vtn CONSULTING

# Rio Mesa Solar
# Overall Existing Condition Hydrologic & Hydraulic Analysis

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# EXECUTIVE SUMMARY

The following is a summary of methodology and results for the Existing Condition hydrologic and hydraulic analysis for the overall Rio Mesa Solar project. The objective of this report is to provide a description of the existing condition flow patterns and storm water runoff for the proposed solar field site. The information presented in this report will also be used to support the Drainage Erosion and Sedimentation Control Plan and the Storm Water Pollution Prevention Plan (SWPPP).

## I. HYDROLOGIC ANALYSIS

### A. SITE DESCRIPTION

The Rio Mesa Solar project (RMS) is located 15 miles southwest of Blythe California, within Riverside County. The site's southern boundary is the Riverside / Imperial County border. Overall, the area of the site is ±9,794 acres. The site is made up to two proposed parcels. The MWD parcel is the original site boundary which encompasses ±6,741 acres (southern portion), and makes up the largest portion of the site. The BLM augmentation area was subsequently incorporated into the site and encompasses an additional ±3,054 acres of area (northern portion). Both parcels are treated as one contiguous site in the hydrologic and hydraulic analyses summarized in this report. The figures, however, show the boundaries of each separate parcel. Note that the site boundary for the BLM augmentation parcel contains an additional 160-acre parcel along the western portion of the site between the original MWD parcels and the BLM augmentation area. Brightsource Energy informed VTN that they will be pursuing this area to be incorporated into the project and requested that VTN this area as part of the site for this report.

The site generally slopes in a west to eastern direction through a series of large flood corridors containing numerous braided washes, smaller washes, and overland topography. Sparse desert vegetative brush covers most of the surface within the site with the exception of barren- hilly areas located along the north-western boundary of the site.

### B. WATERSHED AREA DESCRIPTION

The tributary watershed to the RMS consists of ±49.7 square miles. The majority of the watershed is located west and southwest of the site location and slopes in an eastern direction into the Palo Verde Mesa region. A series of mountain ranges are located west, northwest, and southwest of the site and serve as the tributary watershed divides (within Riverside and Imperial Counties). Specifically, the Palo Verde Mountain Range is located southwest of the site and the Mule Mountain Range is located to west and northwest.

The vegetation within the tributary watershed areas vary depending on the elevation and terrain. Higher mountain areas within the watershed contain extremely sparse vegetation and are characteristic of barren land. The eastern (lower elevation) portion of the watershed contains a greater density of desert shrub, especially along the banks of washes.

The offsite watershed was subdivided into 27 hydrologic drainage basins based on a combination of United States Geological Survey (USGS) Quadrangle (Quad) Map topography with 10-meter contour intervals and 4-ft Map Mart topography. For the onsite project area, 23 different basins were delineated based on more accurate 1-ft flown topography. Table 1 shown below summarizes the basin areas.

*Table 1: Basin Area Summary*

| Basin Label | Basin Area (sq.mi) | Corresponding S-Graph |
|---|---|---|
| **OFFSITE BASINS** | | |
| M1 | 0.76 | Desert |
| M2 | 24.30 | Mountain |
| M3 | 0.57 | Desert |
| M4 | 2.71 | Mountain |
| M5 | 0.39 | Desert |
| M5A | 0.17 | Desert |
| M5B | 0.18 | Desert |
| M6 | 1.32 | Mountain |
| M7 | 0.16 | Desert |
| M8 | 1.04 | Mountain |
| M9 | 1.80 | Mountain |
| M10 | 0.38 | Desert |
| M11 | 1.30 | Mountain |
| M12 | 3.98 | Mountain |
| M13 | 7.18 | Mountain |
| MX | 0.01 | Mountain |
| M17 | 0.67 | Mountain |
| M18 | 0.12 | Desert |
| M19 | 0.11 | Desert |
| M20 | 0.49 | Mountain |
| M21 | 0.17 | Mountain |
| M22 | 0.07 | Desert |
| M23 | 0.18 | Mountain |
| M24 | 0.66 | Mountain |
| M25 | 0.15 | Mountain |
| M26 | 0.53 | Desert |
| M27 | 0.22 | Desert |
| Total Area = | 49.65 | |
| | | |

| ONSITE BASINS | | |
|---|---|---|
| ONA | 0.87 | Desert |
| ONB | 2.83 | Desert |
| ONC | 0.30 | Desert |
| OND | 1.34 | Desert |
| ONE1 | 1.61 | Desert |
| ONE2 | 2.59 | Desert |
| ONF | 0.50 | Desert |
| ONG | 0.14 | Desert |
| ONH | 0.20 | Mountain |
| ONI | 0.05 | Mountain |
| ONJ | 0.07 | Mountain |
| ONK | 0.68 | Desert |
| ONL | 0.73 | Desert |
| ONM | 0.10 | Desert |
| ONN | 0.08 | Desert |
| ONO | 0.55 | Desert |
| ONP | 1.47 | Desert |
| ONQ | 0.66 | Desert |
| ONR | 0.27 | Desert |
| ONS | 0.04 | Desert |
| ONT | 0.04 | Desert |
| ONU | 0.05 | Desert |
| ONV | 0.12 | Desert |
| Total Area = | 15.30 sq.mi. | |

Overall, the majority of the offsite watershed combines within 6 separate defined major washes which traverse the site. The labels “Sand Wash” and “Dry Wash” are used interchangeably on the USGS quad map to label numerous washes within the watershed of the site. Therefore, an alternative labeling system was determined for the onsite washes which are depicted on Figures 7323HYD100 and -404 and are consistent with the FLO-2D and HEC-RAS analyses completed in this report. A description of the major washes is provided below (refer to Figure 7323HYD100 for pertinent wash locations):

- “Wash 45” - The largest wash, with the most area tributary, is located along the site’s southern boundary on the Imperial and Riverside County border. The wash is shown to originate from the Palo Verde Mountains and traverses through the site’s southwest corner and exits near the southeast corner in the shape of a curve with an average radius of ±6,525-ft. Offsite drainage basins tributary to this wash include: M1, M2, M3, M4, and a portion of M13.

- "Wash 30" - This second major wash is located ±0.75-miles north of Wash 45. This wash traverses the site in a west to east direction. Offsite drainage basins tributary to this wash include: M5, M5A, M5B, and M6.

- "Wash 25B" - This third major wash is located ±2.4-miles north of Wash 45. Wash 25B traverses through the site's western boundary and eventually exits along the eastern property line. This particular wash originates high within the Mule Mountain range. Offsite drainage basins tributary to Wash 25B include: M7, M8, and M9. Due to the complex braided wash system present along the northwestern property boundary, additional flow from basins M10, M11, and M12 also contribute to Wash 25B.

- "Wash 0" – This fourth major wash traverses through the site's northern boundary and is located ±1.1-miles north of Wash 25B. This particular wash originates from the Mule Mountains. Wash 0 has a curve shape with an average radius of ±3,625-ft. A complex braided channel system is also present within Wash 0, which allows some of the tributary flows to split off in a southern direction to combine with flows in Wash 25B (as mentioned above). Tributary basins to Wash 0 include: M10, M11, M12, M14, and M15.

- "Wash 70" – A fifth major wash traversing the northern part of the RMS site in a north-eastern direction. The watershed tributary to Wash 70 originates from the Mule Mountains and drains to a complex system of incised channels that meander around small hills. The meandering portions around the small hills cause several flow splits to occur, which eventually cause flow to be distributed to different major washes. Wash 70 receives portions of the flow generated by offsite basins M12 and M11 due to such flow splits. In addition, offsite basins entirely tributary to Wash 70 include: MX, M17, M18, M19, and M20. It was noted during a field investigation that tributary basin M20 drains to an existing open pit mine located 0.33-mi west of the RMS western boundary. This open pit mine was modeled in the hydrologic analysis with stage-storage based on available topographic information to determine any possible reduction in peak flow or volumes tributary to the site.

- "Wash 90" – The sixth major (most northern) wash traverses the site in a south-eastern direction. The tributary watershed to this particular wash originates from the Mule Mountains. Offsite basins tributary to Wash 90 include: M21, M22, M23, M24, M25, and M26.

## C. FLOOD ZONES

The site is encompassed within several Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) panel numbers. According to the FIRM Index

(06065CIND2A, sheets 1 and 2) all of the encompassing panels are currently not printed, and so these areas are considered to be Zone D, which is denoted as undetermined risk areas. The encompassing panels (which are not printed) include: 06065C3775G, 06065C3200G, 06065C3225G, and 06065C3780G. Panel 06025C0275C (effective date of September 26, 2008) is published as the southern half of panel 06065C3775G, however it does not show any flood hazard information outside of Imperial County. Although the FIRM's do not currently depict any special flood hazard areas impacting the site, research revealed that the California Department of Water Resources (DWR) has recently published a study which delineates "awareness floodplains" or "100-year floodplains based upon best available data." The DWR study denotes 6 separate 100-year flood plains traversing the site (refer to Figure 7323HYD404). These delineated floodplains coincide with Washes 45, 30, 25B, 0, 70, and 90 mentioned in Section I.B. of this report. Based on a telephone conversation with Riverside County Flood Control staff, the "awareness floodplains" are treated as 100-year floodplains for the purpose of development. This means that 100-year water surfaces would need to be defined (this is done in this study) and that structures would need to be raised above the 100-year water surface or the structures would need to be flood proofed to protect against the 100-year water surface. Riverside County Flood Control staff indicated that no FEMA submittal is required for developing within an "awareness floodplain".

## D. HYDROLOGIC CRITERIA

The site boundary is located within Riverside County California. The basis for the analysis was the Riverside County Flood Control and Water Conservation District Hydrology Manual (Riverside County Manual). Riverside County Flood Control staff was consulted in the appropriateness of use of this manual since the site is located outside of the seven jurisdictional zones of the Riverside County Flood Control District. Riverside County TLMA GIS system was used to determine if the site lies within any local area flood control districts. Based on information from the website, it does not appear that the site is within a local flood control district. According to Riverside County Flood Control staff, for areas that do not fall within any local flood control districts, the Riverside County Flood Control District is the default agency.

The California Energy Commission (CEC) will be the governing agency for all submittals for this project since the power plant will be larger than 50 MW in power output. The CEC requires that project design meets the requirements of all federal, state and local floodplain regulations.

## E. HYDROLOGIC CALCULATIONS

### 1. Storm Event

The hydrologic models included in this report are based on the 24-hour, 100, 25, 10, 5, and 2-year events. For the storm event distribution, the Los Angeles District Pre-Processor to HEC-1 Version 2.0 (LAPRE-1) program was utilized to compute

the hyetograph. The use of this pre-processor was based on recommendations from Riverside County Flood Control staff. The LAPRE-1 program has numerous storm event hyetographs internally pre-programmed for the Los Angeles district. The design storm hyetograph chosen for the RMS hydrologic models is shown in the table below.

*Table 2: Design Storm Hyetograph Summary*

| Storm Event | LAPRE-1 Storm # ($P Value 1) | Description |
|---|---|---|
| 24 Hour (100, 25, 10, 5, 2-year) | 14 | Southern California intermediate storm (Feb. 16, 1980); 24-hour duration |

**2. Loss Parameters**

Loss parameters were referenced from 2 sources: the Riverside County Manual and the National Resource Conservation Service (NRCS) Technical Release 55 (TR-55). The SCS Curve Number was incorporated into the hydrologic analysis to account for precipitation losses (initial abstraction, depression storage, and infiltration) within the watershed. It should be noted that the Riverside County Manual specifies loss parameters as "Runoff Index numbers" which are synonymous to the Curve Number. As required per the Riverside County Manual, all curve numbers used in the hydrologic analysis are representative of the Antecedent Moisture Condition (AMC) II, which represents a condition between dry and saturated for soils prior to the storm event.

The NRCS General Soil Survey for the state of California was used to determine the soil types within the watershed (See Figures 7323HYD101 and -102). Information from the General Soil Survey includes the soil group composition and hydrologic type to which the soils belong to (A through D). The soil survey information was used to establish a composite Curve Number for each soil type and subsequently for each individual drainage basin. The basin composite curve number also takes into account the land cover type. Based on field observations and aerial photography examination, it was determined that 2 main land covers exist within the watershed: a desert vegetative shrub and barren (rockland). The barren land cover is primarily present in the mountainous region of basins, while the desert shrub cover is located in lower elevations and throughout the entire onsite area. A percentage of each land cover was approximated by the aerial photos and applied in the composite curve number calculation. The table shown below summarizes the land cover break down and composite curve number for all watershed basins.

*Table 3: Basin Composite Curve Number Summary*

| BASIN LABEL | Land Cover Breakdown | | |
|---|---|---|---|
| | Barren | Desert Shrub | Composite CN (AMC II) |
| **OFFSITE BASINS** | | | |
| M1 | 0% | 100% | 77.3 |
| M2 | 75% | 25% | 86.2 |
| M3 | 20% | 80% | 79.1 |
| M4 | 80% | 20% | 85.3 |
| M5 | 0% | 100% | 74.6 |
| M5A | 100% | 0% | 86.2 |
| M5B | 100% | 0% | 86.2 |
| M6 | 45% | 55% | 83.8 |
| M7 | 0% | 100% | 77.3 |
| M8 | 70% | 30% | 85.6 |
| M9 | 65% | 35% | 86.2 |
| M10 | 20% | 80% | 79.1 |
| M11 | 45% | 55% | 82.3 |
| M12 | 70% | 30% | 87.1 |
| M13 | 75% | 25% | 88.4 |
| MX | 100% | 0% | 91.6 |
| M17 | 40% | 60% | 84.5 |
| M18 | 100% | 0% | 83.1 |
| M19 | 100% | 0% | 83.1 |
| M20 | 100% | 0% | 90.4 |
| M21 | 80% | 20% | 82.5 |
| M22 | 70% | 30% | 79.7 |
| M23 | 50% | 50% | 82.1 |
| M24 | 95% | 5% | 91.3 |
| M25 | 74% | 26% | 85.4 |
| M26 | 25% | 75% | 75.9 |
| M27 | 0% | 100% | 71.9 |
| **ONSITE BASINS** | | | |
| ONA | 0% | 100% | 76.1 |
| ONB | 4% | 96% | 73.4 |
| ONC | 0% | 100% | 71.9 |
| OND | 0% | 100% | 71.9 |
| ONE1 | 0% | 100% | 73.7 |
| ONE2 | 13% | 87% | 74.5 |
| ONF | 0% | 100% | 71.9 |
| ONG | 0% | 100% | 71.9 |
| ONH | 49% | 51% | 81.7 |
| ONI | 21% | 79% | 79.1 |
| ONJ | 24% | 76% | 79.4 |
| ONK | 0% | 100% | 71.9 |

| | | | |
|---|---|---|---|
| ONL | 0% | 100% | 71.9 |
| ONM | 0% | 100% | 71.9 |
| ONN | 0% | 100% | 71.9 |
| ONO | 0% | 100% | 71.9 |
| ONP | 0% | 100% | 71.9 |
| ONQ | 0% | 100% | 71.9 |
| ONR | 0% | 100% | 71.9 |
| ONS | 0% | 100% | 71.9 |
| ONT | 0% | 100% | 71.9 |
| ONU | 0% | 100% | 71.9 |
| ONV | 0% | 100% | 72.0 |

**3. Precipitation Values**

Precipitation values used in the hydrologic models were referenced from the National Oceanic and Atmospheric Administration (NOAA) Atlas 14, Volume 1, Version 4.0: Semiarid Southwest. A centroid was identified for the entire watershed (offsite and onsite basins) and point precipitation frequency estimates were obtained at that location since isopluvial contours vary minimally throughout this region. Subsequently, additional onsite parcels (BLM augmentation area) were added to the RMS project, and a second centroid for the additional watershed (extra onsite and offsite basins) was identified and the rainfall obtained at that point.

## F. HEC-1 ANALYSIS

The U.S. Army Corps of Engineers (USACE) hydrograph package HEC-1 program was utilized to establish storm water runoff values for all offsite hydrologic basins within the watershed. The Riverside County Manual was referenced during the preparation of the hydrologic models for this project. According to the referenced manual, the Unit Hydrograph Method is to be implemented for hydrologic studies where the watershed exceeds 300 to 500-acres. The Unit Hydrograph Method requires the development of unit hydrographs for each individual hydrologic basin from an appropriate S-Graph. A mountain S-Graph was selected for drainage basins extending high into surrounding mountain ranges, while a desert S-Graph was chosen for flatter basins within the lower elevations.

To aid in the development of the unit hydrographs, the Los Angeles District Pre-Processor to HEC-1 V2.0 (LAPRE-1) program was utilized to compute the unit hydrograph ordinates. The LAPRE-1 program has many different S-Graphs pre-programmed into the software to select from depending on the geographic location within southern California. During a conversation with RCFD&WCD staff, it was recommended that the appropriate mountain and desert S-Graphs to be used within Riverside County are the #1 OC-Mountain and #9 Whitewater River average respectively. After the appropriate S-graph was chosen for each individual basin, the physical parameters (Length, slope, centroid length, and manning's n-

value) were input into the LAPRE-1 software. The LAPRE-1 output file is the HEC-1 input (.dat) file with the unit hydrograph ordinates written for each basin. Subsequently, the HEC-1 program was utilized to determine the runoff hydrograph for each basin, as well as the hydrograph combination points. Resulting flows from the HEC-1 analysis are discussed in Section III.A of this report and shown on Figure 7323HYD100.

## G. FLO-2D ANALYSIS

FLO-2D is a 2-dimensional flood routing program with the ability to generate storm flow runoff (hydrographs) and determine flow depths and velocities. The FLO-2D program was utilized for the onsite areas where 1-foot contour topography is available. 2-foot contour topography was utilized to extend the grid system along the western boundary of the site. The elevations on the 1-foot and 2-foot topography matched well enough that the two topography sources could be merged to extend the grid system where required. FLO-2D also has the capability to import hydrographs from external sources into the model. This was utilized to bring in all hydrographs created by the HEC-1 model for the offsite tributary areas northwest, west and southwest of the site.

### 1. Grid Size

The grid size used in the FLO-2D analysis was set to 75-ft x 75-ft. This grid size was determined from the recommendations of the FLO-2D user manual to set peak discharge divided by the surface area of an individual grid element to less than 1 cfs/ft^2.

### 2. Roughness Coefficients

Manning's roughness coefficients (n-values) were referenced from FLO-2D reference manuals and based on guidelines from *Open Channel Hydraulics by Chow, 1959*. Based on these sources and site visits, an n-value of 0.065 was used for the natural desert areas of the site. Note that this value may seem higher than would normally be used in a 1-dimensional model like HEC-RAS. However, since FLO-2D is a 2-dimensional model, it requires that the roughness coefficient account for flow in 8 directions which tends to increases the friction potential when compared to 1-dimensional modeling.

### 3. Loss Parameters

SCS Curve Number loss parameters were used with the FLO-2D program as discussed in the Hydrologic Calculations portion of this memorandum.

### 4. FLO-2D Analysis

The FLO-2D model is used to simulate onsite precipitation and runoff for the onsite areas and incorporates the HEC-1 hydrographs for offsite areas. The flow simulations for the 24-hour, 100, 25, 10, 5, and 2-year storms have been completed. Results for these analyses are discussed in section III.B of this report.

# II. HYDRAULIC ANALYSIS

## A. HEC-RAS ANALYSIS

For determination of water surface extent, flow depths, and velocities for the defined channels within the site, the USACE HEC-RAS Water Surface Profiling software was utilized. Cross-sections for the model were cut based on the 1 foot-contour topography obtained for the site. The HEC-RAS analysis was run in mixed flow regime to allow the model to move between subcritical and supercritical results as necessary. Flow values used in the HEC-RAS analysis were calibrated with the FLO-2D analysis completed with the site. FLO-2D is a 2-dimensional model that can accurately determine the division of flow in complicated channel networks and at flow breakout locations. For this reason, the FLO-2D model is the best for predicting the flow quantities within the washes through the site. The FLO-2D calibrated HEC-RAS analysis provides the most accurate determination of flow depths and velocities within the washes since the cross-sections are based on 1-foot topography.

### 1. Roughness Coefficients

Manning's roughness coefficients (n-values) were determined for the floodplain areas, and the main wash of the flood zones. N-values were based on field visits and reference information from *Open Channel Hydraulics by Chow, 1959.* For the analysis, the overbank areas were set to 0.050, and the main channel was set to 0.040.

### 2. Junctions

The main washes impacting the site are modeled with one continuous analysis through the use of stream reaches and junctions. The Energy Method was used at the junctions to determine all losses and to balance the Energy Grade Line between the reaches.

### 3. Boundary Conditions

The upstream and downstream boundary conditions for the model utilize the normal depth option within HEC-RAS. The upstream and downstream normal depth slopes were based on the 1-foot contour topography for the area.

### 4. HEC-RAS Analysis

The HEC-RAS analysis has been completed for the 24-hour 100, 25, 10, 5, and 2-year storm events for onsite washes. Results for these analyses are discussed in Section III.B of this report. Figures 7323HYD300A-E included in Appendix, show the location of cross-sections, river reaches, and water surface extents.

## B. FLO-2D

Water surface extent, flow depths, and velocities for onsite areas were determined within the FLO-2D software program. The FLO-2D analysis is used to determine the flow conditions

for the site in overland sheet flow areas, shallow washes not modeled by HEC-RAS, and within complex channel networks with numerous flows split and breakout locations. The Results of the FLO-2D analysis are shown on Figures 7323HYD200 through 7323HYD209 for the 100, 25, 10, 5, and 2-year storm events.

**1. Channels**

FLO-2D has the ability to include defined channels superimposed onto the grid system to give more accurate results where defined channels are present. The HEC-RAS channels were imported into the FLO-2D model to provide additional detail of the conveyance area of the onsite washes. Due to the numerous braided washes within the channels, the FLO-2D model was experiencing volume conservation problems due to the large variation of conveyance areas between cross-sections. It was also observed that several flow breakout areas from the main wash areas in the floodplain only model were not shown in the channel and floodplain model. The 1-dimenisional limitations of the channel sub-routine in FLO-2D may have been limiting the ability for the model to share flows at some of the critical breakout locations. Based on the 1-foot topography for the site, the relatively small grid size of 75 feet used for the floodplain grid system provides results very comparable to the HEC-RAS analysis completed for the onsite washes. For these reasons, the final FLO-2D model does not incorporate HEC-RAS channels for the majority of the onsite area. The one exception is in the northwest portion of the site where a flow split is observed (See cross section 1 on Figure 7323HYD200). The split to the south is a well-defined channel with vertical banks on both sides. The initial floodplain only model was not conveying a reasonable amount of flow into the southern channel. This was most likely due to the grid cells being too large to provide an accurate estimate of the conveyance area for the split to the south. A channel was incorporated into this location to ensure that the FLO-2D model contained accurate conveyance area for the split to the south at this critical flow split location.

**2. Irrigation Channel and Levee**

The FLO-2D analysis includes a levee downstream of the eastern site boundary to replicate an existing berm just west of the irrigation channel. The grid system extends east of the irrigation channel and outflow nodes are placed downstream of the channel to allow flow to be routed off of the grid.

# III. SUMMARY OF ANALYSIS RESULTS

## A. HYDROLOGIC ANALYSIS RESULTS

Table 4 shows the hydrologic analysis results for the 24-Hour 100, 25, 10, 5, and 2-year storm runoff values computed by the HEC-1 analysis. The HEC-1 analysis includes onsite basins to provide peak flows and volumes for all areas routed through the site. The final peak flow and flow volumes reported and used within the hydraulic analysis are based on the FLO-2D analysis. The HEC-1 values are provided for comparison to the FLO-2D values but it should be noted that the HEC-1 values do not take into account onsite storage that is reflected in the FLO-2D results.

Due to the intricate nature of the channel located near basins ONH through ONJ (refer to Figure 7323HYD100), 3 complex flow splits occur according to the FLO-2D analysis performed in parallel to the HEC-1 analysis. The flow splits occurring at combination point CP1 divert runoff towards Washes 70, 0, and 25B. To determine the percentage of the flow tributary to each respective wash from CP1, cross sections were placed within the FLO-2D model near the flow split in apparent break out locations impacting both Washes 70 and 25B.

Results from the FLO-2D cross sections were used to determine a percentage of flow impacting these washes. These percentages were then input into the HEC-1 diversion cards accordingly. Diversion and retrieval cards FS1/RET1 represent the portion of flow tributary to Wash 70, while FS2/RET2 represents flow tributary to Wash 25B. The remaining flow after both diversions (FS1 and FS2) is tributary to Wash 0. A third diversion (FS3) was modeled in HEC-1 at the outlet of basin M13. In this diversion, it was assumed that 50% of the flow generated travels east in lieu of continuing on towards Wash 45. Cards DIV1 through DIV3 represent the remaining hydrograph flow after respective diversions. The HEC-1 runoff results summarized in Table 4 reflect such diversions.

*Table 4: HEC-1 Analysis Runoff Results Summary*

| Basin / Combination Point Label | Area (sq. mi.) | 24-Hr Q100 (cfs) | 24-Hr Q25 (cfs) | 24-Hr Q10 (cfs) | 24-Hr Q5 (cfs) | 24-Hr Q2 (cfs) |
|---|---|---|---|---|---|---|
| **OFFSITE BASINS** | | | | | | |
| M1 | 0.76 | 162 | 98 | 63 | 40 | 15 |
| M2 | 24.30 | 4,520 | 2,934 | 2,021 | 1,410 | 697 |
| M3 | 0.57 | 125 | 77 | 50 | 33 | 13 |
| M4 | 2.71 | 598 | 389 | 268 | 186 | 91 |
| M5 | 0.39 | 77 | 45 | 27 | 17 | 5 |
| M5A | 0.17 | 46 | 30 | 22 | 15 | 8 |
| M5B | 0.18 | 49 | 33 | 23 | 17 | 9 |
| M6 | 1.32 | 316 | 204 | 140 | 96 | 46 |

| | | | | | | |
|---|---|---|---|---|---|---|
| M7 | 0.16 | 35 | 21 | 14 | 9 | 3 |
| M8 | 1.04 | 265 | 175 | 122 | 86 | 44 |
| M9 | 1.80 | 439 | 289 | 203 | 143 | 73 |
| M10 | 0.38 | 85 | 53 | 34 | 22 | 9 |
| M11 | 1.30 | 300 | 191 | 128 | 87 | 39 |
| M12 | 3.98 | 954 | 634 | 446 | 318 | 165 |
| M13 | 7.18 | 1,607 | 1,075 | 764 | 550 | 294 |
| MX | 0.01 | 3 | 2 | 2 | 1 | 1 |
| M17 | 0.67 | 189 | 124 | 86 | 59 | 30 |
| M18 | 0.12 | 34 | 22 | 15 | 10 | 5 |
| M19 | 0.11 | 31 | 20 | 14 | 9 | 5 |
| M20 | 0.49 | 155 | 107 | 79 | 58 | 34 |
| M21 | 0.17 | 47 | 30 | 21 | 14 | 7 |
| M22 | 0.07 | 18 | 12 | 8 | 5 | 2 |
| M23 | 0.18 | 49 | 31 | 21 | 14 | 7 |
| M24 | 0.66 | 210 | 147 | 108 | 80 | 48 |
| M25 | 0.15 | 43 | 29 | 20 | 14 | 7 |
| M26 | 0.53 | 120 | 72 | 45 | 27 | 10 |
| M27 | 0.22 | 45 | 25 | 15 | 8 | 2 |
| **ONSITE BASINS** | | | | | | |
| ONA | 0.87 | 176 | 104 | 65 | 40 | 14 |
| ONB | 2.83 | 459 | 257 | 151 | 86 | 21 |
| ONC | 0.30 | 55 | 31 | 18 | 10 | 2 |
| OND | 1.34 | 234 | 131 | 76 | 43 | 9 |
| ONE1 | 1.61 | 284 | 162 | 97 | 56 | 15 |
| ONE2 | 2.59 | 444 | 254 | 152 | 89 | 25 |
| ONF | 0.50 | 91 | 51 | 30 | 17 | 4 |
| ONG | 0.14 | 26 | 15 | 9 | 5 | 1 |
| ONH | 0.20 | 49 | 31 | 21 | 14 | 6 |
| ONI | 0.05 | 12 | 7 | 5 | 3 | 1 |
| ONJ | 0.07 | 16 | 10 | 7 | 4 | 2 |
| ONK | 0.68 | 119 | 67 | 39 | 22 | 5 |
| ONL | 0.73 | 146 | 83 | 48 | 27 | 7 |
| ONM | 0.10 | 21 | 12 | 7 | 4 | 1 |
| ONN | 0.08 | 16 | 9 | 6 | 3 | 1 |
| ONO | 0.55 | 108 | 61 | 36 | 20 | 5 |
| ONP | 1.47 | 289 | 163 | 95 | 52 | 13 |
| ONQ | 0.66 | 132 | 74 | 44 | 24 | 6 |
| ONR | 0.27 | 56 | 32 | 19 | 11 | 3 |
| ONS | 0.04 | 8 | 5 | 3 | 2 | 0 |
| ONT | 0.04 | 9 | 5 | 3 | 2 | 0 |
| ONU | 0.05 | 11 | 6 | 4 | 2 | 1 |
| ONV | 0.12 | 23 | 13 | 8 | 4 | 1 |
| **DIVERSIONS, ROUTE, AND STORAGE CARDS (REFER TO HEC-1 RUN)** | | | | | | |
| FS1 | -- | 65 | 38 | 22 | 13 | 3 |
| DV1 | -- | 1,341 | 880 | 613 | 432 | 218 |
| FS2 | -- | 671 | 438 | 370 | 257 | 157 |

| | | | | | | |
|---|---|---|---|---|---|---|
| DV2 | -- | 671 | 442 | 244 | 174 | 61 |
| FS3 | -- | 803 | 538 | 382 | 275 | 147 |
| DV3 | -- | 803 | 538 | 382 | 275 | 147 |
| RET1 | -- | 65 | 38 | 22 | 13 | 3 |
| RET2 | -- | 671 | 438 | 370 | 257 | 157 |
| RMONU | -- | 11 | 6 | 4 | 2 | 1 |
| RMONT | -- | 8 | 5 | 3 | 2 | 1 |
| RM20 | -- | 154 | 106 | 14 | 0 | 0 |
| RM24 | -- | 210 | 146 | 108 | 80 | 48 |
| RM27 | -- | 45 | 25 | 15 | 8 | 2 |
| RCP17 | -- | 482 | 318 | 141 | 94 | 43 |
| RCP23 | -- | 481 | 316 | 218 | 150 | 77 |
| STOR1 | -- | 154 | 106 | 14 | 0 | 0 |
| **HYDROGRAPH COMBINATION POINTS** | | | | | | |
| CPA | 1.64 | 288 | 161 | 94 | 53 | 11 |
| CP1 | 5.98 | 1,406 | 918 | 636 | 444 | 221 |
| CP2 | 6.10 | 693 | 454 | 251 | 178 | 62 |
| CP3 | 6.24 | 718 | 469 | 259 | 183 | 63 |
| CP4 | 7.42 | 924 | 584 | 326 | 221 | 71 |
| CP5 | 2.84 | 694 | 457 | 320 | 225 | 114 |
| CP6 | 2.84 | 1,365 | 896 | 689 | 482 | 271 |
| CP6A | 1.77 | 316 | 181 | 108 | 63 | 18 |
| CP6B | 4.61 | 1,671 | 1,069 | 793 | 542 | 286 |
| CP7 | 7.20 | 2,100 | 1,313 | 937 | 624 | 307 |
| CP8 | 1.67 | 410 | 267 | 184 | 128 | 63 |
| CP9 | 2.06 | 487 | 312 | 212 | 144 | 67 |
| CP10 | 4.89 | 918 | 549 | 347 | 218 | 81 |
| CP11 | 3.28 | 721 | 464 | 317 | 218 | 104 |
| CP12 | 7.94 | 960 | 632 | 442 | 312 | 161 |
| CP12A | 27.58 | 5,192 | 3,359 | 2,309 | 1,605 | 789 |
| CP12B | 35.52 | 6,070 | 3,934 | 2,706 | 1,883 | 928 |
| CP13 | 36.39 | 6,232 | 4,026 | 2,764 | 1,917 | 940 |
| CP14 | 0.01 | 69 | 40 | 24 | 14 | 4 |
| CP14A | 0.05 | 77 | 45 | 27 | 16 | 4 |
| CP15 | 0.72 | 265 | 169 | 112 | 74 | 34 |
| CP16 | 0.60 | 184 | 125 | 16 | 9 | 5 |
| CP17 | 1.44 | 483 | 314 | 141 | 94 | 43 |
| CP18 | 2.91 | 760 | 471 | 230 | 141 | 54 |
| CP19 | 0.78 | 155 | 87 | 51 | 27 | 7 |
| CP20 | 0.59 | 116 | 65 | 38 | 20 | 5 |
| CP21 | 0.57 | 158 | 102 | 70 | 47 | 23 |
| CP22 | 1.19 | 329 | 218 | 152 | 106 | 57 |
| CP23 | 1.76 | 482 | 316 | 218 | 151 | 77 |
| CP24 | 2.42 | 612 | 389 | 261 | 174 | 83 |
| CP25 | 0.49 | 99 | 56 | 32 | 17 | 4 |

## B. HYDRAULIC ANALYSIS RESULTS

The following table shows the maximum flow depths and velocities for each reach within the HEC-RAS analysis for the site (refer to Exhibit 7323HYD300A-E for location of river reaches and cross-sections).

*Table 5: HEC-RAS Results Summary*

| HEC-RAS Hydraulic Analysis Maximum Depth and Velocity Results | | | | |
|---|---|---|---|---|
| ***24-Hour, 100-Year*** | | | | |
| **River Reach** | **Discharge (cfs)** | **Max. Depth (ft.)** | **Max. Velocity (ft/s)** | **Cross Section (Max Depth Section/Max Vel. Section)** |
| Wash 90 | 491.00 | 2.14 | 4.43 | 800.13/800.13 |
| Wash 60 | 64.00 | 1.16 | 3.21 | 3746.65/2826.26 |
| Wash 80 | 242.00 | 2.24 | 4.34 | 6827.33/7287.57 |
| Wash 75 | 189.00 | 1.22 | 2.85 | 908.89/546.93 |
| Wash 70 | 443.00 | 1.71 | 3.78 | 1029.2/2036.83 |
| Wash 0 | 788.00 | 2.23 | 6.07 | 12718.16/767.81 |
| Wash 10A | 160.00 | 1.68 | 4.76 | 22483.47/22483.47 |
| Wash 4 | 105.00 | 1.71 | 4.57 | 813.29/1076.68 |
| Wash 10B | 280.24 | 2.16 | 4.12 | 19884.32/18600 |
| Wash 5 | 445.31 | 2.44 | 5.02 | 2398.41/676.61 |
| Wash 20 | 726.22 | 2.62 | 4.68 | 16100/16636.71 |
| Wash 15 | 676.15 | 2.89 | 4.59 | 3100/600 |
| Wash 25A | 1350.96 | 2.38 | 3.73 | 10806.78/8100 |
| Wash 23 | 195.52 | 1.65 | 4.00 | 3479.12/3038.38 |
| Wash 25B | 1336.02 | 3.59 | 4.80 | 1368.02/2100 |
| Wash 30 | 305.83 | 1.65 | 3.60 | 7500/8000 |
| Wash 45 | 6154.09 | 3.92 | 4.60 | 2500/378.44 |
| Wash 35 | 614.76 | 2.36 | 4.34 | 4063.78/1600 |
| Wash 40 | 4640.71 | 4.47 | 4.64 | 10653.2/9616.88 |

| HEC-RAS Hydraulic Analysis Maximum Depth and Velocity Results | | | | |
|---|---|---|---|---|
| ***24-Hour, 25-Year*** | | | | |
| **River Reach** | **Discharge (cfs)** | **Max. Depth (ft.)** | **Max. Velocity (ft/s)** | **Cross Section (Max Depth Section/Max Vel. Section)** |
| Wash 90 | 283.00 | 1.75 | 4.29 | 800.13/800.13 |
| Wash 60 | 38.00 | 0.96 | 2.61 | 1155.84/2826.26 |
| Wash 80 | 147.00 | 1.75 | 4.17 | 6827.33/8711.54 |
| Wash 75 | 84.00 | 0.90 | 2.59 | 908.89/908.89 |

| | | | | |
|---|---|---|---|---|
| Wash 70 | 217.00 | 1.40 | 3.41 | 3191.72/3521.27 |
| Wash 0 | 520.00 | 1.93 | 5.34 | 12718.16/767.81 |
| Wash 10A | 105.00 | 1.43 | 4.31 | 22271.22/22483.47 |
| Wash 4 | 70.00 | 1.59 | 4.07 | 813.29/1076.68 |
| Wash 10B | 175.00 | 1.82 | 4.41 | 19884.32/18600 |
| Wash 5 | 288.23 | 2.22 | 4.55 | 2398.41/676.61 |
| Wash 20 | 456.88 | 2.41 | 4.39 | 16100/15600 |
| Wash 15 | 581.60 | 2.79 | 4.23 | 3100/600 |
| Wash 25A | 678.31 | 1.82 | 3.09 | 10806.78/10806.78 |
| Wash 23 | 29.35 | 1.15 | 2.86 | 3479.12/3038.38 |
| Wash 25B | 671.57 | 3.12 | 3.95 | 1368.02/6600 |
| Wash 30 | 85.71 | 1.32 | 3.26 | 7500/3000 |
| Wash 45 | 3958.27 | 3.57 | 4.00 | 2500/378.44 |
| Wash 35 | 392.02 | 2.25 | 3.75 | 1600/1600 |
| Wash 40 | 3007.84 | 4.14 | 4.70 | 10033.98/7943.06 |

| **HEC-RAS Hydraulic Analysis Maximum Depth and Velocity Results** | | | | |
|---|---|---|---|---|
| ***24-Hour, 10-Year*** | | | | |
| **River Reach** | **Discharge (cfs)** | **Max. Depth (ft.)** | **Max. Velocity (ft/s)** | **Cross Section (Max Depth Section/Max Vel. Section)** |
| Wash 90 | 117.00 | 1.38 | 3.32 | 800.13/800.13 |
| Wash 60 | 22.00 | 0.77 | 2.41 | 3746.65/1155.84 |
| Wash 80 | 98.00 | 1.53 | 3.81 | 6827.33/7287.57 |
| Wash 75 | 43.00 | 0.72 | 2.31 | 546.93/546.93 |
| Wash 70 | 99.00 | 1.19 | 2.83 | 3191.72/358.04 |
| Wash 0 | 359.00 | 1.70 | 4.63 | 4232/767.81 |
| Wash 10A | 71.83 | 1.32 | 4.00 | 22271.22/22483.47 |
| Wash 4 | 47.90 | 1.49 | 3.64 | 813.29/1076.68 |
| Wash 10B | 119.78 | 1.61 | 4.05 | 19884.32/18600 |
| Wash 5 | 200.86 | 1.83 | 4.28 | 2398.41/2138.83 |
| Wash 20 | 311.95 | 2.21 | 4.17 | 16100/15600 |
| Wash 15 | 536.71 | 2.74 | 4.00 | 3100/600 |
| Wash 25A | 404.51 | 1.58 | 2.92 | 8600/7100 |
| Wash 23 | 1.00 | 0.23 | 1.01 | 2630.84/3479.12 |
| Wash 25B | 401.33 | 2.85 | 4.17 | 1368.02/3600 |
| Wash 30 | 9.95 | 0.44 | 2.08 | 7500/9000 |
| Wash 45 | 2690.40 | 3.34 | 3.68 | 2500/378.44 |
| Wash 35 | 265.68 | 2.14 | 3.91 | 1600/2500 |
| Wash 40 | 2069.07 | 3.74 | 4.39 | 10033.98/7943.06 |

| HEC-RAS Hydraulic Analysis Maximum Depth and Velocity Results | | | | |
|---|---|---|---|---|
| ***24-Hour, 5-Year*** | | | | |
| **River Reach** | **Discharge (cfs)** | **Max. Depth (ft.)** | **Max. Velocity (ft/s)** | **Cross Section (Max Depth Section/Max Vel. Section)** |
| Wash 90 | 61.00 | 1.17 | 2.88 | 800.13/800.13 |
| Wash 60 | 13.00 | 0.66 | 2.16 | 1902.48/1155.84 |
| Wash 80 | 64.00 | 1.32 | 3.53 | 6827.33/8711.54 |
| Wash 75 | 4.00 | 0.36 | 1.95 | 546.93/546.93 |
| Wash 70 | 53.00 | 1.07 | 2.72 | 3191.72/1321.01 |
| Wash 0 | 233.00 | 1.51 | 4.17 | 4232/767.81 |
| Wash 10A | 49.26 | 1.21 | 3.60 | 22271.22/22483.47 |
| Wash 4 | 32.84 | 1.37 | 3.48 | 813.29/1076.68 |
| Wash 10B | 82.10 | 1.38 | 3.63 | 19884.32/18600 |
| Wash 5 | 140.45 | 1.61 | 4.52 | 2398.41/2138.83 |
| Wash 20 | 214.77 | 1.85 | 3.70 | 16100/15600 |
| Wash 15 | 458.57 | 2.64 | 3.54 | 3100/600 |
| Wash 25A | 210.76 | 1.38 | 3.22 | 8600/8100 |
| Wash 23 | 1.00 | 0.21 | 1.44 | 3038.38/3479.12 |
| Wash 25B | 206.14 | 1.26 | 3.13 | 2600/3600 |
| Wash 30 | 1.00 | 0.22 | 1.50 | 9500/9000 |
| Wash 45 | 1843.41 | 3.15 | 3.43 | 2500/5500 |
| Wash 35 | 183.81 | 1.63 | 5.75 | 1600/1600 |
| Wash 40 | 1435.73 | 3.42 | 3.79 | 10653.2/7943.06 |

| HEC-RAS Hydraulic Analysis Maximum Depth and Velocity Results | | | | |
|---|---|---|---|---|
| ***24-Hour, 2-Year*** | | | | |
| **River Reach** | **Discharge (cfs)** | **Max. Depth (ft.)** | **Max. Velocity (ft/s)** | **Cross Section (Max Depth Section/Max Vel. Section)** |
| Wash 90 | 8.00 | 0.67 | 2.08 | 800.13/800.13 |
| Wash 60 | 3.00 | 0.40 | 1.68 | 1902.48/1902.48 |
| Wash 80 | 22.00 | 0.85 | 3.03 | 6827.33/8711.54 |
| Wash 75 | 0.10 | 0.12 | 0.83 | 546.93/546.93 |
| Wash 70 | 0.10 | 0.09 | 1.2 | 3191.72/1321.01 |
| Wash 0 | 67.00 | 1.02 | 3.02 | 11096.81/767.81 |
| Wash 10A | 23.35 | 0.83 | 3.11 | 22271.22/22483.47 |
| Wash 4 | 15.57 | 1.27 | 2.95 | 813.29/1076.68 |
| Wash 10B | 38.92 | 1.03 | 2.96 | 19884.32/18600 |
| Wash 5 | 71.41 | 1.28 | 3.69 | 2398.41/2138.83 |
| Wash 20 | 85.80 | 1.42 | 2.63 | 16100/15600 |
| Wash 15 | 204.54 | 2.27 | 3.83 | 3100/600 |

| | | | | |
|---|---|---|---|---|
| Wash 25A | 40.21 | 1.07 | 2.58 | 8600/9100 |
| Wash 23 | 1.00 | 0.21 | 1.44 | 3038.38/3479.12 |
| Wash 25B | 24.74 | 1.84 | 2.62 | 2600/5600 |
| Wash 30 | 1.00 | 0.22 | 1.5 | 9500/9000 |
| Wash 45 | 787.74 | 2.39 | 3.39 | 2500/3500 |
| Wash 35 | 78.56 | 1.12 | 4.56 | 1600/1600 |
| Wash 40 | 700.95 | 2.83 | 3.32 | 10653.2/9616.88 |

The following tables show the results from the FLO-2D analysis for the onsite portion of the site. *Table 6* summarizes the peak flow and max depth for the thirteen separate cross sections that were delineated into the FLO-2D model to give representative results at the cross section locations (Refer to Exhibit 7323HYD200 for the location of the cross sections). Each cross-section is located at the downstream end of the site to determine the flow depths of the discharge exiting the site. The FLO-2D cross section will be used to compare flow rates and flow depths in the post-construction analysis to those determined in the existing condition analysis.

*Table 6: FLO-2D Cross Sections*

| **FLO-2D Flood Plain Cross Section Summary** | | |
|---|---|---|
| ***24-Hour, 100-Year*** | | |
| **Cross Section** | **Max Discharge (cfs)** | **Max. Depth (ft.)** |
| CS 1 | 672.15 | 0.64 |
| CS 2 | 0 | 0.10 |
| CS 3 | 1335.99 | 1.77 |
| CS 4 | 0 | 0.10 |
| CS 5 | 298.96 | 0.95 |
| CS 6 | 6142.51 | 2.51 |
| CS 7 | 64.11 | 0.45 |
| CS 8 | 787.90 | 1.07 |
| CS 9 | 45.35 | 0.37 |
| CS 10 | 42.52 | 0.47 |
| CS 11 | 443.09 | 1.79 |
| CS 12 | 490.93 | 1.05 |
| CS 13 | 33.71 | 0.46 |

| | | |
|---|---|---|
| ***24-Hour, 25-Year*** | | |
| CS 1 | 437.57 | 0.51 |
| CS 2 | 0 | 0.05 |
| CS 3 | 671.94 | 1.27 |
| CS 4 | 0 | 0.05 |
| CS 5 | 67.09 | 0.52 |
| CS 6 | 3940.49 | 2.31 |
| CS 7 | 38.27 | 0.32 |
| CS 8 | 519.67 | 0.89 |
| CS 9 | 0 | 0.06 |
| CS 10 | 0 | 0.06 |
| CS 11 | 216.65 | 1.47 |
| CS 12 | 282.61 | 0.80 |
| CS 13 | 6.86 | 0.10 |
| ***24-Hour, 10-Year*** | | |
| CS 1 | 370.11 | 0.39 |
| CS 2 | 0 | 0.03 |
| CS 3 | 350.25 | 0.92 |
| CS 4 | 0 | 0.03 |
| CS 5 | 0 | 0.03 |
| CS 6 | 2680.20 | 1.97 |
| CS 7 | 22.08 | 0.28 |
| CS 8 | 359.31 | 0.75 |
| CS 9 | 0 | 0.03 |
| CS 10 | 0 | 0.03 |
| CS 11 | 99.18 | 1.19 |
| CS 12 | 117.19 | 0.58 |
| CS 13 | 0 | 0.03 |
| ***24-Hour, 5-Year*** | | |
| CS 1 | 257.17 | 0.29 |
| CS 2 | 0 | 0.01 |
| CS 3 | 144.76 | 0.64 |
| CS 4 | 0 | 0.01 |
| CS 5 | 0 | 0.01 |
| CS 6 | 1822.64 | 1.67 |
| CS 7 | 13.06 | 0.24 |
| CS 8 | 232.76 | 0.70 |
| CS 9 | 0 | 0.02 |
| CS 10 | 0 | 0.02 |
| CS 11 | 53.08 | 1.01 |

| | | |
|---|---|---|
| CS 12 | 61.28 | 0.47 |
| CS 13 | 0 | 0.02 |
| ***24-Hour, 2-Year*** | | |
| CS 1 | 256.93 | 0.18 |
| CS 2 | 0 | 0 |
| CS 3 | 8.47 | 0.24 |
| CS 4 | 0 | 0 |
| CS 5 | 0 | 0 |
| CS 6 | 757.55 | 1.21 |
| CS 7 | 3.36 | 0.16 |
| CS 8 | 67.00 | 0.46 |
| CS 9 | 0 | 0 |
| CS 10 | 0 | 0 |
| CS 11 | 0 | 0 |
| CS 12 | 7.76 | 0.19 |
| CS 13 | 0 | 0 |

The volume results reported in *Table 7* were obtained from the "Floodplain Outflow Hydrograph" in the SUMMARY.OUT files. The runoff volume represents all the flow volume that leaves the site during each storm event.

*Table 7: FLO-2D Runoff Volumes*

| **Runoff Volume Summary** | |
|---|---|
| ***24-Hour, 100-Year Event*** | |
| Existing Condition – Runoff Volume = | 5215.33 ac-ft |
| ***24-Hour, 25-Year Event*** | |
| Existing Condition – Runoff Volume = | 2895.91 ac-ft |
| ***24-Hour, 10-Year Event*** | |
| Existing Condition – Runoff Volume = | 1783.23 ac-ft |
| ***24-Hour, 5-Year Event*** | |
| Existing Condition – Runoff Volume = | 1072.56 ac-ft |
| ***24-Hour, 2-Year Event*** | |
| Existing Condition – Runoff Volume = | 412.30 ac-ft |

Several of the onsite washes contained numerous braided washes upstream of the start of the HEC-RAS analysis completed for this site. These braided washes were more readily modeled by the FLO-2D grid system than by HEC-RAS. Table 8 below shows the maximum flow depths and velocities determined by FLO-2D for these areas upstream of the HEC-RAS washes.

*Table 8: FLO-2D Depths & Velocities*

| FLO-2D Results Upstream of HEC-RAS Washes | | |
|---|---|---|
| **River** | **Max Depth (ft)** | **Max Velocity (ft/s)** |
| 24-Hour, 100-Year | | |
| WASH90 | 2.76 | 2.68 |
| WASH75 | 1.89 | 2.2 |
| WASH0 | 6.17 | 8.05 |
| WASH15 | 2.11 | 3.52 |
| 24-Hour, 25-Year | | |
| WASH90 | 2.25 | 2.35 |
| WASH75 | 1.62 | 1.89 |
| WASH0 | 4.93 | 6.91 |
| WASH15 | 1.42 | 2.8 |
| 24-Hour, 10-Year | | |
| WASH90 | 1.8 | 1.76 |
| WASH75 | 1.29 | 1.64 |
| WASH0 | 4.08 | 6.03 |
| WASH15 | 1.15 | 2.42 |
| 24-Hour, 5-Year | | |
| WASH90 | 1.23 | 1.63 |
| WASH75 | 0.56 | 0.81 |
| WASH0 | 3.45 | 5.23 |
| WASH15 | 0.95 | 2.01 |
| 24-Hour, 2-Year | | |
| WASH90 | 0.63 | 1.04 |
| WASH75 | 0 | 0 |
| WASH0 | 2.57 | 2.86 |
| WASH15 | 0.69 | 0.91 |

# IV. EVALUATION OF CHANNEL STABILITY AND ALLUVIAL PROCESSES

## A. OFFSITE BASINS

An offsite basin evaluation was conducted to determine the adequacy of the USGS topography used for basin delineations and the stability of channels within the offsite basin watershed. The evaluation was intended to determine if there was potential for lateral migration of the offsite channels that could change flow patterns impacting the site. As part of the evaluation, the basin delineations were compared to imagery available from Google

Earth and three channels were physically walked within the offsite watershed. The channels walked were within basins M9, M8, and M4. A summary of the findings are reported below. Refer to figure 7323HYD100 for overall basin locations and flow magnitudes.

***Basins M8 – M9:*** The main channel within basin M9 runs close to the northern boundary of basin M8. Based on Google Earth imagery, there appeared to be a few small breakout washes from the main channel that crossed the boundary and discharged into basin M8. The Photo Documentation Exhibit included in Appendix of this report provides photos and detailed notes taken during the investigation. The investigation found that the channel is deeply incised with a bank depth of 3 to 5 feet, nearly vertical, along the southern edge. The nearly vertical slope of the southern bank of the channel suggests that the channel is subject to erosion. However, the area to the south is at the same elevation as the channel top for several hundred feet before reaching another channel. The amount of earth that the channel would need to cut through to move the channel out of the M9 basin and into basin M8, does not seem feasible in the 50-year operation lifetime of the project.

The small channels that appear to breakout of the main channel were observed during the site evaluation. The channels are shallow with depths in general of less than one foot. The flow depths required to allow flows to overtop the main channel into these washes did not seem consistent with the magnitude of the design flows computed or with the conveyance capacity of the main channel. In order for the flows to approach the required depths to overtop the channel, the entire channel or a substantial portion of it, would need to fill to heights of 3 to 5 feet. The main channel was observed to be between 100 and 300 feet wide throughout this location, which would require a far greater flow value than what is being determined during the 100-year storm event. Based on the field conditions observed, it is believed that these washes may be historical washes that were part of a braided system of small washes that conveyed flows prior to the carving of the main channel shown presently. This would coincide with the site observations that the small washes do not appear to currently convey any significant flows and that they are elevated towards the top of the main channel, at the level of the ground on either side of the main channel.

***Basins M8-M7****:* Among having similar concerns as the wash in basin M9, the main channel within basin M8 contains a relatively sharp curve from the northeast to the east direction. These concerns warranted that this location be physically walked during the investigation. Similar to the M9 channel, the M8 channel is a deeply concise channel between 3 and 10 feet deep with nearly vertical banks. As shown in the Photo Documentation Exhibit included in the Appendix, the wash would need to cut through several hundred feet of earth in either direction before breaking through to another wash location.

***Basins M4-M5, M5A,& M5B:*** The main wash within basin M4 contains several sharp turns that, based on photo imagery, may have been subject to breakout into basins M5, M5A, and M5B. The channel was consistent with the channels within basins M8 and M9 in that it

contained nearly vertical banks and was at a depth of 4-10 feet. Photos of the channel and overbank areas show that the channel is cutting into the overbank area around bends but would need to cut several hundred feet of earth before it would migrate to another wash location.

The three channels evaluated are a typical representation of the washes within the offsite area and should provide a good estimate of the conditions within the offsite watershed. In addition, the northern portion of the watershed (basins M10, M11, and M12) are located in more mountainous regions that tend to have more defined channels that are carved through bed rock and are less prone to migration. Based on the investigation conducted and the imagery available through Google Earth, it is concluded that the basin delineations determined from the USGS topography should provide a reasonable assessment of the flow locations from the offsite watershed.

## B. ONSITE AREA

An onsite evaluation was conducted to determine whether the flow patterns established by the FLO-2D and HEC-RAS models computed for this site are adequate given the site conditions. The evaluation included comparing the 1-foot topography for the site with imagery from Google Earth, historical photographs from USGS, and an onsite walk of the main channel corridors.

### 1. Onsite Channel Breakout Location

Based on a comparison of timeline imagery available from Google Earth and ESRI ArcMap, a flow breakout was found in a channel located in the northwest portion of the site. The breakout location is shown on Figure 7323HYD400A-E, *Onsite Breakout* Area, included in the Appendix. Based on the available timeline imagery of the area, the breakout was determined to have occurred between April 2005 and May of 2009. The breakout channel is approximately 80 foot wide and varies in depth from 3 to 10 feet. A 3-D rendering of the breakout location was created from the 1-foot topography DTM surface for the site and is shown on Figures 7323HYD403A and B.

The nearly shear and perfectly straight cut of the channel suggest that the channel may have been man-made and not the product of a storm event or series of storm events. Heavy equipment tracks were found within the breakout channel however, the tracks were too new to have been the cause of the channel. Although the tracks were too new to be the cause of the breakout, there appears to be evidence of heavy equipment being operated in the area. The breakout channel occurs at the location within the sharp bend that would be expected if a breakout was to occur. Due to the location of the breakout and the lack of any conclusive physical evidence of it being man-made, it is assumed to be the

product of flooding events for this report. Detailed photos are included in the Photo Documentation Exhibit within the Appendix.

The finding of this breakout channel has spurred the onsite and offsite evaluation conducted with this report to determine if the same situation could occur at other locations. The results determined are reported below.

**2. Historical Photo Analysis**

Historical photos available from Google Earth and USGS were used to determine if the onsite channels have shown tendencies for migration in the past. Imagery for the area is limited, but photos were found from 1948, 1996, 2005, 2009, and 2010. In addition, the USGS quad map dated 1983, established blue streamlines indicating the major flow corridors. These images and maps were used to create a historical document to determine if other breakout areas and lateral migration of the main washes have occurred over the 63 year period of available records. The current location of major flow corridors were delineated based on the most current aerial imagery and the FLO-2D analysis water surface extents based on the 1-foot topography for the site. These current flow corridors were then superimposed over the historical photos and quad maps to determine if the background images show contradictions in the current flow locations. The historical photo document labeled Figure 7323HYD401A-E is included in Appendix.

The conclusions drawn from this analysis are that the major flow corridors within the site today have been, by and large, stable for the last 63 years. Other than the one isolated break out location discussed above, no major discrepancies were found between the location of the major flow corridors on the historical images and the current location of the corridors. There is some evidence that the one breakout location found may have been man-made. However, even if it was caused by storm runoff, the physical conditions found at the breakout location are not observed at other locations within the site.

**3. Overall Onsite Flow Patterns**

The onsite area was walked extensively to determine the characteristics of the main flow corridors and the overland flow areas of the site. Photos and notes taken during the evaluations are included in the Photo Documentation Exhibits within the Appendix. The overall flow patterns determined for the site are shown on Figure 7323HYD402 and discussed below.

***Major Flow Corridors:*** Based on the site walk, historic photo evaluation and the FLO-2D analysis completed for the site, the major flow corridors are shown in light blue on Figure 7323 HYD402. For these areas, it is concluded that the peak flows, flow depths, and velocities determined in the analysis completed with this report, are suitable for use in design of the site. These areas may be subject to isolated

breakout flows and lateral migration of the washes within the corridor, but for the most part, the FLO-2D and HEC-RAS analyses give accurate representation of the flow conditions during the design events determined in this report. An erosion and scour analysis will need to be completed to determine if it is feasible to locate heliostats within portions of the Major Flow Corridors. In general, it is expected that there will be areas of high flow depths and velocities within these areas that will not be suitable for heliostat placement.

Some of the bank locations along the Major Flow Corridors are nearly vertical. These areas pose a concern to heliostats adjacent to them due to the continued cutting of the banks. The banks show a tendency to be undermined by flows which cause pieces of the bank to break off and fall into the channel. This condition is shown within the Photo Documentation Exhibit within the Appendix. It is recommended that the geotechnical engineer perform bank stability analysis over the vertical sections of the banks to determine an adequate buffer zone between the bank and the heliostats.

***Breakout & Lateral Migration Areas:*** These areas are shown in green on Figure 7323HYD402 and are located adjacent to main flow corridors. They consist of areas that show previous flow breakout locations from the main corridors. They also include areas that are adjacent to main corridors and subject to lateral migration of flows due to lack of topographic relief. Due to the potential of breakout flows and lateral migration of channels into these areas, the peak flows, flow depths, and velocities determined in the FLO-2D and HEC-RAS analyses may not be accurate for these areas. The flows determined by FLO-2D for these areas assume the current terrain and does not predict any physical alteration of the existing terrain. Therefore, the flows used for determination of erosion and scour potential of these areas may need to be conservatively based on the flows upstream of these areas prior to any breakouts or flow splits. Those flows can be determined from the HEC-1 and FLO-2D analysis completed with this report.

These areas need to be studied in detail to determine the best alternative for mitigation. It may be feasible that heliostats can be driven to below the potential scour and erosion depths. It may also be shown that bank stabilization of the Major Flow Corridors adjacent to these areas may reduce the heliostat burial depths to a point of being a more feasible option. A third option would be to not place heliostats in some of the areas shown to have the highest scour potential. All of these alternatives will be evaluated with the scour and erosion analysis and site mitigation alternatives analysis that will be completed for the site.

***Channel Head Cut Areas:*** These areas extend along a north/south axis near the middle of the site. For the most part, the site's predominant downgrade direction

is west to east until this location is reached. Large portions of the western part of the site consist of flows traveling as sheet flow or within very shallow swales. When the sheet flow gets to the middle of the site, the downgrade direction turns either north or south due to the site being slightly elevated to the east. This turning has caused flows that have been traveling from the upstream area as sheet flow, to be concentrated back into channel flow as they are now routed to the north and to the south. The channels formed during this process are considered part of the Major Flow Corridor system. The small channels formed around the main channel are considered within the Channel Head Cut Area and are shown in orange color on Figure 7323HYD402. As the sheet flow is collected along the north/south running channels, head cutting is occurring where the flows meet the channel banks. Over time, this head cutting has proceeded in the upstream direction to form small channels that lead into the larger channel. Due to this, special attention needs to be paid to this area to understand the rate of head cutting and the extent of the newly formed channels. Based on the Historic Photo exhibit, the main north and south channels have not extended much past the current location in the last 63 years. However, the smaller head cut channels could be growing wider and deeper over time. Due to the limited resolution of the 1948 photograph, it is hard to determine the change in length or size of the head cut channels.

In general it is assumed that the erosion and scour analysis will show that these areas are adequate for heliostat placement with proper burial depths. Alternative mitigation measures may be available to reduce the rate of head cutting or stop it all together. These mitigation alternatives will be explored in future reports and may have a substantial benefit in reducing the burial depths of heliostats in these areas.

## V. REFERENCES

Riverside County Flood Control and Water Conservation District (RFCD&WCD) Hydrology Manual; April 1978.

Los Angeles District Pre-Processor to HEC-1 (LAPRE-1) Version 2.0 User's Manual; May 2005

National Oceanic and Atmospheric Administration (NOAA) Atlas 14 Volume 1 Version 4.0: Semiarid Southwest; 2006

National Resources Conservation Service (NRCS) Technical Release 55 (TR-55) Urban Hydrology for Small Watersheds; June 1986

National Resources Conservation Service (NRCS) State Soil Geographic (STATSGO) Database; California General Soil Survey; 2006

Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map Database,

California Department of Water Resources (DWR) 100-Year Floodplains Based Upon Best Available Data; 2009.

# APPENDICES:

**List of Existing Condition Hydrologic and Hydraulic Analysis Figures:**

1. 7323HYD100- Existing Condition Basin Map
2. 7323HYD101- Overall Soils Exhibit
3. 7323HYD102- Onsite Soils Exhibit
4. 7323HYD200- FLO-2D Depth Map, 24-Hour, 100-Year
5. 7323HYD201- FLO-2D Velocity Map, 24-Hour, 100-Year
6. 7323HYD202- FLO-2D Depth Map, 24-Hour, 25-Year
7. 7323HYD203- FLO-2D Velocity Map, 24-Hour, 25-Year
8. 7323HYD204- FLO-2D Depth Map, 24-Hour, 10-Year
9. 7323HYD205- FLO-2D Velocity Map, 24-Hour, 10-Year
10. 7323HYD206- FLO-2D Depth Map, 24-Hour, 5-Year
11. 7323HYD207- FLO-2D Velocity Map, 24-Hour, 5-Year
12. 7323HYD208- FLO-2D Depth Map, 24-Hour, 2-Year
13. 7323HYD209- FLO-2D Velocity Map, 24-Hour, 2-Year
14. 7323HYD300A- HEC-RAS Exhibit 100-Year
15. 7323HYD300B- HEC-RAS Exhibit 25-Year
16. 7323HYD300C- HEC-RAS Exhibit 10-Year
17. 7323HYD300D- HEC-RAS Exhibit 5-Year
18. 7323HYD300E- HEC-RAS Exhibit 2-Year
19. 7323HYD400A- Onsite Breakout Area
20. 7323HYD400B- Onsite Breakout Area
21. 7323HYD400C- Onsite Breakout Area
22. 7323HYD400D- Onsite Breakout Area
23. 7323HYD400E- Onsite Breakout Area
24. 7323HYD401A- Historical Photograph Exhibit 2010

25. 7323HYD401B- Historical Photograph Exhibit 2009
26. 7323HYD401C- Historical Photograph Exhibit 1996
27. 7323HYD401D- Historical Photograph Exhibit 1983 Quad Topo Map
28. 7323HYD401E- Historical Photograph Exhibit 1948
29. 7323HYD402- Onsite Flow Patterns
30. 7323HYD403A- 3-D Representation of Breakout Area – Looking Northwest
31. 7323HYD403B- 3-D Representation of Breakout Area – Looking Southeast
32. 7323HYD404-DWR Awareness Floodplain Map
33. Photo Documentation and Exhibits (Areas 1 through 7)

**List of Existing Condition Hydrologic and Hydraulic Analysis Appendices:**

**A. HEC-1 Model Input/Output & LAPRE-1 Input/Output**

i. 24-Hour, 100-Year Storm
ii. 24-Hour, 25-Year Storm
iii. 24-Hour, 10-Year Storm
iv. 24-Hour, 5-Year Storm
v. 24-Hour, 2-Year Storm

**B. Rainfall Information / References**

i. Rainfall Depths Summary Sheet
ii. Point Precipitation frequency estimate tabulation sheet (from NOAA Atlas 14)
iii. Referenced Depth-Area-Duration Curves (DARF) from Riverside County Hydrology Manual

**C. Curve Number Calculations / References**

i. Curve Number Calculation for Soils
ii. Composite Curve Number Calculation for Basins
iii. Referenced Table 2-2d from TR-55
iv. Referenced Plate E-6.1 from Riverside County Hydrology Manual
v. Referenced Soil Type Component Legend from USDA NRCS General Soil Survey
vi. Referenced Soil Water Feature Tables from USDA NRCS General Soil Survey

**D. Basin Lag Time Calculations**

**E. FLO-2D Analysis**

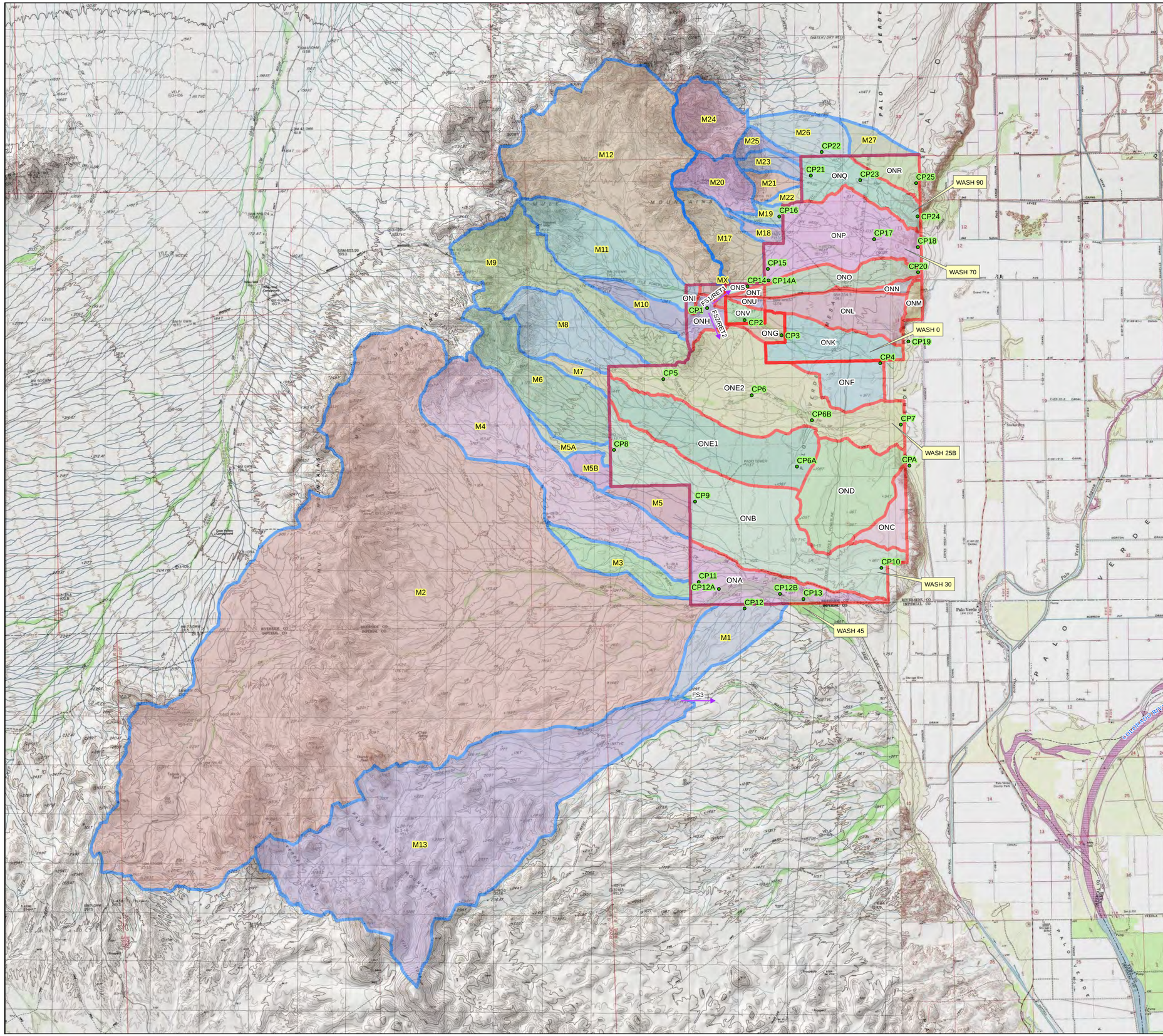
i. 24-Hour, 100-Year SUMMARY.OUT File
ii. 24-Hour, 25-Year SUMMARY.OUT File
iii. 24-Hour, 10-Year SUMMARY.OUT File
iv. 24-Hour, 5-Year SUMMARY.OUT File
v. 24-Hour, 2-Year SUMMARY.OUT File
vi. 24-Hour, 100-Year HYCROSS.OUT File
vii. 24-Hour, 25-Year HYCROSS.OUT File
viii. 24-Hour, 10-Year HYCROSS.OUT File
ix. 24-Hour, 5-Year HYCROSS.OUT File
x. 24-Hour, 2-Year HYCROSS.OUT File

**F. HEC-RAS Analysis**

i. HEC-RAS report 24-Hour, 100-Year Storm
ii. HEC-RAS report 24-Hour, 25-Year Storm

iii. HEC-RAS report 24-Hour, 10-Year Storm
iv. HEC-RAS report 24-Hour, 5-Year Storm
v. HEC-RAS report 24-Hour, 2-Year Storm
vi. HEC-RAS Input

# FIGURES:




| Basin Label | Area (sq. mi.) | 24-Hr Q100 (cfs) | 24-Hr Q25 (cfs) | 24-Hr Q10 (cfs) | 24-Hr Q5 (cfs) | 24-Hr Q2 (cfs) |
|---|---|---|---|---|---|---|
| **OFFSITE BASINS** | | | | | | |
| M1 | 0.76 | 162 | 98 | 63 | 40 | 15 |
| M2 | 24.30 | 4,520 | 2,934 | 2,021 | 1,410 | 697 |
| M3 | 0.57 | 125 | 77 | 50 | 33 | 13 |
| M4 | 2.71 | 598 | 389 | 268 | 186 | 91 |
| M5 | 0.39 | 77 | 45 | 27 | 17 | 5 |
| M5A | 0.17 | 46 | 30 | 22 | 15 | 8 |
| M5B | 0.18 | 49 | 33 | 23 | 17 | 9 |
| M6 | 1.32 | 316 | 204 | 140 | 96 | 46 |
| M7 | 0.16 | 35 | 21 | 14 | 9 | 3 |
| M8 | 1.04 | 265 | 175 | 122 | 86 | 44 |
| M9 | 1.80 | 439 | 289 | 203 | 143 | 73 |
| M10 | 0.38 | 85 | 53 | 34 | 22 | 9 |
| M11 | 1.30 | 300 | 191 | 128 | 87 | 39 |
| M12 | 3.98 | 954 | 634 | 446 | 318 | 165 |
| M13 | 7.18 | 1,607 | 1,075 | 764 | 550 | 294 |
| MX | 0.01 | 3 | 2 | 2 | 1 | 1 |
| M17 | 0.67 | 189 | 124 | 86 | 59 | 30 |
| M18 | 0.12 | 34 | 22 | 15 | 10 | 5 |
| M19 | 0.11 | 31 | 20 | 14 | 9 | 5 |
| M20 | 0.49 | 155 | 107 | 79 | 58 | 34 |
| M21 | 0.17 | 47 | 30 | 21 | 14 | 7 |
| M22 | 0.07 | 18 | 12 | 8 | 5 | 2 |
| M23 | 0.18 | 49 | 31 | 21 | 14 | 7 |
| M24 | 0.66 | 210 | 147 | 108 | 80 | 48 |
| M25 | 0.15 | 43 | 29 | 20 | 14 | 7 |
| M26 | 0.53 | 120 | 72 | 45 | 27 | 10 |
| M27 | 0.22 | 45 | 25 | 15 | 8 | 2 |
| **ONSITE BASINS** | | | | | | |
| ONA | 0.87 | 176 | 104 | 65 | 40 | 14 |
| ONB | 2.83 | 459 | 257 | 151 | 86 | 21 |
| ONC | 0.30 | 55 | 31 | 18 | 10 | 2 |
| OND | 1.34 | 234 | 131 | 76 | 43 | 9 |
| ONE1 | 1.61 | 284 | 162 | 97 | 56 | 15 |
| ONE2 | 2.59 | 444 | 254 | 152 | 89 | 25 |
| ONF | 0.50 | 91 | 51 | 30 | 17 | 4 |
| ONG | 0.14 | 26 | 15 | 9 | 5 | 1 |
| ONH | 0.20 | 49 | 31 | 21 | 14 | 6 |
| ONI | 0.05 | 12 | 7 | 5 | 3 | 1 |
| ONJ | 0.07 | 16 | 10 | 7 | 4 | 2 |
| ONK | 0.68 | 119 | 67 | 39 | 22 | 5 |
| ONL | 0.73 | 146 | 83 | 48 | 27 | 7 |
| ONM | 0.10 | 21 | 12 | 7 | 4 | 1 |
| ONN | 0.08 | 16 | 9 | 6 | 3 | 1 |
| ONO | 0.55 | 108 | 61 | 36 | 20 | 5 |
| ONP | 1.47 | 289 | 163 | 95 | 52 | 13 |
| ONQ | 0.66 | 132 | 74 | 44 | 24 | 6 |
| ONR | 0.27 | 56 | 32 | 19 | 11 | 3 |
| ONS | 0.04 | 8 | 5 | 3 | 2 | 0 |
| ONT | 0.04 | 9 | 5 | 3 | 2 | 0 |
| ONU | 0.05 | 11 | 6 | 4 | 2 | 1 |
| ONV | 0.12 | 23 | 13 | 8 | 4 | 1 |
| **DIVERSIONS, ROUTES, AND STORAGE CARDS (REFER TO HEC-1 RUN)** | | | | | | |
| FS1 | -- | 65 | 38 | 22 | 13 | 3 |
| DV1 | -- | 1,341 | 880 | 613 | 432 | 218 |
| FS2 | -- | 671 | 438 | 370 | 257 | 157 |
| DV2 | -- | 671 | 442 | 244 | 174 | 61 |
| FS3 | -- | 803 | 538 | 382 | 275 | 147 |
| DV3 | -- | 803 | 538 | 382 | 275 | 147 |
| RET1 | -- | 65 | 38 | 22 | 13 | 3 |
| RET2 | -- | 671 | 438 | 370 | 257 | 157 |
| RMONU | -- | 11 | 6 | 4 | 2 | 1 |
| RMONT | -- | 8 | 5 | 3 | 2 | 1 |
| RM20 | -- | 154 | 106 | 14 | 0 | 0 |
| RM24 | -- | 210 | 146 | 108 | 80 | 48 |
| RM27 | -- | 45 | 25 | 15 | 8 | 2 |
| RCP17 | -- | 482 | 318 | 141 | 94 | 43 |
| RCP23 | -- | 481 | 316 | 218 | 150 | 77 |
| STOR1 | -- | 154 | 106 | 14 | 0 | 0 |
| **HYDROGRAPH COMBINATION POINTS** | | | | | | |
| CPA | 1.64 | 288 | 161 | 94 | 53 | 11 |
| CP1 | 5.98 | 1,406 | 918 | 636 | 444 | 221 |
| CP2 | 6.10 | 693 | 454 | 251 | 178 | 62 |
| CP3 | 6.24 | 718 | 469 | 259 | 183 | 63 |
| CP4 | 7.42 | 924 | 584 | 326 | 221 | 71 |
| CP5 | 2.84 | 694 | 457 | 320 | 225 | 114 |
| CP6 | 2.84 | 1,365 | 896 | 689 | 482 | 271 |
| CP6A | 1.77 | 316 | 181 | 108 | 63 | 18 |
| CP6B | 4.61 | 1,671 | 1,069 | 793 | 542 | 286 |
| CP7 | 7.20 | 2,100 | 1,313 | 937 | 624 | 307 |
| CP8 | 1.67 | 410 | 267 | 184 | 128 | 63 |
| CP9 | 2.06 | 487 | 312 | 212 | 144 | 67 |
| CP10 | 4.89 | 918 | 549 | 347 | 218 | 81 |
| CP11 | 3.28 | 721 | 464 | 317 | 218 | 104 |
| CP12 | 7.94 | 960 | 632 | 442 | 312 | 161 |
| CP12A | 27.58 | 5,192 | 3,359 | 2,309 | 1,605 | 789 |
| CP12B | 35.52 | 6,070 | 3,934 | 2,706 | 1,883 | 928 |
| CP13 | 36.39 | 6,232 | 4,026 | 2,764 | 1,917 | 940 |
| CP14 | 0.01 | 69 | 40 | 24 | 14 | 4 |
| CP14A | 0.05 | 77 | 45 | 27 | 16 | 4 |
| CP15 | 0.72 | 265 | 169 | 112 | 74 | 34 |
| CP16 | 0.60 | 184 | 125 | 16 | 9 | 5 |
| CP17 | 1.44 | 483 | 314 | 141 | 94 | 43 |
| CP18 | 2.91 | 760 | 471 | 230 | 141 | 54 |
| CP19 | 0.78 | 155 | 87 | 51 | 27 | 7 |
| CP20 | 0.59 | 116 | 65 | 38 | 20 | 5 |
| CP21 | 0.57 | 158 | 102 | 70 | 47 | 23 |
| CP22 | 1.19 | 329 | 218 | 152 | 106 | 57 |
| CP23 | 1.76 | 482 | 316 | 218 | 151 | 77 |
| CP24 | 2.42 | 612 | 389 | 261 | 174 | 83 |
| CP25 | 0.49 | 99 | 56 | 32 | 17 | 4 |

| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 7/5/11 | RV | Added Q divert arrows per Bechtel comments. |
| | 6/29/11 | RV | Rev. hydrology diversion/combining per latest FLO2D flows at x-sections. |
| | 6/11/11 | RV | Added additional aug. area offsite/onsite basins per topo. Updated map to 1" = 1,450' from topo. Includes additional parcel per TR 6/10/11. |

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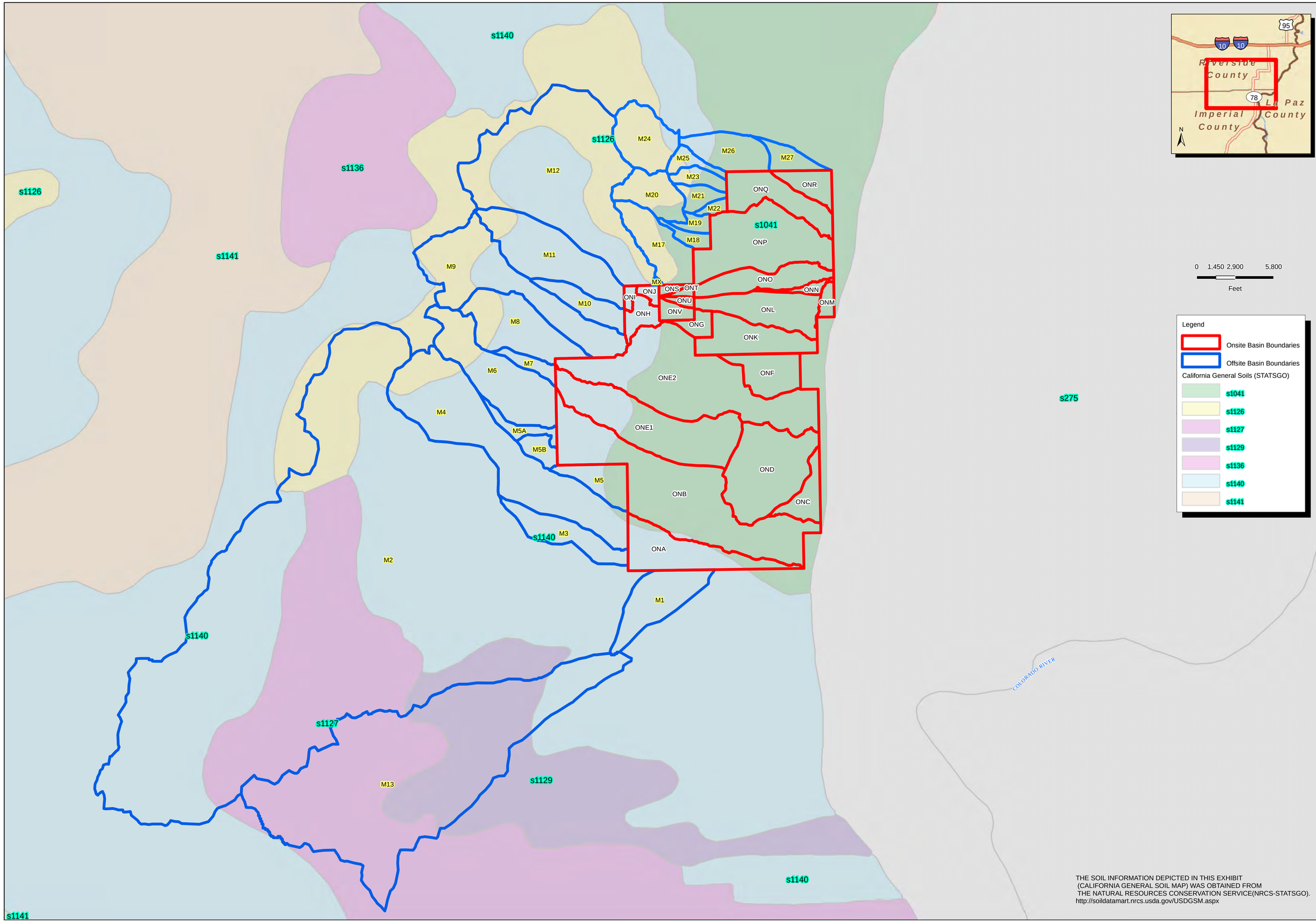
# DRAINAGE BASIN EXHIBIT

# RIO MESA SOLAR

PROJECT NO. 7323
DRAWN BY: RV/LL
DATE 7/5/2011
SCALE: 1 " = 3,000 '

SHEET
7323HYD100

DATE: 7/5/2011-File: \\vtnnv.com\ds\hydrology\7323-BlythePreliminary Site Investigation\GIS\MXD\7323-BasinExhibit.mxd By: rauh




THE SOIL INFORMATION DEPICTED IN THIS EXHIBIT (CALIFORNIA GENERAL SOIL MAP) WAS OBTAINED FROM THE NATURAL RESOURCES CONSERVATION SERVICE(NRCS-STATSGO). http://soildatamart.nrcs.usda.gov/USDGSM.aspx

N W E S

| REV. | DATE | BY | REVISION |
|---|---|---|---|
| 2 | 6/30/11 | RV | Show soil symbol (color) legend per Bechtel. |
| 1 | 6/11/11 | RV | Updated fig. to depict aug. area onsite/offsite basins |

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# OVERALL SOILS EXHIBIT

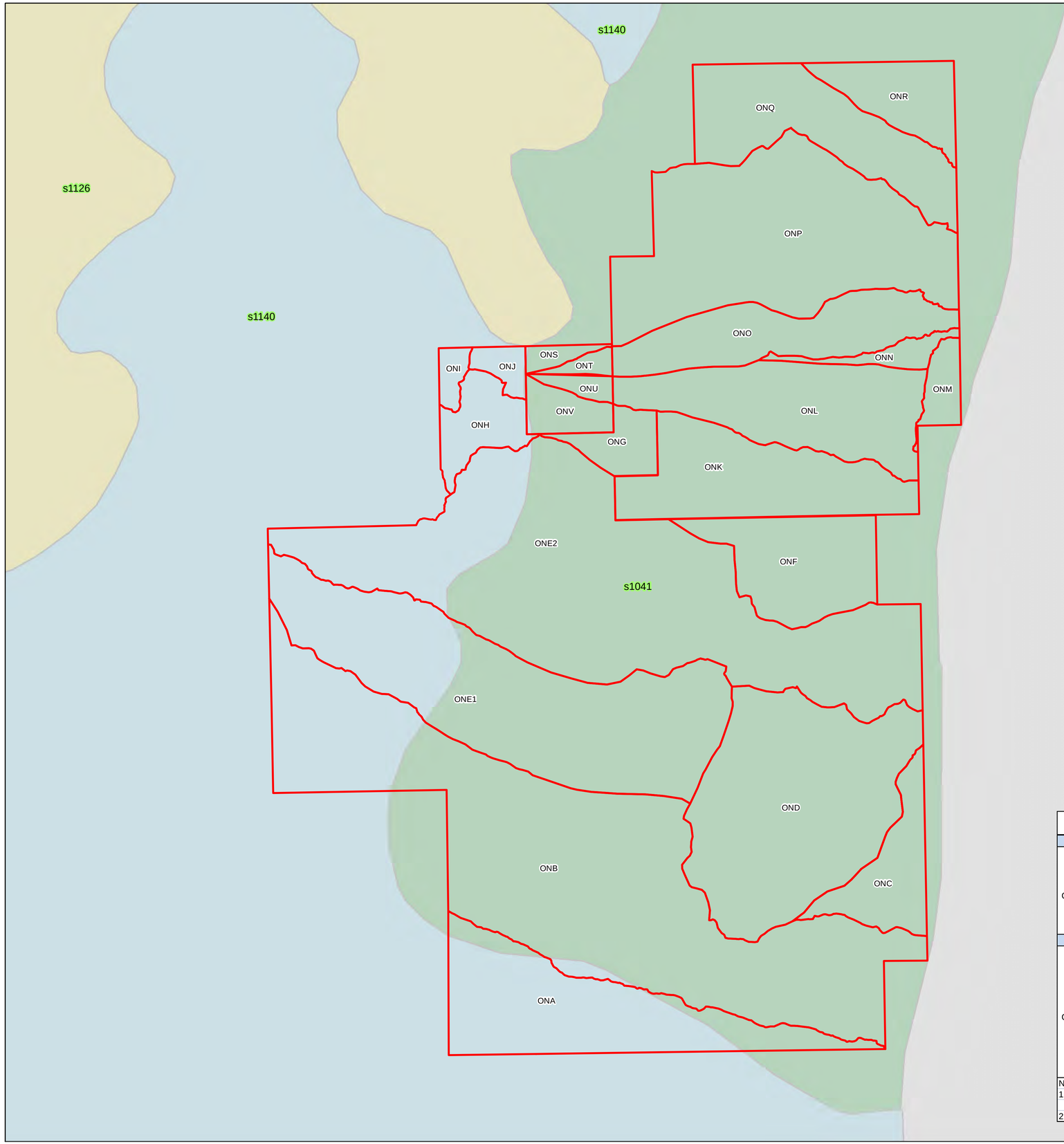
# RIO MESA VERDE SEGS

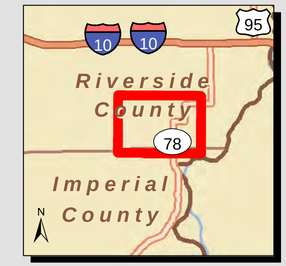
PROJECT NO. 7323
DRAWN BY: RV
DATE 6/30/11
SCALE: 1 " = 3,000 '

SHEET
7323HYD101

DATE: 6/30/2011, File: \\vtnv.com\dfs\hydrology\7323-BrightPreliminary Site Investigation\GIS\MXD\7323-Soils-Overall.mxd, By: rsalv

BSE Document Control Number: 7323HYD101




THE SOIL INFORMATION DEPICTED IN THIS EXHIBIT (CALIFORNIA GENERAL SOIL MAP) WAS OBTAINED FROM THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS-STATSGO).
http://soildatamart.nrcs.usda.gov/USDGSM.aspx

s275

0 750 1,500 3,000
Feet

**Legend**

Onsite Basin Boundaries

**California General Soils (STATSGO)**

s1041

s1126

s1140

| Soil Map Symbol | Soil Map Name | Composition % | Hydrologic Group | Texture |
|---|---|---|---|---|
| **s1041** | **Rositas-Orita-Carizo-Aco** | -- | -- | -- |
| Sub Components | Carrizo | 18% | A | Gravelly sand |
| | Aco | 28% | B | Sandy loam/Gravelly loamy sand |
| | Orita | 15% | B | Gravelly sandy loam |
| | Badland | 7% | D | Weathered bedrock |
| | Rositas | 19% | A | Fine Sand |
| | Carsitas | 6% | A | Gravelly sand |
| | Chuckwalla | 6% | B | Very gravelly silt loam |
| | Rock Outcrop | 1% | D | Unweathered bedrock |
| **s1140** | **Rillito-Gunsight** | -- | -- | -- |
| Sub Components | Gunsight | 27% | B | Very gravelly sandy loam/Very Gravelly loam |
| | Rillito | 19% | B | Gravelly loam |
| | Chuckwalla | 8% | B | Very gravelly silt loam |
| | Carrizo | 6% | A | Gravelly loamy sand |
| | Beeline | 5% | D | Very gravelly sandy clay |
| | Cipriano | 5% | D | Very gravelly sandy loam |
| | Denure | 5% | B | Gravelly sandy loam |
| | Gilman | 5% | B | Loam |
| | Mohall | 5% | B | Clay loam |
| | Momoli | 5% | B | Gravelly sandy loam |
| | Pinamt | 5% | B | Extremely gravelly sandy loam |
| | Tremant | 5% | B | Gravelly sandy loam |

Notes:
1. Soil information obtained from California / Nevada U.S. General Soils Map (STATSGO) obtained from: http://soildatamart.nrcs.usda.gov/
2. Sub component soil texture is top layer as listed in the "Engineering Properties Report". Texture varies with depth.

N W E S

| REV. | DATE | BY | REVISION |
|---|---|---|---|
| 2 | 6/30/11 | RV | Show soil symbol (color) legend per Bechtel. |
| 1 | 6/11/11 | RV | Fig. revised to depict aug. area onsite/offsite basins. |

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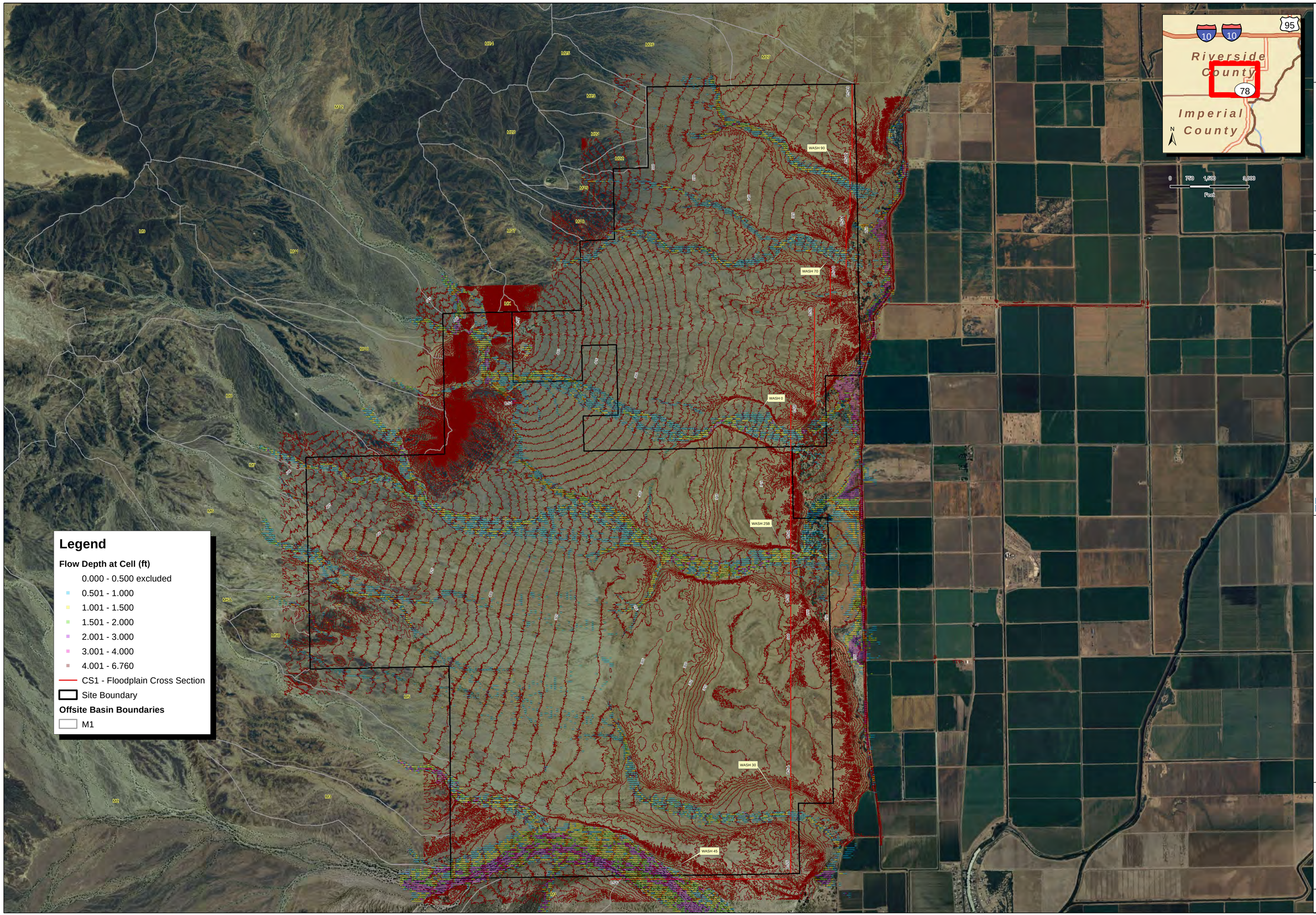
**ONSITE SOILS EXHIBIT**

**RIO MESA VERDE SEGS**

PROJECT NO. 7323
DRAWN BY: RV
DATE: 6/30/11
SCALE: 1 " = 1,500 '

SHEET
**7323HYD102**

DATE: 6/30/2011 File: \\vtmx.com\fs\hydrology\7323-BlythePreliminary Site Investigation\GIS\MXD\7323-Soils_Onsite.mxd By: rauV




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

RIVERSIDE COUNTY, CA

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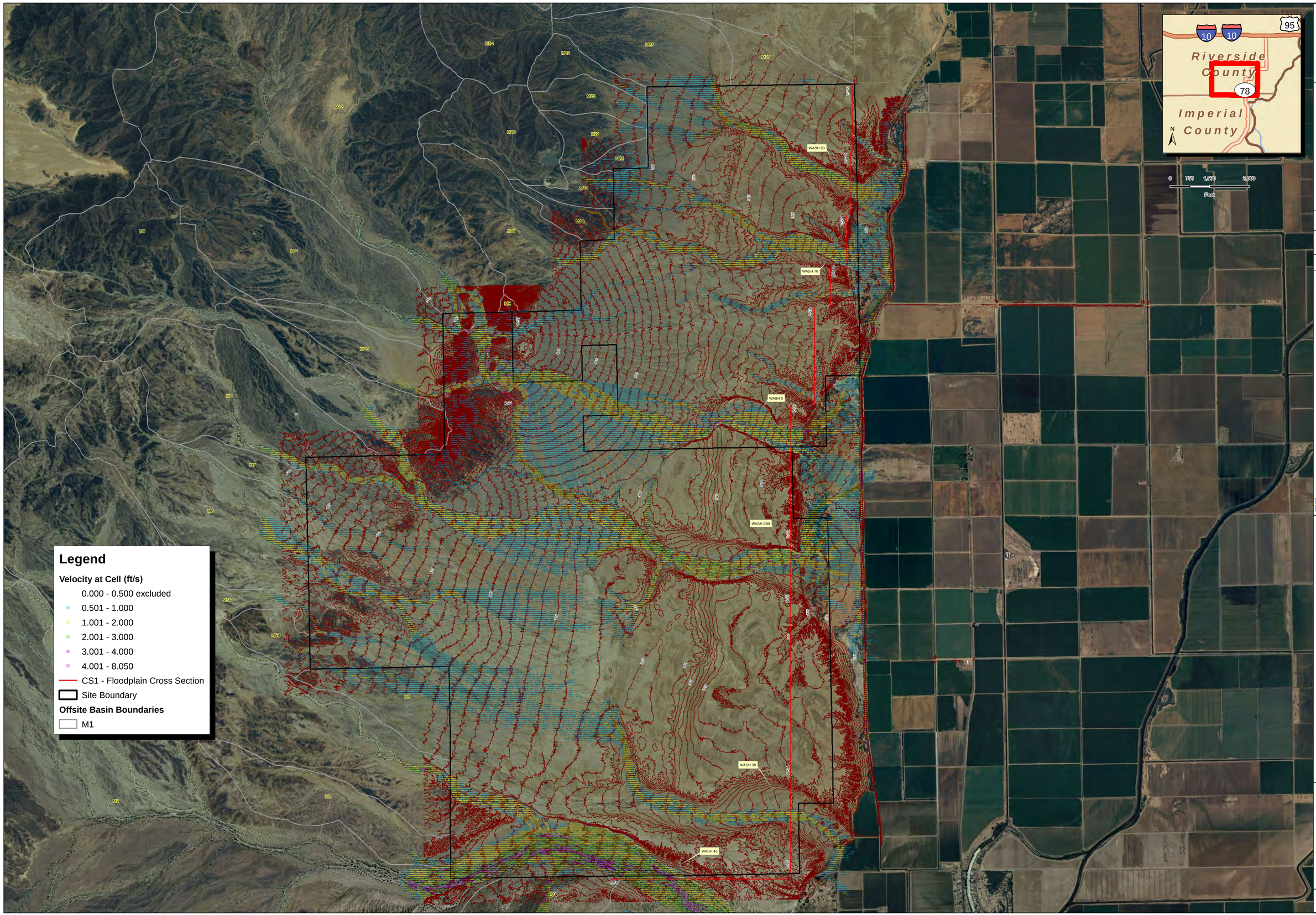
FLO-2D DEPTH MAP
24HR-100YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1" = 1,500 '

SHEET
7323HYD200

DATE: 11/16/2010 File: \\vtnnv.com\dfs\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd By: tenzar




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

RIVERSIDE COUNTY, CA

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FLO-2D VELOCITY MAP
24HR-100YR
EXISTING CONDITION

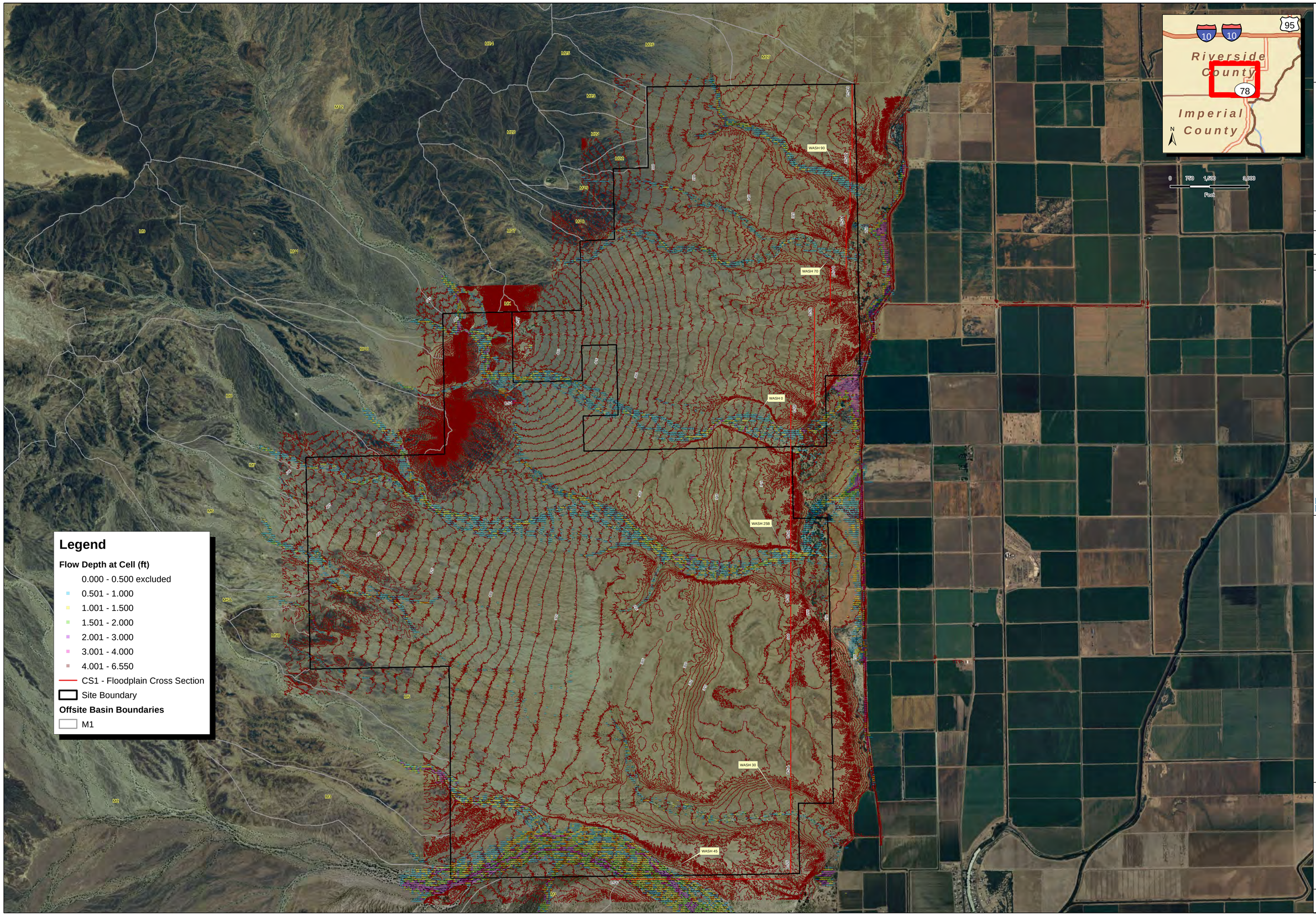
RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD201

DATE: 11/16/2010 File: \\vtnnv.com\dfs\gis\data\VTN.mxd template:36x24_revision_block.mxd By: terrasv

BSE Document Control Number: 7323HYD101




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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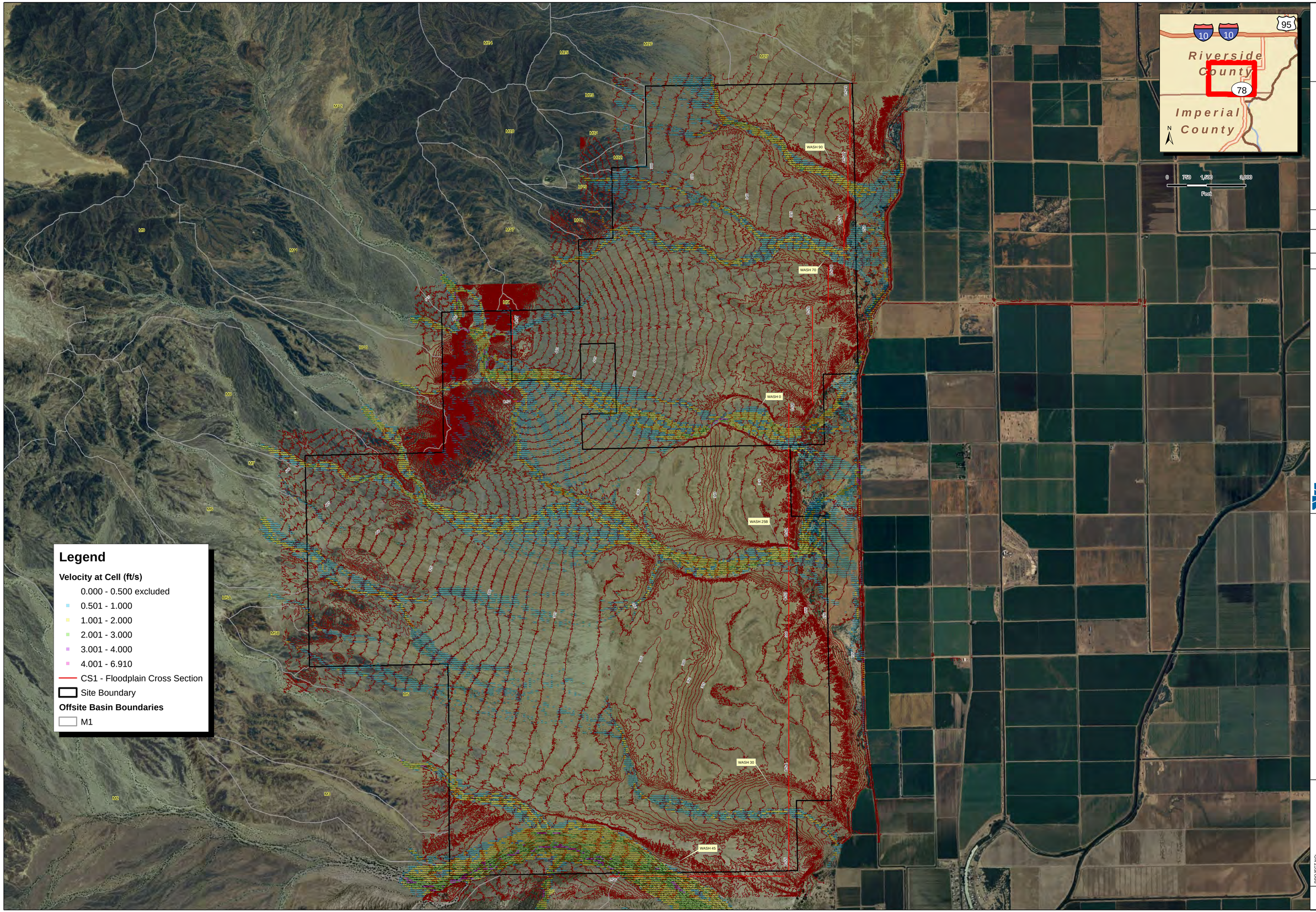
FLO-2D DEPTH MAP
24HR-25YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD202

DATE: 11/18/2010 File: \\vtnnv.com\dfs\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd By: tessar




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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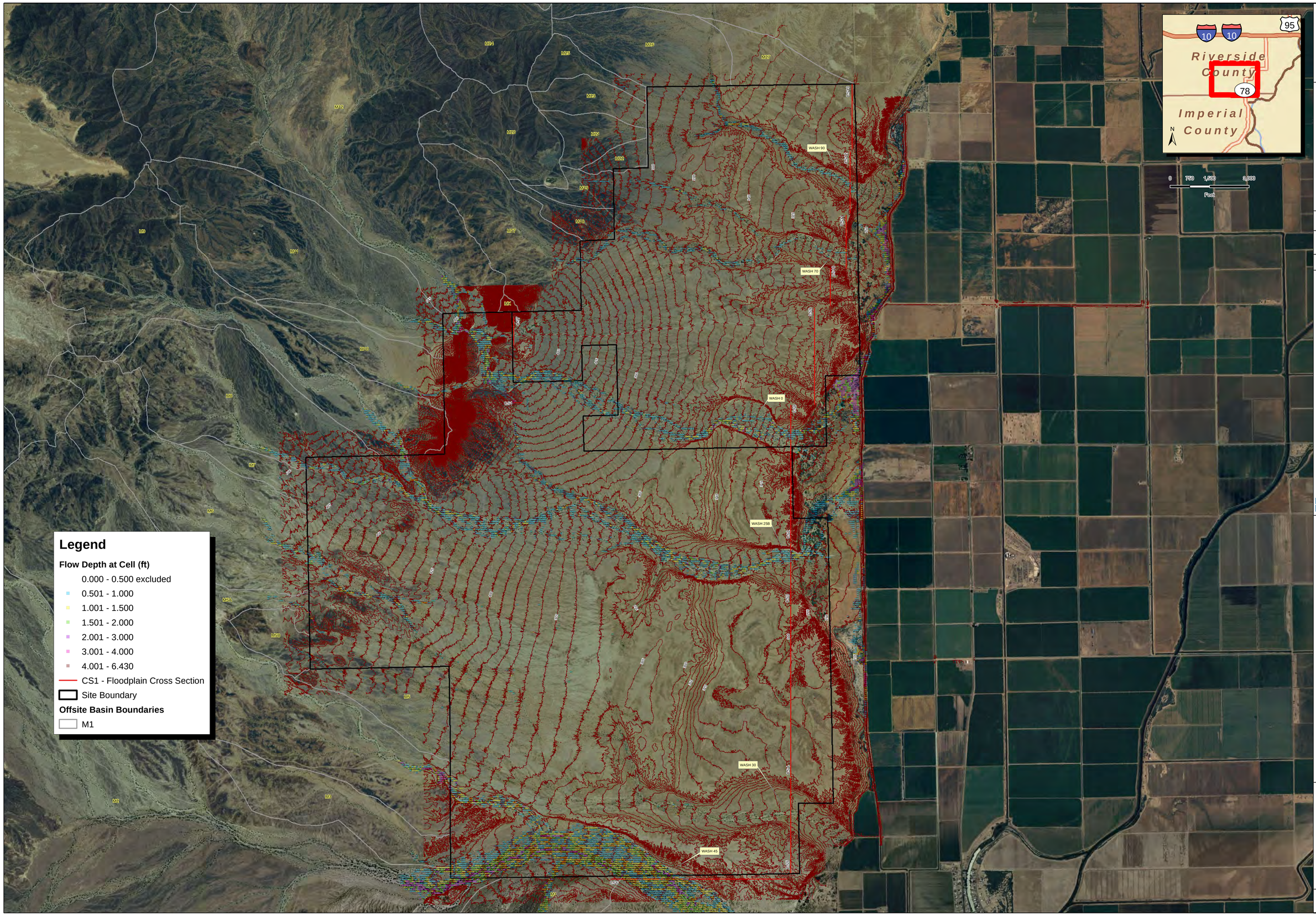
# FLO-2D VELOCITY MAP 24HR-25YR EXISTING CONDITION

# RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD203

DATE: 11/18/2010; File: \\vtnnv.com\fs\gis\data\VTN\mxd\templates\36x24_revision_block.mxd; By: tenesiv




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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# FLO-2D DEPTH MAP 24HR-10YR EXISTING CONDITION

# RIO MESA SOLAR

PROJECT NO: 7323

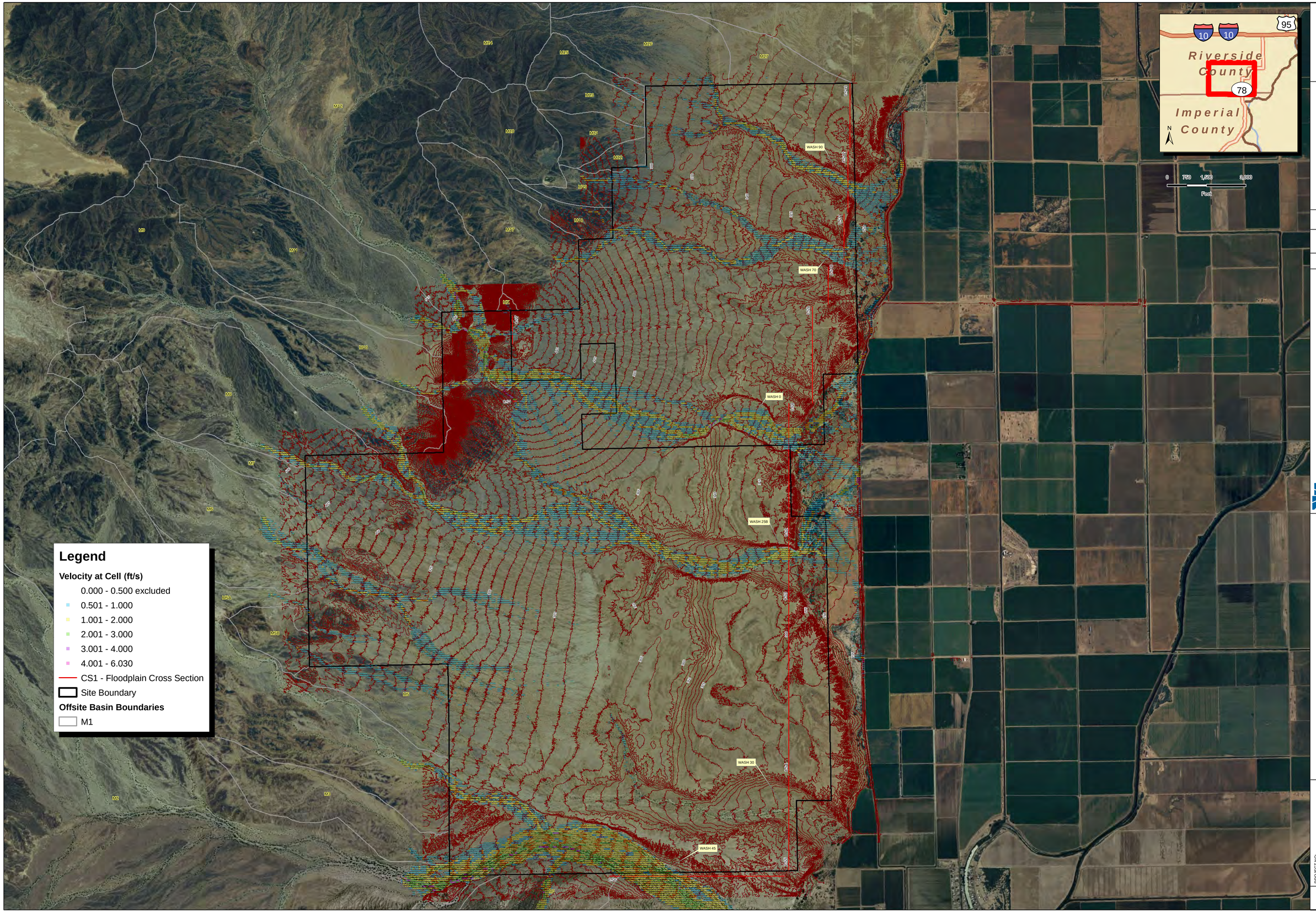
DRAWN BY: SB

DATE: 6/16/2011

SCALE: 1" = 1,500 '

SHEET 7323HYD204

DATE: 11/16/2010 File: \\vtnnv.com\ds\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd By: tetrsav




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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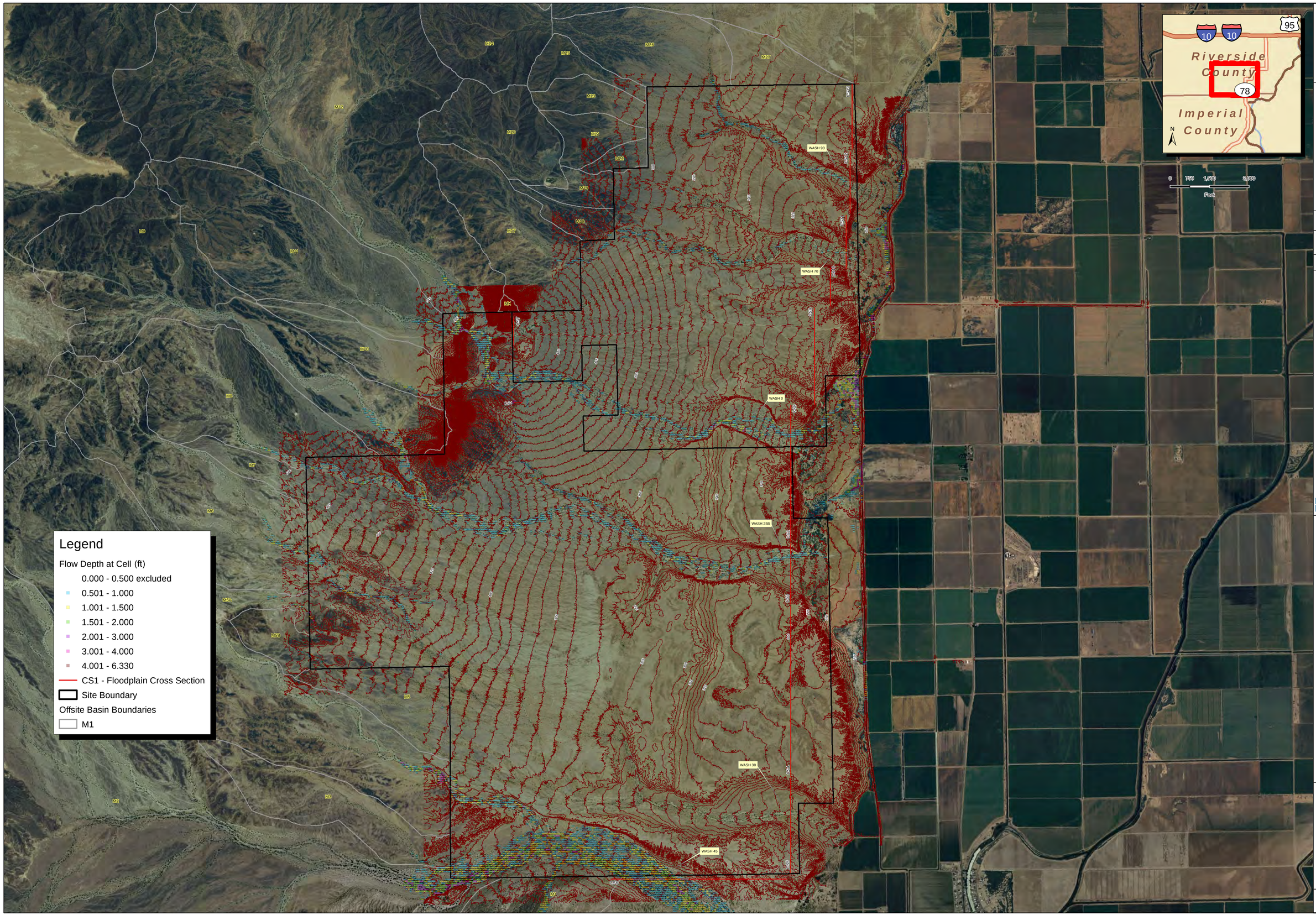
FLO-2D VELOCITY MAP
24HR-10YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD205

DATE: 11/18/2010; File: \\atmx.com\fs\gisdata\VN\mxd\templates\36x24_revision_block.mxd; By: tlewis\r




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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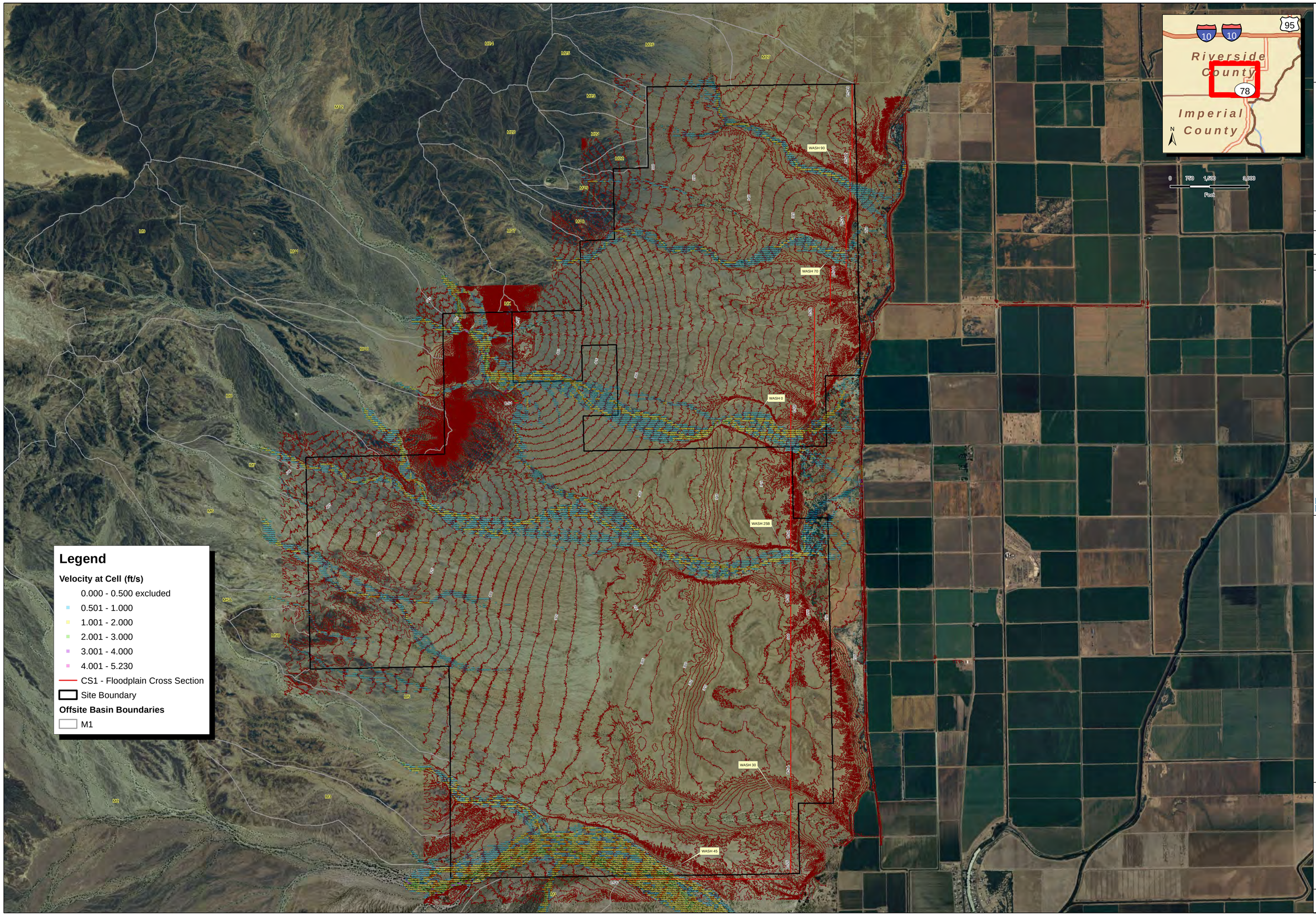
FLO-2D DEPTH MAP
24HR-5YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD206

DATE: 11/16/2010 File: \\vtmx.com\ds\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd By: tessar




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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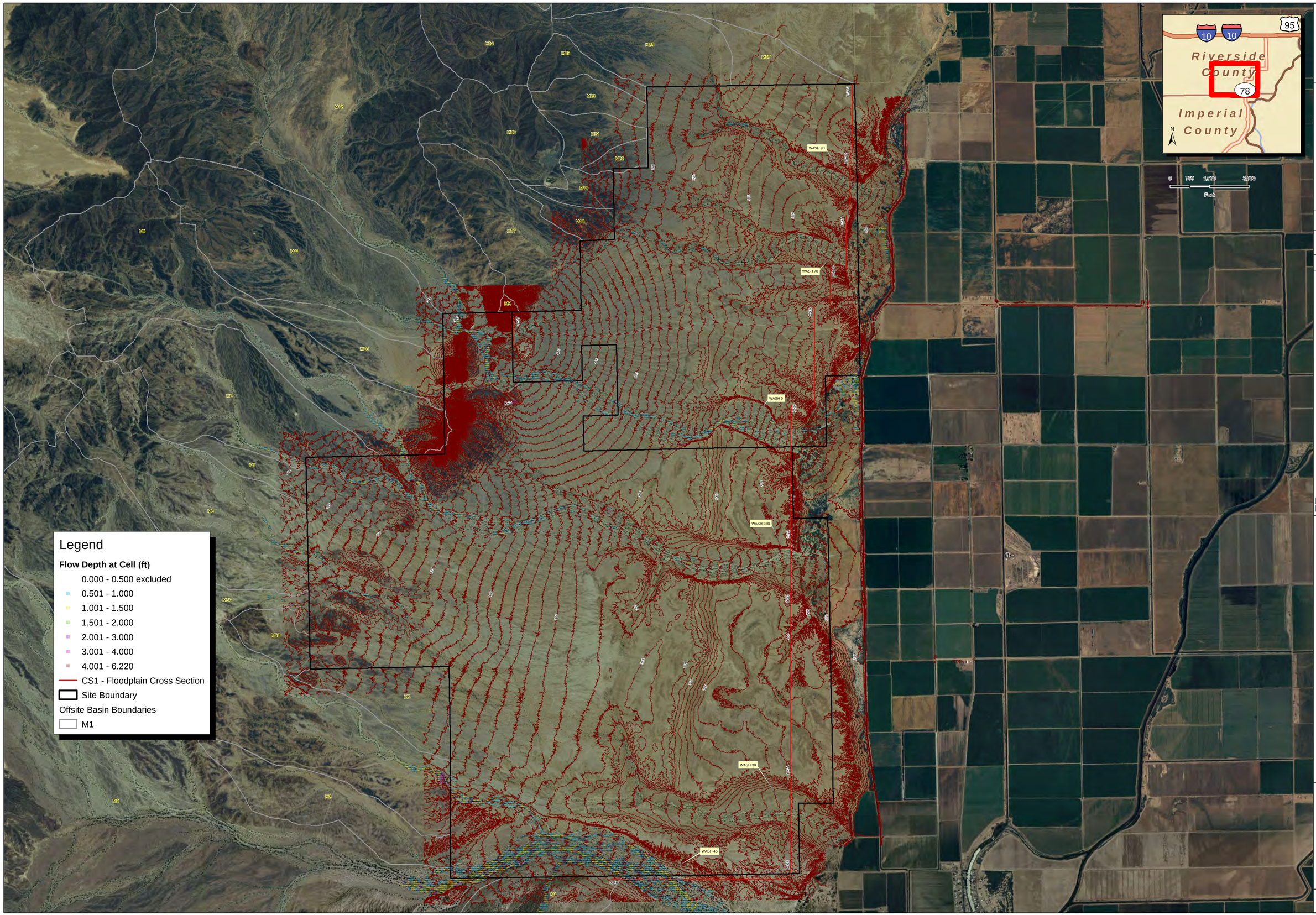
FLO-2D VELOCITY MAP
24HR-5YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD207

DATE: 11/16/2010 File: \\vtnnv.com\ds\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd By: tessar




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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# FLO-2D DEPTH MAP 24HR-2YR EXISTING CONDITION

# RIO MESA SOLAR

PROJECT NO: 7323

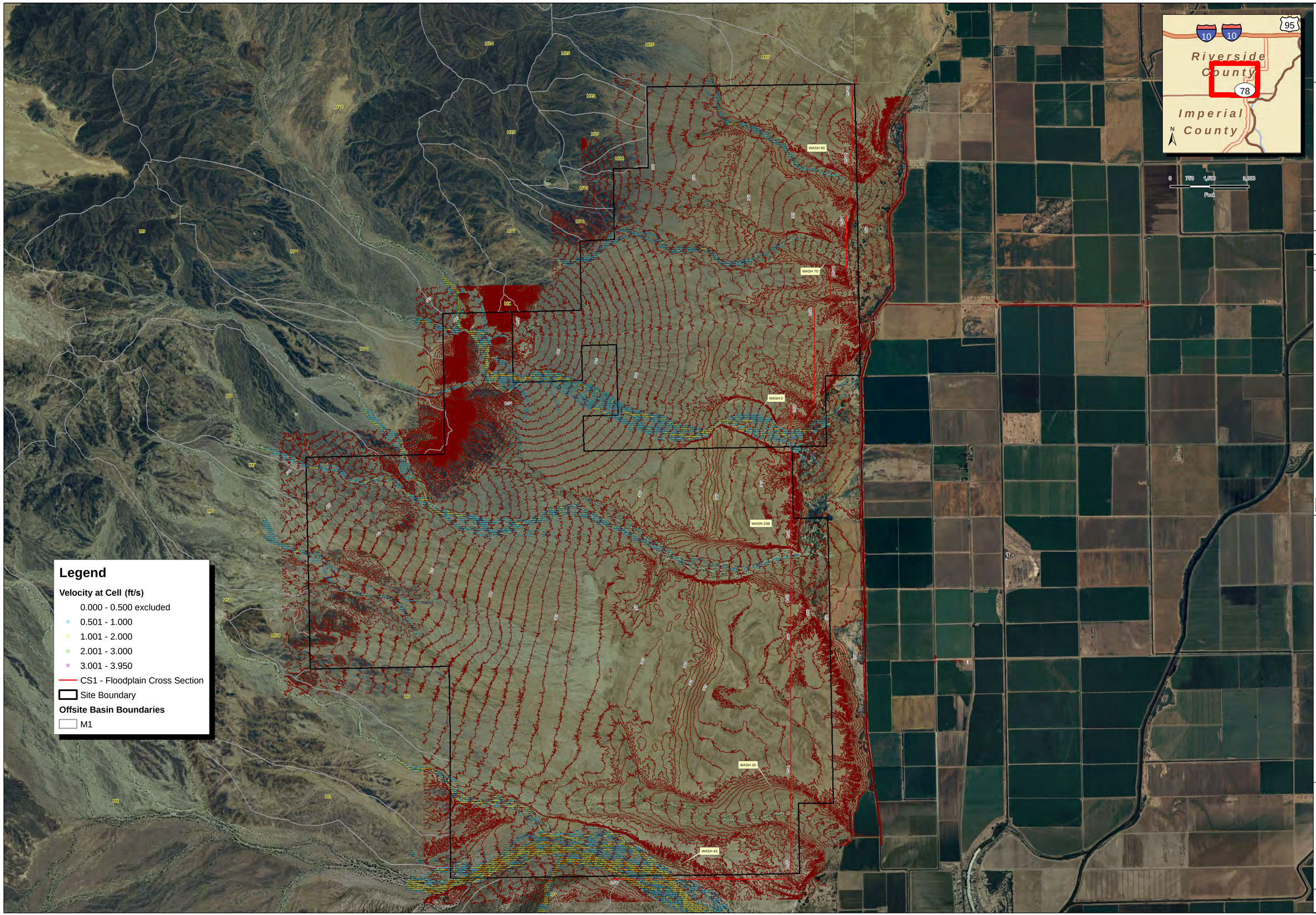
DRAWN BY: SB

DATE: 6/16/2011

SCALE: 1 " = 1,500 '

SHEET 7323HYD208

DATE: 11/16/2010; File: \\vtnnv.com\dfs\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd; By: tetesar




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| | 6/16/11 | SB | Added augmentation area, replaced CS 7 & 8 and added CS 9-13 |

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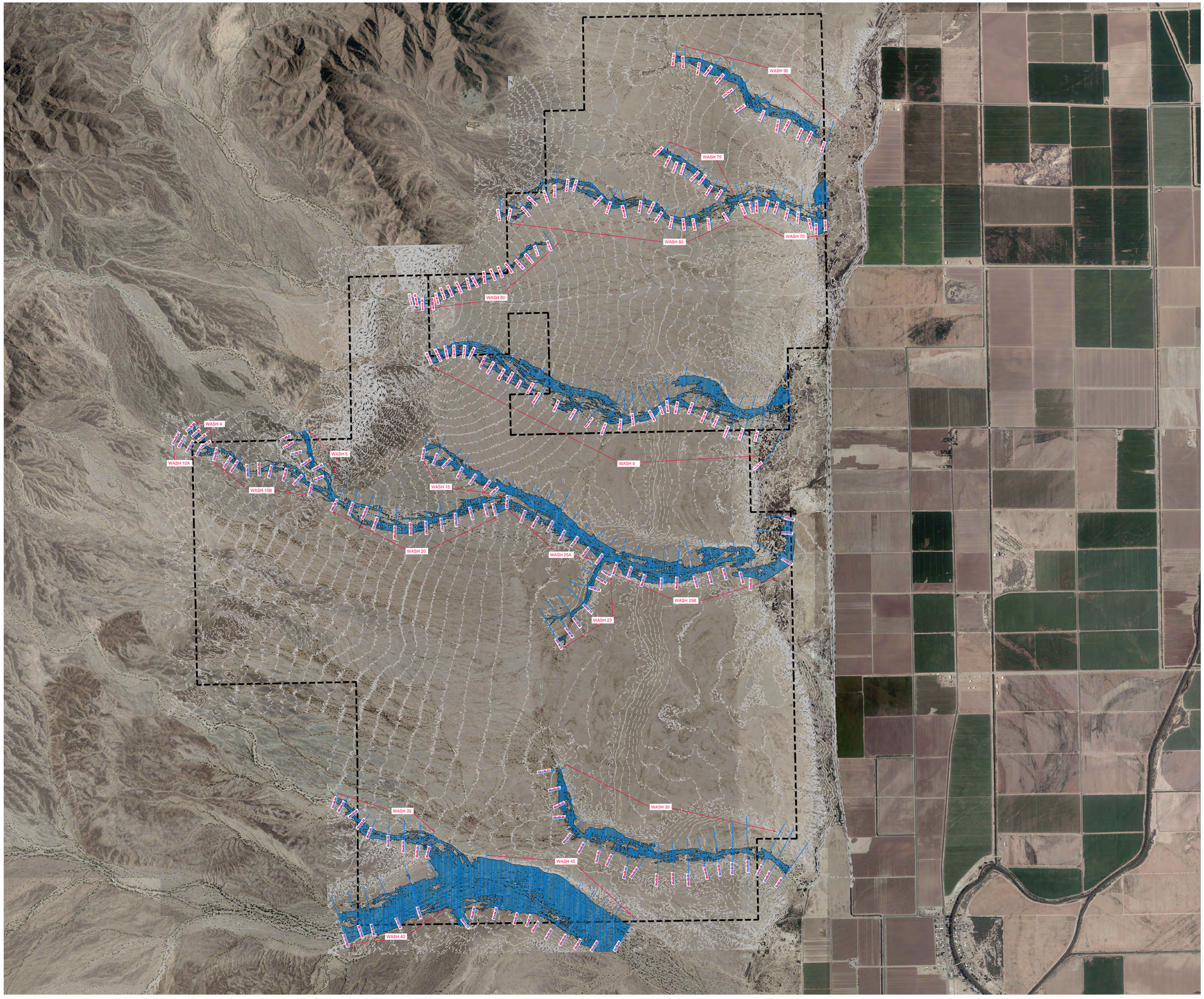
FLO-2D VELOCITY MAP
24HR-2YR
EXISTING CONDITION

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: SB
DATE: 6/16/2011
SCALE: 1 " = 1,500 '

SHEET
7323HYD209

DATE: 11/16/2010; File: \\vtnnv.com\fs\gis\data\V7\Arcmxd\templates\36x24_revision_block.mxd; By: tessar




GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

LEGENDS

- SITE BOUNDARY
- 1+00.00 HEC-RAS RIVER CROSS SECTIONS
- WATER SURFACE EXTEND
- 5' CONTOUR

MAGNETIC

| REV | DATE | BY | REVISION |
|---|---|---|---|

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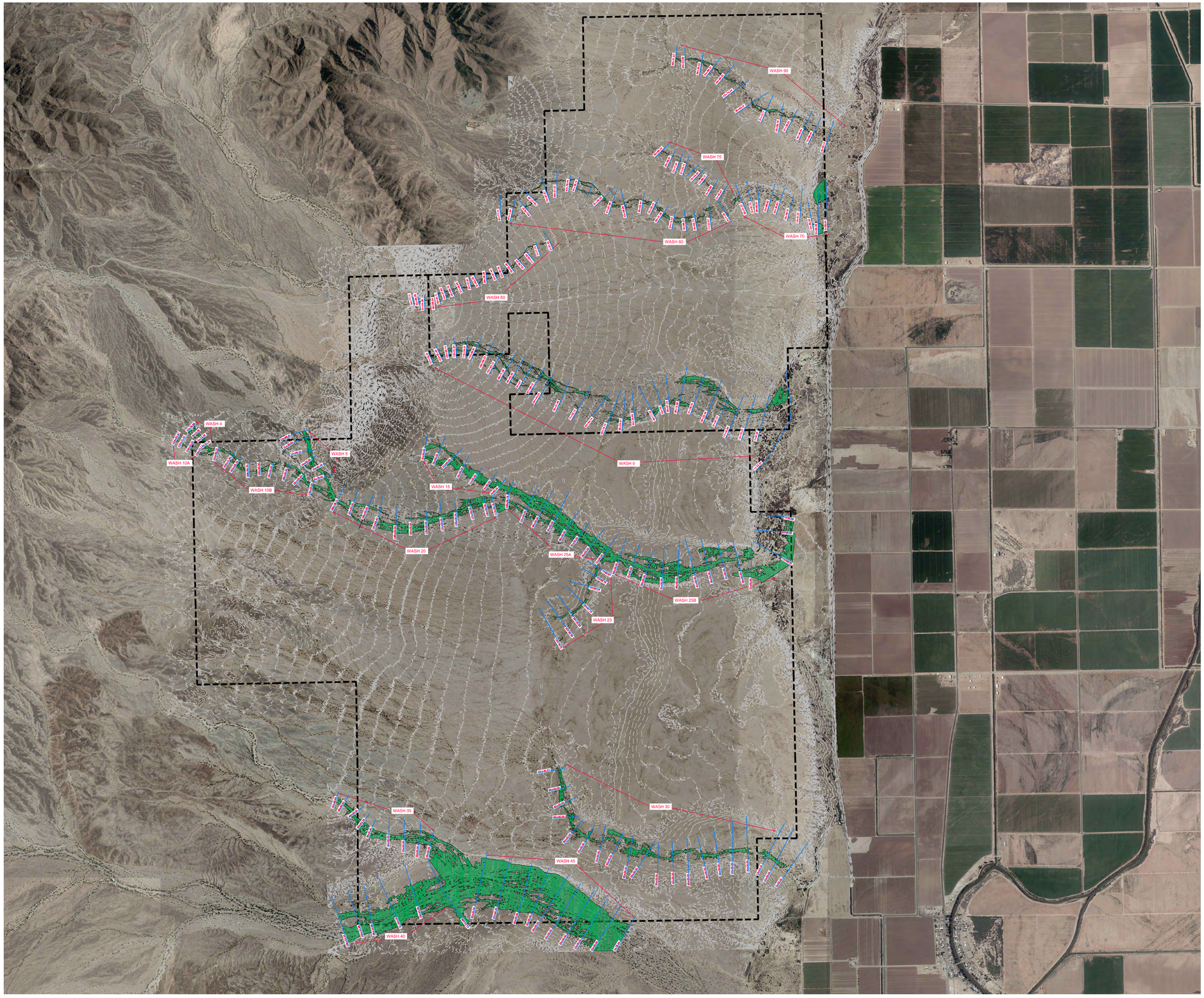
RIO MESA SOLAR
HEC-RAS EXHIBIT (100 YR)

DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE: HORIZ. VERT.

SHEET
7323HYD300A
OF SHEETS
DRAWING NO.




GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

LEGENDS

- SITE BOUNDARY
- 1+00.00 HEC-RAS RIVER CROSS SECTIONS
- WATER SURFACE EXTEND
- 5' CONTOUR

MAGNETIC

| REV | DATE | BY | REVISION |
|---|---|---|---|

BRIGHTSOURCE ENERGY

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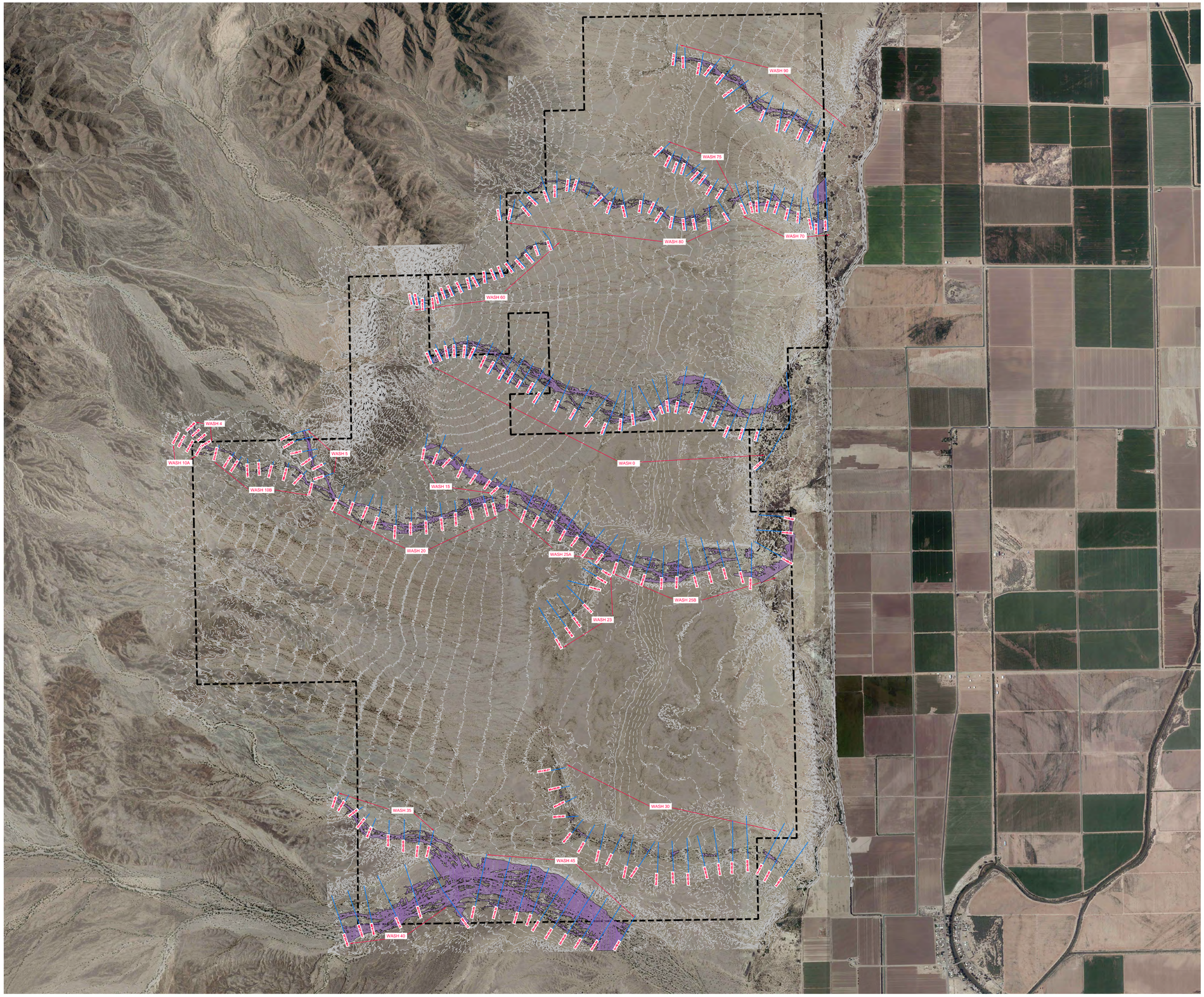
RIO MESA SOLAR
HEC-RAS EXHIBIT (25 YR)

DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE:
HORIZ.
VERT.

SHEET
7323HYD300B
OF SHEETS
DRAWING NO.




GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

LEGENDS

- SITE BOUNDARY
- 1+00.00 HEC-RAS RIVER CROSS SECTIONS
- WATER SURFACE EXTEND
- 5' CONTOUR

MAGNETIC

| REV | DATE | BY | REVISION |
|---|---|---|---|

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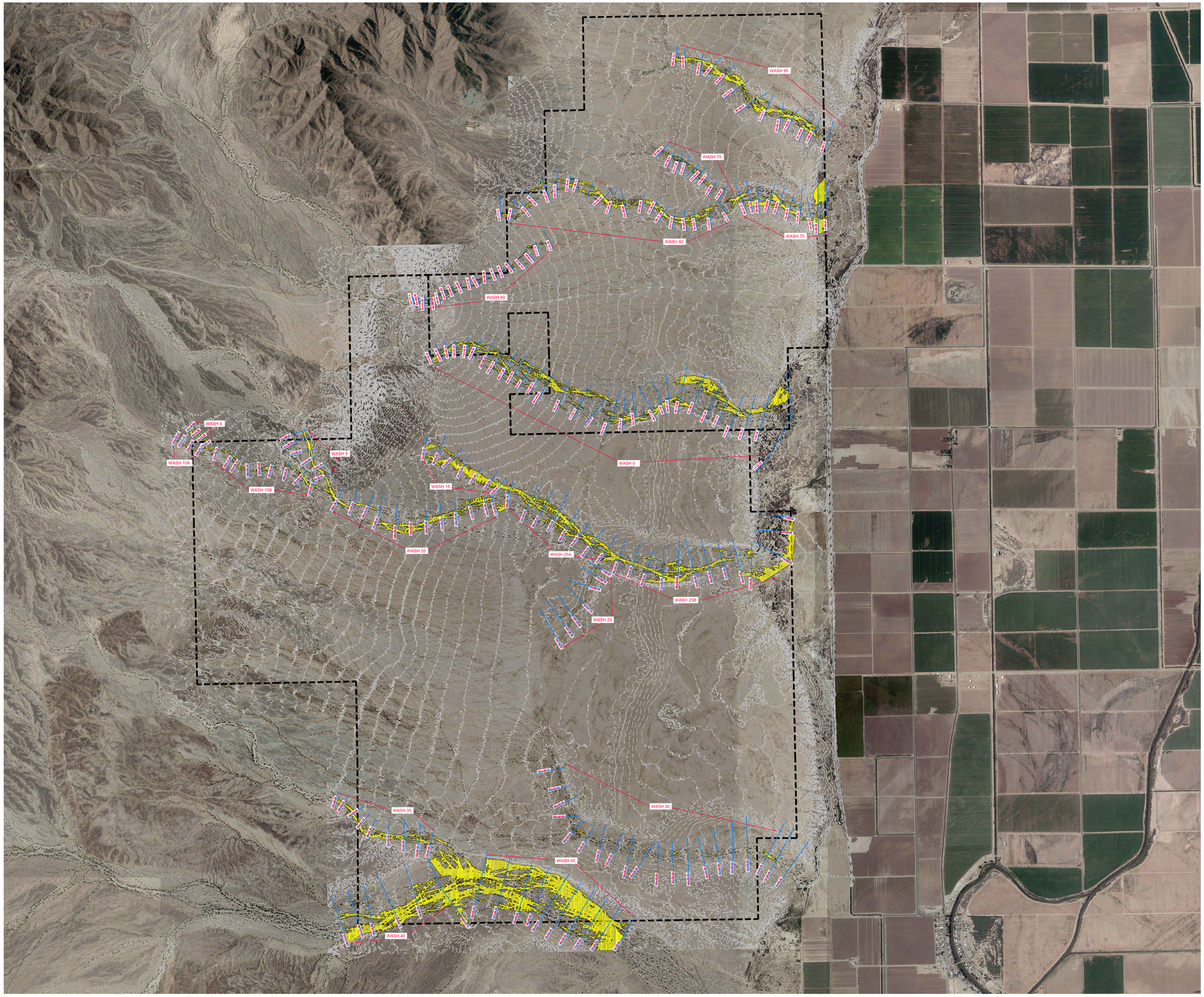
RIO MESA SOLAR
HEC-RAS EXHIBIT (10 YR)

DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE: HORIZ. VERT.

SHEET
OF SHEETS
7323HYD3000
DRAWING NO.




GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

LEGENDS

- SITE BOUNDARY
- 1+00.00 HEC-RAS RIVER CROSS SECTIONS
- WATER SURFACE EXTEND
- 5' CONTOUR

MAGNETIC

| REV | DATE | BY | REVISION |
|---|---|---|---|

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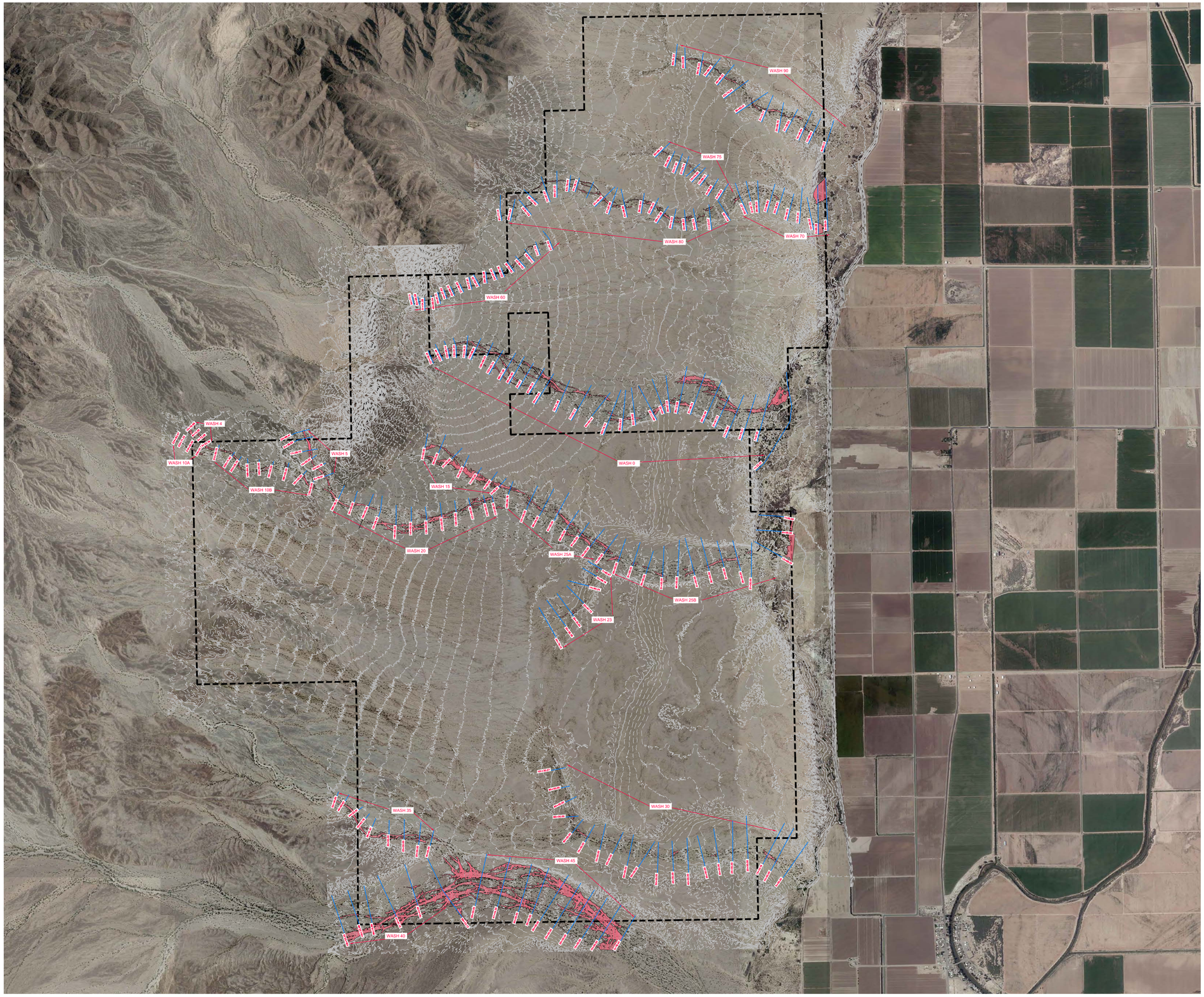
RIO MESA SOLAR
HEC-RAS EXHIBIT (5 YR)

DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE: HORIZ. VERT.

SHEET
7323HYD300D
OF SHEETS
DRAWING NO.




GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

LEGENDS

- SITE BOUNDARY
- 1+00.00 HEC-RAS RIVER CROSS SECTIONS
- WATER SURFACE EXTEND
- 5' CONTOUR

MAGNETIC

| REV | DATE | BY | REVISION |
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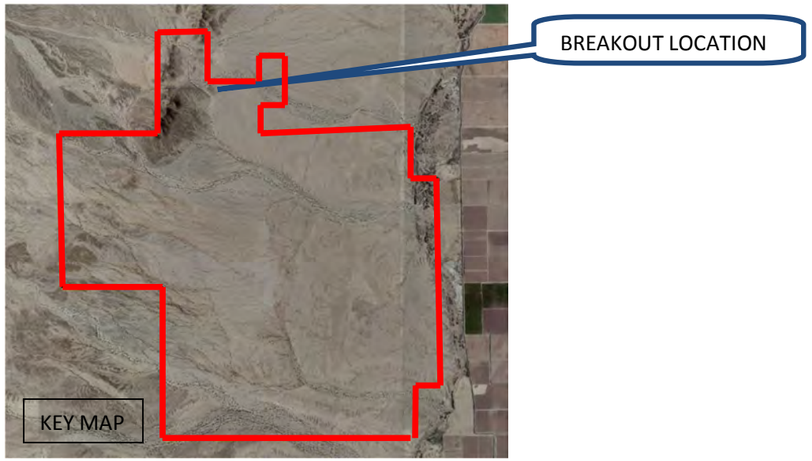
RIO MESA SOLAR
HEC-RAS EXHIBIT (2 YR)

DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE: HORIZ. VERT.

SHEET 7323HYD300E OF SHEETS
DRAWING NO.

# ONSITE BREAKOUT AREA



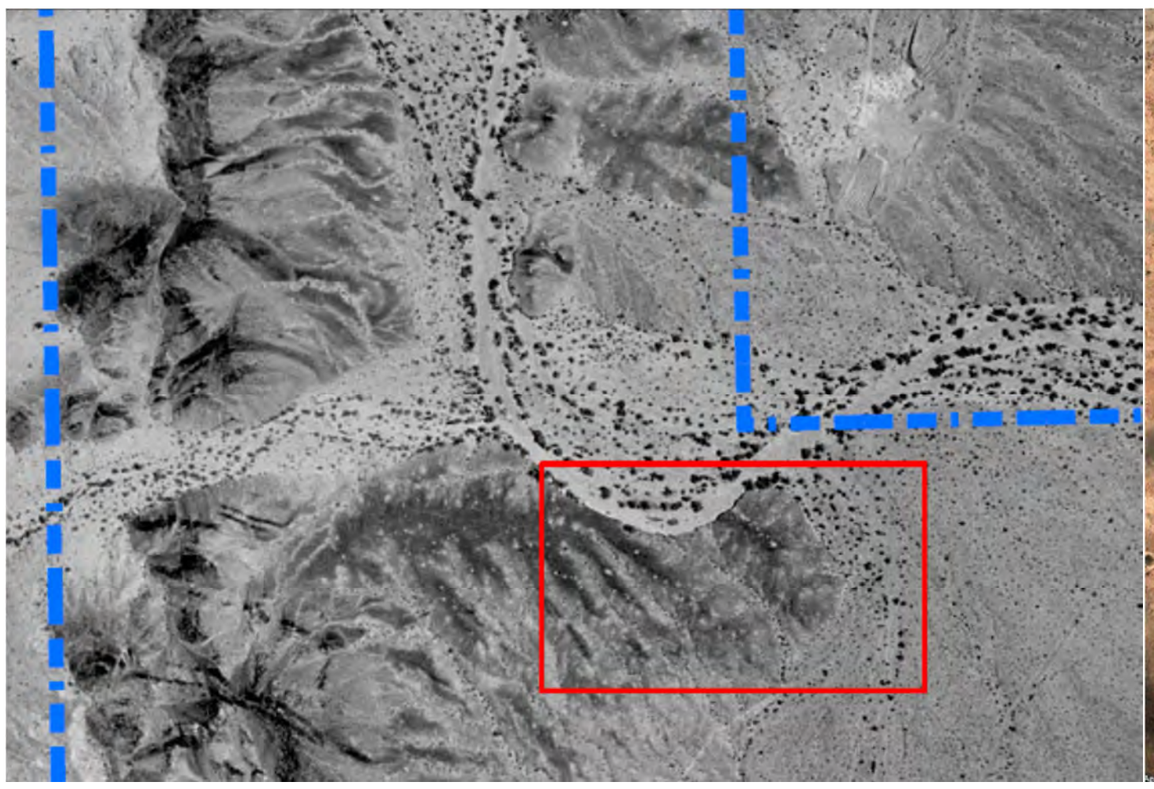



Photo Source / Date: ESRI ArcMap -National MDOQ / 1996

Photo Source / Date: Google Earth / April 2005

**7323HYD400A**

ONSITE BREAKOUT AREA

Photo Source /Date: Google Earth / May 2009

Photo Source / Date: ESRI ArcMap -NAIP California / 2010

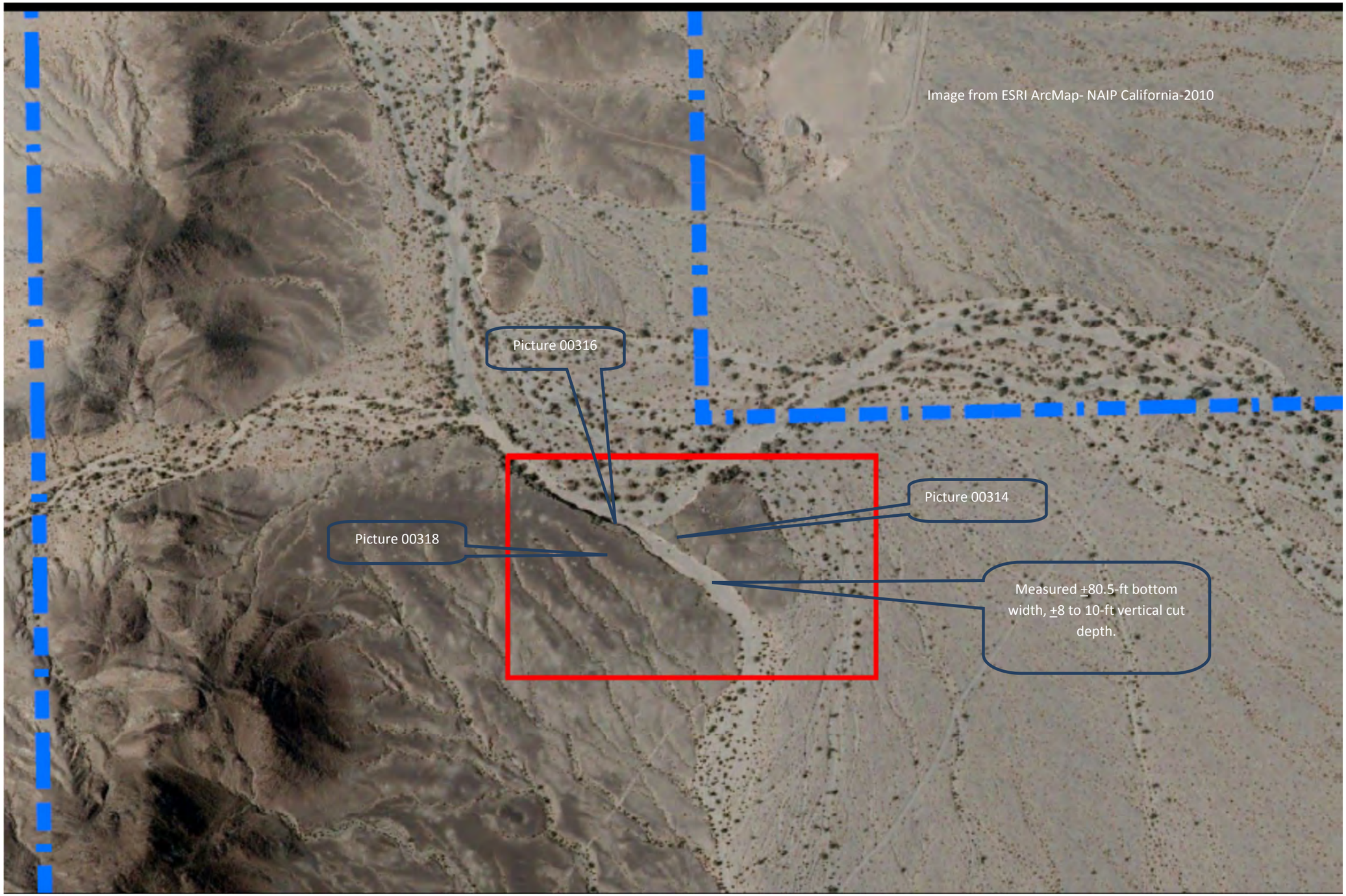
**7323HYD400B**

# ONSITE BREAKOUT AREA

Photo Source / Date: North American Mapping (NAM) / 2011

**7323HYD400C**

# ONSITE BREAKOUT AREA




**7323HYD400D**

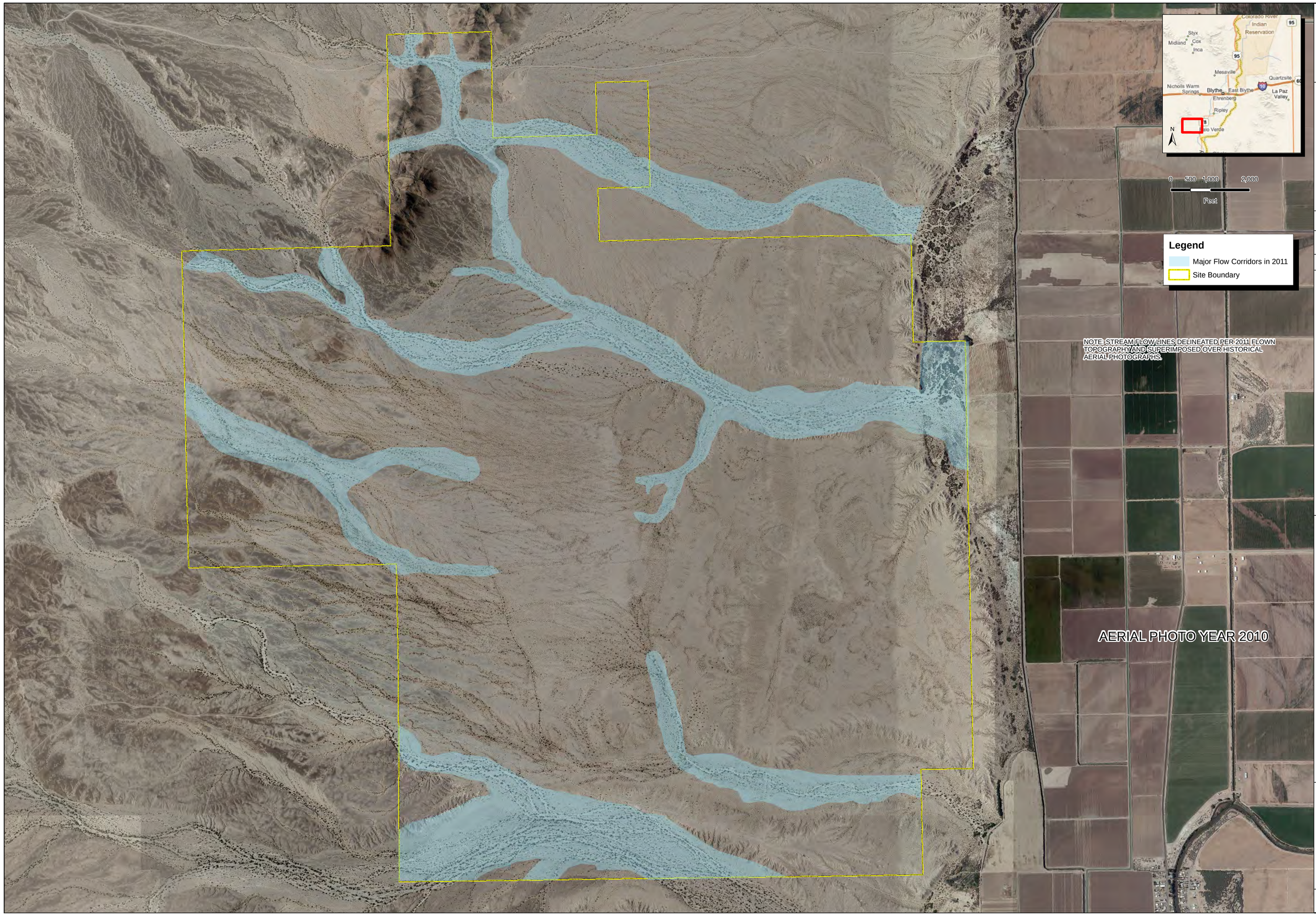
# ONSITE BREAKOUT AREA

Picture 00314 Below:

Picture 00316 Below:

Picture 00318 Right:

**7323HYD400E**

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BRIGHTSOURCE ENERGY

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HISTORICAL PHOTOGRAPH EXHIBIT

RIO MESA SOLAR

PROJECT NO. 7323

DRAWN BY: WYT/RV

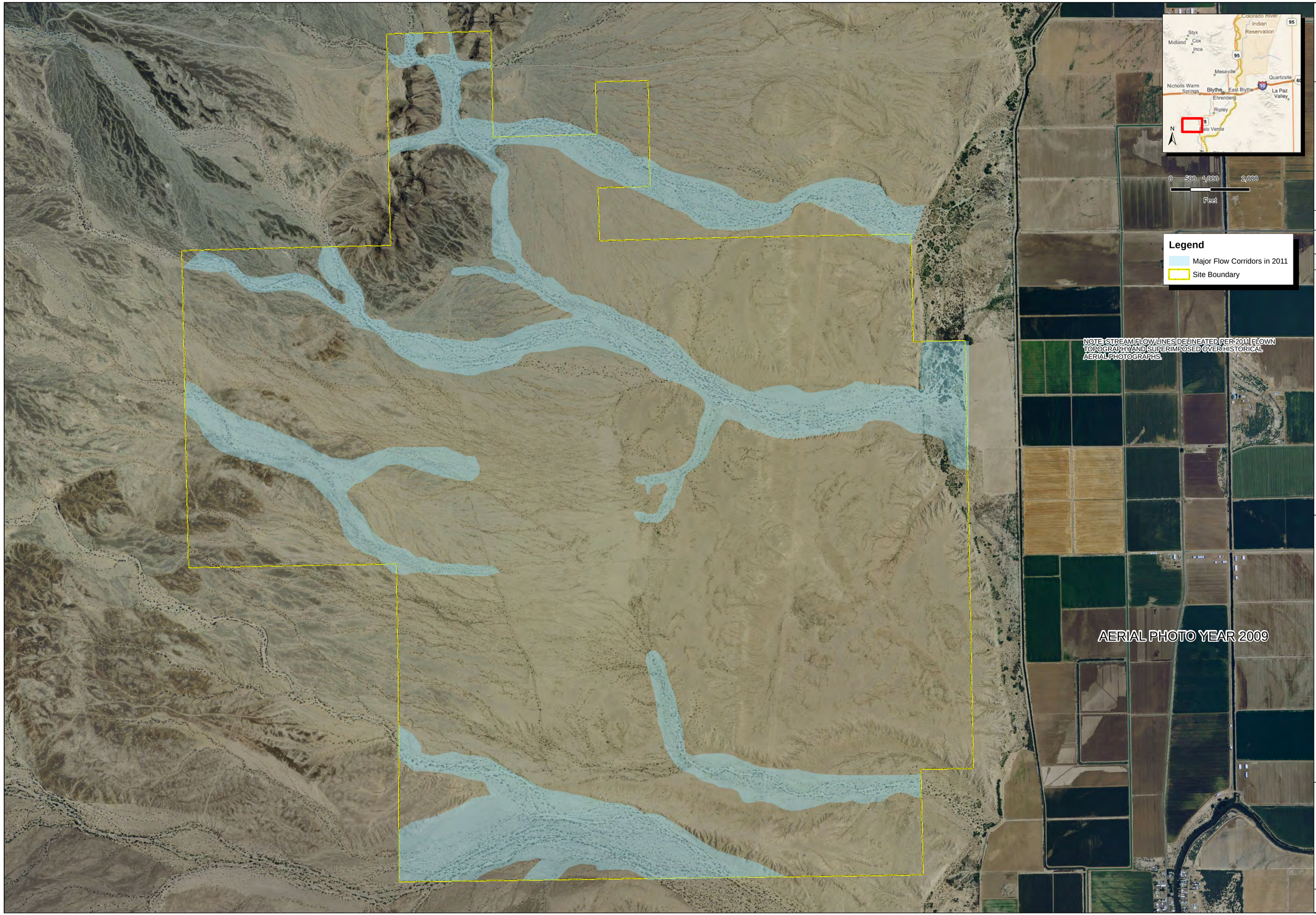
DATE: 5/3/11

SCALE: 1 " = 1,000 '

SHEET
7323HYD401A

DATE: 11/18/2010; File: \\vtmx.com\shr\gis\data\WYT\mxd-templates\36x24_revision_block.mxd; By: lenesav

BSE Document Control Number: 7323HYD101

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|---|---|---|---|
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HISTORICAL PHOTOGRAPH EXHIBIT

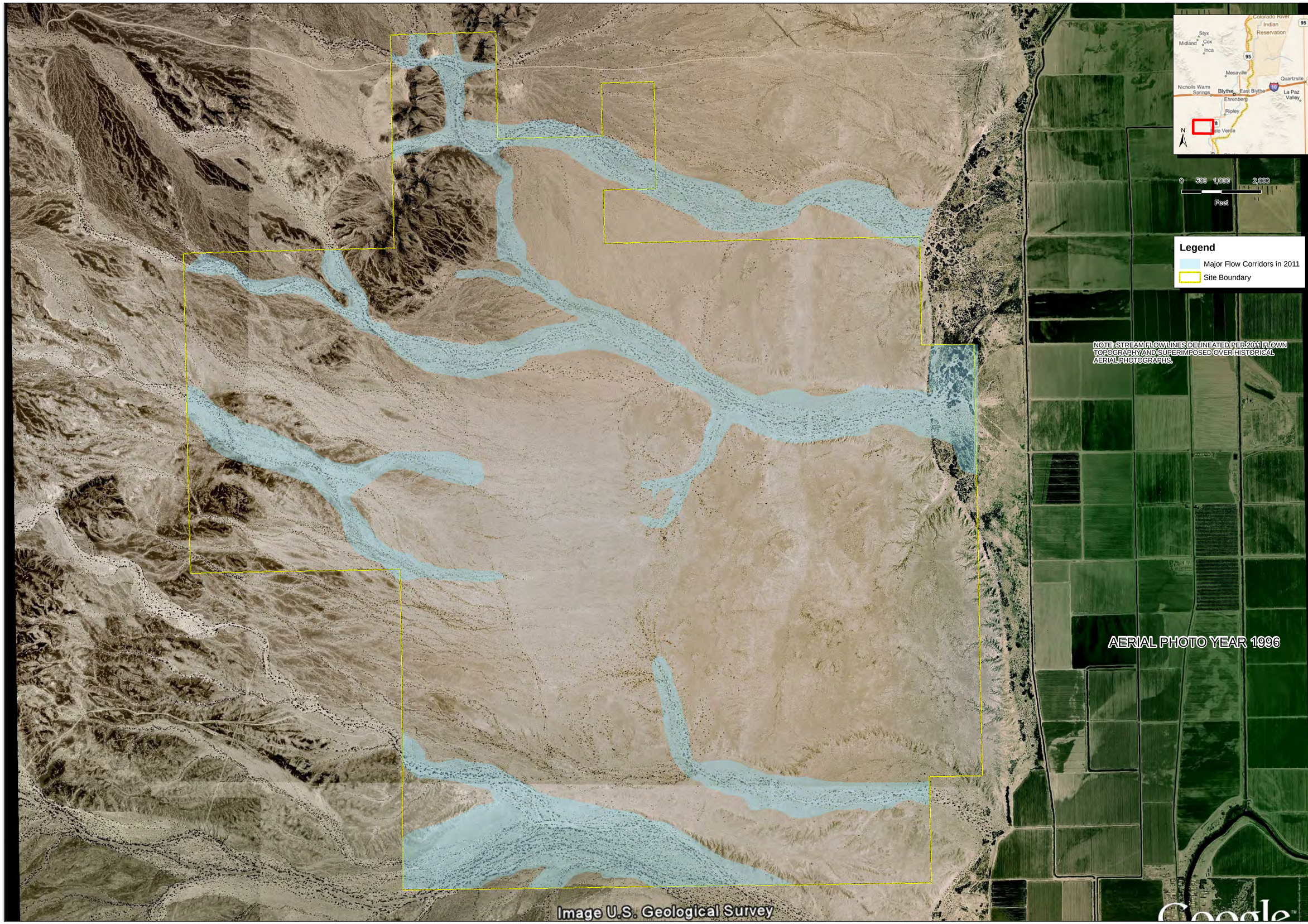
RIO MESA SOLAR

| | |
|---|---|
| PROJECT NO: | 7323 |
| DRAWN BY: | WYT/RV |
| DATE | 5/3/11 |
| SCALE: | 1 " = 1,000 ' |

SHEET
7323HYD401B

DATE: 11/18/2010 File: \\vtmx.com\dfs\global\VTN\mxd\templates\36x24_revision_block.mxd By: tkrestov

BSE Document Control Number: 7323HYD101

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| REV. | DATE | BY | REVISION |
|---|---|---|---|
| 1 | | | |

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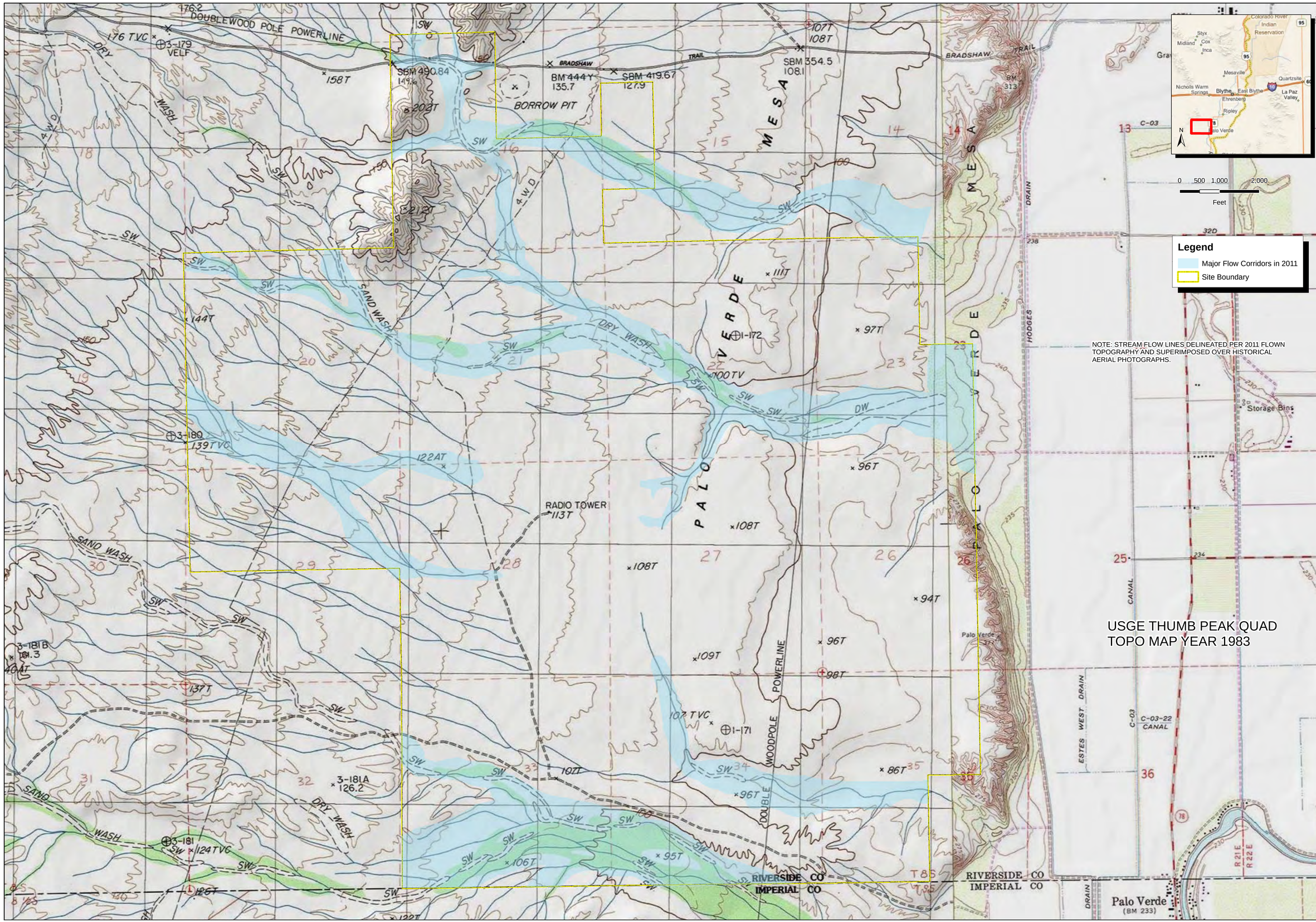
HISTORICAL PHOTOGRAPH EXHIBIT

RIO MESA SOLAR

PROJECT NO: 7323
DRAWN BY: WYT/RV
DATE: 5/3/11
SCALE: 1 " = 1,000 '
SHEET 7323HYD401C

DATE: 11/18/2010; File: \\vtnnv.com\shr\gis\data\WYT\mxd-templates\36x24_revision_block.mxd; By: lentesv




| REV. | DATE | BY | REVISION |
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RIO MESA SOLAR

| | |
|---|---|
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| DRAWN BY: | WYT/RV |
| DATE: | 5/3/11 |
| SCALE: | 1 " = 1,000 ' |
| SHEET | 7323HYD401D |

DATE: 11/18/2010; File: \\atmx.com\ds\gis\data\VT\mxd-templates\36x24_revision_block.mxd; By: teresav

BSE Document Control Number: 7323HYD101

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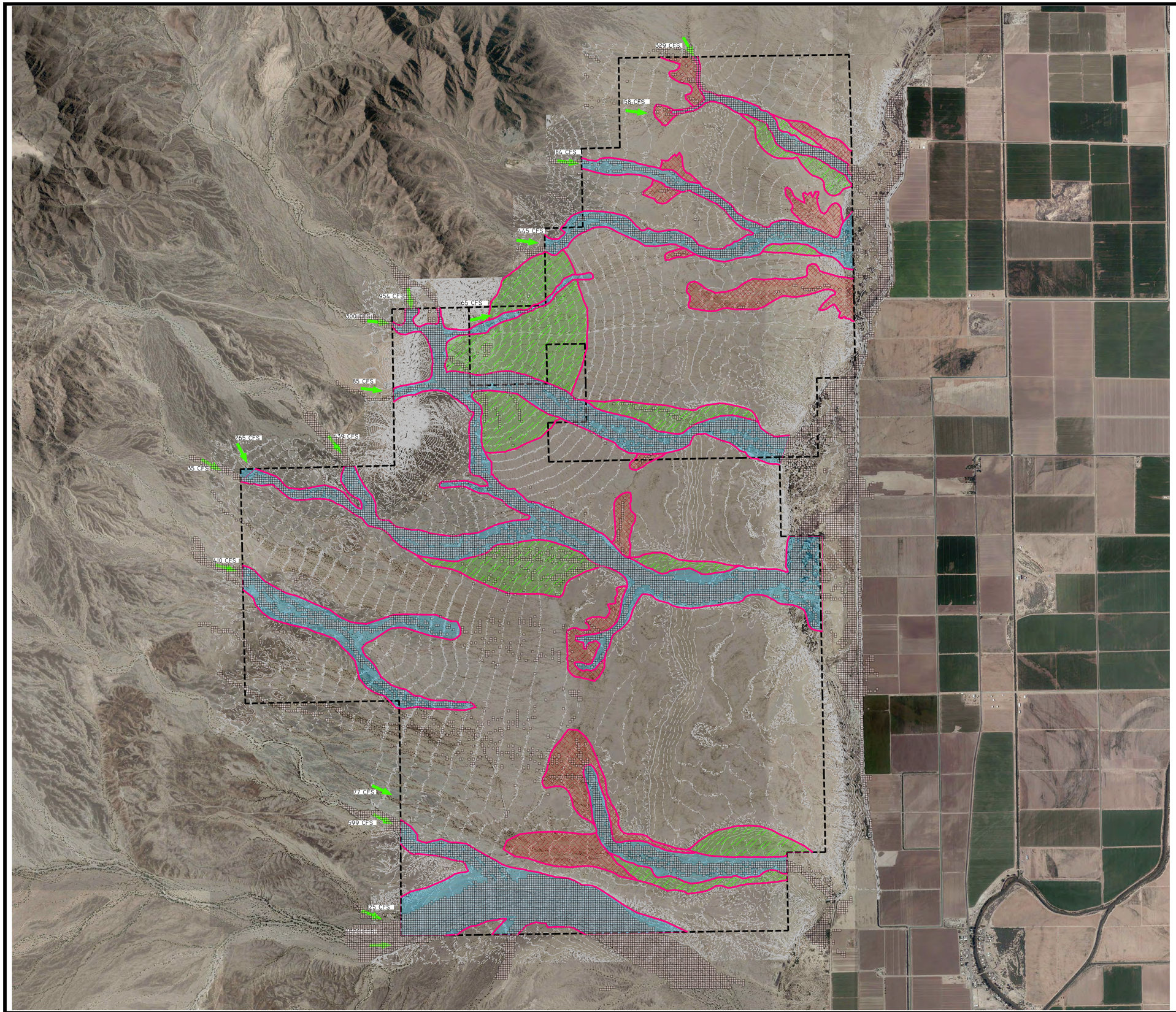
HISTORICAL PHOTOGRAPH EXHIBIT

RIO MESA SOLAR

| PROJECT NO: | 7323 |
|---|---|
| DRAWN BY: | WYT/RV |
| DATE | 5/3/11 |
| SCALE: | 1 " = 1,000 ' |

SHEET
7323HYD401E

DATE: 11/19/2010; File: \\vtmnv.com\dfs\gis\data\VTNmxd-templates\36x24_revision_block.mxd;By: tretsav




MAGNETIC

GRAPHIC SCALE

1500 0 750 1500 3000

1" = 1500'

## LEGENDS

- SITE BOUNDARY
- 5' CONTOUR
- MAJOR FLOW CORRIDOR AREA DELINEATIONS BASED ON HISTORICAL PHOTOS AND FIELD EVALUATION. THESE CORRIDORS CONTAIN THE MAJORITY OF THE ONSITE FLOWS AND HAVE SHOWN TO BE RELATIVELY STABLE OVER A PERIOD OF AT LEAST 60 YEARS
- AREA SUBJECT TO FLOW BREAKOUTS AND LATERAL MIGRATION OF WASHES WITHIN THE MAIN FLOW CORRIDORS WITH LARGE POTENTIAL FOR SCOUR AND EROSION
- AREA SUBJECT TO CONCENTRATION OF SHEET FLOWS AND FORMATION OF NEW CHANNELS WHICH SHOW SIGNS OF HEAD CUTTING IN UPSTREAM DIRECTION
- FLOW INUNDATION PER FLOW-2D ANALYSIS
- FLOW DIRECTION
- 750 CFS — 24 HR 100 YR FLOW

| REV | DATE | BY | REVISION |
|---|---|---|---|

BRIGHTSOURCE ENERGY

2727 SOUTH RAINBOW BOULEVARD
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CONSULTING ENGINEERS ● PLANNERS ● LAND SURVEYORS

RIO MESA SOLAR

ONSITE FLOW PATTERNS

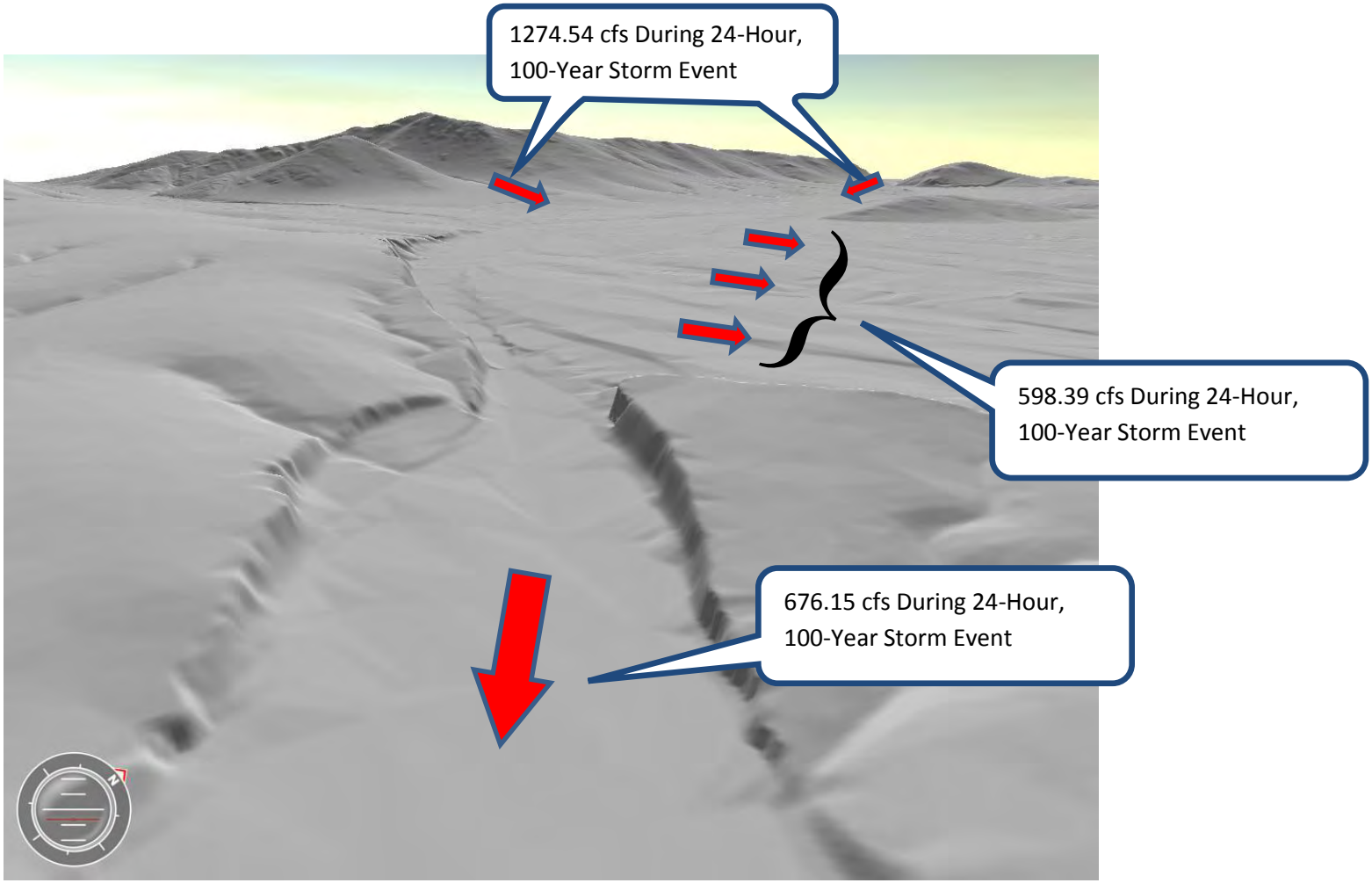
DRAWN BY: WT
DESIGNED BY:
CHECKED BY:
PROJECT NO: 7323
SCALE: HORIZ. VERT.

SHEET 7323HYD402 OF SHEETS
DRAWING NO.

H:\??? (BR-?)

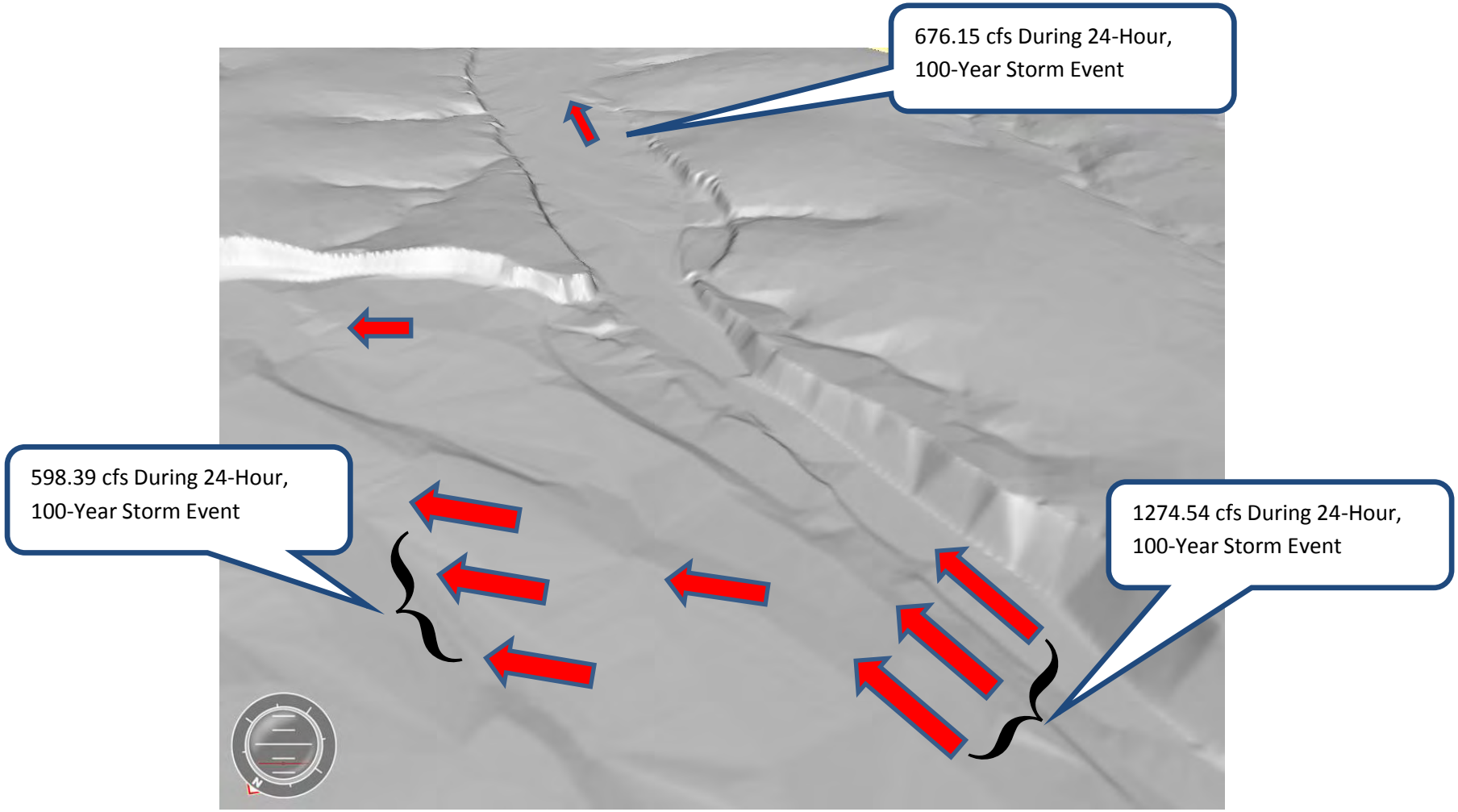
BSE Document Control Number: 7323HYD101

# 3-D Representation of Breakout Area – Looking Northwest

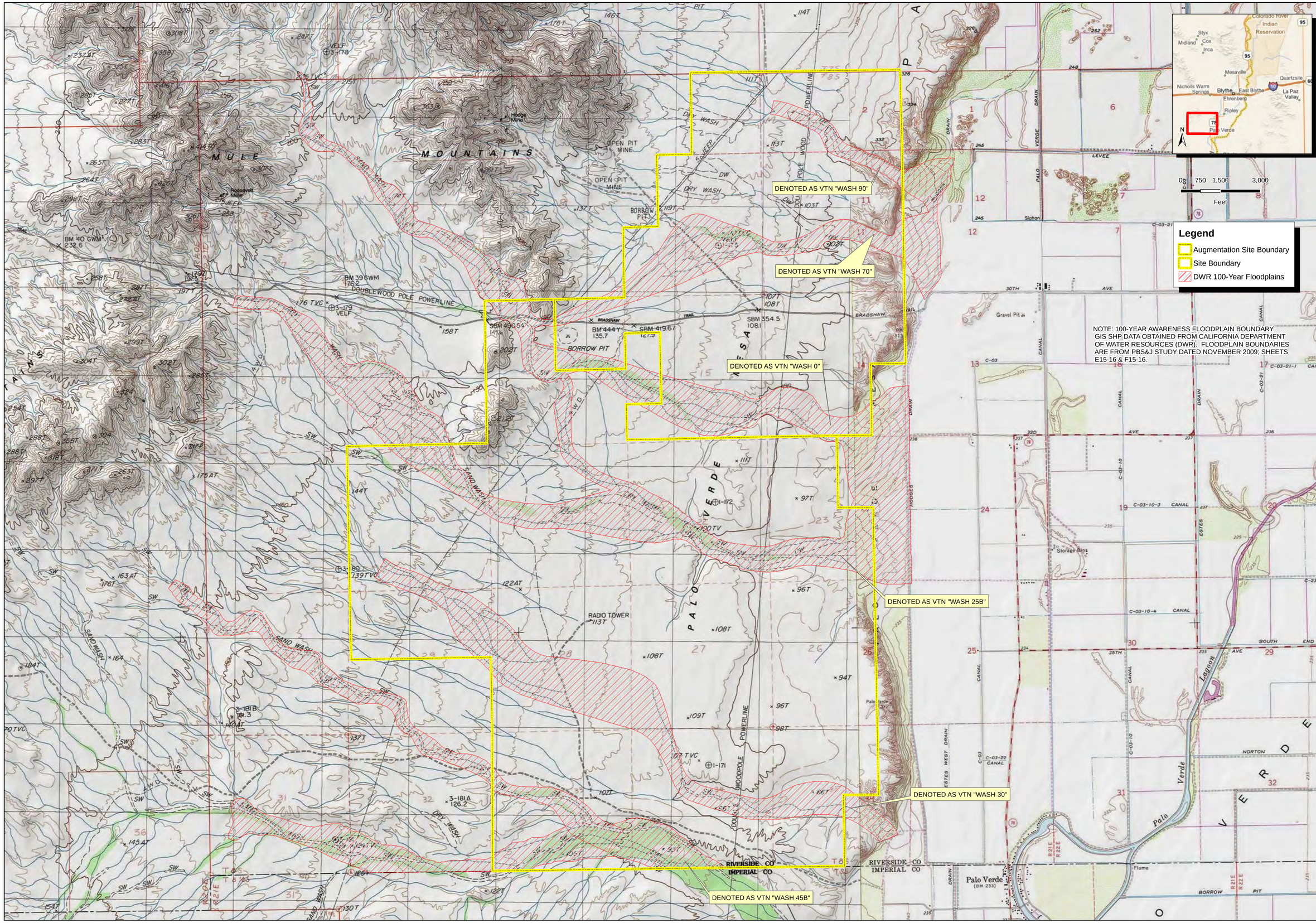



7323HYD403A

# 3-D Representation of Breakout Area – Looking Southeast




7323HYD403B




| REV. | DATE | BY | REVISION |
|---|---|---|---|
| 1 | 6/13/11 | RV | Fig. rev. to depict new augmentation area parcel. |

RIVERSIDE COUNTY, CA

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Las Vegas, NV 89146
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Fax (702) 362-2597
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# DWR 100-YEAR AWARNESS FLOODPLAIN MAP

# RIO MESA SOLAR

| | |
|---|---|
| PROJECT NO. | 7323 |
| DRAWN BY: | RV |
| DATE | 6/3/11 |
| SCALE: | 1 " = 1,500 ' |

SHEET

7323HYD404

DATE: 11/18/2010 File: \\vtnnv.com\dfs\global\VTN\mxd-templates\36x24_revision_block.mxd By: lenesiv

BSE Document Control Number: 7323HYD101

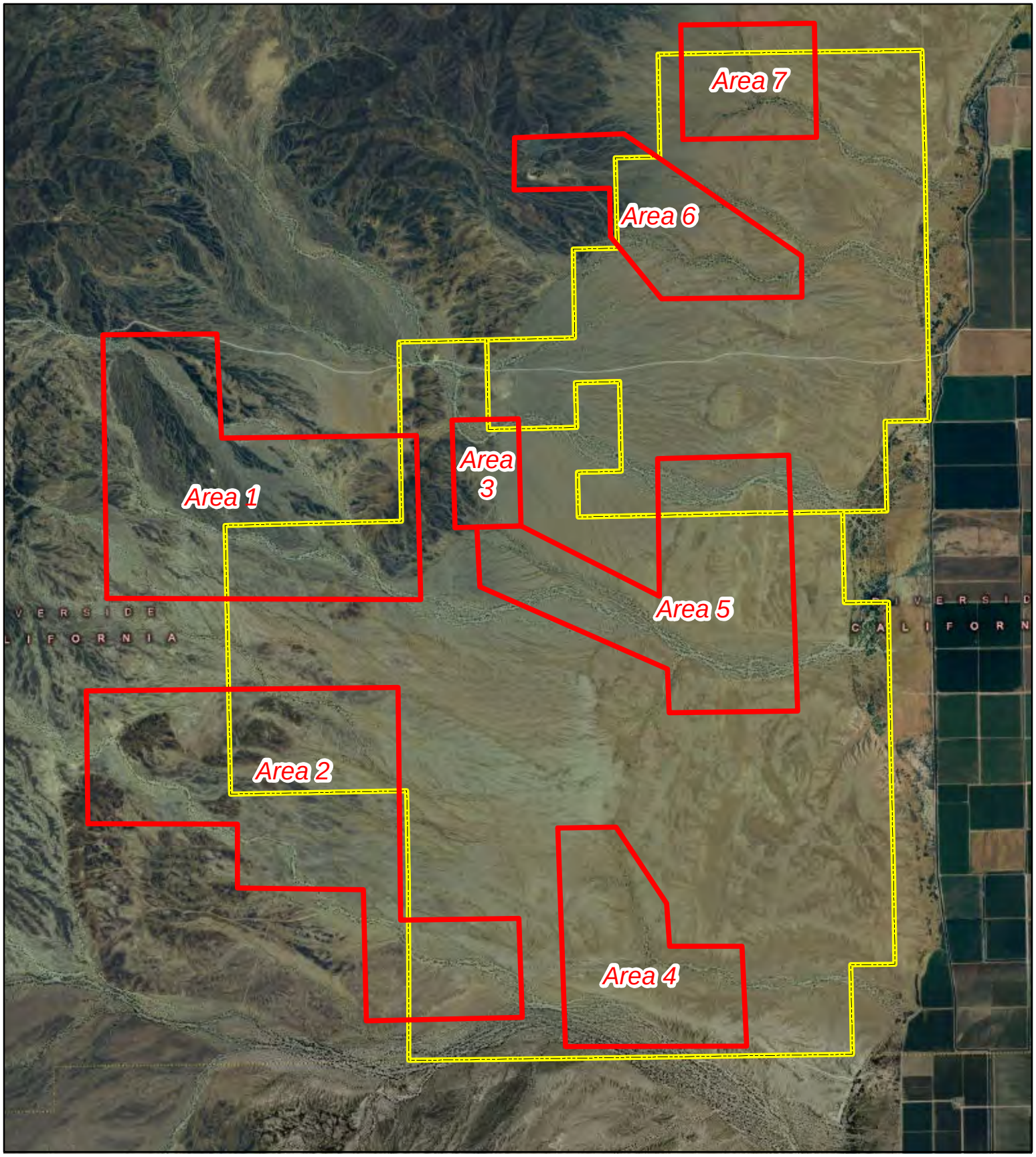
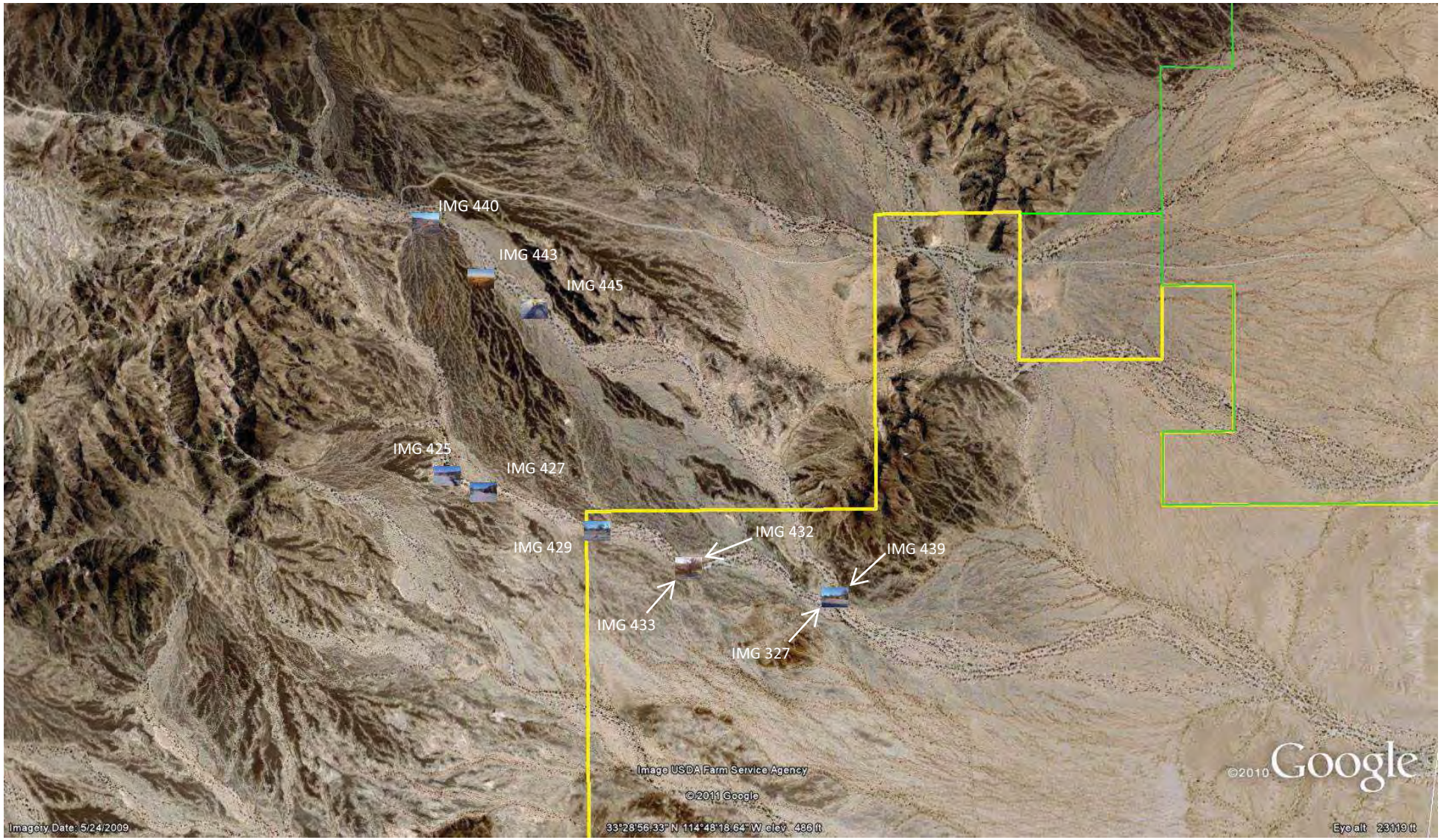



**PHOTO DOCUMENT**

# KEY MAP

BSE Document Control Number: 7323HYD101




# AREA 1: M8-M9 WASH AND M8-M7 WASH

**BASIN M8-M9 WASH**

IMG445

Standing on south bank of the main channel within the M9 basin looking southeast. Bank nearly vertical at this location however there are no signs of breakout channels forming to the south. Location of photo is approximately 6600 feet upstream of where the channel crosses the western boundary of the site. 100-year flow was determined to be 439 cfs.

IMG443

Photo taken approximately 70 feet south of southern bank of wash. Determined in the field that this was the boundary between flows breaking towards the channel and flows going southeast away from the channel. The location matches well with the basin delineations for M8 and M9 from the USGS topography.

IMG440

Looking downstream along southern bank in the north-northwest direction. Photo taken approximately 8400 feet upstream of site boundary with wash. Photo shows the steep bank and how incised the channel is below the ground level to the south. A tremendous amount of earth would need to be cut before the channel migrates out of the M9 Basin.

**BASIN M8-M7 WASH**

IMG327

Looking downstream to the southeast just below the confluence of the M9 and M8 channels as they enter the site. Wash is wide and flat at this location. Bed does not show signs of erosion at this location. 100-year flow at this location was determined to be 726 cfs.

IMG439

Looking upstream in the northwest direction at the confluence of the M8 and M9 channels.

IMG432

M8 channel approximately 2100 feet downstream of west boundary of site. Photo shows southern bank of channel looking upstream at the location of a slight bend in channel. Channel is 5-6 feet deep at this location.

IMG433

Same location as Image 432 but standing on the top of the bank looking to the southeast. Cutting of the southern bank may be occurring. But as shown in the photo, the channel would have to cut through a very large area to migrate out of its current location.

IMG429

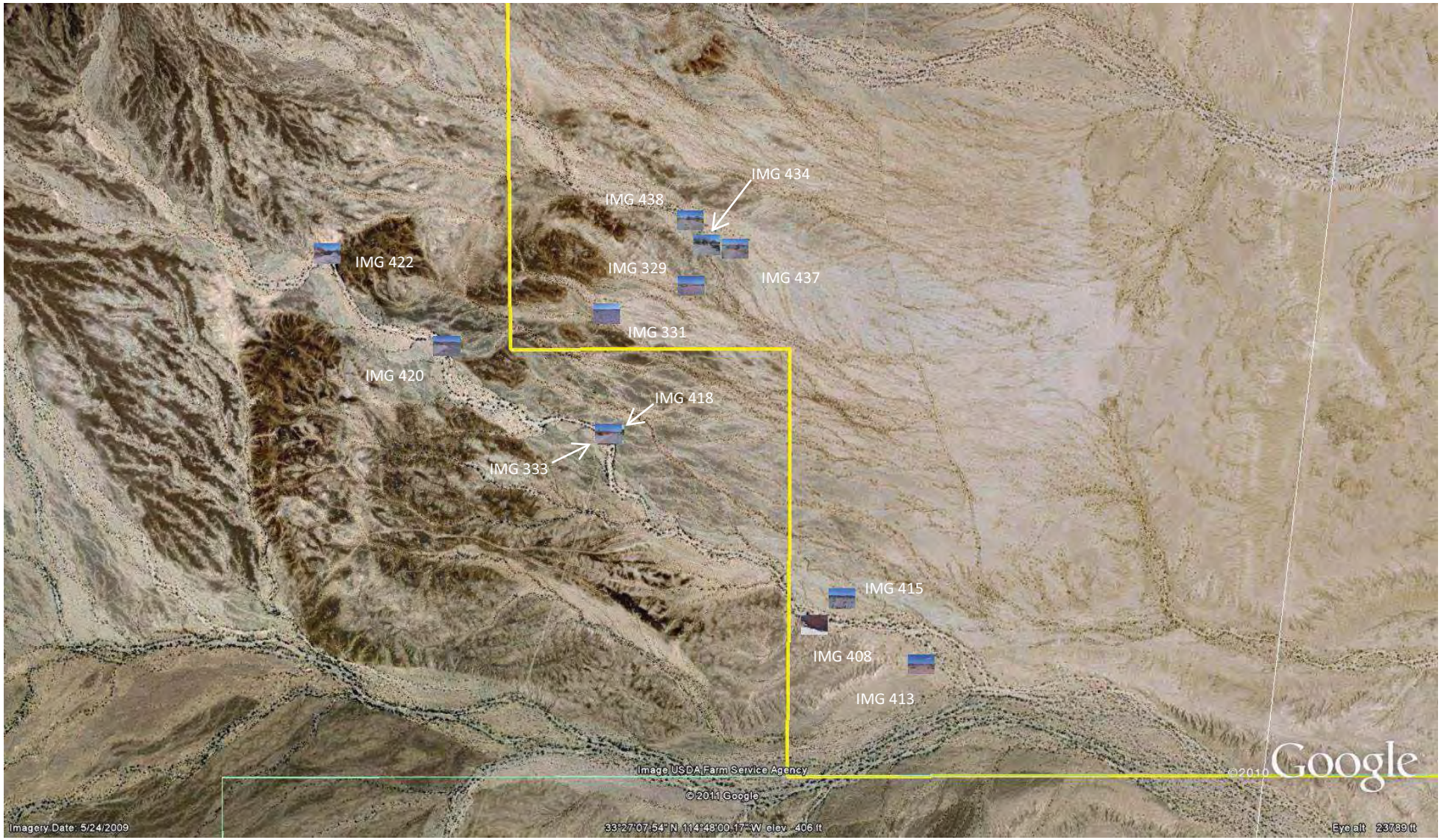
M8 channel just downstream of west boundary of site. Photo looking south at the southern bank of the channel. Bank is approximately 4.5 feet high and about 80 feet from the thalweg of the channel. No signs of excessive erosion in the channel. 100-year flow determined for basin M8 is 265 cfs.

IMG427

M8 channel approximately 2000 feet upstream of west site boundary. Photo looking northeast at the southern bank of the channel. Location is at the bend in the channel which has caused the vertical face of the southern bank. Flows undermining the bank is causing the upper parts to break off creating the vertical face.

IMG425

M8 channel approximately 2700 feet upstream of west site boundary. Looking east in the downstream direction at the southern bank. This location is at a sharp turn in the channel which has caused the steepening of the bank. However the ground beyond the bank is at the same level as the top of bank approximately 10 feet above the channel bottom.




AREA 2: M4-M5, M5A AND M5B / ONSITE CENTRAL-EAST

**BASIN M4-M5, M5A AND M5B WASH**

IMG413

Looking southwest between M4 channel and Wash 45. The area could be inundated during storm events but there are no signs of excessive erosion or scour.

IMG408

South bank of M4 Channel. Location is at a sharp turn causing the vertical cutting of the bank. Bank appears to be undercut by flows causing the upper portions of the bank to collapse into the channel. Areas like this within the site will need a bank stability analysis to determine a proper buffer zone between the bank and heliostats.

IMG415

Standing north of the M4 channel and looking to the south. The area is a wide floodplain most likely subject to shallow, slow moving flows. The 100-year flow determined for the M4 basin at this location was 599 cfs.

IMG418

M4 channel approximately 4900 feet upstream of where the wash meets the western boundary. Area is in a sharp turn and shows a low flow channel established along the north bank of the channel. Channel bank is nearly vertical due to the cutting cause by the turning flows.

IMG333

Same location as image 418 but standing at the top of bank looking downstream to the southeast. As shown, the bank is subject to erosion but would need to erode several hundred feet prior to the channel migrating into a new location.

IMG420

M4 channel approximately 8800 feet upstream of where the channel meets the western boundary of the site. Location is along a sharp curve with the north bank subject to heavy cutting. There are no washes to the north within several hundred feet which the channel could migrate into.

IMG422

M4 channel approximately 11,000 feet upstream of the western boundary of the site. Flows are contained by high banks to the north and to the south. The area is in a sharp bend but the elevation of the ground to the north prevents flows from breaching the main channel.

**ONSITE EAST-CENTRAL WASH**

IMG331

Photo looking east downstream of where offsite basin M7 discharges onto site. Flows are conveyed in shallow channels and as overland sheet flow through this area. The 100-year flow for basin M7 was determined to be 35 cfs.

IMG329

Looking north across the shallow floodplain created by offsite basin M7. The channel from basin M8 is in the background of the photo.

IMG438

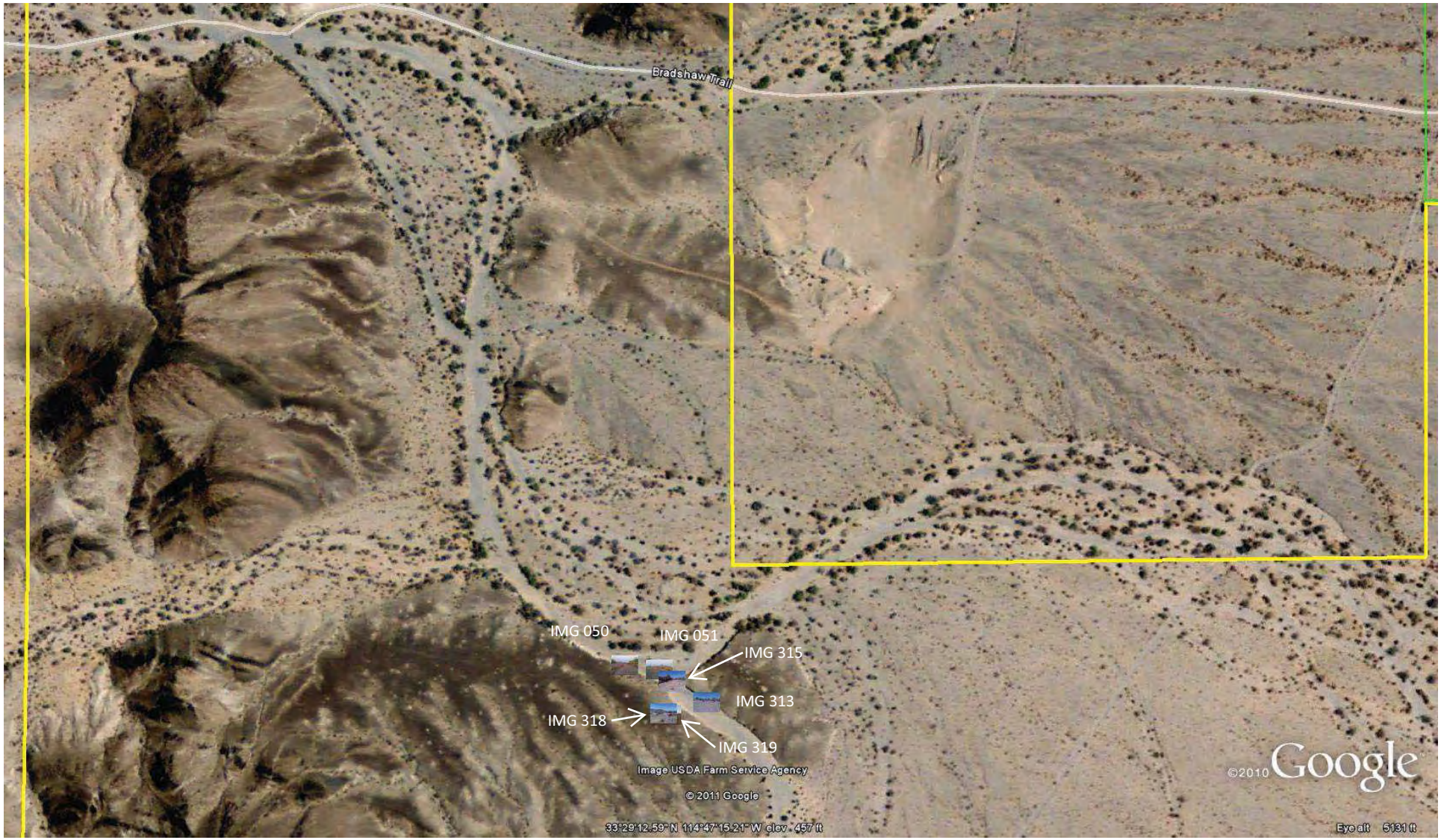
Looking downstream to the east within the M6 channel. The wash splits downstream with flows on the left side of the picture continuing east and flows on the right side routed to the southeast. The 100-year flow determined for basin M6 near this location was 316 cfs.

IMG437

Terminus of the east fork of the M6 channel downstream of the flow split in image 438. Channel dissipated to sheet flow in approximately a thousand feet from the split.

IMG434

Southeast fork of the M6 channel after flow split. Channel is much more defined than the east fork and appears to continue for several thousand feet downstream.




# AREA 3: ONSITE BREAKOUT

**ONSITE BREAKOUT AREA**

IMG050

Looking south in downstream direction of channel breach. Low flow channel along western bank is approximately 2 feet deep. Flows determined to breach to the south during the 100-year storm is 676 cfs.

IMG051

The east bank of the breach is unusually uniform. This along with the straight vertical cuts in the banks, and short time frame for such a large uniform channel to be cut, implies that the breach may have been man made. An abandon gravel pit is located within a half mile of the breach.

IMG315

Standing at the breach location on the east bank of the low flow channel and looking upstream.

IMG318

Standing at the top of the west bank looking to the northeast at the breach and the floodplain upstream of it. Flow splits to the east before reaching the breach within the wide floodplain shown in the foreground of the picture. Total flow before the breach is approximately 1300 cfs.

IMG319

Standing on the top of the west bank looking southeast in the direction of the breach channel. The channel cut is approximately 80 feet wide and nearly perfect in uniform.

IMG313

Standing downstream of the breach looking into the upstream direction.

# AREA 4: WASH 45 AND WASH 30

**WASH 45**

IMG339

Photo location is approximately 1 mile downstream of where Wash 45 crosses the western site boundary. As shown, the wash is 20-40 feet below the site grade to the north and the floodplain is approximately 1000 to 1500 feet wide.

IMG340

Photo taken at the same location as image 339 but standing at the bottom of the channel looking east at the northern bank. Some erosion of the bank is shown along the bottom due to the bend in the channel at this location. Due to the width of the floodplain, flows depths and velocities are relatively lower considering the +6,000 cfs 100-year flow at this location.

IMG342

Photo location approximately 3400 feet downstream of image 340. Looking south into Wash 45 floodplain, this is approximately where the wash crosses the southern boundary of the site and discharges off of the site.

**WASH 30**

IMG344

Wash 30 near power line road looking east in the downstream direction. Channel is well defined and approximately 1-2 feet deep. 100-year flow determined at this location is approximately 300 cfs. This is one of two main washes in this location of the Wash 30 flood plain. The other main wash is located approximately 100 feet north of this one and the entire flood plain is 500-700 feet wide.

IMG346

Same wash as image 344 approximately 220 feet upstream. Photo looking east in downstream direction of Wash 30.

IMG348

Wash 30 approximately 540 feet upstream of image 346, looking upstream in the west direction. Location is upstream of flow split that divides the channel into two. Wash is larger in width at this location but remains 1-2 feet in depth. Sandy bottom with no signs of significant erosion occurring.

IMG350

Wash 30 approximately 750 feet upstream of image 348. Wash is fairly uniform in this area.

IMG459

One of the headcutting channels that is being formed as flows are collected into Wash 30. Wash 30 becomes perpendicular to the direction of upstream flow causing headcutting as the shallow upstream sheet flows are discharged over the west bank and into the channel. Those headcuts are creating new channels such as this one in the upstream direction away from the main channel.

IMG457

Another example of a head cut channel north of the one shown on image 459. Channel varies from 5-10 feet wide and 0.5 to 1.5 feet in depth

IMG456

Example of another head cut channel to the north of image 459.

IMG455

In the main channel approximately 1650 feet upstream of image 350. Photo is looking north in upstream direction of Wash 30.

IMG453

Another head cut formed channel feeding into Wash 30, looking south. The head cut channel shown on images 456,457, and 459 are mainly within upstream watershed made up of onsite area and offsite basin M5. This channel and those upstream are from onsite area and portions of offsite basin M6 that splits to the south.

IMG451

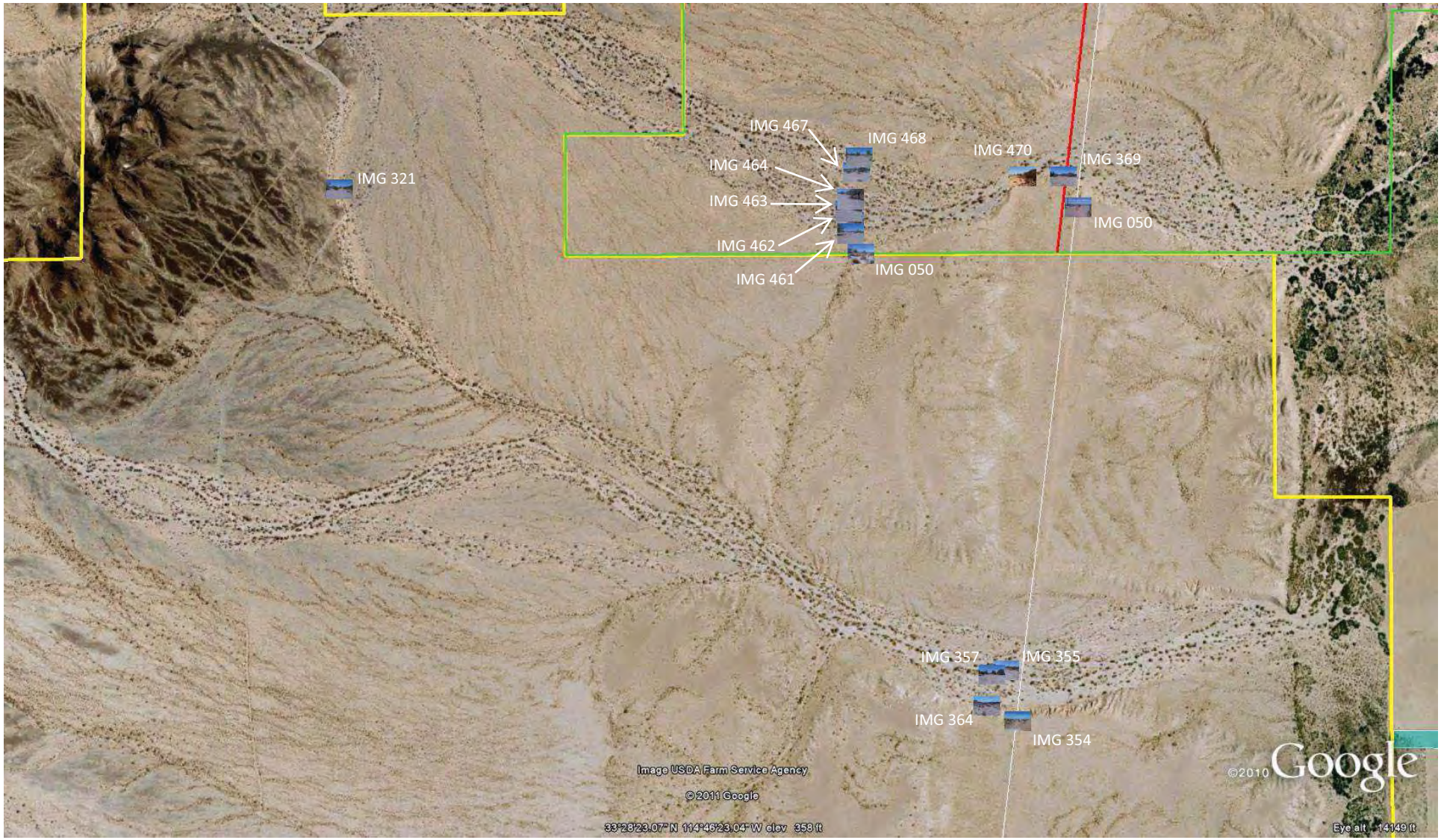
At this point, Wash 30 has split with two main washes that proceed in the upstream direction. One wash continues north and the other to the northwest. This wash is the split that veers to the northwest. The channel continues for approximately 800 feet to the northwest. Above that point, flows seem to be sheet flow or in very small swales.

IMG447

This channel feeds into the north main wash upstream of the split discussed in image 451. The channel is typical of the numerous channels in this area that feed into and form Wash 30. The depths range from 0.5 to 2 feet and the width from 5 to 15 feet.

IMG448

Photo is looking upstream in the northwest direction. Channels have dissipated upstream of this point and flow travel mostly in shallow swales or as sheet flow. Channel are continuing to cut in the upstream direction but rate of cut seems to be very slow based on comparison of  the historical photos with the current imagery.




# AREA 5: WASH 25B AND WASH 0

**WASH 25B**

IMG354

Wash 25B standing at the top of bank looking north into the wash. Very wide and deep floodplain with numerous braided channels within it. Flow can migrate through the floodplain but potential for migration out of the floodplain is low.

IMG364

Standing in the wash and looking south at the southern bank. Bank has some erosion caused by local onsite flows overtopping into the wash.

IMG357

Photo is near the center of Wash 25B looking upstream to the west. This is one of the numerous braided channels within the wash. The channels all typically have sand bottoms and are 2 to 3 feet in depth. 100-year flow determined for Wash 25B at this location is 1336 cfs.

IMG355

Another braided channel within Wash25B to the north of image 357. Photo is looking north and the north bank of Wash 25B can be seen in the background.

IMG321

Photo is looking north in the upstream direction of the break out channel shown in Area 3 of this document. The flows in this channel are routed into Wash 25B. Prior to the breakout, this flow would have been tributary to Wash 0 to the north.

**WASH 0**

IMG366

Photo is from top of south bank looking north into Wash 0. Erosion is from local flows that travel north into the wash.

IMG369

Channel close to the south bank with Wash 0. Channels are similar to those in Wash 25B with sandy bottom and typically 1 to 3 foot in depth.

IMG470

Erosion of south bank of Wash 0 occurring near a sharp bend in the wash. A geotechnical evaluation of slope stability will be needed to provide an adequate buffer between the bank and heliostats.

IMG460

Photo looking upstream into the most southern channel collecting flows into Wash 0. The channel travels southwest and collects flows from the local onsite area and local offsite area just north of the site boundary. The other channels within Wash 0 are mostly formed by the large offsite tributary basins M10, M11, and M12, west of the site.

IMG461

This is the southernmost channel within Wash 0 that is formed by the large offsite basins M10, M11 and M12. The 100-year flow determined for Wash 0 is 745 cfs.

IMG462

Channel within Wash 0 just north of channel shown on image 461.

IMG463

Channel north of previous image. All of these channels are similar in width and depth, suggesting that the flow is spread out across the wash.

IMG464

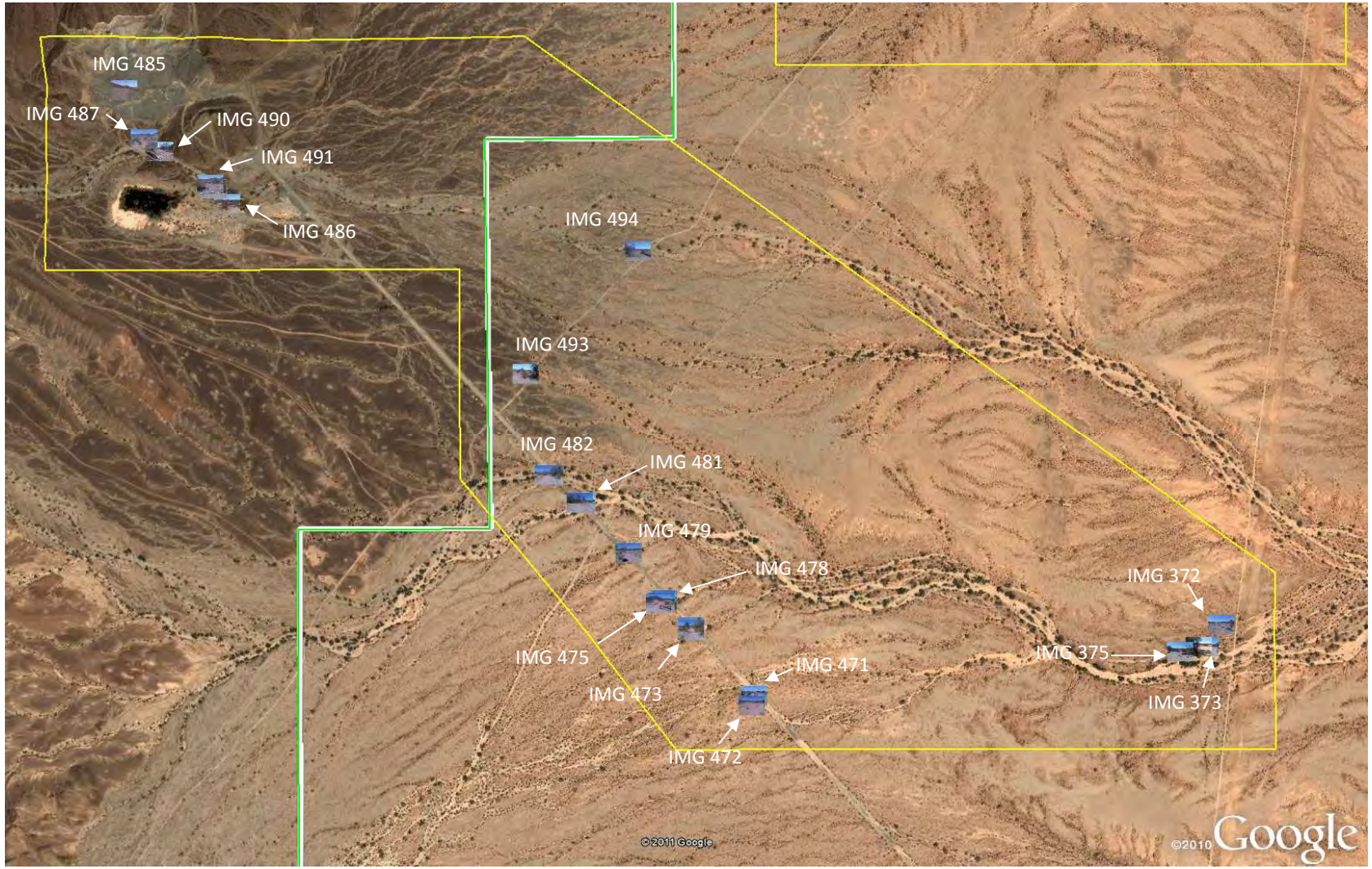
Channel to the north of image 463.

IMG467

Channel in the northern portion of Wash 0. Channels have cut around an island forming the 2-3 foot bank on the left side of the photo.

IMG468

Most northern channel within Wash 0 looking upstream to the west.




AREA 6: BASINS M19, M20, & WASH 80

IMG372

Sheet flow and shallow flooding area north of Wash 80. Photo looking northwest.

IMG373

Northern most channel within Wash 80. Photo is looking northwest in upstream direction. Channel is 0.5 to 1.0 deep in this location.

IMG375

Standing within Wash 80 looking into the floodplain in northwest direction. In the center of the picture, a small channel is forming as flows discharge from the floodplain into the wash. This type of channel cutting is typical within the area. Most of the channels cutting into the wash are 0.5 to 1.0 feet in depth.

IMG471

Photo taken along existing roadway alignment, looking south-east. Noticed erosion occurring on both sides of road as water is routed over the road and along alignment.

IMG472

Photo of minor washes looking west that cuts through the existing roadway running northwest.

IMG473

Photo of wash crossing existing roadway alignment looking west. Wash varies in depth from 1 to 2 feet.

IMG475

Photo of wash tributary to existing road looking west.

IMG478

Photo of erosion along east side of existing roadway.

IMG479

Photo of wash crossing existing roadway, looking in the west direction.

IMG481

Photo of wash crossing existing roadway, looking in the east direction.

IMG482

Photo of wash crossing existing roadway, looking in the west direction.

IMG485

Photo of area located north of existing open pit mine. This area drains to the east along existing roadway. A small drainage basin is confined to this area.

IMG486

Photo of wash looking in the north-west direction. This wash runs along the north side of existing open pit mine. Grading within the mine has cut off the wash so flow can no longer continue unimpeded in the downstream direction. Therefore ponding is likely to occur with flows eventually discharging into the existing pit before proceeding in the downstream direction onto the site.

IMG491

Same wash as in photo 486. Looking in the southwest direction where the wash turns and discharges into existing open mine pit. The area downstream of the wash has been graded 2-3 feet higher than the wash causing the flows to discharge into the pit instead of proceeding downstream.

IMG487

Photo of wash located south of existing open pit mine, looking in west direction. This area drains into the wash discussed in photo. 486.

IMG490

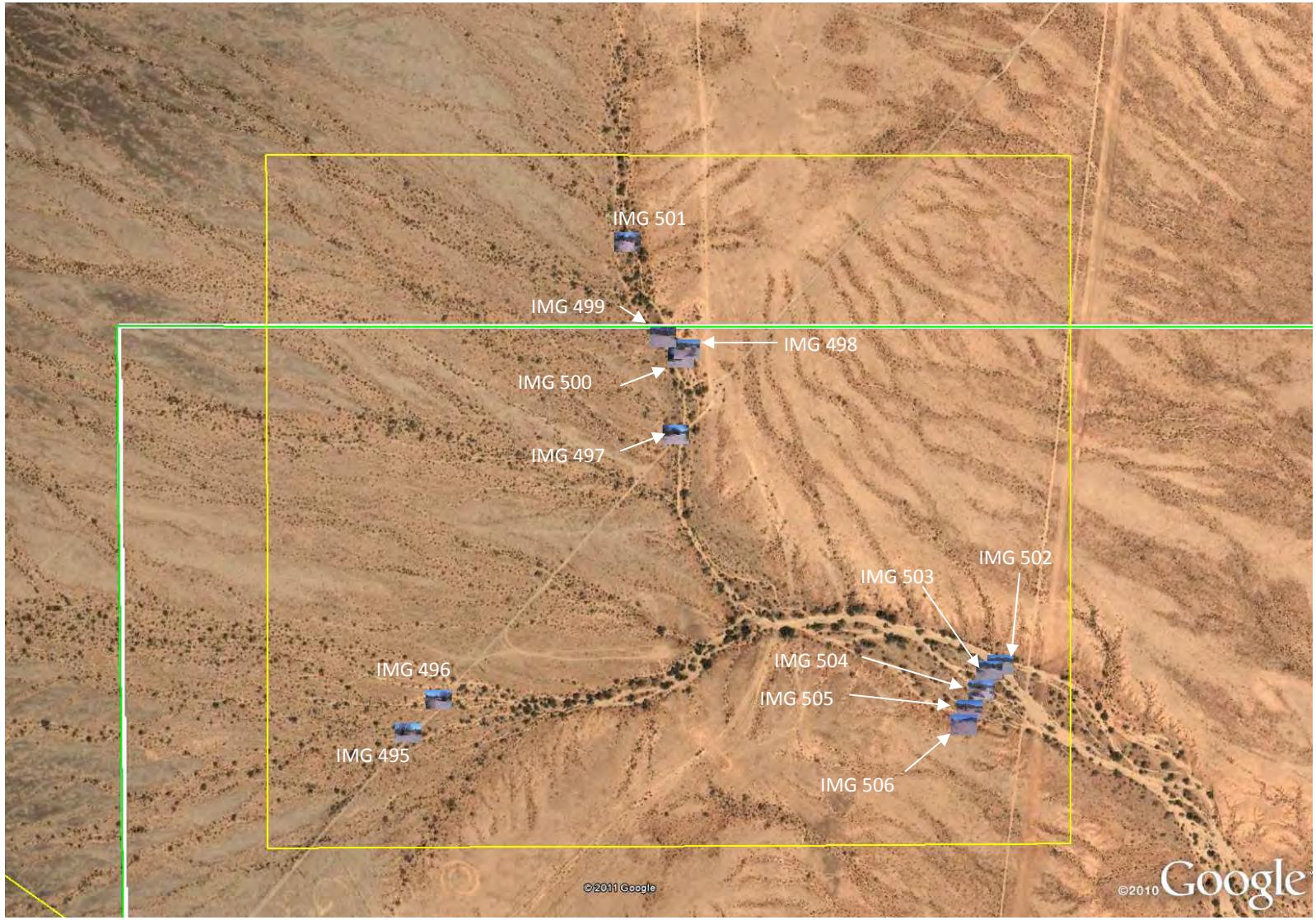
Same wash as in photo 486 (located adjacent to open mine pit) looking in a south-east (downstream) direction. Drainage basin M20 is tributary to this wash.

IMG493

Photo of wash crossing existing road, looking in east direction, along existing IID power line.

IMG494

Photo of wash crossing road looking in east direction, along existing IID power line.


IMG 501
IMG 499
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IMG 505
IMG 506
IMG 496
IMG 495
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AREA 7

IMG495

Photo of wash crossing existing roadway along existing IID power line; looking in the west direction.

IMG496

Photo of wash crossing existing roadway along existing IID power line; looking in the east direction.

IMG497

Photo of wash crossing road along existing IID power line, looking in the east direction.

IMG498

Looking down from plateau area into wash (looking in the south-west direction).

IMG499

Looking down into wash area (looking in the west direction).

IMG500

Looking at the existing bluff in the east direction.

IMG501

Photo of wash running from north to south, looking towards southern direction in downstream direction.

IMG502

Photo of Wash 90 looking in western direction (upstream). This is a main wash draining towards northern portion of augmentation area which contains several braided channels. Photo shows the most northern of the channels within the wash.

IMG503

Channel south of photo 502 within Wash 90 looking in western direction.

IMG504

Photo taken approximately at center of Wash 90 looking in the west (upstream) direction.

IMG505

Looking west, south of previous photo 504. This area seems to be a floodplain between the distinct channels within the wash. This mainly is an overflow/sheet flow area.

IMG506

Looking west, along southern bank of Wash 90 of augmentation area.

# APPENDIX A:

## HEC-1 Model Input / Output &

## LAPRE-1 Input/Output

# APPENDIX A:

## i. 24-Hour, 100-Year Storm

```
1****************************************                                   ****************************************
 *                                      *                                   *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                   *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                                   *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1               *                                   *          609 SECOND STREET           *
 *                                      *                                   *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  11:14:10  *                                   *          (916) 756-1104              *
 *                                      *                                   *                                      *
 ****************************************                                   ****************************************


                                       X     X  XXXXXXX   XXXXX           X
                                       X     X  X        X     X         XX
                                       X     X  X        X                X
                                       XXXXXXX  XXXX     X       XXXXX    X
                                       X     X  X        X                X
                                       X     X  X        X     X          X
                                       X     X  XXXXXXX   XXXXX          XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


1                                        HEC-1 INPUT                                        PAGE  1

 LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

               *DIAGRAM
   1           ID    ******************************************************
   2           ID    WO# 7323 - RIO MESA SOLAR
   3           ID    24-HR, 100-YR STORM
   4           ID    NOAA ATLAS 14- 24HR/100YR AVG PT RAINFALL DEPTH = 3.59"/3.87"
   5           ID    EXISTING CONDITION ANALYSIS
   6           ID    UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
   7           ID    STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
   8           ID    MODEL WITH NEW COMBINING SCHEME
   9           ID    ******************************************************
  10           ID    DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
  11           ID    REFERENCING RCFD & WCD PLATE E-5.8
  12           ID
  13           ID     AREA RANGE       DARF
  14           ID      (SQ.MI.)         --
  15           ID
  16           ID       0 TO 2.5  --->  1.000
  17           ID     2.5 TO  10  --->  0.990
  18           ID      10 TO  20  --->  0.980
  19           ID      20 TO  30  --->  0.970
  20           ID      30 TO  40  --->  0.965
  21           ID      40 TO  50  --->  0.955
  22           ID
  23           ID   *******************************************************
  24           IT       5       0       0    2000
  25           IN       5       0       0
  26           IO       5       0       0
  27           JR     PREC   1.000   0.990   0.980   0.970   0.965   0.955
               *

  28           KK     M27
  29           KM    EXISTING OFFSITE BASIN
  30           BA     0.22
  31           KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
  32           PB     3.87
  33           PI     .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
  34           PI     .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
  35           PI     .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
  36           PI     .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
  37           PI     .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
  38           PI     .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
  39           PI     .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
  40           PI     .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
  41           PI     .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
  42           PI     .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
  43           PI     .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
  44           PI     .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
  45           PI     .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
  46           PI     .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
  47           PI     .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
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  52           PI     .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1                                        HEC-1 INPUT                                        PAGE  2

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  54           PI     .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
  55           PI     .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
  56           PI     .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
  57           PI     .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
  58           PI     .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
  59           PI     .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
  60           PI     .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
  61           PI     .019    .023    .014    .009    .009    .005    .005    .005
```

```
 62          LS            71.9
 63          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 64          UI    52.6   117.7   306.7   329.2   202.0   132.8    95.3    73.6    59.2    49.9
 65          UI    39.2    33.4    28.4    24.8    22.5    19.0    17.4    12.8    12.8     9.5
 66          UI     7.2     7.2     7.2     7.2     4.6     4.1     4.1     4.1     4.1     4.1
 67          UI     4.1     4.1     2.0
             *

 68          KK    RM27
 69          KM   ROUTE M27 TO ONR
 70          KM   EXISTING WASH
 71          RD    5175   0.013   0.035       0    TRAP      20       3
             *

 72          KK    ONR
 73          KM   EXISTING ONSITE BASIN
 74          BA    0.27
 75          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 76          PB    3.87
 77          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 78          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 79          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 80          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 81          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 82          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 83          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 84          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 85          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 86          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 87          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 88          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 89          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 90          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 91          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 92          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 93          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 94          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 95          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 96          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 97          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 98          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 99          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
100          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
101          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
102          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
103          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1                                          HEC-1 INPUT                                                PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

104          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
105          PI    .019    .023    .014    .009    .009    .005    .005    .005
106          LS            71.9
107          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
108          UI    102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
109          UI    37.8    31.8    24.9    21.3    14.9    11.9    11.9    11.0     6.8     6.8
110          UI     6.8     6.8     6.8     6.5
             *

111          KK    CP25
112          KM   COMBINE M27, ONR
113          HC       2
             *

114          KK    M22
115          KM   EXISTING OFFSITE BASIN
116          BA    0.07
117          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
118          PB    3.87
119          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
120          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
121          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
122          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
123          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
124          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
125          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
126          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
127          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
128          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
129          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
130          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
131          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
132          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
133          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
134          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
135          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
136          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
137          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
138          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
139          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
140          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
141          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
142          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
143          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
144          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
145          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
146          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
147          PI    .019    .023    .014    .009    .009    .005    .005    .005
148          LS            79.7
149          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
150          UI    65.5   222.4    95.5    49.7    31.7    21.3    15.6    11.5     8.1     5.1
151          UI     4.9     2.9     2.9     2.9     2.0
             *
1                                          HEC-1 INPUT                                                PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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 152          KK    M21
 153          KM   EXISTING OFFSITE BASIN
 154          BA    0.17
 155          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 156          PB    3.87
 157          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 158          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 159          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 160          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 161          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 162          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 163          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 164          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 165          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 166          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 167          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 168          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 169          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 170          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 171          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 172          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 173          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 174          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 175          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 176          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 177          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 178          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 179          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 180          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 181          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 182          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 183          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 184          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 185          PI    .019    .023    .014    .009    .009    .005    .005    .005
 186          LS            82.5
 187          KM   UHG FROM MOUNTAIN S-GRAPH
 188          UI    322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
 189          UI    21.9    19.0    15.4    14.5    10.7    10.5     7.5     3.8     3.8     3.8
 190          UI     3.8     3.8     3.8     1.6
              *

 191          KK    M23
 192          KM   EXISTING OFFSITE BASIN
 193          BA    0.18
 194          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 195          PB    3.87
 196          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 197          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 198          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 199          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 200          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 201          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 202          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 203          PI    .139    .139    .130    .107    .093    .093    .088    .088    .093
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 204          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 205          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 206          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 207          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 208          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 209          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 210          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 211          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 212          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 213          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 214          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 215          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 216          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 217          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 218          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 219          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 220          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 221          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 222          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 223          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 224          PI    .019    .023    .014    .009    .009    .005    .005    .005
 225          LS            82.1
 226          KM   UHG FROM MOUNTAIN S-GRAPH
 227          UI    269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
 228          UI    23.8    21.0    18.6    17.1    13.5    13.2     9.8     9.8     8.3     3.6
 229          UI     3.6     3.6     3.6     3.6     3.6     3.6     2.0
              *

 230          KK    M25
 231          KM   EXISTING OFFSITE BASIN
 232          BA    0.15
 233          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 234          PB    3.87
 235          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 236          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 237          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 238          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 239          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 240          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 241          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 242          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 243          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 244          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 245          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 246          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 247          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
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 248          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 249          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 250          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 251          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 252          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 253          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 254          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 255          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 256          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1                                          HEC-1 INPUT                                          PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 258          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 259          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 260          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 261          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 262          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 263          PI    .019    .023    .014    .009    .009    .005    .005    .005
 264          LS            85.4
 265          KM   UHG FROM MOUNTAIN S-GRAPH
 266          UI    178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
 267          UI    19.6    17.8    16.3    15.3    13.0    12.2     9.9     9.9     7.4     7.2
 268          UI     7.2     4.1     2.6     2.6     2.6     2.6     2.6     2.6     2.6     2.6
 269          UI      .0
              *

 270          KK    CP21
 271          KM   COMBINE M22, M21, M23, M25
 272          HC       4
              *

 273          KK    M24
 274          KM   EXISTING OFFSITE BASIN
 275          BA    0.66
 276          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 277          PB    3.87
 278          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 279          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 280          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 281          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 282          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 283          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 284          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 285          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 286          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 287          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 288          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 289          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 290          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 291          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 292          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 293          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 294          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 295          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 296          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 297          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 298          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 299          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 300          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 301          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 302          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 303          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 304          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 305          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 306          PI    .019    .023    .014    .009    .009    .005    .005    .005
 307          LS            91.3
1                                          HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          KM   UHG FROM MOUNTAIN S-GRAPH
 309          UI    724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
 310          UI    86.8    79.3    73.9    64.9    60.5    54.8    47.3    41.7    40.3    30.3
 311          UI    30.3    30.3    15.8    11.0    11.0    11.0    11.0    11.0    11.0    11.0
 312          UI    11.0     5.5
              *

 313          KK    RM24
 314          KM   ROUTE M24 TO M26
 315          KM   EXISTING WASH
 316          RD    8410   0.014   0.035       0    TRAP      20       3
              *

 317          KK     M26
 318          KM   EXISTING OFFSITE BASIN
 319          BA    0.53
 320          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 321          PB    3.87
 322          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 323          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 324          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 325          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 326          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 327          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 328          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 329          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 330          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 331          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 332          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 333          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 334          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 335          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 336          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 337          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
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 338          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 339          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 340          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 341          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 342          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 343          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 344          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 345          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 346          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 347          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 348          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 349          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 350          PI    .019    .023    .014    .009    .009    .005    .005    .005
 351          LS            75.9
 352          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 353          UI    96.8   189.8   395.5   791.6   574.8   378.1   279.2   200.7   165.0   132.8
 354          UI    114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
 355          UI    27.1    25.6    25.6    18.0    14.4    14.4    14.4    14.4    14.4     8.4
 356          UI     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2      .0
              *
1                                          HEC-1 INPUT                                                PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 357          KK    CP22
 358          KM   COMBINE M24, M26
 359          HC       2
              *

 360          KK    CP23
 361          KM   COMBINE CP21, CP22
 362          HC       2
              *

 363          KK   RCP23
 364          KM   ROUTE CP23 TO ONQ
 365          KM   EXISTING WASH
 366          RD    8840   0.012   0.035       0    TRAP      20       3
              *

 367          KK    ONQ
 368          KM   EXISTING ONSITE BASIN
 369          BA    0.66
 370          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 371          PB    3.87
 372          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 373          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 374          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 375          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 376          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 377          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 378          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 379          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 380          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 381          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 382          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 383          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 384          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 385          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 386          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 387          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 388          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 389          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 390          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 391          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 392          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 393          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 394          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 395          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 396          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 397          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 398          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 399          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 400          PI    .019    .023    .014    .009    .009    .005    .005    .005
 401          LS            71.9
 402          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 403          UI    107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
 404          UI    144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
1                                          HEC-1 INPUT                                                PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 405          UI    43.9    40.2    29.5    29.5    29.5    19.2    16.6    16.6    16.6    16.6
 406          UI    16.6    12.1     9.4     9.4     9.4     9.4     9.4     9.4     9.4     9.4
 407          UI     9.4     9.4     1.8
              *

 408          KK    CP24
 409          KM   COMBINE CP23, ONQ
 410          HC       2
              *

 411          KK  CPDUM1
 412          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 413          HC       2
              *

 414          KK     M12
 415          KM   EXISTING OFFSITE BASIN
 416          BA    3.98
 417          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 418          PB    3.59
 419          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 420          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 421          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
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 422          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 423          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 424          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 425          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 426          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 427          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 428          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 429          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 430          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 431          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 432          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 433          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 434          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 435          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 436          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 437          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 438          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 439          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 440          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 441          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 442          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 443          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 444          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 445          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 446          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 447          PI    .017    .022    .013    .009    .009    .004    .004    .004
 448          LS            87.1
 449          KM   UHG FROM MOUNTAIN S-GRAPH
 450          UI    885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
 451          UI    770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
 452          UI    350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
 453          UI    196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 454          UI    135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
 455          UI    99.9    99.9    99.9    99.9    82.8    76.2    76.2    76.2    76.2    76.2
 456          UI    76.2    76.2    63.0    55.4    55.4    55.4    55.4    55.4    55.4    55.4
 457          UI    55.4    55.4    55.4    37.5    20.1    20.1    20.1    20.1    20.1    20.1
 458          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 459          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 460          UI    20.1    20.1    20.1    20.1     1.5
              *

 461          KK     ONJ
 462          KM   EXISTING ONSITE BASIN
 463          BA    0.07
 464          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 465          PB    3.59
 466          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 467          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 468          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 469          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 470          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 471          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 472          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 473          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 474          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 475          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 476          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 477          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 478          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 479          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 480          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 481          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 482          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 483          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 484          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 485          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 486          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 487          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 488          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 489          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 490          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 491          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 492          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 493          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 494          PI    .017    .022    .013    .009    .009    .004    .004    .004
 495          LS            79.4
 496          KM   UHG FROM MOUNTAIN S-GRAPH
 497          UI    248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
 498          UI     3.6     2.5     2.5     2.5     1.3
              *

 499          KK     M11
 500          KM   EXISTING OFFSITE BASIN
 501          BA    1.30
 502          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 503          PB    3.59
 504          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                          HEC-1 INPUT                                                PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 505          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 506          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 507          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 508          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 509          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 510          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 511          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 512          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 513          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 514          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 515          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
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 516          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 517          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 518          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 519          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 520          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 521          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 522          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 523          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 524          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 525          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 526          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 527          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 528          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 529          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 530          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 531          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 532          PI    .017    .022    .013    .009    .009    .004    .004    .004
 533          LS            82.3
 534          KM   UHG FROM MOUNTAIN S-GRAPH
 535          UI    496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
 536          UI    249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
 537          UI    88.4    84.7    78.0    78.0    71.6    69.8    69.8    62.1    61.2    61.2
 538          UI    55.4    51.7    51.7    51.7    42.9    39.4    39.4    39.4    39.4    32.8
 539          UI    28.6    28.6    28.6    28.6    28.6    28.6    18.0    10.4    10.4    10.4
 540          UI    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4
 541          UI    10.4    10.4    10.4    10.4    10.4     7.6
              *

 542          KK     ONI
 543          KM   EXISTING ONSITE BASIN
 544          BA    0.05
 545          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 546          PB    3.59
 547          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 548          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 549          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 550          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 551          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 552          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 553          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 554          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 555          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 556          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 557          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1                                            HEC-1 INPUT                                          PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 558          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 559          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 560          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 561          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 562          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 563          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 564          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 565          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 566          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 567          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 568          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 569          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 570          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 571          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 572          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 573          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 574          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 575          PI    .017    .022    .013    .009    .009    .004    .004    .004
 576          LS            79.1
 577          KM   UHG FROM MOUNTAIN S-GRAPH
 578          UI    165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
 579          UI     4.6     2.2     1.7     1.7     1.7     1.4
              *

 580          KK     M10
 581          KM   EXISTING OFFSITE BASIN
 582          BA    0.38
 583          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 584          PB    3.59
 585          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 586          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 587          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 588          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 589          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 590          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 591          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 592          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 593          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 594          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 595          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 596          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 597          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 598          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 599          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 600          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 601          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 602          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 603          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 604          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 605          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 606          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 607          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 608          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 609          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 610          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1                                            HEC-1 INPUT                                          PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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611          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
612          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
613          PI    .017    .022    .013    .009    .009    .004    .004    .004
614          LS          79.1
615          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
616          UI    82.5   174.6   427.6   584.1   379.9   246.8   169.8   134.8   106.0    91.1
617          UI    75.3    59.6    52.8    44.5    39.6    36.6    30.7    29.9    20.6    20.6
618          UI    18.6    11.6    11.6    11.6    11.6    10.9     6.6     6.6     6.6     6.6
619          UI     6.6     6.6     6.6     6.6     5.1
             *

620          KK     ONH
621          KM   EXISTING ONSITE BASIN
622          BA    0.20
623          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
624          PB    3.59
625          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
626          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
627          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
628          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
629          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
630          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
631          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
632          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
633          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
634          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
635          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
636          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
637          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
638          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
639          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
640          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
641          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
642          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
643          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
644          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
645          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
646          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
647          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
648          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
649          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
650          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
651          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
652          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
653          PI    .017    .022    .013    .009    .009    .004    .004    .004
654          LS          81.7
655          KM   UHG FROM MOUNTAIN S-GRAPH
656          UI    302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
657          UI    26.4    23.5    20.5    18.7    15.1    14.4    11.0    11.0     8.5     4.0
658          UI     4.0     4.0     4.0     4.0     4.0     4.0     1.6
             *
1                                                HEC-1 INPUT                                                PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


659          KK     CP1
660          KM   COMBINE M12, ONJ, M11, ONI, M10, ONH
661          HC       6
             *

662          KK     DV1
663          KM   FLOWSPLIT DIVERSION FROM CP1
664          KM   4.6% OF BASIN FLOW DIVERTS "OUT" NORTH-EAST, TO "WASH 70"
665          KM   95.4% OF BASIN FLOW TO CONTINUE SOUTH
666          DT     FS1
667          DI     100
668          DQ     4.6
             *

669          KK     DV2
670          KM   FLOWSPLIT DIVERSION FROM DV1
671          KM   50% OF BASIN FLOW DIVERTS "OUT" SOUTH, TO "WASH 25B"
672          KM   50% OF BASIN FLOW TO CONTINUE EAST, TO "WASH 0"
673          DT     FS2
674          DI     100
675          DQ      50
             *

676          KK     ONV
677          KM   EXISTING ONSITE BASIN
678          BA    0.12
679          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
680          PB    3.59
681          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
682          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
683          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
684          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
685          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
686          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
687          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
688          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
689          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
690          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
691          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
692          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
693          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
694          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
695          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
696          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
697          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
698          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
699          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
700          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
701          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
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 702          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 703          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 704          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 705          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 706          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1                                          HEC-1 INPUT                                                PAGE 15

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 707          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 708          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 709          PI    .017    .022    .013    .009    .009    .004    .004    .004
 710          LS            72.0
 711          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 712          UI    112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
 713          UI     8.3     4.9     4.9     4.9     3.3
              *

 714          KK     CP2
 715          KM   COMBINE CP1, DV2
 716          HC       2
              *

 717          KK     ONG
 718          KM   EXISTING ONSITE BASIN
 719          BA    0.14
 720          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 721          PB    3.59
 722          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 723          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 724          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 725          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 726          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 727          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 728          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 729          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 730          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 731          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 732          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 733          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 734          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 735          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 736          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 737          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 738          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 739          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 740          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 741          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 742          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 743          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 744          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 745          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 746          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 747          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 748          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 749          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 750          PI    .017    .022    .013    .009    .009    .004    .004    .004
 751          LS            71.9
 752          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 753          UI    78.4   321.8   250.4   124.3    77.3    55.9    38.5    30.3    23.8    19.7
 754          UI    13.8    10.5     7.7     7.7     5.3     4.4     4.4     4.4     4.4     1.0
              *
1                                          HEC-1 INPUT                                                PAGE 16

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 755          KK     CP3
 756          KM   COMBINE CP2, ONG
 757          HC       2
              *

 758          KK     ONK
 759          KM   EXISTING ONSITE BASIN
 760          BA    0.68
 761          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 762          PB    3.59
 763          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
 764          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 765          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 766          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 767          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 768          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 769          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 770          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 771          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 772          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 773          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 774          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 775          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 776          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 777          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 778          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 779          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 780          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 781          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 782          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 783          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 784          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 785          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 786          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 787          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 788          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 789          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 790          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 791          PI    .017    .022    .013    .009    .009    .004    .004    .004
```

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 792          LS            71.9
 793          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 794          UI    109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
 795          UI    151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
 796          UI    44.9    43.5    30.2    30.2    30.2    22.1    16.9    16.9    16.9    16.9
 797          UI    16.9    14.0     9.7     9.7     9.7     9.7     9.7     9.7     9.7     9.7
 798          UI     9.7     9.7     4.8
              *

 799          KK     ONF
 800          KM   EXISTING ONSITE BASIN
 801          BA    0.50
 802          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 803          PB    3.59
 804          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                          HEC-1 INPUT                                                PAGE 17

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 805          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
 806          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
 807          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
 808          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
 809          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
 810          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
 811          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
 812          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
 813          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
 814          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
 815          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
 816          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
 817          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
 818          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
 819          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
 820          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
 821          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
 822          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
 823          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
 824          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
 825          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
 826          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
 827          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
 828          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
 829          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
 830          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
 831          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
 832          PI    .017    .022    .013    .009    .009    .004    .004    .004
 833          LS            71.9
 834          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 835          UI    153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
 836          UI    77.0    64.7    56.7    51.5    34.8    34.8    22.8    19.5    19.5    19.5
 837          UI    12.6    11.1    11.1    11.1    11.1    11.1    11.1     1.6
              *

 838          KK     CP4
 839          KM   COMBINE CP3, ONK, ONF
 840          HC       3
              *

 841          KK  CPDUM2
 842          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 843          HC       2
              *

 844          KK    RET1
 845          KM   RETRIEVE "FS1" PORTION OF FLOW SPLIT
 846          KM   TRIB TO "WASH 70"
 847          DR     FS1
              *
1                                          HEC-1 INPUT                                                PAGE 18

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 848          KK      MX
 849          KM   EXISTING OFFSITE BASIN
 850          BA    0.01
 851          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 852          PB    3.87
 853          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 854          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 855          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 856          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 857          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 858          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 859          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 860          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 861          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 862          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 863          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 864          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 865          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 866          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 867          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 868          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 869          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 870          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 871          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 872          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 873          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 874          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 875          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 876          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 877          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 878          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 879          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
```

```
 880          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 881          PI    .019    .023    .014    .009    .009    .005    .005    .005
 882          LS            91.6
 883          KM   UHG FROM MOUNTAIN S-GRAPH
 884          UI    57.5    10.9     5.2     2.5     1.0      .0
              *

 885          KK    CP14
 886          KM   COMBINE FS1, MX
 887          HC       2
              *

 888          KK     ONS
 889          KM   EXISTING ONSITE BASIN
 890          BA    0.04
 891          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 892          PB    3.87
 893          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 894          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 895          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 896          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 897          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1                                          HEC-1 INPUT                                                PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 898          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 899          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 900          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 901          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 902          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 903          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 904          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 905          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 906          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 907          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 908          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 909          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 910          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 911          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 912          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 913          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 914          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 915          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 916          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 917          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 918          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 919          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 920          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 921          PI    .019    .023    .014    .009    .009    .005    .005    .005
 922          LS            71.9
 923          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 924          UI    30.5   114.4    61.6    30.9    19.9    13.3     9.8     7.6     5.6     4.2
 925          UI     2.6     2.6     1.7     1.5     1.5     1.5     1.0
              *

 926          KK   CP14A
 927          KM   COMBINE CP14, ONS
 928          HC       2
              *

 929          KK    M17
 930          KM   EXISTING OFFSITE BASIN
 931          BA    0.67
 932          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 933          PB    3.87
 934          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 935          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 936          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 937          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 938          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 939          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 940          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 941          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 942          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 943          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 944          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 945          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 946          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 947          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 948          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1                                          HEC-1 INPUT                                                PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 949          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 950          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 951          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 952          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 953          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 954          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 955          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 956          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
 957          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
 958          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
 959          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
 960          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
 961          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
 962          PI    .019    .023    .014    .009    .009    .005    .005    .005
 963          LS            84.5
 964          KM   UHG FROM MOUNTAIN S-GRAPH
 965          UI    564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
 966          UI    97.4    80.4    73.6    69.1    63.2    58.7    55.5    49.3    46.8    41.3
 967          UI    35.7    35.7    29.9    25.9    25.9    25.9    16.2     9.4     9.4     9.4
 968          UI     9.4     9.4     9.4     9.4     9.4     9.4     9.4     3.8
              *
```

```
 969          KK    CP15
 970          KM   COMBINE CP14A, M17
 971          HC       2
              *

 972          KK    M18
 973          KM   EXISTING OFFSITE BASIN
 974          BA    0.12
 975          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 976          PB    3.87
 977          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
 978          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
 979          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
 980          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
 981          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
 982          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
 983          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
 984          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
 985          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
 986          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
 987          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
 988          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
 989          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
 990          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
 991          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
 992          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
 993          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
 994          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
 995          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
 996          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
 997          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
 998          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
 999          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1                                                HEC-1 INPUT                                                    PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1000          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1001          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1002          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1003          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1004          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1005          PI    .019    .023    .014    .009    .009    .005    .005    .005
1006          LS            83.1
1007          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1008          UI    69.8   284.1   213.2   103.8    65.1    46.9    32.8    25.0    20.2    16.0
1009          UI    12.1     7.9     6.8     6.7     3.9     3.9     3.9     3.9     3.0
              *

1010          KK    M20
1011          KM   EXISTING OFFSITE BASIN
1012          BA    0.49
1013          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1014          PB    3.87
1015          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1016          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1017          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1018          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1019          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1020          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1021          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1022          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1023          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1024          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1025          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1026          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1027          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1028          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1029          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1030          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1031          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1032          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1033          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1034          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1035          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1036          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1037          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1038          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1039          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1040          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1041          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1042          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1043          PI    .019    .023    .014    .009    .009    .005    .005    .005
1044          LS            90.4
1045          KM   UHG FROM MOUNTAIN S-GRAPH
1046          UI    626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
1047          UI    64.5    59.4    52.2    47.6    44.1    35.1    33.6    28.1    24.4    24.4
1048          UI    16.7     8.9     8.9     8.9     8.9     8.9     8.9     8.9     8.9      .0
              *
1                                                HEC-1 INPUT                                                    PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1049          KK   STOR1
1050          KM   EXISTING OPEN MINE PIT BASIN
1051          KM   INTERCEPTS FLOW FROM M20
1052          KM   OPEN MINE PIT TOP EDGE ELEV = 440 ft
1053          KM   SPILL OUT BEGINS ABOVE TOP EDGE ELEV.
1054          RS       1    STOR       0
1055          SA    0.76    1.46    3.37    5.06    5.13    5.23    5.72    6.67
1056          SE     428     432     436     440   440.2   440.5     442     444
1057          SQ       0       0       0       0      61     240    2929    8283
              *
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1058          KK    RM20
1059          KM   ROUTE M20 FLOW TO M19
1060          KM   EXISTING WASH
1061          RD    3500   0.028   0.035       0    TRAP      20       3
              *

1062          KK    M19
1063          KM   EXISTING OFFSITE BASIN
1064          BA    0.11
1065          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1066          PB    3.87
1067          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1068          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1069          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1070          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1071          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1072          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1073          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1074          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1075          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1076          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1077          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1078          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1079          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1080          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1081          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1082          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1083          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1084          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1085          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1086          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1087          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1088          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1089          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1090          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1091          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1092          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1093          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1094          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1095          PI    .019    .023    .014    .009    .009    .005    .005    .005
1096          LS            83.1
1097          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1098          UI    117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
1                                          HEC-1 INPUT                                                    PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1099          UI     6.3     4.7     4.7     4.7      .0
              *

1100          KK    CP16
1101          KM   COMBINE M20, M19
1102          HC       2
              *

1103          KK    CP17
1104          KM   COMBINE CP15, M18, CP16
1105          HC       3
              *

1106          KK   RCP17
1107          KM   ROUTE CP17 TO ONP
1108          KM   EXISTING WASH
1109          RD   11280   0.014   0.035       0    TRAP      20       3
              *

1110          KK    ONP
1111          KM   EXISTING ONSITE BASIN
1112          BA    1.47
1113          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1114          PB    3.87
1115          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1116          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1117          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1118          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1119          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1120          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1121          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1122          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1123          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1124          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1125          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1126          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1127          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1128          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1129          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1130          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1131          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1132          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1133          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1134          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1135          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1136          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1137          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1138          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1139          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1140          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1141          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1142          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1143          PI    .019    .023    .014    .009    .009    .005    .005    .005
1144          LS            71.9
1145          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                    PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1146          UI    206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
1147          UI    366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
1148          UI    103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
1149          UI    32.6    32.6    32.6    32.6    32.6    25.9    18.6    18.6    18.6    18.6
1150          UI    18.6    18.6    18.6    18.6    18.6    18.6    18.6    14.4
              *

1151          KK    CP18
1152          KM   COMBINE CP17, ONP
1153          HC       2
              *

1154          KK  CPDUM3
1155          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1156          HC       2
              *

1157          KK     ONT
1158          KM   EXISTING ONSITE BASIN
1159          BA    0.04
1160          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1161          PB    3.87
1162          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1163          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1164          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1165          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1166          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1167          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1168          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1169          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1170          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1171          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1172          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1173          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1174          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1175          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1176          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1177          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1178          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1179          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1180          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1181          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1182          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1183          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1184          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1185          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1186          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1187          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1188          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1189          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1190          PI    .019    .023    .014    .009    .009    .005    .005    .005
1191          LS            71.9
1192          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1193          UI    47.6   130.9    50.1    26.7    16.4    11.2     8.4     5.6     3.2     3.1
1194          UI     1.8     1.8     1.8     1.0
              *
1                                          HEC-1 INPUT                                          PAGE 25

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195          KK   RMONT
1196          KM   ROUTE ONT TO ONO
1197          KM   EXISTING WASH
1198          RD   10985   0.015   0.035       0    TRAP      20       3
              *

1199          KK    ONO
1200          KM   EXISTING ONSITE BASIN
1201          BA    0.55
1202          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1203          PB    3.87
1204          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1205          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1206          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1207          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1208          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1209          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1210          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1211          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1212          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1213          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1214          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1215          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1216          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1217          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1218          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1219          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1220          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1221          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1222          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1223          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1224          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1225          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1226          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1227          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1228          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1229          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1230          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1231          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1232          PI    .019    .023    .014    .009    .009    .005    .005    .005
1233          LS            71.9
1234          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1235          UI    79.8   140.8   249.2   528.5   675.3   480.0   333.2   260.9   187.2   161.1
1236          UI    135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
1237          UI    39.9    35.3    33.4    31.6    22.4    22.4    22.4    18.8    12.6    12.6
```

```
1238          UI    12.6    12.6    12.6    12.6     9.3     7.2     7.2     7.2     7.2     7.2
1239          UI     7.2     7.2     7.2     7.2     7.2     7.2     1.8
              *
1                                                HEC-1 INPUT                                                PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1240          KK    CP20
1241          KM   COMBINE ONT, ONO
1242          HC        2
              *

1243          KK  CPDUM4
1244          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1245          HC        2
              *

1246          KK     ONU
1247          KM   EXISTING ONSITE BASIN
1248          BA    0.05
1249          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1250          PB    3.87
1251          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1252          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1253          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1254          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1255          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1256          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1257          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1258          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1259          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1260          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1261          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1262          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1263          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1264          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1265          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1266          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1267          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1268          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1269          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1270          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1271          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1272          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1273          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1274          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1275          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1276          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1277          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1278          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1279          PI    .019    .023    .014    .009    .009    .005    .005    .005
1280          LS            71.9
1281          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1282          UI    55.1   162.7    64.0    34.2    21.1    14.5    10.9     7.3     4.6     3.8
1283          UI     2.7     2.2     2.2     1.8
              *
1                                                HEC-1 INPUT                                                PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1284          KK   RMONU
1285          KM   ROUTE ONU TO ONL
1286          KM   EXISTING WASH
1287          RD   10520   0.016   0.035       0    TRAP      20       3
              *

1288          KK    ONL
1289          KM   EXISTING ONSITE BASIN
1290          BA    0.73
1291          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1292          PB    3.87
1293          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1294          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1295          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1296          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1297          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1298          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1299          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1300          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1301          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1302          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1303          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1304          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1305          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1306          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1307          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1308          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1309          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1310          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1311          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1312          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1313          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1314          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1315          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1316          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1317          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1318          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1319          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1320          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1321          PI    .019    .023    .014    .009    .009    .005    .005    .005
1322          LS            71.9
1323          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1324          UI    122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
1325          UI    159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
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1326          UI    49.7    37.6    33.4    33.4    28.2    18.7    18.7    18.7    18.7    18.7
1327          UI    16.1    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7
1328          UI    10.7     2.7
              *
1                                          HEC-1 INPUT                                                PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1329          KK    CP19
1330          KM   COMBINE ONU, ONL
1331          HC       2
              *

1332          KK    ONM
1333          KM   EXISTING ONSITE BASIN
1334          BA    0.10
1335          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1336          PB    3.87
1337          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1338          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1339          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1340          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1341          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1342          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1343          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1344          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1345          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1346          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1347          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1348          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1349          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1350          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1351          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1352          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1353          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1354          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1355          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1356          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1357          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1358          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1359          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1360          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1361          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1362          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1363          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1364          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1365          PI    .019    .023    .014    .009    .009    .005    .005    .005
1366          LS            71.9
1367          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1368          UI    197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
1369          UI     5.4     1.2
              *

1370          KK    ONN
1371          KM   EXISTING ONSITE BASIN
1372          BA    0.08
1373          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1374          PB    3.87
1375          PI    .005    .005    .009    .009    .009    .009    .014    .014    .014    .014
1376          PI    .019    .019    .023    .023    .023    .023    .023    .023    .023    .023
1377          PI    .023    .023    .023    .023    .023    .023    .023    .023    .023    .023
1378          PI    .028    .028    .033    .033    .033    .033    .037    .042    .051    .060
1                                          HEC-1 INPUT                                                PAGE 29

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1379          PI    .070    .065    .060    .056    .056    .051    .046    .056    .070    .084
1380          PI    .088    .088    .088    .093    .088    .088    .088    .093    .098    .102
1381          PI    .116    .125    .130    .139    .139    .139    .139    .139    .139    .139
1382          PI    .139    .139    .130    .107    .093    .093    .093    .088    .088    .093
1383          PI    .102    .111    .121    .135    .149    .163    .176    .186    .195    .200
1384          PI    .209    .218    .223    .228    .232    .237    .237    .237    .241    .241
1385          PI    .241    .241    .246    .251    .255    .260    .260    .260    .255    .251
1386          PI    .246    .251    .260    .269    .279    .288    .293    .297    .302    .307
1387          PI    .311    .316    .316    .316    .320    .325    .330    .330    .330    .330
1388          PI    .334    .344    .362    .395    .423    .432    .427    .423    .418    .423
1389          PI    .423    .427    .432    .432    .437    .441    .446    .446    .441    .437
1390          PI    .437    .432    .427    .423    .418    .418    .413    .409    .404    .413
1391          PI    .427    .441    .460    .488    .506    .515    .525    .525    .525    .525
1392          PI    .525    .525    .529    .529    .534    .539    .543    .539    .525    .478
1393          PI    .432    .390    .353    .320    .302    .293    .279    .237    .158    .093
1394          PI    .084    .079    .102    .144    .204    .209    .181    .135    .107    .088
1395          PI    .079    .070    .060    .060    .056    .051    .046    .042    .042    .042
1396          PI    .037    .033    .033    .028    .028    .028    .023    .023    .023    .023
1397          PI    .023    .023    .019    .019    .019    .014    .014    .009    .009    .009
1398          PI    .009    .005    .005    .009    .009    .014    .014    .019    .019    .019
1399          PI    .019    .019    .014    .014    .014    .014    .014    .014    .014    .014
1400          PI    .019    .019    .014    .014    .014    .019    .019    .014    .009    .014
1401          PI    .019    .023    .028    .046    .084    .116    .135    .121    .088    .060
1402          PI    .028    .009    .005    .005    .000    .000    .000    .000    .000    .005
1403          PI    .019    .023    .014    .009    .009    .005    .005    .005
1404          LS            71.9
1405          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1406          UI    22.6    56.4   148.9   107.3    65.2    41.8    31.7    24.4    20.2    15.4
1407          UI    13.0    11.0     9.3     8.2     7.4     5.2     5.2     3.4     2.9     2.9
1408          UI     2.9     2.2     1.7     1.7     1.7     1.7     1.7     1.7     1.4
              *

1409          KK  CPDUM5
1410          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1411          HC       4
              *

1412          KK      M9
1413          KM   EXISTING OFFSITE BASIN
```

```
1414          BA    1.80
1415          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1416          PB    3.59
1417          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1418          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1419          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1420          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1421          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1422          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1423          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1424          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1425          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1426          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1427          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1428          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1429          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1                                             HEC-1 INPUT                                                PAGE 30

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1431          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1432          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1433          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1434          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1435          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1436          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1437          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1438          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1439          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1440          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1441          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1442          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1443          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1444          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1445          PI    .017    .022    .013    .009    .009    .004    .004    .004
1446          LS            86.2
1447          KM   UHG FROM MOUNTAIN S-GRAPH
1448          UI    471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
1449          UI    364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
1450          UI    145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
1451          UI    79.4    79.4    79.1    71.0    71.0    71.0    70.1    62.3    62.3    62.3
1452          UI    62.3    56.1    52.6    52.6    52.6    52.6    48.4    40.1    40.1    40.1
1453          UI    40.1    40.1    40.1    35.9    29.1    29.1    29.1    29.1    29.1    29.1
1454          UI    29.1    29.1    29.1    14.0    10.6    10.6    10.6    10.6    10.6    10.6
1455          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6
1456          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6     5.1
              *

1457          KK      M8
1458          KM   EXISTING OFFSITE BASIN
1459          BA    1.04
1460          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1461          PB    3.59
1462          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1463          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1464          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1465          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1466          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1467          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1468          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1469          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1470          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1471          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1472          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1473          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1474          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1475          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1476          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1477          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1478          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1479          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1480          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1481          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1482          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1                                             HEC-1 INPUT                                                PAGE 31

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1483          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1484          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1485          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1486          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1487          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1488          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1489          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1490          PI    .017    .022    .013    .009    .009    .004    .004    .004
1491          LS            85.6
1492          KM   UHG FROM MOUNTAIN S-GRAPH
1493          UI    495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
1494          UI    177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
1495          UI    69.5    66.3    65.0    58.1    58.1    54.6    49.1    49.1    47.8    37.4
1496          UI    37.4    37.4    37.4    29.2    27.2    27.2    27.2    27.2    27.2    12.0
1497          UI     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9
1498          UI     9.9     9.9     9.9     9.9     9.9     4.0
              *

1499          KK     CP5
1500          KM   COMBINE M9, M8
1501          HC       2
              *

1502          KK    RET2
1503          KM   RETRIEVE FLOW TRIB. TO "WASH 25B"
1504          DR     FS2
              *
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1505          KK     CP6
1506          KM   COMBINE CP5, RET2
1507          HC       2
              *

1508          KK      M7
1509          KM   EXISTING OFFSITE BASIN
1510          BA    0.16
1511          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1512          PB    3.59
1513          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1514          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1515          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1516          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1517          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1518          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1519          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1520          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1521          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1522          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1523          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1524          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1525          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1526          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1527          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1528          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1529          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1                                             HEC-1 INPUT                                                PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1530          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1531          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1532          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1533          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1534          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1535          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1536          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1537          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1538          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1539          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1540          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1541          PI    .017    .022    .013    .009    .009    .004    .004    .004
1542          LS            77.3
1543          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1544          UI    65.0   232.2   334.4   171.6   100.8    70.8    54.5    39.7    31.5    25.7
1545          UI    21.7    18.5    13.2    11.5     7.4     7.4     7.4     4.4     4.2     4.2
1546          UI     4.2     4.2     4.0
              *

1547          KK    ONE1
1548          KM   EXISTING ONSITE BASIN
1549          BA    1.61
1550          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1551          PB    3.59
1552          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1553          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1554          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1555          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1556          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1557          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1558          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1559          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1560          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1561          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1562          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1563          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1564          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1565          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1566          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1567          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1568          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1569          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1570          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1571          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1572          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1573          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1574          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1575          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1576          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1577          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1578          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1579          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1580          PI    .017    .022    .013    .009    .009    .004    .004    .004
1581          LS            73.7
1582          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                             HEC-1 INPUT                                                PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1583          UI    163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
1584          UI    566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
1585          UI    159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
1586          UI    74.5    68.3    68.3    68.3    48.4    45.9    45.9    45.9    45.9    36.7
1587          UI    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    17.1
1588          UI    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7
1589          UI    14.7    14.7    14.7    14.7    14.7    14.7     2.7
              *

1590          KK    CP6A
1591          KM   COMBINE M7, ONE1
1592          HC       2
              *

1593          KK    CP6B
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```
1594          KM   COMBINE CP6, CP6A
1595          HC       2
              *

1596          KK    ONE2
1597          KM   EXISTING ONSITE BASIN
1598          BA    2.59
1599          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1600          PB    3.59
1601          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1602          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1603          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1604          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1605          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1606          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1607          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1608          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1609          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1610          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1611          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1612          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1613          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1614          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1615          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1616          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1617          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1618          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1619          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1620          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1621          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1622          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1623          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1624          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1625          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1626          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1627          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1628          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1629          PI    .017    .022    .013    .009    .009    .004    .004    .004
1630          LS            74.5
1631          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1632          UI    210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
1633          UI   1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
1634          UI    290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
1635          UI    151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
1636          UI    87.8    87.8    78.6    59.0    59.0    59.0    59.0    59.0    59.0    45.4
1637          UI    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1
1638          UI    33.1    27.1    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1639          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1640          UI    18.9    18.9    15.4
              *

1641          KK     CP7
1642          KM   COMBINE CP6B, ONE2
1643          HC       2
              *

1644          KK      M6
1645          KM   EXISTING OFFSITE BASIN
1646          BA    1.32
1647          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1648          PB    3.59
1649          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1650          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1651          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1652          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1653          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1654          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1655          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1656          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1657          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1658          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1659          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1660          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1661          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1662          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1663          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1664          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1665          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1666          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1667          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1668          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1669          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1670          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1671          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1672          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1673          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1674          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1675          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1676          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1677          PI    .017    .022    .013    .009    .009    .004    .004    .004
1678          LS            83.8
1679          KM   UHG FROM MOUNTAIN S-GRAPH
1680          UI    488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
1681          UI    247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
1682          UI    87.8    87.8    78.9    77.5    75.6    69.3    69.3    67.0    60.8    60.8
1                                          HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1683          UI    60.8    52.1    51.3    51.3    51.3    39.9    39.1    39.1    39.1    39.1
1684          UI    31.5    28.4    28.4    28.4    28.4    28.4    28.4    19.1    10.3    10.3
1685          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3
```

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1686          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3     2.5
              *

1687          KK     M5A
1688          KM   EXISTING OFFSITE BASIN
1689          BA    0.17
1690          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1691          PB    3.59
1692          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1693          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1694          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1695          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1696          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1697          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1698          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1699          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1700          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1701          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1702          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1703          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1704          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1705          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1706          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1707          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1708          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1709          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1710          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1711          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1712          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1713          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1714          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1715          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1716          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1717          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1718          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1719          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1720          PI    .017    .022    .013    .009    .009    .004    .004    .004
1721          LS            86.2
1722          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1723          UI    46.0   109.1   301.7   233.7   143.7    91.0    69.2    52.4    44.0    34.0
1724          UI    28.4    23.8    20.4    18.2    16.1    12.5    10.8     9.6     6.1     6.1
1725          UI     6.1     6.1     3.7     3.5     3.5     3.5     3.5     3.5     3.5     2.5
              *

1726          KK     M5B
1727          KM   EXISTING OFFSITE BASIN
1728          BA    0.18
1729          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1730          PB    3.59
1731          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1732          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1733          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1                                          HEC-1 INPUT                                                PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1734          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1735          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1736          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1737          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1738          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1739          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1740          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1741          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1742          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1743          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1744          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1745          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1746          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1747          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1748          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1749          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1750          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1751          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1752          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1753          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1754          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1755          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1756          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1757          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1758          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1759          PI    .017    .022    .013    .009    .009    .004    .004    .004
1760          LS            86.2
1761          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1762          UI    94.4   388.4   330.7   165.8   102.3    73.1    51.5    39.8    31.7    26.1
1763          UI    19.0    16.0     9.6     9.6     8.6     5.5     5.5     5.5     5.5     4.6
              *

1764          KK     CP8
1765          KM   COMBINE M6, M5A, M5B
1766          HC       3
              *

1767          KK      M5
1768          KM   EXISTING OFFSITE BASIN
1769          BA    0.39
1770          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1771          PB    3.59
1772          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1773          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1774          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1775          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1776          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1777          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1778          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1779          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
```

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1780          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1781          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1782          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1783          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1784          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1                                          HEC-1 INPUT                                                PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1785          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1786          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1787          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1788          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1789          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1790          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1791          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1792          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1793          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1794          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1795          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1796          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1797          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1798          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1799          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1800          PI    .017    .022    .013    .009    .009    .004    .004    .004
1801          LS            74.6
1802          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1803          UI    91.1   201.2   517.0   587.6   366.2   241.4   170.2   132.5   105.2    89.8
1804          UI    70.8    59.8    51.4    45.0    39.6    34.5    33.1    22.6    22.3    19.8
1805          UI    12.5    12.5    12.5    12.5    10.2     7.1     7.1     7.1     7.1     7.1
1806          UI     7.1     7.1     7.1      .0
              *

1807          KK     CP9
1808          KM   COMBINE CP8, M5
1809          HC       2
              *

1810          KK     ONB
1811          KM   EXISTING ONSITE BASIN
1812          BA    2.83
1813          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1814          PB    3.59
1815          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1816          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1817          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1818          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1819          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1820          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1821          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1822          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1823          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1824          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1825          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1826          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1827          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1828          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1829          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1830          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1831          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1832          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1833          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1834          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1835          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1                                          HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1836          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1837          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1838          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1839          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1840          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1841          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1842          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1843          PI    .017    .022    .013    .009    .009    .004    .004    .004
1844          LS            73.4
1845          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1846          UI   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
1847          UI  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
1848          UI   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
1849          UI   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
1850          UI   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
1851          UI    59.1    59.1    59.1    58.1    33.2    33.2    33.2    33.2    33.2    33.2
1852          UI    33.2    33.2    33.2    33.2    33.2    33.2    33.2    21.2    18.9    18.9
1853          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1854          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1855          UI     6.1
              *

1856          KK    CP10
1857          KM   COMBINE CP9, ONB
1858          HC       2
              *

1859          KK     OND
1860          KM   EXISTING ONSITE BASIN
1861          BA    1.34
1862          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1863          PB    3.59
1864          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1865          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1866          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1867          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1868          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1869          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
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1870          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1871          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1872          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1873          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1874          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1875          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1876          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1877          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1878          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1879          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1880          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1881          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1882          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1883          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1884          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1885          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1886          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1                                          HEC-1 INPUT                                          PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1887          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1888          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1889          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1890          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1891          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1892          PI    .017    .022    .013    .009    .009    .004    .004    .004
1893          LS            71.9
1894          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1895          UI    203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
1896          UI    309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
1897          UI    90.9    85.1    79.2    57.2    57.2    57.2    42.6    32.1    32.1    32.1
1898          UI    32.1    32.1    30.5    18.3    18.3    18.3    18.3    18.3    18.3    18.3
1899          UI    18.3    18.3    18.3    18.3     4.0
              *

1900          KK     ONC
1901          KM   EXISTING ONSITE BASIN
1902          BA    0.30
1903          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1904          PB    3.59
1905          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1906          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1907          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1908          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1909          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1910          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1911          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1912          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1913          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1914          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1915          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1916          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1917          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1918          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1919          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
1920          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1921          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1922          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1923          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1924          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1925          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1926          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1927          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1928          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1929          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1930          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1931          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1932          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1933          PI    .017    .022    .013    .009    .009    .004    .004    .004
1934          LS            71.9
1935          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1936          UI    146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
1937          UI    35.8    27.5    19.2    15.4    15.4    10.9     8.8     8.8     8.8     8.8
1938          UI     5.4
              *
1                                          HEC-1 INPUT                                          PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1939          KK     CPA
1940          KM   COMBINE OND, ONC
1941          HC       2
              *

1942          KK      M4
1943          KM   EXISTING OFFSITE BASIN
1944          BA    2.71
1945          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1946          PB    3.59
1947          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1948          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1949          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1950          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
1951          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
1952          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
1953          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
1954          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
1955          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
1956          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
1957          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
1958          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
1959          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
1960          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
1961          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
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1962          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
1963          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
1964          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
1965          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
1966          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
1967          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
1968          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
1969          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
1970          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
1971          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
1972          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
1973          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
1974          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
1975          PI    .017    .022    .013    .009    .009    .004    .004    .004
1976          LS            85.3
1977          KM   UHG FROM MOUNTAIN S-GRAPH
1978          UI    485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
1979          UI    649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
1980          UI    269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
1981          UI    152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
1982          UI    95.6    92.6    84.4    84.4    84.4    84.4    81.7    75.5    75.5    75.5
1983          UI    75.5    75.5    68.6    66.2    66.2    66.2    66.2    66.2    62.1    55.9
1984          UI    55.9    55.9    55.9    55.9    55.9    55.9    44.0    42.6    42.6    42.6
1985          UI    42.6    42.6    42.6    42.6    42.6    42.1    31.0    31.0    31.0    31.0
1986          UI    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    21.3
1987          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1988          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1989          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1990          UI    11.3    11.3    11.3    11.3    11.3    11.3     8.5
              *
1                                          HEC-1 INPUT                                                PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1991          KK      M3
1992          KM   EXISTING OFFSITE BASIN
1993          BA    0.57
1994          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1995          PB    3.59
1996          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1997          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
1998          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
1999          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2000          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2001          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2002          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2003          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2004          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2005          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2006          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2007          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2008          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2009          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
2010          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2011          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2012          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2013          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2014          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2015          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2016          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2017          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2018          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2019          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2020          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2021          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2022          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2023          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2024          PI    .017    .022    .013    .009    .009    .004    .004    .004
2025          LS            79.1
2026          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2027          UI    87.5   162.8   294.9   662.8   681.0   472.9   336.7   243.7   191.2   159.0
2028          UI    130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
2029          UI    37.5    36.6    30.9    24.6    24.6    24.6    15.0    13.8    13.8    13.8
2030          UI    13.8    13.8    10.9     7.9     7.9     7.9     7.9     7.9     7.9     7.9
2031          UI     7.9     7.9     7.9     5.6
              *

2032          KK    CP11
2033          KM   COMBINE M4, M3
2034          HC       2
              *

2035          KK      M2
2036          KM   EXISTING OFFSITE BASIN
2037          BA   24.30
2038          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2039          PB    3.59
2040          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                          HEC-1 INPUT                                                PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2041          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2042          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2043          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2044          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2045          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2046          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2047          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2048          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2049          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2050          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2051          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2052          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2053          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
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2054          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2055          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2056          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2057          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2058          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2059          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2060          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2061          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2062          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2063          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2064          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2065          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2066          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2067          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2068          PI    .017    .022    .013    .009    .009    .004    .004    .004
2069          LS            86.2
2070          KM   UHG FROM MOUNTAIN S-GRAPH
2071          UI  1111.9  2221.1  2203.4  3001.1  3365.7  3569.7  4543.3  5289.0  6350.9  7587.7
2072          UI  7721.3  9338.4  7205.7  6488.0  5526.3  4850.8  4632.4  3956.0  3879.3  3543.3
2073          UI  3060.6  2466.9  2637.2  2146.4  2106.1  2033.1  2001.3  2001.4  1936.4  1691.3
2074          UI  1656.5  1534.3  1504.1  1559.9  1431.1  1421.8  1295.3  1250.7  1250.7  1251.3
2075          UI  1250.6  1241.0  1065.3  1000.8  1000.4   988.4   920.1   909.7   910.0   903.8
2076          UI   847.9   833.8   834.1   833.8   787.9   715.8   715.0   714.0   715.4   706.1
2077          UI   670.2   666.7   667.4   667.4   666.7   606.7   541.1   540.4   541.1   541.1
2078          UI   541.1   540.4   490.0   445.2   445.2   444.5   445.2   443.8   445.2   444.5
2079          UI   436.2   397.6   392.7   392.0   392.0   393.4   391.3   393.4   391.3   393.4
2080          UI   371.3   351.3   352.0   350.6   351.3   350.6   352.0   350.6   350.6   352.0
2081          UI   347.9   323.0   309.2   310.6   310.6   310.6   309.2   310.6   310.6   310.6
2082          UI   310.6   309.2   310.6   276.1   258.1   259.5   258.1   256.8   259.5   258.1
2083          UI   256.8   258.1   259.5   258.1   258.1   258.1   258.1   248.5   204.3   197.4
2084          UI   197.4   197.4   198.8   197.4   200.2   196.0   200.2   197.4   197.4   198.8
2085          UI   198.8   198.8   196.0   198.8   198.8   197.4   190.5   146.3   143.6   143.6
2086          UI   144.9   143.6   143.6   144.9   143.6   143.6   144.9   143.6   143.6   143.6
2087          UI   146.3   140.8   146.3   143.6   143.6   143.6   143.6   146.3   140.8   146.3
2088          UI   143.6   143.6   129.8    55.2    38.7    38.7    38.7    44.2    38.7    38.7
2089          UI    35.9    38.7    41.4    38.7    38.7    41.4    38.7    38.7    38.7    41.4
2090          UI    38.7    38.7    41.4    35.9    41.4    38.7    38.7    41.4    38.7    38.7
              *
1                                          HEC-1 INPUT                                                PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2091          KK   CP12A
2092          KM   COMBINE CP11, M2
2093          HC        2
              *

2094          KK     M13
2095          KM   EXISTING OFFSITE BASIN
2096          BA    7.18
2097          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2098          PB    3.59
2099          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
2100          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2101          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2102          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2103          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2104          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2105          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2106          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2107          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2108          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2109          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2110          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2111          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2112          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
2113          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2114          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2115          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2116          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2117          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2118          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2119          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2120          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2121          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2122          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2123          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2124          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2125          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2126          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2127          PI    .017    .022    .013    .009    .009    .004    .004    .004
2128          LS            88.4
2129          KM   UHG FROM MOUNTAIN S-GRAPH
2130          UI    961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
2131          UI   2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
2132          UI    718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
2133          UI    432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
2134          UI    301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
2135          UI    192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
2136          UI    170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
2137          UI    133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
2138          UI    112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
2139          UI    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6
2140          UI    65.9    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2
2141          UI    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    23.8    22.6
2142          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
1                                          HEC-1 INPUT                                                PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2143          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
2144          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
              *

2145          KK     DV3
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2146          KM   FLOWSPLIT DIVERSION FROM BASIN M13
2147          KM   ASSUME 50% OF FLOW TO CONTINUE EAST
2148          KM   ASSUME 50% OF FLOW TO CONTINUE NORTH
2149          DT     FS3
2150          DI     100
2151          DQ      50
              *

2152          KK      M1
2153          KM   EXISTING OFFSITE BASIN
2154          BA    0.76
2155          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2156          PB    3.59
2157          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
2158          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2159          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2160          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2161          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2162          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2163          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2164          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2165          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2166          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2167          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2168          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2169          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2170          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
2171          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2172          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2173          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2174          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2175          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2176          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2177          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2178          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2179          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2180          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2181          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2182          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2183          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2184          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2185          PI    .017    .022    .013    .009    .009    .004    .004    .004
2186          LS            77.3
2187          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2188          UI    176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
2189          UI    139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
2190          UI    24.2    24.2    24.2    24.2    21.1    13.8    13.8    13.8    13.8    13.8
2191          UI    13.8    13.8    13.8     3.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2192          KK    CP12
2193          KM   COMBINE DV5, M11
2194          HC       2
              *

2195          KK   CP12B
2196          KM   COMBINE CP12A, CP12
2197          HC       2
              *

2198          KK     ONA
2199          KM   EXISTING ONSITE BASIN
2200          BA    0.87
2201          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2202          PB    3.59
2203          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
2204          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2205          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2206          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2207          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2208          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2209          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2210          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2211          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2212          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2213          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2214          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2215          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2216          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
2217          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2218          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2219          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2220          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2221          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2222          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2223          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2224          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2225          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2226          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2227          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2228          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2229          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2230          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2231          PI    .017    .022    .013    .009    .009    .004    .004    .004
2232          LS            76.1
2233          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2234          UI    138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
2235          UI    195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
2236          UI    57.1    57.1    39.1    38.4    38.4    30.7    21.5    21.5    21.5    21.6
2237          UI    21.5    19.7    12.3    12.3    12.3    12.3    12.3    12.3    12.3    12.3
2238          UI    12.3    12.3     9.3
              *
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          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          2239          KK    CP13
          2240          KM   COMBINE CP12B, ONA
          2241          HC       2
                        *
          2242          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    28         M27
                V
                V
    68        RM27
                .
                .
    72          .        ONR
                .           .
                .           .
   111        CP25...........
                .
                .
   114          .        M22
                .           .
                .           .
   152          .           .        M21
                .           .           .
                .           .           .
   191          .           .           .        M23
                .           .           .           .
                .           .           .           .
   230          .           .           .           .        M25
                .           .           .           .           .
                .           .           .           .           .
   270          .        CP21...................................
                .           .
                .           .
   273          .           .        M24
                .           .           V
                .           .           V
   313          .           .        RM24
                .           .           .
                .           .           .
   317          .           .           .         M26
                .           .           .           .
                .           .           .           .
   357          .           .        CP22...........
                .           .           .
                .           .           .
   360          .        CP23...........
                .           V
                .           V
   363          .       RCP23
                .           .
                .           .
   367          .           .        ONQ
                .           .           .
                .           .           .
   408          .        CP24...........
                .           .
                .           .
   411      CPDUM1...........
                .
                .
   414          .         M12
                .           .
                .           .
   461          .           .         ONJ
                .           .           .
                .           .           .
   499          .           .           .         M11
                .           .           .           .
                .           .           .           .
   542          .           .           .           .         ONI
                .           .           .           .           .
                .           .           .           .           .
   580          .           .           .           .           .         M10
                .           .           .           .           .           .
                .           .           .           .           .           .
   620          .           .           .           .           .           .         ONH
                .           .           .           .           .           .           .
                .           .           .           .           .           .           .
   659          .         CP1..............................................................
                .           .
                .           .
   666          .           .------->     FS1
   662          .         DV1
                .           .
                .           .
   673          .           .------->     FS2
   669          .         DV2
                .           .
                .           .
   676          .           .         ONV
                .           .           .
                .           .           .
   714          .         CP2...........
                .           .
                .           .
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 717          .           .         ONG
              .           .           .
              .           .           .
 755          .         CP3............
              .           .
              .           .
 758          .           .         ONK
              .           .           .
              .           .           .
 799          .           .           .         ONF
              .           .           .           .
              .           .           .           .
 838          .         CP4........................
              .           .
              .           .
 841      CPDUM2............
              .
              .
 847          .           .<-------     FS1
 844          .        RET1
              .           .
              .           .
 848          .           .          MX
              .           .           .
              .           .           .
 885          .        CP14............
              .           .
              .           .
 888          .           .         ONS
              .           .           .
              .           .           .
 926          .       CP14A............
              .           .
              .           .
 929          .           .        M17
              .           .           .
              .           .           .
 969          .        CP15............
              .           .
              .           .
 972          .           .        M18
              .           .           .
              .           .           .
1010          .           .           .        M20
              .           .           .          V
              .           .           .          V
1049          .           .           .       STOR1
              .           .           .          V
              .           .           .          V
1058          .           .           .        RM20
              .           .           .           .
              .           .           .           .
1062          .           .           .           .        M19
              .           .           .           .           .
              .           .           .           .           .
1100          .           .           .        CP16............
              .           .           .           .
              .           .           .           .
1103          .        CP17........................
              .           V
              .           V
1106          .       RCP17
              .           .
              .           .
1110          .           .        ONP
              .           .           .
              .           .           .
1151          .        CP18............
              .           .
              .           .
1154      CPDUM3............
              .
              .
1157          .         ONT
              .           V
              .           V
1195          .       RMONT
              .           .
              .           .
1199          .           .        ONO
              .           .           .
              .           .           .
1240          .        CP20............
              .           .
              .           .
1243      CPDUM4............
              .
              .
1246          .         ONU
              .           V
              .           V
1284          .       RMONU
              .           .
              .           .
1288          .           .        ONL
              .           .           .
              .           .           .
1329          .        CP19............
              .           .
              .           .
1332          .           .        ONM
              .           .           .
              .           .           .
1370          .           .           .        ONN
              .           .           .           .
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1409      CPDUM5..................................
               .
               .
1412           .          M9
               .            .
               .            .
1457           .            .          M8
               .            .            .
               .            .            .
1499           .         CP5............
               .            .
               .            .
1504           .            .           .<-------     FS2
1502           .            .        RET2
               .            .            .
               .            .            .
1505           .         CP6............
               .            .
               .            .
1508           .            .          M7
               .            .            .
               .            .            .
1547           .            .            .        ONE1
               .            .            .           .
               .            .            .           .
1590           .            .        CP6A............
               .            .            .
               .            .            .
1593           .        CP6B............
               .            .
               .            .
1596           .            .        ONE2
               .            .            .
               .            .            .
1641           .         CP7............
               .            .
               .            .
1644           .            .          M6
               .            .            .
               .            .            .
1687           .            .            .         M5A
               .            .            .           .
               .            .            .           .
1726           .            .            .           .         M5B
               .            .            .           .           .
               .            .            .           .           .
1764           .            .         CP8........................
               .            .            .
               .            .            .
1767           .            .            .          M5
               .            .            .           .
               .            .            .           .
1807           .            .         CP9............
               .            .            .
               .            .            .
1810           .            .            .         ONB
               .            .            .           .
               .            .            .           .
1856           .            .        CP10............
               .            .            .
               .            .            .
1859           .            .            .         OND
               .            .            .           .
               .            .            .           .
1900           .            .            .           .         ONC
               .            .            .           .           .
               .            .            .           .           .
1939           .            .            .         CPA............
               .            .            .           .
               .            .            .           .
1942           .            .            .           .          M4
               .            .            .           .           .
               .            .            .           .           .
1991           .            .            .           .           .          M3
               .            .            .           .           .           .
               .            .            .           .           .           .
2032           .            .            .           .        CP11............
               .            .            .           .           .
               .            .            .           .           .
2035           .            .            .           .           .          M2
               .            .            .           .           .           .
               .            .            .           .           .           .
2091           .            .            .           .       CP12A............
               .            .            .           .           .
               .            .            .           .           .
2094           .            .            .           .           .         M13
               .            .            .           .           .           .
               .            .            .           .           .           .
2149           .            .            .           .           .           .-------->     FS3
2145           .            .            .           .           .         DV3
               .            .            .           .           .           .
               .            .            .           .           .           .
2152           .            .            .           .           .           .          M1
               .            .            .           .           .           .           .
               .            .            .           .           .           .           .
2192           .            .            .           .           .        CP12............
               .            .            .           .           .           .
               .            .            .           .           .           .
2195           .            .            .           .       CP12B............
               .            .            .           .           .
               .            .            .           .           .
2198           .            .            .           .           .         ONA
               .            .            .           .           .           .
               .            .            .           .           .           .
2239           .            .            .           .        CP13............
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  11:14:10  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                          ******************************************************
                          WO# 7323 - RIO MESA SOLAR
                          24-HR, 100-YR STORM
                          NOAA ATLAS 14- 24HR/100YR AVG PT RAINFALL DEPTH = 3.59"/3.87"
                          EXISTING CONDITION ANALYSIS
                          UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
                          STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
                          MODEL WITH NEW COMBINING SCHEME
                          ******************************************************
                          DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
                          REFERENCING RCFD & WCD PLATE E-5.8

                           AREA RANGE       DARF
                            (SQ.MI.)         --

                            0 TO 2.5  --->  1.000
                          2.5 TO  10  --->  0.990
                           10 TO  20  --->  0.980
                           20 TO  30  --->  0.970
                           30 TO  40  --->  0.965
                           40 TO  50  --->  0.955

                         ******************************************************

   26 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      7    0  ENDING DATE
                       NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL     .08 HOURS
                         TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                       NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00       .99       .98       .97       .96       .95
1

                PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                TIME TO PEAK IN HOURS


                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN            RATIO 1  RATIO 2  RATIO 3  RATIO 4  RATIO 5  RATIO 6
                                                       1.00      .99      .98      .97      .96      .95

 HYDROGRAPH AT
+                  M27       .22     1   FLOW          45.      44.      43.      43.      42.      42.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

 ROUTED TO
+                 RM27       .22     1   FLOW          45.      44.      43.      43.      42.      41.
                                         TIME         15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                 ONR        .27     1   FLOW          56.      55.      54.      53.      53.      52.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CP25       .49     1   FLOW          99.      97.      95.      94.      93.      91.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                 M22        .07     1   FLOW          18.      18.      18.      18.      18.      17.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                 M21        .17     1   FLOW          47.      46.      46.      45.      45.      44.
                                         TIME         14.83    14.83    14.83    14.83    14.83    14.83
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT + | M23 | .18 | 1 | FLOW | 49. | 48. | 48. | 47. | 47. | 46. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT + | M25 | .15 | 1 | FLOW | 43. | 43. | 42. | 42. | 42. | 41. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 4 COMBINED AT + | CP21 | .57 | 1 | FLOW | 158. | 156. | 153. | 151. | 150. | 148. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT + | M24 | .66 | 1 | FLOW | 210. | 208. | 205. | 203. | 202. | 200. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO + | RM24 | .66 | 1 | FLOW | 210. | 208. | 205. | 203. | 202. | 199. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| HYDROGRAPH AT + | M26 | .53 | 1 | FLOW | 120. | 118. | 117. | 115. | 114. | 112. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT + | CP22 | 1.19 | 1 | FLOW | 329. | 325. | 321. | 317. | 315. | 311. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT + | CP23 | 1.76 | 1 | FLOW | 482. | 476. | 470. | 464. | 460. | 454. |
| | | | | TIME | 14.92 | 14.92 | 15.00 | 15.00 | 15.00 | 15.00 |
| ROUTED TO + | RCP23 | 1.76 | 1 | FLOW | 481. | 475. | 469. | 463. | 460. | 454. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| HYDROGRAPH AT + | ONQ | .66 | 1 | FLOW | 132. | 129. | 127. | 125. | 124. | 122. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT + | CP24 | 2.42 | 1 | FLOW | 612. | 604. | 596. | 587. | 583. | 575. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT + | CPDUM1 | 2.91 | 1 | FLOW | 709. | 699. | 690. | 680. | 675. | 665. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| HYDROGRAPH AT + | M12 | 3.98 | 1 | FLOW | 966. | 954. | 942. | 930. | 924. | 911. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT + | ONJ | .07 | 1 | FLOW | 16. | 16. | 16. | 16. | 16. | 15. |
| | | | | TIME | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 |
| HYDROGRAPH AT + | M11 | 1.30 | 1 | FLOW | 300. | 296. | 292. | 288. | 286. | 282. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONI | .05 | 1 | FLOW | 12. | 11. | 11. | 11. | 11. | 11. |
| | | | | TIME | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 |
| HYDROGRAPH AT + | M10 | .38 | 1 | FLOW | 85. | 84. | 83. | 81. | 81. | 80. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONH | .20 | 1 | FLOW | 49. | 48. | 47. | 47. | 46. | 46. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 6 COMBINED AT + | CP1 | 5.98 | 1 | FLOW | 1425. | 1406. | 1387. | 1369. | 1360. | 1341. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| DIVERSION TO + | FS1 | 5.98 | 1 | FLOW | 66. | 65. | 64. | 63. | 63. | 62. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | DV1 | 5.98 | 1 | FLOW | 1359. | 1341. | 1324. | 1306. | 1297. | 1279. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| DIVERSION TO + | FS2 | 5.98 | 1 | FLOW | 680. | 671. | 662. | 653. | 649. | 640. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | DV2 | 5.98 | 1 | FLOW | 680. | 671. | 662. | 653. | 649. | 640. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONV | .12 | 1 | FLOW | 23. | 22. | 22. | 21. | 21. | 21. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 2 COMBINED AT + | CP2 | 6.10 | 1 | FLOW | 702. | 693. | 683. | 674. | 670. | 660. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONG | .14 | 1 | FLOW | 26. | 26. | 25. | 25. | 24. | 24. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 2 COMBINED AT + | CP3 | 6.24 | 1 | FLOW | 728. | 718. | 708. | 699. | 694. | 684. |

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                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONK       .68     1   FLOW        119.     117.     115.     113.     112.     110.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                   ONF       .50     1   FLOW         91.      90.      88.      86.      86.      84.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  3 COMBINED AT
+                   CP4      7.42     1   FLOW        937.     924.     911.     898.     891.     878.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CPDUM2    10.33     1   FLOW       1642.    1619.    1596.    1572.    1561.    1538.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                  RET1       .00     1   FLOW         66.      65.      64.      63.      63.      62.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                    MX       .01     1   FLOW          3.       3.       3.       3.       3.       3.
                                          TIME        14.75    14.75    14.75    14.75    14.75    14.75

  2 COMBINED AT
+                  CP14       .01     1   FLOW         69.      68.      67.      66.      65.      65.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONS       .04     1   FLOW          8.       8.       8.       8.       8.       8.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                 CP14A       .05     1   FLOW         77.      76.      75.      74.      73.      72.
                                          TIME        14.92    14.92    14.92    14.92    14.92    15.00

 HYDROGRAPH AT
+                  M17        .67     1   FLOW        189.     186.     184.     181.     180.     178.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP15       .72     1   FLOW        265.     262.     259.     255.     254.     250.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M18        .12     1   FLOW         34.      33.      33.      33.      32.      32.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M20        .49     1   FLOW        155.     153.     151.     149.     149.     147.
                                          TIME        14.83    14.83    14.83    14.83    14.83    14.83

 ROUTED TO
+                 STOR1       .49     1   FLOW        154.     152.     150.     149.     148.     146.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92
                                     ** PEAK STAGES IN FEET **
                                     1  STAGE       440.36   440.35   440.35   440.35   440.35   440.34
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                  RM20       .49     1   FLOW        154.     152.     150.     148.     148.     146.
                                          TIME        15.00    15.00    15.00    15.08    15.08    15.08

 HYDROGRAPH AT
+                  M19        .11     1   FLOW         31.      31.      30.      30.      30.      29.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP16       .60     1   FLOW        184.     182.     180.     178.     177.     175.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  3 COMBINED AT
+                  CP17      1.44     1   FLOW        483.     477.     471.     465.     462.     456.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RCP17      1.44     1   FLOW        482.     476.     470.     465.     461.     455.
                                          TIME        15.25    15.17    15.25    15.25    15.25    15.17

 HYDROGRAPH AT
+                  ONP       1.47     1   FLOW        289.     284.     279.     274.     272.     267.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP18      2.91     1   FLOW        770.     760.     748.     736.     732.     723.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                CPDUM3     13.24     1   FLOW       2408.    2373.    2340.    2307.    2289.    2253.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                  ONT       .04     1   FLOW          9.       8.       8.       8.       8.       8.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RMONT       .04     1   FLOW          8.       8.       8.       8.       8.       8.
                                          TIME        15.92    15.92    15.92    15.92    16.00    16.00

 HYDROGRAPH AT
+                  ONO       .55     1   FLOW        108.     107.     105.     103.     102.     100.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 2 COMBINED AT + | CP20 | .59 | 1 | FLOW | 116. | 114. | 112. | 110. | 109. | 107. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT + | CPDUM4 | 13.83 | 1 | FLOW | 2524. | 2487. | 2451. | 2417. | 2398. | 2360. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT + | ONU | .05 | 1 | FLOW | 11. | 10. | 10. | 10. | 10. | 10. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO + | RMONU | .05 | 1 | FLOW | 11. | 10. | 10. | 10. | 10. | 10. |
| | | | | TIME | 15.83 | 15.83 | 15.83 | 15.83 | 15.83 | 15.83 |
| HYDROGRAPH AT + | ONL | .73 | 1 | FLOW | 146. | 143. | 141. | 139. | 137. | 135. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT + | CP19 | .78 | 1 | FLOW | 155. | 153. | 150. | 147. | 146. | 144. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT + | ONM | .10 | 1 | FLOW | 21. | 21. | 21. | 20. | 20. | 20. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT + | ONN | .08 | 1 | FLOW | 16. | 16. | 16. | 16. | 16. | 15. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 4 COMBINED AT + | CPDUM5 | 14.79 | 1 | FLOW | 2715. | 2675. | 2636. | 2599. | 2578. | 2537. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT + | M9 | 1.80 | 1 | FLOW | 439. | 433. | 427. | 422. | 419. | 413. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | M8 | 1.04 | 1 | FLOW | 265. | 261. | 258. | 255. | 253. | 249. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 2 COMBINED AT + | CP5 | 2.84 | 1 | FLOW | 703. | 694. | 685. | 676. | 672. | 663. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | RET2 | .00 | 1 | FLOW | 680. | 671. | 662. | 653. | 649. | 640. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT + | CP6 | 2.84 | 1 | FLOW | 1382. | 1365. | 1347. | 1329. | 1320. | 1302. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | M7 | .16 | 1 | FLOW | 35. | 34. | 34. | 33. | 33. | 32. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT + | ONE1 | 1.61 | 1 | FLOW | 284. | 279. | 275. | 270. | 267. | 263. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| 2 COMBINED AT + | CP6A | 1.77 | 1 | FLOW | 316. | 310. | 305. | 300. | 297. | 292. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT + | CP6B | 4.61 | 1 | FLOW | 1694. | 1671. | 1648. | 1625. | 1613. | 1590. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONE2 | 2.59 | 1 | FLOW | 452. | 444. | 437. | 429. | 425. | 418. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| 2 COMBINED AT + | CP7 | 7.20 | 1 | FLOW | 2130. | 2100. | 2070. | 2039. | 2024. | 1994. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT + | M6 | 1.32 | 1 | FLOW | 316. | 312. | 307. | 303. | 301. | 297. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | M5A | .17 | 1 | FLOW | 46. | 45. | 44. | 44. | 44. | 43. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | M5B | .18 | 1 | FLOW | 49. | 48. | 48. | 47. | 47. | 46. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 3 COMBINED AT + | CP8 | 1.67 | 1 | FLOW | 410. | 405. | 399. | 394. | 391. | 386. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | M5 | .39 | 1 | FLOW | 77. | 75. | 74. | 73. | 72. | 71. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT + | CP9 | 2.06 | 1 | FLOW | 487. | 480. | 474. | 467. | 464. | 457. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT + | ONB | 2.83 | 1 | FLOW | 467. | 459. | 451. | 443. | 439. | 431. |

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                                        TIME        15.42    15.42    15.42    15.42    15.42    15.42

  2 COMBINED AT
+                  CP10      4.89     1  FLOW         932.     918.     904.     889.     882.     868.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                   OND      1.34     1  FLOW         234.     230.     226.     222.     220.     216.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                   ONC       .30     1  FLOW          55.      54.      54.      53.      52.      51.
                                        TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                   CPA      1.64     1  FLOW         288.     283.     278.     273.     271.     266.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    M4      2.71     1  FLOW         606.     598.     590.     582.     578.     570.
                                        TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    M3       .57     1  FLOW         125.     124.     122.     120.     119.     117.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                  CP11      3.28     1  FLOW         731.     721.     712.     702.     697.     687.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    M2     24.30     1  FLOW        4706.    4644.    4582.    4520.    4489.    4427.
                                        TIME        15.42    15.42    15.42    15.42    15.42    15.42

  2 COMBINED AT
+                 CP12A     27.58     1  FLOW        5407.    5335.    5264.    5192.    5157.    5085.
                                        TIME        15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                   M13      7.18     1  FLOW        1627.    1607.    1586.    1566.    1556.    1536.
                                        TIME        15.17    15.17    15.17    15.17    15.17    15.17

 DIVERSION TO
+                   FS3      7.18     1  FLOW         813.     803.     793.     783.     778.     768.
                                        TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   DV3      7.18     1  FLOW         813.     803.     793.     783.     778.     768.
                                        TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    M1       .76     1  FLOW         162.     160.     157.     155.     154.     151.
                                        TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                  CP12      7.94     1  FLOW         973.     960.     947.     935.     929.     916.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                 CP12B     35.52     1  FLOW        6364.    6280.    6196.    6112.    6070.    5986.
                                        TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                   ONA       .87     1  FLOW         176.     173.     170.     167.     166.     163.
                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                  CP13     36.39     1  FLOW        6535.    6448.    6361.    6275.    6232.    6145.
1                                       TIME        15.25    15.25    15.25    15.25    15.25    15.25
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                   INTERPOLATED TO
                                                                                 COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME       DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                              PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     44.80    920.00      1.36      5.00     44.80    920.00        1.36

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1599E+02 EXCESS= .0000E+00 OUTFLOW= .1599E+02 BASIN STORAGE= .5758E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     44.06    920.00      1.34      5.00     44.06    920.00        1.34

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1568E+02 EXCESS= .0000E+00 OUTFLOW= .1568E+02 BASIN STORAGE= .5705E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     43.32    920.00      1.31      5.00     43.32    920.00        1.31

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1537E+02 EXCESS= .0000E+00 OUTFLOW= .1537E+02 BASIN STORAGE= .5533E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     42.59    920.00      1.28      5.00     42.59    920.00        1.28

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1506E+02 EXCESS= .0000E+00 OUTFLOW= .1506E+02 BASIN STORAGE= .5482E-02 PERCENT ERROR=   -.1
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          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     42.22    920.00      1.27      5.00     42.22    920.00        1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1490E+02 EXCESS= .0000E+00 OUTFLOW= .1491E+02 BASIN STORAGE= .5456E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     41.49    920.00      1.24      5.00     41.49    920.00        1.24

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1460E+02 EXCESS= .0000E+00 OUTFLOW= .1460E+02 BASIN STORAGE= .6804E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    209.88    910.00      2.92      5.00    209.88    910.00        2.92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1028E+03 EXCESS= .0000E+00 OUTFLOW= .1028E+03 BASIN STORAGE= .8966E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    207.56    910.00      2.88      5.00    207.56    910.00        2.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1015E+03 EXCESS= .0000E+00 OUTFLOW= .1015E+03 BASIN STORAGE= .8913E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    205.24    910.00      2.85      5.00    205.24    910.00        2.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1002E+03 EXCESS= .0000E+00 OUTFLOW= .1002E+03 BASIN STORAGE= .8862E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    202.91    910.00      2.81      5.00    202.91    910.00        2.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9886E+02 EXCESS= .0000E+00 OUTFLOW= .9888E+02 BASIN STORAGE= .9947E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    201.75    910.00      2.79      5.00    201.75    910.00        2.79

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9821E+02 EXCESS= .0000E+00 OUTFLOW= .9823E+02 BASIN STORAGE= .9919E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    199.42    910.00      2.75      5.00    199.42    910.00        2.75

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9691E+02 EXCESS= .0000E+00 OUTFLOW= .9693E+02 BASIN STORAGE= .9860E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    481.42    915.00      2.29      5.00    481.42    915.00        2.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2145E+03 EXCESS= .0000E+00 OUTFLOW= .2145E+03 BASIN STORAGE= .9703E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    475.28    915.00      2.25      5.00    475.28    915.00        2.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2114E+03 EXCESS= .0000E+00 OUTFLOW= .2114E+03 BASIN STORAGE= .9651E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    469.15    915.00      2.22      5.00    469.15    915.00        2.22

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2082E+03 EXCESS= .0000E+00 OUTFLOW= .2083E+03 BASIN STORAGE= .9601E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    462.99    915.00      2.19      5.00    462.99    915.00        2.19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2051E+03 EXCESS= .0000E+00 OUTFLOW= .2051E+03 BASIN STORAGE= .1034E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    459.92    915.00      2.17      5.00    459.92    915.00        2.17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2036E+03 EXCESS= .0000E+00 OUTFLOW= .2036E+03 BASIN STORAGE= .1031E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    453.79    915.00      2.14      5.00    453.79    915.00        2.14

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2004E+03 EXCESS= .0000E+00 OUTFLOW= .2005E+03 BASIN STORAGE= .1026E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    153.68    900.00      1.67      5.00    153.68    900.00        1.67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4353E+02 EXCESS= .0000E+00 OUTFLOW= .4355E+02 BASIN STORAGE= .2913E-02 PERCENT ERROR=   -.1
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          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    151.95    900.00      1.63      5.00    151.95    900.00        1.63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4257E+02 EXCESS= .0000E+00 OUTFLOW= .4261E+02 BASIN STORAGE= .2901E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    150.21    900.00      1.59      5.00    150.21    900.00        1.59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4161E+02 EXCESS= .0000E+00 OUTFLOW= .4164E+02 BASIN STORAGE= .2870E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    148.49    905.00      1.56      5.00    148.49    905.00        1.56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4065E+02 EXCESS= .0000E+00 OUTFLOW= .4068E+02 BASIN STORAGE= .2853E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    147.62    905.00      1.54      5.00    147.62    905.00        1.54

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4017E+02 EXCESS= .0000E+00 OUTFLOW= .4020E+02 BASIN STORAGE= .2852E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00    145.90    905.00      1.50      5.00    145.90    905.00        1.50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3922E+02 EXCESS= .0000E+00 OUTFLOW= .3924E+02 BASIN STORAGE= .3717E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    482.19    915.00      2.45      5.00    482.19    915.00        2.45

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1880E+03 EXCESS= .0000E+00 OUTFLOW= .1880E+03 BASIN STORAGE= .1165E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    475.64    910.00      2.41      5.00    475.64    910.00        2.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1849E+03 EXCESS= .0000E+00 OUTFLOW= .1849E+03 BASIN STORAGE= .1369E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    470.05    915.00      2.37      5.00    470.05    915.00        2.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1817E+03 EXCESS= .0000E+00 OUTFLOW= .1818E+03 BASIN STORAGE= .1360E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    464.84    915.00      2.33      5.00    464.84    915.00        2.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1786E+03 EXCESS= .0000E+00 OUTFLOW= .1786E+03 BASIN STORAGE= .1350E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    461.33    915.00      2.31      5.00    461.33    915.00        2.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1771E+03 EXCESS= .0000E+00 OUTFLOW= .1771E+03 BASIN STORAGE= .1334E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    455.46    910.00      2.27      5.00    455.46    910.00        2.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1740E+03 EXCESS= .0000E+00 OUTFLOW= .1740E+03 BASIN STORAGE= .1289E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      8.42    955.00      1.37      5.00      8.42    955.00        1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2907E+01 EXCESS= .0000E+00 OUTFLOW= .2913E+01 BASIN STORAGE= .1366E-01 PERCENT ERROR=   -.7

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      8.28    955.00      1.34      5.00      8.28    955.00        1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2850E+01 EXCESS= .0000E+00 OUTFLOW= .2856E+01 BASIN STORAGE= .1360E-01 PERCENT ERROR=   -.7

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      8.14    955.00      1.31      5.00      8.14    955.00        1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2794E+01 EXCESS= .0000E+00 OUTFLOW= .2800E+01 BASIN STORAGE= .1353E-01 PERCENT ERROR=   -.7

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      8.00    955.00      1.29      5.00      8.00    955.00        1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2738E+01 EXCESS= .0000E+00 OUTFLOW= .2744E+01 BASIN STORAGE= .1346E-01 PERCENT ERROR=   -.7

          FOR PLAN = 1  RATIO=  .00
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   RMONT  MANE         5.00      7.94    960.00      1.27      5.00      7.94    960.00        1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2710E+01 EXCESS= .0000E+00 OUTFLOW= .2716E+01 BASIN STORAGE= .1341E-01 PERCENT ERROR=   -.7

     FOR PLAN = 1  RATIO=  .00
   RMONT  MANE         5.00      7.80    960.00      1.25      5.00      7.80    960.00        1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2654E+01 EXCESS= .0000E+00 OUTFLOW= .2660E+01 BASIN STORAGE= .1279E-01 PERCENT ERROR=   -.7

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00     10.54    950.00      1.37      5.00     10.54    950.00        1.37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3634E+01 EXCESS= .0000E+00 OUTFLOW= .3641E+01 BASIN STORAGE= .1301E-01 PERCENT ERROR=   -.6

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00     10.37    950.00      1.34      5.00     10.37    950.00        1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3564E+01 EXCESS= .0000E+00 OUTFLOW= .3571E+01 BASIN STORAGE= .1287E-01 PERCENT ERROR=   -.6

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00     10.20    950.00      1.31      5.00     10.20    950.00        1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3493E+01 EXCESS= .0000E+00 OUTFLOW= .3500E+01 BASIN STORAGE= .1281E-01 PERCENT ERROR=   -.6

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00     10.03    950.00      1.29      5.00     10.03    950.00        1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3423E+01 EXCESS= .0000E+00 OUTFLOW= .3430E+01 BASIN STORAGE= .1261E-01 PERCENT ERROR=   -.6

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      9.95    950.00      1.27      5.00      9.95    950.00        1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3388E+01 EXCESS= .0000E+00 OUTFLOW= .3395E+01 BASIN STORAGE= .1239E-01 PERCENT ERROR=   -.6

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      9.78    950.00      1.25      5.00      9.78    950.00        1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3319E+01 EXCESS= .0000E+00 OUTFLOW= .3325E+01 BASIN STORAGE= .1234E-01 PERCENT ERROR=   -.6


*** NORMAL END OF HEC-1 ***
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1*************************************
 *                                   *
 *   L.A. DISTRICT HEC-1 PREPROCESSOR  *
 *              MARCH 1984           *
 *                                   *
 * LAST REVISED 13 JUL 1998   Ver 2.0  *
 *                                   *
 *  RUN DATE 06/28/2011  TIME 11:08:13 *
 *                                   *
 *************************************


               L          A     PPPPPP   RRRRRR   EEEEEEE   1
               L         A A    P     P  R     R  E        11
               L        A   A   P     P  R     R  E         1
               L       A     A  PPPPPP   RRRRRR   EEEEE     1
               L       AAAAAAA  P        R   R    E         1
               L       A     A  P        R    R   E         1
               LLLLLLL A     A  P        R     R  EEEEEEE  111

 ID ******************************************************

 ID WO# 7323 - RIO MESA SOLAR

 ID 24-HR, 100-YR STORM

 ID NOAA ATLAS 14- 24HR/100YR AVG PT RAINFALL DEPTH = 3.59"/3.87"

 ID EXISTING CONDITION ANALYSIS

 ID UNIT HYDROGRAPHS GENERATED FROM LAPRE-1

 ID STORM HYTEOGRAPHS GENERATED FROM LAPRE-1

 ID MODEL WITH NEW COMBINING SCHEME

 ID ******************************************************

 ID DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR

 ID REFERENCING RCFD & WCD PLATE E-5.8

 ID

 ID  AREA RANGE       DARF

 ID   (SQ.MI.)         --

 ID

 ID   0 TO 2.5  --->  1.000

 ID 2.5 TO  10  --->  0.990

 ID  10 TO  20  --->  0.980

 ID  20 TO  30  --->  0.970

 ID  30 TO  40  --->  0.965

 ID  40 TO  50  --->  0.955

 ID

 ID******************************************************

 TIME INTERVAL IS  0 HR  5 MIN

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 KK   M27

 AREA =    .22 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .2    3.87   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    1.17     .54   41.77    .035       9      .0     .00

   WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

  UNIT HYDROGRAPH  LH=  33  PERCENT LAG=   24.00  LAG=     .35  UG VOL.=   1703.
     53.    118.    307.    329.    202.    133.     95.     74.     59.     50.
     39.     33.     28.     25.     23.     19.     17.     13.     13.      9.
      7.      7.      7.      7.      5.      4.      4.      4.      4.      4.
      4.      4.      2.

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 KK  RM27

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 KK  ONR

 AREA =    .27 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .3    3.87   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
     .98     .37   68.37    .035       9      .0     .00
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  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   32.55  LAG=     .26  UG VOL.=   2090.
   102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
    38.     32.     25.     21.     15.     12.     12.     11.      7.      7.
     7.      7.      7.      7.

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KK  CP25

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KK  M22

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .20   86.00    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.14  LAG=     .16  UG VOL.=    542.
    66.    222.     95.     50.     32.     21.     16.     11.      8.      5.
     5.      3.      3.      3.      2.

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KK  M21

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .84     .37  831.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   55.49  LAG=     .15  UG VOL.=   1316.
   322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
    22.     19.     15.     14.     11.     11.      7.      4.      4.      4.
     4.      4.      4.      2.

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KK  M23

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.00     .45  900.44    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   48.94  LAG=     .17  UG VOL.=   1393.
   269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
    24.     21.     19.     17.     14.     13.     10.     10.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK  M25

AREA =    .15 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.05     .59  870.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  31  PERCENT LAG=   43.06  LAG=     .19  UG VOL.=   1161.
   178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
    20.     18.     16.     15.     13.     12.     10.     10.      7.      7.
     7.      4.      3.      3.      3.      3.      3.      3.      3.      3.
     0.

==============================================================================

KK  CP21

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KK  M24

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION
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     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.28     .58  998.98    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  32  PERCENT LAG=   41.27  LAG=     .20  UG VOL.=   5108.
   724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
    87.     79.     74.     65.     60.     55.     47.     42.     40.     30.
    30.     30.     16.     11.     11.     11.     11.     11.     11.     11.
    11.      6.

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KK  RM24

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KK   M26

AREA =    .53 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.59     .85   72.80    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  40  PERCENT LAG=   19.98  LAG=     .42  UG VOL.=   4102.
    97.    190.    396.    792.    575.    378.    279.    201.    165.    133.
   114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
    27.     26.     26.     18.     14.     14.     14.     14.     14.      8.
     8.      8.      8.      8.      8.      8.      8.      8.      8.      0.

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KK  CP22

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KK  CP23

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KK RCP23

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KK  ONQ

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.67     .93   63.88    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.49  LAG=     .45  UG VOL.=   5108.
   107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
   144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
    44.     40.     30.     30.     30.     19.     17.     17.     17.     17.
    17.     12.      9.      9.      9.      9.      9.      9.      9.      9.
     9.      9.      2.

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KK  CP24

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KKCPDUM1

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KK   M12

AREA =   3.98 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     4.0    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.91    2.42  301.01    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 105  PERCENT LAG=   12.49  LAG=     .67  UG VOL.=  30805.
   885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
   770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
   350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
   196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
   135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
   100.    100.    100.    100.     83.     76.     76.     76.     76.     76.
    76.     76.     63.     55.     55.     55.     55.     55.     55.     55.
    55.     55.     55.     38.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.      2.
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KK   ONJ

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .39     .16  418.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   89.63  LAG=     .09  UG VOL.=    542.
   248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
     4.      3.      3.      3.      1.

================================================================================

KK   M11

AREA =   1.30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.46    1.24  351.38    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  66  PERCENT LAG=   19.78  LAG=     .42  UG VOL.=  10062.
   496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
   249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
    88.     85.     78.     78.     72.     70.     70.     62.     61.     61.
    55.     52.     52.     52.     43.     39.     39.     39.     39.     33.
    29.     29.     29.     29.     29.     29.     18.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      8.

================================================================================

KK   ONI

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .36     .24  507.37    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  16  PERCENT LAG=   82.16  LAG=     .10  UG VOL.=    387.
   165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
     5.      2.      2.      2.      2.      1.

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KK   M10

AREA =    .38 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.51     .67   74.89    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  35  PERCENT LAG=   22.43  LAG=     .37  UG VOL.=   2941.
    82.    175.    428.    584.    380.    247.    170.    135.    106.     91.
    75.     60.     53.     45.     40.     37.     31.     30.     21.     21.
    19.     12.     12.     12.     12.     11.      7.      7.      7.      7.
     7.      7.      7.      7.      5.

================================================================================

KK   ONH

AREA =    .20 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .70     .30  202.53    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   49.24  LAG=     .17  UG VOL.=   1548.
   302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
    26.     23.     21.     19.     15.     14.     11.     11.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK   CP1
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KK   DV1

================================================================================

KK   DV2

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KK   ONV

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .49     .25  103.16    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.16  LAG=     .16  UG VOL.=    929.
   112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
     8.      5.      5.      5.      3.

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KK   CP2

================================================================================

KK   ONG

AREA =    .14 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .73     .28   70.34    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   40.69  LAG=     .20  UG VOL.=   1084.
    78.    322.    250.    124.     77.     56.     38.     30.     24.     20.
    14.     10.      8.      8.      5.      4.      4.      4.      4.      1.

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KK   CP3

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KK   ONK

AREA =    .68 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.87     .93   77.12    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.36  LAG=     .45  UG VOL.=   5263.
   109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
   151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
    45.     43.     30.     30.     30.     22.     17.     17.     17.     17.
    17.     14.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.      5.

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KK   ONF

AREA =    .50 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.22     .46   85.02    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  28  PERCENT LAG=   28.74  LAG=     .29  UG VOL.=   3870.
   153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
    77.     65.     57.     52.     35.     35.     23.     20.     20.     20.
    13.     11.     11.     11.     11.     11.     11.      2.

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KK   CP4

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KKCPDUM2

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KK  RET1

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KK    MX

AREA =    .01 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .14     .06 1525.43    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=   6  PERCENT LAG=  245.56  LAG=     .03  UG VOL.=     77.
    58.     11.      5.      2.      1.      0.

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KK  CP14

================================================================================

KK   ONS

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .31  115.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  17  PERCENT LAG=   47.60  LAG=     .18  UG VOL.=    310.
    30.    114.     62.     31.     20.     13.     10.      8.      6.      4.
     3.      3.      2.      1.      1.      1.      1.

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KK CP14A

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KK  M17

AREA =    .67 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .54  494.88    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  38  PERCENT LAG=   34.76  LAG=     .24  UG VOL.=   5186.
   564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
    97.     80.     74.     69.     63.     59.     55.     49.     47.     41.
    36.     36.     30.     26.     26.     26.     16.      9.      9.      9.
     9.      9.      9.      9.      9.      9.      9.      4.

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KK  CP15

================================================================================

KK  M18

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .89     .32  152.41    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  19  PERCENT LAG=   41.55  LAG=     .20  UG VOL.=    929.
    70.    284.    213.    104.     65.     47.     33.     25.     20.     16.
    12.      8.      7.      7.      4.      4.      4.      4.      3.

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KK  M20

AREA =    .49 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.07     .48  734.10    .035       1      .0     .00

  MOUNTAIN S-GRAPH
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 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   44.77  LAG=     .19  UG VOL.=   3793.
   626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
    64.     59.     52.     48.     44.     35.     34.     28.     24.     24.
    17.      9.      9.      9.      9.      9.      9.      9.      9.      0.

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KK STOR1

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KK  RM20

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KK  M19

AREA =    .11 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .67     .19  140.33    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   55.55  LAG=     .15  UG VOL.=    851.
   117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
     6.      5.      5.      5.      0.

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KK  CP16

================================================================================

KK  CP17

================================================================================

KK RCP17

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KK  ONP

AREA =   1.47 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.5    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.14    1.09   74.90    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  48  PERCENT LAG=   16.33  LAG=     .51  UG VOL.=  11378.
   206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
   366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
   103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
    33.     33.     33.     33.     33.     26.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     14.

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KK  CP18

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KKCPDUM3

================================================================================

KK   ONT

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .51     .16   72.94    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   58.08  LAG=     .14  UG VOL.=    310.
    48.    131.     50.     27.     16.     11.      8.      6.      3.      3.
     2.      2.      2.      1.

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KK RMONT

================================================================================

KK  ONO

AREA =    .55 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    3.87   .0000     .00     .00     .00     .00
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      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.08    1.06   79.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  47  PERCENT LAG=   16.86  LAG=     .49  UG VOL.=   4257.
    80.    141.    249.    529.    675.    480.    333.    261.    187.    161.
   135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
    40.     35.     33.     32.     22.     22.     22.     19.     13.     13.
    13.     13.     13.     13.      9.      7.      7.      7.      7.      7.
     7.      7.      7.      7.      7.      7.      2.

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KK  CP20

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KKCPDUM4

================================================================================

KK   ONU

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .48     .19   77.62    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   56.34  LAG=     .15  UG VOL.=    387.
    55.    163.     64.     34.     21.     14.     11.      7.      5.      4.
     3.      2.      2.      2.

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KK RMONU

================================================================================

KK  ONL

AREA =    .73 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.99     .84   83.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  42  PERCENT LAG=   18.91  LAG=     .44  UG VOL.=   5650.
   122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
   159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
    50.     38.     33.     33.     28.     19.     19.     19.     19.     19.
    16.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.      3.

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KK  CP19

================================================================================

KK  ONM

AREA =    .10 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .35     .25  215.67    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  12  PERCENT LAG=   69.50  LAG=     .12  UG VOL.=    774.
   197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
     5.      1.

================================================================================

KK  ONN

AREA =    .08 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    3.87   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .52   83.15    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  29  PERCENT LAG=   27.06  LAG=     .31  UG VOL.=    619.
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    23.     56.    149.    107.     65.     42.     32.     24.     20.     15.
    13.     11.      9.      8.      7.      5.      5.      3.      3.      3.
     3.      2.      2.      2.      2.      2.      2.      2.      1.
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KKCPDUM5

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KK  M9

AREA =  1.80 SQ.MI.

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 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.8    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.17    1.95  284.58    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  90  PERCENT LAG=   14.53  LAG=     .57  UG VOL.=  13932.
   471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
   364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
   145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
    79.     79.     79.     71.     71.     71.     70.     62.     62.     62.
    62.     56.     53.     53.     53.     53.     48.     40.     40.     40.
    40.     40.     40.     36.     29.     29.     29.     29.     29.     29.
    29.     29.     29.     14.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.      5.
```

==========

KK  M8

AREA =  1.04 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.0    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.02     .81  248.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  56  PERCENT LAG=   23.47  LAG=     .36  UG VOL.=   8050.
   495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
   177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
    69.     66.     65.     58.     58.     55.     49.     49.     48.     37.
    37.     37.     37.     29.     27.     27.     27.     27.     27.     12.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      4.
```

==========

KK  CP5

==========

KK  RET2

==========

KK  CP6

==========

KK  M7

AREA =   .16 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .97     .43  113.71    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  23  PERCENT LAG=   34.00  LAG=     .25  UG VOL.=   1238.
    65.    232.    334.    172.    101.     71.     54.     40.     32.     26.
    22.     18.     13.     11.      7.      7.      7.      4.      4.      4.
     4.      4.      4.
```

==========

KK  ONE1

AREA =  1.61 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.6    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.15    1.46   52.35    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  67  PERCENT LAG=   11.78  LAG=     .71  UG VOL.=  12461.
   163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
```

```
   566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
   159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
    74.     68.     68.     68.     48.     46.     46.     46.     46.     37.
    26.     26.     26.     26.     26.     26.     26.     26.     26.     17.
    15.     15.     15.     15.     15.     15.     15.     15.     15.     15.
    15.     15.     15.     15.     15.     15.      3.
```

==========

KK  CP6A

==========

KK  CP6B

==========

KK  ONE2

AREA =   2.59 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.6    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.20    2.08   58.07    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  83  PERCENT LAG=    9.42  LAG=     .88  UG VOL.=  20047.
   210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
  1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
   290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
   151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
    88.     88.     79.     59.     59.     59.     59.     59.     59.     45.
    33.     33.     33.     33.     33.     33.     33.     33.     33.     33.
    33.     27.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     15.
```

==========

KK   CP7

==========

KK    M6

AREA =   1.32 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.35    1.10  223.90    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  68  PERCENT LAG=   19.33  LAG=     .43  UG VOL.=  10217.
   488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
   247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
    88.     88.     79.     77.     76.     69.     69.     67.     61.     61.
    61.     52.     51.     51.     51.     40.     39.     39.     39.     39.
    32.     28.     28.     28.     28.     28.     28.     19.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.      2.
```

==========

KK   M5A

AREA =    .17 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.24     .50   64.29    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   26.24  LAG=     .32  UG VOL.=   1316.
    46.    109.    302.    234.    144.     91.     69.     52.     44.     34.
    28.     24.     20.     18.     16.     12.     11.     10.      6.      6.
     6.      6.      4.      3.      3.      3.      3.      3.      3.      3.
```

==========

KK   M5B

AREA =    .18 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .64     .26   38.95    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   39.33  LAG=     .21  UG VOL.=   1393.
    94.    388.    331.    166.    102.     73.     52.     40.     32.     26.
```

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    19.     16.     10.     10.      9.      5.      5.      5.      5.      5.

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KK   CP8

==============================================================================

KK    M5

AREA =    .39 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .62   57.53    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.60  LAG=     .35  UG VOL.=   3019.
    91.    201.    517.    588.    366.    241.    170.    133.    105.     90.
    71.     60.     51.     45.     40.     34.     33.     23.     22.     20.
    13.     13.     13.     13.     10.      7.      7.      7.      7.      7.
     7.      7.      7.      0.

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KK   CP9

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KK   ONB

AREA =   2.83 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.8    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.50    2.15   45.11    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  91  PERCENT LAG=    8.64  LAG=     .96  UG VOL.=  21904.
   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
    59.     59.     59.     58.     33.     33.     33.     33.     33.     33.
    33.     33.     33.     33.     33.     33.     33.     21.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
     6.

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KK  CP10

==============================================================================

KK   OND

AREA =   1.34 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.75    1.04   68.49    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  45  PERCENT LAG=   17.64  LAG=     .47  UG VOL.=  10372.
   203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
   309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
    91.     85.     79.     57.     57.     57.     43.     32.     32.     32.
    32.     32.     30.     18.     18.     18.     18.     18.     18.     18.
    18.     18.     18.     18.      4.

==============================================================================

KK   ONC

AREA =    .30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .3    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .80     .21   32.43    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  21  PERCENT LAG=   37.84  LAG=     .22  UG VOL.=   2322.
   146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
    36.     27.     19.     15.     15.     11.      9.      9.      9.      9.
     5.

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KK   CPA

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KK    M4

AREA =   2.71 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.7    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.74    2.49  165.93    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 127  PERCENT LAG=   10.26  LAG=     .81  UG VOL.=  20975.
   485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
   649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
   269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
   152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
    96.     93.     84.     84.     84.     84.     82.     75.     75.     75.
    75.     75.     69.     66.     66.     66.     66.     66.     62.     56.
    56.     56.     56.     56.     56.     56.     44.     43.     43.     43.
    43.     43.     43.     43.     43.     42.     31.     31.     31.     31.
    31.     31.     31.     31.     31.     31.     31.     31.     31.     21.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.      9.

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KK    M3

AREA =    .57 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.94     .97   77.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  44  PERCENT LAG=   17.84  LAG=     .47  UG VOL.=   4412.
    87.    163.    295.    663.    681.    473.    337.    244.    191.    159.
   130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
    37.     37.     31.     25.     25.     25.     15.     14.     14.     14.
    14.     14.     11.      8.      8.      8.      8.      8.      8.      8.
     8.      8.      8.      6.

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KK  CP11

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KK CP12A

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KK   M13

AREA =   7.18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     7.2    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   6.22    3.99  171.11    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 168  PERCENT LAG=    7.78  LAG=    1.07  UG VOL.=  55573.
   961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
  2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
   718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
   432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
   301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
   192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
   170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
   133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
   112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
    86.     86.     86.     86.     86.     86.     86.     86.     86.     86.
    66.     62.     62.     62.     62.     62.     62.     62.     62.     62.
    62.     62.     62.     62.     62.     62.     62.     62.     24.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.      3.
    WARNING!!!!! THE UNIT HYDROGRAPH COMPUTED BY    LAPRE1 IS GREATER THAN 150
ORDINATES.
     ONLY THE FIRST 150 ORDINATES WILL BE USED ON    THE UI CARDS OF THE SUBSEQ
UENT HEC-1 RUN.

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KK   DV3

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KK    M1

AREA =    .76 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .8    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .50   53.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.48  LAG=     .35  UG VOL.=   5882.
   176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
   139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
    24.     24.     24.     24.     21.     14.     14.     14.     14.     14.
    14.     14.     14.      3.

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KK  CP12

================================================================================

KK CP12B

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KK   ONA

AREA =    .87 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .9    3.59   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.77     .83   53.25    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.24  LAG=     .46  UG VOL.=   6734.
   138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
   195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
    57.     57.     39.     38.     38.     31.     22.     22.     22.     22.
    22.     20.     12.     12.     12.     12.     12.     12.     12.     12.
    12.     12.      9.

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KK  CP13
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# APPENDIX A:

## ii. 24-Hour, 25-Year Storm

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1***************************************                              ***************************************
 *                                     *                              *                                     *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1) *                              *   U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998             *                              *   HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1               *                              *         609 SECOND STREET           *
 *                                     *                              *      DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  14:26:25 *                              *          (916) 756-1104             *
 *                                     *                              *                                     *
 ***************************************                              ***************************************


                              X     X  XXXXXXX   XXXXX          X
                              X     X  X        X     X        XX
                              X     X  X        X               X
                              XXXXXXX  XXXX     X       XXXXX   X
                              X     X  X        X               X
                              X     X  X        X     X         X
                              X     X  XXXXXXX   XXXXX         XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                                 HEC-1 INPUT                                          PAGE  1

          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                        *DIAGRAM
            1           ID     *******************************************************
            2           ID     WO# 7323 - RIO MESA SOLAR
            3           ID     24-HR, 25-YR STORM
            4           ID     NOAA ATLAS 14- 24HR/25YR AVG PT RAINFALL DEPTH = 2.63"/2.82"
            5           ID     EXISTING CONDITION ANALYSIS
            6           ID     UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
            7           ID     STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
            8           ID     MODEL WITH NEW COMBINING SCHEME
            9           ID     *******************************************************
           10           ID     DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
           11           ID     REFERENCING RCFD & WCD PLATE E-5.8
           12           ID
           13           ID      AREA RANGE        DARF
           14           ID       (SQ.MI.)          --
           15           ID
           16           ID        0 TO 2.5  --->  1.000
           17           ID     2.5 TO  10   --->  0.990
           18           ID      10 TO  20   --->  0.980
           19           ID      20 TO  30   --->  0.970
           20           ID      30 TO  40   --->  0.965
           21           ID      40 TO  50   --->  0.955
           22           ID
           23           ID    *******************************************************
           24           IT       5       0       0    2000
           25           IN       5       0       0
           26           IO       5       0       0
           27           JR     PREC   1.000   0.990   0.980   0.970   0.965   0.955
                        *

           28           KK     M27
           29           KM     EXISTING OFFSITE BASIN
           30           BA     0.22
           31           KM          FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
           32           PB     2.82
           33           PI     .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
           34           PI     .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
           35           PI     .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
           36           PI     .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
           37           PI     .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
           38           PI     .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
           39           PI     .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
           40           PI     .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
           41           PI     .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
           42           PI     .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
           43           PI     .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
           44           PI     .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
           45           PI     .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
           46           PI     .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
           47           PI     .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
           48           PI     .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
           49           PI     .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
           50           PI     .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
           51           PI     .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
           52           PI     .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1                                                 HEC-1 INPUT                                          PAGE  2

          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

           53           PI     .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
           54           PI     .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
           55           PI     .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
           56           PI     .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
           57           PI     .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
           58           PI     .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
           59           PI     .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
           60           PI     .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
           61           PI     .014    .017    .010    .007    .007    .003    .003    .003
```

```
 62          LS            71.9
 63          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 64          UI    52.6   117.7   306.7   329.2   202.0   132.8    95.3    73.6    59.2    49.9
 65          UI    39.2    33.4    28.4    24.8    22.5    19.0    17.4    12.8    12.8     9.5
 66          UI     7.2     7.2     7.2     7.2     4.6     4.1     4.1     4.1     4.1     4.1
 67          UI     4.1     4.1     2.0
             *

 68          KK    RM27
 69          KM   ROUTE M27 TO ONR
 70          KM   EXISTING WASH
 71          RD    5175   0.013   0.035       0    TRAP      20       3
             *

 72          KK    ONR
 73          KM   EXISTING ONSITE BASIN
 74          BA    0.27
 75          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 76          PB    2.82
 77          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 78          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 79          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 80          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 81          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 82          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 83          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 84          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 85          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 86          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 87          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 88          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 89          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 90          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 91          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 92          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 93          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 94          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 95          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 96          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 97          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 98          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 99          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
100          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
101          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
102          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
103          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1                                          HEC-1 INPUT                                          PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

104          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
105          PI    .014    .017    .010    .007    .007    .003    .003    .003
106          LS            71.9
107          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
108          UI    102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
109          UI    37.8    31.8    24.9    21.3    14.9    11.9    11.9    11.0     6.8     6.8
110          UI     6.8     6.8     6.8     6.5
             *

111          KK    CP25
112          KM   COMBINE M27, ONR
113          HC       2
             *

114          KK    M22
115          KM   EXISTING OFFSITE BASIN
116          BA    0.07
117          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
118          PB    2.82
119          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
120          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
121          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
122          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
123          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
124          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
125          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
126          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
127          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
128          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
129          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
130          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
131          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
132          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
133          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
134          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
135          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
136          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
137          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
138          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
139          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
140          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
141          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
142          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
143          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
144          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
145          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
146          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
147          PI    .014    .017    .010    .007    .007    .003    .003    .003
148          LS            79.7
149          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
150          UI    65.5   222.4    95.5    49.7    31.7    21.3    15.6    11.5     8.1     5.1
151          UI     4.9     2.9     2.9     2.9     2.0
             *
1                                          HEC-1 INPUT                                          PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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 152          KK    M21
 153          KM   EXISTING OFFSITE BASIN
 154          BA    0.17
 155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 156          PB    2.82
 157          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 158          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 159          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 160          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 161          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 162          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 163          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 164          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 165          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 166          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 167          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 168          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 169          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 170          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 171          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 172          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 173          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 174          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 175          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 176          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 177          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 178          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 179          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 180          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 181          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 182          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 183          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 184          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 185          PI    .014    .017    .010    .007    .007    .003    .003    .003
 186          LS            82.5
 187          KM   UHG FROM MOUNTAIN S-GRAPH
 188          UI    322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
 189          UI    21.9    19.0    15.4    14.5    10.7    10.5     7.5     3.8     3.8     3.8
 190          UI     3.8     3.8     3.8     1.6
              *

 191          KK    M23
 192          KM   EXISTING OFFSITE BASIN
 193          BA    0.18
 194          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 195          PB    2.82
 196          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 197          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 198          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 199          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 200          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 201          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 202          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 203          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 204          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 205          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 206          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 207          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 208          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 209          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 210          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 211          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 212          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 213          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 214          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 215          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 216          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 217          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 218          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 219          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 220          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 221          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 222          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 223          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 224          PI    .014    .017    .010    .007    .007    .003    .003    .003
 225          LS            82.1
 226          KM   UHG FROM MOUNTAIN S-GRAPH
 227          UI    269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
 228          UI    23.8    21.0    18.6    17.1    13.5    13.2     9.8     9.8     8.3     3.6
 229          UI     3.6     3.6     3.6     3.6     3.6     3.6     2.0
              *

 230          KK    M25
 231          KM   EXISTING OFFSITE BASIN
 232          BA    0.15
 233          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 234          PB    2.82
 235          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 236          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 237          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 238          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 239          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 240          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 241          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 242          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 243          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 244          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 245          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 246          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 247          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
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 248          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 249          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 250          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 251          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 252          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 253          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 254          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 255          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 256          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1                                            HEC-1 INPUT                                          PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 258          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 259          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 260          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 261          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 262          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 263          PI    .014    .017    .010    .007    .007    .003    .003    .003
 264          LS            85.4
 265          KM   UHG FROM MOUNTAIN S-GRAPH
 266          UI    178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
 267          UI    19.6    17.8    16.3    15.3    13.0    12.2     9.9     9.9     7.4     7.2
 268          UI     7.2     4.1     2.6     2.6     2.6     2.6     2.6     2.6     2.6     2.6
 269          UI      .0
              *

 270          KK    CP21
 271          KM   COMBINE M22, M21, M23, M25
 272          HC       4
              *

 273          KK    M24
 274          KM   EXISTING OFFSITE BASIN
 275          BA    0.66
 276          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 277          PB    2.82
 278          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 279          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 280          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 281          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 282          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 283          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 284          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 285          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 286          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 287          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 288          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 289          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 290          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 291          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 292          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 293          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 294          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 295          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 296          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 297          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 298          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 299          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 300          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 301          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 302          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 303          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 304          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 305          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 306          PI    .014    .017    .010    .007    .007    .003    .003    .003
 307          LS            91.3
1                                            HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          KM   UHG FROM MOUNTAIN S-GRAPH
 309          UI    724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
 310          UI    86.8    79.3    73.9    64.9    60.5    54.8    47.3    41.7    40.3    30.3
 311          UI    30.3    30.3    15.8    11.0    11.0    11.0    11.0    11.0    11.0    11.0
 312          UI    11.0     5.5
              *

 313          KK    RM24
 314          KM   ROUTE M24 TO M26
 315          KM   EXISTING WASH
 316          RD    8410   0.014   0.035       0    TRAP      20       3
              *

 317          KK     M26
 318          KM   EXISTING OFFSITE BASIN
 319          BA    0.53
 320          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 321          PB    2.82
 322          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 323          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 324          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 325          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 326          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 327          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 328          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 329          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 330          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 331          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 332          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 333          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 334          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 335          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 336          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 337          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
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 338          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 339          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 340          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 341          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 342          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 343          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 344          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 345          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 346          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 347          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 348          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 349          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 350          PI    .014    .017    .010    .007    .007    .003    .003    .003
 351          LS            75.9
 352          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 353          UI    96.8   189.8   395.5   791.6   574.8   378.1   279.2   200.7   165.0   132.8
 354          UI    114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
 355          UI    27.1    25.6    25.6    18.0    14.4    14.4    14.4    14.4    14.4     8.4
 356          UI     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2      .0
              *
1                                          HEC-1 INPUT                                                PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 357          KK    CP22
 358          KM   COMBINE M24, M26
 359          HC       2
              *

 360          KK    CP23
 361          KM   COMBINE CP21, CP22
 362          HC       2
              *

 363          KK   RCP23
 364          KM   ROUTE CP23 TO ONQ
 365          KM   EXISTING WASH
 366          RD    8840   0.012   0.035       0    TRAP      20       3
              *

 367          KK    ONQ
 368          KM   EXISTING ONSITE BASIN
 369          BA    0.66
 370          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 371          PB    2.82
 372          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 373          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 374          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 375          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 376          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 377          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 378          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 379          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 380          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 381          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 382          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 383          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 384          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 385          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 386          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 387          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 388          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 389          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 390          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 391          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 392          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 393          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 394          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 395          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 396          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 397          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 398          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 399          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 400          PI    .014    .017    .010    .007    .007    .003    .003    .003
 401          LS            71.9
 402          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 403          UI    107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
 404          UI    144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
1                                          HEC-1 INPUT                                                PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 405          UI    43.9    40.2    29.5    29.5    29.5    19.2    16.6    16.6    16.6    16.6
 406          UI    16.6    12.1     9.4     9.4     9.4     9.4     9.4     9.4     9.4     9.4
 407          UI     9.4     9.4     1.8
              *

 408          KK    CP24
 409          KM   COMBINE CP23, ONQ
 410          HC       2
              *

 411          KK  CPDUM1
 412          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 413          HC       2
              *

 414          KK     M12
 415          KM   EXISTING OFFSITE BASIN
 416          BA    3.98
 417          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 418          PB    2.63
 419          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 420          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 421          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
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 422          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 423          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 424          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 425          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 426          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 427          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 428          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 429          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 430          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 431          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 432          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 433          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 434          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 435          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 436          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 437          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 438          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 439          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 440          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 441          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 442          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 443          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 444          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 445          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 446          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 447          PI    .013    .016    .009    .006    .006    .003    .003    .003
 448          LS            87.1
 449          KM   UHG FROM MOUNTAIN S-GRAPH
 450          UI    885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
 451          UI    770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
 452          UI    350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
 453          UI    196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 454          UI    135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
 455          UI    99.9    99.9    99.9    99.9    82.8    76.2    76.2    76.2    76.2    76.2
 456          UI    76.2    76.2    63.0    55.4    55.4    55.4    55.4    55.4    55.4    55.4
 457          UI    55.4    55.4    55.4    37.5    20.1    20.1    20.1    20.1    20.1    20.1
 458          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 459          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 460          UI    20.1    20.1    20.1    20.1     1.5
              *

 461          KK     ONJ
 462          KM   EXISTING ONSITE BASIN
 463          BA    0.07
 464          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 465          PB    2.63
 466          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 467          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 468          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 469          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 470          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 471          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 472          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 473          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 474          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 475          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 476          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 477          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 478          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 479          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 480          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 481          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 482          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 483          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 484          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 485          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 486          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 487          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 488          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 489          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 490          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 491          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 492          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 493          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 494          PI    .013    .016    .009    .006    .006    .003    .003    .003
 495          LS            79.4
 496          KM   UHG FROM MOUNTAIN S-GRAPH
 497          UI    248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
 498          UI     3.6     2.5     2.5     2.5     1.3
              *

 499          KK     M11
 500          KM   EXISTING OFFSITE BASIN
 501          BA    1.30
 502          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 503          PB    2.63
 504          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1                                          HEC-1 INPUT                                                PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 505          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 506          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 507          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 508          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 509          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 510          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 511          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 512          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 513          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 514          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 515          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
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 516          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 517          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 518          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 519          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 520          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 521          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 522          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 523          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 524          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 525          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 526          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 527          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 528          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 529          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 530          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 531          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 532          PI    .013    .016    .009    .006    .006    .003    .003    .003
 533          LS            82.3
 534          KM   UHG FROM MOUNTAIN S-GRAPH
 535          UI    496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
 536          UI    249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
 537          UI    88.4    84.7    78.0    78.0    71.6    69.8    69.8    62.1    61.2    61.2
 538          UI    55.4    51.7    51.7    51.7    42.9    39.4    39.4    39.4    39.4    32.8
 539          UI    28.6    28.6    28.6    28.6    28.6    28.6    18.0    10.4    10.4    10.4
 540          UI    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4
 541          UI    10.4    10.4    10.4    10.4    10.4     7.6
              *

 542          KK     ONI
 543          KM   EXISTING ONSITE BASIN
 544          BA    0.05
 545          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 546          PB    2.63
 547          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 548          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 549          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 550          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 551          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 552          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 553          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 554          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 555          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 556          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 557          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1                                          HEC-1 INPUT                                                PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 558          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 559          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 560          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 561          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 562          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 563          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 564          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 565          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 566          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 567          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 568          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 569          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 570          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 571          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 572          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 573          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 574          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 575          PI    .013    .016    .009    .006    .006    .003    .003    .003
 576          LS            79.1
 577          KM   UHG FROM MOUNTAIN S-GRAPH
 578          UI    165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
 579          UI     4.6     2.2     1.7     1.7     1.7     1.4
              *

 580          KK     M10
 581          KM   EXISTING OFFSITE BASIN
 582          BA    0.38
 583          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 584          PB    2.63
 585          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 586          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 587          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 588          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 589          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 590          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 591          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 592          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 593          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 594          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 595          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 596          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 597          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 598          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 599          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 600          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 601          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 602          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 603          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 604          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 605          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 606          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 607          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 608          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 609          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 610          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1                                          HEC-1 INPUT                                                PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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611          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
612          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
613          PI    .013    .016    .009    .006    .006    .003    .003    .003
614          LS          79.1
615          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
616          UI    82.5   174.6   427.6   584.1   379.9   246.8   169.8   134.8   106.0    91.1
617          UI    75.3    59.6    52.8    44.5    39.6    36.6    30.7    29.9    20.6    20.6
618          UI    18.6    11.6    11.6    11.6    11.6    10.9     6.6     6.6     6.6     6.6
619          UI     6.6     6.6     6.6     6.6     5.1
             *

620          KK     ONH
621          KM   EXISTING ONSITE BASIN
622          BA    0.20
623          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
624          PB    2.63
625          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
626          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
627          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
628          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
629          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
630          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
631          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
632          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
633          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
634          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
635          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
636          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
637          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
638          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
639          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
640          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
641          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
642          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
643          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
644          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
645          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
646          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
647          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
648          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
649          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
650          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
651          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
652          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
653          PI    .013    .016    .009    .006    .006    .003    .003    .003
654          LS          81.7
655          KM   UHG FROM MOUNTAIN S-GRAPH
656          UI    302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
657          UI    26.4    23.5    20.5    18.7    15.1    14.4    11.0    11.0     8.5     4.0
658          UI     4.0     4.0     4.0     4.0     4.0     4.0     1.6
             *
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

659          KK     CP1
660          KM   COMBINE M12, ONJ, M11, ONI, M10, ONH
661          HC       6
             *

662          KK     DV1
663          KM   FLOWSPLIT DIVERSION FROM CP1
664          KM   4.1% OF BASIN FLOW DIVERTS "OUT" NORTH-EAST, TO "WASH 70"
665          KM   95.9% OF BASIN FLOW TO CONTINUE SOUTH
666          DT     FS1
667          DI     100
668          DQ     4.1
             *

669          KK     DV2
670          KM   FLOWSPLIT DIVERSION FROM DV1
671          KM   49.8% OF BASIN FLOW DIVERTS "OUT" SOUTH, TO "WASH 25B"
672          KM   50.2% OF BASIN FLOW TO CONTINUE EAST, TO "WASH 0"
673          DT     FS2
674          DI     100
675          DQ    49.8
             *

676          KK     ONV
677          KM   EXISTING ONSITE BASIN
678          BA    0.12
679          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
680          PB    2.63
681          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
682          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
683          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
684          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
685          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
686          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
687          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
688          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
689          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
690          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
691          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
692          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
693          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
694          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
695          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
696          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
697          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
698          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
699          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
700          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
701          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
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 702          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 703          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 704          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 705          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 706          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1                                          HEC-1 INPUT                                                PAGE 15

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 707          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 708          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 709          PI    .013    .016    .009    .006    .006    .003    .003    .003
 710          LS            72.0
 711          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 712          UI    112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
 713          UI     8.3     4.9     4.9     4.9     3.3
              *

 714          KK     CP2
 715          KM   COMBINE CP1, ONV
 716          HC       2
              *

 717          KK     ONG
 718          KM   EXISTING ONSITE BASIN
 719          BA    0.14
 720          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 721          PB    2.63
 722          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 723          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 724          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 725          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 726          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 727          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 728          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 729          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 730          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 731          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 732          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 733          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 734          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 735          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 736          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 737          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 738          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 739          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 740          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 741          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 742          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 743          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 744          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 745          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 746          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 747          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 748          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 749          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 750          PI    .013    .016    .009    .006    .006    .003    .003    .003
 751          LS            71.9
 752          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 753          UI    78.4   321.8   250.4   124.3    77.3    55.9    38.5    30.3    23.8    19.7
 754          UI    13.8    10.5     7.7     7.7     5.3     4.4     4.4     4.4     4.4     1.0
              *
1                                          HEC-1 INPUT                                                PAGE 16

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 755          KK     CP3
 756          KM   COMBINE CP2, ONG
 757          HC       2
              *

 758          KK     ONK
 759          KM   EXISTING ONSITE BASIN
 760          BA    0.68
 761          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 762          PB    2.63
 763          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
 764          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 765          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 766          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 767          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 768          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 769          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 770          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 771          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 772          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 773          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 774          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 775          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 776          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 777          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 778          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 779          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 780          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 781          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 782          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 783          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 784          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 785          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 786          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 787          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 788          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 789          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 790          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 791          PI    .013    .016    .009    .006    .006    .003    .003    .003
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 792          LS            71.9
 793          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 794          UI    109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
 795          UI    151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
 796          UI    44.9    43.5    30.2    30.2    30.2    22.1    16.9    16.9    16.9    16.9
 797          UI    16.9    14.0     9.7     9.7     9.7     9.7     9.7     9.7     9.7     9.7
 798          UI     9.7     9.7     4.8
              *

 799          KK     ONF
 800          KM   EXISTING ONSITE BASIN
 801          BA    0.50
 802          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 803          PB    2.63
 804          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 805          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
 806          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
 807          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
 808          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
 809          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
 810          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
 811          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
 812          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
 813          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
 814          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
 815          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
 816          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
 817          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
 818          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
 819          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
 820          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
 821          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
 822          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
 823          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
 824          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
 825          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
 826          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
 827          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
 828          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
 829          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
 830          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
 831          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
 832          PI    .013    .016    .009    .006    .006    .003    .003    .003
 833          LS            71.9
 834          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 835          UI    153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
 836          UI    77.0    64.7    56.7    51.5    34.8    34.8    22.8    19.5    19.5    19.5
 837          UI    12.6    11.1    11.1    11.1    11.1    11.1    11.1     1.6
              *

 838          KK     CP4
 839          KM   COMBINE CP3, ONK, ONF
 840          HC       3
              *

 841          KK  CPDUM2
 842          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 843          HC       2
              *

 844          KK    RET1
 845          KM   RETRIEVE "FS1" PORTION OF FLOW SPLIT
 846          KM   TRIB TO "WASH 70"
 847          DR     FS1
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 848          KK      MX
 849          KM   EXISTING OFFSITE BASIN
 850          BA    0.01
 851          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 852          PB    2.82
 853          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 854          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 855          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 856          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 857          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 858          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 859          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 860          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 861          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 862          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 863          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 864          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 865          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 866          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 867          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 868          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 869          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 870          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 871          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 872          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 873          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 874          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 875          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 876          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 877          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 878          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 879          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
```

```
 880          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 881          PI    .014    .017    .010    .007    .007    .003    .003    .003
 882          LS            91.6
 883          KM   UHG FROM MOUNTAIN S-GRAPH
 884          UI    57.5    10.9     5.2     2.5     1.0      .0
              *

 885          KK    CP14
 886          KM   COMBINE FS1, MX
 887          HC       2
              *

 888          KK     ONS
 889          KM   EXISTING ONSITE BASIN
 890          BA    0.04
 891          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 892          PB    2.82
 893          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 894          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 895          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 896          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 897          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1                                          HEC-1 INPUT                                                PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 898          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 899          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 900          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 901          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 902          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 903          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 904          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 905          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 906          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 907          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 908          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 909          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 910          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 911          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 912          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 913          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 914          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 915          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 916          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 917          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 918          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 919          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 920          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 921          PI    .014    .017    .010    .007    .007    .003    .003    .003
 922          LS            71.9
 923          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 924          UI    30.5   114.4    61.6    30.9    19.9    13.3     9.8     7.6     5.6     4.2
 925          UI     2.6     2.6     1.7     1.5     1.5     1.5     1.0
              *

 926          KK   CP14A
 927          KM   COMBINE CP14, ONS
 928          HC       2
              *

 929          KK    M17
 930          KM   EXISTING OFFSITE BASIN
 931          BA    0.67
 932          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 933          PB    2.82
 934          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 935          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 936          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 937          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 938          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 939          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 940          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 941          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 942          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 943          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 944          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 945          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 946          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 947          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 948          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1                                          HEC-1 INPUT                                                PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 949          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 950          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 951          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 952          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 953          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 954          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 955          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 956          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
 957          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
 958          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
 959          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
 960          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
 961          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
 962          PI    .014    .017    .010    .007    .007    .003    .003    .003
 963          LS            84.5
 964          KM   UHG FROM MOUNTAIN S-GRAPH
 965          UI    564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
 966          UI    97.4    80.4    73.6    69.1    63.2    58.7    55.5    49.3    46.8    41.3
 967          UI    35.7    35.7    29.9    25.9    25.9    25.9    16.2     9.4     9.4     9.4
 968          UI     9.4     9.4     9.4     9.4     9.4     9.4     9.4     3.8
              *
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```
 969          KK    CP15
 970          KM   COMBINE CP14A, M17
 971          HC       2
              *

 972          KK    M18
 973          KM   EXISTING OFFSITE BASIN
 974          BA    0.12
 975          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 976          PB    2.82
 977          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
 978          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
 979          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
 980          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
 981          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
 982          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
 983          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
 984          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
 985          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
 986          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
 987          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
 988          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
 989          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
 990          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
 991          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
 992          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
 993          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
 994          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
 995          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
 996          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
 997          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
 998          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
 999          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1                                                HEC-1 INPUT                                                    PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1000          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1001          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1002          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1003          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1004          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1005          PI    .014    .017    .010    .007    .007    .003    .003    .003
1006          LS            83.1
1007          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1008          UI    69.8   284.1   213.2   103.8    65.1    46.9    32.8    25.0    20.2    16.0
1009          UI    12.1     7.9     6.8     6.7     3.9     3.9     3.9     3.9     3.0
              *

1010          KK    M20
1011          KM   EXISTING OFFSITE BASIN
1012          BA    0.49
1013          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1014          PB    2.82
1015          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1016          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1017          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1018          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1019          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1020          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1021          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1022          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1023          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1024          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1025          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1026          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1027          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1028          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1029          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1030          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1031          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1032          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1033          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1034          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1035          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1036          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1037          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1038          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1039          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1040          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1041          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1042          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1043          PI    .014    .017    .010    .007    .007    .003    .003    .003
1044          LS            90.4
1045          KM   UHG FROM MOUNTAIN S-GRAPH
1046          UI    626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
1047          UI    64.5    59.4    52.2    47.6    44.1    35.1    33.6    28.1    24.4    24.4
1048          UI    16.7     8.9     8.9     8.9     8.9     8.9     8.9     8.9     8.9      .0
              *
1                                                HEC-1 INPUT                                                    PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1049          KK   STOR1
1050          KM   EXISTING OPEN MINE PIT BASIN
1051          KM   INTERCEPTS FLOW FROM M20
1052          KM   OPEN MINE PIT TOP EDGE ELEV = 440 ft
1053          KM   SPILL OUT BEGINS ABOVE TOP EDGE ELEV.
1054          RS       1    STOR       0
1055          SA    0.76    1.46    3.37    5.06    5.13    5.23    5.72    6.67
1056          SE     428     432     436     440   440.2   440.5     442     444
1057          SQ       0       0       0       0      61     240    2929    8283
              *
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1058          KK    RM20
1059          KM   ROUTE M20 FLOW TO M19
1060          KM   EXISTING WASH
1061          RD    3500   0.028   0.035       0    TRAP      20       3
              *

1062          KK    M19
1063          KM   EXISTING OFFSITE BASIN
1064          BA    0.11
1065          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1066          PB    2.82
1067          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1068          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1069          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1070          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1071          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1072          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1073          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1074          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1075          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1076          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1077          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1078          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1079          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1080          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1081          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1082          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1083          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1084          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1085          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1086          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1087          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1088          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1089          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1090          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1091          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1092          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1093          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1094          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1095          PI    .014    .017    .010    .007    .007    .003    .003    .003
1096          LS            83.1
1097          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1098          UI    117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
1                                          HEC-1 INPUT                                                    PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1099          UI     6.3     4.7     4.7     4.7      .0
              *

1100          KK    CP16
1101          KM   COMBINE M20, M19
1102          HC       2
              *

1103          KK    CP17
1104          KM   COMBINE CP15, M18, CP16
1105          HC       3
              *

1106          KK   RCP17
1107          KM   ROUTE CP17 TO ONP
1108          KM   EXISTING WASH
1109          RD   11280   0.014   0.035       0    TRAP      20       3
              *

1110          KK    ONP
1111          KM   EXISTING ONSITE BASIN
1112          BA    1.47
1113          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1114          PB    2.82
1115          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1116          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1117          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1118          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1119          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1120          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1121          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1122          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1123          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1124          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1125          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1126          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1127          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1128          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1129          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1130          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1131          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1132          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1133          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1134          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1135          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1136          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1137          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1138          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1139          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1140          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1141          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1142          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1143          PI    .014    .017    .010    .007    .007    .003    .003    .003
1144          LS            71.9
1145          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                    PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1146          UI    206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
1147          UI    366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
1148          UI    103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
1149          UI    32.6    32.6    32.6    32.6    32.6    25.9    18.6    18.6    18.6    18.6
1150          UI    18.6    18.6    18.6    18.6    18.6    18.6    18.6    14.4
              *

1151          KK    CP18
1152          KM   COMBINE CP17, ONP
1153          HC       2
              *

1154          KK  CPDUM3
1155          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1156          HC       2
              *

1157          KK     ONT
1158          KM   EXISTING ONSITE BASIN
1159          BA    0.04
1160          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1161          PB    2.82
1162          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1163          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1164          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1165          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1166          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1167          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1168          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1169          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1170          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1171          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1172          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1173          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1174          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1175          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1176          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1177          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1178          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1179          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1180          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1181          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1182          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1183          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1184          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1185          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1186          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1187          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1188          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1189          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1190          PI    .014    .017    .010    .007    .007    .003    .003    .003
1191          LS            71.9
1192          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1193          UI    47.6   130.9    50.1    26.7    16.4    11.2     8.4     5.6     3.2     3.1
1194          UI     1.8     1.8     1.8     1.0
              *
```

1 HEC-1 INPUT PAGE 25

```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195          KK   RMONT
1196          KM   ROUTE ONT TO ONO
1197          KM   EXISTING WASH
1198          RD   10985   0.015   0.035       0    TRAP      20       3
              *

1199          KK    ONO
1200          KM   EXISTING ONSITE BASIN
1201          BA    0.55
1202          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1203          PB    2.82
1204          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1205          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1206          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1207          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1208          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1209          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1210          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1211          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1212          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1213          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1214          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1215          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1216          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1217          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1218          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1219          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1220          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1221          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1222          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1223          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1224          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1225          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1226          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1227          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1228          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1229          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1230          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1231          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1232          PI    .014    .017    .010    .007    .007    .003    .003    .003
1233          LS            71.9
1234          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1235          UI    79.8   140.8   249.2   528.5   675.3   480.0   333.2   260.9   187.2   161.1
1236          UI    135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
1237          UI    39.9    35.3    33.4    31.6    22.4    22.4    22.4    18.8    12.6    12.6
```

```
1238          UI    12.6    12.6    12.6    12.6     9.3     7.2     7.2     7.2     7.2     7.2
1239          UI     7.2     7.2     7.2     7.2     7.2     7.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1240          KK    CP20
1241          KM   COMBINE ONT, ONO
1242          HC       2
              *

1243          KK  CPDUM4
1244          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1245          HC       2
              *

1246          KK     ONU
1247          KM   EXISTING ONSITE BASIN
1248          BA    0.05
1249          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1250          PB    2.82
1251          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1252          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1253          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1254          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1255          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1256          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1257          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1258          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1259          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1260          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1261          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1262          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1263          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1264          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1265          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1266          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1267          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1268          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1269          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1270          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1271          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1272          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1273          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1274          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1275          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1276          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1277          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1278          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1279          PI    .014    .017    .010    .007    .007    .003    .003    .003
1280          LS            71.9
1281          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1282          UI    55.1   162.7    64.0    34.2    21.1    14.5    10.9     7.3     4.6     3.8
1283          UI     2.7     2.2     2.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1284          KK   RMONU
1285          KM   ROUTE ONU TO ONL
1286          KM   EXISTING WASH
1287          RD   10520   0.016   0.035       0    TRAP      20       3
              *

1288          KK    ONL
1289          KM   EXISTING ONSITE BASIN
1290          BA    0.73
1291          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1292          PB    2.82
1293          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1294          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1295          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1296          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1297          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1298          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1299          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1300          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1301          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1302          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1303          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1304          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1305          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1306          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1307          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1308          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1309          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1310          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1311          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1312          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1313          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1314          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1315          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1316          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1317          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1318          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1319          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1320          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1321          PI    .014    .017    .010    .007    .007    .003    .003    .003
1322          LS            71.9
1323          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1324          UI    122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
1325          UI    159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
```

```
1326          UI    49.7    37.6    33.4    33.4    28.2    18.7    18.7    18.7    18.7    18.7
1327          UI    16.1    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7
1328          UI    10.7     2.7
              *
1                                          HEC-1 INPUT                                                PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1329          KK    CP19
1330          KM   COMBINE ONU, ONL
1331          HC       2
              *

1332          KK    ONM
1333          KM   EXISTING ONSITE BASIN
1334          BA    0.10
1335          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1336          PB    2.82
1337          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1338          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1339          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1340          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1341          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1342          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1343          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1344          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1345          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1346          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1347          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1348          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1349          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1350          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1351          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1352          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1353          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1354          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1355          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1356          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1357          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1358          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1359          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1360          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1361          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1362          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1363          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1364          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1365          PI    .014    .017    .010    .007    .007    .003    .003    .003
1366          LS            71.9
1367          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1368          UI    197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
1369          UI     5.4     1.2
              *

1370          KK    ONN
1371          KM   EXISTING ONSITE BASIN
1372          BA    0.08
1373          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1374          PB    2.82
1375          PI    .003    .003    .007    .007    .007    .007    .010    .010    .010    .010
1376          PI    .014    .014    .017    .017    .017    .017    .017    .017    .017    .017
1377          PI    .017    .017    .017    .017    .017    .017    .017    .017    .017    .017
1378          PI    .020    .020    .024    .024    .024    .024    .027    .030    .037    .044
1                                          HEC-1 INPUT                                                PAGE 29

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1379          PI    .051    .047    .044    .041    .041    .037    .034    .041    .051    .061
1380          PI    .064    .064    .064    .068    .064    .064    .064    .068    .071    .074
1381          PI    .085    .091    .095    .102    .102    .102    .102    .102    .102    .102
1382          PI    .102    .102    .095    .078    .068    .068    .068    .064    .064    .068
1383          PI    .074    .081    .088    .098    .108    .118    .129    .135    .142    .146
1384          PI    .152    .159    .162    .166    .169    .173    .173    .173    .176    .176
1385          PI    .176    .176    .179    .183    .186    .190    .190    .190    .186    .183
1386          PI    .179    .183    .190    .196    .203    .210    .213    .217    .220    .223
1387          PI    .227    .230    .230    .230    .233    .237    .240    .240    .240    .240
1388          PI    .244    .250    .264    .288    .308    .315    .311    .308    .305    .308
1389          PI    .308    .311    .315    .315    .318    .321    .325    .325    .321    .318
1390          PI    .318    .315    .311    .308    .305    .305    .301    .298    .294    .301
1391          PI    .311    .321    .335    .355    .369    .376    .382    .382    .382    .382
1392          PI    .382    .382    .386    .386    .389    .393    .396    .393    .382    .349
1393          PI    .315    .284    .257    .233    .220    .213    .203    .173    .115    .068
1394          PI    .061    .058    .074    .105    .149    .152    .132    .098    .078    .064
1395          PI    .058    .051    .044    .044    .041    .037    .034    .030    .030    .030
1396          PI    .027    .024    .024    .020    .020    .020    .017    .017    .017    .017
1397          PI    .017    .017    .014    .014    .014    .010    .010    .007    .007    .007
1398          PI    .007    .003    .003    .007    .007    .010    .010    .014    .014    .014
1399          PI    .014    .014    .010    .010    .010    .010    .010    .010    .010    .010
1400          PI    .014    .014    .010    .010    .010    .014    .014    .010    .007    .010
1401          PI    .014    .017    .020    .034    .061    .085    .098    .088    .064    .044
1402          PI    .020    .007    .003    .003    .000    .000    .000    .000    .000    .003
1403          PI    .014    .017    .010    .007    .007    .003    .003    .003
1404          LS            71.9
1405          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1406          UI    22.6    56.4   148.9   107.3    65.2    41.8    31.7    24.4    20.2    15.4
1407          UI    13.0    11.0     9.3     8.2     7.4     5.2     5.2     3.4     2.9     2.9
1408          UI     2.9     2.2     1.7     1.7     1.7     1.7     1.7     1.7     1.4
              *

1409          KK  CPDUM5
1410          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1411          HC       4
              *

1412          KK      M9
1413          KM   EXISTING OFFSITE BASIN
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1414          BA    1.80
1415          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1416          PB    2.63
1417          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1418          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1419          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1420          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1421          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1422          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1423          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1424          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1425          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1426          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1427          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1428          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1429          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1                                             HEC-1 INPUT                                                PAGE 30

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1431          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1432          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1433          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1434          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1435          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1436          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1437          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1438          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1439          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1440          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1441          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1442          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1443          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1444          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1445          PI    .013    .016    .009    .006    .006    .003    .003    .003
1446          LS            86.2
1447          KM   UHG FROM MOUNTAIN S-GRAPH
1448          UI    471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
1449          UI    364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
1450          UI    145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
1451          UI    79.4    79.4    79.1    71.0    71.0    71.0    70.1    62.3    62.3    62.3
1452          UI    62.3    56.1    52.6    52.6    52.6    52.6    48.4    40.1    40.1    40.1
1453          UI    40.1    40.1    40.1    35.9    29.1    29.1    29.1    29.1    29.1    29.1
1454          UI    29.1    29.1    29.1    14.0    10.6    10.6    10.6    10.6    10.6    10.6
1455          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6
1456          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6     5.1
              *

1457          KK      M8
1458          KM   EXISTING OFFSITE BASIN
1459          BA    1.04
1460          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1461          PB    2.63
1462          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1463          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1464          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1465          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1466          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1467          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1468          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1469          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1470          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1471          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1472          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1473          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1474          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1475          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1476          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1477          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1478          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1479          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1480          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1481          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1482          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1                                             HEC-1 INPUT                                                PAGE 31

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1483          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1484          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1485          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1486          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1487          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1488          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1489          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1490          PI    .013    .016    .009    .006    .006    .003    .003    .003
1491          LS            85.6
1492          KM   UHG FROM MOUNTAIN S-GRAPH
1493          UI    495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
1494          UI    177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
1495          UI    69.5    66.3    65.0    58.1    58.1    54.6    49.1    49.1    47.8    37.4
1496          UI    37.4    37.4    37.4    29.2    27.2    27.2    27.2    27.2    27.2    12.0
1497          UI     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9
1498          UI     9.9     9.9     9.9     9.9     9.9     4.0
              *

1499          KK     CP5
1500          KM   COMBINE M9, M8
1501          HC       2
              *

1502          KK    RET2
1503          KM   RETRIEVE FLOW TRIB. TO "WASH 25B"
1504          DR     FS2
              *
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1505          KK     CP6
1506          KM   COMBINE CP5, RET2
1507          HC       2
              *

1508          KK      M7
1509          KM   EXISTING OFFSITE BASIN
1510          BA    0.16
1511          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1512          PB    2.63
1513          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1514          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1515          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1516          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1517          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1518          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1519          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1520          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1521          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1522          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1523          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1524          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1525          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1526          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1527          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1528          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1529          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1                                           HEC-1 INPUT                                                PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1530          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1531          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1532          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1533          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1534          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1535          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1536          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1537          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1538          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1539          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1540          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1541          PI    .013    .016    .009    .006    .006    .003    .003    .003
1542          LS            77.3
1543          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1544          UI    65.0   232.2   334.4   171.6   100.8    70.8    54.5    39.7    31.5    25.7
1545          UI    21.7    18.5    13.2    11.5     7.4     7.4     7.4     4.4     4.2     4.2
1546          UI     4.2     4.2     4.0
              *

1547          KK    ONE1
1548          KM   EXISTING ONSITE BASIN
1549          BA    1.61
1550          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1551          PB    2.63
1552          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1553          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1554          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1555          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1556          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1557          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1558          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1559          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1560          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1561          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1562          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1563          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1564          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1565          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1566          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1567          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1568          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1569          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1570          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1571          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1572          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1573          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1574          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1575          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1576          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1577          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1578          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1579          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1580          PI    .013    .016    .009    .006    .006    .003    .003    .003
1581          LS            73.7
1582          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                           HEC-1 INPUT                                                PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1583          UI    163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
1584          UI    566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
1585          UI    159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
1586          UI    74.5    68.3    68.3    68.3    48.4    45.9    45.9    45.9    45.9    36.7
1587          UI    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    17.1
1588          UI    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7
1589          UI    14.7    14.7    14.7    14.7    14.7    14.7     2.7
              *

1590          KK    CP6A
1591          KM   COMBINE M7, ONE1
1592          HC       2
              *

1593          KK    CP6B
```

```
1594          KM   COMBINE CP6, CP6A
1595          HC       2
              *

1596          KK    ONE2
1597          KM   EXISTING ONSITE BASIN
1598          BA    2.59
1599          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1600          PB    2.63
1601          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1602          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1603          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1604          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1605          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1606          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1607          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1608          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1609          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1610          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1611          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1612          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1613          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1614          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1615          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1616          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1617          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1618          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1619          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1620          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1621          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1622          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1623          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1624          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1625          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1626          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1627          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1628          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1629          PI    .013    .016    .009    .006    .006    .003    .003    .003
1630          LS            74.5
1631          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1632          UI    210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
1633          UI   1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
1634          UI    290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
1635          UI    151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
1636          UI    87.8    87.8    78.6    59.0    59.0    59.0    59.0    59.0    59.0    45.4
1637          UI    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1
1638          UI    33.1    27.1    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1639          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1640          UI    18.9    18.9    15.4
              *

1641          KK     CP7
1642          KM   COMBINE CP6B, ONE2
1643          HC       2
              *

1644          KK      M6
1645          KM   EXISTING OFFSITE BASIN
1646          BA    1.32
1647          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1648          PB    2.63
1649          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1650          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1651          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1652          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1653          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1654          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1655          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1656          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1657          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1658          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1659          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1660          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1661          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1662          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1663          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1664          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1665          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1666          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1667          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1668          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1669          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1670          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1671          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1672          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1673          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1674          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1675          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1676          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1677          PI    .013    .016    .009    .006    .006    .003    .003    .003
1678          LS            83.8
1679          KM   UHG FROM MOUNTAIN S-GRAPH
1680          UI    488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
1681          UI    247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
1682          UI    87.8    87.8    78.9    77.5    75.6    69.3    69.3    67.0    60.8    60.8
1                                          HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1683          UI    60.8    52.1    51.3    51.3    51.3    39.9    39.1    39.1    39.1    39.1
1684          UI    31.5    28.4    28.4    28.4    28.4    28.4    28.4    19.1    10.3    10.3
1685          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3
```

```
1686          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3     2.5
              *

1687          KK     M5A
1688          KM   EXISTING OFFSITE BASIN
1689          BA    0.17
1690          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1691          PB    2.63
1692          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1693          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1694          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1695          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1696          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1697          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1698          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1699          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1700          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1701          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1702          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1703          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1704          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1705          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1706          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1707          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1708          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1709          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1710          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1711          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1712          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1713          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1714          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1715          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1716          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1717          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1718          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1719          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1720          PI    .013    .016    .009    .006    .006    .003    .003    .003
1721          LS            86.2
1722          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1723          UI    46.0   109.1   301.7   233.7   143.7    91.0    69.2    52.4    44.0    34.0
1724          UI    28.4    23.8    20.4    18.2    16.1    12.5    10.8     9.6     6.1     6.1
1725          UI     6.1     6.1     3.7     3.5     3.5     3.5     3.5     3.5     3.5     2.5
              *

1726          KK     M5B
1727          KM   EXISTING OFFSITE BASIN
1728          BA    0.18
1729          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1730          PB    2.63
1731          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1732          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1733          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1                                          HEC-1 INPUT                                                PAGE 36

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1734          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1735          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1736          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1737          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1738          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1739          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1740          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1741          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1742          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1743          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1744          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1745          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1746          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1747          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1748          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1749          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1750          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1751          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1752          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1753          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1754          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1755          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1756          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1757          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1758          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1759          PI    .013    .016    .009    .006    .006    .003    .003    .003
1760          LS            86.2
1761          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1762          UI    94.4   388.4   330.7   165.8   102.3    73.1    51.5    39.8    31.7    26.1
1763          UI    19.0    16.0     9.6     9.6     8.6     5.5     5.5     5.5     5.5     4.6
              *

1764          KK     CP8
1765          KM   COMBINE M6, M5A, M5B
1766          HC       3
              *

1767          KK      M5
1768          KM   EXISTING OFFSITE BASIN
1769          BA    0.39
1770          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1771          PB    2.63
1772          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1773          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1774          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1775          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1776          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1777          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1778          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1779          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
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1780          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1781          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1782          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1783          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1784          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1                                          HEC-1 INPUT                                                PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1785          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1786          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1787          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1788          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1789          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1790          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1791          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1792          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1793          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1794          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1795          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1796          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1797          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1798          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1799          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1800          PI    .013    .016    .009    .006    .006    .003    .003    .003
1801          LS            74.6
1802          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1803          UI    91.1   201.2   517.0   587.6   366.2   241.4   170.2   132.5   105.2    89.8
1804          UI    70.8    59.8    51.4    45.0    39.6    34.5    33.1    22.6    22.3    19.8
1805          UI    12.5    12.5    12.5    12.5    10.2     7.1     7.1     7.1     7.1     7.1
1806          UI     7.1     7.1     7.1      .0
              *

1807          KK     CP9
1808          KM   COMBINE CP8, M5
1809          HC       2
              *

1810          KK     ONB
1811          KM   EXISTING ONSITE BASIN
1812          BA    2.83
1813          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1814          PB    2.63
1815          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1816          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1817          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1818          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1819          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1820          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1821          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1822          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1823          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1824          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1825          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1826          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1827          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1828          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1829          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1830          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1831          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1832          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1833          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1834          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1835          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1                                          HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1836          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1837          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1838          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1839          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1840          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1841          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1842          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1843          PI    .013    .016    .009    .006    .006    .003    .003    .003
1844          LS            73.4
1845          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1846          UI    210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
1847          UI   1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
1848          UI    353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
1849          UI    172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
1850          UI    105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
1851          UI    59.1    59.1    59.1    58.1    33.2    33.2    33.2    33.2    33.2    33.2
1852          UI    33.2    33.2    33.2    33.2    33.2    33.2    33.2    21.2    18.9    18.9
1853          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1854          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1855          UI     6.1
              *

1856          KK    CP10
1857          KM   COMBINE CP9, ONB
1858          HC       2
              *

1859          KK     OND
1860          KM   EXISTING ONSITE BASIN
1861          BA    1.34
1862          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1863          PB    2.63
1864          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1865          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1866          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1867          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1868          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1869          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
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1870          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1871          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1872          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1873          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1874          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1875          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1876          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1877          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1878          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1879          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1880          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1881          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1882          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1883          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1884          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1885          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1886          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1                                          HEC-1 INPUT                                                PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1887          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1888          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1889          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1890          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1891          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1892          PI    .013    .016    .009    .006    .006    .003    .003    .003
1893          LS            71.9
1894          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1895          UI    203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
1896          UI    309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
1897          UI    90.9    85.1    79.2    57.2    57.2    57.2    42.6    32.1    32.1    32.1
1898          UI    32.1    32.1    30.5    18.3    18.3    18.3    18.3    18.3    18.3    18.3
1899          UI    18.3    18.3    18.3    18.3     4.0
              *

1900          KK     ONC
1901          KM   EXISTING ONSITE BASIN
1902          BA    0.30
1903          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1904          PB    2.63
1905          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1906          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1907          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1908          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1909          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1910          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1911          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1912          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1913          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1914          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1915          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1916          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1917          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1918          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1919          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
1920          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1921          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1922          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1923          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1924          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1925          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1926          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1927          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1928          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1929          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1930          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1931          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1932          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1933          PI    .013    .016    .009    .006    .006    .003    .003    .003
1934          LS            71.9
1935          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1936          UI    146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
1937          UI    35.8    27.5    19.2    15.4    15.4    10.9     8.8     8.8     8.8     8.8
1938          UI     5.4
              *
1                                          HEC-1 INPUT                                                PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1939          KK     CPA
1940          KM   COMBINE OND, ONC
1941          HC       2
              *

1942          KK      M4
1943          KM   EXISTING OFFSITE BASIN
1944          BA    2.71
1945          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1946          PB    2.63
1947          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1948          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1949          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1950          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
1951          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
1952          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
1953          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
1954          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
1955          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
1956          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
1957          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
1958          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
1959          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
1960          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
1961          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
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1962          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
1963          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
1964          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
1965          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
1966          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
1967          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
1968          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
1969          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
1970          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
1971          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
1972          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
1973          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
1974          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
1975          PI    .013    .016    .009    .006    .006    .003    .003    .003
1976          LS            85.3
1977          KM   UHG FROM MOUNTAIN S-GRAPH
1978          UI    485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
1979          UI    649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
1980          UI    269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
1981          UI    152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
1982          UI    95.6    92.6    84.4    84.4    84.4    84.4    81.7    75.5    75.5    75.5
1983          UI    75.5    75.5    68.6    66.2    66.2    66.2    66.2    66.2    62.1    55.9
1984          UI    55.9    55.9    55.9    55.9    55.9    55.9    44.0    42.6    42.6    42.6
1985          UI    42.6    42.6    42.6    42.6    42.6    42.1    31.0    31.0    31.0    31.0
1986          UI    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    21.3
1987          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1988          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1989          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1990          UI    11.3    11.3    11.3    11.3    11.3    11.3     8.5
              *
1                                          HEC-1 INPUT                                          PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1991          KK      M3
1992          KM   EXISTING OFFSITE BASIN
1993          BA    0.57
1994          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1995          PB    2.63
1996          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
1997          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
1998          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
1999          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
2000          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
2001          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
2002          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
2003          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
2004          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
2005          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
2006          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
2007          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
2008          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
2009          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
2010          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
2011          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
2012          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
2013          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
2014          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
2015          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
2016          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
2017          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
2018          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
2019          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
2020          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
2021          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
2022          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
2023          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
2024          PI    .013    .016    .009    .006    .006    .003    .003    .003
2025          LS            79.1
2026          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2027          UI    87.5   162.8   294.9   662.8   681.0   472.9   336.7   243.7   191.2   159.0
2028          UI    130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
2029          UI    37.5    36.6    30.9    24.6    24.6    24.6    15.0    13.8    13.8    13.8
2030          UI    13.8    13.8    10.9     7.9     7.9     7.9     7.9     7.9     7.9     7.9
2031          UI     7.9     7.9     7.9     5.6
              *

2032          KK    CP11
2033          KM   COMBINE M4, M3
2034          HC       2
              *

2035          KK      M2
2036          KM   EXISTING OFFSITE BASIN
2037          BA   24.30
2038          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2039          PB    2.63
2040          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                          HEC-1 INPUT                                          PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2041          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2042          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2043          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2044          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2045          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2046          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2047          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2048          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2049          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2050          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2051          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2052          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2053          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
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2054          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2055          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2056          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2057          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2058          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2059          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2060          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2061          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2062          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2063          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2064          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2065          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2066          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2067          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2068          PI    .017    .022    .013    .009    .009    .004    .004    .004
2069          LS            86.2
2070          KM   UHG FROM MOUNTAIN S-GRAPH
2071          UI  1111.9  2221.1  2203.4  3001.1  3365.7  3569.7  4543.3  5289.0  6350.9  7587.7
2072          UI  7721.3  9338.4  7205.7  6488.0  5526.3  4850.8  4632.4  3956.0  3879.3  3543.3
2073          UI  3060.6  2466.9  2637.2  2146.4  2106.1  2033.1  2001.3  2001.4  1936.4  1691.3
2074          UI  1656.5  1534.3  1504.1  1559.9  1431.1  1421.8  1295.3  1250.7  1250.7  1251.3
2075          UI  1250.6  1241.0  1065.3  1000.8  1000.4   988.4   920.1   909.7   910.0   903.8
2076          UI   847.9   833.8   834.1   833.8   787.9   715.8   715.0   714.0   715.4   706.1
2077          UI   670.2   666.7   667.4   667.4   666.7   606.7   541.1   540.4   541.1   541.1
2078          UI   541.1   540.4   490.0   445.2   445.2   444.5   445.2   443.8   445.2   444.5
2079          UI   436.2   397.6   392.7   392.0   392.0   393.4   391.3   393.4   391.3   393.4
2080          UI   371.3   351.3   352.0   350.6   351.3   350.6   352.0   350.6   350.6   352.0
2081          UI   347.9   323.0   309.2   310.6   310.6   310.6   309.2   310.6   310.6   310.6
2082          UI   310.6   309.2   310.6   276.1   258.1   259.5   258.1   256.8   259.5   258.1
2083          UI   256.8   258.1   259.5   258.1   258.1   258.1   258.1   248.5   204.3   197.4
2084          UI   197.4   197.4   198.8   197.4   200.2   196.0   200.2   197.4   197.4   198.8
2085          UI   198.8   198.8   196.0   198.8   198.8   197.4   190.5   146.3   143.6   143.6
2086          UI   144.9   143.6   143.6   144.9   143.6   143.6   144.9   143.6   143.6   143.6
2087          UI   146.3   140.8   146.3   143.6   143.6   143.6   143.6   146.3   140.8   146.3
2088          UI   143.6   143.6   129.8    55.2    38.7    38.7    38.7    44.2    38.7    38.7
2089          UI    35.9    38.7    41.4    38.7    38.7    41.4    38.7    38.7    38.7    41.4
2090          UI    38.7    38.7    41.4    35.9    41.4    38.7    38.7    41.4    38.7    38.7
              *
1                                          HEC-1 INPUT                                                PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2091          KK   CP12A
2092          KM   COMBINE CP11, M2
2093          HC        2
              *

2094          KK     M13
2095          KM   EXISTING OFFSITE BASIN
2096          BA    7.18
2097          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2098          PB    2.63
2099          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
2100          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
2101          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
2102          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
2103          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
2104          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
2105          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
2106          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
2107          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
2108          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
2109          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
2110          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
2111          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
2112          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
2113          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
2114          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
2115          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
2116          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
2117          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
2118          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
2119          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
2120          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
2121          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
2122          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
2123          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
2124          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
2125          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
2126          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
2127          PI    .013    .016    .009    .006    .006    .003    .003    .003
2128          LS            88.4
2129          KM   UHG FROM MOUNTAIN S-GRAPH
2130          UI    961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
2131          UI   2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
2132          UI    718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
2133          UI    432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
2134          UI    301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
2135          UI    192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
2136          UI    170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
2137          UI    133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
2138          UI    112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
2139          UI    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6
2140          UI    65.9    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2
2141          UI    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    23.8    22.6
2142          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
1                                          HEC-1 INPUT                                                PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2143          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
2144          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
              *

2145          KK     DV3
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2146          KM   FLOWSPLIT DIVERSION FROM BASIN M13
2147          KM   ASSUME 50% OF FLOW TO CONTINUE EAST
2148          KM   ASSUME 50% OF FLOW TO CONTINUE NORTH
2149          DT     FS3
2150          DI     100
2151          DQ      50
              *

2152          KK      M1
2153          KM   EXISTING OFFSITE BASIN
2154          BA    0.76
2155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2156          PB    2.63
2157          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
2158          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
2159          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
2160          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
2161          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
2162          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
2163          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
2164          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
2165          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
2166          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
2167          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
2168          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
2169          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
2170          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
2171          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
2172          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
2173          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
2174          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
2175          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
2176          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
2177          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
2178          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
2179          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
2180          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
2181          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
2182          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
2183          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
2184          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
2185          PI    .013    .016    .009    .006    .006    .003    .003    .003
2186          LS            77.3
2187          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2188          UI    176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
2189          UI    139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
2190          UI    24.2    24.2    24.2    24.2    21.1    13.8    13.8    13.8    13.8    13.8
2191          UI    13.8    13.8    13.8     3.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2192          KK    CP12
2193          KM   COMBINE DV5, M11
2194          HC       2
              *

2195          KK   CP12B
2196          KM   COMBINE CP12A, CP12
2197          HC       2
              *

2198          KK     ONA
2199          KM   EXISTING ONSITE BASIN
2200          BA    0.87
2201          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2202          PB    2.63
2203          PI    .003    .003    .006    .006    .006    .006    .009    .009    .009    .009
2204          PI    .013    .013    .016    .016    .016    .016    .016    .016    .016    .016
2205          PI    .016    .016    .016    .016    .016    .016    .016    .016    .016    .016
2206          PI    .019    .019    .022    .022    .022    .022    .025    .028    .035    .041
2207          PI    .047    .044    .041    .038    .038    .035    .032    .038    .047    .057
2208          PI    .060    .060    .060    .063    .060    .060    .060    .063    .066    .069
2209          PI    .079    .085    .088    .095    .095    .095    .095    .095    .095    .095
2210          PI    .095    .095    .088    .073    .063    .063    .063    .060    .060    .063
2211          PI    .069    .076    .082    .092    .101    .110    .120    .126    .133    .136
2212          PI    .142    .148    .151    .155    .158    .161    .161    .161    .164    .164
2213          PI    .164    .164    .167    .170    .174    .177    .177    .177    .174    .170
2214          PI    .167    .170    .177    .183    .189    .196    .199    .202    .205    .208
2215          PI    .211    .215    .215    .215    .218    .221    .224    .224    .224    .224
2216          PI    .227    .234    .246    .268    .287    .294    .290    .287    .284    .287
2217          PI    .287    .290    .294    .294    .297    .300    .303    .303    .300    .297
2218          PI    .297    .294    .290    .287    .284    .284    .281    .278    .275    .281
2219          PI    .290    .300    .312    .331    .344    .350    .357    .357    .357    .357
2220          PI    .357    .357    .360    .360    .363    .366    .369    .366    .357    .325
2221          PI    .294    .265    .240    .218    .205    .199    .189    .161    .107    .063
2222          PI    .057    .054    .069    .098    .139    .142    .123    .092    .073    .060
2223          PI    .054    .047    .041    .041    .038    .035    .032    .028    .028    .028
2224          PI    .025    .022    .022    .019    .019    .019    .016    .016    .016    .016
2225          PI    .016    .016    .013    .013    .013    .009    .009    .006    .006    .006
2226          PI    .006    .003    .003    .006    .006    .009    .009    .013    .013    .013
2227          PI    .013    .013    .009    .009    .009    .009    .009    .009    .009    .009
2228          PI    .013    .013    .009    .009    .009    .013    .013    .009    .006    .009
2229          PI    .013    .016    .019    .032    .057    .079    .092    .082    .060    .041
2230          PI    .019    .006    .003    .003    .000    .000    .000    .000    .000    .003
2231          PI    .013    .016    .009    .006    .006    .003    .003    .003
2232          LS            76.1
2233          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2234          UI    138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
2235          UI    195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
2236          UI    57.1    57.1    39.1    38.4    38.4    30.7    21.5    21.5    21.5    21.6
2237          UI    21.5    19.7    12.3    12.3    12.3    12.3    12.3    12.3    12.3    12.3
2238          UI    12.3    12.3     9.3
              *
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          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          2239          KK    CP13
          2240          KM   COMBINE CP12B, ONA
          2241          HC       2
                        *
          2242          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    28         M27
                V
                V
    68        RM27
                .
                .
    72          .        ONR
                .           .
                .           .
   111        CP25...........
                .
                .
   114          .        M22
                .           .
                .           .
   152          .           .        M21
                .           .           .
                .           .           .
   191          .           .           .        M23
                .           .           .           .
                .           .           .           .
   230          .           .           .           .        M25
                .           .           .           .           .
                .           .           .           .           .
   270          .        CP21...................................
                .           .
                .           .
   273          .           .        M24
                .           .           V
                .           .           V
   313          .           .        RM24
                .           .           .
                .           .           .
   317          .           .           .         M26
                .           .           .           .
                .           .           .           .
   357          .           .        CP22...........
                .           .           .
                .           .           .
   360          .        CP23...........
                .           V
                .           V
   363          .       RCP23
                .           .
                .           .
   367          .           .        ONQ
                .           .           .
                .           .           .
   408          .        CP24...........
                .           .
                .           .
   411      CPDUM1...........
                .
                .
   414          .         M12
                .           .
                .           .
   461          .           .         ONJ
                .           .           .
                .           .           .
   499          .           .           .         M11
                .           .           .           .
                .           .           .           .
   542          .           .           .           .         ONI
                .           .           .           .           .
                .           .           .           .           .
   580          .           .           .           .           .         M10
                .           .           .           .           .           .
                .           .           .           .           .           .
   620          .           .           .           .           .           .         ONH
                .           .           .           .           .           .           .
                .           .           .           .           .           .           .
   659          .         CP1..............................................................
                .           .
                .           .
   666          .           .------->     FS1
   662          .         DV1
                .           .
                .           .
   673          .           .------->     FS2
   669          .         DV2
                .           .
                .           .
   676          .           .         ONV
                .           .           .
                .           .           .
   714          .         CP2...........
                .           .
                .           .
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 717          .           .         ONG
              .           .           .
              .           .           .
 755          .         CP3............
              .           .
              .           .
 758          .           .         ONK
              .           .           .
              .           .           .
 799          .           .           .         ONF
              .           .           .           .
              .           .           .           .
 838          .         CP4........................
              .           .
              .           .
 841      CPDUM2............
              .
              .
 847          .           .<-------     FS1
 844          .        RET1
              .           .
              .           .
 848          .           .          MX
              .           .           .
              .           .           .
 885          .        CP14............
              .           .
              .           .
 888          .           .         ONS
              .           .           .
              .           .           .
 926          .       CP14A............
              .           .
              .           .
 929          .           .        M17
              .           .           .
              .           .           .
 969          .        CP15............
              .           .
              .           .
 972          .           .        M18
              .           .           .
              .           .           .
1010          .           .           .        M20
              .           .           .          V
              .           .           .          V
1049          .           .           .       STOR1
              .           .           .          V
              .           .           .          V
1058          .           .           .        RM20
              .           .           .           .
              .           .           .           .
1062          .           .           .           .        M19
              .           .           .           .           .
              .           .           .           .           .
1100          .           .           .        CP16............
              .           .           .           .
              .           .           .           .
1103          .        CP17........................
              .           V
              .           V
1106          .       RCP17
              .           .
              .           .
1110          .           .        ONP
              .           .           .
              .           .           .
1151          .        CP18............
              .           .
              .           .
1154      CPDUM3............
              .
              .
1157          .         ONT
              .           V
              .           V
1195          .       RMONT
              .           .
              .           .
1199          .           .        ONO
              .           .           .
              .           .           .
1240          .        CP20............
              .           .
              .           .
1243      CPDUM4............
              .
              .
1246          .         ONU
              .           V
              .           V
1284          .       RMONU
              .           .
              .           .
1288          .           .        ONL
              .           .           .
              .           .           .
1329          .        CP19............
              .           .
              .           .
1332          .           .        ONM
              .           .           .
              .           .           .
1370          .           .           .        ONN
              .           .           .           .
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1409      CPDUM5..................................
               .
               .
1412           .          M9
               .            .
               .            .
1457           .            .          M8
               .            .            .
               .            .            .
1499           .         CP5............
               .            .
               .            .
1504           .            .           .<-------     FS2
1502           .            .        RET2
               .            .            .
               .            .            .
1505           .         CP6............
               .            .
               .            .
1508           .            .          M7
               .            .            .
               .            .            .
1547           .            .            .        ONE1
               .            .            .           .
               .            .            .           .
1590           .            .        CP6A............
               .            .            .
               .            .            .
1593           .        CP6B............
               .            .
               .            .
1596           .            .        ONE2
               .            .            .
               .            .            .
1641           .         CP7............
               .            .
               .            .
1644           .            .          M6
               .            .            .
               .            .            .
1687           .            .            .         M5A
               .            .            .           .
               .            .            .           .
1726           .            .            .           .         M5B
               .            .            .           .           .
               .            .            .           .           .
1764           .            .         CP8........................
               .            .            .
               .            .            .
1767           .            .            .          M5
               .            .            .           .
               .            .            .           .
1807           .            .         CP9............
               .            .            .
               .            .            .
1810           .            .            .         ONB
               .            .            .           .
               .            .            .           .
1856           .            .        CP10............
               .            .            .
               .            .            .
1859           .            .            .         OND
               .            .            .           .
               .            .            .           .
1900           .            .            .           .         ONC
               .            .            .           .           .
               .            .            .           .           .
1939           .            .            .         CPA............
               .            .            .           .
               .            .            .           .
1942           .            .            .           .          M4
               .            .            .           .           .
               .            .            .           .           .
1991           .            .            .           .           .          M3
               .            .            .           .           .           .
               .            .            .           .           .           .
2032           .            .            .           .        CP11............
               .            .            .           .           .
               .            .            .           .           .
2035           .            .            .           .           .          M2
               .            .            .           .           .           .
               .            .            .           .           .           .
2091           .            .            .           .       CP12A............
               .            .            .           .           .
               .            .            .           .           .
2094           .            .            .           .           .         M13
               .            .            .           .           .           .
               .            .            .           .           .           .
2149           .            .            .           .           .           .-------->     FS3
2145           .            .            .           .           .         DV3
               .            .            .           .           .           .
               .            .            .           .           .           .
2152           .            .            .           .           .           .          M1
               .            .            .           .           .           .           .
               .            .            .           .           .           .           .
2192           .            .            .           .           .        CP12............
               .            .            .           .           .           .
               .            .            .           .           .           .
2195           .            .            .           .       CP12B............
               .            .            .           .           .
               .            .            .           .           .
2198           .            .            .           .           .         ONA
               .            .            .           .           .           .
               .            .            .           .           .           .
2239           .            .            .           .        CP13............
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  14:26:25  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                          ******************************************************
                          WO# 7323 - RIO MESA SOLAR
                          24-HR, 25-YR STORM
                          NOAA ATLAS 14- 24HR/25YR AVG PT RAINFALL DEPTH = 2.63"/2.82"
                          EXISTING CONDITION ANALYSIS
                          UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
                          STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
                          MODEL WITH NEW COMBINING SCHEME
                          ******************************************************
                          DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
                          REFERENCING RCFD & WCD PLATE E-5.8

                           AREA RANGE       DARF
                            (SQ.MI.)         --

                            0 TO 2.5  --->  1.000
                          2.5 TO  10  --->  0.990
                           10 TO  20  --->  0.980
                           20 TO  30  --->  0.970
                           30 TO  40  --->  0.965
                           40 TO  50  --->  0.955

                         ******************************************************

   26 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      7    0  ENDING DATE
                       NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL     .08 HOURS
                         TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                        NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00       .99       .98       .97       .96       .95
1

                PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                 TIME TO PEAK IN HOURS


                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN            RATIO 1  RATIO 2  RATIO 3  RATIO 4  RATIO 5  RATIO 6
                                                       1.00      .99      .98      .97      .96      .95

 HYDROGRAPH AT
+                  M27       .22     1   FLOW          25.      25.      24.      24.      24.      23.
                                         TIME         15.08    15.08    15.08    15.08    15.08    15.08

 ROUTED TO
+                 RM27       .22     1   FLOW          25.      25.      24.      24.      24.      23.
                                         TIME         15.42    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                  ONR       .27     1   FLOW          32.      31.      31.      30.      30.      29.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CP25       .49     1   FLOW          56.      54.      53.      52.      52.      51.
                                         TIME         15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                  M22       .07     1   FLOW          12.      11.      11.      11.      11.      11.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M21       .17     1   FLOW          30.      30.      29.      29.      29.      28.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT | | | | | | | | | | |
| + | M23 | .18 | 1 | FLOW | 31. | 31. | 31. | 30. | 30. | 29. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M25 | .15 | 1 | FLOW | 29. | 28. | 28. | 28. | 27. | 27. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 4 COMBINED AT | | | | | | | | | | |
| + | CP21 | .57 | 1 | FLOW | 102. | 101. | 99. | 98. | 97. | 95. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M24 | .66 | 1 | FLOW | 147. | 145. | 143. | 142. | 141. | 139. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO | | | | | | | | | | |
| + | RM24 | .66 | 1 | FLOW | 146. | 145. | 143. | 141. | 140. | 139. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.25 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M26 | .53 | 1 | FLOW | 72. | 71. | 69. | 68. | 68. | 66. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP22 | 1.19 | 1 | FLOW | 218. | 215. | 212. | 209. | 207. | 204. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP23 | 1.76 | 1 | FLOW | 316. | 311. | 307. | 303. | 300. | 296. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| ROUTED TO | | | | | | | | | | |
| + | RCP23 | 1.76 | 1 | FLOW | 316. | 311. | 307. | 302. | 300. | 296. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONQ | .66 | 1 | FLOW | 74. | 73. | 72. | 70. | 69. | 68. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP24 | 2.42 | 1 | FLOW | 389. | 383. | 377. | 371. | 368. | 362. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CPDUM1 | 2.91 | 1 | FLOW | 443. | 436. | 429. | 423. | 419. | 412. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M12 | 3.98 | 1 | FLOW | 642. | 634. | 625. | 616. | 612. | 603. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONJ | .07 | 1 | FLOW | 10. | 10. | 10. | 10. | 10. | 9. |
| | | | | TIME | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M11 | 1.30 | 1 | FLOW | 191. | 188. | 185. | 182. | 181. | 178. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONI | .05 | 1 | FLOW | 7. | 7. | 7. | 7. | 7. | 7. |
| | | | | TIME | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M10 | .38 | 1 | FLOW | 53. | 52. | 51. | 50. | 50. | 49. |
| | | | | TIME | 15.00 | 15.00 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONH | .20 | 1 | FLOW | 31. | 31. | 30. | 30. | 29. | 29. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 6 COMBINED AT | | | | | | | | | | |
| + | CP1 | 5.98 | 1 | FLOW | 931. | 918. | 904. | 891. | 884. | 871. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| DIVERSION TO | | | | | | | | | | |
| + | FS1 | 5.98 | 1 | FLOW | 38. | 38. | 37. | 37. | 36. | 36. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV1 | 5.98 | 1 | FLOW | 893. | 880. | 867. | 855. | 848. | 835. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| DIVERSION TO | | | | | | | | | | |
| + | FS2 | 5.98 | 1 | FLOW | 445. | 438. | 432. | 426. | 422. | 416. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV2 | 5.98 | 1 | FLOW | 448. | 442. | 435. | 429. | 426. | 419. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONV | .12 | 1 | FLOW | 13. | 13. | 12. | 12. | 12. | 12. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP2 | 6.10 | 1 | FLOW | 461. | 454. | 448. | 441. | 438. | 431. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONG | .14 | 1 | FLOW | 15. | 14. | 14. | 14. | 14. | 13. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP3 | 6.24 | 1 | FLOW | 476. | 469. | 462. | 455. | 451. | 444. |

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                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONK       .68    1   FLOW         67.      65.      64.      63.      62.      61.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   ONF       .50    1   FLOW         51.      50.      49.      48.      48.      47.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  3 COMBINED AT
+                   CP4      7.42    1   FLOW        593.     584.     574.     565.     560.     551.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CPDUM2    10.33    1   FLOW       1033.    1016.    1000.     984.     976.     960.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                  RET1       .00    1   FLOW         38.      38.      37.      37.      36.      36.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                    MX       .01    1   FLOW          2.       2.       2.       2.       2.       2.
                                          TIME        14.75    14.75    14.75    14.75    14.75    14.75

  2 COMBINED AT
+                  CP14       .01    1   FLOW         40.      40.      39.      39.      38.      38.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONS       .04    1   FLOW          5.       5.       5.       5.       5.       4.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                 CP14A       .05    1   FLOW         45.      44.      44.      43.      43.      42.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                  M17        .67    1   FLOW        124.     122.     120.     119.     118.     116.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP15       .72    1   FLOW        169.     166.     164.     162.     160.     158.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M18        .12    1   FLOW         22.      22.      21.      21.      21.      21.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M20        .49    1   FLOW        107.     106.     105.     103.     103.     101.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 STOR1       .49    1   FLOW        106.     104.     102.     100.      99.      96.
                                          TIME        15.00    15.00    15.00    15.00    15.08    15.08
                                     ** PEAK STAGES IN FEET **
                                     1  STAGE       440.28   440.27   440.27   440.26   440.26   440.26
                                          TIME        15.00    15.00    15.00    15.00    15.08    15.08

 ROUTED TO
+                  RM20       .49    1   FLOW        106.     104.     102.     100.      98.      96.
                                          TIME        15.08    15.08    15.17    15.17    15.08    15.25

 HYDROGRAPH AT
+                  M19        .11    1   FLOW         20.      20.      20.      19.      19.      19.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP16       .60    1   FLOW        125.     122.     120.     117.     116.     112.
                                          TIME        15.08    15.08    15.08    15.17    15.08    15.17

  3 COMBINED AT
+                  CP17      1.44    1   FLOW        314.     308.     303.     294.     292.     280.
                                          TIME        15.00    15.00    15.00    15.08    15.08    15.08

 ROUTED TO
+                 RCP17      1.44    1   FLOW        318.     316.     311.     302.     299.     289.
                                          TIME        15.25    15.33    15.33    15.42    15.42    15.50

 HYDROGRAPH AT
+                  ONP       1.47    1   FLOW        163.     160.     157.     154.     152.     149.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP18      2.91    1   FLOW        480.     471.     463.     446.     442.     423.
                                          TIME        15.25    15.33    15.33    15.42    15.42    15.50

  2 COMBINED AT
+                CPDUM3     13.24    1   FLOW       1499.    1467.    1423.    1386.    1351.    1315.
                                          TIME        15.17    15.25    15.33    15.33    15.42    15.42

 HYDROGRAPH AT
+                  ONT       .04    1   FLOW          5.       5.       5.       5.       5.       4.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RMONT       .04    1   FLOW          5.       5.       5.       5.       5.       4.
                                          TIME        16.17    16.17    16.17    16.17    16.17    16.17

 HYDROGRAPH AT
+                  ONO       .55    1   FLOW         61.      60.      59.      58.      57.      56.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17
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  2 COMBINED AT
+                 CP20       .59    1   FLOW        65.    64.    62.    61.    60.    59.
                                       TIME      15.17  15.17  15.17  15.17  15.17  15.17

  2 COMBINED AT
+                CPDUM4     13.83    1   FLOW      1564.  1531.  1483.  1445.  1409.  1371.
                                       TIME      15.17  15.25  15.33  15.33  15.33  15.42

 HYDROGRAPH AT
+                  ONU       .05    1   FLOW        6.     6.     6.     6.     6.     6.
                                       TIME      14.92  14.92  14.92  14.92  14.92  14.92

 ROUTED TO
+                RMONU       .05    1   FLOW        6.     6.     6.     6.     6.     6.
                                       TIME      16.00  16.00  16.00  16.00  16.00  16.00

 HYDROGRAPH AT
+                  ONL       .73    1   FLOW       83.    81.    79.    78.    77.    75.
                                       TIME      15.08  15.08  15.08  15.08  15.08  15.08

  2 COMBINED AT
+                 CP19       .78    1   FLOW       87.    86.    84.    82.    81.    80.
                                       TIME      15.17  15.17  15.17  15.17  15.17  15.17

 HYDROGRAPH AT
+                  ONM       .10    1   FLOW       12.    12.    12.    12.    11.    11.
                                       TIME      14.92  14.92  14.92  14.92  14.92  14.92

 HYDROGRAPH AT
+                  ONN       .08    1   FLOW        9.     9.     9.     9.     9.     9.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

  4 COMBINED AT
+                CPDUM5     14.79    1   FLOW      1671.  1633.  1580.  1540.  1503.  1460.
                                       TIME      15.17  15.25  15.33  15.33  15.33  15.33

 HYDROGRAPH AT
+                   M9      1.80    1   FLOW       289.   285.   281.   277.   275.   271.
                                       TIME      15.08  15.08  15.08  15.08  15.08  15.08

 HYDROGRAPH AT
+                   M8      1.04    1   FLOW       175.   172.   170.   167.   166.   164.
                                       TIME      14.92  15.00  15.00  15.00  15.00  15.00

  2 COMBINED AT
+                  CP5      2.84    1   FLOW       464.   457.   451.   444.   441.   435.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                 RET2       .00    1   FLOW       445.   438.   432.   426.   422.   416.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

  2 COMBINED AT
+                  CP6      2.84    1   FLOW       909.   896.   883.   870.   864.   851.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                   M7       .16    1   FLOW        21.    21.    20.    20.    20.    20.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                  ONE1      1.61    1   FLOW       162.   159.   155.   152.   151.   148.
                                       TIME      15.25  15.25  15.25  15.25  15.25  15.25

  2 COMBINED AT
+                 CP6A      1.77    1   FLOW       181.   177.   174.   170.   168.   165.
                                       TIME      15.25  15.25  15.25  15.25  15.25  15.25

  2 COMBINED AT
+                 CP6B      4.61    1   FLOW      1085.  1069.  1053.  1036.  1028.  1012.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                  ONE2      2.59    1   FLOW       259.   254.   249.   244.   242.   237.
                                       TIME      15.42  15.42  15.42  15.42  15.42  15.42

  2 COMBINED AT
+                  CP7      7.20    1   FLOW      1334.  1313.  1292.  1271.  1260.  1239.
                                       TIME      15.08  15.08  15.08  15.08  15.08  15.08

 HYDROGRAPH AT
+                   M6      1.32    1   FLOW       204.   201.   198.   195.   194.   191.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                  M5A       .17    1   FLOW        30.    30.    30.    29.    29.    29.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                  M5B       .18    1   FLOW        33.    32.    32.    31.    31.    31.
                                       TIME      14.92  14.92  14.92  14.92  14.92  14.92

  3 COMBINED AT
+                  CP8      1.67    1   FLOW       267.   263.   259.   255.   254.   250.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                   M5       .39    1   FLOW        45.    44.    43.    42.    42.    41.
                                       TIME      15.08  15.08  15.08  15.08  15.08  15.08

  2 COMBINED AT
+                  CP9      2.06    1   FLOW       312.   307.   302.   298.   295.   291.
                                       TIME      15.00  15.00  15.00  15.00  15.00  15.00

 HYDROGRAPH AT
+                  ONB      2.83    1   FLOW       263.   257.   252.   247.   244.   239.
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                                        TIME        15.42    15.50    15.50    15.50    15.50    15.50

  2 COMBINED AT
+                   CP10      4.89     1  FLOW         559.     549.     539.     529.     525.     515.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    OND      1.34     1  FLOW         131.     128.     126.     123.     122.     119.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    ONC       .30     1  FLOW          31.      31.      30.      29.      29.      29.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                    CPA      1.64     1  FLOW         161.     158.     155.     151.     150.     147.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                     M4      2.71     1  FLOW         394.     389.     383.     377.     374.     369.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M3       .57     1  FLOW          77.      76.      75.      73.      73.      71.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                   CP11      3.28     1  FLOW         471.     464.     457.     450.     447.     440.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M2     24.30     1  FLOW        3067.    3022.    2978.    2934.    2912.    2868.
                                          TIME        15.50    15.50    15.50    15.50    15.50    15.50

  2 COMBINED AT
+                  CP12A     27.58     1  FLOW        3512.    3461.    3410.    3359.    3334.    3283.
                                          TIME        15.33    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                    M13      7.18     1  FLOW        1090.    1075.    1060.    1046.    1039.    1024.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 DIVERSION TO
+                    FS3      7.18     1  FLOW         545.     538.     530.     523.     519.     512.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                    DV3      7.18     1  FLOW         545.     538.     530.     523.     519.     512.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                     M1       .76     1  FLOW          98.      96.      95.      93.      92.      90.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                   CP12      7.94     1  FLOW         641.     632.     623.     614.     609.     600.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP12B     35.52     1  FLOW        4143.    4083.    4023.    3964.    3934.    3874.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                    ONA       .87     1  FLOW         104.     102.     100.      99.      98.      96.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                   CP13     36.39     1  FLOW        4242.    4180.    4119.    4057.    4026.    3965.
1                                         TIME        15.33    15.33    15.33    15.33    15.33    15.33
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                  INTERPOLATED TO
                                                                                COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                              PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     25.46    925.00       .70      5.00     25.46    925.00         .70

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .8194E+01 EXCESS= .0000E+00 OUTFLOW= .8198E+01 BASIN STORAGE= .6219E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     24.97    925.00       .68      5.00     24.97    925.00         .68

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .8007E+01 EXCESS= .0000E+00 OUTFLOW= .8011E+01 BASIN STORAGE= .5995E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     24.48    925.00       .67      5.00     24.48    925.00         .67

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .7821E+01 EXCESS= .0000E+00 OUTFLOW= .7825E+01 BASIN STORAGE= .5932E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     23.99    925.00       .65      5.00     23.99    925.00         .65

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .7637E+01 EXCESS= .0000E+00 OUTFLOW= .7641E+01 BASIN STORAGE= .5663E-02 PERCENT ERROR=   -.1
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          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     23.75    925.00       .64      5.00     23.75    925.00         .64

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7545E+01 EXCESS= .0000E+00 OUTFLOW= .7549E+01 BASIN STORAGE= .5632E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     23.26    925.00       .63      5.00     23.26    925.00         .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7363E+01 EXCESS= .0000E+00 OUTFLOW= .7366E+01 BASIN STORAGE= .6486E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    146.36    910.00      1.93      5.00    146.36    910.00        1.93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6786E+02 EXCESS= .0000E+00 OUTFLOW= .6789E+02 BASIN STORAGE= .9583E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    144.60    910.00      1.90      5.00    144.60    910.00        1.90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6694E+02 EXCESS= .0000E+00 OUTFLOW= .6696E+02 BASIN STORAGE= .1083E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    142.88    910.00      1.88      5.00    142.88    910.00        1.88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6602E+02 EXCESS= .0000E+00 OUTFLOW= .6604E+02 BASIN STORAGE= .1076E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    141.15    910.00      1.85      5.00    141.15    910.00        1.85

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6511E+02 EXCESS= .0000E+00 OUTFLOW= .6512E+02 BASIN STORAGE= .1070E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    140.29    910.00      1.84      5.00    140.29    910.00        1.84

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6465E+02 EXCESS= .0000E+00 OUTFLOW= .6466E+02 BASIN STORAGE= .1020E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    138.56    915.00      1.81      5.00    138.56    915.00        1.81

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6373E+02 EXCESS= .0000E+00 OUTFLOW= .6375E+02 BASIN STORAGE= .1014E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    315.53    915.00      1.41      5.00    315.53    915.00        1.41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1323E+03 EXCESS= .0000E+00 OUTFLOW= .1323E+03 BASIN STORAGE= .1099E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    311.12    915.00      1.39      5.00    311.12    915.00        1.39

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1302E+03 EXCESS= .0000E+00 OUTFLOW= .1302E+03 BASIN STORAGE= .1228E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    306.70    915.00      1.36      5.00    306.70    915.00        1.36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1281E+03 EXCESS= .0000E+00 OUTFLOW= .1281E+03 BASIN STORAGE= .1221E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    302.28    915.00      1.34      5.00    302.28    915.00        1.34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1260E+03 EXCESS= .0000E+00 OUTFLOW= .1260E+03 BASIN STORAGE= .1214E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    300.08    915.00      1.33      5.00    300.08    915.00        1.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1250E+03 EXCESS= .0000E+00 OUTFLOW= .1250E+03 BASIN STORAGE= .1143E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    295.67    915.00      1.31      5.00    295.67    915.00        1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1229E+03 EXCESS= .0000E+00 OUTFLOW= .1229E+03 BASIN STORAGE= .1137E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         2.00    105.91    908.00       .69      5.00    105.61    905.00         .69

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1789E+02 EXCESS= .0000E+00 OUTFLOW= .1791E+02 BASIN STORAGE= .3184E-02 PERCENT ERROR=   -.1
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          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.75    104.29    906.50       .66      5.00    103.62    905.00         .66

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1721E+02 EXCESS= .0000E+00 OUTFLOW= .1724E+02 BASIN STORAGE= .3333E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.75    102.47    906.50       .63      5.00    102.03    910.00         .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1654E+02 EXCESS= .0000E+00 OUTFLOW= .1656E+02 BASIN STORAGE= .3222E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.50     99.95    909.00       .61      5.00     99.84    910.00         .61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1587E+02 EXCESS= .0000E+00 OUTFLOW= .1588E+02 BASIN STORAGE= .2861E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.75     99.03    908.25       .60      5.00     98.13    905.00         .59

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1553E+02 EXCESS= .0000E+00 OUTFLOW= .1555E+02 BASIN STORAGE= .3205E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.50     95.59    915.00       .57      5.00     95.59    915.00         .57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1486E+02 EXCESS= .0000E+00 OUTFLOW= .1488E+02 BASIN STORAGE= .3195E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    318.27    915.00      1.35      5.00    318.27    915.00        1.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1038E+03 EXCESS= .0000E+00 OUTFLOW= .1038E+03 BASIN STORAGE= .1240E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    315.60    920.00      1.32      5.00    315.60    920.00        1.32

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1015E+03 EXCESS= .0000E+00 OUTFLOW= .1016E+03 BASIN STORAGE= .1231E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    311.49    920.00      1.29      5.00    311.49    920.00        1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9939E+02 EXCESS= .0000E+00 OUTFLOW= .9941E+02 BASIN STORAGE= .1181E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    302.36    925.00      1.27      5.00    302.36    925.00        1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9748E+02 EXCESS= .0000E+00 OUTFLOW= .9750E+02 BASIN STORAGE= .1172E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    299.34    925.00      1.25      5.00    299.34    925.00        1.25

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9626E+02 EXCESS= .0000E+00 OUTFLOW= .9629E+02 BASIN STORAGE= .1167E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    289.00    930.00      1.23      5.00    289.00    930.00        1.23

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9438E+02 EXCESS= .0000E+00 OUTFLOW= .9440E+02 BASIN STORAGE= .1436E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      4.82    970.00       .70      5.00      4.82    970.00         .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1490E+01 EXCESS= .0000E+00 OUTFLOW= .1494E+01 BASIN STORAGE= .1212E-01 PERCENT ERROR=  -1.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      4.73    970.00       .68      5.00      4.73    970.00         .68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1456E+01 EXCESS= .0000E+00 OUTFLOW= .1460E+01 BASIN STORAGE= .1197E-01 PERCENT ERROR=  -1.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      4.64    970.00       .67      5.00      4.64    970.00         .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1422E+01 EXCESS= .0000E+00 OUTFLOW= .1426E+01 BASIN STORAGE= .1189E-01 PERCENT ERROR=  -1.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      4.55    970.00       .65      5.00      4.55    970.00         .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1388E+01 EXCESS= .0000E+00 OUTFLOW= .1393E+01 BASIN STORAGE= .1159E-01 PERCENT ERROR=  -1.2

          FOR PLAN = 1  RATIO=  .00
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   RMONT  MANE         5.00      4.50    970.00       .65      5.00      4.50    970.00         .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1372E+01 EXCESS= .0000E+00 OUTFLOW= .1376E+01 BASIN STORAGE= .1147E-01 PERCENT ERROR=  -1.2

     FOR PLAN = 1  RATIO=  .00
   RMONT  MANE         5.00      4.41    970.00       .63      5.00      4.41    970.00         .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1339E+01 EXCESS= .0000E+00 OUTFLOW= .1343E+01 BASIN STORAGE= .1143E-01 PERCENT ERROR=  -1.2

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      6.03    960.00       .70      5.00      6.03    960.00         .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1863E+01 EXCESS= .0000E+00 OUTFLOW= .1868E+01 BASIN STORAGE= .1157E-01 PERCENT ERROR=   -.9

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      5.91    960.00       .68      5.00      5.91    960.00         .68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1820E+01 EXCESS= .0000E+00 OUTFLOW= .1825E+01 BASIN STORAGE= .1149E-01 PERCENT ERROR=   -.9

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      5.80    960.00       .67      5.00      5.80    960.00         .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1778E+01 EXCESS= .0000E+00 OUTFLOW= .1783E+01 BASIN STORAGE= .1144E-01 PERCENT ERROR=   -.9

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      5.68    960.00       .65      5.00      5.68    960.00         .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1736E+01 EXCESS= .0000E+00 OUTFLOW= .1741E+01 BASIN STORAGE= .1127E-01 PERCENT ERROR=   -.9

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      5.63    960.00       .65      5.00      5.63    960.00         .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1715E+01 EXCESS= .0000E+00 OUTFLOW= .1720E+01 BASIN STORAGE= .1099E-01 PERCENT ERROR=   -.9

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      5.51    960.00       .63      5.00      5.51    960.00         .63

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1674E+01 EXCESS= .0000E+00 OUTFLOW= .1678E+01 BASIN STORAGE= .1090E-01 PERCENT ERROR=   -.9


*** NORMAL END OF HEC-1 ***
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1*************************************
 *                                   *
 *   L.A. DISTRICT HEC-1 PREPROCESSOR  *
 *              MARCH 1984           *
 *                                   *
 * LAST REVISED 13 JUL 1998   Ver 2.0  *
 *                                   *
 *  RUN DATE 06/28/2011  TIME 14:00:45 *
 *                                   *
 *************************************


                L          A     PPPPPP   RRRRRR   EEEEEEE   1
                L         A A    P     P  R     R  E        11
                L        A   A   P     P  R     R  E         1
                L       A     A  PPPPPP   RRRRRR   EEEEE     1
                L       AAAAAAA  P        R   R    E         1
                L       A     A  P        R    R   E         1
                LLLLLLL A     A  P        R     R  EEEEEEE  111

 ID ******************************************************

 ID WO# 7323 - RIO MESA SOLAR

 ID 24-HR, 25-YR STORM

 ID NOAA ATLAS 14- 24HR/25YR AVG PT RAINFALL DEPTH = 2.63"/2.82"

 ID EXISTING CONDITION ANALYSIS

 ID UNIT HYDROGRAPHS GENERATED FROM LAPRE-1

 ID STORM HYTEOGRAPHS GENERATED FROM LAPRE-1

 ID MODEL WITH NEW COMBINING SCHEME

 ID ******************************************************

 ID DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR

 ID REFERENCING RCFD & WCD PLATE E-5.8

 ID

 ID  AREA RANGE       DARF

 ID   (SQ.MI.)         --

 ID

 ID   0 TO 2.5  --->  1.000

 ID 2.5 TO  10  --->  0.990

 ID  10 TO  20  --->  0.980

 ID  20 TO  30  --->  0.970

 ID  30 TO  40  --->  0.965

 ID  40 TO  50  --->  0.955

 ID

 ID******************************************************

 TIME INTERVAL IS  0 HR  5 MIN

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 KK   M27

 AREA =    .22 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .2    2.82   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    1.17     .54   41.77    .035       9      .0     .00

   WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

  UNIT HYDROGRAPH  LH=  33  PERCENT LAG=   24.00  LAG=     .35  UG VOL.=   1703.
     53.    118.    307.    329.    202.    133.     95.     74.     59.     50.
     39.     33.     28.     25.     23.     19.     17.     13.     13.      9.
      7.      7.      7.      7.      5.      4.      4.      4.      4.      4.
      4.      4.      2.

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 KK  RM27

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 KK  ONR

 AREA =    .27 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .3    2.82   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
     .98     .37   68.37    .035       9      .0     .00
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  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   32.55  LAG=     .26  UG VOL.=   2090.
   102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
    38.     32.     25.     21.     15.     12.     12.     11.      7.      7.
     7.      7.      7.      7.

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KK  CP25

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KK  M22

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .20   86.00    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.14  LAG=     .16  UG VOL.=    542.
    66.    222.     95.     50.     32.     21.     16.     11.      8.      5.
     5.      3.      3.      3.      2.

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KK  M21

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .84     .37  831.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   55.49  LAG=     .15  UG VOL.=   1316.
   322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
    22.     19.     15.     14.     11.     11.      7.      4.      4.      4.
     4.      4.      4.      2.

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KK  M23

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.00     .45  900.44    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   48.94  LAG=     .17  UG VOL.=   1393.
   269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
    24.     21.     19.     17.     14.     13.     10.     10.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

================================================================================

KK  M25

AREA =    .15 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.05     .59  870.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  31  PERCENT LAG=   43.06  LAG=     .19  UG VOL.=   1161.
   178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
    20.     18.     16.     15.     13.     12.     10.     10.      7.      7.
     7.      4.      3.      3.      3.      3.      3.      3.      3.      3.
     0.

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KK  CP21

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KK  M24

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION
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     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.28     .58  998.98    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  32  PERCENT LAG=   41.27  LAG=     .20  UG VOL.=   5108.
   724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
    87.     79.     74.     65.     60.     55.     47.     42.     40.     30.
    30.     30.     16.     11.     11.     11.     11.     11.     11.     11.
    11.      6.

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KK  RM24

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KK   M26

AREA =    .53 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.59     .85   72.80    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  40  PERCENT LAG=   19.98  LAG=     .42  UG VOL.=   4102.
    97.    190.    396.    792.    575.    378.    279.    201.    165.    133.
   114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
    27.     26.     26.     18.     14.     14.     14.     14.     14.      8.
     8.      8.      8.      8.      8.      8.      8.      8.      8.      0.

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KK  CP22

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KK  CP23

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KK RCP23

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KK  ONQ

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.67     .93   63.88    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.49  LAG=     .45  UG VOL.=   5108.
   107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
   144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
    44.     40.     30.     30.     30.     19.     17.     17.     17.     17.
    17.     12.      9.      9.      9.      9.      9.      9.      9.      9.
     9.      9.      2.

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KK  CP24

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KKCPDUM1

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KK   M12

AREA =   3.98 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     4.0    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.91    2.42  301.01    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 105  PERCENT LAG=   12.49  LAG=     .67  UG VOL.=  30805.
   885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
   770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
   350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
   196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
   135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
   100.    100.    100.    100.     83.     76.     76.     76.     76.     76.
    76.     76.     63.     55.     55.     55.     55.     55.     55.     55.
    55.     55.     55.     38.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.      2.
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KK   ONJ

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .39     .16  418.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   89.63  LAG=     .09  UG VOL.=    542.
   248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
     4.      3.      3.      3.      1.

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KK   M11

AREA =   1.30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.46    1.24  351.38    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  66  PERCENT LAG=   19.78  LAG=     .42  UG VOL.=  10062.
   496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
   249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
    88.     85.     78.     78.     72.     70.     70.     62.     61.     61.
    55.     52.     52.     52.     43.     39.     39.     39.     39.     33.
    29.     29.     29.     29.     29.     29.     18.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      8.

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KK   ONI

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .36     .24  507.37    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  16  PERCENT LAG=   82.16  LAG=     .10  UG VOL.=    387.
   165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
     5.      2.      2.      2.      2.      1.

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KK   M10

AREA =    .38 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.51     .67   74.89    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  35  PERCENT LAG=   22.43  LAG=     .37  UG VOL.=   2941.
    82.    175.    428.    584.    380.    247.    170.    135.    106.     91.
    75.     60.     53.     45.     40.     37.     31.     30.     21.     21.
    19.     12.     12.     12.     12.     11.      7.      7.      7.      7.
     7.      7.      7.      7.      5.

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KK   ONH

AREA =    .20 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .70     .30  202.53    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   49.24  LAG=     .17  UG VOL.=   1548.
   302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
    26.     23.     21.     19.     15.     14.     11.     11.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK   CP1
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KK   DV1

================================================================================

KK   DV2

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KK   ONV

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .49     .25  103.16    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.16  LAG=     .16  UG VOL.=    929.
   112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
     8.      5.      5.      5.      3.

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KK   CP2

================================================================================

KK   ONG

AREA =    .14 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .73     .28   70.34    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   40.69  LAG=     .20  UG VOL.=   1084.
    78.    322.    250.    124.     77.     56.     38.     30.     24.     20.
    14.     10.      8.      8.      5.      4.      4.      4.      4.      1.

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KK   CP3

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KK   ONK

AREA =    .68 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.87     .93   77.12    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.36  LAG=     .45  UG VOL.=   5263.
   109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
   151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
    45.     43.     30.     30.     30.     22.     17.     17.     17.     17.
    17.     14.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.      5.

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KK   ONF

AREA =    .50 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.22     .46   85.02    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  28  PERCENT LAG=   28.74  LAG=     .29  UG VOL.=   3870.
   153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
    77.     65.     57.     52.     35.     35.     23.     20.     20.     20.
    13.     11.     11.     11.     11.     11.     11.      2.

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KK   CP4

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KKCPDUM2

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KK  RET1

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KK    MX

AREA =    .01 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .14     .06 1525.43    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=   6  PERCENT LAG=  245.56  LAG=     .03  UG VOL.=     77.
    58.     11.      5.      2.      1.      0.

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KK  CP14

================================================================================

KK   ONS

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .31  115.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  17  PERCENT LAG=   47.60  LAG=     .18  UG VOL.=    310.
    30.    114.     62.     31.     20.     13.     10.      8.      6.      4.
     3.      3.      2.      1.      1.      1.      1.

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KK CP14A

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KK  M17

AREA =    .67 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .54  494.88    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  38  PERCENT LAG=   34.76  LAG=     .24  UG VOL.=   5186.
   564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
    97.     80.     74.     69.     63.     59.     55.     49.     47.     41.
    36.     36.     30.     26.     26.     26.     16.      9.      9.      9.
     9.      9.      9.      9.      9.      9.      9.      4.

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KK  CP15

================================================================================

KK  M18

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .89     .32  152.41    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  19  PERCENT LAG=   41.55  LAG=     .20  UG VOL.=    929.
    70.    284.    213.    104.     65.     47.     33.     25.     20.     16.
    12.      8.      7.      7.      4.      4.      4.      4.      3.

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KK  M20

AREA =    .49 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.07     .48  734.10    .035       1      .0     .00

  MOUNTAIN S-GRAPH
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 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   44.77  LAG=     .19  UG VOL.=   3793.
   626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
    64.     59.     52.     48.     44.     35.     34.     28.     24.     24.
    17.      9.      9.      9.      9.      9.      9.      9.      9.      0.

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KK STOR1

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KK  RM20

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KK  M19

AREA =    .11 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .67     .19  140.33    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   55.55  LAG=     .15  UG VOL.=    851.
   117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
     6.      5.      5.      5.      0.

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KK  CP16

================================================================================

KK  CP17

================================================================================

KK RCP17

================================================================================

KK  ONP

AREA =   1.47 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.5    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.14    1.09   74.90    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  48  PERCENT LAG=   16.33  LAG=     .51  UG VOL.=  11378.
   206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
   366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
   103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
    33.     33.     33.     33.     33.     26.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     14.

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KK  CP18

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KKCPDUM3

================================================================================

KK   ONT

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .51     .16   72.94    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   58.08  LAG=     .14  UG VOL.=    310.
    48.    131.     50.     27.     16.     11.      8.      6.      3.      3.
     2.      2.      2.      1.

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KK RMONT

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KK  ONO

AREA =    .55 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    2.82   .0000     .00     .00     .00     .00
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      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.08    1.06   79.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  47  PERCENT LAG=   16.86  LAG=     .49  UG VOL.=   4257.
    80.    141.    249.    529.    675.    480.    333.    261.    187.    161.
   135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
    40.     35.     33.     32.     22.     22.     22.     19.     13.     13.
    13.     13.     13.     13.      9.      7.      7.      7.      7.      7.
     7.      7.      7.      7.      7.      7.      2.

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KK  CP20

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KKCPDUM4

================================================================================

KK   ONU

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .48     .19   77.62    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   56.34  LAG=     .15  UG VOL.=    387.
    55.    163.     64.     34.     21.     14.     11.      7.      5.      4.
     3.      2.      2.      2.

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KK RMONU

================================================================================

KK  ONL

AREA =    .73 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.99     .84   83.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  42  PERCENT LAG=   18.91  LAG=     .44  UG VOL.=   5650.
   122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
   159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
    50.     38.     33.     33.     28.     19.     19.     19.     19.     19.
    16.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.      3.

================================================================================

KK  CP19

================================================================================

KK  ONM

AREA =    .10 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .35     .25  215.67    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  12  PERCENT LAG=   69.50  LAG=     .12  UG VOL.=    774.
   197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
     5.      1.

================================================================================

KK  ONN

AREA =    .08 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.82   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .52   83.15    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  29  PERCENT LAG=   27.06  LAG=     .31  UG VOL.=    619.
```

```
    23.     56.    149.    107.     65.     42.     32.     24.     20.     15.
    13.     11.      9.      8.      7.      5.      5.      3.      3.      3.
     3.      2.      2.      2.      2.      2.      2.      2.      1.
```

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KKCPDUM5

==========

KK    M9

AREA =   1.80 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.8    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.17    1.95  284.58    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  90  PERCENT LAG=   14.53  LAG=     .57  UG VOL.=  13932.
   471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
   364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
   145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
    79.     79.     79.     71.     71.     71.     70.     62.     62.     62.
    62.     56.     53.     53.     53.     53.     48.     40.     40.     40.
    40.     40.     40.     36.     29.     29.     29.     29.     29.     29.
    29.     29.     29.     14.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.      5.
```

==========

KK    M8

AREA =   1.04 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.0    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.02     .81  248.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  56  PERCENT LAG=   23.47  LAG=     .36  UG VOL.=   8050.
   495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
   177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
    69.     66.     65.     58.     58.     55.     49.     49.     48.     37.
    37.     37.     37.     29.     27.     27.     27.     27.     27.     12.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      4.
```

==========

KK   CP5

==========

KK  RET2

==========

KK   CP6

==========

KK    M7

AREA =    .16 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .97     .43  113.71    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  23  PERCENT LAG=   34.00  LAG=     .25  UG VOL.=   1238.
    65.    232.    334.    172.    101.     71.     54.     40.     32.     26.
    22.     18.     13.     11.      7.      7.      7.      4.      4.      4.
     4.      4.      4.
```

==========

KK  ONE1

AREA =   1.61 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.6    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.15    1.46   52.35    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  67  PERCENT LAG=   11.78  LAG=     .71  UG VOL.=  12461.
   163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
```

```
   566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
   159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
    74.     68.     68.     68.     48.     46.     46.     46.     46.     37.
    26.     26.     26.     26.     26.     26.     26.     26.     26.     17.
    15.     15.     15.     15.     15.     15.     15.     15.     15.     15.
    15.     15.     15.     15.     15.     15.      3.
```

==========

KK  CP6A

==========

KK  CP6B

==========

KK  ONE2

AREA =   2.59 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.6    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.20    2.08   58.07    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  83  PERCENT LAG=    9.42  LAG=     .88  UG VOL.=  20047.
   210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
  1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
   290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
   151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
    88.     88.     79.     59.     59.     59.     59.     59.     59.     45.
    33.     33.     33.     33.     33.     33.     33.     33.     33.     33.
    33.     27.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     15.
```

==========

KK   CP7

==========

KK    M6

AREA =   1.32 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.35    1.10  223.90    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  68  PERCENT LAG=   19.33  LAG=     .43  UG VOL.=  10217.
   488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
   247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
    88.     88.     79.     77.     76.     69.     69.     67.     61.     61.
    61.     52.     51.     51.     51.     40.     39.     39.     39.     39.
    32.     28.     28.     28.     28.     28.     28.     19.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.      2.
```

==========

KK   M5A

AREA =    .17 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.24     .50   64.29    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   26.24  LAG=     .32  UG VOL.=   1316.
    46.    109.    302.    234.    144.     91.     69.     52.     44.     34.
    28.     24.     20.     18.     16.     12.     11.     10.      6.      6.
     6.      6.      4.      3.      3.      3.      3.      3.      3.      3.
```

==========

KK   M5B

AREA =    .18 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .64     .26   38.95    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   39.33  LAG=     .21  UG VOL.=   1393.
    94.    388.    331.    166.    102.     73.     52.     40.     32.     26.
```

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    19.     16.     10.     10.      9.      5.      5.      5.      5.      5.

==============================================================================

KK   CP8

==============================================================================

KK    M5

AREA =    .39 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .62   57.53    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.60  LAG=     .35  UG VOL.=   3019.
    91.    201.    517.    588.    366.    241.    170.    133.    105.     90.
    71.     60.     51.     45.     40.     34.     33.     23.     22.     20.
    13.     13.     13.     13.     10.      7.      7.      7.      7.      7.
     7.      7.      7.      0.

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KK   CP9

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KK   ONB

AREA =   2.83 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.8    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.50    2.15   45.11    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  91  PERCENT LAG=    8.64  LAG=     .96  UG VOL.=  21904.
   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
    59.     59.     59.     58.     33.     33.     33.     33.     33.     33.
    33.     33.     33.     33.     33.     33.     33.     21.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
     6.

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KK  CP10

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KK   OND

AREA =   1.34 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.75    1.04   68.49    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  45  PERCENT LAG=   17.64  LAG=     .47  UG VOL.=  10372.
   203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
   309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
    91.     85.     79.     57.     57.     57.     43.     32.     32.     32.
    32.     32.     30.     18.     18.     18.     18.     18.     18.     18.
    18.     18.     18.     18.      4.

==============================================================================

KK   ONC

AREA =    .30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .3    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .80     .21   32.43    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  21  PERCENT LAG=   37.84  LAG=     .22  UG VOL.=   2322.
   146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
    36.     27.     19.     15.     15.     11.      9.      9.      9.      9.
     5.

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KK   CPA

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KK    M4

AREA =   2.71 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.7    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.74    2.49  165.93    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 127  PERCENT LAG=   10.26  LAG=     .81  UG VOL.=  20975.
   485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
   649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
   269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
   152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
    96.     93.     84.     84.     84.     84.     82.     75.     75.     75.
    75.     75.     69.     66.     66.     66.     66.     66.     62.     56.
    56.     56.     56.     56.     56.     56.     44.     43.     43.     43.
    43.     43.     43.     43.     43.     42.     31.     31.     31.     31.
    31.     31.     31.     31.     31.     31.     31.     31.     31.     21.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.      9.

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KK    M3

AREA =    .57 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.94     .97   77.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  44  PERCENT LAG=   17.84  LAG=     .47  UG VOL.=   4412.
    87.    163.    295.    663.    681.    473.    337.    244.    191.    159.
   130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
    37.     37.     31.     25.     25.     25.     15.     14.     14.     14.
    14.     14.     11.      8.      8.      8.      8.      8.      8.      8.
     8.      8.      8.      6.

================================================================================

KK  CP11

================================================================================

KK CP12A

================================================================================

KK   M13

AREA =   7.18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     7.2    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   6.22    3.99  171.11    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 168  PERCENT LAG=    7.78  LAG=    1.07  UG VOL.=  55573.
   961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
  2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
   718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
   432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
   301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
   192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
   170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
   133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
   112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
    86.     86.     86.     86.     86.     86.     86.     86.     86.     86.
    66.     62.     62.     62.     62.     62.     62.     62.     62.     62.
    62.     62.     62.     62.     62.     62.     62.     62.     24.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.      3.
    WARNING!!!!! THE UNIT HYDROGRAPH COMPUTED BY    LAPRE1 IS GREATER THAN 150
ORDINATES.
     ONLY THE FIRST 150 ORDINATES WILL BE USED ON    THE UI CARDS OF THE SUBSEQ
UENT HEC-1 RUN.

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KK   DV3

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KK    M1

AREA =    .76 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .8    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .50   53.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.48  LAG=     .35  UG VOL.=   5882.
   176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
   139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
    24.     24.     24.     24.     21.     14.     14.     14.     14.     14.
    14.     14.     14.      3.

================================================================================

KK  CP12

================================================================================

KK CP12B

================================================================================

KK   ONA

AREA =    .87 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .9    2.63   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.77     .83   53.25    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.24  LAG=     .46  UG VOL.=   6734.
   138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
   195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
    57.     57.     39.     38.     38.     31.     22.     22.     22.     22.
    22.     20.     12.     12.     12.     12.     12.     12.     12.     12.
    12.     12.      9.

================================================================================

KK  CP13
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# APPENDIX A:

## iii. 24-Hour, 10-Year Storm

```
1****************************************                  ****************************************
 *                                      *                  *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                  *   U.S. ARMY CORPS OF ENGINEERS       *
 *              JUN   1998              *                  *   HYDROLOGIC ENGINEERING CENTER      *
 *            VERSION 4.1               *                  *         609 SECOND STREET            *
 *                                      *                  *      DAVIS, CALIFORNIA 95616         *
 *  RUN DATE   28JUN11  TIME  14:38:35  *                  *          (916) 756-1104              *
 *                                      *                  *                                      *
 ****************************************                  ****************************************



                              X     X  XXXXXXX   XXXXX         X
                              X     X  X        X     X       XX
                              X     X  X        X              X
                              XXXXXXX  XXXX     X       XXXXX  X
                              X     X  X        X              X
                              X     X  X        X     X        X
                              X     X  XXXXXXX   XXXXX        XXX



          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


1                                               HEC-1 INPUT                                               PAGE  1

          LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                      *DIAGRAM
            1         ID    *******************************************************
            2         ID    WO# 7323 - RIO MESA SOLAR
            3         ID    24-HR, 10-YR STORM
            4         ID    NOAA ATLAS 14- 24HR/10YR AVG PT RAINFALL DEPTH = 2.06"/2.19"
            5         ID    EXISTING CONDITION ANALYSIS
            6         ID    UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
            7         ID    STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
            8         ID    MODEL WITH NEW COMBINING SCHEME
            9         ID    *******************************************************
           10         ID    DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
           11         ID    REFERENCING RCFD & WCD PLATE E-5.8
           12         ID
           13         ID     AREA RANGE       DARF
           14         ID      (SQ.MI.)         --
           15         ID
           16         ID      0 TO 2.5  --->  1.000
           17         ID    2.5 TO  10  --->  0.990
           18         ID     10 TO  20  --->  0.980
           19         ID     20 TO  30  --->  0.970
           20         ID     30 TO  40  --->  0.965
           21         ID     40 TO  50  --->  0.955
           22         ID
           23         ID   *******************************************************
           24         IT       5       0       0    2000
           25         IN       5       0       0
           26         IO       5       0       0
           27         JR     PREC   1.000   0.990   0.980   0.970   0.965   0.955
                      *

           28         KK     M27
           29         KM    EXISTING OFFSITE BASIN
           30         BA     0.22
           31         KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
           32         PB     2.19
           33         PI     .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
           34         PI     .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
           35         PI     .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
           36         PI     .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
           37         PI     .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
           38         PI     .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
           39         PI     .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
           40         PI     .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
           41         PI     .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
           42         PI     .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
           43         PI     .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
           44         PI     .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
           45         PI     .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
           46         PI     .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
           47         PI     .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
           48         PI     .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
           49         PI     .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
           50         PI     .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
           51         PI     .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
           52         PI     .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1                                               HEC-1 INPUT                                               PAGE  2

          LINE        ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

           53         PI     .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
           54         PI     .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
           55         PI     .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
           56         PI     .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
           57         PI     .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
           58         PI     .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
           59         PI     .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
           60         PI     .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
           61         PI     .011    .013    .008    .005    .005    .003    .003    .003
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  62          LS            71.9
  63          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
  64          UI    52.6   117.7   306.7   329.2   202.0   132.8    95.3    73.6    59.2    49.9
  65          UI    39.2    33.4    28.4    24.8    22.5    19.0    17.4    12.8    12.8     9.5
  66          UI     7.2     7.2     7.2     7.2     4.6     4.1     4.1     4.1     4.1     4.1
  67          UI     4.1     4.1     2.0
              *

  68          KK    RM27
  69          KM   ROUTE M27 TO ONR
  70          KM   EXISTING WASH
  71          RD    5175   0.013   0.035       0    TRAP      20       3
              *

  72          KK    ONR
  73          KM   EXISTING ONSITE BASIN
  74          BA    0.27
  75          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
  76          PB    2.19
  77          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
  78          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
  79          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
  80          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
  81          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
  82          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
  83          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
  84          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
  85          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
  86          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
  87          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
  88          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
  89          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
  90          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
  91          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
  92          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
  93          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
  94          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
  95          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
  96          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
  97          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
  98          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
  99          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 100          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 101          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 102          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 103          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1                                          HEC-1 INPUT                                                PAGE  3

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 104          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 105          PI    .011    .013    .008    .005    .005    .003    .003    .003
 106          LS            71.9
 107          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 108          UI    102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
 109          UI    37.8    31.8    24.9    21.3    14.9    11.9    11.9    11.0     6.8     6.8
 110          UI     6.8     6.8     6.8     6.5
              *

 111          KK    CP25
 112          KM   COMBINE M27, ONR
 113          HC       2
              *

 114          KK    M22
 115          KM   EXISTING OFFSITE BASIN
 116          BA    0.07
 117          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 118          PB    2.19
 119          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 120          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 121          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 122          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 123          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 124          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 125          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 126          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 127          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 128          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 129          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 130          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 131          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 132          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 133          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 134          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 135          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 136          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 137          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 138          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 139          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 140          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 141          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 142          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 143          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 144          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 145          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 146          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 147          PI    .011    .013    .008    .005    .005    .003    .003    .003
 148          LS            79.7
 149          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 150          UI    65.5   222.4    95.5    49.7    31.7    21.3    15.6    11.5     8.1     5.1
 151          UI     4.9     2.9     2.9     2.9     2.0
              *
1                                          HEC-1 INPUT                                                PAGE  4

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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 152          KK    M21
 153          KM   EXISTING OFFSITE BASIN
 154          BA    0.17
 155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 156          PB    2.19
 157          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 158          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 159          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 160          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 161          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 162          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 163          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 164          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 165          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 166          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 167          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 168          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 169          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 170          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 171          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 172          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 173          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 174          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 175          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 176          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 177          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 178          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 179          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 180          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 181          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 182          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 183          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 184          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 185          PI    .011    .013    .008    .005    .005    .003    .003    .003
 186          LS            82.5
 187          KM   UHG FROM MOUNTAIN S-GRAPH
 188          UI    322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
 189          UI    21.9    19.0    15.4    14.5    10.7    10.5     7.5     3.8     3.8     3.8
 190          UI     3.8     3.8     3.8     1.6
              *

 191          KK    M23
 192          KM   EXISTING OFFSITE BASIN
 193          BA    0.18
 194          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 195          PB    2.19
 196          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 197          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 198          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 199          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 200          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 201          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 202          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 203          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 204          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 205          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 206          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 207          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 208          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 209          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 210          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 211          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 212          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 213          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 214          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 215          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 216          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 217          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 218          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 219          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 220          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 221          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 222          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 223          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 224          PI    .011    .013    .008    .005    .005    .003    .003    .003
 225          LS            82.1
 226          KM   UHG FROM MOUNTAIN S-GRAPH
 227          UI    269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
 228          UI    23.8    21.0    18.6    17.1    13.5    13.2     9.8     9.8     8.3     3.6
 229          UI     3.6     3.6     3.6     3.6     3.6     3.6     2.0
              *

 230          KK    M25
 231          KM   EXISTING OFFSITE BASIN
 232          BA    0.15
 233          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 234          PB    2.19
 235          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 236          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 237          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 238          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 239          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 240          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 241          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 242          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 243          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 244          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 245          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 246          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 247          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
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 248          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 249          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 250          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 251          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 252          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 253          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 254          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 255          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 256          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1                                            HEC-1 INPUT                                          PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 258          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 259          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 260          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 261          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 262          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 263          PI    .011    .013    .008    .005    .005    .003    .003    .003
 264          LS            85.4
 265          KM   UHG FROM MOUNTAIN S-GRAPH
 266          UI    178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
 267          UI    19.6    17.8    16.3    15.3    13.0    12.2     9.9     9.9     7.4     7.2
 268          UI     7.2     4.1     2.6     2.6     2.6     2.6     2.6     2.6     2.6     2.6
 269          UI      .0
              *

 270          KK    CP21
 271          KM   COMBINE M22, M21, M23, M25
 272          HC       4
              *

 273          KK    M24
 274          KM   EXISTING OFFSITE BASIN
 275          BA    0.66
 276          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 277          PB    2.19
 278          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 279          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 280          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 281          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 282          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 283          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 284          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 285          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 286          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 287          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 288          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 289          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 290          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 291          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 292          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 293          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 294          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 295          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 296          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 297          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 298          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 299          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 300          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 301          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 302          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 303          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 304          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 305          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 306          PI    .011    .013    .008    .005    .005    .003    .003    .003
 307          LS            91.3
1                                            HEC-1 INPUT                                          PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          KM   UHG FROM MOUNTAIN S-GRAPH
 309          UI    724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
 310          UI    86.8    79.3    73.9    64.9    60.5    54.8    47.3    41.7    40.3    30.3
 311          UI    30.3    30.3    15.8    11.0    11.0    11.0    11.0    11.0    11.0    11.0
 312          UI    11.0     5.5
              *

 313          KK    RM24
 314          KM   ROUTE M24 TO M26
 315          KM   EXISTING WASH
 316          RD    8410   0.014   0.035       0    TRAP      20       3
              *

 317          KK     M26
 318          KM   EXISTING OFFSITE BASIN
 319          BA    0.53
 320          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 321          PB    2.19
 322          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 323          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 324          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 325          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 326          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 327          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 328          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 329          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 330          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 331          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 332          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 333          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 334          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 335          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 336          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 337          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
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 338          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 339          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 340          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 341          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 342          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 343          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 344          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 345          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 346          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 347          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 348          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 349          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 350          PI    .011    .013    .008    .005    .005    .003    .003    .003
 351          LS            75.9
 352          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 353          UI    96.8   189.8   395.5   791.6   574.8   378.1   279.2   200.7   165.0   132.8
 354          UI    114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
 355          UI    27.1    25.6    25.6    18.0    14.4    14.4    14.4    14.4    14.4     8.4
 356          UI     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2      .0
              *
1                                          HEC-1 INPUT                                                PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 357          KK    CP22
 358          KM   COMBINE M24, M26
 359          HC       2
              *

 360          KK    CP23
 361          KM   COMBINE CP21, CP22
 362          HC       2
              *

 363          KK   RCP23
 364          KM   ROUTE CP23 TO ONQ
 365          KM   EXISTING WASH
 366          RD    8840   0.012   0.035       0    TRAP      20       3
              *

 367          KK    ONQ
 368          KM   EXISTING ONSITE BASIN
 369          BA    0.66
 370          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 371          PB    2.19
 372          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 373          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 374          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 375          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 376          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 377          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 378          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 379          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 380          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 381          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 382          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 383          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 384          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 385          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 386          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 387          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 388          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 389          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 390          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 391          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 392          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 393          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 394          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 395          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 396          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 397          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 398          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 399          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 400          PI    .011    .013    .008    .005    .005    .003    .003    .003
 401          LS            71.9
 402          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 403          UI    107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
 404          UI    144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
1                                          HEC-1 INPUT                                                PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 405          UI    43.9    40.2    29.5    29.5    29.5    19.2    16.6    16.6    16.6    16.6
 406          UI    16.6    12.1     9.4     9.4     9.4     9.4     9.4     9.4     9.4     9.4
 407          UI     9.4     9.4     1.8
              *

 408          KK    CP24
 409          KM   COMBINE CP23, ONQ
 410          HC       2
              *

 411          KK  CPDUM1
 412          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 413          HC       2
              *

 414          KK     M12
 415          KM   EXISTING OFFSITE BASIN
 416          BA    3.98
 417          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 418          PB    2.06
 419          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 420          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 421          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
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 422          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 423          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 424          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 425          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 426          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 427          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 428          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 429          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 430          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 431          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 432          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 433          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 434          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 435          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 436          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 437          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 438          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 439          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 440          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 441          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 442          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 443          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 444          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 445          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 446          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 447          PI    .010    .012    .007    .005    .005    .002    .002    .002
 448          LS            87.1
 449          KM   UHG FROM MOUNTAIN S-GRAPH
 450          UI    885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
 451          UI    770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
 452          UI    350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
 453          UI    196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 454          UI    135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
 455          UI    99.9    99.9    99.9    99.9    82.8    76.2    76.2    76.2    76.2    76.2
 456          UI    76.2    76.2    63.0    55.4    55.4    55.4    55.4    55.4    55.4    55.4
 457          UI    55.4    55.4    55.4    37.5    20.1    20.1    20.1    20.1    20.1    20.1
 458          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 459          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 460          UI    20.1    20.1    20.1    20.1     1.5
              *

 461          KK     ONJ
 462          KM   EXISTING ONSITE BASIN
 463          BA    0.07
 464          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 465          PB    2.06
 466          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 467          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 468          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 469          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 470          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 471          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 472          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 473          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 474          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 475          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 476          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 477          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 478          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 479          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 480          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 481          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 482          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 483          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 484          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 485          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 486          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 487          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 488          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 489          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 490          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 491          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 492          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 493          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 494          PI    .010    .012    .007    .005    .005    .002    .002    .002
 495          LS            79.4
 496          KM   UHG FROM MOUNTAIN S-GRAPH
 497          UI    248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
 498          UI     3.6     2.5     2.5     2.5     1.3
              *

 499          KK     M11
 500          KM   EXISTING OFFSITE BASIN
 501          BA    1.30
 502          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 503          PB    2.06
 504          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1                                          HEC-1 INPUT                                                PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 505          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 506          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 507          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 508          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 509          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 510          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 511          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 512          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 513          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 514          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 515          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
```

```
 516          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 517          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 518          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 519          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 520          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 521          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 522          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 523          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 524          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 525          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 526          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 527          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 528          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 529          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 530          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 531          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 532          PI    .010    .012    .007    .005    .005    .002    .002    .002
 533          LS            82.3
 534          KM   UHG FROM MOUNTAIN S-GRAPH
 535          UI    496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
 536          UI    249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
 537          UI    88.4    84.7    78.0    78.0    71.6    69.8    69.8    62.1    61.2    61.2
 538          UI    55.4    51.7    51.7    51.7    42.9    39.4    39.4    39.4    39.4    32.8
 539          UI    28.6    28.6    28.6    28.6    28.6    28.6    18.0    10.4    10.4    10.4
 540          UI    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4
 541          UI    10.4    10.4    10.4    10.4    10.4     7.6
              *

 542          KK     ONI
 543          KM   EXISTING ONSITE BASIN
 544          BA    0.05
 545          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 546          PB    2.06
 547          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 548          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 549          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 550          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 551          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 552          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 553          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 554          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 555          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 556          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 557          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1                                          HEC-1 INPUT                                                PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 558          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 559          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 560          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 561          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 562          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 563          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 564          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 565          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 566          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 567          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 568          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 569          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 570          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 571          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 572          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 573          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 574          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 575          PI    .010    .012    .007    .005    .005    .002    .002    .002
 576          LS            79.1
 577          KM   UHG FROM MOUNTAIN S-GRAPH
 578          UI    165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
 579          UI     4.6     2.2     1.7     1.7     1.7     1.4
              *

 580          KK     M10
 581          KM   EXISTING OFFSITE BASIN
 582          BA    0.38
 583          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 584          PB    2.06
 585          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 586          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 587          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 588          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 589          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 590          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 591          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 592          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 593          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 594          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 595          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 596          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 597          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 598          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 599          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 600          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 601          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 602          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 603          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 604          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 605          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 606          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 607          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 608          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 609          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 610          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1                                          HEC-1 INPUT                                                PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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611          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
612          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
613          PI    .010    .012    .007    .005    .005    .002    .002    .002
614          LS          79.1
615          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
616          UI    82.5   174.6   427.6   584.1   379.9   246.8   169.8   134.8   106.0    91.1
617          UI    75.3    59.6    52.8    44.5    39.6    36.6    30.7    29.9    20.6    20.6
618          UI    18.6    11.6    11.6    11.6    11.6    10.9     6.6     6.6     6.6     6.6
619          UI     6.6     6.6     6.6     6.6     5.1
             *

620          KK     ONH
621          KM   EXISTING ONSITE BASIN
622          BA    0.20
623          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
624          PB    2.06
625          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
626          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
627          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
628          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
629          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
630          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
631          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
632          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
633          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
634          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
635          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
636          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
637          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
638          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
639          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
640          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
641          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
642          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
643          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
644          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
645          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
646          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
647          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
648          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
649          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
650          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
651          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
652          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
653          PI    .010    .012    .007    .005    .005    .002    .002    .002
654          LS          81.7
655          KM   UHG FROM MOUNTAIN S-GRAPH
656          UI    302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
657          UI    26.4    23.5    20.5    18.7    15.1    14.4    11.0    11.0     8.5     4.0
658          UI     4.0     4.0     4.0     4.0     4.0     4.0     1.6
             *
1                                                HEC-1 INPUT                                                PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


659          KK     CP1
660          KM   COMBINE M12, ONJ, M11, ONI, M10, ONH
661          HC       6
             *

662          KK     DV1
663          KM   FLOWSPLIT DIVERSION FROM CP1
664          KM   3.5% OF BASIN FLOW DIVERTS "OUT" NORTH-EAST, TO "WASH 70"
665          KM   96.5% OF BASIN FLOW TO CONTINUE SOUTH
666          DT     FS1
667          DI     100
668          DQ     3.5
             *

669          KK     DV2
670          KM   FLOWSPLIT DIVERSION FROM DV1
671          KM   60.3% OF BASIN FLOW DIVERTS "OUT" SOUTH, TO "WASH 25B"
672          KM   39.7% OF BASIN FLOW TO CONTINUE EAST, TO "WASH 0"
673          DT     FS2
674          DI     100
675          DQ    60.3
             *

676          KK     ONV
677          KM   EXISTING ONSITE BASIN
678          BA    0.12
679          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
680          PB    2.06
681          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
682          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
683          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
684          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
685          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
686          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
687          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
688          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
689          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
690          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
691          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
692          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
693          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
694          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
695          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
696          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
697          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
698          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
699          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
700          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
701          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
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```
 702          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 703          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 704          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 705          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 706          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1                                          HEC-1 INPUT                                                    PAGE 15

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 707          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 708          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 709          PI    .010    .012    .007    .005    .005    .002    .002    .002
 710          LS            72.0
 711          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 712          UI    112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
 713          UI     8.3     4.9     4.9     4.9     3.3
              *

 714          KK     CP2
 715          KM   COMBINE CP1, ONV
 716          HC       2
              *

 717          KK     ONG
 718          KM   EXISTING ONSITE BASIN
 719          BA    0.14
 720          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 721          PB    2.06
 722          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 723          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 724          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 725          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 726          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 727          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 728          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 729          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 730          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 731          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 732          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 733          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 734          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 735          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 736          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 737          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 738          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 739          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 740          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 741          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 742          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 743          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 744          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 745          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 746          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 747          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 748          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 749          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 750          PI    .010    .012    .007    .005    .005    .002    .002    .002
 751          LS            71.9
 752          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 753          UI    78.4   321.8   250.4   124.3    77.3    55.9    38.5    30.3    23.8    19.7
 754          UI    13.8    10.5     7.7     7.7     5.3     4.4     4.4     4.4     4.4     1.0
              *
1                                          HEC-1 INPUT                                                    PAGE 16

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 755          KK     CP3
 756          KM   COMBINE CP2, ONG
 757          HC       2
              *

 758          KK     ONK
 759          KM   EXISTING ONSITE BASIN
 760          BA    0.68
 761          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 762          PB    2.06
 763          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
 764          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 765          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 766          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 767          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 768          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 769          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 770          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 771          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 772          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 773          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 774          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 775          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 776          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 777          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 778          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 779          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 780          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 781          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 782          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 783          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 784          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 785          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 786          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 787          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 788          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 789          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 790          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 791          PI    .010    .012    .007    .005    .005    .002    .002    .002
```

```
 792          LS            71.9
 793          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 794          UI    109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
 795          UI    151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
 796          UI    44.9    43.5    30.2    30.2    30.2    22.1    16.9    16.9    16.9    16.9
 797          UI    16.9    14.0     9.7     9.7     9.7     9.7     9.7     9.7     9.7     9.7
 798          UI     9.7     9.7     4.8
              *

 799          KK     ONF
 800          KM   EXISTING ONSITE BASIN
 801          BA    0.50
 802          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 803          PB    2.06
 804          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1                                                HEC-1 INPUT                                                    PAGE 17

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 805          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
 806          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
 807          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
 808          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
 809          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
 810          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
 811          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
 812          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
 813          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
 814          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
 815          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
 816          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
 817          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
 818          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
 819          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
 820          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
 821          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
 822          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
 823          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
 824          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
 825          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
 826          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
 827          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
 828          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
 829          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
 830          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
 831          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
 832          PI    .010    .012    .007    .005    .005    .002    .002    .002
 833          LS            71.9
 834          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 835          UI    153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
 836          UI    77.0    64.7    56.7    51.5    34.8    34.8    22.8    19.5    19.5    19.5
 837          UI    12.6    11.1    11.1    11.1    11.1    11.1    11.1     1.6
              *

 838          KK     CP4
 839          KM   COMBINE CP3, ONK, ONF
 840          HC       3
              *

 841          KK  CPDUM2
 842          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 843          HC       2
              *

 844          KK    RET1
 845          KM   RETRIEVE "FS1" PORTION OF FLOW SPLIT
 846          KM   TRIB TO "WASH 70"
 847          DR     FS1
              *
1                                                HEC-1 INPUT                                                    PAGE 18

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 848          KK      MX
 849          KM   EXISTING OFFSITE BASIN
 850          BA    0.01
 851          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 852          PB    2.19
 853          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 854          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 855          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 856          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 857          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 858          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 859          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 860          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 861          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 862          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 863          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 864          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 865          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 866          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 867          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 868          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 869          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 870          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 871          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 872          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 873          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 874          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 875          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 876          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 877          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 878          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 879          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
```

```
 880          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 881          PI    .011    .013    .008    .005    .005    .003    .003    .003
 882          LS            91.6
 883          KM   UHG FROM MOUNTAIN S-GRAPH
 884          UI    57.5    10.9     5.2     2.5     1.0      .0
              *

 885          KK    CP14
 886          KM   COMBINE FS1, MX
 887          HC       2
              *

 888          KK     ONS
 889          KM   EXISTING ONSITE BASIN
 890          BA    0.04
 891          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 892          PB    2.19
 893          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 894          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 895          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 896          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 897          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1                                           HEC-1 INPUT                                                PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 898          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 899          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 900          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 901          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 902          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 903          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 904          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 905          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 906          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 907          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 908          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 909          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 910          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 911          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 912          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 913          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 914          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 915          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 916          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 917          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 918          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 919          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 920          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 921          PI    .011    .013    .008    .005    .005    .003    .003    .003
 922          LS            71.9
 923          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 924          UI    30.5   114.4    61.6    30.9    19.9    13.3     9.8     7.6     5.6     4.2
 925          UI     2.6     2.6     1.7     1.5     1.5     1.5     1.0
              *

 926          KK   CP14A
 927          KM   COMBINE CP14, ONS
 928          HC       2
              *

 929          KK     M17
 930          KM   EXISTING OFFSITE BASIN
 931          BA    0.67
 932          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 933          PB    2.19
 934          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 935          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 936          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 937          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 938          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 939          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 940          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 941          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 942          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 943          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 944          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 945          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 946          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 947          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 948          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1                                           HEC-1 INPUT                                                PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 949          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 950          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 951          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 952          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 953          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 954          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 955          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 956          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
 957          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
 958          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
 959          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
 960          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
 961          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
 962          PI    .011    .013    .008    .005    .005    .003    .003    .003
 963          LS            84.5
 964          KM   UHG FROM MOUNTAIN S-GRAPH
 965          UI     564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
 966          UI    97.4    80.4    73.6    69.1    63.2    58.7    55.5    49.3    46.8    41.3
 967          UI    35.7    35.7    29.9    25.9    25.9    25.9    16.2     9.4     9.4     9.4
 968          UI     9.4     9.4     9.4     9.4     9.4     9.4     9.4     3.8
              *
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 969          KK    CP15
 970          KM   COMBINE CP14A, M17
 971          HC       2
              *

 972          KK    M18
 973          KM   EXISTING OFFSITE BASIN
 974          BA    0.12
 975          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 976          PB    2.19
 977          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
 978          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
 979          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
 980          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
 981          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
 982          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
 983          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
 984          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
 985          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
 986          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
 987          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
 988          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
 989          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
 990          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
 991          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
 992          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
 993          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
 994          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
 995          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
 996          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
 997          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
 998          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
 999          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1                                            HEC-1 INPUT                                          PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1000          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1001          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1002          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1003          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1004          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1005          PI    .011    .013    .008    .005    .005    .003    .003    .003
1006          LS            83.1
1007          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1008          UI    69.8   284.1   213.2   103.8    65.1    46.9    32.8    25.0    20.2    16.0
1009          UI    12.1     7.9     6.8     6.7     3.9     3.9     3.9     3.9     3.0
              *

1010          KK    M20
1011          KM   EXISTING OFFSITE BASIN
1012          BA    0.49
1013          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1014          PB    2.19
1015          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1016          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1017          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1018          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1019          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1020          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1021          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1022          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1023          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1024          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1025          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1026          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1027          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1028          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1029          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1030          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1031          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1032          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1033          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1034          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1035          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1036          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1037          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1038          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1039          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1040          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1041          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1042          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1043          PI    .011    .013    .008    .005    .005    .003    .003    .003
1044          LS            90.4
1045          KM   UHG FROM MOUNTAIN S-GRAPH
1046          UI    626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
1047          UI    64.5    59.4    52.2    47.6    44.1    35.1    33.6    28.1    24.4    24.4
1048          UI    16.7     8.9     8.9     8.9     8.9     8.9     8.9     8.9     8.9      .0
              *
1                                            HEC-1 INPUT                                          PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1049          KK   STOR1
1050          KM   EXISTING OPEN MINE PIT BASIN
1051          KM   INTERCEPTS FLOW FROM M20
1052          KM   OPEN MINE PIT TOP EDGE ELEV = 440 ft
1053          KM   SPILL OUT BEGINS ABOVE TOP EDGE ELEV.
1054          RS       1    STOR       0
1055          SA    0.76    1.46    3.37    5.06    5.13    5.23    5.72    6.67
1056          SE     428     432     436     440   440.2   440.5     442     444
1057          SQ       0       0       0       0      61     240    2929    8283
              *
```

```
1058          KK    RM20
1059          KM   ROUTE M20 FLOW TO M19
1060          KM   EXISTING WASH
1061          RD    3500   0.028   0.035       0    TRAP      20       3
              *

1062          KK    M19
1063          KM   EXISTING OFFSITE BASIN
1064          BA    0.11
1065          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1066          PB    2.19
1067          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1068          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1069          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1070          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1071          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1072          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1073          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1074          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1075          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1076          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1077          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1078          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1079          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1080          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1081          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1082          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1083          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1084          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1085          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1086          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1087          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1088          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1089          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1090          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1091          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1092          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1093          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1094          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1095          PI    .011    .013    .008    .005    .005    .003    .003    .003
1096          LS            83.1
1097          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1098          UI    117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
1                                          HEC-1 INPUT                                                    PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1099          UI     6.3     4.7     4.7     4.7      .0
              *

1100          KK    CP16
1101          KM   COMBINE M20, M19
1102          HC       2
              *

1103          KK    CP17
1104          KM   COMBINE CP15, M18, CP16
1105          HC       3
              *

1106          KK   RCP17
1107          KM   ROUTE CP17 TO ONP
1108          KM   EXISTING WASH
1109          RD   11280   0.014   0.035       0    TRAP      20       3
              *

1110          KK    ONP
1111          KM   EXISTING ONSITE BASIN
1112          BA    1.47
1113          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1114          PB    2.19
1115          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1116          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1117          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1118          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1119          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1120          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1121          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1122          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1123          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1124          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1125          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1126          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1127          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1128          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1129          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1130          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1131          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1132          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1133          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1134          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1135          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1136          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1137          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1138          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1139          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1140          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1141          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1142          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1143          PI    .011    .013    .008    .005    .005    .003    .003    .003
1144          LS            71.9
1145          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                    PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1146          UI    206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
1147          UI    366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
1148          UI    103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
1149          UI    32.6    32.6    32.6    32.6    32.6    25.9    18.6    18.6    18.6    18.6
1150          UI    18.6    18.6    18.6    18.6    18.6    18.6    18.6    14.4
              *

1151          KK    CP18
1152          KM   COMBINE CP17, ONP
1153          HC       2
              *

1154          KK  CPDUM3
1155          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1156          HC       2
              *

1157          KK     ONT
1158          KM   EXISTING ONSITE BASIN
1159          BA    0.04
1160          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1161          PB    2.19
1162          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1163          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1164          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1165          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1166          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1167          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1168          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1169          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1170          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1171          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1172          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1173          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1174          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1175          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1176          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1177          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1178          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1179          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1180          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1181          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1182          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1183          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1184          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1185          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1186          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1187          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1188          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1189          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1190          PI    .011    .013    .008    .005    .005    .003    .003    .003
1191          LS            71.9
1192          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1193          UI    47.6   130.9    50.1    26.7    16.4    11.2     8.4     5.6     3.2     3.1
1194          UI     1.8     1.8     1.8     1.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195          KK   RMONT
1196          KM   ROUTE ONT TO ONO
1197          KM   EXISTING WASH
1198          RD   10985   0.015   0.035       0    TRAP      20       3
              *

1199          KK    ONO
1200          KM   EXISTING ONSITE BASIN
1201          BA    0.55
1202          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1203          PB    2.19
1204          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1205          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1206          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1207          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1208          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1209          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1210          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1211          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1212          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1213          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1214          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1215          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1216          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1217          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1218          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1219          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1220          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1221          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1222          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1223          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1224          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1225          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1226          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1227          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1228          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1229          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1230          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1231          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1232          PI    .011    .013    .008    .005    .005    .003    .003    .003
1233          LS            71.9
1234          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1235          UI    79.8   140.8   249.2   528.5   675.3   480.0   333.2   260.9   187.2   161.1
1236          UI    135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
1237          UI    39.9    35.3    33.4    31.6    22.4    22.4    22.4    18.8    12.6    12.6
```

```
1238          UI    12.6    12.6    12.6    12.6     9.3     7.2     7.2     7.2     7.2     7.2
1239          UI     7.2     7.2     7.2     7.2     7.2     7.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1240          KK    CP20
1241          KM   COMBINE ONT, ONO
1242          HC        2
              *

1243          KK  CPDUM4
1244          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1245          HC        2
              *

1246          KK     ONU
1247          KM   EXISTING ONSITE BASIN
1248          BA    0.05
1249          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1250          PB    2.19
1251          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1252          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1253          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1254          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1255          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1256          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1257          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1258          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1259          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1260          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1261          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1262          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1263          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1264          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1265          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1266          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1267          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1268          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1269          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1270          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1271          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1272          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1273          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1274          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1275          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1276          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1277          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1278          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1279          PI    .011    .013    .008    .005    .005    .003    .003    .003
1280          LS            71.9
1281          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1282          UI    55.1   162.7    64.0    34.2    21.1    14.5    10.9     7.3     4.6     3.8
1283          UI     2.7     2.2     2.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1284          KK   RMONU
1285          KM   ROUTE ONU TO ONL
1286          KM   EXISTING WASH
1287          RD   10520   0.016   0.035       0    TRAP      20       3
              *

1288          KK    ONL
1289          KM   EXISTING ONSITE BASIN
1290          BA    0.73
1291          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1292          PB    2.19
1293          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1294          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1295          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1296          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1297          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1298          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1299          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1300          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1301          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1302          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1303          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1304          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1305          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1306          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1307          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1308          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1309          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1310          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1311          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1312          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1313          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1314          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1315          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1316          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1317          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1318          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1319          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1320          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1321          PI    .011    .013    .008    .005    .005    .003    .003    .003
1322          LS            71.9
1323          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1324          UI    122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
1325          UI    159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
```

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1326          UI    49.7    37.6    33.4    33.4    28.2    18.7    18.7    18.7    18.7    18.7
1327          UI    16.1    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7
1328          UI    10.7     2.7
              *
1                                          HEC-1 INPUT                                                PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1329          KK    CP19
1330          KM   COMBINE ONU, ONL
1331          HC       2
              *

1332          KK    ONM
1333          KM   EXISTING ONSITE BASIN
1334          BA    0.10
1335          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1336          PB    2.19
1337          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1338          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1339          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1340          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1341          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1342          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1343          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1344          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1345          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1346          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1347          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1348          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1349          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1350          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1351          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1352          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1353          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1354          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1355          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1356          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1357          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1358          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1359          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1360          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1361          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1362          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1363          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1364          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1365          PI    .011    .013    .008    .005    .005    .003    .003    .003
1366          LS            71.9
1367          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1368          UI    197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
1369          UI     5.4     1.2
              *

1370          KK    ONN
1371          KM   EXISTING ONSITE BASIN
1372          BA    0.08
1373          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1374          PB    2.19
1375          PI    .003    .003    .005    .005    .005    .005    .008    .008    .008    .008
1376          PI    .011    .011    .013    .013    .013    .013    .013    .013    .013    .013
1377          PI    .013    .013    .013    .013    .013    .013    .013    .013    .013    .013
1378          PI    .016    .016    .018    .018    .018    .018    .021    .024    .029    .034
1                                          HEC-1 INPUT                                                PAGE 29

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1379          PI    .039    .037    .034    .032    .032    .029    .026    .032    .039    .047
1380          PI    .050    .050    .050    .053    .050    .050    .050    .053    .055    .058
1381          PI    .066    .071    .074    .079    .079    .079    .079    .079    .079    .079
1382          PI    .079    .079    .074    .060    .053    .053    .053    .050    .050    .053
1383          PI    .058    .063    .068    .076    .084    .092    .100    .105    .110    .113
1384          PI    .118    .124    .126    .129    .131    .134    .134    .134    .137    .137
1385          PI    .137    .137    .139    .142    .145    .147    .147    .147    .145    .142
1386          PI    .139    .142    .147    .152    .158    .163    .166    .168    .171    .173
1387          PI    .176    .179    .179    .179    .181    .184    .187    .187    .187    .187
1388          PI    .189    .194    .205    .223    .239    .244    .242    .239    .237    .239
1389          PI    .239    .242    .244    .244    .247    .250    .252    .252    .250    .247
1390          PI    .247    .244    .242    .239    .237    .237    .234    .231    .229    .234
1391          PI    .242    .250    .260    .276    .286    .292    .297    .297    .297    .297
1392          PI    .297    .297    .300    .300    .302    .305    .307    .305    .297    .271
1393          PI    .244    .221    .200    .181    .171    .166    .158    .134    .089    .053
1394          PI    .047    .045    .058    .081    .116    .118    .102    .076    .060    .050
1395          PI    .045    .039    .034    .034    .032    .029    .026    .024    .024    .024
1396          PI    .021    .018    .018    .016    .016    .016    .013    .013    .013    .013
1397          PI    .013    .013    .011    .011    .011    .008    .008    .005    .005    .005
1398          PI    .005    .003    .003    .005    .005    .008    .008    .011    .011    .011
1399          PI    .011    .011    .008    .008    .008    .008    .008    .008    .008    .008
1400          PI    .011    .011    .008    .008    .008    .011    .011    .008    .005    .008
1401          PI    .011    .013    .016    .026    .047    .066    .076    .068    .050    .034
1402          PI    .016    .005    .003    .003    .000    .000    .000    .000    .000    .003
1403          PI    .011    .013    .008    .005    .005    .003    .003    .003
1404          LS            71.9
1405          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1406          UI    22.6    56.4   148.9   107.3    65.2    41.8    31.7    24.4    20.2    15.4
1407          UI    13.0    11.0     9.3     8.2     7.4     5.2     5.2     3.4     2.9     2.9
1408          UI     2.9     2.2     1.7     1.7     1.7     1.7     1.7     1.7     1.4
              *

1409          KK  CPDUM5
1410          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1411          HC       4
              *

1412          KK      M9
1413          KM   EXISTING OFFSITE BASIN
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1414          BA    1.80
1415          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1416          PB    2.06
1417          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1418          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1419          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1420          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1421          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1422          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1423          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1424          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1425          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1426          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1427          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1428          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1429          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1431          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1432          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1433          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1434          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1435          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1436          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1437          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1438          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1439          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1440          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1441          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1442          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1443          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1444          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1445          PI    .010    .012    .007    .005    .005    .002    .002    .002
1446          LS            86.2
1447          KM   UHG FROM MOUNTAIN S-GRAPH
1448          UI    471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
1449          UI    364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
1450          UI    145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
1451          UI    79.4    79.4    79.1    71.0    71.0    71.0    70.1    62.3    62.3    62.3
1452          UI    62.3    56.1    52.6    52.6    52.6    52.6    48.4    40.1    40.1    40.1
1453          UI    40.1    40.1    40.1    35.9    29.1    29.1    29.1    29.1    29.1    29.1
1454          UI    29.1    29.1    29.1    14.0    10.6    10.6    10.6    10.6    10.6    10.6
1455          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6
1456          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6     5.1
              *

1457          KK      M8
1458          KM   EXISTING OFFSITE BASIN
1459          BA    1.04
1460          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1461          PB    2.06
1462          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1463          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1464          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1465          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1466          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1467          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1468          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1469          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1470          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1471          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1472          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1473          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1474          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1475          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1476          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1477          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1478          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1479          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1480          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1481          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1482          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1483          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1484          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1485          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1486          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1487          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1488          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1489          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1490          PI    .010    .012    .007    .005    .005    .002    .002    .002
1491          LS            85.6
1492          KM   UHG FROM MOUNTAIN S-GRAPH
1493          UI    495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
1494          UI    177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
1495          UI    69.5    66.3    65.0    58.1    58.1    54.6    49.1    49.1    47.8    37.4
1496          UI    37.4    37.4    37.4    29.2    27.2    27.2    27.2    27.2    27.2    12.0
1497          UI     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9
1498          UI     9.9     9.9     9.9     9.9     9.9     4.0
              *

1499          KK     CP5
1500          KM   COMBINE M9, M8
1501          HC       2
              *

1502          KK    RET2
1503          KM   RETRIEVE FLOW TRIB. TO "WASH 25B"
1504          DR     FS2
              *
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1505          KK     CP6
1506          KM   COMBINE CP5, RET2
1507          HC       2
              *

1508          KK      M7
1509          KM   EXISTING OFFSITE BASIN
1510          BA    0.16
1511          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1512          PB    2.06
1513          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1514          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1515          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1516          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1517          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1518          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1519          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1520          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1521          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1522          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1523          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1524          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1525          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1526          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1527          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1528          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1529          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1                                             HEC-1 INPUT                                                PAGE 32

              LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1530          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1531          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1532          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1533          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1534          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1535          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1536          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1537          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1538          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1539          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1540          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1541          PI    .010    .012    .007    .005    .005    .002    .002    .002
1542          LS            77.3
1543          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1544          UI    65.0   232.2   334.4   171.6   100.8    70.8    54.5    39.7    31.5    25.7
1545          UI    21.7    18.5    13.2    11.5     7.4     7.4     7.4     4.4     4.2     4.2
1546          UI     4.2     4.2     4.0
              *

1547          KK    ONE1
1548          KM   EXISTING ONSITE BASIN
1549          BA    1.61
1550          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1551          PB    2.06
1552          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1553          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1554          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1555          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1556          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1557          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1558          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1559          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1560          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1561          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1562          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1563          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1564          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1565          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1566          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1567          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1568          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1569          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1570          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1571          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1572          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1573          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1574          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1575          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1576          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1577          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1578          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1579          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1580          PI    .010    .012    .007    .005    .005    .002    .002    .002
1581          LS            73.7
1582          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                             HEC-1 INPUT                                                PAGE 33

              LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1583          UI    163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
1584          UI    566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
1585          UI    159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
1586          UI    74.5    68.3    68.3    68.3    48.4    45.9    45.9    45.9    45.9    36.7
1587          UI    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    17.1
1588          UI    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7
1589          UI    14.7    14.7    14.7    14.7    14.7    14.7     2.7
              *

1590          KK    CP6A
1591          KM   COMBINE M7, ONE1
1592          HC       2
              *

1593          KK    CP6B
```

```
1594          KM   COMBINE CP6, CP6A
1595          HC       2
              *

1596          KK    ONE2
1597          KM   EXISTING ONSITE BASIN
1598          BA    2.59
1599          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1600          PB    2.06
1601          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1602          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1603          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1604          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1605          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1606          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1607          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1608          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1609          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1610          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1611          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1612          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1613          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1614          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1615          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1616          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1617          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1618          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1619          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1620          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1621          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1622          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1623          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1624          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1625          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1626          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1627          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1628          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1629          PI    .010    .012    .007    .005    .005    .002    .002    .002
1630          LS            74.5
1631          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1632          UI    210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
1633          UI   1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
1634          UI    290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
1635          UI    151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
1636          UI    87.8    87.8    78.6    59.0    59.0    59.0    59.0    59.0    59.0    45.4
1637          UI    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1
1638          UI    33.1    27.1    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1639          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1640          UI    18.9    18.9    15.4
              *

1641          KK     CP7
1642          KM   COMBINE CP6B, ONE2
1643          HC       2
              *

1644          KK      M6
1645          KM   EXISTING OFFSITE BASIN
1646          BA    1.32
1647          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1648          PB    2.06
1649          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1650          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1651          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1652          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1653          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1654          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1655          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1656          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1657          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1658          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1659          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1660          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1661          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1662          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1663          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1664          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1665          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1666          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1667          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1668          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1669          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1670          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1671          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1672          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1673          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1674          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1675          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1676          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1677          PI    .010    .012    .007    .005    .005    .002    .002    .002
1678          LS            83.8
1679          KM   UHG FROM MOUNTAIN S-GRAPH
1680          UI    488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
1681          UI    247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
1682          UI    87.8    87.8    78.9    77.5    75.6    69.3    69.3    67.0    60.8    60.8
1                                          HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1683          UI    60.8    52.1    51.3    51.3    51.3    39.9    39.1    39.1    39.1    39.1
1684          UI    31.5    28.4    28.4    28.4    28.4    28.4    28.4    19.1    10.3    10.3
1685          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3
```

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1686          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3     2.5
              *

1687          KK     M5A
1688          KM   EXISTING OFFSITE BASIN
1689          BA    0.17
1690          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1691          PB    2.06
1692          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1693          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1694          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1695          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1696          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1697          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1698          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1699          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1700          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1701          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1702          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1703          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1704          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1705          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1706          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1707          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1708          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1709          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1710          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1711          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1712          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1713          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1714          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1715          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1716          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1717          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1718          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1719          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1720          PI    .010    .012    .007    .005    .005    .002    .002    .002
1721          LS            86.2
1722          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1723          UI    46.0   109.1   301.7   233.7   143.7    91.0    69.2    52.4    44.0    34.0
1724          UI    28.4    23.8    20.4    18.2    16.1    12.5    10.8     9.6     6.1     6.1
1725          UI     6.1     6.1     3.7     3.5     3.5     3.5     3.5     3.5     3.5     2.5
              *

1726          KK     M5B
1727          KM   EXISTING OFFSITE BASIN
1728          BA    0.18
1729          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1730          PB    2.06
1731          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1732          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1733          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1734          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1735          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1736          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1737          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1738          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1739          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1740          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1741          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1742          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1743          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1744          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1745          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1746          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1747          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1748          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1749          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1750          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1751          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1752          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1753          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1754          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1755          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1756          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1757          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1758          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1759          PI    .010    .012    .007    .005    .005    .002    .002    .002
1760          LS            86.2
1761          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1762          UI    94.4   388.4   330.7   165.8   102.3    73.1    51.5    39.8    31.7    26.1
1763          UI    19.0    16.0     9.6     9.6     8.6     5.5     5.5     5.5     5.5     4.6
              *

1764          KK     CP8
1765          KM   COMBINE M6, M5A, M5B
1766          HC       3
              *

1767          KK      M5
1768          KM   EXISTING OFFSITE BASIN
1769          BA    0.39
1770          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1771          PB    2.06
1772          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1773          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1774          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1775          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1776          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1777          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1778          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1779          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
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1780          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1781          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1782          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1783          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1784          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1                                           HEC-1 INPUT                                                PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1785          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1786          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1787          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1788          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1789          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1790          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1791          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1792          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1793          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1794          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1795          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1796          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1797          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1798          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1799          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1800          PI    .010    .012    .007    .005    .005    .002    .002    .002
1801          LS            74.6
1802          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1803          UI    91.1   201.2   517.0   587.6   366.2   241.4   170.2   132.5   105.2    89.8
1804          UI    70.8    59.8    51.4    45.0    39.6    34.5    33.1    22.6    22.3    19.8
1805          UI    12.5    12.5    12.5    12.5    10.2     7.1     7.1     7.1     7.1     7.1
1806          UI     7.1     7.1     7.1      .0
              *

1807          KK     CP9
1808          KM   COMBINE CP8, M5
1809          HC       2
              *

1810          KK     ONB
1811          KM   EXISTING ONSITE BASIN
1812          BA    2.83
1813          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1814          PB    2.06
1815          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1816          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1817          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1818          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1819          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1820          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1821          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1822          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1823          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1824          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1825          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1826          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1827          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1828          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1829          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1830          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1831          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1832          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1833          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1834          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1835          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1                                           HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1836          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1837          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1838          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1839          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1840          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1841          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1842          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1843          PI    .010    .012    .007    .005    .005    .002    .002    .002
1844          LS            73.4
1845          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1846          UI    210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
1847          UI   1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
1848          UI    353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
1849          UI    172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
1850          UI    105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
1851          UI    59.1    59.1    59.1    58.1    33.2    33.2    33.2    33.2    33.2    33.2
1852          UI    33.2    33.2    33.2    33.2    33.2    33.2    33.2    21.2    18.9    18.9
1853          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1854          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1855          UI     6.1
              *

1856          KK    CP10
1857          KM   COMBINE CP9, ONB
1858          HC       2
              *

1859          KK     OND
1860          KM   EXISTING ONSITE BASIN
1861          BA    1.34
1862          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1863          PB    2.06
1864          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1865          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1866          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1867          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1868          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1869          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
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1870          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1871          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1872          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1873          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1874          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1875          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1876          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1877          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1878          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1879          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1880          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1881          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1882          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1883          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1884          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1885          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1886          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1                                                HEC-1 INPUT                                          PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1887          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1888          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1889          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1890          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1891          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1892          PI    .010    .012    .007    .005    .005    .002    .002    .002
1893          LS            71.9
1894          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1895          UI    203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
1896          UI    309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
1897          UI    90.9    85.1    79.2    57.2    57.2    57.2    42.6    32.1    32.1    32.1
1898          UI    32.1    32.1    30.5    18.3    18.3    18.3    18.3    18.3    18.3    18.3
1899          UI    18.3    18.3    18.3    18.3     4.0
              *

1900          KK     ONC
1901          KM   EXISTING ONSITE BASIN
1902          BA    0.30
1903          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1904          PB    2.06
1905          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1906          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1907          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1908          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1909          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1910          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1911          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1912          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1913          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1914          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1915          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1916          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1917          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1918          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1919          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
1920          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1921          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1922          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1923          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1924          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1925          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1926          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1927          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1928          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1929          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1930          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1931          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1932          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1933          PI    .010    .012    .007    .005    .005    .002    .002    .002
1934          LS            71.9
1935          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1936          UI    146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
1937          UI    35.8    27.5    19.2    15.4    15.4    10.9     8.8     8.8     8.8     8.8
1938          UI     5.4
              *
1                                                HEC-1 INPUT                                          PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1939          KK     CPA
1940          KM   COMBINE OND, ONC
1941          HC       2
              *

1942          KK      M4
1943          KM   EXISTING OFFSITE BASIN
1944          BA    2.71
1945          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1946          PB    2.06
1947          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1948          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1949          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1950          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
1951          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
1952          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
1953          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
1954          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
1955          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
1956          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
1957          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
1958          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
1959          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
1960          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
1961          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
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1962          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
1963          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
1964          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
1965          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
1966          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
1967          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
1968          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
1969          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
1970          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
1971          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
1972          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
1973          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
1974          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
1975          PI    .010    .012    .007    .005    .005    .002    .002    .002
1976          LS            85.3
1977          KM   UHG FROM MOUNTAIN S-GRAPH
1978          UI    485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
1979          UI    649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
1980          UI    269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
1981          UI    152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
1982          UI    95.6    92.6    84.4    84.4    84.4    84.4    81.7    75.5    75.5    75.5
1983          UI    75.5    75.5    68.6    66.2    66.2    66.2    66.2    66.2    62.1    55.9
1984          UI    55.9    55.9    55.9    55.9    55.9    55.9    44.0    42.6    42.6    42.6
1985          UI    42.6    42.6    42.6    42.6    42.6    42.1    31.0    31.0    31.0    31.0
1986          UI    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    21.3
1987          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1988          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1989          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1990          UI    11.3    11.3    11.3    11.3    11.3    11.3     8.5
              *
1                                          HEC-1 INPUT                                          PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1991          KK      M3
1992          KM   EXISTING OFFSITE BASIN
1993          BA    0.57
1994          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1995          PB    2.06
1996          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
1997          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
1998          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
1999          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
2000          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
2001          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
2002          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
2003          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
2004          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
2005          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
2006          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
2007          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
2008          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
2009          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
2010          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
2011          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
2012          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
2013          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
2014          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
2015          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
2016          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
2017          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
2018          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
2019          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
2020          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
2021          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
2022          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
2023          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
2024          PI    .010    .012    .007    .005    .005    .002    .002    .002
2025          LS            79.1
2026          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2027          UI    87.5   162.8   294.9   662.8   681.0   472.9   336.7   243.7   191.2   159.0
2028          UI    130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
2029          UI    37.5    36.6    30.9    24.6    24.6    24.6    15.0    13.8    13.8    13.8
2030          UI    13.8    13.8    10.9     7.9     7.9     7.9     7.9     7.9     7.9     7.9
2031          UI     7.9     7.9     7.9     5.6
              *

2032          KK    CP11
2033          KM   COMBINE M4, M3
2034          HC       2
              *

2035          KK      M2
2036          KM   EXISTING OFFSITE BASIN
2037          BA   24.30
2038          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2039          PB    2.06
2040          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                          HEC-1 INPUT                                          PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2041          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2042          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2043          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2044          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2045          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2046          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2047          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2048          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2049          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2050          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2051          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2052          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2053          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
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2054          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2055          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2056          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2057          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2058          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2059          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2060          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2061          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2062          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2063          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2064          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2065          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2066          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2067          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2068          PI    .017    .022    .013    .009    .009    .004    .004    .004
2069          LS            86.2
2070          KM   UHG FROM MOUNTAIN S-GRAPH
2071          UI  1111.9  2221.1  2203.4  3001.1  3365.7  3569.7  4543.3  5289.0  6350.9  7587.7
2072          UI  7721.3  9338.4  7205.7  6488.0  5526.3  4850.8  4632.4  3956.0  3879.3  3543.3
2073          UI  3060.6  2466.9  2637.2  2146.4  2106.1  2033.1  2001.3  2001.4  1936.4  1691.3
2074          UI  1656.5  1534.3  1504.1  1559.9  1431.1  1421.8  1295.3  1250.7  1250.7  1251.3
2075          UI  1250.6  1241.0  1065.3  1000.8  1000.4   988.4   920.1   909.7   910.0   903.8
2076          UI   847.9   833.8   834.1   833.8   787.9   715.8   715.0   714.0   715.4   706.1
2077          UI   670.2   666.7   667.4   667.4   666.7   606.7   541.1   540.4   541.1   541.1
2078          UI   541.1   540.4   490.0   445.2   445.2   444.5   445.2   443.8   445.2   444.5
2079          UI   436.2   397.6   392.7   392.0   392.0   393.4   391.3   393.4   391.3   393.4
2080          UI   371.3   351.3   352.0   350.6   351.3   350.6   352.0   350.6   350.6   352.0
2081          UI   347.9   323.0   309.2   310.6   310.6   310.6   309.2   310.6   310.6   310.6
2082          UI   310.6   309.2   310.6   276.1   258.1   259.5   258.1   256.8   259.5   258.1
2083          UI   256.8   258.1   259.5   258.1   258.1   258.1   258.1   248.5   204.3   197.4
2084          UI   197.4   197.4   198.8   197.4   200.2   196.0   200.2   197.4   197.4   198.8
2085          UI   198.8   198.8   196.0   198.8   198.8   197.4   190.5   146.3   143.6   143.6
2086          UI   144.9   143.6   143.6   144.9   143.6   143.6   144.9   143.6   143.6   143.6
2087          UI   146.3   140.8   146.3   143.6   143.6   143.6   143.6   146.3   140.8   146.3
2088          UI   143.6   143.6   129.8    55.2    38.7    38.7    38.7    44.2    38.7    38.7
2089          UI    35.9    38.7    41.4    38.7    38.7    41.4    38.7    38.7    38.7    41.4
2090          UI    38.7    38.7    41.4    35.9    41.4    38.7    38.7    41.4    38.7    38.7
              *
1                                          HEC-1 INPUT                                                PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2091          KK   CP12A
2092          KM   COMBINE CP11, M2
2093          HC        2
              *

2094          KK     M13
2095          KM   EXISTING OFFSITE BASIN
2096          BA    7.18
2097          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2098          PB    2.06
2099          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
2100          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
2101          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
2102          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
2103          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
2104          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
2105          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
2106          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
2107          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
2108          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
2109          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
2110          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
2111          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
2112          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
2113          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
2114          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
2115          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
2116          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
2117          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
2118          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
2119          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
2120          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
2121          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
2122          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
2123          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
2124          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
2125          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
2126          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
2127          PI    .010    .012    .007    .005    .005    .002    .002    .002
2128          LS            88.4
2129          KM   UHG FROM MOUNTAIN S-GRAPH
2130          UI    961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
2131          UI   2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
2132          UI    718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
2133          UI    432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
2134          UI    301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
2135          UI    192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
2136          UI    170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
2137          UI    133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
2138          UI    112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
2139          UI    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6
2140          UI    65.9    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2
2141          UI    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    23.8    22.6
2142          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
1                                          HEC-1 INPUT                                                PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2143          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
2144          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
              *

2145          KK     DV3
```

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2146          KM   FLOWSPLIT DIVERSION FROM BASIN M13
2147          KM   ASSUME 50% OF FLOW TO CONTINUE EAST
2148          KM   ASSUME 50% OF FLOW TO CONTINUE NORTH
2149          DT     FS3
2150          DI     100
2151          DQ      50
              *

2152          KK      M1
2153          KM   EXISTING OFFSITE BASIN
2154          BA    0.76
2155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2156          PB    2.06
2157          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
2158          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
2159          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
2160          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
2161          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
2162          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
2163          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
2164          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
2165          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
2166          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
2167          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
2168          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
2169          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
2170          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
2171          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
2172          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
2173          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
2174          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
2175          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
2176          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
2177          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
2178          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
2179          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
2180          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
2181          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
2182          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
2183          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
2184          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
2185          PI    .010    .012    .007    .005    .005    .002    .002    .002
2186          LS            77.3
2187          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2188          UI    176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
2189          UI    139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
2190          UI    24.2    24.2    24.2    24.2    21.1    13.8    13.8    13.8    13.8    13.8
2191          UI    13.8    13.8    13.8     3.0
              *
1                                          HEC-1 INPUT                                          PAGE 45

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2192          KK    CP12
2193          KM   COMBINE DV5, M11
2194          HC       2
              *

2195          KK   CP12B
2196          KM   COMBINE CP12A, CP12
2197          HC       2
              *

2198          KK     ONA
2199          KM   EXISTING ONSITE BASIN
2200          BA    0.87
2201          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2202          PB    2.06
2203          PI    .002    .002    .005    .005    .005    .005    .007    .007    .007    .007
2204          PI    .010    .010    .012    .012    .012    .012    .012    .012    .012    .012
2205          PI    .012    .012    .012    .012    .012    .012    .012    .012    .012    .012
2206          PI    .015    .015    .017    .017    .017    .017    .020    .022    .027    .032
2207          PI    .037    .035    .032    .030    .030    .027    .025    .030    .037    .044
2208          PI    .047    .047    .047    .049    .047    .047    .047    .049    .052    .054
2209          PI    .062    .067    .069    .074    .074    .074    .074    .074    .074    .074
2210          PI    .074    .074    .069    .057    .049    .049    .049    .047    .047    .049
2211          PI    .054    .059    .064    .072    .079    .087    .094    .099    .104    .106
2212          PI    .111    .116    .119    .121    .124    .126    .126    .126    .129    .129
2213          PI    .129    .129    .131    .133    .136    .138    .138    .138    .136    .133
2214          PI    .131    .133    .138    .143    .148    .153    .156    .158    .161    .163
2215          PI    .166    .168    .168    .168    .171    .173    .176    .176    .176    .176
2216          PI    .178    .183    .193    .210    .225    .230    .227    .225    .222    .225
2217          PI    .225    .227    .230    .230    .232    .235    .237    .237    .235    .232
2218          PI    .232    .230    .227    .225    .222    .222    .220    .218    .215    .220
2219          PI    .227    .235    .245    .260    .269    .274    .279    .279    .279    .279
2220          PI    .279    .279    .282    .282    .284    .287    .289    .287    .279    .255
2221          PI    .230    .208    .188    .171    .161    .156    .148    .126    .084    .049
2222          PI    .044    .042    .054    .077    .109    .111    .096    .072    .057    .047
2223          PI    .042    .037    .032    .032    .030    .027    .025    .022    .022    .022
2224          PI    .020    .017    .017    .015    .015    .015    .012    .012    .012    .012
2225          PI    .012    .012    .010    .010    .010    .007    .007    .005    .005    .005
2226          PI    .005    .002    .002    .005    .005    .007    .007    .010    .010    .010
2227          PI    .010    .010    .007    .007    .007    .007    .007    .007    .007    .007
2228          PI    .010    .010    .007    .007    .007    .010    .010    .007    .005    .007
2229          PI    .010    .012    .015    .025    .044    .062    .072    .064    .047    .032
2230          PI    .015    .005    .002    .002    .000    .000    .000    .000    .000    .002
2231          PI    .010    .012    .007    .005    .005    .002    .002    .002
2232          LS            76.1
2233          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2234          UI    138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
2235          UI    195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
2236          UI    57.1    57.1    39.1    38.4    38.4    30.7    21.5    21.5    21.5    21.6
2237          UI    21.5    19.7    12.3    12.3    12.3    12.3    12.3    12.3    12.3    12.3
2238          UI    12.3    12.3     9.3
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          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          2239          KK    CP13
          2240          KM   COMBINE CP12B, ONA
          2241          HC       2
                        *
          2242          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    28         M27
                V
                V
    68        RM27
                .
                .
    72          .        ONR
                .           .
                .           .
   111        CP25...........
                .
                .
   114          .        M22
                .           .
                .           .
   152          .           .        M21
                .           .           .
                .           .           .
   191          .           .           .        M23
                .           .           .           .
                .           .           .           .
   230          .           .           .           .        M25
                .           .           .           .           .
                .           .           .           .           .
   270          .        CP21...................................
                .           .
                .           .
   273          .           .        M24
                .           .           V
                .           .           V
   313          .           .        RM24
                .           .           .
                .           .           .
   317          .           .           .         M26
                .           .           .           .
                .           .           .           .
   357          .           .        CP22...........
                .           .           .
                .           .           .
   360          .        CP23...........
                .           V
                .           V
   363          .       RCP23
                .           .
                .           .
   367          .           .        ONQ
                .           .           .
                .           .           .
   408          .        CP24...........
                .           .
                .           .
   411      CPDUM1...........
                .
                .
   414          .         M12
                .           .
                .           .
   461          .           .         ONJ
                .           .           .
                .           .           .
   499          .           .           .         M11
                .           .           .           .
                .           .           .           .
   542          .           .           .           .         ONI
                .           .           .           .           .
                .           .           .           .           .
   580          .           .           .           .           .         M10
                .           .           .           .           .           .
                .           .           .           .           .           .
   620          .           .           .           .           .           .         ONH
                .           .           .           .           .           .           .
                .           .           .           .           .           .           .
   659          .         CP1..............................................................
                .           .
                .           .
   666          .           .------->     FS1
   662          .         DV1
                .           .
                .           .
   673          .           .------->     FS2
   669          .         DV2
                .           .
                .           .
   676          .           .         ONV
                .           .           .
                .           .           .
   714          .         CP2............
                .           .
                .           .
```

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 717          .           .         ONG
              .           .           .
              .           .           .
 755          .         CP3............
              .           .
              .           .
 758          .           .         ONK
              .           .           .
              .           .           .
 799          .           .           .         ONF
              .           .           .           .
              .           .           .           .
 838          .         CP4........................
              .           .
              .           .
 841      CPDUM2............
              .
              .
 847          .           .<-------     FS1
 844          .        RET1
              .           .
              .           .
 848          .           .          MX
              .           .           .
              .           .           .
 885          .        CP14............
              .           .
              .           .
 888          .           .         ONS
              .           .           .
              .           .           .
 926          .       CP14A............
              .           .
              .           .
 929          .           .         M17
              .           .           .
              .           .           .
 969          .        CP15............
              .           .
              .           .
 972          .           .        M18
              .           .           .
              .           .           .
1010          .           .           .        M20
              .           .           .          V
              .           .           .          V
1049          .           .           .       STOR1
              .           .           .          V
              .           .           .          V
1058          .           .           .        RM20
              .           .           .           .
              .           .           .           .
1062          .           .           .           .        M19
              .           .           .           .           .
              .           .           .           .           .
1100          .           .           .        CP16............
              .           .           .           .
              .           .           .           .
1103          .        CP17........................
              .           V
              .           V
1106          .       RCP17
              .           .
              .           .
1110          .           .        ONP
              .           .           .
              .           .           .
1151          .        CP18............
              .           .
              .           .
1154      CPDUM3............
              .
              .
1157          .         ONT
              .           V
              .           V
1195          .       RMONT
              .           .
              .           .
1199          .           .        ONO
              .           .           .
              .           .           .
1240          .        CP20............
              .           .
              .           .
1243      CPDUM4............
              .
              .
1246          .         ONU
              .           V
              .           V
1284          .       RMONU
              .           .
              .           .
1288          .           .        ONL
              .           .           .
              .           .           .
1329          .        CP19............
              .           .
              .           .
1332          .           .        ONM
              .           .           .
              .           .           .
1370          .           .           .        ONN
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1409      CPDUM5..................................
               .
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1412           .          M9
               .            .
               .            .
1457           .            .          M8
               .            .            .
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1499           .         CP5............
               .            .
               .            .
1504           .            .           .<-------     FS2
1502           .            .        RET2
               .            .            .
               .            .            .
1505           .         CP6............
               .            .
               .            .
1508           .            .          M7
               .            .            .
               .            .            .
1547           .            .            .        ONE1
               .            .            .           .
               .            .            .           .
1590           .            .        CP6A............
               .            .            .
               .            .            .
1593           .        CP6B............
               .            .
               .            .
1596           .            .        ONE2
               .            .            .
               .            .            .
1641           .         CP7............
               .            .
               .            .
1644           .            .          M6
               .            .            .
               .            .            .
1687           .            .            .         M5A
               .            .            .           .
               .            .            .           .
1726           .            .            .           .         M5B
               .            .            .           .           .
               .            .            .           .           .
1764           .            .         CP8........................
               .            .            .
               .            .            .
1767           .            .            .          M5
               .            .            .           .
               .            .            .           .
1807           .            .         CP9............
               .            .            .
               .            .            .
1810           .            .            .         ONB
               .            .            .           .
               .            .            .           .
1856           .            .        CP10............
               .            .            .
               .            .            .
1859           .            .            .         OND
               .            .            .           .
               .            .            .           .
1900           .            .            .           .         ONC
               .            .            .           .           .
               .            .            .           .           .
1939           .            .            .         CPA............
               .            .            .           .
               .            .            .           .
1942           .            .            .           .          M4
               .            .            .           .           .
               .            .            .           .           .
1991           .            .            .           .           .          M3
               .            .            .           .           .           .
               .            .            .           .           .           .
2032           .            .            .           .        CP11............
               .            .            .           .           .
               .            .            .           .           .
2035           .            .            .           .           .          M2
               .            .            .           .           .           .
               .            .            .           .           .           .
2091           .            .            .           .       CP12A............
               .            .            .           .           .
               .            .            .           .           .
2094           .            .            .           .           .         M13
               .            .            .           .           .           .
               .            .            .           .           .           .
2149           .            .            .           .           .           .-------->     FS3
2145           .            .            .           .           .         DV3
               .            .            .           .           .           .
               .            .            .           .           .           .
2152           .            .            .           .           .           .          M1
               .            .            .           .           .           .           .
               .            .            .           .           .           .           .
2192           .            .            .           .           .        CP12............
               .            .            .           .           .           .
               .            .            .           .           .           .
2195           .            .            .           .       CP12B............
               .            .            .           .           .
               .            .            .           .           .
2198           .            .            .           .           .         ONA
               .            .            .           .           .           .
               .            .            .           .           .           .
2239           .            .            .           .        CP13............
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *              JUN   1998              *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *            VERSION 4.1               *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  14:38:35  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                          ******************************************************
                          WO# 7323 - RIO MESA SOLAR
                          24-HR, 10-YR STORM
                          NOAA ATLAS 14- 24HR/10YR AVG PT RAINFALL DEPTH = 2.06"/2.19"
                          EXISTING CONDITION ANALYSIS
                          UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
                          STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
                          MODEL WITH NEW COMBINING SCHEME
                          ******************************************************
                          DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
                          REFERENCING RCFD & WCD PLATE E-5.8

                           AREA RANGE       DARF
                            (SQ.MI.)         --

                            0 TO 2.5  --->  1.000
                          2.5 TO  10  --->  0.990
                           10 TO  20  --->  0.980
                           20 TO  30  --->  0.970
                           30 TO  40  --->  0.965
                           40 TO  50  --->  0.955

                         ******************************************************

   26 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      7    0  ENDING DATE
                       NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL     .08 HOURS
                         TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                       NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00       .99       .98       .97       .96       .95
1

                PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                TIME TO PEAK IN HOURS


                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN            RATIO 1  RATIO 2  RATIO 3  RATIO 4  RATIO 5  RATIO 6
                                                       1.00      .99      .98      .97      .96      .95

 HYDROGRAPH AT
+                  M27       .22     1   FLOW          15.      15.      14.      14.      14.      13.
                                         TIME         15.08    15.08    15.08    15.08    15.08    15.08

 ROUTED TO
+                 RM27       .22     1   FLOW          15.      15.      14.      14.      14.      13.
                                         TIME         15.50    15.50    15.50    15.50    15.50    15.50

 HYDROGRAPH AT
+                  ONR       .27     1   FLOW          19.      18.      18.      18.      17.      17.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

   2 COMBINED AT
+                 CP25       .49     1   FLOW          32.      31.      31.      30.      30.      29.
                                         TIME         15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                 M22        .07     1   FLOW           8.       7.       7.       7.       7.       7.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                 M21        .17     1   FLOW          21.      20.      20.      20.      19.      19.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92
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| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT | | | | | | | | | | |
| + | M23 | .18 | 1 | FLOW | 21. | 21. | 21. | 20. | 20. | 20. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M25 | .15 | 1 | FLOW | 20. | 20. | 20. | 19. | 19. | 19. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 4 COMBINED AT | | | | | | | | | | |
| + | CP21 | .57 | 1 | FLOW | 70. | 68. | 67. | 66. | 66. | 65. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M24 | .66 | 1 | FLOW | 108. | 107. | 106. | 104. | 104. | 102. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO | | | | | | | | | | |
| + | RM24 | .66 | 1 | FLOW | 108. | 107. | 105. | 104. | 103. | 102. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M26 | .53 | 1 | FLOW | 45. | 44. | 43. | 42. | 42. | 41. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP22 | 1.19 | 1 | FLOW | 152. | 150. | 148. | 145. | 144. | 142. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP23 | 1.76 | 1 | FLOW | 218. | 215. | 212. | 209. | 207. | 204. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| ROUTED TO | | | | | | | | | | |
| + | RCP23 | 1.76 | 1 | FLOW | 218. | 215. | 212. | 208. | 207. | 203. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONQ | .66 | 1 | FLOW | 44. | 43. | 42. | 41. | 40. | 39. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP24 | 2.42 | 1 | FLOW | 261. | 256. | 252. | 248. | 246. | 241. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CPDUM1 | 2.91 | 1 | FLOW | 292. | 287. | 282. | 277. | 275. | 270. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M12 | 3.98 | 1 | FLOW | 453. | 446. | 440. | 433. | 430. | 423. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONJ | .07 | 1 | FLOW | 7. | 7. | 6. | 6. | 6. | 6. |
| | | | | TIME | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 | 14.83 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M11 | 1.30 | 1 | FLOW | 128. | 126. | 124. | 122. | 121. | 119. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONI | .05 | 1 | FLOW | 5. | 5. | 5. | 4. | 4. | 4. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M10 | .38 | 1 | FLOW | 34. | 34. | 33. | 32. | 32. | 31. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONH | .20 | 1 | FLOW | 21. | 21. | 20. | 20. | 20. | 19. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 6 COMBINED AT | | | | | | | | | | |
| + | CP1 | 5.98 | 1 | FLOW | 646. | 636. | 626. | 616. | 611. | 600. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS1 | 5.98 | 1 | FLOW | 23. | 22. | 22. | 22. | 21. | 21. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV1 | 5.98 | 1 | FLOW | 623. | 613. | 604. | 594. | 589. | 579. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS2 | 5.98 | 1 | FLOW | 376. | 370. | 364. | 358. | 355. | 349. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV2 | 5.98 | 1 | FLOW | 247. | 244. | 240. | 236. | 234. | 230. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONV | .12 | 1 | FLOW | 8. | 7. | 7. | 7. | 7. | 7. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP2 | 6.10 | 1 | FLOW | 255. | 251. | 247. | 243. | 241. | 237. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONG | .14 | 1 | FLOW | 9. | 8. | 8. | 8. | 8. | 8. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP3 | 6.24 | 1 | FLOW | 264. | 259. | 255. | 251. | 249. | 244. |

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                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONK       .68    1   FLOW         39.      38.      37.      36.      36.      35.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   ONF       .50    1   FLOW         30.      29.      29.      28.      28.      27.
                                          TIME        15.00    15.00    15.00    15.00    15.08    15.08

  3 COMBINED AT
+                   CP4      7.42    1   FLOW        332.     326.     320.     314.     312.     306.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                 CPDUM2    10.33    1   FLOW        621.     610.     599.     588.     582.     571.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                  RET1       .00    1   FLOW         23.      22.      22.      22.      21.      21.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    MX       .01    1   FLOW          2.       2.       2.       2.       2.       2.
                                          TIME        14.75    14.75    14.75    14.75    14.75    14.75

  2 COMBINED AT
+                  CP14       .01    1   FLOW         24.      24.      23.      23.      23.      22.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONS       .04    1   FLOW          3.       3.       3.       3.       3.       3.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                 CP14A       .05    1   FLOW         27.      27.      26.      26.      25.      25.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   M17       .67    1   FLOW         86.      84.      83.      82.      81.      80.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP15       .72    1   FLOW        112.     111.     109.     107.     106.     105.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                   M18       .12    1   FLOW         15.      15.      15.      14.      14.      14.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                   M20       .49    1   FLOW         79.      78.      77.      76.      75.      74.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 STOR1       .49    1   FLOW         14.      11.      11.      11.      11.      10.
                                          TIME        17.08    22.50    22.50    22.50    22.50    22.58
                                     ** PEAK STAGES IN FEET **
                                     1  STAGE       440.04   440.04   440.04   440.04   440.04   440.03
                                          TIME        17.08    22.50    22.50    22.50    22.50    22.50

 ROUTED TO
+                  RM20       .49    1   FLOW         14.      11.      11.      11.      11.      11.
                                          TIME        17.33    22.75    22.75    22.75    22.75    22.83

 HYDROGRAPH AT
+                   M19       .11    1   FLOW         14.      14.      13.      13.      13.      13.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP16       .60    1   FLOW         16.      14.      13.      13.      13.      13.
                                          TIME        17.33    14.92    14.92    14.92    14.92    14.92

  3 COMBINED AT
+                  CP17      1.44    1   FLOW        141.     139.     137.     135.     134.     131.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RCP17      1.44    1   FLOW        141.     138.     136.     134.     133.     131.
                                          TIME        15.33    15.33    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                   ONP      1.47    1   FLOW         95.      93.      91.      89.      88.      86.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP18      2.91    1   FLOW        234.     230.     225.     221.     219.     214.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

  2 COMBINED AT
+                CPDUM3     13.24    1   FLOW        853.     837.     822.     807.     799.     784.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   ONT       .04    1   FLOW          3.       3.       3.       3.       3.       3.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RMONT       .04    1   FLOW          3.       3.       3.       3.       3.       3.
                                          TIME        16.33    16.33    16.42    16.50    16.50    16.33

 HYDROGRAPH AT
+                   ONO       .55    1   FLOW         36.      35.      34.      33.      33.      32.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17
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  2 COMBINED AT
+                 CP20       .59    1   FLOW        38.     36.     36.     35.     34.     34.
                                        TIME     15.17   15.17   15.25   15.17   15.17   15.17

  2 COMBINED AT
+                CPDUM4     13.83    1   FLOW       890.    874.    857.    841.    834.    818.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                  ONU       .05    1   FLOW        4.      4.      3.      3.      3.      3.
                                        TIME     14.92   14.92   14.92   14.92   14.92   14.92

 ROUTED TO
+                RMONU       .05    1   FLOW        4.      3.      3.      3.      3.      3.
                                        TIME     16.25   16.25   16.25   16.25   16.25   16.25

 HYDROGRAPH AT
+                  ONL       .73    1   FLOW       48.     47.     46.     45.     44.     43.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

  2 COMBINED AT
+                 CP19       .78    1   FLOW       51.     49.     48.     47.     47.     45.
                                        TIME     15.17   15.17   15.08   15.17   15.17   15.17

 HYDROGRAPH AT
+                  ONM       .10    1   FLOW        7.      7.      7.      7.      7.      7.
                                        TIME     14.92   14.92   14.92   14.92   14.92   14.92

 HYDROGRAPH AT
+                  ONN       .08    1   FLOW        6.      5.      5.      5.      5.      5.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  4 COMBINED AT
+                CPDUM5     14.79    1   FLOW       953.    934.    916.    899.    891.    873.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                   M9      1.80    1   FLOW       203.    200.    197.    193.    192.    189.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M8      1.04    1   FLOW       122.    120.    119.    117.    116.    114.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

  2 COMBINED AT
+                  CP5      2.84    1   FLOW       325.    320.    315.    310.    307.    302.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                 RET2       .00    1   FLOW       376.    370.    364.    358.    355.    349.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  2 COMBINED AT
+                  CP6      2.84    1   FLOW       700.    689.    678.    668.    662.    651.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                   M7       .16    1   FLOW        14.     13.     13.     13.     13.     12.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                 ONE1      1.61    1   FLOW        97.     94.     92.     90.     89.     87.
                                        TIME     15.33   15.33   15.33   15.33   15.33   15.33

  2 COMBINED AT
+                 CP6A      1.77    1   FLOW       108.    106.    104.    101.    100.     98.
                                        TIME     15.25   15.25   15.25   15.25   15.25   15.25

  2 COMBINED AT
+                 CP6B      4.61    1   FLOW       806.    793.    780.    766.    760.    747.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                 ONE2      2.59    1   FLOW       156.    152.    149.    146.    144.    140.
                                        TIME     15.42   15.42   15.42   15.42   15.42   15.42

  2 COMBINED AT
+                  CP7      7.20    1   FLOW       953.    937.    920.    903.    895.    879.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M6      1.32    1   FLOW       140.    137.    135.    133.    132.    129.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  M5A       .17    1   FLOW        22.     21.     21.     21.     20.     20.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  M5B       .18    1   FLOW        23.     23.     23.     22.     22.     22.
                                        TIME     14.92   14.92   14.92   14.92   14.92   14.92

  3 COMBINED AT
+                  CP8      1.67    1   FLOW       184.    181.    178.    176.    174.    171.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                   M5       .39    1   FLOW        27.     27.     26.     26.     25.     25.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  2 COMBINED AT
+                  CP9      2.06    1   FLOW       212.    208.    205.    201.    199.    196.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  ONB      2.83    1   FLOW       155.    151.    148.    144.    142.    139.
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                                        TIME        15.50    15.50    15.50    15.50    15.50    15.50

  2 COMBINED AT
+                   CP10      4.89     1  FLOW         354.     347.     340.     333.     329.     323.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    OND      1.34     1  FLOW          76.      74.      73.      71.      70.      68.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    ONC       .30     1  FLOW          18.      18.      18.      17.      17.      17.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                    CPA      1.64     1  FLOW          94.      92.      89.      87.      86.      84.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                     M4      2.71     1  FLOW         272.     268.     263.     259.     257.     253.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M3       .57     1  FLOW          50.      49.      48.      47.      47.      46.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                   CP11      3.28     1  FLOW         322.     317.     312.     307.     304.     299.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M2     24.30     1  FLOW        2121.    2088.    2054.    2021.    2004.    1971.
                                          TIME        15.50    15.50    15.50    15.50    15.50    15.50

  2 COMBINED AT
+                  CP12A     27.58     1  FLOW        2424.    2385.    2347.    2309.    2290.    2251.
                                          TIME        15.42    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                    M13      7.18     1  FLOW         775.     764.     753.     742.     736.     725.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 DIVERSION TO
+                    FS3      7.18     1  FLOW         388.     382.     376.     371.     368.     362.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                    DV3      7.18     1  FLOW         388.     382.     376.     371.     368.     362.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                     M1       .76     1  FLOW          63.      61.      60.      59.      58.      57.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                   CP12      7.94     1  FLOW         449.     442.     435.     428.     425.     418.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP12B     35.52     1  FLOW        2864.    2819.    2773.    2728.    2706.    2661.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                    ONA       .87     1  FLOW          65.      64.      62.      61.      60.      59.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                   CP13     36.39     1  FLOW        2926.    2880.    2833.    2787.    2764.    2717.
1                                         TIME        15.33    15.33    15.33    15.33    15.33    15.33
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                  INTERPOLATED TO
                                                                                COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                              PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     14.97    930.00       .37      5.00     14.97    930.00         .37

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4375E+01 EXCESS= .0000E+00 OUTFLOW= .4378E+01 BASIN STORAGE= .6221E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     14.63    930.00       .36      5.00     14.63    930.00         .36

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4258E+01 EXCESS= .0000E+00 OUTFLOW= .4261E+01 BASIN STORAGE= .6144E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     14.29    930.00       .35      5.00     14.29    930.00         .35

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4142E+01 EXCESS= .0000E+00 OUTFLOW= .4144E+01 BASIN STORAGE= .5948E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     13.95    930.00       .34      5.00     13.95    930.00         .34

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4026E+01 EXCESS= .0000E+00 OUTFLOW= .4029E+01 BASIN STORAGE= .5882E-02 PERCENT ERROR=   -.2
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          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     13.78    930.00       .34      5.00     13.78    930.00         .34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3969E+01 EXCESS= .0000E+00 OUTFLOW= .3972E+01 BASIN STORAGE= .5835E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00     13.45    930.00       .33      5.00     13.45    930.00         .33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3856E+01 EXCESS= .0000E+00 OUTFLOW= .3859E+01 BASIN STORAGE= .5610E-02 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    108.02    915.00      1.35      5.00    108.02    915.00        1.35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4761E+02 EXCESS= .0000E+00 OUTFLOW= .4763E+02 BASIN STORAGE= .1164E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    106.67    915.00      1.33      5.00    106.67    915.00        1.33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4692E+02 EXCESS= .0000E+00 OUTFLOW= .4694E+02 BASIN STORAGE= .9483E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    105.33    915.00      1.31      5.00    105.33    915.00        1.31

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4624E+02 EXCESS= .0000E+00 OUTFLOW= .4625E+02 BASIN STORAGE= .9422E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    103.99    915.00      1.29      5.00    103.99    915.00        1.29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4555E+02 EXCESS= .0000E+00 OUTFLOW= .4556E+02 BASIN STORAGE= .9362E-02 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    103.32    915.00      1.28      5.00    103.32    915.00        1.28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4521E+02 EXCESS= .0000E+00 OUTFLOW= .4522E+02 BASIN STORAGE= .9330E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00    101.98    915.00      1.27      5.00    101.98    915.00        1.27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4452E+02 EXCESS= .0000E+00 OUTFLOW= .4454E+02 BASIN STORAGE= .9270E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    218.18    920.00       .93      5.00    218.18    920.00         .93

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8700E+02 EXCESS= .0000E+00 OUTFLOW= .8702E+02 BASIN STORAGE= .1046E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    214.89    920.00       .91      5.00    214.89    920.00         .91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8550E+02 EXCESS= .0000E+00 OUTFLOW= .8552E+02 BASIN STORAGE= .1103E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    211.59    920.00       .90      5.00    211.59    920.00         .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8401E+02 EXCESS= .0000E+00 OUTFLOW= .8402E+02 BASIN STORAGE= .1096E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    208.29    920.00       .88      5.00    208.29    920.00         .88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8252E+02 EXCESS= .0000E+00 OUTFLOW= .8254E+02 BASIN STORAGE= .1090E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    206.64    920.00       .87      5.00    206.64    920.00         .87

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8178E+02 EXCESS= .0000E+00 OUTFLOW= .8180E+02 BASIN STORAGE= .1087E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    203.35    920.00       .86      5.00    203.35    920.00         .86

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8030E+02 EXCESS= .0000E+00 OUTFLOW= .8032E+02 BASIN STORAGE= .1081E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.25     17.38   1028.75       .12      5.00     14.24   1040.00         .12

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3099E+01 EXCESS= .0000E+00 OUTFLOW= .3108E+01 BASIN STORAGE= .3246E-02 PERCENT ERROR=   -.4
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          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         2.00     12.76   1052.00       .10      5.00     11.15   1365.00         .10

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2598E+01 EXCESS= .0000E+00 OUTFLOW= .2606E+01 BASIN STORAGE= .3109E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         2.50     11.06   1367.50       .08      5.00     11.05   1365.00         .08

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2097E+01 EXCESS= .0000E+00 OUTFLOW= .2103E+01 BASIN STORAGE= .3253E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         2.75     10.94   1366.75       .06      5.00     10.87   1365.00         .06

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1597E+01 EXCESS= .0000E+00 OUTFLOW= .1600E+01 BASIN STORAGE= .3314E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         4.50     10.92   1368.00       .05      5.00     10.82   1365.00         .05

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1349E+01 EXCESS= .0000E+00 OUTFLOW= .1351E+01 BASIN STORAGE= .3130E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         1.75     11.78   1366.75       .03      5.00     10.82   1370.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8498E+00 EXCESS= .0000E+00 OUTFLOW= .8560E+00 BASIN STORAGE= .3091E-02 PERCENT ERROR=  -1.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    140.69    920.00       .74      5.00    140.69    920.00         .74

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5688E+02 EXCESS= .0000E+00 OUTFLOW= .5689E+02 BASIN STORAGE= .1228E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    138.46    920.00       .72      5.00    138.46    920.00         .72

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5538E+02 EXCESS= .0000E+00 OUTFLOW= .5540E+02 BASIN STORAGE= .1194E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    136.30    925.00       .70      5.00    136.30    925.00         .70

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5395E+02 EXCESS= .0000E+00 OUTFLOW= .5396E+02 BASIN STORAGE= .1162E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    134.15    925.00       .68      5.00    134.15    925.00         .68

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5248E+02 EXCESS= .0000E+00 OUTFLOW= .5249E+02 BASIN STORAGE= .1404E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    133.07    925.00       .67      5.00    133.07    925.00         .67

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5173E+02 EXCESS= .0000E+00 OUTFLOW= .5175E+02 BASIN STORAGE= .1398E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00    130.91    925.00       .65      5.00    130.91    925.00         .65

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5026E+02 EXCESS= .0000E+00 OUTFLOW= .5027E+02 BASIN STORAGE= .1345E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      2.92    980.00       .38      5.00      2.92    980.00         .38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7955E+00 EXCESS= .0000E+00 OUTFLOW= .8014E+00 BASIN STORAGE= .1172E-01 PERCENT ERROR=  -2.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      2.81    980.00       .37      5.00      2.81    980.00         .37

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7741E+00 EXCESS= .0000E+00 OUTFLOW= .7798E+00 BASIN STORAGE= .1164E-01 PERCENT ERROR=  -2.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      2.79    985.00       .36      5.00      2.79    985.00         .36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7530E+00 EXCESS= .0000E+00 OUTFLOW= .7586E+00 BASIN STORAGE= .1139E-01 PERCENT ERROR=  -2.3

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      2.75    990.00       .35      5.00      2.75    990.00         .35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7320E+00 EXCESS= .0000E+00 OUTFLOW= .7380E+00 BASIN STORAGE= .1113E-01 PERCENT ERROR=  -2.3

          FOR PLAN = 1  RATIO=  .00
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   RMONT  MANE         5.00      2.73    990.00       .34      5.00      2.73    990.00         .34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7217E+00 EXCESS= .0000E+00 OUTFLOW= .7277E+00 BASIN STORAGE= .1105E-01 PERCENT ERROR=  -2.4

     FOR PLAN = 1  RATIO=  .00
   RMONT  MANE         5.00      2.59    980.00       .33      5.00      2.59    980.00         .33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7010E+00 EXCESS= .0000E+00 OUTFLOW= .7069E+00 BASIN STORAGE= .1334E-01 PERCENT ERROR=  -2.7

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.58    975.00       .38      5.00      3.58    975.00         .38

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9946E+00 EXCESS= .0000E+00 OUTFLOW= .1000E+01 BASIN STORAGE= .1134E-01 PERCENT ERROR=  -1.7

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.49    975.00       .36      5.00      3.49    975.00         .36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9679E+00 EXCESS= .0000E+00 OUTFLOW= .9730E+00 BASIN STORAGE= .1126E-01 PERCENT ERROR=  -1.7

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.41    975.00       .36      5.00      3.41    975.00         .36

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9415E+00 EXCESS= .0000E+00 OUTFLOW= .9471E+00 BASIN STORAGE= .1108E-01 PERCENT ERROR=  -1.8

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.37    975.00       .35      5.00      3.37    975.00         .35

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9153E+00 EXCESS= .0000E+00 OUTFLOW= .9207E+00 BASIN STORAGE= .1101E-01 PERCENT ERROR=  -1.8

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.32    975.00       .34      5.00      3.32    975.00         .34

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9023E+00 EXCESS= .0000E+00 OUTFLOW= .9078E+00 BASIN STORAGE= .1098E-01 PERCENT ERROR=  -1.8

     FOR PLAN = 1  RATIO=  .00
   RMONU  MANE         5.00      3.21    975.00       .33      5.00      3.21    975.00         .33

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8765E+00 EXCESS= .0000E+00 OUTFLOW= .8816E+00 BASIN STORAGE= .1078E-01 PERCENT ERROR=  -1.8


*** NORMAL END OF HEC-1 ***
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1*************************************
 *                                   *
 *   L.A. DISTRICT HEC-1 PREPROCESSOR  *
 *              MARCH 1984           *
 *                                   *
 * LAST REVISED 13 JUL 1998   Ver 2.0  *
 *                                   *
 *  RUN DATE 06/28/2011  TIME 14:35:58 *
 *                                   *
 *************************************


               L          A     PPPPPP   RRRRRR   EEEEEEE   1
               L         A A    P     P  R     R  E        11
               L        A   A   P     P  R     R  E         1
               L       A     A  PPPPPP   RRRRRR   EEEEE     1
               L       AAAAAAA  P        R   R    E         1
               L       A     A  P        R    R   E         1
               LLLLLLL A     A  P        R     R  EEEEEEE  111

 ID ******************************************************

 ID WO# 7323 - RIO MESA SOLAR

 ID 24-HR, 10-YR STORM

 ID NOAA ATLAS 14- 24HR/10YR AVG PT RAINFALL DEPTH = 2.06"/2.19"

 ID EXISTING CONDITION ANALYSIS

 ID UNIT HYDROGRAPHS GENERATED FROM LAPRE-1

 ID STORM HYTEOGRAPHS GENERATED FROM LAPRE-1

 ID MODEL WITH NEW COMBINING SCHEME

 ID ******************************************************

 ID DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR

 ID REFERENCING RCFD & WCD PLATE E-5.8

 ID

 ID  AREA RANGE       DARF

 ID   (SQ.MI.)         --

 ID

 ID   0 TO 2.5  --->  1.000

 ID 2.5 TO  10  --->  0.990

 ID  10 TO  20  --->  0.980

 ID  20 TO  30  --->  0.970

 ID  30 TO  40  --->  0.965

 ID  40 TO  50  --->  0.955

 ID

 ID******************************************************

 TIME INTERVAL IS  0 HR  5 MIN

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 KK   M27

 AREA =    .22 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .2    2.19   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    1.17     .54   41.77    .035       9      .0     .00

   WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

  UNIT HYDROGRAPH  LH=  33  PERCENT LAG=   24.00  LAG=     .35  UG VOL.=   1703.
     53.    118.    307.    329.    202.    133.     95.     74.     59.     50.
     39.     33.     28.     25.     23.     19.     17.     13.     13.      9.
      7.      7.      7.      7.      5.      4.      4.      4.      4.      4.
      4.      4.      2.

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 KK  RM27

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 KK  ONR

 AREA =    .27 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .3    2.19   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
     .98     .37   68.37    .035       9      .0     .00
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  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   32.55  LAG=     .26  UG VOL.=   2090.
   102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
    38.     32.     25.     21.     15.     12.     12.     11.      7.      7.
     7.      7.      7.      7.

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KK  CP25

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KK  M22

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .20   86.00    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.14  LAG=     .16  UG VOL.=    542.
    66.    222.     95.     50.     32.     21.     16.     11.      8.      5.
     5.      3.      3.      3.      2.

==============================================================================

KK  M21

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .84     .37  831.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   55.49  LAG=     .15  UG VOL.=   1316.
   322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
    22.     19.     15.     14.     11.     11.      7.      4.      4.      4.
     4.      4.      4.      2.

==============================================================================

KK  M23

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.00     .45  900.44    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   48.94  LAG=     .17  UG VOL.=   1393.
   269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
    24.     21.     19.     17.     14.     13.     10.     10.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK  M25

AREA =    .15 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.05     .59  870.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  31  PERCENT LAG=   43.06  LAG=     .19  UG VOL.=   1161.
   178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
    20.     18.     16.     15.     13.     12.     10.     10.      7.      7.
     7.      4.      3.      3.      3.      3.      3.      3.      3.      3.
     0.

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KK  CP21

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KK  M24

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION
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     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.28     .58  998.98    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  32  PERCENT LAG=   41.27  LAG=     .20  UG VOL.=   5108.
   724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
    87.     79.     74.     65.     60.     55.     47.     42.     40.     30.
    30.     30.     16.     11.     11.     11.     11.     11.     11.     11.
    11.      6.

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KK  RM24

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KK   M26

AREA =    .53 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.59     .85   72.80    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  40  PERCENT LAG=   19.98  LAG=     .42  UG VOL.=   4102.
    97.    190.    396.    792.    575.    378.    279.    201.    165.    133.
   114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
    27.     26.     26.     18.     14.     14.     14.     14.     14.      8.
     8.      8.      8.      8.      8.      8.      8.      8.      8.      0.

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KK  CP22

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KK  CP23

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KK RCP23

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KK  ONQ

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.67     .93   63.88    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.49  LAG=     .45  UG VOL.=   5108.
   107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
   144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
    44.     40.     30.     30.     30.     19.     17.     17.     17.     17.
    17.     12.      9.      9.      9.      9.      9.      9.      9.      9.
     9.      9.      2.

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KK  CP24

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KKCPDUM1

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KK   M12

AREA =   3.98 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     4.0    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.91    2.42  301.01    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 105  PERCENT LAG=   12.49  LAG=     .67  UG VOL.=  30805.
   885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
   770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
   350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
   196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
   135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
   100.    100.    100.    100.     83.     76.     76.     76.     76.     76.
    76.     76.     63.     55.     55.     55.     55.     55.     55.     55.
    55.     55.     55.     38.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.      2.
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KK   ONJ

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .39     .16  418.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   89.63  LAG=     .09  UG VOL.=    542.
   248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
     4.      3.      3.      3.      1.

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KK   M11

AREA =   1.30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.46    1.24  351.38    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  66  PERCENT LAG=   19.78  LAG=     .42  UG VOL.=  10062.
   496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
   249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
    88.     85.     78.     78.     72.     70.     70.     62.     61.     61.
    55.     52.     52.     52.     43.     39.     39.     39.     39.     33.
    29.     29.     29.     29.     29.     29.     18.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      8.

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KK   ONI

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .36     .24  507.37    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  16  PERCENT LAG=   82.16  LAG=     .10  UG VOL.=    387.
   165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
     5.      2.      2.      2.      2.      1.

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KK   M10

AREA =    .38 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.51     .67   74.89    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  35  PERCENT LAG=   22.43  LAG=     .37  UG VOL.=   2941.
    82.    175.    428.    584.    380.    247.    170.    135.    106.     91.
    75.     60.     53.     45.     40.     37.     31.     30.     21.     21.
    19.     12.     12.     12.     12.     11.      7.      7.      7.      7.
     7.      7.      7.      7.      5.

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KK   ONH

AREA =    .20 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .70     .30  202.53    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   49.24  LAG=     .17  UG VOL.=   1548.
   302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
    26.     23.     21.     19.     15.     14.     11.     11.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK   CP1
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KK   DV1

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KK   DV2

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KK   ONV

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .49     .25  103.16    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.16  LAG=     .16  UG VOL.=    929.
   112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
     8.      5.      5.      5.      3.

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KK   CP2

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KK   ONG

AREA =    .14 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .73     .28   70.34    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   40.69  LAG=     .20  UG VOL.=   1084.
    78.    322.    250.    124.     77.     56.     38.     30.     24.     20.
    14.     10.      8.      8.      5.      4.      4.      4.      4.      1.

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KK   CP3

================================================================================

KK   ONK

AREA =    .68 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.87     .93   77.12    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.36  LAG=     .45  UG VOL.=   5263.
   109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
   151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
    45.     43.     30.     30.     30.     22.     17.     17.     17.     17.
    17.     14.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.      5.

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KK   ONF

AREA =    .50 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.22     .46   85.02    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  28  PERCENT LAG=   28.74  LAG=     .29  UG VOL.=   3870.
   153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
    77.     65.     57.     52.     35.     35.     23.     20.     20.     20.
    13.     11.     11.     11.     11.     11.     11.      2.

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KK   CP4

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KKCPDUM2

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KK  RET1

================================================================================

KK    MX

AREA =    .01 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .14     .06 1525.43    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=   6  PERCENT LAG=  245.56  LAG=     .03  UG VOL.=     77.
    58.     11.      5.      2.      1.      0.

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KK  CP14

================================================================================

KK   ONS

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .31  115.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  17  PERCENT LAG=   47.60  LAG=     .18  UG VOL.=    310.
    30.    114.     62.     31.     20.     13.     10.      8.      6.      4.
     3.      3.      2.      1.      1.      1.      1.

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KK CP14A

================================================================================

KK   M17

AREA =    .67 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .54  494.88    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  38  PERCENT LAG=   34.76  LAG=     .24  UG VOL.=   5186.
   564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
    97.     80.     74.     69.     63.     59.     55.     49.     47.     41.
    36.     36.     30.     26.     26.     26.     16.      9.      9.      9.
     9.      9.      9.      9.      9.      9.      9.      4.

================================================================================

KK  CP15

================================================================================

KK  M18

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .89     .32  152.41    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  19  PERCENT LAG=   41.55  LAG=     .20  UG VOL.=    929.
    70.    284.    213.    104.     65.     47.     33.     25.     20.     16.
    12.      8.      7.      7.      4.      4.      4.      4.      3.

================================================================================

KK  M20

AREA =    .49 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.07     .48  734.10    .035       1      .0     .00

  MOUNTAIN S-GRAPH
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 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   44.77  LAG=     .19  UG VOL.=   3793.
   626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
    64.     59.     52.     48.     44.     35.     34.     28.     24.     24.
    17.      9.      9.      9.      9.      9.      9.      9.      9.      0.

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KK STOR1

================================================================================

KK  RM20

================================================================================

KK  M19

AREA =    .11 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .67     .19  140.33    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   55.55  LAG=     .15  UG VOL.=    851.
   117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
     6.      5.      5.      5.      0.

================================================================================

KK  CP16

================================================================================

KK  CP17

================================================================================

KK RCP17

================================================================================

KK  ONP

AREA =   1.47 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.5    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.14    1.09   74.90    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  48  PERCENT LAG=   16.33  LAG=     .51  UG VOL.=  11378.
   206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
   366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
   103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
    33.     33.     33.     33.     33.     26.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     14.

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KK  CP18

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KKCPDUM3

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KK   ONT

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .51     .16   72.94    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   58.08  LAG=     .14  UG VOL.=    310.
    48.    131.     50.     27.     16.     11.      8.      6.      3.      3.
     2.      2.      2.      1.

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KK RMONT

================================================================================

KK  ONO

AREA =    .55 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    2.19   .0000     .00     .00     .00     .00
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      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.08    1.06   79.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  47  PERCENT LAG=   16.86  LAG=     .49  UG VOL.=   4257.
    80.    141.    249.    529.    675.    480.    333.    261.    187.    161.
   135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
    40.     35.     33.     32.     22.     22.     22.     19.     13.     13.
    13.     13.     13.     13.      9.      7.      7.      7.      7.      7.
     7.      7.      7.      7.      7.      7.      2.

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KK  CP20

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KKCPDUM4

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KK   ONU

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .48     .19   77.62    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   56.34  LAG=     .15  UG VOL.=    387.
    55.    163.     64.     34.     21.     14.     11.      7.      5.      4.
     3.      2.      2.      2.

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KK RMONU

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KK  ONL

AREA =    .73 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.99     .84   83.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  42  PERCENT LAG=   18.91  LAG=     .44  UG VOL.=   5650.
   122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
   159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
    50.     38.     33.     33.     28.     19.     19.     19.     19.     19.
    16.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.      3.

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KK  CP19

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KK  ONM

AREA =    .10 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .35     .25  215.67    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  12  PERCENT LAG=   69.50  LAG=     .12  UG VOL.=    774.
   197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
     5.      1.

================================================================================

KK  ONN

AREA =    .08 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    2.19   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .52   83.15    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  29  PERCENT LAG=   27.06  LAG=     .31  UG VOL.=    619.
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```
    23.     56.    149.    107.     65.     42.     32.     24.     20.     15.
    13.     11.      9.      8.      7.      5.      5.      3.      3.      3.
     3.      2.      2.      2.      2.      2.      2.      2.      1.

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KKCPDUM5

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KK    M9

AREA =   1.80 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.8    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.17    1.95  284.58    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  90  PERCENT LAG=   14.53  LAG=     .57  UG VOL.=  13932.
   471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
   364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
   145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
    79.     79.     79.     71.     71.     71.     70.     62.     62.     62.
    62.     56.     53.     53.     53.     53.     48.     40.     40.     40.
    40.     40.     40.     36.     29.     29.     29.     29.     29.     29.
    29.     29.     29.     14.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.      5.

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KK    M8

AREA =   1.04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.0    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.02     .81  248.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  56  PERCENT LAG=   23.47  LAG=     .36  UG VOL.=   8050.
   495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
   177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
    69.     66.     65.     58.     58.     55.     49.     49.     48.     37.
    37.     37.     37.     29.     27.     27.     27.     27.     27.     12.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      4.

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KK   CP5

==============================================================================

KK  RET2

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KK   CP6

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KK    M7

AREA =    .16 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .97     .43  113.71    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  23  PERCENT LAG=   34.00  LAG=     .25  UG VOL.=   1238.
    65.    232.    334.    172.    101.     71.     54.     40.     32.     26.
    22.     18.     13.     11.      7.      7.      7.      4.      4.      4.
     4.      4.      4.

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KK  ONE1

AREA =   1.61 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.6    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.15    1.46   52.35    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  67  PERCENT LAG=   11.78  LAG=     .71  UG VOL.=  12461.
   163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
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   566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
   159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
    74.     68.     68.     68.     48.     46.     46.     46.     46.     37.
    26.     26.     26.     26.     26.     26.     26.     26.     26.     17.
    15.     15.     15.     15.     15.     15.     15.     15.     15.     15.
    15.     15.     15.     15.     15.     15.      3.

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KK  CP6A

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KK  CP6B

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KK  ONE2

AREA =   2.59 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.6    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.20    2.08   58.07    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  83  PERCENT LAG=    9.42  LAG=     .88  UG VOL.=  20047.
   210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
  1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
   290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
   151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
    88.     88.     79.     59.     59.     59.     59.     59.     59.     45.
    33.     33.     33.     33.     33.     33.     33.     33.     33.     33.
    33.     27.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     15.

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KK   CP7

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KK    M6

AREA =   1.32 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.35    1.10  223.90    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  68  PERCENT LAG=   19.33  LAG=     .43  UG VOL.=  10217.
   488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
   247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
    88.     88.     79.     77.     76.     69.     69.     67.     61.     61.
    61.     52.     51.     51.     51.     40.     39.     39.     39.     39.
    32.     28.     28.     28.     28.     28.     28.     19.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.      2.

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KK   M5A

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.24     .50   64.29    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   26.24  LAG=     .32  UG VOL.=   1316.
    46.    109.    302.    234.    144.     91.     69.     52.     44.     34.
    28.     24.     20.     18.     16.     12.     11.     10.      6.      6.
     6.      6.      4.      3.      3.      3.      3.      3.      3.      3.

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KK   M5B

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .64     .26   38.95    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   39.33  LAG=     .21  UG VOL.=   1393.
    94.    388.    331.    166.    102.     73.     52.     40.     32.     26.
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    19.     16.     10.     10.      9.      5.      5.      5.      5.      5.

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KK   CP8

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KK    M5

AREA =    .39 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .62   57.53    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.60  LAG=     .35  UG VOL.=   3019.
    91.    201.    517.    588.    366.    241.    170.    133.    105.     90.
    71.     60.     51.     45.     40.     34.     33.     23.     22.     20.
    13.     13.     13.     13.     10.      7.      7.      7.      7.      7.
     7.      7.      7.      0.

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KK   CP9

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KK   ONB

AREA =   2.83 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.8    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.50    2.15   45.11    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  91  PERCENT LAG=    8.64  LAG=     .96  UG VOL.=  21904.
   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
    59.     59.     59.     58.     33.     33.     33.     33.     33.     33.
    33.     33.     33.     33.     33.     33.     33.     21.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
     6.

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KK  CP10

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KK   OND

AREA =   1.34 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.75    1.04   68.49    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  45  PERCENT LAG=   17.64  LAG=     .47  UG VOL.=  10372.
   203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
   309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
    91.     85.     79.     57.     57.     57.     43.     32.     32.     32.
    32.     32.     30.     18.     18.     18.     18.     18.     18.     18.
    18.     18.     18.     18.      4.

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KK   ONC

AREA =    .30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .3    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .80     .21   32.43    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  21  PERCENT LAG=   37.84  LAG=     .22  UG VOL.=   2322.
   146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
    36.     27.     19.     15.     15.     11.      9.      9.      9.      9.
     5.

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KK   CPA

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KK    M4

AREA =   2.71 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.7    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.74    2.49  165.93    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 127  PERCENT LAG=   10.26  LAG=     .81  UG VOL.=  20975.
   485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
   649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
   269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
   152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
    96.     93.     84.     84.     84.     84.     82.     75.     75.     75.
    75.     75.     69.     66.     66.     66.     66.     66.     62.     56.
    56.     56.     56.     56.     56.     56.     44.     43.     43.     43.
    43.     43.     43.     43.     43.     42.     31.     31.     31.     31.
    31.     31.     31.     31.     31.     31.     31.     31.     31.     21.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.      9.

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KK    M3

AREA =    .57 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.94     .97   77.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  44  PERCENT LAG=   17.84  LAG=     .47  UG VOL.=   4412.
    87.    163.    295.    663.    681.    473.    337.    244.    191.    159.
   130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
    37.     37.     31.     25.     25.     25.     15.     14.     14.     14.
    14.     14.     11.      8.      8.      8.      8.      8.      8.      8.
     8.      8.      8.      6.

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KK  CP11

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KK CP12A

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KK   M13

AREA =   7.18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     7.2    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   6.22    3.99  171.11    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 168  PERCENT LAG=    7.78  LAG=    1.07  UG VOL.=  55573.
   961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
  2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
   718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
   432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
   301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
   192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
   170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
   133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
   112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
    86.     86.     86.     86.     86.     86.     86.     86.     86.     86.
    66.     62.     62.     62.     62.     62.     62.     62.     62.     62.
    62.     62.     62.     62.     62.     62.     62.     62.     24.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.      3.
    WARNING!!!!! THE UNIT HYDROGRAPH COMPUTED BY    LAPRE1 IS GREATER THAN 150
ORDINATES.
     ONLY THE FIRST 150 ORDINATES WILL BE USED ON    THE UI CARDS OF THE SUBSEQ
UENT HEC-1 RUN.

================================================================================

KK   DV3

================================================================================
```

```
KK    M1

AREA =    .76 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .8    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .50   53.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.48  LAG=     .35  UG VOL.=   5882.
   176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
   139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
    24.     24.     24.     24.     21.     14.     14.     14.     14.     14.
    14.     14.     14.      3.

================================================================================

KK  CP12

================================================================================

KK CP12B

================================================================================

KK   ONA

AREA =    .87 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .9    2.06   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.77     .83   53.25    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.24  LAG=     .46  UG VOL.=   6734.
   138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
   195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
    57.     57.     39.     38.     38.     31.     22.     22.     22.     22.
    22.     20.     12.     12.     12.     12.     12.     12.     12.     12.
    12.     12.      9.

================================================================================

KK  CP13
```

# APPENDIX A:

## iv. 24-Hour, 5-Year Storm

```
1****************************************              ****************************************
 *                                      *              *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *              *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *              *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *              *          609 SECOND STREET           *
 *                                      *              *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  14:59:57  *              *          (916) 756-1104              *
 *                                      *              *                                      *
****************************************              ****************************************


                    X     X  XXXXXXX   XXXXX          X
                    X     X  X        X     X        XX
                    X     X  X        X               X
                    XXXXXXX  XXXX     X       XXXXX   X
                    X     X  X        X               X
                    X     X  X        X     X         X
                    X     X  XXXXXXX   XXXXX         XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM


1                                          HEC-1 INPUT                                         PAGE  1

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                       *DIAGRAM
           1           ID   *******************************************************
           2           ID   WO# 7323 - RIO MESA SOLAR
           3           ID   24-HR, 5-YR STORM
           4           ID   NOAA ATLAS 14- 24HR/5YR AVG PT RAINFALL DEPTH = 1.66"/1.73"
           5           ID   EXISTING CONDITION ANALYSIS
           6           ID   UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
           7           ID   STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
           8           ID   MODEL WITH NEW COMBINING SCHEME
           9           ID   *******************************************************
          10           ID   DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
          11           ID   REFERENCING RCFD & WCD PLATE E-5.8
          12           ID
          13           ID    AREA RANGE       DARF
          14           ID     (SQ.MI.)         --
          15           ID
          16           ID     0 TO 2.5  --->  1.000
          17           ID   2.5 TO  10  --->  0.990
          18           ID    10 TO  20  --->  0.980
          19           ID    20 TO  30  --->  0.970
          20           ID    30 TO  40  --->  0.965
          21           ID    40 TO  50  --->  0.955
          22           ID
          23           ID  ********************************************************
          24           IT       5       0       0    2000
          25           IN       5       0       0
          26           IO       5       0       0
          27           JR    PREC   1.000   0.990   0.980   0.970   0.965   0.955
                       *

          28           KK    M27
          29           KM   EXISTING OFFSITE BASIN
          30           BA    0.22
          31           KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
          32           PB    1.73
          33           PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
          34           PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
          35           PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
          36           PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
          37           PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
          38           PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
          39           PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
          40           PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
          41           PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
          42           PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
          43           PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
          44           PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
          45           PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
          46           PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
          47           PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
          48           PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
          49           PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
          50           PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
          51           PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
          52           PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1                                          HEC-1 INPUT                                         PAGE  2

         LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

          53           PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
          54           PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
          55           PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
          56           PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
          57           PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
          58           PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
          59           PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
          60           PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
          61           PI    .008    .010    .006    .004    .004    .002    .002    .002
```

```
 62          LS            71.9
 63          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 64          UI    52.6   117.7   306.7   329.2   202.0   132.8    95.3    73.6    59.2    49.9
 65          UI    39.2    33.4    28.4    24.8    22.5    19.0    17.4    12.8    12.8     9.5
 66          UI     7.2     7.2     7.2     7.2     4.6     4.1     4.1     4.1     4.1     4.1
 67          UI     4.1     4.1     2.0
             *

 68          KK    RM27
 69          KM   ROUTE M27 TO ONR
 70          KM   EXISTING WASH
 71          RD    5175   0.013   0.035       0    TRAP      20       3
             *

 72          KK    ONR
 73          KM   EXISTING ONSITE BASIN
 74          BA    0.27
 75          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 76          PB    1.73
 77          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 78          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 79          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 80          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 81          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 82          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 83          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 84          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 85          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 86          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 87          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 88          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 89          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 90          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 91          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 92          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 93          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 94          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 95          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 96          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 97          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 98          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 99          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
100          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
101          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
102          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
103          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1                                          HEC-1 INPUT                                                PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

104          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
105          PI    .008    .010    .006    .004    .004    .002    .002    .002
106          LS            71.9
107          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
108          UI    102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
109          UI    37.8    31.8    24.9    21.3    14.9    11.9    11.9    11.0     6.8     6.8
110          UI     6.8     6.8     6.8     6.5
             *

111          KK    CP25
112          KM   COMBINE M27, ONR
113          HC       2
             *

114          KK    M22
115          KM   EXISTING OFFSITE BASIN
116          BA    0.07
117          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
118          PB    1.73
119          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
120          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
121          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
122          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
123          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
124          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
125          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
126          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
127          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
128          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
129          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
130          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
131          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
132          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
133          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
134          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
135          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
136          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
137          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
138          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
139          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
140          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
141          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
142          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
143          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
144          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
145          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
146          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
147          PI    .008    .010    .006    .004    .004    .002    .002    .002
148          LS            79.7
149          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
150          UI    65.5   222.4    95.5    49.7    31.7    21.3    15.6    11.5     8.1     5.1
151          UI     4.9     2.9     2.9     2.9     2.0
             *
1                                          HEC-1 INPUT                                                PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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```
 152          KK    M21
 153          KM   EXISTING OFFSITE BASIN
 154          BA    0.17
 155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 156          PB    1.73
 157          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 158          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 159          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 160          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 161          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 162          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 163          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 164          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 165          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 166          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 167          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 168          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 169          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 170          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 171          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 172          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 173          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 174          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 175          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 176          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 177          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 178          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 179          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 180          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 181          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 182          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 183          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 184          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 185          PI    .008    .010    .006    .004    .004    .002    .002    .002
 186          LS            82.5
 187          KM   UHG FROM MOUNTAIN S-GRAPH
 188          UI    322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
 189          UI    21.9    19.0    15.4    14.5    10.7    10.5     7.5     3.8     3.8     3.8
 190          UI     3.8     3.8     3.8     1.6
              *

 191          KK    M23
 192          KM   EXISTING OFFSITE BASIN
 193          BA    0.18
 194          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 195          PB    1.73
 196          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 197          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 198          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 199          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 200          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 201          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 202          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 203          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
```



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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 204          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 205          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 206          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 207          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 208          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 209          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 210          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 211          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 212          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 213          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 214          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 215          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 216          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 217          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 218          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 219          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 220          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 221          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 222          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 223          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 224          PI    .008    .010    .006    .004    .004    .002    .002    .002
 225          LS            82.1
 226          KM   UHG FROM MOUNTAIN S-GRAPH
 227          UI    269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
 228          UI    23.8    21.0    18.6    17.1    13.5    13.2     9.8     9.8     8.3     3.6
 229          UI     3.6     3.6     3.6     3.6     3.6     3.6     2.0
              *

 230          KK    M25
 231          KM   EXISTING OFFSITE BASIN
 232          BA    0.15
 233          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 234          PB    1.73
 235          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 236          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 237          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 238          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 239          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 240          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 241          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 242          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 243          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 244          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 245          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 246          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 247          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
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 248          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 249          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 250          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 251          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 252          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 253          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 254          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 255          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 256          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1                                          HEC-1 INPUT                                                PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 258          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 259          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 260          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 261          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 262          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 263          PI    .008    .010    .006    .004    .004    .002    .002    .002
 264          LS            85.4
 265          KM   UHG FROM MOUNTAIN S-GRAPH
 266          UI    178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
 267          UI    19.6    17.8    16.3    15.3    13.0    12.2     9.9     9.9     7.4     7.2
 268          UI     7.2     4.1     2.6     2.6     2.6     2.6     2.6     2.6     2.6     2.6
 269          UI      .0
              *

 270          KK    CP21
 271          KM   COMBINE M22, M21, M23, M25
 272          HC       4
              *

 273          KK    M24
 274          KM   EXISTING OFFSITE BASIN
 275          BA    0.66
 276          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 277          PB    1.73
 278          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 279          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 280          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 281          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 282          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 283          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 284          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 285          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 286          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 287          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 288          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 289          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 290          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 291          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 292          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 293          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 294          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 295          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 296          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 297          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 298          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 299          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 300          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 301          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 302          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 303          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 304          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 305          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 306          PI    .008    .010    .006    .004    .004    .002    .002    .002
 307          LS            91.3
1                                          HEC-1 INPUT                                                PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          KM   UHG FROM MOUNTAIN S-GRAPH
 309          UI    724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
 310          UI    86.8    79.3    73.9    64.9    60.5    54.8    47.3    41.7    40.3    30.3
 311          UI    30.3    30.3    15.8    11.0    11.0    11.0    11.0    11.0    11.0    11.0
 312          UI    11.0     5.5
              *

 313          KK    RM24
 314          KM   ROUTE M24 TO M26
 315          KM   EXISTING WASH
 316          RD    8410   0.014   0.035       0    TRAP      20       3
              *

 317          KK     M26
 318          KM   EXISTING OFFSITE BASIN
 319          BA    0.53
 320          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 321          PB    1.73
 322          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 323          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 324          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 325          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 326          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 327          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 328          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 329          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 330          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 331          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 332          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 333          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 334          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 335          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 336          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 337          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
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 338          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 339          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 340          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 341          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 342          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 343          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 344          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 345          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 346          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 347          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 348          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 349          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 350          PI    .008    .010    .006    .004    .004    .002    .002    .002
 351          LS            75.9
 352          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 353          UI    96.8   189.8   395.5   791.6   574.8   378.1   279.2   200.7   165.0   132.8
 354          UI    114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
 355          UI    27.1    25.6    25.6    18.0    14.4    14.4    14.4    14.4    14.4     8.4
 356          UI     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2      .0
              *
1                                          HEC-1 INPUT                                                PAGE  8

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


 357          KK    CP22
 358          KM   COMBINE M24, M26
 359          HC       2
              *

 360          KK    CP23
 361          KM   COMBINE CP21, CP22
 362          HC       2
              *

 363          KK   RCP23
 364          KM   ROUTE CP23 TO ONQ
 365          KM   EXISTING WASH
 366          RD    8840   0.012   0.035       0    TRAP      20       3
              *

 367          KK    ONQ
 368          KM   EXISTING ONSITE BASIN
 369          BA    0.66
 370          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 371          PB    1.73
 372          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 373          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 374          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 375          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 376          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 377          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 378          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 379          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 380          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 381          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 382          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 383          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 384          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 385          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 386          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 387          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 388          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 389          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 390          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 391          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 392          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 393          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 394          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 395          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 396          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 397          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 398          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 399          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 400          PI    .008    .010    .006    .004    .004    .002    .002    .002
 401          LS            71.9
 402          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 403          UI    107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
 404          UI    144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
1                                          HEC-1 INPUT                                                PAGE  9

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 405          UI    43.9    40.2    29.5    29.5    29.5    19.2    16.6    16.6    16.6    16.6
 406          UI    16.6    12.1     9.4     9.4     9.4     9.4     9.4     9.4     9.4     9.4
 407          UI     9.4     9.4     1.8
              *

 408          KK    CP24
 409          KM   COMBINE CP23, ONQ
 410          HC       2
              *

 411          KK  CPDUM1
 412          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 413          HC       2
              *

 414          KK     M12
 415          KM   EXISTING OFFSITE BASIN
 416          BA    3.98
 417          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 418          PB    1.66
 419          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 420          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 421          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
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 422          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 423          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 424          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 425          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 426          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 427          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 428          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 429          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 430          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 431          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 432          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 433          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 434          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 435          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 436          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 437          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 438          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 439          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 440          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 441          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 442          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 443          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 444          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 445          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 446          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 447          PI    .008    .010    .006    .004    .004    .002    .002    .002
 448          LS            87.1
 449          KM   UHG FROM MOUNTAIN S-GRAPH
 450          UI    885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
 451          UI    770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
 452          UI    350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
 453          UI    196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 454          UI    135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
 455          UI    99.9    99.9    99.9    99.9    82.8    76.2    76.2    76.2    76.2    76.2
 456          UI    76.2    76.2    63.0    55.4    55.4    55.4    55.4    55.4    55.4    55.4
 457          UI    55.4    55.4    55.4    37.5    20.1    20.1    20.1    20.1    20.1    20.1
 458          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 459          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 460          UI    20.1    20.1    20.1    20.1     1.5
              *

 461          KK     ONJ
 462          KM   EXISTING ONSITE BASIN
 463          BA    0.07
 464          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 465          PB    1.66
 466          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 467          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 468          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 469          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 470          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 471          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 472          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 473          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 474          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 475          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 476          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 477          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 478          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 479          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 480          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 481          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 482          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 483          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 484          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 485          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 486          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 487          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 488          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 489          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 490          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 491          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 492          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 493          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 494          PI    .008    .010    .006    .004    .004    .002    .002    .002
 495          LS            79.4
 496          KM   UHG FROM MOUNTAIN S-GRAPH
 497          UI    248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
 498          UI     3.6     2.5     2.5     2.5     1.3
              *

 499          KK     M11
 500          KM   EXISTING OFFSITE BASIN
 501          BA    1.30
 502          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 503          PB    1.66
 504          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1                                          HEC-1 INPUT                                                PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 505          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 506          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 507          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 508          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 509          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 510          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 511          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 512          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 513          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 514          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 515          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
```

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 516          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 517          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 518          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 519          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 520          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 521          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 522          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 523          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 524          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 525          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 526          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 527          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 528          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 529          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 530          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 531          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 532          PI    .008    .010    .006    .004    .004    .002    .002    .002
 533          LS            82.3
 534          KM   UHG FROM MOUNTAIN S-GRAPH
 535          UI    496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
 536          UI    249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
 537          UI    88.4    84.7    78.0    78.0    71.6    69.8    69.8    62.1    61.2    61.2
 538          UI    55.4    51.7    51.7    51.7    42.9    39.4    39.4    39.4    39.4    32.8
 539          UI    28.6    28.6    28.6    28.6    28.6    28.6    18.0    10.4    10.4    10.4
 540          UI    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4
 541          UI    10.4    10.4    10.4    10.4    10.4     7.6
              *

 542          KK     ONI
 543          KM   EXISTING ONSITE BASIN
 544          BA    0.05
 545          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 546          PB    1.66
 547          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 548          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 549          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 550          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 551          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 552          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 553          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 554          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 555          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 556          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 557          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1                                          HEC-1 INPUT                                              PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 558          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 559          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 560          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 561          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 562          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 563          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 564          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 565          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 566          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 567          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 568          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 569          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 570          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 571          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 572          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 573          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 574          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 575          PI    .008    .010    .006    .004    .004    .002    .002    .002
 576          LS            79.1
 577          KM   UHG FROM MOUNTAIN S-GRAPH
 578          UI    165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
 579          UI     4.6     2.2     1.7     1.7     1.7     1.4
              *

 580          KK     M10
 581          KM   EXISTING OFFSITE BASIN
 582          BA    0.38
 583          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 584          PB    1.66
 585          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 586          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 587          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 588          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 589          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 590          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 591          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 592          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 593          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 594          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 595          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 596          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 597          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 598          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 599          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 600          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 601          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 602          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 603          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 604          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 605          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 606          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 607          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 608          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 609          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 610          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1                                          HEC-1 INPUT                                              PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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611          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
612          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
613          PI    .008    .010    .006    .004    .004    .002    .002    .002
614          LS          79.1
615          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
616          UI    82.5   174.6   427.6   584.1   379.9   246.8   169.8   134.8   106.0    91.1
617          UI    75.3    59.6    52.8    44.5    39.6    36.6    30.7    29.9    20.6    20.6
618          UI    18.6    11.6    11.6    11.6    11.6    10.9     6.6     6.6     6.6     6.6
619          UI     6.6     6.6     6.6     6.6     5.1
             *

620          KK     ONH
621          KM   EXISTING ONSITE BASIN
622          BA    0.20
623          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
624          PB    1.66
625          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
626          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
627          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
628          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
629          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
630          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
631          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
632          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
633          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
634          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
635          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
636          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
637          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
638          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
639          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
640          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
641          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
642          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
643          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
644          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
645          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
646          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
647          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
648          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
649          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
650          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
651          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
652          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
653          PI    .008    .010    .006    .004    .004    .002    .002    .002
654          LS          81.7
655          KM   UHG FROM MOUNTAIN S-GRAPH
656          UI    302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
657          UI    26.4    23.5    20.5    18.7    15.1    14.4    11.0    11.0     8.5     4.0
658          UI     4.0     4.0     4.0     4.0     4.0     4.0     1.6
             *
1                                                HEC-1 INPUT                                                PAGE 14

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


659          KK     CP1
660          KM   COMBINE M12, ONJ, M11, ONI, M10, ONH
661          HC       6
             *

662          KK     DV1
663          KM   FLOWSPLIT DIVERSION FROM CP1
664          KM   2.9% OF BASIN FLOW DIVERTS "OUT" NORTH-EAST, TO "WASH 70"
665          KM   97.1% OF BASIN FLOW TO CONTINUE SOUTH
666          DT     FS1
667          DI     100
668          DQ     2.9
             *

669          KK     DV2
670          KM   FLOWSPLIT DIVERSION FROM DV1
671          KM   59.6% OF BASIN FLOW DIVERTS "OUT" SOUTH, TO "WASH 25B"
672          KM   40.4% OF BASIN FLOW TO CONTINUE EAST, TO "WASH 0"
673          DT     FS2
674          DI     100
675          DQ    59.6
             *

676          KK     ONV
677          KM   EXISTING ONSITE BASIN
678          BA    0.12
679          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
680          PB    1.66
681          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
682          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
683          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
684          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
685          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
686          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
687          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
688          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
689          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
690          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
691          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
692          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
693          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
694          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
695          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
696          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
697          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
698          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
699          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
700          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
701          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
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 702          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 703          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 704          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 705          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 706          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1                                          HEC-1 INPUT                                                PAGE 15

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 707          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 708          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 709          PI    .008    .010    .006    .004    .004    .002    .002    .002
 710          LS            72.0
 711          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 712          UI    112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
 713          UI     8.3     4.9     4.9     4.9     3.3
              *

 714          KK     CP2
 715          KM   COMBINE CP1, ONV
 716          HC       2
              *

 717          KK     ONG
 718          KM   EXISTING ONSITE BASIN
 719          BA    0.14
 720          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 721          PB    1.66
 722          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 723          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 724          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 725          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 726          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 727          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 728          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 729          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 730          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 731          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 732          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 733          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 734          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 735          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 736          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 737          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 738          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 739          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 740          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 741          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 742          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 743          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 744          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 745          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 746          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 747          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 748          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 749          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 750          PI    .008    .010    .006    .004    .004    .002    .002    .002
 751          LS            71.9
 752          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 753          UI    78.4   321.8   250.4   124.3    77.3    55.9    38.5    30.3    23.8    19.7
 754          UI    13.8    10.5     7.7     7.7     5.3     4.4     4.4     4.4     4.4     1.0
              *
1                                          HEC-1 INPUT                                                PAGE 16

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 755          KK     CP3
 756          KM   COMBINE CP2, ONG
 757          HC       2
              *

 758          KK     ONK
 759          KM   EXISTING ONSITE BASIN
 760          BA    0.68
 761          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 762          PB    1.66
 763          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 764          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 765          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 766          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 767          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 768          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 769          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 770          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 771          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 772          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 773          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 774          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 775          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 776          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 777          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 778          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 779          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 780          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 781          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 782          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 783          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 784          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 785          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 786          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 787          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 788          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 789          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 790          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 791          PI    .008    .010    .006    .004    .004    .002    .002    .002
```

```
 792          LS            71.9
 793          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 794          UI    109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
 795          UI    151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
 796          UI    44.9    43.5    30.2    30.2    30.2    22.1    16.9    16.9    16.9    16.9
 797          UI    16.9    14.0     9.7     9.7     9.7     9.7     9.7     9.7     9.7     9.7
 798          UI     9.7     9.7     4.8
              *

 799          KK     ONF
 800          KM   EXISTING ONSITE BASIN
 801          BA    0.50
 802          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 803          PB    1.66
 804          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1                                                HEC-1 INPUT                                                    PAGE 17

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 805          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 806          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 807          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
 808          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
 809          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
 810          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
 811          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
 812          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
 813          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
 814          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
 815          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
 816          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
 817          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
 818          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
 819          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
 820          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
 821          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
 822          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
 823          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
 824          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
 825          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
 826          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 827          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 828          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 829          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 830          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
 831          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 832          PI    .008    .010    .006    .004    .004    .002    .002    .002
 833          LS            71.9
 834          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 835          UI    153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
 836          UI    77.0    64.7    56.7    51.5    34.8    34.8    22.8    19.5    19.5    19.5
 837          UI    12.6    11.1    11.1    11.1    11.1    11.1    11.1     1.6
              *

 838          KK     CP4
 839          KM   COMBINE CP3, ONK, ONF
 840          HC       3
              *

 841          KK  CPDUM2
 842          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 843          HC       2
              *

 844          KK    RET1
 845          KM   RETRIEVE "FS1" PORTION OF FLOW SPLIT
 846          KM   TRIB TO "WASH 70"
 847          DR     FS1
              *
1                                                HEC-1 INPUT                                                    PAGE 18

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 848          KK      MX
 849          KM   EXISTING OFFSITE BASIN
 850          BA    0.01
 851          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 852          PB    1.73
 853          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 854          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 855          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 856          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 857          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 858          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 859          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 860          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 861          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 862          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 863          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 864          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 865          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 866          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 867          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 868          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 869          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 870          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 871          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 872          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 873          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 874          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 875          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 876          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 877          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 878          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 879          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
```

```
 880          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 881          PI    .008    .010    .006    .004    .004    .002    .002    .002
 882          LS            91.6
 883          KM   UHG FROM MOUNTAIN S-GRAPH
 884          UI    57.5    10.9     5.2     2.5     1.0      .0
              *

 885          KK    CP14
 886          KM   COMBINE FS1, MX
 887          HC       2
              *

 888          KK     ONS
 889          KM   EXISTING ONSITE BASIN
 890          BA    0.04
 891          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 892          PB    1.73
 893          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 894          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 895          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 896          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 897          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1                                          HEC-1 INPUT                                                PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 898          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 899          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 900          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 901          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 902          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 903          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 904          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 905          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 906          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 907          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 908          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 909          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 910          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 911          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 912          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 913          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 914          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 915          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 916          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 917          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 918          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 919          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 920          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 921          PI    .008    .010    .006    .004    .004    .002    .002    .002
 922          LS            71.9
 923          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 924          UI    30.5   114.4    61.6    30.9    19.9    13.3     9.8     7.6     5.6     4.2
 925          UI     2.6     2.6     1.7     1.5     1.5     1.5     1.0
              *

 926          KK   CP14A
 927          KM   COMBINE CP14, ONS
 928          HC       2
              *

 929          KK    M17
 930          KM   EXISTING OFFSITE BASIN
 931          BA    0.67
 932          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 933          PB    1.73
 934          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 935          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 936          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 937          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 938          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 939          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 940          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 941          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 942          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 943          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 944          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 945          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 946          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 947          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 948          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1                                          HEC-1 INPUT                                                PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 949          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 950          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 951          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 952          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 953          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 954          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 955          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 956          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
 957          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
 958          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
 959          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
 960          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
 961          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
 962          PI    .008    .010    .006    .004    .004    .002    .002    .002
 963          LS            84.5
 964          KM   UHG FROM MOUNTAIN S-GRAPH
 965          UI    564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
 966          UI    97.4    80.4    73.6    69.1    63.2    58.7    55.5    49.3    46.8    41.3
 967          UI    35.7    35.7    29.9    25.9    25.9    25.9    16.2     9.4     9.4     9.4
 968          UI     9.4     9.4     9.4     9.4     9.4     9.4     9.4     3.8
              *
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```
 969          KK    CP15
 970          KM   COMBINE CP14A, M17
 971          HC       2
              *

 972          KK    M18
 973          KM   EXISTING OFFSITE BASIN
 974          BA    0.12
 975          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 976          PB    1.73
 977          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
 978          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
 979          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
 980          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
 981          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
 982          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
 983          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
 984          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
 985          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
 986          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
 987          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
 988          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
 989          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
 990          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
 991          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
 992          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
 993          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
 994          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
 995          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
 996          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
 997          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
 998          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
 999          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1                                                HEC-1 INPUT                                                    PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1000          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1001          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1002          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1003          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1004          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1005          PI    .008    .010    .006    .004    .004    .002    .002    .002
1006          LS            83.1
1007          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1008          UI    69.8   284.1   213.2   103.8    65.1    46.9    32.8    25.0    20.2    16.0
1009          UI    12.1     7.9     6.8     6.7     3.9     3.9     3.9     3.9     3.0
              *

1010          KK    M20
1011          KM   EXISTING OFFSITE BASIN
1012          BA    0.49
1013          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1014          PB    1.73
1015          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1016          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1017          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1018          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1019          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1020          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1021          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1022          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1023          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1024          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1025          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1026          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1027          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1028          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1029          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1030          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1031          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1032          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1033          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1034          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1035          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1036          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1037          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1038          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1039          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1040          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1041          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1042          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1043          PI    .008    .010    .006    .004    .004    .002    .002    .002
1044          LS            90.4
1045          KM   UHG FROM MOUNTAIN S-GRAPH
1046          UI    626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
1047          UI    64.5    59.4    52.2    47.6    44.1    35.1    33.6    28.1    24.4    24.4
1048          UI    16.7     8.9     8.9     8.9     8.9     8.9     8.9     8.9     8.9      .0
              *
1                                                HEC-1 INPUT                                                    PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1049          KK   STOR1
1050          KM   EXISTING OPEN MINE PIT BASIN
1051          KM   INTERCEPTS FLOW FROM M20
1052          KM   OPEN MINE PIT TOP EDGE ELEV = 440 ft
1053          KM   SPILL OUT BEGINS ABOVE TOP EDGE ELEV.
1054          RS       1    STOR       0
1055          SA    0.76    1.46    3.37    5.06    5.13    5.23    5.72    6.67
1056          SE     428     432     436     440   440.2   440.5     442     444
1057          SQ       0       0       0       0      61     240    2929    8283
              *
```

```
1058          KK    RM20
1059          KM   ROUTE M20 FLOW TO M19
1060          KM   EXISTING WASH
1061          RD    3500   0.028   0.035       0    TRAP      20       3
              *

1062          KK    M19
1063          KM   EXISTING OFFSITE BASIN
1064          BA    0.11
1065          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1066          PB    1.73
1067          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1068          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1069          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1070          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1071          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1072          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1073          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1074          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1075          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1076          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1077          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1078          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1079          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1080          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1081          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1082          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1083          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1084          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1085          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1086          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1087          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1088          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1089          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1090          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1091          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1092          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1093          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1094          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1095          PI    .008    .010    .006    .004    .004    .002    .002    .002
1096          LS            83.1
1097          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1098          UI    117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
1                                          HEC-1 INPUT                                                                  PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1099          UI     6.3     4.7     4.7     4.7      .0
              *

1100          KK    CP16
1101          KM   COMBINE M20, M19
1102          HC       2
              *

1103          KK    CP17
1104          KM   COMBINE CP15, M18, CP16
1105          HC       3
              *

1106          KK   RCP17
1107          KM   ROUTE CP17 TO ONP
1108          KM   EXISTING WASH
1109          RD   11280   0.014   0.035       0    TRAP      20       3
              *

1110          KK    ONP
1111          KM   EXISTING ONSITE BASIN
1112          BA    1.47
1113          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1114          PB    1.73
1115          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1116          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1117          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1118          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1119          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1120          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1121          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1122          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1123          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1124          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1125          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1126          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1127          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1128          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1129          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1130          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1131          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1132          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1133          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1134          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1135          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1136          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1137          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1138          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1139          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1140          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1141          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1142          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1143          PI    .008    .010    .006    .004    .004    .002    .002    .002
1144          LS            71.9
1145          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                                  PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1146          UI    206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
1147          UI    366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
1148          UI    103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
1149          UI    32.6    32.6    32.6    32.6    32.6    25.9    18.6    18.6    18.6    18.6
1150          UI    18.6    18.6    18.6    18.6    18.6    18.6    18.6    14.4
              *

1151          KK    CP18
1152          KM   COMBINE CP17, ONP
1153          HC       2
              *

1154          KK  CPDUM3
1155          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1156          HC       2
              *

1157          KK     ONT
1158          KM   EXISTING ONSITE BASIN
1159          BA    0.04
1160          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1161          PB    1.73
1162          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1163          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1164          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1165          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1166          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1167          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1168          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1169          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1170          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1171          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1172          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1173          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1174          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1175          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1176          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1177          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1178          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1179          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1180          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1181          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1182          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1183          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1184          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1185          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1186          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1187          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1188          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1189          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1190          PI    .008    .010    .006    .004    .004    .002    .002    .002
1191          LS            71.9
1192          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1193          UI    47.6   130.9    50.1    26.7    16.4    11.2     8.4     5.6     3.2     3.1
1194          UI     1.8     1.8     1.8     1.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195          KK   RMONT
1196          KM   ROUTE ONT TO ONO
1197          KM   EXISTING WASH
1198          RD   10985   0.015   0.035       0    TRAP      20       3
              *

1199          KK    ONO
1200          KM   EXISTING ONSITE BASIN
1201          BA    0.55
1202          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1203          PB    1.73
1204          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1205          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1206          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1207          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1208          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1209          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1210          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1211          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1212          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1213          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1214          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1215          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1216          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1217          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1218          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1219          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1220          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1221          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1222          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1223          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1224          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1225          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1226          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1227          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1228          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1229          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1230          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1231          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1232          PI    .008    .010    .006    .004    .004    .002    .002    .002
1233          LS            71.9
1234          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1235          UI    79.8   140.8   249.2   528.5   675.3   480.0   333.2   260.9   187.2   161.1
1236          UI    135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
1237          UI    39.9    35.3    33.4    31.6    22.4    22.4    22.4    18.8    12.6    12.6
```

```
1238          UI    12.6    12.6    12.6    12.6     9.3     7.2     7.2     7.2     7.2     7.2
1239          UI     7.2     7.2     7.2     7.2     7.2     7.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1240          KK    CP20
1241          KM   COMBINE ONT, ONO
1242          HC       2
              *

1243          KK  CPDUM4
1244          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1245          HC       2
              *

1246          KK     ONU
1247          KM   EXISTING ONSITE BASIN
1248          BA    0.05
1249          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1250          PB    1.73
1251          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1252          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1253          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1254          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1255          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1256          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1257          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1258          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1259          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1260          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1261          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1262          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1263          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1264          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1265          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1266          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1267          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1268          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1269          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1270          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1271          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1272          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1273          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1274          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1275          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1276          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1277          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1278          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1279          PI    .008    .010    .006    .004    .004    .002    .002    .002
1280          LS            71.9
1281          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1282          UI    55.1   162.7    64.0    34.2    21.1    14.5    10.9     7.3     4.6     3.8
1283          UI     2.7     2.2     2.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1284          KK   RMONU
1285          KM   ROUTE ONU TO ONL
1286          KM   EXISTING WASH
1287          RD   10520   0.016   0.035       0    TRAP      20       3
              *

1288          KK    ONL
1289          KM   EXISTING ONSITE BASIN
1290          BA    0.73
1291          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1292          PB    1.73
1293          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1294          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1295          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1296          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1297          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1298          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1299          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1300          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1301          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1302          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1303          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1304          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1305          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1306          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1307          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1308          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1309          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1310          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1311          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1312          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1313          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1314          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1315          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1316          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1317          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1318          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1319          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1320          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1321          PI    .008    .010    .006    .004    .004    .002    .002    .002
1322          LS            71.9
1323          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1324          UI    122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
1325          UI    159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
```

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1326          UI    49.7    37.6    33.4    33.4    28.2    18.7    18.7    18.7    18.7    18.7
1327          UI    16.1    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7
1328          UI    10.7     2.7
              *
1                                          HEC-1 INPUT                                                PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1329          KK    CP19
1330          KM   COMBINE ONU, ONL
1331          HC       2
              *

1332          KK    ONM
1333          KM   EXISTING ONSITE BASIN
1334          BA    0.10
1335          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1336          PB    1.73
1337          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1338          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1339          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1340          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1341          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1342          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1343          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1344          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1345          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1346          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1347          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1348          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1349          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1350          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1351          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1352          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1353          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1354          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1355          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1356          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1357          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1358          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1359          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1360          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1361          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1362          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1363          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1364          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1365          PI    .008    .010    .006    .004    .004    .002    .002    .002
1366          LS            71.9
1367          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1368          UI    197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
1369          UI     5.4     1.2
              *

1370          KK    ONN
1371          KM   EXISTING ONSITE BASIN
1372          BA    0.08
1373          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1374          PB    1.73
1375          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1376          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1377          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1378          PI    .012    .012    .015    .015    .015    .015    .017    .019    .023    .027
1                                          HEC-1 INPUT                                                PAGE 29

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1379          PI    .031    .029    .027    .025    .025    .023    .021    .025    .031    .037
1380          PI    .039    .039    .039    .042    .039    .039    .039    .042    .044    .046
1381          PI    .052    .056    .058    .062    .062    .062    .062    .062    .062    .062
1382          PI    .062    .062    .058    .048    .042    .042    .042    .039    .039    .042
1383          PI    .046    .050    .054    .060    .066    .073    .079    .083    .087    .089
1384          PI    .093    .098    .100    .102    .104    .106    .106    .106    .108    .108
1385          PI    .108    .108    .110    .112    .114    .116    .116    .116    .114    .112
1386          PI    .110    .112    .116    .120    .125    .129    .131    .133    .135    .137
1387          PI    .139    .141    .141    .141    .143    .145    .147    .147    .147    .147
1388          PI    .149    .154    .162    .176    .189    .193    .191    .189    .187    .189
1389          PI    .189    .191    .193    .193    .195    .197    .199    .199    .197    .195
1390          PI    .195    .193    .191    .189    .187    .187    .185    .183    .181    .185
1391          PI    .191    .197    .206    .218    .226    .230    .235    .235    .235    .235
1392          PI    .235    .235    .237    .237    .239    .241    .243    .241    .235    .214
1393          PI    .193    .174    .158    .143    .135    .131    .125    .106    .071    .042
1394          PI    .037    .035    .046    .064    .091    .093    .081    .060    .048    .039
1395          PI    .035    .031    .027    .027    .025    .023    .021    .019    .019    .019
1396          PI    .017    .015    .015    .012    .012    .012    .010    .010    .010    .010
1397          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1398          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1399          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1400          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1401          PI    .008    .010    .012    .021    .037    .052    .060    .054    .039    .027
1402          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1403          PI    .008    .010    .006    .004    .004    .002    .002    .002
1404          LS            71.9
1405          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1406          UI    22.6    56.4   148.9   107.3    65.2    41.8    31.7    24.4    20.2    15.4
1407          UI    13.0    11.0     9.3     8.2     7.4     5.2     5.2     3.4     2.9     2.9
1408          UI     2.9     2.2     1.7     1.7     1.7     1.7     1.7     1.7     1.4
              *

1409          KK  CPDUM5
1410          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1411          HC       4
              *

1412          KK      M9
1413          KM   EXISTING OFFSITE BASIN
```

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1414          BA    1.80
1415          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1416          PB    1.66
1417          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1418          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1419          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1420          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1421          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1422          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1423          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1424          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1425          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1426          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1427          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1428          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1429          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1431          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1432          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1433          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1434          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1435          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1436          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1437          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1438          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1439          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1440          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1441          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1442          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1443          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1444          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1445          PI    .008    .010    .006    .004    .004    .002    .002    .002
1446          LS            86.2
1447          KM   UHG FROM MOUNTAIN S-GRAPH
1448          UI    471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
1449          UI    364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
1450          UI    145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
1451          UI    79.4    79.4    79.1    71.0    71.0    71.0    70.1    62.3    62.3    62.3
1452          UI    62.3    56.1    52.6    52.6    52.6    52.6    48.4    40.1    40.1    40.1
1453          UI    40.1    40.1    40.1    35.9    29.1    29.1    29.1    29.1    29.1    29.1
1454          UI    29.1    29.1    29.1    14.0    10.6    10.6    10.6    10.6    10.6    10.6
1455          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6
1456          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6     5.1
              *

1457          KK      M8
1458          KM   EXISTING OFFSITE BASIN
1459          BA    1.04
1460          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1461          PB    1.66
1462          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1463          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1464          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1465          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1466          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1467          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1468          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1469          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1470          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1471          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1472          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1473          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1474          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1475          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1476          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1477          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1478          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1479          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1480          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1481          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1482          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1483          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1484          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1485          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1486          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1487          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1488          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1489          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1490          PI    .008    .010    .006    .004    .004    .002    .002    .002
1491          LS            85.6
1492          KM   UHG FROM MOUNTAIN S-GRAPH
1493          UI    495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
1494          UI    177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
1495          UI    69.5    66.3    65.0    58.1    58.1    54.6    49.1    49.1    47.8    37.4
1496          UI    37.4    37.4    37.4    29.2    27.2    27.2    27.2    27.2    27.2    12.0
1497          UI     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9
1498          UI     9.9     9.9     9.9     9.9     9.9     4.0
              *

1499          KK     CP5
1500          KM   COMBINE M9, M8
1501          HC       2
              *

1502          KK    RET2
1503          KM   RETRIEVE FLOW TRIB. TO "WASH 25B"
1504          DR     FS2
              *
```

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1505          KK     CP6
1506          KM   COMBINE CP5, RET2
1507          HC       2
              *

1508          KK      M7
1509          KM   EXISTING OFFSITE BASIN
1510          BA    0.16
1511          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1512          PB    1.66
1513          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1514          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1515          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1516          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1517          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1518          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1519          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1520          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1521          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1522          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1523          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1524          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1525          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1526          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1527          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1528          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1529          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1                                          HEC-1 INPUT                                                    PAGE 32

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1530          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1531          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1532          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1533          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1534          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1535          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1536          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1537          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1538          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1539          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1540          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1541          PI    .008    .010    .006    .004    .004    .002    .002    .002
1542          LS            77.3
1543          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1544          UI    65.0   232.2   334.4   171.6   100.8    70.8    54.5    39.7    31.5    25.7
1545          UI    21.7    18.5    13.2    11.5     7.4     7.4     7.4     4.4     4.2     4.2
1546          UI     4.2     4.2     4.0
              *

1547          KK    ONE1
1548          KM   EXISTING ONSITE BASIN
1549          BA    1.61
1550          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1551          PB    1.66
1552          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1553          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1554          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1555          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1556          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1557          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1558          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1559          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1560          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1561          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1562          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1563          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1564          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1565          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1566          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1567          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1568          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1569          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1570          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1571          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1572          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1573          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1574          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1575          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1576          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1577          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1578          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1579          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1580          PI    .008    .010    .006    .004    .004    .002    .002    .002
1581          LS            73.7
1582          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                    PAGE 33

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1583          UI    163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
1584          UI    566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
1585          UI    159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
1586          UI    74.5    68.3    68.3    68.3    48.4    45.9    45.9    45.9    45.9    36.7
1587          UI    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    17.1
1588          UI    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7
1589          UI    14.7    14.7    14.7    14.7    14.7    14.7     2.7
              *

1590          KK    CP6A
1591          KM   COMBINE M7, ONE1
1592          HC       2
              *

1593          KK    CP6B
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1594          KM   COMBINE CP6, CP6A
1595          HC       2
              *

1596          KK    ONE2
1597          KM   EXISTING ONSITE BASIN
1598          BA    2.59
1599          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1600          PB    1.66
1601          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1602          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1603          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1604          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1605          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1606          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1607          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1608          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1609          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1610          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1611          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1612          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1613          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1614          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1615          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1616          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1617          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1618          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1619          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1620          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1621          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1622          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1623          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1624          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1625          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1626          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1627          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1628          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1629          PI    .008    .010    .006    .004    .004    .002    .002    .002
1630          LS            74.5
1631          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1632          UI    210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
1633          UI   1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
1634          UI    290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
1635          UI    151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
1636          UI    87.8    87.8    78.6    59.0    59.0    59.0    59.0    59.0    59.0    45.4
1637          UI    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1
1638          UI    33.1    27.1    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1639          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1640          UI    18.9    18.9    15.4
              *

1641          KK     CP7
1642          KM   COMBINE CP6B, ONE2
1643          HC       2
              *

1644          KK      M6
1645          KM   EXISTING OFFSITE BASIN
1646          BA    1.32
1647          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1648          PB    1.66
1649          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1650          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1651          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1652          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1653          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1654          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1655          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1656          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1657          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1658          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1659          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1660          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1661          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1662          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1663          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1664          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1665          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1666          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1667          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1668          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1669          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1670          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1671          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1672          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1673          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1674          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1675          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1676          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1677          PI    .008    .010    .006    .004    .004    .002    .002    .002
1678          LS            83.8
1679          KM   UHG FROM MOUNTAIN S-GRAPH
1680          UI    488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
1681          UI    247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
1682          UI    87.8    87.8    78.9    77.5    75.6    69.3    69.3    67.0    60.8    60.8
1                                          HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1683          UI    60.8    52.1    51.3    51.3    51.3    39.9    39.1    39.1    39.1    39.1
1684          UI    31.5    28.4    28.4    28.4    28.4    28.4    28.4    19.1    10.3    10.3
1685          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3
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1686          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3     2.5
              *

1687          KK     M5A
1688          KM   EXISTING OFFSITE BASIN
1689          BA    0.17
1690          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1691          PB    1.66
1692          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1693          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1694          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1695          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1696          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1697          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1698          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1699          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1700          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1701          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1702          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1703          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1704          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1705          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1706          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1707          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1708          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1709          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1710          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1711          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1712          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1713          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1714          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1715          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1716          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1717          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1718          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1719          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1720          PI    .008    .010    .006    .004    .004    .002    .002    .002
1721          LS            86.2
1722          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1723          UI    46.0   109.1   301.7   233.7   143.7    91.0    69.2    52.4    44.0    34.0
1724          UI    28.4    23.8    20.4    18.2    16.1    12.5    10.8     9.6     6.1     6.1
1725          UI     6.1     6.1     3.7     3.5     3.5     3.5     3.5     3.5     3.5     2.5
              *

1726          KK     M5B
1727          KM   EXISTING OFFSITE BASIN
1728          BA    0.18
1729          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1730          PB    1.66
1731          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1732          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1733          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1734          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1735          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1736          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1737          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1738          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1739          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1740          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1741          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1742          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1743          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1744          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1745          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1746          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1747          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1748          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1749          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1750          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1751          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1752          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1753          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1754          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1755          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1756          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1757          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1758          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1759          PI    .008    .010    .006    .004    .004    .002    .002    .002
1760          LS            86.2
1761          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1762          UI    94.4   388.4   330.7   165.8   102.3    73.1    51.5    39.8    31.7    26.1
1763          UI    19.0    16.0     9.6     9.6     8.6     5.5     5.5     5.5     5.5     4.6
              *

1764          KK     CP8
1765          KM   COMBINE M6, M5A, M5B
1766          HC       3
              *

1767          KK      M5
1768          KM   EXISTING OFFSITE BASIN
1769          BA    0.39
1770          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1771          PB    1.66
1772          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1773          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1774          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1775          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1776          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1777          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1778          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1779          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
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1780          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1781          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1782          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1783          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1784          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1                                           HEC-1 INPUT                                                PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1785          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1786          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1787          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1788          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1789          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1790          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1791          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1792          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1793          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1794          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1795          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1796          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1797          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1798          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1799          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1800          PI    .008    .010    .006    .004    .004    .002    .002    .002
1801          LS            74.6
1802          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1803          UI    91.1   201.2   517.0   587.6   366.2   241.4   170.2   132.5   105.2    89.8
1804          UI    70.8    59.8    51.4    45.0    39.6    34.5    33.1    22.6    22.3    19.8
1805          UI    12.5    12.5    12.5    12.5    10.2     7.1     7.1     7.1     7.1     7.1
1806          UI     7.1     7.1     7.1      .0
              *

1807          KK     CP9
1808          KM   COMBINE CP8, M5
1809          HC       2
              *

1810          KK     ONB
1811          KM   EXISTING ONSITE BASIN
1812          BA    2.83
1813          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1814          PB    1.66
1815          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1816          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1817          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1818          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1819          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1820          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1821          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1822          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1823          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1824          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1825          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1826          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1827          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1828          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1829          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1830          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1831          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1832          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1833          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1834          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1835          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1                                           HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1836          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1837          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1838          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1839          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1840          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1841          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1842          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1843          PI    .008    .010    .006    .004    .004    .002    .002    .002
1844          LS            73.4
1845          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1846          UI   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
1847          UI  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
1848          UI   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
1849          UI   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
1850          UI   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
1851          UI    59.1    59.1    59.1    58.1    33.2    33.2    33.2    33.2    33.2    33.2
1852          UI    33.2    33.2    33.2    33.2    33.2    33.2    33.2    21.2    18.9    18.9
1853          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1854          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1855          UI     6.1
              *

1856          KK    CP10
1857          KM   COMBINE CP9, ONB
1858          HC       2
              *

1859          KK     OND
1860          KM   EXISTING ONSITE BASIN
1861          BA    1.34
1862          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1863          PB    1.66
1864          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1865          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1866          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1867          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1868          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1869          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
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1870          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1871          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1872          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1873          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1874          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1875          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1876          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1877          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1878          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1879          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1880          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1881          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1882          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1883          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1884          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1885          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1886          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1                                          HEC-1 INPUT                                                PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1887          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1888          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1889          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1890          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1891          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1892          PI    .008    .010    .006    .004    .004    .002    .002    .002
1893          LS            71.9
1894          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1895          UI    203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
1896          UI    309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
1897          UI    90.9    85.1    79.2    57.2    57.2    57.2    42.6    32.1    32.1    32.1
1898          UI    32.1    32.1    30.5    18.3    18.3    18.3    18.3    18.3    18.3    18.3
1899          UI    18.3    18.3    18.3    18.3     4.0
              *

1900          KK     ONC
1901          KM   EXISTING ONSITE BASIN
1902          BA    0.30
1903          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1904          PB    1.66
1905          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1906          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1907          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1908          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1909          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1910          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1911          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1912          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1913          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1914          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1915          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1916          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1917          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1918          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1919          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
1920          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1921          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1922          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1923          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1924          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1925          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1926          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1927          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1928          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1929          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1930          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1931          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1932          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1933          PI    .008    .010    .006    .004    .004    .002    .002    .002
1934          LS            71.9
1935          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1936          UI    146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
1937          UI    35.8    27.5    19.2    15.4    15.4    10.9     8.8     8.8     8.8     8.8
1938          UI     5.4
              *
1                                          HEC-1 INPUT                                                PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1939          KK     CPA
1940          KM   COMBINE OND, ONC
1941          HC       2
              *

1942          KK      M4
1943          KM   EXISTING OFFSITE BASIN
1944          BA    2.71
1945          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1946          PB    1.66
1947          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1948          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1949          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1950          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
1951          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
1952          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
1953          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
1954          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
1955          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
1956          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
1957          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
1958          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
1959          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
1960          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
1961          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
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1962          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
1963          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
1964          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
1965          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
1966          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
1967          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
1968          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
1969          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
1970          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
1971          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
1972          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
1973          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
1974          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
1975          PI    .008    .010    .006    .004    .004    .002    .002    .002
1976          LS            85.3
1977          KM   UHG FROM MOUNTAIN S-GRAPH
1978          UI    485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
1979          UI    649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
1980          UI    269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
1981          UI    152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
1982          UI    95.6    92.6    84.4    84.4    84.4    84.4    81.7    75.5    75.5    75.5
1983          UI    75.5    75.5    68.6    66.2    66.2    66.2    66.2    66.2    62.1    55.9
1984          UI    55.9    55.9    55.9    55.9    55.9    55.9    44.0    42.6    42.6    42.6
1985          UI    42.6    42.6    42.6    42.6    42.6    42.1    31.0    31.0    31.0    31.0
1986          UI    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    21.3
1987          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1988          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1989          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1990          UI    11.3    11.3    11.3    11.3    11.3    11.3     8.5
              *
1                                        HEC-1 INPUT                                                PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1991          KK      M3
1992          KM   EXISTING OFFSITE BASIN
1993          BA    0.57
1994          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1995          PB    1.66
1996          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
1997          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
1998          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
1999          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
2000          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
2001          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
2002          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
2003          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
2004          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
2005          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
2006          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
2007          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
2008          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
2009          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
2010          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
2011          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
2012          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
2013          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
2014          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
2015          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
2016          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
2017          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
2018          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
2019          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
2020          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
2021          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
2022          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
2023          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
2024          PI    .008    .010    .006    .004    .004    .002    .002    .002
2025          LS            79.1
2026          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2027          UI    87.5   162.8   294.9   662.8   681.0   472.9   336.7   243.7   191.2   159.0
2028          UI    130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
2029          UI    37.5    36.6    30.9    24.6    24.6    24.6    15.0    13.8    13.8    13.8
2030          UI    13.8    13.8    10.9     7.9     7.9     7.9     7.9     7.9     7.9     7.9
2031          UI     7.9     7.9     7.9     5.6
              *

2032          KK    CP11
2033          KM   COMBINE M4, M3
2034          HC       2
              *

2035          KK      M2
2036          KM   EXISTING OFFSITE BASIN
2037          BA   24.30
2038          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2039          PB    1.66
2040          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                        HEC-1 INPUT                                                PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2041          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2042          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2043          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2044          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2045          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2046          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2047          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2048          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2049          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2050          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2051          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2052          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2053          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
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2054          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2055          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2056          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2057          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2058          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2059          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2060          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2061          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2062          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2063          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2064          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2065          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2066          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2067          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2068          PI    .017    .022    .013    .009    .009    .004    .004    .004
2069          LS            86.2
2070          KM   UHG FROM MOUNTAIN S-GRAPH
2071          UI  1111.9  2221.1  2203.4  3001.1  3365.7  3569.7  4543.3  5289.0  6350.9  7587.7
2072          UI  7721.3  9338.4  7205.7  6488.0  5526.3  4850.8  4632.4  3956.0  3879.3  3543.3
2073          UI  3060.6  2466.9  2637.2  2146.4  2106.1  2033.1  2001.3  2001.4  1936.4  1691.3
2074          UI  1656.5  1534.3  1504.1  1559.9  1431.1  1421.8  1295.3  1250.7  1250.7  1251.3
2075          UI  1250.6  1241.0  1065.3  1000.8  1000.4   988.4   920.1   909.7   910.0   903.8
2076          UI   847.9   833.8   834.1   833.8   787.9   715.8   715.0   714.0   715.4   706.1
2077          UI   670.2   666.7   667.4   667.4   666.7   606.7   541.1   540.4   541.1   541.1
2078          UI   541.1   540.4   490.0   445.2   445.2   444.5   445.2   443.8   445.2   444.5
2079          UI   436.2   397.6   392.7   392.0   392.0   393.4   391.3   393.4   391.3   393.4
2080          UI   371.3   351.3   352.0   350.6   351.3   350.6   352.0   350.6   350.6   352.0
2081          UI   347.9   323.0   309.2   310.6   310.6   310.6   309.2   310.6   310.6   310.6
2082          UI   310.6   309.2   310.6   276.1   258.1   259.5   258.1   256.8   259.5   258.1
2083          UI   256.8   258.1   259.5   258.1   258.1   258.1   258.1   248.5   204.3   197.4
2084          UI   197.4   197.4   198.8   197.4   200.2   196.0   200.2   197.4   197.4   198.8
2085          UI   198.8   198.8   196.0   198.8   198.8   197.4   190.5   146.3   143.6   143.6
2086          UI   144.9   143.6   143.6   144.9   143.6   143.6   144.9   143.6   143.6   143.6
2087          UI   146.3   140.8   146.3   143.6   143.6   143.6   143.6   146.3   140.8   146.3
2088          UI   143.6   143.6   129.8    55.2    38.7    38.7    38.7    44.2    38.7    38.7
2089          UI    35.9    38.7    41.4    38.7    38.7    41.4    38.7    38.7    38.7    41.4
2090          UI    38.7    38.7    41.4    35.9    41.4    38.7    38.7    41.4    38.7    38.7
              *
1                                          HEC-1 INPUT                                                PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2091          KK   CP12A
2092          KM   COMBINE CP11, M2
2093          HC        2
              *

2094          KK     M13
2095          KM   EXISTING OFFSITE BASIN
2096          BA    7.18
2097          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2098          PB    1.66
2099          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
2100          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
2101          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
2102          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
2103          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
2104          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
2105          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
2106          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
2107          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
2108          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
2109          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
2110          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
2111          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
2112          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
2113          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
2114          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
2115          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
2116          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
2117          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
2118          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
2119          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
2120          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
2121          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
2122          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
2123          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
2124          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
2125          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
2126          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
2127          PI    .008    .010    .006    .004    .004    .002    .002    .002
2128          LS            88.4
2129          KM   UHG FROM MOUNTAIN S-GRAPH
2130          UI    961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
2131          UI   2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
2132          UI    718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
2133          UI    432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
2134          UI    301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
2135          UI    192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
2136          UI    170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
2137          UI    133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
2138          UI    112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
2139          UI    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6
2140          UI    65.9    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2
2141          UI    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    23.8    22.6
2142          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
1                                          HEC-1 INPUT                                                PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2143          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
2144          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
              *

2145          KK     DV3
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2146          KM   FLOWSPLIT DIVERSION FROM BASIN M13
2147          KM   ASSUME 50% OF FLOW TO CONTINUE EAST
2148          KM   ASSUME 50% OF FLOW TO CONTINUE NORTH
2149          DT     FS3
2150          DI     100
2151          DQ      50
              *

2152          KK      M1
2153          KM   EXISTING OFFSITE BASIN
2154          BA    0.76
2155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2156          PB    1.66
2157          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
2158          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
2159          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
2160          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
2161          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
2162          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
2163          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
2164          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
2165          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
2166          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
2167          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
2168          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
2169          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
2170          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
2171          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
2172          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
2173          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
2174          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
2175          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
2176          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
2177          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
2178          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
2179          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
2180          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
2181          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
2182          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
2183          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
2184          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
2185          PI    .008    .010    .006    .004    .004    .002    .002    .002
2186          LS            77.3
2187          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2188          UI    176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
2189          UI    139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
2190          UI    24.2    24.2    24.2    24.2    21.1    13.8    13.8    13.8    13.8    13.8
2191          UI    13.8    13.8    13.8     3.0
              *
1                                          HEC-1 INPUT                                          PAGE 45

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2192          KK    CP12
2193          KM   COMBINE DV5, M11
2194          HC       2
              *

2195          KK   CP12B
2196          KM   COMBINE CP12A, CP12
2197          HC       2
              *

2198          KK     ONA
2199          KM   EXISTING ONSITE BASIN
2200          BA    0.87
2201          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2202          PB    1.66
2203          PI    .002    .002    .004    .004    .004    .004    .006    .006    .006    .006
2204          PI    .008    .008    .010    .010    .010    .010    .010    .010    .010    .010
2205          PI    .010    .010    .010    .010    .010    .010    .010    .010    .010    .010
2206          PI    .012    .012    .014    .014    .014    .014    .016    .018    .022    .026
2207          PI    .030    .028    .026    .024    .024    .022    .020    .024    .030    .036
2208          PI    .038    .038    .038    .040    .038    .038    .038    .040    .042    .044
2209          PI    .050    .054    .056    .060    .060    .060    .060    .060    .060    .060
2210          PI    .060    .060    .056    .046    .040    .040    .040    .038    .038    .040
2211          PI    .044    .048    .052    .058    .064    .070    .076    .080    .084    .086
2212          PI    .090    .094    .096    .098    .100    .102    .102    .102    .104    .104
2213          PI    .104    .104    .106    .108    .110    .112    .112    .112    .110    .108
2214          PI    .106    .108    .112    .116    .120    .124    .125    .127    .129    .131
2215          PI    .133    .135    .135    .135    .137    .139    .141    .141    .141    .141
2216          PI    .143    .147    .155    .169    .181    .185    .183    .181    .179    .181
2217          PI    .181    .183    .185    .185    .187    .189    .191    .191    .189    .187
2218          PI    .187    .185    .183    .181    .179    .179    .177    .175    .173    .177
2219          PI    .183    .189    .197    .209    .217    .221    .225    .225    .225    .225
2220          PI    .225    .225    .227    .227    .229    .231    .233    .231    .225    .205
2221          PI    .185    .167    .151    .137    .129    .125    .120    .102    .068    .040
2222          PI    .036    .034    .044    .062    .088    .090    .078    .058    .046    .038
2223          PI    .034    .030    .026    .026    .024    .022    .020    .018    .018    .018
2224          PI    .016    .014    .014    .012    .012    .012    .010    .010    .010    .010
2225          PI    .010    .010    .008    .008    .008    .006    .006    .004    .004    .004
2226          PI    .004    .002    .002    .004    .004    .006    .006    .008    .008    .008
2227          PI    .008    .008    .006    .006    .006    .006    .006    .006    .006    .006
2228          PI    .008    .008    .006    .006    .006    .008    .008    .006    .004    .006
2229          PI    .008    .010    .012    .020    .036    .050    .058    .052    .038    .026
2230          PI    .012    .004    .002    .002    .000    .000    .000    .000    .000    .002
2231          PI    .008    .010    .006    .004    .004    .002    .002    .002
2232          LS            76.1
2233          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2234          UI    138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
2235          UI    195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
2236          UI    57.1    57.1    39.1    38.4    38.4    30.7    21.5    21.5    21.5    21.6
2237          UI    21.5    19.7    12.3    12.3    12.3    12.3    12.3    12.3    12.3    12.3
2238          UI    12.3    12.3     9.3
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          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          2239          KK    CP13
          2240          KM   COMBINE CP12B, ONA
          2241          HC       2
                        *
          2242          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    28         M27
                V
                V
    68        RM27
                .
                .
    72          .        ONR
                .           .
                .           .
   111        CP25...........
                .
                .
   114          .        M22
                .           .
                .           .
   152          .           .        M21
                .           .           .
                .           .           .
   191          .           .           .        M23
                .           .           .           .
                .           .           .           .
   230          .           .           .           .        M25
                .           .           .           .           .
                .           .           .           .           .
   270          .        CP21...................................
                .           .
                .           .
   273          .           .        M24
                .           .           V
                .           .           V
   313          .           .        RM24
                .           .           .
                .           .           .
   317          .           .           .         M26
                .           .           .           .
                .           .           .           .
   357          .           .        CP22...........
                .           .           .
                .           .           .
   360          .        CP23...........
                .           V
                .           V
   363          .       RCP23
                .           .
                .           .
   367          .           .        ONQ
                .           .           .
                .           .           .
   408          .        CP24...........
                .           .
                .           .
   411      CPDUM1...........
                .
                .
   414          .         M12
                .           .
                .           .
   461          .           .         ONJ
                .           .           .
                .           .           .
   499          .           .           .         M11
                .           .           .           .
                .           .           .           .
   542          .           .           .           .         ONI
                .           .           .           .           .
                .           .           .           .           .
   580          .           .           .           .           .         M10
                .           .           .           .           .           .
                .           .           .           .           .           .
   620          .           .           .           .           .           .         ONH
                .           .           .           .           .           .           .
                .           .           .           .           .           .           .
   659          .         CP1..............................................................
                .           .
                .           .
   666          .           .------->     FS1
   662          .         DV1
                .           .
                .           .
   673          .           .------->     FS2
   669          .         DV2
                .           .
                .           .
   676          .           .         ONV
                .           .           .
                .           .           .
   714          .         CP2............
                .           .
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 717          .           .         ONG
              .           .           .
              .           .           .
 755          .         CP3............
              .           .
              .           .
 758          .           .         ONK
              .           .           .
              .           .           .
 799          .           .           .         ONF
              .           .           .           .
              .           .           .           .
 838          .         CP4........................
              .           .
              .           .
 841      CPDUM2............
              .
              .
 847          .           .<-------     FS1
 844          .        RET1
              .           .
              .           .
 848          .           .          MX
              .           .           .
              .           .           .
 885          .        CP14............
              .           .
              .           .
 888          .           .         ONS
              .           .           .
              .           .           .
 926          .       CP14A............
              .           .
              .           .
 929          .           .        M17
              .           .           .
              .           .           .
 969          .        CP15............
              .           .
              .           .
 972          .           .        M18
              .           .           .
              .           .           .
1010          .           .           .        M20
              .           .           .          V
              .           .           .          V
1049          .           .           .       STOR1
              .           .           .          V
              .           .           .          V
1058          .           .           .        RM20
              .           .           .           .
              .           .           .           .
1062          .           .           .           .        M19
              .           .           .           .           .
              .           .           .           .           .
1100          .           .           .        CP16............
              .           .           .           .
              .           .           .           .
1103          .        CP17........................
              .           V
              .           V
1106          .       RCP17
              .           .
              .           .
1110          .           .        ONP
              .           .           .
              .           .           .
1151          .        CP18............
              .           .
              .           .
1154      CPDUM3............
              .
              .
1157          .         ONT
              .           V
              .           V
1195          .       RMONT
              .           .
              .           .
1199          .           .        ONO
              .           .           .
              .           .           .
1240          .        CP20............
              .           .
              .           .
1243      CPDUM4............
              .
              .
1246          .         ONU
              .           V
              .           V
1284          .       RMONU
              .           .
              .           .
1288          .           .        ONL
              .           .           .
              .           .           .
1329          .        CP19............
              .           .
              .           .
1332          .           .        ONM
              .           .           .
              .           .           .
1370          .           .           .        ONN
              .           .           .           .
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1409      CPDUM5..................................
               .
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1412           .          M9
               .            .
               .            .
1457           .            .          M8
               .            .            .
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1499           .         CP5............
               .            .
               .            .
1504           .            .           .<-------     FS2
1502           .            .        RET2
               .            .            .
               .            .            .
1505           .         CP6............
               .            .
               .            .
1508           .            .          M7
               .            .            .
               .            .            .
1547           .            .            .        ONE1
               .            .            .           .
               .            .            .           .
1590           .            .        CP6A............
               .            .            .
               .            .            .
1593           .        CP6B............
               .            .
               .            .
1596           .            .        ONE2
               .            .            .
               .            .            .
1641           .         CP7............
               .            .
               .            .
1644           .            .          M6
               .            .            .
               .            .            .
1687           .            .            .         M5A
               .            .            .           .
               .            .            .           .
1726           .            .            .           .         M5B
               .            .            .           .           .
               .            .            .           .           .
1764           .            .         CP8........................
               .            .            .
               .            .            .
1767           .            .            .          M5
               .            .            .           .
               .            .            .           .
1807           .            .         CP9............
               .            .            .
               .            .            .
1810           .            .            .         ONB
               .            .            .           .
               .            .            .           .
1856           .            .        CP10............
               .            .            .
               .            .            .
1859           .            .            .         OND
               .            .            .           .
               .            .            .           .
1900           .            .            .           .         ONC
               .            .            .           .           .
               .            .            .           .           .
1939           .            .            .         CPA............
               .            .            .           .
               .            .            .           .
1942           .            .            .           .          M4
               .            .            .           .           .
               .            .            .           .           .
1991           .            .            .           .           .          M3
               .            .            .           .           .           .
               .            .            .           .           .           .
2032           .            .            .           .        CP11............
               .            .            .           .           .
               .            .            .           .           .
2035           .            .            .           .           .          M2
               .            .            .           .           .           .
               .            .            .           .           .           .
2091           .            .            .           .       CP12A............
               .            .            .           .           .
               .            .            .           .           .
2094           .            .            .           .           .         M13
               .            .            .           .           .           .
               .            .            .           .           .           .
2149           .            .            .           .           .           .-------->     FS3
2145           .            .            .           .           .         DV3
               .            .            .           .           .           .
               .            .            .           .           .           .
2152           .            .            .           .           .           .          M1
               .            .            .           .           .           .           .
               .            .            .           .           .           .           .
2192           .            .            .           .           .        CP12............
               .            .            .           .           .           .
               .            .            .           .           .           .
2195           .            .            .           .       CP12B............
               .            .            .           .           .
               .            .            .           .           .
2198           .            .            .           .           .         ONA
               .            .            .           .           .           .
               .            .            .           .           .           .
2239           .            .            .           .        CP13............
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  14:59:57  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                          ******************************************************
                          WO# 7323 - RIO MESA SOLAR
                          24-HR, 5-YR STORM
                          NOAA ATLAS 14- 24HR/5YR AVG PT RAINFALL DEPTH = 1.66"/1.73"
                          EXISTING CONDITION ANALYSIS
                          UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
                          STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
                          MODEL WITH NEW COMBINING SCHEME
                          ******************************************************
                          DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
                          REFERENCING RCFD & WCD PLATE E-5.8

                           AREA RANGE       DARF
                            (SQ.MI.)         --

                            0 TO 2.5  --->  1.000
                          2.5 TO  10  --->  0.990
                           10 TO  20  --->  0.980
                           20 TO  30  --->  0.970
                           30 TO  40  --->  0.965
                           40 TO  50  --->  0.955

                         ******************************************************

   26 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      7    0  ENDING DATE
                       NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL     .08 HOURS
                         TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                       NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00       .99       .98       .97       .96       .95
1

                PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                TIME TO PEAK IN HOURS


                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN            RATIO 1  RATIO 2  RATIO 3  RATIO 4  RATIO 5  RATIO 6
                                                       1.00      .99      .98      .97      .96      .95

 HYDROGRAPH AT
+                  M27       .22     1   FLOW            8.       8.       8.       8.       7.       7.
                                           TIME        15.08    15.08    15.08    15.08    15.08    15.08

 ROUTED TO
+                 RM27       .22     1   FLOW            8.       8.       8.       8.       7.       7.
                                           TIME        15.58    15.67    15.67    15.67    15.67    15.67

 HYDROGRAPH AT
+                  ONR       .27     1   FLOW           11.      10.      10.      10.       9.       9.
                                           TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CP25       .49     1   FLOW           17.      17.      16.      16.      15.      15.
                                           TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                  M22       .07     1   FLOW            5.       5.       5.       5.       5.       5.
                                           TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M21       .17     1   FLOW           14.      14.      13.      13.      13.      13.
                                           TIME        14.92    14.92    14.92    14.92    14.92    14.92
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT | | | | | | | | | | |
| + | M23 | .18 | 1 | FLOW | 14. | 14. | 14. | 13. | 13. | 13. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M25 | .15 | 1 | FLOW | 14. | 14. | 14. | 13. | 13. | 13. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 4 COMBINED AT | | | | | | | | | | |
| + | CP21 | .57 | 1 | FLOW | 47. | 46. | 45. | 44. | 44. | 43. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M24 | .66 | 1 | FLOW | 80. | 79. | 78. | 77. | 77. | 76. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO | | | | | | | | | | |
| + | RM24 | .66 | 1 | FLOW | 80. | 79. | 78. | 77. | 76. | 75. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.33 | 15.33 | 15.33 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M26 | .53 | 1 | FLOW | 27. | 26. | 26. | 25. | 25. | 24. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP22 | 1.19 | 1 | FLOW | 106. | 105. | 103. | 101. | 101. | 99. |
| | | | | TIME | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 | 15.25 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP23 | 1.76 | 1 | FLOW | 151. | 148. | 145. | 143. | 142. | 139. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| ROUTED TO | | | | | | | | | | |
| + | RCP23 | 1.76 | 1 | FLOW | 150. | 148. | 145. | 143. | 142. | 139. |
| | | | | TIME | 15.42 | 15.42 | 15.42 | 15.42 | 15.42 | 15.42 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONQ | .66 | 1 | FLOW | 24. | 23. | 23. | 22. | 22. | 21. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP24 | 2.42 | 1 | FLOW | 174. | 170. | 167. | 164. | 162. | 159. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CPDUM1 | 2.91 | 1 | FLOW | 190. | 187. | 183. | 179. | 178. | 174. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M12 | 3.98 | 1 | FLOW | 323. | 318. | 312. | 307. | 305. | 299. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONJ | .07 | 1 | FLOW | 4. | 4. | 4. | 4. | 4. | 4. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M11 | 1.30 | 1 | FLOW | 87. | 85. | 83. | 82. | 81. | 79. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONI | .05 | 1 | FLOW | 3. | 3. | 3. | 3. | 3. | 3. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M10 | .38 | 1 | FLOW | 22. | 22. | 21. | 21. | 21. | 20. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONH | .20 | 1 | FLOW | 14. | 14. | 14. | 13. | 13. | 13. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 6 COMBINED AT | | | | | | | | | | |
| + | CP1 | 5.98 | 1 | FLOW | 452. | 444. | 437. | 429. | 425. | 417. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS1 | 5.98 | 1 | FLOW | 13. | 13. | 13. | 12. | 12. | 12. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV1 | 5.98 | 1 | FLOW | 439. | 432. | 424. | 417. | 413. | 405. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS2 | 5.98 | 1 | FLOW | 262. | 257. | 253. | 248. | 246. | 242. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV2 | 5.98 | 1 | FLOW | 177. | 174. | 171. | 168. | 167. | 164. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONV | .12 | 1 | FLOW | 4. | 4. | 4. | 4. | 4. | 4. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP2 | 6.10 | 1 | FLOW | 182. | 178. | 175. | 172. | 171. | 167. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONG | .14 | 1 | FLOW | 5. | 5. | 5. | 5. | 4. | 4. |
| | | | | TIME | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 | 15.00 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP3 | 6.24 | 1 | FLOW | 186. | 183. | 180. | 177. | 175. | 172. |

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                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                   ONK       .68     1   FLOW         22.      21.      20.      20.      19.      19.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   ONF       .50     1   FLOW         17.      17.      16.      16.      15.      15.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  3 COMBINED AT
+                   CP4      7.42     1   FLOW        225.     221.     216.     212.     209.     205.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                 CPDUM2    10.33     1   FLOW        411.     403.     395.     387.     383.     375.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                  RET1       .00     1   FLOW         13.      13.      13.      12.      12.      12.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    MX       .01     1   FLOW          1.       1.       1.       1.       1.       1.
                                          TIME        14.75    14.75    14.75    14.75    14.75    14.75

  2 COMBINED AT
+                  CP14       .01     1   FLOW         14.      14.      14.      14.      13.      13.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                   ONS       .04     1   FLOW          2.       2.       2.       1.       1.       1.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                 CP14A       .05     1   FLOW         16.      16.      15.      15.      15.      15.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                  M17        .67     1   FLOW         59.      58.      57.      56.      55.      54.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP15       .72     1   FLOW         74.      73.      72.      71.      70.      69.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M18        .12     1   FLOW         10.      10.      10.      10.      10.       9.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                  M20        .49     1   FLOW         58.      57.      56.      55.      55.      54.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 STOR1       .49     1   FLOW          0.       0.       0.       0.       0.       0.
                                          TIME         .00      .00      .00      .00      .00      .00
                                       ** PEAK STAGES IN FEET **
                                       1  STAGE       438.28   438.19   438.10   438.02   437.97   437.88
                                          TIME        26.25    26.00    26.25    26.17    26.17    26.08

 ROUTED TO
+                  RM20       .49     1   FLOW          0.       0.       0.       0.       0.       0.
                                          TIME         .00      .00      .00      .00      .00      .00

 HYDROGRAPH AT
+                  M19        .11     1   FLOW          9.       9.       9.       9.       9.       9.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+                  CP16       .60     1   FLOW          9.       9.       9.       9.       9.       9.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

  3 COMBINED AT
+                  CP17      1.44     1   FLOW         94.      92.      91.      89.      88.      87.
                                          TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+                 RCP17      1.44     1   FLOW         94.      92.      90.      89.      88.      86.
                                          TIME        15.42    15.42    15.42    15.42    15.42    15.50

 HYDROGRAPH AT
+                   ONP      1.47     1   FLOW         52.      51.      49.      48.      47.      46.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

  2 COMBINED AT
+                  CP18      2.91     1   FLOW        144.     141.     138.     135.     133.     130.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

  2 COMBINED AT
+                CPDUM3     13.24     1   FLOW        553.     542.     531.     519.     514.     503.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                   ONT       .04     1   FLOW          2.       2.       2.       1.       1.       1.
                                          TIME        14.92    14.92    14.92    14.92    14.92    15.00

 ROUTED TO
+                 RMONT       .04     1   FLOW          2.       2.       2.       2.       2.       2.
                                          TIME        16.67    16.50    16.75    16.83    16.67    16.75

 HYDROGRAPH AT
+                   ONO       .55     1   FLOW         20.      19.      18.      18.      18.      17.
                                          TIME        15.17    15.17    15.25    15.25    15.25    15.25
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  2 COMBINED AT
+                 CP20       .59    1   FLOW        20.     19.     18.     18.     18.     17.
                                        TIME     15.17   15.17   15.25   15.25   15.25   15.25

  2 COMBINED AT
+                CPDUM4     13.83    1   FLOW       573.    561.    549.    537.    532.    520.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                  ONU       .05    1   FLOW         2.      2.      2.      2.      2.      2.
                                        TIME     14.92   15.00   15.00   15.00   15.00   15.00

 ROUTED TO
+                RMONU       .05    1   FLOW         2.      2.      2.      2.      2.      2.
                                        TIME     16.67   16.50   16.58   16.42   16.67   16.33

 HYDROGRAPH AT
+                  ONL       .73    1   FLOW        27.     26.     25.     24.     24.     23.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

  2 COMBINED AT
+                 CP19       .78    1   FLOW        27.     26.     25.     24.     24.     23.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                  ONM       .10    1   FLOW         4.      4.      4.      4.      4.      4.
                                        TIME     14.92   14.92   14.92   14.92   14.92   14.92

 HYDROGRAPH AT
+                  ONN       .08    1   FLOW         3.      3.      3.      3.      3.      3.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  4 COMBINED AT
+                CPDUM5     14.79    1   FLOW       606.    593.    580.    568.    562.    549.
                                        TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                   M9      1.80    1   FLOW       143.    141.    138.    136.    135.    133.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M8      1.04    1   FLOW        86.     85.     83.     82.     81.     80.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

  2 COMBINED AT
+                  CP5      2.84    1   FLOW       229.    225.    221.    217.    216.    212.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                 RET2       .00    1   FLOW       262.    257.    253.    248.    246.    242.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  2 COMBINED AT
+                  CP6      2.84    1   FLOW       490.    482.    474.    465.    461.    453.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M7       .16    1   FLOW         9.      8.      8.      8.      8.      8.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                 ONE1      1.61    1   FLOW        56.     54.     53.     51.     51.     49.
                                        TIME     15.33   15.33   15.33   15.33   15.33   15.33

  2 COMBINED AT
+                 CP6A      1.77    1   FLOW        63.     62.     60.     58.     57.     56.
                                        TIME     15.33   15.33   15.33   15.33   15.33   15.33

  2 COMBINED AT
+                 CP6B      4.61    1   FLOW       552.    542.    532.    522.    517.    507.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                 ONE2      2.59    1   FLOW        92.     89.     87.     84.     83.     81.
                                        TIME     15.50   15.50   15.50   15.50   15.50   15.50

  2 COMBINED AT
+                  CP7      7.20    1   FLOW       636.    624.    611.    599.    593.    581.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M6      1.32    1   FLOW        96.     94.     93.     91.     90.     88.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  M5A       .17    1   FLOW        15.     15.     15.     15.     15.     14.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  M5B       .18    1   FLOW        17.     16.     16.     16.     16.     15.
                                        TIME     14.92   14.92   14.92   14.92   14.92   14.92

  3 COMBINED AT
+                  CP8      1.67    1   FLOW       128.    126.    124.    121.    120.    118.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                   M5       .39    1   FLOW        17.     16.     16.     15.     15.     15.
                                        TIME     15.08   15.08   15.08   15.08   15.08   15.08

  2 COMBINED AT
+                  CP9      2.06    1   FLOW       144.    142.    139.    136.    135.    132.
                                        TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                  ONB      2.83    1   FLOW        88.     86.     83.     81.     80.     77.
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                                        TIME        15.50    15.58    15.58    15.58    15.58    15.58

  2 COMBINED AT
+                   CP10      4.89     1  FLOW         223.     218.     213.     208.     205.     200.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                    OND      1.34     1  FLOW          43.      41.      40.      39.      38.      37.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    ONC       .30     1  FLOW          10.      10.      10.      10.       9.       9.
                                          TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+                    CPA      1.64     1  FLOW          53.      51.      49.      48.      47.      46.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M4      2.71     1  FLOW         189.     186.     183.     179.     178.     174.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M3       .57     1  FLOW          33.      32.      31.      31.      30.      30.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                   CP11      3.28     1  FLOW         222.     218.     214.     210.     208.     204.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                     M2     24.30     1  FLOW        1486.    1461.    1435.    1410.    1397.    1372.
                                          TIME        15.58    15.58    15.58    15.58    15.58    15.58

  2 COMBINED AT
+                  CP12A     27.58     1  FLOW        1692.    1663.    1634.    1605.    1590.    1561.
                                          TIME        15.50    15.50    15.50    15.50    15.50    15.50

 HYDROGRAPH AT
+                    M13      7.18     1  FLOW         558.     550.     541.     532.     528.     519.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 DIVERSION TO
+                    FS3      7.18     1  FLOW         279.     275.     270.     266.     264.     259.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                    DV3      7.18     1  FLOW         279.     275.     270.     266.     264.     259.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                     M1       .76     1  FLOW          40.      39.      38.      37.      37.      36.
                                          TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+                   CP12      7.94     1  FLOW         317.     312.     307.     302.     299.     294.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                  CP12B     35.52     1  FLOW        2003.    1969.    1934.    1900.    1883.    1848.
                                          TIME        15.42    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                    ONA       .87     1  FLOW          40.      39.      38.      37.      37.      36.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                   CP13     36.39     1  FLOW        2040.    2005.    1970.    1934.    1917.    1882.
1                                         TIME        15.42    15.42    15.42    15.42    15.42    15.42
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                  INTERPOLATED TO
                                                                                COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                              PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      8.27    940.00       .19      5.00      8.27    940.00        .19

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .2172E+01 EXCESS= .0000E+00 OUTFLOW= .2174E+01 BASIN STORAGE= .6141E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      8.04    940.00       .18      5.00      8.04    940.00        .18

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .2101E+01 EXCESS= .0000E+00 OUTFLOW= .2103E+01 BASIN STORAGE= .6054E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      7.81    940.00       .17      5.00      7.81    940.00        .17

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .2031E+01 EXCESS= .0000E+00 OUTFLOW= .2033E+01 BASIN STORAGE= .5992E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      7.59    940.00       .17      5.00      7.59    940.00        .17

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .1962E+01 EXCESS= .0000E+00 OUTFLOW= .1964E+01 BASIN STORAGE= .5892E-02 PERCENT ERROR=   -.4
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          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      7.47    940.00       .16      5.00      7.47    940.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1927E+01 EXCESS= .0000E+00 OUTFLOW= .1929E+01 BASIN STORAGE= .5857E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      7.25    940.00       .16      5.00      7.25    940.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1860E+01 EXCESS= .0000E+00 OUTFLOW= .1862E+01 BASIN STORAGE= .5650E-02 PERCENT ERROR=   -.4

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     80.02    915.00       .95      5.00     80.02    915.00         .95

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3343E+02 EXCESS= .0000E+00 OUTFLOW= .3345E+02 BASIN STORAGE= .9693E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     78.95    915.00       .94      5.00     78.95    915.00         .94

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3292E+02 EXCESS= .0000E+00 OUTFLOW= .3293E+02 BASIN STORAGE= .9406E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     77.89    915.00       .92      5.00     77.89    915.00         .92

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3240E+02 EXCESS= .0000E+00 OUTFLOW= .3241E+02 BASIN STORAGE= .9201E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     76.83    920.00       .91      5.00     76.83    920.00         .91

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3188E+02 EXCESS= .0000E+00 OUTFLOW= .3190E+02 BASIN STORAGE= .9137E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     76.31    920.00       .90      5.00     76.31    920.00         .90

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3162E+02 EXCESS= .0000E+00 OUTFLOW= .3164E+02 BASIN STORAGE= .9007E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     75.26    920.00       .88      5.00     75.26    920.00         .88

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3111E+02 EXCESS= .0000E+00 OUTFLOW= .3112E+02 BASIN STORAGE= .8943E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    150.32    925.00       .61      5.00    150.32    925.00         .61

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5695E+02 EXCESS= .0000E+00 OUTFLOW= .5697E+02 BASIN STORAGE= .1166E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    147.84    925.00       .60      5.00    147.84    925.00         .60

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5589E+02 EXCESS= .0000E+00 OUTFLOW= .5591E+02 BASIN STORAGE= .1102E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    145.37    925.00       .58      5.00    145.37    925.00         .58

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5483E+02 EXCESS= .0000E+00 OUTFLOW= .5485E+02 BASIN STORAGE= .1092E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    142.90    925.00       .57      5.00    142.90    925.00         .57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5378E+02 EXCESS= .0000E+00 OUTFLOW= .5379E+02 BASIN STORAGE= .1238E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    141.67    925.00       .57      5.00    141.67    925.00         .57

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5326E+02 EXCESS= .0000E+00 OUTFLOW= .5327E+02 BASIN STORAGE= .1231E-01 PERCENT ERROR=    .0

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00    139.20    925.00       .56      5.00    139.20    925.00         .56

CONTINUITY SUMMARY (AC-FT) - INFLOW= .5221E+02 EXCESS= .0000E+00 OUTFLOW= .5223E+02 BASIN STORAGE= .1224E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00
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          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    925.00         .00


          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     93.64    925.00       .43      5.00     93.64    925.00         .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3337E+02 EXCESS= .0000E+00 OUTFLOW= .3339E+02 BASIN STORAGE= .1304E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     92.01    925.00       .43      5.00     92.01    925.00         .43

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3270E+02 EXCESS= .0000E+00 OUTFLOW= .3272E+02 BASIN STORAGE= .1267E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     90.37    925.00       .42      5.00     90.37    925.00         .42

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3203E+02 EXCESS= .0000E+00 OUTFLOW= .3205E+02 BASIN STORAGE= .1222E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     88.75    925.00       .41      5.00     88.75    925.00         .41

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3137E+02 EXCESS= .0000E+00 OUTFLOW= .3139E+02 BASIN STORAGE= .1166E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     87.93    930.00       .40      5.00     87.93    930.00         .40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3104E+02 EXCESS= .0000E+00 OUTFLOW= .3105E+02 BASIN STORAGE= .1309E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     86.36    930.00       .40      5.00     86.36    930.00         .40

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3038E+02 EXCESS= .0000E+00 OUTFLOW= .3040E+02 BASIN STORAGE= .1283E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.84   1000.00       .19      5.00      1.84   1000.00         .19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3949E+00 EXCESS= .0000E+00 OUTFLOW= .4002E+00 BASIN STORAGE= .1113E-01 PERCENT ERROR=  -4.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.72    990.00       .18      5.00      1.72    990.00         .18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3820E+00 EXCESS= .0000E+00 OUTFLOW= .3874E+00 BASIN STORAGE= .1292E-01 PERCENT ERROR=  -4.8

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.70   1005.00       .18      5.00      1.70   1005.00         .18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3692E+00 EXCESS= .0000E+00 OUTFLOW= .3745E+00 BASIN STORAGE= .1280E-01 PERCENT ERROR=  -4.9

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.70   1010.00       .17      5.00      1.70   1010.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3566E+00 EXCESS= .0000E+00 OUTFLOW= .3619E+00 BASIN STORAGE= .1249E-01 PERCENT ERROR=  -5.0

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.66   1000.00       .17      5.00      1.66   1000.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3504E+00 EXCESS= .0000E+00 OUTFLOW= .3559E+00 BASIN STORAGE= .1243E-01 PERCENT ERROR=  -5.1

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         5.00      1.60   1005.00       .16      5.00      1.60   1005.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3381E+00 EXCESS= .0000E+00 OUTFLOW= .3437E+00 BASIN STORAGE= .1206E-01 PERCENT ERROR=  -5.2
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          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      2.14   1000.00       .19      5.00      2.14   1000.00         .19

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4937E+00 EXCESS= .0000E+00 OUTFLOW= .4991E+00 BASIN STORAGE= .1126E-01 PERCENT ERROR=  -3.4

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      2.15    990.00       .18      5.00      2.15    990.00         .18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4776E+00 EXCESS= .0000E+00 OUTFLOW= .4829E+00 BASIN STORAGE= .1119E-01 PERCENT ERROR=  -3.5

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      2.12    995.00       .18      5.00      2.12    995.00         .18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4616E+00 EXCESS= .0000E+00 OUTFLOW= .4670E+00 BASIN STORAGE= .1085E-01 PERCENT ERROR=  -3.5

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      2.00    985.00       .17      5.00      2.00    985.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4459E+00 EXCESS= .0000E+00 OUTFLOW= .4512E+00 BASIN STORAGE= .1076E-01 PERCENT ERROR=  -3.6

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      2.02   1000.00       .17      5.00      2.02   1000.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4381E+00 EXCESS= .0000E+00 OUTFLOW= .4435E+00 BASIN STORAGE= .1061E-01 PERCENT ERROR=  -3.6

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         5.00      1.92   1005.00       .16      5.00      1.92   1005.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .4228E+00 EXCESS= .0000E+00 OUTFLOW= .4279E+00 BASIN STORAGE= .1036E-01 PERCENT ERROR=  -3.7


*** NORMAL END OF HEC-1 ***
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1*************************************
 *                                   *
 *   L.A. DISTRICT HEC-1 PREPROCESSOR  *
 *              MARCH 1984           *
 *                                   *
 * LAST REVISED 13 JUL 1998   Ver 2.0  *
 *                                   *
 *  RUN DATE 06/28/2011  TIME 14:57:46 *
 *                                   *
 *************************************


                L          A     PPPPPP   RRRRRR   EEEEEEE   1
                L         A A    P     P  R     R  E        11
                L        A   A   P     P  R     R  E         1
                L       A     A  PPPPPP   RRRRRR   EEEEE     1
                L       AAAAAAA  P        R   R    E         1
                L       A     A  P        R    R   E         1
                LLLLLLL A     A  P        R     R  EEEEEEE  111

 ID ******************************************************

 ID WO# 7323 - RIO MESA SOLAR

 ID 24-HR, 5-YR STORM

 ID NOAA ATLAS 14- 24HR/5YR AVG PT RAINFALL DEPTH = 1.66"/1.73"

 ID EXISTING CONDITION ANALYSIS

 ID UNIT HYDROGRAPHS GENERATED FROM LAPRE-1

 ID STORM HYTEOGRAPHS GENERATED FROM LAPRE-1

 ID MODEL WITH NEW COMBINING SCHEME

 ID ******************************************************

 ID DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR

 ID REFERENCING RCFD & WCD PLATE E-5.8

 ID

 ID  AREA RANGE       DARF

 ID   (SQ.MI.)         --

 ID

 ID   0 TO 2.5  --->  1.000

 ID 2.5 TO  10  --->  0.990

 ID  10 TO  20  --->  0.980

 ID  20 TO  30  --->  0.970

 ID  30 TO  40  --->  0.965

 ID  40 TO  50  --->  0.955

 ID

 ID******************************************************

 TIME INTERVAL IS  0 HR  5 MIN

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 KK   M27

 AREA =    .22 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .2    1.73   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    1.17     .54   41.77    .035       9      .0     .00

   WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

  UNIT HYDROGRAPH  LH=  33  PERCENT LAG=   24.00  LAG=     .35  UG VOL.=   1703.
     53.    118.    307.    329.    202.    133.     95.     74.     59.     50.
     39.     33.     28.     25.     23.     19.     17.     13.     13.      9.
      7.      7.      7.      7.      5.      4.      4.      4.      4.      4.
      4.      4.      2.

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 KK  RM27

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 KK  ONR

 AREA =    .27 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .3    1.73   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
     .98     .37   68.37    .035       9      .0     .00
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  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   32.55  LAG=     .26  UG VOL.=   2090.
   102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
    38.     32.     25.     21.     15.     12.     12.     11.      7.      7.
     7.      7.      7.      7.

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KK  CP25

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KK  M22

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .20   86.00    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.14  LAG=     .16  UG VOL.=    542.
    66.    222.     95.     50.     32.     21.     16.     11.      8.      5.
     5.      3.      3.      3.      2.

================================================================================

KK  M21

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .84     .37  831.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   55.49  LAG=     .15  UG VOL.=   1316.
   322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
    22.     19.     15.     14.     11.     11.      7.      4.      4.      4.
     4.      4.      4.      2.

================================================================================

KK  M23

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.00     .45  900.44    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   48.94  LAG=     .17  UG VOL.=   1393.
   269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
    24.     21.     19.     17.     14.     13.     10.     10.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

================================================================================

KK  M25

AREA =    .15 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.05     .59  870.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  31  PERCENT LAG=   43.06  LAG=     .19  UG VOL.=   1161.
   178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
    20.     18.     16.     15.     13.     12.     10.     10.      7.      7.
     7.      4.      3.      3.      3.      3.      3.      3.      3.      3.
     0.

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KK  CP21

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KK  M24

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION
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     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.28     .58  998.98    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  32  PERCENT LAG=   41.27  LAG=     .20  UG VOL.=   5108.
   724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
    87.     79.     74.     65.     60.     55.     47.     42.     40.     30.
    30.     30.     16.     11.     11.     11.     11.     11.     11.     11.
    11.      6.

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KK  RM24

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KK   M26

AREA =    .53 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.59     .85   72.80    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  40  PERCENT LAG=   19.98  LAG=     .42  UG VOL.=   4102.
    97.    190.    396.    792.    575.    378.    279.    201.    165.    133.
   114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
    27.     26.     26.     18.     14.     14.     14.     14.     14.      8.
     8.      8.      8.      8.      8.      8.      8.      8.      8.      0.

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KK  CP22

================================================================================

KK  CP23

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KK RCP23

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KK  ONQ

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.67     .93   63.88    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.49  LAG=     .45  UG VOL.=   5108.
   107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
   144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
    44.     40.     30.     30.     30.     19.     17.     17.     17.     17.
    17.     12.      9.      9.      9.      9.      9.      9.      9.      9.
     9.      9.      2.

================================================================================

KK  CP24

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KKCPDUM1

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KK   M12

AREA =   3.98 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     4.0    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.91    2.42  301.01    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 105  PERCENT LAG=   12.49  LAG=     .67  UG VOL.=  30805.
   885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
   770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
   350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
   196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
   135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
   100.    100.    100.    100.     83.     76.     76.     76.     76.     76.
    76.     76.     63.     55.     55.     55.     55.     55.     55.     55.
    55.     55.     55.     38.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.      2.
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KK   ONJ

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .39     .16  418.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   89.63  LAG=     .09  UG VOL.=    542.
   248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
     4.      3.      3.      3.      1.

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KK   M11

AREA =   1.30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.46    1.24  351.38    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  66  PERCENT LAG=   19.78  LAG=     .42  UG VOL.=  10062.
   496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
   249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
    88.     85.     78.     78.     72.     70.     70.     62.     61.     61.
    55.     52.     52.     52.     43.     39.     39.     39.     39.     33.
    29.     29.     29.     29.     29.     29.     18.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      8.

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KK   ONI

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .36     .24  507.37    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  16  PERCENT LAG=   82.16  LAG=     .10  UG VOL.=    387.
   165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
     5.      2.      2.      2.      2.      1.

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KK   M10

AREA =    .38 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.51     .67   74.89    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  35  PERCENT LAG=   22.43  LAG=     .37  UG VOL.=   2941.
    82.    175.    428.    584.    380.    247.    170.    135.    106.     91.
    75.     60.     53.     45.     40.     37.     31.     30.     21.     21.
    19.     12.     12.     12.     12.     11.      7.      7.      7.      7.
     7.      7.      7.      7.      5.

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KK   ONH

AREA =    .20 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .70     .30  202.53    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   49.24  LAG=     .17  UG VOL.=   1548.
   302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
    26.     23.     21.     19.     15.     14.     11.     11.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK   CP1
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KK   DV1

================================================================================

KK   DV2

================================================================================

KK   ONV

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .49     .25  103.16    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.16  LAG=     .16  UG VOL.=    929.
   112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
     8.      5.      5.      5.      3.

================================================================================

KK   CP2

================================================================================

KK   ONG

AREA =    .14 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .73     .28   70.34    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   40.69  LAG=     .20  UG VOL.=   1084.
    78.    322.    250.    124.     77.     56.     38.     30.     24.     20.
    14.     10.      8.      8.      5.      4.      4.      4.      4.      1.

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KK   CP3

================================================================================

KK   ONK

AREA =    .68 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.87     .93   77.12    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.36  LAG=     .45  UG VOL.=   5263.
   109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
   151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
    45.     43.     30.     30.     30.     22.     17.     17.     17.     17.
    17.     14.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.      5.

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KK   ONF

AREA =    .50 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.22     .46   85.02    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  28  PERCENT LAG=   28.74  LAG=     .29  UG VOL.=   3870.
   153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
    77.     65.     57.     52.     35.     35.     23.     20.     20.     20.
    13.     11.     11.     11.     11.     11.     11.      2.

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KK   CP4

================================================================================

KKCPDUM2

================================================================================
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KK  RET1

================================================================================

KK    MX

AREA =    .01 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .14     .06 1525.43    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=   6  PERCENT LAG=  245.56  LAG=     .03  UG VOL.=     77.
    58.     11.      5.      2.      1.      0.

================================================================================

KK  CP14

================================================================================

KK   ONS

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .31  115.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  17  PERCENT LAG=   47.60  LAG=     .18  UG VOL.=    310.
    30.    114.     62.     31.     20.     13.     10.      8.      6.      4.
     3.      3.      2.      1.      1.      1.      1.

================================================================================

KK CP14A

================================================================================

KK  M17

AREA =    .67 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .54  494.88    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  38  PERCENT LAG=   34.76  LAG=     .24  UG VOL.=   5186.
   564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
    97.     80.     74.     69.     63.     59.     55.     49.     47.     41.
    36.     36.     30.     26.     26.     26.     16.      9.      9.      9.
     9.      9.      9.      9.      9.      9.      9.      4.

================================================================================

KK  CP15

================================================================================

KK  M18

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .89     .32  152.41    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  19  PERCENT LAG=   41.55  LAG=     .20  UG VOL.=    929.
    70.    284.    213.    104.     65.     47.     33.     25.     20.     16.
    12.      8.      7.      7.      4.      4.      4.      4.      3.

================================================================================

KK  M20

AREA =    .49 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.07     .48  734.10    .035       1      .0     .00

  MOUNTAIN S-GRAPH
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```
 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   44.77  LAG=     .19  UG VOL.=   3793.
   626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
    64.     59.     52.     48.     44.     35.     34.     28.     24.     24.
    17.      9.      9.      9.      9.      9.      9.      9.      9.      0.

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KK STOR1

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KK  RM20

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KK  M19

AREA =    .11 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .67     .19  140.33    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   55.55  LAG=     .15  UG VOL.=    851.
   117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
     6.      5.      5.      5.      0.

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KK  CP16

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KK  CP17

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KK RCP17

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KK  ONP

AREA =   1.47 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.5    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.14    1.09   74.90    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  48  PERCENT LAG=   16.33  LAG=     .51  UG VOL.=  11378.
   206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
   366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
   103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
    33.     33.     33.     33.     33.     26.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     14.

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KK  CP18

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KKCPDUM3

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KK   ONT

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .51     .16   72.94    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   58.08  LAG=     .14  UG VOL.=    310.
    48.    131.     50.     27.     16.     11.      8.      6.      3.      3.
     2.      2.      2.      1.

================================================================================

KK RMONT

================================================================================

KK  ONO

AREA =    .55 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    1.73   .0000     .00     .00     .00     .00
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      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.08    1.06   79.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  47  PERCENT LAG=   16.86  LAG=     .49  UG VOL.=   4257.
    80.    141.    249.    529.    675.    480.    333.    261.    187.    161.
   135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
    40.     35.     33.     32.     22.     22.     22.     19.     13.     13.
    13.     13.     13.     13.      9.      7.      7.      7.      7.      7.
     7.      7.      7.      7.      7.      7.      2.

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KK  CP20

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KKCPDUM4

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KK   ONU

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .48     .19   77.62    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   56.34  LAG=     .15  UG VOL.=    387.
    55.    163.     64.     34.     21.     14.     11.      7.      5.      4.
     3.      2.      2.      2.

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KK RMONU

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KK  ONL

AREA =    .73 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.99     .84   83.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  42  PERCENT LAG=   18.91  LAG=     .44  UG VOL.=   5650.
   122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
   159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
    50.     38.     33.     33.     28.     19.     19.     19.     19.     19.
    16.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.      3.

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KK  CP19

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KK  ONM

AREA =    .10 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .35     .25  215.67    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  12  PERCENT LAG=   69.50  LAG=     .12  UG VOL.=    774.
   197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
     5.      1.

================================================================================

KK  ONN

AREA =    .08 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.73   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .52   83.15    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  29  PERCENT LAG=   27.06  LAG=     .31  UG VOL.=    619.
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```
    23.     56.    149.    107.     65.     42.     32.     24.     20.     15.
    13.     11.      9.      8.      7.      5.      5.      3.      3.      3.
     3.      2.      2.      2.      2.      2.      2.      2.      1.

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KKCPDUM5

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KK    M9

AREA =   1.80 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.8    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.17    1.95  284.58    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  90  PERCENT LAG=   14.53  LAG=     .57  UG VOL.=  13932.
   471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
   364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
   145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
    79.     79.     79.     71.     71.     71.     70.     62.     62.     62.
    62.     56.     53.     53.     53.     53.     48.     40.     40.     40.
    40.     40.     40.     36.     29.     29.     29.     29.     29.     29.
    29.     29.     29.     14.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.      5.

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KK    M8

AREA =   1.04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.0    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.02     .81  248.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  56  PERCENT LAG=   23.47  LAG=     .36  UG VOL.=   8050.
   495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
   177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
    69.     66.     65.     58.     58.     55.     49.     49.     48.     37.
    37.     37.     37.     29.     27.     27.     27.     27.     27.     12.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      4.

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KK   CP5

==============================================================================

KK  RET2

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KK   CP6

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KK    M7

AREA =    .16 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .97     .43  113.71    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  23  PERCENT LAG=   34.00  LAG=     .25  UG VOL.=   1238.
    65.    232.    334.    172.    101.     71.     54.     40.     32.     26.
    22.     18.     13.     11.      7.      7.      7.      4.      4.      4.
     4.      4.      4.

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KK  ONE1

AREA =   1.61 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.6    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.15    1.46   52.35    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  67  PERCENT LAG=   11.78  LAG=     .71  UG VOL.=  12461.
   163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
```

```
   566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
   159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
    74.     68.     68.     68.     48.     46.     46.     46.     46.     37.
    26.     26.     26.     26.     26.     26.     26.     26.     26.     17.
    15.     15.     15.     15.     15.     15.     15.     15.     15.     15.
    15.     15.     15.     15.     15.     15.      3.

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KK  CP6A

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KK  CP6B

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KK  ONE2

AREA =   2.59 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.6    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.20    2.08   58.07    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  83  PERCENT LAG=    9.42  LAG=     .88  UG VOL.=  20047.
   210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
  1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
   290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
   151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
    88.     88.     79.     59.     59.     59.     59.     59.     59.     45.
    33.     33.     33.     33.     33.     33.     33.     33.     33.     33.
    33.     27.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     15.

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KK   CP7

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KK    M6

AREA =   1.32 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.35    1.10  223.90    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  68  PERCENT LAG=   19.33  LAG=     .43  UG VOL.=  10217.
   488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
   247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
    88.     88.     79.     77.     76.     69.     69.     67.     61.     61.
    61.     52.     51.     51.     51.     40.     39.     39.     39.     39.
    32.     28.     28.     28.     28.     28.     28.     19.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.      2.

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KK   M5A

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.24     .50   64.29    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   26.24  LAG=     .32  UG VOL.=   1316.
    46.    109.    302.    234.    144.     91.     69.     52.     44.     34.
    28.     24.     20.     18.     16.     12.     11.     10.      6.      6.
     6.      6.      4.      3.      3.      3.      3.      3.      3.      3.

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KK   M5B

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .64     .26   38.95    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   39.33  LAG=     .21  UG VOL.=   1393.
    94.    388.    331.    166.    102.     73.     52.     40.     32.     26.
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    19.     16.     10.     10.      9.      5.      5.      5.      5.      5.

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KK   CP8

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KK    M5

AREA =    .39 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .62   57.53    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.60  LAG=     .35  UG VOL.=   3019.
    91.    201.    517.    588.    366.    241.    170.    133.    105.     90.
    71.     60.     51.     45.     40.     34.     33.     23.     22.     20.
    13.     13.     13.     13.     10.      7.      7.      7.      7.      7.
     7.      7.      7.      0.

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KK   CP9

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KK   ONB

AREA =   2.83 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.8    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.50    2.15   45.11    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  91  PERCENT LAG=    8.64  LAG=     .96  UG VOL.=  21904.
   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
    59.     59.     59.     58.     33.     33.     33.     33.     33.     33.
    33.     33.     33.     33.     33.     33.     33.     21.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
     6.

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KK  CP10

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KK   OND

AREA =   1.34 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.75    1.04   68.49    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  45  PERCENT LAG=   17.64  LAG=     .47  UG VOL.=  10372.
   203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
   309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
    91.     85.     79.     57.     57.     57.     43.     32.     32.     32.
    32.     32.     30.     18.     18.     18.     18.     18.     18.     18.
    18.     18.     18.     18.      4.

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KK   ONC

AREA =    .30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .3    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .80     .21   32.43    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  21  PERCENT LAG=   37.84  LAG=     .22  UG VOL.=   2322.
   146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
    36.     27.     19.     15.     15.     11.      9.      9.      9.      9.
     5.

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KK   CPA

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KK    M4

AREA =   2.71 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.7    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.74    2.49  165.93    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 127  PERCENT LAG=   10.26  LAG=     .81  UG VOL.=  20975.
   485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
   649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
   269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
   152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
    96.     93.     84.     84.     84.     84.     82.     75.     75.     75.
    75.     75.     69.     66.     66.     66.     66.     66.     62.     56.
    56.     56.     56.     56.     56.     56.     44.     43.     43.     43.
    43.     43.     43.     43.     43.     42.     31.     31.     31.     31.
    31.     31.     31.     31.     31.     31.     31.     31.     31.     21.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.      9.

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KK    M3

AREA =    .57 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.94     .97   77.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  44  PERCENT LAG=   17.84  LAG=     .47  UG VOL.=   4412.
    87.    163.    295.    663.    681.    473.    337.    244.    191.    159.
   130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
    37.     37.     31.     25.     25.     25.     15.     14.     14.     14.
    14.     14.     11.      8.      8.      8.      8.      8.      8.      8.
     8.      8.      8.      6.

================================================================================

KK  CP11

================================================================================

KK CP12A

================================================================================

KK   M13

AREA =   7.18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     7.2    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   6.22    3.99  171.11    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 168  PERCENT LAG=    7.78  LAG=    1.07  UG VOL.=  55573.
   961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
  2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
   718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
   432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
   301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
   192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
   170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
   133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
   112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
    86.     86.     86.     86.     86.     86.     86.     86.     86.     86.
    66.     62.     62.     62.     62.     62.     62.     62.     62.     62.
    62.     62.     62.     62.     62.     62.     62.     62.     24.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.      3.
    WARNING!!!!! THE UNIT HYDROGRAPH COMPUTED BY    LAPRE1 IS GREATER THAN 150
ORDINATES.
     ONLY THE FIRST 150 ORDINATES WILL BE USED ON    THE UI CARDS OF THE SUBSEQ
UENT HEC-1 RUN.

================================================================================

KK   DV3

================================================================================
```

```
KK    M1

AREA =    .76 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .8    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .50   53.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.48  LAG=     .35  UG VOL.=   5882.
   176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
   139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
    24.     24.     24.     24.     21.     14.     14.     14.     14.     14.
    14.     14.     14.      3.

================================================================================

KK  CP12

================================================================================

KK CP12B

================================================================================

KK   ONA

AREA =    .87 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .9    1.66   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.77     .83   53.25    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.24  LAG=     .46  UG VOL.=   6734.
   138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
   195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
    57.     57.     39.     38.     38.     31.     22.     22.     22.     22.
    22.     20.     12.     12.     12.     12.     12.     12.     12.     12.
    12.     12.      9.

================================================================================

KK  CP13
```

# APPENDIX A:

## v. 24-Hour, 2-Year Storm

```
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  15:28:16  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                                                X     X  XXXXXXX   XXXXX           X
                                                X     X  X        X     X         XX
                                                X     X  X        X                X
                                                XXXXXXX  XXXX     X        XXXXX   X
                                                X     X  X        X                X
                                                X     X  X        X     X          X
                                                X     X  XXXXXXX   XXXXX         XXX


          THIS PROGRAM REPLACES ALL PREVIOUS VERSIONS OF HEC-1 KNOWN AS HEC1 (JAN 73), HEC1GS, HEC1DB, AND HEC1KW.

          THE DEFINITIONS OF VARIABLES -RTIMP- AND -RTIOR- HAVE CHANGED FROM THOSE USED WITH THE 1973-STYLE INPUT STRUCTURE.
          THE DEFINITION OF -AMSKK- ON RM-CARD WAS CHANGED WITH REVISIONS DATED 28 SEP 81. THIS IS THE FORTRAN77 VERSION
          NEW OPTIONS: DAMBREAK OUTFLOW SUBMERGENCE , SINGLE EVENT DAMAGE CALCULATION, DSS:WRITE STAGE FREQUENCY,
          DSS:READ TIME SERIES AT DESIRED CALCULATION INTERVAL   LOSS RATE:GREEN AND AMPT INFILTRATION
          KINEMATIC WAVE: NEW FINITE DIFFERENCE ALGORITHM

1                                                   HEC-1 INPUT                                                          PAGE  1

          LINE           ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

                         *DIAGRAM
             1           ID   ******************************************************
             2           ID   WO# 7323 - RIO MESA SOLAR
             3           ID   24-HR, 2-YR STORM
             4           ID   NOAA ATLAS 14- 24HR/2YR AVG PT RAINFALL DEPTH = 1.15"/1.20"
             5           ID   EXISTING CONDITION ANALYSIS
             6           ID   UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
             7           ID   STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
             8           ID   MODEL WITH NEW COMBINING SCHEME
             9           ID   ******************************************************
            10           ID   DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
            11           ID   REFERENCING RCFD & WCD PLATE E-5.8
            12           ID
            13           ID    AREA RANGE       DARF
            14           ID     (SQ.MI.)         --
            15           ID
            16           ID     0 TO 2.5  --->  1.000
            17           ID   2.5 TO  10  --->  0.990
            18           ID    10 TO  20  --->  0.980
            19           ID    20 TO  30  --->  0.970
            20           ID    30 TO  40  --->  0.965
            21           ID    40 TO  50  --->  0.955
            22           ID
            23           ID  ******************************************************
            24           IT       5       0       0    2000
            25           IN       5       0       0
            26           IO       5       0       0
            27           JR    PREC   1.000   0.990   0.980   0.970   0.965   0.955
                         *

            28           KK     M27
            29           KM   EXISTING OFFSITE BASIN
            30           BA    0.22
            31           KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
            32           PB    1.20
            33           PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
            34           PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
            35           PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
            36           PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
            37           PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
            38           PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
            39           PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
            40           PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
            41           PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
            42           PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
            43           PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
            44           PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
            45           PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
            46           PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
            47           PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
            48           PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
            49           PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
            50           PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
            51           PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
            52           PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1                                                   HEC-1 INPUT                                                          PAGE  2

          LINE           ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

            53           PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
            54           PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
            55           PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
            56           PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
            57           PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
            58           PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
            59           PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
            60           PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
            61           PI    .006    .007    .004    .003    .003    .001    .001    .001
```

```
 62          LS            71.9
 63          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 64          UI    52.6   117.7   306.7   329.2   202.0   132.8    95.3    73.6    59.2    49.9
 65          UI    39.2    33.4    28.4    24.8    22.5    19.0    17.4    12.8    12.8     9.5
 66          UI     7.2     7.2     7.2     7.2     4.6     4.1     4.1     4.1     4.1     4.1
 67          UI     4.1     4.1     2.0
             *

 68          KK    RM27
 69          KM   ROUTE M27 TO ONR
 70          KM   EXISTING WASH
 71          RD    5175   0.013   0.035       0    TRAP      20       3
             *

 72          KK    ONR
 73          KM   EXISTING ONSITE BASIN
 74          BA    0.27
 75          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 76          PB    1.20
 77          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 78          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 79          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 80          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 81          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 82          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 83          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 84          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 85          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 86          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 87          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 88          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 89          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 90          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 91          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 92          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 93          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 94          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 95          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 96          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 97          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 98          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 99          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
100          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
101          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
102          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
103          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1                                          HEC-1 INPUT                                                PAGE  3

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

104          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
105          PI    .006    .007    .004    .003    .003    .001    .001    .001
106          LS            71.9
107          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
108          UI    102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
109          UI    37.8    31.8    24.9    21.3    14.9    11.9    11.9    11.0     6.8     6.8
110          UI     6.8     6.8     6.8     6.5
             *

111          KK    CP25
112          KM   COMBINE M27, ONR
113          HC       2
             *

114          KK    M22
115          KM   EXISTING OFFSITE BASIN
116          BA    0.07
117          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
118          PB    1.20
119          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
120          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
121          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
122          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
123          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
124          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
125          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
126          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
127          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
128          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
129          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
130          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
131          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
132          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
133          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
134          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
135          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
136          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
137          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
138          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
139          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
140          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
141          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
142          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
143          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
144          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
145          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
146          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
147          PI    .006    .007    .004    .003    .003    .001    .001    .001
148          LS            79.7
149          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
150          UI    65.5   222.4    95.5    49.7    31.7    21.3    15.6    11.5     8.1     5.1
151          UI     4.9     2.9     2.9     2.9     2.0
             *
1                                          HEC-1 INPUT                                                PAGE  4

LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
 152          KK    M21
 153          KM   EXISTING OFFSITE BASIN
 154          BA    0.17
 155          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 156          PB    1.20
 157          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 158          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 159          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 160          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 161          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 162          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 163          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 164          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 165          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 166          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 167          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 168          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 169          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 170          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 171          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 172          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 173          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 174          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 175          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 176          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 177          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 178          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 179          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 180          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 181          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 182          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 183          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 184          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 185          PI    .006    .007    .004    .003    .003    .001    .001    .001
 186          LS            82.5
 187          KM   UHG FROM MOUNTAIN S-GRAPH
 188          UI    322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
 189          UI    21.9    19.0    15.4    14.5    10.7    10.5     7.5     3.8     3.8     3.8
 190          UI     3.8     3.8     3.8     1.6
              *

 191          KK    M23
 192          KM   EXISTING OFFSITE BASIN
 193          BA    0.18
 194          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 195          PB    1.20
 196          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 197          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 198          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 199          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 200          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 201          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 202          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 203          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 204          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 205          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 206          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 207          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 208          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 209          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 210          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 211          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 212          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 213          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 214          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 215          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 216          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 217          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 218          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 219          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 220          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 221          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 222          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 223          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 224          PI    .006    .007    .004    .003    .003    .001    .001    .001
 225          LS            82.1
 226          KM   UHG FROM MOUNTAIN S-GRAPH
 227          UI    269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
 228          UI    23.8    21.0    18.6    17.1    13.5    13.2     9.8     9.8     8.3     3.6
 229          UI     3.6     3.6     3.6     3.6     3.6     3.6     2.0
              *

 230          KK    M25
 231          KM   EXISTING OFFSITE BASIN
 232          BA    0.15
 233          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 234          PB    1.20
 235          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 236          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 237          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 238          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 239          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 240          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 241          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 242          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 243          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 244          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 245          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 246          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 247          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
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 248          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 249          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 250          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 251          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 252          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 253          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 254          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 255          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 256          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1                                          HEC-1 INPUT                                                PAGE  6

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 257          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 258          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 259          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 260          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 261          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 262          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 263          PI    .006    .007    .004    .003    .003    .001    .001    .001
 264          LS            85.4
 265          KM   UHG FROM MOUNTAIN S-GRAPH
 266          UI    178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
 267          UI    19.6    17.8    16.3    15.3    13.0    12.2     9.9     9.9     7.4     7.2
 268          UI     7.2     4.1     2.6     2.6     2.6     2.6     2.6     2.6     2.6     2.6
 269          UI      .0
              *

 270          KK    CP21
 271          KM   COMBINE M22, M21, M23, M25
 272          HC       4
              *

 273          KK    M24
 274          KM   EXISTING OFFSITE BASIN
 275          BA    0.66
 276          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 277          PB    1.20
 278          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 279          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 280          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 281          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 282          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 283          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 284          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 285          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 286          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 287          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 288          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 289          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 290          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 291          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 292          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 293          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 294          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 295          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 296          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 297          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 298          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 299          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 300          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 301          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 302          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 303          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 304          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 305          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 306          PI    .006    .007    .004    .003    .003    .001    .001    .001
 307          LS            91.3
1                                          HEC-1 INPUT                                                PAGE  7

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 308          KM   UHG FROM MOUNTAIN S-GRAPH
 309          UI    724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
 310          UI    86.8    79.3    73.9    64.9    60.5    54.8    47.3    41.7    40.3    30.3
 311          UI    30.3    30.3    15.8    11.0    11.0    11.0    11.0    11.0    11.0    11.0
 312          UI    11.0     5.5
              *

 313          KK    RM24
 314          KM   ROUTE M24 TO M26
 315          KM   EXISTING WASH
 316          RD    8410   0.014   0.035       0    TRAP      20       3
              *

 317          KK     M26
 318          KM   EXISTING OFFSITE BASIN
 319          BA    0.53
 320          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 321          PB    1.20
 322          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 323          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 324          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 325          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 326          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 327          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 328          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 329          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 330          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 331          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 332          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 333          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 334          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 335          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 336          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 337          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
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 338          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 339          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 340          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 341          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 342          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 343          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 344          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 345          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 346          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 347          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 348          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 349          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 350          PI    .006    .007    .004    .003    .003    .001    .001    .001
 351          LS            75.9
 352          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 353          UI    96.8   189.8   395.5   791.6   574.8   378.1   279.2   200.7   165.0   132.8
 354          UI    114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
 355          UI    27.1    25.6    25.6    18.0    14.4    14.4    14.4    14.4    14.4     8.4
 356          UI     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2     8.2      .0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 357          KK    CP22
 358          KM   COMBINE M24, M26
 359          HC       2
              *

 360          KK    CP23
 361          KM   COMBINE CP21, CP22
 362          HC       2
              *

 363          KK   RCP23
 364          KM   ROUTE CP23 TO ONQ
 365          KM   EXISTING WASH
 366          RD    8840   0.012   0.035       0    TRAP      20       3
              *

 367          KK    ONQ
 368          KM   EXISTING ONSITE BASIN
 369          BA    0.66
 370          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 371          PB    1.20
 372          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 373          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 374          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 375          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 376          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 377          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 378          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 379          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 380          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 381          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 382          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 383          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 384          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 385          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 386          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 387          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 388          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 389          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 390          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 391          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 392          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 393          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 394          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 395          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 396          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 397          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 398          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 399          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 400          PI    .006    .007    .004    .003    .003    .001    .001    .001
 401          LS            71.9
 402          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 403          UI    107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
 404          UI    144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 405          UI    43.9    40.2    29.5    29.5    29.5    19.2    16.6    16.6    16.6    16.6
 406          UI    16.6    12.1     9.4     9.4     9.4     9.4     9.4     9.4     9.4     9.4
 407          UI     9.4     9.4     1.8
              *

 408          KK    CP24
 409          KM   COMBINE CP23, ONQ
 410          HC       2
              *

 411          KK  CPDUM1
 412          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 413          HC       2
              *

 414          KK     M12
 415          KM   EXISTING OFFSITE BASIN
 416          BA    3.98
 417          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 418          PB    1.15
 419          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 420          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 421          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
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 422          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 423          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 424          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 425          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 426          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 427          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 428          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 429          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 430          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 431          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 432          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 433          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 434          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 435          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 436          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 437          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 438          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 439          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 440          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 441          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 442          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 443          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 444          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 445          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 446          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 447          PI    .006    .007    .004    .003    .003    .001    .001    .001
 448          LS            87.1
 449          KM   UHG FROM MOUNTAIN S-GRAPH
 450          UI    885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
 451          UI    770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
 452          UI    350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
 453          UI    196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
1                                          HEC-1 INPUT                                                PAGE 10

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 454          UI    135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
 455          UI    99.9    99.9    99.9    99.9    82.8    76.2    76.2    76.2    76.2    76.2
 456          UI    76.2    76.2    63.0    55.4    55.4    55.4    55.4    55.4    55.4    55.4
 457          UI    55.4    55.4    55.4    37.5    20.1    20.1    20.1    20.1    20.1    20.1
 458          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 459          UI    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1    20.1
 460          UI    20.1    20.1    20.1    20.1     1.5
              *

 461          KK     ONJ
 462          KM   EXISTING ONSITE BASIN
 463          BA    0.07
 464          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 465          PB    1.15
 466          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 467          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 468          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 469          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 470          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 471          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 472          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 473          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 474          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 475          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 476          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 477          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 478          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 479          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 480          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 481          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 482          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 483          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 484          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 485          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 486          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 487          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 488          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 489          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 490          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 491          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 492          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 493          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 494          PI    .006    .007    .004    .003    .003    .001    .001    .001
 495          LS            79.4
 496          KM   UHG FROM MOUNTAIN S-GRAPH
 497          UI    248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
 498          UI     3.6     2.5     2.5     2.5     1.3
              *

 499          KK     M11
 500          KM   EXISTING OFFSITE BASIN
 501          BA    1.30
 502          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 503          PB    1.15
 504          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1                                          HEC-1 INPUT                                                PAGE 11

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 505          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 506          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 507          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 508          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 509          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 510          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 511          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 512          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 513          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 514          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 515          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
```

```
 516          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 517          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 518          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 519          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 520          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 521          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 522          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 523          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 524          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 525          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 526          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 527          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 528          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 529          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 530          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 531          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 532          PI    .006    .007    .004    .003    .003    .001    .001    .001
 533          LS            82.3
 534          KM   UHG FROM MOUNTAIN S-GRAPH
 535          UI    496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
 536          UI    249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
 537          UI    88.4    84.7    78.0    78.0    71.6    69.8    69.8    62.1    61.2    61.2
 538          UI    55.4    51.7    51.7    51.7    42.9    39.4    39.4    39.4    39.4    32.8
 539          UI    28.6    28.6    28.6    28.6    28.6    28.6    18.0    10.4    10.4    10.4
 540          UI    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4    10.4
 541          UI    10.4    10.4    10.4    10.4    10.4     7.6
              *

 542          KK     ONI
 543          KM   EXISTING ONSITE BASIN
 544          BA    0.05
 545          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 546          PB    1.15
 547          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 548          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 549          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 550          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 551          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 552          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 553          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 554          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 555          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 556          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 557          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1                                          HEC-1 INPUT                                          PAGE 12

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 558          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 559          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 560          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 561          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 562          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 563          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 564          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 565          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 566          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 567          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 568          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 569          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 570          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 571          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 572          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 573          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 574          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 575          PI    .006    .007    .004    .003    .003    .001    .001    .001
 576          LS            79.1
 577          KM   UHG FROM MOUNTAIN S-GRAPH
 578          UI    165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
 579          UI     4.6     2.2     1.7     1.7     1.7     1.4
              *

 580          KK     M10
 581          KM   EXISTING OFFSITE BASIN
 582          BA    0.38
 583          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 584          PB    1.15
 585          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 586          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 587          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 588          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 589          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 590          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 591          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 592          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 593          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 594          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 595          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 596          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 597          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 598          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 599          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 600          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 601          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 602          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 603          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 604          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 605          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 606          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 607          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 608          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 609          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 610          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1                                          HEC-1 INPUT                                          PAGE 13

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
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611          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
612          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
613          PI    .006    .007    .004    .003    .003    .001    .001    .001
614          LS          79.1
615          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
616          UI    82.5   174.6   427.6   584.1   379.9   246.8   169.8   134.8   106.0    91.1
617          UI    75.3    59.6    52.8    44.5    39.6    36.6    30.7    29.9    20.6    20.6
618          UI    18.6    11.6    11.6    11.6    11.6    10.9     6.6     6.6     6.6     6.6
619          UI     6.6     6.6     6.6     6.6     5.1
             *

620          KK     ONH
621          KM   EXISTING ONSITE BASIN
622          BA    0.20
623          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
624          PB    1.15
625          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
626          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
627          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
628          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
629          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
630          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
631          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
632          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
633          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
634          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
635          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
636          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
637          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
638          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
639          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
640          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
641          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
642          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
643          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
644          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
645          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
646          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
647          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
648          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
649          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
650          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
651          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
652          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
653          PI    .006    .007    .004    .003    .003    .001    .001    .001
654          LS          81.7
655          KM   UHG FROM MOUNTAIN S-GRAPH
656          UI    302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
657          UI    26.4    23.5    20.5    18.7    15.1    14.4    11.0    11.0     8.5     4.0
658          UI     4.0     4.0     4.0     4.0     4.0     4.0     1.6
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LINE         ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

659          KK     CP1
660          KM   COMBINE M12, ONJ, M11, ONI, M10, ONH
661          HC       6
             *

662          KK     DV1
663          KM   FLOWSPLIT DIVERSION FROM CP1
664          KM   1.4% OF BASIN FLOW DIVERTS "OUT" NORTH-EAST, TO "WASH 70"
665          KM   98.6% OF BASIN FLOW TO CONTINUE SOUTH
666          DT     FS1
667          DI     100
668          DQ     1.4
             *

669          KK     DV2
670          KM   FLOWSPLIT DIVERSION FROM DV1
671          KM   72% OF BASIN FLOW DIVERTS "OUT" SOUTH, TO "WASH 25B"
672          KM   28% OF BASIN FLOW TO CONTINUE EAST, TO "WASH 0"
673          DT     FS2
674          DI     100
675          DQ      72
             *

676          KK     ONV
677          KM   EXISTING ONSITE BASIN
678          BA    0.12
679          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
680          PB    1.15
681          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
682          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
683          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
684          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
685          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
686          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
687          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
688          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
689          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
690          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
691          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
692          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
693          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
694          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
695          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
696          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
697          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
698          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
699          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
700          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
701          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
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 702          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 703          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 704          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 705          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 706          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1                                          HEC-1 INPUT                                                PAGE 15

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 707          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 708          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 709          PI    .006    .007    .004    .003    .003    .001    .001    .001
 710          LS            72.0
 711          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 712          UI    112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
 713          UI     8.3     4.9     4.9     4.9     3.3
              *

 714          KK     CP2
 715          KM   COMBINE DV2, ONV
 716          HC       2
              *

 717          KK     ONG
 718          KM   EXISTING ONSITE BASIN
 719          BA    0.14
 720          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 721          PB    1.15
 722          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 723          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 724          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 725          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 726          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 727          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 728          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 729          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 730          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 731          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 732          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 733          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 734          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 735          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 736          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 737          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 738          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 739          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 740          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 741          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 742          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 743          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 744          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 745          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 746          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 747          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 748          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 749          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 750          PI    .006    .007    .004    .003    .003    .001    .001    .001
 751          LS            71.9
 752          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 753          UI    78.4   321.8   250.4   124.3    77.3    55.9    38.5    30.3    23.8    19.7
 754          UI    13.8    10.5     7.7     7.7     5.3     4.4     4.4     4.4     4.4     1.0
              *
1                                          HEC-1 INPUT                                                PAGE 16

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 755          KK     CP3
 756          KM   COMBINE CP2, ONG
 757          HC       2
              *

 758          KK     ONK
 759          KM   EXISTING ONSITE BASIN
 760          BA    0.68
 761          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 762          PB    1.15
 763          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 764          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 765          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 766          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 767          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 768          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 769          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 770          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 771          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 772          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 773          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 774          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 775          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 776          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 777          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 778          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 779          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 780          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 781          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 782          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 783          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 784          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 785          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 786          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 787          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 788          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 789          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 790          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 791          PI    .006    .007    .004    .003    .003    .001    .001    .001
```

```
 792          LS            71.9
 793          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 794          UI    109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
 795          UI    151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
 796          UI    44.9    43.5    30.2    30.2    30.2    22.1    16.9    16.9    16.9    16.9
 797          UI    16.9    14.0     9.7     9.7     9.7     9.7     9.7     9.7     9.7     9.7
 798          UI     9.7     9.7     4.8
              *

 799          KK     ONF
 800          KM   EXISTING ONSITE BASIN
 801          BA    0.50
 802          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 803          PB    1.15
 804          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1                                                HEC-1 INPUT                                                          PAGE 17

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 805          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 806          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 807          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
 808          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
 809          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
 810          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
 811          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
 812          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
 813          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
 814          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
 815          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
 816          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
 817          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
 818          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
 819          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
 820          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
 821          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
 822          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
 823          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
 824          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
 825          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
 826          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 827          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 828          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 829          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 830          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
 831          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
 832          PI    .006    .007    .004    .003    .003    .001    .001    .001
 833          LS            71.9
 834          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 835          UI    153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
 836          UI    77.0    64.7    56.7    51.5    34.8    34.8    22.8    19.5    19.5    19.5
 837          UI    12.6    11.1    11.1    11.1    11.1    11.1    11.1     1.6
              *

 838          KK     CP4
 839          KM   COMBINE CP3, ONK, ONF
 840          HC       3
              *

 841          KK  CPDUM2
 842          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
 843          HC       2
              *

 844          KK    RET1
 845          KM   RETRIEVE "FS1" PORTION OF FLOW SPLIT
 846          KM   TRIB TO "WASH 70"
 847          DR     FS1
              *
1                                                HEC-1 INPUT                                                          PAGE 18

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 848          KK      MX
 849          KM   EXISTING OFFSITE BASIN
 850          BA    0.01
 851          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 852          PB    1.20
 853          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 854          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 855          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 856          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 857          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 858          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 859          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 860          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 861          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 862          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 863          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 864          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 865          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 866          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 867          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 868          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 869          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 870          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 871          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 872          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 873          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 874          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 875          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 876          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 877          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 878          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 879          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
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 880          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 881          PI    .006    .007    .004    .003    .003    .001    .001    .001
 882          LS            91.6
 883          KM   UHG FROM MOUNTAIN S-GRAPH
 884          UI    57.5    10.9     5.2     2.5     1.0      .0
              *

 885          KK    CP14
 886          KM   COMBINE FS1, MX
 887          HC       2
              *

 888          KK     ONS
 889          KM   EXISTING ONSITE BASIN
 890          BA    0.04
 891          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 892          PB    1.20
 893          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 894          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 895          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 896          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 897          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1                                          HEC-1 INPUT                                                PAGE 19

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 898          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 899          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 900          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 901          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 902          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 903          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 904          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 905          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 906          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 907          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 908          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 909          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 910          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 911          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 912          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 913          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 914          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 915          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 916          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 917          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 918          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 919          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 920          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 921          PI    .006    .007    .004    .003    .003    .001    .001    .001
 922          LS            71.9
 923          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
 924          UI    30.5   114.4    61.6    30.9    19.9    13.3     9.8     7.6     5.6     4.2
 925          UI     2.6     2.6     1.7     1.5     1.5     1.5     1.0
              *

 926          KK   CP14A
 927          KM   COMBINE CP14, ONS
 928          HC       2
              *

 929          KK    M17
 930          KM   EXISTING OFFSITE BASIN
 931          BA    0.67
 932          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 933          PB    1.20
 934          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 935          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 936          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 937          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 938          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 939          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 940          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 941          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 942          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 943          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 944          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 945          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 946          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 947          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 948          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1                                          HEC-1 INPUT                                                PAGE 20

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

 949          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 950          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 951          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 952          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 953          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 954          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 955          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 956          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
 957          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
 958          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
 959          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
 960          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
 961          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
 962          PI    .006    .007    .004    .003    .003    .001    .001    .001
 963          LS            84.5
 964          KM   UHG FROM MOUNTAIN S-GRAPH
 965          UI    564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
 966          UI    97.4    80.4    73.6    69.1    63.2    58.7    55.5    49.3    46.8    41.3
 967          UI    35.7    35.7    29.9    25.9    25.9    25.9    16.2     9.4     9.4     9.4
 968          UI     9.4     9.4     9.4     9.4     9.4     9.4     9.4     3.8
              *
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```
 969          KK    CP15
 970          KM   COMBINE CP14A, M17
 971          HC       2
              *

 972          KK    M18
 973          KM   EXISTING OFFSITE BASIN
 974          BA    0.12
 975          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
 976          PB    1.20
 977          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
 978          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
 979          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
 980          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
 981          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
 982          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
 983          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
 984          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
 985          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
 986          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
 987          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
 988          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
 989          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
 990          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
 991          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
 992          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
 993          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
 994          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
 995          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
 996          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
 997          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
 998          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
 999          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1                                                HEC-1 INPUT                                                    PAGE 21

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1000          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1001          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1002          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1003          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1004          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1005          PI    .006    .007    .004    .003    .003    .001    .001    .001
1006          LS            83.1
1007          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1008          UI    69.8   284.1   213.2   103.8    65.1    46.9    32.8    25.0    20.2    16.0
1009          UI    12.1     7.9     6.8     6.7     3.9     3.9     3.9     3.9     3.0
              *

1010          KK    M20
1011          KM   EXISTING OFFSITE BASIN
1012          BA    0.49
1013          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1014          PB    1.20
1015          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1016          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1017          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1018          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1019          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1020          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1021          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1022          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1023          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1024          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1025          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1026          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1027          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1028          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1029          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1030          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1031          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1032          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1033          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1034          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1035          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1036          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1037          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1038          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1039          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1040          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1041          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1042          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1043          PI    .006    .007    .004    .003    .003    .001    .001    .001
1044          LS            90.4
1045          KM   UHG FROM MOUNTAIN S-GRAPH
1046          UI    626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
1047          UI    64.5    59.4    52.2    47.6    44.1    35.1    33.6    28.1    24.4    24.4
1048          UI    16.7     8.9     8.9     8.9     8.9     8.9     8.9     8.9     8.9      .0
              *
1                                                HEC-1 INPUT                                                    PAGE 22

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1049          KK   STOR1
1050          KM   EXISTING OPEN MINE PIT BASIN
1051          KM   INTERCEPTS FLOW FROM M20
1052          KM   OPEN MINE PIT TOP EDGE ELEV = 440 ft
1053          KM   SPILL OUT BEGINS ABOVE TOP EDGE ELEV.
1054          RS       1    STOR       0
1055          SA    0.76    1.46    3.37    5.06    5.13    5.23    5.72    6.67
1056          SE     428     432     436     440   440.2   440.5     442     444
1057          SQ       0       0       0       0      61     240    2929    8283
              *
```

```
1058          KK    RM20
1059          KM   ROUTE M20 FLOW TO M19
1060          KM   EXISTING WASH
1061          RD    3500   0.028   0.035       0    TRAP      20       3
              *

1062          KK    M19
1063          KM   EXISTING OFFSITE BASIN
1064          BA    0.11
1065          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1066          PB    1.20
1067          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1068          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1069          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1070          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1071          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1072          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1073          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1074          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1075          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1076          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1077          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1078          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1079          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1080          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1081          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1082          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1083          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1084          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1085          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1086          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1087          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1088          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1089          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1090          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1091          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1092          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1093          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1094          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1095          PI    .006    .007    .004    .003    .003    .001    .001    .001
1096          LS            83.1
1097          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1098          UI    117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
1                                          HEC-1 INPUT                                                    PAGE 23

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1099          UI     6.3     4.7     4.7     4.7      .0
              *

1100          KK    CP16
1101          KM   COMBINE M20, M19
1102          HC       2
              *

1103          KK    CP17
1104          KM   COMBINE CP15, M18, CP16
1105          HC       3
              *

1106          KK   RCP17
1107          KM   ROUTE CP17 TO ONP
1108          KM   EXISTING WASH
1109          RD   11280   0.014   0.035       0    TRAP      20       3
              *

1110          KK    ONP
1111          KM   EXISTING ONSITE BASIN
1112          BA    1.47
1113          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1114          PB    1.20
1115          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1116          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1117          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1118          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1119          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1120          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1121          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1122          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1123          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1124          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1125          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1126          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1127          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1128          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1129          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1130          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1131          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1132          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1133          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1134          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1135          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1136          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1137          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1138          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1139          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1140          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1141          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1142          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1143          PI    .006    .007    .004    .003    .003    .001    .001    .001
1144          LS            71.9
1145          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                    PAGE 24

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10
```

```
1146          UI    206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
1147          UI    366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
1148          UI    103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
1149          UI    32.6    32.6    32.6    32.6    32.6    25.9    18.6    18.6    18.6    18.6
1150          UI    18.6    18.6    18.6    18.6    18.6    18.6    18.6    14.4
              *

1151          KK    CP18
1152          KM   COMBINE CP17, ONP
1153          HC       2
              *

1154          KK  CPDUM3
1155          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1156          HC       2
              *

1157          KK     ONT
1158          KM   EXISTING ONSITE BASIN
1159          BA    0.04
1160          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1161          PB    1.20
1162          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1163          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1164          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1165          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1166          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1167          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1168          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1169          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1170          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1171          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1172          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1173          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1174          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1175          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1176          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1177          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1178          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1179          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1180          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1181          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1182          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1183          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1184          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1185          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1186          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1187          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1188          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1189          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1190          PI    .006    .007    .004    .003    .003    .001    .001    .001
1191          LS            71.9
1192          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1193          UI    47.6   130.9    50.1    26.7    16.4    11.2     8.4     5.6     3.2     3.1
1194          UI     1.8     1.8     1.8     1.0
              *
```



```
LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1195          KK   RMONT
1196          KM   ROUTE ONT TO ONO
1197          KM   EXISTING WASH
1198          RD   10985   0.015   0.035       0    TRAP      20       3
              *

1199          KK    ONO
1200          KM   EXISTING ONSITE BASIN
1201          BA    0.55
1202          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1203          PB    1.20
1204          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1205          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1206          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1207          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1208          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1209          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1210          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1211          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1212          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1213          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1214          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1215          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1216          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1217          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1218          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1219          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1220          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1221          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1222          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1223          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1224          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1225          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1226          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1227          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1228          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1229          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1230          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1231          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1232          PI    .006    .007    .004    .003    .003    .001    .001    .001
1233          LS            71.9
1234          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1235          UI    79.8   140.8   249.2   528.5   675.3   480.0   333.2   260.9   187.2   161.1
1236          UI    135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
1237          UI    39.9    35.3    33.4    31.6    22.4    22.4    22.4    18.8    12.6    12.6
```

```
1238          UI    12.6    12.6    12.6    12.6     9.3     7.2     7.2     7.2     7.2     7.2
1239          UI     7.2     7.2     7.2     7.2     7.2     7.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 26

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1240          KK    CP20
1241          KM   COMBINE ONT, ONO
1242          HC        2
              *

1243          KK  CPDUM4
1244          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1245          HC        2
              *

1246          KK     ONU
1247          KM   EXISTING ONSITE BASIN
1248          BA    0.05
1249          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1250          PB    1.20
1251          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1252          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1253          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1254          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1255          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1256          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1257          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1258          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1259          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1260          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1261          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1262          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1263          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1264          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1265          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1266          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1267          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1268          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1269          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1270          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1271          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1272          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1273          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1274          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1275          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1276          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1277          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1278          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1279          PI    .006    .007    .004    .003    .003    .001    .001    .001
1280          LS            71.9
1281          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1282          UI    55.1   162.7    64.0    34.2    21.1    14.5    10.9     7.3     4.6     3.8
1283          UI     2.7     2.2     2.2     1.8
              *
1                                          HEC-1 INPUT                                                PAGE 27

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1284          KK   RMONU
1285          KM   ROUTE ONU TO ONL
1286          KM   EXISTING WASH
1287          RD   10520   0.016   0.035       0    TRAP      20       3
              *

1288          KK    ONL
1289          KM   EXISTING ONSITE BASIN
1290          BA    0.73
1291          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1292          PB    1.20
1293          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1294          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1295          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1296          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1297          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1298          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1299          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1300          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1301          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1302          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1303          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1304          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1305          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1306          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1307          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1308          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1309          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1310          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1311          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1312          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1313          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1314          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1315          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1316          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1317          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1318          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1319          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1320          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1321          PI    .006    .007    .004    .003    .003    .001    .001    .001
1322          LS            71.9
1323          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1324          UI    122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
1325          UI    159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
```

```
1326          UI    49.7    37.6    33.4    33.4    28.2    18.7    18.7    18.7    18.7    18.7
1327          UI    16.1    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7    10.7
1328          UI    10.7     2.7
              *
1                                          HEC-1 INPUT                                                PAGE 28

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1329          KK    CP19
1330          KM   COMBINE ONU, ONL
1331          HC       2
              *

1332          KK    ONM
1333          KM   EXISTING ONSITE BASIN
1334          BA    0.10
1335          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1336          PB    1.20
1337          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1338          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1339          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1340          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1341          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1342          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1343          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1344          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1345          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1346          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1347          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1348          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1349          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1350          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1351          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1352          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1353          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1354          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1355          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1356          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1357          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1358          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1359          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1360          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1361          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1362          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1363          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1364          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1365          PI    .006    .007    .004    .003    .003    .001    .001    .001
1366          LS            71.9
1367          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1368          UI    197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
1369          UI     5.4     1.2
              *

1370          KK    ONN
1371          KM   EXISTING ONSITE BASIN
1372          BA    0.08
1373          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1374          PB    1.20
1375          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1376          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1377          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1378          PI    .009    .009    .010    .010    .010    .010    .012    .013    .016    .019
1                                          HEC-1 INPUT                                                PAGE 29

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1379          PI    .022    .020    .019    .017    .017    .016    .014    .017    .022    .026
1380          PI    .027    .027    .027    .029    .027    .027    .027    .029    .030    .032
1381          PI    .036    .039    .040    .043    .043    .043    .043    .043    .043    .043
1382          PI    .043    .043    .040    .033    .029    .029    .029    .027    .027    .029
1383          PI    .032    .035    .037    .042    .046    .050    .055    .058    .060    .062
1384          PI    .065    .068    .069    .071    .072    .073    .073    .073    .075    .075
1385          PI    .075    .075    .076    .078    .079    .081    .081    .081    .079    .078
1386          PI    .076    .078    .081    .084    .086    .089    .091    .092    .094    .095
1387          PI    .096    .098    .098    .098    .099    .101    .102    .102    .102    .102
1388          PI    .104    .107    .112    .122    .131    .134    .132    .131    .130    .131
1389          PI    .131    .132    .134    .134    .135    .137    .138    .138    .137    .135
1390          PI    .135    .134    .132    .131    .130    .130    .128    .127    .125    .128
1391          PI    .132    .137    .143    .151    .157    .160    .163    .163    .163    .163
1392          PI    .163    .163    .164    .164    .166    .167    .168    .167    .163    .148
1393          PI    .134    .121    .109    .099    .094    .091    .086    .073    .049    .029
1394          PI    .026    .024    .032    .045    .063    .065    .056    .042    .033    .027
1395          PI    .024    .022    .019    .019    .017    .016    .014    .013    .013    .013
1396          PI    .012    .010    .010    .009    .009    .009    .007    .007    .007    .007
1397          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1398          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1399          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1400          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1401          PI    .006    .007    .009    .014    .026    .036    .042    .037    .027    .019
1402          PI    .009    .003    .001    .001    .000    .000    .000    .000    .000    .001
1403          PI    .006    .007    .004    .003    .003    .001    .001    .001
1404          LS            71.9
1405          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1406          UI    22.6    56.4   148.9   107.3    65.2    41.8    31.7    24.4    20.2    15.4
1407          UI    13.0    11.0     9.3     8.2     7.4     5.2     5.2     3.4     2.9     2.9
1408          UI     2.9     2.2     1.7     1.7     1.7     1.7     1.7     1.7     1.4
              *

1409          KK  CPDUM5
1410          KM   DUMMY COMBINATION POINT TO RESET HYDROGRAPHS
1411          HC       4
              *

1412          KK      M9
1413          KM   EXISTING OFFSITE BASIN
```

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1414          BA    1.80
1415          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1416          PB    1.15
1417          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1418          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1419          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1420          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1421          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1422          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1423          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1424          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1425          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1426          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1427          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1428          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1429          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1430          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1431          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1432          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1433          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1434          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1435          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1436          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1437          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1438          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1439          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1440          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1441          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1442          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1443          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1444          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1445          PI    .006    .007    .004    .003    .003    .001    .001    .001
1446          LS            86.2
1447          KM   UHG FROM MOUNTAIN S-GRAPH
1448          UI    471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
1449          UI    364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
1450          UI    145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
1451          UI    79.4    79.4    79.1    71.0    71.0    71.0    70.1    62.3    62.3    62.3
1452          UI    62.3    56.1    52.6    52.6    52.6    52.6    48.4    40.1    40.1    40.1
1453          UI    40.1    40.1    40.1    35.9    29.1    29.1    29.1    29.1    29.1    29.1
1454          UI    29.1    29.1    29.1    14.0    10.6    10.6    10.6    10.6    10.6    10.6
1455          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6
1456          UI    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6    10.6     5.1
              *

1457          KK      M8
1458          KM   EXISTING OFFSITE BASIN
1459          BA    1.04
1460          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1461          PB    1.15
1462          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1463          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1464          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1465          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1466          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1467          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1468          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1469          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1470          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1471          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1472          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1473          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1474          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1475          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1476          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1477          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1478          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1479          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1480          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1481          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1482          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1483          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1484          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1485          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1486          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1487          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1488          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1489          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1490          PI    .006    .007    .004    .003    .003    .001    .001    .001
1491          LS            85.6
1492          KM   UHG FROM MOUNTAIN S-GRAPH
1493          UI    495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
1494          UI    177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
1495          UI    69.5    66.3    65.0    58.1    58.1    54.6    49.1    49.1    47.8    37.4
1496          UI    37.4    37.4    37.4    29.2    27.2    27.2    27.2    27.2    27.2    12.0
1497          UI     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9     9.9
1498          UI     9.9     9.9     9.9     9.9     9.9     4.0
              *

1499          KK     CP5
1500          KM   COMBINE M9, M8
1501          HC       2
              *

1502          KK    RET2
1503          KM   RETRIEVE FLOW TRIB. TO "WASH 25B"
1504          DR     FS2
              *
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1505          KK     CP6
1506          KM   COMBINE CP5, RET2
1507          HC       2
              *

1508          KK      M7
1509          KM   EXISTING OFFSITE BASIN
1510          BA    0.16
1511          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1512          PB    1.15
1513          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1514          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1515          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1516          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1517          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1518          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1519          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1520          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1521          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1522          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1523          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1524          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1525          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1526          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1527          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1528          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1529          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1                                          HEC-1 INPUT                                                PAGE 32

              LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1530          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1531          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1532          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1533          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1534          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1535          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1536          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1537          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1538          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1539          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1540          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1541          PI    .006    .007    .004    .003    .003    .001    .001    .001
1542          LS            77.3
1543          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1544          UI    65.0   232.2   334.4   171.6   100.8    70.8    54.5    39.7    31.5    25.7
1545          UI    21.7    18.5    13.2    11.5     7.4     7.4     7.4     4.4     4.2     4.2
1546          UI     4.2     4.2     4.0
              *

1547          KK    ONE1
1548          KM   EXISTING ONSITE BASIN
1549          BA    1.61
1550          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1551          PB    1.15
1552          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1553          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1554          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1555          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1556          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1557          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1558          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1559          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1560          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1561          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1562          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1563          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1564          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1565          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1566          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1567          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1568          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1569          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1570          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1571          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1572          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1573          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1574          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1575          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1576          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1577          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1578          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1579          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1580          PI    .006    .007    .004    .003    .003    .001    .001    .001
1581          LS            73.7
1582          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                                PAGE 33

              LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1583          UI    163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
1584          UI    566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
1585          UI    159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
1586          UI    74.5    68.3    68.3    68.3    48.4    45.9    45.9    45.9    45.9    36.7
1587          UI    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    25.8    17.1
1588          UI    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7    14.7
1589          UI    14.7    14.7    14.7    14.7    14.7    14.7     2.7
              *

1590          KK    CP6A
1591          KM   COMBINE M7, ONE1
1592          HC       2
              *

1593          KK    CP6B
```

```
1594          KM   COMBINE CP6, CP6A
1595          HC       2
              *

1596          KK    ONE2
1597          KM   EXISTING ONSITE BASIN
1598          BA    2.59
1599          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1600          PB    1.15
1601          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1602          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1603          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1604          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1605          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1606          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1607          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1608          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1609          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1610          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1611          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1612          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1613          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1614          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1615          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1616          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1617          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1618          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1619          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1620          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1621          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1622          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1623          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1624          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1625          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1626          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1627          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1628          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1629          PI    .006    .007    .004    .003    .003    .001    .001    .001
1630          LS            74.5
1631          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1                                          HEC-1 INPUT                                          PAGE 34

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1632          UI    210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
1633          UI   1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
1634          UI    290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
1635          UI    151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
1636          UI    87.8    87.8    78.6    59.0    59.0    59.0    59.0    59.0    59.0    45.4
1637          UI    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1    33.1
1638          UI    33.1    27.1    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1639          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1640          UI    18.9    18.9    15.4
              *

1641          KK     CP7
1642          KM   COMBINE CP6B, ONE2
1643          HC       2
              *

1644          KK      M6
1645          KM   EXISTING OFFSITE BASIN
1646          BA    1.32
1647          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1648          PB    1.15
1649          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1650          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1651          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1652          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1653          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1654          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1655          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1656          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1657          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1658          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1659          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1660          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1661          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1662          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1663          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1664          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1665          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1666          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1667          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1668          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1669          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1670          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1671          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1672          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1673          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1674          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1675          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1676          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1677          PI    .006    .007    .004    .003    .003    .001    .001    .001
1678          LS            83.8
1679          KM   UHG FROM MOUNTAIN S-GRAPH
1680          UI    488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
1681          UI    247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
1682          UI    87.8    87.8    78.9    77.5    75.6    69.3    69.3    67.0    60.8    60.8
1                                          HEC-1 INPUT                                          PAGE 35

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1683          UI    60.8    52.1    51.3    51.3    51.3    39.9    39.1    39.1    39.1    39.1
1684          UI    31.5    28.4    28.4    28.4    28.4    28.4    28.4    19.1    10.3    10.3
1685          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3    10.3
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1686          UI    10.3    10.3    10.3    10.3    10.3    10.3    10.3     2.5
              *

1687          KK     M5A
1688          KM   EXISTING OFFSITE BASIN
1689          BA    0.17
1690          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1691          PB    1.15
1692          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1693          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1694          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1695          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1696          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1697          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1698          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1699          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1700          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1701          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1702          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1703          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1704          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1705          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1706          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1707          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1708          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1709          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1710          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1711          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1712          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1713          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1714          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1715          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1716          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1717          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1718          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1719          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1720          PI    .006    .007    .004    .003    .003    .001    .001    .001
1721          LS            86.2
1722          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1723          UI    46.0   109.1   301.7   233.7   143.7    91.0    69.2    52.4    44.0    34.0
1724          UI    28.4    23.8    20.4    18.2    16.1    12.5    10.8     9.6     6.1     6.1
1725          UI     6.1     6.1     3.7     3.5     3.5     3.5     3.5     3.5     3.5     2.5
              *

1726          KK     M5B
1727          KM   EXISTING OFFSITE BASIN
1728          BA    0.18
1729          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1730          PB    1.15
1731          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1732          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1733          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1734          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1735          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1736          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1737          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1738          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1739          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1740          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1741          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1742          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1743          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1744          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1745          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1746          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1747          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1748          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1749          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1750          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1751          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1752          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1753          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1754          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1755          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1756          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1757          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1758          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1759          PI    .006    .007    .004    .003    .003    .001    .001    .001
1760          LS            86.2
1761          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1762          UI    94.4   388.4   330.7   165.8   102.3    73.1    51.5    39.8    31.7    26.1
1763          UI    19.0    16.0     9.6     9.6     8.6     5.5     5.5     5.5     5.5     4.6
              *

1764          KK     CP8
1765          KM   COMBINE M6, M5A, M5B
1766          HC       3
              *

1767          KK      M5
1768          KM   EXISTING OFFSITE BASIN
1769          BA    0.39
1770          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1771          PB    1.15
1772          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1773          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1774          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1775          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1776          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1777          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1778          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1779          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
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1780          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1781          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1782          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1783          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1784          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1                                          HEC-1 INPUT                                                PAGE 37

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1785          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1786          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1787          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1788          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1789          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1790          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1791          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1792          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1793          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1794          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1795          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1796          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1797          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1798          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1799          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1800          PI    .006    .007    .004    .003    .003    .001    .001    .001
1801          LS            74.6
1802          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1803          UI    91.1   201.2   517.0   587.6   366.2   241.4   170.2   132.5   105.2    89.8
1804          UI    70.8    59.8    51.4    45.0    39.6    34.5    33.1    22.6    22.3    19.8
1805          UI    12.5    12.5    12.5    12.5    10.2     7.1     7.1     7.1     7.1     7.1
1806          UI     7.1     7.1     7.1      .0
              *

1807          KK     CP9
1808          KM   COMBINE CP8, M5
1809          HC       2
              *

1810          KK     ONB
1811          KM   EXISTING ONSITE BASIN
1812          BA    2.83
1813          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1814          PB    1.15
1815          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1816          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1817          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1818          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1819          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1820          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1821          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1822          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1823          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1824          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1825          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1826          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1827          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1828          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1829          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1830          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1831          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1832          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1833          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1834          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1835          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1                                          HEC-1 INPUT                                                PAGE 38

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1836          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1837          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1838          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1839          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1840          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1841          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1842          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1843          PI    .006    .007    .004    .003    .003    .001    .001    .001
1844          LS            73.4
1845          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1846          UI    210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
1847          UI   1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
1848          UI    353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
1849          UI    172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
1850          UI    105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
1851          UI    59.1    59.1    59.1    58.1    33.2    33.2    33.2    33.2    33.2    33.2
1852          UI    33.2    33.2    33.2    33.2    33.2    33.2    33.2    21.2    18.9    18.9
1853          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1854          UI    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9    18.9
1855          UI     6.1
              *

1856          KK    CP10
1857          KM   COMBINE CP9, ONB
1858          HC       2
              *

1859          KK     OND
1860          KM   EXISTING ONSITE BASIN
1861          BA    1.34
1862          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1863          PB    1.15
1864          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1865          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1866          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1867          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1868          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1869          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
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1870          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1871          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1872          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1873          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1874          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1875          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1876          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1877          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1878          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1879          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1880          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1881          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1882          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1883          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1884          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1885          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1886          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1                                          HEC-1 INPUT                                                PAGE 39

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1887          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1888          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1889          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1890          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1891          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1892          PI    .006    .007    .004    .003    .003    .001    .001    .001
1893          LS            71.9
1894          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1895          UI    203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
1896          UI    309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
1897          UI    90.9    85.1    79.2    57.2    57.2    57.2    42.6    32.1    32.1    32.1
1898          UI    32.1    32.1    30.5    18.3    18.3    18.3    18.3    18.3    18.3    18.3
1899          UI    18.3    18.3    18.3    18.3     4.0
              *

1900          KK     ONC
1901          KM   EXISTING ONSITE BASIN
1902          BA    0.30
1903          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1904          PB    1.15
1905          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1906          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1907          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1908          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1909          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1910          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1911          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1912          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1913          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1914          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1915          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1916          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1917          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1918          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1919          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
1920          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1921          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1922          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1923          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1924          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1925          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1926          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1927          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1928          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1929          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1930          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1931          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1932          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1933          PI    .006    .007    .004    .003    .003    .001    .001    .001
1934          LS            71.9
1935          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
1936          UI    146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
1937          UI    35.8    27.5    19.2    15.4    15.4    10.9     8.8     8.8     8.8     8.8
1938          UI     5.4
              *
1                                          HEC-1 INPUT                                                PAGE 40

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

1939          KK     CPA
1940          KM   COMBINE OND, ONC
1941          HC       2
              *

1942          KK      M4
1943          KM   EXISTING OFFSITE BASIN
1944          BA    2.71
1945          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1946          PB    1.15
1947          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1948          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1949          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1950          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
1951          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
1952          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
1953          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
1954          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
1955          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
1956          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
1957          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
1958          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
1959          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
1960          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
1961          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
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1962          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
1963          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
1964          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
1965          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
1966          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
1967          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
1968          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
1969          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
1970          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
1971          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
1972          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
1973          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
1974          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
1975          PI    .006    .007    .004    .003    .003    .001    .001    .001
1976          LS            85.3
1977          KM   UHG FROM MOUNTAIN S-GRAPH
1978          UI    485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
1979          UI    649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
1980          UI    269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
1981          UI    152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
1982          UI    95.6    92.6    84.4    84.4    84.4    84.4    81.7    75.5    75.5    75.5
1983          UI    75.5    75.5    68.6    66.2    66.2    66.2    66.2    66.2    62.1    55.9
1984          UI    55.9    55.9    55.9    55.9    55.9    55.9    44.0    42.6    42.6    42.6
1985          UI    42.6    42.6    42.6    42.6    42.6    42.1    31.0    31.0    31.0    31.0
1986          UI    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    31.0    21.3
1987          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1988          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1989          UI    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3    11.3
1990          UI    11.3    11.3    11.3    11.3    11.3    11.3     8.5
              *
1                                        HEC-1 INPUT                                                PAGE 41

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


1991          KK      M3
1992          KM   EXISTING OFFSITE BASIN
1993          BA    0.57
1994          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
1995          PB    1.15
1996          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
1997          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
1998          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
1999          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
2000          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
2001          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
2002          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
2003          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
2004          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
2005          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
2006          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
2007          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
2008          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
2009          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
2010          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
2011          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
2012          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
2013          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
2014          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
2015          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
2016          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
2017          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
2018          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
2019          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
2020          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
2021          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
2022          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
2023          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
2024          PI    .006    .007    .004    .003    .003    .001    .001    .001
2025          LS            79.1
2026          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2027          UI    87.5   162.8   294.9   662.8   681.0   472.9   336.7   243.7   191.2   159.0
2028          UI    130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
2029          UI    37.5    36.6    30.9    24.6    24.6    24.6    15.0    13.8    13.8    13.8
2030          UI    13.8    13.8    10.9     7.9     7.9     7.9     7.9     7.9     7.9     7.9
2031          UI     7.9     7.9     7.9     5.6
              *

2032          KK    CP11
2033          KM   COMBINE M4, M3
2034          HC       2
              *

2035          KK      M2
2036          KM   EXISTING OFFSITE BASIN
2037          BA   24.30
2038          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2039          PB    1.15
2040          PI    .004    .004    .009    .009    .009    .009    .013    .013    .013    .013
1                                        HEC-1 INPUT                                                PAGE 42

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2041          PI    .017    .017    .022    .022    .022    .022    .022    .022    .022    .022
2042          PI    .022    .022    .022    .022    .022    .022    .022    .022    .022    .022
2043          PI    .026    .026    .030    .030    .030    .030    .034    .039    .047    .056
2044          PI    .065    .060    .056    .052    .052    .047    .043    .052    .065    .078
2045          PI    .082    .082    .082    .086    .082    .082    .082    .086    .090    .095
2046          PI    .108    .116    .121    .129    .129    .129    .129    .129    .129    .129
2047          PI    .129    .129    .121    .099    .086    .086    .086    .082    .082    .086
2048          PI    .095    .103    .112    .125    .138    .151    .164    .172    .181    .185
2049          PI    .194    .202    .207    .211    .215    .220    .220    .220    .224    .224
2050          PI    .224    .224    .228    .233    .237    .241    .241    .241    .237    .233
2051          PI    .228    .233    .241    .250    .258    .267    .271    .276    .280    .284
2052          PI    .289    .293    .293    .293    .297    .302    .306    .306    .306    .306
2053          PI    .310    .319    .336    .366    .392    .401    .396    .392    .388    .392
```

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2054          PI    .392    .396    .401    .401    .405    .409    .414    .414    .409    .405
2055          PI    .405    .401    .396    .392    .388    .388    .383    .379    .375    .383
2056          PI    .396    .409    .426    .452    .470    .478    .487    .487    .487    .487
2057          PI    .487    .487    .491    .491    .495    .500    .504    .500    .487    .444
2058          PI    .401    .362    .327    .297    .280    .271    .258    .220    .146    .086
2059          PI    .078    .073    .095    .134    .190    .194    .168    .125    .099    .082
2060          PI    .073    .065    .056    .056    .052    .047    .043    .039    .039    .039
2061          PI    .034    .030    .030    .026    .026    .026    .022    .022    .022    .022
2062          PI    .022    .022    .017    .017    .017    .013    .013    .009    .009    .009
2063          PI    .009    .004    .004    .009    .009    .013    .013    .017    .017    .017
2064          PI    .017    .017    .013    .013    .013    .013    .013    .013    .013    .013
2065          PI    .017    .017    .013    .013    .013    .017    .017    .013    .009    .013
2066          PI    .017    .022    .026    .043    .078    .108    .125    .112    .082    .056
2067          PI    .026    .009    .004    .004    .000    .000    .000    .000    .000    .004
2068          PI    .017    .022    .013    .009    .009    .004    .004    .004
2069          LS            86.2
2070          KM   UHG FROM MOUNTAIN S-GRAPH
2071          UI  1111.9  2221.1  2203.4  3001.1  3365.7  3569.7  4543.3  5289.0  6350.9  7587.7
2072          UI  7721.3  9338.4  7205.7  6488.0  5526.3  4850.8  4632.4  3956.0  3879.3  3543.3
2073          UI  3060.6  2466.9  2637.2  2146.4  2106.1  2033.1  2001.3  2001.4  1936.4  1691.3
2074          UI  1656.5  1534.3  1504.1  1559.9  1431.1  1421.8  1295.3  1250.7  1250.7  1251.3
2075          UI  1250.6  1241.0  1065.3  1000.8  1000.4   988.4   920.1   909.7   910.0   903.8
2076          UI   847.9   833.8   834.1   833.8   787.9   715.8   715.0   714.0   715.4   706.1
2077          UI   670.2   666.7   667.4   667.4   666.7   606.7   541.1   540.4   541.1   541.1
2078          UI   541.1   540.4   490.0   445.2   445.2   444.5   445.2   443.8   445.2   444.5
2079          UI   436.2   397.6   392.7   392.0   392.0   393.4   391.3   393.4   391.3   393.4
2080          UI   371.3   351.3   352.0   350.6   351.3   350.6   352.0   350.6   350.6   352.0
2081          UI   347.9   323.0   309.2   310.6   310.6   310.6   309.2   310.6   310.6   310.6
2082          UI   310.6   309.2   310.6   276.1   258.1   259.5   258.1   256.8   259.5   258.1
2083          UI   256.8   258.1   259.5   258.1   258.1   258.1   258.1   248.5   204.3   197.4
2084          UI   197.4   197.4   198.8   197.4   200.2   196.0   200.2   197.4   197.4   198.8
2085          UI   198.8   198.8   196.0   198.8   198.8   197.4   190.5   146.3   143.6   143.6
2086          UI   144.9   143.6   143.6   144.9   143.6   143.6   144.9   143.6   143.6   143.6
2087          UI   146.3   140.8   146.3   143.6   143.6   143.6   143.6   146.3   140.8   146.3
2088          UI   143.6   143.6   129.8    55.2    38.7    38.7    38.7    44.2    38.7    38.7
2089          UI    35.9    38.7    41.4    38.7    38.7    41.4    38.7    38.7    38.7    41.4
2090          UI    38.7    38.7    41.4    35.9    41.4    38.7    38.7    41.4    38.7    38.7
              *
1                                          HEC-1 INPUT                                                PAGE 43

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


2091          KK   CP12A
2092          KM   COMBINE CP11, M2
2093          HC        2
              *

2094          KK     M13
2095          KM   EXISTING OFFSITE BASIN
2096          BA    7.18
2097          KM        FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2098          PB    1.15
2099          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
2100          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
2101          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
2102          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
2103          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
2104          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
2105          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
2106          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
2107          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
2108          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
2109          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
2110          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
2111          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
2112          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
2113          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
2114          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
2115          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
2116          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
2117          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
2118          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
2119          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
2120          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
2121          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
2122          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
2123          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
2124          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
2125          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
2126          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
2127          PI    .006    .007    .004    .003    .003    .001    .001    .001
2128          LS            88.4
2129          KM   UHG FROM MOUNTAIN S-GRAPH
2130          UI    961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
2131          UI   2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
2132          UI    718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
2133          UI    432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
2134          UI    301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
2135          UI    192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
2136          UI    170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
2137          UI    133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
2138          UI    112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
2139          UI    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6    85.6
2140          UI    65.9    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2
2141          UI    62.2    62.2    62.2    62.2    62.2    62.2    62.2    62.2    23.8    22.6
2142          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
1                                          HEC-1 INPUT                                                PAGE 44

LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2143          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
2144          UI    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6    22.6
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2145          KK     DV3
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2146          KM   FLOWSPLIT DIVERSION FROM BASIN M13
2147          KM   ASSUME 50% OF FLOW TO CONTINUE EAST
2148          KM   ASSUME 50% OF FLOW TO CONTINUE NORTH
2149          DT     FS3
2150          DI     100
2151          DQ      50
              *

2152          KK      M1
2153          KM   EXISTING OFFSITE BASIN
2154          BA    0.76
2155          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2156          PB    1.15
2157          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
2158          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
2159          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
2160          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
2161          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
2162          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
2163          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
2164          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
2165          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
2166          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
2167          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
2168          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
2169          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
2170          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
2171          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
2172          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
2173          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
2174          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
2175          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
2176          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
2177          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
2178          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
2179          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
2180          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
2181          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
2182          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
2183          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
2184          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
2185          PI    .006    .007    .004    .003    .003    .001    .001    .001
2186          LS            77.3
2187          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2188          UI    176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
2189          UI    139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
2190          UI    24.2    24.2    24.2    24.2    21.1    13.8    13.8    13.8    13.8    13.8
2191          UI    13.8    13.8    13.8     3.0
              *
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LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10

2192          KK    CP12
2193          KM   COMBINE DV5, M11
2194          HC       2
              *

2195          KK   CP12B
2196          KM   COMBINE CP12A, CP12
2197          HC       2
              *

2198          KK     ONA
2199          KM   EXISTING ONSITE BASIN
2200          BA    0.87
2201          KM         FEBURARY 1980 LOS ANGELES GENERAL STORM   24 HRDURATION
2202          PB    1.15
2203          PI    .001    .001    .003    .003    .003    .003    .004    .004    .004    .004
2204          PI    .006    .006    .007    .007    .007    .007    .007    .007    .007    .007
2205          PI    .007    .007    .007    .007    .007    .007    .007    .007    .007    .007
2206          PI    .008    .008    .010    .010    .010    .010    .011    .012    .015    .018
2207          PI    .021    .019    .018    .017    .017    .015    .014    .017    .021    .025
2208          PI    .026    .026    .026    .028    .026    .026    .026    .028    .029    .030
2209          PI    .034    .037    .039    .041    .041    .041    .041    .041    .041    .041
2210          PI    .041    .041    .039    .032    .028    .028    .028    .026    .026    .028
2211          PI    .030    .033    .036    .040    .044    .048    .052    .055    .058    .059
2212          PI    .062    .065    .066    .068    .069    .070    .070    .070    .072    .072
2213          PI    .072    .072    .073    .075    .076    .077    .077    .077    .076    .075
2214          PI    .073    .075    .077    .080    .083    .086    .087    .088    .090    .091
2215          PI    .092    .094    .094    .094    .095    .097    .098    .098    .098    .098
2216          PI    .099    .102    .108    .117    .126    .128    .127    .126    .124    .126
2217          PI    .126    .127    .128    .128    .130    .131    .132    .132    .131    .130
2218          PI    .130    .128    .127    .126    .124    .124    .123    .121    .120    .123
2219          PI    .127    .131    .137    .145    .150    .153    .156    .156    .156    .156
2220          PI    .156    .156    .157    .157    .159    .160    .161    .160    .156    .142
2221          PI    .128    .116    .105    .095    .090    .087    .083    .070    .047    .028
2222          PI    .025    .023    .030    .043    .061    .062    .054    .040    .032    .026
2223          PI    .023    .021    .018    .018    .017    .015    .014    .012    .012    .012
2224          PI    .011    .010    .010    .008    .008    .008    .007    .007    .007    .007
2225          PI    .007    .007    .006    .006    .006    .004    .004    .003    .003    .003
2226          PI    .003    .001    .001    .003    .003    .004    .004    .006    .006    .006
2227          PI    .006    .006    .004    .004    .004    .004    .004    .004    .004    .004
2228          PI    .006    .006    .004    .004    .004    .006    .006    .004    .003    .004
2229          PI    .006    .007    .008    .014    .025    .034    .040    .036    .026    .018
2230          PI    .008    .003    .001    .001    .000    .000    .000    .000    .000    .001
2231          PI    .006    .007    .004    .003    .003    .001    .001    .001
2232          LS            76.1
2233          KM   UHG FROM WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)
2234          UI    138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
2235          UI    195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
2236          UI    57.1    57.1    39.1    38.4    38.4    30.7    21.5    21.5    21.5    21.6
2237          UI    21.5    19.7    12.3    12.3    12.3    12.3    12.3    12.3    12.3    12.3
2238          UI    12.3    12.3     9.3
              *
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          LINE          ID.......1.......2.......3.......4.......5.......6.......7.......8.......9......10


          2239          KK    CP13
          2240          KM   COMBINE CP12B, ONA
          2241          HC       2
                        *
          2242          ZZ
1
                SCHEMATIC DIAGRAM OF STREAM NETWORK
 INPUT
  LINE      (V) ROUTING          (--->) DIVERSION OR PUMP FLOW

   NO.      (.) CONNECTOR        (<---) RETURN OF DIVERTED OR PUMPED FLOW

    28         M27
                V
                V
    68        RM27
                .
                .
    72          .        ONR
                .           .
                .           .
   111        CP25...........
                .
                .
   114          .        M22
                .           .
                .           .
   152          .           .        M21
                .           .           .
                .           .           .
   191          .           .           .        M23
                .           .           .           .
                .           .           .           .
   230          .           .           .           .        M25
                .           .           .           .           .
                .           .           .           .           .
   270          .        CP21...................................
                .           .
                .           .
   273          .           .        M24
                .           .           V
                .           .           V
   313          .           .        RM24
                .           .           .
                .           .           .
   317          .           .           .         M26
                .           .           .           .
                .           .           .           .
   357          .           .        CP22...........
                .           .           .
                .           .           .
   360          .        CP23...........
                .           V
                .           V
   363          .       RCP23
                .           .
                .           .
   367          .           .        ONQ
                .           .           .
                .           .           .
   408          .        CP24...........
                .           .
                .           .
   411      CPDUM1...........
                .
                .
   414          .         M12
                .           .
                .           .
   461          .           .         ONJ
                .           .           .
                .           .           .
   499          .           .           .         M11
                .           .           .           .
                .           .           .           .
   542          .           .           .           .         ONI
                .           .           .           .           .
                .           .           .           .           .
   580          .           .           .           .           .         M10
                .           .           .           .           .           .
                .           .           .           .           .           .
   620          .           .           .           .           .           .         ONH
                .           .           .           .           .           .           .
                .           .           .           .           .           .           .
   659          .         CP1..............................................................
                .           .
                .           .
   666          .           .------->     FS1
   662          .         DV1
                .           .
                .           .
   673          .           .------->     FS2
   669          .         DV2
                .           .
                .           .
   676          .           .         ONV
                .           .           .
                .           .           .
   714          .         CP2............
                .           .
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 717          .           .         ONG
              .           .           .
              .           .           .
 755          .         CP3............
              .           .
              .           .
 758          .           .         ONK
              .           .           .
              .           .           .
 799          .           .           .         ONF
              .           .           .           .
              .           .           .           .
 838          .         CP4........................
              .           .
              .           .
 841      CPDUM2............
              .
              .
 847          .           .<-------     FS1
 844          .        RET1
              .           .
              .           .
 848          .           .          MX
              .           .           .
              .           .           .
 885          .        CP14............
              .           .
              .           .
 888          .           .         ONS
              .           .           .
              .           .           .
 926          .       CP14A............
              .           .
              .           .
 929          .           .        M17
              .           .           .
              .           .           .
 969          .        CP15............
              .           .
              .           .
 972          .           .        M18
              .           .           .
              .           .           .
1010          .           .           .        M20
              .           .           .          V
              .           .           .          V
1049          .           .           .       STOR1
              .           .           .          V
              .           .           .          V
1058          .           .           .        RM20
              .           .           .           .
              .           .           .           .
1062          .           .           .           .        M19
              .           .           .           .           .
              .           .           .           .           .
1100          .           .           .        CP16............
              .           .           .           .
              .           .           .           .
1103          .        CP17........................
              .           V
              .           V
1106          .       RCP17
              .           .
              .           .
1110          .           .        ONP
              .           .           .
              .           .           .
1151          .        CP18............
              .           .
              .           .
1154      CPDUM3............
              .
              .
1157          .         ONT
              .           V
              .           V
1195          .       RMONT
              .           .
              .           .
1199          .           .        ONO
              .           .           .
              .           .           .
1240          .        CP20............
              .           .
              .           .
1243      CPDUM4............
              .
              .
1246          .         ONU
              .           V
              .           V
1284          .       RMONU
              .           .
              .           .
1288          .           .        ONL
              .           .           .
              .           .           .
1329          .        CP19............
              .           .
              .           .
1332          .           .        ONM
              .           .           .
              .           .           .
1370          .           .           .        ONN
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1409      CPDUM5..................................
               .
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1412           .          M9
               .            .
               .            .
1457           .            .          M8
               .            .            .
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1499           .         CP5............
               .            .
               .            .
1504           .            .           .<-------     FS2
1502           .            .        RET2
               .            .            .
               .            .            .
1505           .         CP6............
               .            .
               .            .
1508           .            .          M7
               .            .            .
               .            .            .
1547           .            .            .        ONE1
               .            .            .           .
               .            .            .           .
1590           .            .        CP6A............
               .            .            .
               .            .            .
1593           .        CP6B............
               .            .
               .            .
1596           .            .        ONE2
               .            .            .
               .            .            .
1641           .         CP7............
               .            .
               .            .
1644           .            .          M6
               .            .            .
               .            .            .
1687           .            .            .         M5A
               .            .            .           .
               .            .            .           .
1726           .            .            .           .         M5B
               .            .            .           .           .
               .            .            .           .           .
1764           .            .         CP8........................
               .            .            .
               .            .            .
1767           .            .            .          M5
               .            .            .           .
               .            .            .           .
1807           .            .         CP9............
               .            .            .
               .            .            .
1810           .            .            .         ONB
               .            .            .           .
               .            .            .           .
1856           .            .        CP10............
               .            .            .
               .            .            .
1859           .            .            .         OND
               .            .            .           .
               .            .            .           .
1900           .            .            .           .         ONC
               .            .            .           .           .
               .            .            .           .           .
1939           .            .            .         CPA............
               .            .            .           .
               .            .            .           .
1942           .            .            .           .          M4
               .            .            .           .           .
               .            .            .           .           .
1991           .            .            .           .           .          M3
               .            .            .           .           .           .
               .            .            .           .           .           .
2032           .            .            .           .        CP11............
               .            .            .           .           .
               .            .            .           .           .
2035           .            .            .           .           .          M2
               .            .            .           .           .           .
               .            .            .           .           .           .
2091           .            .            .           .       CP12A............
               .            .            .           .           .
               .            .            .           .           .
2094           .            .            .           .           .         M13
               .            .            .           .           .           .
               .            .            .           .           .           .
2149           .            .            .           .           .           .------->     FS3
2145           .            .            .           .           .         DV3
               .            .            .           .           .           .
               .            .            .           .           .           .
2152           .            .            .           .           .           .          M1
               .            .            .           .           .           .           .
               .            .            .           .           .           .           .
2192           .            .            .           .           .        CP12............
               .            .            .           .           .           .
               .            .            .           .           .           .
2195           .            .            .           .       CP12B............
               .            .            .           .           .
               .            .            .           .           .
2198           .            .            .           .           .         ONA
               .            .            .           .           .           .
               .            .            .           .           .           .
2239           .            .            .           .        CP13............
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 (***) RUNOFF ALSO COMPUTED AT THIS LOCATION
1****************************************                                                    ****************************************
 *                                      *                                                    *                                      *
 *   FLOOD HYDROGRAPH PACKAGE  (HEC-1)  *                                                    *    U.S. ARMY CORPS OF ENGINEERS      *
 *             JUN   1998               *                                                    *    HYDROLOGIC ENGINEERING CENTER     *
 *           VERSION 4.1                *                                                    *          609 SECOND STREET           *
 *                                      *                                                    *       DAVIS, CALIFORNIA 95616        *
 *  RUN DATE   28JUN11  TIME  15:28:16  *                                                    *           (916) 756-1104             *
 *                                      *                                                    *                                      *
 ****************************************                                                    ****************************************


                          ******************************************************
                          WO# 7323 - RIO MESA SOLAR
                          24-HR, 2-YR STORM
                          NOAA ATLAS 14- 24HR/2YR AVG PT RAINFALL DEPTH = 1.15"/1.20"
                          EXISTING CONDITION ANALYSIS
                          UNIT HYDROGRAPHS GENERATED FROM LAPRE-1
                          STORM HYTEOGRAPHS GENERATED FROM LAPRE-1
                          MODEL WITH NEW COMBINING SCHEME
                          ******************************************************
                          DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR
                          REFERENCING RCFD & WCD PLATE E-5.8

                           AREA RANGE       DARF
                            (SQ.MI.)         --

                            0 TO 2.5  --->  1.000
                          2.5 TO  10  --->  0.990
                           10 TO  20  --->  0.980
                           20 TO  30  --->  0.970
                           30 TO  40  --->  0.965
                           40 TO  50  --->  0.955

                         ******************************************************

   26 IO          OUTPUT CONTROL VARIABLES
                        IPRNT           5  PRINT CONTROL
                        IPLOT           0  PLOT CONTROL
                        QSCAL          0.  HYDROGRAPH PLOT SCALE

      IT          HYDROGRAPH TIME DATA
                         NMIN           5  MINUTES IN COMPUTATION INTERVAL
                        IDATE      1    0  STARTING DATE
                        ITIME        0000  STARTING TIME
                           NQ        2000  NUMBER OF HYDROGRAPH ORDINATES
                       NDDATE      7    0  ENDING DATE
                       NDTIME        2235  ENDING TIME
                       ICENT          19  CENTURY MARK

                    COMPUTATION INTERVAL     .08 HOURS
                         TOTAL TIME BASE  166.58 HOURS

           ENGLISH UNITS
                DRAINAGE AREA          SQUARE MILES
                PRECIPITATION DEPTH    INCHES
                LENGTH, ELEVATION      FEET
                FLOW                   CUBIC FEET PER SECOND
                STORAGE VOLUME         ACRE-FEET
                SURFACE AREA           ACRES
                TEMPERATURE            DEGREES FAHRENHEIT

      JP          MULTI-PLAN OPTION
                        NPLAN           1  NUMBER OF PLANS

      JR          MULTI-RATIO OPTION
                      RATIOS OF PRECIPITATION
                     1.00       .99       .98       .97       .96       .95
1

                PEAK FLOW AND STAGE (END-OF-PERIOD) SUMMARY FOR MULTIPLE PLAN-RATIO ECONOMIC COMPUTATIONS
                                   FLOWS IN CUBIC FEET PER SECOND,  AREA IN SQUARE MILES
                                                 TIME TO PEAK IN HOURS


                                                          RATIOS APPLIED TO PRECIPITATION
 OPERATION       STATION     AREA    PLAN            RATIO 1  RATIO 2  RATIO 3  RATIO 4  RATIO 5  RATIO 6
                                                       1.00      .99      .98      .97      .96      .95

 HYDROGRAPH AT
+                  M27       .22     1   FLOW            2.       2.       2.       2.       2.       2.
                                         TIME         15.25    15.25    15.25    15.25    15.25    15.25

 ROUTED TO
+                 RM27       .22     1   FLOW            2.       2.       2.       2.       2.       2.
                                         TIME         16.00    16.08    15.92    16.00    16.00    16.08

 HYDROGRAPH AT
+                  ONR       .27     1   FLOW            3.       3.       2.       2.       2.       2.
                                         TIME         15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                 CP25       .49     1   FLOW            4.       4.       4.       4.       3.       3.
                                         TIME         15.58    15.67    15.67    15.75    15.75    15.83

 HYDROGRAPH AT
+                  M22       .07     1   FLOW            2.       2.       2.       2.       2.       2.
                                         TIME         15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+                  M21       .17     1   FLOW            7.       6.       6.       6.       6.       6.
                                         TIME         14.92    14.92    14.92    14.92    14.92    14.92
```

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| HYDROGRAPH AT | | | | | | | | | | |
| + | M23 | .18 | 1 | FLOW | 7. | 7. | 6. | 6. | 6. | 6. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M25 | .15 | 1 | FLOW | 7. | 7. | 7. | 7. | 7. | 7. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 4 COMBINED AT | | | | | | | | | | |
| + | CP21 | .57 | 1 | FLOW | 23. | 22. | 22. | 21. | 21. | 21. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M24 | .66 | 1 | FLOW | 48. | 47. | 47. | 46. | 46. | 45. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| ROUTED TO | | | | | | | | | | |
| + | RM24 | .66 | 1 | FLOW | 48. | 47. | 46. | 46. | 45. | 45. |
| | | | | TIME | 15.33 | 15.33 | 15.42 | 15.42 | 15.42 | 15.42 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M26 | .53 | 1 | FLOW | 10. | 9. | 9. | 9. | 8. | 8. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP22 | 1.19 | 1 | FLOW | 57. | 56. | 55. | 54. | 54. | 52. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP23 | 1.76 | 1 | FLOW | 77. | 76. | 74. | 73. | 72. | 70. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| ROUTED TO | | | | | | | | | | |
| + | RCP23 | 1.76 | 1 | FLOW | 77. | 76. | 74. | 73. | 72. | 71. |
| | | | | TIME | 15.50 | 15.50 | 15.58 | 15.58 | 15.58 | 15.58 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONQ | .66 | 1 | FLOW | 6. | 6. | 5. | 5. | 5. | 5. |
| | | | | TIME | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 | 15.33 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP24 | 2.42 | 1 | FLOW | 83. | 81. | 79. | 78. | 77. | 75. |
| | | | | TIME | 15.50 | 15.50 | 15.50 | 15.50 | 15.50 | 15.58 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CPDUM1 | 2.91 | 1 | FLOW | 87. | 85. | 83. | 80. | 79. | 77. |
| | | | | TIME | 15.58 | 15.58 | 15.67 | 15.75 | 15.75 | 15.50 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M12 | 3.98 | 1 | FLOW | 168. | 165. | 162. | 159. | 157. | 154. |
| | | | | TIME | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 | 15.17 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONJ | .07 | 1 | FLOW | 2. | 2. | 2. | 2. | 2. | 2. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M11 | 1.30 | 1 | FLOW | 39. | 38. | 37. | 36. | 36. | 35. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONI | .05 | 1 | FLOW | 1. | 1. | 1. | 1. | 1. | 1. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | M10 | .38 | 1 | FLOW | 9. | 9. | 9. | 8. | 8. | 8. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.17 | 15.17 | 15.17 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONH | .20 | 1 | FLOW | 6. | 6. | 6. | 6. | 6. | 6. |
| | | | | TIME | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 | 14.92 |
| 6 COMBINED AT | | | | | | | | | | |
| + | CP1 | 5.98 | 1 | FLOW | 226. | 221. | 216. | 212. | 209. | 205. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS1 | 5.98 | 1 | FLOW | 3. | 3. | 3. | 3. | 3. | 3. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV1 | 5.98 | 1 | FLOW | 223. | 218. | 213. | 209. | 206. | 202. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| DIVERSION TO | | | | | | | | | | |
| + | FS2 | 5.98 | 1 | FLOW | 160. | 157. | 154. | 150. | 149. | 145. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | DV2 | 5.98 | 1 | FLOW | 62. | 61. | 60. | 58. | 58. | 56. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONV | .12 | 1 | FLOW | 1. | 1. | 1. | 1. | 1. | 1. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP2 | 6.10 | 1 | FLOW | 63. | 62. | 61. | 59. | 59. | 57. |
| | | | | TIME | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 | 15.08 |
| HYDROGRAPH AT | | | | | | | | | | |
| + | ONG | .14 | 1 | FLOW | 1. | 1. | 1. | 1. | 1. | 1. |
| | | | | TIME | 15.08 | 15.08 | 15.17 | 15.17 | 15.17 | 15.17 |
| 2 COMBINED AT | | | | | | | | | | |
| + | CP3 | 6.24 | 1 | FLOW | 64. | 63. | 62. | 60. | 59. | 58. |

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                                        TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                ONK       .68     1   FLOW         5.       4.       4.       4.       4.       3.
                                      TIME        15.33    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+                ONF       .50     1   FLOW         4.       4.       3.       3.       3.       3.
                                      TIME        15.17    15.25    15.25    15.25    15.25    15.25

  3 COMBINED AT
+                CP4      7.42     1   FLOW        73.      71.      69.      67.      66.      64.
                                      TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+             CPDUM2     10.33     1   FLOW       155.     151.     147.     143.     141.     138.
                                      TIME        15.25    15.25    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+               RET1       .00     1   FLOW         3.       3.       3.       3.       3.       3.
                                      TIME        15.08    15.08    15.08    15.08    15.08    15.08

 HYDROGRAPH AT
+                 MX       .01     1   FLOW         1.       1.       1.       1.       1.       1.
                                      TIME        14.83    14.83    14.83    14.83    14.83    14.83

  2 COMBINED AT
+               CP14       .01     1   FLOW         4.       4.       4.       4.       4.       4.
                                      TIME        14.92    14.92    14.92    14.92    14.92    14.92

 HYDROGRAPH AT
+                 ONS       .04     1   FLOW         0.       0.       0.       0.       0.       0.
                                      TIME        15.08    15.08    15.08    15.08    15.08    15.08

  2 COMBINED AT
+              CP14A       .05     1   FLOW         4.       4.       4.       4.       4.       4.
                                      TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+               M17        .67     1   FLOW        30.      29.      28.      28.      27.      27.
                                      TIME        15.00    15.00    15.00    15.00    15.00    15.00

  2 COMBINED AT
+               CP15       .72     1   FLOW        34.      33.      32.      32.      31.      31.
                                      TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+               M18        .12     1   FLOW         5.       5.       5.       5.       5.       5.
                                      TIME        15.00    15.00    15.00    15.00    15.00    15.00

 HYDROGRAPH AT
+               M20        .49     1   FLOW        34.      33.      33.      32.      32.      32.
                                      TIME        14.92    14.92    14.92    14.92    14.92    14.92

 ROUTED TO
+             STOR1        .49     1   FLOW         0.       0.       0.       0.       0.       0.
                                      TIME         .00      .00      .00      .00      .00      .00
                                   ** PEAK STAGES IN FEET **
                                   1  STAGE      435.43   435.34   435.24   435.14   435.09   435.00
                                      TIME        26.25    26.33    26.25    26.17    26.17    26.08

 ROUTED TO
+              RM20        .49     1   FLOW         0.       0.       0.       0.       0.       0.
                                      TIME         .00      .00      .00      .00      .00      .00

 HYDROGRAPH AT
+               M19        .11     1   FLOW         5.       5.       4.       4.       4.       4.
                                      TIME        14.92    14.92    14.92    14.92    14.92    14.92

  2 COMBINED AT
+               CP16       .60     1   FLOW         5.       5.       4.       4.       4.       4.
                                      TIME        14.92    14.92    14.92    14.92    14.92    14.92

  3 COMBINED AT
+               CP17      1.44     1   FLOW        43.      43.      42.      41.      40.      39.
                                      TIME        14.92    15.00    15.00    15.00    15.00    15.00

 ROUTED TO
+             RCP17      1.44     1   FLOW        43.      42.      41.      41.      40.      39.
                                      TIME        15.58    15.58    15.58    15.67    15.67    15.67

 HYDROGRAPH AT
+               ONP      1.47     1   FLOW        13.      12.      11.      11.      10.      10.
                                      TIME        15.33    15.42    15.42    15.42    15.42    15.42

  2 COMBINED AT
+               CP18      2.91     1   FLOW        56.      54.      53.      51.      50.      49.
                                      TIME        15.58    15.58    15.58    15.58    15.58    15.58

  2 COMBINED AT
+             CPDUM3     13.24     1   FLOW       208.     203.     198.     192.     190.     184.
                                      TIME        15.33    15.42    15.42    15.42    15.42    15.42

 HYDROGRAPH AT
+               ONT        .04     1   FLOW         0.       0.       0.       0.       0.       0.
                                      TIME        15.00    15.00    15.00    15.00    15.00    15.08

 ROUTED TO
+             RMONT        .04     1   FLOW         1.       1.       0.       0.       0.       1.
                                      TIME        18.08    18.08    18.17    18.25    18.33    18.42

 HYDROGRAPH AT
+               ONO        .55     1   FLOW         5.       5.       4.       4.       4.       4.
                                      TIME        15.33    15.33    15.33    15.42    15.42    15.42
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  2 COMBINED AT
+                  CP20       .59    1   FLOW        5.      5.      4.      4.      4.      4.
                                         TIME     15.33   15.33   15.33   15.42   15.42   15.42

  2 COMBINED AT
+                CPDUM4     13.83    1   FLOW      213.    207.    202.    196.    194.    188.
                                         TIME     15.33   15.42   15.42   15.42   15.42   15.42

 HYDROGRAPH AT
+                   ONU       .05    1   FLOW        1.      1.      0.      0.      0.      0.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.08

 ROUTED TO
+                 RMONU       .05    1   FLOW        1.      1.      1.      1.      1.      1.
                                         TIME     17.58   17.67   17.75   17.83   17.83   17.92

 HYDROGRAPH AT
+                   ONL       .73    1   FLOW        7.      6.      6.      6.      5.      5.
                                         TIME     15.33   15.33   15.33   15.33   15.33   15.33

  2 COMBINED AT
+                  CP19       .78    1   FLOW        7.      6.      6.      6.      5.      5.
                                         TIME     15.33   15.33   15.33   15.33   15.33   15.33

 HYDROGRAPH AT
+                   ONM       .10    1   FLOW        1.      1.      1.      1.      1.      1.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                   ONN       .08    1   FLOW        1.      1.      1.      1.      1.      1.
                                         TIME     15.17   15.17   15.17   15.17   15.17   15.25

  4 COMBINED AT
+                CPDUM5     14.79    1   FLOW      221.    215.    209.    203.    200.    194.
                                         TIME     15.33   15.33   15.42   15.42   15.42   15.42

 HYDROGRAPH AT
+                    M9      1.80    1   FLOW       73.     72.     70.     69.     68.     66.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                    M8      1.04    1   FLOW       44.     43.     42.     41.     41.     40.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.00

  2 COMBINED AT
+                   CP5      2.84    1   FLOW      117.    114.    112.    110.    108.    106.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                  RET2       .00    1   FLOW      160.    157.    154.    150.    149.    145.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

  2 COMBINED AT
+                   CP6      2.84    1   FLOW      277.    271.    265.    260.    257.    251.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                    M7       .16    1   FLOW        3.      3.      3.      3.      3.      3.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                  ONE1      1.61    1   FLOW       15.     14.     14.     13.     12.     12.
                                         TIME     15.50   15.50   15.50   15.50   15.50   15.58

  2 COMBINED AT
+                  CP6A      1.77    1   FLOW       18.     17.     16.     15.     15.     14.
                                         TIME     15.42   15.42   15.42   15.50   15.50   15.50

  2 COMBINED AT
+                  CP6B      4.61    1   FLOW      293.    286.    280.    273.    270.    264.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                  ONE2      2.59    1   FLOW       26.     25.     24.     23.     22.     21.
                                         TIME     15.58   15.58   15.58   15.67   15.67   15.67

  2 COMBINED AT
+                   CP7      7.20    1   FLOW      314.    307.    299.    291.    288.    280.
                                         TIME     15.17   15.17   15.17   15.17   15.17   15.17

 HYDROGRAPH AT
+                    M6      1.32    1   FLOW       46.     45.     44.     43.     42.     41.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   M5A       .17    1   FLOW        8.      8.      8.      8.      8.      7.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                   M5B       .18    1   FLOW        9.      9.      8.      8.      8.      8.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.00

  3 COMBINED AT
+                   CP8      1.67    1   FLOW       63.     61.     60.     58.     58.     56.
                                         TIME     15.00   15.00   15.00   15.00   15.00   15.00

 HYDROGRAPH AT
+                    M5       .39    1   FLOW        5.      5.      5.      4.      4.      4.
                                         TIME     15.17   15.17   15.17   15.17   15.17   15.17

  2 COMBINED AT
+                   CP9      2.06    1   FLOW       67.     66.     64.     63.     62.     60.
                                         TIME     15.08   15.08   15.08   15.08   15.08   15.08

 HYDROGRAPH AT
+                   ONB      2.83    1   FLOW       23.     21.     20.     19.     19.     18.
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                                        TIME        15.67    15.75    15.75    15.75    15.75    15.75

  2 COMBINED AT
+                   CP10      4.89     1  FLOW         84.      81.      79.      76.      75.      72.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

 HYDROGRAPH AT
+                    OND      1.34     1  FLOW          9.       9.       8.       8.       7.       7.
                                          TIME        15.42    15.42    15.42    15.42    15.42    15.50

 HYDROGRAPH AT
+                    ONC       .30     1  FLOW          2.       2.       2.       2.       2.       2.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                    CPA      1.64     1  FLOW         11.      11.      10.       9.       9.       8.
                                          TIME        15.33    15.33    15.33    15.42    15.42    15.42

 HYDROGRAPH AT
+                     M4      2.71     1  FLOW         93.      91.      89.      87.      86.      84.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                     M3       .57     1  FLOW         13.      13.      12.      12.      12.      11.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                   CP11      3.28     1  FLOW        106.     104.     102.      99.      98.      96.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

 HYDROGRAPH AT
+                     M2     24.30     1  FLOW        743.     727.     712.     697.     689.     674.
                                          TIME        15.58    15.58    15.67    15.67    15.67    15.67

  2 COMBINED AT
+                  CP12A     27.58     1  FLOW        841.     824.     806.     789.     780.     763.
                                          TIME        15.58    15.58    15.58    15.58    15.58    15.58

 HYDROGRAPH AT
+                    M13      7.18     1  FLOW        299.     294.     288.     283.     280.     274.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

 DIVERSION TO
+                    FS3      7.18     1  FLOW        150.     147.     144.     141.     140.     137.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                    DV3      7.18     1  FLOW        150.     147.     144.     141.     140.     137.
                                          TIME        15.33    15.33    15.33    15.33    15.33    15.33

 HYDROGRAPH AT
+                     M1       .76     1  FLOW         15.      14.      14.      13.      13.      13.
                                          TIME        15.17    15.17    15.17    15.17    15.17    15.17

  2 COMBINED AT
+                   CP12      7.94     1  FLOW        164.     161.     157.     154.     153.     149.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

  2 COMBINED AT
+                  CP12B     35.52     1  FLOW       1001.     980.     959.     939.     928.     908.
                                          TIME        15.50    15.50    15.50    15.50    15.50    15.50

 HYDROGRAPH AT
+                    ONA       .87     1  FLOW         14.      13.      13.      12.      12.      11.
                                          TIME        15.25    15.25    15.25    15.25    15.25    15.25

  2 COMBINED AT
+                   CP13     36.39     1  FLOW       1013.     992.     971.     950.     940.     919.
1                                         TIME        15.50    15.50    15.50    15.50    15.50    15.50
                                        SUMMARY OF KINEMATIC WAVE - MUSKINGUM-CUNGE ROUTING
                                            (FLOW IS DIRECT RUNOFF WITHOUT BASE FLOW)
                                                                                  INTERPOLATED TO
                                                                                COMPUTATION INTERVAL
            ISTAQ    ELEMENT      DT       PEAK    TIME TO     VOLUME      DT       PEAK    TIME TO     VOLUME
                                                      PEAK                                              PEAK

                                (MIN)     (CFS)     (MIN)      (IN)     (MIN)     (CFS)     (MIN)       (IN)

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      2.36    960.00       .04      5.00      2.36    960.00         .04

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4744E+00 EXCESS= .0000E+00 OUTFLOW= .4777E+00 BASIN STORAGE= .5525E-02 PERCENT ERROR=  -1.8

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      2.25    965.00       .04      5.00      2.25    965.00         .04

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4489E+00 EXCESS= .0000E+00 OUTFLOW= .4521E+00 BASIN STORAGE= .6312E-02 PERCENT ERROR=  -2.1

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      2.16    955.00       .04      5.00      2.16    955.00         .04

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .4239E+00 EXCESS= .0000E+00 OUTFLOW= .4274E+00 BASIN STORAGE= .6112E-02 PERCENT ERROR=  -2.3

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      2.08    960.00       .03      5.00      2.08    960.00         .03

 CONTINUITY SUMMARY (AC-FT) - INFLOW= .3996E+00 EXCESS= .0000E+00 OUTFLOW= .4032E+00 BASIN STORAGE= .5940E-02 PERCENT ERROR=  -2.4
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          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         5.00      2.01    960.00       .03      5.00      2.01    960.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3877E+00 EXCESS= .0000E+00 OUTFLOW= .3915E+00 BASIN STORAGE= .5804E-02 PERCENT ERROR=  -2.5

          FOR PLAN = 1  RATIO=  .00
              RM27  MANE         4.75      1.97    964.25       .03      5.00      1.86    965.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .3644E+00 EXCESS= .0000E+00 OUTFLOW= .3679E+00 BASIN STORAGE= .5573E-02 PERCENT ERROR=  -2.5

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     47.80    920.00       .52      5.00     47.80    920.00         .52

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1826E+02 EXCESS= .0000E+00 OUTFLOW= .1827E+02 BASIN STORAGE= .9416E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     47.08    920.00       .51      5.00     47.08    920.00         .51

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1794E+02 EXCESS= .0000E+00 OUTFLOW= .1795E+02 BASIN STORAGE= .9238E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     46.36    925.00       .50      5.00     46.36    925.00         .50

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1762E+02 EXCESS= .0000E+00 OUTFLOW= .1763E+02 BASIN STORAGE= .9167E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     45.66    925.00       .49      5.00     45.66    925.00         .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1730E+02 EXCESS= .0000E+00 OUTFLOW= .1731E+02 BASIN STORAGE= .8900E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     45.30    925.00       .49      5.00     45.30    925.00         .49

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1714E+02 EXCESS= .0000E+00 OUTFLOW= .1715E+02 BASIN STORAGE= .8864E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM24  MANE         5.00     44.60    925.00       .48      5.00     44.60    925.00         .48

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1682E+02 EXCESS= .0000E+00 OUTFLOW= .1683E+02 BASIN STORAGE= .8793E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     77.37    930.00       .29      5.00     77.37    930.00         .29

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2730E+02 EXCESS= .0000E+00 OUTFLOW= .2731E+02 BASIN STORAGE= .1025E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     75.82    930.00       .28      5.00     75.82    930.00         .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2672E+02 EXCESS= .0000E+00 OUTFLOW= .2673E+02 BASIN STORAGE= .1006E-01 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     74.30    935.00       .28      5.00     74.30    935.00         .28

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2613E+02 EXCESS= .0000E+00 OUTFLOW= .2614E+02 BASIN STORAGE= .9999E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     72.80    935.00       .27      5.00     72.80    935.00         .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2555E+02 EXCESS= .0000E+00 OUTFLOW= .2557E+02 BASIN STORAGE= .9829E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     72.05    935.00       .27      5.00     72.05    935.00         .27

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2527E+02 EXCESS= .0000E+00 OUTFLOW= .2528E+02 BASIN STORAGE= .9740E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
             RCP23  MANE         5.00     70.56    935.00       .26      5.00     70.56    935.00         .26

CONTINUITY SUMMARY (AC-FT) - INFLOW= .2469E+02 EXCESS= .0000E+00 OUTFLOW= .2471E+02 BASIN STORAGE= .9681E-02 PERCENT ERROR=   -.1

          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00
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          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00


          FOR PLAN = 1  RATIO=  .00
              RM20  MANE         5.00       .00       .00       .00      5.00       .00    935.00         .00


          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     43.27    935.00       .18      5.00     43.27    935.00         .18

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1356E+02 EXCESS= .0000E+00 OUTFLOW= .1358E+02 BASIN STORAGE= .1227E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     42.35    935.00       .17      5.00     42.35    935.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1323E+02 EXCESS= .0000E+00 OUTFLOW= .1324E+02 BASIN STORAGE= .1175E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     41.42    935.00       .17      5.00     41.42    935.00         .17

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1290E+02 EXCESS= .0000E+00 OUTFLOW= .1291E+02 BASIN STORAGE= .1270E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     40.51    940.00       .16      5.00     40.51    940.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1257E+02 EXCESS= .0000E+00 OUTFLOW= .1259E+02 BASIN STORAGE= .1228E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     40.07    940.00       .16      5.00     40.07    940.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1241E+02 EXCESS= .0000E+00 OUTFLOW= .1242E+02 BASIN STORAGE= .1217E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RCP17  MANE         5.00     39.19    940.00       .16      5.00     39.19    940.00         .16

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1209E+02 EXCESS= .0000E+00 OUTFLOW= .1210E+02 BASIN STORAGE= .1176E-01 PERCENT ERROR=   -.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.75       .75   1083.00       .04      5.00       .54   1085.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8625E-01 EXCESS= .0000E+00 OUTFLOW= .8731E-01 BASIN STORAGE= .1104E-01 PERCENT ERROR= -14.0

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.75       .72   1087.75       .04      5.00       .50   1085.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8160E-01 EXCESS= .0000E+00 OUTFLOW= .8203E-01 BASIN STORAGE= .1176E-01 PERCENT ERROR= -14.9

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.50       .64   1093.50       .04      5.00       .49   1090.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7713E-01 EXCESS= .0000E+00 OUTFLOW= .7657E-01 BASIN STORAGE= .1131E-01 PERCENT ERROR= -13.9

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.25       .62   1096.50       .03      5.00       .45   1095.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7265E-01 EXCESS= .0000E+00 OUTFLOW= .7121E-01 BASIN STORAGE= .1178E-01 PERCENT ERROR= -14.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.50       .56   1102.50       .03      5.00       .49   1100.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .7055E-01 EXCESS= .0000E+00 OUTFLOW= .6907E-01 BASIN STORAGE= .1150E-01 PERCENT ERROR= -14.2

          FOR PLAN = 1  RATIO=  .00
             RMONT  MANE         4.25       .51   1105.00       .03      5.00       .51   1105.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .6625E-01 EXCESS= .0000E+00 OUTFLOW= .6371E-01 BASIN STORAGE= .1103E-01 PERCENT ERROR= -12.8
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```
          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.75       .91   1054.50       .04      5.00       .88   1055.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1078E+00 EXCESS= .0000E+00 OUTFLOW= .1103E+00 BASIN STORAGE= .1090E-01 PERCENT ERROR= -12.4

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.75       .89   1059.25       .04      5.00       .83   1060.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .1020E+00 EXCESS= .0000E+00 OUTFLOW= .1041E+00 BASIN STORAGE= .1056E-01 PERCENT ERROR= -12.4

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.50       .73   1066.50       .04      5.00       .71   1065.00         .04

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9644E-01 EXCESS= .0000E+00 OUTFLOW= .9802E-01 BASIN STORAGE= .1124E-01 PERCENT ERROR= -13.3

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.50       .75   1071.00       .03      5.00       .71   1070.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .9092E-01 EXCESS= .0000E+00 OUTFLOW= .9198E-01 BASIN STORAGE= .1076E-01 PERCENT ERROR= -13.0

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.50       .77   1071.00       .03      5.00       .65   1070.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8821E-01 EXCESS= .0000E+00 OUTFLOW= .8920E-01 BASIN STORAGE= .1068E-01 PERCENT ERROR= -13.2

          FOR PLAN = 1  RATIO=  .00
             RMONU  MANE         4.25       .66   1075.25       .03      5.00       .63   1075.00         .03

CONTINUITY SUMMARY (AC-FT) - INFLOW= .8283E-01 EXCESS= .0000E+00 OUTFLOW= .8305E-01 BASIN STORAGE= .1119E-01 PERCENT ERROR= -13.8


*** NORMAL END OF HEC-1 ***
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1*************************************
 *                                   *
 *   L.A. DISTRICT HEC-1 PREPROCESSOR  *
 *              MARCH 1984           *
 *                                   *
 * LAST REVISED 13 JUL 1998   Ver 2.0  *
 *                                   *
 *  RUN DATE 06/28/2011  TIME 15:25:17 *
 *                                   *
 *************************************


                L          A     PPPPPP   RRRRRR   EEEEEEE   1
                L         A A    P     P  R     R  E        11
                L        A   A   P     P  R     R  E         1
                L       A     A  PPPPPP   RRRRRR   EEEEE     1
                L       AAAAAAA  P        R   R    E         1
                L       A     A  P        R    R   E         1
                LLLLLLL A     A  P        R     R  EEEEEEE  111

 ID ******************************************************

 ID WO# 7323 - RIO MESA SOLAR

 ID 24-HR, 2-YR STORM

 ID NOAA ATLAS 14- 24HR/2YR AVG PT RAINFALL DEPTH = 1.15"/1.20"

 ID EXISTING CONDITION ANALYSIS

 ID UNIT HYDROGRAPHS GENERATED FROM LAPRE-1

 ID STORM HYTEOGRAPHS GENERATED FROM LAPRE-1

 ID MODEL WITH NEW COMBINING SCHEME

 ID ******************************************************

 ID DEPTH-AREA-DURATION PERCENTS (AKA DARF) - 24 HOUR

 ID REFERENCING RCFD & WCD PLATE E-5.8

 ID

 ID  AREA RANGE       DARF

 ID   (SQ.MI.)         --

 ID

 ID   0 TO 2.5  --->  1.000

 ID 2.5 TO  10  --->  0.990

 ID  10 TO  20  --->  0.980

 ID  20 TO  30  --->  0.970

 ID  30 TO  40  --->  0.965

 ID  40 TO  50  --->  0.955

 ID

 ID******************************************************

 TIME INTERVAL IS  0 HR  5 MIN

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 KK   M27

 AREA =    .22 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .2    1.20   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    1.17     .54   41.77    .035       9      .0     .00

   WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

  UNIT HYDROGRAPH  LH=  33  PERCENT LAG=   24.00  LAG=     .35  UG VOL.=   1703.
     53.    118.    307.    329.    202.    133.     95.     74.     59.     50.
     39.     33.     28.     25.     23.     19.     17.     13.     13.      9.
      7.      7.      7.      7.      5.      4.      4.      4.      4.      4.
      4.      4.      2.

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 KK  RM27

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 KK  ONR

 AREA =    .27 SQ.MI.

  PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
     14.      .3    1.20   .0000     .00     .00     .00     .00
       LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

      XL    XLCA       S      BN     NNT    ZFAC  RATIOL
     .98     .37   68.37    .035       9      .0     .00
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  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   32.55  LAG=     .26  UG VOL.=   2090.
   102.    339.    571.    306.    176.    124.     95.     70.     56.     45.
    38.     32.     25.     21.     15.     12.     12.     11.      7.      7.
     7.      7.      7.      7.

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KK  CP25

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KK  M22

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .20   86.00    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.14  LAG=     .16  UG VOL.=    542.
    66.    222.     95.     50.     32.     21.     16.     11.      8.      5.
     5.      3.      3.      3.      2.

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KK  M21

AREA =    .17 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .84     .37  831.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  24  PERCENT LAG=   55.49  LAG=     .15  UG VOL.=   1316.
   322.    381.    146.     98.     67.     53.     41.     31.     28.     25.
    22.     19.     15.     14.     11.     11.      7.      4.      4.      4.
     4.      4.      4.      2.

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KK  M23

AREA =    .18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.00     .45  900.44    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   48.94  LAG=     .17  UG VOL.=   1393.
   269.    416.    167.    105.     77.     58.     47.     36.     29.     26.
    24.     21.     19.     17.     14.     13.     10.     10.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK  M25

AREA =    .15 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.05     .59  870.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  31  PERCENT LAG=   43.06  LAG=     .19  UG VOL.=   1161.
   178.    338.    153.     90.     67.     50.     40.     34.     27.     22.
    20.     18.     16.     15.     13.     12.     10.     10.      7.      7.
     7.      4.      3.      3.      3.      3.      3.      3.      3.      3.
     0.

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KK  CP21

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KK  M24

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION
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     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.28     .58  998.98    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  32  PERCENT LAG=   41.27  LAG=     .20  UG VOL.=   5108.
   724.   1460.    705.    396.    292.    228.    181.    147.    124.     99.
    87.     79.     74.     65.     60.     55.     47.     42.     40.     30.
    30.     30.     16.     11.     11.     11.     11.     11.     11.     11.
    11.      6.

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KK  RM24

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KK   M26

AREA =    .53 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.59     .85   72.80    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  40  PERCENT LAG=   19.98  LAG=     .42  UG VOL.=   4102.
    97.    190.    396.    792.    575.    378.    279.    201.    165.    133.
   114.     99.     80.     69.     62.     55.     47.     45.     38.     38.
    27.     26.     26.     18.     14.     14.     14.     14.     14.      8.
     8.      8.      8.      8.      8.      8.      8.      8.      8.      0.

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KK  CP22

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KK  CP23

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KK RCP23

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KK  ONQ

AREA =    .66 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.67     .93   63.88    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.49  LAG=     .45  UG VOL.=   5108.
   107.    200.    391.    833.    767.    537.    375.    264.    220.    180.
   144.    131.    112.     92.     81.     74.     63.     57.     52.     47.
    44.     40.     30.     30.     30.     19.     17.     17.     17.     17.
    17.     12.      9.      9.      9.      9.      9.      9.      9.      9.
     9.      9.      2.

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KK  CP24

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KKCPDUM1

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KK   M12

AREA =   3.98 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     4.0    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.91    2.42  301.01    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 105  PERCENT LAG=   12.49  LAG=     .67  UG VOL.=  30805.
   885.   1167.   1718.   2384.   3387.   2465.   1849.   1539.   1190.    908.
   770.    770.    653.    594.    554.    495.    481.    459.    385.    363.
   350.    325.    321.    277.    275.    262.    257.    242.    208.    208.
   196.    171.    171.    171.    156.    151.    151.    151.    141.    135.
   135.    135.    134.    118.    118.    118.    118.    118.    102.    100.
   100.    100.    100.    100.     83.     76.     76.     76.     76.     76.
    76.     76.     63.     55.     55.     55.     55.     55.     55.     55.
    55.     55.     55.     38.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.     20.     20.     20.     20.     20.     20.
    20.     20.     20.     20.      2.
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KK   ONJ

AREA =    .07 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .39     .16  418.20    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   89.63  LAG=     .09  UG VOL.=    542.
   248.    112.     54.     34.     22.     18.     14.     11.      9.      7.
     4.      3.      3.      3.      1.

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KK   M11

AREA =   1.30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.46    1.24  351.38    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  66  PERCENT LAG=   19.78  LAG=     .42  UG VOL.=  10062.
   496.    840.   1515.   1280.    855.    590.    410.    374.    310.    270.
   249.    210.    185.    171.    155.    142.    133.    120.    108.     95.
    88.     85.     78.     78.     72.     70.     70.     62.     61.     61.
    55.     52.     52.     52.     43.     39.     39.     39.     39.     33.
    29.     29.     29.     29.     29.     29.     18.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      8.

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KK   ONI

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .36     .24  507.37    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  16  PERCENT LAG=   82.16  LAG=     .10  UG VOL.=    387.
   165.     84.     39.     25.     17.     13.     11.      9.      7.      5.
     5.      2.      2.      2.      2.      1.

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KK   M10

AREA =    .38 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.51     .67   74.89    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  35  PERCENT LAG=   22.43  LAG=     .37  UG VOL.=   2941.
    82.    175.    428.    584.    380.    247.    170.    135.    106.     91.
    75.     60.     53.     45.     40.     37.     31.     30.     21.     21.
    19.     12.     12.     12.     12.     11.      7.      7.      7.      7.
     7.      7.      7.      7.      5.

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KK   ONH

AREA =    .20 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .70     .30  202.53    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  27  PERCENT LAG=   49.24  LAG=     .17  UG VOL.=   1548.
   302.    463.    185.    117.     85.     64.     52.     40.     33.     29.
    26.     23.     21.     19.     15.     14.     11.     11.      8.      4.
     4.      4.      4.      4.      4.      4.      2.

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KK   CP1
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KK   DV1

================================================================================

KK   DV2

================================================================================

KK   ONV

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .49     .25  103.16    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   53.16  LAG=     .16  UG VOL.=    929.
   112.    381.    164.     85.     54.     37.     27.     20.     14.      9.
     8.      5.      5.      5.      3.

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KK   CP2

================================================================================

KK   ONG

AREA =    .14 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .73     .28   70.34    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   40.69  LAG=     .20  UG VOL.=   1084.
    78.    322.    250.    124.     77.     56.     38.     30.     24.     20.
    14.     10.      8.      8.      5.      4.      4.      4.      4.      1.

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KK   CP3

================================================================================

KK   ONK

AREA =    .68 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.87     .93   77.12    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.36  LAG=     .45  UG VOL.=   5263.
   109.    203.    392.    844.    795.    555.    391.    274.    228.    185.
   151.    134.    116.     96.     84.     77.     64.     60.     54.     50.
    45.     43.     30.     30.     30.     22.     17.     17.     17.     17.
    17.     14.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.      5.

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KK   ONF

AREA =    .50 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.22     .46   85.02    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  28  PERCENT LAG=   28.74  LAG=     .29  UG VOL.=   3870.
   153.    427.    999.    634.    377.    254.    187.    151.    114.     93.
    77.     65.     57.     52.     35.     35.     23.     20.     20.     20.
    13.     11.     11.     11.     11.     11.     11.      2.

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KK   CP4

================================================================================

KKCPDUM2

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KK  RET1

================================================================================

KK    MX

AREA =    .01 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .14     .06 1525.43    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=   6  PERCENT LAG=  245.56  LAG=     .03  UG VOL.=     77.
    58.     11.      5.      2.      1.      0.

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KK  CP14

================================================================================

KK   ONS

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .56     .31  115.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  17  PERCENT LAG=   47.60  LAG=     .18  UG VOL.=    310.
    30.    114.     62.     31.     20.     13.     10.      8.      6.      4.
     3.      3.      2.      1.      1.      1.      1.

================================================================================

KK CP14A

================================================================================

KK  M17

AREA =    .67 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .54  494.88    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  38  PERCENT LAG=   34.76  LAG=     .24  UG VOL.=   5186.
   564.   1286.    817.    424.    314.    242.    197.    158.    135.    120.
    97.     80.     74.     69.     63.     59.     55.     49.     47.     41.
    36.     36.     30.     26.     26.     26.     16.      9.      9.      9.
     9.      9.      9.      9.      9.      9.      9.      4.

================================================================================

KK  CP15

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KK  M18

AREA =    .12 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .89     .32  152.41    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  19  PERCENT LAG=   41.55  LAG=     .20  UG VOL.=    929.
    70.    284.    213.    104.     65.     47.     33.     25.     20.     16.
    12.      8.      7.      7.      4.      4.      4.      4.      3.

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KK  M20

AREA =    .49 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .5    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.07     .48  734.10    .035       1      .0     .00

  MOUNTAIN S-GRAPH
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```
 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   44.77  LAG=     .19  UG VOL.=   3793.
   626.   1111.    487.    295.    218.    159.    130.    108.     85.     72.
    64.     59.     52.     48.     44.     35.     34.     28.     24.     24.
    17.      9.      9.      9.      9.      9.      9.      9.      9.      0.

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KK STOR1

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KK  RM20

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KK  M19

AREA =    .11 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .67     .19  140.33    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  15  PERCENT LAG=   55.55  LAG=     .15  UG VOL.=    851.
   117.    356.    143.     76.     47.     32.     24.     16.     11.      8.
     6.      5.      5.      5.      0.

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KK  CP16

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KK  CP17

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KK RCP17

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KK  ONP

AREA =   1.47 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.5    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.14    1.09   74.90    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  48  PERCENT LAG=   16.33  LAG=     .51  UG VOL.=  11378.
   206.    353.    623.   1242.   1796.   1314.    941.    716.    515.    441.
   366.    306.    269.    247.    206.    171.    157.    147.    124.    119.
   103.    103.     86.     86.     76.     58.     58.     58.     46.     33.
    33.     33.     33.     33.     33.     26.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     14.

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KK  CP18

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KKCPDUM3

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KK   ONT

AREA =    .04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .0    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .51     .16   72.94    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   58.08  LAG=     .14  UG VOL.=    310.
    48.    131.     50.     27.     16.     11.      8.      6.      3.      3.
     2.      2.      2.      1.

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KK RMONT

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KK  ONO

AREA =    .55 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    1.20   .0000     .00     .00     .00     .00
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```
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.08    1.06   79.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  47  PERCENT LAG=   16.86  LAG=     .49  UG VOL.=   4257.
    80.    141.    249.    529.    675.    480.    333.    261.    187.    161.
   135.    109.    100.     88.     74.     64.     57.     51.     48.     41.
    40.     35.     33.     32.     22.     22.     22.     19.     13.     13.
    13.     13.     13.     13.      9.      7.      7.      7.      7.      7.
     7.      7.      7.      7.      7.      7.      2.

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KK  CP20

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KKCPDUM4

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KK   ONU

AREA =    .05 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .48     .19   77.62    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  14  PERCENT LAG=   56.34  LAG=     .15  UG VOL.=    387.
    55.    163.     64.     34.     21.     14.     11.      7.      5.      4.
     3.      2.      2.      2.

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KK RMONU

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KK  ONL

AREA =    .73 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .7    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.99     .84   83.30    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  42  PERCENT LAG=   18.91  LAG=     .44  UG VOL.=   5650.
   122.    232.    464.    969.    832.    577.    407.    284.    238.    194.
   159.    145.    120.     97.     87.     78.     71.     60.     59.     50.
    50.     38.     33.     33.     28.     19.     19.     19.     19.     19.
    16.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.      3.

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KK  CP19

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KK  ONM

AREA =    .10 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .35     .25  215.67    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  12  PERCENT LAG=   69.50  LAG=     .12  UG VOL.=    774.
   197.    311.    106.     58.     35.     24.     15.      9.      7.      5.
     5.      1.

================================================================================

KK  ONN

AREA =    .08 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .1    1.20   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .52   83.15    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  29  PERCENT LAG=   27.06  LAG=     .31  UG VOL.=    619.
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```
    23.     56.    149.    107.     65.     42.     32.     24.     20.     15.
    13.     11.      9.      8.      7.      5.      5.      3.      3.      3.
     3.      2.      2.      2.      2.      2.      2.      2.      1.

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KKCPDUM5

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KK    M9

AREA =   1.80 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.8    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.17    1.95  284.58    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  90  PERCENT LAG=   14.53  LAG=     .57  UG VOL.=  13932.
   471.    647.   1072.   1587.   1483.    990.    794.    591.    438.    405.
   364.    317.    292.    256.    253.    217.    196.    184.    171.    164.
   145.    142.    135.    130.    109.    109.     97.     90.     90.     84.
    79.     79.     79.     71.     71.     71.     70.     62.     62.     62.
    62.     56.     53.     53.     53.     53.     48.     40.     40.     40.
    40.     40.     40.     36.     29.     29.     29.     29.     29.     29.
    29.     29.     29.     14.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.      5.

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KK    M8

AREA =   1.04 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.0    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.02     .81  248.59    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  56  PERCENT LAG=   23.47  LAG=     .36  UG VOL.=   8050.
   495.    950.   1474.    908.    607.    393.    341.    280.    239.    211.
   177.    161.    141.    130.    120.    102.     90.     84.     76.     74.
    69.     66.     65.     58.     58.     55.     49.     49.     48.     37.
    37.     37.     37.     29.     27.     27.     27.     27.     27.     12.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.      4.

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KK   CP5

==============================================================================

KK  RET2

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KK   CP6

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KK    M7

AREA =    .16 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .97     .43  113.71    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  23  PERCENT LAG=   34.00  LAG=     .25  UG VOL.=   1238.
    65.    232.    334.    172.    101.     71.     54.     40.     32.     26.
    22.     18.     13.     11.      7.      7.      7.      4.      4.      4.
     4.      4.      4.

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KK  ONE1

AREA =   1.61 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.6    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   3.15    1.46   52.35    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  67  PERCENT LAG=   11.78  LAG=     .71  UG VOL.=  12461.
   163.    212.    321.    507.    784.   1341.   1365.   1062.    853.    661.
```

```
   566.    433.    367.    336.    290.    258.    224.    210.    197.    174.
   159.    134.    129.    117.    115.     98.     98.     88.     82.     82.
    74.     68.     68.     68.     48.     46.     46.     46.     46.     37.
    26.     26.     26.     26.     26.     26.     26.     26.     26.     17.
    15.     15.     15.     15.     15.     15.     15.     15.     15.     15.
    15.     15.     15.     15.     15.     15.      3.
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KK  CP6A

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KK  CP6B

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KK  ONE2

AREA =   2.59 SQ.MI.

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 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.6    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.20    2.08   58.07    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  83  PERCENT LAG=    9.42  LAG=     .88  UG VOL.=  20047.
   210.    222.    343.    473.    684.    943.   1521.   1888.   1688.   1274.
  1138.    924.    755.    690.    541.    472.    449.    399.    363.    330.
   290.    272.    263.    252.    218.    210.    176.    172.    160.    151.
   151.    129.    126.    126.    111.    105.    105.    105.     90.     88.
    88.     88.     79.     59.     59.     59.     59.     59.     59.     45.
    33.     33.     33.     33.     33.     33.     33.     33.     33.     33.
    33.     27.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     15.
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KK   CP7

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KK    M6

AREA =   1.32 SQ.MI.

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 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   2.35    1.10  223.90    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH=  68  PERCENT LAG=   19.33  LAG=     .43  UG VOL.=  10217.
   488.    823.   1447.   1345.    868.    622.    421.    383.    315.    278.
   247.    221.    189.    174.    162.    141.    135.    129.    107.    103.
    88.     88.     79.     77.     76.     69.     69.     67.     61.     61.
    61.     52.     51.     51.     51.     40.     39.     39.     39.     39.
    32.     28.     28.     28.     28.     28.     28.     19.     10.     10.
    10.     10.     10.     10.     10.     10.     10.     10.     10.     10.
    10.     10.     10.     10.     10.     10.     10.      2.
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KK   M5A

AREA =    .17 SQ.MI.

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 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.24     .50   64.29    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  30  PERCENT LAG=   26.24  LAG=     .32  UG VOL.=   1316.
    46.    109.    302.    234.    144.     91.     69.     52.     44.     34.
    28.     24.     20.     18.     16.     12.     11.     10.      6.      6.
     6.      6.      4.      3.      3.      3.      3.      3.      3.      3.
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KK   M5B

AREA =    .18 SQ.MI.

```
 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .2    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .64     .26   38.95    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  20  PERCENT LAG=   39.33  LAG=     .21  UG VOL.=   1393.
    94.    388.    331.    166.    102.     73.     52.     40.     32.     26.
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    19.     16.     10.     10.      9.      5.      5.      5.      5.      5.

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KK   CP8

==============================================================================

KK    M5

AREA =    .39 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .4    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.25     .62   57.53    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.60  LAG=     .35  UG VOL.=   3019.
    91.    201.    517.    588.    366.    241.    170.    133.    105.     90.
    71.     60.     51.     45.     40.     34.     33.     23.     22.     20.
    13.     13.     13.     13.     10.      7.      7.      7.      7.      7.
     7.      7.      7.      0.

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KK   CP9

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KK   ONB

AREA =   2.83 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.8    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.50    2.15   45.11    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  91  PERCENT LAG=    8.64  LAG=     .96  UG VOL.=  21904.
   210.    210.    333.    427.    588.    757.   1192.   1778.   1892.   1573.
  1261.   1129.    940.    757.    720.    577.    487.    473.    424.    383.
   353.    319.    291.    271.    264.    252.    227.    210.    191.    172.
   172.    152.    151.    150.    126.    126.    126.    114.    105.    105.
   105.     98.     88.     88.     88.     88.     75.     59.     59.     59.
    59.     59.     59.     58.     33.     33.     33.     33.     33.     33.
    33.     33.     33.     33.     33.     33.     33.     21.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
    19.     19.     19.     19.     19.     19.     19.     19.     19.     19.
     6.

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KK  CP10

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KK   OND

AREA =   1.34 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     1.3    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.75    1.04   68.49    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  45  PERCENT LAG=   17.64  LAG=     .47  UG VOL.=  10372.
   203.    374.    664.   1513.   1615.   1119.    796.    590.    449.    378.
   309.    267.    242.    201.    166.    150.    137.    122.    108.    102.
    91.     85.     79.     57.     57.     57.     43.     32.     32.     32.
    32.     32.     30.     18.     18.     18.     18.     18.     18.     18.
    18.     18.     18.     18.      4.

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KK   ONC

AREA =    .30 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .3    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
    .80     .21   32.43    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  21  PERCENT LAG=   37.84  LAG=     .22  UG VOL.=   2322.
   146.    590.    579.    284.    178.    125.     89.     68.     54.     45.
    36.     27.     19.     15.     15.     11.      9.      9.      9.      9.
     5.

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KK   CPA

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KK    M4

AREA =   2.71 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     2.7    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   4.74    2.49  165.93    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 127  PERCENT LAG=   10.26  LAG=     .81  UG VOL.=  20975.
   485.    599.    779.   1076.   1524.   1904.   1434.   1118.    922.    825.
   649.    517.    430.    430.    410.    356.    331.    311.    289.    269.
   269.    250.    215.    207.    196.    191.    179.    179.    156.    154.
   152.    143.    143.    136.    116.    116.    116.    103.     96.     96.
    96.     93.     84.     84.     84.     84.     82.     75.     75.     75.
    75.     75.     69.     66.     66.     66.     66.     66.     62.     56.
    56.     56.     56.     56.     56.     56.     44.     43.     43.     43.
    43.     43.     43.     43.     43.     42.     31.     31.     31.     31.
    31.     31.     31.     31.     31.     31.     31.     31.     31.     21.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.     11.     11.     11.     11.
    11.     11.     11.     11.     11.     11.      9.

================================================================================

KK    M3

AREA =    .57 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .6    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.94     .97   77.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  44  PERCENT LAG=   17.84  LAG=     .47  UG VOL.=   4412.
    87.    163.    295.    663.    681.    473.    337.    244.    191.    159.
   130.    113.    101.     84.     72.     63.     57.     52.     45.     44.
    37.     37.     31.     25.     25.     25.     15.     14.     14.     14.
    14.     14.     11.      8.      8.      8.      8.      8.      8.      8.
     8.      8.      8.      6.

================================================================================

KK  CP11

================================================================================

KK CP12A

================================================================================

KK   M13

AREA =   7.18 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.     7.2    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   6.22    3.99  171.11    .035       1      .0     .00

  MOUNTAIN S-GRAPH

 UNIT HYDROGRAPH  LH= 168  PERCENT LAG=    7.78  LAG=    1.07  UG VOL.=  55573.
   961.   1062.   1374.   1636.   2161.   2686.   3252.   3993.   2882.   2439.
  2130.   1729.   1688.   1364.   1162.    985.    864.    864.    864.    780.
   718.    665.    647.    617.    573.    540.    540.    540.    491.    432.
   432.    397.    393.    391.    360.    360.    360.    310.    309.    309.
   301.    288.    288.    288.    260.    234.    234.    234.    234.    202.
   192.    192.    192.    192.    192.    170.    170.    170.    170.    170.
   170.    162.    152.    152.    152.    152.    152.    152.    150.    133.
   133.    133.    133.    133.    133.    133.    133.    118.    112.    112.
   112.    112.    112.    112.    112.    112.    112.     90.     86.     86.
    86.     86.     86.     86.     86.     86.     86.     86.     86.     86.
    66.     62.     62.     62.     62.     62.     62.     62.     62.     62.
    62.     62.     62.     62.     62.     62.     62.     62.     24.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.     23.     23.     23.
    23.     23.     23.     23.     23.     23.     23.      3.
    WARNING!!!!! THE UNIT HYDROGRAPH COMPUTED BY    LAPRE1 IS GREATER THAN 150
ORDINATES.
     ONLY THE FIRST 150 ORDINATES WILL BE USED ON    THE UI CARDS OF THE SUBSEQ
UENT HEC-1 RUN.

================================================================================

KK   DV3

================================================================================
```

```
KK    M1

AREA =    .76 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .8    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.52     .50   53.82    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  34  PERCENT LAG=   23.48  LAG=     .35  UG VOL.=   5882.
   176.    388.    992.   1147.    718.    474.    332.    260.    205.    176.
   139.    117.    101.     88.     77.     68.     64.     46.     43.     40.
    24.     24.     24.     24.     21.     14.     14.     14.     14.     14.
    14.     14.     14.      3.

================================================================================

KK  CP12

================================================================================

KK CP12B

================================================================================

KK   ONA

AREA =    .87 SQ.MI.

 PRECIP   DRAIN   TRAIN     RAF      CN       A       B       C
    14.      .9    1.15   .0000     .00     .00     .00     .00
      LOS ANGELES GENERAL STORM FEBURARY 16,1980          - 24HR DURATION

     XL    XLCA       S      BN     NNT    ZFAC  RATIOL
   1.77     .83   53.25    .035       9      .0     .00

  WHITEWATER RIVER (AVERAGE OF 9 S-GRAPHS)

 UNIT HYDROGRAPH  LH=  43  PERCENT LAG=   18.24  LAG=     .46  UG VOL.=   6734.
   138.    258.    490.   1065.   1022.    713.    505.    354.    292.    238.
   195.    172.    150.    124.    108.     98.     83.     78.     68.     65.
    57.     57.     39.     38.     38.     31.     22.     22.     22.     22.
    22.     20.     12.     12.     12.     12.     12.     12.     12.     12.
    12.     12.      9.

================================================================================

KK  CP13
```

# APPENDIX B:

## Rainfall Information / References

# APPENDIX B:

## i. Rainfall Depths Summary Sheet

# RAINFALL SUMMARY SHEET

**PROJECT: RIO MESA SOLAR**
**CALCULATED BY: RV**

| | 24-Hour Storm | | | | |
|---|---|---|---|---|---|
| BASIN LABEL | 100YR Rainfall Depth (in.) | 25YR Rainfall Depth (in.) | 10YR Rainfall Depth (in.) | 5YR Rainfall Depth (in.) | 2YR Rainfall Depth (in.) |
| M1 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M2 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M3 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M4 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M5 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M5A | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M5B | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M6 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M7 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M8 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M9 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M10 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M11 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M12 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| M13 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| MX | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M17 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M18 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M19 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M20 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M21 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M22 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M23 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M24 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M25 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M26 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| M27 | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| | | | | | |
| ONA | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONB | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONC | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| OND | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONE1 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONE2 | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONF | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONG | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONH | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONI | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONJ | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONK | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONL | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONM | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONN | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONO | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONP | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONQ | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONR | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONS | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONT | 3.87 | 2.82 | 2.19 | 1.73 | 1.20 |
| ONU | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |
| ONV | 3.59 | 2.63 | 2.06 | 1.66 | 1.15 |



BSE Document Control Number: 7323HYD101

# APPENDIX B:

## ii. Point Precipitation Frequency Estimate Tabulation Sheet

# POINT PRECIPITATION FREQUENCY ESTIMATES FROM NOAA ATLAS 14

**California 33.436475 N 114.841444 W 508 feet**

from "Precipitation-Frequency Atlas of the United States" NOAA Atlas 14, Volume 1, Version 4
G.M. Bonnin, D. Martin, B. Lin, T. Parzybok, M.Yekta, and D. Riley
NOAA, National Weather Service, Silver Spring, Maryland, 2006

Extracted: Fri Aug 20 2010

For original RMS parcel & watershed

Confidence Limits | Seasonality | Related Info | GIS data | Maps | Docs | Return to State Map

## Precipitation Frequency Estimates (inches)

| ARI* (years) | 5 min | 10 min | 15 min | 30 min | 60 min | 120 min | 3 hr | 6 hr | 12 hr | 24 hr | 48 hr | 4 day | 7 day | 10 day | 20 day | 30 day | 45 day | 60 day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.10 | 0.15 | 0.18 | 0.25 | 0.31 | 0.38 | 0.43 | 0.55 | 0.66 | 0.86 | 0.89 | 0.97 | 1.04 | 1.08 | 1.22 | 1.35 | 1.49 | 1.62 |
| 2 | 0.14 | 0.21 | 0.26 | 0.35 | 0.43 | 0.53 | 0.61 | 0.75 | 0.91 | 1.15 | 1.19 | 1.29 | 1.38 | 1.44 | 1.63 | 1.82 | 2.02 | 2.20 |
| 5 | 0.22 | 0.34 | 0.42 | 0.57 | 0.70 | 0.87 | 0.97 | 1.17 | 1.41 | 1.66 | 1.69 | 1.84 | 1.96 | 2.06 | 2.33 | 2.60 | 2.90 | 3.17 |
| 10 | 0.30 | 0.45 | 0.56 | 0.76 | 0.94 | 1.16 | 1.28 | 1.52 | 1.80 | 2.06 | 2.09 | 2.26 | 2.40 | 2.53 | 2.87 | 3.17 | 3.55 | 3.88 |
| 25 | 0.42 | 0.64 | 0.79 | 1.07 | 1.32 | 1.61 | 1.75 | 2.02 | 2.35 | 2.63 | 2.64 | 2.85 | 3.00 | 3.20 | 3.60 | 3.94 | 4.42 | 4.82 |
| 50 | 0.53 | 0.81 | 1.00 | 1.35 | 1.67 | 2.02 | 2.16 | 2.45 | 2.82 | 3.09 | 3.09 | 3.33 | 3.48 | 3.73 | 4.18 | 4.53 | 5.08 | 5.54 |
| 100 | 0.66 | 1.01 | 1.25 | 1.68 | 2.08 | 2.49 | 2.64 | 2.93 | 3.33 | 3.59 | 3.62 | 3.84 | 3.99 | 4.29 | 4.78 | 5.14 | 5.77 | 6.29 |
| 200 | 0.82 | 1.24 | 1.54 | 2.08 | 2.57 | 3.04 | 3.19 | 3.46 | 3.88 | 4.12 | 4.16 | 4.38 | 4.53 | 4.88 | 5.41 | 5.77 | 6.46 | 7.04 |
| 500 | 1.07 | 1.63 | 2.02 | 2.71 | 3.36 | 3.91 | 4.08 | 4.33 | 4.72 | 4.89 | 4.94 | 5.14 | 5.29 | 5.72 | 6.28 | 6.64 | 7.40 | 8.06 |
| 1000 | 1.30 | 1.98 | 2.46 | 3.31 | 4.09 | 4.71 | 4.88 | 5.13 | 5.53 | 5.58 | 5.64 | 5.76 | 5.91 | 6.40 | 6.97 | 7.33 | 8.13 | 8.85 |

* These precipitation frequency estimates are based on a partial duration series. **ARI** is the Average Recurrence Interval.
Please refer to NOAA Atlas 14 Document for more information. NOTE: Formatting forces estimates near zero to appear as zero.

## * Upper bound of the 90% confidence interval Precipitation Frequency Estimates (inches)

| ARI** (years) | 5 min | 10 min | 15 min | 30 min | 60 min | 120 min | 3 hr | 6 hr | 12 hr | 24 hr | 48 hr | 4 day | 7 day | 10 day | 20 day | 30 day | 45 day | 60 day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.12 | 0.18 | 0.22 | 0.30 | 0.37 | 0.47 | 0.53 | 0.65 | 0.78 | 0.99 | 1.02 | 1.12 | 1.19 | 1.24 | 1.40 | 1.55 | 1.71 | 1.86 |
| 2 | 0.17 | 0.26 | 0.32 | 0.43 | 0.53 | 0.66 | 0.74 | 0.90 | 1.08 | 1.33 | 1.36 | 1.49 | 1.58 | 1.66 | 1.87 | 2.07 | 2.30 | 2.51 |
| 5 | 0.28 | 0.43 | 0.53 | 0.71 | 0.88 | 1.07 | 1.18 | 1.39 | 1.65 | 1.91 | 1.94 | 2.11 | 2.24 | 2.37 | 2.67 | 2.96 | 3.32 | 3.62 |
| 10 | 0.38 | 0.57 | 0.71 | 0.96 | 1.19 | 1.42 | 1.54 | 1.80 | 2.10 | 2.36 | 2.39 | 2.59 | 2.74 | 2.92 | 3.29 | 3.61 | 4.06 | 4.43 |
| 25 | 0.54 | 0.81 | 1.01 | 1.36 | 1.68 | 1.97 | 2.09 | 2.39 | 2.75 | 3.01 | 3.04 | 3.27 | 3.44 | 3.68 | 4.14 | 4.49 | 5.06 | 5.52 |
| 50 | 0.68 | 1.03 | 1.28 | 1.72 | 2.13 | 2.47 | 2.59 | 2.92 | 3.31 | 3.55 | 3.57 | 3.83 | 4.01 | 4.30 | 4.81 | 5.18 | 5.84 | 6.37 |
| 100 | 0.85 | 1.29 | 1.60 | 2.15 | 2.67 | 3.06 | 3.17 | 3.50 | 3.92 | 4.12 | 4.15 | 4.43 | 4.61 | 4.97 | 5.53 | 5.91 | 6.66 | 7.25 |
| 200 | 1.06 | 1.61 | 1.99 | 2.68 | 3.32 | 3.75 | 3.85 | 4.16 | 4.61 | 4.76 | 4.77 | 5.09 | 5.26 | 5.69 | 6.29 | 6.67 | 7.49 | 8.16 |
| 500 | 1.39 | 2.12 | 2.63 | 3.54 | 4.38 | 4.87 | 4.97 | 5.26 | 5.67 | 5.68 | 5.69 | 6.04 | 6.20 | 6.73 | 7.39 | 7.74 | 8.66 | 9.40 |
| 1000 | 1.71 | 2.61 | 3.23 | 4.35 | 5.38 | 5.92 | 6.03 | 6.31 | 6.69 | 6.76 | 6.83 | 6.83 | 7.00 | 7.58 | 8.28 | 8.62 | 9.58 | 10.39 |

* The **upper** bound of the confidence interval at 90% confidence level is the value which 5% of the simulated quantile values for a given frequency are **greater** than.
** These precipitation frequency estimates are based on a partial duration series. **ARI** is the Average Recurrence Interval.

Please refer to NOAA Atlas 14 Document for more information. NOTE: Formatting prevents estimates near zero to appear as zero.

## * Lower bound of the 90% confidence interval Precipitation Frequency Estimates (inches)

| ARI** (years) | 5 min | 10 min | 15 min | 30 min | 60 min | 120 min | 3 hr | 6 hr | 12 hr | 24 hr | 48 hr | 4 day | 7 day | 10 day | 20 day | 30 day | 45 day | 60 day |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 0.08 | 0.12 | 0.15 | 0.20 | 0.25 | 0.31 | 0.36 | 0.46 | 0.56 | 0.75 | 0.78 | 0.84 | 0.90 | 0.94 | 1.05 | 1.18 | 1.30 | 1.41 |
| 2 | 0.11 | 0.17 | 0.21 | 0.28 | 0.35 | 0.44 | 0.51 | 0.64 | 0.78 | 1.00 | 1.03 | 1.12 | 1.21 | 1.25 | 1.42 | 1.58 | 1.75 | 1.91 |
| 5 | 0.19 | 0.28 | 0.35 | 0.47 | 0.59 | 0.71 | 0.81 | 0.99 | 1.20 | 1.44 | 1.47 | 1.59 | 1.70 | 1.78 | 2.02 | 2.25 | 2.51 | 2.74 |
| 10 | 0.25 | 0.38 | 0.47 | 0.63 | 0.79 | 0.94 | 1.05 | 1.27 | 1.52 | 1.78 | 1.80 | 1.95 | 2.07 | 2.18 | 2.47 | 2.74 | 3.06 | 3.34 |
| 25 | 0.35 | 0.53 | 0.65 | 0.88 | 1.09 | 1.27 | 1.41 | 1.67 | 1.97 | 2.26 | 2.27 | 2.45 | 2.58 | 2.73 | 3.08 | 3.39 | 3.79 | 4.14 |

NOAA Atlas 14, Volume 6, Version 2
Location name: THOUSAND PALMS, California, US*
Coordinates: 33.5035, -114.7695
Elevation: 375ft*
* source: Google Maps

## POINT PRECIPITATION FREQUENCY ESTIMATES

Sanja Perica, Sarah Dietz, Sarah Heim, Lillian Hiner, Kazungu Maitaria, Deborah Martin, Sandra Pavlovic, Ishani Roy, Carl Trypaluk, Dale Unruh, Fenglin Yan, Michael Yekta, Tan Zhao, Geoffrey Bonnin, Daniel Brewer, Li-Chuan Chen, Tye Parzybok, John Yarchoan

NOAA, National Weather Service, Silver Spring, Maryland

PF_tabular | PF_graphical | Maps_&_aerials

For original BLM augmentation parcel & watershed

## PF tabular

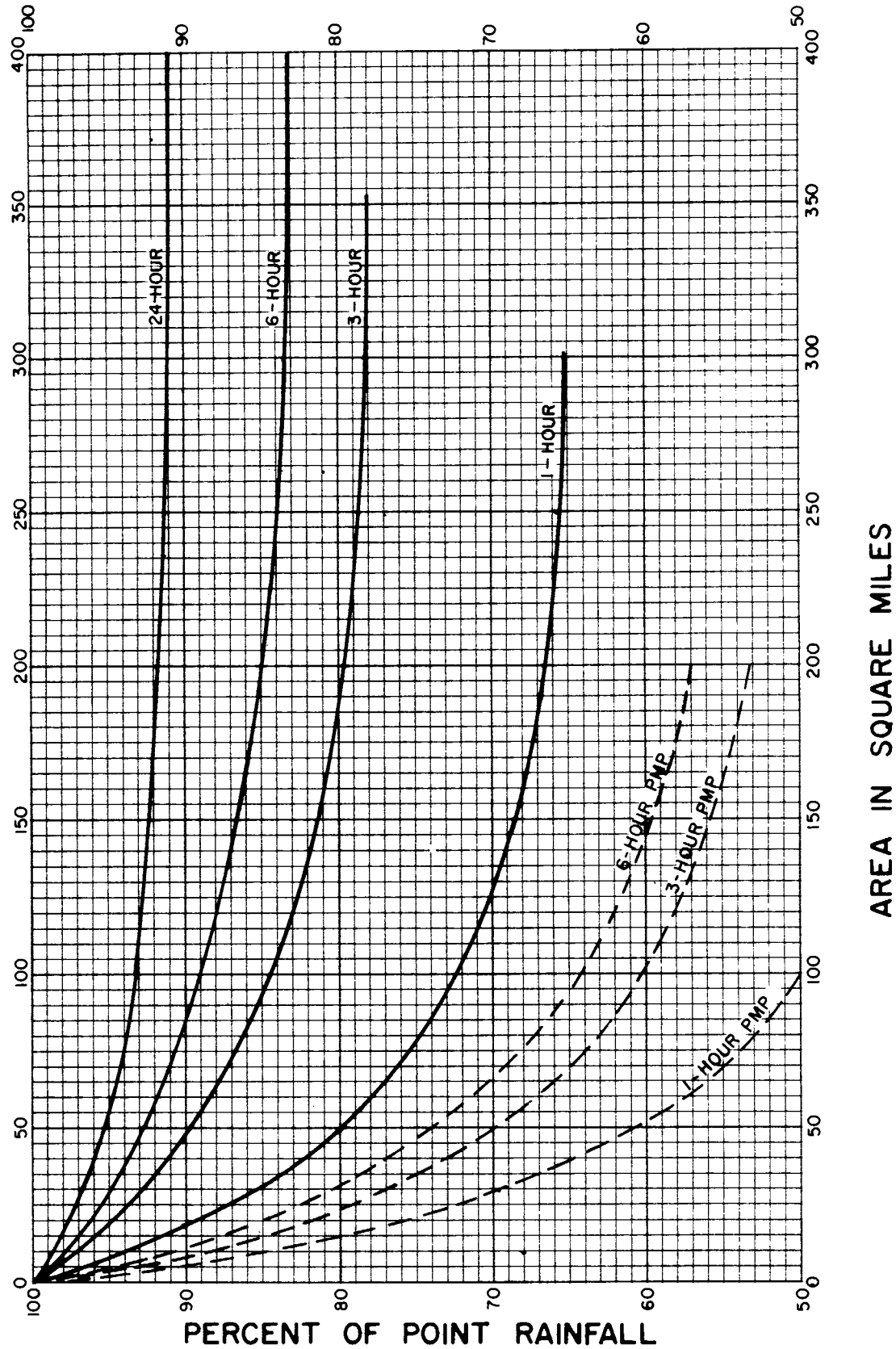
PDS-based point precipitation frequency estimates with 90% confidence intervals (in inches)[1]

| Duration | Average recurrence interval(years) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1 | 2 | 5 | 10 | 25 | 50 | 100 | 200 | 500 | 1000 |
| 5-min | 0.088 (0.074 0.106) | 0.144 (0.121 0.173) | 0.216 (0.180 0.261) | 0.274 (0.227 0.334) | 0.352 (0.282 0.445) | 0.413 (0.323 0.532) | 0.474 (0.362 0.627) | 0.537 (0.398 0.731) | 0.623 (0.443 0.886) | 0.691 (0.474 1.02) |
| 10-min | 0.126 (0.106 0.152) | 0.206 (0.173 0.249) | 0.310 (0.259 0.374) | 0.393 (0.325 0.479) | 0.505 (0.404 0.638) | 0.591 (0.463 0.763) | 0.679 (0.518 0.898) | 0.769 (0.571 1.05) | 0.893 (0.635 1.27) | 0.991 (0.679 1.46) |
| 15-min | 0.153 (0.128 0.184) | 0.249 (0.209 0.301) | 0.374 (0.313 0.453) | 0.475 (0.394 0.579) | 0.611 (0.489 0.771) | 0.715 (0.560 0.922) | 0.821 (0.627 1.09) | 0.930 (0.690 1.27) | 1.08 (0.767 1.54) | 1.20 (0.822 1.77) |
| 30-min | 0.212 (0.177 0.255) | 0.345 (0.289 0.416) | 0.518 (0.433 0.627) | 0.658 (0.545 0.802) | 0.846 (0.677 1.07) | 0.990 (0.775 1.28) | 1.14 (0.868 1.50) | 1.29 (0.955 1.75) | 1.50 (1.06 2.13) | 1.66 (1.14 2.45) |
| 60-min | 0.293 (0.246 0.353) | 0.478 (0.401 0.576) | 0.717 (0.599 0.867) | 0.910 (0.754 1.11) | 1.17 (0.937 1.48) | 1.37 (1.07 1.77) | 1.57 (1.20 2.08) | 1.78 (1.32 2.43) | 2.07 (1.47 2.94) | 2.30 (1.58 3.38) |
| 2-hr | 0.405 (0.340 0.488) | 0.627 (0.525 0.756) | 0.915 (0.764 1.11) | 1.15 (0.951 1.40) | 1.46 (1.17 1.85) | 1.71 (1.34 2.20) | 1.95 (1.49 2.58) | 2.21 (1.64 3.01) | 2.56 (1.82 3.64) | 2.83 (1.94 4.17) |
| 3-hr | 0.468 (0.392 0.563) | 0.709 (0.594 0.855) | 1.02 (0.855 1.24) | 1.28 (1.06 1.56) | 1.63 (1.30 2.05) | 1.89 (1.48 2.44) | 2.17 (1.65 2.87) | 2.45 (1.82 3.33) | 2.84 (2.01 4.03) | 3.14 (2.15 4.63) |
| 6-hr | 0.564 (0.473 0.679) | 0.838 (0.702 1.01) | 1.20 (1.00 1.45) | 1.50 (1.24 1.82) | 1.90 (1.52 2.40) | 2.21 (1.73 2.86) | 2.54 (1.94 3.36) | 2.87 (2.13 3.91) | 3.34 (2.37 4.74) | 3.70 (2.54 5.45) |
| 12-hr | 0.641 (0.538 0.772) | 0.951 (0.797 1.15) | 1.37 (1.14 1.65) | 1.71 (1.42 2.09) | 2.19 (1.75 2.77) | 2.57 (2.01 3.31) | 2.96 (2.26 3.92) | 3.38 (2.50 4.60) | 3.96 (2.81 5.62) | 4.42 (3.03 6.51) |
| 24-hr | 0.804 (0.710 0.929) | 1.20 (1.06 1.39) | 1.73 (1.53 2.01) | 2.19 (1.91 2.55) | 2.82 (2.39 3.40) | 3.33 (2.77 4.09) | 3.87 (3.15 4.85) | 4.44 (3.53 5.71) | 5.25 (4.02 7.01) | 5.91 (4.38 8.14) |
| 2-day | 0.893 (0.789 1.03) | 1.33 (1.17 1.54) | 1.93 (1.70 2.24) | 2.44 (2.13 2.85) | 3.16 (2.68 3.81) | 3.74 (3.12 4.59) | 4.36 (3.55 5.46) | 5.02 (3.98 6.45) | 5.95 (4.55 7.95) | 6.71 (4.97 9.25) |
| 3-day | 0.938 (0.828 1.08) | 1.40 (1.24 1.62) | 2.03 (1.79 2.36) | 2.57 (2.24 3.00) | 3.33 (2.83 4.01) | 3.95 (3.28 4.84) | 4.60 (3.74 5.76) | 5.29 (4.20 6.81) | 6.28 (4.80 8.39) | 7.09 (5.25 9.76) |
| 4-day | 0.993 (0.877 1.15) | 1.49 (1.31 1.72) | 2.16 (1.90 2.50) | 2.72 (2.38 3.18) | 3.53 (2.99 4.25) | 4.18 (3.48 5.13) | 4.87 (3.96 6.10) | 5.60 (4.44 7.20) | 6.64 (5.07 8.86) | 7.48 (5.54 10.3) |
| 7-day | 1.03 (0.913 1.20) | 1.55 (1.37 1.80) | 2.25 (1.98 2.62) | 2.84 (2.48 3.32) | 3.67 (3.12 4.42) | 4.34 (3.61 5.32) | 5.03 (4.10 6.31) | 5.77 (4.58 7.42) | 6.81 (5.21 9.09) | 7.65 (5.67 10.5) |
| 10-day | 1.07 (0.945 1.24) | 1.61 (1.42 1.86) | 2.32 (2.05 2.70) | 2.93 (2.56 3.42) | 3.77 (3.20 4.54) | 4.44 (3.70 5.45) | 5.15 (4.19 6.45) | 5.89 (4.68 7.58) | 6.94 (5.31 9.27) | 7.79 (5.77 10.7) |
| 20-day | 1.18 (1.05 1.37) | 1.75 (1.54 2.02) | 2.50 (2.20 2.90) | 3.14 (2.74 3.67) | 4.03 (3.41 4.85) | 4.73 (3.94 5.81) | 5.47 (4.46 6.86) | 6.26 (4.97 8.05) | 7.37 (5.63 9.84) | 8.27 (6.13 11.4) |
| 30-day | 1.29 (1.14 1.49) | 1.88 (1.66 2.17) | 2.67 (2.35 3.10) | 3.34 (2.92 3.91) | 4.28 (3.63 5.15) | 5.03 (4.18 6.17) | 5.82 (4.73 7.29) | 6.66 (5.28 8.56) | 7.84 (6.00 10.5) | 8.81 (6.53 12.1) |
| 45-day | 1.44 (1.27 1.66) | 2.07 (1.82 2.39) | 2.92 (2.57 3.39) | 3.64 (3.18 4.25) | 4.66 (3.95 5.60) | 5.47 (4.55 6.71) | 6.33 (5.16 7.94) | 7.26 (5.76 9.33) | 8.58 (6.56 11.5) | 9.66 (7.16 13.3) |
| 60-day | 1.59 (1.40 1.83) | 2.25 (1.99 2.60) | 3.16 (2.78 3.66) | 3.92 (3.43 4.58) | 5.02 (4.25 6.04) | 5.90 (4.90 7.23) | 6.83 (5.56 8.56) | 7.85 (6.23 10.1) | 9.31 (7.11 12.4) | 10.5 (7.79 14.5) |

[1] Precipitation frequency (PF) estimates in this table are based on frequency analysis of partial duration series (PDS).

# APPENDIX B:

## iii. Referenced Depth-Area-Duration Curves (DARF) from Riverside County Hydrology Manual




Reference: Bibliography items No. 27 & 29.

**RCFC & WCD**

HYDROLOGY MANUAL

DEPTH-AREA-DURATION RELATIONSHIPS

PLATE E-5.8

BSE Document Control Number: 7323HYD101

# APPENDIX C:

## Curve Number Calculations / References

# APPENDIX C:

## i. Curve Number Calculations for Soils

## SOIL COMPOSITE CURVE NUMBER (CN) CALCULATIONS

**PROJECT: RIO MESA SOLAR**
**CALCULATED BY: RV**

| Soil # s1041 Rositas-Orita-Carrizo-Aco | | | | | | |
|---|---|---|---|---|---|---|
| | | | **AMC II** | **AMC II** | | |
| Soil | Percent | Hydrologic Group | Barren[1] | Desert Shrub[2] | | |
| Carrizo | 18% | A | 78 | 63 | | |
| Aco | 28% | B | 86 | 77 | | |
| Orita | 15% | B | 86 | 77 | | |
| Badland | 7% | D | 93 | 88 | | |
| Rositas | 19% | A | 78 | 63 | | |
| Carsitas | 6% | A | 78 | 63 | | |
| Chuckwalla | 6% | B | 86 | 77 | | |
| Rock Outcrop | 1% | D | 93 | 88 | | |
| **Total** | **100%** | | **83.1** | **71.9** | | |

| Soil # s1126 Tecopa-Rock Outcrop-Lithic Torriorthents | | | | | | |
|---|---|---|---|---|---|---|
| | | | **AMC II** | **AMC II** | | |
| Soil | Percent | Hydrologic Group | Barren[1] | Desert Shrub[2] | | |
| Rock Outcrop | 55% | D | 93 | 88 | | |
| Tecopa | 13% | D | 93 | 88 | | |
| Lithic Torriorthents | 12% | D | 93 | 88 | | |
| Calvista | 5% | D | 93 | 88 | | |
| Rubble land | 3% | A | 78 | 63 | | |
| Sparkhule | 3% | D | 93 | 88 | | |
| Trigger | 3% | D | 93 | 88 | | |
| Arizo | 1% | A | 78 | 63 | | |
| Bitter | 1% | B | 86 | 77 | | |
| Cajon | 1% | A | 78 | 63 | | |
| St. Thomas | 1% | D | 93 | 88 | | |
| Upspring | 1% | D | 93 | 88 | | |
| Virgin Peak | 1% | D | 93 | 88 | | |
| **Total** | **100%** | | **92.2** | **86.6** | | |

| Soil # s1127 Upspring-Sparkhule-Rock Outcrop | | | | | | |
|---|---|---|---|---|---|---|
| | | | **AMC II** | **AMC II** | | |
| Soil | Percent | Hydrologic Group | Barren[1] | Desert Shrub[2] | | |
| Rock Outcrop | 51% | D | 93 | 88 | | |
| Shorim | 8% | C | 91 | 85 | | |
| Upspring | 15% | D | 93 | 88 | | |
| Sparkhule | 10% | D | 93 | 88 | | |
| Arizo | 3% | A | 78 | 63 | | |
| Cajon | 3% | A | 78 | 63 | | |
| Calvista | 2% | D | 93 | 88 | | |
| Lavic | 2% | B | 86 | 77 | | |
| Tecopa | 2% | D | 93 | 88 | | |
| Trigger | 2% | D | 93 | 88 | | |
| Bitter | 1% | B | 86 | 77 | | |
| Nebona | 1% | D | 93 | 88 | | |
| **Total** | **100%** | | **91.7** | **85.9** | | |


BSE Document Control Number: 7323HYD101

| Soil # s1129 Rositas-Beeline-Badland | | | | | | |
|---|---|---|---|---|---|---|
| | | | AMC II | AMC II | | |
| Soil | Percent | Hydrologic Group | Barren[1] | Desert Shrub[2] | | |
| Badland | 32% | D | 93 | 88 | | |
| Beeline | 14% | D | 93 | 88 | | |
| Aco | 5% | B | 86 | 77 | | |
| Carrizo | 5% | A | 78 | 63 | | |
| Gilman | 5% | B | 86 | 77 | | |
| Rositas | 15% | A | 78 | 63 | | |
| Carsitas variant | 8% | D | 93 | 88 | | |
| Gunsight | 7% | B | 86 | 77 | | |
| Chuckwalla | 5% | B | 86 | 77 | | |
| Denure | 2% | B | 86 | 77 | | |
| Glenbar | 1% | B | 86 | 77 | | |
| Lagunita | 1% | A | 78 | 63 | | |
| **Total** | **100%** | | **88.1** | **80.0** | | |

| Soil # s1140 Rillito-Gunsight | | | | | | |
|---|---|---|---|---|---|---|
| | | | AMC II | AMC II | | |
| Soil | Percent | Hydrologic Group | Barren[1] | Desert Shrub[2] | | |
| Gunsight | 27% | B | 86 | 77 | | |
| Rillito | 19% | B | 86 | 77 | | |
| Chuckwalla | 8% | B | 86 | 77 | | |
| Carrizo | 6% | A | 78 | 63 | | |
| Beeline | 5% | D | 93 | 88 | | |
| Cipriano | 5% | D | 93 | 88 | | |
| Denure | 5% | B | 86 | 77 | | |
| Gilman | 5% | B | 86 | 77 | | |
| Mohall | 5% | B | 86 | 77 | | |
| Momoli | 5% | B | 86 | 77 | | |
| Pinamt | 5% | B | 86 | 77 | | |
| Tremant | 5% | B | 86 | 77 | | |
| **Total** | **100%** | | **86.2** | **77.3** | | |

Notes:

1. Barren (rockland, eroded, and graded land); natural cover. Referenced from RCFC & WCD Plate E-6.1
2. Desert Shrub (major plants include saltbrush, greasewood, creosotebsuh, blackbrush, etc.); Semiarid rangelands in poor hydrologic condition. Referenced from USDA TR-55 Table 2-2d



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# APPENDIX C:

## ii. Composite Curve Number Calculations

## For basins

| BASIN COMPOSITE CURVE NUMBER (CN) CALCULATIONS | | | | | | | | Land Cover Breakdown | | BASIN |
|---|---|---|---|---|---|---|---|---|---|---|
| Basin Label | Condition | s1041 % Composition | s1126 % Composition | s1127 % Composition | s1129 % Composition | s1140 % Composition | Total Soil % | Barren | Desert Shrub | COMPOSITE CN |
| M1 | Existing | | | | | 100% | 100% | 0% | 100% | 77.3 |
| M2 | Existing | | 8% | 25% | 4% | 63% | 100% | 75% | 25% | 86.2 |
| M3 | Existing | | | | | 100% | 100% | 20% | 80% | 79.1 |
| M4 | Existing | 1% | 13% | | | 86% | 100% | 80% | 20% | 85.3 |
| M5 | Existing | 50% | | | | 50% | 100% | 0% | 100% | 74.6 |
| M5A | Existing | | | | | 100% | 100% | 100% | 0% | 86.2 |
| M5B | Existing | | | | | 100% | 100% | 100% | 0% | 86.2 |
| M6 | Existing | | 32% | | | 68% | 100% | 45% | 55% | 83.8 |
| M7 | Existing | | | | | 100% | 100% | 0% | 100% | 77.3 |
| M8 | Existing | | 30% | | | 70% | 100% | 70% | 30% | 85.6 |
| M9 | Existing | | 44% | | | 56% | 100% | 65% | 35% | 86.2 |
| M10 | Existing | | | | | 100% | 100% | 20% | 80% | 79.1 |
| M11 | Existing | | 13% | | | 87% | 100% | 45% | 55% | 82.3 |
| M12 | Existing | | 51% | | | 49% | 100% | 70% | 30% | 87.1 |
| M13 | Existing | | | 60% | 30% | 10% | 100% | 75% | 25% | 88.4 |
| MX | Existing | 1% | 90% | | | 9% | 100% | 100% | 0% | 91.6 |
| M17 | Existing | 35% | 65% | | | | 100% | 40% | 60% | 84.5 |
| M18 | Existing | 100% | | | | | 100% | 100% | 0% | 83.1 |
| M19 | Existing | 100% | | | | | 100% | 100% | 0% | 83.1 |
| M20 | Existing | 20% | 80% | | | | 100% | 100% | 0% | 90.4 |
| M21 | Existing | 84% | 16% | | | | 100% | 80% | 20% | 82.5 |
| M22 | Existing | 100% | | | | | 100% | 70% | 30% | 79.7 |
| M23 | Existing | 52% | 33% | | | 15% | 100% | 50% | 50% | 82.1 |
| M24 | Existing | | 90% | | | 10% | 100% | 95% | 5% | 91.3 |
| M25 | Existing | 20% | 33% | | | 47% | 100% | 74% | 26% | 85.4 |
| M26 | Existing | 75% | | | | 25% | 100% | 25% | 75% | 75.9 |
| M27 | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| | | | | | | | | | | |
| ONA | Existing | 21% | | | | 79% | 100% | 0% | 100% | 76.1 |
| ONB | Existing | 79% | | | | 21% | 100% | 4% | 96% | 73.4 |
| ONC | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| OND | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONE1 | Existing | 66% | | | | 34% | 100% | 0% | 100% | 73.7 |
| ONE2 | Existing | 77% | | | | 23% | 100% | 13% | 87% | 74.5 |
| ONF | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONG | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONH | Existing | | | | | 100% | 100% | 49% | 51% | 81.7 |
| ONI | Existing | | | | | 100% | 100% | 21% | 79% | 79.1 |
| ONJ | Existing | | | | | 100% | 100% | 24% | 76% | 79.4 |
| ONK | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONL | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONM | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONN | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONO | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONP | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONQ | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONR | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONS | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONT | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONU | Existing | 100% | | | | | 100% | 0% | 100% | 71.9 |
| ONV | Existing | 98% | | | | 2% | 100% | 0% | 100% | 72.0 |



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# APPENDIX C:

## iii. Referenced Table 2d-d from TR-55

**United States Department of Agriculture**

Natural Resources Conservation Service

Conservation Engineering Division

Technical Release 55

June 1986

# Urban Hydrology for Small Watersheds

## TR-55

To show bookmarks which navigate through the document.

Click the show/hide navigation pane button , and then

click the bookmarks tab. It will navigate you to the contents,

chapters, rainfall maps, and printable forms.

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**Table 2-2d** Runoff curve numbers for arid and semiarid rangelands [1]

| Cover description | | Curve numbers for hydrologic soil group | | | |
|---|---|---|---|---|---|
| Cover type | Hydrologic condition [2] | A [3] | B | C | D |
| Herbaceous—mixture of grass, weeds, and low-growing brush, with brush the minor element. | Poor | | 80 | 87 | 93 |
| | Fair | | 71 | 81 | 89 |
| | Good | | 62 | 74 | 85 |
| Oak-aspen—mountain brush mixture of oak brush, aspen, mountain mahogany, bitter brush, maple, and other brush. | Poor | | 66 | 74 | 79 |
| | Fair | | 48 | 57 | 63 |
| | Good | | 30 | 41 | 48 |
| Pinyon-juniper—pinyon, juniper, or both; grass understory. | Poor | | 75 | 85 | 89 |
| | Fair | | 58 | 73 | 80 |
| | Good | | 41 | 61 | 71 |
| Sagebrush with grass understory. | Poor | | 67 | 80 | 85 |
| | Fair | | 51 | 63 | 70 |
| | Good | | 35 | 47 | 55 |
| Desert shrub—major plants include saltbush, greasewood, creosotebush, blackbrush, bursage, palo verde, mesquite, and cactus. | Poor | 63 | 77 | 85 | 88 |
| | Fair | 55 | 72 | 81 | 86 |
| | Good | 49 | 68 | 79 | 84 |

1 Average runoff condition, and $I_a$, = 0.2S. For range in humid regions, use table 2-2c.
2 Poor: <30% ground cover (litter, grass, and brush overstory).
Fair: 30 to 70% ground cover.
Good: > 70% ground cover.
3 Curve numbers for group A have been developed only for desert shrub.


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# APPENDIX C:

## iv. Referenced Plate E-6.1 from

## Riverside County Hydrology Manual

RUNOFF INDEX NUMBERS OF HYDROLOGIC SOIL-COVER COMPLEXES FOR PERVIOUS AREAS-AMC II

| Cover Type (3) | Quality of Cover (2) | Soil Group A | B | C | D |
|---|---|---|---|---|---|
| NATURAL COVERS - | | | | | |
| Barren (Rockland, eroded and graded land) | | 78 | 86 | 91 | 93 |
| Chaparrel, Broadleaf (Manzonita, ceanothus and scrub oak) | Poor | 53 | 70 | 80 | 85 |
| | Fair | 40 | 63 | 75 | 81 |
| | Good | 31 | 57 | 71 | 78 |
| Chaparrel, Narrowleaf (Chamise and redshank) | Poor | 71 | 82 | 88 | 91 |
| | Fair | 55 | 72 | 81 | 86 |
| Grass, Annual or Perennial | Poor | 67 | 78 | 86 | 89 |
| | Fair | 50 | 69 | 79 | 84 |
| | Good | 38 | 61 | 74 | 80 |
| Meadows or Cienegas (Areas with seasonally high water table, principal vegetation is sod forming grass) | Poor | 63 | 77 | 85 | 88 |
| | Fair | 51 | 70 | 80 | 84 |
| | Good | 30 | 58 | 72 | 78 |
| Open Brush (Soft wood shrubs - buckwheat, sage, etc.) | Poor | 62 | 76 | 84 | 88 |
| | Fair | 46 | 66 | 77 | 83 |
| | Good | 41 | 63 | 75 | 81 |
| Woodland (Coniferous or broadleaf trees predominate. Canopy density is at least 50 percent) | Poor | 45 | 66 | 77 | 83 |
| | Fair | 36 | 60 | 73 | 79 |
| | Good | 28 | 55 | 70 | 77 |
| Woodland, Grass (Coniferous or broadleaf trees with canopy density from 20 to 50 percent) | Poor | 57 | 73 | 82 | 86 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| URBAN COVERS - | | | | | |
| Residential or Commercial Landscaping (Lawn, shrubs, etc.) | Good | 32 | 56 | 69 | 75 |
| Turf (Irrigated and mowed grass) | Poor | 58 | 74 | 83 | 87 |
| | Fair | 44 | 65 | 77 | 82 |
| | Good | 33 | 58 | 72 | 79 |
| AGRICULTURAL COVERS - | | | | | |
| Fallow (Land plowed but not tilled or seeded) | | 76 | 85 | 90 | 92 |

**RCFC & WCD**

HYDROLOGY MANUAL

**RUNOFF INDEX NUMBERS FOR PERVIOUS AREAS**



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# APPENDIX C:

## v. Referenced Soil Type Component Legend

## From USDA General Soil Survey

# Component Legend

United States

| Map unit symbol and name | Pct. of map unit | Component name | Component kind | Pct. Slope | | |
|---|---|---|---|---|---|---|
| | | | | Low | RV | High |
| s1041: | | | | | | |
| Rositas-Orita-Carrizo-Aco (s1041) | | | | | | |
| | 18 | Carrizo | Series | 0 | 1 | 2 |
| | 17 | Aco | Series | 0 | 1 | 1 |
| | 11 | Aco | Series | 0 | 1 | 1 |
| | 8 | Orita | Series | 0 | 1 | 1 |
| | 7 | Badland | Miscellaneous area | 9 | 42 | 75 |
| | 7 | Rositas | Series | 0 | 1 | 2 |
| | 7 | Rositas | Series | 2 | 6 | 9 |
| | 6 | Carsitas | Series | 2 | 6 | 9 |
| | 6 | Chuckawalla | Series | 0 | 1 | 2 |
| | 5 | Rositas | Series | 0 | 1 | 2 |
| | 4 | Orita | Series | 0 | 1 | 2 |
| | 3 | Orita | Series | 0 | 1 | 2 |
| | 1 | Rock outcrop | Miscellaneous area | 15 | 45 | 75 |
| s1126: | | | | | | |
| Tecopa-Rock outcrop-Lithic Torriorthents (s1126) | | | | | | |
| | 55 | Rock outcrop | Miscellaneous area | 15 | 45 | 75 |
| | 10 | Tecopa | Series | 50 | 63 | 75 |
| | 8 | Lithic Torriorthents | Taxon above family | 50 | 63 | 75 |
| | 4 | Lithic Torriorthents | Taxon above family | 30 | 40 | 50 |
| | 3 | Calvista | Series | 15 | 23 | 30 |
| | 3 | Rubble land | Miscellaneous area | 15 | 45 | 75 |
| | 3 | Tecopa | Series | 30 | 40 | 50 |
| | 2 | Calvista | Series | 2 | 9 | 15 |
| | 2 | Sparkhule | Series | 15 | 23 | 30 |

# Component Legend

United States

| Map unit symbol and name | Pct. of map unit | Component name | Component kind | Pct. Slope | | |
|---|---|---|---|---|---|---|
| | | | | Low | RV | High |
| s1126: | | | | | | |
| Tecopa-Rock outcrop-Lithic Torriorthents (s1126) | | | | | | |
| | 2 | Trigger | Series | 15 | 23 | 30 |
| | 1 | Arizo | Series | 2 | 4 | 5 |
| | 1 | Bitter | Series | 2 | 5 | 8 |
| | 1 | Cajon | Series | 0 | 4 | 8 |
| | 1 | Sparkhule | Series | 30 | 40 | 50 |
| | 1 | St. Thomas | Series | 50 | 63 | 75 |
| | 1 | Trigger | Series | 30 | 40 | 50 |
| | 1 | Upspring | Series | 15 | 33 | 50 |
| | 1 | Virgin Peak | Series | 30 | 53 | 75 |
| s1127: | | | | | | |
| Upspring-Sparkhule-Rock outcrop (s1127) | | | | | | |
| | 46 | Rock outcrop | Miscellaneous area | 2 | 26 | 50 |
| | 6 | Shorim | Series | 2 | 9 | 15 |
| | 6 | Upspring | Series | 15 | 23 | 30 |
| | 6 | Upspring | Series | 30 | 40 | 50 |
| | 5 | Rock outcrop | Miscellaneous area | 0 | 8 | 15 |
| | 5 | Sparkhule | Series | 15 | 23 | 30 |
| | 5 | Sparkhule | Series | 30 | 40 | 50 |
| | 3 | Arizo | Series | 2 | 4 | 5 |
| | 3 | Cajon | Series | 0 | 4 | 8 |
| | 3 | Upspring | Series | 8 | 12 | 15 |
| | 2 | Calvista | Series | 15 | 23 | 30 |
| | 2 | Lavic | Series | 0 | 3 | 5 |

# Component Legend

United States

| Map unit symbol and name | Pct. of map unit | Component name | Component kind | Pct. Slope | | |
|---|---|---|---|---|---|---|
| | | | | Low | RV | High |
| s1127: | | | | | | |
| Upspring-Sparkhule-Rock outcrop (s1127) | | | | | | |
| | 2 | Shorim | Series | 15 | 23 | 30 |
| | 2 | Tecopa | Series | 15 | 33 | 50 |
| | 2 | Trigger | Series | 15 | 33 | 50 |
| | 1 | Bitter | Series | 2 | 5 | 8 |
| | 1 | Nebona | Series | 2 | 5 | 8 |
| s1129: | | | | | | |
| Rositas-Beeline-Badland (s1129) | | | | | | |
| | 17 | Badland | Miscellaneous area | 50 | 63 | 75 |
| | 15 | Badland | Miscellaneous area | 9 | 30 | 50 |
| | 9 | Beeline | Series | 15 | 30 | 45 |
| | 5 | Aco | Series | 0 | 3 | 5 |
| | 5 | Beeline | Series | 3 | 9 | 15 |
| | 5 | Carrizo | Series | 2 | 4 | 5 |
| | 5 | Gilman | Series | 0 | 1 | 2 |
| | 5 | Rositas | Series | 8 | 12 | 15 |
| | 4 | Carsitas variant | Variant | 2 | 9 | 15 |
| | 4 | Carsitas variant | Variant | 15 | 23 | 30 |
| | 4 | Gunsight | Series | 15 | 23 | 30 |
| | 4 | Rositas | Series | 15 | 23 | 30 |
| | 3 | Chuckawalla | Series | 8 | 12 | 15 |
| | 3 | Gunsight | Series | 8 | 12 | 15 |
| | 3 | Rositas | Series | 0 | 4 | 8 |
| | 3 | Rositas | Series | 0 | 4 | 8 |
| | 2 | Chuckawalla | Series | 2 | 5 | 8 |

# Component Legend

United States

| Map unit symbol and name | Pct. of map unit | Component name | Component kind | Pct. Slope | | |
|---|---|---|---|---|---|---|
| | | | | Low | RV | High |
| s1129: | | | | | | |
| Rositas-Beeline-Badland (s1129) | | | | | | |
| | 2 | Denure | Series | 0 | 2 | 3 |
| | 1 | Glenbar | Series | 0 | 1 | 1 |
| | 1 | Lagunita | Series | 0 | 2 | 3 |
| s1140: | | | | | | |
| Rillito-Gunsight (s1140) | | | | | | |
| | 27 | Gunsight | Series | 1 | 21 | 40 |
| | 19 | Rillito | Series | 0 | 20 | 40 |
| | 8 | Chuckawalla | Series | 0 | 15 | 30 |
| | 6 | Carrizo | Series | 0 | 1 | 2 |
| | 5 | Beeline | Series | 3 | 24 | 45 |
| | 5 | Cipriano | Series | 0 | 18 | 35 |
| | 5 | Denure | Series | 0 | 4 | 8 |
| | 5 | Gilman | Series | 0 | 3 | 5 |
| | 5 | Mohall | Series | 0 | 4 | 8 |
| | 5 | Momoli | Series | 1 | 6 | 10 |
| | 5 | Pinamt | Series | 0 | 20 | 40 |
| | 5 | Tremant | Series | 0 | 5 | 10 |

# APPENDIX C:

## vi. Referenced Soil Water Feature Tables

## From USDA NRCS General Soily Survey

# Water Features

United States

[Depths of layers are in feet. See text for definitions of terms used in this table. Estimates of the frequency of ponding and flooding apply to the whole year rather than to individual months. Absence of an entry indicates that the feature is not a concern or that data were not estimated]

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1041: | | | | | | | | | | |
| Carrizo | A | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |
| Aco | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Aco | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Orita | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Badland | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Carsitas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Chuckawalla | B | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1041: | | | | | | | | | | |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Orita | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Orita | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rock outcrop | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| s1126: | | | | | | | | | | |
| Rock outcrop | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Tecopa | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Lithic Torriorthents | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Lithic Torriorthents | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Calvista | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rubble land | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Tecopa | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Calvista | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Sparkhule | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Trigger | D | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1126: | | | | | | | | | | |
| Arizo | A | --- | March | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | April | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | May | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | June | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | July | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | August | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | September | --- | --- | --- | --- | None | Very brief | Occasional |
| Bitter | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Cajon | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Sparkhule | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| St. Thomas | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Trigger | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Upspring | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Virgin Peak | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| s1127: | | | | | | | | | | |
| Rock outcrop | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Shorim | C | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Upspring | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Upspring | D | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1127: | | | | | | | | | | |
| Rock outcrop | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Sparkhule | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Sparkhule | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Arizo | A | --- | March | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | April | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | May | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | June | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | July | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | August | --- | --- | --- | --- | None | Very brief | Occasional |
| | | | September | --- | --- | --- | --- | None | Very brief | Occasional |
| Cajon | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Upspring | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Calvista | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Lavic | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Shorim | C | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Tecopa | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Trigger | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Bitter | B | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1127: | | | | | | | | | | |
| Nebona | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| s1129: | | | | | | | | | | |
| Badland | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Badland | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Beeline | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Aco | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Beeline | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Carrizo | A | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1129: | | | | | | | | | | |
| Gilman | B | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Carsitas variant | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Carsitas variant | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Gunsight | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Chuckawalla | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Gunsight | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rositas | A | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1129: | | | | | | | | | | |
| Chuckawalla | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Denure | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Glenbar | B | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |
| Lagunita | A | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1140: | | | | | | | | | | |
| Gunsight | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Rillito | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Chuckawalla | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Carrizo | A | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Beeline | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Cipriano | D | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Denure | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Gilman | B | --- | January | --- | --- | --- | --- | None | --- | Rare |
| | | | February | --- | --- | --- | --- | None | --- | Rare |
| | | | March | --- | --- | --- | --- | None | --- | Rare |
| | | | April | --- | --- | --- | --- | None | --- | Rare |
| | | | May | --- | --- | --- | --- | None | --- | Rare |
| | | | June | --- | --- | --- | --- | None | --- | Rare |
| | | | July | --- | --- | --- | --- | None | --- | Rare |
| | | | August | --- | --- | --- | --- | None | --- | Rare |
| | | | September | --- | --- | --- | --- | None | --- | Rare |
| | | | October | --- | --- | --- | --- | None | --- | Rare |
| | | | November | --- | --- | --- | --- | None | --- | Rare |
| | | | December | --- | --- | --- | --- | None | --- | Rare |
| Mohall | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Momoli | B | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# Water Features

United States

| Map symbol and soil name | Hydrologic group | Surface runoff | Months | Water table | | Ponding | | | Flooding | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Upper limit | Lower limit | Surface water depth | Duration | Frequency | Duration | Frequency |
| | | | | *Ft* | *Ft* | *Ft* | | | | |
| s1140: | | | | | | | | | | |
| Pinamt | B | --- | Jan-Dec | | | --- | --- | None | --- | None |
| Tremant | B | --- | Jan-Dec | | | --- | --- | None | --- | None |

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# APPENDIX D:

## Basin Lag Time Calculations

# BASIN LAG TIME CALCULATIONS

**PROJECT: RIO MESA SOLAR**
**CALCULATED BY: RV/LL**

**Equation:**

$$\text{Lag (hours)} = 24n\left[\frac{L.Lca}{S^{1/2}}\right]^{.38}$$

| Basin Label | Area ac. | Area sq. mi. | High Elev. ft. | Low Elev. ft. | Length, L ft. | Length, L mi. | Lca ft. | Lca mi. | Slope, S ft./mi. | Manning's "n" | TLag hrs. | TLag min. | LAPRE-1 S-Graph # | S-Graph Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| M1 | 484.02 | 0.76 | 427 | 345 | 8,044.66 | 1.52 | 2,641.99 | 0.50 | 53.82 | 0.035 | 0.355 | 21.32 | 9 | Desert |
| M2 | 15,554.20 | 24.30 | 1480 | 370 | 57,205.67 | 10.83 | 25,415.92 | 4.81 | 102.45 | 0.035 | 1.566 | 93.97 | 1 | Mountain |
| M3 | 366.17 | 0.57 | 528 | 377 | 10,245.56 | 1.94 | 5,119.24 | 0.97 | 77.82 | 0.035 | 0.467 | 28.02 | 9 | Desert |
| M4 | 1,734.35 | 2.71 | 1168 | 382 | 25,011.31 | 4.74 | 13,142.66 | 2.49 | 165.93 | 0.035 | 0.812 | 48.73 | 1 | Mountain |
| M5 | 251.06 | 0.39 | 468 | 396 | 6,608.50 | 1.25 | 3,249.71 | 0.62 | 57.53 | 0.035 | 0.352 | 21.13 | 9 | Desert |
| M5A | 111.17 | 0.17 | 542 | 462 | 6,570.60 | 1.24 | 2,663.37 | 0.50 | 64.29 | 0.035 | 0.319 | 19.14 | 9 | Desert |
| M5B | 113.90 | 0.18 | 475 | 450 | 3,389.29 | 0.64 | 1,382.00 | 0.26 | 38.95 | 0.035 | 0.213 | 12.76 | 9 | Desert |
| M6 | 846.22 | 1.32 | 991 | 465 | 12,404.06 | 2.35 | 5,802.79 | 1.10 | 223.90 | 0.035 | 0.431 | 25.85 | 1 | Mountain |
| M7 | 101.22 | 0.16 | 591 | 481 | 5,107.69 | 0.97 | 2,293.93 | 0.43 | 113.71 | 0.035 | 0.246 | 14.75 | 9 | Desert |
| M8 | 663.75 | 1.04 | 991 | 490 | 10,641.19 | 2.02 | 4,289.24 | 0.81 | 248.59 | 0.035 | 0.355 | 21.31 | 1 | Mountain |
| M9 | 1,150.38 | 1.80 | 1358 | 455 | 16,754.15 | 3.17 | 10,276.00 | 1.95 | 284.58 | 0.035 | 0.573 | 34.40 | 1 | Mountain |
| M10 | 242.64 | 0.38 | 592 | 479 | 7,966.91 | 1.51 | 3,527.45 | 0.67 | 74.89 | 0.035 | 0.371 | 22.26 | 9 | Desert |
| M11 | 831.69 | 1.30 | 1358 | 492 | 13,012.75 | 2.46 | 6,541.54 | 1.24 | 351.38 | 0.035 | 0.421 | 25.29 | 1 | Mountain |
| M12 | 2,548.74 | 3.98 | 1667 | 490 | 20,645.94 | 3.91 | 12,786.45 | 2.42 | 301.01 | 0.035 | 0.667 | 40.04 | 1 | Mountain |
| M13 | 4,593.70 | 7.18 | 1560 | 496 | 32,831.73 | 6.22 | 21,062.47 | 3.99 | 171.11 | 0.035 | 1.071 | 64.27 | 1 | Mountain |
| MX | 7.18 | 0.01 | 711 | 492 | 758.03 | 0.14 | 301.77 | 0.06 | 1525.43 | 0.035 | 0.034 | 2.02 | 1 | Mountain |
| M17 | 429.41 | 0.67 | 1152 | 400 | 8,016.00 | 1.52 | 2,868.00 | 0.54 | 494.88 | 0.035 | 0.240 | 14.41 | 1 | Mountain |
| M18 | 79.09 | 0.12 | 524 | 388 | 4,711.43 | 0.89 | 1,709.65 | 0.32 | 152.41 | 0.035 | 0.202 | 12.10 | 9 | Desert |
| M19 | 69.52 | 0.11 | 494 | 400 | 3,536.71 | 0.67 | 1,018.49 | 0.19 | 140.33 | 0.035 | 0.151 | 9.05 | 9 | Desert |
| M20 | 316.60 | 0.49 | 1244 | 460 | 5,638.94 | 1.07 | 2,540.35 | 0.48 | 734.10 | 0.035 | 0.186 | 11.17 | 1 | Mountain |
| M21 | 111.98 | 0.17 | 1078 | 382 | 4,419.11 | 0.84 | 1,978.00 | 0.37 | 831.59 | 0.035 | 0.151 | 9.04 | 1 | Mountain |
| M22 | 44.46 | 0.07 | 430 | 382 | 2,946.81 | 0.56 | 1,042.14 | 0.20 | 86.00 | 0.035 | 0.156 | 9.35 | 9 | Desert |
| M23 | 113.03 | 0.18 | 1284 | 384 | 5,277.40 | 1.00 | 2,371.27 | 0.45 | 900.44 | 0.035 | 0.170 | 10.21 | 1 | Mountain |
| M24 | 424.97 | 0.66 | 1762 | 482 | 6,765.31 | 1.28 | 3,051.99 | 0.58 | 998.98 | 0.035 | 0.202 | 12.10 | 1 | Mountain |
| M25 | 98.84 | 0.15 | 1300 | 388 | 5,533.63 | 1.05 | 3,139.72 | 0.59 | 870.20 | 0.035 | 0.194 | 11.64 | 1 | Mountain |
| M26 | 340.91 | 0.53 | 484 | 368 | 8,413.61 | 1.59 | 4,492.53 | 0.85 | 72.80 | 0.035 | 0.418 | 25.05 | 9 | Desert |
| M27 | 143.89 | 0.22 | 379 | 330 | 6,194.37 | 1.17 | 2,844.19 | 0.54 | 41.77 | 0.035 | 0.347 | 20.83 | 9 | Desert |
| | | | | | | | | | | | | | | |
| ONA | 557.65 | 0.87 | 400 | 306 | 9,321.29 | 1.77 | 4,398.76 | 0.83 | 53.25 | 0.035 | 0.457 | 27.42 | 9 | Desert |
| ONB | 1,810.03 | 2.83 | 478 | 275 | 23,760.89 | 4.50 | 11,364.51 | 2.15 | 45.11 | 0.035 | 0.965 | 57.92 | 9 | Desert |
| ONC | 193.46 | 0.30 | 334 | 308 | 4,232.96 | 0.80 | 1,119.87 | 0.21 | 32.43 | 0.035 | 0.221 | 13.27 | 9 | Desert |
| OND | 858.45 | 1.34 | 368 | 248 | 9,250.81 | 1.75 | 5,511.22 | 1.04 | 68.49 | 0.035 | 0.473 | 28.40 | 9 | Desert |
| ONE1 | 1,028.67 | 1.61 | 494 | 329 | 16,643.22 | 3.15 | 7,726.68 | 1.46 | 52.35 | 0.035 | 0.708 | 42.48 | 9 | Desert |
| ONE2 | 1,659.89 | 2.59 | 489 | 245 | 22,184.42 | 4.20 | 10,957.75 | 2.08 | 58.07 | 0.035 | 0.884 | 53.05 | 9 | Desert |
| ONF | 317.06 | 0.50 | 378 | 274 | 6,458.35 | 1.22 | 2,434.87 | 0.46 | 85.02 | 0.035 | 0.291 | 17.43 | 9 | Desert |
| ONG | 91.43 | 0.14 | 443 | 392 | 3,828.39 | 0.73 | 1,485.47 | 0.28 | 70.34 | 0.035 | 0.205 | 12.28 | 9 | Desert |
| ONH | 130.07 | 0.20 | 585 | 443 | 3,702.01 | 0.70 | 1,605.04 | 0.30 | 202.53 | 0.035 | 0.170 | 10.21 | 1 | Mountain |
| ONI | 32.76 | 0.05 | 662 | 481 | 1,883.60 | 0.36 | 1,252.28 | 0.24 | 507.37 | 0.035 | 0.101 | 6.04 | 1 | Mountain |
| ONJ | 42.49 | 0.07 | 629 | 464 | 2,083.21 | 0.39 | 836.61 | 0.16 | 418.20 | 0.035 | 0.093 | 5.58 | 1 | Mountain |
| ONK | 435.01 | 0.68 | 407 | 263 | 9,858.98 | 1.87 | 4,900.28 | 0.93 | 77.12 | 0.035 | 0.453 | 27.20 | 9 | Desert |
| ONL | 470.16 | 0.73 | 426 | 260 | 10,522.34 | 1.99 | 4,427.24 | 0.84 | 83.30 | 0.035 | 0.441 | 26.44 | 9 | Desert |
| ONM | 62.52 | 0.10 | 320 | 245 | 1,836.11 | 0.35 | 1,336.45 | 0.25 | 215.67 | 0.035 | 0.120 | 7.21 | 9 | Desert |
| ONN | 52.93 | 0.08 | 362 | 258 | 6,603.87 | 1.25 | 2,751.05 | 0.52 | 83.15 | 0.035 | 0.308 | 18.49 | 9 | Desert |
| ONO | 353.96 | 0.55 | 425 | 260 | 10,985.87 | 2.08 | 5,572.83 | 1.06 | 79.30 | 0.035 | 0.493 | 29.61 | 9 | Desert |
| ONP | 939.28 | 1.47 | 425 | 265 | 11,278.73 | 2.14 | 5,762.60 | 1.09 | 74.90 | 0.035 | 0.510 | 30.62 | 9 | Desert |
| ONQ | 422.87 | 0.66 | 382 | 275 | 8,843.84 | 1.67 | 4,914.91 | 0.93 | 63.88 | 0.035 | 0.451 | 27.08 | 9 | Desert |
| ONR | 174.44 | 0.27 | 371 | 304 | 5,174.50 | 0.98 | 1,946.54 | 0.37 | 68.37 | 0.035 | 0.256 | 15.34 | 9 | Desert |
| ONS | 28.77 | 0.04 | 490 | 425 | 2,963.22 | 0.56 | 1,647.65 | 0.31 | 115.82 | 0.035 | 0.176 | 10.54 | 9 | Desert |
| ONT | 24.81 | 0.04 | 462 | 425 | 2,678.40 | 0.51 | 841.22 | 0.16 | 72.94 | 0.035 | 0.143 | 8.58 | 9 | Desert |
| ONU | 31.53 | 0.05 | 463 | 426 | 2,516.76 | 0.48 | 979.00 | 0.19 | 77.62 | 0.035 | 0.146 | 8.77 | 9 | Desert |
| ONV | 76.19 | 0.12 | 469 | 418 | 2,610.20 | 0.49 | 1,345.33 | 0.25 | 103.16 | 1.035 | 4.685 | 281.07 | 9 | Desert |
| | | 15.30 | | | | | | | | | | | | |

**Notes:**
Lag time equation referenced from Riverside County Hydrology Manual (pg E-3)
L: Watercourse length
Lca: Watercourse centroud length, from outlet point on watercourse to point perpendicular to basin centroid.
S: Basin slope, ft/mile.
n: Average Manning's roughness coefficient.



BSE Document Control Number: 7323HYD101

# APPENDIX E:

# FLO-2D Analysis

# APPENDIX E:

## i. 24 Hour, 100-Year Storm

## SUMMARY.OUT File

NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

SUMMARY.OUT FILE
CREATED WITH VERSION: 2009.06 BUILD NO. 09-11.05.04

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.250 | 18.028 | 0.000000 | 0.000001 |
| 0.500 | 30.000 | 0.000000 | 0.000002 |
| 0.750 | 30.000 | 0.000000 | 0.000001 |
| 1.000 | 30.000 | 0.000000 | 0.000004 |
| 1.250 | 30.000 | 0.000000 | 0.000001 |
| 1.500 | 30.000 | 0.000001 | 0.000004 |
| 1.750 | 30.000 | 0.000001 | 0.000003 |
| 2.000 | 30.000 | 0.000001 | 0.000003 |
| 2.250 | 30.000 | 0.000001 | 0.000002 |
| 2.500 | 30.000 | 0.000000 | 0.000000 |
| 2.750 | 30.000 | 0.000002 | 0.000003 |
| 3.000 | 30.000 | -0.000001 | 0.000002 |
| 3.250 | 30.000 | 0.000000 | 0.000000 |
| 3.500 | 30.000 | 0.000001 | 0.000002 |
| 3.750 | 30.000 | 0.000000 | 0.000000 |
| 4.005 | 27.794 | 0.000003 | 0.000003 |
| 4.255 | 23.042 | -0.000001 | 0.000001 |
| 4.502 | 22.292 | 0.000007 | 0.000005 |
| 4.754 | 19.702 | -0.000006 | 0.000004 |
| 5.005 | 18.403 | -0.000008 | 0.000004 |
| 5.252 | 15.103 | 0.000003 | 0.000001 |
| 5.500 | 12.934 | 0.000007 | 0.000003 |
| 5.751 | 11.161 | -0.000015 | 0.000005 |
| 6.001 | 9.872 | -0.000001 | 0.000000 |
| 6.250 | 8.714 | 0.000013 | 0.000004 |
| 6.500 | 8.045 | -0.000005 | 0.000001 |
| 6.750 | 7.553 | 0.000006 | 0.000002 |
| 7.002 | 6.970 | 0.000015 | 0.000004 |
| 7.250 | 6.581 | 0.000005 | 0.000001 |
| 7.502 | 6.279 | 0.000005 | 0.000001 |
| 7.751 | 5.900 | -0.000017 | 0.000003 |
| 8.000 | 5.046 | 0.000017 | 0.000003 |
| 8.250 | 4.660 | -0.000002 | 0.000000 |
| 8.500 | 4.314 | -0.000010 | 0.000001 |
| 8.751 | 3.837 | -0.000005 | 0.000001 |
| 9.000 | 3.652 | 0.000022 | 0.000003 |
| 9.250 | 3.468 | -0.000017 | 0.000002 |
| 9.501 | 3.304 | 0.000016 | 0.000001 |
| 9.750 | 2.184 | 0.000016 | 0.000001 |
| 10.000 | 1.637 | 0.000051 | 0.000004 |
| 10.250 | 1.491 | 0.000071 | 0.000005 |
| 10.500 | 1.200 | -0.000050 | 0.000003 |
| 10.750 | 1.070 | -0.000008 | 0.000000 |
| 11.000 | 1.070 | 0.000033 | 0.000002 |
| 11.250 | 1.227 | 0.000134 | 0.000007 |
| 11.500 | 1.440 | -0.000001 | 0.000000 |
| 11.750 | 2.042 | 0.000006 | 0.000000 |
| 12.000 | 2.500 | 0.000001 | 0.000000 |
| 12.250 | 1.433 | -0.000058 | 0.000002 |
| 12.500 | 1.230 | 0.000003 | 0.000000 |
| 12.750 | 1.227 | 0.000135 | 0.000004 |
| 13.000 | 1.195 | 0.000106 | 0.000003 |
| 13.250 | 1.198 | 0.000045 | 0.000001 |
| 13.500 | 1.170 | 0.000125 | 0.000003 |
| 13.750 | 1.143 | -0.000008 | 0.000000 |
| 14.000 | 1.197 | 0.000162 | 0.000004 |
| 14.250 | 1.168 | 0.000072 | 0.000002 |
| 14.500 | 1.176 | 0.000200 | 0.000004 |
| 14.750 | 1.150 | -0.000054 | 0.000001 |
| 15.000 | 1.119 | 0.000103 | 0.000002 |
| 15.250 | 1.157 | -0.000048 | 0.000001 |
| 15.500 | 1.057 | 0.000209 | 0.000003 |
| 15.750 | 1.050 | -0.000126 | 0.000002 |
| 16.000 | 1.151 | 0.000131 | 0.000002 |
| 16.250 | 1.112 | 0.000022 | 0.000000 |
| 16.500 | 1.008 | -0.000054 | 0.000001 |
| 16.750 | 1.108 | 0.000001 | 0.000000 |
| 17.000 | 1.149 | 0.000041 | 0.000001 |
| 17.250 | 1.055 | 0.000113 | 0.000002 |
| 17.500 | 1.220 | 0.000065 | 0.000001 |
| 17.750 | 1.283 | -0.000162 | 0.000002 |
| 18.000 | 1.389 | -0.000005 | 0.000000 |
| 18.250 | 2.051 | 0.000006 | 0.000000 |
| 18.501 | 2.481 | -0.000246 | 0.000003 |
| 18.750 | 1.991 | -0.000190 | 0.000002 |
| 19.001 | 2.014 | 0.000120 | 0.000002 |
| 19.250 | 2.081 | 0.000279 | 0.000004 |
| 19.500 | 2.127 | -0.000282 | 0.000004 |
| 19.750 | 2.196 | -0.000032 | 0.000000 |
| 20.000 | 2.182 | 0.000181 | 0.000002 |
| 20.250 | 2.250 | -0.000217 | 0.000003 |
| 20.500 | 2.314 | 0.000238 | 0.000003 |
| 20.750 | 2.364 | 0.000109 | 0.000001 |
| 21.000 | 2.403 | -0.000166 | 0.000002 |
| 21.251 | 2.438 | 0.000095 | 0.000001 |
| 21.500 | 2.426 | 0.000199 | 0.000002 |
| 21.751 | 2.376 | 0.000046 | 0.000001 |
| 22.000 | 2.439 | -0.000227 | 0.000003 |
| 22.251 | 2.379 | -0.000079 | 0.000001 |
| 22.501 | 2.367 | -0.000284 | 0.000003 |
| 22.751 | 2.502 | -0.000081 | 0.000001 |
| 23.000 | 2.402 | -0.000251 | 0.000003 |
| 23.250 | 2.629 | -0.000234 | 0.000003 |
| 23.501 | 2.583 | 0.000111 | 0.000001 |
| 23.750 | 2.475 | 0.000128 | 0.000002 |
| 24.001 | 2.511 | -0.000070 | 0.000001 |
| 24.250 | 2.532 | 0.000059 | 0.000001 |
| 24.500 | 2.516 | 0.000356 | 0.000004 |
| 24.750 | 2.507 | 0.000169 | 0.000002 |
| 25.000 | 2.617 | 0.000235 | 0.000003 |
| 25.251 | 2.522 | 0.000036 | 0.000000 |
| 25.500 | 2.686 | 0.000334 | 0.000004 |
| 25.750 | 2.749 | 0.000053 | 0.000001 |
| 26.001 | 2.684 | -0.000251 | 0.000003 |
| 26.250 | 2.758 | 0.000240 | 0.000003 |
| 26.500 | 2.766 | -0.000194 | 0.000002 |
| 26.751 | 2.775 | 0.000269 | 0.000003 |
| 27.000 | 2.769 | -0.000054 | 0.000001 |
| 27.250 | 2.825 | 0.000220 | 0.000003 |
| 27.500 | 2.831 | 0.000130 | 0.000002 |
| 27.750 | 2.788 | -0.000328 | 0.000004 |
| 28.000 | 2.806 | 0.000069 | 0.000001 |
| 28.251 | 2.833 | 0.000551 | 0.000006 |



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| | | | |
|---|---|---|---|
| 28.500 | 2.853 | 0.000079 | 0.000001 |
| 28.750 | 2.853 | 0.000401 | 0.000005 |
| 29.001 | 2.866 | 0.000300 | 0.000003 |
| 29.250 | 2.869 | 0.000329 | 0.000004 |
| 29.501 | 2.870 | 0.000369 | 0.000004 |
| 29.750 | 2.872 | 0.000184 | 0.000002 |
| 30.000 | 2.874 | 0.000117 | 0.000001 |
| 30.251 | 2.884 | -0.000295 | 0.000003 |
| 30.500 | 2.876 | -0.000110 | 0.000001 |
| 30.750 | 2.886 | 0.000010 | 0.000000 |
| 31.000 | 2.884 | 0.000272 | 0.000003 |
| 31.251 | 2.891 | -0.000018 | 0.000000 |
| 31.501 | 2.893 | 0.000348 | 0.000004 |
| 31.750 | 2.901 | 0.000280 | 0.000003 |
| 32.000 | 2.900 | 0.000084 | 0.000001 |
| 32.251 | 2.899 | 0.000024 | 0.000000 |
| 32.500 | 2.908 | -0.000154 | 0.000002 |
| 32.751 | 2.907 | 0.000145 | 0.000002 |
| 33.000 | 2.910 | 0.000069 | 0.000001 |
| 33.250 | 2.913 | 0.000471 | 0.000005 |
| 33.500 | 2.921 | 0.000345 | 0.000004 |
| 33.751 | 2.917 | 0.000330 | 0.000004 |
| 34.001 | 2.921 | -0.000410 | 0.000005 |
| 34.250 | 2.930 | 0.000501 | 0.000006 |
| 34.501 | 2.926 | 0.000566 | 0.000007 |
| 34.751 | 2.939 | 0.000234 | 0.000003 |
| 35.001 | 2.941 | 0.000219 | 0.000003 |
| 35.251 | 2.933 | 0.000027 | 0.000000 |
| 35.500 | 2.938 | -0.000024 | 0.000000 |
| 35.750 | 2.939 | -0.000372 | 0.000004 |
| 36.000 | 2.943 | 0.000119 | 0.000001 |
| 36.250 | 2.951 | 0.000192 | 0.000002 |
| 36.500 | 2.957 | -0.000404 | 0.000005 |
| 36.750 | 2.953 | -0.000232 | 0.000003 |
| 37.001 | 2.956 | 0.000130 | 0.000002 |
| 37.251 | 2.959 | -0.000412 | 0.000005 |
| 37.501 | 2.964 | 0.000129 | 0.000001 |
| 37.750 | 2.966 | 0.000378 | 0.000004 |
| 38.001 | 2.974 | -0.000138 | 0.000002 |
| 38.250 | 2.982 | 0.000054 | 0.000001 |
| 38.501 | 2.976 | -0.000098 | 0.000001 |
| 38.751 | 2.981 | -0.000233 | 0.000003 |
| 39.000 | 2.978 | 0.000145 | 0.000002 |
| 39.251 | 2.991 | 0.000326 | 0.000004 |
| 39.500 | 2.988 | -0.000212 | 0.000002 |
| 39.751 | 2.995 | 0.000261 | 0.000003 |
| 40.001 | 2.991 | 0.000250 | 0.000003 |
| 40.251 | 2.995 | 0.000084 | 0.000001 |
| 40.500 | 3.005 | -0.000070 | 0.000001 |
| 40.750 | 3.001 | -0.000118 | 0.000001 |
| 41.000 | 3.008 | 0.000164 | 0.000002 |
| 41.251 | 3.008 | -0.000020 | 0.000000 |
| 41.501 | 3.012 | 0.000339 | 0.000004 |
| 41.750 | 3.011 | -0.000057 | 0.000001 |
| 42.001 | 3.016 | 0.000394 | 0.000005 |
| 42.251 | 3.019 | 0.000539 | 0.000006 |
| 42.500 | 3.026 | 0.000036 | 0.000000 |
| 42.750 | 3.022 | 0.000388 | 0.000004 |
| 43.000 | 3.030 | -0.000043 | 0.000000 |
| 43.250 | 3.032 | 0.000336 | 0.000004 |
| 43.500 | 3.038 | -0.000029 | 0.000000 |
| 43.750 | 3.042 | 0.000026 | 0.000000 |
| 44.000 | 3.040 | -0.000191 | 0.000002 |
| 44.250 | 3.047 | 0.000177 | 0.000002 |
| 44.500 | 3.054 | 0.000270 | 0.000003 |
| 44.750 | 3.053 | -0.000032 | 0.000000 |
| 45.000 | 3.061 | -0.000150 | 0.000002 |
| 45.251 | 3.054 | -0.000073 | 0.000001 |
| 45.501 | 3.061 | 0.000234 | 0.000003 |
| 45.750 | 3.057 | 0.000114 | 0.000001 |
| 46.001 | 3.065 | -0.000027 | 0.000000 |
| 46.250 | 3.069 | 0.000145 | 0.000002 |
| 46.500 | 3.073 | 0.000663 | 0.000008 |
| 46.750 | 3.078 | 0.000357 | 0.000004 |
| 47.001 | 3.080 | -0.000029 | 0.000000 |
| 47.251 | 3.083 | -0.000187 | 0.000002 |
| 47.501 | 3.083 | 0.000153 | 0.000002 |
| 47.751 | 3.088 | 0.000735 | 0.000008 |
| 48.000 | 3.089 | 0.000140 | 0.000002 |
| 48.250 | 3.094 | -0.000066 | 0.000001 |
| 48.501 | 3.096 | 0.000404 | 0.000005 |
| 48.751 | 3.105 | -0.000289 | 0.000003 |
| 49.001 | 3.113 | -0.000257 | 0.000003 |
| 49.251 | 3.115 | -0.000090 | 0.000001 |
| 49.500 | 3.117 | -0.000230 | 0.000003 |
| 49.751 | 3.131 | 0.000297 | 0.000003 |
| 50.000 | 3.124 | 0.000009 | 0.000000 |
| 50.250 | 3.132 | -0.000118 | 0.000001 |
| 50.501 | 3.143 | 0.000119 | 0.000001 |
| 50.750 | 3.162 | -0.000110 | 0.000001 |
| 51.000 | 3.161 | -0.000125 | 0.000001 |
| 51.251 | 3.152 | -0.000078 | 0.000001 |
| 51.500 | 3.161 | -0.000071 | 0.000001 |
| 51.750 | 3.161 | 0.000034 | 0.000000 |
| 52.001 | 3.161 | 0.000387 | 0.000004 |
| 52.250 | 3.162 | -0.000150 | 0.000002 |
| 52.500 | 3.161 | 0.000220 | 0.000003 |
| 52.750 | 3.163 | 0.000282 | 0.000003 |
| 53.000 | 3.161 | 0.000115 | 0.000001 |
| 53.251 | 3.161 | 0.000158 | 0.000002 |
| 53.501 | 3.161 | 0.000148 | 0.000002 |
| 53.750 | 3.160 | 0.000175 | 0.000002 |
| 54.000 | 3.161 | 0.000192 | 0.000002 |
| 54.251 | 3.161 | -0.000425 | 0.000005 |
| 54.500 | 3.161 | 0.000124 | 0.000001 |
| 54.750 | 3.161 | 0.000280 | 0.000003 |
| 55.001 | 3.161 | 0.000255 | 0.000003 |
| 55.251 | 3.161 | -0.000006 | 0.000000 |
| 55.500 | 3.161 | -0.000369 | 0.000004 |
| 55.751 | 3.161 | 0.000033 | 0.000000 |
| 56.000 | 3.162 | 0.000032 | 0.000000 |
| 56.250 | 3.161 | 0.000253 | 0.000003 |
| 56.501 | 3.161 | -0.000220 | 0.000003 |
| 56.750 | 3.163 | -0.000049 | 0.000001 |
| 57.000 | 3.161 | 0.000040 | 0.000000 |
| 57.251 | 3.161 | -0.000325 | 0.000004 |
| 57.501 | 3.161 | 0.000104 | 0.000001 |
| 57.750 | 3.160 | 0.000376 | 0.000004 |
| 58.000 | 3.161 | -0.000177 | 0.000002 |
| 58.251 | 3.161 | 0.000210 | 0.000002 |
| 58.500 | 3.161 | -0.000409 | 0.000005 |
| 58.750 | 3.161 | 0.000383 | 0.000004 |



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| | | | |
|---|---|---|---|
| 59.001 | 3.161 | 0.000145 | 0.000002 |
| 59.250 | 3.161 | -0.000170 | 0.000002 |
| 59.500 | 3.161 | -0.000082 | 0.000001 |
| 59.751 | 3.161 | -0.000279 | 0.000003 |
| 60.000 | 3.162 | 0.000192 | 0.000002 |
| 60.250 | 3.161 | 0.000430 | 0.000005 |
| 60.501 | 3.161 | 0.000274 | 0.000003 |
| 60.750 | 3.163 | 0.000221 | 0.000003 |
| 61.000 | 3.161 | 0.000036 | 0.000000 |
| 61.251 | 3.161 | 0.000133 | 0.000002 |
| 61.501 | 3.161 | -0.000185 | 0.000002 |
| 61.750 | 3.160 | 0.000241 | 0.000003 |
| 62.001 | 3.161 | 0.000354 | 0.000004 |
| 62.251 | 3.161 | 0.000153 | 0.000002 |
| 62.500 | 3.161 | 0.000065 | 0.000001 |
| 62.750 | 3.161 | 0.000301 | 0.000003 |
| 63.001 | 3.161 | 0.000223 | 0.000003 |
| 63.250 | 3.161 | 0.000449 | 0.000005 |
| 63.500 | 3.161 | 0.000148 | 0.000002 |
| 63.751 | 3.161 | 0.000246 | 0.000003 |
| 64.000 | 3.162 | -0.000058 | 0.000001 |
| 64.250 | 3.161 | 0.000059 | 0.000001 |
| 64.501 | 3.161 | -0.000025 | 0.000000 |
| 64.750 | 3.163 | -0.000067 | 0.000001 |
| 65.000 | 3.161 | 0.000302 | 0.000003 |
| 65.251 | 3.161 | 0.000105 | 0.000001 |
| 65.500 | 3.160 | -0.000203 | 0.000002 |
| 65.750 | 3.161 | -0.000035 | 0.000000 |
| 66.001 | 3.161 | 0.000342 | 0.000004 |
| 66.251 | 3.161 | 0.000131 | 0.000001 |
| 66.500 | 3.161 | -0.000042 | 0.000000 |
| 66.750 | 3.161 | -0.000090 | 0.000001 |
| 67.001 | 3.161 | 0.000351 | 0.000004 |
| 67.250 | 3.161 | -0.000042 | 0.000000 |
| 67.500 | 3.161 | 0.000188 | 0.000002 |
| 67.751 | 3.161 | -0.000208 | 0.000002 |
| 68.000 | 3.162 | 0.000284 | 0.000003 |
| 68.250 | 3.161 | -0.000124 | 0.000001 |
| 68.501 | 3.161 | -0.000204 | 0.000002 |
| 68.750 | 3.163 | 0.000272 | 0.000003 |
| 69.001 | 3.161 | 0.000083 | 0.000001 |
| 69.251 | 3.161 | 0.000260 | 0.000003 |
| 69.500 | 3.160 | -0.000078 | 0.000001 |
| 69.750 | 3.161 | -0.000388 | 0.000004 |
| 70.001 | 3.161 | -0.000105 | 0.000001 |
| 70.251 | 3.161 | -0.000136 | 0.000002 |
| 70.500 | 3.161 | 0.000373 | 0.000004 |
| 70.751 | 3.161 | 0.000052 | 0.000001 |
| 71.001 | 3.161 | 0.000099 | 0.000001 |
| 71.250 | 3.161 | -0.000151 | 0.000002 |
| 71.500 | 3.161 | 0.000100 | 0.000001 |
| 71.751 | 3.161 | 0.000398 | 0.000005 |
| 72.000 | 3.162 | 0.000177 | 0.000002 |

==========

MASS BALANCE INFLOW - OUTFLOW VOLUME

==========

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 3.8700 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 3499.16 |
| INFLOW HYDROGRAPH | 5249.74 |
| INFLOW HYDROGRAPHS + RAINFALL | 8748.90 |

==========

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 1.91 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 2202.28 |
| FLOODPLAIN STORAGE | 1328.40 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 5215.33 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 8746.01 |

| CHANNEL FLOW | |
|---|---|
| CHANNEL STORAGE | 2.89 |
| CHANNEL OUTFLOW | 0.00 |
| CHANNEL OUTFLOW AND STORAGE | 2.89 |

==========

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 5215.33 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 8748.90 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

| | |
|---|---|
| THE MAXIMUM INUNDATED AREA IS: | 9001.43 ACRES |
| THE MAXIMUM WETTED FLOODPLAIN AREA IS: | 9000.10 ACRES |
| THE MAXIMUM WETTED CHANNEL AREA IS: | 1.34 ACRES |



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==========================================================================================================================

     COMPUTER RUN TIME IS :  3.16309 HRS
     THIS OUTPUT FILE WAS TERMINATED ON:   6/15/2011  AT:  18:38:21
```

# APPENDIX E:

## ii. 24 Hour, 25-Year Storm

## SUMMARY.OUT File

NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

SUMMARY.OUT FILE
CREATED WITH VERSION: 2009.06 BUILD NO. 09-11.05.04

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.250 | 18.028 | 0.000000 | 0.000006 |
| 0.500 | 30.000 | 0.000000 | 0.000003 |
| 0.750 | 30.000 | 0.000000 | 0.000002 |
| 1.000 | 30.000 | 0.000000 | 0.000000 |
| 1.250 | 30.000 | 0.000000 | 0.000004 |
| 1.500 | 30.000 | 0.000000 | 0.000001 |
| 1.750 | 30.000 | 0.000000 | 0.000001 |
| 2.000 | 30.000 | -0.000001 | 0.000003 |
| 2.250 | 30.000 | 0.000000 | 0.000000 |
| 2.500 | 30.000 | -0.000001 | 0.000003 |
| 2.750 | 30.000 | 0.000002 | 0.000004 |
| 3.000 | 30.000 | 0.000000 | 0.000000 |
| 3.250 | 30.000 | -0.000001 | 0.000003 |
| 3.500 | 30.000 | 0.000001 | 0.000002 |
| 3.750 | 30.000 | -0.000002 | 0.000003 |
| 4.000 | 30.000 | -0.000001 | 0.000001 |
| 4.250 | 30.000 | 0.000000 | 0.000000 |
| 4.504 | 28.508 | 0.000003 | 0.000003 |
| 4.755 | 23.188 | 0.000001 | 0.000001 |
| 5.001 | 21.592 | 0.000001 | 0.000001 |
| 5.250 | 19.116 | 0.000003 | 0.000002 |
| 5.506 | 19.536 | 0.000006 | 0.000003 |
| 5.753 | 16.171 | 0.000007 | 0.000004 |
| 6.002 | 13.801 | -0.000005 | 0.000002 |
| 6.252 | 12.696 | 0.000005 | 0.000002 |
| 6.502 | 11.857 | -0.000005 | 0.000002 |
| 6.751 | 10.913 | -0.000006 | 0.000002 |
| 7.002 | 10.253 | -0.000002 | 0.000001 |
| 7.251 | 9.058 | -0.000006 | 0.000002 |
| 7.502 | 8.067 | 0.000004 | 0.000001 |
| 7.752 | 7.311 | -0.000004 | 0.000001 |
| 8.001 | 6.561 | 0.000014 | 0.000003 |
| 8.250 | 6.358 | 0.000012 | 0.000003 |
| 8.500 | 6.078 | 0.000001 | 0.000000 |
| 8.750 | 5.328 | -0.000017 | 0.000003 |
| 9.001 | 4.956 | 0.000020 | 0.000003 |
| 9.250 | 4.753 | 0.000012 | 0.000002 |
| 9.501 | 4.241 | -0.000008 | 0.000001 |
| 9.751 | 3.796 | 0.000024 | 0.000003 |
| 10.001 | 3.695 | -0.000030 | 0.000004 |
| 10.251 | 3.547 | -0.000014 | 0.000002 |
| 10.500 | 3.455 | -0.000033 | 0.000003 |
| 10.751 | 3.303 | -0.000052 | 0.000005 |
| 11.001 | 2.456 | -0.000030 | 0.000003 |
| 11.250 | 1.729 | -0.000057 | 0.000004 |
| 11.500 | 1.575 | -0.000005 | 0.000000 |
| 11.750 | 1.383 | 0.000010 | 0.000001 |
| 12.000 | 1.088 | 0.000039 | 0.000002 |
| 12.250 | 1.070 | -0.000007 | 0.000000 |
| 12.500 | 1.071 | -0.000057 | 0.000003 |
| 12.750 | 1.416 | -0.000016 | 0.000001 |
| 13.000 | 2.257 | 0.000070 | 0.000003 |
| 13.250 | 2.815 | 0.000015 | 0.000001 |
| 13.500 | 2.601 | -0.000070 | 0.000003 |
| 13.750 | 2.617 | 0.000026 | 0.000001 |
| 14.000 | 2.223 | 0.000093 | 0.000003 |
| 14.250 | 1.396 | 0.000075 | 0.000002 |
| 14.500 | 1.177 | 0.000064 | 0.000002 |
| 14.750 | 1.132 | -0.000007 | 0.000000 |
| 15.000 | 1.098 | -0.000037 | 0.000001 |
| 15.250 | 1.101 | 0.000105 | 0.000003 |
| 15.500 | 1.093 | -0.000043 | 0.000001 |
| 15.750 | 1.118 | -0.000079 | 0.000002 |
| 16.000 | 1.106 | 0.000082 | 0.000002 |
| 16.250 | 1.096 | 0.000004 | 0.000000 |
| 16.500 | 1.119 | 0.000189 | 0.000004 |
| 16.750 | 1.148 | 0.000013 | 0.000000 |
| 17.000 | 1.209 | 0.000044 | 0.000001 |
| 17.250 | 1.279 | -0.000019 | 0.000000 |
| 17.500 | 1.929 | 0.000158 | 0.000003 |
| 17.750 | 1.853 | 0.000023 | 0.000000 |
| 18.000 | 1.612 | -0.000162 | 0.000003 |
| 18.250 | 1.638 | 0.000013 | 0.000000 |
| 18.500 | 1.783 | 0.000008 | 0.000000 |
| 18.750 | 1.974 | 0.000119 | 0.000002 |
| 19.000 | 1.962 | 0.000023 | 0.000000 |
| 19.250 | 2.082 | -0.000010 | 0.000000 |
| 19.500 | 2.046 | 0.000008 | 0.000000 |
| 19.750 | 2.188 | -0.000134 | 0.000003 |
| 20.001 | 2.137 | 0.000126 | 0.000002 |
| 20.250 | 2.315 | 0.000022 | 0.000000 |
| 20.500 | 2.390 | -0.000045 | 0.000001 |
| 20.750 | 2.373 | 0.000006 | 0.000000 |
| 21.000 | 2.351 | 0.000261 | 0.000005 |
| 21.250 | 2.233 | 0.000015 | 0.000000 |
| 21.500 | 1.970 | 0.000110 | 0.000002 |
| 21.751 | 2.429 | -0.000086 | 0.000002 |
| 22.000 | 2.416 | 0.000019 | 0.000000 |
| 22.250 | 2.427 | 0.000055 | 0.000001 |
| 22.500 | 2.602 | 0.000019 | 0.000000 |
| 22.750 | 2.676 | 0.000002 | 0.000000 |
| 23.000 | 2.507 | -0.000003 | 0.000000 |
| 23.250 | 2.850 | 0.000166 | 0.000003 |
| 23.501 | 2.665 | 0.000017 | 0.000000 |
| 23.750 | 2.440 | 0.000067 | 0.000001 |
| 24.000 | 2.437 | -0.000276 | 0.000005 |
| 24.250 | 2.490 | 0.000063 | 0.000001 |
| 24.500 | 2.454 | -0.000038 | 0.000001 |
| 24.750 | 2.729 | 0.000084 | 0.000001 |
| 25.000 | 2.766 | -0.000094 | 0.000002 |
| 25.251 | 2.759 | -0.000081 | 0.000001 |
| 25.500 | 2.738 | 0.000076 | 0.000001 |
| 25.750 | 2.727 | 0.000066 | 0.000001 |
| 26.001 | 2.948 | 0.000085 | 0.000002 |
| 26.250 | 2.985 | -0.000097 | 0.000002 |
| 26.500 | 2.649 | -0.000032 | 0.000001 |
| 26.750 | 2.790 | -0.000083 | 0.000001 |
| 27.000 | 3.063 | -0.000093 | 0.000002 |
| 27.250 | 2.979 | 0.000051 | 0.000001 |
| 27.501 | 3.080 | 0.000257 | 0.000005 |
| 27.750 | 3.106 | -0.000091 | 0.000002 |
| 28.001 | 3.114 | -0.000020 | 0.000000 |
| 28.250 | 3.107 | 0.000157 | 0.000003 |



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| | | | |
|---|---|---|---|
| 28.501 | 3.108 | -0.000019 | 0.000000 |
| 28.751 | 3.101 | -0.000301 | 0.000005 |
| 29.001 | 3.096 | -0.000044 | 0.000001 |
| 29.250 | 3.098 | 0.000118 | 0.000002 |
| 29.501 | 3.098 | 0.000246 | 0.000004 |
| 29.751 | 3.094 | -0.000159 | 0.000003 |
| 30.001 | 3.093 | 0.000165 | 0.000003 |
| 30.251 | 3.090 | -0.000118 | 0.000002 |
| 30.500 | 3.088 | 0.000222 | 0.000004 |
| 30.750 | 3.093 | 0.000052 | 0.000001 |
| 31.000 | 3.086 | -0.000136 | 0.000002 |
| 31.251 | 3.085 | -0.000202 | 0.000004 |
| 31.500 | 3.089 | -0.000152 | 0.000003 |
| 31.751 | 3.086 | 0.000177 | 0.000003 |
| 32.000 | 3.091 | -0.000109 | 0.000002 |
| 32.250 | 3.082 | -0.000233 | 0.000004 |
| 32.501 | 3.086 | 0.000200 | 0.000004 |
| 32.750 | 3.085 | 0.000102 | 0.000002 |
| 33.000 | 3.084 | -0.000240 | 0.000004 |
| 33.251 | 3.086 | -0.000309 | 0.000005 |
| 33.500 | 3.090 | 0.000247 | 0.000004 |
| 33.751 | 3.087 | -0.000127 | 0.000002 |
| 34.001 | 3.092 | -0.000099 | 0.000002 |
| 34.250 | 3.095 | 0.000191 | 0.000003 |
| 34.500 | 3.094 | -0.000019 | 0.000000 |
| 34.750 | 3.095 | 0.000167 | 0.000003 |
| 35.000 | 3.090 | 0.000217 | 0.000004 |
| 35.250 | 3.095 | 0.000121 | 0.000002 |
| 35.500 | 3.093 | -0.000098 | 0.000002 |
| 35.750 | 3.099 | -0.000253 | 0.000004 |
| 36.000 | 3.106 | -0.000036 | 0.000001 |
| 36.251 | 3.108 | 0.000198 | 0.000003 |
| 36.501 | 3.108 | 0.000054 | 0.000001 |
| 36.751 | 3.102 | 0.000281 | 0.000005 |
| 37.000 | 3.105 | 0.000178 | 0.000003 |
| 37.250 | 3.107 | 0.000223 | 0.000004 |
| 37.500 | 3.110 | -0.000116 | 0.000002 |
| 37.750 | 3.105 | 0.000349 | 0.000006 |
| 38.000 | 3.105 | 0.000276 | 0.000005 |
| 38.251 | 3.118 | 0.000269 | 0.000005 |
| 38.501 | 3.115 | 0.000090 | 0.000002 |
| 38.750 | 3.118 | 0.000009 | 0.000000 |
| 39.000 | 3.124 | -0.000204 | 0.000004 |
| 39.251 | 3.122 | 0.000130 | 0.000002 |
| 39.500 | 3.121 | -0.000011 | 0.000000 |
| 39.750 | 3.125 | -0.000107 | 0.000002 |
| 40.001 | 3.133 | -0.000040 | 0.000001 |
| 40.250 | 3.129 | 0.000042 | 0.000001 |
| 40.501 | 3.142 | 0.000011 | 0.000000 |
| 40.751 | 3.133 | 0.000005 | 0.000000 |
| 41.000 | 3.131 | -0.000095 | 0.000002 |
| 41.250 | 3.128 | 0.000219 | 0.000004 |
| 41.501 | 3.149 | 0.000029 | 0.000001 |
| 41.750 | 3.141 | 0.000067 | 0.000001 |
| 42.001 | 3.145 | 0.000265 | 0.000005 |
| 42.251 | 3.145 | 0.000000 | 0.000000 |
| 42.501 | 3.146 | -0.000054 | 0.000001 |
| 42.751 | 3.147 | -0.000013 | 0.000000 |
| 43.001 | 3.148 | 0.000120 | 0.000002 |
| 43.250 | 3.151 | -0.000029 | 0.000001 |
| 43.500 | 3.144 | -0.000020 | 0.000000 |
| 43.751 | 3.146 | 0.000033 | 0.000001 |
| 44.001 | 3.146 | -0.000212 | 0.000004 |
| 44.251 | 3.147 | -0.000057 | 0.000001 |
| 44.500 | 3.149 | -0.000016 | 0.000000 |
| 44.750 | 3.150 | -0.000250 | 0.000004 |
| 45.000 | 3.144 | -0.000148 | 0.000003 |
| 45.251 | 3.146 | -0.000248 | 0.000004 |
| 45.500 | 3.152 | 0.000124 | 0.000002 |
| 45.751 | 3.159 | 0.000213 | 0.000004 |
| 46.001 | 3.160 | 0.000259 | 0.000005 |
| 46.250 | 3.172 | -0.000072 | 0.000001 |
| 46.501 | 3.165 | 0.000309 | 0.000005 |
| 46.751 | 3.173 | 0.000124 | 0.000002 |
| 47.000 | 3.168 | -0.000086 | 0.000002 |
| 47.250 | 3.173 | 0.000237 | 0.000004 |
| 47.500 | 3.181 | 0.000045 | 0.000001 |
| 47.750 | 3.178 | 0.000262 | 0.000005 |
| 48.001 | 3.184 | -0.000082 | 0.000001 |
| 48.251 | 3.182 | 0.000214 | 0.000004 |
| 48.500 | 3.189 | -0.000132 | 0.000002 |
| 48.750 | 3.189 | -0.000086 | 0.000001 |
| 49.001 | 3.196 | 0.000091 | 0.000002 |
| 49.251 | 3.194 | 0.000030 | 0.000001 |
| 49.501 | 3.194 | -0.000074 | 0.000001 |
| 49.751 | 3.201 | -0.000030 | 0.000001 |
| 50.000 | 3.206 | 0.000156 | 0.000003 |
| 50.250 | 3.205 | -0.000146 | 0.000003 |
| 50.501 | 3.205 | 0.000080 | 0.000001 |
| 50.751 | 3.204 | 0.000276 | 0.000005 |
| 51.000 | 3.221 | 0.000115 | 0.000002 |
| 51.250 | 3.215 | 0.000141 | 0.000002 |
| 51.500 | 3.213 | 0.000003 | 0.000000 |
| 51.751 | 3.224 | 0.000085 | 0.000001 |
| 52.000 | 3.216 | 0.000211 | 0.000004 |
| 52.251 | 3.230 | -0.000053 | 0.000001 |
| 52.501 | 3.216 | -0.000004 | 0.000000 |
| 52.750 | 3.231 | -0.000023 | 0.000000 |
| 53.001 | 3.232 | -0.000129 | 0.000002 |
| 53.251 | 3.237 | -0.000020 | 0.000000 |
| 53.500 | 3.233 | 0.000017 | 0.000000 |
| 53.751 | 3.243 | 0.000005 | 0.000000 |
| 54.001 | 3.237 | 0.000090 | 0.000002 |
| 54.250 | 3.243 | -0.000017 | 0.000000 |
| 54.500 | 3.246 | 0.000132 | 0.000002 |
| 54.750 | 3.249 | 0.000045 | 0.000001 |
| 55.000 | 3.252 | 0.000213 | 0.000004 |
| 55.250 | 3.251 | -0.000041 | 0.000001 |
| 55.501 | 3.254 | -0.000052 | 0.000001 |
| 55.750 | 3.255 | -0.000103 | 0.000002 |
| 56.000 | 3.260 | -0.000240 | 0.000004 |
| 56.251 | 3.265 | -0.000093 | 0.000002 |
| 56.500 | 3.265 | 0.000045 | 0.000001 |
| 56.750 | 3.261 | 0.000156 | 0.000003 |
| 57.001 | 3.267 | 0.000168 | 0.000003 |
| 57.251 | 3.272 | 0.000217 | 0.000004 |
| 57.501 | 3.274 | 0.000162 | 0.000003 |
| 57.750 | 3.267 | 0.000029 | 0.000000 |
| 58.001 | 3.280 | 0.000125 | 0.000002 |
| 58.250 | 3.277 | 0.000182 | 0.000003 |
| 58.501 | 3.279 | -0.000045 | 0.000001 |
| 58.751 | 3.287 | -0.000008 | 0.000000 |



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| | | | |
|---|---|---|---|
| 59.001 | 3.281 | -0.000020 | 0.000000 |
| 59.250 | 3.288 | 0.000023 | 0.000000 |
| 59.500 | 3.287 | -0.000104 | 0.000002 |
| 59.751 | 3.292 | 0.000113 | 0.000002 |
| 60.001 | 3.297 | -0.000048 | 0.000001 |
| 60.251 | 3.293 | 0.000042 | 0.000001 |
| 60.501 | 3.301 | -0.000392 | 0.000007 |
| 60.750 | 3.304 | -0.000122 | 0.000002 |
| 61.001 | 3.303 | 0.000244 | 0.000004 |
| 61.250 | 3.309 | 0.000050 | 0.000001 |
| 61.501 | 3.306 | -0.000186 | 0.000003 |
| 61.750 | 3.313 | 0.000089 | 0.000002 |
| 62.000 | 3.313 | 0.000118 | 0.000002 |
| 62.250 | 3.316 | 0.000147 | 0.000003 |
| 62.500 | 3.312 | 0.000090 | 0.000002 |
| 62.750 | 3.334 | -0.000037 | 0.000001 |
| 63.001 | 3.327 | -0.000050 | 0.000001 |
| 63.251 | 3.322 | -0.000091 | 0.000002 |
| 63.500 | 3.326 | 0.000043 | 0.000001 |
| 63.751 | 3.330 | -0.000112 | 0.000002 |
| 64.001 | 3.332 | -0.000127 | 0.000002 |
| 64.251 | 3.332 | 0.000257 | 0.000004 |
| 64.500 | 3.326 | 0.000116 | 0.000002 |
| 64.751 | 3.329 | -0.000159 | 0.000003 |
| 65.000 | 3.330 | 0.000018 | 0.000000 |
| 65.250 | 3.333 | 0.000193 | 0.000003 |
| 65.500 | 3.329 | 0.000081 | 0.000001 |
| 65.751 | 3.328 | -0.000069 | 0.000001 |
| 66.000 | 3.328 | -0.000039 | 0.000001 |
| 66.250 | 3.331 | 0.000222 | 0.000004 |
| 66.500 | 3.335 | -0.000185 | 0.000003 |
| 66.751 | 3.327 | -0.000239 | 0.000004 |
| 67.000 | 3.327 | -0.000039 | 0.000001 |
| 67.251 | 3.329 | 0.000062 | 0.000001 |
| 67.501 | 3.331 | 0.000102 | 0.000002 |
| 67.751 | 3.335 | -0.000053 | 0.000001 |
| 68.000 | 3.325 | 0.000088 | 0.000002 |
| 68.251 | 3.328 | -0.000061 | 0.000001 |
| 68.500 | 3.329 | -0.000207 | 0.000004 |
| 68.750 | 3.332 | 0.000184 | 0.000003 |
| 69.000 | 3.332 | 0.000007 | 0.000000 |
| 69.251 | 3.327 | 0.000036 | 0.000001 |
| 69.500 | 3.328 | 0.000163 | 0.000003 |
| 69.751 | 3.330 | 0.000239 | 0.000004 |
| 70.001 | 3.332 | -0.000274 | 0.000005 |
| 70.251 | 3.332 | -0.000306 | 0.000005 |
| 70.501 | 3.327 | 0.000060 | 0.000001 |
| 70.751 | 3.328 | 0.000080 | 0.000001 |
| 71.000 | 3.330 | 0.000120 | 0.000002 |
| 71.250 | 3.333 | 0.000183 | 0.000003 |
| 71.501 | 3.330 | 0.000054 | 0.000001 |
| 71.750 | 3.326 | -0.000059 | 0.000001 |
| 72.001 | 3.337 | -0.000047 | 0.000001 |

==========

MASS BALANCE INFLOW - OUTFLOW VOLUME

==========

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 2.8200 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 2561.86 |
| INFLOW HYDROGRAPH | 3227.56 |
| INFLOW HYDROGRAPHS + RAINFALL | 5789.42 |

==========

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 1.62 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 1868.69 |
| FLOODPLAIN STORAGE | 1021.91 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 2895.91 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 5786.51 |

| CHANNEL FLOW | |
|---|---|
| CHANNEL STORAGE | 2.91 |
| CHANNEL OUTFLOW | 0.00 |
| CHANNEL OUTFLOW AND STORAGE | 2.91 |

==========

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 2895.91 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 5789.42 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

| | |
|---|---|
| THE MAXIMUM INUNDATED AREA IS: | 5861.09 ACRES |
| THE MAXIMUM WETTED FLOODPLAIN AREA IS: | 5859.78 ACRES |
| THE MAXIMUM WETTED CHANNEL AREA IS: | 1.31 ACRES |



BSE Document Control Number: 7323HYD101

```
COMPUTER RUN TIME IS :  2.40259 HRS
THIS OUTPUT FILE WAS TERMINATED ON:   6/15/2011  AT:  19:52:49
```

# APPENDIX E:

## iii. 24 Hour, 10-Year Storm

## SUMMARY.OUT File

NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

SUMMARY.OUT FILE
CREATED WITH VERSION: 2009.06 BUILD NO. 09-11.05.04

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.250 | 18.028 | 0.000000 | 0.000001 |
| 0.500 | 30.000 | 0.000000 | 0.000005 |
| 0.750 | 30.000 | 0.000000 | 0.000001 |
| 1.000 | 30.000 | 0.000000 | 0.000001 |
| 1.250 | 30.000 | 0.000000 | 0.000002 |
| 1.500 | 30.000 | 0.000000 | 0.000002 |
| 1.750 | 30.000 | 0.000000 | 0.000002 |
| 2.000 | 30.000 | 0.000000 | 0.000002 |
| 2.250 | 30.000 | 0.000000 | 0.000001 |
| 2.500 | 30.000 | -0.000001 | 0.000003 |
| 2.750 | 30.000 | -0.000001 | 0.000003 |
| 3.000 | 30.000 | -0.000001 | 0.000002 |
| 3.250 | 30.000 | -0.000001 | 0.000003 |
| 3.500 | 30.000 | -0.000001 | 0.000002 |
| 3.750 | 30.000 | -0.000002 | 0.000003 |
| 4.000 | 30.000 | 0.000002 | 0.000003 |
| 4.250 | 30.000 | -0.000003 | 0.000004 |
| 4.500 | 30.000 | -0.000002 | 0.000003 |
| 4.750 | 30.000 | 0.000004 | 0.000004 |
| 5.000 | 26.464 | 0.000003 | 0.000003 |
| 5.252 | 22.632 | 0.000002 | 0.000002 |
| 5.503 | 21.023 | -0.000004 | 0.000003 |
| 5.752 | 18.662 | -0.000001 | 0.000001 |
| 6.001 | 19.538 | 0.000005 | 0.000003 |
| 6.254 | 17.145 | 0.000004 | 0.000002 |
| 6.503 | 15.710 | 0.000004 | 0.000002 |
| 6.752 | 14.250 | 0.000007 | 0.000003 |
| 7.001 | 13.596 | 0.000004 | 0.000002 |
| 7.252 | 12.363 | -0.000005 | 0.000002 |
| 7.503 | 11.147 | 0.000008 | 0.000003 |
| 7.751 | 9.618 | 0.000010 | 0.000003 |
| 8.000 | 8.622 | 0.000004 | 0.000001 |
| 8.251 | 7.585 | 0.000000 | 0.000000 |
| 8.500 | 7.064 | 0.000003 | 0.000001 |
| 8.751 | 6.742 | -0.000015 | 0.000003 |
| 9.001 | 6.474 | 0.000003 | 0.000001 |
| 9.250 | 6.108 | -0.000010 | 0.000002 |
| 9.501 | 5.598 | 0.000007 | 0.000001 |
| 9.751 | 5.095 | -0.000028 | 0.000005 |
| 10.000 | 4.956 | -0.000017 | 0.000003 |
| 10.251 | 4.459 | 0.000017 | 0.000003 |
| 10.500 | 4.045 | 0.000016 | 0.000002 |
| 10.750 | 3.768 | -0.000029 | 0.000004 |
| 11.001 | 3.679 | -0.000055 | 0.000006 |
| 11.250 | 3.540 | -0.000007 | 0.000001 |
| 11.501 | 3.494 | -0.000024 | 0.000002 |
| 11.751 | 3.321 | -0.000024 | 0.000002 |
| 12.000 | 2.739 | 0.000020 | 0.000002 |
| 12.250 | 1.736 | 0.000006 | 0.000000 |
| 12.500 | 1.575 | -0.000014 | 0.000001 |
| 12.750 | 1.432 | -0.000002 | 0.000000 |
| 13.000 | 1.274 | 0.000008 | 0.000001 |
| 13.250 | 1.102 | 0.000040 | 0.000002 |
| 13.500 | 1.303 | -0.000004 | 0.000000 |
| 13.750 | 1.386 | 0.000067 | 0.000003 |
| 14.001 | 1.804 | -0.000045 | 0.000002 |
| 14.250 | 2.106 | -0.000002 | 0.000000 |
| 14.501 | 2.128 | 0.000027 | 0.000001 |
| 14.751 | 2.772 | -0.000065 | 0.000003 |
| 15.001 | 2.759 | 0.000063 | 0.000002 |
| 15.250 | 2.627 | -0.000053 | 0.000002 |
| 15.501 | 2.430 | -0.000031 | 0.000001 |
| 15.750 | 1.701 | -0.000028 | 0.000001 |
| 16.000 | 1.322 | -0.000109 | 0.000004 |
| 16.250 | 1.353 | -0.000139 | 0.000004 |
| 16.500 | 1.392 | 0.000048 | 0.000001 |
| 16.751 | 1.914 | -0.000048 | 0.000001 |
| 17.000 | 2.287 | -0.000083 | 0.000002 |
| 17.250 | 2.053 | -0.000081 | 0.000002 |
| 17.500 | 2.073 | -0.000110 | 0.000003 |
| 17.750 | 2.032 | -0.000055 | 0.000002 |
| 18.001 | 2.147 | 0.000099 | 0.000003 |
| 18.251 | 2.222 | -0.000047 | 0.000001 |
| 18.500 | 2.205 | -0.000065 | 0.000002 |
| 18.750 | 2.369 | 0.000009 | 0.000000 |
| 19.000 | 2.307 | -0.000065 | 0.000002 |
| 19.250 | 2.442 | 0.000036 | 0.000001 |
| 19.500 | 2.597 | 0.000074 | 0.000002 |
| 19.751 | 2.454 | -0.000057 | 0.000002 |
| 20.000 | 2.566 | -0.000034 | 0.000001 |
| 20.250 | 2.696 | 0.000120 | 0.000003 |
| 20.501 | 2.613 | -0.000147 | 0.000004 |
| 20.750 | 2.666 | -0.000048 | 0.000001 |
| 21.000 | 2.755 | -0.000066 | 0.000002 |
| 21.251 | 2.881 | -0.000029 | 0.000001 |
| 21.500 | 2.841 | 0.000007 | 0.000000 |
| 21.751 | 2.889 | -0.000079 | 0.000002 |
| 22.001 | 2.779 | -0.000061 | 0.000002 |
| 22.250 | 2.832 | 0.000000 | 0.000000 |
| 22.500 | 2.853 | -0.000144 | 0.000004 |
| 22.750 | 2.945 | -0.000009 | 0.000000 |
| 23.000 | 3.001 | -0.000118 | 0.000003 |
| 23.250 | 3.014 | -0.000130 | 0.000003 |
| 23.500 | 3.041 | 0.000034 | 0.000001 |
| 23.751 | 2.992 | -0.000161 | 0.000004 |
| 24.000 | 2.907 | -0.000084 | 0.000002 |
| 24.250 | 2.516 | -0.000180 | 0.000005 |
| 24.500 | 2.971 | -0.000109 | 0.000003 |
| 24.750 | 2.543 | -0.000127 | 0.000003 |
| 25.001 | 2.926 | -0.000019 | 0.000000 |
| 25.251 | 3.093 | 0.000098 | 0.000002 |
| 25.500 | 2.962 | 0.000012 | 0.000000 |
| 25.751 | 3.120 | -0.000094 | 0.000002 |
| 26.001 | 2.944 | -0.000107 | 0.000003 |
| 26.250 | 3.185 | -0.000110 | 0.000003 |
| 26.501 | 3.122 | -0.000022 | 0.000001 |
| 26.750 | 3.149 | -0.000041 | 0.000001 |
| 27.001 | 3.244 | -0.000229 | 0.000006 |
| 27.250 | 3.281 | 0.000036 | 0.000001 |
| 27.501 | 3.289 | -0.000040 | 0.000001 |
| 27.751 | 3.294 | -0.000028 | 0.000001 |
| 28.000 | 3.246 | -0.000062 | 0.000002 |
| 28.251 | 3.161 | -0.000025 | 0.000001 |



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| | | | |
|---|---|---|---|
| 28.500 | 3.198 | -0.000017 | 0.000000 |
| 28.750 | 3.224 | -0.000079 | 0.000002 |
| 29.000 | 3.227 | -0.000007 | 0.000000 |
| 29.250 | 3.229 | -0.000180 | 0.000004 |
| 29.501 | 3.242 | -0.000049 | 0.000001 |
| 29.750 | 3.228 | -0.000117 | 0.000003 |
| 30.001 | 3.221 | 0.000015 | 0.000000 |
| 30.250 | 3.243 | -0.000027 | 0.000001 |
| 30.500 | 3.241 | -0.000049 | 0.000001 |
| 30.751 | 3.218 | 0.000024 | 0.000001 |
| 31.001 | 3.159 | -0.000103 | 0.000003 |
| 31.251 | 3.181 | 0.000074 | 0.000002 |
| 31.501 | 3.131 | -0.000132 | 0.000003 |
| 31.751 | 3.107 | -0.000091 | 0.000002 |
| 32.000 | 3.044 | -0.000005 | 0.000000 |
| 32.250 | 3.023 | 0.000030 | 0.000001 |
| 32.500 | 3.015 | -0.000072 | 0.000002 |
| 32.750 | 3.010 | -0.000240 | 0.000006 |
| 33.000 | 2.994 | 0.000018 | 0.000000 |
| 33.250 | 2.961 | 0.000000 | 0.000000 |
| 33.500 | 2.920 | 0.000065 | 0.000002 |
| 33.751 | 2.938 | -0.000102 | 0.000003 |
| 34.001 | 2.865 | -0.000153 | 0.000004 |
| 34.251 | 2.857 | -0.000161 | 0.000004 |
| 34.501 | 2.866 | 0.000094 | 0.000002 |
| 34.750 | 2.815 | -0.000034 | 0.000001 |
| 35.001 | 2.835 | -0.000096 | 0.000002 |
| 35.250 | 2.781 | -0.000087 | 0.000002 |
| 35.500 | 2.774 | -0.000037 | 0.000001 |
| 35.750 | 2.749 | 0.000032 | 0.000001 |
| 36.000 | 2.711 | -0.000206 | 0.000005 |
| 36.250 | 2.711 | 0.000059 | 0.000001 |
| 36.501 | 2.642 | -0.000085 | 0.000002 |
| 36.750 | 2.623 | -0.000085 | 0.000002 |
| 37.001 | 2.604 | -0.000163 | 0.000004 |
| 37.250 | 2.596 | 0.000031 | 0.000001 |
| 37.501 | 2.575 | -0.000188 | 0.000005 |
| 37.750 | 2.569 | -0.000099 | 0.000002 |
| 38.000 | 2.539 | -0.000028 | 0.000001 |
| 38.250 | 2.564 | -0.000009 | 0.000000 |
| 38.501 | 2.549 | 0.000017 | 0.000000 |
| 38.750 | 2.522 | -0.000100 | 0.000002 |
| 39.000 | 2.501 | -0.000233 | 0.000006 |
| 39.250 | 2.545 | -0.000088 | 0.000002 |
| 39.500 | 2.497 | -0.000158 | 0.000004 |
| 39.751 | 2.449 | -0.000175 | 0.000004 |
| 40.000 | 2.478 | -0.000111 | 0.000003 |
| 40.250 | 2.470 | -0.000111 | 0.000003 |
| 40.501 | 2.496 | -0.000185 | 0.000005 |
| 40.751 | 2.468 | 0.000008 | 0.000000 |
| 41.000 | 2.489 | -0.000029 | 0.000001 |
| 41.251 | 2.468 | 0.000063 | 0.000002 |
| 41.500 | 2.477 | -0.000215 | 0.000005 |
| 41.751 | 2.490 | -0.000078 | 0.000002 |
| 42.001 | 2.458 | -0.000141 | 0.000003 |
| 42.250 | 2.463 | 0.000013 | 0.000000 |
| 42.500 | 2.467 | -0.000180 | 0.000004 |
| 42.751 | 2.441 | -0.000264 | 0.000006 |
| 43.000 | 2.453 | -0.000012 | 0.000000 |
| 43.251 | 2.451 | -0.000113 | 0.000003 |
| 43.501 | 2.439 | -0.000209 | 0.000005 |
| 43.751 | 2.432 | -0.000028 | 0.000001 |
| 44.000 | 2.455 | -0.000097 | 0.000002 |
| 44.250 | 2.476 | -0.000043 | 0.000001 |
| 44.500 | 2.444 | -0.000192 | 0.000005 |
| 44.750 | 2.479 | -0.000129 | 0.000003 |
| 45.001 | 2.410 | 0.000029 | 0.000001 |
| 45.251 | 2.426 | -0.000127 | 0.000003 |
| 45.500 | 2.434 | 0.000030 | 0.000001 |
| 45.750 | 2.473 | 0.000017 | 0.000000 |
| 46.001 | 2.384 | -0.000267 | 0.000007 |
| 46.250 | 2.398 | -0.000048 | 0.000001 |
| 46.500 | 2.418 | -0.000119 | 0.000003 |
| 46.751 | 2.396 | -0.000032 | 0.000001 |
| 47.000 | 2.378 | -0.000119 | 0.000003 |
| 47.250 | 2.383 | -0.000155 | 0.000004 |
| 47.500 | 2.378 | 0.000032 | 0.000001 |
| 47.751 | 2.393 | -0.000012 | 0.000000 |
| 48.000 | 2.333 | -0.000007 | 0.000000 |
| 48.250 | 2.421 | -0.000048 | 0.000001 |
| 48.500 | 2.311 | 0.000118 | 0.000003 |
| 48.750 | 2.441 | 0.000048 | 0.000001 |
| 49.000 | 2.331 | 0.000054 | 0.000001 |
| 49.250 | 2.306 | -0.000088 | 0.000002 |
| 49.500 | 2.331 | -0.000109 | 0.000003 |
| 49.750 | 2.357 | -0.000119 | 0.000003 |
| 50.000 | 2.275 | -0.000076 | 0.000002 |
| 50.250 | 2.362 | -0.000125 | 0.000003 |
| 50.500 | 2.431 | -0.000019 | 0.000000 |
| 50.750 | 2.381 | -0.000179 | 0.000004 |
| 51.001 | 2.404 | -0.000193 | 0.000005 |
| 51.250 | 2.391 | -0.000179 | 0.000004 |
| 51.500 | 2.350 | 0.000035 | 0.000001 |
| 51.750 | 2.343 | -0.000020 | 0.000000 |
| 52.000 | 2.324 | -0.000135 | 0.000003 |
| 52.251 | 2.308 | -0.000166 | 0.000004 |
| 52.500 | 2.296 | -0.000145 | 0.000004 |
| 52.750 | 2.287 | -0.000039 | 0.000001 |
| 53.000 | 2.303 | -0.000059 | 0.000001 |
| 53.251 | 2.280 | -0.000119 | 0.000003 |
| 53.500 | 2.291 | -0.000036 | 0.000001 |
| 53.751 | 2.277 | 0.000010 | 0.000000 |
| 54.000 | 2.270 | -0.000009 | 0.000000 |
| 54.250 | 2.283 | -0.000179 | 0.000004 |
| 54.500 | 2.291 | -0.000205 | 0.000005 |
| 54.750 | 2.290 | -0.000115 | 0.000003 |
| 55.000 | 2.273 | -0.000079 | 0.000002 |
| 55.250 | 2.290 | -0.000109 | 0.000003 |
| 55.500 | 2.309 | 0.000004 | 0.000000 |
| 55.750 | 2.297 | 0.000043 | 0.000001 |
| 56.000 | 2.277 | 0.000017 | 0.000000 |
| 56.251 | 2.304 | 0.000121 | 0.000003 |
| 56.500 | 2.279 | -0.000065 | 0.000002 |
| 56.751 | 2.296 | -0.000057 | 0.000001 |
| 57.000 | 2.306 | 0.000054 | 0.000001 |
| 57.250 | 2.289 | -0.000119 | 0.000003 |
| 57.500 | 2.288 | -0.000214 | 0.000005 |
| 57.750 | 2.286 | -0.000052 | 0.000001 |
| 58.000 | 2.296 | -0.000197 | 0.000005 |
| 58.250 | 2.294 | 0.000035 | 0.000001 |
| 58.501 | 2.300 | -0.000070 | 0.000002 |
| 58.750 | 2.299 | -0.000108 | 0.000003 |



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|---|---|---|---|
| 59.000 | 2.289 | -0.000193 | 0.000005 |
| 59.250 | 2.289 | -0.000103 | 0.000003 |
| 59.500 | 2.276 | -0.000092 | 0.000002 |
| 59.750 | 2.307 | -0.000108 | 0.000003 |
| 60.000 | 2.279 | 0.000091 | 0.000002 |
| 60.250 | 2.289 | -0.000131 | 0.000003 |
| 60.501 | 2.281 | 0.000024 | 0.000001 |
| 60.751 | 2.296 | 0.000131 | 0.000003 |
| 61.001 | 2.274 | 0.000016 | 0.000000 |
| 61.250 | 2.297 | 0.000050 | 0.000001 |
| 61.501 | 2.279 | -0.000074 | 0.000002 |
| 61.750 | 2.292 | -0.000061 | 0.000001 |
| 62.000 | 2.289 | 0.000184 | 0.000004 |
| 62.250 | 2.297 | 0.000006 | 0.000000 |
| 62.500 | 2.293 | -0.000041 | 0.000001 |
| 62.750 | 2.273 | -0.000034 | 0.000001 |
| 63.000 | 2.276 | -0.000233 | 0.000006 |
| 63.250 | 2.291 | -0.000035 | 0.000001 |
| 63.500 | 2.264 | -0.000008 | 0.000000 |
| 63.750 | 2.285 | -0.000287 | 0.000007 |
| 64.000 | 2.290 | -0.000139 | 0.000003 |
| 64.250 | 2.302 | -0.000078 | 0.000002 |
| 64.501 | 2.275 | -0.000114 | 0.000003 |
| 64.750 | 2.280 | 0.000029 | 0.000001 |
| 65.000 | 2.283 | -0.000192 | 0.000005 |
| 65.250 | 2.292 | -0.000051 | 0.000001 |
| 65.500 | 2.290 | 0.000011 | 0.000000 |
| 65.751 | 2.299 | 0.000076 | 0.000002 |
| 66.000 | 2.279 | -0.000073 | 0.000002 |
| 66.250 | 2.282 | -0.000188 | 0.000005 |
| 66.500 | 2.301 | -0.000081 | 0.000002 |
| 66.750 | 2.301 | -0.000077 | 0.000002 |
| 67.000 | 2.268 | -0.000230 | 0.000006 |
| 67.251 | 2.285 | -0.000083 | 0.000002 |
| 67.500 | 2.293 | 0.000122 | 0.000003 |
| 67.750 | 2.308 | 0.000000 | 0.000000 |
| 68.000 | 2.292 | 0.000072 | 0.000002 |
| 68.250 | 2.293 | -0.000098 | 0.000002 |
| 68.500 | 2.295 | -0.000019 | 0.000000 |
| 68.750 | 2.281 | -0.000190 | 0.000005 |
| 69.000 | 2.308 | -0.000242 | 0.000006 |
| 69.250 | 2.274 | -0.000002 | 0.000000 |
| 69.500 | 2.289 | -0.000063 | 0.000002 |
| 69.751 | 2.274 | -0.000238 | 0.000006 |
| 70.001 | 2.304 | -0.000114 | 0.000003 |
| 70.250 | 2.309 | -0.000029 | 0.000001 |
| 70.500 | 2.273 | 0.000014 | 0.000000 |
| 70.750 | 2.280 | -0.000039 | 0.000001 |
| 71.000 | 2.292 | 0.000125 | 0.000003 |
| 71.250 | 2.288 | -0.000147 | 0.000004 |
| 71.500 | 2.277 | -0.000047 | 0.000001 |
| 71.750 | 2.274 | -0.000070 | 0.000002 |
| 72.000 | 2.278 | -0.000056 | 0.000001 |

==========

MASS BALANCE INFLOW - OUTFLOW VOLUME

==========

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 2.1900 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 2002.02 |
| INFLOW HYDROGRAPH | 2147.48 |
| INFLOW HYDROGRAPHS + RAINFALL | 4149.49 |

==========

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 1.39 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 1608.05 |
| FLOODPLAIN STORAGE | 755.30 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 1783.23 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 4146.58 |

| CHANNEL FLOW | |
|---|---|
| CHANNEL STORAGE | 2.91 |
| CHANNEL OUTFLOW | 0.00 |
| CHANNEL OUTFLOW AND STORAGE | 2.91 |

==========

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 1783.23 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 4149.49 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

| | |
|---|---|
| THE MAXIMUM INUNDATED AREA IS: | 4229.49 ACRES |
| THE MAXIMUM WETTED FLOODPLAIN AREA IS: | 4228.15 ACRES |
| THE MAXIMUM WETTED CHANNEL AREA IS: | 1.34 ACRES |



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```
COMPUTER RUN TIME IS :  2.60205 HRS
THIS OUTPUT FILE WAS TERMINATED ON:   6/15/2011  AT:  16:41: 0
```

# APPENDIX E:

## iv. 24 Hour, 5-Year Storm

## SUMMARY.OUT File

NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

SUMMARY.OUT FILE
CREATED WITH VERSION: 2009.06 BUILD NO. 2009.18.03

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.250 | 18.028 | 0.000000 | 0.000004 |
| 0.500 | 30.000 | 0.000000 | 0.000003 |
| 0.750 | 30.000 | 0.000000 | 0.000002 |
| 1.000 | 30.000 | 0.000000 | 0.000001 |
| 1.250 | 30.000 | 0.000000 | 0.000002 |
| 1.500 | 30.000 | 0.000000 | 0.000004 |
| 1.750 | 30.000 | 0.000000 | 0.000004 |
| 2.000 | 30.000 | 0.000000 | 0.000003 |
| 2.250 | 30.000 | 0.000001 | 0.000005 |
| 2.500 | 30.000 | 0.000001 | 0.000003 |
| 2.750 | 30.000 | 0.000000 | 0.000002 |
| 3.000 | 30.000 | -0.000001 | 0.000003 |
| 3.250 | 30.000 | 0.000001 | 0.000002 |
| 3.500 | 30.000 | 0.000001 | 0.000003 |
| 3.750 | 30.000 | -0.000002 | 0.000004 |
| 4.000 | 30.000 | -0.000002 | 0.000003 |
| 4.250 | 30.000 | 0.000000 | 0.000001 |
| 4.500 | 30.000 | 0.000004 | 0.000005 |
| 4.750 | 30.000 | -0.000004 | 0.000005 |
| 5.000 | 30.000 | -0.000003 | 0.000003 |
| 5.250 | 30.000 | 0.000000 | 0.000000 |
| 5.502 | 25.177 | 0.000000 | 0.000000 |
| 5.750 | 22.329 | -0.000002 | 0.000002 |
| 6.002 | 21.096 | 0.000007 | 0.000005 |
| 6.254 | 18.910 | 0.000006 | 0.000004 |
| 6.500 | 19.677 | 0.000007 | 0.000004 |
| 6.755 | 19.897 | 0.000004 | 0.000002 |
| 7.001 | 18.447 | -0.000008 | 0.000004 |
| 7.254 | 16.275 | 0.000001 | 0.000000 |
| 7.502 | 13.946 | -0.000007 | 0.000003 |
| 7.753 | 12.557 | -0.000005 | 0.000002 |
| 8.001 | 11.460 | 0.000005 | 0.000002 |
| 8.251 | 10.348 | 0.000015 | 0.000005 |
| 8.501 | 9.357 | -0.000005 | 0.000002 |
| 8.752 | 8.140 | 0.000014 | 0.000004 |
| 9.000 | 7.395 | 0.000014 | 0.000004 |
| 9.251 | 7.045 | 0.000006 | 0.000001 |
| 9.502 | 6.861 | 0.000011 | 0.000003 |
| 9.751 | 6.500 | 0.000010 | 0.000002 |
| 10.001 | 6.229 | -0.000011 | 0.000002 |
| 10.250 | 5.691 | -0.000009 | 0.000002 |
| 10.501 | 5.189 | -0.000028 | 0.000005 |
| 10.750 | 4.951 | -0.000027 | 0.000004 |
| 11.001 | 4.605 | 0.000004 | 0.000001 |
| 11.251 | 4.124 | 0.000024 | 0.000003 |
| 11.500 | 3.876 | -0.000004 | 0.000001 |
| 11.751 | 3.755 | -0.000014 | 0.000002 |
| 12.000 | 3.649 | -0.000028 | 0.000003 |
| 12.251 | 3.524 | 0.000007 | 0.000001 |
| 12.501 | 3.435 | 0.000009 | 0.000001 |
| 12.750 | 3.282 | 0.000030 | 0.000003 |
| 13.000 | 3.135 | 0.000032 | 0.000003 |
| 13.250 | 1.952 | -0.000028 | 0.000002 |
| 13.500 | 1.801 | -0.000018 | 0.000001 |
| 13.750 | 1.647 | 0.000027 | 0.000002 |
| 14.000 | 1.578 | -0.000046 | 0.000003 |
| 14.250 | 1.562 | -0.000059 | 0.000004 |
| 14.500 | 1.529 | 0.000039 | 0.000002 |
| 14.750 | 1.395 | -0.000001 | 0.000000 |
| 15.000 | 1.461 | -0.000065 | 0.000003 |
| 15.250 | 1.978 | 0.000031 | 0.000002 |
| 15.500 | 2.093 | -0.000019 | 0.000001 |
| 15.750 | 2.627 | -0.000039 | 0.000002 |
| 16.000 | 2.853 | 0.000030 | 0.000001 |
| 16.250 | 2.813 | -0.000056 | 0.000002 |
| 16.500 | 2.681 | -0.000002 | 0.000000 |
| 16.751 | 2.506 | 0.000021 | 0.000001 |
| 17.000 | 2.480 | -0.000014 | 0.000001 |
| 17.250 | 2.488 | -0.000034 | 0.000001 |
| 17.501 | 2.524 | -0.000043 | 0.000002 |
| 17.751 | 2.548 | -0.000058 | 0.000002 |
| 18.000 | 2.520 | 0.000040 | 0.000002 |
| 18.251 | 2.573 | -0.000015 | 0.000001 |
| 18.500 | 2.766 | 0.000001 | 0.000000 |
| 18.751 | 2.830 | 0.000026 | 0.000001 |
| 19.001 | 2.946 | -0.000017 | 0.000001 |
| 19.250 | 2.930 | 0.000133 | 0.000005 |
| 19.501 | 3.106 | 0.000084 | 0.000003 |
| 19.751 | 2.885 | 0.000032 | 0.000001 |
| 20.000 | 3.087 | 0.000077 | 0.000003 |
| 20.250 | 3.285 | 0.000012 | 0.000000 |
| 20.501 | 3.094 | -0.000075 | 0.000003 |
| 20.751 | 3.218 | 0.000046 | 0.000002 |
| 21.000 | 3.219 | -0.000014 | 0.000000 |
| 21.250 | 3.236 | 0.000008 | 0.000000 |
| 21.501 | 3.197 | -0.000026 | 0.000001 |
| 21.751 | 3.450 | 0.000031 | 0.000001 |
| 22.000 | 3.069 | -0.000062 | 0.000002 |
| 22.250 | 3.330 | 0.000074 | 0.000003 |
| 22.500 | 3.146 | -0.000057 | 0.000002 |
| 22.751 | 3.449 | 0.000032 | 0.000001 |
| 23.001 | 3.344 | 0.000126 | 0.000004 |
| 23.251 | 3.378 | -0.000061 | 0.000002 |
| 23.500 | 3.353 | 0.000060 | 0.000002 |
| 23.750 | 3.373 | -0.000020 | 0.000001 |
| 24.001 | 3.386 | 0.000060 | 0.000002 |
| 24.250 | 3.472 | 0.000005 | 0.000000 |
| 24.500 | 3.082 | -0.000034 | 0.000001 |
| 24.751 | 3.380 | -0.000043 | 0.000001 |
| 25.000 | 3.441 | -0.000036 | 0.000001 |
| 25.251 | 3.316 | 0.000018 | 0.000001 |
| 25.501 | 3.176 | -0.000039 | 0.000001 |
| 25.751 | 3.260 | -0.000054 | 0.000002 |
| 26.000 | 3.390 | 0.000031 | 0.000001 |
| 26.250 | 3.501 | -0.000063 | 0.000002 |
| 26.500 | 3.503 | -0.000063 | 0.000002 |
| 26.751 | 3.508 | -0.000035 | 0.000001 |
| 27.001 | 3.487 | 0.000011 | 0.000000 |
| 27.251 | 3.466 | -0.000065 | 0.000002 |
| 27.500 | 3.451 | -0.000024 | 0.000001 |
| 27.750 | 3.449 | -0.000071 | 0.000002 |
| 28.000 | 3.434 | 0.000036 | 0.000001 |
| 28.251 | 3.431 | -0.000021 | 0.000001 |



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| | | | |
|---|---|---|---|
| 28.500 | 3.432 | -0.000019 | 0.000001 |
| 28.750 | 3.432 | -0.000086 | 0.000003 |
| 29.000 | 3.424 | 0.000052 | 0.000002 |
| 29.251 | 3.426 | -0.000072 | 0.000002 |
| 29.500 | 3.420 | -0.000029 | 0.000001 |
| 29.750 | 3.405 | 0.000012 | 0.000000 |
| 30.001 | 3.403 | -0.000125 | 0.000004 |
| 30.250 | 3.389 | -0.000054 | 0.000002 |
| 30.501 | 3.395 | 0.000002 | 0.000000 |
| 30.750 | 3.389 | -0.000040 | 0.000001 |
| 31.000 | 3.392 | -0.000058 | 0.000002 |
| 31.251 | 3.391 | 0.000047 | 0.000002 |
| 31.500 | 3.392 | 0.000052 | 0.000002 |
| 31.750 | 3.393 | -0.000080 | 0.000003 |
| 32.001 | 3.390 | -0.000061 | 0.000002 |
| 32.250 | 3.393 | -0.000114 | 0.000004 |
| 32.500 | 3.392 | 0.000076 | 0.000003 |
| 32.751 | 3.392 | 0.000047 | 0.000002 |
| 33.000 | 3.392 | 0.000004 | 0.000000 |
| 33.250 | 3.393 | 0.000035 | 0.000001 |
| 33.501 | 3.391 | -0.000035 | 0.000001 |
| 33.751 | 3.396 | 0.000042 | 0.000001 |
| 34.001 | 3.401 | -0.000068 | 0.000002 |
| 34.251 | 3.395 | -0.000069 | 0.000002 |
| 34.500 | 3.402 | -0.000018 | 0.000001 |
| 34.750 | 3.405 | 0.000014 | 0.000000 |
| 35.000 | 3.407 | -0.000078 | 0.000003 |
| 35.250 | 3.411 | 0.000014 | 0.000000 |
| 35.500 | 3.399 | -0.000153 | 0.000005 |
| 35.751 | 3.415 | -0.000056 | 0.000002 |
| 36.001 | 3.412 | -0.000118 | 0.000004 |
| 36.250 | 3.411 | -0.000012 | 0.000000 |
| 36.501 | 3.416 | -0.000117 | 0.000004 |
| 36.750 | 3.414 | 0.000006 | 0.000000 |
| 37.001 | 3.415 | -0.000056 | 0.000002 |
| 37.250 | 3.415 | 0.000017 | 0.000001 |
| 37.501 | 3.415 | 0.000023 | 0.000001 |
| 37.750 | 3.420 | -0.000015 | 0.000001 |
| 38.001 | 3.417 | 0.000005 | 0.000000 |
| 38.250 | 3.427 | 0.000049 | 0.000002 |
| 38.501 | 3.413 | 0.000044 | 0.000001 |
| 38.751 | 3.424 | -0.000055 | 0.000002 |
| 39.001 | 3.422 | 0.000029 | 0.000001 |
| 39.251 | 3.421 | -0.000099 | 0.000003 |
| 39.501 | 3.422 | -0.000076 | 0.000003 |
| 39.750 | 3.420 | 0.000041 | 0.000001 |
| 40.000 | 3.420 | -0.000013 | 0.000000 |
| 40.251 | 3.416 | -0.000136 | 0.000005 |
| 40.500 | 3.417 | -0.000047 | 0.000002 |
| 40.750 | 3.417 | -0.000103 | 0.000003 |
| 41.000 | 3.423 | 0.000047 | 0.000002 |
| 41.251 | 3.418 | 0.000065 | 0.000002 |
| 41.500 | 3.417 | -0.000064 | 0.000002 |
| 41.750 | 3.420 | 0.000016 | 0.000001 |
| 42.001 | 3.429 | 0.000069 | 0.000002 |
| 42.251 | 3.421 | 0.000091 | 0.000003 |
| 42.500 | 3.420 | -0.000121 | 0.000004 |
| 42.750 | 3.419 | -0.000017 | 0.000001 |
| 43.000 | 3.419 | -0.000022 | 0.000001 |
| 43.250 | 3.425 | -0.000005 | 0.000000 |
| 43.500 | 3.423 | -0.000010 | 0.000000 |
| 43.750 | 3.423 | -0.000082 | 0.000003 |
| 44.000 | 3.422 | -0.000069 | 0.000002 |
| 44.250 | 3.420 | -0.000081 | 0.000003 |
| 44.501 | 3.422 | 0.000061 | 0.000002 |
| 44.750 | 3.422 | 0.000021 | 0.000001 |
| 45.001 | 3.416 | -0.000061 | 0.000002 |
| 45.250 | 3.420 | -0.000119 | 0.000004 |
| 45.500 | 3.421 | -0.000013 | 0.000000 |
| 45.750 | 3.419 | -0.000024 | 0.000001 |
| 46.001 | 3.420 | -0.000037 | 0.000001 |
| 46.251 | 3.420 | 0.000016 | 0.000001 |
| 46.501 | 3.420 | -0.000109 | 0.000004 |
| 46.750 | 3.419 | 0.000090 | 0.000003 |
| 47.000 | 3.417 | 0.000007 | 0.000000 |
| 47.251 | 3.416 | -0.000064 | 0.000002 |
| 47.500 | 3.419 | -0.000122 | 0.000004 |
| 47.750 | 3.419 | 0.000047 | 0.000002 |
| 48.001 | 3.420 | -0.000058 | 0.000002 |
| 48.250 | 3.417 | -0.000037 | 0.000001 |
| 48.500 | 3.418 | -0.000026 | 0.000001 |
| 48.750 | 3.411 | 0.000035 | 0.000001 |
| 49.000 | 3.418 | -0.000052 | 0.000002 |
| 49.251 | 3.415 | -0.000150 | 0.000005 |
| 49.500 | 3.417 | -0.000093 | 0.000003 |
| 49.751 | 3.418 | 0.000016 | 0.000001 |
| 50.000 | 3.417 | 0.000024 | 0.000001 |
| 50.251 | 3.416 | 0.000028 | 0.000001 |
| 50.500 | 3.416 | 0.000028 | 0.000001 |
| 50.751 | 3.416 | 0.000010 | 0.000000 |
| 51.001 | 3.416 | 0.000065 | 0.000002 |
| 51.250 | 3.408 | -0.000009 | 0.000000 |
| 51.501 | 3.413 | 0.000039 | 0.000001 |
| 51.751 | 3.419 | -0.000038 | 0.000001 |
| 52.000 | 3.416 | -0.000076 | 0.000003 |
| 52.250 | 3.412 | -0.000025 | 0.000001 |
| 52.501 | 3.415 | -0.000066 | 0.000002 |
| 52.750 | 3.413 | -0.000069 | 0.000002 |
| 53.001 | 3.415 | -0.000051 | 0.000002 |
| 53.251 | 3.413 | -0.000011 | 0.000000 |
| 53.500 | 3.412 | -0.000001 | 0.000000 |
| 53.751 | 3.407 | -0.000047 | 0.000002 |
| 54.000 | 3.417 | -0.000072 | 0.000002 |
| 54.251 | 3.410 | -0.000063 | 0.000002 |
| 54.501 | 3.401 | -0.000056 | 0.000002 |
| 54.751 | 3.405 | 0.000026 | 0.000001 |
| 55.000 | 3.402 | -0.000065 | 0.000002 |
| 55.250 | 3.401 | 0.000027 | 0.000001 |
| 55.501 | 3.403 | 0.000018 | 0.000001 |
| 55.750 | 3.402 | -0.000055 | 0.000002 |
| 56.000 | 3.393 | 0.000030 | 0.000001 |
| 56.251 | 3.391 | 0.000043 | 0.000001 |
| 56.500 | 3.393 | -0.000015 | 0.000001 |
| 56.750 | 3.391 | -0.000101 | 0.000003 |
| 57.001 | 3.392 | -0.000101 | 0.000003 |
| 57.250 | 3.391 | -0.000117 | 0.000004 |
| 57.500 | 3.393 | 0.000028 | 0.000001 |
| 57.751 | 3.391 | 0.000039 | 0.000001 |
| 58.000 | 3.393 | -0.000031 | 0.000001 |
| 58.251 | 3.391 | -0.000041 | 0.000001 |
| 58.501 | 3.393 | -0.000022 | 0.000001 |
| 58.750 | 3.390 | -0.000010 | 0.000000 |



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| | | | |
|---|---|---|---|
| 59.000 | 3.393 | -0.000074 | 0.000002 |
| 59.251 | 3.391 | -0.000073 | 0.000002 |
| 59.500 | 3.393 | 0.000063 | 0.000002 |
| 59.751 | 3.391 | -0.000013 | 0.000000 |
| 60.001 | 3.393 | -0.000021 | 0.000001 |
| 60.250 | 3.389 | 0.000120 | 0.000004 |
| 60.501 | 3.395 | -0.000063 | 0.000002 |
| 60.750 | 3.389 | -0.000100 | 0.000003 |
| 61.000 | 3.392 | -0.000010 | 0.000000 |
| 61.251 | 3.391 | -0.000096 | 0.000003 |
| 61.500 | 3.392 | -0.000043 | 0.000001 |
| 61.750 | 3.393 | -0.000024 | 0.000001 |
| 62.001 | 3.390 | -0.000019 | 0.000001 |
| 62.250 | 3.393 | 0.000010 | 0.000000 |
| 62.500 | 3.392 | -0.000064 | 0.000002 |
| 62.751 | 3.392 | -0.000015 | 0.000001 |
| 63.000 | 3.392 | -0.000030 | 0.000001 |
| 63.250 | 3.393 | -0.000110 | 0.000004 |
| 63.501 | 3.391 | -0.000039 | 0.000001 |
| 63.750 | 3.393 | 0.000041 | 0.000001 |
| 64.000 | 3.391 | 0.000060 | 0.000002 |
| 64.251 | 3.392 | 0.000036 | 0.000001 |
| 64.500 | 3.391 | -0.000004 | 0.000000 |
| 64.750 | 3.393 | 0.000059 | 0.000002 |
| 65.001 | 3.391 | -0.000018 | 0.000001 |
| 65.250 | 3.393 | -0.000043 | 0.000001 |
| 65.501 | 3.391 | -0.000003 | 0.000000 |
| 65.751 | 3.393 | 0.000079 | 0.000003 |
| 66.000 | 3.390 | -0.000082 | 0.000003 |
| 66.251 | 3.393 | 0.000087 | 0.000003 |
| 66.501 | 3.390 | -0.000026 | 0.000001 |
| 66.750 | 3.393 | -0.000086 | 0.000003 |
| 67.001 | 3.391 | -0.000019 | 0.000001 |
| 67.251 | 3.393 | 0.000068 | 0.000002 |
| 67.500 | 3.389 | -0.000015 | 0.000001 |
| 67.751 | 3.395 | -0.000056 | 0.000002 |
| 68.000 | 3.389 | -0.000016 | 0.000001 |
| 68.250 | 3.392 | -0.000013 | 0.000000 |
| 68.501 | 3.391 | 0.000022 | 0.000001 |
| 68.750 | 3.392 | 0.000011 | 0.000000 |
| 69.000 | 3.393 | -0.000048 | 0.000002 |
| 69.251 | 3.390 | -0.000022 | 0.000001 |
| 69.500 | 3.393 | -0.000035 | 0.000001 |
| 69.750 | 3.392 | -0.000054 | 0.000002 |
| 70.001 | 3.392 | 0.000045 | 0.000001 |
| 70.250 | 3.392 | 0.000021 | 0.000001 |
| 70.500 | 3.393 | 0.000091 | 0.000003 |
| 70.751 | 3.391 | 0.000045 | 0.000002 |
| 71.000 | 3.393 | -0.000029 | 0.000001 |
| 71.250 | 3.391 | -0.000021 | 0.000001 |
| 71.501 | 3.392 | 0.000109 | 0.000004 |
| 71.750 | 3.391 | 0.000042 | 0.000001 |
| 72.000 | 3.393 | -0.000001 | 0.000000 |

==========

MASS BALANCE INFLOW - OUTFLOW VOLUME

==========

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 1.7300 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 1604.92 |
| INFLOW HYDROGRAPH | 1397.82 |
| INFLOW HYDROGRAPHS + RAINFALL | 3002.74 |

==========

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 1.20 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 1383.32 |
| FLOODPLAIN STORAGE | 543.93 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 1072.56 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 2999.82 |

| CHANNEL FLOW | |
|---|---|
| CHANNEL STORAGE | 2.93 |
| CHANNEL OUTFLOW | 0.00 |
| CHANNEL OUTFLOW AND STORAGE | 2.93 |

==========

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 1072.56 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 3002.74 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

| | |
|---|---|
| THE MAXIMUM INUNDATED AREA IS: | 3388.34 ACRES |
| THE MAXIMUM WETTED FLOODPLAIN AREA IS: | 3386.99 ACRES |
| THE MAXIMUM WETTED CHANNEL AREA IS: | 1.35 ACRES |



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==========================================================================================================================

     COMPUTER RUN TIME IS :  2.05566 HRS
     THIS OUTPUT FILE WAS TERMINATED ON:   6/15/2011  AT:  20:34: 7
```

# APPENDIX E:

## v. 24 Hour, 2-Year Storm

## SUMMARY.OUT File

NEGATIVE VOLUME CONSERVATION (ACRE FEET)
INDICATES EXCESS VOLUME (OUTFLOW + STORAGE > INFLOW)

SUMMARY.OUT FILE
CREATED WITH VERSION: 2009.06 BUILD NO. 2009.18.03

| SIMULATION TIME (HOURS) | AVERAGE TIMESTEP (SECONDS) | VOLUME CONSERVATION (ACRE FEET) | PERCENT OF INFLOW |
|---|---|---|---|
| 0.250 | 18.028 | 0.000000 | 0.000003 |
| 0.500 | 30.000 | 0.000000 | 0.000003 |
| 0.750 | 30.000 | 0.000000 | 0.000004 |
| 1.000 | 30.000 | 0.000000 | 0.000002 |
| 1.250 | 30.000 | 0.000000 | 0.000003 |
| 1.500 | 30.000 | 0.000000 | 0.000001 |
| 1.750 | 30.000 | 0.000000 | 0.000004 |
| 2.000 | 30.000 | 0.000000 | 0.000004 |
| 2.250 | 30.000 | 0.000000 | 0.000001 |
| 2.500 | 30.000 | 0.000000 | 0.000003 |
| 2.750 | 30.000 | 0.000000 | 0.000001 |
| 3.000 | 30.000 | 0.000001 | 0.000005 |
| 3.250 | 30.000 | 0.000000 | 0.000002 |
| 3.500 | 30.000 | 0.000000 | 0.000000 |
| 3.750 | 30.000 | -0.000001 | 0.000002 |
| 4.000 | 30.000 | 0.000001 | 0.000002 |
| 4.250 | 30.000 | 0.000002 | 0.000004 |
| 4.500 | 30.000 | -0.000001 | 0.000002 |
| 4.750 | 30.000 | 0.000000 | 0.000001 |
| 5.000 | 30.000 | 0.000000 | 0.000000 |
| 5.250 | 30.000 | 0.000000 | 0.000000 |
| 5.500 | 30.000 | -0.000003 | 0.000004 |
| 5.750 | 30.000 | 0.000001 | 0.000001 |
| 6.000 | 30.000 | -0.000003 | 0.000003 |
| 6.252 | 25.183 | 0.000003 | 0.000003 |
| 6.502 | 24.277 | 0.000002 | 0.000002 |
| 6.751 | 22.465 | 0.000003 | 0.000002 |
| 7.007 | 24.204 | -0.000003 | 0.000002 |
| 7.252 | 21.029 | -0.000007 | 0.000005 |
| 7.502 | 19.133 | 0.000003 | 0.000002 |
| 7.755 | 20.275 | 0.000006 | 0.000004 |
| 8.003 | 17.513 | -0.000003 | 0.000001 |
| 8.252 | 15.703 | 0.000002 | 0.000001 |
| 8.501 | 14.205 | -0.000002 | 0.000001 |
| 8.753 | 12.799 | -0.000005 | 0.000002 |
| 9.002 | 11.790 | -0.000005 | 0.000002 |
| 9.251 | 10.926 | -0.000013 | 0.000005 |
| 9.500 | 9.970 | -0.000010 | 0.000003 |
| 9.752 | 9.348 | -0.000009 | 0.000003 |
| 10.001 | 8.534 | 0.000005 | 0.000002 |
| 10.250 | 7.803 | 0.000000 | 0.000000 |
| 10.500 | 7.495 | -0.000013 | 0.000003 |
| 10.752 | 7.187 | -0.000015 | 0.000004 |
| 11.001 | 6.900 | 0.000002 | 0.000000 |
| 11.251 | 6.517 | -0.000006 | 0.000001 |
| 11.501 | 6.124 | -0.000012 | 0.000002 |
| 11.750 | 5.722 | 0.000003 | 0.000001 |
| 12.001 | 5.194 | 0.000026 | 0.000004 |
| 12.251 | 5.022 | 0.000000 | 0.000000 |
| 12.501 | 4.541 | 0.000022 | 0.000003 |
| 12.750 | 4.238 | -0.000011 | 0.000002 |
| 13.000 | 3.980 | -0.000022 | 0.000003 |
| 13.251 | 3.825 | 0.000001 | 0.000000 |
| 13.500 | 3.769 | 0.000014 | 0.000002 |
| 13.751 | 3.656 | 0.000010 | 0.000001 |
| 14.000 | 3.607 | 0.000022 | 0.000002 |
| 14.251 | 3.523 | -0.000024 | 0.000002 |
| 14.500 | 3.522 | -0.000007 | 0.000001 |
| 14.751 | 3.378 | 0.000025 | 0.000002 |
| 15.000 | 3.290 | 0.000035 | 0.000003 |
| 15.250 | 3.198 | 0.000012 | 0.000001 |
| 15.501 | 2.947 | 0.000028 | 0.000002 |
| 15.750 | 2.996 | -0.000041 | 0.000003 |
| 16.000 | 2.933 | -0.000034 | 0.000003 |
| 16.250 | 2.971 | -0.000019 | 0.000001 |
| 16.500 | 2.021 | -0.000051 | 0.000004 |
| 16.750 | 1.698 | -0.000028 | 0.000002 |
| 17.001 | 1.591 | -0.000019 | 0.000001 |
| 17.250 | 1.690 | -0.000009 | 0.000001 |
| 17.500 | 1.918 | 0.000033 | 0.000002 |
| 17.751 | 2.064 | -0.000050 | 0.000003 |
| 18.000 | 2.226 | -0.000021 | 0.000001 |
| 18.250 | 2.225 | -0.000026 | 0.000002 |
| 18.500 | 2.400 | -0.000003 | 0.000000 |
| 18.750 | 2.541 | -0.000044 | 0.000003 |
| 19.000 | 2.640 | 0.000034 | 0.000002 |
| 19.251 | 2.870 | 0.000010 | 0.000001 |
| 19.500 | 2.611 | 0.000028 | 0.000002 |
| 19.751 | 2.718 | -0.000018 | 0.000001 |
| 20.000 | 2.859 | -0.000032 | 0.000002 |
| 20.250 | 2.971 | 0.000008 | 0.000000 |
| 20.500 | 3.334 | -0.000024 | 0.000001 |
| 20.751 | 3.439 | 0.000034 | 0.000002 |
| 21.001 | 3.409 | -0.000095 | 0.000006 |
| 21.251 | 3.409 | 0.000062 | 0.000004 |
| 21.501 | 3.590 | -0.000082 | 0.000005 |
| 21.751 | 3.178 | -0.000060 | 0.000004 |
| 22.000 | 3.459 | -0.000016 | 0.000001 |
| 22.251 | 3.681 | 0.000033 | 0.000002 |
| 22.501 | 3.435 | -0.000049 | 0.000003 |
| 22.750 | 3.705 | -0.000012 | 0.000001 |
| 23.000 | 3.738 | 0.000073 | 0.000004 |
| 23.251 | 3.746 | -0.000022 | 0.000001 |
| 23.501 | 3.700 | 0.000048 | 0.000003 |
| 23.750 | 3.698 | -0.000049 | 0.000003 |
| 24.001 | 3.709 | 0.000022 | 0.000001 |
| 24.251 | 3.701 | 0.000002 | 0.000000 |
| 24.501 | 3.309 | 0.000020 | 0.000001 |
| 24.750 | 3.636 | 0.000033 | 0.000002 |
| 25.001 | 3.672 | 0.000003 | 0.000000 |
| 25.250 | 3.768 | 0.000026 | 0.000001 |
| 25.501 | 3.805 | -0.000001 | 0.000000 |
| 25.751 | 3.829 | 0.000038 | 0.000002 |
| 26.001 | 3.850 | 0.000018 | 0.000001 |
| 26.251 | 3.893 | 0.000062 | 0.000004 |
| 26.501 | 3.948 | -0.000035 | 0.000002 |
| 26.750 | 3.992 | -0.000009 | 0.000001 |
| 27.001 | 3.990 | 0.000021 | 0.000001 |
| 27.250 | 3.992 | 0.000046 | 0.000003 |
| 27.501 | 3.994 | 0.000021 | 0.000001 |
| 27.750 | 3.992 | 0.000013 | 0.000001 |
| 28.001 | 3.991 | 0.000042 | 0.000002 |
| 28.250 | 3.992 | 0.000008 | 0.000000 |



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| | | | |
|---|---|---|---|
| 28.501 | 3.990 | -0.000003 | 0.000000 |
| 28.750 | 3.992 | 0.000010 | 0.000001 |
| 29.001 | 3.994 | 0.000029 | 0.000002 |
| 29.251 | 3.992 | -0.000015 | 0.000001 |
| 29.500 | 3.992 | 0.000016 | 0.000001 |
| 29.751 | 3.991 | 0.000066 | 0.000004 |
| 30.000 | 3.992 | -0.000043 | 0.000002 |
| 30.251 | 3.990 | -0.000031 | 0.000002 |
| 30.500 | 3.992 | -0.000026 | 0.000002 |
| 30.751 | 3.994 | -0.000015 | 0.000001 |
| 31.000 | 3.992 | 0.000038 | 0.000002 |
| 31.251 | 3.991 | 0.000012 | 0.000001 |
| 31.500 | 3.992 | -0.000009 | 0.000000 |
| 31.751 | 3.990 | 0.000036 | 0.000002 |
| 32.000 | 3.992 | 0.000015 | 0.000001 |
| 32.251 | 3.994 | -0.000004 | 0.000000 |
| 32.500 | 3.992 | 0.000024 | 0.000001 |
| 32.751 | 3.991 | -0.000006 | 0.000000 |
| 33.001 | 3.992 | 0.000049 | 0.000003 |
| 33.250 | 3.992 | 0.000005 | 0.000000 |
| 33.500 | 3.990 | 0.000027 | 0.000002 |
| 33.751 | 3.994 | -0.000002 | 0.000000 |
| 34.001 | 3.992 | 0.000040 | 0.000002 |
| 34.250 | 3.992 | -0.000014 | 0.000001 |
| 34.501 | 3.991 | 0.000004 | 0.000000 |
| 34.750 | 3.992 | 0.000009 | 0.000001 |
| 35.001 | 3.990 | -0.000018 | 0.000001 |
| 35.250 | 3.992 | -0.000001 | 0.000000 |
| 35.501 | 3.994 | -0.000027 | 0.000002 |
| 35.750 | 3.992 | -0.000001 | 0.000000 |
| 36.001 | 3.991 | 0.000028 | 0.000002 |
| 36.250 | 3.992 | 0.000041 | 0.000002 |
| 36.501 | 3.990 | 0.000004 | 0.000000 |
| 36.750 | 3.992 | 0.000003 | 0.000000 |
| 37.001 | 3.994 | 0.000020 | 0.000001 |
| 37.251 | 3.992 | 0.000050 | 0.000003 |
| 37.500 | 3.992 | -0.000017 | 0.000001 |
| 37.751 | 3.991 | -0.000028 | 0.000002 |
| 38.000 | 3.992 | 0.000044 | 0.000003 |
| 38.251 | 3.990 | 0.000031 | 0.000002 |
| 38.500 | 3.992 | 0.000017 | 0.000001 |
| 38.751 | 3.994 | 0.000000 | 0.000000 |
| 39.000 | 3.992 | -0.000009 | 0.000001 |
| 39.251 | 3.991 | -0.000008 | 0.000000 |
| 39.500 | 3.992 | 0.000004 | 0.000000 |
| 39.751 | 3.990 | 0.000043 | 0.000003 |
| 40.000 | 3.992 | -0.000026 | 0.000001 |
| 40.251 | 3.994 | 0.000025 | 0.000001 |
| 40.501 | 3.992 | 0.000018 | 0.000001 |
| 40.750 | 3.992 | 0.000016 | 0.000001 |
| 41.001 | 3.991 | 0.000024 | 0.000001 |
| 41.250 | 3.992 | 0.000029 | 0.000002 |
| 41.501 | 3.990 | 0.000007 | 0.000000 |
| 41.750 | 3.992 | 0.000001 | 0.000000 |
| 42.001 | 3.994 | 0.000004 | 0.000000 |
| 42.250 | 3.992 | -0.000014 | 0.000001 |
| 42.501 | 3.991 | 0.000004 | 0.000000 |
| 42.750 | 3.992 | -0.000014 | 0.000001 |
| 43.001 | 3.990 | 0.000054 | 0.000003 |
| 43.250 | 3.992 | -0.000034 | 0.000002 |
| 43.501 | 3.994 | 0.000032 | 0.000002 |
| 43.751 | 3.992 | -0.000036 | 0.000002 |
| 44.001 | 3.991 | -0.000044 | 0.000003 |
| 44.251 | 3.992 | 0.000036 | 0.000002 |
| 44.500 | 3.992 | 0.000005 | 0.000000 |
| 44.751 | 3.990 | -0.000008 | 0.000000 |
| 45.001 | 3.994 | -0.000006 | 0.000000 |
| 45.251 | 3.992 | 0.000063 | 0.000004 |
| 45.500 | 3.992 | -0.000008 | 0.000000 |
| 45.751 | 3.991 | -0.000012 | 0.000001 |
| 46.000 | 3.992 | 0.000057 | 0.000003 |
| 46.251 | 3.990 | 0.000050 | 0.000003 |
| 46.500 | 3.992 | 0.000042 | 0.000002 |
| 46.751 | 3.994 | 0.000032 | 0.000002 |
| 47.000 | 3.992 | 0.000029 | 0.000002 |
| 47.251 | 3.991 | 0.000033 | 0.000002 |
| 47.500 | 3.992 | 0.000011 | 0.000001 |
| 47.751 | 3.990 | 0.000004 | 0.000000 |
| 48.000 | 3.992 | 0.000001 | 0.000000 |
| 48.251 | 3.994 | -0.000007 | 0.000000 |
| 48.501 | 3.992 | 0.000056 | 0.000003 |
| 48.750 | 3.992 | -0.000033 | 0.000002 |
| 49.001 | 3.991 | -0.000024 | 0.000001 |
| 49.250 | 3.992 | 0.000030 | 0.000002 |
| 49.501 | 3.990 | 0.000043 | 0.000002 |
| 49.750 | 3.992 | 0.000032 | 0.000002 |
| 50.001 | 3.994 | 0.000020 | 0.000001 |
| 50.250 | 3.992 | 0.000022 | 0.000001 |
| 50.501 | 3.991 | 0.000026 | 0.000002 |
| 50.750 | 3.992 | -0.000002 | 0.000000 |
| 51.001 | 3.990 | -0.000014 | 0.000001 |
| 51.250 | 3.992 | -0.000016 | 0.000001 |
| 51.501 | 3.994 | 0.000050 | 0.000003 |
| 51.751 | 3.992 | -0.000029 | 0.000002 |
| 52.000 | 3.992 | 0.000049 | 0.000003 |
| 52.251 | 3.991 | 0.000048 | 0.000003 |
| 52.500 | 3.992 | -0.000010 | 0.000001 |
| 52.751 | 3.990 | -0.000026 | 0.000001 |
| 53.000 | 3.992 | 0.000037 | 0.000002 |
| 53.251 | 3.962 | 0.000037 | 0.000002 |
| 53.500 | 3.871 | 0.000047 | 0.000003 |
| 53.751 | 3.838 | 0.000004 | 0.000000 |
| 54.000 | 3.834 | -0.000010 | 0.000001 |
| 54.251 | 3.837 | -0.000015 | 0.000001 |
| 54.500 | 3.838 | 0.000067 | 0.000004 |
| 54.751 | 3.837 | 0.000049 | 0.000003 |
| 55.000 | 3.839 | 0.000023 | 0.000001 |
| 55.250 | 3.834 | 0.000032 | 0.000002 |
| 55.501 | 3.841 | 0.000029 | 0.000002 |
| 55.751 | 3.838 | -0.000029 | 0.000002 |
| 56.000 | 3.838 | 0.000029 | 0.000002 |
| 56.250 | 3.835 | 0.000002 | 0.000000 |
| 56.501 | 3.837 | 0.000024 | 0.000001 |
| 56.750 | 3.838 | 0.000012 | 0.000001 |
| 57.001 | 3.834 | 0.000016 | 0.000001 |
| 57.250 | 3.837 | -0.000013 | 0.000001 |
| 57.500 | 3.837 | -0.000016 | 0.000001 |
| 57.751 | 3.833 | 0.000034 | 0.000002 |
| 58.000 | 3.839 | -0.000014 | 0.000001 |
| 58.251 | 3.841 | -0.000009 | 0.000001 |
| 58.500 | 3.838 | -0.000001 | 0.000000 |
| 58.751 | 3.835 | -0.000026 | 0.000001 |



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| | | | |
|---|---|---|---|
| 59.000 | 3.837 | -0.000019 | 0.000001 |
| 59.251 | 3.839 | 0.000027 | 0.000002 |
| 59.500 | 3.838 | 0.000022 | 0.000001 |
| 59.750 | 3.834 | -0.000010 | 0.000001 |
| 60.001 | 3.837 | 0.000034 | 0.000002 |
| 60.250 | 3.839 | 0.000012 | 0.000001 |
| 60.501 | 3.841 | 0.000061 | 0.000004 |
| 60.751 | 3.839 | 0.000023 | 0.000001 |
| 61.000 | 3.839 | 0.000002 | 0.000000 |
| 61.251 | 3.838 | 0.000045 | 0.000003 |
| 61.500 | 3.838 | 0.000025 | 0.000001 |
| 61.751 | 3.837 | 0.000006 | 0.000000 |
| 62.000 | 3.839 | 0.000027 | 0.000002 |
| 62.251 | 3.836 | 0.000041 | 0.000002 |
| 62.500 | 3.836 | 0.000023 | 0.000001 |
| 62.751 | 3.840 | -0.000015 | 0.000001 |
| 63.001 | 3.834 | -0.000013 | 0.000001 |
| 63.251 | 3.839 | 0.000014 | 0.000001 |
| 63.501 | 3.837 | 0.000018 | 0.000001 |
| 63.751 | 3.839 | -0.000011 | 0.000001 |
| 64.000 | 3.838 | 0.000012 | 0.000001 |
| 64.250 | 3.834 | 0.000003 | 0.000000 |
| 64.501 | 3.837 | -0.000014 | 0.000001 |
| 64.750 | 3.839 | 0.000035 | 0.000002 |
| 65.001 | 3.840 | 0.000067 | 0.000004 |
| 65.251 | 3.839 | 0.000023 | 0.000001 |
| 65.501 | 3.834 | 0.000029 | 0.000002 |
| 65.750 | 3.837 | 0.000019 | 0.000001 |
| 66.001 | 3.839 | 0.000018 | 0.000001 |
| 66.250 | 3.839 | 0.000054 | 0.000003 |
| 66.501 | 3.837 | -0.000029 | 0.000002 |
| 66.750 | 3.839 | 0.000026 | 0.000001 |
| 67.001 | 3.842 | -0.000009 | 0.000001 |
| 67.250 | 3.831 | 0.000028 | 0.000002 |
| 67.501 | 3.840 | 0.000004 | 0.000000 |
| 67.750 | 3.839 | 0.000048 | 0.000003 |
| 68.001 | 3.839 | 0.000016 | 0.000001 |
| 68.250 | 3.839 | -0.000005 | 0.000000 |
| 68.501 | 3.837 | -0.000024 | 0.000001 |
| 68.750 | 3.836 | -0.000029 | 0.000002 |
| 69.001 | 3.836 | 0.000006 | 0.000000 |
| 69.250 | 3.838 | 0.000016 | 0.000001 |
| 69.500 | 3.836 | 0.000017 | 0.000001 |
| 69.751 | 3.841 | 0.000031 | 0.000002 |
| 70.001 | 3.837 | 0.000006 | 0.000000 |
| 70.251 | 3.837 | 0.000030 | 0.000002 |
| 70.500 | 3.835 | 0.000007 | 0.000000 |
| 70.751 | 3.837 | -0.000006 | 0.000000 |
| 71.000 | 3.839 | 0.000047 | 0.000003 |
| 71.251 | 3.837 | -0.000019 | 0.000001 |
| 71.500 | 3.839 | 0.000013 | 0.000001 |
| 71.750 | 3.831 | 0.000058 | 0.000003 |
| 72.001 | 3.806 | 0.000053 | 0.000003 |

==========

MASS BALANCE INFLOW - OUTFLOW VOLUME

==========

*** INFLOW (ACRE-FEET) ***

TOTAL POINT RAINFALL: 1.2000 INCHES

| | WATER |
|---|---|
| RAINFALL VOLUME | 1113.24 |
| INFLOW HYDROGRAPH | 639.07 |
| INFLOW HYDROGRAPHS + RAINFALL | 1752.31 |

==========

*** OUTFLOW (ACRE-FT) ***

OVERLAND INFILTRATED AND INTERCEPTED WATER 0.90 INCHES

| OVERLAND FLOW | WATER |
|---|---|
| WATER LOST TO INFILTRATION & INTERCEPTION | 1042.83 |
| FLOODPLAIN STORAGE | 294.26 |
| FLOODPLAIN OUTFLOW HYDROGRAPH | 412.30 |
| FLOODPLAIN OUTFLOW, INFILTRATION & STORAGE | 1749.40 |

| CHANNEL FLOW | |
|---|---|
| CHANNEL STORAGE | 2.91 |
| CHANNEL OUTFLOW | 0.00 |
| CHANNEL OUTFLOW AND STORAGE | 2.91 |

==========

*** TOTALS ***

| | |
|---|---|
| TOTAL OUTFLOW FROM GRID SYSTEM | 412.30 |
| TOTAL VOLUME OF OUTFLOW AND STORAGE | 1752.31 |

SURFACE AREA OF INUNDATION REGARDLESS OF THE TIME OF OCCURRENCE:
(FOR FLOW DEPTHS GREATER THAN THE "TOL" VALUE TYPICALLY 0.1 FT OR 0.03 M)

| | |
|---|---|
| THE MAXIMUM INUNDATED AREA IS: | 2061.14 ACRES |
| THE MAXIMUM WETTED FLOODPLAIN AREA IS: | 2059.83 ACRES |
| THE MAXIMUM WETTED CHANNEL AREA IS: | 1.31 ACRES |



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==========================================================================================================================

     COMPUTER RUN TIME IS :  2.05176 HRS
     THIS OUTPUT FILE WAS TERMINATED ON:   6/15/2011  AT:  20: 7:25
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# APPENDIX E:

## vi. 24 Hour, 100-Year Storm

## HYCROSS.OUT File

THE MAXIMUM DISCHARGE FROM CROSS SECTION 1 IS: 672.15 CFS AT TIME: 15.66 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 164.19 AF

NOTE: THE MAXIMUM DISCHARGE AT THIS CROSS SECTION INCLUDES THE CHANNEL DISCHARGE
THE HYDRAULIC VARIABLES IN THE TABLE BELOW ARE COMPUTED FOR THE FLOODPLAIN FLOW (DEPTH > TOL) ONLY
IF THE HYDRAULIC VARIABLES ARE ZERO IN THE TABLE BELOW, ALL THE DISCHARGE IS IN THE CHANNEL

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 1

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 2.26 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 7.37 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 22.98 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 16.53 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 57.96 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 150.00 | 0.22 | 1.16 | 120.32 |
| 12.00 | 150.00 | 0.21 | 1.31 | 71.17 |
| 12.25 | 150.00 | 0.21 | 1.37 | 92.54 |
| 12.50 | 150.00 | 0.28 | 1.52 | 332.83 |
| 12.75 | 150.00 | 0.32 | 1.95 | 110.56 |
| 13.00 | 150.00 | 0.27 | 1.73 | 116.59 |
| 13.25 | 150.00 | 0.36 | 1.97 | 363.89 |
| 13.50 | 150.00 | 0.32 | 2.32 | 224.67 |
| 13.75 | 150.00 | 0.32 | 1.80 | 381.54 |
| 14.00 | 150.00 | 0.40 | 2.75 | 237.25 |
| 14.25 | 150.00 | 0.30 | 1.88 | 149.88 |
| 14.50 | 150.00 | 0.40 | 2.57 | 524.52 |
| 14.75 | 150.00 | 0.33 | 2.69 | 180.63 |
| 15.00 | 150.00 | 0.39 | 2.30 | 553.93 |
| 15.25 | 150.00 | 0.40 | 3.47 | 272.38 |
| 15.50 | 150.00 | 0.34 | 2.00 | 289.55 |
| 15.75 | 150.00 | 0.42 | 2.99 | 644.66 |
| 16.00 | 150.00 | 0.36 | 3.15 | 247.94 |
| 16.25 | 150.00 | 0.35 | 1.90 | 464.84 |
| 16.50 | 150.00 | 0.39 | 2.36 | 479.78 |
| 16.75 | 150.00 | 0.33 | 2.28 | 190.45 |
| 17.00 | 150.00 | 0.28 | 1.86 | 184.50 |
| 17.25 | 150.00 | 0.31 | 1.79 | 192.30 |
| 17.50 | 150.00 | 0.28 | 1.65 | 92.27 |
| 17.75 | 150.00 | 0.23 | 1.33 | 172.31 |
| 18.00 | 150.00 | 0.21 | 1.14 | 134.92 |
| 18.25 | 150.00 | 0.21 | 1.11 | 101.38 |
| 18.50 | 150.00 | 0.16 | 1.19 | 28.84 |
| 18.75 | 150.00 | 0.14 | 0.77 | 16.46 |
| 19.00 | 150.00 | 0.13 | 0.85 | 32.31 |
| 19.25 | 150.00 | 0.16 | 1.01 | 24.66 |
| 19.50 | 150.00 | 0.14 | 0.62 | 13.15 |
| 19.75 | 150.00 | 0.15 | 0.54 | 97.78 |
| 20.00 | 75.00 | 0.06 | 2.56 | 133.74 |
| 20.25 | 150.00 | 0.13 | 0.53 | 10.45 |
| 20.50 | 150.00 | 0.13 | 0.52 | 10.13 |
| 20.75 | 150.00 | 0.13 | 0.45 | 100.48 |
| 21.00 | 75.00 | 0.06 | 1.51 | 6.71 |
| 21.25 | 0.00 | 0.00 | 0.00 | 2.32 |
| 21.50 | 150.00 | 0.11 | 0.28 | 4.56 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 150.00 | 0.11 | 0.37 | 6.11 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 150.00 | 0.14 | 0.41 | 77.17 |
| 22.75 | 150.00 | 0.12 | 0.48 | 98.30 |
| 23.00 | 150.00 | 0.13 | 0.43 | 26.67 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 150.00 | 0.13 | 0.28 | 105.05 |
| 23.75 | 150.00 | 0.12 | 0.42 | 7.87 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 75.00 | 0.09 | 1.29 | 76.78 |
| 24.75 | 150.00 | 0.13 | 0.36 | 109.41 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 75.00 | 0.07 | 1.46 | 32.50 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 2 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 2

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 3 IS: 1335.99 CFS AT TIME: 17.08 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 655.68 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 3



BSE Document Control Number: 7323HYD101

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 900.00 | 0.29 | 3.12 | 807.98 |
| 15.75 | 900.00 | 0.32 | 3.22 | 933.10 |
| 16.00 | 825.00 | 0.34 | 3.68 | 1023.57 |
| 16.25 | 825.00 | 0.36 | 3.86 | 1144.26 |
| 16.50 | 825.00 | 0.38 | 3.97 | 1236.10 |
| 16.75 | 900.00 | 0.39 | 3.68 | 1301.60 |
| 17.00 | 900.00 | 0.40 | 3.71 | 1333.28 |
| 17.25 | 900.00 | 0.40 | 3.71 | 1326.80 |
| 17.50 | 900.00 | 0.39 | 3.65 | 1283.76 |
| 17.75 | 900.00 | 0.38 | 3.56 | 1215.16 |
| 18.00 | 900.00 | 0.36 | 3.45 | 1125.00 |
| 18.25 | 900.00 | 0.35 | 3.40 | 1079.19 |
| 18.50 | 825.00 | 0.35 | 3.73 | 1070.27 |
| 18.75 | 825.00 | 0.34 | 3.64 | 1013.05 |
| 19.00 | 825.00 | 0.33 | 3.56 | 960.60 |
| 19.25 | 825.00 | 0.32 | 3.46 | 907.64 |
| 19.50 | 825.00 | 0.31 | 3.39 | 858.90 |
| 19.75 | 825.00 | 0.30 | 3.30 | 806.37 |
| 20.00 | 750.00 | 0.28 | 3.57 | 752.30 |
| 20.25 | 825.00 | 0.27 | 3.10 | 698.93 |
| 20.50 | 825.00 | 0.26 | 3.00 | 650.01 |
| 20.75 | 825.00 | 0.25 | 2.91 | 610.98 |
| 21.00 | 750.00 | 0.24 | 3.16 | 572.12 |
| 21.25 | 750.00 | 0.23 | 3.08 | 533.97 |
| 21.50 | 750.00 | 0.22 | 3.00 | 496.97 |
| 21.75 | 750.00 | 0.21 | 2.90 | 462.06 |
| 22.00 | 750.00 | 0.20 | 2.81 | 430.07 |
| 22.25 | 750.00 | 0.20 | 2.72 | 400.63 |
| 22.50 | 750.00 | 0.19 | 2.60 | 368.26 |
| 22.75 | 750.00 | 0.18 | 2.52 | 342.11 |
| 23.00 | 750.00 | 0.17 | 2.42 | 317.21 |
| 23.25 | 750.00 | 0.17 | 2.35 | 296.62 |
| 23.50 | 750.00 | 0.16 | 2.31 | 280.18 |
| 23.75 | 675.00 | 0.15 | 2.57 | 262.44 |
| 24.00 | 675.00 | 0.15 | 2.51 | 246.13 |
| 24.25 | 675.00 | 0.14 | 2.46 | 231.54 |
| 24.50 | 750.00 | 0.14 | 2.11 | 217.11 |
| 24.75 | 675.00 | 0.13 | 2.31 | 201.91 |
| 25.00 | 675.00 | 0.13 | 2.25 | 190.37 |
| 25.25 | 675.00 | 0.12 | 2.18 | 178.27 |
| 25.50 | 675.00 | 0.12 | 2.12 | 167.86 |
| 25.75 | 675.00 | 0.11 | 2.08 | 159.37 |
| 26.00 | 750.00 | 0.11 | 1.75 | 148.41 |
| 26.25 | 525.00 | 0.10 | 2.72 | 140.85 |
| 26.50 | 600.00 | 0.10 | 2.25 | 134.62 |
| 26.75 | 600.00 | 0.10 | 2.18 | 127.69 |
| 27.00 | 675.00 | 0.10 | 1.85 | 123.62 |
| 27.25 | 600.00 | 0.09 | 2.08 | 116.81 |
| 27.50 | 525.00 | 0.09 | 2.45 | 114.03 |
| 27.75 | 600.00 | 0.09 | 2.06 | 113.38 |
| 28.00 | 600.00 | 0.09 | 2.04 | 111.73 |
| 28.25 | 525.00 | 0.09 | 2.42 | 110.47 |
| 28.50 | 600.00 | 0.09 | 2.02 | 108.13 |
| 28.75 | 600.00 | 0.09 | 2.01 | 106.15 |
| 29.00 | 525.00 | 0.08 | 2.32 | 100.80 |
| 29.25 | 600.00 | 0.08 | 1.88 | 95.26 |
| 29.50 | 600.00 | 0.08 | 1.83 | 89.72 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 29.75 | 525.00 | 0.08 | 2.13 | 85.21 |
| 30.00 | 600.00 | 0.08 | 1.75 | 81.58 |
| 30.25 | 525.00 | 0.07 | 2.01 | 75.52 |
| 30.50 | 450.00 | 0.07 | 2.38 | 70.15 |
| 30.75 | 525.00 | 0.07 | 1.83 | 64.05 |
| 31.00 | 450.00 | 0.06 | 2.25 | 60.96 |
| 31.25 | 450.00 | 0.06 | 2.19 | 57.41 |
| 31.50 | 525.00 | 0.06 | 1.70 | 53.08 |
| 31.75 | 450.00 | 0.05 | 2.04 | 49.73 |
| 32.00 | 450.00 | 0.05 | 1.93 | 45.31 |
| 32.25 | 450.00 | 0.05 | 1.88 | 42.42 |
| 32.50 | 525.00 | 0.05 | 1.46 | 39.98 |
| 32.75 | 450.00 | 0.05 | 1.81 | 38.81 |
| 33.00 | 450.00 | 0.05 | 1.65 | 34.41 |
| 33.25 | 450.00 | 0.05 | 1.63 | 33.59 |
| 33.50 | 450.00 | 0.04 | 1.61 | 32.57 |
| 33.75 | 450.00 | 0.04 | 1.52 | 30.07 |
| 34.00 | 450.00 | 0.04 | 1.50 | 28.85 |
| 34.25 | 450.00 | 0.04 | 1.39 | 26.02 |
| 34.50 | 525.00 | 0.04 | 1.06 | 24.37 |
| 34.75 | 450.00 | 0.04 | 1.34 | 23.48 |
| 35.00 | 450.00 | 0.04 | 1.36 | 23.69 |
| 35.25 | 450.00 | 0.04 | 1.28 | 22.50 |
| 35.50 | 525.00 | 0.04 | 0.97 | 21.34 |
| 35.75 | 525.00 | 0.04 | 0.94 | 20.29 |
| 36.00 | 450.00 | 0.04 | 1.09 | 18.36 |
| 36.25 | 450.00 | 0.04 | 1.07 | 17.25 |
| 36.50 | 450.00 | 0.03 | 1.11 | 17.21 |
| 36.75 | 375.00 | 0.03 | 1.31 | 15.19 |
| 37.00 | 450.00 | 0.03 | 0.92 | 13.49 |
| 37.25 | 375.00 | 0.03 | 1.14 | 12.55 |
| 37.50 | 375.00 | 0.03 | 1.19 | 12.56 |
| 37.75 | 450.00 | 0.03 | 0.96 | 13.61 |
| 38.00 | 375.00 | 0.03 | 1.00 | 11.22 |
| 38.25 | 450.00 | 0.03 | 0.76 | 10.62 |
| 38.50 | 375.00 | 0.03 | 0.72 | 7.56 |
| 38.75 | 375.00 | 0.03 | 0.91 | 9.31 |
| 39.00 | 450.00 | 0.03 | 0.60 | 7.72 |
| 39.25 | 375.00 | 0.02 | 0.76 | 6.98 |
| 39.50 | 375.00 | 0.02 | 0.75 | 6.75 |
| 39.75 | 300.00 | 0.02 | 1.07 | 6.55 |
| 40.00 | 375.00 | 0.02 | 0.73 | 6.33 |
| 40.25 | 375.00 | 0.02 | 0.61 | 4.97 |
| 40.50 | 450.00 | 0.03 | 0.61 | 6.89 |
| 40.75 | 300.00 | 0.02 | 1.22 | 6.85 |
| 41.00 | 300.00 | 0.02 | 0.80 | 4.33 |
| 41.25 | 375.00 | 0.02 | 0.64 | 4.85 |
| 41.50 | 225.00 | 0.01 | 1.40 | 3.82 |
| 41.75 | 150.00 | 0.01 | 3.70 | 4.29 |
| 42.00 | 150.00 | 0.01 | 3.72 | 4.30 |
| 42.25 | 75.00 | 0.00 | 11.07 | 3.33 |
| 42.50 | 300.00 | 0.02 | 0.43 | 2.00 |
| 42.75 | 375.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 150.00 | 0.01 | 1.03 | 1.24 |
| 43.25 | 225.00 | 0.01 | 1.09 | 2.64 |
| 43.50 | 300.00 | 0.02 | 0.23 | 1.07 |
| 43.75 | 150.00 | 0.01 | 0.31 | 0.36 |
| 44.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 2.90 |
| 44.50 | 300.00 | 0.01 | 0.28 | 1.22 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 300.00 | 0.02 | 1.10 | 5.10 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 225.00 | 0.01 | 0.31 | 0.80 |
| 47.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 2.77 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 4 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 4

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 5 IS: 298.96 CFS AT TIME: 20.23 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 131.04 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 5

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 525.00 | 0.10 | 4.58 | 245.97 |
| 20.25 | 525.00 | 0.12 | 4.83 | 297.53 |
| 20.50 | 525.00 | 0.12 | 4.79 | 291.44 |
| 20.75 | 525.00 | 0.11 | 4.65 | 278.09 |
| 21.00 | 525.00 | 0.11 | 4.53 | 265.06 |
| 21.25 | 600.00 | 0.10 | 4.31 | 250.01 |
| 21.50 | 750.00 | 0.09 | 3.34 | 235.85 |
| 21.75 | 750.00 | 0.09 | 3.21 | 222.04 |
| 22.00 | 600.00 | 0.09 | 3.93 | 210.49 |
| 22.25 | 750.00 | 0.09 | 3.01 | 197.96 |
| 22.50 | 750.00 | 0.09 | 2.94 | 188.40 |
| 22.75 | 600.00 | 0.08 | 3.66 | 179.10 |
| 23.00 | 600.00 | 0.08 | 3.58 | 169.41 |
| 23.25 | 600.00 | 0.08 | 3.53 | 162.49 |
| 23.50 | 600.00 | 0.07 | 3.39 | 152.16 |
| 23.75 | 675.00 | 0.07 | 2.93 | 144.83 |
| 24.00 | 600.00 | 0.07 | 3.27 | 137.74 |
| 24.25 | 675.00 | 0.07 | 2.82 | 131.95 |
| 24.50 | 600.00 | 0.07 | 3.14 | 125.42 |
| 24.75 | 600.00 | 0.06 | 3.06 | 118.47 |
| 25.00 | 600.00 | 0.06 | 2.98 | 113.51 |
| 25.25 | 600.00 | 0.06 | 2.95 | 109.58 |
| 25.50 | 450.00 | 0.05 | 4.15 | 102.21 |
| 25.75 | 600.00 | 0.06 | 2.74 | 96.44 |
| 26.00 | 600.00 | 0.06 | 2.60 | 89.74 |
| 26.25 | 450.00 | 0.05 | 3.80 | 86.69 |
| 26.50 | 450.00 | 0.05 | 3.65 | 81.63 |
| 26.75 | 525.00 | 0.05 | 2.84 | 76.77 |
| 27.00 | 450.00 | 0.05 | 3.41 | 73.95 |
| 27.25 | 450.00 | 0.05 | 3.29 | 70.21 |
| 27.50 | 450.00 | 0.05 | 3.20 | 66.97 |
| 27.75 | 450.00 | 0.05 | 3.18 | 65.26 |
| 28.00 | 525.00 | 0.05 | 2.48 | 62.01 |
| 28.25 | 525.00 | 0.05 | 2.41 | 59.12 |
| 28.50 | 450.00 | 0.04 | 2.97 | 57.60 |
| 28.75 | 450.00 | 0.04 | 2.84 | 53.84 |
| 29.00 | 450.00 | 0.04 | 2.80 | 51.93 |
| 29.25 | 525.00 | 0.04 | 2.18 | 48.96 |
| 29.50 | 450.00 | 0.04 | 2.72 | 48.22 |
| 29.75 | 375.00 | 0.04 | 3.42 | 46.05 |
| 30.00 | 450.00 | 0.04 | 2.54 | 42.96 |
| 30.25 | 375.00 | 0.03 | 3.28 | 41.88 |
| 30.50 | 375.00 | 0.03 | 3.25 | 40.67 |
| 30.75 | 375.00 | 0.03 | 3.18 | 38.74 |
| 31.00 | 450.00 | 0.03 | 2.32 | 36.04 |
| 31.25 | 375.00 | 0.03 | 3.05 | 35.56 |
| 31.50 | 375.00 | 0.03 | 2.82 | 32.28 |
| 31.75 | 450.00 | 0.03 | 2.13 | 31.04 |
| 32.00 | 375.00 | 0.03 | 2.86 | 30.99 |
| 32.25 | 375.00 | 0.03 | 2.68 | 28.54 |
| 32.50 | 375.00 | 0.03 | 2.64 | 27.56 |



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| | | | | |
|---|---|---|---|---|
| 32.75 | 300.00 | 0.02 | 3.59 | 26.54 |
| 33.00 | 375.00 | 0.03 | 2.54 | 25.25 |
| 33.25 | 375.00 | 0.03 | 2.49 | 24.26 |
| 33.50 | 375.00 | 0.03 | 2.45 | 23.48 |
| 33.75 | 375.00 | 0.03 | 2.58 | 24.34 |
| 34.00 | 300.00 | 0.02 | 3.15 | 20.91 |
| 34.25 | 300.00 | 0.02 | 3.20 | 21.01 |
| 34.50 | 450.00 | 0.03 | 1.62 | 19.66 |
| 34.75 | 300.00 | 0.02 | 3.13 | 20.02 |
| 35.00 | 375.00 | 0.02 | 2.18 | 19.25 |
| 35.25 | 375.00 | 0.02 | 2.15 | 18.75 |
| 35.50 | 300.00 | 0.02 | 2.96 | 18.10 |
| 35.75 | 375.00 | 0.02 | 2.07 | 18.68 |
| 36.00 | 375.00 | 0.02 | 1.92 | 17.26 |
| 36.25 | 300.00 | 0.02 | 2.50 | 15.74 |
| 36.50 | 375.00 | 0.02 | 1.80 | 15.69 |
| 36.75 | 375.00 | 0.02 | 1.77 | 15.20 |
| 37.00 | 300.00 | 0.02 | 2.32 | 13.89 |
| 37.25 | 300.00 | 0.02 | 2.09 | 12.33 |
| 37.50 | 300.00 | 0.02 | 2.09 | 12.16 |
| 37.75 | 300.00 | 0.02 | 2.04 | 11.44 |
| 38.00 | 300.00 | 0.02 | 2.02 | 10.89 |
| 38.25 | 375.00 | 0.02 | 1.37 | 10.31 |
| 38.50 | 300.00 | 0.02 | 1.87 | 9.50 |
| 38.75 | 300.00 | 0.02 | 1.72 | 8.62 |
| 39.00 | 300.00 | 0.02 | 1.86 | 9.20 |
| 39.25 | 375.00 | 0.02 | 1.18 | 8.46 |
| 39.50 | 300.00 | 0.02 | 1.75 | 8.62 |
| 39.75 | 300.00 | 0.02 | 1.46 | 7.30 |
| 40.00 | 300.00 | 0.02 | 1.41 | 7.09 |
| 40.25 | 300.00 | 0.02 | 1.38 | 6.79 |
| 40.50 | 300.00 | 0.02 | 1.27 | 6.16 |
| 40.75 | 300.00 | 0.02 | 1.25 | 5.97 |
| 41.00 | 300.00 | 0.02 | 1.13 | 5.24 |
| 41.25 | 300.00 | 0.01 | 1.09 | 4.83 |
| 41.50 | 300.00 | 0.01 | 1.05 | 4.51 |
| 41.75 | 300.00 | 0.01 | 1.03 | 4.27 |
| 42.00 | 300.00 | 0.01 | 0.98 | 3.89 |
| 42.25 | 300.00 | 0.01 | 0.96 | 3.73 |
| 42.50 | 300.00 | 0.01 | 0.94 | 3.54 |
| 42.75 | 225.00 | 0.01 | 1.56 | 3.36 |
| 43.00 | 225.00 | 0.01 | 1.45 | 2.84 |
| 43.25 | 300.00 | 0.01 | 0.53 | 1.73 |
| 43.50 | 225.00 | 0.01 | 0.91 | 1.64 |
| 43.75 | 225.00 | 0.01 | 0.89 | 1.60 |
| 44.00 | 75.00 | 0.00 | 7.93 | 1.57 |
| 44.25 | 300.00 | 0.01 | 0.26 | 0.82 |
| 44.50 | 225.00 | 0.01 | 0.50 | 0.89 |
| 44.75 | 150.00 | 0.01 | 3.10 | 2.46 |
| 45.00 | 225.00 | 0.01 | 0.34 | 0.61 |
| 45.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 225.00 | 0.01 | 1.31 | 2.32 |
| 45.75 | 150.00 | 0.01 | 1.10 | 0.87 |
| 46.00 | 225.00 | 0.01 | 0.81 | 1.44 |
| 46.25 | 75.00 | 0.00 | 7.17 | 1.42 |
| 46.50 | 300.00 | 0.01 | 0.46 | 1.45 |
| 46.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 150.00 | 0.01 | 1.03 | 0.82 |
| 47.25 | 300.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 75.00 | 0.00 | 4.16 | 0.83 |
| 47.75 | 75.00 | 0.00 | 11.62 | 2.31 |
| 48.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 75.00 | 0.00 | 7.29 | 1.45 |
| 48.50 | 75.00 | 0.00 | 8.56 | 1.70 |
| 48.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 225.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 75.00 | 0.00 | 0.00 | 0.00 |



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| | | | | |
|---|---|---|---|---|
| 63.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 75.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 6 IS: 6142.51 CFS AT TIME: 15.92 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 3537.92 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 6

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 300.00 | 0.02 | 6.10 | 40.48 |
| 10.00 | 825.00 | 0.04 | 1.88 | 65.69 |
| 10.25 | 1200.00 | 0.06 | 1.20 | 82.80 |
| 10.50 | 1350.00 | 0.09 | 1.41 | 168.45 |
| 10.75 | 2100.00 | 0.16 | 1.06 | 364.32 |
| 11.00 | 2550.00 | 0.23 | 1.13 | 675.08 |
| 11.25 | 2550.00 | 0.28 | 1.19 | 856.85 |
| 11.50 | 2550.00 | 0.32 | 1.33 | 1077.04 |
| 11.75 | 2550.00 | 0.37 | 1.55 | 1476.63 |
| 12.00 | 2550.00 | 0.41 | 1.68 | 1744.42 |
| 12.25 | 2625.00 | 0.41 | 1.87 | 2035.45 |
| 12.50 | 2625.00 | 0.49 | 1.90 | 2419.59 |
| 12.75 | 2625.00 | 0.53 | 2.05 | 2849.28 |
| 13.00 | 2625.00 | 0.56 | 2.18 | 3227.93 |
| 13.25 | 2850.00 | 0.58 | 2.17 | 3567.37 |
| 13.50 | 2775.00 | 0.61 | 2.27 | 3856.50 |
| 13.75 | 2850.00 | 0.60 | 2.40 | 4105.81 |
| 14.00 | 2925.00 | 0.62 | 2.37 | 4325.90 |
| 14.25 | 2850.00 | 0.66 | 2.40 | 4518.55 |
| 14.50 | 2775.00 | 0.68 | 2.49 | 4723.76 |
| 14.75 | 3075.00 | 0.67 | 2.42 | 4958.96 |
| 15.00 | 2775.00 | 0.72 | 2.63 | 5257.30 |
| 15.25 | 2850.00 | 0.73 | 2.69 | 5579.86 |
| 15.50 | 2775.00 | 0.76 | 2.78 | 5889.37 |
| 15.75 | 2775.00 | 0.78 | 2.82 | 6082.53 |
| 16.00 | 2775.00 | 0.78 | 2.83 | 6127.88 |
| 16.25 | 2775.00 | 0.77 | 2.82 | 6037.54 |
| 16.50 | 2775.00 | 0.75 | 2.76 | 5769.22 |
| 16.75 | 2775.00 | 0.72 | 2.67 | 5344.83 |
| 17.00 | 2775.00 | 0.69 | 2.56 | 4916.21 |
| 17.25 | 2775.00 | 0.66 | 2.46 | 4496.23 |
| 17.50 | 2925.00 | 0.62 | 2.27 | 4086.26 |
| 17.75 | 2700.00 | 0.61 | 2.30 | 3759.52 |
| 18.00 | 2700.00 | 0.58 | 2.22 | 3501.15 |
| 18.25 | 2625.00 | 0.56 | 2.21 | 3231.30 |
| 18.50 | 2700.00 | 0.53 | 2.06 | 2966.85 |
| 18.75 | 2625.00 | 0.51 | 2.05 | 2726.16 |


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| | | | | |
|---|---|---|---|---|
| 19.00 | 2625.00 | 0.48 | 1.97 | 2501.70 |
| 19.25 | 2625.00 | 0.46 | 1.90 | 2306.94 |
| 19.50 | 2625.00 | 0.44 | 1.83 | 2138.13 |
| 19.75 | 2625.00 | 0.43 | 1.77 | 1990.50 |
| 20.00 | 2625.00 | 0.41 | 1.72 | 1860.60 |
| 20.25 | 2550.00 | 0.39 | 1.73 | 1739.81 |
| 20.50 | 2550.00 | 0.38 | 1.68 | 1629.67 |
| 20.75 | 2550.00 | 0.37 | 1.63 | 1530.39 |
| 21.00 | 2550.00 | 0.36 | 1.59 | 1443.41 |
| 21.25 | 2550.00 | 0.34 | 1.55 | 1362.06 |
| 21.50 | 2550.00 | 0.33 | 1.52 | 1292.63 |
| 21.75 | 2550.00 | 0.33 | 1.48 | 1229.10 |
| 22.00 | 2550.00 | 0.32 | 1.46 | 1177.15 |
| 22.25 | 2550.00 | 0.31 | 1.43 | 1134.36 |
| 22.50 | 2550.00 | 0.30 | 1.41 | 1095.15 |
| 22.75 | 2550.00 | 0.30 | 1.39 | 1056.41 |
| 23.00 | 2550.00 | 0.29 | 1.37 | 1027.24 |
| 23.25 | 2550.00 | 0.29 | 1.36 | 1023.06 |
| 23.50 | 2550.00 | 0.30 | 1.37 | 1031.65 |
| 23.75 | 2550.00 | 0.30 | 1.37 | 1039.12 |
| 24.00 | 2550.00 | 0.30 | 1.38 | 1050.49 |
| 24.25 | 2550.00 | 0.30 | 1.39 | 1062.44 |
| 24.50 | 2550.00 | 0.30 | 1.38 | 1047.34 |
| 24.75 | 2550.00 | 0.29 | 1.36 | 999.34 |
| 25.00 | 2475.00 | 0.28 | 1.36 | 939.47 |
| 25.25 | 2550.00 | 0.27 | 1.29 | 874.80 |
| 25.50 | 2475.00 | 0.26 | 1.28 | 813.10 |
| 25.75 | 2475.00 | 0.25 | 1.24 | 757.43 |
| 26.00 | 2475.00 | 0.24 | 1.21 | 706.43 |
| 26.25 | 2475.00 | 0.23 | 1.18 | 661.18 |
| 26.50 | 2550.00 | 0.22 | 1.12 | 615.94 |
| 26.75 | 2475.00 | 0.21 | 1.12 | 577.16 |
| 27.00 | 2475.00 | 0.20 | 1.08 | 540.40 |
| 27.25 | 2550.00 | 0.19 | 1.03 | 506.77 |
| 27.50 | 2475.00 | 0.19 | 1.03 | 475.62 |
| 27.75 | 2475.00 | 0.18 | 1.00 | 444.33 |
| 28.00 | 2475.00 | 0.17 | 0.97 | 417.41 |
| 28.25 | 2475.00 | 0.17 | 0.94 | 392.04 |
| 28.50 | 2475.00 | 0.16 | 0.92 | 372.23 |
| 28.75 | 2475.00 | 0.16 | 0.90 | 349.69 |
| 29.00 | 2475.00 | 0.15 | 0.88 | 328.17 |
| 29.25 | 2475.00 | 0.15 | 0.85 | 308.00 |
| 29.50 | 2475.00 | 0.14 | 0.83 | 288.90 |
| 29.75 | 2475.00 | 0.14 | 0.80 | 270.51 |
| 30.00 | 2400.00 | 0.13 | 0.82 | 254.86 |
| 30.25 | 2400.00 | 0.13 | 0.80 | 240.05 |
| 30.50 | 2400.00 | 0.12 | 0.77 | 224.21 |
| 30.75 | 2400.00 | 0.12 | 0.75 | 209.13 |
| 31.00 | 2400.00 | 0.11 | 0.73 | 194.57 |
| 31.25 | 2400.00 | 0.11 | 0.71 | 181.22 |
| 31.50 | 2325.00 | 0.10 | 0.71 | 167.38 |
| 31.75 | 2325.00 | 0.10 | 0.68 | 156.17 |
| 32.00 | 2175.00 | 0.09 | 0.72 | 144.17 |
| 32.25 | 2175.00 | 0.09 | 0.69 | 133.78 |
| 32.50 | 2175.00 | 0.09 | 0.68 | 127.02 |
| 32.75 | 2175.00 | 0.08 | 0.64 | 114.41 |
| 33.00 | 2175.00 | 0.08 | 0.63 | 107.67 |
| 33.25 | 2025.00 | 0.07 | 0.67 | 100.88 |
| 33.50 | 2100.00 | 0.07 | 0.61 | 93.67 |
| 33.75 | 1875.00 | 0.07 | 0.70 | 87.91 |
| 34.00 | 1800.00 | 0.06 | 0.69 | 80.05 |
| 34.25 | 1950.00 | 0.06 | 0.59 | 73.66 |
| 34.50 | 2025.00 | 0.06 | 0.53 | 67.04 |
| 34.75 | 2025.00 | 0.06 | 0.52 | 63.47 |
| 35.00 | 1875.00 | 0.06 | 0.57 | 59.46 |
| 35.25 | 1725.00 | 0.05 | 0.64 | 57.53 |
| 35.50 | 1875.00 | 0.05 | 0.55 | 54.21 |
| 35.75 | 1725.00 | 0.05 | 0.56 | 47.34 |
| 36.00 | 1725.00 | 0.05 | 0.55 | 45.32 |
| 36.25 | 1500.00 | 0.04 | 0.67 | 43.67 |
| 36.50 | 1800.00 | 0.05 | 0.45 | 38.11 |
| 36.75 | 1800.00 | 0.05 | 0.47 | 39.47 |
| 37.00 | 1725.00 | 0.04 | 0.46 | 35.06 |
| 37.25 | 1800.00 | 0.04 | 0.38 | 30.42 |
| 37.50 | 1500.00 | 0.04 | 0.50 | 28.76 |
| 37.75 | 1350.00 | 0.04 | 0.61 | 28.96 |
| 38.00 | 1200.00 | 0.03 | 0.68 | 26.58 |
| 38.25 | 1500.00 | 0.04 | 0.50 | 27.24 |
| 38.50 | 1350.00 | 0.03 | 0.51 | 23.13 |
| 38.75 | 1425.00 | 0.03 | 0.45 | 21.79 |
| 39.00 | 1350.00 | 0.03 | 0.47 | 20.41 |
| 39.25 | 1125.00 | 0.03 | 0.62 | 19.71 |
| 39.50 | 1425.00 | 0.03 | 0.43 | 19.97 |
| 39.75 | 1125.00 | 0.03 | 0.60 | 18.30 |
| 40.00 | 1350.00 | 0.03 | 0.39 | 15.80 |
| 40.25 | 975.00 | 0.02 | 0.72 | 16.57 |
| 40.50 | 1125.00 | 0.03 | 0.58 | 16.44 |
| 40.75 | 1125.00 | 0.02 | 0.47 | 13.15 |
| 41.00 | 1275.00 | 0.03 | 0.41 | 13.83 |
| 41.25 | 1200.00 | 0.03 | 0.33 | 9.92 |
| 41.50 | 975.00 | 0.02 | 0.58 | 12.15 |
| 41.75 | 1200.00 | 0.02 | 0.35 | 10.49 |
| 42.00 | 825.00 | 0.02 | 0.71 | 10.82 |
| 42.25 | 1050.00 | 0.02 | 0.42 | 9.62 |
| 42.50 | 825.00 | 0.02 | 0.79 | 11.45 |
| 42.75 | 1050.00 | 0.02 | 0.32 | 7.08 |
| 43.00 | 975.00 | 0.02 | 0.54 | 10.48 |
| 43.25 | 975.00 | 0.02 | 0.55 | 10.55 |
| 43.50 | 900.00 | 0.02 | 0.40 | 6.54 |
| 43.75 | 675.00 | 0.01 | 0.67 | 6.62 |
| 44.00 | 750.00 | 0.02 | 0.52 | 6.17 |
| 44.25 | 675.00 | 0.01 | 0.79 | 7.56 |
| 44.50 | 825.00 | 0.02 | 0.41 | 5.64 |
| 44.75 | 675.00 | 0.01 | 0.55 | 5.18 |
| 45.00 | 900.00 | 0.02 | 0.35 | 5.43 |
| 45.25 | 525.00 | 0.01 | 0.91 | 5.23 |
| 45.50 | 675.00 | 0.01 | 0.71 | 6.30 |
| 45.75 | 525.00 | 0.01 | 0.94 | 5.15 |
| 46.00 | 600.00 | 0.01 | 0.45 | 3.07 |
| 46.25 | 600.00 | 0.01 | 0.75 | 5.06 |
| 46.50 | 450.00 | 0.01 | 1.10 | 4.23 |
| 46.75 | 600.00 | 0.01 | 0.84 | 5.47 |
| 47.00 | 375.00 | 0.01 | 1.86 | 4.88 |
| 47.25 | 450.00 | 0.01 | 0.93 | 3.36 |
| 47.50 | 600.00 | 0.01 | 0.29 | 1.81 |
| 47.75 | 525.00 | 0.01 | 0.79 | 3.73 |
| 48.00 | 600.00 | 0.01 | 0.33 | 1.98 |
| 48.25 | 375.00 | 0.01 | 0.88 | 2.12 |
| 48.50 | 375.00 | 0.01 | 1.29 | 3.06 |
| 48.75 | 300.00 | 0.01 | 2.18 | 3.28 |
| 49.00 | 375.00 | 0.01 | 1.17 | 2.68 |
| 49.25 | 300.00 | 0.00 | 1.51 | 2.21 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 49.50 | 300.00 | 0.00 | 0.77 | 1.14 |
| 49.75 | 450.00 | 0.01 | 0.52 | 1.72 |
| 50.00 | 75.00 | 0.00 | 15.31 | 2.09 |
| 50.25 | 225.00 | 0.00 | 1.99 | 1.64 |
| 50.50 | 75.00 | 0.00 | 15.17 | 2.07 |
| 50.75 | 150.00 | 0.00 | -0.09 | -0.05 |
| 51.00 | 150.00 | 0.00 | -0.94 | -0.50 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.75 |
| 51.50 | 0.00 | 0.00 | 0.00 | 1.15 |
| 51.75 | 75.00 | 0.00 | 6.76 | 0.93 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 75.00 | 0.00 | 1.39 | 0.19 |
| 52.50 | 75.00 | 0.00 | 3.19 | 0.43 |
| 52.75 | 225.00 | 0.00 | 0.41 | 0.44 |
| 53.00 | 75.00 | 0.00 | 1.40 | 0.19 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 75.00 | 0.00 | 1.50 | 0.20 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 7 IS: 64.11 CFS AT TIME: 15.42 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 20.85 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 7

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 75.00 | 0.01 | 0.25 | 0.13 |
| 10.25 | 225.00 | 0.02 | 0.29 | 1.60 |
| 10.50 | 225.00 | 0.02 | 0.35 | 1.91 |
| 10.75 | 150.00 | 0.02 | 0.65 | 1.74 |
| 11.00 | 150.00 | 0.02 | 1.36 | 3.88 |
| 11.25 | 525.00 | 0.07 | 0.19 | 7.40 |
| 11.50 | 525.00 | 0.07 | 0.33 | 11.89 |
| 11.75 | 525.00 | 0.07 | 0.38 | 14.34 |
| 12.00 | 600.00 | 0.08 | 0.34 | 16.43 |
| 12.25 | 600.00 | 0.08 | 0.36 | 18.33 |
| 12.50 | 600.00 | 0.09 | 0.43 | 24.22 |
| 12.75 | 675.00 | 0.11 | 0.39 | 27.66 |
| 13.00 | 600.00 | 0.10 | 0.51 | 30.33 |
| 13.25 | 600.00 | 0.10 | 0.54 | 32.46 |
| 13.50 | 600.00 | 0.10 | 0.57 | 35.75 |
| 13.75 | 525.00 | 0.11 | 0.71 | 39.41 |
| 14.00 | 600.00 | 0.11 | 0.57 | 39.53 |
| 14.25 | 675.00 | 0.12 | 0.51 | 42.73 |
| 14.50 | 600.00 | 0.12 | 0.62 | 45.38 |
| 14.75 | 600.00 | 0.12 | 0.70 | 52.04 |
| 15.00 | 525.00 | 0.12 | 0.90 | 56.95 |
| 15.25 | 825.00 | 0.14 | 0.43 | 51.09 |
| 15.50 | 750.00 | 0.13 | 0.54 | 54.16 |
| 15.75 | 600.00 | 0.12 | 0.76 | 53.08 |
| 16.00 | 600.00 | 0.11 | 0.71 | 44.85 |
| 16.25 | 600.00 | 0.10 | 0.67 | 40.81 |
| 16.50 | 525.00 | 0.09 | 0.76 | 35.55 |
| 16.75 | 525.00 | 0.08 | 0.70 | 30.02 |
| 17.00 | 375.00 | 0.12 | 0.53 | 23.20 |
| 17.25 | 300.00 | 0.10 | 0.73 | 21.19 |
| 17.50 | 450.00 | 0.09 | 0.49 | 19.69 |
| 17.75 | 450.00 | 0.06 | 0.66 | 18.25 |
| 18.00 | 225.00 | 0.07 | 0.78 | 12.80 |
| 18.25 | 300.00 | 0.08 | 0.54 | 13.30 |
| 18.50 | 300.00 | 0.07 | 0.42 | 9.34 |
| 18.75 | 300.00 | 0.07 | 0.37 | 7.95 |
| 19.00 | 300.00 | 0.07 | 0.30 | 6.30 |
| 19.25 | 225.00 | 0.06 | 0.40 | 5.08 |
| 19.50 | 225.00 | 0.06 | 0.39 | 4.90 |
| 19.75 | 150.00 | 0.04 | 0.85 | 5.40 |
| 20.00 | 300.00 | 0.06 | 0.16 | 2.87 |
| 20.25 | 150.00 | 0.03 | 0.45 | 2.38 |
| 20.50 | 300.00 | 0.03 | 0.26 | 2.30 |
| 20.75 | 75.00 | 0.02 | 2.69 | 3.50 |
| 21.00 | 150.00 | 0.03 | 0.60 | 2.41 |
| 21.25 | 150.00 | 0.03 | 0.25 | 1.11 |
| 21.50 | 75.00 | 0.02 | 0.94 | 1.07 |
| 21.75 | 225.00 | 0.04 | 0.12 | 0.99 |
| 22.00 | 75.00 | 0.01 | 2.76 | 2.98 |
| 22.25 | 375.00 | 0.03 | 0.16 | 2.08 |
| 22.50 | 75.00 | 0.02 | 0.66 | 0.83 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 75.00 | 0.01 | 1.50 | 1.61 |
| 23.25 | 150.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 75.00 | 0.01 | 1.53 | 1.64 |
| 23.75 | 150.00 | 0.03 | 0.22 | 0.84 |
| 24.00 | 225.00 | 0.04 | 0.12 | 1.00 |
| 24.25 | 75.00 | 0.01 | 0.93 | 1.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 1.80 |
| 24.75 | 75.00 | 0.01 | 1.51 | 1.62 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 75.00 | 0.01 | 1.80 | 1.69 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 8 IS: 787.90 CFS AT TIME: 16.73 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 405.11 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 8

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 600.00 | 0.17 | 2.71 | 271.50 |
| 14.00 | 900.00 | 0.21 | 2.15 | 411.02 |
| 14.25 | 900.00 | 0.23 | 2.28 | 472.75 |
| 14.50 | 900.00 | 0.25 | 2.41 | 541.95 |
| 14.75 | 900.00 | 0.26 | 2.47 | 573.47 |
| 15.00 | 900.00 | 0.27 | 2.53 | 604.00 |
| 15.25 | 975.00 | 0.28 | 2.36 | 644.43 |
| 15.50 | 900.00 | 0.28 | 2.66 | 677.93 |
| 15.75 | 900.00 | 0.29 | 2.71 | 709.96 |
| 16.00 | 900.00 | 0.30 | 2.77 | 739.15 |
| 16.25 | 900.00 | 0.30 | 2.81 | 764.29 |
| 16.50 | 900.00 | 0.31 | 2.83 | 777.70 |
| 16.75 | 1125.00 | 0.32 | 2.18 | 783.42 |
| 17.00 | 975.00 | 0.31 | 2.56 | 771.63 |
| 17.25 | 900.00 | 0.30 | 2.76 | 741.13 |
| 17.50 | 1050.00 | 0.30 | 2.25 | 698.99 |
| 17.75 | 900.00 | 0.28 | 2.60 | 647.54 |
| 18.00 | 900.00 | 0.26 | 2.50 | 591.47 |
| 18.25 | 975.00 | 0.25 | 2.19 | 539.54 |
| 18.50 | 900.00 | 0.24 | 2.33 | 499.94 |
| 18.75 | 900.00 | 0.23 | 2.27 | 469.15 |
| 19.00 | 975.00 | 0.23 | 1.99 | 436.29 |
| 19.25 | 975.00 | 0.21 | 1.92 | 402.08 |
| 19.50 | 900.00 | 0.20 | 2.04 | 369.24 |
| 19.75 | 900.00 | 0.19 | 1.96 | 338.03 |
| 20.00 | 900.00 | 0.18 | 1.89 | 311.40 |
| 20.25 | 825.00 | 0.17 | 2.04 | 289.29 |
| 20.50 | 900.00 | 0.17 | 1.73 | 266.75 |
| 20.75 | 825.00 | 0.16 | 1.87 | 249.25 |
| 21.00 | 900.00 | 0.16 | 1.62 | 232.55 |
| 21.25 | 900.00 | 0.15 | 1.54 | 213.97 |
| 21.50 | 900.00 | 0.15 | 1.50 | 200.66 |
| 21.75 | 825.00 | 0.14 | 1.63 | 187.61 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 22.00 | 900.00 | 0.14 | 1.40 | 174.16 |
| 22.25 | 900.00 | 0.13 | 1.35 | 162.57 |
| 22.50 | 825.00 | 0.13 | 1.46 | 152.43 |
| 22.75 | 825.00 | 0.12 | 1.40 | 141.77 |
| 23.00 | 825.00 | 0.12 | 1.36 | 133.58 |
| 23.25 | 900.00 | 0.12 | 1.18 | 126.76 |
| 23.50 | 825.00 | 0.11 | 1.29 | 119.12 |
| 23.75 | 900.00 | 0.11 | 1.06 | 108.41 |
| 24.00 | 825.00 | 0.11 | 1.19 | 104.29 |
| 24.25 | 825.00 | 0.10 | 1.09 | 92.87 |
| 24.50 | 825.00 | 0.10 | 1.09 | 90.20 |
| 24.75 | 825.00 | 0.10 | 1.05 | 84.90 |
| 25.00 | 825.00 | 0.10 | 0.99 | 78.53 |
| 25.25 | 825.00 | 0.10 | 0.96 | 75.50 |
| 25.50 | 825.00 | 0.09 | 0.94 | 72.09 |
| 25.75 | 825.00 | 0.09 | 0.94 | 71.64 |
| 26.00 | 825.00 | 0.09 | 0.95 | 74.00 |
| 26.25 | 825.00 | 0.10 | 1.06 | 88.17 |
| 26.50 | 825.00 | 0.10 | 1.15 | 98.03 |
| 26.75 | 825.00 | 0.10 | 1.16 | 97.65 |
| 27.00 | 825.00 | 0.10 | 1.05 | 86.51 |
| 27.25 | 750.00 | 0.09 | 1.13 | 78.26 |
| 27.50 | 825.00 | 0.09 | 0.98 | 76.13 |
| 27.75 | 825.00 | 0.09 | 0.91 | 67.16 |
| 28.00 | 825.00 | 0.09 | 0.88 | 63.41 |
| 28.25 | 825.00 | 0.08 | 0.80 | 55.42 |
| 28.50 | 825.00 | 0.08 | 0.75 | 50.17 |
| 28.75 | 900.00 | 0.08 | 0.64 | 48.46 |
| 29.00 | 825.00 | 0.08 | 0.73 | 47.12 |
| 29.25 | 825.00 | 0.08 | 0.62 | 39.04 |
| 29.50 | 825.00 | 0.07 | 0.58 | 35.58 |
| 29.75 | 825.00 | 0.07 | 0.59 | 34.06 |
| 30.00 | 825.00 | 0.07 | 0.52 | 29.37 |
| 30.25 | 750.00 | 0.06 | 0.63 | 28.85 |
| 30.50 | 750.00 | 0.06 | 0.62 | 27.72 |
| 30.75 | 750.00 | 0.06 | 0.59 | 25.85 |
| 31.00 | 675.00 | 0.05 | 0.68 | 23.75 |
| 31.25 | 675.00 | 0.05 | 0.59 | 19.92 |
| 31.50 | 675.00 | 0.05 | 0.54 | 17.49 |
| 31.75 | 750.00 | 0.05 | 0.47 | 17.73 |
| 32.00 | 600.00 | 0.04 | 0.72 | 17.66 |
| 32.25 | 675.00 | 0.04 | 0.49 | 14.77 |
| 32.50 | 675.00 | 0.04 | 0.39 | 11.64 |
| 32.75 | 675.00 | 0.04 | 0.49 | 14.13 |
| 33.00 | 675.00 | 0.04 | 0.47 | 13.23 |
| 33.25 | 525.00 | 0.03 | 0.72 | 12.39 |
| 33.50 | 600.00 | 0.04 | 0.45 | 9.75 |
| 33.75 | 300.00 | 0.03 | 1.36 | 10.52 |
| 34.00 | 300.00 | 0.02 | 1.94 | 11.08 |
| 34.25 | 150.00 | 0.01 | 3.55 | 7.69 |
| 34.50 | 300.00 | 0.02 | 1.85 | 10.04 |
| 34.75 | 300.00 | 0.02 | 0.35 | 2.51 |
| 35.00 | 450.00 | 0.03 | 0.29 | 3.41 |
| 35.25 | 150.00 | 0.01 | 1.52 | 2.54 |
| 35.50 | 300.00 | 0.02 | 1.17 | 5.87 |
| 35.75 | 0.00 | 0.00 | 0.00 | 2.37 |
| 36.00 | 450.00 | 0.03 | 0.10 | 1.22 |
| 36.25 | 225.00 | 0.02 | 0.52 | 2.21 |
| 36.50 | 75.00 | 0.00 | 2.95 | 0.96 |
| 36.75 | 375.00 | 0.02 | 0.15 | 1.35 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 75.00 | 0.01 | 5.73 | 2.16 |
| 39.00 | 0.00 | 0.00 | 0.00 | 1.30 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 225.00 | 0.01 | 1.70 | 4.80 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 3.11 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 9 IS: 45.35 CFS AT TIME: 16.29 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 8.83 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 9

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 75.00 | 0.00 | 15.22 | 2.53 |
| 16.50 | 975.00 | 0.03 | 0.25 | 7.31 |
| 16.75 | 375.00 | 0.01 | 1.55 | 8.32 |
| 17.00 | 825.00 | 0.03 | 0.54 | 12.13 |
| 17.25 | 300.00 | 0.01 | 4.48 | 18.45 |
| 17.50 | 450.00 | 0.02 | 2.15 | 18.39 |
| 17.75 | 300.00 | 0.01 | 4.76 | 21.33 |
| 18.00 | 300.00 | 0.02 | 4.49 | 20.26 |
| 18.25 | 525.00 | 0.02 | 1.75 | 19.38 |
| 18.50 | 600.00 | 0.02 | 1.82 | 25.31 |
| 18.75 | 450.00 | 0.02 | 2.23 | 18.78 |
| 19.00 | 375.00 | 0.02 | 3.21 | 19.44 |
| 19.25 | 300.00 | 0.01 | 3.60 | 14.41 |
| 19.50 | 225.00 | 0.01 | 5.52 | 12.99 |
| 19.75 | 300.00 | 0.01 | 4.34 | 16.20 |
| 20.00 | 300.00 | 0.01 | 3.03 | 10.61 |
| 20.25 | 300.00 | 0.01 | 3.19 | 10.59 |
| 20.50 | 450.00 | 0.02 | 1.14 | 8.15 |
| 20.75 | 450.00 | 0.02 | 1.36 | 9.23 |
| 21.00 | 450.00 | 0.02 | 1.00 | 6.76 |
| 21.25 | 225.00 | 0.01 | 2.55 | 5.14 |
| 21.50 | 300.00 | 0.01 | 1.23 | 4.01 |
| 21.75 | 225.00 | 0.01 | 2.24 | 4.51 |
| 22.00 | 600.00 | 0.02 | 0.85 | 9.89 |
| 22.25 | 375.00 | 0.01 | 2.64 | 13.84 |
| 22.50 | 525.00 | 0.02 | 1.04 | 10.61 |
| 22.75 | 300.00 | 0.01 | 2.47 | 8.84 |
| 23.00 | 300.00 | 0.01 | 3.33 | 11.98 |
| 23.25 | 300.00 | 0.01 | 3.15 | 11.55 |
| 23.50 | 150.00 | 0.01 | 10.73 | 13.05 |
| 23.75 | 225.00 | 0.01 | 4.72 | 9.68 |
| 24.00 | 300.00 | 0.01 | 1.58 | 5.25 |
| 24.25 | 150.00 | 0.01 | 8.70 | 8.60 |
| 24.50 | 225.00 | 0.01 | 2.68 | 5.36 |
| 24.75 | 225.00 | 0.01 | 1.68 | 3.42 |
| 25.00 | 225.00 | 0.01 | 2.14 | 3.85 |
| 25.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 150.00 | 0.00 | 1.17 | 0.77 |
| 25.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 75.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 38.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 75.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 69.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 75.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 10 IS: 42.52 CFS AT TIME: 18.25 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 12.75 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 10

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 150.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 225.00 | 0.02 | 0.91 | 4.45 |
| 16.75 | 225.00 | 0.03 | 1.07 | 7.00 |
| 17.00 | 300.00 | 0.04 | 0.86 | 9.62 |
| 17.25 | 225.00 | 0.03 | 0.88 | 5.95 |
| 17.50 | 225.00 | 0.04 | 1.67 | 15.25 |
| 17.75 | 225.00 | 0.06 | 2.93 | 36.87 |
| 18.00 | 150.00 | 0.05 | 5.10 | 39.12 |
| 18.25 | 150.00 | 0.05 | 5.16 | 40.08 |
| 18.50 | 150.00 | 0.05 | 5.00 | 38.37 |
| 18.75 | 150.00 | 0.05 | 5.02 | 37.76 |
| 19.00 | 225.00 | 0.06 | 2.80 | 34.99 |
| 19.25 | 225.00 | 0.04 | 3.25 | 32.38 |
| 19.50 | 150.00 | 0.04 | 4.54 | 30.53 |
| 19.75 | 225.00 | 0.05 | 2.66 | 29.81 |
| 20.00 | 150.00 | 0.04 | 4.29 | 25.79 |
| 20.25 | 150.00 | 0.04 | 4.19 | 24.13 |
| 20.50 | 150.00 | 0.04 | 3.73 | 20.80 |
| 20.75 | 225.00 | 0.04 | 1.88 | 17.83 |
| 21.00 | 300.00 | 0.05 | 1.05 | 14.64 |
| 21.25 | 150.00 | 0.03 | 2.68 | 12.72 |
| 21.50 | 225.00 | 0.04 | 1.18 | 9.76 |
| 21.75 | 150.00 | 0.03 | 2.23 | 9.39 |
| 22.00 | 150.00 | 0.03 | 2.22 | 8.84 |
| 22.25 | 375.00 | 0.05 | 0.52 | 9.31 |
| 22.50 | 225.00 | 0.04 | 1.27 | 10.14 |
| 22.75 | 300.00 | 0.04 | 0.87 | 11.21 |
| 23.00 | 150.00 | 0.03 | 2.18 | 8.77 |
| 23.25 | 150.00 | 0.02 | 2.15 | 7.72 |
| 23.50 | 225.00 | 0.03 | 1.11 | 7.14 |
| 23.75 | 150.00 | 0.02 | 2.19 | 7.07 |
| 24.00 | 150.00 | 0.02 | 2.11 | 7.84 |
| 24.25 | 150.00 | 0.03 | 1.94 | 7.43 |
| 24.50 | 150.00 | 0.02 | 1.99 | 6.66 |
| 24.75 | 150.00 | 0.02 | 1.88 | 6.06 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 25.00 | 150.00 | 0.02 | 1.67 | 5.36 |
| 25.25 | 75.00 | 0.02 | 3.98 | 4.50 |
| 25.50 | 150.00 | 0.02 | 0.75 | 2.00 |
| 25.75 | 75.00 | 0.01 | 3.83 | 2.93 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 11 IS: 443.09 CFS AT TIME: 16.58 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 209.77 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 11

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 600.00 | 0.16 | 1.53 | 148.04 |
| 14.25 | 750.00 | 0.17 | 1.31 | 163.04 |
| 14.50 | 675.00 | 0.17 | 1.58 | 177.02 |
| 14.75 | 675.00 | 0.17 | 1.60 | 183.89 |
| 15.00 | 675.00 | 0.17 | 1.63 | 189.37 |
| 15.25 | 675.00 | 0.20 | 1.97 | 267.55 |
| 15.50 | 750.00 | 0.22 | 1.89 | 312.20 |
| 15.75 | 750.00 | 0.23 | 1.99 | 344.66 |
| 16.00 | 750.00 | 0.24 | 2.16 | 395.95 |
| 16.25 | 750.00 | 0.25 | 2.21 | 412.98 |
| 16.50 | 675.00 | 0.25 | 2.56 | 433.25 |
| 16.75 | 750.00 | 0.26 | 2.28 | 437.34 |
| 17.00 | 750.00 | 0.25 | 2.26 | 427.84 |
| 17.25 | 750.00 | 0.25 | 2.20 | 407.18 |
| 17.50 | 675.00 | 0.24 | 2.38 | 377.99 |
| 17.75 | 750.00 | 0.23 | 1.98 | 341.12 |
| 18.00 | 750.00 | 0.22 | 1.85 | 302.02 |
| 18.25 | 750.00 | 0.21 | 1.74 | 270.62 |
| 18.50 | 675.00 | 0.19 | 1.86 | 245.35 |
| 18.75 | 750.00 | 0.19 | 1.57 | 225.96 |
| 19.00 | 675.00 | 0.18 | 1.68 | 204.57 |
| 19.25 | 675.00 | 0.17 | 1.61 | 186.66 |
| 19.50 | 675.00 | 0.16 | 1.50 | 165.18 |
| 19.75 | 675.00 | 0.16 | 1.41 | 150.09 |
| 20.00 | 675.00 | 0.15 | 1.33 | 135.82 |
| 20.25 | 675.00 | 0.14 | 1.23 | 120.08 |
| 20.50 | 675.00 | 0.14 | 1.16 | 108.56 |
| 20.75 | 675.00 | 0.13 | 1.09 | 97.93 |
| 21.00 | 675.00 | 0.13 | 1.04 | 90.43 |
| 21.25 | 600.00 | 0.12 | 1.11 | 82.47 |
| 21.50 | 675.00 | 0.12 | 0.93 | 75.35 |
| 21.75 | 675.00 | 0.12 | 0.83 | 64.77 |
| 22.00 | 600.00 | 0.11 | 0.91 | 61.59 |
| 22.25 | 750.00 | 0.11 | 0.65 | 55.92 |
| 22.50 | 750.00 | 0.11 | 0.63 | 53.56 |
| 22.75 | 600.00 | 0.11 | 0.86 | 56.52 |
| 23.00 | 675.00 | 0.11 | 0.71 | 52.40 |
| 23.25 | 675.00 | 0.11 | 0.68 | 48.53 |
| 23.50 | 600.00 | 0.10 | 0.74 | 46.15 |
| 23.75 | 675.00 | 0.10 | 0.61 | 42.06 |
| 24.00 | 675.00 | 0.10 | 0.60 | 40.21 |
| 24.25 | 675.00 | 0.10 | 0.57 | 37.24 |
| 24.50 | 675.00 | 0.09 | 0.52 | 32.21 |
| 24.75 | 675.00 | 0.09 | 0.50 | 30.47 |
| 25.00 | 675.00 | 0.09 | 0.48 | 28.64 |
| 25.25 | 600.00 | 0.09 | 0.55 | 28.46 |
| 25.50 | 600.00 | 0.08 | 0.53 | 26.85 |
| 25.75 | 675.00 | 0.08 | 0.42 | 23.42 |
| 26.00 | 600.00 | 0.08 | 0.46 | 22.34 |
| 26.25 | 600.00 | 0.08 | 0.43 | 20.61 |
| 26.50 | 600.00 | 0.08 | 0.53 | 25.81 |
| 26.75 | 675.00 | 0.09 | 0.45 | 26.04 |
| 27.00 | 675.00 | 0.09 | 0.46 | 27.10 |
| 27.25 | 675.00 | 0.09 | 0.45 | 26.42 |
| 27.50 | 675.00 | 0.09 | 0.47 | 27.08 |
| 27.75 | 675.00 | 0.08 | 0.43 | 24.54 |
| 28.00 | 675.00 | 0.08 | 0.43 | 24.03 |
| 28.25 | 675.00 | 0.08 | 0.40 | 21.79 |
| 28.50 | 600.00 | 0.08 | 0.43 | 20.20 |
| 28.75 | 600.00 | 0.08 | 0.39 | 18.32 |
| 29.00 | 675.00 | 0.08 | 0.34 | 17.69 |
| 29.25 | 525.00 | 0.07 | 0.48 | 18.60 |
| 29.50 | 525.00 | 0.07 | 0.42 | 15.98 |
| 29.75 | 525.00 | 0.07 | 0.38 | 13.65 |
| 30.00 | 525.00 | 0.07 | 0.40 | 14.59 |
| 30.25 | 525.00 | 0.07 | 0.34 | 11.77 |
| 30.50 | 450.00 | 0.06 | 0.47 | 13.40 |
| 30.75 | 450.00 | 0.06 | 0.37 | 10.38 |
| 31.00 | 450.00 | 0.06 | 0.41 | 11.07 |
| 31.25 | 375.00 | 0.06 | 0.41 | 8.57 |
| 31.50 | 525.00 | 0.07 | 0.23 | 8.05 |
| 31.75 | 600.00 | 0.06 | 0.30 | 11.44 |
| 32.00 | 450.00 | 0.06 | 0.37 | 9.55 |
| 32.25 | 375.00 | 0.06 | 0.50 | 11.08 |
| 32.50 | 300.00 | 0.06 | 0.56 | 9.40 |
| 32.75 | 450.00 | 0.06 | 0.40 | 9.91 |
| 33.00 | 375.00 | 0.06 | 0.50 | 10.48 |
| 33.25 | 300.00 | 0.06 | 0.73 | 12.34 |
| 33.50 | 375.00 | 0.06 | 0.28 | 6.65 |
| 33.75 | 525.00 | 0.06 | 0.27 | 8.47 |
| 34.00 | 300.00 | 0.06 | 0.69 | 11.65 |
| 34.25 | 525.00 | 0.06 | 0.22 | 7.28 |
| 34.50 | 525.00 | 0.06 | 0.26 | 7.95 |
| 34.75 | 300.00 | 0.06 | 0.66 | 11.17 |
| 35.00 | 600.00 | 0.07 | 0.18 | 6.87 |
| 35.25 | 300.00 | 0.06 | 0.50 | 8.47 |
| 35.50 | 450.00 | 0.06 | 0.32 | 8.77 |
| 35.75 | 300.00 | 0.06 | 0.69 | 11.63 |
| 36.00 | 450.00 | 0.06 | 0.29 | 7.35 |
| 36.25 | 525.00 | 0.06 | 0.29 | 9.52 |
| 36.50 | 450.00 | 0.06 | 0.41 | 10.92 |
| 36.75 | 450.00 | 0.06 | 0.40 | 10.03 |
| 37.00 | 525.00 | 0.06 | 0.34 | 10.59 |
| 37.25 | 450.00 | 0.06 | 0.40 | 10.94 |
| 37.50 | 525.00 | 0.06 | 0.28 | 9.03 |
| 37.75 | 450.00 | 0.06 | 0.41 | 10.64 |
| 38.00 | 300.00 | 0.06 | 0.63 | 10.57 |
| 38.25 | 600.00 | 0.06 | 0.26 | 9.85 |
| 38.50 | 450.00 | 0.06 | 0.24 | 6.33 |
| 38.75 | 600.00 | 0.07 | 0.20 | 8.02 |
| 39.00 | 600.00 | 0.06 | 0.24 | 9.10 |
| 39.25 | 375.00 | 0.05 | 0.38 | 7.72 |
| 39.50 | 450.00 | 0.06 | 0.29 | 7.62 |
| 39.75 | 375.00 | 0.06 | 0.52 | 10.95 |
| 40.00 | 375.00 | 0.05 | 0.52 | 10.49 |
| 40.25 | 525.00 | 0.06 | 0.32 | 9.83 |
| 40.50 | 375.00 | 0.06 | 0.45 | 9.51 |
| 40.75 | 375.00 | 0.06 | 0.36 | 7.86 |
| 41.00 | 450.00 | 0.06 | 0.32 | 8.29 |
| 41.25 | 525.00 | 0.06 | 0.36 | 11.09 |
| 41.50 | 450.00 | 0.06 | 0.37 | 9.49 |



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| | | | | |
|---|---|---|---|---|
| 41.75 | 300.00 | 0.06 | 0.71 | 11.96 |
| 42.00 | 450.00 | 0.06 | 0.30 | 7.99 |
| 42.25 | 600.00 | 0.07 | 0.19 | 7.33 |
| 42.50 | 375.00 | 0.06 | 0.48 | 10.61 |
| 42.75 | 450.00 | 0.06 | 0.45 | 11.64 |
| 43.00 | 450.00 | 0.06 | 0.40 | 10.77 |
| 43.25 | 375.00 | 0.06 | 0.41 | 9.25 |
| 43.50 | 600.00 | 0.06 | 0.19 | 7.34 |
| 43.75 | 300.00 | 0.05 | 0.71 | 11.16 |
| 44.00 | 300.00 | 0.06 | 0.49 | 8.32 |
| 44.25 | 450.00 | 0.06 | 0.34 | 8.88 |
| 44.50 | 375.00 | 0.06 | 0.47 | 9.94 |
| 44.75 | 525.00 | 0.06 | 0.33 | 10.49 |
| 45.00 | 375.00 | 0.06 | 0.48 | 10.98 |
| 45.25 | 525.00 | 0.06 | 0.33 | 10.35 |
| 45.50 | 450.00 | 0.06 | 0.35 | 9.34 |
| 45.75 | 300.00 | 0.06 | 0.78 | 13.28 |
| 46.00 | 450.00 | 0.06 | 0.40 | 10.75 |
| 46.25 | 450.00 | 0.06 | 0.33 | 8.42 |
| 46.50 | 450.00 | 0.06 | 0.31 | 8.30 |
| 46.75 | 375.00 | 0.06 | 0.52 | 10.94 |
| 47.00 | 450.00 | 0.06 | 0.24 | 6.30 |
| 47.25 | 375.00 | 0.05 | 0.47 | 9.54 |
| 47.50 | 525.00 | 0.06 | 0.30 | 9.38 |
| 47.75 | 600.00 | 0.06 | 0.22 | 8.45 |
| 48.00 | 375.00 | 0.06 | 0.51 | 10.60 |
| 48.25 | 375.00 | 0.05 | 0.62 | 12.43 |
| 48.50 | 300.00 | 0.06 | 0.44 | 7.70 |
| 48.75 | 375.00 | 0.06 | 0.56 | 11.83 |
| 49.00 | 300.00 | 0.05 | 0.80 | 12.53 |
| 49.25 | 525.00 | 0.06 | 0.30 | 9.66 |
| 49.50 | 375.00 | 0.06 | 0.43 | 9.36 |
| 49.75 | 375.00 | 0.06 | 0.52 | 11.91 |
| 50.00 | 525.00 | 0.06 | 0.32 | 10.30 |
| 50.25 | 600.00 | 0.07 | 0.17 | 6.48 |
| 50.50 | 525.00 | 0.07 | 0.31 | 10.82 |
| 50.75 | 375.00 | 0.06 | 0.57 | 12.03 |
| 51.00 | 375.00 | 0.05 | 0.30 | 5.83 |
| 51.25 | 375.00 | 0.06 | 0.50 | 10.52 |
| 51.50 | 450.00 | 0.06 | 0.36 | 9.29 |
| 51.75 | 375.00 | 0.06 | 0.57 | 12.01 |
| 52.00 | 450.00 | 0.06 | 0.31 | 8.37 |
| 52.25 | 450.00 | 0.06 | 0.36 | 9.78 |
| 52.50 | 300.00 | 0.05 | 0.64 | 9.92 |
| 52.75 | 375.00 | 0.06 | 0.46 | 10.14 |
| 53.00 | 525.00 | 0.06 | 0.24 | 7.85 |
| 53.25 | 525.00 | 0.06 | 0.30 | 9.40 |
| 53.50 | 375.00 | 0.06 | 0.46 | 9.71 |
| 53.75 | 375.00 | 0.06 | 0.40 | 8.66 |
| 54.00 | 525.00 | 0.06 | 0.24 | 7.89 |
| 54.25 | 450.00 | 0.06 | 0.45 | 11.27 |
| 54.50 | 450.00 | 0.06 | 0.34 | 8.46 |
| 54.75 | 525.00 | 0.06 | 0.29 | 9.49 |
| 55.00 | 600.00 | 0.06 | 0.22 | 8.30 |
| 55.25 | 300.00 | 0.06 | 0.58 | 10.23 |
| 55.50 | 375.00 | 0.06 | 0.52 | 10.92 |
| 55.75 | 375.00 | 0.06 | 0.62 | 13.11 |
| 56.00 | 450.00 | 0.06 | 0.44 | 11.84 |
| 56.25 | 525.00 | 0.06 | 0.26 | 8.35 |
| 56.50 | 375.00 | 0.06 | 0.37 | 8.51 |
| 56.75 | 300.00 | 0.06 | 0.65 | 10.96 |
| 57.00 | 225.00 | 0.05 | 0.77 | 9.45 |
| 57.25 | 525.00 | 0.06 | 0.22 | 7.37 |
| 57.50 | 450.00 | 0.06 | 0.40 | 10.40 |
| 57.75 | 525.00 | 0.06 | 0.23 | 7.26 |
| 58.00 | 300.00 | 0.06 | 0.62 | 10.51 |
| 58.25 | 375.00 | 0.06 | 0.55 | 11.53 |
| 58.50 | 600.00 | 0.06 | 0.19 | 7.22 |
| 58.75 | 450.00 | 0.06 | 0.41 | 11.00 |
| 59.00 | 600.00 | 0.06 | 0.20 | 7.63 |
| 59.25 | 450.00 | 0.06 | 0.41 | 10.68 |
| 59.50 | 600.00 | 0.06 | 0.22 | 8.36 |
| 59.75 | 525.00 | 0.06 | 0.25 | 8.39 |
| 60.00 | 450.00 | 0.06 | 0.26 | 7.02 |
| 60.25 | 300.00 | 0.06 | 0.56 | 9.87 |
| 60.50 | 600.00 | 0.07 | 0.24 | 9.54 |
| 60.75 | 450.00 | 0.06 | 0.29 | 7.77 |
| 61.00 | 525.00 | 0.06 | 0.27 | 9.16 |
| 61.25 | 525.00 | 0.06 | 0.27 | 8.32 |
| 61.50 | 450.00 | 0.06 | 0.41 | 10.98 |
| 61.75 | 525.00 | 0.06 | 0.29 | 9.32 |
| 62.00 | 600.00 | 0.06 | 0.20 | 7.40 |
| 62.25 | 450.00 | 0.06 | 0.46 | 11.63 |
| 62.50 | 450.00 | 0.06 | 0.40 | 10.24 |
| 62.75 | 600.00 | 0.07 | 0.26 | 10.22 |
| 63.00 | 600.00 | 0.07 | 0.27 | 10.38 |
| 63.25 | 450.00 | 0.06 | 0.32 | 8.24 |
| 63.50 | 450.00 | 0.06 | 0.27 | 7.31 |
| 63.75 | 525.00 | 0.06 | 0.32 | 10.59 |
| 64.00 | 525.00 | 0.06 | 0.32 | 9.89 |
| 64.25 | 525.00 | 0.06 | 0.23 | 7.20 |
| 64.50 | 600.00 | 0.06 | 0.28 | 10.49 |
| 64.75 | 375.00 | 0.06 | 0.47 | 9.93 |
| 65.00 | 450.00 | 0.06 | 0.37 | 9.56 |
| 65.25 | 450.00 | 0.06 | 0.32 | 8.22 |
| 65.50 | 375.00 | 0.06 | 0.48 | 10.12 |
| 65.75 | 525.00 | 0.06 | 0.26 | 8.36 |
| 66.00 | 450.00 | 0.06 | 0.42 | 11.06 |
| 66.25 | 450.00 | 0.06 | 0.42 | 11.26 |
| 66.50 | 375.00 | 0.06 | 0.46 | 9.57 |
| 66.75 | 450.00 | 0.06 | 0.26 | 7.35 |
| 67.00 | 450.00 | 0.06 | 0.40 | 10.37 |
| 67.25 | 675.00 | 0.07 | 0.15 | 7.00 |
| 67.50 | 450.00 | 0.06 | 0.31 | 8.35 |
| 67.75 | 525.00 | 0.06 | 0.29 | 9.37 |
| 68.00 | 450.00 | 0.06 | 0.34 | 8.60 |
| 68.25 | 300.00 | 0.06 | 0.44 | 7.69 |
| 68.50 | 375.00 | 0.06 | 0.50 | 11.05 |
| 68.75 | 375.00 | 0.06 | 0.47 | 10.67 |
| 69.00 | 525.00 | 0.06 | 0.26 | 8.85 |
| 69.25 | 525.00 | 0.06 | 0.24 | 7.84 |
| 69.50 | 375.00 | 0.06 | 0.48 | 11.06 |
| 69.75 | 450.00 | 0.06 | 0.33 | 8.95 |
| 70.00 | 450.00 | 0.06 | 0.43 | 11.00 |
| 70.25 | 525.00 | 0.06 | 0.25 | 8.03 |
| 70.50 | 525.00 | 0.06 | 0.27 | 8.53 |
| 70.75 | 375.00 | 0.06 | 0.54 | 11.31 |
| 71.00 | 450.00 | 0.06 | 0.31 | 8.10 |
| 71.25 | 525.00 | 0.06 | 0.31 | 10.20 |
| 71.50 | 375.00 | 0.06 | 0.46 | 9.56 |
| 71.75 | 300.00 | 0.06 | 0.56 | 9.45 |
| 72.00 | 450.00 | 0.06 | 0.32 | 8.91 |



BSE Document Control Number: 7323HYD101

THE MAXIMUM DISCHARGE FROM CROSS SECTION 12 IS: 490.93 CFS AT TIME: 16.55 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 281.59 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 12

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 375.00 | 0.10 | 3.94 | 154.11 |
| 14.00 | 375.00 | 0.13 | 4.91 | 248.67 |
| 14.25 | 450.00 | 0.15 | 4.21 | 286.08 |
| 14.50 | 450.00 | 0.16 | 4.48 | 327.83 |
| 14.75 | 450.00 | 0.17 | 4.56 | 343.07 |
| 15.00 | 450.00 | 0.17 | 4.62 | 355.62 |
| 15.25 | 450.00 | 0.18 | 4.69 | 369.84 |
| 15.50 | 450.00 | 0.18 | 4.83 | 396.34 |
| 15.75 | 450.00 | 0.19 | 4.95 | 423.55 |
| 16.00 | 450.00 | 0.20 | 5.05 | 444.46 |
| 16.25 | 525.00 | 0.20 | 4.52 | 463.35 |
| 16.50 | 450.00 | 0.20 | 5.27 | 482.70 |
| 16.75 | 675.00 | 0.20 | 3.58 | 476.69 |
| 17.00 | 525.00 | 0.19 | 4.45 | 446.17 |
| 17.25 | 450.00 | 0.18 | 4.86 | 404.11 |
| 17.50 | 450.00 | 0.17 | 4.64 | 359.56 |
| 17.75 | 600.00 | 0.17 | 3.10 | 313.18 |
| 18.00 | 525.00 | 0.15 | 3.42 | 272.82 |
| 18.25 | 525.00 | 0.14 | 3.21 | 240.75 |
| 18.50 | 375.00 | 0.13 | 4.66 | 221.16 |
| 18.75 | 450.00 | 0.13 | 3.56 | 200.60 |
| 19.00 | 375.00 | 0.11 | 4.24 | 179.49 |
| 19.25 | 375.00 | 0.11 | 3.99 | 158.28 |
| 19.50 | 375.00 | 0.10 | 3.84 | 144.36 |
| 19.75 | 375.00 | 0.10 | 3.67 | 131.41 |
| 20.00 | 375.00 | 0.09 | 3.47 | 117.45 |
| 20.25 | 375.00 | 0.08 | 3.31 | 104.58 |
| 20.50 | 375.00 | 0.08 | 3.17 | 93.94 |
| 20.75 | 375.00 | 0.07 | 3.03 | 85.06 |
| 21.00 | 375.00 | 0.07 | 2.92 | 78.40 |
| 21.25 | 375.00 | 0.07 | 2.82 | 71.81 |
| 21.50 | 375.00 | 0.06 | 2.73 | 66.39 |
| 21.75 | 375.00 | 0.06 | 2.58 | 59.57 |
| 22.00 | 375.00 | 0.06 | 2.51 | 55.19 |
| 22.25 | 450.00 | 0.06 | 1.85 | 51.86 |
| 22.50 | 450.00 | 0.06 | 2.03 | 53.86 |
| 22.75 | 375.00 | 0.06 | 2.34 | 48.40 |
| 23.00 | 375.00 | 0.05 | 2.10 | 41.71 |
| 23.25 | 375.00 | 0.05 | 1.98 | 38.24 |
| 23.50 | 375.00 | 0.05 | 1.88 | 35.40 |
| 23.75 | 375.00 | 0.05 | 1.78 | 32.17 |
| 24.00 | 375.00 | 0.05 | 1.81 | 31.21 |
| 24.25 | 375.00 | 0.05 | 1.76 | 30.02 |
| 24.50 | 375.00 | 0.04 | 1.72 | 28.67 |
| 24.75 | 375.00 | 0.04 | 1.68 | 27.71 |
| 25.00 | 375.00 | 0.04 | 1.61 | 26.18 |
| 25.25 | 375.00 | 0.04 | 1.67 | 27.03 |
| 25.50 | 375.00 | 0.04 | 1.69 | 27.16 |
| 25.75 | 375.00 | 0.04 | 1.62 | 26.13 |
| 26.00 | 375.00 | 0.04 | 1.70 | 27.75 |
| 26.25 | 375.00 | 0.05 | 1.69 | 28.91 |
| 26.50 | 375.00 | 0.05 | 1.71 | 29.58 |
| 26.75 | 375.00 | 0.05 | 1.77 | 30.89 |
| 27.00 | 375.00 | 0.05 | 1.75 | 30.43 |
| 27.25 | 375.00 | 0.04 | 1.71 | 28.54 |
| 27.50 | 375.00 | 0.04 | 1.71 | 27.76 |
| 27.75 | 375.00 | 0.04 | 1.59 | 25.30 |


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| | | | | |
|---|---|---|---|---|
| 28.00 | 375.00 | 0.04 | 1.49 | 23.44 |
| 28.25 | 375.00 | 0.04 | 1.56 | 24.38 |
| 28.50 | 375.00 | 0.04 | 1.58 | 24.71 |
| 28.75 | 375.00 | 0.04 | 1.67 | 26.11 |
| 29.00 | 375.00 | 0.04 | 1.44 | 22.48 |
| 29.25 | 375.00 | 0.04 | 1.65 | 25.73 |
| 29.50 | 375.00 | 0.04 | 1.58 | 24.67 |
| 29.75 | 375.00 | 0.04 | 1.56 | 24.35 |
| 30.00 | 375.00 | 0.04 | 1.57 | 24.51 |
| 30.25 | 375.00 | 0.04 | 1.47 | 22.96 |
| 30.50 | 375.00 | 0.04 | 1.57 | 24.56 |
| 30.75 | 375.00 | 0.04 | 1.56 | 24.32 |
| 31.00 | 375.00 | 0.04 | 1.68 | 26.13 |
| 31.25 | 375.00 | 0.04 | 1.48 | 22.93 |
| 31.50 | 375.00 | 0.04 | 1.48 | 23.05 |
| 31.75 | 375.00 | 0.04 | 1.58 | 24.63 |
| 32.00 | 375.00 | 0.04 | 1.67 | 26.12 |
| 32.25 | 375.00 | 0.04 | 1.56 | 24.40 |
| 32.50 | 375.00 | 0.04 | 1.70 | 26.54 |
| 32.75 | 375.00 | 0.04 | 1.57 | 24.42 |
| 33.00 | 450.00 | 0.04 | 1.23 | 24.46 |
| 33.25 | 375.00 | 0.04 | 1.60 | 25.03 |
| 33.50 | 375.00 | 0.04 | 1.44 | 22.56 |
| 33.75 | 375.00 | 0.04 | 1.66 | 25.79 |
| 34.00 | 375.00 | 0.04 | 1.63 | 25.43 |
| 34.25 | 375.00 | 0.04 | 1.59 | 24.77 |
| 34.50 | 375.00 | 0.04 | 1.77 | 27.67 |
| 34.75 | 375.00 | 0.04 | 1.62 | 25.18 |
| 35.00 | 375.00 | 0.04 | 1.47 | 22.89 |
| 35.25 | 375.00 | 0.04 | 1.55 | 24.20 |
| 35.50 | 375.00 | 0.04 | 1.53 | 23.89 |
| 35.75 | 375.00 | 0.04 | 1.55 | 24.16 |
| 36.00 | 375.00 | 0.04 | 1.60 | 24.85 |
| 36.25 | 375.00 | 0.04 | 1.60 | 24.96 |
| 36.50 | 375.00 | 0.04 | 1.50 | 23.41 |
| 36.75 | 375.00 | 0.04 | 1.63 | 25.23 |
| 37.00 | 375.00 | 0.04 | 1.52 | 23.67 |
| 37.25 | 375.00 | 0.04 | 1.54 | 24.04 |
| 37.50 | 375.00 | 0.04 | 1.76 | 27.45 |
| 37.75 | 375.00 | 0.04 | 1.67 | 26.13 |
| 38.00 | 375.00 | 0.04 | 1.61 | 25.07 |
| 38.25 | 375.00 | 0.04 | 1.60 | 24.97 |
| 38.50 | 375.00 | 0.04 | 1.59 | 24.94 |
| 38.75 | 375.00 | 0.04 | 1.54 | 23.98 |
| 39.00 | 375.00 | 0.04 | 1.55 | 24.24 |
| 39.25 | 375.00 | 0.04 | 1.57 | 24.39 |
| 39.50 | 375.00 | 0.04 | 1.59 | 24.74 |
| 39.75 | 375.00 | 0.04 | 1.63 | 25.47 |
| 40.00 | 375.00 | 0.04 | 1.58 | 24.53 |
| 40.25 | 375.00 | 0.04 | 1.73 | 27.00 |
| 40.50 | 375.00 | 0.04 | 1.69 | 26.28 |
| 40.75 | 375.00 | 0.04 | 1.54 | 24.10 |
| 41.00 | 375.00 | 0.04 | 1.57 | 24.49 |
| 41.25 | 375.00 | 0.04 | 1.72 | 26.87 |
| 41.50 | 375.00 | 0.04 | 1.44 | 22.59 |
| 41.75 | 375.00 | 0.04 | 1.53 | 23.82 |
| 42.00 | 375.00 | 0.04 | 1.54 | 24.17 |
| 42.25 | 375.00 | 0.04 | 1.60 | 24.91 |
| 42.50 | 375.00 | 0.04 | 1.60 | 24.97 |
| 42.75 | 375.00 | 0.04 | 1.54 | 24.06 |
| 43.00 | 375.00 | 0.04 | 1.56 | 24.29 |
| 43.25 | 375.00 | 0.04 | 1.56 | 24.31 |
| 43.50 | 375.00 | 0.04 | 1.45 | 22.68 |
| 43.75 | 375.00 | 0.04 | 1.64 | 25.48 |
| 44.00 | 375.00 | 0.04 | 1.62 | 25.34 |
| 44.25 | 375.00 | 0.04 | 1.47 | 22.96 |
| 44.50 | 375.00 | 0.04 | 1.48 | 23.02 |
| 44.75 | 375.00 | 0.04 | 1.57 | 24.43 |
| 45.00 | 375.00 | 0.04 | 1.56 | 24.41 |
| 45.25 | 375.00 | 0.04 | 1.65 | 25.72 |
| 45.50 | 375.00 | 0.04 | 1.55 | 24.20 |
| 45.75 | 375.00 | 0.04 | 1.63 | 25.45 |
| 46.00 | 375.00 | 0.04 | 1.56 | 24.09 |
| 46.25 | 375.00 | 0.04 | 1.53 | 23.81 |
| 46.50 | 375.00 | 0.04 | 1.61 | 25.05 |
| 46.75 | 375.00 | 0.04 | 1.56 | 24.26 |
| 47.00 | 375.00 | 0.04 | 1.53 | 23.80 |
| 47.25 | 375.00 | 0.04 | 1.51 | 23.58 |
| 47.50 | 375.00 | 0.04 | 1.44 | 22.48 |
| 47.75 | 375.00 | 0.04 | 1.53 | 23.92 |
| 48.00 | 375.00 | 0.04 | 1.64 | 25.59 |
| 48.25 | 375.00 | 0.04 | 1.54 | 24.04 |
| 48.50 | 375.00 | 0.04 | 1.41 | 22.01 |
| 48.75 | 375.00 | 0.04 | 1.54 | 24.08 |
| 49.00 | 375.00 | 0.04 | 1.52 | 23.67 |
| 49.25 | 375.00 | 0.04 | 1.44 | 22.38 |
| 49.50 | 375.00 | 0.04 | 1.53 | 23.98 |
| 49.75 | 375.00 | 0.04 | 1.53 | 23.99 |
| 50.00 | 375.00 | 0.04 | 1.67 | 26.09 |
| 50.25 | 375.00 | 0.04 | 1.61 | 25.18 |
| 50.50 | 375.00 | 0.04 | 1.52 | 23.80 |
| 50.75 | 375.00 | 0.04 | 1.66 | 25.93 |
| 51.00 | 375.00 | 0.04 | 1.56 | 24.31 |
| 51.25 | 375.00 | 0.04 | 1.63 | 25.45 |
| 51.50 | 375.00 | 0.04 | 1.65 | 25.80 |
| 51.75 | 375.00 | 0.04 | 1.55 | 24.17 |
| 52.00 | 375.00 | 0.04 | 1.50 | 23.33 |
| 52.25 | 375.00 | 0.04 | 1.58 | 24.64 |
| 52.50 | 375.00 | 0.04 | 1.58 | 24.61 |
| 52.75 | 375.00 | 0.04 | 1.66 | 25.95 |
| 53.00 | 375.00 | 0.04 | 1.48 | 23.03 |
| 53.25 | 375.00 | 0.04 | 1.63 | 25.34 |
| 53.50 | 375.00 | 0.04 | 1.63 | 25.49 |
| 53.75 | 375.00 | 0.04 | 1.41 | 22.09 |
| 54.00 | 375.00 | 0.04 | 1.60 | 24.96 |
| 54.25 | 375.00 | 0.04 | 1.57 | 24.41 |
| 54.50 | 375.00 | 0.04 | 1.59 | 24.78 |
| 54.75 | 375.00 | 0.04 | 1.51 | 23.60 |
| 55.00 | 375.00 | 0.04 | 1.63 | 25.51 |
| 55.25 | 375.00 | 0.04 | 1.55 | 24.24 |
| 55.50 | 375.00 | 0.04 | 1.66 | 25.88 |
| 55.75 | 375.00 | 0.04 | 1.66 | 25.95 |
| 56.00 | 375.00 | 0.04 | 1.63 | 25.32 |
| 56.25 | 375.00 | 0.04 | 1.56 | 24.26 |
| 56.50 | 375.00 | 0.04 | 1.58 | 24.66 |
| 56.75 | 450.00 | 0.04 | 1.18 | 23.58 |
| 57.00 | 375.00 | 0.04 | 1.48 | 23.02 |
| 57.25 | 375.00 | 0.04 | 1.70 | 26.50 |
| 57.50 | 375.00 | 0.04 | 1.54 | 24.04 |
| 57.75 | 375.00 | 0.04 | 1.43 | 22.41 |
| 58.00 | 375.00 | 0.04 | 1.69 | 26.41 |
| 58.25 | 375.00 | 0.04 | 1.48 | 23.03 |



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|---|---|---|---|---|
| 58.50 | 375.00 | 0.04 | 1.57 | 24.44 |
| 58.75 | 375.00 | 0.04 | 1.59 | 24.83 |
| 59.00 | 375.00 | 0.04 | 1.55 | 24.08 |
| 59.25 | 375.00 | 0.04 | 1.54 | 24.16 |
| 59.50 | 375.00 | 0.04 | 1.61 | 25.18 |
| 59.75 | 375.00 | 0.04 | 1.66 | 25.89 |
| 60.00 | 375.00 | 0.04 | 1.59 | 24.88 |
| 60.25 | 375.00 | 0.04 | 1.59 | 24.80 |
| 60.50 | 375.00 | 0.04 | 1.48 | 23.20 |
| 60.75 | 375.00 | 0.04 | 1.66 | 25.98 |
| 61.00 | 375.00 | 0.04 | 1.65 | 25.77 |
| 61.25 | 450.00 | 0.04 | 1.25 | 24.88 |
| 61.50 | 375.00 | 0.04 | 1.68 | 26.19 |
| 61.75 | 375.00 | 0.04 | 1.70 | 26.51 |
| 62.00 | 375.00 | 0.04 | 1.70 | 26.55 |
| 62.25 | 375.00 | 0.04 | 1.46 | 22.85 |
| 62.50 | 375.00 | 0.04 | 1.65 | 25.72 |
| 62.75 | 375.00 | 0.04 | 1.55 | 24.17 |
| 63.00 | 375.00 | 0.04 | 1.67 | 26.12 |
| 63.25 | 375.00 | 0.04 | 1.43 | 22.37 |
| 63.50 | 375.00 | 0.04 | 1.52 | 23.65 |
| 63.75 | 375.00 | 0.04 | 1.51 | 23.63 |
| 64.00 | 375.00 | 0.04 | 1.59 | 24.87 |
| 64.25 | 375.00 | 0.04 | 1.55 | 24.21 |
| 64.50 | 375.00 | 0.04 | 1.54 | 24.08 |
| 64.75 | 375.00 | 0.04 | 1.56 | 24.44 |
| 65.00 | 375.00 | 0.04 | 1.67 | 26.11 |
| 65.25 | 375.00 | 0.04 | 1.51 | 23.59 |
| 65.50 | 375.00 | 0.04 | 1.50 | 23.43 |
| 65.75 | 375.00 | 0.04 | 1.64 | 25.58 |
| 66.00 | 375.00 | 0.04 | 1.45 | 22.63 |
| 66.25 | 375.00 | 0.04 | 1.57 | 24.57 |
| 66.50 | 375.00 | 0.04 | 1.45 | 22.74 |
| 66.75 | 375.00 | 0.04 | 1.65 | 25.79 |
| 67.00 | 375.00 | 0.04 | 1.57 | 24.50 |
| 67.25 | 375.00 | 0.04 | 1.46 | 22.69 |
| 67.50 | 375.00 | 0.04 | 1.47 | 22.92 |
| 67.75 | 375.00 | 0.04 | 1.56 | 24.33 |
| 68.00 | 375.00 | 0.04 | 1.48 | 23.10 |
| 68.25 | 375.00 | 0.04 | 1.64 | 25.67 |
| 68.50 | 375.00 | 0.04 | 1.57 | 24.40 |
| 68.75 | 375.00 | 0.04 | 1.52 | 23.63 |
| 69.00 | 375.00 | 0.04 | 1.61 | 25.02 |
| 69.25 | 375.00 | 0.04 | 1.52 | 23.76 |
| 69.50 | 375.00 | 0.04 | 1.49 | 23.37 |
| 69.75 | 375.00 | 0.04 | 1.55 | 24.22 |
| 70.00 | 375.00 | 0.04 | 1.50 | 23.41 |
| 70.25 | 375.00 | 0.04 | 1.71 | 26.75 |
| 70.50 | 375.00 | 0.04 | 1.60 | 25.01 |
| 70.75 | 375.00 | 0.04 | 1.75 | 27.32 |
| 71.00 | 375.00 | 0.04 | 1.64 | 25.74 |
| 71.25 | 375.00 | 0.04 | 1.59 | 24.75 |
| 71.50 | 375.00 | 0.04 | 1.53 | 23.76 |
| 71.75 | 375.00 | 0.04 | 1.57 | 24.63 |
| 72.00 | 450.00 | 0.04 | 1.28 | 25.42 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 13 IS: 33.71 CFS AT TIME: 17.05 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 26.56 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 13

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 75.00 | 0.00 | 2.09 | 0.69 |
| 16.00 | 600.00 | 0.04 | 0.30 | 6.47 |
| 16.25 | 600.00 | 0.04 | 0.56 | 12.91 |
| 16.50 | 750.00 | 0.05 | 0.49 | 18.28 |
| 16.75 | 975.00 | 0.06 | 0.34 | 21.05 |
| 17.00 | 750.00 | 0.07 | 0.58 | 28.60 |
| 17.25 | 900.00 | 0.07 | 0.44 | 28.66 |
| 17.50 | 900.00 | 0.07 | 0.44 | 28.37 |
| 17.75 | 750.00 | 0.06 | 0.58 | 27.73 |
| 18.00 | 825.00 | 0.07 | 0.48 | 27.08 |
| 18.25 | 900.00 | 0.07 | 0.41 | 24.85 |
| 18.50 | 1050.00 | 0.07 | 0.27 | 20.51 |
| 18.75 | 750.00 | 0.06 | 0.47 | 20.34 |
| 19.00 | 825.00 | 0.06 | 0.36 | 17.42 |
| 19.25 | 825.00 | 0.06 | 0.34 | 15.94 |
| 19.50 | 750.00 | 0.05 | 0.36 | 14.48 |
| 19.75 | 750.00 | 0.05 | 0.36 | 13.92 |
| 20.00 | 900.00 | 0.06 | 0.24 | 11.89 |
| 20.25 | 675.00 | 0.04 | 0.42 | 12.53 |
| 20.50 | 675.00 | 0.04 | 0.37 | 10.30 |
| 20.75 | 600.00 | 0.04 | 0.41 | 9.02 |
| 21.00 | 750.00 | 0.04 | 0.22 | 6.63 |
| 21.25 | 600.00 | 0.03 | 0.25 | 5.30 |
| 21.50 | 525.00 | 0.03 | 0.38 | 5.83 |
| 21.75 | 450.00 | 0.03 | 0.18 | 2.07 |
| 22.00 | 225.00 | 0.01 | 1.54 | 5.14 |
| 22.25 | 750.00 | 0.04 | 0.34 | 11.30 |
| 22.50 | 75.00 | 0.01 | 12.17 | 10.28 |
| 22.75 | 450.00 | 0.03 | 0.56 | 7.01 |
| 23.00 | 375.00 | 0.02 | 0.67 | 5.84 |
| 23.25 | 150.00 | 0.01 | 3.99 | 6.28 |
| 23.50 | 300.00 | 0.02 | 1.02 | 5.33 |
| 23.75 | 450.00 | 0.03 | 0.50 | 5.61 |
| 24.00 | 225.00 | 0.01 | 1.30 | 4.01 |
| 24.25 | 225.00 | 0.01 | 0.93 | 2.87 |
| 24.50 | 450.00 | 0.02 | 0.41 | 4.56 |
| 24.75 | 300.00 | 0.02 | 0.56 | 2.93 |
| 25.00 | 600.00 | 0.03 | 0.16 | 3.05 |
| 25.25 | 525.00 | 0.03 | 0.18 | 2.70 |
| 25.50 | 450.00 | 0.03 | 0.51 | 5.78 |
| 25.75 | 450.00 | 0.03 | 0.35 | 4.04 |
| 26.00 | 300.00 | 0.02 | 1.45 | 7.65 |
| 26.25 | 675.00 | 0.04 | 0.23 | 5.74 |
| 26.50 | 375.00 | 0.02 | 0.60 | 4.86 |
| 26.75 | 450.00 | 0.02 | 0.31 | 3.39 |
| 27.00 | 375.00 | 0.02 | 0.46 | 3.74 |
| 27.25 | 525.00 | 0.03 | 0.49 | 7.45 |
| 27.50 | 525.00 | 0.03 | 0.21 | 3.18 |
| 27.75 | 750.00 | 0.04 | 0.21 | 6.05 |
| 28.00 | 375.00 | 0.02 | 0.68 | 5.28 |
| 28.25 | 450.00 | 0.02 | 0.41 | 4.55 |
| 28.50 | 375.00 | 0.02 | 0.35 | 2.84 |
| 28.75 | 600.00 | 0.03 | 0.15 | 2.92 |
| 29.00 | 300.00 | 0.02 | 1.18 | 6.23 |
| 29.25 | 450.00 | 0.02 | 0.43 | 4.68 |
| 29.50 | 450.00 | 0.03 | 0.26 | 2.93 |
| 29.75 | 450.00 | 0.03 | 0.38 | 4.32 |
| 30.00 | 225.00 | 0.01 | 2.04 | 6.30 |
| 30.25 | 525.00 | 0.03 | 0.15 | 2.24 |
| 30.50 | 525.00 | 0.03 | 0.19 | 2.84 |
| 30.75 | 375.00 | 0.02 | 0.73 | 5.67 |
| 31.00 | 225.00 | 0.01 | 1.30 | 3.87 |
| 31.25 | 525.00 | 0.03 | 0.20 | 3.07 |
| 31.50 | 450.00 | 0.03 | 0.48 | 5.50 |
| 31.75 | 375.00 | 0.02 | 0.57 | 4.41 |
| 32.00 | 225.00 | 0.01 | 1.61 | 4.79 |
| 32.25 | 525.00 | 0.03 | 0.31 | 4.71 |
| 32.50 | 525.00 | 0.03 | 0.25 | 3.81 |
| 32.75 | 525.00 | 0.03 | 0.35 | 5.37 |
| 33.00 | 450.00 | 0.03 | 0.56 | 6.36 |
| 33.25 | 525.00 | 0.03 | 0.30 | 4.52 |
| 33.50 | 375.00 | 0.02 | 0.76 | 6.09 |
| 33.75 | 225.00 | 0.01 | 1.57 | 4.84 |
| 34.00 | 525.00 | 0.03 | 0.24 | 3.54 |
| 34.25 | 375.00 | 0.02 | 0.65 | 5.25 |
| 34.50 | 525.00 | 0.03 | 0.36 | 5.50 |
| 34.75 | 600.00 | 0.03 | 0.11 | 2.23 |
| 35.00 | 375.00 | 0.02 | 0.27 | 2.19 |
| 35.25 | 450.00 | 0.03 | 0.16 | 1.83 |
| 35.50 | 300.00 | 0.02 | 1.11 | 5.84 |
| 35.75 | 600.00 | 0.03 | 0.21 | 3.93 |
| 36.00 | 375.00 | 0.02 | 0.58 | 4.68 |
| 36.25 | 525.00 | 0.03 | 0.32 | 4.77 |
| 36.50 | 300.00 | 0.02 | 0.94 | 4.94 |
| 36.75 | 300.00 | 0.02 | 0.74 | 3.88 |
| 37.00 | 525.00 | 0.03 | 0.41 | 6.24 |
| 37.25 | 375.00 | 0.02 | 0.54 | 4.34 |
| 37.50 | 300.00 | 0.02 | 1.09 | 5.55 |
| 37.75 | 525.00 | 0.03 | 0.41 | 6.26 |
| 38.00 | 375.00 | 0.02 | 0.54 | 4.32 |
| 38.25 | 300.00 | 0.02 | 0.69 | 3.64 |
| 38.50 | 525.00 | 0.03 | 0.15 | 2.33 |
| 38.75 | 525.00 | 0.03 | 0.32 | 4.73 |
| 39.00 | 525.00 | 0.03 | 0.17 | 2.52 |
| 39.25 | 525.00 | 0.03 | 0.42 | 6.46 |
| 39.50 | 225.00 | 0.01 | 1.33 | 4.11 |
| 39.75 | 225.00 | 0.01 | 1.07 | 3.19 |
| 40.00 | 525.00 | 0.03 | 0.40 | 6.15 |
| 40.25 | 375.00 | 0.02 | 0.74 | 5.73 |
| 40.50 | 300.00 | 0.02 | 1.00 | 5.26 |
| 40.75 | 300.00 | 0.02 | 1.31 | 6.90 |
| 41.00 | 750.00 | 0.04 | 0.18 | 5.41 |
| 41.25 | 450.00 | 0.02 | 0.28 | 3.01 |
| 41.50 | 825.00 | 0.04 | 0.08 | 2.71 |
| 41.75 | 525.00 | 0.03 | 0.26 | 3.91 |
| 42.00 | 675.00 | 0.04 | 0.13 | 3.23 |
| 42.25 | 300.00 | 0.02 | 0.91 | 4.65 |
| 42.50 | 375.00 | 0.02 | 0.58 | 4.68 |
| 42.75 | 300.00 | 0.02 | 0.88 | 4.50 |
| 43.00 | 450.00 | 0.03 | 0.38 | 4.28 |
| 43.25 | 225.00 | 0.01 | 1.79 | 5.56 |
| 43.50 | 375.00 | 0.02 | 0.72 | 5.56 |
| 43.75 | 675.00 | 0.04 | 0.13 | 3.11 |
| 44.00 | 675.00 | 0.04 | 0.24 | 6.07 |
| 44.25 | 525.00 | 0.03 | 0.31 | 4.51 |
| 44.50 | 525.00 | 0.03 | 0.34 | 5.15 |



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|---|---|---|---|---|
| 44.75 | 450.00 | 0.02 | 0.44 | 4.78 |
| 45.00 | 375.00 | 0.02 | 0.52 | 4.17 |
| 45.25 | 600.00 | 0.03 | 0.20 | 3.79 |
| 45.50 | 300.00 | 0.02 | 0.91 | 4.80 |
| 45.75 | 600.00 | 0.03 | 0.22 | 4.27 |
| 46.00 | 375.00 | 0.02 | 0.57 | 4.40 |
| 46.25 | 300.00 | 0.02 | 1.02 | 5.35 |
| 46.50 | 450.00 | 0.03 | 0.56 | 6.35 |
| 46.75 | 225.00 | 0.01 | 2.10 | 6.52 |
| 47.00 | 525.00 | 0.03 | 0.17 | 2.53 |
| 47.25 | 450.00 | 0.03 | 0.18 | 2.04 |
| 47.50 | 450.00 | 0.02 | 0.56 | 6.15 |
| 47.75 | 675.00 | 0.04 | 0.13 | 3.20 |
| 48.00 | 225.00 | 0.01 | 1.97 | 6.11 |
| 48.25 | 600.00 | 0.03 | 0.17 | 3.26 |
| 48.50 | 450.00 | 0.03 | 0.28 | 3.14 |
| 48.75 | 450.00 | 0.03 | 0.41 | 4.70 |
| 49.00 | 300.00 | 0.02 | 1.05 | 5.54 |
| 49.25 | 225.00 | 0.01 | 0.76 | 2.35 |
| 49.50 | 525.00 | 0.03 | 0.31 | 4.71 |
| 49.75 | 675.00 | 0.04 | 0.22 | 5.37 |
| 50.00 | 450.00 | 0.03 | 0.41 | 4.66 |
| 50.25 | 225.00 | 0.01 | 0.95 | 2.94 |
| 50.50 | 225.00 | 0.01 | 0.73 | 2.25 |
| 50.75 | 300.00 | 0.02 | 0.86 | 4.53 |
| 51.00 | 600.00 | 0.03 | 0.29 | 5.79 |
| 51.25 | 600.00 | 0.03 | 0.12 | 2.34 |
| 51.50 | 300.00 | 0.02 | 0.88 | 4.65 |
| 51.75 | 300.00 | 0.02 | 0.86 | 4.53 |
| 52.00 | 525.00 | 0.03 | 0.15 | 2.17 |
| 52.25 | 375.00 | 0.02 | 0.79 | 6.37 |
| 52.50 | 450.00 | 0.03 | 0.42 | 4.81 |
| 52.75 | 375.00 | 0.02 | 0.64 | 5.15 |
| 53.00 | 450.00 | 0.02 | 0.65 | 7.11 |
| 53.25 | 450.00 | 0.02 | 0.55 | 6.05 |
| 53.50 | 600.00 | 0.03 | 0.18 | 3.64 |
| 53.75 | 450.00 | 0.03 | 0.67 | 7.62 |
| 54.00 | 525.00 | 0.03 | 0.26 | 3.77 |
| 54.25 | 600.00 | 0.03 | 0.24 | 4.50 |
| 54.50 | 150.00 | 0.01 | 4.32 | 6.43 |
| 54.75 | 375.00 | 0.02 | 0.68 | 5.49 |
| 55.00 | 675.00 | 0.04 | 0.14 | 3.45 |
| 55.25 | 375.00 | 0.02 | 0.84 | 6.74 |
| 55.50 | 525.00 | 0.03 | 0.19 | 2.98 |
| 55.75 | 375.00 | 0.02 | 0.40 | 3.24 |
| 56.00 | 300.00 | 0.02 | 1.22 | 6.42 |
| 56.25 | 300.00 | 0.02 | 1.03 | 5.42 |
| 56.50 | 300.00 | 0.02 | 0.80 | 4.07 |
| 56.75 | 375.00 | 0.02 | 0.47 | 3.79 |
| 57.00 | 525.00 | 0.03 | 0.18 | 2.77 |
| 57.25 | 450.00 | 0.02 | 0.44 | 4.88 |
| 57.50 | 525.00 | 0.03 | 0.32 | 4.91 |
| 57.75 | 525.00 | 0.03 | 0.20 | 3.01 |
| 58.00 | 225.00 | 0.01 | 2.68 | 8.29 |
| 58.25 | 450.00 | 0.02 | 0.48 | 5.23 |
| 58.50 | 450.00 | 0.02 | 0.35 | 3.86 |
| 58.75 | 300.00 | 0.02 | 0.78 | 4.13 |
| 59.00 | 375.00 | 0.02 | 0.18 | 1.48 |
| 59.25 | 525.00 | 0.03 | 0.36 | 5.44 |
| 59.50 | 450.00 | 0.02 | 0.21 | 2.25 |
| 59.75 | 525.00 | 0.03 | 0.22 | 3.23 |
| 60.00 | 675.00 | 0.04 | 0.16 | 3.95 |
| 60.25 | 525.00 | 0.03 | 0.47 | 6.91 |
| 60.50 | 375.00 | 0.02 | 0.88 | 7.07 |
| 60.75 | 375.00 | 0.02 | 0.62 | 4.82 |
| 61.00 | 375.00 | 0.02 | 0.80 | 6.17 |
| 61.25 | 525.00 | 0.03 | 0.36 | 5.44 |
| 61.50 | 450.00 | 0.02 | 0.35 | 3.84 |
| 61.75 | 450.00 | 0.02 | 0.18 | 1.93 |
| 62.00 | 525.00 | 0.03 | 0.33 | 4.85 |
| 62.25 | 525.00 | 0.03 | 0.24 | 3.68 |
| 62.50 | 375.00 | 0.02 | 0.40 | 3.25 |
| 62.75 | 375.00 | 0.02 | 0.41 | 3.27 |
| 63.00 | 525.00 | 0.03 | 0.22 | 3.37 |
| 63.25 | 225.00 | 0.01 | 2.33 | 7.20 |
| 63.50 | 375.00 | 0.02 | 0.63 | 5.10 |
| 63.75 | 600.00 | 0.03 | 0.16 | 3.05 |
| 64.00 | 525.00 | 0.03 | 0.36 | 5.53 |
| 64.25 | 450.00 | 0.02 | 0.40 | 4.39 |
| 64.50 | 300.00 | 0.02 | 0.74 | 3.93 |
| 64.75 | 600.00 | 0.03 | 0.16 | 3.19 |
| 65.00 | 450.00 | 0.03 | 0.35 | 3.96 |
| 65.25 | 300.00 | 0.02 | 0.89 | 4.69 |
| 65.50 | 450.00 | 0.03 | 0.40 | 4.49 |
| 65.75 | 450.00 | 0.03 | 0.31 | 3.57 |
| 66.00 | 750.00 | 0.04 | 0.22 | 6.84 |
| 66.25 | 600.00 | 0.03 | 0.12 | 2.26 |
| 66.50 | 300.00 | 0.02 | 0.74 | 3.88 |
| 66.75 | 225.00 | 0.01 | 1.53 | 4.73 |
| 67.00 | 300.00 | 0.02 | 0.58 | 2.97 |
| 67.25 | 450.00 | 0.02 | 0.36 | 4.00 |
| 67.50 | 450.00 | 0.03 | 0.29 | 3.26 |
| 67.75 | 675.00 | 0.04 | 0.26 | 6.29 |
| 68.00 | 450.00 | 0.03 | 0.54 | 6.17 |
| 68.25 | 525.00 | 0.03 | 0.21 | 3.28 |
| 68.50 | 600.00 | 0.03 | 0.27 | 5.23 |
| 68.75 | 375.00 | 0.02 | 0.69 | 5.52 |
| 69.00 | 450.00 | 0.02 | 0.22 | 2.42 |
| 69.25 | 225.00 | 0.01 | 1.93 | 5.96 |
| 69.50 | 450.00 | 0.02 | 0.29 | 3.17 |
| 69.75 | 525.00 | 0.03 | 0.26 | 3.98 |
| 70.00 | 525.00 | 0.03 | 0.14 | 2.19 |
| 70.25 | 225.00 | 0.01 | 1.51 | 4.67 |
| 70.50 | 525.00 | 0.03 | 0.45 | 6.95 |
| 70.75 | 675.00 | 0.04 | 0.15 | 3.58 |
| 71.00 | 300.00 | 0.02 | 1.24 | 6.56 |
| 71.25 | 225.00 | 0.01 | 0.84 | 2.57 |
| 71.50 | 525.00 | 0.03 | 0.33 | 4.83 |
| 71.75 | 525.00 | 0.03 | 0.39 | 5.78 |
| 72.00 | 375.00 | 0.02 | 0.58 | 4.65 |

# APPENDIX E:

## vii. 24 Hour, 25-Year Storm

## HYCROSS.OUT File

THE MAXIMUM DISCHARGE FROM CROSS SECTION 1 IS: 437.57 CFS AT TIME: 15.35 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 90.94 AF

NOTE: THE MAXIMUM DISCHARGE AT THIS CROSS SECTION INCLUDES THE CHANNEL DISCHARGE
THE HYDRAULIC VARIABLES IN THE TABLE BELOW ARE COMPUTED FOR THE FLOODPLAIN FLOW (DEPTH > TOL) ONLY
IF THE HYDRAULIC VARIABLES ARE ZERO IN THE TABLE BELOW, ALL THE DISCHARGE IS IN THE CHANNEL

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 1

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 1.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 2.77 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 8.58 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 1.52 |
| 11.25 | 0.00 | 0.00 | 0.00 | 34.05 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 46.30 |
| 12.00 | 0.00 | 0.00 | 0.00 | 23.23 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 27.07 |
| 13.00 | 150.00 | 0.18 | 1.23 | 33.91 |
| 13.25 | 150.00 | 0.22 | 1.14 | 141.55 |
| 13.50 | 150.00 | 0.23 | 1.50 | 123.85 |
| 13.75 | 150.00 | 0.23 | 1.39 | 47.36 |
| 14.00 | 150.00 | 0.24 | 1.18 | 277.98 |
| 14.25 | 150.00 | 0.23 | 1.21 | 236.74 |
| 14.50 | 150.00 | 0.25 | 1.57 | 177.11 |
| 14.75 | 150.00 | 0.32 | 1.84 | 156.10 |
| 15.00 | 150.00 | 0.33 | 1.86 | 298.11 |
| 15.25 | 150.00 | 0.33 | 1.87 | 385.61 |
| 15.50 | 150.00 | 0.35 | 1.97 | 336.52 |
| 15.75 | 150.00 | 0.36 | 2.33 | 241.94 |
| 16.00 | 150.00 | 0.35 | 2.03 | 172.66 |
| 16.25 | 150.00 | 0.33 | 1.90 | 247.02 |
| 16.50 | 150.00 | 0.28 | 1.60 | 330.67 |
| 16.75 | 150.00 | 0.22 | 1.29 | 153.36 |
| 17.00 | 150.00 | 0.22 | 1.27 | 158.13 |
| 17.25 | 150.00 | 0.23 | 1.22 | 102.55 |
| 17.50 | 150.00 | 0.21 | 1.16 | 36.07 |
| 17.75 | 150.00 | 0.17 | 1.22 | 31.56 |
| 18.00 | 150.00 | 0.14 | 0.69 | 14.85 |
| 18.25 | 150.00 | 0.15 | 1.18 | 26.84 |
| 18.50 | 150.00 | 0.14 | 0.62 | 12.73 |
| 18.75 | 150.00 | 0.13 | 0.47 | 68.37 |
| 19.00 | 150.00 | 0.14 | 0.56 | 67.78 |
| 19.25 | 150.00 | 0.15 | 0.80 | 38.37 |
| 19.50 | 150.00 | 0.14 | 0.53 | 11.01 |
| 19.75 | 150.00 | 0.12 | 0.49 | 8.49 |
| 20.00 | 150.00 | 0.13 | 0.43 | 86.35 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 150.00 | 0.11 | 0.35 | 121.62 |
| 21.00 | 150.00 | 0.10 | 0.30 | 4.60 |
| 21.25 | 150.00 | 0.11 | 0.43 | 6.87 |
| 21.50 | 0.00 | 0.00 | 0.00 | 52.93 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 75.00 | 0.00 | 0.00 | 97.87 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 150.00 | 0.11 | 0.44 | 23.25 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 150.00 | 0.14 | 0.41 | 8.55 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 54.38 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |


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| 27.00 | 75.00 | 0.05 | 1.51 | 6.14 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 2 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 2

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 3 IS: 671.94 CFS AT TIME: 17.89 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 288.62 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 3



BSE Document Control Number: 7323HYD101

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 525.00 | 0.16 | 4.11 | 351.63 |
| 17.25 | 600.00 | 0.22 | 4.30 | 563.50 |
| 17.50 | 750.00 | 0.25 | 3.35 | 630.75 |
| 17.75 | 750.00 | 0.26 | 3.43 | 667.84 |
| 18.00 | 750.00 | 0.26 | 3.41 | 669.68 |
| 18.25 | 825.00 | 0.26 | 2.99 | 647.17 |
| 18.50 | 825.00 | 0.26 | 2.92 | 614.92 |
| 18.75 | 750.00 | 0.24 | 3.18 | 578.19 |
| 19.00 | 750.00 | 0.23 | 3.10 | 542.26 |
| 19.25 | 750.00 | 0.22 | 3.01 | 502.34 |
| 19.50 | 750.00 | 0.21 | 2.91 | 463.21 |
| 19.75 | 750.00 | 0.21 | 2.83 | 434.64 |
| 20.00 | 750.00 | 0.20 | 2.76 | 414.26 |
| 20.25 | 750.00 | 0.19 | 2.67 | 387.85 |
| 20.50 | 750.00 | 0.19 | 2.58 | 361.40 |
| 20.75 | 750.00 | 0.18 | 2.50 | 335.95 |
| 21.00 | 750.00 | 0.17 | 2.40 | 310.86 |
| 21.25 | 750.00 | 0.17 | 2.32 | 289.20 |
| 21.50 | 675.00 | 0.15 | 2.57 | 266.48 |
| 21.75 | 675.00 | 0.14 | 2.50 | 244.77 |
| 22.00 | 675.00 | 0.14 | 2.42 | 224.08 |
| 22.25 | 750.00 | 0.14 | 2.06 | 209.09 |
| 22.50 | 675.00 | 0.13 | 2.33 | 205.37 |
| 22.75 | 675.00 | 0.13 | 2.31 | 201.53 |
| 23.00 | 600.00 | 0.12 | 2.63 | 193.90 |
| 23.25 | 600.00 | 0.12 | 2.59 | 186.66 |
| 23.50 | 525.00 | 0.11 | 2.97 | 176.65 |
| 23.75 | 750.00 | 0.12 | 1.85 | 167.66 |
| 24.00 | 525.00 | 0.11 | 2.87 | 160.81 |
| 24.25 | 675.00 | 0.11 | 2.05 | 152.66 |
| 24.50 | 675.00 | 0.11 | 1.99 | 144.17 |
| 24.75 | 525.00 | 0.10 | 2.62 | 132.62 |
| 25.00 | 600.00 | 0.10 | 2.19 | 127.60 |
| 25.25 | 675.00 | 0.10 | 1.79 | 117.12 |
| 25.50 | 600.00 | 0.09 | 2.05 | 111.60 |
| 25.75 | 675.00 | 0.09 | 1.68 | 104.74 |
| 26.00 | 600.00 | 0.09 | 1.99 | 103.28 |
| 26.25 | 600.00 | 0.08 | 1.94 | 98.73 |
| 26.50 | 525.00 | 0.08 | 2.25 | 93.45 |
| 26.75 | 600.00 | 0.08 | 1.81 | 87.30 |
| 27.00 | 525.00 | 0.07 | 2.08 | 81.48 |
| 27.25 | 600.00 | 0.08 | 1.72 | 79.06 |
| 27.50 | 600.00 | 0.07 | 1.70 | 75.87 |
| 27.75 | 525.00 | 0.07 | 1.92 | 69.39 |
| 28.00 | 750.00 | 0.08 | 1.14 | 66.77 |
| 28.25 | 525.00 | 0.07 | 1.83 | 63.75 |
| 28.50 | 525.00 | 0.07 | 1.83 | 62.60 |
| 28.75 | 450.00 | 0.06 | 2.23 | 61.29 |
| 29.00 | 450.00 | 0.06 | 2.25 | 61.35 |
| 29.25 | 525.00 | 0.06 | 1.80 | 59.62 |
| 29.50 | 675.00 | 0.07 | 1.22 | 57.19 |



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| | | | | |
|---|---|---|---|---|
| 29.75 | 525.00 | 0.06 | 1.73 | 55.61 |
| 30.00 | 525.00 | 0.06 | 1.70 | 53.68 |
| 30.25 | 600.00 | 0.06 | 1.40 | 52.22 |
| 30.50 | 450.00 | 0.05 | 2.05 | 50.00 |
| 30.75 | 450.00 | 0.05 | 1.99 | 47.30 |
| 31.00 | 525.00 | 0.05 | 1.58 | 45.38 |
| 31.25 | 450.00 | 0.05 | 1.91 | 42.76 |
| 31.50 | 525.00 | 0.05 | 1.45 | 39.69 |
| 31.75 | 450.00 | 0.05 | 1.74 | 37.26 |
| 32.00 | 450.00 | 0.05 | 1.74 | 36.50 |
| 32.25 | 450.00 | 0.05 | 1.61 | 32.82 |
| 32.50 | 450.00 | 0.04 | 1.68 | 33.82 |
| 32.75 | 450.00 | 0.04 | 1.55 | 30.61 |
| 33.00 | 450.00 | 0.04 | 1.50 | 28.81 |
| 33.25 | 450.00 | 0.04 | 1.45 | 27.07 |
| 33.50 | 450.00 | 0.04 | 1.38 | 24.77 |
| 33.75 | 450.00 | 0.04 | 1.41 | 24.69 |
| 34.00 | 450.00 | 0.04 | 1.22 | 21.63 |
| 34.25 | 450.00 | 0.04 | 1.23 | 21.37 |
| 34.50 | 525.00 | 0.04 | 0.93 | 20.57 |
| 34.75 | 450.00 | 0.04 | 1.13 | 19.25 |
| 35.00 | 525.00 | 0.04 | 0.87 | 18.98 |
| 35.25 | 450.00 | 0.04 | 1.09 | 18.26 |
| 35.50 | 450.00 | 0.04 | 1.06 | 16.98 |
| 35.75 | 450.00 | 0.03 | 1.04 | 16.03 |
| 36.00 | 450.00 | 0.03 | 0.94 | 14.01 |
| 36.25 | 375.00 | 0.03 | 1.28 | 14.41 |
| 36.50 | 450.00 | 0.03 | 0.81 | 11.62 |
| 36.75 | 450.00 | 0.03 | 0.88 | 12.56 |
| 37.00 | 375.00 | 0.03 | 1.17 | 12.70 |
| 37.25 | 450.00 | 0.03 | 0.78 | 10.92 |
| 37.50 | 450.00 | 0.03 | 0.75 | 10.55 |
| 37.75 | 375.00 | 0.03 | 0.92 | 9.77 |
| 38.00 | 375.00 | 0.03 | 0.92 | 9.47 |
| 38.25 | 375.00 | 0.03 | 0.90 | 8.88 |
| 38.50 | 450.00 | 0.03 | 0.59 | 7.27 |
| 38.75 | 375.00 | 0.02 | 0.78 | 6.76 |
| 39.00 | 300.00 | 0.02 | 0.86 | 5.30 |
| 39.25 | 450.00 | 0.03 | 0.47 | 5.43 |
| 39.50 | 375.00 | 0.02 | 0.59 | 4.98 |
| 39.75 | 300.00 | 0.02 | 0.87 | 4.83 |
| 40.00 | 300.00 | 0.02 | 1.21 | 6.82 |
| 40.25 | 300.00 | 0.02 | 1.02 | 5.44 |
| 40.50 | 300.00 | 0.02 | 0.79 | 3.91 |
| 40.75 | 450.00 | 0.02 | 0.27 | 2.64 |
| 41.00 | 300.00 | 0.01 | 0.76 | 3.40 |
| 41.25 | 375.00 | 0.02 | 0.60 | 4.16 |
| 41.50 | 225.00 | 0.01 | 0.38 | 1.03 |
| 41.75 | 75.00 | 0.00 | 9.57 | 3.13 |
| 42.00 | 300.00 | 0.02 | 0.45 | 2.07 |
| 42.25 | 0.00 | 0.00 | 0.00 | 1.35 |
| 42.50 | 300.00 | 0.01 | 0.08 | 0.37 |
| 42.75 | 150.00 | 0.01 | 0.36 | 0.43 |
| 43.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 300.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 300.00 | 0.01 | 0.49 | 2.20 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 1.06 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 225.00 | 0.01 | 0.49 | 1.34 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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| | | | | |
|---|---|---|---|---|
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 4 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 4

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

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|---|---|---|---|---|
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 5 IS: 67.09 CFS AT TIME: 25.60 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 34.38 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 5

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 225.00 | 0.04 | 6.26 | 59.33 |
| 25.50 | 375.00 | 0.05 | 3.61 | 65.67 |
| 25.75 | 375.00 | 0.05 | 3.35 | 63.66 |
| 26.00 | 375.00 | 0.05 | 3.28 | 62.59 |
| 26.25 | 450.00 | 0.05 | 2.62 | 63.07 |
| 26.50 | 300.00 | 0.05 | 4.46 | 61.91 |
| 26.75 | 375.00 | 0.05 | 3.26 | 59.12 |
| 27.00 | 375.00 | 0.05 | 3.21 | 57.23 |
| 27.25 | 375.00 | 0.05 | 3.05 | 53.33 |
| 27.50 | 375.00 | 0.05 | 3.05 | 52.26 |
| 27.75 | 375.00 | 0.04 | 3.10 | 50.45 |
| 28.00 | 375.00 | 0.04 | 2.95 | 48.40 |
| 28.25 | 300.00 | 0.04 | 3.91 | 46.65 |
| 28.50 | 375.00 | 0.04 | 2.76 | 43.37 |
| 28.75 | 375.00 | 0.04 | 2.73 | 41.92 |
| 29.00 | 300.00 | 0.04 | 3.79 | 42.01 |
| 29.25 | 450.00 | 0.04 | 2.01 | 38.25 |
| 29.50 | 300.00 | 0.04 | 3.68 | 38.64 |
| 29.75 | 300.00 | 0.03 | 3.56 | 36.36 |
| 30.00 | 300.00 | 0.03 | 3.45 | 34.31 |
| 30.25 | 300.00 | 0.03 | 3.36 | 32.41 |
| 30.50 | 375.00 | 0.03 | 2.29 | 29.35 |
| 30.75 | 300.00 | 0.03 | 3.07 | 27.93 |
| 31.00 | 300.00 | 0.03 | 3.04 | 27.02 |
| 31.25 | 300.00 | 0.03 | 3.14 | 26.89 |
| 31.50 | 300.00 | 0.03 | 2.93 | 24.29 |
| 31.75 | 225.00 | 0.02 | 4.16 | 22.44 |
| 32.00 | 300.00 | 0.03 | 2.84 | 22.60 |
| 32.25 | 300.00 | 0.03 | 2.80 | 21.97 |
| 32.50 | 225.00 | 0.02 | 4.19 | 21.34 |



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| | | | | |
|---|---|---|---|---|
| 32.75 | 375.00 | 0.03 | 1.77 | 18.73 |
| 33.00 | 300.00 | 0.02 | 2.56 | 18.84 |
| 33.25 | 300.00 | 0.02 | 2.48 | 17.95 |
| 33.50 | 225.00 | 0.02 | 3.28 | 16.50 |
| 33.75 | 225.00 | 0.02 | 3.25 | 16.19 |
| 34.00 | 225.00 | 0.02 | 3.18 | 15.40 |
| 34.25 | 300.00 | 0.02 | 1.96 | 14.29 |
| 34.50 | 375.00 | 0.03 | 1.31 | 13.32 |
| 34.75 | 225.00 | 0.02 | 2.96 | 13.58 |
| 35.00 | 300.00 | 0.02 | 1.76 | 12.33 |
| 35.25 | 225.00 | 0.02 | 2.72 | 12.23 |
| 35.50 | 225.00 | 0.02 | 2.67 | 11.58 |
| 35.75 | 225.00 | 0.02 | 2.68 | 11.27 |
| 36.00 | 225.00 | 0.02 | 2.66 | 10.84 |
| 36.25 | 375.00 | 0.02 | 1.16 | 10.45 |
| 36.50 | 225.00 | 0.02 | 2.61 | 10.20 |
| 36.75 | 225.00 | 0.02 | 2.57 | 9.86 |
| 37.00 | 375.00 | 0.02 | 1.12 | 9.68 |
| 37.25 | 225.00 | 0.02 | 2.31 | 8.62 |
| 37.50 | 225.00 | 0.02 | 2.04 | 7.55 |
| 37.75 | 225.00 | 0.02 | 2.14 | 7.91 |
| 38.00 | 225.00 | 0.02 | 1.91 | 6.99 |
| 38.25 | 225.00 | 0.02 | 1.89 | 6.91 |
| 38.50 | 225.00 | 0.02 | 2.32 | 8.51 |
| 38.75 | 225.00 | 0.02 | 2.10 | 7.97 |
| 39.00 | 225.00 | 0.02 | 1.87 | 7.03 |
| 39.25 | 225.00 | 0.02 | 1.85 | 6.81 |
| 39.50 | 225.00 | 0.02 | 1.74 | 6.30 |
| 39.75 | 225.00 | 0.02 | 1.62 | 5.80 |
| 40.00 | 225.00 | 0.02 | 1.54 | 5.46 |
| 40.25 | 225.00 | 0.02 | 1.52 | 5.16 |
| 40.50 | 225.00 | 0.01 | 1.48 | 4.81 |
| 40.75 | 225.00 | 0.01 | 1.46 | 4.53 |
| 41.00 | 225.00 | 0.01 | 1.38 | 4.15 |
| 41.25 | 225.00 | 0.01 | 1.38 | 3.95 |
| 41.50 | 225.00 | 0.01 | 1.37 | 3.77 |
| 41.75 | 225.00 | 0.01 | 1.35 | 3.62 |
| 42.00 | 225.00 | 0.01 | 0.95 | 2.45 |
| 42.25 | 225.00 | 0.01 | 0.90 | 2.20 |
| 42.50 | 225.00 | 0.01 | 0.82 | 1.81 |
| 42.75 | 225.00 | 0.01 | 0.79 | 1.69 |
| 43.00 | 150.00 | 0.01 | 2.63 | 2.47 |
| 43.25 | 150.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 75.00 | 0.00 | 6.44 | 1.56 |
| 43.75 | 75.00 | 0.00 | 5.99 | 1.50 |
| 44.00 | 150.00 | 0.01 | 2.55 | 2.39 |
| 44.25 | 0.00 | 0.00 | 0.00 | 1.56 |
| 44.50 | 150.00 | 0.01 | 0.92 | 0.86 |
| 44.75 | 150.00 | 0.01 | 0.90 | 0.85 |
| 45.00 | 225.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 75.00 | 0.00 | 3.52 | 0.83 |
| 45.50 | 75.00 | 0.00 | 3.48 | 0.87 |
| 45.75 | 150.00 | 0.01 | 1.61 | 1.52 |
| 46.00 | 150.00 | 0.01 | 0.88 | 0.83 |
| 46.25 | 150.00 | 0.01 | 0.89 | 0.83 |
| 46.50 | 75.00 | 0.00 | 6.16 | 1.49 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 75.00 | 0.00 | 3.25 | 0.81 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.85 |
| 47.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 75.00 | 0.00 | 2.51 | 0.61 |
| 48.25 | 75.00 | 0.00 | 2.51 | 0.61 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.82 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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| | | | | |
|---|---|---|---|---|
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 6 IS: 3940.49 CFS AT TIME: 16.14 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 2166.23 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 6

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 375.00 | 0.02 | 4.04 | 33.99 |
| 11.00 | 825.00 | 0.04 | 1.76 | 54.50 |
| 11.25 | 1125.00 | 0.05 | 1.25 | 68.67 |
| 11.50 | 1350.00 | 0.07 | 1.18 | 110.64 |
| 11.75 | 1800.00 | 0.13 | 1.16 | 264.93 |
| 12.00 | 2250.00 | 0.20 | 1.11 | 506.06 |
| 12.25 | 2475.00 | 0.24 | 1.11 | 673.15 |
| 12.50 | 2550.00 | 0.28 | 1.17 | 825.19 |
| 12.75 | 2550.00 | 0.32 | 1.36 | 1105.89 |
| 13.00 | 2550.00 | 0.36 | 1.52 | 1394.43 |
| 13.25 | 2550.00 | 0.39 | 1.63 | 1625.94 |
| 13.50 | 2550.00 | 0.42 | 1.73 | 1856.77 |
| 13.75 | 2625.00 | 0.45 | 1.80 | 2139.82 |
| 14.00 | 2625.00 | 0.48 | 1.92 | 2429.06 |
| 14.25 | 2700.00 | 0.50 | 1.95 | 2627.70 |
| 14.50 | 2625.00 | 0.52 | 2.05 | 2795.35 |
| 14.75 | 2775.00 | 0.53 | 2.03 | 2965.30 |
| 15.00 | 2775.00 | 0.54 | 2.09 | 3152.37 |
| 15.25 | 2775.00 | 0.57 | 2.13 | 3367.78 |
| 15.50 | 2775.00 | 0.58 | 2.25 | 3603.21 |
| 15.75 | 2775.00 | 0.61 | 2.25 | 3798.96 |
| 16.00 | 2775.00 | 0.62 | 2.29 | 3912.30 |
| 16.25 | 2700.00 | 0.62 | 2.34 | 3932.78 |
| 16.50 | 2700.00 | 0.61 | 2.32 | 3845.74 |
| 16.75 | 2700.00 | 0.60 | 2.26 | 3642.23 |
| 17.00 | 2700.00 | 0.57 | 2.19 | 3380.61 |
| 17.25 | 2625.00 | 0.55 | 2.17 | 3111.62 |
| 17.50 | 2700.00 | 0.52 | 2.03 | 2847.88 |
| 17.75 | 2700.00 | 0.50 | 1.94 | 2600.27 |
| 18.00 | 2625.00 | 0.47 | 1.93 | 2406.62 |
| 18.25 | 2625.00 | 0.46 | 1.87 | 2237.71 |
| 18.50 | 2625.00 | 0.44 | 1.80 | 2064.08 |
| 18.75 | 2625.00 | 0.42 | 1.74 | 1902.17 |


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| | | | | |
|---|---|---|---|---|
| 19.00 | 2625.00 | 0.40 | 1.68 | 1747.39 |
| 19.25 | 2625.00 | 0.38 | 1.62 | 1610.71 |
| 19.50 | 2550.00 | 0.36 | 1.62 | 1488.42 |
| 19.75 | 2550.00 | 0.35 | 1.57 | 1382.44 |
| 20.00 | 2550.00 | 0.33 | 1.52 | 1287.53 |
| 20.25 | 2550.00 | 0.32 | 1.47 | 1199.60 |
| 20.50 | 2475.00 | 0.31 | 1.46 | 1121.56 |
| 20.75 | 2550.00 | 0.30 | 1.39 | 1051.28 |
| 21.00 | 2625.00 | 0.27 | 1.39 | 991.83 |
| 21.25 | 2475.00 | 0.28 | 1.35 | 933.94 |
| 21.50 | 2550.00 | 0.27 | 1.29 | 883.22 |
| 21.75 | 2475.00 | 0.26 | 1.29 | 838.05 |
| 22.00 | 2475.00 | 0.25 | 1.27 | 800.14 |
| 22.25 | 2475.00 | 0.25 | 1.25 | 768.75 |
| 22.50 | 2475.00 | 0.24 | 1.22 | 737.56 |
| 22.75 | 2475.00 | 0.24 | 1.20 | 710.08 |
| 23.00 | 2475.00 | 0.23 | 1.19 | 686.61 |
| 23.25 | 2475.00 | 0.23 | 1.17 | 672.44 |
| 23.50 | 2475.00 | 0.23 | 1.17 | 674.99 |
| 23.75 | 2475.00 | 0.23 | 1.17 | 677.35 |
| 24.00 | 2475.00 | 0.23 | 1.17 | 680.11 |
| 24.25 | 2475.00 | 0.24 | 1.18 | 688.85 |
| 24.50 | 2475.00 | 0.24 | 1.18 | 692.17 |
| 24.75 | 2475.00 | 0.23 | 1.18 | 680.69 |
| 25.00 | 2475.00 | 0.23 | 1.17 | 649.54 |
| 25.25 | 2475.00 | 0.22 | 1.14 | 609.76 |
| 25.50 | 2475.00 | 0.21 | 1.11 | 570.95 |
| 25.75 | 2475.00 | 0.20 | 1.08 | 534.67 |
| 26.00 | 2475.00 | 0.19 | 1.05 | 500.61 |
| 26.25 | 2475.00 | 0.19 | 1.02 | 470.84 |
| 26.50 | 2475.00 | 0.18 | 0.99 | 438.09 |
| 26.75 | 2475.00 | 0.17 | 0.97 | 409.49 |
| 27.00 | 2475.00 | 0.17 | 0.93 | 384.07 |
| 27.25 | 2475.00 | 0.16 | 0.91 | 363.20 |
| 27.50 | 2475.00 | 0.15 | 0.89 | 340.82 |
| 27.75 | 2475.00 | 0.15 | 0.87 | 321.71 |
| 28.00 | 2400.00 | 0.14 | 0.88 | 302.12 |
| 28.25 | 2475.00 | 0.14 | 0.82 | 283.36 |
| 28.50 | 2400.00 | 0.13 | 0.83 | 267.12 |
| 28.75 | 2475.00 | 0.13 | 0.78 | 251.65 |
| 29.00 | 2400.00 | 0.12 | 0.79 | 236.55 |
| 29.25 | 2475.00 | 0.12 | 0.73 | 222.18 |
| 29.50 | 2400.00 | 0.12 | 0.75 | 210.21 |
| 29.75 | 2475.00 | 0.11 | 0.70 | 196.65 |
| 30.00 | 2400.00 | 0.11 | 0.71 | 186.52 |
| 30.25 | 2400.00 | 0.11 | 0.69 | 175.74 |
| 30.50 | 2325.00 | 0.10 | 0.71 | 166.94 |
| 30.75 | 2325.00 | 0.10 | 0.67 | 153.34 |
| 31.00 | 2250.00 | 0.09 | 0.68 | 145.21 |
| 31.25 | 2175.00 | 0.09 | 0.69 | 136.50 |
| 31.50 | 2250.00 | 0.09 | 0.65 | 129.75 |
| 31.75 | 2175.00 | 0.08 | 0.67 | 121.92 |
| 32.00 | 2175.00 | 0.08 | 0.63 | 110.91 |
| 32.25 | 2100.00 | 0.08 | 0.66 | 105.44 |
| 32.50 | 2250.00 | 0.08 | 0.56 | 95.66 |
| 32.75 | 2100.00 | 0.07 | 0.59 | 89.20 |
| 33.00 | 2100.00 | 0.07 | 0.57 | 83.66 |
| 33.25 | 1875.00 | 0.06 | 0.66 | 79.04 |
| 33.50 | 1950.00 | 0.06 | 0.60 | 73.13 |
| 33.75 | 1800.00 | 0.06 | 0.65 | 67.46 |
| 34.00 | 1875.00 | 0.06 | 0.58 | 61.60 |
| 34.25 | 2025.00 | 0.06 | 0.50 | 58.35 |
| 34.50 | 1800.00 | 0.05 | 0.59 | 55.82 |
| 34.75 | 1875.00 | 0.05 | 0.51 | 50.44 |
| 35.00 | 1800.00 | 0.05 | 0.56 | 51.17 |
| 35.25 | 1650.00 | 0.05 | 0.58 | 45.29 |
| 35.50 | 1800.00 | 0.05 | 0.47 | 41.16 |
| 35.75 | 1650.00 | 0.04 | 0.56 | 41.03 |
| 36.00 | 1650.00 | 0.04 | 0.47 | 34.10 |
| 36.25 | 1500.00 | 0.04 | 0.56 | 33.59 |
| 36.50 | 1575.00 | 0.04 | 0.55 | 34.84 |
| 36.75 | 1425.00 | 0.04 | 0.52 | 27.35 |
| 37.00 | 1500.00 | 0.04 | 0.45 | 25.32 |
| 37.25 | 1425.00 | 0.04 | 0.47 | 23.68 |
| 37.50 | 1575.00 | 0.04 | 0.37 | 21.49 |
| 37.75 | 1350.00 | 0.03 | 0.44 | 19.37 |
| 38.00 | 1050.00 | 0.03 | 0.79 | 22.84 |
| 38.25 | 1275.00 | 0.03 | 0.49 | 18.88 |
| 38.50 | 1125.00 | 0.03 | 0.67 | 21.06 |
| 38.75 | 1275.00 | 0.03 | 0.49 | 18.27 |
| 39.00 | 1275.00 | 0.03 | 0.46 | 17.01 |
| 39.25 | 1125.00 | 0.03 | 0.57 | 16.64 |
| 39.50 | 1275.00 | 0.03 | 0.52 | 18.12 |
| 39.75 | 900.00 | 0.02 | 0.75 | 14.07 |
| 40.00 | 1050.00 | 0.02 | 0.50 | 11.86 |
| 40.25 | 1050.00 | 0.02 | 0.55 | 12.97 |
| 40.50 | 900.00 | 0.02 | 0.60 | 10.85 |
| 40.75 | 1125.00 | 0.02 | 0.43 | 11.45 |
| 41.00 | 900.00 | 0.02 | 0.59 | 10.26 |
| 41.25 | 975.00 | 0.02 | 0.49 | 9.54 |
| 41.50 | 825.00 | 0.02 | 0.62 | 9.04 |
| 41.75 | 750.00 | 0.02 | 0.66 | 8.04 |
| 42.00 | 975.00 | 0.02 | 0.41 | 7.91 |
| 42.25 | 975.00 | 0.02 | 0.43 | 8.25 |
| 42.50 | 900.00 | 0.02 | 0.59 | 9.63 |
| 42.75 | 825.00 | 0.02 | 0.39 | 5.42 |
| 43.00 | 675.00 | 0.01 | 0.56 | 5.44 |
| 43.25 | 825.00 | 0.02 | 0.30 | 4.22 |
| 43.50 | 600.00 | 0.01 | 0.87 | 6.86 |
| 43.75 | 450.00 | 0.01 | 1.72 | 8.12 |
| 44.00 | 450.00 | 0.01 | 1.79 | 8.31 |
| 44.25 | 525.00 | 0.01 | 0.79 | 4.66 |
| 44.50 | 675.00 | 0.01 | 0.62 | 5.60 |
| 44.75 | 600.00 | 0.01 | 1.10 | 7.93 |
| 45.00 | 750.00 | 0.01 | 0.51 | 5.42 |
| 45.25 | 750.00 | 0.01 | 0.52 | 5.43 |
| 45.50 | 525.00 | 0.01 | 0.76 | 3.99 |
| 45.75 | 375.00 | 0.01 | 1.38 | 3.86 |
| 46.00 | 600.00 | 0.01 | 0.44 | 2.90 |
| 46.25 | 600.00 | 0.01 | 0.25 | 1.58 |
| 46.50 | 450.00 | 0.01 | 1.25 | 4.59 |
| 46.75 | 525.00 | 0.01 | 0.26 | 1.27 |
| 47.00 | 525.00 | 0.01 | 0.77 | 3.65 |
| 47.25 | 300.00 | 0.01 | 2.65 | 4.22 |
| 47.50 | 450.00 | 0.01 | 0.85 | 2.93 |
| 47.75 | 450.00 | 0.01 | 0.36 | 1.25 |
| 48.00 | 675.00 | 0.01 | 0.25 | 1.93 |
| 48.25 | 225.00 | 0.00 | 1.31 | 1.12 |
| 48.50 | 450.00 | 0.01 | 0.33 | 1.11 |
| 48.75 | 300.00 | 0.00 | 0.50 | 0.74 |
| 49.00 | 300.00 | 0.00 | 1.51 | 2.21 |
| 49.25 | 225.00 | 0.00 | 1.08 | 0.89 |



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| | | | | |
|---|---|---|---|---|
| 49.50 | 150.00 | 0.00 | 7.11 | 2.61 |
| 49.75 | 375.00 | 0.01 | 1.18 | 2.69 |
| 50.00 | 375.00 | 0.01 | 0.08 | 0.18 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.43 |
| 50.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 75.00 | 0.00 | -0.12 | -0.02 |
| 51.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 75.00 | 0.00 | 1.36 | 0.19 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 75.00 | 0.00 | 31.24 | 3.32 |
| 52.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 75.00 | 0.00 | 1.33 | 0.18 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 75.00 | 0.00 | 6.09 | 0.83 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 7 IS: 38.27 CFS AT TIME: 15.90 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 10.39 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 7

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 150.00 | 0.01 | 0.17 | 0.34 |
| 11.25 | 150.00 | 0.01 | 0.30 | 0.66 |
| 11.50 | 150.00 | 0.02 | 0.38 | 0.95 |
| 11.75 | 150.00 | 0.02 | 1.57 | 4.00 |
| 12.00 | 150.00 | 0.02 | 0.80 | 2.16 |
| 12.25 | 150.00 | 0.02 | 1.35 | 3.92 |
| 12.50 | 375.00 | 0.06 | 0.28 | 5.91 |
| 12.75 | 525.00 | 0.07 | 0.29 | 10.10 |
| 13.00 | 600.00 | 0.08 | 0.27 | 12.27 |
| 13.25 | 525.00 | 0.07 | 0.40 | 14.73 |
| 13.50 | 525.00 | 0.07 | 0.45 | 17.36 |
| 13.75 | 600.00 | 0.08 | 0.37 | 17.70 |
| 14.00 | 450.00 | 0.07 | 0.70 | 21.87 |
| 14.25 | 600.00 | 0.09 | 0.42 | 21.73 |
| 14.50 | 600.00 | 0.09 | 0.41 | 21.98 |
| 14.75 | 600.00 | 0.09 | 0.45 | 24.26 |
| 15.00 | 600.00 | 0.09 | 0.47 | 26.27 |
| 15.25 | 525.00 | 0.09 | 0.59 | 27.08 |
| 15.50 | 600.00 | 0.09 | 0.47 | 25.55 |
| 15.75 | 450.00 | 0.08 | 0.80 | 29.15 |
| 16.00 | 375.00 | 0.08 | 0.84 | 26.56 |
| 16.25 | 525.00 | 0.08 | 0.66 | 27.07 |
| 16.50 | 525.00 | 0.07 | 0.60 | 22.89 |
| 16.75 | 375.00 | 0.06 | 0.88 | 19.91 |
| 17.00 | 300.00 | 0.09 | 0.57 | 14.69 |
| 17.25 | 300.00 | 0.08 | 0.48 | 12.26 |
| 17.50 | 300.00 | 0.08 | 0.46 | 11.34 |
| 17.75 | 300.00 | 0.08 | 0.61 | 13.90 |
| 18.00 | 225.00 | 0.06 | 0.65 | 8.80 |
| 18.25 | 150.00 | 0.05 | 1.07 | 8.29 |
| 18.50 | 300.00 | 0.07 | 0.27 | 5.49 |
| 18.75 | 225.00 | 0.06 | 0.39 | 4.88 |
| 19.00 | 225.00 | 0.05 | 0.29 | 3.09 |
| 19.25 | 150.00 | 0.04 | 0.88 | 4.68 |
| 19.50 | 150.00 | 0.03 | 0.87 | 4.43 |
| 19.75 | 150.00 | 0.03 | 0.47 | 2.28 |
| 20.00 | 150.00 | 0.03 | 0.64 | 2.98 |
| 20.25 | 150.00 | 0.03 | 0.43 | 1.93 |
| 20.50 | 75.00 | 0.02 | 2.81 | 3.21 |
| 20.75 | 75.00 | 0.01 | 0.93 | 1.00 |
| 21.00 | 75.00 | 0.01 | 0.94 | 1.01 |
| 21.25 | 75.00 | 0.01 | 1.94 | 2.09 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.97 |
| 21.75 | 75.00 | 0.01 | 1.50 | 1.61 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.98 |
| 22.25 | 225.00 | 0.02 | 0.84 | 3.83 |
| 22.50 | 75.00 | 0.01 | -0.79 | -0.39 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.93 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 1.23 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 150.00 | 0.03 | 0.68 | 2.91 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | |
|---|---|---|---|---|
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 8 IS: 519.67 CFS AT TIME: 17.13 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 243.81 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 8

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 375.00 | 0.14 | 3.97 | 205.88 |
| 15.25 | 900.00 | 0.18 | 1.92 | 320.15 |
| 15.50 | 900.00 | 0.19 | 1.97 | 344.83 |
| 15.75 | 900.00 | 0.20 | 2.07 | 377.85 |
| 16.00 | 900.00 | 0.21 | 2.16 | 416.79 |
| 16.25 | 900.00 | 0.22 | 2.24 | 452.81 |
| 16.50 | 900.00 | 0.23 | 2.29 | 476.44 |
| 16.75 | 900.00 | 0.24 | 2.34 | 499.27 |
| 17.00 | 900.00 | 0.24 | 2.37 | 516.06 |
| 17.25 | 900.00 | 0.24 | 2.37 | 518.29 |
| 17.50 | 900.00 | 0.24 | 2.35 | 505.75 |
| 17.75 | 900.00 | 0.23 | 2.30 | 481.35 |
| 18.00 | 900.00 | 0.22 | 2.23 | 450.66 |
| 18.25 | 900.00 | 0.21 | 2.14 | 413.54 |
| 18.50 | 900.00 | 0.20 | 2.07 | 378.48 |
| 18.75 | 975.00 | 0.20 | 1.80 | 349.04 |
| 19.00 | 900.00 | 0.19 | 1.93 | 328.56 |
| 19.25 | 900.00 | 0.18 | 1.88 | 309.40 |
| 19.50 | 900.00 | 0.18 | 1.82 | 289.33 |
| 19.75 | 825.00 | 0.17 | 1.95 | 269.02 |
| 20.00 | 825.00 | 0.16 | 1.88 | 249.87 |
| 20.25 | 825.00 | 0.15 | 1.82 | 231.57 |
| 20.50 | 825.00 | 0.15 | 1.74 | 212.54 |
| 20.75 | 825.00 | 0.14 | 1.67 | 196.19 |
| 21.00 | 825.00 | 0.14 | 1.59 | 179.03 |
| 21.25 | 825.00 | 0.13 | 1.54 | 166.63 |
| 21.50 | 825.00 | 0.13 | 1.49 | 155.47 |
| 21.75 | 825.00 | 0.12 | 1.41 | 142.84 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 22.00 | 825.00 | 0.12 | 1.39 | 135.72 |
| 22.25 | 825.00 | 0.11 | 1.32 | 124.50 |
| 22.50 | 825.00 | 0.11 | 1.27 | 117.43 |
| 22.75 | 825.00 | 0.11 | 1.25 | 112.14 |
| 23.00 | 825.00 | 0.11 | 1.15 | 100.39 |
| 23.25 | 750.00 | 0.10 | 1.30 | 95.84 |
| 23.50 | 825.00 | 0.10 | 1.04 | 85.55 |
| 23.75 | 825.00 | 0.10 | 1.01 | 80.71 |
| 24.00 | 825.00 | 0.10 | 0.99 | 78.47 |
| 24.25 | 825.00 | 0.09 | 0.93 | 71.45 |
| 24.50 | 825.00 | 0.09 | 0.91 | 68.22 |
| 24.75 | 825.00 | 0.09 | 0.86 | 63.21 |
| 25.00 | 825.00 | 0.09 | 0.85 | 60.64 |
| 25.25 | 750.00 | 0.08 | 0.96 | 57.42 |
| 25.50 | 825.00 | 0.08 | 0.81 | 55.92 |
| 25.75 | 825.00 | 0.08 | 0.77 | 52.03 |
| 26.00 | 825.00 | 0.08 | 0.75 | 50.01 |
| 26.25 | 825.00 | 0.08 | 0.75 | 49.33 |
| 26.50 | 825.00 | 0.08 | 0.76 | 51.13 |
| 26.75 | 825.00 | 0.08 | 0.85 | 59.57 |
| 27.00 | 825.00 | 0.09 | 0.83 | 60.37 |
| 27.25 | 750.00 | 0.08 | 0.99 | 62.99 |
| 27.50 | 825.00 | 0.09 | 0.89 | 63.47 |
| 27.75 | 750.00 | 0.08 | 0.94 | 56.29 |
| 28.00 | 750.00 | 0.08 | 0.91 | 52.70 |
| 28.25 | 750.00 | 0.07 | 0.86 | 48.47 |
| 28.50 | 825.00 | 0.08 | 0.67 | 42.56 |
| 28.75 | 825.00 | 0.08 | 0.60 | 37.07 |
| 29.00 | 750.00 | 0.07 | 0.72 | 37.64 |
| 29.25 | 825.00 | 0.07 | 0.58 | 33.39 |
| 29.50 | 750.00 | 0.06 | 0.64 | 30.45 |
| 29.75 | 750.00 | 0.06 | 0.61 | 27.71 |
| 30.00 | 750.00 | 0.06 | 0.62 | 27.62 |
| 30.25 | 750.00 | 0.06 | 0.58 | 25.75 |
| 30.50 | 825.00 | 0.06 | 0.45 | 22.67 |
| 30.75 | 825.00 | 0.06 | 0.45 | 21.64 |
| 31.00 | 750.00 | 0.05 | 0.48 | 18.77 |
| 31.25 | 675.00 | 0.05 | 0.57 | 17.53 |
| 31.50 | 600.00 | 0.04 | 0.74 | 18.09 |
| 31.75 | 750.00 | 0.05 | 0.46 | 16.68 |
| 32.00 | 750.00 | 0.05 | 0.39 | 13.87 |
| 32.25 | 750.00 | 0.05 | 0.42 | 14.72 |
| 32.50 | 675.00 | 0.04 | 0.28 | 7.95 |
| 32.75 | 675.00 | 0.04 | 0.41 | 11.27 |
| 33.00 | 600.00 | 0.04 | 0.50 | 10.93 |
| 33.25 | 600.00 | 0.04 | 0.31 | 6.60 |
| 33.50 | 450.00 | 0.03 | 0.68 | 8.27 |
| 33.75 | 450.00 | 0.03 | 0.86 | 10.29 |
| 34.00 | 375.00 | 0.03 | 0.36 | 3.55 |
| 34.25 | 150.00 | 0.01 | 4.36 | 7.68 |
| 34.50 | 225.00 | 0.01 | 0.82 | 2.32 |
| 34.75 | 300.00 | 0.02 | 0.64 | 3.84 |
| 35.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 75.00 | 0.00 | 3.08 | 0.96 |
| 36.00 | 0.00 | 0.00 | 0.00 | 2.63 |
| 36.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 150.00 | 0.01 | 2.17 | 2.97 |
| 37.00 | 150.00 | 0.01 | 1.16 | 2.06 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 1.22 |
| 37.75 | 75.00 | 0.00 | 10.68 | 3.36 |
| 38.00 | 75.00 | 0.00 | 3.65 | 1.25 |
| 38.25 | 75.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 9 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 9

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 10 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 10

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 11 IS: 216.65 CFS AT TIME: 17.21 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 95.75 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 11

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 225.00 | 0.03 | 0.21 | 1.35 |
| 15.50 | 675.00 | 0.14 | 1.14 | 106.90 |
| 15.75 | 600.00 | 0.14 | 1.29 | 110.90 |
| 16.00 | 675.00 | 0.14 | 1.22 | 118.84 |
| 16.25 | 750.00 | 0.15 | 1.13 | 130.24 |
| 16.50 | 675.00 | 0.15 | 1.34 | 139.58 |
| 16.75 | 675.00 | 0.16 | 1.39 | 146.41 |
| 17.00 | 750.00 | 0.17 | 1.36 | 173.14 |
| 17.25 | 750.00 | 0.19 | 1.53 | 214.13 |
| 17.50 | 750.00 | 0.18 | 1.49 | 205.22 |
| 17.75 | 675.00 | 0.17 | 1.61 | 189.66 |
| 18.00 | 675.00 | 0.17 | 1.57 | 179.62 |
| 18.25 | 750.00 | 0.17 | 1.35 | 170.55 |
| 18.50 | 675.00 | 0.16 | 1.46 | 157.17 |
| 18.75 | 675.00 | 0.15 | 1.36 | 141.11 |
| 19.00 | 750.00 | 0.15 | 1.12 | 128.49 |
| 19.25 | 600.00 | 0.15 | 1.37 | 119.28 |
| 19.50 | 675.00 | 0.14 | 1.14 | 106.68 |
| 19.75 | 675.00 | 0.13 | 1.09 | 98.20 |
| 20.00 | 675.00 | 0.13 | 1.02 | 88.42 |
| 20.25 | 675.00 | 0.12 | 0.94 | 78.33 |
| 20.50 | 600.00 | 0.12 | 1.02 | 72.90 |
| 20.75 | 675.00 | 0.12 | 0.79 | 62.97 |
| 21.00 | 750.00 | 0.11 | 0.65 | 55.55 |
| 21.25 | 600.00 | 0.11 | 0.84 | 55.01 |
| 21.50 | 600.00 | 0.11 | 0.76 | 47.70 |
| 21.75 | 675.00 | 0.10 | 0.63 | 43.20 |
| 22.00 | 675.00 | 0.10 | 0.59 | 40.06 |
| 22.25 | 675.00 | 0.10 | 0.58 | 38.34 |
| 22.50 | 675.00 | 0.10 | 0.56 | 36.39 |
| 22.75 | 750.00 | 0.10 | 0.45 | 32.75 |
| 23.00 | 600.00 | 0.09 | 0.60 | 31.95 |
| 23.25 | 675.00 | 0.09 | 0.47 | 27.55 |
| 23.50 | 675.00 | 0.09 | 0.43 | 25.08 |
| 23.75 | 600.00 | 0.08 | 0.50 | 25.21 |
| 24.00 | 525.00 | 0.08 | 0.57 | 24.17 |
| 24.25 | 600.00 | 0.08 | 0.38 | 18.10 |
| 24.50 | 600.00 | 0.08 | 0.45 | 20.18 |
| 24.75 | 600.00 | 0.08 | 0.44 | 20.20 |
| 25.00 | 525.00 | 0.07 | 0.51 | 18.32 |
| 25.25 | 375.00 | 0.07 | 0.76 | 18.56 |
| 25.50 | 525.00 | 0.07 | 0.46 | 16.24 |
| 25.75 | 600.00 | 0.07 | 0.36 | 15.06 |
| 26.00 | 450.00 | 0.07 | 0.54 | 16.15 |
| 26.25 | 450.00 | 0.07 | 0.49 | 14.72 |
| 26.50 | 375.00 | 0.07 | 0.62 | 15.62 |
| 26.75 | 375.00 | 0.07 | 0.62 | 15.50 |
| 27.00 | 600.00 | 0.07 | 0.28 | 11.74 |
| 27.25 | 450.00 | 0.06 | 0.50 | 14.34 |
| 27.50 | 375.00 | 0.06 | 0.69 | 16.40 |
| 27.75 | 600.00 | 0.07 | 0.37 | 16.43 |
| 28.00 | 600.00 | 0.07 | 0.39 | 16.81 |
| 28.25 | 450.00 | 0.07 | 0.58 | 18.05 |
| 28.50 | 450.00 | 0.07 | 0.51 | 15.62 |
| 28.75 | 450.00 | 0.06 | 0.48 | 13.81 |
| 29.00 | 375.00 | 0.06 | 0.60 | 13.16 |
| 29.25 | 450.00 | 0.06 | 0.42 | 11.52 |
| 29.50 | 525.00 | 0.06 | 0.26 | 8.50 |
| 29.75 | 525.00 | 0.06 | 0.28 | 8.94 |
| 30.00 | 525.00 | 0.06 | 0.27 | 8.40 |
| 30.25 | 450.00 | 0.06 | 0.19 | 5.11 |
| 30.50 | 375.00 | 0.05 | 0.46 | 9.25 |
| 30.75 | 375.00 | 0.06 | 0.39 | 8.09 |
| 31.00 | 450.00 | 0.06 | 0.22 | 5.54 |
| 31.25 | 450.00 | 0.06 | 0.22 | 5.73 |
| 31.50 | 300.00 | 0.05 | 0.54 | 7.33 |
| 31.75 | 300.00 | 0.04 | 0.59 | 7.20 |
| 32.00 | 225.00 | 0.04 | 0.49 | 4.36 |
| 32.25 | 375.00 | 0.05 | 0.35 | 5.83 |
| 32.50 | 375.00 | 0.04 | 0.46 | 7.40 |
| 32.75 | 375.00 | 0.05 | 0.28 | 4.82 |
| 33.00 | 450.00 | 0.05 | 0.13 | 3.11 |
| 33.25 | 375.00 | 0.05 | 0.20 | 3.68 |
| 33.50 | 375.00 | 0.05 | 0.33 | 6.15 |
| 33.75 | 300.00 | 0.05 | 0.28 | 3.97 |
| 34.00 | 300.00 | 0.04 | 0.27 | 3.14 |
| 34.25 | 225.00 | 0.04 | 0.32 | 3.11 |
| 34.50 | 300.00 | 0.05 | 0.28 | 3.92 |
| 34.75 | 375.00 | 0.04 | 0.25 | 4.06 |
| 35.00 | 300.00 | 0.04 | 0.31 | 4.05 |
| 35.25 | 450.00 | 0.05 | 0.29 | 6.24 |
| 35.50 | 450.00 | 0.05 | 0.17 | 3.93 |
| 35.75 | 225.00 | 0.04 | 0.69 | 6.72 |
| 36.00 | 375.00 | 0.05 | 0.26 | 4.96 |
| 36.25 | 375.00 | 0.05 | 0.28 | 5.29 |
| 36.50 | 375.00 | 0.05 | 0.12 | 2.09 |
| 36.75 | 300.00 | 0.04 | 0.25 | 3.13 |
| 37.00 | 225.00 | 0.04 | 0.66 | 6.50 |
| 37.25 | 225.00 | 0.04 | 0.33 | 3.13 |
| 37.50 | 375.00 | 0.04 | 0.25 | 4.20 |
| 37.75 | 300.00 | 0.05 | 0.31 | 4.23 |
| 38.00 | 300.00 | 0.05 | 0.64 | 8.79 |
| 38.25 | 450.00 | 0.05 | 0.23 | 5.23 |
| 38.50 | 300.00 | 0.05 | 0.23 | 3.14 |
| 38.75 | 300.00 | 0.05 | 0.31 | 4.28 |
| 39.00 | 300.00 | 0.05 | 0.29 | 4.17 |
| 39.25 | 150.00 | 0.04 | 0.49 | 3.15 |
| 39.50 | 225.00 | 0.04 | 0.78 | 6.70 |
| 39.75 | 300.00 | 0.05 | 0.42 | 6.07 |
| 40.00 | 525.00 | 0.05 | 0.14 | 4.05 |
| 40.25 | 225.00 | 0.04 | 0.63 | 5.06 |
| 40.50 | 375.00 | 0.04 | 0.17 | 2.69 |
| 40.75 | 450.00 | 0.05 | 0.17 | 3.94 |
| 41.00 | 450.00 | 0.05 | 0.36 | 8.22 |
| 41.25 | 375.00 | 0.05 | 0.29 | 5.12 |
| 41.50 | 525.00 | 0.05 | 0.18 | 4.98 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 41.75 | 450.00 | 0.05 | 0.26 | 5.73 |
| 42.00 | 225.00 | 0.04 | 0.50 | 4.94 |
| 42.25 | 225.00 | 0.04 | 0.32 | 3.12 |
| 42.50 | 450.00 | 0.05 | 0.29 | 6.25 |
| 42.75 | 375.00 | 0.05 | 0.23 | 4.22 |
| 43.00 | 225.00 | 0.04 | 0.51 | 5.02 |
| 43.25 | 300.00 | 0.04 | 0.51 | 6.55 |
| 43.50 | 300.00 | 0.04 | 0.51 | 6.48 |
| 43.75 | 450.00 | 0.05 | 0.17 | 4.07 |
| 44.00 | 375.00 | 0.04 | 0.31 | 5.23 |
| 44.25 | 375.00 | 0.04 | 0.32 | 5.28 |
| 44.50 | 375.00 | 0.04 | 0.25 | 4.14 |
| 44.75 | 375.00 | 0.05 | 0.29 | 5.08 |
| 45.00 | 375.00 | 0.05 | 0.33 | 5.75 |
| 45.25 | 375.00 | 0.04 | 0.43 | 6.86 |
| 45.50 | 300.00 | 0.05 | 0.23 | 3.14 |
| 45.75 | 450.00 | 0.05 | 0.31 | 6.65 |
| 46.00 | 450.00 | 0.05 | 0.15 | 3.08 |
| 46.25 | 525.00 | 0.05 | 0.16 | 4.63 |
| 46.50 | 300.00 | 0.05 | 0.28 | 4.04 |
| 46.75 | 450.00 | 0.05 | 0.28 | 6.28 |
| 47.00 | 225.00 | 0.04 | 0.43 | 4.21 |
| 47.25 | 600.00 | 0.05 | 0.12 | 3.96 |
| 47.50 | 375.00 | 0.04 | 0.29 | 4.80 |
| 47.75 | 450.00 | 0.05 | 0.19 | 4.24 |
| 48.00 | 525.00 | 0.05 | 0.11 | 3.14 |
| 48.25 | 300.00 | 0.05 | 0.21 | 3.04 |
| 48.50 | 225.00 | 0.04 | 0.43 | 4.21 |
| 48.75 | 450.00 | 0.05 | 0.14 | 3.13 |
| 49.00 | 225.00 | 0.04 | 0.43 | 4.22 |
| 49.25 | 300.00 | 0.05 | 0.22 | 3.12 |
| 49.50 | 225.00 | 0.04 | 0.32 | 3.13 |
| 49.75 | 300.00 | 0.04 | 0.25 | 3.14 |
| 50.00 | 375.00 | 0.05 | 0.17 | 3.14 |
| 50.25 | 375.00 | 0.04 | 0.30 | 4.90 |
| 50.50 | 225.00 | 0.04 | 0.36 | 3.15 |
| 50.75 | 375.00 | 0.05 | 0.17 | 3.04 |
| 51.00 | 450.00 | 0.05 | 0.21 | 4.98 |
| 51.25 | 225.00 | 0.04 | 0.52 | 4.28 |
| 51.50 | 375.00 | 0.05 | 0.30 | 5.29 |
| 51.75 | 225.00 | 0.04 | 0.41 | 3.99 |
| 52.00 | 375.00 | 0.05 | 0.33 | 6.15 |
| 52.25 | 300.00 | 0.05 | 0.33 | 4.56 |
| 52.50 | 375.00 | 0.05 | 0.27 | 5.17 |
| 52.75 | 375.00 | 0.04 | 0.36 | 6.09 |
| 53.00 | 225.00 | 0.04 | 0.78 | 7.63 |
| 53.25 | 300.00 | 0.05 | 0.26 | 3.97 |
| 53.50 | 375.00 | 0.05 | 0.19 | 3.67 |
| 53.75 | 300.00 | 0.04 | 0.35 | 4.40 |
| 54.00 | 300.00 | 0.04 | 0.41 | 5.24 |
| 54.25 | 600.00 | 0.06 | 0.09 | 3.14 |
| 54.50 | 375.00 | 0.04 | 0.29 | 4.91 |
| 54.75 | 450.00 | 0.05 | 0.18 | 3.94 |
| 55.00 | 225.00 | 0.04 | 0.43 | 4.22 |
| 55.25 | 375.00 | 0.05 | 0.11 | 2.09 |
| 55.50 | 300.00 | 0.05 | 0.29 | 4.19 |
| 55.75 | 300.00 | 0.04 | 0.53 | 6.21 |
| 56.00 | 450.00 | 0.05 | 0.14 | 3.13 |
| 56.25 | 225.00 | 0.04 | 0.41 | 4.03 |
| 56.50 | 450.00 | 0.05 | 0.14 | 3.13 |
| 56.75 | 300.00 | 0.05 | 0.22 | 3.14 |
| 57.00 | 450.00 | 0.05 | 0.29 | 6.08 |
| 57.25 | 375.00 | 0.04 | 0.37 | 6.18 |
| 57.50 | 375.00 | 0.04 | 0.18 | 3.03 |
| 57.75 | 225.00 | 0.04 | 0.77 | 6.62 |
| 58.00 | 375.00 | 0.04 | 0.32 | 5.21 |
| 58.25 | 375.00 | 0.05 | 0.39 | 6.72 |
| 58.50 | 300.00 | 0.04 | 0.57 | 7.21 |
| 58.75 | 375.00 | 0.05 | 0.28 | 4.79 |
| 59.00 | 225.00 | 0.04 | 0.53 | 5.23 |
| 59.25 | 300.00 | 0.04 | 0.33 | 4.09 |
| 59.50 | 300.00 | 0.05 | 0.28 | 4.06 |
| 59.75 | 225.00 | 0.04 | 0.68 | 6.62 |
| 60.00 | 450.00 | 0.05 | 0.13 | 3.02 |
| 60.25 | 300.00 | 0.05 | 0.23 | 3.14 |
| 60.50 | 225.00 | 0.04 | 0.42 | 4.16 |
| 60.75 | 300.00 | 0.05 | 0.40 | 5.54 |
| 61.00 | 450.00 | 0.05 | 0.18 | 3.70 |
| 61.25 | 225.00 | 0.04 | 0.45 | 4.19 |
| 61.50 | 450.00 | 0.05 | 0.19 | 4.06 |
| 61.75 | 450.00 | 0.05 | 0.14 | 3.13 |
| 62.00 | 450.00 | 0.05 | 0.25 | 5.72 |
| 62.25 | 300.00 | 0.04 | 0.33 | 4.20 |
| 62.50 | 300.00 | 0.05 | 0.42 | 6.04 |
| 62.75 | 300.00 | 0.05 | 0.33 | 4.56 |
| 63.00 | 375.00 | 0.05 | 0.28 | 5.23 |
| 63.25 | 375.00 | 0.04 | 0.16 | 2.64 |
| 63.50 | 450.00 | 0.05 | 0.29 | 6.49 |
| 63.75 | 150.00 | 0.04 | 0.79 | 5.08 |
| 64.00 | 450.00 | 0.05 | 0.23 | 5.15 |
| 64.25 | 300.00 | 0.05 | 0.30 | 4.16 |
| 64.50 | 450.00 | 0.05 | 0.31 | 6.74 |
| 64.75 | 375.00 | 0.05 | 0.32 | 5.52 |
| 65.00 | 450.00 | 0.05 | 0.25 | 5.30 |
| 65.25 | 225.00 | 0.04 | 0.53 | 5.21 |
| 65.50 | 375.00 | 0.05 | 0.27 | 5.16 |
| 65.75 | 375.00 | 0.05 | 0.40 | 6.91 |
| 66.00 | 300.00 | 0.05 | 0.21 | 3.01 |
| 66.25 | 225.00 | 0.04 | 0.68 | 6.70 |
| 66.50 | 450.00 | 0.05 | 0.22 | 4.72 |
| 66.75 | 600.00 | 0.05 | 0.10 | 3.17 |
| 67.00 | 225.00 | 0.04 | 0.67 | 6.58 |
| 67.25 | 450.00 | 0.05 | 0.14 | 3.14 |
| 67.50 | 300.00 | 0.04 | 0.32 | 4.06 |
| 67.75 | 525.00 | 0.05 | 0.13 | 3.66 |
| 68.00 | 525.00 | 0.05 | 0.08 | 2.09 |
| 68.25 | 225.00 | 0.04 | 0.51 | 5.04 |
| 68.50 | 225.00 | 0.04 | 0.74 | 7.21 |
| 68.75 | 225.00 | 0.04 | 0.64 | 6.27 |
| 69.00 | 225.00 | 0.04 | 0.71 | 6.97 |
| 69.25 | 450.00 | 0.05 | 0.37 | 7.80 |
| 69.50 | 525.00 | 0.05 | 0.15 | 4.21 |
| 69.75 | 225.00 | 0.04 | 0.80 | 7.80 |
| 70.00 | 300.00 | 0.04 | 0.40 | 5.14 |
| 70.25 | 450.00 | 0.05 | 0.26 | 5.50 |
| 70.50 | 300.00 | 0.04 | 0.33 | 4.06 |
| 70.75 | 225.00 | 0.04 | 0.72 | 7.09 |
| 71.00 | 450.00 | 0.05 | 0.14 | 3.13 |
| 71.25 | 300.00 | 0.05 | 0.45 | 6.22 |
| 71.50 | 300.00 | 0.05 | 0.26 | 3.58 |
| 71.75 | 450.00 | 0.05 | 0.33 | 6.85 |
| 72.00 | 225.00 | 0.04 | 0.65 | 6.36 |



BSE Document Control Number: 7323HYD101

THE MAXIMUM DISCHARGE FROM CROSS SECTION 12 IS: 282.61 CFS AT TIME: 16.71 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 157.95 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 12

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 375.00 | 0.10 | 3.62 | 129.14 |
| 15.50 | 375.00 | 0.11 | 4.22 | 177.87 |
| 15.75 | 375.00 | 0.12 | 4.46 | 203.54 |
| 16.00 | 450.00 | 0.14 | 3.88 | 239.47 |
| 16.25 | 375.00 | 0.14 | 5.03 | 262.40 |
| 16.50 | 450.00 | 0.15 | 4.15 | 276.22 |
| 16.75 | 450.00 | 0.15 | 4.19 | 282.24 |
| 17.00 | 450.00 | 0.15 | 4.15 | 276.13 |
| 17.25 | 375.00 | 0.14 | 5.01 | 259.60 |
| 17.50 | 375.00 | 0.13 | 4.79 | 236.68 |
| 17.75 | 375.00 | 0.12 | 4.54 | 210.16 |
| 18.00 | 375.00 | 0.12 | 4.33 | 187.80 |
| 18.25 | 375.00 | 0.11 | 4.08 | 167.53 |
| 18.50 | 375.00 | 0.10 | 3.92 | 151.33 |
| 18.75 | 375.00 | 0.10 | 3.77 | 138.57 |
| 19.00 | 375.00 | 0.09 | 3.58 | 127.09 |
| 19.25 | 375.00 | 0.09 | 3.47 | 117.39 |
| 19.50 | 375.00 | 0.09 | 3.34 | 107.28 |
| 19.75 | 375.00 | 0.08 | 3.23 | 98.73 |
| 20.00 | 375.00 | 0.08 | 3.10 | 89.31 |
| 20.25 | 375.00 | 0.07 | 2.97 | 81.89 |
| 20.50 | 375.00 | 0.07 | 2.86 | 74.56 |
| 20.75 | 375.00 | 0.07 | 2.76 | 68.02 |
| 21.00 | 375.00 | 0.06 | 2.65 | 61.54 |
| 21.25 | 375.00 | 0.06 | 2.56 | 55.95 |
| 21.50 | 375.00 | 0.06 | 2.33 | 48.82 |
| 21.75 | 375.00 | 0.05 | 2.18 | 44.32 |
| 22.00 | 375.00 | 0.05 | 2.14 | 42.50 |
| 22.25 | 375.00 | 0.05 | 1.85 | 35.76 |
| 22.50 | 375.00 | 0.05 | 1.95 | 36.38 |
| 22.75 | 375.00 | 0.05 | 1.76 | 31.38 |
| 23.00 | 375.00 | 0.04 | 1.76 | 29.56 |
| 23.25 | 375.00 | 0.04 | 1.49 | 23.98 |
| 23.50 | 375.00 | 0.04 | 1.64 | 25.62 |
| 23.75 | 375.00 | 0.04 | 1.64 | 25.21 |
| 24.00 | 375.00 | 0.04 | 1.36 | 20.86 |
| 24.25 | 375.00 | 0.04 | 1.36 | 20.47 |
| 24.50 | 375.00 | 0.04 | 1.51 | 23.41 |
| 24.75 | 375.00 | 0.04 | 1.49 | 22.74 |
| 25.00 | 375.00 | 0.04 | 1.39 | 21.59 |
| 25.25 | 375.00 | 0.04 | 1.29 | 19.50 |
| 25.50 | 375.00 | 0.04 | 1.28 | 18.95 |
| 25.75 | 375.00 | 0.04 | 1.28 | 18.88 |
| 26.00 | 375.00 | 0.04 | 1.28 | 18.66 |
| 26.25 | 375.00 | 0.04 | 1.28 | 18.63 |
| 26.50 | 375.00 | 0.04 | 1.29 | 19.29 |
| 26.75 | 375.00 | 0.04 | 1.29 | 19.09 |
| 27.00 | 375.00 | 0.04 | 1.28 | 18.92 |
| 27.25 | 375.00 | 0.04 | 1.27 | 18.25 |
| 27.50 | 375.00 | 0.04 | 1.26 | 18.05 |
| 27.75 | 375.00 | 0.04 | 1.27 | 18.20 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 28.00 | 375.00 | 0.04 | 1.26 | 17.73 |
| 28.25 | 375.00 | 0.04 | 1.13 | 16.61 |
| 28.50 | 375.00 | 0.04 | 1.12 | 16.28 |
| 28.75 | 375.00 | 0.04 | 1.12 | 16.43 |
| 29.00 | 375.00 | 0.04 | 1.12 | 16.42 |
| 29.25 | 375.00 | 0.04 | 1.12 | 16.46 |
| 29.50 | 375.00 | 0.04 | 1.12 | 16.32 |
| 29.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 30.00 | 375.00 | 0.04 | 1.13 | 16.48 |
| 30.25 | 375.00 | 0.04 | 1.12 | 16.29 |
| 30.50 | 375.00 | 0.04 | 1.12 | 16.25 |
| 30.75 | 375.00 | 0.04 | 1.12 | 16.27 |
| 31.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 31.25 | 375.00 | 0.04 | 1.12 | 16.25 |
| 31.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 31.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 32.00 | 375.00 | 0.04 | 1.12 | 16.26 |
| 32.25 | 375.00 | 0.04 | 1.12 | 16.26 |
| 32.50 | 375.00 | 0.04 | 1.12 | 16.29 |
| 32.75 | 375.00 | 0.04 | 1.12 | 16.27 |
| 33.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 33.25 | 375.00 | 0.04 | 1.12 | 16.28 |
| 33.50 | 375.00 | 0.04 | 1.12 | 16.30 |
| 33.75 | 375.00 | 0.04 | 1.12 | 16.25 |
| 34.00 | 375.00 | 0.04 | 1.12 | 16.25 |
| 34.25 | 375.00 | 0.04 | 1.12 | 16.33 |
| 34.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 34.75 | 375.00 | 0.04 | 1.12 | 16.26 |
| 35.00 | 375.00 | 0.04 | 1.12 | 16.39 |
| 35.25 | 375.00 | 0.04 | 1.12 | 16.25 |
| 35.50 | 375.00 | 0.04 | 1.12 | 16.23 |
| 35.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 36.00 | 375.00 | 0.04 | 1.12 | 16.21 |
| 36.25 | 375.00 | 0.04 | 1.12 | 16.20 |
| 36.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 36.75 | 375.00 | 0.04 | 1.12 | 16.27 |
| 37.00 | 375.00 | 0.04 | 1.12 | 16.26 |
| 37.25 | 375.00 | 0.04 | 1.12 | 16.28 |
| 37.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 37.75 | 375.00 | 0.04 | 1.12 | 16.25 |
| 38.00 | 375.00 | 0.04 | 1.12 | 16.23 |
| 38.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 38.50 | 375.00 | 0.04 | 1.12 | 16.27 |
| 38.75 | 375.00 | 0.04 | 1.12 | 16.25 |
| 39.00 | 375.00 | 0.04 | 1.12 | 16.23 |
| 39.25 | 375.00 | 0.04 | 1.12 | 16.28 |
| 39.50 | 450.00 | 0.04 | 0.87 | 16.24 |
| 39.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 40.00 | 375.00 | 0.04 | 1.12 | 16.25 |
| 40.25 | 375.00 | 0.04 | 1.12 | 16.22 |
| 40.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 40.75 | 375.00 | 0.04 | 1.12 | 16.31 |
| 41.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 41.25 | 375.00 | 0.04 | 1.12 | 16.34 |
| 41.50 | 375.00 | 0.04 | 1.12 | 16.19 |
| 41.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 42.00 | 375.00 | 0.04 | 1.12 | 16.20 |
| 42.25 | 375.00 | 0.04 | 1.12 | 16.29 |
| 42.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 42.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 43.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 43.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 43.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 43.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 44.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 44.25 | 375.00 | 0.04 | 1.12 | 16.32 |
| 44.50 | 375.00 | 0.04 | 1.12 | 16.19 |
| 44.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 45.00 | 375.00 | 0.04 | 1.12 | 16.22 |
| 45.25 | 375.00 | 0.04 | 1.12 | 16.24 |
| 45.50 | 375.00 | 0.04 | 1.12 | 16.32 |
| 45.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 46.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 46.25 | 375.00 | 0.04 | 1.12 | 16.26 |
| 46.50 | 375.00 | 0.04 | 1.12 | 16.25 |
| 46.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 47.00 | 375.00 | 0.04 | 1.12 | 16.26 |
| 47.25 | 375.00 | 0.04 | 1.12 | 16.25 |
| 47.50 | 375.00 | 0.04 | 1.12 | 16.28 |
| 47.75 | 375.00 | 0.04 | 1.12 | 16.25 |
| 48.00 | 375.00 | 0.04 | 1.12 | 16.31 |
| 48.25 | 375.00 | 0.04 | 1.12 | 16.24 |
| 48.50 | 375.00 | 0.04 | 1.12 | 16.25 |
| 48.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 49.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 49.25 | 375.00 | 0.04 | 1.12 | 16.32 |
| 49.50 | 375.00 | 0.04 | 1.12 | 16.29 |
| 49.75 | 375.00 | 0.04 | 1.12 | 16.24 |
| 50.00 | 375.00 | 0.04 | 1.12 | 16.29 |
| 50.25 | 375.00 | 0.04 | 1.12 | 16.24 |
| 50.50 | 375.00 | 0.04 | 1.12 | 16.28 |
| 50.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 51.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 51.25 | 375.00 | 0.04 | 1.12 | 16.23 |
| 51.50 | 375.00 | 0.04 | 1.13 | 16.49 |
| 51.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 52.00 | 375.00 | 0.04 | 1.18 | 17.07 |
| 52.25 | 375.00 | 0.04 | 1.12 | 16.31 |
| 52.50 | 375.00 | 0.04 | 1.12 | 16.27 |
| 52.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 53.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 53.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 53.50 | 375.00 | 0.04 | 1.12 | 16.21 |
| 53.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 54.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 54.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 54.50 | 375.00 | 0.04 | 1.12 | 16.25 |
| 54.75 | 375.00 | 0.04 | 1.12 | 16.33 |
| 55.00 | 375.00 | 0.04 | 1.12 | 16.27 |
| 55.25 | 375.00 | 0.04 | 1.12 | 16.28 |
| 55.50 | 375.00 | 0.04 | 1.12 | 16.27 |
| 55.75 | 375.00 | 0.04 | 1.12 | 16.27 |
| 56.00 | 375.00 | 0.04 | 1.12 | 16.22 |
| 56.25 | 375.00 | 0.04 | 1.12 | 16.23 |
| 56.50 | 375.00 | 0.04 | 1.18 | 17.10 |
| 56.75 | 375.00 | 0.04 | 1.12 | 16.26 |
| 57.00 | 375.00 | 0.04 | 1.12 | 16.29 |
| 57.25 | 375.00 | 0.04 | 1.12 | 16.31 |
| 57.50 | 450.00 | 0.04 | 0.87 | 16.27 |
| 57.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 58.00 | 450.00 | 0.04 | 0.87 | 16.26 |
| 58.25 | 375.00 | 0.04 | 1.12 | 16.27 |



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|---|---|---|---|---|
| 58.50 | 375.00 | 0.04 | 1.12 | 16.33 |
| 58.75 | 450.00 | 0.04 | 0.87 | 16.28 |
| 59.00 | 375.00 | 0.04 | 1.12 | 16.25 |
| 59.25 | 375.00 | 0.04 | 1.12 | 16.33 |
| 59.50 | 375.00 | 0.04 | 1.12 | 16.29 |
| 59.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 60.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 60.25 | 375.00 | 0.04 | 1.12 | 16.31 |
| 60.50 | 375.00 | 0.04 | 1.12 | 16.26 |
| 60.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 61.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 61.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 61.50 | 375.00 | 0.04 | 1.12 | 16.24 |
| 61.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 62.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 62.25 | 375.00 | 0.04 | 1.12 | 16.31 |
| 62.50 | 375.00 | 0.04 | 1.12 | 16.33 |
| 62.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 63.00 | 375.00 | 0.04 | 1.12 | 16.24 |
| 63.25 | 375.00 | 0.04 | 1.12 | 16.25 |
| 63.50 | 375.00 | 0.04 | 1.12 | 16.31 |
| 63.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 64.00 | 375.00 | 0.04 | 1.12 | 16.28 |
| 64.25 | 375.00 | 0.04 | 1.12 | 16.30 |
| 64.50 | 375.00 | 0.04 | 1.12 | 16.24 |
| 64.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 65.00 | 375.00 | 0.04 | 1.12 | 16.27 |
| 65.25 | 450.00 | 0.04 | 0.87 | 16.30 |
| 65.50 | 450.00 | 0.04 | 0.87 | 16.25 |
| 65.75 | 375.00 | 0.04 | 1.12 | 16.31 |
| 66.00 | 375.00 | 0.04 | 1.12 | 16.27 |
| 66.25 | 375.00 | 0.04 | 1.12 | 16.31 |
| 66.50 | 375.00 | 0.04 | 1.12 | 16.28 |
| 66.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 67.00 | 375.00 | 0.04 | 1.12 | 16.29 |
| 67.25 | 375.00 | 0.04 | 1.12 | 16.26 |
| 67.50 | 375.00 | 0.04 | 1.12 | 16.29 |
| 67.75 | 375.00 | 0.04 | 1.12 | 16.23 |
| 68.00 | 375.00 | 0.04 | 1.12 | 16.37 |
| 68.25 | 375.00 | 0.04 | 1.12 | 16.25 |
| 68.50 | 375.00 | 0.04 | 1.12 | 16.43 |
| 68.75 | 375.00 | 0.04 | 1.12 | 16.30 |
| 69.00 | 375.00 | 0.04 | 1.12 | 16.43 |
| 69.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 69.50 | 375.00 | 0.04 | 1.12 | 16.19 |
| 69.75 | 375.00 | 0.04 | 1.12 | 16.28 |
| 70.00 | 375.00 | 0.04 | 1.12 | 16.27 |
| 70.25 | 375.00 | 0.04 | 1.12 | 16.27 |
| 70.50 | 375.00 | 0.04 | 1.12 | 16.31 |
| 70.75 | 375.00 | 0.04 | 1.12 | 16.29 |
| 71.00 | 375.00 | 0.04 | 1.12 | 16.40 |
| 71.25 | 375.00 | 0.04 | 1.12 | 16.20 |
| 71.50 | 375.00 | 0.04 | 1.12 | 16.28 |
| 71.75 | 375.00 | 0.04 | 1.12 | 16.33 |
| 72.00 | 375.00 | 0.04 | 1.12 | 16.26 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 13 IS: 6.86 CFS AT TIME: 61.76 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 4.64 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 13

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 150.00 | 0.05 | 0.33 | 2.48 |
| 21.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 1.50 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 1.02 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 75.00 | 0.01 | 3.66 | 3.93 |
| 23.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 150.00 | 0.03 | 0.50 | 2.52 |
| 24.25 | 225.00 | 0.04 | 0.08 | 0.73 |
| 24.50 | 75.00 | 0.01 | 0.18 | 0.19 |
| 24.75 | 75.00 | 0.02 | 1.48 | 1.85 |
| 25.00 | 225.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.20 |
| 26.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 75.00 | 0.02 | 0.67 | 0.84 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.21 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 75.00 | 0.03 | 0.44 | 0.83 |
| 28.00 | 225.00 | 0.06 | 0.13 | 1.71 |
| 28.25 | 150.00 | 0.03 | 0.05 | 0.20 |
| 28.50 | 75.00 | 0.01 | 3.32 | 3.56 |
| 28.75 | 150.00 | 0.03 | 0.05 | 0.23 |
| 29.00 | 450.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 150.00 | 0.03 | 0.50 | 2.50 |
| 29.50 | 150.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 75.00 | 0.01 | 0.20 | 0.21 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.19 |
| 31.50 | 225.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 375.00 | 0.05 | 0.03 | 0.58 |
| 32.00 | 75.00 | 0.01 | 3.33 | 2.50 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.21 |
| 32.50 | 150.00 | 0.03 | 0.39 | 1.46 |
| 32.75 | 75.00 | 0.03 | 0.68 | 1.71 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 1.71 |
| 33.50 | 75.00 | 0.01 | 0.74 | 0.79 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.86 |
| 34.00 | 150.00 | 0.05 | 0.03 | 0.20 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.84 |
| 34.50 | 225.00 | 0.03 | 0.16 | 1.00 |
| 34.75 | 150.00 | 0.02 | 0.24 | 0.67 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.69 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 375.00 | 0.05 | 0.17 | 3.18 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.22 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 150.00 | 0.05 | 0.22 | 1.69 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.21 |
| 37.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 75.00 | 0.01 | 0.81 | 0.87 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.21 |
| 38.00 | 75.00 | 0.01 | 0.22 | 0.17 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 150.00 | 0.01 | 0.70 | 0.81 |
| 38.75 | 150.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 150.00 | 0.01 | 0.80 | 0.92 |
| 39.50 | 375.00 | 0.02 | 0.16 | 1.18 |
| 39.75 | 450.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 75.00 | 0.01 | 0.19 | 0.20 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.86 |
| 40.50 | 75.00 | 0.01 | 2.59 | 2.77 |
| 40.75 | 225.00 | 0.01 | 0.30 | 0.78 |
| 41.00 | 150.00 | 0.03 | 0.19 | 0.83 |
| 41.25 | 225.00 | 0.05 | 0.02 | 0.21 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 75.00 | 0.01 | 3.14 | 3.37 |
| 42.25 | 75.00 | 0.01 | 0.19 | 0.20 |
| 42.50 | 225.00 | 0.01 | 0.31 | 0.80 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 300.00 | 0.04 | 0.02 | 0.23 |
| 43.25 | 150.00 | 0.01 | 0.67 | 0.78 |
| 43.50 | 75.00 | 0.00 | 7.41 | 2.16 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 1.70 |
| 44.25 | 225.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 150.00 | 0.03 | 0.05 | 0.21 |



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|---|---|---|---|---|
| 44.75 | 75.00 | 0.01 | 2.17 | 2.32 |
| 45.00 | 75.00 | 0.00 | 12.73 | 3.67 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.18 |
| 45.50 | 75.00 | 0.00 | 8.00 | 2.32 |
| 45.75 | 150.00 | 0.02 | 0.65 | 1.96 |
| 46.00 | 300.00 | 0.01 | 0.12 | 0.54 |
| 46.25 | 225.00 | 0.01 | 0.07 | 0.17 |
| 46.50 | 225.00 | 0.01 | 0.57 | 1.48 |
| 46.75 | 75.00 | 0.01 | 2.34 | 2.51 |
| 47.00 | 75.00 | 0.00 | 5.64 | 1.64 |
| 47.25 | 75.00 | 0.02 | 1.28 | 1.92 |
| 47.50 | 375.00 | 0.02 | 0.17 | 1.24 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 150.00 | 0.01 | 1.44 | 1.66 |
| 48.25 | 300.00 | 0.02 | 0.32 | 1.50 |
| 48.50 | 150.00 | 0.01 | 0.54 | 0.60 |
| 48.75 | 375.00 | 0.02 | 0.20 | 1.46 |
| 49.00 | 150.00 | 0.03 | 0.05 | 0.22 |
| 49.25 | 75.00 | 0.00 | 2.11 | 0.61 |
| 49.50 | 75.00 | 0.00 | 4.47 | 1.30 |
| 49.75 | 225.00 | 0.01 | 0.31 | 0.78 |
| 50.00 | 75.00 | 0.00 | 8.71 | 2.51 |
| 50.25 | 150.00 | 0.03 | 0.64 | 2.73 |
| 50.50 | 225.00 | 0.01 | 0.31 | 0.82 |
| 50.75 | 75.00 | 0.00 | 1.89 | 0.55 |
| 51.00 | 300.00 | 0.01 | 0.14 | 0.60 |
| 51.25 | 0.00 | 0.00 | 0.00 | 1.07 |
| 51.50 | 150.00 | 0.01 | 0.81 | 0.94 |
| 51.75 | 150.00 | 0.01 | 3.03 | 3.50 |
| 52.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 225.00 | 0.01 | 0.77 | 1.92 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.60 |
| 52.75 | 150.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 1.07 |
| 53.50 | 150.00 | 0.01 | 1.91 | 2.13 |
| 53.75 | 375.00 | 0.02 | 0.10 | 0.69 |
| 54.00 | 75.00 | 0.00 | 11.44 | 3.31 |
| 54.25 | 300.00 | 0.02 | 0.46 | 2.11 |
| 54.50 | 375.00 | 0.02 | 0.18 | 1.29 |
| 54.75 | 450.00 | 0.02 | 0.06 | 0.60 |
| 55.00 | 225.00 | 0.01 | 0.55 | 1.42 |
| 55.25 | 225.00 | 0.01 | 1.00 | 2.52 |
| 55.50 | 300.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 225.00 | 0.01 | 1.29 | 3.34 |
| 56.00 | 300.00 | 0.01 | 0.14 | 0.61 |
| 56.25 | 375.00 | 0.02 | 0.19 | 1.37 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 150.00 | 0.01 | 0.53 | 0.61 |
| 57.00 | 150.00 | 0.01 | 0.67 | 0.78 |
| 57.25 | 75.00 | 0.00 | 2.79 | 0.81 |
| 57.50 | 225.00 | 0.01 | 1.13 | 2.94 |
| 57.75 | 375.00 | 0.02 | 0.21 | 1.53 |
| 58.00 | 75.00 | 0.00 | 5.72 | 1.69 |
| 58.25 | 600.00 | 0.03 | 0.03 | 0.61 |
| 58.50 | 75.00 | 0.00 | 4.82 | 1.40 |
| 58.75 | 75.00 | 0.00 | 2.09 | 0.61 |
| 59.00 | 75.00 | 0.00 | 0.72 | 0.21 |
| 59.25 | 225.00 | 0.01 | 0.27 | 0.71 |
| 59.50 | 375.00 | 0.02 | 0.11 | 0.77 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.18 |
| 60.00 | 75.00 | 0.00 | 5.02 | 1.46 |
| 60.25 | 300.00 | 0.01 | 0.33 | 1.45 |
| 60.50 | 225.00 | 0.01 | 0.81 | 2.12 |
| 60.75 | 150.00 | 0.01 | 2.60 | 3.02 |
| 61.00 | 225.00 | 0.01 | 0.32 | 0.81 |
| 61.25 | 150.00 | 0.01 | 0.53 | 0.61 |
| 61.50 | 300.00 | 0.02 | 0.13 | 0.61 |
| 61.75 | 300.00 | 0.02 | 0.28 | 1.30 |
| 62.00 | 300.00 | 0.02 | 0.81 | 3.76 |
| 62.25 | 150.00 | 0.01 | 1.20 | 1.39 |
| 62.50 | 225.00 | 0.01 | 0.84 | 2.21 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 75.00 | 0.00 | 6.21 | 1.73 |
| 63.25 | 300.00 | 0.02 | 0.28 | 1.30 |
| 63.50 | 375.00 | 0.02 | 0.08 | 0.61 |
| 63.75 | 150.00 | 0.01 | 0.70 | 0.81 |
| 64.00 | 150.00 | 0.01 | 2.83 | 3.30 |
| 64.25 | 75.00 | 0.01 | 3.44 | 2.58 |
| 64.50 | 75.00 | 0.00 | 2.80 | 0.81 |
| 64.75 | 75.00 | 0.00 | 10.39 | 3.01 |
| 65.00 | 150.00 | 0.01 | 1.12 | 1.30 |
| 65.25 | 150.00 | 0.01 | 0.64 | 0.72 |
| 65.50 | 0.00 | 0.00 | 0.00 | 1.72 |
| 65.75 | 150.00 | 0.01 | 2.79 | 3.23 |
| 66.00 | 75.00 | 0.01 | 0.86 | 0.92 |
| 66.25 | 150.00 | 0.01 | 0.70 | 0.81 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.78 |
| 66.75 | 150.00 | 0.01 | 4.22 | 4.89 |
| 67.00 | 225.00 | 0.01 | 1.77 | 4.60 |
| 67.25 | 300.00 | 0.02 | 1.16 | 5.34 |
| 67.50 | 150.00 | 0.01 | 3.42 | 3.97 |
| 67.75 | 225.00 | 0.01 | 0.33 | 0.82 |
| 68.00 | 375.00 | 0.02 | 0.19 | 1.31 |
| 68.25 | 150.00 | 0.01 | 0.55 | 0.61 |
| 68.50 | 225.00 | 0.01 | 0.33 | 0.82 |
| 68.75 | 75.00 | 0.00 | 1.29 | 0.37 |
| 69.00 | 225.00 | 0.01 | 2.40 | 6.25 |
| 69.25 | 150.00 | 0.01 | 2.13 | 2.48 |
| 69.50 | 75.00 | 0.03 | 0.32 | 0.60 |
| 69.75 | 75.00 | 0.00 | 6.60 | 1.91 |
| 70.00 | 75.00 | 0.00 | 1.88 | 0.54 |
| 70.25 | 75.00 | 0.01 | 2.60 | 2.80 |
| 70.50 | 150.00 | 0.01 | 0.87 | 1.00 |
| 70.75 | 300.00 | 0.02 | 0.47 | 2.16 |
| 71.00 | 225.00 | 0.01 | 0.71 | 1.84 |
| 71.25 | 150.00 | 0.01 | 1.12 | 1.31 |
| 71.50 | 150.00 | 0.01 | 2.88 | 3.33 |
| 71.75 | 75.00 | 0.00 | 2.10 | 0.61 |
| 72.00 | 75.00 | 0.00 | 2.80 | 0.81 |



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# APPENDIX E:

## viii. 24 Hour, 10-Year Storm

## HYCROSS.OUT File

THE MAXIMUM DISCHARGE FROM CROSS SECTION 1 IS: 370.11 CFS AT TIME: 15.95 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 53.07 AF

NOTE: THE MAXIMUM DISCHARGE AT THIS CROSS SECTION INCLUDES THE CHANNEL DISCHARGE
THE HYDRAULIC VARIABLES IN THE TABLE BELOW ARE COMPUTED FOR THE FLOODPLAIN FLOW (DEPTH > TOL) ONLY
IF THE HYDRAULIC VARIABLES ARE ZERO IN THE TABLE BELOW, ALL THE DISCHARGE IS IN THE CHANNEL

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 1

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 16.55 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 9.22 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 7.10 |
| 12.25 | 0.00 | 0.00 | 0.00 | 8.59 |
| 12.50 | 0.00 | 0.00 | 0.00 | 9.93 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 63.12 |
| 13.25 | 0.00 | 0.00 | 0.00 | 63.60 |
| 13.50 | 0.00 | 0.00 | 0.00 | 22.48 |
| 13.75 | 0.00 | 0.00 | 0.00 | 25.19 |
| 14.00 | 75.00 | 0.09 | 1.12 | 150.22 |
| 14.25 | 150.00 | 0.16 | 1.17 | 27.64 |
| 14.50 | 150.00 | 0.16 | 1.12 | 69.08 |
| 14.75 | 150.00 | 0.21 | 1.42 | 160.87 |
| 15.00 | 150.00 | 0.23 | 1.41 | 88.85 |
| 15.25 | 150.00 | 0.22 | 1.23 | 41.21 |
| 15.50 | 150.00 | 0.24 | 1.22 | 223.69 |
| 15.75 | 150.00 | 0.24 | 1.17 | 294.22 |
| 16.00 | 150.00 | 0.23 | 1.15 | 165.01 |
| 16.25 | 150.00 | 0.24 | 1.26 | 144.19 |
| 16.50 | 150.00 | 0.25 | 1.42 | 67.79 |
| 16.75 | 150.00 | 0.20 | 1.18 | 95.28 |
| 17.00 | 150.00 | 0.16 | 1.18 | 39.60 |
| 17.25 | 150.00 | 0.15 | 1.17 | 26.37 |
| 17.50 | 150.00 | 0.15 | 0.61 | 117.77 |
| 17.75 | 150.00 | 0.15 | 0.88 | 19.08 |
| 18.00 | 150.00 | 0.12 | 0.68 | 39.63 |
| 18.25 | 75.00 | 0.08 | 1.94 | 100.77 |
| 18.50 | 150.00 | 0.12 | 0.54 | 9.97 |
| 18.75 | 150.00 | 0.12 | 0.41 | 47.98 |
| 19.00 | 150.00 | 0.12 | 0.47 | 10.18 |
| 19.25 | 150.00 | 0.13 | 0.48 | 9.20 |
| 19.50 | 150.00 | 0.12 | 0.45 | 7.84 |
| 19.75 | 75.00 | 0.07 | 1.37 | 109.43 |
| 20.00 | 150.00 | 0.12 | 0.31 | 68.34 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 150.00 | 0.12 | 0.49 | 104.59 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 150.00 | 0.12 | 0.29 | 5.20 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 75.00 | 0.00 | 0.00 | 92.20 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 150.00 | 0.12 | 0.42 | 46.91 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 150.00 | 0.11 | 0.45 | 92.22 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 11.04 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 150.00 | 0.11 | 0.45 | 52.93 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |



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| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 2 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 2

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 3 IS: 350.25 CFS AT TIME: 18.88 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 135.56 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 3



BSE Document Control Number: 7323HYD101

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 450.00 | 0.12 | 4.11 | 228.91 |
| 18.75 | 525.00 | 0.16 | 3.96 | 334.57 |
| 19.00 | 600.00 | 0.17 | 3.48 | 348.35 |
| 19.25 | 675.00 | 0.17 | 2.92 | 337.46 |
| 19.50 | 750.00 | 0.17 | 2.49 | 319.96 |
| 19.75 | 750.00 | 0.17 | 2.40 | 302.53 |
| 20.00 | 750.00 | 0.16 | 2.35 | 287.35 |
| 20.25 | 675.00 | 0.15 | 2.62 | 271.61 |
| 20.50 | 675.00 | 0.15 | 2.57 | 254.52 |
| 20.75 | 750.00 | 0.14 | 2.19 | 235.58 |
| 21.00 | 675.00 | 0.13 | 2.45 | 221.42 |
| 21.25 | 675.00 | 0.13 | 2.35 | 204.34 |
| 21.50 | 675.00 | 0.12 | 2.27 | 190.63 |
| 21.75 | 675.00 | 0.12 | 2.20 | 177.64 |
| 22.00 | 675.00 | 0.11 | 2.11 | 163.51 |
| 22.25 | 675.00 | 0.11 | 2.05 | 153.27 |
| 22.50 | 675.00 | 0.11 | 1.98 | 142.27 |
| 22.75 | 675.00 | 0.10 | 1.89 | 131.05 |
| 23.00 | 600.00 | 0.10 | 2.15 | 123.05 |
| 23.25 | 600.00 | 0.09 | 2.07 | 114.13 |
| 23.50 | 525.00 | 0.09 | 2.40 | 107.91 |
| 23.75 | 450.00 | 0.08 | 2.84 | 101.85 |
| 24.00 | 525.00 | 0.08 | 2.27 | 96.46 |
| 24.25 | 675.00 | 0.09 | 1.58 | 91.30 |
| 24.50 | 525.00 | 0.08 | 2.14 | 85.23 |
| 24.75 | 525.00 | 0.07 | 2.06 | 79.42 |
| 25.00 | 525.00 | 0.07 | 2.01 | 75.06 |
| 25.25 | 525.00 | 0.07 | 1.95 | 70.02 |
| 25.50 | 525.00 | 0.07 | 1.86 | 64.69 |
| 25.75 | 450.00 | 0.06 | 2.27 | 61.58 |
| 26.00 | 450.00 | 0.06 | 2.16 | 56.84 |
| 26.25 | 600.00 | 0.06 | 1.43 | 54.75 |
| 26.50 | 450.00 | 0.05 | 2.05 | 50.13 |
| 26.75 | 450.00 | 0.05 | 2.02 | 48.06 |
| 27.00 | 450.00 | 0.05 | 1.89 | 43.46 |
| 27.25 | 675.00 | 0.06 | 1.09 | 44.19 |
| 27.50 | 450.00 | 0.05 | 1.79 | 38.99 |
| 27.75 | 450.00 | 0.05 | 1.78 | 38.37 |
| 28.00 | 525.00 | 0.05 | 1.38 | 36.34 |
| 28.25 | 525.00 | 0.05 | 1.32 | 34.44 |
| 28.50 | 450.00 | 0.05 | 1.61 | 32.68 |
| 28.75 | 450.00 | 0.04 | 1.54 | 30.90 |
| 29.00 | 450.00 | 0.04 | 1.53 | 30.36 |
| 29.25 | 450.00 | 0.04 | 1.56 | 30.64 |
| 29.50 | 450.00 | 0.04 | 1.62 | 31.84 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 29.75 | 450.00 | 0.04 | 1.55 | 30.47 |
| 30.00 | 450.00 | 0.04 | 1.50 | 29.57 |
| 30.25 | 450.00 | 0.04 | 1.50 | 29.38 |
| 30.50 | 450.00 | 0.04 | 1.51 | 29.75 |
| 30.75 | 450.00 | 0.04 | 1.49 | 28.73 |
| 31.00 | 450.00 | 0.04 | 1.47 | 28.16 |
| 31.25 | 450.00 | 0.04 | 1.46 | 27.54 |
| 31.50 | 450.00 | 0.04 | 1.53 | 28.51 |
| 31.75 | 450.00 | 0.04 | 1.39 | 25.21 |
| 32.00 | 450.00 | 0.04 | 1.39 | 24.69 |
| 32.25 | 525.00 | 0.04 | 1.01 | 22.69 |
| 32.50 | 525.00 | 0.04 | 1.02 | 22.44 |
| 32.75 | 450.00 | 0.04 | 1.17 | 20.42 |
| 33.00 | 450.00 | 0.04 | 1.21 | 21.03 |
| 33.25 | 525.00 | 0.04 | 0.87 | 18.97 |
| 33.50 | 450.00 | 0.04 | 1.08 | 18.51 |
| 33.75 | 450.00 | 0.04 | 1.07 | 17.58 |
| 34.00 | 375.00 | 0.03 | 1.36 | 16.58 |
| 34.25 | 450.00 | 0.03 | 0.96 | 14.76 |
| 34.50 | 450.00 | 0.03 | 1.01 | 15.01 |
| 34.75 | 525.00 | 0.04 | 0.78 | 14.66 |
| 35.00 | 450.00 | 0.03 | 0.95 | 13.62 |
| 35.25 | 375.00 | 0.03 | 1.19 | 13.04 |
| 35.50 | 450.00 | 0.03 | 0.83 | 11.73 |
| 35.75 | 375.00 | 0.03 | 0.90 | 9.61 |
| 36.00 | 375.00 | 0.03 | 0.81 | 8.62 |
| 36.25 | 525.00 | 0.03 | 0.60 | 10.78 |
| 36.50 | 375.00 | 0.03 | 0.91 | 9.35 |
| 36.75 | 300.00 | 0.02 | 1.27 | 8.90 |
| 37.00 | 300.00 | 0.02 | 1.17 | 7.66 |
| 37.25 | 450.00 | 0.03 | 0.55 | 6.62 |
| 37.50 | 375.00 | 0.02 | 0.60 | 5.28 |
| 37.75 | 450.00 | 0.03 | 0.44 | 5.13 |
| 38.00 | 300.00 | 0.02 | 0.68 | 3.98 |
| 38.25 | 375.00 | 0.02 | 0.87 | 6.97 |
| 38.50 | 300.00 | 0.02 | 0.83 | 4.66 |
| 38.75 | 375.00 | 0.02 | 0.56 | 4.43 |
| 39.00 | 300.00 | 0.02 | 0.97 | 5.04 |
| 39.25 | 225.00 | 0.01 | 2.07 | 5.75 |
| 39.50 | 300.00 | 0.01 | 1.01 | 4.51 |
| 39.75 | 300.00 | 0.01 | 0.52 | 2.33 |
| 40.00 | 150.00 | 0.01 | 3.88 | 4.49 |
| 40.25 | 225.00 | 0.01 | 1.21 | 3.15 |
| 40.50 | 75.00 | 0.00 | 3.77 | 1.09 |
| 40.75 | 225.00 | 0.01 | 0.89 | 2.32 |
| 41.00 | 300.00 | 0.02 | 0.80 | 3.69 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.79 |
| 41.50 | 0.00 | 0.00 | 0.00 | 1.67 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 225.00 | 0.01 | 0.14 | 0.36 |
| 42.25 | 150.00 | 0.01 | 2.55 | 3.19 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.80 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 75.00 | 0.00 | 3.19 | 0.92 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 4 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 4

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 5 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 5

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 6 IS: 2680.20 CFS AT TIME: 16.39 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 1411.67 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 6

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 525.00 | 0.03 | 2.81 | 40.24 |
| 12.00 | 750.00 | 0.04 | 1.97 | 52.52 |
| 12.25 | 1050.00 | 0.05 | 1.33 | 64.81 |
| 12.50 | 1275.00 | 0.08 | 1.46 | 144.21 |
| 12.75 | 1800.00 | 0.14 | 1.16 | 283.27 |
| 13.00 | 2325.00 | 0.20 | 1.07 | 506.64 |
| 13.25 | 2475.00 | 0.24 | 1.10 | 647.16 |
| 13.50 | 2550.00 | 0.27 | 1.14 | 773.98 |
| 13.75 | 2550.00 | 0.30 | 1.32 | 1023.47 |
| 14.00 | 2550.00 | 0.34 | 1.44 | 1234.53 |
| 14.25 | 2625.00 | 0.35 | 1.49 | 1380.94 |
| 14.50 | 2550.00 | 0.38 | 1.59 | 1518.91 |
| 14.75 | 2625.00 | 0.39 | 1.63 | 1689.98 |
| 15.00 | 2550.00 | 0.42 | 1.76 | 1899.83 |
| 15.25 | 2700.00 | 0.44 | 1.76 | 2097.85 |
| 15.50 | 2700.00 | 0.45 | 1.87 | 2280.42 |
| 15.75 | 2625.00 | 0.49 | 1.93 | 2458.08 |
| 16.00 | 2625.00 | 0.50 | 1.98 | 2593.26 |
| 16.25 | 2625.00 | 0.51 | 2.01 | 2667.36 |
| 16.50 | 2625.00 | 0.50 | 2.02 | 2668.41 |
| 16.75 | 2700.00 | 0.49 | 1.93 | 2582.36 |
| 17.00 | 2625.00 | 0.48 | 1.94 | 2436.49 |
| 17.25 | 2625.00 | 0.46 | 1.88 | 2270.50 |
| 17.50 | 2625.00 | 0.44 | 1.82 | 2091.46 |
| 17.75 | 2625.00 | 0.42 | 1.75 | 1915.92 |
| 18.00 | 2550.00 | 0.40 | 1.74 | 1762.31 |
| 18.25 | 2550.00 | 0.38 | 1.68 | 1635.11 |
| 18.50 | 2550.00 | 0.36 | 1.63 | 1513.97 |
| 18.75 | 2550.00 | 0.35 | 1.58 | 1399.57 |


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| | | | | |
|---|---|---|---|---|
| 19.00 | 2550.00 | 0.33 | 1.52 | 1290.77 |
| 19.25 | 2550.00 | 0.32 | 1.47 | 1186.95 |
| 19.50 | 2550.00 | 0.30 | 1.42 | 1095.26 |
| 19.75 | 2550.00 | 0.29 | 1.37 | 1016.30 |
| 20.00 | 2550.00 | 0.28 | 1.33 | 945.00 |
| 20.25 | 2475.00 | 0.27 | 1.32 | 879.99 |
| 20.50 | 2475.00 | 0.26 | 1.29 | 821.34 |
| 20.75 | 2475.00 | 0.25 | 1.25 | 770.50 |
| 21.00 | 2550.00 | 0.24 | 1.19 | 721.85 |
| 21.25 | 2475.00 | 0.23 | 1.19 | 679.48 |
| 21.50 | 2475.00 | 0.22 | 1.16 | 640.83 |
| 21.75 | 2475.00 | 0.22 | 1.14 | 608.51 |
| 22.00 | 2475.00 | 0.21 | 1.11 | 577.57 |
| 22.25 | 2475.00 | 0.21 | 1.09 | 552.44 |
| 22.50 | 2475.00 | 0.20 | 1.07 | 531.88 |
| 22.75 | 2475.00 | 0.20 | 1.05 | 509.18 |
| 23.00 | 2475.00 | 0.19 | 1.03 | 487.32 |
| 23.25 | 2475.00 | 0.19 | 1.01 | 473.27 |
| 23.50 | 2475.00 | 0.19 | 1.01 | 468.60 |
| 23.75 | 2475.00 | 0.19 | 1.01 | 470.04 |
| 24.00 | 2475.00 | 0.19 | 1.01 | 471.49 |
| 24.25 | 2475.00 | 0.19 | 1.01 | 475.47 |
| 24.50 | 2475.00 | 0.19 | 1.02 | 482.50 |
| 24.75 | 2475.00 | 0.19 | 1.02 | 483.30 |
| 25.00 | 2475.00 | 0.19 | 1.01 | 470.58 |
| 25.25 | 2475.00 | 0.18 | 1.00 | 446.13 |
| 25.50 | 2550.00 | 0.17 | 0.95 | 418.97 |
| 25.75 | 2475.00 | 0.17 | 0.95 | 392.30 |
| 26.00 | 2475.00 | 0.16 | 0.92 | 371.79 |
| 26.25 | 2475.00 | 0.16 | 0.90 | 349.63 |
| 26.50 | 2475.00 | 0.15 | 0.88 | 328.96 |
| 26.75 | 2475.00 | 0.15 | 0.86 | 310.90 |
| 27.00 | 2475.00 | 0.14 | 0.83 | 289.73 |
| 27.25 | 2325.00 | 0.13 | 0.88 | 273.74 |
| 27.50 | 2325.00 | 0.13 | 0.85 | 256.55 |
| 27.75 | 2475.00 | 0.13 | 0.76 | 240.27 |
| 28.00 | 2475.00 | 0.12 | 0.74 | 226.30 |
| 28.25 | 2400.00 | 0.12 | 0.76 | 214.05 |
| 28.50 | 2400.00 | 0.11 | 0.73 | 200.54 |
| 28.75 | 2325.00 | 0.11 | 0.75 | 189.81 |
| 29.00 | 2325.00 | 0.11 | 0.73 | 177.77 |
| 29.25 | 2250.00 | 0.10 | 0.75 | 170.59 |
| 29.50 | 2325.00 | 0.10 | 0.69 | 159.37 |
| 29.75 | 2325.00 | 0.10 | 0.67 | 151.36 |
| 30.00 | 2100.00 | 0.09 | 0.75 | 144.41 |
| 30.25 | 2250.00 | 0.09 | 0.67 | 137.81 |
| 30.50 | 2325.00 | 0.09 | 0.62 | 128.67 |
| 30.75 | 2025.00 | 0.08 | 0.73 | 121.44 |
| 31.00 | 2100.00 | 0.08 | 0.67 | 114.40 |
| 31.25 | 2100.00 | 0.08 | 0.65 | 106.01 |
| 31.50 | 2025.00 | 0.07 | 0.68 | 101.85 |
| 31.75 | 2025.00 | 0.07 | 0.64 | 93.88 |
| 32.00 | 2100.00 | 0.07 | 0.60 | 89.29 |
| 32.25 | 1800.00 | 0.06 | 0.71 | 82.52 |
| 32.50 | 2100.00 | 0.07 | 0.55 | 77.67 |
| 32.75 | 1950.00 | 0.06 | 0.59 | 70.65 |
| 33.00 | 1950.00 | 0.06 | 0.58 | 67.90 |
| 33.25 | 1950.00 | 0.06 | 0.55 | 62.36 |
| 33.50 | 1875.00 | 0.05 | 0.57 | 58.49 |
| 33.75 | 1800.00 | 0.05 | 0.59 | 55.61 |
| 34.00 | 1725.00 | 0.05 | 0.58 | 50.29 |
| 34.25 | 1650.00 | 0.05 | 0.63 | 49.80 |
| 34.50 | 1800.00 | 0.05 | 0.53 | 47.20 |
| 34.75 | 1725.00 | 0.05 | 0.54 | 43.88 |
| 35.00 | 1800.00 | 0.05 | 0.46 | 39.02 |
| 35.25 | 1650.00 | 0.04 | 0.48 | 34.72 |
| 35.50 | 1425.00 | 0.04 | 0.59 | 32.85 |
| 35.75 | 1500.00 | 0.04 | 0.48 | 28.03 |
| 36.00 | 1575.00 | 0.04 | 0.47 | 28.71 |
| 36.25 | 1650.00 | 0.04 | 0.42 | 27.04 |
| 36.50 | 1350.00 | 0.03 | 0.61 | 27.76 |
| 36.75 | 1275.00 | 0.03 | 0.55 | 22.76 |
| 37.00 | 1425.00 | 0.03 | 0.44 | 21.46 |
| 37.25 | 1350.00 | 0.03 | 0.45 | 19.56 |
| 37.50 | 1425.00 | 0.03 | 0.41 | 19.31 |
| 37.75 | 1500.00 | 0.03 | 0.37 | 18.98 |
| 38.00 | 1350.00 | 0.03 | 0.41 | 17.12 |
| 38.25 | 975.00 | 0.02 | 0.72 | 16.65 |
| 38.50 | 1200.00 | 0.03 | 0.42 | 13.67 |
| 38.75 | 1125.00 | 0.03 | 0.51 | 14.43 |
| 39.00 | 1050.00 | 0.02 | 0.58 | 14.07 |
| 39.25 | 1050.00 | 0.02 | 0.48 | 11.27 |
| 39.50 | 825.00 | 0.02 | 0.79 | 12.38 |
| 39.75 | 975.00 | 0.02 | 0.49 | 10.04 |
| 40.00 | 825.00 | 0.02 | 0.66 | 9.99 |
| 40.25 | 975.00 | 0.02 | 0.46 | 9.13 |
| 40.50 | 825.00 | 0.02 | 0.79 | 11.42 |
| 40.75 | 675.00 | 0.01 | 0.83 | 8.37 |
| 41.00 | 825.00 | 0.02 | 0.57 | 8.19 |
| 41.25 | 825.00 | 0.02 | 0.67 | 9.51 |
| 41.50 | 900.00 | 0.02 | 0.52 | 8.58 |
| 41.75 | 825.00 | 0.02 | 0.56 | 7.88 |
| 42.00 | 900.00 | 0.02 | 0.43 | 6.97 |
| 42.25 | 825.00 | 0.02 | 0.61 | 8.51 |
| 42.50 | 750.00 | 0.02 | 0.60 | 6.99 |
| 42.75 | 900.00 | 0.02 | 0.32 | 5.22 |
| 43.00 | 825.00 | 0.02 | 0.41 | 5.58 |
| 43.25 | 750.00 | 0.02 | 0.66 | 7.47 |
| 43.50 | 525.00 | 0.01 | 0.76 | 4.49 |
| 43.75 | 675.00 | 0.01 | 0.81 | 7.38 |
| 44.00 | 675.00 | 0.01 | 0.39 | 3.48 |
| 44.25 | 600.00 | 0.01 | 0.86 | 6.13 |
| 44.50 | 525.00 | 0.01 | 0.88 | 4.86 |
| 44.75 | 450.00 | 0.01 | 0.76 | 3.07 |
| 45.00 | 675.00 | 0.01 | 0.28 | 2.32 |
| 45.25 | 525.00 | 0.01 | 1.17 | 6.05 |
| 45.50 | 375.00 | 0.01 | 1.31 | 3.55 |
| 45.75 | 825.00 | 0.01 | 0.27 | 3.24 |
| 46.00 | 375.00 | 0.01 | 1.80 | 4.64 |
| 46.25 | 450.00 | 0.01 | 0.81 | 2.89 |
| 46.50 | 450.00 | 0.01 | 0.49 | 1.73 |
| 46.75 | 525.00 | 0.01 | 0.56 | 2.66 |
| 47.00 | 375.00 | 0.01 | 0.81 | 1.97 |
| 47.25 | 375.00 | 0.01 | 0.53 | 1.27 |
| 47.50 | 525.00 | 0.01 | 0.44 | 2.02 |
| 47.75 | 375.00 | 0.01 | 0.88 | 2.09 |
| 48.00 | 300.00 | 0.01 | 1.36 | 2.04 |
| 48.25 | 450.00 | 0.01 | 0.86 | 2.86 |
| 48.50 | 225.00 | 0.00 | 3.12 | 2.58 |
| 48.75 | 300.00 | 0.00 | 0.47 | 0.69 |
| 49.00 | 300.00 | 0.00 | 0.26 | 0.38 |
| 49.25 | 300.00 | 0.00 | 0.16 | 0.24 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 49.50 | 150.00 | 0.00 | 1.46 | 0.78 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.68 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 75.00 | 0.00 | 1.62 | 0.22 |
| 50.50 | 150.00 | 0.00 | 1.82 | 0.68 |
| 50.75 | 0.00 | 0.00 | 0.00 | 1.11 |
| 51.00 | 0.00 | 0.00 | 0.00 | 1.13 |
| 51.25 | 75.00 | 0.00 | 3.23 | 0.43 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 75.00 | 0.00 | 2.85 | 0.38 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 7 IS: 22.08 CFS AT TIME: 15.69 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 5.23 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 7

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 75.00 | 0.01 | 0.75 | 0.47 |
| 12.75 | 150.00 | 0.01 | 0.24 | 0.52 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 150.00 | 0.01 | 0.70 | 1.42 |
| 13.50 | 375.00 | 0.04 | 0.18 | 2.90 |
| 13.75 | 300.00 | 0.05 | 0.57 | 7.80 |
| 14.00 | 600.00 | 0.07 | 0.15 | 6.00 |
| 14.25 | 450.00 | 0.06 | 0.39 | 10.18 |
| 14.50 | 600.00 | 0.07 | 0.25 | 11.18 |
| 14.75 | 525.00 | 0.07 | 0.39 | 14.33 |
| 15.00 | 525.00 | 0.07 | 0.43 | 15.69 |
| 15.25 | 525.00 | 0.07 | 0.41 | 14.62 |
| 15.50 | 600.00 | 0.07 | 0.36 | 15.94 |
| 15.75 | 525.00 | 0.07 | 0.49 | 17.50 |
| 16.00 | 450.00 | 0.06 | 0.62 | 16.84 |
| 16.25 | 300.00 | 0.09 | 0.62 | 16.00 |
| 16.50 | 375.00 | 0.10 | 0.35 | 12.96 |
| 16.75 | 300.00 | 0.04 | 0.96 | 12.45 |
| 17.00 | 300.00 | 0.07 | 0.38 | 8.54 |
| 17.25 | 225.00 | 0.06 | 0.64 | 8.47 |
| 17.50 | 225.00 | 0.06 | 0.40 | 5.16 |
| 17.75 | 300.00 | 0.07 | 0.27 | 5.63 |
| 18.00 | 225.00 | 0.06 | 0.39 | 5.59 |
| 18.25 | 225.00 | 0.05 | 0.30 | 3.38 |
| 18.50 | 150.00 | 0.04 | 0.76 | 4.19 |
| 18.75 | 225.00 | 0.04 | 0.26 | 2.50 |
| 19.00 | 225.00 | 0.05 | 0.23 | 2.36 |
| 19.25 | 75.00 | 0.02 | 1.71 | 2.12 |
| 19.50 | 150.00 | 0.03 | 0.24 | 1.09 |
| 19.75 | 225.00 | 0.02 | 0.58 | 2.64 |
| 20.00 | 75.00 | 0.01 | 1.45 | 1.56 |
| 20.25 | 75.00 | 0.01 | 2.37 | 2.54 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.84 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.98 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 8 IS: 359.31 CFS AT TIME: 17.47 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 151.69 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 8

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 675.00 | 0.15 | 1.90 | 193.91 |
| 16.50 | 825.00 | 0.16 | 1.93 | 262.15 |
| 16.75 | 900.00 | 0.18 | 1.84 | 294.08 |
| 17.00 | 825.00 | 0.18 | 2.11 | 312.71 |
| 17.25 | 900.00 | 0.19 | 1.96 | 340.35 |
| 17.50 | 900.00 | 0.20 | 2.01 | 357.59 |
| 17.75 | 900.00 | 0.20 | 1.99 | 350.89 |
| 18.00 | 900.00 | 0.19 | 1.95 | 334.93 |
| 18.25 | 900.00 | 0.18 | 1.89 | 312.69 |
| 18.50 | 900.00 | 0.18 | 1.82 | 289.05 |
| 18.75 | 900.00 | 0.17 | 1.74 | 269.90 |
| 19.00 | 900.00 | 0.17 | 1.69 | 253.66 |
| 19.25 | 900.00 | 0.16 | 1.65 | 239.43 |
| 19.50 | 900.00 | 0.16 | 1.58 | 223.90 |
| 19.75 | 825.00 | 0.15 | 1.72 | 210.19 |
| 20.00 | 900.00 | 0.15 | 1.49 | 196.48 |
| 20.25 | 825.00 | 0.14 | 1.60 | 180.73 |
| 20.50 | 825.00 | 0.13 | 1.56 | 169.56 |
| 20.75 | 825.00 | 0.13 | 1.49 | 156.28 |
| 21.00 | 825.00 | 0.12 | 1.44 | 146.26 |
| 21.25 | 825.00 | 0.12 | 1.37 | 133.66 |
| 21.50 | 900.00 | 0.12 | 1.17 | 124.41 |
| 21.75 | 825.00 | 0.11 | 1.29 | 117.96 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 22.00 | 825.00 | 0.11 | 1.24 | 110.15 |
| 22.25 | 825.00 | 0.10 | 1.13 | 98.26 |
| 22.50 | 825.00 | 0.10 | 1.12 | 94.39 |
| 22.75 | 825.00 | 0.10 | 1.05 | 85.01 |
| 23.00 | 825.00 | 0.10 | 1.01 | 81.20 |
| 23.25 | 975.00 | 0.10 | 0.75 | 75.40 |
| 23.50 | 825.00 | 0.09 | 0.95 | 72.17 |
| 23.75 | 750.00 | 0.09 | 1.04 | 66.19 |
| 24.00 | 825.00 | 0.09 | 0.89 | 64.08 |
| 24.25 | 825.00 | 0.09 | 0.79 | 55.48 |
| 24.50 | 825.00 | 0.08 | 0.76 | 52.82 |
| 24.75 | 750.00 | 0.08 | 0.90 | 51.66 |
| 25.00 | 825.00 | 0.08 | 0.75 | 49.34 |
| 25.25 | 825.00 | 0.08 | 0.73 | 47.03 |
| 25.50 | 825.00 | 0.08 | 0.73 | 46.11 |
| 25.75 | 825.00 | 0.08 | 0.63 | 39.32 |
| 26.00 | 825.00 | 0.07 | 0.60 | 36.79 |
| 26.25 | 825.00 | 0.07 | 0.61 | 36.43 |
| 26.50 | 750.00 | 0.07 | 0.70 | 35.14 |
| 26.75 | 825.00 | 0.07 | 0.58 | 33.93 |
| 27.00 | 750.00 | 0.07 | 0.76 | 40.14 |
| 27.25 | 825.00 | 0.08 | 0.65 | 40.31 |
| 27.50 | 750.00 | 0.07 | 0.87 | 47.35 |
| 27.75 | 750.00 | 0.07 | 0.83 | 45.21 |
| 28.00 | 825.00 | 0.08 | 0.64 | 40.27 |
| 28.25 | 750.00 | 0.07 | 0.71 | 37.56 |
| 28.50 | 825.00 | 0.07 | 0.61 | 36.63 |
| 28.75 | 825.00 | 0.07 | 0.53 | 30.38 |
| 29.00 | 825.00 | 0.07 | 0.55 | 30.68 |
| 29.25 | 825.00 | 0.06 | 0.53 | 28.53 |
| 29.50 | 825.00 | 0.06 | 0.50 | 25.71 |
| 29.75 | 825.00 | 0.06 | 0.46 | 23.52 |
| 30.00 | 825.00 | 0.06 | 0.44 | 22.14 |
| 30.25 | 750.00 | 0.05 | 0.57 | 23.23 |
| 30.50 | 675.00 | 0.05 | 0.54 | 17.56 |
| 30.75 | 750.00 | 0.05 | 0.48 | 17.90 |
| 31.00 | 675.00 | 0.04 | 0.53 | 16.16 |
| 31.25 | 600.00 | 0.04 | 0.63 | 15.19 |
| 31.50 | 675.00 | 0.04 | 0.43 | 12.69 |
| 31.75 | 675.00 | 0.04 | 0.42 | 12.02 |
| 32.00 | 750.00 | 0.05 | 0.30 | 10.28 |
| 32.25 | 600.00 | 0.04 | 0.50 | 11.07 |
| 32.50 | 675.00 | 0.04 | 0.42 | 11.41 |
| 32.75 | 525.00 | 0.03 | 0.54 | 9.01 |
| 33.00 | 225.00 | 0.02 | 2.60 | 11.31 |
| 33.25 | 675.00 | 0.04 | 0.30 | 7.95 |
| 33.50 | 300.00 | 0.02 | 0.65 | 4.60 |
| 33.75 | 375.00 | 0.02 | 0.15 | 1.32 |
| 34.00 | 525.00 | 0.03 | 0.20 | 3.11 |
| 34.25 | 75.00 | 0.00 | 3.37 | 1.15 |
| 34.50 | 0.00 | 0.00 | 0.00 | 4.52 |
| 34.75 | 150.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 75.00 | 0.01 | 5.36 | 2.38 |
| 35.25 | 225.00 | 0.02 | 0.79 | 3.12 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 2.09 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 375.00 | 0.02 | 0.71 | 5.53 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 75.00 | 0.00 | 2.72 | 0.85 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 150.00 | 0.01 | 2.38 | 3.41 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 225.00 | 0.01 | 1.11 | 3.27 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 9 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 9

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 10 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 10

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 11 IS: 99.18 CFS AT TIME: 17.57 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 57.91 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 11

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 375.00 | 0.11 | 1.21 | 50.32 |
| 17.00 | 675.00 | 0.13 | 1.03 | 90.98 |
| 17.25 | 675.00 | 0.13 | 1.06 | 94.54 |
| 17.50 | 675.00 | 0.13 | 1.05 | 94.18 |
| 17.75 | 675.00 | 0.13 | 1.07 | 93.51 |
| 18.00 | 675.00 | 0.13 | 0.99 | 84.26 |
| 18.25 | 675.00 | 0.12 | 0.93 | 76.58 |
| 18.50 | 600.00 | 0.12 | 0.98 | 69.04 |
| 18.75 | 600.00 | 0.11 | 0.88 | 58.81 |
| 19.00 | 675.00 | 0.11 | 0.73 | 55.65 |
| 19.25 | 600.00 | 0.12 | 0.94 | 64.98 |
| 19.50 | 675.00 | 0.12 | 0.89 | 71.43 |
| 19.75 | 600.00 | 0.12 | 0.95 | 66.28 |
| 20.00 | 675.00 | 0.11 | 0.81 | 61.70 |
| 20.25 | 600.00 | 0.11 | 0.87 | 57.69 |
| 20.50 | 675.00 | 0.11 | 0.69 | 49.78 |
| 20.75 | 600.00 | 0.10 | 0.76 | 47.48 |
| 21.00 | 675.00 | 0.10 | 0.63 | 42.85 |
| 21.25 | 675.00 | 0.10 | 0.59 | 38.91 |
| 21.50 | 600.00 | 0.09 | 0.62 | 34.74 |
| 21.75 | 600.00 | 0.09 | 0.61 | 33.16 |
| 22.00 | 675.00 | 0.09 | 0.50 | 30.09 |
| 22.25 | 675.00 | 0.09 | 0.49 | 28.90 |
| 22.50 | 600.00 | 0.08 | 0.53 | 26.14 |
| 22.75 | 600.00 | 0.08 | 0.49 | 23.12 |
| 23.00 | 600.00 | 0.08 | 0.44 | 21.28 |
| 23.25 | 450.00 | 0.07 | 0.60 | 19.79 |
| 23.50 | 525.00 | 0.07 | 0.50 | 19.12 |
| 23.75 | 675.00 | 0.08 | 0.35 | 17.95 |
| 24.00 | 600.00 | 0.07 | 0.39 | 17.22 |
| 24.25 | 525.00 | 0.07 | 0.47 | 16.79 |
| 24.50 | 450.00 | 0.06 | 0.46 | 13.03 |
| 24.75 | 600.00 | 0.07 | 0.26 | 10.93 |
| 25.00 | 450.00 | 0.06 | 0.47 | 13.03 |
| 25.25 | 600.00 | 0.06 | 0.23 | 8.80 |
| 25.50 | 525.00 | 0.06 | 0.33 | 11.19 |
| 25.75 | 450.00 | 0.06 | 0.40 | 10.37 |
| 26.00 | 525.00 | 0.06 | 0.34 | 11.45 |
| 26.25 | 375.00 | 0.06 | 0.31 | 6.45 |
| 26.50 | 525.00 | 0.06 | 0.31 | 9.63 |
| 26.75 | 375.00 | 0.06 | 0.50 | 10.36 |
| 27.00 | 375.00 | 0.05 | 0.44 | 8.78 |
| 27.25 | 600.00 | 0.06 | 0.28 | 10.52 |
| 27.50 | 525.00 | 0.06 | 0.31 | 10.27 |
| 27.75 | 450.00 | 0.06 | 0.32 | 8.62 |
| 28.00 | 450.00 | 0.06 | 0.48 | 13.50 |
| 28.25 | 375.00 | 0.06 | 0.65 | 13.75 |
| 28.50 | 450.00 | 0.06 | 0.46 | 12.99 |
| 28.75 | 450.00 | 0.06 | 0.41 | 11.15 |
| 29.00 | 375.00 | 0.06 | 0.34 | 7.91 |
| 29.25 | 375.00 | 0.05 | 0.53 | 10.99 |
| 29.50 | 450.00 | 0.06 | 0.24 | 6.57 |
| 29.75 | 450.00 | 0.06 | 0.34 | 9.45 |
| 30.00 | 450.00 | 0.05 | 0.36 | 8.96 |
| 30.25 | 600.00 | 0.06 | 0.18 | 7.11 |
| 30.50 | 375.00 | 0.05 | 0.48 | 9.44 |
| 30.75 | 300.00 | 0.06 | 0.35 | 5.93 |
| 31.00 | 450.00 | 0.05 | 0.30 | 7.25 |
| 31.25 | 375.00 | 0.06 | 0.17 | 3.53 |
| 31.50 | 450.00 | 0.05 | 0.20 | 4.87 |
| 31.75 | 375.00 | 0.05 | 0.30 | 5.80 |
| 32.00 | 375.00 | 0.05 | 0.36 | 6.66 |
| 32.25 | 225.00 | 0.05 | 0.45 | 4.65 |
| 32.50 | 375.00 | 0.05 | 0.25 | 4.61 |
| 32.75 | 450.00 | 0.05 | 0.23 | 5.60 |
| 33.00 | 375.00 | 0.05 | 0.41 | 6.90 |
| 33.25 | 300.00 | 0.04 | 0.35 | 4.75 |
| 33.50 | 225.00 | 0.05 | 0.46 | 4.78 |
| 33.75 | 450.00 | 0.05 | 0.24 | 5.73 |
| 34.00 | 225.00 | 0.05 | 0.64 | 6.67 |
| 34.25 | 375.00 | 0.05 | 0.25 | 4.77 |
| 34.50 | 450.00 | 0.05 | 0.24 | 5.46 |
| 34.75 | 600.00 | 0.06 | 0.21 | 7.24 |
| 35.00 | 225.00 | 0.05 | 0.45 | 4.70 |
| 35.25 | 300.00 | 0.04 | 0.37 | 4.80 |
| 35.50 | 450.00 | 0.06 | 0.23 | 5.93 |
| 35.75 | 300.00 | 0.05 | 0.25 | 3.79 |
| 36.00 | 300.00 | 0.05 | 0.45 | 6.71 |
| 36.25 | 375.00 | 0.05 | 0.45 | 8.39 |
| 36.50 | 375.00 | 0.05 | 0.37 | 7.36 |
| 36.75 | 375.00 | 0.05 | 0.37 | 7.41 |
| 37.00 | 375.00 | 0.05 | 0.22 | 3.84 |
| 37.25 | 525.00 | 0.06 | 0.27 | 7.73 |
| 37.50 | 525.00 | 0.06 | 0.13 | 3.84 |
| 37.75 | 450.00 | 0.05 | 0.33 | 7.46 |
| 38.00 | 450.00 | 0.05 | 0.32 | 7.74 |
| 38.25 | 225.00 | 0.05 | 0.55 | 5.83 |
| 38.50 | 375.00 | 0.05 | 0.27 | 4.89 |
| 38.75 | 375.00 | 0.05 | 0.39 | 7.33 |
| 39.00 | 300.00 | 0.05 | 0.32 | 4.94 |
| 39.25 | 600.00 | 0.06 | 0.11 | 3.88 |
| 39.50 | 300.00 | 0.05 | 0.32 | 4.71 |
| 39.75 | 450.00 | 0.05 | 0.26 | 6.08 |
| 40.00 | 375.00 | 0.05 | 0.30 | 6.09 |
| 40.25 | 300.00 | 0.05 | 0.33 | 5.20 |
| 40.50 | 225.00 | 0.05 | 0.66 | 7.08 |
| 40.75 | 450.00 | 0.05 | 0.31 | 7.51 |
| 41.00 | 300.00 | 0.04 | 0.54 | 7.12 |
| 41.25 | 375.00 | 0.05 | 0.45 | 8.51 |
| 41.50 | 225.00 | 0.05 | 0.56 | 6.04 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 41.75 | 450.00 | 0.06 | 0.16 | 3.97 |
| 42.00 | 300.00 | 0.05 | 0.32 | 4.99 |
| 42.25 | 375.00 | 0.05 | 0.27 | 4.99 |
| 42.50 | 450.00 | 0.05 | 0.25 | 5.99 |
| 42.75 | 450.00 | 0.05 | 0.25 | 6.00 |
| 43.00 | 225.00 | 0.05 | 0.56 | 6.04 |
| 43.25 | 375.00 | 0.05 | 0.33 | 6.14 |
| 43.50 | 525.00 | 0.06 | 0.17 | 4.91 |
| 43.75 | 525.00 | 0.05 | 0.18 | 5.01 |
| 44.00 | 300.00 | 0.05 | 0.62 | 8.92 |
| 44.25 | 600.00 | 0.06 | 0.17 | 5.97 |
| 44.50 | 375.00 | 0.05 | 0.27 | 5.04 |
| 44.75 | 450.00 | 0.05 | 0.21 | 4.95 |
| 45.00 | 375.00 | 0.05 | 0.50 | 8.72 |
| 45.25 | 225.00 | 0.05 | 0.66 | 7.17 |
| 45.50 | 525.00 | 0.06 | 0.18 | 5.19 |
| 45.75 | 375.00 | 0.05 | 0.24 | 4.94 |
| 46.00 | 300.00 | 0.05 | 0.41 | 6.11 |
| 46.25 | 225.00 | 0.05 | 0.48 | 5.19 |
| 46.50 | 450.00 | 0.05 | 0.22 | 5.08 |
| 46.75 | 300.00 | 0.05 | 0.77 | 10.63 |
| 47.00 | 225.00 | 0.05 | 0.47 | 5.06 |
| 47.25 | 300.00 | 0.05 | 0.41 | 6.54 |
| 47.50 | 450.00 | 0.05 | 0.21 | 4.87 |
| 47.75 | 225.00 | 0.05 | 0.47 | 5.11 |
| 48.00 | 225.00 | 0.05 | 0.47 | 5.06 |
| 48.25 | 225.00 | 0.05 | 0.70 | 7.62 |
| 48.50 | 525.00 | 0.06 | 0.16 | 4.95 |
| 48.75 | 525.00 | 0.06 | 0.23 | 7.37 |
| 49.00 | 375.00 | 0.05 | 0.50 | 10.29 |
| 49.25 | 450.00 | 0.05 | 0.26 | 6.17 |
| 49.50 | 300.00 | 0.05 | 0.27 | 4.04 |
| 49.75 | 375.00 | 0.05 | 0.34 | 6.97 |
| 50.00 | 375.00 | 0.05 | 0.38 | 7.18 |
| 50.25 | 300.00 | 0.05 | 0.41 | 6.20 |
| 50.50 | 300.00 | 0.05 | 0.62 | 8.66 |
| 50.75 | 225.00 | 0.05 | 0.47 | 5.05 |
| 51.00 | 300.00 | 0.05 | 0.36 | 5.45 |
| 51.25 | 450.00 | 0.05 | 0.16 | 3.97 |
| 51.50 | 450.00 | 0.05 | 0.30 | 7.08 |
| 51.75 | 300.00 | 0.05 | 0.49 | 7.72 |
| 52.00 | 300.00 | 0.05 | 0.61 | 9.58 |
| 52.25 | 375.00 | 0.05 | 0.25 | 5.10 |
| 52.50 | 225.00 | 0.05 | 0.56 | 6.06 |
| 52.75 | 375.00 | 0.05 | 0.45 | 8.14 |
| 53.00 | 375.00 | 0.05 | 0.33 | 6.71 |
| 53.25 | 450.00 | 0.05 | 0.22 | 5.06 |
| 53.50 | 375.00 | 0.05 | 0.32 | 6.09 |
| 53.75 | 375.00 | 0.05 | 0.31 | 6.10 |
| 54.00 | 450.00 | 0.05 | 0.26 | 6.07 |
| 54.25 | 450.00 | 0.05 | 0.35 | 8.50 |
| 54.50 | 450.00 | 0.06 | 0.31 | 7.94 |
| 54.75 | 225.00 | 0.05 | 0.46 | 5.02 |
| 55.00 | 375.00 | 0.05 | 0.45 | 8.56 |
| 55.25 | 600.00 | 0.06 | 0.11 | 4.05 |
| 55.50 | 450.00 | 0.05 | 0.31 | 7.20 |
| 55.75 | 300.00 | 0.05 | 0.37 | 5.35 |
| 56.00 | 450.00 | 0.05 | 0.27 | 6.15 |
| 56.25 | 300.00 | 0.05 | 0.49 | 7.72 |
| 56.50 | 525.00 | 0.06 | 0.20 | 5.89 |
| 56.75 | 525.00 | 0.06 | 0.21 | 6.08 |
| 57.00 | 450.00 | 0.05 | 0.21 | 5.06 |
| 57.25 | 300.00 | 0.05 | 0.44 | 6.09 |
| 57.50 | 225.00 | 0.05 | 0.72 | 7.85 |
| 57.75 | 225.00 | 0.05 | 0.55 | 5.97 |
| 58.00 | 375.00 | 0.05 | 0.39 | 7.03 |
| 58.25 | 225.00 | 0.05 | 0.70 | 7.60 |
| 58.50 | 375.00 | 0.05 | 0.33 | 6.18 |
| 58.75 | 375.00 | 0.05 | 0.41 | 7.74 |
| 59.00 | 375.00 | 0.05 | 0.19 | 3.99 |
| 59.25 | 375.00 | 0.05 | 0.30 | 6.00 |
| 59.50 | 225.00 | 0.05 | 0.70 | 7.58 |
| 59.75 | 375.00 | 0.05 | 0.36 | 7.32 |
| 60.00 | 450.00 | 0.05 | 0.22 | 5.11 |
| 60.25 | 300.00 | 0.05 | 0.32 | 5.01 |
| 60.50 | 450.00 | 0.06 | 0.16 | 4.07 |
| 60.75 | 300.00 | 0.05 | 0.34 | 5.09 |
| 61.00 | 450.00 | 0.05 | 0.26 | 6.19 |
| 61.25 | 525.00 | 0.05 | 0.25 | 7.12 |
| 61.50 | 300.00 | 0.05 | 0.43 | 6.18 |
| 61.75 | 450.00 | 0.05 | 0.21 | 5.10 |
| 62.00 | 300.00 | 0.05 | 0.31 | 4.98 |
| 62.25 | 450.00 | 0.05 | 0.26 | 6.18 |
| 62.50 | 375.00 | 0.05 | 0.38 | 7.50 |
| 62.75 | 450.00 | 0.06 | 0.21 | 5.43 |
| 63.00 | 300.00 | 0.05 | 0.47 | 7.19 |
| 63.25 | 300.00 | 0.04 | 0.53 | 7.15 |
| 63.50 | 450.00 | 0.05 | 0.21 | 4.97 |
| 63.75 | 525.00 | 0.05 | 0.14 | 4.08 |
| 64.00 | 375.00 | 0.05 | 0.33 | 6.08 |
| 64.25 | 375.00 | 0.05 | 0.40 | 7.00 |
| 64.50 | 300.00 | 0.05 | 0.32 | 5.10 |
| 64.75 | 300.00 | 0.05 | 0.26 | 4.08 |
| 65.00 | 450.00 | 0.05 | 0.25 | 6.02 |
| 65.25 | 375.00 | 0.05 | 0.37 | 7.66 |
| 65.50 | 225.00 | 0.05 | 0.47 | 5.09 |
| 65.75 | 225.00 | 0.05 | 0.55 | 6.00 |
| 66.00 | 300.00 | 0.05 | 0.36 | 5.08 |
| 66.25 | 450.00 | 0.05 | 0.25 | 5.93 |
| 66.50 | 375.00 | 0.05 | 0.31 | 6.11 |
| 66.75 | 450.00 | 0.05 | 0.30 | 7.05 |
| 67.00 | 300.00 | 0.05 | 0.58 | 8.74 |
| 67.25 | 300.00 | 0.05 | 0.41 | 6.14 |
| 67.50 | 300.00 | 0.05 | 0.34 | 5.10 |
| 67.75 | 375.00 | 0.05 | 0.20 | 4.08 |
| 68.00 | 300.00 | 0.05 | 0.72 | 10.07 |
| 68.25 | 300.00 | 0.05 | 0.49 | 7.44 |
| 68.50 | 225.00 | 0.05 | 0.70 | 7.59 |
| 68.75 | 225.00 | 0.05 | 0.66 | 7.21 |
| 69.00 | 375.00 | 0.05 | 0.35 | 7.20 |
| 69.25 | 300.00 | 0.05 | 0.38 | 6.04 |
| 69.50 | 525.00 | 0.05 | 0.31 | 8.93 |
| 69.75 | 375.00 | 0.05 | 0.24 | 4.92 |
| 70.00 | 375.00 | 0.05 | 0.40 | 7.55 |
| 70.25 | 225.00 | 0.05 | 0.46 | 5.04 |
| 70.50 | 225.00 | 0.05 | 0.38 | 4.09 |
| 70.75 | 225.00 | 0.05 | 0.47 | 5.12 |
| 71.00 | 375.00 | 0.05 | 0.37 | 7.63 |
| 71.25 | 375.00 | 0.05 | 0.32 | 6.09 |
| 71.50 | 300.00 | 0.05 | 0.41 | 6.20 |
| 71.75 | 225.00 | 0.05 | 0.76 | 8.21 |
| 72.00 | 375.00 | 0.05 | 0.43 | 7.85 |



BSE Document Control Number: 7323HYD101

THE MAXIMUM DISCHARGE FROM CROSS SECTION 12 IS: 117.19 CFS AT TIME: 17.80 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 110.07 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 12

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 375.00 | 0.08 | 3.22 | 96.79 |
| 17.50 | 375.00 | 0.09 | 3.44 | 115.38 |
| 17.75 | 375.00 | 0.09 | 3.46 | 117.02 |
| 18.00 | 375.00 | 0.09 | 3.43 | 114.27 |
| 18.25 | 375.00 | 0.09 | 3.33 | 106.29 |
| 18.50 | 375.00 | 0.08 | 3.24 | 99.52 |
| 18.75 | 375.00 | 0.08 | 3.13 | 91.38 |
| 19.00 | 375.00 | 0.08 | 3.05 | 85.84 |
| 19.25 | 375.00 | 0.07 | 2.93 | 79.00 |
| 19.50 | 375.00 | 0.07 | 2.83 | 72.31 |
| 19.75 | 375.00 | 0.07 | 2.74 | 66.83 |
| 20.00 | 375.00 | 0.06 | 2.67 | 62.74 |
| 20.25 | 375.00 | 0.06 | 2.60 | 57.89 |
| 20.50 | 375.00 | 0.06 | 2.40 | 51.25 |
| 20.75 | 375.00 | 0.05 | 2.35 | 48.38 |
| 21.00 | 375.00 | 0.05 | 2.10 | 41.74 |
| 21.25 | 375.00 | 0.05 | 2.13 | 40.89 |
| 21.50 | 375.00 | 0.05 | 1.77 | 32.56 |
| 21.75 | 375.00 | 0.04 | 1.67 | 27.92 |
| 22.00 | 375.00 | 0.04 | 1.57 | 24.59 |
| 22.25 | 375.00 | 0.04 | 1.30 | 19.84 |
| 22.50 | 375.00 | 0.04 | 1.27 | 18.51 |
| 22.75 | 375.00 | 0.04 | 1.15 | 16.15 |
| 23.00 | 375.00 | 0.04 | 1.14 | 15.55 |
| 23.25 | 375.00 | 0.03 | 1.08 | 14.11 |
| 23.50 | 375.00 | 0.03 | 1.06 | 13.58 |
| 23.75 | 375.00 | 0.03 | 0.90 | 11.40 |
| 24.00 | 375.00 | 0.03 | 0.89 | 11.01 |
| 24.25 | 375.00 | 0.03 | 0.89 | 10.64 |
| 24.50 | 375.00 | 0.03 | 0.89 | 10.73 |
| 24.75 | 375.00 | 0.03 | 0.89 | 10.98 |
| 25.00 | 375.00 | 0.03 | 0.83 | 10.27 |
| 25.25 | 375.00 | 0.03 | 0.89 | 10.84 |
| 25.50 | 375.00 | 0.03 | 0.90 | 11.04 |
| 25.75 | 375.00 | 0.03 | 0.97 | 12.02 |
| 26.00 | 375.00 | 0.03 | 0.92 | 11.32 |
| 26.25 | 375.00 | 0.03 | 0.90 | 11.37 |
| 26.50 | 375.00 | 0.03 | 0.91 | 11.29 |
| 26.75 | 375.00 | 0.03 | 1.05 | 12.87 |
| 27.00 | 375.00 | 0.03 | 1.06 | 13.39 |
| 27.25 | 375.00 | 0.04 | 1.10 | 14.79 |
| 27.50 | 375.00 | 0.04 | 1.18 | 17.01 |
| 27.75 | 375.00 | 0.04 | 1.32 | 20.11 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 28.00 | 375.00 | 0.04 | 1.34 | 20.55 |
| 28.25 | 375.00 | 0.04 | 1.52 | 23.64 |
| 28.50 | 375.00 | 0.04 | 1.30 | 19.23 |
| 28.75 | 375.00 | 0.04 | 1.30 | 19.75 |
| 29.00 | 375.00 | 0.04 | 1.36 | 20.32 |
| 29.25 | 375.00 | 0.04 | 1.31 | 19.76 |
| 29.50 | 375.00 | 0.04 | 1.30 | 19.20 |
| 29.75 | 375.00 | 0.04 | 1.31 | 20.09 |
| 30.00 | 375.00 | 0.04 | 1.33 | 20.35 |
| 30.25 | 375.00 | 0.04 | 1.37 | 20.68 |
| 30.50 | 375.00 | 0.04 | 1.29 | 19.23 |
| 30.75 | 375.00 | 0.04 | 1.30 | 19.28 |
| 31.00 | 375.00 | 0.04 | 1.51 | 22.99 |
| 31.25 | 375.00 | 0.04 | 1.44 | 22.39 |
| 31.50 | 375.00 | 0.04 | 1.30 | 19.36 |
| 31.75 | 375.00 | 0.04 | 1.62 | 24.83 |
| 32.00 | 375.00 | 0.04 | 1.29 | 19.24 |
| 32.25 | 375.00 | 0.04 | 1.29 | 19.33 |
| 32.50 | 375.00 | 0.04 | 1.57 | 24.12 |
| 32.75 | 375.00 | 0.04 | 1.21 | 17.85 |
| 33.00 | 375.00 | 0.04 | 1.29 | 19.28 |
| 33.25 | 375.00 | 0.04 | 1.33 | 20.48 |
| 33.50 | 375.00 | 0.04 | 1.30 | 19.13 |
| 33.75 | 375.00 | 0.04 | 1.30 | 19.22 |
| 34.00 | 375.00 | 0.04 | 1.60 | 24.37 |
| 34.25 | 375.00 | 0.04 | 1.30 | 19.28 |
| 34.50 | 375.00 | 0.04 | 1.43 | 20.92 |
| 34.75 | 375.00 | 0.04 | 1.30 | 19.58 |
| 35.00 | 375.00 | 0.04 | 1.30 | 19.25 |
| 35.25 | 375.00 | 0.04 | 1.30 | 19.79 |
| 35.50 | 375.00 | 0.04 | 1.58 | 23.91 |
| 35.75 | 375.00 | 0.04 | 1.36 | 20.63 |
| 36.00 | 375.00 | 0.04 | 1.30 | 20.10 |
| 36.25 | 375.00 | 0.04 | 1.29 | 19.20 |
| 36.50 | 375.00 | 0.04 | 1.30 | 19.68 |
| 36.75 | 375.00 | 0.04 | 1.29 | 19.17 |
| 37.00 | 375.00 | 0.04 | 1.29 | 19.35 |
| 37.25 | 375.00 | 0.04 | 1.32 | 20.01 |
| 37.50 | 375.00 | 0.04 | 1.43 | 22.03 |
| 37.75 | 375.00 | 0.04 | 1.29 | 19.28 |
| 38.00 | 375.00 | 0.04 | 1.46 | 22.43 |
| 38.25 | 375.00 | 0.04 | 1.30 | 19.52 |
| 38.50 | 375.00 | 0.04 | 1.30 | 19.36 |
| 38.75 | 375.00 | 0.04 | 1.47 | 22.67 |
| 39.00 | 375.00 | 0.04 | 1.30 | 19.44 |
| 39.25 | 375.00 | 0.04 | 1.29 | 19.48 |
| 39.50 | 375.00 | 0.04 | 1.33 | 20.15 |
| 39.75 | 375.00 | 0.04 | 1.30 | 19.39 |
| 40.00 | 375.00 | 0.04 | 1.38 | 21.26 |
| 40.25 | 375.00 | 0.04 | 1.30 | 20.00 |
| 40.50 | 375.00 | 0.04 | 1.30 | 19.36 |
| 40.75 | 375.00 | 0.04 | 1.29 | 19.29 |
| 41.00 | 375.00 | 0.04 | 1.31 | 20.36 |
| 41.25 | 375.00 | 0.04 | 1.41 | 22.01 |
| 41.50 | 375.00 | 0.04 | 1.29 | 19.33 |
| 41.75 | 375.00 | 0.04 | 1.30 | 19.51 |
| 42.00 | 375.00 | 0.04 | 1.33 | 20.18 |
| 42.25 | 375.00 | 0.04 | 1.31 | 19.78 |
| 42.50 | 375.00 | 0.04 | 1.33 | 20.55 |
| 42.75 | 375.00 | 0.04 | 1.46 | 22.34 |
| 43.00 | 375.00 | 0.04 | 1.29 | 19.37 |
| 43.25 | 375.00 | 0.04 | 1.29 | 19.25 |
| 43.50 | 375.00 | 0.04 | 1.30 | 19.35 |
| 43.75 | 375.00 | 0.04 | 1.29 | 19.30 |
| 44.00 | 375.00 | 0.04 | 1.30 | 19.56 |
| 44.25 | 375.00 | 0.04 | 1.29 | 19.17 |
| 44.50 | 375.00 | 0.04 | 1.31 | 19.67 |
| 44.75 | 375.00 | 0.04 | 1.29 | 19.64 |
| 45.00 | 375.00 | 0.04 | 1.34 | 20.49 |
| 45.25 | 375.00 | 0.04 | 1.63 | 25.41 |
| 45.50 | 375.00 | 0.04 | 1.29 | 19.18 |
| 45.75 | 375.00 | 0.04 | 1.29 | 18.95 |
| 46.00 | 375.00 | 0.04 | 1.47 | 21.87 |
| 46.25 | 375.00 | 0.04 | 1.30 | 19.53 |
| 46.50 | 375.00 | 0.04 | 1.30 | 19.39 |
| 46.75 | 375.00 | 0.04 | 1.37 | 21.01 |
| 47.00 | 375.00 | 0.04 | 1.29 | 19.22 |
| 47.25 | 375.00 | 0.04 | 1.50 | 23.23 |
| 47.50 | 375.00 | 0.04 | 1.31 | 19.46 |
| 47.75 | 375.00 | 0.04 | 1.49 | 22.79 |
| 48.00 | 375.00 | 0.04 | 1.30 | 19.40 |
| 48.25 | 375.00 | 0.04 | 1.24 | 18.39 |
| 48.50 | 375.00 | 0.04 | 1.50 | 23.24 |
| 48.75 | 375.00 | 0.04 | 1.24 | 18.65 |
| 49.00 | 375.00 | 0.04 | 1.51 | 23.02 |
| 49.25 | 375.00 | 0.04 | 1.31 | 20.30 |
| 49.50 | 375.00 | 0.04 | 1.29 | 19.26 |
| 49.75 | 375.00 | 0.04 | 1.60 | 24.72 |
| 50.00 | 375.00 | 0.04 | 1.31 | 19.98 |
| 50.25 | 375.00 | 0.04 | 1.32 | 19.75 |
| 50.50 | 375.00 | 0.04 | 1.45 | 22.36 |
| 50.75 | 375.00 | 0.04 | 1.29 | 19.51 |
| 51.00 | 375.00 | 0.04 | 1.30 | 19.49 |
| 51.25 | 375.00 | 0.04 | 1.37 | 21.25 |
| 51.50 | 375.00 | 0.04 | 1.49 | 22.90 |
| 51.75 | 375.00 | 0.04 | 1.41 | 21.52 |
| 52.00 | 375.00 | 0.04 | 1.30 | 19.75 |
| 52.25 | 375.00 | 0.04 | 1.30 | 19.67 |
| 52.50 | 375.00 | 0.04 | 1.29 | 19.32 |
| 52.75 | 375.00 | 0.04 | 1.36 | 20.40 |
| 53.00 | 375.00 | 0.04 | 1.30 | 19.68 |
| 53.25 | 375.00 | 0.04 | 1.29 | 19.39 |
| 53.50 | 375.00 | 0.04 | 1.30 | 19.63 |
| 53.75 | 375.00 | 0.04 | 1.29 | 19.22 |
| 54.00 | 375.00 | 0.04 | 1.45 | 22.28 |
| 54.25 | 375.00 | 0.04 | 1.30 | 19.34 |
| 54.50 | 375.00 | 0.04 | 1.38 | 21.28 |
| 54.75 | 375.00 | 0.04 | 1.30 | 19.36 |
| 55.00 | 375.00 | 0.04 | 1.32 | 20.28 |
| 55.25 | 375.00 | 0.04 | 1.29 | 19.22 |
| 55.50 | 375.00 | 0.04 | 1.29 | 19.27 |
| 55.75 | 375.00 | 0.04 | 1.40 | 21.68 |
| 56.00 | 375.00 | 0.04 | 1.32 | 19.90 |
| 56.25 | 375.00 | 0.04 | 1.38 | 21.46 |
| 56.50 | 375.00 | 0.04 | 1.34 | 20.50 |
| 56.75 | 375.00 | 0.04 | 1.32 | 20.35 |
| 57.00 | 375.00 | 0.04 | 1.33 | 20.16 |
| 57.25 | 375.00 | 0.04 | 1.29 | 19.47 |
| 57.50 | 375.00 | 0.04 | 1.29 | 19.38 |
| 57.75 | 375.00 | 0.04 | 1.30 | 19.33 |
| 58.00 | 375.00 | 0.04 | 1.31 | 19.72 |
| 58.25 | 375.00 | 0.04 | 1.36 | 20.98 |



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| | | | | |
|---|---|---|---|---|
| 58.50 | 375.00 | 0.04 | 1.29 | 19.32 |
| 58.75 | 375.00 | 0.04 | 1.31 | 19.76 |
| 59.00 | 450.00 | 0.04 | 1.01 | 19.43 |
| 59.25 | 375.00 | 0.04 | 1.30 | 19.14 |
| 59.50 | 375.00 | 0.04 | 1.45 | 21.71 |
| 59.75 | 375.00 | 0.04 | 1.35 | 20.24 |
| 60.00 | 375.00 | 0.04 | 1.29 | 19.30 |
| 60.25 | 375.00 | 0.04 | 1.31 | 19.58 |
| 60.50 | 375.00 | 0.04 | 1.39 | 20.89 |
| 60.75 | 375.00 | 0.04 | 1.39 | 21.18 |
| 61.00 | 375.00 | 0.04 | 1.56 | 23.95 |
| 61.25 | 375.00 | 0.04 | 1.38 | 20.60 |
| 61.50 | 375.00 | 0.04 | 1.29 | 19.26 |
| 61.75 | 375.00 | 0.04 | 1.29 | 19.21 |
| 62.00 | 375.00 | 0.04 | 1.44 | 21.75 |
| 62.25 | 375.00 | 0.04 | 1.49 | 22.08 |
| 62.50 | 375.00 | 0.04 | 1.43 | 21.74 |
| 62.75 | 375.00 | 0.04 | 1.30 | 19.62 |
| 63.00 | 375.00 | 0.04 | 1.32 | 19.83 |
| 63.25 | 375.00 | 0.04 | 1.41 | 21.30 |
| 63.50 | 375.00 | 0.04 | 1.51 | 22.59 |
| 63.75 | 375.00 | 0.04 | 1.29 | 19.27 |
| 64.00 | 375.00 | 0.04 | 1.32 | 19.67 |
| 64.25 | 375.00 | 0.04 | 1.59 | 24.55 |
| 64.50 | 375.00 | 0.04 | 1.34 | 20.31 |
| 64.75 | 375.00 | 0.04 | 1.30 | 19.88 |
| 65.00 | 375.00 | 0.04 | 1.37 | 20.83 |
| 65.25 | 375.00 | 0.04 | 1.46 | 22.22 |
| 65.50 | 375.00 | 0.04 | 1.30 | 19.70 |
| 65.75 | 375.00 | 0.04 | 1.30 | 19.35 |
| 66.00 | 375.00 | 0.04 | 1.30 | 19.38 |
| 66.25 | 375.00 | 0.04 | 1.34 | 20.18 |
| 66.50 | 375.00 | 0.04 | 1.46 | 22.27 |
| 66.75 | 375.00 | 0.04 | 1.46 | 22.34 |
| 67.00 | 375.00 | 0.04 | 1.31 | 19.65 |
| 67.25 | 375.00 | 0.04 | 1.30 | 19.40 |
| 67.50 | 375.00 | 0.04 | 1.41 | 21.58 |
| 67.75 | 375.00 | 0.04 | 1.30 | 19.21 |
| 68.00 | 375.00 | 0.04 | 1.30 | 19.58 |
| 68.25 | 375.00 | 0.04 | 1.29 | 19.46 |
| 68.50 | 375.00 | 0.04 | 1.39 | 20.85 |
| 68.75 | 375.00 | 0.04 | 1.30 | 19.41 |
| 69.00 | 375.00 | 0.04 | 1.29 | 19.25 |
| 69.25 | 375.00 | 0.04 | 1.30 | 19.34 |
| 69.50 | 375.00 | 0.04 | 1.31 | 19.38 |
| 69.75 | 375.00 | 0.04 | 1.42 | 21.86 |
| 70.00 | 375.00 | 0.04 | 1.30 | 19.28 |
| 70.25 | 375.00 | 0.04 | 1.44 | 22.04 |
| 70.50 | 375.00 | 0.04 | 1.46 | 22.61 |
| 70.75 | 375.00 | 0.04 | 1.30 | 19.52 |
| 71.00 | 375.00 | 0.04 | 1.47 | 22.10 |
| 71.25 | 375.00 | 0.04 | 1.36 | 20.48 |
| 71.50 | 375.00 | 0.04 | 1.34 | 20.05 |
| 71.75 | 375.00 | 0.04 | 1.30 | 19.60 |
| 72.00 | 375.00 | 0.04 | 1.29 | 19.33 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 13 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 13

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# APPENDIX E:

## ix. 24 Hour, 5-Year Storm

## HYCROSS.OUT File

THE MAXIMUM DISCHARGE FROM CROSS SECTION 1 IS: 257.17 CFS AT TIME: 17.02 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 28.98 AF

NOTE: THE MAXIMUM DISCHARGE AT THIS CROSS SECTION INCLUDES THE CHANNEL DISCHARGE
THE HYDRAULIC VARIABLES IN THE TABLE BELOW ARE COMPUTED FOR THE FLOODPLAIN FLOW (DEPTH > TOL) ONLY
IF THE HYDRAULIC VARIABLES ARE ZERO IN THE TABLE BELOW, ALL THE DISCHARGE IS IN THE CHANNEL

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 1

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 1.15 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 3.71 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 21.83 |
| 13.25 | 0.00 | 0.00 | 0.00 | 36.35 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 15.60 |
| 14.00 | 0.00 | 0.00 | 0.00 | 50.13 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 75.00 | 0.10 | 1.13 | 89.24 |
| 15.50 | 150.00 | 0.16 | 1.20 | 28.41 |
| 15.75 | 150.00 | 0.18 | 1.27 | 42.49 |
| 16.00 | 150.00 | 0.16 | 1.18 | 29.16 |
| 16.25 | 150.00 | 0.18 | 1.14 | 157.21 |
| 16.50 | 150.00 | 0.16 | 0.91 | 150.27 |
| 16.75 | 150.00 | 0.15 | 0.71 | 114.82 |
| 17.00 | 150.00 | 0.13 | 0.69 | 121.60 |
| 17.25 | 150.00 | 0.16 | 0.90 | 111.96 |
| 17.50 | 150.00 | 0.12 | 0.63 | 16.21 |
| 17.75 | 150.00 | 0.11 | 0.45 | 72.20 |
| 18.00 | 150.00 | 0.13 | 0.40 | 7.70 |
| 18.25 | 75.00 | 0.07 | 1.69 | 12.43 |
| 18.50 | 150.00 | 0.13 | 0.48 | 9.42 |
| 18.75 | 75.00 | 0.05 | 1.59 | 6.49 |
| 19.00 | 150.00 | 0.12 | 0.40 | 7.03 |
| 19.25 | 150.00 | 0.10 | 0.32 | 50.04 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 150.00 | 0.12 | 0.46 | 91.32 |
| 20.50 | 150.00 | 0.14 | 0.42 | 8.91 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 150.00 | 0.12 | 0.39 | 22.60 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 8.28 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 150.00 | 0.12 | 0.36 | 78.06 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 150.00 | 0.13 | 0.37 | 7.59 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

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| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
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| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

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| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 2 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 2

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 3 IS: 144.76 CFS AT TIME: 21.13 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 64.74 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 3



BSE Document Control Number: 7323HYD101

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 450.00 | 0.09 | 3.12 | 128.30 |
| 20.75 | 525.00 | 0.10 | 2.62 | 133.36 |
| 21.00 | 450.00 | 0.10 | 3.30 | 142.70 |
| 21.25 | 525.00 | 0.10 | 2.72 | 142.33 |
| 21.50 | 525.00 | 0.10 | 2.68 | 137.47 |
| 21.75 | 600.00 | 0.10 | 2.20 | 130.12 |
| 22.00 | 525.00 | 0.09 | 2.53 | 122.41 |
| 22.25 | 525.00 | 0.09 | 2.45 | 114.37 |
| 22.50 | 450.00 | 0.08 | 2.94 | 109.69 |
| 22.75 | 525.00 | 0.08 | 2.32 | 102.09 |
| 23.00 | 450.00 | 0.08 | 2.78 | 97.71 |
| 23.25 | 450.00 | 0.08 | 2.71 | 91.33 |
| 23.50 | 525.00 | 0.08 | 2.13 | 85.21 |
| 23.75 | 525.00 | 0.07 | 2.04 | 79.17 |
| 24.00 | 450.00 | 0.07 | 2.49 | 76.30 |
| 24.25 | 525.00 | 0.07 | 1.91 | 69.55 |
| 24.50 | 525.00 | 0.07 | 1.88 | 65.91 |
| 24.75 | 600.00 | 0.07 | 1.52 | 62.16 |
| 25.00 | 525.00 | 0.06 | 1.76 | 57.82 |
| 25.25 | 525.00 | 0.06 | 1.73 | 55.48 |
| 25.50 | 450.00 | 0.06 | 2.09 | 52.54 |
| 25.75 | 525.00 | 0.06 | 1.63 | 49.15 |
| 26.00 | 450.00 | 0.05 | 1.97 | 46.38 |
| 26.25 | 450.00 | 0.05 | 1.96 | 44.24 |
| 26.50 | 450.00 | 0.05 | 1.86 | 40.89 |
| 26.75 | 450.00 | 0.05 | 1.75 | 37.66 |
| 27.00 | 450.00 | 0.05 | 1.68 | 35.15 |
| 27.25 | 450.00 | 0.05 | 1.69 | 34.69 |
| 27.50 | 450.00 | 0.05 | 1.62 | 32.91 |
| 27.75 | 450.00 | 0.04 | 1.53 | 30.28 |
| 28.00 | 450.00 | 0.04 | 1.52 | 29.45 |
| 28.25 | 525.00 | 0.05 | 1.16 | 27.80 |
| 28.50 | 450.00 | 0.04 | 1.41 | 25.80 |
| 28.75 | 525.00 | 0.04 | 1.18 | 27.02 |
| 29.00 | 450.00 | 0.04 | 1.34 | 23.45 |
| 29.25 | 450.00 | 0.04 | 1.25 | 22.00 |
| 29.50 | 450.00 | 0.04 | 1.30 | 22.27 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 29.75 | 450.00 | 0.04 | 1.17 | 20.49 |
| 30.00 | 450.00 | 0.04 | 1.20 | 20.79 |
| 30.25 | 525.00 | 0.04 | 0.99 | 22.00 |
| 30.50 | 450.00 | 0.04 | 1.22 | 21.13 |
| 30.75 | 450.00 | 0.04 | 1.17 | 20.26 |
| 31.00 | 375.00 | 0.04 | 1.49 | 20.30 |
| 31.25 | 525.00 | 0.04 | 0.92 | 20.23 |
| 31.50 | 450.00 | 0.04 | 1.12 | 19.37 |
| 31.75 | 525.00 | 0.04 | 0.91 | 19.87 |
| 32.00 | 450.00 | 0.04 | 1.11 | 18.94 |
| 32.25 | 450.00 | 0.04 | 1.08 | 18.55 |
| 32.50 | 525.00 | 0.04 | 0.90 | 19.70 |
| 32.75 | 450.00 | 0.04 | 1.07 | 17.65 |
| 33.00 | 450.00 | 0.04 | 1.10 | 17.56 |
| 33.25 | 450.00 | 0.03 | 1.05 | 16.35 |
| 33.50 | 450.00 | 0.03 | 1.04 | 15.90 |
| 33.75 | 450.00 | 0.03 | 1.02 | 15.21 |
| 34.00 | 375.00 | 0.03 | 1.21 | 13.80 |
| 34.25 | 375.00 | 0.03 | 1.27 | 14.10 |
| 34.50 | 450.00 | 0.03 | 0.77 | 11.06 |
| 34.75 | 375.00 | 0.03 | 1.20 | 12.59 |
| 35.00 | 450.00 | 0.03 | 0.71 | 10.11 |
| 35.25 | 300.00 | 0.03 | 1.38 | 10.79 |
| 35.50 | 450.00 | 0.03 | 0.72 | 10.01 |
| 35.75 | 450.00 | 0.03 | 0.71 | 9.75 |
| 36.00 | 375.00 | 0.03 | 0.92 | 9.46 |
| 36.25 | 300.00 | 0.02 | 1.13 | 8.02 |
| 36.50 | 375.00 | 0.03 | 0.87 | 8.23 |
| 36.75 | 375.00 | 0.02 | 0.62 | 5.58 |
| 37.00 | 450.00 | 0.03 | 0.62 | 7.42 |
| 37.25 | 300.00 | 0.02 | 1.07 | 6.50 |
| 37.50 | 375.00 | 0.02 | 0.85 | 7.30 |
| 37.75 | 375.00 | 0.02 | 0.72 | 6.04 |
| 38.00 | 225.00 | 0.02 | 1.74 | 5.90 |
| 38.25 | 375.00 | 0.02 | 0.67 | 5.38 |
| 38.50 | 300.00 | 0.02 | 0.81 | 4.30 |
| 38.75 | 225.00 | 0.01 | 1.18 | 3.41 |
| 39.00 | 225.00 | 0.01 | 1.71 | 4.58 |
| 39.25 | 150.00 | 0.01 | 2.95 | 3.41 |
| 39.50 | 225.00 | 0.01 | 0.37 | 0.92 |
| 39.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 225.00 | 0.01 | 1.26 | 3.27 |
| 40.25 | 150.00 | 0.01 | 0.79 | 0.92 |
| 40.50 | 0.00 | 0.00 | 0.00 | 1.87 |
| 40.75 | 150.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 75.00 | 0.00 | 2.94 | 0.88 |
| 41.50 | 150.00 | 0.01 | 1.42 | 1.77 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 150.00 | 0.01 | 1.08 | 1.26 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 75.00 | 0.00 | 3.76 | 1.18 |
| 42.75 | 75.00 | 0.00 | 4.38 | 1.22 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 150.00 | 0.01 | 2.71 | 3.14 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 1.77 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 1.99 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 4 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 4

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 5 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 5

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 6 IS: 1822.64 CFS AT TIME: 16.63 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 930.84 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 6

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 375.00 | 0.02 | 3.68 | 29.55 |
| 12.75 | 675.00 | 0.03 | 2.12 | 45.74 |
| 13.00 | 1050.00 | 0.04 | 1.28 | 57.47 |
| 13.25 | 1275.00 | 0.06 | 1.10 | 79.20 |
| 13.50 | 1425.00 | 0.10 | 1.38 | 200.07 |
| 13.75 | 2025.00 | 0.16 | 1.14 | 373.15 |
| 14.00 | 2475.00 | 0.21 | 1.00 | 519.11 |
| 14.25 | 2550.00 | 0.23 | 1.04 | 614.33 |
| 14.50 | 2550.00 | 0.25 | 1.10 | 699.96 |
| 14.75 | 2550.00 | 0.29 | 1.28 | 930.58 |
| 15.00 | 2550.00 | 0.31 | 1.35 | 1055.99 |
| 15.25 | 2550.00 | 0.32 | 1.42 | 1171.44 |
| 15.50 | 2550.00 | 0.34 | 1.48 | 1290.02 |
| 15.75 | 2550.00 | 0.36 | 1.54 | 1427.64 |
| 16.00 | 2550.00 | 0.38 | 1.63 | 1597.48 |
| 16.25 | 2550.00 | 0.40 | 1.70 | 1740.99 |
| 16.50 | 2550.00 | 0.41 | 1.74 | 1813.07 |
| 16.75 | 2625.00 | 0.41 | 1.69 | 1811.22 |
| 17.00 | 2550.00 | 0.40 | 1.73 | 1754.19 |
| 17.25 | 2550.00 | 0.38 | 1.69 | 1659.41 |
| 17.50 | 2550.00 | 0.37 | 1.64 | 1548.64 |
| 17.75 | 2550.00 | 0.35 | 1.59 | 1429.78 |
| 18.00 | 2550.00 | 0.34 | 1.53 | 1313.49 |
| 18.25 | 2550.00 | 0.32 | 1.48 | 1213.29 |
| 18.50 | 2550.00 | 0.31 | 1.43 | 1126.80 |
| 18.75 | 2550.00 | 0.29 | 1.39 | 1044.57 |


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| | | | | |
|---|---|---|---|---|
| 19.00 | 2475.00 | 0.28 | 1.38 | 968.57 |
| 19.25 | 2550.00 | 0.27 | 1.30 | 892.54 |
| 19.50 | 2475.00 | 0.26 | 1.29 | 823.31 |
| 19.75 | 2475.00 | 0.25 | 1.25 | 762.30 |
| 20.00 | 2550.00 | 0.23 | 1.18 | 706.23 |
| 20.25 | 2475.00 | 0.23 | 1.18 | 657.64 |
| 20.50 | 2475.00 | 0.22 | 1.14 | 613.78 |
| 20.75 | 2475.00 | 0.21 | 1.11 | 573.41 |
| 21.00 | 2475.00 | 0.20 | 1.08 | 538.00 |
| 21.25 | 2475.00 | 0.19 | 1.05 | 504.67 |
| 21.50 | 2475.00 | 0.19 | 1.02 | 473.97 |
| 21.75 | 2550.00 | 0.18 | 0.97 | 445.14 |
| 22.00 | 2475.00 | 0.18 | 0.98 | 424.86 |
| 22.25 | 2550.00 | 0.16 | 0.99 | 405.89 |
| 22.50 | 2475.00 | 0.17 | 0.94 | 387.63 |
| 22.75 | 2475.00 | 0.16 | 0.92 | 373.26 |
| 23.00 | 2475.00 | 0.16 | 0.90 | 356.75 |
| 23.25 | 2475.00 | 0.16 | 0.89 | 343.92 |
| 23.50 | 2475.00 | 0.15 | 0.88 | 336.68 |
| 23.75 | 2550.00 | 0.15 | 0.86 | 335.77 |
| 24.00 | 2475.00 | 0.15 | 0.87 | 332.90 |
| 24.25 | 2475.00 | 0.15 | 0.88 | 335.23 |
| 24.50 | 2475.00 | 0.16 | 0.87 | 335.07 |
| 24.75 | 2475.00 | 0.16 | 0.88 | 338.74 |
| 25.00 | 2475.00 | 0.16 | 0.88 | 340.85 |
| 25.25 | 2400.00 | 0.15 | 0.90 | 328.98 |
| 25.50 | 2475.00 | 0.15 | 0.86 | 315.35 |
| 25.75 | 2475.00 | 0.14 | 0.84 | 298.13 |
| 26.00 | 2475.00 | 0.14 | 0.81 | 277.02 |
| 26.25 | 2475.00 | 0.13 | 0.79 | 263.00 |
| 26.50 | 2475.00 | 0.13 | 0.77 | 245.29 |
| 26.75 | 2475.00 | 0.13 | 0.74 | 230.62 |
| 27.00 | 2475.00 | 0.12 | 0.73 | 219.43 |
| 27.25 | 2475.00 | 0.12 | 0.71 | 205.81 |
| 27.50 | 2400.00 | 0.11 | 0.73 | 195.07 |
| 27.75 | 2325.00 | 0.11 | 0.74 | 184.58 |
| 28.00 | 2250.00 | 0.10 | 0.76 | 175.23 |
| 28.25 | 2325.00 | 0.10 | 0.70 | 164.88 |
| 28.50 | 2325.00 | 0.10 | 0.68 | 154.39 |
| 28.75 | 2400.00 | 0.10 | 0.63 | 145.81 |
| 29.00 | 2250.00 | 0.09 | 0.68 | 141.24 |
| 29.25 | 2400.00 | 0.09 | 0.59 | 131.11 |
| 29.50 | 2175.00 | 0.09 | 0.66 | 124.15 |
| 29.75 | 2100.00 | 0.08 | 0.68 | 118.30 |
| 30.00 | 1950.00 | 0.08 | 0.75 | 113.20 |
| 30.25 | 2100.00 | 0.08 | 0.66 | 107.36 |
| 30.50 | 2100.00 | 0.08 | 0.62 | 99.25 |
| 30.75 | 2100.00 | 0.07 | 0.62 | 95.69 |
| 31.00 | 1950.00 | 0.07 | 0.67 | 91.15 |
| 31.25 | 1875.00 | 0.07 | 0.67 | 83.63 |
| 31.50 | 2025.00 | 0.07 | 0.59 | 80.01 |
| 31.75 | 1950.00 | 0.06 | 0.61 | 76.32 |
| 32.00 | 2025.00 | 0.06 | 0.57 | 72.31 |
| 32.25 | 2025.00 | 0.06 | 0.54 | 66.97 |
| 32.50 | 1950.00 | 0.06 | 0.56 | 63.02 |
| 32.75 | 1875.00 | 0.05 | 0.56 | 57.74 |
| 33.00 | 1800.00 | 0.05 | 0.59 | 56.27 |
| 33.25 | 1725.00 | 0.05 | 0.60 | 52.28 |
| 33.50 | 1650.00 | 0.05 | 0.60 | 47.85 |
| 33.75 | 1800.00 | 0.05 | 0.51 | 45.71 |
| 34.00 | 1650.00 | 0.05 | 0.54 | 41.30 |
| 34.25 | 1575.00 | 0.04 | 0.56 | 38.11 |
| 34.50 | 1800.00 | 0.05 | 0.44 | 37.09 |
| 34.75 | 1575.00 | 0.04 | 0.56 | 36.61 |
| 35.00 | 1575.00 | 0.04 | 0.48 | 30.88 |
| 35.25 | 1575.00 | 0.04 | 0.48 | 30.01 |
| 35.50 | 1500.00 | 0.04 | 0.51 | 28.50 |
| 35.75 | 1725.00 | 0.04 | 0.35 | 24.50 |
| 36.00 | 1575.00 | 0.04 | 0.39 | 23.06 |
| 36.25 | 1350.00 | 0.03 | 0.53 | 23.75 |
| 36.50 | 1350.00 | 0.03 | 0.47 | 20.66 |
| 36.75 | 1350.00 | 0.03 | 0.46 | 19.93 |
| 37.00 | 1050.00 | 0.03 | 0.75 | 21.21 |
| 37.25 | 1200.00 | 0.03 | 0.50 | 17.12 |
| 37.50 | 1275.00 | 0.03 | 0.43 | 15.79 |
| 37.75 | 1275.00 | 0.03 | 0.42 | 15.03 |
| 38.00 | 1200.00 | 0.03 | 0.43 | 13.61 |
| 38.25 | 900.00 | 0.02 | 0.68 | 12.77 |
| 38.50 | 1125.00 | 0.02 | 0.42 | 11.46 |
| 38.75 | 1050.00 | 0.02 | 0.50 | 11.66 |
| 39.00 | 1050.00 | 0.02 | 0.52 | 12.17 |
| 39.25 | 750.00 | 0.02 | 0.74 | 9.49 |
| 39.50 | 975.00 | 0.02 | 0.50 | 9.87 |
| 39.75 | 825.00 | 0.02 | 0.70 | 10.19 |
| 40.00 | 750.00 | 0.02 | 0.70 | 8.52 |
| 40.25 | 1275.00 | 0.02 | 0.31 | 9.45 |
| 40.50 | 750.00 | 0.02 | 0.60 | 7.21 |
| 40.75 | 750.00 | 0.02 | 0.58 | 6.86 |
| 41.00 | 825.00 | 0.02 | 0.45 | 6.22 |
| 41.25 | 900.00 | 0.02 | 0.37 | 6.00 |
| 41.50 | 900.00 | 0.02 | 0.44 | 7.09 |
| 41.75 | 825.00 | 0.02 | 0.48 | 6.67 |
| 42.00 | 675.00 | 0.01 | 0.53 | 5.07 |
| 42.25 | 750.00 | 0.02 | 0.63 | 7.18 |
| 42.50 | 675.00 | 0.01 | 0.56 | 5.30 |
| 42.75 | 675.00 | 0.01 | 0.84 | 7.77 |
| 43.00 | 675.00 | 0.01 | 0.60 | 5.44 |
| 43.25 | 600.00 | 0.01 | 0.58 | 4.18 |
| 43.50 | 525.00 | 0.01 | 1.04 | 5.80 |
| 43.75 | 600.00 | 0.01 | 0.96 | 6.73 |
| 44.00 | 600.00 | 0.01 | 0.70 | 4.82 |
| 44.25 | 600.00 | 0.01 | 0.33 | 2.23 |
| 44.50 | 375.00 | 0.01 | 1.62 | 4.49 |
| 44.75 | 450.00 | 0.01 | 1.66 | 6.33 |
| 45.00 | 525.00 | 0.01 | 0.86 | 4.28 |
| 45.25 | 525.00 | 0.01 | 0.32 | 1.54 |
| 45.50 | 525.00 | 0.01 | 0.58 | 2.79 |
| 45.75 | 600.00 | 0.01 | 0.41 | 2.57 |
| 46.00 | 375.00 | 0.01 | 1.09 | 2.67 |
| 46.25 | 225.00 | 0.00 | 3.02 | 2.76 |
| 46.50 | 450.00 | 0.01 | 0.51 | 1.78 |
| 46.75 | 375.00 | 0.01 | 1.17 | 2.81 |
| 47.00 | 525.00 | 0.01 | 0.37 | 1.70 |
| 47.25 | 300.00 | 0.01 | 1.37 | 2.08 |
| 47.50 | 450.00 | 0.01 | 0.11 | 0.37 |
| 47.75 | 300.00 | 0.00 | 1.37 | 2.02 |
| 48.00 | 375.00 | 0.01 | 1.70 | 3.91 |
| 48.25 | 225.00 | 0.00 | 2.92 | 2.40 |
| 48.50 | 450.00 | 0.01 | 0.27 | 0.89 |
| 48.75 | 150.00 | 0.00 | 1.23 | 0.45 |
| 49.00 | 150.00 | 0.00 | 3.12 | 1.17 |
| 49.25 | 75.00 | 0.00 | 12.85 | 1.22 |



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|---|---|---|---|---|
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 75.00 | 0.00 | 7.12 | 0.97 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 7 IS: 13.06 CFS AT TIME: 15.52 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 2.39 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 7

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 75.00 | 0.01 | 0.24 | 0.12 |
| 13.50 | 150.00 | 0.01 | 0.23 | 0.51 |
| 13.75 | 75.00 | 0.01 | 1.48 | 0.80 |
| 14.00 | 150.00 | 0.01 | 0.31 | 0.68 |
| 14.25 | 225.00 | 0.02 | -0.13 | -0.57 |
| 14.50 | 150.00 | 0.01 | 0.50 | 1.07 |
| 14.75 | 300.00 | 0.04 | 0.40 | 4.45 |
| 15.00 | 450.00 | 0.05 | 0.23 | 5.53 |
| 15.25 | 450.00 | 0.05 | 0.37 | 8.32 |
| 15.50 | 525.00 | 0.06 | 0.23 | 7.35 |
| 15.75 | 525.00 | 0.06 | 0.29 | 9.75 |
| 16.00 | 300.00 | 0.08 | 0.35 | 7.81 |
| 16.25 | 375.00 | 0.06 | 0.36 | 7.87 |
| 16.50 | 375.00 | 0.05 | 0.48 | 9.30 |
| 16.75 | 300.00 | 0.07 | 0.29 | 6.06 |
| 17.00 | 225.00 | 0.06 | 0.53 | 6.69 |
| 17.25 | 225.00 | 0.06 | 0.39 | 5.45 |
| 17.50 | 300.00 | 0.06 | 0.18 | 3.31 |
| 17.75 | 150.00 | 0.04 | 0.65 | 3.70 |
| 18.00 | 150.00 | 0.03 | 0.74 | 3.87 |
| 18.25 | 225.00 | 0.04 | 0.26 | 2.37 |
| 18.50 | 150.00 | 0.03 | 0.76 | 3.59 |
| 18.75 | 225.00 | 0.04 | 0.11 | 1.10 |
| 19.00 | 150.00 | 0.03 | 0.75 | 3.22 |
| 19.25 | 150.00 | 0.03 | 0.37 | 1.61 |
| 19.50 | 150.00 | 0.03 | 0.19 | 0.96 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.89 |
| 20.00 | 225.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 75.00 | 0.01 | 1.69 | 1.16 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 75.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | |
|---|---|---|---|---|
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 8 IS: 232.76 CFS AT TIME: 18.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 91.85 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 8

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 750.00 | 0.14 | 1.83 | 196.54 |
| 17.75 | 825.00 | 0.15 | 1.80 | 226.07 |
| 18.00 | 825.00 | 0.15 | 1.82 | 231.35 |
| 18.25 | 900.00 | 0.16 | 1.57 | 221.38 |
| 18.50 | 825.00 | 0.15 | 1.73 | 211.53 |
| 18.75 | 900.00 | 0.15 | 1.50 | 198.77 |
| 19.00 | 900.00 | 0.14 | 1.45 | 188.07 |
| 19.25 | 900.00 | 0.14 | 1.44 | 181.77 |
| 19.50 | 900.00 | 0.14 | 1.38 | 169.76 |
| 19.75 | 825.00 | 0.13 | 1.52 | 162.14 |
| 20.00 | 900.00 | 0.13 | 1.29 | 149.66 |
| 20.25 | 900.00 | 0.12 | 1.25 | 140.06 |
| 20.50 | 900.00 | 0.12 | 1.18 | 127.11 |
| 20.75 | 825.00 | 0.11 | 1.28 | 118.45 |
| 21.00 | 900.00 | 0.11 | 1.10 | 113.32 |
| 21.25 | 825.00 | 0.11 | 1.22 | 107.63 |
| 21.50 | 825.00 | 0.10 | 1.19 | 102.07 |
| 21.75 | 825.00 | 0.10 | 1.07 | 89.25 |


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| | | | | |
|---|---|---|---|---|
| 22.00 | 825.00 | 0.10 | 1.06 | 85.58 |
| 22.25 | 825.00 | 0.10 | 0.96 | 76.38 |
| 22.50 | 825.00 | 0.09 | 0.97 | 75.20 |
| 22.75 | 825.00 | 0.09 | 0.92 | 69.40 |
| 23.00 | 825.00 | 0.09 | 0.89 | 65.53 |
| 23.25 | 825.00 | 0.09 | 0.84 | 59.82 |
| 23.50 | 750.00 | 0.08 | 0.96 | 57.59 |
| 23.75 | 825.00 | 0.08 | 0.75 | 51.36 |
| 24.00 | 750.00 | 0.08 | 0.88 | 50.22 |
| 24.25 | 825.00 | 0.08 | 0.73 | 47.38 |
| 24.50 | 825.00 | 0.08 | 0.63 | 40.26 |
| 24.75 | 975.00 | 0.08 | 0.48 | 38.87 |
| 25.00 | 750.00 | 0.07 | 0.73 | 38.69 |
| 25.25 | 750.00 | 0.07 | 0.72 | 36.97 |
| 25.50 | 750.00 | 0.07 | 0.68 | 33.88 |
| 25.75 | 825.00 | 0.07 | 0.53 | 30.28 |
| 26.00 | 750.00 | 0.06 | 0.65 | 30.93 |
| 26.25 | 825.00 | 0.07 | 0.51 | 27.81 |
| 26.50 | 750.00 | 0.06 | 0.58 | 26.22 |
| 26.75 | 825.00 | 0.06 | 0.53 | 27.64 |
| 27.00 | 750.00 | 0.06 | 0.58 | 25.37 |
| 27.25 | 750.00 | 0.06 | 0.57 | 24.95 |
| 27.50 | 825.00 | 0.06 | 0.50 | 26.00 |
| 27.75 | 825.00 | 0.07 | 0.54 | 29.52 |
| 28.00 | 825.00 | 0.07 | 0.55 | 30.76 |
| 28.25 | 750.00 | 0.06 | 0.64 | 30.46 |
| 28.50 | 825.00 | 0.07 | 0.52 | 28.45 |
| 28.75 | 750.00 | 0.06 | 0.63 | 28.30 |
| 29.00 | 750.00 | 0.06 | 0.58 | 25.39 |
| 29.25 | 750.00 | 0.06 | 0.59 | 25.55 |
| 29.50 | 750.00 | 0.06 | 0.57 | 23.89 |
| 29.75 | 750.00 | 0.05 | 0.50 | 20.33 |
| 30.00 | 675.00 | 0.05 | 0.64 | 20.72 |
| 30.25 | 675.00 | 0.05 | 0.62 | 19.44 |
| 30.50 | 825.00 | 0.05 | 0.39 | 17.22 |
| 30.75 | 600.00 | 0.04 | 0.67 | 16.26 |
| 31.00 | 675.00 | 0.04 | 0.50 | 14.90 |
| 31.25 | 600.00 | 0.04 | 0.43 | 10.06 |
| 31.50 | 600.00 | 0.04 | 0.58 | 13.12 |
| 31.75 | 450.00 | 0.03 | 0.91 | 11.70 |
| 32.00 | 450.00 | 0.03 | 0.75 | 9.48 |
| 32.25 | 675.00 | 0.04 | 0.35 | 9.42 |
| 32.50 | 525.00 | 0.03 | 0.63 | 10.47 |
| 32.75 | 300.00 | 0.02 | 2.00 | 11.56 |
| 33.00 | 450.00 | 0.03 | 0.61 | 7.20 |
| 33.25 | 225.00 | 0.02 | 1.38 | 5.41 |
| 33.50 | 150.00 | 0.01 | 3.50 | 4.40 |
| 33.75 | 300.00 | 0.02 | 0.13 | 0.94 |
| 34.00 | 300.00 | 0.02 | 1.72 | 8.62 |
| 34.25 | 150.00 | 0.01 | 1.79 | 3.16 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 225.00 | 0.01 | 1.30 | 3.66 |
| 35.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 75.00 | 0.01 | 2.08 | 0.92 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.86 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 5.44 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.71 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 1.02 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |



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| | | | | |
|---|---|---|---|---|
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 9 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 9

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 10 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 10

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 11 IS: 53.08 CFS AT TIME: 18.68 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 24.40 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 11

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 300.00 | 0.08 | 0.43 | 9.74 |
| 18.50 | 600.00 | 0.11 | 0.72 | 46.53 |
| 18.75 | 675.00 | 0.10 | 0.67 | 47.32 |
| 19.00 | 675.00 | 0.10 | 0.64 | 44.18 |
| 19.25 | 600.00 | 0.10 | 0.70 | 41.75 |
| 19.50 | 600.00 | 0.09 | 0.64 | 35.93 |
| 19.75 | 675.00 | 0.09 | 0.51 | 30.89 |
| 20.00 | 675.00 | 0.09 | 0.48 | 28.66 |
| 20.25 | 600.00 | 0.08 | 0.52 | 26.52 |
| 20.50 | 600.00 | 0.08 | 0.50 | 25.06 |
| 20.75 | 600.00 | 0.08 | 0.45 | 21.78 |
| 21.00 | 600.00 | 0.08 | 0.44 | 20.79 |
| 21.25 | 675.00 | 0.08 | 0.36 | 20.10 |
| 21.50 | 675.00 | 0.08 | 0.35 | 18.24 |
| 21.75 | 600.00 | 0.07 | 0.39 | 16.96 |
| 22.00 | 525.00 | 0.07 | 0.45 | 16.48 |
| 22.25 | 450.00 | 0.07 | 0.58 | 17.50 |
| 22.50 | 525.00 | 0.07 | 0.48 | 17.16 |
| 22.75 | 525.00 | 0.07 | 0.33 | 11.77 |
| 23.00 | 450.00 | 0.06 | 0.45 | 12.23 |
| 23.25 | 600.00 | 0.06 | 0.26 | 10.06 |
| 23.50 | 450.00 | 0.06 | 0.37 | 9.66 |
| 23.75 | 300.00 | 0.05 | 0.64 | 9.82 |
| 24.00 | 375.00 | 0.06 | 0.33 | 6.89 |
| 24.25 | 450.00 | 0.06 | 0.26 | 6.42 |
| 24.50 | 450.00 | 0.05 | 0.26 | 6.01 |
| 24.75 | 225.00 | 0.04 | 0.43 | 4.22 |
| 25.00 | 300.00 | 0.04 | 0.20 | 2.62 |
| 25.25 | 150.00 | 0.04 | 0.25 | 1.44 |
| 25.50 | 375.00 | 0.04 | 0.14 | 2.11 |
| 25.75 | 150.00 | 0.04 | 0.36 | 2.00 |
| 26.00 | 225.00 | 0.04 | 0.36 | 3.17 |
| 26.25 | 375.00 | 0.05 | 0.19 | 3.30 |
| 26.50 | 150.00 | 0.04 | 0.41 | 2.32 |
| 26.75 | 525.00 | 0.05 | 0.07 | 1.78 |
| 27.00 | 375.00 | 0.05 | 0.08 | 1.37 |
| 27.25 | 450.00 | 0.04 | 0.13 | 2.51 |
| 27.50 | 375.00 | 0.04 | 0.37 | 6.04 |
| 27.75 | 300.00 | 0.04 | 0.34 | 4.45 |
| 28.00 | 225.00 | 0.04 | 0.45 | 4.18 |
| 28.25 | 450.00 | 0.05 | 0.17 | 3.54 |
| 28.50 | 450.00 | 0.05 | 0.26 | 5.78 |
| 28.75 | 675.00 | 0.06 | 0.10 | 4.00 |
| 29.00 | 375.00 | 0.05 | 0.32 | 5.95 |
| 29.25 | 225.00 | 0.04 | 0.42 | 3.95 |
| 29.50 | 300.00 | 0.04 | 0.29 | 3.45 |
| 29.75 | 450.00 | 0.05 | 0.28 | 5.92 |
| 30.00 | 225.00 | 0.04 | 0.65 | 5.91 |
| 30.25 | 225.00 | 0.04 | 0.31 | 2.78 |
| 30.50 | 150.00 | 0.04 | 0.44 | 2.53 |
| 30.75 | 450.00 | 0.04 | 0.20 | 3.80 |
| 31.00 | 300.00 | 0.04 | 0.21 | 2.20 |
| 31.25 | 375.00 | 0.04 | 0.19 | 2.80 |
| 31.50 | 225.00 | 0.04 | 0.25 | 2.21 |
| 31.75 | 225.00 | 0.04 | 0.11 | 1.05 |
| 32.00 | 150.00 | 0.04 | 0.35 | 1.97 |
| 32.25 | 150.00 | 0.04 | 0.23 | 1.29 |
| 32.50 | 225.00 | 0.04 | 0.25 | 2.16 |
| 32.75 | 225.00 | 0.04 | 0.49 | 4.30 |
| 33.00 | 450.00 | 0.05 | 0.25 | 5.15 |
| 33.25 | 150.00 | 0.04 | 0.53 | 2.99 |
| 33.50 | 300.00 | 0.04 | 0.27 | 3.08 |
| 33.75 | 150.00 | 0.04 | 0.96 | 5.42 |
| 34.00 | 150.00 | 0.04 | 0.64 | 3.60 |
| 34.25 | 225.00 | 0.03 | 0.28 | 2.12 |
| 34.50 | 225.00 | 0.04 | 0.46 | 4.03 |
| 34.75 | 150.00 | 0.04 | 0.19 | 1.04 |
| 35.00 | 450.00 | 0.04 | 0.06 | 1.17 |
| 35.25 | 375.00 | 0.05 | 0.04 | 0.74 |
| 35.50 | 375.00 | 0.04 | 0.07 | 1.14 |
| 35.75 | 150.00 | 0.04 | 0.19 | 1.07 |
| 36.00 | 150.00 | 0.04 | 0.17 | 0.97 |
| 36.25 | 300.00 | 0.04 | 0.06 | 0.75 |
| 36.50 | 300.00 | 0.04 | 0.10 | 1.10 |
| 36.75 | 150.00 | 0.04 | 0.21 | 1.21 |
| 37.00 | 225.00 | 0.03 | 0.61 | 4.66 |
| 37.25 | 225.00 | 0.04 | 0.24 | 2.08 |
| 37.50 | 300.00 | 0.04 | 0.10 | 1.24 |
| 37.75 | 525.00 | 0.05 | 0.10 | 2.54 |
| 38.00 | 300.00 | 0.04 | 0.26 | 3.25 |
| 38.25 | 525.00 | 0.05 | 0.11 | 2.94 |
| 38.50 | 225.00 | 0.04 | 0.27 | 2.31 |
| 38.75 | 225.00 | 0.03 | 0.28 | 2.13 |
| 39.00 | 375.00 | 0.04 | 0.15 | 2.31 |
| 39.25 | 450.00 | 0.04 | 0.11 | 2.12 |
| 39.50 | 300.00 | 0.04 | 0.09 | 1.10 |
| 39.75 | 300.00 | 0.04 | 0.18 | 2.15 |
| 40.00 | 225.00 | 0.04 | 0.25 | 2.18 |
| 40.25 | 225.00 | 0.04 | 0.21 | 1.84 |
| 40.50 | 225.00 | 0.04 | 0.86 | 7.16 |
| 40.75 | 375.00 | 0.04 | 0.46 | 6.97 |
| 41.00 | 375.00 | 0.05 | 0.07 | 1.23 |
| 41.25 | 150.00 | 0.04 | 0.72 | 4.07 |
| 41.50 | 225.00 | 0.04 | 0.48 | 4.33 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 41.75 | 300.00 | 0.04 | 0.27 | 3.38 |
| 42.00 | 375.00 | 0.04 | 0.22 | 3.28 |
| 42.25 | 300.00 | 0.04 | 0.10 | 1.19 |
| 42.50 | 150.00 | 0.04 | 0.38 | 2.13 |
| 42.75 | 225.00 | 0.04 | 0.26 | 2.16 |
| 43.00 | 150.00 | 0.04 | 0.40 | 2.28 |
| 43.25 | 150.00 | 0.04 | 0.83 | 4.68 |
| 43.50 | 150.00 | 0.04 | 0.35 | 1.99 |
| 43.75 | 150.00 | 0.04 | 0.71 | 3.98 |
| 44.00 | 150.00 | 0.04 | 0.21 | 1.20 |
| 44.25 | 150.00 | 0.04 | 0.48 | 2.68 |
| 44.50 | 450.00 | 0.04 | 0.17 | 3.43 |
| 44.75 | 300.00 | 0.04 | 0.36 | 4.06 |
| 45.00 | 525.00 | 0.05 | 0.04 | 0.97 |
| 45.25 | 225.00 | 0.04 | 0.13 | 1.14 |
| 45.50 | 525.00 | 0.05 | 0.11 | 2.93 |
| 45.75 | 300.00 | 0.04 | 0.17 | 2.07 |
| 46.00 | 525.00 | 0.05 | 0.05 | 1.28 |
| 46.25 | 300.00 | 0.04 | 0.44 | 4.99 |
| 46.50 | 375.00 | 0.04 | 0.24 | 3.82 |
| 46.75 | 150.00 | 0.04 | 0.23 | 1.28 |
| 47.00 | 150.00 | 0.04 | 0.54 | 3.04 |
| 47.25 | 300.00 | 0.04 | 0.23 | 2.49 |
| 47.50 | 150.00 | 0.04 | 0.18 | 1.02 |
| 47.75 | 225.00 | 0.04 | 0.43 | 3.78 |
| 48.00 | 525.00 | 0.05 | 0.09 | 2.27 |
| 48.25 | 300.00 | 0.04 | 0.18 | 2.12 |
| 48.50 | 300.00 | 0.04 | 0.10 | 1.25 |
| 48.75 | 150.00 | 0.04 | 0.22 | 1.26 |
| 49.00 | 225.00 | 0.03 | 0.70 | 5.35 |
| 49.25 | 300.00 | 0.04 | 0.25 | 3.05 |
| 49.50 | 225.00 | 0.04 | 0.22 | 1.97 |
| 49.75 | 150.00 | 0.04 | 0.23 | 1.28 |
| 50.00 | 225.00 | 0.04 | 0.35 | 3.08 |
| 50.25 | 225.00 | 0.04 | 0.23 | 2.10 |
| 50.50 | 450.00 | 0.05 | 0.15 | 3.16 |
| 50.75 | 225.00 | 0.03 | 0.16 | 1.26 |
| 51.00 | 300.00 | 0.04 | 0.27 | 2.96 |
| 51.25 | 300.00 | 0.04 | 0.07 | 0.88 |
| 51.50 | 300.00 | 0.04 | 0.21 | 2.22 |
| 51.75 | 450.00 | 0.04 | 0.11 | 2.19 |
| 52.00 | 150.00 | 0.04 | 0.65 | 3.67 |
| 52.25 | 300.00 | 0.04 | 0.21 | 2.39 |
| 52.50 | 300.00 | 0.04 | 0.36 | 4.47 |
| 52.75 | 300.00 | 0.04 | 0.26 | 3.29 |
| 53.00 | 375.00 | 0.04 | 0.29 | 4.46 |
| 53.25 | 225.00 | 0.04 | 0.64 | 5.61 |
| 53.50 | 150.00 | 0.04 | 0.42 | 2.36 |
| 53.75 | 150.00 | 0.04 | 0.59 | 3.33 |
| 54.00 | 450.00 | 0.05 | 0.11 | 2.26 |
| 54.25 | 225.00 | 0.04 | 0.33 | 2.85 |
| 54.50 | 375.00 | 0.04 | 0.33 | 4.84 |
| 54.75 | 225.00 | 0.04 | 0.33 | 2.88 |
| 55.00 | 225.00 | 0.04 | 0.16 | 1.39 |
| 55.25 | 300.00 | 0.04 | 0.12 | 1.56 |
| 55.50 | 450.00 | 0.04 | 0.20 | 4.05 |
| 55.75 | 450.00 | 0.05 | 0.15 | 3.42 |
| 56.00 | 225.00 | 0.04 | 0.28 | 2.48 |
| 56.25 | 225.00 | 0.04 | 0.28 | 2.53 |
| 56.50 | 450.00 | 0.04 | 0.28 | 5.49 |
| 56.75 | 525.00 | 0.05 | 0.15 | 3.85 |
| 57.00 | 225.00 | 0.03 | 0.31 | 2.46 |
| 57.25 | 375.00 | 0.04 | 0.27 | 4.60 |
| 57.50 | 375.00 | 0.04 | 0.22 | 3.54 |
| 57.75 | 225.00 | 0.04 | 0.64 | 5.75 |
| 58.00 | 525.00 | 0.05 | 0.17 | 4.45 |
| 58.25 | 225.00 | 0.04 | 0.39 | 3.53 |
| 58.50 | 525.00 | 0.05 | 0.14 | 3.62 |
| 58.75 | 450.00 | 0.05 | 0.17 | 3.55 |
| 59.00 | 375.00 | 0.05 | 0.19 | 3.38 |
| 59.25 | 300.00 | 0.04 | 0.19 | 2.59 |
| 59.50 | 375.00 | 0.04 | 0.16 | 2.57 |
| 59.75 | 375.00 | 0.05 | 0.17 | 2.94 |
| 60.00 | 450.00 | 0.05 | 0.17 | 3.53 |
| 60.25 | 375.00 | 0.04 | 0.21 | 3.41 |
| 60.50 | 375.00 | 0.05 | 0.09 | 1.57 |
| 60.75 | 225.00 | 0.04 | 0.50 | 4.50 |
| 61.00 | 225.00 | 0.04 | 0.17 | 1.57 |
| 61.25 | 300.00 | 0.04 | 0.19 | 2.61 |
| 61.50 | 225.00 | 0.04 | 0.29 | 2.49 |
| 61.75 | 225.00 | 0.04 | 0.39 | 3.54 |
| 62.00 | 300.00 | 0.04 | 0.19 | 2.61 |
| 62.25 | 300.00 | 0.04 | 0.27 | 3.15 |
| 62.50 | 525.00 | 0.05 | 0.06 | 1.58 |
| 62.75 | 225.00 | 0.04 | 0.79 | 7.19 |
| 63.00 | 225.00 | 0.03 | 0.48 | 3.67 |
| 63.25 | 525.00 | 0.05 | 0.27 | 6.70 |
| 63.50 | 300.00 | 0.04 | 0.27 | 3.45 |
| 63.75 | 375.00 | 0.05 | 0.32 | 5.65 |
| 64.00 | 300.00 | 0.04 | 0.31 | 4.03 |
| 64.25 | 300.00 | 0.04 | 0.26 | 3.31 |
| 64.50 | 225.00 | 0.04 | 0.09 | 0.83 |
| 64.75 | 450.00 | 0.04 | 0.24 | 4.69 |
| 65.00 | 225.00 | 0.04 | 0.58 | 5.26 |
| 65.25 | 375.00 | 0.04 | 0.11 | 1.60 |
| 65.50 | 525.00 | 0.05 | 0.14 | 3.61 |
| 65.75 | 300.00 | 0.04 | 0.28 | 3.62 |
| 66.00 | 225.00 | 0.04 | 0.41 | 3.73 |
| 66.25 | 300.00 | 0.04 | 0.62 | 7.40 |
| 66.50 | 375.00 | 0.04 | 0.25 | 3.73 |
| 66.75 | 300.00 | 0.04 | 0.20 | 2.61 |
| 67.00 | 300.00 | 0.04 | 0.36 | 4.60 |
| 67.25 | 300.00 | 0.05 | 0.12 | 1.62 |
| 67.50 | 150.00 | 0.04 | 0.45 | 2.66 |
| 67.75 | 300.00 | 0.04 | 0.33 | 3.65 |
| 68.00 | 225.00 | 0.04 | 0.28 | 2.66 |
| 68.25 | 375.00 | 0.04 | 0.37 | 5.85 |
| 68.50 | 375.00 | 0.04 | 0.10 | 1.64 |
| 68.75 | 150.00 | 0.04 | 0.43 | 2.58 |
| 69.00 | 600.00 | 0.05 | 0.08 | 2.68 |
| 69.25 | 150.00 | 0.04 | 0.43 | 2.58 |
| 69.50 | 450.00 | 0.04 | 0.10 | 1.90 |
| 69.75 | 225.00 | 0.04 | 0.53 | 4.88 |
| 70.00 | 225.00 | 0.04 | 0.18 | 1.66 |
| 70.25 | 300.00 | 0.04 | 0.31 | 3.72 |
| 70.50 | 450.00 | 0.05 | 0.16 | 3.40 |
| 70.75 | 375.00 | 0.04 | 0.25 | 3.75 |
| 71.00 | 300.00 | 0.04 | 0.33 | 3.78 |
| 71.25 | 300.00 | 0.04 | 0.39 | 4.63 |
| 71.50 | 375.00 | 0.05 | 0.33 | 5.72 |
| 71.75 | 300.00 | 0.04 | 0.42 | 5.30 |
| 72.00 | 225.00 | 0.04 | 0.37 | 3.46 |



BSE Document Control Number: 7323HYD101

THE MAXIMUM DISCHARGE FROM CROSS SECTION 12 IS: 61.28 CFS AT TIME: 18.92 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 35.67 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 12

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 300.00 | 0.05 | 3.36 | 54.78 |
| 18.25 | 375.00 | 0.06 | 2.62 | 58.94 |
| 18.50 | 375.00 | 0.06 | 2.50 | 55.71 |
| 18.75 | 375.00 | 0.06 | 2.63 | 59.41 |
| 19.00 | 375.00 | 0.06 | 2.66 | 61.17 |
| 19.25 | 375.00 | 0.06 | 2.60 | 58.36 |
| 19.50 | 375.00 | 0.06 | 2.52 | 54.89 |
| 19.75 | 375.00 | 0.06 | 2.32 | 49.15 |
| 20.00 | 375.00 | 0.05 | 2.25 | 46.25 |
| 20.25 | 375.00 | 0.05 | 2.26 | 45.37 |
| 20.50 | 375.00 | 0.05 | 2.08 | 40.98 |
| 20.75 | 375.00 | 0.05 | 1.86 | 35.49 |
| 21.00 | 375.00 | 0.05 | 1.81 | 33.50 |
| 21.25 | 375.00 | 0.05 | 1.72 | 29.99 |
| 21.50 | 375.00 | 0.04 | 1.66 | 27.25 |
| 21.75 | 375.00 | 0.04 | 1.62 | 25.45 |
| 22.00 | 375.00 | 0.04 | 1.34 | 20.54 |
| 22.25 | 375.00 | 0.04 | 1.29 | 19.28 |
| 22.50 | 375.00 | 0.04 | 1.26 | 17.87 |
| 22.75 | 375.00 | 0.04 | 1.11 | 15.63 |
| 23.00 | 375.00 | 0.04 | 1.09 | 15.04 |
| 23.25 | 375.00 | 0.03 | 0.94 | 12.08 |
| 23.50 | 375.00 | 0.03 | 0.91 | 11.39 |
| 23.75 | 375.00 | 0.03 | 0.89 | 11.06 |
| 24.00 | 375.00 | 0.03 | 0.88 | 10.54 |
| 24.25 | 375.00 | 0.03 | 0.86 | 10.03 |
| 24.50 | 375.00 | 0.03 | 0.71 | 8.11 |
| 24.75 | 375.00 | 0.03 | 0.70 | 7.89 |
| 25.00 | 375.00 | 0.03 | 0.77 | 8.58 |
| 25.25 | 375.00 | 0.03 | 0.83 | 9.10 |
| 25.50 | 375.00 | 0.03 | 0.81 | 8.84 |
| 25.75 | 375.00 | 0.03 | 0.82 | 8.94 |
| 26.00 | 375.00 | 0.03 | 0.67 | 7.29 |
| 26.25 | 300.00 | 0.02 | 1.23 | 8.87 |
| 26.50 | 300.00 | 0.02 | 1.14 | 8.47 |
| 26.75 | 375.00 | 0.03 | 0.73 | 7.76 |
| 27.00 | 375.00 | 0.03 | 0.58 | 6.12 |
| 27.25 | 375.00 | 0.03 | 0.56 | 5.81 |
| 27.50 | 375.00 | 0.03 | 0.57 | 5.74 |
| 27.75 | 225.00 | 0.02 | 1.28 | 4.83 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 28.00 | 300.00 | 0.02 | 1.18 | 7.30 |
| 28.25 | 300.00 | 0.02 | 0.83 | 5.02 |
| 28.50 | 300.00 | 0.02 | 0.70 | 4.18 |
| 28.75 | 225.00 | 0.01 | 1.44 | 4.82 |
| 29.00 | 150.00 | 0.01 | 1.88 | 3.25 |
| 29.25 | 225.00 | 0.02 | 1.06 | 3.62 |
| 29.50 | 150.00 | 0.01 | 3.79 | 6.39 |
| 29.75 | 300.00 | 0.02 | 0.35 | 2.03 |
| 30.00 | 300.00 | 0.02 | 0.74 | 4.25 |
| 30.25 | 375.00 | 0.02 | 0.52 | 4.69 |
| 30.50 | 225.00 | 0.02 | 1.40 | 4.76 |
| 30.75 | 225.00 | 0.02 | 1.42 | 4.80 |
| 31.00 | 300.00 | 0.02 | 0.86 | 4.93 |
| 31.25 | 150.00 | 0.01 | 2.26 | 3.79 |
| 31.50 | 300.00 | 0.02 | 0.97 | 5.58 |
| 31.75 | 375.00 | 0.02 | 0.57 | 5.11 |
| 32.00 | 300.00 | 0.02 | 0.90 | 5.18 |
| 32.25 | 225.00 | 0.02 | 0.33 | 1.16 |
| 32.50 | 150.00 | 0.01 | 3.92 | 5.63 |
| 32.75 | 225.00 | 0.01 | 0.34 | 1.08 |
| 33.00 | 375.00 | 0.02 | 0.42 | 3.80 |
| 33.25 | 225.00 | 0.01 | 1.49 | 4.81 |
| 33.50 | 225.00 | 0.01 | 1.42 | 4.59 |
| 33.75 | 225.00 | 0.01 | 2.09 | 6.74 |
| 34.00 | 225.00 | 0.02 | 0.60 | 2.03 |
| 34.25 | 150.00 | 0.01 | 2.92 | 4.62 |
| 34.50 | 375.00 | 0.02 | 0.61 | 5.49 |
| 34.75 | 300.00 | 0.02 | 0.43 | 2.49 |
| 35.00 | 300.00 | 0.02 | 0.43 | 2.46 |
| 35.25 | 225.00 | 0.01 | 1.31 | 4.21 |
| 35.50 | 300.00 | 0.02 | 0.59 | 3.39 |
| 35.75 | 375.00 | 0.02 | 0.38 | 3.41 |
| 36.00 | 225.00 | 0.01 | 1.24 | 4.02 |
| 36.25 | 150.00 | 0.01 | 3.42 | 4.92 |
| 36.50 | 300.00 | 0.02 | 0.89 | 5.12 |
| 36.75 | 300.00 | 0.02 | 0.82 | 4.71 |
| 37.00 | 375.00 | 0.02 | 0.38 | 3.40 |
| 37.25 | 300.00 | 0.02 | 0.59 | 3.39 |
| 37.50 | 375.00 | 0.02 | 0.23 | 2.03 |
| 37.75 | 300.00 | 0.02 | 0.35 | 1.99 |
| 38.00 | 375.00 | 0.02 | 0.23 | 2.03 |
| 38.25 | 300.00 | 0.02 | 0.62 | 3.77 |
| 38.50 | 300.00 | 0.02 | 0.70 | 4.02 |
| 38.75 | 375.00 | 0.02 | 0.35 | 3.10 |
| 39.00 | 225.00 | 0.01 | 1.46 | 4.72 |
| 39.25 | 300.00 | 0.02 | 0.70 | 4.05 |
| 39.50 | 375.00 | 0.02 | 0.51 | 4.54 |
| 39.75 | 300.00 | 0.02 | 0.38 | 2.28 |
| 40.00 | 300.00 | 0.02 | 0.66 | 3.79 |
| 40.25 | 225.00 | 0.02 | 1.40 | 4.73 |
| 40.50 | 375.00 | 0.02 | 0.40 | 3.56 |
| 40.75 | 150.00 | 0.01 | 4.05 | 6.80 |
| 41.00 | 225.00 | 0.01 | 1.10 | 3.54 |
| 41.25 | 300.00 | 0.02 | 0.66 | 3.81 |
| 41.50 | 150.00 | 0.01 | 4.71 | 6.74 |
| 41.75 | 150.00 | 0.01 | 3.10 | 5.21 |
| 42.00 | 225.00 | 0.02 | 0.95 | 3.23 |
| 42.25 | 300.00 | 0.02 | 0.71 | 4.09 |
| 42.50 | 375.00 | 0.02 | 0.36 | 3.26 |
| 42.75 | 150.00 | 0.01 | 3.23 | 5.41 |
| 43.00 | 300.00 | 0.02 | 0.16 | 0.94 |
| 43.25 | 225.00 | 0.01 | 1.32 | 4.25 |
| 43.50 | 225.00 | 0.01 | 0.80 | 2.57 |
| 43.75 | 225.00 | 0.01 | 1.40 | 4.49 |
| 44.00 | 300.00 | 0.02 | 0.91 | 5.20 |
| 44.25 | 225.00 | 0.01 | 1.05 | 3.37 |
| 44.50 | 225.00 | 0.02 | 1.33 | 4.76 |
| 44.75 | 300.00 | 0.02 | 0.36 | 2.16 |
| 45.00 | 150.00 | 0.01 | 3.76 | 6.32 |
| 45.25 | 300.00 | 0.02 | 0.49 | 2.82 |
| 45.50 | 300.00 | 0.02 | 0.38 | 2.29 |
| 45.75 | 225.00 | 0.02 | 1.51 | 5.10 |
| 46.00 | 300.00 | 0.02 | 1.09 | 6.23 |
| 46.25 | 300.00 | 0.02 | 0.59 | 3.55 |
| 46.50 | 300.00 | 0.02 | 0.35 | 2.03 |
| 46.75 | 225.00 | 0.01 | 1.16 | 3.75 |
| 47.00 | 150.00 | 0.01 | 2.05 | 3.25 |
| 47.25 | 225.00 | 0.01 | 0.34 | 1.08 |
| 47.50 | 300.00 | 0.02 | 0.59 | 3.39 |
| 47.75 | 300.00 | 0.02 | 0.35 | 1.99 |
| 48.00 | 300.00 | 0.02 | 0.97 | 5.57 |
| 48.25 | 375.00 | 0.02 | 0.29 | 2.64 |
| 48.50 | 150.00 | 0.01 | 1.93 | 3.24 |
| 48.75 | 300.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 375.00 | 0.02 | 0.52 | 4.68 |
| 49.25 | 300.00 | 0.02 | 0.82 | 4.71 |
| 49.50 | 225.00 | 0.01 | 1.10 | 3.54 |
| 49.75 | 300.00 | 0.02 | 1.17 | 6.70 |
| 50.00 | 225.00 | 0.01 | 1.94 | 6.28 |
| 50.25 | 75.00 | 0.01 | 11.06 | 4.90 |
| 50.50 | 150.00 | 0.01 | 2.78 | 4.67 |
| 50.75 | 150.00 | 0.01 | 3.15 | 5.28 |
| 51.00 | 225.00 | 0.02 | 1.56 | 5.57 |
| 51.25 | 300.00 | 0.02 | 0.35 | 2.02 |
| 51.50 | 225.00 | 0.01 | 1.10 | 3.55 |
| 51.75 | 150.00 | 0.01 | 3.55 | 5.36 |
| 52.00 | 300.00 | 0.02 | 0.96 | 5.50 |
| 52.25 | 300.00 | 0.02 | 0.54 | 3.26 |
| 52.50 | 225.00 | 0.02 | 0.60 | 2.15 |
| 52.75 | 225.00 | 0.02 | 1.40 | 4.75 |
| 53.00 | 225.00 | 0.01 | 1.63 | 5.27 |
| 53.25 | 225.00 | 0.01 | 1.88 | 6.08 |
| 53.50 | 225.00 | 0.02 | 1.32 | 4.72 |
| 53.75 | 225.00 | 0.01 | 1.23 | 3.97 |
| 54.00 | 225.00 | 0.02 | 1.07 | 3.63 |
| 54.25 | 375.00 | 0.02 | 0.45 | 4.04 |
| 54.50 | 225.00 | 0.01 | 2.07 | 6.68 |
| 54.75 | 225.00 | 0.01 | 1.28 | 4.15 |
| 55.00 | 375.00 | 0.02 | 0.42 | 3.76 |
| 55.25 | 300.00 | 0.02 | 0.61 | 3.69 |
| 55.50 | 300.00 | 0.02 | 0.85 | 5.09 |
| 55.75 | 300.00 | 0.02 | 0.97 | 5.58 |
| 56.00 | 375.00 | 0.02 | 0.36 | 3.20 |
| 56.25 | 375.00 | 0.02 | 0.38 | 3.44 |
| 56.50 | 300.00 | 0.02 | 0.47 | 2.69 |
| 56.75 | 300.00 | 0.02 | 0.53 | 3.07 |
| 57.00 | 225.00 | 0.01 | 1.60 | 5.15 |
| 57.25 | 300.00 | 0.02 | 0.53 | 3.05 |
| 57.50 | 150.00 | 0.01 | 3.56 | 5.08 |
| 57.75 | 300.00 | 0.02 | 0.43 | 2.50 |
| 58.00 | 150.00 | 0.01 | 3.12 | 4.95 |
| 58.25 | 150.00 | 0.01 | 2.00 | 3.18 |



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| | | | | |
|---|---|---|---|---|
| 58.50 | 225.00 | 0.02 | 1.09 | 3.71 |
| 58.75 | 300.00 | 0.02 | 0.87 | 5.03 |
| 59.00 | 225.00 | 0.02 | 1.32 | 4.73 |
| 59.25 | 225.00 | 0.01 | 1.73 | 5.56 |
| 59.50 | 225.00 | 0.02 | 1.06 | 3.57 |
| 59.75 | 375.00 | 0.02 | 0.29 | 2.64 |
| 60.00 | 225.00 | 0.02 | 0.90 | 3.22 |
| 60.25 | 225.00 | 0.01 | 1.17 | 3.79 |
| 60.50 | 375.00 | 0.02 | 0.23 | 2.03 |
| 60.75 | 300.00 | 0.02 | 0.34 | 2.03 |
| 61.00 | 300.00 | 0.02 | 0.93 | 5.33 |
| 61.25 | 300.00 | 0.02 | 0.95 | 5.42 |
| 61.50 | 300.00 | 0.02 | 1.07 | 6.16 |
| 61.75 | 150.00 | 0.01 | 4.74 | 6.80 |
| 62.00 | 300.00 | 0.02 | 0.69 | 3.98 |
| 62.25 | 225.00 | 0.01 | 1.18 | 3.81 |
| 62.50 | 375.00 | 0.02 | 0.42 | 3.75 |
| 62.75 | 375.00 | 0.02 | 0.38 | 3.42 |
| 63.00 | 300.00 | 0.02 | 0.39 | 2.26 |
| 63.25 | 150.00 | 0.01 | 4.24 | 6.08 |
| 63.50 | 300.00 | 0.02 | 0.67 | 3.85 |
| 63.75 | 300.00 | 0.02 | 0.92 | 5.29 |
| 64.00 | 300.00 | 0.02 | 0.57 | 3.25 |
| 64.25 | 375.00 | 0.02 | 0.43 | 3.87 |
| 64.50 | 150.00 | 0.01 | 2.87 | 4.13 |
| 64.75 | 300.00 | 0.02 | 0.46 | 2.55 |
| 65.00 | 300.00 | 0.02 | 0.43 | 2.49 |
| 65.25 | 300.00 | 0.02 | 0.78 | 4.71 |
| 65.50 | 300.00 | 0.02 | 0.54 | 3.11 |
| 65.75 | 300.00 | 0.02 | 0.43 | 2.49 |
| 66.00 | 300.00 | 0.02 | 0.84 | 4.84 |
| 66.25 | 375.00 | 0.02 | 0.55 | 4.90 |
| 66.50 | 225.00 | 0.01 | 1.68 | 5.44 |
| 66.75 | 150.00 | 0.01 | 4.19 | 7.01 |
| 67.00 | 225.00 | 0.02 | 1.06 | 3.58 |
| 67.25 | 150.00 | 0.01 | 3.93 | 5.64 |
| 67.50 | 225.00 | 0.02 | 0.90 | 3.22 |
| 67.75 | 225.00 | 0.01 | 1.11 | 3.60 |
| 68.00 | 225.00 | 0.01 | 1.21 | 3.92 |
| 68.25 | 300.00 | 0.02 | 0.81 | 4.67 |
| 68.50 | 150.00 | 0.01 | 4.80 | 6.90 |
| 68.75 | 300.00 | 0.02 | 0.71 | 4.10 |
| 69.00 | 300.00 | 0.02 | 0.17 | 0.97 |
| 69.25 | 150.00 | 0.01 | 2.37 | 3.76 |
| 69.50 | 225.00 | 0.02 | 1.33 | 4.49 |
| 69.75 | 375.00 | 0.02 | 0.42 | 3.76 |
| 70.00 | 375.00 | 0.02 | 0.68 | 6.12 |
| 70.25 | 375.00 | 0.02 | 0.28 | 2.49 |
| 70.50 | 300.00 | 0.02 | 0.94 | 5.38 |
| 70.75 | 300.00 | 0.02 | 0.61 | 3.68 |
| 71.00 | 225.00 | 0.01 | 2.08 | 6.74 |
| 71.25 | 300.00 | 0.02 | 0.61 | 3.52 |
| 71.50 | 375.00 | 0.02 | 0.28 | 2.50 |
| 71.75 | 225.00 | 0.01 | 1.70 | 5.49 |
| 72.00 | 300.00 | 0.02 | 0.57 | 3.43 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 13 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 13

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# APPENDIX E:

## x. 24 Hour, 2-Year Storm

## HYCROSS.OUT File

THE MAXIMUM DISCHARGE FROM CROSS SECTION 1 IS: 256.93 CFS AT TIME: 18.17 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 20.23 AF

NOTE: THE MAXIMUM DISCHARGE AT THIS CROSS SECTION INCLUDES THE CHANNEL DISCHARGE
THE HYDRAULIC VARIABLES IN THE TABLE BELOW ARE COMPUTED FOR THE FLOODPLAIN FLOW (DEPTH > TOL) ONLY
IF THE HYDRAULIC VARIABLES ARE ZERO IN THE TABLE BELOW, ALL THE DISCHARGE IS IN THE CHANNEL

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 1

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 6.75 |
| 14.75 | 0.00 | 0.00 | 0.00 | 15.19 |
| 15.00 | 0.00 | 0.00 | 0.00 | 17.66 |
| 15.25 | 0.00 | 0.00 | 0.00 | 3.37 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 2.23 |
| 16.00 | 0.00 | 0.00 | 0.00 | 45.62 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 36.04 |
| 16.75 | 0.00 | 0.00 | 0.00 | 59.02 |
| 17.00 | 0.00 | 0.00 | 0.00 | 76.78 |
| 17.25 | 0.00 | 0.00 | 0.00 | 73.25 |
| 17.50 | 0.00 | 0.00 | 0.00 | 22.78 |
| 17.75 | 0.00 | 0.00 | 0.00 | 119.07 |
| 18.00 | 0.00 | 0.00 | 0.00 | 73.70 |
| 18.25 | 0.00 | 0.00 | 0.00 | 11.58 |
| 18.50 | 0.00 | 0.00 | 0.00 | 8.07 |
| 18.75 | 0.00 | 0.00 | 0.00 | 1.03 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 55.72 |
| 19.50 | 0.00 | 0.00 | 0.00 | 55.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 89.05 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 49.68 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 22.89 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |


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| | | | | |
|---|---|---|---|---|
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

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|---|---|---|---|---|
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 2 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 2

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 3 IS: 8.47 CFS AT TIME: 31.60 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 4.52 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 3



BSE Document Control Number: 7323HYD101

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 150.00 | 0.01 | 0.81 | 1.34 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 29.75 | 225.00 | 0.02 | 1.42 | 5.83 |
| 30.00 | 300.00 | 0.02 | 1.07 | 7.00 |
| 30.25 | 300.00 | 0.02 | 1.09 | 7.48 |
| 30.50 | 300.00 | 0.02 | 1.08 | 7.44 |
| 30.75 | 300.00 | 0.02 | 0.92 | 6.36 |
| 31.00 | 375.00 | 0.03 | 0.65 | 6.34 |
| 31.25 | 300.00 | 0.02 | 1.07 | 7.41 |
| 31.50 | 300.00 | 0.02 | 0.92 | 6.28 |
| 31.75 | 300.00 | 0.02 | 1.08 | 7.22 |
| 32.00 | 375.00 | 0.02 | 0.73 | 6.81 |
| 32.25 | 375.00 | 0.02 | 0.72 | 6.68 |
| 32.50 | 375.00 | 0.02 | 0.80 | 7.32 |
| 32.75 | 375.00 | 0.02 | 0.62 | 5.62 |
| 33.00 | 450.00 | 0.03 | 0.63 | 7.62 |
| 33.25 | 375.00 | 0.02 | 0.71 | 6.40 |
| 33.50 | 375.00 | 0.02 | 0.84 | 7.42 |
| 33.75 | 375.00 | 0.02 | 0.85 | 7.49 |
| 34.00 | 450.00 | 0.03 | 0.44 | 5.14 |
| 34.25 | 300.00 | 0.02 | 0.85 | 5.08 |
| 34.50 | 300.00 | 0.02 | 1.19 | 7.06 |
| 34.75 | 450.00 | 0.03 | 0.45 | 5.13 |
| 35.00 | 300.00 | 0.02 | 1.05 | 6.11 |
| 35.25 | 450.00 | 0.02 | 0.34 | 3.81 |
| 35.50 | 225.00 | 0.02 | 1.76 | 5.94 |
| 35.75 | 300.00 | 0.02 | 0.83 | 4.61 |
| 36.00 | 300.00 | 0.02 | 0.81 | 4.44 |
| 36.25 | 225.00 | 0.01 | 1.39 | 4.43 |
| 36.50 | 225.00 | 0.01 | 1.39 | 4.29 |
| 36.75 | 300.00 | 0.02 | 1.21 | 6.30 |
| 37.00 | 150.00 | 0.01 | 3.73 | 5.07 |
| 37.25 | 225.00 | 0.01 | 0.98 | 2.68 |
| 37.50 | 225.00 | 0.01 | 1.31 | 3.44 |
| 37.75 | 450.00 | 0.02 | 0.12 | 1.18 |
| 38.00 | 300.00 | 0.02 | 0.70 | 3.23 |
| 38.25 | 300.00 | 0.01 | 0.80 | 3.42 |
| 38.50 | 375.00 | 0.02 | 0.19 | 1.30 |
| 38.75 | 300.00 | 0.02 | 0.66 | 3.06 |
| 39.00 | 300.00 | 0.01 | 0.63 | 2.71 |
| 39.25 | 150.00 | 0.01 | 2.64 | 3.06 |
| 39.50 | 75.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 150.00 | 0.01 | 2.52 | 3.03 |
| 40.00 | 75.00 | 0.00 | 5.96 | 1.79 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 225.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 150.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 1.30 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 2.58 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 4 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 4

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 5 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 5

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 6 IS: 757.55 CFS AT TIME: 17.14 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 405.34 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 6

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 375.00 | 0.02 | 3.60 | 26.13 |
| 14.25 | 525.00 | 0.03 | 2.72 | 37.14 |
| 14.50 | 825.00 | 0.03 | 1.57 | 42.37 |
| 14.75 | 975.00 | 0.04 | 1.32 | 48.73 |
| 15.00 | 1200.00 | 0.07 | 1.45 | 113.37 |
| 15.25 | 1500.00 | 0.10 | 1.25 | 194.05 |
| 15.50 | 2100.00 | 0.15 | 1.02 | 316.35 |
| 15.75 | 2400.00 | 0.18 | 0.94 | 406.86 |
| 16.00 | 2475.00 | 0.20 | 0.96 | 471.25 |
| 16.25 | 2475.00 | 0.21 | 1.00 | 529.70 |
| 16.50 | 2475.00 | 0.23 | 1.10 | 628.96 |
| 16.75 | 2475.00 | 0.25 | 1.18 | 726.03 |
| 17.00 | 2475.00 | 0.25 | 1.21 | 752.92 |
| 17.25 | 2475.00 | 0.25 | 1.22 | 753.33 |
| 17.50 | 2550.00 | 0.24 | 1.18 | 732.55 |
| 17.75 | 2550.00 | 0.24 | 1.16 | 697.81 |
| 18.00 | 2475.00 | 0.23 | 1.16 | 657.14 |
| 18.25 | 2550.00 | 0.22 | 1.10 | 618.61 |
| 18.50 | 2550.00 | 0.21 | 1.10 | 599.26 |
| 18.75 | 2475.00 | 0.21 | 1.10 | 571.88 |


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|---|---|---|---|---|
| 19.00 | 2550.00 | 0.20 | 1.05 | 540.16 |
| 19.25 | 2475.00 | 0.19 | 1.05 | 506.36 |
| 19.50 | 2475.00 | 0.19 | 1.02 | 470.19 |
| 19.75 | 2475.00 | 0.18 | 0.99 | 435.77 |
| 20.00 | 2475.00 | 0.17 | 0.96 | 404.67 |
| 20.25 | 2475.00 | 0.16 | 0.93 | 380.00 |
| 20.50 | 2475.00 | 0.16 | 0.90 | 352.94 |
| 20.75 | 2475.00 | 0.15 | 0.88 | 328.83 |
| 21.00 | 2475.00 | 0.15 | 0.85 | 307.80 |
| 21.25 | 2475.00 | 0.14 | 0.83 | 290.63 |
| 21.50 | 2475.00 | 0.14 | 0.81 | 273.97 |
| 21.75 | 2475.00 | 0.13 | 0.79 | 257.27 |
| 22.00 | 2475.00 | 0.13 | 0.76 | 240.64 |
| 22.25 | 2400.00 | 0.12 | 0.77 | 228.49 |
| 22.50 | 2400.00 | 0.12 | 0.76 | 217.08 |
| 22.75 | 2400.00 | 0.12 | 0.75 | 207.19 |
| 23.00 | 2400.00 | 0.11 | 0.74 | 199.47 |
| 23.25 | 2475.00 | 0.11 | 0.69 | 190.18 |
| 23.50 | 2325.00 | 0.11 | 0.74 | 183.51 |
| 23.75 | 2325.00 | 0.11 | 0.72 | 177.60 |
| 24.00 | 2325.00 | 0.10 | 0.71 | 172.12 |
| 24.25 | 2325.00 | 0.10 | 0.71 | 171.96 |
| 24.50 | 2250.00 | 0.10 | 0.74 | 170.77 |
| 24.75 | 2175.00 | 0.10 | 0.78 | 171.95 |
| 25.00 | 2250.00 | 0.10 | 0.75 | 172.47 |
| 25.25 | 2475.00 | 0.11 | 0.65 | 171.14 |
| 25.50 | 2325.00 | 0.10 | 0.71 | 172.08 |
| 25.75 | 2325.00 | 0.10 | 0.71 | 169.09 |
| 26.00 | 2400.00 | 0.10 | 0.66 | 161.96 |
| 26.25 | 2100.00 | 0.09 | 0.79 | 157.02 |
| 26.50 | 2325.00 | 0.10 | 0.65 | 145.51 |
| 26.75 | 2325.00 | 0.09 | 0.63 | 137.45 |
| 27.00 | 2325.00 | 0.09 | 0.61 | 129.74 |
| 27.25 | 2175.00 | 0.09 | 0.67 | 123.58 |
| 27.50 | 2250.00 | 0.08 | 0.61 | 114.87 |
| 27.75 | 2100.00 | 0.08 | 0.66 | 110.29 |
| 28.00 | 2025.00 | 0.08 | 0.69 | 105.62 |
| 28.25 | 2025.00 | 0.07 | 0.66 | 99.15 |
| 28.50 | 1875.00 | 0.07 | 0.72 | 94.81 |
| 28.75 | 1950.00 | 0.07 | 0.66 | 89.68 |
| 29.00 | 2100.00 | 0.07 | 0.57 | 84.45 |
| 29.25 | 1950.00 | 0.07 | 0.62 | 80.04 |
| 29.50 | 1950.00 | 0.06 | 0.62 | 78.06 |
| 29.75 | 1875.00 | 0.06 | 0.63 | 71.96 |
| 30.00 | 2025.00 | 0.06 | 0.52 | 65.24 |
| 30.25 | 2025.00 | 0.06 | 0.52 | 63.20 |
| 30.50 | 2025.00 | 0.06 | 0.50 | 60.10 |
| 30.75 | 2100.00 | 0.06 | 0.46 | 56.98 |
| 31.00 | 1875.00 | 0.05 | 0.55 | 55.75 |
| 31.25 | 1950.00 | 0.05 | 0.49 | 52.42 |
| 31.50 | 1800.00 | 0.05 | 0.55 | 51.40 |
| 31.75 | 2025.00 | 0.05 | 0.45 | 49.62 |
| 32.00 | 1725.00 | 0.05 | 0.55 | 46.45 |
| 32.25 | 1725.00 | 0.05 | 0.53 | 44.19 |
| 32.50 | 1650.00 | 0.05 | 0.52 | 39.49 |
| 32.75 | 1650.00 | 0.04 | 0.56 | 41.08 |
| 33.00 | 1650.00 | 0.04 | 0.52 | 37.79 |
| 33.25 | 1500.00 | 0.04 | 0.55 | 33.57 |
| 33.50 | 1650.00 | 0.04 | 0.48 | 33.51 |
| 33.75 | 1725.00 | 0.04 | 0.40 | 29.27 |
| 34.00 | 1650.00 | 0.04 | 0.43 | 28.40 |
| 34.25 | 1575.00 | 0.04 | 0.46 | 27.44 |
| 34.50 | 1575.00 | 0.04 | 0.44 | 26.11 |
| 34.75 | 1275.00 | 0.03 | 0.61 | 24.69 |
| 35.00 | 1200.00 | 0.03 | 0.59 | 21.73 |
| 35.25 | 1350.00 | 0.03 | 0.50 | 21.71 |
| 35.50 | 1275.00 | 0.03 | 0.53 | 20.87 |
| 35.75 | 1425.00 | 0.03 | 0.43 | 19.86 |
| 36.00 | 1275.00 | 0.03 | 0.48 | 17.99 |
| 36.25 | 1125.00 | 0.03 | 0.58 | 17.20 |
| 36.50 | 1350.00 | 0.03 | 0.39 | 15.40 |
| 36.75 | 975.00 | 0.02 | 0.70 | 15.38 |
| 37.00 | 975.00 | 0.02 | 0.57 | 12.30 |
| 37.25 | 975.00 | 0.02 | 0.49 | 10.26 |
| 37.50 | 1275.00 | 0.03 | 0.32 | 10.52 |
| 37.75 | 750.00 | 0.02 | 1.04 | 13.45 |
| 38.00 | 975.00 | 0.02 | 0.48 | 9.65 |
| 38.25 | 1200.00 | 0.02 | 0.33 | 9.50 |
| 38.50 | 900.00 | 0.02 | 0.50 | 8.42 |
| 38.75 | 900.00 | 0.02 | 0.55 | 9.28 |
| 39.00 | 675.00 | 0.01 | 0.94 | 9.38 |
| 39.25 | 900.00 | 0.02 | 0.52 | 8.62 |
| 39.50 | 900.00 | 0.02 | 0.51 | 8.30 |
| 39.75 | 750.00 | 0.02 | 0.74 | 8.65 |
| 40.00 | 750.00 | 0.02 | 0.49 | 5.70 |
| 40.25 | 675.00 | 0.01 | 0.48 | 4.64 |
| 40.50 | 600.00 | 0.01 | 0.97 | 7.49 |
| 40.75 | 675.00 | 0.01 | 0.68 | 6.41 |
| 41.00 | 675.00 | 0.01 | 0.62 | 5.72 |
| 41.25 | 825.00 | 0.02 | 0.56 | 7.40 |
| 41.50 | 675.00 | 0.01 | 0.77 | 6.95 |
| 41.75 | 675.00 | 0.01 | 0.62 | 5.50 |
| 42.00 | 750.00 | 0.01 | 0.32 | 3.44 |
| 42.25 | 825.00 | 0.02 | 0.28 | 3.45 |
| 42.50 | 750.00 | 0.01 | 0.35 | 3.64 |
| 42.75 | 300.00 | 0.01 | 1.93 | 3.61 |
| 43.00 | 675.00 | 0.01 | 0.64 | 5.27 |
| 43.25 | 450.00 | 0.01 | 1.19 | 4.49 |
| 43.50 | 525.00 | 0.01 | 1.01 | 5.02 |
| 43.75 | 600.00 | 0.01 | 0.79 | 4.99 |
| 44.00 | 375.00 | 0.01 | 1.18 | 3.00 |
| 44.25 | 300.00 | 0.01 | 3.06 | 5.00 |
| 44.50 | 600.00 | 0.01 | 0.68 | 4.17 |
| 44.75 | 450.00 | 0.01 | 0.59 | 2.06 |
| 45.00 | 450.00 | 0.01 | 0.74 | 2.58 |
| 45.25 | 300.00 | 0.01 | 2.80 | 4.42 |
| 45.50 | 300.00 | 0.01 | 0.75 | 1.17 |
| 45.75 | 375.00 | 0.01 | 0.80 | 1.92 |
| 46.00 | 375.00 | 0.01 | 0.99 | 2.34 |
| 46.25 | 300.00 | 0.01 | 0.94 | 1.43 |
| 46.50 | 375.00 | 0.01 | 1.22 | 2.86 |
| 46.75 | 375.00 | 0.01 | 0.70 | 1.62 |
| 47.00 | 375.00 | 0.01 | 1.52 | 3.48 |
| 47.25 | 150.00 | 0.00 | 4.37 | 1.61 |
| 47.50 | 450.00 | 0.01 | 0.38 | 1.24 |
| 47.75 | 150.00 | 0.00 | 0.49 | 0.18 |
| 48.00 | 150.00 | 0.00 | 0.24 | 0.09 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.66 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.47 |
| 48.75 | 150.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 75.00 | 0.00 | -1.58 | -0.17 |
| 49.25 | 75.00 | 0.00 | 0.00 | 0.00 |



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| | | | | |
|---|---|---|---|---|
| 49.50 | 0.00 | 0.00 | 0.00 | 1.15 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 75.00 | 0.00 | 3.33 | 0.45 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 7 IS: 3.36 CFS AT TIME: 18.46 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.18 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 7

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 75.00 | 0.02 | 1.14 | 1.82 |
| 17.50 | 75.00 | 0.01 | 1.68 | 1.86 |
| 17.75 | 0.00 | 0.00 | 0.00 | 1.80 |
| 18.00 | 75.00 | 0.01 | 1.74 | 1.87 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.95 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 8 IS: 67.00 CFS AT TIME: 20.71 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 26.29 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 8

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 600.00 | 0.08 | 1.25 | 61.54 |
| 20.50 | 750.00 | 0.08 | 0.97 | 60.90 |
| 20.75 | 825.00 | 0.09 | 0.87 | 61.85 |
| 21.00 | 825.00 | 0.09 | 0.88 | 63.38 |
| 21.25 | 750.00 | 0.08 | 0.98 | 59.15 |
| 21.50 | 825.00 | 0.08 | 0.79 | 54.75 |
| 21.75 | 750.00 | 0.08 | 0.92 | 53.70 |


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| | | | | |
|---|---|---|---|---|
| 22.00 | 825.00 | 0.08 | 0.78 | 52.17 |
| 22.25 | 825.00 | 0.08 | 0.72 | 47.38 |
| 22.50 | 825.00 | 0.08 | 0.70 | 44.47 |
| 22.75 | 825.00 | 0.08 | 0.66 | 41.91 |
| 23.00 | 825.00 | 0.07 | 0.59 | 35.94 |
| 23.25 | 825.00 | 0.07 | 0.59 | 36.00 |
| 23.50 | 825.00 | 0.07 | 0.60 | 35.31 |
| 23.75 | 825.00 | 0.07 | 0.53 | 30.94 |
| 24.00 | 825.00 | 0.07 | 0.52 | 28.74 |
| 24.25 | 750.00 | 0.06 | 0.63 | 28.54 |
| 24.50 | 750.00 | 0.06 | 0.64 | 28.57 |
| 24.75 | 750.00 | 0.06 | 0.61 | 26.34 |
| 25.00 | 750.00 | 0.06 | 0.55 | 23.87 |
| 25.25 | 750.00 | 0.06 | 0.56 | 23.38 |
| 25.50 | 750.00 | 0.05 | 0.49 | 20.16 |
| 25.75 | 675.00 | 0.05 | 0.58 | 18.96 |
| 26.00 | 750.00 | 0.05 | 0.52 | 20.13 |
| 26.25 | 675.00 | 0.05 | 0.64 | 19.71 |
| 26.50 | 600.00 | 0.04 | 0.63 | 15.51 |
| 26.75 | 525.00 | 0.04 | 0.96 | 18.48 |
| 27.00 | 825.00 | 0.05 | 0.33 | 14.45 |
| 27.25 | 675.00 | 0.04 | 0.53 | 15.99 |
| 27.50 | 750.00 | 0.05 | 0.31 | 11.23 |
| 27.75 | 750.00 | 0.05 | 0.33 | 11.89 |
| 28.00 | 525.00 | 0.04 | 0.60 | 11.06 |
| 28.25 | 525.00 | 0.03 | 0.78 | 14.21 |
| 28.50 | 600.00 | 0.04 | 0.58 | 13.74 |
| 28.75 | 600.00 | 0.04 | 0.51 | 12.35 |
| 29.00 | 525.00 | 0.04 | 0.69 | 13.10 |
| 29.25 | 825.00 | 0.05 | 0.27 | 12.03 |
| 29.50 | 675.00 | 0.04 | 0.46 | 13.74 |
| 29.75 | 675.00 | 0.04 | 0.46 | 13.83 |
| 30.00 | 675.00 | 0.04 | 0.40 | 11.77 |
| 30.25 | 750.00 | 0.05 | 0.34 | 11.73 |
| 30.50 | 675.00 | 0.04 | 0.44 | 12.30 |
| 30.75 | 675.00 | 0.04 | 0.33 | 9.05 |
| 31.00 | 375.00 | 0.02 | 1.03 | 9.12 |
| 31.25 | 375.00 | 0.02 | 1.36 | 11.87 |
| 31.50 | 375.00 | 0.02 | 0.80 | 6.85 |
| 31.75 | 150.00 | 0.01 | 2.42 | 5.08 |
| 32.00 | 375.00 | 0.02 | 0.68 | 5.64 |
| 32.25 | 225.00 | 0.02 | 1.44 | 5.83 |
| 32.50 | 375.00 | 0.03 | 0.43 | 4.00 |
| 32.75 | 75.00 | 0.00 | 6.49 | 2.04 |
| 33.00 | 0.00 | 0.00 | 0.00 | 1.18 |
| 33.25 | 75.00 | 0.01 | 6.47 | 2.86 |
| 33.50 | 225.00 | 0.01 | 1.61 | 4.95 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 75.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 300.00 | 0.02 | 0.72 | 4.10 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.86 |
| 35.25 | 75.00 | 0.00 | 3.67 | 1.25 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 1.26 |
| 36.25 | 150.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 9 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 9

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 10 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 10

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 11 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 11

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

THE MAXIMUM DISCHARGE FROM CROSS SECTION 12 IS: 7.76 CFS AT TIME: 70.98 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 20.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 12

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 75.00 | 0.01 | 0.85 | 0.41 |
| 23.75 | 225.00 | 0.02 | 1.23 | 5.15 |
| 24.00 | 225.00 | 0.02 | 1.57 | 6.09 |
| 24.25 | 300.00 | 0.02 | 1.13 | 7.19 |
| 24.50 | 300.00 | 0.02 | 0.88 | 5.54 |
| 24.75 | 75.00 | 0.01 | 12.78 | 7.04 |
| 25.00 | 300.00 | 0.02 | 1.17 | 6.92 |
| 25.25 | 300.00 | 0.02 | 0.80 | 4.83 |
| 25.50 | 75.00 | 0.01 | 11.46 | 5.06 |
| 25.75 | 300.00 | 0.02 | 0.63 | 3.59 |
| 26.00 | 225.00 | 0.01 | 1.73 | 5.61 |
| 26.25 | 150.00 | 0.01 | 3.33 | 5.27 |
| 26.50 | 225.00 | 0.02 | 1.38 | 4.70 |
| 26.75 | 225.00 | 0.01 | 0.42 | 1.36 |
| 27.00 | 225.00 | 0.01 | 1.91 | 6.16 |
| 27.25 | 375.00 | 0.02 | 0.45 | 4.02 |
| 27.50 | 225.00 | 0.01 | 0.32 | 1.02 |
| 27.75 | 300.00 | 0.02 | 0.35 | 2.02 |


BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 28.00 | 150.00 | 0.01 | 0.99 | 1.49 |
| 28.25 | 150.00 | 0.01 | 2.02 | 3.20 |
| 28.50 | 375.00 | 0.02 | 0.15 | 1.38 |
| 28.75 | 375.00 | 0.02 | 0.53 | 4.71 |
| 29.00 | 300.00 | 0.02 | 0.44 | 2.67 |
| 29.25 | 225.00 | 0.02 | 1.12 | 3.80 |
| 29.50 | 300.00 | 0.02 | 0.63 | 3.86 |
| 29.75 | 375.00 | 0.02 | 0.52 | 4.76 |
| 30.00 | 150.00 | 0.01 | 2.83 | 4.28 |
| 30.25 | 300.00 | 0.02 | 0.82 | 4.83 |
| 30.50 | 225.00 | 0.02 | 1.41 | 5.29 |
| 30.75 | 300.00 | 0.02 | 0.46 | 2.88 |
| 31.00 | 300.00 | 0.02 | 0.44 | 2.79 |
| 31.25 | 375.00 | 0.02 | 0.47 | 4.34 |
| 31.50 | 375.00 | 0.02 | 0.75 | 7.01 |
| 31.75 | 150.00 | 0.01 | 3.07 | 5.64 |
| 32.00 | 150.00 | 0.01 | 3.41 | 5.64 |
| 32.25 | 375.00 | 0.02 | 0.46 | 4.31 |
| 32.50 | 225.00 | 0.02 | 1.25 | 4.32 |
| 32.75 | 150.00 | 0.01 | 2.60 | 4.82 |
| 33.00 | 300.00 | 0.02 | 1.07 | 6.42 |
| 33.25 | 300.00 | 0.02 | 0.95 | 5.71 |
| 33.50 | 225.00 | 0.02 | 0.78 | 2.84 |
| 33.75 | 300.00 | 0.02 | 0.66 | 3.97 |
| 34.00 | 300.00 | 0.02 | 0.57 | 3.45 |
| 34.25 | 300.00 | 0.02 | 0.82 | 4.97 |
| 34.50 | 150.00 | 0.01 | 2.68 | 4.94 |
| 34.75 | 300.00 | 0.02 | 0.81 | 4.91 |
| 35.00 | 375.00 | 0.02 | 0.14 | 1.28 |
| 35.25 | 300.00 | 0.02 | 1.15 | 6.97 |
| 35.50 | 300.00 | 0.02 | 0.66 | 3.96 |
| 35.75 | 300.00 | 0.02 | 0.28 | 1.78 |
| 36.00 | 300.00 | 0.02 | 0.63 | 3.76 |
| 36.25 | 300.00 | 0.02 | 0.77 | 4.90 |
| 36.50 | 225.00 | 0.02 | 2.01 | 6.93 |
| 36.75 | 300.00 | 0.02 | 1.17 | 7.07 |
| 37.00 | 300.00 | 0.02 | 0.91 | 5.50 |
| 37.25 | 300.00 | 0.02 | 0.71 | 4.53 |
| 37.50 | 150.00 | 0.01 | 4.46 | 7.10 |
| 37.75 | 375.00 | 0.03 | 0.37 | 3.48 |
| 38.00 | 375.00 | 0.02 | 0.47 | 4.40 |
| 38.25 | 225.00 | 0.02 | 1.53 | 5.61 |
| 38.50 | 225.00 | 0.02 | 1.94 | 7.11 |
| 38.75 | 300.00 | 0.02 | 0.67 | 4.09 |
| 39.00 | 375.00 | 0.03 | 0.53 | 5.01 |
| 39.25 | 375.00 | 0.03 | 0.60 | 5.67 |
| 39.50 | 300.00 | 0.02 | 0.55 | 3.50 |
| 39.75 | 300.00 | 0.02 | 0.21 | 1.34 |
| 40.00 | 300.00 | 0.02 | 1.03 | 6.32 |
| 40.25 | 300.00 | 0.02 | 0.67 | 4.11 |
| 40.50 | 225.00 | 0.02 | 1.54 | 5.68 |
| 40.75 | 375.00 | 0.03 | 0.36 | 3.37 |
| 41.00 | 375.00 | 0.03 | 0.54 | 5.08 |
| 41.25 | 225.00 | 0.02 | 1.30 | 5.02 |
| 41.50 | 225.00 | 0.02 | 1.59 | 5.87 |
| 41.75 | 300.00 | 0.02 | 0.92 | 5.63 |
| 42.00 | 300.00 | 0.02 | 0.83 | 5.07 |
| 42.25 | 300.00 | 0.02 | 0.47 | 3.02 |
| 42.50 | 375.00 | 0.03 | 0.62 | 5.84 |
| 42.75 | 375.00 | 0.03 | 0.55 | 5.17 |
| 43.00 | 300.00 | 0.02 | 0.96 | 5.87 |
| 43.25 | 225.00 | 0.02 | 2.04 | 7.17 |
| 43.50 | 300.00 | 0.02 | 0.54 | 3.34 |
| 43.75 | 300.00 | 0.02 | 0.74 | 4.52 |
| 44.00 | 375.00 | 0.03 | 0.53 | 5.02 |
| 44.25 | 300.00 | 0.02 | 0.81 | 5.21 |
| 44.50 | 375.00 | 0.03 | 0.53 | 5.02 |
| 44.75 | 225.00 | 0.02 | 1.26 | 4.44 |
| 45.00 | 375.00 | 0.03 | 0.42 | 3.94 |
| 45.25 | 300.00 | 0.02 | 0.91 | 5.56 |
| 45.50 | 375.00 | 0.03 | 0.48 | 4.53 |
| 45.75 | 375.00 | 0.03 | 0.62 | 5.86 |
| 46.00 | 375.00 | 0.03 | 0.43 | 4.10 |
| 46.25 | 375.00 | 0.03 | 0.62 | 5.87 |
| 46.50 | 300.00 | 0.02 | 1.16 | 7.09 |
| 46.75 | 300.00 | 0.02 | 0.81 | 4.99 |
| 47.00 | 300.00 | 0.02 | 0.91 | 5.58 |
| 47.25 | 150.00 | 0.01 | 2.81 | 5.09 |
| 47.50 | 300.00 | 0.02 | 0.82 | 5.04 |
| 47.75 | 300.00 | 0.02 | 0.67 | 4.13 |
| 48.00 | 300.00 | 0.02 | 0.82 | 5.03 |
| 48.25 | 300.00 | 0.02 | 0.75 | 4.60 |
| 48.50 | 300.00 | 0.02 | 0.29 | 1.85 |
| 48.75 | 375.00 | 0.03 | 0.20 | 1.85 |
| 49.00 | 225.00 | 0.02 | 1.24 | 4.37 |
| 49.25 | 375.00 | 0.03 | 0.67 | 6.34 |
| 49.50 | 300.00 | 0.02 | 1.16 | 7.10 |
| 49.75 | 225.00 | 0.02 | 2.01 | 7.11 |
| 50.00 | 300.00 | 0.02 | 0.71 | 4.57 |
| 50.25 | 300.00 | 0.02 | 0.81 | 4.99 |
| 50.50 | 375.00 | 0.03 | 0.47 | 4.45 |
| 50.75 | 375.00 | 0.03 | 0.74 | 7.05 |
| 51.00 | 225.00 | 0.02 | 1.09 | 4.27 |
| 51.25 | 150.00 | 0.01 | 3.10 | 5.92 |
| 51.50 | 300.00 | 0.02 | 1.00 | 6.18 |
| 51.75 | 300.00 | 0.02 | 0.53 | 3.45 |
| 52.00 | 300.00 | 0.02 | 0.82 | 5.07 |
| 52.25 | 375.00 | 0.03 | 0.45 | 4.31 |
| 52.50 | 225.00 | 0.02 | 1.44 | 5.60 |
| 52.75 | 375.00 | 0.03 | 0.53 | 5.05 |
| 53.00 | 300.00 | 0.02 | 0.91 | 5.57 |
| 53.25 | 300.00 | 0.02 | 1.06 | 6.50 |
| 53.50 | 375.00 | 0.03 | 0.26 | 2.43 |
| 53.75 | 300.00 | 0.02 | 0.78 | 5.03 |
| 54.00 | 375.00 | 0.03 | 0.32 | 3.06 |
| 54.25 | 300.00 | 0.02 | 0.55 | 3.53 |
| 54.50 | 225.00 | 0.02 | 0.59 | 2.32 |
| 54.75 | 375.00 | 0.03 | 0.41 | 3.86 |
| 55.00 | 300.00 | 0.02 | 1.13 | 6.96 |
| 55.25 | 300.00 | 0.02 | 1.08 | 6.61 |
| 55.50 | 225.00 | 0.02 | 1.59 | 5.63 |
| 55.75 | 375.00 | 0.03 | 0.59 | 5.59 |
| 56.00 | 300.00 | 0.02 | 0.92 | 5.64 |
| 56.25 | 300.00 | 0.02 | 0.56 | 3.43 |
| 56.50 | 300.00 | 0.02 | 1.07 | 6.57 |
| 56.75 | 375.00 | 0.03 | 0.68 | 6.48 |
| 57.00 | 375.00 | 0.03 | 0.61 | 5.75 |
| 57.25 | 375.00 | 0.03 | 0.54 | 5.08 |
| 57.50 | 300.00 | 0.02 | 1.18 | 7.23 |
| 57.75 | 375.00 | 0.03 | 0.63 | 5.98 |
| 58.00 | 300.00 | 0.02 | 1.16 | 7.15 |
| 58.25 | 225.00 | 0.02 | 1.59 | 5.62 |



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| | | | | |
|---|---|---|---|---|
| 58.50 | 375.00 | 0.03 | 0.38 | 3.56 |
| 58.75 | 225.00 | 0.02 | 1.25 | 4.64 |
| 59.00 | 150.00 | 0.01 | 4.03 | 6.60 |
| 59.25 | 300.00 | 0.02 | 0.76 | 4.90 |
| 59.50 | 375.00 | 0.03 | 0.62 | 5.94 |
| 59.75 | 375.00 | 0.03 | 0.53 | 4.99 |
| 60.00 | 300.00 | 0.02 | 1.06 | 6.50 |
| 60.25 | 225.00 | 0.02 | 1.67 | 5.89 |
| 60.50 | 225.00 | 0.02 | 1.11 | 4.13 |
| 60.75 | 150.00 | 0.01 | 3.11 | 5.64 |
| 61.00 | 300.00 | 0.02 | 0.91 | 5.62 |
| 61.25 | 375.00 | 0.03 | 0.56 | 5.25 |
| 61.50 | 300.00 | 0.02 | 0.77 | 5.01 |
| 61.75 | 300.00 | 0.02 | 1.15 | 7.09 |
| 62.00 | 225.00 | 0.02 | 2.01 | 7.07 |
| 62.25 | 375.00 | 0.03 | 0.59 | 5.58 |
| 62.50 | 300.00 | 0.02 | 0.95 | 5.85 |
| 62.75 | 300.00 | 0.02 | 0.92 | 5.68 |
| 63.00 | 300.00 | 0.02 | 0.91 | 5.59 |
| 63.25 | 375.00 | 0.03 | 0.43 | 4.06 |
| 63.50 | 375.00 | 0.03 | 0.42 | 3.95 |
| 63.75 | 300.00 | 0.02 | 0.66 | 4.04 |
| 64.00 | 300.00 | 0.02 | 0.56 | 3.43 |
| 64.25 | 375.00 | 0.03 | 0.61 | 5.73 |
| 64.50 | 300.00 | 0.02 | 1.17 | 7.20 |
| 64.75 | 300.00 | 0.02 | 1.16 | 7.15 |
| 65.00 | 300.00 | 0.02 | 0.82 | 5.05 |
| 65.25 | 300.00 | 0.02 | 0.81 | 5.01 |
| 65.50 | 375.00 | 0.03 | 0.42 | 4.02 |
| 65.75 | 300.00 | 0.02 | 0.68 | 4.19 |
| 66.00 | 375.00 | 0.03 | 0.53 | 5.04 |
| 66.25 | 300.00 | 0.02 | 0.55 | 3.52 |
| 66.50 | 300.00 | 0.02 | 0.91 | 5.89 |
| 66.75 | 300.00 | 0.02 | 0.69 | 4.26 |
| 67.00 | 300.00 | 0.02 | 0.56 | 3.48 |
| 67.25 | 300.00 | 0.02 | 1.17 | 7.22 |
| 67.50 | 300.00 | 0.02 | 0.91 | 5.59 |
| 67.75 | 225.00 | 0.02 | 1.65 | 6.17 |
| 68.00 | 300.00 | 0.02 | 0.61 | 3.96 |
| 68.25 | 375.00 | 0.03 | 0.37 | 3.51 |
| 68.50 | 375.00 | 0.03 | 0.70 | 6.62 |
| 68.75 | 225.00 | 0.02 | 1.91 | 7.10 |
| 69.00 | 150.00 | 0.01 | 2.58 | 4.95 |
| 69.25 | 300.00 | 0.02 | 0.94 | 5.77 |
| 69.50 | 225.00 | 0.02 | 1.58 | 5.61 |
| 69.75 | 375.00 | 0.03 | 0.54 | 5.07 |
| 70.00 | 375.00 | 0.03 | 0.53 | 5.04 |
| 70.25 | 300.00 | 0.02 | 0.61 | 3.78 |
| 70.50 | 300.00 | 0.02 | 0.89 | 5.51 |
| 70.75 | 375.00 | 0.03 | 0.53 | 5.07 |
| 71.00 | 300.00 | 0.02 | 0.66 | 4.09 |
| 71.25 | 300.00 | 0.02 | 0.94 | 5.76 |
| 71.50 | 225.00 | 0.02 | 2.03 | 7.19 |
| 71.75 | 375.00 | 0.03 | 0.76 | 7.22 |
| 72.00 | 300.00 | 0.02 | 0.81 | 4.98 |

THE MAXIMUM DISCHARGE FROM CROSS SECTION 13 IS: 0.00 CFS AT TIME: 0.00 HOURS
THE TOTAL VOLUME OF DISCHARGE IS: 0.00 AF

HYDROGRAPH AND AVERAGE FLOODPLAIN HYDRAULICS FOR CROSS SECTION NO: 13

| TIME (HRS) | TOPWID (FT) | DEPTH (FT) | VELOCITY (FPS) | DISCHARGE (CFS) |
|---|---|---|---|---|
| 0.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 0.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 1.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 2.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 3.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 4.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 5.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 6.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 7.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 8.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 9.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 10.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 11.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 12.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 13.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.00 | 0.00 | 0.00 | 0.00 | 0.00 |

| | | | | |
|---|---|---|---|---|
| 14.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 14.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 15.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 16.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 17.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 18.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 19.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 20.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 21.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 22.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 23.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 24.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 25.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 26.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 27.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 28.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 29.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 30.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 31.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 32.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 33.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 34.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 35.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 36.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 37.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 38.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 39.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 40.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 41.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 42.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 43.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 44.50 | 0.00 | 0.00 | 0.00 | 0.00 |



BSE Document Control Number: 7323HYD101

| | | | | |
|---|---|---|---|---|
| 44.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 45.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 46.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 47.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 48.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 49.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 50.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 51.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 52.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 53.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 54.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 55.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 56.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 57.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 58.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 59.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 60.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 61.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 62.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 63.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 64.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 65.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 66.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 67.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 68.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 69.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 70.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.25 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.50 | 0.00 | 0.00 | 0.00 | 0.00 |
| 71.75 | 0.00 | 0.00 | 0.00 | 0.00 |
| 72.00 | 0.00 | 0.00 | 0.00 | 0.00 |

# APPENDIX F:

# HEC-RAS Analysis

# APPENDIX F:

i. HEC-RAS report 24-Hour, 100-Year Storm

HEC-RAS Plan: Plan 07 Profile: 100 YR

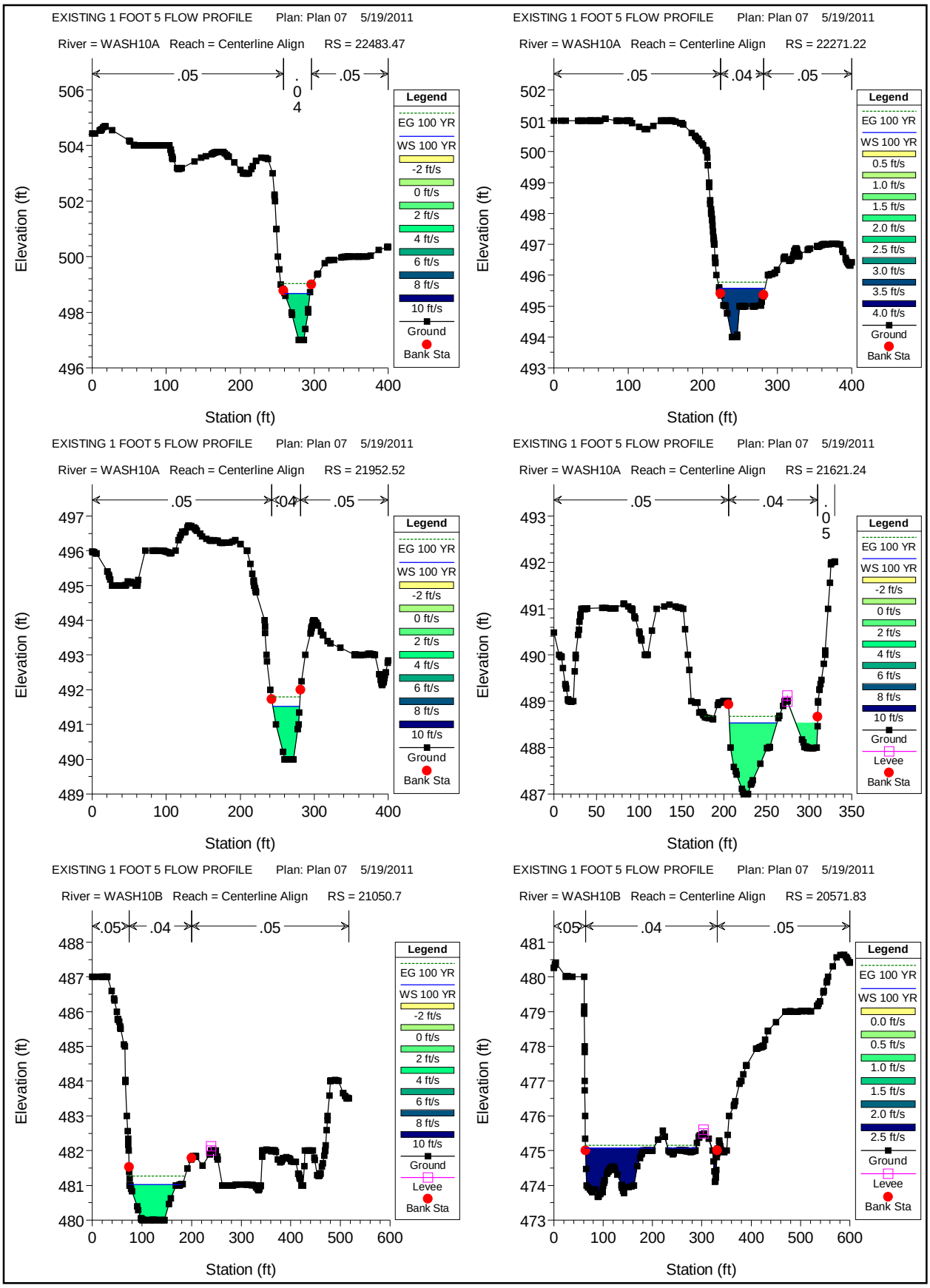
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH5 | Center Line Wash | 2398.41 | 100 YR | 445.31 | 457.00 | 459.44 | 458.87 | 459.59 | 0.007362 | 3.16 | 140.81 | 142.07 | 0.56 |
| WASH5 | Center Line Wash | 2138.83 | 100 YR | 445.31 | 454.99 | 456.42 | 456.36 | 456.65 | 0.019510 | 3.83 | 116.29 | 182.91 | 0.85 |
| WASH5 | Center Line Wash | 1728.1 | 100 YR | 445.31 | 450.99 | 452.80 | 452.24 | 452.94 | 0.005134 | 2.99 | 148.83 | 124.57 | 0.48 |
| WASH5 | Center Line Wash | 1400 | 100 YR | 445.31 | 447.98 | 449.40 | 449.40 | 449.64 | 0.028038 | 3.87 | 115.15 | 234.61 | 0.97 |
| WASH5 | Center Line Wash | 1040.76 | 100 YR | 445.31 | 443.98 | 445.57 | 445.08 | 445.71 | 0.005707 | 3.00 | 148.19 | 133.39 | 0.50 |
| WASH5 | Center Line Wash | 676.61 | 100 YR | 445.31 | 439.98 | 441.43 | 441.43 | 441.82 | 0.026249 | 5.02 | 88.65 | 115.99 | 1.01 |
| WASH45 | Centerline Align | 5500 | 100 YR | 6154.09 | 340.89 | 343.85 | 343.54 | 344.10 | 0.008254 | 4.29 | 1632.88 | 1357.38 | 0.63 |
| WASH45 | Centerline Align | 4744.3 | 100 YR | 6154.09 | 333.99 | 337.61 | | 337.83 | 0.008275 | 3.70 | 1665.49 | 1455.08 | 0.61 |
| WASH45 | Centerline Align | 4000 | 100 YR | 6154.09 | 329.00 | 331.79 | | 331.98 | 0.007435 | 3.53 | 1743.64 | 1506.51 | 0.58 |
| WASH45 | Centerline Align | 3500 | 100 YR | 6154.09 | 324.90 | 327.26 | 326.98 | 327.52 | 0.010828 | 4.09 | 1505.12 | 1382.66 | 0.69 |
| WASH45 | Centerline Align | 3000 | 100 YR | 6154.09 | 318.94 | 322.78 | | 323.02 | 0.007581 | 3.92 | 1568.87 | 1173.31 | 0.60 |
| WASH45 | Centerline Align | 2500 | 100 YR | 6154.09 | 314.98 | 318.90 | | 319.14 | 0.007989 | 3.95 | 1557.60 | 1198.47 | 0.61 |
| WASH45 | Centerline Align | 2000 | 100 YR | 6154.09 | 312.00 | 315.03 | | 315.25 | 0.007590 | 3.75 | 1643.28 | 1319.20 | 0.59 |
| WASH45 | Centerline Align | 1500 | 100 YR | 6154.09 | 308.00 | 310.75 | | 311.02 | 0.009435 | 4.15 | 1484.11 | 1203.65 | 0.66 |
| WASH45 | Centerline Align | 1000 | 100 YR | 6154.09 | 303.95 | 306.72 | | 306.94 | 0.007120 | 3.70 | 1663.11 | 1295.95 | 0.58 |
| WASH45 | Centerline Align | 378.44 | 100 YR | 6154.09 | 298.95 | 301.64 | 301.21 | 301.97 | 0.009003 | 4.60 | 1337.39 | 892.80 | 0.66 |
| WASH40 | Centerline Align | 10653.2 | 100 YR | 4640.71 | 375.98 | 380.45 | 379.97 | 380.67 | 0.006916 | 3.76 | 1233.45 | 914.77 | 0.57 |
| WASH40 | Centerline Align | 10033.98 | 100 YR | 4640.71 | 371.98 | 376.66 | | 376.88 | 0.005450 | 3.69 | 1257.29 | 806.28 | 0.52 |
| WASH40 | Centerline Align | 9616.88 | 100 YR | 4640.71 | 370.00 | 373.17 | 372.76 | 373.50 | 0.013151 | 4.64 | 999.18 | 876.11 | 0.77 |
| WASH40 | Centerline Align | 8761.12 | 100 YR | 4640.71 | 363.93 | 367.31 | | 367.47 | 0.004324 | 3.26 | 1459.58 | 1085.98 | 0.46 |
| WASH40 | Centerline Align | 7943.06 | 100 YR | 4640.71 | 357.89 | 360.28 | 360.23 | 360.62 | 0.022456 | 4.64 | 999.57 | 1311.27 | 0.94 |
| WASH40 | Centerline Align | 6943.13 | 100 YR | 4640.71 | 349.05 | 352.48 | | 352.59 | 0.004029 | 2.64 | 1760.54 | 1487.53 | 0.43 |
| WASH4 | Wash 4 | 1076.68 | 100 YR | 105.00 | 497.27 | 498.36 | 498.36 | 498.68 | 0.027700 | 4.57 | 22.98 | 36.08 | 1.01 |
| WASH4 | Wash 4 | 813.29 | 100 YR | 105.00 | 492.96 | 493.70 | 493.53 | 493.78 | 0.010578 | 2.26 | 46.53 | 102.29 | 0.59 |
| WASH4 | Wash 4 | 573.28 | 100 YR | 105.00 | 488.79 | 489.37 | 489.37 | 489.54 | 0.034858 | 3.28 | 32.06 | 98.67 | 1.01 |
| WASH4 | Wash 4 | 333.76 | 100 YR | 105.00 | 483.99 | 485.65 | 485.03 | 485.70 | 0.002765 | 1.76 | 59.70 | 70.67 | 0.33 |
| WASH35 | Centerline Align | 5246.65 | 100 YR | 614.76 | 388.76 | 391.00 | 390.53 | 391.21 | 0.006760 | 3.65 | 168.27 | 137.24 | 0.56 |
| WASH35 | Centerline Align | 4965.62 | 100 YR | 614.76 | 386.87 | 389.20 | 388.46 | 389.35 | 0.006334 | 3.08 | 199.51 | 187.13 | 0.53 |
| WASH35 | Centerline Align | 4493.91 | 100 YR | 614.76 | 383.92 | 385.40 | 385.09 | 385.66 | 0.009851 | 4.12 | 149.26 | 126.32 | 0.67 |
| WASH35 | Centerline Align | 4063.78 | 100 YR | 614.76 | 379.98 | 382.34 | | 382.47 | 0.005658 | 2.96 | 207.68 | 190.24 | 0.50 |
| WASH35 | Centerline Align | 3661.61 | 100 YR | 614.76 | 377.65 | 378.92 | | 379.12 | 0.013350 | 3.58 | 171.49 | 224.29 | 0.72 |
| WASH35 | Centerline Align | 3000 | 100 YR | 614.76 | 371.96 | 373.76 | | 373.90 | 0.005182 | 3.06 | 200.98 | 163.03 | 0.49 |
| WASH35 | Centerline Align | 2500 | 100 YR | 614.76 | 367.85 | 369.27 | 369.16 | 369.53 | 0.017539 | 4.13 | 149.03 | 193.41 | 0.83 |
| WASH35 | Centerline Align | 2000 | 100 YR | 614.76 | 363.88 | 365.36 | 364.83 | 365.46 | 0.004593 | 2.50 | 246.38 | 249.28 | 0.44 |
| WASH35 | Centerline Align | 1600 | 100 YR | 614.76 | 359.00 | 361.41 | 361.41 | 361.70 | 0.028681 | 4.34 | 141.56 | 247.13 | 1.01 |
| WASH30 | Centerline Align | 10130.27 | 100 YR | 305.83 | 348.00 | 349.37 | 349.22 | 349.54 | 0.014040 | 3.32 | 92.22 | 140.93 | 0.72 |
| WASH30 | Centerline Align | 9500 | 100 YR | 305.83 | 344.00 | 345.36 | | 345.40 | 0.003722 | 1.70 | 179.69 | 275.97 | 0.37 |
| WASH30 | Centerline Align | 9000 | 100 YR | 305.83 | 339.99 | 341.10 | 341.09 | 341.23 | 0.032658 | 2.83 | 108.09 | 394.86 | 0.95 |
| WASH30 | Centerline Align | 8500 | 100 YR | 305.83 | 335.95 | 337.16 | 336.58 | 337.20 | 0.003535 | 1.54 | 198.91 | 342.24 | 0.36 |
| WASH30 | Centerline Align | 8000 | 100 YR | 305.83 | 331.99 | 333.02 | 333.01 | 333.22 | 0.031299 | 3.60 | 85.06 | 209.73 | 0.99 |
| WASH30 | Centerline Align | 7500 | 100 YR | 305.83 | 327.91 | 329.56 | | 329.59 | 0.003102 | 1.38 | 222.04 | 408.53 | 0.33 |
| WASH30 | Centerline Align | 7000 | 100 YR | 305.83 | 324.88 | 325.79 | 325.79 | 325.94 | 0.033565 | 3.09 | 99.10 | 324.30 | 0.98 |
| WASH30 | Centerline Align | 6500 | 100 YR | 305.83 | 319.94 | 321.24 | 320.69 | 321.27 | 0.003203 | 1.28 | 238.46 | 500.35 | 0.33 |

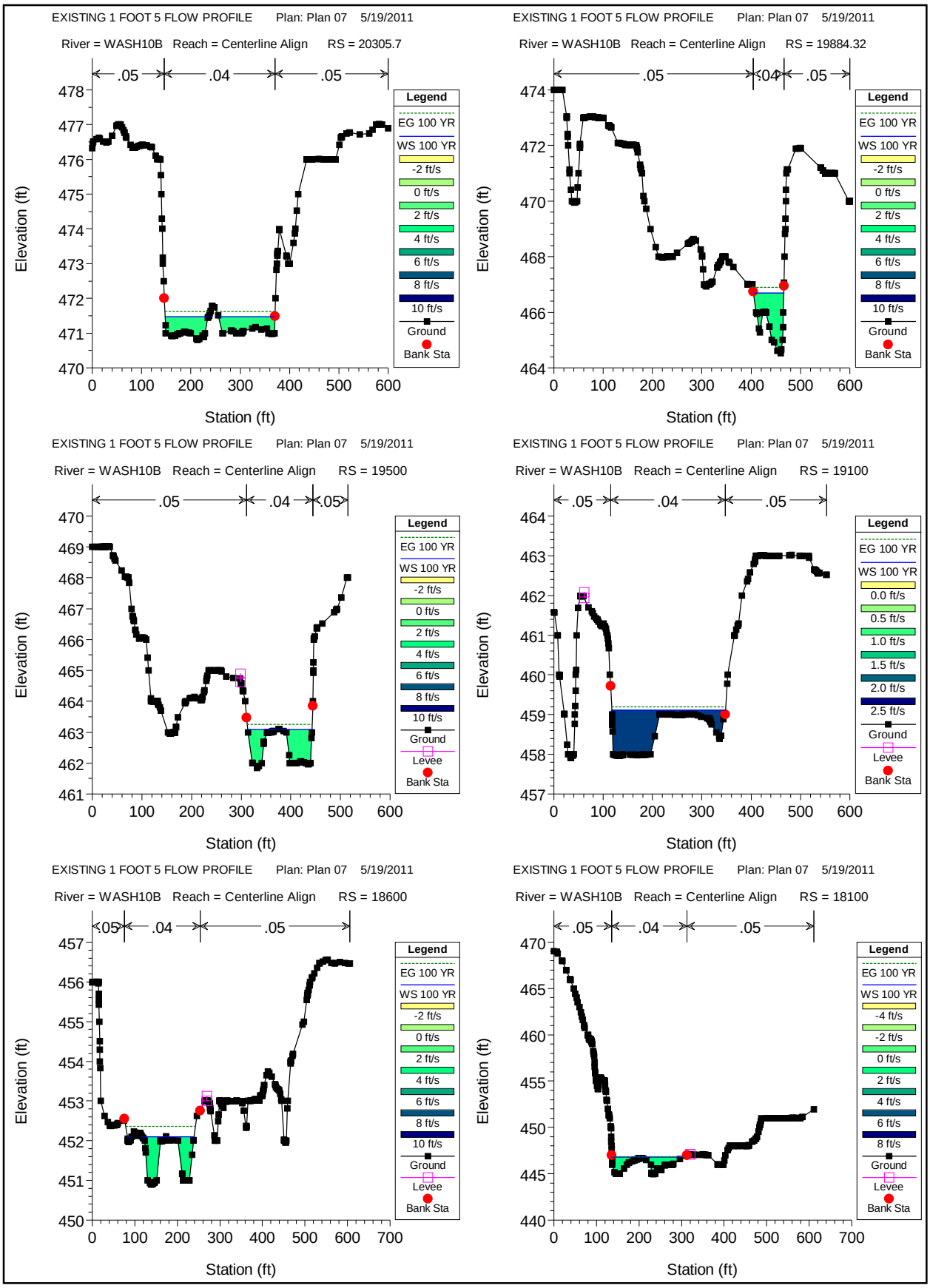
HEC-RAS Plan: Plan 07 Profile: 100 YR (Continued)

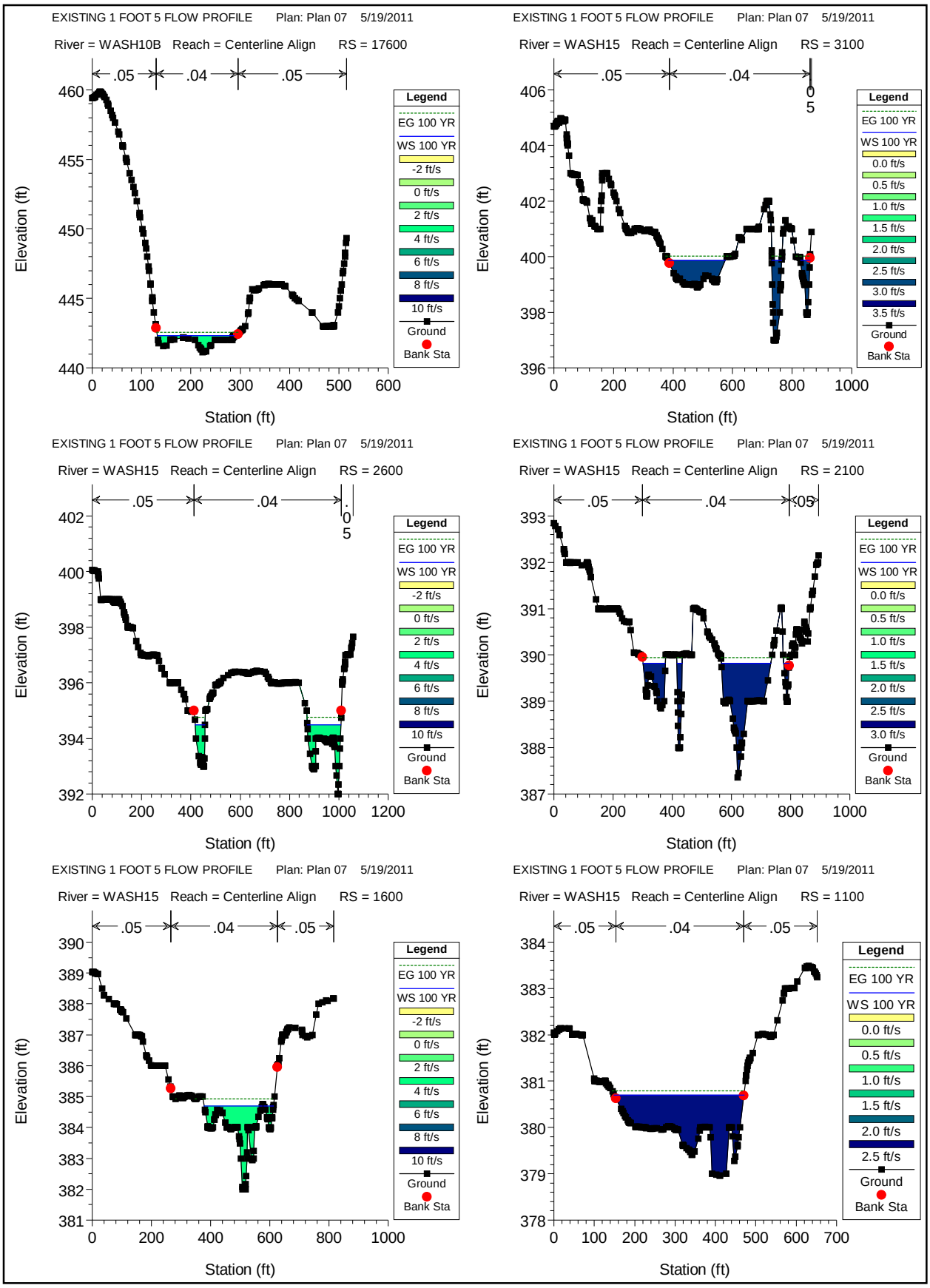
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH30 | Centerline Align | 6000 | 100 YR | 305.83 | 316.28 | 317.13 | 317.13 | 317.27 | 0.044633 | 2.95 | 103.78 | 450.96 | 1.08 |
| WASH30 | Centerline Align | 5500 | 100 YR | 305.83 | 310.52 | 311.57 | 311.30 | 311.60 | 0.003860 | 1.44 | 212.78 | 432.86 | 0.36 |
| WASH30 | Centerline Align | 5000 | 100 YR | 305.83 | 306.00 | 308.10 | | 308.22 | 0.014803 | 2.77 | 110.28 | 229.14 | 0.70 |
| WASH30 | Centerline Align | 4500 | 100 YR | 305.83 | 302.71 | 303.69 | | 303.75 | 0.005962 | 1.92 | 159.18 | 290.21 | 0.46 |
| WASH30 | Centerline Align | 4000 | 100 YR | 305.83 | 297.96 | 299.12 | 298.83 | 299.22 | 0.015289 | 2.64 | 115.68 | 264.84 | 0.70 |
| WASH30 | Centerline Align | 3500 | 100 YR | 305.83 | 293.44 | 294.47 | | 294.53 | 0.006300 | 1.89 | 162.00 | 316.05 | 0.46 |
| WASH30 | Centerline Align | 3000 | 100 YR | 305.83 | 287.97 | 289.17 | 289.12 | 289.27 | 0.020992 | 2.50 | 122.17 | 385.09 | 0.78 |
| WASH30 | Centerline Align | 2500 | 100 YR | 305.83 | 282.22 | 283.61 | 283.29 | 283.72 | 0.006860 | 2.69 | 113.79 | 139.33 | 0.52 |
| WASH30 | Centerline Align | 2000 | 100 YR | 305.83 | 277.99 | 278.54 | | 278.66 | 0.016480 | 2.76 | 110.68 | 250.86 | 0.73 |
| WASH30 | Centerline Align | 1343.16 | 100 YR | 305.83 | 269.94 | 270.64 | | 270.74 | 0.009203 | 2.46 | 124.53 | 217.61 | 0.57 |
| WASH30 | Centerline Align | 1000 | 100 YR | 305.83 | 265.53 | 266.55 | | 266.72 | 0.015346 | 3.32 | 92.12 | 150.28 | 0.75 |
| WASH30 | Centerline Align | 500 | 100 YR | 305.83 | 259.00 | 260.15 | 259.81 | 260.24 | 0.011001 | 2.46 | 124.09 | 246.54 | 0.61 |
| WASH25B | Centerline Align | 6600 | 100 YR | 1336.02 | 320.99 | 323.46 | 323.16 | 323.72 | 0.011560 | 4.12 | 323.93 | 308.34 | 0.71 |
| WASH25B | Centerline Align | 6100 | 100 YR | 1336.02 | 316.93 | 318.56 | 318.32 | 318.70 | 0.008686 | 3.00 | 445.90 | 553.06 | 0.59 |
| WASH25B | Centerline Align | 5600 | 100 YR | 1336.02 | 310.97 | 312.98 | 312.80 | 313.16 | 0.014613 | 3.45 | 387.75 | 576.43 | 0.74 |
| WASH25B | Centerline Align | 5100 | 100 YR | 1336.02 | 304.99 | 306.65 | | 306.80 | 0.011143 | 3.20 | 418.16 | 568.23 | 0.66 |
| WASH25B | Centerline Align | 4600 | 100 YR | 1336.02 | 298.93 | 300.58 | 300.44 | 300.74 | 0.013262 | 3.21 | 415.81 | 638.39 | 0.70 |
| WASH25B | Centerline Align | 4100 | 100 YR | 1336.02 | 291.99 | 294.19 | | 294.38 | 0.012223 | 3.46 | 386.31 | 499.58 | 0.69 |
| WASH25B | Centerline Align | 3600 | 100 YR | 1336.02 | 285.53 | 287.66 | 287.48 | 287.87 | 0.013904 | 3.68 | 363.37 | 472.18 | 0.74 |
| WASH25B | Centerline Align | 3100 | 100 YR | 1336.02 | 280.00 | 281.50 | | 281.70 | 0.011026 | 3.58 | 373.34 | 426.02 | 0.67 |
| WASH25B | Centerline Align | 2600 | 100 YR | 1336.02 | 274.65 | 275.30 | | 275.50 | 0.012344 | 1.86 | 399.35 | 563.88 | 0.60 |
| WASH25B | Centerline Align | 2100 | 100 YR | 1336.02 | 268.58 | 269.70 | 269.70 | 270.01 | 0.029478 | 4.80 | 315.63 | 549.35 | 1.05 |
| WASH25B | Centerline Align | 1368.02 | 100 YR | 1336.02 | 255.25 | 258.84 | 258.32 | 258.99 | 0.005447 | 3.07 | 434.78 | 362.45 | 0.49 |
| WASH25B | Centerline Align | 600 | 100 YR | 1336.02 | 250.34 | 252.59 | 252.34 | 252.88 | 0.012583 | 4.35 | 307.24 | 285.94 | 0.74 |
| WASH25B | Centerline Align | 100 | 100 YR | 1336.02 | 245.90 | 247.69 | 247.30 | 247.90 | 0.008008 | 3.71 | 360.15 | 303.79 | 0.60 |
| WASH25A | Centerline Align | 10806.78 | 100 YR | 1350.96 | 366.90 | 369.28 | 368.83 | 369.44 | 0.009432 | 3.27 | 412.64 | 476.41 | 0.62 |
| WASH25A | Centerline Align | 10100 | 100 YR | 1350.96 | 359.87 | 361.84 | | 362.03 | 0.011736 | 3.45 | 391.87 | 493.30 | 0.68 |
| WASH25A | Centerline Align | 9600 | 100 YR | 1350.96 | 354.94 | 356.56 | | 356.70 | 0.009700 | 3.04 | 444.41 | 585.98 | 0.62 |
| WASH25A | Centerline Align | 9100 | 100 YR | 1350.96 | 348.87 | 350.82 | | 350.99 | 0.013627 | 3.35 | 403.46 | 594.08 | 0.72 |
| WASH25A | Centerline Align | 8600 | 100 YR | 1350.96 | 343.00 | 345.21 | 344.87 | 345.34 | 0.009484 | 2.99 | 452.42 | 602.84 | 0.61 |
| WASH25A | Centerline Align | 8100 | 100 YR | 1350.96 | 338.00 | 339.91 | | 340.13 | 0.011527 | 3.73 | 361.97 | 399.66 | 0.69 |
| WASH25A | Centerline Align | 7600 | 100 YR | 1350.96 | 332.89 | 334.60 | | 334.81 | 0.009840 | 3.67 | 368.39 | 370.60 | 0.65 |
| WASH25A | Centerline Align | 7100 | 100 YR | 1350.96 | 327.91 | 329.32 | 329.12 | 329.50 | 0.011480 | 3.38 | 400.09 | 511.74 | 0.67 |
| WASH23 | Wash23 | 3479.12 | 100 YR | 195.52 | 357.86 | 359.51 | 359.23 | 359.57 | 0.005934 | 1.98 | 98.58 | 170.27 | 0.46 |
| WASH23 | Wash23 | 3038.38 | 100 YR | 195.52 | 353.21 | 354.25 | 354.25 | 354.50 | 0.030695 | 4.00 | 48.83 | 101.06 | 1.02 |
| WASH23 | Wash23 | 2630.84 | 100 YR | 195.52 | 348.77 | 349.87 | 349.53 | 349.95 | 0.005159 | 2.16 | 90.37 | 123.51 | 0.45 |
| WASH23 | Wash23 | 2097.72 | 100 YR | 195.52 | 343.97 | 345.22 | 345.09 | 345.37 | 0.017009 | 3.08 | 63.46 | 125.08 | 0.76 |
| WASH23 | Wash23 | 1490.24 | 100 YR | 195.52 | 338.53 | 339.44 | 339.21 | 339.50 | 0.006187 | 1.93 | 101.44 | 189.28 | 0.46 |
| WASH23 | Wash23 | 1066.16 | 100 YR | 195.52 | 333.93 | 334.59 | 334.56 | 334.83 | 0.024374 | 3.93 | 49.71 | 88.94 | 0.93 |
| WASH23 | Wash23 | 780.97 | 100 YR | 195.52 | 330.99 | 331.91 | | 331.97 | 0.005315 | 2.09 | 93.66 | 138.25 | 0.45 |
| WASH20 | Centerline Align | 16636.71 | 100 YR | 726.22 | 430.89 | 433.16 | 432.67 | 433.50 | 0.008126 | 4.68 | 161.93 | 137.33 | 0.64 |
| WASH20 | Centerline Align | 16100 | 100 YR | 726.22 | 425.98 | 428.60 | | 428.75 | 0.009467 | 3.08 | 235.67 | 298.52 | 0.61 |
| WASH20 | Centerline Align | 15600 | 100 YR | 726.22 | 421.00 | 423.29 | 423.17 | 423.57 | 0.017184 | 4.27 | 170.16 | 206.86 | 0.83 |

HEC-RAS Plan: Plan 07 Profile: 100 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH20 | Centerline Align | 15169.42 | 100 YR | 726.22 | 417.28 | 419.12 | 418.72 | 419.22 | 0.011126 | 2.62 | 277.39 | 507.28 | 0.62 |
| WASH20 | Centerline Align | 14600 | 100 YR | 726.22 | 410.69 | 412.35 | 412.14 | 412.49 | 0.011050 | 3.03 | 239.30 | 348.66 | 0.65 |
| WASH20 | Centerline Align | 14100 | 100 YR | 726.22 | 404.94 | 406.65 | 406.46 | 406.80 | 0.011064 | 3.19 | 234.72 | 330.55 | 0.65 |
| WASH20 | Centerline Align | 13600 | 100 YR | 370.52 | 399.85 | 400.85 | 400.59 | 400.95 | 0.008501 | 2.58 | 151.80 | 247.02 | 0.56 |
| WASH20 | Centerline Align | 13100 | 100 YR | 370.52 | 394.00 | 395.38 | 395.17 | 395.50 | 0.009608 | 2.81 | 131.90 | 194.53 | 0.60 |
| WASH20 | Centerline Align | 12600 | 100 YR | 370.52 | 388.97 | 390.35 | 390.20 | 390.48 | 0.011977 | 2.87 | 129.04 | 217.02 | 0.66 |
| WASH20 | Centerline Align | 12100 | 100 YR | 370.52 | 383.00 | 384.42 | 384.29 | 384.51 | 0.011860 | 2.36 | 157.07 | 352.46 | 0.62 |
| WASH20 | Centerline Align | 11600 | 100 YR | 370.52 | 376.96 | 378.19 | 378.07 | 378.29 | 0.013094 | 2.56 | 144.99 | 310.77 | 0.66 |
| WASH20 | Centerline Align | 11329.19 | 100 YR | 370.52 | 373.39 | 374.59 | 374.47 | 374.72 | 0.013237 | 2.83 | 130.82 | 242.23 | 0.68 |
| WASH15 | Centerline Align | 3100 | 100 YR | 676.15 | 396.98 | 399.87 | 399.56 | 400.01 | 0.008245 | 3.07 | 220.22 | 255.46 | 0.58 |
| WASH15 | Centerline Align | 2600 | 100 YR | 676.15 | 392.00 | 394.49 | | 394.76 | 0.013754 | 4.13 | 163.84 | 176.43 | 0.75 |
| WASH15 | Centerline Align | 2100 | 100 YR | 676.15 | 387.36 | 389.82 | | 389.94 | 0.007025 | 2.81 | 240.39 | 279.90 | 0.53 |
| WASH15 | Centerline Align | 1600 | 100 YR | 676.15 | 381.99 | 384.70 | 384.54 | 384.93 | 0.015344 | 3.85 | 175.83 | 229.46 | 0.77 |
| WASH15 | Centerline Align | 1100 | 100 YR | 676.15 | 378.96 | 380.70 | | 380.79 | 0.005107 | 2.43 | 278.31 | 321.47 | 0.46 |
| WASH15 | Centerline Align | 600 | 100 YR | 676.15 | 373.92 | 375.38 | 375.38 | 375.71 | 0.028694 | 4.59 | 147.23 | 235.79 | 1.02 |
| WASH15 | Centerline Align | 282.51 | 100 YR | 676.15 | 369.86 | 372.26 | 371.55 | 372.37 | 0.003066 | 2.64 | 271.95 | 267.08 | 0.39 |
| WASH10B | Centerline Align | 21050.7 | 100 YR | 280.24 | 480.00 | 481.02 | 480.91 | 481.27 | 0.019153 | 3.99 | 70.22 | 102.61 | 0.85 |
| WASH10B | Centerline Align | 20571.83 | 100 YR | 280.24 | 473.67 | 475.07 | 474.68 | 475.16 | 0.009007 | 2.46 | 113.82 | 194.75 | 0.57 |
| WASH10B | Centerline Align | 20305.7 | 100 YR | 280.24 | 470.81 | 471.48 | 471.42 | 471.63 | 0.021322 | 3.14 | 89.27 | 202.56 | 0.83 |
| WASH10B | Centerline Align | 19884.32 | 100 YR | 280.24 | 464.53 | 466.69 | | 466.89 | 0.006912 | 3.60 | 77.91 | 61.32 | 0.56 |
| WASH10B | Centerline Align | 19500 | 100 YR | 280.24 | 461.84 | 463.09 | 462.81 | 463.26 | 0.013602 | 3.32 | 84.36 | 125.25 | 0.71 |
| WASH10B | Centerline Align | 19100 | 100 YR | 280.24 | 457.97 | 459.12 | 458.72 | 459.19 | 0.007797 | 2.20 | 127.13 | 230.87 | 0.52 |
| WASH10B | Centerline Align | 18600 | 100 YR | 280.24 | 450.90 | 452.10 | 452.10 | 452.36 | 0.029595 | 4.12 | 67.99 | 131.04 | 1.01 |
| WASH10B | Centerline Align | 18100 | 100 YR | 280.24 | 444.98 | 446.78 | 446.22 | 446.84 | 0.003875 | 2.03 | 138.14 | 167.37 | 0.39 |
| WASH10B | Centerline Align | 17600 | 100 YR | 280.24 | 441.14 | 442.33 | 442.33 | 442.57 | 0.032007 | 3.94 | 71.18 | 155.95 | 1.03 |
| WASH10A | Centerline Align | 22483.47 | 100 YR | 160.00 | 497.00 | 498.68 | 498.56 | 499.03 | 0.017222 | 4.76 | 33.60 | 34.56 | 0.85 |
| WASH10A | Centerline Align | 22271.22 | 100 YR | 160.00 | 493.99 | 495.58 | | 495.78 | 0.013369 | 3.59 | 44.82 | 61.58 | 0.72 |
| WASH10A | Centerline Align | 21952.52 | 100 YR | 160.00 | 489.99 | 491.53 | | 491.80 | 0.011688 | 4.17 | 38.35 | 35.96 | 0.71 |
| WASH10A | Centerline Align | 21621.24 | 100 YR | 160.00 | 487.00 | 488.53 | 488.19 | 488.68 | 0.007551 | 3.07 | 52.20 | 56.23 | 0.56 |

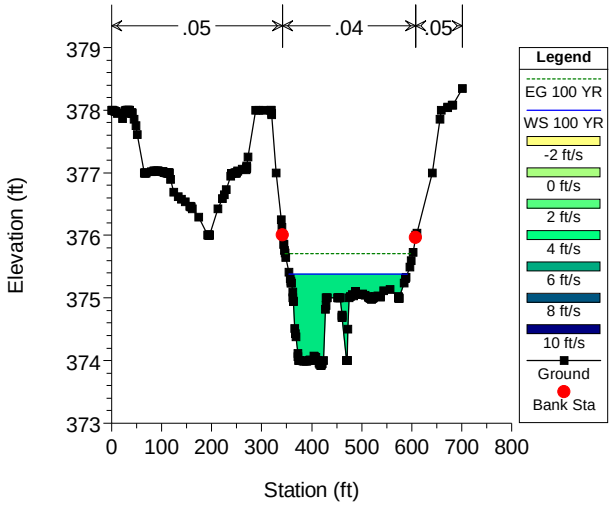

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22483.47
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22271.22
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
4.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21952.52
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21621.24
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 21050.7
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20571.83
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20305.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19884.32
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 17600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 3100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1100
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s

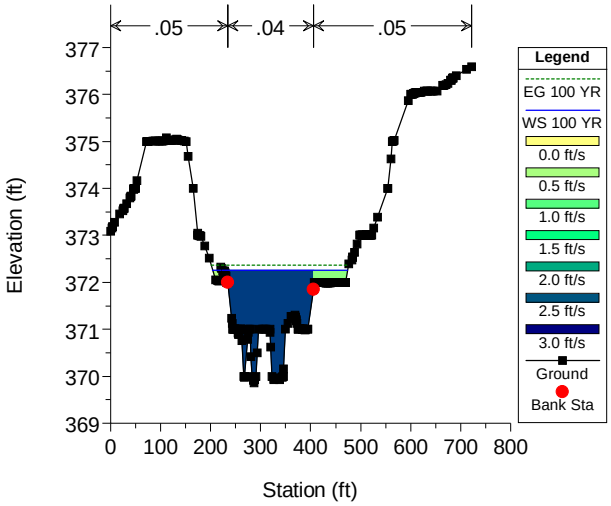
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 600



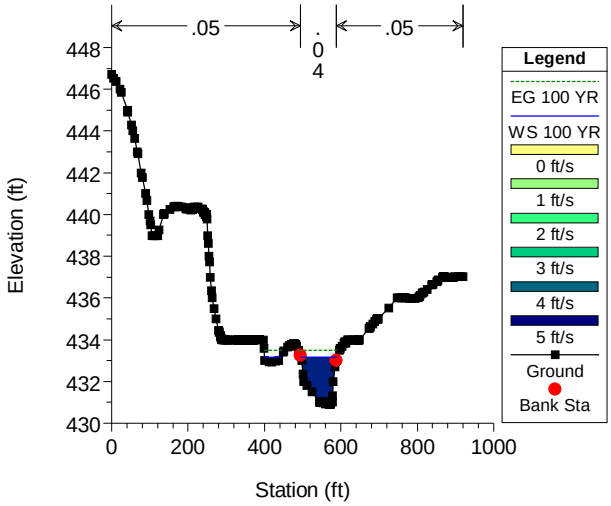

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 282.51



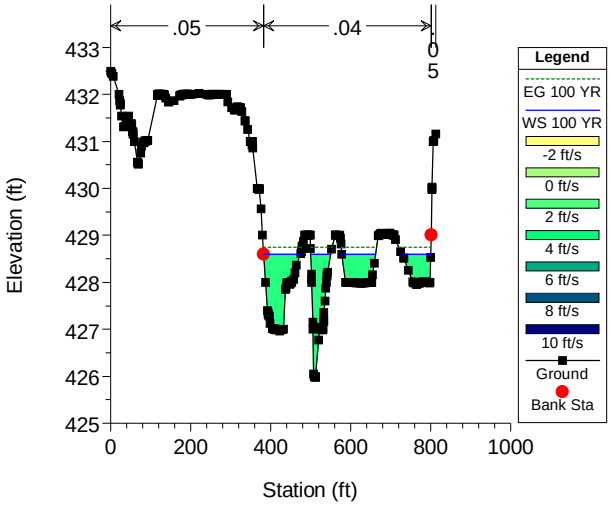

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16636.71



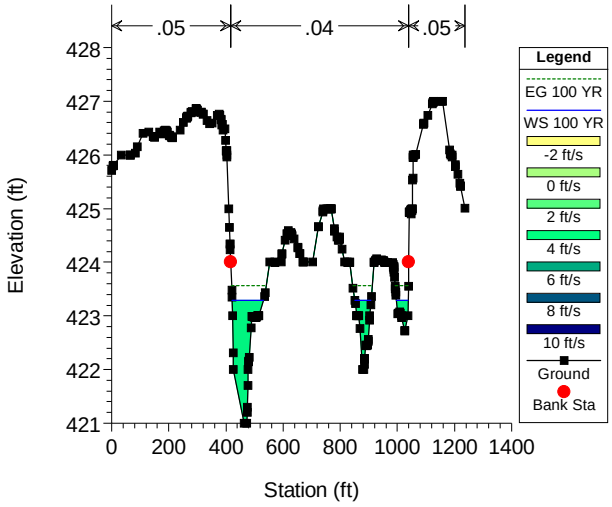

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16100



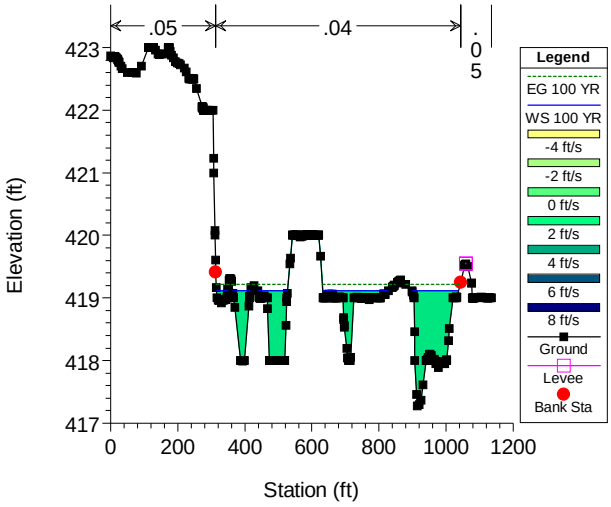

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

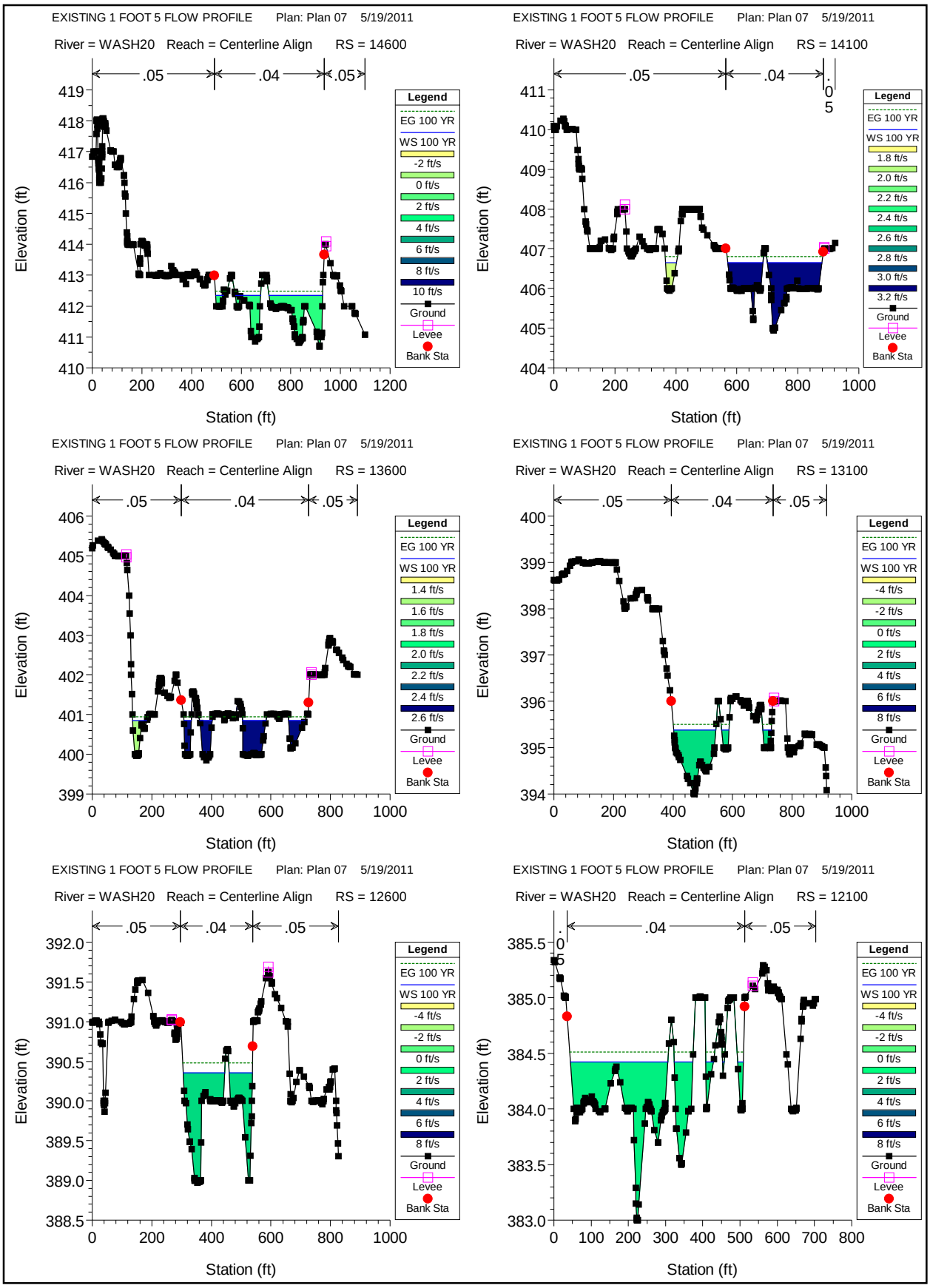
River = WASH20 Reach = Centerline Align RS = 15600

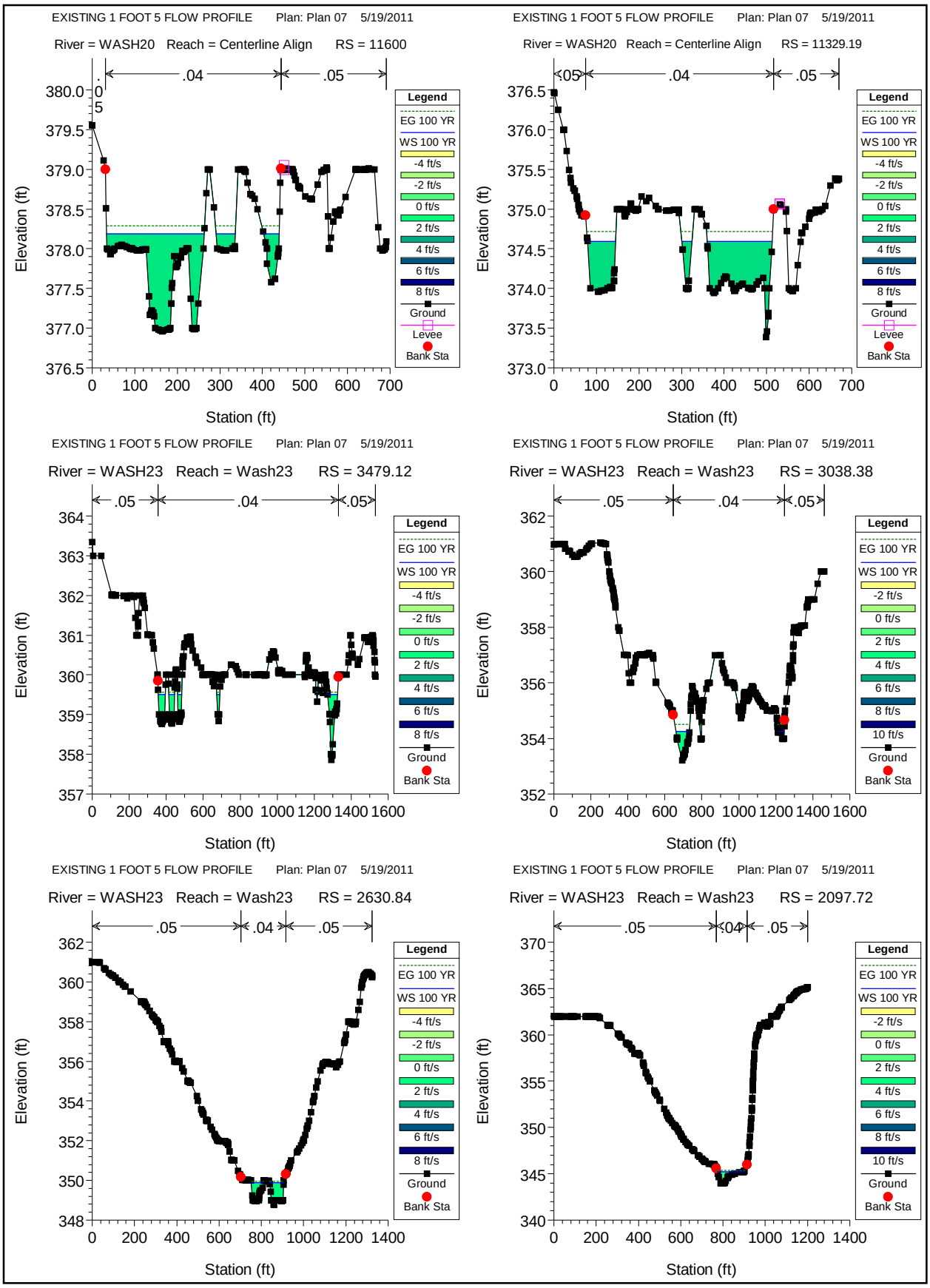


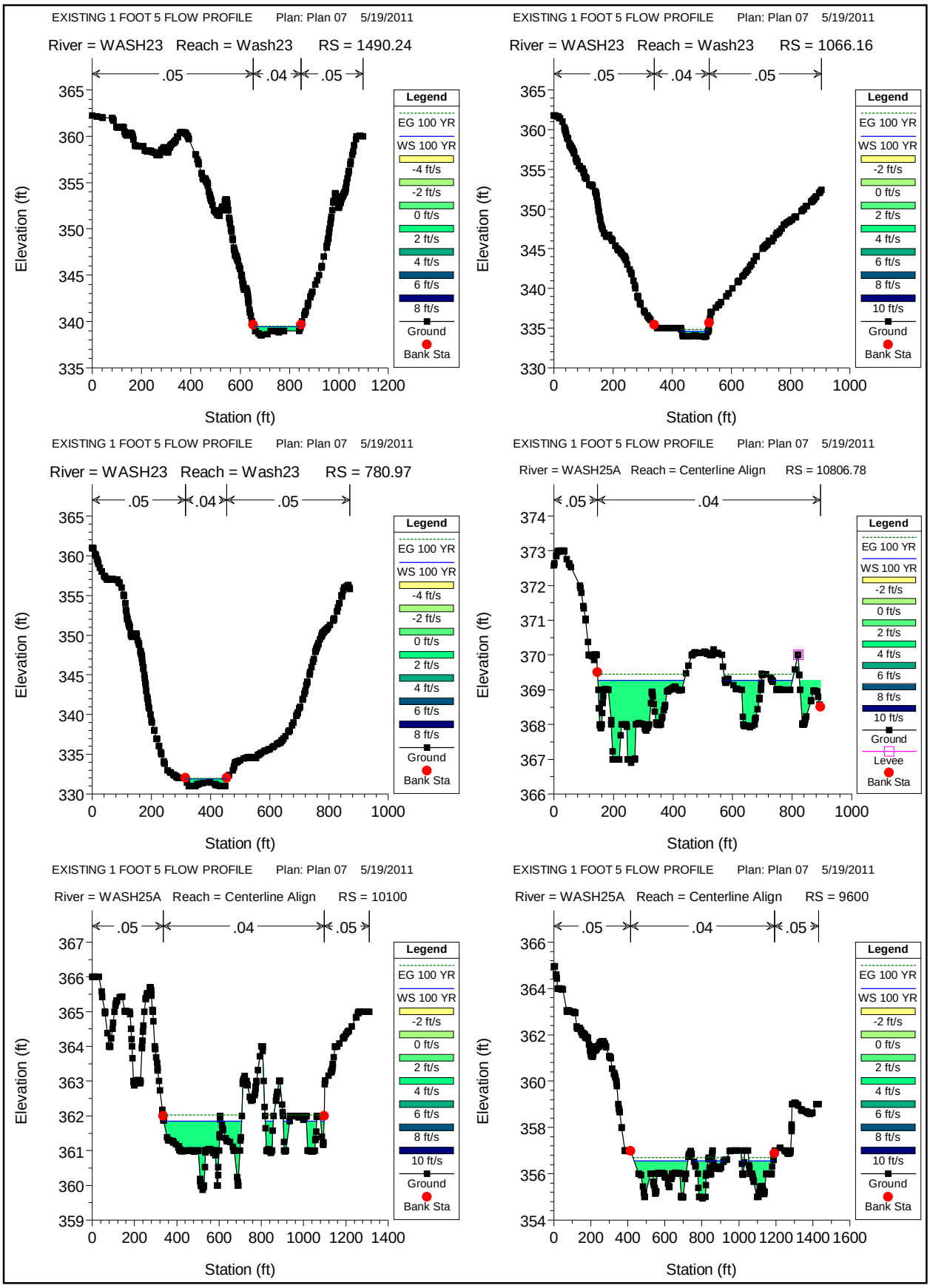

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

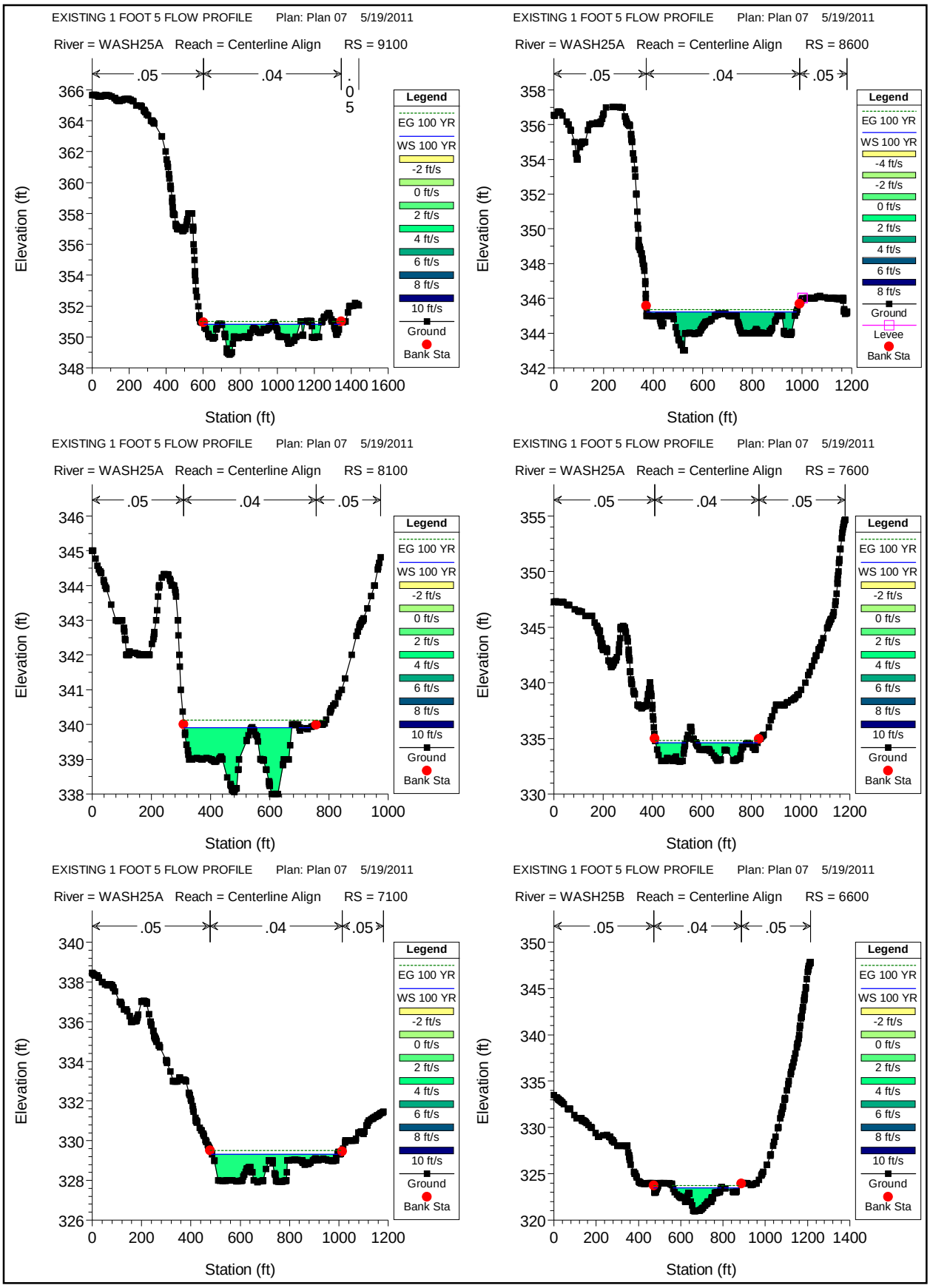
River = WASH20 Reach = Centerline Align RS = 15169.42

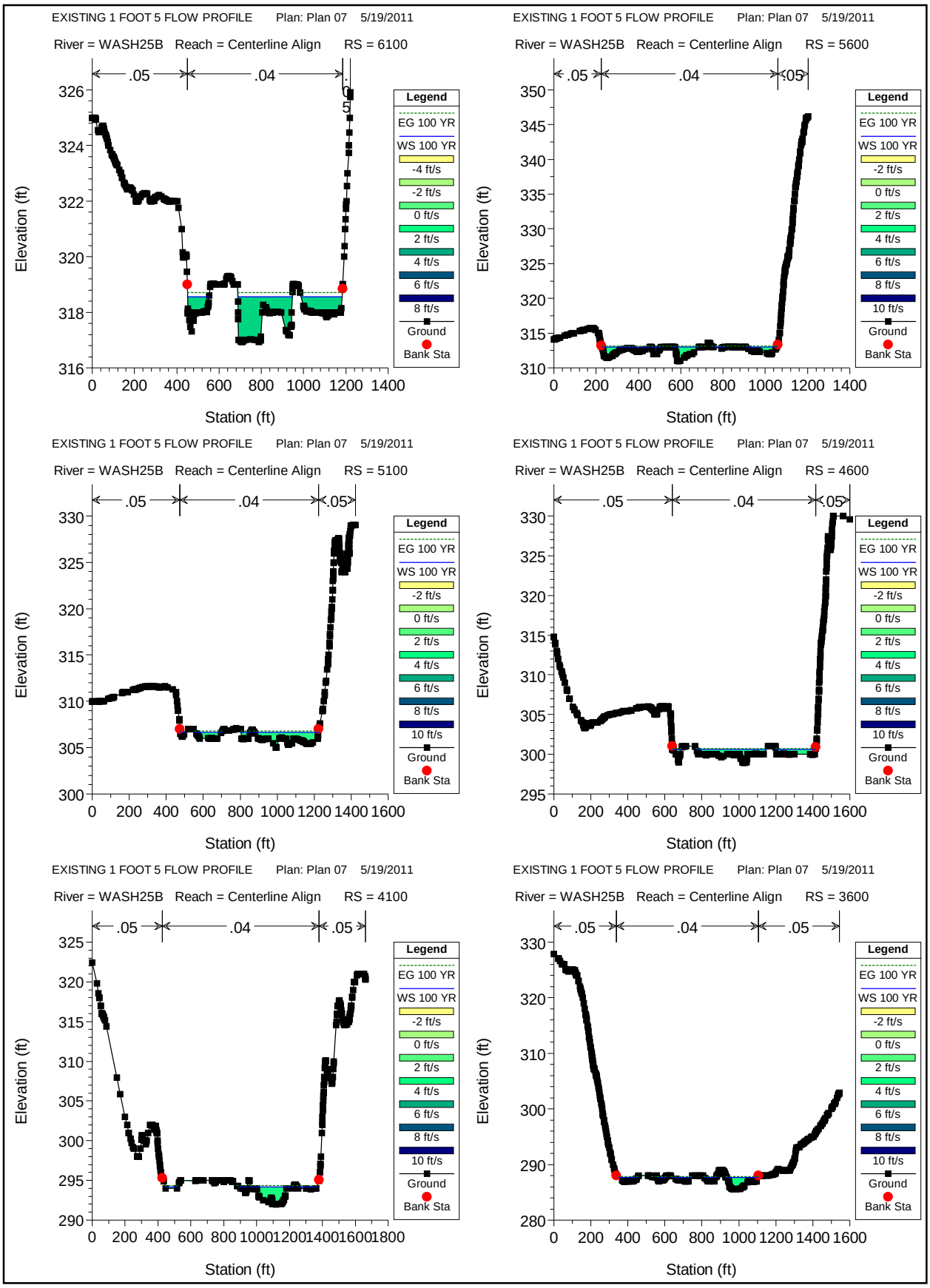


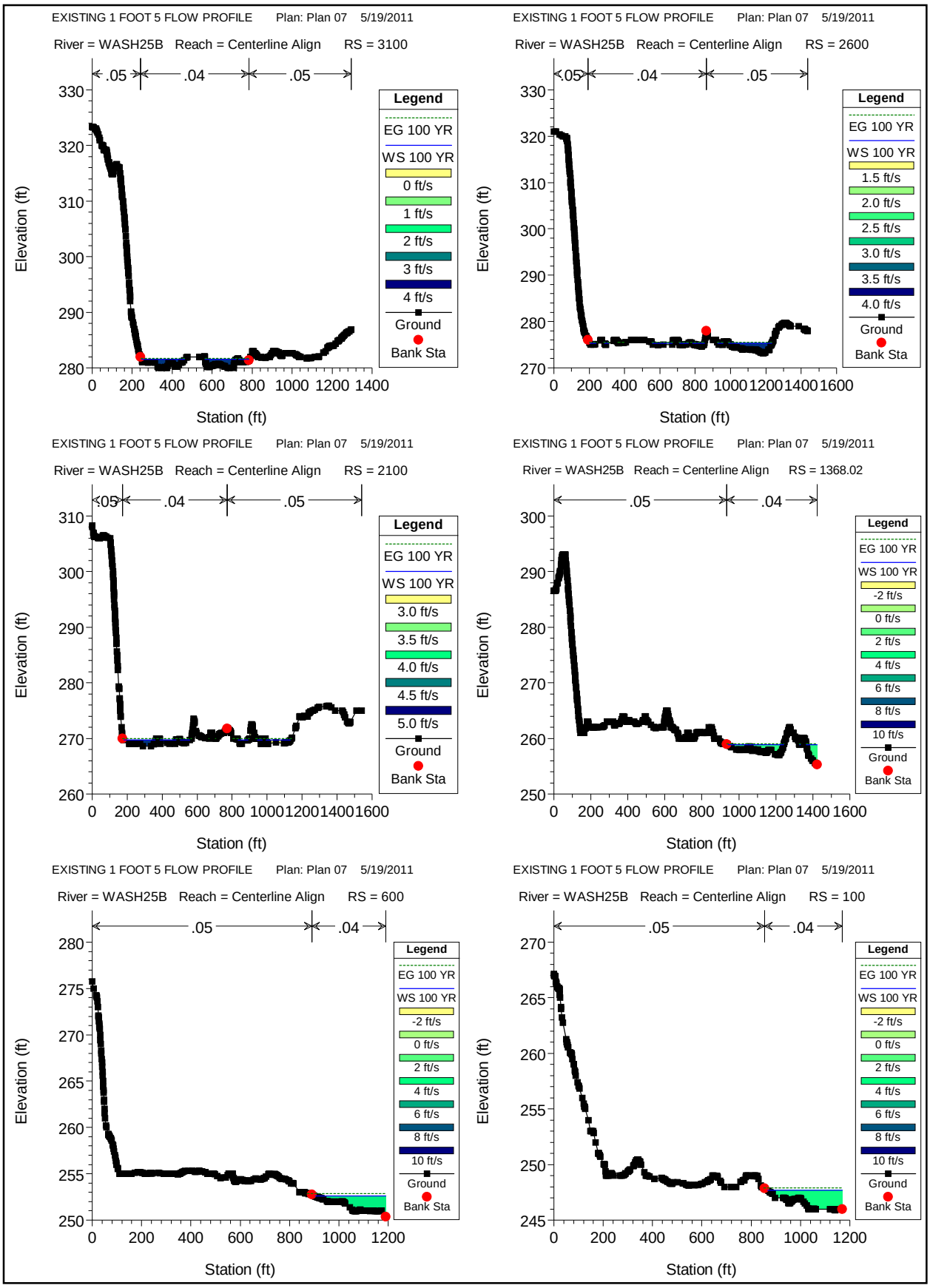

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14100
.05 .04 .05
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
3.2 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13600
.05 .04 .05
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13100
.05 .04 .05
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12100
.04 .05

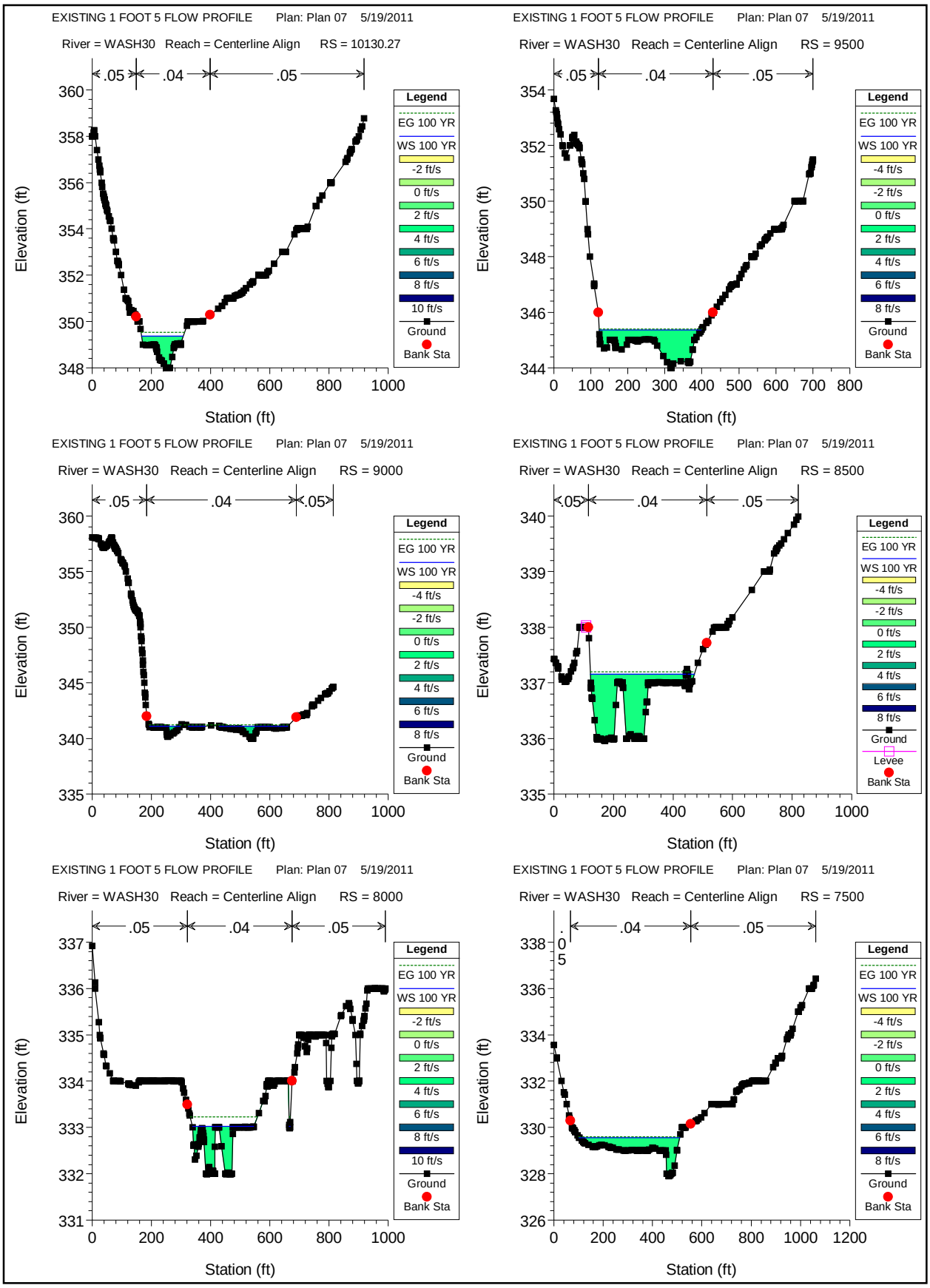

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11329.19
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3479.12
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3038.38
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2630.84
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2097.72
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

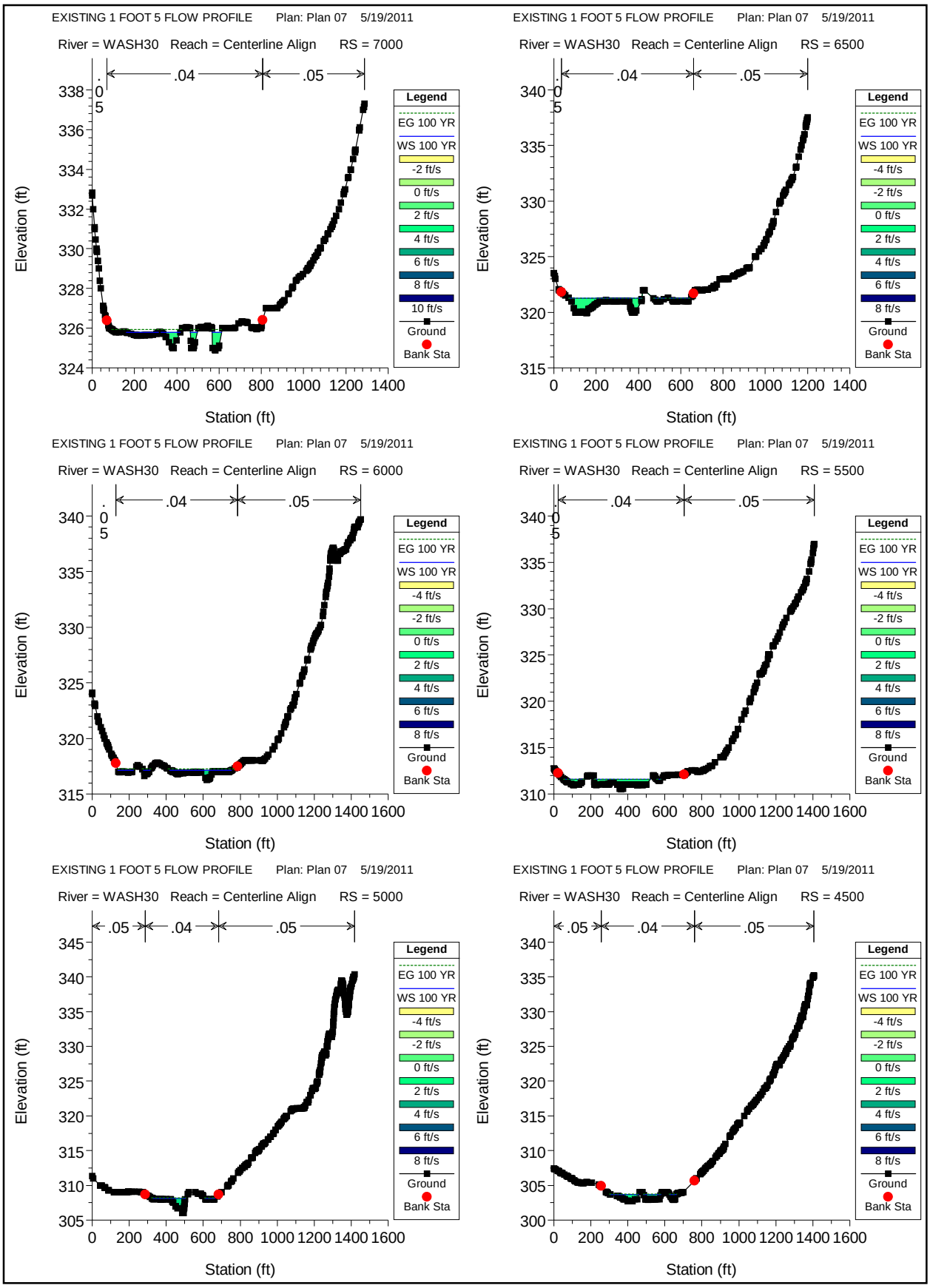

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1490.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1066.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 780.97
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10806.78
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

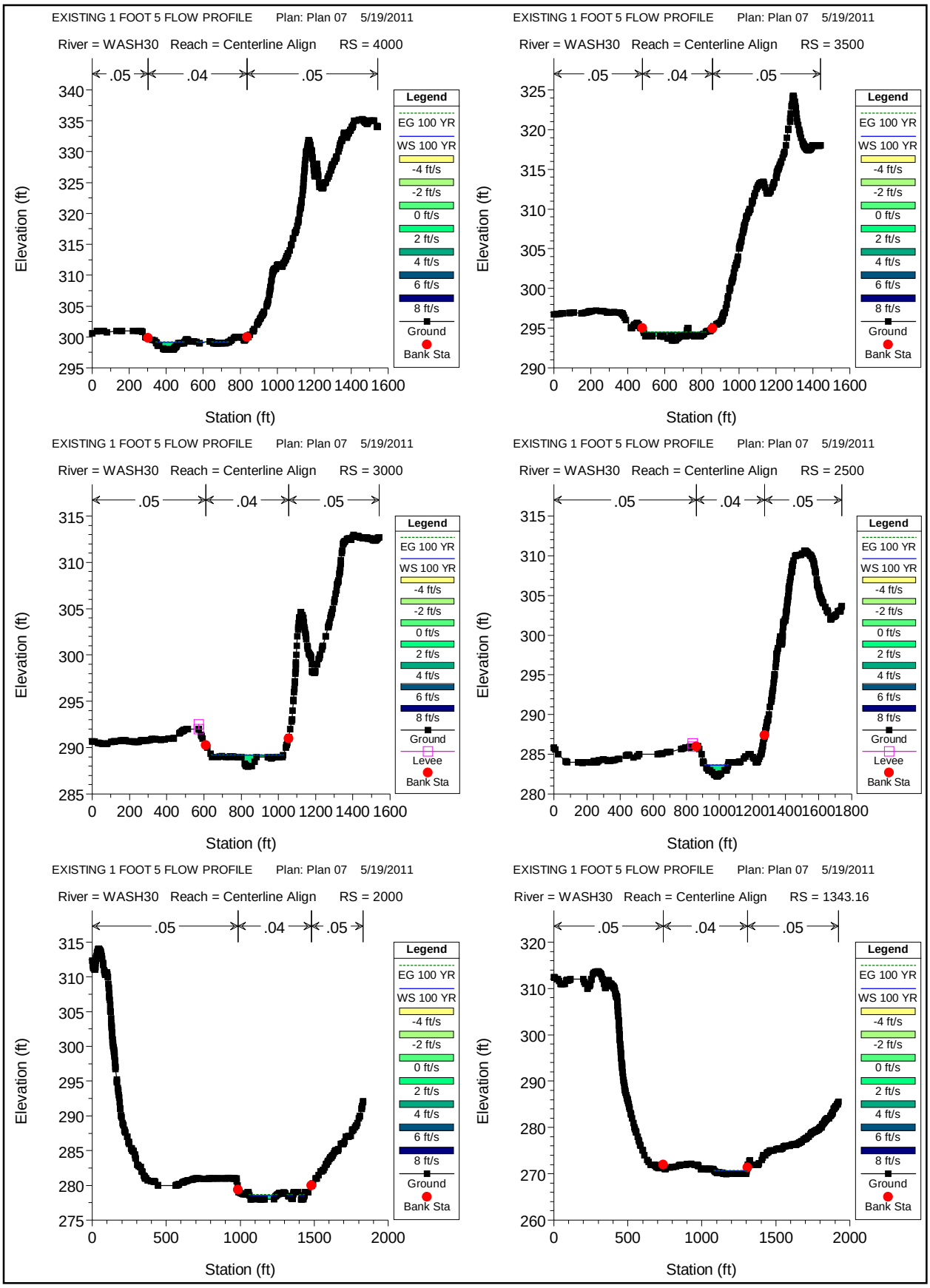

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6600
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

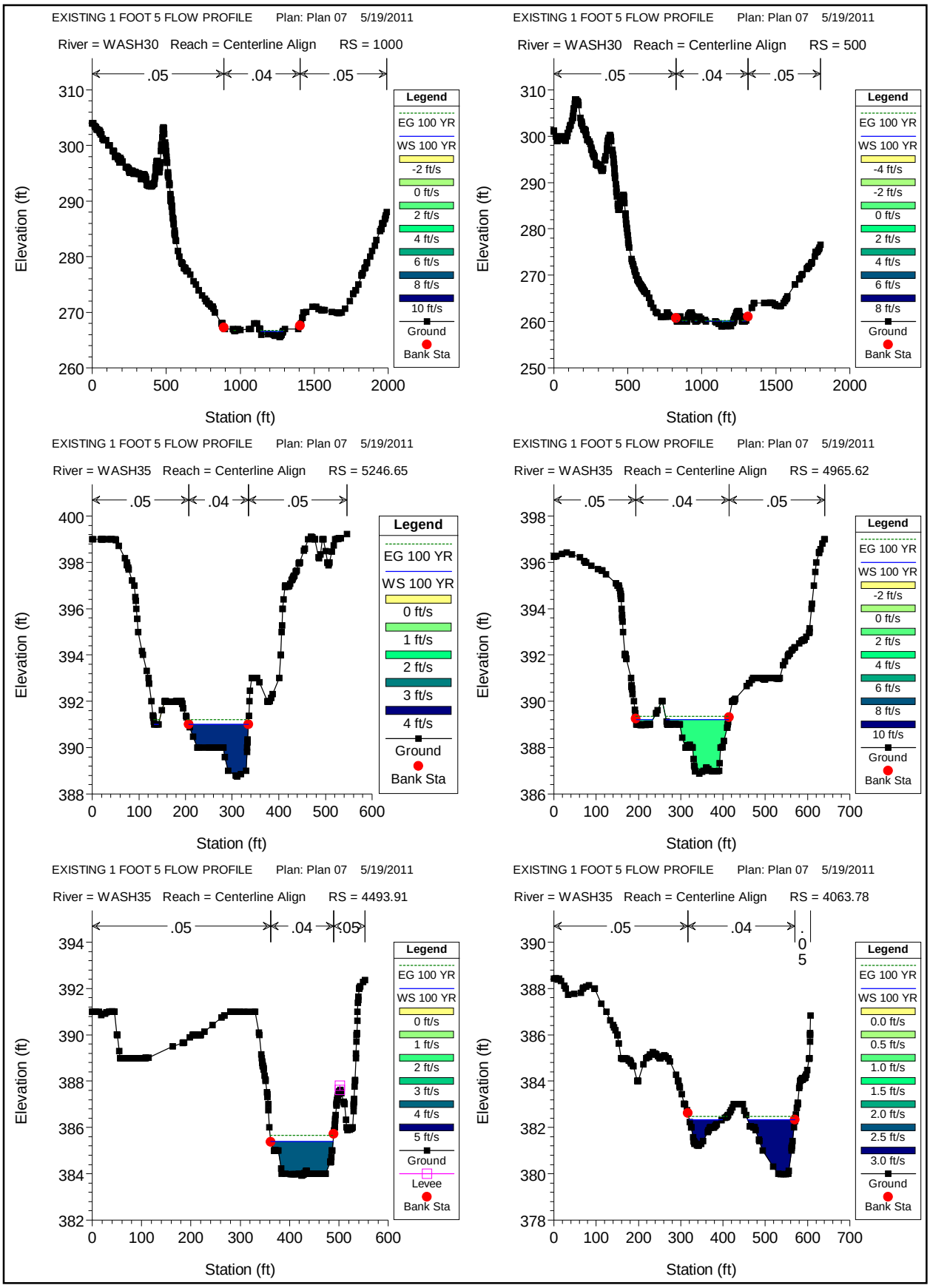

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6100
River = WASH25B Reach = Centerline Align RS = 5600
River = WASH25B Reach = Centerline Align RS = 5100
River = WASH25B Reach = Centerline Align RS = 4600
River = WASH25B Reach = Centerline Align RS = 4100
River = WASH25B Reach = Centerline Align RS = 3600
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

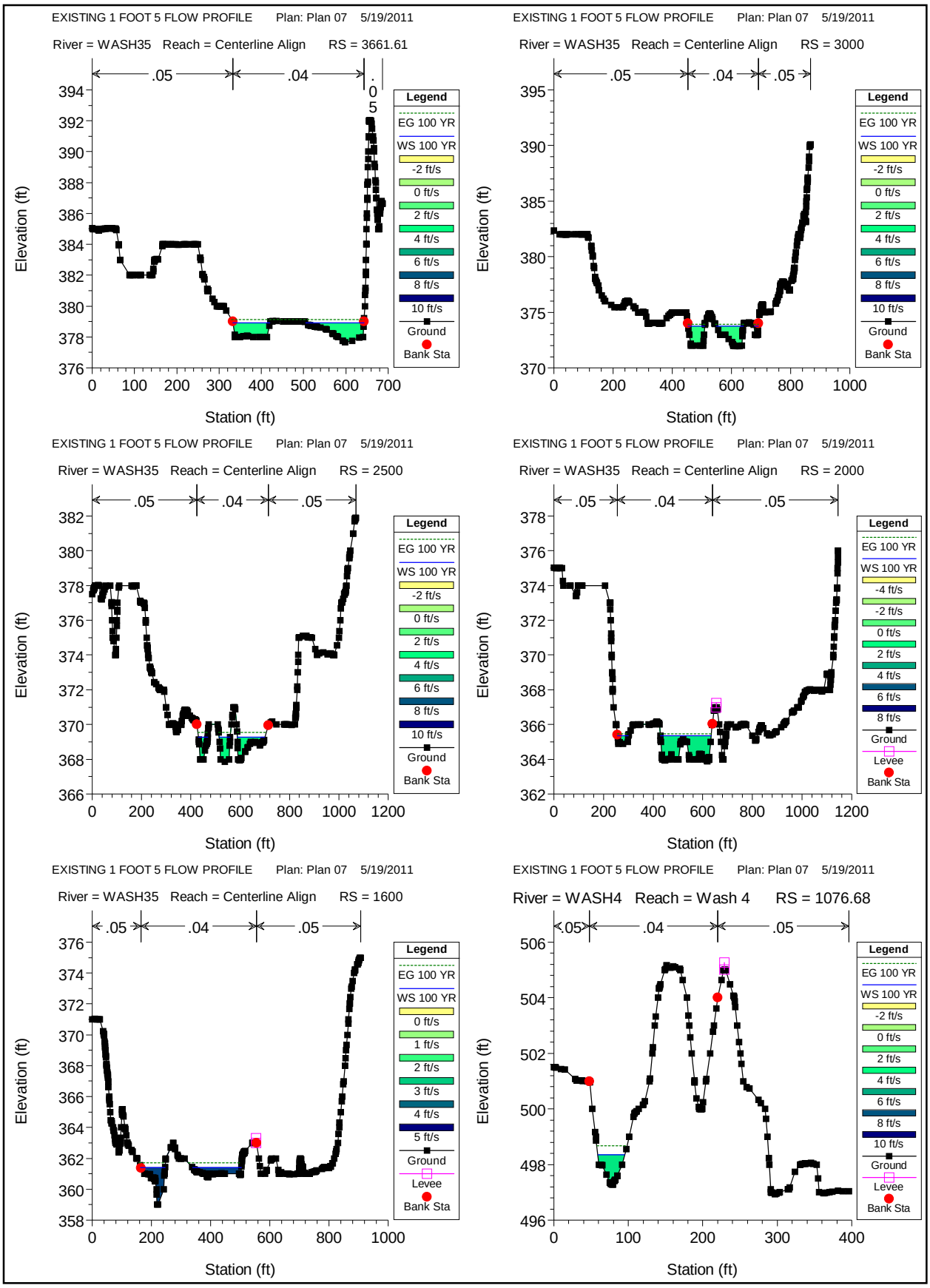

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3100
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2600
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
4.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2100
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
3.0 ft/s
3.5 ft/s
4.0 ft/s
4.5 ft/s
5.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 1368.02
.05 .04
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 600
.05 .04
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 100
.05 .04
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)

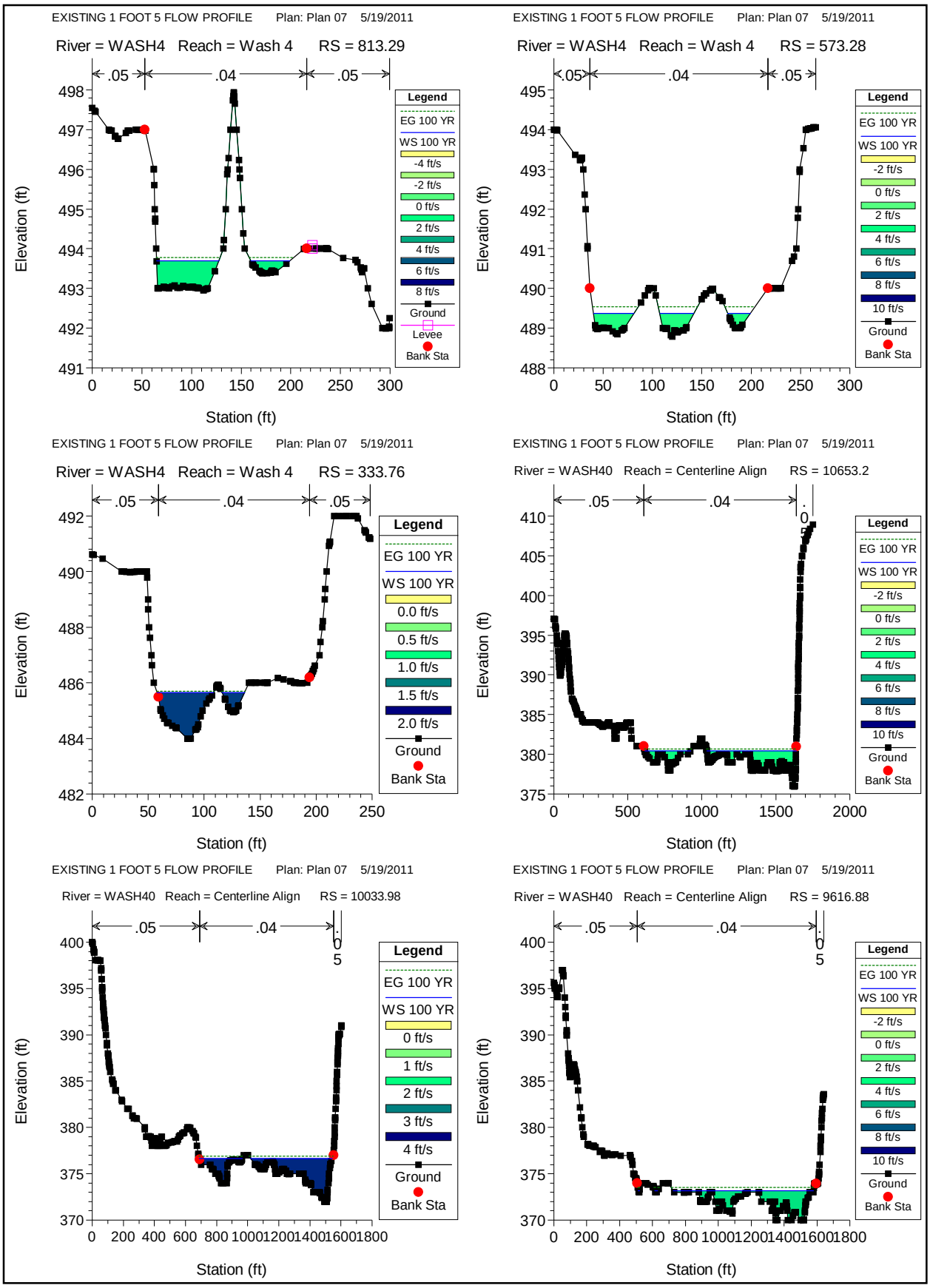

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 10130.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4000
River = WASH30 Reach = Centerline Align RS = 3500
River = WASH30 Reach = Centerline Align RS = 3000
River = WASH30 Reach = Centerline Align RS = 2500
River = WASH30 Reach = Centerline Align RS = 2000
River = WASH30 Reach = Centerline Align RS = 1343.16
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

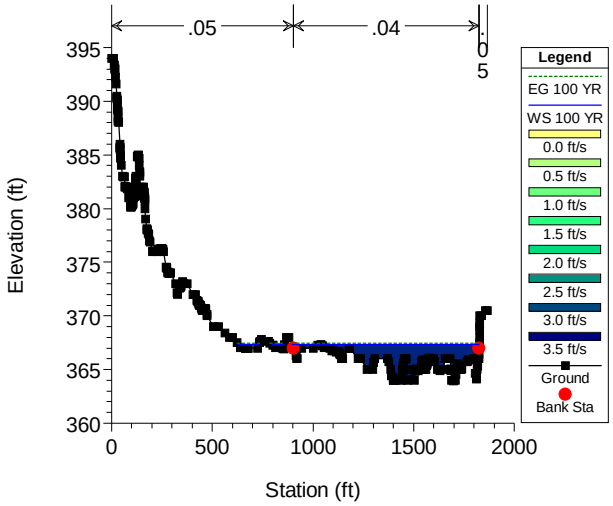

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 5246.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4965.62
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4493.91
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4063.78
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3661.61
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 1600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 1076.68
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 813.29
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 573.28
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 333.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10653.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10033.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 9616.88
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

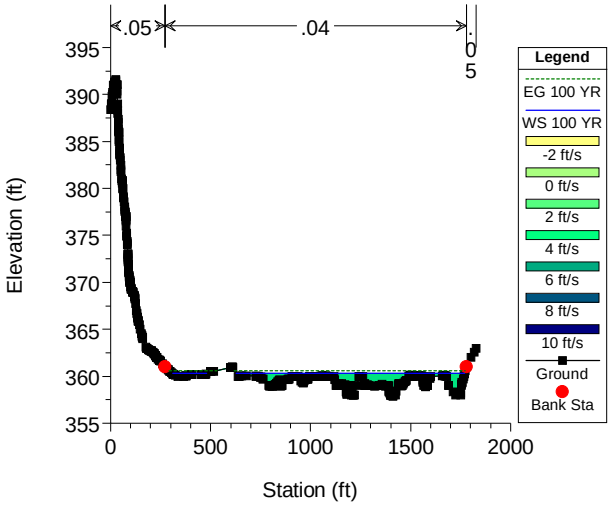
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 8761.12



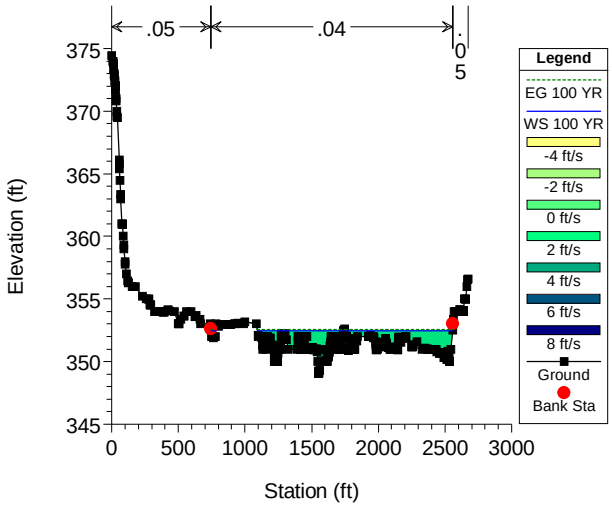

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 7943.06



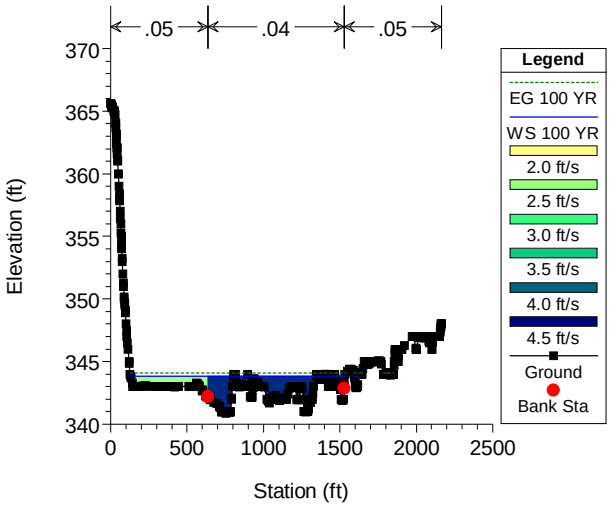

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 6943.13



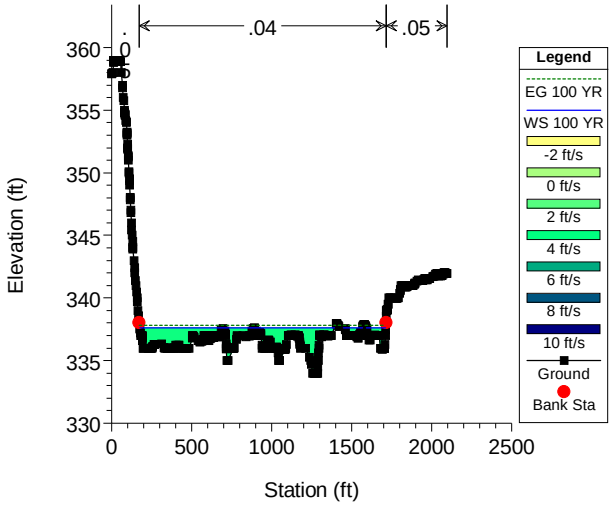

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 5500



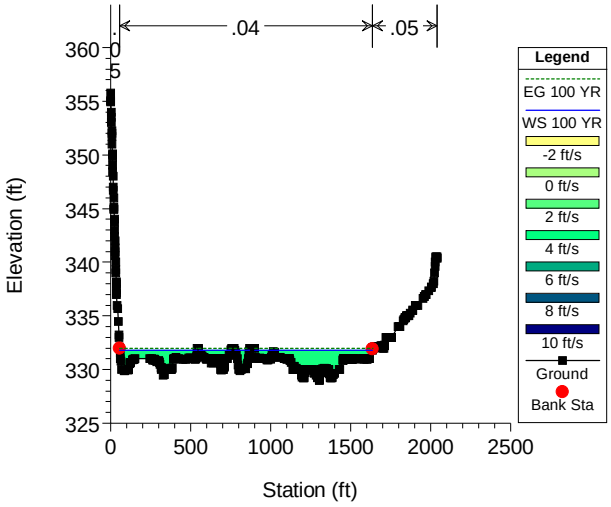

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

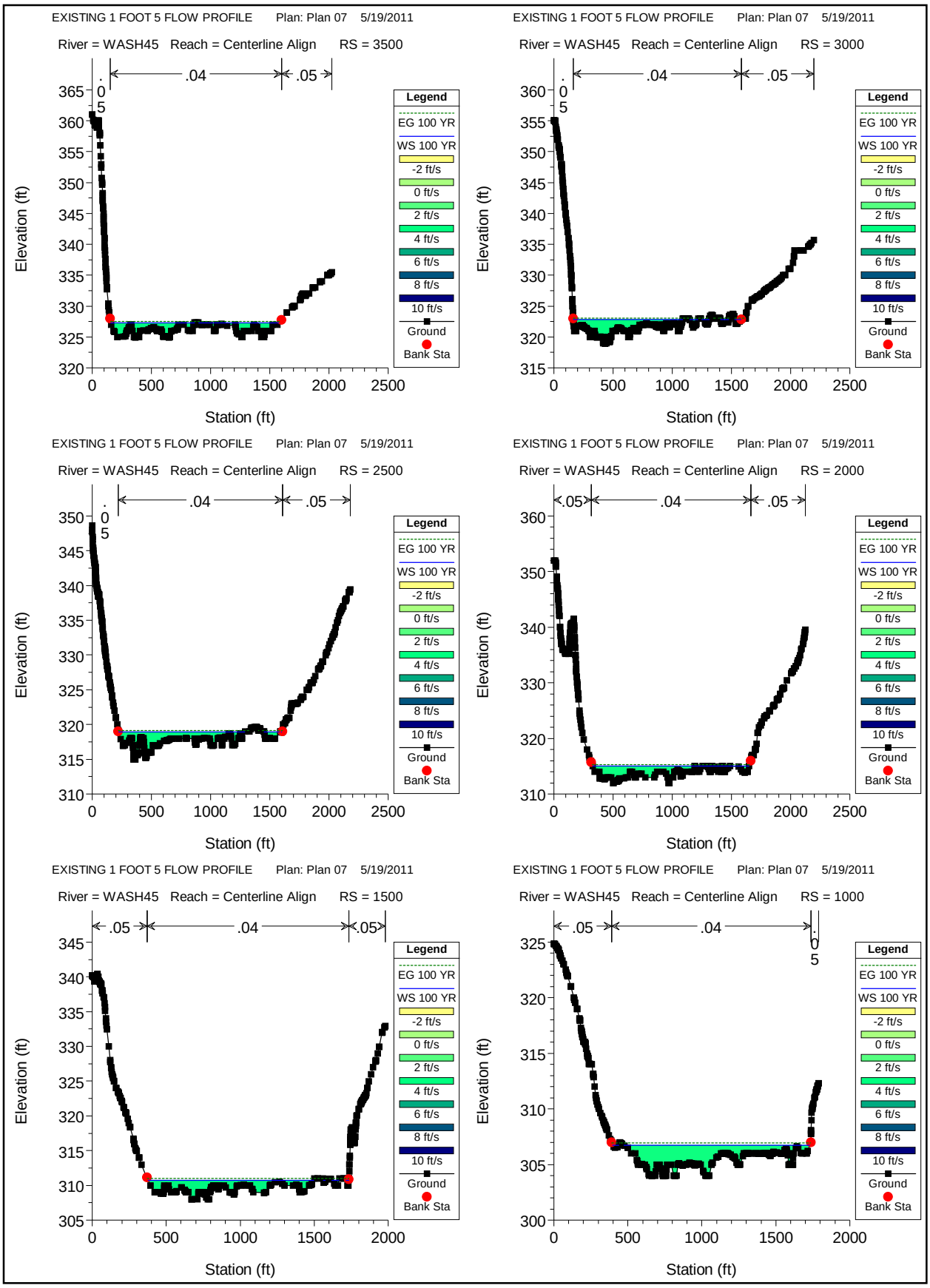
River = WASH45 Reach = Centerline Align RS = 4744.3

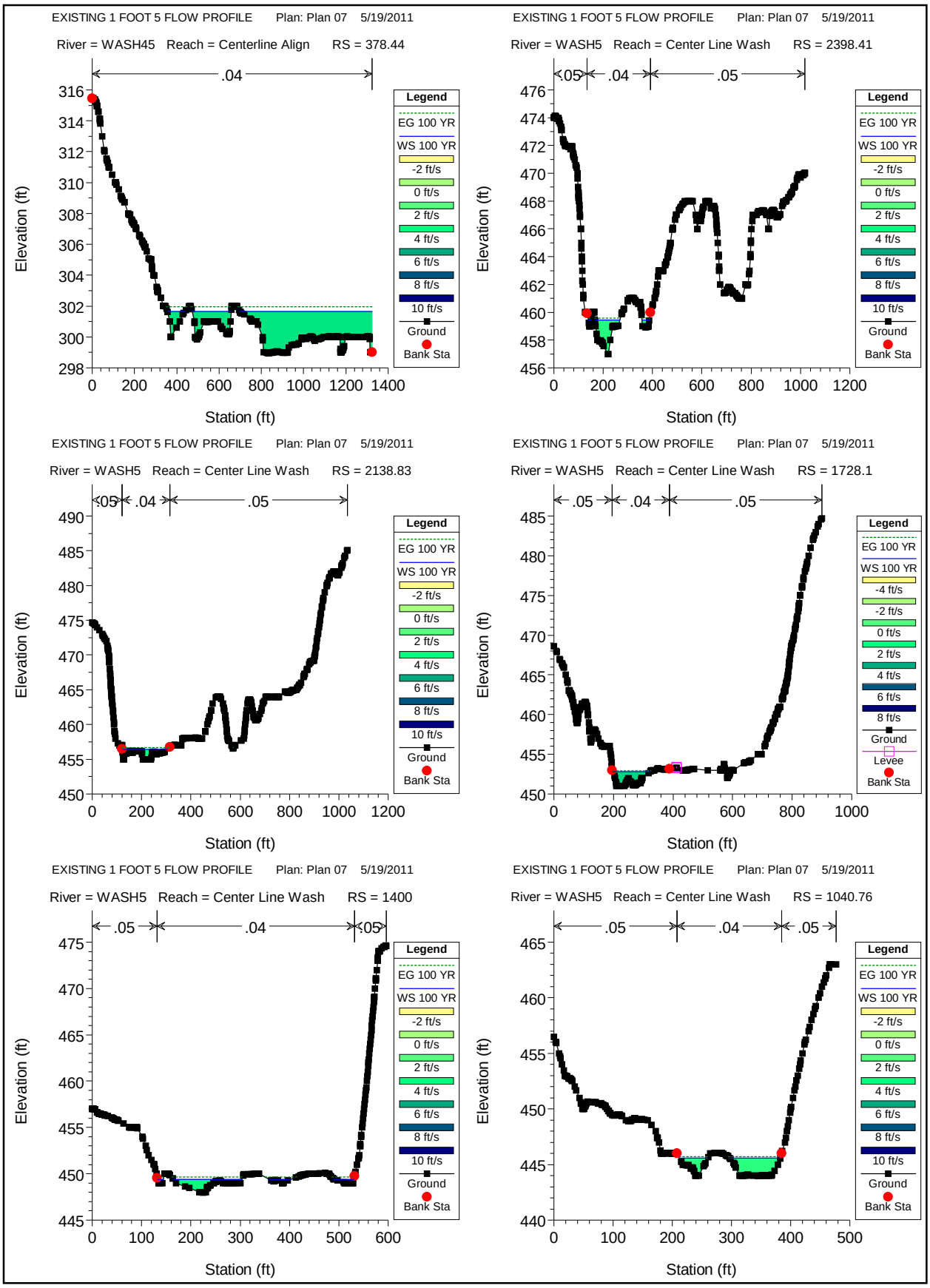



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 4000

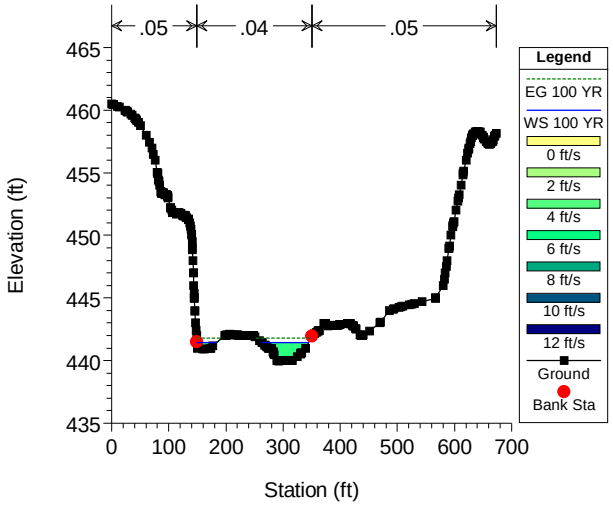



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 378.44
.04
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2398.41
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1728.1
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1400
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1040.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH5 Reach = Center Line Wash RS = 676.61



HEC-RAS Plan: Plan 03 Profile: 100 YR

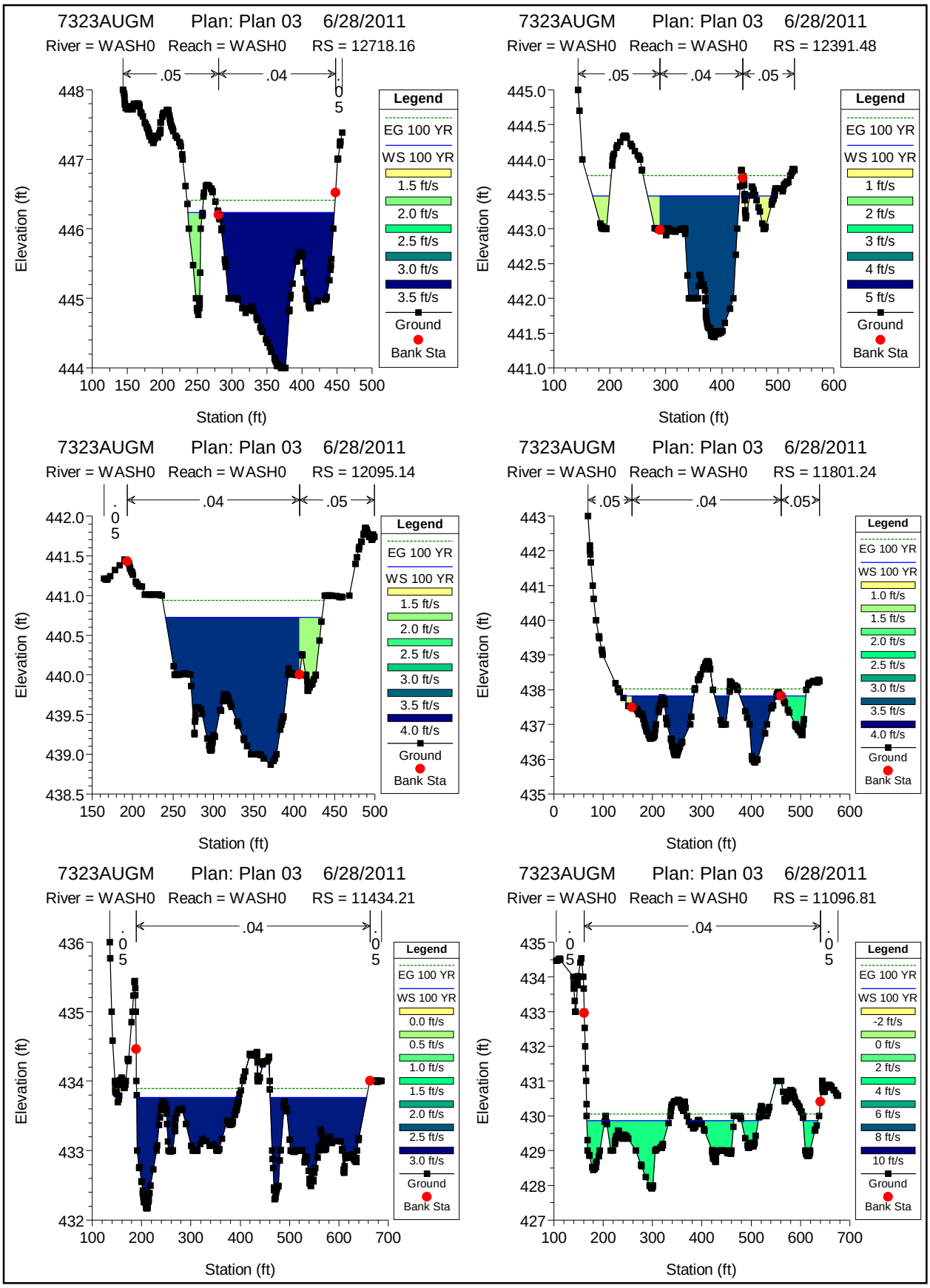
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH90 | WASH90 | 6831.23 | 100 YR | 491.00 | 352.00 | 354.02 | 2.02 | 353.52 | 354.12 | 0.007004 | 2.52 | 194.59 | 265.60 | 0.52 |
| WASH90 | WASH90 | 6503.89 | 100 YR | 491.00 | 349.63 | 351.23 | 1.60 | | 351.41 | 0.009819 | 3.41 | 144.08 | 161.64 | 0.64 |
| WASH90 | WASH90 | 5935.33 | 100 YR | 491.00 | 344.37 | 345.93 | 1.56 | | 346.06 | 0.008955 | 2.89 | 169.66 | 226.76 | 0.59 |
| WASH90 | WASH90 | 5486.51 | 100 YR | 491.00 | 339.99 | 341.40 | 1.41 | 341.23 | 341.51 | 0.011551 | 2.59 | 189.69 | 363.07 | 0.63 |
| WASH90 | WASH90 | 4998.22 | 100 YR | 491.00 | 334.38 | 335.78 | 1.40 | 335.59 | 335.91 | 0.011398 | 2.90 | 169.07 | 269.57 | 0.65 |
| WASH90 | WASH90 | 4374.24 | 100 YR | 491.00 | 326.76 | 328.03 | 1.27 | 327.89 | 328.19 | 0.013457 | 3.21 | 152.85 | 237.36 | 0.71 |
| WASH90 | WASH90 | 3683.01 | 100 YR | 491.00 | 317.38 | 318.72 | 1.34 | 318.56 | 318.84 | 0.013538 | 2.80 | 175.31 | 335.72 | 0.68 |
| WASH90 | WASH90 | 3113.17 | 100 YR | 491.00 | 309.99 | 311.31 | 1.32 | 311.14 | 311.45 | 0.012445 | 3.02 | 162.60 | 261.27 | 0.67 |
| WASH90 | WASH90 | 2556.75 | 100 YR | 491.00 | 302.32 | 303.42 | 1.10 | | 303.58 | 0.016237 | 3.19 | 153.88 | 277.83 | 0.76 |
| WASH90 | WASH90 | 2138.83 | 100 YR | 491.00 | 295.39 | 296.47 | 1.08 | 296.37 | 296.67 | 0.017191 | 3.52 | 139.40 | 232.51 | 0.79 |
| WASH90 | WASH90 | 1646.84 | 100 YR | 491.00 | 287.08 | 288.10 | 1.02 | | 288.25 | 0.017121 | 3.13 | 157.05 | 304.29 | 0.77 |
| WASH90 | WASH90 | 1288.94 | 100 YR | 491.00 | 280.46 | 281.83 | 1.37 | 281.79 | 282.01 | 0.022297 | 3.39 | 144.87 | 303.13 | 0.86 |
| WASH90 | WASH90 | 800.13 | 100 YR | 491.00 | 268.50 | 270.64 | 2.14 | 270.57 | 270.94 | 0.021506 | 4.43 | 110.91 | 151.21 | 0.91 |
| WASH80 | WASH80 | 9177.14 | 100 YR | 242.00 | 406.00 | 407.98 | 1.98 | 407.43 | 408.09 | 0.006144 | 2.74 | 88.41 | 96.42 | 0.50 |
| WASH80 | WASH80 | 8711.54 | 100 YR | 242.00 | 400.91 | 402.88 | 1.97 | 402.83 | 403.16 | 0.022291 | 4.24 | 57.05 | 84.92 | 0.91 |
| WASH80 | WASH80 | 8318.51 | 100 YR | 242.00 | 395.00 | 396.89 | 1.89 | 396.59 | 397.11 | 0.011221 | 3.79 | 63.78 | 66.74 | 0.68 |
| WASH80 | WASH80 | 7927.46 | 100 YR | 242.00 | 391.00 | 392.54 | 1.54 | 392.29 | 392.77 | 0.010940 | 3.84 | 63.08 | 63.88 | 0.68 |
| WASH80 | WASH80 | 7287.57 | 100 YR | 242.00 | 384.00 | 385.97 | 1.97 | | 386.26 | 0.009464 | 4.34 | 55.76 | 41.92 | 0.66 |
| WASH80 | WASH80 | 6827.33 | 100 YR | 242.00 | 380.00 | 382.24 | 2.24 | | 382.35 | 0.007458 | 2.64 | 91.57 | 121.64 | 0.54 |
| WASH80 | WASH80 | 6379.44 | 100 YR | 242.00 | 376.99 | 378.50 | 1.51 | 378.27 | 378.60 | 0.009508 | 2.47 | 98.06 | 173.83 | 0.58 |
| WASH80 | WASH80 | 6136.14 | 100 YR | 242.00 | 374.99 | 376.07 | 1.08 | | 376.15 | 0.010543 | 2.25 | 107.43 | 236.49 | 0.59 |
| WASH80 | WASH80 | 5694.19 | 100 YR | 242.00 | 370.83 | 372.12 | 1.29 | | 372.17 | 0.007756 | 1.81 | 133.40 | 322.30 | 0.50 |
| WASH80 | WASH80 | 5146 | 100 YR | 242.00 | 366.00 | 367.42 | 1.42 | 367.24 | 367.50 | 0.009404 | 2.34 | 103.24 | 196.38 | 0.57 |
| WASH80 | WASH80 | 4787.98 | 100 YR | 242.00 | 363.67 | 364.93 | 1.26 | | 364.97 | 0.005453 | 1.68 | 144.28 | 301.46 | 0.43 |
| WASH80 | WASH80 | 4308.96 | 100 YR | 242.00 | 360.00 | 360.86 | 0.86 | | 360.99 | 0.014097 | 2.85 | 85.04 | 163.31 | 0.69 |
| WASH80 | WASH80 | 3652.44 | 100 YR | 242.00 | 353.35 | 354.75 | 1.40 | 354.46 | 354.84 | 0.006656 | 2.44 | 99.13 | 136.72 | 0.51 |
| WASH80 | WASH80 | 3226.43 | 100 YR | 242.00 | 349.80 | 351.23 | 1.43 | 351.05 | 351.31 | 0.010568 | 2.27 | 106.63 | 232.56 | 0.59 |
| WASH80 | WASH80 | 2831.38 | 100 YR | 242.00 | 345.72 | 346.96 | 1.24 | | 347.05 | 0.010981 | 2.44 | 99.08 | 199.18 | 0.61 |
| WASH80 | WASH80 | 2414.33 | 100 YR | 242.00 | 341.69 | 343.01 | 1.32 | | 343.10 | 0.008258 | 2.33 | 104.07 | 181.80 | 0.54 |
| WASH80 | WASH80 | 1998.23 | 100 YR | 242.00 | 338.00 | 339.09 | 1.09 | | 339.17 | 0.010388 | 2.32 | 104.12 | 216.36 | 0.59 |
| WASH80 | WASH80 | 1662.74 | 100 YR | 242.00 | 334.43 | 335.38 | 0.95 | | 335.46 | 0.012883 | 2.32 | 104.36 | 255.75 | 0.64 |
| WASH80 | WASH80 | 1123.57 | 100 YR | 242.00 | 327.07 | 328.33 | 1.26 | | 328.44 | 0.013471 | 2.73 | 88.72 | 176.09 | 0.68 |
| WASH80 | WASH80 | 611 | 100 YR | 242.00 | 320.60 | 321.52 | 0.92 | | 321.67 | 0.013253 | 3.05 | 79.41 | 131.88 | 0.69 |
| WASH75 | WASH75 | 3066.24 | 100 YR | 189.00 | 352.99 | 354.20 | 1.21 | 353.95 | 354.28 | 0.012447 | 2.36 | 80.15 | 186.41 | 0.63 |
| WASH75 | WASH75 | 2658.51 | 100 YR | 189.00 | 348.60 | 349.71 | 1.11 | | 349.80 | 0.009781 | 2.52 | 75.03 | 132.08 | 0.59 |
| WASH75 | WASH75 | 2371.61 | 100 YR | 189.00 | 345.39 | 346.26 | 0.87 | | 346.36 | 0.015075 | 2.50 | 75.64 | 188.14 | 0.69 |
| WASH75 | WASH75 | 2124.14 | 100 YR | 189.00 | 342.00 | 343.04 | 1.04 | 342.84 | 343.13 | 0.011403 | 2.38 | 79.29 | 170.17 | 0.62 |
| WASH75 | WASH75 | 1807.24 | 100 YR | 189.00 | 338.62 | 339.47 | 0.85 | | 339.55 | 0.011173 | 2.24 | 84.22 | 194.68 | 0.60 |
| WASH75 | WASH75 | 1554.2 | 100 YR | 189.00 | 335.34 | 336.17 | 0.83 | | 336.26 | 0.015271 | 2.40 | 78.68 | 207.59 | 0.69 |
| WASH75 | WASH75 | 1289.14 | 100 YR | 189.00 | 331.45 | 332.49 | 1.04 | | 332.58 | 0.012708 | 2.45 | 77.39 | 177.15 | 0.64 |
| WASH75 | WASH75 | 908.89 | 100 YR | 189.00 | 326.14 | 327.36 | 1.21 | | 327.48 | 0.015506 | 2.82 | 67.07 | 140.92 | 0.72 |
| WASH75 | WASH75 | 546.93 | 100 YR | 189.00 | 320.30 | 321.46 | 1.16 | | 321.59 | 0.016214 | 2.85 | 66.28 | 141.22 | 0.73 |
| WASH70 | WASH70 | 3521.27 | 100 YR | 443.00 | 310.47 | 311.97 | 1.50 | | 312.16 | 0.016672 | 3.56 | 125.71 | 230.87 | 0.78 |
| WASH70 | WASH70 | 3191.72 | 100 YR | 443.00 | 305.11 | 306.77 | 1.66 | | 306.92 | 0.015232 | 3.15 | 140.59 | 246.24 | 0.73 |
| WASH70 | WASH70 | 2880.01 | 100 YR | 443.00 | 300.57 | 301.93 | 1.36 | | 302.08 | 0.012630 | 3.03 | 146.07 | 235.73 | 0.68 |
| WASH70 | WASH70 | 2398.82 | 100 YR | 443.00 | 294.64 | 295.72 | 1.08 | | 295.80 | 0.010899 | 2.33 | 189.95 | 406.96 | 0.60 |

HEC-RAS Plan: Plan 03 Profile: 100 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH70 | WASH70 | 2036.83 | 100 YR | 443.00 | 288.77 | 289.81 | 1.04 | 289.77 | 290.03 | 0.025398 | 3.78 | 117.13 | 229.31 | 0.93 |
| WASH70 | WASH70 | 1648.15 | 100 YR | 443.00 | 282.26 | 283.45 | 1.19 | | 283.58 | 0.011610 | 2.99 | 148.33 | 229.81 | 0.66 |
| WASH70 | WASH70 | 1321.01 | 100 YR | 443.00 | 276.44 | 277.50 | 1.06 | 277.50 | 277.71 | 0.031314 | 3.66 | 120.99 | 290.68 | 1.00 |
| WASH70 | WASH70 | 1029.2 | 100 YR | 443.00 | 269.54 | 271.25 | 1.71 | 270.65 | 271.30 | 0.003933 | 1.83 | 241.90 | 346.95 | 0.39 |
| WASH70 | WASH70 | 666.38 | 100 YR | 443.00 | 267.00 | 268.27 | 10.97 | 268.22 | 268.48 | 0.021738 | 3.64 | 121.62 | 224.12 | 0.87 |
| WASH70 | WASH70 | 358.04 | 100 YR | 443.00 | 261.11 | 262.58 | 11.85 | 262.43 | 262.93 | 0.015101 | 4.74 | 93.49 | 88.29 | 0.81 |
| WASH60 | WASH60 | 5477.11 | 100 YR | 64.00 | 467.00 | 467.90 | 0.90 | 467.62 | 468.03 | 0.007798 | 2.82 | 22.69 | 28.15 | 0.55 |
| WASH60 | WASH60 | 5299.28 | 100 YR | 64.00 | 465.62 | 466.53 | 0.91 | | 466.64 | 0.007729 | 2.68 | 23.93 | 32.08 | 0.55 |
| WASH60 | WASH60 | 5104.28 | 100 YR | 64.00 | 463.90 | 464.87 | 0.97 | 464.67 | 464.95 | 0.009825 | 2.29 | 27.99 | 56.97 | 0.57 |
| WASH60 | WASH60 | 4869.04 | 100 YR | 64.00 | 460.91 | 461.68 | 0.77 | 461.61 | 461.82 | 0.019049 | 2.95 | 21.68 | 50.54 | 0.78 |
| WASH60 | WASH60 | 4591.11 | 100 YR | 64.00 | 457.00 | 457.82 | 0.82 | | 457.88 | 0.010817 | 2.05 | 31.19 | 80.42 | 0.58 |
| WASH60 | WASH60 | 4337.83 | 100 YR | 64.00 | 454.00 | 454.84 | 0.84 | 454.72 | 454.92 | 0.012716 | 2.18 | 29.42 | 78.52 | 0.63 |
| WASH60 | WASH60 | 4068.7 | 100 YR | 64.00 | 450.95 | 451.54 | 0.90 | 451.43 | 451.59 | 0.011953 | 1.79 | 35.69 | 121.61 | 0.58 |
| WASH60 | WASH60 | 3746.65 | 100 YR | 64.00 | 446.00 | 447.16 | 1.16 | 447.02 | 447.25 | 0.015397 | 2.37 | 27.01 | 73.08 | 0.69 |
| WASH60 | WASH60 | 3427.61 | 100 YR | 64.00 | 441.98 | 442.82 | 0.84 | | 442.88 | 0.011348 | 1.88 | 34.68 | 91.07 | 0.58 |
| WASH60 | WASH60 | 3162.25 | 100 YR | 64.00 | 438.68 | 439.52 | 0.84 | | 439.61 | 0.015998 | 2.39 | 26.75 | 73.29 | 0.70 |
| WASH60 | WASH60 | 2826.26 | 100 YR | 64.00 | 433.38 | 434.45 | 1.07 | 434.31 | 434.61 | 0.013851 | 3.21 | 19.97 | 31.55 | 0.71 |
| WASH60 | WASH60 | 2497.44 | 100 YR | 64.00 | 429.89 | 430.64 | 0.75 | 430.45 | 430.76 | 0.009926 | 2.74 | 23.35 | 36.38 | 0.60 |
| WASH60 | WASH60 | 2235.76 | 100 YR | 64.00 | 426.68 | 427.74 | 1.06 | 427.57 | 427.86 | 0.012484 | 2.73 | 23.46 | 43.52 | 0.65 |
| WASH60 | WASH60 | 1902.48 | 100 YR | 64.00 | 421.48 | 422.50 | 1.02 | 422.43 | 422.60 | 0.020428 | 2.53 | 25.28 | 76.39 | 0.78 |
| WASH60 | WASH60 | 1536.23 | 100 YR | 64.00 | 415.62 | 416.62 | 2.60 | 416.48 | 416.74 | 0.012914 | 2.79 | 22.95 | 42.62 | 0.67 |
| WASH60 | WASH60 | 1155.84 | 100 YR | 64.00 | 410.17 | 411.27 | 2.27 | 411.17 | 411.37 | 0.015417 | 2.53 | 25.27 | 61.85 | 0.70 |
| WASH60 | WASH60 | 717.74 | 100 YR | 64.00 | 403.99 | 404.67 | 1.67 | 404.55 | 404.78 | 0.014671 | 2.70 | 23.76 | 52.04 | 0.70 |
| WASH60 | WASH60 | 251.42 | 100 YR | 64.00 | 397.00 | 397.59 | 0.63 | 397.50 | 397.66 | 0.015802 | 2.17 | 29.53 | 93.35 | 0.68 |
| WASH0 | WASH0 | 12718.16 | 100 YR | 788.00 | 444.00 | 446.23 | 2.23 | 445.74 | 446.41 | 0.006010 | 3.47 | 234.36 | 185.99 | 0.53 |
| WASH0 | WASH0 | 12391.48 | 100 YR | 788.00 | 441.44 | 443.47 | 2.03 | | 443.77 | 0.011451 | 4.46 | 194.61 | 236.01 | 0.72 |
| WASH0 | WASH0 | 12095.14 | 100 YR | 788.00 | 438.87 | 440.72 | 1.85 | | 440.94 | 0.007976 | 3.76 | 218.00 | 193.74 | 0.60 |
| WASH0 | WASH0 | 11801.24 | 100 YR | 788.00 | 435.91 | 437.81 | 1.90 | | 438.02 | 0.012959 | 3.74 | 223.94 | 298.72 | 0.72 |
| WASH0 | WASH0 | 11434.21 | 100 YR | 788.00 | 432.17 | 433.77 | 1.60 | | 433.89 | 0.009738 | 2.85 | 276.72 | 406.49 | 0.61 |
| WASH0 | WASH0 | 11096.81 | 100 YR | 788.00 | 427.91 | 429.86 | 1.95 | | 430.05 | 0.013515 | 3.47 | 227.38 | 315.49 | 0.72 |
| WASH0 | WASH0 | 10668.33 | 100 YR | 788.00 | 422.99 | 424.56 | 1.57 | | 424.70 | 0.011514 | 2.94 | 267.91 | 422.02 | 0.65 |
| WASH0 | WASH0 | 10283.74 | 100 YR | 788.00 | 418.12 | 419.68 | 1.56 | | 419.82 | 0.014091 | 2.92 | 270.04 | 500.77 | 0.70 |
| WASH0 | WASH0 | 9871.26 | 100 YR | 788.00 | 412.69 | 414.11 | 1.42 | | 414.25 | 0.012931 | 3.05 | 261.97 | 432.64 | 0.69 |
| WASH0 | WASH0 | 9562.95 | 100 YR | 788.00 | 408.29 | 410.02 | 1.73 | | 410.14 | 0.013698 | 2.85 | 285.56 | 539.56 | 0.69 |
| WASH0 | WASH0 | 9197 | 100 YR | 788.00 | 403.65 | 405.15 | 1.50 | 404.96 | 405.27 | 0.012949 | 2.81 | 283.41 | 540.69 | 0.67 |
| WASH0 | WASH0 | 8798.15 | 100 YR | 788.00 | 397.89 | 399.32 | 1.43 | | 399.48 | 0.016297 | 3.19 | 246.68 | 445.63 | 0.76 |
| WASH0 | WASH0 | 8444.54 | 100 YR | 788.00 | 392.80 | 394.13 | 1.33 | | 394.30 | 0.013234 | 3.27 | 241.21 | 360.11 | 0.70 |
| WASH0 | WASH0 | 7821.48 | 100 YR | 788.00 | 383.87 | 385.64 | 1.77 | | 385.79 | 0.013036 | 3.28 | 266.78 | 435.88 | 0.70 |
| WASH0 | WASH0 | 7102.13 | 100 YR | 788.00 | 374.51 | 376.05 | 1.54 | | 376.21 | 0.015631 | 3.28 | 247.22 | 438.71 | 0.75 |
| WASH0 | WASH0 | 6494.14 | 100 YR | 788.00 | 364.25 | 366.20 | 1.95 | | 366.40 | 0.015055 | 3.58 | 219.84 | 314.60 | 0.76 |
| WASH0 | WASH0 | 6019.74 | 100 YR | 788.00 | 357.46 | 359.20 | 1.74 | | 359.34 | 0.015680 | 3.00 | 262.83 | 507.24 | 0.73 |
| WASH0 | WASH0 | 5624.57 | 100 YR | 788.00 | 350.55 | 352.33 | 1.78 | | 352.52 | 0.014082 | 3.46 | 227.49 | 326.09 | 0.73 |
| WASH0 | WASH0 | 5234.92 | 100 YR | 788.00 | 344.24 | 346.33 | 2.09 | | 346.66 | 0.014192 | 4.63 | 170.33 | 159.10 | 0.79 |
| WASH0 | WASH0 | 4617.22 | 100 YR | 788.00 | 334.54 | 335.98 | 1.44 | | 336.25 | 0.015815 | 4.23 | 186.51 | 216.38 | 0.80 |
| WASH0 | WASH0 | 4232 | 100 YR | 788.00 | 327.66 | 329.83 | 2.17 | | 330.18 | 0.013324 | 4.74 | 166.09 | 142.06 | 0.77 |
| WASH0 | WASH0 | 3967.23 | 100 YR | 788.00 | 324.40 | 326.14 | 1.74 | | 326.44 | 0.015162 | 4.39 | 179.57 | 190.85 | 0.80 |

HEC-RAS Plan: Plan 03 Profile: 100 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH0 | WASH0 | 3612.08 | 100 YR | 788.00 | 319.18 | 320.57 | 1.57 | 320.48 | 320.77 | 0.019715 | 3.65 | 216.05 | 369.22 | 0.84 |
| WASH0 | WASH0 | 3138.34 | 100 YR | 788.00 | 310.27 | 311.74 | 2.07 | 311.74 | 311.99 | 0.029670 | 4.00 | 197.09 | 398.73 | 1.00 |
| WASH0 | WASH0 | 2622.49 | 100 YR | 788.00 | 300.88 | 302.29 | 1.41 | | 302.44 | 0.019175 | 3.07 | 256.56 | 556.44 | 0.80 |
| WASH0 | WASH0 | 2197.73 | 100 YR | 788.00 | 292.25 | 293.80 | 1.55 | | 293.97 | 0.016125 | 3.34 | 235.59 | 394.25 | 0.76 |
| WASH0 | WASH0 | 1740.94 | 100 YR | 788.00 | 284.60 | 286.06 | 1.46 | 285.88 | 286.23 | 0.016871 | 3.36 | 234.20 | 401.64 | 0.78 |
| WASH0 | WASH0 | 1270.27 | 100 YR | 788.00 | 276.04 | 277.89 | 1.85 | 277.69 | 278.05 | 0.012221 | 3.26 | 243.34 | 352.16 | 0.68 |
| WASH0 | WASH0 | 767.81 | 100 YR | 788.00 | 266.47 | 268.48 | 2.01 | 268.48 | 269.06 | 0.022166 | 6.07 | 129.76 | 112.56 | 1.00 |
| WASH0 | WASH0 | 133.33 | 100 YR | 788.00 | 252.81 | 254.42 | 1.61 | 254.28 | 254.64 | 0.015304 | 3.83 | 205.90 | 270.84 | 0.77 |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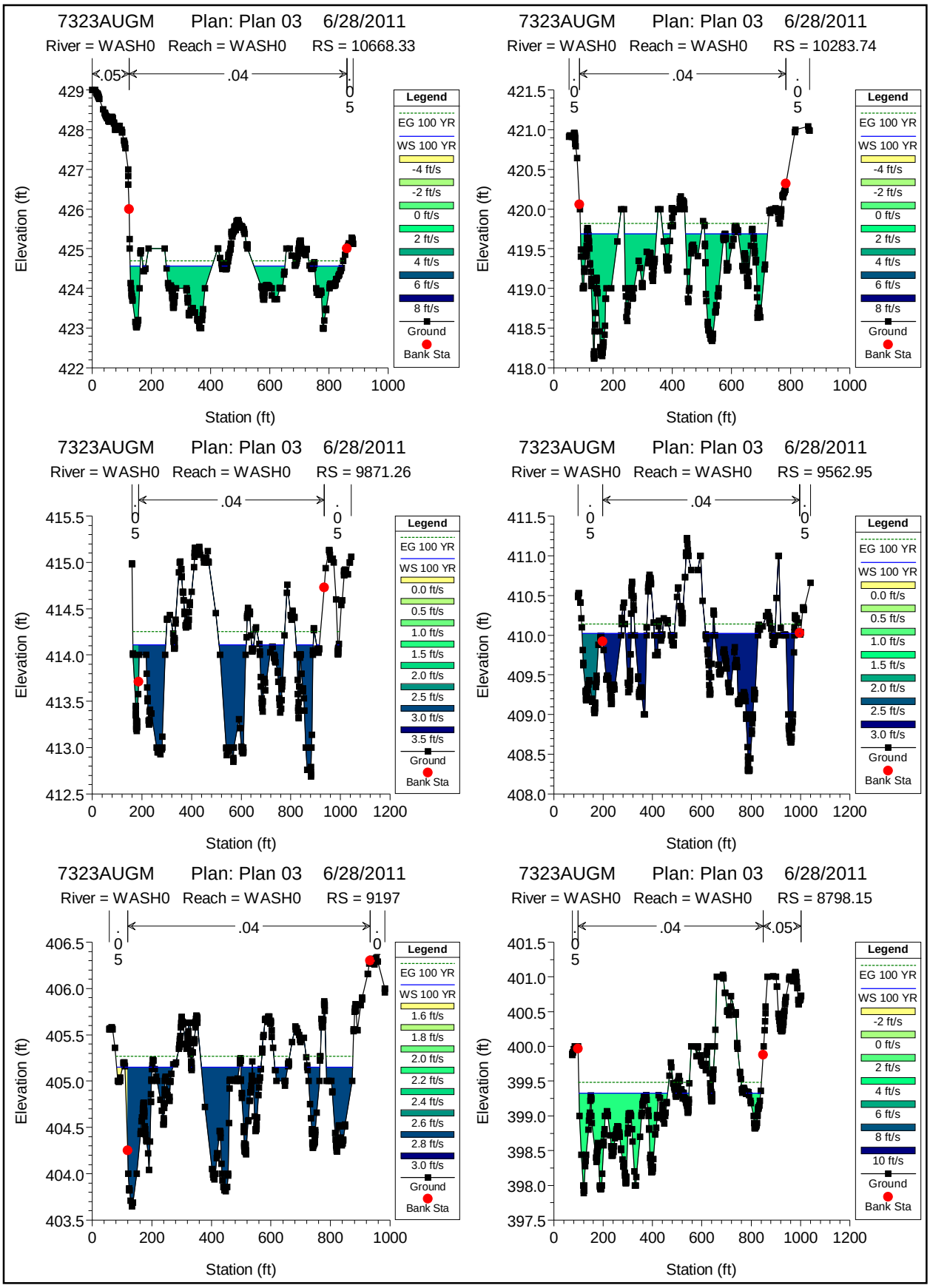
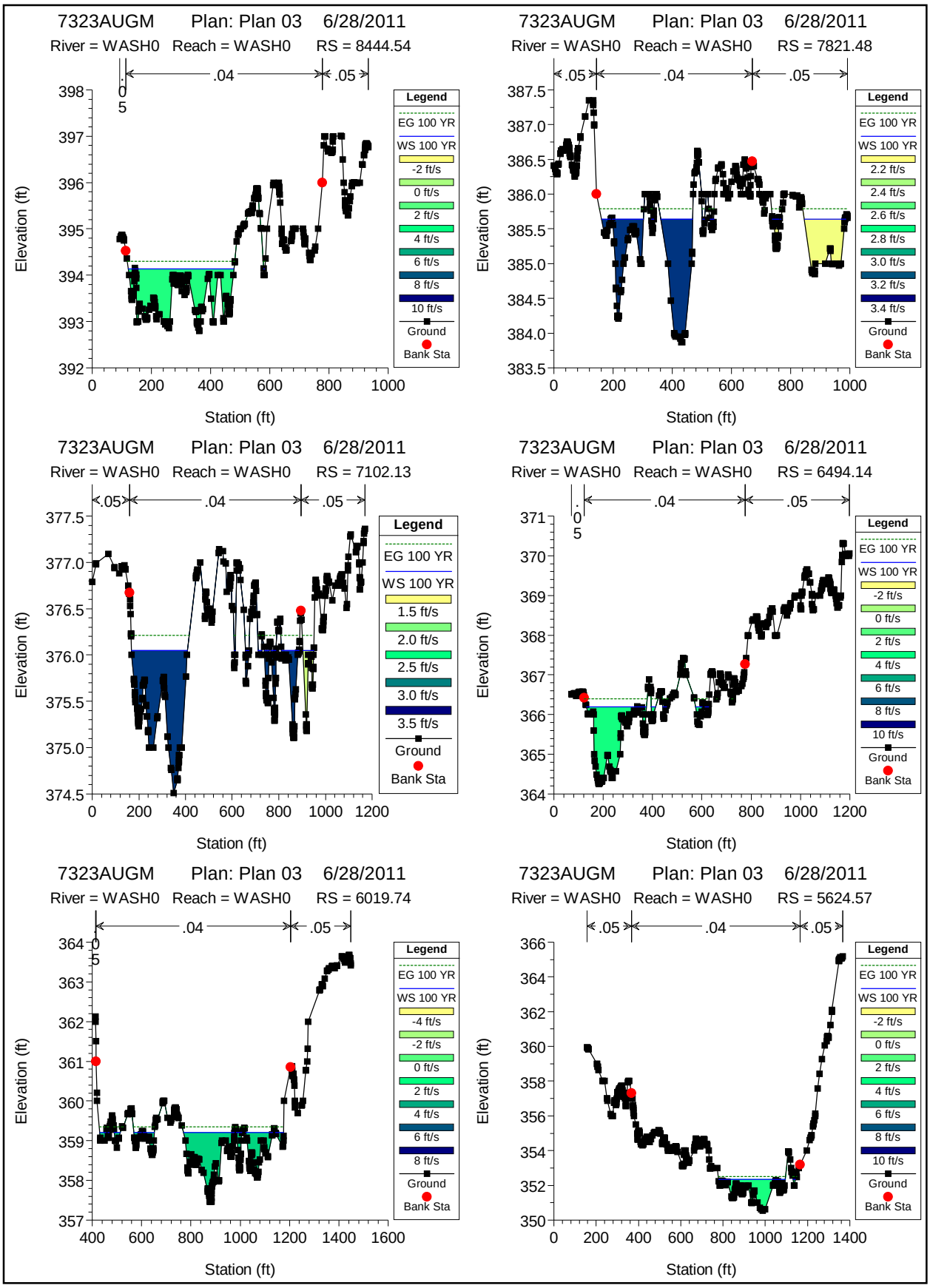
River = WASH0 Reach = WASH0 RS = 12718.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12391.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1 ft/s
2 ft/s
3 ft/s
4 ft/s
5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12095.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
4.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11801.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
4.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11434.21
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11096.81
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10668.33
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10283.74
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9871.26
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9562.95
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9197
.05
.04
.0
Legend
EG 100 YR
WS 100 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8798.15
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)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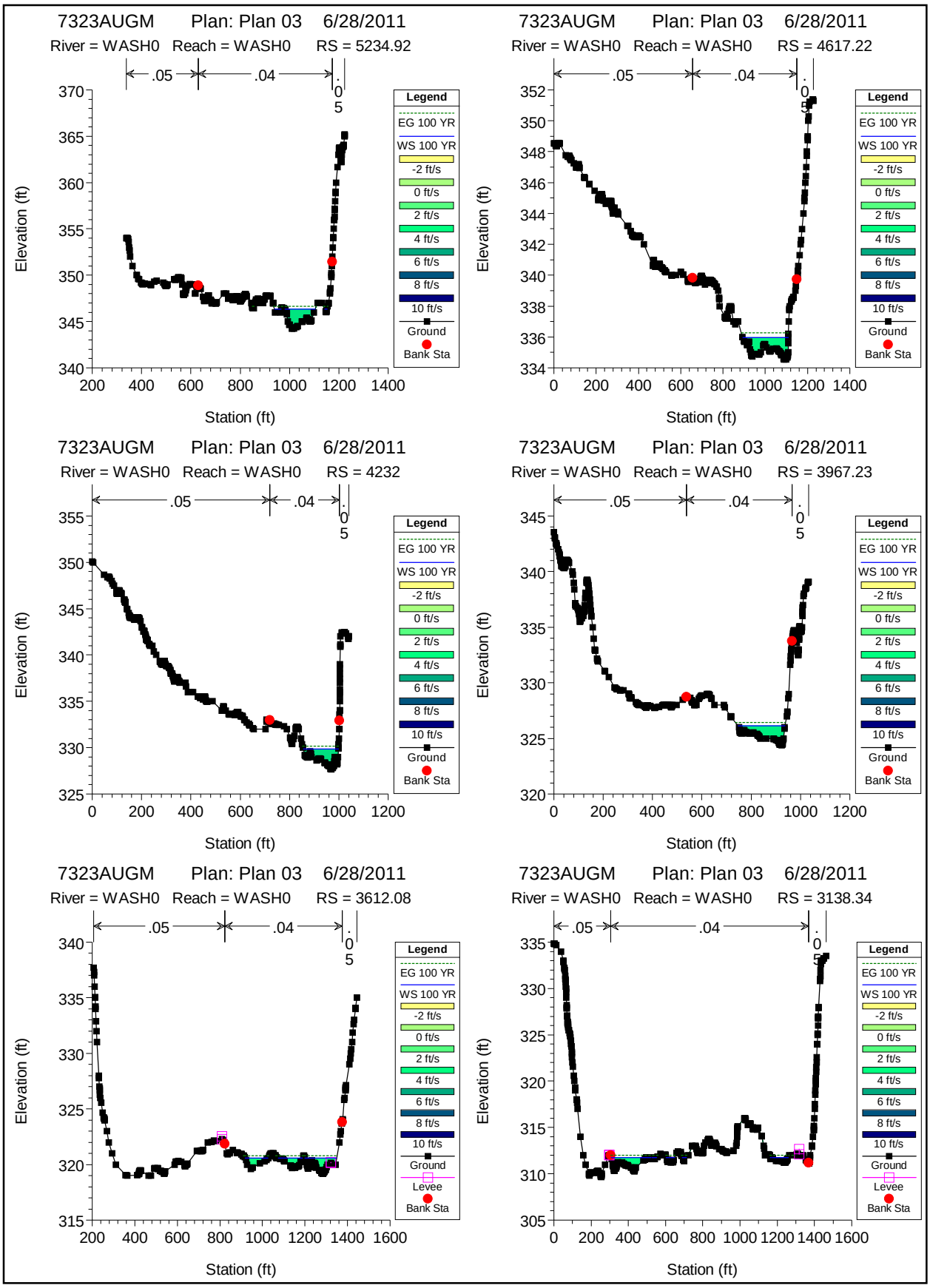
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7821.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
3.2 ft/s
3.4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7102.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6494.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6019.74
.04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5624.57
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta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River = WASH0 Reach = WASH0 RS = 5234.92
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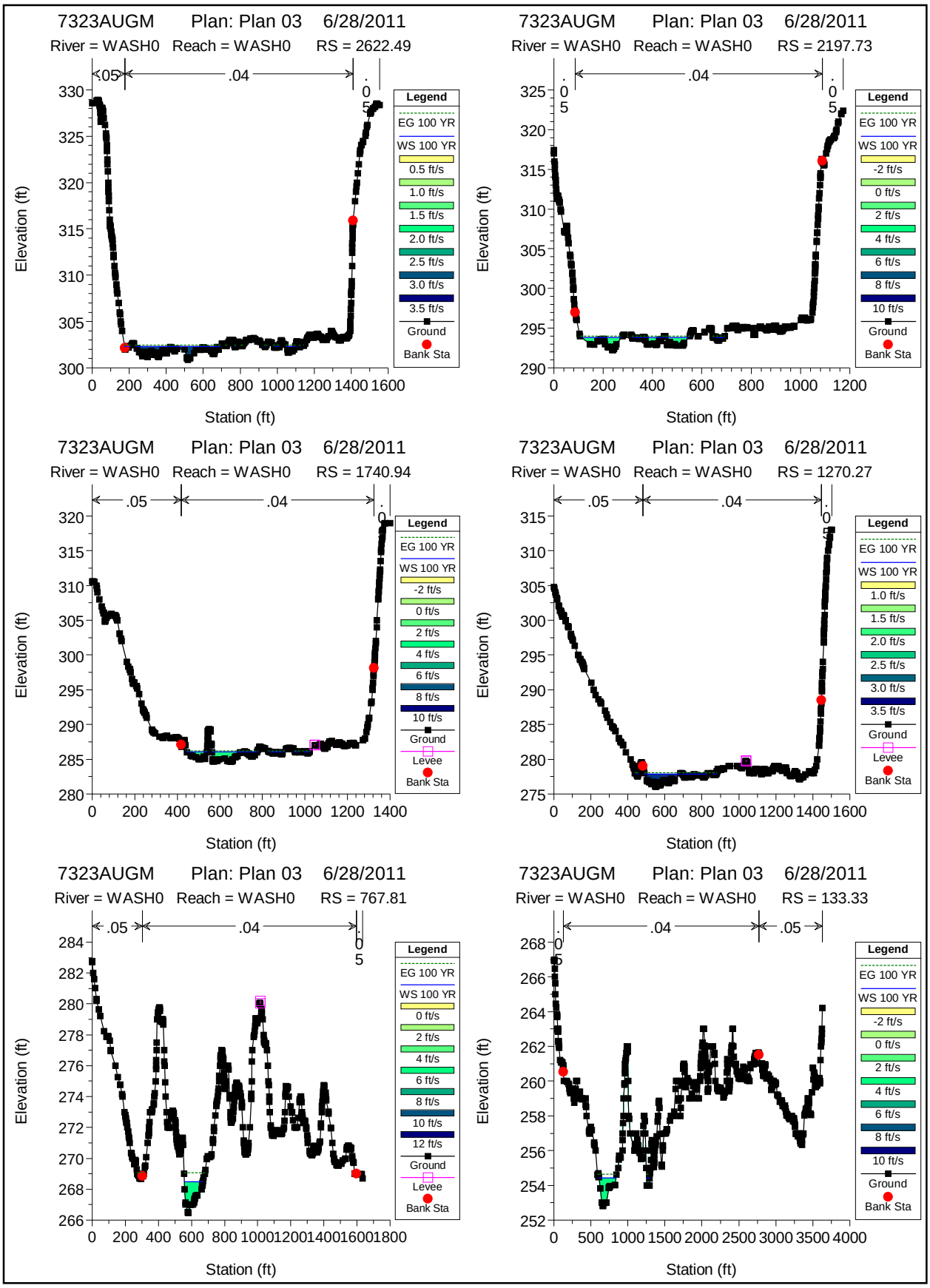
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4617.22
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4232
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3967.23
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3612.08
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3138.34
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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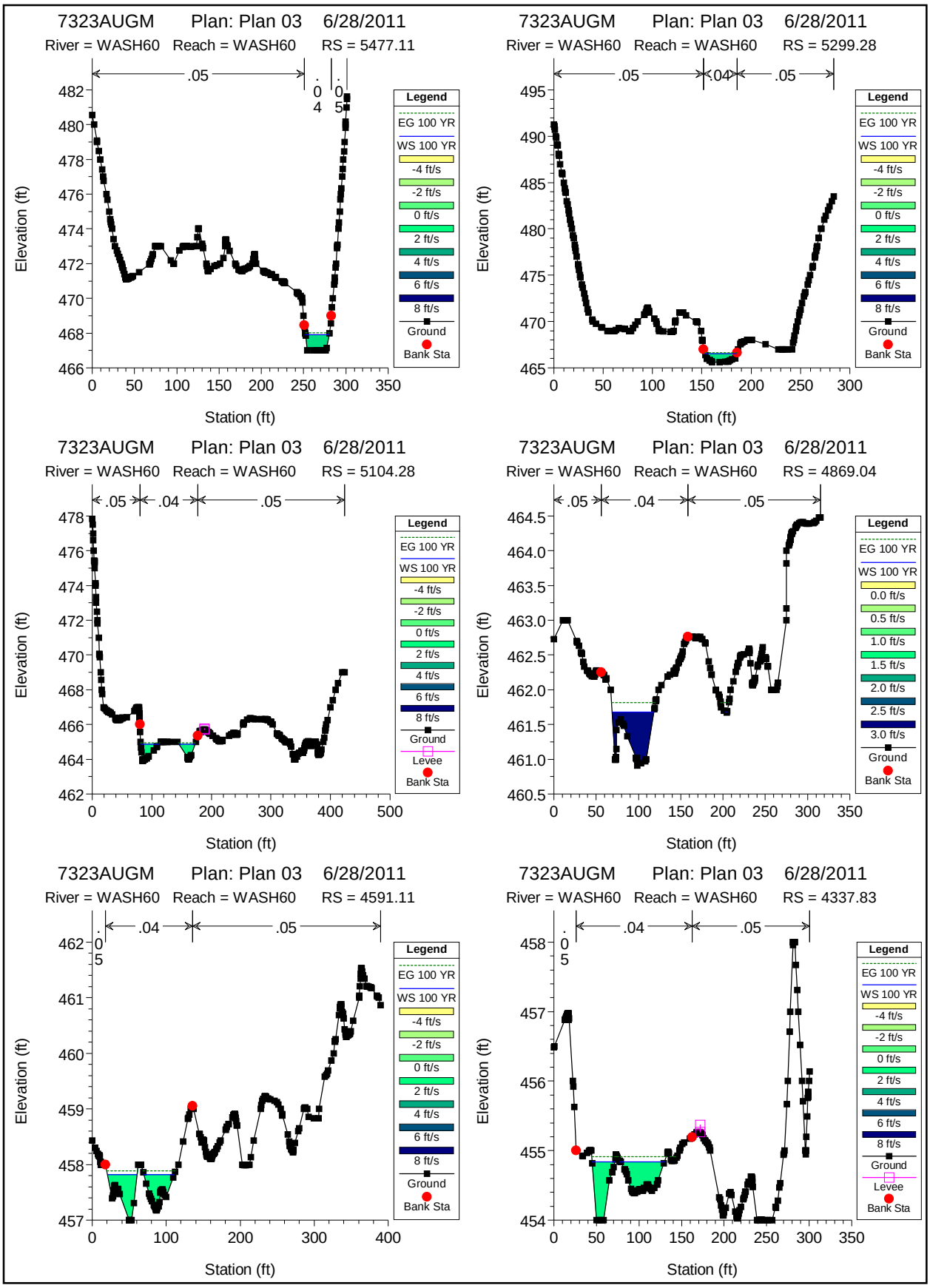
River = WASH0 Reach = WASH0 RS = 2622.49
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 2197.73
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1740.94
.05
.04
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1270.27
.05
.04
Legend
EG 100 YR
WS 100 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 767.81
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 133.33
.05
.04
.05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)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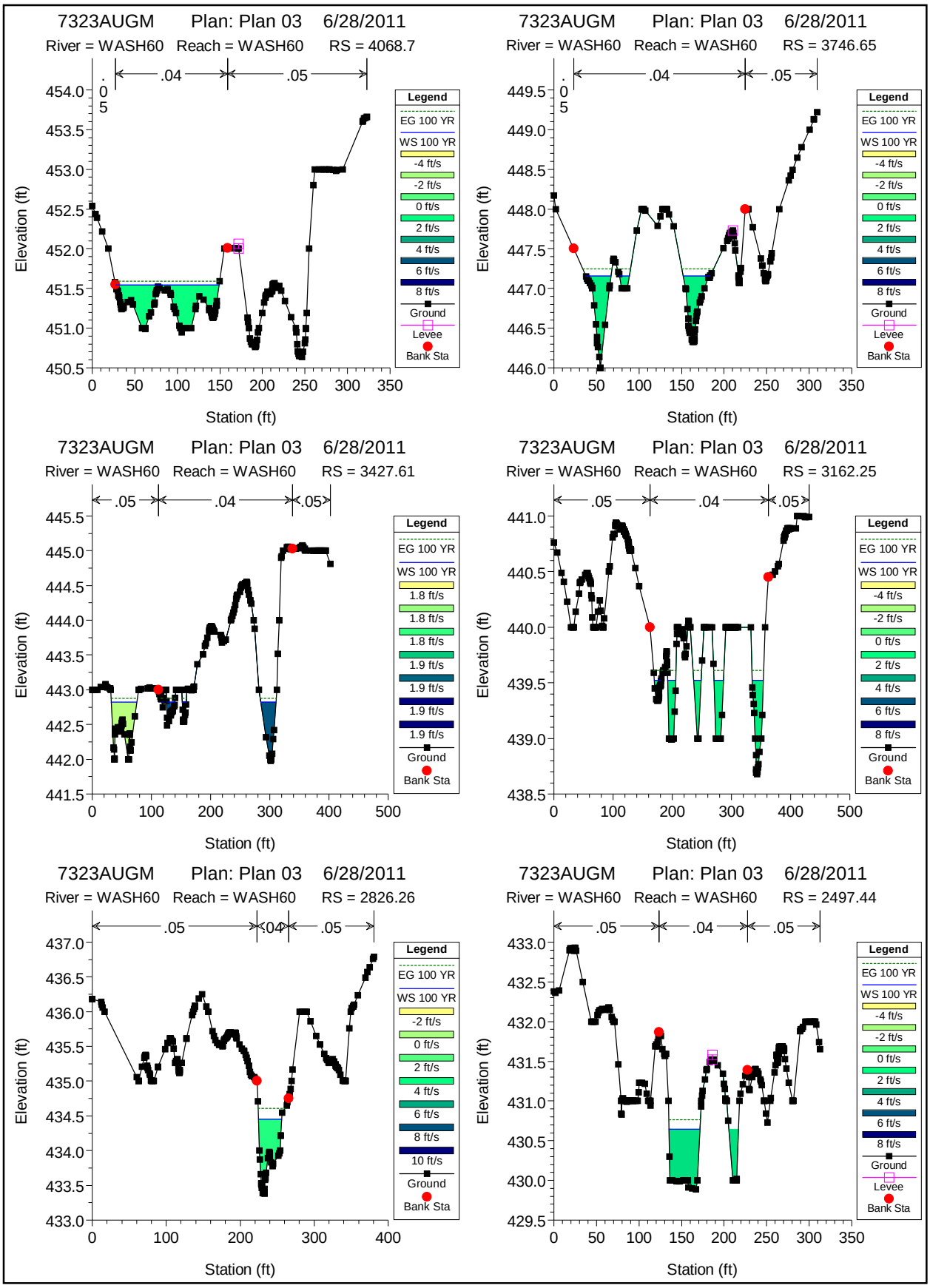
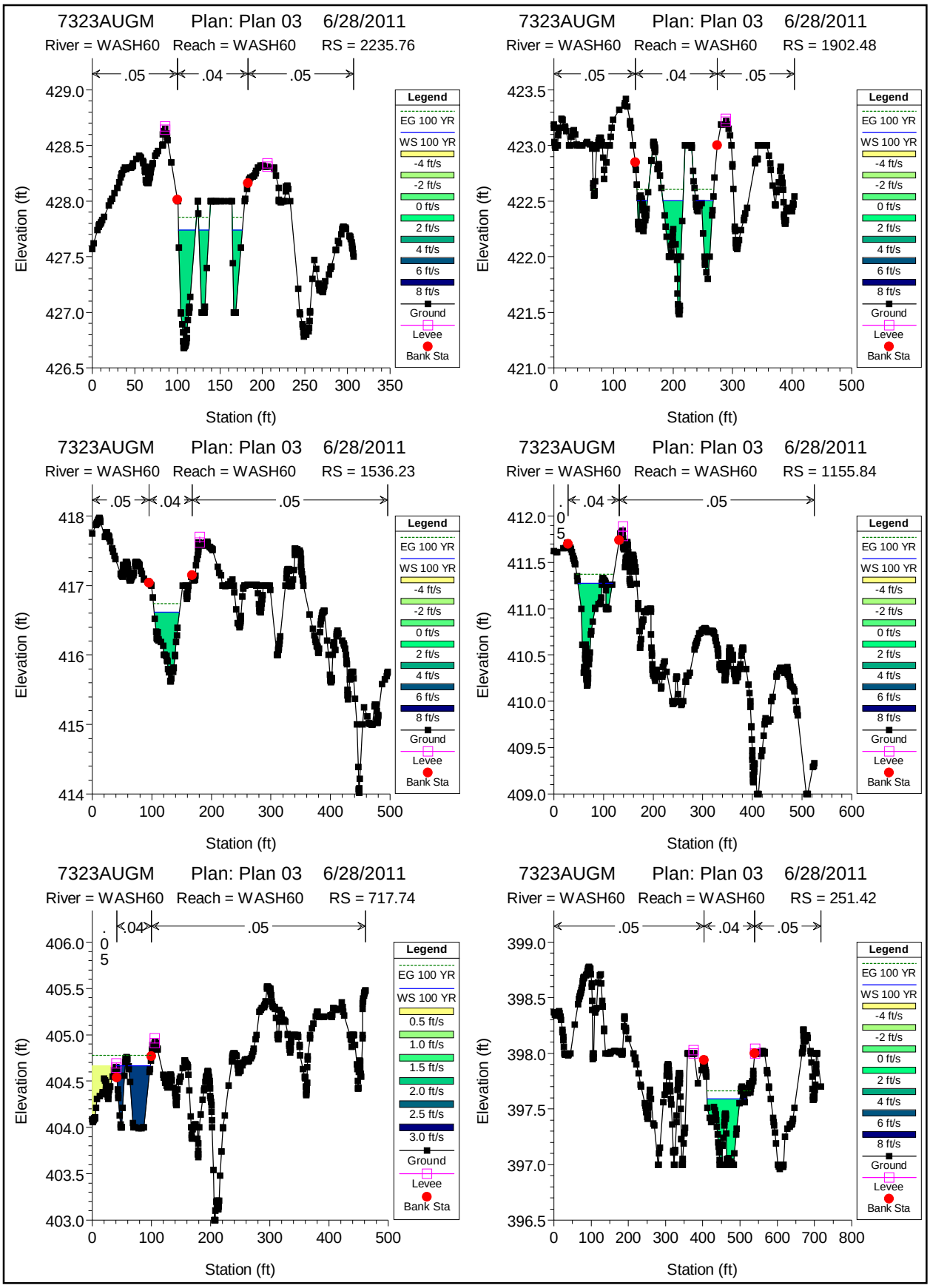
River = WASH60 Reach = WASH60 RS = 5477.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5299.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5104.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4869.04
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4591.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4337.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s


7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4068.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3746.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3427.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
1.8 ft/s
1.8 ft/s
1.8 ft/s
1.9 ft/s
1.9 ft/s
1.9 ft/s
1.9 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3162.25
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2826.26
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2497.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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River = WASH60 Reach = WASH60 RS = 2235.76
.05 .04 .05
Elevation (ft)
Station (ft)
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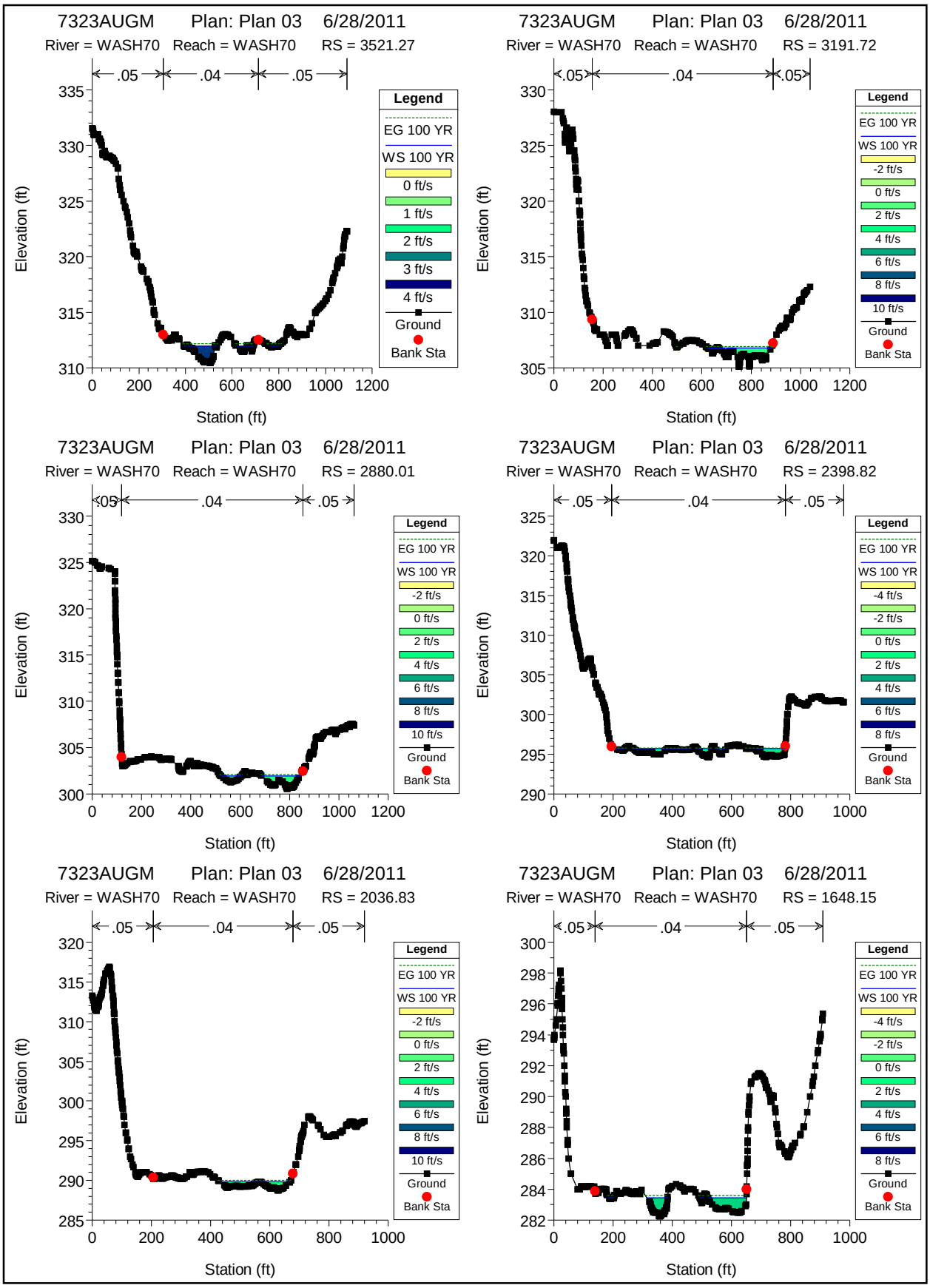
River = WASH60 Reach = WASH60 RS = 1902.48
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1536.23
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1155.84
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 717.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 251.42
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Levee
Bank Sta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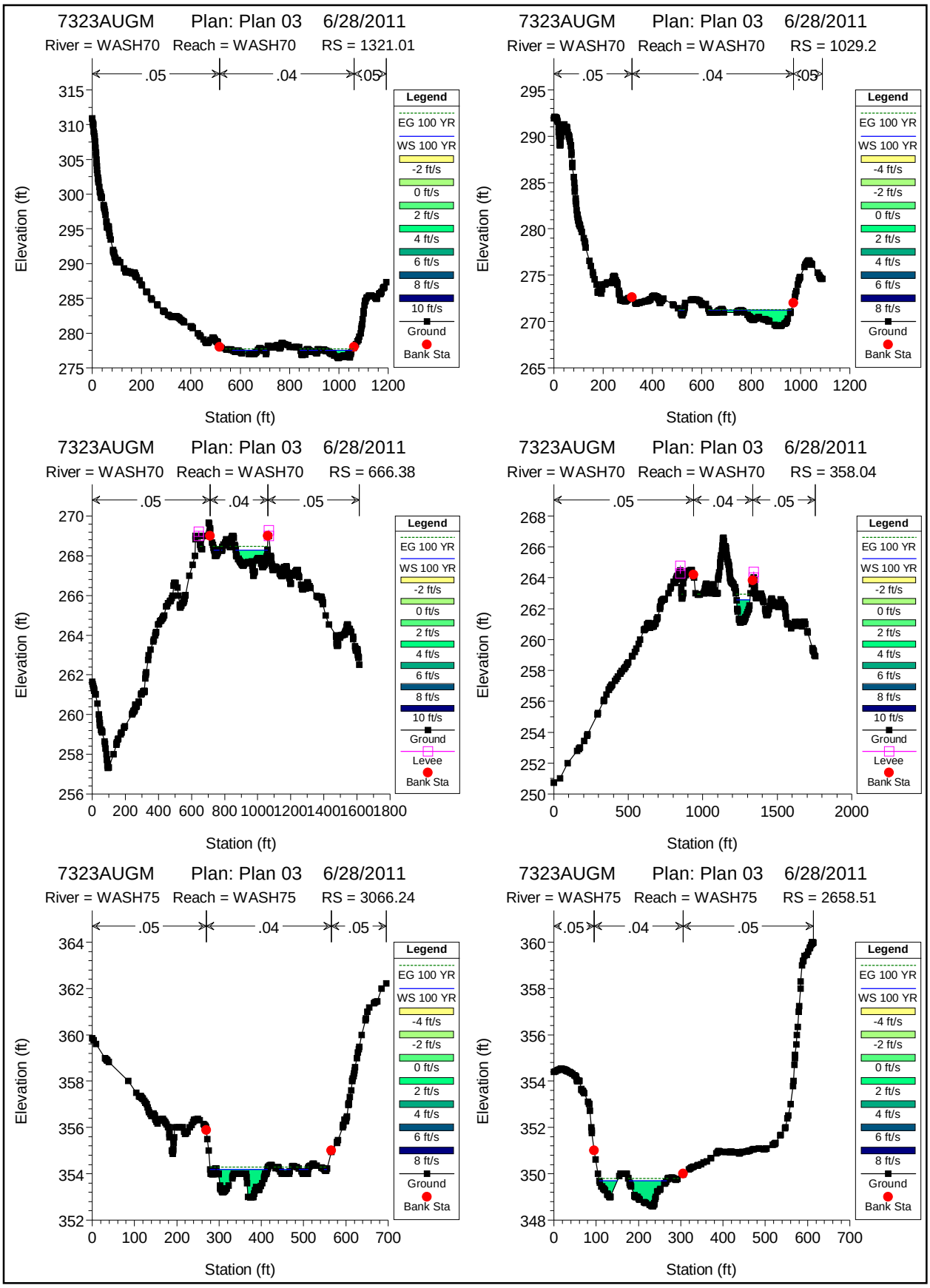
River = WASH70 Reach = WASH70 RS = 3521.27
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 3191.72
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2880.01
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2398.82
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2036.83
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1648.15
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)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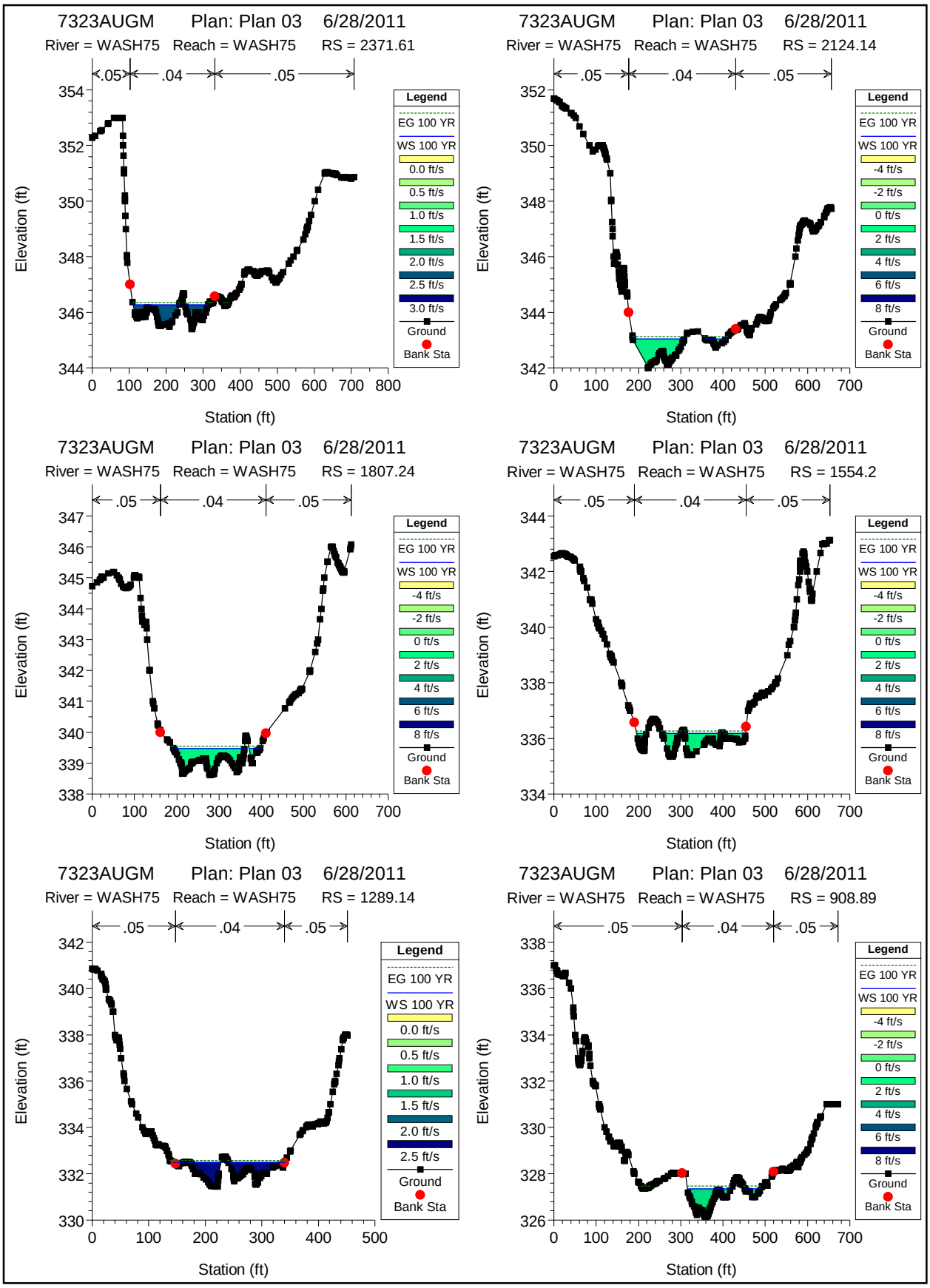
River = WASH70 Reach = WASH70 RS = 1321.01
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1029.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 666.38
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 358.04
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 3066.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2658.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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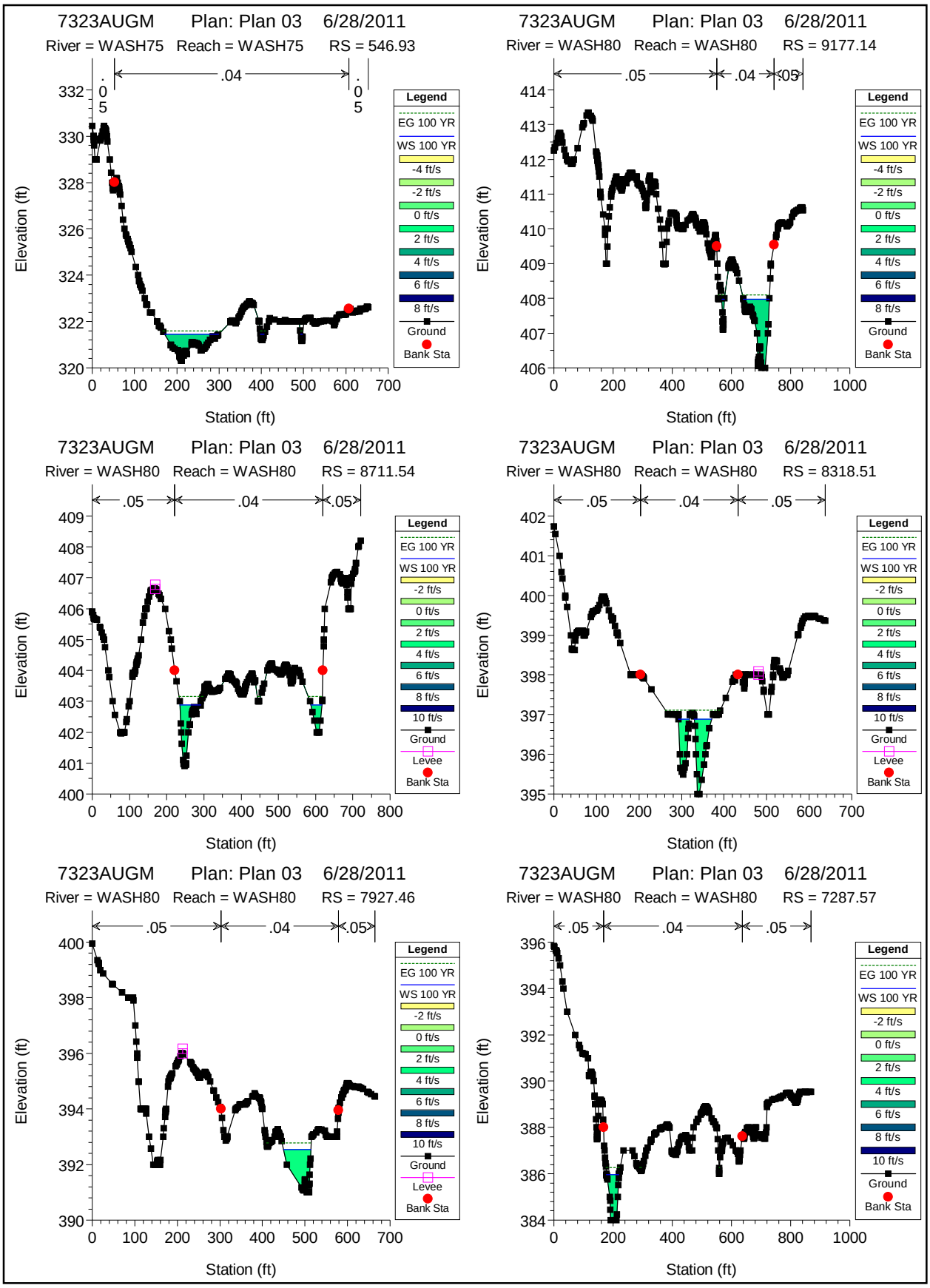
River = WASH75 Reach = WASH75 RS = 2371.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2124.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1807.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1554.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1289.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 908.89
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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River = WASH75 Reach = WASH75 RS = 546.93
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 9177.14
.05 .04 .05
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River = WASH80 Reach = WASH80 RS = 8711.54
.05 .04 .05
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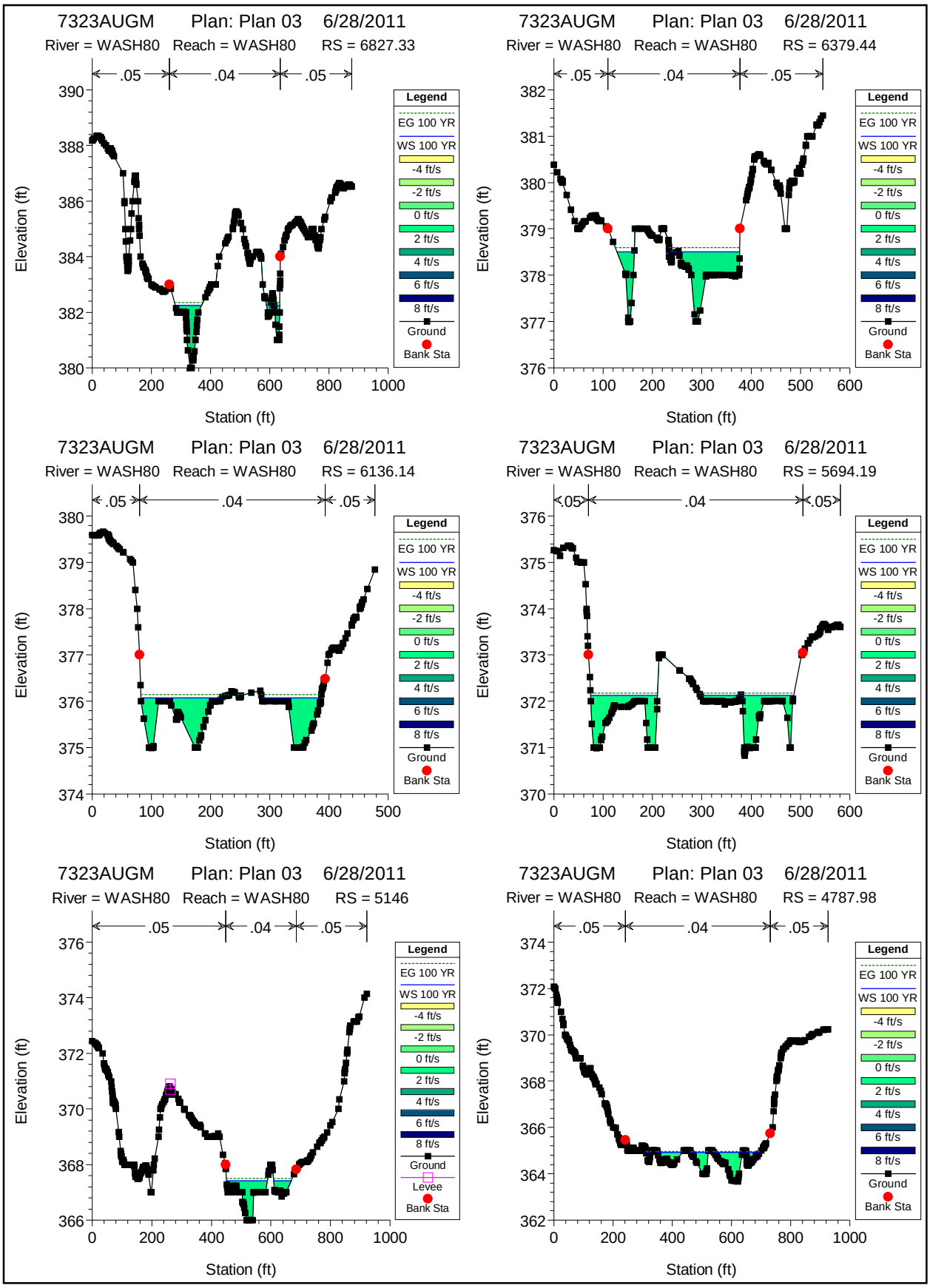
River = WASH80 Reach = WASH80 RS = 8318.51
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7927.46
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7287.57
.05 .04 .05
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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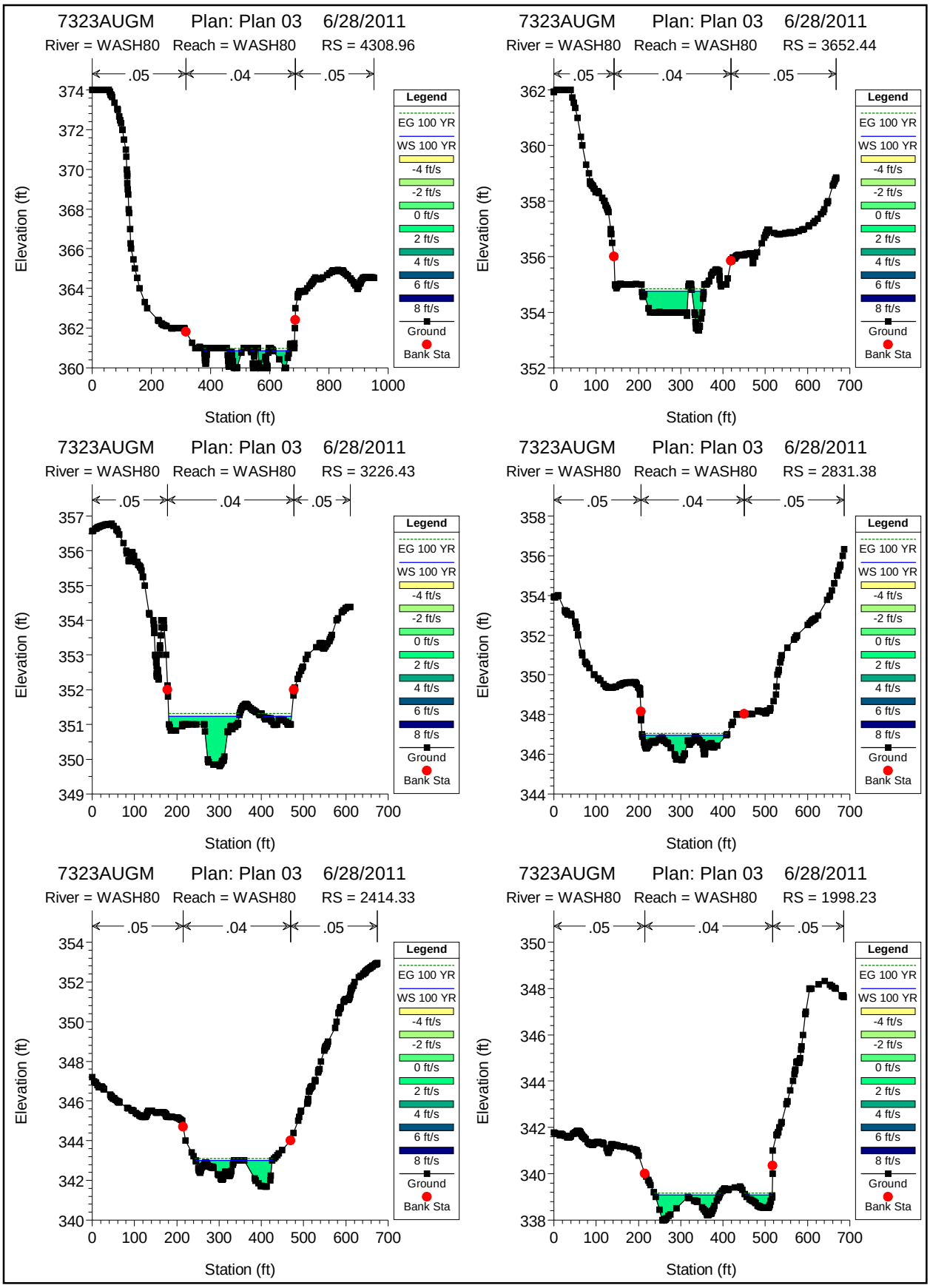
River = WASH80 Reach = WASH80 RS = 6827.33
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6379.44
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6136.14
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5694.19
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5146
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4787.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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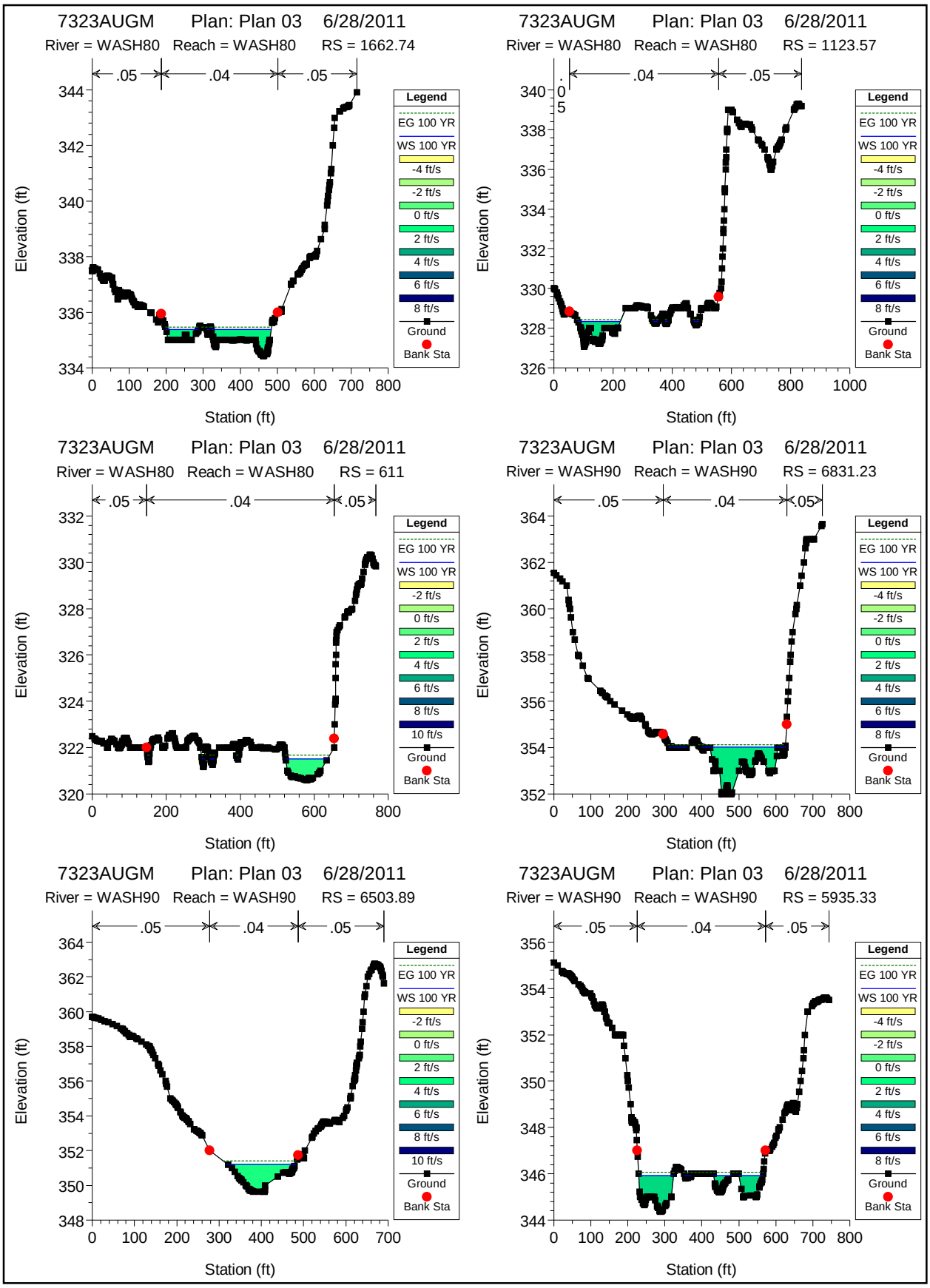
River = WASH80 Reach = WASH80 RS = 4308.96
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3652.44
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3226.43
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2831.38
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2414.33
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1998.23
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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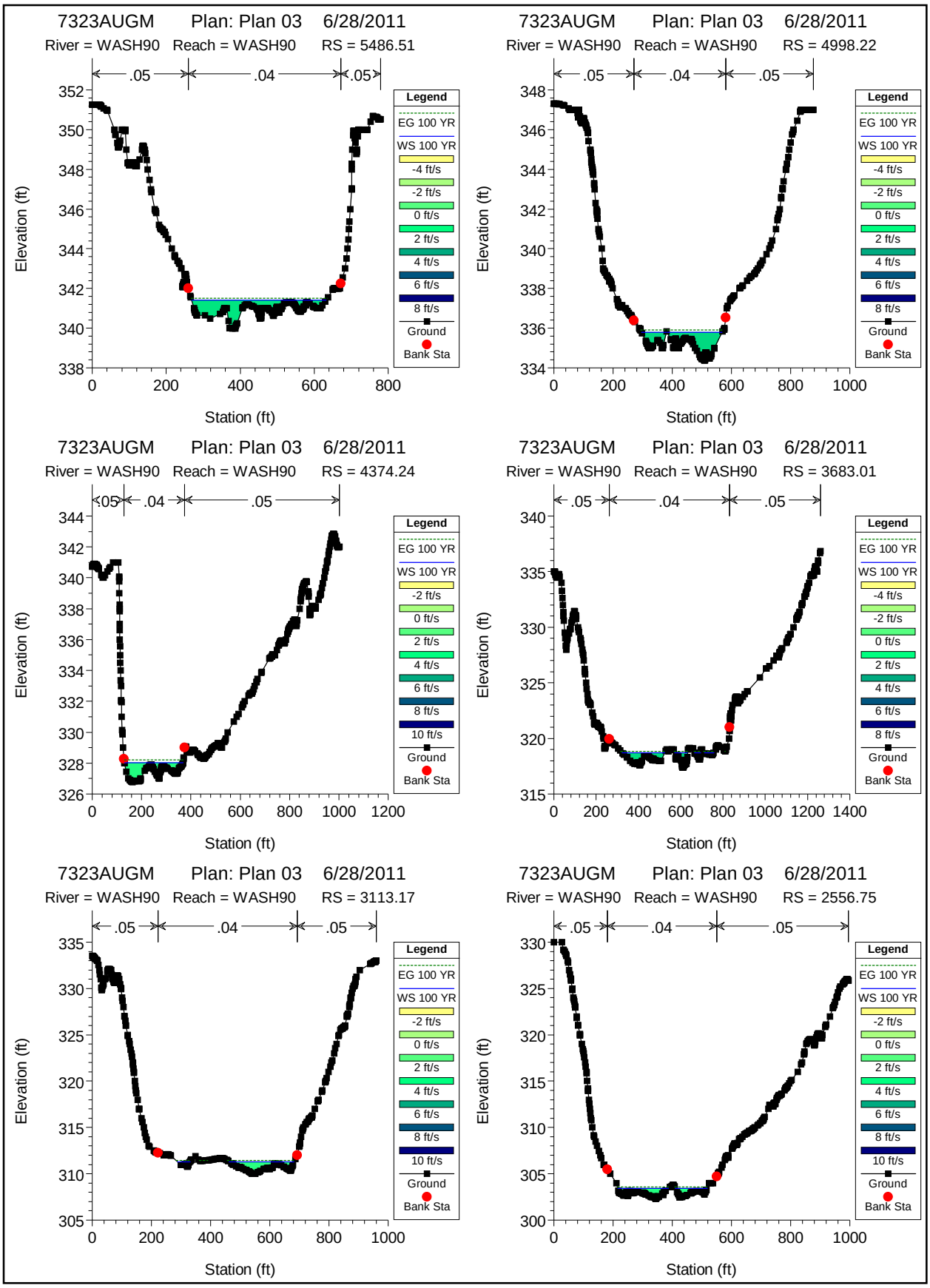
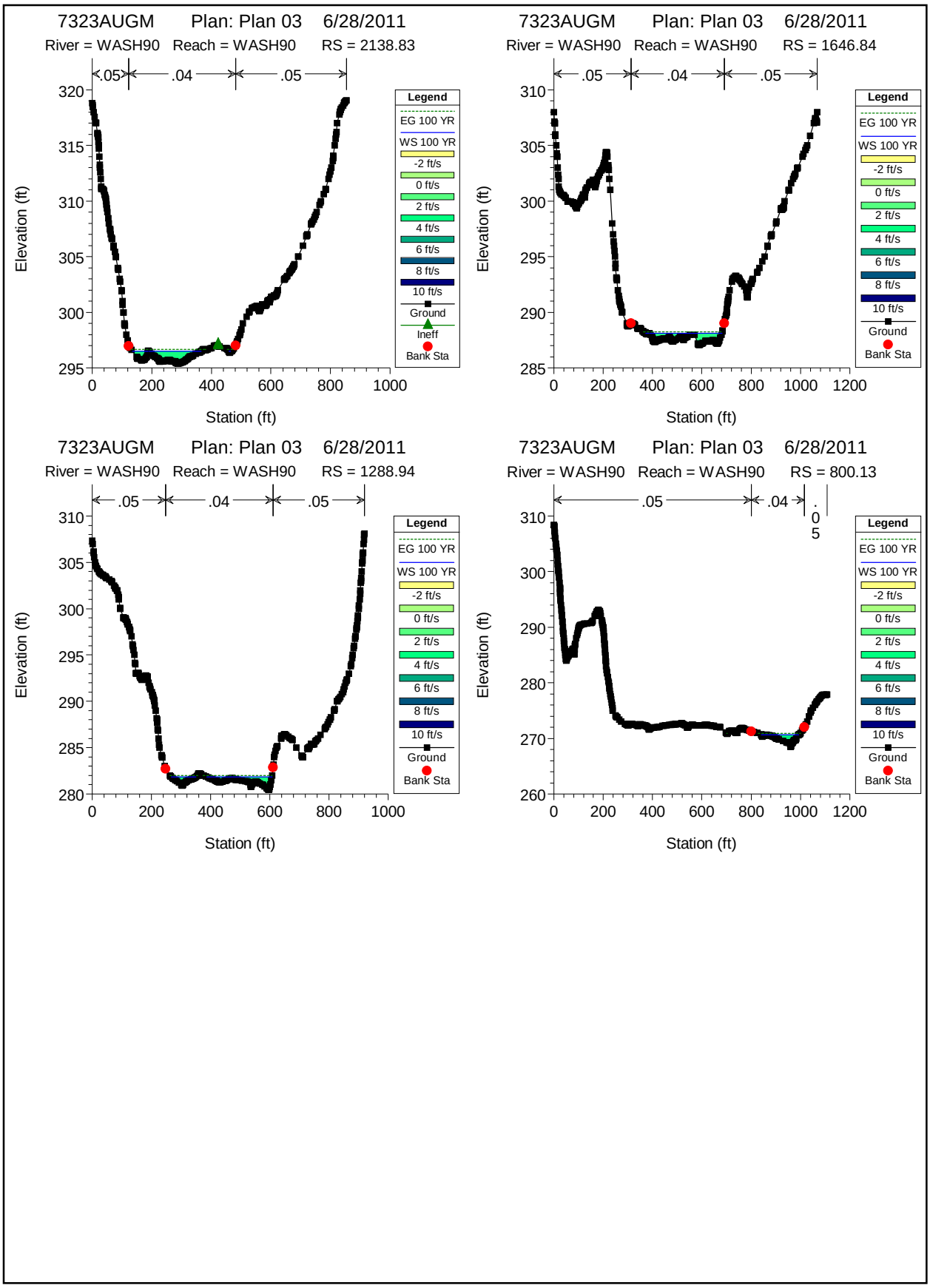
River = WASH80 Reach = WASH80 RS = 1662.74
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1123.57
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 611
.05 .04 .05
-2 ft/s
10 ft/s
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6831.23
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6503.89
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5935.33
.05 .04 .05


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5486.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4998.22
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4374.24
.05 .04 .05
10 ft/s
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3683.01
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3113.17
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2556.75
.05 .04 .05


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Ineff
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1646.84
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1288.94
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 800.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 100 YR
WS 100 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

# APPENDIX F:

## ii. HEC-RAS report 24-Hour, 25-Year Storm

HEC-RAS Plan: Plan 07 Profile: 25 YR

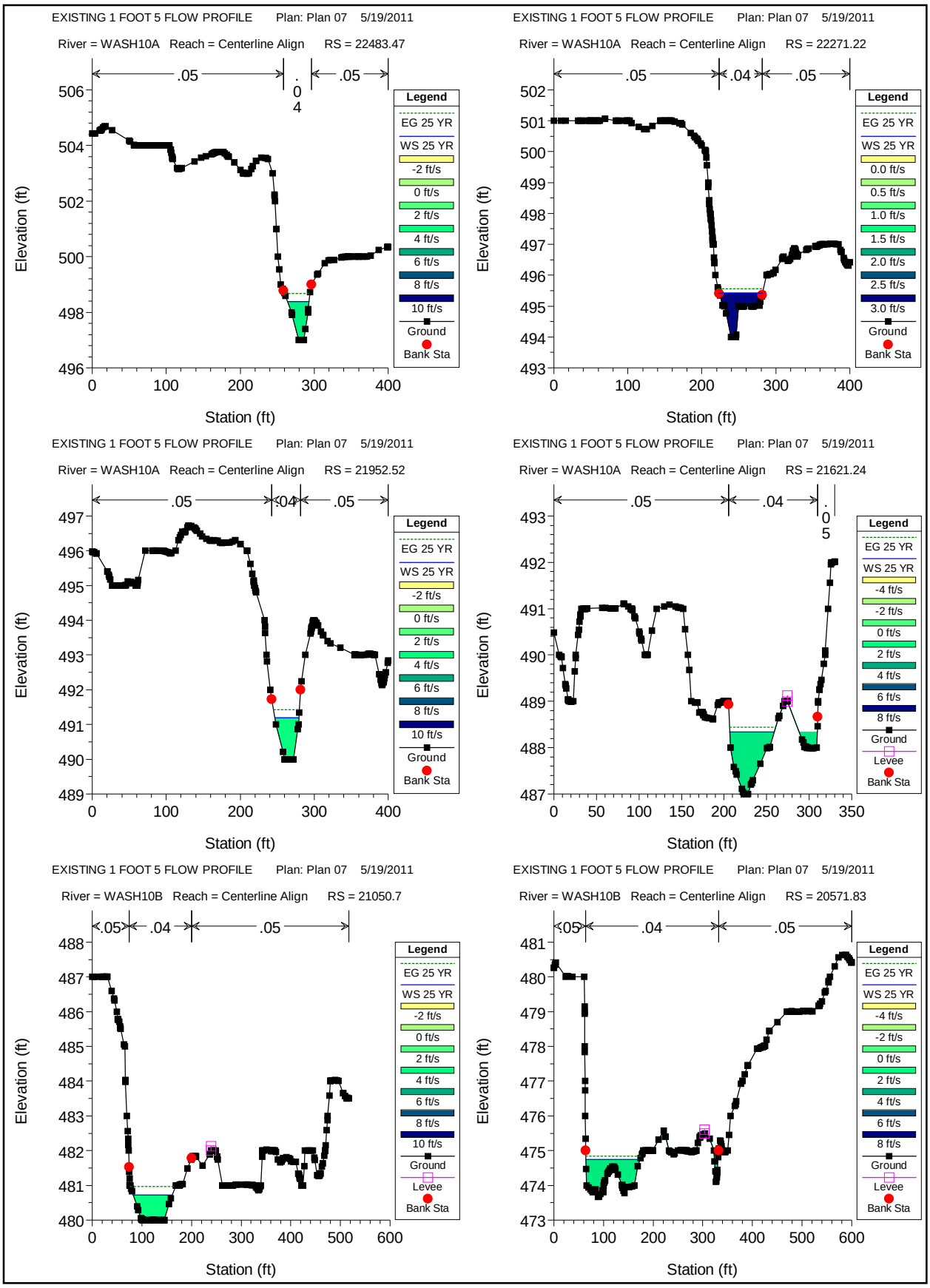
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH5 | Center Line Wash | 2398.41 | 25 YR | 288.23 | 457.00 | 459.22 | 458.57 | 459.33 | 0.006035 | 2.58 | 111.59 | 131.48 | 0.49 |
| WASH5 | Center Line Wash | 2138.83 | 25 YR | 288.23 | 454.99 | 456.21 | 456.19 | 456.42 | 0.027394 | 3.63 | 79.45 | 174.84 | 0.95 |
| WASH5 | Center Line Wash | 1728.1 | 25 YR | 288.23 | 450.99 | 452.51 | 451.99 | 452.61 | 0.004542 | 2.52 | 114.34 | 112.89 | 0.44 |
| WASH5 | Center Line Wash | 1400 | 25 YR | 288.23 | 447.98 | 449.23 | 449.23 | 449.44 | 0.032695 | 3.72 | 77.53 | 188.07 | 1.02 |
| WASH5 | Center Line Wash | 1040.76 | 25 YR | 288.23 | 443.98 | 445.28 | 444.83 | 445.38 | 0.005479 | 2.59 | 111.34 | 121.60 | 0.48 |
| WASH5 | Center Line Wash | 676.61 | 25 YR | 288.23 | 439.98 | 441.20 | 441.20 | 441.52 | 0.028141 | 4.55 | 63.31 | 101.21 | 1.01 |
| WASH45 | Centerline Align | 5500 | 25 YR | 3958.27 | 340.89 | 343.50 | 343.22 | 343.71 | 0.008141 | 3.85 | 1176.09 | 1256.94 | 0.61 |
| WASH45 | Centerline Align | 4744.3 | 25 YR | 3958.27 | 333.99 | 337.31 | 336.94 | 337.47 | 0.008294 | 3.19 | 1242.14 | 1357.32 | 0.59 |
| WASH45 | Centerline Align | 4000 | 25 YR | 3958.27 | 329.00 | 331.50 | | 331.64 | 0.007389 | 3.00 | 1320.69 | 1451.60 | 0.55 |
| WASH45 | Centerline Align | 3500 | 25 YR | 3958.27 | 324.90 | 326.87 | 326.61 | 327.11 | 0.011334 | 3.94 | 1005.59 | 1011.86 | 0.70 |
| WASH45 | Centerline Align | 3000 | 25 YR | 3958.27 | 318.94 | 322.45 | | 322.62 | 0.007233 | 3.34 | 1186.83 | 1092.99 | 0.56 |
| WASH45 | Centerline Align | 2500 | 25 YR | 3958.27 | 314.98 | 318.55 | | 318.73 | 0.008402 | 3.44 | 1151.52 | 1133.82 | 0.60 |
| WASH45 | Centerline Align | 2000 | 25 YR | 3958.27 | 312.00 | 314.59 | | 314.77 | 0.007470 | 3.43 | 1153.10 | 1042.22 | 0.58 |
| WASH45 | Centerline Align | 1500 | 25 YR | 3958.27 | 308.00 | 310.45 | | 310.64 | 0.009189 | 3.53 | 1122.18 | 1137.36 | 0.63 |
| WASH45 | Centerline Align | 1000 | 25 YR | 3958.27 | 303.95 | 306.37 | | 306.53 | 0.007358 | 3.25 | 1218.33 | 1182.78 | 0.56 |
| WASH45 | Centerline Align | 378.44 | 25 YR | 3958.27 | 298.95 | 301.23 | 300.83 | 301.48 | 0.009005 | 4.00 | 988.79 | 813.74 | 0.64 |
| WASH40 | Centerline Align | 10653.2 | 25 YR | 3007.84 | 375.98 | 380.12 | 379.53 | 380.28 | 0.007232 | 3.24 | 929.59 | 893.98 | 0.56 |
| WASH40 | Centerline Align | 10033.98 | 25 YR | 3007.84 | 371.98 | 376.12 | | 376.31 | 0.005718 | 3.48 | 863.61 | 624.60 | 0.52 |
| WASH40 | Centerline Align | 9616.88 | 25 YR | 3007.84 | 370.00 | 372.64 | | 372.97 | 0.011867 | 4.62 | 650.54 | 531.13 | 0.74 |
| WASH40 | Centerline Align | 8761.12 | 25 YR | 3007.84 | 363.93 | 366.81 | 366.17 | 366.95 | 0.004577 | 3.03 | 993.65 | 749.45 | 0.46 |
| WASH40 | Centerline Align | 7943.06 | 25 YR | 3007.84 | 357.89 | 359.97 | 359.97 | 360.32 | 0.018029 | 4.70 | 640.48 | 699.97 | 0.87 |
| WASH40 | Centerline Align | 6943.13 | 25 YR | 3007.84 | 349.05 | 352.19 | 351.61 | 352.27 | 0.004158 | 2.26 | 1328.56 | 1443.82 | 0.42 |
| WASH4 | Wash 4 | 1076.68 | 25 YR | 70.00 | 497.27 | 498.19 | 498.19 | 498.45 | 0.029522 | 4.07 | 17.20 | 33.69 | 1.00 |
| WASH4 | Wash 4 | 813.29 | 25 YR | 70.00 | 492.96 | 493.58 | 493.42 | 493.64 | 0.010379 | 1.99 | 35.13 | 91.77 | 0.57 |
| WASH4 | Wash 4 | 573.28 | 25 YR | 70.00 | 488.79 | 489.28 | 489.28 | 489.42 | 0.035962 | 2.92 | 23.94 | 89.46 | 1.00 |
| WASH4 | Wash 4 | 333.76 | 25 YR | 70.00 | 483.99 | 485.44 | 484.85 | 485.48 | 0.002467 | 1.52 | 45.98 | 61.16 | 0.31 |
| WASH35 | Centerline Align | 5246.65 | 25 YR | 392.02 | 388.76 | 390.56 | 390.27 | 390.75 | 0.009099 | 3.43 | 114.20 | 119.40 | 0.62 |
| WASH35 | Centerline Align | 4965.62 | 25 YR | 392.02 | 386.87 | 388.70 | | 388.84 | 0.005179 | 3.03 | 129.35 | 106.86 | 0.49 |
| WASH35 | Centerline Align | 4493.91 | 25 YR | 392.02 | 383.92 | 385.03 | 384.81 | 385.25 | 0.012094 | 3.75 | 104.59 | 118.85 | 0.70 |
| WASH35 | Centerline Align | 4063.78 | 25 YR | 392.02 | 379.98 | 381.96 | | 382.08 | 0.004893 | 2.72 | 144.35 | 134.88 | 0.46 |
| WASH35 | Centerline Align | 3661.61 | 25 YR | 392.02 | 377.65 | 378.68 | 378.54 | 378.85 | 0.015613 | 3.27 | 119.75 | 201.88 | 0.75 |
| WASH35 | Centerline Align | 3000 | 25 YR | 392.02 | 371.96 | 373.44 | | 373.54 | 0.004838 | 2.59 | 151.11 | 149.15 | 0.45 |
| WASH35 | Centerline Align | 2500 | 25 YR | 392.02 | 367.85 | 369.05 | 368.91 | 369.25 | 0.018952 | 3.61 | 108.64 | 182.70 | 0.82 |
| WASH35 | Centerline Align | 2000 | 25 YR | 392.02 | 363.88 | 365.12 | 364.63 | 365.19 | 0.004434 | 2.09 | 187.22 | 240.04 | 0.42 |
| WASH35 | Centerline Align | 1600 | 25 YR | 392.02 | 359.00 | 361.25 | 361.25 | 361.47 | 0.030039 | 3.75 | 104.47 | 234.16 | 0.99 |
| WASH30 | Centerline Align | 10130.27 | 25 YR | 85.71 | 348.00 | 348.79 | 348.65 | 348.91 | 0.013480 | 2.83 | 30.28 | 56.91 | 0.68 |
| WASH30 | Centerline Align | 9500 | 25 YR | 85.71 | 344.00 | 344.90 | | 344.92 | 0.003626 | 1.26 | 68.16 | 161.66 | 0.34 |
| WASH30 | Centerline Align | 9000 | 25 YR | 85.71 | 339.99 | 340.66 | 340.66 | 340.82 | 0.032918 | 3.21 | 26.72 | 81.28 | 0.99 |
| WASH30 | Centerline Align | 8500 | 25 YR | 85.71 | 335.95 | 336.50 | 336.26 | 336.52 | 0.003833 | 1.33 | 64.35 | 145.92 | 0.35 |
| WASH30 | Centerline Align | 8000 | 25 YR | 85.71 | 331.99 | 332.49 | 332.45 | 332.62 | 0.023555 | 2.94 | 29.14 | 78.43 | 0.85 |
| WASH30 | Centerline Align | 7500 | 25 YR | 85.71 | 327.91 | 329.23 | | 329.25 | 0.003103 | 0.89 | 96.41 | 342.12 | 0.30 |
| WASH30 | Centerline Align | 7000 | 25 YR | 85.71 | 324.88 | 325.38 | 325.38 | 325.52 | 0.036290 | 3.06 | 27.99 | 98.23 | 1.01 |
| WASH30 | Centerline Align | 6500 | 25 YR | 85.71 | 319.94 | 320.63 | 320.35 | 320.65 | 0.003564 | 1.30 | 65.82 | 146.25 | 0.34 |

HEC-RAS Plan: Plan 07 Profile: 25 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH30 | Centerline Align | 6000 | 25 YR | 85.71 | 316.28 | 317.03 | 316.96 | 317.06 | 0.021170 | 1.47 | 58.41 | 412.87 | 0.69 |
| WASH30 | Centerline Align | 5500 | 25 YR | 85.71 | 310.52 | 311.21 | 311.11 | 311.23 | 0.007358 | 1.16 | 73.83 | 335.68 | 0.44 |
| WASH30 | Centerline Align | 5000 | 25 YR | 85.71 | 306.00 | 307.12 | | 307.22 | 0.008784 | 2.60 | 32.98 | 51.00 | 0.57 |
| WASH30 | Centerline Align | 4500 | 25 YR | 85.71 | 302.71 | 303.27 | | 303.31 | 0.006946 | 1.42 | 60.52 | 195.56 | 0.45 |
| WASH30 | Centerline Align | 4000 | 25 YR | 85.71 | 297.96 | 298.51 | | 298.60 | 0.013445 | 2.38 | 36.07 | 87.99 | 0.65 |
| WASH30 | Centerline Align | 3500 | 25 YR | 85.71 | 293.44 | 294.18 | | 294.20 | 0.006139 | 1.17 | 72.98 | 284.64 | 0.41 |
| WASH30 | Centerline Align | 3000 | 25 YR | 85.71 | 287.97 | 288.56 | 288.53 | 288.72 | 0.024498 | 3.26 | 26.26 | 62.39 | 0.89 |
| WASH30 | Centerline Align | 2500 | 25 YR | 85.71 | 282.22 | 283.13 | 282.86 | 283.17 | 0.006246 | 1.67 | 51.27 | 119.32 | 0.45 |
| WASH30 | Centerline Align | 2000 | 25 YR | 85.71 | 277.99 | 278.26 | | 278.31 | 0.017087 | 1.82 | 47.19 | 206.22 | 0.67 |
| WASH30 | Centerline Align | 1343.16 | 25 YR | 85.71 | 269.94 | 270.33 | | 270.36 | 0.009018 | 1.50 | 57.05 | 205.22 | 0.50 |
| WASH30 | Centerline Align | 1000 | 25 YR | 85.71 | 265.53 | 266.20 | 266.13 | 266.27 | 0.016534 | 2.09 | 40.94 | 141.09 | 0.68 |
| WASH30 | Centerline Align | 500 | 25 YR | 85.71 | 259.00 | 259.52 | 259.39 | 259.60 | 0.011001 | 2.17 | 39.41 | 94.49 | 0.59 |
| WASH25B | Centerline Align | 6600 | 25 YR | 671.57 | 320.99 | 322.83 | 322.58 | 323.08 | 0.011871 | 3.95 | 170.05 | 176.23 | 0.71 |
| WASH25B | Centerline Align | 6100 | 25 YR | 671.57 | 316.93 | 318.30 | 318.09 | 318.38 | 0.007507 | 2.21 | 304.33 | 535.42 | 0.52 |
| WASH25B | Centerline Align | 5600 | 25 YR | 671.57 | 310.97 | 312.58 | 312.48 | 312.75 | 0.018681 | 3.33 | 201.59 | 378.93 | 0.80 |
| WASH25B | Centerline Align | 5100 | 25 YR | 671.57 | 304.99 | 306.40 | 306.22 | 306.49 | 0.008931 | 2.35 | 285.83 | 521.83 | 0.56 |
| WASH25B | Centerline Align | 4600 | 25 YR | 671.57 | 298.93 | 300.32 | 300.24 | 300.43 | 0.017414 | 2.69 | 249.44 | 612.49 | 0.74 |
| WASH25B | Centerline Align | 4100 | 25 YR | 671.57 | 291.99 | 293.39 | | 293.63 | 0.010886 | 3.91 | 171.62 | 168.97 | 0.68 |
| WASH25B | Centerline Align | 3600 | 25 YR | 671.57 | 285.53 | 287.34 | 287.16 | 287.48 | 0.013853 | 3.00 | 223.79 | 393.34 | 0.70 |
| WASH25B | Centerline Align | 3100 | 25 YR | 671.57 | 280.00 | 281.17 | | 281.30 | 0.011077 | 2.82 | 238.34 | 389.13 | 0.63 |
| WASH25B | Centerline Align | 2600 | 25 YR | 671.57 | 274.65 | 274.95 | | 275.09 | 0.010684 | 0.93 | 228.94 | 294.34 | 0.48 |
| WASH25B | Centerline Align | 2100 | 25 YR | 671.57 | 268.58 | 269.47 | 269.47 | 269.68 | 0.029128 | 3.87 | 197.05 | 490.51 | 0.99 |
| WASH25B | Centerline Align | 1368.02 | 25 YR | 671.57 | 255.25 | 258.37 | 257.83 | 258.46 | 0.005474 | 2.46 | 272.69 | 318.11 | 0.47 |
| WASH25B | Centerline Align | 600 | 25 YR | 671.57 | 250.34 | 252.15 | 251.87 | 252.34 | 0.012596 | 3.51 | 191.18 | 245.36 | 0.70 |
| WASH25B | Centerline Align | 100 | 25 YR | 671.57 | 245.90 | 247.24 | 246.89 | 247.37 | 0.008006 | 2.92 | 230.28 | 278.93 | 0.57 |
| WASH25A | Centerline Align | 10806.78 | 25 YR | 678.31 | 366.90 | 368.72 | 368.43 | 368.87 | 0.008518 | 3.09 | 219.30 | 255.15 | 0.59 |
| WASH25A | Centerline Align | 10100 | 25 YR | 678.31 | 359.87 | 361.53 | 361.38 | 361.65 | 0.012464 | 2.78 | 243.88 | 443.36 | 0.66 |
| WASH25A | Centerline Align | 9600 | 25 YR | 678.31 | 354.94 | 356.26 | | 356.35 | 0.009099 | 2.42 | 280.49 | 496.89 | 0.57 |
| WASH25A | Centerline Align | 9100 | 25 YR | 678.31 | 348.87 | 350.51 | | 350.64 | 0.014764 | 2.84 | 238.51 | 476.49 | 0.71 |
| WASH25A | Centerline Align | 8600 | 25 YR | 678.31 | 343.00 | 344.79 | 344.54 | 344.90 | 0.009148 | 2.72 | 249.34 | 371.83 | 0.59 |
| WASH25A | Centerline Align | 8100 | 25 YR | 678.31 | 338.00 | 339.47 | | 339.63 | 0.012281 | 3.20 | 212.14 | 309.78 | 0.68 |
| WASH25A | Centerline Align | 7600 | 25 YR | 678.31 | 332.89 | 334.19 | 333.88 | 334.32 | 0.009276 | 2.97 | 228.55 | 302.11 | 0.60 |
| WASH25A | Centerline Align | 7100 | 25 YR | 678.31 | 327.91 | 328.90 | | 329.06 | 0.012009 | 3.19 | 212.58 | 306.11 | 0.67 |
| WASH23 | Wash23 | 3479.12 | 25 YR | 29.35 | 357.86 | 359.01 | 358.58 | 359.03 | 0.005668 | 1.09 | 27.03 | 111.60 | 0.39 |
| WASH23 | Wash23 | 3038.38 | 25 YR | 29.35 | 353.21 | 353.70 | 353.70 | 353.83 | 0.037727 | 2.86 | 10.25 | 41.00 | 1.01 |
| WASH23 | Wash23 | 2630.84 | 25 YR | 29.35 | 348.77 | 349.27 | | 349.29 | 0.005194 | 1.15 | 25.55 | 90.82 | 0.38 |
| WASH23 | Wash23 | 2097.72 | 25 YR | 29.35 | 343.97 | 344.43 | | 344.52 | 0.018925 | 2.46 | 11.94 | 35.76 | 0.75 |
| WASH23 | Wash23 | 1490.24 | 25 YR | 29.35 | 338.53 | 339.07 | 338.85 | 339.08 | 0.005169 | 0.87 | 33.69 | 180.78 | 0.36 |
| WASH23 | Wash23 | 1066.16 | 25 YR | 29.35 | 333.93 | 334.16 | 334.16 | 334.24 | 0.043079 | 2.26 | 12.98 | 81.70 | 1.00 |
| WASH23 | Wash23 | 780.97 | 25 YR | 29.35 | 330.99 | 331.50 | 331.22 | 331.51 | 0.001891 | 0.75 | 39.22 | 124.27 | 0.23 |
| WASH20 | Centerline Align | 16636.71 | 25 YR | 456.88 | 430.89 | 432.70 | 432.30 | 432.95 | 0.008137 | 4.04 | 113.12 | 84.88 | 0.62 |
| WASH20 | Centerline Align | 16100 | 25 YR | 456.88 | 425.98 | 428.39 | | 428.50 | 0.008303 | 2.58 | 176.88 | 264.57 | 0.56 |
| WASH20 | Centerline Align | 15600 | 25 YR | 456.88 | 421.00 | 422.90 | 422.73 | 423.20 | 0.016722 | 4.39 | 104.00 | 118.55 | 0.83 |

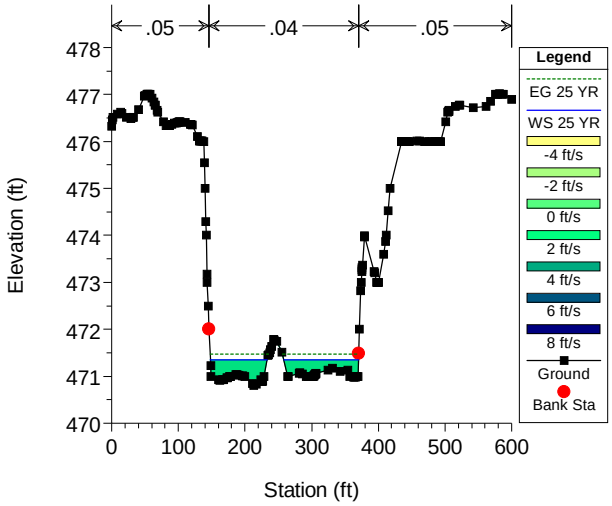
HEC-RAS Plan: Plan 07 Profile: 25 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH20 | Centerline Align | 15169.42 | 25 YR | 456.88 | 417.28 | 418.71 | 418.51 | 418.85 | 0.010889 | 2.99 | 153.04 | 225.99 | 0.64 |
| WASH20 | Centerline Align | 14600 | 25 YR | 456.88 | 410.69 | 412.15 | 411.82 | 412.26 | 0.010943 | 2.63 | 173.80 | 311.82 | 0.62 |
| WASH20 | Centerline Align | 14100 | 25 YR | 456.88 | 404.94 | 406.46 | 406.31 | 406.57 | 0.010944 | 2.69 | 174.55 | 313.95 | 0.62 |
| WASH20 | Centerline Align | 13600 | 25 YR | 264.98 | 399.85 | 400.69 | 400.48 | 400.78 | 0.008777 | 2.36 | 116.12 | 216.22 | 0.56 |
| WASH20 | Centerline Align | 13100 | 25 YR | 264.98 | 394.00 | 395.24 | 395.06 | 395.34 | 0.009805 | 2.52 | 105.15 | 185.32 | 0.59 |
| WASH20 | Centerline Align | 12600 | 25 YR | 264.98 | 388.97 | 390.30 | 390.10 | 390.38 | 0.008266 | 2.26 | 117.45 | 214.77 | 0.54 |
| WASH20 | Centerline Align | 12100 | 25 YR | 264.98 | 383.00 | 384.27 | 384.20 | 384.37 | 0.019058 | 2.51 | 105.56 | 308.00 | 0.76 |
| WASH20 | Centerline Align | 11600 | 25 YR | 264.98 | 376.96 | 378.15 | 377.84 | 378.21 | 0.008575 | 1.98 | 134.15 | 307.99 | 0.53 |
| WASH20 | Centerline Align | 11329.19 | 25 YR | 264.98 | 373.39 | 374.41 | 374.37 | 374.55 | 0.024325 | 3.04 | 87.05 | 228.38 | 0.87 |
| WASH15 | Centerline Align | 3100 | 25 YR | 581.60 | 396.98 | 399.77 | 399.49 | 399.91 | 0.008580 | 2.95 | 196.95 | 246.54 | 0.58 |
| WASH15 | Centerline Align | 2600 | 25 YR | 581.60 | 392.00 | 394.42 | | 394.65 | 0.013093 | 3.84 | 151.42 | 175.05 | 0.73 |
| WASH15 | Centerline Align | 2100 | 25 YR | 581.60 | 387.36 | 389.72 | | 389.84 | 0.007300 | 2.71 | 214.56 | 270.90 | 0.54 |
| WASH15 | Centerline Align | 1600 | 25 YR | 581.60 | 381.99 | 384.64 | 384.44 | 384.84 | 0.014456 | 3.61 | 161.29 | 221.64 | 0.74 |
| WASH15 | Centerline Align | 1100 | 25 YR | 581.60 | 378.96 | 380.61 | | 380.70 | 0.005306 | 2.32 | 250.57 | 315.12 | 0.46 |
| WASH15 | Centerline Align | 600 | 25 YR | 581.60 | 373.92 | 375.34 | 375.34 | 375.62 | 0.026266 | 4.23 | 137.35 | 232.50 | 0.97 |
| WASH15 | Centerline Align | 282.51 | 25 YR | 581.60 | 369.86 | 371.96 | 371.47 | 372.09 | 0.005131 | 2.93 | 198.37 | 171.75 | 0.48 |
| WASH10B | Centerline Align | 21050.7 | 25 YR | 175.00 | 480.00 | 480.73 | 480.69 | 480.97 | 0.024129 | 3.94 | 44.37 | 78.47 | 0.92 |
| WASH10B | Centerline Align | 20571.83 | 25 YR | 175.00 | 473.67 | 474.74 | 474.49 | 474.84 | 0.007812 | 2.46 | 71.19 | 109.63 | 0.54 |
| WASH10B | Centerline Align | 20305.7 | 25 YR | 175.00 | 470.81 | 471.35 | 471.31 | 471.47 | 0.023818 | 2.72 | 64.40 | 197.19 | 0.84 |
| WASH10B | Centerline Align | 19884.32 | 25 YR | 175.00 | 464.53 | 466.35 | | 466.49 | 0.007031 | 3.06 | 57.22 | 58.25 | 0.54 |
| WASH10B | Centerline Align | 19500 | 25 YR | 175.00 | 461.84 | 462.76 | 462.60 | 462.92 | 0.012863 | 3.23 | 54.14 | 80.27 | 0.69 |
| WASH10B | Centerline Align | 19100 | 25 YR | 175.00 | 457.97 | 458.78 | 458.53 | 458.88 | 0.008113 | 2.43 | 71.99 | 116.04 | 0.54 |
| WASH10B | Centerline Align | 18600 | 25 YR | 175.00 | 450.90 | 451.76 | 451.76 | 452.06 | 0.027269 | 4.41 | 39.71 | 65.05 | 0.99 |
| WASH10B | Centerline Align | 18100 | 25 YR | 175.00 | 444.98 | 446.50 | 445.95 | 446.55 | 0.003740 | 1.82 | 95.99 | 132.94 | 0.38 |
| WASH10B | Centerline Align | 17600 | 25 YR | 175.00 | 441.14 | 442.21 | 442.21 | 442.38 | 0.032471 | 3.30 | 52.99 | 152.80 | 0.99 |
| WASH10A | Centerline Align | 22483.47 | 25 YR | 105.00 | 497.00 | 498.39 | 498.27 | 498.68 | 0.017280 | 4.31 | 24.34 | 29.12 | 0.83 |
| WASH10A | Centerline Align | 22271.22 | 25 YR | 105.00 | 493.99 | 495.42 | 495.26 | 495.56 | 0.012309 | 2.97 | 35.44 | 58.70 | 0.67 |
| WASH10A | Centerline Align | 21952.52 | 25 YR | 105.00 | 489.99 | 491.20 | | 491.43 | 0.013597 | 3.85 | 27.26 | 32.32 | 0.74 |
| WASH10A | Centerline Align | 21621.24 | 25 YR | 105.00 | 487.00 | 488.34 | 488.00 | 488.44 | 0.006297 | 2.52 | 41.65 | 52.52 | 0.50 |


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22483.47
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22271.22
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21952.52
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21621.24
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 21050.7
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20571.83
.05
.04
.05
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)

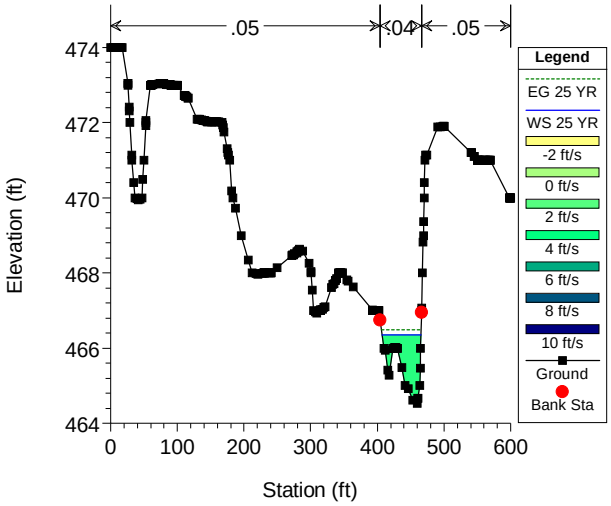
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH10B Reach = Centerline Align RS = 20305.7



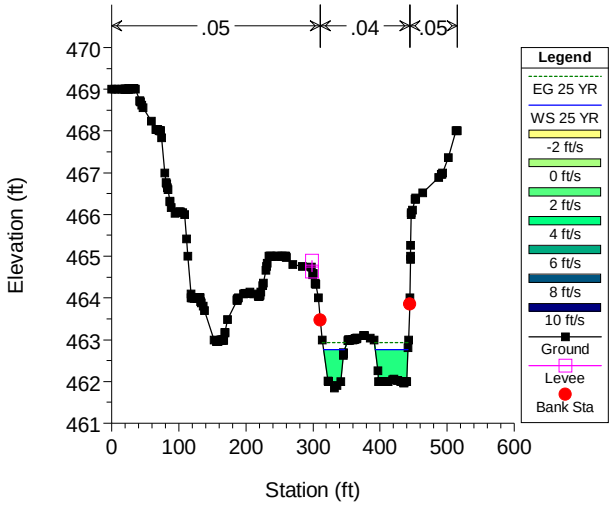

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH10B Reach = Centerline Align RS = 19884.32



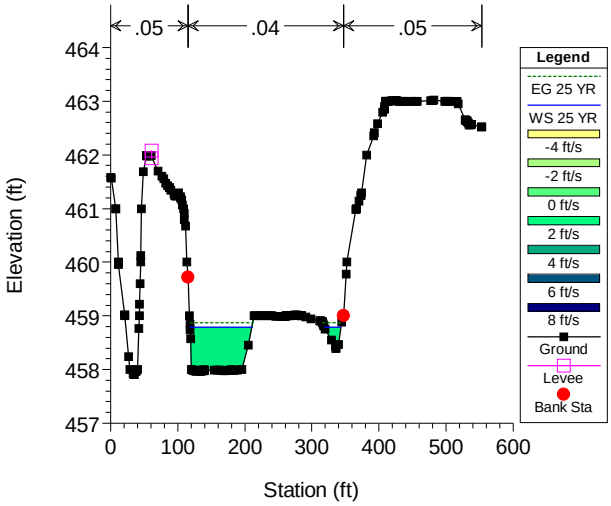

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH10B Reach = Centerline Align RS = 19500



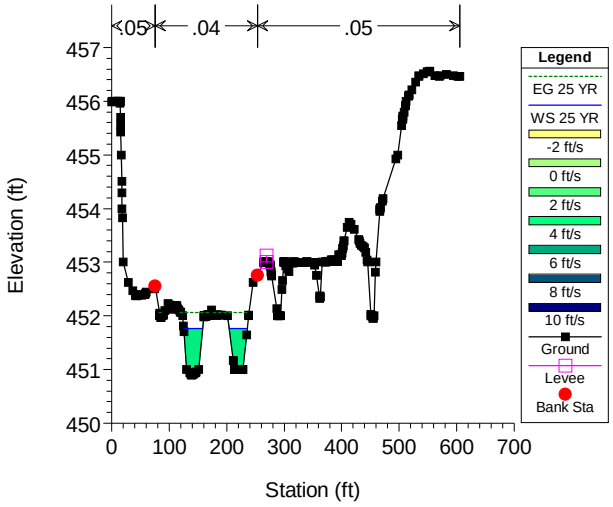

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH10B Reach = Centerline Align RS = 19100



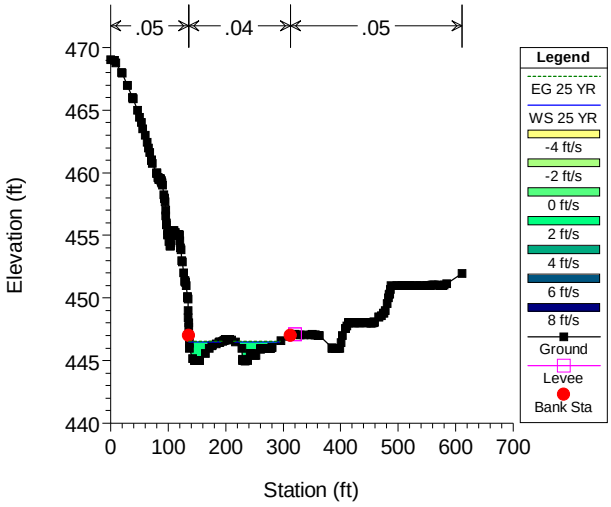

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

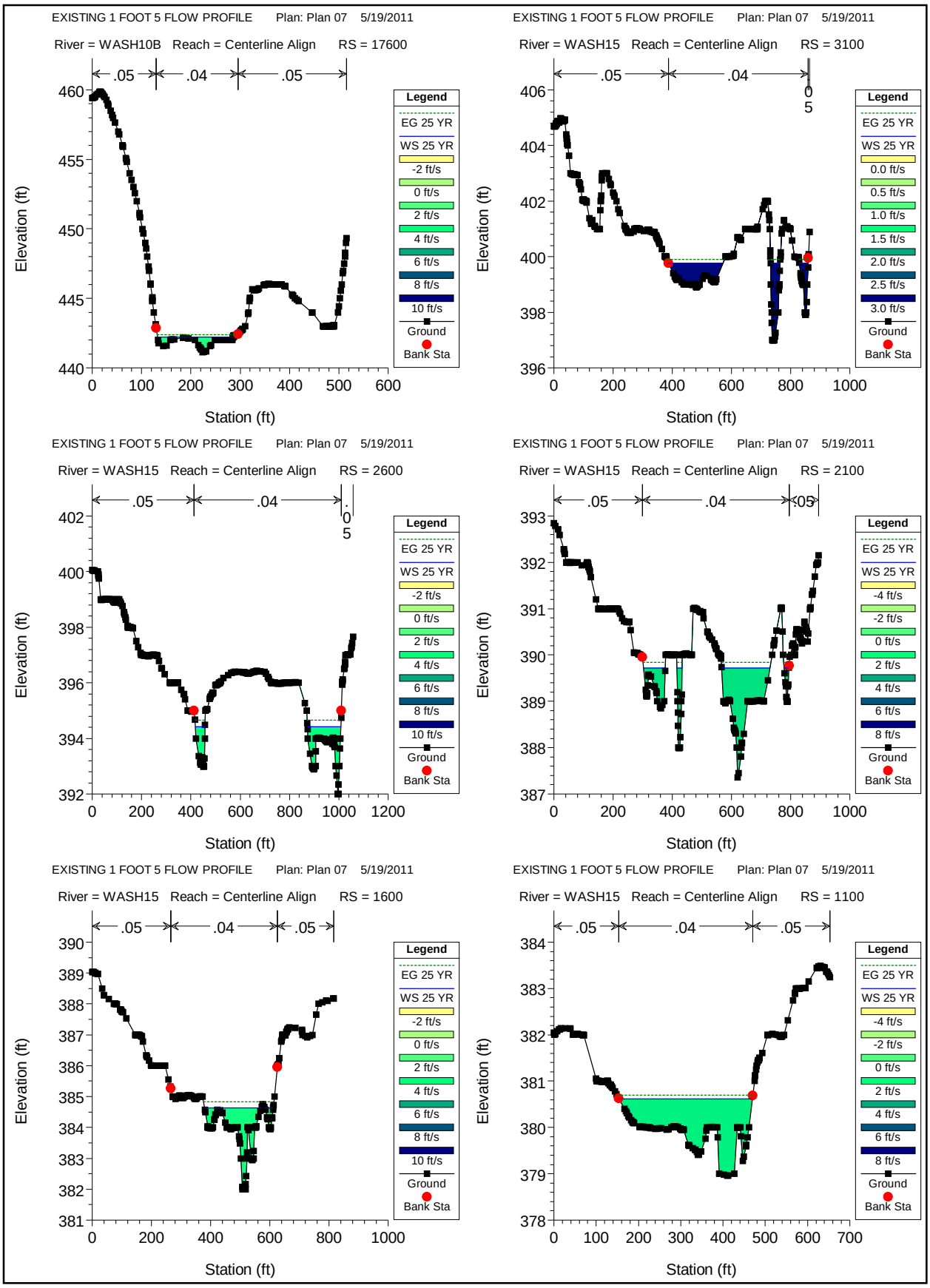
River = WASH10B Reach = Centerline Align RS = 18600




EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

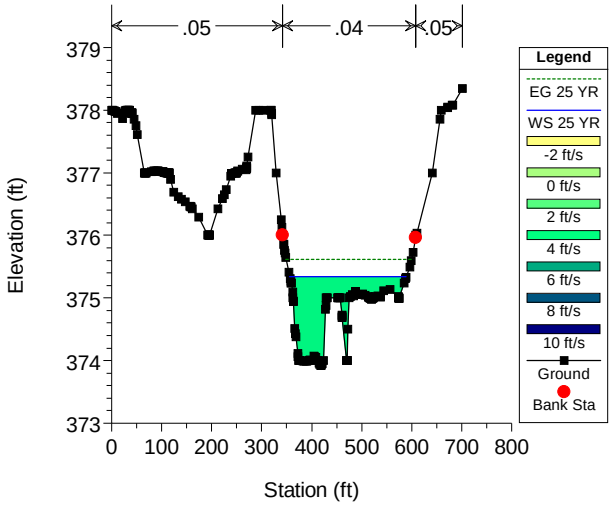
River = WASH10B Reach = Centerline Align RS = 18100




EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 17600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 3100
.05 .04 .05
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2100
.05 .04 .05
-4 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1100
.05 .04 .05

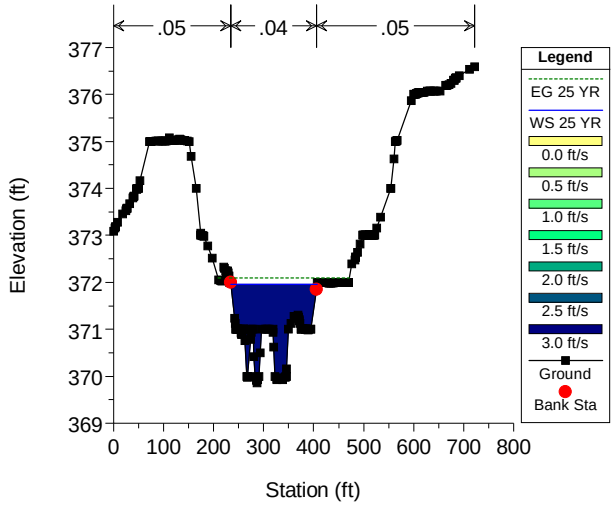
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 600



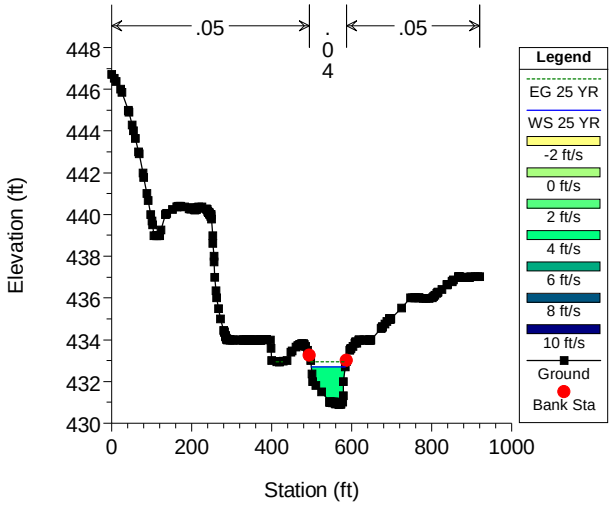

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 282.51



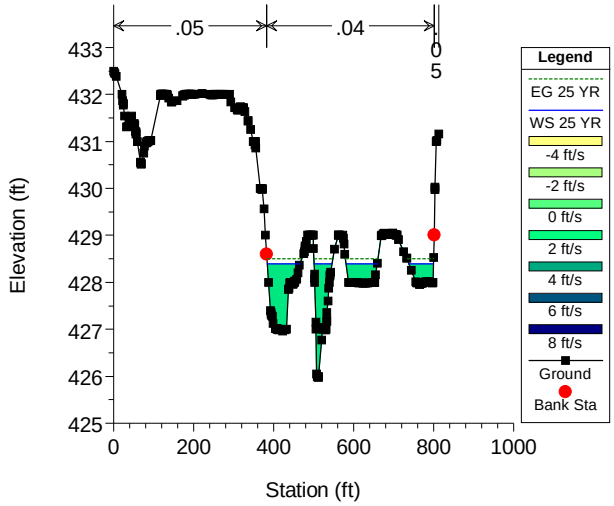

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16636.71



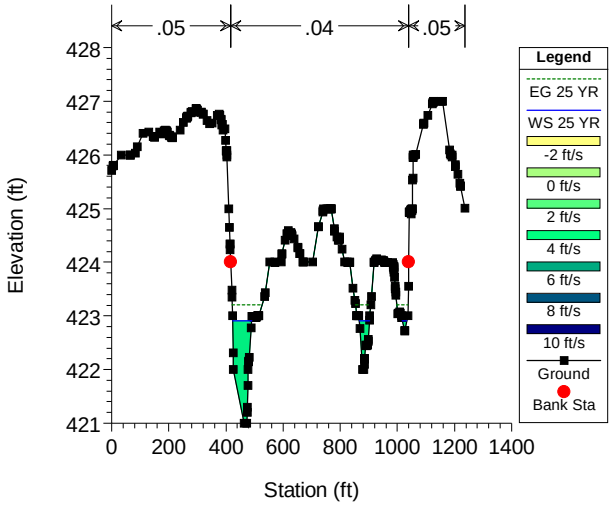

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16100



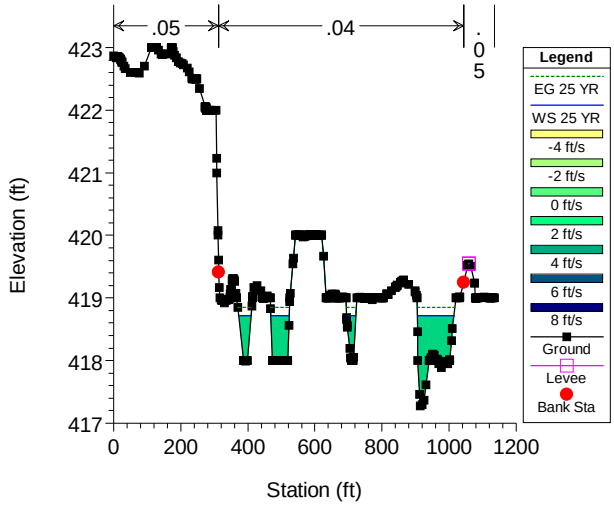

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

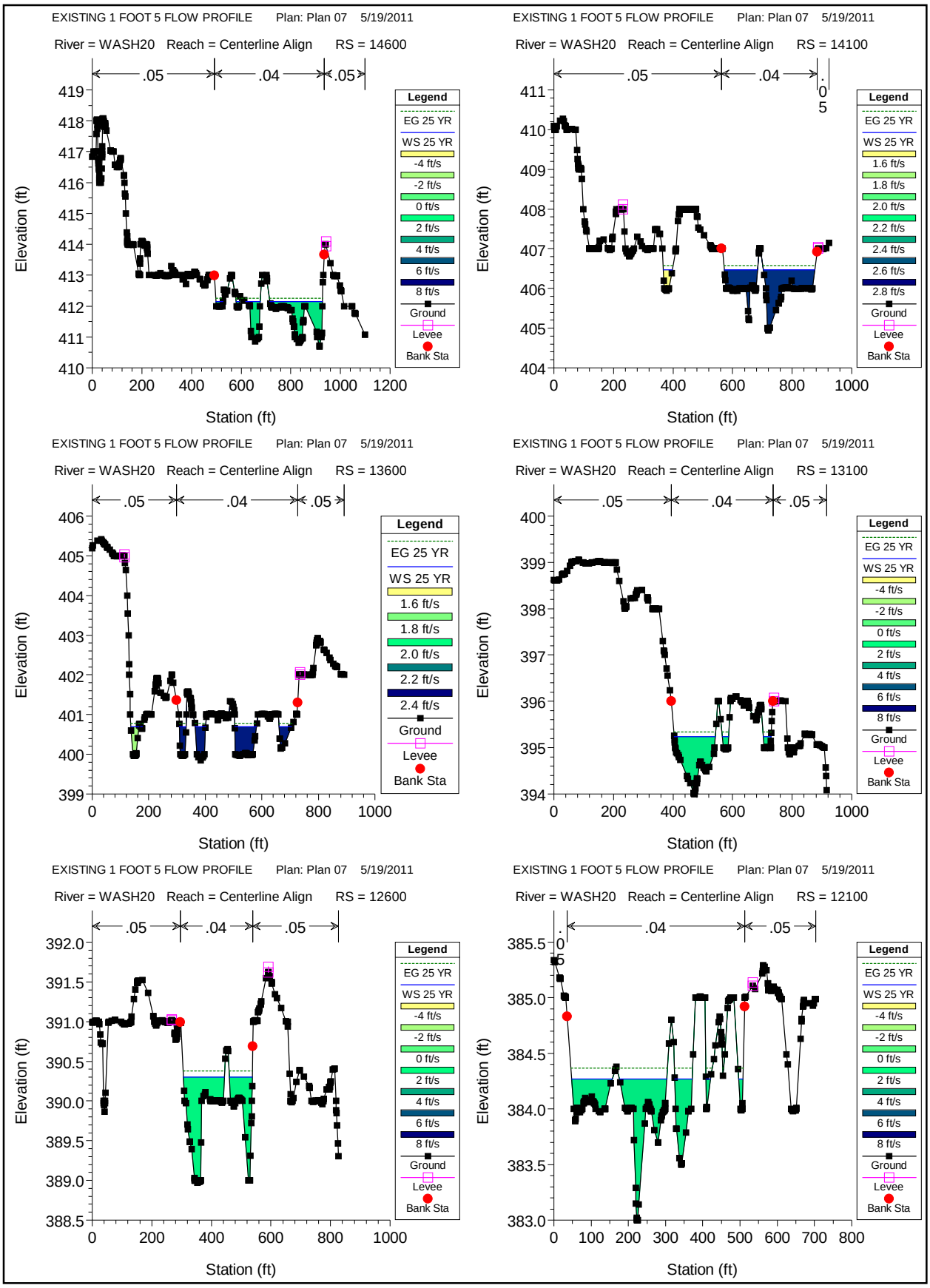
River = WASH20 Reach = Centerline Align RS = 15600

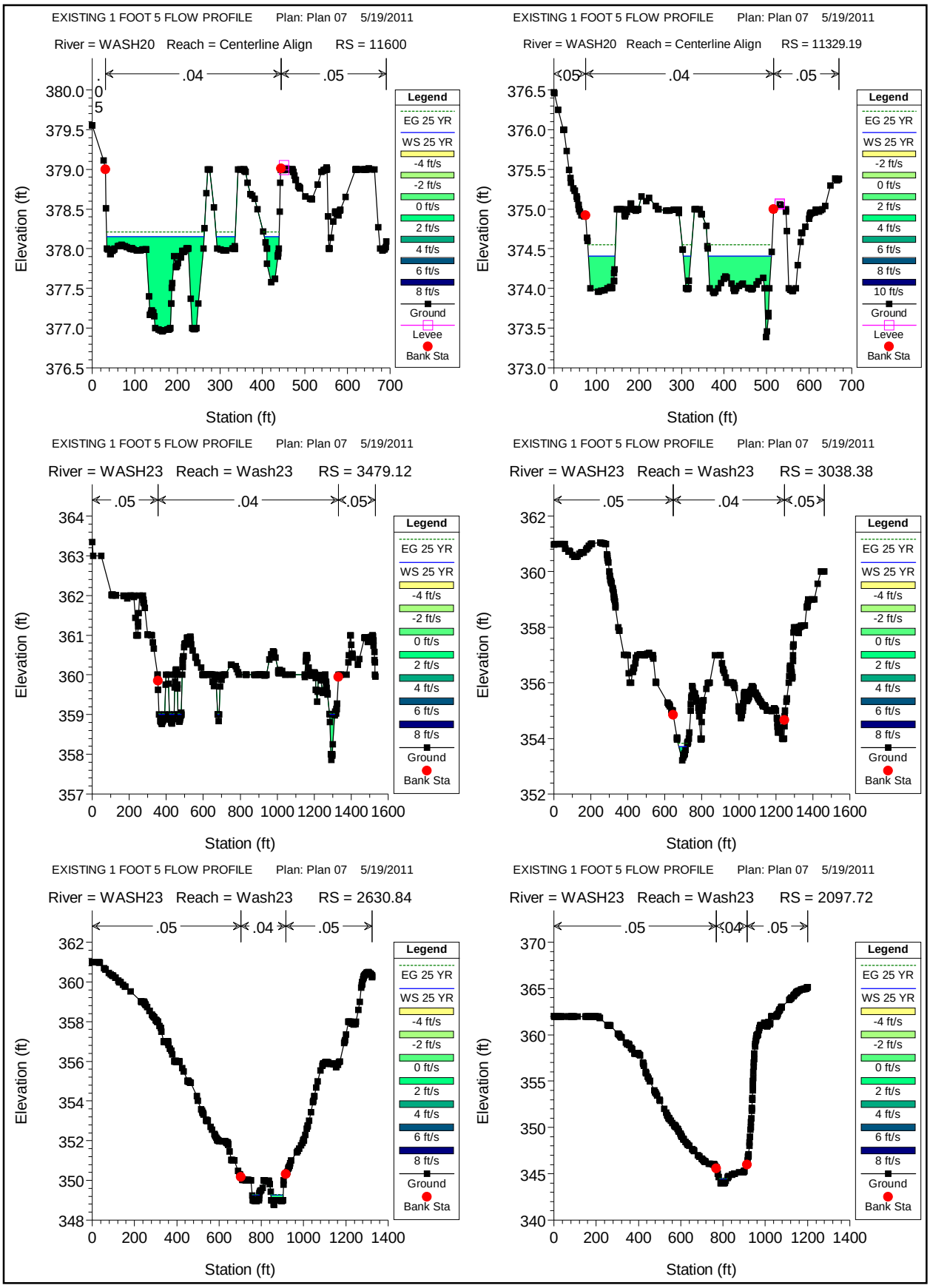


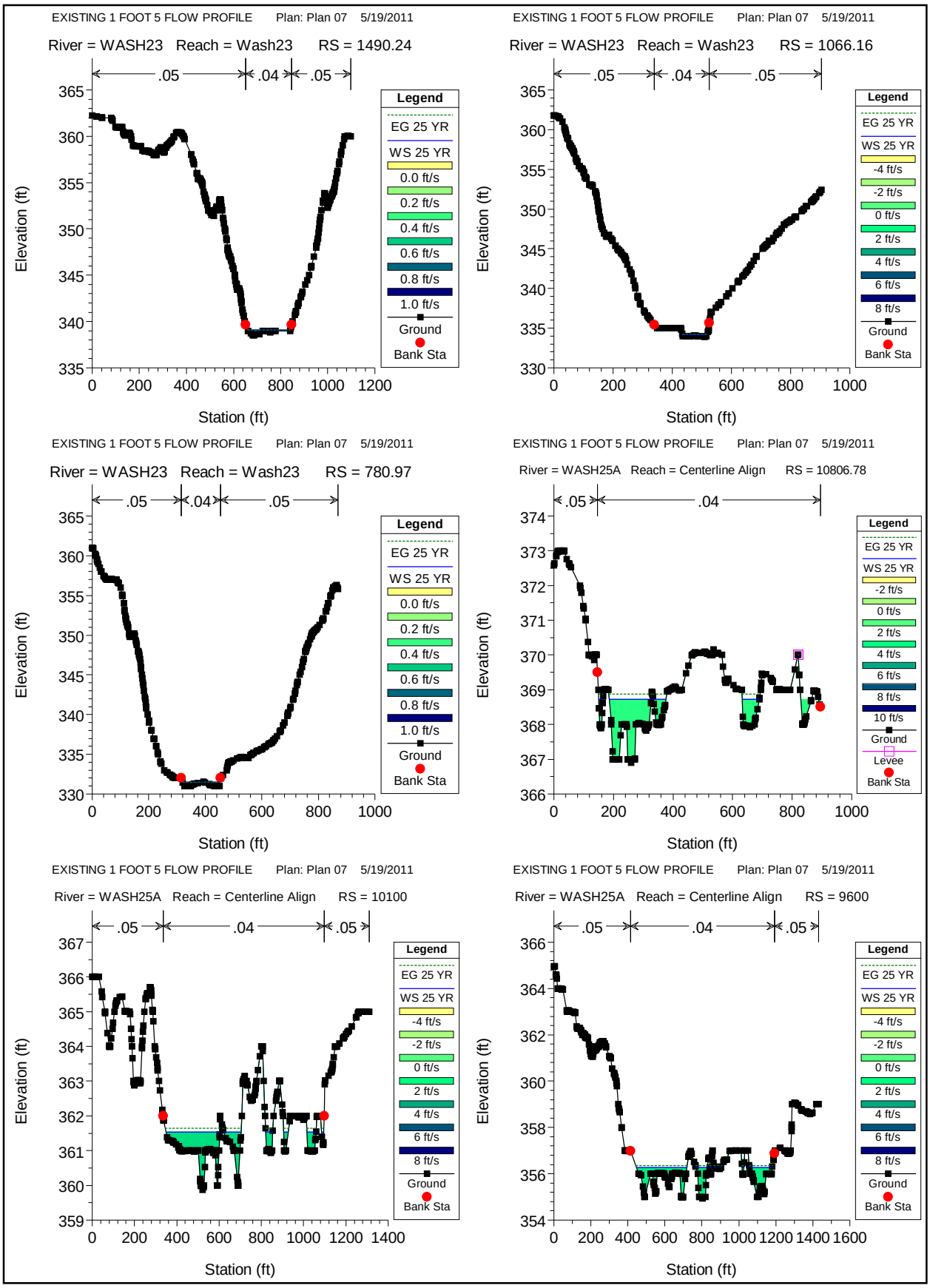

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

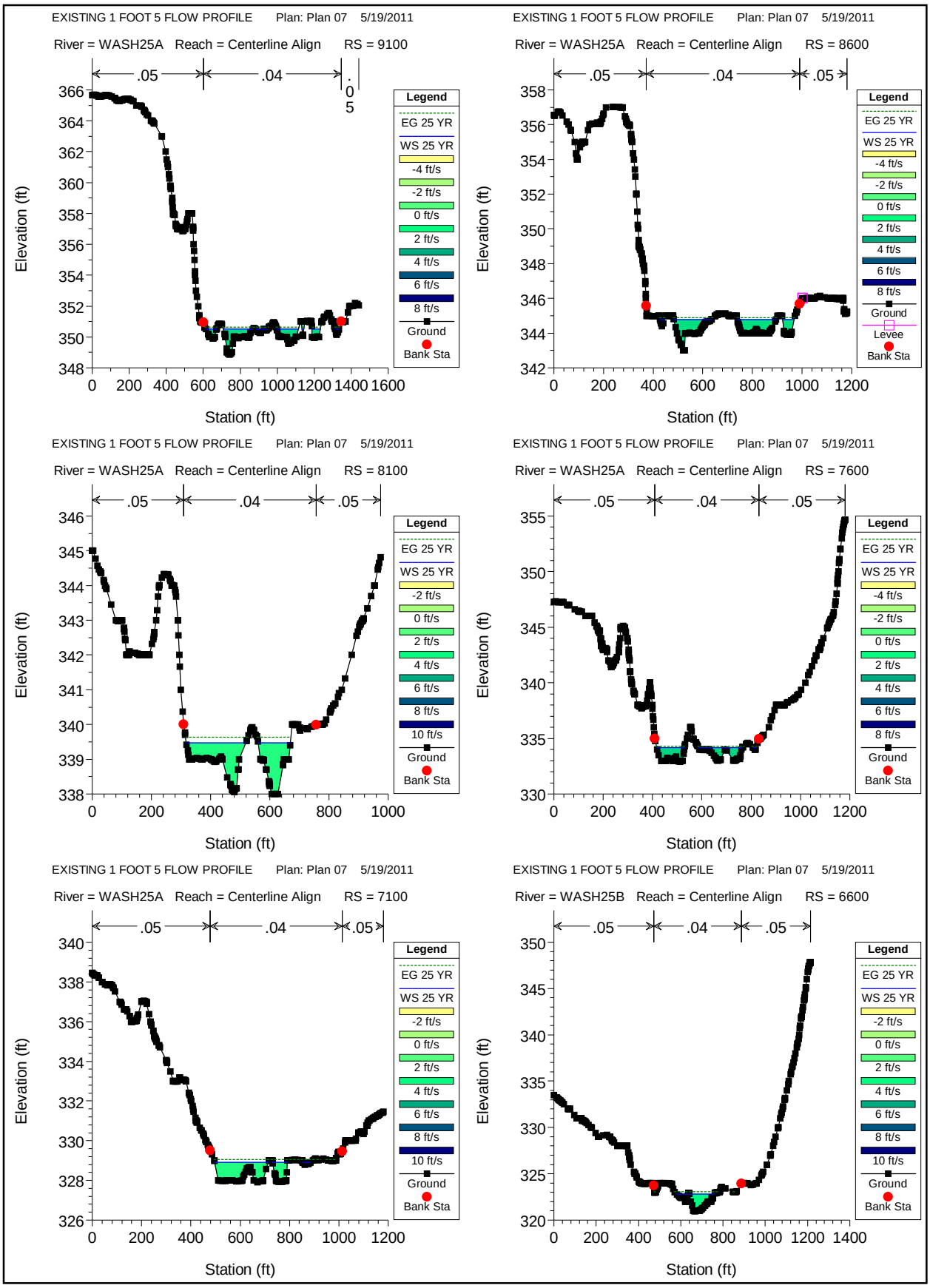
River = WASH20 Reach = Centerline Align RS = 15169.42




EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12100
.04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

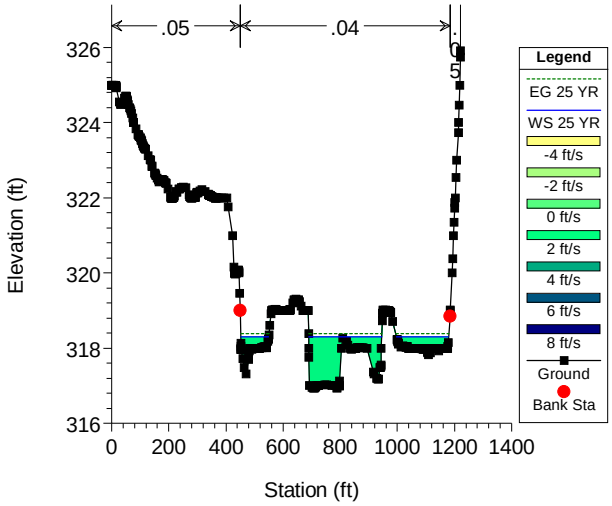

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11329.19
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3479.12
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3038.38
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2630.84
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2097.72
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1490.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1066.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 780.97
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10806.78
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6600
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

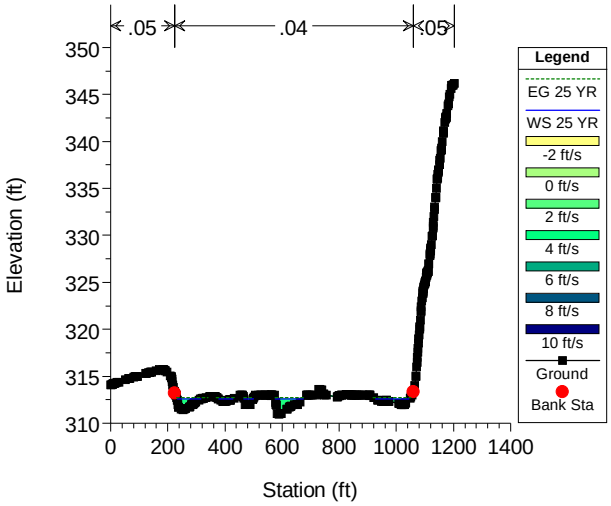
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 6100



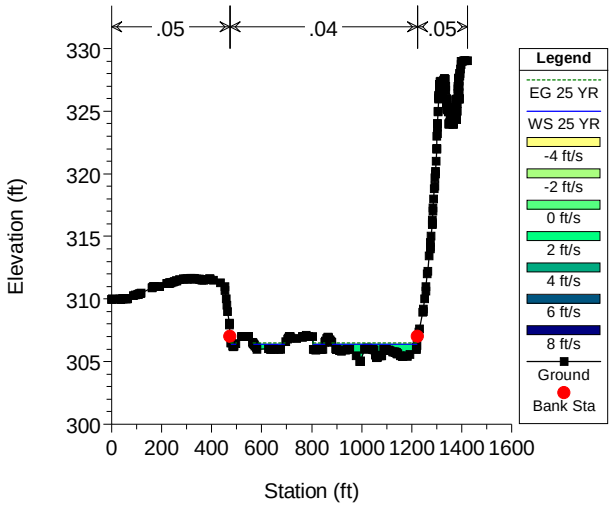

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 5600



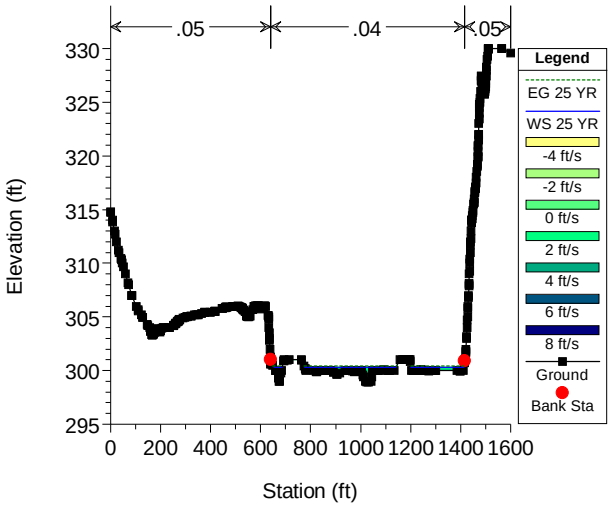

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 5100



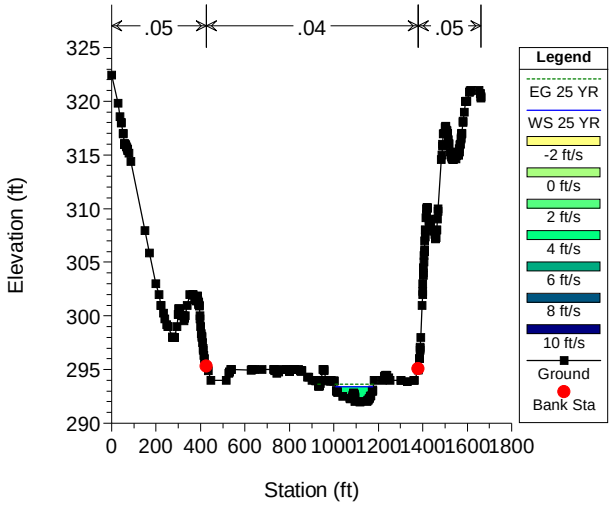

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 4600



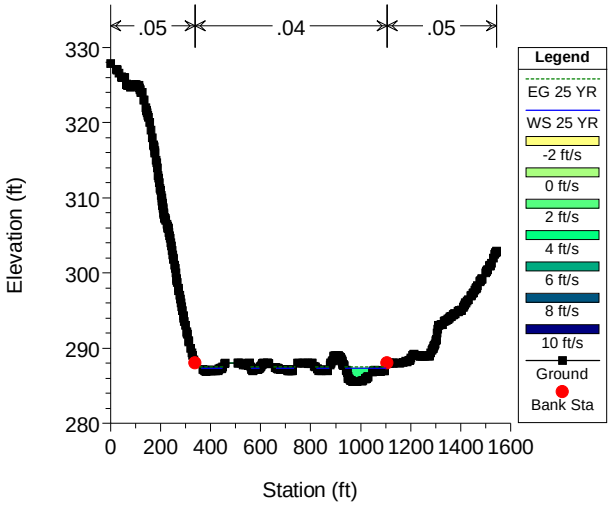

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

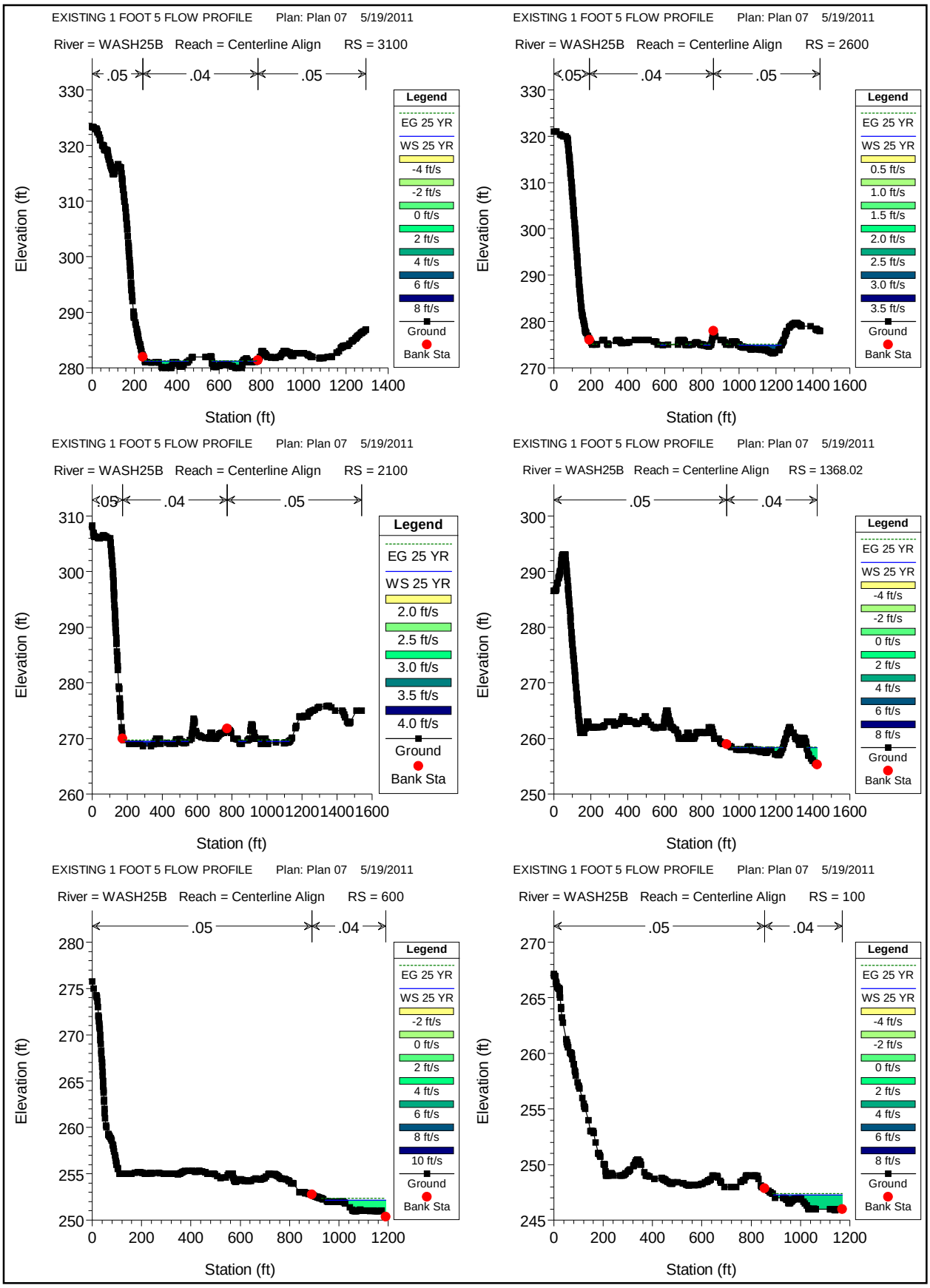
River = WASH25B Reach = Centerline Align RS = 4100

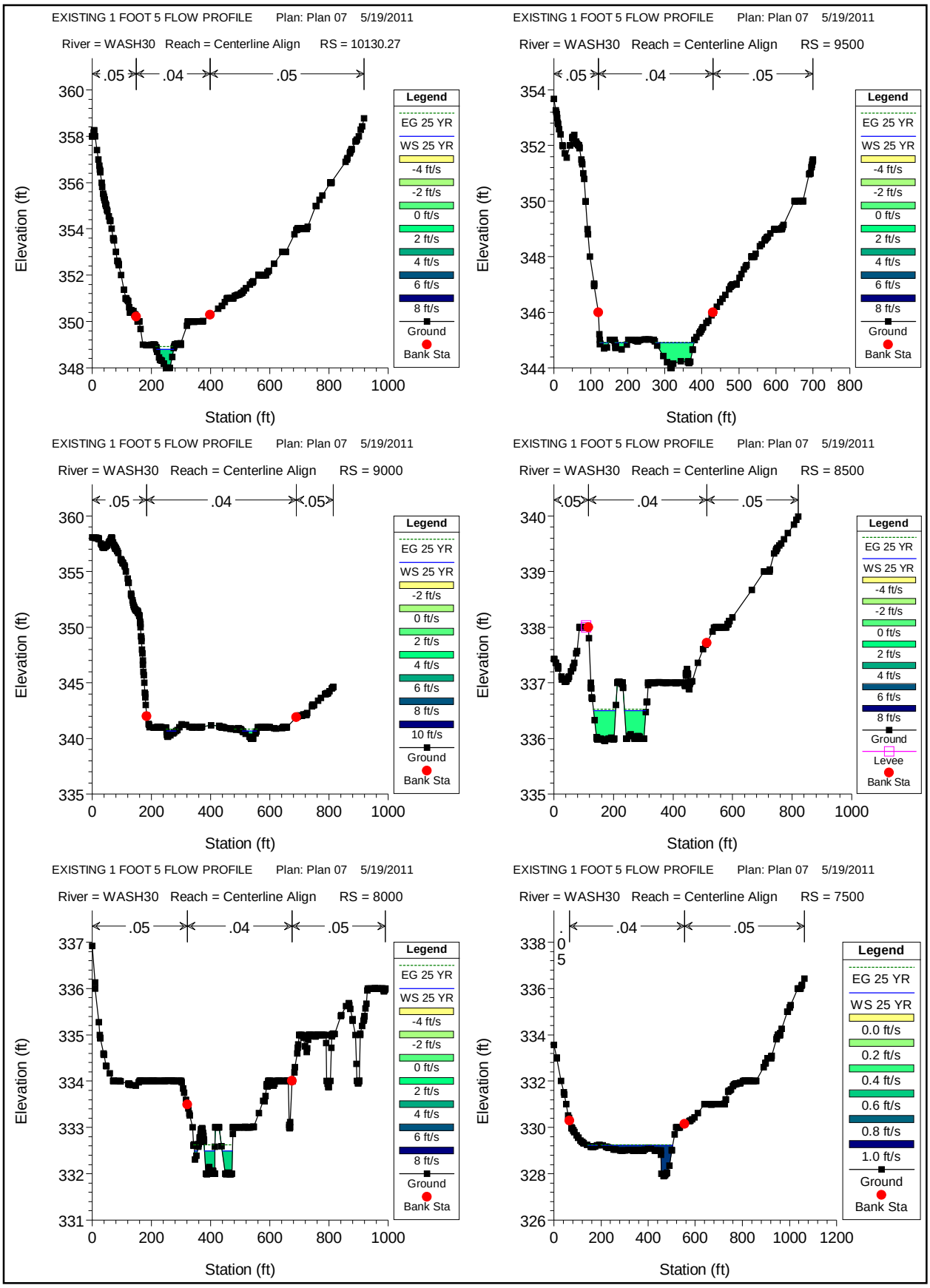


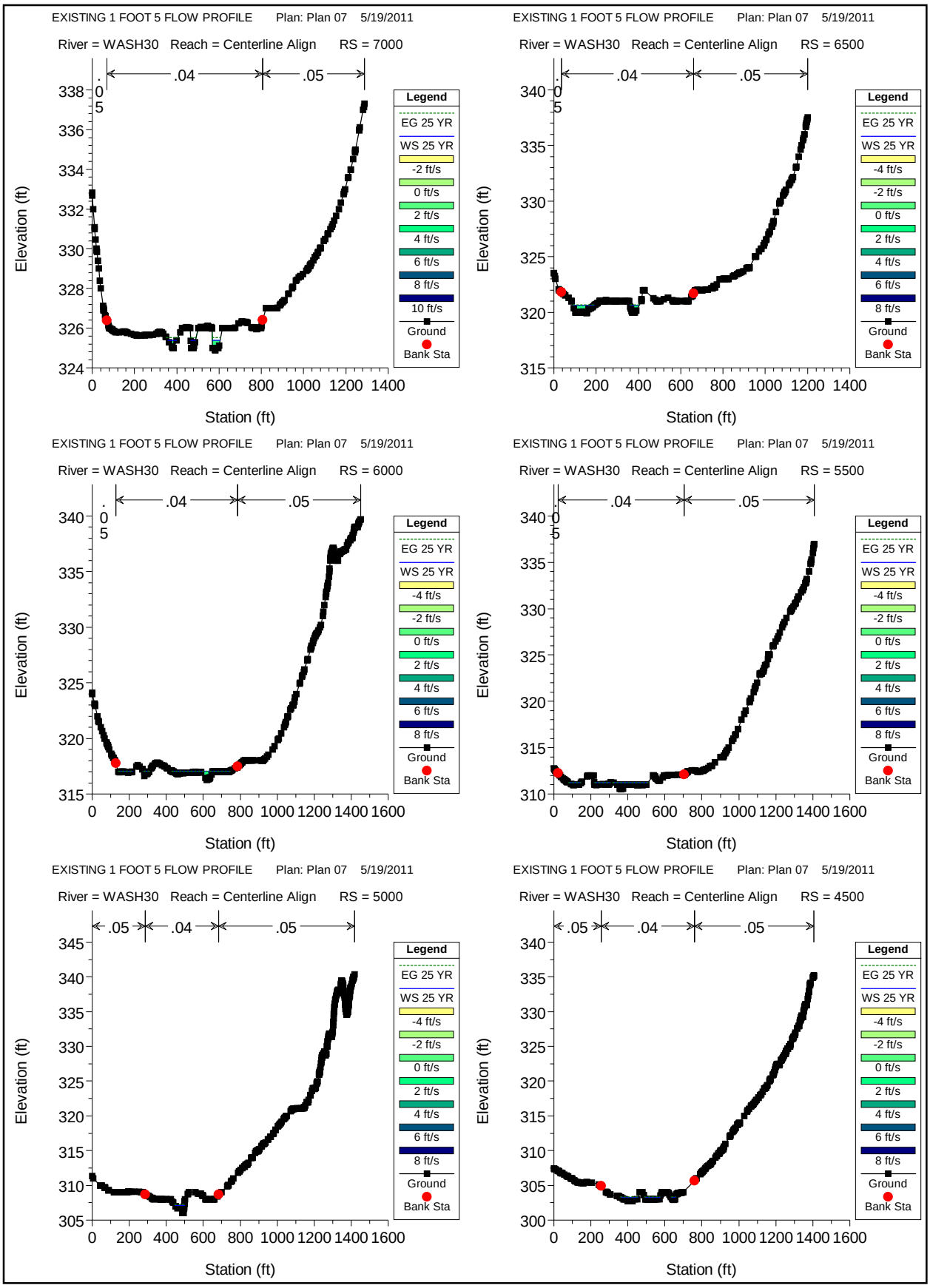

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

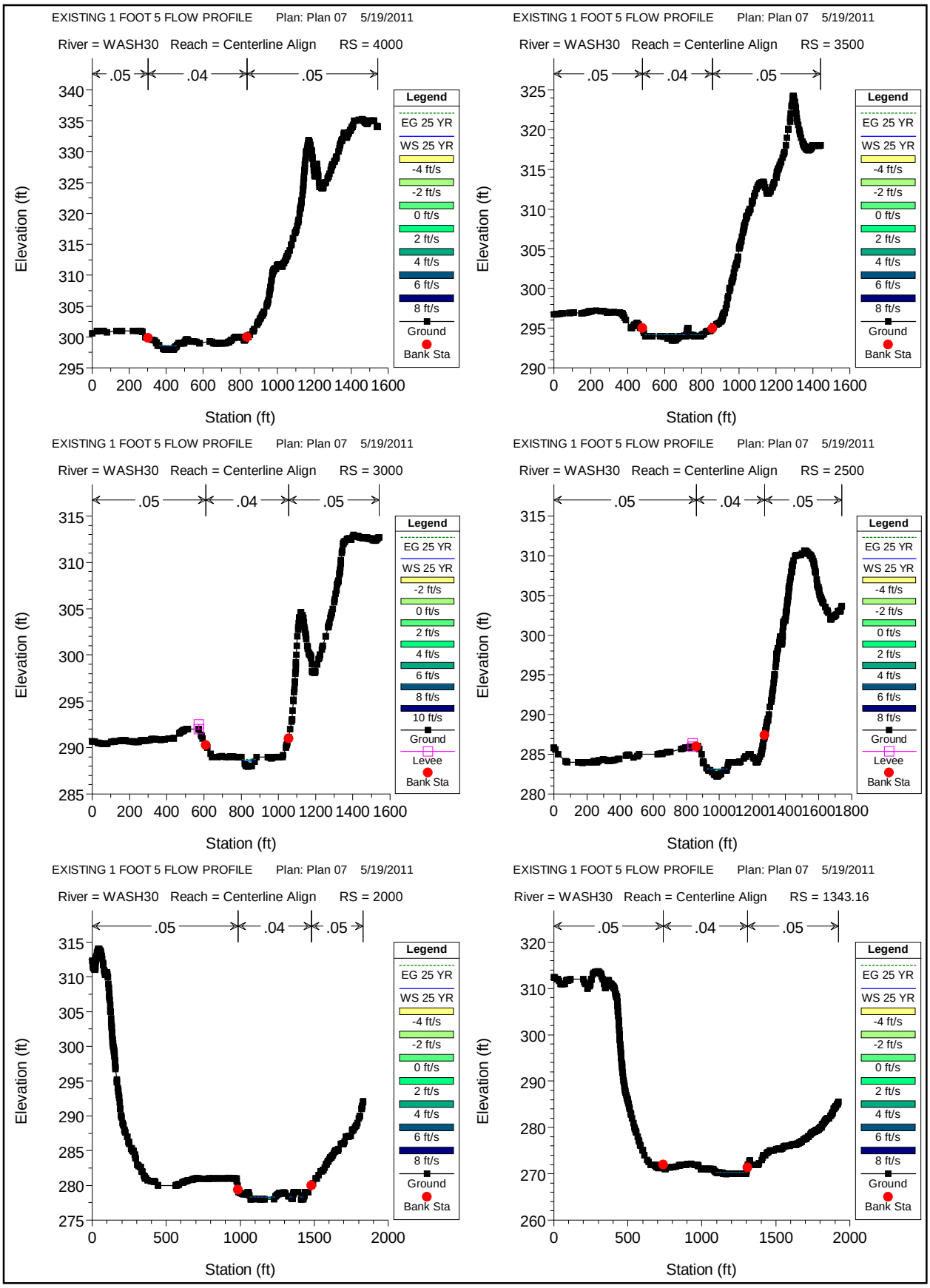
River = WASH25B Reach = Centerline Align RS = 3600

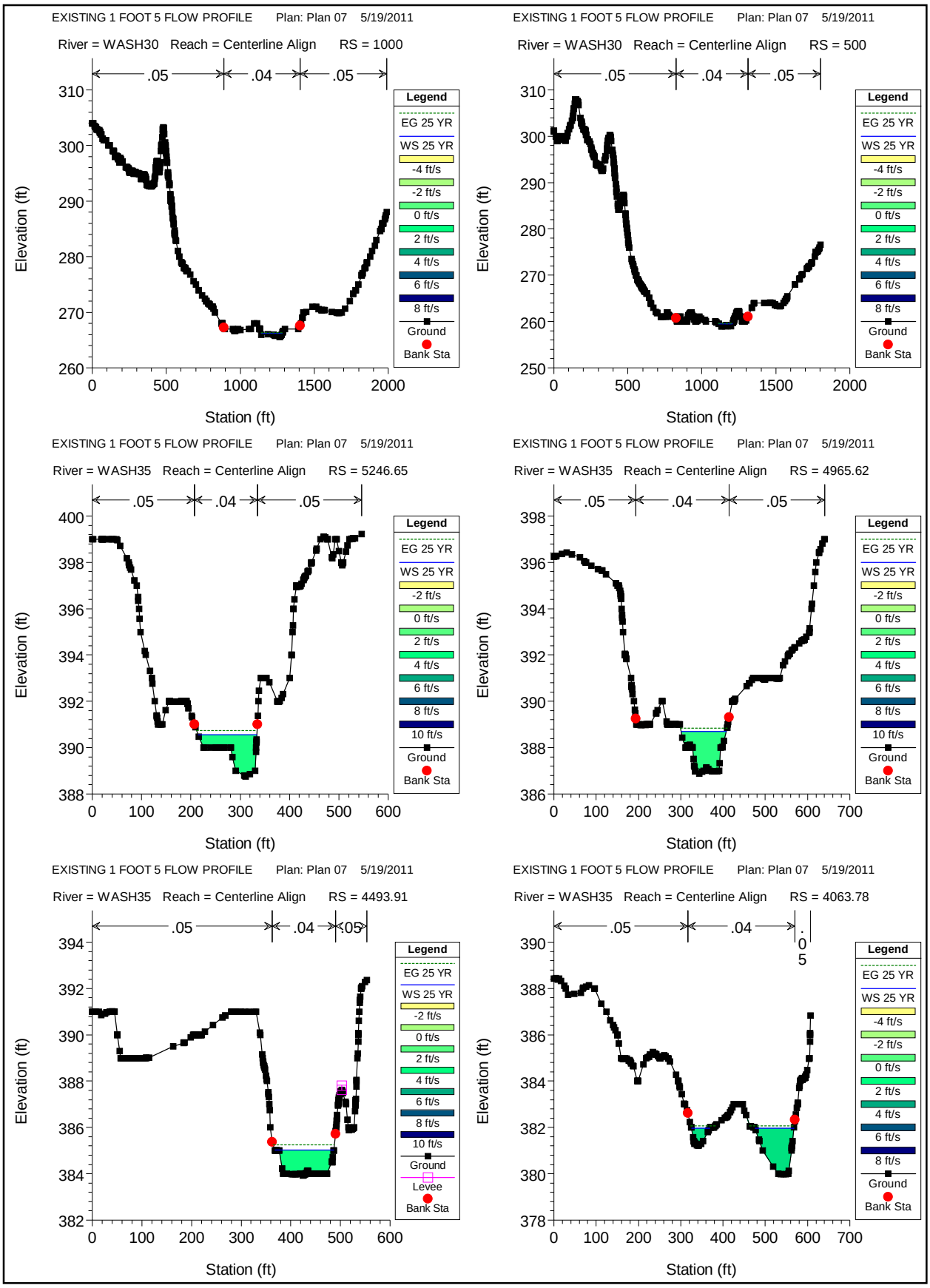


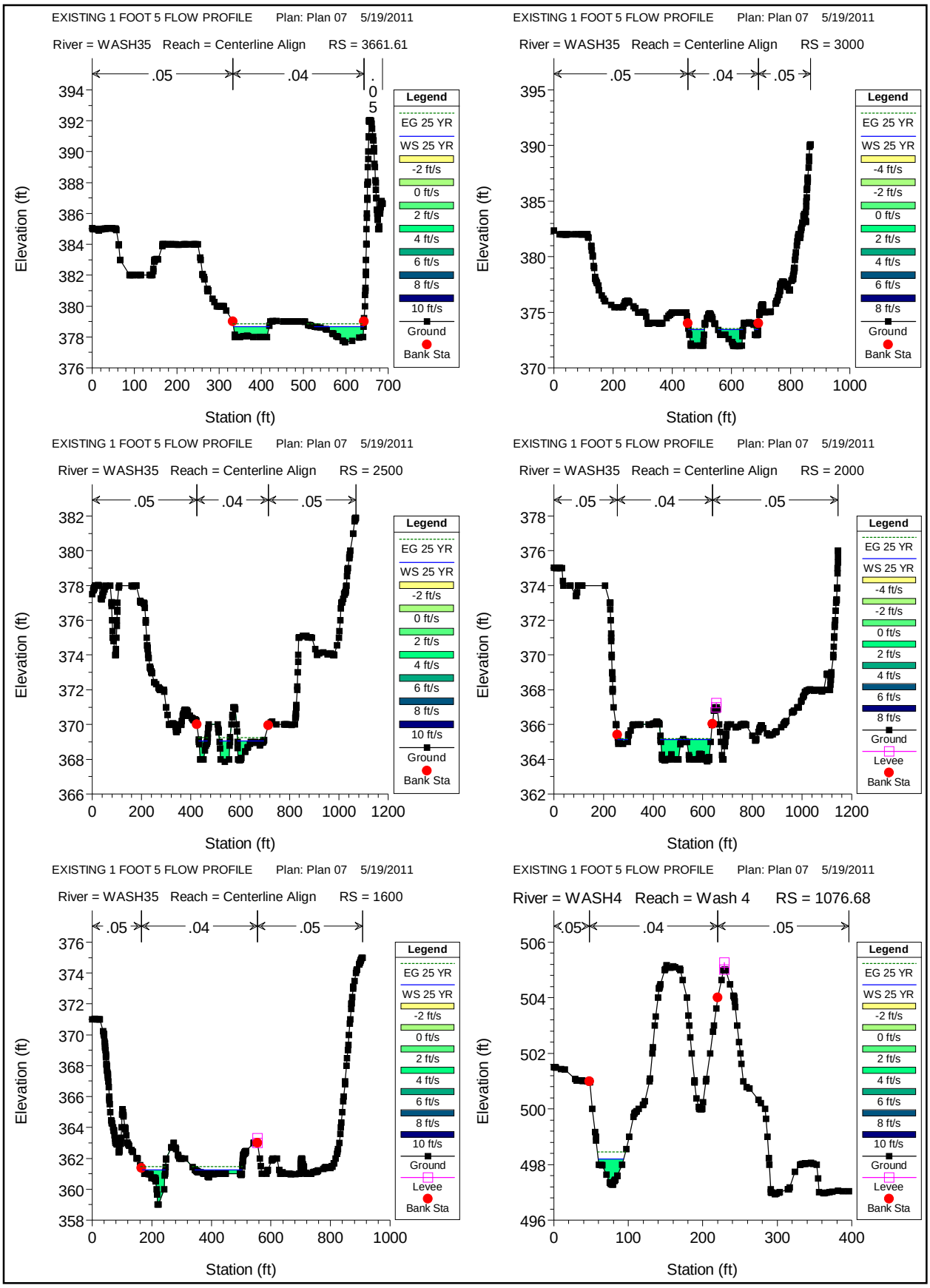

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
4.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 1368.02
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 600
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 100
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

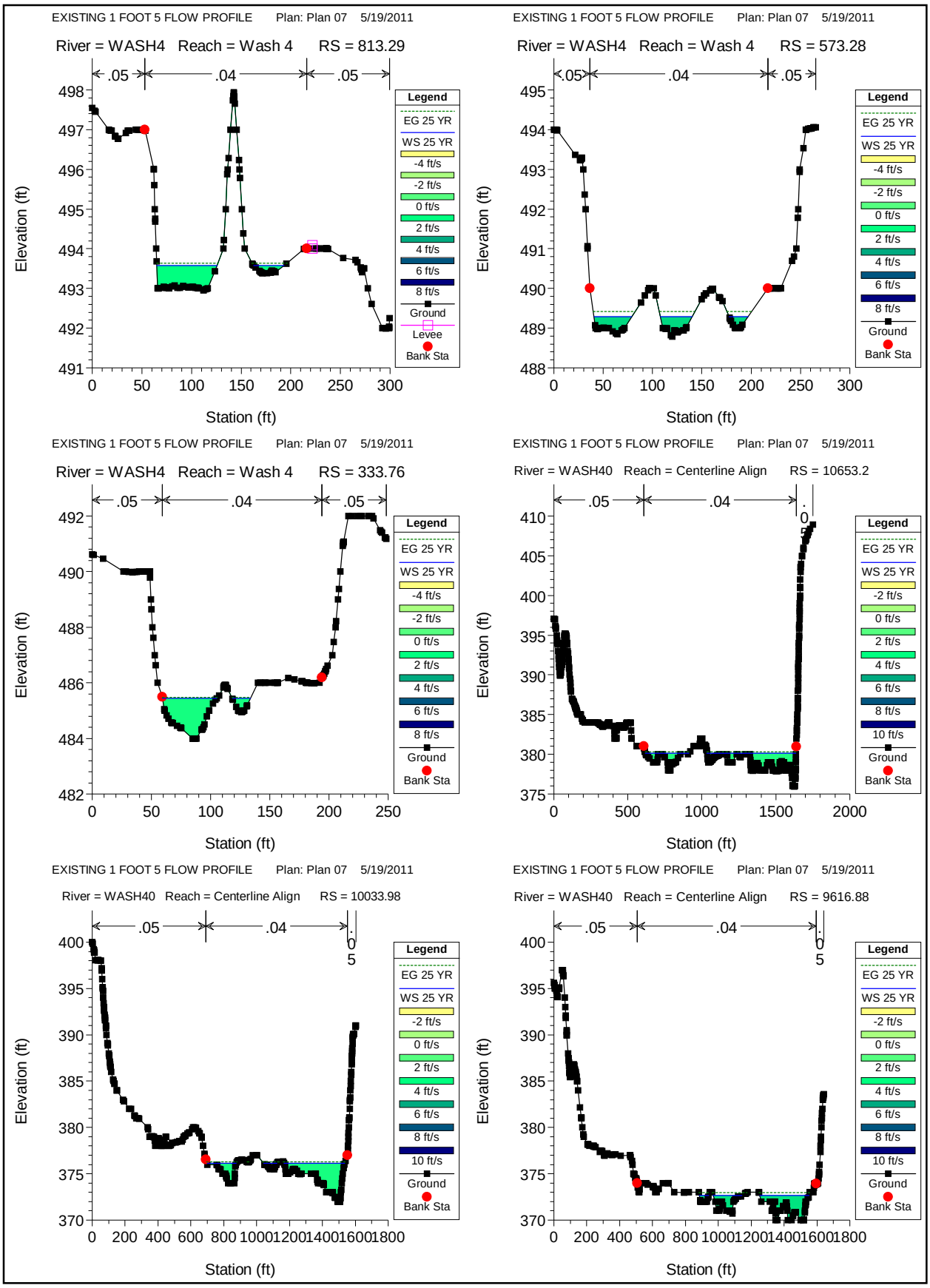

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 10130.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1343.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

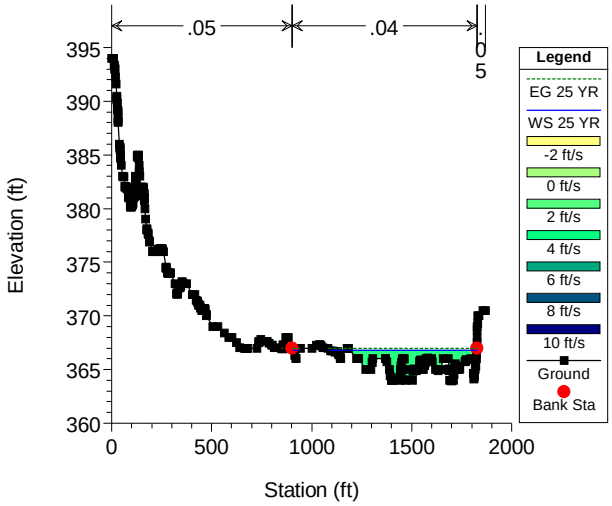

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1000
River = WASH30 Reach = Centerline Align RS = 500
River = WASH35 Reach = Centerline Align RS = 5246.65
River = WASH35 Reach = Centerline Align RS = 4965.62
River = WASH35 Reach = Centerline Align RS = 4493.91
River = WASH35 Reach = Centerline Align RS = 4063.78
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3661.61
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 1600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 1076.68
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 813.29
River = WASH4 Reach = Wash 4 RS = 573.28
River = WASH4 Reach = Wash 4 RS = 333.76
River = WASH40 Reach = Centerline Align RS = 10653.2
River = WASH40 Reach = Centerline Align RS = 10033.98
River = WASH40 Reach = Centerline Align RS = 9616.88
.05
.04
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)

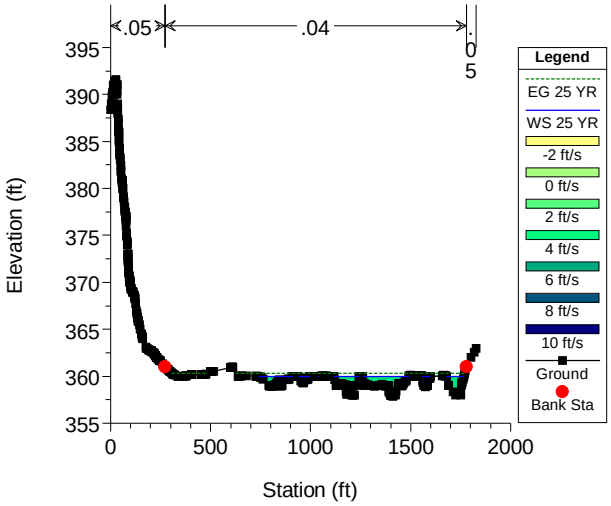
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 8761.12



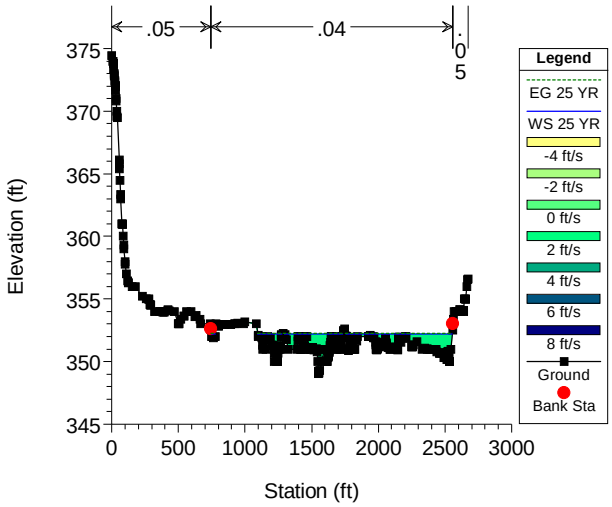

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 7943.06



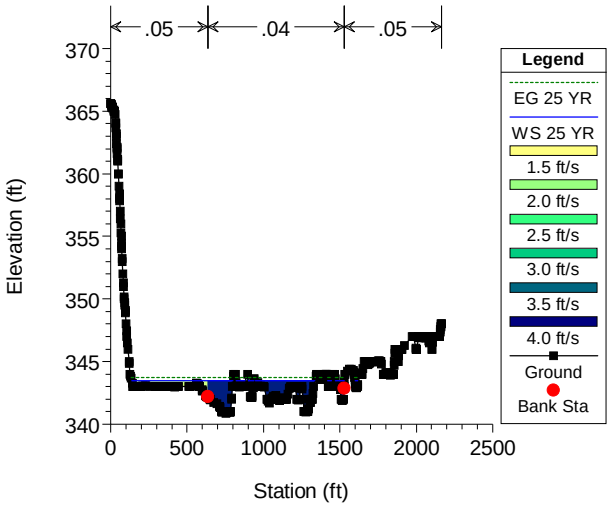

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 6943.13



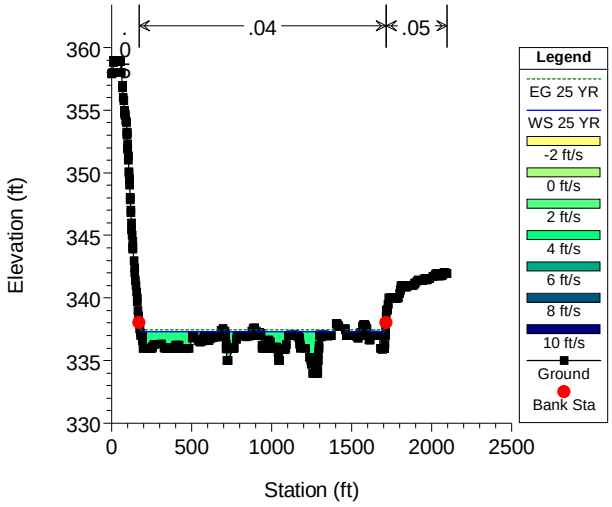

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 5500



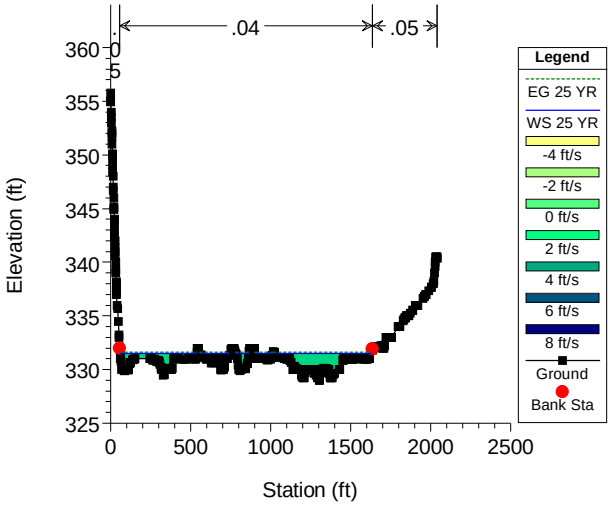

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

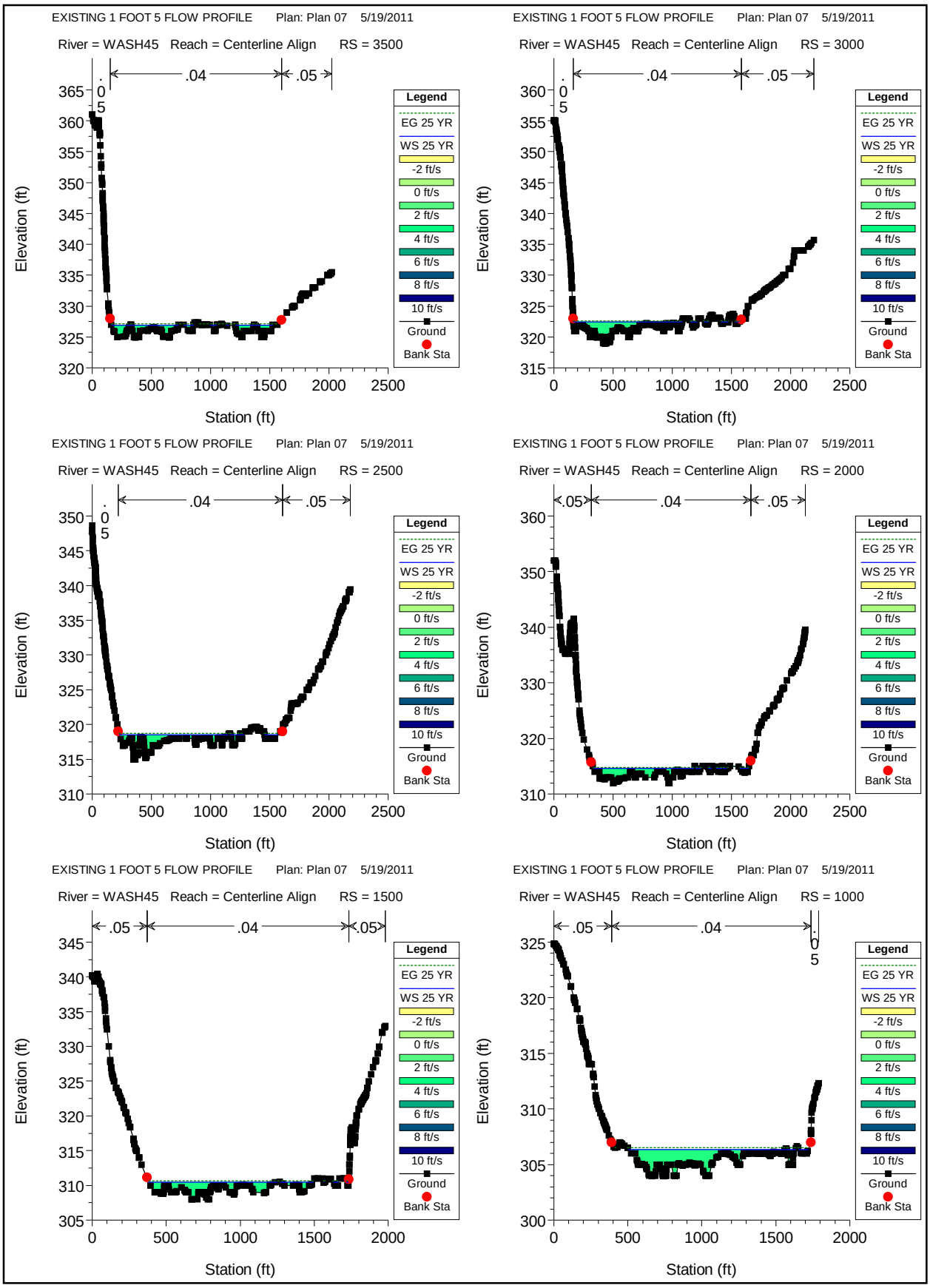
River = WASH45 Reach = Centerline Align RS = 4744.3

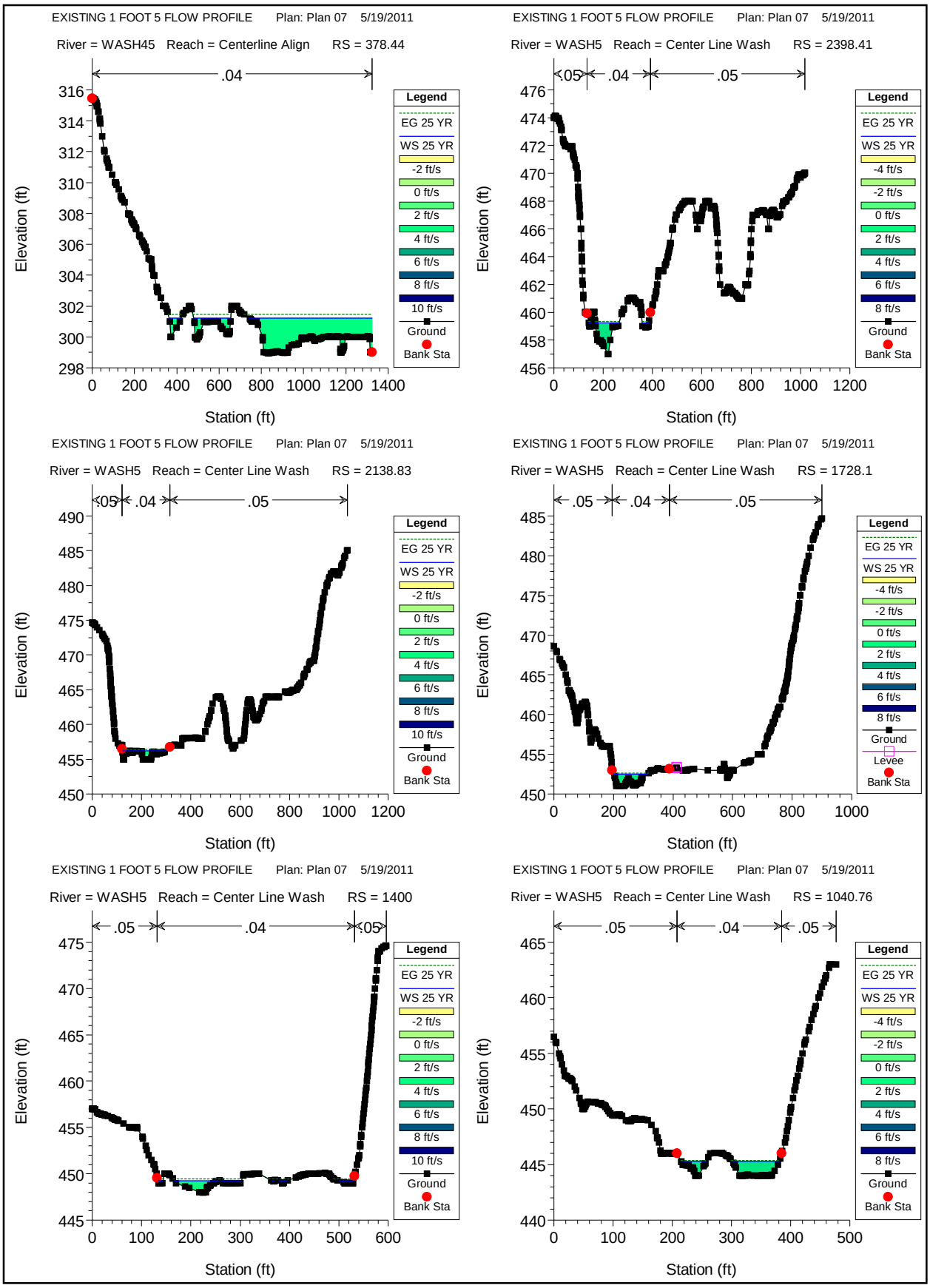



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 4000

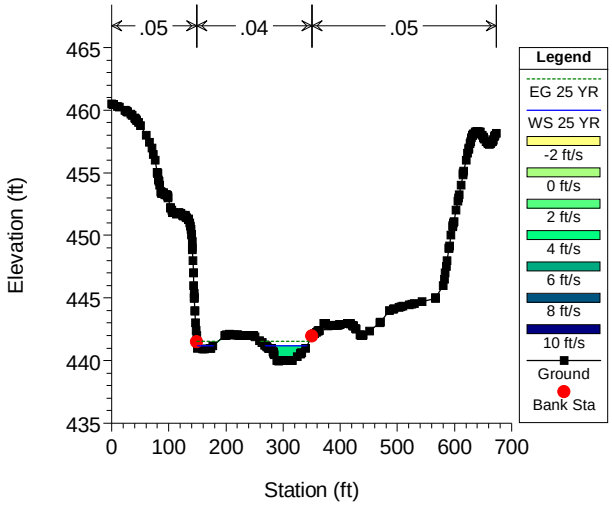



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 378.44
.04
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2398.41
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1728.1
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1400
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1040.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH5 Reach = Center Line Wash RS = 676.61



HEC-RAS Plan: Plan 03 Profile: 25 YR

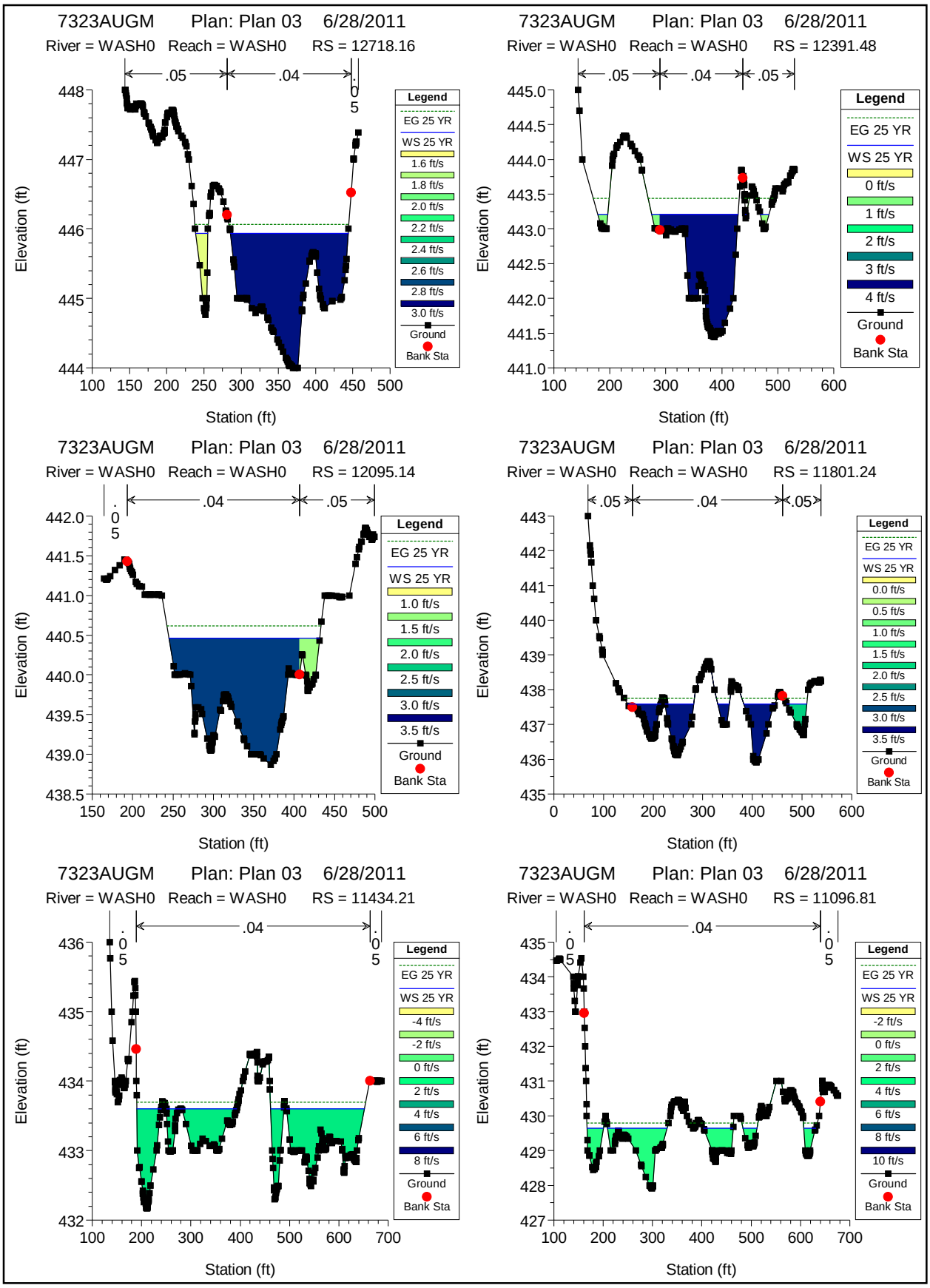
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH90 | WASH90 | 6831.23 | 25 YR | 283.00 | 352.00 | 353.60 | 1.60 | 353.26 | 353.69 | 0.006610 | 2.41 | 117.41 | 164.34 | 0.50 |
| WASH90 | WASH90 | 6503.89 | 25 YR | 283.00 | 349.63 | 350.92 | 1.29 | | 351.05 | 0.010098 | 2.91 | 97.22 | 141.08 | 0.62 |
| WASH90 | WASH90 | 5935.33 | 25 YR | 283.00 | 344.37 | 345.65 | 1.28 | 345.40 | 345.75 | 0.008585 | 2.51 | 112.62 | 180.27 | 0.56 |
| WASH90 | WASH90 | 5486.51 | 25 YR | 283.00 | 339.99 | 341.23 | 1.24 | 341.07 | 341.30 | 0.011561 | 2.19 | 129.05 | 316.98 | 0.61 |
| WASH90 | WASH90 | 4998.22 | 25 YR | 283.00 | 334.38 | 335.58 | 1.20 | 335.41 | 335.67 | 0.011502 | 2.43 | 116.63 | 245.11 | 0.62 |
| WASH90 | WASH90 | 4374.24 | 25 YR | 283.00 | 326.76 | 327.84 | 1.08 | | 327.95 | 0.013368 | 2.64 | 107.16 | 222.15 | 0.67 |
| WASH90 | WASH90 | 3683.01 | 25 YR | 283.00 | 317.38 | 318.52 | 1.14 | 318.38 | 318.61 | 0.013634 | 2.48 | 114.26 | 264.48 | 0.66 |
| WASH90 | WASH90 | 3113.17 | 25 YR | 283.00 | 309.99 | 311.10 | 1.11 | 310.91 | 311.20 | 0.012458 | 2.55 | 110.95 | 229.81 | 0.65 |
| WASH90 | WASH90 | 2556.75 | 25 YR | 283.00 | 302.32 | 303.25 | 0.93 | | 303.36 | 0.016073 | 2.60 | 108.93 | 265.68 | 0.71 |
| WASH90 | WASH90 | 2138.83 | 25 YR | 283.00 | 295.39 | 296.26 | 0.87 | 296.16 | 296.40 | 0.016704 | 3.00 | 94.42 | 191.33 | 0.75 |
| WASH90 | WASH90 | 1646.84 | 25 YR | 283.00 | 287.08 | 287.92 | 0.84 | | 288.03 | 0.016646 | 2.65 | 106.89 | 260.18 | 0.73 |
| WASH90 | WASH90 | 1288.94 | 25 YR | 283.00 | 280.46 | 281.68 | 1.22 | 281.63 | 281.80 | 0.021999 | 2.84 | 99.64 | 269.07 | 0.82 |
| WASH90 | WASH90 | 800.13 | 25 YR | 283.00 | 268.50 | 270.25 | 1.75 | 270.18 | 270.53 | 0.021505 | 4.29 | 65.95 | 94.16 | 0.90 |
| WASH80 | WASH80 | 9177.14 | 25 YR | 147.00 | 406.00 | 407.63 | 1.63 | 407.09 | 407.73 | 0.006222 | 2.56 | 57.46 | 70.00 | 0.50 |
| WASH80 | WASH80 | 8711.54 | 25 YR | 147.00 | 400.91 | 402.57 | 1.66 | 402.50 | 402.84 | 0.021231 | 4.17 | 35.27 | 51.89 | 0.89 |
| WASH80 | WASH80 | 8318.51 | 25 YR | 147.00 | 395.00 | 396.52 | 1.52 | 396.30 | 396.71 | 0.011854 | 3.49 | 42.15 | 52.15 | 0.68 |
| WASH80 | WASH80 | 7927.46 | 25 YR | 147.00 | 391.00 | 392.27 | 1.27 | 392.04 | 392.43 | 0.010066 | 3.16 | 46.56 | 59.37 | 0.63 |
| WASH80 | WASH80 | 7287.57 | 25 YR | 147.00 | 384.00 | 385.44 | 1.44 | | 385.70 | 0.010963 | 4.08 | 36.04 | 33.22 | 0.69 |
| WASH80 | WASH80 | 6827.33 | 25 YR | 147.00 | 380.00 | 381.75 | 1.75 | 381.32 | 381.88 | 0.006400 | 2.90 | 50.61 | 51.86 | 0.52 |
| WASH80 | WASH80 | 6379.44 | 25 YR | 147.00 | 376.99 | 378.31 | 1.32 | 378.13 | 378.39 | 0.009564 | 2.15 | 68.42 | 150.05 | 0.56 |
| WASH80 | WASH80 | 6136.14 | 25 YR | 147.00 | 374.99 | 375.80 | 0.81 | | 375.89 | 0.011041 | 2.36 | 62.40 | 132.90 | 0.61 |
| WASH80 | WASH80 | 5694.19 | 25 YR | 147.00 | 370.83 | 371.82 | 0.99 | | 371.90 | 0.007492 | 2.18 | 67.48 | 120.42 | 0.51 |
| WASH80 | WASH80 | 5146 | 25 YR | 147.00 | 366.00 | 367.27 | 1.27 | 367.10 | 367.33 | 0.009316 | 1.95 | 75.20 | 186.52 | 0.54 |
| WASH80 | WASH80 | 4787.98 | 25 YR | 147.00 | 363.67 | 364.77 | 1.10 | | 364.80 | 0.005542 | 1.48 | 99.41 | 254.00 | 0.42 |
| WASH80 | WASH80 | 4308.96 | 25 YR | 147.00 | 360.00 | 360.69 | 0.69 | 360.56 | 360.79 | 0.014021 | 2.49 | 59.01 | 137.82 | 0.67 |
| WASH80 | WASH80 | 3652.44 | 25 YR | 147.00 | 353.35 | 354.54 | 1.19 | | 354.61 | 0.006733 | 2.07 | 70.92 | 126.15 | 0.49 |
| WASH80 | WASH80 | 3226.43 | 25 YR | 147.00 | 349.80 | 351.08 | 1.28 | | 351.14 | 0.009999 | 1.98 | 74.17 | 190.15 | 0.56 |
| WASH80 | WASH80 | 2831.38 | 25 YR | 147.00 | 345.72 | 346.81 | 1.09 | | 346.88 | 0.011676 | 2.11 | 69.64 | 182.41 | 0.60 |
| WASH80 | WASH80 | 2414.33 | 25 YR | 147.00 | 341.69 | 342.78 | 1.09 | | 342.85 | 0.008097 | 2.12 | 69.47 | 137.73 | 0.53 |
| WASH80 | WASH80 | 1998.23 | 25 YR | 147.00 | 338.00 | 338.94 | 0.94 | | 339.01 | 0.010297 | 1.98 | 74.07 | 193.84 | 0.57 |
| WASH80 | WASH80 | 1662.74 | 25 YR | 147.00 | 334.43 | 335.27 | 0.84 | | 335.32 | 0.012571 | 1.93 | 76.20 | 241.61 | 0.61 |
| WASH80 | WASH80 | 1123.57 | 25 YR | 147.00 | 327.07 | 328.13 | 1.06 | | 328.22 | 0.013407 | 2.51 | 58.64 | 131.59 | 0.66 |
| WASH80 | WASH80 | 611 | 25 YR | 147.00 | 320.60 | 321.28 | 0.68 | 321.18 | 321.41 | 0.015904 | 2.88 | 51.09 | 106.10 | 0.73 |
| WASH75 | WASH75 | 3066.24 | 25 YR | 84.00 | 352.99 | 353.80 | 0.81 | 353.67 | 353.91 | 0.013772 | 2.56 | 32.78 | 72.50 | 0.67 |
| WASH75 | WASH75 | 2658.51 | 25 YR | 84.00 | 348.60 | 349.44 | 0.84 | 349.24 | 349.50 | 0.008663 | 1.94 | 43.23 | 102.56 | 0.53 |
| WASH75 | WASH75 | 2371.61 | 25 YR | 84.00 | 345.39 | 346.06 | 0.67 | | 346.12 | 0.016896 | 2.05 | 40.99 | 147.98 | 0.69 |
| WASH75 | WASH75 | 2124.14 | 25 YR | 84.00 | 342.00 | 342.75 | 0.75 | | 342.82 | 0.010829 | 2.06 | 40.83 | 105.13 | 0.58 |
| WASH75 | WASH75 | 1807.24 | 25 YR | 84.00 | 338.62 | 339.28 | 0.66 | 339.16 | 339.32 | 0.011186 | 1.71 | 49.08 | 170.51 | 0.56 |
| WASH75 | WASH75 | 1554.2 | 25 YR | 84.00 | 335.34 | 335.97 | 0.63 | 335.88 | 336.04 | 0.015175 | 2.03 | 41.35 | 139.61 | 0.66 |
| WASH75 | WASH75 | 1289.14 | 25 YR | 84.00 | 331.45 | 332.22 | 0.77 | | 332.29 | 0.013159 | 2.11 | 39.75 | 113.54 | 0.63 |
| WASH75 | WASH75 | 908.89 | 25 YR | 84.00 | 326.14 | 327.04 | 0.90 | | 327.15 | 0.016905 | 2.59 | 32.47 | 82.74 | 0.73 |
| WASH75 | WASH75 | 546.93 | 25 YR | 84.00 | 320.30 | 321.18 | 0.88 | | 321.29 | 0.021203 | 2.58 | 32.56 | 98.64 | 0.79 |
| WASH70 | WASH70 | 3521.27 | 25 YR | 217.00 | 310.47 | 311.53 | 1.06 | | 311.71 | 0.015442 | 3.41 | 63.54 | 99.78 | 0.75 |
| WASH70 | WASH70 | 3191.72 | 25 YR | 217.00 | 305.11 | 306.51 | 1.40 | | 306.61 | 0.015491 | 2.63 | 82.51 | 191.85 | 0.71 |
| WASH70 | WASH70 | 2880.01 | 25 YR | 217.00 | 300.57 | 301.67 | 1.10 | | 301.76 | 0.012531 | 2.44 | 88.96 | 197.81 | 0.64 |
| WASH70 | WASH70 | 2398.82 | 25 YR | 217.00 | 294.64 | 295.45 | 0.81 | | 295.52 | 0.010535 | 2.11 | 102.65 | 248.37 | 0.58 |

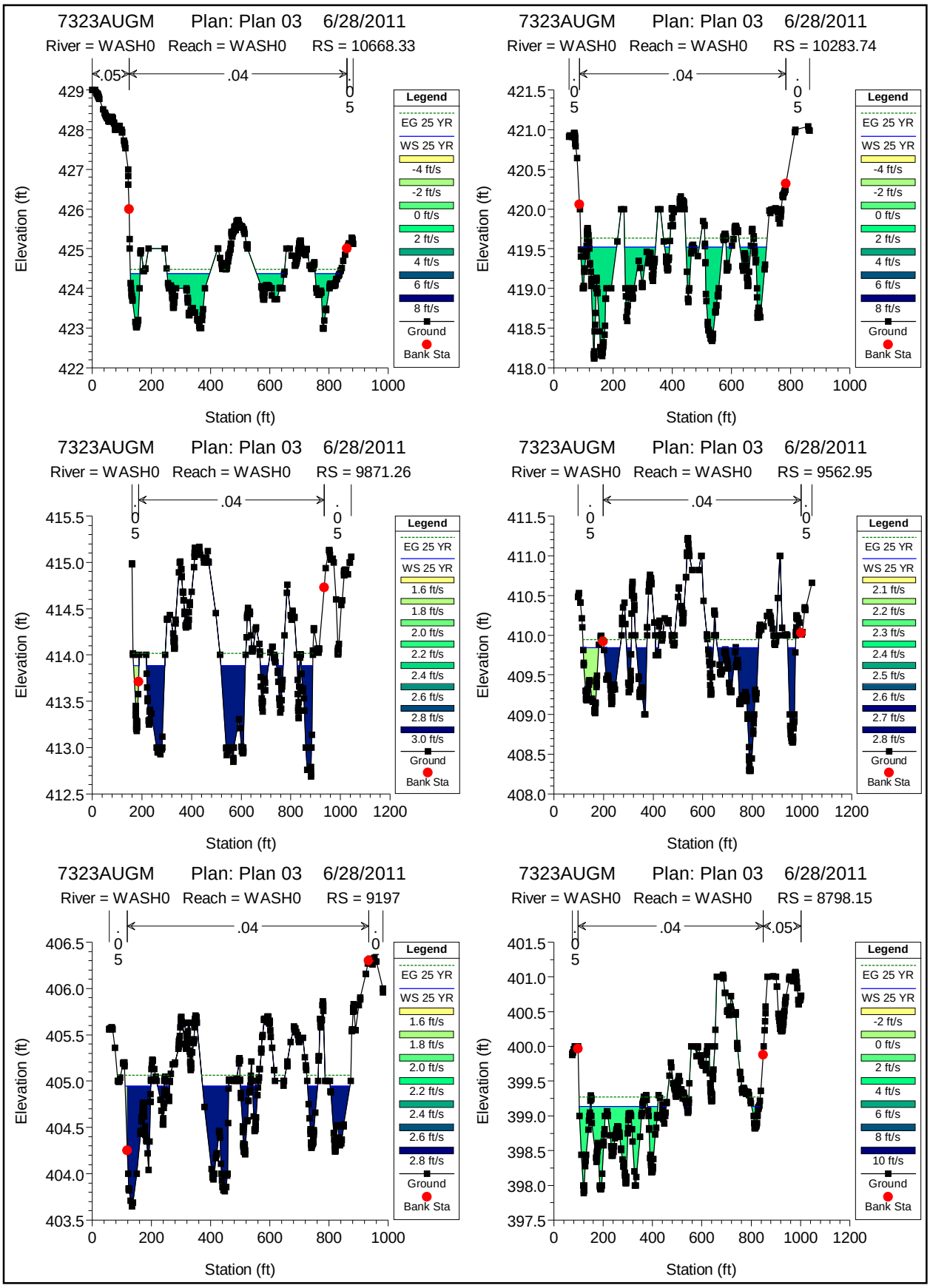
HEC-RAS Plan: Plan 03 Profile: 25 YR (Continued)

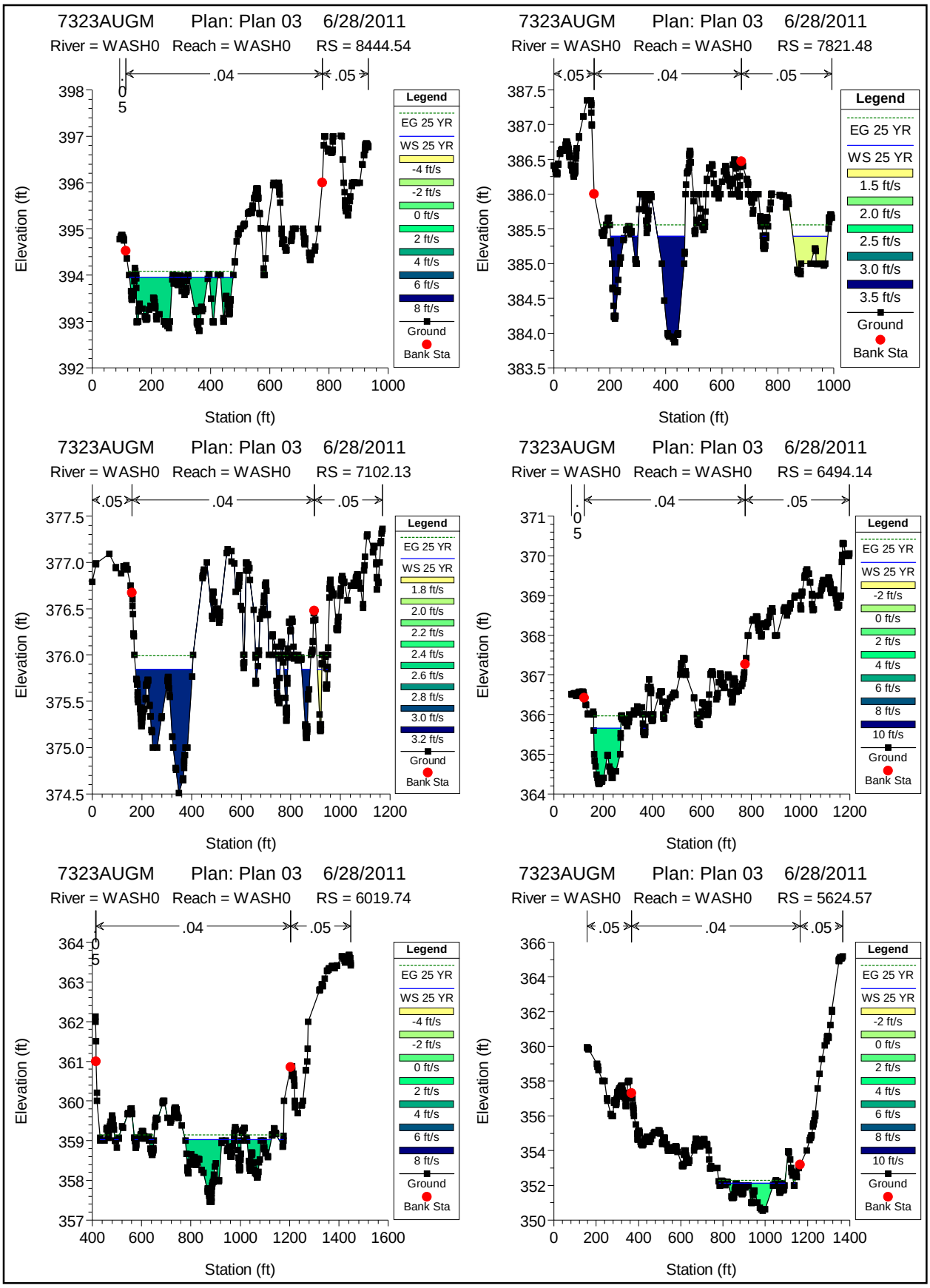
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH70 | WASH70 | 2036.83 | 25 YR | 217.00 | 288.77 | 289.58 | 0.81 | 289.55 | 289.73 | 0.027062 | 3.10 | 69.95 | 193.35 | 0.91 |
| WASH70 | WASH70 | 1648.15 | 25 YR | 217.00 | 282.26 | 283.15 | 0.89 | | 283.24 | 0.011297 | 2.45 | 88.52 | 180.75 | 0.62 |
| WASH70 | WASH70 | 1321.01 | 25 YR | 217.00 | 276.44 | 277.27 | 0.83 | 277.27 | 277.44 | 0.031600 | 3.29 | 66.04 | 187.87 | 0.98 |
| WASH70 | WASH70 | 1029.2 | 25 YR | 217.00 | 269.54 | 270.80 | 1.26 | 270.38 | 270.85 | 0.003506 | 1.73 | 125.33 | 179.38 | 0.37 |
| WASH70 | WASH70 | 666.38 | 25 YR | 217.00 | 267.00 | 268.04 | 10.74 | 268.00 | 268.18 | 0.024007 | 2.97 | 73.00 | 196.63 | 0.86 |
| WASH70 | WASH70 | 358.04 | 25 YR | 217.00 | 261.11 | 262.17 | 11.44 | 262.05 | 262.38 | 0.015104 | 3.68 | 58.99 | 81.50 | 0.76 |
| WASH60 | WASH60 | 5477.11 | 25 YR | 38.00 | 467.00 | 467.66 | 0.66 | 467.44 | 467.75 | 0.007967 | 2.36 | 16.08 | 26.52 | 0.53 |
| WASH60 | WASH60 | 5299.28 | 25 YR | 38.00 | 465.62 | 466.33 | 0.71 | | 466.40 | 0.007185 | 2.16 | 17.58 | 30.80 | 0.50 |
| WASH60 | WASH60 | 5104.28 | 25 YR | 38.00 | 463.90 | 464.69 | 0.79 | 464.52 | 464.75 | 0.010071 | 2.02 | 18.82 | 47.02 | 0.56 |
| WASH60 | WASH60 | 4869.04 | 25 YR | 38.00 | 460.91 | 461.55 | 0.64 | | 461.64 | 0.018165 | 2.47 | 15.39 | 44.17 | 0.74 |
| WASH60 | WASH60 | 4591.11 | 25 YR | 38.00 | 457.00 | 457.69 | 0.69 | | 457.74 | 0.011115 | 1.76 | 21.59 | 71.47 | 0.56 |
| WASH60 | WASH60 | 4337.83 | 25 YR | 38.00 | 454.00 | 454.71 | 0.71 | 454.61 | 454.77 | 0.012356 | 1.88 | 20.22 | 65.78 | 0.60 |
| WASH60 | WASH60 | 4068.7 | 25 YR | 38.00 | 450.95 | 451.44 | 0.80 | 451.36 | 451.48 | 0.012096 | 1.57 | 24.13 | 100.77 | 0.57 |
| WASH60 | WASH60 | 3746.65 | 25 YR | 38.00 | 446.00 | 446.94 | 0.94 | 446.83 | 447.04 | 0.015804 | 2.52 | 15.09 | 37.94 | 0.70 |
| WASH60 | WASH60 | 3427.61 | 25 YR | 38.00 | 441.98 | 442.70 | 0.72 | | 442.74 | 0.010719 | 1.65 | 24.36 | 78.02 | 0.55 |
| WASH60 | WASH60 | 3162.25 | 25 YR | 38.00 | 438.68 | 439.38 | 0.70 | | 439.45 | 0.017455 | 2.18 | 17.43 | 58.66 | 0.70 |
| WASH60 | WASH60 | 2826.26 | 25 YR | 38.00 | 433.38 | 434.28 | 0.90 | 434.15 | 434.38 | 0.013198 | 2.61 | 14.57 | 30.27 | 0.66 |
| WASH60 | WASH60 | 2497.44 | 25 YR | 38.00 | 429.89 | 430.46 | 0.57 | 430.31 | 430.54 | 0.010337 | 2.28 | 16.66 | 35.29 | 0.59 |
| WASH60 | WASH60 | 2235.76 | 25 YR | 38.00 | 426.68 | 427.56 | 0.88 | 427.41 | 427.64 | 0.011940 | 2.34 | 16.24 | 36.70 | 0.62 |
| WASH60 | WASH60 | 1902.48 | 25 YR | 38.00 | 421.48 | 422.35 | 0.87 | 422.29 | 422.44 | 0.021307 | 2.44 | 15.60 | 51.54 | 0.78 |
| WASH60 | WASH60 | 1536.23 | 25 YR | 38.00 | 415.62 | 416.45 | 2.43 | 416.33 | 416.54 | 0.012593 | 2.34 | 16.24 | 38.51 | 0.64 |
| WASH60 | WASH60 | 1155.84 | 25 YR | 38.00 | 410.17 | 411.13 | 2.13 | 410.97 | 411.21 | 0.015710 | 2.21 | 17.19 | 52.35 | 0.68 |
| WASH60 | WASH60 | 717.74 | 25 YR | 38.00 | 403.99 | 404.51 | 1.51 | 404.41 | 404.60 | 0.014477 | 2.32 | 16.38 | 43.68 | 0.67 |
| WASH60 | WASH60 | 251.42 | 25 YR | 38.00 | 397.00 | 397.48 | 0.52 | 397.37 | 397.54 | 0.015815 | 1.89 | 20.06 | 77.66 | 0.66 |
| WASH0 | WASH0 | 12718.16 | 25 YR | 520.00 | 444.00 | 445.93 | 1.93 | 445.49 | 446.07 | 0.005751 | 2.95 | 180.74 | 174.53 | 0.50 |
| WASH0 | WASH0 | 12391.48 | 25 YR | 520.00 | 441.44 | 443.21 | 1.77 | | 443.44 | 0.011935 | 3.90 | 138.60 | 188.41 | 0.71 |
| WASH0 | WASH0 | 12095.14 | 25 YR | 520.00 | 438.87 | 440.46 | 1.59 | | 440.62 | 0.007688 | 3.20 | 168.25 | 186.67 | 0.57 |
| WASH0 | WASH0 | 11801.24 | 25 YR | 520.00 | 435.91 | 437.59 | 1.68 | | 437.76 | 0.012994 | 3.36 | 162.69 | 252.20 | 0.70 |
| WASH0 | WASH0 | 11434.21 | 25 YR | 520.00 | 432.17 | 433.60 | 1.43 | | 433.70 | 0.009502 | 2.46 | 211.30 | 376.47 | 0.58 |
| WASH0 | WASH0 | 11096.81 | 25 YR | 520.00 | 427.91 | 429.64 | 1.73 | | 429.80 | 0.014272 | 3.19 | 162.85 | 266.18 | 0.72 |
| WASH0 | WASH0 | 10668.33 | 25 YR | 520.00 | 422.99 | 424.38 | 1.39 | | 424.49 | 0.010840 | 2.63 | 197.82 | 352.49 | 0.62 |
| WASH0 | WASH0 | 10283.74 | 25 YR | 520.00 | 418.12 | 419.52 | 1.40 | 419.38 | 419.63 | 0.014856 | 2.67 | 194.44 | 427.59 | 0.70 |
| WASH0 | WASH0 | 9871.26 | 25 YR | 520.00 | 412.69 | 413.89 | 1.20 | | 414.02 | 0.012555 | 2.93 | 180.41 | 311.11 | 0.67 |
| WASH0 | WASH0 | 9562.95 | 25 YR | 520.00 | 408.29 | 409.84 | 1.55 | | 409.95 | 0.013874 | 2.67 | 200.53 | 418.15 | 0.68 |
| WASH0 | WASH0 | 9197 | 25 YR | 520.00 | 403.65 | 404.95 | 1.30 | | 405.07 | 0.012852 | 2.75 | 190.20 | 362.72 | 0.67 |
| WASH0 | WASH0 | 8798.15 | 25 YR | 520.00 | 397.89 | 399.13 | 1.24 | 399.02 | 399.27 | 0.016493 | 3.01 | 172.70 | 343.96 | 0.75 |
| WASH0 | WASH0 | 8444.54 | 25 YR | 520.00 | 392.80 | 393.95 | 1.15 | | 394.08 | 0.013168 | 2.92 | 178.17 | 313.81 | 0.68 |
| WASH0 | WASH0 | 7821.48 | 25 YR | 520.00 | 383.87 | 385.39 | 1.52 | | 385.56 | 0.012202 | 3.46 | 174.35 | 301.79 | 0.69 |
| WASH0 | WASH0 | 7102.13 | 25 YR | 520.00 | 374.51 | 375.85 | 1.34 | | 375.99 | 0.015750 | 3.10 | 171.03 | 325.60 | 0.74 |
| WASH0 | WASH0 | 6494.14 | 25 YR | 520.00 | 364.25 | 365.65 | 1.40 | | 365.96 | 0.014701 | 4.46 | 116.51 | 117.79 | 0.79 |
| WASH0 | WASH0 | 6019.74 | 25 YR | 520.00 | 357.46 | 359.02 | 1.56 | | 359.15 | 0.017094 | 2.88 | 180.60 | 395.10 | 0.75 |
| WASH0 | WASH0 | 5624.57 | 25 YR | 520.00 | 350.55 | 352.13 | 1.58 | | 352.29 | 0.014187 | 3.13 | 166.06 | 278.44 | 0.71 |
| WASH0 | WASH0 | 5234.92 | 25 YR | 520.00 | 344.24 | 346.01 | 1.77 | | 346.29 | 0.014414 | 4.22 | 123.13 | 133.44 | 0.77 |
| WASH0 | WASH0 | 4617.22 | 25 YR | 520.00 | 334.54 | 335.77 | 1.23 | | 335.98 | 0.016125 | 3.64 | 143.00 | 210.89 | 0.78 |
| WASH0 | WASH0 | 4232 | 25 YR | 520.00 | 327.66 | 329.57 | 1.91 | | 329.82 | 0.012940 | 4.03 | 128.98 | 137.83 | 0.73 |
| WASH0 | WASH0 | 3967.23 | 25 YR | 520.00 | 324.40 | 325.92 | 1.52 | | 326.14 | 0.015069 | 3.77 | 138.09 | 183.80 | 0.77 |

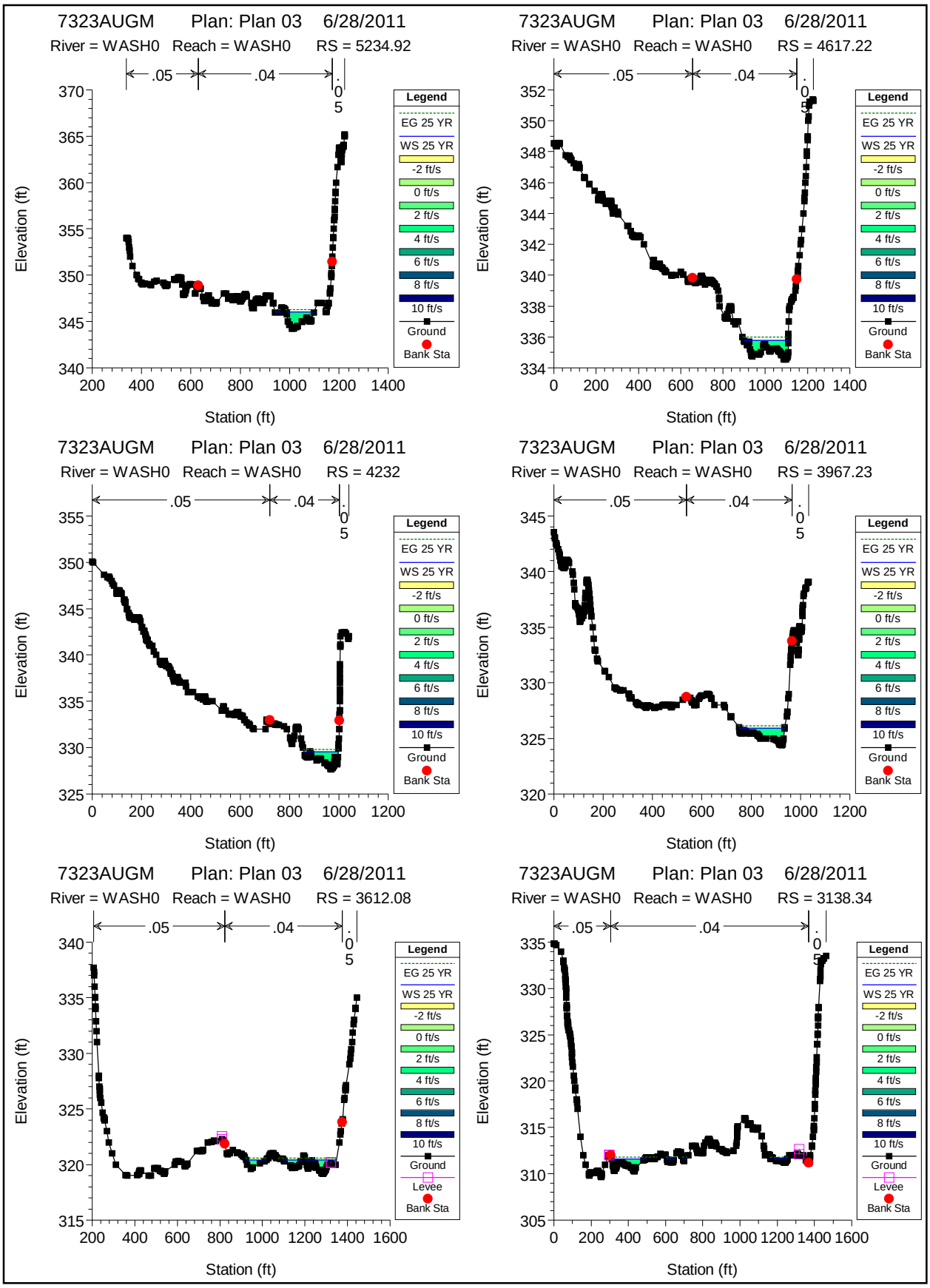
HEC-RAS Plan: Plan 03 Profile: 25 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH0 | WASH0 | 3612.08 | 25 YR | 520.00 | 319.18 | 320.40 | 1.40 | 320.33 | 320.56 | 0.019389 | 3.25 | 160.17 | 321.85 | 0.81 |
| WASH0 | WASH0 | 3138.34 | 25 YR | 520.00 | 310.27 | 311.57 | 1.90 | 311.57 | 311.80 | 0.030944 | 3.81 | 136.51 | 306.44 | 1.01 |
| WASH0 | WASH0 | 2622.49 | 25 YR | 520.00 | 300.88 | 302.16 | 1.28 | | 302.28 | 0.018840 | 2.76 | 188.21 | 471.67 | 0.77 |
| WASH0 | WASH0 | 2197.73 | 25 YR | 520.00 | 292.25 | 293.61 | 1.36 | | 293.76 | 0.015783 | 3.10 | 167.91 | 310.36 | 0.74 |
| WASH0 | WASH0 | 1740.94 | 25 YR | 520.00 | 284.60 | 285.79 | 1.19 | 285.68 | 285.97 | 0.017177 | 3.46 | 150.20 | 250.04 | 0.79 |
| WASH0 | WASH0 | 1270.27 | 25 YR | 520.00 | 276.04 | 277.59 | 1.55 | 277.42 | 277.77 | 0.015320 | 3.44 | 151.31 | 235.46 | 0.75 |
| WASH0 | WASH0 | 767.81 | 25 YR | 520.00 | 266.47 | 268.19 | 1.72 | 268.17 | 268.63 | 0.023099 | 5.34 | 97.41 | 105.77 | 0.98 |
| WASH0 | WASH0 | 133.33 | 25 YR | 520.00 | 252.81 | 254.23 | 1.42 | 254.12 | 254.40 | 0.015321 | 3.32 | 156.65 | 255.31 | 0.75 |


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12718.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12391.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12095.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11801.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11434.21
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11096.81
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10668.33
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10283.74
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9871.26
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9562.95
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
2.1 ft/s
2.2 ft/s
2.3 ft/s
2.4 ft/s
2.5 ft/s
2.6 ft/s
2.7 ft/s
2.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9197
.05
.04
.0
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8798.15
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8444.54
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7821.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7102.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
3.2 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6494.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6019.74
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5624.57
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta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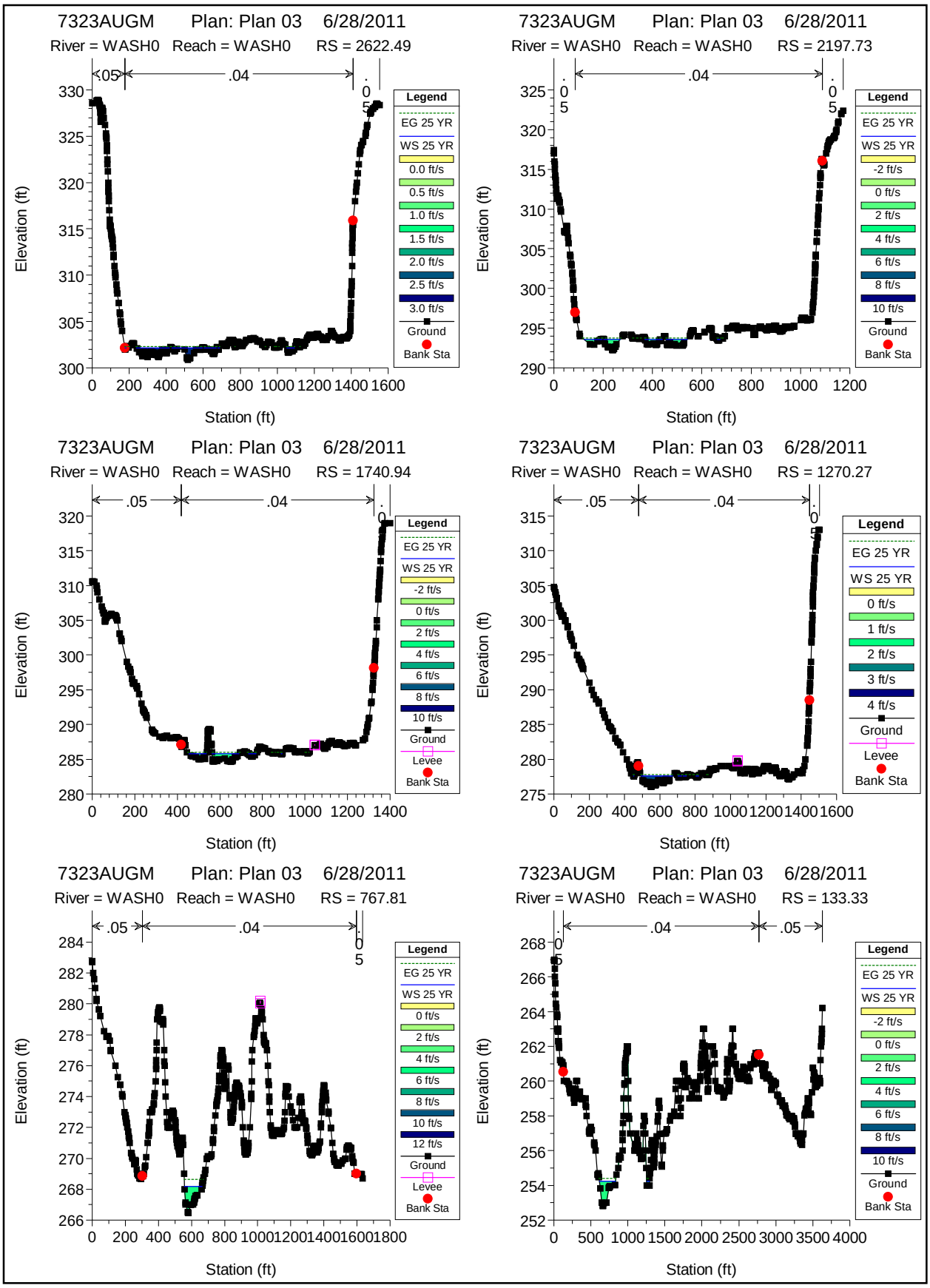
River = WASH0 Reach = WASH0 RS = 5234.92
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4617.22
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4232
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3967.23
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3612.08
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3138.34
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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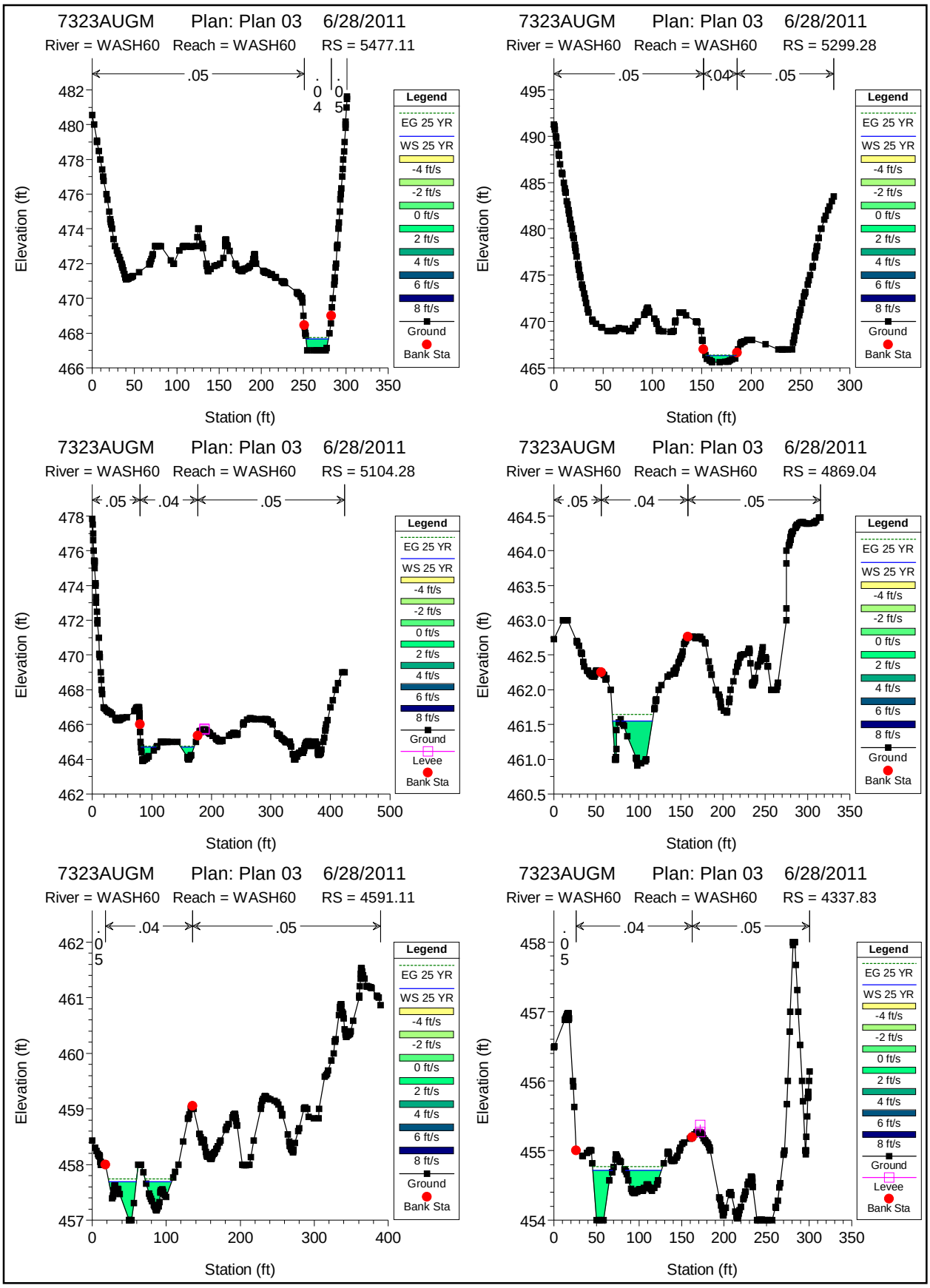
River = WASH0 Reach = WASH0 RS = 2622.49
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 2197.73
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1740.94
.05 .04
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1270.27
.05 .04
Legend
EG 25 YR
WS 25 YR
0 ft/s
1 ft/s
2 ft/s
3 ft/s
4 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 767.81
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 133.33
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)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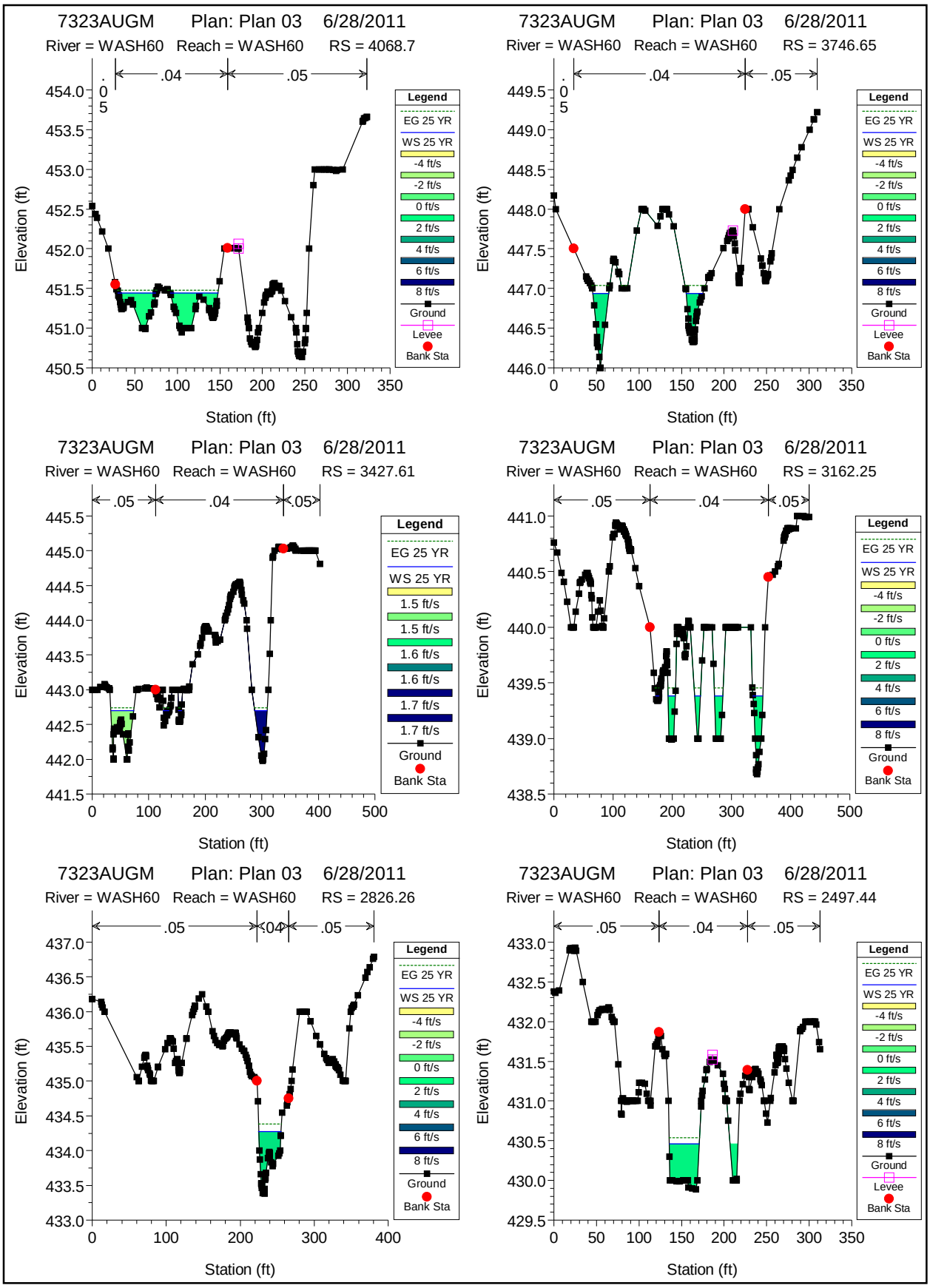
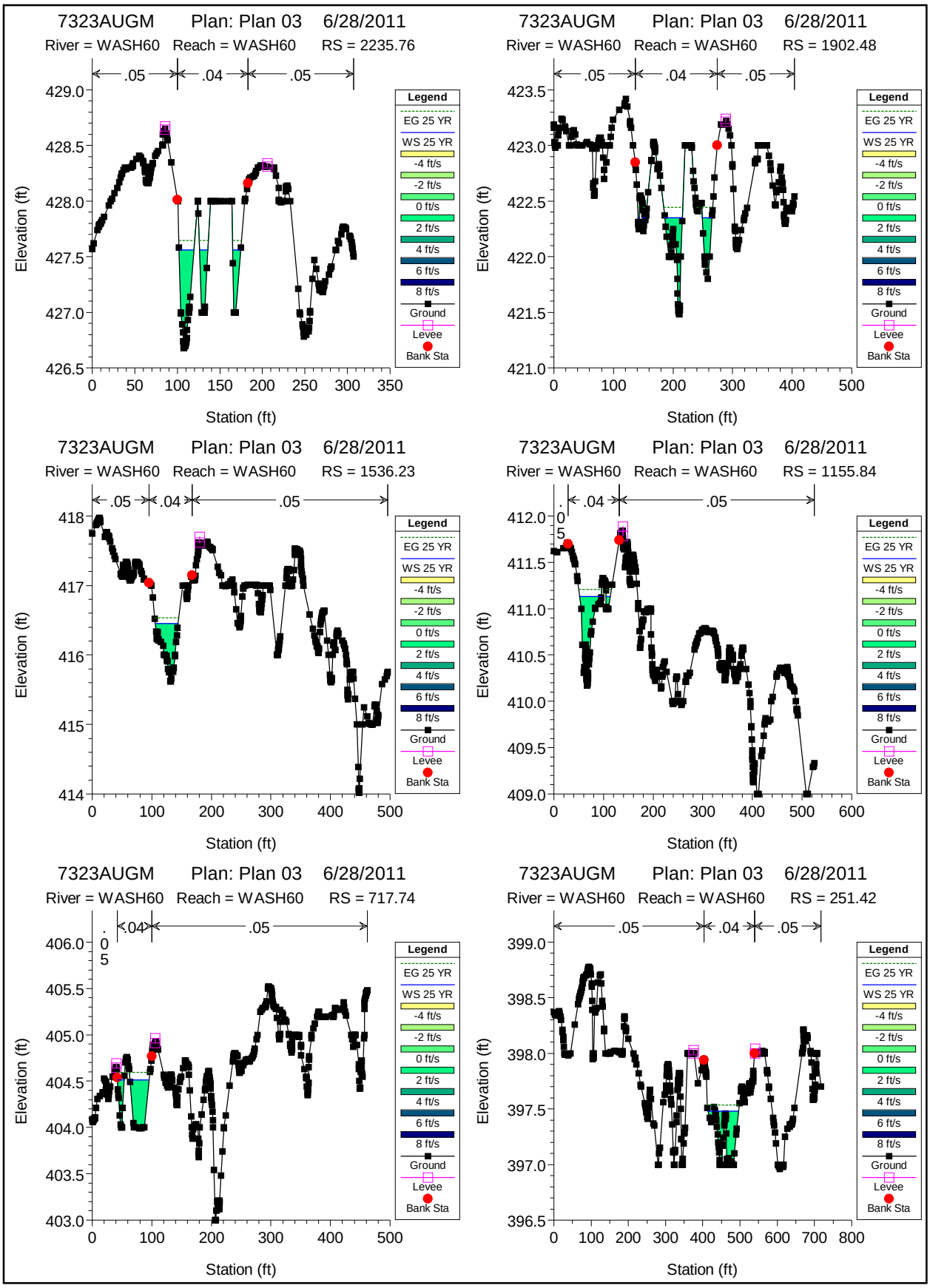
River = WASH60 Reach = WASH60 RS = 5477.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5299.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5104.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4869.04
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4591.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4337.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4068.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3746.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3427.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
1.5 ft/s
1.5 ft/s
1.6 ft/s
1.6 ft/s
1.7 ft/s
1.7 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3162.25
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2826.26
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2497.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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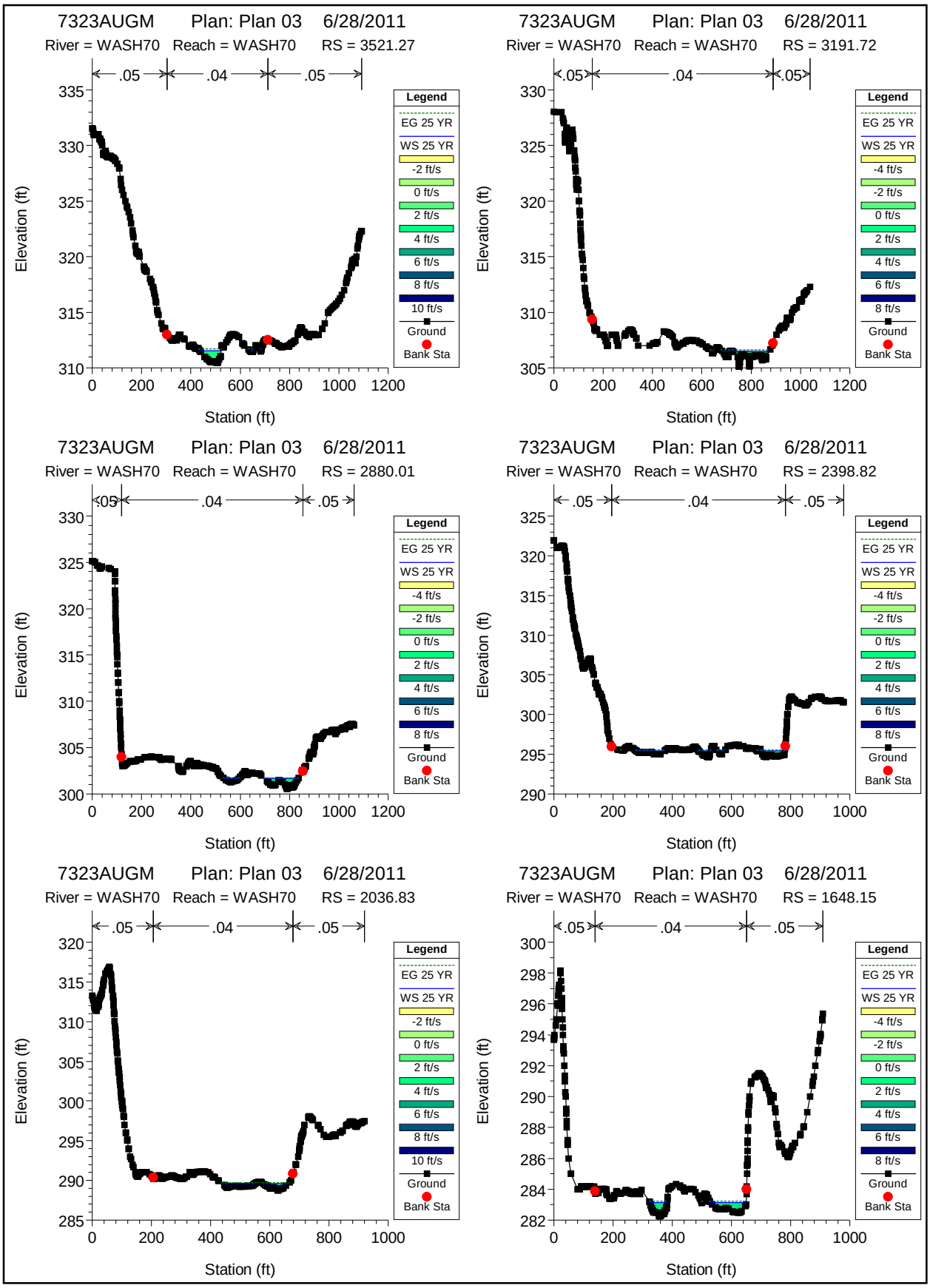
River = WASH60 Reach = WASH60 RS = 2235.76
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1902.48
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1536.23
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1155.84
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 717.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 251.42
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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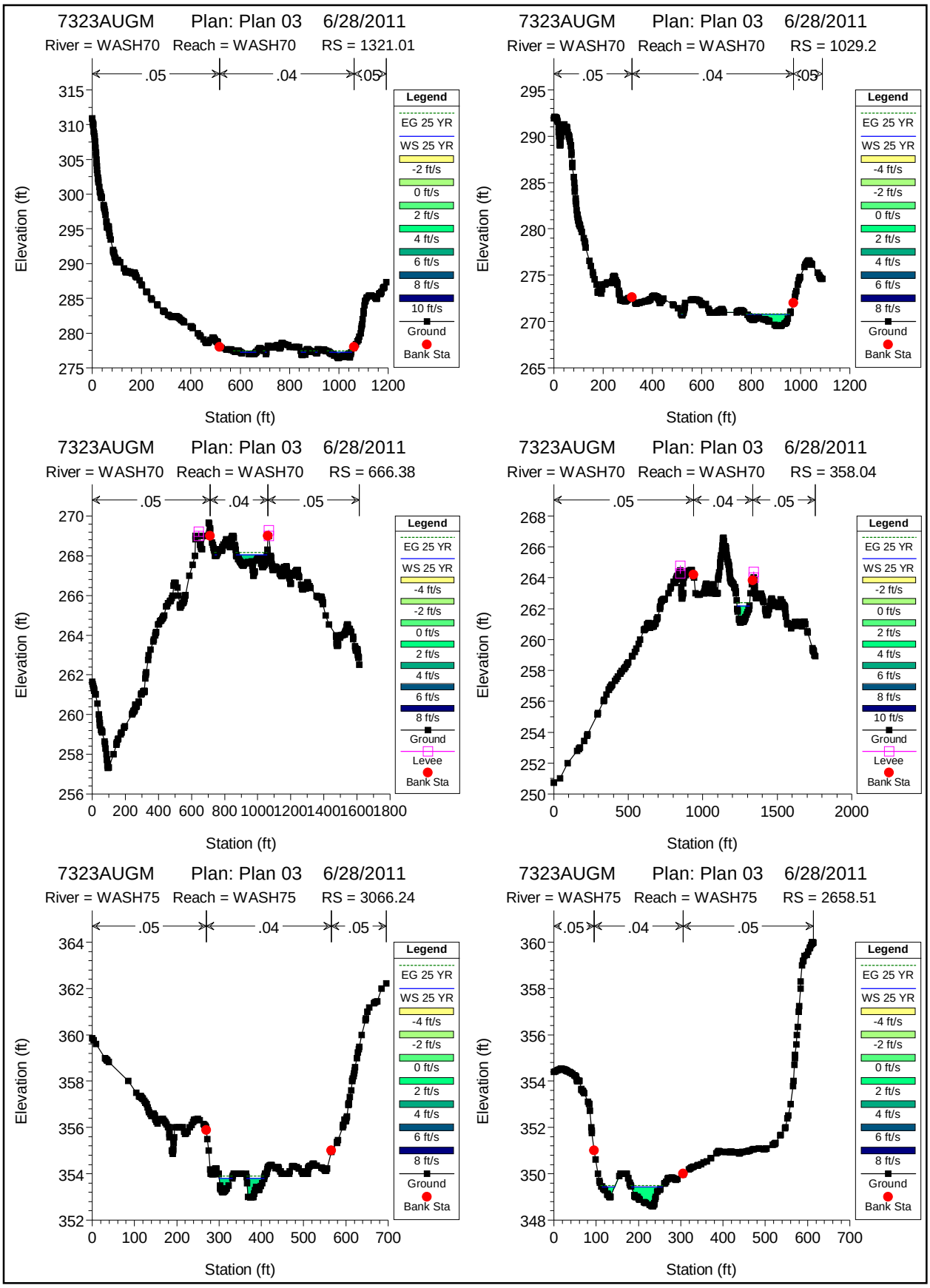
River = WASH70 Reach = WASH70 RS = 3521.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 3191.72
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2880.01
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2398.82
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2036.83
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1648.15
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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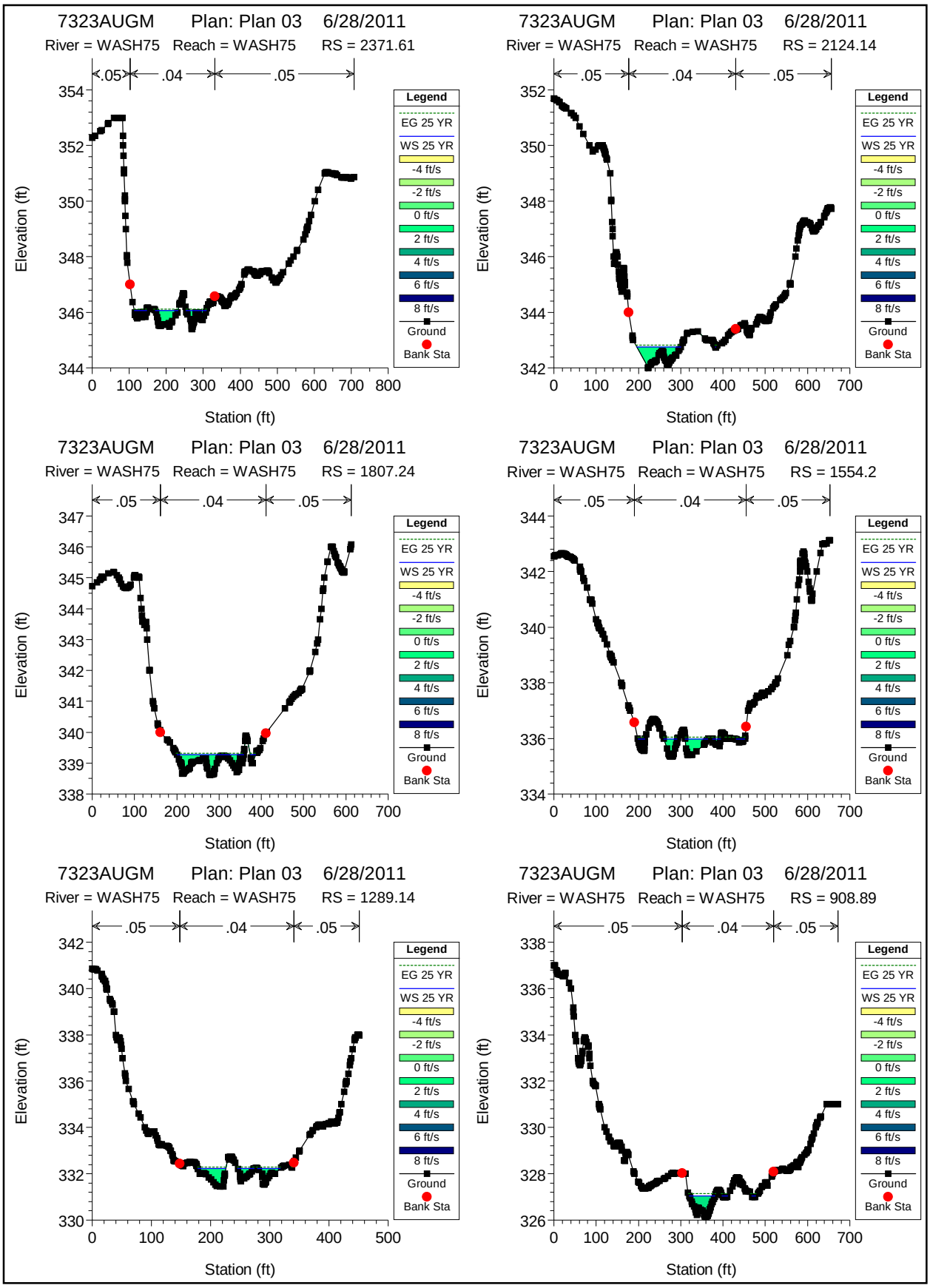
River = WASH70 Reach = WASH70 RS = 1321.01
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1029.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 666.38
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 358.04
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 3066.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2658.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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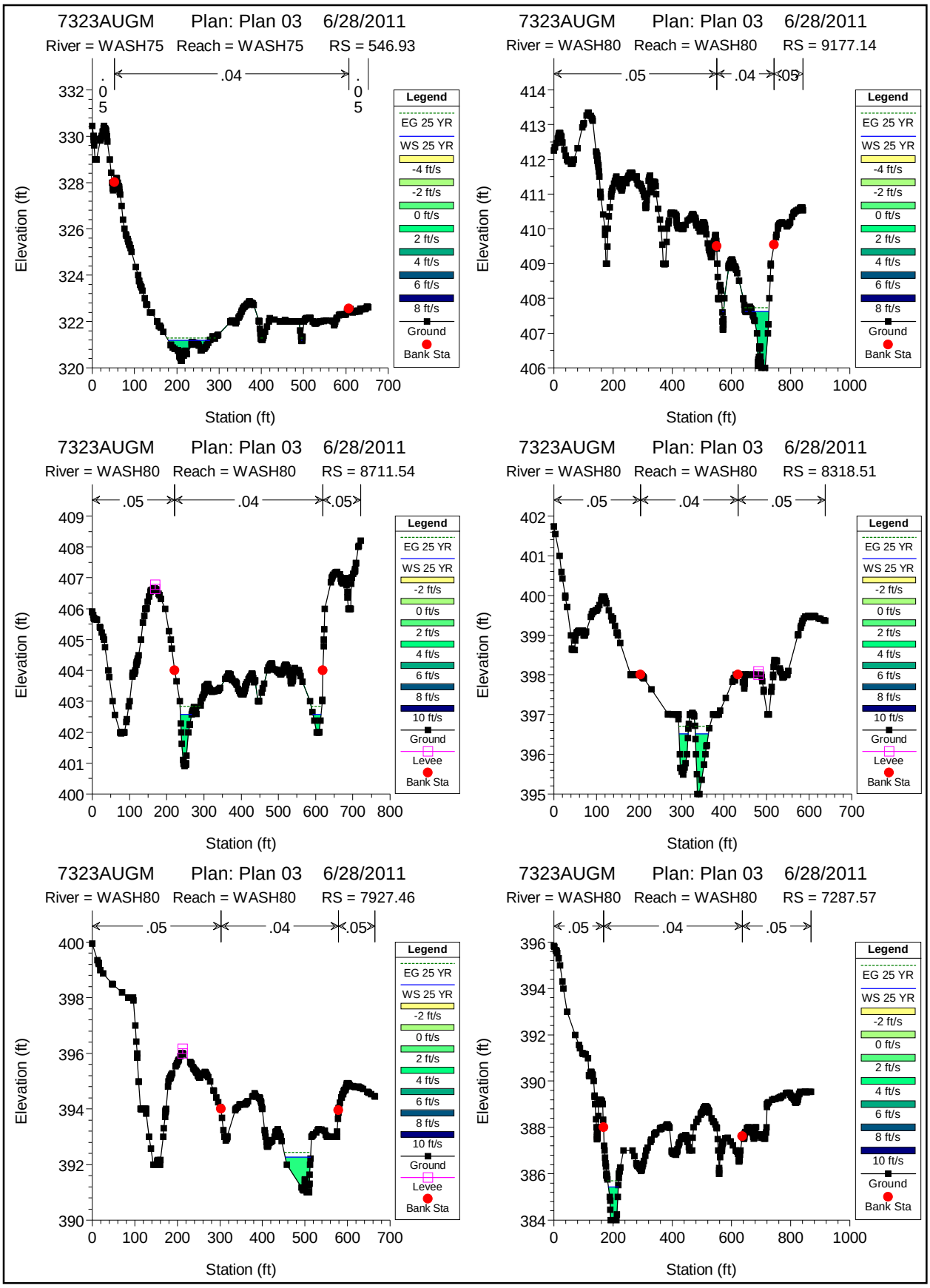
River = WASH75 Reach = WASH75 RS = 2371.61
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2124.14
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1807.24
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1554.2
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1289.14
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 908.89
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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River = WASH75 Reach = WASH75 RS = 546.93
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 9177.14
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8711.54
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8318.51
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7927.46
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7287.57
.05 .04 .05
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
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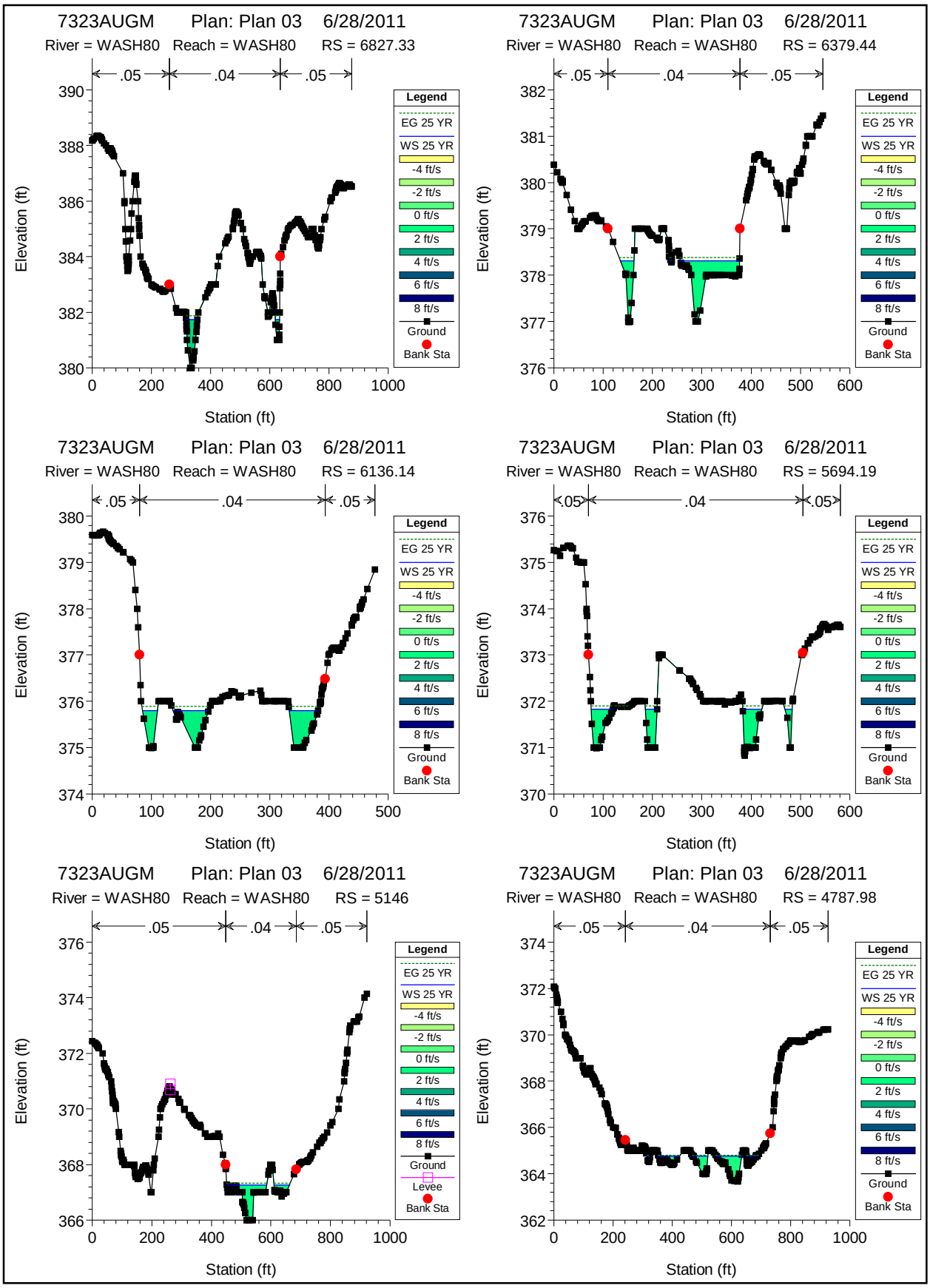
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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River = WASH80 Reach = WASH80 RS = 6827.33
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6379.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6136.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5694.19
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5146
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4787.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 25 YR
WS 25 YR
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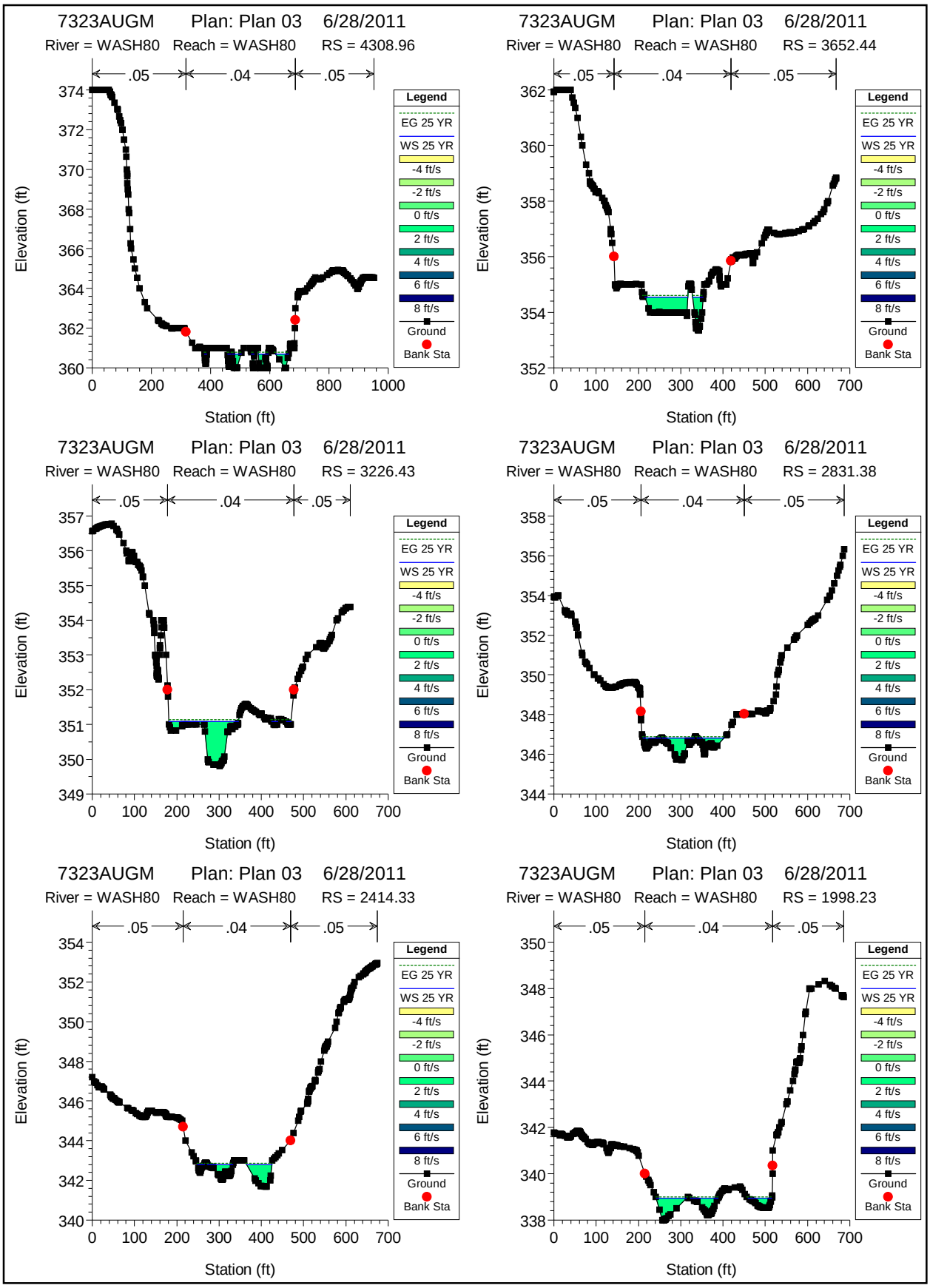
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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7323AUGM Plan: Plan 03 6/28/2011
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7323AUGM Plan: Plan 03 6/28/2011
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7323AUGM Plan: Plan 03 6/28/2011
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7323AUGM Plan: Plan 03 6/28/2011
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.05
.04
.05
Elevation (ft)
Station (ft)
Legend
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WS 25 YR
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-2 ft/s
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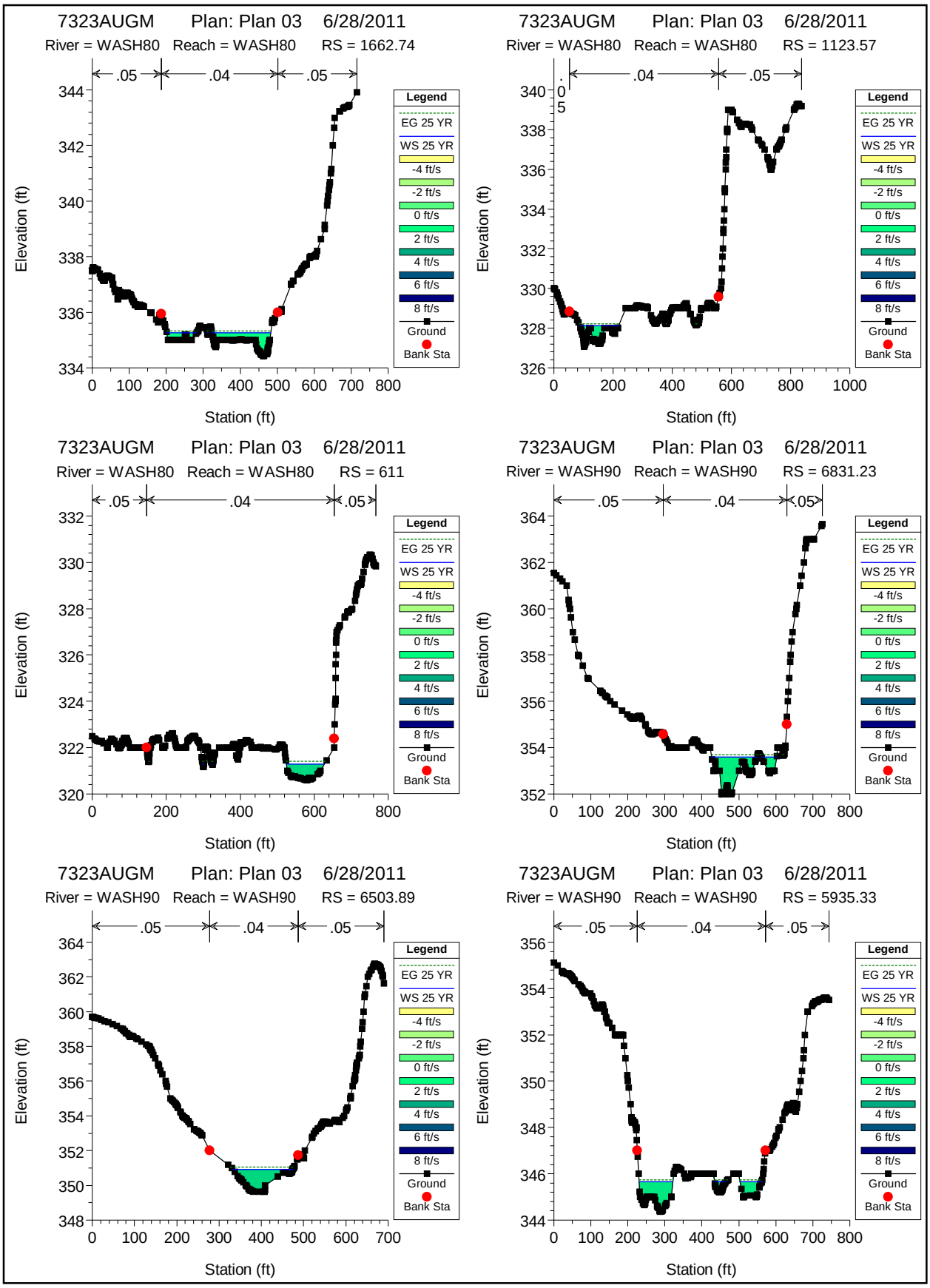
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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Legend
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WS 25 YR
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-2 ft/s
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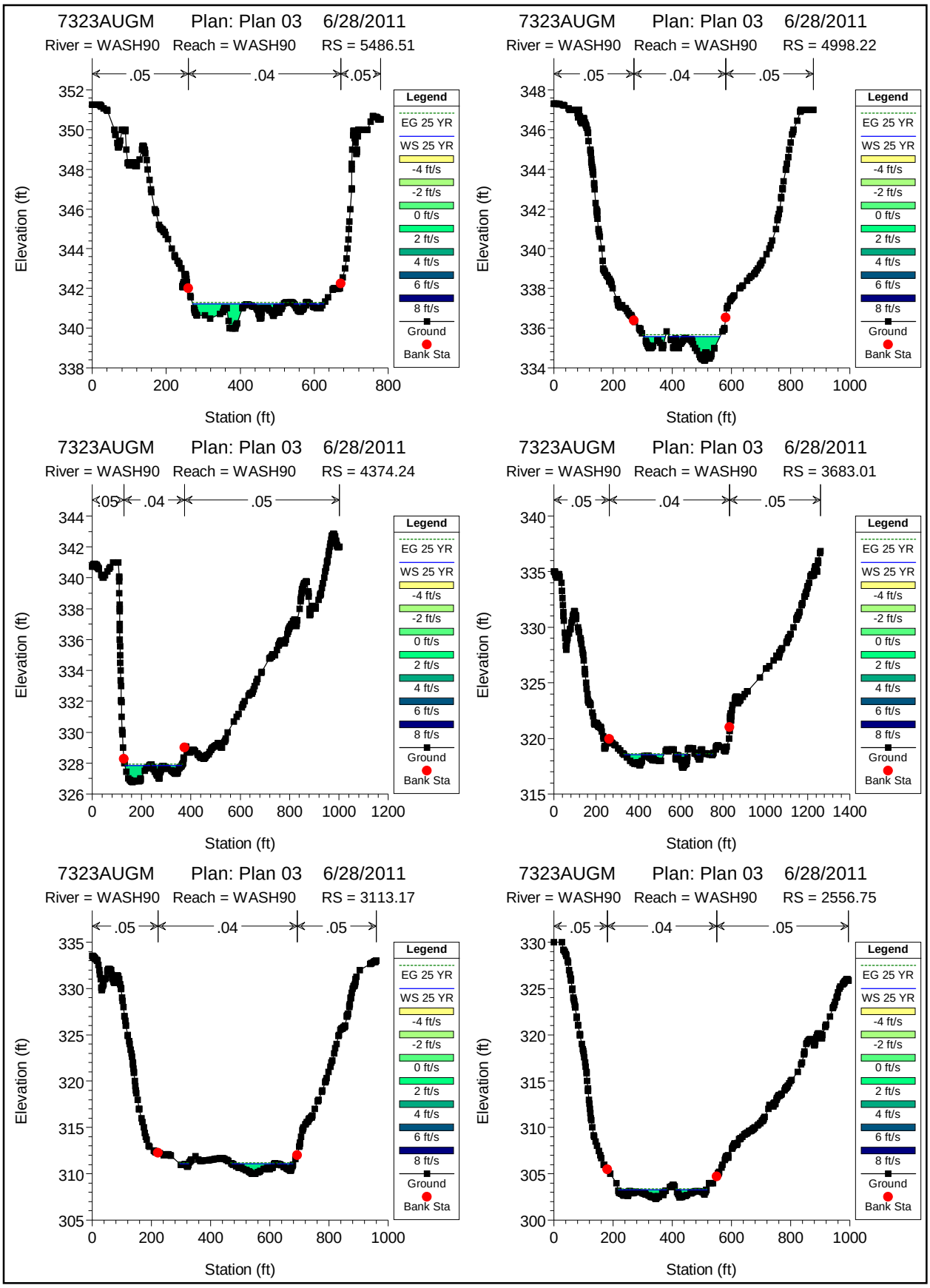
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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Station (ft)
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Station (ft)
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Station (ft)
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Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
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Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
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Elevation (ft)
Station (ft)
Legend
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WS 25 YR
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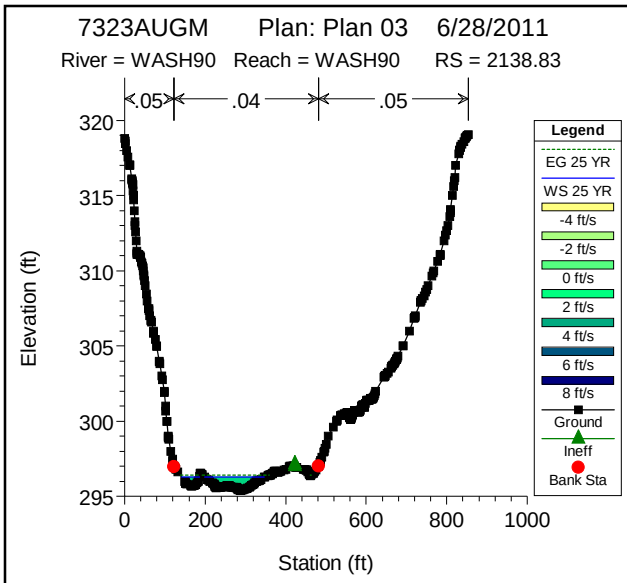
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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Station (ft)
Legend
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WS 25 YR
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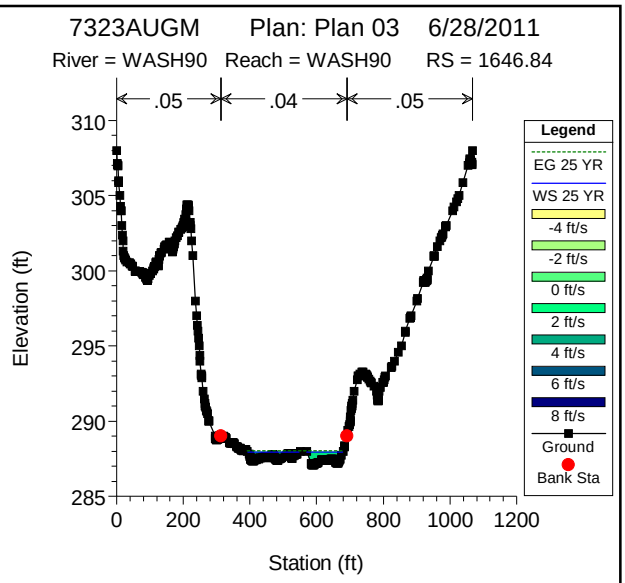
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Ineff
Bank Sta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.04
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Station (ft)
Legend
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WS 25 YR
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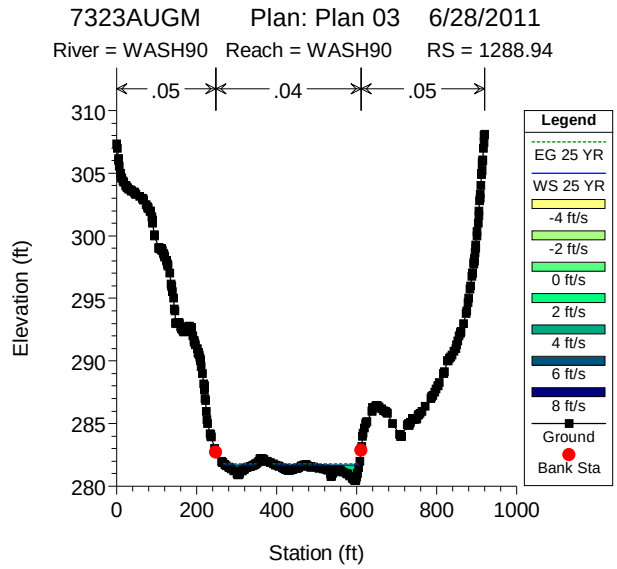
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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.04
.05
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Station (ft)
Legend
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WS 25 YR
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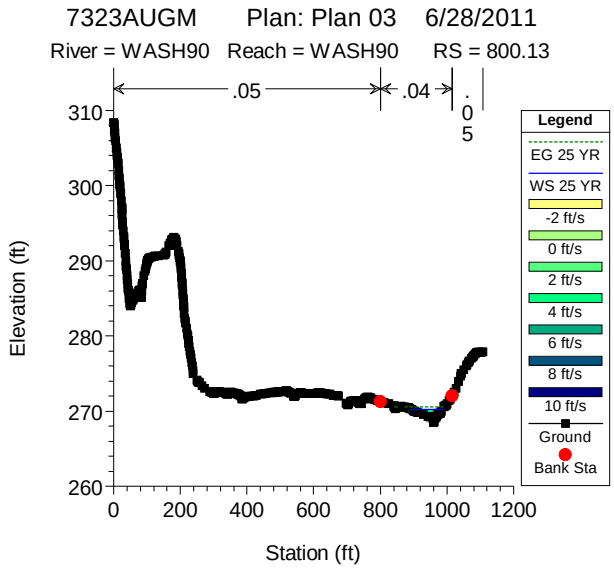
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
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.05
.04
Elevation (ft)
Station (ft)
Legend
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WS 25 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

# APPENDIX F:

## iii. HEC-RAS report 24-Hour, 10-Year Storm

HEC-RAS Plan: Plan 07 Profile: 10 YR

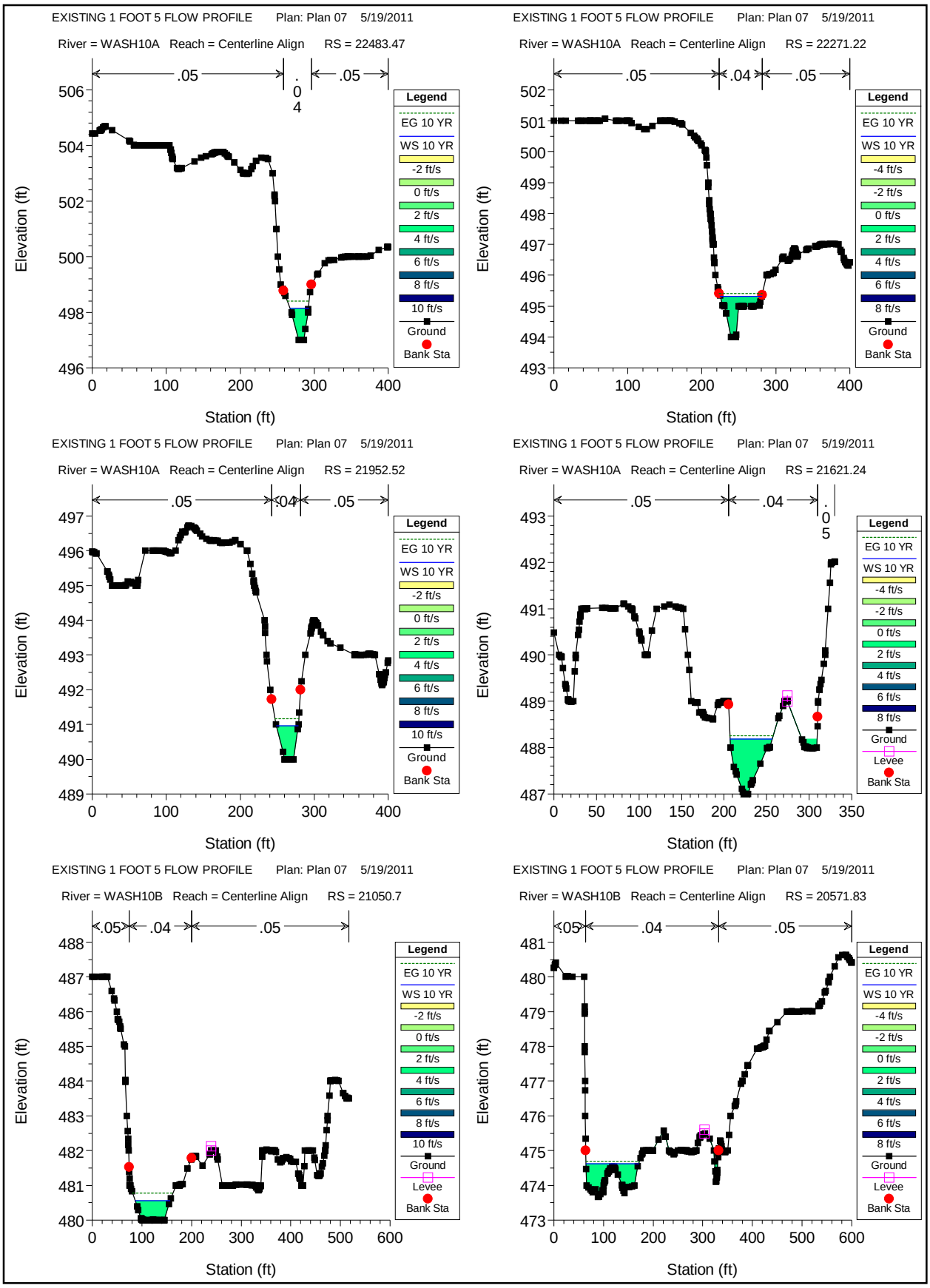
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH5 | Center Line Wash | 2398.41 | 10 YR | 200.86 | 457.00 | 458.83 | 458.36 | 458.96 | 0.005322 | 2.82 | 71.18 | 66.83 | 0.48 |
| WASH5 | Center Line Wash | 2138.83 | 10 YR | 200.86 | 454.99 | 455.96 | 455.96 | 456.24 | 0.028508 | 4.28 | 46.89 | 82.70 | 1.00 |
| WASH5 | Center Line Wash | 1728.1 | 10 YR | 200.86 | 450.99 | 452.30 | 451.82 | 452.37 | 0.004212 | 2.21 | 90.89 | 103.31 | 0.42 |
| WASH5 | Center Line Wash | 1400 | 10 YR | 200.86 | 447.98 | 449.10 | 449.10 | 449.30 | 0.035612 | 3.57 | 56.33 | 155.08 | 1.04 |
| WASH5 | Center Line Wash | 1040.76 | 10 YR | 200.86 | 443.98 | 445.08 | 444.66 | 445.16 | 0.005340 | 2.29 | 87.82 | 113.32 | 0.46 |
| WASH5 | Center Line Wash | 676.61 | 10 YR | 200.86 | 439.98 | 441.04 | 441.04 | 441.31 | 0.029827 | 4.18 | 48.07 | 91.36 | 1.02 |
| WASH45 | Centerline Align | 5500 | 10 YR | 2690.40 | 340.89 | 343.25 | 342.79 | 343.42 | 0.008011 | 3.46 | 866.15 | 1189.10 | 0.59 |
| WASH45 | Centerline Align | 4744.3 | 10 YR | 2690.40 | 333.99 | 337.11 | 336.65 | 337.23 | 0.008333 | 2.78 | 968.29 | 1304.26 | 0.57 |
| WASH45 | Centerline Align | 4000 | 10 YR | 2690.40 | 329.00 | 331.31 | | 331.41 | 0.007329 | 2.59 | 1037.84 | 1409.46 | 0.53 |
| WASH45 | Centerline Align | 3500 | 10 YR | 2690.40 | 324.90 | 326.61 | 326.40 | 326.81 | 0.011839 | 3.55 | 758.31 | 921.37 | 0.69 |
| WASH45 | Centerline Align | 3000 | 10 YR | 2690.40 | 318.94 | 322.16 | | 322.30 | 0.007060 | 3.03 | 888.38 | 928.46 | 0.55 |
| WASH45 | Centerline Align | 2500 | 10 YR | 2690.40 | 314.98 | 318.32 | | 318.46 | 0.008398 | 3.00 | 897.53 | 1084.78 | 0.58 |
| WASH45 | Centerline Align | 2000 | 10 YR | 2690.40 | 312.00 | 314.33 | | 314.47 | 0.007579 | 3.02 | 889.44 | 982.65 | 0.56 |
| WASH45 | Centerline Align | 1500 | 10 YR | 2690.40 | 308.00 | 310.22 | | 310.37 | 0.008912 | 3.08 | 873.72 | 1061.05 | 0.60 |
| WASH45 | Centerline Align | 1000 | 10 YR | 2690.40 | 303.95 | 306.12 | | 306.25 | 0.007633 | 2.86 | 939.41 | 1132.71 | 0.55 |
| WASH45 | Centerline Align | 378.44 | 10 YR | 2690.40 | 298.95 | 300.89 | 300.56 | 301.10 | 0.009001 | 3.68 | 730.13 | 680.06 | 0.63 |
| WASH40 | Centerline Align | 10653.2 | 10 YR | 2069.07 | 375.98 | 379.67 | 379.27 | 379.85 | 0.007824 | 3.40 | 607.76 | 573.78 | 0.58 |
| WASH40 | Centerline Align | 10033.98 | 10 YR | 2069.07 | 371.98 | 375.72 | | 375.88 | 0.005325 | 3.21 | 644.95 | 500.19 | 0.50 |
| WASH40 | Centerline Align | 9616.88 | 10 YR | 2069.07 | 370.00 | 372.28 | | 372.58 | 0.012955 | 4.34 | 477.22 | 458.13 | 0.75 |
| WASH40 | Centerline Align | 8761.12 | 10 YR | 2069.07 | 363.93 | 366.50 | | 366.61 | 0.004290 | 2.67 | 773.92 | 669.70 | 0.44 |
| WASH40 | Centerline Align | 7943.06 | 10 YR | 2069.07 | 357.89 | 359.72 | 359.63 | 360.02 | 0.020096 | 4.39 | 471.57 | 619.07 | 0.89 |
| WASH40 | Centerline Align | 6943.13 | 10 YR | 2069.07 | 349.05 | 351.92 | | 351.99 | 0.004237 | 2.15 | 964.48 | 1152.22 | 0.41 |
| WASH4 | Wash 4 | 1076.68 | 10 YR | 47.90 | 497.27 | 498.07 | 498.07 | 498.27 | 0.031436 | 3.64 | 13.15 | 31.90 | 1.00 |
| WASH4 | Wash 4 | 813.29 | 10 YR | 47.90 | 492.96 | 493.48 | 493.32 | 493.53 | 0.009997 | 1.78 | 26.95 | 81.27 | 0.54 |
| WASH4 | Wash 4 | 573.28 | 10 YR | 47.90 | 488.79 | 489.22 | 489.22 | 489.33 | 0.038310 | 2.65 | 18.08 | 82.19 | 1.00 |
| WASH4 | Wash 4 | 333.76 | 10 YR | 47.90 | 483.99 | 485.27 | 484.72 | 485.30 | 0.002142 | 1.32 | 36.32 | 53.91 | 0.28 |
| WASH35 | Centerline Align | 5246.65 | 10 YR | 265.68 | 388.76 | 390.31 | 390.10 | 390.46 | 0.010704 | 3.14 | 84.54 | 114.01 | 0.64 |
| WASH35 | Centerline Align | 4965.62 | 10 YR | 265.68 | 386.87 | 388.44 | | 388.55 | 0.004670 | 2.57 | 103.18 | 100.72 | 0.45 |
| WASH35 | Centerline Align | 4493.91 | 10 YR | 265.68 | 383.92 | 384.76 | 384.63 | 384.96 | 0.014422 | 3.54 | 75.06 | 106.10 | 0.74 |
| WASH35 | Centerline Align | 4063.78 | 10 YR | 265.68 | 379.98 | 381.71 | | 381.80 | 0.004367 | 2.36 | 112.72 | 119.62 | 0.43 |
| WASH35 | Centerline Align | 3661.61 | 10 YR | 265.68 | 377.65 | 378.49 | | 378.64 | 0.018046 | 3.13 | 84.87 | 170.63 | 0.78 |
| WASH35 | Centerline Align | 3000 | 10 YR | 265.68 | 371.96 | 373.22 | | 373.30 | 0.004530 | 2.23 | 119.36 | 141.20 | 0.43 |
| WASH35 | Centerline Align | 2500 | 10 YR | 265.68 | 367.85 | 368.77 | 368.71 | 369.01 | 0.021795 | 3.91 | 67.97 | 112.51 | 0.89 |
| WASH35 | Centerline Align | 2000 | 10 YR | 265.68 | 363.88 | 364.86 | 364.49 | 364.93 | 0.004163 | 2.01 | 132.27 | 172.15 | 0.40 |
| WASH35 | Centerline Align | 1600 | 10 YR | 265.68 | 359.00 | 361.14 | 361.14 | 361.32 | 0.032311 | 3.35 | 79.38 | 223.11 | 0.99 |
| WASH30 | Centerline Align | 10130.27 | 10 YR | 9.95 | 348.00 | 348.28 | 348.22 | 348.32 | 0.016809 | 1.62 | 6.14 | 31.39 | 0.65 |
| WASH30 | Centerline Align | 9500 | 10 YR | 9.95 | 344.00 | 344.38 | | 344.39 | 0.003205 | 0.71 | 14.09 | 72.42 | 0.28 |
| WASH30 | Centerline Align | 9000 | 10 YR | 9.95 | 339.99 | 340.29 | 340.29 | 340.36 | 0.046942 | 2.08 | 4.77 | 36.17 | 1.01 |
| WASH30 | Centerline Align | 8500 | 10 YR | 9.95 | 335.95 | 336.15 | 336.06 | 336.15 | 0.003341 | 0.57 | 17.31 | 124.95 | 0.27 |
| WASH30 | Centerline Align | 8000 | 10 YR | 9.95 | 331.99 | 332.14 | 332.14 | 332.18 | 0.037771 | 1.64 | 6.08 | 56.32 | 0.88 |
| WASH30 | Centerline Align | 7500 | 10 YR | 9.95 | 327.91 | 328.35 | 328.14 | 328.36 | 0.002755 | 0.91 | 10.96 | 34.46 | 0.28 |
| WASH30 | Centerline Align | 7000 | 10 YR | 9.95 | 324.88 | 325.10 | 325.08 | 325.13 | 0.029574 | 1.52 | 6.54 | 56.30 | 0.79 |
| WASH30 | Centerline Align | 6500 | 10 YR | 9.95 | 319.94 | 320.18 | 320.09 | 320.19 | 0.004896 | 0.75 | 13.34 | 86.79 | 0.34 |

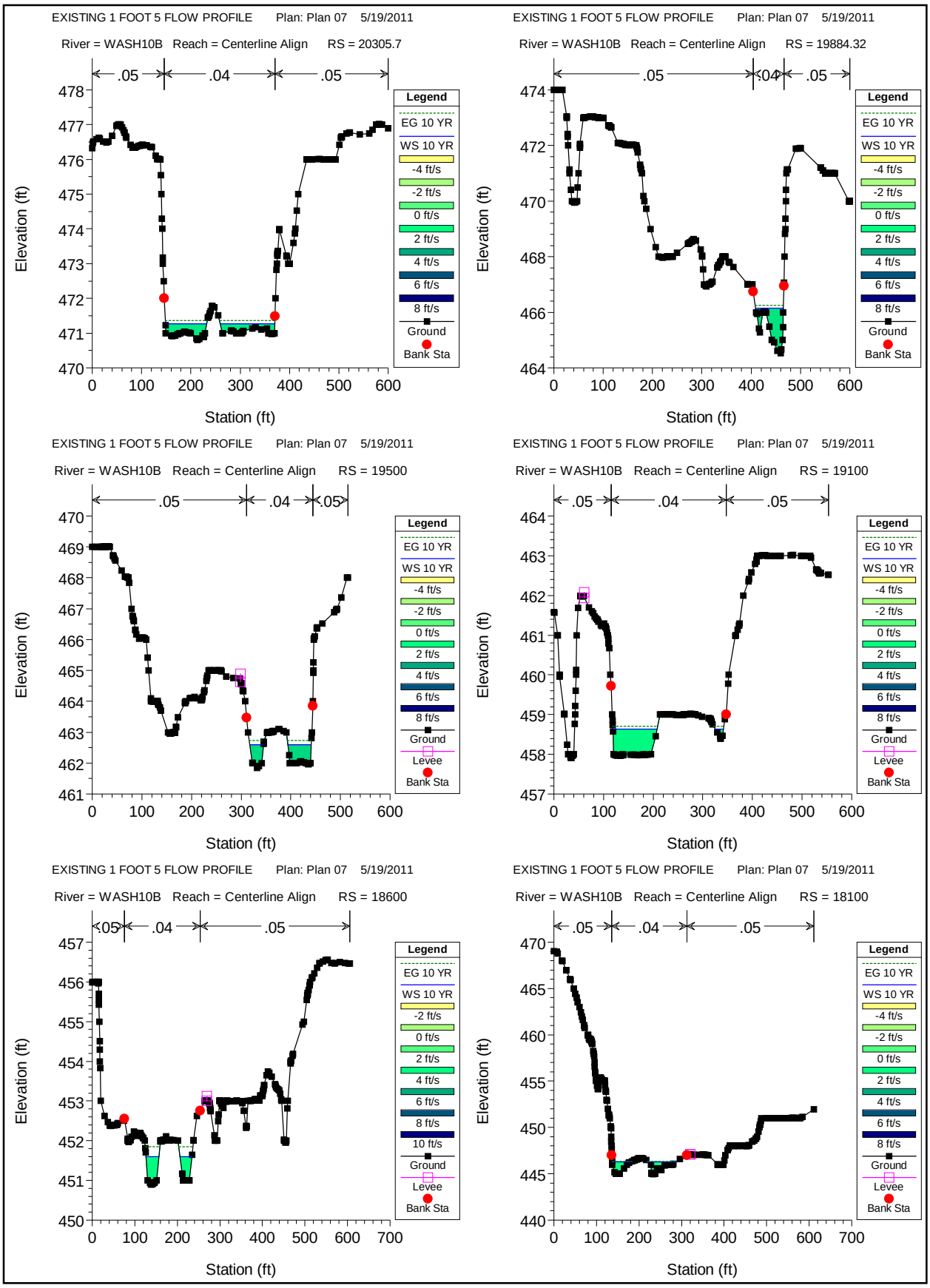
HEC-RAS Plan: Plan 07 Profile: 10 YR (Continued)

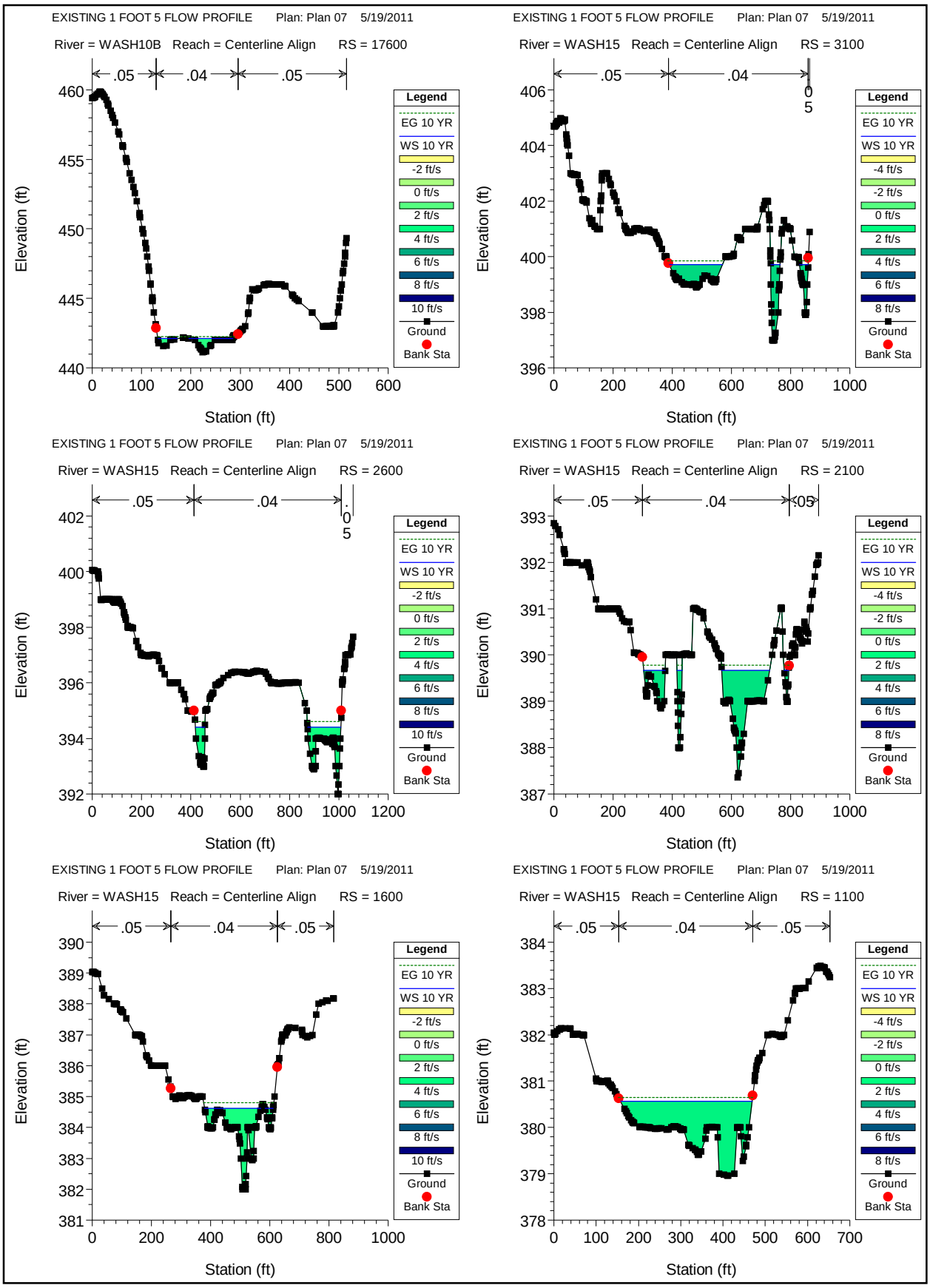
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH30 | Centerline Align | 6000 | 10 YR | 9.95 | 316.28 | 316.61 | | 316.64 | 0.011232 | 1.34 | 7.44 | 37.53 | 0.53 |
| WASH30 | Centerline Align | 5500 | 10 YR | 9.95 | 310.52 | 310.84 | | 310.87 | 0.011801 | 1.52 | 6.55 | 28.36 | 0.56 |
| WASH30 | Centerline Align | 5000 | 10 YR | 9.95 | 306.00 | 306.45 | | 306.48 | 0.006796 | 1.35 | 7.38 | 25.17 | 0.44 |
| WASH30 | Centerline Align | 4500 | 10 YR | 9.95 | 302.71 | 303.02 | 302.88 | 303.03 | 0.007012 | 0.65 | 15.40 | 162.58 | 0.37 |
| WASH30 | Centerline Align | 4000 | 10 YR | 9.95 | 297.96 | 298.14 | 298.10 | 298.16 | 0.014430 | 1.19 | 8.36 | 60.65 | 0.57 |
| WASH30 | Centerline Align | 3500 | 10 YR | 9.95 | 293.44 | 293.80 | | 293.82 | 0.005785 | 0.90 | 11.00 | 60.71 | 0.37 |
| WASH30 | Centerline Align | 3000 | 10 YR | 9.95 | 287.97 | 288.16 | 288.14 | 288.20 | 0.030302 | 1.77 | 5.61 | 38.99 | 0.82 |
| WASH30 | Centerline Align | 2500 | 10 YR | 9.95 | 282.22 | 282.61 | 282.48 | 282.63 | 0.005735 | 0.99 | 10.07 | 48.31 | 0.38 |
| WASH30 | Centerline Align | 2000 | 10 YR | 9.95 | 277.99 | 278.08 | | 278.09 | 0.016429 | 0.81 | 12.32 | 176.34 | 0.54 |
| WASH30 | Centerline Align | 1343.16 | 10 YR | 9.95 | 269.94 | 270.08 | | 270.09 | 0.009399 | 0.72 | 13.88 | 156.36 | 0.42 |
| WASH30 | Centerline Align | 1000 | 10 YR | 9.95 | 265.53 | 265.84 | 265.79 | 265.88 | 0.016600 | 1.43 | 6.94 | 42.40 | 0.62 |
| WASH30 | Centerline Align | 500 | 10 YR | 9.95 | 259.00 | 259.17 | 259.10 | 259.18 | 0.011011 | 1.04 | 9.58 | 69.60 | 0.49 |
| WASH25B | Centerline Align | 6600 | 10 YR | 401.33 | 320.99 | 322.52 | | 322.70 | 0.010848 | 3.37 | 118.91 | 145.81 | 0.66 |
| WASH25B | Centerline Align | 6100 | 10 YR | 401.33 | 316.93 | 318.14 | | 318.19 | 0.007488 | 1.84 | 218.65 | 506.23 | 0.49 |
| WASH25B | Centerline Align | 5600 | 10 YR | 401.33 | 310.97 | 312.37 | 312.26 | 312.52 | 0.019126 | 3.03 | 132.26 | 291.09 | 0.79 |
| WASH25B | Centerline Align | 5100 | 10 YR | 401.33 | 304.99 | 306.25 | 306.08 | 306.31 | 0.008647 | 1.94 | 206.77 | 490.75 | 0.53 |
| WASH25B | Centerline Align | 4600 | 10 YR | 401.33 | 298.93 | 300.20 | 300.12 | 300.28 | 0.017978 | 2.23 | 180.11 | 601.65 | 0.72 |
| WASH25B | Centerline Align | 4100 | 10 YR | 401.33 | 291.99 | 293.10 | | 293.26 | 0.011234 | 3.26 | 123.11 | 163.27 | 0.66 |
| WASH25B | Centerline Align | 3600 | 10 YR | 401.33 | 285.53 | 286.82 | 286.64 | 287.09 | 0.013568 | 4.17 | 96.26 | 101.66 | 0.76 |
| WASH25B | Centerline Align | 3100 | 10 YR | 401.33 | 280.00 | 280.91 | | 281.02 | 0.010763 | 2.69 | 149.13 | 255.25 | 0.62 |
| WASH25B | Centerline Align | 2600 | 10 YR | 401.33 | 274.65 | 274.72 | | 274.81 | 0.008836 | 0.44 | 171.11 | 236.46 | 0.37 |
| WASH25B | Centerline Align | 2100 | 10 YR | 401.33 | 268.58 | 269.35 | 269.35 | 269.50 | 0.028723 | 3.31 | 137.41 | 451.94 | 0.94 |
| WASH25B | Centerline Align | 1368.02 | 10 YR | 401.33 | 255.25 | 258.10 | 257.40 | 258.17 | 0.005688 | 2.10 | 190.88 | 290.54 | 0.46 |
| WASH25B | Centerline Align | 600 | 10 YR | 401.33 | 250.34 | 251.79 | 251.60 | 251.96 | 0.012294 | 3.34 | 120.34 | 163.68 | 0.69 |
| WASH25B | Centerline Align | 100 | 10 YR | 401.33 | 245.90 | 246.94 | 246.63 | 247.05 | 0.008014 | 2.65 | 151.67 | 212.73 | 0.55 |
| WASH25A | Centerline Align | 10806.78 | 10 YR | 404.51 | 366.90 | 368.48 | 368.21 | 368.58 | 0.007622 | 2.53 | 159.82 | 231.15 | 0.54 |
| WASH25A | Centerline Align | 10100 | 10 YR | 404.51 | 359.87 | 361.35 | 361.23 | 361.44 | 0.013989 | 2.41 | 167.55 | 410.76 | 0.67 |
| WASH25A | Centerline Align | 9600 | 10 YR | 404.51 | 354.94 | 356.09 | | 356.15 | 0.008243 | 2.00 | 202.75 | 445.04 | 0.52 |
| WASH25A | Centerline Align | 9100 | 10 YR | 404.51 | 348.87 | 350.30 | | 350.41 | 0.017074 | 2.71 | 149.23 | 357.33 | 0.74 |
| WASH25A | Centerline Align | 8600 | 10 YR | 404.51 | 343.00 | 344.58 | 344.36 | 344.66 | 0.008253 | 2.28 | 177.59 | 319.96 | 0.54 |
| WASH25A | Centerline Align | 8100 | 10 YR | 404.51 | 338.00 | 339.25 | | 339.37 | 0.014079 | 2.79 | 145.06 | 288.13 | 0.69 |
| WASH25A | Centerline Align | 7600 | 10 YR | 404.51 | 332.89 | 333.92 | | 334.02 | 0.008377 | 2.62 | 154.12 | 226.93 | 0.56 |
| WASH25A | Centerline Align | 7100 | 10 YR | 404.51 | 327.91 | 328.63 | | 328.76 | 0.013627 | 2.92 | 138.53 | 250.55 | 0.69 |
| WASH23 | Wash23 | 3479.12 | 10 YR | 1.00 | 357.86 | 358.06 | 358.01 | 358.07 | 0.013247 | 1.01 | 0.99 | 8.57 | 0.53 |
| WASH23 | Wash23 | 3038.38 | 10 YR | 1.00 | 353.21 | 353.39 | | 353.40 | 0.008666 | 0.70 | 1.42 | 15.54 | 0.41 |
| WASH23 | Wash23 | 2630.84 | 10 YR | 1.00 | 348.77 | 349.00 | 348.97 | 349.01 | 0.013822 | 0.44 | 2.26 | 70.02 | 0.43 |
| WASH23 | Wash23 | 2097.72 | 10 YR | 1.00 | 343.97 | 344.08 | 344.03 | 344.08 | 0.006612 | 0.56 | 1.79 | 22.48 | 0.35 |
| WASH23 | Wash23 | 1490.24 | 10 YR | 1.00 | 338.53 | 338.62 | | 338.63 | 0.012839 | 0.59 | 1.68 | 31.75 | 0.45 |
| WASH23 | Wash23 | 1066.16 | 10 YR | 1.00 | 333.93 | 334.03 | 334.03 | 334.03 | 0.009257 | 0.39 | 2.57 | 71.22 | 0.36 |
| WASH23 | Wash23 | 780.97 | 10 YR | 1.00 | 330.99 | 331.15 | 331.02 | 331.15 | 0.000214 | 0.13 | 7.52 | 62.26 | 0.07 |
| WASH20 | Centerline Align | 16636.71 | 10 YR | 311.95 | 430.89 | 432.47 | 432.06 | 432.64 | 0.006748 | 3.32 | 94.03 | 82.39 | 0.55 |
| WASH20 | Centerline Align | 16100 | 10 YR | 311.95 | 425.98 | 428.20 | | 428.29 | 0.009852 | 2.44 | 127.95 | 237.23 | 0.59 |
| WASH20 | Centerline Align | 15600 | 10 YR | 311.95 | 421.00 | 422.62 | 422.48 | 422.89 | 0.016359 | 4.17 | 74.84 | 90.80 | 0.81 |

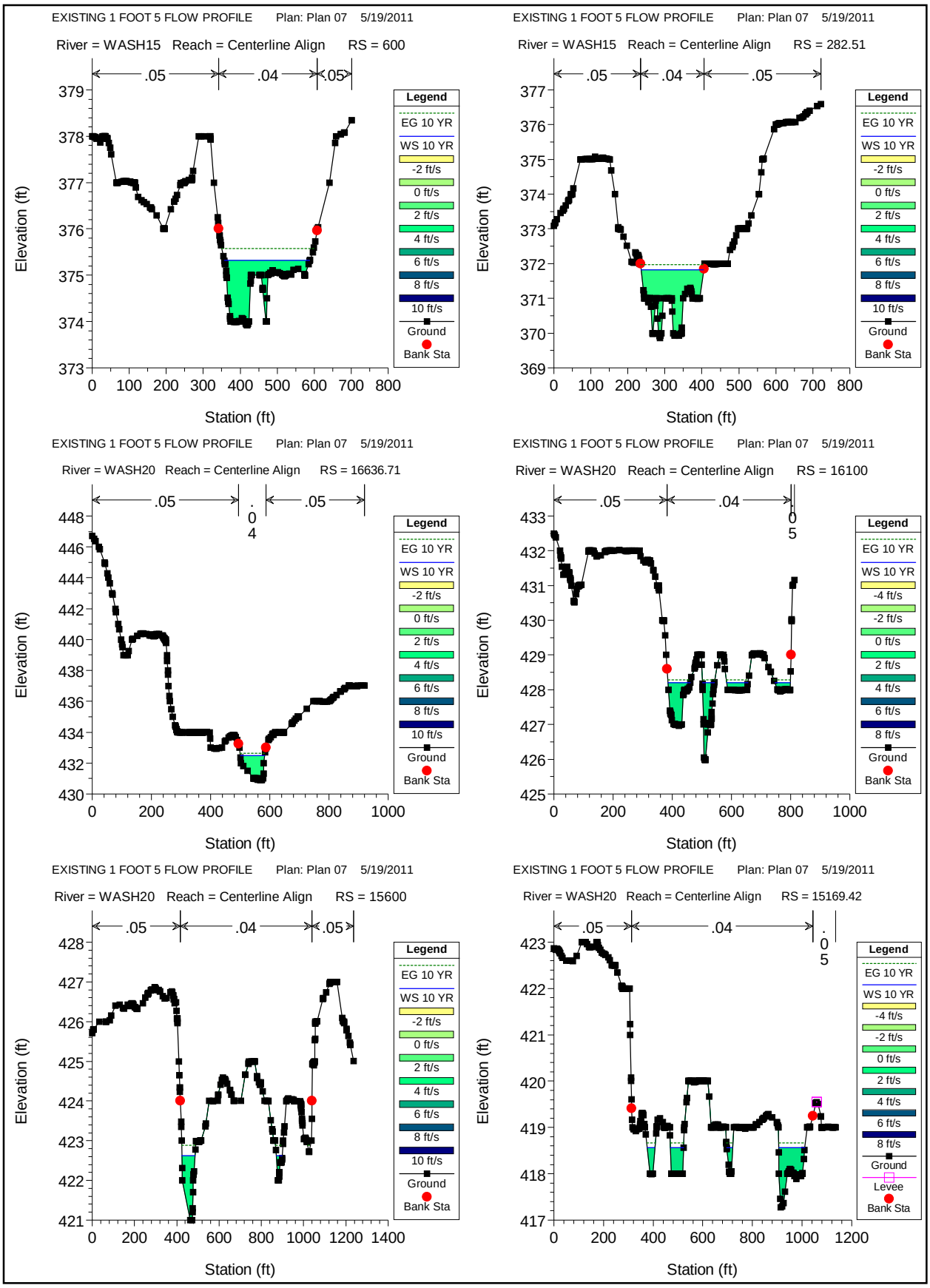
HEC-RAS Plan: Plan 07 Profile: 10 YR (Continued)

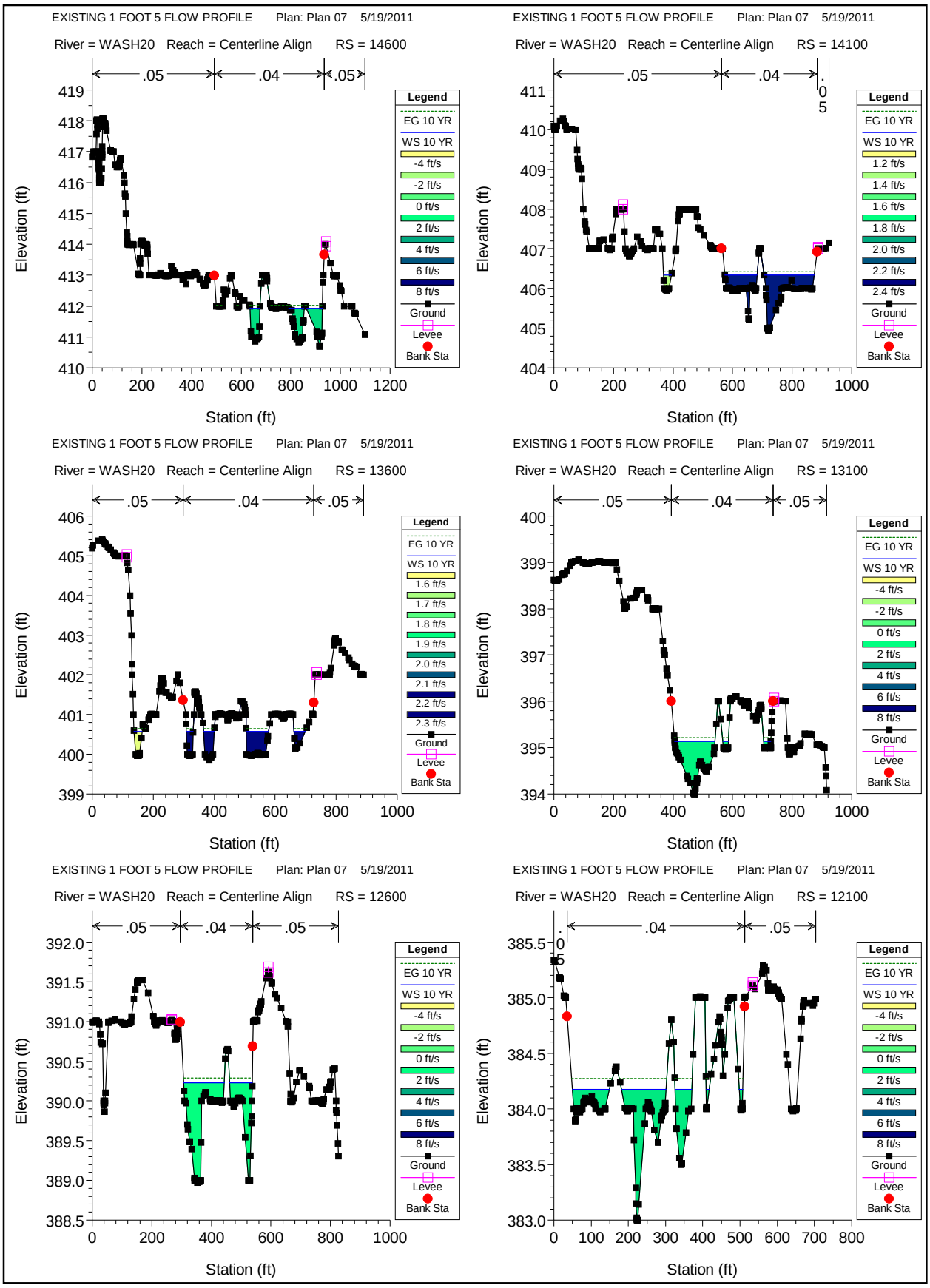
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH20 | Centerline Align | 15169.42 | 10 YR | 311.95 | 417.28 | 418.56 | 418.38 | 418.67 | 0.010451 | 2.60 | 120.20 | 212.40 | 0.61 |
| WASH20 | Centerline Align | 14600 | 10 YR | 311.95 | 410.69 | 411.91 | 411.64 | 412.03 | 0.009492 | 2.79 | 111.79 | 164.66 | 0.60 |
| WASH20 | Centerline Align | 14100 | 10 YR | 311.95 | 404.94 | 406.34 | 406.21 | 406.42 | 0.011006 | 2.34 | 136.52 | 303.01 | 0.60 |
| WASH20 | Centerline Align | 13600 | 10 YR | 195.66 | 399.85 | 400.58 | 400.40 | 400.65 | 0.009284 | 2.19 | 92.13 | 194.44 | 0.56 |
| WASH20 | Centerline Align | 13100 | 10 YR | 195.66 | 394.00 | 395.14 | 394.93 | 395.22 | 0.009760 | 2.26 | 86.44 | 178.37 | 0.57 |
| WASH20 | Centerline Align | 12600 | 10 YR | 195.66 | 388.97 | 390.23 | 389.88 | 390.29 | 0.006922 | 1.91 | 102.71 | 211.87 | 0.48 |
| WASH20 | Centerline Align | 12100 | 10 YR | 195.66 | 383.00 | 384.17 | 384.14 | 384.27 | 0.025726 | 2.52 | 77.67 | 282.36 | 0.85 |
| WASH20 | Centerline Align | 11600 | 10 YR | 195.66 | 376.96 | 378.10 | 377.70 | 378.14 | 0.007123 | 1.66 | 117.56 | 303.68 | 0.47 |
| WASH20 | Centerline Align | 11329.19 | 10 YR | 195.66 | 373.39 | 374.30 | 374.30 | 374.45 | 0.035643 | 3.06 | 63.91 | 221.44 | 1.00 |
| WASH15 | Centerline Align | 3100 | 10 YR | 536.71 | 396.98 | 399.72 | 399.45 | 399.85 | 0.008928 | 2.92 | 183.88 | 241.20 | 0.59 |
| WASH15 | Centerline Align | 2600 | 10 YR | 536.71 | 392.00 | 394.39 | | 394.60 | 0.012468 | 3.67 | 146.23 | 174.47 | 0.71 |
| WASH15 | Centerline Align | 2100 | 10 YR | 536.71 | 387.36 | 389.67 | | 389.78 | 0.007586 | 2.67 | 200.90 | 266.86 | 0.54 |
| WASH15 | Centerline Align | 1600 | 10 YR | 536.71 | 381.99 | 384.61 | 384.40 | 384.80 | 0.013611 | 3.45 | 155.58 | 218.39 | 0.72 |
| WASH15 | Centerline Align | 1100 | 10 YR | 536.71 | 378.96 | 380.56 | | 380.64 | 0.005542 | 2.29 | 234.60 | 311.48 | 0.46 |
| WASH15 | Centerline Align | 600 | 10 YR | 536.71 | 373.92 | 375.33 | 375.30 | 375.57 | 0.023955 | 4.00 | 134.32 | 231.49 | 0.92 |
| WASH15 | Centerline Align | 282.51 | 10 YR | 536.71 | 369.86 | 371.82 | | 371.97 | 0.006513 | 3.06 | 175.22 | 168.96 | 0.53 |
| WASH10B | Centerline Align | 21050.7 | 10 YR | 119.78 | 480.00 | 480.55 | 480.55 | 480.78 | 0.029585 | 3.78 | 31.72 | 69.77 | 0.99 |
| WASH10B | Centerline Align | 20571.83 | 10 YR | 119.78 | 473.67 | 474.62 | 474.36 | 474.69 | 0.006947 | 2.07 | 57.95 | 106.02 | 0.49 |
| WASH10B | Centerline Align | 20305.7 | 10 YR | 119.78 | 470.81 | 471.27 | 471.25 | 471.36 | 0.028502 | 2.48 | 48.32 | 194.31 | 0.88 |
| WASH10B | Centerline Align | 19884.32 | 10 YR | 119.78 | 464.53 | 466.14 | | 466.25 | 0.006683 | 2.62 | 45.68 | 56.46 | 0.51 |
| WASH10B | Centerline Align | 19500 | 10 YR | 119.78 | 461.84 | 462.60 | 462.46 | 462.73 | 0.013313 | 2.89 | 41.47 | 74.73 | 0.68 |
| WASH10B | Centerline Align | 19100 | 10 YR | 119.78 | 457.97 | 458.64 | 458.40 | 458.71 | 0.007790 | 2.15 | 55.84 | 105.33 | 0.52 |
| WASH10B | Centerline Align | 18600 | 10 YR | 119.78 | 450.90 | 451.60 | 451.60 | 451.85 | 0.029974 | 4.05 | 29.59 | 59.14 | 1.01 |
| WASH10B | Centerline Align | 18100 | 10 YR | 119.78 | 444.98 | 446.31 | 445.80 | 446.35 | 0.003544 | 1.65 | 72.57 | 112.03 | 0.36 |
| WASH10B | Centerline Align | 17600 | 10 YR | 119.78 | 441.14 | 442.11 | 442.11 | 442.26 | 0.035347 | 3.12 | 38.42 | 128.70 | 1.01 |
| WASH10A | Centerline Align | 22483.47 | 10 YR | 71.83 | 497.00 | 498.15 | 498.04 | 498.40 | 0.017998 | 4.00 | 17.95 | 24.78 | 0.83 |
| WASH10A | Centerline Align | 22271.22 | 10 YR | 71.83 | 493.99 | 495.31 | 495.15 | 495.41 | 0.011067 | 2.49 | 28.79 | 56.22 | 0.61 |
| WASH10A | Centerline Align | 21952.52 | 10 YR | 71.83 | 489.99 | 490.96 | | 491.17 | 0.016133 | 3.61 | 19.88 | 29.56 | 0.78 |
| WASH10A | Centerline Align | 21621.24 | 10 YR | 71.83 | 487.00 | 488.19 | 487.84 | 488.26 | 0.005387 | 2.11 | 33.97 | 49.65 | 0.45 |

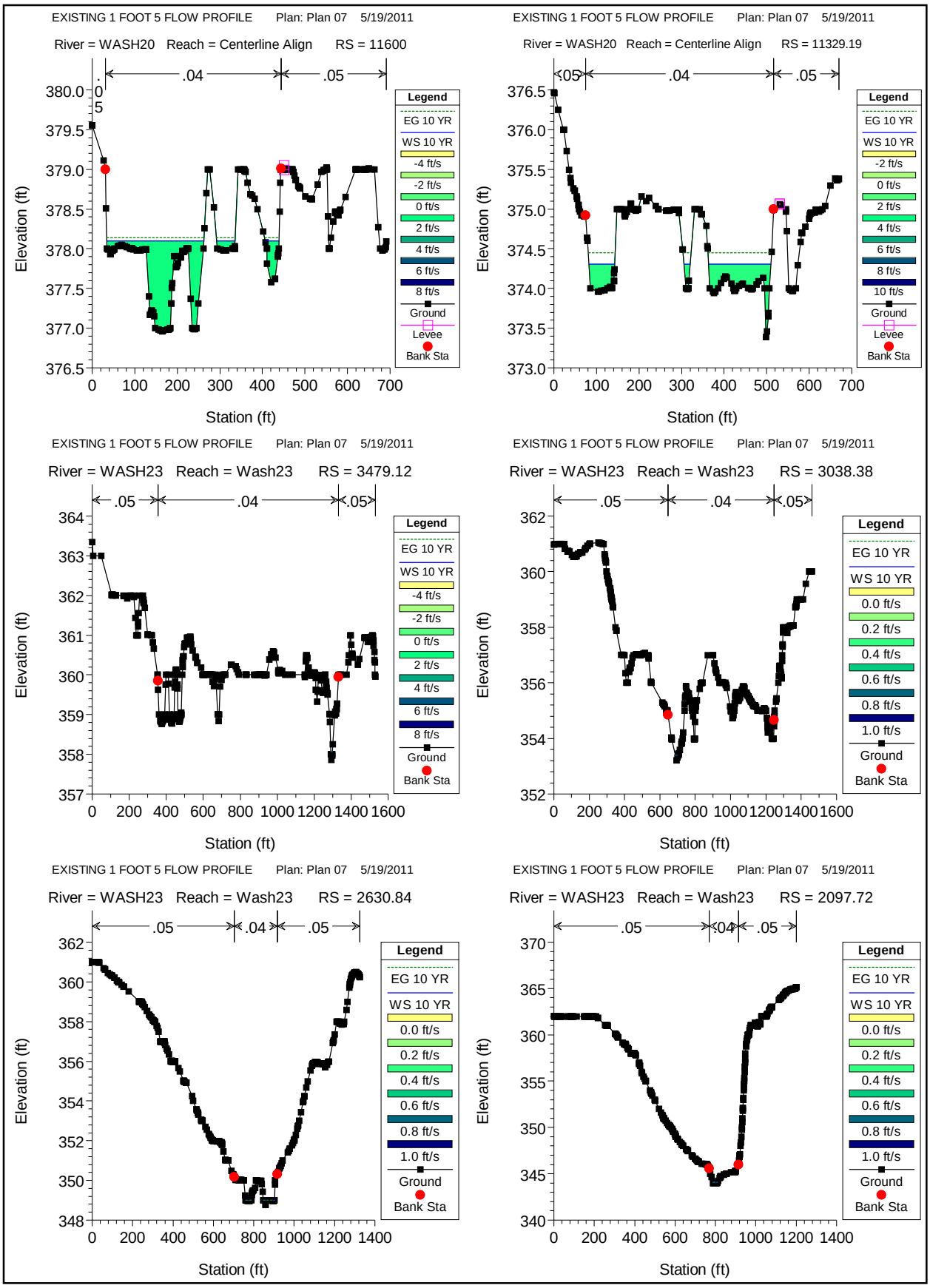

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22483.47
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22271.22
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21952.52
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21621.24
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 21050.7
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20571.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

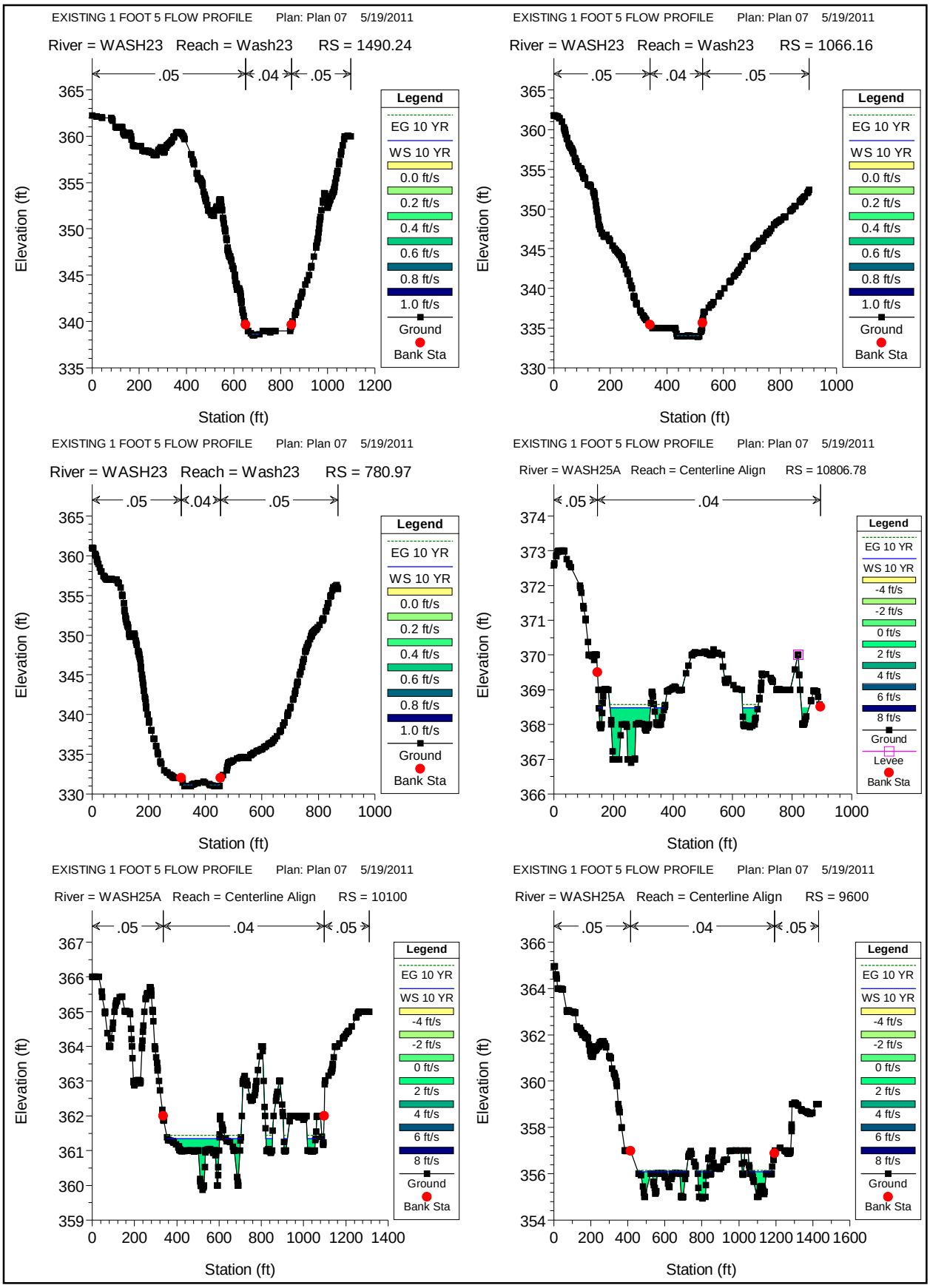

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20305.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19884.32
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

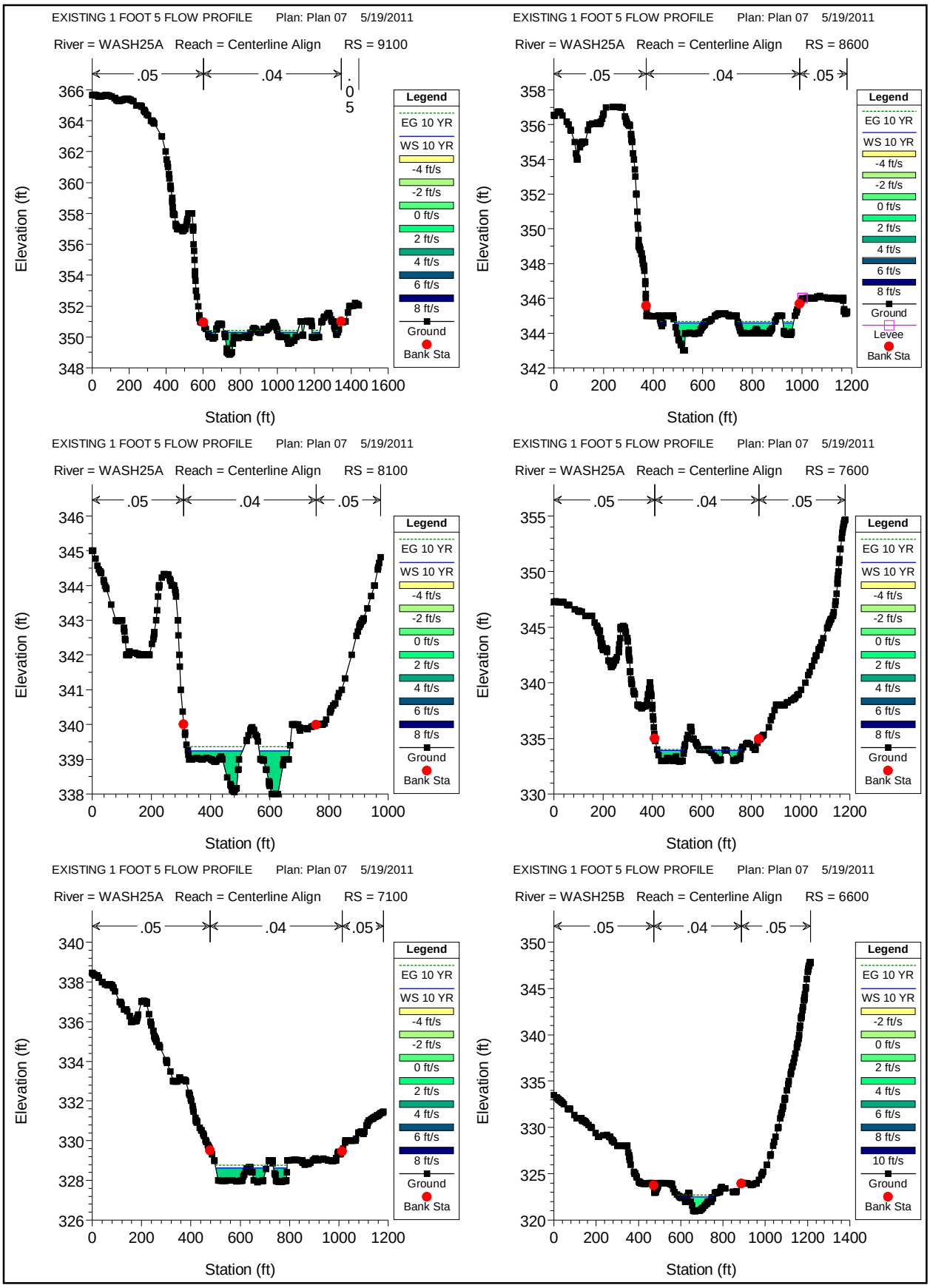

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 17600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 3100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 282.51
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 16636.71
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 16100
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 15600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 15169.42
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14100
.05 .04 .05
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13600
.05 .04 .05
1.6 ft/s
1.7 ft/s
1.8 ft/s
1.9 ft/s
2.0 ft/s
2.1 ft/s
2.2 ft/s
2.3 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12100
.04 .05

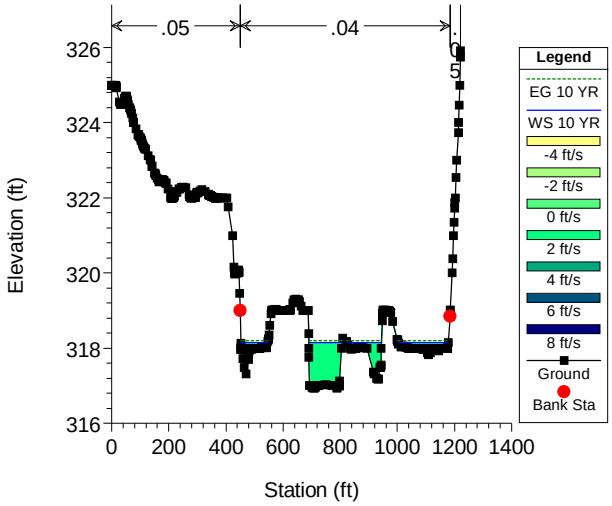

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11329.19
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3479.12
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3038.38
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2630.84
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2097.72
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1490.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1066.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 780.97
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10806.78
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

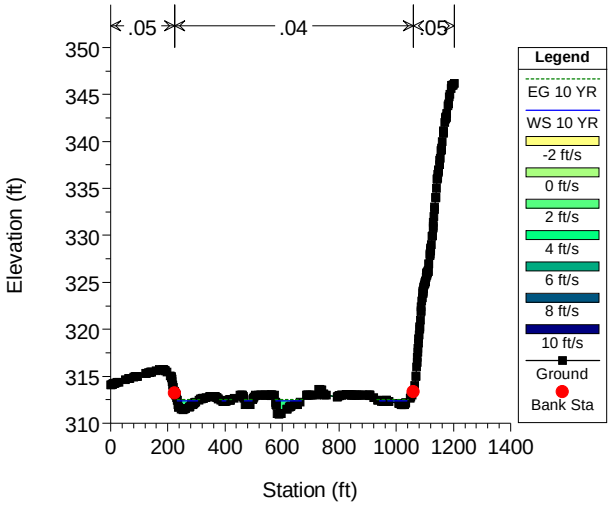
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 6100



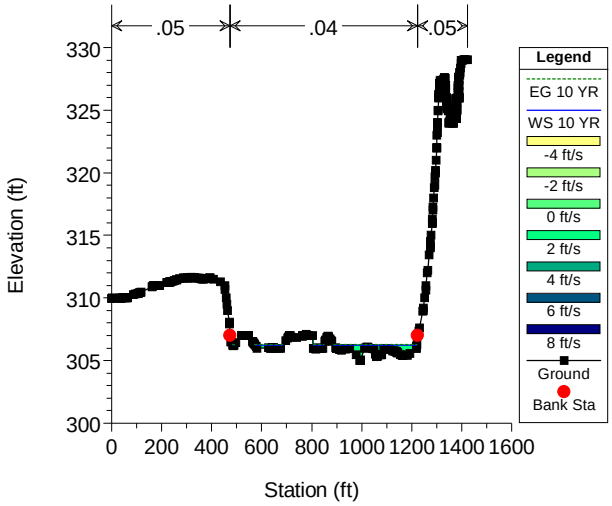

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 5600



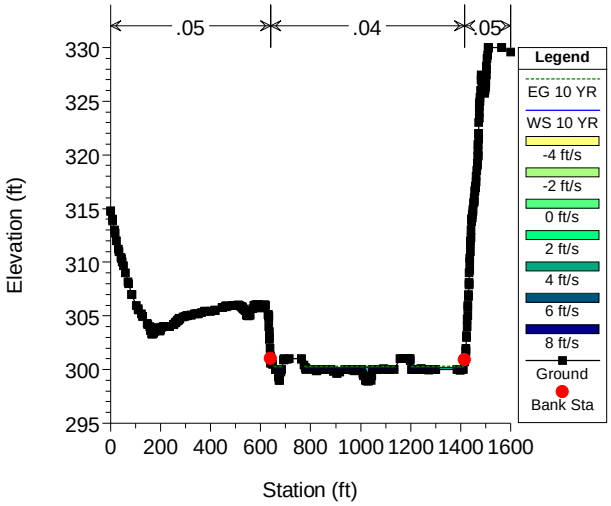

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 5100



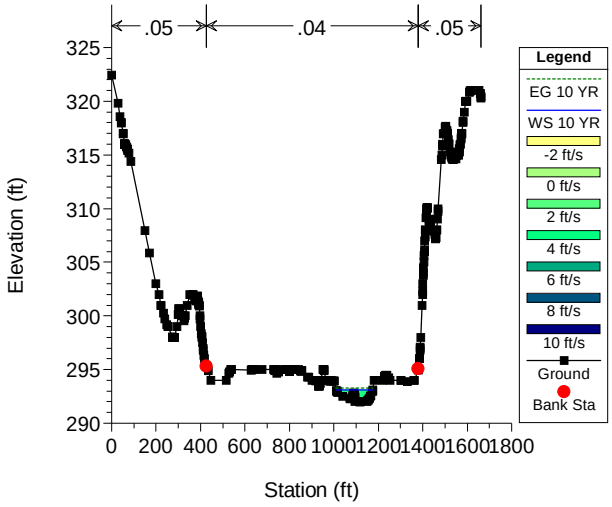

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25B Reach = Centerline Align RS = 4600



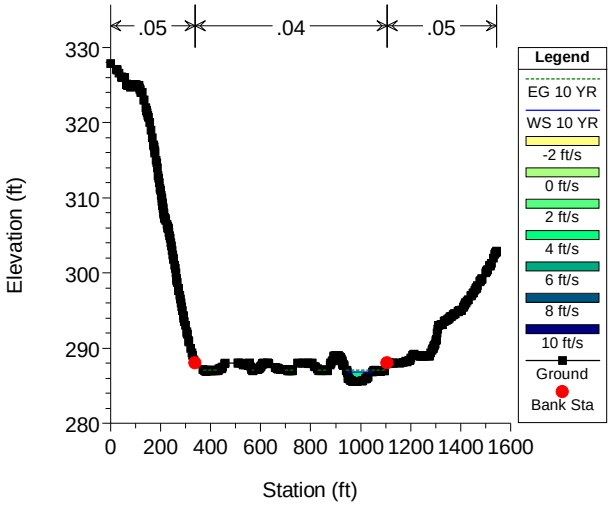

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

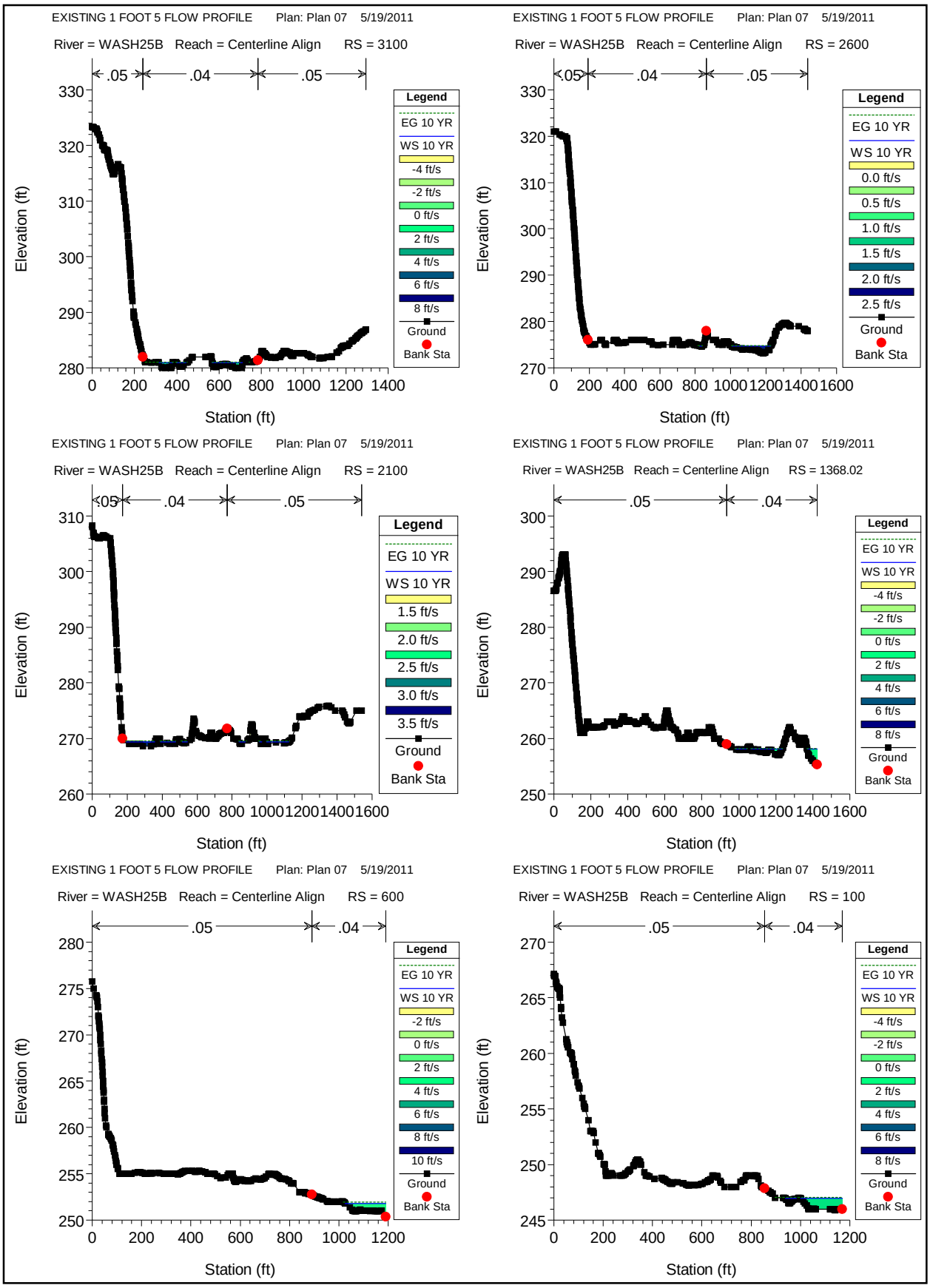
River = WASH25B Reach = Centerline Align RS = 4100

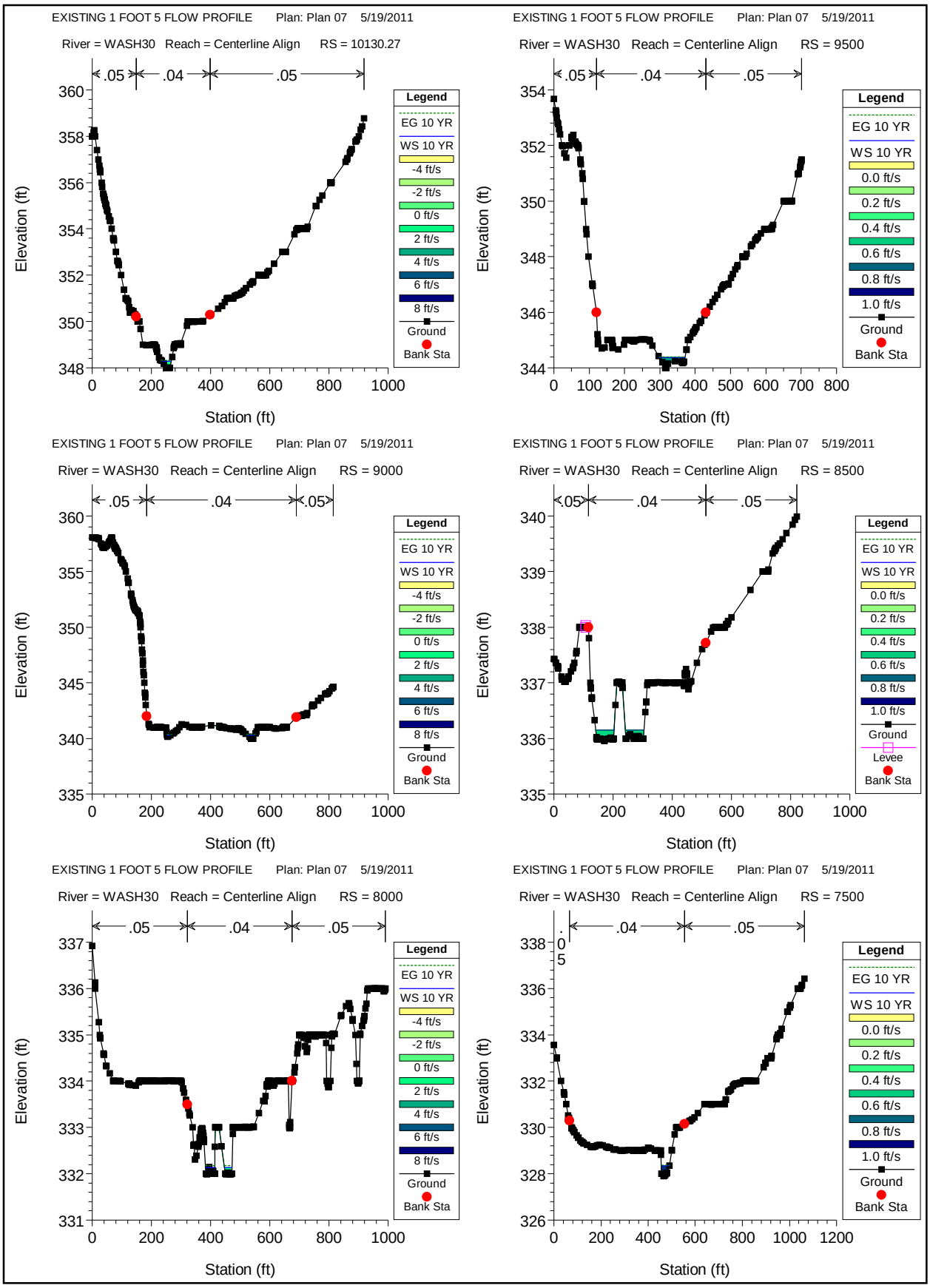


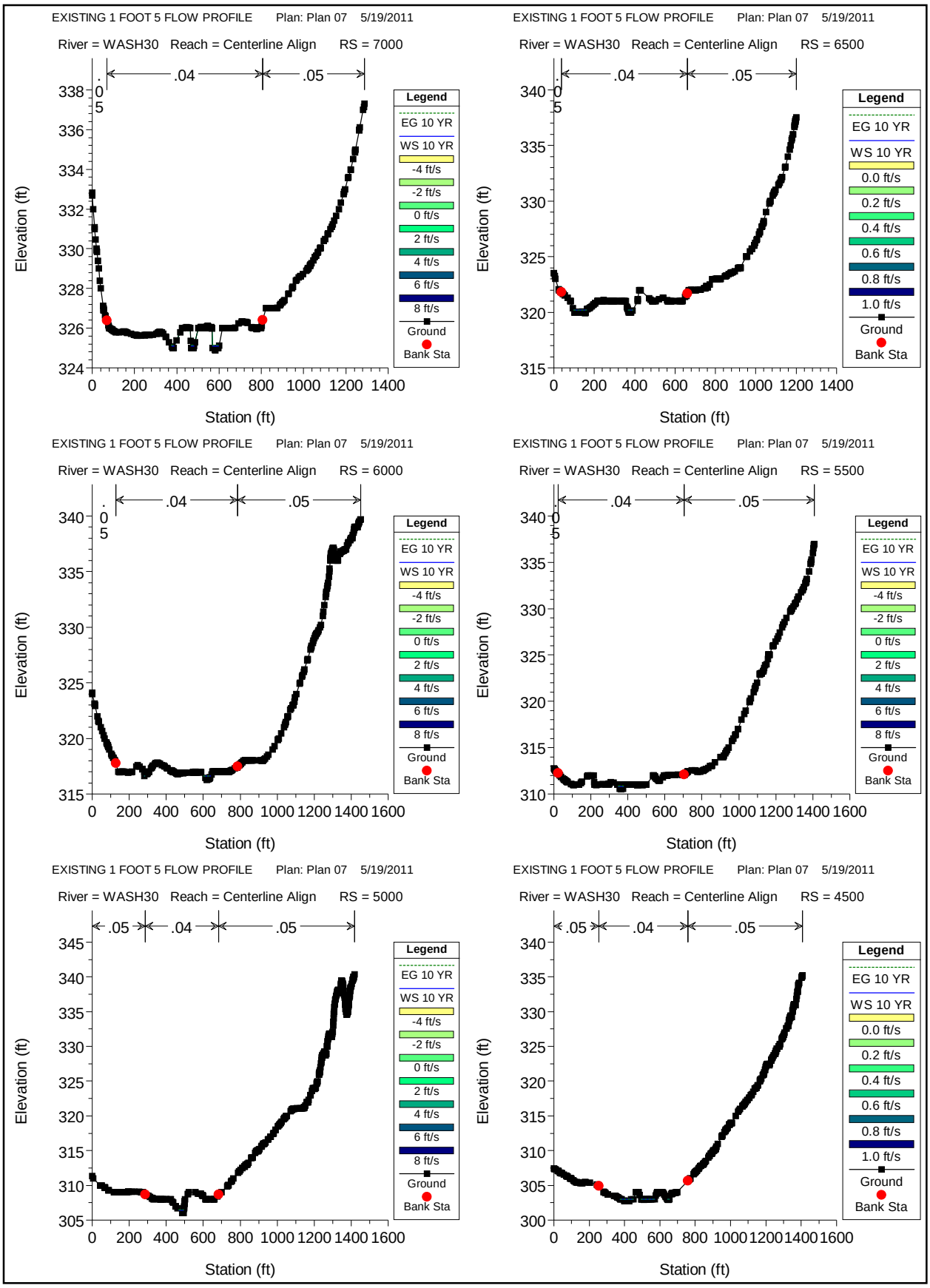

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

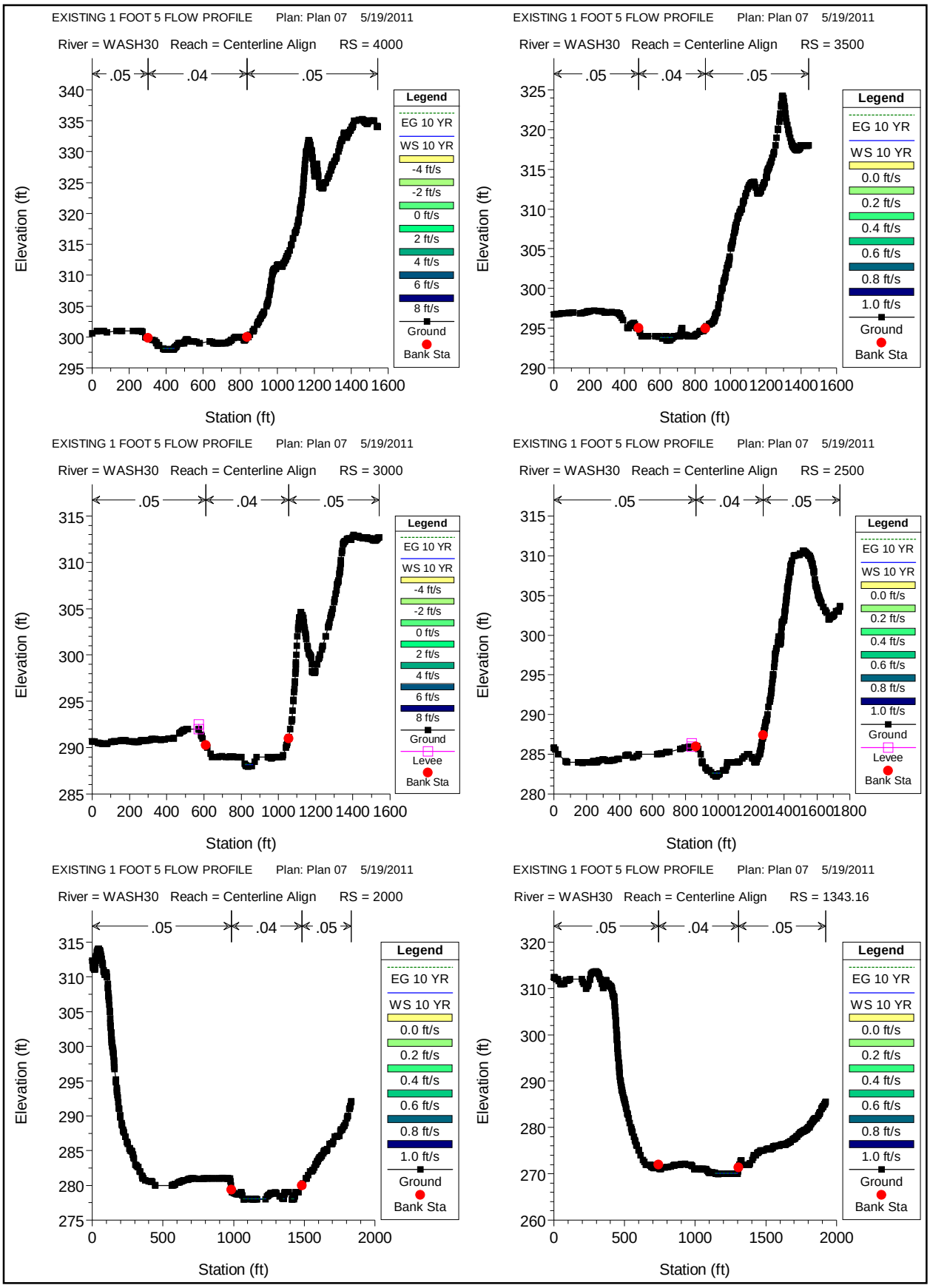
River = WASH25B Reach = Centerline Align RS = 3600

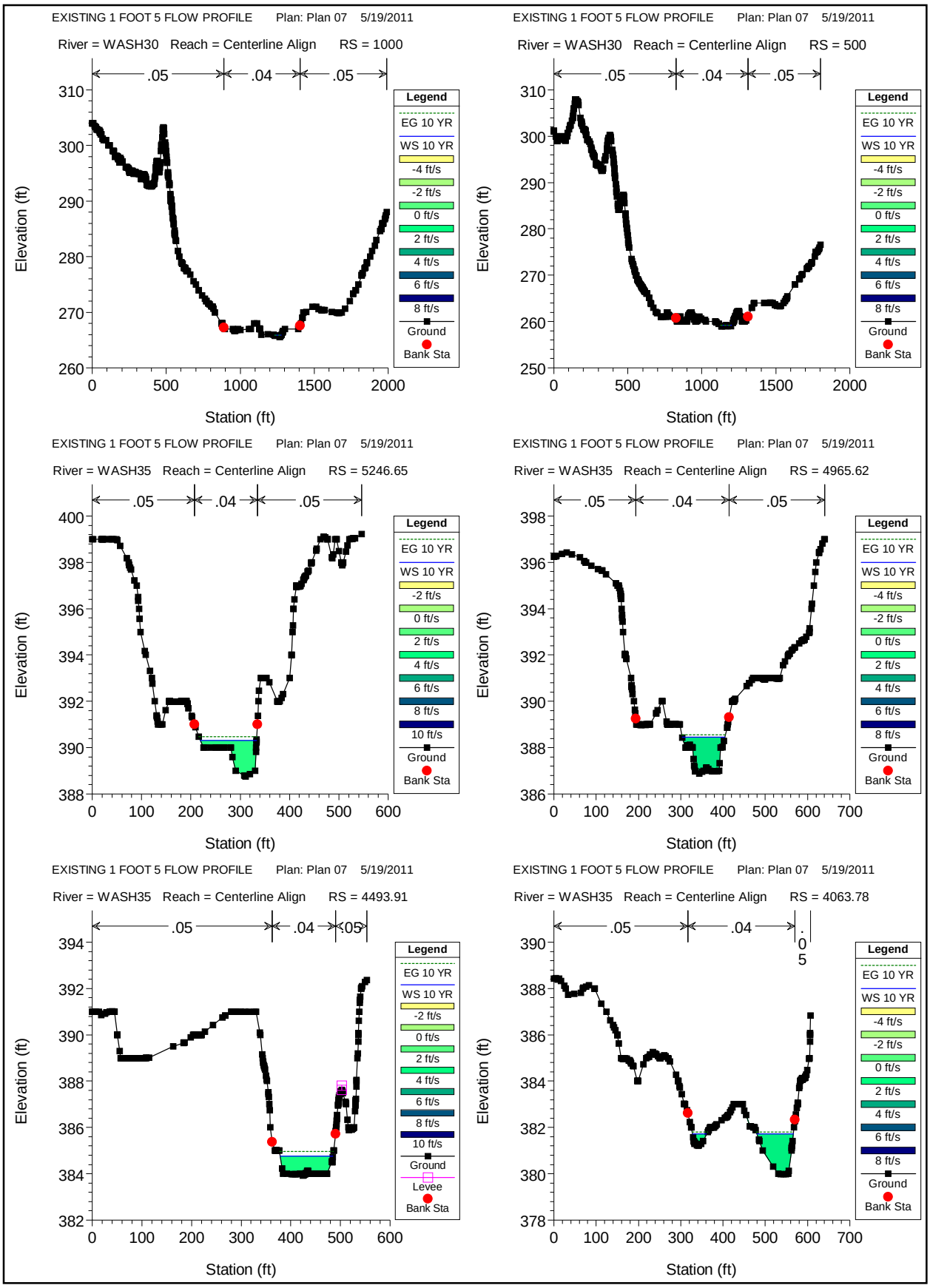


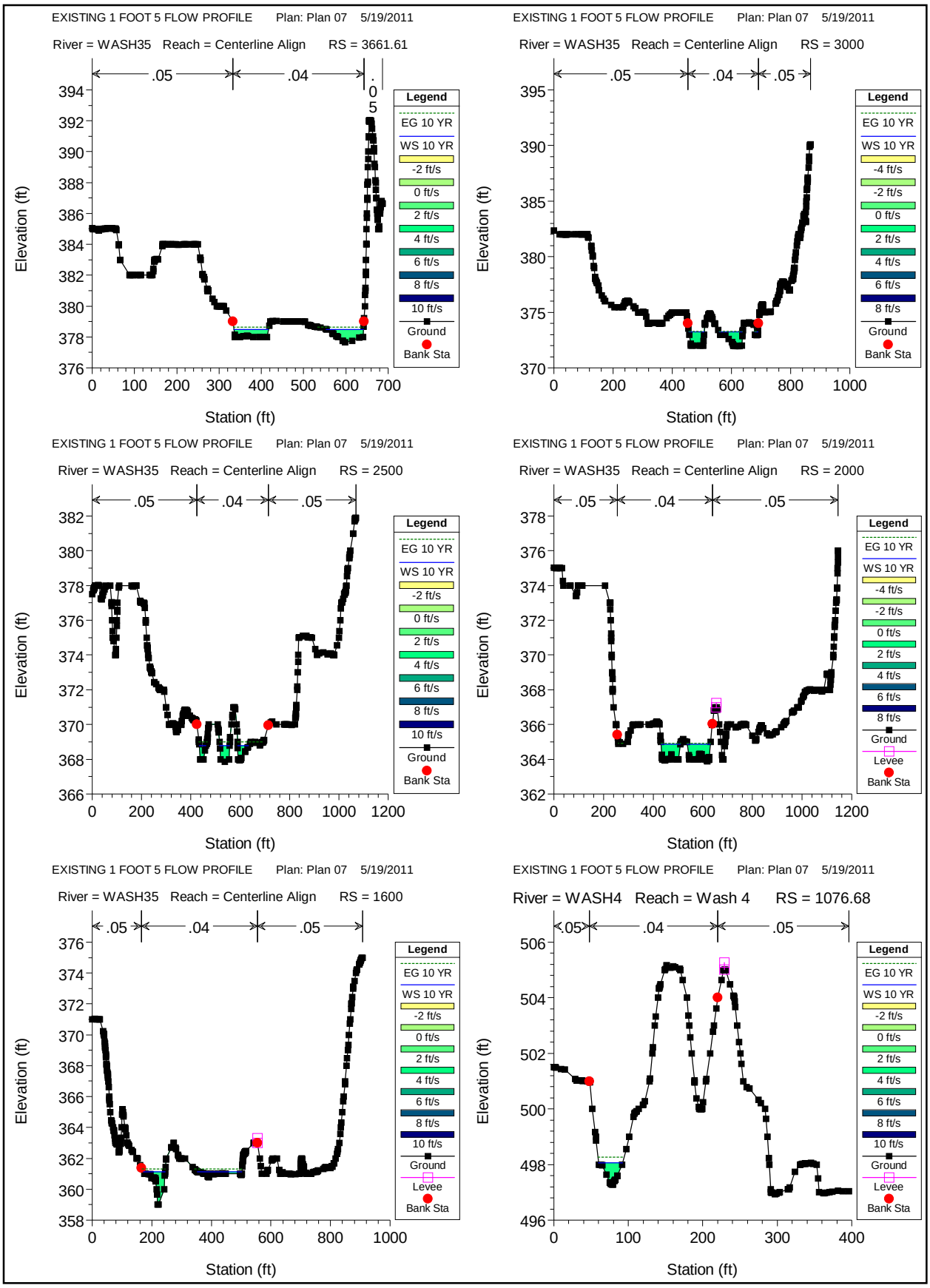

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3100
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2600
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2100
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 1368.02
.05 .04
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 600
.05 .04
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 100
.05 .04
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)

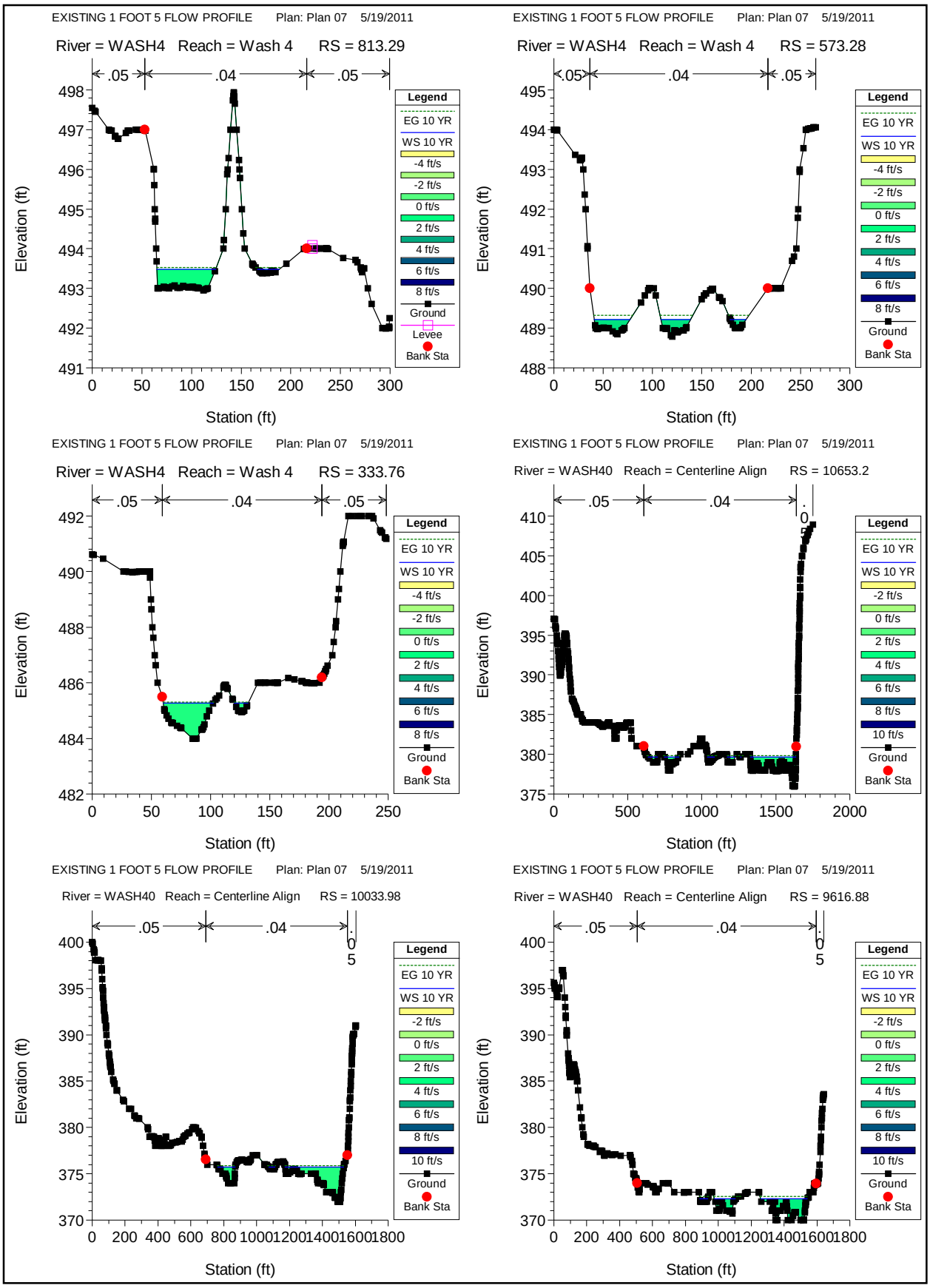

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 10130.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1343.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

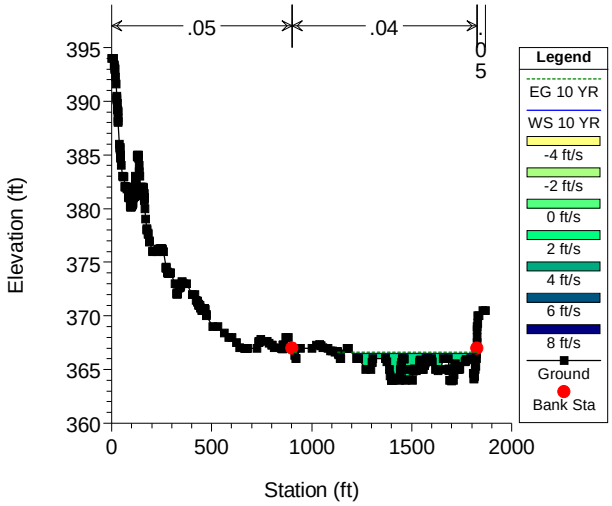

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1000
River = WASH30 Reach = Centerline Align RS = 500
River = WASH35 Reach = Centerline Align RS = 5246.65
River = WASH35 Reach = Centerline Align RS = 4965.62
River = WASH35 Reach = Centerline Align RS = 4493.91
River = WASH35 Reach = Centerline Align RS = 4063.78
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3661.61
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 1600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 1076.68
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 813.29
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 573.28
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 333.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10653.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10033.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 9616.88
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

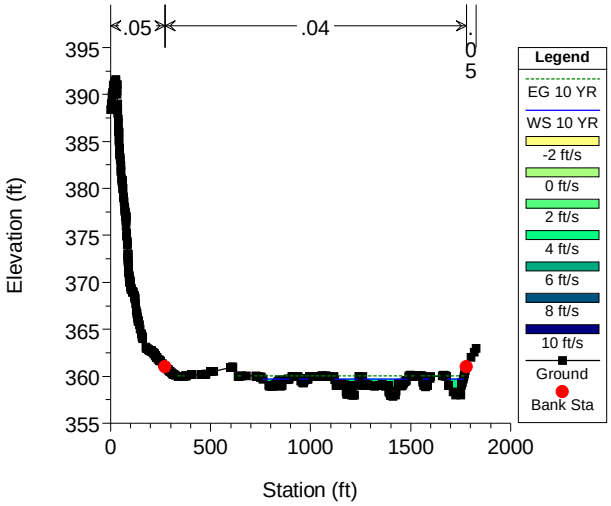
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 8761.12



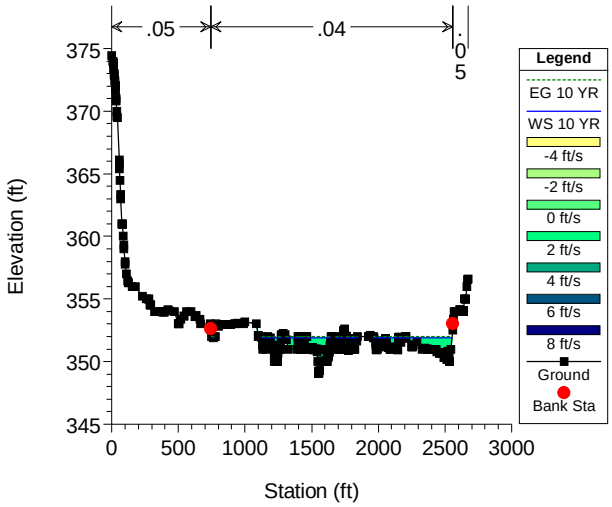

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 7943.06



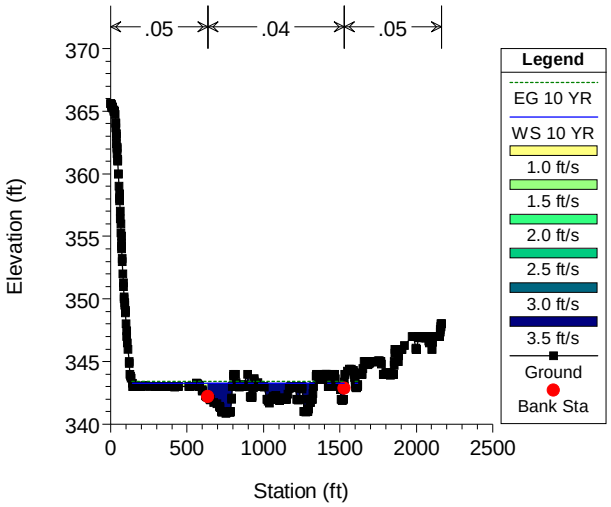

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 6943.13



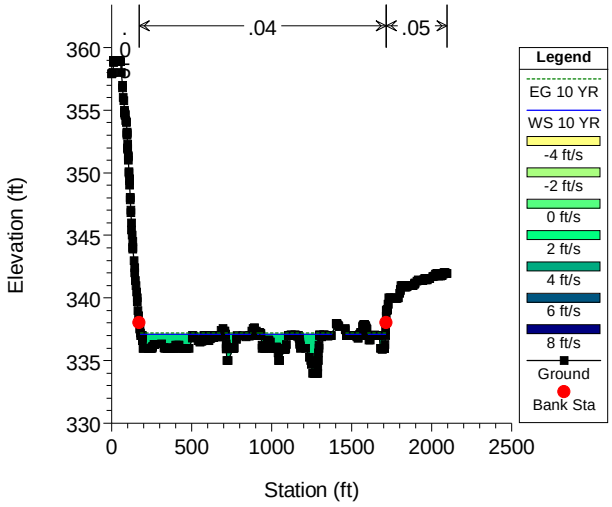

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 5500



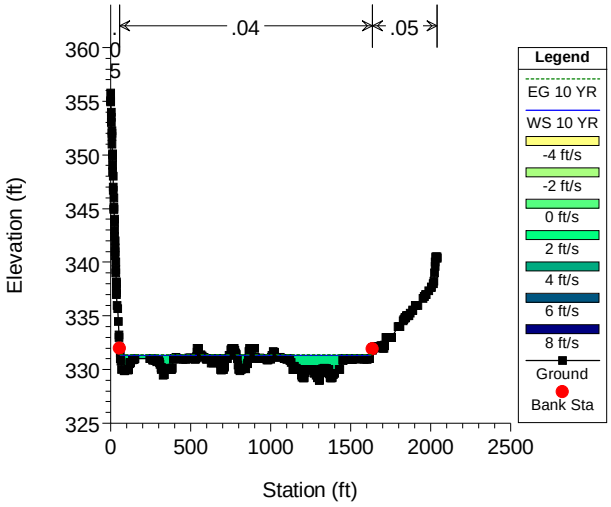

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

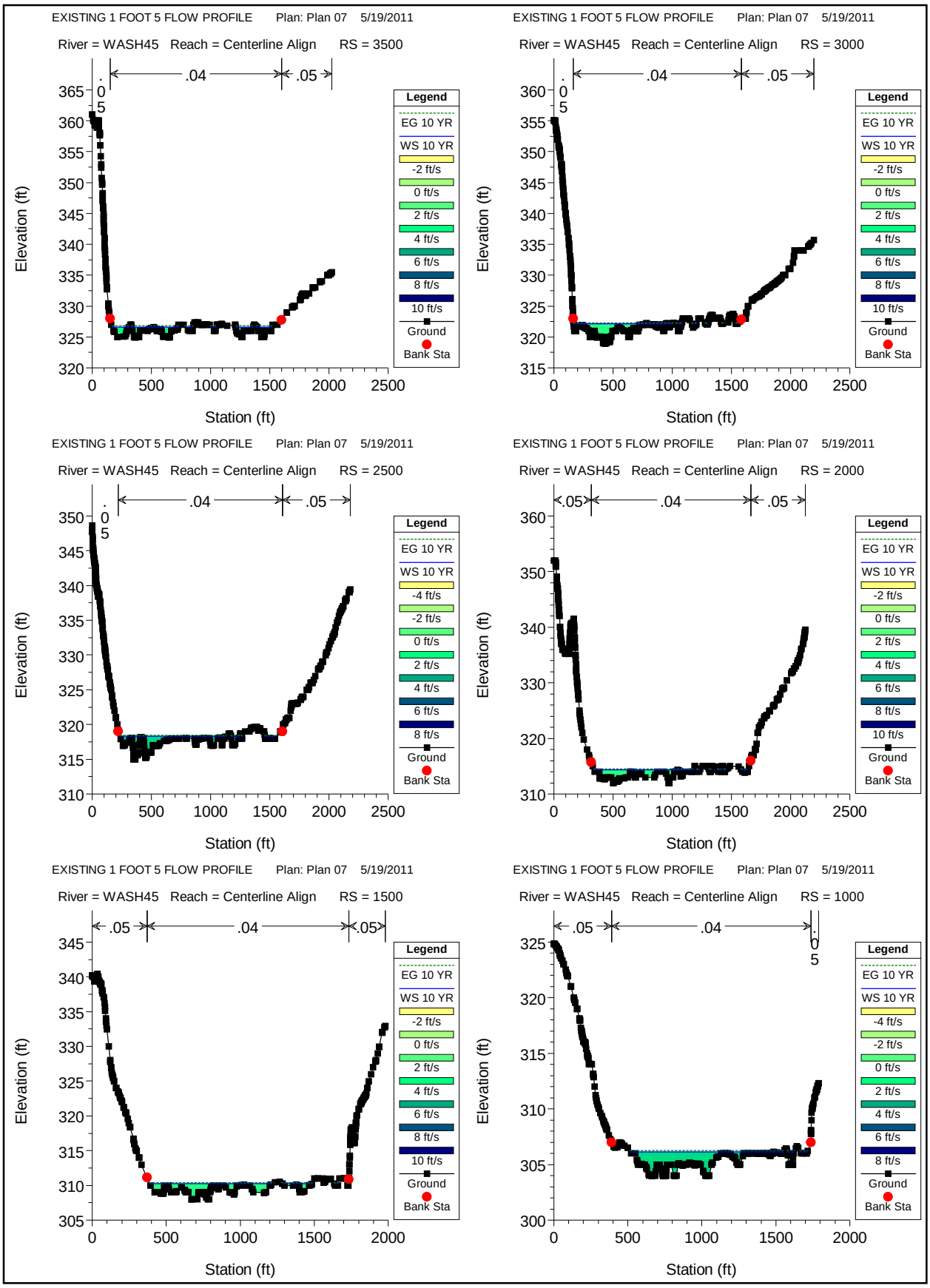
River = WASH45 Reach = Centerline Align RS = 4744.3

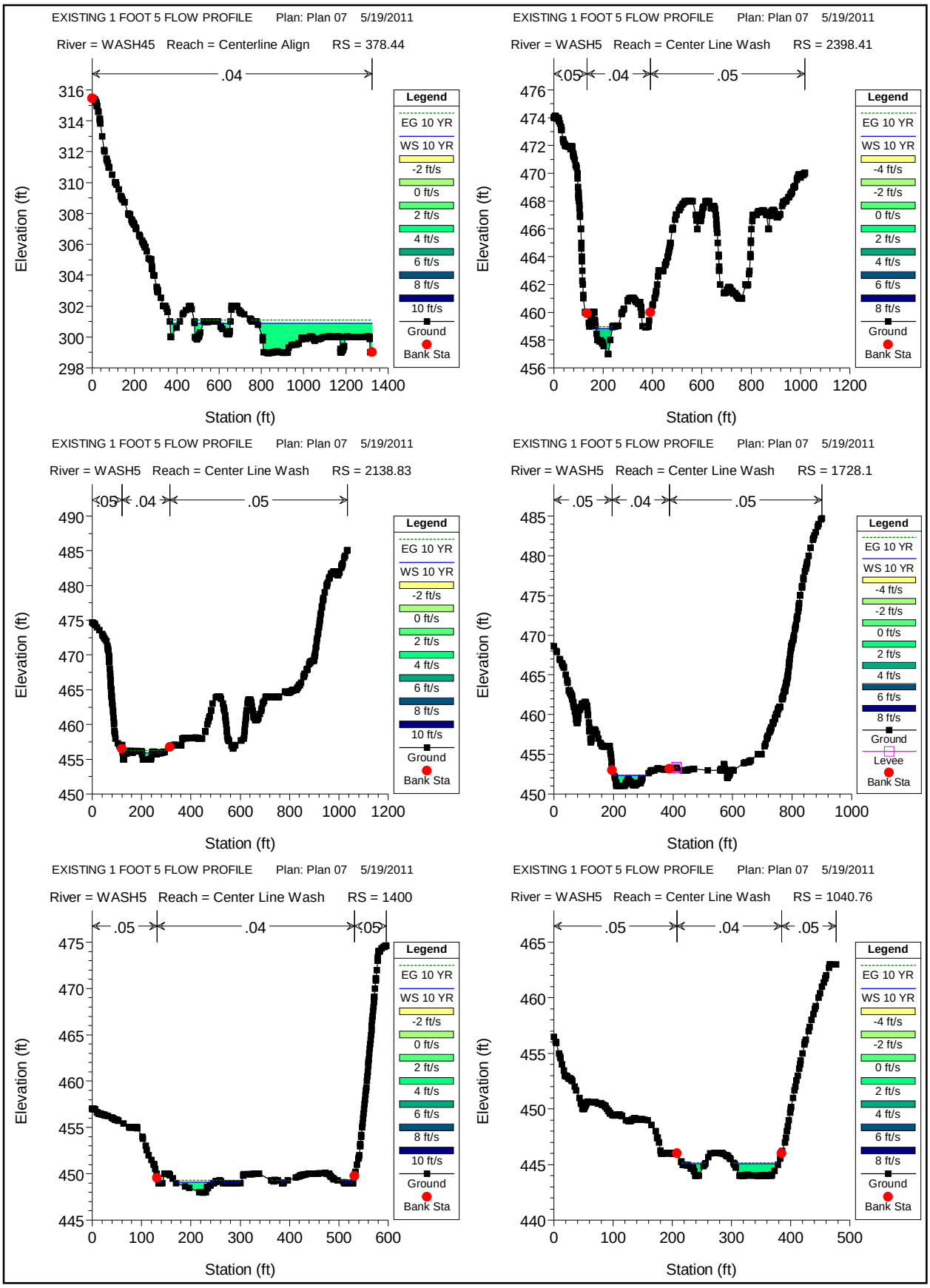



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 4000

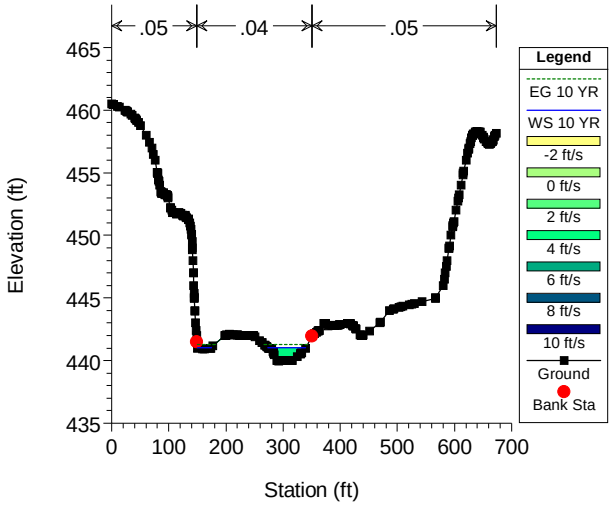



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3500
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3000
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2500
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2000
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1500
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1000
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 378.44
.04
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2398.41
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1728.1
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1400
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1040.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH5 Reach = Center Line Wash RS = 676.61



HEC-RAS Plan: Plan 03 Profile: 10 YR

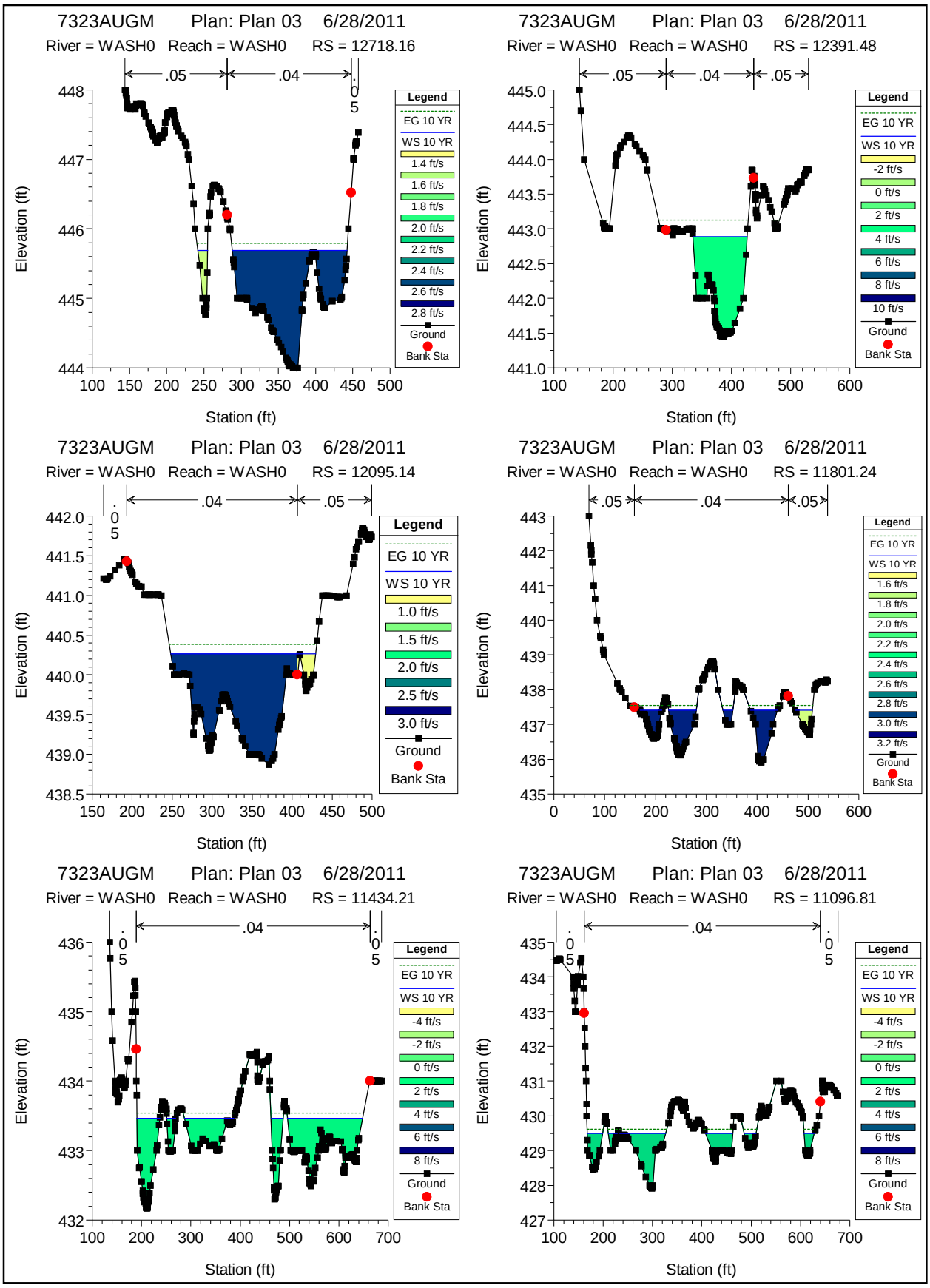
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH90 | WASH90 | 6831.23 | 10 YR | 117.00 | 352.00 | 353.20 | 1.20 | 352.81 | 353.26 | 0.006849 | 1.96 | 59.60 | 116.57 | 0.48 |
| WASH90 | WASH90 | 6503.89 | 10 YR | 117.00 | 349.63 | 350.51 | 0.88 | | 350.60 | 0.009856 | 2.39 | 48.92 | 93.59 | 0.58 |
| WASH90 | WASH90 | 5935.33 | 10 YR | 117.00 | 344.37 | 345.34 | 0.97 | | 345.39 | 0.008513 | 1.90 | 61.71 | 149.84 | 0.52 |
| WASH90 | WASH90 | 5486.51 | 10 YR | 117.00 | 339.99 | 340.96 | 0.97 | 340.81 | 341.02 | 0.011283 | 1.92 | 60.94 | 179.38 | 0.58 |
| WASH90 | WASH90 | 4998.22 | 10 YR | 117.00 | 334.38 | 335.28 | 0.90 | 335.14 | 335.35 | 0.011991 | 2.06 | 56.93 | 158.34 | 0.60 |
| WASH90 | WASH90 | 4374.24 | 10 YR | 117.00 | 326.76 | 327.53 | 0.77 | | 327.60 | 0.012871 | 2.25 | 51.99 | 133.17 | 0.63 |
| WASH90 | WASH90 | 3683.01 | 10 YR | 117.00 | 317.38 | 318.25 | 0.87 | 318.14 | 318.32 | 0.014023 | 2.06 | 56.92 | 177.97 | 0.64 |
| WASH90 | WASH90 | 3113.17 | 10 YR | 117.00 | 309.99 | 310.80 | 0.81 | | 310.87 | 0.012192 | 2.09 | 56.11 | 154.76 | 0.61 |
| WASH90 | WASH90 | 2556.75 | 10 YR | 117.00 | 302.32 | 303.05 | 0.73 | | 303.11 | 0.016063 | 1.98 | 58.98 | 215.46 | 0.67 |
| WASH90 | WASH90 | 2138.83 | 10 YR | 117.00 | 295.39 | 296.01 | 0.62 | 295.93 | 296.09 | 0.016342 | 2.30 | 50.93 | 151.29 | 0.70 |
| WASH90 | WASH90 | 1646.84 | 10 YR | 117.00 | 287.08 | 287.72 | 0.64 | | 287.78 | 0.017087 | 2.02 | 57.99 | 216.42 | 0.69 |
| WASH90 | WASH90 | 1288.94 | 10 YR | 117.00 | 280.46 | 281.45 | 0.99 | 281.39 | 281.54 | 0.022457 | 2.38 | 49.24 | 176.42 | 0.79 |
| WASH90 | WASH90 | 800.13 | 10 YR | 117.00 | 268.50 | 269.88 | 1.38 | 269.81 | 270.05 | 0.021541 | 3.32 | 35.21 | 73.86 | 0.85 |
| WASH80 | WASH80 | 9177.14 | 10 YR | 98.00 | 406.00 | 407.29 | 1.29 | 406.87 | 407.39 | 0.006120 | 2.52 | 38.92 | 47.94 | 0.49 |
| WASH80 | WASH80 | 8711.54 | 10 YR | 98.00 | 400.91 | 402.37 | 1.46 | 402.29 | 402.59 | 0.020640 | 3.80 | 25.80 | 42.71 | 0.86 |
| WASH80 | WASH80 | 8318.51 | 10 YR | 98.00 | 395.00 | 396.29 | 1.29 | 396.11 | 396.45 | 0.012205 | 3.15 | 31.10 | 45.82 | 0.67 |
| WASH80 | WASH80 | 7927.46 | 10 YR | 98.00 | 391.00 | 392.09 | 1.09 | 391.88 | 392.21 | 0.009646 | 2.71 | 36.16 | 56.14 | 0.60 |
| WASH80 | WASH80 | 7287.57 | 10 YR | 98.00 | 384.00 | 385.10 | 1.10 | | 385.33 | 0.012017 | 3.81 | 25.72 | 28.12 | 0.70 |
| WASH80 | WASH80 | 6827.33 | 10 YR | 98.00 | 380.00 | 381.53 | 1.53 | | 381.62 | 0.005666 | 2.46 | 39.83 | 47.86 | 0.48 |
| WASH80 | WASH80 | 6379.44 | 10 YR | 98.00 | 376.99 | 378.18 | 1.19 | 377.89 | 378.24 | 0.010549 | 2.01 | 48.71 | 126.91 | 0.57 |
| WASH80 | WASH80 | 6136.14 | 10 YR | 98.00 | 374.99 | 375.68 | 0.69 | | 375.75 | 0.009984 | 2.06 | 47.59 | 115.05 | 0.56 |
| WASH80 | WASH80 | 5694.19 | 10 YR | 98.00 | 370.83 | 371.64 | 0.81 | 371.43 | 371.70 | 0.008422 | 2.09 | 46.90 | 97.26 | 0.53 |
| WASH80 | WASH80 | 5146 | 10 YR | 98.00 | 366.00 | 367.18 | 1.18 | 366.77 | 367.22 | 0.007921 | 1.66 | 59.14 | 166.43 | 0.49 |
| WASH80 | WASH80 | 4787.98 | 10 YR | 98.00 | 363.67 | 364.64 | 0.97 | | 364.67 | 0.006457 | 1.41 | 69.56 | 214.33 | 0.44 |
| WASH80 | WASH80 | 4308.96 | 10 YR | 98.00 | 360.00 | 360.60 | 0.60 | 360.46 | 360.67 | 0.011228 | 2.06 | 47.59 | 125.23 | 0.59 |
| WASH80 | WASH80 | 3652.44 | 10 YR | 98.00 | 353.35 | 354.38 | 1.03 | 354.22 | 354.44 | 0.008135 | 1.90 | 51.52 | 120.15 | 0.51 |
| WASH80 | WASH80 | 3226.43 | 10 YR | 98.00 | 349.80 | 350.68 | 0.88 | | 350.80 | 0.008918 | 2.75 | 35.69 | 51.45 | 0.58 |
| WASH80 | WASH80 | 2831.38 | 10 YR | 98.00 | 345.72 | 346.70 | 0.98 | | 346.75 | 0.011804 | 1.92 | 51.02 | 155.19 | 0.59 |
| WASH80 | WASH80 | 2414.33 | 10 YR | 98.00 | 341.69 | 342.61 | 0.92 | | 342.67 | 0.008248 | 2.02 | 48.56 | 104.79 | 0.52 |
| WASH80 | WASH80 | 1998.23 | 10 YR | 98.00 | 338.00 | 338.83 | 0.83 | | 338.88 | 0.010265 | 1.81 | 54.03 | 161.41 | 0.55 |
| WASH80 | WASH80 | 1662.74 | 10 YR | 98.00 | 334.43 | 335.19 | 0.76 | | 335.23 | 0.013001 | 1.69 | 58.00 | 230.07 | 0.59 |
| WASH80 | WASH80 | 1123.57 | 10 YR | 98.00 | 327.07 | 328.02 | 0.95 | | 328.10 | 0.013209 | 2.16 | 45.40 | 126.06 | 0.63 |
| WASH80 | WASH80 | 611 | 10 YR | 98.00 | 320.60 | 321.15 | 0.55 | | 321.26 | 0.016973 | 2.59 | 37.87 | 96.85 | 0.73 |
| WASH75 | WASH75 | 3066.24 | 10 YR | 43.00 | 352.99 | 353.61 | 0.62 | 353.52 | 353.68 | 0.015096 | 2.18 | 19.73 | 59.59 | 0.67 |
| WASH75 | WASH75 | 2658.51 | 10 YR | 43.00 | 348.60 | 349.25 | 0.65 | | 349.30 | 0.008032 | 1.63 | 26.43 | 77.29 | 0.49 |
| WASH75 | WASH75 | 2371.61 | 10 YR | 43.00 | 345.39 | 345.92 | 0.53 | | 345.97 | 0.018210 | 1.81 | 23.70 | 108.68 | 0.68 |
| WASH75 | WASH75 | 2124.14 | 10 YR | 43.00 | 342.00 | 342.60 | 0.60 | | 342.65 | 0.010366 | 1.63 | 26.42 | 93.58 | 0.54 |
| WASH75 | WASH75 | 1807.24 | 10 YR | 43.00 | 338.62 | 339.15 | 0.53 | 339.03 | 339.19 | 0.011467 | 1.43 | 30.01 | 138.68 | 0.54 |
| WASH75 | WASH75 | 1554.2 | 10 YR | 43.00 | 335.34 | 335.83 | 0.49 | | 335.88 | 0.015052 | 1.76 | 24.38 | 101.14 | 0.63 |
| WASH75 | WASH75 | 1289.14 | 10 YR | 43.00 | 331.45 | 332.07 | 0.62 | | 332.12 | 0.013406 | 1.77 | 24.26 | 91.41 | 0.61 |
| WASH75 | WASH75 | 908.89 | 10 YR | 43.00 | 326.14 | 326.81 | 0.67 | | 326.89 | 0.014681 | 2.31 | 18.59 | 50.39 | 0.67 |
| WASH75 | WASH75 | 546.93 | 10 YR | 43.00 | 320.30 | 321.02 | 0.72 | 320.99 | 321.11 | 0.023584 | 2.31 | 18.64 | 72.27 | 0.80 |
| WASH70 | WASH70 | 3521.27 | 10 YR | 99.00 | 310.47 | 311.18 | 0.71 | | 311.30 | 0.015217 | 2.83 | 34.98 | 72.03 | 0.72 |
| WASH70 | WASH70 | 3191.72 | 10 YR | 99.00 | 305.11 | 306.30 | 1.19 | | 306.37 | 0.015314 | 2.10 | 47.13 | 152.15 | 0.67 |
| WASH70 | WASH70 | 2880.01 | 10 YR | 99.00 | 300.57 | 301.46 | 0.89 | | 301.52 | 0.012488 | 1.93 | 51.36 | 162.13 | 0.60 |
| WASH70 | WASH70 | 2398.82 | 10 YR | 99.00 | 294.64 | 295.27 | 0.63 | | 295.31 | 0.009581 | 1.60 | 61.79 | 211.04 | 0.52 |

HEC-RAS Plan: Plan 03 Profile: 10 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH70 | WASH70 | 2036.83 | 10 YR | 99.00 | 288.77 | 289.41 | 0.64 | 289.41 | 289.51 | 0.031877 | 2.51 | 39.42 | 169.16 | 0.92 |
| WASH70 | WASH70 | 1648.15 | 10 YR | 99.00 | 282.26 | 282.95 | 0.69 | | 283.00 | 0.010267 | 1.80 | 54.95 | 165.86 | 0.55 |
| WASH70 | WASH70 | 1321.01 | 10 YR | 99.00 | 276.44 | 277.09 | 0.65 | 277.09 | 277.21 | 0.037396 | 2.80 | 35.40 | 145.55 | 1.00 |
| WASH70 | WASH70 | 1029.2 | 10 YR | 99.00 | 269.54 | 270.50 | 0.96 | 270.10 | 270.53 | 0.003280 | 1.30 | 75.86 | 157.88 | 0.33 |
| WASH70 | WASH70 | 666.38 | 10 YR | 99.00 | 267.00 | 267.86 | 10.56 | 267.83 | 267.95 | 0.025510 | 2.39 | 41.49 | 162.60 | 0.83 |
| WASH70 | WASH70 | 358.04 | 10 YR | 99.00 | 261.11 | 261.86 | 11.13 | 261.75 | 261.99 | 0.015109 | 2.83 | 34.96 | 71.57 | 0.71 |
| WASH60 | WASH60 | 5477.11 | 10 YR | 22.00 | 467.00 | 467.47 | 0.47 | 467.31 | 467.53 | 0.008226 | 1.96 | 11.25 | 25.29 | 0.52 |
| WASH60 | WASH60 | 5299.28 | 10 YR | 22.00 | 465.62 | 466.17 | 0.55 | | 466.22 | 0.006693 | 1.72 | 12.76 | 29.79 | 0.46 |
| WASH60 | WASH60 | 5104.28 | 10 YR | 22.00 | 463.90 | 464.54 | 0.64 | 464.40 | 464.59 | 0.010652 | 1.79 | 12.27 | 38.19 | 0.56 |
| WASH60 | WASH60 | 4869.04 | 10 YR | 22.00 | 460.91 | 461.41 | 0.50 | | 461.49 | 0.016654 | 2.15 | 10.22 | 33.71 | 0.69 |
| WASH60 | WASH60 | 4591.11 | 10 YR | 22.00 | 457.00 | 457.59 | 0.58 | | 457.62 | 0.011695 | 1.52 | 14.51 | 62.48 | 0.55 |
| WASH60 | WASH60 | 4337.83 | 10 YR | 22.00 | 454.00 | 454.61 | 0.61 | 454.52 | 454.65 | 0.011759 | 1.58 | 13.96 | 56.93 | 0.56 |
| WASH60 | WASH60 | 4068.7 | 10 YR | 22.00 | 450.95 | 451.36 | 0.72 | 451.27 | 451.39 | 0.012530 | 1.35 | 16.31 | 88.24 | 0.55 |
| WASH60 | WASH60 | 3746.65 | 10 YR | 22.00 | 446.00 | 446.77 | 0.77 | 446.67 | 446.85 | 0.015915 | 2.27 | 9.68 | 28.50 | 0.69 |
| WASH60 | WASH60 | 3427.61 | 10 YR | 22.00 | 441.98 | 442.59 | 0.61 | | 442.62 | 0.010491 | 1.55 | 16.36 | 64.73 | 0.54 |
| WASH60 | WASH60 | 3162.25 | 10 YR | 22.00 | 438.68 | 439.26 | 0.58 | | 439.32 | 0.017808 | 1.97 | 11.18 | 44.57 | 0.69 |
| WASH60 | WASH60 | 2826.26 | 10 YR | 22.00 | 433.38 | 434.13 | 0.75 | 434.04 | 434.21 | 0.013110 | 2.13 | 10.35 | 29.12 | 0.63 |
| WASH60 | WASH60 | 2497.44 | 10 YR | 22.00 | 429.89 | 430.32 | 0.43 | 430.21 | 430.37 | 0.010386 | 1.85 | 11.87 | 34.50 | 0.56 |
| WASH60 | WASH60 | 2235.76 | 10 YR | 22.00 | 426.68 | 427.40 | 0.72 | 427.27 | 427.46 | 0.011950 | 2.02 | 10.87 | 30.61 | 0.60 |
| WASH60 | WASH60 | 1902.48 | 10 YR | 22.00 | 421.48 | 422.23 | 0.75 | 422.18 | 422.31 | 0.020869 | 2.15 | 10.22 | 40.06 | 0.75 |
| WASH60 | WASH60 | 1536.23 | 10 YR | 22.00 | 415.62 | 416.31 | 2.29 | 416.20 | 416.37 | 0.012915 | 1.98 | 11.11 | 34.51 | 0.62 |
| WASH60 | WASH60 | 1155.84 | 10 YR | 22.00 | 410.17 | 410.92 | 1.92 | 410.80 | 411.01 | 0.015506 | 2.41 | 9.12 | 24.07 | 0.69 |
| WASH60 | WASH60 | 717.74 | 10 YR | 22.00 | 403.99 | 404.38 | 1.38 | 404.30 | 404.45 | 0.014420 | 1.97 | 11.15 | 37.80 | 0.64 |
| WASH60 | WASH60 | 251.42 | 10 YR | 22.00 | 397.00 | 397.35 | 0.39 | 397.28 | 397.40 | 0.015816 | 1.82 | 12.11 | 49.86 | 0.65 |
| WASH0 | WASH0 | 12718.16 | 10 YR | 359.00 | 444.00 | 445.69 | 1.69 | 445.32 | 445.80 | 0.006264 | 2.64 | 138.72 | 167.20 | 0.50 |
| WASH0 | WASH0 | 12391.48 | 10 YR | 359.00 | 441.44 | 442.89 | 1.45 | | 443.13 | 0.010990 | 3.90 | 91.99 | 91.48 | 0.69 |
| WASH0 | WASH0 | 12095.14 | 10 YR | 359.00 | 438.87 | 440.27 | 1.39 | | 440.38 | 0.007722 | 2.80 | 131.92 | 181.35 | 0.55 |
| WASH0 | WASH0 | 11801.24 | 10 YR | 359.00 | 435.91 | 437.41 | 1.50 | | 437.55 | 0.012542 | 3.09 | 121.50 | 202.67 | 0.68 |
| WASH0 | WASH0 | 11434.21 | 10 YR | 359.00 | 432.17 | 433.46 | 1.29 | | 433.54 | 0.009559 | 2.21 | 162.36 | 341.23 | 0.56 |
| WASH0 | WASH0 | 11096.81 | 10 YR | 359.00 | 427.91 | 429.49 | 1.58 | | 429.62 | 0.014339 | 2.86 | 125.38 | 242.22 | 0.70 |
| WASH0 | WASH0 | 10668.33 | 10 YR | 359.00 | 422.99 | 424.25 | 1.26 | 424.08 | 424.33 | 0.010720 | 2.33 | 154.04 | 326.05 | 0.60 |
| WASH0 | WASH0 | 10283.74 | 10 YR | 359.00 | 418.12 | 419.39 | 1.27 | 419.25 | 419.49 | 0.015016 | 2.53 | 142.11 | 343.14 | 0.69 |
| WASH0 | WASH0 | 9871.26 | 10 YR | 359.00 | 412.69 | 413.73 | 1.04 | 413.57 | 413.84 | 0.012516 | 2.68 | 136.25 | 269.85 | 0.66 |
| WASH0 | WASH0 | 9562.95 | 10 YR | 359.00 | 408.29 | 409.71 | 1.42 | 409.58 | 409.80 | 0.013688 | 2.47 | 151.18 | 357.37 | 0.66 |
| WASH0 | WASH0 | 9197 | 10 YR | 359.00 | 403.65 | 404.80 | 1.15 | | 404.90 | 0.013059 | 2.56 | 141.06 | 303.63 | 0.66 |
| WASH0 | WASH0 | 8798.15 | 10 YR | 359.00 | 397.89 | 398.99 | 1.10 | 398.88 | 399.11 | 0.016192 | 2.80 | 128.06 | 280.03 | 0.73 |
| WASH0 | WASH0 | 8444.54 | 10 YR | 359.00 | 392.80 | 393.80 | 1.00 | | 393.91 | 0.013456 | 2.70 | 133.18 | 268.60 | 0.67 |
| WASH0 | WASH0 | 7821.48 | 10 YR | 359.00 | 383.87 | 385.20 | 1.33 | | 385.37 | 0.012411 | 3.33 | 122.02 | 249.36 | 0.69 |
| WASH0 | WASH0 | 7102.13 | 10 YR | 359.00 | 374.51 | 375.71 | 1.20 | | 375.83 | 0.015768 | 2.80 | 130.27 | 288.44 | 0.72 |
| WASH0 | WASH0 | 6494.14 | 10 YR | 359.00 | 364.25 | 365.43 | 1.18 | | 365.67 | 0.014433 | 3.95 | 90.78 | 108.61 | 0.76 |
| WASH0 | WASH0 | 6019.74 | 10 YR | 359.00 | 357.46 | 358.85 | 1.39 | | 358.98 | 0.016613 | 2.86 | 125.54 | 271.53 | 0.74 |
| WASH0 | WASH0 | 5624.57 | 10 YR | 359.00 | 350.55 | 351.93 | 1.38 | | 352.07 | 0.014099 | 3.07 | 117.03 | 201.46 | 0.71 |
| WASH0 | WASH0 | 5234.92 | 10 YR | 359.00 | 344.24 | 345.71 | 1.47 | | 345.95 | 0.014175 | 3.97 | 90.33 | 105.89 | 0.76 |
| WASH0 | WASH0 | 4617.22 | 10 YR | 359.00 | 334.54 | 335.63 | 1.09 | | 335.78 | 0.016243 | 3.20 | 112.08 | 201.11 | 0.76 |
| WASH0 | WASH0 | 4232 | 10 YR | 359.00 | 327.66 | 329.36 | 1.70 | | 329.56 | 0.012611 | 3.53 | 101.74 | 130.28 | 0.70 |
| WASH0 | WASH0 | 3967.23 | 10 YR | 359.00 | 324.40 | 325.77 | 1.37 | | 325.93 | 0.015010 | 3.26 | 110.28 | 182.09 | 0.74 |

HEC-RAS Plan: Plan 03 Profile: 10 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH0 | WASH0 | 3612.08 | 10 YR | 359.00 | 319.18 | 320.29 | 1.29 | 320.21 | 320.42 | 0.019544 | 2.89 | 124.33 | 299.67 | 0.79 |
| WASH0 | WASH0 | 3138.34 | 10 YR | 359.00 | 310.27 | 311.46 | 1.79 | 311.46 | 311.65 | 0.032033 | 3.50 | 102.60 | 268.54 | 1.00 |
| WASH0 | WASH0 | 2622.49 | 10 YR | 359.00 | 300.88 | 302.07 | 1.19 | | 302.16 | 0.018304 | 2.42 | 148.38 | 443.88 | 0.74 |
| WASH0 | WASH0 | 2197.73 | 10 YR | 359.00 | 292.25 | 293.46 | 1.21 | | 293.59 | 0.015436 | 2.84 | 126.59 | 262.65 | 0.72 |
| WASH0 | WASH0 | 1740.94 | 10 YR | 359.00 | 284.60 | 285.64 | 1.04 | 285.55 | 285.79 | 0.017291 | 3.10 | 115.65 | 227.93 | 0.77 |
| WASH0 | WASH0 | 1270.27 | 10 YR | 359.00 | 276.04 | 277.38 | 1.34 | 277.25 | 277.55 | 0.014749 | 3.32 | 108.05 | 170.84 | 0.74 |
| WASH0 | WASH0 | 767.81 | 10 YR | 359.00 | 266.47 | 267.99 | 1.52 | 267.96 | 268.33 | 0.022839 | 4.63 | 77.46 | 103.11 | 0.94 |
| WASH0 | WASH0 | 133.33 | 10 YR | 359.00 | 252.81 | 254.10 | 1.29 | 253.82 | 254.23 | 0.015303 | 2.91 | 123.28 | 244.35 | 0.72 |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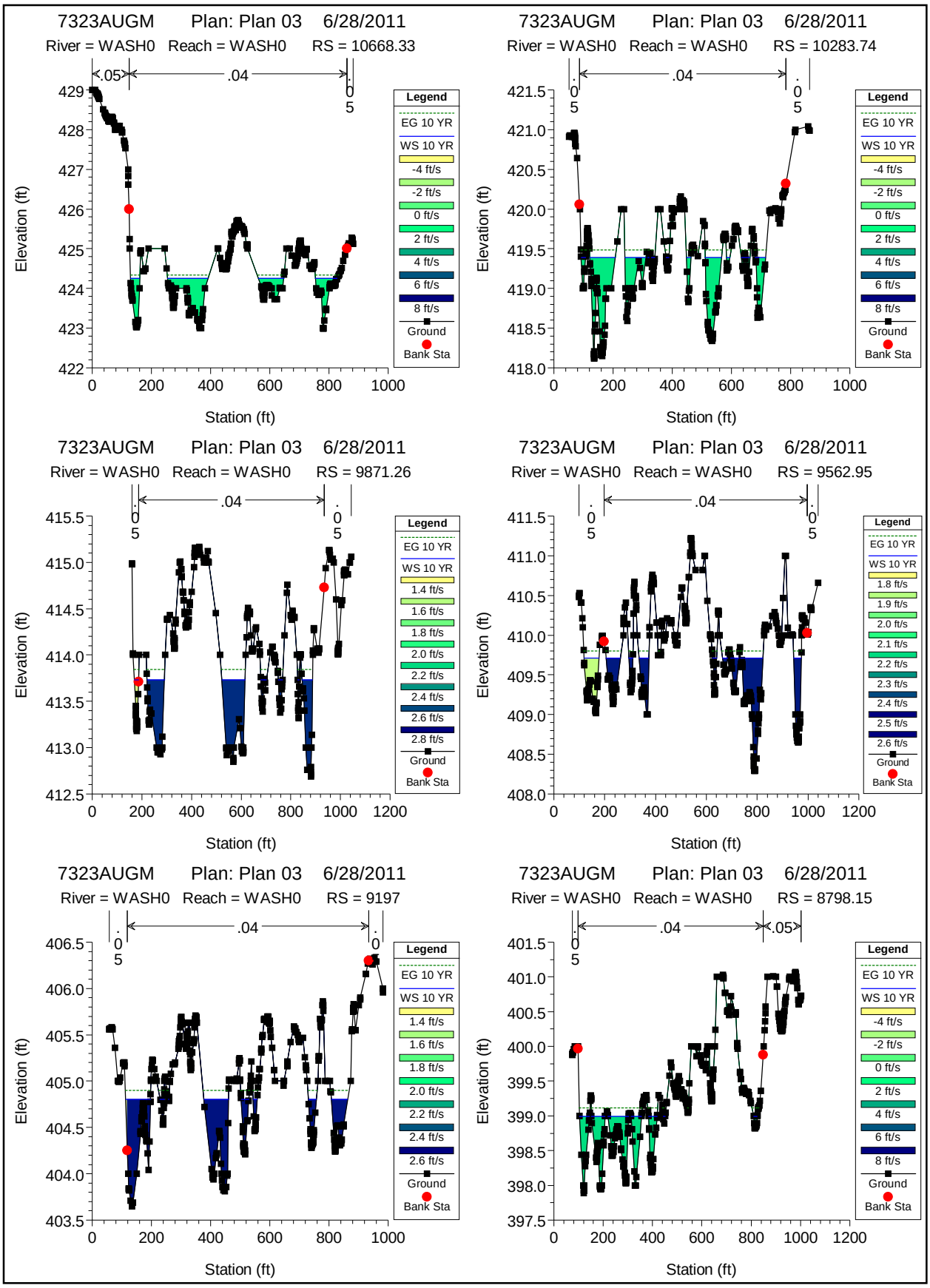
River = WASH0 Reach = WASH0 RS = 12718.16
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12391.48
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12095.14
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11801.24
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
3.0 ft/s
3.2 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11434.21
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11096.81
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)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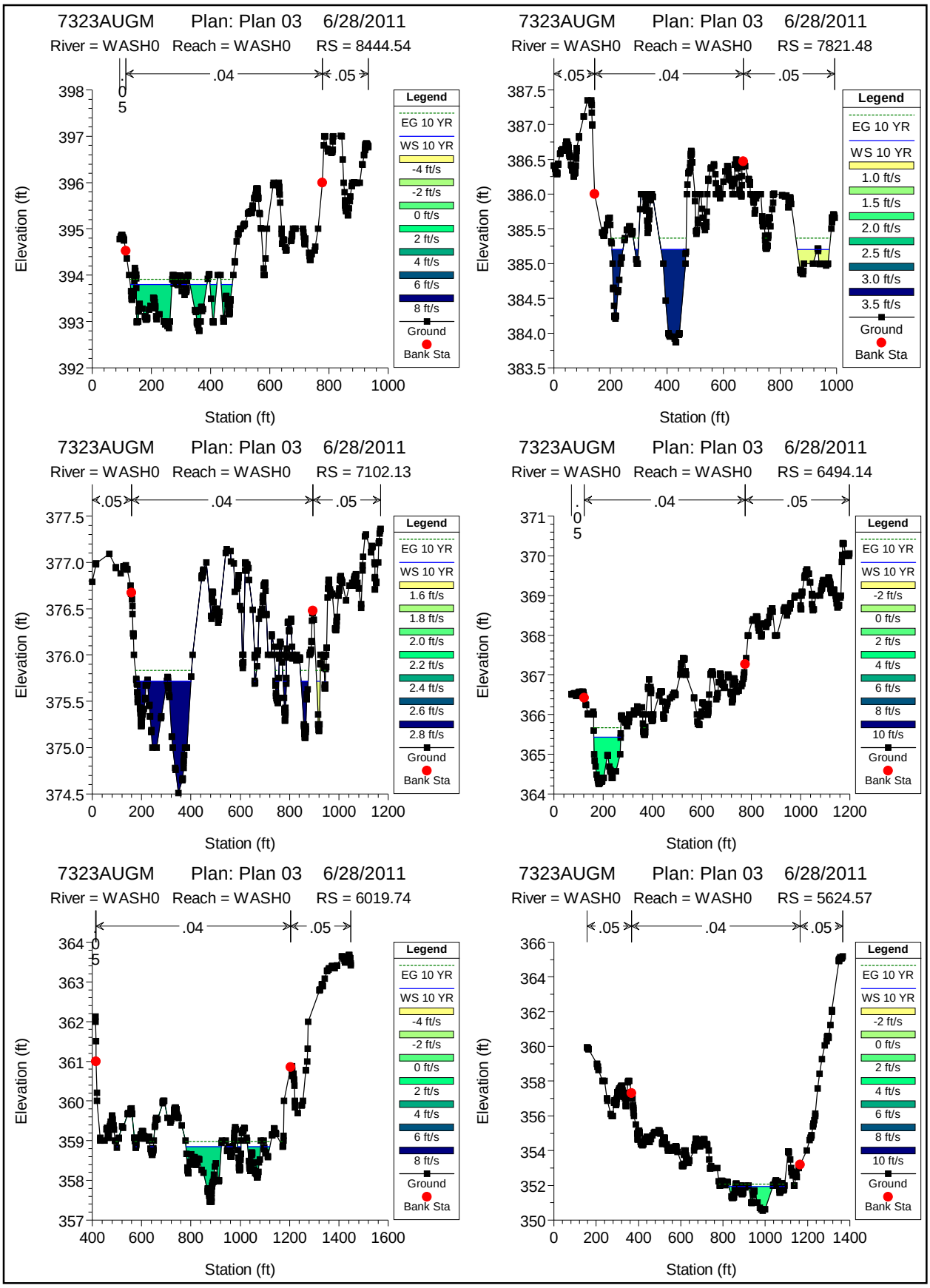
River = WASH0 Reach = WASH0 RS = 10668.33
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10283.74
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9871.26
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9562.95
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.8 ft/s
1.9 ft/s
2.0 ft/s
2.1 ft/s
2.2 ft/s
2.3 ft/s
2.4 ft/s
2.5 ft/s
2.6 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9197
.05
.04
.0
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8798.15
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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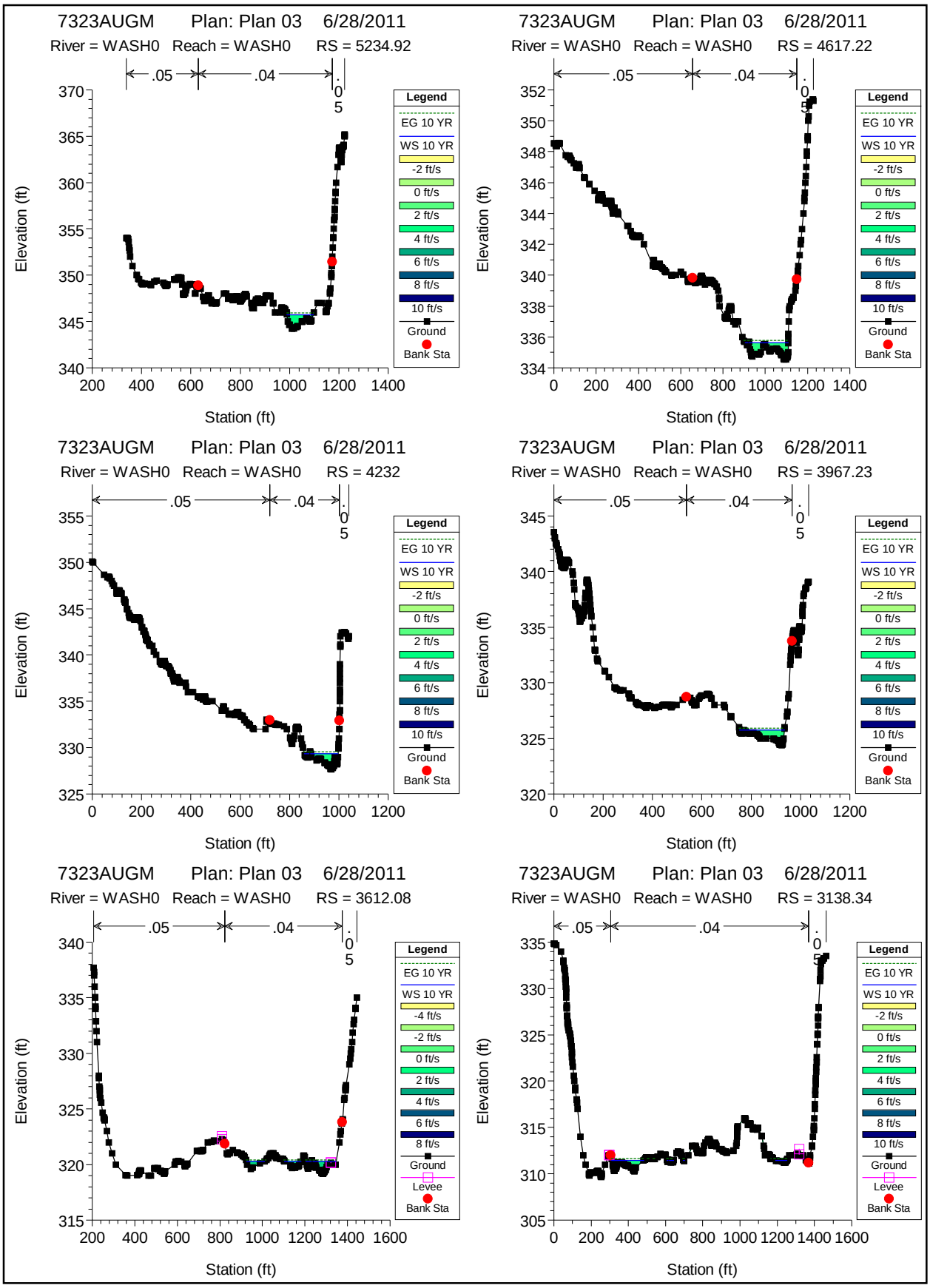
River = WASH0 Reach = WASH0 RS = 8444.54
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7821.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7102.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
2.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6494.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6019.74
.04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5624.57
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta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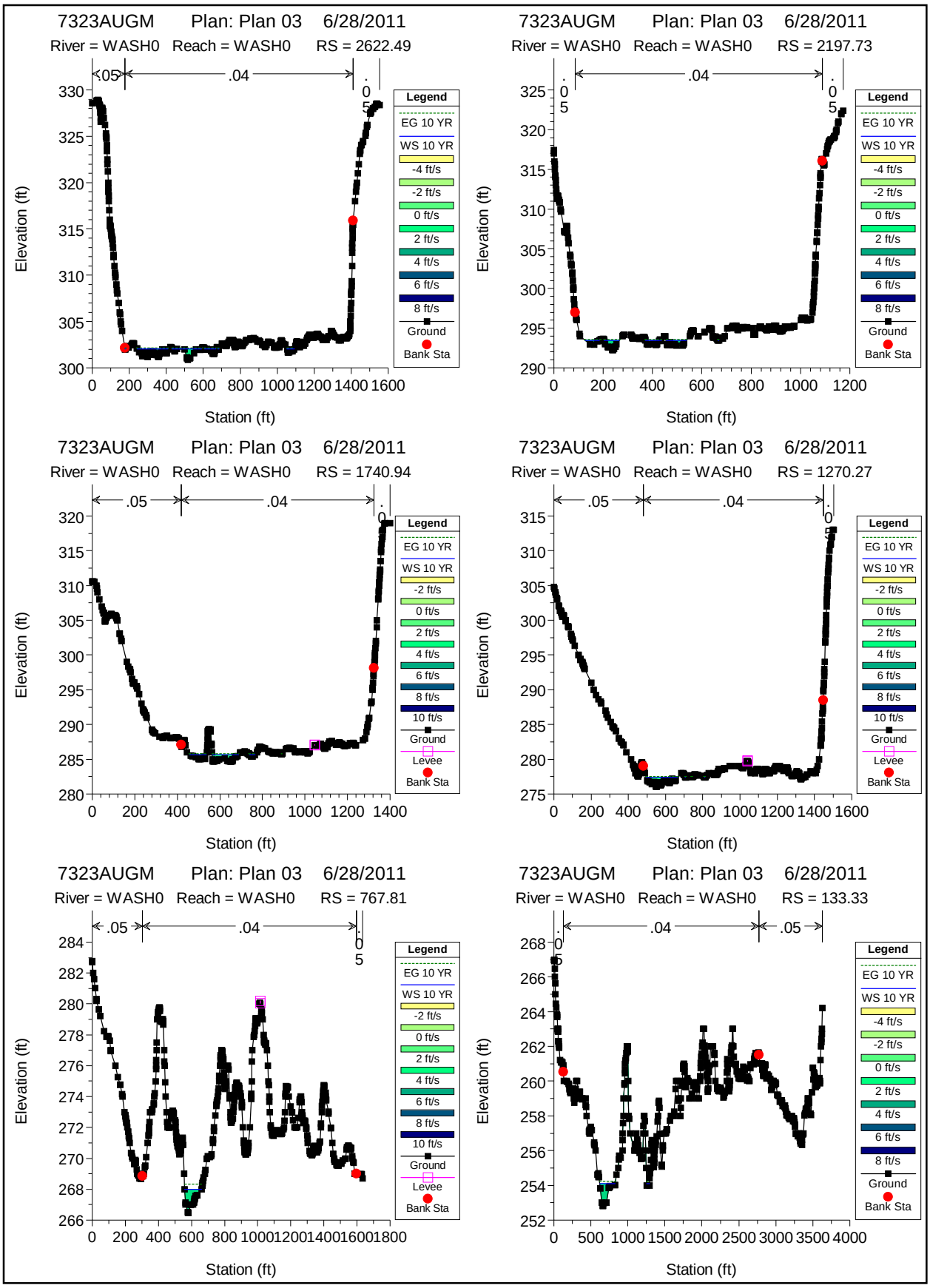
River = WASH0 Reach = WASH0 RS = 5234.92
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4617.22
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4232
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3967.23
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3612.08
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3138.34
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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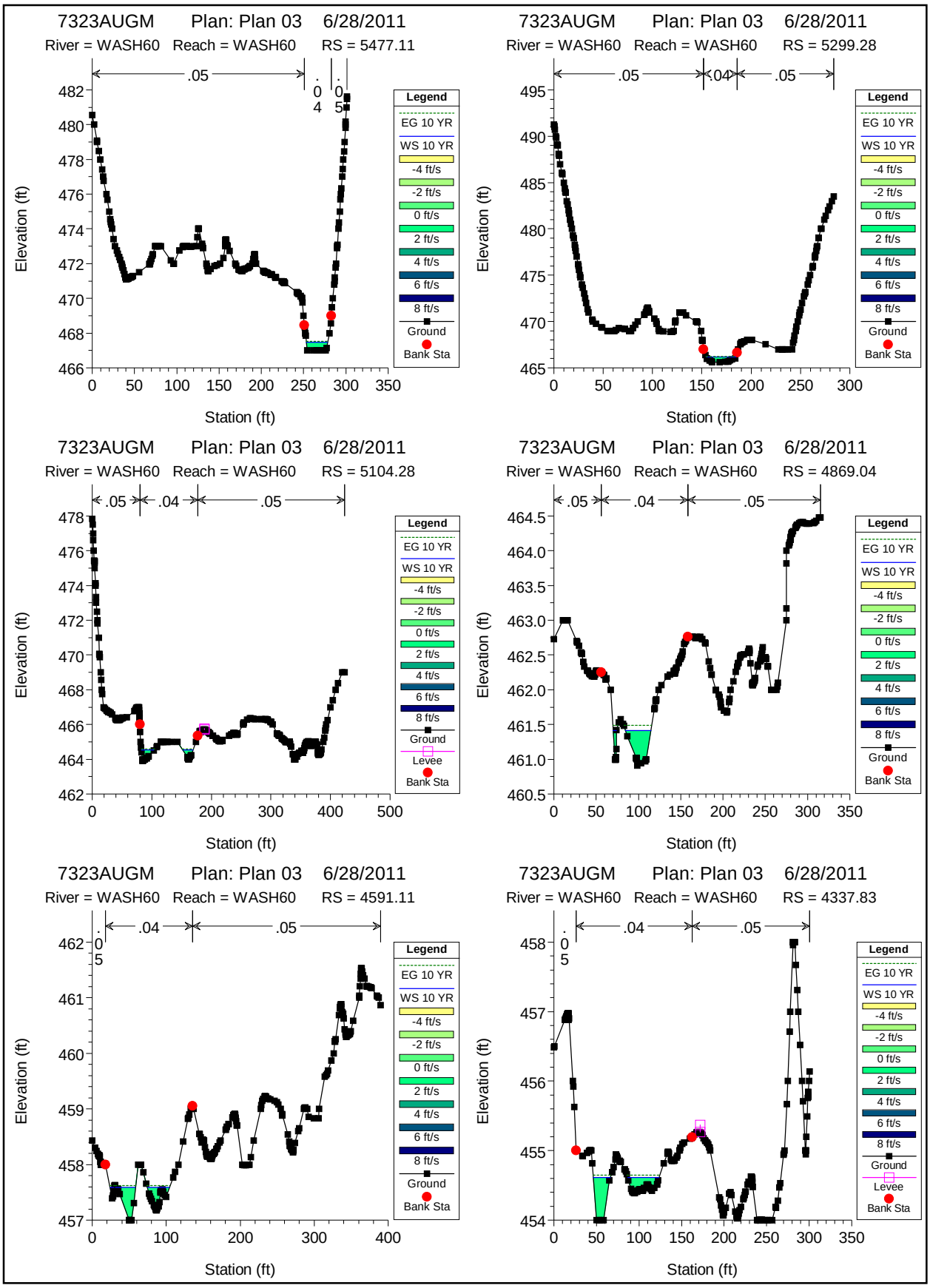
River = WASH0 Reach = WASH0 RS = 2622.49
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 2197.73
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1740.94
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1270.27
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 767.81
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 133.33
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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.05
.04
.05
Elevation (ft)
Station (ft)
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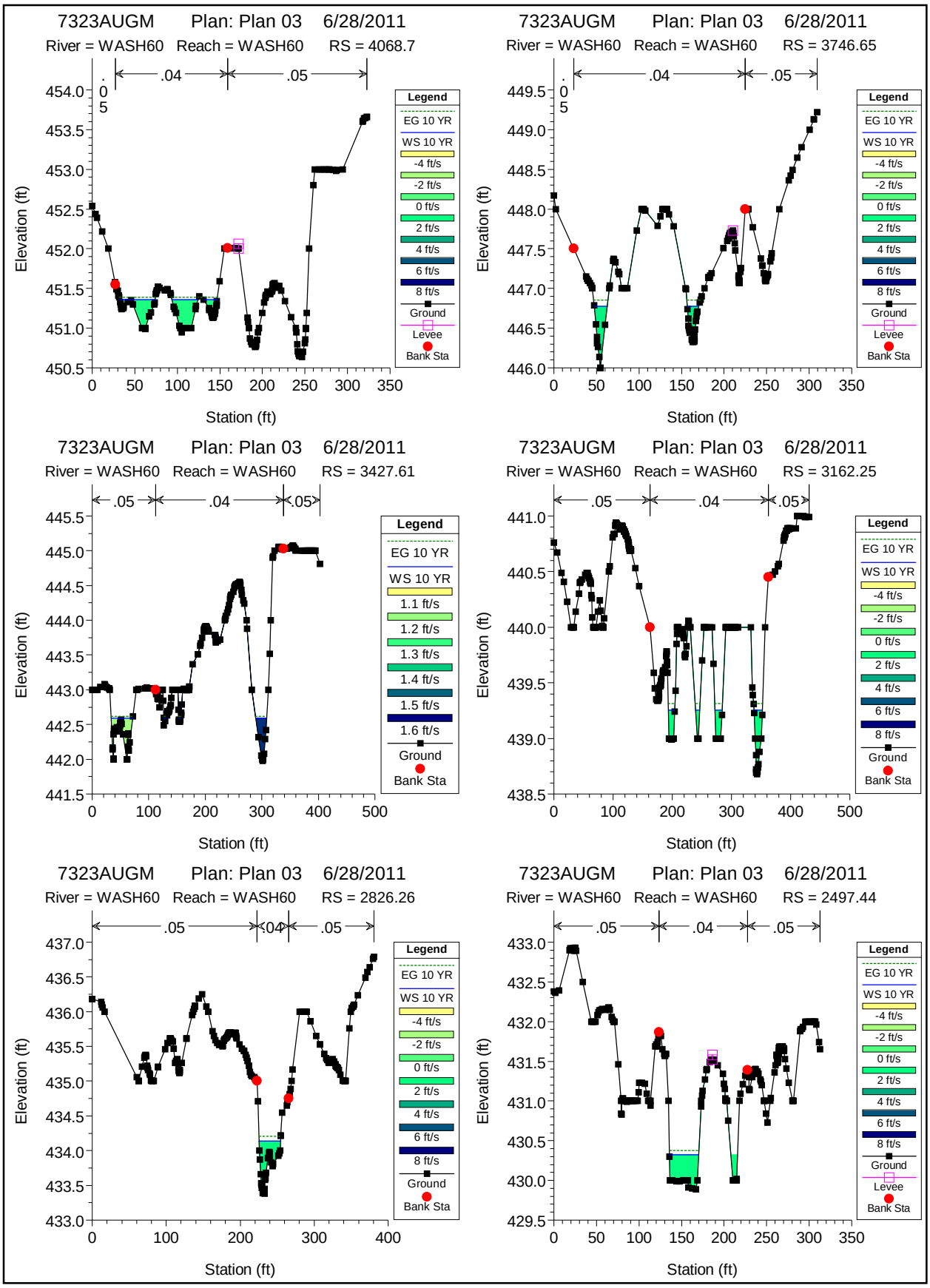
River = WASH60 Reach = WASH60 RS = 5299.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5104.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4869.04
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4591.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4337.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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River = WASH60 Reach = WASH60 RS = 4068.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3746.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3427.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
1.1 ft/s
1.2 ft/s
1.3 ft/s
1.4 ft/s
1.5 ft/s
1.6 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3162.25
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2826.26
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2497.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
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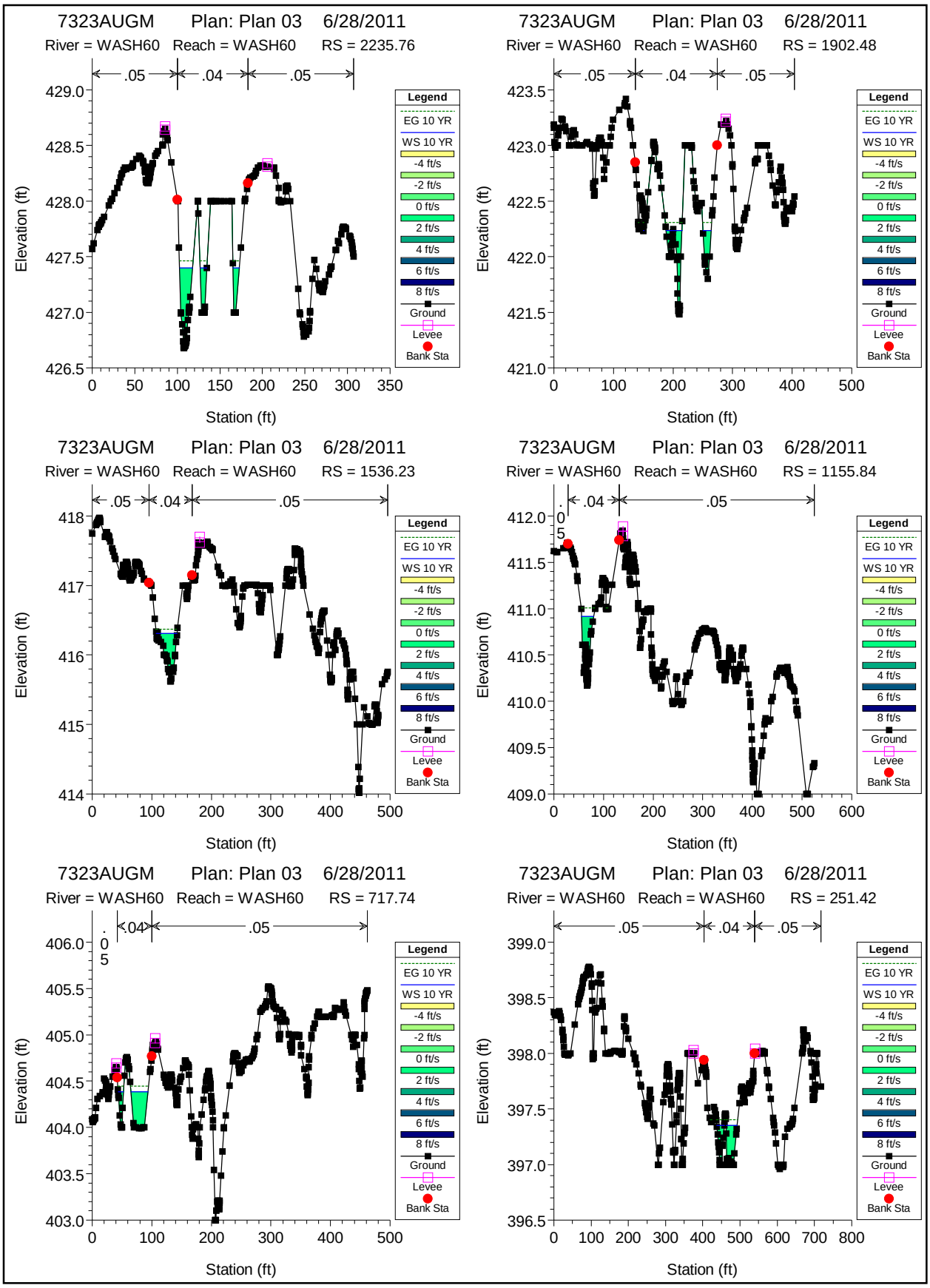
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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Elevation (ft)
Station (ft)
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River = WASH60 Reach = WASH60 RS = 1902.48
.05 .04 .05
Elevation (ft)
Station (ft)
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River = WASH60 Reach = WASH60 RS = 1536.23
.05 .04 .05
Elevation (ft)
Station (ft)
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River = WASH60 Reach = WASH60 RS = 1155.84
.05 .04 .05
Elevation (ft)
Station (ft)
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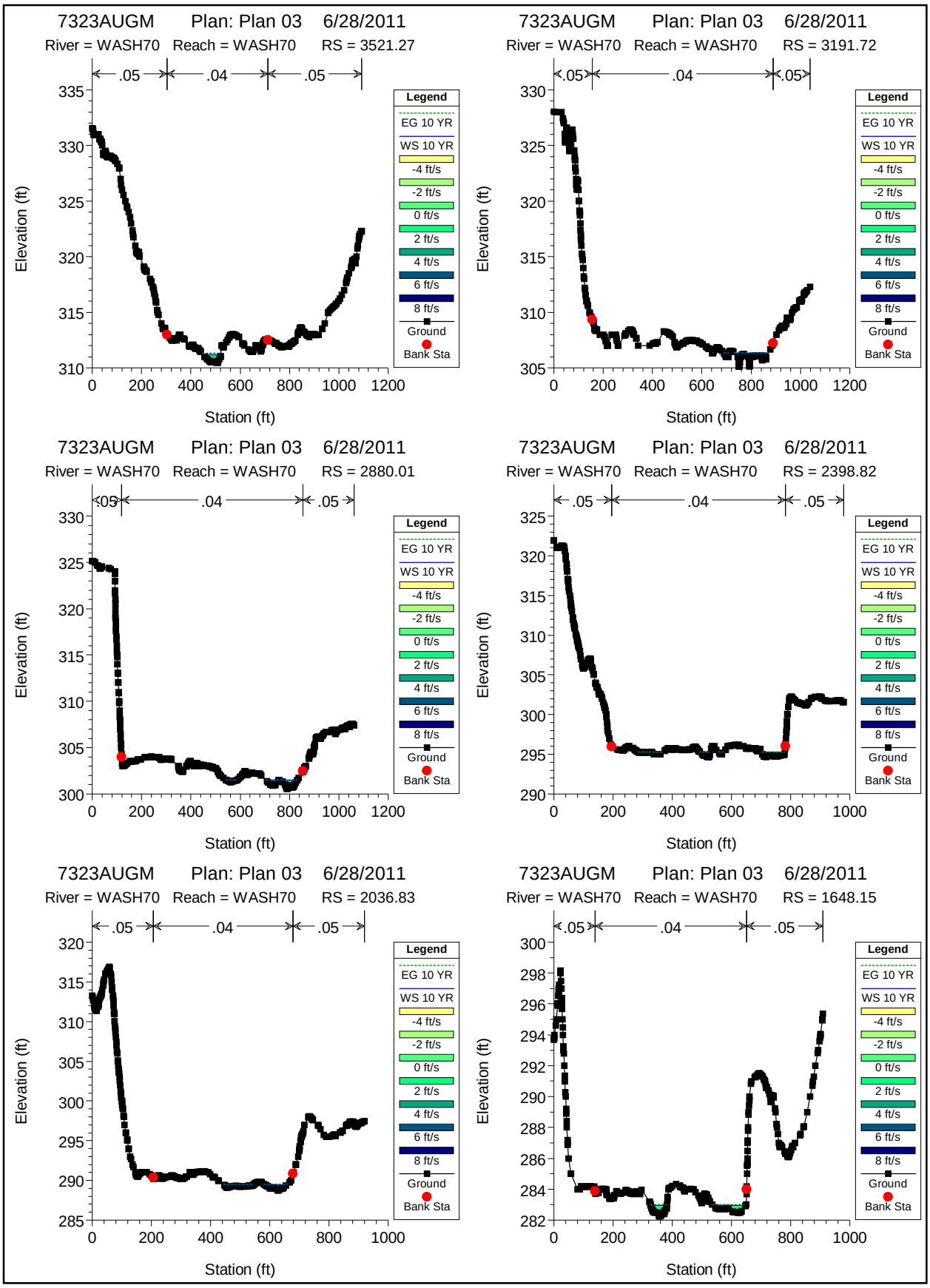
River = WASH60 Reach = WASH60 RS = 717.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 251.42
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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Elevation (ft)
Station (ft)
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River = WASH70 Reach = WASH70 RS = 3191.72
.05 .04 .05
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River = WASH70 Reach = WASH70 RS = 2880.01
.05 .04 .05
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River = WASH70 Reach = WASH70 RS = 2398.82
.05 .04 .05
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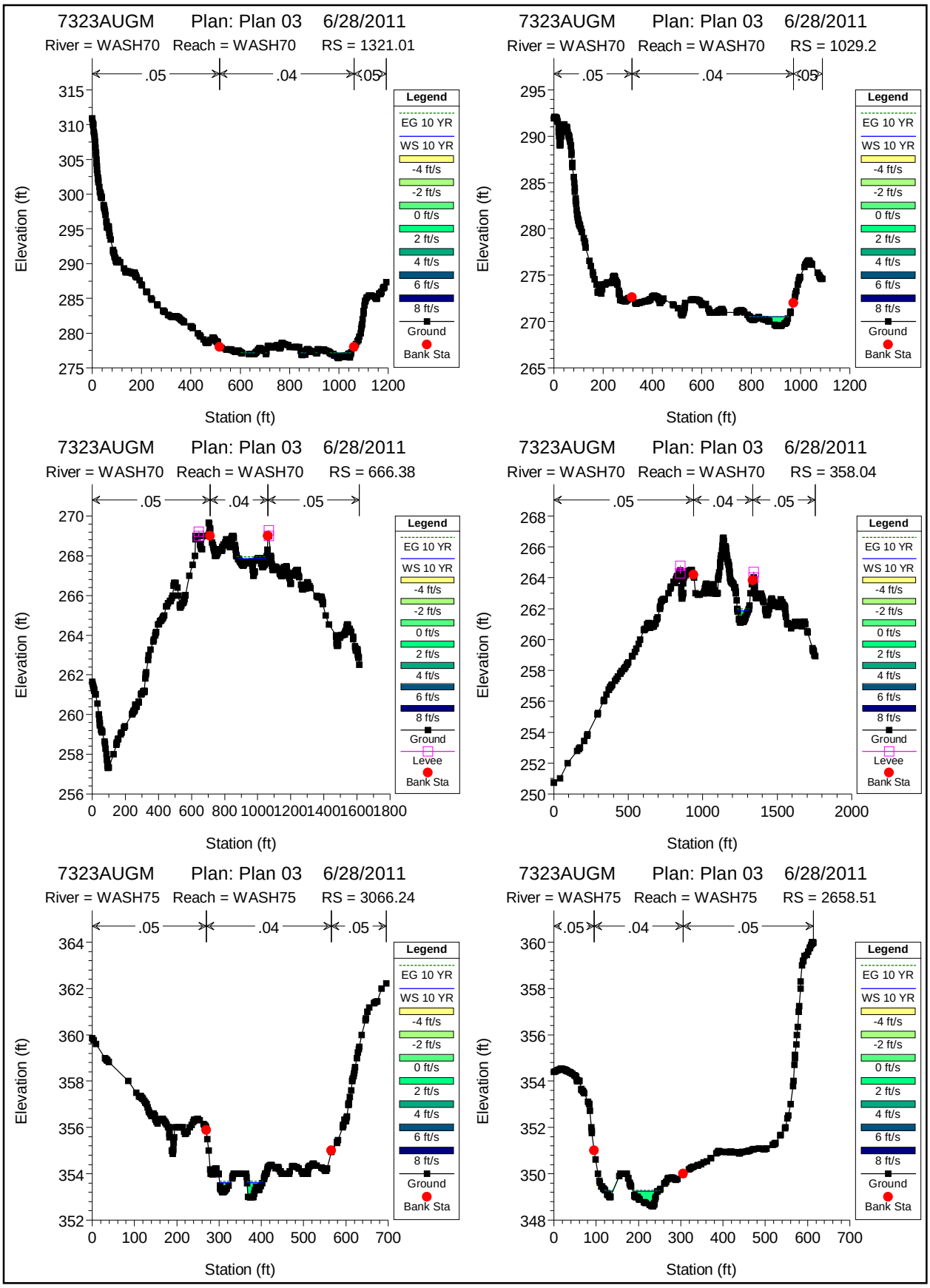
River = WASH70 Reach = WASH70 RS = 2036.83
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1648.15
.05 .04 .05
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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Elevation (ft)
Station (ft)
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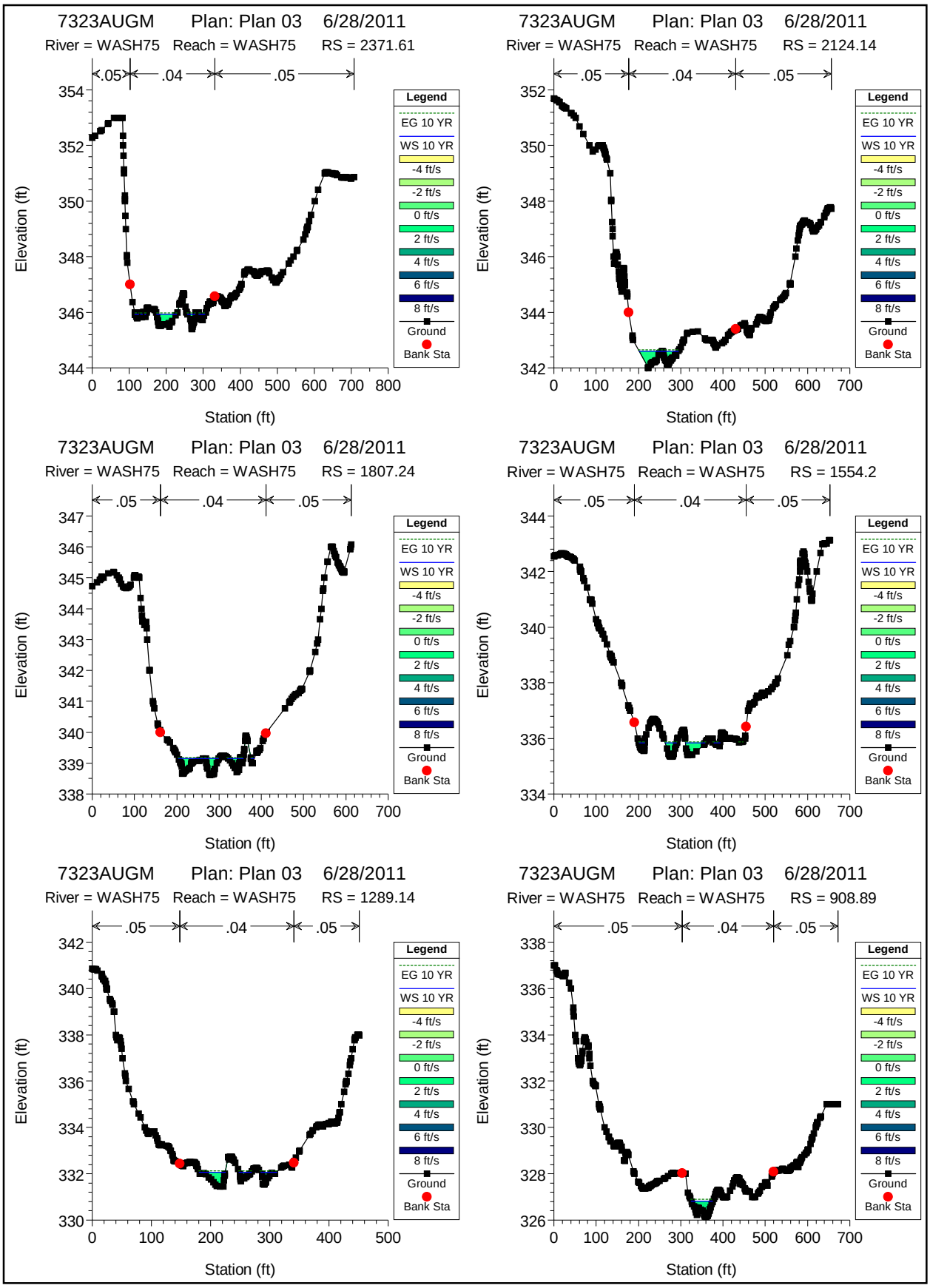
River = WASH70 Reach = WASH70 RS = 1029.2
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 666.38
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 358.04
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 3066.24
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2658.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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Station (ft)
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WS 10 YR
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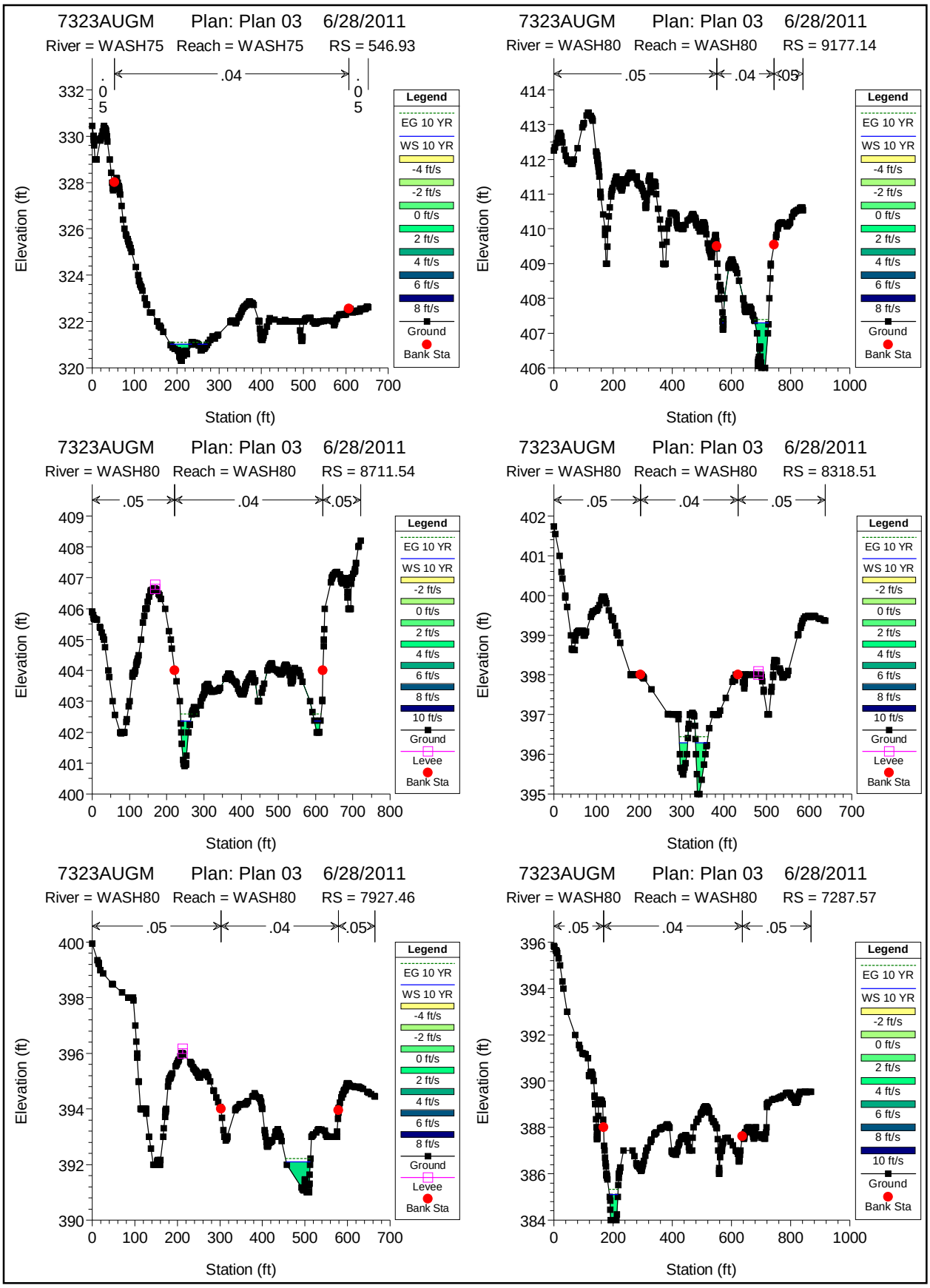
6 ft/s
8 ft/s
Ground
Bank Sta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Legend
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WS 10 YR
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-2 ft/s
0 ft/s
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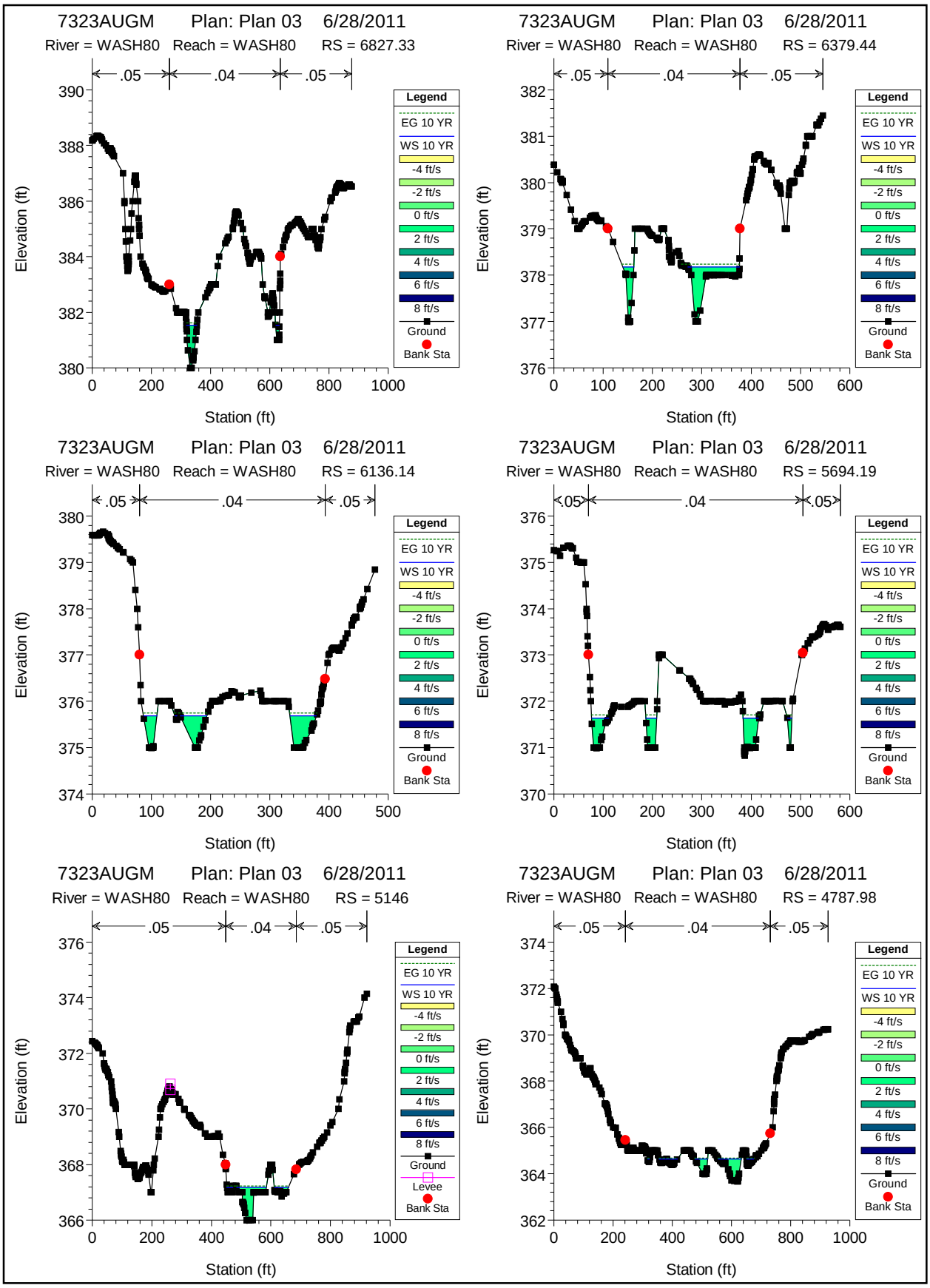
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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Station (ft)
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Station (ft)
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Station (ft)
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Station (ft)
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Station (ft)
Legend
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WS 10 YR
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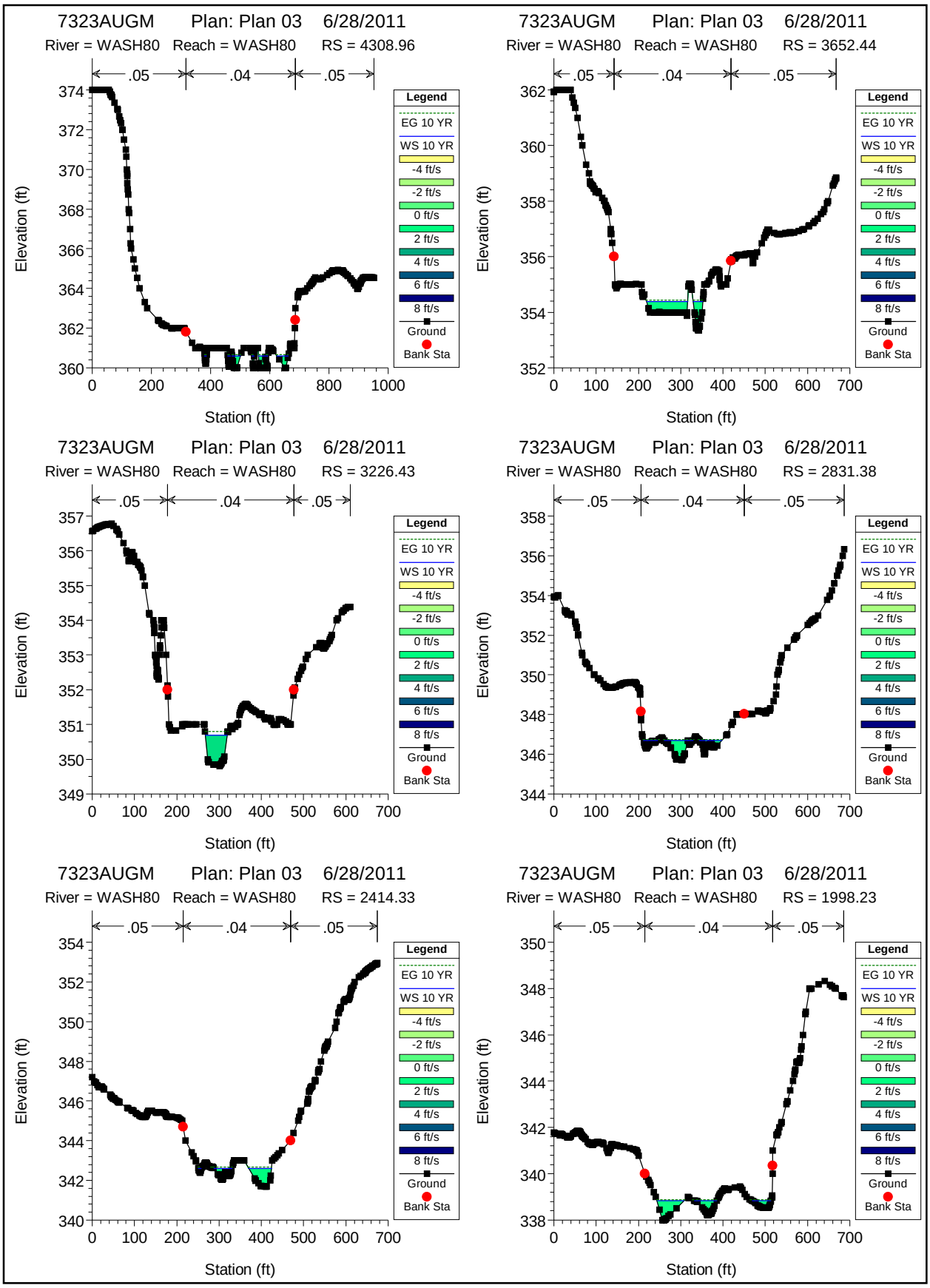
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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7323AUGM Plan: Plan 03 6/28/2011
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7323AUGM Plan: Plan 03 6/28/2011
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7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2414.33
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.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
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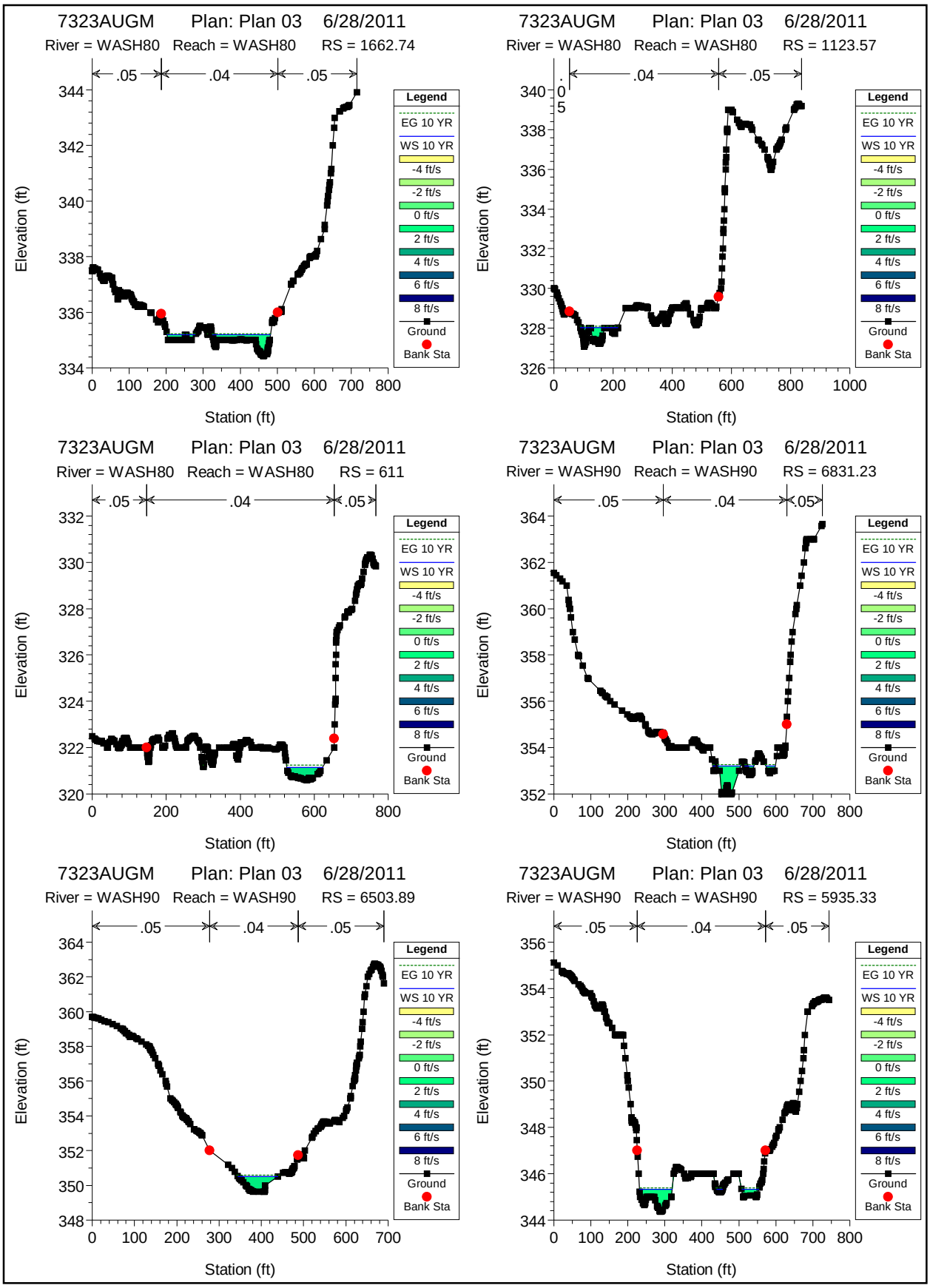
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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7323AUGM Plan: Plan 03 6/28/2011
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Legend
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WS 10 YR
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-2 ft/s
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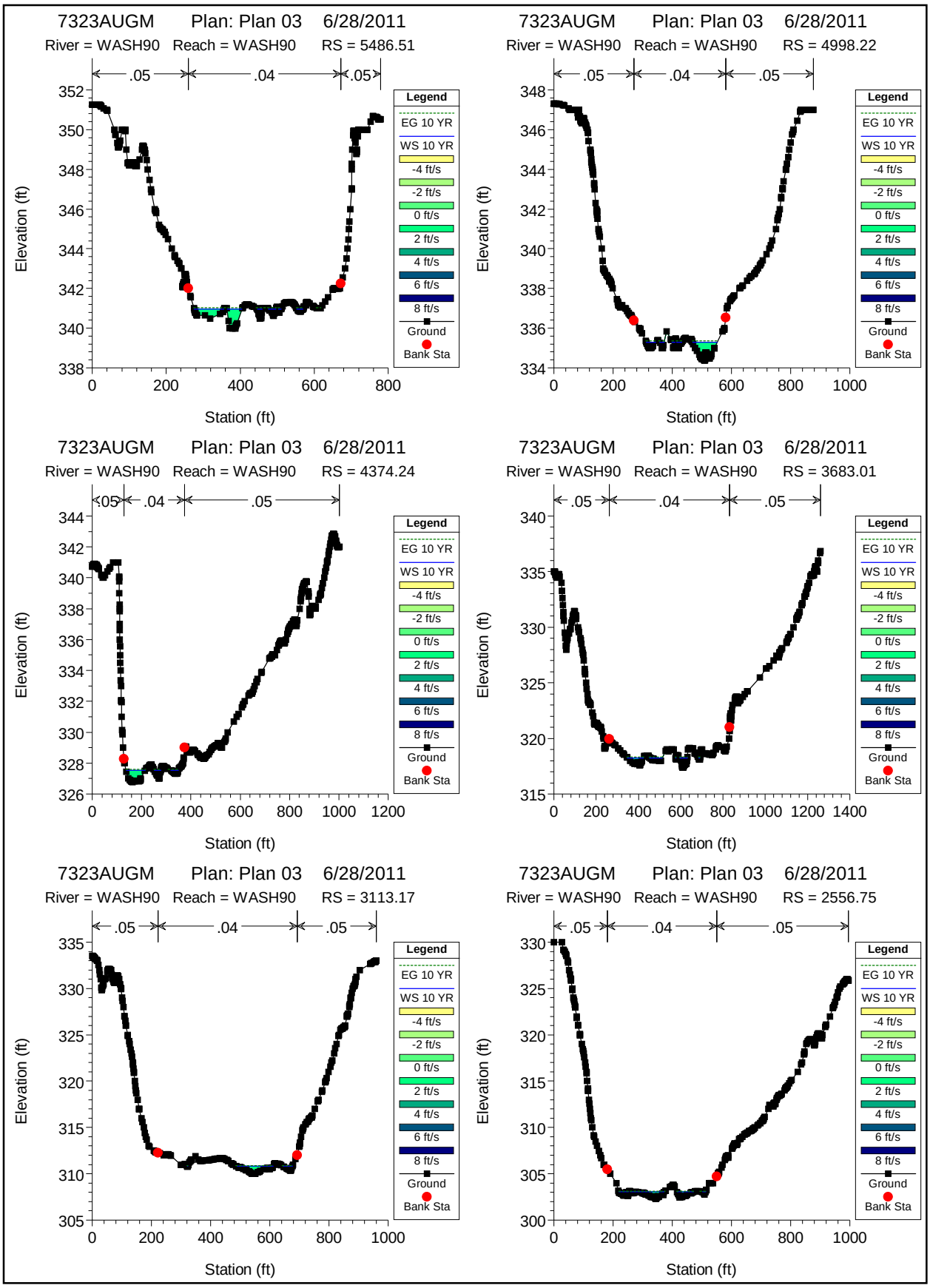
8 ft/s
Ground
Bank Sta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Station (ft)
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Station (ft)
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Station (ft)
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Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
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Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2556.75
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
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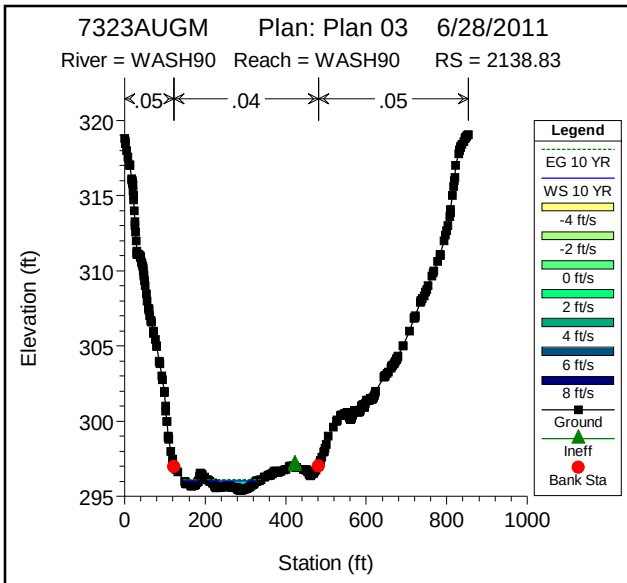
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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.04
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Elevation (ft)
Station (ft)
Legend
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WS 10 YR
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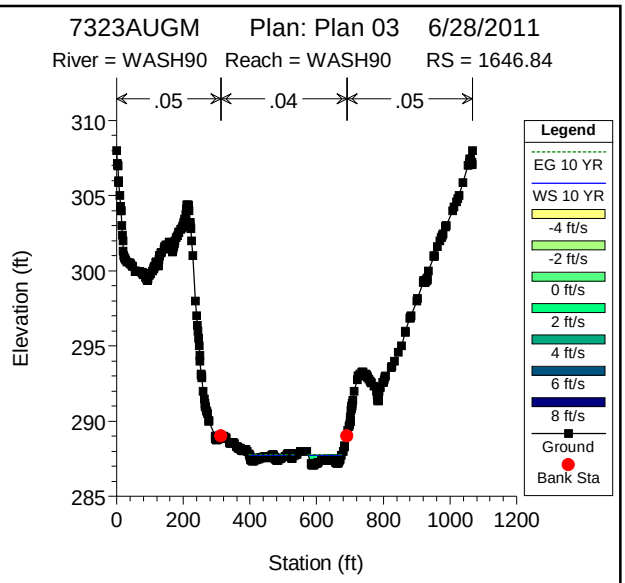
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Ineff
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1646.84
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.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
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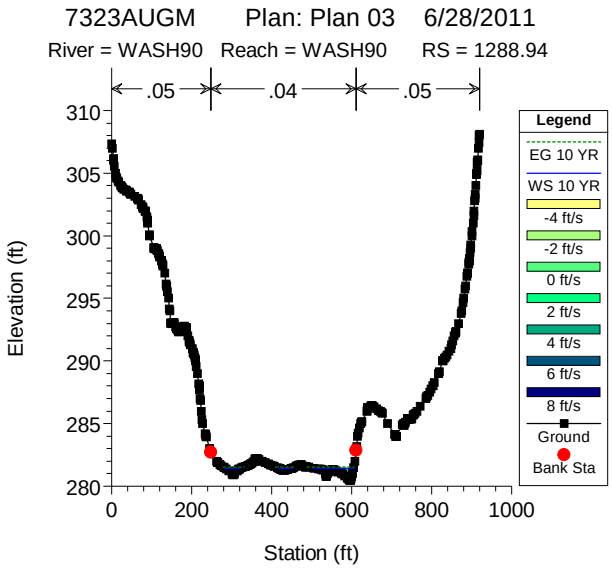
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1288.94
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.04
.05
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
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-2 ft/s
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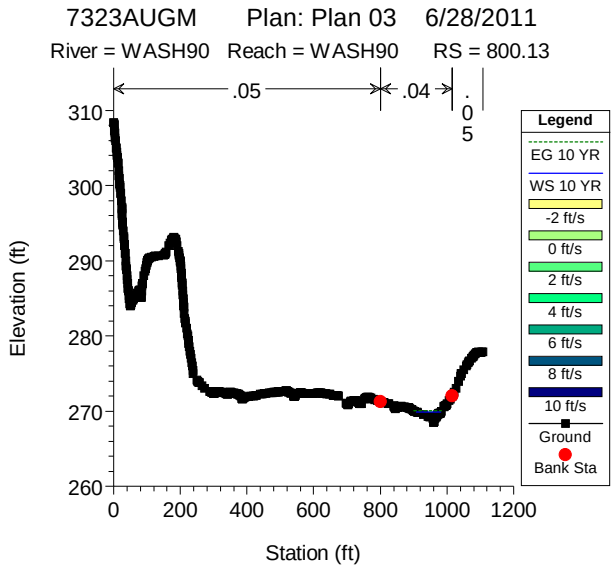
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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.04
Elevation (ft)
Station (ft)
Legend
EG 10 YR
WS 10 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

# APPENDIX F:

## iv. HEC-RAS report 24-Hour, 5-Year Storm

HEC-RAS Plan: Plan 07 Profile: 5 YR

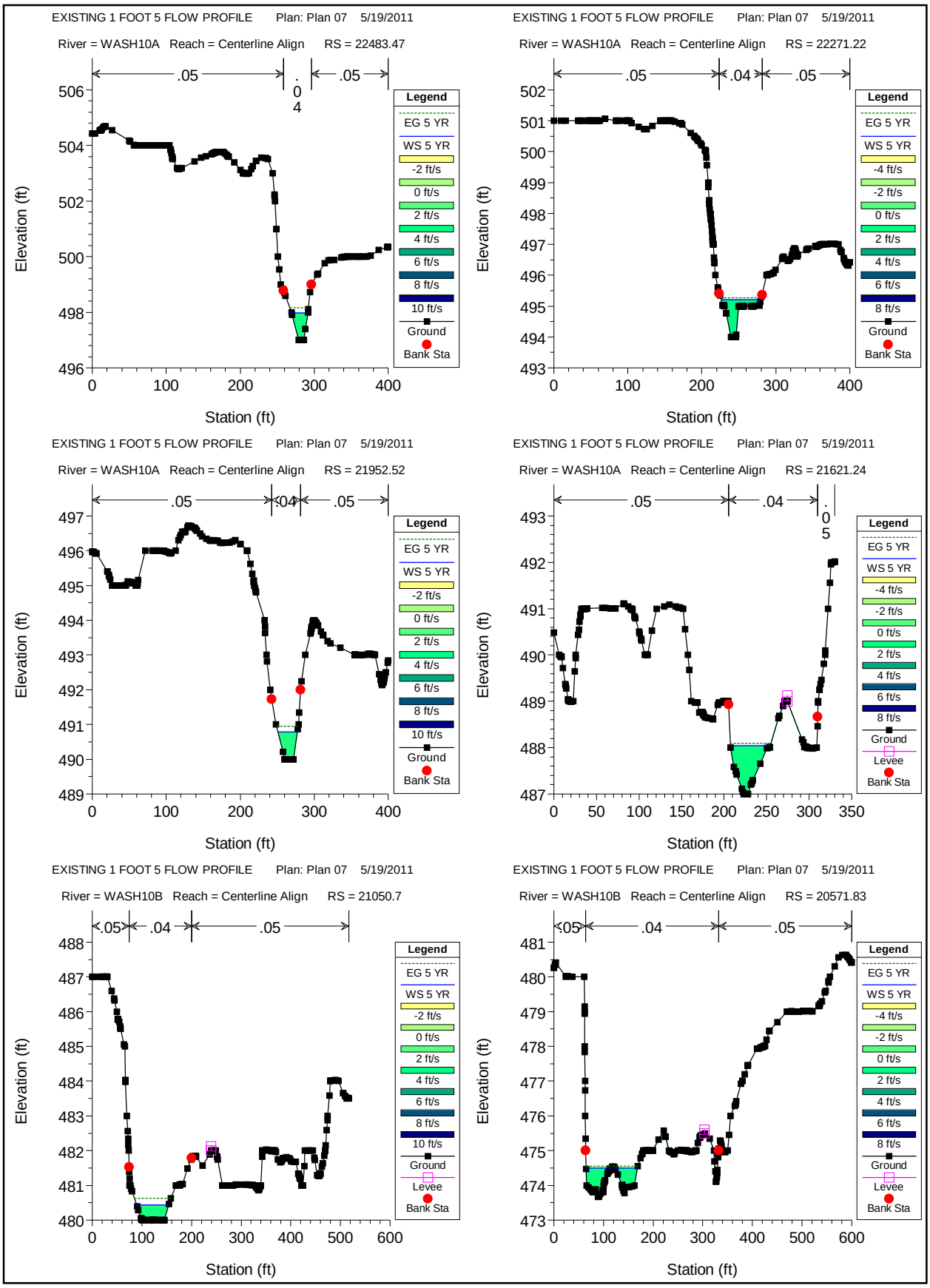
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH5 | Center Line Wash | 2398.41 | 5 YR | 140.45 | 457.00 | 458.61 | 458.20 | 458.71 | 0.005104 | 2.47 | 56.85 | 63.15 | 0.46 |
| WASH5 | Center Line Wash | 2138.83 | 5 YR | 140.45 | 454.99 | 455.72 | 455.72 | 456.04 | 0.029502 | 4.52 | 31.10 | 51.92 | 1.03 |
| WASH5 | Center Line Wash | 1728.1 | 5 YR | 140.45 | 450.99 | 452.10 | 451.69 | 452.16 | 0.004194 | 1.98 | 71.07 | 95.21 | 0.40 |
| WASH5 | Center Line Wash | 1400 | 5 YR | 140.45 | 447.98 | 448.90 | 448.90 | 449.17 | 0.031977 | 4.15 | 33.81 | 68.25 | 1.04 |
| WASH5 | Center Line Wash | 1040.76 | 5 YR | 140.45 | 443.98 | 444.87 | 444.53 | 444.94 | 0.005427 | 2.13 | 65.83 | 95.41 | 0.45 |
| WASH5 | Center Line Wash | 676.61 | 5 YR | 140.45 | 439.98 | 440.79 | 440.79 | 441.09 | 0.028264 | 4.41 | 31.86 | 53.65 | 1.01 |
| WASH45 | Centerline Align | 5500 | 5 YR | 1843.41 | 340.89 | 342.92 | 342.57 | 343.10 | 0.007686 | 3.43 | 549.74 | 537.58 | 0.58 |
| WASH45 | Centerline Align | 4744.3 | 5 YR | 1843.41 | 333.99 | 336.75 | 336.45 | 336.89 | 0.008802 | 2.98 | 617.62 | 778.21 | 0.59 |
| WASH45 | Centerline Align | 4000 | 5 YR | 1843.41 | 329.00 | 331.17 | | 331.24 | 0.006586 | 2.18 | 844.64 | 1370.62 | 0.49 |
| WASH45 | Centerline Align | 3500 | 5 YR | 1843.41 | 324.90 | 326.37 | 326.22 | 326.55 | 0.014345 | 3.37 | 547.28 | 830.25 | 0.73 |
| WASH45 | Centerline Align | 3000 | 5 YR | 1843.41 | 318.94 | 321.81 | | 321.95 | 0.006373 | 2.94 | 626.66 | 633.38 | 0.52 |
| WASH45 | Centerline Align | 2500 | 5 YR | 1843.41 | 314.98 | 318.13 | | 318.24 | 0.008733 | 2.66 | 692.80 | 1031.00 | 0.57 |
| WASH45 | Centerline Align | 2000 | 5 YR | 1843.41 | 312.00 | 314.13 | | 314.24 | 0.007365 | 2.64 | 697.37 | 923.06 | 0.54 |
| WASH45 | Centerline Align | 1500 | 5 YR | 1843.41 | 308.00 | 309.90 | | 310.06 | 0.009545 | 3.19 | 578.67 | 702.92 | 0.62 |
| WASH45 | Centerline Align | 1000 | 5 YR | 1843.41 | 303.95 | 305.73 | | 305.87 | 0.007417 | 3.01 | 611.53 | 668.09 | 0.56 |
| WASH45 | Centerline Align | 378.44 | 5 YR | 1843.41 | 298.95 | 300.65 | 300.36 | 300.81 | 0.009004 | 3.24 | 568.83 | 642.76 | 0.61 |
| WASH40 | Centerline Align | 10653.2 | 5 YR | 1435.73 | 375.98 | 379.40 | 379.05 | 379.55 | 0.008137 | 3.10 | 462.51 | 516.45 | 0.58 |
| WASH40 | Centerline Align | 10033.98 | 5 YR | 1435.73 | 371.98 | 375.36 | | 375.50 | 0.005356 | 2.99 | 479.90 | 415.06 | 0.49 |
| WASH40 | Centerline Align | 9616.88 | 5 YR | 1435.73 | 370.00 | 372.07 | 371.68 | 372.29 | 0.011954 | 3.75 | 382.63 | 429.45 | 0.70 |
| WASH40 | Centerline Align | 8761.12 | 5 YR | 1435.73 | 363.93 | 366.23 | | 366.32 | 0.004518 | 2.40 | 598.73 | 634.15 | 0.43 |
| WASH40 | Centerline Align | 7943.06 | 5 YR | 1435.73 | 357.89 | 359.56 | | 359.78 | 0.017741 | 3.79 | 378.85 | 564.31 | 0.82 |
| WASH40 | Centerline Align | 6943.13 | 5 YR | 1435.73 | 349.05 | 351.70 | | 351.76 | 0.004522 | 1.98 | 725.56 | 1027.45 | 0.41 |
| WASH4 | Wash 4 | 1076.68 | 5 YR | 32.84 | 497.27 | 497.94 | 497.94 | 498.13 | 0.031944 | 3.48 | 9.44 | 24.82 | 0.99 |
| WASH4 | Wash 4 | 813.29 | 5 YR | 32.84 | 492.96 | 493.36 | 493.25 | 493.41 | 0.010624 | 1.79 | 18.33 | 57.17 | 0.56 |
| WASH4 | Wash 4 | 573.28 | 5 YR | 32.84 | 488.79 | 489.17 | 489.17 | 489.25 | 0.033150 | 2.23 | 14.71 | 77.56 | 0.90 |
| WASH4 | Wash 4 | 333.76 | 5 YR | 32.84 | 483.99 | 485.11 | 484.61 | 485.13 | 0.002002 | 1.17 | 28.07 | 47.44 | 0.27 |
| WASH35 | Centerline Align | 5246.65 | 5 YR | 183.81 | 388.76 | 390.13 | 389.73 | 390.25 | 0.012437 | 2.88 | 63.86 | 109.97 | 0.67 |
| WASH35 | Centerline Align | 4965.62 | 5 YR | 183.81 | 386.87 | 388.23 | | 388.31 | 0.004361 | 2.24 | 82.17 | 94.12 | 0.42 |
| WASH35 | Centerline Align | 4493.91 | 5 YR | 183.81 | 383.92 | 384.60 | 384.49 | 384.76 | 0.015800 | 3.16 | 58.10 | 104.08 | 0.75 |
| WASH35 | Centerline Align | 4063.78 | 5 YR | 183.81 | 379.98 | 381.48 | | 381.55 | 0.004297 | 2.13 | 86.10 | 104.73 | 0.41 |
| WASH35 | Centerline Align | 3661.61 | 5 YR | 183.81 | 377.65 | 378.39 | | 378.50 | 0.016711 | 2.69 | 68.41 | 163.31 | 0.73 |
| WASH35 | Centerline Align | 3000 | 5 YR | 183.81 | 371.96 | 372.97 | | 373.04 | 0.004880 | 2.15 | 85.44 | 112.49 | 0.44 |
| WASH35 | Centerline Align | 2500 | 5 YR | 183.81 | 367.85 | 368.66 | | 368.83 | 0.017897 | 3.28 | 56.07 | 104.25 | 0.79 |
| WASH35 | Centerline Align | 2000 | 5 YR | 183.81 | 363.88 | 364.68 | 364.39 | 364.73 | 0.004616 | 1.81 | 101.45 | 166.57 | 0.41 |
| WASH35 | Centerline Align | 1600 | 5 YR | 183.81 | 359.00 | 360.63 | 360.63 | 361.15 | 0.023498 | 5.75 | 31.96 | 31.07 | 1.00 |
| WASH30 | Centerline Align | 10130.27 | 5 YR | 1.00 | 348.00 | 348.08 | 348.05 | 348.09 | 0.017596 | 0.82 | 1.23 | 18.17 | 0.55 |
| WASH30 | Centerline Align | 9500 | 5 YR | 1.00 | 344.00 | 344.22 | 344.10 | 344.22 | 0.003078 | 0.32 | 3.17 | 52.99 | 0.23 |
| WASH30 | Centerline Align | 9000 | 5 YR | 1.00 | 339.99 | 340.08 | 340.08 | 340.12 | 0.060393 | 1.50 | 0.67 | 9.96 | 1.02 |
| WASH30 | Centerline Align | 8500 | 5 YR | 1.00 | 335.95 | 336.04 | 336.01 | 336.04 | 0.002614 | 0.23 | 4.40 | 106.07 | 0.20 |
| WASH30 | Centerline Align | 8000 | 5 YR | 1.00 | 331.99 | 332.02 | 332.02 | 332.04 | 0.124655 | 1.15 | 0.87 | 33.83 | 1.26 |
| WASH30 | Centerline Align | 7500 | 5 YR | 1.00 | 327.91 | 328.07 | 327.99 | 328.07 | 0.002597 | 0.40 | 2.49 | 25.36 | 0.23 |
| WASH30 | Centerline Align | 7000 | 5 YR | 1.00 | 324.88 | 324.98 | | 324.99 | 0.029065 | 0.87 | 1.15 | 22.58 | 0.68 |
| WASH30 | Centerline Align | 6500 | 5 YR | 1.00 | 319.94 | 320.05 | 320.02 | 320.05 | 0.004923 | 0.32 | 3.15 | 74.04 | 0.27 |

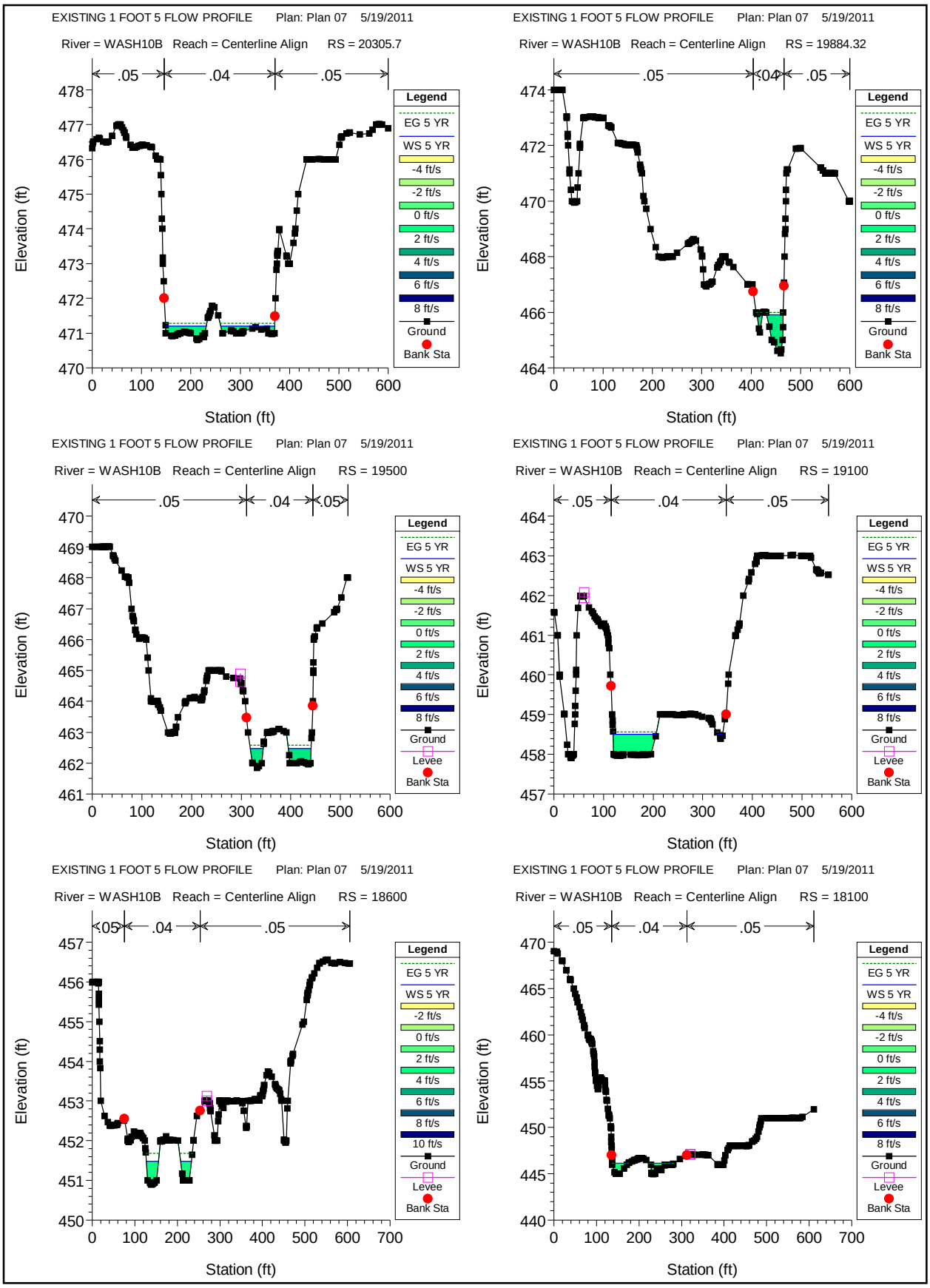
HEC-RAS Plan: Plan 07 Profile: 5 YR (Continued)

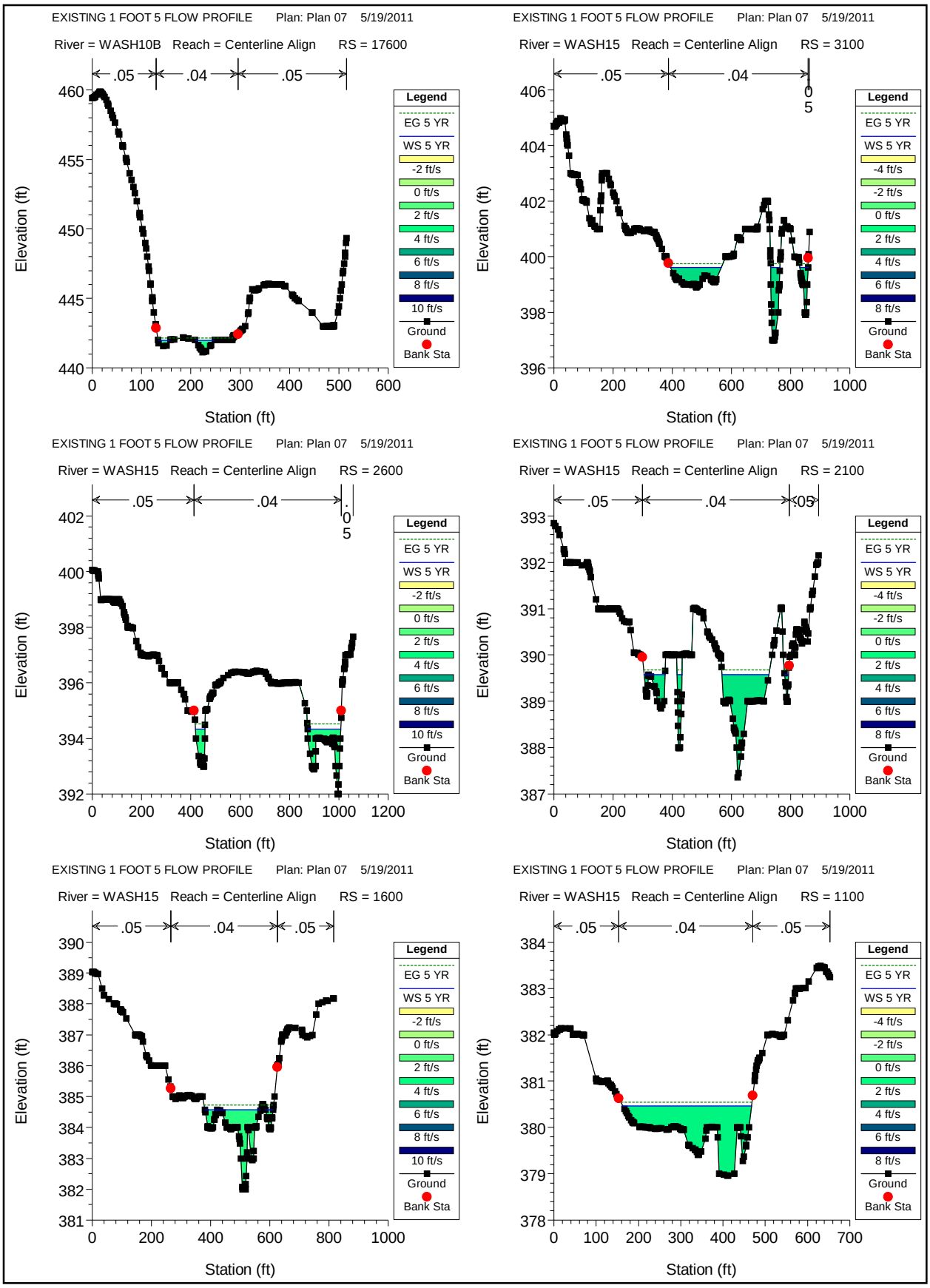
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH30 | Centerline Align | 6000 | 5 YR | 1.00 | 316.28 | 316.41 | | 316.42 | 0.011805 | 0.67 | 1.48 | 21.66 | 0.45 |
| WASH30 | Centerline Align | 5500 | 5 YR | 1.00 | 310.52 | 310.62 | | 310.63 | 0.011318 | 0.69 | 1.44 | 19.69 | 0.45 |
| WASH30 | Centerline Align | 5000 | 5 YR | 1.00 | 306.00 | 306.13 | 306.08 | 306.14 | 0.007299 | 0.72 | 1.39 | 12.96 | 0.39 |
| WASH30 | Centerline Align | 4500 | 5 YR | 1.00 | 302.71 | 302.80 | | 302.81 | 0.006136 | 0.47 | 2.14 | 33.15 | 0.32 |
| WASH30 | Centerline Align | 4000 | 5 YR | 1.00 | 297.96 | 298.02 | 298.01 | 298.03 | 0.016884 | 0.52 | 1.91 | 53.23 | 0.49 |
| WASH30 | Centerline Align | 3500 | 5 YR | 1.00 | 293.44 | 293.57 | 293.52 | 293.57 | 0.005495 | 0.52 | 1.91 | 23.11 | 0.32 |
| WASH30 | Centerline Align | 3000 | 5 YR | 1.00 | 287.97 | 288.03 | 288.02 | 288.04 | 0.032898 | 0.79 | 1.27 | 31.86 | 0.69 |
| WASH30 | Centerline Align | 2500 | 5 YR | 1.00 | 282.22 | 282.37 | 282.31 | 282.38 | 0.005668 | 0.56 | 1.78 | 19.76 | 0.33 |
| WASH30 | Centerline Align | 2000 | 5 YR | 1.00 | 277.99 | 278.03 | 278.02 | 278.03 | 0.015025 | 0.34 | 2.97 | 147.40 | 0.42 |
| WASH30 | Centerline Align | 1343.16 | 5 YR | 1.00 | 269.94 | 270.01 | 270.00 | 270.01 | 0.010098 | 0.30 | 3.37 | 149.87 | 0.35 |
| WASH30 | Centerline Align | 1000 | 5 YR | 1.00 | 265.53 | 265.67 | 265.63 | 265.68 | 0.016241 | 0.78 | 1.29 | 19.42 | 0.53 |
| WASH30 | Centerline Align | 500 | 5 YR | 1.00 | 259.00 | 259.04 | 259.03 | 259.05 | 0.011010 | 0.46 | 2.16 | 52.76 | 0.40 |
| WASH25B | Centerline Align | 6600 | 5 YR | 206.14 | 320.99 | 322.16 | 321.86 | 322.28 | 0.009816 | 2.81 | 73.32 | 109.71 | 0.61 |
| WASH25B | Centerline Align | 6100 | 5 YR | 206.14 | 316.93 | 317.69 | | 317.77 | 0.008273 | 2.24 | 91.90 | 169.64 | 0.54 |
| WASH25B | Centerline Align | 5600 | 5 YR | 206.14 | 310.97 | 312.15 | | 312.26 | 0.015405 | 2.56 | 80.40 | 193.67 | 0.70 |
| WASH25B | Centerline Align | 5100 | 5 YR | 206.14 | 304.99 | 306.09 | | 306.12 | 0.009930 | 1.59 | 130.04 | 463.97 | 0.53 |
| WASH25B | Centerline Align | 4600 | 5 YR | 206.14 | 298.93 | 300.11 | 300.05 | 300.15 | 0.014657 | 1.61 | 127.66 | 593.08 | 0.61 |
| WASH25B | Centerline Align | 4100 | 5 YR | 206.14 | 291.99 | 292.79 | | 292.91 | 0.014310 | 2.78 | 74.06 | 149.26 | 0.70 |
| WASH25B | Centerline Align | 3600 | 5 YR | 206.14 | 285.53 | 286.51 | 286.31 | 286.66 | 0.010979 | 3.13 | 65.95 | 91.56 | 0.65 |
| WASH25B | Centerline Align | 3100 | 5 YR | 206.14 | 280.00 | 280.67 | | 280.75 | 0.012655 | 2.25 | 91.69 | 232.12 | 0.63 |
| WASH25B | Centerline Align | 2600 | 5 YR | 206.14 | 274.65 | 274.47 | | 274.52 | 0.007450 | | 116.13 | 201.69 | 0.00 |
| WASH25B | Centerline Align | 2100 | 5 YR | 206.14 | 268.58 | 269.21 | 269.21 | 269.32 | 0.032430 | 2.79 | 79.50 | 364.97 | 0.95 |
| WASH25B | Centerline Align | 1368.02 | 5 YR | 206.14 | 255.25 | 257.53 | 256.84 | 257.61 | 0.005344 | 2.35 | 87.81 | 106.88 | 0.46 |
| WASH25B | Centerline Align | 600 | 5 YR | 206.14 | 250.34 | 251.52 | 251.39 | 251.63 | 0.012426 | 2.65 | 77.76 | 150.60 | 0.65 |
| WASH25B | Centerline Align | 100 | 5 YR | 206.14 | 245.90 | 246.62 | 246.40 | 246.70 | 0.008003 | 2.23 | 92.64 | 168.46 | 0.53 |
| WASH25A | Centerline Align | 10806.78 | 5 YR | 210.76 | 366.90 | 368.25 | 367.80 | 368.31 | 0.006454 | 1.94 | 108.79 | 207.45 | 0.47 |
| WASH25A | Centerline Align | 10100 | 5 YR | 210.76 | 359.87 | 361.15 | | 361.23 | 0.017531 | 2.20 | 95.59 | 318.08 | 0.71 |
| WASH25A | Centerline Align | 9600 | 5 YR | 210.76 | 354.94 | 355.79 | | 355.84 | 0.007264 | 1.92 | 109.76 | 231.99 | 0.49 |
| WASH25A | Centerline Align | 9100 | 5 YR | 210.76 | 348.87 | 350.12 | 350.07 | 350.20 | 0.019771 | 2.31 | 91.12 | 309.07 | 0.75 |
| WASH25A | Centerline Align | 8600 | 5 YR | 210.76 | 343.00 | 344.38 | 344.21 | 344.43 | 0.007522 | 1.79 | 117.65 | 283.48 | 0.49 |
| WASH25A | Centerline Align | 8100 | 5 YR | 210.76 | 338.00 | 338.90 | 338.79 | 339.07 | 0.016427 | 3.22 | 65.47 | 117.69 | 0.76 |
| WASH25A | Centerline Align | 7600 | 5 YR | 210.76 | 332.89 | 333.68 | | 333.74 | 0.007370 | 2.04 | 103.16 | 200.92 | 0.50 |
| WASH25A | Centerline Align | 7100 | 5 YR | 210.76 | 327.91 | 328.40 | | 328.50 | 0.016109 | 2.49 | 84.57 | 219.98 | 0.71 |
| WASH23 | Wash23 | 3479.12 | 5 YR | 1.00 | 357.86 | 358.02 | 358.02 | 358.05 | 0.038901 | 1.44 | 0.69 | 7.97 | 0.86 |
| WASH23 | Wash23 | 3038.38 | 5 YR | 1.00 | 353.21 | 353.42 | 353.33 | 353.42 | 0.004358 | 0.54 | 1.85 | 17.97 | 0.30 |
| WASH23 | Wash23 | 2630.84 | 5 YR | 1.00 | 348.77 | 348.97 | 348.97 | 348.99 | 0.061721 | 1.21 | 0.83 | 17.51 | 0.98 |
| WASH23 | Wash23 | 2097.72 | 5 YR | 1.00 | 343.97 | 344.10 | 344.03 | 344.10 | 0.003275 | 0.45 | 2.24 | 23.18 | 0.25 |
| WASH23 | Wash23 | 1490.24 | 5 YR | 1.00 | 338.53 | 338.59 | 338.59 | 338.61 | 0.078003 | 1.12 | 0.89 | 25.28 | 1.05 |
| WASH23 | Wash23 | 1066.16 | 5 YR | 1.00 | 333.93 | 334.04 | 334.03 | 334.05 | 0.003735 | 0.29 | 3.48 | 77.51 | 0.24 |
| WASH23 | Wash23 | 780.97 | 5 YR | 1.00 | 330.99 | 331.02 | 331.02 | 331.04 | 0.102807 | 0.98 | 1.02 | 43.01 | 1.12 |
| WASH20 | Centerline Align | 16636.71 | 5 YR | 214.77 | 430.89 | 432.21 | 431.87 | 432.34 | 0.007286 | 2.97 | 72.35 | 79.36 | 0.55 |
| WASH20 | Centerline Align | 16100 | 5 YR | 214.77 | 425.98 | 427.83 | | 427.98 | 0.009126 | 3.14 | 68.39 | 81.57 | 0.60 |
| WASH20 | Centerline Align | 15600 | 5 YR | 214.77 | 421.00 | 422.42 | | 422.63 | 0.014000 | 3.70 | 58.02 | 74.84 | 0.74 |

HEC-RAS Plan: Plan 07 Profile: 5 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH20 | Centerline Align | 15169.42 | 5 YR | 214.77 | 417.28 | 418.43 | 418.28 | 418.51 | 0.010842 | 2.32 | 92.73 | 199.84 | 0.60 |
| WASH20 | Centerline Align | 14600 | 5 YR | 214.77 | 410.69 | 411.71 | 411.50 | 411.81 | 0.009895 | 2.63 | 81.81 | 136.29 | 0.60 |
| WASH20 | Centerline Align | 14100 | 5 YR | 214.77 | 404.94 | 406.25 | 406.13 | 406.31 | 0.010912 | 2.03 | 108.04 | 294.45 | 0.58 |
| WASH20 | Centerline Align | 13600 | 5 YR | 141.66 | 399.85 | 400.48 | 400.32 | 400.54 | 0.009105 | 1.97 | 74.28 | 181.68 | 0.54 |
| WASH20 | Centerline Align | 13100 | 5 YR | 141.66 | 394.00 | 395.04 | 394.83 | 395.10 | 0.010075 | 2.04 | 69.55 | 172.25 | 0.56 |
| WASH20 | Centerline Align | 12600 | 5 YR | 141.66 | 388.97 | 390.15 | 389.74 | 390.20 | 0.006285 | 1.64 | 86.57 | 208.68 | 0.45 |
| WASH20 | Centerline Align | 12100 | 5 YR | 141.66 | 383.00 | 384.11 | 384.09 | 384.20 | 0.031313 | 2.41 | 58.68 | 263.54 | 0.90 |
| WASH20 | Centerline Align | 11600 | 5 YR | 141.66 | 376.96 | 377.89 | 377.56 | 377.95 | 0.006650 | 1.99 | 71.07 | 132.94 | 0.48 |
| WASH20 | Centerline Align | 11329.19 | 5 YR | 141.66 | 373.39 | 374.25 | 374.25 | 374.37 | 0.038163 | 2.77 | 51.22 | 217.53 | 1.00 |
| WASH15 | Centerline Align | 3100 | 5 YR | 458.57 | 396.98 | 399.62 | 399.39 | 399.75 | 0.009793 | 2.87 | 160.00 | 231.17 | 0.61 |
| WASH15 | Centerline Align | 2600 | 5 YR | 458.57 | 392.00 | 394.34 | | 394.52 | 0.011181 | 3.34 | 137.15 | 173.46 | 0.66 |
| WASH15 | Centerline Align | 2100 | 5 YR | 458.57 | 387.36 | 389.58 | | 389.68 | 0.008366 | 2.61 | 175.38 | 258.96 | 0.56 |
| WASH15 | Centerline Align | 1600 | 5 YR | 458.57 | 381.99 | 384.57 | 384.32 | 384.72 | 0.011906 | 3.15 | 145.73 | 212.38 | 0.67 |
| WASH15 | Centerline Align | 1100 | 5 YR | 458.57 | 378.96 | 380.47 | 380.19 | 380.54 | 0.006128 | 2.23 | 205.31 | 304.71 | 0.48 |
| WASH15 | Centerline Align | 600 | 5 YR | 458.57 | 373.92 | 375.31 | 375.23 | 375.50 | 0.019505 | 3.54 | 129.67 | 230.04 | 0.83 |
| WASH15 | Centerline Align | 282.51 | 5 YR | 458.57 | 369.86 | 371.68 | | 371.82 | 0.007613 | 3.04 | 150.94 | 165.62 | 0.56 |
| WASH10B | Centerline Align | 21050.7 | 5 YR | 82.10 | 480.00 | 480.44 | 480.44 | 480.62 | 0.032535 | 3.45 | 23.78 | 64.24 | 1.00 |
| WASH10B | Centerline Align | 20571.83 | 5 YR | 82.10 | 473.67 | 474.50 | 474.26 | 474.55 | 0.006156 | 1.79 | 45.95 | 95.52 | 0.45 |
| WASH10B | Centerline Align | 20305.7 | 5 YR | 82.10 | 470.81 | 471.20 | 471.20 | 471.29 | 0.035646 | 2.29 | 35.85 | 192.04 | 0.93 |
| WASH10B | Centerline Align | 19884.32 | 5 YR | 82.10 | 464.53 | 465.91 | | 466.00 | 0.006347 | 2.46 | 33.39 | 43.71 | 0.50 |
| WASH10B | Centerline Align | 19500 | 5 YR | 82.10 | 461.84 | 462.47 | 462.36 | 462.57 | 0.013407 | 2.53 | 32.45 | 71.72 | 0.66 |
| WASH10B | Centerline Align | 19100 | 5 YR | 82.10 | 457.97 | 458.51 | 458.31 | 458.57 | 0.007739 | 1.92 | 42.83 | 95.21 | 0.50 |
| WASH10B | Centerline Align | 18600 | 5 YR | 82.10 | 450.90 | 451.47 | 451.47 | 451.68 | 0.030869 | 3.63 | 22.63 | 54.51 | 0.99 |
| WASH10B | Centerline Align | 18100 | 5 YR | 82.10 | 444.98 | 446.12 | 445.67 | 446.15 | 0.003781 | 1.55 | 52.97 | 94.34 | 0.36 |
| WASH10B | Centerline Align | 17600 | 5 YR | 82.10 | 441.14 | 441.98 | 441.98 | 442.14 | 0.026939 | 3.29 | 24.96 | 62.94 | 0.92 |
| WASH10A | Centerline Align | 22483.47 | 5 YR | 49.26 | 497.00 | 497.97 | 497.86 | 498.17 | 0.017373 | 3.60 | 13.68 | 21.56 | 0.80 |
| WASH10A | Centerline Align | 22271.22 | 5 YR | 49.26 | 493.99 | 495.20 | 494.90 | 495.27 | 0.010753 | 2.16 | 22.79 | 54.03 | 0.59 |
| WASH10A | Centerline Align | 21952.52 | 5 YR | 49.26 | 489.99 | 490.78 | 490.68 | 490.95 | 0.017486 | 3.34 | 14.74 | 26.18 | 0.78 |
| WASH10A | Centerline Align | 21621.24 | 5 YR | 49.26 | 487.00 | 488.05 | 487.71 | 488.10 | 0.005043 | 1.82 | 27.00 | 46.88 | 0.42 |

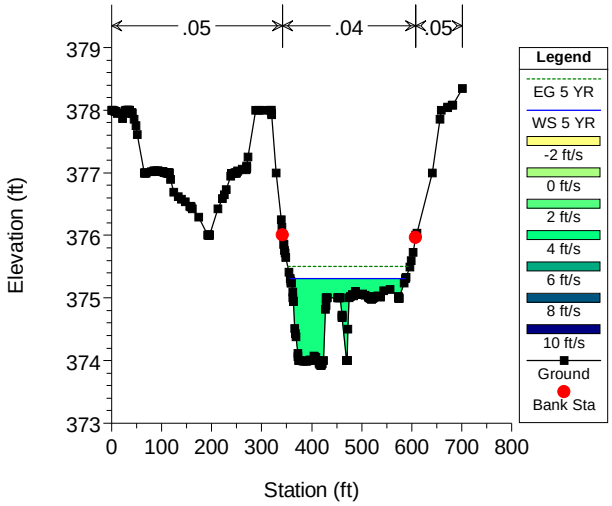

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22483.47
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22271.22
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21952.52
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21621.24
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 21050.7
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20571.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20305.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19884.32
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 17600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 3100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

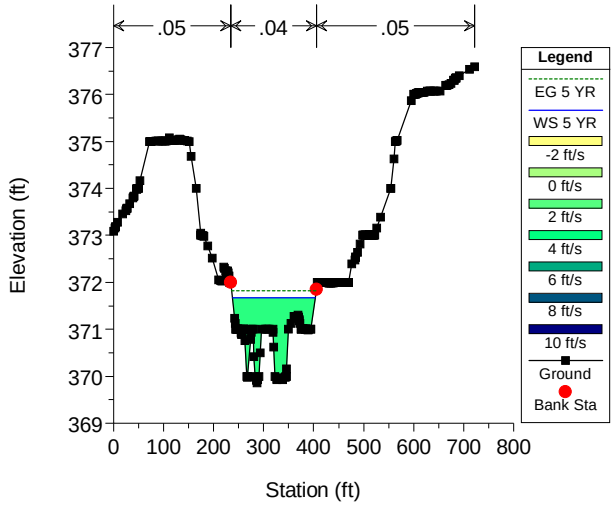
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 600



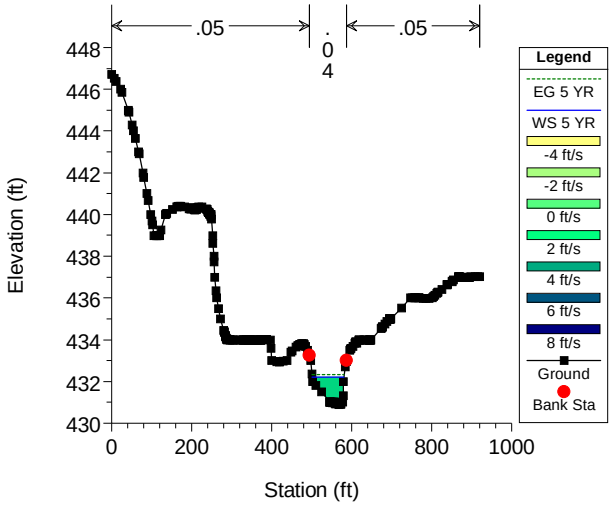

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH15 Reach = Centerline Align RS = 282.51



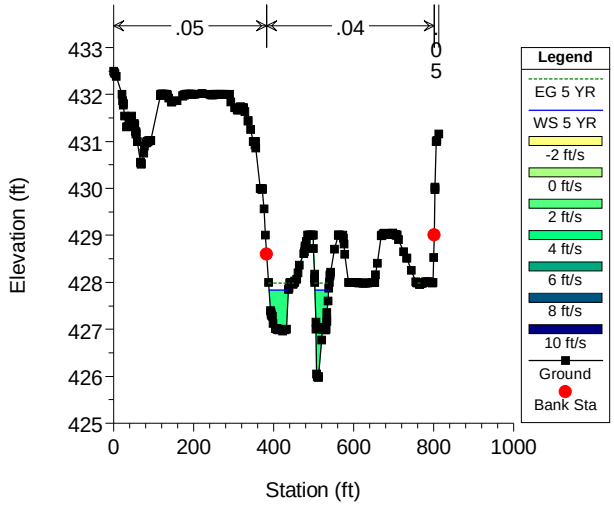

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16636.71



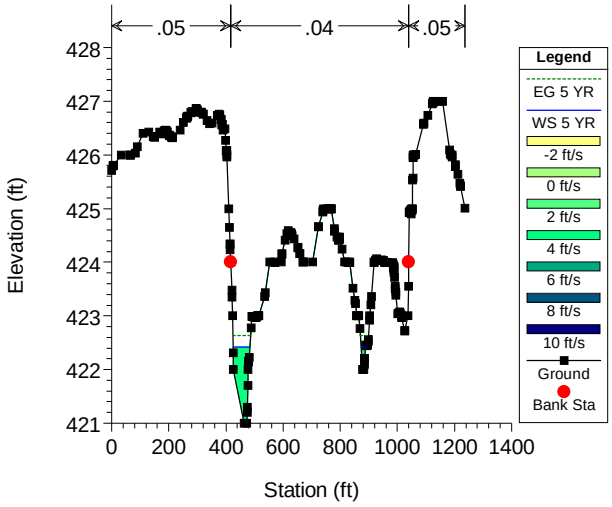

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH20 Reach = Centerline Align RS = 16100



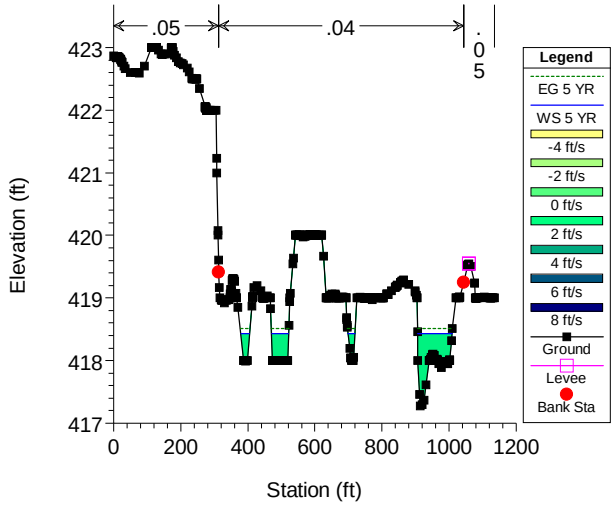

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

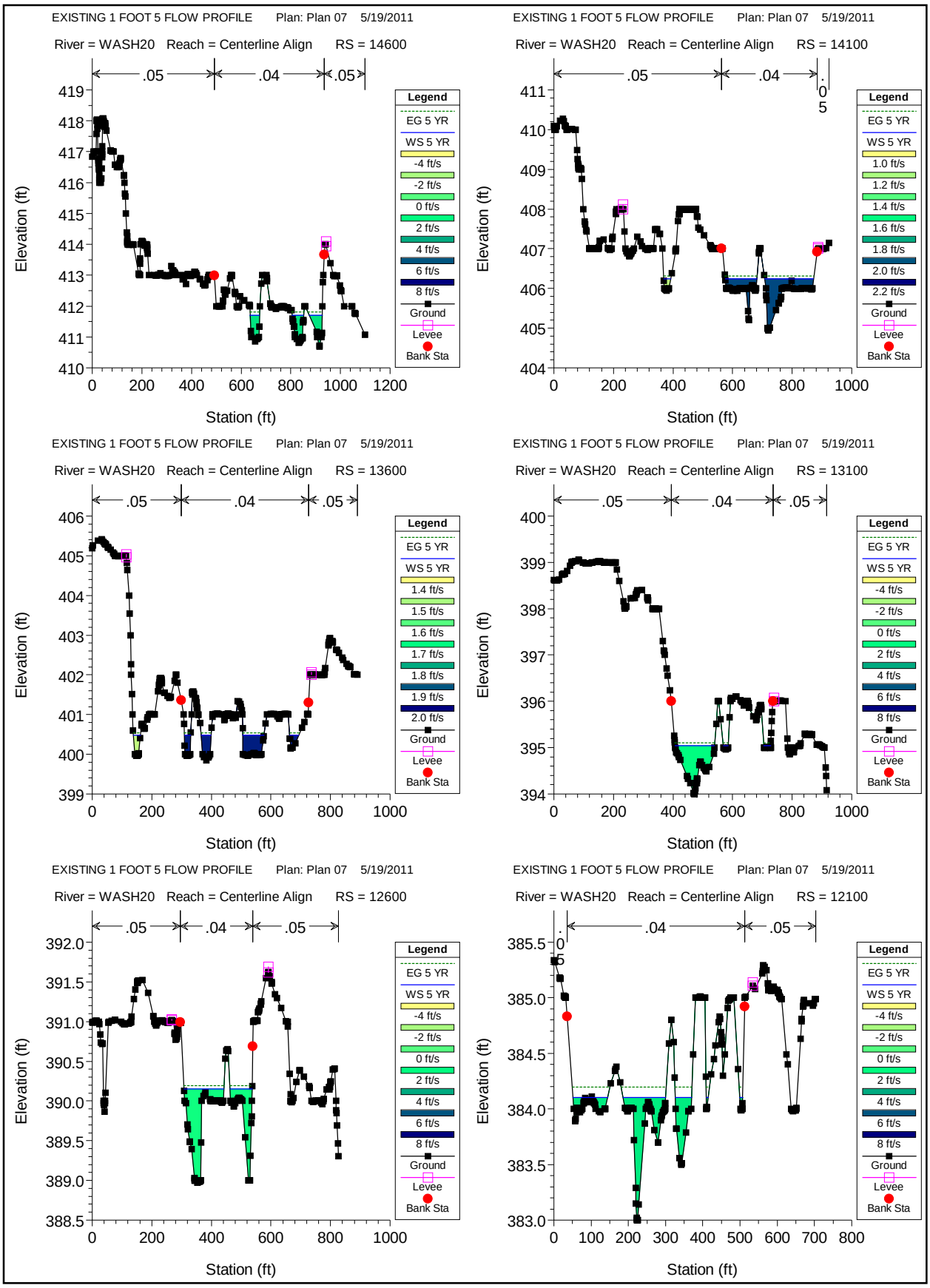
River = WASH20 Reach = Centerline Align RS = 15600

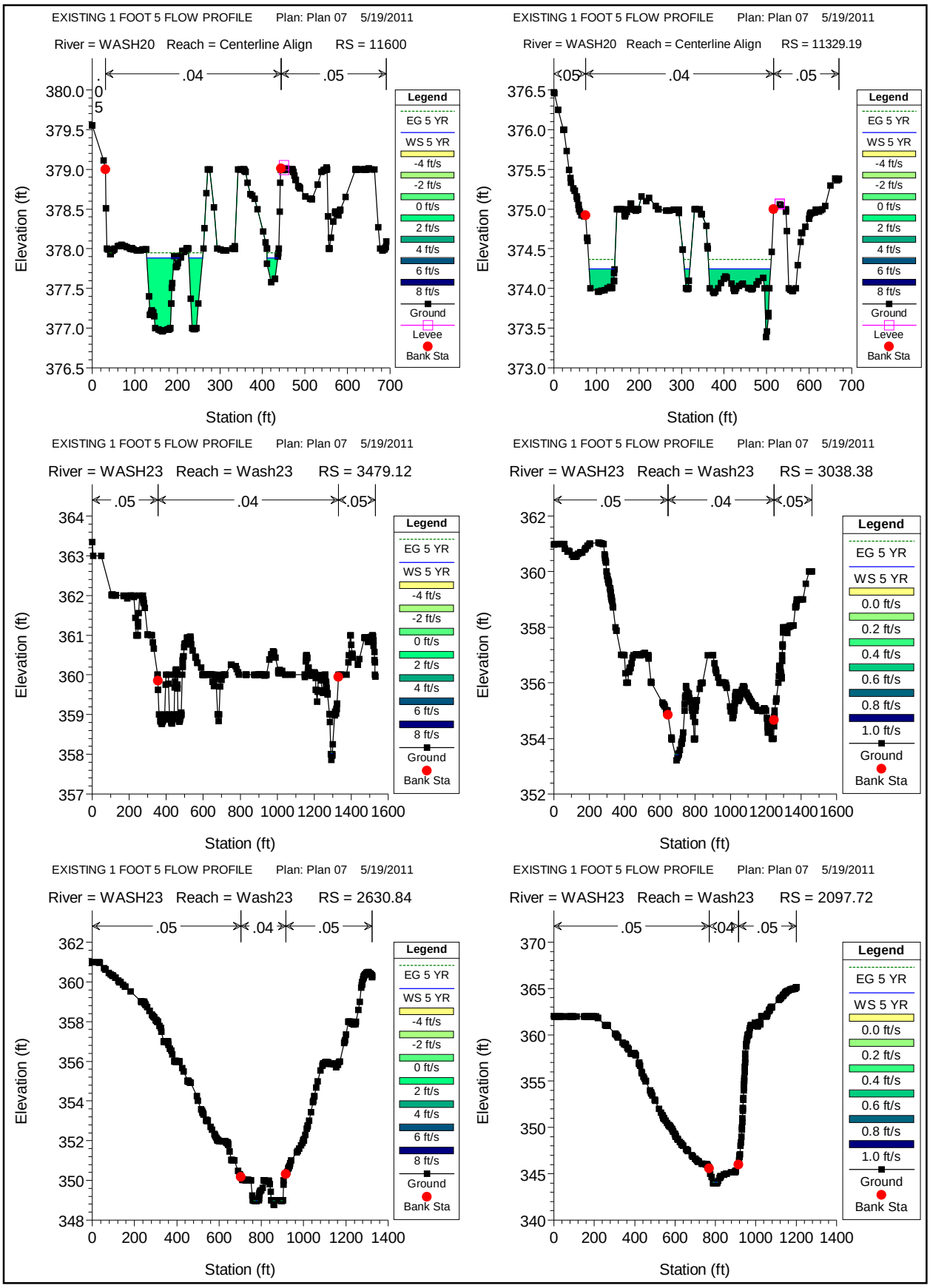


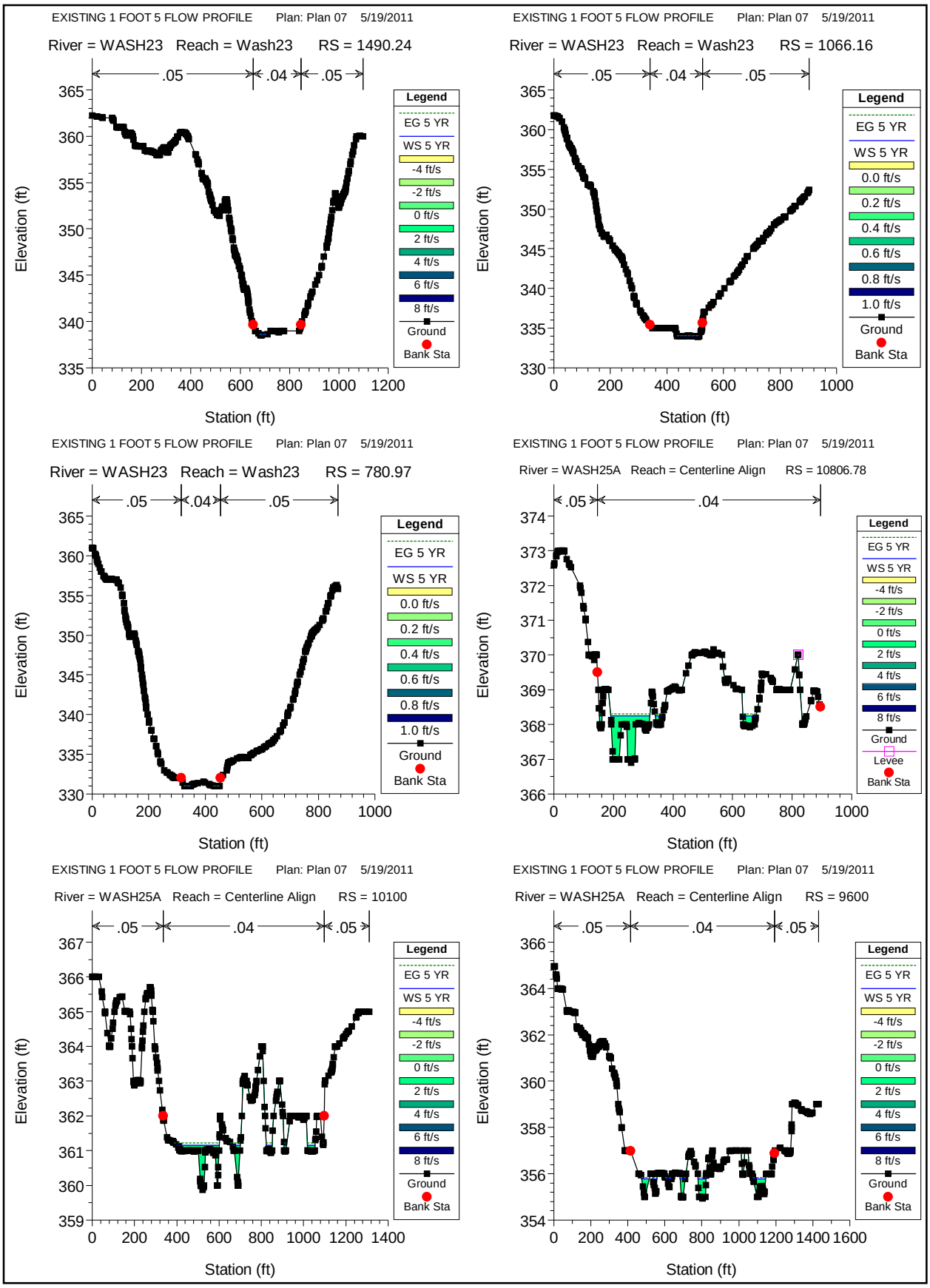

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

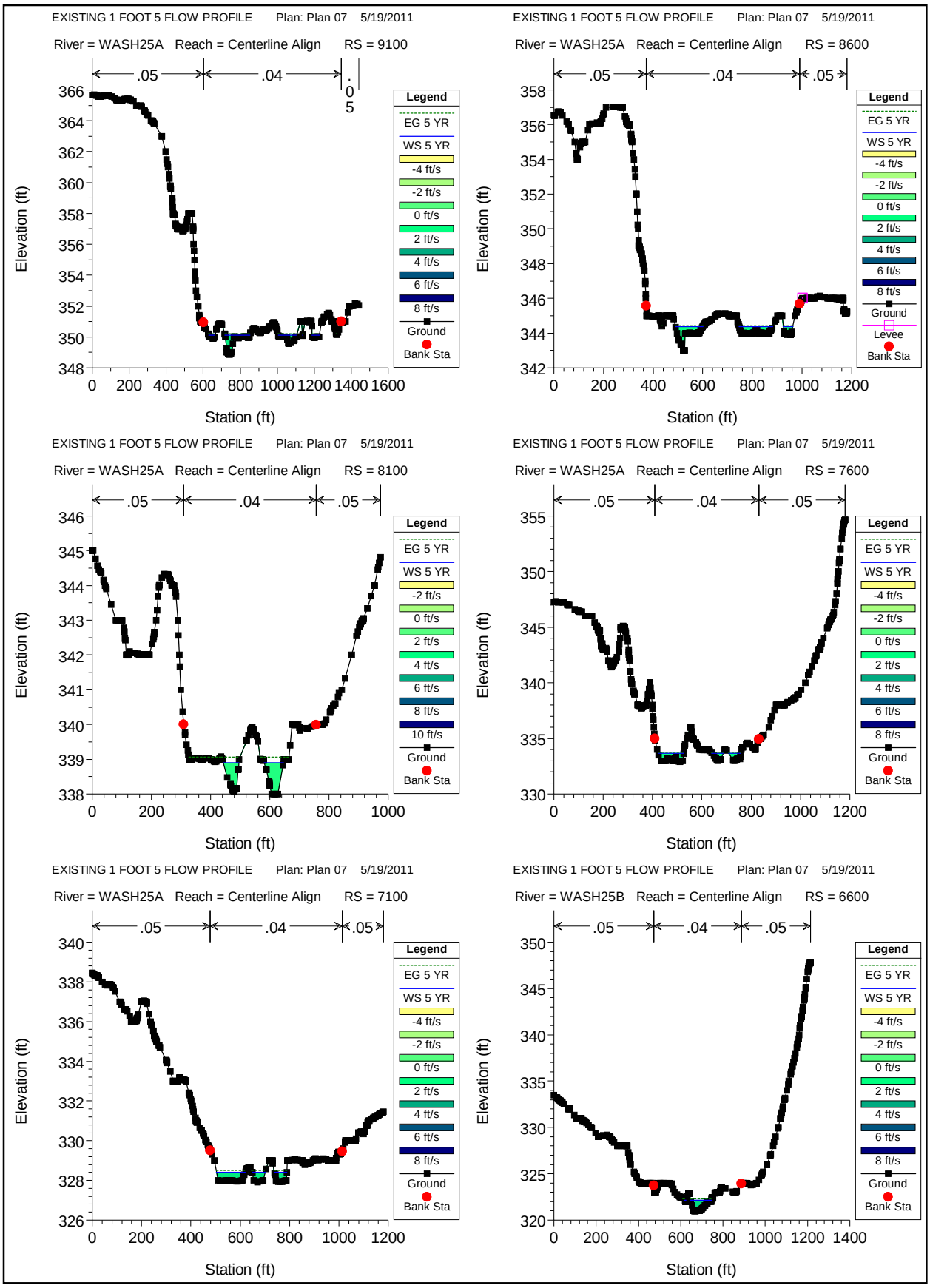
River = WASH20 Reach = Centerline Align RS = 15169.42

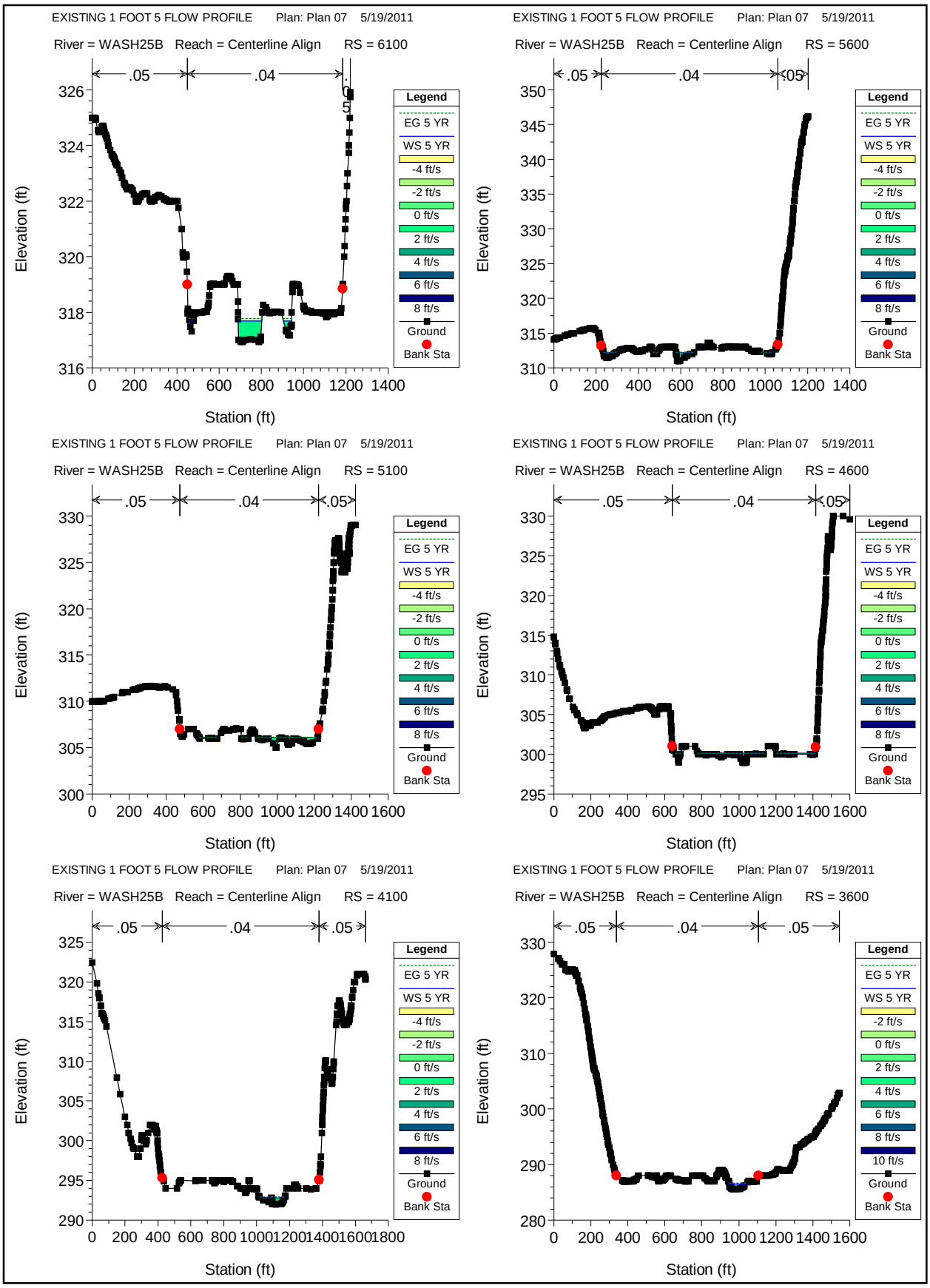


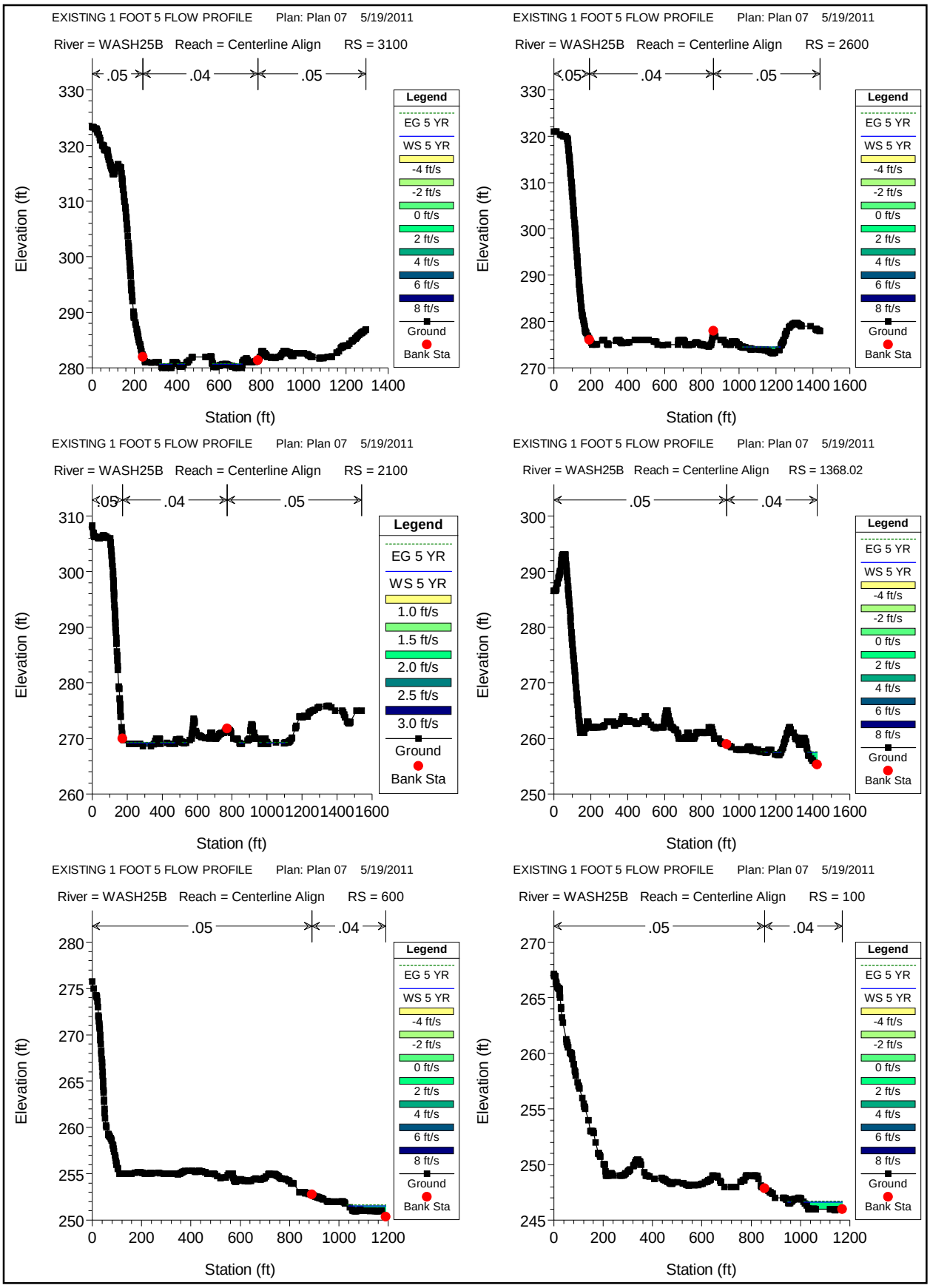

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14100
.05 .04 .05
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13600
.05 .04 .05
1.4 ft/s
1.5 ft/s
1.6 ft/s
1.7 ft/s
1.8 ft/s
1.9 ft/s
2.0 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12100
.04 .05

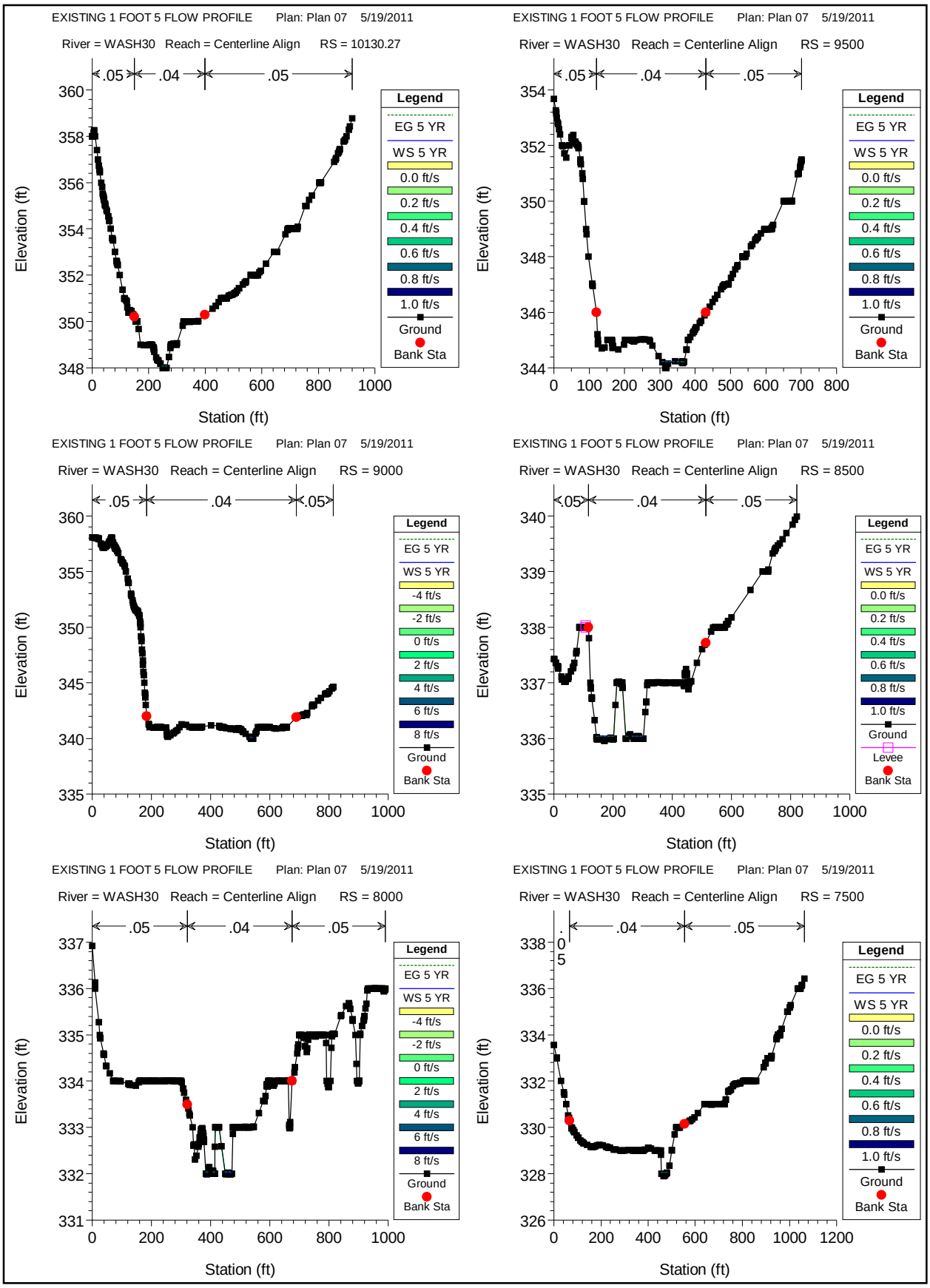

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11329.19
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3479.12
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3038.38
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2630.84
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2097.72
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

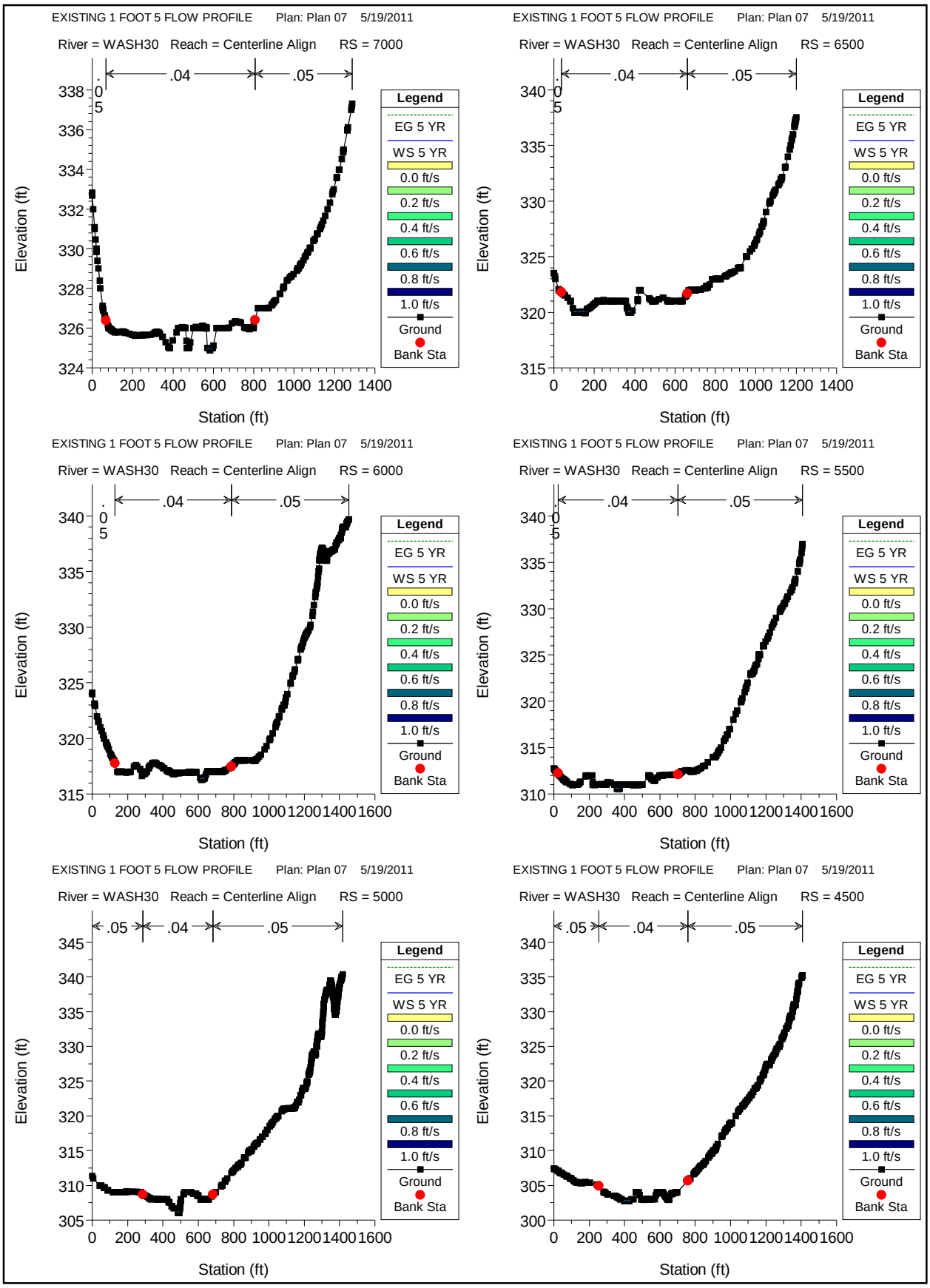

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1490.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 1066.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 780.97
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10806.78
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 10100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

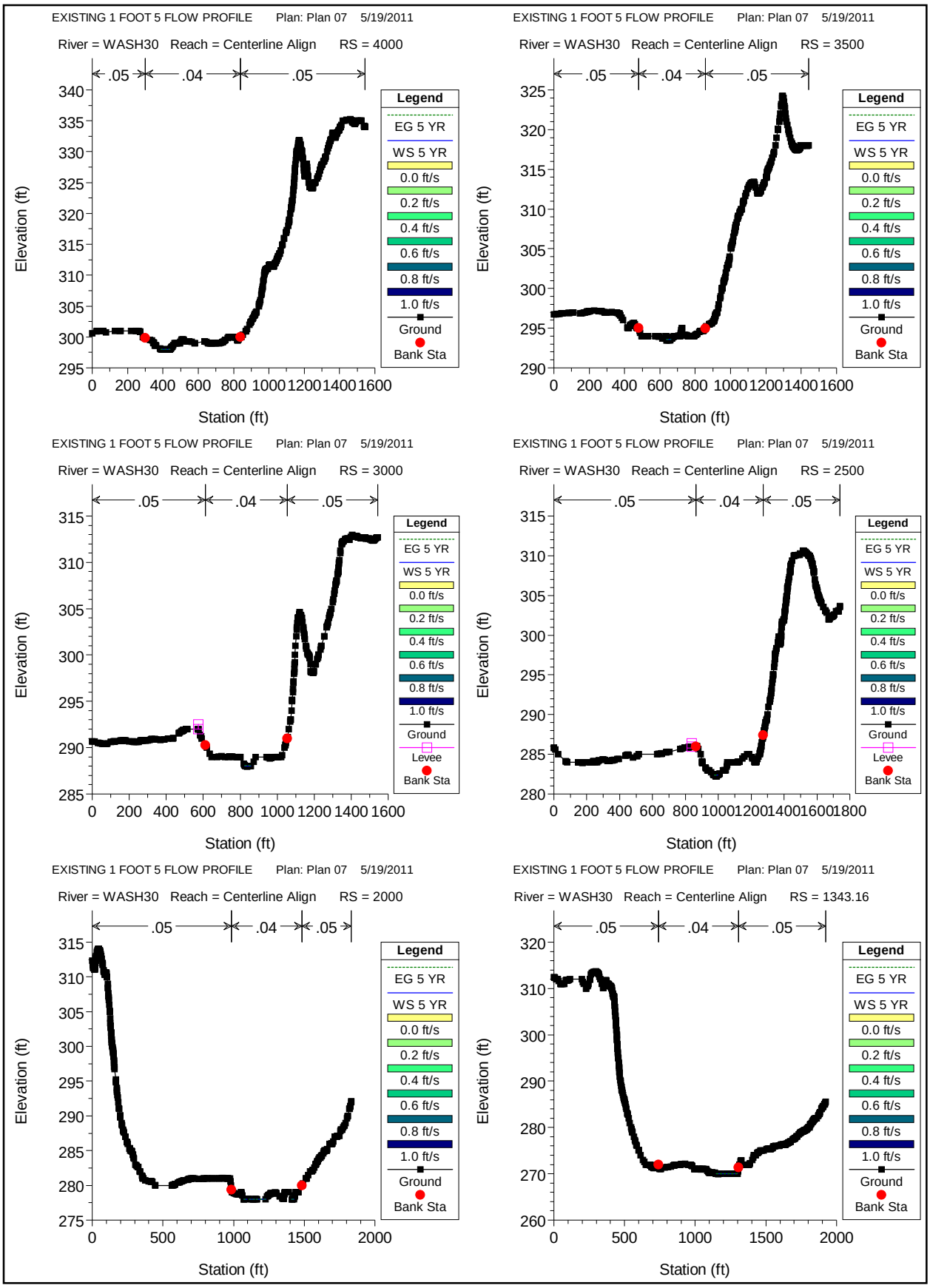

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6600
.05 .04 .05
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

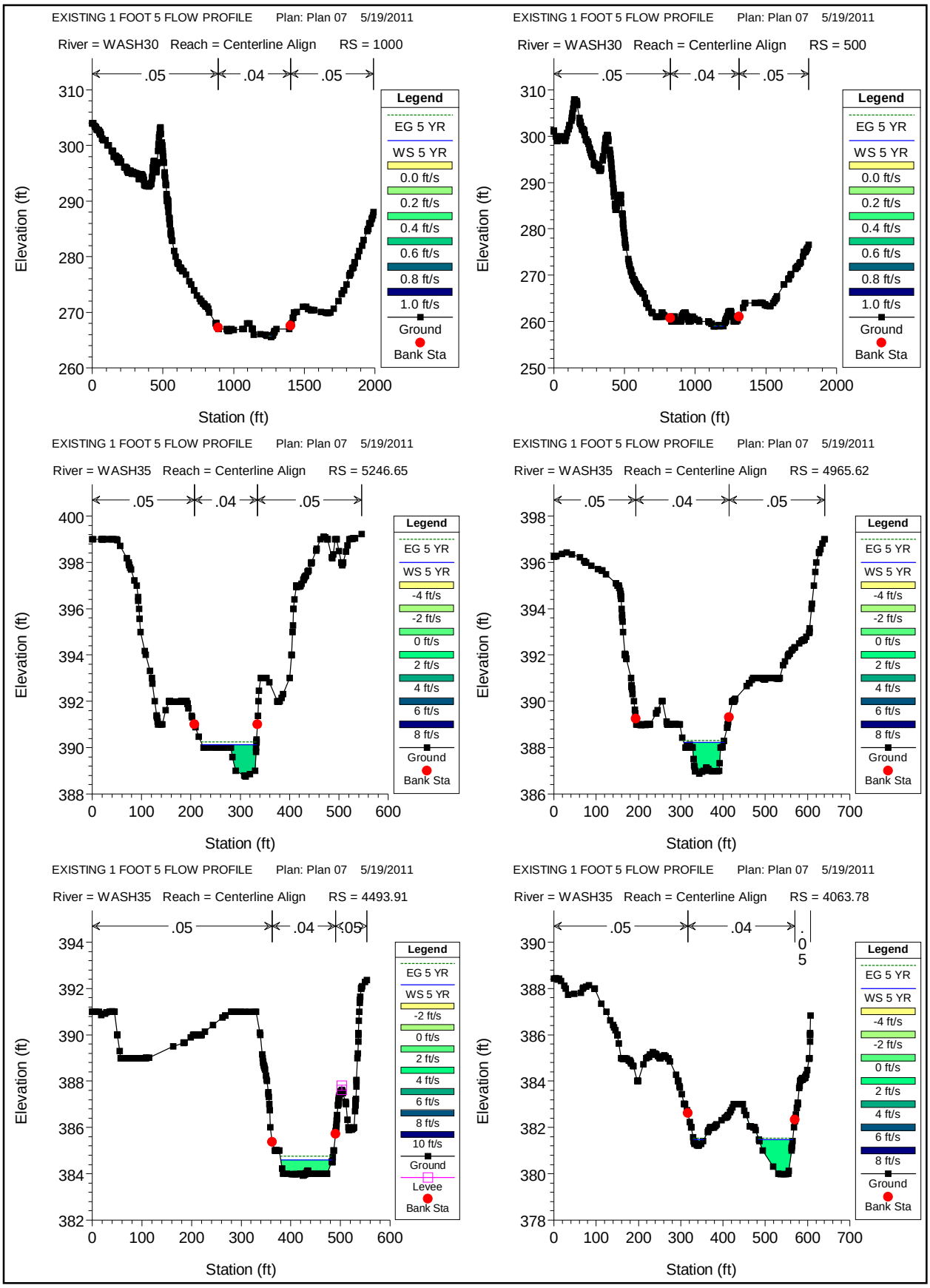

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6100
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 5600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 5100
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 4600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 4100
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

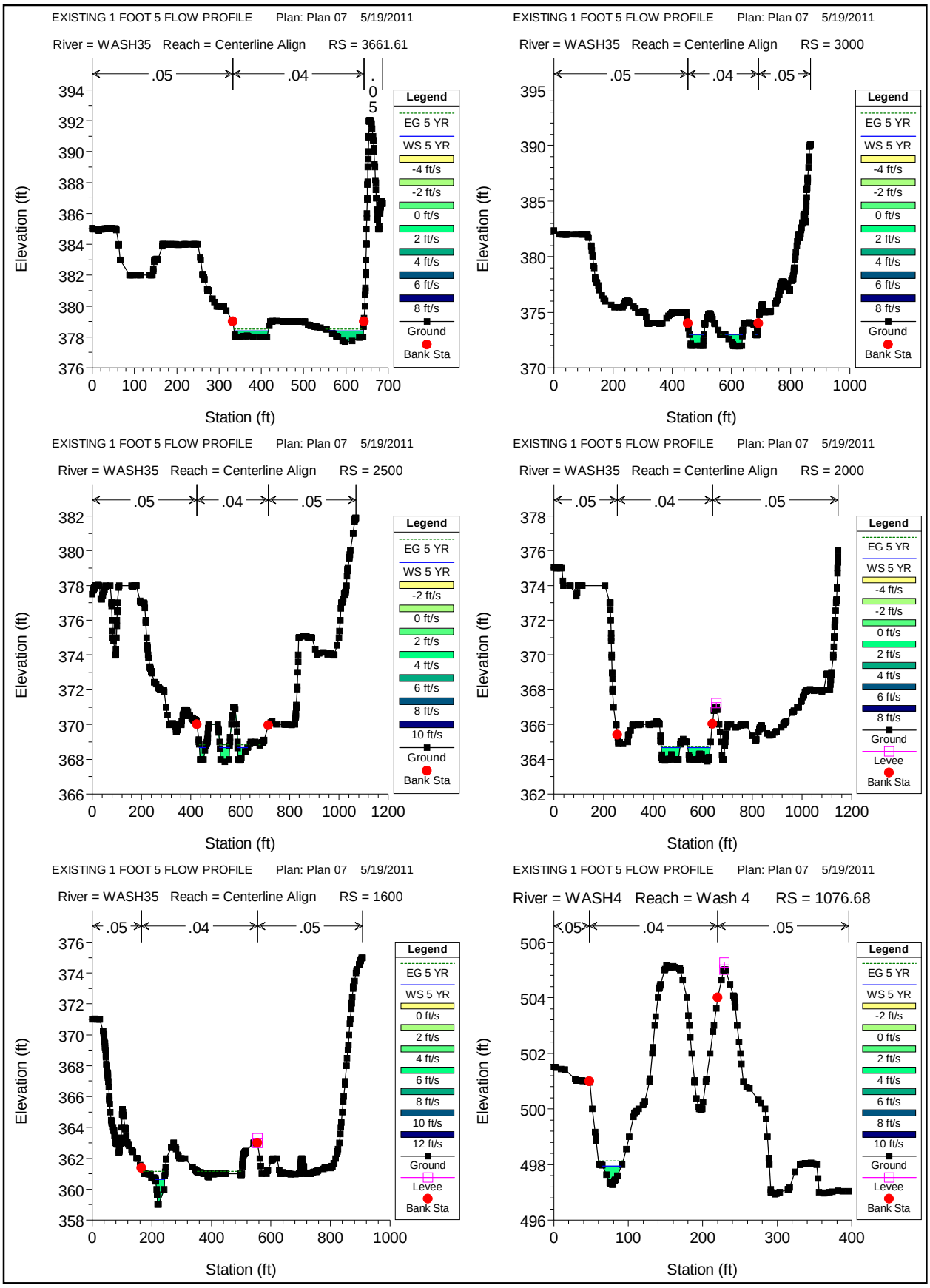

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2100
.05 .04 .05
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 1368.02
.05 .04
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 600
.05 .04
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 100
.05 .04

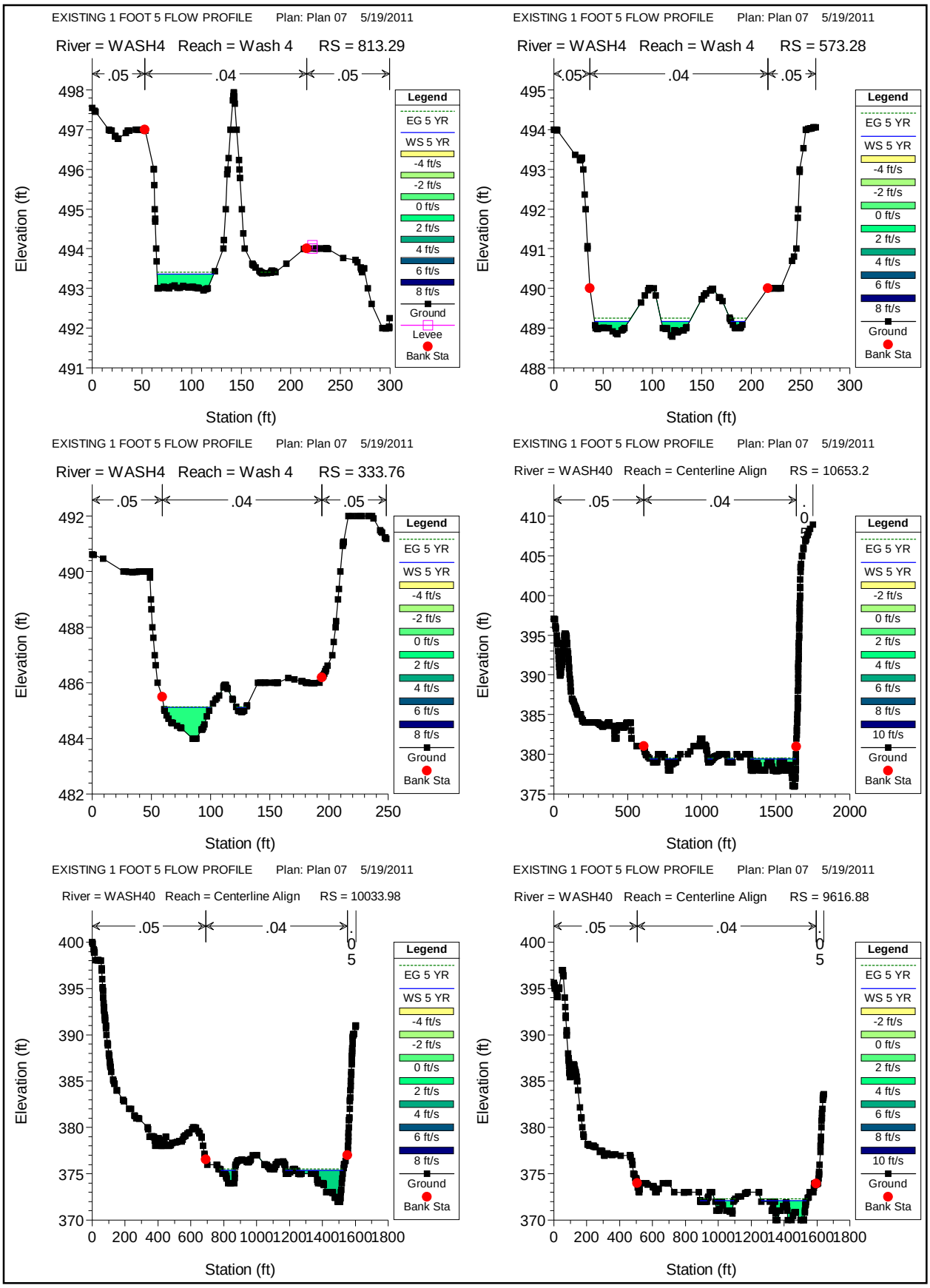

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 10130.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7000
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6000
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5000
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4000
River = WASH30 Reach = Centerline Align RS = 3500
River = WASH30 Reach = Centerline Align RS = 3000
River = WASH30 Reach = Centerline Align RS = 2500
River = WASH30 Reach = Centerline Align RS = 2000
River = WASH30 Reach = Centerline Align RS = 1343.16
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta

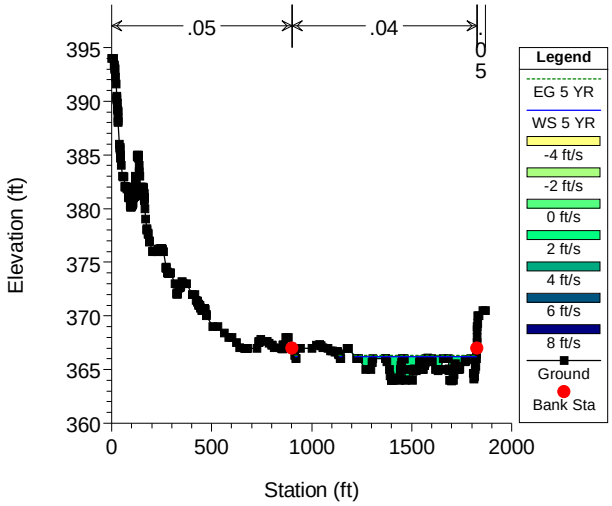

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 5246.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4965.62
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4493.91
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4063.78
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3661.61
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 1600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
12 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 1076.68
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 813.29
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 573.28
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 333.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10653.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10033.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 9616.88
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

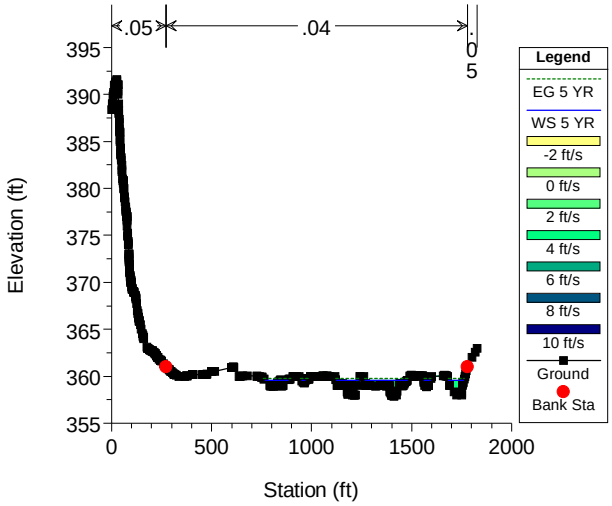
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 8761.12



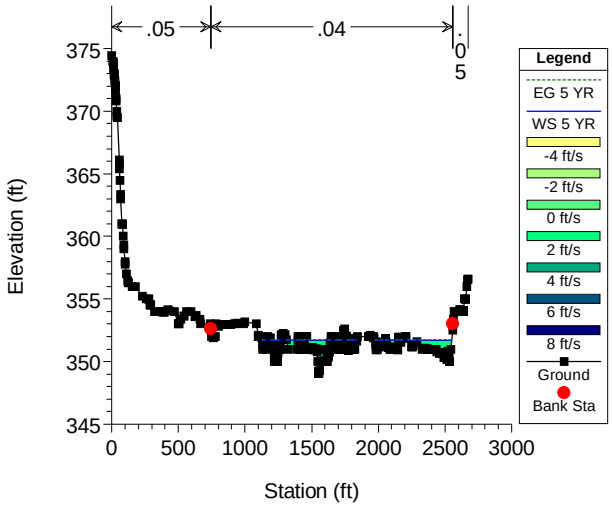

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 7943.06



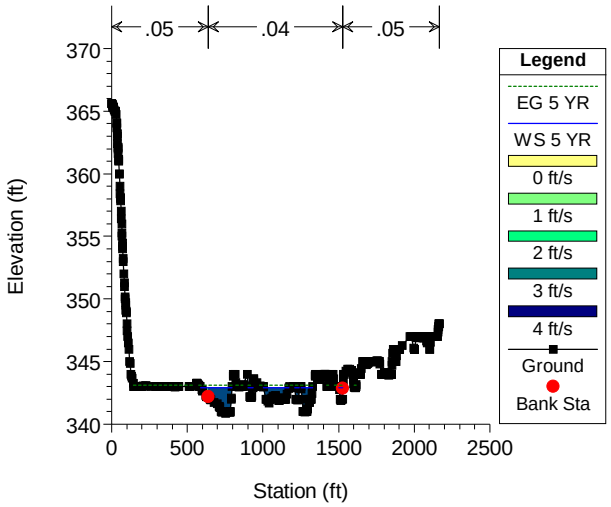

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 6943.13



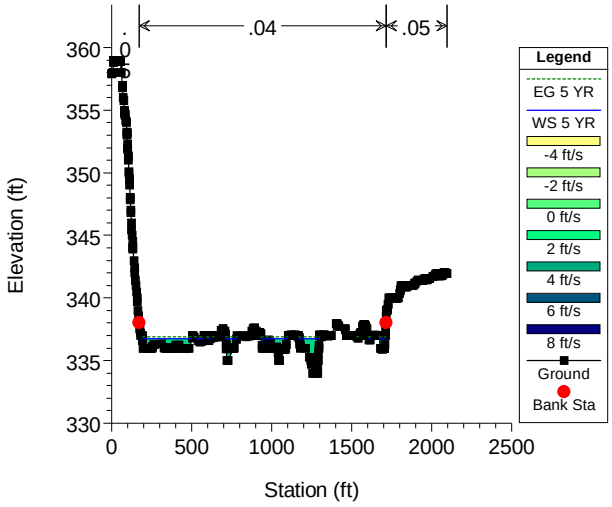

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 5500



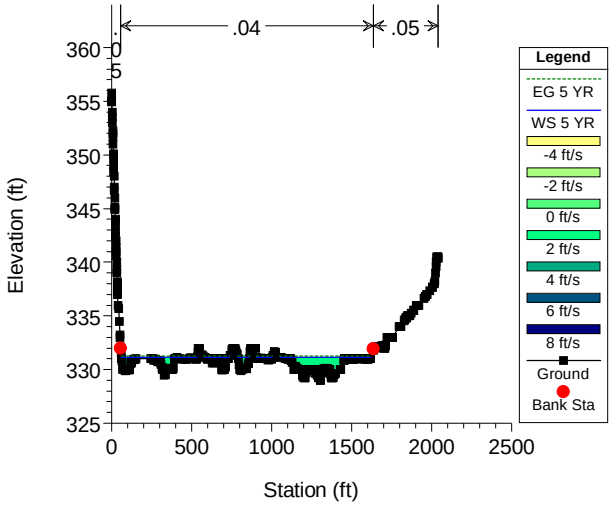

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

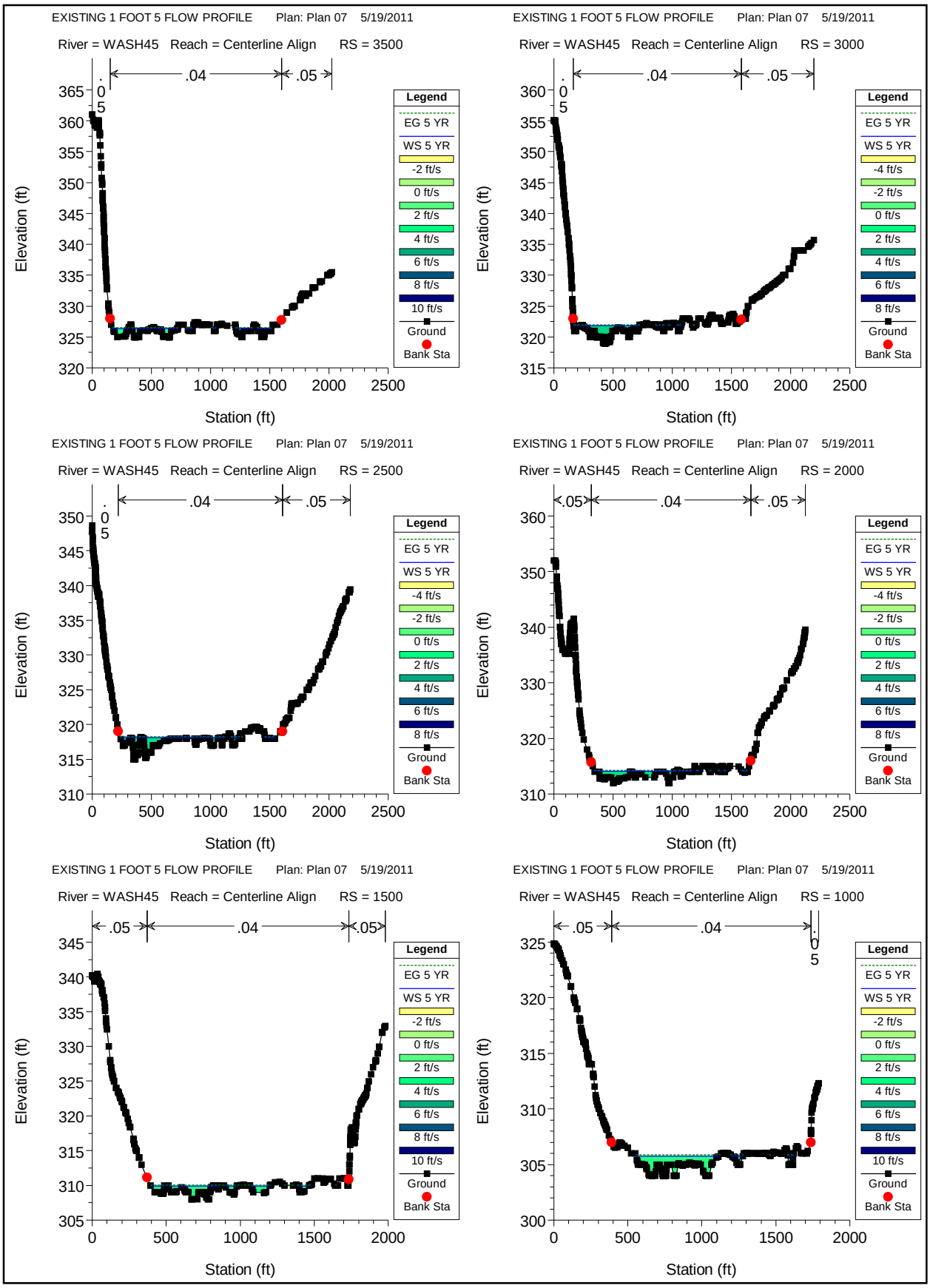
River = WASH45 Reach = Centerline Align RS = 4744.3

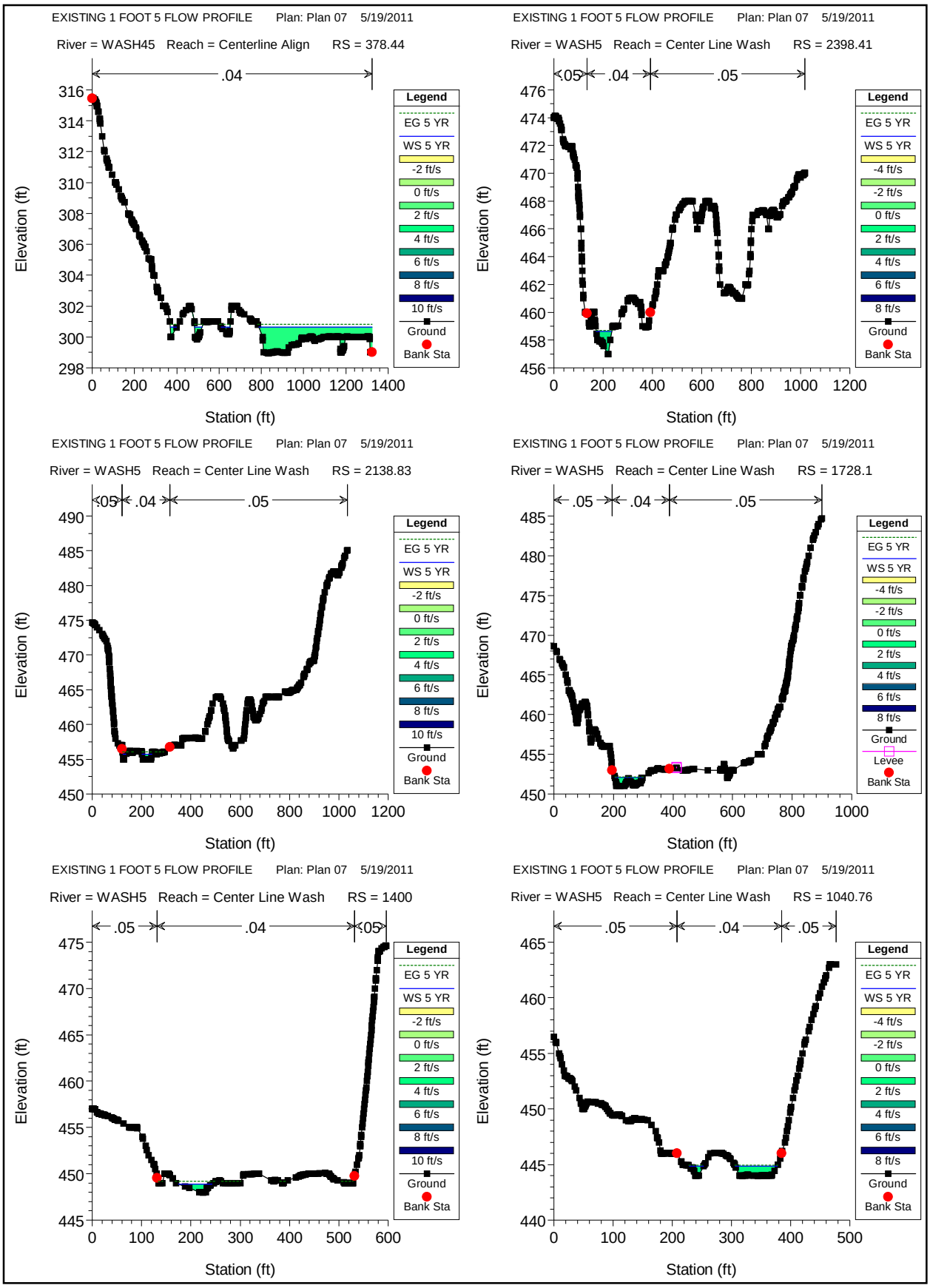



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 4000

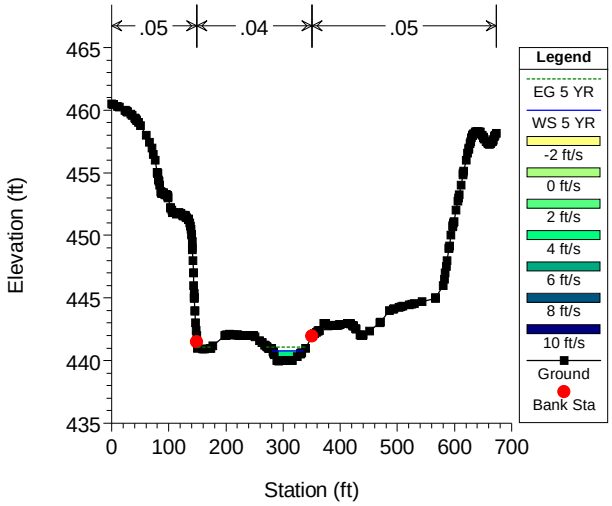



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 378.44
.04
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2398.41
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1728.1
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1400
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1040.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH5 Reach = Center Line Wash RS = 676.61



HEC-RAS Plan: Plan 03 Profile: 5 YR

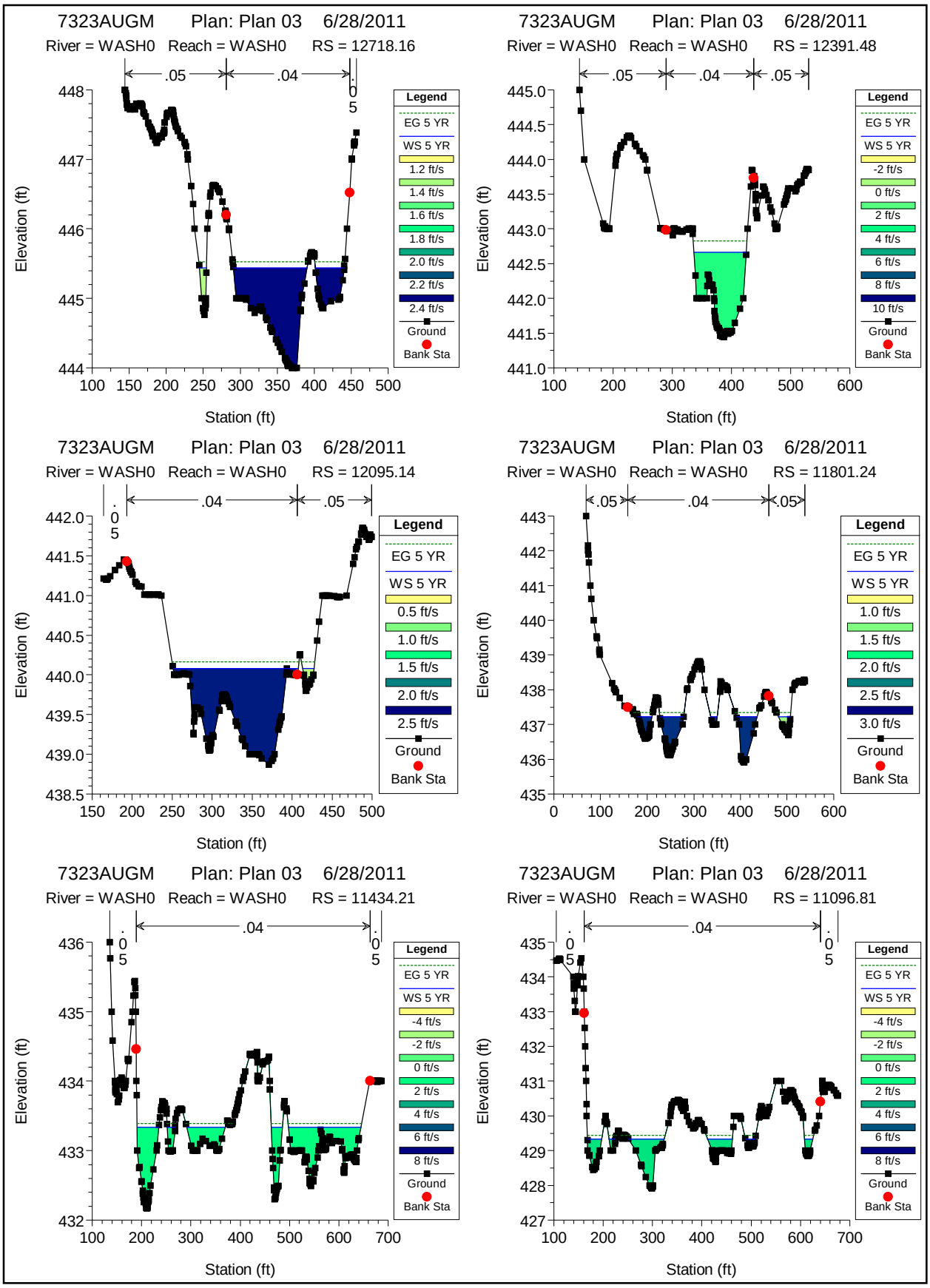
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH90 | WASH90 | 6831.23 | 5 YR | 61.00 | 352.00 | 352.87 | 0.87 | 352.57 | 352.93 | 0.006654 | 2.00 | 30.53 | 56.87 | 0.48 |
| WASH90 | WASH90 | 6503.89 | 5 YR | 61.00 | 349.63 | 350.28 | 0.65 | | 350.34 | 0.009546 | 2.04 | 29.94 | 71.13 | 0.55 |
| WASH90 | WASH90 | 5935.33 | 5 YR | 61.00 | 344.37 | 345.17 | 0.80 | | 345.21 | 0.008521 | 1.56 | 39.08 | 127.17 | 0.50 |
| WASH90 | WASH90 | 5486.51 | 5 YR | 61.00 | 339.99 | 340.80 | 0.81 | 340.69 | 340.85 | 0.011245 | 1.68 | 36.23 | 129.51 | 0.56 |
| WASH90 | WASH90 | 4998.22 | 5 YR | 61.00 | 334.38 | 335.11 | 0.73 | | 335.16 | 0.012021 | 1.83 | 33.40 | 111.08 | 0.59 |
| WASH90 | WASH90 | 4374.24 | 5 YR | 61.00 | 326.76 | 327.33 | 0.57 | | 327.40 | 0.012890 | 2.00 | 30.52 | 93.47 | 0.62 |
| WASH90 | WASH90 | 3683.01 | 5 YR | 61.00 | 317.38 | 318.11 | 0.73 | 318.00 | 318.16 | 0.013864 | 1.78 | 34.18 | 131.01 | 0.62 |
| WASH90 | WASH90 | 3113.17 | 5 YR | 61.00 | 309.99 | 310.65 | 0.66 | 310.52 | 310.70 | 0.012350 | 1.75 | 34.83 | 126.07 | 0.59 |
| WASH90 | WASH90 | 2556.75 | 5 YR | 61.00 | 302.32 | 302.92 | 0.60 | | 302.97 | 0.015740 | 1.77 | 34.49 | 147.46 | 0.64 |
| WASH90 | WASH90 | 2138.83 | 5 YR | 61.00 | 295.39 | 295.88 | 0.49 | 295.82 | 295.94 | 0.016574 | 1.87 | 32.65 | 133.67 | 0.67 |
| WASH90 | WASH90 | 1646.84 | 5 YR | 61.00 | 287.08 | 287.61 | 0.53 | | 287.66 | 0.016601 | 1.65 | 37.08 | 183.97 | 0.65 |
| WASH90 | WASH90 | 1288.94 | 5 YR | 61.00 | 280.46 | 281.28 | 0.82 | 281.23 | 281.37 | 0.022630 | 2.38 | 25.59 | 91.70 | 0.80 |
| WASH90 | WASH90 | 800.13 | 5 YR | 61.00 | 268.50 | 269.67 | 1.17 | 269.61 | 269.80 | 0.021505 | 2.88 | 21.19 | 55.01 | 0.82 |
| WASH80 | WASH80 | 9177.14 | 5 YR | 64.00 | 406.00 | 407.02 | 1.02 | 406.70 | 407.11 | 0.006138 | 2.33 | 27.44 | 37.99 | 0.48 |
| WASH80 | WASH80 | 8711.54 | 5 YR | 64.00 | 400.91 | 402.17 | 1.26 | 402.08 | 402.36 | 0.020106 | 3.53 | 18.13 | 32.85 | 0.84 |
| WASH80 | WASH80 | 8318.51 | 5 YR | 64.00 | 395.00 | 396.10 | 1.10 | 395.95 | 396.22 | 0.012388 | 2.79 | 22.91 | 40.92 | 0.66 |
| WASH80 | WASH80 | 7927.46 | 5 YR | 64.00 | 391.00 | 391.93 | 0.93 | 391.72 | 392.01 | 0.009420 | 2.35 | 27.20 | 51.28 | 0.57 |
| WASH80 | WASH80 | 7287.57 | 5 YR | 64.00 | 384.00 | 384.84 | 0.84 | | 385.02 | 0.012771 | 3.41 | 18.79 | 25.50 | 0.70 |
| WASH80 | WASH80 | 6827.33 | 5 YR | 64.00 | 380.00 | 381.32 | 1.32 | | 381.39 | 0.005279 | 2.12 | 30.25 | 43.29 | 0.45 |
| WASH80 | WASH80 | 6379.44 | 5 YR | 64.00 | 376.99 | 377.91 | 0.92 | | 378.03 | 0.011514 | 2.69 | 23.77 | 42.56 | 0.64 |
| WASH80 | WASH80 | 6136.14 | 5 YR | 64.00 | 374.99 | 375.58 | 0.59 | | 375.63 | 0.008415 | 1.75 | 36.55 | 99.15 | 0.51 |
| WASH80 | WASH80 | 5694.19 | 5 YR | 64.00 | 370.83 | 371.47 | 0.64 | | 371.53 | 0.010244 | 2.00 | 32.02 | 82.27 | 0.56 |
| WASH80 | WASH80 | 5146 | 5 YR | 64.00 | 366.00 | 366.91 | 0.91 | 366.60 | 366.99 | 0.006822 | 2.28 | 28.06 | 43.60 | 0.50 |
| WASH80 | WASH80 | 4787.98 | 5 YR | 64.00 | 363.67 | 364.51 | 0.84 | | 364.54 | 0.006836 | 1.40 | 45.85 | 149.54 | 0.44 |
| WASH80 | WASH80 | 4308.96 | 5 YR | 64.00 | 360.00 | 360.50 | 0.50 | | 360.55 | 0.010345 | 1.78 | 35.88 | 110.17 | 0.55 |
| WASH80 | WASH80 | 3652.44 | 5 YR | 64.00 | 353.35 | 354.27 | 0.92 | 354.14 | 354.31 | 0.008770 | 1.66 | 38.48 | 116.14 | 0.51 |
| WASH80 | WASH80 | 3226.43 | 5 YR | 64.00 | 349.80 | 350.51 | 0.71 | | 350.60 | 0.008686 | 2.36 | 27.13 | 48.17 | 0.55 |
| WASH80 | WASH80 | 2831.38 | 5 YR | 64.00 | 345.72 | 346.57 | 0.85 | | 346.62 | 0.011772 | 1.88 | 33.97 | 106.19 | 0.59 |
| WASH80 | WASH80 | 2414.33 | 5 YR | 64.00 | 341.69 | 342.47 | 0.78 | | 342.53 | 0.008340 | 1.81 | 35.35 | 90.56 | 0.51 |
| WASH80 | WASH80 | 1998.23 | 5 YR | 64.00 | 338.00 | 338.73 | 0.73 | | 338.77 | 0.009905 | 1.64 | 38.99 | 131.74 | 0.53 |
| WASH80 | WASH80 | 1662.74 | 5 YR | 64.00 | 334.43 | 335.13 | 0.70 | | 335.16 | 0.012744 | 1.44 | 44.53 | 221.86 | 0.57 |
| WASH80 | WASH80 | 1123.57 | 5 YR | 64.00 | 327.07 | 327.85 | 0.78 | | 327.93 | 0.013200 | 2.18 | 29.41 | 80.64 | 0.63 |
| WASH80 | WASH80 | 611 | 5 YR | 64.00 | 320.60 | 321.05 | 0.45 | | 321.13 | 0.017562 | 2.24 | 28.51 | 92.56 | 0.71 |
| WASH75 | WASH75 | 3066.24 | 5 YR | 4.00 | 352.99 | 353.19 | 0.20 | 353.14 | 353.22 | 0.015615 | 1.44 | 2.78 | 16.15 | 0.61 |
| WASH75 | WASH75 | 2658.51 | 5 YR | 4.00 | 348.60 | 348.85 | 0.25 | | 348.87 | 0.007761 | 0.87 | 4.61 | 33.69 | 0.41 |
| WASH75 | WASH75 | 2371.61 | 5 YR | 4.00 | 345.39 | 345.64 | 0.25 | | 345.66 | 0.017501 | 1.01 | 3.96 | 42.48 | 0.58 |
| WASH75 | WASH75 | 2124.14 | 5 YR | 4.00 | 342.00 | 342.28 | 0.28 | | 342.29 | 0.010902 | 0.88 | 4.55 | 42.04 | 0.47 |
| WASH75 | WASH75 | 1807.24 | 5 YR | 4.00 | 338.62 | 338.83 | 0.21 | 338.77 | 338.84 | 0.010867 | 0.86 | 4.67 | 44.80 | 0.47 |
| WASH75 | WASH75 | 1554.2 | 5 YR | 4.00 | 335.34 | 335.53 | 0.19 | | 335.55 | 0.015746 | 1.04 | 3.84 | 36.35 | 0.56 |
| WASH75 | WASH75 | 1289.14 | 5 YR | 4.00 | 331.45 | 331.66 | 0.21 | | 331.68 | 0.013535 | 1.17 | 3.42 | 24.17 | 0.55 |
| WASH75 | WASH75 | 908.89 | 5 YR | 4.00 | 326.14 | 326.42 | 0.28 | | 326.44 | 0.015671 | 1.24 | 3.22 | 23.32 | 0.59 |
| WASH75 | WASH75 | 546.93 | 5 YR | 4.00 | 320.30 | 320.66 | 0.36 | 320.66 | 320.72 | 0.047855 | 1.95 | 2.05 | 17.29 | 1.00 |
| WASH70 | WASH70 | 3521.27 | 5 YR | 53.00 | 310.47 | 311.01 | 0.54 | 310.91 | 311.09 | 0.014729 | 2.27 | 23.37 | 65.50 | 0.67 |
| WASH70 | WASH70 | 3191.72 | 5 YR | 53.00 | 305.11 | 306.18 | 1.07 | | 306.23 | 0.016167 | 1.77 | 30.00 | 130.76 | 0.65 |
| WASH70 | WASH70 | 2880.01 | 5 YR | 53.00 | 300.57 | 301.27 | 0.70 | | 301.32 | 0.012203 | 1.88 | 28.17 | 90.62 | 0.59 |
| WASH70 | WASH70 | 2398.82 | 5 YR | 53.00 | 294.64 | 295.12 | 0.48 | 295.02 | 295.16 | 0.009380 | 1.43 | 36.99 | 147.06 | 0.50 |

HEC-RAS Plan: Plan 03 Profile: 5 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH70 | WASH70 | 2036.83 | 5 YR | 53.00 | 288.77 | 289.33 | 0.56 | 289.30 | 289.39 | 0.032731 | 2.09 | 25.31 | 145.53 | 0.88 |
| WASH70 | WASH70 | 1648.15 | 5 YR | 53.00 | 282.26 | 282.84 | 0.58 | | 282.87 | 0.010173 | 1.45 | 36.65 | 152.83 | 0.52 |
| WASH70 | WASH70 | 1321.01 | 5 YR | 53.00 | 276.44 | 276.96 | 0.52 | 276.96 | 277.07 | 0.038301 | 2.72 | 19.46 | 84.70 | 1.00 |
| WASH70 | WASH70 | 1029.2 | 5 YR | 53.00 | 269.54 | 270.29 | 0.75 | 269.95 | 270.31 | 0.003082 | 1.16 | 45.86 | 109.30 | 0.31 |
| WASH70 | WASH70 | 666.38 | 5 YR | 53.00 | 267.00 | 267.75 | 10.45 | 267.72 | 267.82 | 0.026465 | 2.05 | 25.86 | 130.92 | 0.81 |
| WASH70 | WASH70 | 358.04 | 5 YR | 53.00 | 261.11 | 261.68 | 10.95 | 261.58 | 261.76 | 0.015102 | 2.34 | 22.63 | 61.55 | 0.68 |
| WASH60 | WASH60 | 5477.11 | 5 YR | 13.00 | 467.00 | 467.35 | 0.35 | 467.22 | 467.39 | 0.007985 | 1.59 | 8.17 | 24.47 | 0.49 |
| WASH60 | WASH60 | 5299.28 | 5 YR | 13.00 | 465.62 | 466.05 | 0.43 | | 466.08 | 0.006754 | 1.42 | 9.18 | 29.02 | 0.44 |
| WASH60 | WASH60 | 5104.28 | 5 YR | 13.00 | 463.90 | 464.42 | 0.52 | 464.31 | 464.46 | 0.010546 | 1.56 | 8.36 | 31.96 | 0.54 |
| WASH60 | WASH60 | 4869.04 | 5 YR | 13.00 | 460.91 | 461.31 | 0.40 | | 461.37 | 0.016803 | 1.86 | 7.01 | 29.10 | 0.67 |
| WASH60 | WASH60 | 4591.11 | 5 YR | 13.00 | 457.00 | 457.49 | 0.49 | | 457.52 | 0.011540 | 1.38 | 9.39 | 45.93 | 0.54 |
| WASH60 | WASH60 | 4337.83 | 5 YR | 13.00 | 454.00 | 454.53 | 0.53 | 454.37 | 454.56 | 0.011862 | 1.34 | 9.72 | 51.03 | 0.54 |
| WASH60 | WASH60 | 4068.7 | 5 YR | 13.00 | 450.95 | 451.29 | 0.65 | 451.21 | 451.31 | 0.012288 | 1.22 | 10.64 | 65.80 | 0.54 |
| WASH60 | WASH60 | 3746.65 | 5 YR | 13.00 | 446.00 | 446.64 | 0.64 | 446.57 | 446.71 | 0.016857 | 2.07 | 6.29 | 22.28 | 0.69 |
| WASH60 | WASH60 | 3427.61 | 5 YR | 13.00 | 441.98 | 442.48 | 0.50 | | 442.51 | 0.009950 | 1.60 | 10.20 | 48.78 | 0.53 |
| WASH60 | WASH60 | 3162.25 | 5 YR | 13.00 | 438.68 | 439.17 | 0.49 | 439.12 | 439.22 | 0.018460 | 1.69 | 7.68 | 39.41 | 0.68 |
| WASH60 | WASH60 | 2826.26 | 5 YR | 13.00 | 433.38 | 434.04 | 0.66 | 433.95 | 434.08 | 0.012885 | 1.73 | 7.51 | 28.39 | 0.59 |
| WASH60 | WASH60 | 2497.44 | 5 YR | 13.00 | 429.89 | 430.22 | 0.33 | 430.14 | 430.26 | 0.010529 | 1.52 | 8.56 | 33.92 | 0.53 |
| WASH60 | WASH60 | 2235.76 | 5 YR | 13.00 | 426.68 | 427.28 | 0.60 | 427.17 | 427.33 | 0.011946 | 1.75 | 7.41 | 25.90 | 0.58 |
| WASH60 | WASH60 | 1902.48 | 5 YR | 13.00 | 421.48 | 422.14 | 0.66 | 422.08 | 422.20 | 0.020648 | 1.90 | 6.84 | 32.04 | 0.72 |
| WASH60 | WASH60 | 1536.23 | 5 YR | 13.00 | 415.62 | 416.19 | 2.17 | 416.08 | 416.24 | 0.013167 | 1.82 | 7.14 | 25.57 | 0.61 |
| WASH60 | WASH60 | 1155.84 | 5 YR | 13.00 | 410.17 | 410.77 | 1.77 | 410.68 | 410.84 | 0.015347 | 2.16 | 6.03 | 18.66 | 0.67 |
| WASH60 | WASH60 | 717.74 | 5 YR | 13.00 | 403.99 | 404.29 | 1.29 | 404.21 | 404.33 | 0.014363 | 1.69 | 7.71 | 33.06 | 0.61 |
| WASH60 | WASH60 | 251.42 | 5 YR | 13.00 | 397.00 | 397.27 | 0.31 | 397.21 | 397.31 | 0.015805 | 1.57 | 8.30 | 42.69 | 0.63 |
| WASH0 | WASH0 | 12718.16 | 5 YR | 233.00 | 444.00 | 445.44 | 1.44 | 445.15 | 445.52 | 0.006816 | 2.39 | 99.37 | 148.23 | 0.51 |
| WASH0 | WASH0 | 12391.48 | 5 YR | 233.00 | 441.44 | 442.66 | 1.22 | | 442.83 | 0.010219 | 3.26 | 71.57 | 88.49 | 0.64 |
| WASH0 | WASH0 | 12095.14 | 5 YR | 233.00 | 438.87 | 440.08 | 1.21 | | 440.17 | 0.007835 | 2.39 | 98.94 | 170.78 | 0.53 |
| WASH0 | WASH0 | 11801.24 | 5 YR | 233.00 | 435.91 | 437.22 | 1.31 | | 437.34 | 0.012180 | 2.81 | 86.36 | 164.80 | 0.66 |
| WASH0 | WASH0 | 11434.21 | 5 YR | 233.00 | 432.17 | 433.34 | 1.17 | | 433.39 | 0.009476 | 1.93 | 120.61 | 308.37 | 0.54 |
| WASH0 | WASH0 | 11096.81 | 5 YR | 233.00 | 427.91 | 429.33 | 1.42 | | 429.43 | 0.014869 | 2.63 | 88.61 | 199.91 | 0.70 |
| WASH0 | WASH0 | 10668.33 | 5 YR | 233.00 | 422.99 | 424.13 | 1.14 | | 424.19 | 0.010212 | 1.99 | 117.37 | 304.71 | 0.56 |
| WASH0 | WASH0 | 10283.74 | 5 YR | 233.00 | 418.12 | 419.22 | 1.10 | 419.11 | 419.32 | 0.016073 | 2.50 | 93.32 | 241.24 | 0.71 |
| WASH0 | WASH0 | 9871.26 | 5 YR | 233.00 | 412.69 | 413.59 | 0.90 | 413.44 | 413.67 | 0.011756 | 2.36 | 100.20 | 229.57 | 0.62 |
| WASH0 | WASH0 | 9562.95 | 5 YR | 233.00 | 408.29 | 409.57 | 1.28 | 409.47 | 409.65 | 0.014604 | 2.32 | 105.35 | 294.90 | 0.67 |
| WASH0 | WASH0 | 9197 | 5 YR | 233.00 | 403.65 | 404.67 | 1.02 | 404.52 | 404.75 | 0.012330 | 2.25 | 103.84 | 258.97 | 0.62 |
| WASH0 | WASH0 | 8798.15 | 5 YR | 233.00 | 397.89 | 398.84 | 0.95 | 398.76 | 398.95 | 0.017389 | 2.59 | 89.81 | 232.71 | 0.74 |
| WASH0 | WASH0 | 8444.54 | 5 YR | 233.00 | 392.80 | 393.67 | 0.87 | | 393.75 | 0.012547 | 2.30 | 101.39 | 246.54 | 0.63 |
| WASH0 | WASH0 | 7821.48 | 5 YR | 233.00 | 383.87 | 384.97 | 1.10 | | 385.13 | 0.012594 | 3.22 | 73.35 | 121.10 | 0.69 |
| WASH0 | WASH0 | 7102.13 | 5 YR | 233.00 | 374.51 | 375.57 | 1.06 | | 375.67 | 0.015095 | 2.52 | 93.80 | 233.82 | 0.69 |
| WASH0 | WASH0 | 6494.14 | 5 YR | 233.00 | 364.25 | 365.24 | 0.99 | | 365.41 | 0.014252 | 3.33 | 70.00 | 107.52 | 0.73 |
| WASH0 | WASH0 | 6019.74 | 5 YR | 233.00 | 357.46 | 358.70 | 1.24 | | 358.81 | 0.017173 | 2.62 | 88.94 | 224.93 | 0.73 |
| WASH0 | WASH0 | 5624.57 | 5 YR | 233.00 | 350.55 | 351.75 | 1.20 | | 351.87 | 0.014159 | 2.80 | 83.18 | 164.71 | 0.69 |
| WASH0 | WASH0 | 5234.92 | 5 YR | 233.00 | 344.24 | 345.50 | 1.26 | | 345.68 | 0.014392 | 3.41 | 68.39 | 102.20 | 0.73 |
| WASH0 | WASH0 | 4617.22 | 5 YR | 233.00 | 334.54 | 335.47 | 0.93 | | 335.59 | 0.016293 | 2.85 | 81.82 | 175.53 | 0.74 |
| WASH0 | WASH0 | 4232 | 5 YR | 233.00 | 327.66 | 329.17 | 1.51 | | 329.31 | 0.012318 | 3.01 | 77.41 | 123.64 | 0.67 |
| WASH0 | WASH0 | 3967.23 | 5 YR | 233.00 | 324.40 | 325.60 | 1.20 | | 325.73 | 0.014980 | 2.86 | 81.40 | 162.80 | 0.71 |

HEC-RAS Plan: Plan 03 Profile: 5 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH0 | WASH0 | 3612.08 | 5 YR | 233.00 | 319.18 | 320.17 | 1.17 | 320.10 | 320.28 | 0.019007 | 2.63 | 88.55 | 240.33 | 0.76 |
| WASH0 | WASH0 | 3138.34 | 5 YR | 233.00 | 310.27 | 311.30 | 1.63 | 311.30 | 311.49 | 0.032760 | 3.45 | 67.59 | 183.93 | 1.00 |
| WASH0 | WASH0 | 2622.49 | 5 YR | 233.00 | 300.88 | 301.90 | 1.02 | | 302.00 | 0.019280 | 2.56 | 90.89 | 259.12 | 0.76 |
| WASH0 | WASH0 | 2197.73 | 5 YR | 233.00 | 292.25 | 293.32 | 1.07 | | 293.42 | 0.015634 | 2.53 | 92.22 | 229.70 | 0.70 |
| WASH0 | WASH0 | 1740.94 | 5 YR | 233.00 | 284.60 | 285.51 | 0.91 | 285.41 | 285.62 | 0.017222 | 2.70 | 86.21 | 208.53 | 0.74 |
| WASH0 | WASH0 | 1270.27 | 5 YR | 233.00 | 276.04 | 277.21 | 1.17 | 277.10 | 277.34 | 0.014967 | 2.87 | 81.23 | 161.85 | 0.71 |
| WASH0 | WASH0 | 767.81 | 5 YR | 233.00 | 266.47 | 267.77 | 1.30 | 267.72 | 268.04 | 0.022640 | 4.17 | 55.91 | 86.73 | 0.91 |
| WASH0 | WASH0 | 133.33 | 5 YR | 233.00 | 252.81 | 253.75 | 0.93 | 253.61 | 253.93 | 0.015320 | 3.43 | 67.93 | 105.41 | 0.75 |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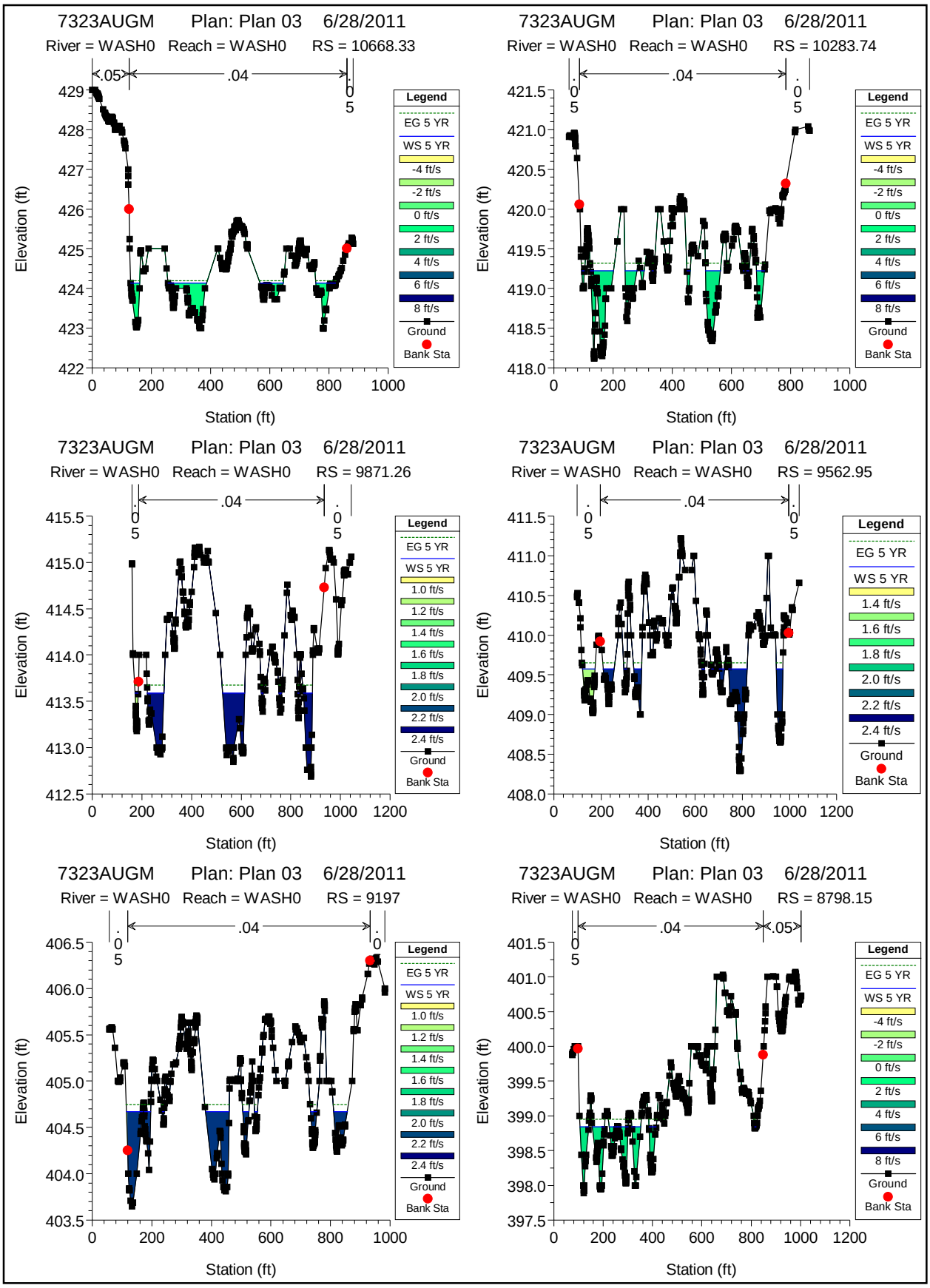
River = WASH0 Reach = WASH0 RS = 12718.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12391.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12095.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11801.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11434.21
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11096.81
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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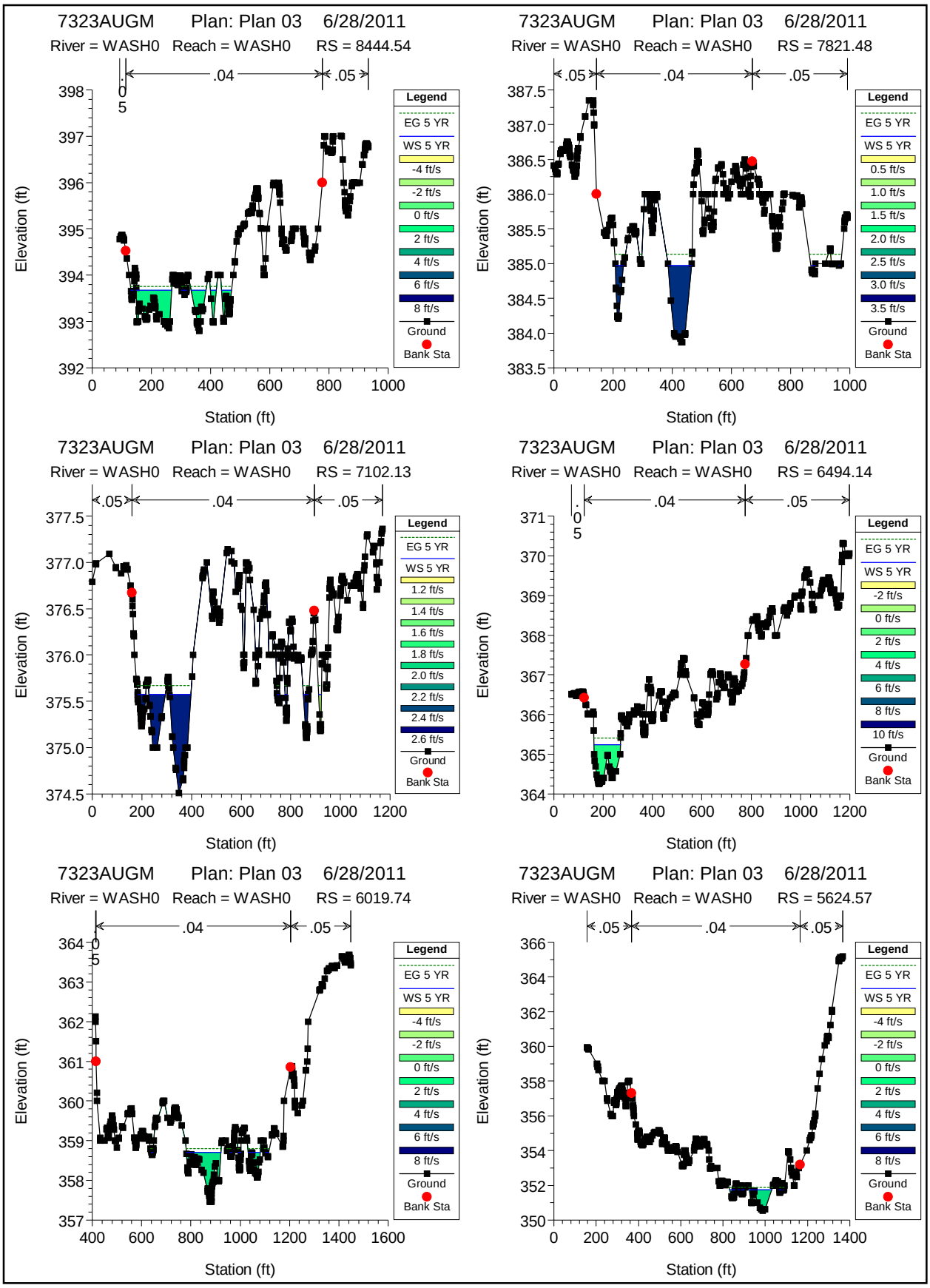
River = WASH0 Reach = WASH0 RS = 10668.33
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10283.74
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9871.26
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9562.95
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9197
.05
.04
.0
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8798.15
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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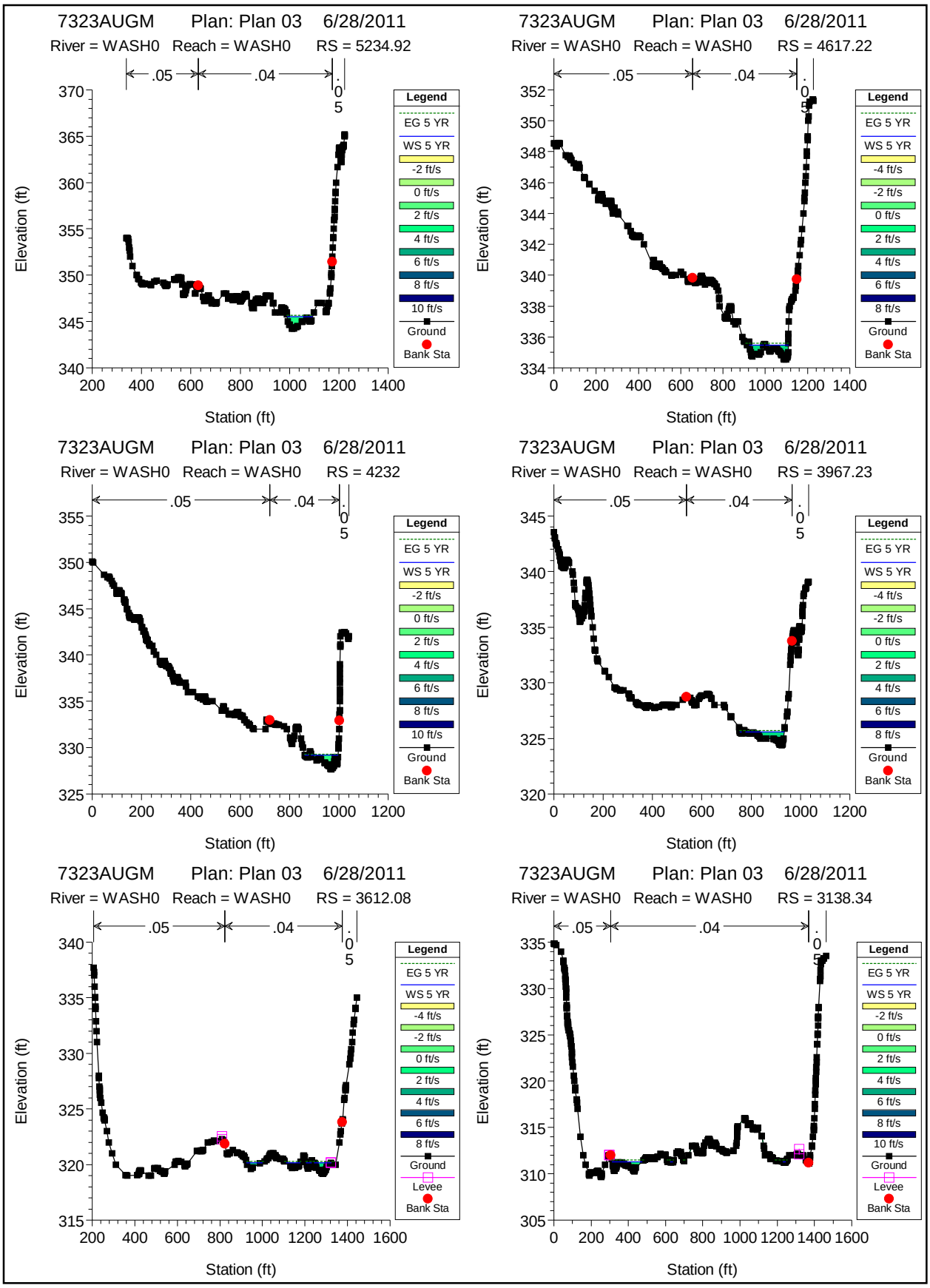
River = WASH0 Reach = WASH0 RS = 8444.54
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7821.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
3.0 ft/s
3.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7102.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
2.2 ft/s
2.4 ft/s
2.6 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6494.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6019.74
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5624.57
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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River = WASH0 Reach = WASH0 RS = 5234.92
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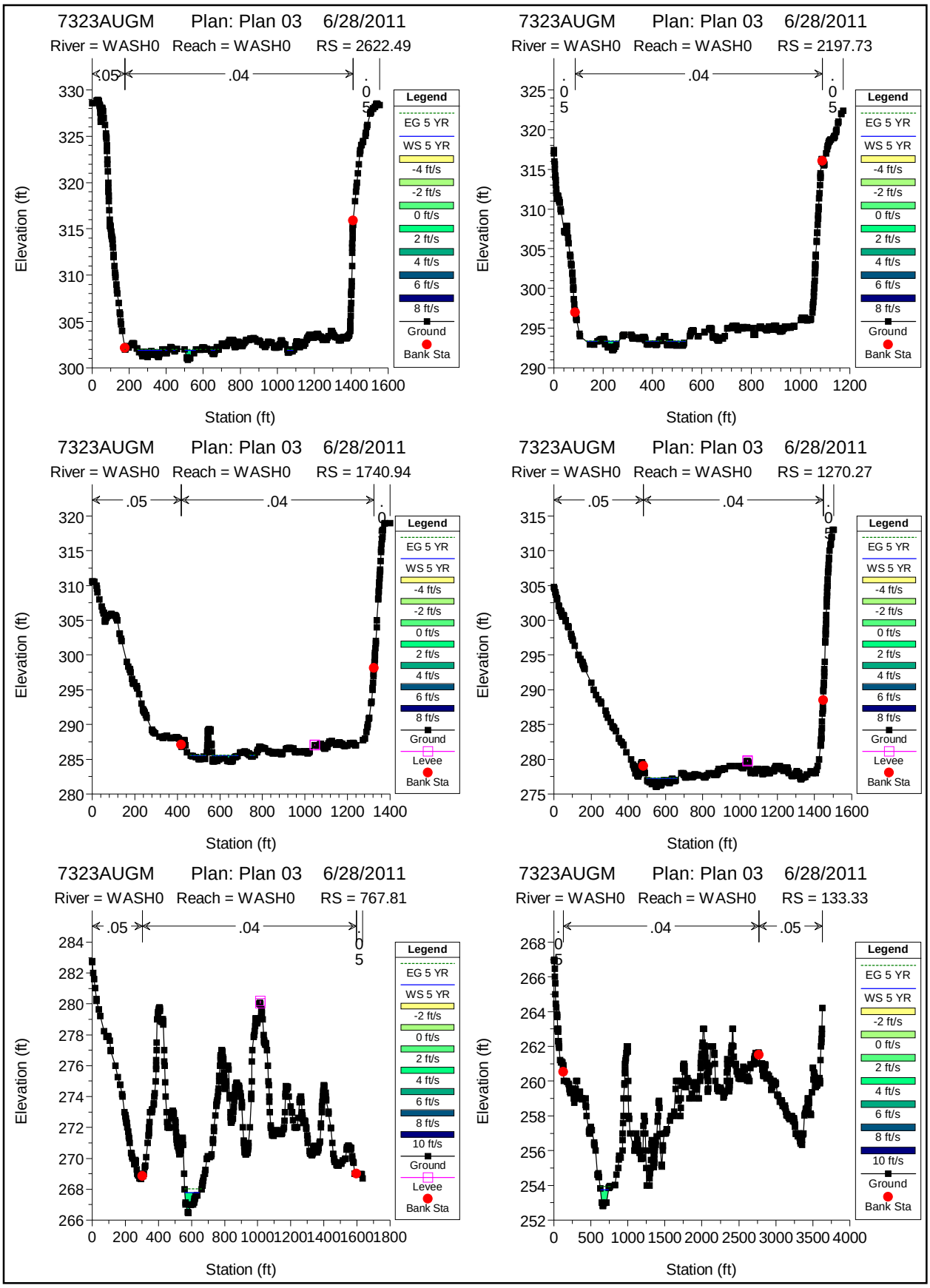
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4617.22
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4232
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3967.23
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3612.08
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3138.34
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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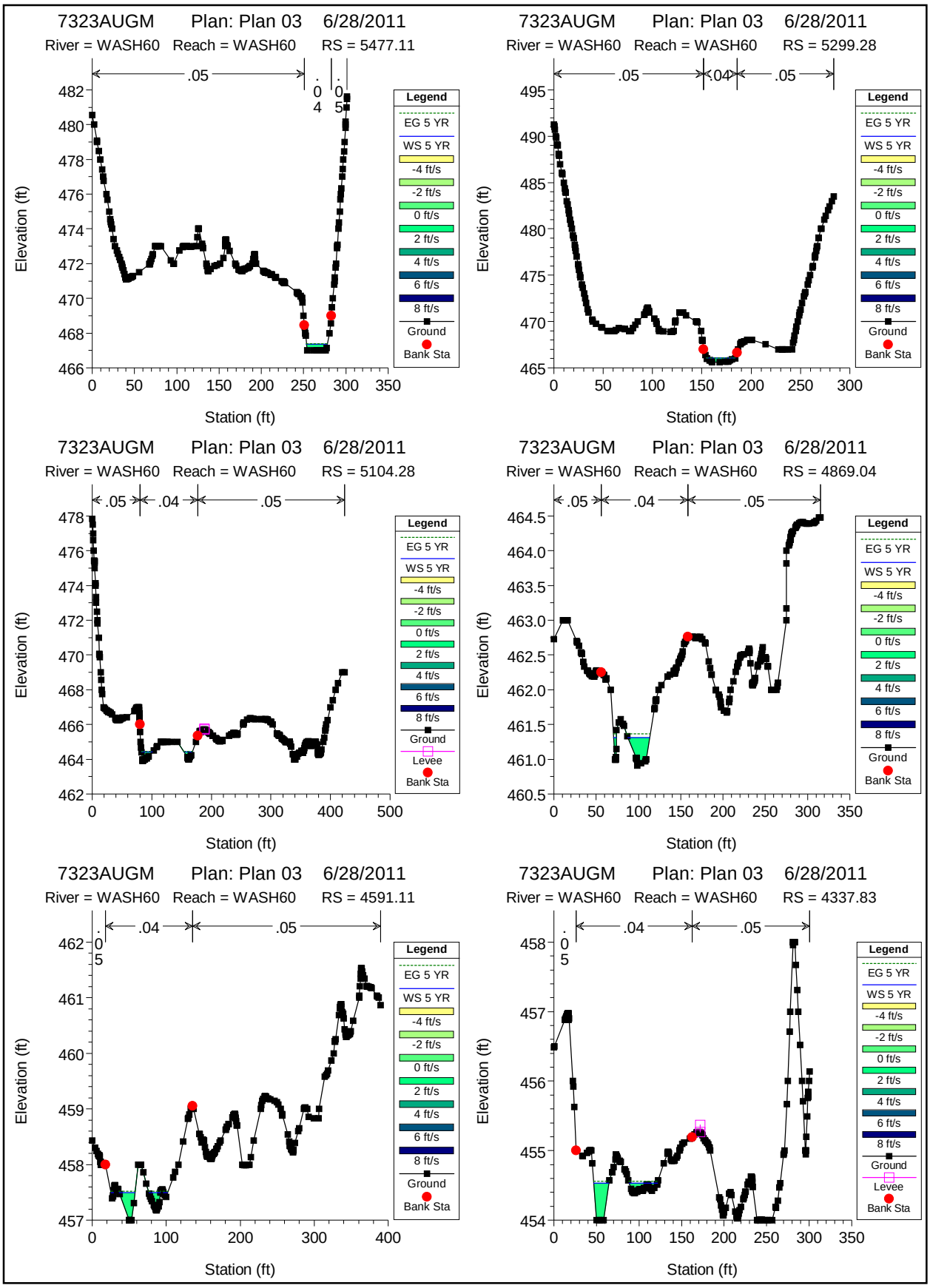
River = WASH0 Reach = WASH0 RS = 2622.49
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 2197.73
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1740.94
.05
.04
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1270.27
.05
.04
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 767.81
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 133.33
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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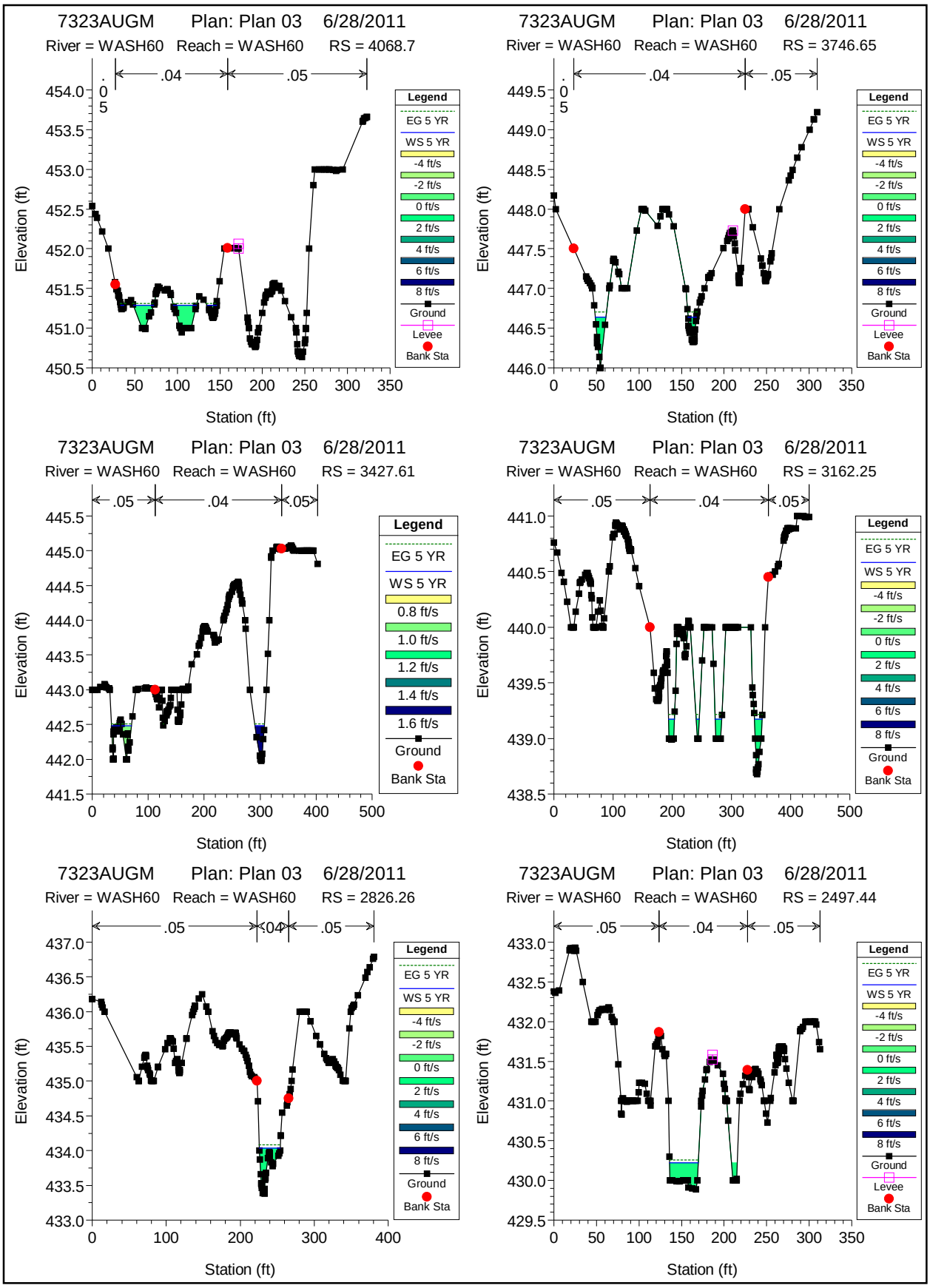
River = WASH60 Reach = WASH60 RS = 5477.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5299.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5104.28
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4869.04
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4591.11
.05
.04
.05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4337.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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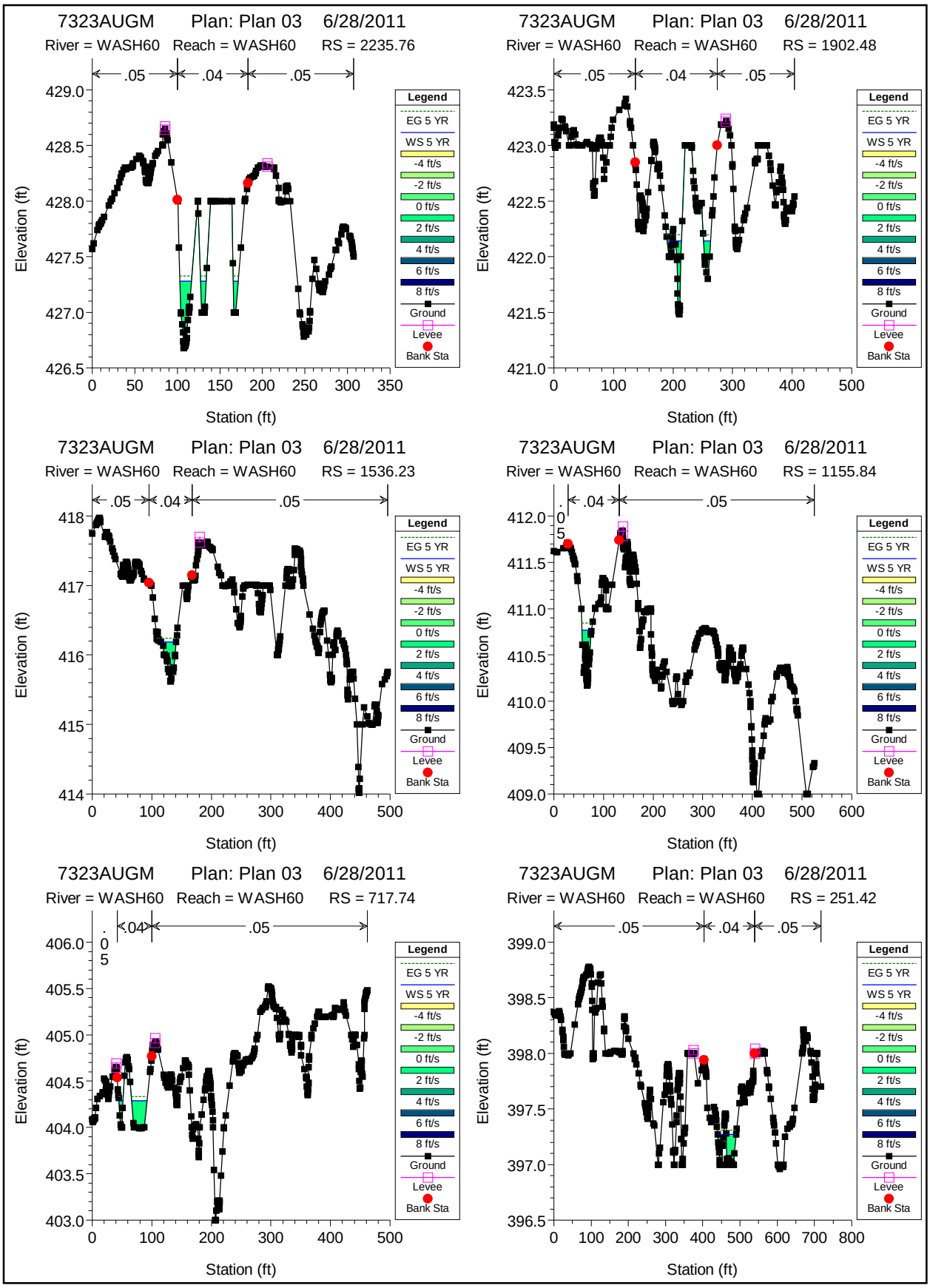
River = WASH60 Reach = WASH60 RS = 4068.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3746.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3427.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.8 ft/s
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3162.25
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2826.26
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2497.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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River = WASH60 Reach = WASH60 RS = 2235.76
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Elevation (ft)
Station (ft)
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River = WASH60 Reach = WASH60 RS = 1902.48
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1536.23
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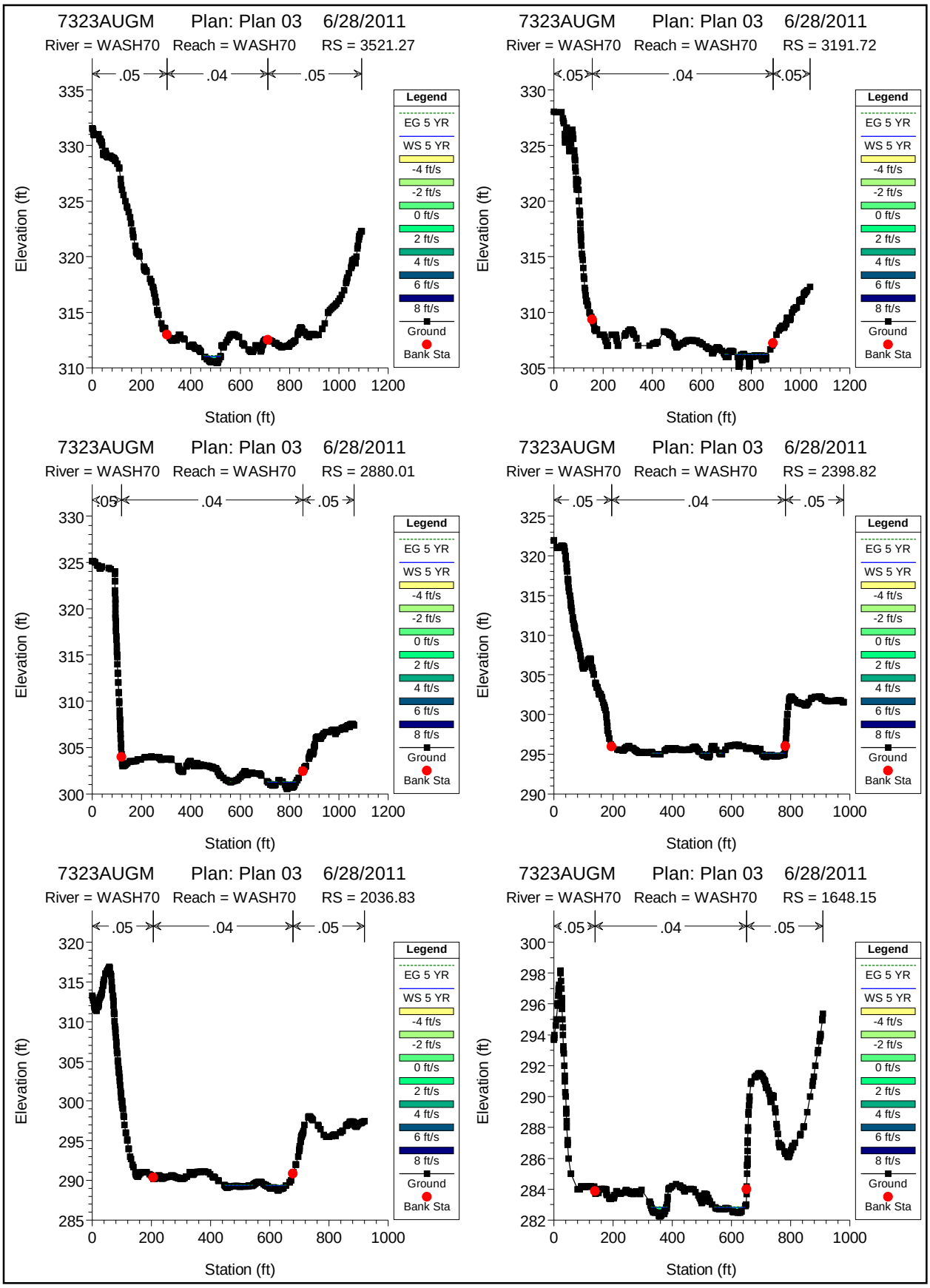
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1155.84
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 717.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 251.42
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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River = WASH70 Reach = WASH70 RS = 3521.27
.05 .04 .05
Elevation (ft)
Station (ft)
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River = WASH70 Reach = WASH70 RS = 3191.72
.05 .04 .05
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River = WASH70 Reach = WASH70 RS = 2880.01
.05 .04 .05
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River = WASH70 Reach = WASH70 RS = 2398.82
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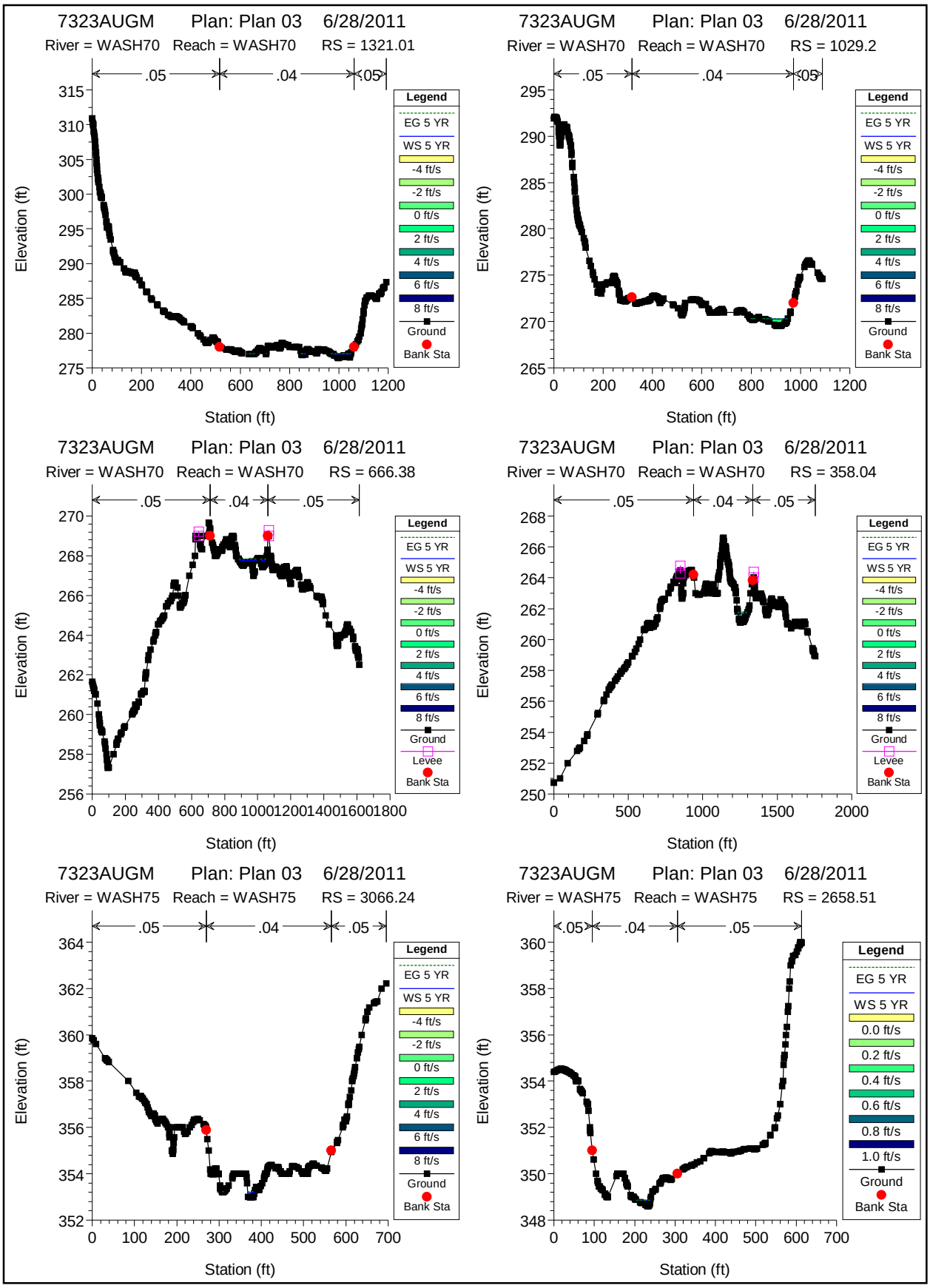
River = WASH70 Reach = WASH70 RS = 2036.83
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1648.15
.05 .04 .05
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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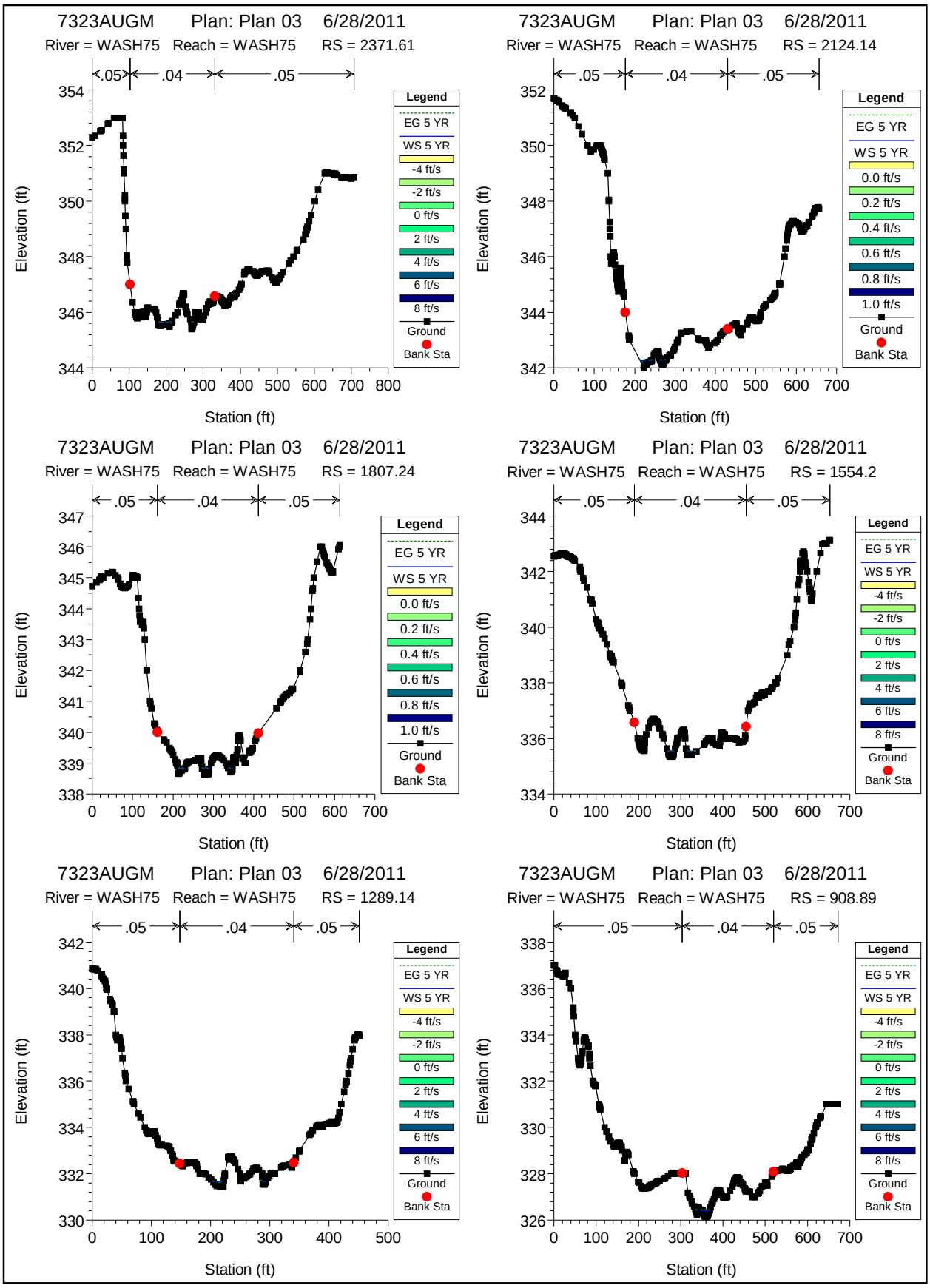
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1029.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 666.38
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 358.04
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 3066.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2658.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
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.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2124.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1807.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
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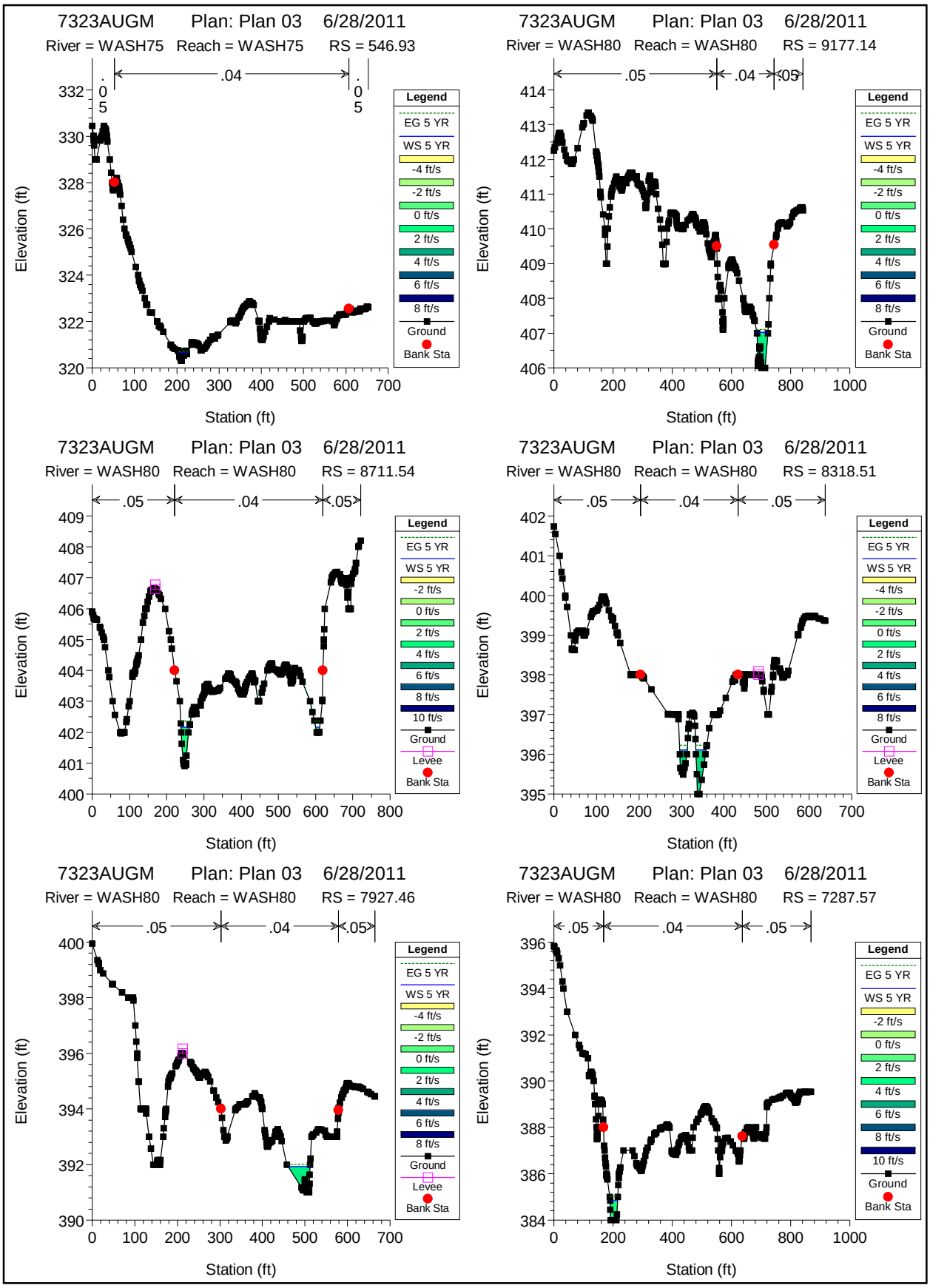
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1554.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1289.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 908.89
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
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Elevation (ft)
Station (ft)
Legend
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WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 9177.14
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8711.54
.05 .04 .05
10 ft/s
Levee
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8318.51
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7927.46
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7323AUGM Plan: Plan 03 6/28/2011
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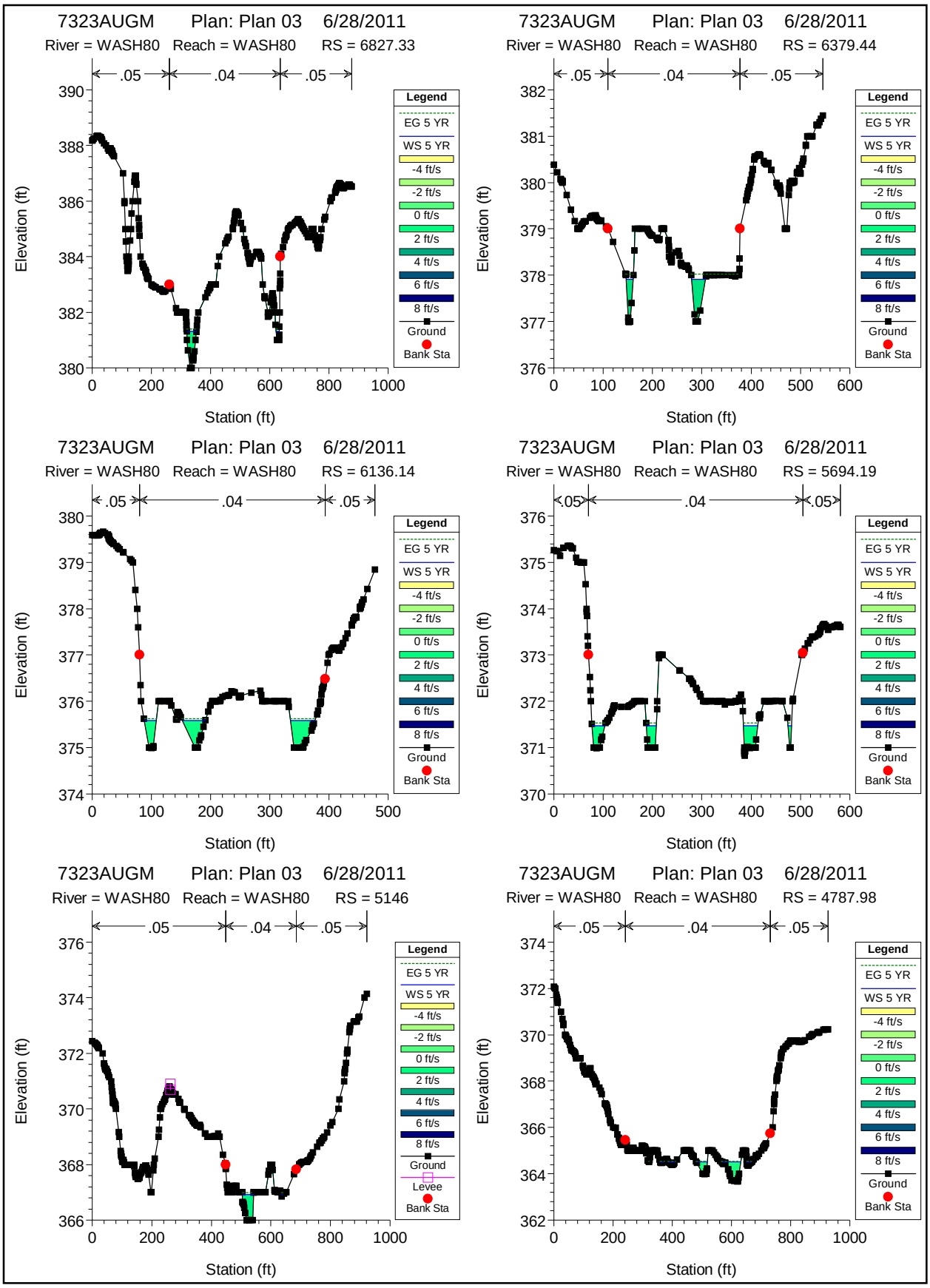
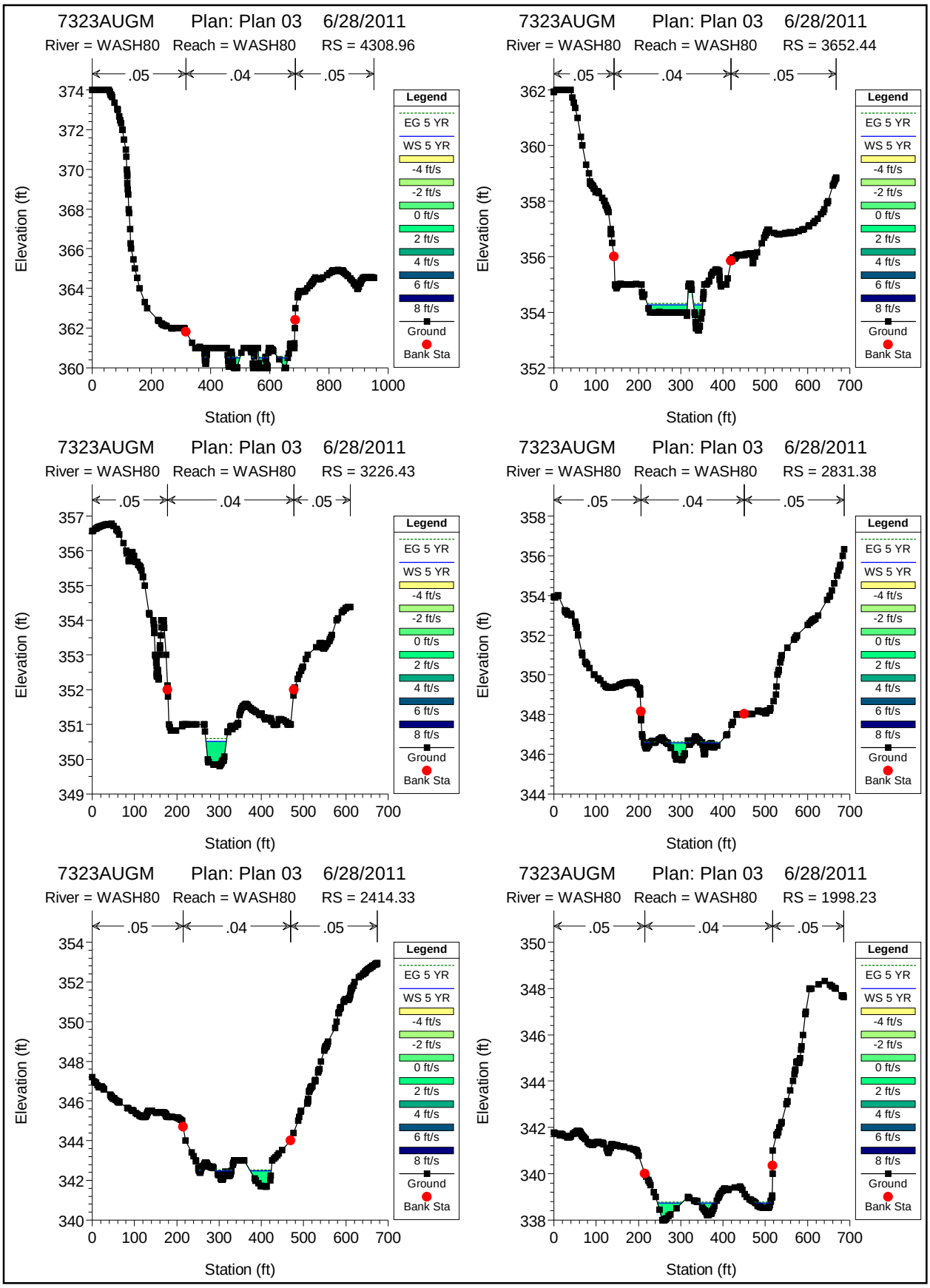
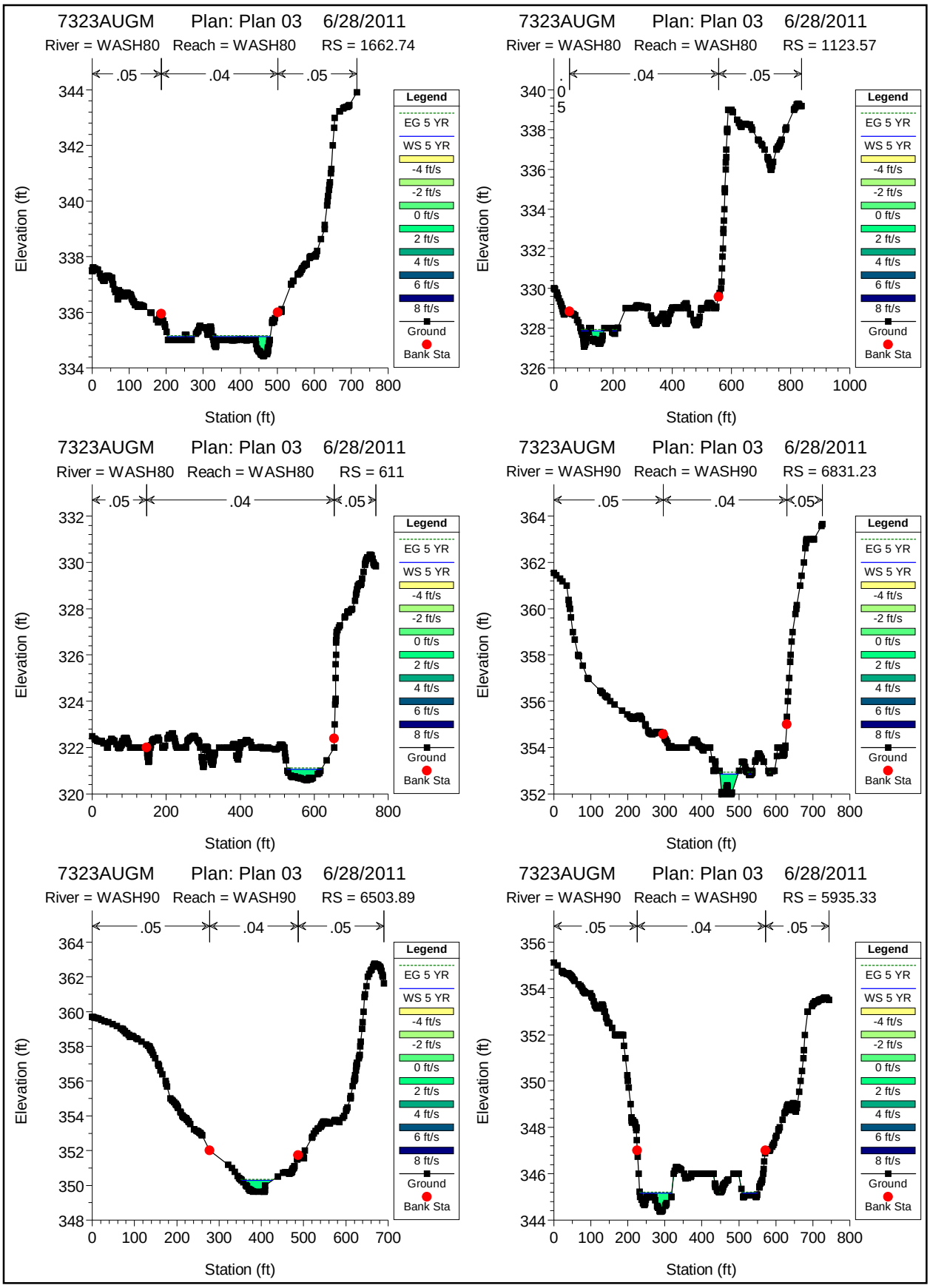
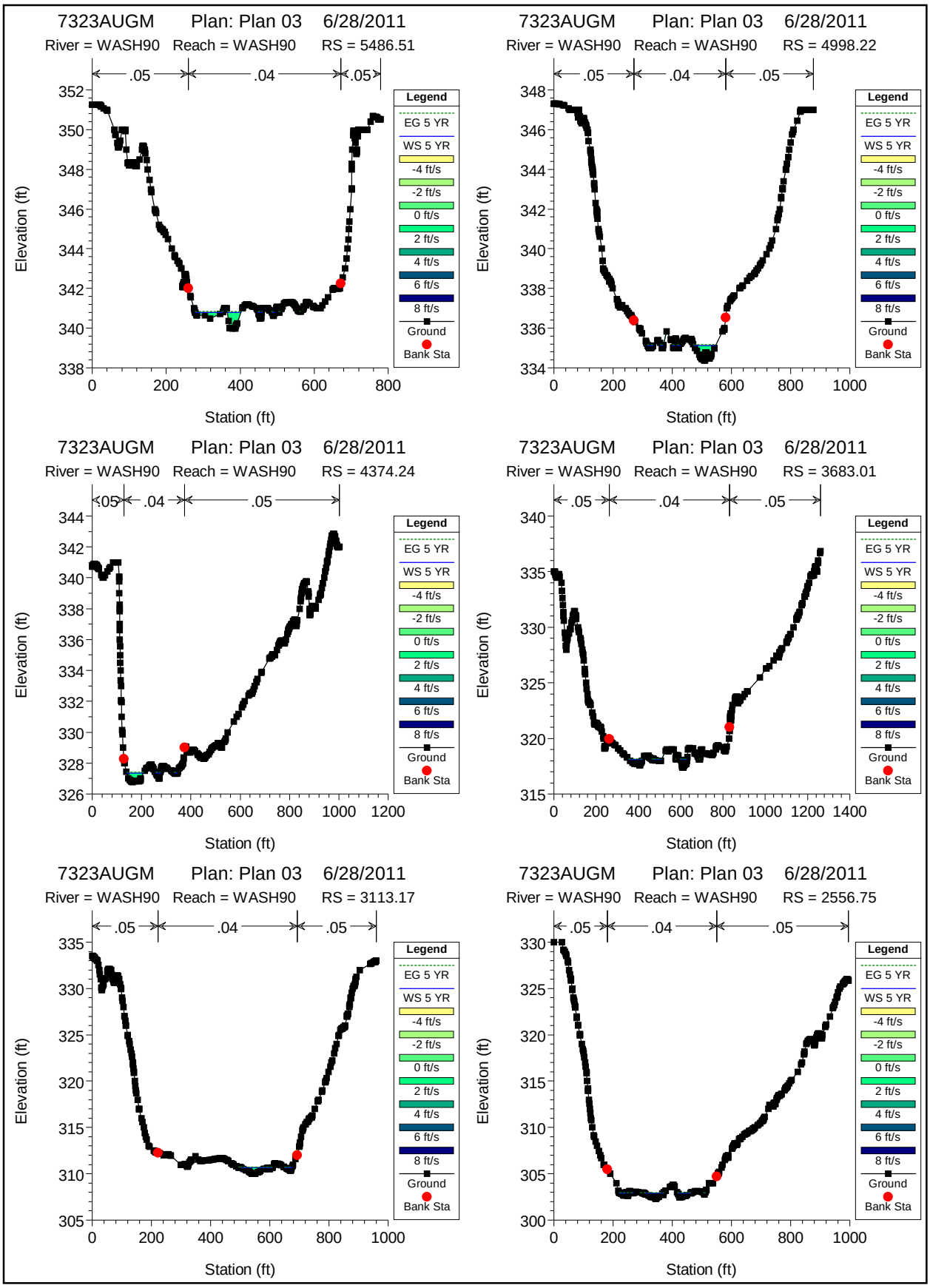
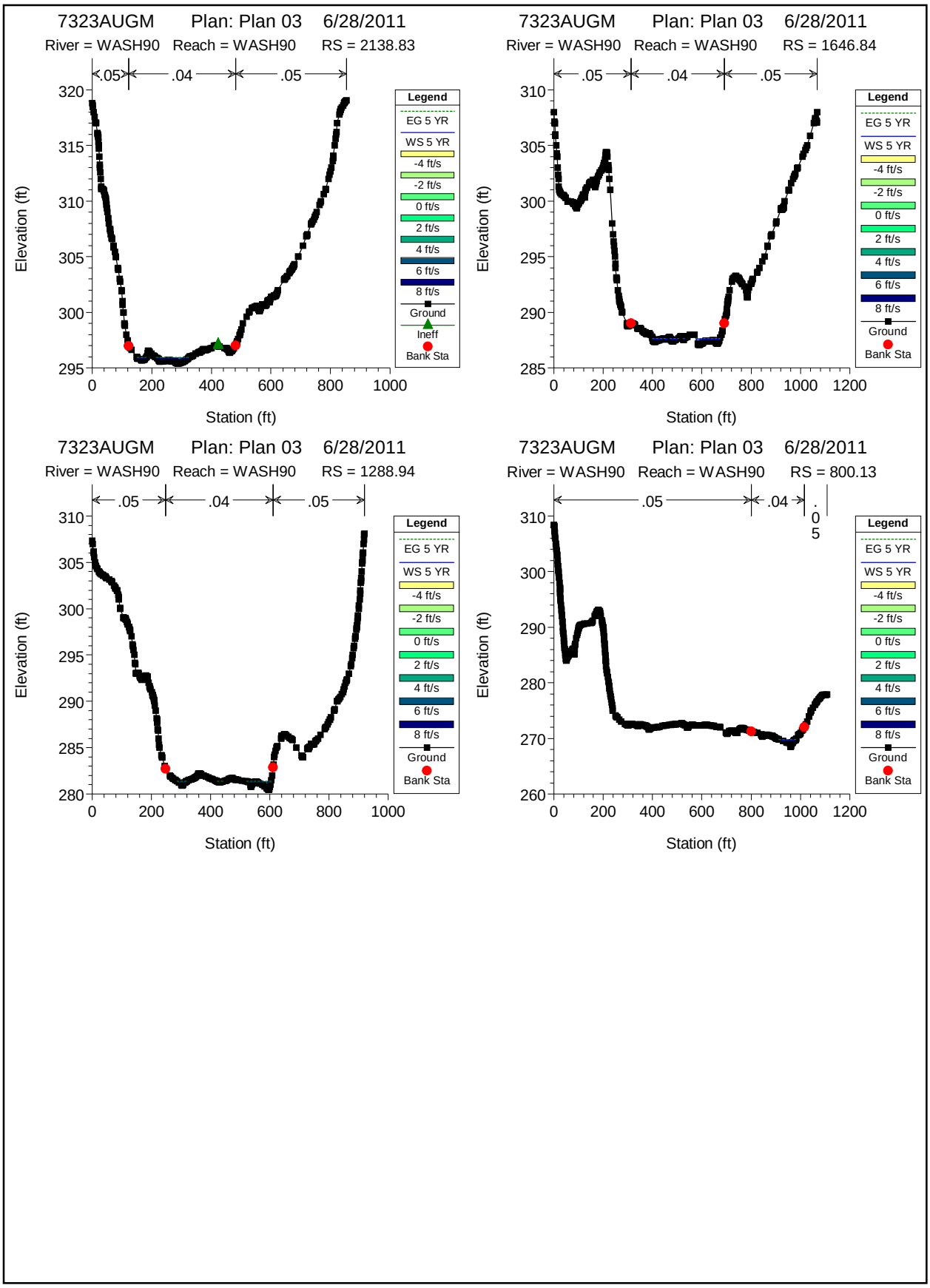

7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6827.33
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6379.44
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6136.14
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5694.19
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5146
.05 .04 .05
Levee
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4787.98
.05 .04 .05


7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4308.96
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3652.44
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3226.43
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2831.38
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2414.33
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1998.23
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1662.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1123.57
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 611
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6831.23
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6503.89
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5935.33
.05 .04 .05
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5486.51
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4998.22
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4374.24
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3683.01
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3113.17
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2556.75
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Ineff
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1646.84
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1288.94
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 800.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 5 YR
WS 5 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

# APPENDIX F:

## v. HEC-RAS report 24-Hour, 2-Year Storm

HEC-RAS Plan: Plan 07 Profile: 2 YR

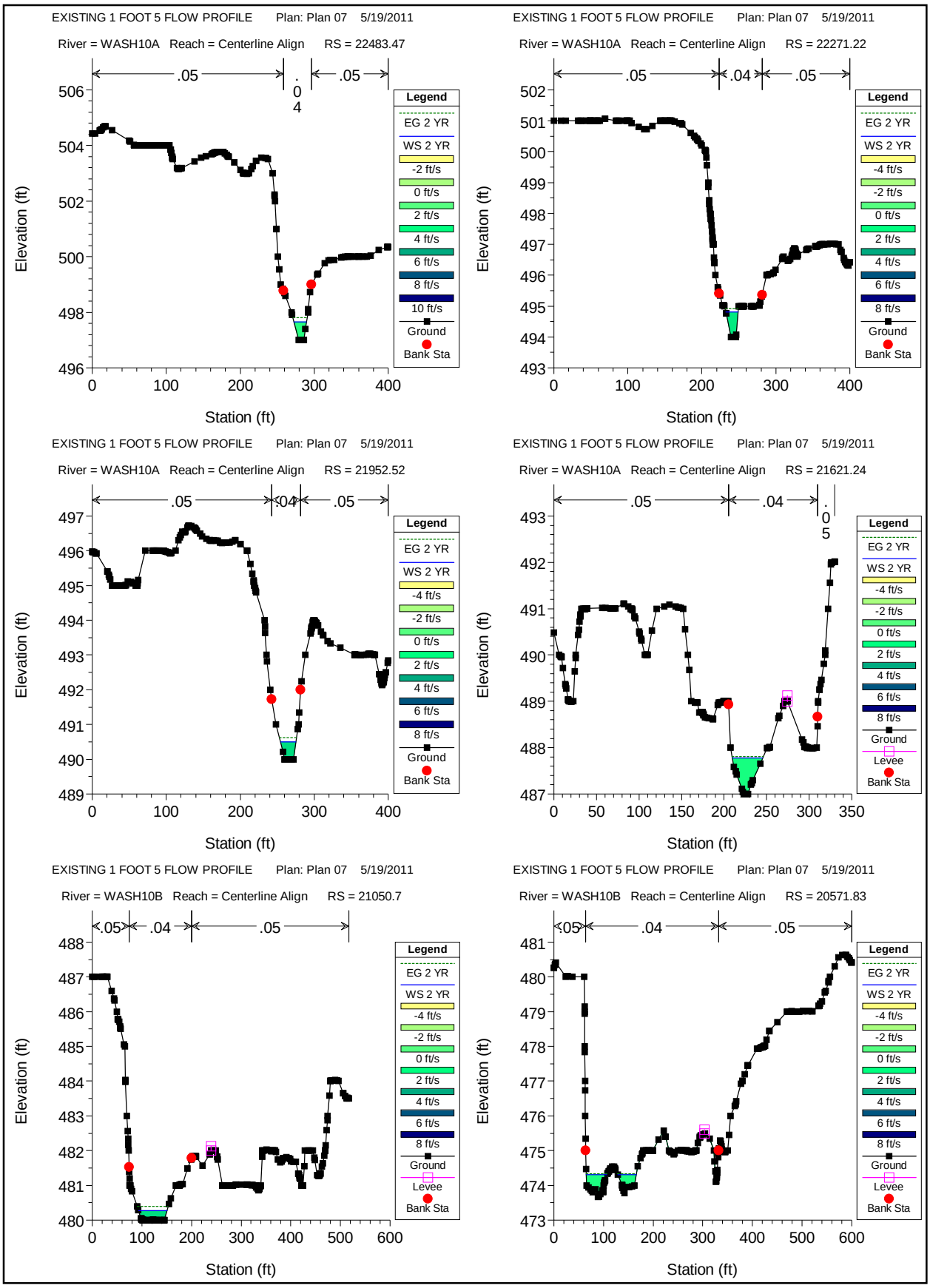
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH5 | Center Line Wash | 2398.41 | 2 YR | 71.41 | 457.00 | 458.28 | 457.97 | 458.34 | 0.004945 | 1.94 | 36.85 | 57.55 | 0.43 |
| WASH5 | Center Line Wash | 2138.83 | 2 YR | 71.41 | 454.99 | 455.48 | 455.48 | 455.69 | 0.031281 | 3.69 | 19.36 | 45.83 | 1.00 |
| WASH5 | Center Line Wash | 1728.1 | 2 YR | 71.41 | 450.99 | 451.79 | 451.49 | 451.83 | 0.004139 | 1.61 | 44.35 | 80.04 | 0.38 |
| WASH5 | Center Line Wash | 1400 | 2 YR | 71.41 | 447.98 | 448.67 | 448.67 | 448.87 | 0.032800 | 3.57 | 19.98 | 51.52 | 1.01 |
| WASH5 | Center Line Wash | 1040.76 | 2 YR | 71.41 | 443.98 | 444.59 | 444.34 | 444.64 | 0.005239 | 1.72 | 41.48 | 80.83 | 0.42 |
| WASH5 | Center Line Wash | 676.61 | 2 YR | 71.41 | 439.98 | 440.54 | 440.54 | 440.75 | 0.031864 | 3.68 | 19.38 | 46.78 | 1.01 |
| WASH45 | Centerline Align | 5500 | 2 YR | 787.74 | 340.89 | 342.46 | 342.15 | 342.56 | 0.006866 | 2.50 | 315.39 | 430.62 | 0.51 |
| WASH45 | Centerline Align | 4744.3 | 2 YR | 787.74 | 333.99 | 336.33 | 336.11 | 336.42 | 0.009766 | 2.38 | 330.34 | 630.18 | 0.58 |
| WASH45 | Centerline Align | 4000 | 2 YR | 787.74 | 329.00 | 330.56 | | 330.64 | 0.006326 | 2.22 | 355.02 | 545.11 | 0.48 |
| WASH45 | Centerline Align | 3500 | 2 YR | 787.74 | 324.90 | 325.88 | | 326.06 | 0.014345 | 3.39 | 232.03 | 347.73 | 0.73 |
| WASH45 | Centerline Align | 3000 | 2 YR | 787.74 | 318.94 | 321.18 | | 321.29 | 0.006762 | 2.57 | 306.11 | 395.27 | 0.52 |
| WASH45 | Centerline Align | 2500 | 2 YR | 787.74 | 314.98 | 317.37 | | 317.50 | 0.008547 | 2.91 | 270.96 | 346.93 | 0.58 |
| WASH45 | Centerline Align | 2000 | 2 YR | 787.74 | 312.00 | 313.55 | | 313.64 | 0.006959 | 2.39 | 328.97 | 483.93 | 0.51 |
| WASH45 | Centerline Align | 1500 | 2 YR | 787.74 | 308.00 | 309.48 | | 309.58 | 0.009625 | 2.51 | 313.96 | 549.12 | 0.58 |
| WASH45 | Centerline Align | 1000 | 2 YR | 787.74 | 303.95 | 305.30 | | 305.38 | 0.007350 | 2.26 | 348.69 | 583.24 | 0.51 |
| WASH45 | Centerline Align | 378.44 | 2 YR | 787.74 | 298.95 | 300.25 | 300.05 | 300.34 | 0.009005 | 2.41 | 326.73 | 575.75 | 0.56 |
| WASH40 | Centerline Align | 10653.2 | 2 YR | 700.95 | 375.98 | 378.81 | 378.54 | 378.97 | 0.009804 | 3.20 | 219.33 | 269.07 | 0.62 |
| WASH40 | Centerline Align | 10033.98 | 2 YR | 700.95 | 371.98 | 374.51 | | 374.65 | 0.005190 | 2.96 | 236.51 | 202.56 | 0.48 |
| WASH40 | Centerline Align | 9616.88 | 2 YR | 700.95 | 370.00 | 371.50 | 371.25 | 371.68 | 0.010354 | 3.32 | 211.06 | 255.23 | 0.64 |
| WASH40 | Centerline Align | 8761.12 | 2 YR | 700.95 | 363.93 | 365.62 | | 365.70 | 0.004997 | 2.32 | 302.34 | 362.82 | 0.45 |
| WASH40 | Centerline Align | 7943.06 | 2 YR | 700.95 | 357.89 | 359.33 | 359.17 | 359.44 | 0.013184 | 2.74 | 255.45 | 494.33 | 0.67 |
| WASH40 | Centerline Align | 6943.13 | 2 YR | 700.95 | 349.05 | 351.34 | | 351.39 | 0.005411 | 1.74 | 403.75 | 796.12 | 0.43 |
| WASH4 | Wash 4 | 1076.68 | 2 YR | 15.57 | 497.27 | 497.75 | 497.75 | 497.89 | 0.035280 | 2.95 | 5.27 | 19.13 | 0.99 |
| WASH4 | Wash 4 | 813.29 | 2 YR | 15.57 | 492.96 | 493.26 | 493.17 | 493.28 | 0.008183 | 1.25 | 12.49 | 55.24 | 0.46 |
| WASH4 | Wash 4 | 573.28 | 2 YR | 15.57 | 488.79 | 489.07 | 489.07 | 489.14 | 0.057097 | 2.07 | 7.51 | 66.49 | 1.09 |
| WASH4 | Wash 4 | 333.76 | 2 YR | 15.57 | 483.99 | 484.81 | 484.45 | 484.82 | 0.001823 | 0.97 | 16.12 | 33.85 | 0.25 |
| WASH35 | Centerline Align | 5246.65 | 2 YR | 78.56 | 388.76 | 389.46 | 389.37 | 389.62 | 0.017711 | 3.25 | 24.16 | 45.16 | 0.78 |
| WASH35 | Centerline Align | 4965.62 | 2 YR | 78.56 | 386.87 | 387.75 | | 387.79 | 0.003273 | 1.70 | 46.16 | 64.22 | 0.35 |
| WASH35 | Centerline Align | 4493.91 | 2 YR | 78.56 | 383.92 | 384.32 | 384.29 | 384.43 | 0.025734 | 2.68 | 29.28 | 96.87 | 0.86 |
| WASH35 | Centerline Align | 4063.78 | 2 YR | 78.56 | 379.98 | 380.98 | | 381.03 | 0.003765 | 1.74 | 45.12 | 67.51 | 0.38 |
| WASH35 | Centerline Align | 3661.61 | 2 YR | 78.56 | 377.65 | 378.21 | | 378.27 | 0.016264 | 1.96 | 39.98 | 149.58 | 0.67 |
| WASH35 | Centerline Align | 3000 | 2 YR | 78.56 | 371.96 | 372.57 | | 372.62 | 0.005238 | 1.70 | 46.12 | 91.05 | 0.42 |
| WASH35 | Centerline Align | 2500 | 2 YR | 78.56 | 367.85 | 368.42 | | 368.51 | 0.014728 | 2.37 | 33.12 | 86.56 | 0.68 |
| WASH35 | Centerline Align | 2000 | 2 YR | 78.56 | 363.88 | 364.41 | 364.23 | 364.44 | 0.005102 | 1.36 | 57.92 | 158.34 | 0.40 |
| WASH35 | Centerline Align | 1600 | 2 YR | 78.56 | 359.00 | 360.12 | 360.12 | 360.44 | 0.027109 | 4.56 | 17.24 | 26.57 | 1.00 |
| WASH30 | Centerline Align | 10130.27 | 2 YR | 1.00 | 348.00 | 348.08 | 348.05 | 348.09 | 0.017596 | 0.82 | 1.23 | 18.17 | 0.55 |
| WASH30 | Centerline Align | 9500 | 2 YR | 1.00 | 344.00 | 344.22 | 344.10 | 344.22 | 0.003078 | 0.32 | 3.17 | 52.99 | 0.23 |
| WASH30 | Centerline Align | 9000 | 2 YR | 1.00 | 339.99 | 340.08 | 340.08 | 340.12 | 0.060393 | 1.50 | 0.67 | 9.96 | 1.02 |
| WASH30 | Centerline Align | 8500 | 2 YR | 1.00 | 335.95 | 336.04 | 336.01 | 336.04 | 0.002614 | 0.23 | 4.40 | 106.07 | 0.20 |
| WASH30 | Centerline Align | 8000 | 2 YR | 1.00 | 331.99 | 332.02 | 332.02 | 332.04 | 0.124655 | 1.15 | 0.87 | 33.83 | 1.26 |
| WASH30 | Centerline Align | 7500 | 2 YR | 1.00 | 327.91 | 328.07 | 327.99 | 328.07 | 0.002597 | 0.40 | 2.49 | 25.36 | 0.23 |
| WASH30 | Centerline Align | 7000 | 2 YR | 1.00 | 324.88 | 324.98 | | 324.99 | 0.029065 | 0.87 | 1.15 | 22.58 | 0.68 |
| WASH30 | Centerline Align | 6500 | 2 YR | 1.00 | 319.94 | 320.05 | 320.02 | 320.05 | 0.004923 | 0.32 | 3.15 | 74.04 | 0.27 |

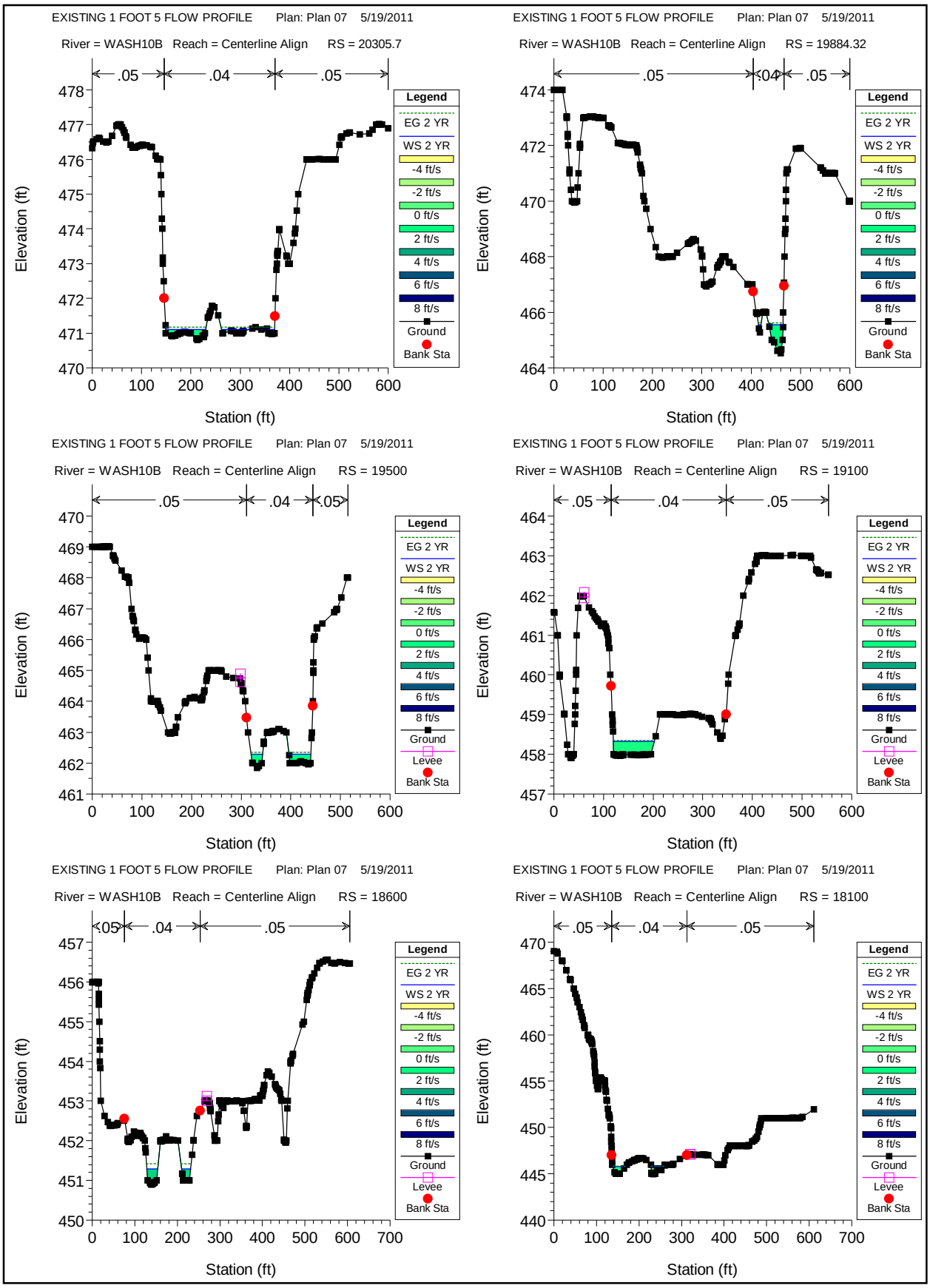
HEC-RAS Plan: Plan 07 Profile: 2 YR (Continued)

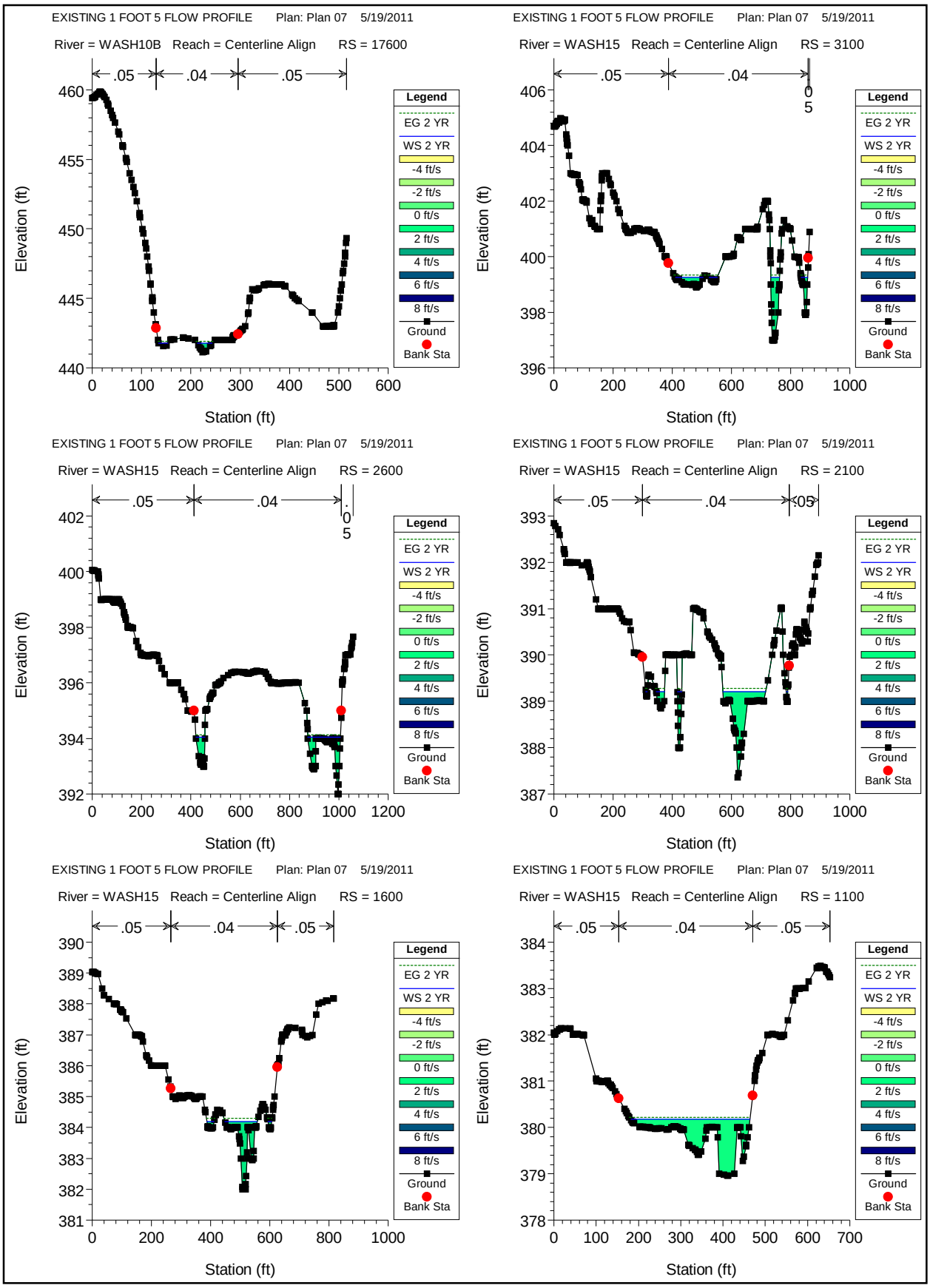
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH30 | Centerline Align | 6000 | 2 YR | 1.00 | 316.28 | 316.41 | | 316.42 | 0.011805 | 0.67 | 1.48 | 21.66 | 0.45 |
| WASH30 | Centerline Align | 5500 | 2 YR | 1.00 | 310.52 | 310.62 | | 310.63 | 0.011318 | 0.69 | 1.44 | 19.69 | 0.45 |
| WASH30 | Centerline Align | 5000 | 2 YR | 1.00 | 306.00 | 306.13 | 306.08 | 306.14 | 0.007299 | 0.72 | 1.39 | 12.96 | 0.39 |
| WASH30 | Centerline Align | 4500 | 2 YR | 1.00 | 302.71 | 302.80 | | 302.81 | 0.006136 | 0.47 | 2.14 | 33.15 | 0.32 |
| WASH30 | Centerline Align | 4000 | 2 YR | 1.00 | 297.96 | 298.02 | 298.01 | 298.03 | 0.016884 | 0.52 | 1.91 | 53.23 | 0.49 |
| WASH30 | Centerline Align | 3500 | 2 YR | 1.00 | 293.44 | 293.57 | 293.52 | 293.57 | 0.005495 | 0.52 | 1.91 | 23.11 | 0.32 |
| WASH30 | Centerline Align | 3000 | 2 YR | 1.00 | 287.97 | 288.03 | 288.02 | 288.04 | 0.032898 | 0.79 | 1.27 | 31.86 | 0.69 |
| WASH30 | Centerline Align | 2500 | 2 YR | 1.00 | 282.22 | 282.37 | 282.31 | 282.38 | 0.005668 | 0.56 | 1.78 | 19.76 | 0.33 |
| WASH30 | Centerline Align | 2000 | 2 YR | 1.00 | 277.99 | 278.03 | 278.02 | 278.03 | 0.015025 | 0.34 | 2.97 | 147.40 | 0.42 |
| WASH30 | Centerline Align | 1343.16 | 2 YR | 1.00 | 269.94 | 270.01 | 270.00 | 270.01 | 0.010098 | 0.30 | 3.37 | 149.87 | 0.35 |
| WASH30 | Centerline Align | 1000 | 2 YR | 1.00 | 265.53 | 265.67 | 265.63 | 265.68 | 0.016241 | 0.78 | 1.29 | 19.42 | 0.53 |
| WASH30 | Centerline Align | 500 | 2 YR | 1.00 | 259.00 | 259.04 | 259.02 | 259.05 | 0.011010 | 0.46 | 2.16 | 52.76 | 0.40 |
| WASH25B | Centerline Align | 6600 | 2 YR | 24.74 | 320.99 | 321.36 | 321.25 | 321.41 | 0.011077 | 1.72 | 14.37 | 49.17 | 0.56 |
| WASH25B | Centerline Align | 6100 | 2 YR | 24.74 | 316.93 | 317.21 | | 317.23 | 0.006498 | 1.04 | 23.83 | 116.63 | 0.40 |
| WASH25B | Centerline Align | 5600 | 2 YR | 24.74 | 310.97 | 311.42 | 311.38 | 311.52 | 0.024971 | 2.62 | 9.45 | 31.71 | 0.84 |
| WASH25B | Centerline Align | 5100 | 2 YR | 24.74 | 304.99 | 305.62 | | 305.63 | 0.006782 | 1.05 | 23.54 | 116.83 | 0.41 |
| WASH25B | Centerline Align | 4600 | 2 YR | 24.74 | 298.93 | 299.28 | 299.26 | 299.38 | 0.030196 | 2.60 | 9.51 | 37.09 | 0.91 |
| WASH25B | Centerline Align | 4100 | 2 YR | 24.74 | 291.99 | 292.31 | | 292.34 | 0.008088 | 1.35 | 18.29 | 70.89 | 0.47 |
| WASH25B | Centerline Align | 3600 | 2 YR | 24.74 | 285.53 | 285.83 | | 285.89 | 0.023732 | 2.02 | 12.27 | 58.66 | 0.78 |
| WASH25B | Centerline Align | 3100 | 2 YR | 24.74 | 280.00 | 280.30 | | 280.31 | 0.006445 | 0.99 | 25.06 | 131.47 | 0.40 |
| WASH25B | Centerline Align | 2600 | 2 YR | 24.74 | 274.65 | 275.05 | 275.00 | 275.07 | 0.017492 | 1.07 | 23.11 | 227.30 | 0.59 |
| WASH25B | Centerline Align | 2100 | 2 YR | 24.74 | 268.58 | 268.80 | 268.80 | 268.88 | 0.042616 | 2.35 | 10.54 | 62.24 | 1.01 |
| WASH25B | Centerline Align | 1368.02 | 2 YR | 24.74 | 255.25 | 256.33 | 255.90 | 256.36 | 0.002507 | 1.29 | 19.12 | 31.83 | 0.29 |
| WASH25B | Centerline Align | 600 | 2 YR | 24.74 | 250.34 | 251.06 | 251.06 | 251.12 | 0.055127 | 1.92 | 12.89 | 124.20 | 1.05 |
| WASH25B | Centerline Align | 100 | 2 YR | 24.74 | 245.90 | 246.16 | 246.09 | 246.18 | 0.008004 | 1.02 | 24.15 | 140.88 | 0.44 |
| WASH25A | Centerline Align | 10806.78 | 2 YR | 40.21 | 366.90 | 367.41 | 367.26 | 367.47 | 0.008382 | 1.85 | 21.71 | 53.84 | 0.51 |
| WASH25A | Centerline Align | 10100 | 2 YR | 40.21 | 359.87 | 360.53 | | 360.60 | 0.011414 | 2.09 | 19.28 | 50.40 | 0.59 |
| WASH25A | Centerline Align | 9600 | 2 YR | 40.21 | 354.94 | 355.33 | | 355.36 | 0.009625 | 1.42 | 28.40 | 117.10 | 0.51 |
| WASH25A | Centerline Align | 9100 | 2 YR | 40.21 | 348.87 | 349.43 | | 349.53 | 0.014390 | 2.58 | 15.58 | 35.32 | 0.68 |
| WASH25A | Centerline Align | 8600 | 2 YR | 40.21 | 343.00 | 344.07 | 343.69 | 344.09 | 0.008466 | 1.05 | 38.47 | 227.25 | 0.45 |
| WASH25A | Centerline Align | 8100 | 2 YR | 40.21 | 338.00 | 338.43 | | 338.49 | 0.015475 | 1.97 | 20.37 | 72.91 | 0.66 |
| WASH25A | Centerline Align | 7600 | 2 YR | 40.21 | 332.89 | 333.29 | 333.19 | 333.32 | 0.007381 | 1.17 | 34.35 | 154.46 | 0.44 |
| WASH25A | Centerline Align | 7100 | 2 YR | 40.21 | 327.91 | 328.13 | 328.08 | 328.16 | 0.015404 | 1.34 | 29.96 | 190.64 | 0.60 |
| WASH23 | Wash23 | 3479.12 | 2 YR | 1.00 | 357.86 | 358.02 | 358.02 | 358.05 | 0.038901 | 1.44 | 0.69 | 7.97 | 0.86 |
| WASH23 | Wash23 | 3038.38 | 2 YR | 1.00 | 353.21 | 353.42 | 353.33 | 353.42 | 0.004358 | 0.54 | 1.85 | 17.97 | 0.30 |
| WASH23 | Wash23 | 2630.84 | 2 YR | 1.00 | 348.77 | 348.97 | 348.97 | 348.99 | 0.061721 | 1.21 | 0.83 | 17.51 | 0.98 |
| WASH23 | Wash23 | 2097.72 | 2 YR | 1.00 | 343.97 | 344.10 | 344.03 | 344.10 | 0.003275 | 0.45 | 2.24 | 23.18 | 0.25 |
| WASH23 | Wash23 | 1490.24 | 2 YR | 1.00 | 338.53 | 338.59 | 338.59 | 338.61 | 0.078003 | 1.12 | 0.89 | 25.28 | 1.05 |
| WASH23 | Wash23 | 1066.16 | 2 YR | 1.00 | 333.93 | 334.04 | 334.03 | 334.05 | 0.003728 | 0.29 | 3.49 | 77.52 | 0.24 |
| WASH23 | Wash23 | 780.97 | 2 YR | 1.00 | 330.99 | 331.02 | 331.02 | 331.04 | 0.102807 | 0.98 | 1.02 | 43.01 | 1.12 |
| WASH20 | Centerline Align | 16636.71 | 2 YR | 85.80 | 430.89 | 431.77 | 431.49 | 431.85 | 0.006588 | 2.14 | 40.13 | 66.84 | 0.49 |
| WASH20 | Centerline Align | 16100 | 2 YR | 85.80 | 425.98 | 427.41 | | 427.50 | 0.010237 | 2.37 | 36.15 | 71.60 | 0.59 |
| WASH20 | Centerline Align | 15600 | 2 YR | 85.80 | 421.00 | 422.03 | | 422.14 | 0.010400 | 2.63 | 32.59 | 56.13 | 0.61 |

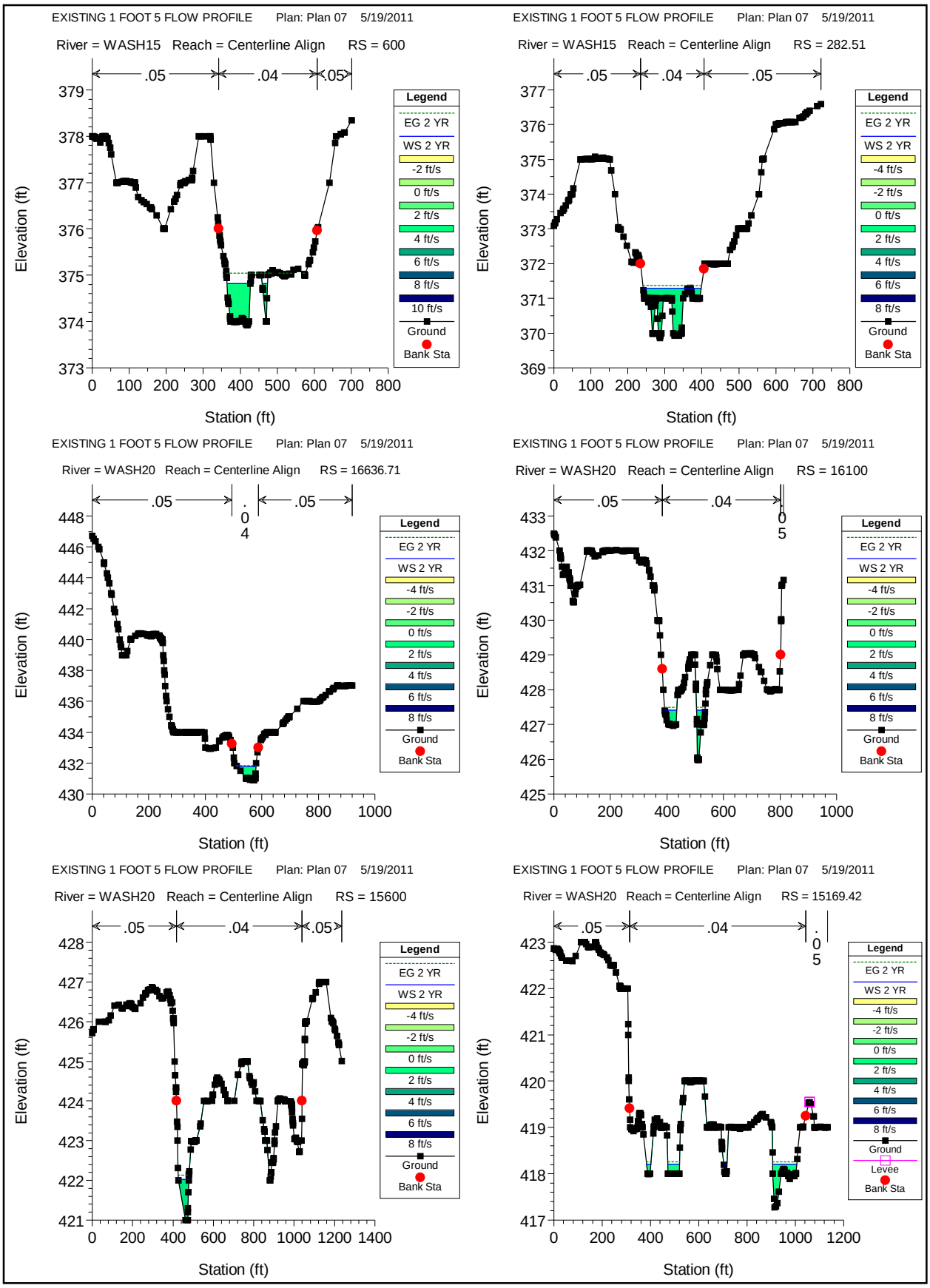
HEC-RAS Plan: Plan 07 Profile: 2 YR (Continued)

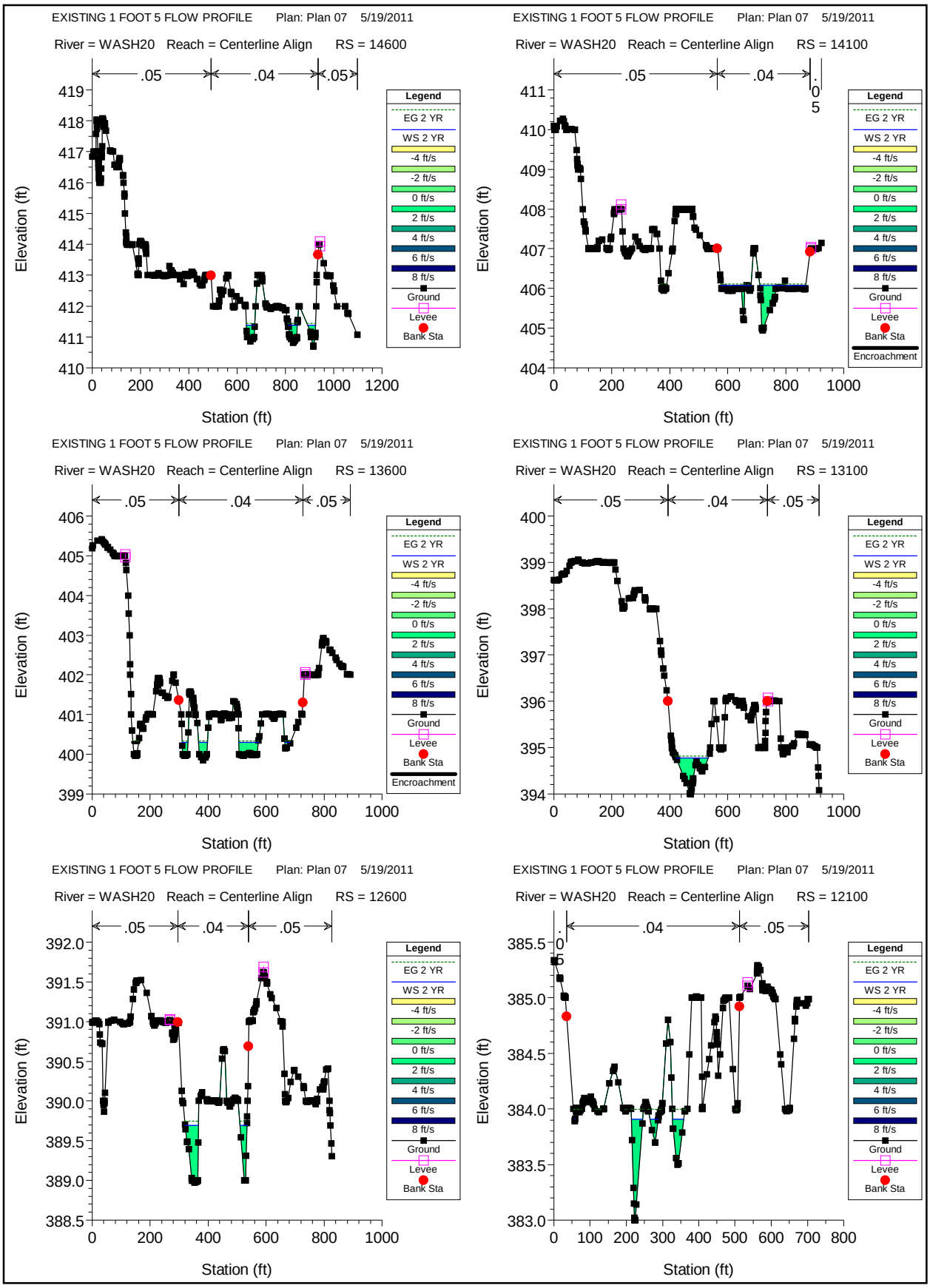
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH20 | Centerline Align | 15169.42 | 2 YR | 85.80 | 417.28 | 418.21 | 418.11 | 418.25 | 0.011050 | 1.69 | 50.86 | 178.93 | 0.56 |
| WASH20 | Centerline Align | 14600 | 2 YR | 85.80 | 410.69 | 411.38 | 411.24 | 411.45 | 0.009910 | 2.01 | 42.73 | 106.60 | 0.56 |
| WASH20 | Centerline Align | 14100 | 2 YR | 85.80 | 404.94 | 406.08 | 405.76 | 406.11 | 0.010609 | 1.45 | 59.20 | 253.65 | 0.53 |
| WASH20 | Centerline Align | 13600 | 2 YR | 60.06 | 399.85 | 400.30 | 400.19 | 400.34 | 0.009640 | 1.56 | 38.57 | 138.01 | 0.52 |
| WASH20 | Centerline Align | 13100 | 2 YR | 60.06 | 394.00 | 394.78 | 394.64 | 394.82 | 0.009845 | 1.72 | 34.97 | 109.96 | 0.54 |
| WASH20 | Centerline Align | 12600 | 2 YR | 60.06 | 388.97 | 389.69 | 389.47 | 389.74 | 0.007286 | 1.88 | 31.93 | 69.67 | 0.49 |
| WASH20 | Centerline Align | 12100 | 2 YR | 60.06 | 383.00 | 383.91 | 383.84 | 384.00 | 0.020755 | 2.36 | 25.41 | 86.47 | 0.77 |
| WASH20 | Centerline Align | 11600 | 2 YR | 60.06 | 376.96 | 377.49 | 377.33 | 377.55 | 0.008768 | 1.92 | 31.34 | 76.55 | 0.53 |
| WASH20 | Centerline Align | 11329.19 | 2 YR | 60.06 | 373.39 | 374.18 | 374.14 | 374.22 | 0.018418 | 1.59 | 37.78 | 213.19 | 0.67 |
| WASH15 | Centerline Align | 3100 | 2 YR | 204.54 | 396.98 | 399.25 | 398.65 | 399.35 | 0.011545 | 2.45 | 83.34 | 171.84 | 0.62 |
| WASH15 | Centerline Align | 2600 | 2 YR | 204.54 | 392.00 | 394.05 | | 394.14 | 0.009445 | 2.33 | 87.80 | 168.33 | 0.57 |
| WASH15 | Centerline Align | 2100 | 2 YR | 204.54 | 387.36 | 389.21 | | 389.28 | 0.010003 | 2.23 | 91.77 | 196.92 | 0.58 |
| WASH15 | Centerline Align | 1600 | 2 YR | 204.54 | 381.99 | 384.19 | 383.68 | 384.29 | 0.009959 | 2.51 | 81.51 | 145.73 | 0.59 |
| WASH15 | Centerline Align | 1100 | 2 YR | 204.54 | 378.96 | 380.17 | | 380.22 | 0.006743 | 1.72 | 119.07 | 281.49 | 0.47 |
| WASH15 | Centerline Align | 600 | 2 YR | 204.54 | 373.92 | 374.82 | 374.72 | 375.05 | 0.017723 | 3.83 | 53.35 | 77.89 | 0.82 |
| WASH15 | Centerline Align | 282.51 | 2 YR | 204.54 | 369.86 | 371.29 | | 371.38 | 0.007999 | 2.29 | 89.28 | 155.28 | 0.53 |
| WASH10B | Centerline Align | 21050.7 | 2 YR | 38.92 | 480.00 | 480.27 | 480.27 | 480.40 | 0.036724 | 2.79 | 13.97 | 57.10 | 0.99 |
| WASH10B | Centerline Align | 20571.83 | 2 YR | 38.92 | 473.67 | 474.31 | 474.11 | 474.34 | 0.005006 | 1.34 | 28.99 | 79.29 | 0.39 |
| WASH10B | Centerline Align | 20305.7 | 2 YR | 38.92 | 470.81 | 471.11 | 471.11 | 471.18 | 0.055251 | 2.10 | 18.57 | 157.80 | 1.08 |
| WASH10B | Centerline Align | 19884.32 | 2 YR | 38.92 | 464.53 | 465.56 | 465.23 | 465.62 | 0.005584 | 1.95 | 19.95 | 33.61 | 0.45 |
| WASH10B | Centerline Align | 19500 | 2 YR | 38.92 | 461.84 | 462.29 | 462.21 | 462.35 | 0.014454 | 1.97 | 19.75 | 67.24 | 0.64 |
| WASH10B | Centerline Align | 19100 | 2 YR | 38.92 | 457.97 | 458.32 | 458.18 | 458.35 | 0.007323 | 1.48 | 26.31 | 82.76 | 0.46 |
| WASH10B | Centerline Align | 18600 | 2 YR | 38.92 | 450.90 | 451.29 | 451.29 | 451.42 | 0.035381 | 2.96 | 13.13 | 47.47 | 0.99 |
| WASH10B | Centerline Align | 18100 | 2 YR | 38.92 | 444.98 | 445.79 | 445.45 | 445.82 | 0.003270 | 1.32 | 29.39 | 59.38 | 0.33 |
| WASH10B | Centerline Align | 17600 | 2 YR | 38.92 | 441.14 | 441.77 | 441.77 | 441.90 | 0.037778 | 2.97 | 13.08 | 49.45 | 1.02 |
| WASH10A | Centerline Align | 22483.47 | 2 YR | 23.35 | 497.00 | 497.65 | 497.58 | 497.80 | 0.020379 | 3.11 | 7.51 | 16.65 | 0.82 |
| WASH10A | Centerline Align | 22271.22 | 2 YR | 23.35 | 493.99 | 494.82 | 494.60 | 494.91 | 0.009618 | 2.50 | 9.35 | 16.30 | 0.58 |
| WASH10A | Centerline Align | 21952.52 | 2 YR | 23.35 | 489.99 | 490.50 | | 490.63 | 0.020050 | 2.83 | 8.26 | 20.93 | 0.79 |
| WASH10A | Centerline Align | 21621.24 | 2 YR | 23.35 | 487.00 | 487.77 | 487.50 | 487.81 | 0.004621 | 1.47 | 15.87 | 35.66 | 0.39 |


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22483.47
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 22271.22
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21952.52
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10A Reach = Centerline Align RS = 21621.24
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 21050.7
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20571.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 20305.7
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19884.32
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19500
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 19100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 18100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH10B Reach = Centerline Align RS = 17600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 3100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 2100
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1600
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 1100
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH15 Reach = Centerline Align RS = 282.51
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 16636.71
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 16100
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 15600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 15169.42
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 14100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 13100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 12100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
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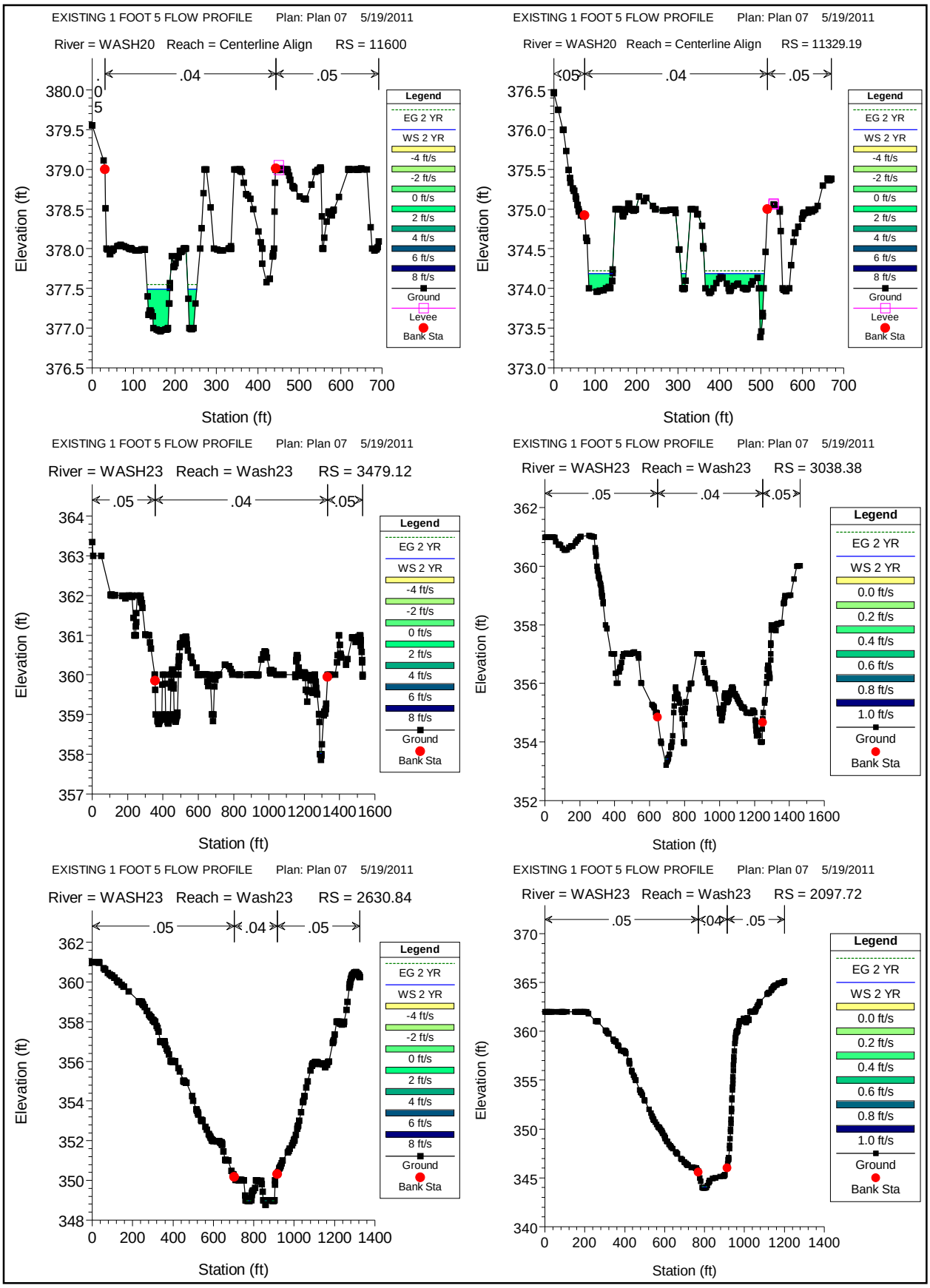
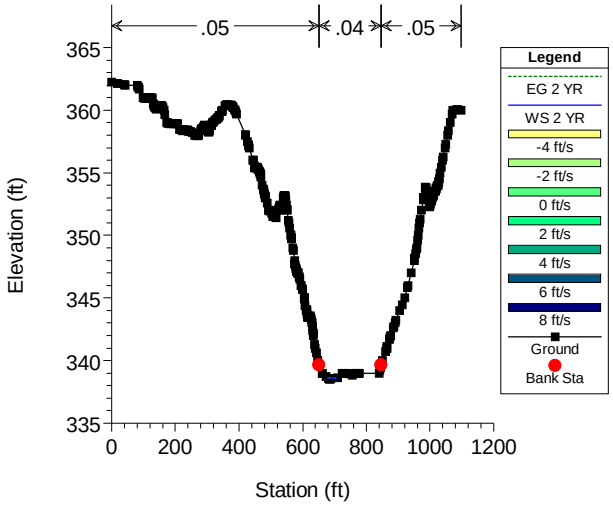
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
Encroachment


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH20 Reach = Centerline Align RS = 11329.19
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3479.12
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 3038.38
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2630.84
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH23 Reach = Wash23 RS = 2097.72
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s

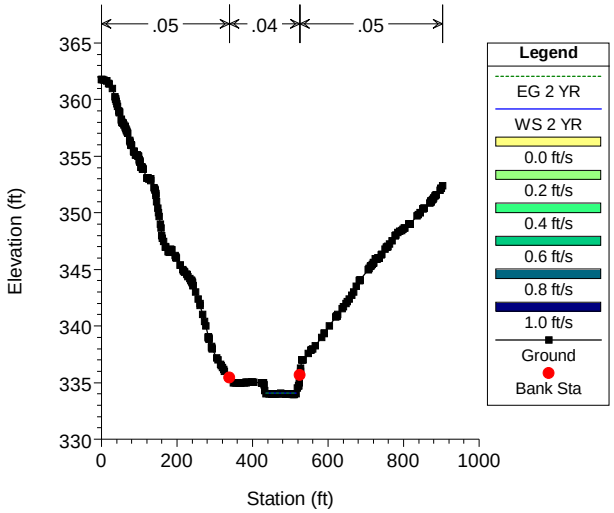
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH23 Reach = Wash23 RS = 1490.24



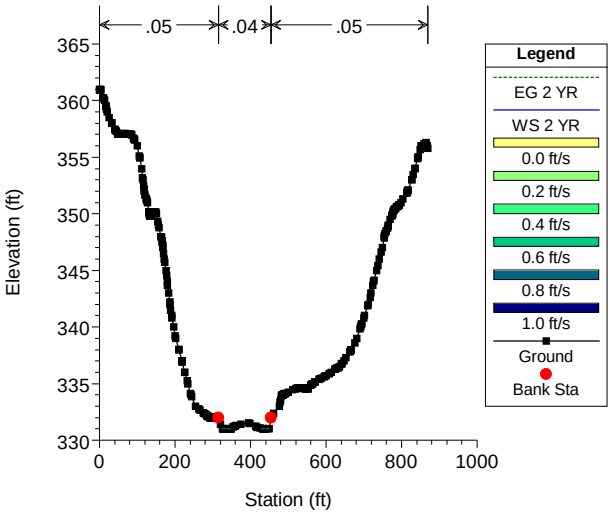

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH23 Reach = Wash23 RS = 1066.16



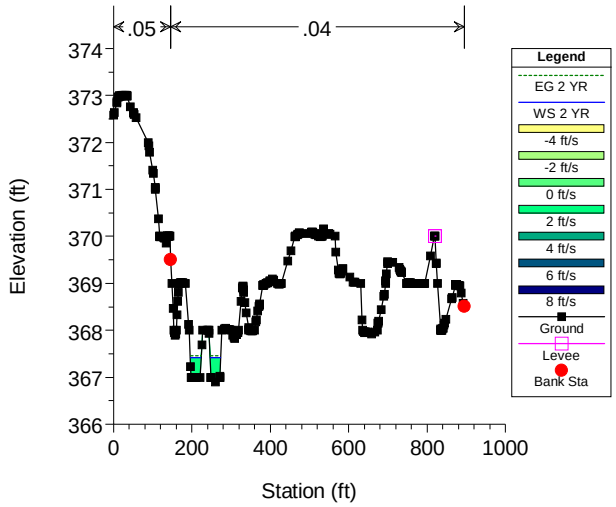

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH23 Reach = Wash23 RS = 780.97



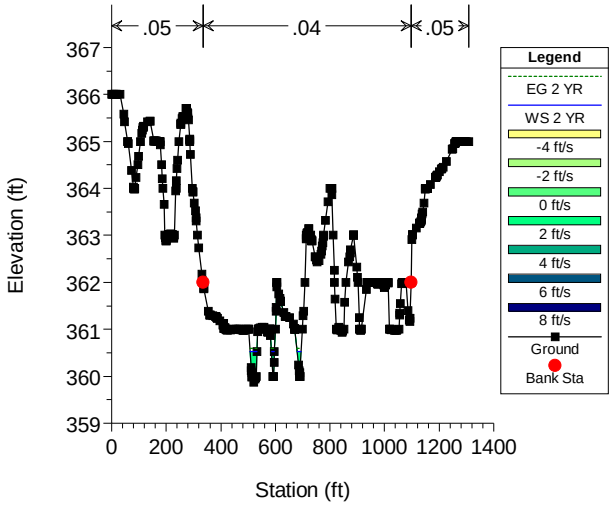

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH25A Reach = Centerline Align RS = 10806.78



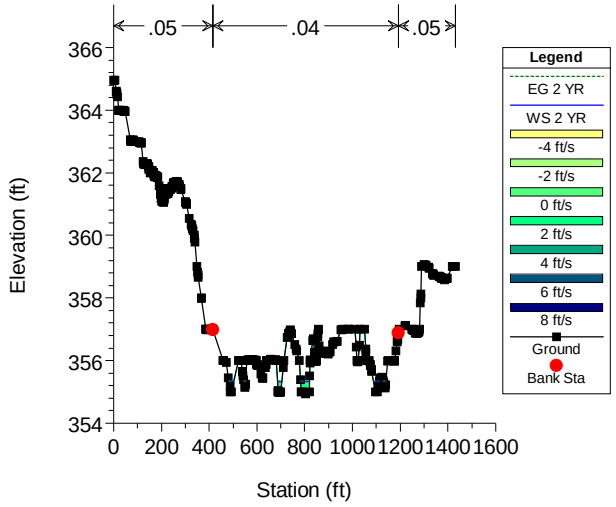

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

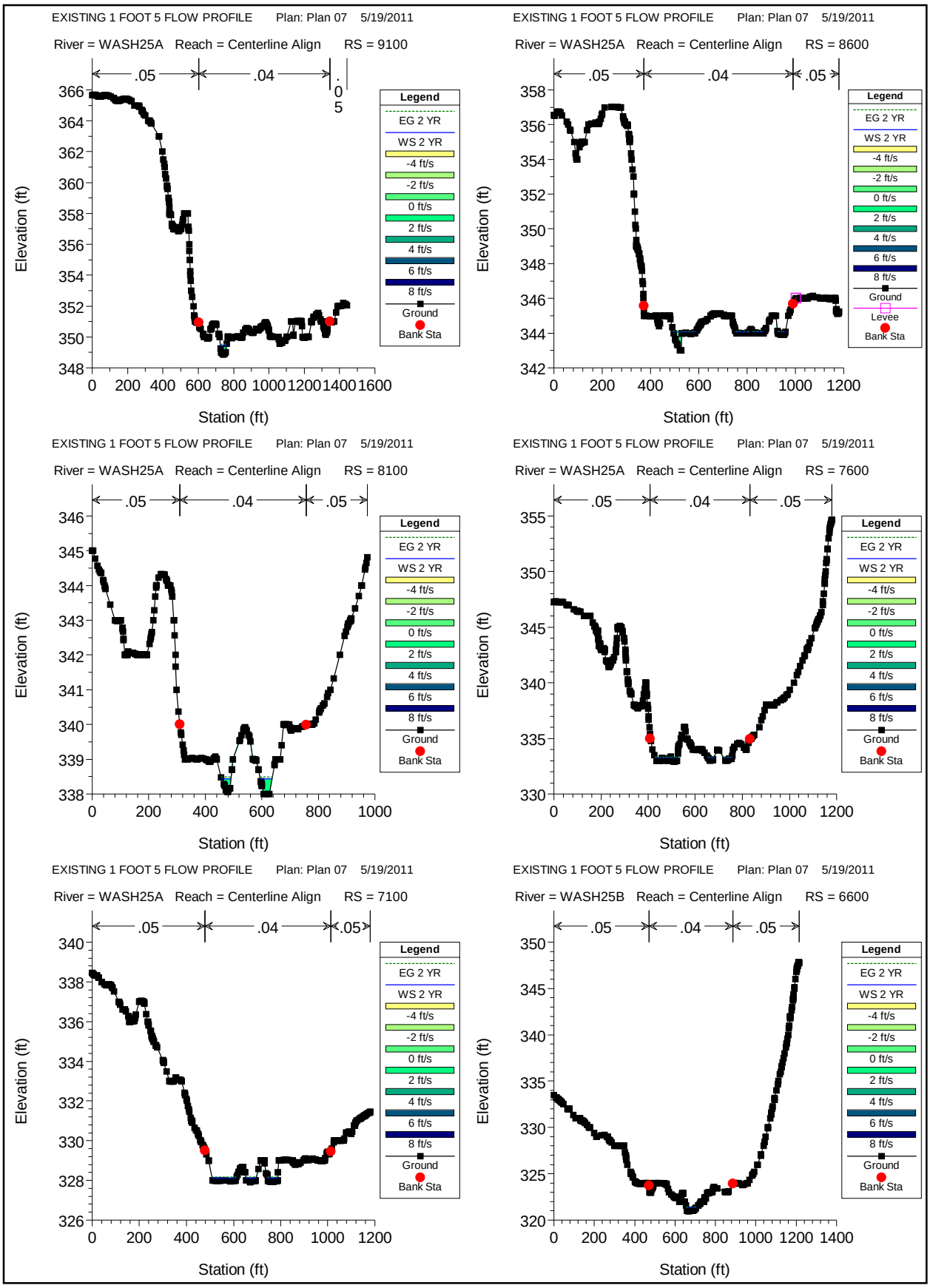
River = WASH25A Reach = Centerline Align RS = 10100

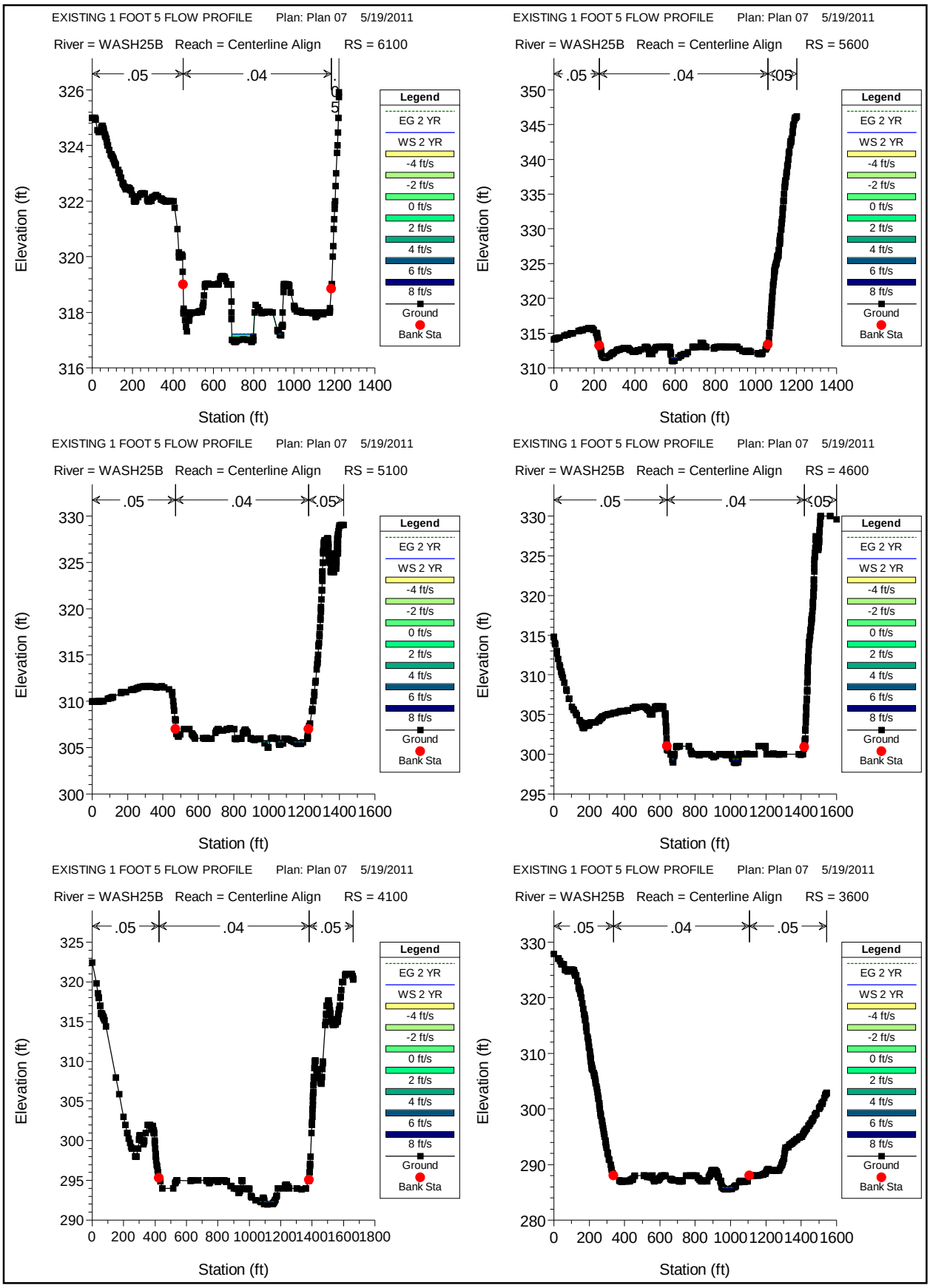


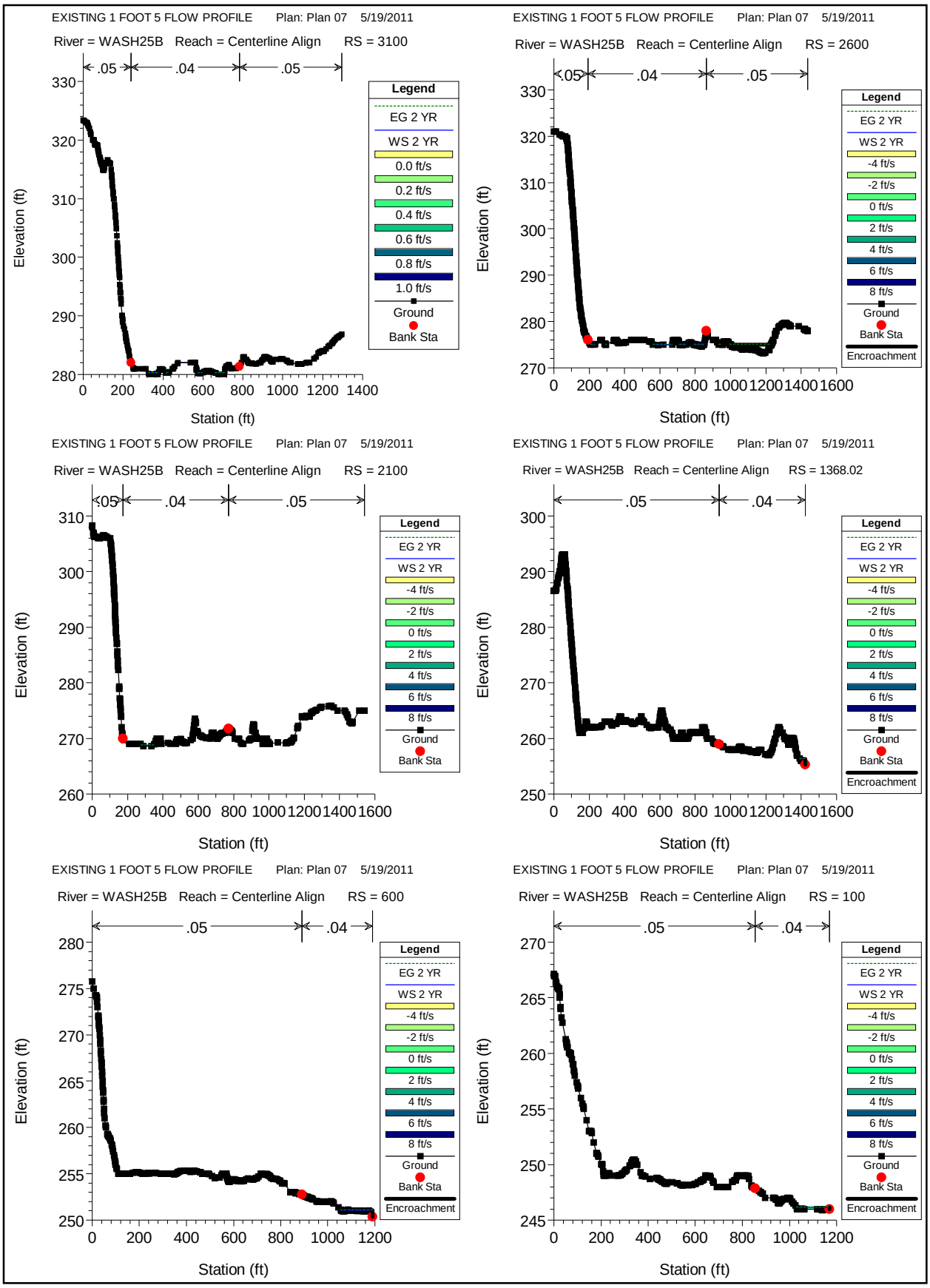

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

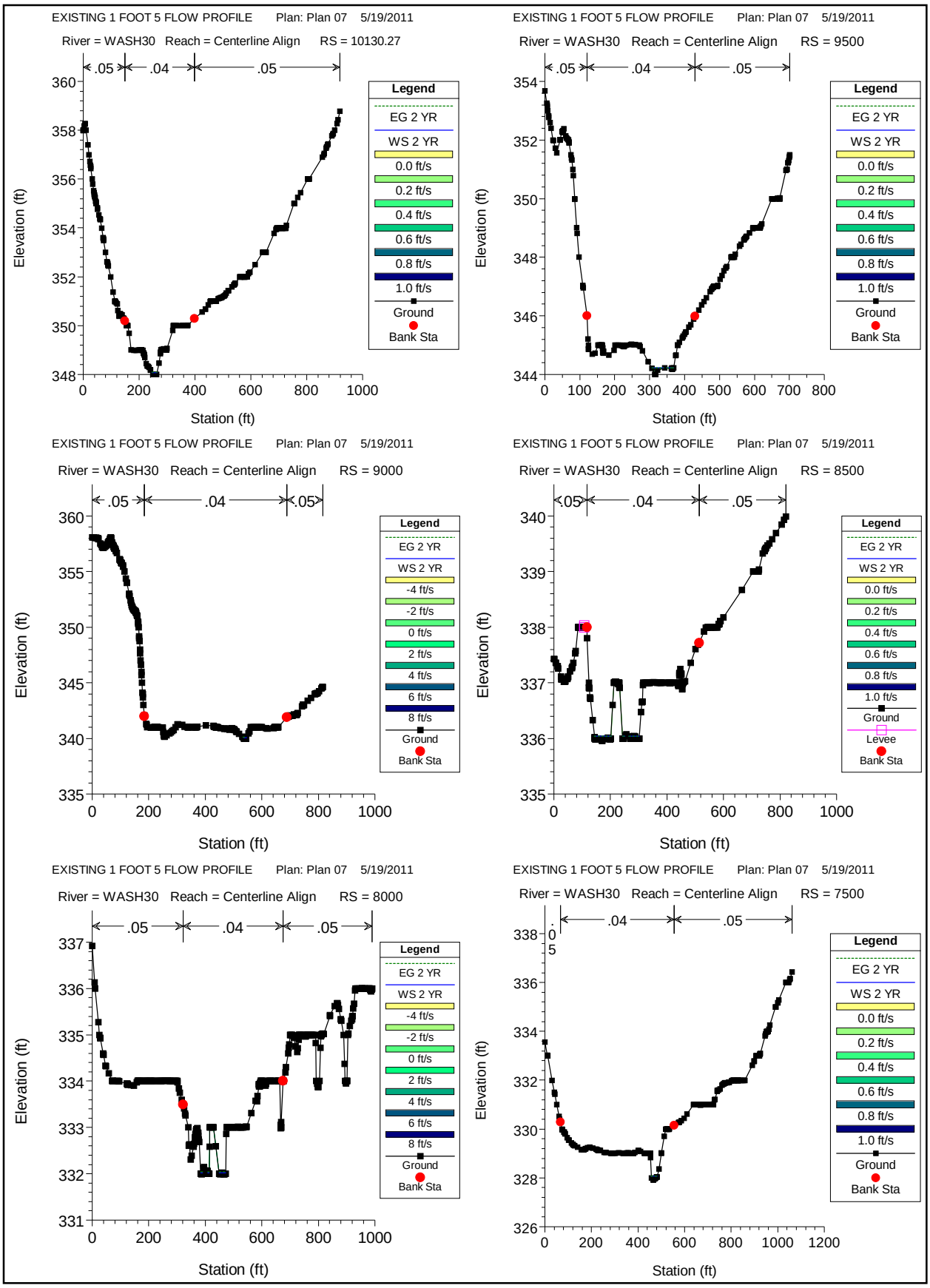
River = WASH25A Reach = Centerline Align RS = 9600

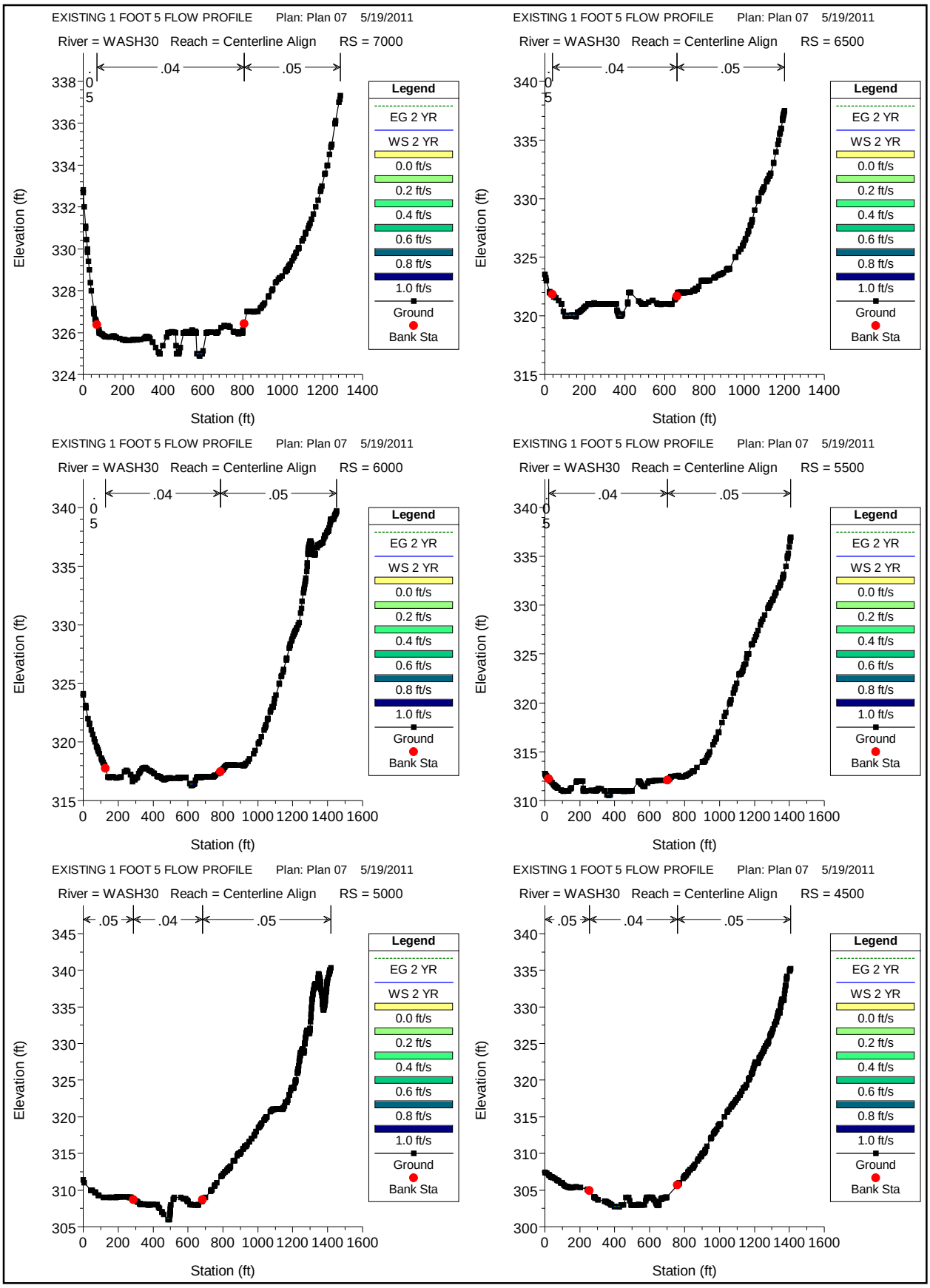


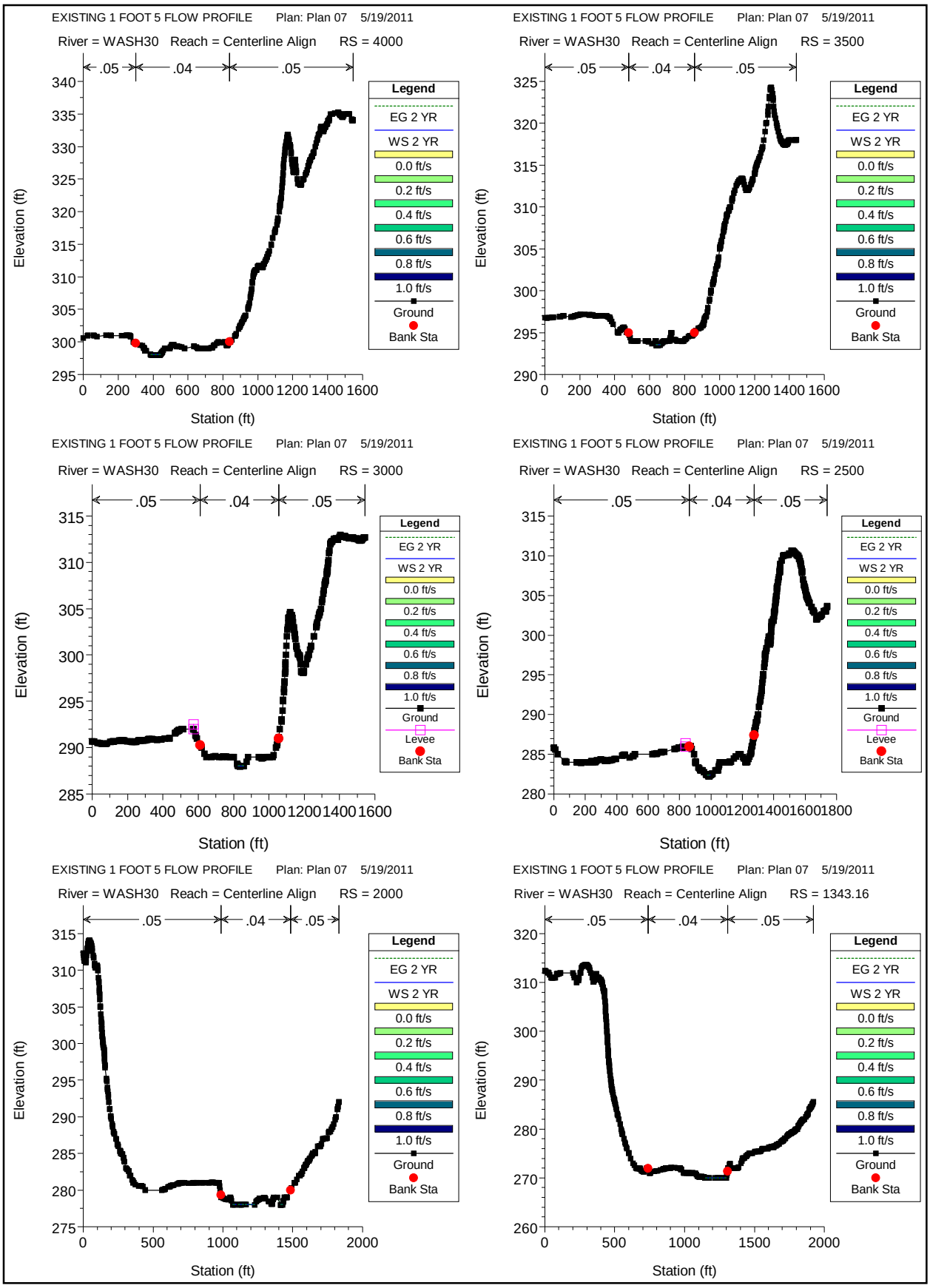

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 9100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 8100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7600
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25A Reach = Centerline Align RS = 7100
.05 .04 .05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

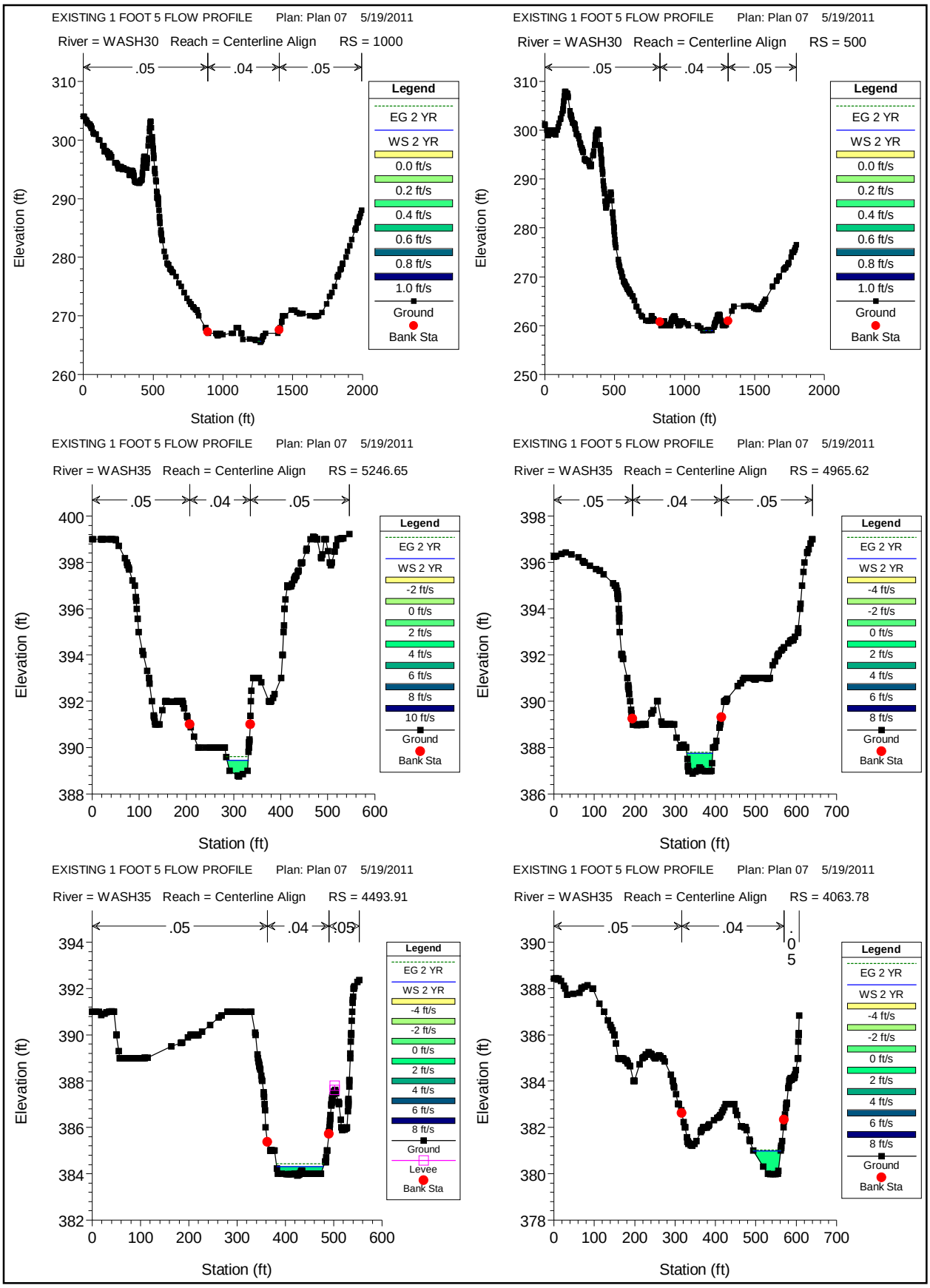

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 6100
.05
.04
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 5600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 5100
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 4600
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 4100
.05
.04
.05
Elevation (ft)
Station (ft)
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

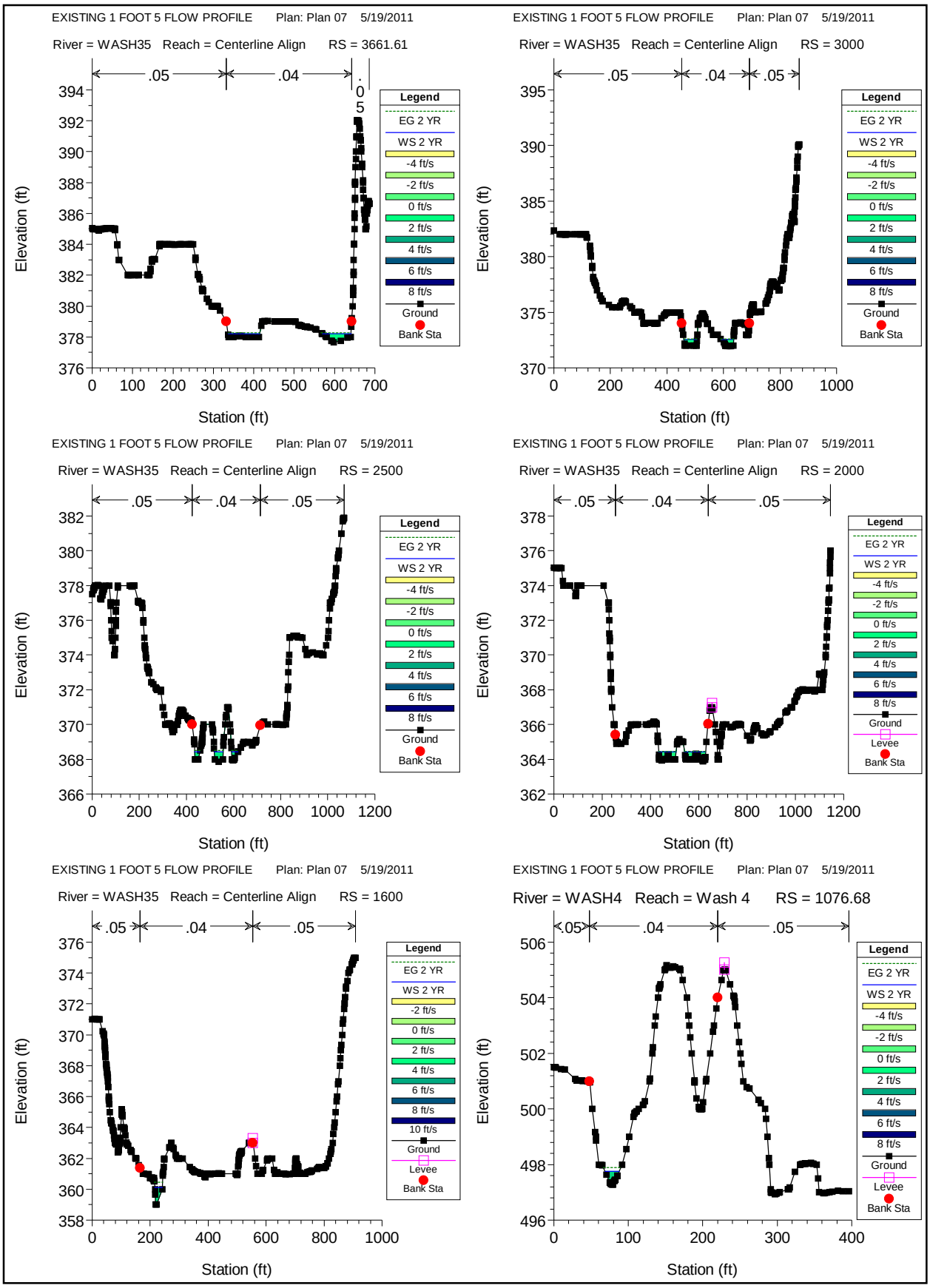

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 3100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2600
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Encroachment
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 2100
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 1368.02
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Encroachment
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 600
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Encroachment
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH25B Reach = Centerline Align RS = 100
.05 .04
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Encroachment

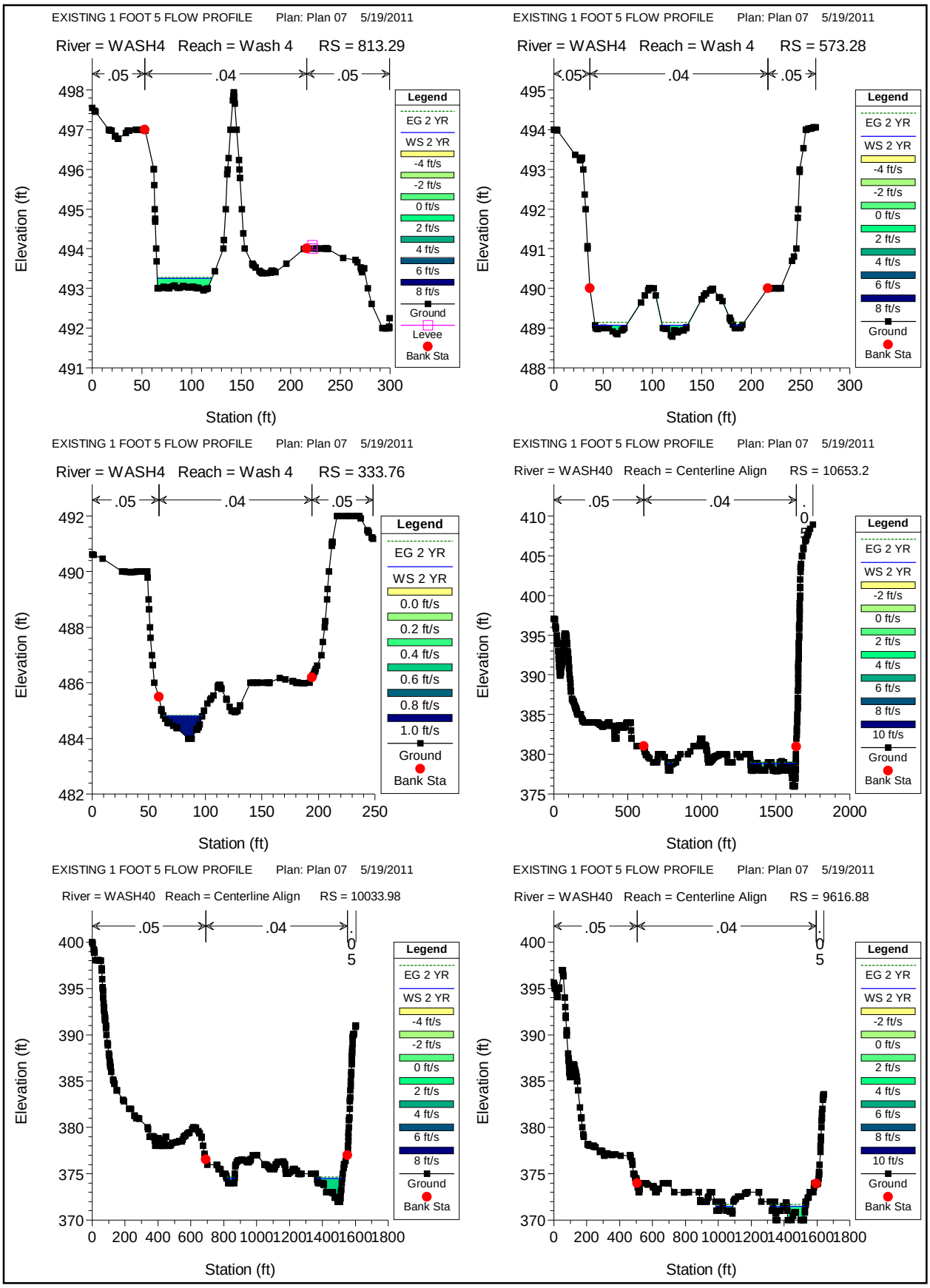

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 10130.27
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 9000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 8000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7500
.04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 7000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6500
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 6000
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5500
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 5000
.05 .04 .05
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4500
.05 .04 .05


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 4000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1343.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

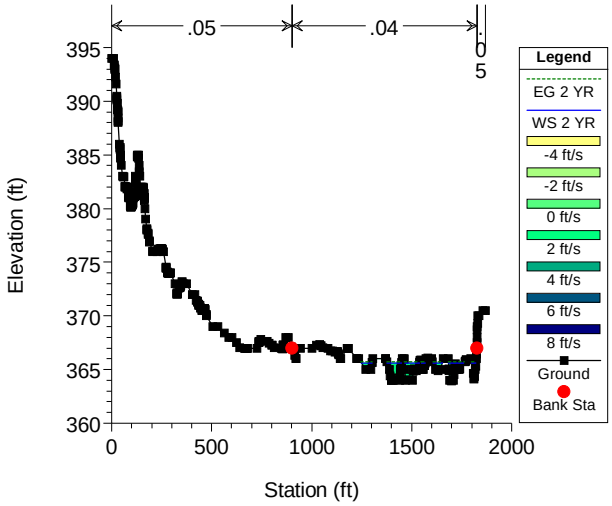

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH30 Reach = Centerline Align RS = 500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 5246.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4965.62
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4493.91
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 4063.78
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3661.61
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 3000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2500
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 2000
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH35 Reach = Centerline Align RS = 1600
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 1076.68
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 813.29
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 573.28
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH4 Reach = Wash 4 RS = 333.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10653.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 10033.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH40 Reach = Centerline Align RS = 9616.88
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta

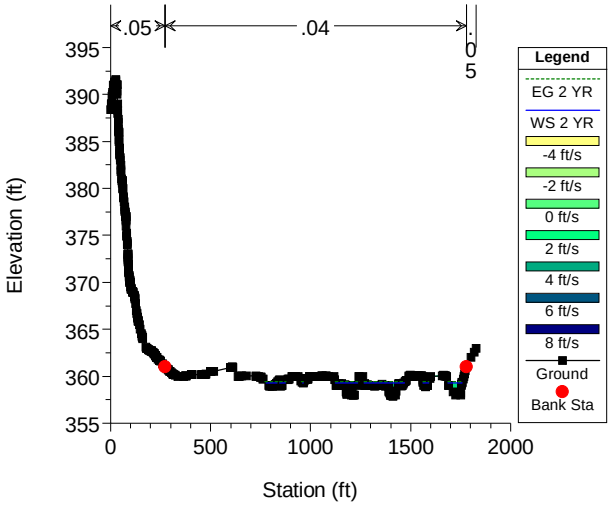
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 8761.12



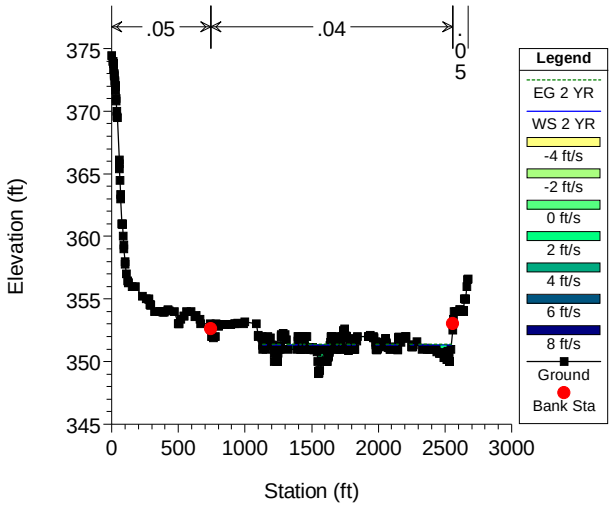

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 7943.06



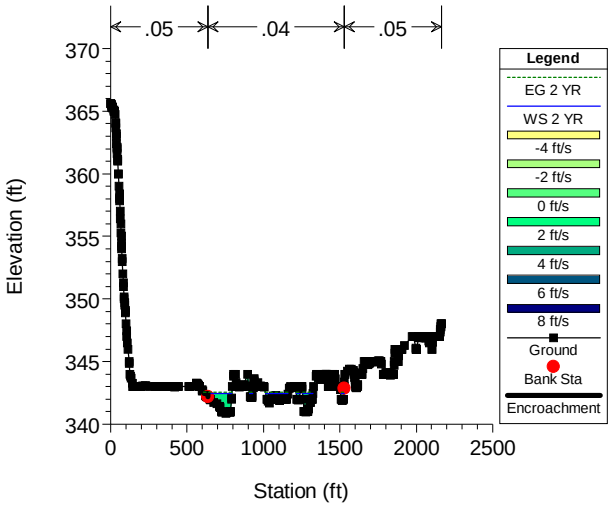

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH40 Reach = Centerline Align RS = 6943.13



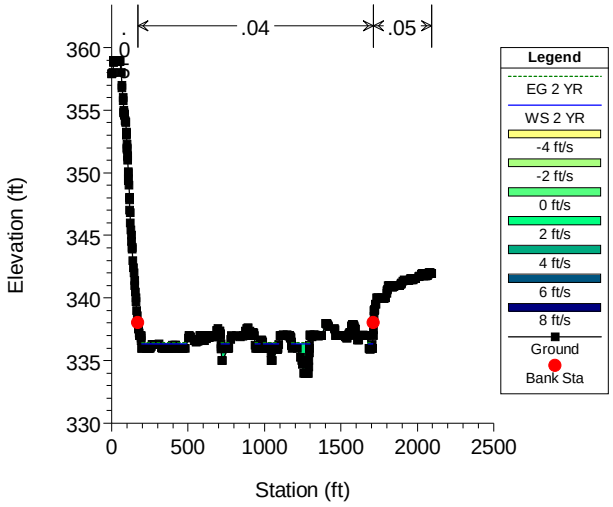

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 5500



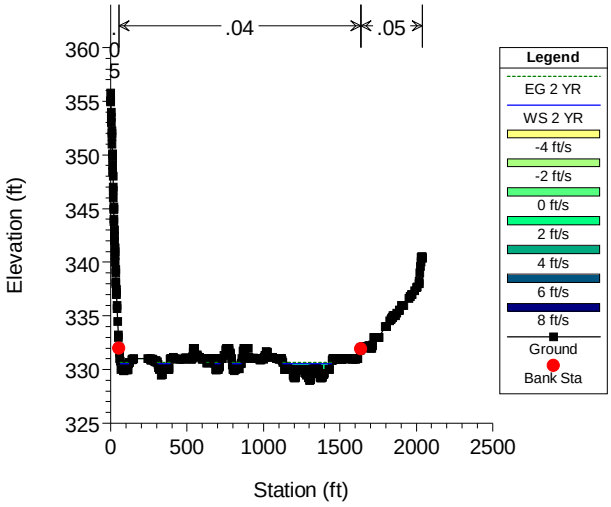

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

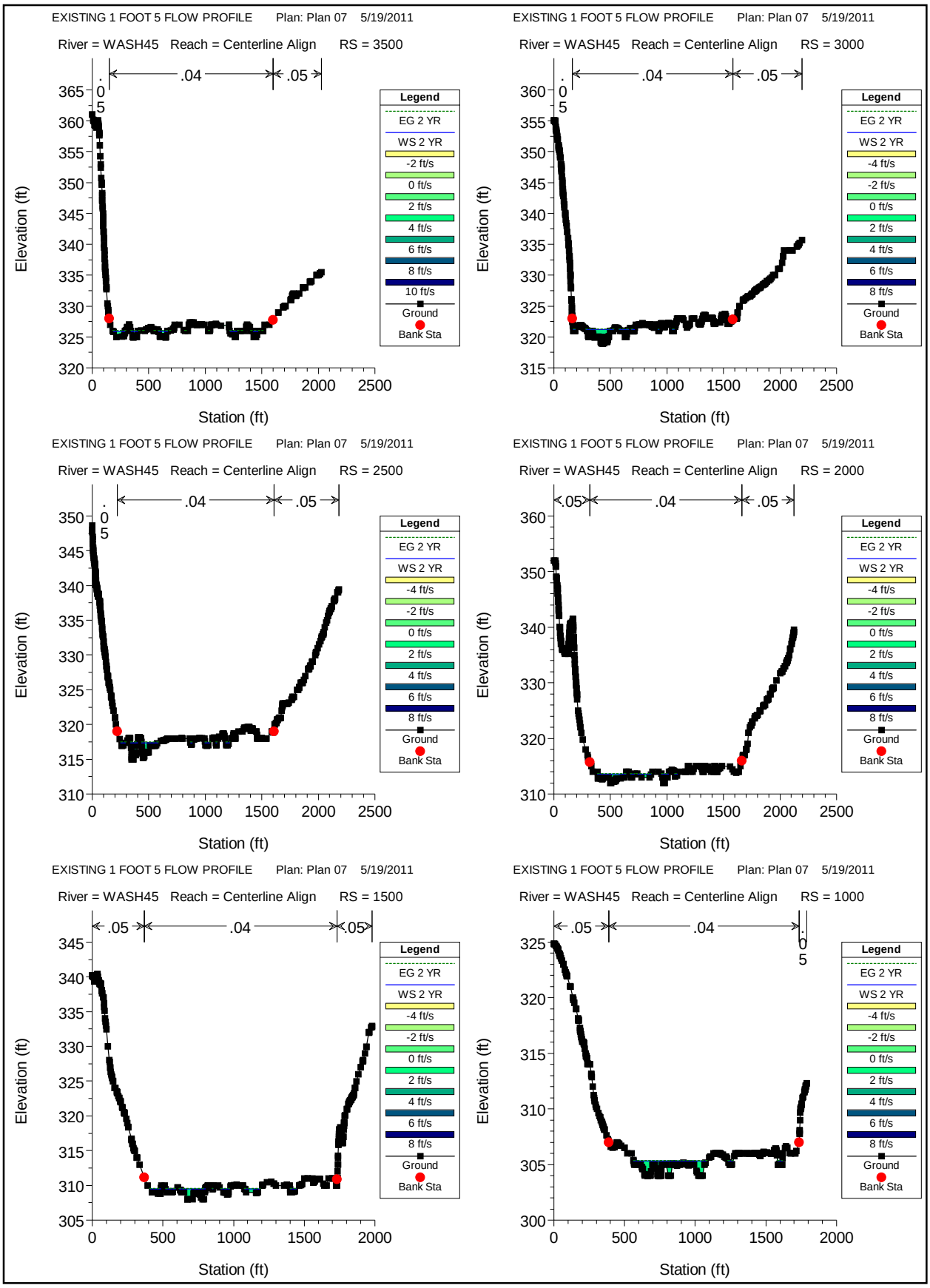
River = WASH45 Reach = Centerline Align RS = 4744.3

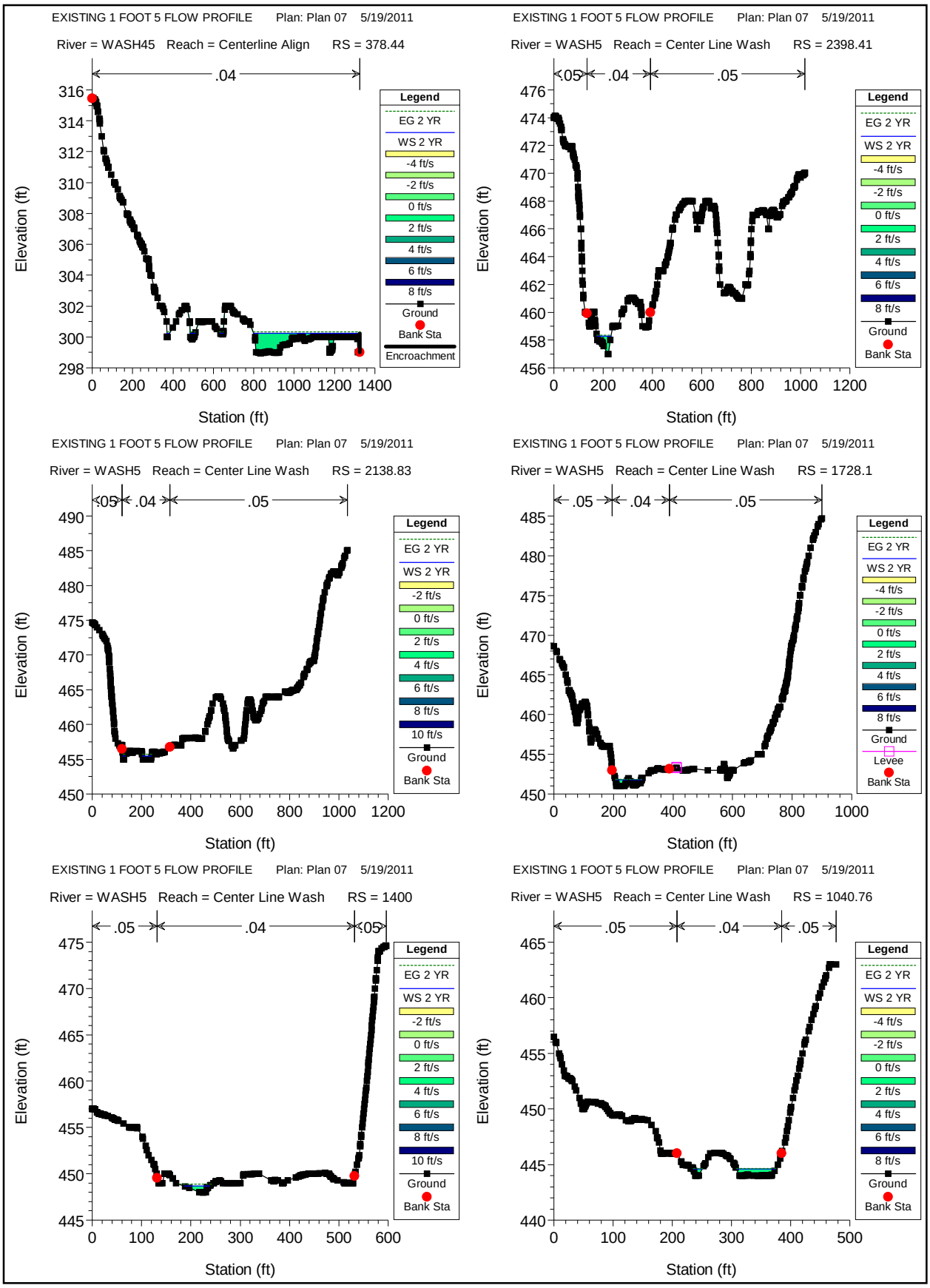



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH45 Reach = Centerline Align RS = 4000

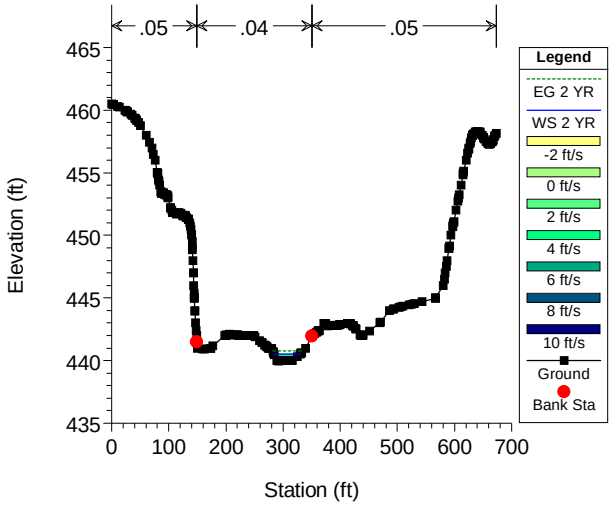



EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 3000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 2000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1500
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 1000
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH45 Reach = Centerline Align RS = 378.44
.04
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Encroachment
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2398.41
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 2138.83
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1728.1
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1400
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Bank Sta
EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011
River = WASH5 Reach = Center Line Wash RS = 1040.76
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

EXISTING 1 FOOT 5 FLOW PROFILE Plan: Plan 07 5/19/2011

River = WASH5 Reach = Center Line Wash RS = 676.61



HEC-RAS Plan: Plan 03 Profile: 2 YR

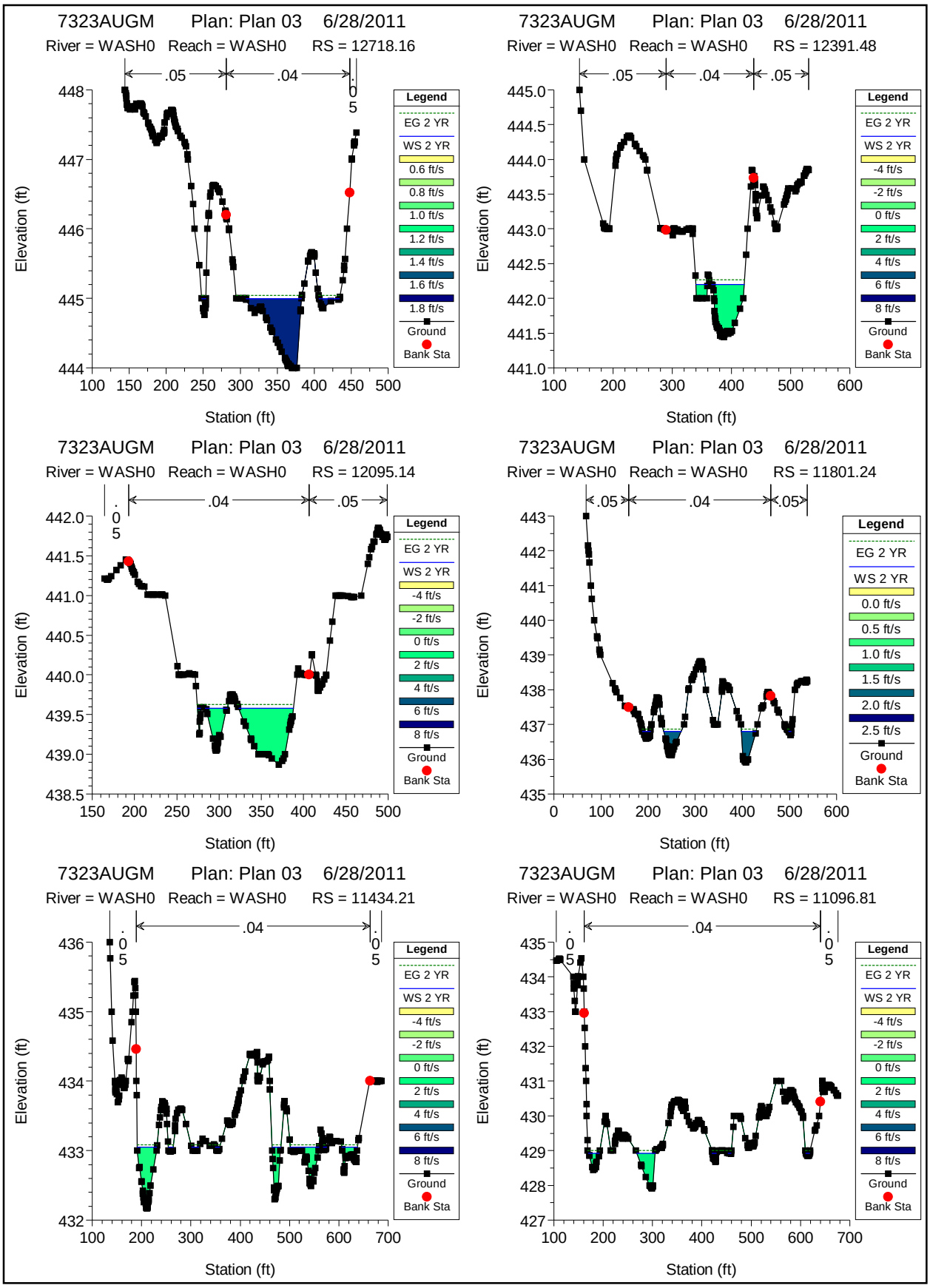
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH90 | WASH90 | 6831.23 | 2 YR | 8.00 | 352.00 | 352.31 | 0.31 | 352.19 | 352.33 | 0.006678 | 1.12 | 7.16 | 32.02 | 0.42 |
| WASH90 | WASH90 | 6503.89 | 2 YR | 8.00 | 349.63 | 349.85 | 0.22 | | 349.86 | 0.008581 | 1.11 | 7.23 | 39.63 | 0.46 |
| WASH90 | WASH90 | 5935.33 | 2 YR | 8.00 | 344.37 | 344.74 | 0.37 | 344.65 | 344.77 | 0.009380 | 1.18 | 6.77 | 35.97 | 0.48 |
| WASH90 | WASH90 | 5486.51 | 2 YR | 8.00 | 339.99 | 340.28 | 0.29 | | 340.32 | 0.010523 | 1.47 | 5.45 | 22.79 | 0.53 |
| WASH90 | WASH90 | 4998.22 | 2 YR | 8.00 | 334.38 | 334.69 | 0.31 | 334.62 | 334.71 | 0.012550 | 1.25 | 6.42 | 39.05 | 0.54 |
| WASH90 | WASH90 | 4374.24 | 2 YR | 8.00 | 326.76 | 326.99 | 0.23 | 326.93 | 327.01 | 0.012149 | 1.13 | 7.08 | 48.75 | 0.52 |
| WASH90 | WASH90 | 3683.01 | 2 YR | 8.00 | 317.38 | 317.78 | 0.40 | 317.71 | 317.80 | 0.014663 | 1.17 | 6.83 | 51.34 | 0.57 |
| WASH90 | WASH90 | 3113.17 | 2 YR | 8.00 | 309.99 | 310.26 | 0.27 | | 310.29 | 0.011917 | 1.23 | 6.49 | 38.77 | 0.53 |
| WASH90 | WASH90 | 2556.75 | 2 YR | 8.00 | 302.32 | 302.64 | 0.32 | | 302.66 | 0.015905 | 1.12 | 7.12 | 60.61 | 0.58 |
| WASH90 | WASH90 | 2138.83 | 2 YR | 8.00 | 295.39 | 295.65 | 0.26 | 295.61 | 295.67 | 0.016133 | 1.02 | 7.85 | 78.28 | 0.57 |
| WASH90 | WASH90 | 1646.84 | 2 YR | 8.00 | 287.08 | 287.35 | 0.27 | | 287.38 | 0.017672 | 1.36 | 5.89 | 40.78 | 0.63 |
| WASH90 | WASH90 | 1288.94 | 2 YR | 8.00 | 280.46 | 280.89 | 0.43 | 280.85 | 280.94 | 0.022412 | 1.84 | 4.36 | 22.90 | 0.74 |
| WASH90 | WASH90 | 800.13 | 2 YR | 8.00 | 268.50 | 269.17 | 0.67 | 269.11 | 269.24 | 0.021515 | 2.08 | 3.85 | 16.26 | 0.75 |
| WASH80 | WASH80 | 9177.14 | 2 YR | 22.00 | 406.00 | 406.60 | 0.60 | 406.39 | 406.65 | 0.006852 | 1.72 | 12.82 | 30.58 | 0.47 |
| WASH80 | WASH80 | 8711.54 | 2 YR | 22.00 | 400.91 | 401.64 | 0.73 | 401.55 | 401.79 | 0.017716 | 3.03 | 7.26 | 15.06 | 0.77 |
| WASH80 | WASH80 | 8318.51 | 2 YR | 22.00 | 395.00 | 395.76 | 0.76 | 395.64 | 395.83 | 0.013029 | 2.08 | 10.56 | 30.51 | 0.62 |
| WASH80 | WASH80 | 7927.46 | 2 YR | 22.00 | 391.00 | 391.60 | 0.60 | 391.45 | 391.65 | 0.008894 | 1.72 | 12.81 | 37.08 | 0.52 |
| WASH80 | WASH80 | 7287.57 | 2 YR | 22.00 | 384.00 | 384.44 | 0.44 | | 384.53 | 0.014247 | 2.42 | 9.10 | 22.51 | 0.67 |
| WASH80 | WASH80 | 6827.33 | 2 YR | 22.00 | 380.00 | 380.85 | 0.85 | | 380.89 | 0.004977 | 1.66 | 13.21 | 25.99 | 0.41 |
| WASH80 | WASH80 | 6379.44 | 2 YR | 22.00 | 376.99 | 377.55 | 0.56 | | 377.62 | 0.011793 | 2.04 | 10.77 | 29.77 | 0.60 |
| WASH80 | WASH80 | 6136.14 | 2 YR | 22.00 | 374.99 | 375.36 | 0.37 | | 375.39 | 0.007295 | 1.24 | 17.80 | 73.15 | 0.44 |
| WASH80 | WASH80 | 5694.19 | 2 YR | 22.00 | 370.83 | 371.24 | 0.41 | | 371.27 | 0.012265 | 1.49 | 14.75 | 67.36 | 0.56 |
| WASH80 | WASH80 | 5146 | 2 YR | 22.00 | 366.00 | 366.51 | 0.51 | 366.31 | 366.55 | 0.006387 | 1.67 | 13.20 | 31.33 | 0.45 |
| WASH80 | WASH80 | 4787.98 | 2 YR | 22.00 | 363.67 | 364.17 | 0.50 | | 364.20 | 0.006710 | 1.30 | 16.86 | 59.99 | 0.43 |
| WASH80 | WASH80 | 4308.96 | 2 YR | 22.00 | 360.00 | 360.30 | 0.30 | | 360.33 | 0.009906 | 1.31 | 16.75 | 78.83 | 0.50 |
| WASH80 | WASH80 | 3652.44 | 2 YR | 22.00 | 353.35 | 354.10 | 0.75 | 353.94 | 354.12 | 0.009029 | 1.12 | 19.67 | 110.09 | 0.47 |
| WASH80 | WASH80 | 3226.43 | 2 YR | 22.00 | 349.80 | 350.21 | 0.41 | | 350.25 | 0.009122 | 1.64 | 13.38 | 42.38 | 0.52 |
| WASH80 | WASH80 | 2831.38 | 2 YR | 22.00 | 345.72 | 346.24 | 0.52 | | 346.29 | 0.011071 | 1.81 | 12.13 | 38.35 | 0.57 |
| WASH80 | WASH80 | 2414.33 | 2 YR | 22.00 | 341.69 | 342.17 | 0.48 | | 342.21 | 0.008690 | 1.53 | 14.35 | 48.72 | 0.50 |
| WASH80 | WASH80 | 1998.23 | 2 YR | 22.00 | 338.00 | 338.50 | 0.50 | | 338.53 | 0.010046 | 1.42 | 15.45 | 65.27 | 0.52 |
| WASH80 | WASH80 | 1662.74 | 2 YR | 22.00 | 334.43 | 334.88 | 0.45 | | 334.94 | 0.014710 | 1.87 | 11.78 | 44.08 | 0.64 |
| WASH80 | WASH80 | 1123.57 | 2 YR | 22.00 | 327.07 | 327.60 | 0.53 | | 327.64 | 0.012359 | 1.66 | 13.24 | 51.76 | 0.58 |
| WASH80 | WASH80 | 611 | 2 YR | 22.00 | 320.60 | 320.89 | 0.29 | 320.85 | 320.93 | 0.016792 | 1.53 | 14.39 | 80.38 | 0.64 |
| WASH75 | WASH75 | 3066.24 | 2 YR | 0.10 | 352.99 | 353.02 | 0.03 | 353.02 | 353.02 | 0.012658 | 0.34 | 0.29 | 12.65 | 0.39 |
| WASH75 | WASH75 | 2658.51 | 2 YR | 0.10 | 348.60 | 348.63 | 0.03 | 348.63 | 348.65 | 0.087952 | 0.81 | 0.12 | 6.13 | 1.01 |
| WASH75 | WASH75 | 2371.61 | 2 YR | 0.10 | 345.39 | 345.48 | 0.09 | 345.46 | 345.49 | 0.020501 | 0.75 | 0.13 | 2.49 | 0.57 |
| WASH75 | WASH75 | 2124.14 | 2 YR | 0.10 | 342.00 | 342.07 | 0.07 | 342.05 | 342.08 | 0.009876 | 0.42 | 0.24 | 6.25 | 0.38 |
| WASH75 | WASH75 | 1807.24 | 2 YR | 0.10 | 338.62 | 338.66 | 0.04 | 338.64 | 338.66 | 0.011817 | 0.33 | 0.30 | 12.59 | 0.38 |
| WASH75 | WASH75 | 1554.2 | 2 YR | 0.10 | 335.34 | 335.38 | 0.04 | | 335.38 | 0.014284 | 0.42 | 0.24 | 8.14 | 0.43 |
| WASH75 | WASH75 | 1289.14 | 2 YR | 0.10 | 331.45 | 331.48 | 0.03 | | 331.49 | 0.015104 | 0.37 | 0.27 | 11.38 | 0.43 |
| WASH75 | WASH75 | 908.89 | 2 YR | 0.10 | 326.14 | 326.20 | 0.06 | | 326.21 | 0.016274 | 0.47 | 0.21 | 6.90 | 0.47 |
| WASH75 | WASH75 | 546.93 | 2 YR | 0.10 | 320.30 | 320.42 | 0.12 | 320.40 | 320.43 | 0.024597 | 0.83 | 0.12 | 2.19 | 0.62 |
| WASH70 | WASH70 | 3521.27 | 2 YR | 0.10 | 310.47 | 310.51 | 0.04 | | 310.51 | 0.012953 | 0.36 | 0.28 | 11.34 | 0.40 |
| WASH70 | WASH70 | 3191.72 | 2 YR | 0.10 | 305.11 | 305.20 | 0.09 | | 305.21 | 0.022104 | 0.75 | 0.13 | 2.66 | 0.59 |
| WASH70 | WASH70 | 2880.01 | 2 YR | 0.10 | 300.57 | 300.63 | 0.06 | | 300.64 | 0.008063 | 0.44 | 0.23 | 4.83 | 0.35 |
| WASH70 | WASH70 | 2398.82 | 2 YR | 0.10 | 294.64 | 294.70 | 0.06 | 294.68 | 294.70 | 0.006283 | 0.27 | 0.37 | 13.16 | 0.29 |

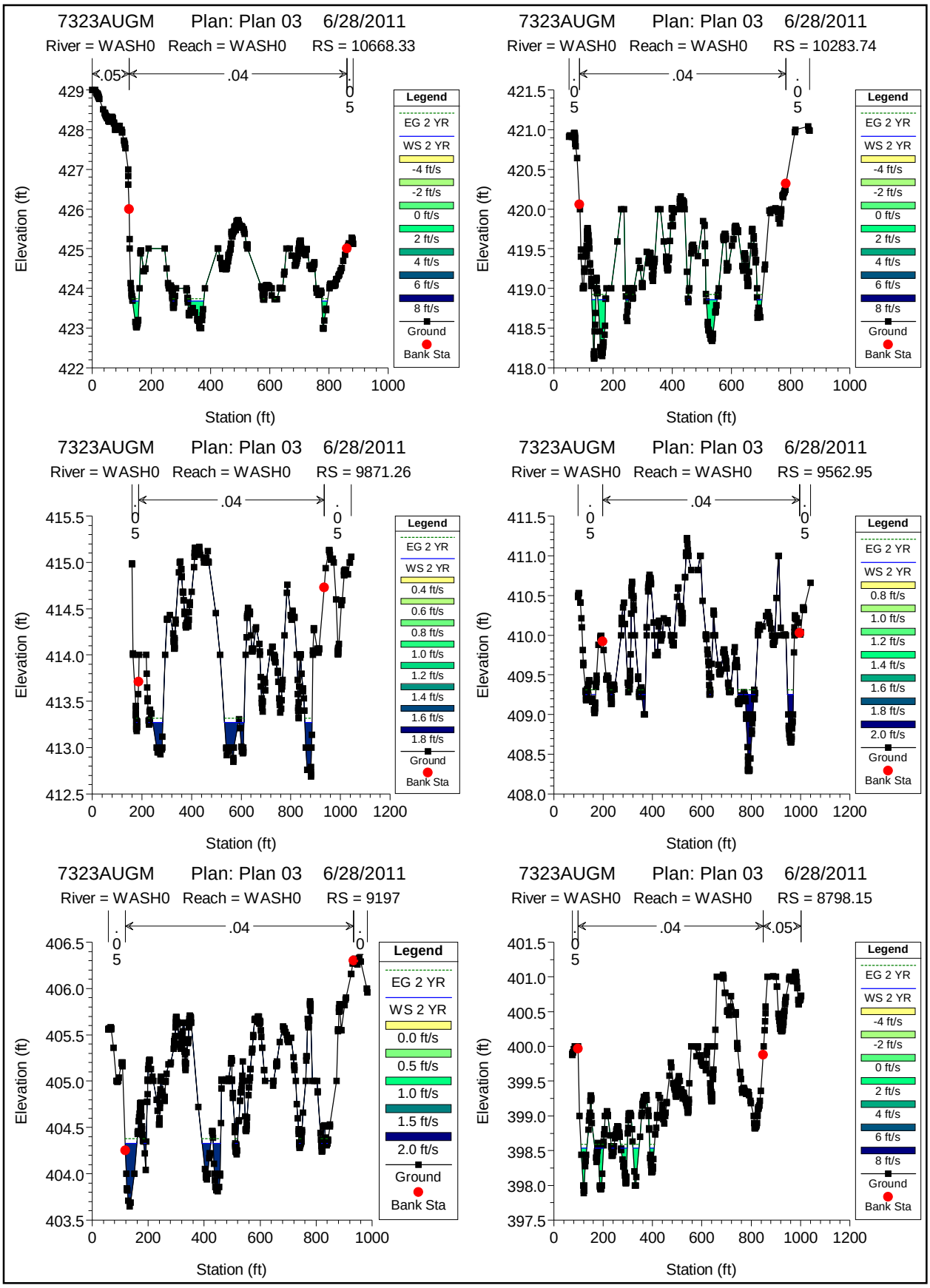
HEC-RAS Plan: Plan 03 Profile: 2 YR (Continued)

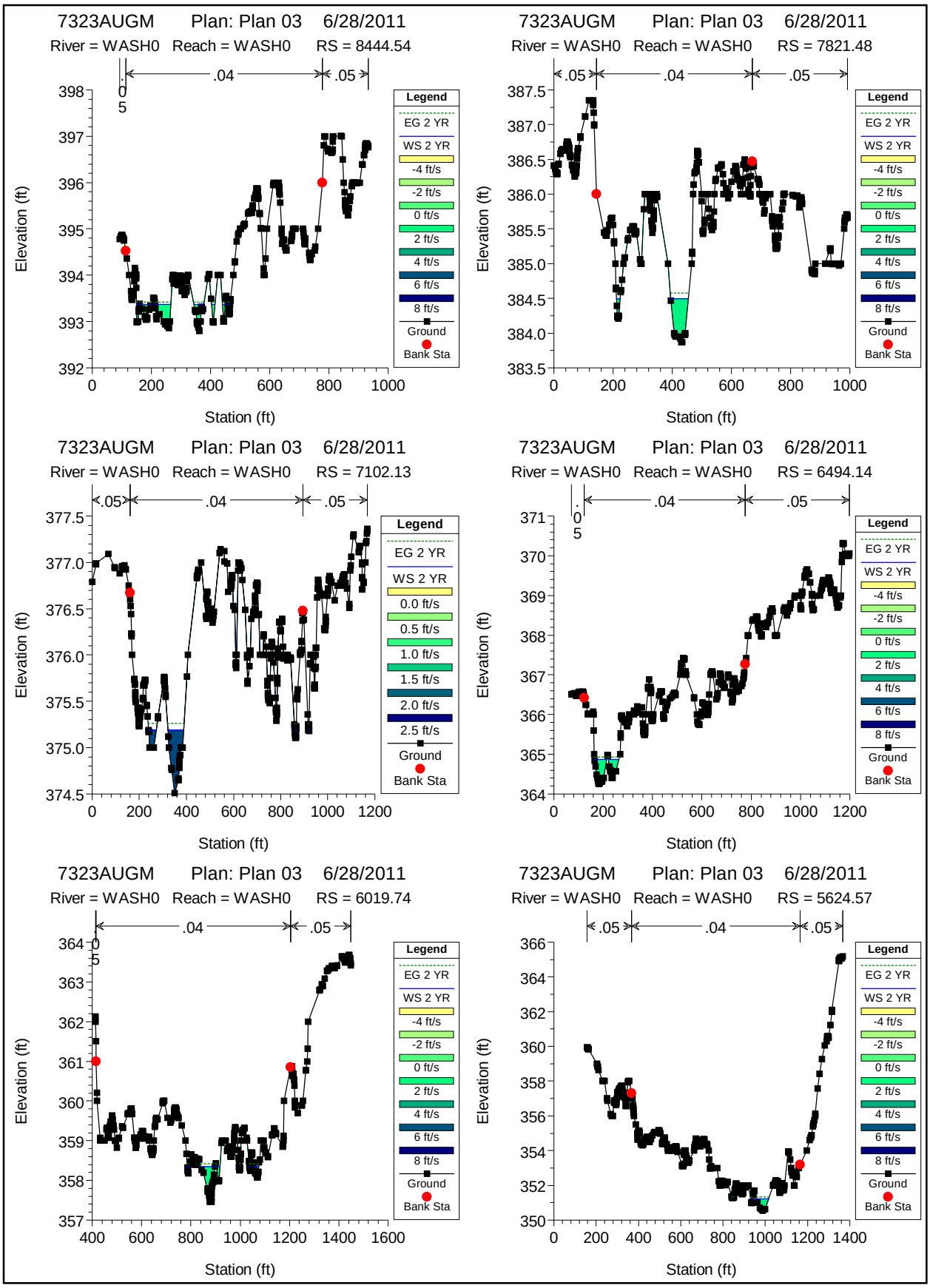
| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH70 | WASH70 | 2036.83 | 2 YR | 0.10 | 288.77 | 288.80 | 0.03 | 288.80 | 288.82 | 0.105929 | 0.91 | 0.11 | 5.27 | 1.12 |
| WASH70 | WASH70 | 1648.15 | 2 YR | 0.10 | 282.26 | 282.33 | 0.07 | 282.30 | 282.34 | 0.006096 | 0.32 | 0.31 | 8.46 | 0.29 |
| WASH70 | WASH70 | 1321.01 | 2 YR | 0.10 | 276.44 | 276.47 | 0.03 | 276.47 | 276.49 | 0.215447 | 1.20 | 0.08 | 4.51 | 1.56 |
| WASH70 | WASH70 | 1029.2 | 2 YR | 0.10 | 269.54 | 269.58 | 0.04 | 269.56 | 269.58 | 0.003202 | 0.18 | 0.55 | 21.89 | 0.20 |
| WASH70 | WASH70 | 666.38 | 2 YR | 0.10 | 267.00 | 267.05 | 9.75 | 267.04 | 267.05 | 0.024834 | 0.66 | 0.15 | 4.03 | 0.60 |
| WASH70 | WASH70 | 358.04 | 2 YR | 0.10 | 261.11 | 261.16 | 10.43 | 261.14 | 261.16 | 0.015118 | 0.36 | 0.27 | 12.23 | 0.43 |
| WASH60 | WASH60 | 5477.11 | 2 YR | 3.00 | 467.00 | 467.14 | 0.14 | 467.08 | 467.16 | 0.008606 | 0.93 | 3.23 | 23.10 | 0.44 |
| WASH60 | WASH60 | 5299.28 | 2 YR | 3.00 | 465.62 | 465.82 | 0.20 | | 465.83 | 0.006487 | 0.90 | 3.35 | 20.46 | 0.39 |
| WASH60 | WASH60 | 5104.28 | 2 YR | 3.00 | 463.90 | 464.21 | 0.31 | 464.14 | 464.23 | 0.010804 | 1.05 | 2.86 | 20.14 | 0.49 |
| WASH60 | WASH60 | 4869.04 | 2 YR | 3.00 | 460.91 | 461.12 | 0.21 | | 461.14 | 0.016308 | 1.22 | 2.46 | 18.72 | 0.59 |
| WASH60 | WASH60 | 4591.11 | 2 YR | 3.00 | 457.00 | 457.28 | 0.28 | | 457.30 | 0.011886 | 1.06 | 2.84 | 21.28 | 0.51 |
| WASH60 | WASH60 | 4337.83 | 2 YR | 3.00 | 454.00 | 454.22 | 0.22 | 454.15 | 454.25 | 0.012212 | 1.33 | 2.26 | 12.20 | 0.55 |
| WASH60 | WASH60 | 4068.7 | 2 YR | 3.00 | 450.95 | 451.14 | 0.50 | 451.09 | 451.15 | 0.010883 | 0.87 | 3.46 | 32.66 | 0.47 |
| WASH60 | WASH60 | 3746.65 | 2 YR | 3.00 | 446.00 | 446.40 | 0.40 | 446.35 | 446.43 | 0.020678 | 1.54 | 1.95 | 12.59 | 0.69 |
| WASH60 | WASH60 | 3427.61 | 2 YR | 3.00 | 441.98 | 442.27 | 0.29 | | 442.28 | 0.008520 | 1.03 | 3.38 | 22.75 | 0.45 |
| WASH60 | WASH60 | 3162.25 | 2 YR | 3.00 | 438.68 | 439.03 | 0.35 | 438.95 | 439.05 | 0.021816 | 1.10 | 2.74 | 30.59 | 0.65 |
| WASH60 | WASH60 | 2826.26 | 2 YR | 3.00 | 433.38 | 433.75 | 0.37 | | 433.79 | 0.011773 | 1.52 | 1.97 | 8.42 | 0.55 |
| WASH60 | WASH60 | 2497.44 | 2 YR | 3.00 | 429.89 | 430.07 | 0.18 | 430.03 | 430.08 | 0.010745 | 0.86 | 3.49 | 33.00 | 0.47 |
| WASH60 | WASH60 | 2235.76 | 2 YR | 3.00 | 426.68 | 427.05 | 0.37 | 426.95 | 427.08 | 0.012302 | 1.16 | 2.59 | 17.31 | 0.53 |
| WASH60 | WASH60 | 1902.48 | 2 YR | 3.00 | 421.48 | 421.88 | 0.40 | 421.78 | 421.92 | 0.020022 | 1.68 | 1.78 | 9.73 | 0.69 |
| WASH60 | WASH60 | 1536.23 | 2 YR | 3.00 | 415.62 | 415.93 | 1.91 | 415.86 | 415.96 | 0.013465 | 1.35 | 2.23 | 12.75 | 0.57 |
| WASH60 | WASH60 | 1155.84 | 2 YR | 3.00 | 410.17 | 410.53 | 1.53 | 410.47 | 410.56 | 0.015000 | 1.39 | 2.16 | 12.66 | 0.59 |
| WASH60 | WASH60 | 717.74 | 2 YR | 3.00 | 403.99 | 404.12 | 1.12 | 404.09 | 404.14 | 0.014269 | 1.03 | 2.90 | 25.72 | 0.54 |
| WASH60 | WASH60 | 251.42 | 2 YR | 3.00 | 397.00 | 397.13 | 0.17 | 397.10 | 397.14 | 0.015811 | 0.99 | 3.02 | 30.89 | 0.56 |
| WASH0 | WASH0 | 12718.16 | 2 YR | 67.00 | 444.00 | 445.00 | 1.00 | 444.68 | 445.04 | 0.007784 | 1.71 | 39.52 | 107.88 | 0.49 |
| WASH0 | WASH0 | 12391.48 | 2 YR | 67.00 | 441.44 | 442.20 | 0.76 | | 442.26 | 0.009345 | 2.06 | 32.54 | 74.85 | 0.55 |
| WASH0 | WASH0 | 12095.14 | 2 YR | 67.00 | 438.87 | 439.58 | 0.71 | | 439.63 | 0.008477 | 1.82 | 36.73 | 94.16 | 0.51 |
| WASH0 | WASH0 | 11801.24 | 2 YR | 67.00 | 435.91 | 436.80 | 0.89 | 436.63 | 436.86 | 0.010484 | 2.03 | 33.24 | 89.37 | 0.57 |
| WASH0 | WASH0 | 11434.21 | 2 YR | 67.00 | 432.17 | 433.05 | 0.88 | | 433.09 | 0.010109 | 1.46 | 45.88 | 187.38 | 0.52 |
| WASH0 | WASH0 | 11096.81 | 2 YR | 67.00 | 427.91 | 428.93 | 1.02 | | 429.01 | 0.014684 | 2.29 | 29.31 | 80.82 | 0.67 |
| WASH0 | WASH0 | 10668.33 | 2 YR | 67.00 | 422.99 | 423.68 | 0.69 | 423.55 | 423.74 | 0.010401 | 1.91 | 35.08 | 97.75 | 0.56 |
| WASH0 | WASH0 | 10283.74 | 2 YR | 67.00 | 418.12 | 418.86 | 0.74 | 418.76 | 418.93 | 0.015360 | 2.11 | 31.78 | 102.31 | 0.67 |
| WASH0 | WASH0 | 9871.26 | 2 YR | 67.00 | 412.69 | 413.27 | 0.58 | 413.17 | 413.32 | 0.012077 | 1.70 | 39.69 | 151.23 | 0.58 |
| WASH0 | WASH0 | 9562.95 | 2 YR | 67.00 | 408.29 | 409.25 | 0.96 | 409.07 | 409.31 | 0.014081 | 2.00 | 34.88 | 128.89 | 0.64 |
| WASH0 | WASH0 | 9197 | 2 YR | 67.00 | 403.65 | 404.33 | 0.68 | | 404.38 | 0.012894 | 1.83 | 36.72 | 129.52 | 0.60 |
| WASH0 | WASH0 | 8798.15 | 2 YR | 67.00 | 397.89 | 398.53 | 0.64 | 398.45 | 398.59 | 0.016446 | 1.93 | 34.63 | 133.62 | 0.67 |
| WASH0 | WASH0 | 8444.54 | 2 YR | 67.00 | 392.80 | 393.37 | 0.57 | | 393.42 | 0.013065 | 1.66 | 40.43 | 165.48 | 0.59 |
| WASH0 | WASH0 | 7821.48 | 2 YR | 67.00 | 383.87 | 384.50 | 0.63 | | 384.58 | 0.013032 | 2.30 | 29.17 | 73.13 | 0.64 |
| WASH0 | WASH0 | 7102.13 | 2 YR | 67.00 | 374.51 | 375.19 | 0.68 | | 375.26 | 0.017066 | 2.15 | 31.19 | 108.79 | 0.70 |
| WASH0 | WASH0 | 6494.14 | 2 YR | 67.00 | 364.25 | 364.87 | 0.62 | | 364.94 | 0.013757 | 2.13 | 31.39 | 91.52 | 0.64 |
| WASH0 | WASH0 | 6019.74 | 2 YR | 67.00 | 357.46 | 358.35 | 0.89 | | 358.42 | 0.017430 | 2.11 | 31.80 | 112.75 | 0.70 |
| WASH0 | WASH0 | 5624.57 | 2 YR | 67.00 | 350.55 | 351.23 | 0.68 | | 351.33 | 0.015292 | 2.47 | 27.13 | 68.77 | 0.69 |
| WASH0 | WASH0 | 5234.92 | 2 YR | 67.00 | 344.24 | 344.97 | 0.73 | | 345.08 | 0.015587 | 2.71 | 24.70 | 55.17 | 0.71 |
| WASH0 | WASH0 | 4617.22 | 2 YR | 67.00 | 334.54 | 335.15 | 0.61 | | 335.21 | 0.015860 | 2.05 | 32.64 | 112.21 | 0.67 |
| WASH0 | WASH0 | 4232 | 2 YR | 67.00 | 327.66 | 328.66 | 1.00 | | 328.75 | 0.011572 | 2.41 | 27.83 | 59.27 | 0.62 |
| WASH0 | WASH0 | 3967.23 | 2 YR | 67.00 | 324.40 | 325.20 | 0.80 | | 325.27 | 0.014343 | 2.08 | 32.29 | 101.27 | 0.65 |

HEC-RAS Plan: Plan 03 Profile: 2 YR (Continued)

| River | Reach | River Sta | Profile | Q Total | Min Ch El | W.S. Elev | Max Chl Dpth | Crit W.S. | E.G. Elev | E.G. Slope | Vel Chnl | Flow Area | Top Width | Froude # Chl |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | (cfs) | (ft) | (ft) | (ft) | (ft) | (ft) | (ft/ft) | (ft/s) | (sq ft) | (ft) | |
| WASH0 | WASH0 | 3612.08 | 2 YR | 67.00 | 319.18 | 319.89 | 0.89 | 319.83 | 319.95 | 0.019018 | 1.96 | 34.15 | 144.05 | 0.71 |
| WASH0 | WASH0 | 3138.34 | 2 YR | 67.00 | 310.27 | 310.94 | 1.27 | 310.94 | 311.07 | 0.036696 | 2.88 | 23.29 | 90.48 | 1.00 |
| WASH0 | WASH0 | 2622.49 | 2 YR | 67.00 | 300.88 | 301.61 | 0.73 | | 301.67 | 0.019505 | 2.01 | 33.35 | 138.28 | 0.72 |
| WASH0 | WASH0 | 2197.73 | 2 YR | 67.00 | 292.25 | 293.06 | 0.81 | | 293.11 | 0.015920 | 1.72 | 39.01 | 175.76 | 0.64 |
| WASH0 | WASH0 | 1740.94 | 2 YR | 67.00 | 284.60 | 285.18 | 0.58 | 285.11 | 285.24 | 0.017714 | 2.03 | 32.97 | 124.90 | 0.70 |
| WASH0 | WASH0 | 1270.27 | 2 YR | 67.00 | 276.04 | 276.87 | 0.82 | 276.79 | 276.93 | 0.016530 | 2.11 | 31.82 | 108.63 | 0.69 |
| WASH0 | WASH0 | 767.81 | 2 YR | 67.00 | 266.47 | 267.26 | 0.79 | 267.21 | 267.40 | 0.021953 | 3.02 | 22.17 | 54.45 | 0.83 |
| WASH0 | WASH0 | 133.33 | 2 YR | 67.00 | 252.81 | 253.34 | 0.53 | 253.25 | 253.42 | 0.015304 | 2.28 | 29.33 | 83.70 | 0.68 |


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12718.16
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.6 ft/s
0.8 ft/s
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12391.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 12095.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11801.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11434.21
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 11096.81
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10668.33
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 10283.74
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9871.26
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9562.95
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.8 ft/s
1.0 ft/s
1.2 ft/s
1.4 ft/s
1.6 ft/s
1.8 ft/s
2.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 9197
.05
.04
.0
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 8798.15
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta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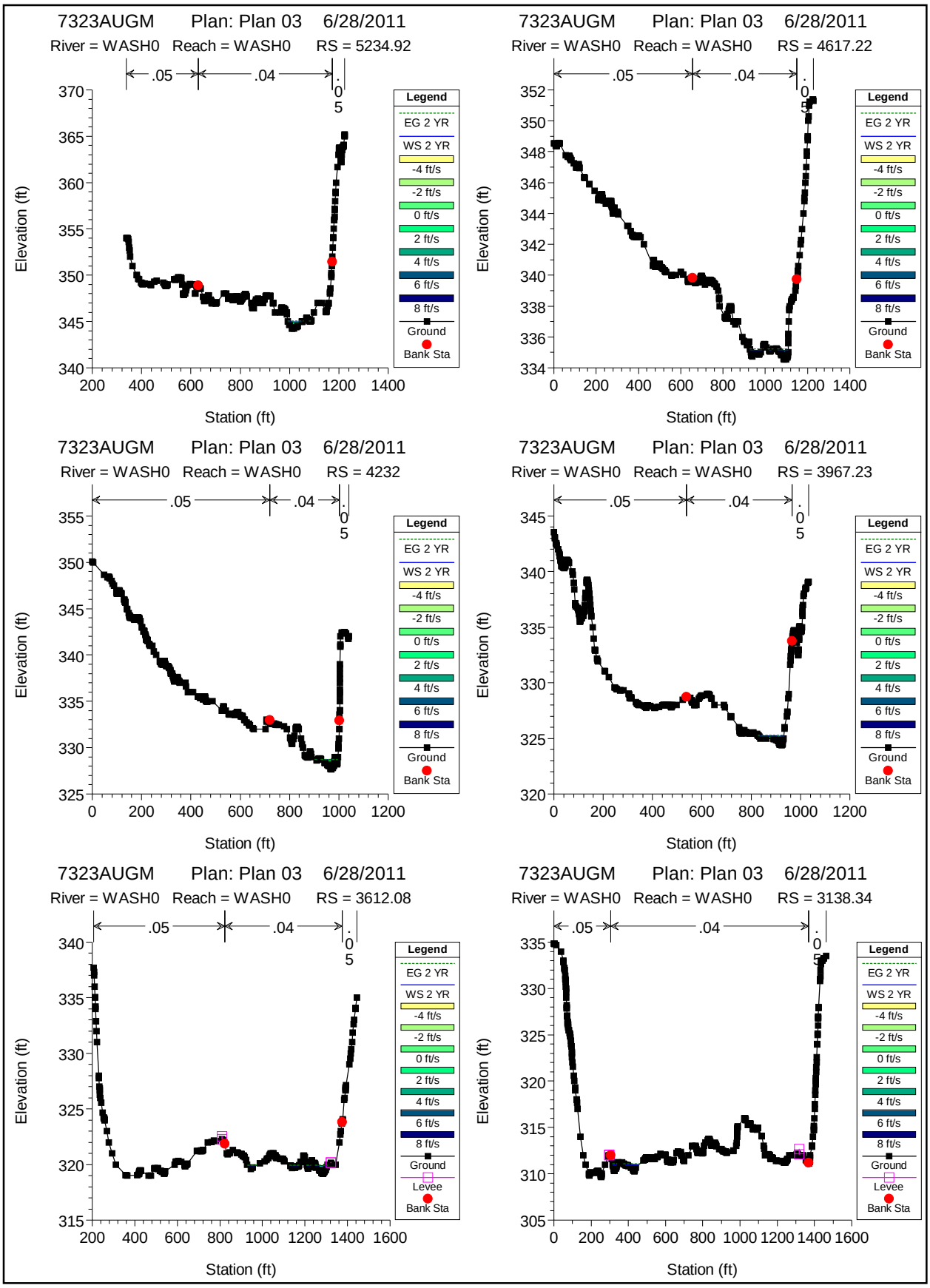
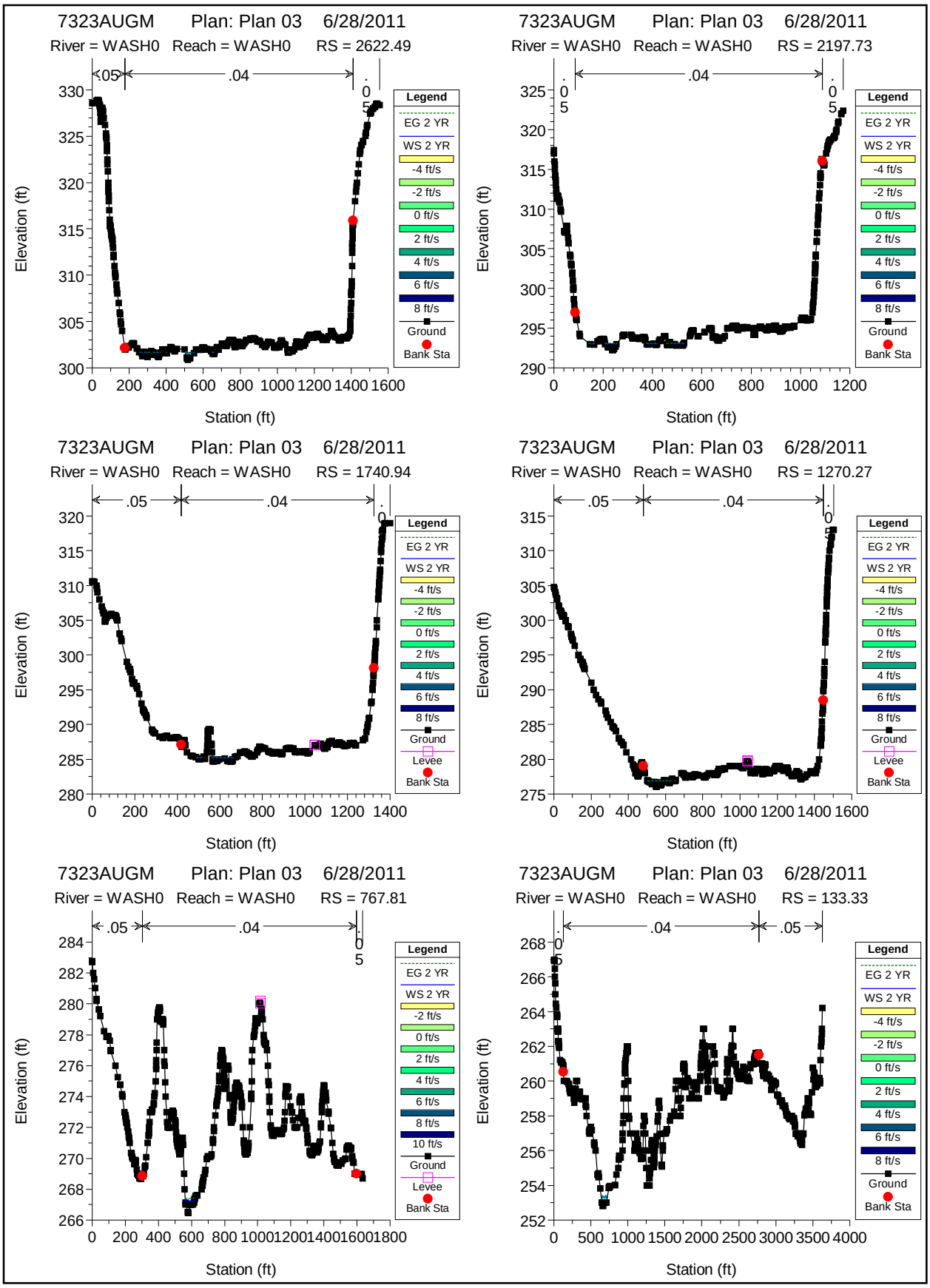
River = WASH0 Reach = WASH0 RS = 8444.54
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7821.48
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 7102.13
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.5 ft/s
1.0 ft/s
1.5 ft/s
2.0 ft/s
2.5 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6494.14
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 6019.74
.04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5624.57
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 5234.92
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4617.22
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 4232
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3967.23
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3612.08
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 3138.34
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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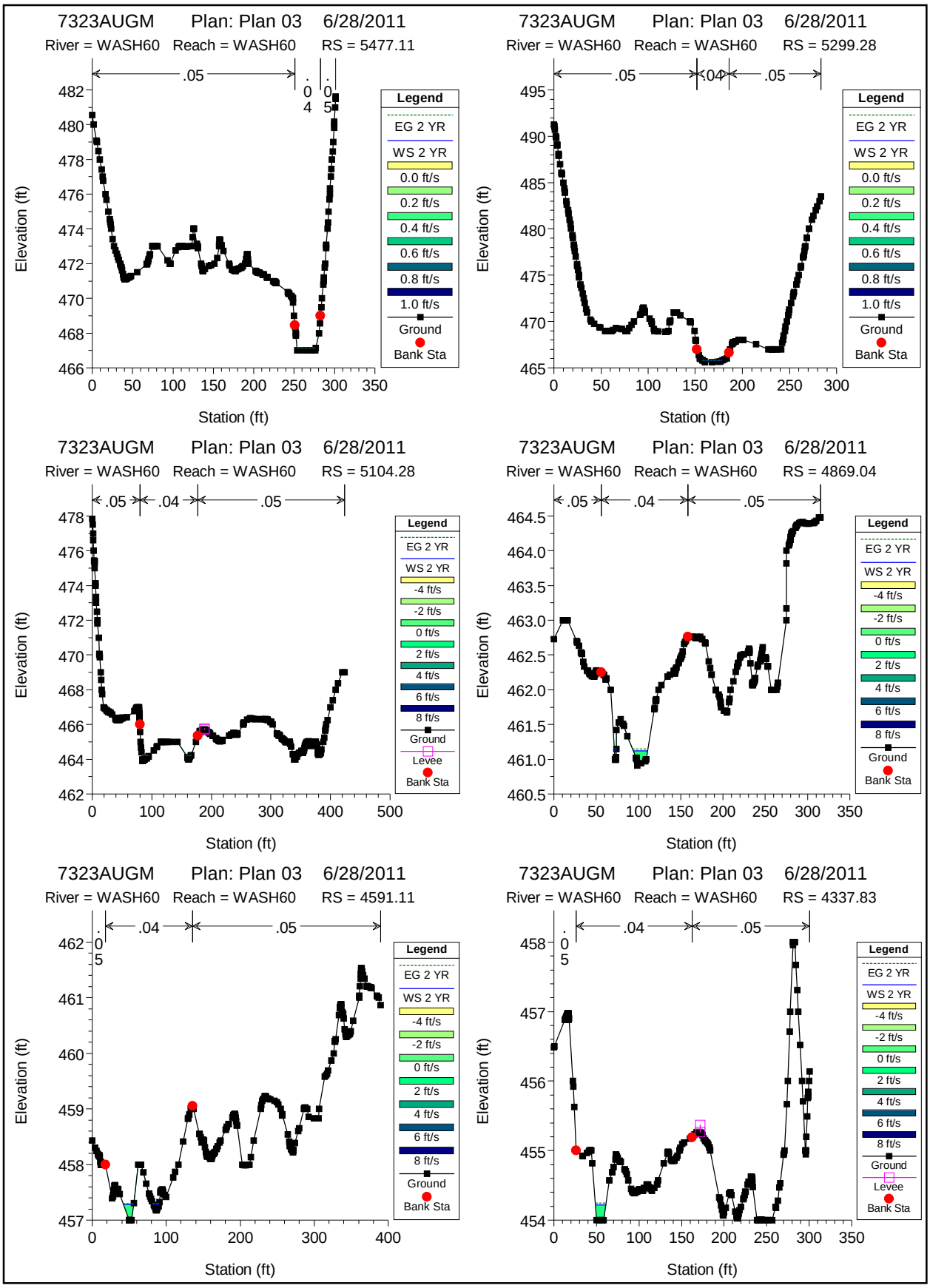
River = WASH0 Reach = WASH0 RS = 2622.49
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 2197.73
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1740.94
.05 .04
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 1270.27
.05 .04
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 767.81
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH0 Reach = WASH0 RS = 133.33
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta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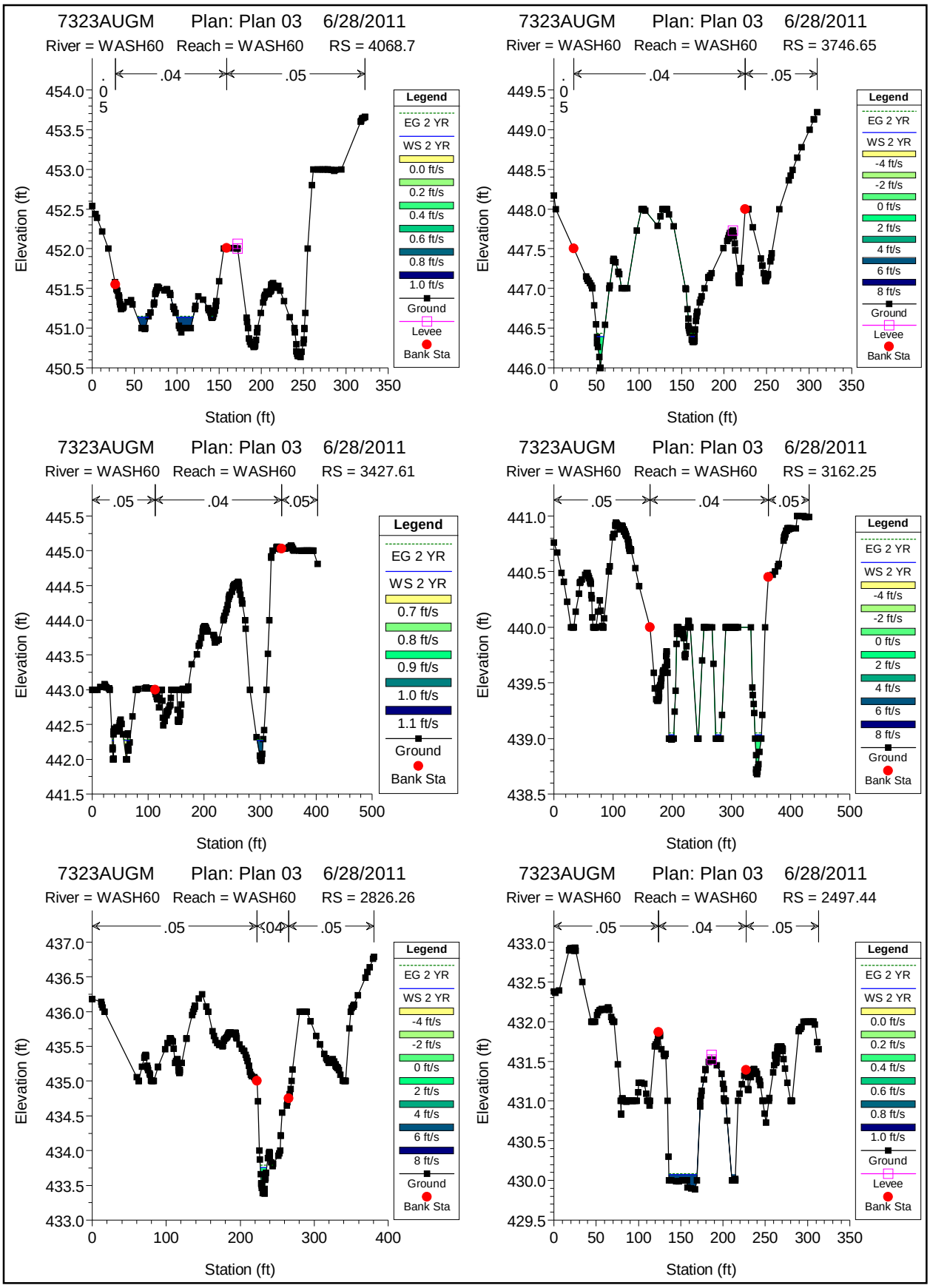
River = WASH60 Reach = WASH60 RS = 5477.11
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5299.28
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 5104.28
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4869.04
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4591.11
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 4337.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta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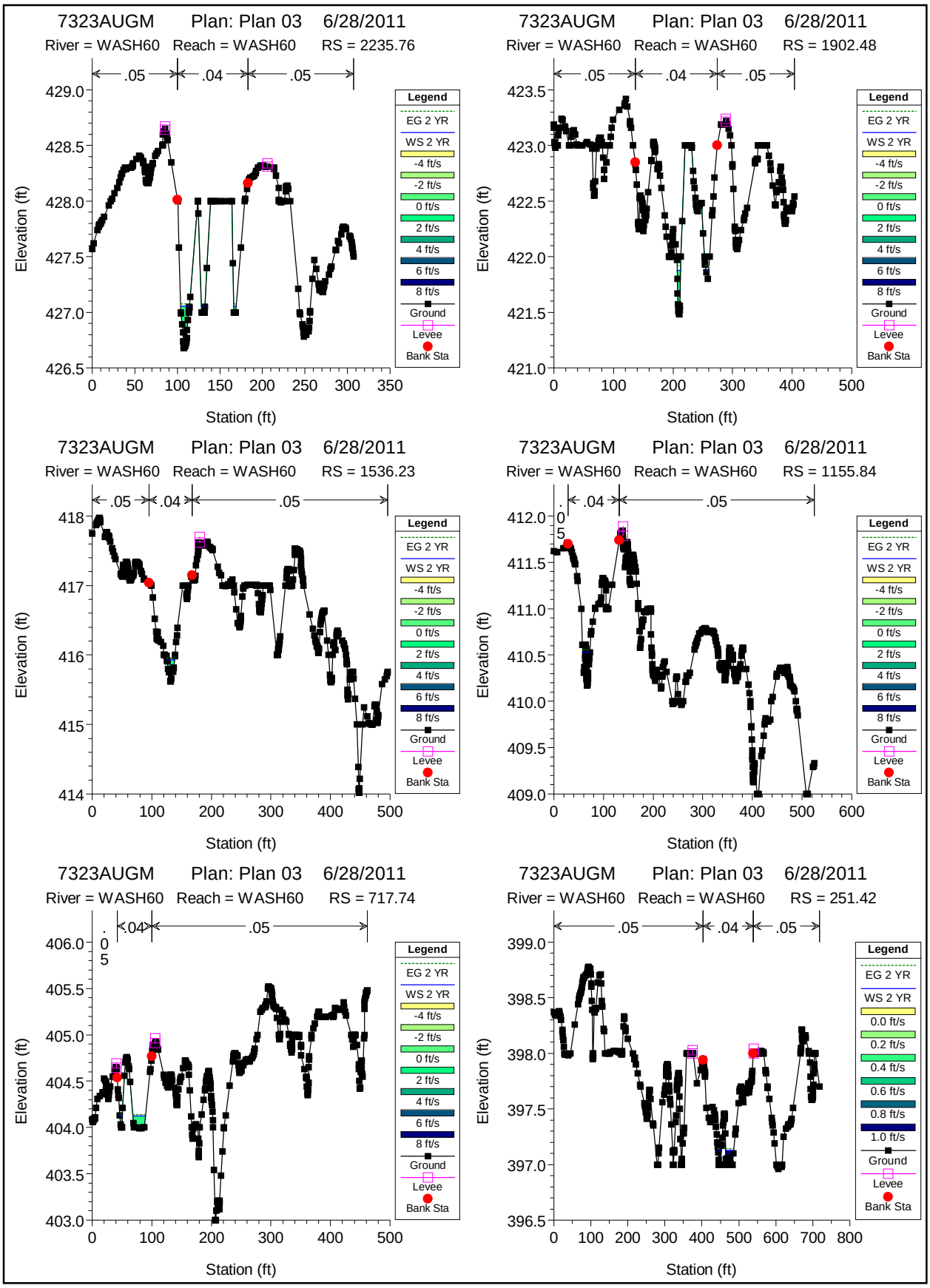
River = WASH60 Reach = WASH60 RS = 4068.7
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3746.65
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3427.61
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.7 ft/s
0.8 ft/s
0.9 ft/s
1.0 ft/s
1.1 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 3162.25
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2826.26
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 2497.44
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta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River = WASH60 Reach = WASH60 RS = 2235.76
.05 .04 .05
Elevation (ft)
Station (ft)
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River = WASH60 Reach = WASH60 RS = 1902.48
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1536.23
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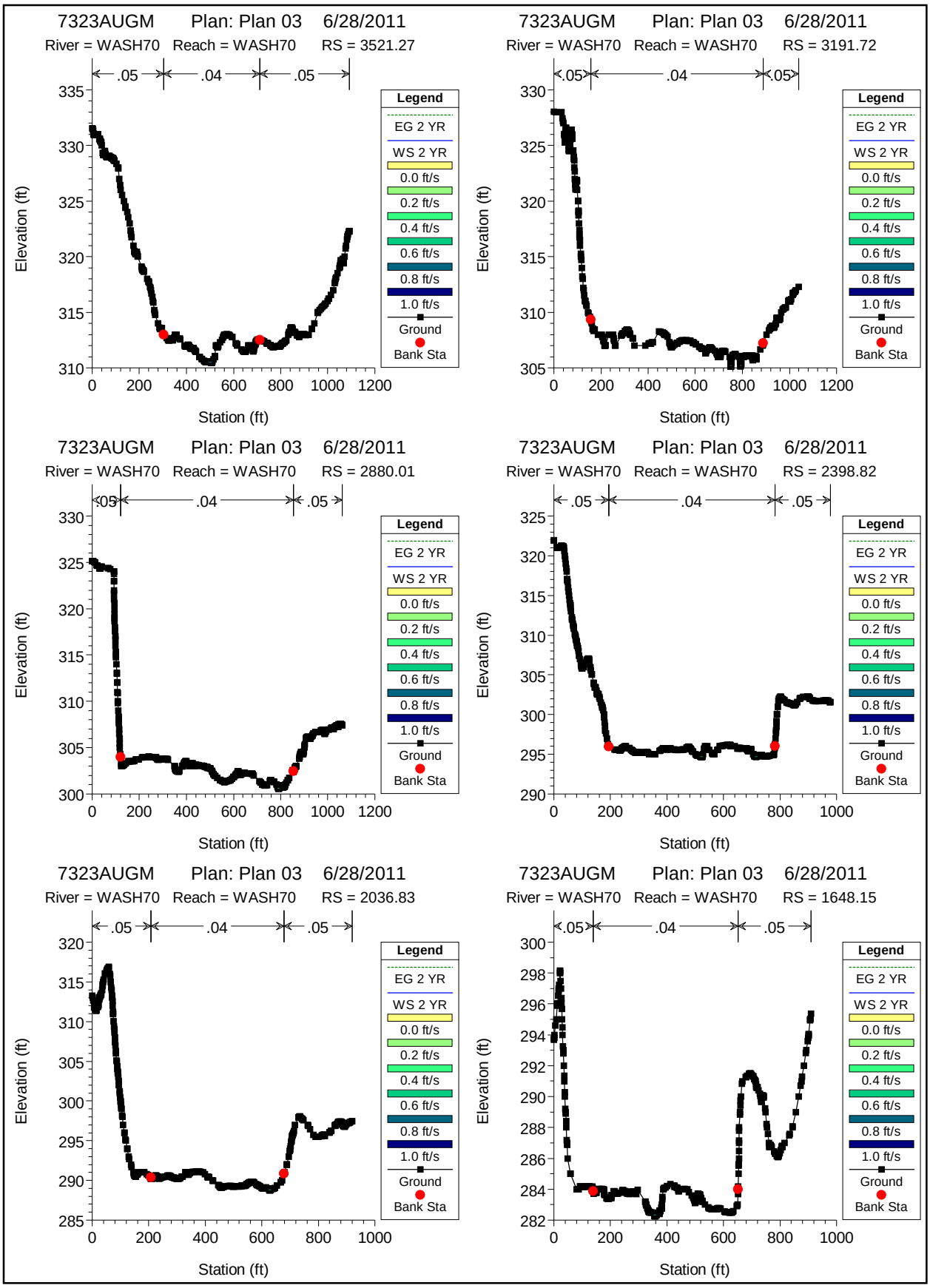
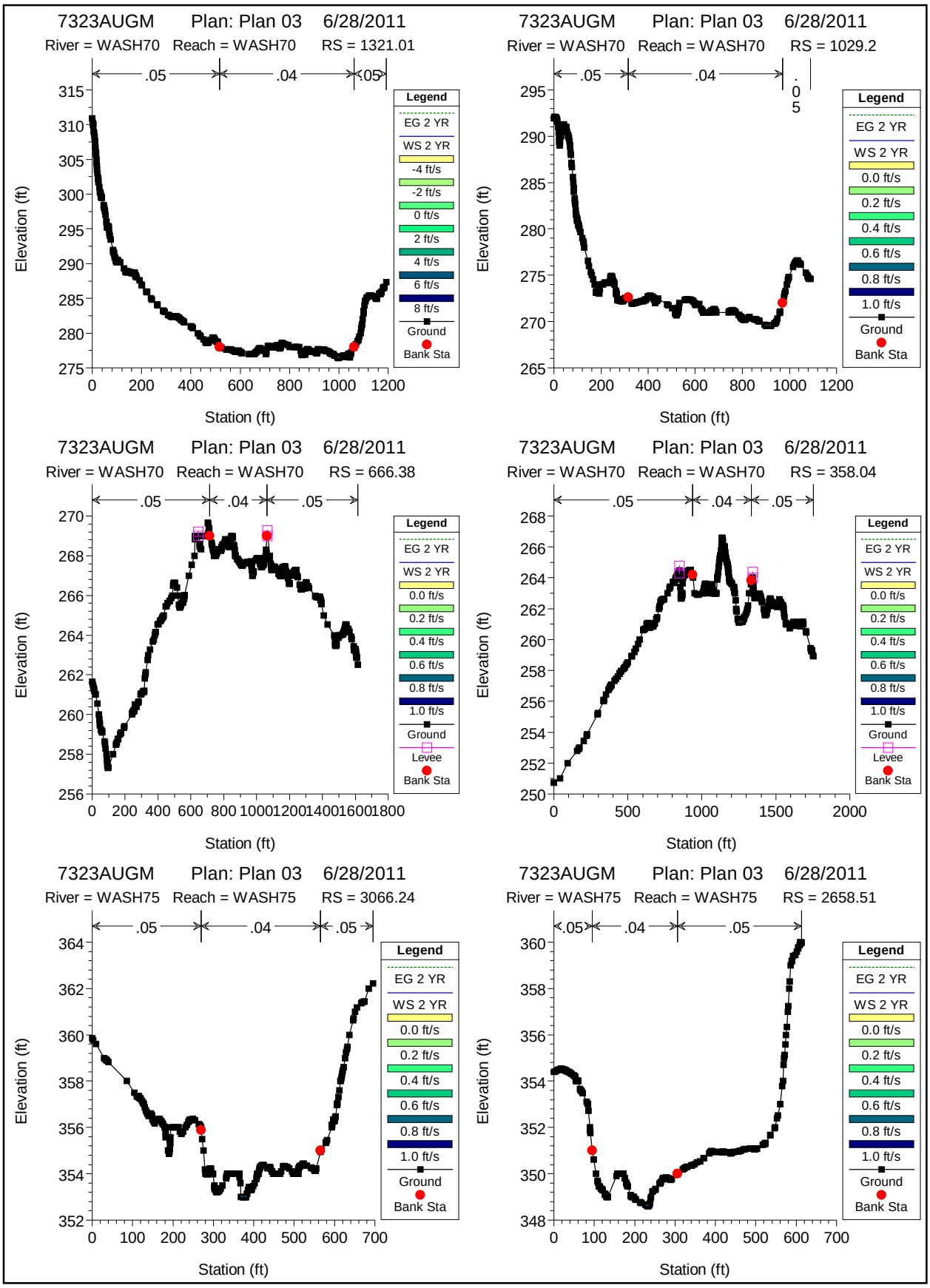
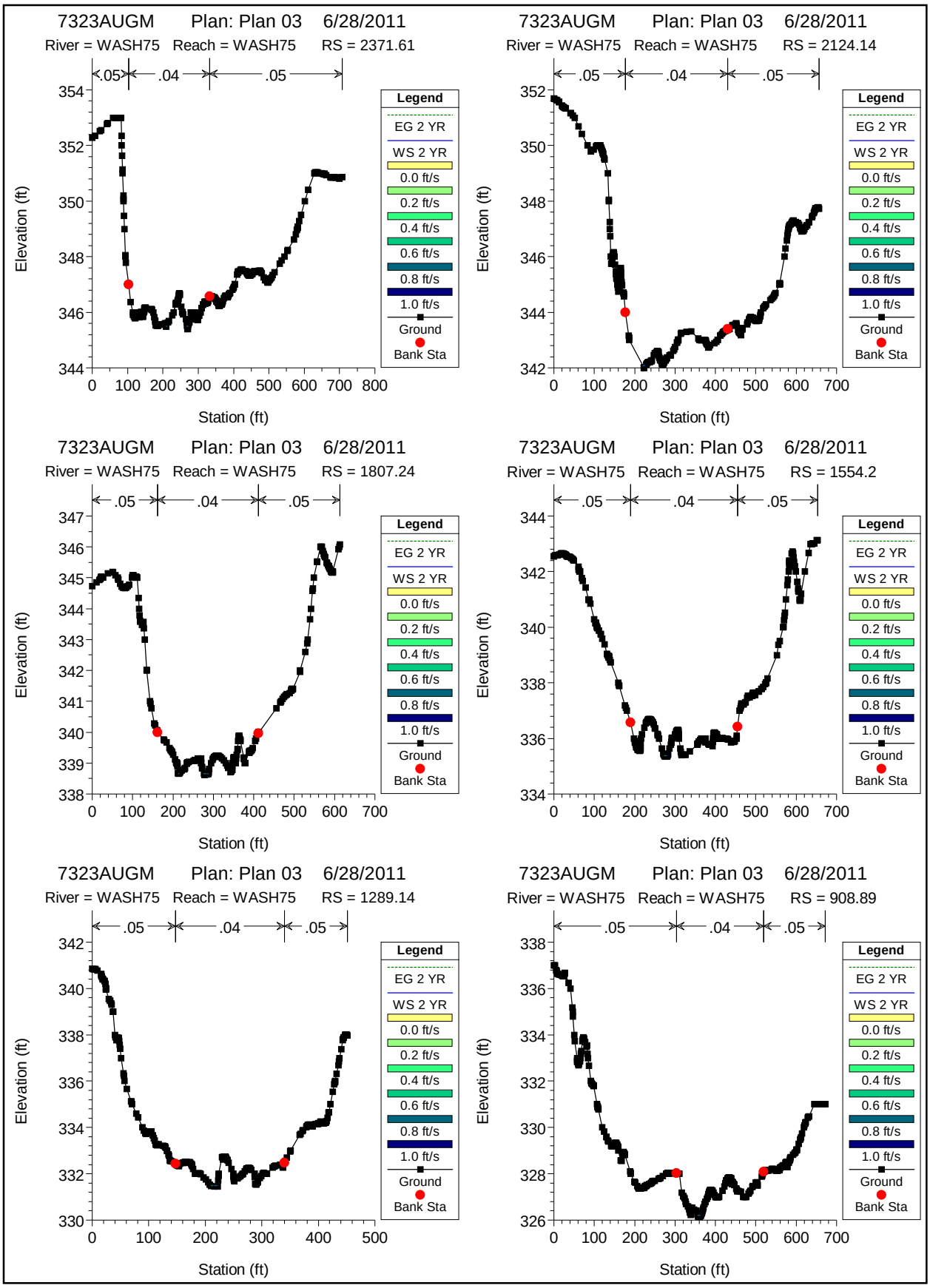
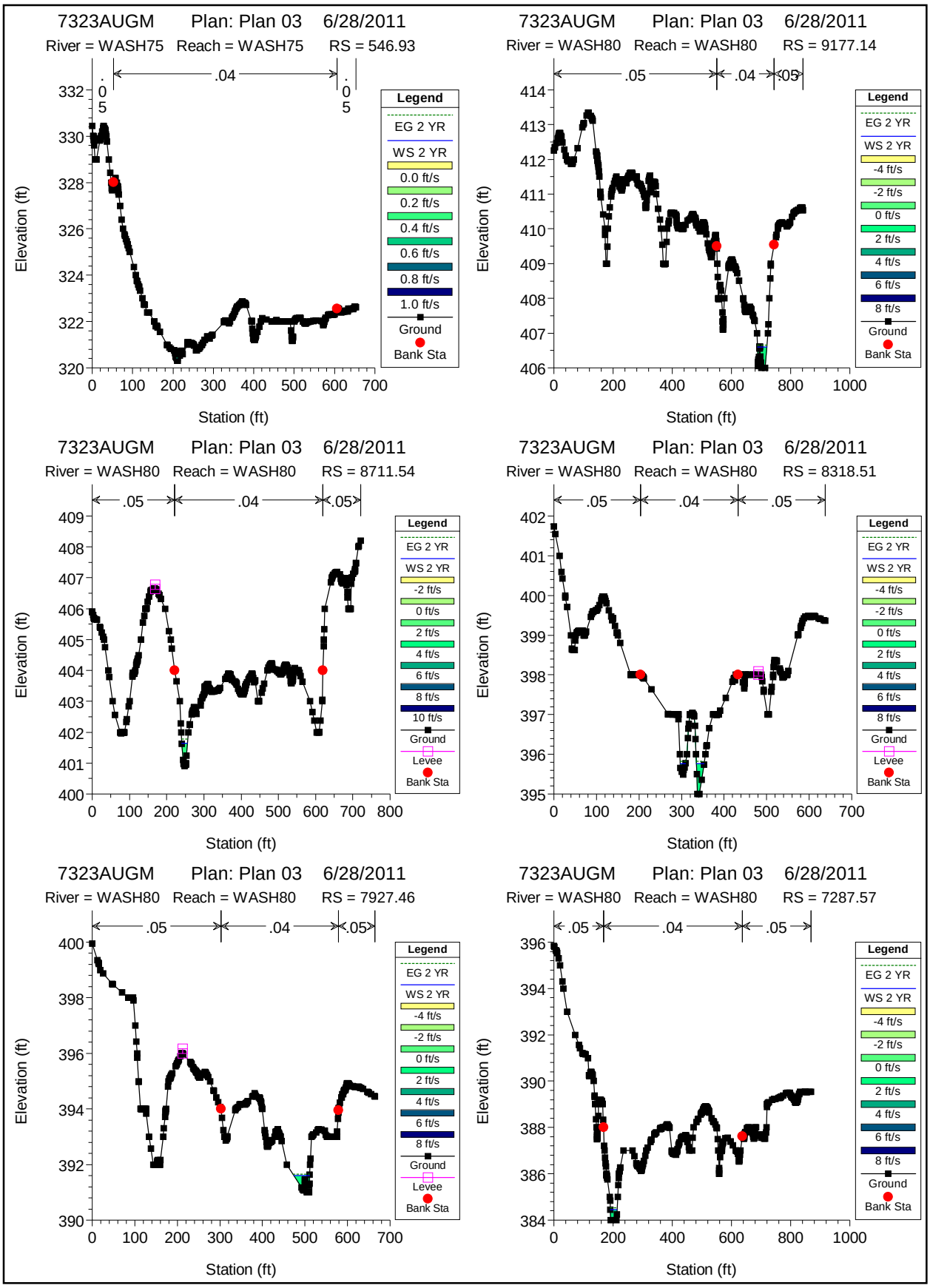
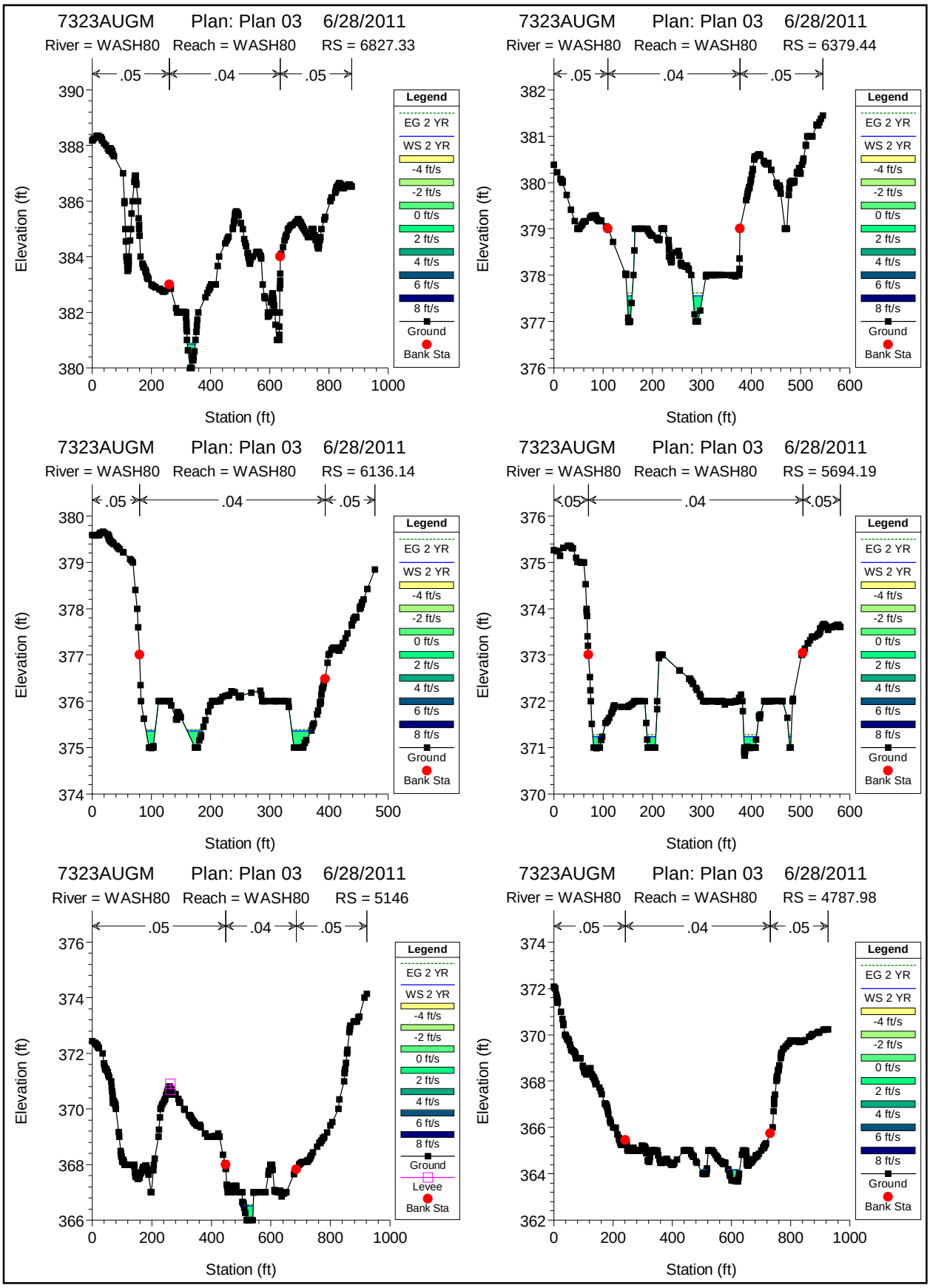
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 1155.84
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 717.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH60 Reach = WASH60 RS = 251.42
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta

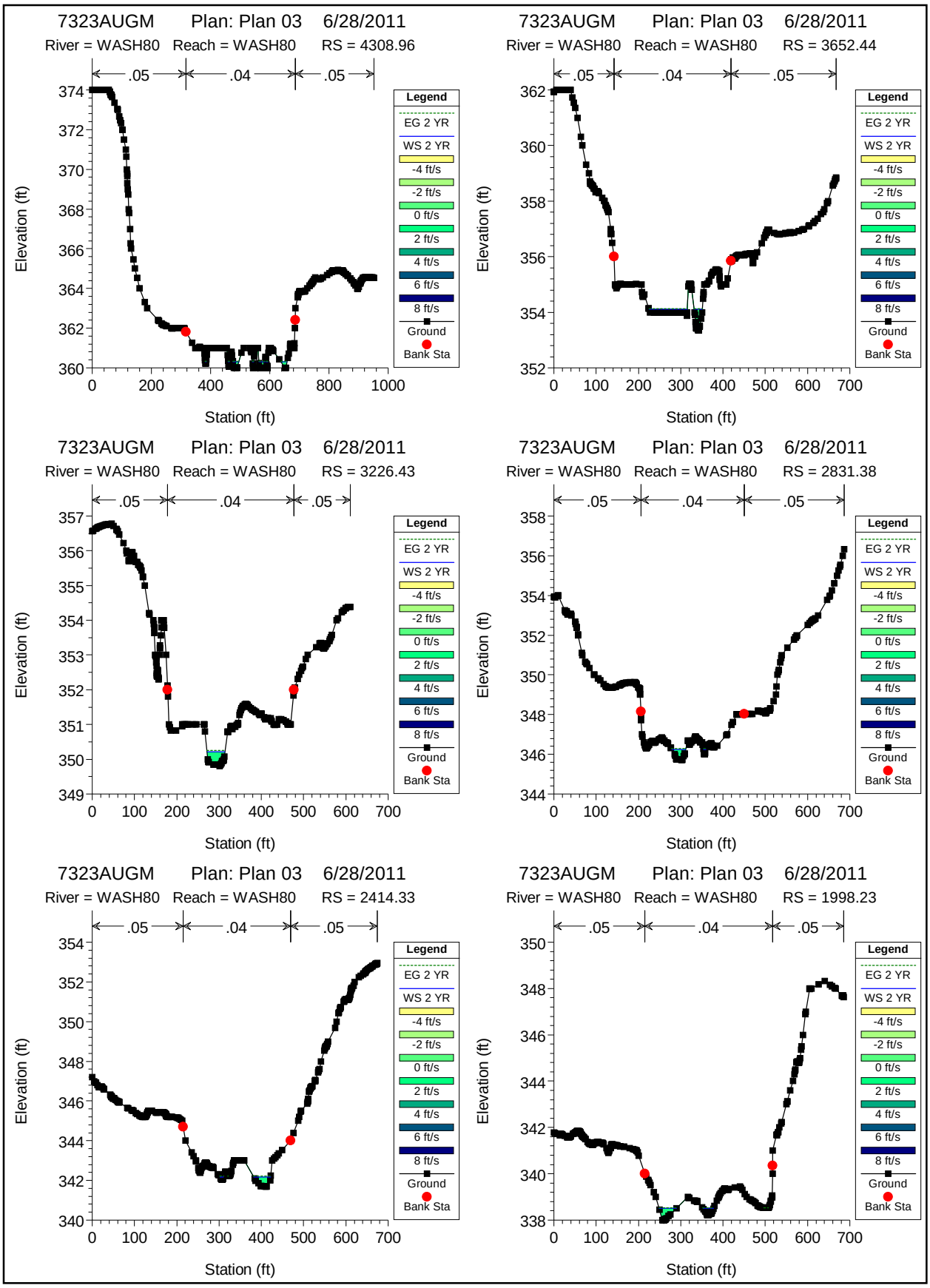

7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 3521.27
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 3191.72
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2880.01
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2398.82
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 2036.83
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1648.15
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

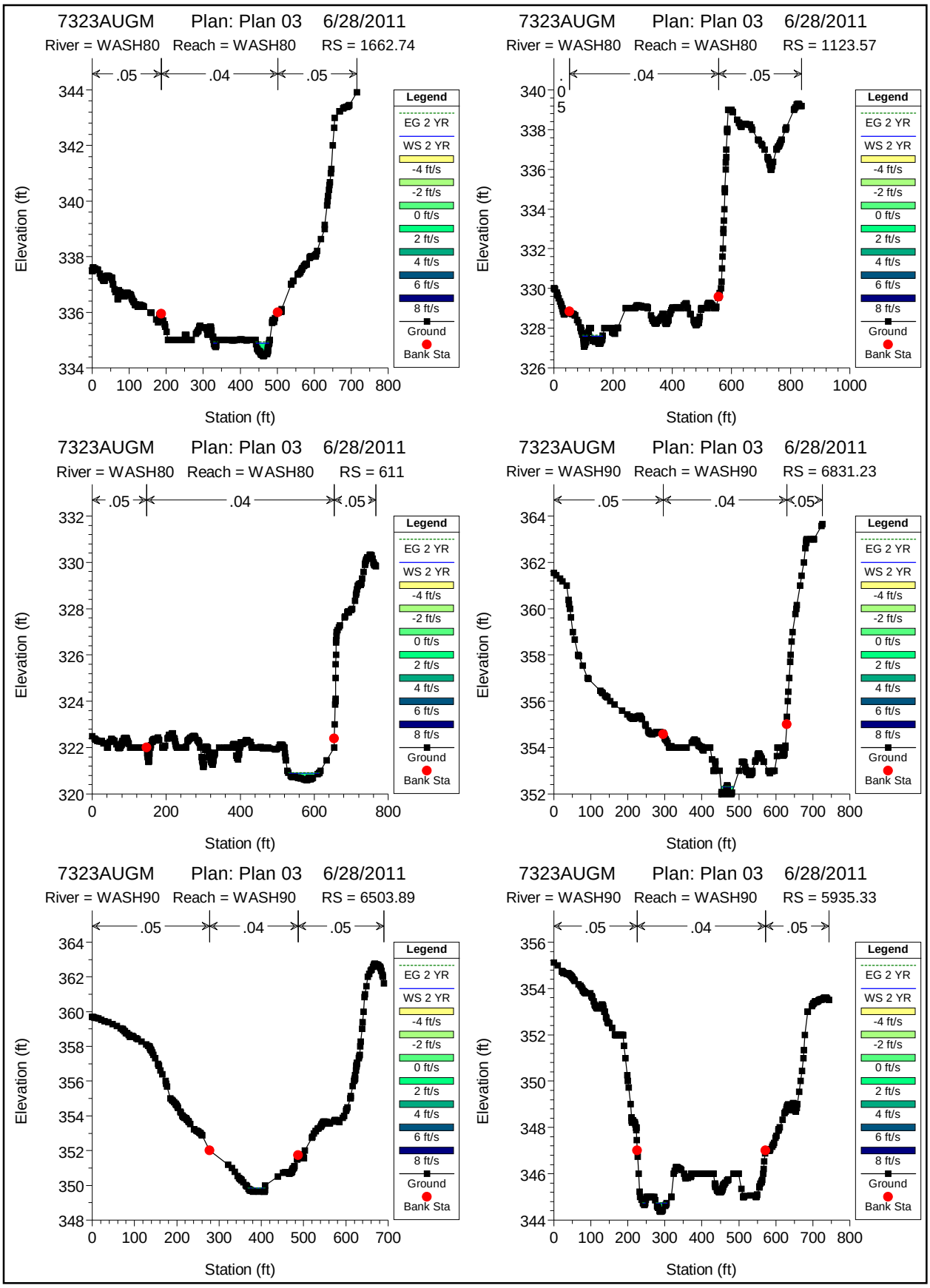

7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1321.01
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 1029.2
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 666.38
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH70 Reach = WASH70 RS = 358.04
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Levee
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 3066.24
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2658.51
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

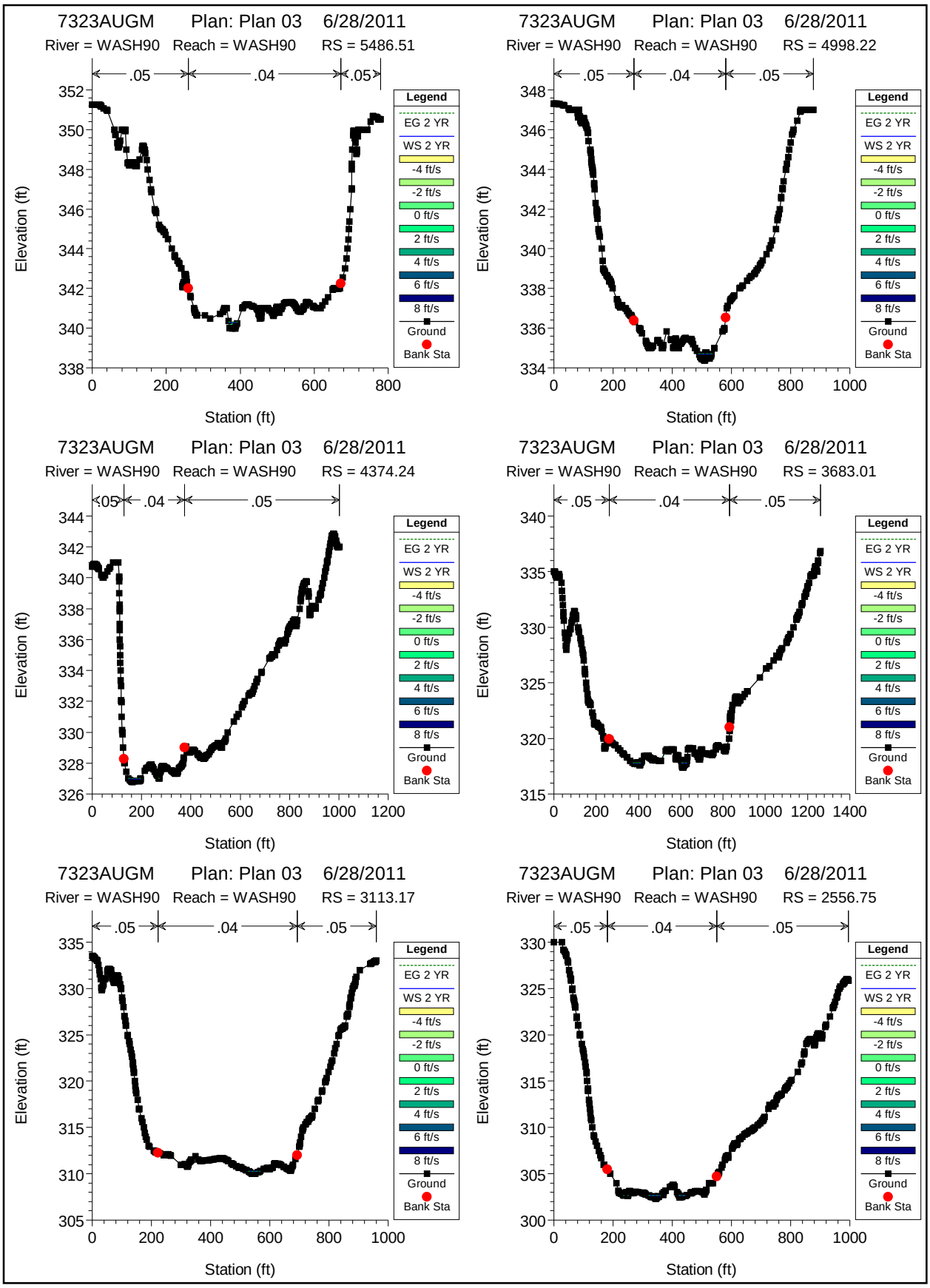

7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2371.61
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 2124.14
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1807.24
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1554.2
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 1289.14
7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 908.89
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta

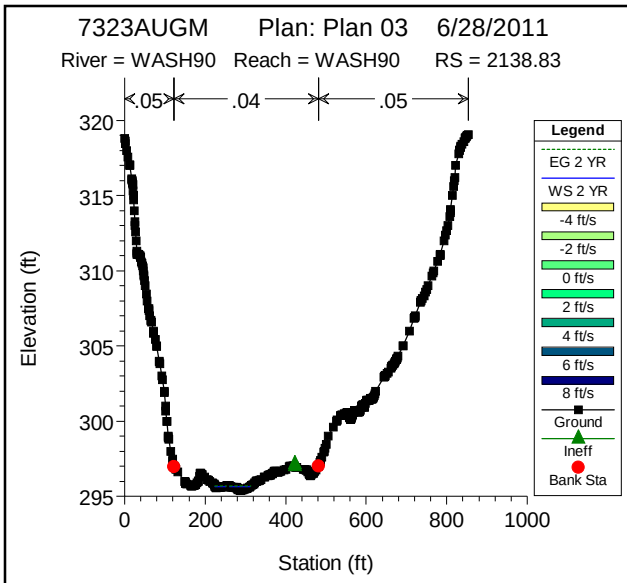

7323AUGM Plan: Plan 03 6/28/2011
River = WASH75 Reach = WASH75 RS = 546.93
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
0.0 ft/s
0.2 ft/s
0.4 ft/s
0.6 ft/s
0.8 ft/s
1.0 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 9177.14
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8711.54
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
10 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 8318.51
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7927.46
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 7287.57
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta
Elevation (ft)
Station (ft)

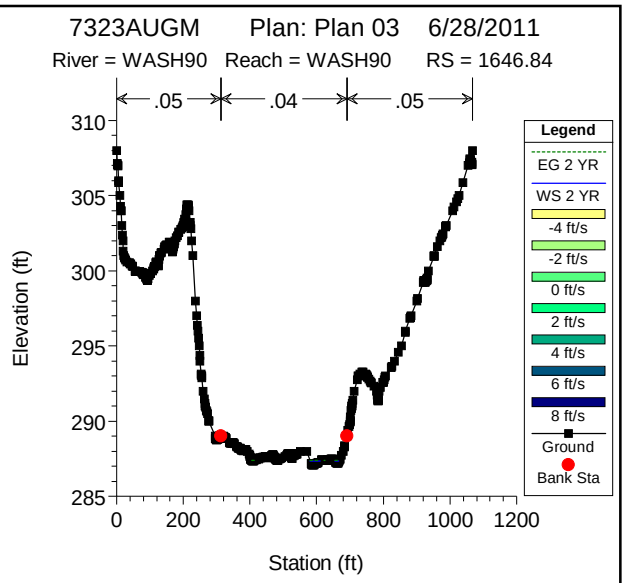

7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6827.33
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6379.44
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 6136.14
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5694.19
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 5146
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4787.98
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Levee
Bank Sta

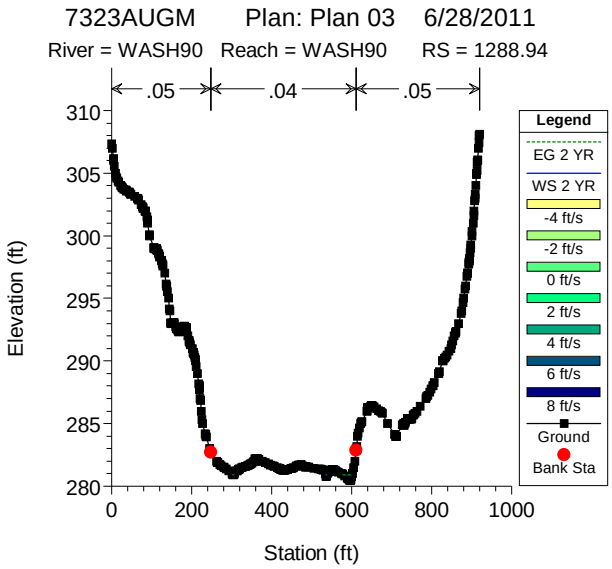

7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 4308.96
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3652.44
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 3226.43
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2831.38
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 2414.33
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1998.23
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

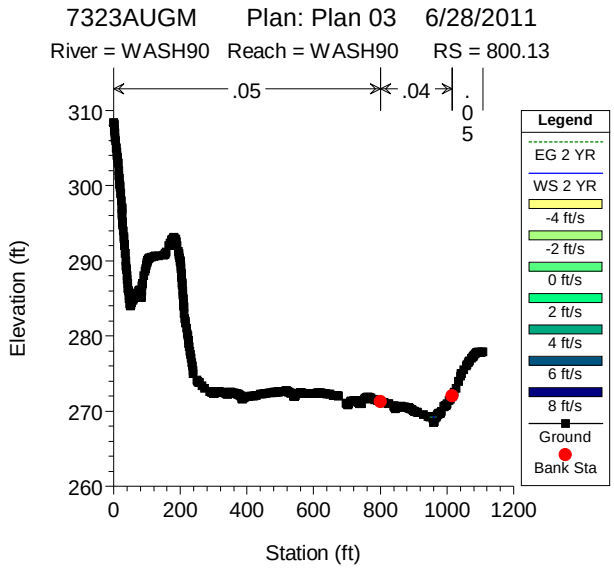

7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1662.74
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 1123.57
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH80 Reach = WASH80 RS = 611
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6831.23
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 6503.89
.05 .04 .05
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5935.33
.05 .04 .05
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 5486.51
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4998.22
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 4374.24
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3683.01
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 3113.17
.05 .04 .05
Elevation (ft)
Station (ft)
7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2556.75
.05 .04 .05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 2138.83
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Ineff
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1646.84
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 1288.94
.05
.04
.05
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta


7323AUGM Plan: Plan 03 6/28/2011
River = WASH90 Reach = WASH90 RS = 800.13
.05
.04
Elevation (ft)
Station (ft)
Legend
EG 2 YR
WS 2 YR
-4 ft/s
-2 ft/s
0 ft/s
2 ft/s
4 ft/s
6 ft/s
8 ft/s
Ground
Bank Sta

# APPENDIX F:

## vi. HEC-RAS Input

HEC-RAS Version 4.1.0 Jan 2010
U.S. Army Corps of Engineers
Hydrologic Engineering Center
609 Second Street
Davis, California

```
X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: EXISTING 1 FOOT 5 FLOW PROFILE
Project File : 7323HECRAS.prj
Run Date and Time: 5/19/2011 10:32:15 AM

Project in English units

PLAN DATA

Plan Title: Plan 07
Plan File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-4-2011\7323HECRAS.p07

Geometry Title: EX WASH 4 NO NORTH  WASH
Geometry File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-4-2011\7323HECRAS.g05

Flow Title    : EX FLOW 100 YR 25YR 10YR 5YR 2YR
Flow File     : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-4-2011\7323HECRAS.f04

Plan Summary Information:
Number of:  Cross Sections =  165    Multiple Openings  =    0
            Culverts       =    0    Inline Structures  =    0
            Bridges        =    0    Lateral Structures =    0

Computational Information
    Water surface calculation tolerance  =  0.01
    Critical depth calculation tolerance =  0.01
    Maximum number of iterations         =  20
    Maximum difference tolerance         =  0.3
    Flow tolerance factor                =  0.001

Computation Options
    Critical depth computed only where necessary
    Conveyance Calculation Method: At breaks in n values only
    Friction Slope Method:         Average Conveyance
    Computational Flow Regime:     Mixed Flow

Encroachment Data
   Equal Conveyance = True
   Left Offset      =        0
   Right Offset     =        0

River = WASH45           Reach = Centerline Align
RS      Profile           Method  Value1  Value2
5500    2 YR                   4       1
4744.3  2 YR                   4       1
4000    2 YR                   4       1
3500    2 YR                   4       1
3000    2 YR                   4       1
2500    2 YR                   4       1
2000    2 YR                   4       1
1500    2 YR                   4       1
1000    2 YR                   4       1
378.44  2 YR                   4       1

River = WASH30           Reach = Centerline Align
RS      Profile           Method  Value1  Value2

| | | | |
|---|---|---|---|
| 10130.272 | YR | 4 | 1 |
| 9500 | 2 YR | 4 | 1 |
| 9000 | 2 YR | 4 | 1 |
| 8500 | 2 YR | 4 | 1 |
| 8000 | 2 YR | 4 | 1 |
| 7500 | 2 YR | 4 | 1 |
| 7000 | 2 YR | 4 | 1 |
| 6500 | 2 YR | 4 | 1 |
| 6000 | 2 YR | 4 | 1 |
| 5500 | 2 YR | 4 | 1 |
| 5000 | 2 YR | 4 | 1 |
| 4500 | 2 YR | 4 | 1 |
| 4000 | 2 YR | 4 | 1 |
| 3500 | 2 YR | 4 | 1 |
| 3000 | 2 YR | 4 | 1 |
| 2500 | 2 YR | 4 | 1 |
| 2000 | 2 YR | 4 | 1 |
| 1343.16 | 2 YR | 4 | 1 |
| 1000 | 2 YR | 4 | 1 |
| 500 | 2 YR | 4 | 1 |

River = WASH25B Reach = Centerline Align

| RS | Profile | Method | Value1 | Value2 |
|---|---|---|---|---|
| 6600 | 2 YR | 4 | 1 | |
| 6100 | 2 YR | 4 | 1 | |
| 5600 | 2 YR | 4 | 1 | |
| 5100 | 2 YR | 4 | 1 | |
| 4600 | 2 YR | 4 | 1 | |
| 4100 | 2 YR | 4 | 1 | |
| 3600 | 2 YR | 4 | 1 | |
| 3100 | 2 YR | 4 | 1 | |
| 2600 | 2 YR | 4 | 1 | |
| 2100 | 2 YR | 4 | 1 | |
| 1368.02 | 2 YR | 4 | 1 | |
| 600 | 2 YR | 4 | 1 | |
| 100 | 2 YR | 4 | 1 | |

River = WASH25A Reach = Centerline Align

| RS | Profile | Method | Value1 | Value2 |
|---|---|---|---|---|
| 10806.782 | YR | 4 | 1 | |
| 10100 | 2 YR | 4 | 1 | |
| 9600 | 2 YR | 4 | 1 | |
| 9100 | 2 YR | 4 | 1 | |
| 8600 | 2 YR | 4 | 1 | |
| 8100 | 2 YR | 4 | 1 | |
| 7600 | 2 YR | 4 | 1 | |
| 7100 | 2 YR | 4 | 1 | |

River = WASH23 Reach = Wash23

| RS | Profile | Method | Value1 | Value2 |
|---|---|---|---|---|
| 3479.12 | 2 YR | 4 | 1 | |
| 3038.38 | 2 YR | 4 | 1 | |
| 2630.84 | 2 YR | 4 | 1 | |
| 2097.72 | 2 YR | 4 | 1 | |
| 1490.24 | 2 YR | 4 | 1 | |
| 1066.16 | 2 YR | 4 | 1 | |
| 780.97 | 2 YR | 4 | 1 | |

River = WASH20 Reach = Centerline Align

| RS | Profile | Method | Value1 | Value2 |
|---|---|---|---|---|
| 16636.712 | YR | 4 | 1 | |
| 16100 | 2 YR | 4 | 1 | |
| 15600 | 2 YR | 4 | 1 | |
| 15169.422 | YR | 4 | 1 | |
| 14600 | 2 YR | 4 | 1 | |
| 14100 | 2 YR | 4 | 1 | |
| 13600 | 2 YR | 4 | 1 | |
| 13100 | 2 YR | 4 | 1 | |
| 12600 | 2 YR | 4 | 1 | |
| 12100 | 2 YR | 4 | 1 | |
| 11600 | 2 YR | 4 | 1 | |
| 11329.192 | YR | 4 | 1 | |

River = WASH35 Reach = Centerline Align

| RS | Profile | Method | Value1 | Value2 |
|---|---|---|---|---|
| 5246.65 | 2 YR | 4 | 1 | |
| 4965.62 | 2 YR | 4 | 1 | |
| 4493.91 | 2 YR | 4 | 1 | |
| 4063.78 | 2 YR | 4 | 1 | |

| | | | |
|---|---|---|---|
| 3661.61 | 2 YR | 4 | 1 |
| 3000 | 2 YR | 4 | 1 |
| 2500 | 2 YR | 4 | 1 |
| 2000 | 2 YR | 4 | 1 |
| 1600 | 2 YR | 4 | 1 |

FLOW DATA

Flow Title: EX FLOW 100 YR 25YR 10YR 5YR 2YR
Flow File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-4-2011\7323HECRAS.f04

Flow Data (cfs)

| River | Reach | RS | 100 YR | 2 YR | 5 YR | 10 YR | 25 YR |
|---|---|---|---|---|---|---|---|
| WASH10A | Centerline Align | 22483.47 | 160 | 23.35 | 49.26 | 71.83 | 105 |
| WASH10B | Centerline Align | 21050.7 | 280.24 | 38.92 | 82.1 | 119.78 | 175 |
| WASH15 | Centerline Align | 3100 | 676.15 | 204.54 | 458.57 | 536.71 | 581.6 |
| WASH20 | Centerline Align | 16636.71 | 726.22 | 85.8 | 214.77 | 311.95 | 456.88 |
| WASH20 | Centerline Align | 13600 | 370.52 | 60.06 | 141.66 | 195.66 | 264.98 |
| WASH23 | Wash23 | 3479.12 | 195.52 | 1 | 1 | 1 | 29.35 |
| WASH25A | Centerline Align | 10806.78 | 1350.96 | 40.21 | 210.76 | 404.51 | 678.31 |
| WASH25B | Centerline Align | 6600 | 1336.02 | 24.74 | 206.14 | 401.33 | 671.57 |
| WASH30 | Centerline Align | 10130.27 | 305.83 | 1 | 1 | 9.95 | 85.71 |
| WASH35 | Centerline Align | 5246.65 | 614.76 | 78.56 | 183.81 | 265.68 | 392.02 |
| WASH4 | Wash 4 | 1076.68 | 105 | 15.57 | 32.84 | 47.9 | 70 |
| WASH40 | Centerline Align | 10653.2 | 4640.71 | 700.95 | 1435.73 | 2069.07 | 3007.84 |
| WASH45 | Centerline Align | 5500 | 6154.09 | 787.74 | 1843.41 | 2690.4 | 3958.27 |
| WASH5 | Center Line Wash | 2398.41 | 445.31 | 71.41 | 140.45 | 200.86 | 288.23 |

Boundary Conditions

| River | Reach | Profile | Upstream | Downstream |
|---|---|---|---|---|
| WASH10A | Centerline Align | 100 YR | Normal S = 0.013 | |
| WASH10A | Centerline Align | 2 YR | Normal S = 0.013 | |
| WASH15 | Centerline Align | 100 YR | Normal S = 0.02 | |
| WASH15 | Centerline Align | 2 YR | Normal S = 0.02 | |
| WASH23 | Wash23 | 100 YR | Normal S = 0.009 | |
| WASH23 | Wash23 | 2 YR | Normal S = 0.009 | |
| WASH25B | Centerline Align | 100 YR | | Normal S = 0.008 |
| WASH25B | Centerline Align | 2 YR | | Normal S = 0.008 |
| WASH30 | Centerline Align | 100 YR | Normal S = 0.005 | Normal S = 0.011 |
| WASH30 | Centerline Align | 2 YR | Normal S = 0.005 | Normal S = 0.011 |
| WASH35 | Centerline Align | 100 YR | Normal S = 0.006 | |
| WASH35 | Centerline Align | 2 YR | Normal S = 0.006 | |
| WASH4 | Wash 4 | 100 YR | Normal S = 0.004 | |
| WASH4 | Wash 4 | 2 YR | Normal S = 0.004 | |
| WASH40 | Centerline Align | 100 YR | Normal S = 0.006 | |
| WASH40 | Centerline Align | 2 YR | Normal S = 0.006 | |
| WASH45 | Centerline Align | 100 YR | | Normal S = 0.009 |
| WASH45 | Centerline Align | 2 YR | | Normal S = 0.009 |
| WASH5 | Center Line Wash | 100 YR | Normal S = 0.016 | |
| WASH5 | Center Line Wash | 2 YR | Normal S = 0.016 | |

GEOMETRY DATA

Geometry Title: EX WASH 4 NO NORTH WASH
Geometry File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-4-2011\7323HECRAS.g05

Reach Connection Table

| River | Reach | Upstream Boundary | Downstream Boundary |
|---|---|---|---|
| WASH10A | Centerline Align | | J4-10 |
| WASH10B | Centerline Align | J4-10 | J5-10 |
| WASH15 | Centerline Align | | J15-20 |
| WASH20 | Centerline Align | J5-10 | J15-20 |
| WASH23 | Wash23 | | J23-25 |
| WASH25A | Centerline Align | J15-20 | J23-25 |
| WASH25B | Centerline Align | J23-25 | |
| WASH30 | Centerline Align | | |
| WASH35 | Centerline Align | | J35-40 |
| WASH4 | Wash 4 | | J4-10 |
| WASH40 | Centerline Align | | J35-40 |
| WASH45 | Centerline Align | J35-40 | |
| WASH5 | Center Line Wash | | J5-10 |

JUNCTION INFORMATION

Name: J4-10
Description:
Energy computation Method

Length across Junction

| River | Reach | | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|---|
| WASH10A | Centerline Align | to | WASH10B | Centerline Align | 570.54 | |
| WASH4 | Wash 4 | to | WASH10B | Centerline Align | 480 | |

Name: J5-10
Description:
Energy computation Method

Length across Junction

| River | Reach | | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|---|
| WASH10B | Centerline Align | to | WASH20 | Centerline Align | 779.82 | |
| WASH5 | Center Line Wash | to | WASH20 | Centerline Align | 706.64 | |

Name: J15-20
Description:
Energy computation Method

Length across Junction

| River | Reach | | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|---|
| WASH20 | Centerline Align | to | WASH25A | Centerline Align | 522.41 | |
| WASH15 | Centerline Align | to | WASH25A | Centerline Align | 483.8 | 0 |

Name: J35-40
Description:
Energy computation Method

Length across Junction

| River | Reach | | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|---|
| WASH40 | Centerline Align | to | WASH45 | Centerline Align | 1443.13 | |
| WASH35 | Centerline Align | to | WASH45 | Centerline Align | 1667.33 | 0 |

Name: J23-25
Description:
Energy computation Method

Length across Junction

| River | Reach | | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|---|
| WASH25A | Centerline Align | to | WASH25B | Centerline Align | 500 | |
| WASH23 | Wash23 | to | WASH25B | Centerline Align | 801 | |

CROSS SECTION

RIVER: WASH10A
REACH: Centerline Align RS: 22483.47

INPUT
Description:
Station Elevation Data num= 181

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 504.43 | 3.910004 | 504.449.970001 | | 504.54 | 10.28 | 504.5411.10001 | | 504.55 |
| 11.47 | 504.56 | 11.81 | 504.56 | 12.31 | 504.5713.01999 | | 504.5914.98001 | | 504.65 |
| 16.53 | 504.68 | 17.95999 | 504.68 | 18.23001 | 504.6926.89001 | | 504.5650.01999 | | 504.17 |
| 50.89999 | 504.15 | 56.25 | 504.02 | 56.78 | 504.0156.95999 | | 504.0156.98001 | | 504.01 |
| 56.98999 | 504.01 | 57.26999 | 50457.60999 | | 504 | 58.41 | 50458.76999 | | 504 |
| 60.09 | 504 | 60.38 | 504 | 60.41 | 504 | 63.87 | 504 | 65.87 | 504 |
| 67.44 | 504 | 69.81 | 50470.26999 | | 50473.04999 | | 50473.10999 | | 504 |
| 73.13 | 50473.14999 | | 50473.26999 | | 50473.32001 | | 504 | 73.37 | 504 |
| 73.48999 | 50473.73999 | | 504 | 76.16 | 504 | 77.44 | 504 | 78.03 | 504 |
| 79.54999 | 50481.14001 | | 504 | 84.38 | 504 | 85.59 | 50491.70999 | | 504 |
| 94.38 | 50495.35999 | | 50496.67999 | | 50496.95999 | | 504 | 97.09 | 504 |
| 97.48001 | 50497.73001 | | 504 | 97.78 | 50498.95999 | | 50499.17999 | | 504 |
| 99.26999 | 50499.85001 | | 504 | 100.91 | 504 | 101.13 | 504 | 101.29 | 504 |
| 102.14 | 504 | 103.24 | 504 | 103.37 | 504 | 103.76 | 504 | 104.51 | 504 |
| 105.77 | 503.86 | 105.95 | 503.85 | 106.96 | 503.73 | 108.05 | 503.59 | 108.29 | 503.55 |
| 108.41 | 503.57 | 108.64 | 503.52 | 114.69 | 503.19 | 116.39 | 503.15 | 116.46 | 503.15 |
| 116.61 | 503.15 | 116.76 | 503.15 | 118.08 | 503.17 | 119.56 | 503.18 | 120.71 | 503.19 |
| 137.97 | 503.43 | 147.4 | 503.56 | 153.62 | 503.61 | 161.25 | 503.69 | 162.92 | 503.71 |
| 163.05 | 503.71 | 164.45 | 503.73 | 165.93 | 503.75 | 166.33 | 503.75 | 168.21 | 503.77 |
| 172.24 | 503.77 | 176.54 | 503.76 | 177.17 | 503.76 | 179.13 | 503.72 | 181.86 | 503.66 |
| 183.29 | 503.62 | 184.17 | 503.6 | 184.42 | 503.6 | 191.83 | 503.39 | 200 | 503.12 |
| 203.29 | 503.02 | 204.18 | 503.01 | 204.48 | 503.01 | 205.16 | 503 | 205.2 | 503 |
| 205.24 | 503 | 205.45 | 503 | 205.9 | 503 | 208.54 | 502.99 | 209.39 | 502.99 |
| 211.83 | 503 | 215 | 503.15 | 217.25 | 503.26 | 221.42 | 503.44 | 221.54 | 503.44 |
| 228.67 | 503.56 | 234.48 | 503.54 | 235.11 | 503.54 | 237.3 | 503.52 | 243.82 | 503 |
| 246.42 | 502.23 | 246.57 | 502.18 | 247.09 | 502 | 248.88 | 501 | 248.89 | 501 |
| 250.92 | 500 | 252.83 | 499.54 | 254.65 | 499 | 257.24 | 498.85 | 258.37 | 498.78 |
| 259.78 | 498.69 | 261.3 | 498.59 | 269.54 | 498 | 270.39 | 497.9 | 279.32 | 497 |
| 280.66 | 497 | 283.05 | 497 | 283.13 | 497 | 283.73 | 497 | 285.52 | 497 |
| 285.84 | 497 | 288.1 | 497.39 | 291.53 | 498 | 291.97 | 498.11 | 294.66 | 498.73 |
| 296.43 | 499 | 304.18 | 499.35 | 305.26 | 499.39 | 314.16 | 499.77 | 319.24 | 499.86 |
| 321.75 | 499.89 | 327 | 499.89 | 336.92 | 499.97 | 338.84 | 499.99 | 339.61 | 499.99 |
| 340.42 | 499.99 | 341.58 | 500 | 344.93 | 500 | 345.61 | 500 | 345.73 | 500 |
| 346.84 | 500 | 349.19 | 500 | 353.44 | 500 | 355.19 | 500 | 359.76 | 500 |
| 360.54 | 500 | 360.86 | 500 | 365.47 | 500 | 368.74 | 500 | 370.98 | 500 |
| 376.32 | 500.04 | 387.25 | 500.25 | 398.46 | 500.34 | 399.01 | 500.35 | 399.59 | 500.36 |
| 400 | 500.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 258.37 | .04 | 296.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 258.37 | 296.43 | 212.25 | 212.25 | 212.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH10A
REACH: Centerline Align RS: 22271.22

INPUT
Description:
Station Elevation Data num= 243

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 5019.42 | 9993 | 501.0116.01999 | | 501.0132.67999 | | 50134.23999 | | 501 |
| 35.72 | 50137.32001 | | 501 | 43.19 | 501 | 43.41 | 501 | 49.22 | 501 |
| 49.48001 | 50149.48999 | | 501 | 49.5 | 50149.51001 | | 50149.54001 | | 501 |
| 49.59 | 50149.60999 | | 50154.48001 | | 501.01 | 57.59 | 501.0157.76999 | | 501 |
| 58 | 501.01 | 58.84 | 501.0158.92999 | | 501.0160.07999 | | 501.0162.29999 | | 501.01 |
| 68.98001 | 501.0769.07001 | | 501.07 | 83.87 | 50184.35999 | | 501 | 85.75 | 501 |
| 87.57999 | 501 | 92.56 | 50198.60999 | | 50198.73001 | | 501 | 98.78 | 501 |
| 98.91 | 501 | 99.62 | 501 | 102.03 | 501 | 102.21 | 501 | 104.71 | 500.93 |
| 114.4 | 500.81 | 121.95 | 500.72 | 122 | 500.72 | 125.5 | 500.72 | 133.4 | 500.83 |
| 143.99 | 501 | 144.2 | 501 | 144.21 | 501 | 145.38 | 501 | 146 | 501 |
| 149.78 | 501 | 149.95 | 501 | 150.22 | 501 | 152.32 | 501 | 153.43 | 501 |
| 154.44 | 501 | 156.71 | 501 | 157.49 | 501 | 157.59 | 501 | 157.64 | 501 |
| 157.69 | 501 | 159.48 | 501 | 163.47 | 500.97 | 169.64 | 500.93 | 169.68 | 500.93 |
| 171.47 | 500.93 | 171.56 | 500.93 | 173.64 | 500.88 | 185.01 | 500.6 | 189.5 | 500.51 |
| 190.73 | 500.47 | 193.01 | 500.42 | 193.69 | 500.39 | 195.31 | 500.34 | 198.31 | 500.26 |
| 200 | 500.2 | 203.94 | 500.06 | 204.3 | 500.05 | 204.56 | 500.04 | 205 | 500.03 |
| 205.53 | 500 | 206.21 | 499.8 | 206.85 | 499.56 | 208.34 | 499 | 208.37 | 498.99 |
| 208.68 | 498.85 | 209.62 | 498.42 | 210.07 | 498.3 | 210.85 | 498.13 | 211.34 | 498 |
| 211.57 | 497.98 | 212.09 | 497.83 | 212.23 | 497.78 | 212.84 | 497.62 | 213.56 | 497.42 |
| 214.21 | 497.23 | 214.34 | 497.19 | 214.63 | 497.12 | 215.02 | 497.01 | 215.27 | 497 |
| 215.29 | 497 | 215.31 | 497 | 215.4 | 497 | 215.42 | 497 | 216.44 | 496.57 |
| 216.91 | 496.42 | 217.04 | 496.39 | 218.41 | 496 | 221.73 | 495.6 | 222.14 | 495.55 |
| 223.62 | 495.4 | 224.38 | 495.34 | 227.78 | 495.02 | 228.6 | 495.02 | 229.26 | 495.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 229.36 | 495.02 | 229.5 | 495.02 | 230.63 | 495 | 232.82 | 494.77 | 232.91 | 494.76 |
| 239.36 | 494 | 241.49 | 493.99 | 242.45 | 493.99 | 244.02 | 494 | 244.36 | 494 |
| 245.59 | 494 | 245.76 | 494 | 245.93 | 494 | 246.22 | 494.08 | 249.29 | 495 |
| 250.68 | 495 | 252.09 | 495 | 253.5 | 495 | 253.7 | 495 | 254.03 | 494.99 |
| 254.49 | 494.99 | 254.54 | 494.99 | 254.75 | 494.99 | 255.28 | 495 | 255.47 | 495 |
| 255.78 | 495 | 257.27 | 495 | 266.96 | 495 | 267.03 | 495 | 268.2 | 495 |
| 269.22 | 495 | 269.56 | 495 | 269.79 | 495 | 277.53 | 495.03 | 277.56 | 495.03 |
| 277.59 | 495.03 | 277.61 | 495.03 | 277.62 | 495.03 | 277.71 | 495.03 | 277.99 | 495.04 |
| 279.32 | 495.14 | 281.03 | 495.32 | 281.41 | 495.36 | 281.76 | 495.39 | 287.23 | 496 |
| 288.25 | 496.01 | 288.29 | 496.01 | 288.61 | 496.01 | 288.93 | 496.01 | 290.94 | 496.03 |
| 293.43 | 496.04 | 296.16 | 496.07 | 297.22 | 496.08 | 299.23 | 496.18 | 308.37 | 496.53 |
| 309.36 | 496.58 | 310.15 | 496.6 | 316.08 | 496.46 | 316.99 | 496.49 | 317.39 | 496.49 |
| 317.68 | 496.48 | 319.22 | 496.52 | 321.15 | 496.61 | 321.73 | 496.66 | 323.21 | 496.78 |
| 323.22 | 496.78 | 323.71 | 496.8 | 324.44 | 496.84 | 324.95 | 496.86 | 325.22 | 496.86 |
| 325.31 | 496.86 | 325.86 | 496.84 | 325.98 | 496.84 | 326.15 | 496.83 | 326.48 | 496.8 |
| 327.13 | 496.74 | 327.69 | 496.69 | 327.75 | 496.69 | 327.95 | 496.67 | 328.39 | 496.63 |
| 328.78 | 496.6 | 329.13 | 496.63 | 329.43 | 496.65 | 329.66 | 496.66 | 341.17 | 496.82 |
| 342.17 | 496.85 | 344.19 | 496.86 | 353.59 | 496.94 | 353.67 | 496.94 | 354.23 | 496.93 |
| 354.28 | 496.93 | 354.43 | 496.93 | 354.77 | 496.93 | 355.76 | 496.94 | 356.49 | 496.94 |
| 359.32 | 496.97 | 359.65 | 496.98 | 360.26 | 496.98 | 362.03 | 497 | 362.27 | 497 |
| 362.32 | 497 | 362.4 | 497 | 363.98 | 497 | 364.84 | 497 | 365.64 | 497 |
| 369.65 | 497 | 373.38 | 497.01 | 374.17 | 497.01 | 374.23 | 497.01 | 374.53 | 497.01 |
| 374.56 | 497.01 | 377.06 | 497.01 | 379.44 | 497.01 | 381.36 | 497 | 384.55 | 497 |
| 387.27 | 496.82 | 388.57 | 496.76 | 388.59 | 496.76 | 388.6 | 496.76 | 391.67 | 496.55 |
| 392.46 | 496.5 | 393.69 | 496.44 | 394.08 | 496.42 | 394.63 | 496.4 | 395.51 | 496.36 |
| 396.77 | 496.33 | 397.84 | 496.31 | 400 | 496.42 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 223.62 | .04 | 281.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 223.62 | 281.41 | 321.94 | 318.7 | 315.11 | .1 | .3 |

CROSS SECTION

RIVER: WASH10A
REACH: Centerline Align RS: 21952.52

INPUT
Description:
Station Elevation Data num= 206

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 495.98.8299866 | | 495.97 | 1.5 | 495.962.470001 | | 495.964.980011 | | 495.92 |
| 5.600006 | 495.93 | 20.19 | 495.420.57001 | | 495.422.17999 | | 495.3123.10999 | | 495.25 |
| 24.20999 | 495.17 | 26.59 | 495 | 30.66 | 495 | 34.47 | 49534.51999 | | 495 |
| 34.54001 | 495 | 34.59 | 495 | 36.78 | 49539.04999 | | 49543.51999 | | 495 |
| 44.95999 | 495.0145.17999 | | 495.0145.32001 | | 495.0147.92999 | | 495.1252.76999 | | 495.1 |
| 54.12 | 495.0854.60999 | | 495.07 | 58.88 | 49558.95999 | | 49559.01001 | | 495 |
| 59.70001 | 49559.82999 | | 49560.17999 | | 495 | 60.56 | 49560.73999 | | 495 |
| 61.51999 | 495.07 | 62.37 | 495.16 | 71.72 | 496 | 81.37 | 496 | 82.34 | 496 |
| 83.48001 | 496 | 83.84 | 49686.67001 | | 496 | 87.81 | 49689.79999 | | 496 |
| 91.57001 | 49696.89999 | | 496 | 97.12 | 495.9998.92999 | | 495.98 | 101.75 | 495.96 |
| 103.36 | 495.95 | 104.72 | 495.94 | 105.89 | 495.93 | 107.1 | 495.94 | 112.93 | 496 |
| 116.73 | 496.31 | 118.43 | 496.39 | 119.78 | 496.45 | 121.39 | 496.53 | 121.8 | 496.55 |
| 123.58 | 496.54 | 125.27 | 496.53 | 125.88 | 496.57 | 128.4 | 496.67 | 130.01 | 496.72 |
| 130.16 | 496.72 | 130.48 | 496.73 | 133.79 | 496.71 | 137.78 | 496.67 | 138.71 | 496.65 |
| 139.53 | 496.63 | 140.44 | 496.6 | 141.27 | 496.58 | 145.78 | 496.49 | 148.79 | 496.42 |
| 154.41 | 496.34 | 158.51 | 496.31 | 159.02 | 496.3 | 160.39 | 496.29 | 160.75 | 496.29 |
| 161.72 | 496.29 | 164.39 | 496.3 | 167.06 | 496.29 | 169.58 | 496.29 | 172.87 | 496.24 |
| 175.38 | 496.22 | 176.95 | 496.23 | 177.06 | 496.23 | 181.43 | 496.24 | 185.73 | 496.24 |
| 189.14 | 496.26 | 193.49 | 496.31 | 193.52 | 496.31 | 200 | 496.2 | 200.01 | 496.2 |
| 209.38 | 496 | 209.45 | 496 | 209.48 | 496 | 213.82 | 495.62 | 216.25 | 495.34 |
| 217.94 | 495.14 | 218.27 | 495.11 | 218.36 | 495.1 | 219.11 | 495 | 220.05 | 494.93 |
| 221.09 | 494.85 | 221.71 | 494.81 | 232.75 | 494 | 233.35 | 493.82 | 233.88 | 493.64 |
| 235.71 | 493 | 236.3 | 492.81 | 240.4 | 492 | 242.53 | 491.72 | 248.58 | 491 |
| 258.03 | 490.21 | 259.96 | 490 | 260.65 | 490 | 261.12 | 490 | 264.9 | 489.99 |
| 265.44 | 489.99 | 266.14 | 489.99 | 269.68 | 489.99 | 271.85 | 490 | 278.05 | 490.87 |
| 278.79 | 491 | 279.51 | 491.34 | 281.67 | 492 | 282.86 | 492.24 | 288.07 | 493 |
| 294.83 | 493.62 | 295.39 | 493.68 | 296.03 | 493.75 | 296.26 | 493.78 | 296.38 | 493.79 |
| 296.76 | 493.82 | 298.11 | 493.93 | 298.17 | 493.93 | 298.5 | 493.96 | 298.59 | 493.96 |
| 298.64 | 493.97 | 298.76 | 493.98 | 298.78 | 493.98 | 299 | 493.99 | 299.09 | 493.99 |
| 299.1 | 493.99 | 299.24 | 493.99 | 299.25 | 493.99 | 300.01 | 493.99 | 300.1 | 493.99 |
| 300.15 | 493.99 | 300.28 | 493.99 | 300.34 | 493.99 | 300.76 | 493.98 | 301.53 | 493.95 |
| 302.26 | 493.93 | 302.45 | 493.92 | 303.01 | 493.92 | 303.55 | 493.92 | 305.31 | 493.85 |
| 309.09 | 493.68 | 311.71 | 493.58 | 311.92 | 493.58 | 312.25 | 493.57 | 318.36 | 493.4 |
| 322 | 493.34 | 335.12 | 493.21 | 354.65 | 493 | 354.66 | 493 | 354.9 | 493 |
| 354.93 | 493 | 354.94 | 493 | 355.09 | 493 | 355.26 | 493 | 355.29 | 493 |

```
  356.91     493   357.5     493  362.94  492.99  366.58     493  370.76     493
  373.24  493.03  374.24  493.03  374.84  493.04  376.52  493.04  378.68  493.02
  378.86  493.02  379.19  493.02  380.31  493.01  380.93  493.01  381.28  493.01
  381.92     493  387.63  492.45  389.84  492.29  390.81  492.21   391.2  492.17
  391.59  492.14  392.43  492.16  393.69  492.21  393.86  492.22  393.91  492.23
  394.38  492.27  395.09  492.34  395.82  492.42  396.94   492.5  399.34  492.77
     400  492.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  242.53     .04  281.67     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        242.53  281.67            330.7  331.28  335.04             .1       .3

CROSS SECTION


RIVER: WASH10A
REACH: Centerline Align   RS: 21621.24

INPUT
Description:
Station Elevation Data    num=     202
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  490.495.899994     4907.890015  489.978.300018  489.96 8.77002  489.96
9.089996  489.95   10.59  489.72   13.16  489.3713.95001  489.3414.57001  489.28
16.67999  489.0416.77002  489.03   16.81  489.0317.20999  489.01   17.53  489.01
17.61002     489   18.25     48918.35001     489   20.19  488.99   20.63  488.99
22.57001     489   24.63  489.6525.55002  489.9325.83002     49028.48001  490.43
29.23001  490.55   30.25  490.72      31  490.8331.23001  490.8732.02002     491
34.20001     491   34.31     49135.08002     491   35.94     49136.82001     491
   36.87     491   36.91     49138.23999  491.0138.48001  491.01   38.91  491.01
38.92001  491.0138.98001  491.0139.02002  491.01   39.09  491.0139.10001  491.01
   56.88  491.02   60.59  491.0266.26001  491.01   67.25  491.0168.20999  491.01
   68.78  491.0169.51001  491.0170.54001  491.0172.39001  491.0182.07001  491.11
   82.16  491.1182.62001   491.187.23001  491.0589.96001     49190.29001     491
90.95001     491   91.06     491   91.41     491   91.61     491   92.05  490.99
92.24001  490.97   94.77  490.8395.73001  490.79   99.94  490.51  100.78  490.46
  102.37  490.35  102.97  490.31  106.94     490  107.77     490  108.75     490
  109.24     490  109.67     490  110.08     490  115.26  490.53  120.58     491
  129.79  491.05   135.9  491.09  142.75  491.05  146.01  491.03  147.05  491.03
  149.01  491.02  152.06     491  154.26  490.56  157.41     490  159.22  489.68
  161.19     489  166.01  488.97  166.87  488.97     168  488.97  168.31  488.97
   168.5  488.97  171.01  488.76  172.77  488.77  174.47  488.77   174.8  488.75
  175.17  488.74  175.59  488.72   175.9  488.71  176.11   488.7  177.55  488.66
  179.88  488.65  182.23  488.64  186.68  488.63   186.7  488.63  187.12  488.62
  187.14  488.62  192.65  488.92  193.39  488.96  193.41  488.97  194.53  488.97
  195.43  488.97  196.08  488.97  196.87  488.98  199.45     489  199.61     489
  199.64     489  200.12     489  201.16     489  202.58     489  204.78     489
   204.9     489  205.08  488.93  207.32     488  211.68  487.58  213.47  487.49
  214.92  487.42  220.85  487.11  221.88  487.04  223.26     487  224.35     487
  224.64     487  225.25     487   226.2     487  227.13     487  228.16     487
  231.72   487.2  232.69  487.24  233.86   487.3  242.45  487.65   250.5  487.99
  250.74  487.99  252.96     488  253.24  488.01   253.5  488.01  264.03  488.64
  264.91  488.69  269.13   488.9  271.04     489  274.09     489   274.3     489
  274.31     489  274.34     489  274.35     489  291.55  488.18  293.51  488.11
  294.09  488.02   294.1  488.02  294.73  488.02  294.74  488.02  295.08  488.01
  296.13  488.02  296.44  488.02  296.69  488.01  297.49     488  297.66     488
  297.73     488  297.79     488  297.92  487.99  297.97     488  298.38     488
  298.39     488   300.5  487.99  301.06  487.99  303.63  487.98  305.48  487.99
  308.73     488  309.78  488.46   310.2  488.67  310.65  488.97  310.72     489
  312.02  489.25  312.13  489.26  313.32  489.37  314.16  489.46   317.2  489.81
  318.74     490  319.09   490.1  322.27     491  324.19  491.56  325.64  491.96
  325.82     492  326.34     492  326.38     492  326.82     492   329.7  492.01
  329.76  492.01  329.88  492.02

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  205.08     .04   310.2     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        205.08   310.2              581  570.54  610.89             .1       .3
Right Levee     Station=  274.49      Elevation=  489.13

CROSS SECTION


RIVER: WASH10B
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REACH: Centerline Align  RS: 21050.7

INPUT
Description:
Station Elevation Data  num=  276

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 4873.859985 | 487.01 | 9 | 48719.99002 | 487 | 20.31 | 487 | 20.52002 | 487 |
| 20.75 | 487 | 21.41 | 487 | 22.91 | 487 | 23.69 | 487 | 26.71002 | 48728.73001 |
| 487 | 29.47 | 48729.82001 | 487 | 29.88 | 487 | 29.98001 | 48730.12003 | 48738.99002 | 486.644.01001 |
| 486.38 | 45.03 | 486.33 | 49.73001 | 48651.70001 | 485.79 | 51.78 | 485.7851.86002 | 485.7852.34003 | 485.77 |
| 54.14001 | 485.7155.95001 | 485.5856.70001 | 485.5457.60001 | 485.564.01001 | 485.05 | 65.37003 | 48567.08002 | 484.0467.15002 | 484 |
| 67.22 | 483.9869.83002 | 483 | 71.49002 | 482.5672.18002 | 482.35 | 72.66 | 482.1773.04001 | 48274.15002 | 481.53 |
| 74.52002 | 481.3974.98001 | 481.275.58002 | 481.0175.71002 | 481.0175.74002 | 481 | 75.84003 | 48175.87003 | 48175.96002 | 48176.18002 |
| 480.9976.24002 | 480.99 | 78.07001 | 480.979.77002 | 480.8390.40002 | 480.39 | 92.88 | 480.2998.37003 | 480.06 | 99.07001 |
| 480.0499.17001 | 480.0399.20001 | 480.0399.32001 | 480.0399.34003 | 480.03 | 99.36002 | 480.0399.45001 | 480.0399.71002 | 480.0299.73001 | 480.02 |
| 99.75 | 480.02 | 99.76001 | 480.02 | 100.78 | 480 | 101.4 | 480.01 | 101.79 | 480 |
| 102.22 | 480 | 102.41 | 480 | 102.42 | 480 | 102.45 | 480 | 102.46 | 480 |
| 102.87 | 480 | 103.63 | 480 | 104.03 | 480 | 109.15 | 480 | 111.59 | 480 |
| 112.66 | 480 | 114.89 | 480 | 117.46 | 480 | 118.9 | 480 | 122.15 | 480.01 |
| 122.84 | 480.01 | 124.69 | 480 | 126.41 | 480 | 127.35 | 480 | 128.94 | 480 |
| 130.15 | 480 | 131.68 | 480 | 134 | 480 | 136.3 | 480 | 137.33 | 480 |
| 139.7 | 480 | 141.38 | 480 | 143.58 | 480 | 144.71 | 480 | 144.78 | 480 |
| 144.91 | 480 | 144.93 | 480 | 154.2 | 480.47 | 157.97 | 480.63 | 168.47 | 480.99 |
| 168.79 | 480.99 | 169.3 | 480.99 | 169.98 | 480.99 | 170.65 | 480.99 | 171.81 | 480.99 |
| 173.04 | 480.99 | 173.1 | 480.99 | 173.35 | 480.99 | 175.39 | 481 | 175.52 | 481 |
| 175.71 | 481.01 | 175.84 | 481.01 | 177.01 | 481.02 | 177.77 | 481.02 | 179.22 | 481.03 |
| 181.01 | 481.03 | 181.84 | 481.03 | 192.18 | 481.48 | 198.94 | 481.75 | 200.34 | 481.78 |
| 200.5 | 481.78 | 201.33 | 481.81 | 201.92 | 481.83 | 202.42 | 481.84 | 205.15 | 481.84 |
| 207.89 | 481.84 | 208.21 | 481.84 | 208.44 | 481.84 | 208.98 | 481.83 | 221.99 | 481.57 |
| 236.24 | 481.9 | 236.35 | 481.9 | 239.35 | 482 | 241.12 | 482 | 243.93 | 482.01 |
| 244.84 | 482.01 | 245.3 | 482.01 | 249.08 | 482 | 251.51 | 481.83 | 251.6 | 481.82 |
| 251.7 | 481.81 | 252.5 | 481.75 | 262.12 | 481 | 262.33 | 481 | 262.66 | 481 |
| 263.04 | 481 | 265.24 | 481 | 271.21 | 481 | 273.26 | 481 | 279.99 | 481 |
| 282.87 | 481 | 282.98 | 481 | 288.68 | 481.02 | 289.63 | 481.02 | 300.23 | 481.02 |
| 311.1 | 481.02 | 311.85 | 481.02 | 312.58 | 481.02 | 320.97 | 481.01 | 321.68 | 481.01 |
| 322.46 | 481.01 | 322.94 | 481.01 | 327.83 | 481 | 329.77 | 481 | 330.06 | 481 |
| 330.42 | 480.94 | 331.01 | 480.97 | 333.22 | 480.9 | 334.48 | 480.87 | 334.96 | 480.86 |
| 336.05 | 480.89 | 336.45 | 480.9 | 337.05 | 480.92 | 338.58 | 480.97 | 338.94 | 480.98 |
| 339.75 | 481 | 342.3 | 481.82 | 342.86 | 482 | 342.96 | 482 | 343.01 | 482 |
| 345.94 | 482.01 | 350.88 | 482.03 | 353.61 | 482.02 | 360.9 | 482 | 360.93 | 481.99 |
| 360.96 | 481.99 | 360.99 | 481.99 | 361.26 | 481.99 | 361.89 | 481.99 | 362.16 | 481.99 |
| 363.39 | 482 | 363.58 | 482 | 364.18 | 482 | 364.62 | 482 | 365.84 | 482 |
| 366.7 | 482 | 366.97 | 482 | 367.94 | 482 | 370.38 | 481.96 | 374.39 | 481.75 |
| 378.8 | 481.66 | 381.58 | 481.69 | 381.68 | 481.69 | 383.34 | 481.75 | 384.46 | 481.79 |
| 386.38 | 481.78 | 390.86 | 481.81 | 395.47 | 481.78 | 398.31 | 481.76 | 400.45 | 481.69 |
| 405.17 | 481.67 | 409.73 | 481.67 | 415.13 | 481.33 | 415.89 | 481.34 | 416.63 | 481.29 |
| 417.49 | 481.23 | 417.79 | 481.22 | 418.53 | 481.18 | 421.55 | 481 | 421.64 | 481 |
| 422.78 | 481 | 423.27 | 481 | 423.81 | 481 | 424.18 | 481 | 424.8 | 481 |
| 427.07 | 481.55 | 428.72 | 482 | 433.75 | 482 | 436.92 | 482 | 440.47 | 482 |
| 444.75 | 482 | 446.98 | 481.8 | 448.06 | 481.73 | 452.96 | 481.3 | 455.57 | 481.27 |
| 458.05 | 481.28 | 458.3 | 481.3 | 458.86 | 481.32 | 459.06 | 481.33 | 459.39 | 481.34 |
| 459.75 | 481.35 | 462.96 | 481.54 | 464.51 | 481.64 | 467.65 | 481.86 | 469.34 | 481.99 |
| 469.67 | 482 | 469.73 | 482 | 469.78 | 482 | 470.51 | 482.16 | 472.34 | 482.59 |
| 473.64 | 482.88 | 474.06 | 483 | 477.5 | 483.58 | 479.43 | 484 | 479.58 | 484 |
| 480.13 | 484.01 | 481.6 | 484.02 | 484.67 | 484.02 | 486 | 484.02 | 489.75 | 484.04 |
| 493.26 | 484.02 | 495.88 | 484 | 505.13 | 483.65 | 505.7 | 483.65 | 509.27 | 483.57 |
| 512.11 | 483.52 | 512.67 | 483.51 | 513.06 | 483.5 | 513.54 | 483.5 | 514.02 | 483.51 |
| 514.71 | 483.51 | 516.7 | 483.5 | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 74.15002 | .04 | 200.34 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 74.15002 | 200.34 | 555 | 478.87 | 408.02 | .1 | .3 |

Right Levee  Station=  239.88  Elevation=  482.12

CROSS SECTION

RIVER: WASH10B
REACH: Centerline Align  RS: 20571.83

INPUT
Description:

```
Station Elevation Data    num=     266
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  480.26.2000122  480.261.919983  480.352.460022  480.372.650024  480.36
3.590027  480.41   23.75  480.0124.53998  480.0224.78003  480.0225.84998  480.02
27.78003  480.0228.09998  480.02   37.06  480.0161.27002     48061.70001  479.15
61.76001     47961.79999  478.94   62.13     47862.22998  477.84   62.56     477
62.70001  476.7462.98999     47663.58002  475.3463.89001     47564.92999  474.47
65.78998     47469.47998  473.9472.98999  473.89   75.88  473.8578.21002  473.81
83.90002  473.89   88.94  473.6789.29999  473.68   89.47  473.6889.51001  473.68
89.82999  473.68   89.97  473.6890.23001  473.6890.32001  473.68   93.81  473.75
98.26001  473.8698.57001  473.85   98.97  473.83   99.03  473.8299.10001  473.81
  100.24     474  101.44  474.08  102.08  474.11  102.67  474.14  102.95  474.15
   107.8  474.33  108.76  474.36  110.28   474.4  110.63   474.4  112.13  474.45
  112.52  474.45  113.47  474.49  117.52  474.54  121.17  474.54  122.57   474.5
  122.82  474.49  123.25  474.47  123.95  474.45  128.57  474.31  136.94  474.01
  137.03  474.01   137.1  474.01  137.14     474   137.9  473.96  137.96  473.96
  138.51  473.93  140.47  473.85  142.12  473.78  149.12  473.95   150.4  473.95
  151.32  473.95  157.56  473.97  162.08     474   168.7  474.55     175  474.78
  177.81   474.9   178.4  474.92  180.45     475  180.66     475  183.29     475
  186.07     475  186.21     475  186.33     475  186.99     475  190.06     475
  190.27     475  190.34     475  190.82     475  197.33  475.01  197.86  475.01
  199.08  475.01  199.33  475.01  199.82  475.01  211.05  475.32  220.91  475.58
  224.08   475.4   224.2   475.4  224.72   475.4  232.24     475  233.88  474.98
  236.13  474.96  236.89  474.95  241.28   474.9  243.34  474.92  250.01     475
  255.21  475.02  255.28  475.02  256.13  475.02  259.42  475.01  261.75  475.01
  265.28  475.01  265.97     475  266.05     475  266.49     475  266.62     475
  266.88     475  267.06     475  267.57  474.99  268.02  474.99  268.34  474.99
  268.46  474.99  269.04  474.99  269.05  474.99   271.7  474.98  276.89  474.96
  277.65  474.96  277.94  474.96  278.61  474.97  280.54  474.97  281.48  474.97
  283.34  474.99  284.03  474.99  286.11     475  286.38  475.01  286.83  475.01
  290.29  475.22  293.44  475.37  293.99   475.4  294.92  475.39   295.8  475.44
     300  475.47  304.15   475.5  313.89  475.35  322.06     475  323.64  474.69
  325.17   474.4  326.65   474.1  327.06  474.12     328  474.23  328.24  474.24
  328.49   474.3  328.74  474.36  329.12  474.45  330.65  474.81  331.12  474.92
  331.52     475  331.57     475  331.71  475.01  331.81  475.02  331.99  475.03
  332.14  475.03  332.22  475.04  332.27  475.04  332.41  475.05  332.42  475.05
  332.96  475.06  332.99  475.06  335.19  475.29  335.44  475.28  336.45   475.2
  336.46   475.2  337.15  475.12  337.22  475.13  337.73  475.03  337.75  475.03
  337.76  475.03  337.87     475  342.27  474.97   344.3  474.96  344.79  474.96
  345.42  474.96  350.16     475  352.65  475.45   355.4     476  364.75  476.28
  365.94  476.33  367.71  476.42  376.72  476.92  379.37     477  379.73  477.01
  384.05   477.2  389.84  477.44  390.11  477.45  390.73  477.46  409.45  477.93
  412.19  477.93  415.88  477.96  417.52  477.97     419  477.98  419.79  477.98
  420.01  477.98  420.48  477.99  422.68     478  422.77     478  422.78     478
  422.96     478  423.46  478.01  424.44  478.02  424.99  478.02  428.23  478.19
  433.57  478.44  433.84  478.45  449.93  478.69  469.68     479  469.88     479
  470.72     479  474.03     479  474.29     479   475.7     479  476.94     479
  478.58  479.01  478.85  479.01  478.91  479.01  481.39     479  482.81     479
   484.3     479  485.24     479  487.48     479  491.36     479  493.29     479
  493.41     479  493.48     479  493.99     479  501.39  479.02  501.72  479.01
  511.37  479.01  514.59  479.02  520.29  479.01  521.18  479.01  533.29  479.16
  533.51  479.17  534.76  479.17  535.06  479.18  536.31  479.23  539.96  479.29
  546.09  479.55  547.41  479.59  552.83  479.84  553.66  479.88  556.06     480
  565.56  480.31  573.29  480.56   581.1  480.63  587.64  480.63  588.52  480.63
  591.87  480.58  593.88  480.54  596.38  480.48  598.57  480.43  599.23  480.42
     600  480.41

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0563.89001     .04  331.52     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      63.89001  331.52           266.13  266.13  266.13              .1       .3
Right Levee     Station=  303.68      Elevation=   475.6

CROSS SECTION


RIVER: WASH10B
REACH: Centerline Align   RS: 20305.7

INPUT
Description:
Station Elevation Data    num=     189
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  476.331.179993  476.461.809998  476.518.630005  476.58   13.75  476.63
15.21997   476.622.48999  476.5128.40002  476.4931.83002  476.5132.76001  476.51
40.08002  476.68      49  476.9750.08002  476.9852.60999     477   53.75     477
53.82001     47753.90997     477   54.44     477   54.81     47755.82001     477
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 57.46997 | 47760.67999 | 476.9263.17999 | 476.84 | 64.81 | 476.7865.09998 | 476.78 |
| 68.14001 | 476.6669.07001 | 476.6277.35999 | 476.4281.82001 | 476.3486.04999 | 476.34 |
| 86.21002 | 476.3486.73999 | 476.34 | 90.41 | 476.36 | 94.56 | 476.3996.95999 | 476.39 |
| 99.28 | 476.4 | 99.94 | 476.41 | 100.9 | 476.42 | 101.64 | 476.42 | 102.28 | 476.42 |
| 110.05 | 476.41 | 118.54 | 476.37 | 119.07 | 476.36 | 120.5 | 476.35 | 128.78 | 476.11 |
| 131.66 | 476.01 | 132.11 | 476.01 | 133.73 | 476.01 | 135.17 | 476.01 | 135.25 | 476.01 |
| 138.19 | 476 | 138.93 | 475.55 | 139.99 | 475 | 141.15 | 474.29 | 141.7 | 474 |
| 143.13 | 473.17 | 143.42 | 473 | 144.83 | 472.49 | 146.33 | 472 | 148.54 | 471.23 |
| 149.22 | 471 | 160.57 | 470.92 | 162.51 | 470.91 | 166.29 | 470.92 | 168.09 | 470.92 |
| 173.21 | 470.97 | 173.8 | 470.97 | 177.3 | 471 | 177.37 | 471 | 177.52 | 471 |
| 177.56 | 471 | 177.7 | 471 | 178.05 | 471 | 186.11 | 471.03 | 188.61 | 471.03 |
| 191.4 | 471.02 | 196.24 | 471.01 | 196.35 | 471.01 | 199.29 | 471 | 211 | 470.85 |
| 213.43 | 470.81 | 216.83 | 470.83 | 223.33 | 470.93 | 225.99 | 470.89 | 226.04 | 470.89 |
| 226.19 | 470.9 | 228.72 | 471 | 234.55 | 471.45 | 235.37 | 471.46 | 236.69 | 471.5 |
| 238.31 | 471.57 | 240.08 | 471.63 | 242.64 | 471.78 | 243.62 | 471.77 | 247.49 | 471.75 |
| 255.79 | 471.51 | 264.27 | 471 | 264.75 | 471 | 281.5 | 471.06 | 282.25 | 471.07 |
| 286.37 | 471.05 | 291.92 | 471 | 294.49 | 471 | 295.18 | 471 | 297.46 | 471 |
| 299.22 | 471 | 300 | 471 | 301.33 | 471 | 302.55 | 471 | 303.64 | 471.01 |
| 303.66 | 471.01 | 303.68 | 471.01 | 304.55 | 471.03 | 305.24 | 471.03 | 306.23 | 471.05 |
| 306.42 | 471.06 | 306.54 | 471.06 | 324.24 | 471.13 | 331.23 | 471.17 | 342.87 | 471.1 |
| 354.67 | 471.13 | 357.56 | 471 | 362.76 | 470.98 | 363.47 | 470.98 | 365.79 | 470.98 |
| 367.3 | 470.99 | 369.64 | 471 | 370.93 | 471.49 | 371.94 | 472 | 373.62 | 472.82 |
| 373.97 | 473 | 375.1 | 473.23 | 375.46 | 473.27 | 375.75 | 473.31 | 376.35 | 473.37 |
| 379.31 | 473.96 | 379.48 | 473.99 | 393.66 | 473.23 | 394.19 | 473.2 | 397.59 | 473 |
| 397.96 | 473 | 398.08 | 473 | 399.07 | 473 | 399.51 | 473 | 400.34 | 473 |
| 408.14 | 473.6 | 410.99 | 473.87 | 412.27 | 474 | 415.19 | 474.52 | 417.73 | 475 |
| 434.53 | 475.99 | 434.77 | 476 | 434.79 | 476 | 435.19 | 476 | 436.23 | 476 |
| 436.55 | 476 | 439.49 | 476 | 440.02 | 476 | 440.88 | 475.99 | 442.69 | 475.99 |
| 444.73 | 475.99 | 446.12 | 476 | 458.02 | 476.01 | 461.39 | 476.01 | 469.07 | 476 |
| 476.02 | 476 | 479.59 | 476 | 484.59 | 475.99 | 488.78 | 476 | 491.76 | 476 |
| 493.6 | 476 | 500.99 | 476.42 | 504.45 | 476.62 | 505 | 476.64 | 505.49 | 476.66 |
| 506.35 | 476.64 | 515.33 | 476.75 | 520.86 | 476.78 | 521.88 | 476.77 | 542.25 | 476.72 |
| 562.01 | 476.75 | 568.3 | 476.86 | 575.9 | 477 | 576.29 | 477 | 578.99 | 477.01 |
| 581.72 | 477.02 | 585.37 | 477.01 | 587.49 | 477 | 600 | 476.89 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 146.33 | .04 | 370.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 146.33 | 370.93 | 215.94 | 421.38 | 586.19 | .1 | .3 |

CROSS SECTION

RIVER: WASH10B
REACH: Centerline Align RS: 19884.32

INPUT
Description:
Station Elevation Data num= 280

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 474 | 3.97998 | 474 | 5.76001 | 4746.059998 | 4746.109985 | 474 |
| 6.150024 | 4746.809998 | 4747.380005 | 4749.190002 | 47410.42999 | 474 |
| 11.04999 | 47412.89001 | 47415.51001 | 474 | 17.12 | 47425.46997 | 473.05 |
| 25.51001 | 473.0525.66998 | 473 | 27.5 | 472.42 | 27.81 | 472.3228.83002 | 472 |
| 31.59003 | 471.1332.10999 | 47134.53003 | 470.4 | 36.25 | 47039.16998 | 469.98 |
| 41.60999 | 469.95 | 43.75 | 469.9746.82001 | 47048.02002 | 470.4949.59003 | 471 |
| 52.75 | 471.9352.95001 | 47253.21002 | 472.0659.59998 | 47360.16998 | 473 |
| 60.35999 | 47360.40997 | 47361.73999 | 473.0161.82001 | 473.0162.03998 | 473.01 |
| 62.52002 | 473.01 | 62.56 | 473.0163.45001 | 473.01 | 71.81 | 473.0374.35999 | 473.04 |
| 76.72998 | 473.04 | 79.25 | 473.04 | 83.88 | 473.02 | 85.87 | 473.02 | 86.56 | 473.01 |
| 86.82001 | 473.01 | 89.03 | 473.0189.35999 | 473.0189.76001 | 47391.29999 | 473 |
| 91.5 | 47391.57001 | 47392.54999 | 47392.85999 | 47394.04999 | 473 |
| 94.42999 | 47394.82999 | 473 | 95.06 | 47396.95999 | 473 | 98.13 | 473 |
| 99.76999 | 47399.85999 | 473 | 100.01 | 473 | 100.02 | 473 | 100.06 | 473 |
| 100.12 | 473 | 110.38 | 472.73 | 110.64 | 472.73 | 110.87 | 472.72 | 110.93 | 472.72 |
| 111.87 | 472.71 | 111.95 | 472.7 | 112.58 | 472.7 | 114.14 | 472.68 | 115.94 | 472.65 |
| 115.97 | 472.65 | 130 | 472.1 | 131.45 | 472.1 | 133.25 | 472.09 | 136.2 | 472.07 |
| 138.02 | 472.06 | 138.96 | 472.05 | 139.44 | 472.05 | 141.21 | 472.05 | 143.32 | 472.04 |
| 144.66 | 472.03 | 144.77 | 472.03 | 146.22 | 472.03 | 146.54 | 472.03 | 151.04 | 472.02 |
| 151.23 | 472.02 | 151.77 | 472.02 | 151.95 | 472.02 | 154.44 | 472.03 | 155.5 | 472.02 |
| 156.45 | 472.02 | 157.03 | 472.02 | 159.12 | 472.03 | 159.29 | 472.03 | 162.18 | 472.02 |
| 166.88 | 472 | 167.88 | 471.94 | 168.7 | 471.87 | 170.03 | 471.75 | 174.79 | 471.31 |
| 176.05 | 471.2 | 176.82 | 471.13 | 178.08 | 471 | 181.81 | 470.19 | 182.9 | 470 |
| 187 | 469.72 | 196.07 | 469 | 206.67 | 468.35 | 212.22 | 468 | 217.88 | 467.98 |
| 220.61 | 467.97 | 220.73 | 467.97 | 227.19 | 467.99 | 229.5 | 468 | 230.18 | 468 |
| 230.44 | 468 | 230.53 | 468 | 230.83 | 468 | 231.14 | 468 | 236.89 | 468.01 |
| 239.45 | 468.01 | 239.94 | 468.01 | 240.23 | 468.01 | 241.06 | 468.01 | 249.7 | 468.14 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 271.85 | 468.46 | 272.3 | 468.48 | 274.58 | 468.48 | 275.76 | 468.52 | 279.03 | 468.54 |
| 279.68 | 468.56 | 280.9 | 468.58 | 281.52 | 468.59 | 282.15 | 468.6 | 283.31 | 468.62 |
| 283.6 | 468.63 | 288.4 | 468.58 | 297.9 | 468.26 | 300 | 468.04 | 300.42 | 468 |
| 302.42 | 467.54 | 304.7 | 467 | 307.1 | 466.96 | 309.52 | 466.93 | 314.02 | 466.99 |
| 314.24 | 467 | 314.42 | 467 | 314.81 | 467.01 | 314.83 | 467.01 | 314.97 | 467.01 |
| 317.45 | 467.04 | 320.05 | 467.08 | 321.45 | 467.1 | 331.5 | 467.62 | 333.58 | 467.7 |
| 334.78 | 467.72 | 336.91 | 467.8 | 337.11 | 467.8 | 338.74 | 467.85 | 342.01 | 467.99 |
| 342.1 | 468 | 342.83 | 468 | 343.85 | 468 | 344.5 | 468 | 344.67 | 468 |
| 344.96 | 468 | 347.16 | 468 | 347.34 | 468 | 354.6 | 467.81 | 356.16 | 467.79 |
| 364.04 | 467.63 | 392.54 | 467.01 | 392.66 | 467 | 393.51 | 467 | 393.71 | 467 |
| 393.79 | 467 | 394.34 | 467 | 394.5 | 467 | 395.25 | 467 | 398.27 | 467 |
| 398.48 | 467 | 399.95 | 467 | 401.24 | 467 | 401.61 | 467 | 402.19 | 467 |
| 402.51 | 467 | 404.47 | 466.75 | 409.84 | 466 | 411.87 | 465.95 | 415.64 | 465.41 |
| 417.15 | 465.27 | 423.21 | 466 | 423.57 | 466 | 424.04 | 466 | 424.18 | 466 |
| 425.56 | 466.01 | 426.41 | 466.01 | 427.38 | 466.01 | 427.43 | 466.01 | 427.47 | 466.01 |
| 427.69 | 466.01 | 429.63 | 466 | 430.27 | 466 | 436.47 | 465.49 | 441.91 | 465 |
| 446.71 | 464.92 | 453.46 | 464.62 | 459.77 | 464.53 | 460.75 | 464.66 | 460.88 | 464.67 |
| 463.23 | 465 | 464.16 | 465.46 | 465.02 | 466 | 466.66 | 466.95 | 466.73 | 467 |
| 466.81 | 467.07 | 467.68 | 468 | 468.87 | 468.82 | 469.06 | 469 | 469.48 | 469.36 |
| 470.09 | 470 | 470.7 | 470.41 | 471.36 | 471 | 472.72 | 471.14 | 474.55 | 471.13 |
| 490.89 | 471.88 | 494.18 | 471.88 | 498.53 | 471.9 | 498.89 | 471.91 | 499.26 | 471.91 |
| 499.76 | 471.91 | 499.91 | 471.91 | 540.92 | 471.21 | 541.92 | 471.2 | 545.36 | 471.11 |
| 545.58 | 471.11 | 549.71 | 471 | 550.18 | 471 | 550.21 | 471 | 550.24 | 471 |
| 550.81 | 471 | 551.41 | 471 | 551.65 | 471 | 552.33 | 471 | 552.56 | 471 |
| 552.62 | 471 | 553.04 | 471 | 554.22 | 471 | 559.45 | 471 | 560.64 | 471 |
| 561.73 | 471 | 562.47 | 471 | 563.01 | 471 | 564.13 | 471 | 565.09 | 471 |
| 567.12 | 471 | 567.59 | 471 | 569.42 | 471 | 569.43 | 471 | 569.44 | 471 |
| 598.46 | 470 | 598.65 | 470 | 598.66 | 470 | 598.69 | 470 | 598.71 | 470 |
| 598.73 | 470 | 598.86 | 470 | 599.23 | 470 | 599.61 | 470 | 600 | 470 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 404.47 | .04 | 466.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 404.47 | 466.66 | 387.82 | 384.32 | 385.74 | .1 | .3 |

CROSS SECTION

RIVER: WASH10B
REACH: Centerline Align RS: 19500

INPUT
Description:
Station Elevation Data num= 255

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 469 | 4.5 | 469 | 9.120026 | 469 | 14.87003 | 469 | 19.01001 | 469 |
| 19.69 | 469 | 20.91 | 469 | 20.95001 | 469 | 21.29001 | 469 | 22.98001 | 469.01 |
| 24.57001 | 469.01 | 25.03 | 469.01 | 25.14001 | 469.01 | 25.65002 | 469.02 | 28.64001 | 469.01 |
| 31.04001 | 469.02 | 31.51001 | 469.02 | 32.29001 | 469.02 | 32.79001 | 469.02 | 33.13 | 469.02 |
| 35.75 | 469 | 41.54001 | 468.72 | 42.18002 | 468.71 | 42.86002 | 468.74 | 5.15002 | 468.62 |
| 46.99002 | 468.56 | 59.35001 | 468.24 | 66.06 | 468.04 | 66.97 | 468.04 | 69.01001 | 468.03 |
| 70.80002 | 468.01 | 72.65002 | 468 | 72.70001 | 468 | 72.95001 | 468 | 73.98001 | 467.84 |
| 79.18002 | 467 | 81.5 | 466.76 | 81.79001 | 466.74 | 82.77002 | 466.64 | 83.90002 | 466.59 |
| 86.48001 | 466.32 | 87.22 | 466.31 | 88.97 | 466.16 | 94.76001 | 466.03 | 100.37 | 466.06 |
| 100.56 | 466.06 | 101.82 | 466.06 | 101.84 | 466.06 | 101.94 | 466.06 | 103.31 | 466.05 |
| 105.46 | 466.04 | 109.22 | 466 | 111.51 | 465.42 | 113.87 | 465 | 118.42 | 464.09 |
| 118.74 | 464 | 119.47 | 464 | 119.69 | 464 | 120.61 | 464 | 121.13 | 464 |
| 122.19 | 464 | 122.88 | 463.99 | 125.85 | 464 | 126.06 | 464 | 127 | 464 |
| 127.04 | 464 | 127.4 | 464 | 127.45 | 464 | 128.22 | 464 | 128.26 | 464 |
| 128.27 | 464 | 128.67 | 464 | 128.69 | 464 | 128.71 | 464 | 128.73 | 464 |
| 128.75 | 464 | 129.55 | 464 | 129.56 | 464 | 129.93 | 464 | 129.95 | 464 |
| 129.97 | 464 | 130.55 | 464 | 130.56 | 464 | 130.57 | 464 | 130.74 | 464 |
| 130.78 | 464 | 130.8 | 464 | 130.82 | 464 | 131.06 | 464 | 131.08 | 464 |
| 131.21 | 464 | 131.27 | 464 | 133 | 463.92 | 133.9 | 463.88 | 136.05 | 463.8 |
| 138.7 | 463.7 | 152.5 | 463 | 156.2 | 462.97 | 156.36 | 462.97 | 156.63 | 462.97 |
| 157.46 | 462.97 | 157.73 | 462.97 | 158.13 | 462.97 | 158.28 | 462.97 | 160.03 | 462.98 |
| 160.95 | 462.98 | 162.58 | 462.99 | 163.65 | 462.99 | 163.75 | 462.99 | 164.52 | 462.99 |
| 164.78 | 462.99 | 166.03 | 462.99 | 166.36 | 463 | 166.67 | 463 | 166.88 | 463 |
| 166.89 | 463 | 168.56 | 463.16 | 169.03 | 463.18 | 172.39 | 463.49 | 186.86 | 463.94 |
| 186.9 | 463.94 | 187.38 | 463.97 | 187.75 | 463.99 | 189.02 | 464 | 196.65 | 464.1 |
| 198.45 | 464.11 | 201.06 | 464.11 | 202.09 | 464.11 | 203.17 | 464.12 | 204.15 | 464.12 |
| 205.62 | 464.14 | 211.51 | 464.1 | 217.98 | 464.05 | 219.13 | 464.03 | 219.15 | 464.03 |
| 219.49 | 464.03 | 220.09 | 464.05 | 220.95 | 464.06 | 222.04 | 464.14 | 225.29 | 464.3 |
| 226.04 | 464.36 | 229.95 | 464.67 | 231.09 | 464.75 | 231.95 | 464.83 | 234.27 | 465 |
| 234.54 | 465 | 236.28 | 465 | 236.34 | 465 | 236.55 | 465 | 238.6 | 465 |
| 246.01 | 465 | 246.16 | 465 | 246.62 | 465 | 248.03 | 465 | 253.18 | 465 |
| 254.21 | 465 | 255.16 | 465 | 258.64 | 465 | 258.87 | 465 | 258.9 | 465 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 259.28 | 465 | 259.52 | 464.99 | 260.71 | 464.97 | 270.33 | 464.81 | 284.51 | 464.75 |
| 297.39 | 464.74 | 299.6 | 464.56 | 300.4 | 464.59 | 303.13 | 464.36 | 303.53 | 464.35 |
| 304.36 | 464.32 | 307.88 | 464 | 311.09 | 463.47 | 313.46 | 463 | 322.77 | 462.01 |
| 322.9 | 462 | 322.96 | 462 | 323.03 | 462 | 332.34 | 461.84 | 336.22 | 461.9 |
| 341.78 | 462 | 345.18 | 462.63 | 345.45 | 462.67 | 345.52 | 462.67 | 345.66 | 462.68 |
| 345.73 | 462.69 | 352.45 | 462.98 | 352.61 | 463 | 352.64 | 463 | 353.04 | 463 |
| 355.11 | 463 | 355.15 | 463 | 355.32 | 463 | 359.23 | 463 | 359.79 | 463.01 |
| 359.93 | 463.01 | 361.03 | 463.01 | 361.35 | 463.01 | 361.42 | 463.01 | 361.71 | 463.01 |
| 362.78 | 463.02 | 363.03 | 463.02 | 363.18 | 463.02 | 363.63 | 463.03 | 364.25 | 463.03 |
| 364.7 | 463.03 | 364.9 | 463.03 | 364.99 | 463.04 | 365.08 | 463.04 | 375.53 | 463.1 |
| 376.04 | 463.1 | 376.2 | 463.1 | 376.53 | 463.1 | 385.81 | 463.04 | 391.44 | 463 |
| 396.44 | 462.25 | 397.41 | 462 | 401.84 | 462 | 404.46 | 462 | 407.86 | 462 |
| 412.21 | 462 | 418.65 | 462.05 | 420.81 | 462.06 | 425.59 | 462.03 | 426.64 | 462.03 |
| 431.07 | 462 | 431.36 | 462 | 431.68 | 462 | 435.09 | 461.97 | 435.55 | 461.97 |
| 438.28 | 461.99 | 438.44 | 461.99 | 439.28 | 462 | 441.72 | 462.81 | 442.33 | 463 |
| 444.45 | 463.85 | 444.74 | 464 | 445.44 | 464.92 | 445.51 | 465 | 445.64 | 465.27 |
| 446.22 | 466 | 446.78 | 466.04 | 447.93 | 466.11 | 452.45 | 466.36 | 452.9 | 466.36 |
| 453.38 | 466.39 | 463.82 | 466.52 | 487.59 | 466.89 | 491.55 | 466.96 | 492.66 | 466.97 |
| 493.38 | 467 | 502 | 467.37 | 512.99 | 468 | 514.48 | 468 | 514.95 | 468 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 311.09 | .04 | 444.45 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 311.09 | 444.45 | 475.6 | 400 | 317.56 | .1 | .3 |

Left Levee Station= 298.77 Elevation= 464.89

CROSS SECTION

RIVER: WASH10B
REACH: Centerline Align RS: 19100

INPUT
Description:
Station Elevation Data num= 245

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 461.58 | 6099854 | 461.57 | 7419983 | 461 | 7450012 | 460.99 | 11.02002 | 460 |
| 11.07001 | 459.99 | 11.09998 | 459.99 | 11.13 | 459.99 | 11.15997 | 459.99 | 11.22003 | 459.98 |
| 11.27002 | 459.98 | 11.45001 | 459.96 | 20.97998 | 459.02 | 21.01001 | 459.02 | 21.06 | 459.02 |
| 21.26001 | 459 | 27.15002 | 458.24 | 28.89001 | 458 | 33.32001 | 457.93 | 34.70001 | 457.91 |
| 34.84003 | 457.91 | 38.16998 | 457.96 | 40.29999 | 458 | 42.26999 | 458.76 | 42.67999 | 459 |
| 42.98999 | 459.22 | 43.76001 | 459.64 | 4.42001 | 460 | 44.67001 | 460.13 | 46.26001 | 461 |
| 49.08002 | 461.69 | 53.29001 | 461.99 | 53.48001 | 461.99 | 53.54999 | 461.99 | 53.70999 | 461.99 |
| 53.82001 | 461.99 | 54.23999 | 461.99 | 54.70001 | 461.99 | 54.92999 | 461.99 | 55.01999 | 461.99 |
| 55.89999 | 461.98 | 57.41 | 461.98 | 57.70001 | 461.98 | 57.72 | 461.98 | 58.01001 | 461.98 |
| 58.44 | 461.99 | 58.61002 | 461.99 | 59.67001 | 461.99 | 59.73001 | 461.98 | 70.47 | 461.7 |
| 76.44 | 461.67 | 8.83002 | 461.55 | 82.01999 | 461.47 | 85.23001 | 461.43 | 87.89999 | 461.39 |
| 88.14999 | 461.39 | 89.88 | 461.34 | 94.19 | 461.27 | 95.58002 | 461.24 | 96.79001 | 461.23 |
| 97.92999 | 461.23 | 99.39999 | 461.25 | 101.27 | 461.29 | 103.87 | 461.2 | 104.14 | 461.22 |
| 105.46 | 461.16 | 107.03 | 461.07 | 108.74 | 461 | 109.24 | 460.91 | 110.1 | 460.79 |
| 111.2 | 460.67 | 113.72 | 460 | 115.1 | 459.72 | 117.71 | 459 | 118.25 | 458.85 |
| 118.5 | 458.74 | 118.93 | 458.57 | 120.01 | 458 | 121.9 | 457.99 | 122.58 | 457.99 |
| 124.48 | 457.98 | 127.26 | 457.97 | 128.77 | 457.98 | 133.69 | 457.97 | 133.73 | 457.97 |
| 135.09 | 457.98 | 135.29 | 457.98 | 135.61 | 457.98 | 135.96 | 457.98 | 136.77 | 457.99 |
| 137.25 | 457.99 | 137.74 | 457.99 | 137.98 | 457.99 | 138.7 | 457.98 | 139.19 | 457.98 |
| 139.68 | 457.99 | 139.95 | 457.99 | 140.11 | 457.99 | 154.24 | 457.99 | 158.67 | 457.99 |
| 161.3 | 457.99 | 163.84 | 457.99 | 167.85 | 457.98 | 171.13 | 457.98 | 178.6 | 457.99 |
| 178.88 | 457.99 | 179.32 | 457.99 | 179.54 | 457.99 | 179.83 | 457.99 | 181.82 | 457.99 |
| 183.66 | 457.99 | 183.86 | 457.99 | 188.55 | 457.99 | 195.96 | 458 | 204.91 | 458.46 |
| 214.06 | 459 | 215.15 | 459 | 222.34 | 459 | 224.35 | 459 | 228.11 | 459 |
| 231.48 | 459 | 234.35 | 459 | 238.08 | 459 | 240.24 | 459 | 245.86 | 458.99 |
| 250.6 | 458.99 | 257.58 | 458.99 | 257.59 | 458.99 | 258.45 | 458.99 | 258.85 | 458.99 |
| 260.62 | 458.99 | 261.01 | 459 | 261.66 | 459 | 262.01 | 459 | 263.53 | 459 |
| 264.38 | 459 | 266.02 | 459 | 267.46 | 459 | 268.88 | 459 | 274.61 | 459.01 |
| 274.96 | 459.01 | 276.15 | 459.01 | 278.41 | 459.01 | 282.21 | 459 | 283.9 | 459 |
| 284.03 | 459 | 284.31 | 459 | 284.49 | 459 | 291.41 | 458.98 | 298.34 | 458.94 |
| 311.45 | 458.91 | 311.46 | 458.91 | 313.11 | 458.91 | 315.11 | 458.9 | 315.3 | 458.89 |
| 315.37 | 458.89 | 315.56 | 458.88 | 315.69 | 458.88 | 316.09 | 458.87 | 316.84 | 458.85 |
| 317.36 | 458.83 | 318.03 | 458.81 | 319.84 | 458.75 | 329.14 | 458.55 | 334.62 | 458.44 |
| 335.67 | 458.4 | 336.14 | 458.4 | 339.33 | 458.47 | 344.1 | 458.89 | 347.63 | 459 |
| 351.2 | 459.78 | 352.02 | 460 | 365.59 | 460.98 | 366.23 | 461 | 366.39 | 461 |
| 369.64 | 461.14 | 372.65 | 461.24 | 373.29 | 461.25 | 374.38 | 461.29 | 381.41 | 462 |
| 392.01 | 462.36 | 393.29 | 462.41 | 397.77 | 462.58 | 405.42 | 462.8 | 407.92 | 462.86 |
| 407.96 | 462.86 | 408.46 | 462.9 | 410.23 | 463 | 410.28 | 463 | 410.36 | 463 |
| 410.41 | 463 | 410.42 | 463 | 410.48 | 463 | 411.27 | 463 | 411.31 | 463 |
| 412.03 | 463 | 412.75 | 463 | 413.19 | 463 | 413.33 | 463 | 414.6 | 463 |
| 418.65 | 463.01 | 421.75 | 463.01 | 425.4 | 463.01 | 426.33 | 463.01 | 428.97 | 463 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 429.88 | 463 | 434.72 | 463 | 435.88 | 463 | 436.17 | 463 | 439.19 | 463 |
| 439.73 | 463 | 445.22 | 463 | 449.31 | 463 | 453.31 | 463 | 453.86 | 463 |
| 454.12 | 463 | 455.02 | 463 | 456.58 | 463 | 477.39 | 463.01 | 479.4 | 463.01 |
| 481.84 | 463.02 | 498.2 | 463 | 499.8 | 463 | 500.1 | 463 | 501.07 | 463 |
| 501.63 | 463 | 502.16 | 463 | 502.22 | 463 | 502.95 | 463 | 505.71 | 463 |
| 516.08 | 463 | 516.21 | 463 | 517.59 | 462.95 | 528 | 462.65 | 528.3 | 462.65 |
| 529.31 | 462.64 | 530.34 | 462.64 | 531 | 462.63 | 531.64 | 462.62 | 533.31 | 462.59 |
| 534.35 | 462.56 | 536.25 | 462.56 | 538.13 | 462.57 | 552.39 | 462.52 | 553.19 | 462.52 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 115.1 | .04 | 347.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 115.1 | 347.63 | 513.3 | 500 | 494.8 | .1 | .3 |

Left Levee Station= 61.35 Elevation= 462.08

CROSS SECTION

RIVER: WASH10B
REACH: Centerline Align RS: 18600

INPUT
Description:
Station Elevation Data num= 302

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 455.99 | 1.660034 | 456 | 1.670044 | 456 | 1.679993 | 456 | 1.720032 | 456 |
| 2.540039 | 456 | 3.76001 | 456 | 4.160034 | 456 | 7.869995 | 456 | 8.350037 | 456 |
| 8.970032 | 456 | 9.590027 | 456 | 9.77002 | 456 | 11.20001 | 456 | 12.01001 | 456 |
| 12.72003 | 456 | 13.21002 | 456 | 13.23999 | 456 | 13.25 | 456 | 13.41003 | 456 |
| 13.92999 | 456 | 14.25 | 456 | 14.36005 | 456 | 14.75 | 456 | 14.82001 | 456 |
| 14.84003 | 456 | 14.88 | 455.96 | 15.29004 | 455.71 | 5.53003 | 455.56 | 15.87 | 455.42 |
| 16.58002 | 455 | 17.39001 | 454.51 | 7.80005 | 454.29 | 18.28003 | 454 | 18.64001 | 453.83 |
| 20.28003 | 453 | 29.19 | 452.62 | 36.55005 | 452.47 | 41.17004 | 452.39 | 41.29004 | 452.39 |
| 42.92999 | 452.38 | 43.45001 | 452.37 | 44.63 | 452.39 | 45.76001 | 452.44 | 5.92004 | 452.39 |
| 51.83002 | 452.39 | 57.90002 | 452.4 | 59.5 | 452.42 | 60.17999 | 452.44 | 74.73999 | 452.5 |
| 76.11005 | 452.55 | 82.94 | 452.05 | 83.67999 | 452 | 83.72003 | 452 | 83.78003 | 452 |
| 83.90002 | 452 | 85.37 | 451.97 | 85.46002 | 451.97 | 87.04004 | 452 | 88.61005 | 452.01 |
| 89.19 | 452.01 | 90.53003 | 452.02 | 92.82001 | 452.1 | 97.84003 | 452.23 | 100.31 | 452.21 |
| 102.43 | 452.2 | 104.79 | 452.12 | 110.6 | 452.18 | 110.66 | 452.18 | 110.95 | 452.18 |
| 111.91 | 452.19 | 112.69 | 452.18 | 113.03 | 452.18 | 115.04 | 452.14 | 117.06 | 452.11 |
| 118.75 | 452.08 | 119.64 | 452.06 | 123.76 | 452 | 124.9 | 451.81 | 125.58 | 451.7 |
| 130.08 | 451 | 136.18 | 450.94 | 137.65 | 450.92 | 138.14 | 450.91 | 138.64 | 450.91 |
| 138.71 | 450.91 | 139.24 | 450.9 | 140.2 | 450.91 | 141.42 | 450.92 | 141.72 | 450.92 |
| 142.63 | 450.92 | 143.65 | 450.93 | 145.9 | 450.94 | 147.42 | 450.95 | 151.24 | 451 |
| 160.57 | 451.98 | 160.8 | 452 | 160.87 | 452 | 160.95 | 452 | 161.58 | 452 |
| 161.76 | 452 | 162.26 | 452 | 162.68 | 452 | 163.36 | 451.99 | 163.83 | 451.99 |
| 163.89 | 451.99 | 163.91 | 451.99 | 164.84 | 452 | 165.94 | 452.01 | 166.07 | 452.01 |
| 167.09 | 452.01 | 167.65 | 452.01 | 168.4 | 452.01 | 168.61 | 452.01 | 168.93 | 452.01 |
| 169 | 452.01 | 169.1 | 452.01 | 169.85 | 452.01 | 170.2 | 452.01 | 173.86 | 452.11 |
| 180.33 | 452.01 | 181.32 | 452.01 | 182.11 | 452.01 | 182.6 | 452.01 | 183.13 | 452.01 |
| 187.28 | 452.02 | 191.64 | 452.01 | 201.85 | 452 | 211.11 | 451.17 | 211.23 | 451.17 |
| 213.87 | 451 | 213.88 | 451 | 213.89 | 451 | 213.9 | 451 | 214.66 | 451 |
| 214.79 | 451 | 217.94 | 451 | 220.1 | 451 | 221.46 | 451 | 224.42 | 451 |
| 224.97 | 451 | 225.75 | 451 | 228.41 | 451 | 228.45 | 451 | 235.28 | 451.64 |
| 238.44 | 452 | 238.63 | 452.02 | 245.5 | 452.62 | 253.23 | 452.75 | 263.91 | 452.99 |
| 264.71 | 453 | 265.66 | 453 | 266.25 | 453 | 266.58 | 453 | 267.63 | 453 |
| 269.22 | 453 | 269.74 | 453 | 270.02 | 453 | 271.5 | 453 | 272.22 | 453 |
| 272.67 | 452.99 | 274.96 | 452.96 | 275.09 | 452.95 | 275.66 | 452.94 | 276 | 452.92 |
| 277 | 452.83 | 277.12 | 452.82 | 277.92 | 452.77 | 278.2 | 452.74 | 286.95 | 452.13 |
| 288.68 | 452 | 288.7 | 452 | 289.67 | 452 | 290.28 | 452 | 291.13 | 452 |
| 291.3 | 452 | 293.27 | 452 | 296.36 | 452.49 | 297.48 | 452.66 | 299.21 | 453 |
| 299.36 | 453 | 299.38 | 453 | 299.77 | 453 | 300.15 | 453 | 300.35 | 453 |
| 300.75 | 453 | 300.97 | 453 | 303.21 | 452.93 | 306.02 | 452.87 | 308.53 | 452.83 |
| 314.4 | 452.98 | 315.07 | 453 | 315.97 | 453 | 316.81 | 453 | 317.4 | 453 |
| 318.64 | 453 | 325.47 | 452.99 | 332.38 | 452.99 | 339.62 | 453 | 339.65 | 453 |
| 339.67 | 453 | 339.73 | 453 | 339.74 | 453 | 351.99 | 452.99 | 352.21 | 452.99 |
| 352.22 | 452.99 | 352.75 | 452.95 | 355.58 | 452.76 | 362.03 | 452.33 | 362.23 | 452.37 |
| 362.63 | 452.35 | 362.9 | 452.36 | 366.3 | 453 | 371.79 | 453.01 | 372 | 453.01 |
| 372.95 | 453.01 | 374.62 | 453.02 | 376.48 | 453.02 | 376.65 | 453.02 | 376.77 | 453.02 |
| 381.32 | 453.04 | 383.02 | 453.04 | 383.27 | 453.04 | 383.33 | 453.04 | 386.29 | 453.04 |
| 387.26 | 453.04 | 388.68 | 453.03 | 389.63 | 453.03 | 391.12 | 453.02 | 391.54 | 453.02 |
| 392.49 | 453.02 | 392.94 | 453.02 | 395.34 | 453.14 | 395.45 | 453.14 | 396.93 | 453.14 |
| 398.44 | 453.14 | 399.61 | 453.13 | 400.34 | 453.17 | 401.72 | 453.25 | 401.77 | 453.25 |
| 402.62 | 453.3 | 403.93 | 453.4 | 403.95 | 453.4 | 410 | 453.65 | 412.55 | 453.75 |
| 416.37 | 453.71 | 422.26 | 453.61 | 429.16 | 453.42 | 430.4 | 453.4 | 432.06 | 453.35 |
| 433.59 | 453.32 | 437.09 | 453.29 | 440 | 453.27 | 441.64 | 453.18 | 444.06 | 453.04 |
| 444.65 | 453 | 451.08 | 452.03 | 451.27 | 452 | 451.36 | 452 | 451.39 | 452 |

```
  452.64  451.99  454.08  451.95  455.07  451.96  456.37     452  459.04  452.81
  459.85     453  466.26  453.95  466.44  453.98  466.51     454  466.89  454.02
  470.67  454.14  471.89  454.18  493.79  454.93  496.96     455  503.85  455.55
  505.63  455.66  505.82  455.67  506.29  455.71  506.61  455.72  508.46   455.8
  510.81  455.92  510.85  455.92  511.93     456   516.4  456.09   516.8   456.1
  517.97  456.12  521.41  456.21  528.83  456.36   533.9  456.46  534.56  456.47
  542.06  456.51  548.46  456.55  548.54  456.55  552.72  456.56  553.08  456.56
  562.29  456.48  569.91  456.46  570.91  456.47  582.56   456.5  593.89  456.48
  602.58  456.46  605.77  456.46

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0576.11005     .04  253.23     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      76.11005  253.23           637.42     500     365             .1       .3
Right Levee     Station=  269.84      Elevation=  453.12

CROSS SECTION


RIVER: WASH10B
REACH: Centerline Align   RS: 18100

INPUT
Description:
Station Elevation Data    num=     279
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  469.036.369995     4699.320007  468.76   19.12     46819.76001  467.94
   29.25     46729.40002  466.9838.10999     46638.70001  465.9238.79999  465.91
   46.62     46549.89001  464.4453.16998     46456.03003  463.5360.01001     463
63.22998  462.4265.47998     462   67.38   461.670.91998     46170.96997  460.99
70.97998  460.98      71  460.9871.02002  460.9872.03998  460.7579.59003     460
79.79999  459.97   79.88  459.96      80  459.95   82.12   459.682.46997  459.61
   83.94  459.4684.65997   459.584.84003  459.5285.08002  459.4985.35999  459.52
85.48999  459.5385.82001  459.5385.96997  459.5186.15002   459.5   86.69  459.48
87.03998  459.4387.45001  459.3987.91998  459.3588.39001  459.2888.96002   459.2
   89.06  459.1890.03003     45992.76001  458.2493.53003     45893.72998  457.92
94.15002   457.795.23999     45795.98999  456.5796.90002     45697.35999  455.83
98.52002  455.38   99.34  455.0999.54999     455  101.25  454.54  103.13  454.19
  103.63  454.14  103.75  454.17  104.05  454.18  104.95  454.39  107.43     455
  108.86  455.34  109.52  455.37  110.15  455.38  112.58  455.21  113.98   455.1
  115.97  455.09  117.22  455.05     118  455.07   119.2  455.01  119.31  455.01
  119.47     455   119.5     455  120.44  454.57  121.73     454  122.09  453.84
   123.8     453  124.18  452.86  126.53     452  128.59   451.4  128.86  451.36
  129.41   451.3  130.08  451.23  131.55     451  133.69  450.12  133.96     450
  134.19  449.91  134.75     449  135.12  448.41  135.38     448   135.6  447.68
  135.99     447  136.38   446.4  137.41     446  142.36  445.17  145.26     445
  145.37     445  150.84     445  153.57     445  153.58     445   153.6     445
  154.67     445  164.22  445.59   171.5     446  176.22  446.19  177.13  446.21
  183.73  446.36  188.35  446.45  188.77  446.46  189.44  446.47  190.63  446.49
  194.99  446.55  197.22  446.61  197.45  446.61   198.7  446.64  199.76  446.67
  200.16  446.67  200.58  446.67   203.8   446.7  206.67  446.71  210.21  446.63
  216.67  446.47  227.86     446  229.51  445.12  229.73     445  230.27     445
  233.83  444.98  235.01  444.99  238.04     445  242.58  445.55   243.2  445.59
  244.72  445.59  246.53  445.52  246.73   445.5   247.2   445.5  247.46  445.46
  248.97  445.52  249.95  445.41  253.17  445.44   260.4  445.92  260.46  445.92
   260.5  445.93  261.02     446  261.66     446  262.42     446  267.85     446
  268.76     446  274.71     446  275.22     446   276.7  445.99  277.32  445.99
  278.62     446  280.02  446.05  280.83  446.07  296.27  446.59  311.02  446.97
  311.25  446.97  311.55  446.98   312.3     447  312.55     447  320.49  447.08
  320.88  447.08  328.97  447.07  335.73  447.07  347.98  447.07  350.55  447.08
  355.56  447.04  355.87  447.04  360.53  447.02  361.41  447.02  361.71  447.01
  361.77  447.01  362.05  447.01  362.39     447  384.62  446.01  384.92     446
  384.94     446  390.52  445.99  391.17  445.98  391.97  445.98  396.26  445.99
  398.24     446  400.08  446.42  402.82     447  408.74  447.56  408.83  447.57
     411  447.78  413.95     448  414.08     448  414.19     448  414.28     448
  414.31     448  414.34     448  414.61     448  414.71     448  421.87     448
  423.57  448.01  423.83  448.01   424.2  448.01  428.34     448   429.6     448
  429.92     448   430.2     448  430.95     448  433.32     448  433.44     448
  435.39     448     444     448  444.05     448  444.38     448  444.78     448
  445.02     448  451.71     448  452.03     448  452.25     448  452.66     448
  452.71     448  453.15     448  453.16     448  453.19     448  453.46  448.01
  453.55  448.01  454.45  448.02  455.49  448.03  456.06  448.04   456.8  448.04
     457  448.05  457.17  448.05  458.37  448.06  458.83  448.06  465.74  448.48
  466.46   448.5  470.67  448.57  474.61  448.78  475.55  448.78  477.94     449
  480.67  449.55   483.3     450  484.49  450.26  484.82  450.33  486.42  450.67
  487.86     451  497.38     451  502.26     451  506.04     451  507.07     451
   507.7     451  509.05     451  509.59     451   513.8     451  519.54     451
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  519.92     451  521.04     451   526.4     451  531.43     451  537.63     451
  540.51     451  549.73     451  551.49     451  554.62     451  555.43  451.01
  555.53  451.01  558.29  451.02  560.96  451.03   563.1  451.02  569.29  451.05
  572.95     451  574.51     451   575.3     451  576.31     451   576.5     451
  577.26     451  579.31  451.05  584.04  451.16  611.25  451.95

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  135.99     .04  312.55     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        135.99  312.55           395.71     500   618.5             .1       .3
Right Levee     Station=  320.89      Elevation=  447.12

CROSS SECTION


RIVER: WASH10B
REACH: Centerline Align   RS: 17600

INPUT
Description:
Station Elevation Data    num=     202
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  459.42.5299683  459.422.469971  459.444.129974  459.474.919983   459.5
5.809967  459.538.999969  459.6611.98996  459.7314.28998  459.8415.39996  459.85
15.73996  459.8616.24997  459.8716.72998  459.8718.44998  459.8320.47998  459.73
21.35999  459.6923.10999  459.5924.71997  459.4828.50998  459.2731.65997     459
31.94998  458.9732.98996  458.8837.10999   458.540.47998  458.2142.66998     458
46.16998  457.6552.63998     45754.61996  456.7961.38998     45661.52997  455.98
62.20996   455.968.23996  455.1168.96997     45570.24997  454.8276.28998     454
79.81998  453.5283.78998     45386.71997  452.5890.58997     45295.56998  451.14
96.39996     45197.24997  450.85  102.15     450  103.82  449.67  107.56     449
  109.14   448.6  111.64     448     114   447.3  114.97     447  118.23  446.05
  118.39     446  121.54  445.07  121.72     445  122.21  444.84  122.25  444.83
   122.3  444.82  124.98     444   128.5  443.13  128.98     443  129.62  442.86
  133.48     442  134.42  441.77  143.52  441.58  150.75  441.61   158.3     442
   159.8  442.03  162.42  442.06  166.23  442.06   184.5  442.18  184.68  442.18
  184.74  442.18  184.89  442.18  194.48  442.12  208.79     442  215.23  441.64
  218.29  441.48   219.6   441.4  221.01  441.32  223.86  441.14  226.45  441.16
     230   441.2  230.08   441.2   230.8  441.23  238.86  441.57  240.62  441.64
  248.41     442  249.55     442  261.94     442  262.03     442  264.97     442
  267.83     442  272.88     442  281.41     442  284.48     442  284.89  442.17
  285.07  442.18  285.28   442.2  285.48  442.22  285.96  442.28   286.2  442.32
  286.63  442.27   286.8  442.26  286.96  442.25  287.71  442.32  287.87  442.31
  288.06  442.34  291.43  442.36  295.54  442.42  299.52  442.59  301.73  442.68
  302.97  442.72  303.05  442.72  304.57  442.77  304.71  442.78  304.97  442.79
  310.51     443  315.85  443.89  316.45     444  319.11  444.79  319.86     445
  320.02  445.03  324.02  445.65   327.9  445.59  330.91  445.59  333.99  445.61
  336.34  445.66  338.08  445.73  347.57  445.95   348.5  445.97  349.09  445.97
  349.93  445.98  350.03  445.98  350.17  445.98  350.93     446  356.24  446.02
  356.64  446.03  357.76  446.02  359.04  446.02   361.7  446.01  364.43     446
  367.53     446  373.01  445.99  377.13  445.99  379.05  445.99   383.5     446
  383.78     446  389.55  445.91  389.56  445.91  390.48  445.89  392.09  445.85
  404.77  445.29  406.99   445.2  407.51  445.18  411.32     445  414.81   444.9
  418.73  444.79  445.84     444  446.02  443.99  467.72     443  469.24  442.98
  469.29  442.98  470.85  442.98  471.95  442.98  472.36  442.98  472.58  442.98
  473.43  442.98  473.73  442.98  474.21  442.99  474.89  442.99  476.97     443
  478.52     443  481.66  443.01  483.43  443.01  484.19  443.01  484.35  443.01
  484.74  443.01  485.02  443.01  486.99  443.04     487  443.04  487.51  443.02
  488.32     443  488.68     443  488.87     443  489.39     443   489.4     443
  489.41     443  489.94  443.05  489.99  443.05  490.04  443.06  490.19  443.07
  498.63     444  500.34  444.43  502.31     445  504.17  445.54  505.54     446
  508.26   446.8  508.93     447  510.51   447.5   512.3     448  512.93  448.27
  514.73     449  515.41  449.32

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  129.62     .04  295.54     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        129.62  295.54          1020.59  963.29     904             .1       .3

CROSS SECTION


RIVER: WASH15
REACH: Centerline Align   RS: 3100
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INPUT
Description:
Station Elevation Data num= 444

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 404.68 | 9299927 | 404.68 | 2.529968 | 404.69 | 2.72998 | 404.69 | 5.619995 | 404.72 |
| 6.77002 | 404.75 | 8.029968 | 404.79 | 8.349976 | 404.88 | 709961 | 404.79 | 9.099976 | 404.78 |
| 10.08997 | 404.81 | 11.59998 | 404.84 | 12.02997 | 404.85 | 12.94 | 404.86 | 13.37 | 404.87 |
| 13.75 | 404.87 | 14.20996 | 404.87 | 14.90997 | 404.86 | 15.16998 | 404.85 | 17.45996 | 404.82 |
| 19.87 | 404.88 | 22.70996 | 404.97 | 23.16998 | 404.97 | 23.44 | 404.96 | 24.47998 | 404.95 |
| 24.83002 | 404.95 | 24.89996 | 404.94 | 24.97998 | 404.94 | 31.40997 | 404.88 | 31.57001 | 404.88 |
| 31.75 | 404.87 | 32.41998 | 404.87 | 34.67999 | 404.89 | 36.10999 | 404.93 | 36.91998 | 404.93 |
| 37.54999 | 404.91 | 42.19 | 404.4 | 43.52002 | 404.27 | 43.88 | 404.24 | 44.83002 | 404.12 |
| 45.07001 | 404.09 | 45.32001 | 404.07 | 45.35999 | 404.06 | 45.39996 | 404.05 | 45.76001 | 404 |
| 51.13 | 403.63 | 56.39996 | 403 | 59.83997 | 402.98 | 61.95996 | 402.97 | 62.35999 | 402.97 |
| 62.57001 | 402.97 | 62.69 | 402.97 | 65.01001 | 402.96 | 66.91998 | 402.95 | 68.16998 | 402.95 |
| 69.47998 | 402.95 | 70.01001 | 402.95 | 70.08002 | 402.95 | 70.10999 | 402.95 | 74.27002 | 402.95 |
| 76.19 | 402.94 | 79.40997 | 402.94 | 84.56 | 402.68 | 85.14001 | 402.67 | 85.28998 | 402.66 |
| 87.45001 | 402.62 | 88.62 | 402.6 | 91.94 | 402.43 | 96.67999 | 402.05 | 98.39001 | 402.05 |
| 98.47998 | 402.04 | 98.58997 | 402.04 | 98.77997 | 402.04 | 98.95996 | 402.04 | 99.04999 | 402.04 |
| 99.12 | 402.04 | 99.34998 | 402.03 | 99.95001 | 402.03 | 100.32 | 402.04 | 100.75 | 402.03 |
| 101.56 | 402.02 | 101.62 | 402.02 | 101.67 | 402.02 | 102.1 | 402.02 | 102.23 | 402.02 |
| 102.34 | 402.02 | 102.58 | 402.02 | 103.93 | 402.02 | 104.02 | 402.02 | 104.11 | 402.02 |
| 104.15 | 402.02 | 104.78 | 402.02 | 104.9 | 402.02 | 104.94 | 402.02 | 105.42 | 402.01 |
| 106.16 | 402.01 | 107.73 | 402 | 107.91 | 402 | 110.28 | 402 | 111.16 | 401.95 |
| 120.75 | 401.38 | 124.34 | 401.29 | 125.79 | 401.18 | 125.97 | 401.19 | 126.79 | 401.21 |
| 126.89 | 401.21 | 127.15 | 401.2 | 127.86 | 401.21 | 129.53 | 401.31 | 137 | 401.11 |
| 137.11 | 401.1 | 139.69 | 401.07 | 146.25 | 401 | 147.91 | 401 | 150.44 | 400.99 |
| 150.87 | 400.99 | 151.23 | 400.99 | 155.05 | 401 | 157.39 | 401.68 | 159.11 | 402 |
| 159.2 | 402.02 | 159.81 | 402.2 | 161.67 | 402.74 | 162.21 | 402.89 | 162.58 | 403 |
| 172.13 | 403 | 175.29 | 403 | 178.34 | 403 | 178.49 | 403 | 184.9 | 402.79 |
| 190.3 | 402.62 | 191.91 | 402.57 | 200.72 | 402.3 | 203.76 | 402.22 | 205.48 | 402.17 |
| 210.41 | 402 | 217.04 | 401.71 | 222.33 | 401.57 | 238.68 | 401.11 | 241.8 | 401.02 |
| 242.14 | 401.01 | 242.15 | 401.01 | 242.69 | 401 | 242.79 | 401 | 245.15 | 400.95 |
| 247.95 | 400.9 | 249.03 | 400.89 | 249.13 | 400.88 | 250.83 | 400.85 | 259.71 | 400.85 |
| 269.25 | 400.91 | 269.27 | 400.91 | 272.09 | 401 | 272.15 | 401 | 272.23 | 401 |
| 272.41 | 401 | 272.69 | 401 | 273.03 | 401 | 273.94 | 401.01 | 275.15 | 401.01 |
| 280.25 | 401.03 | 280.47 | 401.03 | 280.89 | 401.03 | 286.62 | 401.01 | 286.89 | 401.01 |
| 289.55 | 401 | 289.65 | 401 | 290.17 | 401 | 292.88 | 400.96 | 304.06 | 400.93 |
| 315.14 | 400.96 | 316.04 | 400.96 | 316.27 | 400.96 | 317.66 | 400.97 | 317.99 | 400.97 |
| 318.82 | 400.97 | 318.98 | 400.97 | 321.29 | 400.95 | 321.34 | 400.95 | 326.27 | 400.91 |
| 330.86 | 400.89 | 337.89 | 400.88 | 338.08 | 400.88 | 338.44 | 400.88 | 338.79 | 400.89 |
| 340.82 | 400.86 | 344.87 | 400.77 | 345.27 | 400.76 | 347.24 | 400.7 | 349.35 | 400.66 |
| 350.59 | 400.63 | 353.12 | 400.56 | 354.41 | 400.52 | 357.57 | 400.46 | 364.74 | 400.27 |
| 374.74 | 400.02 | 375.21 | 400.01 | 376.3 | 400.01 | 376.51 | 400.01 | 377.26 | 400.01 |
| 377.67 | 400 | 378.24 | 400 | 378.55 | 400 | 378.89 | 400 | 378.91 | 400 |
| 380.32 | 399.96 | 387.67 | 399.77 | 387.71 | 399.77 | 402.46 | 399.41 | 407.99 | 399.29 |
| 410.61 | 399.25 | 410.7 | 399.25 | 410.74 | 399.25 | 412.23 | 399.22 | 412.31 | 399.22 |
| 412.36 | 399.22 | 412.46 | 399.22 | 414.63 | 399.19 | 416.32 | 399.17 | 416.78 | 399.17 |
| 421.83 | 399.2 | 422.15 | 399.2 | 432.55 | 399.08 | 437.67 | 399.01 | 438.74 | 399.01 |
| 439.34 | 399.01 | 442.92 | 399 | 443.86 | 399 | 444.02 | 399 | 444.19 | 399 |
| 445.76 | 399 | 446.5 | 399 | 447.17 | 399 | 447.89 | 399 | 448.3 | 399 |
| 448.95 | 399 | 450.8 | 399 | 451.94 | 399 | 452.44 | 399 | 453.3 | 399 |
| 454.42 | 399 | 455.24 | 398.99 | 455.26 | 398.99 | 455.34 | 398.99 | 455.92 | 399 |
| 456.17 | 399 | 459.51 | 399 | 459.79 | 399 | 461.8 | 399 | 462.98 | 399 |
| 463.41 | 399 | 463.89 | 399 | 464.47 | 399 | 467.22 | 398.98 | 467.69 | 398.99 |
| 468.15 | 398.99 | 470.97 | 399 | 470.99 | 399 | 471.52 | 399 | 472.27 | 399.01 |
| 472.86 | 399.01 | 473.61 | 399 | 480.54 | 398.91 | 482.1 | 398.89 | 485.53 | 398.93 |
| 487.86 | 398.96 | 491.2 | 398.99 | 491.23 | 398.99 | 491.29 | 398.99 | 491.37 | 398.99 |
| 491.52 | 399 | 491.57 | 399 | 491.63 | 399 | 491.7 | 399 | 501.76 | 399.21 |
| 508.77 | 399.32 | 519.04 | 399.31 | 531.19 | 399.2 | 531.4 | 399.2 | 531.93 | 399.19 |
| 533.54 | 399.16 | 538.21 | 399.12 | 539.35 | 399.1 | 540.44 | 399.1 | 540.58 | 399.1 |
| 543.16 | 399.09 | 545.8 | 399.1 | 545.87 | 399.1 | 549.13 | 399.18 | 580.24 | 400 |
| 580.37 | 400 | 580.38 | 400 | 581.16 | 400 | 581.47 | 400 | 582.12 | 400 |
| 582.25 | 400 | 582.92 | 400.01 | 589.89 | 400.01 | 591.21 | 400.01 | 591.9 | 400.01 |
| 593.44 | 400.01 | 598.9 | 400.02 | 602.87 | 400.02 | 605.8 | 400.03 | 606.45 | 400.03 |
| 608.24 | 400.11 | 620.85 | 400.69 | 621.18 | 400.69 | 621.47 | 400.7 | 625.16 | 400.69 |
| 626.31 | 400.68 | 626.96 | 400.67 | 627.12 | 400.68 | 629.36 | 400.63 | 631.32 | 400.6 |
| 646.76 | 401 | 646.86 | 401 | 654.49 | 401 | 658.73 | 401 | 663.21 | 401 |
| 664.76 | 401 | 667.2 | 401 | 667.3 | 401 | 676.02 | 401 | 679.08 | 401 |
| 682.55 | 401 | 682.61 | 401 | 682.64 | 401 | 684.23 | 401 | 685.04 | 401 |
| 685.4 | 401 | 685.59 | 401 | 685.82 | 401 | 686.07 | 401 | 686.21 | 401 |
| 686.27 | 401 | 686.81 | 401.02 | 686.83 | 401.02 | 687.07 | 401.03 | 687.56 | 401.04 |
| 688.62 | 401.08 | 706.11 | 401.71 | 710.38 | 401.86 | 714.26 | 402 | 715.63 | 402 |
| 719.19 | 402 | 720.83 | 402 | 720.95 | 402 | 721.08 | 402 | 721.12 | 402 |
| 721.61 | 401.99 | 722.17 | 401.98 | 722.48 | 401.98 | 726.25 | 401.52 | 727.99 | 401.32 |
| 730.13 | 401 | 731.33 | 400.23 | 731.71 | 400 | 732.09 | 399.77 | 733.29 | 399 |
| 734.86 | 398.28 | 735.54 | 398 | 736.74 | 397.61 | 738.23 | 397 | 739.95 | 396.99 |
| 741.39 | 396.98 | 743.76 | 396.99 | 743.86 | 397 | 744.21 | 397 | 744.52 | 397 |
| 746.46 | 397.13 | 748.19 | 397.26 | 758.48 | 398 | 760.51 | 398.79 | 760.81 | 398.93 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 760.99 | 399 | 761 | 399 | 761.01 | 399 | 763.34 | 399.5 | 765.32 | 399.9 |
| 765.72 | 400 | 766.45 | 400.16 | 769.78 | 400.83 | 771.78 | 401 | 777.04 | 401.31 |
| 777.21 | 401.3 | 787.7 | 401.09 | 788.39 | 401.07 | 789.08 | 401.06 | 793.01 | 401.03 |
| 793.24 | 401.03 | 796.39 | 401.02 | 798.47 | 401 | 798.55 | 401 | 798.7 | 401 |
| 798.73 | 401 | 804.35 | 400.59 | 812.79 | 400 | 816.41 | 399.99 | 817.75 | 399.98 |
| 820.25 | 399.99 | 822.72 | 399.99 | 822.73 | 399.99 | 822.74 | 399.99 | 823.05 | 399.98 |
| 823.06 | 399.98 | 823.08 | 399.98 | 823.34 | 399.98 | 824.95 | 399.97 | 825.52 | 399.97 |
| 826.71 | 399.97 | 827.17 | 399.97 | 827.38 | 399.97 | 829.05 | 399.79 | 833.04 | 399.4 |
| 833.77 | 399.35 | 834.56 | 399.3 | 834.85 | 399.28 | 835.73 | 399.24 | 836.33 | 399.21 |
| 837.47 | 399.14 | 838.87 | 399.09 | 840.42 | 399.01 | 841.05 | 399.01 | 841.56 | 399.01 |
| 842.39 | 399 | 842.56 | 399 | 842.72 | 398.99 | 842.78 | 398.98 | 847.84 | 398 |
| 848.39 | 397.98 | 849.17 | 397.95 | 849.5 | 397.93 | 849.74 | 397.92 | 850.36 | 397.9 |
| 850.76 | 397.91 | 852.87 | 398 | 854.33 | 398.37 | 856.39 | 399 | 858.58 | 399.62 |
| 859.77 | 399.96 | 859.95 | 400 | 860.38 | 400.09 | 864.74 | 400.89 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 387.71 | .04 | 859.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 387.71 | 859.77 | 603.67 | 500 | 391.66 | .1 | .3 |

CROSS SECTION

RIVER: WASH15
REACH: Centerline Align RS: 2600

INPUT
Description:
Station Elevation Data num= 461

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 400.054.559937 | 400.044.880005 | | 400.046.380005 | | 400.048.159912 | | 400.04 | |
| 8.98999 | 400.049.929932 | 400.0322.91992 | | 400 24.1499 | | 399.9124.35999 | | 399.89 | |
| 24.94995 | 399.8425.95996 | 399.7534.40997 | | 39935.53992 | | 398.9936.19995 | | 398.99 | |
| 37.60992 | 398.9940.33997 | 39942.82996 | | 39947.21997 | | 39950.68994 | | 399 | |
| 53.02997 | 39953.28992 | 39953.30994 | | 39953.54993 | | 39954.29993 | | 399 | |
| 54.44995 | 39955.30994 | 39955.90997 | | 39957.28992 | | 39959.01996 | | 399 | |
| 59.20996 | 39961.13995 | 39961.32996 | | 39961.66992 | | 39965.15997 | | 399 | |
| 65.83997 | 39969.86993 | 39970.65997 | | 39971.25995 | | 39971.68994 | | 399 | |
| 76.22992 | 39978.87994 | 39979.37994 | | 39980.14996 | | 39981.07996 | | 399 | |
| 83.43994 | 398.9785.13995 | 398.9585.75995 | | 398.9486.70996 | | 398.9287.18994 | | 398.92 | |
| 90.30994 | 398.8892.05994 | 398.993.06995 | | 398.8896.86993 | | 398.9698.42993 | | 398.97 | |
| 100.2899 | 399102.5699 | 399 | 103.6 | 399 | 105.41 | 399 | 107.02 | 399 | |
| 108.9899 | 399 | 112.83 | 398.92 | 113.2 | 398.91113.6699 | 398.9 | 116.78 | 398.84 | |
| 122.4199 | 398.76128.1799 | 398.55 | 128.95 | 398.52131.2899 | | 398.45133.9399 | | 398.35 | |
| 136.22 | 398.27143.5499 | 398.04 | 143.7 | 398.03 | 144.84 | 398 | 145.77 | 398 | |
| 145.83 | 398145.9899 | 398 | 147.6 | 398148.9199 | | 397.99149.6099 | | 397.99 | |
| 153.2899 | 397.99 | 153.9 | 397.99 | 156.1 | 397.99 | 156.46 | 397.99159.3599 | 397.98 | |
| 159.72 | 397.98161.3699 | 397.98161.4399 | | 397.98 | 162.41 | 397.98165.1199 | | 397.97 | |
| 179.0099 | 397.51 | 186.85 | 397.28195.7499 | | 397.08198.5399 | | 397.01199.4899 | 397.01 | |
| 201.2499 | 397.01201.6199 | 397.01203.2499 | | 397.01 | 203.6 | 397.01205.5499 | | 397 | |
| 205.9999 | 397 | 206.09 | 397206.8699 | | 397 | 210.77 | 396.99 | 211.71 | 396.98 |
| 214.6199 | 396.99216.4999 | 397216.8599 | | 397 | 218.77 | 397220.9899 | | 397 | |
| 223.6099 | 396.98 | 224.6 | 396.98226.1299 | | 396.97 | 226.77 | 396.96227.7599 | 396.96 | |
| 230.2299 | 396.97235.3199 | 396.99236.0699 | | 397236.3199 | | 397236.3699 | | 397 | |
| 236.95 | 397 | 244.4 | 397.01 | 247.7 | 397.01248.6799 | | 397.01251.5599 | 397.01 | |
| 255.21 | 397 | 257.72 | 397259.4399 | | 397259.6699 | | 397259.7599 | 397 | |
| 259.91 | 397261.7899 | 396.99 | 262.77 | 396.98265.2899 | | 396.97271.1199 | | 396.78 | |
| 279.9299 | 396.54 | 281.41 | 396.52281.4399 | | 396.52294.5099 | | 396.31314.5499 | 396 | |
| 314.58 | 396 | 315.35 | 396316.2999 | | 396 | 316.41 | 396 | 317.35 | 396 |
| 317.41 | 396 | 319.16 | 396319.6299 | | 396 | 321.22 | 396322.8699 | 396 | |
| 323.21 | 396 | 323.84 | 396 | 329.95 | 396 | 332.16 | 396335.4399 | 396 | |
| 337.28 | 396 | 345.59 | 396 | 347.66 | 396 | 347.72 | 396347.7399 | 396 | |
| 347.96 | 396347.9999 | 396 | 361.64 | 395.74 | 370.15 | 395.6371.5499 | | 395.59 | |
| 376.66 | 395.41388.0099 | 395388.3599 | | 395388.3699 | | 395 | 389.34 | 395 | |
| 389.3799 | 395389.4899 | 395 | 390.14 | 395 | 391.7 | 395 | 392.39 | 395 | |
| 394.9799 | 395 | 395.46 | 395395.7999 | | 395 | 396.2 | 395396.3099 | 395 | |
| 396.72 | 395 | 396.89 | 395398.7899 | | 394.99 | 399.77 | 394.99 | 400.89 | 394.98 |
| 401.6199 | 394.98403.3699 | 394.97405.1799 | | 394.98408.9299 | | 394.99 | 409.35 | 394.99 | |
| 409.6799 | 394.99 | 411.66 | 395 | 411.78 | 395 | 411.83 | 395 | 412.14 | 394.98 |
| 413.21 | 395413.2599 | 394.99413.3099 | | 394.99415.7299 | | 394.68 | 420.72 | 394 | |
| 432.7 | 393.36 | 438.14 | 393.12439.3199 | | 393.08440.3199 | | 393.15 | 441.16 | 393.06 |
| 441.3199 | 393.08441.4199 | 393.09442.3799 | | 393.14 | 442.59 | 393.16444.4399 | | 393.33 | |
| 446.7999 | 393.31449.5099 | 393.23450.5499 | | 393 | 451.59 | 392.99 | 452.1 | 392.98 | |
| 452.7 | 392.99453.7399 | 393 | 454.45 | 393.28 | 456.02 | 394457.1199 | | 394.49 | |
| 458.8599 | 395 | 461.35 | 395.02462.6899 | | 395.03464.6099 | | 395.05 | 465.7 | 395.05 |
| 475.8799 | 395.42 | 478.22 | 395.47 | 479.95 | 395.51483.9199 | | 395.57487.0399 | | 395.61 |
| 489.22 | 395.63 | 489.78 | 395.64 | 490.15 | 395.64490.2599 | | 395.64490.4999 | | 395.65 |

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   500.1  395.92  503.58  395.92503.7899  395.92504.6899  395.93505.3099  395.93
  510.16  395.96514.4799  395.99  514.89  395.99  514.97     396515.3599     396
517.0099     396  517.58     396517.8799     396  518.45     396522.7399  396.06
  532.35  396.17  550.22  396.28564.0099  396.36564.3999  396.36  564.77  396.36
  571.34  396.37  578.49  396.39579.2599   396.4594.8999  396.39610.9299  396.38
  611.47  396.38612.5599  396.38  613.89  396.38614.4399  396.38617.9299  396.37
621.5299  396.36622.5699  396.36623.5599  396.36  626.89  396.36  627.39  396.35
628.3999  396.35630.6299  396.34   632.7  396.33  633.27  396.33  636.09  396.34
643.9399  396.36652.9299  396.39653.6799  396.39  657.97   396.4662.1199  396.41
663.1499  396.41  665.23  396.42  666.24  396.43  667.83  396.43  682.47  396.42
  698.02   396.4  704.33  396.32   712.6  396.21713.0099  396.21717.0699  396.14
723.3999  396.03724.9999     396  725.74     396  729.33  395.99729.4399  395.99
  729.84  395.99  731.85     396735.1899     396735.9999     396  736.49     396
738.0699     396  738.98     396  740.34     396  740.73     396743.7599  395.99
750.8699  395.97  757.14  395.97  765.84  395.98  766.09  395.97766.9099  395.98
  771.24  395.99  771.48     396778.6799     396  783.89     396789.0699     396
  793.98     396795.5699     396   797.2     396799.5299     396  800.27     396
801.2499     396810.8799  396.01  814.27  396.01821.3699  396.02  825.53  396.02
  838.02     396862.2399  395.27  869.53     395871.7399  394.55  873.03  394.34
874.5499     394882.8199  393.44891.1699     393893.3799  392.97  894.22  392.96
  894.34  392.96895.4099  392.94   896.9  392.92898.7399  392.89  900.85  392.92
  905.59     393906.2399  393.53906.2599  393.54  906.95     394911.7499  394.01
914.0399  394.01  914.28  394.01915.0399  394.01  915.21  394.01915.4199  394.01
  916.98  394.01  918.71  394.02920.0699  394.01  920.15  394.01  920.46  394.01
   921.4  394.01  924.23  394.01  925.96     394926.6799     394927.4299     394
927.9999     394   931.6     394932.4899     394  934.89     394935.1899     394
938.9199     394   939.2     394  939.46     394939.5599     394942.9299  393.97
943.1099  393.96  943.73  393.96  944.58  393.95946.4099  393.94947.1799  393.93
947.9999  393.92  948.33  393.92  948.58  393.92  949.03  393.91  949.27  393.91
  952.28  393.88   952.9  393.87952.9099  393.87953.0499  393.87953.5099  393.88
  959.28  393.89966.4299  393.94969.4099  393.96  972.65  393.81973.5499   393.9
  974.21     394975.7899  394.01  976.45  394.02977.5399  394.01978.4299     394
  978.45     394  978.48     394  979.65  393.99979.7599  393.99979.9399  393.99
  981.84  393.76982.6599  393.68  986.46     393  989.77  392.66995.8099     392
  996.35     392  996.96     392997.1299     392  997.27     392997.9199     392
  999.15  392.34  1001.9     393 1004.84  393.64 1006.64     394 1009.42  394.75
  1010.5     395 1012.88  395.93 1013.06     396 1013.08     396  1013.1     396
 1013.12     396 1013.22     396 1013.48  396.01 1014.45  396.03 1015.47  396.06
 1016.35  396.13 1021.33  396.49 1023.17  396.53 1024.34  396.66 1024.68  396.67
 1025.56  396.75 1027.87  396.99 1027.98     397 1032.12  397.01 1035.45  397.01
 1035.63  397.01 1035.73  397.01 1035.88  397.01 1036.13  397.01 1036.14  397.01
 1036.34  397.01 1036.55  397.01 1036.96  397.02 1037.22  397.02 1037.35  397.01
 1038.11  397.02 1038.64  397.02 1039.08  397.02 1040.92  397.02 1042.25  397.02
 1042.36  397.02 1042.48  397.02 1043.73  397.02 1044.49  397.02 1044.85  397.02
    1045  397.02 1045.46  397.02 1050.06  397.24 1052.32  397.29 1054.73  397.44
 1057.82  397.66

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05413.3099     .04  1010.5     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      413.3099  1010.5           692.88     500  324.25              .1       .3

CROSS SECTION


RIVER: WASH15
REACH: Centerline Align   RS: 2100

INPUT
Description:
Station Elevation Data    num=     380
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  392.85 5.51001  392.79   13.81  392.7119.54999  392.5933.89001  392.28
34.39001  392.2835.59003  392.23   36.88  392.1841.66003     39242.01001     392
   42.63     39243.78003     392   44.25     39244.92999     39245.91003     392
      47     39248.23004     39249.33002     39250.98004     39251.60999     392
52.42999     392   53.75  391.9954.90002     39255.48004     39255.84003     392
56.02002     39256.71002     39257.21002     39257.34003     39257.54004     392
62.83002     39267.02002     392   69.13     39273.65002     39280.03003     392
80.10999     39280.22003     39295.17999  391.94  109.74  391.97  112.21     392
  112.22     392  112.23     392  112.24     392  112.25     392  113.06     392
  114.55  391.98  114.85  391.97  115.36  391.96  115.86  391.95  117.08  391.91
  117.54   391.9  119.59  391.84  121.16   391.8  125.45  391.68  142.48   391.2
   149.7     391  150.68     391  151.46     391  154.04     391  155.47  390.99
  155.89  390.99  159.28     391   159.6     391  160.38     391  160.79     391
  165.25     391  174.89  390.99  175.22  390.99  176.75  390.99  176.95  390.99
  182.84     391  184.68     391  187.21     391  187.52     391  188.16     391
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 188.31 | 391.01 | 188.49 | 391 | 188.75 | 391 | 190.23 | 391 | 192.53 | 391 |
| 196.44 | 390.99 | 199.62 | 390.99 | 204.64 | 391 | 208.59 | 391.01 | 212.37 | 391.01 |
| 213.16 | 391.01 | 217.55 | 391 | 220.37 | 390.94 | 223.3 | 390.89 | 230.33 | 390.79 |
| 236.1 | 390.73 | 244.86 | 390.71 | 253.47 | 390.71 | 253.7 | 390.71 | 254.2 | 390.72 |
| 254.41 | 390.72 | 259.98 | 390.54 | 270.87 | 390.06 | 272.62 | 390.05 | 281.18 | 390.05 |
| 284.97 | 390.03 | 286.37 | 390.02 | 286.6 | 390.02 | 287.53 | 390.02 | 287.93 | 390.02 |
| 292.21 | 390 | 296.68 | 389.96 | 298.61 | 389.95 | 309.6 | 389.25 | 311.96 | 389.14 |
| 312.13 | 389.13 | 312.81 | 389.12 | 313.52 | 389.11 | 314.26 | 389.12 | 315.45 | 389.17 |
| 315.54 | 389.18 | 317.05 | 389.34 | 317.09 | 389.34 | 320.17 | 389.58 | 320.36 | 389.57 |
| 320.55 | 389.55 | 328.2 | 389.53 | 339.65 | 389.33 | 340.24 | 389.31 | 344.97 | 389.22 |
| 347.65 | 389.18 | 349.41 | 389 | 358.05 | 388.88 | 361.4 | 388.85 | 366.73 | 388.92 |
| 373.37 | 389 | 375.61 | 389.66 | 377.18 | 390 | 379.71 | 390.01 | 384.16 | 390.02 |
| 384.28 | 390.02 | 390.58 | 390.01 | 393.35 | 390 | 395.07 | 390 | 398.59 | 389.99 |
| 398.68 | 389.99 | 398.72 | 389.99 | 398.81 | 389.99 | 402.09 | 389.99 | 404.5 | 390 |
| 407.07 | 390.01 | 407.97 | 390.01 | 410.53 | 390.01 | 412.14 | 390.01 | 415.15 | 390 |
| 417.39 | 389.2 | 417.93 | 389 | 418.5 | 388.76 | 419.26 | 388.47 | 420.51 | 388 |
| 421.24 | 388 | 423.06 | 387.99 | 423.56 | 387.99 | 425.57 | 388 | 426.29 | 388 |
| 427.42 | 388.23 | 429.74 | 388.73 | 430.9 | 389 | 431.38 | 389.15 | 434.28 | 390 |
| 434.72 | 390 | 435.05 | 390 | 436.27 | 390.01 | 437.98 | 390.02 | 441.26 | 390.03 |
| 446.05 | 390.03 | 448.09 | 390.04 | 453.13 | 390.02 | 455.09 | 390.02 | 459.98 | 390 |
| 461.45 | 390 | 462.74 | 389.99 | 465.07 | 390 | 465.43 | 390 | 465.52 | 390.01 |
| 471.08 | 391 | 473.62 | 391.01 | 475.91 | 391.02 | 480.18 | 391 | 480.43 | 391 |
| 481.56 | 391 | 485.03 | 390.98 | 485.41 | 390.98 | 490.87 | 390.95 | 492.17 | 390.95 |
| 492.58 | 390.95 | 495.17 | 390.94 | 496.51 | 390.94 | 497.15 | 390.93 | 497.67 | 390.93 |
| 498.59 | 390.93 | 499.52 | 390.93 | 500 | 390.93 | 500.32 | 390.93 | 501.35 | 390.93 |
| 501.59 | 390.93 | 501.78 | 390.93 | 502.06 | 390.93 | 503.45 | 390.93 | 506.31 | 390.79 |
| 518.5 | 390.51 | 519.4 | 390.49 | 524.14 | 390.41 | 524.5601 | 390.41 | 525.03 | 390.4 |
| 527.77 | 390.37 | 534.1 | 390.33 | 541.62 | 390.25 | 544.6 | 390.21 | 547.99 | 390.15 |
| 548.63 | 390.14 | 549.47 | 390.13 | 554.6801 | 390.04 | 555.12 | 390.04 | 558.13 | 390.01 |
| 558.42 | 390 | 558.4301 | 390 | 558.99 | 390 | 559.37 | 390 | 561.3101 | 389.98 |
| 561.33 | 389.98 | 561.42 | 389.98 | 564.33 | 389.98 | 564.48 | 389.97 | 564.9 | 389.92 |
| 566.54 | 389.74 | 573.6 | 389 | 574.52 | 388.99 | 575.45 | 388.99 | 579.19 | 388.96 |
| 579.34 | 388.96 | 579.48 | 388.96 | 585.12 | 389 | 587.32 | 389.01 | 588.04 | 389.01 |
| 590.47 | 389.03 | 591.26 | 389.02 | 591.99 | 389.02 | 594.07 | 389.01 | 595.8101 | 389 |
| 604.9301 | 388.63 | 608.73 | 388.43 | 610.17 | 388.39 | 611.95 | 388.37 | 612.72 | 388.35 |
| 614.36 | 388.31 | 616.89 | 388 | 621.41 | 387.36 | 624.49 | 387.45 | 631.45 | 387.81 |
| 633.07 | 388 | 635.67 | 388.1 | 635.6801 | 388.1 | 635.69 | 388.1 | 641.09 | 388.3 |
| 654.4 | 389 | 655.5 | 389 | 656.74 | 389 | 657.46 | 389 | 658.83 | 389 |
| 659.5 | 389 | 660.97 | 389 | 662.35 | 389 | 662.7 | 389 | 664.13 | 389 |
| 666.27 | 389 | 667.11 | 389 | 669.03 | 389 | 669.75 | 389 | 670.12 | 389 |
| 671.53 | 389 | 672.75 | 389 | 674.78 | 389 | 674.9 | 389 | 677.32 | 389 |
| 686.54 | 389.01 | 686.82 | 389.01 | 687.78 | 389.01 | 692.15 | 389.01 | 692.24 | 389.01 |
| 694.74 | 389.01 | 695.84 | 389.01 | 696.6 | 389.01 | 700.29 | 389.01 | 707.18 | 389 |
| 707.71 | 389 | 708.11 | 389 | 708.49 | 389 | 708.86 | 389 | 709.21 | 389 |
| 723.08 | 389.45 | 737.28 | 390 | 742.52 | 390.21 | 743.24 | 390.24 | 745.47 | 390.32 |
| 752.53 | 390.53 | 766.41 | 391 | 766.66 | 391.01 | 767.26 | 391.01 | 768.36 | 391.03 |
| 769.11 | 391.02 | 769.82 | 391 | 772.07 | 390.51 | 774.2 | 390 | 778.61 | 389.61 |
| 781.71 | 389.41 | 783.39 | 389.33 | 786.03 | 389.1 | 786.34 | 389.09 | 787.08 | 389 |
| 787.84 | 388.99 | 788.39 | 388.99 | 788.44 | 388.99 | 789.21 | 389 | 791.01 | 389.32 |
| 791.34 | 389.36 | 793.69 | 389.73 | 794.81 | 389.77 | 795.6 | 389.79 | 796.93 | 389.96 |
| 802.16 | 390 | 805.51 | 390.2 | 805.72 | 390.21 | 806.61 | 390.21 | 807.66 | 390.25 |
| 808.96 | 390.22 | 809.27 | 390.21 | 811.75 | 390 | 812.49 | 389.99 | 813.09 | 390 |
| 813.3 | 390 | 813.45 | 390 | 813.81 | 390 | 813.92 | 390 | 814.99 | 390.16 |
| 815.46 | 390.18 | 818.2 | 390.44 | 819.7 | 390.55 | 820.9 | 390.56 | 821.37 | 390.55 |
| 827.07 | 390.55 | 828.68 | 390.48 | 829.42 | 390.45 | 830.76 | 390.37 | 835.77 | 390.33 |
| 837.65 | 390.25 | 840.07 | 390.3 | 845.5 | 390.55 | 846.51 | 390.69 | 847.16 | 390.72 |
| 850.98 | 390.6 | 852.06 | 390.57 | 852.19 | 390.56 | 852.58 | 390.54 | 853.04 | 390.52 |
| 853.44 | 390.51 | 853.9 | 390.52 | 857.27 | 390.29 | 859.28 | 390.46 | 864.88 | 390.99 |
| 865.87 | 391 | 866.4 | 391.03 | 866.48 | 391.03 | 871.37 | 391.3 | 871.69 | 391.3 |
| 873.55 | 391.31 | 874.99 | 391.38 | 881.94 | 391.69 | 887 | 391.95 | 889.7 | 391.97 |
| 890.74 | 391.99 | 891.15 | 391.99 | 891.95 | 392 | 892.56 | 392 | 895.14 | 392.15 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 298.61 | .04 | 794.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 298.61 | 794.81 | 335 | 500 | 601.81 | .1 | .3 |

CROSS SECTION

RIVER: WASH15
REACH: Centerline Align RS: 1600

INPUT
Description:
Station Elevation Data num= 322

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

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       0  389.032.530029  389.043.470032  389.044.309998  389.039.170044     389
9.190002     3899.369995     38910.21002     389   10.75  388.9918.08002  388.97
19.39001  388.9732.83002   388.539.91003  388.2940.73004  388.2956.54004  388.16
72.83002     388   73.31     38874.60999     38874.71002     38875.07001     388
   75.87     38877.21002     38878.35004     38878.60999     388    81.5  387.99
81.65002  387.9982.09003  387.99   82.25  387.9982.40002  387.9993.65002  387.83
94.23004  387.8394.67004  387.82   95.12  387.82      96  387.8197.10004   387.8
97.59003   387.899.79004  387.76  101.57  387.75  103.58  387.73   115.9  387.53
  146.08     387  146.33     387  147.91     387   148.2     387   148.5     387
  148.71     387  153.07     387  153.22     387  153.96     387  154.01     387
  154.62     387  155.89     387   156.2     387  159.69  386.99  160.09  386.98
  160.44  386.98  161.05  386.98  164.03  386.96  164.48  386.96  165.88  386.95
  165.91  386.95  167.25  386.95  171.19  386.78  182.02  386.34  183.85   386.3
  185.31  386.27  192.13  386.16   198.2  386.01  200.61     386  204.23     386
  205.47     386  206.22     386  207.07     386  207.54     386  208.53     386
  210.77     386  211.06     386  211.18     386  211.57     386  216.07     386
  216.08     386  216.11     386  216.13     386  217.39     386  217.63     386
  221.61     386  225.75     386  227.05     386   228.6     386  229.28     386
  231.04     386  232.11     386   232.9     386  233.39     386  234.34     386
  235.17     386  236.83     386  240.89     386  241.17     386  242.28     386
  243.34     386  243.55     386  244.97     386  245.08     386  246.77     386
  257.75  385.55  263.65  385.33  265.01  385.27   272.5     385  272.99     385
  274.29  384.99  281.97  384.93  285.62  384.96  291.29     385  294.62  385.03
  295.54  385.04  297.61  385.02  299.19  385.01  299.51  385.01   299.9     385
  305.59  384.96  307.11  384.95  310.82  384.98  313.55     385  315.29  385.01
  317.27  385.02  319.84  385.03  321.34  385.03  323.47  385.04  324.56  385.04
  327.96  385.05  328.42  385.05  334.43  385.03  338.71     385  344.72  384.95
     348  384.93  350.35  384.92  352.45  384.94  354.37  384.95   361.6     385
  363.28     385  364.98     385  366.31     385  367.16     385  372.17     385
  380.25  384.58  381.65  384.49  389.74  384.03  389.97  384.02     390  384.02
   390.3     384  390.31     384  390.33     384  391.73     384  392.04     384
   392.3     384   393.6  383.99  394.31  383.99   395.1  383.99  395.64  383.99
  398.58  383.98  402.13  383.98  404.49  383.98  408.51     384  412.81  384.25
  413.16  384.26   416.4  384.42  417.42  384.41  422.26  384.57  424.52  384.54
   431.5  384.55  439.45  384.48  440.32  384.46  449.44  384.16  453.68  384.01
  453.98  384.01  454.38  384.01  455.02  384.01  456.37     384  456.87     384
  456.92     384  457.49     384  466.48  383.96  468.02  383.95   471.8  383.97
  477.55  383.99  478.14  383.99  479.32     384  479.94     384  481.48     384
  485.09     384  486.17     384  487.98     384  488.11     384  489.94     384
  491.13     384  496.33  383.72  498.01  383.62  499.63  383.49  503.13     383
  507.69  382.08   508.1     382  508.37     382  508.42     382  508.57     382
  508.75     382   508.8     382  511.41  381.99  512.62  381.99  512.84  381.99
  513.16  381.99  516.74     382  517.13     382  517.67     382  518.21  382.16
  519.54  382.42  522.76     383  523.19  383.19525.3101     384  526.34     384
527.0601     384  527.21     384  528.27  383.91538.0601     383  539.55  382.98
  541.51  382.95  541.54  382.95  544.95     383  546.14  383.24   549.4     384
550.0601  384.01  550.14  384.01  550.38     384  550.78     384  551.76     384
  551.97     384  552.59     384552.8101     384  553.53  384.03  553.61  384.03
  553.79  384.04   560.9  384.34  567.35  384.54  572.61  384.67  575.57  384.74
  576.17  384.76  576.32  384.76  577.84  384.74   580.1  384.65  580.55  384.66
  580.82  384.66  585.53  384.57  590.85  384.33  592.53  384.28  592.81  384.27
  597.06     384  599.03  383.97  600.21  383.96  601.24  383.95  602.72  383.98
  603.59     384  607.22   384.3  607.35  384.32  610.62  384.57  611.96  384.67
  612.39  384.72  615.85     385  625.68  385.95  626.06     386  626.07     386
  626.37     386  626.69  386.01  626.79  386.01     627  386.02  627.65  386.02
  628.44  386.04  628.69  386.04  631.33  386.25  638.34  386.78   639.3  386.83
  640.89  386.92  642.72  386.99  643.14     387  643.55     387  643.71     387
  643.82     387  645.66     387  645.85     387  646.71     387  648.02     387
  648.36     387  651.66     387  651.68     387  651.83     387  651.99     387
  652.03     387  652.33     387  655.59  387.09  655.81  387.09  656.86  387.11
  659.37  387.17  660.55  387.18  661.53  387.19  662.66   387.2   665.4  387.24
  685.96  387.22  708.68  387.16  709.17  387.11  709.41   387.1  710.48     387
   719.6  386.96  727.11  386.92  736.61  386.96  744.54     387  757.58  387.66
   764.5     388  778.07  388.06  790.09  388.12  795.23   388.1  814.74  388.18
  815.12  388.17  815.39  388.18

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  265.01     .04  625.68     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        265.01  625.68           573.88     500  453.79              .1       .3

CROSS SECTION


RIVER: WASH15
REACH: Centerline Align   RS: 1100
```

INPUT
Description:
Station Elevation Data num= 250

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 382.05.6300049 | | 382.03.9000244 | | 382.021.080017 | | 382.021.090027 | | 382.02 |
| 1.309998 | 382.021.470032 | | 382.011.490051 | | 382.01 1.51001 | | 382.012.630005 | | 382.03 |
| 2.710022 | 382.032.800049 | | 382.032.880005 | | 382.028.100037 | | 382.0812.80005 | | 382.12 |
| 12.92004 | 382.12 | 13.13 | 382.1213.35004 | | 382.1216.36005 | | 382.14 | 16.75 | 382.14 |
| 27.38 | 382.1438.03003 | | 382.1439.24005 | | 382.1345.23004 | | 382.0145.80005 | | 382.01 |
| 46.12 | 382.01 | 46.25 | 382.0151.72003 | | 382.0252.29004 | | 382.02 | 53.44 | 382.02 |
| 54.14001 | 382.0254.41003 | | 382.0255.68005 | | 382.02 | 56.13 | 382.02 | 58.87 | 382.01 |
| 68.36005 | 38268.51001 | | 38269.43005 | | 38270.07001 | | 382 | 70.25 | 381.99 |
| 71.11005 | 382 | 99.31 | 381.06 | 100.47 | 381.02 | 101.22 | 381 | 101.27 | 381 |
| 101.36 | 381 | 101.47 | 381101.7401 | | 381 | 104.37 | 381106.4901 | | 381 |
| 106.7401 | 381 | 107.2 | 380.99 | 108.07 | 380.99 | 109.44 | 380.99110.2401 | | 380.99 |
| 110.8 | 380.99110.9301 | | 380.99 | 112.65 | 380.98 | 115.33 | 380.98 | 117.57 | 380.99 |
| 118.78 | 380.99 | 119.41 | 380.99120.4901 | | 380.99 | 122.37 | 380.99 | 122.88 | 380.99 |
| 125.85 | 381 | 126.38 | 381 | 126.48 | 381127.9901 | | 381 | 129.14 | 380.95 |
| 132.22 | 380.92 | 133.04 | 380.91 | 133.41 | 380.91 | 133.57 | 380.92134.4301 | | 380.92 |
| 136.1801 | 380.88 | 136.25 | 380.88 | 139.28 | 380.85 | 144.92 | 380.78 | 148.16 | 380.72 |
| 153.52 | 380.63 | 166.71 | 380.4 | 170.21 | 380.35 | 172.87 | 380.31 | 176.4 | 380.25 |
| 178.39 | 380.22 | 182.99 | 380.16 | 185.61 | 380.13 | 185.82 | 380.12 | 186.7 | 380.11 |
| 188.17 | 380.11 | 189.51 | 380.1 | 189.74 | 380.1 | 202.18 | 380.01 | 202.55 | 380.01 |
| 203.46 | 380.01 | 205.29 | 380.01 | 205.45 | 380.01 | 209.07 | 380.01 | 210.31 | 380.01 |
| 212.07 | 380.01 | 215.96 | 380 | 216.38 | 380 | 216.79 | 380 | 220.59 | 380 |
| 221.52 | 380 | 221.79 | 380 | 223.7 | 380 | 225.79 | 380 | 227.61 | 379.99 |
| 229.1 | 379.98 | 239.19 | 379.97 | 239.21 | 379.97 | 239.22 | 379.97 | 243.04 | 379.97 |
| 243.66 | 379.97 | 244.15 | 379.97 | 249.08 | 379.98 | 254.26 | 379.98 | 266.14 | 379.95 |
| 269.81 | 379.96 | 271.43 | 379.96 | 278.14 | 380 | 282.06 | 380.01 | 283.87 | 380.02 |
| 284.27 | 380.02 | 285.11 | 380.02 | 285.4 | 380.02 | 286.35 | 380.02 | 287.16 | 380.02 |
| 289.05 | 380.01 | 290.74 | 380.01 | 293.55 | 380 | 298.63 | 379.97 | 298.73 | 379.97 |
| 298.87 | 379.97 | 301.66 | 379.95 | 301.97 | 379.95 | 302.03 | 379.95 | 302.31 | 379.95 |
| 304.2 | 379.96 | 306.76 | 379.95 | 307.38 | 379.95 | 318.35 | 379.63 | 319.26 | 379.62 |
| 320.22 | 379.61 | 320.56 | 379.6 | 320.79 | 379.6 | 328.64 | 379.55 | 333.24 | 379.52 |
| 335.33 | 379.51 | 337.86 | 379.47 | 340.91 | 379.41 | 341.84 | 379.42 | 342.38 | 379.41 |
| 347.84 | 379.48 | 357.95 | 379.76 | 360.58 | 379.93 | 361.79 | 380 | 366.98 | 380 |
| 369.4 | 380 | 374.07 | 380.01 | 377.39 | 380 | 383.11 | 380 | 386.19 | 380 |
| 387.6 | 379.79 | 391.42 | 379 | 402.1 | 378.98 | 409.91 | 378.96 | 411.91 | 378.96 |
| 426.93 | 379 | 433.71 | 379.99 | 433.8 | 380 | 434.46 | 380 | 438.72 | 380 |
| 440.91 | 380 | 442.39 | 379.81 | 446.75 | 379.28 | 449.28 | 379.37 | 454.73 | 379.59 |
| 455.13 | 379.63 | 457.6 | 379.79 | 461.16 | 380 | 470.75 | 380.69 | 474.83 | 381 |
| 476.07 | 381.12 | 476.25 | 381.13 | 478.05 | 381.25 | 479.43 | 381.33 | 481.28 | 381.4 |
| 482.84 | 381.44 | 483.08 | 381.44 | 483.71 | 381.45 | 484.48 | 381.45 | 485.57 | 381.51 |
| 486.31 | 381.5 | 492.77 | 381.61 | 505.29 | 382 | 505.53 | 382 | 507.33 | 382 |
| 516.24 | 382.02 | 517.9 | 382.02 | 524.21 | 382.01 | 530.02 | 382 | 534.67 | 381.97 |
| 537.57 | 381.96 | 539.4 | 381.97 | 544.52 | 382 | 544.63 | 382 | 553.37 | 382.31 |
| 565.96 | 382.74569.8101 | | 382.89 | 570.27 | 382.91 | 572.76 | 383 | 572.89 | 383 |
| 573.14 | 383 | 573.33 | 383 | 573.64 | 383 | 574.27 | 383 | 575.8 | 383 |
| 576.24 | 383 | 576.33 | 383 | 576.34 | 383 | 576.54 | 383 | 576.92 | 383 |
| 577.35 | 383 | 577.37 | 383 | 579.2 | 383 | 581.28 | 383 | 581.35 | 383 |
| 588.67 | 383.01591.4301 | | 383.01 | 594.19 | 383.01 | 595.11 | 383.01602.9301 | | 383.15 |
| 621.28 | 383.45 | 623.57 | 383.44 | 625.72 | 383.48 | 628.45 | 383.46 | 630.39 | 383.49 |
| 635.1801 | 383.47 | 639.04 | 383.46 | 640.02 | 383.45 | 641.03 | 383.44 | 644.51 | 383.37 |
| 645.3 | 383.37 | 646.22 | 383.36 | 648.41 | 383.33 | 650.87 | 383.28 | 652.4 | 383.24 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 153.52 | .04 | 470.75 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 153.52 | 470.75 | 542.95 | 500 | 508.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH15
REACH: Centerline Align RS: 600

INPUT
Description:
Station Elevation Data num= 239

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3781.459961 | | 3781.709961 | | 3782.399963 | | 378 5.01001 | | 377.99 |
| 5.630005 | 377.997.049988 | | 377.989.159973 | | 377.9811.76996 | | 377.9521.66998 | | 377.87 |
| 25.64001 | 377.9627.51996 | | 377.9928.08997 | | 37830.90997 | | 37831.07001 | | 378 |
| 31.70996 | 37832.34998 | | 37832.41998 | | 37834.33997 | | 37834.40997 | | 378 |
| 34.48999 | 37834.64001 | | 37834.72998 | | 378 | 35.94 | 37839.98999 | | 377.95 |
| 40.13 | 377.9640.16998 | | 377.9640.20996 | | 377.9640.39996 | | 377.96 | 41.19 | 377.95 |
| 44.19 | 377.8648.79999 | | 377.75 | 51.75 | 377.6165.70001 | | 37766.70001 | | 377 |

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66.82001     37767.04999     377   68.44     377    69.5     37779.28998  377.02
83.97998  377.0384.51996  377.0386.02997  377.0388.20996  377.0389.07996  377.03
   92.12  377.0392.16998  377.0392.17999  377.0394.03998  377.03  101.87  377.02
   102.7  377.02  102.75  377.02  104.49  377.01  105.17  377.01  106.77  377.01
  109.41     377  111.31     377  111.65     377  112.14     377  113.64     377
  114.28     377  114.38     377  114.56     377  114.66     377  114.81     377
  118.23  376.89  124.38  376.69  132.87  376.62  139.98  376.58   147.2  376.54
  156.51  376.46  158.04  376.46  158.84  376.45  159.32  376.45  160.98  376.42
  174.19  376.29  192.07  376.01  194.13     376  194.54     376  195.15     376
  195.16     376  195.17     376  195.18     376  196.27  376.01  213.12  376.42
  221.49  376.59  224.93  376.65  229.21  376.73  237.72  376.95  239.06  376.99
  239.13  376.99  239.22  376.99   239.3  376.99  239.32  376.99  239.42  376.99
  239.46  376.99   239.6  376.99  239.61  376.99  245.62     377  247.44     377
  248.04     377  248.06     377  248.08     377  249.97     377   251.9  377.03
  251.98  377.03  260.65  377.06  269.09  377.05  269.58  377.07  269.75  377.08
  269.97  377.09  270.37  377.11  273.02  377.25  287.43     378  294.48     378
  303.37     378   318.2     378  318.97     378  319.32     378  319.74  377.95
  319.96  377.93  328.55     377  338.88  376.25  340.58  376.13  342.09     376
   344.3  375.86  344.52  375.85  346.04  375.76  346.63  375.72   347.8  375.65
  354.11  375.41  357.13  375.31  357.93  375.27  358.91  375.24  359.05  375.24
  361.61   375.1  362.66     375   363.1  374.95  363.23  374.94  366.59  374.51
  367.29  374.43  368.09  374.38  372.52  374.11  372.99  374.06  374.05     374
  376.46     374  376.84     374  382.16  373.99  384.96  373.99  389.09  373.99
  390.22  373.99  394.38     374  395.32     374  395.79     374  396.31  374.01
   405.1  374.07  406.17  374.06  408.62  374.05  412.61     374  414.44  373.96
  416.61  373.94  418.67  373.92  418.71  373.92  419.96  373.94  420.26  373.95
  420.68  373.95  424.27     374  428.09  374.82  428.31  374.88  428.95     375
  429.46     375  431.59     375  451.83     375   452.6     375  453.45     375
  454.99     375  456.49     375  457.23     375  460.86  374.73  461.04  374.72
  461.32   374.7   461.4  374.69  470.03     374   470.3     374  470.63     374
  470.71     374  470.78     374  470.85     374  472.43   374.5   474.3     375
  477.59  375.02  481.09  375.05  483.99  375.03  487.71  375.11  487.77  375.11
  499.16  375.05  502.18  375.06  506.34  375.04  512.84  375.01  513.81  375.02
  514.62  375.01  515.61     375  515.84     375  517.28  374.99  519.33  374.98
  519.63  374.98  519.69  374.98  522.42  374.99   523.5     375  527.59  375.02
  532.21  375.03  534.57  375.02  537.14  375.02  538.13  375.01  543.57  375.12
   557.4  375.14  572.88  375.02  573.24     375  573.39     375  574.14  374.99
  574.34  374.99  575.09     375  584.77  375.24  587.45  375.31  588.37  375.33
  596.03  375.49  599.23   375.6  602.47  375.73  607.64  375.96  608.57     376
  609.97  376.04  641.32     377  656.13  377.86  658.93     378  671.71  378.04
  672.43  378.05  680.77  378.08  681.84  378.08  701.11  378.35

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  342.09     .04  607.64     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        342.09  607.64            365.99  317.49  281.21              .1       .3

CROSS SECTION


RIVER: WASH15
REACH: Centerline Align   RS: 282.51

INPUT
Description:
Station Elevation Data    num=     273
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  373.092.649963  373.163.579956  373.18 3.98999  373.197.349976  373.28
17.39996  373.4524.12994  373.5225.77997  373.5627.02997  373.5827.16998  373.58
31.82996  373.6738.27997   373.839.77997  373.8340.96997  373.8445.59998  373.99
45.64996  373.9945.88995  373.9946.22998  373.9947.92999     37448.72998     374
   49.56     37452.71997  374.16   71.81     375    73.5     37573.84998     375
74.08997     37574.25995     37574.29999     37583.88995  375.0188.81995  375.01
89.84998  375.0195.90997  375.0198.76996  375.01102.1899  375.01102.7599  375.01
105.0099  375.01  111.31  375.08  116.48  375.02  119.41  375.03  121.41  375.03
  121.92  375.03128.5099  375.04  131.59  375.05  134.68  375.04  136.41  375.03
  139.39  375.03  141.97  375.02  146.91  375.01  150.43     375  155.06  374.68
164.9399     374  173.58  373.05  174.08     373  174.24     373  176.47  372.99
  177.84  372.99  178.64  372.99     180  372.98  188.61  372.78  196.86  372.52
  209.49  372.05  213.58  372.04  216.17  372.02  216.34  372.04  220.66  372.33
  221.51   372.3   223.7  372.24   224.9  372.22  225.52  372.25   227.6  372.25
  228.95   372.2   230.5  372.14  230.69  372.14  232.31     372   234.3     372
  234.35     372  242.05  371.23  243.23  371.12  244.79     371  244.91     371
  244.94     371   247.4     371  247.77     371  248.65     371  248.72  371.01
  248.88     371  252.95     371  254.79  370.92  255.58  370.89  255.75  370.89
  255.92   370.9  257.11  370.94  258.92     371  259.29     371  259.68     371
  259.81     371  259.94     371  261.83  370.76  266.51     370  267.07  369.98
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  267.22  369.98  267.54  369.99  267.77  369.99  268.06     370   273.9  370.79
  275.08  370.93  275.58     371  277.47     371  278.78     371  280.95  370.42
  282.44     370  285.02  369.91  286.27  369.86  288.07  369.92  290.25     370
  292.76   370.5   295.4     371  303.91     371  305.94     371  309.07     371
  311.48     371  318.38     371  318.74  370.93  320.27  370.62  322.75     370
   325.9  369.94  326.99  369.92  331.17  369.97  333.55  369.96   334.2  369.96
  334.57  369.96  337.94  369.93  343.12  369.98  343.38  369.98  343.83  369.99
  345.19     370  345.93  370.16  349.12     371  354.46  371.12  360.88  371.28
  361.39  371.27  362.95  371.24  368.79  371.31  369.61  371.26  369.76  371.25
  371.21  371.21  371.66  371.18  372.93  371.12  374.58  371.01  375.25  371.01
  375.45  371.01  378.86  371.02   382.9  371.01  384.09     371  384.53     371
  384.61     371   384.8     371  385.12     371  385.91     371  387.28  370.99
  389.23  370.99  389.35  370.99  393.72     371  394.41     371  405.45  371.85
  406.93     372  409.75     372  417.14     372  426.37     372  426.48     372
  426.51     372  426.64     372  427.45     372  430.16  371.99  431.06  371.99
  434.22  371.98   435.3  371.98  438.63  371.99  440.45     372  442.09     372
  443.01     372  443.21     372  447.12     372  452.35     372  456.54     372
  458.27     372  460.61     372  462.21     372  464.92     372   465.8     372
  466.81     372  469.09     372  469.15     372  469.21     372  469.32     372
  469.33     372  469.39     372  476.41   372.4  482.41  372.48  483.95  372.53
  484.24  372.54   487.6  372.64   492.7  372.82  497.98     373499.2599     373
  500.88  373.01  502.65     373   502.8     373  503.45     373   503.8     373
   505.7     373   507.9  373.01  511.71  373.02  512.05  373.02512.5099  373.02
  513.65  373.01  515.04  373.01  515.59  373.01  515.71  373.01  516.33     373
  518.65     373  519.03     373  519.66     373  520.13     373  520.43     373
  521.73     373  526.54  373.15  534.27  373.39  554.42     374  554.46     374
  560.05  374.63  563.53     375  565.08  375.01565.5699  375.01  567.39  375.02
  595.11  375.87  599.85     376  600.62     376  601.12  376.01603.5599  376.01
  604.83  376.02  605.98  376.02  608.18  376.03  609.43  376.03   610.3  376.04
  610.46  376.04  613.53  376.05  615.14  376.05618.0699  376.05  620.75  376.05
  627.66  376.07  630.85  376.07  633.77  376.07  634.16  376.07   639.5  376.08
   642.2  376.08  645.15  376.07  653.27  376.07  664.03   376.2  664.28   376.2
665.8799   376.2  666.35   376.2  670.17  376.21  674.21  376.24680.0699   376.3
  680.93  376.31     681  376.31   683.4  376.34  684.68  376.35  684.84  376.36
  690.91   376.4  711.86  376.53  721.72  376.59

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  234.35     .04  405.45     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
        234.35  405.45             .1       .3

CROSS SECTION


RIVER: WASH20
REACH: Centerline Align   RS: 16636.71

INPUT
Description:
Station Elevation Data    num=     322
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  446.715.669983  446.5311.78998  446.3921.69995     44625.35999  445.85
41.16998     44541.84998  444.9642.70996   444.9   51.25   444.355.10999     444
59.73999  443.6567.40997     44368.45996   442.9   77.81     442   80.12  441.79
88.31995     44191.65997  440.67   97.63     440  100.53   439.7  102.12   439.5
  105.55     439  111.77  438.99  112.36  438.99     113  438.99  116.12  438.99
120.0099     439  123.47  439.27  135.08     440   136.6  440.03  138.04  440.06
  152.64  440.24  162.48  440.36  163.58  440.37  166.46  440.38  169.24  440.39
  171.44  440.39  173.59  440.38  182.85  440.35  193.98  440.26  197.16  440.27
  197.64  440.27  198.15  440.28  199.03  440.27  202.21  440.32  204.19  440.29
  206.38  440.25  206.89  440.23  208.04  440.21  209.52  440.24  209.95  440.23
  210.41  440.24  210.66  440.24  211.35  440.25  213.47  440.29  214.29   440.3
  215.27  440.31   215.8  440.33  215.89  440.33  216.95  440.36  226.19  440.35
  236.61  440.28  237.63  440.24  238.08  440.23  240.34  440.15  241.46  440.11
242.0099   440.1  242.48   440.1  242.59   440.1  243.23  440.08  244.66  440.04
  245.14  440.03  246.06     440  246.25     440  246.54     440  247.04     440
  247.23     440  247.43     440  247.62     440  248.21  439.95  248.38  439.91
  249.14  439.78  252.03     439   253.4  438.61  255.33     438  255.97  437.74
  258.23     437  261.11  436.34262.3199     436  267.27  435.5272.3199     435
  280.18  434.45  280.96   434.4  281.89  434.34   284.3  434.19  284.54  434.18
  284.87  434.16  285.38  434.14  287.11  434.07  287.62  434.04288.5099  434.02
288.5699  434.02  288.62  434.02  289.63     434  291.54  434.01  291.88  434.01
  291.98  434.01  292.24  434.01  293.36  434.01  294.04  434.01  294.56  434.01
295.3199  434.01  296.33     434  296.48     434  301.23     434302.8199     434
  305.53     434  309.75     434  320.75     434  322.33     434  329.68     434
  329.69     434  329.84     434330.0099     434  331.19     434  332.81     434
  333.22     434  337.78  434.03  337.86  434.03  339.24  434.02  342.55     434
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 342.94 | 434.01 | 343.24 | 434 | 343.38 | 434 | 343.44 | 434 | 343.72 | 434 |
| 343.98 | 434 | 344.65 | 434 | 344.79 | 434 | 345.44 | 434 | 346.05 | 434 |
| 346.34 | 434 | 348.39 | 434 | 348.85 | 434 | 352.38 | 434 | 355.41 | 434 |
| 357.15 | 434 | 359.44 | 434 | 361.53 | 434 | 363.12 | 434 | 365.4 | 434 |
| 366.71 | 434 | 371.55 | 434 | 371.59 | 434 | 372 | 434 | 372.03 | 434 |
| 372.23 | 434 | 372.49 | 434 | 373.98 | 434 | 376.8 | 434.01 | 380.34 | 434.01 |
| 382.4 | 434.01 | 385.08 | 434.01 | 386.92 | 434.01 | 396.17 | 434 | 398.1 | 433.59 |
| 400.6 | 433 | 412.18 | 432.95 | 418.8 | 432.93 | 419.18 | 432.93 | 419.31 | 432.93 |
| 419.55 | 432.93 | 429.54 | 432.96 | 437.94 | 433 | 448.58 | 433.41 | 451.22 | 433.47 |
| 460.32 | 433.64 | 465.47 | 433.7 | 466.03 | 433.72 | 466.41 | 433.71 | 468.39 | 433.74 |
| 470.33 | 433.76 | 470.46 | 433.76 | 471.7 | 433.77 | 472.57 | 433.78 | 475.27 | 433.79 |
| 475.63 | 433.79 | 475.96 | 433.8 | 477.61 | 433.8 | 479.26 | 433.8 | 479.36 | 433.8 |
| 482.31 | 433.76 | 484.64 | 433.68 | 489.65 | 433.49 | 493.29 | 433.26 | 493.67 | 433.25 |
| 494.02 | 433.24 | 497.84 | 433 | 500.45 | 432.37 | 502.24 | 432 | 510.29 | 431.82 |
| 524.35 | 431.49 | 544.9 | 431 | 545.13 | 431 | 545.1899 | 431 | 546.34 | 431 |
| 546.38 | 431 | 546.52 | 431 | 549.51 | 431 | 549.97 | 431 | 551.58 | 430.99 |
| 552.34 | 430.99 | 553.61 | 431 | 555.9 | 431 | 556.03 | 431 | 556.95 | 431 |
| 559.09 | 430.94 | 559.58 | 430.93 | 562.02 | 430.96 | 568.6899 | 430.89 | 570.36 | 430.91 |
| 571.98 | 430.93 | 572.34 | 430.93 | 572.54 | 430.93 | 572.63 | 430.93 | 578.36 | 431 |
| 578.7 | 431.31 | 579.23 | 432 | 583.87 | 432.69 | 586.08 | 432.97 | 586.3099 | 432.97 |
| 586.54 | 432.98 | 586.91 | 432.98 | 587.55 | 432.99 | 587.84 | 433 | 595.78 | 433.51 |
| 597.35 | 433.55 | 598.12 | 433.6 | 602.49 | 433.69 | 607.26 | 433.84 | 609.08 | 433.88 |
| 610.67 | 433.88 | 610.7 | 433.88 | 612.85 | 433.84 | 618 | 433.99 | 618.4299 | 434 |
| 618.72 | 434 | 619.67 | 434 | 630.41 | 434 | 630.49 | 434 | 632.85 | 434 |
| 639.04 | 434 | 642.9299 | 434 | 644.5699 | 434 | 645.12 | 434 | 645.64 | 434 |
| 646.39 | 434 | 646.49 | 434 | 646.58 | 434 | 648.1799 | 434 | 673.48 | 434.53 |
| 675.1899 | 434.57 | 676.12 | 434.59 | 677.46 | 434.62 | 683.61 | 434.75 | 688.78 | 434.87 |
| 694.02 | 434.98 | 694.88 | 435 | 695 | 435 | 695.0699 | 435 | 695.1899 | 435 |
| 695.24 | 435 | 696.35 | 435 | 697.01 | 435 | 697.11 | 435 | 697.35 | 435 |
| 724.88 | 435.53 | 747.17 | 436 | 751.9 | 436 | 757.51 | 436 | 759.1 | 436 |
| 760.28 | 436 | 767.6899 | 436 | 767.7 | 436 | 768.26 | 436 | 779.1 | 435.99 |
| 785.7 | 435.98 | 794.31 | 435.99 | 802.25 | 436 | 805.56 | 436.08 | 807.28 | 436.12 |
| 812.78 | 436.23 | 814.59 | 436.25 | 816.75 | 436.28 | 825 | 436.4 | 837.6899 | 436.62 |
| 839.08 | 436.64 | 840.33 | 436.66 | 850.48 | 436.79 | 851.96 | 436.82 | 854.75 | 436.86 |
| 866.45 | 437 | 867.54 | 437.02 | 867.97 | 437.02 | 868.55 | 437.01 | 870.86 | 437.01 |
| 872.96 | 437 | 876.22 | 437 | 881.7599 | 437 | 882.03 | 437 | 882.55 | 437 |
| 887.37 | 437 | 892.2 | 437 | 892.9 | 437 | 892.95 | 437 | 893.14 | 437 |
| 893.3 | 437 | 893.62 | 437 | 893.65 | 437 | 897.06 | 437.01 | 908.3 | 437.03 |
| 915.11 | 437.02 | 919.6 | 437.01 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 493.67 | .04 | 587.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 493.67 | 587.84 | | 464.6 | 536.71 | 587.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 16100

INPUT
Description:
Station Elevation Data num= 332

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 432.496 | 1.42 | 432.473 | 3.34 | 432.438 | 6.53 | 432.38 | 20.89 | 432 |
| 22.69 | 431.866 | 23.75 | 431.815 | 24.07 | 431.798 | 24.48 | 431.778 | 27.98 | 431.547 |
| 31.88 | 431.305 | 34.79 | 431.325 | 38.7 | 431.41 | 39.6 | 431.441 | 39.86 | 431.45 |
| 42.76 | 431.516 | 45.15 | 431.546 | 50.82 | 431.381 | 51.22 | 431.379 | 52.05 | 431.348 |
| 54.74 | 431.219 | 55.43 | 431.199 | 56.37 | 431.166 | 56.65 | 431.158 | 58.94 | 431 |
| 67.32 | 430.553 | 67.62 | 430.555 | 68.34 | 430.536 | 69.01 | 430.521 | 69.55 | 430.514 |
| 74.62 | 430.75 | 76.86 | 430.908 | 81.12 | 430.965 | 82.46 | 430.984 | 82.66 | 430.985 |
| 83.96 | 431 | 84.06 | 431 | 84.08 | 431 | 86.15 | 431.006 | 86.63 | 431.007 |
| 87.35 | 431.011 | 90.69 | 431.019 | 91.11 | 431.019 | 91.19 | 431.02 | 91.39 | 431.021 |
| 92.1 | 431.021 | 117.23 | 431.982 | 117.71 | 432 | 117.75 | 432 | 117.9 | 432 |
| 118.56 | 432 | 119.48 | 432 | 119.98 | 432 | 120.34 | 432 | 120.57 | 432 |
| 121.33 | 432 | 122.1 | 432 | 122.52 | 432 | 122.84 | 432 | 122.98 | 432 |
| 125.59 | 432 | 126.63 | 432 | 128.07 | 432 | 128.66 | 432 | 130.22 | 432 |
| 132.79 | 432 | 134.29 | 431.991 | 138.08 | 431.926 | 144.47 | 431.847 | 145.03 | 431.844 |
| 158.03 | 431.872 | 172.95 | 431.969 | 173.28 | 431.972 | 175.69 | 431.996 | 178.13 | 431.99 |
| 178.15 | 431.99 | 180.32 | 432 | 181.94 | 432.001 | 182.32 | 432.001 | 182.66 | 432.001 |
| 186.76 | 432.002 | 186.97 | 432.002 | 188.14 | 432.002 | 188.47 | 432.003 | 190.19 | 432.003 |
| 190.46 | 432.003 | 190.56 | 432.003 | 191.11 | 432.003 | 191.97 | 432.004 | 193.89 | 432.007 |
| 195.62 | 432.004 | 195.7 | 432.004 | 195.94 | 432.005 | 196.18 | 432.004 | 202.45 | 432.007 |
| 220.22 | 432.021 | 220.68 | 432.021 | 240.47 | 432 | 243.22 | 431.997 | 247.14 | 431.995 |
| 249.98 | 431.997 | 252.47 | 432 | 252.83 | 432 | 256.32 | 432.001 | 261.6 | 432.002 |
| 265.27 | 432.003 | 272.48 | 432.004 | 273.03 | 432.004 | 278.32 | 432.003 | 290.23 | 432 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 292.63 | 431.84 | 301.64 | 431.723 | 308.93 | 431.68 | 310.3 | 431.666 | 311.4 | 431.702 |
| 312.02 | 431.703 | 312.63 | 431.712 | 314.44 | 431.715 | 316.62 | 431.739 | 316.77 | 431.738 |
| 317.22 | 431.729 | 317.4 | 431.733 | 319.07 | 431.692 | 320.36 | 431.72 | 321.03 | 431.701 |
| 321.29 | 431.705 | 321.83 | 431.709 | 323.03 | 431.718 | 324.19 | 431.72 | 328.12 | 431.632 |
| 335.9 | 431.448 | 336.32 | 431.438 | 341.9 | 431.253 | 349.29 | 431.001 | 349.72 | 431 |
| 349.77 | 431 | 350.11 | 431 | 351.6 | 430.999 | 351.86 | 430.999 | 353.11 | 430.999 |
| 353.27 | 431 | 353.28 | 430.999 | 353.31 | 430.999 | 354.33 | 430.928 | 354.39 | 430.927 |
| 355.39 | 430.861 | 367.01 | 430.008 | 367.17 | 430.007 | 367.91 | 430 | 369.89 | 429.989 |
| 371.06 | 429.984 | 371.48 | 429.985 | 371.54 | 429.985 | 371.55 | 429.985 | 371.71 | 429.985 |
| 375.45 | 429.565 | 379.27 | 429 | 382.95 | 428.597 | 387.37 | 428 | 392.3 | 427.402 |
| 392.9 | 427.358 | 394.18 | 427.313 | 394.96 | 427.294 | 396.68 | 427.277 | 398.39 | 427.132 |
| 405.11 | 427.013 | 405.29 | 427.013 | 406.01 | 427.012 | 406.22 | 427.013 | 407.09 | 427.012 |
| 407.64 | 427.011 | 407.81 | 427.01 | 408.97 | 427.005 | 409.22 | 427.005 | 410.51 | 427 |
| 412.39 | 426.994 | 413.05 | 426.992 | 421.73 | 426.962 | 429 | 426.987 | 432.51 | 427 |
| 436.55 | 427.844 | 438.08 | 427.88 | 440.47 | 427.987 | 440.85 | 427.985 | 440.96 | 427.987 |
| 441.66 | 427.993 | 442.24 | 427.999 | 442.42 | 428 | 442.52 | 428 | 442.57 | 428 |
| 443.55 | 428.001 | 444.03 | 428.001 | 444.6 | 428 | 446.89 | 427.965 | 447.35 | 427.961 |
| 449.04 | 427.983 | 449.74 | 427.991 | 450.41 | 428 | 450.47 | 428.004 | 450.51 | 428.005 |
| 452.48 | 428.022 | 453.03 | 428.026 | 457.88 | 428.068 | 460.6 | 428.207 | 464.76 | 428.369 |
| 475.77 | 428.611 | 476.22 | 428.646 | 477.67 | 428.727 | 478.65 | 428.771 | 481.32 | 428.873 |
| 485.22 | 429 | 487.91 | 429 | 489.49 | 429 | 492.88 | 429 | 495.52 | 429 |
| 496.76 | 429 | 498.43 | 429 | 499.79 | 428.714 | 502.24 | 428.181 | 502.59 | 428.08 |
| 502.86 | 428 | 505.34 | 427.151 | 505.62 | 427 | 507.95 | 426.055 | 508.2 | 426 |
| 510.36 | 425.986 | 511.32 | 425.984 | 511.67 | 425.987 | 512.73 | 426 | 519.37 | 426.775 |
| 521.09 | 427 | 521.92 | 427.012 | 524.02 | 427.042 | 524.99 | 427.036 | 527.34 | 427 |
| 528.23 | 426.992 | 528.85 | 426.991 | 529.96 | 426.996 | 530.37 | 426.997 | 530.74 | 427 |
| 532.27 | 427.171 | 532.32 | 427.178 | 533.6 | 427.357 | 535.45 | 427.606 | 537.58 | 427.873 |
| 538.5 | 428 | 540.51 | 428.138 | 540.98 | 428.156 | 542.43 | 428.219 | 551.94 | 428.708 |
| 561 | 429 | 561.65 | 429 | 561.77 | 429 | 564.56 | 429 | 573.01 | 429 |
| 573.94 | 428.932 | 575.47 | 428.812 | 578.06 | 428.598 | 587.51 | 428 | 591.45 | 427.998 |
| 591.76 | 427.998 | 591.9 | 427.998 | 592.56 | 427.998 | 605.03 | 427.992 | 607.25 | 427.992 |
| 613.5 | 427.989 | 621.93 | 427.989 | 624.21 | 427.987 | 628.16 | 427.99 | 628.95 | 427.99 |
| 634.45 | 427.991 | 645.83 | 427.997 | 645.94 | 427.997 | 646.41 | 427.997 | 650.26 | 427.999 |
| 650.53 | 427.999 | 651.12 | 427.999 | 652.7 | 428 | 655.1 | 428.16 | 659.32 | 428.401 |
| 669.38 | 428.989 | 669.65 | 428.99 | 670.49 | 429 | 674.37 | 429.031 | 676.9 | 429.051 |
| 679.95 | 429.035 | 680.12 | 429.036 | 680.37 | 429.036 | 686.27 | 429.025 | 689.98 | 429.026 |
| 697.38 | 429.044 | 697.42 | 429.044 | 698.15 | 429.039 | 702.68 | 429.025 | 702.7 | 429.025 |
| 704.59 | 429.017 | 706.28 | 429.008 | 707.24 | 429.005 | 707.99 | 429.003 | 708.25 | 429 |
| 712.13 | 428.917 | 725.26 | 428.658 | 732.69 | 428.518 | 733.15 | 428.51 | 744.25 | 428.261 |
| 754.55 | 428.011 | 756.97 | 428 | 759.15 | 427.985 | 764.7 | 427.955 | 764.98 | 427.953 |
| 768.04 | 427.97 | 771.3 | 427.986 | 772.21 | 427.99 | 774.2 | 428 | 779.82 | 428.01 |
| 782.62 | 428.012 | 785.57 | 428.016 | 788.21 | 428.011 | 794.77 | 428 | 795.47 | 427.994 |
| 796.22 | 427.988 | 797.03 | 427.993 | 797.76 | 428 | 799.63 | 428.523 | 802.03 | 429 |
| 803.84 | 429.979 | 803.87 | 430 | 803.94 | 430.026 | 806.36 | 431 | 806.4 | 431 |
| 807.36 | 431.027 | 812.57 | 431.16 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 382.95 | .04 | 802.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 382.95 | 802.03 | 108.53 | 100 | 93.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 16000.*

INPUT
Description:
Station Elevation Data num= 235

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 431.14 | 5.64 | 431.08 | 5.87 | 431.08 | 6.1 | 431.07 | 6.65 | 431.07 |
| 21.26 | 430.78 | 23.09 | 430.68 | 24.5 | 430.63 | 32.44 | 430.24 | 40.3 | 430.35 |
| 40.57 | 430.36 | 45.95 | 430.44 | 51.72 | 430.3 | 52.13 | 430.3 | 57.37 | 430.13 |
| 57.65 | 430.13 | 61.31 | 429.94 | 61.44 | 429.94 | 68.51 | 429.65 | 68.82 | 429.65 |
| 70.23 | 429.62 | 70.78 | 429.62 | 75.94 | 429.81 | 78.22 | 429.94 | 83.92 | 430.02 |
| 87.68 | 430.04 | 88.16 | 430.05 | 93.73 | 430.07 | 119.31 | 430.87 | 119.8 | 430.88 |
| 130.34 | 430.88 | 130.94 | 430.87 | 137.08 | 430.86 | 139.4 | 430.82 | 147.6 | 430.75 |
| 178.8 | 430.89 | 256.94 | 430.95 | 257.31 | 430.96 | 275.74 | 430.97 | 276.64 | 430.98 |
| 295.37 | 430.96 | 297.81 | 430.83 | 300.14 | 430.8 | 300.31 | 430.8 | 315.8 | 430.66 |
| 316.92 | 430.68 | 322.38 | 430.71 | 322.84 | 430.7 | 323.02 | 430.7 | 324.72 | 430.67 |
| 326.04 | 430.69 | 326.72 | 430.68 | 326.98 | 430.68 | 327.53 | 430.69 | 329.93 | 430.7 |
| 353.92 | 430.19 | 355.48 | 430.14 | 359.57 | 430.12 | 360.61 | 430.06 | 360.67 | 430.06 |
| 361.03 | 430.03 | 362.49 | 429.96 | 371.13 | 429.44 | 373.51 | 429.26 | 373.7 | 429.26 |
| 375.76 | 429.21 | 376.1 | 429.21 | 377.63 | 429.15 | 378.06 | 429.14 | 378.13 | 429.14 |
| 378.29 | 429.13 | 382.25 | 428.64 | 385.99 | 428.1 | 387.18 | 427.97 | 387.24 | 427.96 |
| 389.73 | 427.68 | 397.89 | 426.63 | 398.41 | 426.59 | 398.59 | 426.58 | 400.2 | 426.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 401.7 | 426.47 | 403.2 | 426.32 | 409.05 | 426.08 | 409.21 | 426.07 | 409.84 | 426.06 |
| 410.02 | 426.05 | 411.26 | 426.01 | 415.4 | 425.99 | 415.98 | 425.98 | 432.94 | 425.95 |
| 436.47 | 426.62 | 439.88 | 426.73 | 440.21 | 426.72 | 440.31 | 426.73 | 445.48 | 426.7 |
| 445.88 | 426.69 | 448.55 | 426.72 | 455.06 | 426.76 | 461.06 | 426.99 | 470.66 | 427.16 |
| 472.32 | 427.25 | 478.9 | 427.45 | 490.42 | 427.42 | 493.74 | 426.76 | 494.28 | 426.62 |
| 496.44 | 425.93 | 496.68 | 425.81 | 498.72 | 425.05 | 498.93 | 425.01 | 503.66 | 424.99 |
| 504.08 | 425.02 | 504.28 | 425.03 | 504.57 | 425.05 | 505.34 | 425.12 | 506.34 | 425.28 |
| 507.14 | 425.37 | 513.24 | 425.98 | 514.71 | 426.15 | 515.29 | 426.2 | 515.7 | 426.2 |
| 519.2 | 426.23 | 520.77 | 426.22 | 521.04 | 426.21 | 521.77 | 426.2 | 522.66 | 426.2 |
| 522.72 | 426.19 | 526.77 | 426.2 | 527.79 | 426.28 | 528 | 426.29 | 528.55 | 426.33 |
| 536 | 427.04 | 538.4 | 427.17 | 538.95 | 427.18 | 552.88 | 427.79 | 562.78 | 428 |
| 577.07 | 428 | 579.18 | 427.92 | 594.32 | 427.31 | 598.55 | 427.31 | 599.01 | 427.3 |
| 617.55 | 427.23 | 617.81 | 427.22 | 644.7 | 427.19 | 655.88 | 427.33 | 663.85 | 427.37 |
| 664.41 | 427.38 | 671.89 | 427.4 | 674.75 | 427.53 | 674.88 | 427.53 | 684.05 | 427.89 |
| 684.14 | 427.89 | 690.71 | 428.08 | 691.36 | 428.09 | 691.74 | 428.11 | 692.06 | 428.1 |
| 699.08 | 428.11 | 700.33 | 428.12 | 700.6 | 428.13 | 725.1 | 428.01 | 731.36 | 427.91 |
| 735.34 | 427.85 | 735.65 | 427.85 | 737.68 | 427.81 | 737.99 | 427.81 | 738.45 | 427.79 |
| 739.05 | 427.79 | 739.21 | 427.78 | 742.34 | 427.74 | 751.5 | 427.42 | 754.66 | 427.39 |
| 755.3 | 427.4 | 755.38 | 427.41 | 755.46 | 427.4 | 758.23 | 427.42 | 759.71 | 427.4 |
| 763.33 | 427.37 | 766.05 | 427.43 | 767.07 | 427.43 | 775.56 | 427.49 | 795.07 | 427.21 |
| 795.44 | 427.21 | 795.96 | 427.2 | 799.13 | 427.19 | 799.4 | 427.18 | 815.33 | 427.2 |
| 816.46 | 427.19 | 816.76 | 427.18 | 817.37 | 427.19 | 817.43 | 427.18 | 817.59 | 427.18 |
| 817.74 | 427.17 | 818.39 | 427.17 | 821.63 | 427.1 | 822.07 | 427.08 | 825.54 | 427.02 |
| 829.99 | 427.03 | 841.77 | 426.94 | 844.5 | 426.97 | 846.72 | 427.41 | 848.3 | 427.63 |
| 848.93 | 427.82 | 849.58 | 428 | 850.06 | 428.23 | 851.17 | 428.35 | 851.57 | 428.37 |
| 851.69 | 428.4 | 851.87 | 428.41 | 851.93 | 428.42 | 852.12 | 428.43 | 852.25 | 428.45 |
| 852.46 | 428.47 | 852.98 | 428.63 | 853.45 | 428.76 | 853.54 | 428.78 | 854.03 | 428.83 |
| 854.17 | 428.84 | 855.31 | 428.95 | 857.77 | 429.23 | 857.9 | 429.25 | 858.22 | 429.27 |
| 862 | 429.61 | 862.61 | 429.65 | 869.17 | 430.18 | 869.35 | 430.19 | 869.74 | 430.19 |
| 870.12 | 430.2 | 870.59 | 430.21 | 878.2 | 430.24 | 885.33 | 430.07 | 886.38 | 430.08 |
| 886.73 | 430.07 | 893.2 | 430 | 893.58 | 430 | 893.78 | 429.99 | 897.25 | 429.93 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 389.73 | .04 | 849.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 389.73 | 849.58 | 108.53 | 100 | 93.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15900.*

INPUT
Description:
Station Elevation Data num= 221

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 429.78 | 6.2 | 429.76 | 21.63 | 429.57 | 23.49 | 429.49 | 33.01 | 429.18 |
| 41 | 429.26 | 41.27 | 429.27 | 46.75 | 429.33 | 52.62 | 429.23 | 53.03 | 429.23 |
| 56.68 | 429.13 | 58.37 | 429.1 | 62.38 | 428.96 | 62.51 | 428.95 | 69.71 | 428.74 |
| 72.01 | 428.72 | 77.26 | 428.86 | 79.58 | 428.97 | 85.38 | 429.05 | 85.59 | 429.05 |
| 85.95 | 429.06 | 89.2 | 429.08 | 89.7 | 429.09 | 93.9 | 429.11 | 94.34 | 429.12 |
| 95.36 | 429.12 | 121.88 | 429.77 | 125.63 | 429.77 | 149.59 | 429.66 | 150.17 | 429.65 |
| 163.62 | 429.68 | 163.83 | 429.69 | 179.08 | 429.76 | 179.42 | 429.77 | 248.99 | 429.87 |
| 249.09 | 429.88 | 281.45 | 429.95 | 300.51 | 429.91 | 303 | 429.81 | 321.29 | 429.65 |
| 327.99 | 429.68 | 328.46 | 429.67 | 328.65 | 429.67 | 330.37 | 429.65 | 331.71 | 429.67 |
| 332.4 | 429.66 | 357.6 | 429.39 | 361.67 | 429.28 | 362.16 | 429.28 | 362.51 | 429.27 |
| 365.62 | 429.25 | 365.79 | 429.24 | 366.88 | 429.19 | 366.95 | 429.19 | 377.59 | 428.7 |
| 380.01 | 428.52 | 380.18 | 428.51 | 382.3 | 428.43 | 382.65 | 428.43 | 383.27 | 428.39 |
| 384.64 | 428.29 | 384.71 | 428.29 | 384.88 | 428.28 | 392.71 | 427.19 | 393.92 | 427.06 |
| 393.98 | 427.05 | 395.22 | 426.93 | 396.52 | 426.76 | 403.47 | 425.85 | 403.92 | 425.81 |
| 404.07 | 425.8 | 406.73 | 425.66 | 408 | 425.51 | 413.13 | 425.13 | 414.47 | 425.05 |
| 415.01 | 425.01 | 433.38 | 424.9 | 436.38 | 425.4 | 437.52 | 425.41 | 439.3 | 425.47 |
| 439.58 | 425.46 | 439.66 | 425.46 | 440.18 | 425.47 | 444.07 | 425.43 | 444.41 | 425.42 |
| 446.19 | 425.43 | 446.69 | 425.44 | 452.24 | 425.45 | 457.36 | 425.6 | 465.55 | 425.7 |
| 465.88 | 425.72 | 466.96 | 425.77 | 472.58 | 425.9 | 482.4 | 425.85 | 485.24 | 425.34 |
| 485.5 | 425.28 | 485.7 | 425.23 | 487.54 | 424.71 | 487.75 | 424.62 | 489.48 | 424.05 |
| 489.67 | 424.01 | 496 | 423.99 | 497.95 | 424.23 | 498.33 | 424.3 | 499.1 | 424.46 |
| 500.04 | 424.56 | 501.66 | 424.68 | 508.81 | 425.36 | 509.48 | 425.4 | 514.02 | 425.42 |
| 515.84 | 425.41 | 516.16 | 425.4 | 517 | 425.4 | 517.3 | 425.39 | 519.43 | 425.39 |
| 520.02 | 425.38 | 520.19 | 425.39 | 521.72 | 425.39 | 522.29 | 425.4 | 522.8 | 425.4 |
| 524.86 | 425.5 | 524.98 | 425.51 | 533.51 | 426.08 | 553.08 | 426.84 | 564.55 | 427 |
| 583.63 | 426.98 | 595.45 | 426.77 | 595.77 | 426.76 | 601.13 | 426.63 | 607 | 426.61 |
| 607.19 | 426.6 | 622.22 | 426.51 | 622.72 | 426.5 | 659.55 | 426.39 | 672.51 | 426.66 |
| 691.08 | 426.8 | 694.39 | 426.9 | 694.55 | 426.9 | 704.42 | 427.15 | 705.18 | 427.16 |
| 705.29 | 427.17 | 713.66 | 427.21 | 714.1 | 427.22 | 723.46 | 427.19 | 724.06 | 427.2 |
| 724.47 | 427.2 | 724.97 | 427.21 | 725.33 | 427.2 | 726.38 | 427.21 | 728.68 | 427.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 728.92 | 427.17 | 729.26 | 427.16 | 737.4 | 427.02 | 750.47 | 427.02 | 752.73 | 426.97 |
| 752.79 | 426.97 | 760.05 | 426.8 | 767.73 | 426.62 | 768.64 | 426.59 | 773.08 | 426.55 |
| 783.39 | 426.06 | 785.64 | 426.04 | 787.06 | 426.07 | 787.8 | 426.1 | 787.89 | 426.11 |
| 787.99 | 426.11 | 790.89 | 426.18 | 796.71 | 426.16 | 797.12 | 426.17 | 800.27 | 426.32 |
| 811.17 | 426.62 | 817.4 | 426.58 | 827.51 | 426.46 | 857.42 | 426.4 | 858.6 | 426.38 |
| 858.73 | 426.38 | 859.07 | 426.36 | 859.77 | 426.37 | 859.84 | 426.37 | 860.21 | 426.35 |
| 863.57 | 426.23 | 864.04 | 426.2 | 869.26 | 426.02 | 874.42 | 426.04 | 887.11 | 425.89 |
| 891.24 | 425.94 | 893.82 | 426.29 | 895.64 | 426.47 | 896.38 | 426.75 | 897.13 | 427 |
| 897.99 | 427.41 | 898.06 | 427.41 | 898.15 | 427.42 | 899.97 | 427.5 | 900.68 | 427.5 |
| 900.88 | 427.54 | 901.21 | 427.55 | 901.31 | 427.56 | 901.66 | 427.57 | 902.25 | 427.6 |
| 902.32 | 427.61 | 903.19 | 427.86 | 903.25 | 427.87 | 904.02 | 428.06 | 904.17 | 428.08 |
| 907.32 | 428.21 | 911.69 | 428.47 | 911.93 | 428.49 | 919.22 | 428.85 | 931.97 | 429.37 |
| 933.67 | 429.39 | 933.74 | 429.39 | 934.5 | 429.4 | 934.82 | 429.41 | 948.05 | 429.43 |
| 960.14 | 429.06 | 962.6 | 429.06 | 974.73 | 428.87 | 975.41 | 428.85 | 975.76 | 428.85 |
| 981.94 | 428.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 396.52 | .04 | 897.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 396.52 | 897.13 | 108.53 | 100 | 93.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15800.*

INPUT
Description:
Station Elevation Data num= 242

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 428.43 | 22 | 428.35 | 25.01 | 428.29 | 25.35 | 428.29 | 33.57 | 428.12 |
| 40.76 | 428.16 | 41.7 | 428.18 | 47.55 | 428.22 | 53.52 | 428.15 | 59.37 | 428.07 |
| 63.21 | 427.98 | 63.45 | 427.97 | 63.58 | 427.97 | 70.9 | 427.83 | 73.25 | 427.82 |
| 79.67 | 427.95 | 80.94 | 428 | 86.84 | 428.08 | 87.05 | 428.08 | 87.42 | 428.09 |
| 95.51 | 428.16 | 95.95 | 428.17 | 96.99 | 428.17 | 123.97 | 428.65 | 128.59 | 428.65 |
| 129.03 | 428.64 | 134.88 | 428.63 | 135.5 | 428.62 | 144.26 | 428.58 | 144.5 | 428.57 |
| 169.67 | 428.59 | 169.89 | 428.6 | 185.03 | 428.67 | 196.69 | 428.62 | 196.78 | 428.61 |
| 231.36 | 428.68 | 256.23 | 428.82 | 256.52 | 428.83 | 265.89 | 428.86 | 266.27 | 428.87 |
| 286.27 | 428.92 | 305.65 | 428.87 | 310.59 | 428.78 | 326.79 | 428.64 | 327.95 | 428.65 |
| 328.6 | 428.64 | 329.24 | 428.65 | 337.39 | 428.64 | 338.09 | 428.63 | 338.37 | 428.64 |
| 353.75 | 428.61 | 354.19 | 428.6 | 366.24 | 428.46 | 368.31 | 428.41 | 368.72 | 428.41 |
| 369.92 | 428.39 | 370.29 | 428.4 | 370.41 | 428.4 | 370.56 | 428.39 | 371.88 | 428.37 |
| 372.09 | 428.37 | 373.16 | 428.32 | 373.22 | 428.31 | 375.11 | 428.26 | 377.71 | 428.13 |
| 384.05 | 427.97 | 386.51 | 427.78 | 386.68 | 427.77 | 388.84 | 427.64 | 388.97 | 427.64 |
| 389.2 | 427.65 | 389.83 | 427.6 | 390.78 | 427.49 | 391.22 | 427.45 | 391.29 | 427.44 |
| 391.46 | 427.42 | 395.4 | 426.84 | 397.99 | 426.47 | 400.66 | 426.15 | 400.72 | 426.15 |
| 401.99 | 426.03 | 403.3 | 425.84 | 409.06 | 425.08 | 409.43 | 425.04 | 411.01 | 424.93 |
| 411.75 | 424.85 | 412.81 | 424.7 | 416.94 | 424.21 | 417.05 | 424.19 | 417.5 | 424.14 |
| 417.63 | 424.13 | 418.5 | 424.02 | 418.6 | 424.01 | 419.32 | 424 | 419.47 | 423.99 |
| 433.81 | 423.86 | 436.3 | 424.17 | 438.71 | 424.21 | 438.94 | 424.2 | 440 | 424.2 |
| 440.61 | 424.19 | 441.25 | 424.19 | 442.66 | 424.16 | 449.43 | 424.14 | 460.44 | 424.25 |
| 461.61 | 424.29 | 466.26 | 424.35 | 474.39 | 424.27 | 476.73 | 423.93 | 476.95 | 423.88 |
| 477.11 | 423.85 | 478.64 | 423.5 | 478.81 | 423.43 | 480.25 | 423.04 | 480.4 | 423.02 |
| 482.32 | 422.99 | 488.35 | 422.99 | 488.9 | 423.08 | 490.56 | 423.35 | 491 | 423.43 |
| 491.87 | 423.64 | 492.94 | 423.75 | 494.78 | 423.86 | 500.58 | 424.37 | 500.98 | 424.4 |
| 502.92 | 424.57 | 503.68 | 424.59 | 504.23 | 424.6 | 508.84 | 424.61 | 510.92 | 424.6 |
| 511.28 | 424.59 | 517.61 | 424.59 | 518.25 | 424.6 | 518.83 | 424.6 | 521.17 | 424.67 |
| 521.23 | 424.67 | 521.31 | 424.68 | 522.04 | 424.7 | 531.01 | 425.12 | 553.28 | 425.89 |
| 585.01 | 426 | 585.18 | 426.01 | 587.97 | 426.04 | 605.82 | 425.99 | 607.94 | 425.94 |
| 613.53 | 425.92 | 615.02 | 425.91 | 615.5 | 425.9 | 638.4 | 425.7 | 638.59 | 425.69 |
| 638.93 | 425.69 | 646.99 | 425.6 | 674.4 | 425.6 | 689.15 | 425.99 | 689.27 | 425.99 |
| 699.49 | 426.13 | 699.66 | 426.13 | 704.33 | 426.2 | 714.04 | 426.26 | 714.21 | 426.27 |
| 725.05 | 426.42 | 726.31 | 426.44 | 726.44 | 426.44 | 736.46 | 426.34 | 736.88 | 426.33 |
| 747.11 | 426.26 | 748.15 | 426.28 | 750.43 | 426.3 | 753.05 | 426.24 | 753.32 | 426.24 |
| 762.97 | 426.02 | 777.71 | 426.02 | 777.83 | 426.01 | 780.41 | 425.94 | 780.47 | 425.93 |
| 788.73 | 425.69 | 797.06 | 425.44 | 798.07 | 425.4 | 798.87 | 425.4 | 799.08 | 425.39 |
| 803.56 | 425.37 | 815.29 | 424.71 | 817.84 | 424.7 | 819.46 | 424.75 | 820.3 | 424.8 |
| 820.36 | 424.8 | 820.51 | 424.81 | 823.82 | 424.94 | 824.17 | 424.93 | 826.12 | 424.93 |
| 826.18 | 424.92 | 828.15 | 424.91 | 830.44 | 424.95 | 830.9 | 424.97 | 834.49 | 425.21 |
| 836.56 | 425.3 | 846.89 | 425.74 | 899.5 | 425.6 | 900.85 | 425.57 | 900.99 | 425.56 |
| 901.38 | 425.54 | 902.18 | 425.55 | 902.26 | 425.55 | 902.47 | 425.53 | 902.67 | 425.52 |
| 903.54 | 425.49 | 907.04 | 425.3 | 912.97 | 425.03 | 922.99 | 425.01 | 933.28 | 424.83 |
| 937.98 | 424.91 | 940.91 | 425.17 | 942.99 | 425.31 | 943.83 | 425.69 | 944.68 | 426 |
| 945.92 | 426.58 | 945.98 | 426.58 | 946.15 | 426.59 | 948.76 | 426.66 | 949.78 | 426.63 |
| 950.07 | 426.69 | 950.54 | 426.69 | 950.69 | 426.7 | 951.19 | 426.7 | 952.04 | 426.73 |
| 952.14 | 426.74 | 953.39 | 427.08 | 953.48 | 427.11 | 954.59 | 427.35 | 954.8 | 427.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 959.33 | 427.48 | 965.62 | 427.72 | 965.97 | 427.74 | 975.87 | 428.08 | 995.24 | 428.56 |
| 997.21 | 428.58 | 997.31 | 428.59 | 1017.89 | 428.62 | 1035.29 | 428.05 | 1038.81 | 428.04 |
| 1056.26 | 427.74 | 1066.62 | 427.47 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 403.3 | .04 | 944.68 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 403.3 | 944.68 | 108.53 | 100 | 93.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15700.*

INPUT
Description:
Station Elevation Data num= 219

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 427.07 | 22.37 | 427.14 | 41.44 | 427.08 | 54.85 | 427.08 | 72.09 | 426.92 |
| 72.41 | 426.93 | 74.48 | 426.92 | 81.01 | 426.99 | 82.31 | 427.03 | 88.3 | 427.11 |
| 88.52 | 427.12 | 89.91 | 427.13 | 90.02 | 427.14 | 97.65 | 427.21 | 97.87 | 427.22 |
| 98.63 | 427.22 | 108.53 | 427.39 | 128.5 | 427.54 | 128.87 | 427.53 | 130.75 | 427.53 |
| 131.2 | 427.52 | 154.71 | 427.46 | 155.31 | 427.47 | 172.53 | 427.49 | 172.75 | 427.5 |
| 190.77 | 427.55 | 204.06 | 427.48 | 204.65 | 427.47 | 209.48 | 427.46 | 209.57 | 427.45 |
| 209.82 | 427.46 | 235.25 | 427.57 | 291.08 | 427.89 | 292.38 | 427.88 | 292.74 | 427.87 |
| 310.8 | 427.83 | 315.82 | 427.77 | 344.63 | 427.61 | 369.83 | 427.64 | 374.5 | 427.55 |
| 374.92 | 427.55 | 376.15 | 427.53 | 376.79 | 427.53 | 378.13 | 427.49 | 378.35 | 427.49 |
| 379.44 | 427.45 | 379.5 | 427.44 | 381.42 | 427.41 | 384.07 | 427.29 | 390.51 | 427.23 |
| 393.02 | 427.03 | 393.19 | 427.02 | 395.38 | 426.86 | 395.52 | 426.86 | 395.74 | 426.87 |
| 396.38 | 426.8 | 397.87 | 426.59 | 398.05 | 426.57 | 402.05 | 425.93 | 402.21 | 425.91 |
| 404.69 | 425.56 | 407.4 | 425.25 | 407.46 | 425.24 | 408.75 | 425.13 | 410.09 | 424.92 |
| 414.64 | 424.3 | 415.94 | 424.16 | 416.19 | 424.14 | 416.78 | 424.04 | 417.61 | 423.88 |
| 417.97 | 423.82 | 420.89 | 423.27 | 420.97 | 423.26 | 421.33 | 423.18 | 421.85 | 423.08 |
| 422.12 | 423.02 | 422.2 | 423.01 | 422.77 | 422.99 | 422.89 | 422.99 | 424.44 | 422.96 |
| 424.76 | 422.96 | 434.24 | 422.81 | 436.21 | 422.95 | 436.96 | 422.94 | 438.12 | 422.95 |
| 438.31 | 422.94 | 438.7 | 422.94 | 438.99 | 422.93 | 439.15 | 422.93 | 439.62 | 422.92 |
| 440.14 | 422.92 | 441.25 | 422.89 | 442.3 | 422.88 | 442.64 | 422.87 | 455.55 | 422.8 |
| 459.93 | 422.8 | 466.37 | 422.7 | 468.23 | 422.51 | 468.4 | 422.48 | 468.53 | 422.47 |
| 469.74 | 422.28 | 469.88 | 422.24 | 471.01 | 422.04 | 471.14 | 422.02 | 472.19 | 422 |
| 480.69 | 422 | 481.3 | 422.11 | 481.61 | 422.16 | 483.66 | 422.57 | 484.64 | 422.82 |
| 485.83 | 422.95 | 486.18 | 422.96 | 487.9 | 423.05 | 494.41 | 423.57 | 494.85 | 423.61 |
| 497.02 | 423.78 | 497.88 | 423.79 | 513.49 | 423.79 | 516.37 | 423.82 | 516.68 | 423.83 |
| 517.49 | 423.84 | 517.64 | 423.84 | 536.5 | 424.34 | 553.47 | 424.95 | 589.04 | 425 |
| 589.24 | 425.01 | 592.37 | 425.1 | 607.5 | 425.27 | 612.38 | 425.29 | 621.69 | 425.22 |
| 622.23 | 425.21 | 622.68 | 425.21 | 623.22 | 425.2 | 648.89 | 424.93 | 649.11 | 424.93 |
| 649.49 | 424.92 | 658.53 | 424.8 | 689.25 | 424.8 | 705.78 | 425.33 | 705.92 | 425.33 |
| 717.38 | 425.5 | 717.57 | 425.51 | 722.81 | 425.6 | 747.58 | 425.72 | 758.25 | 425.46 |
| 758.82 | 425.46 | 769.67 | 425.33 | 774.48 | 425.38 | 788.88 | 425.01 | 805.06 | 425.01 |
| 805.2 | 425 | 808.08 | 424.9 | 808.16 | 424.9 | 817.41 | 424.58 | 823.29 | 424.39 |
| 827.89 | 424.2 | 833.65 | 424.19 | 834.04 | 424.18 | 847.18 | 423.35 | 850.05 | 423.35 |
| 851.86 | 423.42 | 852.81 | 423.5 | 852.87 | 423.5 | 856.75 | 423.69 | 861.6 | 423.68 |
| 864.17 | 423.73 | 864.69 | 423.76 | 868.02 | 424.04 | 868.71 | 424.11 | 870.22 | 424.18 |
| 882.61 | 424.87 | 917.63 | 424.8 | 918.02 | 424.79 | 941.59 | 424.8 | 943.09 | 424.76 |
| 943.69 | 424.72 | 944.59 | 424.74 | 944.68 | 424.73 | 944.74 | 424.73 | 944.92 | 424.71 |
| 945.14 | 424.69 | 946.11 | 424.65 | 950.03 | 424.4 | 950.9 | 424.36 | 951.55 | 424.31 |
| 956.69 | 424.03 | 962.84 | 424.06 | 963.27 | 424.05 | 979.46 | 423.77 | 980.51 | 423.79 |
| 980.69 | 423.79 | 984.72 | 423.88 | 990.33 | 424.16 | 991.27 | 424.62 | 992.23 | 425 |
| 993.84 | 425.75 | 993.92 | 425.76 | 994.15 | 425.76 | 997.55 | 425.82 | 998.89 | 425.76 |
| 999.27 | 425.84 | 999.88 | 425.83 | 1000.07 | 425.84 | 1000.72 | 425.83 | 1001.83 | 425.86 |
| 1001.96 | 425.87 | 1003.59 | 426.31 | 1003.71 | 426.34 | 1005.15 | 426.65 | 1005.44 | 426.69 |
| 1011.35 | 426.74 | 1032.92 | 427.32 | 1060.76 | 427.78 | 1060.89 | 427.78 | 1087.74 | 427.81 |
| 1110.43 | 427.03 | 1115.03 | 427.02 | 1139.06 | 426.57 | 1151.31 | 426.23 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 410.09 | .04 | 992.23 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 410.09 | 992.23 | 108.53 | 100 | 93.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15600

INPUT
Description:
Station Elevation Data num= 284

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 425.713 | 5.12 | 425.792 | 6.03 | 425.802 | 6.28 | 425.802 | 6.52 | 425.805 |
| 33.19 | 425.997 | 65.34 | 426 | 65.58 | 426.001 | 65.72 | 426.001 | 82.35 | 426.036 |
| 90.36 | 426.156 | 110.33 | 426.397 | 130.63 | 426.42 | 145.79 | 426.344 | 146.11 | 426.344 |
| 146.62 | 426.343 | 149.11 | 426.329 | 149.36 | 426.328 | 168.24 | 426.423 | 172.02 | 426.402 |
| 172.24 | 426.405 | 175.38 | 426.394 | 175.61 | 426.397 | 177.24 | 426.414 | 177.55 | 426.415 |
| 183.77 | 426.446 | 188.02 | 426.458 | 192.41 | 426.446 | 194.83 | 426.431 | 201.37 | 426.372 |
| 202.12 | 426.369 | 203.4 | 426.357 | 210 | 426.335 | 210.35 | 426.335 | 211.14 | 426.33 |
| 211.58 | 426.334 | 211.88 | 426.331 | 213.06 | 426.317 | 239.14 | 426.457 | 251.67 | 426.607 |
| 261.87 | 426.688 | 262.28 | 426.69 | 262.37 | 426.691 | 263.65 | 426.7 | 264.85 | 426.71 |
| 265.15 | 426.712 | 266.61 | 426.727 | 277.09 | 426.788 | 277.42 | 426.791 | 283.34 | 426.813 |
| 289.03 | 426.799 | 294.94 | 426.858 | 295.9 | 426.862 | 297.58 | 426.841 | 297.67 | 426.84 |
| 299.25 | 426.827 | 313.31 | 426.795 | 313.56 | 426.795 | 321.04 | 426.763 | 321.22 | 426.762 |
| 334 | 426.639 | 343.74 | 426.58 | 351.65 | 426.593 | 368.97 | 426.738 | 375.95 | 426.765 |
| 378.56 | 426.734 | 382.37 | 426.657 | 382.87 | 426.663 | 386.17 | 426.561 | 387.73 | 426.568 |
| 390.42 | 426.462 | 396.97 | 426.491 | 399.72 | 426.271 | 401.92 | 426.074 | 402.06 | 426.076 |
| 402.29 | 426.084 | 402.94 | 426 | 403.2 | 425.957 | 408.86 | 425 | 411.38 | 424.645 |
| 414.14 | 424.343 | 414.2 | 424.337 | 415.51 | 424.231 | 416.87 | 424 | 420.52 | 423.486 |
| 421.37 | 423.353 | 422.68 | 423 | 424.91 | 422.312 | 425.82 | 422 | 462.99 | 421 |
| 473.03 | 421 | 474.05 | 421.205 | 474.51 | 421.304 | 476.32 | 421.701 | 477.41 | 422 |
| 478.73 | 422.14 | 479.11 | 422.152 | 481.02 | 422.23 | 488.23 | 422.781 | 491.13 | 422.99 |
| 492.09 | 422.989 | 492.76 | 422.99 | 497.54 | 422.984 | 498.48 | 422.984 | 501.06 | 422.976 |
| 501.51 | 422.976 | 502.7 | 422.973 | 503.12 | 422.972 | 504.15 | 422.972 | 506.13 | 422.976 |
| 506.96 | 422.975 | 510.53 | 423 | 512.56 | 423.004 | 512.91 | 423.004 | 513.8 | 423.006 |
| 513.86 | 423.006 | 514.88 | 423.009 | 534.87 | 423.366 | 536.54 | 423.428 | 553.67 | 424 |
| 570.11 | 423.999 | 570.43 | 424 | 593.08 | 424 | 596.76 | 424.154 | 596.84 | 424.156 |
| 607.53 | 424.409 | 613.53 | 424.526 | 613.99 | 424.53 | 618.93 | 424.585 | 627.05 | 424.551 |
| 628.5 | 424.534 | 630.27 | 424.51 | 630.35 | 424.51 | 630.95 | 424.498 | 639.3 | 424.432 |
| 651.36 | 424.276 | 652.07 | 424.264 | 659.39 | 424.164 | 659.63 | 424.163 | 670.06 | 424.003 |
| 670.26 | 424.003 | 671.5 | 424 | 704.1 | 424 | 722.42 | 424.661 | 722.57 | 424.661 |
| 738.24 | 424.93 | 739.83 | 424.963 | 741.28 | 424.999 | 753.55 | 424.999 | 756.07 | 424.999 |
| 763.98 | 425 | 767.01 | 424.996 | 767.5 | 424.996 | 768.57 | 424.994 | 768.73 | 424.994 |
| 779.49 | 424.621 | 780.55 | 424.581 | 787.99 | 424.472 | 793.2 | 424.408 | 794.4 | 424.411 |
| 795.25 | 424.423 | 795.7 | 424.427 | 796.54 | 424.439 | 797.04 | 424.44 | 798.53 | 424.466 |
| 806.85 | 424.24 | 814.48 | 424.011 | 823.36 | 424.001 | 827.58 | 423.998 | 832.41 | 424 |
| 832.56 | 423.988 | 844.99 | 423.511 | 851.25 | 423.287 | 852.61 | 423.231 | 857.7 | 423.006 |
| 858.24 | 423.005 | 858.69 | 423.005 | 858.95 | 423.004 | 864.08 | 423.001 | 864.52 | 423 |
| 868.36 | 422.763 | 879.08 | 422 | 882.25 | 422 | 884.26 | 422.101 | 885.31 | 422.197 |
| 885.38 | 422.202 | 885.44 | 422.205 | 885.57 | 422.209 | 889.68 | 422.451 | 892.53 | 422.453 |
| 892.61 | 422.448 | 895.05 | 422.449 | 897.9 | 422.523 | 898.47 | 422.557 | 902.17 | 422.919 |
| 902.93 | 423 | 906.35 | 423.207 | 908.74 | 423.357 | 918.33 | 423.996 | 918.5 | 424 |
| 922.5 | 424.024 | 925.18 | 424.046 | 927.85 | 424.059 | 935.51 | 424.032 | 941.41 | 424.034 |
| 942.44 | 424.036 | 945.22 | 424.037 | 950.47 | 424.027 | 951.07 | 424.028 | 955.33 | 424 |
| 957.13 | 423.999 | 957.56 | 423.998 | 964.86 | 423.995 | 965.03 | 423.996 | 983.67 | 423.999 |
| 985.34 | 423.955 | 986 | 423.905 | 987 | 423.924 | 987.1 | 423.913 | 987.16 | 423.906 |
| 987.36 | 423.887 | 987.61 | 423.867 | 988.68 | 423.814 | 989.95 | 423.721 | 992.36 | 423.554 |
| 993.03 | 423.502 | 993.99 | 423.45 | 994.71 | 423.388 | 1000.4 | 423.039 | 1003.94 | 423.055 |
| 1004.69 | 423.054 | 1007.22 | 423.069 | 1009.27 | 423.05 | 1013.76 | 423 | 1015.47 | 422.962 |
| 1025.68 | 422.713 | 1026.79 | 422.734 | 1037.68 | 423 | 1038.72 | 423.548 | 1039.78 | 424 |
| 1041.77 | 424.927 | 1041.87 | 424.932 | 1041.93 | 424.94 | 1042.15 | 424.935 | 1046.34 | 424.975 |
| 1047.99 | 424.894 | 1048.46 | 424.983 | 1049.21 | 424.975 | 1049.45 | 424.975 | 1050.25 | 424.958 |
| 1050.78 | 424.975 | 1051.62 | 424.994 | 1051.78 | 425 | 1053.79 | 425.531 | 1053.94 | 425.569 |
| 1055.72 | 425.943 | 1055.77 | 425.957 | 1056.07 | 426 | 1058.09 | 426 | 1058.66 | 426.001 |
| 1063.36 | 426.003 | 1089.97 | 426.569 | 1090.89 | 426.576 | 1093.42 | 426.592 | 1106.17 | 426.731 |
| 1122.77 | 426.949 | 1124.31 | 426.971 | 1124.47 | 426.974 | 1126.24 | 426.999 | 1126.97 | 427 |
| 1153.25 | 427.002 | 1157.58 | 427 | 1182.96 | 426.093 | 1185.57 | 426.017 | 1186.91 | 426.002 |
| 1191.24 | 425.999 | 1192.66 | 425.964 | 1201.8 | 425.813 | 1203.07 | 425.786 | 1212.37 | 425.638 |
| 1219.32 | 425.47 | 1220.88 | 425.425 | 1221.7 | 425.408 | 1235.99 | 425.003 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 416.87 | .04 | 1039.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 416.87 | 1039.78 | 59.25 | 86.12 | 98.5 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15513.8*

INPUT
Description:
Station Elevation Data num= 257

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 425.14 | 5.73 | 425.21 | 9.35 | 425.23 | 9.85 | 425.24 | 78.28 | 425.35 |
| 82.11 | 425.4 | 82.25 | 425.4 | 85.8 | 425.44 | 85.89 | 425.44 | 89.3 | 425.48 |
| 124.17 | 425.7 | 141.97 | 425.66 | 149.15 | 425.69 | 149.68 | 425.7 | 160.57 | 425.74 |
| 160.67 | 425.73 | 182.26 | 425.74 | 200.7 | 425.64 | 201.11 | 425.65 | 202.52 | 425.64 |
| 263.38 | 425.97 | 263.62 | 425.98 | 274.73 | 425.97 | 281.26 | 426.02 | 282.86 | 426 |
| 282.94 | 426 | 334.25 | 425.71 | 344.05 | 425.76 | 344.18 | 425.75 | 344.42 | 425.76 |
| 347.39 | 425.77 | 357.54 | 425.81 | 359.83 | 425.79 | 363.45 | 425.73 | 363.93 | 425.73 |
| 367.07 | 425.65 | 368.55 | 425.65 | 371.11 | 425.57 | 377.33 | 425.59 | 382.04 | 425.26 |
| 382.17 | 425.26 | 382.39 | 425.27 | 383.25 | 425.17 | 385.64 | 424.83 | 388.63 | 424.22 |
| 389.06 | 424.15 | 391.03 | 423.79 | 391.95 | 423.65 | 392.24 | 423.6 | 393.65 | 423.43 |
| 393.71 | 423.43 | 394.96 | 423.3 | 396.25 | 423.08 | 396.63 | 423.02 | 396.85 | 422.98 |
| 398.24 | 422.93 | 398.34 | 422.92 | 398.55 | 422.92 | 402.21 | 422.79 | 402.81 | 422.78 |
| 405.03 | 422.71 | 405.29 | 422.71 | 405.68 | 422.72 | 406.93 | 422.71 | 408.26 | 422.66 |
| 408.35 | 422.65 | 409.58 | 422.57 | 409.94 | 422.54 | 411.15 | 422.47 | 411.56 | 422.44 |
| 415.5 | 422.03 | 415.67 | 422.02 | 415.92 | 422.01 | 416.02 | 422 | 418.4 | 421.83 |
| 421.88 | 421.75 | 422.45 | 421.73 | 422.54 | 421.73 | 422.67 | 421.72 | 423.34 | 421.7 |
| 426.71 | 421.44 | 429.05 | 421.41 | 429.89 | 421.38 | 430.49 | 421.38 | 430.77 | 421.37 |
| 436.26 | 421.34 | 436.54 | 421.3 | 437.95 | 421.13 | 438.62 | 421.12 | 449.54 | 421.06 |
| 450.04 | 421.05 | 450.71 | 421.16 | 451.19 | 421.23 | 451.27 | 421.24 | 451.64 | 421.26 |
| 453.74 | 421.34 | 454.19 | 421.35 | 455.73 | 421.42 | 456.06 | 421.41 | 463.31 | 421.37 |
| 463.66 | 421.36 | 465.42 | 421.36 | 465.54 | 421.35 | 470.43 | 421.33 | 470.79 | 421.32 |
| 471.74 | 421.32 | 472.28 | 421.31 | 476.45 | 421.29 | 480.05 | 421.06 | 481.09 | 421.06 |
| 481.34 | 421.05 | 484.3 | 421.05 | 484.61 | 421.04 | 487.12 | 421.03 | 487.59 | 421.02 |
| 487.67 | 421.01 | 489.08 | 421.01 | 489.73 | 421 | 495.22 | 420.97 | 495.87 | 420.9 |
| 496.27 | 420.87 | 496.32 | 420.87 | 498.9 | 420.75 | 499.15 | 420.75 | 499.62 | 420.74 |
| 499.99 | 420.74 | 500.44 | 420.73 | 500.94 | 420.73 | 501.12 | 420.74 | 503.57 | 420.91 |
| 511.22 | 420.87 | 511.47 | 420.86 | 522.05 | 420.8 | 522.58 | 420.79 | 527.03 | 420.78 |
| 527.33 | 420.77 | 534.47 | 420.76 | 535.17 | 420.75 | 535.29 | 420.76 | 548.95 | 420.65 |
| 549.3 | 420.64 | 550.6 | 420.62 | 550.71 | 420.62 | 551.08 | 420.51 | 551.31 | 420.41 |
| 553.22 | 420.26 | 561.25 | 420.26 | 562.12 | 420.42 | 564.04 | 420.82 | 564.96 | 421.06 |
| 566.07 | 421.17 | 568.01 | 421.24 | 576.56 | 421.85 | 594.97 | 421.87 | 595.72 | 421.88 |
| 596.63 | 421.88 | 613.53 | 422.19 | 629.43 | 422.73 | 662.75 | 422.8 | 665.76 | 422.92 |
| 665.92 | 422.92 | 666.25 | 422.93 | 666.32 | 422.93 | 680.03 | 423.23 | 691.64 | 423.25 |
| 694.19 | 423.22 | 718.81 | 422.95 | 719.01 | 422.95 | 727.83 | 422.81 | 756.6 | 422.8 |
| 772.09 | 423.32 | 772.22 | 423.32 | 788.04 | 423.58 | 809.79 | 423.58 | 810.2 | 423.59 |
| 811.24 | 423.58 | 821.1 | 423.26 | 821.24 | 423.26 | 830.03 | 423.14 | 830.59 | 423.14 |
| 832.94 | 423.12 | 833.57 | 423.13 | 833.66 | 423.13 | 834.04 | 423.14 | 834.13 | 423.14 |
| 836.44 | 423.17 | 849.92 | 422.8 | 865.08 | 422.79 | 865.21 | 422.78 | 885.54 | 422.04 |
| 886.46 | 422 | 892.22 | 422.01 | 904.53 | 421.26 | 906.62 | 421.26 | 907.21 | 421.27 |
| 908.91 | 421.35 | 909.8 | 421.43 | 909.86 | 421.44 | 910.02 | 421.44 | 913.5 | 421.65 |
| 915.9 | 421.66 | 915.97 | 421.65 | 918.04 | 421.66 | 920.93 | 421.75 | 924.7 | 422.12 |
| 937.72 | 422.95 | 992.96 | 423 | 994.37 | 422.97 | 994.93 | 422.93 | 995.3 | 422.93 |
| 995.77 | 422.94 | 995.86 | 422.93 | 996.08 | 422.91 | 998.27 | 422.78 | 998.54 | 422.76 |
| 1000.87 | 422.61 | 1001.68 | 422.57 | 1002.29 | 422.52 | 1007.1 | 422.24 | 1018.39 | 422.22 |
| 1028.47 | 422.01 | 1029.41 | 422.02 | 1038.62 | 422.25 | 1039.5 | 422.69 | 1040.39 | 423.05 |
| 1042.17 | 423.8 | 1042.26 | 423.8 | 1042.31 | 423.81 | 1042.51 | 423.8 | 1046.25 | 423.84 |
| 1047.72 | 423.78 | 1048.14 | 423.85 | 1049.74 | 423.84 | 1050.97 | 423.87 | 1051.11 | 423.87 |
| 1052.9 | 424.3 | 1053.04 | 424.33 | 1054.63 | 424.64 | 1054.94 | 424.68 | 1061.45 | 424.7 |
| 1085.22 | 425.15 | 1112.57 | 425.33 | 1113.32 | 425.35 | 1113.99 | 425.35 | 1115.89 | 425.38 |
| 1116.03 | 425.38 | 1117.61 | 425.4 | 1145.6 | 425.4 | 1170.6 | 424.61 | 1175.66 | 424.6 |
| 1194.25 | 424.31 | 1194.54 | 424.31 | 1194.99 | 424.3 | 1195.22 | 424.3 | 1202.87 | 424.13 |
| 1203.13 | 424.12 | 1215.63 | 423.8 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 396.25 | .04 | 1040.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 396.25 | 1040.39 | 59.25 | 86.12 | 98.5 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15427.7*

INPUT
Description:
Station Elevation Data num= 226

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 424.58 | 8.86 | 424.63 | 9.34 | 424.64 | 16.51 | 424.67 | 16.82 | 424.68 |
| 74.2 | 424.66 | 77.84 | 424.7 | 117.71 | 424.97 | 158.03 | 425.02 | 158.24 | 425.03 |
| 169.42 | 425.04 | 169.52 | 425.03 | 181.06 | 424.99 | 181.45 | 424.98 | 205.61 | 425.03 |
| 205.78 | 425.04 | 207.28 | 425.04 | 207.35 | 425.05 | 207.72 | 425.04 | 266.62 | 425.17 |
| 268.14 | 425.15 | 268.22 | 425.15 | 328.88 | 424.83 | 329.18 | 424.84 | 341.11 | 424.84 |
| 344.54 | 424.79 | 344.99 | 424.8 | 347.96 | 424.74 | 349.37 | 424.74 | 351.79 | 424.68 |
| 357.69 | 424.69 | 362.16 | 424.44 | 362.28 | 424.45 | 362.49 | 424.45 | 363.07 | 424.4 |
| 363.31 | 424.37 | 365.57 | 424.12 | 368.04 | 423.53 | 370.68 | 422.94 | 371.56 | 422.76 |
| 371.83 | 422.7 | 373.17 | 422.52 | 374.4 | 422.38 | 375.63 | 422.16 | 376.28 | 422.06 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 376.65 | 421.99 | 379.02 | 421.94 | 379.2 | 421.93 | 379.55 | 421.93 | 390.61 | 421.78 |
| 390.69 | 421.78 | 390.97 | 421.8 | 391.05 | 421.8 | 391.72 | 421.82 | 393.35 | 421.85 |
| 395.21 | 421.84 | 395.65 | 421.83 | 396.11 | 421.81 | 396.28 | 421.81 | 398.98 | 421.66 |
| 401.76 | 421.52 | 408.47 | 421.02 | 408.76 | 421.02 | 409.19 | 421.01 | 409.37 | 421 |
| 413.41 | 420.87 | 420.32 | 421.05 | 420.71 | 421.05 | 420.77 | 421.04 | 421.85 | 421.07 |
| 422.32 | 421.06 | 426.58 | 420.92 | 427.6 | 420.87 | 431.59 | 420.84 | 433.02 | 420.78 |
| 443.65 | 420.76 | 443.89 | 420.75 | 444.38 | 420.69 | 446.77 | 420.35 | 467.4 | 420.29 |
| 469.37 | 420.66 | 469.5 | 420.68 | 477.12 | 421.06 | 501.52 | 420.99 | 502.18 | 421 |
| 512.46 | 420.96 | 518.61 | 420.55 | 524.21 | 420.54 | 524.52 | 420.55 | 526.38 | 420.55 |
| 527.02 | 420.54 | 530 | 420.54 | 530.17 | 420.53 | 530.67 | 420.53 | 531.48 | 420.51 |
| 533.48 | 420.51 | 534.01 | 420.5 | 544.5 | 420.48 | 545.6 | 420.35 | 545.84 | 420.34 |
| 546.28 | 420.29 | 546.38 | 420.28 | 550.77 | 420.07 | 552.29 | 420.06 | 552.47 | 420.05 |
| 554.24 | 420.05 | 554.55 | 420.07 | 558.75 | 420.44 | 591.18 | 420.35 | 591.64 | 420.34 |
| 598.76 | 420.35 | 599.28 | 420.34 | 636.17 | 420.27 | 638.99 | 420.21 | 639.17 | 420.21 |
| 639.79 | 419.99 | 640.19 | 419.81 | 643.45 | 419.51 | 649.48 | 419.51 | 650.18 | 419.64 |
| 650.5 | 419.69 | 651.75 | 419.93 | 652.5 | 420.11 | 653.42 | 420.2 | 655 | 420.25 |
| 661.98 | 420.71 | 666.41 | 420.71 | 667.06 | 420.72 | 677.68 | 420.74 | 692.2 | 421.02 |
| 705.19 | 421.47 | 732.41 | 421.6 | 734.88 | 421.69 | 735.01 | 421.69 | 735.27 | 421.7 |
| 735.33 | 421.7 | 746.54 | 421.93 | 746.86 | 421.93 | 756.02 | 421.96 | 758.16 | 421.94 |
| 758.57 | 421.93 | 759.73 | 421.93 | 760.28 | 421.92 | 772.67 | 421.8 | 778.22 | 421.73 |
| 778.39 | 421.73 | 785.59 | 421.62 | 809.11 | 421.6 | 821.76 | 421.97 | 821.87 | 421.97 |
| 834.79 | 422.16 | 853.76 | 422.17 | 861.81 | 421.94 | 861.92 | 421.94 | 869.11 | 421.85 |
| 872 | 421.84 | 872.08 | 421.85 | 873.31 | 421.85 | 874.34 | 421.87 | 885.36 | 421.59 |
| 897.75 | 421.58 | 897.85 | 421.57 | 914.47 | 421.03 | 915.22 | 421 | 919.93 | 421.02 |
| 929.99 | 420.51 | 932.18 | 420.53 | 933.57 | 420.6 | 934.29 | 420.67 | 934.38 | 420.67 |
| 934.47 | 420.68 | 937.31 | 420.84 | 941.02 | 420.87 | 942.99 | 420.93 | 943.38 | 420.95 |
| 945.94 | 421.18 | 946.46 | 421.24 | 957.1 | 421.9 | 957.22 | 421.9 | 979.72 | 422.02 |
| 1002.24 | 422 | 1003.4 | 421.98 | 1003.85 | 421.95 | 1004.16 | 421.95 | 1004.54 | 421.96 |
| 1004.61 | 421.95 | 1004.79 | 421.94 | 1004.96 | 421.92 | 1006.58 | 421.84 | 1006.81 | 421.82 |
| 1013.8 | 421.45 | 1018.51 | 421.48 | 1031.26 | 421.3 | 1039.55 | 421.5 | 1040.27 | 421.83 |
| 1041 | 422.1 | 1042.57 | 422.66 | 1042.65 | 422.67 | 1042.87 | 422.67 | 1046.16 | 422.71 |
| 1047.46 | 422.67 | 1047.83 | 422.72 | 1049.24 | 422.72 | 1050.31 | 422.74 | 1050.44 | 422.75 |
| 1052.02 | 423.07 | 1052.14 | 423.1 | 1053.54 | 423.33 | 1053.81 | 423.36 | 1059.54 | 423.39 |
| 1080.47 | 423.73 | 1101.74 | 423.72 | 1105.8 | 423.76 | 1106.25 | 423.77 | 1108.98 | 423.8 |
| 1133.62 | 423.8 | 1155.63 | 423.21 | 1160.09 | 423.2 | 1176.45 | 422.99 | 1176.55 | 422.98 |
| 1177.1 | 422.98 | 1177.26 | 422.97 | 1177.65 | 422.97 | 1184.04 | 422.84 | 1184.26 | 422.84 |
| 1195.27 | 422.6 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 375.63 | .04 | 1041 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 375.63 | 1041 | 59.25 | 86.12 | 98.5 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15341.6*

INPUT
Description:
Station Elevation Data num= 218

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 424.01 | 14.89 | 424.06 | 15.34 | 424.07 | 28.26 | 424.06 | 28.67 | 424.05 |
| 87.38 | 424.08 | 128.44 | 424.33 | 128.82 | 424.34 | 141.25 | 424.36 | 141.99 | 424.37 |
| 179.81 | 424.27 | 180.18 | 424.28 | 196.32 | 424.36 | 251.17 | 424.33 | 273.4 | 424.21 |
| 273.55 | 424.2 | 308.24 | 423.91 | 308.35 | 423.9 | 310.82 | 423.9 | 311.1 | 423.91 |
| 311.25 | 423.91 | 312.34 | 423.89 | 314.16 | 423.89 | 324.95 | 423.87 | 325.62 | 423.86 |
| 326.05 | 423.87 | 328.86 | 423.82 | 330.19 | 423.83 | 332.48 | 423.78 | 338.06 | 423.8 |
| 342.27 | 423.63 | 342.59 | 423.63 | 343.14 | 423.6 | 343.36 | 423.58 | 345.5 | 423.41 |
| 348.18 | 422.67 | 348.57 | 422.57 | 351.16 | 421.86 | 351.42 | 421.8 | 352.68 | 421.61 |
| 352.73 | 421.6 | 353.76 | 421.46 | 353.85 | 421.45 | 355 | 421.25 | 355.93 | 421.1 |
| 356.45 | 420.99 | 359.8 | 420.95 | 360.06 | 420.94 | 360.55 | 420.94 | 376.31 | 420.85 |
| 376.7 | 420.89 | 376.81 | 420.89 | 377.75 | 420.93 | 377.83 | 420.93 | 380.06 | 421 |
| 382.7 | 421 | 383.32 | 420.99 | 383.97 | 420.96 | 384.2 | 420.96 | 388.03 | 420.77 |
| 388.09 | 420.77 | 390.94 | 420.66 | 401.44 | 420.02 | 402.45 | 420 | 402.71 | 420 |
| 408.43 | 419.91 | 418.2 | 420.37 | 418.83 | 420.37 | 420.35 | 420.44 | 434.13 | 420.26 |
| 436.16 | 420.19 | 451.52 | 420.17 | 455.6 | 419.56 | 484.77 | 419.53 | 487.54 | 420.09 |
| 487.73 | 420.12 | 498.5 | 420.71 | 516.38 | 420.67 | 516.79 | 420.68 | 519.38 | 420.67 |
| 533.01 | 420.66 | 533.93 | 420.67 | 548.47 | 420.64 | 557.16 | 420.03 | 564.05 | 420.03 |
| 573.27 | 420.05 | 573.51 | 420.04 | 575.36 | 420.01 | 593.77 | 419.98 | 595.33 | 419.8 |
| 595.67 | 419.78 | 596.29 | 419.72 | 596.43 | 419.7 | 602.65 | 419.4 | 604.38 | 419.38 |
| 604.78 | 419.37 | 607.55 | 419.37 | 607.99 | 419.39 | 613.92 | 419.96 | 642.97 | 419.9 |
| 670.49 | 419.92 | 695.85 | 419.99 | 696.42 | 420 | 723.39 | 419.89 | 727.37 | 419.81 |
| 727.63 | 419.81 | 728.51 | 419.48 | 729.07 | 419.21 | 733.69 | 418.77 | 737.7 | 418.77 |
| 739.47 | 419.05 | 740.05 | 419.17 | 740.76 | 419.23 | 740.96 | 419.23 | 741.99 | 419.26 |
| 747.41 | 419.57 | 747.92 | 419.57 | 748.28 | 419.58 | 759.6 | 419.61 | 770.86 | 419.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 780.94 | 420.2 | 789.76 | 420.29 | 789.93 | 420.29 | 800.31 | 420.4 | 802.08 | 420.4 |
| 803.99 | 420.46 | 804.09 | 420.46 | 804.3 | 420.47 | 813.04 | 420.63 | 813.29 | 420.64 |
| 821.07 | 420.66 | 822.02 | 420.65 | 844.13 | 420.43 | 861.61 | 420.4 | 871.43 | 420.63 |
| 879.92 | 420.71 | 881.55 | 420.74 | 896.27 | 420.76 | 902.52 | 420.62 | 902.61 | 420.61 |
| 910.03 | 420.55 | 910.43 | 420.56 | 912.25 | 420.57 | 920.8 | 420.38 | 930.5 | 420.37 |
| 943.4 | 420.02 | 943.98 | 420 | 947.4 | 420.03 | 947.63 | 420.04 | 955.44 | 419.77 |
| 957.14 | 419.8 | 958.22 | 419.85 | 958.78 | 419.9 | 958.85 | 419.91 | 958.92 | 419.91 |
| 961.13 | 420.04 | 962.65 | 420.06 | 964.01 | 420.08 | 965.53 | 420.13 | 965.84 | 420.15 |
| 967.82 | 420.32 | 968.23 | 420.35 | 976.49 | 420.85 | 976.58 | 420.86 | 988.39 | 421.01 |
| 1011.53 | 421 | 1012.42 | 420.99 | 1012.78 | 420.97 | 1013.02 | 420.97 | 1013.31 | 420.98 |
| 1013.37 | 420.97 | 1013.64 | 420.95 | 1014.01 | 420.94 | 1014.9 | 420.89 | 1015.07 | 420.89 |
| 1016.55 | 420.81 | 1017.06 | 420.8 | 1017.45 | 420.77 | 1020.5 | 420.65 | 1027.66 | 420.67 |
| 1034.06 | 420.59 | 1034.65 | 420.61 | 1040.49 | 420.74 | 1041.05 | 420.97 | 1041.62 | 421.15 |
| 1042.97 | 421.53 | 1043.04 | 421.53 | 1043.23 | 421.54 | 1046.07 | 421.58 | 1047.19 | 421.56 |
| 1047.51 | 421.59 | 1048.02 | 421.59 | 1048.19 | 421.6 | 1048.73 | 421.59 | 1049.66 | 421.62 |
| 1049.77 | 421.62 | 1051.13 | 421.84 | 1051.24 | 421.86 | 1052.45 | 422.02 | 1052.68 | 422.04 |
| 1054.06 | 422.06 | 1073.2 | 422.3 | 1089.12 | 422.25 | 1089.28 | 422.26 | 1094.1 | 422.15 |
| 1096.52 | 422.16 | 1097.6 | 422.18 | 1121.65 | 422.2 | 1141.57 | 421.8 | 1151.69 | 421.73 |
| 1152.55 | 421.71 | 1158.87 | 421.66 | 1159.22 | 421.65 | 1159.39 | 421.65 | 1159.68 | 421.64 |
| 1165.21 | 421.56 | 1165.4 | 421.56 | 1174.92 | 421.4 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 355 | .04 | 1041.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 355 | 1041.62 | 59.25 | 86.12 | 98.5 | .1 | .3 |

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15255.5*

INPUT
Description:
Station Elevation Data num= 203

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 423.44 | 7.89 | 423.44 | 8.31 | 423.45 | 21.45 | 423.45 | 53.48 | 423.28 |
| 117.2 | 423.63 | 117.61 | 423.64 | 119.6 | 423.65 | 119.81 | 423.66 | 161.18 | 423.6 |
| 161.52 | 423.59 | 184.59 | 423.68 | 184.91 | 423.67 | 237.35 | 423.48 | 238.7 | 423.46 |
| 238.77 | 423.46 | 264.23 | 423.34 | 290.34 | 422.98 | 290.71 | 422.98 | 291.07 | 422.97 |
| 292.77 | 422.96 | 293.03 | 422.97 | 293.17 | 422.97 | 294.19 | 422.94 | 303.65 | 422.95 |
| 309.23 | 422.92 | 309.76 | 422.91 | 318.42 | 422.9 | 322.39 | 422.81 | 322.5 | 422.82 |
| 322.69 | 422.82 | 325.43 | 422.71 | 327.63 | 422 | 328.32 | 421.79 | 330.76 | 420.97 |
| 331 | 420.9 | 332.19 | 420.7 | 333.21 | 420.54 | 333.29 | 420.52 | 334.38 | 420.33 |
| 335.58 | 420.13 | 336.26 | 420 | 340.59 | 419.96 | 340.92 | 419.95 | 361.92 | 419.93 |
| 362.43 | 419.97 | 362.58 | 419.97 | 363.79 | 420.03 | 363.89 | 420.03 | 366.78 | 420.14 |
| 370.18 | 420.15 | 371.83 | 420.12 | 372.13 | 420.12 | 377.07 | 419.89 | 377.15 | 419.89 |
| 382.15 | 419.69 | 394.42 | 419.01 | 403.45 | 418.96 | 416.08 | 419.68 | 416.78 | 419.7 |
| 416.89 | 419.69 | 418.86 | 419.8 | 436.68 | 419.69 | 439.29 | 419.59 | 458.72 | 419.59 |
| 459.16 | 419.58 | 464.42 | 418.78 | 502.13 | 418.76 | 505.97 | 419.56 | 519.89 | 420.35 |
| 564.49 | 420.33 | 565.69 | 420.35 | 584.49 | 420.32 | 595.72 | 419.52 | 603.58 | 419.52 |
| 605.96 | 419.53 | 608.96 | 419.56 | 616.54 | 419.55 | 616.86 | 419.54 | 617.77 | 419.54 |
| 619.25 | 419.5 | 643.05 | 419.49 | 645.06 | 419.24 | 645.5 | 419.22 | 646.3 | 419.14 |
| 646.48 | 419.11 | 654.52 | 418.72 | 655.28 | 418.72 | 656.76 | 418.69 | 657.28 | 418.69 |
| 657.62 | 418.68 | 660.86 | 418.68 | 661.42 | 418.72 | 669.09 | 419.48 | 742.23 | 419.49 |
| 767.63 | 419.59 | 768.01 | 419.6 | 783.23 | 419.65 | 811.68 | 419.49 | 815.76 | 419.4 |
| 816.09 | 419.4 | 817.22 | 418.97 | 817.95 | 418.6 | 823.92 | 418.02 | 825.93 | 418.02 |
| 827.18 | 418.17 | 827.6 | 418.23 | 828.1 | 418.26 | 828.25 | 418.26 | 832.83 | 418.44 |
| 835.28 | 418.44 | 835.64 | 418.45 | 837.41 | 418.45 | 837.8 | 418.46 | 841.51 | 418.48 |
| 841.9 | 418.49 | 844.28 | 418.52 | 856.7 | 418.93 | 862.98 | 419.05 | 863.1 | 419.06 |
| 870.48 | 419.2 | 871.74 | 419.2 | 873.11 | 419.23 | 873.36 | 419.23 | 877.26 | 419.3 |
| 877.56 | 419.3 | 879.55 | 419.34 | 879.72 | 419.34 | 888.55 | 419.37 | 901.2 | 419.25 |
| 901.67 | 419.24 | 914.11 | 419.19 | 921.11 | 419.28 | 927.75 | 419.31 | 928.3 | 419.32 |
| 938.78 | 419.35 | 942.89 | 419.3 | 943.23 | 419.29 | 953.33 | 419.22 | 956.24 | 419.17 |
| 970.27 | 419.05 | 972.32 | 419.01 | 972.74 | 419 | 974.09 | 419.01 | 975.17 | 419.04 |
| 975.34 | 419.05 | 980.9 | 419.03 | 981.84 | 419.06 | 982.11 | 419.06 | 983.27 | 419.14 |
| 983.37 | 419.14 | 984.94 | 419.23 | 986.03 | 419.27 | 986.99 | 419.29 | 987.18 | 419.3 |
| 988.3 | 419.34 | 990 | 419.47 | 995.88 | 419.81 | 995.94 | 419.81 | 1004.34 | 420.01 |
| 1021.45 | 420 | 1021.7 | 419.99 | 1022.22 | 419.99 | 1022.32 | 419.98 | 1022.58 | 419.97 |
| 1022.73 | 419.97 | 1023.21 | 419.95 | 1023.34 | 419.95 | 1027.2 | 419.86 | 1036.85 | 419.89 |
| 1041.43 | 419.99 | 1041.82 | 420.11 | 1042.23 | 420.2 | 1043.37 | 420.4 | 1043.46 | 420.4 |
| 1043.58 | 420.41 | 1045.98 | 420.45 | 1046.93 | 420.44 | 1047.2 | 420.46 | 1047.63 | 420.47 |
| 1048.22 | 420.47 | 1049.01 | 420.49 | 1049.1 | 420.49 | 1050.25 | 420.61 | 1050.33 | 420.62 |
| 1051.35 | 420.71 | 1051.55 | 420.73 | 1052.71 | 420.74 | 1053.04 | 420.75 | 1060.89 | 420.88 |
| 1070.96 | 420.88 | 1082.26 | 420.75 | 1082.4 | 420.75 | 1086.45 | 420.57 | 1088.5 | 420.58 |
| 1088.97 | 420.59 | 1109.67 | 420.6 | 1126.46 | 420.4 | 1141.33 | 420.33 | 1141.44 | 420.32 |
| 1145.91 | 420.29 | 1146.38 | 420.28 | 1154.56 | 420.2 | | | | |

```
Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  334.38     .04 1042.23     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        334.38 1042.23            59.25   86.12    98.5              .1       .3

CROSS SECTION


RIVER: WASH20
REACH: Centerline Align   RS: 15169.42

INPUT
Description:
Station Elevation Data    num=     443
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  422.877.399902  422.847.799927  422.858.589966  422.859.279907  422.85
9.359985  422.8510.19995  422.86 11.0199  422.8611.19995  422.8613.15991  422.85
13.55994  422.8513.78992  422.8514.04993  422.8516.77991  422.84   20.13  422.82
   20.87  422.8123.16992  422.7925.33997  422.76   25.75  422.7630.09998   422.7
33.85999  422.6650.17993   422.6 65.0199   422.6   65.13   422.667.93994   422.6
70.70996   422.671.07996   422.6   74.13   422.677.22998  422.59      91   422.7
  113.35     423  113.52     423  113.85     423  114.03     423114.0699     423
114.1799     423  114.41     423  115.47     423115.5599     423   118.1     423
  118.52     423120.8099     423  123.28     423  123.29     423123.8099     423
  124.04     423124.7499     423  124.84     423125.4899     423125.5699     423
  126.59     423  127.14     423  127.22     423  127.53     423127.7999     423
  133.35  422.96   141.6   422.9144.3199  422.89151.2399   422.9158.2399   422.9
171.7499  422.99  171.89  422.99172.0099  422.99173.0699     423173.1299     423
  173.14     423173.1699     423   173.2     423  173.21     423173.5099  422.99
174.2599  422.98177.3099  422.94182.1099  422.88  186.39  422.84192.8599  422.78
198.6299  422.75203.4399  422.74208.7399  422.72218.9999  422.67  224.71  422.61
233.2399  422.51235.2999   422.5237.3099   422.5   240.6   422.5   243.9   422.5
244.0699   422.5245.4399   422.5  246.84   422.5  246.98   422.5247.9299   422.5
   256.4  422.35272.4299  422.06  272.53  422.05  272.72  422.05  272.78  422.05
273.1199  422.04  273.91  422.04274.4999  422.03  274.71  422.03  274.96  422.04
275.0099  422.04275.0699  422.04  275.09  422.04276.0499     422  276.08     422
277.4999     422  277.66     422279.1899     422  279.72     422283.1099     422
285.5099     422   287.2     422  290.16     422  299.71     422305.3599     422
307.4199  421.23308.0699     421310.3599  420.08  310.59     420  312.66  419.61
313.7599  419.41  315.23  419.17316.0599     419321.3699  418.97  321.78  418.96
322.5599  418.96  329.39  418.92336.5499  418.96  338.84  418.97  342.73  418.97
  347.35     419347.3799     419  347.54     419  348.16  419.06  348.34  419.06
  349.83  419.14  349.95  419.14353.4899  419.28354.6099   419.3355.6699  419.31
357.6699  419.31  358.65   419.3359.6899  419.27360.0499  419.27  364.77  419.07
366.1199     419  366.21     419370.7399  418.85  387.39     418  388.03     418
388.9899     418393.0499  417.99394.8099     418  398.47     418411.7999  418.87
  413.96     419414.3199  419.01414.8199  419.02  414.95  419.02417.3699  419.17
  427.98   419.2  439.22  419.12442.4299     419  444.71     419445.7999  418.99
449.1199     419  449.14     419  449.15     419  449.16     419449.1799     419
   449.2     419  457.98  419.03466.2499     419  466.79     419467.8799  418.83
473.2499     418  473.35     418  475.83     418476.4999     418  489.91     418
494.3099     418497.9899     418  506.08     418   506.1     418  517.59     418
519.4999     418522.0699  418.56   523.9  418.94   524.2     419525.6299  419.08
  533.64  419.55535.3699  419.64  541.27     420542.5099     420  544.73     420
544.9399     420  546.64     420551.6299     420  552.79     420552.8599     420
  552.95     420553.2399     420  553.64     420557.1299  419.99564.5499  419.97
569.6099  419.98570.2599  419.99571.6099  419.99574.3799  419.99575.6899     420
  577.03     420577.1799     420578.3199     420578.7999     420  582.41  420.01
  586.33  420.02592.2399  420.01  593.04  420.01593.4999  420.01  595.98     420
  597.45  420.02597.4899  420.02  598.85     420600.1299     420601.1699     420
  601.41     420601.9899     420602.5099     420604.5499     420604.7999     420
  611.73  420.01   617.2     420  620.28     420620.4399     420620.4999     420
625.0299  419.67634.2799     419634.3099     419  634.37     419  636.09     419
637.0499     419638.2599     419  639.21     419641.5099     419  641.74     419
641.7799     419   641.9     419643.9199  419.01  644.83  419.02645.1899  419.02
646.0699  419.03  646.84  419.03647.5299  419.04  650.52  419.06  651.71  419.05
  653.14  419.05659.8099  419.06   660.2  419.05661.3199  419.04663.1299     419
  663.15     419663.1699     419663.4099     419  664.96     419665.6699     419
  667.62     419668.8099     419671.3099     419  671.65     419  672.49     419
  672.64     419673.9099     419  681.77  419.01681.8099  419.01  681.87  419.01
  685.14  419.01  691.96     419692.1299     419692.3199     419694.7899  418.69
  695.33  418.66696.3099  418.56696.5299  418.53703.4399   418.2  706.39  418.04
707.3199  418.04  709.14  418.01709.7799  418.01710.1899     418710.5399     418
712.2599     418712.3199     418  712.33     418  713.87     418714.1699     418
  714.86  418.05724.2599     419  728.08     419   733.9  419.01   738.9     419
  740.98     419743.8799     419  747.21  418.99  748.12  418.99752.0099     419
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 752.2999 | 419 | 753.49 | 419754.4399 | | 419 | 754.97 | 419 | 755.87 | 419 | | |
| 756.2799 | 419756.8099 | | 419758.9999 | | 419766.1699 | | 419 | 766.36 | 419 | | |
| 766.3799 | 419767.2599 | | 419767.2799 | | 419 | 770.33 | 418.97 | 773.35 | 419 | | |
| 773.5699 | 419774.5599 | | 419 | 777.6 | 419794.9099 | | 419 | 796.97 | 419 | | |
| 797.99 | 419 | 798.35 | 419 | 800.86 | 419803.7899 | | 419803.8199 | | 419 | | |
| 803.87 | 419 | 803.95 | 419 | 813.83 | 419.06 | 813.84 | 419.06 | 813.96 | 419.06 | | |
| 815.1299 | 419.05816.0699 | | 419.05 | 816.14 | 419.05 | 816.59 | 419.05817.0599 | | 419.05 | | |
| 817.15 | 419.05817.6699 | | 419.05828.7599 | | 419.12 | 838.48 | 419.17840.3199 | | 419.18 | | |
| 842.4199 | 419.19 | 845.12 | 419.2 | 845.58 | 419.21854.1699 | | 419.24855.0699 | | 419.25 | | |
| 858.9999 | 419.27 | 862.74 | 419.28864.2499 | | 419.29879.2599 | | 419.22897.8199 | | 419.12 | | |
| 899.14 | 419.1 | 902.4 | 419.04 | 904.14 | 419904.5499 | | 419905.9399 | | 418.46 | | |
| 906.83 | 418912.1299 | | 417.46 | 914.15 | 417.28 | 918.84 | 417.3925.0699 | | 417.37 | | |
| 931.1 | 417.61 | 940.66 | 418940.7499 | | 418 | 942.22 | 418 | 942.35 | 418 | | |
| 942.3699 | 418944.8699 | | 418.02 | 946.65 | 418.05949.1699 | | 418.07 | 950.39 | 418.09 | | |
| 950.5699 | 418.09 | 951.41 | 418.1 | 955.71 | 418.08964.0599 | | 418.02964.1299 | | 418.02 | | |
| 964.8099 | 418.01 | 966.02 | 418 | 969.83 | 417.95 | 975.85 | 417.89983.9399 | | 417.97 | | |
| 986.34 | 417.98986.4899 | | 417.98987.2899 | | 417.98987.4399 | | 417.98988.5399 | | 417.97 | | |
| 990.86 | 417.96991.9199 | | 417.96 | 994.85 | 417.95 | 995.39 | 417.95 | 1001.25 | 418 | | |
| 1001.26 | 418 | 1001.56 | 418 | 1001.63 | 418 | 1002.13 | 418.01 | 1002.3 | 418.01 | | |
| 1006.91 | 418.32 | 1010.09 | 418.51 | 1020.3 | 419 | 1021.46 | 419 | 1027.99 | 419 | | |
| 1029.15 | 419 | 1029.65 | 419 | 1030.73 | 419.01 | 1030.88 | 419.01 | 1031.15 | 419.01 | | |
| 1031.6 | 419.01 | 1042.84 | 419.25 | 1055.37 | 419.51 | 1055.68 | 419.52 | 1056.52 | 419.53 | | |
| 1057.41 | 419.54 | 1058.02 | 419.55 | 1064.49 | 419.5 | 1075.4 | 419.24 | 1075.51 | 419.24 | | |
| 1078.81 | 419 | 1079.77 | 418.99 | 1080.47 | 418.99 | 1080.86 | 419 | 1081.21 | 419 | | |
| 1083.2 | 419 | 1085.47 | 419 | 1094.37 | 419 | 1103.85 | 419.01 | 1104.73 | 419.01 | | |
| 1119.94 | 419 | 1120.26 | 419 | 1123.05 | 419 | 1123.11 | 419 | 1123.44 | 419 | | |
| 1123.53 | 419 | 1123.55 | 419 | 1123.56 | 419 | 1123.76 | 419 | 1127.68 | 419 | | |
| 1128.88 | 419 | 1131.93 | 419 | 1134.2 | 419 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05313.7599 | | .04 | 1042.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 313.7599 | 1042.84 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station= 1058.09 Elevation= 419.56

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15121.9*

INPUT
Description:
Station Elevation Data num= 252

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 422.37 | 7.75 | 422.35 | 8.17 | 422.36 | 9.8 | 422.36 | 10.11 | 422.37 |
| 10.68 | 422.41 | 11.42 | 422.45 | 11.54 | 422.46 | 12.13 | 422.46 | 12.34 | 422.45 |
| 13.15 | 422.45 | 13.65 | 422.43 | 13.78 | 422.42 | 14.2 | 422.41 | 16.65 | 422.34 |
| 16.8 | 422.33 | 17.03 | 422.32 | 17.58 | 422.31 | 17.8 | 422.3 | 18.54 | 422.29 |
| 18.97 | 422.27 | 19.33 | 422.27 | 19.7 | 422.26 | 23.38 | 422.23 | 23.86 | 422.24 |
| 24.27 | 422.25 | 24.94 | 422.25 | 26.12 | 422.27 | 26.4 | 422.28 | 26.6 | 422.28 |
| 26.86 | 422.29 | 26.97 | 422.3 | 28.05 | 422.35 | 28.78 | 422.35 | 29.09 | 422.34 |
| 29.61 | 422.33 | 29.93 | 422.33 | 30.11 | 422.32 | 30.21 | 422.32 | 31.42 | 422.3 |
| 31.53 | 422.3 | 31.73 | 422.29 | 33.38 | 422.28 | 33.88 | 422.27 | 49.34 | 422.15 |
| 49.82 | 422.14 | 71.87 | 422.09 | 72.63 | 422.1 | 73.67 | 422.1 | 74.07 | 422.11 |
| 76.13 | 422.11 | 76.42 | 422.12 | 88.74 | 422.06 | 90.4 | 422.02 | 93.26 | 421.99 |
| 93.75 | 421.99 | 94.47 | 421.98 | 94.61 | 421.98 | 94.71 | 421.97 | 95.32 | 421.97 |
| 109.83 | 422.15 | 110.01 | 422.15 | 118.91 | 422.21 | 119.26 | 422.2 | 127.98 | 422.17 |
| 128.85 | 422.21 | 129.13 | 422.23 | 129.35 | 422.25 | 133.87 | 422.26 | 139.65 | 422.21 |
| 145.42 | 422.18 | 145.81 | 422.17 | 147.85 | 422.15 | 148.26 | 422.15 | 148.32 | 422.14 |
| 165.75 | 422.07 | 181.43 | 422.17 | 181.75 | 422.16 | 190.76 | 422.06 | 191.19 | 422.05 |
| 201.93 | 421.96 | 217.96 | 421.93 | 241.36 | 421.75 | 243.82 | 421.71 | 259.7 | 421.71 |
| 268.12 | 421.58 | 268.44 | 421.57 | 268.57 | 421.57 | 278.7 | 421.42 | 285.37 | 421.3 |
| 285.47 | 421.29 | 285.73 | 421.29 | 286.09 | 421.28 | 286.92 | 421.28 | 287.53 | 421.27 |
| 287.75 | 421.27 | 288.02 | 421.28 | 288.15 | 421.28 | 289.16 | 421.24 | 292.45 | 421.24 |
| 293 | 421.23 | 319.86 | 421.25 | 322.02 | 420.54 | 322.7 | 420.33 | 322.84 | 420.28 |
| 324.69 | 419.63 | 325.1 | 419.49 | 325.34 | 419.42 | 328.6 | 418.88 | 328.66 | 418.88 |
| 330.09 | 418.64 | 330.9 | 418.48 | 336.08 | 418.41 | 338.25 | 418.37 | 361.6 | 418.42 |
| 362.21 | 418.47 | 362.38 | 418.47 | 363.84 | 418.55 | 363.95 | 418.55 | 367.41 | 418.67 |
| 371.48 | 418.7 | 373.45 | 418.67 | 373.8 | 418.67 | 378.41 | 418.51 | 379.72 | 418.45 |
| 379.81 | 418.45 | 384.23 | 418.32 | 388.16 | 418.12 | 388.45 | 418.11 | 400.47 | 417.55 |
| 411.27 | 417.57 | 425.95 | 418.48 | 426.38 | 418.5 | 426.73 | 418.51 | 427.35 | 418.51 |
| 429.71 | 418.65 | 443.28 | 418.62 | 451.02 | 418.53 | 454.15 | 418.42 | 477.9 | 418.44 |
| 484.2 | 417.52 | 525.46 | 417.5 | 529.31 | 417.46 | 531.52 | 417.88 | 533.6 | 418.28 |
| 533.89 | 418.33 | 550.54 | 419.24 | 576.52 | 419.23 | 578.18 | 419.26 | 578.33 | 419.26 |
| 582.63 | 419.32 | 582.83 | 419.33 | 586.68 | 419.36 | 587.14 | 419.37 | 594.45 | 419.43 |
| 618.91 | 419.43 | 619.26 | 419.42 | 627.81 | 419.38 | 640.21 | 418.49 | 640.87 | 418.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 641.25 | 418.42 | 647.92 | 418.42 | 648.3 | 418.41 | 648.68 | 418.41 | 649 | 418.42 |
| 650.65 | 418.42 | 651.3 | 418.43 | 653.5 | 418.44 | 654.14 | 418.45 | 657.09 | 418.47 |
| 666.15 | 418.47 | 666.53 | 418.46 | 667.62 | 418.45 | 669.39 | 418.41 | 696.52 | 418.42 |
| 697.51 | 418.41 | 697.86 | 418.41 | 699.97 | 418.17 | 700.27 | 418.13 | 700.79 | 418.1 |
| 701.96 | 417.99 | 711.58 | 417.54 | 712.49 | 417.54 | 714.26 | 417.51 | 714.89 | 417.51 |
| 715.29 | 417.5 | 719.17 | 417.5 | 719.84 | 417.54 | 729.01 | 418.41 | 759.84 | 418.41 |
| 760.24 | 418.4 | 770.96 | 418.37 | 771.9 | 418.35 | 772.29 | 418.35 | 773.94 | 418.33 |
| 778.06 | 418.34 | 778.52 | 418.33 | 820.81 | 418.38 | 824.4 | 418.45 | 824.75 | 418.45 |
| 846.88 | 418.59 | 847.33 | 418.6 | 865.54 | 418.65 | 898.28 | 418.46 | 898.46 | 418.45 |
| 904.44 | 418.33 | 904.84 | 418.33 | 906.2 | 417.83 | 907.06 | 417.41 | 912.23 | 416.9 |
| 914.2 | 416.73 | 924.35 | 416.82 | 938.84 | 417.4 | 942.75 | 417.42 | 947.88 | 417.49 |
| 948.05 | 417.49 | 948.83 | 417.5 | 960.65 | 417.43 | 971.3 | 417.32 | 971.55 | 417.32 |
| 981.3 | 417.44 | 981.44 | 417.44 | 982.18 | 417.45 | 982.32 | 417.45 | 985.5 | 417.44 |
| 989.71 | 417.45 | 995.15 | 417.52 | 995.51 | 417.52 | 995.97 | 417.53 | 996.13 | 417.53 |
| 1003.37 | 418.02 | 1012.86 | 418.51 | 1023.36 | 418.54 | 1033.81 | 418.79 | 1036.82 | 418.87 |
| 1047.17 | 419.01 | 1047.5 | 419.01 | 1048.39 | 419.02 | 1049.34 | 419.02 | 1049.99 | 419.03 |
| 1056.89 | 418.96 | 1064.35 | 418.8 | 1064.7 | 418.8 | 1068.52 | 418.7 | 1068.64 | 418.7 |
| 1072.16 | 418.47 | 1073.18 | 418.45 | 1074.15 | 418.45 | 1074.34 | 418.46 | 1100.26 | 418.43 |
| 1100.49 | 418.42 | 1131.22 | 418.34 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 328.66 | .04 | 1033.81 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
328.66 1033.81 46.07 47.45 64.9 .1 .3
Right Levee Station=1048.443 Elevation=419.1042

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15074.5*

INPUT
Description:
Station Elevation Data num= 277

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 421.86 | 8.1 | 421.87 | 8.54 | 421.88 | 10.57 | 421.88 | 11.17 | 421.96 |
| 11.93 | 422.05 | 13.75 | 422.04 | 14.41 | 421.99 | 14.85 | 421.97 | 15.1 | 421.95 |
| 15.38 | 421.94 | 16.44 | 421.87 | 17.4 | 421.83 | 17.56 | 421.82 | 18.37 | 421.78 |
| 19.83 | 421.72 | 20.21 | 421.7 | 20.6 | 421.69 | 24.44 | 421.66 | 24.94 | 421.68 |
| 27.31 | 421.77 | 27.75 | 421.8 | 27.81 | 421.8 | 28.08 | 421.83 | 28.2 | 421.84 |
| 29.32 | 421.95 | 29.65 | 421.96 | 30.08 | 421.96 | 30.96 | 421.94 | 31.16 | 421.94 |
| 31.28 | 421.93 | 31.47 | 421.93 | 31.58 | 421.92 | 32.85 | 421.89 | 33.32 | 421.89 |
| 34.49 | 421.87 | 35.64 | 421.87 | 35.72 | 421.86 | 35.85 | 421.86 | 36.06 | 421.87 |
| 36.15 | 421.88 | 36.24 | 421.88 | 36.31 | 421.87 | 51.58 | 421.68 | 59.71 | 421.67 |
| 74.8 | 421.58 | 75.13 | 421.59 | 75.93 | 421.6 | 76.25 | 421.6 | 77.01 | 421.61 |
| 77.42 | 421.61 | 77.83 | 421.62 | 79.23 | 421.62 | 79.58 | 421.63 | 89.16 | 421.56 |
| 92.76 | 421.47 | 94.49 | 421.39 | 97.49 | 421.3 | 98 | 421.29 | 98.76 | 421.26 |
| 98.9 | 421.26 | 99 | 421.25 | 99.64 | 421.25 | 114.81 | 421.4 | 114.99 | 421.41 |
| 124.9 | 421.41 | 125.02 | 421.4 | 129.31 | 421.36 | 129.77 | 421.36 | 131.07 | 421.34 |
| 131.52 | 421.34 | 131.69 | 421.33 | 133.78 | 421.33 | 134.69 | 421.42 | 134.99 | 421.47 |
| 135.22 | 421.5 | 138.61 | 421.51 | 138.77 | 421.52 | 139.94 | 421.52 | 145.2 | 421.47 |
| 145.98 | 421.47 | 153.88 | 421.42 | 154.55 | 421.4 | 154.98 | 421.39 | 155.05 | 421.39 |
| 159.96 | 421.24 | 185.75 | 421.31 | 186.42 | 421.32 | 189.66 | 421.34 | 189.99 | 421.33 |
| 190.81 | 421.33 | 199.4 | 421.23 | 218.63 | 421.12 | 222.29 | 421.17 | 222.76 | 421.16 |
| 252.3 | 420.95 | 254.03 | 420.91 | 254.87 | 420.91 | 255.39 | 420.9 | 263.72 | 420.87 |
| 267.06 | 420.9 | 267.25 | 420.9 | 268.75 | 420.92 | 271.47 | 420.92 | 280.27 | 420.8 |
| 280.6 | 420.79 | 280.75 | 420.79 | 286.93 | 420.72 | 291.34 | 420.66 | 298.3 | 420.54 |
| 298.41 | 420.53 | 298.68 | 420.53 | 299.06 | 420.52 | 299.92 | 420.52 | 300.57 | 420.51 |
| 300.8 | 420.51 | 301.07 | 420.52 | 301.21 | 420.52 | 302.26 | 420.48 | 322.9 | 420.47 |
| 323.52 | 420.48 | 330.46 | 420.5 | 331.29 | 420.49 | 334.36 | 420.5 | 337.32 | 419.66 |
| 337.47 | 419.62 | 339.83 | 418.9 | 340.08 | 418.83 | 343.5 | 418.35 | 343.55 | 418.34 |
| 344.95 | 418.12 | 345.74 | 417.96 | 350.79 | 417.85 | 351.18 | 417.83 | 351.92 | 417.82 |
| 352.91 | 417.79 | 375.66 | 417.83 | 376.25 | 417.88 | 376.43 | 417.88 | 377.84 | 417.95 |
| 377.96 | 417.95 | 381.32 | 418.07 | 385.29 | 418.09 | 386.71 | 418.07 | 387.56 | 418.07 |
| 393.33 | 417.91 | 393.41 | 417.91 | 394.63 | 417.89 | 397.72 | 417.78 | 401.55 | 417.6 |
| 413.54 | 417.09 | 424.08 | 417.13 | 438.38 | 417.98 | 438.8 | 418 | 439.16 | 418 |
| 439.62 | 418.01 | 439.74 | 418.01 | 442.04 | 418.12 | 452.13 | 418.09 | 454.42 | 418.06 |
| 455.27 | 418.06 | 462.81 | 417.95 | 465.86 | 417.83 | 489.02 | 417.88 | 495.16 | 417.04 |
| 535 | 417.01 | 539.12 | 416.91 | 543.3 | 417.62 | 543.59 | 417.67 | 559.82 | 418.48 |
| 585.13 | 418.48 | 586.75 | 418.53 | 586.9 | 418.54 | 587.37 | 418.56 | 591.09 | 418.66 |
| 591.29 | 418.66 | 593.81 | 418.71 | 593.95 | 418.71 | 595.03 | 418.72 | 602.6 | 418.85 |
| 611.82 | 418.83 | 613.22 | 418.85 | 626.79 | 418.84 | 627.61 | 418.83 | 627.92 | 418.82 |
| 628.15 | 418.82 | 629.14 | 418.8 | 635.13 | 418.76 | 647.85 | 417.87 | 648.23 | 417.85 |
| 656.67 | 417.83 | 657.13 | 417.84 | 657.38 | 417.83 | 658.02 | 417.84 | 660.16 | 417.85 |
| 660.79 | 417.86 | 663.66 | 417.88 | 672.49 | 417.87 | 672.86 | 417.86 | 673.93 | 417.86 |
| 675.65 | 417.82 | 703.4 | 417.83 | 705.74 | 417.57 | 706.26 | 417.55 | 707.19 | 417.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 707.4 | 417.44 | 713.32 | 417.19 | 713.97 | 417.17 | 716.77 | 417.03 | 719.99 | 417.01 |
| 720.38 | 417 | 724.17 | 417 | 724.82 | 417.04 | 733.76 | 417.83 | 764.19 | 417.81 |
| 764.7 | 417.8 | 775.56 | 417.72 | 775.94 | 417.71 | 776.44 | 417.71 | 777.55 | 417.69 |
| 780.83 | 417.68 | 781.57 | 417.67 | 819.02 | 417.71 | 822.12 | 417.7 | 822.55 | 417.71 |
| 823.23 | 417.71 | 832.27 | 417.93 | 857.24 | 417.99 | 858.1 | 418 | 898.92 | 417.79 |
| 902.24 | 417.71 | 903.09 | 417.7 | 905.13 | 417.65 | 906.45 | 417.2 | 907.3 | 416.81 |
| 914.26 | 416.18 | 923.63 | 416.26 | 937.02 | 416.8 | 940.64 | 416.82 | 945.38 | 416.89 |
| 945.53 | 416.89 | 946.25 | 416.9 | 957.18 | 416.84 | 957.76 | 416.83 | 958.8 | 416.83 |
| 965.44 | 416.76 | 967.24 | 416.76 | 976.25 | 416.91 | 976.38 | 416.91 | 977.07 | 416.92 |
| 984.79 | 416.96 | 989.06 | 417.04 | 989.38 | 417.04 | 989.81 | 417.05 | 996.65 | 417.54 |
| 1005.42 | 418.02 | 1013.02 | 418.05 | 1013.45 | 418.06 | 1014.37 | 418.07 | 1015.12 | 418.07 |
| 1024.77 | 418.32 | 1028.72 | 418.44 | 1038.96 | 418.5 | 1039.31 | 418.51 | 1041.96 | 418.51 |
| 1057.21 | 418.28 | 1061.65 | 418.17 | 1061.77 | 418.17 | 1065.51 | 417.94 | 1066.99 | 417.91 |
| 1067.63 | 417.91 | 1067.83 | 417.92 | 1067.9 | 417.92 | 1068.22 | 417.91 | 1112.08 | 417.76 |
| 1112.45 | 417.75 | 1128.23 | 417.68 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 343.55 | .04 | 1024.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 343.55 | 1024.77 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=1038.797 Elevation=418.6483

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 15027.0*

INPUT
Description:
Station Elevation Data num= 285

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 421.36 | 8.45 | 421.38 | 8.91 | 421.39 | 11.03 | 421.39 | 11.65 | 421.51 |
| 12.45 | 421.64 | 12.59 | 421.65 | 14.34 | 421.64 | 14.63 | 421.6 | 14.89 | 421.58 |
| 15.03 | 421.56 | 15.49 | 421.53 | 15.75 | 421.5 | 16.05 | 421.48 | 17.15 | 421.38 |
| 18.16 | 421.33 | 18.33 | 421.31 | 18.57 | 421.29 | 19.17 | 421.25 | 19.41 | 421.23 |
| 20.22 | 421.19 | 21.49 | 421.12 | 25.5 | 421.1 | 26.02 | 421.13 | 28.95 | 421.31 |
| 29.3 | 421.36 | 29.42 | 421.38 | 30.6 | 421.56 | 30.93 | 421.57 | 31.39 | 421.57 |
| 32.3 | 421.55 | 32.36 | 421.55 | 32.51 | 421.54 | 32.64 | 421.54 | 32.84 | 421.53 |
| 32.95 | 421.53 | 34.27 | 421.49 | 34.39 | 421.49 | 34.61 | 421.48 | 35.99 | 421.47 |
| 36.41 | 421.46 | 36.96 | 421.47 | 37.18 | 421.46 | 37.27 | 421.46 | 37.41 | 421.45 |
| 37.63 | 421.47 | 37.72 | 421.48 | 37.88 | 421.48 | 38.68 | 421.46 | 54.34 | 421.21 |
| 62.3 | 421.2 | 66.85 | 421.09 | 78.39 | 421.08 | 79.22 | 421.1 | 79.55 | 421.1 |
| 81.2 | 421.13 | 82.35 | 421.13 | 82.66 | 421.14 | 83.03 | 421.14 | 83.35 | 421.15 |
| 92.42 | 421.02 | 93.02 | 421.02 | 94.54 | 420.98 | 96.42 | 420.9 | 96.79 | 420.87 |
| 98.59 | 420.75 | 101.71 | 420.61 | 102.25 | 420.58 | 103.04 | 420.55 | 103.18 | 420.54 |
| 103.29 | 420.53 | 103.46 | 420.52 | 103.96 | 420.52 | 119.78 | 420.66 | 119.98 | 420.66 |
| 120.88 | 420.67 | 129.69 | 420.62 | 130.07 | 420.61 | 130.44 | 420.61 | 130.71 | 420.6 |
| 131.92 | 420.58 | 132.02 | 420.58 | 136.76 | 420.51 | 137.22 | 420.51 | 137.4 | 420.5 |
| 139.58 | 420.5 | 140.3 | 420.6 | 140.53 | 420.64 | 140.84 | 420.7 | 141.08 | 420.75 |
| 145.25 | 420.77 | 145.34 | 420.78 | 151.49 | 420.72 | 152.34 | 420.72 | 160.55 | 420.68 |
| 161.25 | 420.65 | 161.3 | 420.65 | 161.7 | 420.64 | 161.77 | 420.63 | 166.89 | 420.42 |
| 193.8 | 420.48 | 197.88 | 420.51 | 198.22 | 420.5 | 199.08 | 420.5 | 208.05 | 420.41 |
| 228.11 | 420.31 | 231.93 | 420.38 | 235.09 | 420.33 | 263.24 | 420.16 | 265.05 | 420.11 |
| 275.16 | 420.05 | 278.64 | 420.1 | 278.84 | 420.1 | 280.4 | 420.13 | 280.92 | 420.13 |
| 281.13 | 420.14 | 281.4 | 420.13 | 284.8 | 420.11 | 292.43 | 420.02 | 292.77 | 420.01 |
| 303.97 | 419.9 | 311.24 | 419.78 | 311.35 | 419.77 | 311.64 | 419.77 | 312.02 | 419.76 |
| 312.93 | 419.76 | 313.6 | 419.75 | 313.84 | 419.75 | 314.13 | 419.76 | 314.27 | 419.76 |
| 315.37 | 419.72 | 318.96 | 419.71 | 319.56 | 419.7 | 332.32 | 419.67 | 344.78 | 419.75 |
| 345.66 | 419.74 | 348.86 | 419.74 | 351.21 | 419.17 | 351.95 | 419 | 352.11 | 418.96 |
| 354.57 | 418.31 | 354.83 | 418.25 | 358.39 | 417.81 | 358.45 | 417.8 | 359.81 | 417.59 |
| 360.58 | 417.44 | 367.56 | 417.22 | 389.73 | 417.25 | 390.09 | 417.28 | 390.3 | 417.29 |
| 390.47 | 417.29 | 391.85 | 417.36 | 391.96 | 417.36 | 395.24 | 417.46 | 399.11 | 417.48 |
| 400.48 | 417.46 | 400.98 | 417.46 | 401.31 | 417.47 | 402.13 | 417.46 | 402.5 | 417.46 |
| 405.68 | 417.4 | 406.93 | 417.36 | 408.2 | 417.35 | 411.21 | 417.25 | 414.94 | 417.08 |
| 426.62 | 416.64 | 436.88 | 416.7 | 451.22 | 417.5 | 452.14 | 417.5 | 454.38 | 417.6 |
| 469.12 | 417.47 | 474.61 | 417.36 | 477.58 | 417.25 | 487.38 | 417.26 | 494.12 | 417.35 |
| 500.13 | 417.32 | 506.11 | 416.56 | 544.92 | 416.51 | 548.93 | 416.37 | 553.01 | 416.96 |
| 553.28 | 417 | 569.09 | 417.72 | 572.49 | 417.72 | 573.14 | 417.71 | 574.06 | 417.72 |
| 593.74 | 417.73 | 595.33 | 417.81 | 595.47 | 417.82 | 599.55 | 417.99 | 599.74 | 418 |
| 602.2 | 418.06 | 602.33 | 418.06 | 610.76 | 418.26 | 633.99 | 418.26 | 634.32 | 418.25 |
| 635.12 | 418.24 | 635.42 | 418.23 | 635.64 | 418.23 | 636.61 | 418.2 | 642.24 | 418.14 |
| 642.44 | 418.14 | 654.84 | 417.29 | 655.2 | 417.27 | 663.42 | 417.24 | 663.87 | 417.25 |
| 664.74 | 417.25 | 664.97 | 417.26 | 666.83 | 417.26 | 667.43 | 417.27 | 670.23 | 417.29 |
| 678.83 | 417.28 | 679.2 | 417.27 | 681.91 | 417.23 | 708.93 | 417.24 | 711.22 | 417.01 |
| 711.72 | 416.99 | 712.63 | 416.92 | 712.83 | 416.9 | 721.96 | 416.53 | 725.1 | 416.51 |
| 725.48 | 416.5 | 729.16 | 416.5 | 729.8 | 416.53 | 738.5 | 417.24 | 767.77 | 417.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 774.92 | 417.12 | 775.64 | 417.13 | 777.31 | 417.11 | 777.5 | 417.11 | 778.32 | 417.1 |
| 779.59 | 417.07 | 780.08 | 417.07 | 781.16 | 417.04 | 785.07 | 417.01 | 785.5 | 417 |
| 824.99 | 417.03 | 825.65 | 417.04 | 829.06 | 417.19 | 834.46 | 417.34 | 868.11 | 417.37 |
| 899.37 | 417.13 | 905.04 | 416.98 | 905.42 | 416.98 | 906.71 | 416.57 | 907.53 | 416.22 |
| 914.31 | 415.63 | 922.92 | 415.71 | 935.2 | 416.21 | 941.91 | 416.27 | 942.87 | 416.29 |
| 961.28 | 416.18 | 963.66 | 416.2 | 971.21 | 416.37 | 971.33 | 416.37 | 971.96 | 416.38 |
| 972.08 | 416.38 | 977.92 | 416.45 | 978.34 | 416.45 | 982.96 | 416.56 | 983.26 | 416.56 |
| 983.65 | 416.58 | 983.79 | 416.58 | 989.93 | 417.05 | 997.97 | 417.53 | 1005.34 | 417.58 |
| 1006.2 | 417.6 | 1006.88 | 417.6 | 1015.74 | 417.86 | 1019.13 | 417.98 | 1019.92 | 417.99 |
| 1032.53 | 418 | 1033.94 | 417.99 | 1050.08 | 417.75 | 1054.77 | 417.63 | 1054.9 | 417.63 |
| 1058.01 | 417.46 | 1058.86 | 417.4 | 1060.42 | 417.37 | 1061.73 | 417.37 | 1069.07 | 417.25 |
| 1090.44 | 417.26 | 1090.71 | 417.25 | 1112.35 | 417.11 | 1112.46 | 417.1 | 1125.25 | 417.02 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 358.45 | .04 | 1015.74 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 358.45 | 1015.74 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station= 1029.15 Elevation=418.1925

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14979.6*

INPUT
Description:
Station Elevation Data num= 294

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 420.86 | 8.81 | 420.89 | 9.28 | 420.9 | 11.48 | 420.9 | 12.14 | 421.06 |
| 12.97 | 421.24 | 13.33 | 421.24 | 13.78 | 421.25 | 14.02 | 421.25 | 14.94 | 421.24 |
| 15.24 | 421.19 | 15.51 | 421.15 | 15.66 | 421.13 | 17.87 | 420.9 | 18.91 | 420.83 |
| 19.09 | 420.8 | 19.34 | 420.77 | 19.97 | 420.72 | 21.55 | 420.6 | 21.96 | 420.58 |
| 22.38 | 420.55 | 26.56 | 420.53 | 27.1 | 420.57 | 29.68 | 420.78 | 29.99 | 420.81 |
| 30.15 | 420.83 | 30.22 | 420.84 | 30.52 | 420.9 | 30.64 | 420.92 | 31.87 | 421.16 |
| 32.22 | 421.18 | 32.69 | 421.18 | 33.64 | 421.16 | 33.7 | 421.15 | 34 | 421.15 |
| 34.2 | 421.14 | 34.32 | 421.13 | 35.7 | 421.08 | 36.21 | 421.08 | 37.48 | 421.06 |
| 38.82 | 421.06 | 38.96 | 421.05 | 39.19 | 421.08 | 39.29 | 421.08 | 39.38 | 421.09 |
| 39.46 | 421.08 | 56.05 | 420.75 | 64.89 | 420.73 | 69.63 | 420.59 | 81.29 | 420.57 |
| 82.51 | 420.6 | 82.86 | 420.6 | 85.02 | 420.64 | 85.77 | 420.64 | 86.48 | 420.66 |
| 86.81 | 420.66 | 96.26 | 420.49 | 96.89 | 420.49 | 100.43 | 420.31 | 100.81 | 420.28 |
| 102.69 | 420.11 | 105.94 | 419.92 | 107.47 | 419.82 | 107.59 | 419.81 | 107.76 | 419.8 |
| 125.91 | 419.93 | 134.88 | 419.83 | 135.08 | 419.82 | 135.47 | 419.82 | 135.69 | 419.81 |
| 135.87 | 419.81 | 136.14 | 419.8 | 137.4 | 419.78 | 137.51 | 419.78 | 142.44 | 419.68 |
| 142.93 | 419.68 | 143.12 | 419.67 | 145.38 | 419.67 | 146.13 | 419.79 | 146.69 | 419.93 |
| 146.94 | 420 | 147.32 | 420 | 147.6 | 420.01 | 151.38 | 420.03 | 151.75 | 420.04 |
| 152.07 | 420.04 | 158.64 | 419.97 | 160.38 | 419.95 | 165.2 | 419.95 | 165.64 | 419.94 |
| 167.22 | 419.94 | 167.96 | 419.9 | 168.43 | 419.88 | 168.49 | 419.88 | 173.83 | 419.6 |
| 201.85 | 419.65 | 206.46 | 419.68 | 216.7 | 419.59 | 217.19 | 419.58 | 237.6 | 419.5 |
| 241.57 | 419.59 | 244.86 | 419.52 | 274.19 | 419.36 | 276.07 | 419.3 | 276.97 | 419.3 |
| 286.59 | 419.24 | 290.22 | 419.3 | 290.42 | 419.3 | 292.6 | 419.34 | 292.81 | 419.35 |
| 293.09 | 419.34 | 296.64 | 419.32 | 304.58 | 419.24 | 304.94 | 419.23 | 316.6 | 419.14 |
| 324.17 | 419.02 | 324.29 | 419.02 | 324.52 | 419.01 | 326.63 | 418.99 | 326.88 | 418.99 |
| 327.18 | 419 | 327.34 | 419 | 328.48 | 418.96 | 346.13 | 418.89 | 350.9 | 418.94 |
| 351.58 | 418.96 | 359.11 | 419 | 360.02 | 418.99 | 363.35 | 418.99 | 365.81 | 418.48 |
| 366.58 | 418.33 | 366.74 | 418.29 | 369.3 | 417.72 | 369.58 | 417.67 | 373.29 | 417.28 |
| 373.35 | 417.27 | 374.67 | 417.06 | 375.42 | 416.92 | 380.21 | 416.72 | 382.22 | 416.64 |
| 395.95 | 416.65 | 396.42 | 416.64 | 403.79 | 416.67 | 404.14 | 416.69 | 404.35 | 416.71 |
| 404.51 | 416.71 | 405.85 | 416.76 | 405.96 | 416.76 | 410.16 | 416.87 | 413.8 | 416.87 |
| 414.26 | 416.86 | 414.74 | 416.86 | 415.06 | 416.87 | 420.53 | 416.82 | 421.77 | 416.82 |
| 424.69 | 416.72 | 428.33 | 416.55 | 428.6 | 416.55 | 439.7 | 416.18 | 440.27 | 416.19 |
| 449.68 | 416.26 | 463.24 | 416.98 | 463.96 | 417 | 464.53 | 417 | 466.71 | 417.07 |
| 480.1 | 416.92 | 486.4 | 416.78 | 489.29 | 416.66 | 493.39 | 416.65 | 505.39 | 416.79 |
| 511.25 | 416.76 | 517.07 | 416.07 | 554.84 | 416.01 | 555.18 | 416 | 558.74 | 415.83 |
| 562.71 | 416.29 | 562.98 | 416.33 | 578.36 | 416.96 | 581.48 | 416.96 | 581.67 | 416.95 |
| 602.36 | 416.98 | 604.48 | 417.13 | 608.01 | 417.33 | 608.2 | 417.33 | 609.38 | 417.38 |
| 610.58 | 417.41 | 610.72 | 417.42 | 615.43 | 417.57 | 615.94 | 417.58 | 618.92 | 417.68 |
| 641.85 | 417.67 | 642.92 | 417.64 | 643.14 | 417.64 | 644.07 | 417.6 | 649.56 | 417.52 |
| 649.75 | 417.52 | 661.2 | 416.74 | 662.17 | 416.69 | 666.2 | 416.67 | 666.61 | 416.66 |
| 671.45 | 416.66 | 671.68 | 416.67 | 672 | 416.67 | 677.88 | 416.69 | 686.54 | 416.67 |
| 688.17 | 416.64 | 714.47 | 416.66 | 716.43 | 416.48 | 716.7 | 416.46 | 717.18 | 416.44 |
| 718.07 | 416.37 | 718.27 | 416.35 | 727.15 | 416.02 | 727.99 | 416.02 | 729.63 | 416 |
| 734.16 | 416 | 734.78 | 416.03 | 743.25 | 416.66 | 771.74 | 416.62 | 778.69 | 416.5 |
| 779.4 | 416.5 | 781.02 | 416.48 | 781.19 | 416.47 | 782 | 416.46 | 782.88 | 416.44 |
| 783.24 | 416.44 | 784.77 | 416.4 | 787.49 | 416.37 | 787.64 | 416.36 | 787.88 | 416.36 |
| 788.99 | 416.33 | 807.93 | 416.27 | 815.06 | 416.29 | 824.08 | 416.36 | 826.45 | 416.35 |
| 826.86 | 416.36 | 827.42 | 416.36 | 828.07 | 416.37 | 831.39 | 416.56 | 836.64 | 416.74 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 837.42 | 416.75 | 852.16 | 416.75 | 852.57 | 416.76 | 899.65 | 416.47 | 899.82 | 416.46 |
| 900.84 | 416.44 | 905.34 | 416.31 | 905.71 | 416.31 | 906.97 | 415.94 | 907.77 | 415.62 |
| 914.36 | 415.08 | 922.2 | 415.16 | 933.39 | 415.61 | 940.37 | 415.68 | 940.5 | 415.69 |
| 950.72 | 415.66 | 957.13 | 415.61 | 958.64 | 415.62 | 966.16 | 415.84 | 966.27 | 415.84 |
| 966.85 | 415.85 | 966.95 | 415.85 | 972.27 | 415.95 | 972.66 | 415.95 | 976.86 | 416.08 |
| 977.09 | 416.08 | 977.49 | 416.1 | 977.62 | 416.1 | 983.21 | 416.56 | 987.63 | 416.87 |
| 990.53 | 417.03 | 996.88 | 417.11 | 997.24 | 417.11 | 998.02 | 417.13 | 998.32 | 417.13 |
| 1006.71 | 417.39 | 1010.29 | 417.54 | 1011.12 | 417.55 | 1024.42 | 417.49 | 1031.87 | 417.34 |
| 1042.94 | 417.22 | 1047.89 | 417.09 | 1048.03 | 417.09 | 1052.2 | 416.87 | 1053.86 | 416.83 |
| 1054.87 | 416.83 | 1062.99 | 416.67 | 1085.82 | 416.67 | 1094.32 | 416.59 | 1095.52 | 416.59 |
| 1104.23 | 416.51 | 1108.24 | 416.48 | 1108.65 | 416.47 | 1122.26 | 416.36 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 373.35 | .04 | 1006.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 373.35 | 1006.71 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=1019.503 Elevation=417.7367

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14932.1*

INPUT
Description:
Station Elevation Data num= 321

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 420.36 | 11.94 | 420.41 | 12.83 | 420.66 | 13.49 | 420.83 | 13.64 | 420.84 |
| 13.86 | 420.84 | 14.33 | 420.85 | 14.58 | 420.85 | 15.54 | 420.83 | 15.84 | 420.77 |
| 16.78 | 420.64 | 17.06 | 420.61 | 17.39 | 420.56 | 18.58 | 420.41 | 19.67 | 420.32 |
| 19.85 | 420.29 | 20.12 | 420.25 | 20.76 | 420.2 | 21.02 | 420.16 | 21.9 | 420.09 |
| 22.41 | 420.04 | 23.28 | 419.98 | 27.62 | 419.97 | 28.18 | 420.02 | 28.67 | 420.07 |
| 29.46 | 420.14 | 30.86 | 420.29 | 31.18 | 420.33 | 31.36 | 420.35 | 31.43 | 420.36 |
| 31.74 | 420.43 | 33.14 | 420.77 | 33.5 | 420.79 | 33.82 | 420.79 | 34 | 420.8 |
| 34.37 | 420.79 | 34.98 | 420.76 | 35.05 | 420.76 | 35.21 | 420.75 | 35.35 | 420.75 |
| 35.57 | 420.74 | 35.69 | 420.74 | 37.12 | 420.68 | 37.25 | 420.68 | 37.48 | 420.67 |
| 37.66 | 420.67 | 38.98 | 420.65 | 39.44 | 420.65 | 40.03 | 420.66 | 40.27 | 420.66 |
| 40.37 | 420.65 | 40.52 | 420.64 | 40.75 | 420.68 | 40.86 | 420.69 | 40.95 | 420.69 |
| 41.03 | 420.68 | 58.85 | 420.28 | 67.48 | 420.27 | 72.41 | 420.09 | 84.53 | 420.06 |
| 85.8 | 420.1 | 86.17 | 420.1 | 88.41 | 420.15 | 89.19 | 420.15 | 90.27 | 420.18 |
| 100.1 | 419.96 | 100.76 | 419.96 | 104.44 | 419.73 | 104.83 | 419.69 | 106.79 | 419.47 |
| 111.6 | 419.11 | 111.76 | 419.1 | 111.88 | 419.09 | 112.06 | 419.07 | 130.93 | 419.19 |
| 140.26 | 419.03 | 140.47 | 419.03 | 140.88 | 419.02 | 141.1 | 419.01 | 141.29 | 419.01 |
| 141.57 | 419 | 142.88 | 418.97 | 142.99 | 418.97 | 148.12 | 418.85 | 148.63 | 418.85 |
| 148.83 | 418.83 | 151.18 | 418.83 | 151.96 | 418.99 | 152.22 | 419.06 | 152.55 | 419.17 |
| 152.81 | 419.25 | 153.2 | 419.25 | 153.49 | 419.26 | 154.37 | 419.26 | 154.48 | 419.27 |
| 155.38 | 419.27 | 156.64 | 419.29 | 157.81 | 419.29 | 157.93 | 419.3 | 158.14 | 419.29 |
| 164.97 | 419.22 | 166.77 | 419.2 | 173.89 | 419.19 | 174.66 | 419.15 | 175.15 | 419.13 |
| 175.22 | 419.12 | 180.77 | 418.77 | 209.91 | 418.82 | 214.7 | 418.85 | 225.34 | 418.76 |
| 230.64 | 418.74 | 230.95 | 418.73 | 247.08 | 418.69 | 251.21 | 418.8 | 254.64 | 418.72 |
| 257.48 | 418.74 | 285.13 | 418.57 | 287.08 | 418.5 | 298.03 | 418.42 | 301.8 | 418.5 |
| 302.01 | 418.51 | 304.27 | 418.55 | 304.49 | 418.56 | 304.79 | 418.55 | 308.47 | 418.53 |
| 316.74 | 418.46 | 325.78 | 418.43 | 337.11 | 418.26 | 337.54 | 418.26 | 337.96 | 418.25 |
| 339.67 | 418.23 | 339.93 | 418.23 | 340.24 | 418.24 | 340.4 | 418.24 | 341.58 | 418.21 |
| 342.01 | 418.2 | 355.38 | 418.12 | 355.9 | 418.11 | 364.91 | 418.18 | 365.61 | 418.2 |
| 370.07 | 418.25 | 373.44 | 418.25 | 374.39 | 418.24 | 377.85 | 418.24 | 381.21 | 417.66 |
| 384.04 | 417.13 | 384.33 | 417.08 | 388.18 | 416.74 | 388.25 | 416.73 | 389.54 | 416.53 |
| 390.26 | 416.4 | 396.87 | 416.06 | 410.05 | 416.07 | 410.23 | 416.06 | 413.64 | 416.06 |
| 417.85 | 416.08 | 418.19 | 416.11 | 418.39 | 416.12 | 418.55 | 416.12 | 419.86 | 416.17 |
| 419.96 | 416.17 | 423.07 | 416.25 | 427.59 | 416.26 | 428.03 | 416.25 | 429.59 | 416.28 |
| 434.21 | 416.27 | 435.34 | 416.28 | 441.72 | 416.03 | 441.98 | 416.03 | 452.78 | 415.73 |
| 457.74 | 415.77 | 462.49 | 415.83 | 470.31 | 416.26 | 475.67 | 416.48 | 476.06 | 416.49 |
| 476.93 | 416.49 | 479.05 | 416.55 | 491.25 | 416.37 | 493.01 | 416.34 | 498.2 | 416.19 |
| 499.87 | 416.11 | 501.01 | 416.08 | 510.29 | 416.09 | 516.67 | 416.23 | 522.36 | 416.2 |
| 528.02 | 415.59 | 564.21 | 415.52 | 564.68 | 415.51 | 564.75 | 415.51 | 565.09 | 415.5 |
| 568.55 | 415.29 | 570.54 | 415.45 | 570.81 | 415.48 | 572.41 | 415.63 | 572.67 | 415.67 |
| 587.63 | 416.2 | 610.97 | 416.24 | 612.47 | 416.36 | 612.6 | 416.38 | 616.47 | 416.66 |
| 616.65 | 416.67 | 618.97 | 416.77 | 619.1 | 416.77 | 627.08 | 417.09 | 635.58 | 417.08 |
| 636.87 | 417.1 | 638.09 | 417.08 | 649.06 | 417.09 | 650.14 | 417.05 | 650.63 | 417.05 |
| 651.54 | 417 | 656.88 | 416.9 | 657.07 | 416.9 | 668.2 | 416.16 | 669.14 | 416.11 |
| 672.75 | 416.09 | 673.06 | 416.08 | 675.13 | 416.08 | 675.48 | 416.07 | 676.93 | 416.07 |
| 677.35 | 416.08 | 677.59 | 416.07 | 678.17 | 416.08 | 683.38 | 416.1 | 691.52 | 416.09 |
| 691.86 | 416.08 | 692.84 | 416.08 | 694.43 | 416.05 | 720.01 | 416.07 | 722.17 | 415.9 |
| 722.65 | 415.88 | 723.51 | 415.83 | 723.7 | 415.81 | 729.75 | 415.62 | 732.34 | 415.52 |
| 733.16 | 415.52 | 734.75 | 415.5 | 739.16 | 415.49 | 739.76 | 415.52 | 748 | 416.07 |
| 775.7 | 416.03 | 776.06 | 416.02 | 776.53 | 416 | 779.83 | 415.91 | 782.47 | 415.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 783.15 | 415.88 | 784.73 | 415.85 | 784.9 | 415.84 | 785.69 | 415.83 | 786.54 | 415.8 |
| 786.89 | 415.8 | 791.02 | 415.71 | 791.17 | 415.7 | 791.4 | 415.7 | 792.49 | 415.67 |
| 811.72 | 415.59 | 812.2 | 415.6 | 829.47 | 415.68 | 830.49 | 415.7 | 833.35 | 415.91 |
| 833.72 | 415.92 | 834.03 | 415.94 | 838.83 | 416.15 | 853.92 | 416.14 | 854.32 | 416.15 |
| 900.27 | 415.8 | 905.64 | 415.64 | 906 | 415.64 | 907.22 | 415.31 | 908 | 415.03 |
| 914.42 | 414.53 | 921.48 | 414.61 | 931.57 | 415.01 | 937.86 | 415.08 | 937.98 | 415.08 |
| 938.52 | 415.09 | 952.97 | 415.03 | 954.16 | 415.05 | 954.33 | 415.06 | 954.92 | 415.07 |
| 961.12 | 415.3 | 961.22 | 415.3 | 961.73 | 415.32 | 961.83 | 415.32 | 966.98 | 415.45 |
| 967.55 | 415.48 | 970.77 | 415.6 | 970.97 | 415.61 | 971.34 | 415.62 | 976.49 | 416.07 |
| 980.47 | 416.39 | 983.09 | 416.54 | 988.07 | 416.62 | 988.82 | 416.64 | 989.14 | 416.64 |
| 989.84 | 416.66 | 990.11 | 416.66 | 997.67 | 416.93 | 1001.44 | 417.1 | 1014.35 | 417 |
| 1014.76 | 416.99 | 1015.88 | 416.98 | 1024.15 | 416.8 | 1026.49 | 416.79 | 1027.33 | 416.77 |
| 1035.81 | 416.69 | 1041.01 | 416.56 | 1041.16 | 416.55 | 1045.55 | 416.34 | 1047.29 | 416.29 |
| 1048.36 | 416.29 | 1056.9 | 416.08 | 1080.63 | 416.09 | 1080.92 | 416.08 | 1088.76 | 415.99 |
| 1100.3 | 415.89 | 1100.72 | 415.88 | 1104.52 | 415.85 | 1104.96 | 415.84 | 1105.38 | 415.84 |
| 1119.28 | 415.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 388.25 | .04 | 997.67 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 388.25 | 997.67 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=1009.857 Elevation=417.2808

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14884.7*

INPUT
Description:
Station Elevation Data num= 333

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 419.85 | 5.05 | 419.93 | 12.03 | 419.92 | 12.4 | 419.93 | 13.11 | 420.15 |
| 13.32 | 420.22 | 14 | 420.43 | 14.32 | 420.43 | 14.39 | 420.44 | 16.13 | 420.43 |
| 16.45 | 420.36 | 16.75 | 420.3 | 16.91 | 420.28 | 17.42 | 420.2 | 17.72 | 420.16 |
| 19.29 | 419.92 | 20.42 | 419.82 | 20.61 | 419.78 | 20.89 | 419.74 | 21.56 | 419.67 |
| 21.83 | 419.63 | 24.17 | 419.41 | 28.68 | 419.4 | 29.26 | 419.46 | 32.05 | 419.79 |
| 32.38 | 419.84 | 32.56 | 419.87 | 32.63 | 419.88 | 32.95 | 419.97 | 33.09 | 420 |
| 34.41 | 420.37 | 34.79 | 420.4 | 35.11 | 420.4 | 35.3 | 420.41 | 35.69 | 420.4 |
| 36.33 | 420.37 | 36.39 | 420.37 | 36.56 | 420.36 | 36.71 | 420.36 | 36.93 | 420.34 |
| 37.05 | 420.34 | 38.54 | 420.28 | 38.67 | 420.27 | 39.1 | 420.27 | 40.48 | 420.25 |
| 40.95 | 420.25 | 41.56 | 420.26 | 41.82 | 420.25 | 41.92 | 420.25 | 41.97 | 420.26 |
| 42.07 | 420.24 | 42.32 | 420.28 | 42.42 | 420.29 | 42.52 | 420.29 | 42.6 | 420.28 |
| 60.52 | 419.82 | 70.07 | 419.8 | 75.19 | 419.59 | 87.78 | 419.55 | 88.16 | 419.57 |
| 89.1 | 419.6 | 89.47 | 419.6 | 90.36 | 419.62 | 90.85 | 419.64 | 91.33 | 419.65 |
| 91.81 | 419.67 | 92.97 | 419.67 | 93.38 | 419.68 | 93.74 | 419.7 | 103.94 | 419.43 |
| 104.62 | 419.42 | 106.33 | 419.32 | 108.45 | 419.14 | 108.85 | 419.1 | 110.88 | 418.83 |
| 115.89 | 418.4 | 116.05 | 418.38 | 116.17 | 418.37 | 116.36 | 418.35 | 135.96 | 418.44 |
| 145.64 | 418.24 | 145.86 | 418.23 | 146.28 | 418.22 | 146.57 | 418.22 | 146.71 | 418.21 |
| 147 | 418.2 | 148.37 | 418.17 | 148.48 | 418.17 | 153.81 | 418.02 | 154.33 | 418.02 |
| 154.54 | 418 | 156.98 | 418 | 157.79 | 418.19 | 158.06 | 418.27 | 158.4 | 418.4 |
| 158.67 | 418.5 | 159.08 | 418.5 | 159.38 | 418.51 | 160.29 | 418.52 | 160.4 | 418.52 |
| 161.24 | 418.53 | 162.84 | 418.54 | 163.36 | 418.55 | 170.38 | 418.48 | 171.3 | 418.48 |
| 173.17 | 418.45 | 178.38 | 418.46 | 178.85 | 418.45 | 180.57 | 418.45 | 181.36 | 418.4 |
| 181.41 | 418.4 | 181.87 | 418.37 | 181.94 | 418.36 | 187.7 | 417.95 | 218.75 | 417.99 |
| 220.68 | 418.01 | 256.56 | 417.87 | 260.85 | 418.02 | 261.4 | 418 | 264.41 | 417.92 |
| 267.36 | 417.94 | 296.07 | 417.77 | 298.1 | 417.69 | 299.08 | 417.69 | 309.14 | 417.61 |
| 309.47 | 417.6 | 313.38 | 417.7 | 313.6 | 417.71 | 315.36 | 417.75 | 315.95 | 417.77 |
| 318.02 | 417.77 | 341.87 | 417.62 | 350.04 | 417.5 | 350.49 | 417.5 | 350.93 | 417.49 |
| 352.7 | 417.47 | 352.97 | 417.47 | 353.29 | 417.48 | 353.36 | 417.48 | 353.43 | 417.47 |
| 354.69 | 417.45 | 355.13 | 417.45 | 355.61 | 417.43 | 366.85 | 417.36 | 366.96 | 417.35 |
| 373.75 | 417.34 | 378.91 | 417.41 | 379.64 | 417.43 | 384.27 | 417.5 | 387.77 | 417.5 |
| 388.76 | 417.48 | 392.35 | 417.49 | 395.83 | 416.99 | 396.01 | 416.97 | 396.92 | 416.82 |
| 398.78 | 416.54 | 399.07 | 416.5 | 403.08 | 416.21 | 403.14 | 416.2 | 404.4 | 416.01 |
| 405.1 | 415.88 | 409.63 | 415.6 | 409.98 | 415.57 | 411.52 | 415.48 | 431.91 | 415.5 |
| 432.44 | 415.53 | 432.6 | 415.53 | 433.86 | 415.57 | 433.97 | 415.57 | 436.98 | 415.64 |
| 441.38 | 415.65 | 441.81 | 415.64 | 443.66 | 415.7 | 448.91 | 415.74 | 451.67 | 415.65 |
| 455.36 | 415.5 | 458.59 | 415.46 | 464.09 | 415.3 | 465.85 | 415.27 | 475.29 | 415.4 |
| 482.9 | 415.79 | 488.1 | 415.99 | 489.32 | 415.99 | 491.38 | 416.02 | 504.95 | 415.78 |
| 509.99 | 415.61 | 511.62 | 415.52 | 512.73 | 415.5 | 517.73 | 415.48 | 518.42 | 415.49 |
| 521.74 | 415.51 | 527.94 | 415.67 | 533.47 | 415.64 | 538.98 | 415.11 | 574.67 | 415.02 |
| 575 | 415 | 578.36 | 414.74 | 580.29 | 414.84 | 582.11 | 414.97 | 582.37 | 415 |
| 596.91 | 415.44 | 619.59 | 415.49 | 621.04 | 415.64 | 621.17 | 415.66 | 624.93 | 415.99 |
| 627.36 | 416.12 | 627.49 | 416.12 | 631.94 | 416.35 | 635.24 | 416.51 | 643.5 | 416.5 |
| 644.78 | 416.51 | 656.6 | 416.5 | 657.65 | 416.46 | 657.92 | 416.46 | 659.01 | 416.4 |
| 664.19 | 416.28 | 664.38 | 416.28 | 675.2 | 415.57 | 676.12 | 415.54 | 676.19 | 415.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 678.48 | 415.51 | 679.62 | 415.51 | 679.93 | 415.5 | 680.32 | 415.5 | 680.62 | 415.49 |
| 682.88 | 415.49 | 683.68 | 415.48 | 684.09 | 415.49 | 684.32 | 415.48 | 684.89 | 415.49 |
| 689.95 | 415.51 | 697.86 | 415.5 | 698.19 | 415.49 | 699.15 | 415.49 | 700.69 | 415.46 |
| 725.55 | 415.49 | 727.39 | 415.35 | 727.65 | 415.34 | 728.11 | 415.33 | 729.13 | 415.27 |
| 737.53 | 415.02 | 738.32 | 415.02 | 739.87 | 415 | 740.42 | 415 | 740.77 | 414.99 |
| 744.16 | 414.99 | 752.75 | 415.48 | 760.96 | 415.48 | 779.67 | 415.43 | 780.02 | 415.42 |
| 780.47 | 415.4 | 783.68 | 415.29 | 786.25 | 415.25 | 786.91 | 415.26 | 788.44 | 415.22 |
| 788.6 | 415.21 | 789.37 | 415.19 | 790.54 | 415.16 | 790.99 | 415.16 | 791.98 | 415.12 |
| 794.56 | 415.05 | 794.7 | 415.04 | 794.93 | 415.04 | 795.59 | 415.01 | 795.98 | 415 |
| 815.92 | 414.91 | 829.14 | 415.01 | 831 | 415 | 831.06 | 415.01 | 831.92 | 415.01 |
| 832.91 | 415.03 | 835.69 | 415.27 | 836.05 | 415.29 | 836.35 | 415.32 | 841.02 | 415.56 |
| 871.97 | 415.45 | 900.56 | 415.14 | 900.73 | 415.14 | 903.7 | 415.03 | 906.29 | 414.96 |
| 907.48 | 414.68 | 908.24 | 414.43 | 914.47 | 413.98 | 920.76 | 414.05 | 929.75 | 414.41 |
| 930.65 | 414.42 | 935.36 | 414.48 | 935.46 | 414.48 | 935.94 | 414.49 | 948.82 | 414.46 |
| 949.88 | 414.49 | 950.03 | 414.49 | 950.93 | 414.52 | 956.08 | 414.76 | 956.16 | 414.77 |
| 956.62 | 414.79 | 956.71 | 414.79 | 961.29 | 414.95 | 961.8 | 414.98 | 964.85 | 415.13 |
| 965.18 | 415.14 | 965.27 | 415.15 | 969.76 | 415.59 | 973.32 | 415.9 | 975.65 | 416.05 |
| 980.75 | 416.16 | 981.66 | 416.19 | 981.9 | 416.19 | 988.64 | 416.46 | 992.6 | 416.65 |
| 993.51 | 416.66 | 1006.15 | 416.49 | 1006.58 | 416.49 | 1016.44 | 416.26 | 1028.67 | 416.16 |
| 1034.14 | 416.02 | 1034.29 | 416.02 | 1038.9 | 415.81 | 1041.22 | 415.75 | 1041.76 | 415.75 |
| 1041.85 | 415.74 | 1050.81 | 415.5 | 1075.12 | 415.51 | 1075.72 | 415.5 | 1076.03 | 415.5 |
| 1084.26 | 415.39 | 1096.37 | 415.27 | 1096.82 | 415.26 | 1100.72 | 415.22 | 1100.8 | 415.22 |
| 1101.26 | 415.21 | 1101.71 | 415.21 | 1116.29 | 415.04 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 403.14 | .04 | 988.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 403.14 | 988.64 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station= 1000.21 Elevation= 416.825

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14837.2*

INPUT
Description:
Station Elevation Data num= 332

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 419.35 | 5.24 | 419.44 | 9.86 | 419.43 | 10.39 | 419.44 | 12.86 | 419.44 |
| 13.81 | 419.78 | 14.52 | 420.02 | 14.68 | 420.03 | 14.92 | 420.03 | 15.43 | 420.04 |
| 15.7 | 420.04 | 16.73 | 420.02 | 17.06 | 419.94 | 17.53 | 419.85 | 20.01 | 419.44 |
| 21.18 | 419.31 | 21.37 | 419.27 | 21.66 | 419.22 | 22.36 | 419.14 | 22.64 | 419.09 |
| 24.13 | 418.93 | 24.59 | 418.89 | 25.06 | 418.84 | 29.74 | 418.83 | 30.34 | 418.91 |
| 33.58 | 419.35 | 33.76 | 419.39 | 33.84 | 419.4 | 34.17 | 419.5 | 34.31 | 419.54 |
| 35.68 | 419.98 | 36.07 | 420 | 36.34 | 420.02 | 36.61 | 420.02 | 37.01 | 420.01 |
| 37.67 | 419.98 | 37.74 | 419.97 | 38.07 | 419.97 | 38.42 | 419.94 | 39.97 | 419.87 |
| 40.1 | 419.87 | 40.36 | 419.86 | 40.55 | 419.86 | 41.97 | 419.84 | 42.46 | 419.84 |
| 43.1 | 419.86 | 43.15 | 419.85 | 43.36 | 419.85 | 43.47 | 419.84 | 43.63 | 419.83 |
| 43.88 | 419.88 | 44.09 | 419.9 | 44.18 | 419.89 | 62.76 | 419.36 | 63.37 | 419.35 |
| 72.65 | 419.33 | 77.97 | 419.08 | 91.02 | 419.04 | 91.42 | 419.06 | 92.39 | 419.09 |
| 92.78 | 419.11 | 93.7 | 419.12 | 95.2 | 419.18 | 96.04 | 419.18 | 97.2 | 419.21 |
| 107.78 | 418.9 | 108.49 | 418.89 | 110.25 | 418.76 | 112.45 | 418.56 | 112.88 | 418.51 |
| 114.98 | 418.19 | 119.25 | 417.78 | 120.34 | 417.66 | 120.47 | 417.65 | 120.66 | 417.62 |
| 140.98 | 417.7 | 151.02 | 417.45 | 151.25 | 417.44 | 151.69 | 417.43 | 151.93 | 417.42 |
| 151.98 | 417.42 | 152.13 | 417.41 | 153.85 | 417.36 | 153.97 | 417.36 | 160.03 | 417.18 |
| 160.25 | 417.17 | 162.78 | 417.17 | 163.62 | 417.39 | 163.9 | 417.48 | 164.25 | 417.63 |
| 164.53 | 417.75 | 164.96 | 417.76 | 167.2 | 417.78 | 167.3 | 417.78 | 168.66 | 417.8 |
| 168.85 | 417.8 | 169.4 | 417.81 | 177.63 | 417.73 | 184.97 | 417.72 | 185.46 | 417.71 |
| 187.24 | 417.71 | 188.06 | 417.65 | 188.11 | 417.65 | 188.59 | 417.62 | 188.66 | 417.61 |
| 194.64 | 417.12 | 225.05 | 417.15 | 232.98 | 417.19 | 266.04 | 417.06 | 270.48 | 417.23 |
| 274.18 | 417.12 | 278.12 | 417.14 | 307.01 | 416.98 | 309.11 | 416.89 | 320.57 | 416.79 |
| 320.9 | 416.79 | 324.96 | 416.9 | 325.19 | 416.91 | 327.62 | 416.98 | 329.77 | 416.98 |
| 350.78 | 416.91 | 362.98 | 416.74 | 363.44 | 416.74 | 363.9 | 416.73 | 365.73 | 416.71 |
| 366.52 | 416.71 | 367.8 | 416.69 | 368.25 | 416.69 | 368.75 | 416.67 | 369.73 | 416.67 |
| 369.94 | 416.66 | 387.56 | 416.56 | 392.91 | 416.65 | 393.67 | 416.67 | 398.47 | 416.75 |
| 402.1 | 416.75 | 403.12 | 416.73 | 406.85 | 416.74 | 409.6 | 416.42 | 410.46 | 416.33 |
| 410.64 | 416.3 | 412.99 | 416.02 | 413.51 | 415.95 | 413.82 | 415.92 | 417.97 | 415.67 |
| 418.04 | 415.67 | 419.26 | 415.48 | 419.94 | 415.36 | 424.34 | 415.04 | 424.67 | 415.01 |
| 426.18 | 414.9 | 445.98 | 414.92 | 446.3 | 414.93 | 446.49 | 414.94 | 446.64 | 414.94 |
| 447.87 | 414.98 | 447.97 | 414.98 | 452.7 | 415.05 | 454.35 | 415.05 | 455.16 | 415.04 |
| 455.58 | 415.04 | 457.05 | 415.1 | 457.38 | 415.11 | 461.34 | 415.18 | 461.42 | 415.18 |
| 462.47 | 415.21 | 468.49 | 414.98 | 471.88 | 414.96 | 477.22 | 414.84 | 478.93 | 414.82 |
| 488.09 | 414.96 | 495.48 | 415.33 | 500.53 | 415.49 | 501.22 | 415.49 | 501.61 | 415.48 |
| 501.72 | 415.48 | 503.72 | 415.5 | 514.49 | 415.26 | 516.89 | 415.21 | 521.79 | 415.02 |
| 523.37 | 414.94 | 524.44 | 414.91 | 533.2 | 414.92 | 539.22 | 415.11 | 544.59 | 415.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 549.93 | 414.63 | 552.06 | 414.62 | 552.62 | 414.61 | 584.59 | 414.52 | 584.91 | 414.5 |
| 588.18 | 414.2 | 590.05 | 414.23 | 590.3 | 414.25 | 591.81 | 414.31 | 592.06 | 414.33 |
| 606.18 | 414.68 | 615.84 | 414.69 | 616.08 | 414.7 | 628.2 | 414.74 | 629.61 | 414.92 |
| 629.74 | 414.94 | 633.39 | 415.33 | 635.75 | 415.47 | 635.87 | 415.48 | 636.82 | 415.53 |
| 637.21 | 415.56 | 640.2 | 415.74 | 640.66 | 415.76 | 643.4 | 415.92 | 664.14 | 415.92 |
| 664.44 | 415.91 | 665.15 | 415.87 | 665.42 | 415.87 | 665.62 | 415.86 | 666.48 | 415.8 |
| 671.51 | 415.66 | 671.7 | 415.66 | 682.2 | 414.99 | 682.77 | 414.98 | 683.09 | 414.96 |
| 683.16 | 414.96 | 686.19 | 414.92 | 686.79 | 414.92 | 687.17 | 414.91 | 692.11 | 414.9 |
| 693.48 | 414.91 | 694.02 | 414.92 | 704.52 | 414.9 | 706.95 | 414.87 | 710.66 | 414.87 |
| 731.09 | 414.9 | 732.88 | 414.79 | 733.13 | 414.78 | 733.57 | 414.77 | 734.57 | 414.72 |
| 739.72 | 414.6 | 742.72 | 414.51 | 745.52 | 414.5 | 745.86 | 414.49 | 749.15 | 414.49 |
| 749.72 | 414.51 | 757.5 | 414.9 | 766.13 | 414.89 | 766.72 | 414.88 | 783.64 | 414.84 |
| 783.98 | 414.82 | 784.41 | 414.81 | 787.53 | 414.68 | 790.02 | 414.62 | 790.67 | 414.63 |
| 792.15 | 414.58 | 792.33 | 414.58 | 793.06 | 414.56 | 793.87 | 414.53 | 794.2 | 414.53 |
| 794.63 | 414.52 | 798.09 | 414.39 | 798.23 | 414.39 | 798.38 | 414.38 | 798.45 | 414.38 |
| 799.47 | 414.33 | 818.84 | 414.23 | 833.85 | 414.33 | 834.22 | 414.34 | 834.74 | 414.34 |
| 835.34 | 414.36 | 838.03 | 414.64 | 838.38 | 414.66 | 838.67 | 414.69 | 843.2 | 414.96 |
| 843.91 | 414.97 | 864.92 | 414.87 | 901.02 | 414.48 | 901.18 | 414.48 | 904.07 | 414.36 |
| 906.58 | 414.29 | 907.73 | 414.04 | 908.47 | 413.84 | 914.52 | 413.44 | 920.05 | 413.5 |
| 927.93 | 413.81 | 928.72 | 413.82 | 930.06 | 413.83 | 932.85 | 413.88 | 932.94 | 413.88 |
| 933.37 | 413.89 | 944.66 | 413.88 | 945.59 | 413.92 | 945.73 | 413.92 | 946.19 | 413.94 |
| 951.03 | 414.23 | 951.11 | 414.23 | 951.51 | 414.25 | 951.59 | 414.26 | 952.15 | 414.28 |
| 955.34 | 414.44 | 955.61 | 414.46 | 956.06 | 414.48 | 958.73 | 414.65 | 959.02 | 414.67 |
| 959.1 | 414.67 | 963.04 | 415.1 | 964.21 | 415.21 | 966.16 | 415.42 | 968.21 | 415.56 |
| 972.68 | 415.69 | 973.48 | 415.72 | 973.69 | 415.72 | 979.61 | 415.99 | 983.75 | 416.21 |
| 984.71 | 416.22 | 1001.82 | 415.91 | 1008.72 | 415.71 | 1021.53 | 415.63 | 1027.26 | 415.48 |
| 1027.42 | 415.48 | 1033.65 | 415.23 | 1034.68 | 415.21 | 1034.99 | 415.21 | 1035.25 | 415.2 |
| 1035.34 | 415.2 | 1044.73 | 414.92 | 1070.81 | 414.92 | 1071.14 | 414.91 | 1092.44 | 414.64 |
| 1092.91 | 414.64 | 1096.99 | 414.59 | 1097.08 | 414.59 | 1097.56 | 414.58 | 1097.74 | 414.58 |
| 1098.03 | 414.57 | 1113.31 | 414.38 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 418.04 | .04 | 979.61 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 418.04 | 979.61 | | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=990.5634 Elevation=416.3692

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14789.8*

INPUT
Description:
Station Elevation Data num= 352

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 418.85 | 5.42 | 418.95 | 13.32 | 418.95 | 14.3 | 419.34 | 15.04 | 419.62 |
| 15.21 | 419.62 | 15.38 | 419.63 | 15.45 | 419.63 | 15.98 | 419.64 | 16.26 | 419.64 |
| 17.33 | 419.62 | 17.67 | 419.52 | 17.98 | 419.45 | 18.16 | 419.42 | 20.72 | 418.95 |
| 21.93 | 418.81 | 22.13 | 418.76 | 22.43 | 418.7 | 23.15 | 418.61 | 23.44 | 418.56 |
| 24.99 | 418.37 | 25.46 | 418.32 | 25.96 | 418.28 | 30.8 | 418.27 | 31.42 | 418.35 |
| 31.48 | 418.36 | 34.41 | 418.8 | 34.77 | 418.87 | 34.97 | 418.9 | 35.05 | 418.92 |
| 35.39 | 419.03 | 36.95 | 419.58 | 37.64 | 419.63 | 37.91 | 419.63 | 38.32 | 419.62 |
| 39.01 | 419.59 | 39.08 | 419.58 | 39.27 | 419.57 | 39.42 | 419.57 | 39.66 | 419.55 |
| 39.79 | 419.55 | 41.39 | 419.47 | 41.53 | 419.46 | 41.99 | 419.46 | 43.98 | 419.43 |
| 44.64 | 419.45 | 44.91 | 419.44 | 45.01 | 419.44 | 45.07 | 419.46 | 45.18 | 419.42 |
| 45.45 | 419.48 | 45.56 | 419.5 | 45.66 | 419.5 | 45.75 | 419.49 | 64.99 | 418.89 |
| 75.24 | 418.87 | 80.75 | 418.58 | 94.27 | 418.53 | 96.08 | 418.61 | 97.04 | 418.63 |
| 98.59 | 418.69 | 99.46 | 418.69 | 100.29 | 418.71 | 100.66 | 418.73 | 112.36 | 418.35 |
| 114.18 | 418.21 | 116.46 | 417.98 | 116.9 | 417.92 | 119.08 | 417.55 | 123.5 | 417.08 |
| 124.45 | 416.96 | 124.63 | 416.94 | 124.76 | 416.93 | 124.96 | 416.9 | 129.22 | 416.9 |
| 146 | 416.96 | 156.41 | 416.65 | 156.64 | 416.65 | 157.34 | 416.62 | 157.55 | 416.62 |
| 159.33 | 416.56 | 159.45 | 416.55 | 165.74 | 416.35 | 165.96 | 416.33 | 168.59 | 416.33 |
| 169.46 | 416.59 | 169.74 | 416.69 | 170.11 | 416.87 | 170.4 | 417 | 170.84 | 417.01 |
| 172.26 | 417.02 | 173.16 | 417.04 | 173.27 | 417.04 | 174.67 | 417.06 | 174.87 | 417.06 |
| 175.43 | 417.07 | 183.96 | 416.98 | 185.97 | 416.96 | 193.91 | 416.96 | 194.76 | 416.9 |
| 194.82 | 416.9 | 195.31 | 416.86 | 195.39 | 416.85 | 201.58 | 416.3 | 233.07 | 416.32 |
| 244.66 | 416.34 | 275.52 | 416.25 | 280.12 | 416.44 | 283.95 | 416.32 | 287.12 | 416.35 |
| 317.95 | 416.18 | 320.13 | 416.08 | 321.18 | 416.08 | 331.99 | 415.98 | 332.34 | 415.97 |
| 336.54 | 416.1 | 336.78 | 416.11 | 339.3 | 416.19 | 341.52 | 416.19 | 363.28 | 416.15 |
| 375.91 | 415.99 | 376.05 | 415.98 | 376.39 | 415.98 | 376.86 | 415.97 | 378.77 | 415.96 |
| 379.06 | 415.95 | 379.58 | 415.95 | 380.91 | 415.93 | 381.38 | 415.93 | 381.89 | 415.91 |
| 382.91 | 415.9 | 383.13 | 415.9 | 393.96 | 415.81 | 394.08 | 415.81 | 401.37 | 415.79 |
| 412.67 | 416 | 416.43 | 416 | 417.49 | 415.98 | 421.35 | 415.99 | 424.19 | 415.73 |
| 425.09 | 415.66 | 425.27 | 415.64 | 428.57 | 415.33 | 432.87 | 415.14 | 432.94 | 415.13 |
| 434.79 | 414.84 | 440.83 | 414.32 | 460.04 | 414.33 | 460.35 | 414.35 | 460.68 | 414.35 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 461.88 | 414.38 | 461.97 | 414.38 | 464.81 | 414.43 | 468.16 | 414.44 | 468.95 | 414.43 |
| 469.36 | 414.43 | 469.79 | 414.45 | 470.07 | 414.47 | 471.1 | 414.53 | 474.94 | 414.63 |
| 475.02 | 414.64 | 476.04 | 414.67 | 481.88 | 414.46 | 485.17 | 414.47 | 490.35 | 414.37 |
| 492.01 | 414.36 | 500.89 | 414.53 | 508.06 | 414.86 | 512.97 | 414.99 | 513.32 | 414.99 |
| 513.61 | 414.98 | 514.01 | 414.98 | 514.12 | 414.97 | 516.06 | 414.97 | 526.5 | 414.69 |
| 527.22 | 414.69 | 527.98 | 414.66 | 528.83 | 414.65 | 533.58 | 414.44 | 535.12 | 414.35 |
| 536.16 | 414.33 | 540.88 | 414.31 | 541.53 | 414.32 | 544.65 | 414.34 | 550.49 | 414.55 |
| 555.27 | 414.52 | 555.7 | 414.51 | 560.88 | 414.15 | 560.96 | 414.15 | 566.07 | 414.11 |
| 568.97 | 414.13 | 594.01 | 414.03 | 594.44 | 414.02 | 594.51 | 414.02 | 594.82 | 414 |
| 597.99 | 413.66 | 599.8 | 413.62 | 600.05 | 413.63 | 601.52 | 413.65 | 601.76 | 413.67 |
| 615.45 | 413.93 | 623.76 | 413.93 | 624.69 | 413.94 | 636.81 | 413.99 | 638.18 | 414.2 |
| 638.31 | 414.21 | 638.71 | 414.27 | 641.84 | 414.66 | 642.01 | 414.67 | 644.14 | 414.82 |
| 645.17 | 414.9 | 645.56 | 414.92 | 651.56 | 415.34 | 659.34 | 415.33 | 660.52 | 415.34 |
| 671.68 | 415.34 | 672.66 | 415.28 | 672.93 | 415.28 | 673.12 | 415.27 | 673.95 | 415.2 |
| 678.83 | 415.04 | 679.01 | 415.04 | 689.2 | 414.41 | 689.75 | 414.4 | 690.06 | 414.38 |
| 690.14 | 414.38 | 693.07 | 414.34 | 693.37 | 414.34 | 693.65 | 414.33 | 696.18 | 414.32 |
| 696.43 | 414.31 | 697.19 | 414.31 | 697.57 | 414.32 | 697.79 | 414.31 | 698.82 | 414.31 |
| 700.14 | 414.32 | 700.67 | 414.33 | 710.86 | 414.31 | 713.21 | 414.28 | 716.81 | 414.28 |
| 735.52 | 414.31 | 736.33 | 414.32 | 736.62 | 414.32 | 738.36 | 414.23 | 738.6 | 414.22 |
| 739.04 | 414.22 | 739.82 | 414.19 | 740 | 414.18 | 745 | 414.08 | 745.54 | 414.06 |
| 747.91 | 414.01 | 750.63 | 414 | 750.96 | 413.99 | 754.15 | 413.99 | 762.25 | 414.31 |
| 770.62 | 414.3 | 771.19 | 414.29 | 787.51 | 414.25 | 787.6 | 414.24 | 787.93 | 414.23 |
| 791.38 | 414.06 | 793.8 | 414 | 794.42 | 414.01 | 795.87 | 413.95 | 796.03 | 413.95 |
| 796.74 | 413.92 | 797.53 | 413.89 | 797.85 | 413.89 | 798.27 | 413.88 | 799.2 | 413.83 |
| 801.63 | 413.73 | 801.76 | 413.73 | 801.91 | 413.72 | 801.98 | 413.72 | 802.97 | 413.67 |
| 821.75 | 413.55 | 825.8 | 413.59 | 834.1 | 413.65 | 834.2 | 413.66 | 835.14 | 413.65 |
| 835.9 | 413.66 | 836.82 | 413.66 | 837.76 | 413.68 | 840.37 | 414.01 | 840.71 | 414.03 |
| 841 | 414.06 | 845.39 | 414.37 | 853.87 | 414.36 | 859.2 | 414.31 | 859.57 | 414.31 |
| 866.46 | 414.24 | 901.48 | 413.82 | 901.63 | 413.81 | 904.44 | 413.69 | 906.55 | 413.62 |
| 906.88 | 413.62 | 907.99 | 413.41 | 908.7 | 413.25 | 914.58 | 412.89 | 919.33 | 412.95 |
| 926.11 | 413.21 | 926.79 | 413.22 | 926.85 | 413.22 | 930.35 | 413.28 | 930.42 | 413.28 |
| 930.79 | 413.29 | 936.32 | 413.31 | 936.62 | 413.3 | 937.15 | 413.31 | 940.51 | 413.3 |
| 941.31 | 413.35 | 941.42 | 413.36 | 941.82 | 413.38 | 945.99 | 413.69 | 946.05 | 413.7 |
| 946.4 | 413.72 | 946.47 | 413.72 | 949.69 | 413.94 | 952.61 | 414.17 | 952.86 | 414.19 |
| 952.93 | 414.2 | 956.32 | 414.61 | 957.32 | 414.72 | 959 | 414.94 | 960.77 | 415.07 |
| 964.62 | 415.22 | 965.3 | 415.25 | 965.49 | 415.25 | 970.57 | 415.53 | 974.9 | 415.77 |
| 975.91 | 415.77 | 992.86 | 415.42 | 1001 | 415.17 | 1014.4 | 415.1 | 1020.38 | 414.95 |
| 1020.55 | 414.94 | 1024.51 | 414.8 | 1025.6 | 414.74 | 1027.07 | 414.69 | 1028.14 | 414.67 |
| 1028.46 | 414.67 | 1028.73 | 414.66 | 1028.83 | 414.66 | 1029.27 | 414.65 | 1038.64 | 414.33 |
| 1065.91 | 414.34 | 1066.25 | 414.33 | 1093.27 | 413.96 | 1093.36 | 413.95 | 1094.04 | 413.95 |
| 1094.36 | 413.94 | 1110.33 | 413.72 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 432.94 | .04 | 970.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 432.94 | 970.57 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=980.9167 Elevation=415.9133

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14742.3*

INPUT
Description:
Station Elevation Data num= 364

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 418.35 | 5.61 | 418.46 | 13.78 | 418.46 | 14.79 | 418.9 | 15.56 | 419.21 |
| 15.73 | 419.22 | 15.99 | 419.22 | 16.53 | 419.24 | 16.82 | 419.24 | 17.92 | 419.21 |
| 18.28 | 419.11 | 18.6 | 419.03 | 18.78 | 418.99 | 19.35 | 418.88 | 19.68 | 418.81 |
| 20.05 | 418.74 | 21.43 | 418.46 | 22.69 | 418.3 | 23.2 | 418.18 | 23.95 | 418.08 |
| 24.25 | 418.02 | 25.85 | 417.81 | 26.85 | 417.71 | 31.86 | 417.7 | 32.51 | 417.8 |
| 32.56 | 417.8 | 33.07 | 417.89 | 33.98 | 418.03 | 35.6 | 418.31 | 36.17 | 418.42 |
| 36.25 | 418.44 | 36.75 | 418.62 | 38.23 | 419.19 | 38.93 | 419.24 | 39.22 | 419.24 |
| 39.64 | 419.23 | 40.35 | 419.2 | 40.43 | 419.19 | 40.62 | 419.18 | 40.78 | 419.18 |
| 41.16 | 419.15 | 42.82 | 419.06 | 42.96 | 419.06 | 43.24 | 419.05 | 43.44 | 419.05 |
| 44.96 | 419.03 | 45.49 | 419.03 | 46.17 | 419.05 | 46.23 | 419.05 | 46.45 | 419.04 |
| 46.56 | 419.03 | 46.62 | 419.06 | 46.74 | 419.02 | 47.01 | 419.08 | 47.13 | 419.1 |
| 47.24 | 419.11 | 47.33 | 419.09 | 67.23 | 418.43 | 67.89 | 418.42 | 77.83 | 418.4 |
| 83.52 | 418.08 | 97.51 | 418.02 | 97.94 | 418.05 | 99.39 | 418.11 | 100.38 | 418.13 |
| 100.93 | 418.15 | 101.45 | 418.18 | 101.98 | 418.2 | 102.88 | 418.2 | 103.27 | 418.21 |
| 103.74 | 418.23 | 104.13 | 418.24 | 115.47 | 417.83 | 116.22 | 417.82 | 118.11 | 417.66 |
| 120.47 | 417.39 | 120.92 | 417.32 | 123.18 | 416.92 | 127.08 | 416.46 | 128.73 | 416.25 |
| 128.91 | 416.23 | 129.05 | 416.21 | 129.26 | 416.17 | 133.67 | 416.17 | 149.65 | 416.22 |
| 149.9 | 416.21 | 151.03 | 416.22 | 162.03 | 415.85 | 162.5 | 415.83 | 162.76 | 415.83 |
| 162.81 | 415.82 | 162.97 | 415.82 | 164.81 | 415.75 | 164.94 | 415.75 | 171.44 | 415.52 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 171.67 | 415.5 | 174.39 | 415.5 | 175.29 | 415.79 | 175.58 | 415.9 | 175.96 | 416.1 |
| 176.26 | 416.25 | 176.72 | 416.26 | 177.05 | 416.26 | 178.06 | 416.28 | 178.19 | 416.28 |
| 179.11 | 416.29 | 179.23 | 416.29 | 180.69 | 416.31 | 180.89 | 416.32 | 181.47 | 416.32 |
| 181.58 | 416.33 | 190.29 | 416.23 | 192.37 | 416.21 | 198.15 | 416.23 | 198.68 | 416.22 |
| 200.58 | 416.22 | 201.46 | 416.15 | 201.52 | 416.15 | 202.03 | 416.11 | 202.11 | 416.1 |
| 203.14 | 415.99 | 208.51 | 415.47 | 241.09 | 415.49 | 249.58 | 415.54 | 283.51 | 415.43 |
| 285 | 415.44 | 289.76 | 415.65 | 293.72 | 415.52 | 297 | 415.55 | 307.76 | 415.42 |
| 328.89 | 415.39 | 331.14 | 415.28 | 343.41 | 415.16 | 343.77 | 415.16 | 350.97 | 415.4 |
| 353.27 | 415.4 | 365.97 | 415.34 | 375.78 | 415.39 | 388.85 | 415.23 | 388.99 | 415.22 |
| 389.35 | 415.22 | 389.83 | 415.21 | 391.8 | 415.2 | 392.1 | 415.19 | 392.64 | 415.19 |
| 394.01 | 415.17 | 394.5 | 415.17 | 395.03 | 415.15 | 407.52 | 415.03 | 407.64 | 415.03 |
| 415.19 | 415.01 | 420.91 | 415.12 | 421.72 | 415.15 | 426.87 | 415.25 | 430.76 | 415.25 |
| 431.85 | 415.23 | 435.85 | 415.23 | 439.72 | 414.99 | 439.91 | 414.98 | 443.31 | 414.75 |
| 447.76 | 414.6 | 447.84 | 414.6 | 449.63 | 414.32 | 455.49 | 413.74 | 467.34 | 413.74 |
| 467.75 | 413.73 | 470.36 | 413.73 | 474.1 | 413.75 | 474.4 | 413.76 | 474.72 | 413.76 |
| 475.88 | 413.79 | 475.97 | 413.79 | 478.73 | 413.82 | 481.98 | 413.83 | 482.74 | 413.82 |
| 483.13 | 413.82 | 484.83 | 413.94 | 488.55 | 414.09 | 488.62 | 414.09 | 489.61 | 414.14 |
| 492.14 | 414.05 | 492.96 | 414.01 | 495.27 | 413.94 | 495.51 | 413.94 | 498.46 | 413.97 |
| 503.48 | 413.9 | 505.08 | 413.91 | 513.7 | 414.09 | 520.64 | 414.4 | 525.4 | 414.49 |
| 525.74 | 414.49 | 526.02 | 414.48 | 526.41 | 414.47 | 526.51 | 414.47 | 528.39 | 414.45 |
| 538.52 | 414.13 | 539.22 | 414.13 | 539.94 | 414.1 | 540.77 | 414.08 | 545.38 | 413.85 |
| 546.86 | 413.76 | 547.88 | 413.74 | 556.11 | 413.75 | 561.77 | 414 | 562.09 | 414 |
| 566.4 | 413.96 | 566.82 | 413.95 | 567.66 | 413.91 | 571.84 | 413.67 | 571.92 | 413.67 |
| 573.84 | 413.65 | 603.94 | 413.53 | 604.36 | 413.52 | 604.43 | 413.52 | 604.72 | 413.5 |
| 607.8 | 413.11 | 609.79 | 413.01 | 611.22 | 412.99 | 611.45 | 413 | 624.72 | 413.17 |
| 627.58 | 413.15 | 628.13 | 413.14 | 645.43 | 413.24 | 646.88 | 413.49 | 650.3 | 414 |
| 650.46 | 414.01 | 652.53 | 414.18 | 652.64 | 414.19 | 656.71 | 414.51 | 657.15 | 414.55 |
| 659.72 | 414.75 | 668.43 | 414.76 | 679.22 | 414.75 | 679.5 | 414.73 | 680.17 | 414.69 |
| 680.43 | 414.68 | 680.61 | 414.68 | 681.42 | 414.6 | 686.15 | 414.42 | 686.32 | 414.42 |
| 696.2 | 413.82 | 696.73 | 413.82 | 697.04 | 413.81 | 697.11 | 413.8 | 699.95 | 413.76 |
| 700.24 | 413.76 | 700.51 | 413.75 | 700.87 | 413.75 | 701.14 | 413.74 | 702.35 | 413.74 |
| 702.66 | 413.73 | 703.94 | 413.72 | 704.32 | 413.73 | 704.53 | 413.72 | 705.05 | 413.72 |
| 705.24 | 413.73 | 706.8 | 413.73 | 707.31 | 413.74 | 716.89 | 413.72 | 717.19 | 413.71 |
| 718.06 | 413.71 | 719.47 | 413.69 | 722.96 | 413.69 | 742.16 | 413.73 | 744.08 | 413.66 |
| 744.5 | 413.66 | 745.26 | 413.64 | 745.43 | 413.63 | 750.81 | 413.55 | 753.1 | 413.5 |
| 759.15 | 413.49 | 759.69 | 413.5 | 766.99 | 413.72 | 775.11 | 413.71 | 775.66 | 413.7 |
| 791.57 | 413.65 | 795.23 | 413.44 | 797.57 | 413.38 | 798.18 | 413.38 | 799.58 | 413.32 |
| 799.74 | 413.32 | 800.43 | 413.29 | 801.19 | 413.25 | 801.5 | 413.25 | 801.91 | 413.24 |
| 805.16 | 413.07 | 805.33 | 413.07 | 805.43 | 413.06 | 805.5 | 413.06 | 806.46 | 413 |
| 822.8 | 412.86 | 823.52 | 412.87 | 836.63 | 412.98 | 838.78 | 412.98 | 839.13 | 412.99 |
| 839.27 | 412.99 | 840.18 | 413.01 | 842.71 | 413.37 | 843.04 | 413.4 | 843.32 | 413.43 |
| 847.57 | 413.78 | 852.98 | 413.79 | 860.96 | 413.7 | 861.32 | 413.7 | 901.93 | 413.15 |
| 902.08 | 413.15 | 904.8 | 413.01 | 907.17 | 412.94 | 908.25 | 412.78 | 908.94 | 412.65 |
| 914.63 | 412.34 | 917.38 | 412.37 | 924.29 | 412.62 | 924.91 | 412.62 | 927.84 | 412.68 |
| 928.21 | 412.68 | 932.82 | 412.72 | 936.35 | 412.73 | 937.02 | 412.78 | 937.12 | 412.79 |
| 937.45 | 412.81 | 937.69 | 412.83 | 940.94 | 413.16 | 941 | 413.16 | 941.29 | 413.19 |
| 941.35 | 413.19 | 941.75 | 413.23 | 942.59 | 413.3 | 944.05 | 413.44 | 944.24 | 413.46 |
| 944.57 | 413.49 | 946.38 | 413.68 | 946.49 | 413.69 | 946.7 | 413.71 | 946.76 | 413.72 |
| 950.44 | 414.23 | 951.85 | 414.45 | 953.32 | 414.58 | 956.73 | 414.75 | 957.13 | 414.78 |
| 957.28 | 414.78 | 961.54 | 415.07 | 966.06 | 415.33 | 967.11 | 415.33 | 983.89 | 414.93 |
| 993.29 | 414.63 | 1007.26 | 414.58 | 1007.78 | 414.56 | 1013.5 | 414.41 | 1013.68 | 414.41 |
| 1017.82 | 414.27 | 1018.95 | 414.21 | 1021.03 | 414.14 | 1021.93 | 414.12 | 1022.32 | 414.12 |
| 1032.55 | 413.75 | 1061 | 413.75 | 1061.36 | 413.74 | 1089.55 | 413.33 | 1089.64 | 413.32 |
| 1090.17 | 413.32 | 1090.31 | 413.31 | 1090.68 | 413.31 | 1107.34 | 413.06 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 447.84 | .04 | 961.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 447.84 | 961.54 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station= 971.27 Elevation=415.4575

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14694.9*

INPUT
Description:
Station Elevation Data num= 362

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 417.85 | 4.83 | 417.95 | 5.8 | 417.98 | 10.91 | 417.97 | 11.5 | 417.98 |
| 14.23 | 417.98 | 15.04 | 418.35 | 16.07 | 418.81 | 16.25 | 418.81 | 16.44 | 418.82 |
| 16.52 | 418.82 | 17.08 | 418.83 | 17.38 | 418.83 | 18.52 | 418.81 | 18.88 | 418.69 |
| 19.22 | 418.6 | 20 | 418.43 | 22.14 | 417.97 | 23.44 | 417.8 | 23.66 | 417.74 |
| 23.98 | 417.67 | 24.75 | 417.55 | 25.06 | 417.49 | 26.1 | 417.34 | 27.74 | 417.14 |
| 32.92 | 417.13 | 33.59 | 417.24 | 36.78 | 417.81 | 37.17 | 417.89 | 37.37 | 417.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 37.46 | 417.96 | 37.82 | 418.1 | 37.98 | 418.16 | 39.5 | 418.79 | 39.93 | 418.83 |
| 40.23 | 418.85 | 40.3 | 418.85 | 40.52 | 418.86 | 41.7 | 418.8 | 41.77 | 418.8 |
| 41.97 | 418.79 | 42.14 | 418.79 | 42.39 | 418.76 | 42.53 | 418.75 | 44.24 | 418.66 |
| 44.39 | 418.66 | 44.67 | 418.65 | 44.88 | 418.65 | 46.46 | 418.62 | 47 | 418.62 |
| 47.71 | 418.65 | 48 | 418.64 | 48.11 | 418.63 | 48.17 | 418.65 | 48.29 | 418.61 |
| 48.57 | 418.69 | 48.81 | 418.71 | 48.9 | 418.69 | 69.47 | 417.96 | 80.42 | 417.93 |
| 86.3 | 417.58 | 100.75 | 417.52 | 102.7 | 417.61 | 103.72 | 417.63 | 104.28 | 417.66 |
| 104.83 | 417.68 | 105.38 | 417.71 | 106.31 | 417.71 | 106.71 | 417.73 | 107.19 | 417.74 |
| 107.59 | 417.76 | 119.31 | 417.3 | 120.09 | 417.29 | 122.04 | 417.11 | 124.48 | 416.81 |
| 124.94 | 416.73 | 127.27 | 416.28 | 133.02 | 415.53 | 133.2 | 415.51 | 133.34 | 415.49 |
| 133.56 | 415.45 | 138.12 | 415.44 | 154.63 | 415.48 | 154.89 | 415.47 | 156.05 | 415.47 |
| 168.17 | 415.03 | 168.23 | 415.03 | 168.39 | 415.02 | 170.3 | 414.95 | 170.43 | 414.94 |
| 177.14 | 414.69 | 177.38 | 414.67 | 180.19 | 414.67 | 181.12 | 414.98 | 181.42 | 415.12 |
| 181.81 | 415.33 | 182.12 | 415.5 | 182.6 | 415.51 | 182.93 | 415.51 | 183.98 | 415.53 |
| 184.11 | 415.53 | 185.07 | 415.55 | 185.19 | 415.55 | 186.7 | 415.57 | 186.91 | 415.57 |
| 187.51 | 415.58 | 187.62 | 415.58 | 188.08 | 415.59 | 188.48 | 415.59 | 189.48 | 415.57 |
| 195.57 | 415.49 | 196.62 | 415.49 | 196.67 | 415.48 | 198.77 | 415.46 | 204.75 | 415.49 |
| 205.29 | 415.48 | 207.26 | 415.48 | 208.17 | 415.4 | 208.22 | 415.4 | 208.75 | 415.35 |
| 208.83 | 415.34 | 215.45 | 414.65 | 249.11 | 414.66 | 257.89 | 414.71 | 294.48 | 414.62 |
| 299.4 | 414.87 | 300.03 | 414.84 | 303.49 | 414.71 | 306.88 | 414.75 | 317.99 | 414.61 |
| 339.83 | 414.59 | 342.16 | 414.47 | 343.29 | 414.47 | 354.84 | 414.35 | 355.21 | 414.34 |
| 361.98 | 414.58 | 362.91 | 414.62 | 363.26 | 414.61 | 365.03 | 414.61 | 378.14 | 414.56 |
| 388.28 | 414.63 | 401.78 | 414.47 | 401.93 | 414.46 | 402.3 | 414.46 | 402.8 | 414.45 |
| 404.83 | 414.44 | 405.14 | 414.43 | 405.7 | 414.43 | 407.12 | 414.41 | 407.62 | 414.41 |
| 408.17 | 414.39 | 421.07 | 414.26 | 421.2 | 414.26 | 423.56 | 414.23 | 429 | 414.23 |
| 434.92 | 414.36 | 435.75 | 414.39 | 441.07 | 414.5 | 445.09 | 414.5 | 446.22 | 414.48 |
| 450.35 | 414.48 | 454.34 | 414.32 | 454.54 | 414.32 | 457.72 | 414.18 | 462.66 | 414.07 |
| 462.73 | 414.06 | 463.84 | 413.9 | 464.47 | 413.8 | 468.46 | 413.35 | 468.77 | 413.31 |
| 470.14 | 413.16 | 481.61 | 413.16 | 482.01 | 413.15 | 488.45 | 413.17 | 488.63 | 413.18 |
| 496.53 | 413.22 | 496.91 | 413.21 | 497.31 | 413.25 | 497.58 | 413.27 | 498.25 | 413.33 |
| 498.55 | 413.35 | 502.15 | 413.54 | 502.22 | 413.55 | 503.18 | 413.6 | 508.66 | 413.42 |
| 508.89 | 413.42 | 511.74 | 413.47 | 516.6 | 413.43 | 526.5 | 413.66 | 533.23 | 413.93 |
| 537.83 | 414 | 538.43 | 413.98 | 538.81 | 413.97 | 538.91 | 413.96 | 540.73 | 413.92 |
| 550.53 | 413.57 | 551.21 | 413.57 | 551.91 | 413.54 | 552.72 | 413.52 | 557.18 | 413.27 |
| 558.61 | 413.17 | 564.02 | 413.14 | 564.63 | 413.15 | 567.56 | 413.17 | 573.04 | 413.44 |
| 573.35 | 413.44 | 577.52 | 413.4 | 577.93 | 413.39 | 582.79 | 413.18 | 584.73 | 413.17 |
| 585.24 | 413.16 | 587.66 | 413.14 | 590.38 | 413.16 | 613.87 | 413.03 | 614.28 | 413.02 |
| 614.34 | 413.02 | 614.63 | 413 | 617.61 | 412.57 | 619.31 | 412.41 | 620.92 | 412.33 |
| 633.99 | 412.41 | 636.76 | 412.39 | 637.29 | 412.38 | 654.04 | 412.5 | 655.33 | 412.75 |
| 655.82 | 412.84 | 658.76 | 413.33 | 658.92 | 413.35 | 661.88 | 413.62 | 662.25 | 413.65 |
| 667.88 | 414.17 | 686.76 | 414.17 | 687.68 | 414.1 | 687.93 | 414.09 | 688.11 | 414.08 |
| 688.89 | 414 | 693.47 | 413.81 | 693.59 | 413.8 | 703.2 | 413.24 | 703.72 | 413.24 |
| 704.01 | 413.23 | 704.08 | 413.23 | 706.83 | 413.18 | 707.11 | 413.18 | 707.72 | 413.16 |
| 709.62 | 413.15 | 709.75 | 413.14 | 709.99 | 413.14 | 710.69 | 413.13 | 711.06 | 413.14 |
| 711.26 | 413.13 | 711.76 | 413.14 | 713.46 | 413.14 | 713.96 | 413.15 | 724.36 | 413.12 |
| 725.73 | 413.1 | 732.14 | 413.11 | 732.77 | 413.12 | 747.7 | 413.14 | 749.33 | 413.1 |
| 749.56 | 413.1 | 749.96 | 413.11 | 750.7 | 413.09 | 750.87 | 413.09 | 755.56 | 413.04 |
| 758.29 | 413 | 764.67 | 412.99 | 771.74 | 413.14 | 779.6 | 413.12 | 780.13 | 413.11 |
| 795.45 | 413.06 | 795.54 | 413.05 | 799.08 | 412.82 | 801.35 | 412.75 | 801.94 | 412.76 |
| 803.29 | 412.69 | 803.43 | 412.69 | 804.11 | 412.65 | 805.15 | 412.61 | 805.54 | 412.61 |
| 806.42 | 412.55 | 808.7 | 412.42 | 808.82 | 412.41 | 808.96 | 412.4 | 809.02 | 412.4 |
| 809.61 | 412.36 | 809.95 | 412.33 | 825.77 | 412.18 | 826.48 | 412.19 | 839.17 | 412.3 |
| 839.26 | 412.3 | 841.24 | 412.31 | 841.58 | 412.32 | 841.72 | 412.32 | 842.6 | 412.34 |
| 845.05 | 412.74 | 845.37 | 412.77 | 845.64 | 412.8 | 849.76 | 413.19 | 854.99 | 413.19 |
| 862.72 | 413.09 | 863.07 | 413.08 | 902.39 | 412.49 | 902.54 | 412.49 | 905.17 | 412.34 |
| 907.46 | 412.27 | 908.5 | 412.15 | 909.17 | 412.06 | 914.68 | 411.79 | 917.89 | 411.84 |
| 922.47 | 412.02 | 922.93 | 412.03 | 925.33 | 412.08 | 925.63 | 412.08 | 929.35 | 412.13 |
| 932.2 | 412.15 | 932.74 | 412.22 | 932.82 | 412.22 | 933.08 | 412.25 | 933.28 | 412.27 |
| 935.9 | 412.62 | 936.18 | 412.66 | 936.55 | 412.7 | 938.56 | 412.96 | 938.82 | 412.99 |
| 940.28 | 413.2 | 940.37 | 413.21 | 940.54 | 413.23 | 940.59 | 413.24 | 942.88 | 413.64 |
| 943.56 | 413.75 | 944.69 | 413.97 | 945.88 | 414.09 | 946.22 | 414.11 | 948.14 | 414.25 |
| 948.63 | 414.28 | 948.95 | 414.31 | 949.07 | 414.31 | 952.51 | 414.6 | 957.21 | 414.88 |
| 958.3 | 414.89 | 975.24 | 414.43 | 985.57 | 414.09 | 1000.12 | 414.05 | 1000.66 | 414.03 |
| 1006.63 | 413.87 | 1006.81 | 413.87 | 1011.12 | 413.73 | 1014.47 | 413.6 | 1015.41 | 413.58 |
| 1015.7 | 413.58 | 1015.8 | 413.57 | 1016.28 | 413.56 | 1026.46 | 413.17 | 1056.09 | 413.17 |
| 1056.46 | 413.16 | 1066.25 | 412.98 | 1085.83 | 412.69 | 1085.93 | 412.69 | 1086.47 | 412.68 |
| 1087.01 | 412.68 | 1104.36 | 412.4 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 462.73 | .04 | 952.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 462.73 | 952.51 | 46.07 | 47.45 | 64.9 | .1 | .3 |

Right Levee Station=961.6234 Elevation=415.0016

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align  RS: 14647.4*

INPUT
Description:
Station Elevation Data  num=  358

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 417.34 | 5.98 | 417.49 | 14.69 | 417.49 | 15.78 | 418.02 | 16.59 | 418.4 |
| 16.78 | 418.41 | 16.97 | 418.41 | 17.05 | 418.42 | 17.63 | 418.43 | 17.94 | 418.43 |
| 19.11 | 418.4 | 19.49 | 418.28 | 19.84 | 418.18 | 20.03 | 418.13 | 22.86 | 417.49 |
| 24.2 | 417.29 | 24.42 | 417.23 | 24.75 | 417.15 | 25.54 | 417.02 | 25.86 | 416.95 |
| 27.57 | 416.7 | 28.09 | 416.63 | 28.64 | 416.57 | 33.98 | 416.57 | 34.67 | 416.69 |
| 34.73 | 416.69 | 35.27 | 416.8 | 37.97 | 417.32 | 38.57 | 417.46 | 38.66 | 417.48 |
| 39.04 | 417.64 | 39.2 | 417.7 | 40.77 | 418.4 | 41.21 | 418.44 | 41.52 | 418.46 |
| 41.6 | 418.46 | 41.83 | 418.47 | 43.04 | 418.41 | 43.12 | 418.4 | 43.32 | 418.39 |
| 43.49 | 418.39 | 43.9 | 418.36 | 45.67 | 418.25 | 45.82 | 418.25 | 46.11 | 418.24 |
| 46.33 | 418.24 | 47.95 | 418.22 | 48.52 | 418.22 | 49.24 | 418.24 | 49.3 | 418.24 |
| 49.54 | 418.23 | 49.66 | 418.22 | 49.72 | 418.25 | 49.85 | 418.21 | 50.14 | 418.29 |
| 50.26 | 418.31 | 50.38 | 418.32 | 50.48 | 418.3 | 71.7 | 417.5 | 72.4 | 417.49 |
| 83.01 | 417.47 | 89.08 | 417.07 | 104 | 417.01 | 104.45 | 417.04 | 106 | 417.11 |
| 107.64 | 417.16 | 108.77 | 417.22 | 109.73 | 417.22 | 110.64 | 417.26 | 111.06 | 417.27 |
| 123.15 | 416.77 | 123.95 | 416.75 | 125.97 | 416.55 | 128.48 | 416.22 | 128.97 | 416.14 |
| 131.37 | 415.64 | 137.3 | 414.82 | 137.49 | 414.79 | 137.64 | 414.77 | 137.86 | 414.72 |
| 142.56 | 414.71 | 159.61 | 414.74 | 159.87 | 414.73 | 161.08 | 414.73 | 173.59 | 414.23 |
| 173.65 | 414.23 | 173.81 | 414.22 | 174.16 | 414.21 | 175.78 | 414.14 | 175.92 | 414.14 |
| 182.23 | 413.88 | 182.85 | 413.86 | 183.09 | 413.83 | 185.99 | 413.83 | 186.95 | 414.18 |
| 187.26 | 414.33 | 187.67 | 414.56 | 187.99 | 414.75 | 188.47 | 414.76 | 188.82 | 414.76 |
| 189.91 | 414.78 | 190.04 | 414.78 | 191.03 | 414.8 | 191.15 | 414.8 | 192.71 | 414.83 |
| 192.92 | 414.83 | 193.54 | 414.84 | 193.67 | 414.84 | 194.14 | 414.85 | 194.55 | 414.85 |
| 202.95 | 414.74 | 203 | 414.74 | 205.17 | 414.71 | 211.34 | 414.74 | 211.9 | 414.73 |
| 213.93 | 414.73 | 214.87 | 414.65 | 214.93 | 414.65 | 215.47 | 414.6 | 215.56 | 414.58 |
| 222.38 | 413.82 | 257.13 | 413.83 | 263.68 | 413.87 | 264.13 | 413.88 | 266.19 | 413.89 |
| 303.96 | 413.81 | 309.04 | 414.08 | 313.26 | 413.91 | 316.76 | 413.96 | 328.23 | 413.81 |
| 350.77 | 413.8 | 353.17 | 413.67 | 366.26 | 413.53 | 366.64 | 413.53 | 374.6 | 413.83 |
| 374.96 | 413.82 | 376.78 | 413.82 | 390.31 | 413.78 | 399.66 | 413.87 | 400.78 | 413.87 |
| 414.72 | 413.71 | 414.87 | 413.7 | 417.87 | 413.68 | 418.19 | 413.67 | 418.77 | 413.67 |
| 420.23 | 413.65 | 420.75 | 413.65 | 421.31 | 413.63 | 422.43 | 413.62 | 422.68 | 413.61 |
| 434.63 | 413.49 | 434.76 | 413.48 | 441.71 | 413.45 | 442.81 | 413.46 | 448.92 | 413.59 |
| 449.78 | 413.63 | 455.27 | 413.75 | 459.42 | 413.75 | 460.58 | 413.72 | 464.85 | 413.73 |
| 468.97 | 413.66 | 469.18 | 413.65 | 472.46 | 413.59 | 472.81 | 413.58 | 477.55 | 413.53 |
| 477.63 | 413.52 | 479.31 | 413.28 | 484.8 | 412.58 | 495.89 | 412.58 | 496.28 | 412.57 |
| 502.23 | 412.58 | 502.51 | 412.59 | 510.68 | 412.61 | 511.07 | 412.65 | 511.33 | 412.67 |
| 512.27 | 412.77 | 515.75 | 413 | 515.82 | 413 | 516.75 | 413.07 | 522.05 | 412.89 |
| 522.27 | 412.9 | 525.03 | 412.98 | 529.73 | 412.97 | 542.82 | 413.35 | 545.81 | 413.47 |
| 550.26 | 413.5 | 550.58 | 413.49 | 550.84 | 413.47 | 551.21 | 413.46 | 551.3 | 413.46 |
| 562.55 | 413.01 | 563.2 | 413.01 | 563.88 | 412.97 | 564.66 | 412.95 | 570.36 | 412.59 |
| 576.24 | 412.56 | 579.02 | 412.58 | 584.32 | 412.88 | 584.62 | 412.88 | 588.65 | 412.84 |
| 593.75 | 412.7 | 593.82 | 412.7 | 595.62 | 412.68 | 623.81 | 412.54 | 624.2 | 412.53 |
| 624.26 | 412.53 | 624.54 | 412.5 | 627.42 | 412.03 | 629.07 | 411.8 | 630.62 | 411.66 |
| 630.84 | 411.67 | 631.88 | 411.66 | 643.27 | 411.65 | 645.94 | 411.63 | 646.46 | 411.62 |
| 651.98 | 411.66 | 652.27 | 411.67 | 662.66 | 411.75 | 663.9 | 412.03 | 664.01 | 412.05 |
| 667.22 | 412.67 | 667.37 | 412.68 | 669.3 | 412.88 | 669.41 | 412.9 | 670.24 | 412.98 |
| 670.59 | 413.02 | 673.22 | 413.29 | 673.63 | 413.34 | 676.04 | 413.58 | 694.3 | 413.58 |
| 695.19 | 413.51 | 695.43 | 413.5 | 695.6 | 413.49 | 696.36 | 413.4 | 700.79 | 413.19 |
| 700.91 | 413.18 | 710.2 | 412.65 | 710.7 | 412.66 | 710.98 | 412.65 | 711.05 | 412.65 |
| 713.71 | 412.59 | 713.98 | 412.59 | 714.24 | 412.58 | 714.57 | 412.58 | 714.83 | 412.57 |
| 715.96 | 412.57 | 716.25 | 412.56 | 716.76 | 412.56 | 717.45 | 412.55 | 717.8 | 412.56 |
| 718 | 412.55 | 719.57 | 412.55 | 720.13 | 412.56 | 729.85 | 412.53 | 731.99 | 412.51 |
| 737.94 | 412.52 | 738.19 | 412.53 | 753.24 | 412.56 | 754.82 | 412.54 | 755.04 | 412.55 |
| 756.14 | 412.55 | 756.3 | 412.54 | 760.84 | 412.52 | 763.48 | 412.49 | 773.74 | 412.52 |
| 779.51 | 412.55 | 784.09 | 412.53 | 784.61 | 412.52 | 799.5 | 412.46 | 802.93 | 412.21 |
| 805.12 | 412.12 | 805.69 | 412.13 | 807 | 412.06 | 807.14 | 412.05 | 807.8 | 412.02 |
| 808.51 | 411.98 | 808.8 | 411.98 | 809.18 | 411.97 | 812.23 | 411.76 | 812.35 | 411.75 |
| 812.48 | 411.74 | 812.55 | 411.74 | 813.11 | 411.69 | 813.45 | 411.67 | 828.75 | 411.5 |
| 829.43 | 411.51 | 834.17 | 411.56 | 834.51 | 411.56 | 841.7 | 411.63 | 843.71 | 411.63 |
| 844.04 | 411.64 | 844.17 | 411.64 | 845.02 | 411.67 | 847.39 | 412.1 | 847.7 | 412.14 |
| 847.96 | 412.18 | 851.94 | 412.59 | 857.01 | 412.6 | 864.48 | 412.47 | 864.82 | 412.47 |
| 902.85 | 411.83 | 902.99 | 411.82 | 905.53 | 411.67 | 907.75 | 411.6 | 909.41 | 411.46 |
| 914.74 | 411.24 | 917.18 | 411.29 | 920.66 | 411.42 | 921 | 411.43 | 921.99 | 411.45 |
| 922.83 | 411.48 | 923.06 | 411.48 | 925.88 | 411.54 | 926.05 | 411.54 | 926.32 | 411.55 |
| 928.04 | 411.58 | 928.51 | 411.66 | 928.72 | 411.68 | 928.86 | 411.7 | 930.86 | 412.08 |
| 931.07 | 412.12 | 931.35 | 412.17 | 931.87 | 412.27 | 932.1 | 412.31 | 932.76 | 412.44 |
| 932.88 | 412.46 | 934.19 | 412.72 | 934.26 | 412.73 | 934.38 | 412.76 | 936.67 | 413.26 |
| 937.54 | 413.48 | 938.7 | 413.62 | 940.16 | 413.77 | 940.42 | 413.8 | 940.53 | 413.81 |
| 940.77 | 413.84 | 943.47 | 414.14 | 948.37 | 414.44 | 949.5 | 414.44 | 977.86 | 413.54 |
| 992.99 | 413.52 | 993.55 | 413.5 | 999.75 | 413.34 | 999.94 | 413.33 | 1004.42 | 413.2 |
| 1007.9 | 413.06 | 1008.88 | 413.04 | 1009.18 | 413.03 | 1009.29 | 413.03 | 1020.38 | 412.58 |
| 1051.19 | 412.58 | 1061.75 | 412.38 | 1082.1 | 412.06 | 1082.21 | 412.06 | 1082.78 | 412.05 |
| 1082.98 | 412.05 | 1083.33 | 412.04 | 1101.37 | 411.74 | | | | |

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Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  477.63     .04  943.47     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        477.63  943.47            46.07   47.45    64.9             .1       .3
Right Levee     Station=951.9767      Elevation=414.5458

CROSS SECTION


RIVER: WASH20
REACH: Centerline Align   RS: 14600

INPUT
Description:
Station Elevation Data    num=     326
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  416.845.140015 416.976.170044     41715.15002     41716.27002  417.58
17.10999     418    17.5 418.0118.18005  418.03    18.5 418.0319.70996     418
20.09998  417.8620.45996 417.7523.57007     41724.95007 416.7925.18005  416.72
25.52002  416.6326.35999 416.4926.67004 416.4227.78003 416.2428.43005  416.14
28.96997  416.0729.53003    41635.04004     416   35.75 416.1335.81006  416.14
   37.37  416.4539.15002 416.8239.56006  416.92   39.87    41740.26001  417.17
42.04004     418    42.5 418.0542.82007 418.0742.90002  418.07   43.13  418.08
43.59998  418.06   44.38 418.0244.45996 418.0144.67004    41844.84998     418
   45.12  417.9745.27002 417.9647.08997 417.8547.55005 417.8447.77002  417.84
49.45007  417.8150.03003 417.8150.78003 417.8450.83997 417.8451.08997  417.83
51.20996  417.8251.27002 417.8551.40002  417.851.70007 417.8951.82996  417.91
51.95007  417.9252.05005  417.957.82007 417.6873.94006 417.0374.66003  417.03
80.34003  417.01   82.69 417.0185.60004    41791.85999 416.57  100.07   416.5
  107.24   416.5  107.71 416.53  108.85  416.59  109.31 416.61   110.4  416.64
  112.16  416.73  113.15 416.73  113.58  416.75  114.09 416.77  114.52  416.79
  126.99  416.24  127.82 416.22   129.9     416  132.49 415.64  132.99  415.55
  135.47     415  139.76 414.38   140.5  414.27  141.58  414.1  141.78  414.07
  141.93  414.05  142.16    414  142.47     414  147.01 413.98  148.09  413.99
  151.85     414  164.59    414  164.86  413.99   166.1 413.99  187.91  413.05
  188.55  413.03   188.8    413  191.79     413  192.78 413.38   193.1  413.54
  193.85     414  198.94 414.09  200.35  414.11  201.68 414.09  203.51  414.07
  208.16     414  209.28 413.99  211.57  413.96  212.96 413.98  215.01     414
  217.93     414  218.51 413.99   220.6  413.99  221.57  413.9  221.63   413.9
  222.19  413.84  223.41 413.69  229.32     413  250.16    413  255.72  412.99
  259.32  412.99  265.15    413  266.29  413.01  267.25 413.01  268.01  413.02
  274.49  413.06  283.15    413  286.52     413  291.46 412.99  292.98  412.99
  296.27  412.98  302.62 412.98  306.17  412.99  308.88 412.99  313.44     413
  318.68  413.29  323.03 413.11  326.64  413.16  329.64 413.12  332.21  413.08
  333.95  413.06  336.07 413.02  338.47     413  361.71    413  364.19  412.86
  365.39  412.86  378.08 412.71     386  413.03  386.28 413.04  386.65  413.03
  388.53  413.03  391.33    413  392.76  412.99  394.99 412.99  396.64  412.98
  401.81     413  402.28    413  411.35   413.1  412.13 413.11  413.28  413.11
  417.67  413.06  418.26 413.05  421.99     413  433.87 412.89  434.45  412.87
  445.69  412.73  448.32 412.71  451.49  412.67  456.62 412.68  462.92  412.83
  463.81  412.87  467.32 412.94  469.47     413  473.75    413  474.95  412.97
  483.81  412.99  484.93 412.99  486.58     413  492.45    413  492.53  412.99
  499.45     412  510.03    412  510.54  411.99  513.64 411.99  516.56     412
  524.46     412  525.71 412.15  525.99  412.18  530.32 412.53  533.35  412.42
  535.44  412.37  535.65 412.38  538.32  412.48  542.86  412.5   555.5   412.9
  558.39     413  562.69    413  563.27  412.97  574.56 412.45  575.19  412.45
  575.85  412.41   576.6 412.39  582.11     412  586.22 411.97  587.16  411.97
  589.11  411.99  590.47    412  595.59  412.32  595.88 412.32  609.25  412.17
  611.79  412.19   632.1 412.04  633.74  412.04  634.12 412.03634.1801  412.03
  634.45     412  638.82 411.19  640.35     411  655.62 410.86  664.74  410.94
  667.62  410.96  671.27    411  672.58  411.33675.6801    412  681.87  412.73
   684.2     413  701.84    413   702.7  412.92702.9301 412.91   703.1   412.9
  703.83   412.8   717.2 412.07717.6801  412.08  720.59 412.01  720.85  412.01
   721.1     412  721.67 411.99  721.83  411.99  722.76 411.98  723.54  411.97
   724.2  411.96  724.54 411.97  724.73  411.96   725.2 411.96  727.25  411.97
  739.55  411.92  739.73 411.92  750.33  411.96  751.24 411.97757.8101  411.97
   760.3  411.98   760.9    412  766.12     412767.5601 411.99  772.79  411.99
  778.58  411.97779.8101 411.97  783.95  411.96  784.16 411.96  785.52  411.95
  788.58  411.94  789.08 411.93  789.66  411.93  797.57 411.87  803.39  411.87
  806.78  411.59   808.9  411.5  809.45  411.51  812.17 411.34  812.45  411.34
  812.82  411.33  815.88 411.09  816.01  411.08  816.07 411.08  816.94     411
  824.03  410.93  831.72 410.82  832.76  410.83  833.41 410.83  836.96  410.88
  837.26  410.88  838.41  410.9  839.51  410.91  841.66 410.94  845.91  410.96
  846.15  410.96  846.49 410.97  846.62  410.97  847.44    411  849.73  411.47
  850.03  411.51  850.28 411.55  854.13     412  859.02    412  903.44  411.16
   905.9     411  914.79 410.69  915.94  410.72  923.89    411  924.17  411.08
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 924.35 | 411.12 | 924.45 | 411.14 | 927.33 | 412 | 929.79 | 412.77 | 930.38 | 413 |
| 934.44 | 413.67 | 939.52 | 414 | 940.7 | 414 | 959.57 | 413.39 | 970.14 | 413 |
| 974.42 | 412.98 | 977.73 | 412.98 | 983.91 | 412.99 | 985.85 | 412.99 | 986.43 | 412.97 |
| 997.72 | 412.67 | 1001.34 | 412.52 | 1002.35 | 412.5 | 1002.78 | 412.49 | 1014.29 | 412 |
| 1046.28 | 412 | 1046.68 | 411.99 | 1057.25 | 411.78 | 1058.74 | 411.77 | 1060.45 | 411.75 |
| 1098.39 | 411.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 492.53 | .04 | 934.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 492.53 | 934.44 | 83.8 | 83.33 | 98.93 | .1 | .3 |

Right Levee Station= 942.33 Elevation= 414.09

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14516.6*

INPUT
Description:
Station Elevation Data num= 461

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 415.71 | 2.05 | 415.74 | 2.72 | 415.76 | 5.26 | 415.81 | 5.45 | 415.81 |
| 6.32 | 415.84 | 15.51 | 415.86 | 16.66 | 416.35 | 17.52 | 416.7 | 18.61 | 416.73 |
| 19.06 | 416.73 | 20.18 | 416.7 | 20.58 | 416.59 | 20.95 | 416.5 | 24.13 | 415.88 |
| 25.54 | 415.7 | 25.78 | 415.64 | 26.13 | 415.57 | 26.99 | 415.45 | 27.31 | 415.39 |
| 27.43 | 415.38 | 28.44 | 415.24 | 29.66 | 415.09 | 30.1 | 415.05 | 30.23 | 415.03 |
| 33.87 | 415.02 | 35.88 | 415.01 | 36.6 | 415.11 | 36.66 | 415.12 | 38.17 | 415.36 |
| 38.26 | 415.38 | 39.12 | 415.52 | 39.29 | 415.55 | 40.08 | 415.68 | 40.5 | 415.77 |
| 40.82 | 415.83 | 40.89 | 415.86 | 41.22 | 415.98 | 43.04 | 416.67 | 43.51 | 416.71 |
| 43.84 | 416.73 | 44.16 | 416.73 | 44.64 | 416.72 | 45.44 | 416.68 | 45.52 | 416.68 |
| 45.73 | 416.67 | 45.92 | 416.67 | 46.2 | 416.64 | 46.35 | 416.64 | 48.21 | 416.54 |
| 48.91 | 416.54 | 50.63 | 416.51 | 51.22 | 416.51 | 51.99 | 416.54 | 52.05 | 416.54 |
| 52.31 | 416.53 | 52.43 | 416.52 | 52.49 | 416.54 | 52.62 | 416.5 | 52.93 | 416.58 |
| 53.07 | 416.59 | 53.19 | 416.6 | 53.29 | 416.58 | 54.49 | 416.55 | 65.05 | 416.21 |
| 72.59 | 415.82 | 74.1 | 415.75 | 74.27 | 415.74 | 74.37 | 415.74 | 75.7 | 415.69 |
| 82.34 | 415.68 | 83.81 | 415.64 | 84.66 | 415.61 | 87.64 | 415.53 | 88.8 | 415.44 |
| 92.78 | 415.16 | 94.05 | 415.08 | 94.53 | 415.07 | 102.45 | 414.95 | 109.8 | 414.92 |
| 110.28 | 414.94 | 110.58 | 414.95 | 110.75 | 414.96 | 111.02 | 414.97 | 111.08 | 414.98 |
| 111.44 | 414.99 | 111.91 | 415.01 | 112.24 | 415.02 | 113.03 | 415.03 | 113.17 | 415.04 |
| 113.64 | 415.06 | 113.72 | 415.06 | 113.8 | 415.07 | 113.88 | 415.07 | 114.32 | 415.09 |
| 114.48 | 415.09 | 114.67 | 415.1 | 114.83 | 415.11 | 115.85 | 415.11 | 116.05 | 415.12 |
| 116.29 | 415.12 | 116.81 | 415.14 | 117.25 | 415.16 | 126.23 | 414.83 | 126.47 | 414.83 |
| 127.07 | 414.8 | 127.85 | 414.78 | 128.02 | 414.77 | 130.02 | 414.7 | 130.87 | 414.68 |
| 133 | 414.5 | 133.66 | 414.42 | 133.89 | 414.4 | 133.99 | 414.39 | 134.87 | 414.29 |
| 135.65 | 414.21 | 136.16 | 414.14 | 138.35 | 413.76 | 138.7 | 413.7 | 143.85 | 413.09 |
| 144.95 | 412.95 | 145.16 | 412.93 | 145.31 | 412.91 | 145.55 | 412.87 | 149.62 | 412.86 |
| 150.51 | 412.85 | 151.62 | 412.86 | 168.51 | 412.83 | 168.79 | 412.82 | 170.06 | 412.82 |
| 173.32 | 412.71 | 175.57 | 412.67 | 175.72 | 412.67 | 186.51 | 412.4 | 186.78 | 412.39 |
| 188.02 | 412.36 | 193.04 | 412.19 | 193.3 | 412.17 | 196.36 | 412.17 | 197.37 | 412.48 |
| 197.7 | 412.62 | 198.25 | 412.89 | 198.47 | 413 | 199.92 | 413.02 | 200.28 | 413.03 |
| 203.68 | 413.08 | 205.12 | 413.09 | 205.25 | 413.09 | 208.36 | 413.06 | 208.89 | 413.05 |
| 214.27 | 412.83 | 214.56 | 412.82 | 216.61 | 412.79 | 217.88 | 412.8 | 218.03 | 412.8 |
| 220.13 | 412.82 | 223.12 | 412.81 | 223.72 | 412.8 | 225.86 | 412.8 | 226.58 | 412.74 |
| 226.85 | 412.72 | 226.91 | 412.72 | 227.6 | 412.66 | 234.06 | 412.05 | 234.78 | 411.99 |
| 256.12 | 412.04 | 271.47 | 412 | 273.62 | 412.01 | 274.4 | 412.02 | 280.1 | 412.04 |
| 281.03 | 412.05 | 287.66 | 412.01 | 288.4 | 412.01 | 289.03 | 412 | 295.67 | 412 |
| 296.76 | 411.99 | 299.44 | 411.99 | 304.17 | 412.06 | 304.42 | 412.07 | 318.69 | 412.06 |
| 320.91 | 412.04 | 326.05 | 412.23 | 326.27 | 412.24 | 330.73 | 411.96 | 331.8 | 411.94 |
| 334.42 | 411.96 | 340.13 | 411.89 | 343.94 | 411.85 | 346.54 | 411.84 | 365.87 | 411.99 |
| 366.62 | 411.99 | 367.38 | 412 | 370.33 | 412.06 | 372.87 | 412 | 374.1 | 412.01 |
| 376.98 | 412 | 378.06 | 412.01 | 378.61 | 412.01 | 379.03 | 412 | 379.44 | 412 |
| 384.12 | 411.95 | 385 | 411.95 | 386.49 | 411.93 | 387.01 | 411.93 | 387.09 | 411.92 |
| 387.45 | 411.94 | 387.59 | 411.94 | 387.73 | 411.95 | 392.69 | 412.11 | 393.1 | 412.12 |
| 393.49 | 412.14 | 393.76 | 412.14 | 394.03 | 412.15 | 394.7 | 412.18 | 395.2 | 412.19 |
| 395.32 | 412.2 | 395.48 | 412.2 | 395.86 | 412.19 | 398.53 | 412.19 | 398.74 | 412.18 |
| 404.85 | 412.16 | 405.1 | 412.15 | 406.91 | 412.15 | 407.69 | 412.16 | 410.03 | 412.16 |
| 410.92 | 412.17 | 412.1 | 412.17 | 414.61 | 412.19 | 414.83 | 412.19 | 416.28 | 412.21 |
| 416.7 | 412.21 | 417.92 | 412.22 | 418.41 | 412.23 | 419.26 | 412.23 | 419.59 | 412.24 |
| 420.5 | 412.24 | 421.7 | 412.26 | 423.38 | 412.26 | 423.93 | 412.25 | 424.28 | 412.25 |
| 425.86 | 412.23 | 426.11 | 412.23 | 427.08 | 412.22 | 427.72 | 412.22 | 428.23 | 412.2 |
| 430.72 | 412.15 | 431.02 | 412.15 | 432.05 | 412.12 | 434.89 | 412.07 | 444.21 | 411.98 |
| 444.8 | 411.96 | 462.25 | 411.76 | 467.5 | 411.75 | 472.81 | 411.84 | 473.19 | 411.85 |
| 473.95 | 411.86 | 474.86 | 411.89 | 475.34 | 411.9 | 475.47 | 411.9 | 477.75 | 411.94 |
| 478.12 | 411.94 | 478.46 | 411.95 | 478.56 | 411.95 | 478.69 | 411.96 | 480.66 | 412 |
| 485.04 | 412 | 486.27 | 411.98 | 496.67 | 411.99 | 497.81 | 412 | 504.18 | 412 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 504.27 | 411.99 | 510.46 | 411.17 | 511.3 | 411.17 | 519.93 | 411.12 | 520.39 | 411.11 |
| 532.85 | 411.05 | 533.97 | 411.17 | 534.22 | 411.19 | 534.84 | 411.23 | 538.1 | 411.46 |
| 542.04 | 411.32 | 542.5 | 411.31 | 542.68 | 411.31 | 542.87 | 411.32 | 543.1 | 411.32 |
| 545.26 | 411.4 | 548.57 | 411.41 | 549.33 | 411.42 | 560.64 | 411.75 | 563.23 | 411.83 |
| 567.08 | 411.83 | 577.71 | 411.37 | 578.27 | 411.37 | 578.86 | 411.34 | 579.53 | 411.32 |
| 584.46 | 410.99 | 588.99 | 410.97 | 590.73 | 410.98 | 590.88 | 410.98 | 591.95 | 410.99 |
| 596.53 | 411.26 | 596.79 | 411.26 | 608.76 | 411.13 | 611.04 | 411.15 | 622.63 | 411.08 |
| 623.07 | 411.07 | 630.46 | 411.02 | 631.08 | 411.02 | 631.32 | 410.99 | 635.24 | 410.32 |
| 636.6 | 410.16 | 650.05 | 410.05 | 650.28 | 410.05 | 663.25 | 410.15 | 664.29 | 410.17 |
| 665.46 | 410.44 | 668.23 | 411 | 675.86 | 411.83 | 691.65 | 411.83 | 692.42 | 411.77 |
| 692.63 | 411.76 | 692.78 | 411.75 | 693.44 | 411.67 | 699.42 | 411.36 | 699.54 | 411.36 |
| 703.13 | 411.17 | 703.2 | 411.17 | 703.49 | 411.15 | 703.61 | 411.15 | 704.09 | 411.12 |
| 704.31 | 411.11 | 704.64 | 411.1 | 704.98 | 411.08 | 705.41 | 411.05 | 705.84 | 411.06 |
| 708.44 | 410.98 | 708.67 | 410.98 | 708.9 | 410.97 | 709.41 | 410.96 | 709.55 | 410.96 |
| 710.38 | 410.94 | 711.67 | 410.92 | 711.98 | 410.92 | 712.15 | 410.91 | 724.66 | 410.8 |
| 725.42 | 410.81 | 725.58 | 410.81 | 735.88 | 410.98 | 743.99 | 410.99 | 744.53 | 411.01 |
| 749.2 | 411.01 | 752.03 | 411 | 752.52 | 411.01 | 767.45 | 410.96 | 768.18 | 410.95 |
| 769.33 | 410.95 | 769.76 | 410.94 | 770.28 | 410.94 | 770.8 | 410.93 | 777.36 | 410.88 |
| 782.57 | 410.89 | 783.84 | 410.79 | 785.6 | 410.67 | 787.5 | 410.61 | 787.99 | 410.62 |
| 790.43 | 410.49 | 791.01 | 410.49 | 793.75 | 410.31 | 793.87 | 410.3 | 794.7 | 410.24 |
| 807.93 | 410.17 | 808 | 410.17 | 808.86 | 410.18 | 809.44 | 410.18 | 811.04 | 410.21 |
| 811.16 | 410.21 | 811.64 | 410.22 | 811.88 | 410.22 | 812.62 | 410.23 | 812.89 | 410.23 |
| 813.92 | 410.25 | 816.83 | 410.28 | 816.91 | 410.28 | 820.64 | 410.3 | 820.85 | 410.29 |
| 821.15 | 410.3 | 821.27 | 410.3 | 822.01 | 410.32 | 824.06 | 410.71 | 824.32 | 410.74 |
| 824.55 | 410.77 | 827.99 | 411.13 | 832.37 | 411.12 | 863.63 | 410.45 | 872.14 | 410.18 |
| 874.34 | 410.02 | 882.3 | 409.73 | 882.77 | 409.75 | 883.54 | 409.76 | 891.75 | 409.96 |
| 891.85 | 409.96 | 893.54 | 410 | 894.23 | 410.06 | 896.07 | 410.08 | 897.56 | 410.1 |
| 897.79 | 410.11 | 898.34 | 410.11 | 898.69 | 410.12 | 898.76 | 410.12 | 899.19 | 410.13 |
| 900.04 | 410.14 | 900.71 | 410.14 | 902.55 | 410.19 | 902.97 | 410.24 | 903.17 | 410.26 |
| 903.57 | 410.28 | 903.8 | 410.28 | 911.53 | 411.15 | 912.17 | 411.23 | 912.72 | 411.29 |
| 913.06 | 411.33 | 913.26 | 411.36 | 915.52 | 411.62 | 915.68 | 411.64 | 916.99 | 411.83 |
| 917.87 | 411.89 | 917.99 | 411.9 | 918.1 | 411.9 | 918.18 | 411.91 | 918.26 | 411.91 |
| 918.41 | 411.92 | 918.48 | 411.93 | 919.27 | 411.97 | 919.78 | 412.01 | 920.8 | 412.07 |
| 921.02 | 412.08 | 921.68 | 412.12 | 926.03 | 412.55 | 930.46 | 412.82 | 931.49 | 412.83 |
| 941.18 | 412.53 | 941.25 | 412.53 | 944.8 | 412.42 | 944.91 | 412.42 | 953.18 | 412.14 |
| 957.2 | 412 | 963.82 | 411.98 | 971.07 | 411.99 | 971.42 | 411.97 | 971.69 | 411.97 |
| 981.28 | 411.72 | 982.19 | 411.69 | 984.44 | 411.6 | 985.32 | 411.58 | 985.6 | 411.58 |
| 985.69 | 411.57 | 995.74 | 411.17 | 1023.67 | 411.17 | 1024.02 | 411.16 | 1033.25 | 410.99 |
| 1069.17 | 410.43 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 504.27 | .04 | 926.03 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 504.27 | 926.03 | 83.8 | 83.33 | 98.93 | .1 | .3 |

Right Levee Station=933.1733 Elevation= 412.915

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14433.3*

INPUT
Description:
Station Elevation Data num= 455

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 414.59 | 2.1 | 414.59 | 5.38 | 414.65 | 5.57 | 414.65 | 6.46 | 414.67 |
| 15.87 | 414.72 | 17.05 | 415.12 | 17.93 | 415.4 | 18.33 | 415.41 | 19.05 | 415.42 |
| 19.38 | 415.43 | 19.51 | 415.42 | 20.65 | 415.41 | 21.44 | 415.24 | 24.69 | 414.75 |
| 26.14 | 414.61 | 26.74 | 414.51 | 27.62 | 414.42 | 27.94 | 414.37 | 28.07 | 414.36 |
| 29.1 | 414.24 | 29.78 | 414.17 | 30.8 | 414.08 | 30.94 | 414.07 | 34.12 | 414.04 |
| 34.66 | 414.03 | 35.73 | 414.03 | 36.71 | 414.02 | 37.45 | 414.1 | 37.52 | 414.11 |
| 39.06 | 414.29 | 39.15 | 414.3 | 40.03 | 414.42 | 40.52 | 414.48 | 41.02 | 414.55 |
| 41.77 | 414.67 | 41.84 | 414.69 | 42.18 | 414.78 | 44.04 | 415.34 | 44.53 | 415.37 |
| 44.86 | 415.38 | 44.94 | 415.38 | 45.19 | 415.39 | 45.68 | 415.38 | 46.5 | 415.35 |
| 46.58 | 415.34 | 46.99 | 415.34 | 47.27 | 415.32 | 47.43 | 415.31 | 49.33 | 415.24 |
| 49.82 | 415.23 | 50.05 | 415.23 | 51.81 | 415.21 | 52.41 | 415.21 | 53.2 | 415.23 |
| 53.26 | 415.23 | 53.52 | 415.22 | 53.65 | 415.22 | 53.71 | 415.24 | 53.85 | 415.2 |
| 54.16 | 415.26 | 54.3 | 415.28 | 54.43 | 415.28 | 54.53 | 415.27 | 66.01 | 414.98 |
| 66.56 | 414.97 | 73.34 | 414.55 | 74.28 | 414.48 | 75.23 | 414.44 | 76 | 414.4 |
| 76.1 | 414.4 | 77.46 | 414.35 | 78.22 | 414.36 | 78.73 | 414.36 | 79.06 | 414.35 |
| 81.24 | 414.36 | 84.17 | 414.34 | 84.25 | 414.34 | 89.68 | 414.06 | 90.86 | 413.95 |
| 94.94 | 413.67 | 96.24 | 413.59 | 108.84 | 413.34 | 108.96 | 413.34 | 109.22 | 413.33 |
| 112.35 | 413.33 | 112.84 | 413.35 | 113.16 | 413.36 | 113.33 | 413.37 | 113.6 | 413.38 |
| 113.67 | 413.38 | 114.04 | 413.39 | 114.52 | 413.41 | 114.85 | 413.41 | 115.66 | 413.43 |
| 115.8 | 413.43 | 116.29 | 413.45 | 116.53 | 413.45 | 116.98 | 413.47 | 117.14 | 413.47 |
| 117.51 | 413.49 | 118.76 | 413.49 | 118.99 | 413.5 | 119.53 | 413.51 | 119.98 | 413.53 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 121.91 | 413.47 | 122.16 | 413.47 | 128.92 | 413.27 | 129.17 | 413.27 | 129.42 | 413.26 |
| 130.83 | 413.22 | 131 | 413.21 | 132.44 | 413.17 | 133.91 | 413.14 | 136.09 | 413 |
| 137.01 | 412.92 | 137.11 | 412.91 | 138.8 | 412.78 | 139.33 | 412.73 | 141.57 | 412.45 |
| 141.63 | 412.44 | 141.93 | 412.4 | 147.2 | 411.92 | 148.33 | 411.8 | 148.54 | 411.78 |
| 148.69 | 411.77 | 148.94 | 411.74 | 153.1 | 411.73 | 154.02 | 411.72 | 155.15 | 411.73 |
| 172.43 | 411.66 | 172.72 | 411.65 | 174.02 | 411.65 | 177.35 | 411.57 | 179.65 | 411.59 |
| 179.81 | 411.58 | 180.7 | 411.58 | 190.39 | 411.5 | 192.4 | 411.49 | 197.54 | 411.35 |
| 197.8 | 411.33 | 200.93 | 411.33 | 201.97 | 411.59 | 202.3 | 411.69 | 202.86 | 411.91 |
| 203.06 | 411.99 | 204.58 | 412.02 | 204.94 | 412.02 | 209.9 | 412.07 | 210.03 | 412.07 |
| 213.21 | 412.05 | 213.75 | 412.04 | 219.55 | 411.66 | 221.65 | 411.63 | 228.32 | 411.62 |
| 228.92 | 411.61 | 231.11 | 411.6 | 231.86 | 411.56 | 232.13 | 411.54 | 232.19 | 411.54 |
| 232.78 | 411.5 | 232.9 | 411.49 | 234.06 | 411.4 | 240.25 | 410.97 | 257.03 | 411.1 |
| 279.99 | 411.01 | 280.78 | 411.02 | 287.57 | 411.03 | 295.11 | 411.01 | 295.76 | 411 |
| 303.66 | 411 | 304.5 | 410.99 | 306.41 | 410.99 | 306.94 | 411.01 | 310.39 | 411.12 |
| 311.25 | 411.14 | 311.51 | 411.15 | 326.11 | 411.12 | 328.38 | 411.09 | 333.64 | 411.19 |
| 333.87 | 411.18 | 338.43 | 410.8 | 339.52 | 410.75 | 342.21 | 410.77 | 351.95 | 410.67 |
| 354.6 | 410.67 | 374.39 | 410.98 | 374.72 | 410.98 | 375.15 | 410.99 | 375.93 | 411 |
| 378.95 | 411.13 | 381.55 | 411.14 | 382.8 | 411.16 | 385.39 | 411.17 | 385.55 | 411.18 |
| 385.75 | 411.18 | 386.86 | 411.2 | 387.06 | 411.21 | 387.42 | 411.21 | 387.85 | 411.2 |
| 388.27 | 411.2 | 392.4 | 411.17 | 393.06 | 411.16 | 393.96 | 411.16 | 395.49 | 411.14 |
| 396.29 | 411.14 | 396.47 | 411.15 | 396.61 | 411.15 | 396.75 | 411.16 | 402.65 | 411.31 |
| 402.92 | 411.32 | 403.21 | 411.32 | 403.88 | 411.34 | 404.4 | 411.35 | 404.52 | 411.36 |
| 404.69 | 411.36 | 405.08 | 411.35 | 408.02 | 411.35 | 409.98 | 411.33 | 413.87 | 411.33 |
| 414.27 | 411.32 | 417.17 | 411.32 | 418.06 | 411.33 | 425.97 | 411.36 | 426.07 | 411.37 |
| 426.4 | 411.37 | 428.75 | 411.38 | 429.02 | 411.39 | 429.36 | 411.39 | 430.29 | 411.4 |
| 431.51 | 411.4 | 431.77 | 411.41 | 432.98 | 411.41 | 433.23 | 411.4 | 435.77 | 411.39 |
| 436.03 | 411.38 | 437.33 | 411.38 | 437.52 | 411.37 | 437.67 | 411.37 | 438.19 | 411.36 |
| 440.75 | 411.28 | 441.05 | 411.28 | 445.01 | 411.16 | 454.55 | 411.07 | 455.16 | 411.05 |
| 473.01 | 410.84 | 478.38 | 410.83 | 481.22 | 410.86 | 481.69 | 410.86 | 483.81 | 410.88 |
| 484.21 | 410.89 | 485.91 | 410.92 | 486.53 | 410.92 | 487.14 | 410.93 | 487.62 | 410.93 |
| 488.87 | 410.95 | 489.25 | 410.96 | 489.83 | 410.96 | 491.84 | 411 | 496.33 | 411 |
| 497.59 | 410.98 | 508.23 | 410.99 | 509.39 | 411 | 516 | 411 | 521.47 | 410.33 |
| 522.22 | 410.33 | 529.84 | 410.24 | 530.24 | 410.23 | 541.25 | 410.09 | 542.45 | 410.2 |
| 545.88 | 410.39 | 548.27 | 410.29 | 549.77 | 410.25 | 550.09 | 410.25 | 550.3 | 410.26 |
| 552.2 | 410.32 | 555.79 | 410.33 | 568.07 | 410.67 | 571.47 | 410.67 | 580.85 | 410.29 |
| 581.35 | 410.29 | 582.46 | 410.25 | 586.82 | 409.99 | 590.07 | 409.97 | 590.81 | 409.96 |
| 592.35 | 409.98 | 593.43 | 409.98 | 597.48 | 410.19 | 597.7 | 410.19 | 608.27 | 410.1 |
| 610.28 | 410.11 | 620.52 | 410.06 | 620.91 | 410.05 | 626.34 | 410.01 | 627.69 | 410.01 |
| 627.93 | 410 | 628.2 | 409.98 | 631.65 | 409.44 | 632.86 | 409.32 | 644.73 | 409.24 |
| 644.93 | 409.24 | 656.39 | 409.32 | 656.86 | 409.33 | 657.3 | 409.33 | 658.34 | 409.55 |
| 660.79 | 410 | 667.52 | 410.67 | 681.47 | 410.67 | 682.15 | 410.61 | 682.33 | 410.61 |
| 682.47 | 410.6 | 683.04 | 410.53 | 688.32 | 410.29 | 688.43 | 410.29 | 689.13 | 410.25 |
| 691.6 | 410.14 | 691.66 | 410.13 | 691.92 | 410.12 | 692.02 | 410.12 | 692.64 | 410.09 |
| 692.94 | 410.07 | 693.24 | 410.06 | 693.61 | 410.04 | 693.99 | 410.04 | 696.29 | 409.95 |
| 696.5 | 409.95 | 696.7 | 409.94 | 697.15 | 409.93 | 697.27 | 409.92 | 698.01 | 409.9 |
| 698.62 | 409.89 | 699.15 | 409.87 | 699.56 | 409.87 | 699.94 | 409.86 | 701.56 | 409.84 |
| 708.68 | 409.7 | 710.62 | 409.69 | 711.28 | 409.7 | 711.42 | 409.71 | 719.8 | 409.97 |
| 720.52 | 409.98 | 727.68 | 410 | 728.16 | 410.01 | 737.56 | 410.02 | 742.14 | 409.99 |
| 746.55 | 409.98 | 747.62 | 409.97 | 748.4 | 409.97 | 749.04 | 409.96 | 750.06 | 409.96 |
| 750.44 | 409.95 | 750.89 | 409.95 | 751.36 | 409.94 | 756.29 | 409.9 | 761.75 | 409.91 |
| 764.43 | 409.75 | 766.1 | 409.71 | 766.54 | 409.73 | 768.69 | 409.64 | 768.91 | 409.65 |
| 769.2 | 409.65 | 771.62 | 409.52 | 771.77 | 409.52 | 772.46 | 409.47 | 784.2 | 409.52 |
| 786.88 | 409.57 | 786.99 | 409.57 | 787.42 | 409.58 | 787.63 | 409.58 | 788.29 | 409.59 |
| 788.52 | 409.59 | 792 | 409.63 | 793.59 | 409.63 | 794.31 | 409.64 | 795.36 | 409.63 |
| 795.92 | 409.63 | 796.57 | 409.65 | 798.38 | 409.94 | 798.62 | 409.97 | 798.82 | 409.99 |
| 801.86 | 410.27 | 805.73 | 410.23 | 833.33 | 409.56 | 834.64 | 409.48 | 840.84 | 409.21 |
| 842.79 | 409.05 | 844.54 | 408.95 | 849.81 | 408.77 | 850.21 | 408.79 | 850.54 | 408.8 |
| 851.74 | 408.81 | 864.47 | 409.09 | 864.62 | 409.1 | 867.23 | 409.15 | 867.58 | 409.17 |
| 868.31 | 409.24 | 871.16 | 409.27 | 873.47 | 409.28 | 873.83 | 409.29 | 874.68 | 409.29 |
| 875.22 | 409.3 | 877.32 | 409.31 | 878.05 | 409.32 | 878.35 | 409.32 | 881.21 | 409.39 |
| 881.86 | 409.43 | 882.18 | 409.44 | 882.8 | 409.43 | 883.14 | 409.43 | 887.13 | 409.65 |
| 887.28 | 409.66 | 896.12 | 410.18 | 896.98 | 410.24 | 897.51 | 410.27 | 897.81 | 410.29 |
| 901.32 | 410.5 | 901.57 | 410.51 | 903.6 | 410.67 | 904.96 | 410.71 | 905.16 | 410.72 |
| 905.32 | 410.72 | 905.45 | 410.73 | 905.57 | 410.73 | 905.81 | 410.74 | 905.91 | 410.74 |
| 907.92 | 410.81 | 908.51 | 410.82 | 909.52 | 410.85 | 909.58 | 410.85 | 910.87 | 410.9 |
| 917.61 | 411.42 | 921.4 | 411.65 | 922.28 | 411.65 | 930.56 | 411.43 | 930.62 | 411.43 |
| 933.66 | 411.34 | 933.75 | 411.34 | 940.82 | 411.11 | 941.26 | 411.1 | 944.25 | 411 |
| 956.11 | 410.99 | 956.41 | 410.98 | 956.64 | 410.97 | 960.3 | 410.89 | 964.83 | 410.78 |
| 967.31 | 410.69 | 967.53 | 410.68 | 968.29 | 410.66 | 968.61 | 410.66 | 977.2 | 410.33 |
| 1001.07 | 410.34 | 1001.37 | 410.33 | 1009.25 | 410.19 | 1010.4 | 410.19 | 1039.95 | 409.77 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 516 | .04 | 917.61 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 516 | 917.61 | 83.8 | 83.33 | 98.93 | .1 | .3 |

Right Levee Station=924.0167 Elevation= 411.74

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align  RS: 14350.*

INPUT
Description:
Station Elevation Data  num=  440

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 413.46 | 2.85 | 413.45 | 5.51 | 413.48 | 5.7 | 413.49 | 6.61 | 413.51 |
| 16.23 | 413.59 | 18.33 | 414.1 | 18.75 | 414.11 | 19.48 | 414.12 | 19.95 | 414.12 |
| 21.12 | 414.11 | 21.54 | 414.04 | 21.92 | 413.99 | 25.26 | 413.63 | 26.73 | 413.52 |
| 26.98 | 413.49 | 27.34 | 413.45 | 28.24 | 413.38 | 28.58 | 413.34 | 28.7 | 413.34 |
| 29.77 | 413.24 | 30.46 | 413.19 | 31.04 | 413.14 | 31.64 | 413.1 | 35.45 | 413.04 |
| 36.54 | 413.04 | 37.54 | 413.03 | 38.31 | 413.08 | 38.37 | 413.09 | 39.94 | 413.22 |
| 40.04 | 413.23 | 40.94 | 413.31 | 41.12 | 413.33 | 41.95 | 413.41 | 42.72 | 413.5 |
| 42.79 | 413.52 | 43.14 | 413.59 | 45.05 | 414.01 | 45.54 | 414.03 | 45.88 | 414.04 |
| 46.72 | 414.04 | 47.55 | 414.02 | 47.64 | 414.01 | 48.06 | 414.01 | 48.51 | 413.98 |
| 50.95 | 413.92 | 53.61 | 413.91 | 54.41 | 413.92 | 54.87 | 413.92 | 54.94 | 413.93 |
| 55.07 | 413.9 | 55.4 | 413.95 | 55.54 | 413.96 | 55.66 | 413.97 | 55.77 | 413.96 |
| 67.52 | 413.74 | 68.08 | 413.72 | 75.97 | 413.15 | 77.55 | 413.07 | 77.72 | 413.06 |
| 77.83 | 413.06 | 78.35 | 413.03 | 79.23 | 413.02 | 85.01 | 413.02 | 86.08 | 413.01 |
| 86.17 | 413.01 | 91.72 | 412.59 | 92.93 | 412.46 | 97.1 | 412.17 | 98.43 | 412.1 |
| 102.04 | 412.01 | 102.91 | 411.98 | 111.31 | 411.76 | 111.44 | 411.76 | 111.71 | 411.75 |
| 114.91 | 411.75 | 115.41 | 411.77 | 115.76 | 411.77 | 115.91 | 411.78 | 116.19 | 411.78 |
| 116.25 | 411.79 | 116.63 | 411.79 | 117.12 | 411.8 | 117.46 | 411.81 | 118.29 | 411.82 |
| 118.44 | 411.82 | 118.93 | 411.84 | 119.18 | 411.84 | 119.64 | 411.85 | 119.81 | 411.86 |
| 121.24 | 411.86 | 121.7 | 411.88 | 122.25 | 411.89 | 122.46 | 411.89 | 122.71 | 411.9 |
| 123.31 | 411.88 | 124.68 | 411.85 | 124.93 | 411.85 | 131.85 | 411.7 | 132.11 | 411.7 |
| 132.36 | 411.69 | 132.99 | 411.68 | 133.8 | 411.66 | 133.98 | 411.66 | 135.45 | 411.63 |
| 136.07 | 411.61 | 136.96 | 411.6 | 139.19 | 411.5 | 139.89 | 411.45 | 140.12 | 411.44 |
| 140.22 | 411.43 | 141.96 | 411.36 | 142.5 | 411.32 | 144.79 | 411.13 | 144.86 | 411.13 |
| 145.15 | 411.1 | 151.7 | 410.66 | 151.92 | 410.64 | 152.08 | 410.63 | 152.32 | 410.61 |
| 156.58 | 410.61 | 171.02 | 410.5 | 176.26 | 410.48 | 176.36 | 410.49 | 176.65 | 410.48 |
| 177.97 | 410.48 | 181.39 | 410.43 | 183.74 | 410.5 | 183.9 | 410.5 | 194.72 | 410.6 |
| 195.19 | 410.6 | 195.48 | 410.61 | 196.77 | 410.62 | 201.34 | 410.52 | 202.03 | 410.52 |
| 202.3 | 410.5 | 205.5 | 410.5 | 206.56 | 410.69 | 206.9 | 410.77 | 207.48 | 410.93 |
| 207.68 | 410.99 | 209.23 | 411.01 | 209.61 | 411.02 | 211.98 | 411.04 | 214.81 | 411.05 |
| 218.06 | 411.04 | 218.61 | 411.03 | 222.05 | 410.73 | 223.04 | 410.63 | 224.55 | 410.49 |
| 228.03 | 410.45 | 231.34 | 410.45 | 233.51 | 410.43 | 234.13 | 410.42 | 236.37 | 410.41 |
| 237.13 | 410.37 | 237.41 | 410.36 | 237.47 | 410.36 | 238.07 | 410.33 | 238.2 | 410.32 |
| 244.96 | 410 | 245.71 | 409.96 | 262.88 | 410.15 | 272.78 | 410.09 | 277.29 | 410.02 |
| 286.36 | 410.01 | 287.17 | 410.02 | 287.3 | 410.02 | 288.03 | 410.01 | 294.11 | 410.02 |
| 301.05 | 410 | 301.82 | 410.01 | 302.49 | 410 | 311.42 | 410 | 312.3 | 409.99 |
| 313.38 | 409.99 | 313.92 | 410.02 | 317.45 | 410.18 | 318.33 | 410.23 | 324.25 | 410.23 |
| 325.08 | 410.24 | 333.02 | 410.19 | 335.85 | 410.13 | 341.22 | 410.14 | 341.46 | 410.13 |
| 346.12 | 409.65 | 347.24 | 409.56 | 349.99 | 409.57 | 355.96 | 409.51 | 362.3 | 409.5 |
| 382.9 | 409.96 | 383.24 | 409.98 | 383.68 | 409.98 | 384.48 | 410 | 387.57 | 410.19 |
| 390.23 | 410.28 | 391.51 | 410.31 | 394.15 | 410.35 | 394.48 | 410.35 | 395.87 | 410.41 |
| 395.96 | 410.41 | 396.07 | 410.4 | 401.32 | 410.38 | 402 | 410.37 | 405.03 | 410.36 |
| 405.11 | 410.35 | 405.3 | 410.36 | 405.63 | 410.36 | 405.78 | 410.37 | 410.97 | 410.47 |
| 411.4 | 410.47 | 411.8 | 410.48 | 412.09 | 410.49 | 412.38 | 410.49 | 413.07 | 410.51 |
| 413.59 | 410.52 | 416.31 | 410.52 | 416.46 | 410.51 | 427.57 | 410.49 | 428.13 | 410.5 |
| 433.91 | 410.51 | 434.11 | 410.52 | 435.76 | 410.52 | 436.09 | 410.53 | 437.38 | 410.53 |
| 437.89 | 410.54 | 439.12 | 410.54 | 440.08 | 410.55 | 445.95 | 410.54 | 446.96 | 410.53 |
| 447.63 | 410.53 | 455.13 | 410.25 | 464.89 | 410.16 | 465.51 | 410.14 | 489.26 | 409.9 |
| 494.82 | 409.92 | 495.22 | 409.93 | 496.01 | 409.93 | 496.97 | 409.94 | 497.6 | 409.94 |
| 498.22 | 409.95 | 498.71 | 409.95 | 499.36 | 409.96 | 499.99 | 409.96 | 500.38 | 409.97 |
| 500.98 | 409.97 | 503.03 | 410 | 508.4 | 410 | 508.9 | 409.99 | 527.74 | 410 |
| 532.49 | 409.5 | 533.13 | 409.5 | 539.74 | 409.36 | 540.09 | 409.34 | 549.64 | 409.14 |
| 550.49 | 409.2 | 550.69 | 409.21 | 551.16 | 409.22 | 553.66 | 409.32 | 556.68 | 409.19 |
| 557.03 | 409.19 | 557.17 | 409.18 | 557.31 | 409.19 | 557.49 | 409.19 | 559.14 | 409.24 |
| 559.34 | 409.24 | 562.26 | 409.25 | 571.79 | 409.48 | 572.91 | 409.5 | 575.86 | 409.5 |
| 576.25 | 409.48 | 584 | 409.22 | 584.43 | 409.22 | 585.4 | 409.18 | 589.17 | 408.98 |
| 591.99 | 408.96 | 592.64 | 408.96 | 594.91 | 408.97 | 598.42 | 409.13 | 598.62 | 409.13 |
| 607.79 | 409.06 | 609.53 | 409.07 | 618.74 | 409.04 | 624.41 | 408.99 | 624.88 | 408.99 |
| 625.07 | 408.97 | 628.07 | 408.57 | 629.11 | 408.48 | 639.59 | 408.43 | 640.58 | 408.44 |
| 647.79 | 408.47 | 649.53 | 408.49 | 649.93 | 408.49 | 650.32 | 408.5 | 651.22 | 408.66 |
| 653.34 | 409 | 659.19 | 409.5 | 671.28 | 409.5 | 671.87 | 409.46 | 672.03 | 409.46 |
| 672.15 | 409.45 | 672.65 | 409.4 | 677.23 | 409.22 | 677.32 | 409.21 | 677.93 | 409.19 |
| 680.07 | 409.1 | 680.13 | 409.1 | 680.35 | 409.09 | 680.44 | 409.08 | 680.81 | 409.07 |
| 680.98 | 409.06 | 681.49 | 409.04 | 681.82 | 409.02 | 682.15 | 409.02 | 684.14 | 408.92 |
| 684.32 | 408.92 | 684.49 | 408.91 | 684.88 | 408.89 | 684.99 | 408.89 | 686.17 | 408.85 |
| 686.62 | 408.83 | 686.85 | 408.83 | 686.98 | 408.82 | 694.89 | 408.59 | 696.57 | 408.57 |
| 697.15 | 408.59 | 697.27 | 408.6 | 704.54 | 408.98 | 705.16 | 408.99 | 711.38 | 409.01 |
| 711.79 | 409.02 | 719.94 | 409.03 | 723.91 | 409.01 | 724.76 | 409 | 727.74 | 408.99 |
| 728.67 | 408.98 | 729.35 | 408.98 | 729.9 | 408.97 | 730.77 | 408.97 | 731.11 | 408.96 |
| 731.51 | 408.96 | 731.91 | 408.95 | 736.19 | 408.91 | 740.93 | 408.93 | 741.9 | 408.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 743.25 | 408.83 | 744.71 | 408.82 | 745.08 | 408.84 | 746.95 | 408.8 | 747.39 | 408.8 |
| 749.49 | 408.74 | 749.58 | 408.73 | 750.22 | 408.71 | 759.37 | 408.86 | 760.36 | 408.87 |
| 761.07 | 408.89 | 761.51 | 408.89 | 762.73 | 408.93 | 763.38 | 408.93 | 763.95 | 408.94 |
| 764.16 | 408.94 | 767.17 | 408.97 | 768.55 | 408.97 | 769.17 | 408.98 | 770.09 | 408.97 |
| 770.25 | 408.96 | 770.57 | 408.96 | 771.14 | 408.97 | 772.71 | 409.18 | 772.91 | 409.2 |
| 773.08 | 409.22 | 775.72 | 409.4 | 779.08 | 409.35 | 803.02 | 408.67 | 804.17 | 408.57 |
| 809.54 | 408.23 | 811.23 | 408.07 | 812.75 | 407.96 | 817.32 | 407.82 | 817.86 | 407.83 |
| 818.3 | 407.85 | 819.93 | 407.86 | 837.18 | 408.22 | 837.39 | 408.23 | 840.93 | 408.29 |
| 841.41 | 408.33 | 842.4 | 408.43 | 851.02 | 408.47 | 851.75 | 408.48 | 856 | 408.49 |
| 859.87 | 408.58 | 860.75 | 408.62 | 862.02 | 408.59 | 862.49 | 408.57 | 867.89 | 408.74 |
| 868.09 | 408.74 | 881.24 | 409.18 | 882.37 | 409.21 | 885.99 | 409.34 | 887.12 | 409.37 |
| 887.46 | 409.39 | 890.22 | 409.5 | 892.06 | 409.53 | 892.32 | 409.54 | 892.72 | 409.54 |
| 892.89 | 409.55 | 893.2 | 409.55 | 893.34 | 409.56 | 895 | 409.59 | 896.07 | 409.6 |
| 896.86 | 409.62 | 898.23 | 409.63 | 898.32 | 409.64 | 898.68 | 409.64 | 899.72 | 409.67 |
| 900.06 | 409.67 | 909.2 | 410.3 | 912.35 | 410.47 | 913.08 | 410.48 | 921.27 | 410.29 |
| 922.51 | 410.25 | 922.59 | 410.25 | 931.31 | 410 | 932.82 | 409.99 | 941.15 | 409.99 |
| 941.4 | 409.98 | 941.59 | 409.98 | 943.56 | 409.94 | 948.39 | 409.83 | 950.44 | 409.76 |
| 950.63 | 409.76 | 951.26 | 409.75 | 951.45 | 409.74 | 951.52 | 409.74 | 958.65 | 409.5 |
| 978.46 | 409.51 | 978.71 | 409.5 | 986.18 | 409.39 | 987.24 | 409.39 | 1010.73 | 409.12 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 527.74 | .04 | 909.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 527.74 | 909.2 | 83.8 | 83.33 | 98.93 | .1 | .3 |

Right Levee Station= 914.86 Elevation= 410.565

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14266.6*

INPUT
Description:
Station Elevation Data num= 402

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 412.34 | 2.19 | 412.3 | 2.91 | 412.3 | 3.52 | 412.31 | 5.63 | 412.32 |
| 5.83 | 412.33 | 9.08 | 412.39 | 16.59 | 412.45 | 18.74 | 412.8 | 19.17 | 412.81 |
| 19.91 | 412.82 | 21.59 | 412.82 | 22.02 | 412.77 | 22.41 | 412.74 | 25.82 | 412.5 |
| 27.33 | 412.44 | 27.58 | 412.41 | 27.95 | 412.38 | 28.87 | 412.34 | 29.21 | 412.32 |
| 29.34 | 412.31 | 31.14 | 412.2 | 32.2 | 412.15 | 32.34 | 412.14 | 36.23 | 412.06 |
| 38.38 | 412.04 | 39.16 | 412.07 | 39.22 | 412.07 | 40.83 | 412.14 | 40.93 | 412.15 |
| 41.85 | 412.21 | 42.37 | 412.24 | 42.88 | 412.28 | 43.33 | 412.31 | 43.67 | 412.34 |
| 43.75 | 412.35 | 46.05 | 412.67 | 46.55 | 412.69 | 46.9 | 412.7 | 47.24 | 412.7 |
| 48.61 | 412.68 | 48.7 | 412.68 | 48.93 | 412.67 | 49.12 | 412.67 | 49.42 | 412.66 |
| 49.59 | 412.66 | 51.58 | 412.62 | 54.8 | 412.61 | 55.62 | 412.62 | 55.96 | 412.62 |
| 56.09 | 412.61 | 56.16 | 412.62 | 56.3 | 412.61 | 56.63 | 412.64 | 56.77 | 412.64 |
| 56.9 | 412.65 | 57.01 | 412.64 | 57.38 | 412.64 | 69.59 | 412.48 | 76.67 | 411.9 |
| 77.66 | 411.81 | 78.65 | 411.77 | 79.27 | 411.72 | 79.45 | 411.72 | 79.56 | 411.71 |
| 80.09 | 411.69 | 80.99 | 411.68 | 84.93 | 411.69 | 88 | 411.67 | 88.09 | 411.67 |
| 93.76 | 411.12 | 95 | 410.97 | 99.26 | 410.68 | 100.62 | 410.61 | 101.13 | 410.6 |
| 113.79 | 410.17 | 117.46 | 410.17 | 117.98 | 410.18 | 118.48 | 410.18 | 118.77 | 410.19 |
| 118.84 | 410.19 | 119.23 | 410.2 | 119.73 | 410.2 | 120.08 | 410.21 | 120.92 | 410.21 |
| 121.07 | 410.22 | 121.66 | 410.22 | 121.74 | 410.23 | 122.3 | 410.23 | 122.47 | 410.24 |
| 123.94 | 410.24 | 124.16 | 410.25 | 124.41 | 410.25 | 124.96 | 410.26 | 126.06 | 410.26 |
| 127.45 | 410.24 | 127.71 | 410.23 | 134.79 | 410.13 | 135.04 | 410.13 | 135.3 | 410.12 |
| 135.94 | 410.12 | 136.78 | 410.1 | 136.96 | 410.1 | 139.09 | 410.07 | 140 | 410.07 |
| 140.52 | 410.05 | 142.28 | 410 | 143.24 | 409.96 | 143.34 | 409.96 | 145.12 | 409.93 |
| 148.01 | 409.82 | 148.08 | 409.81 | 148.38 | 409.79 | 153.08 | 409.6 | 155.29 | 409.5 |
| 155.46 | 409.49 | 155.71 | 409.48 | 160.07 | 409.48 | 174.82 | 409.33 | 180.57 | 409.31 |
| 181.93 | 409.32 | 185.42 | 409.28 | 187.83 | 409.41 | 187.99 | 409.42 | 199.05 | 409.69 |
| 199.53 | 409.71 | 199.83 | 409.72 | 201.15 | 409.74 | 205.82 | 409.68 | 206.52 | 409.68 |
| 206.8 | 409.67 | 210.07 | 409.67 | 211.16 | 409.79 | 211.51 | 409.85 | 212.3 | 410 |
| 213.88 | 410.01 | 219.45 | 410.04 | 219.59 | 410.04 | 222.91 | 410.02 | 223.48 | 410.02 |
| 229.23 | 409.37 | 229.54 | 409.33 | 231.74 | 409.29 | 233.1 | 409.28 | 238.7 | 409.24 |
| 239.34 | 409.23 | 241.63 | 409.22 | 242.69 | 409.18 | 242.76 | 409.18 | 243.37 | 409.15 |
| 243.5 | 409.15 | 251.18 | 408.95 | 257.81 | 409 | 268.73 | 409.2 | 278.85 | 409.12 |
| 284.04 | 409.03 | 291.67 | 409.02 | 292.72 | 409.01 | 320.35 | 409 | 320.91 | 409.03 |
| 325.41 | 409.31 | 325.68 | 409.32 | 335.35 | 409.3 | 340.43 | 409.25 | 340.95 | 409.25 |
| 343.32 | 409.17 | 348.81 | 409.09 | 349.06 | 409.07 | 354.96 | 408.37 | 362.96 | 408.32 |
| 370.36 | 408.33 | 391.42 | 408.95 | 391.76 | 408.97 | 393.03 | 409 | 396.19 | 409.25 |
| 398.9 | 409.42 | 402.92 | 409.52 | 403.09 | 409.52 | 403.25 | 409.53 | 404.67 | 409.6 |
| 414.5 | 409.57 | 414.65 | 409.58 | 414.8 | 409.58 | 420.11 | 409.64 | 420.55 | 409.65 |
| 420.96 | 409.65 | 421.25 | 409.66 | 421.55 | 409.66 | 422.79 | 409.68 | 426 | 409.68 |
| 426.15 | 409.67 | 438.66 | 409.66 | 439.61 | 409.67 | 448.89 | 409.69 | 449.87 | 409.7 |
| 457.58 | 409.69 | 458.13 | 409.66 | 460.8 | 409.55 | 461.12 | 409.54 | 465.26 | 409.34 |
| 475.23 | 409.25 | 475.86 | 409.23 | 500.14 | 408.98 | 509.3 | 408.96 | 509.8 | 408.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 510.47 | 408.97 | 511.11 | 408.98 | 512.12 | 408.98 | 514.22 | 409 | 518.91 | 409.01 |
| 519.71 | 409 | 538.11 | 409 | 539.39 | 409.01 | 539.48 | 409 | 540.54 | 408.92 |
| 543.5 | 408.67 | 544.04 | 408.67 | 549.65 | 408.48 | 549.94 | 408.46 | 558.03 | 408.19 |
| 558.76 | 408.21 | 558.92 | 408.21 | 559.32 | 408.22 | 561.44 | 408.25 | 563.2 | 408.16 |
| 564.29 | 408.12 | 564.41 | 408.12 | 564.53 | 408.13 | 564.68 | 408.13 | 566.08 | 408.15 |
| 566.25 | 408.15 | 567.58 | 408.16 | 568.23 | 408.17 | 568.72 | 408.17 | 577.75 | 408.34 |
| 578.16 | 408.33 | 580.24 | 408.33 | 587.14 | 408.14 | 587.51 | 408.14 | 587.89 | 408.12 |
| 588.33 | 408.12 | 591.53 | 407.98 | 595.69 | 407.96 | 596.39 | 407.97 | 599.36 | 408.07 |
| 599.53 | 408.07 | 607.3 | 408.02 | 608.77 | 408.03 | 618.27 | 408.01 | 621.38 | 407.97 |
| 621.78 | 407.97 | 621.94 | 407.96 | 624.48 | 407.7 | 625.37 | 407.64 | 635.08 | 407.62 |
| 643.34 | 407.66 | 644.1 | 407.77 | 645.9 | 407.99 | 650.85 | 408.33 | 661.1 | 408.33 |
| 661.6 | 408.31 | 661.73 | 408.3 | 661.83 | 408.3 | 662.26 | 408.27 | 666.14 | 408.15 |
| 666.21 | 408.14 | 666.73 | 408.13 | 668.54 | 408.06 | 668.78 | 408.06 | 668.86 | 408.05 |
| 669.17 | 408.04 | 669.31 | 408.04 | 669.53 | 408.03 | 669.75 | 408.03 | 670.02 | 408 |
| 670.3 | 407.99 | 671.99 | 407.9 | 672.62 | 407.86 | 672.71 | 407.86 | 673.26 | 407.83 |
| 673.71 | 407.8 | 674.09 | 407.78 | 674.29 | 407.78 | 674.4 | 407.77 | 675.86 | 407.71 |
| 678.02 | 407.6 | 681.1 | 407.47 | 682.52 | 407.45 | 683.01 | 407.48 | 683.12 | 407.49 |
| 689.27 | 407.99 | 689.8 | 407.99 | 690.48 | 408 | 695.07 | 408.02 | 695.42 | 408.03 |
| 700.29 | 408.04 | 700.6 | 408.05 | 705.69 | 408.02 | 706.4 | 408.02 | 708.81 | 408 |
| 708.93 | 408 | 709.72 | 407.99 | 710.3 | 407.99 | 710.76 | 407.98 | 711.5 | 407.97 |
| 712.13 | 407.97 | 712.47 | 407.96 | 716.1 | 407.92 | 716.72 | 407.92 | 720.11 | 407.95 |
| 720.93 | 407.92 | 722.08 | 407.91 | 723.31 | 407.93 | 723.63 | 407.94 | 725.21 | 407.95 |
| 725.37 | 407.96 | 725.59 | 407.96 | 727.98 | 407.95 | 735.74 | 408.2 | 736.57 | 408.22 |
| 738.58 | 408.29 | 739.79 | 408.29 | 740.45 | 408.3 | 741.09 | 408.3 | 742.34 | 408.31 |
| 742.4 | 408.31 | 743.41 | 408.32 | 744.04 | 408.32 | 744.81 | 408.3 | 745.15 | 408.3 |
| 745.23 | 408.29 | 745.7 | 408.29 | 747.03 | 408.42 | 747.21 | 408.43 | 747.35 | 408.44 |
| 749.59 | 408.53 | 752.43 | 408.46 | 772.72 | 407.78 | 773.69 | 407.66 | 774.74 | 407.56 |
| 778.24 | 407.26 | 779.67 | 407.1 | 780.96 | 406.97 | 782.41 | 406.93 | 783.15 | 406.92 |
| 784.84 | 406.86 | 786.07 | 406.9 | 788.13 | 406.91 | 809.9 | 407.36 | 810.16 | 407.36 |
| 814.63 | 407.44 | 815.23 | 407.48 | 816.48 | 407.62 | 826.62 | 407.65 | 827.37 | 407.66 |
| 831.88 | 407.66 | 833.13 | 407.67 | 833.64 | 407.67 | 838.53 | 407.77 | 839.64 | 407.81 |
| 840.19 | 407.79 | 841.84 | 407.71 | 848.66 | 407.82 | 848.91 | 407.83 | 865.5 | 408.12 |
| 865.56 | 408.12 | 866.4 | 408.13 | 876.83 | 408.33 | 879.15 | 408.36 | 880.2 | 408.36 |
| 880.59 | 408.37 | 880.79 | 408.37 | 886.94 | 408.42 | 887.51 | 408.42 | 888.82 | 408.44 |
| 889.25 | 408.45 | 900.79 | 409.17 | 903.29 | 409.3 | 903.87 | 409.3 | 905.1 | 409.29 |
| 911.37 | 409.17 | 911.44 | 409.17 | 916.1 | 409.06 | 916.39 | 409.05 | 918.37 | 409 |
| 919.57 | 408.99 | 926.39 | 408.99 | 926.54 | 408.98 | 928.11 | 408.96 | 928.96 | 408.94 |
| 931.08 | 408.9 | 931.95 | 408.89 | 932.46 | 408.87 | 933.58 | 408.84 | 933.73 | 408.84 |
| 934.23 | 408.83 | 934.44 | 408.83 | 940.11 | 408.66 | 956.05 | 408.67 | 961.26 | 408.6 |
| 962.83 | 408.6 | 981.52 | 408.46 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 539.48 | .04 | 900.79 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 539.48 | 900.79 | 83.8 | 83.33 | 98.93 | .1 | .3 |

Right Levee Station=905.7034 Elevation= 409.39

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14183.3*

INPUT
Description:
Station Elevation Data num= 385

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 411.21 | 2.24 | 411.15 | 3.59 | 411.15 | 4.55 | 411.16 | 5.95 | 411.16 |
| 6.91 | 411.19 | 9.27 | 411.23 | 16.96 | 411.31 | 19.15 | 411.5 | 19.59 | 411.51 |
| 20.35 | 411.52 | 22.06 | 411.52 | 22.9 | 411.48 | 26.38 | 411.38 | 27.92 | 411.35 |
| 28.18 | 411.34 | 28.56 | 411.32 | 29.5 | 411.3 | 29.85 | 411.29 | 29.98 | 411.29 |
| 31.82 | 411.22 | 32.42 | 411.19 | 32.9 | 411.18 | 33.05 | 411.17 | 36.44 | 411.09 |
| 37.02 | 411.08 | 38.15 | 411.07 | 39.21 | 411.05 | 40.08 | 411.05 | 41.72 | 411.07 |
| 41.82 | 411.08 | 42.76 | 411.1 | 42.95 | 411.11 | 43.29 | 411.12 | 44.27 | 411.16 |
| 44.62 | 411.17 | 44.7 | 411.18 | 45.06 | 411.2 | 47.05 | 411.34 | 47.56 | 411.35 |
| 48.01 | 411.35 | 48.27 | 411.36 | 48.79 | 411.35 | 49.67 | 411.35 | 49.76 | 411.34 |
| 50.66 | 411.34 | 51.83 | 411.32 | 55.99 | 411.31 | 56.83 | 411.32 | 56.9 | 411.32 |
| 57.18 | 411.31 | 57.31 | 411.31 | 57.38 | 411.32 | 57.52 | 411.31 | 57.86 | 411.32 |
| 58.01 | 411.33 | 58.25 | 411.33 | 58.63 | 411.32 | 59.56 | 411.32 | 69.77 | 411.25 |
| 70.52 | 411.25 | 71.11 | 411.24 | 78.34 | 410.58 | 79.35 | 410.48 | 80.36 | 410.43 |
| 81 | 410.38 | 81.18 | 410.37 | 81.29 | 410.37 | 81.84 | 410.34 | 83.56 | 410.34 |
| 84.1 | 410.35 | 88.79 | 410.35 | 89.91 | 410.34 | 90 | 410.33 | 95.8 | 409.65 |
| 97.06 | 409.49 | 101.42 | 409.18 | 116.26 | 408.59 | 116.39 | 408.59 | 116.68 | 408.58 |
| 120.02 | 408.58 | 120.54 | 408.59 | 121.36 | 408.59 | 121.42 | 408.6 | 122.69 | 408.6 |
| 123.55 | 408.61 | 124.48 | 408.61 | 124.96 | 408.62 | 127.11 | 408.62 | 127.68 | 408.63 |
| 137.72 | 408.56 | 138.25 | 408.56 | 138.9 | 408.55 | 141.48 | 408.54 | 142.12 | 408.53 |
| 143.05 | 408.53 | 143.57 | 408.52 | 145.38 | 408.5 | 146.11 | 408.48 | 146.46 | 408.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 148.28 | 408.5 | 151.3 | 408.5 | 151.61 | 408.49 | 156.41 | 408.4 | 157.24 | 408.39 |
| 158.45 | 408.36 | 158.67 | 408.36 | 158.84 | 408.35 | 163.55 | 408.36 | 164.53 | 408.34 |
| 177.01 | 408.18 | 184.1 | 408.14 | 184.5 | 408.14 | 185.89 | 408.15 | 189.46 | 408.14 |
| 191.91 | 408.33 | 192.08 | 408.33 | 203.87 | 408.81 | 205.52 | 408.87 | 210.3 | 408.84 |
| 211.02 | 408.84 | 211.29 | 408.83 | 214.64 | 408.83 | 215.75 | 408.9 | 216.11 | 408.92 |
| 216.92 | 409 | 218.54 | 409 | 218.93 | 409.01 | 221.41 | 409.01 | 222.64 | 409.02 |
| 228.34 | 409.01 | 231.92 | 408.54 | 234.22 | 408.21 | 234.54 | 408.16 | 238.17 | 408.1 |
| 238.33 | 408.1 | 240.63 | 408.08 | 241.63 | 408.08 | 246.77 | 408.02 | 246.88 | 408.02 |
| 247.68 | 408 | 248.04 | 408 | 248.66 | 407.98 | 248.79 | 407.98 | 255.85 | 407.94 |
| 256.64 | 407.93 | 263.42 | 408 | 274.57 | 408.25 | 284.91 | 408.15 | 289.62 | 408.05 |
| 298.02 | 408.02 | 300.08 | 408.01 | 300.84 | 408 | 314.44 | 407.99 | 315.25 | 408 |
| 327.32 | 408 | 327.89 | 408.04 | 332.49 | 408.39 | 332.76 | 408.4 | 338.68 | 408.4 |
| 339.54 | 408.41 | 347.83 | 408.32 | 348.36 | 408.31 | 356.4 | 408.05 | 356.65 | 408.02 |
| 361.52 | 407.34 | 362.69 | 407.19 | 370.85 | 407.13 | 378.41 | 407.17 | 378.8 | 407.18 |
| 399.93 | 407.94 | 400.29 | 407.96 | 400.75 | 407.98 | 401.58 | 408 | 407.58 | 408.56 |
| 411.68 | 408.69 | 411.86 | 408.7 | 412.03 | 408.7 | 413.26 | 408.79 | 413.48 | 408.8 |
| 423.83 | 408.79 | 429.25 | 408.82 | 429.7 | 408.82 | 430.12 | 408.83 | 430.72 | 408.83 |
| 431.44 | 408.84 | 456.83 | 408.84 | 457.36 | 408.85 | 465.78 | 408.85 | 466.84 | 408.84 |
| 467.54 | 408.84 | 468.09 | 408.82 | 470.83 | 408.69 | 471.15 | 408.68 | 472.27 | 408.61 |
| 475.38 | 408.44 | 514.05 | 408.03 | 514.56 | 408.03 | 516.83 | 408 | 517.25 | 408 |
| 518.08 | 407.99 | 519.07 | 407.99 | 519.6 | 407.98 | 520.89 | 407.98 | 521.57 | 407.99 |
| 531.01 | 408.01 | 531.54 | 408 | 549.81 | 408 | 551.12 | 408.01 | 551.21 | 408.01 |
| 554.51 | 407.83 | 554.96 | 407.83 | 559.55 | 407.59 | 559.79 | 407.58 | 566.42 | 407.23 |
| 567.02 | 407.23 | 567.15 | 407.22 | 567.48 | 407.21 | 569.21 | 407.18 | 571.31 | 407.06 |
| 571.88 | 407.06 | 573.02 | 407.07 | 573.16 | 407.07 | 575.19 | 407.08 | 580.71 | 407.15 |
| 581.81 | 407.17 | 584.63 | 407.17 | 584.91 | 407.16 | 590.29 | 407.06 | 590.59 | 407.06 |
| 590.9 | 407.05 | 591.26 | 407.05 | 593.88 | 406.97 | 597.87 | 406.96 | 600.3 | 407 |
| 614.42 | 407 | 618.36 | 406.96 | 618.69 | 406.96 | 618.81 | 406.95 | 620.9 | 406.83 |
| 621.62 | 406.8 | 628.1 | 406.8 | 628.78 | 406.81 | 632.1 | 406.81 | 633.24 | 406.82 |
| 636.08 | 406.82 | 636.35 | 406.83 | 638.45 | 406.99 | 641.4 | 407.12 | 642.51 | 407.16 |
| 650.91 | 407.17 | 651.32 | 407.15 | 651.51 | 407.15 | 651.86 | 407.13 | 655.04 | 407.07 |
| 655.11 | 407.07 | 657.02 | 407.03 | 657.21 | 407.02 | 657.53 | 407.02 | 657.65 | 407.01 |
| 658 | 407.01 | 658.46 | 406.97 | 659.85 | 406.87 | 660.36 | 406.83 | 660.44 | 406.82 |
| 660.88 | 406.79 | 661.25 | 406.76 | 661.73 | 406.73 | 661.82 | 406.72 | 662.04 | 406.71 |
| 667.31 | 406.36 | 668.48 | 406.33 | 668.96 | 406.39 | 674.01 | 406.99 | 674.44 | 407 |
| 675 | 407 | 678.76 | 407.03 | 679.05 | 407.04 | 682.22 | 407.05 | 682.85 | 407.06 |
| 683.04 | 407.06 | 683.3 | 407.07 | 684.71 | 407.05 | 685.54 | 407.05 | 687.47 | 407.03 |
| 688.05 | 407.03 | 690.03 | 407.01 | 690.13 | 407.01 | 690.77 | 407 | 691.24 | 407 |
| 691.63 | 406.99 | 692.23 | 406.98 | 692.47 | 406.98 | 692.75 | 406.97 | 693.02 | 406.97 |
| 696 | 406.93 | 696.51 | 406.93 | 699.29 | 406.97 | 699.96 | 406.96 | 701.91 | 407.03 |
| 702.17 | 407.05 | 703.47 | 407.1 | 703.6 | 407.11 | 703.78 | 407.12 | 705.23 | 407.17 |
| 705.33 | 407.17 | 705.74 | 407.18 | 712.1 | 407.54 | 713.28 | 407.59 | 713.58 | 407.6 |
| 714.43 | 407.64 | 714.88 | 407.64 | 715.28 | 407.65 | 716.49 | 407.65 | 717.51 | 407.66 |
| 718.9 | 407.66 | 719.54 | 407.64 | 719.65 | 407.63 | 719.88 | 407.63 | 720.27 | 407.62 |
| 721.36 | 407.66 | 723.45 | 407.67 | 742.41 | 406.89 | 743.21 | 406.74 | 744.07 | 406.64 |
| 746.94 | 406.28 | 748.11 | 406.12 | 749.17 | 405.99 | 750.36 | 405.96 | 750.96 | 405.95 |
| 752.35 | 405.9 | 753.16 | 405.92 | 753.84 | 405.95 | 756.32 | 405.96 | 782.61 | 406.49 |
| 782.93 | 406.5 | 788.32 | 406.58 | 789.05 | 406.64 | 790.56 | 406.8 | 802.8 | 406.83 |
| 803.71 | 406.84 | 811.29 | 406.84 | 818.53 | 407 | 819.19 | 406.97 | 821.18 | 406.86 |
| 829.42 | 406.91 | 829.72 | 406.91 | 849.76 | 407.06 | 849.83 | 407.06 | 850.85 | 407.07 |
| 851.48 | 407.07 | 858.72 | 407.13 | 859.24 | 407.13 | 866.25 | 407.18 | 867.99 | 407.18 |
| 868.21 | 407.19 | 873.57 | 407.21 | 875.79 | 407.2 | 876.34 | 407.21 | 878.44 | 407.22 |
| 892.37 | 408.05 | 894.23 | 408.12 | 894.66 | 408.13 | 897.4 | 408.13 | 898.72 | 408.11 |
| 899.5 | 408.09 | 900.23 | 408.08 | 900.28 | 408.08 | 903.74 | 408.03 | 903.95 | 408.02 |
| 905.42 | 408 | 906.31 | 408 | 906.99 | 407.99 | 911.49 | 407.99 | 913.28 | 407.97 |
| 913.8 | 407.96 | 915.5 | 407.94 | 915.89 | 407.93 | 916.71 | 407.92 | 916.83 | 407.91 |
| 917.35 | 407.91 | 921.56 | 407.83 | 933.4 | 407.84 | 937.26 | 407.81 | 952.3 | 407.81 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 551.21 | .04 | 892.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 551.21 | 892.37 | 83.8 | 83.34 | 98.93 | .1 | .3 |

Right Levee Station=896.5467 Elevation= 408.215

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14100

INPUT
Description:
Station Elevation Data num= 468

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 410.092.289978 | | 4103.039978 | | 4103.669983 | | 4104.649963 | | 410 |
| 6.080017 | 4109.469971 | | 410.0821.27997 | | 410.22 | 30.62 | 410.2733.59998 | | 410.21 |
| 37.21997 | 410.11 | 37.81 | 410.0937.82001 | | 410.0938.95996 | | 410.0838.97998 | | 410.08 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 42.60999 | 41043.66998 | | 41043.85999 | | 41044.20996 | | 41045.64996 | | 410.01 | |
| 52.92999 | 410.01 | 58.63 | 410.0159.14001 | | 410.01 | 59.88 | 410.0160.83002 | | 410.01 | |
| 71.26001 | 41072.02002 | | 410 | 72.62 | 41077.76001 | | 409.4980.01001 | | 409.26 | |
| 81.03998 | 409.1482.07001 | | 409.0982.71997 | | 409.0482.90997 | | 409.0383.02002 | | 409.03 | |
| 83.58002 | 40985.89001 | | 409.01 | 86.25 | 409.01 | 88.63 | 409.0390.67999 | | 409.02 | |
| 91.91998 | 409 | 93.56 | 408.76 | 99.13 | 408 | 103.58 | 407.69 | 105.53 | 407.61 | |
| 108.85 | 407.47 | 109.78 | 407.43 | 118.74 | 407.01 | 118.87 | 407.01 | 119.16 | 407 | |
| 119.23 | 407 | 119.28 | 407 | 123.45 | 407 | 123.48 | 407 | 123.64 | 407 | |
| 123.65 | 407 | 123.94 | 407 | 124.01 | 407 | 125.3 | 407 | 126.34 | 407 | |
| 126.58 | 407 | 126.87 | 407 | 126.95 | 407 | 127.04 | 407 | 127.07 | 407 | |
| 127.13 | 407 | 127.62 | 407 | 127.8 | 407 | 128.02 | 407 | 129.56 | 407 | |
| 130.63 | 407 | 131.54 | 407 | 133 | 407 | 133.27 | 407 | 137.19 | 406.99 | |
| 138.95 | 406.99 | 140.65 | 406.99 | 140.92 | 406.99 | 141.19 | 406.99 | 141.86 | 406.99 | |
| 142.27 | 406.99 | 142.73 | 406.99 | 142.92 | 406.99 | 144.49 | 406.99 | 146.63 | 406.99 | |
| 149.22 | 407 | 149.47 | 407 | 149.58 | 407 | 150.57 | 407.04 | 154.45 | 407.19 | |
| 154.52 | 407.19 | 167.03 | 407.23 | 180.78 | 407.02 | 182.43 | 407 | 182.64 | 407 | |
| 182.86 | 407 | 188.02 | 406.97 | 191.72 | 406.99 | 193.49 | 407 | 196 | 407.24 | |
| 196.17 | 407.25 | 197.14 | 407.3 | 207.71 | 407.88 | 208.21 | 407.91 | 208.52 | 407.93 | |
| 209.9 | 408 | 221.32 | 408 | 221.54 | 408 | 223.19 | 408 | 223.59 | 408 | |
| 226.12 | 408 | 229.14 | 408 | 233.2 | 408 | 236.86 | 407.44 | 239.53 | 407 | |
| 243.24 | 406.93 | 246.77 | 406.89 | 252.02 | 406.83 | 252.95 | 406.82 | 254.09 | 406.81 | |
| 256.62 | 406.85 | 258.56 | 406.87 | 261.3 | 406.91 | 263.59 | 406.94 | 265.38 | 406.96 | |
| 269.03 | 407 | 280.42 | 407.3 | 290.98 | 407.18 | 295.79 | 407.06 | 306.47 | 407.01 | |
| 307.25 | 407 | 308.08 | 407 | 312.7 | 406.98 | 315.26 | 406.97 | 321.14 | 406.99 | |
| 321.96 | 407 | 322.67 | 407 | 322.95 | 407 | 324.37 | 407 | 324.76 | 407 | |
| 326.35 | 407 | 328.48 | 407 | 330.08 | 407 | 331.29 | 407 | 332.2 | 407 | |
| 333.61 | 407 | 334.29 | 407 | 339.57 | 407.47 | 339.85 | 407.49 | 346.77 | 407.49 | |
| 355.24 | 407.38 | 355.78 | 407.37 | 363.99 | 407 | 369.22 | 406.19 | 370.41 | 406 | |
| 371.98 | 405.99 | 375.04 | 405.97 | 378.75 | 405.94 | 383.97 | 405.98 | 386.47 | 406 | |
| 395.39 | 406.38 | 408.45 | 406.93 | 408.81 | 406.95 | 409.28 | 406.97 | 410.13 | 407 | |
| 416.28 | 407.7 | 420.45 | 407.86 | 420.63 | 407.87 | 420.8 | 407.88 | 420.85 | 407.89 | |
| 422.06 | 407.98 | 422.28 | 408 | 422.36 | 408 | 422.38 | 408 | 422.5 | 408 | |
| 422.59 | 408 | 422.67 | 408 | 423.14 | 408 | 423.6 | 408 | 425.23 | 408 | |
| 428.1 | 408 | 428.82 | 408 | 428.98 | 408 | 429.19 | 408 | 429.22 | 408 | |
| 429.76 | 408 | 429.8 | 408 | 431.47 | 408 | 431.61 | 408 | 431.72 | 408 | |
| 432.05 | 408 | 432.34 | 408 | 432.54 | 408 | 432.69 | 408 | 432.85 | 408 | |
| 435.95 | 408 | 438.39 | 408 | 438.85 | 408 | 439.28 | 408 | 439.58 | 408 | |
| 439.89 | 408 | 440.63 | 408 | 441.32 | 408 | 443.43 | 408 | 443.52 | 408 | |
| 444 | 408 | 444.03 | 408 | 444.25 | 408 | 444.27 | 408 | 444.54 | 408 | |
| 444.69 | 408 | 444.91 | 408 | 445.14 | 408 | 447.3 | 408 | 451.52 | 408 | |
| 451.96 | 408 | 452.24 | 408 | 452.55 | 408 | 452.61 | 408 | 453.27 | 408 | |
| 454.26 | 408 | 455.13 | 408 | 456.1 | 408 | 456.69 | 408 | 457.17 | 408 | |
| 457.57 | 408 | 457.75 | 408 | 458.74 | 408 | 458.99 | 408 | 459.07 | 408 | |
| 459.93 | 408 | 460.03 | 408 | 460.06 | 408 | 462.86 | 408 | 462.91 | 408 | |
| 463.07 | 408 | 463.1 | 408 | 464.72 | 408 | 464.83 | 408 | 465.19 | 408 | |
| 466.56 | 408 | 467.1 | 408 | 467.76 | 408 | 468.05 | 408 | 468.42 | 408 | |
| 469.44 | 408 | 470.77 | 408 | 471.2 | 408 | 471.27 | 408 | 471.32 | 408 | |
| 471.77 | 408 | 472.09 | 408 | 472.65 | 408 | 473.26 | 408 | 473.65 | 408 | |
| 475.42 | 408 | 475.7 | 408 | 476.78 | 408 | 476.83 | 408 | 477.12 | 408 | |
| 477.33 | 408 | 477.34 | 408 | 477.49 | 408 | 480.85 | 407.82 | 481.18 | 407.81 | |
| 485.5 | 407.53 | 490.84 | 407.48 | 503.22 | 407.34 | 525 | 407.09 | 525.52 | 407.08 | |
| 527.83 | 407.04 | 528.26 | 407.04 | 530.66 | 407 | 530.7 | 407 | 530.8 | 407 | |
| 531.46 | 407 | 531.98 | 407 | 532.68 | 407 | 533.35 | 407 | 533.76 | 407 | |
| 534.17 | 407 | 534.19 | 407 | 534.25 | 407 | 534.4 | 407 | 542.32 | 407.01 | |
| 543.6 | 407.01 | 543.95 | 407.01 | 546.1 | 407.01 | 546.18 | 407.01 | 546.21 | 407.01 | |
| 546.23 | 407.01 | 546.28 | 407.01 | 550.28 | 407.01 | 554.47 | 407 | 555.74 | 407 | |
| 556.71 | 407 | 556.88 | 407 | 559.42 | 407 | 560.7 | 407 | 561.52 | 407 | |
| 562.95 | 407.01 | 563.63 | 407.01 | 564.52 | 407 | 565.87 | 407 | 573.97 | 406.35 | |
| 575.64 | 406.21 | 578.63 | 406 | 578.82 | 406 | 579.07 | 406 | 580.07 | 405.99 | |
| 580.92 | 406 | 581.34 | 406 | 584.52 | 406.01 | 585.96 | 406.01 | 586.82 | 406.01 | |
| 587.69 | 406 | 590.81 | 406 | 598.9 | 405.95 | 601.31 | 405.94 | 604.72 | 405.94 | |
| 610.25 | 405.97 | 612.08 | 405.98 | 612.26 | 405.98 | 613.34 | 405.98 | 615.33 | 405.94 | |
| 615.45 | 405.94 | 622.93 | 405.99 | 623.46 | 406 | 624.09 | 406 | 625.19 | 405.99 | |
| 626.05 | 405.99 | 628 | 405.99 | 628.94 | 405.99 | 629.16 | 405.99 | 637.07 | 406 | |
| 643.95 | 406 | 644 | 406 | 644.33 | 406 | 645.49 | 405.99 | 645.52 | 405.99 | |
| 645.64 | 405.99 | 645.69 | 405.99 | 645.89 | 405.99 | 645.98 | 405.99 | 646.12 | 405.99 | |
| 646.26 | 405.99 | 651.55 | 405.43 | 653.52 | 405.24 | 654.43 | 405.21 | 658.76 | 406 | |
| 659.52 | 406.01 | 660.19 | 406.02 | 665.64 | 406.07 | 665.79 | 406.07 | 665.99 | 406.08 | |
| 667.74 | 406.06 | 672.19 | 406.01 | 672.49 | 406 | 672.97 | 405.99 | 673.58 | 405.98 | |
| 675.9 | 405.94 | 677.14 | 405.96 | 678.99 | 406 | 688.46 | 406.88 | 689.02 | 406.92 | |
| 690.28 | 407 | 690.33 | 407 | 690.53 | 407 | 690.63 | 407 | 690.96 | 407 | |
| 692.72 | 407 | 693.37 | 407 | 693.43 | 407 | 693.77 | 407 | 705.47 | 406.34 | |
| 712.11 | 406 | 712.73 | 405.83 | 713.4 | 405.71 | 717.38 | 405 | 718.31 | 404.98 | |
| 718.78 | 404.98 | 719.86 | 404.94 | 720.81 | 404.97 | 721.61 | 405 | 724.52 | 405.01 | |
| 745.39 | 405.46 | 755.33 | 405.62 | 755.7 | 405.63 | 762.02 | 405.73 | 762.87 | 405.79 | |
| 764.64 | 405.99 | 767.28 | 406 | 771.52 | 406.01 | 773.69 | 406.01 | 777.12 | 406.01 | |
| 777.99 | 406.01 | 778.99 | 406.015 | 780.05 | 406.016 | 781.35 | 406.018 | 781.62 | 406.018 | |
| 783.24 | 406.02 | 783.26 | 406.02 | 786.44 | 406.017 | 788.21 | 406.015 | 788.93 | 406.015 | |
| 797.42 | 406.194 | 800.53 | 406 | 806.57 | 405.994 | 810.18 | 405.991 | 810.54 | 405.991 | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 816.38 | 405.988 | 822.64 | 405.992 | 829.56 | 405.997 | 831.95 | 405.999 | 834.02 | 406 |
| 834.1 | 406 | 835.3 | 406 | 836.04 | 406 | 842.5 | 406.002 | 844.52 | 406.002 |
| 853.34 | 406.001 | 853.37 | 406.001 | 853.81 | 406 | 853.83 | 406 | 853.85 | 406 |
| 854.21 | 406 | 854.52 | 406 | 854.53 | 406 | 854.82 | 406 | 855.38 | 406 |
| 855.64 | 406.001 | 855.66 | 406.001 | 858.59 | 406.004 | 860.51 | 406.002 | 861.92 | 406 |
| 864.36 | 405.985 | 864.52 | 405.985 | 865.17 | 405.988 | 867.03 | 405.996 | 867.63 | 406 |
| 883.96 | 406.921 | 886.05 | 406.968 | 887.24 | 406.999 | 888.1 | 407 | 888.12 | 407 |
| 888.61 | 406.999 | 889.09 | 406.999 | 889.12 | 406.999 | 891.38 | 406.999 | 891.52 | 406.999 |
| 893.06 | 406.997 | 894.98 | 406.996 | 895.71 | 406.996 | 896.03 | 406.996 | 896.27 | 406.995 |
| 896.44 | 406.995 | 897.2 | 406.995 | 897.61 | 406.994 | 897.95 | 406.994 | 898.64 | 406.993 |
| 899.31 | 406.993 | 899.85 | 406.993 | 900.24 | 406.994 | 901.87 | 406.996 | 903.49 | 406.997 |
| 906.09 | 407 | 913.63 | 407.017 | 923.08 | 407.154 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 562.95 | .04 | 883.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 562.95 | 883.96 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station= 232.32 Elevation= 408.11
Right Levee Station= 887.39 Elevation= 407.04

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 14028.5*

INPUT
Description:
Station Elevation Data num= 314

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 409.39 | 2.14 | 409.32 | 5.67 | 409.32 | 8.83 | 409.39 | 28.56 | 409.57 |
| 32.98 | 409.48 | 34.72 | 409.43 | 35.27 | 409.42 | 36.34 | 409.41 | 39.75 | 409.34 |
| 66.48 | 409.34 | 67.19 | 409.33 | 67.75 | 409.33 | 74.03 | 408.75 | 74.64 | 408.7 |
| 75.11 | 408.65 | 75.6 | 408.59 | 76.56 | 408.55 | 77.17 | 408.51 | 77.34 | 408.5 |
| 77.45 | 408.5 | 77.97 | 408.47 | 79.24 | 408.47 | 79.95 | 408.48 | 82.68 | 408.49 |
| 84.59 | 408.48 | 85.75 | 408.46 | 92.48 | 407.6 | 96.63 | 407.33 | 110.77 | 406.74 |
| 110.89 | 406.74 | 111.16 | 406.73 | 122.76 | 406.73 | 124.07 | 406.72 | 139.54 | 406.71 |
| 140.13 | 406.74 | 140.27 | 406.74 | 140.46 | 406.75 | 142.72 | 406.83 | 142.94 | 406.84 |
| 144.08 | 406.88 | 155.82 | 406.91 | 158.78 | 406.87 | 158.91 | 406.87 | 159.43 | 406.86 |
| 162.72 | 406.81 | 163.15 | 406.81 | 170.18 | 406.71 | 175.4 | 406.69 | 178.02 | 406.7 |
| 178.85 | 406.71 | 180.5 | 406.71 | 182.84 | 406.92 | 183 | 406.93 | 183.08 | 406.93 |
| 193.77 | 407.47 | 194.23 | 407.49 | 194.52 | 407.51 | 195.81 | 407.57 | 208.21 | 407.52 |
| 208.58 | 407.51 | 217.55 | 407.44 | 219.28 | 407.18 | 222.26 | 406.69 | 223.45 | 406.48 |
| 225.93 | 406.39 | 226.91 | 406.34 | 230.21 | 406.2 | 230.67 | 406.19 | 234.54 | 406.08 |
| 235.1 | 406.05 | 236.9 | 405.98 | 250.97 | 406.01 | 252.73 | 406.04 | 260.32 | 406.22 |
| 260.43 | 406.22 | 261.6 | 406.25 | 261.89 | 406.25 | 270.46 | 406.16 | 271 | 406.16 |
| 273.8 | 406.1 | 274.03 | 406.1 | 274.17 | 406.09 | 275.93 | 406.06 | 292.7 | 406.09 |
| 293.56 | 406.08 | 299.58 | 406.09 | 300.35 | 406.1 | 310.07 | 406.09 | 311.22 | 406.1 |
| 311.85 | 406.1 | 316.78 | 406.51 | 317.04 | 406.53 | 324.16 | 406.54 | 331.39 | 406.46 |
| 331.9 | 406.46 | 339.56 | 406.14 | 344.44 | 405.45 | 344.84 | 405.39 | 345.55 | 405.29 |
| 353.33 | 405.23 | 354.17 | 405.24 | 354.41 | 405.24 | 360.53 | 405.29 | 381.03 | 406.13 |
| 381.37 | 406.15 | 382.6 | 406.2 | 388.34 | 406.83 | 388.5 | 406.83 | 392.23 | 406.98 |
| 392.55 | 407 | 392.6 | 407.01 | 393.73 | 407.09 | 393.93 | 407.1 | 394.01 | 407.11 |
| 407.84 | 407.13 | 408.95 | 407.12 | 411.05 | 407.12 | 411.7 | 407.11 | 414.7 | 407.11 |
| 414.84 | 407.1 | 421.62 | 407.09 | 421.88 | 407.08 | 432.01 | 407.08 | 433.53 | 407.07 |
| 445.44 | 407.07 | 448.57 | 406.91 | 448.88 | 406.9 | 452.91 | 406.66 | 456.81 | 406.62 |
| 457.89 | 406.62 | 489.76 | 406.35 | 490.24 | 406.34 | 492.4 | 406.31 | 492.8 | 406.31 |
| 495.04 | 406.29 | 495.17 | 406.29 | 495.32 | 406.28 | 518.44 | 406.22 | 519.34 | 406.21 |
| 525.16 | 406.2 | 525.8 | 406.2 | 527.89 | 406.18 | 537.02 | 405.48 | 539.81 | 405.29 |
| 540.27 | 405.29 | 541.16 | 405.26 | 541.95 | 405.25 | 542.34 | 405.24 | 545.31 | 405.2 |
| 545.99 | 405.18 | 547.46 | 405.16 | 547.72 | 405.15 | 548.27 | 405.14 | 565.51 | 405.09 |
| 571.06 | 405.12 | 572.24 | 405.12 | 574.1 | 405.09 | 574.21 | 405.09 | 578.24 | 405.12 |
| 581.2 | 405.19 | 581.69 | 405.21 | 582.1 | 405.22 | 582.28 | 405.22 | 585.56 | 405.28 |
| 586.81 | 405.31 | 587.02 | 405.31 | 588.56 | 405.36 | 593.14 | 405.36 | 593.71 | 405.37 |
| 601.19 | 405.36 | 602.27 | 405.35 | 602.99 | 405.35 | 607.93 | 404.86 | 609.76 | 404.7 |
| 610.63 | 404.67 | 611.22 | 404.76 | 613.21 | 405.08 | 613.47 | 405.13 | 613.88 | 405.2 |
| 614.11 | 405.23 | 614.52 | 405.3 | 614.67 | 405.32 | 615.38 | 405.33 | 616.01 | 405.33 |
| 616.56 | 405.34 | 617.86 | 405.34 | 618.75 | 405.35 | 621.24 | 405.36 | 621.43 | 405.37 |
| 627.22 | 405.29 | 627.5 | 405.28 | 630.68 | 405.22 | 631.84 | 405.23 | 633.57 | 405.26 |
| 636.77 | 405.53 | 642.42 | 405.96 | 642.94 | 405.99 | 644.12 | 406.04 | 644.75 | 406.04 |
| 646.4 | 406.02 | 647.06 | 406.02 | 647.38 | 406.01 | 658.31 | 405.42 | 664.51 | 405.13 |
| 665.09 | 404.98 | 669.44 | 404.27 | 670.3 | 404.25 | 670.74 | 404.25 | 671.75 | 404.21 |
| 673.78 | 404.27 | 677.14 | 404.29 | 678.99 | 404.32 | 682.81 | 404.52 | 683.09 | 404.53 |
| 683.17 | 404.53 | 702.04 | 404.83 | 705.26 | 404.85 | 705.57 | 404.85 | 706.27 | 404.87 |
| 707.76 | 404.9 | 707.84 | 404.9 | 708.2 | 404.91 | 708.26 | 404.91 | 710.3 | 404.93 |
| 711.26 | 404.95 | 712.33 | 404.96 | 712.75 | 404.96 | 713.18 | 404.97 | 715.6 | 405 |
| 716.21 | 405 | 720.49 | 405.04 | 721.23 | 405.08 | 721.47 | 405.09 | 723.51 | 405.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 725.97 | 405.27 | 729.37 | 405.34 | 733.98 | 405.34 | 737.37 | 405.31 | 738.75 | 405.29 |
| 738.95 | 405.26 | 739.02 | 405.25 | 739.54 | 405.15 | 740.1 | 405.16 | 751.59 | 405.15 |
| 755.77 | 405.22 | 755.95 | 405.22 | 759.25 | 405.28 | 759.32 | 405.28 | 760.07 | 405.29 |
| 760.47 | 405.3 | 761.41 | 405.31 | 764.23 | 405.18 | 764.97 | 405.14 | 773.91 | 405.14 |
| 776.16 | 405.17 | 776.57 | 405.18 | 777.23 | 405.18 | 783.32 | 405.26 | 784.21 | 405.28 |
| 805.19 | 405.28 | 806.05 | 405.27 | 807.29 | 405.27 | 808.07 | 405.28 | 823.98 | 405.29 |
| 826.04 | 405.22 | 826.59 | 405.2 | 826.87 | 405.2 | 827.05 | 405.19 | 827.41 | 405.18 |
| 827.76 | 405.17 | 828.02 | 405.17 | 828.09 | 405.16 | 828.4 | 405.16 | 828.7 | 405.17 |
| 839.72 | 405.18 | 842.56 | 405.21 | 859.21 | 405.98 | 859.38 | 405.99 | 859.48 | 405.99 |
| 859.69 | 406 | 859.97 | 406.01 | 860.11 | 406.02 | 860.21 | 406.02 | 860.29 | 406.03 |
| 861.44 | 406.12 | 863.45 | 406.24 | 863.54 | 406.25 | 863.66 | 406.25 | 864.48 | 406.26 |
| 864.59 | 406.26 | 865.64 | 406.28 | 866.22 | 406.28 | 867.44 | 406.29 | 867.5 | 406.29 |
| 868.21 | 406.28 | 879.63 | 406.28 | 880.72 | 406.31 | 884.58 | 406.39 | 885.02 | 406.39 |
| 885.15 | 406.4 | 885.65 | 406.4 | 885.75 | 406.41 | 886.28 | 406.41 | 887.52 | 406.4 |
| 900.86 | 406.36 | 904.65 | 406.34 | 905.45 | 406.35 | 909.82 | 406.37 | 910.14 | 406.38 |
| 915.29 | 406.39 | 915.8 | 406.4 | 916.21 | 406.4 | 918.41 | 406.42 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 525.16 | .04 | 861.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 525.16 | 861.44 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=215.3871 Elevation=407.6714

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13957.1*

INPUT
Description:
Station Elevation Data num= 320

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 408.69 | 1.98 | 408.64 | 2.63 | 408.65 | 5.26 | 408.65 | 8.2 | 408.71 |
| 26.51 | 408.87 | 30.6 | 408.8 | 32.73 | 408.75 | 33.73 | 408.74 | 36.89 | 408.68 |
| 62.87 | 408.67 | 69.27 | 408.13 | 69.7 | 408.09 | 70.16 | 408.04 | 71.05 | 408.01 |
| 71.61 | 407.97 | 71.78 | 407.96 | 71.87 | 407.96 | 72.36 | 407.94 | 76.73 | 407.95 |
| 79.58 | 407.93 | 81 | 407.75 | 84.76 | 407.33 | 85.82 | 407.2 | 86.8 | 407.15 |
| 89.67 | 406.98 | 102.8 | 406.47 | 110.83 | 406.46 | 119.1 | 406.44 | 123.57 | 406.43 |
| 123.73 | 406.42 | 129.5 | 406.43 | 130.05 | 406.45 | 130.18 | 406.45 | 130.36 | 406.46 |
| 132.45 | 406.52 | 132.66 | 406.53 | 133.71 | 406.56 | 133.78 | 406.56 | 144.61 | 406.59 |
| 147.36 | 406.56 | 147.47 | 406.56 | 147.96 | 406.55 | 151.01 | 406.51 | 151.41 | 406.51 |
| 156.51 | 406.44 | 157.94 | 406.43 | 162.78 | 406.41 | 167.51 | 406.43 | 168.57 | 406.51 |
| 169.37 | 406.58 | 169.69 | 406.6 | 169.83 | 406.61 | 169.91 | 406.61 | 170.67 | 406.64 |
| 180.26 | 407.08 | 181.72 | 407.14 | 185.15 | 407.14 | 191.61 | 407.06 | 191.8 | 407.05 |
| 192.9 | 407.04 | 193.23 | 407.03 | 193.57 | 407.03 | 201.89 | 406.88 | 203.5 | 406.65 |
| 205.06 | 406.38 | 207.37 | 405.96 | 209.68 | 405.82 | 212.76 | 405.58 | 214.07 | 405.49 |
| 217.66 | 405.32 | 219.85 | 405.15 | 219.98 | 405.15 | 223.85 | 405.08 | 232.91 | 405.03 |
| 234.55 | 405.04 | 241.59 | 405.18 | 241.69 | 405.18 | 242.77 | 405.2 | 243.04 | 405.2 |
| 250.99 | 405.13 | 251.92 | 405.13 | 254.1 | 405.08 | 254.44 | 405.08 | 256.08 | 405.07 |
| 265.33 | 405.15 | 266 | 405.15 | 266.72 | 405.16 | 271.64 | 405.2 | 280.82 | 405.2 |
| 281.16 | 405.19 | 284.38 | 405.19 | 285.77 | 405.18 | 286.07 | 405.18 | 286.47 | 405.19 |
| 288.82 | 405.19 | 289.41 | 405.2 | 293.98 | 405.55 | 294.22 | 405.57 | 300.22 | 405.6 |
| 300.84 | 405.59 | 307.55 | 405.55 | 308.02 | 405.54 | 315.12 | 405.29 | 320.68 | 404.58 |
| 327.9 | 404.53 | 328.91 | 404.53 | 334.59 | 404.57 | 342.31 | 404.84 | 353.61 | 405.34 |
| 353.93 | 405.36 | 354.33 | 405.37 | 355.07 | 405.4 | 360.39 | 405.95 | 360.54 | 405.96 |
| 364 | 406.1 | 364.16 | 406.11 | 364.31 | 406.11 | 365.4 | 406.19 | 365.59 | 406.21 |
| 366.33 | 406.21 | 366.73 | 406.22 | 366.8 | 406.22 | 368.14 | 406.23 | 370.63 | 406.25 |
| 371.19 | 406.25 | 371.25 | 406.26 | 377.94 | 406.26 | 378.49 | 406.25 | 379.93 | 406.25 |
| 380.31 | 406.24 | 381.17 | 406.24 | 381.47 | 406.23 | 383.98 | 406.22 | 384.39 | 406.21 |
| 390.9 | 406.17 | 391.85 | 406.17 | 392.42 | 406.16 | 404.96 | 406.15 | 405.21 | 406.14 |
| 413.39 | 406.13 | 416.29 | 406 | 416.58 | 405.99 | 420.32 | 405.79 | 423.17 | 405.76 |
| 423.94 | 405.76 | 424.94 | 405.75 | 425.54 | 405.75 | 454.52 | 405.61 | 454.97 | 405.6 |
| 459.42 | 405.57 | 460.11 | 405.57 | 460.56 | 405.56 | 461.75 | 405.56 | 462.1 | 405.55 |
| 470.92 | 405.51 | 472.78 | 405.49 | 472.94 | 405.49 | 481.97 | 405.42 | 487.37 | 405.4 |
| 489.91 | 405.37 | 498.39 | 404.74 | 500.99 | 404.57 | 501.42 | 404.57 | 502.98 | 404.5 |
| 503.34 | 404.49 | 506.11 | 404.38 | 506.73 | 404.36 | 508.34 | 404.29 | 523.65 | 404.23 |
| 530.04 | 404.27 | 531.14 | 404.27 | 532.86 | 404.24 | 532.97 | 404.24 | 536.71 | 404.26 |
| 539.46 | 404.4 | 539.92 | 404.43 | 540.3 | 404.44 | 540.47 | 404.45 | 541.43 | 404.48 |
| 543.52 | 404.56 | 544.68 | 404.63 | 546.3 | 404.72 | 547.22 | 404.73 | 549.55 | 404.71 |
| 551.1 | 404.74 | 551.74 | 404.73 | 551.81 | 404.73 | 552.05 | 404.74 | 558.05 | 404.72 |
| 559.06 | 404.71 | 559.73 | 404.71 | 564.32 | 404.29 | 566.02 | 404.15 | 566.82 | 404.12 |
| 569.22 | 404.46 | 569.85 | 404.54 | 570.06 | 404.57 | 570.44 | 404.63 | 570.58 | 404.65 |
| 576.69 | 404.65 | 576.86 | 404.66 | 582.25 | 404.57 | 582.51 | 404.56 | 585.47 | 404.5 |
| 588.15 | 404.53 | 591.12 | 404.74 | 596.38 | 405.04 | 596.86 | 405.05 | 597.96 | 405.09 |
| 598.17 | 405.09 | 598.26 | 405.08 | 598.55 | 405.08 | 600.64 | 405.04 | 600.99 | 405.03 |
| 602.45 | 404.93 | 616.91 | 404.26 | 617.45 | 404.13 | 618.04 | 404.05 | 621.49 | 403.53 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 622.3 | 403.52 | 622.71 | 403.52 | 623.65 | 403.49 | 624.89 | 403.51 | 625.94 | 403.54 |
| 629.76 | 403.56 | 629.82 | 403.57 | 631.86 | 403.6 | 634.87 | 403.83 | 636.51 | 403.94 |
| 636.6 | 403.94 | 657.14 | 404.19 | 662.02 | 404.19 | 662.82 | 404.2 | 664.51 | 404.24 |
| 664.6 | 404.25 | 665.01 | 404.25 | 665.08 | 404.26 | 669.69 | 404.3 | 670.18 | 404.31 |
| 670.66 | 404.31 | 673.41 | 404.33 | 674.1 | 404.34 | 678.95 | 404.36 | 680.07 | 404.4 |
| 682.39 | 404.55 | 685.18 | 404.55 | 686.58 | 404.57 | 689.04 | 404.67 | 695.65 | 404.65 |
| 696.77 | 404.64 | 699.68 | 404.58 | 699.9 | 404.51 | 699.99 | 404.48 | 700.58 | 404.29 |
| 701.21 | 404.3 | 702.6 | 404.29 | 714.25 | 404.29 | 719 | 404.35 | 719.19 | 404.35 |
| 722.95 | 404.4 | 723.02 | 404.41 | 723.88 | 404.41 | 724.33 | 404.42 | 725.39 | 404.43 |
| 727.91 | 404.34 | 729.43 | 404.28 | 739.58 | 404.28 | 742.13 | 404.35 | 751.27 | 404.56 |
| 773.51 | 404.56 | 776.08 | 404.55 | 776.93 | 404.54 | 777.25 | 404.55 | 796.4 | 404.57 |
| 798.75 | 404.44 | 799.37 | 404.41 | 799.53 | 404.4 | 799.69 | 404.4 | 800.3 | 404.37 |
| 800.69 | 404.35 | 800.99 | 404.33 | 813.42 | 404.37 | 817.49 | 404.42 | 836.38 | 405.15 |
| 836.58 | 405.16 | 836.69 | 405.16 | 837.25 | 405.18 | 837.41 | 405.18 | 837.52 | 405.19 |
| 837.62 | 405.19 | 838.92 | 405.32 | 841.56 | 405.54 | 841.84 | 405.54 | 842.91 | 405.55 |
| 843.05 | 405.55 | 845.19 | 405.57 | 862.81 | 405.57 | 864.24 | 405.62 | 866.99 | 405.7 |
| 868.28 | 405.75 | 869.31 | 405.78 | 869.89 | 405.8 | 870.34 | 405.8 | 870.66 | 405.81 |
| 870.71 | 405.81 | 870.84 | 405.82 | 871.23 | 405.82 | 871.49 | 405.83 | 873.17 | 405.81 |
| 875.78 | 405.81 | 876.09 | 405.8 | 876.27 | 405.8 | 881.19 | 405.75 | 895.66 | 405.67 |
| 900.92 | 405.67 | 902.46 | 405.68 | 909.64 | 405.66 | 910.32 | 405.67 | 913.74 | 405.68 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 487.37 | .04 | 838.92 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 487.37 | 838.92 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=198.4543 Elevation=407.2328

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13885.7*

INPUT
Description:
Station Elevation Data num= 377

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 407.99 | 1.83 | 407.96 | 2.43 | 407.97 | 4.86 | 407.97 | 7.56 | 408.02 |
| 24.45 | 408.17 | 26.83 | 408.14 | 30.2 | 408.07 | 31.13 | 408.07 | 34.03 | 408.02 |
| 48.58 | 408.04 | 56.91 | 408.01 | 57.52 | 408 | 58 | 408 | 63.9 | 407.57 |
| 64.3 | 407.53 | 64.72 | 407.5 | 65.54 | 407.47 | 66.06 | 407.44 | 66.21 | 407.43 |
| 66.3 | 407.43 | 66.75 | 407.41 | 70.78 | 407.42 | 72.42 | 407.41 | 73.41 | 407.39 |
| 78.19 | 406.9 | 79.17 | 406.81 | 82.72 | 406.62 | 86.93 | 406.49 | 87.67 | 406.46 |
| 94.83 | 406.21 | 94.93 | 406.21 | 95.16 | 406.2 | 101.53 | 406.19 | 101.92 | 406.18 |
| 105.09 | 406.18 | 106.22 | 406.17 | 113.29 | 406.15 | 113.62 | 406.14 | 119.46 | 406.14 |
| 119.96 | 406.16 | 120.08 | 406.16 | 120.25 | 406.17 | 122.18 | 406.22 | 122.37 | 406.22 |
| 123.35 | 406.25 | 124.66 | 406.25 | 125.7 | 406.26 | 133.39 | 406.27 | 135.93 | 406.25 |
| 136.04 | 406.25 | 136.49 | 406.24 | 139.31 | 406.21 | 139.67 | 406.21 | 145.69 | 406.14 |
| 152.4 | 406.13 | 153.11 | 406.14 | 154.53 | 406.14 | 156.67 | 406.29 | 156.74 | 406.29 |
| 157.44 | 406.31 | 165.88 | 406.65 | 166.28 | 406.66 | 166.53 | 406.68 | 167.63 | 406.71 |
| 170.79 | 406.71 | 176.75 | 406.58 | 176.93 | 406.58 | 177.95 | 406.56 | 178.56 | 406.54 |
| 186.24 | 406.33 | 187.72 | 406.12 | 190.27 | 405.64 | 191.29 | 405.44 | 193.42 | 405.26 |
| 194.26 | 405.15 | 197.08 | 404.83 | 197.47 | 404.79 | 200.79 | 404.56 | 202.01 | 404.41 |
| 202.8 | 404.32 | 202.92 | 404.31 | 204.94 | 404.25 | 206.49 | 404.19 | 206.59 | 404.18 |
| 214.85 | 404.04 | 216.36 | 404.03 | 222.86 | 404.13 | 222.95 | 404.14 | 223.95 | 404.15 |
| 224.2 | 404.15 | 231.53 | 404.1 | 232.38 | 404.1 | 234.4 | 404.07 | 236.22 | 404.07 |
| 250.58 | 404.31 | 258.3 | 404.3 | 259.05 | 404.29 | 263.61 | 404.28 | 263.89 | 404.27 |
| 264.25 | 404.28 | 265.45 | 404.28 | 266.43 | 404.29 | 266.97 | 404.29 | 271.19 | 404.59 |
| 271.41 | 404.61 | 276.94 | 404.65 | 284.13 | 404.63 | 290.69 | 404.43 | 294.87 | 403.97 |
| 295.21 | 403.93 | 295.82 | 403.87 | 302.48 | 403.82 | 303.2 | 403.83 | 303.41 | 403.83 |
| 308.64 | 403.86 | 310.2 | 403.9 | 310.44 | 403.91 | 315.77 | 404.07 | 326.2 | 404.54 |
| 326.48 | 404.56 | 326.86 | 404.58 | 327.54 | 404.6 | 332.45 | 405.08 | 332.59 | 405.09 |
| 335.78 | 405.22 | 335.92 | 405.22 | 336.06 | 405.23 | 337.07 | 405.3 | 337.24 | 405.31 |
| 337.31 | 405.32 | 337.93 | 405.32 | 338.3 | 405.33 | 338.36 | 405.33 | 339.6 | 405.35 |
| 341.89 | 405.38 | 342.47 | 405.38 | 342.53 | 405.39 | 348.63 | 405.39 | 349.15 | 405.38 |
| 350.1 | 405.37 | 350.82 | 405.37 | 351.06 | 405.36 | 351.62 | 405.36 | 351.9 | 405.35 |
| 352.45 | 405.34 | 352.78 | 405.34 | 354.13 | 405.32 | 355.02 | 405.32 | 355.14 | 405.31 |
| 355.5 | 405.31 | 360.59 | 405.26 | 360.95 | 405.26 | 361.17 | 405.25 | 361.99 | 405.25 |
| 362.78 | 405.24 | 366.62 | 405.24 | 367.31 | 405.23 | 369.84 | 405.23 | 371.14 | 405.22 |
| 374.09 | 405.22 | 374.91 | 405.21 | 381.33 | 405.2 | 387.73 | 404.92 | 390.36 | 404.89 |
| 392 | 404.89 | 392.55 | 404.88 | 419.28 | 404.87 | 419.69 | 404.86 | 423.91 | 404.86 |
| 424.03 | 404.85 | 424.44 | 404.85 | 424.85 | 404.84 | 425.41 | 404.84 | 425.95 | 404.83 |
| 426.78 | 404.83 | 434.13 | 404.76 | 434.41 | 404.75 | 436.13 | 404.73 | 436.27 | 404.73 |
| 444.6 | 404.64 | 444.74 | 404.64 | 447.79 | 404.6 | 448.44 | 404.6 | 449.58 | 404.59 |
| 451.93 | 404.55 | 458.43 | 404.11 | 459.77 | 404.01 | 462.17 | 403.86 | 462.57 | 403.86 |
| 464.01 | 403.75 | 466.9 | 403.57 | 468.05 | 403.49 | 468.75 | 403.45 | 468.97 | 403.43 |
| 484.26 | 403.38 | 489.02 | 403.41 | 490.03 | 403.41 | 491.63 | 403.39 | 491.73 | 403.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 495.19 | 403.41 | 497.73 | 403.6 | 498.16 | 403.64 | 498.51 | 403.66 | 499.55 | 403.73 |
| 501.48 | 403.85 | 502.56 | 403.95 | 502.73 | 403.96 | 504.05 | 404.08 | 504.9 | 404.09 |
| 507.06 | 404.07 | 507.56 | 404.09 | 508.49 | 404.11 | 509.08 | 404.1 | 509.14 | 404.1 |
| 509.36 | 404.11 | 514.6 | 404.09 | 514.81 | 404.08 | 514.91 | 404.08 | 515.84 | 404.07 |
| 516.46 | 404.07 | 522.27 | 403.6 | 522.74 | 403.59 | 523.02 | 403.58 | 523.52 | 403.64 |
| 525.23 | 403.83 | 525.46 | 403.85 | 525.81 | 403.89 | 526.01 | 403.91 | 526.36 | 403.96 |
| 526.49 | 403.97 | 527.1 | 403.97 | 527.64 | 403.96 | 528.12 | 403.96 | 529.24 | 403.95 |
| 532.3 | 403.94 | 533.7 | 403.92 | 535.9 | 403.87 | 537.27 | 403.85 | 537.51 | 403.84 |
| 540.25 | 403.78 | 542.73 | 403.79 | 545.48 | 403.95 | 550.33 | 404.11 | 550.78 | 404.12 |
| 551.79 | 404.13 | 552.08 | 404.13 | 554.27 | 404.05 | 554.6 | 404.04 | 555.95 | 403.95 |
| 563.99 | 403.59 | 564.17 | 403.59 | 569.32 | 403.38 | 569.82 | 403.28 | 573.55 | 402.8 |
| 574.29 | 402.79 | 575.54 | 402.76 | 576.93 | 402.78 | 578.11 | 402.81 | 582.38 | 402.84 |
| 582.44 | 402.84 | 584.73 | 402.88 | 588.09 | 403.2 | 589.58 | 403.33 | 589.93 | 403.35 |
| 590.03 | 403.36 | 613.01 | 403.55 | 618.09 | 403.53 | 618.47 | 403.52 | 621.26 | 403.59 |
| 621.37 | 403.59 | 621.82 | 403.6 | 621.89 | 403.6 | 624.49 | 403.62 | 627.06 | 403.65 |
| 627.6 | 403.65 | 628.14 | 403.66 | 631.22 | 403.66 | 631.98 | 403.67 | 637.42 | 403.67 |
| 638.36 | 403.69 | 638.67 | 403.7 | 641.26 | 403.83 | 641.89 | 403.84 | 644.38 | 403.82 |
| 645.96 | 403.86 | 648.7 | 404.01 | 651.36 | 404.01 | 652.2 | 404 | 654.55 | 403.99 |
| 657.35 | 403.95 | 660.61 | 403.86 | 660.86 | 403.76 | 660.95 | 403.72 | 661.61 | 403.44 |
| 676.92 | 403.43 | 682.23 | 403.48 | 682.44 | 403.48 | 686.64 | 403.53 | 687.69 | 403.53 |
| 688.19 | 403.54 | 689.38 | 403.55 | 693.9 | 403.42 | 705.25 | 403.42 | 715.38 | 403.76 |
| 717.21 | 403.81 | 718.33 | 403.85 | 740.19 | 403.86 | 742.63 | 403.84 | 746.06 | 403.82 |
| 747.04 | 403.81 | 747.39 | 403.82 | 747.63 | 403.82 | 752.25 | 403.86 | 759.82 | 403.86 |
| 760.88 | 403.87 | 761.48 | 403.86 | 768.83 | 403.86 | 771.45 | 403.66 | 772.14 | 403.61 |
| 772.2 | 403.61 | 772.33 | 403.6 | 772.51 | 403.6 | 772.73 | 403.58 | 773.19 | 403.55 |
| 773.63 | 403.52 | 773.97 | 403.5 | 774.05 | 403.49 | 774.45 | 403.49 | 774.83 | 403.5 |
| 778.09 | 403.5 | 784.05 | 403.54 | 785.59 | 403.54 | 787.63 | 403.56 | 787.86 | 403.57 |
| 792.43 | 403.62 | 813.56 | 404.32 | 813.62 | 404.33 | 814.18 | 404.33 | 814.54 | 404.34 |
| 814.71 | 404.35 | 814.94 | 404.35 | 816.4 | 404.51 | 819.67 | 404.83 | 820.01 | 404.83 |
| 821.35 | 404.84 | 821.52 | 404.84 | 845.99 | 404.85 | 847.76 | 404.93 | 848.73 | 404.96 |
| 849.54 | 405 | 854.04 | 405.17 | 854.39 | 405.18 | 854.76 | 405.2 | 854.96 | 405.2 |
| 855.05 | 405.21 | 855.32 | 405.21 | 855.71 | 405.22 | 855.77 | 405.22 | 855.94 | 405.23 |
| 856.42 | 405.24 | 856.74 | 405.25 | 856.8 | 405.25 | 858.82 | 405.22 | 861.71 | 405.22 |
| 862.05 | 405.21 | 862.44 | 405.21 | 862.66 | 405.2 | 868.75 | 405.13 | 870.13 | 405.13 |
| 891.55 | 404.98 | 895.09 | 404.99 | 895.61 | 404.98 | 903.14 | 404.93 | 903.34 | 404.93 |
| 903.99 | 404.94 | 909.07 | 404.95 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 449.58 | .04 | 816.4 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 449.58 | 816.4 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=181.5214 Elevation=406.7943

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13814.2*

INPUT
Description:
Station Elevation Data num= 385

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 407.29 | 1.68 | 407.28 | 2.22 | 407.29 | 3.4 | 407.29 | 22.4 | 407.47 |
| 27.23 | 407.41 | 27.66 | 407.4 | 28.51 | 407.4 | 31.17 | 407.36 | 31.94 | 407.37 |
| 44.5 | 407.38 | 53.12 | 407.34 | 56.88 | 407.11 | 58.53 | 407 | 58.89 | 406.98 |
| 59.28 | 406.95 | 60.51 | 406.9 | 60.65 | 406.9 | 60.73 | 406.89 | 61.14 | 406.88 |
| 66.33 | 406.87 | 67.24 | 406.86 | 71.62 | 406.48 | 72.51 | 406.41 | 75.77 | 406.26 |
| 86.86 | 405.94 | 86.95 | 405.94 | 87.17 | 405.93 | 92.59 | 405.92 | 92.8 | 405.91 |
| 95.56 | 405.91 | 96.22 | 405.9 | 103.28 | 405.87 | 103.77 | 405.86 | 104.55 | 405.86 |
| 105.69 | 405.85 | 109.42 | 405.86 | 109.88 | 405.87 | 110.14 | 405.87 | 111.91 | 405.91 |
| 112.09 | 405.92 | 112.98 | 405.94 | 122.18 | 405.95 | 124.51 | 405.93 | 125.04 | 405.93 |
| 127.6 | 405.91 | 127.93 | 405.9 | 128.49 | 405.9 | 133.45 | 405.86 | 137.54 | 405.84 |
| 141.54 | 405.86 | 143.11 | 405.95 | 143.37 | 405.96 | 143.5 | 405.96 | 143.56 | 405.97 |
| 152.3 | 406.25 | 152.53 | 406.26 | 153.54 | 406.29 | 156.44 | 406.29 | 161.89 | 406.11 |
| 162.06 | 406.11 | 163.56 | 406.06 | 170.58 | 405.77 | 171.95 | 405.59 | 173.26 | 405.33 |
| 174.28 | 405.11 | 175.22 | 404.92 | 177.16 | 404.69 | 179.77 | 404.25 | 180.51 | 404.15 |
| 180.87 | 404.09 | 183.91 | 403.8 | 184.35 | 403.72 | 185.76 | 403.49 | 185.87 | 403.48 |
| 187.72 | 403.38 | 189.14 | 403.29 | 189.22 | 403.29 | 196.79 | 403.05 | 198.18 | 403.02 |
| 204.12 | 403.09 | 204.21 | 403.09 | 205.13 | 403.11 | 205.35 | 403.1 | 212.85 | 403.07 |
| 214.69 | 403.05 | 214.87 | 403.05 | 214.98 | 403.06 | 216.37 | 403.08 | 224.18 | 403.29 |
| 224.75 | 403.3 | 225.36 | 403.32 | 228.74 | 403.41 | 229.51 | 403.42 | 230.19 | 403.42 |
| 230.48 | 403.43 | 230.61 | 403.43 | 234.91 | 403.4 | 236.24 | 403.4 | 236.59 | 403.39 |
| 242.34 | 403.37 | 243 | 403.38 | 243.13 | 403.38 | 244.03 | 403.39 | 244.53 | 403.39 |
| 248.39 | 403.64 | 248.6 | 403.65 | 253.66 | 403.7 | 254.19 | 403.7 | 256.62 | 403.72 |
| 260.25 | 403.71 | 266.26 | 403.58 | 268.88 | 403.34 | 270.08 | 403.24 | 270.4 | 403.21 |
| 270.95 | 403.15 | 277.91 | 403.12 | 282.7 | 403.14 | 284.13 | 403.18 | 284.35 | 403.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 289.62 | 403.32 | 298.78 | 403.75 | 299.04 | 403.76 | 299.39 | 403.78 | 300.01 | 403.8 |
| 304.51 | 404.21 | 304.63 | 404.21 | 307.56 | 404.33 | 307.81 | 404.35 | 308.74 | 404.41 |
| 308.9 | 404.42 | 309.18 | 404.42 | 309.53 | 404.43 | 309.92 | 404.43 | 311.05 | 404.46 |
| 313.15 | 404.5 | 313.2 | 404.5 | 313.63 | 404.51 | 314.05 | 404.51 | 314.24 | 404.52 |
| 316.04 | 404.52 | 316.26 | 404.53 | 318.19 | 404.53 | 318.54 | 404.52 | 318.9 | 404.52 |
| 319.33 | 404.51 | 319.8 | 404.51 | 320.67 | 404.5 | 320.89 | 404.5 | 321.02 | 404.49 |
| 321.33 | 404.49 | 321.55 | 404.48 | 321.78 | 404.48 | 322.06 | 404.47 | 322.32 | 404.47 |
| 322.82 | 404.46 | 323.13 | 404.45 | 324.37 | 404.43 | 324.81 | 404.43 | 324.97 | 404.42 |
| 325.45 | 404.42 | 325.62 | 404.41 | 330.29 | 404.35 | 330.61 | 404.34 | 330.81 | 404.34 |
| 331.04 | 404.33 | 331.57 | 404.33 | 332.29 | 404.32 | 332.44 | 404.31 | 340.28 | 404.3 |
| 341.29 | 404.29 | 343.39 | 404.29 | 344.37 | 404.28 | 346.19 | 404.28 | 346.47 | 404.27 |
| 349.17 | 404.27 | 349.28 | 404.26 | 351.74 | 404.18 | 351.98 | 404.18 | 355.14 | 404.05 |
| 357.55 | 404.03 | 358.2 | 404.03 | 359.05 | 404.02 | 363.51 | 404 | 384.04 | 404.13 |
| 386.11 | 404.13 | 386.42 | 404.14 | 388.39 | 404.14 | 388.76 | 404.13 | 389.14 | 404.13 |
| 390.14 | 404.11 | 390.44 | 404.11 | 390.74 | 404.1 | 390.91 | 404.1 | 396.7 | 404.02 |
| 397.64 | 404 | 397.9 | 404 | 399.47 | 403.98 | 399.53 | 403.97 | 399.6 | 403.97 |
| 405.59 | 403.87 | 407.23 | 403.85 | 407.36 | 403.85 | 410.75 | 403.79 | 411.8 | 403.78 |
| 413.95 | 403.74 | 423.35 | 403.15 | 423.49 | 403.15 | 423.68 | 403.14 | 429.59 | 402.57 |
| 442.58 | 402.52 | 448 | 402.55 | 450.49 | 402.54 | 453.66 | 402.56 | 456.39 | 402.85 |
| 456.71 | 402.89 | 456.85 | 402.9 | 459.44 | 403.14 | 459.73 | 403.18 | 461.8 | 403.45 |
| 462.58 | 403.46 | 464.56 | 403.43 | 465.03 | 403.45 | 465.87 | 403.47 | 471.68 | 403.45 |
| 471.77 | 403.44 | 472.62 | 403.43 | 473.19 | 403.43 | 477.09 | 403.15 | 478.53 | 403.06 |
| 478.95 | 403.04 | 479.21 | 403.03 | 479.68 | 403.08 | 481.25 | 403.2 | 481.45 | 403.21 |
| 481.78 | 403.24 | 481.96 | 403.26 | 482.29 | 403.28 | 482.4 | 403.29 | 482.96 | 403.28 |
| 483.46 | 403.28 | 483.9 | 403.27 | 487.47 | 403.23 | 487.73 | 403.23 | 491.63 | 403.15 |
| 492.3 | 403.13 | 492.52 | 403.12 | 492.88 | 403.12 | 493.33 | 403.1 | 495.03 | 403.06 |
| 497.31 | 403.06 | 499.83 | 403.16 | 504.29 | 403.19 | 504.7 | 403.19 | 505.63 | 403.18 |
| 505.82 | 403.17 | 505.89 | 403.17 | 506.13 | 403.16 | 507.43 | 403.09 | 507.91 | 403.07 |
| 508.2 | 403.06 | 509.45 | 402.96 | 516.83 | 402.68 | 517 | 402.67 | 521.72 | 402.51 |
| 522.18 | 402.44 | 522.67 | 402.38 | 525.6 | 402.07 | 526.29 | 402.05 | 526.64 | 402.05 |
| 527.43 | 402.03 | 530.27 | 402.08 | 535 | 402.12 | 535.07 | 402.12 | 537.59 | 402.16 |
| 541.32 | 402.57 | 542.97 | 402.73 | 543.35 | 402.77 | 543.46 | 402.77 | 569.98 | 402.92 |
| 574.5 | 402.87 | 574.93 | 402.86 | 578.01 | 402.93 | 578.13 | 402.94 | 578.62 | 402.95 |
| 578.71 | 402.95 | 584.42 | 402.99 | 585.02 | 403 | 595.89 | 402.98 | 596.93 | 403 |
| 597.27 | 403 | 600.14 | 403.11 | 600.84 | 403.12 | 603.59 | 403.1 | 605.33 | 403.14 |
| 608.37 | 403.34 | 612.23 | 403.34 | 616.56 | 403.3 | 619.6 | 403.21 | 620.4 | 403.18 |
| 621.54 | 403.15 | 621.81 | 403.01 | 621.92 | 402.95 | 622.65 | 402.58 | 638.41 | 402.56 |
| 644.57 | 402.61 | 645.69 | 402.61 | 650.34 | 402.65 | 650.43 | 402.66 | 653.36 | 402.67 |
| 653.43 | 402.66 | 658.36 | 402.56 | 658.94 | 402.57 | 660.92 | 402.57 | 661.48 | 402.56 |
| 670.92 | 402.57 | 674.08 | 402.7 | 675.59 | 402.77 | 685.4 | 403.14 | 694.31 | 403.14 |
| 709.57 | 403.14 | 712.27 | 403.12 | 712.92 | 403.12 | 714.87 | 403.1 | 716.1 | 403.1 |
| 717.15 | 403.09 | 717.54 | 403.09 | 717.81 | 403.1 | 722.92 | 403.14 | 731.29 | 403.15 |
| 732.46 | 403.16 | 733.12 | 403.15 | 741.25 | 403.14 | 744.16 | 402.88 | 744.21 | 402.88 |
| 744.92 | 402.81 | 744.99 | 402.81 | 745.13 | 402.79 | 745.32 | 402.79 | 745.57 | 402.77 |
| 746.07 | 402.74 | 746.94 | 402.67 | 747.03 | 402.66 | 759.79 | 402.73 | 762.05 | 402.76 |
| 762.31 | 402.76 | 763.37 | 402.77 | 767.36 | 402.83 | 790.74 | 403.49 | 790.8 | 403.5 |
| 791.42 | 403.5 | 791.82 | 403.51 | 792.27 | 403.51 | 793.87 | 403.71 | 797.78 | 404.12 |
| 798.19 | 404.12 | 799.78 | 404.13 | 829.17 | 404.14 | 831.28 | 404.24 | 831.34 | 404.24 |
| 838.77 | 404.57 | 839.18 | 404.58 | 839.87 | 404.61 | 840.29 | 404.61 | 840.76 | 404.63 |
| 840.84 | 404.63 | 841.03 | 404.64 | 841.61 | 404.65 | 841.98 | 404.67 | 842.06 | 404.67 |
| 844.47 | 404.63 | 847.29 | 404.63 | 847.91 | 404.62 | 848.32 | 404.62 | 848.79 | 404.61 |
| 849.05 | 404.61 | 856.31 | 404.51 | 856.39 | 404.51 | 857.05 | 404.5 | 857.96 | 404.5 |
| 883.51 | 404.29 | 888.35 | 404.29 | 897.32 | 404.2 | 897.56 | 404.21 | 904.39 | 404.21 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 411.8 | .04 | 793.87 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 411.8 | 793.87 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=164.5886 Elevation=406.3557

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13742.8*

INPUT
Description:
Station Elevation Data num= 386

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 406.59 | 1.52 | 406.6 | 2.02 | 406.61 | 2.44 | 406.61 | 3.09 | 406.62 |
| 4.04 | 406.62 | 20.34 | 406.76 | 22.32 | 406.76 | 24.73 | 406.73 | 25.9 | 406.73 |
| 28.31 | 406.71 | 40.41 | 406.72 | 47.34 | 406.68 | 47.85 | 406.67 | 48.25 | 406.67 |
| 53.16 | 406.44 | 53.84 | 406.4 | 54.96 | 406.37 | 55.08 | 406.36 | 55.16 | 406.36 |
| 55.53 | 406.35 | 56.43 | 406.34 | 56.94 | 406.35 | 57.06 | 406.35 | 57.3 | 406.34 |
| 60.25 | 406.33 | 61.07 | 406.32 | 65.86 | 406.01 | 66.61 | 405.98 | 68.82 | 405.91 |
| 72.32 | 405.83 | 72.93 | 405.82 | 78.89 | 405.67 | 79.25 | 405.67 | 82.02 | 405.65 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 83.94 | 405.65 | 84.1 | 405.64 | 85.05 | 405.64 | 86.08 | 405.63 | 87.43 | 405.63 |
| 88.36 | 405.62 | 91.14 | 405.61 | 91.29 | 405.6 | 93.8 | 405.59 | 94.25 | 405.58 |
| 94.95 | 405.58 | 95.99 | 405.57 | 99.38 | 405.57 | 99.8 | 405.58 | 100.03 | 405.58 |
| 101.64 | 405.61 | 101.8 | 405.61 | 102.61 | 405.63 | 113.57 | 405.62 | 115.89 | 405.6 |
| 121.2 | 405.57 | 124.91 | 405.56 | 128.55 | 405.57 | 129.36 | 405.6 | 129.97 | 405.63 |
| 130.22 | 405.64 | 130.39 | 405.64 | 130.97 | 405.66 | 138 | 405.83 | 138.33 | 405.83 |
| 138.53 | 405.84 | 139.45 | 405.86 | 142.08 | 405.86 | 147.04 | 405.64 | 147.18 | 405.63 |
| 148.28 | 405.59 | 148.55 | 405.57 | 154.93 | 405.21 | 156.17 | 405.06 | 159.14 | 404.4 |
| 160.9 | 404.13 | 163.27 | 403.59 | 163.95 | 403.46 | 164.28 | 403.4 | 167.03 | 403.04 |
| 168.71 | 402.66 | 168.81 | 402.65 | 171.78 | 402.4 | 171.86 | 402.39 | 179.99 | 402.01 |
| 185.39 | 402.05 | 185.47 | 402.05 | 186.3 | 402.06 | 186.51 | 402.06 | 188.8 | 402.04 |
| 192.61 | 402.04 | 193 | 402.05 | 193.32 | 402.05 | 194.99 | 402.03 | 195.16 | 402.04 |
| 195.26 | 402.04 | 196.51 | 402.08 | 201.85 | 402.3 | 207.75 | 402.52 | 208.45 | 402.53 |
| 209.07 | 402.53 | 209.33 | 402.54 | 209.45 | 402.54 | 213.36 | 402.51 | 213.9 | 402.5 |
| 214.56 | 402.5 | 214.88 | 402.49 | 215.76 | 402.49 | 219.3 | 402.46 | 219.83 | 402.46 |
| 220.1 | 402.47 | 220.82 | 402.47 | 221.64 | 402.48 | 222.09 | 402.49 | 225.79 | 402.69 |
| 230.38 | 402.75 | 230.86 | 402.76 | 233.07 | 402.79 | 236.37 | 402.8 | 241.82 | 402.72 |
| 245.3 | 402.5 | 245.59 | 402.48 | 246.09 | 402.44 | 252.4 | 402.41 | 256.76 | 402.43 |
| 258.06 | 402.45 | 258.26 | 402.46 | 262.69 | 402.54 | 263.04 | 402.54 | 271.36 | 402.95 |
| 271.6 | 402.96 | 271.91 | 402.98 | 272.48 | 403.01 | 276.68 | 403.34 | 279.33 | 403.45 |
| 279.45 | 403.46 | 279.57 | 403.46 | 280.4 | 403.52 | 280.55 | 403.52 | 280.6 | 403.53 |
| 280.81 | 403.53 | 281.12 | 403.54 | 281.48 | 403.54 | 282.51 | 403.58 | 284.42 | 403.63 |
| 284.85 | 403.64 | 285.23 | 403.64 | 285.4 | 403.65 | 286.75 | 403.65 | 286.82 | 403.66 |
| 288.99 | 403.66 | 289.31 | 403.65 | 289.63 | 403.65 | 290.03 | 403.64 | 290.45 | 403.64 |
| 291.24 | 403.62 | 291.56 | 403.62 | 291.84 | 403.61 | 292.04 | 403.61 | 292.51 | 403.59 |
| 292.74 | 403.59 | 293.47 | 403.56 | 294.6 | 403.54 | 294.66 | 403.54 | 294.98 | 403.53 |
| 295.34 | 403.53 | 295.44 | 403.52 | 295.74 | 403.52 | 299.98 | 403.43 | 300.27 | 403.43 |
| 300.45 | 403.42 | 300.7 | 403.42 | 301.8 | 403.4 | 301.93 | 403.39 | 307.67 | 403.38 |
| 308.75 | 403.37 | 310.33 | 403.37 | 310.77 | 403.36 | 311.88 | 403.36 | 312.77 | 403.35 |
| 314.01 | 403.35 | 314.42 | 403.34 | 316.12 | 403.34 | 316.76 | 403.33 | 317.23 | 403.33 |
| 319.46 | 403.27 | 319.68 | 403.27 | 322.55 | 403.17 | 330.16 | 403.15 | 348.79 | 403.38 |
| 349.14 | 403.39 | 350.67 | 403.4 | 350.96 | 403.41 | 352.55 | 403.43 | 352.64 | 403.43 |
| 352.75 | 403.42 | 353.09 | 403.41 | 353.43 | 403.41 | 354.34 | 403.39 | 354.61 | 403.38 |
| 355.04 | 403.38 | 361.15 | 403.25 | 361.38 | 403.25 | 362.81 | 403.22 | 362.89 | 403.22 |
| 368.37 | 403.09 | 369.22 | 403.08 | 369.86 | 403.06 | 369.97 | 403.06 | 374.01 | 402.97 |
| 375.97 | 402.93 | 382.52 | 402.54 | 384.53 | 402.44 | 384.66 | 402.43 | 384.86 | 402.43 |
| 386.35 | 402.22 | 388.48 | 401.94 | 388.97 | 401.87 | 390.03 | 401.74 | 390.21 | 401.72 |
| 390.61 | 401.71 | 392.71 | 401.71 | 396.28 | 401.68 | 403 | 401.67 | 405.75 | 401.69 |
| 407.25 | 401.69 | 407.83 | 401.7 | 409.16 | 401.69 | 409.24 | 401.69 | 412.14 | 401.71 |
| 414.27 | 402.01 | 414.62 | 402.07 | 414.91 | 402.11 | 415.04 | 402.12 | 415.78 | 402.22 |
| 416.36 | 402.29 | 417.4 | 402.43 | 417.67 | 402.47 | 418.3 | 402.59 | 418.45 | 402.61 |
| 419.55 | 402.81 | 420.26 | 402.83 | 422.06 | 402.79 | 422.85 | 402.83 | 423.26 | 402.84 |
| 423.99 | 402.84 | 428.37 | 402.81 | 428.63 | 402.81 | 429.41 | 402.79 | 429.92 | 402.79 |
| 434.79 | 402.51 | 435.17 | 402.5 | 435.41 | 402.49 | 437.26 | 402.57 | 437.45 | 402.58 |
| 437.75 | 402.59 | 437.91 | 402.6 | 438.21 | 402.61 | 438.31 | 402.62 | 438.82 | 402.6 |
| 440.61 | 402.56 | 441.24 | 402.56 | 442.93 | 402.52 | 443.17 | 402.52 | 446.18 | 402.44 |
| 446.71 | 402.43 | 447.33 | 402.41 | 447.53 | 402.41 | 449.82 | 402.34 | 451.89 | 402.32 |
| 454.19 | 402.37 | 458.62 | 402.26 | 459.47 | 402.22 | 459.64 | 402.21 | 459.71 | 402.21 |
| 459.93 | 402.19 | 461.11 | 402.12 | 461.54 | 402.09 | 461.81 | 402.07 | 462.94 | 401.97 |
| 469.67 | 401.76 | 469.82 | 401.76 | 474.12 | 401.64 | 474.54 | 401.59 | 474.99 | 401.55 |
| 477.66 | 401.33 | 478.28 | 401.32 | 478.6 | 401.32 | 479.32 | 401.3 | 487.62 | 401.39 |
| 487.7 | 401.4 | 490.46 | 401.44 | 494.55 | 401.93 | 496.78 | 402.18 | 525.95 | 402.28 |
| 531.38 | 402.19 | 534.76 | 402.28 | 534.89 | 402.29 | 535.43 | 402.3 | 535.53 | 402.3 |
| 541.79 | 402.34 | 555.5 | 402.3 | 559.01 | 402.39 | 559.78 | 402.4 | 562.8 | 402.37 |
| 564.7 | 402.43 | 568.03 | 402.67 | 572.27 | 402.67 | 577.01 | 402.62 | 581.22 | 402.48 |
| 582.47 | 402.43 | 582.77 | 402.26 | 583.69 | 401.72 | 602.24 | 401.7 | 607.71 | 401.74 |
| 608.94 | 401.74 | 614.03 | 401.78 | 617.42 | 401.78 | 620.76 | 401.74 | 622.83 | 401.7 |
| 623.46 | 401.71 | 636.6 | 401.71 | 652.46 | 402.43 | 678.95 | 402.43 | 681.91 | 402.4 |
| 682.62 | 402.4 | 686.08 | 402.37 | 687.26 | 402.36 | 687.69 | 402.36 | 687.98 | 402.37 |
| 689.19 | 402.39 | 693.58 | 402.43 | 701.17 | 402.43 | 713.68 | 402.43 | 716.86 | 402.1 |
| 716.92 | 402.1 | 717.7 | 402.02 | 717.77 | 402.01 | 717.92 | 401.99 | 718.14 | 401.99 |
| 718.41 | 401.97 | 718.96 | 401.92 | 719.5 | 401.87 | 719.91 | 401.84 | 720.01 | 401.82 |
| 734 | 401.91 | 736.47 | 401.95 | 736.76 | 401.95 | 767.92 | 402.66 | 767.98 | 402.67 |
| 769.46 | 402.67 | 769.59 | 402.68 | 771.35 | 402.91 | 775.89 | 403.41 | 776.09 | 403.42 |
| 807.51 | 403.42 | 812.35 | 403.43 | 814.8 | 403.55 | 814.87 | 403.55 | 823.49 | 403.96 |
| 823.55 | 403.96 | 824.49 | 404 | 824.77 | 404.01 | 824.89 | 404.01 | 825.27 | 404.02 |
| 825.82 | 404.04 | 825.9 | 404.04 | 826.13 | 404.05 | 827.23 | 404.08 | 827.33 | 404.08 |
| 830.12 | 404.04 | 830.2 | 404.03 | 834.12 | 404.03 | 835.13 | 404.01 | 835.44 | 404.01 |
| 843.87 | 403.89 | 843.97 | 403.88 | 845.78 | 403.88 | 860.17 | 403.74 | 862.48 | 403.7 |
| 876.35 | 403.6 | 876.68 | 403.6 | 877.73 | 403.59 | 880.37 | 403.6 | 891.51 | 403.48 |
| 899.72 | 403.48 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 374.01 | .04 | 771.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 374.01 | 771.35 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=147.6557 Elevation=405.9171

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align  RS: 13671.4*

INPUT
Description:
Station Elevation Data  num=  389

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 405.89 | 1.37 | 405.92 | 1.82 | 405.94 | 2.78 | 405.94 | 18.29 | 406.06 |
| 36.33 | 406.07 | 38.14 | 406.04 | 42.56 | 406.01 | 43.37 | 406.01 | 47.4 | 405.88 |
| 47.79 | 405.87 | 48.08 | 405.87 | 48.4 | 405.85 | 49.02 | 405.84 | 49.4 | 405.83 |
| 49.58 | 405.83 | 49.92 | 405.82 | 50.73 | 405.81 | 54.9 | 405.79 | 55.88 | 405.74 |
| 59.2 | 405.61 | 59.88 | 405.6 | 60.75 | 405.57 | 70.92 | 405.4 | 71.24 | 405.4 |
| 73.73 | 405.38 | 74.83 | 405.38 | 75.46 | 405.37 | 76.46 | 405.37 | 77.38 | 405.36 |
| 78.02 | 405.36 | 78.56 | 405.35 | 79.59 | 405.35 | 81.94 | 405.33 | 82.16 | 405.33 |
| 84 | 405.31 | 84.32 | 405.31 | 84.73 | 405.3 | 85.24 | 405.3 | 85.36 | 405.29 |
| 86.3 | 405.29 | 86.4 | 405.28 | 91.37 | 405.3 | 91.52 | 405.31 | 103.28 | 405.31 |
| 104.18 | 405.3 | 114.5 | 405.28 | 116.29 | 405.3 | 116.84 | 405.32 | 117.21 | 405.32 |
| 124.05 | 405.41 | 124.35 | 405.42 | 124.54 | 405.42 | 125.36 | 405.43 | 127.73 | 405.43 |
| 130.22 | 405.27 | 132.18 | 405.17 | 132.31 | 405.16 | 133.08 | 405.12 | 133.3 | 405.1 |
| 133.54 | 405.09 | 139.28 | 404.65 | 140.39 | 404.53 | 141.46 | 404.27 | 142.29 | 404.06 |
| 143.06 | 403.88 | 144.65 | 403.56 | 145.27 | 403.38 | 146.78 | 402.93 | 147.38 | 402.77 |
| 147.68 | 402.7 | 150.16 | 402.28 | 150.52 | 402.17 | 151.67 | 401.83 | 151.75 | 401.82 |
| 154.42 | 401.5 | 154.49 | 401.5 | 160.68 | 401.08 | 161.81 | 401.01 | 166.73 | 401 |
| 167.48 | 401.01 | 173.15 | 401.01 | 173.5 | 401.02 | 175.44 | 401.02 | 175.53 | 401.03 |
| 183.04 | 401.43 | 183.5 | 401.46 | 184 | 401.48 | 186.76 | 401.62 | 187.39 | 401.64 |
| 187.94 | 401.65 | 188.18 | 401.66 | 188.29 | 401.65 | 191.8 | 401.61 | 192.29 | 401.6 |
| 192.88 | 401.6 | 193.17 | 401.59 | 193.73 | 401.59 | 193.96 | 401.58 | 197.14 | 401.55 |
| 197.35 | 401.55 | 197.62 | 401.56 | 198.4 | 401.56 | 198.51 | 401.57 | 199.25 | 401.58 |
| 199.65 | 401.59 | 202.81 | 401.72 | 202.97 | 401.72 | 207.11 | 401.81 | 207.54 | 401.81 |
| 209.52 | 401.86 | 212.16 | 401.88 | 214.64 | 401.89 | 217.39 | 401.87 | 220.77 | 401.75 |
| 221.23 | 401.73 | 230.82 | 401.71 | 231.98 | 401.73 | 232.16 | 401.73 | 236.14 | 401.77 |
| 236.47 | 401.77 | 243.94 | 402.16 | 244.16 | 402.17 | 244.44 | 402.18 | 244.95 | 402.21 |
| 248.62 | 402.46 | 248.72 | 402.46 | 251.11 | 402.57 | 251.22 | 402.58 | 251.35 | 402.58 |
| 252.07 | 402.62 | 252.2 | 402.63 | 252.39 | 402.63 | 252.44 | 402.64 | 252.72 | 402.64 |
| 252.99 | 402.65 | 253.97 | 402.69 | 255.68 | 402.75 | 256.07 | 402.76 | 256.16 | 402.77 |
| 256.41 | 402.77 | 256.57 | 402.78 | 256.7 | 402.78 | 257.69 | 402.79 | 259.79 | 402.79 |
| 260.08 | 402.78 | 260.37 | 402.78 | 261.11 | 402.76 | 261.82 | 402.75 | 262 | 402.75 |
| 262.1 | 402.74 | 262.36 | 402.73 | 262.54 | 402.73 | 262.72 | 402.72 | 263.16 | 402.7 |
| 263.58 | 402.69 | 263.82 | 402.68 | 264.84 | 402.65 | 264.89 | 402.65 | 265.18 | 402.64 |
| 265.34 | 402.64 | 265.5 | 402.63 | 265.72 | 402.63 | 265.86 | 402.62 | 269.67 | 402.52 |
| 269.93 | 402.51 | 270.1 | 402.51 | 270.28 | 402.5 | 270.71 | 402.49 | 271.3 | 402.47 |
| 276.47 | 402.46 | 276.57 | 402.45 | 277.83 | 402.45 | 278.65 | 402.44 | 279.37 | 402.44 |
| 279.54 | 402.43 | 280.37 | 402.43 | 281.16 | 402.42 | 282.29 | 402.42 | 282.65 | 402.41 |
| 282.88 | 402.41 | 283.94 | 402.4 | 285.18 | 402.4 | 287.18 | 402.36 | 287.38 | 402.36 |
| 289.96 | 402.3 | 291.93 | 402.29 | 292.46 | 402.3 | 293.15 | 402.29 | 295.15 | 402.3 |
| 296.8 | 402.29 | 313.55 | 402.64 | 313.86 | 402.65 | 315.24 | 402.68 | 315.5 | 402.68 |
| 316.93 | 402.71 | 317.11 | 402.71 | 317.72 | 402.69 | 318.54 | 402.67 | 319.03 | 402.65 |
| 319.17 | 402.65 | 324.66 | 402.5 | 324.87 | 402.5 | 326.15 | 402.46 | 326.23 | 402.46 |
| 332.49 | 402.27 | 332.59 | 402.27 | 334.11 | 402.23 | 334.87 | 402.2 | 336.22 | 402.17 |
| 336.63 | 402.15 | 337.17 | 402.14 | 337.99 | 402.11 | 345.71 | 401.72 | 345.98 | 401.72 |
| 346.58 | 401.6 | 347.1 | 401.51 | 347.35 | 401.46 | 349.28 | 401.12 | 349.71 | 401.05 |
| 350.15 | 400.97 | 350.67 | 400.89 | 350.84 | 400.86 | 361.51 | 400.81 | 362.37 | 400.82 |
| 365.96 | 400.84 | 370.61 | 400.85 | 372.85 | 401.28 | 373.23 | 401.35 | 373.9 | 401.46 |
| 375.36 | 401.71 | 376.17 | 401.91 | 376.3 | 401.94 | 377.3 | 402.18 | 377.94 | 402.19 |
| 379.57 | 402.15 | 379.95 | 402.18 | 380.27 | 402.19 | 380.64 | 402.21 | 381.09 | 402.2 |
| 381.14 | 402.2 | 381.31 | 402.21 | 385.26 | 402.17 | 385.49 | 402.17 | 386.19 | 402.15 |
| 386.66 | 402.15 | 389.86 | 402.01 | 391.04 | 401.97 | 391.39 | 401.95 | 391.99 | 401.95 |
| 393.28 | 401.94 | 394.23 | 401.94 | 395.09 | 401.9 | 396.29 | 401.87 | 396.87 | 401.86 |
| 398.39 | 401.81 | 398.6 | 401.81 | 401.32 | 401.72 | 401.8 | 401.71 | 402.36 | 401.69 |
| 402.54 | 401.69 | 405.35 | 401.61 | 406.47 | 401.59 | 408.54 | 401.58 | 412.21 | 401.35 |
| 412.55 | 401.32 | 413.31 | 401.27 | 413.46 | 401.26 | 413.52 | 401.25 | 413.72 | 401.23 |
| 414.79 | 401.14 | 415.18 | 401.11 | 415.42 | 401.09 | 416.44 | 400.99 | 422.5 | 400.85 |
| 422.65 | 400.84 | 426.53 | 400.77 | 426.9 | 400.74 | 429.72 | 400.6 | 430.28 | 400.59 |
| 430.56 | 400.59 | 431.22 | 400.58 | 440.24 | 400.67 | 440.32 | 400.67 | 443.33 | 400.72 |
| 447.77 | 401.3 | 449.74 | 401.54 | 450.2 | 401.59 | 465.21 | 401.64 | 467.86 | 401.63 |
| 481.93 | 401.64 | 487.84 | 401.53 | 489.02 | 401.55 | 491.51 | 401.62 | 491.65 | 401.63 |
| 492.24 | 401.65 | 501.86 | 401.68 | 505.65 | 401.67 | 507.8 | 401.64 | 514.46 | 401.61 |
| 518.72 | 401.68 | 522 | 401.65 | 524.08 | 401.71 | 527.7 | 402.01 | 532.3 | 402 |
| 537.46 | 401.94 | 539.11 | 401.89 | 543.4 | 401.72 | 543.73 | 401.51 | 543.85 | 401.42 |
| 544.72 | 400.86 | 564.9 | 400.84 | 577.73 | 400.9 | 577.84 | 400.91 | 579.1 | 400.9 |
| 581.41 | 400.9 | 585.05 | 400.87 | 586.06 | 400.85 | 587.29 | 400.84 | 587.35 | 400.84 |
| 587.98 | 400.85 | 602.27 | 400.86 | 607.83 | 401.16 | 619.52 | 401.71 | 648.34 | 401.71 |
| 651.56 | 401.68 | 652.17 | 401.68 | 652.33 | 401.67 | 656.08 | 401.65 | 657.37 | 401.63 |
| 657.84 | 401.64 | 658.16 | 401.65 | 664.25 | 401.71 | 674.22 | 401.72 | 675.62 | 401.73 |
| 676.42 | 401.72 | 686.1 | 401.71 | 689.57 | 401.32 | 690.48 | 401.22 | 690.55 | 401.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 690.72 | 401.19 | 690.95 | 401.19 | 691.85 | 401.1 | 692.43 | 401.05 | 692.88 | 401 |
| 692.99 | 400.99 | 698.32 | 401 | 710.9 | 401.14 | 711.21 | 401.15 | 745.09 | 401.83 |
| 745.17 | 401.84 | 745.55 | 401.84 | 745.91 | 401.83 | 746.38 | 401.84 | 746.92 | 401.84 |
| 748.83 | 402.1 | 754 | 402.71 | 795.53 | 402.71 | 798.32 | 402.86 | 798.4 | 402.86 |
| 808.22 | 403.35 | 808.28 | 403.36 | 808.77 | 403.37 | 809.36 | 403.4 | 809.68 | 403.41 |
| 809.82 | 403.42 | 810.24 | 403.42 | 810.87 | 403.45 | 810.97 | 403.45 | 811.22 | 403.46 |
| 811.98 | 403.48 | 812.48 | 403.5 | 812.59 | 403.5 | 815.77 | 403.44 | 819.5 | 403.44 |
| 820.32 | 403.43 | 820.87 | 403.43 | 821.48 | 403.42 | 821.83 | 403.41 | 831.44 | 403.26 |
| 831.55 | 403.26 | 832.42 | 403.25 | 833.61 | 403.25 | 868.43 | 402.91 | 868.81 | 402.91 |
| 870 | 402.9 | 873.82 | 402.9 | 885.69 | 402.75 | 895.05 | 402.74 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 336.22 | .04 | 748.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 336.22 | 748.83 | 66.38 | 71.43 | 76.65 | .1 | .3 |

Left Levee Station=130.7229 Elevation=405.4786

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13600

INPUT
Description:
Station Elevation Data num= 323

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 405.19 | 1.669983 | 405.261.910034 | | 405.2618.73999 | | 405.3832.16998 | | 405.41 |
| 33.84998 | 405.3838.41003 | | 405.3442.07001 | | 405.3142.67999 | | 405.3145.03003 | | 405.28 |
| 45.42999 | 405.2851.90002 | | 405.2253.15002 | | 405.2153.91998 | | 405.2 | 61.31 | 405.15 |
| 69.76001 | 405.0872.84003 | | 405.0572.92999 | | 405.05 | 76.69 | 40577.83002 | | 405 |
| 79.63 | 40579.71002 | | 40581.09998 | | 40581.22998 | | 405 | 82.75 | 405 |
| 83.44 | 40586.66998 | | 404.9990.22998 | | 40590.29999 | | 40590.59998 | | 405 |
| 90.62 | 40591.66998 | | 40592.47003 | | 40592.71002 | | 405 | 93.12 | 405 |
| 101.16 | 405 | 103.22 | 405 | 103.71 | 405 | 104.04 | 405 | 107.34 | 405.01 |
| 111.58 | 405 | 112.64 | 405 | 113.37 | 405 | 115.58 | 404.82 | 118.12 | 404.64 |
| 124.61 | 404 | 126.3 | 403.54 | 128.39 | 403 | 130.28 | 402.27 | 131.08 | 402 |
| 133.28 | 401.52 | 134.62 | 401 | 137.13 | 400.6 | 143.62 | 400 | 147.93 | 399.96 |
| 147.99 | 399.96 | 148.82 | 399.96 | 150.65 | 399.96 | 151.48 | 399.96 | 153.69 | 399.98 |
| 154 | 399.99 | 155.59 | 400 | 155.72 | 400.01 | 155.8 | 400.02 | 161.06 | 400.41 |
| 165.77 | 400.73 | 166.33 | 400.75 | 166.82 | 400.76 | 167.03 | 400.77 | 171.46 | 400.69 |
| 175.17 | 400.64 | 175.41 | 400.65 | 176.2 | 400.66 | 184.21 | 400.87 | 185.97 | 400.93 |
| 190.52 | 401 | 194.86 | 401.02 | 195.96 | 401.02 | 201.26 | 401 | 201.4 | 401 |
| 205.91 | 401 | 206.07 | 401 | 208.06 | 401 | 209.89 | 401 | 220.77 | 401.59 |
| 223.76 | 401.73 | 224.6 | 401.76 | 225.45 | 401.81 | 226.98 | 401.88 | 227.29 | 401.89 |
| 227.37 | 401.9 | 227.59 | 401.9 | 227.73 | 401.91 | 227.79 | 401.91 | 229.27 | 401.92 |
| 230.59 | 401.92 | 230.85 | 401.91 | 231.42 | 401.9 | 231.76 | 401.89 | 232.39 | 401.87 |
| 232.55 | 401.87 | 233.4 | 401.83 | 234.17 | 401.79 | 240.92 | 401.55 | 243.34 | 401.55 |
| 252.24 | 401.47 | 259.12 | 401.42 | 259.59 | 401.43 | 260.57 | 401.43 | 261.98 | 401.44 |
| 263.44 | 401.44 | 276.69 | 401.85 | 281.35 | 402 | 281.38 | 402 | 281.47 | 401.99 |
| 286.85 | 401.8 | 298.43 | 401.36 | 307.16 | 401 | 308.13 | 400.76 | 310.46 | 400.22 |
| 311.46 | 400 | 316.34 | 399.97 | 320.01 | 399.96 | 321.74 | 399.96 | 325.16 | 399.98 |
| 329.09 | 400 | 331.32 | 400.55 | 333.32 | 401 | 335.05 | 401.54 | 335.62 | 401.56 |
| 337.07 | 401.51 | 337.41 | 401.54 | 337.7 | 401.56 | 338.03 | 401.58 | 338.47 | 401.57 |
| 338.62 | 401.58 | 342.28 | 401.53 | 347.3 | 401.42 | 347.61 | 401.41 | 348.14 | 401.39 |
| 349.29 | 401.31 | 349.44 | 401.3 | 349.68 | 401.29 | 349.81 | 401.28 | 350.05 | 401.27 |
| 351.23 | 401.2 | 351.98 | 401.17 | 352.49 | 401.16 | 356.46 | 401 | 356.89 | 400.99 |
| 362.9 | 400.79 | 369.94 | 400 | 375.47 | 399.93 | 383.11 | 399.85 | 390.27 | 399.92 |
| 392.95 | 399.95 | 396.2 | 400 | 401 | 400.67 | 403.12 | 400.94 | 403.62 | 401 |
| 403.76 | 401 | 413.22 | 401.02 | 415.68 | 401.02 | 419.84 | 401.03 | 422.7 | 401.02 |
| 424.63 | 401.02 | 437.91 | 401 | 443.74 | 400.88 | 444.29 | 400.86 | 445.57 | 400.89 |
| 448.26 | 400.97 | 448.41 | 400.98 | 449.05 | 401 | 449.16 | 401 | 452.86 | 401.01 |
| 454.59 | 401.02 | 456.52 | 401.03 | 459.44 | 401.02 | 462.45 | 401 | 463.54 | 401 |
| 465.86 | 400.97 | 472.63 | 400.91 | 477.66 | 400.96 | 481.21 | 400.92 | 483.45 | 401 |
| 487.36 | 401.34 | 492.34 | 401.33 | 497.91 | 401.26 | 499.69 | 401.2 | 501.83 | 401.11 |
| 504.33 | 401 | 504.82 | 400.66 | 505.76 | 400 | 509.54 | 399.99 | 514.81 | 399.98 |
| 516.1 | 399.98 | 520.92 | 399.97 | 523.13 | 399.97 | 531.41 | 399.99 | 533.99 | 400 |
| 535.13 | 400 | 535.44 | 400 | 541.42 | 400.03 | 541.54 | 400.03 | 542.91 | 400.02 |
| 543.63 | 400.02 | 545.4 | 400.02 | 549.33 | 400 | 550.43 | 399.99 | 551.76 | 399.98 |
| 552.5 | 399.99 | 555.06 | 399.99 | 555.78 | 399.99 | 559.25 | 399.99 | 559.93 | 399.99 |
| 560.83 | 399.99 | 561.27 | 399.99 | 561.49 | 399.99 | 562.12 | 399.99 | 564.12 | 399.99 |
| 564.36 | 399.99 | 564.68 | 399.99 | 567.87 | 400 | 567.94 | 400 | 573.95 | 400.35 |
| 576.08 | 400.46 | 582.37 | 400.78 | 586.58 | 401 | 599.76 | 401.01 | 601.25 | 401.01 |
| 606.96 | 401.01 | 610.14 | 401.01 | 617.72 | 401 | 621.2 | 400.96 | 626.13 | 400.92 |
| 627.48 | 400.9 | 627.99 | 400.91 | 628.33 | 400.92 | 629.75 | 400.94 | 634.91 | 401 |
| 635.08 | 401 | 635.15 | 401 | 635.56 | 401 | 636.12 | 401 | 645.69 | 401.01 |
| 647.2 | 401.02 | 648.06 | 401.01 | 651.41 | 401.01 | 654.34 | 401.01 | 658.53 | 401 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 663.52 | 400.39 | 663.77 | 400.39 | 665.85 | 400.17 | 665.97 | 400.15 | 671.73 | 400.17 |
| 682.41 | 400.28 | 703.91 | 400.67 | 711.6 | 400.81 | 722.27 | 401 | 722.35 | 401.01 |
| 722.58 | 401.01 | 722.76 | 401.01 | 723.15 | 401 | 723.66 | 401 | 723.91 | 401 |
| 724.09 | 401 | 724.24 | 401 | 726.31 | 401.3 | 732.11 | 402 | 732.37 | 402 |
| 732.71 | 402 | 735.38 | 402 | 738.41 | 402 | 743.59 | 402 | 746.76 | 402 |
| 749.08 | 402 | 756.08 | 402 | 764.78 | 402 | 770.17 | 401.99 | 771.6 | 401.99 |
| 774.81 | 402 | 778.65 | 402 | 778.71 | 402 | 779.91 | 402.07 | 781.93 | 402.17 |
| 793.02 | 402.75 | 793.57 | 402.77 | 794.23 | 402.8 | 794.74 | 402.82 | 795.22 | 402.83 |
| 795.92 | 402.86 | 796.03 | 402.86 | 796.32 | 402.87 | 797.17 | 402.9 | 797.73 | 402.92 |
| 797.85 | 402.92 | 801.52 | 402.85 | 803.58 | 402.85 | 805.61 | 402.85 | 806.53 | 402.84 |
| 807.14 | 402.83 | 807.83 | 402.82 | 819 | 402.64 | 820.1 | 402.63 | 821.44 | 402.63 |
| 828.65 | 402.55 | 839.83 | 402.43 | 842.78 | 402.38 | 853.07 | 402.28 | 859.37 | 402.23 |
| 860.51 | 402.22 | 860.85 | 402.22 | 860.93 | 402.22 | 862.27 | 402.21 | 865.64 | 402.21 |
| 866.56 | 402.2 | 879.88 | 402.02 | 880.24 | 402.02 | 881.4 | 402.02 | 882.88 | 402.02 |
| 883.17 | 402.02 | 884.06 | 402.02 | 890.38 | 402.01 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 298.43 | .04 | 726.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 298.43 | 726.31 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Left Levee Station= 113.79 Elevation= 405.04
Right Levee Station= 735.51 Elevation= 402.06

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13528.5*

INPUT
Description:
Station Elevation Data num= 307

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 404.25 | 1.75 | 404.31 | 2.82 | 404.31 | 19.6 | 404.43 | 26.19 | 404.44 |
| 27.02 | 404.45 | 33.64 | 404.46 | 35.4 | 404.44 | 46.85 | 404.39 | 47.09 | 404.38 |
| 55.58 | 404.33 | 56.1 | 404.32 | 58.46 | 404.31 | 58.89 | 404.3 | 76.17 | 404.19 |
| 76.27 | 404.19 | 77.36 | 404.17 | 77.71 | 404.17 | 80.2 | 404.14 | 118.56 | 404.15 |
| 120.68 | 404 | 120.75 | 404 | 120.87 | 403.99 | 121.33 | 403.96 | 122 | 403.93 |
| 122.31 | 403.91 | 123.52 | 403.84 | 130.31 | 403.29 | 132.08 | 402.89 | 133.86 | 402.51 |
| 134.26 | 402.43 | 134.5 | 402.35 | 134.71 | 402.29 | 134.78 | 402.26 | 134.88 | 402.23 |
| 136.24 | 401.8 | 136.91 | 401.62 | 137.08 | 401.57 | 139.2 | 401.19 | 139.38 | 401.16 |
| 140.78 | 400.71 | 141.13 | 400.67 | 143.4 | 400.37 | 150.19 | 399.86 | 154.7 | 399.82 |
| 158.41 | 399.82 | 160.44 | 399.84 | 160.72 | 399.84 | 161.04 | 399.85 | 161.34 | 399.85 |
| 162.71 | 399.86 | 162.84 | 399.87 | 162.93 | 399.87 | 163.71 | 399.92 | 163.99 | 399.94 |
| 168.01 | 400.16 | 173.35 | 400.43 | 173.94 | 400.44 | 174 | 400.44 | 174.45 | 400.45 |
| 174.67 | 400.46 | 183.18 | 400.3 | 183.43 | 400.3 | 187.17 | 400.35 | 187.65 | 400.36 |
| 188.52 | 400.37 | 188.66 | 400.38 | 188.73 | 400.38 | 189.75 | 400.4 | 190.72 | 400.43 |
| 192.33 | 400.46 | 194.48 | 400.52 | 203.77 | 400.62 | 209.98 | 400.61 | 210.47 | 400.6 |
| 218.25 | 400.61 | 218.6 | 400.62 | 219.49 | 400.62 | 221.62 | 400.72 | 221.87 | 400.73 |
| 230.87 | 401.14 | 233.65 | 401.24 | 234 | 401.26 | 234.87 | 401.28 | 237.36 | 401.38 |
| 237.69 | 401.39 | 238 | 401.39 | 238.15 | 401.4 | 238.21 | 401.4 | 241.14 | 401.41 |
| 241.41 | 401.4 | 242.01 | 401.39 | 243.02 | 401.36 | 243.19 | 401.36 | 244.88 | 401.29 |
| 248.6 | 401.17 | 248.78 | 401.17 | 248.91 | 401.16 | 249.73 | 401.14 | 250.38 | 401.11 |
| 251.94 | 401.07 | 262.32 | 400.99 | 262.66 | 400.98 | 263.66 | 400.98 | 263.78 | 400.97 |
| 268.31 | 400.95 | 269.22 | 400.94 | 269.72 | 400.94 | 270.48 | 400.93 | 270.97 | 400.93 |
| 271.46 | 400.94 | 275.49 | 400.95 | 279.31 | 401.05 | 289.35 | 401.2 | 289.64 | 401.21 |
| 292.57 | 401.26 | 292.86 | 401.26 | 294.13 | 401.28 | 294.22 | 401.29 | 294.35 | 401.28 |
| 299.52 | 401.09 | 312.08 | 400.59 | 320.7 | 400.2 | 321.66 | 399.98 | 323.96 | 399.5 |
| 324.94 | 399.3 | 325.17 | 399.3 | 330.46 | 399.24 | 342.35 | 399.25 | 344.88 | 399.79 |
| 346.52 | 400.1 | 348.23 | 400.56 | 348.79 | 400.58 | 350.22 | 400.53 | 350.56 | 400.56 |
| 350.85 | 400.57 | 351.17 | 400.59 | 351.61 | 400.58 | 351.75 | 400.59 | 360.32 | 400.43 |
| 360.63 | 400.43 | 361.15 | 400.41 | 362.29 | 400.34 | 362.43 | 400.33 | 362.67 | 400.32 |
| 362.8 | 400.31 | 363.04 | 400.3 | 364.2 | 400.24 | 364.94 | 400.21 | 365.44 | 400.2 |
| 369.36 | 400.06 | 369.79 | 400.05 | 375.72 | 399.86 | 382.67 | 399.17 | 394.08 | 399.03 |
| 394.4 | 399.03 | 394.68 | 399.02 | 394.78 | 399.02 | 395.67 | 399.01 | 395.75 | 399.01 |
| 405.27 | 399.13 | 405.36 | 399.14 | 405.51 | 399.14 | 407.35 | 399.18 | 407.67 | 399.18 |
| 408.41 | 399.19 | 413.06 | 399.79 | 415.11 | 400.03 | 415.59 | 400.08 | 415.73 | 400.08 |
| 448.77 | 400.07 | 454.41 | 399.98 | 454.94 | 399.96 | 457.92 | 400.03 | 458.78 | 400.06 |
| 458.92 | 400.07 | 459.54 | 400.09 | 464.9 | 400.11 | 466.77 | 400.13 | 472.51 | 400.11 |
| 473.56 | 400.12 | 477.71 | 400.08 | 482.36 | 400.09 | 487.22 | 400.18 | 490.66 | 400.18 |
| 492.82 | 400.27 | 496.61 | 400.58 | 497.19 | 400.58 | 497.9 | 400.57 | 501.42 | 400.55 |
| 506.39 | 400.46 | 506.81 | 400.45 | 508.53 | 400.39 | 513.02 | 400.18 | 513.5 | 399.89 |
| 514.41 | 399.32 | 518.06 | 399.28 | 528.27 | 399.26 | 529.07 | 399.25 | 537.59 | 399.27 |
| 542.82 | 399.36 | 543.12 | 399.36 | 547.43 | 399.45 | 548.13 | 399.46 | 556.56 | 399.44 |
| 556.68 | 399.43 | 558.91 | 399.42 | 559.62 | 399.43 | 568.93 | 399.43 | 570.42 | 399.44 |
| 574.56 | 399.44 | 580.38 | 399.74 | 592.6 | 400.29 | 607.12 | 400.28 | 622.72 | 400.28 |
| 625.58 | 400.24 | 625.98 | 400.23 | 626.09 | 400.23 | 630.86 | 400.19 | 632.16 | 400.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 632.66 | 400.18 | 632.99 | 400.19 | 639.35 | 400.25 | 639.98 | 400.25 | 640.52 | 400.24 |
| 649.78 | 400.24 | 651.24 | 400.25 | 652.07 | 400.24 | 662.2 | 400.25 | 667.03 | 399.74 |
| 667.27 | 399.74 | 669.28 | 399.56 | 669.4 | 399.54 | 674.97 | 399.56 | 675.59 | 399.57 |
| 685.3 | 399.56 | 689.48 | 399.59 | 692.32 | 399.64 | 692.73 | 399.65 | 713.07 | 399.97 |
| 713.54 | 399.98 | 715.18 | 400 | 715.88 | 400.02 | 716.19 | 400.02 | 716.49 | 400.03 |
| 716.82 | 400.03 | 723.87 | 400.28 | 723.94 | 400.29 | 725.77 | 400.29 | 726.05 | 400.32 |
| 727.78 | 400.54 | 728.4 | 400.61 | 729.72 | 400.74 | 730.06 | 400.78 | 730.42 | 400.81 |
| 733.65 | 401.14 | 766.24 | 401.14 | 772.73 | 400.99 | 779.17 | 400.98 | 780.8 | 400.99 |
| 780.86 | 400.99 | 781.74 | 401.03 | 782.08 | 401.05 | 784.12 | 401.14 | 784.42 | 401.16 |
| 784.99 | 401.18 | 785.11 | 401.19 | 785.26 | 401.2 | 786.99 | 401.27 | 787.09 | 401.28 |
| 788.42 | 401.33 | 788.6 | 401.34 | 791.38 | 401.45 | 791.71 | 401.47 | 793.9 | 401.58 |
| 796.58 | 401.69 | 797.59 | 401.71 | 798.3 | 401.74 | 798.41 | 401.74 | 798.7 | 401.75 |
| 799.56 | 401.77 | 800.13 | 401.79 | 800.25 | 401.79 | 803.97 | 401.73 | 809.04 | 401.73 |
| 809.66 | 401.72 | 809.91 | 401.71 | 810.36 | 401.71 | 810.75 | 401.7 | 821.68 | 401.58 |
| 825.78 | 401.57 | 826.18 | 401.56 | 831.45 | 401.51 | 831.99 | 401.51 | 847.33 | 401.35 |
| 847.58 | 401.35 | 848.52 | 401.34 | 848.95 | 401.34 | 862.58 | 401.21 | 863.23 | 401.2 |
| 868.93 | 401.19 | 870.42 | 401.17 | 871.03 | 401.17 | 882.87 | 401.02 | 887.23 | 401.02 |
| 887.59 | 401.01 | 893.99 | 400.88 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 312.08 | .04 | 727.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 312.08 | 727.78 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=736.0457 Elevation=401.2057

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13457.1*

INPUT
Description:
Station Elevation Data num= 309

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 403.31 | 1.82 | 403.36 | 2.94 | 403.36 | 3.87 | 403.37 | 24.01 | 403.49 |
| 27.34 | 403.5 | 28.2 | 403.49 | 28.9 | 403.5 | 35.11 | 403.52 | 36.95 | 403.5 |
| 45.92 | 403.49 | 46.58 | 403.5 | 58.01 | 403.44 | 79.5 | 403.32 | 79.6 | 403.32 |
| 80.74 | 403.31 | 81.1 | 403.31 | 83.71 | 403.28 | 123.74 | 403.29 | 125.96 | 403.17 |
| 126.03 | 403.17 | 126.15 | 403.16 | 127.34 | 403.11 | 127.66 | 403.09 | 128.42 | 403.06 |
| 128.93 | 403.03 | 136.01 | 402.57 | 137.85 | 402.24 | 140.14 | 401.86 | 140.19 | 401.84 |
| 140.35 | 401.8 | 140.6 | 401.74 | 140.68 | 401.72 | 140.78 | 401.69 | 142.2 | 401.34 |
| 142.52 | 401.27 | 143.07 | 401.14 | 145.29 | 400.83 | 145.47 | 400.8 | 146.94 | 400.43 |
| 147.3 | 400.39 | 149.36 | 400.18 | 149.68 | 400.14 | 156.76 | 399.71 | 162.18 | 399.69 |
| 162.44 | 399.68 | 162.71 | 399.68 | 163.21 | 399.69 | 167.75 | 399.7 | 168.09 | 399.71 |
| 169.82 | 399.71 | 169.97 | 399.72 | 170.05 | 399.73 | 170.87 | 399.77 | 171.16 | 399.78 |
| 171.22 | 399.79 | 171.36 | 399.79 | 175.36 | 399.94 | 175.8 | 399.96 | 180.94 | 400.13 |
| 181.55 | 400.14 | 182.31 | 400.14 | 191.2 | 399.95 | 192.32 | 399.95 | 192.92 | 399.96 |
| 195.86 | 399.97 | 196.77 | 399.98 | 196.99 | 399.98 | 199.6 | 400.04 | 200.09 | 400.04 |
| 202.98 | 400.12 | 212.69 | 400.22 | 227.1 | 400.22 | 227.8 | 400.23 | 228.23 | 400.23 |
| 229.09 | 400.24 | 229.71 | 400.26 | 231.32 | 400.34 | 243.87 | 400.77 | 245.15 | 400.8 |
| 247.75 | 400.88 | 248.08 | 400.88 | 248.17 | 400.89 | 248.41 | 400.89 | 248.56 | 400.9 |
| 251.69 | 400.89 | 251.97 | 400.88 | 252.59 | 400.88 | 253.65 | 400.85 | 253.83 | 400.85 |
| 255.59 | 400.79 | 259.48 | 400.69 | 259.67 | 400.68 | 259.8 | 400.68 | 260.66 | 400.65 |
| 261.34 | 400.62 | 262.96 | 400.58 | 273.8 | 400.49 | 274.15 | 400.49 | 274.37 | 400.48 |
| 280.05 | 400.46 | 281 | 400.45 | 282.36 | 400.45 | 282.54 | 400.44 | 282.83 | 400.44 |
| 283.34 | 400.45 | 287.54 | 400.46 | 291.53 | 400.54 | 305.67 | 400.56 | 307 | 400.57 |
| 307.12 | 400.57 | 307.22 | 400.56 | 312.62 | 400.36 | 325.73 | 399.83 | 334.24 | 399.4 |
| 335.18 | 399.21 | 337.61 | 398.75 | 338.43 | 398.61 | 338.65 | 398.6 | 339.91 | 398.56 |
| 346.67 | 398.51 | 346.76 | 398.51 | 348.44 | 398.5 | 355.6 | 398.51 | 357.78 | 398.89 |
| 359.72 | 399.2 | 361.41 | 399.58 | 361.96 | 399.6 | 363.38 | 399.55 | 363.71 | 399.57 |
| 363.99 | 399.59 | 364.31 | 399.6 | 364.74 | 399.59 | 364.89 | 399.6 | 373.34 | 399.45 |
| 374.16 | 399.42 | 375.28 | 399.36 | 375.43 | 399.35 | 375.66 | 399.35 | 375.79 | 399.34 |
| 377.9 | 399.25 | 378.4 | 399.24 | 382.27 | 399.11 | 388.54 | 398.94 | 395.4 | 398.34 |
| 406.66 | 398.2 | 406.98 | 398.19 | 407.35 | 398.19 | 408.23 | 398.18 | 408.39 | 398.18 |
| 417.59 | 398.32 | 417.82 | 398.32 | 419.6 | 398.37 | 419.91 | 398.37 | 420.63 | 398.39 |
| 425.12 | 398.91 | 427.1 | 399.12 | 427.56 | 399.16 | 427.7 | 399.17 | 433.06 | 399.21 |
| 453.85 | 399.16 | 454.92 | 399.15 | 459.62 | 399.14 | 465.07 | 399.07 | 465.59 | 399.06 |
| 466.78 | 399.08 | 469.3 | 399.15 | 469.44 | 399.16 | 470.04 | 399.17 | 470.14 | 399.17 |
| 483.58 | 399.23 | 487.59 | 399.21 | 492.08 | 399.26 | 496.78 | 399.4 | 497.02 | 399.4 |
| 500.1 | 399.43 | 502.2 | 399.53 | 504.18 | 399.7 | 505.85 | 399.81 | 507.1 | 399.81 |
| 515.31 | 399.65 | 515.71 | 399.64 | 521.72 | 399.37 | 523.05 | 398.63 | 527.08 | 398.56 |
| 539.29 | 398.54 | 543.47 | 398.55 | 543.82 | 398.56 | 545.46 | 398.56 | 554.96 | 398.87 |
| 555.64 | 398.88 | 556.39 | 398.9 | 556.88 | 398.9 | 557.78 | 398.89 | 566.06 | 398.86 |
| 566.75 | 398.87 | 581.18 | 398.88 | 586.8 | 399.13 | 598.61 | 399.57 | 610.93 | 399.55 |
| 612.33 | 399.56 | 623.49 | 399.58 | 624.51 | 399.57 | 627.72 | 399.56 | 630.48 | 399.51 |
| 630.87 | 399.5 | 630.98 | 399.5 | 635.58 | 399.46 | 636.85 | 399.44 | 637.32 | 399.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 637.64 | 399.45 | 643.79 | 399.49 | 655.28 | 399.48 | 656.09 | 399.47 | 660.31 | 399.46 |
| 661.26 | 399.47 | 661.96 | 399.47 | 665.16 | 399.49 | 665.88 | 399.49 | 670.54 | 399.09 |
| 670.77 | 399.09 | 672.72 | 398.94 | 672.83 | 398.93 | 678.22 | 398.95 | 678.81 | 398.96 |
| 679.6 | 398.95 | 680.17 | 398.95 | 691.24 | 398.81 | 692.24 | 398.83 | 693.46 | 398.84 |
| 694.97 | 398.87 | 695.37 | 398.87 | 713.84 | 399.13 | 715.03 | 399.14 | 715.49 | 399.15 |
| 717.75 | 399.18 | 718.04 | 399.18 | 718.33 | 399.19 | 718.66 | 399.19 | 718.9 | 399.2 |
| 724 | 399.49 | 725.46 | 399.56 | 725.54 | 399.57 | 725.75 | 399.57 | 725.88 | 399.58 |
| 726.06 | 399.58 | 726.29 | 399.57 | 727.31 | 399.57 | 729.24 | 399.79 | 731.21 | 399.95 |
| 735.19 | 400.29 | 768.2 | 400.29 | 768.72 | 400.26 | 774.25 | 400.01 | 774.78 | 399.99 |
| 775.72 | 399.99 | 778.56 | 399.97 | 779.01 | 399.97 | 780.38 | 399.96 | 781.29 | 399.97 |
| 783.01 | 399.97 | 783.9 | 400.02 | 784.24 | 400.03 | 786.32 | 400.11 | 786.62 | 400.13 |
| 787.2 | 400.15 | 787.31 | 400.16 | 787.47 | 400.16 | 789.22 | 400.23 | 789.32 | 400.23 |
| 790.67 | 400.27 | 790.85 | 400.28 | 792.35 | 400.32 | 793.17 | 400.35 | 793.67 | 400.36 |
| 794 | 400.38 | 797.7 | 400.54 | 798.26 | 400.55 | 798.94 | 400.57 | 799.46 | 400.59 |
| 800.67 | 400.62 | 801.08 | 400.62 | 801.95 | 400.65 | 802.53 | 400.66 | 802.65 | 400.66 |
| 806.42 | 400.61 | 808.53 | 400.61 | 810.62 | 400.62 | 812.19 | 400.6 | 812.89 | 400.6 |
| 813.29 | 400.59 | 824.36 | 400.52 | 826.86 | 400.53 | 834.26 | 400.47 | 834.8 | 400.47 |
| 850.33 | 400.34 | 851.55 | 400.34 | 851.98 | 400.33 | 865.78 | 400.18 | 866.45 | 400.18 |
| 866.95 | 400.17 | 872.22 | 400.17 | 873.72 | 400.15 | 874.34 | 400.15 | 886.34 | 400.02 |
| 890.76 | 400.01 | 891.12 | 400 | 895.51 | 399.84 | 897.6 | 399.74 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 325.73 | .04 | 729.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 325.73 | 729.24 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=736.5814 Elevation=400.3514

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13385.7*

INPUT
Description:
Station Elevation Data num= 301

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 402.37 | 1.9 | 402.41 | 3.07 | 402.41 | 4.03 | 402.42 | 25.02 | 402.54 |
| 28.49 | 402.55 | 29.38 | 402.54 | 30.11 | 402.55 | 36.58 | 402.57 | 47.84 | 402.58 |
| 48.54 | 402.59 | 84.5 | 402.45 | 85.25 | 402.44 | 128.93 | 402.44 | 131.23 | 402.34 |
| 131.31 | 402.34 | 131.44 | 402.33 | 131.95 | 402.32 | 132.67 | 402.29 | 133.01 | 402.28 |
| 134.33 | 402.23 | 141.71 | 401.86 | 145.57 | 401.34 | 146.01 | 401.29 | 146.07 | 401.27 |
| 146.23 | 401.24 | 146.49 | 401.19 | 146.58 | 401.18 | 148.16 | 400.87 | 148.49 | 400.81 |
| 148.88 | 400.75 | 149.07 | 400.71 | 151.57 | 400.44 | 153.09 | 400.14 | 155.62 | 399.94 |
| 155.95 | 399.91 | 163.33 | 399.57 | 169.24 | 399.55 | 169.52 | 399.54 | 170.05 | 399.55 |
| 174.78 | 399.56 | 175.13 | 399.57 | 176.94 | 399.57 | 177.09 | 399.58 | 177.18 | 399.58 |
| 178.03 | 399.61 | 178.34 | 399.63 | 178.54 | 399.63 | 188.52 | 399.83 | 189.95 | 399.83 |
| 199.21 | 399.61 | 199.48 | 399.61 | 200.38 | 399.6 | 205.25 | 399.59 | 207.97 | 399.64 |
| 208.48 | 399.64 | 209.16 | 399.66 | 209.49 | 399.66 | 211.49 | 399.71 | 221.6 | 399.82 |
| 234.38 | 399.81 | 236.61 | 399.84 | 237.34 | 399.84 | 237.72 | 399.85 | 237.8 | 399.85 |
| 238.69 | 399.86 | 239.33 | 399.88 | 241.28 | 399.96 | 254.47 | 400.31 | 255.42 | 400.32 |
| 258.13 | 400.37 | 258.48 | 400.38 | 258.82 | 400.38 | 258.98 | 400.39 | 262.23 | 400.38 |
| 262.53 | 400.37 | 263.18 | 400.36 | 263.57 | 400.36 | 264.28 | 400.34 | 264.46 | 400.34 |
| 270.35 | 400.2 | 270.55 | 400.19 | 270.69 | 400.19 | 273.98 | 400.1 | 285.27 | 399.99 |
| 285.87 | 399.99 | 286.73 | 399.98 | 286.86 | 399.98 | 287.11 | 399.99 | 287.49 | 399.98 |
| 291.69 | 399.97 | 291.78 | 399.96 | 294.38 | 399.96 | 294.68 | 399.95 | 295.21 | 399.96 |
| 299.59 | 399.97 | 303.75 | 400.03 | 314.66 | 399.91 | 314.98 | 399.91 | 318.17 | 399.87 |
| 318.48 | 399.87 | 319.86 | 399.86 | 319.96 | 399.86 | 320.1 | 399.85 | 339.38 | 399.06 |
| 347.78 | 398.6 | 348.71 | 398.43 | 350.95 | 398.06 | 351.1 | 398.04 | 351.91 | 397.91 |
| 353.37 | 397.85 | 356.6 | 397.8 | 357.28 | 397.8 | 360.04 | 397.78 | 364.64 | 397.78 |
| 365.08 | 397.77 | 368.86 | 397.76 | 371 | 398.06 | 371.33 | 398.1 | 372.93 | 398.31 |
| 374.59 | 398.61 | 375.14 | 398.61 | 376.53 | 398.58 | 377.45 | 398.61 | 377.88 | 398.6 |
| 378.02 | 398.61 | 386.36 | 398.46 | 386.66 | 398.46 | 388.28 | 398.39 | 388.42 | 398.38 |
| 388.65 | 398.37 | 388.78 | 398.37 | 390.14 | 398.31 | 395.17 | 398.17 | 401.36 | 398.01 |
| 408.13 | 397.51 | 419.24 | 397.36 | 419.55 | 397.35 | 419.92 | 397.35 | 420.79 | 397.34 |
| 421.03 | 397.34 | 429.91 | 397.5 | 429.99 | 397.5 | 430.13 | 397.51 | 431.85 | 397.56 |
| 432.14 | 397.56 | 432.84 | 397.58 | 439.09 | 398.21 | 439.54 | 398.25 | 439.66 | 398.25 |
| 440.83 | 398.27 | 444.84 | 398.3 | 464.9 | 398.23 | 465.94 | 398.22 | 468.51 | 398.21 |
| 470.48 | 398.22 | 475.74 | 398.17 | 476.23 | 398.16 | 479.82 | 398.24 | 479.95 | 398.24 |
| 480.53 | 398.26 | 480.63 | 398.26 | 493.6 | 398.35 | 495.7 | 398.34 | 497.47 | 398.35 |
| 501.81 | 398.44 | 506.34 | 398.62 | 506.58 | 398.62 | 509.55 | 398.69 | 511.57 | 398.8 |
| 513.48 | 398.96 | 515.1 | 399.05 | 516.3 | 399.05 | 519.59 | 398.98 | 524.62 | 398.83 |
| 530.41 | 398.55 | 530.85 | 398.34 | 531.7 | 397.95 | 535.58 | 397.85 | 545.38 | 397.82 |
| 553.32 | 397.85 | 558.2 | 398.08 | 558.48 | 398.09 | 562.5 | 398.3 | 563.15 | 398.31 |
| 563.88 | 398.33 | 563.98 | 398.33 | 564.35 | 398.34 | 565.22 | 398.33 | 571.12 | 398.31 |
| 572.01 | 398.3 | 573.21 | 398.3 | 573.87 | 398.31 | 582.55 | 398.32 | 583.94 | 398.33 |
| 587.81 | 398.33 | 604.63 | 398.86 | 606.94 | 398.86 | 607.4 | 398.85 | 615.65 | 398.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 616.52 | 398.83 | 630.67 | 398.86 | 632.61 | 398.84 | 632.72 | 398.84 | 635.76 | 398.77 |
| 635.86 | 398.77 | 640.31 | 398.73 | 641.53 | 398.71 | 641.99 | 398.72 | 642.3 | 398.72 |
| 648.82 | 398.74 | 649.33 | 398.73 | 659.32 | 398.71 | 660.1 | 398.7 | 664.17 | 398.69 |
| 665.1 | 398.7 | 665.77 | 398.7 | 669.55 | 398.74 | 674.05 | 398.43 | 674.28 | 398.44 |
| 676.15 | 398.33 | 676.26 | 398.32 | 677.85 | 398.33 | 678.3 | 398.34 | 681.46 | 398.34 |
| 682.03 | 398.35 | 682.79 | 398.34 | 683.34 | 398.32 | 694.03 | 398.05 | 697.63 | 398.09 |
| 698.02 | 398.1 | 716.99 | 398.31 | 717.43 | 398.32 | 718.96 | 398.33 | 719.62 | 398.34 |
| 719.9 | 398.35 | 720.49 | 398.35 | 720.73 | 398.36 | 721.56 | 398.43 | 727.06 | 398.84 |
| 727.13 | 398.85 | 727.34 | 398.86 | 728.84 | 398.86 | 729.09 | 398.88 | 730.71 | 399.03 |
| 732.7 | 399.16 | 733.05 | 399.18 | 733.42 | 399.21 | 736.73 | 399.43 | 770.16 | 399.43 |
| 770.69 | 399.39 | 775.37 | 399.08 | 776.29 | 399.03 | 776.83 | 398.99 | 780.65 | 398.96 |
| 781.11 | 398.95 | 782.5 | 398.94 | 785.1 | 398.96 | 785.16 | 398.96 | 786.06 | 399 |
| 786.41 | 399.01 | 789.4 | 399.12 | 789.52 | 399.13 | 789.68 | 399.13 | 790.9 | 399.17 |
| 791.45 | 399.18 | 791.55 | 399.18 | 792.92 | 399.21 | 793.1 | 399.22 | 794.62 | 399.24 |
| 796.3 | 399.28 | 798.54 | 399.39 | 800.03 | 399.43 | 800.61 | 399.44 | 801.29 | 399.46 |
| 803.05 | 399.5 | 803.46 | 399.5 | 804.93 | 399.53 | 805.05 | 399.53 | 808.87 | 399.5 |
| 814.07 | 399.5 | 814.71 | 399.49 | 815.43 | 399.49 | 815.82 | 399.48 | 817.84 | 399.49 |
| 828.18 | 399.47 | 831.66 | 399.48 | 837.06 | 399.43 | 853.34 | 399.33 | 854.57 | 399.33 |
| 855.01 | 399.32 | 869.66 | 399.15 | 875.5 | 399.15 | 876.46 | 399.14 | 877.03 | 399.14 |
| 889.81 | 399.02 | 890.3 | 399.02 | 890.68 | 399.01 | 894.28 | 399.01 | 899.09 | 398.75 |
| 901.21 | 398.61 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 339.38 | .04 | 730.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 339.38 | 730.71 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=737.1171 Elevation=399.4971

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13314.2*

INPUT
Description:
Station Elevation Data num= 300

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 401.44 | 1.98 | 401.46 | 27.84 | 401.6 | 29.63 | 401.6 | 30.56 | 401.59 |
| 31.32 | 401.6 | 48.8 | 401.67 | 49.77 | 401.68 | 50.49 | 401.68 | 52.41 | 401.7 |
| 52.69 | 401.69 | 53.27 | 401.69 | 53.51 | 401.7 | 63.46 | 401.68 | 63.79 | 401.67 |
| 87.51 | 401.59 | 87.9 | 401.58 | 109.39 | 401.56 | 109.67 | 401.57 | 122.69 | 401.57 |
| 123.08 | 401.58 | 134.11 | 401.58 | 136.51 | 401.51 | 136.73 | 401.51 | 137.26 | 401.49 |
| 138.01 | 401.47 | 139.18 | 401.44 | 139.73 | 401.43 | 147.41 | 401.15 | 151.42 | 400.76 |
| 151.88 | 400.71 | 151.94 | 400.71 | 152.11 | 400.68 | 152.38 | 400.64 | 152.47 | 400.63 |
| 152.58 | 400.62 | 154.12 | 400.4 | 154.87 | 400.31 | 155.06 | 400.29 | 157.47 | 400.1 |
| 157.67 | 400.08 | 159.25 | 399.86 | 159.65 | 399.83 | 162.22 | 399.69 | 169.9 | 399.43 |
| 179.2 | 399.41 | 182.18 | 399.42 | 182.52 | 399.43 | 184.21 | 399.43 | 184.31 | 399.44 |
| 185.2 | 399.46 | 185.51 | 399.47 | 185.57 | 399.47 | 185.72 | 399.48 | 196.1 | 399.53 |
| 196.76 | 399.52 | 197.34 | 399.52 | 197.59 | 399.51 | 207.22 | 399.26 | 207.51 | 399.26 |
| 208.44 | 399.24 | 209.09 | 399.24 | 211.74 | 399.21 | 212.27 | 399.2 | 213.26 | 399.19 |
| 213.5 | 399.19 | 215.74 | 399.24 | 216.86 | 399.24 | 217.57 | 399.26 | 217.92 | 399.26 |
| 230.51 | 399.42 | 243.81 | 399.42 | 246.89 | 399.46 | 247.36 | 399.46 | 250.71 | 399.56 |
| 250.98 | 399.57 | 264.31 | 399.83 | 264.7 | 399.83 | 268.51 | 399.87 | 268.88 | 399.88 |
| 272.78 | 399.87 | 273.09 | 399.86 | 273.76 | 399.85 | 274.17 | 399.84 | 274.91 | 399.83 |
| 275.1 | 399.83 | 281.23 | 399.71 | 281.43 | 399.7 | 281.58 | 399.7 | 285 | 399.61 |
| 296.75 | 399.49 | 311.64 | 399.47 | 315.97 | 399.52 | 327.32 | 399.26 | 327.65 | 399.25 |
| 330.97 | 399.18 | 331.29 | 399.17 | 332.73 | 399.14 | 332.87 | 399.14 | 332.97 | 399.13 |
| 353.04 | 398.3 | 361.32 | 397.8 | 363.17 | 397.52 | 364.45 | 397.34 | 364.6 | 397.32 |
| 365.39 | 397.21 | 365.61 | 397.21 | 366.84 | 397.14 | 370.7 | 397.07 | 382.12 | 397.01 |
| 384.23 | 397.23 | 386.13 | 397.41 | 387.77 | 397.63 | 388.31 | 397.63 | 389.68 | 397.6 |
| 390.01 | 397.61 | 390.28 | 397.61 | 390.59 | 397.62 | 391.01 | 397.61 | 391.15 | 397.62 |
| 399.39 | 397.48 | 399.68 | 397.47 | 400.18 | 397.46 | 401.27 | 397.41 | 401.42 | 397.41 |
| 401.64 | 397.4 | 401.77 | 397.4 | 401.99 | 397.39 | 403.82 | 397.33 | 404.31 | 397.32 |
| 408.07 | 397.22 | 408.48 | 397.22 | 414.18 | 397.08 | 420.86 | 396.68 | 431.82 | 396.53 |
| 432.13 | 396.52 | 432.5 | 396.52 | 433.35 | 396.51 | 433.67 | 396.51 | 442.23 | 396.69 |
| 442.45 | 396.69 | 443.39 | 396.72 | 444.1 | 396.76 | 444.38 | 396.75 | 445.06 | 396.77 |
| 451.07 | 397.3 | 451.51 | 397.33 | 451.63 | 397.33 | 452.75 | 397.36 | 456.62 | 397.4 |
| 468.1 | 397.34 | 468.57 | 397.33 | 475.96 | 397.3 | 476.96 | 397.29 | 479.44 | 397.28 |
| 481.33 | 397.29 | 486.4 | 397.26 | 486.88 | 397.26 | 489.57 | 397.31 | 490.34 | 397.33 |
| 490.47 | 397.33 | 491.02 | 397.34 | 491.12 | 397.35 | 507.36 | 397.48 | 509.62 | 397.54 |
| 511.53 | 397.62 | 515.91 | 397.84 | 516.13 | 397.84 | 518.99 | 397.95 | 520.94 | 398.07 |
| 522.79 | 398.22 | 524.34 | 398.29 | 525.5 | 398.29 | 533.14 | 398.03 | 533.52 | 398.02 |
| 539.1 | 397.73 | 540.35 | 397.26 | 543.63 | 397.15 | 544.09 | 397.14 | 555.45 | 397.11 |
| 561.19 | 397.14 | 565.89 | 397.44 | 566.16 | 397.46 | 570.03 | 397.72 | 570.67 | 397.74 |
| 571.36 | 397.76 | 571.47 | 397.76 | 571.81 | 397.77 | 572.66 | 397.77 | 573.28 | 397.76 |
| 580.36 | 397.74 | 581 | 397.75 | 587.46 | 397.76 | 588.24 | 397.77 | 594.43 | 397.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 610.64 | 398.15 | 622.1 | 398.1 | 623.4 | 398.11 | 623.7 | 398.11 | 633.78 | 398.15 |
| 634.74 | 398.14 | 635.74 | 398.14 | 637.61 | 398.12 | 637.73 | 398.12 | 640.29 | 398.05 |
| 640.75 | 398.05 | 646.21 | 397.98 | 646.66 | 397.99 | 652.89 | 397.99 | 653.24 | 397.98 |
| 653.73 | 397.98 | 663.37 | 397.94 | 664.11 | 397.93 | 668.04 | 397.91 | 673.22 | 397.99 |
| 677.56 | 397.78 | 677.78 | 397.79 | 679.59 | 397.71 | 679.69 | 397.7 | 681.22 | 397.72 |
| 681.66 | 397.73 | 685.25 | 397.74 | 685.99 | 397.72 | 696.82 | 397.29 | 697.75 | 397.3 |
| 698.88 | 397.3 | 700.29 | 397.32 | 700.66 | 397.32 | 718.95 | 397.49 | 719.38 | 397.49 |
| 720.85 | 397.5 | 721.48 | 397.51 | 722.02 | 397.51 | 722.28 | 397.52 | 722.55 | 397.52 |
| 727.3 | 398 | 728.66 | 398.11 | 728.73 | 398.12 | 728.93 | 398.14 | 729.04 | 398.15 |
| 729.21 | 398.15 | 729.42 | 398.14 | 730.37 | 398.14 | 730.62 | 398.16 | 732.17 | 398.27 |
| 734.19 | 398.37 | 734.92 | 398.41 | 738.28 | 398.57 | 772.12 | 398.57 | 772.66 | 398.53 |
| 777.4 | 398.11 | 778.87 | 398 | 779.83 | 397.98 | 782.75 | 397.94 | 783.21 | 397.94 |
| 784.62 | 397.92 | 787.25 | 397.95 | 787.31 | 397.95 | 791.61 | 398.09 | 791.72 | 398.09 |
| 791.89 | 398.1 | 793.12 | 398.12 | 793.68 | 398.14 | 793.79 | 398.14 | 795.16 | 398.15 |
| 795.35 | 398.15 | 797.73 | 398.17 | 798.24 | 398.18 | 798.59 | 398.19 | 800.86 | 398.29 |
| 802.95 | 398.33 | 803.65 | 398.35 | 804.18 | 398.36 | 804.69 | 398.36 | 805.42 | 398.37 |
| 805.54 | 398.37 | 805.85 | 398.38 | 807.33 | 398.4 | 807.46 | 398.4 | 817.49 | 398.38 |
| 817.96 | 398.37 | 818.36 | 398.37 | 820.4 | 398.39 | 830.87 | 398.41 | 832.28 | 398.43 |
| 839.87 | 398.4 | 840.43 | 398.39 | 857.6 | 398.32 | 858.04 | 398.31 | 872.88 | 398.13 |
| 878.79 | 398.13 | 879.76 | 398.12 | 880.34 | 398.12 | 880.97 | 398.11 | 893.28 | 398.02 |
| 893.78 | 398.01 | 897.81 | 398.01 | 898.18 | 397.98 | 902.68 | 397.66 | 904.83 | 397.48 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 353.04 | .04 | 732.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 353.04 | 732.17 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=737.6529 Elevation=398.6429

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13242.8*

INPUT
Description:
Station Elevation Data num= 290

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 400.5 | 30.78 | 400.65 | 31.75 | 400.64 | 32.53 | 400.65 | 50.69 | 400.75 |
| 54.44 | 400.8 | 65.31 | 400.8 | 65.91 | 400.79 | 77.45 | 400.8 | 89.5 | 400.73 |
| 89.61 | 400.73 | 90.89 | 400.72 | 112.64 | 400.7 | 113.62 | 400.71 | 139.3 | 400.73 |
| 141.79 | 400.68 | 142.02 | 400.68 | 143.35 | 400.66 | 143.71 | 400.65 | 145.14 | 400.63 |
| 153.11 | 400.43 | 157.76 | 400.14 | 157.82 | 400.14 | 158 | 400.12 | 158.28 | 400.1 |
| 158.37 | 400.09 | 160.08 | 399.93 | 160.43 | 399.91 | 160.86 | 399.87 | 163.76 | 399.72 |
| 165.41 | 399.57 | 165.82 | 399.56 | 168.14 | 399.47 | 176.47 | 399.29 | 186.13 | 399.27 |
| 191.43 | 399.29 | 192.36 | 399.31 | 192.75 | 399.31 | 192.91 | 399.32 | 197.41 | 399.28 |
| 197.9 | 399.28 | 203.69 | 399.23 | 204.37 | 399.22 | 204.45 | 399.21 | 204.98 | 399.2 |
| 205.23 | 399.2 | 215.24 | 398.92 | 215.53 | 398.91 | 220.48 | 398.81 | 221.51 | 398.8 |
| 221.76 | 398.8 | 224.09 | 398.84 | 225.25 | 398.84 | 225.98 | 398.85 | 226.34 | 398.86 |
| 240.07 | 399.02 | 253.23 | 399.02 | 256.44 | 399.07 | 256.85 | 399.08 | 256.93 | 399.08 |
| 260.4 | 399.17 | 260.69 | 399.18 | 274.53 | 399.35 | 274.94 | 399.36 | 279.89 | 399.37 |
| 283.33 | 399.35 | 283.65 | 399.35 | 284.35 | 399.34 | 284.77 | 399.33 | 285.54 | 399.32 |
| 285.74 | 399.32 | 292.1 | 399.22 | 292.31 | 399.22 | 292.46 | 399.21 | 293.43 | 399.19 |
| 294.19 | 399.16 | 308.22 | 398.99 | 309.93 | 398.99 | 310.21 | 399 | 310.62 | 398.99 |
| 323.69 | 398.98 | 328.18 | 399.02 | 339.97 | 398.61 | 343.76 | 398.49 | 344.1 | 398.47 |
| 345.6 | 398.43 | 345.7 | 398.43 | 345.85 | 398.42 | 366.69 | 397.53 | 374.85 | 397 |
| 375.76 | 396.88 | 377.94 | 396.62 | 378.09 | 396.6 | 378.88 | 396.52 | 379.09 | 396.51 |
| 380.3 | 396.43 | 383.44 | 396.36 | 384.11 | 396.35 | 386.79 | 396.33 | 386.88 | 396.33 |
| 391.26 | 396.31 | 391.69 | 396.3 | 395.37 | 396.27 | 399.33 | 396.51 | 400.95 | 396.65 |
| 401.48 | 396.65 | 402.84 | 396.62 | 403.16 | 396.62 | 403.43 | 396.63 | 403.74 | 396.63 |
| 404.15 | 396.62 | 404.29 | 396.62 | 412.41 | 396.49 | 412.7 | 396.49 | 413.19 | 396.47 |
| 414.27 | 396.44 | 414.41 | 396.44 | 414.63 | 396.43 | 414.76 | 396.43 | 414.98 | 396.42 |
| 416.79 | 396.37 | 420.98 | 396.28 | 421.38 | 396.27 | 427 | 396.15 | 433.59 | 395.86 |
| 444.4 | 395.69 | 444.71 | 395.68 | 445.07 | 395.68 | 445.91 | 395.67 | 446.31 | 395.67 |
| 451.11 | 395.77 | 454.55 | 395.87 | 454.76 | 395.87 | 455.67 | 395.91 | 456.35 | 395.95 |
| 456.62 | 395.95 | 457.27 | 395.97 | 463.48 | 396.41 | 463.6 | 396.42 | 468.4 | 396.5 |
| 469.06 | 396.5 | 479.45 | 396.42 | 479.9 | 396.41 | 487.98 | 396.37 | 488.71 | 396.36 |
| 490.37 | 396.35 | 497.53 | 396.36 | 498.6 | 396.37 | 500.85 | 396.41 | 500.98 | 396.42 |
| 501.52 | 396.43 | 501.61 | 396.43 | 513.65 | 396.58 | 517.24 | 396.61 | 519.42 | 396.69 |
| 525.47 | 397.05 | 525.68 | 397.07 | 528.44 | 397.21 | 530.32 | 397.33 | 532.09 | 397.48 |
| 533.59 | 397.53 | 534.1 | 397.53 | 534.71 | 397.52 | 542.06 | 397.23 | 547.8 | 396.91 |
| 548.21 | 396.8 | 548.99 | 396.58 | 552.16 | 396.44 | 552.6 | 396.43 | 556.22 | 396.41 |
| 556.57 | 396.41 | 561.69 | 396.39 | 567.28 | 396.42 | 569.06 | 396.42 | 573.58 | 396.8 |
| 573.84 | 396.82 | 577.57 | 397.15 | 578.18 | 397.17 | 578.85 | 397.19 | 578.95 | 397.2 |
| 579.28 | 397.21 | 580.1 | 397.2 | 588.12 | 397.18 | 598.32 | 397.22 | 601.05 | 397.21 |
| 613.13 | 397.38 | 614.02 | 397.4 | 616.66 | 397.43 | 618.81 | 397.43 | 619.23 | 397.42 |
| 620.55 | 397.42 | 626.89 | 397.37 | 629.23 | 397.38 | 630.45 | 397.4 | 640.82 | 397.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 642.62 | 397.4 | 642.73 | 397.4 | 645.55 | 397.32 | 645.64 | 397.32 | 650.9 | 397.26 |
| 651.61 | 397.26 | 657.12 | 397.23 | 657.66 | 397.23 | 658.13 | 397.22 | 666.14 | 397.17 |
| 667.41 | 397.17 | 668.13 | 397.16 | 670.93 | 397.14 | 671.91 | 397.14 | 672.76 | 397.15 |
| 673.38 | 397.17 | 676.89 | 397.23 | 681.07 | 397.13 | 681.28 | 397.13 | 683.02 | 397.1 |
| 683.12 | 397.09 | 684.59 | 397.12 | 685.02 | 397.12 | 687.94 | 397.13 | 688.48 | 397.14 |
| 689.18 | 397.1 | 689.69 | 397.08 | 699.61 | 396.53 | 701.6 | 396.53 | 702.95 | 396.55 |
| 703.31 | 396.55 | 712.01 | 396.61 | 712.83 | 396.61 | 720.91 | 396.66 | 722.74 | 396.66 |
| 723.35 | 396.67 | 723.61 | 396.67 | 723.87 | 396.68 | 724.38 | 396.68 | 728.94 | 397.26 |
| 730.26 | 397.39 | 730.32 | 397.4 | 730.62 | 397.43 | 731.91 | 397.43 | 733.64 | 397.51 |
| 734.29 | 397.54 | 739.82 | 397.71 | 774.09 | 397.71 | 774.62 | 397.66 | 779.42 | 397.14 |
| 780.92 | 397 | 786.73 | 396.9 | 789.4 | 396.94 | 789.46 | 396.94 | 790.39 | 396.96 |
| 793.81 | 397.06 | 793.93 | 397.06 | 794.09 | 397.07 | 795.34 | 397.08 | 795.91 | 397.09 |
| 799.16 | 397.09 | 800.01 | 397.08 | 800.53 | 397.08 | 800.88 | 397.1 | 803.18 | 397.19 |
| 804.71 | 397.22 | 805.3 | 397.22 | 806.54 | 397.24 | 807.05 | 397.24 | 807.8 | 397.25 |
| 807.92 | 397.25 | 808.23 | 397.26 | 809.13 | 397.27 | 817.12 | 397.26 | 818.12 | 397.27 |
| 819.75 | 397.27 | 820.02 | 397.26 | 820.9 | 397.26 | 822.97 | 397.29 | 833.56 | 397.36 |
| 836.7 | 397.39 | 837.13 | 397.39 | 840.31 | 397.36 | 859.63 | 397.3 | 860.62 | 397.31 |
| 861.07 | 397.3 | 876.09 | 397.11 | 882.08 | 397.11 | 883.06 | 397.1 | 884.29 | 397.1 |
| 896.74 | 397.01 | 901.33 | 397.01 | 901.7 | 396.97 | 904.86 | 396.7 | 908.44 | 396.35 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 366.69 | .04 | 733.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 366.69 | 733.64 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=738.1886 Elevation=397.7886

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13171.4*

INPUT
Description:
Station Elevation Data num= 304

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 399.56 | 16.64 | 399.59 | 29.99 | 399.7 | 31.92 | 399.7 | 32.93 | 399.69 |
| 33.74 | 399.7 | 35.75 | 399.7 | 43.14 | 399.75 | 43.26 | 399.75 | 52.57 | 399.84 |
| 56.46 | 399.9 | 57.39 | 399.9 | 57.65 | 399.91 | 80.34 | 399.93 | 115.49 | 399.84 |
| 144.49 | 399.87 | 147.07 | 399.85 | 147.3 | 399.85 | 147.87 | 399.84 | 148.7 | 399.84 |
| 149.06 | 399.83 | 149.95 | 399.83 | 158.81 | 399.72 | 163.13 | 399.59 | 163.63 | 399.57 |
| 163.69 | 399.57 | 163.88 | 399.56 | 164.17 | 399.55 | 164.26 | 399.54 | 164.38 | 399.54 |
| 166.04 | 399.47 | 166.41 | 399.45 | 166.85 | 399.44 | 167.06 | 399.43 | 169.65 | 399.37 |
| 169.86 | 399.36 | 171.57 | 399.29 | 172 | 399.28 | 174.4 | 399.24 | 174.77 | 399.23 |
| 183.04 | 399.14 | 189.37 | 399.14 | 189.67 | 399.13 | 189.98 | 399.13 | 190.57 | 399.14 |
| 198.46 | 399.14 | 198.56 | 399.15 | 199.52 | 399.15 | 199.86 | 399.16 | 200.09 | 399.16 |
| 211.27 | 398.93 | 211.98 | 398.91 | 212.06 | 398.91 | 212.61 | 398.89 | 212.87 | 398.89 |
| 223.55 | 398.56 | 224.56 | 398.54 | 228.11 | 398.44 | 228.69 | 398.43 | 229.75 | 398.4 |
| 230.01 | 398.4 | 232.43 | 398.45 | 233.06 | 398.44 | 233.63 | 398.44 | 234.4 | 398.45 |
| 234.77 | 398.46 | 249 | 398.62 | 262.66 | 398.63 | 265.17 | 398.67 | 265.98 | 398.69 |
| 266.49 | 398.69 | 270.1 | 398.79 | 270.39 | 398.79 | 284.75 | 398.88 | 290.31 | 398.87 |
| 293.88 | 398.84 | 294.21 | 398.83 | 294.94 | 398.83 | 295.37 | 398.82 | 296.17 | 398.81 |
| 296.38 | 398.81 | 297.46 | 398.8 | 298.44 | 398.78 | 302.98 | 398.73 | 303.2 | 398.73 |
| 303.35 | 398.72 | 304.36 | 398.7 | 305.15 | 398.67 | 319.7 | 398.5 | 340.43 | 398.51 |
| 352.63 | 397.97 | 352.99 | 397.95 | 356.56 | 397.79 | 356.91 | 397.78 | 358.46 | 397.71 |
| 358.61 | 397.71 | 358.72 | 397.7 | 365.03 | 397.44 | 365.58 | 397.41 | 380.34 | 396.77 |
| 388.39 | 396.2 | 389.29 | 396.1 | 390.2 | 396.01 | 391.44 | 395.9 | 391.59 | 395.89 |
| 392.36 | 395.82 | 392.57 | 395.81 | 393.77 | 395.71 | 394.62 | 395.7 | 397.52 | 395.62 |
| 400.25 | 395.61 | 404.58 | 395.57 | 405 | 395.57 | 408.63 | 395.52 | 410.69 | 395.57 |
| 411 | 395.58 | 412.53 | 395.61 | 414.13 | 395.67 | 414.65 | 395.67 | 415.99 | 395.64 |
| 416.88 | 395.64 | 417.28 | 395.63 | 417.42 | 395.63 | 425.43 | 395.51 | 425.72 | 395.5 |
| 427.27 | 395.47 | 427.4 | 395.46 | 427.75 | 395.46 | 427.97 | 395.45 | 429.06 | 395.43 |
| 429.75 | 395.41 | 430.22 | 395.41 | 433.88 | 395.33 | 434.28 | 395.33 | 439.82 | 395.23 |
| 446.32 | 395.03 | 456.98 | 394.86 | 457.28 | 394.85 | 457.64 | 394.85 | 458.47 | 394.84 |
| 458.95 | 394.84 | 464.71 | 394.98 | 466.87 | 395.05 | 466.94 | 395.06 | 467.07 | 395.06 |
| 467.94 | 395.1 | 468.6 | 395.15 | 468.86 | 395.14 | 469.48 | 395.16 | 475.05 | 395.47 |
| 475.45 | 395.49 | 475.57 | 395.5 | 476.6 | 395.53 | 480.18 | 395.59 | 480.81 | 395.59 |
| 490.81 | 395.5 | 491.24 | 395.49 | 492.36 | 395.49 | 499 | 395.44 | 499.7 | 395.43 |
| 501.29 | 395.42 | 507.74 | 395.46 | 508.18 | 395.46 | 511.37 | 395.5 | 511.49 | 395.51 |
| 512.01 | 395.52 | 512.1 | 395.52 | 527.12 | 395.74 | 529.21 | 395.85 | 535.03 | 396.27 |
| 535.24 | 396.29 | 537.89 | 396.46 | 541.4 | 396.74 | 542.83 | 396.76 | 543.91 | 396.76 |
| 550.97 | 396.42 | 556.49 | 396.1 | 557.64 | 395.89 | 561.1 | 395.71 | 564.58 | 395.69 |
| 569.84 | 395.68 | 576.92 | 395.71 | 580.35 | 396.07 | 581.27 | 396.16 | 581.52 | 396.19 |
| 582.41 | 396.28 | 585.1 | 396.57 | 585.69 | 396.6 | 586.33 | 396.63 | 586.43 | 396.63 |
| 586.75 | 396.64 | 592.8 | 396.61 | 593.58 | 396.62 | 597.31 | 396.63 | 597.89 | 396.64 |
| 601.95 | 396.65 | 602.31 | 396.66 | 619.28 | 396.7 | 620.14 | 396.71 | 625.14 | 396.71 |
| 632.5 | 396.64 | 633.28 | 396.64 | 634.48 | 396.65 | 634.75 | 396.66 | 635.93 | 396.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 636.62 | 396.67 | 638.27 | 396.69 | 639.07 | 396.69 | 642.9 | 396.72 | 644.08 | 396.72 |
| 644.97 | 396.71 | 645.89 | 396.71 | 647.62 | 396.68 | 647.73 | 396.68 | 648.75 | 396.64 |
| 650.44 | 396.59 | 650.53 | 396.59 | 655.58 | 396.53 | 655.99 | 396.52 | 656.27 | 396.52 |
| 661.56 | 396.48 | 661.75 | 396.48 | 662.08 | 396.47 | 662.53 | 396.47 | 671.45 | 396.4 |
| 672.14 | 396.39 | 675.77 | 396.36 | 676.6 | 396.38 | 677.19 | 396.4 | 679.95 | 396.47 |
| 680.57 | 396.48 | 686.55 | 396.48 | 688.37 | 396.52 | 691.19 | 396.52 | 691.7 | 396.53 |
| 692.38 | 396.49 | 692.87 | 396.45 | 702.4 | 395.76 | 703.26 | 395.77 | 704.31 | 395.76 |
| 705.61 | 395.77 | 705.95 | 395.77 | 724.63 | 395.83 | 725.21 | 395.84 | 726.2 | 395.84 |
| 726.94 | 395.96 | 730.59 | 396.51 | 731.85 | 396.67 | 731.92 | 396.68 | 732.1 | 396.7 |
| 732.21 | 396.72 | 732.36 | 396.72 | 732.56 | 396.71 | 733.44 | 396.71 | 733.67 | 396.72 |
| 735.1 | 396.76 | 737.17 | 396.79 | 737.53 | 396.8 | 737.92 | 396.8 | 741.36 | 396.86 |
| 776.05 | 396.86 | 781.45 | 396.17 | 782.96 | 396 | 786.94 | 395.91 | 787.41 | 395.91 |
| 788.85 | 395.88 | 789.81 | 395.9 | 791.55 | 395.92 | 791.62 | 395.92 | 792.91 | 395.96 |
| 795.09 | 396 | 796.02 | 396.03 | 796.3 | 396.03 | 797.57 | 396.04 | 798.14 | 396.05 |
| 798.25 | 396.05 | 799.66 | 396.03 | 799.85 | 396.03 | 802.29 | 396 | 802.81 | 395.99 |
| 803.17 | 396 | 805.5 | 396.1 | 807.64 | 396.11 | 808.35 | 396.12 | 808.9 | 396.12 |
| 809.42 | 396.13 | 810.61 | 396.13 | 811.52 | 396.14 | 818.44 | 396.14 | 823.43 | 396.15 |
| 825.53 | 396.19 | 835.07 | 396.29 | 836.25 | 396.31 | 839.43 | 396.34 | 839.86 | 396.34 |
| 862.64 | 396.29 | 863.65 | 396.3 | 864.1 | 396.29 | 879.31 | 396.08 | 885.37 | 396.09 |
| 886.36 | 396.08 | 904.86 | 396 | 909.85 | 395.48 | 912.05 | 395.21 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 380.34 | .04 | 735.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 380.34 | 735.1 | 72.59 | 71.43 | 77.31 | .1 | .3 |

Right Levee Station=738.7243 Elevation=396.9343

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 13100

INPUT
Description:
Station Elevation Data num= 311

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 398.62 | 3.559998 | 398.61 | 4.679993 | 398.61 | 10.84998 | 398.61 | 17.23999 | 398.63 |
| 26.87994 | 398.73 | 29.03998 | 398.74 | 31.06995 | 398.75 | 33.06995 | 398.75 | 34.10999 | 398.74 |
| 34.94995 | 398.75 | 35.47998 | 398.75 | 35.67999 | 398.75 | 37.02997 | 398.75 | 44.81 | 398.81 |
| 54.45996 | 398.93 | 58.48999 | 399 | 58.79999 | 399 | 59.14996 | 399 | 59.71997 | 399.01 |
| 60.45996 | 399.01 | 63.06 | 399.02 | 70.81995 | 399.03 | 73.79999 | 399.03 | 74.33997 | 399.03 |
| 74.37 | 399.03 | 74.37994 | 399.03 | 83.21997 | 399.06 | 84.95996 | 399.05 | 97.65997 | 399 |
| 98.09998 | 399 | 98.96997 | 399 | 106.67 | 398.98 | 107.69 | 398.98 | 114.14 | 398.98 |
| 118.0699 | 398.98 | 127.87 | 399 | 128.47 | 399 | 128.98 | 399 | 142.16 | 399.01 |
| 147.3799 | 399.02 | 147.96 | 399.02 | 149.21 | 399.02 | 152.35 | 399.02 | 152.44 | 399.02 |
| 153.18 | 399.02 | 154.02 | 399.02 | 154.04 | 399.02 | 154.41 | 399.02 | 155.33 | 399.02 |
| 168.99 | 399 | 169.5699 | 399 | 169.7599 | 399 | 169.8 | 399 | 170.06 | 399 |
| 170.16 | 399 | 170.28 | 399 | 172.3799 | 399 | 172.84 | 399 | 173.47 | 399 |
| 175.74 | 399 | 178.17 | 399 | 180.66 | 399 | 182.24 | 399 | 183.98 | 399 |
| 186.79 | 399 | 196.14 | 399 | 196.17 | 399 | 196.8 | 398.99 | 197.41 | 399 |
| 202.55 | 399 | 203.69 | 399 | 206.68 | 399 | 207.03 | 399 | 207.1 | 399 |
| 207.27 | 399 | 212.11 | 398.84 | 219.67 | 398.6 | 233.35 | 398.16 | 236.3 | 398.06 |
| 236.9 | 398.04 | 238 | 398.01 | 238.18 | 398.01 | 238.19 | 398.01 | 238.27 | 398.01 |
| 238.28 | 398.01 | 239.55 | 398.03 | 240.77 | 398.05 | 241.43 | 398.04 | 242.02 | 398.04 |
| 242.81 | 398.05 | 257.94 | 398.22 | 265.09 | 398.23 | 272.09 | 398.23 | 275.53 | 398.3 |
| 275.97 | 398.31 | 276.06 | 398.31 | 277.84 | 398.35 | 279.79 | 398.4 | 280.1 | 398.4 |
| 294.97 | 398.41 | 313.85 | 398.24 | 314.08 | 398.24 | 314.24 | 398.23 | 315.28 | 398.21 |
| 316.1 | 398.18 | 331.17 | 398 | 331.6 | 398 | 331.87 | 398 | 332.86 | 398 |
| 333.31 | 398.01 | 333.75 | 398 | 338.39 | 398 | 338.62 | 398 | 338.73 | 398 |
| 339.8799 | 398 | 340 | 398 | 340.5099 | 398 | 341.47 | 398 | 341.53 | 398 |
| 341.75 | 398 | 342.97 | 398 | 352.62 | 398 | 352.65 | 398 | 365.66 | 397.3 |
| 369.36 | 397.1 | 369.72 | 397.08 | 371.33 | 397 | 378.1299 | 396.71 | 381.41 | 396.56 |
| 388.73 | 396.24 | 393.99 | 396 | 403.71 | 395.26 | 405.08 | 395.17 | 406.05 | 395.11 |
| 407.23 | 395 | 408.07 | 394.98 | 410.93 | 394.9 | 413.54 | 394.88 | 417.89 | 394.84 |
| 420.3 | 394.8 | 424.22 | 394.74 | 446.82 | 394.39 | 450.7 | 394.33 | 457.11 | 394.23 |
| 469.56 | 394.02 | 469.86 | 394.01 | 470.12 | 394.01 | 470.21 | 394.01 | 471.03 | 394 |
| 471.39 | 394 | 471.59 | 394 | 473.99 | 394.06 | 476.02 | 394.12 | 479.26 | 394.24 |
| 479.38 | 394.24 | 480.22 | 394.29 | 480.85 | 394.34 | 481.1 | 394.33 | 488.53 | 394.62 |
| 491.96 | 394.69 | 492.57 | 394.69 | 498.03 | 394.62 | 502.57 | 394.57 | 505.65 | 394.55 |
| 509.13 | 394.52 | 510.02 | 394.51 | 510.69 | 394.5 | 512.22 | 394.49 | 521.21 | 394.58 |
| 537 | 394.87 | 539.01 | 395 | 544.79 | 395.51 | 550.7 | 396 | 552.55 | 396 |
| 553.11 | 396 | 559.89 | 395.61 | 569.61 | 395 | 572.95 | 394.98 | 577.35 | 394.96 |
| 581.48 | 394.98 | 583.15 | 394.99 | 583.4399 | 394.99 | 584.79 | 395 | 590.05 | 395.66 |
| 592.64 | 396 | 593.2 | 396.03 | 593.21 | 396.03 | 594.22 | 396.08 | 600.02 | 396.05 |
| 610.99 | 396.11 | 611.3199 | 396.11 | 611.37 | 396.11 | 626.26 | 396.02 | 630.67 | 396 |
| 631.0599 | 395.99 | 632.28 | 395.98 | 638.12 | 395.91 | 640.28 | 395.93 | 641.41 | 395.95 |

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642.0699  395.95  643.65  395.97  644.42  395.97   648.1     396  648.86     396
  649.23     396  650.08     396  650.37     396  650.97     396  652.63  395.96
  653.71  395.92  655.01  395.87  655.33  395.86   669.7  395.68  679.64  395.59
  680.43  395.61  683.65  395.71  685.86  395.77  687.72  395.82  691.34   395.9
  691.73  395.91  693.05  395.91  694.39  395.91  694.92  395.92695.5699  395.87
  696.04  395.83705.1899     395  706.01     395  707.02  394.99  708.27     395
   708.6     395709.8099     395  713.18  395.01  716.62  395.01  717.38  395.01
  723.85     395  724.83     395  726.52  394.99  727.08     395727.3199     395
727.5599     395  727.79     395  727.83     395  728.03     395  728.74  395.14
  729.78  395.32  731.15  395.57  732.24  395.77  733.79     396733.9399     396
  734.22     396  734.91     396735.1899     396736.5699     396  737.24     396
  738.66     396  739.03     396  739.42     396  747.39     396757.8199  396.01
  758.68  396.01  760.46  396.01  763.24  396.01  778.01     396  783.48   395.2
  785.01     395  789.03   394.9  790.97  394.86791.9399  394.88  793.72  394.91
  794.71  394.93   797.6  394.98  798.22     395  798.34     395798.5099     395
  799.79     395  800.37     395  800.48     395  801.91  394.97   802.1  394.97
   803.7  394.93804.5699  394.91   805.1   394.9  805.46  394.91807.8199     395
   822.1  395.03825.0699  395.04  825.97  395.04  828.09  395.09  842.16   395.3
   842.6   395.3  845.86  395.28  848.86  395.28  850.37  395.29  857.85   395.3
  865.38  395.28  865.65  395.28  866.67  395.29  867.13  395.28  882.52  395.06
  887.52  395.07890.2599  395.06  890.92  395.06  893.11  395.05   900.2  395.03
  903.68  395.01  907.65     395908.3799     395     912  394.57  913.43  394.39
  915.66  394.08

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  393.99     .04736.5699     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        393.99736.5699            69.11   71.43   68.36             .1       .3
Right Levee     Station=  739.26      Elevation=  396.08

CROSS SECTION


RIVER: WASH20
REACH: Centerline Align   RS: 13028.5*

INPUT
Description:
Station Elevation Data    num=     236
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  397.53   16.63  397.54   25.93  397.63   31.36  397.64    31.9  397.63
    32.9  397.62   36.13  397.61   43.22  397.65   43.67  397.66   43.97  397.66
   49.05  397.62   52.17  397.63   56.34  397.73   56.72  397.73   57.05  397.74
   70.26  397.88   80.27  397.91  138.65  397.86  139.87  397.87  169.51  397.86
  170.26  397.87  189.21  397.92  189.82  397.91  190.41  397.92  199.92  397.93
  227.92  397.12  229.56  397.07  229.82  397.07  232.23   397.1  232.87  397.09
  233.44  397.09  248.79  397.23  262.91  397.21  265.76  397.26  266.18  397.27
  266.27  397.27  269.87  397.34  284.51  397.35  289.15  397.32  289.49  397.31
  290.31  397.31  302.17  397.21  302.94  397.21   303.1   397.2  304.89  397.16
   311.7  397.08  312.01  397.08  314.05  397.06  314.64  397.05  319.43     397
  321.06     397  321.49  397.01  321.92     397  340.15     397     341  396.96
  341.54  396.94  343.16  396.86  343.26  396.85  343.35  396.85  355.54  396.24
  356.26   396.2  356.61  396.19  358.16  396.11  358.83  396.09  364.72  395.87
   365.1  395.85  366.37   395.8  368.63  395.74  368.73  395.73  369.64   395.7
  370.28  395.67  378.94  395.33  380.02  395.28  380.54  395.25  380.64  395.24
  389.37  394.58  391.62  394.43  392.76  394.33  396.31  394.21  403.01  394.15
  442.04  393.47  442.24  393.46  442.72  393.45  443.13  393.45  444.01  393.43
  452.71   393.3     453  393.29  453.33  393.29  454.12  393.28   454.6  393.28
  458.02  393.36  461.95  393.49  462.06  393.49  462.87  393.53  463.42  393.57
  463.71  393.57  466.87  393.68  467.05  393.68   469.4  393.77   469.5  393.77
   469.8  393.78  470.82  393.85  474.11     394  474.69  394.02  483.66  393.93
  484.27  393.93  489.44  393.89  490.55  393.89   491.4  393.88  491.61  393.88
  492.04  393.87  493.51  393.86  514.48  394.13   514.8  394.13  514.91  394.14
  515.17  394.14  517.23  394.17  519.16  394.29  524.53  394.71  524.69  394.72
  525.04  394.75  530.35  395.14  532.66  395.14  534.85  395.03  534.97  395.02
   535.3  395.01  548.46  394.29  550.76  394.27  555.87  394.25  558.93  394.26
  561.42  394.28  562.99  394.28  567.96  394.84  568.03  394.85  570.51  395.14
  570.75  395.15  571.05  395.17  572.02  395.21  573.69   395.2  588.08  395.33
  588.44  395.33  596.73  395.28  606.39  395.15   607.3  395.13  614.06  395.06
  617.21  395.09  617.84  395.09  619.35  395.11  623.61  395.13  624.34  395.14
  626.36  395.14  630.54  395.02  644.22  394.87  652.54  394.81  653.81  394.79
  654.47  394.81  654.57  394.81  655.14  394.83  657.05  394.88  657.65   394.9
  659.77  394.95  665.01  395.03  665.39  395.04  668.44  395.03  669.07  394.99
  678.28   394.2  680.03  394.18  696.02  394.14  696.14  394.15  697.05  394.19
   698.7   394.2  699.24  394.21  699.47  394.21   699.7  394.22  700.15  394.22
  700.83  394.35  701.82  394.51  703.13  394.75  704.18  394.93  705.65  395.17
   705.8  395.17     707  395.21  708.32  395.24  709.05  395.27  709.34  395.29
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 718.66 | 395.29 | 720.09 | 395.3 | 721.62 | 395.31 | 726.83 | 395.32 | 731.43 | 395.35 |
| 751.83 | 395.36 | 753.38 | 395.35 | 759.33 | 394.65 | 760.99 | 394.47 | 767.47 | 394.34 |
| 768.53 | 394.36 | 770.46 | 394.38 | 774.68 | 394.43 | 775.36 | 394.45 | 775.67 | 394.45 |
| 777.81 | 394.44 | 779.37 | 394.41 | 779.58 | 394.41 | 782.84 | 394.35 | 783.23 | 394.35 |
| 783.74 | 394.37 | 785.8 | 394.43 | 787.71 | 394.43 | 793.81 | 394.31 | 794.16 | 394.3 |
| 796.86 | 394.3 | 805.53 | 394.35 | 807.15 | 394.38 | 807.84 | 394.4 | 814.18 | 394.49 |
| 814.58 | 394.5 | 815.01 | 394.5 | 823.13 | 394.59 | 830.42 | 394.56 | 832.06 | 394.57 |
| 850.29 | 394.53 | 850.48 | 394.52 | 851.41 | 394.51 | 852.11 | 394.51 | 867.02 | 394.33 |
| 867.93 | 394.34 | 876.15 | 394.36 | 883.13 | 394.34 | 884.1 | 394.35 | 893.51 | 394.35 |
| 895.14 | 394.31 | 897.44 | 394.05 | 899.07 | 393.88 | 900.63 | 393.7 | 901.47 | 393.59 |
| 903.05 | 393.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 380.02 | .04 | 708.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 380.02 | 708.32 | 69.11 | 71.43 | 68.36 | .1 | .3 |

Right Levee Station=718.1072 Elevation=395.4529

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 12957.1*

INPUT
Description:
Station Elevation Data num= 266

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 396.44 | 4.35 | 396.43 | 5.8 | 396.44 | 16.02 | 396.45 | 26.98 | 396.53 |
| 30.2 | 396.53 | 30.72 | 396.52 | 31.69 | 396.49 | 32.47 | 396.49 | 32.96 | 396.48 |
| 33.15 | 396.48 | 34.4 | 396.46 | 34.8 | 396.46 | 41.63 | 396.5 | 42.07 | 396.5 |
| 42.35 | 396.51 | 47.25 | 396.35 | 47.85 | 396.34 | 48.7 | 396.35 | 50.25 | 396.34 |
| 52.21 | 396.39 | 52.71 | 396.41 | 54.26 | 396.46 | 54.63 | 396.46 | 55.48 | 396.49 |
| 68.18 | 396.74 | 77.32 | 396.76 | 133.56 | 396.71 | 134.73 | 396.72 | 161.92 | 396.71 |
| 163.28 | 396.73 | 172.78 | 396.8 | 173.54 | 396.8 | 182.84 | 396.84 | 183.41 | 396.85 |
| 186.34 | 396.85 | 187.6 | 396.86 | 188.19 | 396.86 | 188.67 | 396.85 | 189.25 | 396.86 |
| 192.57 | 396.86 | 219.54 | 396.17 | 220.1 | 396.16 | 221.12 | 396.13 | 221.37 | 396.13 |
| 223.7 | 396.16 | 224.31 | 396.15 | 225.59 | 396.15 | 239.65 | 396.23 | 252.79 | 396.18 |
| 253.24 | 396.19 | 255.99 | 396.22 | 256.4 | 396.23 | 256.48 | 396.23 | 257.67 | 396.24 |
| 259.95 | 396.28 | 265 | 396.27 | 266.17 | 396.28 | 274.05 | 396.29 | 278.52 | 396.26 |
| 279.64 | 396.26 | 291.06 | 396.18 | 291.81 | 396.18 | 291.96 | 396.17 | 293.68 | 396.13 |
| 300.24 | 396.07 | 300.54 | 396.07 | 302.5 | 396.05 | 303.07 | 396.04 | 307.68 | 396 |
| 327.64 | 396 | 330.54 | 395.89 | 330.64 | 395.88 | 330.73 | 395.88 | 337.64 | 395.59 |
| 342.47 | 395.34 | 343.17 | 395.31 | 343.5 | 395.29 | 345 | 395.22 | 351.68 | 395.01 |
| 354.01 | 394.96 | 354.36 | 394.95 | 355.08 | 394.95 | 355.17 | 394.94 | 360.23 | 394.78 |
| 361.16 | 394.74 | 366.05 | 394.57 | 366.55 | 394.54 | 366.64 | 394.53 | 376.29 | 393.81 |
| 377.19 | 393.75 | 378.28 | 393.66 | 381.7 | 393.53 | 384.11 | 393.48 | 388.97 | 393.44 |
| 405.19 | 393.1 | 405.88 | 393.1 | 425.61 | 392.73 | 425.8 | 392.72 | 426.27 | 392.71 |
| 426.66 | 392.71 | 427.5 | 392.69 | 435.86 | 392.58 | 436.13 | 392.57 | 436.46 | 392.57 |
| 437.22 | 392.56 | 437.62 | 392.56 | 444.63 | 392.74 | 444.74 | 392.74 | 445.51 | 392.77 |
| 446.04 | 392.81 | 446.32 | 392.8 | 449.34 | 392.9 | 449.51 | 392.9 | 451.76 | 392.97 |
| 451.85 | 392.98 | 452.14 | 392.98 | 453.12 | 393.08 | 454.12 | 393.17 | 456.25 | 393.32 |
| 456.81 | 393.35 | 465.38 | 393.29 | 465.96 | 393.28 | 471.97 | 393.26 | 472.78 | 393.25 |
| 474.79 | 393.24 | 494.83 | 393.45 | 495.5 | 393.45 | 497.47 | 393.48 | 499.31 | 393.57 |
| 504.59 | 393.93 | 504.93 | 393.96 | 505.43 | 393.99 | 510 | 394.29 | 512.21 | 394.29 |
| 514.3 | 394.19 | 514.42 | 394.19 | 514.73 | 394.17 | 525.72 | 393.65 | 526.23 | 393.62 |
| 527.31 | 393.57 | 534.39 | 393.54 | 537.32 | 393.55 | 538.17 | 393.56 | 541.2 | 393.57 |
| 541.85 | 393.63 | 545.94 | 394.03 | 546.01 | 394.04 | 548.38 | 394.28 | 549.82 | 394.34 |
| 551.42 | 394.34 | 555.13 | 394.38 | 560.66 | 394.5 | 565.17 | 394.54 | 565.28 | 394.55 |
| 565.52 | 394.55 | 573.43 | 394.51 | 583.18 | 394.28 | 583.53 | 394.28 | 589.99 | 394.21 |
| 591.97 | 394.22 | 593 | 394.24 | 601.75 | 394.27 | 603.27 | 394.25 | 605.45 | 394.19 |
| 605.74 | 394.18 | 618.82 | 394.07 | 618.89 | 394.07 | 620.85 | 394.05 | 621.83 | 394.05 |
| 627.98 | 394 | 628.62 | 394.01 | 628.71 | 394.01 | 629.25 | 394.03 | 633.68 | 394.12 |
| 638.69 | 394.16 | 639.05 | 394.17 | 641.48 | 394.14 | 641.97 | 394.15 | 642.56 | 394.1 |
| 642.99 | 394.07 | 651.36 | 393.39 | 654.18 | 393.36 | 654.48 | 393.36 | 661.35 | 393.29 |
| 668.31 | 393.29 | 669.3 | 393.37 | 670.88 | 393.4 | 671.61 | 393.43 | 671.83 | 393.43 |
| 672.04 | 393.44 | 672.26 | 393.44 | 672.91 | 393.56 | 674.44 | 393.8 | 675.12 | 393.92 |
| 676.11 | 394.1 | 676.72 | 394.19 | 677.52 | 394.34 | 677.67 | 394.35 | 677.93 | 394.36 |
| 678.56 | 394.4 | 678.81 | 394.41 | 680.08 | 394.48 | 680.86 | 394.55 | 681.18 | 394.57 |
| 685.73 | 394.57 | 687.02 | 394.58 | 691.24 | 394.57 | 692.79 | 394.6 | 699.75 | 394.64 |
| 700.06 | 394.64 | 711.4 | 394.73 | 722.09 | 394.74 | 726.54 | 394.71 | 728.75 | 394.7 |
| 734.61 | 394.15 | 736.98 | 393.95 | 743.98 | 393.83 | 751.77 | 393.89 | 752.49 | 393.9 |
| 752.84 | 393.9 | 755.15 | 393.89 | 756.83 | 393.86 | 757.05 | 393.86 | 760.58 | 393.79 |
| 763.77 | 393.86 | 765.84 | 393.86 | 766.26 | 393.84 | 772.42 | 393.61 | 772.8 | 393.58 |
| 775.73 | 393.58 | 785.09 | 393.65 | 787.58 | 393.71 | 794.44 | 393.81 | 794.86 | 393.81 |
| 795.33 | 393.82 | 804.11 | 393.88 | 804.63 | 393.87 | 805.02 | 393.87 | 819.69 | 393.83 |
| 823.98 | 393.78 | 827.45 | 393.78 | 831.7 | 393.77 | 832.9 | 393.78 | 832.98 | 393.78 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 833.16 | 393.77 | 833.65 | 393.77 | 834.66 | 393.76 | 835.41 | 393.76 | 851.52 | 393.61 |
| 852.5 | 393.61 | 852.93 | 393.62 | 853.47 | 393.62 | 860.48 | 393.66 | 868.37 | 393.64 |
| 868.81 | 393.65 | 868.93 | 393.65 | 870.75 | 393.67 | 870.96 | 393.67 | 880.14 | 393.69 |
| 881.9 | 393.63 | 883.64 | 393.45 | 884.38 | 393.36 | 886.15 | 393.19 | 888.74 | 392.91 |
| 890.45 | 392.71 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 366.05 | .04 | 680.08 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 366.05 | 680.08 | 69.11 | 71.43 | 68.36 | .1 | .3 |

Right Levee Station=696.9543 Elevation=394.8257

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 12885.7*

INPUT
Description:
Station Elevation Data num= 259

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 395.35 | 3.67 | 395.34 | 4.18 | 395.35 | 15.41 | 395.36 | 24.02 | 395.42 |
| 29.05 | 395.42 | 29.55 | 395.4 | 30.48 | 395.37 | 31.21 | 395.36 | 31.71 | 395.35 |
| 31.88 | 395.35 | 33.09 | 395.32 | 40.04 | 395.34 | 40.46 | 395.35 | 40.74 | 395.35 |
| 45.44 | 395.08 | 46.02 | 395.07 | 46.84 | 395.07 | 48.33 | 395.04 | 48.67 | 395.05 |
| 52.19 | 395.19 | 52.27 | 395.19 | 65.09 | 395.58 | 65.58 | 395.59 | 74.37 | 395.61 |
| 127.28 | 395.56 | 155.74 | 395.57 | 162.85 | 395.66 | 171.56 | 395.75 | 175.87 | 395.76 |
| 176.41 | 395.77 | 180.44 | 395.79 | 181 | 395.78 | 181.47 | 395.78 | 182.02 | 395.79 |
| 185.22 | 395.79 | 211.16 | 395.23 | 211.7 | 395.21 | 212.68 | 395.19 | 212.92 | 395.19 |
| 215.16 | 395.21 | 215.75 | 395.2 | 230.5 | 395.24 | 242.89 | 395.16 | 243.58 | 395.16 |
| 246.22 | 395.18 | 246.61 | 395.19 | 246.69 | 395.18 | 247.83 | 395.19 | 248.29 | 395.2 |
| 250.03 | 395.22 | 262.7 | 395.23 | 263.47 | 395.24 | 263.59 | 395.24 | 267.89 | 395.21 |
| 268.97 | 395.21 | 279.95 | 395.15 | 280.46 | 395.14 | 280.81 | 395.14 | 281.74 | 395.13 |
| 282.48 | 395.11 | 288.78 | 395.06 | 289.07 | 395.05 | 290.96 | 395.04 | 291.51 | 395.03 |
| 295.94 | 395 | 304.29 | 394.99 | 305.15 | 395 | 315.14 | 395 | 315.93 | 394.98 |
| 316.43 | 394.96 | 317.93 | 394.91 | 318.11 | 394.91 | 324.75 | 394.67 | 328.46 | 394.48 |
| 329.2 | 394.45 | 330.07 | 394.41 | 330.39 | 394.4 | 331.83 | 394.34 | 332.44 | 394.31 |
| 338.26 | 394.17 | 339.43 | 394.15 | 340.84 | 394.15 | 341.52 | 394.16 | 341.62 | 394.16 |
| 342.46 | 394.13 | 343.06 | 394.12 | 346.48 | 394.02 | 347.38 | 394 | 351.08 | 393.89 |
| 352.08 | 393.85 | 352.56 | 393.83 | 352.65 | 393.82 | 361.9 | 393.13 | 362.76 | 393.08 |
| 363.81 | 392.99 | 364.55 | 392.95 | 367.08 | 392.84 | 368.84 | 392.79 | 369.39 | 392.79 |
| 373.25 | 392.76 | 389.6 | 392.38 | 396.8 | 392.27 | 409.18 | 391.99 | 409.36 | 391.98 |
| 410.19 | 391.96 | 419.01 | 391.86 | 419.27 | 391.85 | 419.58 | 391.85 | 420.31 | 391.84 |
| 420.63 | 391.84 | 423.75 | 391.9 | 427.32 | 391.99 | 427.43 | 391.99 | 428.16 | 392.01 |
| 428.66 | 392.04 | 428.93 | 392.04 | 431.81 | 392.11 | 431.97 | 392.12 | 434.12 | 392.18 |
| 434.2 | 392.18 | 434.48 | 392.19 | 436.36 | 392.43 | 438.93 | 392.68 | 456.08 | 392.61 |
| 475.19 | 392.76 | 475.82 | 392.76 | 477.7 | 392.78 | 479.45 | 392.86 | 484.35 | 393.14 |
| 484.5 | 393.15 | 484.81 | 393.16 | 485.3 | 393.19 | 489.65 | 393.43 | 491.76 | 393.43 |
| 493.56 | 393.36 | 493.75 | 393.35 | 493.87 | 393.35 | 503.79 | 392.96 | 506.15 | 392.86 |
| 512.91 | 392.83 | 515.7 | 392.84 | 516.51 | 392.85 | 519.4 | 392.85 | 523.92 | 393.22 |
| 523.99 | 393.23 | 526.25 | 393.42 | 527.63 | 393.47 | 529.15 | 393.47 | 537.95 | 393.7 |
| 542.26 | 393.76 | 545.73 | 393.76 | 550.14 | 393.73 | 558.94 | 393.43 | 559.43 | 393.43 |
| 559.77 | 393.42 | 565.93 | 393.36 | 568.8 | 393.38 | 569.38 | 393.38 | 574.64 | 393.4 |
| 575.3 | 393.41 | 577.14 | 393.41 | 579.24 | 393.38 | 579.53 | 393.37 | 580.67 | 393.35 |
| 580.95 | 393.34 | 593.42 | 393.26 | 593.48 | 393.26 | 602.16 | 393.2 | 602.76 | 393.21 |
| 602.85 | 393.21 | 607.58 | 393.3 | 612.7 | 393.3 | 615.03 | 393.26 | 615.49 | 393.26 |
| 624.45 | 392.59 | 627.14 | 392.54 | 627.42 | 392.54 | 633.97 | 392.43 | 640.61 | 392.43 |
| 640.73 | 392.45 | 641.56 | 392.56 | 643.06 | 392.61 | 644.17 | 392.66 | 644.38 | 392.66 |
| 645 | 392.77 | 645.9 | 392.9 | 647.1 | 393.1 | 648.05 | 393.26 | 648.62 | 393.35 |
| 649.39 | 393.51 | 649.53 | 393.52 | 649.78 | 393.54 | 650.38 | 393.6 | 651.83 | 393.72 |
| 653.01 | 393.86 | 663.83 | 393.86 | 665.48 | 393.91 | 667.27 | 393.91 | 667.69 | 393.92 |
| 672.97 | 393.95 | 673.3 | 393.96 | 692.43 | 394.13 | 693.32 | 394.13 | 701.75 | 394.07 |
| 702.27 | 394.06 | 704.13 | 394.05 | 710.42 | 393.59 | 712.96 | 393.42 | 720.48 | 393.31 |
| 721.71 | 393.32 | 723.95 | 393.32 | 728.85 | 393.34 | 729.63 | 393.35 | 729.78 | 393.34 |
| 730 | 393.34 | 732.48 | 393.33 | 734.29 | 393.3 | 734.53 | 393.3 | 738.31 | 393.24 |
| 738.77 | 393.24 | 741.75 | 393.29 | 743.97 | 393.29 | 744.42 | 393.26 | 751.04 | 392.9 |
| 751.45 | 392.87 | 751.67 | 392.87 | 752.05 | 392.86 | 759.77 | 392.89 | 764.65 | 392.96 |
| 767.33 | 393.02 | 774.7 | 393.12 | 775.15 | 393.13 | 786.06 | 393.16 | 801.82 | 393.1 |
| 806.43 | 393.03 | 816.82 | 393.02 | 823.9 | 392.97 | 825.04 | 392.97 | 836.02 | 392.88 |
| 837.08 | 392.89 | 837.53 | 392.89 | 838.12 | 392.9 | 845.65 | 392.96 | 852.01 | 392.96 |
| 854.13 | 392.94 | 854.6 | 392.95 | 854.72 | 392.96 | 855.84 | 392.98 | 856.91 | 392.98 |
| 861.94 | 393.03 | 866.77 | 393.03 | 867.73 | 392.99 | 868.66 | 392.94 | 870.53 | 392.76 |
| 871.33 | 392.66 | 871.98 | 392.61 | 873.22 | 392.5 | 877.84 | 392.03 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 0 | .05 | 352.08 | .04 | 651.83 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
352.08 651.83 69.11 71.43 68.36 .1 .3
Right Levee Station=675.8015 Elevation=394.1986

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 12814.2*

INPUT
Description:
Station Elevation Data num= 275

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 394.26 | 3.06 | 394.25 | 3.53 | 394.26 | 15.95 | 394.28 | 25.07 | 394.32 |
| 27.9 | 394.3 | 28.38 | 394.29 | 29.27 | 394.25 | 29.98 | 394.23 | 30.45 | 394.22 |
| 30.62 | 394.21 | 32.14 | 394.17 | 38.86 | 394.19 | 39.12 | 394.2 | 43.64 | 393.81 |
| 44.99 | 393.79 | 46.41 | 393.75 | 46.74 | 393.76 | 50.12 | 393.91 | 50.19 | 393.92 |
| 50.76 | 393.94 | 51.25 | 393.97 | 51.88 | 393.99 | 62.51 | 394.43 | 62.98 | 394.44 |
| 71.42 | 394.46 | 122.23 | 394.41 | 147.3 | 394.42 | 147.93 | 394.43 | 149.56 | 394.43 |
| 150.81 | 394.45 | 151.49 | 394.47 | 168.32 | 394.69 | 168.89 | 394.68 | 169.41 | 394.69 |
| 171.73 | 394.71 | 172.11 | 394.71 | 173.28 | 394.72 | 173.82 | 394.71 | 174.8 | 394.71 |
| 175.76 | 394.73 | 176.33 | 394.72 | 177.87 | 394.72 | 200.25 | 394.34 | 203.3 | 394.27 |
| 204.24 | 394.26 | 204.4 | 394.25 | 204.48 | 394.25 | 207.19 | 394.26 | 207.69 | 394.25 |
| 208.37 | 394.26 | 236.91 | 394.14 | 238 | 394.15 | 244.77 | 394.14 | 253.13 | 394.18 |
| 269.67 | 394.11 | 270.56 | 394.1 | 271.27 | 394.08 | 277.33 | 394.04 | 279.43 | 394.03 |
| 279.94 | 394.02 | 286.04 | 394 | 286.41 | 393.99 | 294.33 | 393.99 | 295.81 | 394 |
| 302.63 | 394 | 303.4 | 393.99 | 303.88 | 393.97 | 305.31 | 393.94 | 305.41 | 393.94 |
| 305.49 | 393.93 | 311.87 | 393.75 | 316.14 | 393.55 | 316.33 | 393.54 | 316.97 | 393.52 |
| 317.28 | 393.5 | 319.25 | 393.43 | 324.5 | 393.33 | 324.83 | 393.33 | 325.96 | 393.32 |
| 326.99 | 393.34 | 327.97 | 393.37 | 328.06 | 393.37 | 335.74 | 393.2 | 338.11 | 393.14 |
| 338.57 | 393.12 | 338.65 | 393.11 | 346.35 | 392.53 | 348.33 | 392.4 | 349.33 | 392.31 |
| 350.04 | 392.28 | 351.98 | 392.18 | 354.14 | 392.09 | 354.68 | 392.09 | 359.14 | 392.05 |
| 374.02 | 391.65 | 374.65 | 391.65 | 380.91 | 391.55 | 392.75 | 391.25 | 392.93 | 391.24 |
| 393.71 | 391.22 | 402.16 | 391.14 | 402.41 | 391.13 | 403.64 | 391.13 | 405.63 | 391.15 |
| 410.01 | 391.23 | 410.11 | 391.23 | 411.29 | 391.28 | 411.53 | 391.27 | 414.27 | 391.33 |
| 414.43 | 391.34 | 416.47 | 391.38 | 416.55 | 391.38 | 416.81 | 391.39 | 418.61 | 391.69 |
| 420.55 | 391.95 | 421.06 | 392.01 | 428.83 | 392 | 429.36 | 391.99 | 434.8 | 391.99 |
| 435.54 | 392 | 435.72 | 392 | 436.1 | 391.99 | 437.37 | 391.98 | 456.15 | 392.07 |
| 457.93 | 392.09 | 459.6 | 392.14 | 464.26 | 392.35 | 464.4 | 392.36 | 464.7 | 392.37 |
| 469.3 | 392.57 | 471.31 | 392.57 | 473.02 | 392.52 | 473.21 | 392.51 | 473.31 | 392.51 |
| 482.75 | 392.22 | 483.57 | 392.19 | 484.03 | 392.18 | 485 | 392.14 | 494.85 | 392.13 |
| 496.24 | 392.14 | 497.6 | 392.14 | 501.9 | 392.41 | 501.97 | 392.41 | 504.12 | 392.56 |
| 504.58 | 392.58 | 505.43 | 392.6 | 506.88 | 392.6 | 515.25 | 392.91 | 519.35 | 392.98 |
| 526.84 | 392.96 | 535.22 | 392.57 | 535.68 | 392.57 | 536.01 | 392.56 | 537.02 | 392.56 |
| 541.87 | 392.51 | 546.46 | 392.53 | 547.09 | 392.52 | 547.66 | 392.53 | 551.79 | 392.54 |
| 552.03 | 392.55 | 552.53 | 392.55 | 553.91 | 392.54 | 554.53 | 392.53 | 554.81 | 392.52 |
| 555.88 | 392.5 | 569.86 | 392.45 | 570.75 | 392.44 | 575.22 | 392.41 | 576.98 | 392.41 |
| 579.13 | 392.45 | 579.66 | 392.45 | 581.49 | 392.47 | 586.04 | 392.43 | 586.36 | 392.43 |
| 589.01 | 392.37 | 589.55 | 392.34 | 589.94 | 392.31 | 597.54 | 391.78 | 598.22 | 391.77 |
| 599.05 | 391.74 | 600.09 | 391.72 | 600.37 | 391.72 | 601.37 | 391.69 | 606.59 | 391.58 |
| 612.91 | 391.57 | 613.02 | 391.59 | 613.81 | 391.75 | 616.29 | 391.87 | 616.49 | 391.88 |
| 617.95 | 392.1 | 618.47 | 392.17 | 619.08 | 392.27 | 619.99 | 392.43 | 620.53 | 392.51 |
| 621.27 | 392.68 | 621.4 | 392.7 | 621.63 | 392.72 | 622.2 | 392.8 | 622.44 | 392.82 |
| 623.58 | 392.96 | 624.85 | 393.14 | 626.4 | 393.14 | 626.63 | 393.15 | 636.41 | 393.15 |
| 638.18 | 393.21 | 640.09 | 393.22 | 640.54 | 393.23 | 640.7 | 393.22 | 646.18 | 393.27 |
| 646.54 | 393.27 | 660.49 | 393.46 | 666.99 | 393.5 | 667.95 | 393.5 | 676.96 | 393.43 |
| 677.51 | 393.42 | 677.57 | 393.42 | 679.5 | 393.4 | 686.23 | 393.03 | 686.88 | 392.99 |
| 688.94 | 392.9 | 696.99 | 392.79 | 708.89 | 392.78 | 709.67 | 392.77 | 709.82 | 392.77 |
| 711.75 | 392.74 | 712 | 392.74 | 716.05 | 392.68 | 716.54 | 392.68 | 719.72 | 392.72 |
| 722.1 | 392.72 | 722.58 | 392.68 | 729.66 | 392.2 | 730.1 | 392.15 | 732.53 | 392.14 |
| 733.46 | 392.15 | 734.96 | 392.15 | 738.83 | 392.18 | 738.99 | 392.18 | 754.95 | 392.44 |
| 755.44 | 392.44 | 755.97 | 392.45 | 767.1 | 392.45 | 783.59 | 392.37 | 783.95 | 392.36 |
| 788.88 | 392.27 | 797.76 | 392.26 | 799.13 | 392.27 | 799.23 | 392.27 | 799.43 | 392.26 |
| 801.15 | 392.26 | 802.01 | 392.25 | 815.21 | 392.19 | 818.74 | 392.15 | 821.65 | 392.17 |
| 822.14 | 392.17 | 830.81 | 392.25 | 830.96 | 392.25 | 831.85 | 392.26 | 837.62 | 392.26 |
| 839.88 | 392.24 | 840.38 | 392.26 | 840.52 | 392.26 | 841.71 | 392.29 | 842.61 | 392.3 |
| 842.85 | 392.3 | 848.23 | 392.37 | 852.52 | 392.37 | 853.4 | 392.38 | 855.41 | 392.26 |
| 857.42 | 392.07 | 858.27 | 391.97 | 858.97 | 391.92 | 860.3 | 391.81 | 865.24 | 391.35 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 338.11 | .04 | 623.58 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
338.11 623.58 69.11 71.43 68.36 .1 .3
Right Levee Station=654.6486 Elevation=393.5714

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align  RS: 12742.8*

INPUT
Description:
Station Elevation Data  num=  263

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 393.17 | 1.42 | 393.16 | 2.93 | 393.17 | 24.03 | 393.21 | 26.75 | 393.19 |
| 28.74 | 393.1 | 29.19 | 393.08 | 29.35 | 393.08 | 30.46 | 393.04 | 30.82 | 393.02 |
| 37.25 | 393.03 | 37.5 | 393.04 | 41.84 | 392.54 | 42.37 | 392.52 | 43.13 | 392.51 |
| 44.5 | 392.46 | 44.8 | 392.47 | 46.67 | 392.56 | 48.05 | 392.64 | 48.12 | 392.65 |
| 48.38 | 392.66 | 48.66 | 392.68 | 49.13 | 392.7 | 49.74 | 392.74 | 58.26 | 393.2 |
| 59.93 | 393.28 | 60.37 | 393.29 | 142.72 | 393.28 | 143.38 | 393.29 | 144.58 | 393.32 |
| 157.94 | 393.58 | 161.37 | 393.61 | 161.91 | 393.61 | 162.41 | 393.62 | 164.63 | 393.64 |
| 165 | 393.64 | 166.12 | 393.65 | 166.64 | 393.64 | 167.58 | 393.64 | 168.49 | 393.66 |
| 169.04 | 393.65 | 170.52 | 393.65 | 194.41 | 393.34 | 194.9 | 393.33 | 195.81 | 393.32 |
| 198.08 | 393.32 | 198.63 | 393.31 | 212.21 | 393.25 | 223.62 | 393.12 | 223.85 | 393.11 |
| 235.7 | 393.08 | 241.86 | 393.12 | 258.53 | 393.08 | 260.06 | 393.06 | 267.87 | 393.02 |
| 268.41 | 393.02 | 272.46 | 393 | 272.81 | 392.99 | 273.85 | 392.99 | 274.22 | 393 |
| 274.58 | 392.99 | 289.84 | 393 | 290.1 | 393.01 | 290.86 | 392.99 | 291.32 | 392.99 |
| 292.7 | 392.96 | 292.86 | 392.96 | 298.98 | 392.83 | 303.07 | 392.64 | 303.26 | 392.64 |
| 306.06 | 392.54 | 311.09 | 392.49 | 311.41 | 392.49 | 312.5 | 392.5 | 313.48 | 392.53 |
| 313.79 | 392.55 | 314.42 | 392.58 | 314.51 | 392.58 | 321.86 | 392.47 | 324.14 | 392.42 |
| 324.58 | 392.41 | 324.66 | 392.4 | 333.12 | 391.77 | 333.9 | 391.72 | 334.86 | 391.64 |
| 337.39 | 391.5 | 337.85 | 391.47 | 339.45 | 391.4 | 339.96 | 391.39 | 343.48 | 391.37 |
| 344.22 | 391.36 | 352.25 | 391.08 | 358.43 | 390.93 | 359.04 | 390.93 | 365.01 | 390.83 |
| 376.33 | 390.51 | 376.49 | 390.5 | 376.9 | 390.48 | 377.98 | 390.48 | 385.3 | 390.42 |
| 385.55 | 390.41 | 386.65 | 390.41 | 392.69 | 390.48 | 392.79 | 390.48 | 393.45 | 390.5 |
| 393.91 | 390.51 | 394.14 | 390.51 | 396.74 | 390.55 | 396.89 | 390.55 | 398.83 | 390.59 |
| 399.15 | 390.59 | 400.86 | 390.95 | 403.18 | 391.34 | 415.31 | 391.35 | 416.92 | 391.37 |
| 417.09 | 391.37 | 417.45 | 391.36 | 434.62 | 391.38 | 435.9 | 391.39 | 436.17 | 391.38 |
| 436.47 | 391.38 | 438.17 | 391.39 | 444.17 | 391.57 | 444.3 | 391.57 | 444.59 | 391.58 |
| 445.02 | 391.59 | 448.96 | 391.71 | 450.85 | 391.71 | 452.48 | 391.68 | 452.66 | 391.68 |
| 452.76 | 391.67 | 453.03 | 391.67 | 463.85 | 391.43 | 465.74 | 391.43 | 466.48 | 391.42 |
| 475.8 | 391.42 | 476.37 | 391.45 | 479.89 | 391.6 | 479.95 | 391.6 | 481.98 | 391.71 |
| 482.18 | 391.71 | 482.43 | 391.72 | 483.23 | 391.73 | 484.6 | 391.73 | 492.55 | 392.12 |
| 496.44 | 392.2 | 503.55 | 392.18 | 511.5 | 391.71 | 512.24 | 391.71 | 517.8 | 391.66 |
| 519.5 | 391.66 | 520.39 | 391.67 | 520.91 | 391.66 | 522.16 | 391.67 | 522.76 | 391.66 |
| 525.66 | 391.67 | 526.26 | 391.68 | 529.23 | 391.68 | 529.81 | 391.67 | 530.08 | 391.67 |
| 531.1 | 391.66 | 549.45 | 391.62 | 550.5 | 391.61 | 551.04 | 391.62 | 553.16 | 391.63 |
| 553.66 | 391.64 | 555.4 | 391.65 | 559.71 | 391.56 | 560.02 | 391.56 | 562.12 | 391.49 |
| 562.53 | 391.49 | 563.05 | 391.46 | 563.42 | 391.43 | 570.62 | 390.98 | 572.06 | 390.93 |
| 573.05 | 390.91 | 573.31 | 390.9 | 579.21 | 390.72 | 584.15 | 390.71 | 585.21 | 390.72 |
| 585.32 | 390.74 | 586.06 | 390.93 | 587.42 | 391.02 | 587.86 | 391.06 | 588.42 | 391.09 |
| 588.61 | 391.11 | 589.17 | 391.18 | 589.99 | 391.29 | 590.48 | 391.36 | 591.07 | 391.45 |
| 591.92 | 391.59 | 592.44 | 391.68 | 593.14 | 391.85 | 593.26 | 391.87 | 593.48 | 391.91 |
| 594.03 | 391.99 | 594.25 | 392.03 | 595.33 | 392.21 | 596.3 | 392.37 | 596.68 | 392.43 |
| 600.92 | 392.43 | 601.87 | 392.44 | 608.99 | 392.44 | 610.88 | 392.51 | 612.91 | 392.52 |
| 613.39 | 392.53 | 613.56 | 392.53 | 619.4 | 392.58 | 619.78 | 392.59 | 633.65 | 392.81 |
| 641.55 | 392.88 | 641.94 | 392.87 | 642.57 | 392.87 | 652.16 | 392.79 | 652.75 | 392.77 |
| 652.82 | 392.77 | 654.87 | 392.75 | 662.73 | 392.44 | 664.93 | 392.37 | 677.44 | 392.26 |
| 684.32 | 392.24 | 686.16 | 392.22 | 687 | 392.22 | 687.15 | 392.21 | 689.21 | 392.19 |
| 689.48 | 392.19 | 693.79 | 392.13 | 694.98 | 392.13 | 697.7 | 392.15 | 700.23 | 392.14 |
| 708.28 | 391.49 | 708.75 | 391.43 | 711.34 | 391.42 | 718.04 | 391.46 | 718.21 | 391.47 |
| 735.73 | 391.76 | 747.67 | 391.74 | 748.15 | 391.73 | 765.7 | 391.63 | 766.08 | 391.63 |
| 771.34 | 391.51 | 784.4 | 391.51 | 785.32 | 391.5 | 799.37 | 391.46 | 803.12 | 391.42 |
| 806.22 | 391.44 | 815.98 | 391.55 | 823.23 | 391.57 | 825.63 | 391.55 | 826.17 | 391.57 |
| 826.31 | 391.57 | 827.59 | 391.6 | 828.54 | 391.61 | 828.8 | 391.62 | 834.52 | 391.72 |
| 840.02 | 391.72 | 841.12 | 391.65 | 842.17 | 391.57 | 844.3 | 391.38 | 845.21 | 391.27 |
| 845.96 | 391.23 | 847.37 | 391.12 | 852.63 | 390.67 | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 324.14 | .04 | 595.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 324.14 | 595.33 | 69.11 | 71.43 | 68.36 | .1 | .3 |

Right Levee  Station=633.4957  Elevation=392.9443

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align  RS: 12671.4*

INPUT
Description:
Station Elevation Data num= 256

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 392.08 | 1.36 | 392.07 | 2.8 | 392.08 | 23 | 392.11 | 25.59 | 392.08 |
| 26.85 | 392 | 27.5 | 391.97 | 27.93 | 391.95 | 28.09 | 391.94 | 29.15 | 391.89 |
| 29.49 | 391.88 | 35.65 | 391.87 | 35.89 | 391.88 | 40.03 | 391.27 | 40.55 | 391.25 |
| 41.27 | 391.23 | 42.58 | 391.16 | 42.87 | 391.18 | 44.24 | 391.26 | 44.66 | 391.28 |
| 45.98 | 391.37 | 46.05 | 391.38 | 46.29 | 391.39 | 57.34 | 392.13 | 57.77 | 392.15 |
| 120.01 | 392.12 | 120.59 | 392.13 | 134.05 | 392.13 | 135.13 | 392.14 | 137.2 | 392.14 |
| 138.97 | 392.2 | 146.4 | 392.39 | 147.05 | 392.4 | 151.14 | 392.49 | 154.41 | 392.53 |
| 154.93 | 392.53 | 155.41 | 392.54 | 157.54 | 392.56 | 157.89 | 392.56 | 158.96 | 392.58 |
| 159.87 | 392.56 | 161.23 | 392.59 | 161.76 | 392.58 | 176.95 | 392.51 | 186.03 | 392.39 |
| 186.5 | 392.39 | 187.37 | 392.38 | 187.58 | 392.38 | 188.59 | 392.37 | 189.55 | 392.37 |
| 190.07 | 392.36 | 213.98 | 392.09 | 214.58 | 392.09 | 216.91 | 392.06 | 217.33 | 392.06 |
| 218.33 | 392.05 | 218.73 | 392.05 | 220.27 | 392.04 | 221.35 | 392.04 | 224.54 | 392.01 |
| 231.43 | 392.06 | 247.26 | 392.05 | 247.39 | 392.04 | 277 | 392 | 277.35 | 392.01 |
| 277.62 | 392.01 | 278.33 | 392 | 278.77 | 392 | 280.08 | 391.99 | 280.24 | 391.99 |
| 286.1 | 391.92 | 290.01 | 391.74 | 290.19 | 391.74 | 292.33 | 391.67 | 292.87 | 391.66 |
| 296.44 | 391.64 | 297.68 | 391.65 | 297.99 | 391.65 | 299.03 | 391.67 | 299.97 | 391.72 |
| 300.27 | 391.74 | 300.87 | 391.79 | 300.95 | 391.79 | 301.7 | 391.78 | 302.22 | 391.78 |
| 310.17 | 391.71 | 310.59 | 391.7 | 310.66 | 391.69 | 317.67 | 391.17 | 318.72 | 391.1 |
| 320.38 | 390.97 | 322.79 | 390.81 | 323.23 | 390.79 | 324.76 | 390.7 | 325.25 | 390.69 |
| 328.6 | 390.67 | 329.31 | 390.66 | 336.95 | 390.36 | 342.85 | 390.21 | 343.42 | 390.21 |
| 349.12 | 390.11 | 359.9 | 389.77 | 360.06 | 389.76 | 360.45 | 389.74 | 361.48 | 389.74 |
| 368.45 | 389.69 | 371.46 | 389.7 | 372.33 | 389.71 | 372.97 | 389.71 | 375.38 | 389.73 |
| 375.47 | 389.73 | 376.53 | 389.75 | 376.75 | 389.74 | 379.21 | 389.77 | 379.35 | 389.77 |
| 380.62 | 389.79 | 381.26 | 389.79 | 381.49 | 389.8 | 383.1 | 390.21 | 384.84 | 390.57 |
| 385.3 | 390.67 | 392.28 | 390.71 | 396.77 | 390.71 | 398.3 | 390.74 | 398.8 | 390.74 |
| 416.25 | 390.7 | 416.51 | 390.69 | 418.4 | 390.69 | 424.08 | 390.78 | 424.2 | 390.78 |
| 424.47 | 390.79 | 424.89 | 390.79 | 428.61 | 390.86 | 430.4 | 390.86 | 431.94 | 390.84 |
| 432.2 | 390.84 | 432.46 | 390.83 | 439.44 | 390.76 | 441.41 | 390.73 | 441.82 | 390.73 |
| 444.48 | 390.71 | 454.01 | 390.71 | 457.87 | 390.79 | 457.92 | 390.79 | 459.85 | 390.85 |
| 460.27 | 390.85 | 462.33 | 390.87 | 469.85 | 391.33 | 473.53 | 391.41 | 473.62 | 391.42 |
| 476.49 | 391.42 | 477.59 | 391.43 | 480.25 | 391.41 | 487.77 | 390.86 | 488.19 | 390.85 |
| 489.39 | 390.85 | 493.74 | 390.81 | 496.68 | 390.81 | 497.86 | 390.8 | 502.02 | 390.81 |
| 502.65 | 390.82 | 521.96 | 390.83 | 529.33 | 390.82 | 534.66 | 390.65 | 535.66 | 390.61 |
| 536.06 | 390.6 | 536.54 | 390.57 | 536.89 | 390.56 | 543.71 | 390.18 | 544.32 | 390.15 |
| 546.25 | 390.08 | 551.84 | 389.86 | 557.51 | 389.86 | 557.61 | 389.89 | 558.32 | 390.12 |
| 559.6 | 390.23 | 560.02 | 390.27 | 560.2 | 390.28 | 560.37 | 390.3 | 560.55 | 390.31 |
| 562.03 | 390.48 | 562.5 | 390.54 | 563.05 | 390.63 | 564.35 | 390.84 | 565.01 | 391.02 |
| 565.13 | 391.04 | 565.34 | 391.09 | 565.85 | 391.19 | 566.06 | 391.24 | 567.09 | 391.45 |
| 568.11 | 391.64 | 568.52 | 391.71 | 568.94 | 391.72 | 581.58 | 391.72 | 583.58 | 391.81 |
| 585.73 | 391.83 | 586.24 | 391.84 | 586.42 | 391.83 | 592.61 | 391.9 | 594.3 | 391.94 |
| 599.47 | 392.02 | 600.78 | 392.05 | 607.73 | 392.17 | 616.12 | 392.25 | 617.2 | 392.25 |
| 628 | 392.13 | 628.06 | 392.13 | 630.24 | 392.1 | 638.58 | 391.89 | 651.47 | 391.75 |
| 661.04 | 391.69 | 661.49 | 391.69 | 664.32 | 391.66 | 664.49 | 391.66 | 666.67 | 391.63 |
| 666.96 | 391.63 | 670.72 | 391.58 | 671.53 | 391.58 | 672.08 | 391.57 | 678.36 | 391.57 |
| 686.9 | 390.79 | 687.39 | 390.72 | 687.66 | 390.71 | 690.15 | 390.7 | 697.26 | 390.75 |
| 697.44 | 390.75 | 705.6 | 390.93 | 715.46 | 391.07 | 716.01 | 391.07 | 716.62 | 391.08 |
| 728.01 | 391.03 | 728.68 | 391.02 | 729.19 | 391.02 | 747.81 | 390.9 | 748.22 | 390.9 |
| 753.79 | 390.76 | 783.52 | 390.73 | 787.51 | 390.69 | 790.8 | 390.72 | 791.35 | 390.72 |
| 792.05 | 390.74 | 801.14 | 390.85 | 808.83 | 390.87 | 811.39 | 390.85 | 811.95 | 390.87 |
| 812.11 | 390.88 | 814.47 | 390.93 | 814.74 | 390.93 | 820.82 | 391.06 | 826.65 | 391.06 |
| 828.93 | 390.89 | 831.19 | 390.69 | 832.16 | 390.58 | 832.95 | 390.54 | 834.45 | 390.43 |
| 840.03 | 389.98 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 310.17 | .04 | 567.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 310.17 | 567.09 | 69.11 | 71.43 | 68.36 | .1 | .3 |

Right Levee Station=612.3428 Elevation=392.3171

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 12600

INPUT
Description:
Station Elevation Data num= 278

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 390.991 | 1.3 | 390.984 | 3.09 | 390.99 | 4.69 | 391 | 10.35 | 391.008 |
| 13.97 | 391.012 | 14.95 | 391.01 | 21.96 | 391 | 24.44 | 390.969 | 26.26 | 390.837 |
| 28.16 | 390.733 | 34.04 | 390.718 | 34.27 | 390.727 | 38.23 | 390 | 38.72 | 389.974 |
| 39.41 | 389.947 | 40.66 | 389.868 | 42.25 | 389.973 | 42.65 | 390 | 43.91 | 390.101 |

```
   54.76 390.985   55.17     391   64.62 391.009   75.61 391.019   75.85  391.02
   75.88  391.02   96.69     391  102.46 390.981  107.08 390.967  108.07 390.969
  109.02 390.969  109.28  390.97  116.29 390.977  122.33 390.975  127.42 390.988
  129.04 390.993  129.59 390.995  131.02     391  132.71 391.066  139.81 391.285
  144.33 391.406  150.44  391.49  150.78 391.489   151.8 391.507  152.67  391.49
  153.97  391.52  154.47 391.509  168.98 391.524  187.71 391.365  204.34 391.072
  204.92 391.064   208.5     391  211.38 390.975  214.43  390.95  215.38 390.957
  218.32 390.978  221.01     391  221.65 391.002  225.37  391.01  225.64  391.01
  226.28 391.011  232.08 391.012  235.52 391.015  242.95 391.003  243.19 391.003
  244.78     391  244.79     391  245.24 390.998  245.25 390.998  245.27 390.998
  247.68 390.995   249.9 390.992  252.55 390.987  253.65 390.985  254.61 390.986
  255.17 390.987  257.24  390.99  259.14 390.992  264.05     391  264.52 391.004
  264.86 391.006  265.79 391.011  266.21 391.013  267.47 391.018  267.55 391.019
  267.62 391.019  269.46 391.012  273.21     391  276.33 390.862  276.95 390.841
  277.12 390.842  279.68 390.771  283.09 390.783  284.57 390.808  285.56 390.841
  286.46 390.912  287.32 390.998   287.4     391  288.11 391.001  288.61 391.001
  291.49 391.004  294.12 391.001  295.36     391   296.2 390.994   296.6 390.986
  296.67 390.985   308.2 390.129  310.07     390  314.39 389.971   320.3 389.704
  321.66 389.647  327.26 389.482  327.81 389.487  333.22 389.394  343.47 389.028
  343.62 389.025  343.99     389   344.3 388.999  344.97 388.996  352.68  388.97
  355.19 388.975  359.15  388.98  361.68 388.989  361.81 388.989  363.01 388.995
  363.54 388.999  363.61 388.999  363.83     389  365.35 389.476  367.44     390
     374  390.06  378.24 390.078  379.83 390.112  395.47 390.022  396.61 390.018
  396.85     390  396.93     390  397.05     390  397.12     390  403.99 389.995
  404.36 389.995  404.75 389.995   411.4     390  411.56     390  411.65     390
  411.89     390  418.47 390.003  419.64 390.004  420.33 390.003  420.72 390.003
  423.23 390.002  428.47     390  428.66     390  428.83     390  429.23     390
  432.71 389.991  433.54  389.99  435.85 389.981   437.9 389.988  440.06     390
  447.15 390.534   450.7 390.634  453.41 390.644  454.45 390.653  456.96 390.631
  464.05     390  467.24 389.978  474.58 389.938  475.42 389.932  480.39 389.971
  484.41     390  487.29 390.018  491.81 390.037  493.37 390.038  494.12  390.04
  496.29 390.029  497.91 390.023  499.33 390.019  499.82 390.017  501.22 390.012
  503.24     390  513.27 389.544  524.46     389  525.36     389  528.86     389
  529.81 389.001  530.57 389.308  534.51 389.724  535.06 389.805  536.26     390
  536.88  390.19  538.84 390.688  540.35     391   540.8 391.001  541.73 391.003
  542.48 391.004  544.03 391.008   545.1 391.009  546.17 391.012  546.39 391.012
   546.6 391.012  548.37 391.015  549.29 391.015  552.89 391.011  553.15 391.012
  554.16 391.012  556.31 391.116  558.55 391.131  559.09 391.143  559.28 391.139
  561.86 391.163  565.83 391.213  566.26 391.223  567.61 391.257  582.91 391.547
  590.68 391.623  591.11  391.62  591.82 391.619  596.47 391.571  602.58 391.499
  603.24 391.481  603.31 391.482  613.65 391.347  620.02 391.297  635.12 391.172
   650.6 391.007  656.49     391  657.06 390.939  662.88 390.342  665.52 390.086
  666.04     390  666.32 389.998  666.81 389.995  668.95 389.984  670.05 389.989
  671.85     390  676.47 390.037  685.29 390.239  695.72 390.383   696.3 390.385
  696.94 390.391  710.23 390.309     728 390.185  729.92 390.169  730.35 390.166
  736.24     390     741 389.991  742.94  389.99  748.59 389.999  748.83 389.999
  749.51     390  750.89 390.002  751.92 390.003  758.54  390.01     760 390.009
  767.68     390  769.64 389.979  771.89 389.962  775.37 389.994  775.95     390
   776.7 390.025  786.31 390.148  794.44 390.176  797.14 390.148  797.74 390.177
   797.9 390.182  799.33 390.228   800.4 390.244  800.69  390.25  807.11 390.396
  812.23 390.403  813.28 390.408  818.08     390   819.1 389.884  819.94 389.845
  822.14 389.695  825.07 389.466  827.42 389.302

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   296.2     .04  538.84     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         296.2  538.84           465.92     500  593.61             .1       .3
Left Levee      Station=  267.62      Elevation=  391.03
Right Levee     Station=  591.19      Elevation=  391.69

CROSS SECTION


RIVER: WASH20
REACH: Centerline Align   RS: 12100

INPUT
Description:
Station Elevation Data    num=     252
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  385.342.940002  385.3215.33002  385.1815.78003  385.18   16.37  385.17
16.58002  385.1717.33002  385.17   26.94  385.0227.78003  385.0129.17999  385.01
29.66003  385.0129.90002  385.01   30.13  385.01   31.06     38531.22998     385
31.35999     38531.51001     38535.71002  384.8353.22998     38457.39001   383.9
   57.75  383.8958.90002  383.9160.95001  383.97   61.38  383.9862.22998     384
62.64001  384.0162.73999  384.0163.39001     384   63.63     38466.08002  383.99
70.08002  383.9773.48999  383.9976.76001     38479.57001  384.05   80.06  384.05
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 80.59003 | 384.06 | 81.22003 | 384.07 | 83.72998 | 384.1 | 85.69 | 384.08 | 86.79004 | 384.08 |
| 87.46002 | 384.08 | 94.38 | 384.06 | 101.89 | 384.11 | 105.86 | 384.07 | 106.76 | 384.06 |
| 107.61 | 384.05 | 108.08 | 384.05 | 110.21 | 384.04 | 112.25 | 384 | 120.23 | 383.98 |
| 124.56 | 383.97 | 136.66 | 384 | 136.78 | 384 | 136.81 | 384 | 136.83 | 384 |
| 136.86 | 384 | 136.89 | 384 | 153.25 | 384.23 | 164.05 | 384.34 | 165.9 | 384.36 |
| 167.97 | 384.38 | 178.37 | 384.24 | 190.78 | 384.01 | 195.17 | 384 | 197.53 | 383.98 |
| 198.13 | 383.98 | 200.33 | 384 | 201.05 | 384 | 204.49 | 384.01 | 206.72 | 384.01 |
| 208.74 | 384.01 | 213.07 | 384 | 215.57 | 383.72 | 219.46 | 383.29 | 220.61 | 383.15 |
| 222.05 | 383.02 | 222.14 | 383.01 | 222.34 | 383 | 223.6 | 383 | 223.84 | 383 |
| 224.65 | 383 | 224.86 | 383 | 227.66 | 383.14 | 244.14 | 383.87 | 247.18 | 384 |
| 249.04 | 384.02 | 252.85 | 384.06 | 252.97 | 384.06 | 255.01 | 384.04 | 255.04 | 384.04 |
| 255.08 | 384.04 | 257.5 | 384.02 | 259.12 | 384 | 259.36 | 383.99 | 260.33 | 383.98 |
| 261.92 | 383.98 | 270.04 | 383.81 | 279.68 | 383.7 | 280.26 | 383.7 | 287.78 | 383.9 |
| 288.55 | 383.93 | 289.53 | 383.94 | 293.05 | 383.97 | 294.88 | 383.98 | 295.42 | 383.98 |
| 296.05 | 383.99 | 296.14 | 383.99 | 297.4 | 383.99 | 298.29 | 384 | 298.32 | 384 |
| 299.24 | 384.05 | 299.29 | 384.05 | 309.66 | 384.59 | 314.95 | 384.8 | 321.37 | 384.6 |
| 324.45 | 384.28 | 326.79 | 384 | 328.68 | 383.82 | 329.03 | 383.82 | 336.93 | 383.56 |
| 341.72 | 383.5 | 342.14 | 383.51 | 342.63 | 383.51 | 343.79 | 383.51 | 343.89 | 383.51 |
| 354.29 | 383.79 | 360.97 | 383.98 | 361.73 | 383.98 | 368.38 | 384 | 373.97 | 384.49 |
| 379.84 | 385 | 384.65 | 385 | 392.34 | 385.01 | 393.41 | 385.01 | 394.14 | 385.01 |
| 397.93 | 385 | 398.75 | 385 | 399.25 | 385 | 400.33 | 385 | 403.3 | 385 |
| 403.52 | 385 | 405.72 | 385 | 405.83 | 385 | 406.02 | 385 | 408.55 | 384.29 |
| 409.47 | 384 | 409.59 | 384 | 409.9 | 384 | 410.01 | 384.02 | 410.26 | 384.02 |
| 410.44 | 384.01 | 422.64 | 384.31 | 429.4 | 384.45 | 434.3 | 384.57 | 442.78 | 384.78 |
| 445.33 | 384.83 | 446.75 | 384.81 | 449.43 | 384.69 | 449.73 | 384.65 | 449.97 | 384.62 |
| 450.47 | 384.58 | 451.46 | 384.58 | 453.89 | 384.3 | 459.02 | 384.49 | 466.59 | 384.91 |
| 467.62 | 384.97 | 470.17 | 384.98 | 470.46 | 384.98 | 472.04 | 384.99 | 472.71 | 384.99 |
| 474.19 | 385 | 474.44 | 385 | 474.61 | 385 | 476.43 | 385 | 479.15 | 385 |
| 481.09 | 385 | 483.43 | 385 | 494.45 | 384.36 | 501.06 | 384 | 502.88 | 383.99 |
| 503.74 | 383.99 | 506.28 | 384 | 506.41 | 384 | 506.69 | 384.05 | 511.95 | 384.92 |
| 512.45 | 385 | 512.58 | 385 | 514.61 | 385.01 | 534.67 | 385.11 | 540.87 | 385.08 |
| 560.16 | 385.22 | 560.87 | 385.24 | 561.79 | 385.28 | 562.12 | 385.29 | 562.64 | 385.29 |
| 566.51 | 385.28 | 570.56 | 385.25 | 574.76 | 385.13 | 574.82 | 385.13 | 575.55 | 385.1 |
| 576.63 | 385.07 | 576.73 | 385.07 | 576.78 | 385.07 | 576.91 | 385.07 | 577.49 | 385.08 |
| 577.58 | 385.08 | 584.41 | 385.06 | 589.76 | 385.1 | 592.97 | 385.08 | 599.93 | 385.07 |
| 600.35 | 385.07 | 600.46 | 385.07 | 601.42 | 385.05 | 602.38 | 385.05 | 602.52 | 385.05 |
| 602.82 | 385.04 | 603.75 | 385.04 | 605.27 | 385.02 | 605.93 | 385.01 | 606.63 | 385.01 |
| 607.89 | 385 | 611.05 | 384.99 | 611.81 | 384.99 | 625.01 | 384.49 | 627.85 | 384.4 |
| 637.77 | 384 | 640.01 | 383.99 | 641.2 | 383.99 | 642.85 | 383.98 | 645.3 | 383.99 |
| 648.16 | 383.99 | 648.21 | 383.99 | 648.52 | 383.99 | 648.73 | 383.99 | 649.1 | 383.99 |
| 650.94 | 384 | 651.53 | 384.01 | 662.25 | 384.63 | 665.48 | 384.79 | 665.79 | 384.81 |
| 669.58 | 384.92 | 669.88 | 384.93 | 670.59 | 384.96 | 671.23 | 384.97 | 671.6 | 384.98 |
| 684.02 | 384.95 | 695.78 | 384.93 | 698.84 | 384.95 | 701.2 | 384.99 | 702.06 | 384.99 |
| 702.67 | 384.99 | 702.76 | 384.99 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 35.71002 | .04 | 511.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 35.71002 | 511.95 | 500.02 | 500 | 502.8 | .1 | .3 |

Right Levee Station= 534.15 Elevation= 385.14

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 11600

INPUT
Description:
Station Elevation Data num= 257

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 379.55 | 30.00488 | 379.55 | 26.97003 | 379.11 | 30.73004 | | 37932.58002 | 378.51 |
| 34.69 | | 37836.20001 | 377.99 | 42.77002 | 377.93 | 43.34003 | 377.93 | 48.25 | 377.97 |
| 50.84003 | 377.99 | 51.31 | 377.99 | 52.01001 | | 37860.15002 | 378.03 | 63.67004 | 378.04 |
| 67.37 | 378.04 | 67.75 | 378.04 | 68.94 | 378.05 | 70.04004 | 378.04 | 70.99005 | 378.04 |
| 76.47003 | 378.03 | 80.87 | 378.02 | 88.15002 | 378.01 | 89.19 | 378.01 | 90.05005 | 378 |
| 90.28003 | 378 | 91 | | 37891.82001 | 378 | 91.94 | 378 | 92.12 | 378 |
| 93.48004 | | 37893.82001 | 378 | 96.63 | 377.99 | 104.33 | 377.98 | 108.47 | 377.98 |
| 113.35 | 377.98 | 118.51 | 377.99 | 118.72 | 377.99 | 118.96 | 377.99 | 125.32 | 377.99 |
| 125.51 | 377.99 | 125.7 | 377.99 | 125.92 | 377.99 | 127.01 | 377.99 | 127.11 | 377.99 |
| 127.17 | 377.99 | 133.5 | 377.41 | 35.9901 | 377.17 | 136.32 | 377.17 | 137.29 | 377.17 |
| 137.9901 | 377.19 | 138.86 | 377.22 | 140.22 | 377.22 | 143.07 | 377.2 | 146.15 | 377.15 |
| 147.6 | 377 | 156.01 | 376.98 | 160.08 | 376.97 | 161.73 | 376.97 | 164.46 | 376.96 |
| 167.41 | 376.97 | 177.31 | 376.98 | 177.46 | 376.98 | 177.66 | 376.98 | 178.57 | 376.98 |
| 179.05 | 376.98 | 181.07 | 376.99 | 181.59 | 376.99 | 183.39 | 377 | 185.79 | 377.31 |
| 185.88 | 377.31 | 187.29 | 377.51 | 187.8 | 377.57 | 192.2 | 377.91 | 196.62 | 377.77 |
| 196.95 | 377.77 | 199.31 | 377.78 | 201.01 | 377.82 | 206.84 | 377.91 | 207.66 | 377.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 207.67 | 377.9 | 207.68 | 377.9 | 207.74 | 377.9 | 207.8 | 377.89 | 211.58 | 377.97 |
| 213.01 | 377.97 | 213.37 | 377.96 | 213.38 | 377.96 | 214.51 | 377.96 | 214.56 | 377.96 |
| 216.88 | 377.97 | 221.22 | 378 | 222.73 | 378 | 222.96 | 378 | 223.41 | 378 |
| 225.27 | 378 | 226.3 | 378 | 231.72 | 377.37 | 234.56 | 377 | 235.68 | 377 |
| 236.43 | 377 | 237.88 | 376.99 | 239.81 | 376.99 | 239.83 | 376.99 | 239.84 | 376.99 |
| 241.77 | 376.99 | 243.16 | 377 | 243.56 | 377 | 244.63 | 377 | 249.49 | 377.31 |
| 261.23 | 378 | 263.9 | 378.26 | 268.64 | 378.7 | 271.56 | 379 | 273.26 | 379 |
| 275.44 | 379 | 285.99 | 378.52 | 293.87 | 378 | 301.59 | 377.99 | 308.27 | 377.98 |
| 311.53 | 377.98 | 315.16 | 377.98 | 329.36 | 378 | 331.34 | 378 | 331.95 | 378 |
| 334.46 | 378 | 334.54 | 378 | 334.58 | 378 | 334.61 | 378 | 334.65 | 378 |
| 334.69 | 378 | 335.01 | 378.03 | 342.84 | 379 | 347.06 | 379 | 349.66 | 379 |
| 356.05 | 379 | 356.39 | 379 | 356.63 | 379 | 356.82 | 379 | 358.13 | 378.98 |
| 358.4 | 378.98 | 358.87 | 378.98 | 360.95 | 378.97 | 365.52 | 378.83 | 372.08 | 378.69 |
| 376.67 | 378.67 | 382.03 | 378.63 | 388.42 | 378.5 | 401.96 | 378.22 | 407.33 | 378.08 |
| 410.18 | 378 | 410.26 | 378 | 410.85 | 377.81 | 421.18 | 377.58 | 429.03 | 377.62 |
| 429.3 | 377.62 | 436.13 | 377.9 | 436.58 | 377.91 | 436.78 | 377.92 | 437.24 | 377.94 |
| 438.86 | 378 | 440.49 | 378.47 | 441.92 | 378.83 | 442.6 | 379 | 442.84 | 379 |
| 444.29 | 379.01 | 445.37 | 379 | 445.94 | 379 | 447.2 | 379 | 448.18 | 378.99 |
| 448.24 | 378.99 | 449.29 | 378.99 | 450.02 | 379 | 450.43 | 378.99 | 451.48 | 379 |
| 453.32 | 379 | 456.13 | 379.01 | 459.8 | 379 | 461.81 | 379 | 466.16 | 379 |
| 468.19 | 379 | 469.26 | 379 | 470.01 | 379 | 470.03 | 379 | 470.92 | 379 |
| 472.39 | 378.97 | 472.52 | 378.97 | 475.34 | 378.92 | 477.87 | 378.87 | 478.15 | 378.87 |
| 484.2 | 378.79 | 485.86 | 378.78 | 487.24 | 378.77 | 488.77 | 378.76 | 501.31 | 378.66 |
| 511.69 | 378.63 | 514.1801 | 378.63 | 515.1 | 378.63 | 516.15 | 378.62 | 529.54 | 378.81 |
| 538.7 | 378.97 | 543.27 | 378.98 | 544.75 | 378.99 | 549.58 | 379 | 549.7 | 379 |
| 549.72 | 379 | 549.88 | 379 | 550.53 | 379.01 | 550.87 | 379.01 | 551.08 | 379.02 |
| 551.17 | 379.02 | 552.19 | 379 | 554.46 | 378.41 | 556.45 | 378 | 556.71 | 378 |
| 556.92 | 378 | 557.4 | 378 | 557.95 | 378 | 560.88 | 378.14 | 566.71 | 378.34 |
| 570.47 | 378.45 | 571.23 | 378.47 | 571.6 | 378.47 | 575.58 | 378.43 | 579.17 | 378.42 |
| 582 | 378.48 | 583.62 | 378.49 | 595.53 | 378.65 | 619.16 | 379 | 619.33 | 379 |
| 619.37 | 379 | 619.5601 | 379 | 619.82 | 379 | 620.42 | 379 | 620.5 | 379 |
| 620.76 | 379 | 622.4 | 379 | 627.66 | 379 | 634.88 | 379 | 637.96 | 379 |
| 639.6 | 379 | 641.33 | 379 | 642.12 | 379 | 643.37 | 379 | 644.02 | 379 |
| 649.45 | 379.01 | 649.73 | 379.01 | 655.25 | 379 | 663.35 | 379 | 672.37 | 378.27 |
| 676.44 | 378 | 681.94 | 377.98 | 681.9901 | 377.98 | 686.21 | 377.99 | 687.7401 | 378 |
| 689.86 | 378.02 | 691.65 | 378.09 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 30.73004 | .04 | 444.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 30.73004 | 444.29 | 276.49 | 270.81 | 272.92 | .1 | .3 |

Right Levee Station= 450.92 Elevation= 379.05

CROSS SECTION

RIVER: WASH20
REACH: Centerline Align RS: 11329.19

INPUT
Description:
Station Elevation Data num= 202

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 376.47 | 5700073 | 376.46 | 10.57001 | 376.25 | 22.07996 | 376 | 22.62 | 376 |
| 22.70996 | 376 | 22.84998 | 376 | 22.91998 | 376 | 23.28998 | 376 | 29.70001 | 375.73 |
| 35.71997 | 375.49 | 38.51999 | 375.39 | 40.41998 | 375.33 | 45.24997 | 375.26 | 48.57999 | 375.23 |
| 48.97998 | 375.23 | 53.01999 | 375.16 | 54.32999 | 375.13 | 57.35999 | 375.05 | 57.52997 | 375.05 |
| 58.93997 | 375 | 60.87 | 374.97 | 64.66998 | 374.92 | 66.81998 | 374.94 | 67.48999 | 374.94 |
| 68.31 | 374.94 | 69.94998 | 374.92 | 71.16998 | 374.91 | 73.32999 | 374.92 | 74.53998 | 374.92 |
| 77.91998 | 374.64 | 79.53998 | 374.68 | 5.19998 | 374 | 103.09 | 373.96 | 105.26 | 373.96 |
| 111.04 | 373.97 | 119.55 | 373.98 | 125.96 | 374 | 131.66 | 374.01 | 132.43 | 374.02 |
| 133.82 | 374.01 | 135.1 | 374.01 | 135.67 | 374.01 | 136.44 | 374.01 | 141.1 | 374.09 |
| 141.22 | 374.1 | 141.86 | 374.19 | 142.37 | 374.24 | 148.13 | 375 | 150.86 | 375 |
| 154.44 | 375 | 157.78 | 375 | 161.26 | 375 | 165.35 | 374.93 | 167.16 | 374.92 |
| 167.37 | 374.91 | 168.39 | 374.93 | 171.88 | 374.96 | 175.61 | 375 | 180.1 | 375.07 |
| 181.81 | 375.07 | 187.76 | 375 | 187.86 | 375 | 188.13 | 375 | 188.31 | 375 |
| 188.49 | 375 | 190.37 | 374.99 | 192.28 | 374.98 | 193.05 | 374.98 | 194.99 | 374.99 |
| 196.55 | 374.99 | 197.2 | 375 | 197.78 | 375 | 205.71 | 375.16 | 216.86 | 375.1 |
| 223.48 | 375.14 | 239.4 | 375.04 | 245.28 | 375 | 245.31 | 375 | 246.31 | 375 |
| 263.52 | 374.98 | 266.75 | 374.98 | 271.1 | 374.98 | 281.92 | 374.99 | 286.96 | 374.99 |
| 288.17 | 374.99 | 289.25 | 374.99 | 290.15 | 374.99 | 291.8 | 374.99 | 293.28 | 374.99 |
| 294.13 | 374.95 | 302.48 | 374.49 | 303 | 374.49 | 310.41 | 374 | 310.89 | 374 |
| 311.68 | 374 | 313.47 | 373.99 | 315.85 | 374 | 316.01 | 374 | 317.48 | 374.1 |
| 331.01 | 375 | 332.36 | 375 | 334.37 | 375 | 342.44 | 375 | 346.55 | 374.94 |
| 347.01 | 374.93 | 347.36 | 374.94 | 357.88 | 374.79 | 360.77 | 374.53 | 361.7 | 374.5 |
| 366.41 | 374 | 373.52 | 373.96 | 375.97 | 373.94 | 379.86 | 373.96 | 385.92 | 374 |
| 392.72 | 374.07 | 399 | 374.12 | 402.78 | 374.15 | 404.06 | 374.14 | 406.67 | 374.14 |

```
  417.74  374.06  421.56     374  424.18  373.97  424.36  373.97  424.77  373.97
  425.19  373.97  425.52  373.98  426.41  373.98  428.03     374  434.88  374.03
  442.32  374.05  444.46  374.06  456.19  374.01  459.62     374  459.83     374
  459.98     374  463.53  373.99  465.47  373.99   467.4     374  476.79  374.05
  480.29  374.09  491.59  374.13  494.94     374  498.51  373.39  500.53  373.46
  503.93  373.65  504.06  373.65  504.41  373.69  506.37     374  511.39  374.46
  515.96  374.99  516.02     375  516.13     375  516.16     375  530.73  375.06
  533.09  375.05  545.43     375  545.67  374.97  547.43 374.725  552.07     374
  554.97 373.986  558.46 373.976  560.72 373.968  562.01 373.974  568.76     374
  573.22 374.293  579.27 374.584  581.81 374.702  582.28 374.702  582.75 374.702
  583.25 374.698  590.55 374.775  599.76 374.881  601.37  374.92  602.21 374.938
  602.78 374.943  603.26 374.948  605.24 374.957  605.58 374.955  605.97 374.952
  613.71 374.953  615.42  374.99  616.02 374.988  616.73 374.988  616.87 374.988
     617 374.987  617.02 374.987  617.37 374.987  617.44 374.987   617.8 374.985
  617.89 374.985  623.25 374.968  628.17 374.983  631.42     375   637.6 375.041
  649.83 375.298  661.13 375.383  665.05 375.359  667.04 375.368  669.14 375.379
  669.33 375.378  669.91 375.382

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0574.53998     .04  516.02     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      74.53998  516.02           565.35  522.41  405.42             .1       .3
Right Levee     Station=  530.74      Elevation=  375.07

CROSS SECTION


RIVER: WASH23
REACH: Wash23             RS: 3479.12

INPUT
Description:
Station Elevation Data    num=     369
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  363.345.219971     36349.82996     363104.3101  362.02  105.67  362.01
  110.01  362.02110.0601  362.02111.0601     362127.1901     362  128.84  362.01
  169.36     362  171.22  361.98  171.49  361.98  188.38  361.93200.3199  361.98
  201.89  361.98  202.92  361.99   204.7  361.99  205.13     362205.8199  361.99
206.0699  361.99206.4301     362  225.01     362  225.62  361.96     233  361.44
  238.92     361  241.66  360.99   242.3  360.99244.8101     361  245.61     361
247.1801  361.22  248.16  361.33  250.08  361.56  254.89     362  272.83     362
  275.38  361.89  275.64  361.89  277.04  361.83  280.09   361.8  283.63  361.69
  299.78  361.02  300.15  361.01  316.63  361.01  319.37     361  322.79     361
  327.85  360.82333.3101  360.66  353.97  360.01  354.46     360  355.21  359.85
  356.25  359.62  359.76     359  368.83  358.85  369.53  358.84  372.28  358.81
  375.55  358.76  377.34  358.78  379.21  358.81  381.33  358.84  382.24  358.86
  382.51  358.86  382.97  358.87  385.71  358.91  388.26  358.94  389.17   358.9
  392.65     359  396.88  359.76  398.34     360     411     360  412.26  359.78
  416.13     359  417.63  358.92   418.1  358.89  418.21  358.89  418.42   358.9
  421.08  358.91  422.27  358.89  422.98  358.88  423.24  358.87  426.91  358.83
   427.3  358.82  428.47   358.8  430.01  358.78   430.2  358.78  432.67  358.84
  433.63  358.85  435.52  358.88436.5699   358.9  437.37  358.91  437.85  358.93
  442.87     359  445.96  359.68  446.72  359.83  447.46     360  447.77  360.01
  447.85  360.01  451.77  360.11  452.62  360.12  453.64  360.14   456.6  360.07
  457.79  360.04  459.83     360  460.87  359.76  461.37  359.66  464.48     359
470.5601  358.83  470.84  358.83  472.36  358.86473.6801  358.89  474.88  358.92
   475.2  358.93   476.2  358.95  477.38  358.97  478.86  358.98  479.67  358.98
  479.88  358.99  480.67  358.99  480.78     359  481.04     359  481.27  359.05
  486.47     360  488.25   360.2  488.38  360.21489.8101  360.36  490.15  360.37
  491.23  360.46  492.22  360.46  493.12  360.47  496.67   360.7  498.23  360.77
  499.36  360.78  499.83  360.78  503.13  360.79  503.84  360.79  504.11  360.78
504.4401  360.78  506.02  360.77  511.44  360.94  514.68  360.94  514.94  360.93
  517.94  360.93  518.03  360.92  520.43  360.92  527.87  360.95  528.69  360.95
  528.83  360.96  529.95  360.96  532.25  360.89  534.96  360.77  542.47  360.61
  557.81  360.46  559.34  360.43  559.54  360.43  569.15   360.3  569.23   360.3
  588.75  360.18  596.75  360.01  597.64  360.01  599.39     360  600.96     360
   602.3  359.99  603.48  359.99  606.14     360  606.79     360  607.99  360.01
  621.76  360.01  623.42  360.02  637.06  360.02  641.06  360.01  644.65  360.01
  645.98     360  649.59     360  651.09  359.83  657.38  359.72  664.12  359.89
  665.46  359.98  666.83     360   667.3  359.99  667.99  359.95  678.57     359
  678.63     359  682.85  358.84  687.11     359  691.91  359.71   698.1  359.87
  701.48  359.98  702.18  359.98  704.91     360  714.18     360  715.11  360.01
  718.51  360.01  751.28  360.25  751.85  360.26  753.09  360.26  775.38  360.22
  781.81  360.15  789.49  360.06  793.78     360   829.1     360  830.87  360.01
  833.24  360.01  834.85     360  875.63     360  879.63  359.99  882.58  359.99
  886.84     360  894.49     360  898.56  360.01  904.67  360.01  906.93  360.02
  908.49  360.01  919.44  360.01  920.89     360  926.17     360  932.59  359.98
```

```
  938.41  359.99  939.09     360  941.18     360  956.54  360.39  968.73  360.52
  976.81  360.59  977.02  360.59  982.27  360.57  989.58  360.44 1004.91  360.11
 1006.73  360.06 1006.79  360.06 1007.81  360.05 1008.74  360.05 1009.05  360.04
  1010.4  360.04 1011.38  360.07 1011.54  360.06 1011.66  360.06 1013.88  360.13
 1027.74   360.1 1043.45  360.01 1044.13     360 1076.16  360.01 1081.74     360
 1148.53     360 1149.04  359.95 1150.15     360 1155.48  360.34 1156.08  360.38
 1156.96  360.45 1157.69  360.49 1157.97  360.47 1160.27  360.49 1161.22  360.42
 1162.08  360.44 1169.77  360.18 1172.44  360.06 1175.67  360.04 1175.79  360.04
 1176.04  360.03 1177.25  360.03 1180.43     360 1184.36  359.98 1186.53  359.98
 1189.48  359.99 1192.08  359.99 1193.72     360 1197.91  360.04 1200.55  360.05
 1200.67  360.06  1200.8  360.05 1202.71  360.04 1203.86  360.04 1206.48     360
 1206.74     360 1207.36  359.92 1209.37  359.62 1209.67  359.62 1216.55  359.32
 1219.32  359.57 1223.52  359.99 1225.76  359.99 1228.73  359.98 1229.41  359.97
 1231.25  359.97 1231.83  359.96  1233.2  359.96 1235.74  359.86 1244.26   359.6
  1245.1  359.61 1246.32  359.55  1247.9  359.55  1258.2  359.89 1258.25   359.9
 1258.35  359.91 1258.51  359.91 1259.21     360 1260.06     360 1260.35  359.98
 1263.86  359.83 1265.42  359.77  1268.2  359.67  1271.5  359.54 1272.33   359.5
 1283.64  359.02 1285.02     359 1285.92  358.81 1289.99     358 1293.79  357.86
 1296.66  357.97 1297.59     358 1300.57  358.25 1310.49  358.98 1310.69     359
 1314.23  359.07 1315.49  359.05 1315.98  359.05 1317.93  359.03 1319.98  359.14
  1321.7  359.14 1321.88  359.15 1323.85  359.28 1331.69  359.95 1332.05  359.99
 1333.56     360 1341.65     360 1344.94  360.01 1374.15  360.01 1384.78  360.31
 1388.33   360.5 1396.34  360.99 1397.56  360.99 1400.83  360.76 1404.51  360.53
 1405.15  360.53 1406.48  360.49 1407.73   360.5 1408.29  360.46 1408.38  360.43
  1435.5  360.25 1444.97   360.4 1472.32  360.93 1472.48  360.93 1474.51  360.95
 1474.67  360.95 1476.09  360.94  1476.4  360.94 1477.44  360.95 1477.71  360.95
 1480.44  360.94 1481.76  360.94 1488.89  360.83 1494.46   360.9  1498.5  360.91
 1499.29  360.92    1502  360.93 1502.95  360.94 1504.88  360.95 1506.35  360.95
 1506.76  360.96 1510.19  360.95 1514.67  360.98 1515.42  360.99 1516.51  360.99
 1516.95  360.97 1518.57  360.87 1519.43  360.86 1520.82  360.73 1524.79  360.58
 1526.35  360.38 1527.24  360.32 1529.09     360 1531.13  359.96

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  355.21     .04 1331.69     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        355.21 1331.69            420.09  440.74  457.73              .1       .3

CROSS SECTION


RIVER: WASH23
REACH: Wash23             RS: 3038.38

INPUT
Description:
Station Elevation Data    num=     365
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  360.98     1.5  360.988.849976     36129.94006     36132.73999  360.99
35.43005  360.9939.70007     36146.32007     36150.76001  360.99   58.25  360.99
61.23999  360.8361.60999  360.8378.19006  360.7378.29004  360.7378.66003  360.72
   79.63  360.7481.07007  360.7588.16003  360.73     101  360.61  110.51  360.54
  120.01  360.54128.5801  360.56  137.85  360.64137.9601  360.64148.9501  360.69
149.5901  360.69  150.86  360.68  156.35  360.68  160.65  360.69  173.75  360.79
  179.23  360.85   180.9  360.85  190.02  360.92190.2001  360.92199.9401     361
  204.73     361204.9601  361.01  251.22  361.04  259.24  361.03260.8401  361.03
  264.61  361.02266.8301  361.02268.3401  361.01  271.87  361.01  276.53     361
281.5601     361     288  360.62288.9401  360.57290.3301  360.48  292.38   360.4
   293.6  360.33  298.72     360  301.49  359.86  302.25  359.83  305.35  359.72
  307.79  359.66   308.9  359.63  310.85  359.59311.4601  359.58  317.27  359.41
317.7001   359.4  319.38  359.35  321.48  359.26  322.78  359.19  324.92  359.09
  324.99  359.08325.8101  359.05  326.97     359  327.51     359  329.01  358.94
  332.51  358.78  333.78  358.72  348.25     358354.3401  357.88   354.5  357.87
  380.05  357.01  391.87  357.01393.4501     357   398.5     357  405.13  356.35
409.6801     356418.2001     356  424.24   356.4  426.38   356.4  429.16  356.51
  430.15  356.53  432.35  356.55433.1901  356.54  439.88  356.71  444.11  356.91
     451     357  462.66  357.01  465.88  357.02  466.84  357.02471.2401  357.01
  481.77  357.01  487.41     357487.8101     357   489.3  357.01  489.75  357.01
  490.34     357   490.8     357  491.05  357.01  491.34  357.01  497.83  357.02
498.9301  357.03500.7401  357.03  505.33  357.05  507.85  357.05  513.59  357.07
   533.7     357534.4301     357  535.08  356.96535.4301  356.94  536.69  356.87
  550.07  356.03  550.48     356  553.15     356   613.7  355.28  618.69  355.24
  622.55  355.22  623.65  355.21   626.6  355.16634.1201  355.01634.4301  355.01
  636.22     355  640.21     355   642.5  354.99  645.66  354.85     665  354.02
  665.07  354.02   665.6     354  666.52  353.96  694.33  353.21  699.72  353.32
  702.38  353.38704.6801  353.42705.0601  353.42   705.6  353.43  706.03  353.44
  707.17  353.47712.4301  353.58  721.58  353.81722.3101  353.83  722.76  353.84
  723.75  353.86  724.53  353.88  724.61  353.88729.4301     354731.1201  354.21
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 738.63 | 355 | 740.19 | 355.23 | 742.91 | 355.47 | 743.97 | 355.54 | 747.21 | 355.88 |
| 748.95 | 355.83 | 752.22 | 355.68 | 753.19 | 355.62 | 757.97 | 355.63 | 762.86 | 355.61 |
| 767.5 | 355.46 | 770.77 | 355.37 | 772.35 | 355.32 | 780 | 355.1 | 783.67 | 355 |
| 786.98 | 354.79 | 793.44 | 354 | 794.32 | 353.98 | 796.04 | 353.96 | 796.13 | 353.96 |
| 797.86 | 354799.3101 | | 354.59800.3101 | | 355802.3101 | | 355.14 | 802.83 | 355.15 |
| 806.05 | 355.35 | 808.45 | 355.37 | 824.77 | 355.79831.9901 | | 355.99 | 835.79 | 355.99 |
| 837.94 | 356 | 841.53 | 356 | 870.19 | 357 | 899.55 | 357 | 900.23 | 356.99 |
| 908.07 | 356.71 | 914.35 | 356.5 | 917.09 | 356.45 | 920.36 | 356.36 | 929.27 | 356.19 |
| 937.75 | 356.01 | 938.47 | 356 | 946.07 | 356 | 947.23 | 356.01 | 952.86 | 356.01 |
| 955.33 | 356.02 | 956.21 | 356.02 | 971.37 | 356973.0701 | | 355.94973.4401 | | 355.94 |
| 974.47 | 355.9 | 977.55 | 355.81 | 997.3 | 355.15 | 1001.58 | 355 | 1001.97 | 354.99 |
| 1002.08 | 354.99 | 1003.34 | 354.96 | 1011.63 | 354.73 | 1012.11 | 354.75 | 1015.04 | 354.82 |
| 1015.91 | 354.85 | 1021 | 355 | 1021.87 | 355.11 | 1022.15 | 355.13 | 1023.55 | 355.26 |
| 1023.87 | 355.27 | 1026.64 | 355.49 | 1027.43 | 355.54 | 1028.09 | 355.58 | 1029.58 | 355.63 |
| 1029.79 | 355.63 | 1031.65 | 355.66 | 1033.6 | 355.66 | 1033.94 | 355.64 | 1034.06 | 355.63 |
| 1039.22 | 355.42 | 1042.07 | 355.35 | 1043.84 | 355.36 | 1044.06 | 355.36 | 1048.54 | 355.4 |
| 1052.03 | 355.46 | 1053.61 | 355.49 | 1059.21 | 355.61 | 1061.68 | 355.67 | 1063.09 | 355.7 |
| 1064.64 | 355.74 | 1069.7 | 355.85 | 1071.32 | 355.87 | 1072.79 | 355.87 | 1073 | 355.86 |
| 1073.54 | 355.86 | 1073.84 | 355.85 | 1074.42 | 355.84 | 1075.09 | 355.84 | 1075.55 | 355.83 |
| 1076.58 | 355.82 | 1077 | 355.82 | 1077.42 | 355.81 | 1078.72 | 355.8 | 1086.09 | 355.64 |
| 1086.89 | 355.64 | 1089.6 | 355.65 | 1093.52 | 355.57 | 1097.08 | 355.55 | 1101.14 | 355.51 |
| 1104.08 | 355.46 | 1107.89 | 355.41 | 1109.53 | 355.4 | 1114.16 | 355.34 | 1114.94 | 355.34 |
| 1115.7 | 355.33 | 1120.79 | 355.29 | 1126.75 | 355.22 | 1129.47 | 355.18 | 1130.48 | 355.17 |
| 1130.81 | 355.17 | 1132.36 | 355.16 | 1138.35 | 355.18 | 1138.44 | 355.19 | 1144.84 | 355.14 |
| 1152.56 | 355.02 | 1153.11 | 355 | 1155 | 355 | 1157.26 | 354.99 | 1160.16 | 354.99 |
| 1162.78 | 355 | 1167.12 | 355 | 1168.89 | 355.01 | 1169.66 | 355.01 | 1171.07 | 355 |
| 1173.15 | 355 | 1178.71 | 354.98 | 1185.54 | 355 | 1189.85 | 355.06 | 1191.02 | 355.08 |
| 1191.96 | 355.07 | 1195.72 | 355.05 | 1200.34 | 355 | 1205.29 | 354.74 | 1205.63 | 354.71 |
| 1207.46 | 354.56 | 1209.48 | 354.42 | 1210.23 | 354.37 | 1212.09 | 354.21 | 1212.39 | 354.22 |
| 1217.11 | 354.39 | 1220.89 | 354.38 | 1225.46 | 354.22 | 1233.41 | 354 | 1238.43 | 353.98 |
| 1243.48 | 354 | 1245.72 | 354.44 | 1246.9 | 354.66 | 1247.5 | 354.76 | 1247.67 | 354.8 |
| 1249.13 | 355 | 1257.21 | 355.33 | 1259.44 | 355.41 | 1260.32 | 355.44 | 1269.46 | 356 |
| 1271.86 | 356.24 | 1274.79 | 356.48 | 1275.33 | 356.49 | 1275.95 | 356.54 | 1276.67 | 356.58 |
| 1276.91 | 356.6 | 1278.37 | 356.62 | 1279.86 | 356.59 | 1281.38 | 356.53 | 1283.97 | 356.39 |
| 1284.62 | 356.35 | 1285.96 | 356.29 | 1288.14 | 356.18 | 1288.64 | 356.16 | 1289.26 | 356.21 |
| 1292.31 | 356.79 | 1292.94 | 357 | 1294.02 | 357.3 | 1294.22 | 357.35 | 1294.32 | 357.38 |
| 1295.93 | 357.81 | 1296.74 | 358 | 1305.79 | 358 | 1311.82 | 357.97 | 1313.42 | 357.96 |
| 1314.96 | 357.92 | 1322.32 | 357.8 | 1325.1 | 358 | 1326.57 | 358.01 | 1328.32 | 358.01 |
| 1329.48 | 358.02 | 1330.9 | 358.02 | 1335.95 | 358.04 | 1336.98 | 358.04 | 1338.79 | 358.05 |
| 1339.1 | 358.05 | 1352.72 | 358.06 | 1354.14 | 358.07 | 1355.63 | 358.07 | 1366.46 | 358.73 |
| 1366.9 | 358.72 | 1368.36 | 358.73 | 1369.15 | 358.77 | 1371 | 358.76 | 1373.17 | 358.85 |
| 1374.93 | 358.95 | 1375.61 | 359 | 1395.91 | 359 | 1398.07 | 359.01 | 1408.77 | 359.01 |
| 1425.45 | 359.56 | 1443.75 | 360 | 1449.34 | 360 | 1451.65 | 360.01 | 1460.78 | 360.01 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 645.66 | .04 | 1246.9 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 645.66 | 1246.9 | 415.04 | 407.54 | 407.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH23
REACH: Wash23 RS: 2630.84

INPUT
Description:
Station Elevation Data num= 475

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 361.6699219 | | 3612.069946 | | 3612.359985 | | 3615.859985 | | 361 |
| 8.909912 | 36110.07996 | | 36115.15002 | | 36117.32996 | | 36118.04993 | | 361 |
| 20.69995 | 36120.97998 | | 36121.02991 | | 36121.43994 | | 361 | 21.87 | 361 |
| 22.53992 | 36126.20996 | | 360.9929.19995 | | 360.9929.65991 | | 360.99 | 29.87 | 360.99 |
| 31.55994 | 360.9832.60999 | | 360.9835.15002 | | 360.9856.52991 | | 360.762.56995 | | 360.63 |
| 63.18994 | 360.6277.73999 | | 360.4686.26001 | | 360.3793.21997 | | 360.3398.90991 | | 360.3 |
| 98.97998 | 360.3 | 110.27 | 360.22 | 110.46 | 360.22 | 123.1 | 360.07 | 127.9 | 360 |
| 128.27 | 360 | 128.62 | 360 | 129.51 | 360130.6599 | | 360 | 130.76 | 360 |
| 131.8099 | 360 | 131.88 | 360 | 134.36 | 359.97146.1899 | | 359.85 | 155.4 | 359.76 |
| 157.76 | 359.75180.9299 | | 359.52 | 230.99 | 359.01 | 232.46 | 359232.9399 | | 359 |
| 233.38 | 359 | 235.89 | 359 | 239.26 | 359 | 239.9 | 359 | 242.86 | 359 |
| 243.24 | 359 | 243.27 | 359 | 243.33 | 359 | 243.5 | 359 | 245.38 | 358.97 |
| 246.77 | 358.94 | 248.52 | 358.91 | 250.15 | 358.88253.0699 | | 358.83 | 259.64 | 358.73 |
| 270.0499 | 358.55 | 271.02 | 358.53 | 282.38 | 358.34 | 286.88 | 358.28 | 290.12 | 358.23 |
| 292.39 | 358.2300.7799 | | 358.08 | 300.96 | 358.08301.3099 | | 358.07 | 301.48 | 358.07 |
| 301.91 | 358.06 | 303.74 | 358.04304.1299 | | 358.04307.5599 | | 358 | 308.7 | 358 |
| 308.8799 | 358 | 312.36 | 357.99318.7599 | | 357.78 | 323.9 | 357.68327.8799 | | 357.5 |
| 338.3099 | 357 | 338.34 | 357338.8099 | | 357339.3199 | | 357 | 342.33 | 356.99 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 343.41 | 356.99 | 344.22 | 356.99 | 347.3799 | 356.99 | 348.23 | 356.99 | 348.45 | 356.99 | | |
| 349.34 | 356.99 | 349.53 | 356.99 | 350.5599 | 357 | 350.59 | 357 | 350.68 | 357 | | |
| 351.33 | 357 | 351.53 | 357 | 351.71 | 357 | 352.12 | 357 | 355.9 | 357 | | |
| 356.05 | 357 | 356.12 | 357 | 356.8 | 357 | 357.1 | 357 | 357.14 | 357 | | |
| 357.53 | 356.99 | 357.62 | 356.99 | 358.98 | 356.91 | 360.83 | 356.83 | 368.35 | 356.64 | | |
| 373.16 | 356.53 | 378.9999 | 356.35 | 388.77 | 356.01 | 388.96 | 356.01 | 390.2599 | 356 | | |
| 390.67 | 356 | 390.71 | 356 | 394.37 | 356.01 | 395.04 | 356.01 | 395.5699 | 356 | | |
| 396.34 | 356.01 | 396.48 | 356.01 | 396.84 | 356 | 397.2 | 356.01 | 398.4999 | 356 | | |
| 399.35 | 356 | 399.4999 | 356 | 399.61 | 356 | 399.6299 | 356 | 399.72 | 356 | | |
| 399.7599 | 356 | 400.09 | 356 | 400.18 | 356 | 400.97 | 356 | 401.0699 | 356 | | |
| 401.2599 | 356 | 401.4999 | 356 | 401.74 | 356 | 402.65 | 356 | 402.8 | 356 | | |
| 402.96 | 356 | 403.2 | 356 | 403.6299 | 356 | 403.86 | 356 | 404.23 | 356 | | |
| 404.4 | 356 | 404.73 | 356 | 405.11 | 356 | 406.2 | 356 | 407.97 | 356 | | |
| 408.96 | 356 | 409.4399 | 356 | 410.73 | 356 | 410.79 | 356 | 410.95 | 356 | | |
| 411.3199 | 355.99 | 411.53 | 355.99 | 425.8199 | 355.66 | 432.99 | 355.49 | 451.73 | 355.01 | | |
| 451.77 | 355.01 | 452.33 | 355.01 | 452.64 | 355.01 | 452.67 | 355.01 | 453.24 | 355 | | |
| 453.47 | 355 | 454.87 | 354.99 | 455.21 | 354.99 | 456.9999 | 354.97 | 458.22 | 354.96 | | |
| 464.2599 | 354.91 | 466.59 | 354.92 | 494.4 | 354.24 | 500.45 | 354 | 515.4999 | 353.59 | | |
| 518.68 | 353.51 | 522.1 | 353.42 | 522.67 | 353.41 | 523.9 | 353.38 | 526.0599 | 353.32 | | |
| 539.7499 | 353.05 | 540.3099 | 353.03 | 540.62 | 353.03 | 540.7499 | 353.02 | 541.77 | 353 | | |
| 541.9999 | 353 | 542.1899 | 353 | 544.4999 | 353 | 544.62 | 353 | 544.71 | 353 | | |
| 545.5699 | 353 | 559.41 | 352.71 | 567.61 | 352.56 | 577.15 | 352.35 | 579.7499 | 352.3 | | |
| 582.99 | 352.23 | 586.7599 | 352.15 | 590.89 | 352.07 | 592.2 | 352.04 | 592.83 | 352.03 | | |
| 593.7 | 352.02 | 593.79 | 352.02 | 594.2599 | 352 | 595.0599 | 352 | 595.47 | 352 | | |
| 595.5699 | 352 | 595.7499 | 352 | 596.46 | 352 | 600.45 | 351.99 | 601.87 | 351.99 | | |
| 601.9 | 351.99 | 601.95 | 351.99 | 602.0699 | 351.99 | 608.29 | 351.98 | 616.78 | 351.97 | | |
| 626.0699 | 351.98 | 626.2599 | 351.99 | 626.3099 | 351.99 | 626.49 | 351.99 | 628.14 | 351.99 | | |
| 634.23 | 351.93 | 634.7599 | 351.92 | 635.62 | 351.89 | 638.96 | 351.91 | 639.05 | 351.91 | | |
| 639.59 | 351.91 | 640.08 | 351.9 | 640.49 | 351.9 | 640.89 | 351.89 | 641.39 | 351.87 | | |
| 642.39 | 351.84 | 643.16 | 351.81 | 643.58 | 351.8 | 650.34 | 351.45 | 658.52 | 351.02 | | |
| 659.09 | 351.02 | 662.33 | 351.02 | 666.3199 | 351.01 | 666.46 | 351.01 | 666.8799 | 351.01 | | |
| 668.42 | 351.01 | 668.5099 | 351.01 | 668.6299 | 351.01 | 669.58 | 351 | 670.73 | 351 | | |
| 671.23 | 351 | 671.66 | 351 | 671.83 | 351 | 671.95 | 351 | 671.97 | 351 | | |
| 690.46 | 350.47 | 696.3099 | 350.31 | 697.67 | 350.29 | 698.41 | 350.28 | 698.84 | 350.27 | | |
| 703.49 | 350.17 | 710.2499 | 350.02 | 711.27 | 350.02 | 716.1299 | 350.03 | 721.41 | 350.02 | | |
| 725.89 | 350.01 | 727.1 | 350.01 | 728.12 | 350.01 | 728.59 | 350.01 | 730.18 | 350.01 | | |
| 730.79 | 350.01 | 732.93 | 350.02 | 733.7599 | 350.02 | 734.62 | 350.01 | 739.74 | 350.02 | | |
| 742.4399 | 350.01 | 745.7 | 350.01 | 750.42 | 350 | 751.27 | 350 | 756.8099 | 349.25 | | |
| 759.8199 | 349 | 760.8799 | 349 | 762.4 | 348.99 | 763.18 | 348.99 | 766.16 | 348.98 | | |
| 766.28 | 348.98 | 770.4999 | 348.97 | 773.28 | 348.96 | 777.39 | 348.96 | 787.47 | 349 | | |
| 788.24 | 349.09 | 788.2599 | 349.09 | 788.29 | 349.09 | 790.24 | 349.27 | 791.2 | 349.35 | | |
| 793.4 | 349.43 | 795.18 | 349.47 | 800.04 | 349.51 | 806.27 | 349.61 | 811.3 | 350 | | |
| 811.96 | 350 | 812.73 | 350 | 812.87 | 350 | 814.39 | 350 | 814.91 | 350 | | |
| 815.6699 | 349.99 | 827.41 | 349.96 | 828.13 | 349.96 | 828.73 | 349.96 | 829.95 | 349.96 | | |
| 830.3199 | 349.96 | 831.15 | 349.96 | 831.2 | 349.96 | 831.21 | 349.96 | 832.6699 | 349.97 | | |
| 833.61 | 349.97 | 836.63 | 349.98 | 839.8099 | 349.82 | 844.4399 | 349.43 | 847.5699 | 349 | | |
| 848.36 | 348.99 | 848.98 | 348.99 | 849.99 | 349 | 850.11 | 349 | 850.84 | 349 | | |
| 852.0499 | 349 | 852.87 | 349 | 854.11 | 349 | 854.74 | 349 | 858.91 | 348.78 | | |
| 859.35 | 348.77 | 863.63 | 348.99 | 863.97 | 349 | 864.29 | 349 | 867.2999 | 349 | | |
| 869.01 | 349 | 869.22 | 349 | 869.65 | 349 | 873.0699 | 349.01 | 875.35 | 349.01 | | |
| 877.09 | 349.01 | 879.6699 | 349.01 | 885.27 | 349 | 885.66 | 349 | 887.02 | 349 | | |
| 888.75 | 349 | 888.76 | 349 | 888.99 | 349 | 890.14 | 348.99 | 890.29 | 348.99 | | |
| 893.38 | 348.97 | 895.0599 | 348.96 | 895.4199 | 348.96 | 895.7999 | 348.96 | 898.27 | 348.98 | | |
| 899.98 | 348.99 | 900.4199 | 348.99 | 901.54 | 349 | 901.83 | 349 | 904.48 | 349.8 | | |
| 905.22 | 350 | 917 | 350.31 | 917.7 | 350.33 | 920.02 | 350.39 | 922.12 | 350.44 | | |
| 927.39 | 350.6 | 928.98 | 350.65 | 929.97 | 350.67 | 933.21 | 350.75 | 937.41 | 350.86 | | |
| 941.71 | 351 | 967.9199 | 351.41 | 972.22 | 351.49 | 978.5699 | 351.61 | 988.5499 | 351.77 | | |
| 994.3199 | 351.89 | 999.54 | 352 | 999.5499 | 352 | 999.5599 | 352 | 1000.1 | 352 | | |
| 1000.31 | 352.01 | 1002.28 | 352.08 | 1008.07 | 352.3 | 1015.61 | 352.6 | 1018.68 | 352.72 | | |
| 1019.81 | 352.76 | 1025.74 | 353 | 1034.97 | 353.44 | 1044 | 353.94 | 1045.19 | 354 | | |
| 1049.57 | 354.22 | 1050.41 | 354.26 | 1059.25 | 354.67 | 1066.88 | 355 | 1080.68 | 355.54 | | |
| 1088.86 | 355.78 | 1091.45 | 355.85 | 1091.91 | 355.86 | 1093.31 | 355.87 | 1095.06 | 355.9 | | |
| 1095.36 | 355.9 | 1095.67 | 355.9 | 1096.29 | 355.9 | 1096.63 | 355.89 | 1102.65 | 355.95 | | |
| 1103.11 | 355.94 | 1106.25 | 355.97 | 1106.25 | 355.96 | 1108.7 | 355.97 | 1108.78 | 355.96 | | |
| 1114.94 | 355.94 | 1115.45 | 355.94 | 1115.58 | 355.94 | 1125.2 | 355.86 | 1125.65 | 355.88 | | |
| 1137.19 | 355.9 | 1138.21 | 355.9 | 1139.28 | 355.89 | 1139.36 | 355.89 | 1139.49 | 355.89 | | |
| 1139.54 | 355.89 | 1142.57 | 355.85 | 1142.86 | 355.85 | 1143.15 | 355.85 | 1143.23 | 355.85 | | |
| 1144.11 | 355.84 | 1154.28 | 355.7 | 1154.57 | 355.7 | 1162.16 | 355.82 | 1167.19 | 355.96 | | |
| 1171.37 | 356 | 1192.32 | 356.91 | 1194.43 | 357 | 1195.46 | 357.06 | 1200.14 | 357.35 | | |
| 1210.77 | 358 | 1211.99 | 358 | 1214.54 | 358 | 1215.29 | 358 | 1218.33 | 358 | | |
| 1223.46 | 358 | 1226.78 | 357.92 | 1226.87 | 357.91 | 1227.77 | 357.89 | 1236.57 | 357.86 | | |
| 1245.32 | 357.88 | 1245.54 | 357.89 | 1248.38 | 358 | 1258.55 | 358.58 | 1264.85 | 359 | | |
| 1273.21 | 359.7 | 1275.11 | 359.84 | 1275.7 | 359.88 | 1275.98 | 359.89 | 1277.4 | 360 | | |
| 1280.41 | 360.14 | 1282.58 | 360.21 | 1284.42 | 360.27 | 1286.19 | 360.3 | 1287.85 | 360.32 | | |
| 1289.99 | 360.39 | 1295.56 | 360.41 | 1297.11 | 360.46 | 1298.13 | 360.48 | 1303.23 | 360.46 | | |
| 1305.11 | 360.48 | 1305.93 | 360.49 | 1307.41 | 360.48 | 1314.79 | 360.43 | 1317.67 | 360.39 | | |
| 1318.62 | 360.37 | 1322.91 | 360.32 | 1323.78 | 360.28 | 1324.12 | 360.27 | 1324.84 | 360.23 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 703.49 | .04 | 917 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 703.49 | 917 | 516.25 | 533.12 | 545.48 | .1 | .3 |

CROSS SECTION

RIVER: WASH23
REACH: Wash23 RS: 2097.72

INPUT
Description:
Station Elevation Data num= 394

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 362.01 | 1.630005 | 362 | 1.869995 | 362 | 2.699951 | 362 | 9.540039 | 362 |
| 9.660034 | 362 | 10.01001 | 362 | 10.30005 | 362 | 11.16003 | 362 | 11.94995 | 362 |
| 22.62 | 362 | 22.79004 | 362 | 23.18005 | 362 | 32.03003 | 362 | 32.47998 | 362 |
| 33.19006 | 362 | 33.39001 | 362 | 53.71997 | 362 | 59.10999 | 362 | 70.35999 | 362 |
| 83.43005 | 362 | 83.62 | 362 | 83.78003 | 362 | 83.94995 | 362 | 87.58997 | 362 |
| 87.64001 | 362 | 87.88 | 362 | 88.14001 | 362 | 89.46997 | 362 | 94.77002 | 362 |
| 95.12 | 362 | 95.93005 | 362 | 112.26 | 362 | 148.99 | 362 | 151.02 | 362 |
| 154.16 | 362 | 154.3201 | 362 | 157.91 | 362 | 162.52 | 362 | 162.66 | 362 |
| 163.46 | 362 | 164.41 | 362 | 177.26 | 362 | 179.17 | 362 | 180.05 | 362 |
| 180.29 | 362 | 180.77 | 362 | 190.27 | 362 | 190.44 | 362 | 190.6 | 362 |
| 195.47 | 362 | 195.87 | 362 | 196.19 | 362 | 200.48 | 362 | 209.04 | 362 |
| 209.48 | 362 | 217.72 | 361.81 | 218.25 | 361.8 | 253.71 | 361.05 | 255.18 | 361.04 |
| 258.61 | 361.03 | 258.69 | 361.03 | 261.57 | 361.03 | 262.91 | 361.02 | 263.69 | 361.02 |
| 263.95 | 361.01 | 264.11 | 361.01 | 264.87 | 361.01 | 265.07 | 361.01 | 265.53 | 361 |
| 265.55 | 361 | 303.42 | 360.12 | 304.44 | 360.1 | 305.82 | 360.07 | 308.79 | 360 |
| 309.03 | 360 | 314.36 | 359.84 | 316.98 | 359.75 | 319.36 | 359.72 | 340.92 | 359.18 |
| 347.34 | 359.01 | 347.92 | 359.01 | 348.26 | 359.01 | 353.33 | 359 | 353.79 | 359 |
| 355.72 | 358.93 | 356.11 | 358.91 | 364.57 | 358.61 | 365.33 | 358.58 | 369.16 | 358.47 |
| 369.39 | 358.46 | 380.03 | 358.01 | 382.14 | 358.01 | 382.46 | 358.01 | 384.08 | 358.01 |
| 385.36 | 358.01 | 389.15 | 358.01 | 389.72 | 358.01 | 391.23 | 358.01 | 393.46 | 358.01 |
| 394.03 | 358 | 394.55 | 358 | 394.67 | 358 | 394.94 | 358 | 395.38 | 358 |
| 397.9 | 358 | 398.25 | 358 | 398.62 | 358 | 399.42 | 358 | 403.61 | 357.89 |
| 404 | 357.87 | 406.83 | 357.76 | 421.67 | 357 | 422.7 | 356.91 | 423.04 | 356.88 |
| 423.25 | 356.86 | 425.88 | 356.65 | 433.85 | 356 | 435.67 | 355.91 | 436.93 | 355.86 |
| 443.88 | 355.51 | 448.59 | 355.3 | 454.35 | 355.01 | 454.54 | 355 | 454.64 | 354.99 |
| 475.63 | 354 | 479.64 | 353.8 | 480.04 | 353.78 | 483.37 | 353.67 | 488.63 | 353.45 |
| 498.88 | 353 | 499.16 | 353 | 501.27 | 352.87 | 521.12 | 352 | 531.12 | 351.62 |
| 536.39 | 351.35 | 538.49 | 351.26 | 542.64 | 351.05 | 543.61 | 351 | 543.65 | 351 |
| 544.2 | 351 | 546.56 | 350.91 | 552.34 | 350.71 | 559.69 | 350.48 | 567.98 | 350.25 |
| 568.2 | 350.25 | 571.09 | 350.17 | 571.49 | 350.16 | 572.65 | 350.15 | 573.64 | 350.14 |
| 574.84 | 350.15 | 578.87 | 350 | 584.86 | 349.85 | 586.2 | 349.79 | 589.61 | 349.63 |
| 590.79 | 349.57 | 597.66 | 349.35 | 599.9 | 349.23 | 602.09 | 349.1 | 602.34 | 349.09 |
| 603.78 | 349 | 610.95 | 348.79 | 612.65 | 348.74 | 613.88 | 348.71 | 622.82 | 348.44 |
| 629.9 | 348.27 | 634.11 | 348.15 | 634.57 | 348.14 | 640.8 | 348 | 654.59 | 347.67 |
| 659.15 | 347.57 | 660.36 | 347.54 | 663.02 | 347.48 | 663.86 | 347.46 | 681.67 | 347 |
| 686.91 | 346.89 | 687.94 | 346.87 | 698.16 | 346.64 | 700.4301 | 346.6 | 706.25 | 346.48 |
| 710.13 | 346.4 | 712.17 | 346.36 | 714.38 | 346.33 | 715.13 | 346.32 | 715.55 | 346.31 |
| 716.05 | 346.3 | 716.7 | 346.29 | 732.75 | 346.08 | 739.37 | 346.1 | 749.65 | 346.04 |
| 753.91 | 346.02 | 755.94 | 346.01 | 756.09 | 346.01 | 757.53 | 346.01 | 757.57 | 346 |
| 757.6 | 346 | 759.28 | 346 | 762.5 | 345.86 | 764.53 | 345.78 | 767.56 | 345.68 |
| 767.64 | 345.68 | 767.77 | 345.67 | 767.92 | 345.66 | 769.32 | 345.56 | 774.89 | 345 |
| 780.19 | 344.63 | 788.59 | 344 | 791.57 | 343.99 | 793.38 | 343.99 | 797.8 | 343.97 |
| 801 | 343.98 | 801.45 | 343.98 | 806.35 | 344 | 806.99 | 344.03 | 807.73 | 344.03 |
| 809.25 | 344.04 | 813.34 | 344.22 | 821.37 | 344.53 | 822.73 | 344.61 | 823.6 | 344.64 |
| 824.81 | 344.72 | 825.25 | 344.71 | 825.67 | 344.74 | 841.16 | 344.93 | 842.72 | 344.93 |
| 853.2 | 344.99 | 854.4301 | 345 | 854.99 | 345.01 | 876.92 | 345.14 | 895.21 | 345.17 |
| 895.63 | 345.17 | 897.22 | 345.21 | 898.85 | 345.25 | 899.73 | 345.28 | 900.9 | 345.33 |
| 901.09 | 345.33 | 913.5 | 346 | 916.4301 | 346.44 | 919.33 | 346.85 | 919.46 | 346.87 |
| 919.56 | 346.89 | 920.12 | 347 | 920.5 | 347.1 | 924.36 | 348 | 925.77 | 348.36 |
| 928.35 | 349 | 930.24 | 349.75 | 930.84 | 350 | 932.27 | 350.57 | 933.37 | 351 |
| 935.39 | 351.8 | 935.85 | 352 | 936.08 | 352.11 | 937.79 | 353 | 938.21 | 353.19 |
| 939.84 | 354 | 940.47 | 354.3 | 941.2 | 354.65 | 941.91 | 355 | 942.71 | 355.34 |
| 944.1 | 356 | 945.31 | 356.58 | 946.32 | 357 | 947.22 | 357.4 | 948.48 | 358 |
| 951.51 | 358.78 | 952.98 | 359 | 954.97 | 359.33 | 956 | 359.46 | 957.13 | 359.61 |
| 959.3 | 359.86 | 959.82 | 359.91 | 959.94 | 359.92 | 960.22 | 359.89 | 960.64 | 359.95 |
| 961.61 | 359.99 | 961.67 | 360 | 962.37 | 360 | 962.54 | 360.01 | 965.07 | 360.04 |
| 965.55 | 360.05 | 966.33 | 360.06 | 969.64 | 360.5 | 971.82 | 360.75 | 975.52 | 361 |
| 976 | 361.03 | 976.25 | 361.03 | 976.47 | 361.03 | 978.16 | 361.04 | 979 | 361.05 |
| 981.93 | 361.07 | 982.59 | 361.07 | 984.3 | 361.07 | 984.87 | 361.07 | 985.4 | 361.07 |
| 986.98 | 361.07 | 988.55 | 361.08 | 991.89 | 361.07 | 995.65 | 361.26 | 996.63 | 361.32 |
| 996.78 | 361.32 | 996.94 | 361.32 | 1001.01 | 361.27 | 1002.59 | 361.2 | 1004.61 | 361.08 |
| 1004.74 | 361.08 | 1005.85 | 361 | 1005.89 | 361 | 1008.47 | 360.9 | 1009.59 | 361 |
| 1009.89 | 361.02 | 1010.04 | 361.03 | 1012.64 | 361.27 | 1014.36 | 361.36 | 1015.03 | 361.38 |

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 1018.75  361.17 1019.14  361.18 1019.85  361.15 1020.16  361.14 1021.17  361.14
 1021.42  361.17 1022.29  361.19 1022.86  361.25  1027.7     362 1029.72  362.01
 1033.85  362.02 1035.06  362.03 1036.03  362.03 1037.15  362.03 1037.53  362.03
 1041.44  362.02 1047.05  362.01 1051.29     362 1051.36     362 1052.31  362.05
 1053.79  362.06 1054.33  362.09 1054.52   362.1 1055.86  362.16 1056.11  362.18
 1056.18  362.18 1058.53   362.3 1063.83  362.53 1066.62  362.63 1067.15  362.66
 1067.82  362.68 1069.34  362.74 1074.16  362.93 1074.95  362.97 1075.22  362.97
  1077.1  362.99 1077.47     363 1077.57     363 1077.58     363 1077.59     363
 1077.62     363 1078.27     363 1078.32     363 1113.43  363.79 1117.79  363.88
 1120.38  363.93 1121.46  363.95 1122.13  363.96 1124.87     364 1133.17  364.19
 1134.22  364.22  1135.7  364.26 1137.07  364.31 1137.21  364.32 1144.58  364.49
 1144.88   364.5 1146.65  364.55 1147.02  364.56  1148.3  364.59 1149.01  364.61
 1149.42  364.61 1153.07   364.7 1155.53  364.74  1162.1  364.78 1169.98  364.89
 1171.44   364.9 1173.01  364.91 1174.02  364.91 1178.14  364.92 1183.94  364.94
 1184.03  364.94 1187.45  364.98 1188.84     365 1192.78     365 1192.82     365
 1197.26  365.09 1198.42  365.11 1200.44  365.15 1200.51  365.15

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  769.32     .04   913.5     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        769.32   913.5           557.44  607.48  682.23              .1       .3

CROSS SECTION


RIVER: WASH23
REACH: Wash23             RS: 1490.24

INPUT
Description:
Station Elevation Data    num=     424
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  362.2418.56995  362.1418.72998  362.14 40.1499  362.0540.33997  362.05
42.98999     36280.49994     36283.37994  361.8383.62994  361.8286.44995  361.67
97.66992  361.0199.76996  361.01100.6899     361  101.96  360.99  102.22  360.99
102.4799  360.98102.9999  360.98105.6899  360.96106.1199  360.96107.6799  360.98
110.2999  360.99112.5599  360.99113.2899  360.98114.5099  360.98115.8699  360.97
117.3699  360.99  118.15  360.99118.5499  360.98123.1899  360.98123.4399  360.97
125.0099  360.97  125.33  360.96  125.97  360.96126.5499  360.95  127.09  360.96
131.1199  360.51  131.71  360.47133.4899  360.36  134.64   360.3135.2299  360.25
136.0099  360.22   138.9  360.16140.0599  360.09140.3799  360.11140.9099  360.15
142.3699  360.14  142.47  360.16144.8699  360.18144.9199  360.18145.0399  360.19
145.7599  360.21  145.84  360.21147.5499  360.27  147.84  360.27  150.22  360.37
150.5599  360.36151.2999  360.32154.1099  360.36154.2599  360.36154.8099  360.36
156.1199  360.34   156.2  360.33   156.7  360.32158.1599  360.28160.4199  360.19
160.4899  360.19  164.83     360166.9099  359.64  172.09     359176.0599  358.96
  176.21  358.96177.0399  358.95182.1299  358.94183.4999  358.93  184.15  358.94
187.7399  358.94192.9799  358.93194.6899  358.92  199.77  358.93  200.27  358.93
200.6199  358.92203.3599  358.92204.8499  358.91206.8799  358.92  214.02  358.46
  219.45  358.47220.1699  358.47223.0099  358.37223.4899  358.38224.0399   358.4
226.1099  358.47227.2299  358.43227.7399  358.45  237.52  358.42  238.47  358.39
  238.78  358.39  241.21  358.32   245.9   358.3  246.97   358.3253.8799  358.18
261.2899  358.01  261.65  358.01263.0599     358266.4299     358  267.22  357.99
  267.47  357.99  268.58  357.97268.9299  357.98270.9099  357.98273.6299     358
278.5499  358.37  280.53  358.49280.6299   358.5286.9999  358.65290.7299  358.79
290.9299   358.8291.2999  358.79293.3699  358.75293.6899  358.74293.9399  358.73
295.1699  358.67295.9399   358.6  296.52  358.58  297.89  358.44298.8699  358.43
299.4099  358.38  301.39  358.34304.1599  358.24306.4199  358.24307.9999  358.35
308.5099  358.37  314.02  358.79314.1899   358.8  314.53  358.83  317.02     359
317.1899  359.01  318.27  359.02321.3499  359.14  325.72  359.24329.6599   359.3
332.3199  359.36333.9299   359.4  335.64  359.45  337.83  359.53338.4099  359.56
345.5099  359.88345.9899   359.9  346.15  359.91  346.33  359.93347.8599     360
355.9899  360.36356.8799  360.37  359.47  360.42361.8199  360.43364.1099   360.4
365.6799  360.41368.1899  360.42373.6099  360.42374.6099  360.41376.2499  360.38
380.1599  360.28380.6199  360.26382.4799   360.2386.6199  360.02386.9899     360
  389.52  359.85392.5499  359.69  419.45  358.05420.5099     358426.1899  357.51
  429.78  357.24430.8199  357.15432.6799     357443.6599  356.03443.8699     356
443.9299  355.99  444.03  355.99  447.45  355.53  448.97   355.4449.4899   355.4
452.9099  355.38456.0099  355.43456.4399  355.43457.1099  355.42  458.08  355.39
459.3499   355.3  460.34  355.24  460.95  355.22463.5099  355.09463.6599  355.08
465.6699     355466.7499  354.94  466.89  354.92467.7299  354.84468.9199  354.66
473.0399     354475.7999  353.73  476.22  353.67  478.15   353.5   480.2  353.31
480.4399  353.28481.9299  353.12482.0399   353.1482.1299  353.09  482.89     353
487.5699  352.58493.1599     352494.5099  351.98  494.83  351.98  496.22  351.97
  497.22  351.96  498.59  351.95  501.65  351.76  507.03   351.5  507.33  351.49
509.3099  351.51509.4999  351.52509.6899  351.52510.4399  351.55511.3199  351.55
513.0599  351.53513.5999  351.52  515.34  351.46516.4299  351.43  524.02     352
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524.3199  352.04525.0499  352.13526.7499  352.32528.5599  352.43538.4299     353
540.5699  353.12540.9099  353.14541.7299  353.17541.9899  353.18542.6099  353.18
  544.22  353.13544.3499  353.12  545.21  353.07  545.72     353546.6899  352.83
   547.2  352.73548.6699  352.41550.0599  352.09  550.58  352.01  550.65     352
555.4399  351.22556.4799     351  558.83   350.6   562.7  350.04562.9099     350
564.0399  349.82  564.71  349.72568.8099     349   570.2  348.79574.3199     348
575.6099  347.75575.8699  347.71  577.14  347.56578.5599  347.36579.0499  347.31
579.9099   347.2580.6299  347.16580.7999  347.14581.1699  347.14581.3599  347.12
583.2299  347.07584.6099  347.01584.8099     347584.9899     347585.4999  346.96
588.2699  346.69   588.6  346.67590.4899  346.51   595.7     346595.8099     346
598.5199  345.71599.0499  345.66604.7799  345.02604.9899  345.01605.5499     345
605.6699     345605.7499  344.97605.9099  344.94608.0099  344.38  610.59   344.1
  610.72  344.08611.6699     344612.6799  343.97612.7899  343.97613.4299  343.75
614.8199  343.58  615.61  343.51615.6899   343.5  615.84  343.49616.5699  343.46
617.4099  343.43  617.97  343.44618.9999  343.48619.6699  343.45  624.11  343.58
  624.83  343.48625.5399  343.41627.0099  343.27629.1599  343.02629.5599     343
630.9299   342.7  631.95  342.41632.8099  342.19  632.89  342.16  633.45     342
637.5299  341.31639.4099     341  642.73   340.6  647.48  340.01647.6499     340
  651.85  339.66  660.36     339661.9399     339673.3999  338.73  681.46  338.57
681.8699  338.56684.0599  338.54684.4199  338.53686.8699  338.53710.2999  338.61
  723.58     339724.7899     339  727.64  339.01  729.85     339  748.33     339
749.2599  338.94756.3799  338.85763.7699  338.98  763.96     339774.6199     339
  774.89  339.01  776.61  339.01  776.96     339  839.47     339842.0099  339.24
844.0299  339.44846.2799  339.65   851.1     340860.6599  340.74863.6799  340.99
863.8599     341865.2599  341.12  872.95  341.72875.2899  341.91  876.45     342
  884.85  342.63  885.85  342.71  889.65     343892.7499  343.22  905.21     344
912.3799  344.48919.8699     345928.7999  345.81   931.1     346939.8199     347
950.0099     348950.9299   348.2  953.83  348.53956.4899  348.89   958.1     349
960.4999   349.6962.3599     350  965.08  350.58966.9799     351968.8099   351.3
972.7299     352  977.96  352.86  978.77     353  979.33  353.03984.6299  353.78
985.4899  353.88986.1099  353.82  986.33  353.82986.6299  353.79987.5699  353.67
   988.7   353.5  993.59  352.88   994.1  352.83994.2299  352.82998.1299  352.36
  999.47  352.28 1001.35  352.48 1004.28  352.75 1004.88  352.79 1005.09  352.81
 1005.23  352.81 1005.52  352.83 1005.83  352.84 1007.57     353  1008.7  353.08
 1010.06  353.17 1012.01  353.27 1014.32  353.48 1014.93  353.51 1016.49  353.56
 1018.26   353.7 1018.93  353.74 1019.08  353.76 1021.67  353.93 1023.77  353.97
 1024.65     354  1024.8     354 1027.01  354.24 1027.61  354.33 1028.92  354.53
 1031.66     355 1035.27  355.46 1038.86     356 1040.71  356.27 1046.47     357
 1048.83  357.29 1054.94     358 1058.08  358.35 1062.59     359 1068.64  359.67
  1071.4     360 1082.61  360.02 1087.41  360.02 1097.44     360

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  651.85     .04846.2799     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        651.85846.2799           470.41  424.08  375.58             .1       .3

CROSS SECTION


RIVER: WASH23
REACH: Wash23              RS: 1066.16

INPUT
Description:
Station Elevation Data     num=     365
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  361.77.1599731  361.773.659973  361.797.559998  361.7413.60999  361.65
   13.88  361.6418.27997  361.4620.26001   361.429.27002     361      36  360.26
37.28998  360.0837.96997     360   38.62  359.8739.89001  359.6541.53998  359.42
45.45996     35946.90997   358.946.98999  358.8947.04999  358.8947.72998  358.81
52.45001  358.2653.17999  358.1754.59998     35854.95001  357.97   56.31  357.93
57.34998  357.9458.96997  357.7462.20996  357.6563.10999  357.5664.58997  357.42
65.83002  357.3166.52002  357.2667.91998  357.1469.35999     35774.35999  356.39
74.84998  356.3375.70001  356.2178.21997     356   78.37     35678.45001     356
78.48999     356   78.56     35678.84998  355.9485.20001  355.43   85.62  355.41
85.66998  355.4185.70996  355.4185.78998  355.4187.14001  355.4390.40997  355.13
91.91998  355.1394.52002  355.0995.07001   355.196.60999  355.0396.76001  355.02
97.52997     355  100.06   354.7  100.83  354.61  101.48  354.57   102.3   354.5
  102.47  354.48  104.56  354.05  104.84  354.05  105.24  354.05  105.75  354.04
  106.08  354.03  106.77  354.02  107.54  354.01   107.9     354  109.22  353.87
  109.58  353.87  109.98  353.86  120.21  353.07  120.27  353.07  121.26  353.06
  122.43  353.05  122.91  353.05  124.89  353.03  125.52  353.03  126.12  353.02
  127.74  353.02  129.81     353  130.97  352.83  139.63  352.23  141.42  352.08
  142.21     352  142.64     352  143.78  351.74  144.53  351.55  146.57     351
  148.72  350.44  150.61     350  152.18  349.67  155.18     349  156.82  348.67
  159.66     348  161.82  347.74  164.78  347.49  169.04     347  169.37  346.97
  169.69  346.95  175.73  346.57  178.94   346.5  179.48  346.56  179.74  346.54
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 181.3 | 346.67 | 181.67 | 346.69 | 182.41 | 346.72 | 182.65 | 346.74 | 183.36 | 346.78 |
| 185.09 | 346.73 | 185.48 | 346.73 | 185.87 | 346.73 | 194.15 | 346.25 | 196.52 | 346.11 |
| 196.89 | 346.08 | 198.1 | 346 | 207.74 | 345.4 | 208.26 | 345.37 | 215 | 345 |
| 217.74 | 344.86 | 218.07 | 344.84 | 220.2 | 344.78 | 225.01 | 344.58 | 226.99 | 344.51 |
| 229.36 | 344.39 | 233.47 | 344.21 | 238.01 | 344 | 238.06 | 344 | 238.11 | 344 |
| 238.14 | 344 | 239.29 | 343.93 | 240.52 | 343.85 | 240.56 | 343.84 | 241.29 | 343.77 |
| 243.08 | 343.59 | 243.17 | 343.58 | 248.64 | 343 | 255.41 | 342.41 | 260.37 | 342 |
| 261.83 | 341.83 | 268.59 | 341 | 273.18 | 340.39 | 275.99 | 340 | 282.76 | 339.07 |
| 283.25 | 339 | 283.52 | 338.97 | 283.75 | 338.94 | 284.03 | 338.91 | 285.13 | 338.8 |
| 290.94 | 338.19 | 291.86 | 338.09 | 291.92 | 338.09 | 293.02 | 338 | 304.38 | 337.19 |
| 307.64 | 337 | 314.67 | 336.64 | 317.52 | 336.5 | 320.55 | 336.34 | 323.24 | 336.18 |
| 325.97 | 336 | 339.23 | 335.4 | 348.68 | 335 | 353.45 | 334.99 | 357.41 | 334.99 |
| 362.77 | 335 | 365.71 | 335 | 366 | 335 | 366.24 | 335 | 366.72 | 335 |
| 367.77 | 335 | 368.08 | 335 | 368.19 | 335 | 369.72 | 335 | 378.79 | 335 |
| 382.21 | 335 | 383.12 | 335.01 | 383.4 | 335.01 | 388.16 | 335.01 | 398.18 | 335.01 |
| 398.28 | 335.01 | 398.81 | 335.01 | 400.29 | 335.01 | 402.59 | 335.01 | 424.19 | 335 |
| 425.12 | 335 | 425.2 | 335 | 425.68 | 335 | 425.86 | 335 | 426.05 | 335 |
| 426.07 | 335 | 426.09 | 335 | 426.36 | 335 | 426.8 | 335 | 427.14 | 335 |
| 427.3 | 335 | 427.46 | 335 | 427.5 | 335 | 427.66 | 335 | 428.3 | 335 |
| 428.58 | 334.96 | 429.72 | 334.8 | 433 | 334.32 | 435.49 | 334 | 443.69 | 333.99 |
| 444.31 | 333.99 | 451.3 | 334 | 451.46 | 334 | 452.56 | 334 | 452.59 | 334 |
| 453.01 | 334 | 453.25 | 334 | 453.29 | 334 | 453.98 | 334 | 454.54 | 334 |
| 455.81 | 334 | 458.04 | 333.99 | 458.31 | 333.99 | 458.76 | 333.99 | 459.08 | 333.99 |
| 459.59 | 333.99 | 460.29 | 333.99 | 463.94 | 334 | 472.68 | 334.04 | 474.98 | 334.05 |
| 476.97 | 334.04 | 480.12 | 334.03 | 487.18 | 334 | 487.56 | 333.99 | 487.93 | 333.99 |
| 488 | 333.99 | 489.14 | 333.99 | 489.5 | 334 | 490.67 | 334 | 495.92 | 334.01 |
| 497.4 | 334.01 | 503.2 | 334 | 505.24 | 333.97 | 508.45 | 333.94 | 509.05 | 333.93 |
| 509.35 | 333.93 | 509.6 | 333.93 | 514.48 | 334 | 519.37 | 334.55 | 521.3 | 334.67 |
| 522.44 | 334.73 | 523.48 | 335 | 525.47 | 335.66 | 526.51 | 336 | 527.26 | 336.25 |
| 529.8199 | 337 | 531.14 | 337.02 | 532.4 | 337.02 | 533.18 | 337.03 | 547.54 | 337.6 |
| 554.69 | 337.85 | 556.43 | 337.91 | 559.01 | 338 | 565.27 | 338.27 | 582.71 | 339 |
| 589.8199 | 339.35 | 590.13 | 339.37 | 603.73 | 340 | 620.88 | 340.78 | 622.16 | 340.83 |
| 622.92 | 340.87 | 624.41 | 340.93 | 626.15 | 341 | 637 | 341.53 | 641.3 | 341.71 |
| 647.88 | 342 | 650.79 | 342.14 | 655.31 | 342.37 | 662.27 | 342.74 | 667.25 | 343 |
| 675.3 | 343.49 | 683.46 | 344 | 683.59 | 344 | 684.1 | 344.03 | 684.76 | 344.06 |
| 705.95 | 345 | 706.28 | 345 | 708.74 | 345.12 | 712.5 | 345.29 | 713.44 | 345.32 |
| 714.31 | 345.35 | 716.19 | 345.45 | 719.74 | 345.54 | 720.77 | 345.58 | 721.09 | 345.59 |
| 725.74 | 345.94 | 726.14 | 345.94 | 727.12 | 345.95 | 727.48 | 345.95 | 727.61 | 345.95 |
| 727.94 | 345.96 | 728.09 | 345.96 | 728.44 | 345.96 | 729.86 | 345.96 | 731.06 | 345.97 |
| 732.58 | 345.98 | 732.69 | 345.98 | 732.75 | 345.98 | 734.63 | 345.99 | 734.85 | 345.99 |
| 736.28 | 346 | 736.35 | 346 | 736.36 | 346 | 736.39 | 346 | 736.41 | 346 |
| 741.03 | 346.31 | 742.12 | 346.35 | 750.48 | 346.78 | 754.18 | 346.98 | 755.32 | 346.98 |
| 757.36 | 347 | 757.93 | 347 | 757.96 | 347 | 758.03 | 347 | 763.28 | 347.24 |
| 768.89 | 347.53 | 778.15 | 348 | 778.28 | 348 | 779.17 | 348.04 | 785.58 | 348.25 |
| 789.78 | 348.37 | 794.7 | 348.45 | 797.79 | 348.52 | 802.18 | 348.64 | 804.08 | 348.68 |
| 813.29 | 348.98 | 813.63 | 348.98 | 814.37 | 348.99 | 814.66 | 348.99 | 817.09 | 349 |
| 817.27 | 349 | 817.29 | 349 | 817.3 | 349 | 817.34 | 349 | 836.37 | 349.73 |
| 839.48 | 349.84 | 844.24 | 350 | 844.69 | 350.02 | 851.54 | 350.33 | 853.11 | 350.38 |
| 853.69 | 350.41 | 853.87 | 350.42 | 869.39 | 350.89 | 870.68 | 350.94 | 872.45 | 351 |
| 872.66 | 351 | 872.96 | 351.02 | 873.07 | 351.02 | 873.12 | 351.02 | 873.21 | 351.02 |
| 876.16 | 351.16 | 878.06 | 351.23 | 879.98 | 351.31 | 883.39 | 351.46 | 885.48 | 351.53 |
| 887.07 | 351.6 | 896.04 | 352 | 898.92 | 352.14 | 899.35 | 352.16 | 903.24 | 352.4 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 339.23 | .04 | 525.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 339.23 | 525.47 | 285.33 | 285.19 | 284.54 | .1 | .3 |

CROSS SECTION

RIVER: WASH23
REACH: Wash23 RS: 780.97

INPUT
Description:
Station Elevation Data num= 353

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 360.93 | .5499878 | 360.98 | 2.440002 | 360.97 | 2.909973 | 360.97 | 3.190002 | 360.94 |
| 10.20001 | 360.23 | 11.63 | 360.13 | 13.22998 | | 360.16 | 28998 | 359.58 | 17.10999 |
| 18.92999 | 359.23 | 21.06 | | 35926.21997 | 358.5 | 31.38 | 358.03 | 31.48999 | 358.02 |
| 31.73999 | | 35839.98999 | 357.49 | 40.89001 | 357.44 | 43.04999 | 357.36 | 43.54999 | 357.32 |
| 47.26001 | 357.14 | 49.62 | 357.05 | 49.95001 | 357.02 | 52.34003 | 357.05 | 53.13 | 357.01 |
| 58 | 357.03 | 58.87 | 357.04 | 60.08002 | 357.04 | 60.45001 | 357.04 | 64.14001 | 357.06 |
| 65.16998 | 357.07 | 66.65997 | 357.07 | 66.78998 | 357.07 | 67.39001 | 357.08 | 67.57001 | 357.08 |
| 68.79999 | 357.07 | 79.09998 | 357.02 | 80.59003 | 357.01 | 81.26001 | 357.01 | 81.67999 | 357.01 |
| 84.65002 | | 35784.95001 | 356.97 | 85.23999 | 356.97 | 90.34003 | 356.67 | 91.07001 | 356.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 91.96997 | 356.69 | 3.28998 | 356.52 | 99.89001 | 356 | 105.93 | 355.09 | 106.51 | 355 |
| 106.84 | 354.95 | 111.64 | 354 | 113.93 | 353.17 | 114.51 | 353 | 116.5 | 352.43 |
| 118.12 | 352.15 | 118.56 | 352.06 | 118.96 | 352 | 121.16 | 351.63 | 123.5 | 351.39 |
| 124.07 | 351.28 | 124.95 | 351.21 | 126.03 | 351.12 | 126.81 | 351 | 130.61 | 350.2 |
| 130.83 | 350.17 | 131 | 350.15 | 131.9 | 350.01 | 131.95 | 350 | 132.42 | 349.94 |
| 132.43 | 349.93 | 133.66 | 349.8 | 133.69 | 349.8 | 134.62 | 349.79 | 136.56 | 349.91 |
| 137.97 | 349.99 | 138.08 | 349.99 | 138.27 | 350 | 147.05 | 350.2 | 147.48 | 350.19 |
| 148.2 | 350.15 | 148.37 | 350.14 | 148.55 | 350.13 | 150.02 | 350 | 153.6 | 349.32 |
| 156.19 | 349 | 157.68 | 348.77 | 163.02 | 348 | 163.31 | 347.97 | 163.8 | 347.9 |
| 165.59 | 347.64 | 166.34 | 347.52 | 166.63 | 347.46 | 167.67 | 347.24 | 168.54 | 347 |
| 170.23 | 346.52 | 172.02 | 346 | 173.08 | 345.72 | 175.56 | 345 | 177.21 | 344.52 |
| 179.18 | 344 | 180.42 | 343.7 | 182.89 | 343 | 186.12 | 342.21 | 186.84 | 342 |
| 188.86 | 341.49 | 190.73 | 341 | 191.61 | 340.81 | 196.01 | 340 | 200.42 | 339.24 |
| 201.82 | 339 | 209.64 | 338.02 | 209.8 | 338 | 218.14 | 337 | 218.18 | 337 |
| 218.19 | 337 | 218.81 | 336.92 | 225.77 | 336.02 | 225.96 | 336 | 231.39 | 335.24 |
| 233.08 | 335 | 240.87 | 334.12 | 241.83 | 334 | 244.19 | 333.82 | 254.28 | 333 |
| 262.67 | 332.75 | 266.37 | 332.66 | 274.38 | 332.45 | 276.18 | 332.4 | 279.13 | 332.32 |
| 282.62 | 332.24 | 285.44 | 332.15 | 285.47 | 332.15 | 287.18 | 332.11 | 287.52 | 332.1 |
| 288.18 | 332.08 | 292.4 | 332 | 292.51 | 332 | 293.08 | 332 | 293.33 | 332 |
| 294.77 | 332 | 295.17 | 332 | 295.29 | 332 | 295.85 | 332 | 297.08 | 332 |
| 298.13 | 332 | 298.67 | 332 | 299.58 | 332 | 302.74 | 332.01 | 303.58 | 332.01 |
| 303.67 | 332.01 | 304.09 | 332.01 | 309.32 | 332 | 313 | 332 | 314.45 | 332 |
| 319.97 | 331.44 | 325.98 | 331 | 327.3 | 331 | 327.64 | 331 | 327.9 | 331 |
| 328.16 | 331 | 328.48 | 331 | 328.68 | 331 | 328.77 | 331 | 328.79 | 331 |
| 333.52 | 330.99 | 335.31 | 330.99 | 338.25 | 330.99 | 341.51 | 331 | 342.87 | 331 |
| 343.16 | 331 | 343.94 | 331 | 344.51 | 331 | 345.58 | 331 | 347.14 | 331 |
| 347.74 | 331.01 | 348.14 | 331.01 | 348.35 | 331.01 | 354.15 | 331.17 | 354.43 | 331.17 |
| 358.39 | 331.25 | 359.64 | 331.26 | 361.15 | 331.3 | 374.14 | 331.4 | 394.44 | 331.55 |
| 398.25 | 331.45 | 413.76 | 331.25 | 417.65 | 331.14 | 417.69 | 331.14 | 425.51 | 331.07 |
| 432.12 | 331 | 432.43 | 331 | 433.32 | 331 | 435.02 | 331 | 435.26 | 331 |
| 435.71 | 331 | 436.2 | 331 | 437.03 | 331 | 437.51 | 331 | 440.14 | 331 |
| 442.96 | 331 | 445.97 | 331 | 449.75 | 331 | 453.77 | 331.94 | 454 | 332 |
| 461.82 | 332.36 | 475.77 | 333 | 477.77 | 333.36 | 479.35 | 333.55 | 481.56 | 333.9 |
| 483.45 | 334 | 484.72 | 334 | 485.1 | 334 | 485.22 | 334 | 485.71 | 334 |
| 485.88 | 334 | 486.29 | 334 | 486.4 | 334 | 488.44 | 334.05 | 488.87 | 334.06 |
| 490.04 | 334.08 | 490.19 | 334.08 | 491.46 | 334.1 | 493.53 | 334.13 | 499.85 | 334.25 |
| 512.64 | 334.45 | 520.23 | 334.55 | 520.74 | 334.56 | 525.04 | 334.61 | 526.69 | 334.63 |
| 527.62 | 334.64 | 527.97 | 334.64 | 528.52 | 334.64 | 531.2 | 334.65 | 534.58 | 334.65 |
| 535.51 | 334.66 | 536.49 | 334.66 | 539.85 | 334.62 | 540.94 | 334.6 | 541.66 | 334.59 |
| 543.31 | 334.56 | 544.83 | 334.52 | 548.87 | 334.53 | 553.1 | 334.55 | 560.04 | 334.86 |
| 560.11 | 334.86 | 562.63 | 334.95 | 564.28 | 335 | 569.04 | 335.12 | 571.53 | 335.17 |
| 581.39 | 335.39 | 582.73 | 335.41 | 587.96 | 335.48 | 595.73 | 335.61 | 597.05 | 335.63 |
| 600.74 | 335.69 | 608.84 | 335.88 | 609.19 | 335.89 | 613.93 | 336 | 623.78 | 336.29 |
| 624.38 | 336.3 | 625.73 | 336.31 | 628.62 | 336.37 | 632.55 | 336.41 | 633.52 | 336.42 |
| 636.17 | 336.5 | 640.68 | 336.71 | 641.44 | 336.75 | 641.87 | 336.76 | 647.03 | 337 |
| 652.48 | 337.28 | 662.83 | 337.8 | 663.68 | 337.85 | 666.33 | 337.99 | 666.42 | 337.99 |
| 666.52 | 338 | 675.66 | 338.62 | 680.54 | 339 | 689.71 | 339.84 | 691.4 | 340 |
| 692.14 | 340.07 | 693.91 | 340.26 | 694.08 | 340.27 | 699.46 | 340.8 | 701.79 | 341 |
| 710.87 | 341.86 | 712.07 | 342 | 716.72 | 342.62 | 719.24 | 343 | 723.87 | 343.69 |
| 726.07 | 344 | 727.18 | 344.16 | 733.65 | 345 | 736.69 | 345.41 | 741.22 | 346 |
| 745.71 | 346.62 | 748.37 | 347 | 753.74 | 347.89 | 754.44 | 348 | 754.62 | 348.01 |
| 756.72 | 348.25 | 758.55 | 348.44 | 759.54 | 348.51 | 762.07 | 348.74 | 764.21 | 348.9 |
| 765.04 | 349 | 769.78 | 349.5 | 774.61 | 349.85 | 774.67 | 349.86 | 774.82 | 349.87 |
| 776.24 | 349.98 | 776.43 | 350 | 777.91 | 350.21 | 778.37 | 350.25 | 779.17 | 350.3 |
| 779.87 | 350.33 | 781.91 | 350.41 | 783.41 | 350.48 | 784.17 | 350.49 | 786.87 | 350.63 |
| 789.23 | 350.61 | 791.16 | 350.67 | 792.4 | 350.74 | 793.19 | 350.79 | 797.59 | 351 |
| 803.66 | 351.31 | 813.93 | 351.85 | 814.77 | 351.91 | 815.87 | 352 | 816.1 | 352 |
| 817.11 | 352.07 | 817.77 | 352.13 | 826.62 | 353 | 826.66 | 353 | 830.65 | 353.49 |
| 834.75 | 354 | 835.12 | 354.04 | 842.45 | 354.86 | 843.71 | 355 | 843.72 | 355 |
| 843.73 | 355 | 843.74 | 355 | 843.82 | 355.01 | 848.77 | 355.65 | 851.81 | 356 |
| 852.68 | 356 | 853.21 | 356 | 853.37 | 356 | 859.03 | 356.16 | 864.51 | 356.3 |
| 865 | 356.3 | 868.14 | 356 | 869.81 | 355.81 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 314.45 | .04 | 454 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 314.45 | 454 | .1 | .3 |

CROSS SECTION

RIVER: WASH25A
REACH: Centerline Align RS: 10806.78

INPUT
Description:
Station Elevation Data num= 313

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 372.578 | 2.31 | 372.637 | 7.94 | 372.844 | 8.71 | 372.864 | 12.15 | 372.971 |
| 12.47 | 372.981 | 14.08 | 372.998 | 14.99 | 372.997 | 15.22 | 372.997 | 17.34 | 372.995 |
| 18.8 | 372.996 | 20.71 | 373 | 25.09 | 373.001 | 27.81 | 373.001 | 28.6 | 373.001 |
| 30.32 | 373 | 33.1 | 373 | 33.39 | 372.998 | 33.45 | 372.998 | 33.75 | 372.994 |
| 34.73 | 372.986 | 42.38 | 372.762 | 50.4 | 372.634 | 51.16 | 372.618 | 52.04 | 372.597 |
| 56.49 | 372.527 | 87.72 | 372 | 89.26 | 371.925 | 91.76 | 371.788 | 99.23 | 371.406 |
| 100.54 | 371.346 | 106.14 | 371.04 | 106.43 | 371.027 | 106.94 | 371 | 113.79 | 370.371 |
| 117.95 | 370 | 118.06 | 370 | 118.19 | 369.998 | 118.34 | 369.998 | 119.27 | 369.996 |
| 120.7 | 369.99 | 126.98 | 369.974 | 128.87 | 369.972 | 130.61 | 369.969 | 133.38 | 369.987 |
| 133.51 | 369.987 | 134.67 | 369.862 | 136.31 | 369.988 | 136.44 | 370 | 137.66 | 370.004 |
| 137.89 | 370.004 | 138.02 | 370.005 | 139.84 | 370.01 | 140.11 | 370.011 | 140.16 | 370.011 |
| 142.58 | 370.002 | 143.36 | 370 | 145.8 | 369.509 | 148.85 | 369 | 151.7 | 368.467 |
| 153.77 | 368 | 154.49 | 367.977 | 155.51 | 367.948 | 157.26 | 367.891 | 158.21 | 367.92 |
| 160.67 | 368 | 162.3 | 368.335 | 163.97 | 368.612 | 165.06 | 368.806 | 166.61 | 369 |
| 166.68 | 369 | 166.7 | 369 | 170.52 | 369.007 | 171.41 | 369.008 | 172.02 | 369.009 |
| 173.52 | 369.011 | 175.76 | 369.015 | 176.88 | 369.014 | 183.36 | 369 | 191.66 | 368.13 |
| 192.38 | 368 | 196.68 | 367.225 | 197.54 | 367 | 200.01 | 366.997 | 204.06 | 366.993 |
| 208.77 | 366.989 | 211.59 | 366.991 | 219.79 | 367 | 224.88 | 367.692 | 227.55 | 368 |
| 239.08 | 368 | 241.49 | 368 | 243.85 | 368 | 244.14 | 367.93 | 247.87 | 367 |
| 248.41 | 366.994 | 248.95 | 366.99 | 259.51 | 366.901 | 270.72 | 366.996 | 271.14 | 367 |
| 271.25 | 367.026 | 275.37 | 368 | 283.33 | 368.036 | 286.61 | 368.044 | 293.06 | 368.022 |
| 295.88 | 368.015 | 299.19 | 368 | 304.56 | 367.889 | 307.42 | 367.85 | 309.52 | 367.821 |
| 314.18 | 367.908 | 316.41 | 367.947 | 317.04 | 367.959 | 319.33 | 368 | 325.41 | 368.616 |
| 328.8 | 368.906 | 329.32 | 368.941 | 329.43 | 368.934 | 329.57 | 368.936 | 330.2 | 368.908 |
| 331.17 | 368.86 | 332.01 | 368.813 | 335.18 | 368.586 | 338.92 | 368.378 | 343.96 | 368.06 |
| 344.58 | 368.019 | 344.86 | 368 | 350.27 | 367.994 | 352.93 | 367.993 | 353.29 | 367.993 |
| 353.9 | 367.993 | 359.3 | 368 | 362.58 | 368.181 | 363.6 | 368.222 | 368.23 | 368.417 |
| 371.24 | 368.503 | 372.27 | 368.529 | 373.08 | 368.566 | 380.55 | 368.951 | 381.01 | 368.952 |
| 382.04 | 368.96 | 382.45 | 368.962 | 383 | 368.967 | 383.51 | 368.967 | 388.36 | 369 |
| 391.35 | 369.014 | 393.94 | 369.018 | 397.88 | 369.042 | 398.87 | 369.049 | 400.27 | 369.057 |
| 405.18 | 369.091 | 408.53 | 369.073 | 408.62 | 369.072 | 418.71 | 369 | 421.92 | 368.989 |
| 423.38 | 368.986 | 425.52 | 368.992 | 426.95 | 368.995 | 428.46 | 369 | 443.97 | 369.475 |
| 452.23 | 369.693 | 463.03 | 369.995 | 463.94 | 369.996 | 464.24 | 369.997 | 464.47 | 369.998 |
| 464.73 | 370 | 464.84 | 370 | 469.64 | 370.039 | 471.05 | 370.049 | 473.48 | 370.071 |
| 473.73 | 370.07 | 490.26 | 370.064 | 505.62 | 370.085 | 505.65 | 370.085 | 505.81 | 370.085 |
| 507.15 | 370.091 | 507.26 | 370.09 | 507.51 | 370.089 | 507.71 | 370.088 | 512.57 | 370.058 |
| 513.47 | 370.053 | 514.3 | 370.048 | 516.99 | 370.037 | 523.49 | 370 | 525.76 | 370 |
| 527.84 | 369.999 | 531.21 | 370 | 531.76 | 370 | 533.17 | 370 | 535.54 | 370.154 |
| 535.62 | 370.151 | 546.96 | 370.05 | 548 | 370.054 | 549.54 | 370.059 | 551.54 | 370.051 |
| 564.89 | 370 | 567.18 | 369.668 | 573.27 | 369.284 | 575.22 | 369.214 | 577.12 | 369.203 |
| 578.92 | 369.203 | 579.34 | 369.212 | 582 | 369.264 | 584.35 | 369.307 | 585.48 | 369.31 |
| 603.17 | 369.129 | 610.78 | 369.028 | 613.59 | 369.024 | 616.05 | 369.02 | 630.48 | 369 |
| 634.74 | 368.217 | 636.04 | 368 | 637.76 | 367.975 | 640.16 | 367.945 | 641.54 | 367.961 |
| 641.84 | 367.96 | 642.13 | 367.96 | 642.74 | 367.965 | 649.2 | 367.964 | 658.96 | 367.924 |
| 666.39 | 367.961 | 673.63 | 368 | 675.06 | 368.154 | 675.07 | 368.154 | 677.12 | 368.192 |
| 683.05 | 368.446 | 689.26 | 368.724 | 690.41 | 368.765 | 694.08 | 369 | 694.66 | 369.057 |
| 694.71 | 369.055 | 696.16 | 369.198 | 698.61 | 369.468 | 699.55 | 369.427 | 712.76 | 369.451 |
| 728.07 | 369.337 | 730.37 | 369.301 | 732.25 | 369.275 | 733.08 | 369.253 | 734.13 | 369.24 |
| 734.58 | 369.229 | 747.79 | 369.005 | 748.28 | 369.005 | 748.55 | 369.005 | 749.22 | 369.005 |
| 751.14 | 369.006 | 752.48 | 369.006 | 755.6 | 369.006 | 756.84 | 369.007 | 757.86 | 369.006 |
| 763.76 | 369.005 | 764.01 | 369.005 | 765.87 | 369.005 | 767.55 | 369.005 | 768.06 | 369.004 |
| 768.25 | 369.004 | 770.71 | 369.003 | 771.44 | 369.003 | 772.43 | 369.002 | 774.03 | 369.002 |
| 774.37 | 369.002 | 776.22 | 369.001 | 776.99 | 369.001 | 778.25 | 369 | 778.61 | 369 |
| 778.73 | 369 | 782.6 | 368.997 | 784.56 | 368.996 | 785.72 | 368.995 | 788.92 | 368.997 |
| 792 | 368.999 | 794.07 | 369 | 808.63 | 369.578 | 819.39 | 370 | 819.5 | 370 |
| 820.18 | 370 | 824.19 | 369.437 | 824.29 | 369.423 | 827.12 | 369 | 834.16 | 368.033 |
| 834.42 | 368 | 834.6 | 368 | 835.35 | 367.999 | 836.02 | 367.998 | 836.8 | 367.997 |
| 837.18 | 367.997 | 838.88 | 368 | 840.42 | 368.04 | 840.77 | 368.049 | 842.92 | 368.11 |
| 844.35 | 368.148 | 847.41 | 368.236 | 862.65 | 368.675 | 863.85 | 368.696 | 872.34 | 368.961 |
| 872.64 | 368.974 | 872.67 | 368.974 | 873.22 | 368.974 | 873.32 | 368.975 | 873.55 | 368.975 |
| 873.61 | 368.975 | 873.84 | 368.975 | 873.92 | 368.975 | 874.35 | 368.975 | 874.38 | 368.975 |
| 874.39 | 368.975 | 876.2 | 368.976 | 876.57 | 368.976 | 882.91 | 368.954 | 884.24 | 368.944 |
| 886.83 | 368.799 | 892.43 | 368.576 | 895.29 | 368.514 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 145.8 | .04 | 895.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 145.8 | 895.29 | 827.5032 | 706.78 | 664.38 | .1 | .3 |

Right Levee Station= 820.18 Elevation= 370.01

CROSS SECTION

RIVER: WASH25A
REACH: Centerline Align RS: 10100

INPUT
Description:
Station Elevation Data num= 442

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 366.01 | 2.910034 | 366.01 | 6.75 | 366.01 | 10.12 | 366.01 | 15.17004 | 366.01 |
| 15.28003 | 366.01 | 5.52002 | 366.01 | 18.52002 | 366.01 | 31.52002 | | 36643.71997 | 365.58 |
| 47.98999 | 365.42 | 59.45996 | | 36559.73999 | 364.99 | 60.32996 | 364.95 | 72.38 | 364.39 |
| 80.16003 | 364.03 | 80.83997 | | 36480.96997 | | 36481.40002 | | 36482.96997 | 363.99 |
| 83.76001 | 363.99 | 84.92993 | | 36490.16003 | 364.23 | 95.59998 | 364.59 | 9.29004 | 364.68 |
| 105.03 | | 365110.8199 | 365.18 | 113.11 | 365.24 | 115.11 | 365.29 | 115.51 | 365.29 |
| 116.98 | 365.33 | 117.54 | 365.32 | 130.4 | 365.42 | 141.02 | 365.43 | 141.67 | 365.43 |
| 154.09 | 365.01 | 154.24 | 365.01 | 154.65 | 365.01 | 157.85 | 365.01 | 160.25 | 365.01 |
| 161.98 | 365.01 | 164.09 | 365.01 | 167.97 | 365 | 168.54 | 365 | 173.23 | 365 |
| 173.88 | | 365175.1899 | 365 | 175.76 | 365 | 177.2 | 365 | 178.1 | 364.93 |
| 182.89 | 364.51 | 186.27 | 364.2 | 188.67 | 364 | 191.17 | 363.66 | 195.38 | 363 |
| 195.9399 | 362.98 | 197.0599 | 362.95 | 198.9299 | 362.88 | 199.09 | 362.88 | 199.1799 | 362.88 |
| 200.45 | 362.91 | 200.97 | 362.92 | 201.78 | 362.95 | 201.9299 | 362.95 | 202.4 | 362.96 |
| 203.13 | 362.97 | 203.78 | 362.97 | 206.6799 | 363 | 208.02 | 363.02 | 209.09 | 363.01 |
| 210.33 | 363.01 | 211.04 | 363.01 | 211.2 | 363.01 | 211.9 | 363.01 | 216.1799 | 363.04 |
| 219.79 | 363.02 | 221.6899 | 363.01 | 222.04 | 363.01 | 222.4299 | 363.01 | 222.97 | 363 |
| 223.05 | 363 | 223.28 | 363 | 223.88 | 362.99 | 223.99 | 362.99 | 226.49 | 362.94 |
| 228.08 | 362.97 | 229.4299 | 363 | 235.39 | 363.95 | 235.8199 | 364 | 237.3 | 364.16 |
| 240.15 | 364.43 | 241.84 | 364.6 | 245.87 | | 365252.4399 | 365.36 | 252.89 | 365.37 |
| 253.62 | 365.39 | 257.76 | 365.49 | 260.95 | 365.53 | 261.75 | 365.52 | 263.37 | 365.53 |
| 264.11 | 365.53 | 273.1799 | 365.71 | 274 | 365.7 | 274.62 | 365.69 | 274.8 | 365.69 |
| 275 | 365.69 | 277.29 | 365.61 | 277.8 | 365.62 | 278.37 | 365.59 | 279.61 | 365.5 |
| 280.6899 | 365.46 | 285.51 | 365.05 | 285.62 | 365.04 | 285.78 | 365.02 | 285.99 | 365 |
| 288.7 | 364.73 | 296.07 | 364 | 297.53 | 363.94 | 297.85 | 363.92 | 303.46 | 363.69 |
| 306.41 | 363.52 | 308.74 | 363.38 | 310.11 | 363.31 | 314.76 | 363 | 319.79 | 362.73 |
| 330.73 | 362.18 | 333.66 | 362.03 | 333.73 | 362.03 | 333.95 | 362.02 | 334.62 | 362 |
| 335.08 | 362 | 335.09 | 362 | 336.97 | 361.87 | 337.53 | 361.87 | 338.14 | 361.86 |
| 353.89 | 361.39 | 359.33 | 361.3 | 360.26 | 361.31 | 360.81 | 361.31 | 370.53 | 361.29 |
| 380.74 | 361.28 | 381.13 | 361.27 | 383.85 | 361.25 | 386.16 | 361.23 | 386.17 | 361.23 |
| 395.63 | 361.18 | 406.9 | 361.08 | 407.87 | 361.1 | 409.24 | 361.12 | 409.33 | 361.12 |
| 411.47 | 361.02 | 412.05 | 361.03 | 412.92 | 361.03 | 413.78 | 361.03 | 414.09 | 361.03 |
| 414.36 | 361.03 | 417.58 | 361 | 420.02 | 361 | 421.55 | 360.99 | 422.15 | 360.99 |
| 422.93 | 360.99 | 423.98 | 360.99 | 424.22 | 360.99 | 424.33 | 360.99 | 424.56 | 360.99 |
| 425.53 | 360.99 | 433.33 | 360.99 | 435.92 | 360.99 | 436.53 | 360.99 | 442.37 | 361 |
| 450.36 | 361 | 456.99 | 361 | 463.53 | 361 | 467.86 | 361 | 471.26 | 361 |
| 474.41 | 360.99 | 481.85 | 360.97 | 484.87 | 360.98 | 492.24 | 361 | 499.95 | 361 |
| 502.04 | 361 | 502.56 | 361 | 511.14 | 360.18 | 511.73 | 360.12 | 512.43 | 360.07 |
| 513.14 | 360 | 514.25 | 359.98 | 520.9 | 359.87 | 525.6 | 359.94 | 527.23 | 359.97 |
| 528.88 | 360 | 532.7 | 360.52 | 535.67 | 360.95 | 536.01 | 361 | 536.16 | 361.01 |
| 536.19 | 361.01 | 536.67 | 361 | 542.73 | 361.02 | 544.29 | 361.03 | 551.74 | 361.05 |
| 557.01 | 361.04 | 566.51 | 361 | 570.93 | 360.95 | 572.75 | 360.93 | 576.76 | 360.98 |
| 578.34 | 361 | 578.72 | 361 | 579.82 | 361 | 580.63 | 361 | 580.93 | 361 |
| 582.4 | 360.87 | 590.91 | 360 | 591.51 | 360 | 593.49 | 360 | 595.4 | 360.29 |
| 596.63 | 360.52 | 599.94 | 361 | 601.51 | 361.38 | 601.96 | 361.47 | 604.05 | 361.9 |
| 604.32 | 362 | 604.37 | 362 | 604.5 | 362 | 612.97 | 361.75 | 616.48 | 361.66 |
| 618.67 | 361.6 | 618.76 | 361.59 | 630.66 | 361.36 | 636.22 | 361.28 | 636.69 | 361.28 |
| 637.93 | 361.28 | 638.18 | 361.28 | 638.36 | 361.28 | 638.91 | 361.27 | 650.9 | 361.25 |
| 665.58 | 361.11 | 669.88 | 361.02 | 670.74 | 361 | 670.77 | 361 | 670.88 | 361 |
| 671.11 | 361 | 671.23 | 361 | 685.7 | 360.24 | 688.04 | 360.12 | 689.63 | 360 |
| 689.72 | 360 | 689.83 | 360 | 689.92 | 360 | 689.95 | 360 | 690.57 | 360.08 |
| 698.19 | 361 | 701.83 | 361.29 | 703.21 | 361.38 | 707.7 | 362 | 712.55 | 362.93 |
| 712.65 | 362.94 | 712.97 | 363 | 715.84 | 363.05 | 716.57 | 363.06 | 721.65 | 363.14 |
| 722.36 | 363.14 | 729.94 | 363 | 731.27 | 362.91 | 732.59 | 362.89 | 734.34 | 362.88 |
| 734.35 | 362.88 | 746.57 | 362.55 | 746.61 | 362.55 | 750.17 | 362.48 | 753.03 | 362.44 |
| 759.31 | 362.46 | 767.9 | 362.6 | 769.8 | 362.67 | 772.29 | 362.78 | 773.3 | 362.84 |
| 776.29 | 362.98 | 776.7 | 363 | 784.02 | 363.32 | 792.73 | 363.72 | 799.33 | 364 |
| 805.65 | 364 | 806.71 | 364 | 807.36 | 363.87 | 811.11 | 363 | 815.21 | 362.26 |
| 816.64 | 362 | 818.83 | 361.65 | 823.42 | 361 | 825.39 | 360.99 | 827.16 | 360.99 |
| 827.92 | 360.99 | 829.69 | 361 | 831.48 | 361.03 | 833.33 | 361.05 | 836.22 | 361.01 |
| 836.89 | 361.01 | 837.47 | 361 | 839.13 | 360.98 | 843.97 | 360.94 | 846.83 | 360.96 |
| 850.67 | 361 | 854.46 | 361.57 | 858.17 | 362 | 868.49 | 362.44 | 871.96 | 362.55 |
| 873.7 | 362.62 | 875.81 | 362.7 | 885.66 | 363 | 886.38 | | 363887.3199 | 363 |
| 887.33 | 363 | 887.35 | 363 | 897.9 | 362.32 | 901.21 | 362.11 | 902.64 | 362 |
| 906.67 | 361.25 | 907.92 | 361 | 911.05 | 360.99 | 911.8199 | 360.98 | 914.34 | 361 |
| 915.6 | 361 | 933.52 | 361.85 | 936.66 | 362 | 937.01 | 362 | 937.61 | 362 |
| 939.69 | | 362941.5699 | 362 | 942.44 | 362 | 946.86 | 362 | 946.9 | 362 |
| 946.95 | 362 | 947.03 | 362 | 948.54 | 362 | 948.63 | 362 | 951.84 | 362 |
| 955.39 | 362 | 956.48 | 362 | 958.54 | 362 | 962.58 | 362 | 963.62 | 362 |
| 963.95 | 362 | 973.89 | 361.97 | 976.66 | 361.96 | 980.28 | 361.97 | 984.71 | 361.98 |
| 989.3199 | 362 | 989.98 | 362 | 990.76 | 362 | 993.48 | 362 | 996.36 | 361.94 |
| 999.43 | 361.89 | 1002.47 | 361.94 | 1003.98 | 361.95 | 1008.84 | 362 | 1009.75 | 362 |
| 1010.41 | 362 | 1011.63 | 362 | 1013.38 | 362 | 1013.41 | 362 | 1013.45 | 361.99 |
| 1018.67 | 361 | 1019.15 | 361 | 1020.66 | 361 | 1025.29 | 360.99 | 1035.5 | 360.97 |
| 1042.97 | 360.98 | 1046.12 | 360.99 | 1053.18 | 361 | 1055.92 | 361.31 | 1056.35 | 361.34 |
| 1058.71 | 361.55 | 1062.56 | 361.97 | 1064.26 | 362 | 1064.63 | 362 | 1068.04 | 362 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1073.03 | 362 | 1076.49 | 362 | 1078.62 | 362 | 1086.51 | 361.4 | 1090.68 | 361.2 |
| 1092.42 | 361.17 | 1092.68 | 361.23 | 1092.78 | 361.23 | 1096.56 | 362 | 1100.92 | 362.91 |
| 1101.45 | 363 | 1101.97 | 363.02 | 1116.85 | 363.16 | 1128.13 | 363.26 | 1128.28 | 363.25 |
| 1128.52 | 363.25 | 1130.5 | 363.27 | 1132.8 | 363.29 | 1134.13 | 363.32 | 1135.06 | 363.35 |
| 1136.18 | 363.38 | 1137.75 | 363.45 | 1138.93 | 363.5 | 1143.31 | 363.69 | 1149.21 | 363.99 |
| 1149.55 | 363.99 | 1149.98 | 364 | 1152.71 | 364 | 1155.42 | 364 | 1155.71 | 364 |
| 1156.59 | 364 | 1156.6 | 364 | 1156.67 | 364 | 1156.85 | 364 | 1156.96 | 364 |
| 1157.19 | 364 | 1168.73 | 364.09 | 1186.24 | 364.23 | 1186.34 | 364.23 | 1187.12 | 364.24 |
| 1188.43 | 364.25 | 1188.53 | 364.25 | 1190.82 | 364.27 | 1193.49 | 364.29 | 1201.4 | 364.36 |
| 1207.98 | 364.41 | 1210.41 | 364.42 | 1214.87 | 364.45 | 1226.62 | 364.58 | 1248.07 | 364.83 |
| 1248.94 | 364.84 | 1257.33 | 364.95 | 1257.83 | 364.96 | 1258.93 | 364.97 | 1259.68 | 364.97 |
| 1261.54 | 365 | 1263.36 | 365 | 1265.09 | 365 | 1266.51 | 365 | 1266.88 | 365 |
| 1270.46 | 365 | 1278.14 | 365 | 1291.7 | 364.99 | 1291.95 | 364.99 | 1292.14 | 364.99 |
| 1300.32 | 364.99 | 1309.49 | 365 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 335.09 | .04 | 1096.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 335.09 | 1096.56 | 543.6 | 500 | 417.85 | .1 | .3 |

CROSS SECTION

RIVER: WASH25A
REACH: Centerline Align RS: 9600

INPUT
Description:
Station Elevation Data num= 391

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 364.96 | 1.73999 | 364.95 | 4.72998 | 364.96 | 11.4001 | 364.61 | 1.93005 | 364.58 |
| 12.6001 | 364.55 | 13.79004 | 364.51 | 5.08008 | 364.42 | 21.46008 | 36 | 422.26001 | 364 |
| 22.78003 | 363.99 | 23.08008 | 363.99 | 23.67004 | 36 | 434.30005 | 36 | 436.64001 | 363.99 |
| 39.40002 | 363.99 | 39.96008 | 363.98 | 41.08008 | 363.98 | 42.21008 | 363.97 | 44.28003 | 363.97 |
| 44.44006 | 363.96 | 47.97009 | 363.96 | 70.35999 | 363.05 | 71.16003 | 363.02 | 71.39001 | 363.01 |
| 71.63 | 363.01 | 71.91003 | 36 | 377.35999 | 36 | 379.58008 | 363.05 | 82.23999 | 363.03 |
| 82.30005 | 363.03 | 83.78003 | 36 | 388.48999 | 363 | 90.37 | 362.99 | 105.75 | 362.99 |
| 107.42 | 362.98 | 107.9301 | 362.98 | 109.65 | 362.97 | 112.0701 | 362.97 | 112.48 | 362.96 |
| 114.0701 | 362.96 | 114.78 | 362.95 | 115.0801 | 362.95 | 123.3501 | 362.36 | 126 | 362.3 |
| 126.26 | 362.29 | 126.78 | 362.28 | 127.99 | 362.27 | 128.6801 | 362.27 | 132.0801 | 362.25 |
| 133.77 | 362.26 | 137.4701 | 362.3 | 139.29 | 362.3 | 140.76 | 362.28 | 145.24 | 362.19 |
| 146.1801 | 362.2 | 148.49 | 362.12 | 148.5801 | 362.12 | 153.51 | 362 | 155.79 | 362.01 |
| 155.8401 | 362.01 | 159.8 | 362.07 | 159.92 | 362.07 | 163.5601 | 362.02 | 164.7201 | 362.02 |
| 165.16 | 362.01 | 165.88 | 362.01 | 166.5701 | 362 | 166.66 | 362 | 167.05 | 361.99 |
| 167.26 | 361.99 | 168.76 | 361.95 | 170.02 | 361.92 | 171.0601 | 361.91 | 71.9301 | 361.89 |
| 172.1801 | 361.89 | 174.2201 | 361.88 | 174.8201 | 361.88 | 175.3201 | 361.89 | 177.3101 | 361.91 |
| 177.76 | 361.91 | 78.6901 | 361.91 | 81.4701 | 361.86 | 185.37 | 361.87 | 189.88 | 361.58 |
| 195.77 | 361.32 | 196.0701 | 361.32 | 199.5 | 361.17 | 200.03 | 361.17 | 202.24 | 361.09 |
| 202.86 | 361.08 | 203.42 | 361.09 | 204.2001 | 361.12 | 206.4301 | 361.12 | 08.8301 | 361.06 |
| 209.28 | 361.13 | 211.0801 | 361.13 | 211.52 | 361.22 | 11.6901 | 361.21 | 217.52 | 361.32 |
| 218.12 | 361.33 | 218.54 | 361.32 | 218.9401 | 361.36 | 219.11 | 361.32 | 220.38 | 361.5 |
| 221.5 | 361.39 | 222.24 | 361.33 | 223.99 | 361.38 | 224.76 | 361.41 | 227.6801 | 361.34 |
| 229.55 | 361.41 | 230.24 | 361.4 | 230.89 | 361.43 | 233 | 361.47 | 234.87 | 361.49 |
| 237.36 | 361.49 | 238.53 | 361.48 | 238.8201 | 361.48 | 242.1801 | 361.51 | 243.75 | 361.53 |
| 244.48 | 361.56 | 245.27 | 361.57 | 249.42 | 361.66 | 252.4501 | 361.68 | 252.9 | 361.68 |
| 254.78 | 361.67 | 256.3401 | 361.67 | 257.9501 | 361.68 | 260.03 | 361.71 | 261.3201 | 361.71 |
| 261.75 | 361.72 | 262.66 | 361.69 | 263.41 | 361.71 | 265.7201 | 361.72 | 268.05 | 361.71 |
| 271.8501 | 361.63 | 272.1901 | 361.63 | 273.17 | 361.62 | 273.91 | 361.62 | 276.1901 | 361.56 |
| 281.2101 | 361.51 | 282.7101 | 361.47 | 298.9401 | 361.08 | 299.2101 | 361.08 | 301.17 | 361.05 |
| 305.51 | 361.01 | 306.0801 | 361.01 | 306.49 | 361 | 315.9701 | 360.55 | 324.3 | 360.36 |
| 325.9501 | 360.32 | 326.79 | 360.29 | 330 | 360.21 | 332.15 | 360.15 | 336.92 | 360 |
| 338.12 | 359.9 | 339.51 | 359.78 | 347.4401 | 359 | 351.4401 | 358.83 | 353.37 | 358.74 |
| 354.75 | 358.67 | 367.1801 | 358 | 367.3401 | 357.99 | 384.8501 | 357.01 | 385.0601 | 357 |
| 385.13 | 357 | 388.01 | 356.99 | 393.3401 | 356.99 | 396.98 | 357 | 414.2501 | 357 |
| 415.47 | 356.98 | 458.47 | 356.01 | 458.6201 | 356.01 | 459.1 | 356 | 461.76 | 356 |
| 471.2501 | 355.94 | 480.53 | 355.46 | 486.6201 | 355.18 | 488.36 | 355 | 492.7401 | 355 |
| 522.03 | 356 | 525.8 | 356.01 | 529.6201 | 356.01 | 533.5701 | 356 | 537.98 | 355.65 |
| 538.42 | 355.63 | 541.34 | 355.51 | 544.3101 | 355.45 | 48.8201 | 355.15 | 550.1901 | 355.16 |
| 552.41 | 355.24 | 552.9401 | 355.24 | 558.42 | 356 | 561.59 | 356.02 | 562.5601 | 356.02 |
| 567.3801 | 356.03 | 567.92 | 356.03 | 576.11 | 356.02 | 582.0001 | 356.03 | 583.11 | 356.03 |
| 584.35 | 356.02 | 592.03 | 356.02 | 593.23 | 356.01 | 595.73 | 356.01 | 597.05 | 356 |
| 597.9301 | 355.89 | 599.61 | 355.88 | 601.98 | 355.84 | 615.78 | 355.57 | 623.09 | 355.46 |
| 623.16 | 355.46 | 623.9301 | 355.43 | 635.2501 | 355.77 | 637.05 | 355.88 | 637.1901 | 355.89 |
| 639.33 | 356 | 639.8 | 356.01 | 643.3101 | 356.01 | 656.58 | 356.05 | 658.98 | 356.04 |
| 676.3201 | 356.03 | 677.58 | 356.02 | 678.16 | 356.02 | 680.42 | 356 | 687.45 | 355.05 |
| 687.89 | 355.02 | 688.72 | 355 | 689.33 | 355.01 | 689.8701 | 355 | 691.0001 | 355 |
| 694.03 | 354.99 | 695.64 | 354.99 | 699.65 | 355 | 710.34 | 355.77 | 714.0701 | 356 |

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  726.78  356.73730.3701  356.81  731.97  356.83  732.76  356.87  735.17  356.87
  736.47  356.92  738.95  356.99  739.41  356.95739.5001  356.95  740.95  356.94
  744.65  356.87   758.2  356.51764.3101  356.37766.3701  356.32  777.47     356
  781.91   355.4  785.42     355  786.42     355  803.05  354.94  803.78  354.94
  819.55     355821.3701  355.51822.8101  355.92823.1201     356823.9301  356.03
  833.61  356.63  836.96  356.69  841.22  356.26  841.58  356.25  842.28  356.18
843.6201     356   844.1     356845.4301  355.99  846.46  355.99  847.09  355.98
847.5701  355.99  850.71     356855.0701  356.76  855.73  356.87  856.54  356.99
  856.59     357861.5001  356.47  863.17  356.31864.2401  356.26867.8101  356.24
870.9301  356.23871.4401  356.24  893.28   356.3  895.54  356.24895.8201  356.23
   896.6  356.22  897.01  356.21  903.71  356.26904.8201  356.29   904.9  356.29
  915.45  356.51921.4501  356.6921.7101  356.59  934.86  356.62   935.1  356.62
  951.03  356.99  954.13  356.99  958.73     357  981.92     357  984.85  357.01
 1011.36     357 1015.95  356.44 1019.45     356 1021.09  355.96 1021.37  355.96
 1022.65  355.98 1023.15     356 1028.33   356.5 1032.88     357 1049.85     357
 1055.84  356.38 1056.78  356.27 1058.85     356 1070.19     356 1070.35  355.99
  1074.2  355.88 1075.77  355.85 1079.79  355.71 1080.87  355.66  1097.1     355
  1105.4     355 1108.14  355.18 1112.81  355.34 1116.09  355.42 1116.49  355.42
 1116.95  355.45 1117.94  355.43 1122.82  355.47  1128.2  355.37 1129.67   355.3
 1130.76  355.27 1131.72  355.25 1133.95  355.18 1135.93  355.13 1136.48  355.14
    1138  355.23 1147.04  355.98 1150.57     356 1172.84     356 1174.46  355.99
  1175.9  355.99 1176.79     356 1181.09  356.32 1187.28  356.59 1188.16  356.63
 1188.87  356.67 1193.36  356.88 1193.44  356.88 1195.77     357    1220  357.11
 1222.94  357.12 1247.85  357.01 1249.33     357 1251.45  356.98 1254.33  356.96
 1262.58  356.88 1265.27  356.89 1270.56  356.87 1274.36   356.9 1274.74   356.9
 1275.37  356.91 1277.08  356.93 1278.09  356.94 1281.27     357  1284.5  357.84
 1285.11     358 1285.54  358.12 1288.71     359  1300.4  359.07 1304.28  359.05
 1307.94  359.04 1318.51  358.99 1321.87  358.94 1335.81  358.78 1337.64  358.77
  1338.1  358.76 1341.09  358.73 1361.86   358.7 1363.23  358.69  1363.6  358.68
 1366.38  358.68 1369.87  358.66  1371.2  358.65  1372.1  358.64  1374.3  358.62
 1374.89  358.61 1385.25  358.58 1395.86  358.63 1396.78  358.64 1418.96     359
 1431.04     359

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  415.47     .04 1193.36     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        415.47 1193.36           516.03     500  513.02              .1       .3

CROSS SECTION


RIVER: WASH25A
REACH: Centerline Align   RS: 9100

INPUT
Description:
Station Elevation Data    num=     392
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  365.651.849976  365.6510.91992  365.6919.47998  365.6720.55994  365.66
22.27002  365.6433.80994  365.5835.31995  365.5942.20996  365.5943.01001  365.58
47.16992  365.5848.81995  365.5956.91992   365.665.52991  365.6366.32996  365.63
67.27991  365.6470.44995  365.6574.94995  365.6576.08997  365.66   76.75  365.65
   80.87  365.6384.77991  365.6286.09998  365.6287.07996  365.6389.77002  365.62
   92.38  365.62  104.13  365.58  119.99  365.48121.7899  365.48122.6499  365.46
130.0499  365.35  130.85  365.35134.6599  365.33  138.58  365.33139.1599  365.32
139.9199  365.32  140.98  365.31  142.02  365.31145.0299   365.3  145.48   365.3
147.5299  365.29  149.47  365.29155.6799  365.33   156.6  365.33158.7899  365.32
  160.99  365.33  162.72  365.35170.5699   365.4  177.36  365.43  185.71  365.43
  190.77  365.41  197.22  365.41  207.63  365.36  207.71  365.36  218.84   365.3
222.9299  365.27  238.71     365     262     365265.5399  364.94  265.97  364.93
  266.49  364.93278.5399  364.71  281.64  364.66  281.85  364.66  282.34  364.65
  282.52  364.64  282.99  364.63  287.08  364.57293.4299  364.42301.0299  364.33
316.5299  364.01  320.86  364.01  323.09     364  324.63     364327.9399  363.94
  329.25  363.92332.5699  363.86   335.7  363.81376.9399     363  377.23     363
396.8999     362  402.86  361.48  406.59  361.22  409.46     361413.6499  360.55
417.4399  360.28  422.27  359.82422.8099  359.78  423.67  359.72  425.34  359.58
  432.14     359433.1899  358.78433.4399  358.73  435.55  358.41437.9999     358
438.0599     358  438.85  357.98  438.92  357.98439.8799  357.96  440.67  357.93
440.9999  357.94441.4399  357.93442.3799  357.93  444.15  357.91  444.52  357.91
   450.2  357.33  452.17  357.22   452.4  357.21  452.71  357.21453.9299  357.19
454.7599  357.16457.8199  357.13  460.58  357.03  460.72  357.02  460.98  357.02
461.5699  357.01  461.66  357.01461.9399     357  462.95  356.99464.7499  356.99
  464.92  356.98  466.34  356.99  467.96  356.99  468.47     357  469.02  356.99
473.8799     357475.3699     357  477.46  357.03  477.64  357.03  479.92  357.09
  480.09  357.09  480.83  357.11  481.55  357.11  484.49     357   487.7  356.87
  487.92  356.87  488.11  356.88  493.98  356.88500.6299  356.99  500.71     357
  500.85     357  504.17  357.12510.1299  357.27  513.04  357.49514.6299  357.62
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  518.97     358   522.8     358527.0699  358.01536.9999  358.01  541.21     358
544.6299  357.15544.8699  357.08  545.21     357545.6199  356.89  548.98     356
550.4399  355.57  552.15     355   554.7  354.26  555.59     354  556.97  353.63
  559.54     353564.8099  352.61572.3099     352577.3699  351.39  577.84  351.33
578.5099  351.23582.5599     351589.8699  350.95  591.84  350.95  592.66  350.94
  596.14  350.94597.0099  350.93600.5699  350.94  602.08  350.94  606.77  350.63
607.5599  350.62  613.74   350.5  626.47  350.21  627.67  350.18  629.45  350.12
  633.55     350  634.05     350  635.24  349.99635.5099  349.99  636.77  349.98
  644.99  349.98  652.29  349.91  653.14  349.91653.5099  349.92   654.9  349.93
655.8799  349.94659.0599  349.96  662.24     350  669.54  350.49670.4399  350.51
672.3099  350.54674.3099  350.56  678.59  350.76  683.86  350.81684.8199  350.81
  685.78  350.83686.5699  350.85687.9999  350.85  696.35   350.8  698.54  350.84
  701.54  350.78  716.28   350.2  716.66  350.19717.1899  350.17  720.16     350
726.1199  349.26  728.16     349   731.2  348.98735.7599  348.93742.4399  348.87
  749.39  348.92756.3799     349761.2599  349.57  765.23     350  768.15  350.03
  768.34  350.03  775.71  349.99  777.24  349.99  781.24  349.96788.3799  349.93
791.3699  349.94  801.61     350  805.91     350807.8199  349.98809.5699  349.98
  811.03     350  820.74  350.01  823.54  350.02826.2599  350.01  830.54  350.01
835.5699     350842.3099  349.96842.3799  349.96846.6799  349.97   850.3     350
  855.78  350.28  856.27  350.28  866.59  350.48   872.7  350.57  881.27  350.53
   884.2  350.48   885.1  350.47886.8199  350.46  893.34  350.33  897.36  350.33
   901.4  350.34   901.6  350.34   904.4   350.3   906.7  350.28  908.35  350.28
   910.1  350.29  910.71  350.3910.8099  350.3926.9399   350.5  927.29   350.5
936.0099  350.45937.1799  350.43937.5699  350.43  941.71  350.45  943.99  350.47
  952.46  350.56955.0499  350.64955.4199  350.64  956.72  350.66  964.71  350.72
  975.13  350.86975.3199  350.86  978.49  350.91  980.15  350.93981.5399  350.94
982.2599  350.92983.8099  350.87  986.71  350.85  987.08  350.83  989.34  350.78
  990.73  350.74992.8199  350.67993.8099  350.63998.2899   350.5999.5099  350.46
 1000.82  350.41 1006.13   350.1 1008.92  350.01 1012.96  350.02 1015.53  350.01
 1021.26  350.01 1023.09     350 1032.47     350 1034.21  349.99  1052.5  349.99
 1052.85  349.98 1053.12  349.98 1055.51  349.85 1060.69  349.59 1062.21  349.56
 1074.69  349.62 1091.42  349.75 1093.57   349.8 1100.97  349.99 1101.06  349.99
 1101.26     350  1102.1  350.03 1126.52     351 1132.63     351  1137.7  350.07
 1138.25  350.07 1138.98  350.09 1139.74  350.14  1150.5     351 1151.47     351
 1161.55  351.03 1162.41  351.03 1167.89  351.02 1173.08     351 1173.78  350.99
 1174.04  350.98 1174.43  350.98  1174.9     351 1179.32  351.03 1180.36  351.03
 1182.18  351.02  1183.5  351.02 1185.88     351 1186.86   350.7 1188.67     350
 1198.16  349.96    1199  349.96 1201.85  349.95 1203.84  349.96 1217.19  350.01
 1219.56  350.01 1220.98     350 1225.78     350 1240.29  350.94 1241.01  350.99
 1241.25     351 1241.46     351 1243.07  351.02 1243.22  351.02 1244.11  351.04
 1252.51  351.25 1254.71  351.31 1255.35  351.32 1268.56  351.47 1277.25  351.55
 1279.51  351.52 1284.27  351.39 1292.83  351.14 1293.06  351.14 1295.77     351
 1297.53  350.99 1302.49  350.99 1302.98     351 1303.08     351 1303.39  350.99
  1309.2  350.71 1310.39  350.63 1312.54  350.56 1313.14  350.52 1317.28  350.32
 1317.86   350.3 1318.69  350.26    1319  350.23 1320.23  350.17 1320.98  350.14
 1328.62   350.3 1333.11  350.47 1346.16     351 1349.95     351 1350.06  350.99
 1351.07  350.99 1352.52  350.98 1353.91  350.98  1354.9  350.97  1355.1  350.97
 1357.11  350.98 1370.21  350.99 1381.52  351.58 1389.29     352 1390.47     352
 1395.58  352.01 1401.49  352.01 1402.35  352.02 1410.72  352.02 1421.39   352.2
 1432.62  352.13 1441.71  352.05

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  602.08     .04 1346.16     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        602.08 1346.16           671.36     500  509.41              .1       .3

CROSS SECTION


RIVER: WASH25A
REACH: Centerline Align   RS: 8600

INPUT
Description:
Station Elevation Data    num=     476
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  356.551.079956  356.542.400024  356.542.709961  356.542.800049  356.55
3.449951  356.5314.52002  356.7420.46997  356.7521.05005  356.7422.31006  356.73
23.56006  356.7126.48999  356.6833.71997  356.5452.43994  356.1759.47998     356
66.68994  355.7268.29004  355.6583.58997     35590.08997  354.3490.21997  354.33
   92.88  354.0993.64001     35493.82996  353.9994.10999  353.9994.65002  353.99
   95.12  353.9995.35999     354  105.12  354.71  108.76  354.89108.9301   354.9
  109.78  354.92  109.83  354.93  109.97  354.94  110.62  354.95111.0699  354.96
  111.15  354.95  112.47  354.95  112.48  354.95  112.92  354.94  114.16     355
  114.78  354.99  114.91  354.99  119.04  354.99   121.6  354.98  122.23  354.98
126.5601     355  138.12  355.68  142.99     356  154.15  356.05  155.02  356.06
155.3101  356.05  157.67  356.05   158.4  356.05  161.11  356.04  163.18  356.04
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 166.08 | 356.03 | 173.46 | 356.12 | 181.43 | 356.03 | 181.88 | 356.04 | 182.07 | 356.04 |
| 184.04 | 356.03 | 184.44 | 356.04 | 184.53 | 356.04 | 184.73 | 356.05 | 186.16 | 356.08 |
| 187.15 | 356.11 | 188.15 | 356.15 | 188.99 | 356.18 | 193.78 | 356.35 | 198.89 | 356.56 |
| 200.63 | 356.63 | 209.02 | 357 | 237.13 | 357.01 | 242.18 | 357.02 | 263.58 | 357.01 |
| 266.52 | 357 | 275.59 | 357 | 275.97 | 356.99 | 276.23 | 356.99 | 285.5 | 356.48 |
| 289.05 | 356.34 | 291.26 | 356.2 | 291.8 | 356.18 | 292.1 | 356.18 | 292.31 | 356.17 |
| 294.09 | 356.11 | 294.56 | 356.1 | 294.7 | 356.09 | 299.81 | 356.02 | 299.83 | 356.02 |
| 303.26 | 356 | 303.94 | 355.99 | 303.97 | 355.99 | 304.14 | 355.99 | 304.18 | 355.99 |
| 304.82 | 355.95 | 304.9 | 355.95 | 305.14 | 355.93 | 310.27 | 355.47 | 310.82 | 355.42 |
| 312.78 | 355.19 | 312.8 | 355.19 | 312.82 | 355.19 | 312.83 | 355.18 | 313.02 | 355.16 |
| 313.59 | 355.1 | 314.1 | 355.03 | 314.34 | 355 | 319.37 | 354.34 | 321.97 | 354 |
| 326.4 | 353.41 | 328.67 | 353 | 331.73 | 352.04 | 331.86 | 352 | 331.97 | 351.97 |
| 335.23 | 351 | 338.05 | 350.24 | 338.79 | 350 | 340.58 | 349.37 | 341.73 | 349.05 |
| 341.97 | 349 | 342.04 | 349 | 342.47 | 348.99 | 344.08 | 348.96 | 344.51 | 348.96 |
| 345.2 | 348.95 | 345.6 | 348.96 | 347.58 | 348.83 | 347.69 | 348.81 | 348.05 | 348.79 |
| 352.53 | 348.59 | 352.79 | 348.58 | 353.37 | 348.54 | 356.01 | 348.29 | 356.63 | 348.24 |
| 356.93 | 348.21 | 359.56 | 348 | 361.74 | 347.88 | 361.97 | 347.86 | 362.97 | 347.8 |
| 364.37 | 347.59 | 367.5 | 347 | 368.13 | 346.83 | 370.11 | 346.26 | 370.71 | 346 |
| 372.31 | 345.56 | 373.44 | 345.25 | 374.45 | 345 | 374.53 | 345 | 374.58 | 345 |
| 375.31 | 345 | 380.47 | 344.99 | 383.76 | 344.99 | 397.41 | 344.97 | 402.86 | 344.98 |
| 420.31 | 345 | 421.39 | 345 | 423.12 | 345 | 424.11 | 345 | 424.75 | 345 |
| 427.57 | 344.82 | 429.42 | 344.7 | 430.81 | 344.61 | 431.85 | 344.56 | 434.93 | 344.39 |
| 439.85 | 344.56 | 451.01 | 345 | 451.08 | 345 | 452.51 | 345 | 455.46 | 345 |
| 456.28 | 345 | 458.73 | 345 | 465.46 | 345.01 | 471.05 | 345.01 | 475.13 | 345 |
| 476.93 | 345 | 477.59 | 345 | 477.66 | 345 | 478.42 | 345 | 478.92 | 345 |
| 479.14 | 345 | 479.21 | 345 | 479.23 | 345 | 479.26 | 345 | 479.83 | 344.97 |
| 482.44 | 344.82 | 490.12 | 344.35 | 495.53 | 344 | 501.27 | 343.67 | 504.43 | 343.59 |
| 510.36 | 343.39 | 512.01 | 343.32 | 520.76 | 343 | 523.3 | 343 | 524.25 | 343 |
| 526.04 | 343 | 526.52 | 343 | 529.35 | 343.96 | 529.47 | 344 | 530.12 | 344 |
| 532.09 | 344 | 545.57 | 344.01 | 547.9 | 344.01 | 551.19 | 344 | 561.63 | 344 |
| 562.29 | 344 | 564.3 | 343.98 | 566.9 | 343.97 | 567.25 | 343.97 | 567.86 | 343.97 |
| 569.88 | 343.98 | 573.55 | 344 | 573.88 | 344 | 574.55 | 344 | 574.63 | 344 |
| 574.71 | 344 | 576.03 | 344 | 576.17 | 344 | 577.45 | 344 | 577.62 | 344 |
| 578.72 | 344 | 579.41 | 344 | 579.56 | 344 | 581.83 | 344.01 | 582.09 | 344.01 |
| 583.48 | 344.01 | 583.79 | 344.01 | 583.87 | 344.01 | 584.56 | 344.01 | 584.9 | 344.01 |
| 585.18 | 344.01 | 591.26 | 344.16 | 592.24 | 344.19 | 593.74 | 344.24 | 597.75 | 344.33 |
| 599.62 | 344.37 | 602.6 | 344.43 | 603.58 | 344.44 | 604.94 | 344.46 | 605.27 | 344.47 |
| 605.79 | 344.49 | 606.53 | 344.52 | 607.16 | 344.51 | 607.55 | 344.53 | 607.92 | 344.54 |
| 610.14 | 344.61 | 611.85 | 344.65 | 612.14 | 344.65 | 612.22 | 344.65 | 619.46 | 344.66 |
| 627.16 | 344.69 | 627.32 | 344.69 | 635.53 | 344.79 | 635.95 | 344.8 | 648.37 | 344.98 |
| 649.23 | 345 | 649.74 | 345.01 | 655.54 | 345.08 | 660.18 | 345.05 | 663.14 | 345.13 |
| 670.27 | 345.12 | 677.63 | 345.1 | 678.36 | 345.1 | 679.1 | 345.1 | 690.84 | 345.13 |
| 703.39 | 345.04 | 704.55 | 345.02 | 704.56 | 345.02 | 706.17 | 345 | 706.6 | 345 |
| 706.62 | 345 | 707.33 | 345 | 709.05 | 345 | 709.24 | 345 | 710.41 | 345 |
| 712.24 | 345 | 715.85 | 345 | 716.99 | 345 | 718.03 | 345 | 721.47 | 345 |
| 722.5 | 345 | 724.41 | 345 | 733.85 | 345 | 734.45 | 345 | 737.29 | 345 |
| 740.33 | 344.65 | 741.41 | 344.6 | 744 | 344.51 | 745.75 | 344.43 | 748.21 | 344.31 |
| 750 | 344.19 | 750.82 | 344.13 | 756.7 | 344 | 757 | 344 | 759.81 | 344 |
| 759.98 | 344 | 760.37 | 344 | 760.41 | 344 | 760.98 | 344 | 765.28 | 344.01 |
| 767.17 | 344 | 767.4 | 344 | 767.59 | 344 | 768.17 | 344 | 769.75 | 343.99 |
| 770.37 | 343.99 | 770.45 | 343.99 | 770.56 | 343.99 | 771.31 | 343.99 | 771.79 | 344 |
| 771.92 | 344 | 772.12 | 344 | 772.4 | 344 | 773.14 | 344 | 774.08 | 344 |
| 776.55 | 344 | 779.55 | 344 | 779.63 | 344 | 790.18 | 344 | 790.91 | 344 |
| 790.95 | 344 | 792.5 | 344 | 793.39 | 343.99 | 795.27 | 343.99 | 796.49 | 343.98 |
| 798.08 | 343.99 | 801.08 | 344 | 802.82 | 344.01 | 804.12 | 344.01 | 805.83 | 344.01 |
| 806.06 | 344.01 | 806.79 | 344.01 | 808.2 | 344.05 | 808.28 | 344.05 | 811.36 | 344.11 |
| 811.84 | 344.12 | 812.06 | 344.13 | 812.31 | 344.14 | 815.17 | 344.24 | 819.33 | 344.19 |
| 824.55 | 344.04 | 824.56 | 344.04 | 825.21 | 344.03 | 825.22 | 344.03 | 826.31 | 344.01 |
| 826.71 | 344 | 830.57 | 344 | 830.64 | 344 | 830.73 | 344 | 832.06 | 344.01 |
| 833.3 | 344.01 | 834.96 | 344.01 | 838.64 | 344.01 | 842.15 | 344 | 850.12 | 344 |
| 851.51 | 344 | 852.78 | 344 | 855.82 | 344 | 859.76 | 344 | 864.34 | 344 |
| 864.35 | 344 | 864.97 | 344 | 867.74 | 344 | 870.69 | 344.12 | 870.73 | 344.12 |
| 872.22 | 344.12 | 874.28 | 344.16 | 876.43 | 344.21 | 879.02 | 344.3 | 890.16 | 344.66 |
| 894.07 | 344.79 | 901.17 | 345 | 906.41 | 345 | 910.56 | 345 | 911.96 | 345 |
| 913.02 | 345 | 918.79 | 345 | 926.41 | 344.13 | 926.88 | 344.07 | 927.17 | 344 |
| 930.93 | 343.97 | 931.62 | 343.96 | 938.87 | 343.9 | 946.28 | 343.96 | 948.85 | 343.98 |
| 951.23 | 343.97 | 951.93 | 343.96 | 952.32 | 343.95 | 953.6 | 343.92 | 953.69 | 343.92 |
| 953.78 | 343.92 | 957.26 | 344 | 958.46 | 344.08 | 971.1 | 345 | 976.07 | 345.19 |
| 976.56 | 345.21 | 981.2 | 345.35 | 990.73 | 345.67 | 994.01 | 345.76 | 995.97 | 345.8 |
| 998.03 | 345.87 | 1000.47 | 345.95 | 1001.19 | 345.98 | 1001.96 | 346 | 1017.17 | 346.01 |
| 1020.31 | 346.01 | 1021.29 | 346.01 | 1021.89 | 346.01 | 1022.78 | 346.01 | 1023.05 | 346.01 |
| 1028.35 | 346.01 | 1028.99 | 346.01 | 1029.96 | 346.01 | 1030.08 | 346.01 | 1031.47 | 346.01 |
| 1033.47 | 346.01 | 1038.95 | 346.01 | 1043.07 | 346.01 | 1047.65 | 346.01 | 1048.79 | 346.01 |
| 1051.12 | 346.01 | 1060.34 | 346.09 | 1060.44 | 346.09 | 1061.8 | 346.09 | 1062.62 | 346.09 |
| 1063.43 | 346.09 | 1063.65 | 346.09 | 1066.31 | 346.1 | 1066.84 | 346.1 | 1072.35 | 346.13 |
| 1090.59 | 346.06 | 1102.39 | 346.01 | 1104 | 346.01 | 1109.04 | 346 | 1113.84 | 346 |
| 1115.01 | 346 | 1117.64 | 346 | 1120.38 | 346 | 1122.12 | 346 | 1125.68 | 346 |
| 1127.01 | 346 | 1128.14 | 346 | 1131.02 | 346 | 1132.83 | 346 | 1134.66 | 346.01 |
| 1135.44 | 346.01 | 1135.84 | 346.01 | 1139.05 | 346 | 1139.52 | 345.98 | 1139.58 | 345.98 |

```
  1140.1  345.98 1141.51  345.98 1143.34  345.97 1147.88  345.96 1151.22  345.95
 1156.56  345.98 1158.57     346 1159.58     346 1161.11     346 1162.37     346
 1164.81     346    1165     346 1165.29     346 1165.36     346 1165.72  345.89
  1165.8  345.87 1167.97  345.23 1169.21  345.33 1170.24  345.37 1172.84  345.15
 1173.63  345.11 1176.88  345.13 1177.58  345.13  1179.4  345.14 1180.68   345.2
 1181.25  345.23

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  372.31     .04  990.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         372.31  990.73          525.23     500  422.06             .1       .3
Right Levee     Station= 1002.12      Elevation=  346.03

CROSS SECTION


RIVER: WASH25A
REACH: Centerline Align   RS: 8100

INPUT
Description:
Station Elevation Data    num=     327
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  345.01.4699707     345 .539978     345     .75     3453.459961     345
10.46997  344.7718.20996  344.5722.77997  344.46   26.56   344.429.58002  344.37
31.08997  344.3638.51001  344.1640.29999  344.1143.39001     34445.73999  343.94
47.54999   343.964.34998  343.45   80.56     34380.85999     34386.91998  342.98
88.15997  342.9895.27997     34395.46997     34395.58997     34397.89996     343
99.97998     343  100.12     343  100.15  342.99  106.64  342.79  107.33  342.74
  108.83  342.68  110.88  342.47  111.34  342.43  114.98     342  115.79     342
  116.46     342  117.05     342  118.14     342  119.74  341.99  120.53     342
  122.47     342  124.86     342  126.98   342.1  143.72  342.06  144.03  342.06
   151.5  342.03  153.21  342.03  158.17  342.01  158.49  342.01   161.2     342
  161.31     342  161.63     342  162.18     342  163.77     342  163.95     342
  164.17     342  168.01     342  168.42     342  168.93     342  169.88     342
  171.64     342  174.82     342  176.19     342  176.66     342  177.89     342
  180.35  342.01  183.17  342.02  185.45  342.02  190.28     342  190.85     342
   191.9     342  192.13     342  192.73     342  193.04     342  202.04  342.32
  206.02  342.46  207.41  342.53  209.25  342.61  210.37  342.66  216.26     343
  218.98  343.29  222.89  343.68  225.32  343.94  226.28     344  227.19  344.01
  235.34  344.23  242.15  344.31  242.64  344.32  243.37  344.32  243.52  344.32
  243.74  344.32  243.86  344.32  243.97  344.32  244.16  344.32  249.84  344.33
   255.4  344.33  256.88  344.29  261.74  344.19  263.49  344.15  263.96  344.13
  268.25  344.02  268.44  344.02  268.85     344  268.89     344  269.61     344
  270.83  343.99  273.76     344  274.01     344  274.02     344  274.03     344
  274.22     344  276.17  343.99  279.58  343.87  281.29   343.8  282.59  343.68
  288.91     343  288.96     343  291.51  342.56  294.15     342   295.6  341.66
  298.81     341  304.87  340.37  309.37     340  313.05  339.77  314.24   339.7
  319.12  339.42  323.12  339.25  325.56  339.13  328.48     339  328.57     339
  332.89  338.99  333.82  338.99  335.96  338.99  337.85     339  344.82  339.02
  353.51  339.04  362.28  339.02  363.62  339.01  369.46     339  370.12  339.01
  370.31     339  370.34     339  370.37     339  370.42     339  370.43     339
  370.66     339  371.26     339  371.29     339  372.17     339  385.96  339.03
  392.81  339.02  401.53     339  401.79     339  405.46  338.98  406.69  338.97
  411.79  338.94  414.09  338.93  415.77  338.92  418.95  338.94  428.85     339
  430.07  339.02  431.38  339.03  434.77  339.08  439.04  339.02  440.05     339
  456.08  338.48  466.46  338.28  467.61  338.26   468.8  338.23   472.8  338.12
  475.75   338.1  477.71  338.08  479.47  338.06  480.03  338.08  481.26  338.13
  482.89  338.14  486.34  338.16  486.95  338.16  487.55  338.16  493.55   338.7
  493.71  338.71  496.74     339  521.27  339.53  521.99  339.55  528.46  339.69
  534.62  339.83   535.6  339.85  536.38  339.87  538.04   339.9  539.09  339.91
  541.13  339.92  544.78  339.85  544.87  339.84  544.93  339.84  545.03  339.83
  545.11  339.83  545.71  339.82  546.22   339.8  551.94  339.71  556.65  339.66
  559.99  339.51  568.38  339.01  570.16     339  571.79     339  572.67  338.99
  573.95  338.99  574.81  338.99  575.31  338.99  575.67  338.98  575.86  338.98
  577.42  338.98  578.17  338.97  578.18  338.97  578.21  338.97  578.43  338.98
   579.2  338.97  579.33  338.97  579.42  338.97  587.37  338.71   588.3   338.7
  596.45  338.37  596.83  338.36  597.65  338.34  598.03  338.32  599.02  338.28
  599.17  338.27   599.6  338.25  599.97  338.23  606.08     338614.0699     338
   618.3     338  622.26     338  626.84     338  644.33  338.83  645.28  338.86
  648.65     339  648.67     339  648.72     339  651.85     339  652.53     339
  652.75     339  657.15     339  658.39     339   664.7     339669.3199   339.4
  675.91     340  676.59     340  680.73     340681.8199     340  682.78  339.99
  683.99  339.99  684.86  339.99  685.04  339.99   685.2  339.99  686.24     340
  688.78     340   696.1     340  700.17  339.91  700.43  339.91  700.49  339.91
702.0699  339.86   702.7  339.83  723.73  339.89  727.06  339.87  728.63  339.87
   741.3  339.94  745.02  339.95   750.4  339.96  756.34  339.99  756.35  339.99
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 756.44 | 340 | 762.42 | 340 | 770.42 | 340 | 770.72 | 340 | 771.84 | 340 |
| 773.12 | 340 | 773.41 | 340 | 774.99 | 340 | 775.24 | 340 | 776.85 | 340 |
| 777.69 | 340 | 777.95 | 340 | 778.99 | 340.01 | 785.59 | 340.03 | 790.7 | 340.14 |
| 802.71 | 340.34 | 804.52 | 340.39 | 805.79 | 340.42 | 808.34 | 340.47 | 815.13 | 340.55 |
| 820.33 | 340.6 | 821.09 | 340.6 | 830.47 | 340.79 | 833.53 | 340.9 | 842.95 | 341 |
| 853.82 | 341.32 | 876.39 | 342 | 893.28 | 342.55 | 897.34 | 342.67 | 902.41 | 342.81 |
| 904.48 | 342.86 | 904.96 | 342.87 | 906.46 | 342.9 | 906.65 | 342.9 | 910.54 | 342.96 |
| 912.24 | 342.99 | 912.65 | 342.99 | 913.48 | 342.99 | 913.7 | 343 | 914.03 | 343 |
| 914.21 | 343 | 914.43 | 343 | 914.55 | 343 | 914.74 | 343.01 | 916.22 | 343.04 |
| 916.41 | 343.04 | 916.55 | 343.05 | 929.37 | 343.34 | 942.96 | 343.69 | 952.86 | 343.99 |
| 952.87 | 343.99 | 953.22 | 344 | 953.37 | 344 | 964.63 | 344.46 | 966.64 | 344.53 |
| 969.33 | 344.65 | 973.99 | 344.81 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 309.37 | .04 | 756.34 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 309.37 | 756.34 | 541.1 | 500 | 502.06 | .1 | .3 |

CROSS SECTION

RIVER: WASH25A
REACH: Centerline Align RS: 7600

INPUT
Description:
Station Elevation Data num= 463

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 347.283.820068 | 347.317.969971 | 347.329.969971 | 347.3110.55005 | 347.3 | | | | |
| 13.09998 | 347.314.08008 | 347.2915.29004 | 347.316.96997 | 347.2717.77002 | 347.27 | | | | |
| 21.52002 | 347.2925.06006 | 347.3128.85999 | 347.332.83008 | 347.2833.08008 | 347.28 | | | | |
| 34.83997 | 347.2738.53003 | 347.2439.15002 | 347.2353.33997 | 347.0354.94006 | 347.01 | | | | |
| 55.53003 | 347.0161.26001 | 34762.09998 | 34785.18005 | 346.6397.42004 | 346.49 | | | | |
| 99.62 | 346.45100.8301 | 346.44101.4301 | 346.44 | 102.22 | 346.43103.4301 | 346.42 | | | |
| 104.05 | 346.41 | 108.13 | 346.4 | 112.36 | 346.38 | 128.9 | 346.01129.0601 | 346.01 | |
| 129.42 | 346.01 | 130.97 | 346.01131.6801 | 346.01134.3301 | 346.01136.8301 | 346.01 | | | |
| 137.28 | 346.01 | 140.37 | 346.01140.9301 | 346.01 | 151.76 | 346 | 153.29 | 346 | |
| 153.5 | 346 | 153.55 | 346 | 154.01 | 346 | 164.64 | 345.41 | 172.02 | 345.13 |
| 172.46 | 345.11 | 173.04 | 345.09 | 173.26 | 345.08 | 173.74 | 345.06 | 175.96 | 345 |
| 178.07 | 344.79 | 178.29 | 344.78 | 179.53 | 344.68 | 181.09 | 344.64 | 181.92 | 344.66 |
| 184.26 | 344.48 | 186.3 | 344.67 | 187.15 | 344.68 | 189.39 | 344 | 189.51 | 343.96 |
| 189.68 | 343.92 | 189.81 | 343.88 | 191.23 | 343.41 | 191.45 | 343.37 | 191.7 | 343.33 |
| 191.83 | 343.33 | 192.42 | 343.31 | 192.77 | 343.35 | 193.19 | 343.38 | 193.4 | 343.39 |
| 193.69 | 343.34 | 195.69 | 343.53 | 196.05 | 343.48 | 197.95 | 343.2 | 198.66 | 343.07 |
| 200.19 | 343 | 200.25 | 343 | 200.3 | 343 | 200.32 | 343 | 201.98 | 342.98 |
| 202.61 | 342.97 | 203.89 | 342.96 | 203.95 | 342.96 | 204.92 | 342.95 | 206.17 | 343 |
| 207.68 | 343.02 | 208.05 | 343.02 | 208.39 | 343.02 | 208.71 | 343.02 | 208.88 | 343.02 |
| 211.2 | 343.12 | 214.66 | 343.01 | 214.87 | 343 | 214.9 | 343 | 214.95 | 343 |
| 215.19 | 342.96 | 215.76 | 342.77 | 220.5 | 342 | 225.83 | 341.93 | 226.1 | 341.92 |
| 226.7 | 341.92 | 228.49 | 341.89 | 230.28 | 341.64 | 232.83 | 341.41 | 233 | 341.4 |
| 234.23 | 341.47 | 234.8 | 341.48 | 237.71 | 341.57 | 237.94 | 341.58 | 238.34 | 341.6 |
| 239.14 | 341.63 | 239.94 | 341.67 | 241.67 | 341.75 | 243.2 | 341.82 | 248.94 | 342 |
| 248.95 | 342 | 249.12 | 342.01 | 251.66 | 342.07 | 251.97 | 342.09 | 255.26 | 342.32 |
| 262.68 | 342.76 | 262.86 | 342.77 | 263.96 | 343 | 265.72 | 343.46 | 267.91 | 344 |
| 270.94 | 344.84 | 271.57 | 345 | 271.65 | 345 | 271.69 | 345 | 271.78 | 345 |
| 272.06 | 345.01 | 279.44 | 345.1 | 281.68 | 345.07 | 287.27 | 345 | 290.48 | 344.66 |
| 292.21 | 344.51 | 297.44 | 344.01 | 297.61 | 344 | 298.93 | 343.73 | 302.54 | 343 |
| 303.36 | 342.77 | 304.27 | 342.51 | 305.42 | 342.21 | 306.28 | 342 | 309.78 | 341.02 |
| 309.84 | 341 | 309.87 | 340.99 | 309.91 | 340.99 | 313.44 | 340.31 | 314.84 | 340.09 |
| 315.21 | 340.01 | 315.28 | 340 | 315.53 | 339.93 | 316.19 | 339.89 | 321.94 | 339.29 |
| 323.16 | 339.19 | 324.85 | 339.11 | 326.92 | 339.01 | 327.04 | 339 | 327.22 | 338.99 |
| 327.41 | 338.97 | 340.08 | 338.01 | 340.65 | 338.01 | 340.78 | 338.01 | 340.85 | 338 |
| 341.04 | 338 | 341.61 | 337.99 | 344.46 | 337.95 | 345.38 | 337.94 | 346.48 | 337.92 |
| 347.46 | 337.9 | 347.66 | 337.9 | 348.11 | 337.89 | 351.9 | 337.96 | 355.75 | 337.77 |
| 356.1 | 337.7 | 356.68 | 337.74 | 360.48 | 337.82 | 363.4 | 337.92 | 363.53 | 337.92 |
| 363.86 | 337.92 | 364.21 | 337.89 | 364.54 | 337.88 | 365.15 | 337.91 | 371.33 | 337.91 |
| 371.37 | 337.91 | 371.42 | 337.91 | 371.51 | 337.91 | 371.61 | 337.91 | 373.8 | 338 |
| 377.56 | 338.39 | 381.74 | 338.85 | 382.24 | 338.93 | 382.71 | 339 | 385.7 | 339.45 |
| 389.12 | 339.95 | 389.15 | 339.95 | 389.29 | 339.98 | 389.4 | 340 | 389.43 | 340 |
| 389.44 | 340 | 389.55 | 340 | 389.64 | 340 | 389.66 | 340 | 391.6 | 339.55 |
| 393.82 | 339.03 | 393.92 | 339 | 394.69 | 338.83 | 398.49 | 338 | 399.71 | 337.67 |
| 401.75 | 337 | 402.62 | 336.69 | 405.04 | 336 | 407.07 | 335.41 | 408.57 | 335 |
| 411.1 | 334.75 | 418.71 | 334 | 425.28 | 333.5 | 435.52 | 333 | 436.49 | 333 |
| 437.02 | 333 | 438.51 | 332.99 | 439.36 | 332.99 | 441.95 | 332.99 | 445.66 | 332.98 |
| 448.42 | 332.98 | 454.8 | 333 | 459.15 | 333.23 | 459.91 | 333.24 | 469.17 | 333.15 |
| 471.6 | 333.09 | 482.73 | 333 | 483.31 | 333 | 483.49 | 333 | 487.24 | 333.01 |
| 488.9 | 333.13 | 490.44 | 333.23 | 495.61 | 333.36 | 496.94 | 333 | 505.88 | 332.92 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 510.16 | 332.89 | 514.89 | 332.94 | 523.17 | 333 | 525.68 | 333.63 | 527.05 | 334 |
| 529.02 | 334.3 | 529.13 | 334.31 | 531.67 | 334.49 | 539.33 | 335 | 542.62 | 335.33 |
| 552.02 | 336 | 552.83 | 336 | 553.96 | 336 | 555.07 | 336 | 556.11 | 336 |
| 559.31 | 335.62 | 564.41 | 335 | 566.68 | 334.92 | 566.98 | 334.91 | 575.17 | 334.64 |
| 576.34 | 334.59 | 578.74 | 334.5 | 580.8 | 334.42 | 582.07 | 334.36 | 583.62 | 334.29 |
| 589.33 | 334 | 591.62 | 333.99 | 594.97 | 333.99 | 601.57 | 333.97 | 604.23 | 333.97 |
| 608.53 | 333.98 | 610.36 | 333.98 | 613.39 | 333.99 | 614.04 | 333.99 | 616.45 | 333.99 |
| 617.73 | 333.99 | 618.3 | 334 | 619.75 | 333.98 | 621.4 | 333.98 | 623.05 | 333.99 |
| 623.09 | 333.99 | 626.91 | 333.99 | 627.06 | 333.99 | 627.29 | 333.99 | 627.41 | 333.99 |
| 630.24 | 333.94 | 632.14 | 333.88 | 639.4 | 333.69 | 648.25 | 333.44 | 654.04 | 333.27 |
| 656.84 | 333.19 | 661.3 | 333.07 | 661.95 | 333.05 | 662.16 | 333.05 | 663.4 | 333.03 |
| 663.63 | 333.02 | 663.7 | 333.02 | 663.9 | 333.02 | 664.21 | 333.01 | 664.4 | 333.01 |
| 666.84 | 333.02 | 670.95 | 333.05 | 674.85 | 333.07 | 674.91 | 333.07 | 676.34 | 333.12 |
| 693.26 | 333.97 | 693.29 | 333.97 | 693.4 | 333.97 | 694.5 | 333.97 | 700.66 | 333.93 |
| 727.1 | 333.03 | 727.8101 | 333.02 | 728.08 | 333.03 | 728.12 | 333.03 | 729.54 | 333.03 |
| 730.97 | 333.03 | 730.98 | 333.03 | 734.64 | 333.02 | 734.78 | 333.03 | 735.02 | 333.04 |
| 735.07 | 333.04 | 735.11 | 333.04 | 737.1801 | 333.06 | 737.35 | 333.06 | 741.12 | 333.12 |
| 743.41 | 333.16 | 745.55 | 333.18 | 754.12 | 333.15 | 755.85 | 333.37 | 757.41 | 333.5 |
| 760.41 | 334 | 764.95 | 334.21 | 766.21 | 334.21 | 766.47 | 334.21 | 766.74 | 334.22 |
| 778.72 | 334.5 | 785.16 | 334.58 | 789.77 | 334.53 | 795.59 | 334.47 | 807.05 | 334.2 |
| 807.24 | 334.2 | 807.42 | 334.19 | 808.9401 | 334.18 | 810.26 | 334.17 | 814.74 | 334 |
| 816.05 | 334 | 816.1 | 333.99 | 816.84 | 334 | 817.47 | 334 | 826.05 | 334.62 |
| 831.65 | 334.92 | 832.96 | 335 | 833.08 | 335 | 833.84 | 335 | 836.01 | 335 |
| 837.04 | 335 | 837.3 | 335 | 841.1 | 335.1 | 844.37 | 335.19 | 848.37 | 335.29 |
| 850.13 | 335.34 | 872 | 336 | 880.16 | 336.66 | 885.71 | 337 | 893.83 | 337.54 |
| 900.64 | 338 | 902.02 | 338 | 902.3101 | 338 | 902.85 | 338 | 903.38 | 338 |
| 906.39 | 338 | 914.7 | 338 | 915.71 | 338 | 928.17 | 338 | 928.51 | 338 |
| 929.7 | 338 | 930.3 | 338 | 930.97 | 338 | 931.35 | 338 | 932.05 | 338 |
| 934.34 | 338 | 934.4301 | 338 | 934.65 | 338 | 935.1801 | 338 | 944.85 | 338.21 |
| 948.4 | 338.27 | 961.91 | 338.45 | 970.59 | 338.53 | 972.96 | 338.57 | 975.84 | 338.61 |
| 979.3 | 338.68 | 987.64 | 338.88 | 988 | 338.88 | 992.52 | 339 | 1001.49 | 339.36 |
| 1019.1 | 340 | 1031.13 | 340.68 | 1037.25 | 341 | 1046.18 | 341.51 | 1055.67 | 342 |
| 1062.37 | 342.4 | 1063.09 | 342.44 | 1064.39 | 342.5 | 1073.37 | 342.97 | 1074.24 | 342.97 |
| 1074.28 | 342.97 | 1075.85 | 342.99 | 1075.98 | 342.99 | 1076.27 | 343 | 1076.39 | 343 |
| 1076.62 | 343 | 1076.66 | 343 | 1076.76 | 343.01 | 1076.77 | 343.01 | 1076.78 | 343.01 |
| 1078.2 | 343.11 | 1078.71 | 343.14 | 1079.24 | 343.17 | 1080.11 | 343.22 | 1084.54 | 343.53 |
| 1085.71 | 343.62 | 1092.47 | 344 | 1107.92 | 344.92 | 1109.17 | 345 | 1112.91 | 345.22 |
| 1114.77 | 345.32 | 1117.74 | 345.46 | 1119.02 | 345.51 | 1122.1 | 345.66 | 1123.88 | 345.72 |
| 1125 | 345.76 | 1130.15 | 346 | 1131.94 | 346.11 | 1135.55 | 346.34 | 1141.31 | 347 |
| 1142.65 | 347.34 | 1146.05 | 348 | 1149.16 | 348.89 | 1149.59 | 349 | 1150.75 | 349.33 |
| 1152.22 | 349.68 | 1153.54 | 350 | 1156.65 | 350.79 | 1157.44 | 351 | 1157.94 | 351.11 |
| 1161.67 | 352 | 1161.96 | 352.05 | 1166.75 | 353 | 1169.04 | 353.53 | 1170.55 | 353.81 |
| 1172.17 | 354 | 1174.37 | 354.22 | 1175.53 | 354.32 | 1176.9 | 354.46 | 1178.56 | 354.61 |
| 1179.27 | 354.63 | 1179.86 | 354.65 | 1180.27 | 354.64 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 408.57 | .04 | 831.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 408.57 | 831.65 | 484.19 | 500 | 513.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH25A
REACH: Centerline Align RS: 7100

INPUT
Description:
Station Elevation Data num= 388

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.45 | 9000244 | 338.45 | 2190063 | 338.43 | 6550049 | 338.37 | 6960083 | 338.37 |
| 9.560059 | 338.34 | 11.88 | 338.33 | 13.28003 | 338.33 | 13.38 | 338.33 | 13.77002 | 338.33 |
| 15.62 | 338.33 | 18.36011 | 338.32 | 19.4801 | 338.32 | 20.89001 | 338.3 | 26.9801 | 338.22 |
| 27.58008 | 338.21 | 40.29004 | 338 | 40.65002 | 337.99 | 40.67004 | 337.99 | 51.48999 | 337.88 |
| 60.52002 | 337.83 | 60.61011 | 337.83 | 64.37 | 337.86 | 67.67004 | 337.87 | 67.69006 | 337.87 |
| 69.45007 | 337.87 | 70.91003 | 337.88 | 72.2301 | 337.88 | 76.46008 | 337.86 | 78.15002 | 337.84 |
| 80.42004 | 337.82 | 83.57007 | 337.74 | 83.72009 | 337.74 | 86.05005 | 337.69 | 92.77002 | 337.52 |
| 112.15 | 337 | 112.3301 | 337 | 116.27 | 336.95 | 119.3301 | 336.84 | 127.9401 | 336.61 |
| 136.92 | 336.62 | 137.14 | 336.62 | 137.76 | 336.61 | 142.87 | 336.51 | 152.4401 | 336.28 |
| 152.5 | 336.28 | 157.7001 | 336 | 158.65 | 335.99 | 158.66 | 335.99 | 160.36 | 335.99 |
| 162.6401 | 336 | 166.3801 | 336.02 | 168.3 | 336.02 | 170.2601 | 336.02 | 171.54 | 336.02 |
| 173.8801 | 336.01 | 177.5701 | 336.04 | 177.61 | 336.04 | 177.6901 | 336.04 | 178.0701 | 336.05 |
| 178.5701 | 336.06 | 179.6901 | 336.1 | 181.4 | 336.16 | 181.9 | 336.18 | 183.7501 | 336.26 |
| 185.55 | 336.35 | 199.0601 | 337 | 200.3801 | 337.01 | 203.72 | 337.02 | 203.78 | 337.02 |
| 208.3901 | 337.04 | 209.53 | 337.04 | 212.2601 | 337.03 | 213.8701 | 337.02 | 215.3901 | 337.02 |
| 219.8901 | 337 | 220.79 | 336.94 | 221.3801 | 336.91 | 230.1301 | 336.37 | 236.0801 | 336 |
| 236.1901 | 335.99 | 239.52 | 335.84 | 240.1301 | 335.81 | 247.53 | 335.55 | 248.35 | 335.51 |

```
252.0101  335.28252.3101  335.27  252.48  335.27  253.21  335.23  254.28  335.19
254.5701  335.18  255.67  335.15256.6201  335.14  257.29  335.11  259.71  335.06
261.1401     335  261.15     335  261.21     335  270.05  334.81270.1801  334.81
270.3101  334.81  270.41  334.81  275.29  334.71300.3901  334.05  300.85  334.03
301.8101     334  302.52  333.98  303.71  333.93  316.05   333.5  328.11  333.01
  328.48  333.01  328.77     333   329.1     333334.1301  332.99  334.91  332.99
335.6401  332.99336.6801  332.99  337.59  332.99337.7601  332.99338.0801  332.99
339.1401  332.99  342.97     333   343.1     333  344.09  332.98344.6401     333
354.1401  333.19354.3701  333.18  354.79  333.17  365.78  333.07  367.72  333.08
  371.27  333.07  372.71  333.06374.0601  333.06  378.35  333.04  380.79     333
  391.48  332.41   393.3  332.34394.5801  332.29  399.46   332.1  401.78     332
  406.29  331.75   409.3  331.59  411.54  331.46417.9401  331.14420.3801     331
420.9301     331421.2401     331421.6901     331  423.61  330.95  423.79  330.95
424.0001  330.94424.2601  330.94424.7501  330.93  424.96  330.92  435.05  330.66
440.7601  330.52  443.22   330.5449.2001  330.37  450.98  330.31453.1201  330.24
459.1301  330.04460.4501     330462.8301  329.93  463.03  329.93468.4301  329.79
470.2601  329.75  472.23  329.69  474.17  329.64  475.48   329.6  478.53  329.51
  484.84  329.32  494.73     329495.0101  328.98  509.85     328  518.86  327.98
527.9901  327.97  529.15  327.97540.0701  327.99  542.03  327.99  545.73     328
  551.23     328  556.16     328  558.79     328567.3801     328  583.97  327.96
586.6301  327.95591.3701  327.96599.1901  327.98604.1901  327.99605.0601  327.99
608.0601     328  613.04   328.2  617.15  328.29   621.8  328.44626.1901  328.57
  626.92   328.6627.1901   328.6629.2001  328.61   630.8  328.62  635.97  328.66
   641.6  328.67  646.55  328.42  648.15  328.41649.0801   328.4654.1901     328
669.4701  327.92670.5601  327.91680.8401  327.95690.6801  327.97690.9401  327.97
  691.91  327.99692.0901  327.99   693.1     328  705.52  328.57  716.01  328.99
716.4901     329  716.63     329716.7201     329716.8701     329716.9301     329
717.3201     329  717.42     329717.9301     329  718.67     329719.2001     329
   719.6     329719.7001     329  720.01     329730.3401     329731.5901     329
732.4401  328.87  738.54  328.37741.5701  328.29742.7501  328.28  745.13     328
  747.26  327.96  755.51  327.92761.6201  327.94769.0801  327.93773.3701  327.95
   773.6  327.95  780.16  327.97  783.48  327.99783.9701  327.99  784.28  327.99
  785.51  327.99  787.15     328  788.78  328.41  791.16     329793.0601     329
793.2501     329795.8201  329.01  799.04  329.01810.3401  329.03  818.27  329.04
  821.04  329.05   827.6  329.04  833.39  329.03   846.4  329.01  846.61  329.01
849.8401     329849.9401     329849.9601     329850.2501     329  850.42     329
  850.55  328.99  850.66  328.99  852.17  328.92853.4601  328.89  854.89   328.9
  856.03  328.91  861.14  328.82862.2401   328.8  867.02   328.9873.3301  328.85
  874.01  328.84875.9401  328.83  877.17  328.84  883.36  328.89  885.17  328.91
895.5801     329900.6801  329.06905.0601   329.1906.2201  329.09907.9701  329.08
911.5801  329.05911.9401  329.05912.9701  329.04914.9501  329.02915.5801  329.02
918.0801  329.02927.3101  329.06937.3101  329.11947.9401  329.05  956.86  329.01
  957.41     329958.8701     329  959.23     329  959.42     329960.2501     329
  969.47  328.99  973.54  328.98  975.78  328.99979.9301  328.99984.0701     329
986.2401     329   987.9     329  989.14  329.13  995.09  329.36998.8801  329.44
  999.78  329.42 1000.66  329.44 1001.98  329.41 1002.56  329.39 1003.14  329.34
 1003.62  329.31 1007.44  329.33 1012.96  329.45 1017.03   329.6 1025.28  329.92
  1027.2     330 1027.33     330 1027.59     330 1036.82  330.01 1036.88  330.01
 1039.56  330.01 1040.78  330.01  1040.8  330.01 1041.72  330.01 1043.19  330.01
 1045.77  330.01 1049.68  330.01 1050.54  330.01 1051.49  330.01 1052.91  330.01
 1053.29  330.01 1054.86  330.01 1057.31  330.01 1057.85  330.01 1058.15  330.01
 1058.39  330.01 1066.81  330.01 1067.19  330.01 1069.74  330.11 1078.28  330.41
 1080.48   330.4 1080.88   330.4 1081.71   330.4  1084.7   330.4  1086.1  330.41
 1088.28  330.44 1089.13  330.44 1089.97  330.44 1090.56  330.45 1094.72   330.4
 1099.68  330.34 1102.46  330.45 1103.42  330.45 1112.13  330.77 1113.69  330.78
 1114.02  330.78 1114.53  330.77 1114.72  330.77 1117.85  330.91 1118.03  330.91
 1118.13  330.91 1121.36     331  1123.2  331.01 1123.44  331.02 1130.78  331.08
 1137.39  331.11 1138.36  331.13 1141.17  331.14 1141.36  331.14 1147.02  331.19
 1147.37  331.19 1153.55  331.26 1155.47  331.25 1156.43  331.25 1157.42  331.26
 1159.17  331.28 1162.76  331.31 1166.05  331.34 1169.26  331.38 1176.62  331.41
 1177.21  331.42 1178.97  331.44  1180.8  331.45

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  478.53     .04 1012.96     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        478.53 1012.96            301.5     500  665.34              .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 6600

INPUT
Description:
Station Elevation Data    num=     432
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
```

| | | | | | |
|---|---|---|---|---|---|
| 0 | 333.49 10.87 | 333.26 12.37 | 333.2215.17993 | 333.1719.78992 | 333.07 |
| 20.17993 | 333.0623.40991 | 33323.67993 | 33327.82996 | 332.9230.40991 | 332.87 |
| 30.6499 | 332.8734.85999 | 332.79 36.12 | 332.7640.15991 | 332.69 48 | 332.54 |
| 67.09998 | 332.0167.40991 | 332.0168.10999 | 332.0168.57996 | 332.0169.32996 | 332.01 |
| 69.65991 | 332.0171.23999 | 33273.18994 | 33273.65991 | 33273.82996 | 332 |
| 74.5199 | 33274.89001 | 33276.90991 | 33296.02991 | 331.36107.8999 | 331 |
| 108.0199 | 331109.5199 | 331 111.34 | 330.99113.4199 | 330.99114.5599 | 330.99 |
| 115.2 | 330.99 115.88 | 330.99116.9399 | 330.99118.1499 | 330.99 120.1 | 330.99 |
| 121.3199 | 330.99124.2999 | 330.99 124.72 | 330.99 125.51 | 330.99 126.73 | 330.99 |
| 128.87 | 330.99129.0699 | 330.99132.0599 | 330.79 134.7 | 330.75134.7699 | 330.75 |
| 135.49 | 330.76136.1699 | 330.76 137.6 | 330.72140.0299 | 330.73140.4099 | 330.73 |
| 143.0499 | 330.7 143.75 | 330.69 144.5 | 330.68147.5199 | 330.61 149.99 | 330.56 |
| 155.08 | 330.48 164.25 | 330.26 174.12 | 330.01174.5399 | 330.01 177.47 | 330 |
| 178.14 | 329.99 198.22 | 329.38 210.52 | 329 210.72 | 329 211.21 | 329 |
| 211.33 | 329 211.47 | 329211.8799 | 329.02 211.89 | 329.02233.7999 | 329.13 |
| 251.73 | 329.2262.9399 | 329.02 263.79 | 329.01 263.92 | 329.01 264.65 | 329 |
| 264.83 | 329 265.09 | 329 265.17 | 329 266.89 | 328.94 272.65 | 328.7 |
| 275.8199 | 328.59276.1299 | 328.59277.0499 | 328.56278.3799 | 328.56 279.66 | 328.57 |
| 285.4999 | 328.38299.8099 | 328.02300.5099 | 328.02301.1799 | 328.02 301.77 | 328.02 |
| 309.41 | 328.02 319.11 | 328.01330.9399 | 328.01 331.23 | 328.01333.3199 | 328.01 |
| 334.1299 | 328.01341.6299 | 328.01342.1799 | 328.01342.4899 | 328344.3799 | 328 |
| 345.6 | 328345.6299 | 328345.9999 | 328346.0599 | 328346.4999 | 328 |
| 352.28 | 327.33355.5499 | 327356.8199 | 326.83 357.84 | 326.71359.5099 | 326.5 |
| 363.7399 | 326 378.77 | 325.2381.9899 | 325.04382.8199 | 325382.8799 | 325 |
| 382.96 | 325383.0099 | 325 383.04 | 325 389.04 | 324.73391.5599 | 324.61 |
| 400.46 | 324.21 402.67 | 324.16 403.89 | 324.13404.1899 | 324.12 404.59 | 324.11 |
| 407.2599 | 324.06 407.64 | 324.05 407.9 | 324.04407.9999 | 324.04 411.96 | 324 |
| 412.0499 | 324 412.28 | 324418.9399 | 323.96425.2599 | 323.95 427.35 | 323.94 |
| 428.52 | 323.94430.0099 | 323.93430.2599 | 323.92 440.39 | 323.97441.1299 | 323.96 |
| 442.6199 | 323.96 445.46 | 323.97445.5599 | 323.97445.8699 | 323.97 447.4 | 323.97 |
| 450.3099 | 323.98 455.17 | 324 455.67 | 324 456.08 | 324 456.48 | 324 |
| 456.8799 | 324 457.46 | 324458.4999 | 324459.6199 | 324 462.58 | 324 |
| 466.2 | 324 468.34 | 324469.0099 | 324470.1899 | 324 471.14 | 324 |
| 471.41 | 324472.2999 | 323.71 474.54 | 323474.7499 | 322.99474.8799 | 322.99 |
| 475.04 | 322.99475.1299 | 322.99 475.29 | 322.99 476.23 | 322.99477.7499 | 322.98 |
| 478.21 | 322.97 479.4 | 322.99480.4899 | 323480.5499 | 323 485.11 | 323.31 |
| 487.98 | 323.49 489.96 | 323.58491.0599 | 323.64 492.72 | 323.73 500.04 | 324 |
| 500.48 | 324 501.6 | 324501.7999 | 324 501.83 | 324 502.4 | 324 |
| 503.2399 | 324 507.4 | 323.99 508.58 | 323.99515.9899 | 324 516.04 | 324 |
| 516.27 | 324520.4899 | 324 520.85 | 324 522.52 | 324522.6899 | 324 |
| 522.73 | 324534.1299 | 323.98 543.16 | 323.99543.4999 | 323.99 546.2 | 323.99 |
| 550.16 | 323.88 556.65 | 323.92557.4999 | 323.86 558.41 | 323.79 565.16 | 323.37 |
| 570.14 | 323 582.16 | 322.74 590.36 | 322.61 596.11 | 322.52 596.47 | 322.52 |
| 597.7499 | 322.5 599.59 | 322.47601.2499 | 322.45 603.1 | 322.42 605.21 | 322.4 |
| 620.8199 | 322.03 621.85 | 322.01622.1799 | 322.01 622.59 | 322.01622.6299 | 322.01 |
| 623.34 | 322.01623.6199 | 322.03 631.9 | 322.62635.3799 | 322.86 635.71 | 322.84 |
| 635.95 | 322.84 636.77 | 322.9636.9899 | 322.9 637.11 | 322.89 637.58 | 322.91 |
| 638.8699 | 322.92639.3799 | 322.91 639.73 | 322.89 639.98 | 322.87 640.21 | 322.85 |
| 646.17 | 322 648.14 | 322648.1899 | 322 653.59 | 321.6 659.14 | 321 |
| 659.8699 | 321 660.58 | 321 660.79 | 321 664.9 | 320.99 665.08 | 320.99 |
| 670.3799 | 320.99 678.96 | 321 679.27 | 321679.3799 | 321 680.66 | 321 |
| 681.1299 | 321681.6799 | 321682.3099 | 321 683.59 | 321684.0099 | 321 |
| 686.11 | 321 688.36 | 321.02688.3699 | 321.02 688.89 | 321.03690.5699 | 321.06 |
| 693.34 | 321.1 699.42 | 321.2 701.92 | 321.28704.5599 | 321.35714.2599 | 321.57 |
| 715.25 | 321.6721.6299 | 321.73725.3099 | 321.77 728.12 | 321.98 728.45 | 321.98 |
| 731.22 | 321.97 731.47 | 321.97 732.7 | 321.98 733.27 | 321.97 739.71 | 321.99 |
| 743.7599 | 322 744.02 | 322 744.15 | 322.04 745.7 | 322.26 746.7 | 322.38 |
| 747.7899 | 322.46748.1699 | 322.44748.2599 | 322.45 748.95 | 322.4 749.83 | 322.38 |
| 750.62 | 322.37 752.1 | 322.37 760.62 | 322.92 760.74 | 322.92 760.87 | 322.92 |
| 762.25 | 322.93763.1299 | 322.93763.4199 | 322.93764.9099 | 322.94765.3099 | 322.94 |
| 766.21 | 322.95768.1699 | 322.96 769.96 | 322.97 770.28 | 322.97 772.22 | 322.98 |
| 772.62 | 322.99 774.77 | 323 776.97 | 323.01777.6699 | 323.01 777.96 | 323.01 |
| 780.9199 | 323.01 782.74 | 323.02 783.58 | 323.01 785.95 | 323.12 788.9 | 323.43 |
| 791.98 | 323.55 792.1 | 323.56792.4199 | 323.57 809.77 | 323.43 846.21 | 323.09 |
| 850.6 | 323.01 851.21 | 323 851.85 | 323853.1599 | 323853.2899 | 323 |
| 854.58 | 323 854.87 | 323855.6699 | 323 857.87 | 323861.1799 | 323.04 |
| 862.73 | 323.06864.5699 | 323.1886.7999 | 323.95891.5399 | 323.99891.8799 | 323.99 |
| 893.84 | 323.99 894.23 | 323.99894.4099 | 323.99 895.6 | 323.99 895.84 | 323.99 |
| 896.4399 | 323.99896.8799 | 323.99 898.97 | 323.99 899.48 | 323.99906.9299 | 323.98 |
| 907.8799 | 323.98 909.14 | 323.98911.8799 | 323.97 914.09 | 323.97918.0599 | 323.92 |
| 932.21 | 323.77937.2999 | 323.81 940.83 | 323.84952.7999 | 323.93 957.9 | 324 |
| 958.11 | 324 958.45 | 324958.9099 | 324968.9999 | 324.32 981.59 | 324.82 |
| 983.58 | 324.9 986.33 | 325 990.95 | 325.2 1008.58 | 325.99 1008.82 | 326 |
| 1008.9 | 326 1023.82 | 326.96 1024.43 | 327 1025.52 | 327.08 1037.93 | 328 |
| 1042.64 | 328.42 1049.22 | 329 1059.88 | 329.93 1060.69 | 330 1061.12 | 330.04 |
| 1071.55 | 331 1075.5 | 331.4 1077.32 | 331.58 1081.78 | 332 1084.3 | 332.25 |
| 1091.75 | 333 1092.62 | 333.09 1093.38 | 333.17 1101.75 | 334 1108.44 | 334.65 |
| 1112.02 | 335 1119.44 | 335.72 1122.4 | 336 1127.43 | 336.5 1128.56 | 336.62 |
| 1132.51 | 337 1137.64 | 337.48 1143.12 | 338 1149.44 | 338.67 1152.13 | 339 |

```
 1153.06  339.11    1157  339.55 1160.05     340    1163  340.72 1164.33     341
 1169.57  341.79 1170.13  341.87  1170.5  341.93 1170.61  341.94 1170.83  341.97
 1170.93  341.97 1171.14     342  1176.2  342.65 1178.74     343 1183.57  343.72
 1184.08   343.8 1185.08  343.94 1185.46     344  1187.6  344.37 1191.34     345
  1192.1  345.14 1197.14     346 1201.52  346.78 1202.84     347 1203.59  347.13
  1203.8  347.16 1205.95  347.39 1206.93  347.44 1207.46  347.47 1209.72  347.65
  1212.1  347.77 1212.84  347.83 1212.89  347.83 1212.93  347.83  1213.4  347.83
 1214.14  347.79 1215.08  347.76

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05472.2999     .04886.7999     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      472.2999886.7999            487.5     500  501.18              .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 6100

INPUT
Description:
Station Elevation Data    num=     499
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     325.5500488     325.6500244     325.7401123     3251.940063  324.99
2.670044  324.993.680054  324.99    5.75     32513.400024     3256.420044     325
 7.01001     3257.160034     32513.47009     32513.53003     32514.02002  324.98
 14.6001  324.97   14.88  324.9615.39001  324.9415.66003  324.9326.21008  324.56
31.94006   324.532.32007  324.49   33.25   324.535.20007  324.5244.66003  324.66
 49.2301  324.71      50  324.7150.72009   324.751.66003  324.69      52  324.68
54.33008  324.6255.52002  324.5956.42004  324.5658.24011  324.4863.45007   324.4
 64.3501  324.3666.66003  324.3269.53003  324.2473.26001  324.1276.14001     324
76.62012     32476.90002     32484.84009  323.8392.12012  323.6993.36011  323.68
   93.88  323.6795.02002  323.6696.52002  323.64100.0801  323.59102.4501  323.55
   103.5  323.53  104.64  323.51107.8701  323.45110.2301   323.4112.8501  323.36
114.9301  323.32  116.25   323.3117.9701  323.29128.1801  323.12  133.67  323.02
  135.78     323141.6101  322.84142.0801  322.83  149.63  322.66  151.55  322.64
  152.63  322.63154.9301  322.59   159.8  322.52163.7101  322.48  166.66  322.43
171.3201  322.44  176.67  322.49177.1101  322.47177.9301  322.46  178.55  322.47
178.9501  322.47180.8101  322.46  182.17  322.46  184.15  322.45   187.9   322.4
  190.65  322.38  191.42  322.38   198.1  322.24206.6301  322.01208.2101     322
  209.35     322209.5901     322210.5101     322210.7701     322210.8401     322
  211.04     322211.3301     322211.8701     322212.3901     322  212.66     322
  212.79     322214.0201  322.01  214.28  322.01216.2701  322.01216.7601  322.01
218.5901  322.05225.1201  322.16  226.66  322.15  228.11  322.15  235.97  322.24
236.7001  322.24244.0001  322.27244.2101  322.27251.9301  322.28259.6801  322.27
271.2001  322.08273.6801  322.03274.2101  322.03  275.97  322.02277.5601  322.01
277.6401  322.01278.6501     322  279.66  321.99  280.22  321.99280.6201  321.99
  281.67     322  285.54  322.01288.3101  322.01289.0701  322.01289.1301  322.01
  289.35  322.01290.3901  322.01291.5101  322.01291.9001  322.01292.5001  322.01
298.6301  322.13  298.85  322.13300.3701  322.15300.8401  322.14  301.29  322.14
308.6901  322.19  315.48  322.21326.5201  322.16339.1901   322.1339.3101  322.09
  341.53  322.08342.4901  322.07343.2601  322.06   343.3  322.06  343.85  322.06
  344.41  322.06  344.54  322.06349.4901  322.03351.9301  322.03356.7401  322.02
361.6501  322.01  362.61     322362.6201     322362.7701     322  362.78     322
365.9501     322   366.1     322  368.42     322372.4301     322  373.42     322
  384.54     322391.1301     322402.6801     322   407.6  321.76  422.53     321
428.0801  320.16429.2401     320  430.36  319.99  431.29  319.98432.1301  319.97
432.8901  319.98433.9001  319.98436.2501     320  436.79  320.01  437.03  320.01
438.5801  320.03438.9001  320.04  440.41  320.05  441.17  320.06441.9601  320.07
442.8801  320.07442.9501  320.07443.1301  320.07443.2701  320.07  443.78  320.07
443.9301  320.08  444.05  320.08  446.67  320.03446.8201     320448.2501  319.45
449.4301     319452.1901  318.13452.5001  318.04452.6301     318452.9901  317.97
453.3701  317.96453.4901  317.96458.5101  317.72463.8201  317.48469.8801  317.31
478.8201  317.71479.0901  317.71479.7001  317.76481.9501  317.93   482.8     318
483.0101     318484.7401     318  486.53  317.99488.4301  317.99  489.55  317.98
489.8201  317.98490.5901  317.98497.0601  317.99  499.98  317.99500.3101  317.99
  502.85  317.99505.7601     318  507.66     318508.0701     318509.1901     318
  509.55     318  509.85     318510.5001     318  511.04     318512.2601     318
512.5901     318513.1201     318513.2501     318513.4901     318514.0901     318
514.7501     318517.2001     318  517.73     318525.2401  318.01   525.6  318.01
  526.05  318.01532.2501  318.02532.2701  318.02  532.28  318.02   532.3  318.02
534.8901  318.02536.5701  318.02536.9601  318.02537.7401  318.02537.9601  318.02
538.5801  318.02539.6301  318.01541.5901  318.01541.9601  318.01  546.92  318.18
548.1201  318.23548.6301  318.25  550.11  318.35  553.61   318.6557.8301  318.92
558.9501     319  559.41     319562.1801  319.01564.6901  319.01  570.42  319.03
  572.78  319.03574.7401  319.03582.5701     319583.8101     319584.0901     319
```

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  584.53     319  584.55     319584.6301     319584.6901     319585.0201     319
  585.22     319  586.28     319  586.85     319587.3701     319  587.48     319
  587.86     319  588.05     319588.6501     319589.2101  318.99589.4001  318.99
594.6901  318.99596.9601     319  599.05     319  601.54     319  603.29     319
608.1801     319612.8301     319  619.91     319620.3201     319621.9301     319
623.1201  319.01623.7101  319.01  623.86  319.01623.9501  319.01625.1401  319.04
633.1201   319.2637.7101  319.27638.0701  319.28645.6501   319.3  653.23  319.28
  656.29  319.23  656.85  319.23657.3801  319.22664.1201  319.11  669.53     319
  669.85     319  671.47     319   672.8     319  673.97     319  678.91     319
681.2601     319  686.04     319687.6801     319   687.8     319689.1401  318.39
  689.79     318690.2601  317.76692.3901     317700.1201  316.96705.9401  316.93
706.9601  316.93710.0701  316.94712.3501  316.96714.8501  316.97  721.41     317
721.6301     317722.0901     317723.0101     317723.0701     317723.7101     317
746.2301  317.02751.8201  317.03769.9301  317.01781.1001     317   787.9  316.94
  789.52  316.93796.6301  316.99797.6801     317798.4801  317.13804.5701     318
  809.36  318.26821.4701  318.18827.2201  318.07836.4401     318  838.41  317.98
840.2201  317.97840.9501  317.98843.2501     318845.8701     318847.1801     318
852.4701     318853.1201     318853.3201     318  857.61  318.01  860.04  318.01
  864.78  318.01866.9801  318.01  869.04  318.01875.7201  318.01879.8701  318.01
892.9701     318916.3101  317.36918.2501  317.32927.6201  317.19932.9301  317.18
934.8201  317.17937.9901  317.48941.6901  317.49942.3501  317.51942.7001  317.55
  943.42     318  947.41  318.72948.4901  318.93948.8801     319949.0001  319.02
  951.28     319  951.42     319955.5101     319957.8201     319  958.77     319
959.4301  319.01962.9901     319963.8201     319964.4801     319966.7701     319
967.0901     319970.1801     319971.7401  318.98  972.15  318.98972.5601  318.97
973.5001  318.97975.7701  318.94  976.54  318.94983.6401  318.71999.5101  318.23
  999.98  318.22 1000.23  318.21 1001.31  318.18 1002.11  318.16    1003  318.13
 1003.25  318.12  1003.6  318.11 1004.07  318.11 1012.68  318.03 1019.43  318.06
 1025.77  318.04 1029.55  318.03 1030.52  318.03 1031.18  318.03 1031.52  318.03
 1034.59  318.05 1040.38     318 1040.48     318 1040.76     318 1045.66     318
 1050.75     318 1052.74     318 1056.37     318 1062.82     318  1063.3     318
 1063.71     318  1063.8     318 1066.75     318 1066.84     318 1068.04     318
 1068.18     318 1068.35     318 1068.47     318 1068.66     318 1071.29     318
 1071.42     318 1071.67     318 1071.97     318 1073.33  317.99 1073.67  317.99
 1073.71  317.99 1081.81  317.99 1087.07  317.98 1089.93  317.98 1090.67  317.98
 1091.24  317.98 1091.73  317.98 1092.21  317.98 1092.28  317.98 1094.92  317.98
 1100.05  317.99 1100.68  317.99 1101.06  317.99 1101.93  317.99 1102.93  317.99
    1103  317.99 1103.56  317.99  1103.7  317.99 1105.82   317.9 1105.91  317.89
 1106.61  317.91  1106.8  317.89 1106.87  317.89 1107.23  317.88 1107.84  317.83
 1114.97  317.88 1123.57     318 1123.59     318 1124.03     318 1124.75     318
 1125.35     318 1128.41     318 1128.67     318 1128.91  317.99 1129.22     318
 1145.29  317.92 1149.33  317.99 1155.93     318 1161.67     318 1164.66     318
 1165.46     318 1173.67     318 1175.89     318 1175.97     318 1176.34  318.04
 1177.36  318.14 1184.36  318.85  1185.8     319 1185.89  319.01 1192.11     320
 1193.93  320.37 1197.11     321 1198.82  321.35 1200.69  321.72 1201.43  321.87
 1202.24     322 1205.24  322.54 1208.45     323 1213.11  323.73 1214.63     324
 1217.25  324.46  1219.3     325 1221.13  325.75 1221.56  325.92

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05449.4301     .04 1184.36     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      449.4301 1184.36           525.75     500  515.16              .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 5600

INPUT
Description:
Station Elevation Data    num=     379
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  314.091.390015  314.115.880005  314.156.380005  314.157.690063  314.17
9.910034   314.210.64001   314.213.80005  314.2317.90002  314.2623.10999  314.34
28.28003  314.3950.59009  314.6463.59009  314.7465.69006  314.7567.73999  314.75
81.22998  314.9285.27002  314.9888.85999  314.9989.97998     31594.85999     315
  122.53  315.29  124.26   315.3125.0701  315.31131.9301  315.36  135.64   315.4
  139.73  315.43  142.28  315.44  143.28  315.45   159.8  315.58170.7101   315.7
  182.91  315.69  183.59  315.71   184.1  315.71184.5001   315.7187.2401  315.67
  190.79  315.62190.9901  315.62  191.47  315.61  197.85  315.42  208.26  315.02
212.4301     315  213.41  314.85  214.02  314.73215.8701  314.41217.6901   314.1
  218.32     314  219.45   313.8   222.9   313.4  224.17   313.3224.8701  313.22
  225.09  313.21  225.67  313.12  225.89  313.11  226.59     313  230.04     313
  231.61  312.74  233.27  312.47  233.36  312.47   235.4     312238.1901  311.68
   238.3  311.69  246.98  311.48  252.85  311.46253.1901  311.47257.0601  311.53
  260.21  311.57  261.54  311.59  274.71  311.71  277.07  311.77  282.92  311.98
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 284.66 | 311.98 | 286.14 | 312 | 286.8 | 312 | 287.76 | 312.02 | 288.34 | 312.03 |
| 289.5601 | 312.06 | 291.88 | 312.11 | 293.97 | 312.15 | 294.4301 | 312.16 | 298.9901 | 312.27 |
| 308.4901 | 312.46 | 314.2 | 312.56 | 318.13 | 312.61 | 321.35 | 312.64 | 323.03 | 312.65 |
| 323.88 | 312.66 | 325.77 | 312.66 | 334.83 | 312.7 | 345.72 | 312.83 | 348.1901 | 312.83 |
| 350.79 | 312.85 | 351.27 | 312.86 | 352.5001 | 312.86 | 353.6 | 312.87 | 355.14 | 312.88 |
| 355.58 | 312.88 | 359.79 | 312.89 | 360.07 | 312.89 | 362.02 | 312.88 | 364.66 | 312.86 |
| 365.41 | 312.86 | 367.7501 | 312.81 | 371.13 | 312.73 | 371.48 | 312.72 | 375.42 | 312.62 |
| 376.17 | 312.61 | 385.96 | 312.42 | 391.28 | 312.33 | 395.1 | 312.34 | 399.27 | 312.36 |
| 400.67 | 312.35 | 401.16 | 312.36 | 402.6 | 312.37 | 403.11 | 312.37 | 404.03 | 312.39 |
| 404.45 | 312.38 | 405.35 | 312.38 | 415.6801 | 312.5 | 416.45 | 312.5 | 417.54 | 312.48 |
| 418.79 | 312.47 | 419.71 | 312.47 | 432.3701 | 312.65 | 451.41 | 312.99 | 456.33 | 312.99 |
| 458.9901 | 313 | 460.72 | 313 | 462.3701 | 312.86 | 463.4301 | 312.87 | 463.7401 | 312.83 |
| 464.55 | 312.78 | 466.3 | 312.64 | 470.8701 | 312 | 488.15 | 312 | 497.9401 | 312.52 |
| 500.59 | 312.65 | 502.76 | 312.77 | 506.64 | 312.96 | 507.14 | 313 | 517.1901 | 313 |
| 523.1 | 312.99 | 526.34 | 312.99 | 529.52 | 312.98 | 536.88 | 312.99 | 540.27 | 313 |
| 541.23 | 313 | 549.08 | 313.02 | 554.6801 | 313.02 | 557.6201 | 313.01 | 559.55 | 313 |
| 561.29 | 312.97 | 562.15 | 312.96 | 563.26 | 312.98 | 563.9301 | 312.99 | 564.09 | 312.99 |
| 564.3701 | 313 | 573.9 | 313 | 577.48 | 312.26 | 578.08 | 312.15 | 578.9901 | 312 |
| 579.21 | 311.94 | 583.2 | 311 | 589.27 | 310.97 | 595.09 | 311 | 595.4401 | 311 |
| 595.57 | 311.01 | 596.54 | 311.01 | 616.58 | 311.5 | 617.27 | 311.52 | 625.96 | 311.72 |
| 627.42 | 311.75 | 628.5001 | 311.76 | 631.79 | 311.83 | 642.45 | 311.99 | 651.71 | 311.99 |
| 652.88 | 312 | 654.95 | 312 | 664.13 | 312.28 | 686.26 | 312.99 | 686.77 | 312.99 |
| 687.33 | 313 | 691.0801 | 313 | 691.87 | 313.01 | 699.99 | 313.01 | 705.22 | 313 |
| 720.86 | 313 | 727.39 | 313.67 | 32.0601 | 313.61 | 737.4 | 313.55 | 738.4501 | 313.54 |
| 746.17 | 313.15 | 749.03 | 313 | 755.67 | 313 | 793.49 | 312.82 | 793.6 | 312.82 |
| 794.37 | 312.84 | 798.61 | 312.96 | 800.54 | 312.95 | 800.71 | 312.95 | 802.9 | 312.94 |
| 808.13 | 312.98 | 808.55 | 312.98 | 809.65 | 312.99 | 823.7001 | 313.07 | 824.09 | 313.07 |
| 828.86 | 313.06 | 830.46 | 313.06 | 833.38 | 313.04 | 835.11 | 313.04 | 840.78 | 313.01 |
| 841.35 | 313.01 | 842.0701 | 313.02 | 843.84 | 313 | 849.66 | 313 | 852.74 | 313.01 |
| 853.79 | 313.01 | 860.28 | 313.02 | 861.87 | 313.02 | 867.3301 | 313.01 | 867.8 | 313.01 |
| 870.75 | 313 | 879.42 | 313 | 883.11 | 312.99 | 895.1 | 313 | 900.84 | 313.02 |
| 904.67 | 313 | 905.76 | 313 | 906.61 | 312.99 | 906.86 | 312.99 | 908.23 | 312.96 |
| 919.9301 | 312.72 | 933.21 | 312.48 | 935.75 | 312.43 | 947.4 | 312.3 | 955.22 | 312.29 |
| 955.72 | 312.3 | 955.9301 | 312.39 | 61.1801 | 312.39 | 965.34 | 312.45 | 965.77 | 312.45 |
| 966.3201 | 312.43 | 971.77 | 312.31 | 975.02 | 312.29 | 1008.99 | 312.11 | 1011.02 | 312.11 |
| 1011.4 | 312.1 | 1011.71 | 312.1 | 1016.48 | 312.01 | 1016.65 | 312.01 | 1017.72 | 312 |
| 1018.64 | 312 | 1020.11 | 311.99 | 1020.66 | 311.99 | 1023.37 | 311.97 | 1024.41 | 311.98 |
| 1026.55 | 311.99 | 1027.16 | 311.99 | 1027.37 | 312 | 1027.78 | 312 | 1029.51 | 312.08 |
| 1031.41 | 312.14 | 1031.68 | 312.15 | 1032 | 312.16 | 1047.27 | 312.69 | 1051.01 | 312.79 |
| 1056.04 | 313 | 1059.28 | 313.31 | 1064.52 | 314 | 1067.7 | 314.99 | 1067.76 | 315.01 |
| 1070.89 | 316 | 1071.87 | 316.44 | 1073.36 | 317 | 1074.51 | 317.53 | 1075.72 | 318 |
| 1077.08 | 318.49 | 1078.42 | 319 | 1079.41 | 319.42 | 1080.84 | 320 | 1081.31 | 320.2 |
| 1081.52 | 320.29 | 1083.43 | 321 | 1085.72 | 321.84 | 1086.11 | 322 | 1087.12 | 322.37 |
| 1089.73 | 323 | 1090.79 | 323.35 | 1092.21 | 323.8 | 1092.39 | 323.84 | 1092.87 | 324 |
| 1092.93 | 324.01 | 1093.75 | 324.13 | 1094.95 | 324.3 | 1096.15 | 324.51 | 1097.57 | 324.74 |
| 1098.91 | 324.88 | 1099.27 | 325 | 1101.45 | 325.07 | 1101.6 | 325.07 | 1102.31 | 325.1 |
| 1102.41 | 325.1 | 1102.85 | 325.12 | 1103.12 | 325.12 | 1105.24 | 325.55 | 1105.97 | 325.78 |
| 1106.07 | 325.77 | 1106.74 | 325.95 | 1106.87 | 325.95 | 1107.19 | 326 | 1107.54 | 326.01 |
| 1107.75 | 326.01 | 1108.1 | 326.05 | 1108.78 | 326.06 | 1108.92 | 326.07 | 1110.3 | 326.13 |
| 1110.47 | 326.15 | 1110.55 | 326.17 | 1110.97 | 326.27 | 1113.28 | 326.99 | 1113.34 | 327 |
| 1117.76 | 327.86 | 1118.39 | 328 | 1118.57 | 328.07 | 1119.1 | 328.32 | 1119.33 | 328.41 |
| 1119.92 | 328.58 | 1120.35 | 328.68 | 1121.74 | 329 | 1125.6 | 329.92 | 1125.94 | 330 |
| 1128.29 | 330.78 | 1128.89 | 331 | 1129.97 | 331.39 | 1131.74 | 332 | 1133.75 | 332.75 |
| 1134.49 | 333 | 1137.07 | 333.99 | 1137.22 | 334.03 | 1137.27 | 334.05 | 1139.79 | 335 |
| 1143.04 | 335.95 | 1143.19 | 336 | 1143.52 | 336.08 | 1145.28 | 336.52 | 1146.21 | 336.73 |
| 1146.6 | 336.82 | 1146.97 | 336.89 | 1147.5 | 337 | 1150.28 | 337.53 | 1152.26 | 338 |
| 1153.4 | 338.22 | 1156.65 | 339 | 1157.12 | 339.12 | 1158 | 339.32 | 1161.3 | 340 |
| 1164.16 | 340.88 | 1164.7 | 341 | 1165.31 | 341.14 | 1169.96 | 342 | 1171.93 | 342.37 |
| 1172.31 | 342.43 | 1173.12 | 342.5 | 1173.38 | 342.54 | 1173.62 | 342.56 | 1173.76 | 342.58 |
| 1174.08 | 342.6 | 1174.43 | 342.62 | 1176.45 | 343 | 1180.91 | 343.79 | 1181.92 | 344 |
| 1185.29 | 344.76 | 1186.43 | 345 | 1190.7 | 345.66 | 1192.97 | 346 | 1193.63 | 346 |
| 1194.14 | 346.01 | 1198.1 | 346.01 | 1199.21 | 346.02 | 1202.91 | 346.18 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 225.09 | .04 | 1059.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 225.09 | 1059.28 | 390.86 | 500 | 671.59 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 5100

INPUT
Description:
Station Elevation Data num= 409

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.99 | 1.200073 | 309.99 | 1.550049 | 310 | 32.60999 | 310 | 34.84998 | 309.99 |
| 37.09009 | 309.99 | 40.10999 | 310 | 44.02002 | 310 | 44.85999 | 310.01 | 47.93005 | 310.01 |
| 56.84009 | 310.03 | 59.15002 | 310.02 | 59.90002 | 310.03 | 60.40002 | 310.03 | 63.76001 | 310.02 |
| 88.18005 | 310.28 | 94.14001 | 310.31 | 03.6901 | 310.35 | 104.6901 | 310.37 | 106.8 | 310.38 |
| 109.25 | 310.41 | 114 | 310.45 | 116.78 | 310.48 | 162.41 | 310.91 | 164.27 | 310.93 |
| 167.41 | 310.97 | 168.0701 | 310.97 | 170.9401 | 311 | 189.2101 | 311 | 191.5701 | 311.01 |
| 220.72 | 311.22 | 222.41 | 311.23 | 229.24 | 311.25 | 229.8301 | 311.26 | 231.02 | 311.27 |
| 232.05 | 311.27 | 234.97 | 311.29 | 238.9401 | 311.31 | 245.5801 | 311.36 | 251.4501 | 311.39 |
| 257.5 | 311.44 | 259.23 | 311.45 | 260.35 | 311.45 | 271.5 | 311.53 | 286.03 | 311.59 |
| 287.79 | 311.59 | 294.36 | 311.62 | 298.8101 | 311.62 | 303.3 | 311.61 | 305.37 | 311.6 |
| 305.5601 | 311.6 | 313.9501 | 311.65 | 315.51 | 311.65 | 317.91 | 311.66 | 320.9 | 311.65 |
| 323.9501 | 311.65 | 329.61 | 311.63 | 330.49 | 311.62 | 331.16 | 311.62 | 332.5 | 311.61 |
| 341.61 | 311.59 | 350.41 | 311.59 | 354.14 | 311.57 | 354.23 | 311.57 | 356.72 | 311.55 |
| 357 | 311.55 | 361.4601 | 311.52 | 368.35 | 311.52 | 375.25 | 311.54 | 376.87 | 311.56 |
| 378.3301 | 311.56 | 381.42 | 311.57 | 382.6901 | 311.56 | 383.53 | 311.57 | 387.61 | 311.57 |
| 391.54 | 311.6 | 392.03 | 311.59 | 392.87 | 311.6 | 393.02 | 311.6 | 408.17 | 311.51 |
| 435.3 | 311.29 | 452.44 | 311 | 454.2401 | 310.69 | 458.61 | 310 | 461.55 | 309.52 |
| 464.2 | 309 | 470.14 | 308.07 | 470.6 | 308 | 470.76 | 307.93 | 472.9301 | 307 |
| 476.21 | 306.47 | 478.23 | 306.47 | 484.32 | 306.24 | 486.96 | 306.2 | 488.6 | 306.23 |
| 488.77 | 306.23 | 497.25 | 306.42 | 519.55 | 306.98 | 520.36 | 306.98 | 522.91 | 306.99 |
| 544.72 | 306.99 | 546.03 | 307 | 548.53 | 307 | 548.9 | 306.98 | 562.55 | 306.53 |
| 564.63 | 306.49 | 565.63 | 306.46 | 568.46 | 306.38 | 570 | 306.33 | 573.76 | 306.22 |
| 577.84 | 306.12 | 581.63 | 306 | 626.7401 | 306.01 | 634.39 | 306 | 637.9301 | 306 |
| 641.89 | 306.03 | 643.53 | 306.03 | 647.4 | 306.01 | 648.85 | 306.01 | 649.96 | 306 |
| 668.14 | 305.99 | 676.46 | 306 | 697.4 | 306.6 | 703.26 | 306.78 | 705.6 | 306.84 |
| 709.28 | 306.95 | 710.46 | 306.96 | 711.09 | 306.97 | 712.01 | 306.99 | 712.21 | 307 |
| 712.88 | 307 | 713.34 | 306.98 | 715.97 | 306.92 | 738.59 | 306.87 | 762.29 | 306.96 |
| 762.41 | 306.96 | 763.73 | 307 | 764.33 | 307 | 765.4901 | 307.01 | 775.54 | 307.01 |
| 779.44 | 307.08 | 784.67 | 307 | 786.5 | 307 | 788 | 307.01 | 803.9901 | 307 |
| 806.61 | 306 | 808.96 | 305.98 | 815.54 | 305.94 | 815.78 | 305.94 | 826.7 | 306.02 |
| 829.13 | 306 | 831.09 | 306 | 831.9901 | 305.99 | 835.4 | 305.99 | 837.59 | 305.98 |
| 840.3101 | 305.98 | 843.65 | 306 | 853.54 | 306.52 | 855.96 | 306.64 | 860.14 | 306.83 |
| 864.85 | 306.93 | 865.13 | 306.93 | 866.4901 | 306.91 | 868.78 | 306.88 | 872.78 | 306.77 |
| 876.61 | 306.64 | 878.5 | 306.58 | 879.75 | 306.55 | 897.04 | 306.01 | 897.45 | 306 |
| 898.21 | 306 | 900.94 | 305.98 | 911.27 | 305.89 | 913.28 | 305.87 | 919.25 | 305.82 |
| 934.0701 | 305.93 | 938.01 | 305.91 | 941.46 | 306 | 951 | 306 | 952.27 | 305.99 |
| 976.75 | 305.46 | 993.23 | 305 | 993.9301 | 304.99 | 994.35 | 304.99 | 995.89 | 305 |
| 996.99 | 305.06 | 1010.39 | 306 | 1016.91 | 306.05 | 1021.23 | 306.05 | 1022.25 | 306.06 |
| 1023.15 | 306.06 | 1026.85 | 306.04 | 1043.27 | 306 | 1044.11 | 305.99 | 1044.76 | 305.99 |
| 1045.12 | 305.98 | 1048.52 | 305.95 | 1055.07 | 305.51 | 1058.84 | 305.31 | 1059.27 | 305.34 |
| 1059.85 | 305.33 | 1060.34 | 305.35 | 1060.49 | 305.35 | 1062.47 | 305.36 | 1062.65 | 305.36 |
| 1063.41 | 305.37 | 1063.47 | 305.37 | 1067.74 | 305.46 | 1072.14 | 305.45 | 1076.53 | 305.46 |
| 1079 | 305.46 | 1080.05 | 305.47 | 1088.1 | 306 | 1096.54 | 306 | 1098.17 | 305.99 |
| 1099.06 | 305.99 | 1109.02 | 305.94 | 1113.25 | 305.86 | 1124.74 | 305.76 | 1126.95 | 305.78 |
| 1130.43 | 305.77 | 1134.41 | 305.75 | 1134.97 | 305.73 | 1135.63 | 305.73 | 1137.02 | 305.72 |
| 1138.53 | 305.7 | 1139 | 305.7 | 1140.23 | 305.69 | 1142.33 | 305.64 | 1143.09 | 305.64 |
| 1144.45 | 305.6 | 1155.43 | 305.47 | 1163.12 | 305.42 | 1165.48 | 305.43 | 1165.88 | 305.43 |
| 1180.48 | 305.46 | 1182.02 | 305.44 | 1193.24 | 305.56 | 1217.55 | 306 | 1218.66 | 306 |
| 1219.33 | 306.12 | 1220.46 | 306.3 | 1224.69 | 307 | 1228.77 | 307.36 | 1231.61 | 307.63 |
| 1244.84 | 308.93 | 1245.64 | 309 | 1247.11 | 309.2 | 1252.22 | 310 | 1256 | 310.61 |
| 1257.72 | 311 | 1263.04 | 312 | 1264.12 | 312.23 | 1270.97 | 313.46 | 1273.82 | 314 |
| 1274.57 | 314.16 | 1275.96 | 314.5 | 1278.06 | 315 | 1281.78 | 315.96 | 1281.97 | 316 |
| 1282.34 | 316.12 | 1282.87 | 316.28 | 1285.31 | 317 | 1286.2 | 317.27 | 1288.7 | 318 |
| 1291.05 | 318.8 | 1291.69 | 319 | 1293.78 | 319.69 | 1294.76 | 320 | 1295.17 | 320.19 |
| 1297.24 | 321 | 1299.5 | 321.97 | 1299.58 | 322 | 1299.65 | 322.04 | 1301.73 | 323 |
| 1302.08 | 323.18 | 1303.06 | 323.7 | 1303.6 | 323.97 | 1303.65 | 324 | 1305.48 | 324.94 |
| 1305.59 | 325 | 1307.44 | 325.97 | 1307.51 | 326 | 1307.58 | 326.04 | 1308.03 | 326.22 |
| 1308.24 | 326.28 | 1310.42 | 326.95 | 1310.59 | 327 | 1311.41 | 327.16 | 1313.29 | 327.32 |
| 1314.69 | 327.37 | 1315.93 | 327.11 | 1315.99 | 327.11 | 1316.59 | 327.01 | 1316.66 | 327 |
| 1318.11 | 326.68 | 1318.85 | 326.53 | 1319.51 | 326.41 | 1319.77 | 326.39 | 1320.02 | 326.36 |
| 1320.86 | 326.35 | 1322.54 | 326.41 | 1323.29 | 326.44 | 1323.68 | 326.48 | 1324.13 | 326.53 |
| 1324.71 | 326.65 | 1326.08 | 326.93 | 1326.13 | 326.94 | 1326.33 | 327 | 1328.73 | 327.43 |
| 1329.16 | 327.45 | 1329.72 | 327.51 | 1330.1 | 327.52 | 1331.31 | 327.61 | 1331.82 | 327.59 |
| 1332.38 | 327.56 | 1333.21 | 327.56 | 1333.56 | 327.53 | 1336.43 | 327 | 1337.11 | 326.68 |
| 1338.59 | 326 | 1338.66 | 325.97 | 1338.73 | 325.94 | 1338.84 | 325.9 | 1339.74 | 325.58 |
| 1340.24 | 325.43 | 1340.79 | 325.31 | 1341.24 | 325.22 | 1341.62 | 325.18 | 1341.8 | 325.16 |
| 1342.89 | 325.13 | 1343.13 | 325.11 | 1345.47 | 325.15 | 1345.63 | 325.14 | 1346.32 | 325 |
| 1346.53 | 324.96 | 1349.88 | 324 | 1350.08 | 323.95 | 1350.28 | 323.98 | 1350.64 | 323.97 |
| 1351.06 | 324 | 1351.29 | 324.05 | 1351.37 | 324.06 | 1353.06 | 324.34 | 1354.12 | 324.41 |
| 1355.5 | 324.51 | 1356.37 | 324.51 | 1362.52 | 324.11 | 1362.92 | 324.08 | 1363.51 | 324 |
| 1364.78 | 323.98 | 1365.71 | 323.98 | 1365.99 | 323.97 | 1366.56 | 323.98 | 1366.84 | 323.99 |
| 1367.04 | 324 | 1369.01 | 324.56 | 1370.99 | 325 | 1371.2 | 325.02 | 1371.76 | 325.13 |
| 1372.73 | 325.27 | 1373.61 | 325.3 | 1376.01 | 325.89 | 1376.22 | 325.89 | 1376.3 | 325.86 |
| 1376.44 | 325.95 | 1376.59 | 325.86 | 1376.65 | 325.83 | 1377.47 | 325.3 | 1378.01 | 325 |
| 1378.92 | 324.57 | 1379.38 | 324.47 | 1380.19 | 324.34 | 1380.55 | 324.87 | 1380.69 | 324.86 |
| 1380.76 | 324.87 | 1382.22 | 325 | 1383.13 | 325.59 | 1383.74 | 326 | 1384.36 | 326.41 |
| 1385.01 | 326.79 | 1385.54 | 327 | 1387.01 | 327.47 | 1387.18 | 327.61 | 1387.27 | 327.65 |
| 1387.36 | 327.59 | 1387.48 | 327.57 | 1387.55 | 327.47 | 1387.88 | 327 | 1388.47 | 326.37 |

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 1389.05     326 1389.24  325.98 1389.55  325.98 1389.66     326 1390.23  326.48
 1390.94     327 1391.32  327.38 1391.71  327.78 1391.97     328 1392.13     328
 1392.69  328.02 1394.44  328.38 1396.77  328.73 1398.46     329 1403.48     329
 1407.73  329.01 1413.66  329.01  1413.9  329.02 1422.53  329.02

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05472.9301     .04 1224.69     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      472.9301 1224.69           547.22     500  502.03              .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 4600

INPUT
Description:
Station Elevation Data    num=     389
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   314.8.3199463 314.766.469971     3147.809937 313.8514.85999     313
17.33997  312.7123.60999     31231.54993  311.233.83997     31141.53003 310.42
42.65002 310.3346.23999     31051.02002 309.6658.92993     30969.34998 308.16
71.40002     30884.78003 307.01   84.88     30785.14001 306.98   101.9     306
109.4199  305.65  111.25 305.58122.5699 305.17  128.53 304.94  128.85 304.93
  144.86  304.29  148.16 304.21  155.41     304157.6799 303.83  159.72 303.67
  163.08  303.36   165.5 303.33  167.61 303.31168.0599 303.32  168.12 303.32
  170.46  303.38  174.21 303.51  175.61 303.57  176.98 303.64  177.48 303.66
  181.01 303.76181.6699  303.8   182.5 303.84  183.09 303.87     185 303.89
186.4199   303.9   188.4 303.81190.0599  303.8190.5699 303.77  194.75 303.66
  196.25 303.59200.6899 303.73  203.76 303.93  209.58     304  212.37     304
   230.5 304.03236.3199 304.03  249.73 304.18  250.49  304.2250.9399 304.19
   251.2  304.19  253.62 304.24  257.98 304.34  258.73 304.37  260.26  304.4
  260.91  304.42  265.58 304.53266.9399 304.55  268.02 304.58   269.9 304.61
  270.39 304.62270.8099 304.63  273.33 304.72  274.97 304.76275.7899 304.74
  289.91 304.87296.5699 304.97304.8099 304.99305.8099     305  307.24     305
  321.16 305.05321.6899 305.06  335.38  305.2  342.76  305.2348.0599 305.21
  349.58 305.22364.5399 305.34  375.88 305.41  376.11 305.41  377.02 305.42
   396.6  305.45  399.45 305.45  414.96  305.5416.4199 305.52  417.25 305.52
  417.87  305.53  446.24 305.77  448.21  305.8  457.09 305.87457.5599 305.87
459.8099   305.9   461.1  305.9463.4399 305.92463.7999 305.92  466.35 305.91
  488.99  305.98  489.27 305.98  489.77 305.97  491.65     306  503.91     306
508.3099  306.01  513.46     306  519.41  305.9  522.46 305.88  523.53 305.87
  524.78  305.83  526.95 305.77  528.01 305.72530.5399 305.67  531.98  305.6
   537.6  305.49  543.62 305.14  544.16 305.12544.2999 305.11  544.46 305.11
  544.58   305.1545.1899 305.08   545.6 305.07  545.72 305.07  547.99     305
  550.61  304.99  550.91 304.99553.5599     305  554.02     305  557.85 305.05
567.8199  305.66  572.59     306  573.65     306  578.56 306.02  583.74 306.03
  587.45  306.02   589.4 306.02  590.54 306.01  595.04     306  595.96     306
   596.2  305.99  599.25 305.83  601.94 305.75607.5099 305.86  610.12 305.99
   610.6  305.99  610.77     306614.5099 306.01  617.09 306.01  620.13     306
  629.37  305.16  629.75 305.13  631.05     305  631.15 304.96  631.48  304.8
   633.3     304  634.29 303.54  635.53     303  635.99 302.79  637.53     302
  639.19  301.29  639.78     301   640.6 300.64640.8199 300.61  640.98 300.62
  646.68 300.48661.0699 300.03  661.49 300.01  661.61 300.01  661.75     300
   670.4  299.29   673.5     299  675.05     299  682.06 299.79684.0099     300
  692.15  300.93  692.96 300.93  693.85     301  706.47 300.99  713.34     301
  762.98     301  763.64 300.98  774.28  300.4779.0099 300.16780.2599 300.11
  780.62  300.09     782     300813.7599 299.99  821.23 299.88  823.96 299.89
  824.18  299.89  834.46 299.98   835.2 299.99  835.56 299.99  837.06     300
  840.23     300  842.21 300.01  843.77     300  858.17     300859.7599 300.01
873.3199  300.01  878.71     300  879.14     300  881.67 299.99  892.14  299.8
  902.49  299.66  905.63 299.64  917.64 299.77  935.73     300949.0099 300.01
  960.96     300  968.62 299.95  975.05 299.92  975.35 299.91  975.47 299.91
  989.61     300  991.23     300  992.79 300.01  996.24 300.01 1002.17     300
 1002.36     300 1008.82 299.57 1011.65 299.41 1019.64     299 1024.64 298.96
 1028.26  298.95  1032.2 298.93 1043.15     299 1044.82 299.39 1047.63     300
  1064.2     300 1067.37 299.99 1068.41     300 1075.16     300 1090.88 300.05
 1093.49  300.05 1107.77     300 1111.12     300 1117.31 299.99 1135.21     300
 1158.36     301 1166.37 301.01 1175.36 301.01 1177.59     301 1183.76     301
 1185.74  301.01 1192.76 301.01 1193.45     301 1197.85     301 1198.69 300.84
 1203.57     300 1209.84 299.99 1211.87 299.99 1213.12     300 1217.92     300
 1228.01  300.03 1229.21 300.03 1234.17 300.02 1240.86 300.04 1241.19 300.04
 1242.43  300.05 1246.34     300 1246.78     300 1251.52 300.01  1255.7 300.01
 1258.88     300 1260.94     300 1263.86 299.99 1273.51 299.97 1280.72 299.98
 1286.47     300 1295.98     300 1299.13 299.99  1301.4     300 1385.22     300
  1397.3  299.95 1397.99 299.95    1411     300 1415.02 300.73 1416.56 300.93
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1416.67 | 300.95 | 1416.76 | 300.96 | 1417.17 | 301 | 1418.73 | 301.09 | 1421.07 | 301.68 |
| 1421.61 | 301.82 | 1421.97 | 302 | 1423.77 | 303 | 1424.04 | 303.16 | 1425.59 | 304 |
| 1426.93 | 304.73 | 1427.42 | 305 | 1428.87 | 305.79 | 1429.25 | 306 | 1430.78 | 306.83 |
| 1431.09 | 307 | 1432.68 | 307.87 | 1432.92 | 308 | 1433.08 | 308.09 | 1434.78 | 309 |
| 1435.22 | 309.28 | 1436.31 | 310 | 1436.9 | 310.37 | 1437.85 | 311 | 1438.97 | 311.67 |
| 1439.61 | 312 | 1440.33 | 312.31 | 1441.73 | 313 | 1443.52 | 313.77 | 1444.16 | 314 |
| 1444.39 | 314.01 | 1444.58 | 314.05 | 1445.15 | 314.15 | 1446.17 | 314.42 | 1447.96 | 314.75 |
| 1448.62 | 314.89 | 1452.78 | 315.5 | 1453.48 | 315.65 | 1453.71 | 315.69 | 1454.82 | 316 |
| 1456.7 | 316.57 | 1457.35 | 316.68 | 1458.52 | 316.97 | 1458.67 | 317 | 1459.3 | 317.11 |
| 1460.72 | 317.47 | 1462.69 | 318 | 1464.86 | 318.56 | 1466.81 | 319 | 1467.23 | 319.19 |
| 1468.48 | 319.87 | 1468.56 | 319.93 | 1468.67 | 320 | 1469.31 | 320.42 | 1470.1 | 320.85 |
| 1470.29 | 321 | 1470.87 | 321.47 | 1471.56 | 321.94 | 1471.62 | 321.99 | 1472.93 | 323 |
| 1473.54 | 323.43 | 1474.3 | 324 | 1475.12 | 324.54 | 1475.49 | 324.79 | 1475.98 | 325 |
| 1476.81 | 325.36 | 1478.86 | 326 | 1481.64 | 326.93 | 1481.84 | 327 | 1482.12 | 327.1 |
| 1483.34 | 327.46 | 1483.49 | 327.44 | 1484.03 | 327.28 | 1484.93 | 327 | 1486.01 | 326.66 |
| 1486.6 | 326.53 | 1487.03 | 326.44 | 1489.03 | 326.24 | 1491.82 | 326 | 1493.6 | 325.84 |
| 1494.7 | 325.75 | 1494.88 | 325.76 | 1495.66 | 325.79 | 1495.92 | 325.85 | 1496.93 | 326 |
| 1498.44 | 326.23 | 1498.64 | 326.27 | 1499.22 | 326.41 | 1500.22 | 326.72 | 1500.3 | 326.76 |
| 1500.75 | 327 | 1501.6 | 327.45 | 1502.31 | 328 | 1503.11 | 328.25 | 1505.82 | 329 |
| 1507.16 | 329.28 | 1509.92 | 329.96 | 1510.14 | 329.97 | 1510.33 | 329.99 | 1510.5 | 329.99 |
| 1510.58 | 330 | 1563.58 | 330 | 1564.34 | 329.99 | 1599.85 | 329.58 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 639.78 | .04 | 1416.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 639.78 | 1416.56 | 198.47 | 500 | 688.19 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 4100

INPUT
Description:
Station Elevation Data num= 328

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.4127 | 0991 | 319.837 | 29993 | 318.5942 | 98999 | 318 | 43898 | 9 317.94 |
| 50.70996 | 317 | 51.79993 | 316.9456 | 65991 | 316.0556 | 85999 | 316.0256 | 97998 | 316.02 |
| 57.35999 | 316 | 58.56995 | 315.9958 | 78992 | 315.9860 | 16992 | 315.9863 | 92993 | 315.94 |
| 65.3999 | 315.77 | 68.37 | 315.6671 | 35999 | 315.4972 | 97998 | 315.43 | 78 | 315.14 |
| 87.25 | 314.4149 | .6499 | 307.95 | 171.33 | 305.84199 | .7899 | 303 | 211.97 | 302 |
| 222.6699 | 301 | 223.11 | 301233 | .2999 | 300.27239 | .9099 | 299.73 | 248.13 | 299.21 |
| 252.6499 | 299253 | .8099 | 298.99273 | .8999 | 298.06274 | .4299 | 298 | 277.84 | 297.96 |
| 281.47 | 297.99281 | .7799 | 298 | 281.85 | 298.01 | 292.84 | 299298 | .3199 | 300.11 |
| 298.4299 | 300.11 | 301.74 | 300.61302 | .4299 | 300.65303 | .0299 | 300.66 | 306.13 | 300.55 |
| 315.6599 | 300.07317 | .1699 | 300.03319 | .6499 | 300.04 | 321.84 | 300 | 324.37 | 299.56 |
| 327.24 | 299.79 | 328.7 | 299.95332 | .3099 | 300339 | .2899 | 301 | 352.23 | 302 |
| 365.76 | 302366 | .6499 | 301.96366 | .8199 | 301.95 | 375.22 | 301.55 | 375.71 | 301.52 |
| 380.01 | 301.4 | 381.48 | 301.45384 | .1799 | 301.73 | 384.36 | 301.71384 | .7999 | 301.8 |
| 384.8899 | 301.79385 | .2799 | 301.84385 | .5699 | 301.83385 | .6399 | 301.83 | 385.71 | 301.82 |
| 386.11 | 301.8386 | .8899 | 301.7390 | .0399 | 301.37 | 390.88 | 301.24 | 392.35 | 301.09 |
| 393.0299 | 301.01 | 393.24 | 301393 | .8099 | 300.9 | 397.71 | 300398 | .7699 | 299.72 |
| 401.6799 | 299 | 403.86 | 298.34 | 405.01 | 298.09 | 405.46 | 298408 | .2999 | 297.52 |
| 411.01 | 297 | 412.5 | 296.77 | 415.01 | 296.34 | 417.62 | 296 | 426.21 | 295.29 |
| 434.24 | 294.86 | 446.88 | 294 | 514.97 | 294 | 526.26 | 294.65529 | .9199 | 294.76 |
| 530.51 | 294.79 | 536.34 | 295538 | .5699 | 295 | 538.96 | 294.99 | 627.6 | 294.96 |
| 627.96 | 294.95 | 631.83 | 295 | 632.2 | 295.01641 | .5099 | 295.01676 | .4299 | 294.99 |
| 727.7399 | 294.99730 | .6199 | 295 | 733.78 | 294.93733 | .8699 | 294.92 | 734.22 | 294.92 |
| 734.6699 | 294.9 | 743.9 | 294.64750 | .7599 | 294.79 | 756.66 | 295 | 786.9 | 295 |
| 787.0499 | 294.98799 | .9999 | 294.8800 | .4899 | 294.83800 | .7999 | 294.84 | 803.7 | 294.99 |
| 803.79 | 295 | 822.72 | 294.99 | 823.15 | 295 | 823.52 | 295823 | .6099 | 294.99 |
| 824.0599 | 295840 | .1799 | 295850 | .1099 | 294.88 | 850.77 | 294.89 | 852.64 | 294.86 |
| 852.72 | 294.85 | 854.15 | 294.88856 | .4399 | 294.87 | 856.79 | 294.86 | 881.72 | 294.29 |
| 887.6099 | 294.28 | 901.1 | 294917 | .2399 | 294 | 918.21 | 293.91931 | .6799 | 293.43 |
| 931.96 | 293.43932 | .8099 | 293.48 | 933.64 | 293.48 | 934.27 | 293.52935 | .9899 | 293.53 |
| 939.47 | 293.72942 | .0099 | 293.96942 | .3799 | 294949 | .4199 | 295 | 955.29 | 295 |
| 956.9899 | 294.88 | 966.09 | 294982 | .6199 | 293.96982 | .9299 | 293.95 | 984.34 | 293.96 |
| 984.5499 | 293.97987 | .1899 | 293.97987 | .7599 | 293.96997 | .9899 | 293.93998 | .4399 | 293.92 |
| 1000.98 | 293.91 | 1011.42 | 293.07 | 1012.5 | 293 | 1012.64 | 293 | 1013.03 | 292.99 |
| 1013.57 | 292.99 | 1016.78 | 292.84 | 1040.08 | 292.49 | 1069.96 | 292.33 | 1075.06 | 292.27 |
| 1082.82 | 292.47 | 1084.88 | 292.62 | 1085.43 | 292.58 | 1088.48 | 292.79 | 1088.67 | 292.8 |
| 1089.43 | 292.78 | 1090.55 | 292.7 | 1090.7 | 292.72 | 1091.62 | 292.6 | 1092.23 | 292.61 |
| 1092.82 | 292.5 | 1093.31 | 292.48 | 1094.29 | 292.4 | 1094.38 | 292.39 | 1095.34 | 292 |
| 1116.58 | 291.99 | 1117.45 | 292 | 1148.76 | 292.02 | 1153.07 | 292.12 | 1154.74 | 292.13 |
| 1157.83 | 292.26 | 1161.8 | 292.33 | 1164.73 | 292.49 | 1166.49 | 292.54 | 1173.25 | 292.96 |
| 1173.75 | 293 | 1174.45 | 293.11 | 1180.82 | 294 | 1216.92 | 294 | 1226.63 | 294.35 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1230.4 | 294.39 | 1233.39 | 294.47 | 1239.6 | 294.45 | 1248.48 | 294.24 | 1253.37 | 294 |
| 1302.59 | 293.99 | 1302.86 | 293.98 | 1331.99 | 293.85 | 1360.34 | 293.97 | 1361.17 | 294 |
| 1379.18 | 294.94 | 1380.05 | 295 | 1380.43 | 295.08 | 1385.15 | 296 | 1385.26 | 296.04 |
| 1386.94 | 296.79 | 1387.61 | 297 | 1387.85 | 297.1 | 1389.76 | 298 | 1396.56 | 301 |
| 1398.7 | 302 | 1399.43 | 302.3 | 1400.81 | 303 | 1402.4 | 303.76 | 1402.86 | 304 |
| 1403.95 | 304.51 | 1404.95 | 305 | 1406.25 | 305.61 | 1407.01 | 306 | 1407.33 | 306.17 |
| 1409.17 | 307 | 1409.97 | 307.38 | 1411.38 | 308 | 1411.43 | 308.02 | 1414.68 | 309.16 |
| 1415.68 | 309.45 | 1417.89 | 310 | 1418.79 | 310.06 | 1418.92 | 310.06 | 1419.19 | 310.05 |
| 1420.42 | 310.12 | 1420.57 | 310.11 | 1428.07 | 309 | 1428.98 | 308.84 | 1429.1 | 308.83 |
| 1431.15 | 308.56 | 1434.24 | 308.36 | 1434.63 | 308.33 | 1448.16 | 307.87 | 1453.3 | 307.57 |
| 1456.5 | 307.27 | 1457.27 | 307.25 | 1458.03 | 307.18 | 1458.78 | 307.27 | 1462.72 | 307.99 |
| 1462.97 | 308 | 1466.62 | 309 | 1468.57 | 309.71 | 1469.55 | 310 | 1484.07 | 314.55 |
| 1485.74 | 315 | 1489.46 | 315.84 | 1490.02 | 316 | 1493.26 | 316.98 | 1493.33 | 317 |
| 1500.55 | 317.57 | 1503.06 | 317.65 | 1503.24 | 317.65 | 1507.22 | 317.31 | 1508.05 | 317.26 |
| 1511.41 | 317 | 1514.98 | 316.39 | 1517.06 | 316.08 | 1517.72 | 316 | 1522.59 | 315.28 |
| 1526.15 | 315 | 1530.44 | 314.8 | 1531.37 | 314.73 | 1532.69 | 314.67 | 1533.13 | 314.64 |
| 1535.48 | 314.54 | 1536.55 | 314.54 | 1538.39 | 314.73 | 1538.68 | 314.73 | 1539.35 | 314.78 |
| 1541.65 | 314.83 | 1541.97 | 314.83 | 1550.84 | 314.6 | 1552.95 | 314.94 | 1560.1 | 314.99 |
| 1560.54 | 315 | 1560.98 | 315.08 | 1561.67 | 315.15 | 1561.82 | 315.16 | 1562.1 | 315.2 |
| 1562.18 | 315.2 | 1562.55 | 315.31 | 1562.82 | 315.29 | 1563.02 | 315.29 | 1565.15 | 315.56 |
| 1567.72 | 315.94 | 1568.77 | 316 | 1572.13 | 316.48 | 1572.82 | 316.57 | 1575.65 | 316.98 |
| 1575.92 | 316.98 | 1576.1 | 316.99 | 1576.19 | 317 | 1581.36 | 318 | 1581.94 | 318.12 |
| 1585.57 | 319 | 1592.6 | 319.97 | 1592.86 | 320 | 1593.77 | 320 | 1593.96 | 320.01 |
| 1596.08 | 320.01 | 1596.33 | 320.02 | 1597.4 | 320.02 | 1610.5 | 320.83 | 1612.53 | 320.93 |
| 1613.42 | 320.93 | 1614.58 | 321 | 1652.9 | 321 | 1657.6 | 320.73 | 1658.12 | 320.69 |
| 1660.91 | 320.43 | 1661.61 | 320.38 | 1662.45 | 320.3 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 426.21 | .04 | 1380.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 426.21 | 1380.43 | 519.21 | 500 | 500.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 3600

INPUT
Description:
Station Elevation Data num= 486

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.8 | 923.91003 | 327.09 | 25.27002 | 327.04 | 26.70996 | 327 | 33.56006 | 326.63 |
| 43.34998 | 326.07 | 43.59998 | 326.06 | 45.18994 | 326 | 51.19995 | 326 | 51.39001 | 325.99 |
| 54.09998 | 325.99 | 54.55005 | 325.98 | 55.35999 | 325.98 | 63.89001 | 325.16 | 64.91003 | 325.06 |
| 64.98999 | 325.07 | 65.08997 | 325.06 | 65.58997 | 325.06 | 66.51001 | 325 | 67.96997 | 324.98 |
| 71.98999 | 324.94 | 73.93005 | 324.95 | 74.89001 | 324.94 | 76.68994 | 324.94 | 78.15002 | 324.68 |
| 80.12 | 324.93 | 80.18005 | 324.93 | 80.81006 | 325 | 83.34998 | 325 | 88.95996 | 325.01 |
| 92.40002 | 325.01 | 95.14001 | 325.02 | 98.76001 | 325.02 | 101.4399 | 325.01 | 103.26 | 325.02 |
| 105.1 | 325.01 | 107.9301 | 325.01 | 113.02 | 325 | 113.39 | 325 | 116.35 | 324.61 |
| 117.72 | 324.38 | 118.98 | 324.35 | 121.51 | 324.04 | 123.1899 | 324.04 | 123.72 | 324.03 |
| 124.76 | 324.02 | 125.5699 | 324 | 133.15 | 323.04 | 133.46 | 323 | 140.01 | 322 |
| 142.9301 | 321.69 | 144.4 | 321.53 | 146.4301 | 321.29 | 148.79 | 321 | 150.66 | 320.72 |
| 155.1899 | 320 | 160.85 | 319 | 166.84 | 318 | 172.34 | 317.07 | 172.76 | 317 |
| 173.9301 | 316.76 | 176.4 | 316.26 | 177.65 | 316 | 177.79 | 315.97 | 181.61 | 315 |
| 183.28 | 314.64 | 185.85 | 314 | 190.5699 | 313 | 192.3 | 312.59 | 195.23 | 312 |
| 198.24 | 311.3 | 199.5 | 311 | 202.64 | 310.3 | 203.87 | 310 | 205.8199 | 309.54 |
| 206.91 | 309.34 | 208.55 | 309.01 | 208.61 | 309 | 209.53 | 308.72 | 210.21 | 308.5 |
| 211.97 | 308 | 212.96 | 307.9 | 213.35 | 307.78 | 214.9301 | 307.38 | 215.37 | 307.36 |
| 215.86 | 307.31 | 216.55 | 307.25 | 216.87 | 307.24 | 217.63 | 307.17 | 219.1801 | 307 |
| 224.23 | 306.49 | 227.03 | 306.23 | 228.89 | 306 | 229.3101 | 305.96 | 229.37 | 305.95 |
| 229.66 | 305.9 | 233.27 | 305.35 | 234.98 | 305 | 236.9301 | 304.63 | 240 | 304 |
| 242.55 | 303.56 | 245.51 | 303 | 248.6 | 302.44 | 250.8 | 302 | 251.64 | 301.83 |
| 255.96 | 301 | 257.63 | 300.61 | 260.4 | 300 | 263.41 | 299.29 | 264.79 | 299 |
| 266.02 | 298.76 | 270.2 | 298 | 272.29 | 297.61 | 275.76 | 297 | 278.6801 | 296.5 |
| 281.45 | 296 | 284.45 | 295.48 | 287.1 | 295 | 290.85 | 294.33 | 292.66 | 294 |
| 295.23 | 293.55 | 298.55 | 293 | 303.5601 | 292.19 | 304.86 | 292 | 305.9399 | 291.86 |
| 312.1899 | 291 | 313.41 | 290.84 | 320.3199 | 290 | 324.8 | 289.41 | 328.28 | 289 |
| 333.0699 | 288.45 | 336.8199 | 288 | 369.26 | 287.16 | 373.4301 | 287.06 | 375.64 | 287 |
| 381.98 | 286.94 | 382.25 | 286.94 | 386.27 | 286.97 | 388.77 | 287 | 392.42 | 287.02 |
| 393.46 | 287.03 | 395.58 | 287.04 | 396.64 | 287.04 | 398.9 | 287.02 | 401.7 | 287.01 |
| 402.05 | 287 | 402.71 | 287 | 409.66 | 286.99 | 410.29 | 286.99 | 417.27 | 287 |
| 419.3101 | 287 | 420.52 | 287.01 | 429.3199 | 287.01 | 432.39 | 287.16 | 433.55 | 287.2 |
| 438.54 | 287.3 | 442.87 | 287.3 | 443.54 | 287.29 | 444.01 | 287.29 | 444.14 | 287.28 |
| 444.35 | 287.3 | 447.76 | 287.46 | 455.1 | 287.96 | 457.77 | 288 | 508.5 | 288 |
| 509.71 | 287.99 | 511.61 | 288 | 523.33 | 288 | 529.25 | 287.78 | 540.1 | 287.71 |
| 549.57 | 287.68 | 556.24 | 288 | 556.33 | 287.99 | 561.38 | 287.49 | 564.48 | 287.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 567.08 | 287 | 567.25 | 287 | 572.03 | 287.11 | 574.54 | 287.24 | 580.46 | 287.35 |
| 584.24 | 287.24 | 584.86 | 287.23 | 585.88 | 287.2 | 586.96 | 287.19 | 587.25 | 287.18 |
| 587.46 | 287.18 | 587.88 | 287.16 | 590.16 | 287.2 | 594.84 | 287.33 | 595.3 | 287.35 |
| 598 | 287.48 | 598.98 | 287.52 | 600.38 | 287.58 | 603.45 | 287.73 | 607.29 | 287.87 |
| 607.5 | 287.88 | 607.58 | 287.88 | 609.83 | 287.95 | 610.85 | 287.99 | 612.66 | 288 |
| 626.54 | 288 | 627.45 | 287.98 | 627.92 | 287.97 | 628.74 | 287.96 | 629.62 | 287.94 |
| 631.07 | 287.91 | 631.75 | 287.89 | 658.81 | 287.39 | 659.48 | 287.39 | 665.26 | 287.32 |
| 665.77 | 287.31 | 667.32 | 287.29 | 668.26 | 287.28 | 669.63 | 287.25 | 670.78 | 287.24 |
| 670.85 | 287.23 | 679.36 | 287.18 | 680.95 | 287.16 | 685.26 | 287.15 | 689.63 | 287.16 |
| 692.58 | 287.16 | 706.26 | 287.04 | 708.45 | 287.01 | 708.88 | 287 | 712.66 | 287 |
| 713.79 | 286.99 | 714.05 | 286.99 | 718.82 | 286.98 | 723.06 | 286.99 | 724.37 | 287 |
| 726.24 | 287 | 726.89 | 287.09 | 727.16 | 287.1 | 727.38 | 287.1 | 728.23 | 287.13 |
| 748.71 | 288 | 752.15 | 288 | 768.82 | 287.99 | 773.28 | 288 | 787.36 | 288 |
| 787.89 | 287.99 | 790.83 | 287.95 | 800.37 | 287.88 | 804.13 | 287.99 | 805.79 | 287.99 |
| 814.98 | 287.58 | 819.02 | 287.5 | 825.67 | 287.25 | 826.55 | 287.23 | 832.31 | 287 |
| 838.85 | 286.95 | 845.31 | 287 | 849.98 | 287.05 | 850.81 | 287.06 | 853.95 | 287.09 |
| 855.3 | 287.08 | 856 | 287.07 | 858.2 | 287.05 | 861.44 | 287.03 | 863.72 | 287 |
| 868.31 | 287 | 876.84 | 287.71 | 880.85 | 287.99 | 881.22 | 287.99 | 881.34 | 288 |
| 886.16 | 288.26 | 887.38 | 288.31 | 892.56 | 288.89 | 892.66 | 288.89 | 893.76 | 288.9 |
| 893.85 | 288.91 | 894.62 | 288.91 | 897.44 | 288.93 | 898.21 | 288.93 | 899.3 | 288.94 |
| 900.05 | 288.95 | 900.67 | 288.95 | 902.43 | 288.97 | 905.68 | 288.98 | 906.4 | 288.95 |
| 907.73 | 288.91 | 911.03 | 288.91 | 911.18 | 288.92 | 911.55 | 288.92 | 912.06 | 288.91 |
| 912.38 | 288.91 | 912.77 | 288.9 | 912.96 | 288.89 | 913.17 | 288.88 | 919.36 | 288.81 |
| 920.13 | 288.76 | 921.57 | 288.64 | 923.08 | 288.46 | 923.53 | 288.41 | 924.07 | 288.34 |
| 924.43 | 288.3 | 925.51 | 288.23 | 927.19 | 288 | 929.19 | 287.85 | 929.51 | 287.83 |
| 930.02 | 287.8 | 930.49 | 287.77 | 931.78 | 287.71 | 932.02 | 287.7 | 933.21 | 287.64 |
| 943.35 | 287.04 | 943.83 | 287.01 | 944.54 | 287.01 | 945.32 | 287 | 946.82 | 286.72 |
| 949.01 | 286.2 | 949.85 | 286 | 950.86 | 286 | 954.85 | 285.87 | 959.74 | 285.73 |
| 960.69 | 285.71 | 962.37 | 285.7 | 968.82 | 285.53 | 985.04 | 285.55 | 1004.24 | 285.63 |
| 1005.75 | 285.64 | 1007.79 | 285.69 | 1019.1 | 285.91 | 1019.86 | 285.92 | 1021.98 | 285.99 |
| 1022.7 | 285.99 | 1023.12 | 286 | 1023.76 | 286 | 1024.26 | 286.01 | 1027.3 | 286.1 |
| 1028.16 | 286.12 | 1030.31 | 286.19 | 1046.79 | 286.78 | 1052.39 | 287 | 1052.75 | 287 |
| 1055.31 | 287.01 | 1057.73 | 287.03 | 1058.35 | 287.02 | 1062.4 | 287 | 1062.5 | 287 |
| 1063.44 | 286.99 | 1064.41 | 286.99 | 1074.77 | 286.94 | 1077.91 | 286.93 | 1080.99 | 286.93 |
| 1091.67 | 286.98 | 1092.27 | 286.98 | 1095.56 | 286.99 | 1096.46 | 287 | 1096.96 | 287.05 |
| 1105.64 | 288 | 1108.43 | 288 | 1112.57 | 288.01 | 1117.13 | 288.01 | 1121.38 | 288.02 |
| 1125.74 | 288.01 | 1127.8 | 288.01 | 1132.75 | 288 | 1153.43 | 288 | 1156.52 | 288.01 |
| 1168.81 | 288.13 | 1181.39 | 288.22 | 1184.56 | 288.2 | 1184.64 | 288.2 | 1192.94 | 288.33 |
| 1193.64 | 288.36 | 1194.31 | 288.38 | 1195.72 | 288.39 | 1197.24 | 288.44 | 1201.28 | 288.66 |
| 1207.15 | 289 | 1208.66 | 289 | 1210.94 | 289.08 | 1212.39 | 289.12 | 1213.72 | 289.16 |
| 1220.7 | 289.03 | 1222.81 | 289.04 | 1223.95 | 289.04 | 1235.28 | 289 | 1235.9 | 288.99 |
| 1236.51 | 288.99 | 1237.71 | 288.98 | 1238.4 | 288.98 | 1239.24 | 288.97 | 1240.24 | 288.97 |
| 1246.08 | 288.93 | 1247.48 | 288.93 | 1252.45 | 288.92 | 1257.16 | 288.92 | 1258.05 | 288.93 |
| 1270.63 | 288.95 | 1274.11 | 288.98 | 1274.35 | 288.98 | 1275.26 | 289 | 1279.98 | 289.35 |
| 1286.23 | 289.71 | 1288.54 | 289.85 | 1290.1 | 289.94 | 1290.91 | 290 | 1292.48 | 290.18 |
| 1293.7 | 290.29 | 1294.85 | 290.39 | 1297.2 | 290.6 | 1301.57 | 291 | 1301.93 | 291.06 |
| 1302.35 | 291.15 | 1305.98 | 292 | 1308.36 | 292.51 | 1310.74 | 293 | 1313.53 | 293.04 |
| 1321.61 | 293.12 | 1323.8 | 293.12 | 1326.6 | 293.14 | 1326.69 | 293.14 | 1326.91 | 293.16 |
| 1333.1 | 293.55 | 1337 | 293.62 | 1338.72 | 293.64 | 1342.78 | 293.72 | 1348.11 | 293.84 |
| 1348.26 | 293.85 | 1353.83 | 294 | 1357.98 | 294.13 | 1361.57 | 294.22 | 1361.74 | 294.23 |
| 1361.92 | 294.23 | 1369.05 | 294.39 | 1371.69 | 294.44 | 1372.72 | 294.45 | 1375.87 | 294.54 |
| 1378.01 | 294.56 | 1378.25 | 294.56 | 1389.59 | 294.85 | 1390.93 | 294.88 | 1391.17 | 294.88 |
| 1391.66 | 294.89 | 1395.08 | 294.97 | 1395.61 | 295 | 1401.09 | 295 | 1402.34 | 295.01 |
| 1403.81 | 295.06 | 1409.95 | 295.39 | 1412.87 | 295.56 | 1415.25 | 295.72 | 1419.41 | 295.99 |
| 1419.6 | 296 | 1419.95 | 296 | 1425.95 | 296.27 | 1430.57 | 296.46 | 1440.86 | 296.92 |
| 1442.1 | 296.97 | 1442.75 | 297 | 1449.27 | 297.32 | 1450.51 | 297.39 | 1457.56 | 297.74 |
| 1460.55 | 297.9 | 1461.62 | 297.95 | 1462.57 | 298 | 1463.46 | 298.02 | 1463.74 | 298.02 |
| 1467.84 | 298.33 | 1476.96 | 298.81 | 1477.83 | 298.87 | 1480.37 | 299 | 1483.55 | 299.15 |
| 1484.96 | 299.2 | 1485.4 | 299.22 | 1501.26 | 300 | 1503.48 | 300.15 | 1503.86 | 300.18 |
| 1506.53 | 300.35 | 1508.53 | 300.45 | 1515.32 | 300.92 | 1516.13 | 300.98 | 1516.83 | 300.98 |
| 1517.86 | 300.99 | 1518.63 | 300.99 | 1519.12 | 301 | 1522.81 | 301.28 | 1529.92 | 302 |
| 1536.33 | 302.49 | 1539.37 | 302.67 | 1540.67 | 302.73 | 1541.43 | 302.76 | 1543.52 | 302.85 |
| 1544.25 | 302.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 336.8199 | .04 | 1105.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 336.8199 | 1105.64 | 547.87 | 500 | 500 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 3100

INPUT
Description:

Station Elevation Data num= 419

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.36 | 1.049927 | 323.36 | 2.75 | 323.32 | 3.339966 | 323.31 | 7.73999 | 323.23 |
| 13.63 | 323.03 | 16.30994 | 323.01 | 18.55994 | 323.01 | 19.16003 | 323 | 22.17004 | 322.72 |
| 23.70996 | 322.56 | 25.42993 | 322.35 | 30.27002 | 322 | 35.40002 | 321.37 | 37.97998 | 321 |
| 38.43994 | 320.96 | 47.91003 | 320.08 | 48.35999 | 320 | 48.69995 | 320 | 50.04004 | 319.98 |
| 50.85999 | 319.98 | 52.04993 | 319.97 | 53.14001 | 319.97 | 53.40002 | 319.96 | 53.54993 | 319.96 |
| 57.09998 | 319.38 | 58.07996 | 319.32 | 58.75 | 319.29 | 59.34998 | 319.22 | 60.15002 | 319.2 |
| 60.38 | 319.26 | 1.48999 | 319.23 | 67.79993 | 319.19 | 67.84998 | 319.19 | 67.93994 | 319.18 |
| 70.17004 | 319.11 | 70.89001 | 319.06 | 71.47998 | 319 | 72.65002 | 318.78 | 73.25 | 318.64 |
| 74.33997 | 318.47 | 5.02002 | 318.22 | 76.03003 | 318 | 78.10999 | 317.62 | 79.16003 | 317.45 |
| 82.29993 | 317 | 83.19995 | 316.98 | 83.32996 | 316.98 | 84.30994 | 316.78 | 85.23999 | 316.62 |
| 86.54993 | 316.46 | 87.17993 | 316.41 | 88.31995 | 316.28 | 89.53003 | 316.18 | 91.21997 | 316 |
| 91.84998 | 315.94 | 91.93994 | 315.93 | 92.28003 | 315.87 | 93.91003 | 315.64 | 97.17004 | 315.1 |
| 97.54004 | 315.04 | 97.84998 | 315 | 99.04004 | 314.87 | 99.09998 | 314.86 | 100.91 | 314.82 |
| 101 | 314.82 | 102.14 | 314.89 | 102.2 | 314.91 | 03.6899 | 315 | 107.76 | 315.33 |
| 115.25 | 316 | 115.85 | 316.05 | 116.58 | 316.1 | 116.65 | 316.11 | 116.87 | 316.12 |
| 121.84 | 316.62 | 122.26 | 316.6 | 127.35 | 316.14 | 128.23 | 316.15 | 130.5599 | 316.11 |
| 130.71 | 316.11 | 133.72 | 316.02 | 134.14 | 316.01 | 134.46 | 316.01 | 134.52 | 316 |
| 134.64 | 316 | 134.8199 | 315.96 | 138.83 | 315 | 141.49 | 314.09 | 141.73 | 314 |
| 141.85 | 313.95 | 142.5499 | 313.67 | 144.0599 | 313.06 | 144.2 | 313 | 145.85 | 312.32 |
| 146.62 | 312 | 149.13 | 311.19 | 149.64 | 311 | 150.41 | 310.78 | 152.96 | 310 |
| 153.1799 | 309.94 | 156.27 | 309 | 157.13 | 308.71 | 158.8099 | 308 | 160.61 | 307.19 |
| 161.04 | 307 | 161.42 | 306.83 | 163.2 | 306 | 163.54 | 305.84 | 165.35 | 305 |
| 165.67 | 304.86 | 168.0499 | 303.69 | 170.64 | 302.49 | 171.5599 | 302 | 172.22 | 301.65 |
| 173.49 | 301 | 174.0699 | 300.63 | 175.1799 | 300 | 176.4 | 299.38 | 177.1 | 299 |
| 178.28 | 298.33 | 178.95 | 298 | 179.65 | 297.63 | 180.76 | 297 | 181.6 | 296.55 |
| 183.79 | 295.32 | 184.4 | 295 | 186.11 | 294.06 | 186.22 | 294 | 186.3099 | 293.95 |
| 188.41 | 293 | 188.9399 | 292.78 | 190.59 | 292 | 194.7 | 290.13 | 194.96 | 290 |
| 196.1 | 289.46 | 196.17 | 289.44 | 196.6 | 289.28 | 197.15 | 289.12 | 197.88 | 289 |
| 202.7999 | 288.21 | 205.75 | 287.72 | 210.04 | 287 | 210.59 | 286.91 | 213.17 | 286.45 |
| 213.88 | 286.31 | 214.65 | 286.15 | 215.41 | 286 | 216.92 | 285.69 | 217.65 | 285.56 |
| 220.2 | 285 | 222.25 | 284.59 | 225.27 | 284.24 | 227.27 | 284 | 227.75 | 283.92 |
| 230.65 | 283.32 | 232.48 | 283 | 237.27 | 282.37 | 239.5699 | 282.13 | 239.73 | 282.11 |
| 240.65 | 282 | 248.5699 | 281.23 | 250.9 | 281 | 252.1 | 281 | 253.1 | 280.99 |
| 257.96 | 280.99 | 258.28 | 280.98 | 279.79 | 280.96 | 299.55 | 281 | 313.05 | 281 |
| 313.69 | 280.97 | 327.62 | 280.2 | 331.01 | 280 | 344.32 | 280 | 347.69 | 280.01 |
| 355.23 | 280.1 | 365.22 | 280.19 | 370.62 | 280 | 374.18 | 280 | 377.14 | 280.38 |
| 381.37 | 281 | 395.66 | 281 | 399.69 | 280.81 | 400.79 | 280.78 | 402.03 | 280.74 |
| 411.82 | 280.39 | 415.48 | 280.28 | 416.04 | 280.26 | 416.62 | 280.25 | 418.13 | 280.25 |
| 418.51 | 280.24 | 419.18 | 280.24 | 419.4 | 280.23 | 422.14 | 280.24 | 425.23 | 280.26 |
| 432.84 | 280.51 | 445.56 | 280.97 | 449.78 | 281 | 450.62 | 281 | 453.2 | 281.13 |
| 459.08 | 281.35 | 471.15 | 281.85 | 471.7 | 281.88 | 474.98 | 282 | 536.48 | 282 |
| 540.36 | 281.99 | 546.67 | 281.99 | 551.5 | 282 | 558.38 | 282 | 560.26 | 282.02 |
| 560.89 | 282.02 | 562.34 | 282.01 | 563.48 | 282 | 565.99 | 281.11 | 566.31 | 281 |
| 567.63 | 280.82 | 567.73 | 280.81 | 568.02 | 280.78 | 568.24 | 280.77 | 568.75 | 280.76 |
| 574.36 | 280.22 | 575.24 | 280.23 | 577.03 | 280.28 | 578.58 | 280.19 | 579.77 | 280.22 |
| 583.76 | 280.19 | 586.97 | 280.18 | 598.42 | 280.34 | 599.46 | 280.36 | 602.92 | 280.42 |
| 605.52 | 280.46 | 606.58 | 280.48 | 607.55 | 280.49 | 612.67 | 280.57 | 616.48 | 280.62 |
| 617.38 | 280.64 | 630.22 | 280.66 | 631.75 | 280.68 | 632.93 | 280.66 | 636.23 | 280.59 |
| 636.99 | 280.6 | 637.88 | 280.58 | 638.86 | 280.56 | 639.59 | 280.55 | 640.93 | 280.54 |
| 641.46 | 280.53 | 641.9 | 280.52 | 643.49 | 280.51 | 650.51 | 280.44 | 660.53 | 280.3 |
| 661.36 | 280.28 | 664.12 | 280.24 | 664.36 | 280.23 | 676.44 | 280.01 | 684.05 | 280.01 |
| 687.23 | 280 | 707.83 | 280 | 709.2 | 280.55 | 710.46 | 281 | 715.41 | 281.29 |
| 717.54 | 281.4 | 718.93 | 281.43 | 720.02 | 281.49 | 725.94 | 281.62 | 729.72 | 281.67 |
| 732.78 | 281.41 | 732.89 | 281.4 | 733.54 | 281.41 | 733.7 | 281.39 | 733.83 | 281.39 |
| 738.84 | 281.1 | 740.2 | 281.04 | 741.7 | 281 | 755.19 | 281.06 | 767.41 | 281.09 |
| 767.55 | 281.09 | 769.85 | 281.1 | 773.54 | 281.15 | 773.71 | 281.16 | 774.16 | 281.18 |
| 775.44 | 281.18 | 775.77 | 281.19 | 779.73 | 281.24 | 780.8 | 281.29 | 781.17 | 281.31 |
| 783.02 | 281.36 | 792.26 | 282 | 799.67 | 282.87 | 801.14 | 282.95 | 802.35 | 283 |
| 805.6899 | 283 | 807.91 | 282.99 | 815.39 | 282.62 | 819.03 | 282.47 | 822.37 | 282.3 |
| 824.22 | 282.21 | 828.24 | 282 | 830.52 | 281.97 | 831.53 | 281.96 | 836.6 | 281.92 |
| 840.62 | 281.95 | 841.9399 | 281.95 | 842.8199 | 281.96 | 844.2 | 281.96 | 846.28 | 281.86 |
| 847.15 | 281.85 | 847.26 | 281.85 | 866 | 281.77 | 878.7 | 281.92 | 886.23 | 281.99 |
| 887.59 | 282 | 887.86 | 282 | 888.2 | 282.01 | 888.81 | 282.02 | 893.7 | 282.32 |
| 897.72 | 282.53 | 901.33 | 282.6 | 902.14 | 282.62 | 905.9399 | 282.94 | 906.35 | 282.94 |
| 907.13 | 282.95 | 909.34 | 282.95 | 910.04 | 282.96 | 912.05 | 282.96 | 912.34 | 282.97 |
| 915.55 | 282.96 | 918.37 | 282.96 | 923.17 | 282.9 | 930.4399 | 282.71 | 931.35 | 282.73 |
| 931.79 | 282.71 | 932.3199 | 282.68 | 933.83 | 282.7 | 934.46 | 282.69 | 938.5699 | 282.45 |
| 939.3199 | 282.43 | 940.1 | 282.4 | 942.96 | 282.25 | 943.1899 | 282.24 | 943.5699 | 282.25 |
| 945.97 | 282.18 | 947.39 | 282.15 | 948.79 | 282.18 | 948.88 | 282.18 | 949.35 | 282.2 |
| 949.49 | 282.2 | 965.56 | 282.62 | 988.49 | 282.62 | 989.24 | 282.63 | 990.72 | 282.64 |
| 992.64 | 282.66 | 1001.87 | 282.64 | 1016.84 | 282.45 | 1021.76 | 282.32 | 1022.39 | 282.31 |
| 1022.71 | 282.3 | 1029.52 | 282.14 | 1034.55 | 282.01 | 1035.35 | 282 | 1041.18 | 282 |
| 1074.16 | 281.74 | 1076.1 | 281.75 | 1081.83 | 281.75 | 1082.51 | 281.76 | 1089.88 | 281.75 |
| 1090.6 | 281.76 | 1092.74 | 281.77 | 1093.41 | 281.77 | 1094.07 | 281.78 | 1114.3 | 281.96 |
| 1117.25 | 281.99 | 1121.14 | 281.99 | 1125.46 | 282 | 1132.83 | 282 | 1133.28 | 282.01 |
| 1133.99 | 282.01 | 1156.39 | 282.7 | 1157.21 | 282.72 | 1166.87 | 283 | 1176.96 | 283.61 |
| 1178.2 | 283.64 | 1182.56 | 283.74 | 1184.15 | 283.77 | 1185.06 | 283.81 | 1187.13 | 283.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1188.09 | 283.91 | 1194.86 | 283.96 | 1196.9 | 284 | 1200.53 | 284 | 1201.89 | 283.99 |
| 1205.51 | 283.99 | 1208.87 | 284 | 1216.97 | 284.33 | 1227.64 | 284.74 | 1230.38 | 284.83 |
| 1230.47 | 284.83 | 1230.65 | 284.84 | 1230.84 | 284.84 | 1232.12 | 284.87 | 1237.27 | 285 |
| 1245.2 | 285.29 | 1245.65 | 285.31 | 1247.01 | 285.34 | 1248.72 | 285.39 | 1251.74 | 285.55 |
| 1252.8 | 285.6 | 1257.07 | 285.79 | 1263.22 | 286 | 1269.96 | 286.2 | 1272.8 | 286.28 |
| 1273.77 | 286.3 | 1274.44 | 286.31 | 1275.7 | 286.36 | 1277.73 | 286.4 | 1277.9 | 286.4 |
| 1282.3 | 286.53 | 1285.95 | 286.6 | 1292.29 | 286.79 | 1295.36 | 286.89 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 240.65 | .04 | 783.02 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 240.65 | 783.02 | 103.92 | 100 | 114.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 3000.*

INPUT
Description:
Station Elevation Data num= 463

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.89 | 1.01 | 322.89 | 13.09 | 322.62 | 17.83 | 322.59 | 18.4 | 322.58 |
| 21.29 | 322.34 | 24.43 | 322.03 | 29.07 | 321.73 | 34 | 321.2 | 36.48 | 320.89 |
| 36.92 | 320.86 | 46.02 | 320.12 | 46.45 | 320.05 | 46.78 | 320.05 | 48.06 | 320.03 |
| 51.04 | 320.01 | 51.29 | 320 | 51.44 | 320 | 54.85 | 319.53 | 55.79 | 319.47 |
| 56.43 | 319.45 | 57.01 | 319.39 | 57.78 | 319.37 | 58 | 319.37 | 59.06 | 319.39 |
| 65.12 | 319.35 | 65.26 | 319.34 | 67.4 | 319.29 | 68.09 | 319.25 | 68.66 | 319.2 |
| 69.78 | 319.02 | 71.4 | 318.72 | 72.06 | 318.58 | 73.03 | 318.4 | 76.03 | 317.96 |
| 79.05 | 317.58 | 79.91 | 317.55 | 80.04 | 317.55 | 80.98 | 317.38 | 81.87 | 317.25 |
| 83.13 | 317.1 | 83.74 | 317.06 | 84.83 | 316.94 | 85.03 | 316.93 | 85.89 | 316.87 |
| 85.99 | 316.87 | 86.19 | 316.85 | 87.29 | 316.72 | 87.62 | 316.69 | 88.22 | 316.61 |
| 88.31 | 316.6 | 88.64 | 316.54 | 88.83 | 316.51 | 88.93 | 316.49 | 89.42 | 316.4 |
| 89.68 | 316.36 | 90.2 | 316.26 | 93.33 | 315.62 | 93.69 | 315.55 | 94.86 | 315.36 |
| 95.13 | 315.32 | 95.19 | 315.31 | 95.52 | 315.28 | 95.78 | 315.26 | 96.93 | 315.16 |
| 97.01 | 315.16 | 98.11 | 315.14 | 98.46 | 315.14 | 99.6 | 315.11 | 99.97 | 315.11 |
| 103.46 | 315.06 | 103.99 | 315.06 | 107.45 | 315.04 | 108.33 | 315.02 | 108.67 | 315.02 |
| 110.7 | 315 | 111.28 | 315 | 111.98 | 314.98 | 112.04 | 314.98 | 112.26 | 314.97 |
| 117.03 | 314.95 | 117.43 | 314.9 | 117.61 | 314.87 | 121.98 | 314.19 | 122.32 | 314.13 |
| 122.58 | 314.11 | 123.09 | 314.08 | 123.17 | 314.07 | 125.4 | 313.85 | 125.55 | 313.84 |
| 126.94 | 313.69 | 127.31 | 313.64 | 128.71 | 313.49 | 128.84 | 313.47 | 129.15 | 313.45 |
| 129.21 | 313.43 | 129.32 | 313.42 | 129.5 | 313.38 | 129.61 | 313.34 | 130.12 | 313.2 |
| 133.35 | 312.28 | 133.71 | 312.15 | 135.81 | 311.36 | 135.9 | 311.33 | 136.13 | 311.23 |
| 136.25 | 311.18 | 136.45 | 311.09 | 136.92 | 310.89 | 137.08 | 310.83 | 138.51 | 310.21 |
| 138.66 | 310.15 | 139.67 | 309.72 | 140.09 | 309.53 | 140.83 | 309.21 | 140.89 | 309.19 |
| 143.11 | 308.39 | 143.24 | 308.34 | 143.73 | 308.14 | 144.15 | 308.01 | 146.88 | 307.07 |
| 147.13 | 306.99 | 150.1 | 305.98 | 150.93 | 305.68 | 152.54 | 304.96 | 154.27 | 304.16 |
| 154.35 | 304.12 | 155.05 | 303.8 | 156.59 | 303.07 | 156.76 | 302.98 | 157.08 | 302.83 |
| 158.65 | 302.07 | 158.82 | 301.99 | 159.13 | 301.85 | 160.98 | 300.93 | 161.41 | 300.72 |
| 163.53 | 299.74 | 163.9 | 299.56 | 164.79 | 299.1 | 164.95 | 299.02 | 165.42 | 298.77 |
| 166.64 | 298.16 | 167.2 | 297.82 | 167.51 | 297.64 | 168.26 | 297.23 | 168.59 | 297.06 |
| 169.43 | 296.64 | 170.11 | 296.28 | 170.59 | 296.02 | 171.16 | 295.7 | 171.24 | 295.66 |
| 171.84 | 295.38 | 172.56 | 295.02 | 173.62 | 294.45 | 174.41 | 294.05 | 176.53 | 292.92 |
| 176.92 | 292.73 | 178.76 | 291.8 | 178.87 | 291.74 | 178.95 | 291.7 | 179.08 | 291.65 |
| 180.97 | 290.83 | 181.42 | 290.64 | 181.48 | 290.62 | 184.29 | 289.42 | 185.3 | 289.01 |
| 187.01 | 288.29 | 187.26 | 288.18 | 188.36 | 287.71 | 188.84 | 287.55 | 189.37 | 287.4 |
| 197.63 | 285.98 | 197.7 | 285.97 | 205.25 | 284.64 | 205.44 | 284.61 | 206.17 | 284.46 |
| 206.9 | 284.33 | 208.16 | 284.09 | 208.35 | 284.06 | 209.06 | 283.94 | 211.51 | 283.46 |
| 213.47 | 283.11 | 216.38 | 282.79 | 216.5 | 282.78 | 218.3 | 282.58 | 218.76 | 282.51 |
| 221.54 | 282 | 223.3 | 281.72 | 227.9 | 281.15 | 230.11 | 280.92 | 230.26 | 280.9 |
| 231.15 | 280.8 | 235.42 | 280.47 | 235.75 | 280.44 | 241.43 | 280.24 | 253.87 | 280 |
| 255.54 | 280 | 260.81 | 279.84 | 261.73 | 279.81 | 261.93 | 279.81 | 262.14 | 279.8 |
| 262.48 | 279.79 | 263.1 | 279.79 | 269.63 | 279.88 | 270.34 | 279.88 | 276.82 | 279.96 |
| 277.42 | 279.96 | 277.63 | 279.97 | 281.31 | 279.98 | 282.48 | 279.93 | 282.81 | 279.93 |
| 284.25 | 279.87 | 284.83 | 279.88 | 285.59 | 279.85 | 307.36 | 279.97 | 341.38 | 279.93 |
| 343.18 | 279.9 | 343.33 | 279.9 | 346.13 | 279.79 | 380.23 | 279.8 | 380.87 | 279.95 |
| 381.15 | 279.98 | 381.29 | 279.97 | 381.92 | 279.99 | 386.9 | 279.99 | 387.46 | 280 |
| 389.08 | 280 | 389.38 | 279.98 | 389.63 | 279.97 | 390.72 | 279.97 | 391.53 | 279.93 |
| 392.1 | 279.89 | 393.21 | 279.78 | 393.52 | 279.77 | 393.97 | 279.77 | 394.46 | 279.75 |
| 405.3 | 279.56 | 405.48 | 279.56 | 409.41 | 279.53 | 409.56 | 279.53 | 410.65 | 279.52 |
| 410.95 | 279.52 | 411.38 | 279.51 | 411.55 | 279.51 | 418.2 | 279.31 | 418.3 | 279.31 |
| 418.59 | 279.3 | 419.36 | 279.26 | 419.46 | 279.26 | 419.92 | 279.25 | 420.19 | 279.25 |
| 422.64 | 279.2 | 424.49 | 279.13 | 424.67 | 279.12 | 432.02 | 278.93 | 445.37 | 278.94 |
| 459.39 | 279.08 | 463.71 | 278.93 | 466.56 | 278.93 | 468.93 | 279.23 | 472.31 | 279.73 |
| 483.74 | 279.73 | 486.97 | 279.58 | 499.6 | 279.15 | 500.51 | 279.13 | 501.72 | 279.13 |
| 502.02 | 279.12 | 502.56 | 279.12 | 502.73 | 279.11 | 507.4 | 279.14 | 523.66 | 279.71 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 527.71 | 279.73 | 529.77 | 279.83 | 547.2 | 280.53 | 613.92 | 280.53 | 615.42 | 280.55 |
| 615.93 | 280.55 | 618 | 280.53 | 620.26 | 279.73 | 621.63 | 279.55 | 621.81 | 279.55 |
| 622.21 | 279.54 | 626.7 | 279.11 | 627.41 | 279.11 | 628.84 | 279.15 | 630.08 | 279.08 |
| 631.03 | 279.11 | 636.79 | 279.07 | 661.12 | 279.44 | 672.61 | 279.47 | 673.56 | 279.46 |
| 676.2 | 279.4 | 676.81 | 279.41 | 677.52 | 279.39 | 679.96 | 279.36 | 680.38 | 279.35 |
| 680.73 | 279.35 | 695.64 | 279.17 | 696.3 | 279.15 | 698.51 | 279.12 | 698.7 | 279.11 |
| 708.37 | 278.94 | 733.48 | 278.93 | 734.65 | 279.36 | 735.55 | 279.66 | 735.77 | 279.74 |
| 735.84 | 279.74 | 741.96 | 280.07 | 743.17 | 280.1 | 744.12 | 280.15 | 752.6 | 280.31 |
| 755.27 | 280.11 | 755.36 | 280.1 | 755.93 | 280.11 | 756.07 | 280.1 | 756.18 | 280.1 |
| 761.75 | 279.83 | 763.06 | 279.8 | 764.61 | 279.81 | 785.51 | 280.17 | 785.66 | 280.17 |
| 790.86 | 280.34 | 791.01 | 280.36 | 791.41 | 280.38 | 796.27 | 280.54 | 797.53 | 280.62 |
| 799.14 | 280.69 | 799.76 | 280.72 | 805.2 | 280.82 | 807.09 | 280.88 | 808.61 | 280.95 |
| 816.19 | 281.6 | 818.94 | 281.69 | 824.63 | 281.64 | 845.45 | 280.8 | 846.09 | 280.79 |
| 846.68 | 280.79 | 846.85 | 280.78 | 854.01 | 280.64 | 854.6 | 280.64 | 861.16 | 280.58 |
| 861.79 | 280.58 | 862.44 | 280.54 | 863.92 | 280.49 | 864.82 | 280.48 | 881.62 | 280.43 |
| 882.43 | 280.42 | 888.96 | 280.58 | 889.34 | 280.58 | 890.16 | 280.6 | 890.72 | 280.6 |
| 890.98 | 280.61 | 904.14 | 280.73 | 906.5 | 280.73 | 906.85 | 280.74 | 907.48 | 280.74 |
| 910.63 | 280.88 | 910.79 | 280.89 | 916.6 | 281.06 | 918.92 | 281.06 | 920.3 | 281.08 |
| 920.65 | 281.08 | 921.13 | 281.09 | 925.02 | 281.34 | 942.66 | 281.22 | 943.08 | 281.21 |
| 943.35 | 281.2 | 950.02 | 281.05 | 950.11 | 281.05 | 950.43 | 281.06 | 951.04 | 281.07 |
| 951.33 | 281.06 | 951.49 | 281.05 | 952.03 | 281.03 | 953.58 | 281.04 | 954.22 | 281.03 |
| 958.43 | 280.83 | 959.2 | 280.82 | 962.93 | 280.66 | 963.55 | 280.66 | 967.47 | 280.58 |
| 968.9 | 280.6 | 968.99 | 280.6 | 969.47 | 280.61 | 969.62 | 280.61 | 983.66 | 280.85 |
| 983.73 | 280.85 | 986.07 | 280.91 | 986.79 | 280.92 | 1009.55 | 280.9 | 1010.32 | 280.91 |
| 1023.47 | 280.91 | 1044.27 | 280.63 | 1044.6 | 280.62 | 1052.46 | 280.48 | 1053.51 | 280.45 |
| 1054.38 | 280.44 | 1055.85 | 280.4 | 1056.12 | 280.4 | 1056.72 | 280.38 | 1069.01 | 280.29 |
| 1069.53 | 280.28 | 1083.26 | 280.14 | 1083.43 | 280.14 | 1097.83 | 280.05 | 1101.81 | 280.07 |
| 1102.3 | 280.08 | 1105.14 | 280.09 | 1105.83 | 280.1 | 1120.44 | 280.22 | 1120.83 | 280.22 |
| 1123.63 | 280.25 | 1131.66 | 280.48 | 1134.9 | 280.54 | 1135.03 | 280.55 | 1135.09 | 280.55 |
| 1136.81 | 280.61 | 1141.19 | 280.71 | 1141.41 | 280.72 | 1143.64 | 280.76 | 1157.36 | 281.12 |
| 1157.82 | 281.14 | 1158.55 | 281.16 | 1171.91 | 281.68 | 1172.87 | 281.71 | 1173.46 | 281.72 |
| 1187.09 | 282.14 | 1187.54 | 282.16 | 1192.22 | 282.29 | 1192.31 | 282.3 | 1201.58 | 282.78 |
| 1202.38 | 282.83 | 1202.55 | 282.83 | 1207.97 | 282.93 | 1208.27 | 282.94 | 1208.42 | 282.94 |
| 1209.92 | 282.95 | 1212.97 | 283.03 | 1214.48 | 283.04 | 1214.96 | 283.03 | 1230.55 | 283.01 |
| 1231.16 | 283 | 1235.23 | 283 | 1257.26 | 283.66 | 1257.35 | 283.66 | 1257.53 | 283.67 |
| 1257.73 | 283.67 | 1272.43 | 284.03 | 1272.9 | 284.05 | 1276.04 | 284.11 | 1284.59 | 284.4 |
| 1300.7 | 284.72 | 1302.38 | 284.73 | 1303.67 | 284.77 | 1304.11 | 284.77 | 1305.33 | 284.79 |
| 1305.95 | 284.79 | 1310.33 | 284.87 | 1311.14 | 284.87 | 1311.5 | 284.88 | 1319.59 | 285.01 |
| 1320.66 | 285.04 | 1321.42 | 285.05 | 1323.8 | 285.11 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 231.15 | .04 | 799.14 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 231.15 | 799.14 | 103.92 | 100 | 114.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2900.*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.42 | .97 | 322.42 | 2.53 | 322.39 | 3.08 | 322.39 | 13.23 | 322.21 |
| 13.46 | 322.21 | 17.09 | 322.17 | 17.65 | 322.15 | 21.84 | 321.85 | 23.42 | 321.71 |
| 27.88 | 321.45 | 32.6 | 321.03 | 34.98 | 320.78 | 35.4 | 320.76 | 44.13 | 320.16 |
| 44.54 | 320.11 | 44.85 | 320.11 | 46.09 | 320.08 | 48.94 | 320.06 | 49.18 | 320.05 |
| 49.32 | 320.05 | 52.59 | 319.67 | 54.11 | 319.6 | 54.66 | 319.56 | 55.4 | 319.54 |
| 55.61 | 319.54 | 56.63 | 319.55 | 57.51 | 319.53 | 62.57 | 319.51 | 64.63 | 319.47 |
| 65.29 | 319.44 | 65.84 | 319.4 | 66.91 | 319.27 | 67.47 | 319.18 | 68.47 | 319.04 |
| 69.1 | 318.93 | 70.03 | 318.8 | 71.94 | 318.57 | 73.62 | 318.4 | 75.8 | 318.15 |
| 76.63 | 318.13 | 76.75 | 318.12 | 77.65 | 317.98 | 78.51 | 317.87 | 79.72 | 317.75 |
| 80.3 | 317.71 | 81.35 | 317.61 | 81.54 | 317.59 | 82.36 | 317.56 | 82.46 | 317.55 |
| 82.65 | 317.54 | 83.29 | 317.47 | 83.71 | 317.41 | 84.02 | 317.37 | 84.16 | 317.36 |
| 84.6 | 317.29 | 84.68 | 317.27 | 84.99 | 317.2 | 85.17 | 317.17 | 85.28 | 317.15 |
| 85.99 | 317 | 87.7 | 316.59 | 88.63 | 316.35 | 89.84 | 316.06 | 90.12 | 316 |
| 90.96 | 315.83 | 91.22 | 315.77 | 91.59 | 315.71 | 91.84 | 315.68 | 92.94 | 315.5 |
| 93.02 | 315.49 | 94.07 | 315.38 | 94.13 | 315.38 | 95.18 | 315.27 | 95.66 | 315.21 |
| 95.86 | 315.19 | 103.88 | 314.27 | 104.2 | 314.23 | 106.15 | 314.01 | 107.37 | 313.85 |
| 107.44 | 313.85 | 107.64 | 313.82 | 108.45 | 313.72 | 108.75 | 313.69 | 112.22 | 313.28 |
| 112.61 | 313.19 | 112.77 | 313.15 | 113.5 | 313 | 116.96 | 312.21 | 117.29 | 312.13 |
| 117.54 | 312.09 | 118.03 | 312 | 118.1 | 311.99 | 120.25 | 311.59 | 120.39 | 311.57 |
| 121.73 | 311.31 | 122.08 | 311.23 | 123.16 | 311.01 | 123.42 | 310.96 | 123.55 | 310.94 |
| 123.84 | 310.88 | 123.9 | 310.87 | 124.01 | 310.85 | 124.17 | 310.8 | 124.28 | 310.76 |
| 127.87 | 309.57 | 130.23 | 308.6 | 130.32 | 308.56 | 130.65 | 308.41 | 130.84 | 308.32 |

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|---|---|---|---|---|---|---|---|---|---|
| 131.45 | 308.05 | 132.68 | 307.49 | 132.96 | 307.36 | 133.92 | 306.93 | 135.04 | 306.41 |
| 137.23 | 305.54 | 137.82 | 305.29 | 138.23 | 305.14 | 138.53 | 305.02 | 143.32 | 303.19 |
| 143.7 | 303.05 | 144.14 | 302.88 | 144.72 | 302.64 | 145.86 | 302.11 | 146.27 | 301.93 |
| 147.93 | 301.13 | 148.01 | 301.09 | 150.15 | 300.05 | 151.08 | 299.59 | 152.12 | 299.05 |
| 152.59 | 298.83 | 154.36 | 297.95 | 155.6 | 297.36 | 157.16 | 296.64 | 159.79 | 295.31 |
| 160.32 | 295 | 160.63 | 294.84 | 161.35 | 294.45 | 161.66 | 294.3 | 162.47 | 293.9 |
| 163.11 | 293.56 | 163.58 | 293.32 | 164.13 | 293.02 | 164.2 | 292.99 | 164.77 | 292.73 |
| 164.82 | 292.71 | 165.46 | 292.41 | 166.49 | 291.9 | 167.24 | 291.54 | 169.28 | 290.52 |
| 169.65 | 290.35 | 169.84 | 290.26 | 170.41 | 290 | 171.41 | 289.53 | 171.51 | 289.49 |
| 171.71 | 289.4 | 173.53 | 288.65 | 173.96 | 288.48 | 174.02 | 288.46 | 175.54 | 287.87 |
| 179.07 | 286.55 | 179.32 | 286.46 | 179.56 | 286.36 | 180.61 | 285.96 | 180.68 | 285.94 |
| 181.07 | 285.82 | 181.58 | 285.68 | 182.25 | 285.56 | 182.38 | 285.54 | 189.5 | 284.24 |
| 189.57 | 284.22 | 194.8 | 283.28 | 196.34 | 283.02 | 196.81 | 282.93 | 198.4 | 282.66 |
| 199.6 | 282.45 | 199.79 | 282.42 | 200.46 | 282.33 | 204.7 | 281.63 | 207.48 | 281.35 |
| 207.6 | 281.33 | 209.32 | 281.17 | 209.98 | 281.08 | 210.34 | 281.01 | 212.44 | 280.67 |
| 214.12 | 280.44 | 218.53 | 279.93 | 220.65 | 279.71 | 220.8 | 279.69 | 221.65 | 279.6 |
| 228.78 | 279.08 | 237.59 | 278.93 | 259.45 | 279 | 267.62 | 278.69 | 268.01 | 278.67 |
| 269.36 | 278.63 | 269.69 | 278.61 | 270.22 | 278.59 | 271.18 | 278.59 | 281.3 | 278.77 |
| 282.4 | 278.78 | 292.45 | 278.95 | 293.37 | 278.95 | 294.04 | 278.97 | 294.1 | 278.97 |
| 294.26 | 278.96 | 294.49 | 278.96 | 294.67 | 278.95 | 296.53 | 278.99 | 299.4 | 278.99 |
| 301.22 | 278.88 | 301.72 | 278.88 | 303.96 | 278.77 | 304.86 | 278.79 | 305.69 | 278.75 |
| 306.04 | 278.74 | 306.33 | 278.72 | 306.75 | 278.74 | 317.97 | 278.73 | 339.79 | 278.98 |
| 345.96 | 278.98 | 346.36 | 278.97 | 347.43 | 278.98 | 375.67 | 278.98 | 389.99 | 278.87 |
| 390.45 | 278.88 | 392.53 | 278.88 | 395.32 | 278.83 | 395.54 | 278.83 | 399.89 | 278.59 |
| 452.75 | 278.6 | 453.74 | 278.9 | 454.17 | 278.96 | 454.39 | 278.94 | 455.36 | 278.99 |
| 457.55 | 278.98 | 457.87 | 278.97 | 464.59 | 278.99 | 464.88 | 279 | 466.47 | 279 |
| 467.33 | 278.93 | 467.54 | 278.94 | 468.43 | 278.95 | 468.54 | 278.94 | 469.01 | 278.94 |
| 469.71 | 278.9 | 470.26 | 278.85 | 470.92 | 278.81 | 471.14 | 278.78 | 472.88 | 278.59 |
| 473.35 | 278.58 | 473.61 | 278.58 | 473.72 | 278.57 | 474.04 | 278.57 | 487.64 | 278.44 |
| 491.61 | 278.44 | 491.9 | 278.45 | 501.31 | 278.5 | 505.28 | 278.45 | 511.61 | 278.27 |
| 511.76 | 278.27 | 512.22 | 278.25 | 512.27 | 278.25 | 513.4 | 278.2 | 513.55 | 278.2 |
| 514.27 | 278.19 | 514.69 | 278.19 | 518.49 | 278.15 | 518.97 | 278.14 | 521.63 | 278.05 |
| 533.03 | 277.86 | 553.56 | 277.97 | 556.8 | 277.86 | 558.94 | 277.86 | 560.71 | 278.09 |
| 563.25 | 278.46 | 571.82 | 278.46 | 574.24 | 278.35 | 584.4 | 278.01 | 585.31 | 278.01 |
| 585.53 | 278 | 589.57 | 278.02 | 601.76 | 278.44 | 604.8 | 278.46 | 606.35 | 278.54 |
| 617.12 | 278.97 | 617.45 | 278.99 | 619.42 | 279.06 | 669.46 | 279.06 | 671.83 | 279.07 |
| 672.52 | 279.06 | 674.02 | 278.53 | 674.21 | 278.46 | 675.01 | 278.35 | 675.07 | 278.35 |
| 675.24 | 278.33 | 675.37 | 278.32 | 675.68 | 278.32 | 679.04 | 277.99 | 680.65 | 278.03 |
| 681.58 | 277.97 | 682.29 | 277.99 | 686.61 | 277.97 | 693.48 | 278.06 | 694.1 | 278.08 |
| 698.38 | 278.15 | 698.96 | 278.15 | 704.86 | 278.24 | 712.56 | 278.26 | 713.48 | 278.27 |
| 714.19 | 278.26 | 716.17 | 278.21 | 716.62 | 278.22 | 718.99 | 278.18 | 719.3 | 278.18 |
| 719.57 | 278.17 | 720.52 | 278.17 | 732.9 | 278 | 733.04 | 278 | 740.29 | 277.87 |
| 759.13 | 277.86 | 760.12 | 278.19 | 760.9 | 278.41 | 761.09 | 278.47 | 764.79 | 278.67 |
| 766.38 | 278.74 | 767.41 | 278.76 | 768.23 | 278.8 | 775.47 | 278.95 | 777.76 | 278.81 |
| 777.84 | 278.81 | 778.32 | 278.82 | 778.44 | 278.81 | 778.54 | 278.81 | 782.28 | 278.65 |
| 784.42 | 278.6 | 785.74 | 278.6 | 799.53 | 279.05 | 803.61 | 279.25 | 803.74 | 279.25 |
| 808.19 | 279.54 | 808.32 | 279.55 | 808.65 | 279.58 | 809.61 | 279.63 | 809.85 | 279.65 |
| 812.81 | 279.84 | 813.61 | 279.9 | 813.89 | 279.93 | 815.27 | 280.02 | 815.89 | 280.04 |
| 821.47 | 279.86 | 823.4 | 279.85 | 824.95 | 279.9 | 832.72 | 280.33 | 835.53 | 280.37 |
| 841.35 | 280.3 | 849.19 | 279.98 | 862.66 | 279.6 | 863.31 | 279.6 | 863.92 | 279.59 |
| 864.09 | 279.59 | 865.05 | 279.55 | 878.74 | 279.2 | 879.39 | 279.19 | 880.05 | 279.16 |
| 881.57 | 279.12 | 882.48 | 279.11 | 900.51 | 279.07 | 906.73 | 279.32 | 907.19 | 279.33 |
| 907.58 | 279.33 | 908.42 | 279.36 | 908.63 | 279.36 | 908.99 | 279.35 | 909.26 | 279.36 |
| 915.8 | 279.36 | 922.72 | 279.47 | 923 | 279.48 | 923.44 | 279.47 | 924.87 | 279.47 |
| 925.15 | 279.46 | 925.5 | 279.47 | 926.14 | 279.47 | 929.37 | 279.56 | 929.54 | 279.56 |
| 935.48 | 279.59 | 937.85 | 279.54 | 939.27 | 279.56 | 939.62 | 279.56 | 940.11 | 279.57 |
| 943.15 | 279.7 | 944.1 | 279.75 | 944.51 | 279.74 | 945.34 | 279.74 | 950.5 | 279.63 |
| 958.59 | 279.59 | 961.71 | 279.54 | 962.16 | 279.54 | 962.58 | 279.53 | 962.86 | 279.52 |
| 969.68 | 279.4 | 969.78 | 279.39 | 970.1 | 279.4 | 970.73 | 279.4 | 971.03 | 279.39 |
| 971.19 | 279.39 | 971.75 | 279.37 | 973.99 | 279.38 | 978.3 | 279.22 | 982.9 | 279.08 |
| 983.14 | 279.07 | 983.54 | 279.08 | 987.54 | 279 | 989.01 | 279.02 | 989.1 | 279.01 |
| 989.59 | 279.02 | 989.74 | 279.02 | 1004.11 | 279.15 | 1004.19 | 279.14 | 1006.58 | 279.2 |
| 1007.32 | 279.21 | 1030.62 | 279.17 | 1034.97 | 279.2 | 1051.78 | 279.13 | 1066.15 | 278.95 |
| 1066.48 | 278.95 | 1078 | 278.77 | 1078.28 | 278.77 | 1078.89 | 278.75 | 1084.84 | 278.7 |
| 1085.84 | 278.7 | 1091.47 | 278.62 | 1092.01 | 278.62 | 1106.05 | 278.44 | 1106.23 | 278.44 |
| 1120.96 | 278.36 | 1122 | 278.37 | 1122.44 | 278.38 | 1124.4 | 278.39 | 1125.04 | 278.4 |
| 1125.54 | 278.4 | 1128.44 | 278.43 | 1129.16 | 278.45 | 1136.88 | 278.52 | 1137.64 | 278.54 |
| 1144.1 | 278.63 | 1144.5 | 278.64 | 1147.37 | 278.67 | 1148.2 | 278.7 | 1155.59 | 279.06 |
| 1158.9 | 279.16 | 1159.04 | 279.17 | 1159.1 | 279.17 | 1159.76 | 279.2 | 1160.86 | 279.28 |
| 1162.87 | 279.33 | 1169.14 | 279.59 | 1169.64 | 279.62 | 1178.62 | 280.09 | 1181.9 | 280.24 |
| 1182.37 | 280.27 | 1183.11 | 280.3 | 1185.66 | 280.45 | 1196.79 | 280.94 | 1212.32 | 281.43 |
| 1212.79 | 281.45 | 1217.57 | 281.59 | 1217.66 | 281.59 | 1227.97 | 282.05 | 1228.15 | 282.06 |
| 1228.9 | 282.08 | 1229.45 | 282.08 | 1233.69 | 282.14 | 1234 | 282.13 | 1234.16 | 282.14 |
| 1235.68 | 282.13 | 1236.64 | 282.15 | 1237.06 | 282.15 | 1237.5 | 282.16 | 1238.81 | 282.17 |
| 1240.36 | 282.16 | 1240.84 | 282.15 | 1253.96 | 282.07 | 1254.2 | 282.06 | 1254.28 | 282.06 |
| 1257.42 | 282.01 | 1261.59 | 282 | 1284.14 | 282.5 | 1284.62 | 282.5 | 1299.67 | 282.77 |
| 1300.14 | 282.79 | 1303.36 | 282.83 | 1304.38 | 282.87 | 1329.61 | 283.16 | 1330.31 | 283.16 |
| 1331.63 | 283.18 | 1338.45 | 283.2 | 1338.55 | 283.21 | 1352.24 | 283.33 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 221.65 | .04 | 815.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 221.65 | 815.27 | 103.92 | 100 | 114.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2800.*

INPUT
Description:
Station Elevation Data num= 481

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 321.94 | 12.02 | 321.81 | 12.66 | 321.81 | 12.88 | 321.8 | 16.89 | 321.73 |
| 26.68 | 321.18 | 33.89 | 320.65 | 42.23 | 320.2 | 42.63 | 320.16 | 42.93 | 320.16 |
| 46.85 | 320.1 | 47.07 | 320.09 | 47.21 | 320.09 | 50.34 | 319.82 | 51.79 | 319.76 |
| 52.32 | 319.73 | 53.03 | 319.71 | 53.23 | 319.7 | 59.81 | 319.68 | 59.89 | 319.67 |
| 61.86 | 319.64 | 63.01 | 319.6 | 64.57 | 319.46 | 67.02 | 319.2 | 69.78 | 318.98 |
| 70.46 | 318.94 | 72.55 | 318.73 | 73.34 | 318.7 | 73.46 | 318.69 | 75.14 | 318.5 |
| 76.3 | 318.39 | 76.85 | 318.36 | 77.86 | 318.27 | 78.04 | 318.26 | 78.83 | 318.24 |
| 78.92 | 318.24 | 79.11 | 318.23 | 79.72 | 318.16 | 80.41 | 318.06 | 80.56 | 318.05 |
| 80.97 | 317.96 | 81.05 | 317.94 | 81.52 | 317.83 | 81.62 | 317.81 | 82.07 | 317.7 |
| 82.3 | 317.64 | 83.94 | 317.17 | 84.83 | 316.9 | 85.66 | 316.67 | 85.99 | 316.57 |
| 87.06 | 316.29 | 87.31 | 316.23 | 87.36 | 316.21 | 87.66 | 316.14 | 87.9 | 316.09 |
| 88.96 | 315.84 | 89.04 | 315.83 | 90.09 | 315.62 | 90.36 | 315.57 | 91.41 | 315.34 |
| 91.75 | 315.27 | 98.61 | 313.71 | 99.43 | 313.51 | 99.73 | 313.45 | 101.6 | 313.01 |
| 101.65 | 313 | 102.13 | 312.89 | 102.77 | 312.73 | 102.83 | 312.71 | 103.03 | 312.66 |
| 103.48 | 312.56 | 103.8 | 312.48 | 104.08 | 312.42 | 105.9 | 311.98 | 106.2 | 311.9 |
| 107.41 | 311.6 | 107.78 | 311.49 | 107.94 | 311.43 | 108.63 | 311.24 | 110.31 | 310.74 |
| 112.26 | 310.12 | 112.5 | 310.06 | 114.69 | 309.45 | 115.09 | 309.33 | 115.23 | 309.3 |
| 116.51 | 308.93 | 116.85 | 308.82 | 117.88 | 308.51 | 118.13 | 308.43 | 118.25 | 308.4 |
| 118.53 | 308.32 | 118.59 | 308.3 | 118.69 | 308.27 | 119.42 | 308 | 122.39 | 306.85 |
| 122.71 | 306.71 | 123.22 | 306.47 | 124.65 | 305.84 | 124.73 | 305.8 | 124.94 | 305.69 |
| 125.05 | 305.64 | 125.23 | 305.55 | 125.66 | 305.34 | 125.81 | 305.27 | 127 | 304.7 |
| 127.26 | 304.57 | 128.18 | 304.14 | 129.25 | 303.62 | 129.3 | 303.59 | 130.37 | 303.14 |
| 131.91 | 302.43 | 132.3 | 302.27 | 132.59 | 302.14 | 137.18 | 300.18 | 137.76 | 299.94 |
| 137.96 | 299.86 | 138.52 | 299.61 | 140 | 298.89 | 140.32 | 298.74 | 141.59 | 298.1 |
| 141.66 | 298.06 | 143.09 | 297.35 | 144.6 | 296.58 | 145.6 | 296.03 | 145.76 | 295.96 |
| 146.05 | 295.82 | 147.75 | 294.96 | 148.14 | 294.77 | 150.43 | 293.71 | 151.24 | 293.31 |
| 151.39 | 293.24 | 151.82 | 293.02 | 152.94 | 292.47 | 153.45 | 292.19 | 154.43 | 291.68 |
| 156.12 | 290.85 | 157.09 | 290.35 | 158.37 | 289.79 | 159.35 | 289.34 | 160.07 | 289.02 |
| 162.02 | 288.13 | 162.56 | 287.89 | 163.1 | 287.66 | 164.16 | 287.23 | 164.35 | 287.16 |
| 166.51 | 286.32 | 166.56 | 286.31 | 168.01 | 285.81 | 169.14 | 285.44 | 169.45 | 285.33 |
| 170.06 | 285.14 | 171.39 | 284.7 | 171.64 | 284.62 | 171.87 | 284.54 | 172.93 | 284.19 |
| 173.31 | 284.08 | 173.8 | 283.96 | 174.44 | 283.84 | 174.56 | 283.81 | 181.38 | 282.5 |
| 181.44 | 282.48 | 185.16 | 281.78 | 185.64 | 281.7 | 186.45 | 281.55 | 189.22 | 281.09 |
| 189.89 | 280.99 | 190.37 | 280.91 | 191.04 | 280.81 | 191.22 | 280.79 | 191.87 | 280.71 |
| 195.92 | 280.15 | 200.35 | 279.75 | 200.77 | 279.7 | 200.97 | 279.68 | 203.33 | 279.35 |
| 204.94 | 279.15 | 211.19 | 278.5 | 211.33 | 278.49 | 212.14 | 278.4 | 221.11 | 277.78 |
| 221.82 | 277.72 | 233.74 | 277.62 | 238.36 | 277.65 | 259.88 | 278 | 263.18 | 278 |
| 263.37 | 277.99 | 274.44 | 277.55 | 275.55 | 277.49 | 276.38 | 277.46 | 276.79 | 277.44 |
| 277.24 | 277.43 | 277.96 | 277.4 | 279.26 | 277.4 | 308.08 | 277.94 | 308.67 | 277.94 |
| 309.33 | 277.93 | 309.78 | 277.95 | 310.24 | 277.96 | 310.31 | 277.96 | 310.53 | 277.95 |
| 310.84 | 277.95 | 311.08 | 277.94 | 314.54 | 278 | 317.5 | 277.99 | 319.96 | 277.83 |
| 320.37 | 277.83 | 320.64 | 277.84 | 323.67 | 277.67 | 324.89 | 277.7 | 326.88 | 277.6 |
| 327.45 | 277.62 | 342.66 | 277.61 | 372.22 | 277.99 | 380.58 | 277.99 | 381.11 | 277.97 |
| 420.83 | 277.99 | 440.24 | 277.82 | 440.86 | 277.83 | 440.99 | 277.83 | 441.3 | 277.84 |
| 447.45 | 277.75 | 447.76 | 277.75 | 453.65 | 277.39 | 472.6 | 277.34 | 525.27 | 277.4 |
| 526.61 | 277.84 | 527.19 | 277.94 | 527.49 | 277.92 | 528.81 | 277.98 | 535.61 | 277.97 |
| 535.94 | 277.98 | 543.86 | 277.99 | 544.49 | 277.95 | 545.02 | 277.9 | 545.31 | 277.91 |
| 546.52 | 277.92 | 546.66 | 277.91 | 547.29 | 277.9 | 548.25 | 277.85 | 548.99 | 277.78 |
| 549.89 | 277.71 | 550.19 | 277.68 | 552.54 | 277.39 | 553.18 | 277.38 | 577.92 | 277.32 |
| 578.31 | 277.33 | 586.56 | 277.45 | 586.88 | 277.45 | 591.06 | 277.49 | 596.44 | 277.44 |
| 605.02 | 277.23 | 605.22 | 277.23 | 605.84 | 277.2 | 605.91 | 277.2 | 607.45 | 277.14 |
| 607.51 | 277.14 | 607.65 | 277.13 | 614.99 | 277.1 | 618.6 | 276.98 | 634.05 | 276.79 |
| 647.73 | 276.87 | 649.89 | 276.79 | 651.31 | 276.79 | 652.5 | 276.94 | 654.19 | 277.19 |
| 659.91 | 277.19 | 661.52 | 277.11 | 662.45 | 277.09 | 668.06 | 276.89 | 669.31 | 276.89 |
| 669.4 | 276.88 | 671.73 | 276.89 | 679.87 | 277.18 | 681.89 | 277.19 | 691.63 | 277.59 |
| 724.99 | 277.59 | 725.75 | 277.6 | 726 | 277.6 | 726.58 | 277.59 | 727.03 | 277.59 |
| 728.04 | 277.23 | 728.17 | 277.19 | 728.85 | 277.1 | 728.94 | 277.1 | 729.14 | 277.09 |
| 731.39 | 276.88 | 731.74 | 276.88 | 732.45 | 276.9 | 733.07 | 276.87 | 733.55 | 276.88 |
| 736.43 | 276.86 | 741.01 | 276.93 | 741.43 | 276.93 | 748.23 | 277.04 | 748.59 | 277.05 |
| 753.73 | 277.05 | 754.34 | 277.06 | 756.13 | 277.03 | 756.44 | 277.03 | 757.19 | 277.01 |
| 758.01 | 277.01 | 758.23 | 277 | 758.4 | 277 | 765.85 | 276.91 | 766.19 | 276.9 |
| 767.29 | 276.89 | 767.39 | 276.88 | 772.22 | 276.79 | 784.77 | 276.79 | 785.6 | 277.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 786.25 | 277.17 | 786.4 | 277.21 | 790.79 | 277.41 | 791.66 | 277.43 | 792.33 | 277.46 |
| 798.35 | 277.6 | 800.24 | 277.52 | 800.31 | 277.51 | 800.71 | 277.52 | 800.89 | 277.52 |
| 805.77 | 277.39 | 806.87 | 277.4 | 818.32 | 278.03 | 821.71 | 278.33 | 821.8 | 278.33 |
| 825.51 | 278.73 | 825.62 | 278.75 | 826.69 | 278.86 | 826.9 | 278.89 | 830.02 | 279.21 |
| 831.39 | 279.34 | 832.03 | 279.36 | 837.74 | 278.91 | 839.71 | 278.83 | 841.3 | 278.85 |
| 849.24 | 279.05 | 852.12 | 279.06 | 858.08 | 278.95 | 866.72 | 278.64 | 879.87 | 278.4 |
| 880.54 | 278.4 | 881.16 | 278.39 | 881.33 | 278.39 | 882.32 | 278.34 | 896.98 | 277.81 |
| 897.66 | 277.77 | 899.21 | 277.74 | 917.12 | 277.71 | 917.74 | 277.72 | 918.59 | 277.72 |
| 924.95 | 278.06 | 925.43 | 278.08 | 926.68 | 278.11 | 926.9 | 278.11 | 927.26 | 278.1 |
| 927.54 | 278.12 | 933.97 | 278.08 | 934.23 | 278.07 | 941.31 | 278.21 | 941.59 | 278.22 |
| 942.05 | 278.22 | 943.5 | 278.2 | 944.16 | 278.2 | 944.26 | 278.19 | 944.81 | 278.19 |
| 948.11 | 278.23 | 948.28 | 278.23 | 950.05 | 278.21 | 956.79 | 278.03 | 957.57 | 278.04 |
| 958.23 | 278.03 | 958.6 | 278.04 | 959.1 | 278.04 | 963.18 | 278.15 | 963.62 | 278.15 |
| 964.45 | 278.13 | 964.82 | 278.11 | 969.73 | 277.97 | 969.91 | 277.96 | 970.04 | 277.97 |
| 979.07 | 277.9 | 982.08 | 277.84 | 982.37 | 277.84 | 989.35 | 277.74 | 990.42 | 277.74 |
| 990.73 | 277.73 | 990.89 | 277.73 | 991.46 | 277.72 | 993.08 | 277.73 | 993.75 | 277.72 |
| 998.16 | 277.6 | 998.96 | 277.59 | 1002.87 | 277.49 | 1003.52 | 277.49 | 1007.62 | 277.43 |
| 1009.21 | 277.43 | 1009.72 | 277.44 | 1024.65 | 277.44 | 1025.66 | 277.45 | 1027.85 | 277.51 |
| 1051.68 | 277.45 | 1052.48 | 277.46 | 1066.02 | 277.46 | 1066.25 | 277.45 | 1073.33 | 277.42 |
| 1088.02 | 277.27 | 1088.37 | 277.27 | 1098.61 | 277.17 | 1100.15 | 277.14 | 1100.44 | 277.14 |
| 1128.84 | 276.73 | 1129.03 | 276.73 | 1137.54 | 276.64 | 1142.81 | 276.66 | 1143.16 | 276.67 |
| 1144.1 | 276.67 | 1145.16 | 276.69 | 1145.61 | 276.69 | 1147.61 | 276.72 | 1148.27 | 276.72 |
| 1151.75 | 276.77 | 1152.48 | 276.79 | 1160.38 | 276.91 | 1161.15 | 276.93 | 1171.11 | 277.09 |
| 1179.52 | 277.63 | 1182.91 | 277.77 | 1183.05 | 277.78 | 1183.11 | 277.79 | 1183.79 | 277.83 |
| 1184.91 | 277.94 | 1186.56 | 277.99 | 1186.97 | 278.01 | 1189.49 | 278.17 | 1189.73 | 278.18 |
| 1192.06 | 278.31 | 1192.85 | 278.37 | 1193.9 | 278.43 | 1206.43 | 279.36 | 1206.91 | 279.39 |
| 1208.98 | 279.55 | 1210.28 | 279.63 | 1227.23 | 280.43 | 1237.55 | 280.72 | 1238.03 | 280.74 |
| 1242.92 | 280.88 | 1243.01 | 280.88 | 1252.72 | 281.24 | 1253.56 | 281.28 | 1253.74 | 281.28 |
| 1255.07 | 281.31 | 1259.41 | 281.34 | 1259.72 | 281.33 | 1259.89 | 281.33 | 1260.7 | 281.32 |
| 1262.43 | 281.32 | 1262.85 | 281.31 | 1265.67 | 281.29 | 1266.73 | 281.27 | 1266.92 | 281.26 |
| 1280.15 | 281.1 | 1280.47 | 281.1 | 1283.69 | 281.02 | 1287.95 | 281 | 1311.01 | 281.33 |
| 1311.11 | 281.33 | 1311.3 | 281.34 | 1311.51 | 281.34 | 1326.9 | 281.52 | 1327.39 | 281.52 |
| 1331.73 | 281.58 | 1357.53 | 281.59 | 1358.25 | 281.58 | 1360.06 | 281.58 | 1360.78 | 281.57 |
| 1361.78 | 281.57 | 1361.96 | 281.56 | 1367.42 | 281.54 | 1367.81 | 281.53 | 1378.19 | 281.53 |
| 1380.68 | 281.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 212.14 | .04 | 831.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 212.14 | 831.39 | 103.92 | 100 | 114.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2700.*

INPUT
Description:
Station Elevation Data num= 492

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 321.47 | 11.48 | 321.41 | 12.1 | 321.4 | 12.31 | 321.4 | 16.13 | 321.31 |
| 40.34 | 320.24 | 40.72 | 320.21 | 41.01 | 320.21 | 44.75 | 320.14 | 45.09 | 320.14 |
| 48.08 | 319.96 | 48.91 | 319.93 | 49.47 | 319.92 | 49.98 | 319.89 | 50.65 | 319.88 |
| 50.84 | 319.87 | 51.78 | 319.86 | 52.58 | 319.84 | 57.21 | 319.84 | 60.19 | 319.8 |
| 61.18 | 319.76 | 62.6 | 319.68 | 63.17 | 319.64 | 65.77 | 319.52 | 67.31 | 319.47 |
| 69.3 | 319.31 | 70.06 | 319.27 | 70.17 | 319.27 | 71.78 | 319.12 | 72.88 | 319.04 |
| 73.41 | 319.01 | 74.37 | 318.94 | 74.55 | 318.92 | 75.3 | 318.93 | 75.39 | 318.92 |
| 75.56 | 318.92 | 76.15 | 318.85 | 76.53 | 318.78 | 76.81 | 318.75 | 76.95 | 318.73 |
| 77.34 | 318.64 | 77.42 | 318.62 | 77.71 | 318.54 | 77.87 | 318.5 | 77.97 | 318.48 |
| 78.4 | 318.35 | 78.62 | 318.28 | 79.08 | 318.12 | 80.18 | 317.75 | 81.03 | 317.45 |
| 81.82 | 317.19 | 82.13 | 317.08 | 82.4 | 317 | 83.16 | 316.76 | 83.74 | 316.57 |
| 83.97 | 316.51 | 84.97 | 316.19 | 85.05 | 316.16 | 86.01 | 315.87 | 86.32 | 315.78 |
| 87.02 | 315.56 | 87.64 | 315.35 | 88.55 | 315.02 | 92.85 | 313.51 | 94.2 | 313.05 |
| 94.97 | 312.76 | 95.27 | 312.66 | 97.05 | 312.02 | 98.17 | 311.6 | 98.23 | 311.58 |
| 98.41 | 311.51 | 98.84 | 311.35 | 99.15 | 311.24 | 101.15 | 310.49 | 101.45 | 310.38 |
| 102.6 | 309.93 | 102.95 | 309.78 | 103.1 | 309.72 | 103.77 | 309.48 | 105.37 | 308.87 |
| 106.93 | 308.24 | 107.24 | 308.12 | 107.91 | 307.85 | 107.98 | 307.83 | 109.56 | 307.22 |
| 109.94 | 307.08 | 110.07 | 307.03 | 111.29 | 306.55 | 111.61 | 306.41 | 112.6 | 306.01 |
| 112.84 | 305.91 | 112.95 | 305.86 | 113.38 | 305.7 | 113.53 | 305.63 | 113.63 | 305.59 |
| 114.07 | 305.39 | 115.72 | 304.67 | 116.9 | 304.13 | 117.22 | 303.98 | 117.7 | 303.74 |
| 119.06 | 303.08 | 119.14 | 303.04 | 119.35 | 302.93 | 119.45 | 302.87 | 119.62 | 302.77 |
| 120.04 | 302.57 | 120.18 | 302.5 | 121.31 | 301.92 | 121.43 | 301.86 | 121.56 | 301.79 |
| 122.44 | 301.36 | 122.81 | 301.16 | 123.46 | 300.82 | 123.51 | 300.8 | 124.53 | 300.32 |
| 125.58 | 299.79 | 127.41 | 298.9 | 128.77 | 298.26 | 128.99 | 298.16 | 131.03 | 297.18 |
| 131.38 | 297.02 | 131.78 | 296.83 | 132.31 | 296.57 | 133.35 | 296.04 | 133.73 | 295.86 |
| 134.03 | 295.7 | 135.24 | 295.07 | 135.32 | 295.03 | 135.61 | 294.88 | 135.93 | 294.72 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 136.68 | 294.32 | 137.28 | 294.02 | 137.42 | 293.94 | 138.13 | 293.57 | 139.08 | 293.02 |
| 139.23 | 292.94 | 139.5 | 292.81 | 141.13 | 291.98 | 143.36 | 290.93 | 143.69 | 290.78 |
| 144.61 | 290.35 | 146.09 | 289.63 | 147.51 | 288.91 | 149.13 | 288.13 | 150.06 | 287.67 |
| 150.12 | 287.65 | 151.28 | 287.18 | 152.21 | 286.79 | 152.9 | 286.51 | 155.1 | 285.59 |
| 155.28 | 285.53 | 155.8 | 285.33 | 156.72 | 285.01 | 156.81 | 284.98 | 156.88 | 284.95 |
| 158.65 | 284.3 | 159.05 | 284.16 | 159.1 | 284.15 | 163.72 | 282.85 | 163.95 | 282.79 |
| 164.17 | 282.72 | 165.13 | 282.46 | 165.19 | 282.44 | 166.01 | 282.24 | 166.63 | 282.11 |
| 166.74 | 282.09 | 173.25 | 280.75 | 173.32 | 280.74 | 175.71 | 280.26 | 176.87 | 280.05 |
| 178.1 | 279.81 | 179.94 | 279.52 | 180.1 | 279.49 | 182.49 | 279.17 | 182.66 | 279.15 |
| 183.27 | 279.09 | 187.15 | 278.67 | 189.8 | 278.44 | 191.78 | 278.3 | 191.97 | 278.28 |
| 192.31 | 278.24 | 195.76 | 277.87 | 199.8 | 277.48 | 200.05 | 277.46 | 201.73 | 277.29 |
| 201.87 | 277.28 | 202.64 | 277.2 | 213.95 | 276.43 | 214.85 | 276.36 | 229.9 | 276.31 |
| 235.73 | 276.38 | 262.88 | 277 | 267.05 | 277 | 281.25 | 276.4 | 281.91 | 276.36 |
| 281.97 | 276.36 | 283.71 | 276.29 | 284.23 | 276.26 | 285.69 | 276.2 | 287.33 | 276.2 |
| 323.7 | 276.92 | 325.29 | 276.92 | 325.85 | 276.94 | 325.91 | 276.94 | 326.43 | 276.96 |
| 326.53 | 276.96 | 326.8 | 276.95 | 327.12 | 276.95 | 327.19 | 276.94 | 327.5 | 276.93 |
| 330.68 | 277 | 335.59 | 277 | 338.7 | 276.79 | 339.56 | 276.79 | 343.39 | 276.56 |
| 344.92 | 276.6 | 346.93 | 276.5 | 347.44 | 276.47 | 348.15 | 276.5 | 367.34 | 276.49 |
| 404.64 | 276.99 | 415.19 | 276.99 | 415.87 | 276.98 | 465.99 | 276.99 | 490.48 | 276.76 |
| 491.26 | 276.78 | 491.44 | 276.78 | 491.82 | 276.79 | 494.82 | 276.77 | 499.59 | 276.67 |
| 499.97 | 276.67 | 507.41 | 276.2 | 531.32 | 276.12 | 554.46 | 276.2 | 597.79 | 276.2 |
| 599.48 | 276.79 | 600.21 | 276.92 | 600.59 | 276.89 | 602.25 | 276.98 | 604.95 | 276.95 |
| 605.99 | 276.95 | 606.54 | 276.94 | 610.84 | 276.96 | 611.26 | 276.97 | 618.04 | 276.98 |
| 618.53 | 276.99 | 621.25 | 276.99 | 622.05 | 276.93 | 622.71 | 276.86 | 623.08 | 276.88 |
| 624.6 | 276.9 | 624.78 | 276.88 | 625.58 | 276.87 | 626.79 | 276.8 | 627.73 | 276.7 |
| 628.85 | 276.62 | 632.2 | 276.2 | 633.01 | 276.19 | 633.46 | 276.19 | 633.64 | 276.18 |
| 633.71 | 276.19 | 634.19 | 276.18 | 657.45 | 276.15 | 675.14 | 276.41 | 675.53 | 276.41 |
| 680.34 | 276.47 | 680.81 | 276.48 | 687.6 | 276.44 | 698.43 | 276.19 | 698.68 | 276.19 |
| 699.47 | 276.15 | 699.56 | 276.15 | 701.49 | 276.07 | 702.97 | 276.06 | 703.42 | 276.07 |
| 711.01 | 276.05 | 715.08 | 275.92 | 715.56 | 275.9 | 735.06 | 275.72 | 741.9 | 275.76 |
| 742.98 | 275.72 | 743.69 | 275.72 | 745.13 | 275.92 | 747.99 | 275.92 | 748.79 | 275.88 |
| 749.01 | 275.88 | 751.95 | 275.78 | 752.06 | 275.77 | 753.9 | 275.77 | 757.97 | 275.91 |
| 758.81 | 275.92 | 758.98 | 275.92 | 759.5 | 275.95 | 763.09 | 276.09 | 763.2 | 276.1 |
| 763.85 | 276.12 | 781.55 | 276.12 | 782.05 | 275.94 | 782.12 | 275.92 | 782.38 | 275.88 |
| 782.46 | 275.88 | 782.61 | 275.87 | 783.73 | 275.76 | 783.9 | 275.77 | 784.26 | 275.78 |
| 784.57 | 275.76 | 786.25 | 275.76 | 788.54 | 275.79 | 788.75 | 275.79 | 789.96 | 275.81 |
| 790.17 | 275.82 | 790.37 | 275.82 | 792.15 | 275.84 | 792.33 | 275.85 | 794.9 | 275.85 |
| 795.21 | 275.86 | 795.44 | 275.85 | 796.1 | 275.84 | 796.43 | 275.84 | 796.63 | 275.83 |
| 797.15 | 275.83 | 797.24 | 275.82 | 797.55 | 275.82 | 800.96 | 275.78 | 801.13 | 275.78 |
| 804.14 | 275.72 | 810.42 | 275.72 | 811.08 | 275.84 | 811.72 | 275.94 | 821.22 | 276.24 |
| 822.73 | 276.22 | 822.79 | 276.22 | 823.11 | 276.23 | 823.18 | 276.22 | 823.25 | 276.23 |
| 826.39 | 276.19 | 828.01 | 276.2 | 837.12 | 277.02 | 839.82 | 277.41 | 842.84 | 277.93 |
| 842.92 | 277.94 | 843.78 | 278.09 | 843.94 | 278.12 | 845.32 | 278.36 | 845.89 | 278.43 |
| 846.42 | 278.51 | 846.6 | 278.54 | 847.52 | 278.67 | 848.17 | 278.68 | 851.85 | 278.24 |
| 854 | 277.95 | 856.02 | 277.81 | 857.64 | 277.79 | 865.77 | 277.78 | 874.8 | 277.6 |
| 883.63 | 277.32 | 897.08 | 277.2 | 897.76 | 277.2 | 898.4 | 277.19 | 898.58 | 277.19 |
| 915.27 | 276.39 | 916.86 | 276.37 | 936.67 | 276.36 | 940.42 | 276.64 | 943.17 | 276.81 |
| 943.66 | 276.83 | 944.94 | 276.87 | 945.16 | 276.87 | 945.54 | 276.86 | 945.82 | 276.87 |
| 952.4 | 276.79 | 952.66 | 276.79 | 959.9 | 276.96 | 960.19 | 276.97 | 962.14 | 276.93 |
| 962.44 | 276.93 | 962.81 | 276.92 | 966.85 | 276.91 | 967.03 | 276.9 | 973.24 | 276.64 |
| 975.72 | 276.51 | 976.53 | 276.52 | 977.2 | 276.51 | 978.09 | 276.51 | 979.36 | 276.53 |
| 982.7 | 276.55 | 983.1 | 276.54 | 983.93 | 276.5 | 988.95 | 276.3 | 998.5 | 276.22 |
| 1000.68 | 276.17 | 1001.14 | 276.17 | 1001.59 | 276.16 | 1001.88 | 276.16 | 1009.01 | 276.08 |
| 1010.11 | 276.08 | 1010.42 | 276.07 | 1010.59 | 276.07 | 1011.17 | 276.06 | 1013.52 | 276.07 |
| 1015.07 | 276.03 | 1022.84 | 275.91 | 1023.09 | 275.9 | 1023.5 | 275.9 | 1027.69 | 275.85 |
| 1039.34 | 275.83 | 1045.02 | 275.74 | 1045.1 | 275.73 | 1046.14 | 275.73 | 1048.38 | 275.8 |
| 1094.88 | 275.7 | 1098.45 | 275.65 | 1109.9 | 275.6 | 1110.25 | 275.59 | 1122.59 | 275.51 |
| 1151.64 | 275.03 | 1151.82 | 275.03 | 1160.53 | 274.92 | 1160.72 | 274.92 | 1165.91 | 274.97 |
| 1166.28 | 274.97 | 1166.65 | 274.98 | 1167.23 | 274.98 | 1171.5 | 275.05 | 1172.02 | 275.05 |
| 1175.06 | 275.12 | 1175.8 | 275.13 | 1187.02 | 275.37 | 1187.75 | 275.38 | 1188.47 | 275.4 |
| 1193.71 | 275.5 | 1194.85 | 275.51 | 1195.72 | 275.57 | 1203.45 | 276.21 | 1206.91 | 276.39 |
| 1207.06 | 276.4 | 1207.12 | 276.41 | 1207.81 | 276.47 | 1208.96 | 276.61 | 1210.65 | 276.67 |
| 1211.06 | 276.69 | 1212.15 | 276.79 | 1213.65 | 276.89 | 1213.88 | 276.91 | 1216.27 | 277.09 |
| 1217.08 | 277.16 | 1217.62 | 277.2 | 1225.91 | 278 | 1227.53 | 278.18 | 1230.96 | 278.47 |
| 1233.57 | 278.72 | 1234.9 | 278.82 | 1246.54 | 279.47 | 1248.19 | 279.52 | 1251.73 | 279.69 |
| 1252.23 | 279.71 | 1262.78 | 280.01 | 1263.27 | 280.03 | 1268.28 | 280.17 | 1268.37 | 280.18 |
| 1279.15 | 280.5 | 1279.34 | 280.51 | 1280.12 | 280.53 | 1285.13 | 280.54 | 1285.45 | 280.52 |
| 1285.62 | 280.53 | 1288.21 | 280.48 | 1288.65 | 280.48 | 1292.11 | 280.4 | 1292.61 | 280.38 |
| 1292.81 | 280.38 | 1305.17 | 280.17 | 1306.33 | 280.14 | 1306.58 | 280.13 | 1306.66 | 280.13 |
| 1309.95 | 280.03 | 1314.31 | 280 | 1359.07 | 280.29 | 1387.57 | 279.99 | 1388.04 | 279.99 |
| 1388.78 | 279.97 | 1389.35 | 279.97 | 1389.58 | 279.96 | 1389.79 | 279.96 | 1389.98 | 279.95 |
| 1391.46 | 279.94 | 1394.7 | 279.88 | 1394.8 | 279.88 | 1395.57 | 279.87 | 1395.96 | 279.86 |
| 1406.58 | 279.76 | 1409.12 | 279.78 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 202.64 | .04 | 847.52 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

```
        202.64  847.52           103.92     100  114.51             .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 2600

INPUT
Description:
Station Elevation Data    num=     407
      Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
        0     32111.53003     321 11.7301  320.9933.26001  320.3841.74011  320.21
 50.11011     32064.15002     32071.05005  319.5971.77002  319.6172.02002  319.61
 72.58008  319.5472.94006  319.4773.34009  319.4274.22009  319.1674.31006  319.14
 74.72009     31974.93005  318.9276.42004  318.33 77.2301     31879.26001  317.22
 79.81006     31780.03003  316.9282.27002     31682.94006  315.783.36011  315.51
 83.53003  315.4384.40002     315 85.2301  314.686.45007     31486.89001  313.79
     88.5     31389.78003  312.3990.52002     31290.80005  311.8792.54004     311
 94.21008  310.15    94.5     31094.76001  309.8796.41003     30996.69006  308.85
 98.27002     30898.90002  307.72100.4301     307  101.92  306.26  102.42     306
102.8501  305.78  104.42     305106.0701  304.17  106.38     304  107.55  303.38
    108.3     303108.7201  302.79  110.29     302111.7201  301.26112.1801     301
113.4801  300.32  114.01     300  114.54  299.72115.8601     299116.7001  298.57
117.7201     298118.6901  297.5119.5801     297120.4501  296.53121.4401     296
122.7301  295.32  124.89  294.17125.2201     294125.6001  293.81127.1001     293
  127.75  292.67128.9701     292  130.27  291.3130.8401     291  131.65  290.56
132.5601     290  134.51     289135.5901  288.49  136.64     288137.8301  287.46
  138.79     287139.9701  286.44140.8701     286  142.54  285.22  143.02     285
143.5801  284.79145.7301     284147.8301  283.21148.4901     283  149.63  282.67
151.5901     282153.9901  281.45  154.27  281.38154.8301  281.27  156.04     281
  158.92  280.37160.5801     280  162.76  279.52165.1901     279167.4701  278.52
  169.75  278.08170.2201     278   171.5  277.81173.3201  277.59173.9301  277.53
   180.9     277182.9701  276.88  183.29  276.85188.5801  276.43  190.67  276.24
  193.14     276  201.92  275.4   206.8  275.09  207.88     275  226.05     275
  230.16  275.06233.0901  275.11  261.64  275.91  265.88     276  270.92     276
271.2001  275.99288.0701  275.25288.8601  275.2288.9301  275.2  289.77  275.16
  291.03  275.11  291.66  275.08292.3401  275.05293.4301     275  295.41     275
  336.54  275.86339.3301  275.91340.2301  275.91341.2401  275.9  341.92  275.93
341.9901  275.93342.6201  275.95342.7401  275.95343.0701  275.94343.4501  275.94
  343.54  275.93  343.91  275.92  347.76     276349.1801  276.01   350.5  276.01
352.6801     276353.6901     276357.4401  275.74358.0601  275.74358.4801  275.75
363.1001  275.46364.9501  275.51  366.67  275.42  367.38  275.38367.9901  275.35
368.8501  275.38  392.03  275.37396.9301  275.43  404.91  275.51408.2001  275.55
437.0701     276449.8101     276450.6301  275.98  452.85     276457.2101  275.99
478.8301  275.98497.7101  275.99  501.66     276511.1501     276  540.73  275.71
  541.67  275.73541.8801  275.73542.3401  275.74  545.97  275.72  551.72  275.59
552.1901  275.59  561.17     275  590.04  274.9617.9901     275670.3101     275
  672.35  275.74  673.23  275.9673.6901  275.86675.7001  275.97  678.04  275.95
678.9601  275.94680.2101  275.94680.8701  275.93  683.67  275.93686.0701  275.95
686.5701  275.96689.8101  275.97  691.66  275.97693.4401  275.98694.7601  275.98
  695.35  275.99698.6401  275.99   699.6  275.91700.4001  275.83  700.85  275.85
702.6901  275.87702.9001  275.85703.8701  275.84705.3301  275.75706.4601  275.63
707.8201  275.52  711.86     275713.3801  274.99   713.6  274.99713.6801     275
714.2701  274.99  715.86  274.98  725.66  274.97  730.03  274.95  742.35     275
  750.54  275.09751.1301  275.11763.7101  275.37764.1901  275.37767.6801  275.43
  768.61  275.44770.0001  275.46770.5601  275.47778.7601  275.43791.8401  275.15
792.1401  275.15793.0901  275.1793.2001  275.1  795.54  275.01795.6301  275.01
  795.85     275797.3201     275  797.86  275.01798.1901  275.01  801.92  275.02
  806.05     275  807.03     275  812.53  274.83  825.73  274.69836.0701  274.65
836.5601  274.66836.9401  274.67837.0601  274.68843.5801  274.86  846.28  274.96
849.1401     275  851.67  275.39  855.91     276  857.98  276.5  859.73     277
862.0101  277.64863.6401     278864.3101     278868.0701  277.39870.2701     277
872.3301  276.79  900.55     276914.9901     276915.6401  275.99915.8201  275.99
   924.3  275.48931.4801  275.07932.8801     275953.2101     275  953.86  275.01
954.7501  275.01958.5801  275.35  961.39  275.56  961.89  275.58   962.3  275.59
963.2001  275.63963.4301  275.63963.8101  275.61964.1001  275.63967.9701  275.55
971.0901  275.51975.7001  275.65978.4901  275.7  978.78  275.71981.5701  275.65
985.5901  275.58  985.77  275.57988.6901  275.4  994.66     275995.4801     275
996.1901  274.99  996.55  274.99998.3801  274.98999.6001  274.96 1000.32  274.96
 1001.77  274.95  1002.2  274.94 1003.05  274.89 1008.37  274.63  1012.2  274.61
 1016.82  274.55 1017.94  274.54 1020.16  274.49 1020.64  274.49 1021.09  274.48
 1021.39  274.48 1025.27  274.44 1028.68  274.42 1029.13  274.42 1030.12  274.41
 1033.28  274.41 1034.87  274.39 1059.67  274.18 1061.14  274.14 1065.48  274.03
 1065.56  274.02 1066.62  274.02 1068.91  274.1 1086.73  274.01 1109.03     274
 1112.71  273.99 1116.43  273.99 1120.08  273.93 1139.74  273.91 1140.74  273.91
 1141.89   273.9 1142.84   273.9 1144.45  273.88 1144.75  273.88 1151.76  273.76
 1158.85  273.62 1159.42  273.61 1169.45  273.41 1174.43  273.32 1174.62  273.32
 1180.02  273.24 1183.52  273.21 1183.71  273.21 1186.02  273.23 1189.02  273.27
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1189.39 | 273.28 | 1190.37 | 273.29 | 1191.48 | 273.31 | 1194.04 | 273.36 | 1194.73 | 273.37 |
| 1195.26 | 273.38 | 1215.1 | 273.88 | 1215.53 | 273.89 | 1217.43 | 273.92 | 1218.59 | 273.93 |
| 1219.48 | 274 | 1227.38 | 274.79 | 1228.52 | 274.86 | 1230.92 | 275 | 1231.07 | 275.02 |
| 1231.13 | 275.03 | 1231.84 | 275.1 | 1233.01 | 275.27 | 1235.16 | 275.37 | 1236.27 | 275.49 |
| 1237.8 | 275.62 | 1240.48 | 275.86 | 1241.31 | 275.95 | 1241.86 | 276 | 1250.33 | 277 |
| 1251.99 | 277.22 | 1252.72 | 277.3 | 1253.86 | 277.41 | 1258.16 | 277.89 | 1259.52 | 278 |
| 1271.41 | 278.73 | 1272.46 | 278.77 | 1273.1 | 278.79 | 1276.72 | 278.97 | 1277.23 | 279 |
| 1288.01 | 279.3 | 1288.51 | 279.32 | 1293.72 | 279.47 | 1300.21 | 279.63 | 1303.86 | 279.7 |
| 1304.74 | 279.73 | 1305.73 | 279.75 | 1308.2 | 279.76 | 1310.85 | 279.74 | 1311.18 | 279.72 |
| 1311.35 | 279.73 | 1312.2 | 279.7 | 1314.45 | 279.64 | 1314.92 | 279.63 | 1317.98 | 279.52 |
| 1318.5 | 279.5 | 1318.7 | 279.49 | 1323.52 | 279.39 | 1328.91 | 279.26 | 1332.52 | 279.18 |
| 1332.77 | 279.17 | 1335.55 | 279.07 | 1336.22 | 279.04 | 1339.89 | 279 | 1386.41 | 279 |
| 1416.02 | 278.39 | 1416.77 | 278.37 | 1417.36 | 278.36 | 1417.59 | 278.35 | 1418.03 | 278.34 |
| 1419.51 | 278.31 | 1422.82 | 278.22 | 1423.71 | 278.2 | 1424.11 | 278.19 | 1432.95 | 278.04 |
| 1434.96 | 278 | 1437.56 | 278 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 193.14 | .04 | 863.6401 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 193.14 | 863.6401 | 126.07 | 100 | 65.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2500.*

INPUT
Description:
Station Elevation Data num= 466

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 318.46 | 1.23 | 318.4 | 10.02 | 318.11 | 11.29 | 318.09 | 11.4 | 318.08 |
| 11.49 | 318.08 | 12.67 | 318.03 | 13.45 | 318.01 | 13.58 | 318 | 38.53 | 317.43 |
| 38.68 | 317.42 | 40.88 | 317.38 | 41.55 | 317.36 | 49.08 | 317.21 | 62.83 | 317.26 |
| 69.23 | 317 | 69.59 | 316.98 | 69.68 | 316.98 | 70.3 | 317 | 70.54 | 316.99 |
| 71.09 | 316.94 | 71.44 | 316.88 | 71.84 | 316.84 | 72.7 | 316.62 | 72.79 | 316.61 |
| 73.39 | 316.43 | 75.46 | 315.75 | 75.65 | 315.68 | 77.17 | 315.2 | 78.17 | 314.87 |
| 78.39 | 314.81 | 80.58 | 314.06 | 81.65 | 313.67 | 81.82 | 313.6 | 83.48 | 312.93 |
| 83.65 | 312.87 | 84.68 | 312.45 | 84.96 | 312.33 | 85.11 | 312.28 | 85.75 | 312.02 |
| 85.98 | 311.93 | 86.56 | 311.71 | 86.69 | 311.65 | 87.09 | 311.49 | 87.94 | 311.16 |
| 88.66 | 310.84 | 88.94 | 310.74 | 92.28 | 309.35 | 92.56 | 309.23 | 92.82 | 309.13 |
| 94.43 | 308.42 | 94.71 | 308.3 | 96.26 | 307.62 | 97.53 | 307.14 | 98.37 | 306.81 |
| 99.83 | 306.22 | 100.74 | 305.83 | 103.9 | 304.54 | 105.34 | 303.91 | 106.08 | 303.6 |
| 106.49 | 303.44 | 109.43 | 302.21 | 109.88 | 302 | 111.15 | 301.46 | 111.67 | 301.2 |
| 112.16 | 300.99 | 113.48 | 300.32 | 114.31 | 299.92 | 114.56 | 299.79 | 115.31 | 299.41 |
| 115.44 | 299.35 | 115.92 | 299.1 | 116.26 | 298.94 | 117.13 | 298.48 | 118.4 | 297.84 |
| 119.18 | 297.43 | 121.14 | 296.45 | 122.33 | 295.84 | 122.65 | 295.68 | 123.02 | 295.5 |
| 124.49 | 294.72 | 124.92 | 294.51 | 125.13 | 294.41 | 126.09 | 293.91 | 126.33 | 293.78 |
| 127.6 | 293.12 | 128.16 | 292.84 | 128.95 | 292.43 | 129.84 | 291.91 | 130.97 | 291.33 |
| 131.75 | 290.91 | 132.04 | 290.77 | 132.7 | 290.43 | 132.81 | 290.38 | 133.67 | 289.93 |
| 133.84 | 289.85 | 134.25 | 289.65 | 135 | 289.27 | 135.3 | 289.11 | 135.79 | 288.86 |
| 135.94 | 288.78 | 136.24 | 288.63 | 137.1 | 288.18 | 137.34 | 288.06 | 137.98 | 287.72 |
| 138.98 | 287.22 | 139.62 | 286.89 | 140.09 | 286.64 | 140.35 | 286.52 | 141.75 | 285.9 |
| 142.74 | 285.51 | 142.8 | 285.49 | 143.83 | 285.06 | 144.34 | 284.87 | 144.8 | 284.67 |
| 145.45 | 284.43 | 145.73 | 284.33 | 146.56 | 284.06 | 146.94 | 283.92 | 147.69 | 283.62 |
| 148.48 | 283.32 | 150.83 | 282.63 | 151.11 | 282.54 | 151.47 | 282.45 | 151.66 | 282.4 |
| 152.84 | 282.05 | 155.19 | 281.38 | 157.17 | 280.82 | 157.29 | 280.79 | 159.42 | 280.17 |
| 164.04 | 278.92 | 166.27 | 278.35 | 167.18 | 278.15 | 167.43 | 278.09 | 167.98 | 277.97 |
| 170.36 | 277.51 | 172.87 | 277.11 | 173.28 | 277.04 | 177.19 | 276.45 | 177.62 | 276.4 |
| 179.22 | 276.18 | 179.53 | 276.13 | 184.71 | 275.37 | 184.99 | 275.32 | 186.23 | 275.18 |
| 189.18 | 274.8 | 200.6 | 274.05 | 201.51 | 273.97 | 216.7 | 273.95 | 222.59 | 274.03 |
| 250.01 | 274.71 | 254.23 | 274.71 | 268.57 | 274.09 | 269.23 | 274.05 | 269.29 | 274.05 |
| 271.05 | 273.98 | 271.57 | 273.95 | 273.05 | 273.89 | 274.71 | 273.89 | 311.44 | 274.58 |
| 313.04 | 274.57 | 313.61 | 274.59 | 313.66 | 274.59 | 314.19 | 274.61 | 314.29 | 274.61 |
| 314.57 | 274.6 | 314.89 | 274.6 | 314.96 | 274.59 | 315.27 | 274.58 | 318.49 | 274.64 |
| 323.45 | 274.64 | 326.59 | 274.43 | 327.45 | 274.43 | 331.32 | 274.2 | 332.87 | 274.24 |
| 334.9 | 274.13 | 335.41 | 274.11 | 336.13 | 274.13 | 355.51 | 274.1 | 393.18 | 274.6 |
| 403.83 | 274.6 | 404.52 | 274.58 | 406.38 | 274.6 | 455.13 | 274.6 | 479.87 | 274.37 |
| 480.66 | 274.38 | 480.83 | 274.38 | 481.22 | 274.39 | 484.25 | 274.38 | 489.06 | 274.27 |
| 489.46 | 274.27 | 496.97 | 273.8 | 521.11 | 273.72 | 544.48 | 273.8 | 588.24 | 273.8 |
| 589.95 | 274.39 | 590.68 | 274.52 | 591.07 | 274.49 | 592.75 | 274.57 | 596.52 | 274.55 |
| 597.07 | 274.54 | 601.42 | 274.56 | 601.84 | 274.57 | 608.69 | 274.58 | 609.18 | 274.59 |
| 611.93 | 274.59 | 612.74 | 274.53 | 613.4 | 274.46 | 613.78 | 274.48 | 615.32 | 274.49 |
| 615.5 | 274.48 | 616.31 | 274.47 | 617.53 | 274.4 | 618.47 | 274.3 | 619.61 | 274.21 |
| 622.99 | 273.8 | 624.44 | 273.79 | 624.51 | 273.8 | 625 | 273.79 | 626.33 | 273.78 |
| 655.34 | 273.86 | 655.83 | 273.88 | 666.35 | 274.07 | 666.75 | 274.07 | 672.08 | 274.15 |
| 678.94 | 274.11 | 689.88 | 273.87 | 690.13 | 273.87 | 690.92 | 273.83 | 691.01 | 273.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 692.97 | 273.76 | 693.05 | 273.76 | 693.23 | 273.75 | 694.46 | 273.75 | 694.91 | 273.76 |
| 702.58 | 273.74 | 707.18 | 273.6 | 726.87 | 273.44 | 730.6 | 273.45 | 731.12 | 273.46 |
| 737.78 | 273.5 | 742.07 | 273.6 | 743.02 | 273.61 | 743.91 | 273.72 | 745.15 | 273.82 |
| 750.36 | 273.84 | 750.5 | 273.82 | 751.57 | 273.65 | 760.69 | 273.74 | 771.85 | 273.77 |
| 772.39 | 273.84 | 772.51 | 273.85 | 772.6 | 273.85 | 773.51 | 273.94 | 774.74 | 273.93 |
| 778.18 | 273.97 | 780.51 | 273.89 | 781.27 | 273.88 | 781.44 | 273.87 | 781.71 | 273.87 |
| 781.97 | 273.86 | 782.98 | 273.86 | 783.27 | 273.87 | 783.48 | 273.86 | 784.53 | 273.87 |
| 787.57 | 273.97 | 795.17 | 274.35 | 795.55 | 274.45 | 796.3 | 274.58 | 796.8 | 274.71 |
| 797.09 | 274.8 | 797.35 | 274.87 | 797.82 | 275.02 | 798.23 | 275.14 | 798.63 | 275.12 |
| 799.23 | 275.06 | 799.43 | 275.06 | 799.64 | 275.02 | 801.55 | 274.79 | 802.24 | 274.74 |
| 806.4 | 274.74 | 812.04 | 274.83 | 813.68 | 274.9 | 814.48 | 274.92 | 819.65 | 275.14 |
| 820.12 | 275.21 | 821.61 | 275.4 | 821.93 | 275.45 | 822.6 | 275.49 | 822.86 | 275.5 |
| 823.41 | 275.53 | 823.64 | 275.54 | 823.78 | 275.55 | 824.18 | 275.57 | 827.28 | 275.59 |
| 828.83 | 275.62 | 829.22 | 275.64 | 829.94 | 275.68 | 832 | 275.86 | 832.27 | 275.88 |
| 833.72 | 276.01 | 833.88 | 276.02 | 834.12 | 276.04 | 835.71 | 276.15 | 835.78 | 276.16 |
| 835.94 | 276.17 | 836.02 | 276.18 | 836.57 | 276.21 | 837.03 | 276.25 | 840.43 | 276.4 |
| 842.2 | 276.53 | 842.27 | 276.53 | 843.8 | 276.66 | 844.02 | 276.67 | 844.16 | 276.69 |
| 845.23 | 276.76 | 845.94 | 276.76 | 849.85 | 276.26 | 849.96 | 276.25 | 852.31 | 275.92 |
| 854.51 | 275.74 | 854.99 | 275.72 | 863.46 | 275.44 | 863.52 | 275.44 | 872.22 | 275.06 |
| 884.64 | 274.78 | 885.86 | 274.77 | 891.41 | 274.79 | 892.8 | 274.77 | 893.1 | 274.76 |
| 900.06 | 274.66 | 900.75 | 274.64 | 900.94 | 274.64 | 901.69 | 274.59 | 904.34 | 274.44 |
| 919.16 | 273.83 | 940.87 | 273.95 | 941.43 | 273.96 | 942.51 | 273.96 | 944.26 | 274.08 |
| 946.94 | 274.3 | 949.6 | 274.6 | 950.14 | 274.64 | 951.78 | 274.78 | 952.19 | 274.78 |
| 952.5 | 274.82 | 955.88 | 274.96 | 959.45 | 274.9 | 959.86 | 274.88 | 959.96 | 274.87 |
| 964.88 | 274.81 | 967.86 | 274.74 | 968.17 | 274.74 | 973.86 | 274.48 | 975.45 | 274.46 |
| 975.64 | 274.46 | 978.76 | 274.31 | 985.13 | 273.93 | 986.01 | 273.92 | 986.76 | 273.9 |
| 987.15 | 273.9 | 992.72 | 273.82 | 998.72 | 273.54 | 999.77 | 273.5 | 1000.1 | 273.5 |
| 1005.44 | 273.64 | 1006.26 | 273.64 | 1006.41 | 273.65 | 1007.17 | 273.65 | 1007.78 | 273.64 |
| 1008.79 | 273.64 | 1009.35 | 273.63 | 1009.99 | 273.63 | 1012.36 | 273.59 | 1012.87 | 273.59 |
| 1013.35 | 273.58 | 1019.55 | 273.54 | 1024.92 | 273.41 | 1025.62 | 273.38 | 1025.75 | 273.38 |
| 1027.38 | 273.32 | 1028.07 | 273.31 | 1054.55 | 273.18 | 1060.75 | 273.06 | 1061.97 | 273.06 |
| 1064.42 | 273.12 | 1115.16 | 273.04 | 1123.84 | 272.99 | 1126.43 | 273.02 | 1126.92 | 273.02 |
| 1127.35 | 273.03 | 1128.62 | 273.03 | 1131.61 | 273.06 | 1131.96 | 273.06 | 1145.08 | 273.23 |
| 1145.4 | 273.24 | 1159.78 | 273.36 | 1160.45 | 273.36 | 1161.06 | 273.37 | 1176.37 | 273.45 |
| 1177.09 | 273.44 | 1177.29 | 273.44 | 1177.99 | 273.43 | 1178.47 | 273.43 | 1186.8 | 273.34 |
| 1198.77 | 273.51 | 1199.33 | 273.51 | 1211.07 | 273.73 | 1211.23 | 273.73 | 1217.36 | 273.95 |
| 1218.22 | 273.97 | 1218.49 | 273.98 | 1220.98 | 274.04 | 1221.13 | 274.04 | 1224.25 | 274.1 |
| 1225.2 | 274.16 | 1226.11 | 274.24 | 1233.63 | 274.82 | 1237.41 | 275 | 1237.57 | 275.02 |
| 1237.64 | 275.03 | 1238.39 | 275.09 | 1239.64 | 275.23 | 1241.94 | 275.33 | 1243.12 | 275.43 |
| 1247.62 | 275.74 | 1248.51 | 275.82 | 1249.09 | 275.86 | 1258.08 | 276.7 | 1258.14 | 276.7 |
| 1259.91 | 276.88 | 1260.04 | 276.89 | 1260.69 | 276.95 | 1261.91 | 277.04 | 1266.5 | 277.45 |
| 1267.95 | 277.54 | 1280.65 | 278.13 | 1282.45 | 278.18 | 1286.86 | 278.35 | 1298.37 | 278.6 |
| 1298.91 | 278.62 | 1316.24 | 278.92 | 1317.29 | 278.93 | 1322.76 | 278.89 | 1323.11 | 278.87 |
| 1323.3 | 278.88 | 1326.61 | 278.78 | 1327.11 | 278.77 | 1330.93 | 278.64 | 1331.14 | 278.64 |
| 1345.9 | 278.34 | 1346.17 | 278.34 | 1349.14 | 278.26 | 1349.85 | 278.23 | 1369.69 | 278.2 |
| 1378.86 | 278.05 | 1379.17 | 278.05 | 1391.15 | 277.8 | 1400.23 | 277.74 | 1401.39 | 277.78 |
| 1403.36 | 277.76 | 1434.39 | 277.72 | 1436.49 | 277.69 | 1436.74 | 277.68 | 1455.29 | 277.4 |
| 1458.06 | 277.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 189.18 | .04 | 845.23 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 189.18 | 845.23 | 126.07 | 100 | 65.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2400.*

INPUT
Description:
Station Elevation Data num= 479

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.91 | 1.21 | 315.8 | 6.86 | 315.4 | 9.81 | 315.23 | 11.06 | 315.18 |
| 11.17 | 315.17 | 11.25 | 315.17 | 12.41 | 315.11 | 13.16 | 315.08 | 13.29 | 315.07 |
| 33.96 | 314.63 | 37.72 | 314.6 | 37.87 | 314.59 | 40.03 | 314.55 | 40.37 | 314.54 |
| 40.68 | 314.54 | 48.06 | 314.42 | 57.64 | 314.45 | 58.51 | 314.46 | 58.65 | 314.46 |
| 61.52 | 314.52 | 67.78 | 314.39 | 68.14 | 314.37 | 68.23 | 314.37 | 68.83 | 314.38 |
| 69.07 | 314.38 | 69.6 | 314.34 | 69.78 | 314.32 | 69.95 | 314.29 | 70.33 | 314.26 |
| 71.18 | 314.09 | 71.26 | 314.08 | 71.66 | 313.99 | 71.86 | 313.94 | 72.48 | 313.77 |
| 73.88 | 313.42 | 74.06 | 313.37 | 76.01 | 312.88 | 76.54 | 312.74 | 76.75 | 312.69 |
| 78.9 | 312.13 | 79.54 | 311.94 | 79.94 | 311.83 | 80.1 | 311.78 | 80.94 | 311.51 |
| 81.74 | 311.27 | 81.9 | 311.22 | 83.19 | 310.8 | 83.95 | 310.58 | 84.18 | 310.51 |
| 84.75 | 310.35 | 85.27 | 310.18 | 86.1 | 309.93 | 86.81 | 309.69 | 87.08 | 309.61 |
| 90.35 | 308.55 | 92.46 | 307.85 | 92.73 | 307.75 | 94.24 | 307.23 | 94.84 | 307.06 |
| 97.74 | 306.18 | 98.22 | 306.02 | 101.72 | 304.92 | 102.02 | 304.81 | 104.26 | 304.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 105.77 | 303.61 | 107.14 | 303.16 | 107.58 | 303 | 108.83 | 302.59 | 109.33 | 302.4 |
| 109.84 | 302.23 | 111.11 | 301.63 | 111.91 | 301.27 | 112.16 | 301.15 | 112.89 | 300.81 |
| 113.02 | 300.76 | 113.49 | 300.53 | 113.82 | 300.38 | 114.68 | 299.96 | 115.51 | 299.57 |
| 115.93 | 299.38 | 116.46 | 299.1 | 116.68 | 298.99 | 118.61 | 298.09 | 119.23 | 297.77 |
| 119.77 | 297.51 | 120.09 | 297.36 | 120.45 | 297.18 | 121.07 | 296.88 | 121.89 | 296.45 |
| 122.3 | 296.24 | 122.51 | 296.14 | 123.45 | 295.68 | 123.68 | 295.56 | 126 | 294.42 |
| 126.25 | 294.3 | 127.12 | 293.82 | 128.22 | 293.25 | 128.99 | 292.82 | 129.27 | 292.68 |
| 129.92 | 292.33 | 130.03 | 292.26 | 130.87 | 291.79 | 131.44 | 291.49 | 132.18 | 291.07 |
| 132.95 | 290.65 | 133.1 | 290.56 | 133.39 | 290.39 | 135.09 | 289.44 | 136.07 | 288.92 |
| 136.69 | 288.55 | 137.16 | 288.28 | 137.41 | 288.14 | 137.69 | 287.99 | 138.14 | 287.76 |
| 138.78 | 287.42 | 139.75 | 287.02 | 139.81 | 287 | 140.82 | 286.55 | 141.31 | 286.34 |
| 141.77 | 286.13 | 142.4 | 285.86 | 142.68 | 285.75 | 143.49 | 285.45 | 143.87 | 285.29 |
| 145.37 | 284.63 | 147.68 | 283.81 | 147.94 | 283.7 | 148.48 | 283.52 | 150.81 | 282.7 |
| 151.95 | 282.28 | 152.4 | 282.13 | 153.88 | 281.62 | 154 | 281.57 | 157.02 | 280.51 |
| 163.1 | 278.53 | 164.47 | 278.13 | 166.8 | 277.49 | 169.26 | 276.88 | 169.65 | 276.78 |
| 173.48 | 275.91 | 175.47 | 275.49 | 175.77 | 275.42 | 181.12 | 274.24 | 185.22 | 273.6 |
| 194.41 | 273.01 | 195.13 | 272.95 | 207.36 | 272.89 | 212.09 | 272.95 | 231.29 | 273.38 |
| 234.15 | 273.42 | 237.54 | 273.42 | 237.72 | 273.41 | 249.07 | 272.94 | 250.21 | 272.88 |
| 252.68 | 272.78 | 254.01 | 272.77 | 283.55 | 273.25 | 284.15 | 273.24 | 284.83 | 273.24 |
| 285.76 | 273.26 | 286.32 | 273.26 | 286.38 | 273.25 | 286.63 | 273.24 | 289.22 | 273.29 |
| 293.21 | 273.28 | 295.73 | 273.11 | 296.15 | 273.11 | 296.43 | 273.12 | 299.54 | 272.94 |
| 300.78 | 272.96 | 301.94 | 272.91 | 302.42 | 272.88 | 302.83 | 272.86 | 303.4 | 272.88 |
| 319 | 272.83 | 349.29 | 273.2 | 357.86 | 273.2 | 358.41 | 273.19 | 399.12 | 273.2 |
| 419.01 | 273.03 | 419.65 | 273.04 | 419.79 | 273.04 | 420.1 | 273.05 | 426.4 | 272.96 |
| 426.72 | 272.96 | 432.76 | 272.6 | 452.18 | 272.54 | 506.17 | 272.6 | 507.54 | 273.04 |
| 508.13 | 273.14 | 508.44 | 273.11 | 509.8 | 273.18 | 511.37 | 273.17 | 511.99 | 273.16 |
| 525.23 | 273.19 | 526.41 | 273.1 | 526.71 | 273.11 | 527.95 | 273.12 | 528.09 | 273.11 |
| 528.74 | 273.1 | 529.72 | 273.05 | 530.48 | 272.97 | 531.4 | 272.91 | 534.12 | 272.6 |
| 535.14 | 272.59 | 535.29 | 272.59 | 535.34 | 272.6 | 535.74 | 272.59 | 536.81 | 272.58 |
| 560.13 | 272.63 | 560.53 | 272.64 | 568.99 | 272.78 | 569.31 | 272.78 | 571.66 | 272.81 |
| 573.22 | 272.82 | 573.6 | 272.83 | 579.11 | 272.79 | 587.91 | 272.6 | 588.11 | 272.6 |
| 588.75 | 272.57 | 588.83 | 272.57 | 590.4 | 272.51 | 590.46 | 272.51 | 590.61 | 272.5 |
| 598.13 | 272.48 | 601.83 | 272.37 | 617.66 | 272.22 | 624.26 | 272.24 | 625.17 | 272.25 |
| 636.96 | 272.28 | 644.53 | 272.44 | 646.21 | 272.45 | 647.78 | 272.67 | 649.97 | 272.86 |
| 659.17 | 272.88 | 659.43 | 272.83 | 661.32 | 272.49 | 677.43 | 272.6 | 683.61 | 272.55 |
| 697.15 | 272.58 | 698.11 | 272.72 | 698.31 | 272.74 | 698.47 | 272.73 | 700.08 | 272.91 |
| 702.27 | 272.89 | 708.33 | 272.95 | 708.79 | 272.94 | 709.32 | 272.91 | 712.45 | 272.78 |
| 713.79 | 272.76 | 714.09 | 272.74 | 714.57 | 272.75 | 715.04 | 272.72 | 716.49 | 272.72 |
| 716.71 | 272.71 | 716.81 | 272.71 | 717.33 | 272.72 | 717.7 | 272.71 | 719.56 | 272.68 |
| 724.93 | 272.78 | 738.36 | 273.26 | 739.02 | 273.46 | 739.93 | 273.62 | 740.35 | 273.68 |
| 741.24 | 273.93 | 741.75 | 274.1 | 742.2 | 274.23 | 743.76 | 274.75 | 744.48 | 274.68 |
| 745.53 | 274.55 | 745.89 | 274.55 | 746.26 | 274.46 | 749.64 | 273.94 | 750.85 | 273.81 |
| 750.9 | 273.8 | 757.99 | 273.68 | 758.2 | 273.67 | 760.43 | 273.68 | 763.84 | 273.64 |
| 781.63 | 273.86 | 781.7 | 273.87 | 782.44 | 273.97 | 785.09 | 274.26 | 785.65 | 274.33 |
| 785.94 | 274.35 | 786.56 | 274.36 | 786.83 | 274.36 | 787.29 | 274.37 | 787.38 | 274.37 |
| 788.67 | 274.4 | 788.92 | 274.4 | 789.63 | 274.42 | 789.73 | 274.42 | 795.1 | 274.25 |
| 797.15 | 274.22 | 797.83 | 274.22 | 798.52 | 274.23 | 799.8 | 274.27 | 800.02 | 274.28 |
| 800.11 | 274.28 | 803.44 | 274.49 | 803.93 | 274.51 | 806.76 | 274.69 | 810 | 274.83 |
| 810.12 | 274.84 | 810.4 | 274.85 | 810.55 | 274.86 | 811.51 | 274.89 | 812.33 | 274.94 |
| 818.34 | 275.05 | 821.47 | 275.21 | 821.59 | 275.22 | 824.29 | 275.39 | 824.68 | 275.41 |
| 824.93 | 275.43 | 826.81 | 275.51 | 827.57 | 275.51 | 828.97 | 275.4 | 829.3 | 275.38 |
| 830.42 | 275.24 | 831.48 | 275.15 | 831.73 | 275.12 | 831.84 | 275.1 | 834.34 | 274.84 |
| 836.68 | 274.68 | 837.19 | 274.67 | 846.2 | 274.33 | 846.27 | 274.33 | 855.52 | 273.8 |
| 868.73 | 273.55 | 875.42 | 273.59 | 875.79 | 273.58 | 875.92 | 273.58 | 885.13 | 273.32 |
| 885.86 | 273.29 | 889.68 | 273.08 | 905.44 | 272.67 | 929.12 | 272.91 | 930.28 | 272.91 |
| 932.13 | 273 | 934.63 | 273.2 | 934.98 | 273.22 | 937.82 | 273.64 | 938.39 | 273.71 |
| 938.85 | 273.76 | 939.87 | 273.89 | 940.14 | 273.92 | 940.28 | 273.93 | 940.57 | 273.96 |
| 940.9 | 274.01 | 942.3 | 274.16 | 944.49 | 274.35 | 946.2 | 274.34 | 948.29 | 274.28 |
| 948.72 | 274.25 | 948.83 | 274.24 | 957.24 | 273.78 | 957.57 | 273.77 | 963.62 | 273.36 |
| 965.3 | 273.35 | 965.51 | 273.34 | 967.51 | 273.28 | 975.6 | 272.85 | 976.53 | 272.84 |
| 981.21 | 272.73 | 982.03 | 272.72 | 984.16 | 272.67 | 985.13 | 272.62 | 990.05 | 272.41 |
| 991.17 | 272.38 | 991.53 | 272.38 | 997.2 | 272.68 | 998.07 | 272.71 | 998.4 | 272.73 |
| 998.64 | 272.72 | 998.9 | 272.73 | 999.04 | 272.73 | 999.69 | 272.72 | 1001.36 | 272.72 |
| 1001.62 | 272.73 | 1002.04 | 272.72 | 1004.56 | 272.69 | 1012.2 | 272.66 | 1014.75 | 272.55 |
| 1015.87 | 272.49 | 1017.92 | 272.41 | 1020.54 | 272.24 | 1021.26 | 272.23 | 1023.77 | 272.22 |
| 1023.9 | 272.23 | 1056.03 | 272.1 | 1056.12 | 272.09 | 1057.32 | 272.1 | 1059.92 | 272.15 |
| 1102.28 | 272.06 | 1108.17 | 272.09 | 1108.84 | 272.1 | 1109.66 | 272.09 | 1123.12 | 272.06 |
| 1125.87 | 272.12 | 1126.4 | 272.12 | 1126.85 | 272.13 | 1127.85 | 272.13 | 1131.38 | 272.21 |
| 1131.76 | 272.21 | 1141.01 | 272.41 | 1141.49 | 272.43 | 1142.8 | 272.47 | 1143.88 | 272.52 |
| 1145.71 | 272.58 | 1146.05 | 272.6 | 1178.52 | 273.57 | 1178.98 | 273.57 | 1179.75 | 273.56 |
| 1181.22 | 273.56 | 1190.07 | 273.47 | 1192.04 | 273.47 | 1202.8 | 273.65 | 1203.41 | 273.65 |
| 1215.89 | 273.79 | 1216.05 | 273.8 | 1222.58 | 274.1 | 1223.49 | 274.12 | 1223.78 | 274.13 |
| 1226.43 | 274.18 | 1226.59 | 274.19 | 1229.9 | 274.27 | 1231.52 | 274.37 | 1231.88 | 274.4 |
| 1239.88 | 274.86 | 1243.04 | 274.97 | 1243.9 | 275.01 | 1244.07 | 275.02 | 1244.14 | 275.03 |
| 1244.95 | 275.08 | 1246.28 | 275.19 | 1248.72 | 275.28 | 1249.98 | 275.37 | 1254.76 | 275.63 |
| 1265.89 | 276.4 | 1265.95 | 276.4 | 1268.66 | 276.6 | 1274.84 | 277.01 | 1276.38 | 277.08 |
| 1289.88 | 277.53 | 1295.91 | 277.68 | 1296.49 | 277.7 | 1308.74 | 277.9 | 1309.3 | 277.92 |
| 1319.68 | 278.08 | 1326.74 | 278.09 | 1331.77 | 278.08 | 1334.67 | 278.04 | 1335.05 | 278.02 |
| 1335.24 | 278.02 | 1343.36 | 277.79 | 1343.59 | 277.78 | 1359.28 | 277.51 | 1359.57 | 277.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1363.48 | 277.42 | 1384.58 | 277.4 | 1389.21 | 277.3 | 1407.41 | 276.6 | 1412.17 | 276.58 |
| 1417.07 | 276.49 | 1418.3 | 276.55 | 1420.39 | 276.52 | 1420.48 | 276.53 | 1422.79 | 276.54 |
| 1453.39 | 277.04 | 1454.96 | 277.02 | 1455.63 | 277.02 | 1455.89 | 277.01 | 1456.39 | 277 |
| 1462.84 | 276.92 | 1463.29 | 276.91 | 1475.62 | 276.8 | 1478.57 | 276.8 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 185.22 | .04 | 826.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 185.22 | 826.81 | 126.07 | 100 | 65.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2300.*

INPUT
Description:
Station Elevation Data num= 490

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.37 | 1.18 | 313.2 | 7.09 | 312.56 | 9.6 | 312.34 | 10.82 | 312.27 |
| 10.93 | 312.26 | 11.01 | 312.26 | 12.14 | 312.19 | 12.88 | 312.16 | 13.01 | 312.15 |
| 13.35 | 312.13 | 33.23 | 311.78 | 36.91 | 311.77 | 37.06 | 311.76 | 39.17 | 311.72 |
| 39.51 | 311.71 | 39.81 | 311.71 | 41.14 | 311.68 | 47.03 | 311.63 | 56.4 | 311.68 |
| 57.26 | 311.7 | 57.4 | 311.7 | 60.2 | 311.78 | 66.33 | 311.77 | 66.68 | 311.76 |
| 66.77 | 311.76 | 67.36 | 311.77 | 67.59 | 311.76 | 68.28 | 311.72 | 68.45 | 311.7 |
| 68.83 | 311.67 | 69.65 | 311.55 | 69.74 | 311.54 | 70.12 | 311.48 | 70.32 | 311.44 |
| 71.72 | 311.19 | 72.3 | 311.08 | 72.48 | 311.05 | 73.94 | 310.78 | 74.38 | 310.71 |
| 74.9 | 310.61 | 75.11 | 310.58 | 77.21 | 310.19 | 78.23 | 309.98 | 78.39 | 309.95 |
| 79.99 | 309.6 | 80.15 | 309.57 | 81.13 | 309.34 | 81.55 | 309.25 | 82.16 | 309.14 |
| 82.38 | 309.09 | 82.93 | 308.99 | 83.45 | 308.87 | 84.26 | 308.7 | 84.95 | 308.53 |
| 85.21 | 308.48 | 88.69 | 307.69 | 88.93 | 307.64 | 92.23 | 306.85 | 96.12 | 306.03 |
| 96.52 | 305.94 | 99.55 | 305.29 | 99.84 | 305.22 | 101.64 | 304.81 | 102.03 | 304.73 |
| 106.5 | 303.73 | 107 | 303.6 | 107.47 | 303.49 | 108.73 | 302.95 | 109.52 | 302.63 |
| 109.77 | 302.52 | 110.6 | 302.17 | 111.06 | 301.95 | 111.39 | 301.81 | 113.04 | 301.09 |
| 113.45 | 300.92 | 114.19 | 300.55 | 116.07 | 299.73 | 116.68 | 299.43 | 117.21 | 299.18 |
| 117.52 | 299.03 | 118.48 | 298.59 | 119.28 | 298.17 | 119.69 | 297.97 | 119.89 | 297.88 |
| 120.81 | 297.45 | 121.04 | 297.35 | 122.79 | 296.52 | 123.31 | 296.28 | 124.41 | 295.73 |
| 125.48 | 295.16 | 126.51 | 294.59 | 127.15 | 294.22 | 127.25 | 294.15 | 128.08 | 293.64 |
| 128.24 | 293.55 | 128.63 | 293.32 | 129.63 | 292.71 | 130.25 | 292.34 | 130.53 | 292.16 |
| 131.36 | 291.67 | 131.59 | 291.53 | 132.21 | 291.16 | 133.16 | 290.61 | 133.77 | 290.22 |
| 134.22 | 289.92 | 134.48 | 289.76 | 134.75 | 289.59 | 135.19 | 289.32 | 135.81 | 288.95 |
| 136.77 | 288.53 | 136.82 | 288.5 | 137.81 | 288.03 | 138.29 | 287.82 | 139.63 | 287.17 |
| 140.43 | 286.83 | 140.79 | 286.67 | 141.5 | 286.31 | 142.27 | 285.95 | 143.1 | 285.6 |
| 144.52 | 284.98 | 145.13 | 284.72 | 145.31 | 284.65 | 146.44 | 284.16 | 147.59 | 283.68 |
| 148.7 | 283.19 | 150.59 | 282.41 | 150.7 | 282.36 | 152.36 | 281.64 | 153.66 | 281.11 |
| 159.31 | 278.9 | 159.75 | 278.74 | 160.18 | 278.57 | 160.42 | 278.49 | 160.95 | 278.29 |
| 162.66 | 277.67 | 163.23 | 277.47 | 163.71 | 277.31 | 164.07 | 277.18 | 166.02 | 276.52 |
| 167.27 | 276.14 | 168.14 | 275.85 | 169.77 | 275.36 | 170.58 | 275.13 | 174.85 | 273.84 |
| 176.98 | 273.24 | 177.24 | 273.16 | 178.44 | 272.95 | 181.26 | 272.4 | 188.21 | 271.97 |
| 188.76 | 271.92 | 196.65 | 271.84 | 201.59 | 271.86 | 218.28 | 272.14 | 220.84 | 272.12 |
| 220.99 | 272.12 | 229.57 | 271.78 | 230.44 | 271.74 | 231.08 | 271.72 | 231.4 | 271.7 |
| 232.3 | 271.67 | 233.31 | 271.66 | 255.66 | 271.91 | 256.12 | 271.91 | 256.63 | 271.9 |
| 257.33 | 271.92 | 257.56 | 271.92 | 257.76 | 271.91 | 257.99 | 271.91 | 259.95 | 271.93 |
| 260.67 | 271.93 | 261.34 | 271.92 | 262.45 | 271.92 | 262.97 | 271.91 | 264.88 | 271.8 |
| 265.4 | 271.8 | 267.76 | 271.67 | 268.7 | 271.69 | 269.93 | 271.63 | 270.24 | 271.62 |
| 270.68 | 271.63 | 282.48 | 271.56 | 284.32 | 271.57 | 290.71 | 271.63 | 291.3 | 271.63 |
| 305.4 | 271.8 | 311.88 | 271.8 | 312.3 | 271.79 | 313.43 | 271.8 | 342.32 | 271.79 |
| 343.1 | 271.8 | 358.15 | 271.69 | 358.74 | 271.69 | 358.97 | 271.7 | 360.82 | 271.69 |
| 363.75 | 271.64 | 363.99 | 271.64 | 368.56 | 271.4 | 424.1 | 271.4 | 425.14 | 271.69 |
| 425.59 | 271.76 | 425.82 | 271.74 | 426.84 | 271.78 | 428.03 | 271.78 | 428.5 | 271.77 |
| 434.97 | 271.78 | 435.87 | 271.79 | 438.52 | 271.79 | 439.01 | 271.76 | 439.41 | 271.73 |
| 439.64 | 271.74 | 440.69 | 271.74 | 441.18 | 271.73 | 441.92 | 271.7 | 442.5 | 271.65 |
| 443.19 | 271.6 | 445.25 | 271.4 | 446.02 | 271.39 | 464.93 | 271.4 | 465.23 | 271.41 |
| 471.63 | 271.48 | 471.88 | 271.48 | 475.12 | 271.5 | 479.29 | 271.47 | 485.95 | 271.32 |
| 486.1 | 271.32 | 486.58 | 271.3 | 486.64 | 271.3 | 487.83 | 271.26 | 487.88 | 271.26 |
| 487.99 | 271.25 | 493.18 | 271.23 | 493.68 | 271.22 | 496.48 | 271.14 | 508.46 | 271.01 |
| 536.13 | 271.06 | 546.98 | 271.29 | 549.4 | 271.3 | 551.64 | 271.63 | 554.79 | 271.91 |
| 567.48 | 271.91 | 567.81 | 271.92 | 567.98 | 271.92 | 568.36 | 271.84 | 571.07 | 271.32 |
| 594.18 | 271.47 | 603.03 | 271.37 | 622.46 | 271.39 | 623.83 | 271.6 | 624.12 | 271.62 |
| 624.35 | 271.61 | 626.65 | 271.89 | 629.79 | 271.85 | 638.49 | 271.94 | 639.14 | 271.92 |
| 639.9 | 271.87 | 644.39 | 271.67 | 646.32 | 271.64 | 646.75 | 271.62 | 647.43 | 271.62 |
| 648.1 | 271.58 | 649.11 | 271.59 | 649.24 | 271.58 | 650.19 | 271.59 | 650.5 | 271.57 |
| 650.65 | 271.57 | 651.4 | 271.58 | 651.92 | 271.55 | 654.59 | 271.49 | 662.3 | 271.59 |
| 681.55 | 272.17 | 682.5 | 272.47 | 683.81 | 272.7 | 684.41 | 272.79 | 685.68 | 273.16 |
| 686.41 | 273.4 | 687.06 | 273.6 | 688.26 | 274.01 | 689.3 | 274.35 | 690.32 | 274.25 |
| 691.83 | 274.04 | 692.35 | 274.03 | 692.88 | 273.9 | 697.73 | 273.08 | 699.46 | 272.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 699.53 | 272.87 | 709.7 | 272.62 | 710 | 272.61 | 713.2 | 272.59 | 715.6 | 272.53 |
| 730.47 | 272.5 | 730.52 | 272.49 | 743.6 | 272.57 | 743.71 | 272.58 | 744.77 | 272.73 |
| 749.37 | 273.21 | 749.78 | 273.23 | 750.67 | 273.24 | 751.05 | 273.24 | 751.71 | 273.25 |
| 751.84 | 273.24 | 753.7 | 273.26 | 754.06 | 273.26 | 755.07 | 273.27 | 755.22 | 273.26 |
| 762.91 | 272.92 | 766.84 | 272.81 | 767.83 | 272.82 | 768.24 | 272.83 | 769.66 | 272.85 |
| 769.98 | 272.86 | 770.1 | 272.86 | 774.87 | 273.12 | 775.58 | 273.15 | 780.24 | 273.39 |
| 784.29 | 273.51 | 784.46 | 273.52 | 784.86 | 273.53 | 785.08 | 273.54 | 786.46 | 273.56 |
| 787.62 | 273.62 | 796.25 | 273.7 | 800.73 | 273.89 | 800.9 | 273.91 | 805.69 | 274.17 |
| 808.4 | 274.27 | 809.2 | 274.27 | 810.69 | 274.2 | 811.03 | 274.19 | 812.22 | 274.06 |
| 813.34 | 274 | 813.61 | 273.97 | 813.73 | 273.96 | 816.38 | 273.76 | 818.86 | 273.63 |
| 824.22 | 273.43 | 824.78 | 273.4 | 828.94 | 273.22 | 829.01 | 273.22 | 838.82 | 272.53 |
| 854.2 | 272.32 | 859.72 | 272.38 | 859.91 | 272.38 | 860.3 | 272.37 | 860.44 | 272.37 |
| 862.02 | 272.31 | 862.35 | 272.29 | 870.19 | 271.98 | 875.02 | 271.72 | 883.48 | 271.55 |
| 891.72 | 271.5 | 911.96 | 271.75 | 916.19 | 271.84 | 916.82 | 271.86 | 918.04 | 271.86 |
| 920.01 | 271.92 | 923.03 | 272.15 | 928.21 | 273.03 | 928.49 | 273.07 | 928.95 | 273.13 |
| 929.29 | 273.2 | 930.79 | 273.44 | 933.1 | 273.74 | 934.91 | 273.75 | 937.13 | 273.66 |
| 937.59 | 273.61 | 938.92 | 273.5 | 939.68 | 273.42 | 945.96 | 272.88 | 946.61 | 272.83 |
| 953.37 | 272.24 | 955.37 | 272.23 | 957.5 | 272.19 | 958.03 | 272.16 | 966.07 | 271.78 |
| 967.06 | 271.76 | 967.91 | 271.73 | 974.63 | 271.55 | 981.38 | 271.27 | 982.57 | 271.25 |
| 982.95 | 271.25 | 988.96 | 271.73 | 989.89 | 271.77 | 990.06 | 271.79 | 990.24 | 271.8 |
| 990.49 | 271.8 | 990.77 | 271.81 | 990.91 | 271.81 | 991.6 | 271.79 | 992.74 | 271.81 |
| 993.37 | 271.81 | 993.64 | 271.82 | 997.34 | 271.8 | 997.88 | 271.79 | 1004.86 | 271.77 |
| 1010.92 | 271.4 | 1011.71 | 271.33 | 1011.85 | 271.33 | 1012.55 | 271.26 | 1013.69 | 271.16 |
| 1052.67 | 271.13 | 1055.43 | 271.17 | 1100.32 | 271.09 | 1103.71 | 271.12 | 1104.13 | 271.12 |
| 1107.27 | 271.15 | 1121.03 | 271.14 | 1122.4 | 271.12 | 1125.31 | 271.22 | 1125.87 | 271.22 |
| 1126.36 | 271.23 | 1127.41 | 271.24 | 1127.78 | 271.24 | 1139.06 | 271.56 | 1140.67 | 271.63 |
| 1141.36 | 271.65 | 1163.66 | 272.85 | 1181.11 | 273.68 | 1181.29 | 273.68 | 1181.6 | 273.69 |
| 1182.64 | 273.69 | 1183.42 | 273.68 | 1183.96 | 273.69 | 1195.43 | 273.59 | 1198.78 | 273.63 |
| 1204.87 | 273.78 | 1219.16 | 273.84 | 1220.71 | 273.86 | 1220.88 | 273.86 | 1227.79 | 274.24 |
| 1228.76 | 274.26 | 1229.07 | 274.27 | 1231.87 | 274.33 | 1232.04 | 274.33 | 1235.56 | 274.44 |
| 1237.65 | 274.55 | 1246.13 | 274.89 | 1249.48 | 274.98 | 1250.39 | 275.01 | 1250.58 | 275.02 |
| 1250.65 | 275.03 | 1251.5 | 275.07 | 1252.91 | 275.16 | 1255.5 | 275.24 | 1273.69 | 276.1 |
| 1273.75 | 276.11 | 1275.75 | 276.2 | 1275.9 | 276.21 | 1276.63 | 276.25 | 1278 | 276.31 |
| 1281.45 | 276.51 | 1284.81 | 276.62 | 1299.12 | 276.93 | 1319.1 | 277.2 | 1319.7 | 277.22 |
| 1322.7 | 277.27 | 1328.93 | 277.3 | 1329.45 | 277.32 | 1330.7 | 277.33 | 1343.51 | 277.25 |
| 1346.58 | 277.19 | 1346.98 | 277.17 | 1347.19 | 277.17 | 1350.92 | 277.07 | 1351.48 | 277.06 |
| 1355.79 | 276.93 | 1356.03 | 276.93 | 1363.64 | 276.74 | 1372.66 | 276.67 | 1372.96 | 276.67 |
| 1399.48 | 276.6 | 1404.37 | 276.45 | 1409.81 | 276.16 | 1410.16 | 276.15 | 1414.75 | 275.86 |
| 1423.66 | 275.41 | 1428.71 | 275.38 | 1430.01 | 275.33 | 1433.9 | 275.23 | 1435.2 | 275.33 |
| 1437.42 | 275.29 | 1437.52 | 275.29 | 1439.43 | 275.33 | 1439.55 | 275.33 | 1472.39 | 276.36 |
| 1473.15 | 276.36 | 1474.76 | 276.34 | 1475.57 | 276.34 | 1482.4 | 276.28 | 1499.07 | 276.2 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 181.26 | .04 | 808.4 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 181.26 | 808.4 | 126.07 | 100 | 65.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 2200.*

INPUT
Description:
Station Elevation Data num= 454

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.82 | 1.16 | 310.6 | 6.57 | 309.8 | 6.93 | 309.75 | 9.39 | 309.46 |
| 10.69 | 309.35 | 10.77 | 309.35 | 11.88 | 309.27 | 12.6 | 309.23 | 12.72 | 309.22 |
| 13.06 | 309.2 | 32.51 | 308.93 | 36.11 | 308.94 | 36.25 | 308.93 | 38.32 | 308.89 |
| 38.64 | 308.88 | 38.94 | 308.88 | 40.24 | 308.86 | 55.17 | 308.9 | 56.01 | 308.93 |
| 56.14 | 308.93 | 61.46 | 309.11 | 64.88 | 309.16 | 65.22 | 309.15 | 66.11 | 309.15 |
| 66.63 | 309.13 | 66.79 | 309.13 | 66.96 | 309.11 | 67.33 | 309.09 | 68.13 | 309.02 |
| 69.38 | 308.88 | 70.15 | 308.81 | 72.33 | 308.58 | 72.76 | 308.53 | 76.14 | 308.19 |
| 76.68 | 308.12 | 78.24 | 307.94 | 78.4 | 307.92 | 79.36 | 307.78 | 79.63 | 307.75 |
| 80.36 | 307.69 | 80.58 | 307.66 | 81.12 | 307.64 | 81.62 | 307.56 | 82.42 | 307.47 |
| 86.48 | 306.95 | 86.75 | 306.92 | 88.5 | 306.69 | 88.76 | 306.66 | 90.21 | 306.47 |
| 91.4 | 306.33 | 92.19 | 306.25 | 94.02 | 306.04 | 94.42 | 305.99 | 97.37 | 305.66 |
| 97.66 | 305.63 | 99.42 | 305.42 | 99.8 | 305.38 | 104.17 | 304.87 | 104.66 | 304.8 |
| 105.12 | 304.75 | 107.13 | 303.98 | 107.37 | 303.88 | 108.07 | 303.63 | 108.19 | 303.59 |
| 108.64 | 303.38 | 108.96 | 303.25 | 110.57 | 302.61 | 110.97 | 302.46 | 111.48 | 302.21 |
| 111.69 | 302.1 | 113.54 | 301.36 | 114.13 | 301.08 | 114.65 | 300.85 | 114.95 | 300.71 |
| 115.3 | 300.56 | 115.89 | 300.29 | 116.68 | 299.9 | 117.07 | 299.7 | 117.27 | 299.62 |
| 118.17 | 299.23 | 118.39 | 299.13 | 120.11 | 298.37 | 121.69 | 297.64 | 122.74 | 297.08 |
| 123.48 | 296.65 | 123.74 | 296.49 | 124.37 | 296.11 | 124.47 | 296.04 | 125.43 | 295.4 |
| 125.82 | 295.16 | 126.53 | 294.69 | 126.8 | 294.5 | 127.26 | 294.22 | 127.41 | 294.12 |
| 127.68 | 293.93 | 128.49 | 293.41 | 128.71 | 293.26 | 129.32 | 292.89 | 130.25 | 292.31 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 130.85 | 291.89 | 131.29 | 291.56 | 131.8 | 291.19 | 132.23 | 290.89 | 132.85 | 290.47 |
| 133.78 | 290.04 | 133.83 | 290.01 | 134.8 | 289.52 | 135.27 | 289.3 | 136.58 | 288.58 |
| 137.36 | 288.22 | 137.72 | 288.05 | 138.41 | 287.66 | 139.16 | 287.27 | 141.96 | 285.86 |
| 142.13 | 285.78 | 144.36 | 284.66 | 145.45 | 284.09 | 147.3 | 283.21 | 147.41 | 283.15 |
| 149.03 | 282.32 | 150.31 | 281.71 | 156.68 | 278.79 | 156.91 | 278.68 | 159.11 | 277.7 |
| 159.67 | 277.46 | 160.14 | 277.25 | 160.48 | 277.09 | 162.02 | 276.42 | 162.4 | 276.26 |
| 163.61 | 275.78 | 164.46 | 275.43 | 166.06 | 274.81 | 166.86 | 274.52 | 167.96 | 274.1 |
| 168.26 | 273.99 | 171.03 | 272.92 | 173.11 | 272.17 | 173.37 | 272.08 | 174.54 | 271.83 |
| 177.3 | 271.2 | 182.39 | 270.9 | 187.74 | 270.79 | 188.66 | 270.78 | 202.41 | 270.85 |
| 204.15 | 270.83 | 204.25 | 270.83 | 210.66 | 270.6 | 211.09 | 270.58 | 211.31 | 270.58 |
| 211.55 | 270.57 | 211.92 | 270.55 | 228.08 | 270.58 | 228.43 | 270.57 | 228.66 | 270.58 |
| 228.95 | 270.58 | 229.06 | 270.57 | 231.17 | 270.57 | 232.38 | 270.55 | 232.73 | 270.55 |
| 234.23 | 270.48 | 234.38 | 270.48 | 235.97 | 270.41 | 236.61 | 270.41 | 237.66 | 270.37 |
| 237.96 | 270.37 | 245.96 | 270.29 | 265.91 | 270.4 | 266.19 | 270.39 | 266.96 | 270.4 |
| 286.56 | 270.39 | 287.08 | 270.4 | 299.1 | 270.35 | 301.09 | 270.32 | 301.25 | 270.32 |
| 304.35 | 270.21 | 312.74 | 270.19 | 313.54 | 270.18 | 342.03 | 270.2 | 342.73 | 270.34 |
| 343.04 | 270.38 | 343.2 | 270.37 | 343.89 | 270.39 | 344.7 | 270.39 | 345.02 | 270.38 |
| 347.47 | 270.38 | 347.64 | 270.39 | 351.81 | 270.39 | 352.14 | 270.38 | 352.42 | 270.36 |
| 352.57 | 270.36 | 353.21 | 270.37 | 353.28 | 270.36 | 353.62 | 270.36 | 354.98 | 270.3 |
| 356.37 | 270.19 | 374.27 | 270.19 | 374.44 | 270.18 | 379.47 | 270.15 | 383.98 | 270.05 |
| 384.09 | 270.04 | 385.26 | 270 | 386.18 | 270 | 388.89 | 269.97 | 391.13 | 269.91 |
| 399.25 | 269.79 | 435.3 | 269.84 | 449.44 | 270.13 | 452.58 | 270.15 | 455.51 | 270.58 |
| 459.61 | 270.95 | 476.14 | 270.95 | 476.58 | 270.96 | 476.8 | 270.96 | 477.28 | 270.86 |
| 480.82 | 270.16 | 510.92 | 270.33 | 522.45 | 270.19 | 547.76 | 270.19 | 549.54 | 270.48 |
| 549.92 | 270.51 | 550.22 | 270.5 | 553.23 | 270.86 | 557.31 | 270.81 | 568.64 | 270.92 |
| 569.49 | 270.89 | 570.49 | 270.83 | 576.33 | 270.57 | 578.84 | 270.53 | 579.4 | 270.49 |
| 580.29 | 270.5 | 581.17 | 270.44 | 582.48 | 270.45 | 582.65 | 270.44 | 583.88 | 270.45 |
| 584.29 | 270.42 | 584.49 | 270.43 | 585.46 | 270.43 | 586.15 | 270.4 | 589.62 | 270.3 |
| 599.66 | 270.39 | 616.5 | 270.81 | 624.74 | 271.09 | 625.98 | 271.47 | 627.68 | 271.78 |
| 628.46 | 271.89 | 630.12 | 272.38 | 631.08 | 272.7 | 631.92 | 272.96 | 634.83 | 273.96 |
| 636.17 | 273.81 | 638.14 | 273.53 | 638.81 | 273.52 | 639.5 | 273.33 | 645.81 | 272.23 |
| 648.08 | 271.95 | 648.17 | 271.93 | 661.81 | 271.54 | 665.97 | 271.5 | 669.09 | 271.41 |
| 688.47 | 271.28 | 705.57 | 271.29 | 705.71 | 271.3 | 707.09 | 271.49 | 712.04 | 271.97 |
| 713.08 | 272.09 | 713.62 | 272.12 | 714.79 | 272.12 | 715.28 | 272.11 | 716.14 | 272.12 |
| 716.31 | 272.11 | 717.98 | 272.11 | 718.73 | 272.12 | 719.19 | 272.11 | 720.52 | 272.13 |
| 720.71 | 272.11 | 730.73 | 271.58 | 735.84 | 271.41 | 737.13 | 271.41 | 739.52 | 271.44 |
| 739.93 | 271.45 | 740.1 | 271.45 | 746.31 | 271.75 | 747.23 | 271.78 | 751.98 | 272.01 |
| 752.52 | 272.02 | 753.31 | 272.06 | 758.58 | 272.19 | 758.8 | 272.2 | 759.33 | 272.21 |
| 759.6 | 272.23 | 761.4 | 272.24 | 762.92 | 272.31 | 774.15 | 272.35 | 780.22 | 272.59 |
| 785.28 | 272.86 | 786 | 272.88 | 786.46 | 272.92 | 789.98 | 273.02 | 790.84 | 273.03 |
| 792.4 | 273 | 792.77 | 273 | 794.02 | 272.89 | 795.21 | 272.85 | 795.62 | 272.82 |
| 801.03 | 272.57 | 801.6 | 272.56 | 802.77 | 272.51 | 803.1 | 272.49 | 806.7 | 272.36 |
| 807.29 | 272.32 | 811.69 | 272.11 | 811.76 | 272.11 | 822.12 | 271.27 | 838.36 | 271.1 |
| 844.2 | 271.18 | 844.4 | 271.18 | 844.81 | 271.16 | 844.96 | 271.16 | 846.62 | 271.08 |
| 856.09 | 270.59 | 856.32 | 270.58 | 860.36 | 270.36 | 869.29 | 270.28 | 878 | 270.34 |
| 899.38 | 270.67 | 904.51 | 270.81 | 905.81 | 270.81 | 907.88 | 270.85 | 910.68 | 271.05 |
| 911.07 | 271.07 | 914.25 | 271.71 | 914.88 | 271.83 | 915.4 | 271.94 | 916.55 | 272.16 |
| 917.01 | 272.24 | 917.69 | 272.39 | 919.27 | 272.72 | 921.72 | 273.14 | 923.63 | 273.15 |
| 925.97 | 273.05 | 926.45 | 272.98 | 926.58 | 272.97 | 927.86 | 272.82 | 928.67 | 272.71 |
| 935.29 | 271.94 | 941.58 | 271.27 | 943.13 | 271.12 | 945.01 | 271.12 | 945.24 | 271.11 |
| 947.48 | 271.09 | 948.04 | 271.06 | 948.95 | 271.03 | 956.54 | 270.71 | 958.49 | 270.65 |
| 958.94 | 270.63 | 965.58 | 270.41 | 966.13 | 270.4 | 972.72 | 270.14 | 974.37 | 270.13 |
| 980.72 | 270.77 | 981.7 | 270.84 | 982.07 | 270.88 | 982.33 | 270.87 | 982.63 | 270.89 |
| 982.78 | 270.89 | 983.51 | 270.87 | 985.38 | 270.9 | 985.67 | 270.91 | 997.51 | 270.89 |
| 999.79 | 270.71 | 1003.91 | 270.4 | 1004.75 | 270.31 | 1004.9 | 270.3 | 1006.85 | 270.08 |
| 1010.46 | 270.07 | 1010.61 | 270.08 | 1055.65 | 270.22 | 1098.35 | 270.12 | 1101.93 | 270.16 |
| 1104.94 | 270.18 | 1105.69 | 270.2 | 1120.23 | 270.21 | 1121.68 | 270.19 | 1124.76 | 270.32 |
| 1125.35 | 270.32 | 1125.86 | 270.34 | 1126.97 | 270.34 | 1127.37 | 270.35 | 1130.93 | 270.5 |
| 1131.35 | 270.5 | 1139.28 | 270.78 | 1140.97 | 270.87 | 1141.7 | 270.9 | 1161.83 | 272.33 |
| 1164.47 | 272.54 | 1183.69 | 273.8 | 1183.88 | 273.8 | 1184.21 | 273.81 | 1186.14 | 273.81 |
| 1186.71 | 273.82 | 1198.83 | 273.72 | 1202.37 | 273.76 | 1208.79 | 273.92 | 1223.89 | 273.91 |
| 1225.53 | 273.93 | 1225.71 | 273.93 | 1233.01 | 274.39 | 1234.04 | 274.41 | 1234.36 | 274.42 |
| 1237.32 | 274.48 | 1237.5 | 274.48 | 1243.43 | 274.71 | 1253.84 | 274.95 | 1255.92 | 274.98 |
| 1256.89 | 275.01 | 1257.08 | 275.02 | 1257.15 | 275.02 | 1259.54 | 275.12 | 1281.5 | 275.81 |
| 1281.56 | 275.81 | 1283.67 | 275.86 | 1283.83 | 275.86 | 1289.69 | 276.1 | 1333.26 | 276.57 |
| 1339.84 | 276.56 | 1340.39 | 276.58 | 1341.71 | 276.59 | 1355.13 | 276.41 | 1355.25 | 276.41 |
| 1358.92 | 276.32 | 1359.13 | 276.32 | 1368.22 | 276.08 | 1368.48 | 276.07 | 1376.51 | 275.87 |
| 1386.04 | 275.84 | 1386.36 | 275.83 | 1414.37 | 275.8 | 1419.54 | 275.6 | 1425.29 | 275.22 |
| 1425.66 | 275.2 | 1430.51 | 274.81 | 1439.92 | 274.21 | 1445.25 | 274.17 | 1446.62 | 274.1 |
| 1450.73 | 273.98 | 1452.11 | 274.1 | 1454.45 | 274.05 | 1454.55 | 274.05 | 1456.58 | 274.11 |
| 1456.7 | 274.12 | 1457.14 | 274.13 | 1491.39 | 275.68 | 1519.58 | 275.6 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 177.3 | .04 | 789.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 177.3 | 789.98 | 126.07 | 100 | 65.25 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align  RS: 2100

INPUT
Description:
Station Elevation Data  num=  327

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.281.130005 | | 3086.419922 | | 3076.779907 | 306.949.179932 | | 306.57 | |
| 10.44995 | 306.4411.60999 | 306.3512.31995 | | 306.3112.43994 | | 306.29 12.7699 | | 306.27 | |
| 22.47998 | 306.2331.77991 | 306.0835.29993 | | 306.1135.43994 | | 306.137.77991 | | 306.05 | |
| 38.06995 | 306.0539.33997 | 306.0342.92993 | | 306.0353.93994 | | 306.1354.76001 | | 306.16 | |
| 54.89001 | 306.1660.08997 | 306.4363.42993 | | 306.5563.84998 | | 306.5465.29993 | | 306.53 | |
| 67.82996 | 306.4469.14001 | 306.4270.70996 | | 306.37 76.6499 | | 306.2777.84998 | | 306.22 | |
| 78.56995 | 306.2578.77991 | 306.2479.30994 | | 306.2879.79993 | | 306.2589.35999 | | 306.06 | |
| 102.7699 | 306 | 104.97 | 305.25105.7699 | | 305 | 106.21 | 304.8 | 108.49 | 304 |
| 109.2 | 303.66 | 111 | 303 | 111.58 | 302.73113.2999 | | 302 | 114.46 | 301.43 |
| 115.5299 | 301117.9199 | | 300 | 118.98 | 299.54 | 120 | 299 | 120.98 | 298.4 |
| 121.59 | 298 | 122.48 | 297.35 | 123.01 | 297 | 123.97 | 296.3124.4199 | | 296 |
| 124.83 | 295.7 | 125.84 | 295 | 127.34 | 294 | 127.96 | 293.53 | 128.6 | 293 |
| 129.2799 | 292.46 | 129.88 | 292 | 130.84 | 291.52131.7899 | | 291 | 132.25 | 290.78 |
| 133.5299 | 290 | 134.64 | 289.43135.3199 | | 289 | 136.85 | 288.13 | 138.49 | 287.17 |
| 138.7899 | 287 | 141.14 | 285.64 | 142.2 | 285 | 144.01 | 284 | 145.7 | 283 |
| 146.95 | 282.31 | 152.64 | 279.3153.1799 | | 279153.4099 | | 278.88156.5599 | | 277.19 |
| 156.8999 | 277158.3999 | | 276.19158.7699 | | 276 | 159.96 | 275.43160.7899 | | 275 |
| 162.75 | 274.08 | 163.13 | 273.91 | 167.21 | 272 | 169.5 | 271 | 170.64 | 270.72 |
| 173.34 | 270 | 178.83 | 269.74 | 210.1 | 269.01 | 212.59 | 269.01 | 213.34 | 269 |
| 230.7899 | 268.99 | 231.51 | 269244.5599 | | 269.01 | 244.98 | 269272.6699 | | 268.99 |
| 290.0499 | 268.58 | 334.47 | 268.62351.8999 | | 268.98355.7699 | | 269 | 359.38 | 269.54 |
| 364.4299 | 270384.7999 | | 269.99 | 385.34 | 270 | 385.61 | 270 | 386.21 | 269.87 |
| 390.5699 | 269427.6599 | | 269.2 | 441.87 | 269.01473.0599 | | 269 | 475.26 | 269.36 |
| 475.73 | 269.39 | 476.1 | 269.38479.7999 | | 269.83 | 484.83 | 269.77498.7999 | | 269.91 |
| 499.84 | 269.87501.0699 | | 269.79508.2699 | | 269.46 | 511.37 | 269.41512.0599 | | 269.37 |
| 513.1499 | 269.37 | 514.23 | 269.3 | 515.85 | 269.31516.0599 | | 269.3 | 517.58 | 269.31 |
| 518.08 | 269.28 | 519.52 | 269.29520.3699 | | 269.24 | 524.65 | 269.11 | 537.02 | 269.2 |
| 557.78 | 269.68567.9299 | | 270 | 569.46 | 270.48571.5499 | | 270.86 | 572.52 | 271 |
| 574.5599 | 271.6575.7399 | | 272 | 576.78 | 272.32 | 578.7 | 273580.3699 | | 273.56 |
| 582.0099 | 273.38584.4399 | | 273.02 | 585.27 | 273586.1199 | | 272.77 | 593.9 | 271.37 |
| 596.6899 | 271.02596.7999 | | 271609.7399 | | 270.58613.1199 | | 270.49 | 613.61 | 270.47 |
| 618.7399 | 270.41 | 622.59 | 270.29 | 626.59 | 270.23643.2499 | | 270.12 | 646.47 | 270.07 |
| 646.5499 | 270.06 | 667.54 | 270 | 667.72 | 270.02 | 669.42 | 270.25675.5099 | | 270.83 |
| 676.7999 | 270.97 | 677.46 | 271 | 678.9 | 271679.5099 | | 270.99680.5699 | | 270.99 |
| 680.78 | 270.98 | 682.83 | 270.97683.7599 | | 270.98 | 684.33 | 270.97 | 685.96 | 270.98 |
| 686.2 | 270.96698.5499 | | 270.25 | 704.85 | 270706.4399 | | 270 | 707.1 | 270.01 |
| 709.3799 | 270.02 | 709.89 | 270.03 | 710.09 | 270.03717.7499 | | 270.38718.8799 | | 270.41 |
| 724.7399 | 270.67 | 725.4 | 270.69726.3699 | | 270.73732.8699 | | 270.87 | 733.14 | 270.88 |
| 733.79 | 270.89734.1299 | | 270.91 | 736.35 | 270.92 | 738.22 | 271752.0599 | | 271 |
| 759.2599 | 271.26 | 759.54 | 271.28 | 765.77 | 271.59 | 766.66 | 271.62 | 767.23 | 271.66 |
| 771.5699 | 271.78774.1199 | | 271.8774.4999 | | 271.81775.8199 | | 271.71777.0699 | | 271.7 |
| 777.3699 | 271.68783.8099 | | 271.5 | 785.04 | 271.45 | 785.39 | 271.43789.1799 | | 271.28 |
| 789.7999 | 271.24794.4299 | | 271794.5099 | | 271 | 805.42 | 270 | 822.53 | 269.87 |
| 828.6799 | 269.97 | 828.89 | 269.97829.3199 | | 269.95 | 829.48 | 269.95 | 831.23 | 269.85 |
| 831.6 | 269.82842.3799 | | 269.17 | 845.7 | 269 | 855.11 | 269886.7999 | | 269.59 |
| 892.21 | 269.76895.7599 | | 269.77899.1199 | | 270905.3699 | | 271.4907.7499 | | 272 |
| 910.33 | 272.53 | 912.34 | 272.55914.8099 | | 272.43915.3199 | | 272.35916.7999 | | 272.14 |
| 916.85 | 272.13 | 917.65 | 272924.6299 | | 271931.2499 | | 270.18932.8799 | | 270 |
| 937.47 | 270938.0599 | | 269.97964.0499 | | 269 | 965.79 | 269 | 972.48 | 269.82 |
| 973.5099 | 269.9 | 973.7 | 269.93 | 973.9 | 269.95974.1799 | | 269.95974.4899 | | 269.97 |
| 974.65 | 269.97 | 975.42 | 269.95 | 977.39 | 269.99977.6899 | | 270 | 990.17 | 270 |
| 996.91 | 269.4 | 997.79 | 269.28 | 997.95 | 269.27999.9999 | | 269 1003.81 | | 269 |
| 1003.96 | 269.01 1051.41 | | 269.25 1096.39 | | 269.15 | 1100.5 | 269.2 1100.63 | | 269.2 |
| 1103.33 | 269.23 1104.12 | | 269.25 1119.43 | | 269.28 1120.96 | | 269.25 | 1124.2 | 269.42 |
| 1124.82 | 269.42 1125.36 | | 269.44 1126.53 | | 269.45 1126.95 | | 269.46 | 1130.7 | 269.64 |
| 1131.14 | 269.65 | 1139.5 | 270 1142.05 | | 270.15 1161.31 | | 271.84 1163.25 | | 272 |
| 1166.03 | 272.27 1186.28 | | 273.91 1186.48 | | 273.91 1186.83 | | 273.93 1188.86 | | 273.93 |
| 1189.46 | 273.95 1202.22 | | 273.84 1205.95 | | 273.88 1212.72 | | 274.07 1228.62 | | 273.98 |
| 1230.35 | 274 1230.54 | | 274 1238.23 | | 274.53 1239.31 | | 274.55 1239.65 | | 274.57 |
| 1242.96 | 274.63 1248.78 | | 274.85 | 1249.2 | 274.86 1262.36 | | 274.99 1262.64 | | 275 |
| 1271.48 | 275.2 | 1289.3 | 275.51 1291.76 | | 275.52 1297.93 | | 275.69 | 1337.7 | 275.78 |
| 1343.83 | 275.86 1350.76 | | 275.82 1351.34 | | 275.84 1352.73 | | 275.84 1366.99 | | 275.57 |
| 1389.38 | 275 1429.26 | | 275 1434.71 | | 274.75 1440.76 | | 274.27 1441.15 | | 274.25 |
| 1446.26 | 273.76 1456.17 | | 273.01 1461.79 | | 272.96 1463.23 | | 272.88 1467.56 | | 272.72 |
| 1469.01 | 272.88 1471.48 | | 272.81 1473.72 | | 272.9 1473.85 | | 272.91 1474.31 | | 272.92 |
| 1510.39 | 275 1540.08 | | 275 | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

```
       0     .05  173.34     .04771.5699     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        173.34771.5699           107.79  731.98 1606.73             .1       .3

CROSS SECTION


RIVER: WASH25B
REACH: Centerline Align   RS: 1368.02

INPUT
Description:
Station Elevation Data    num=     474
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  286.52.4699707  286.52.9100342  286.541.839966  286.562.439941  286.55
5.709961  286.516.660034  286.527.419922  286.559.390015   286.610.42993  286.68
12.53003  286.8613.44995     287   18.62  287.8918.79993  287.9219.22998     288
   24.38   288.824.73999  288.8525.90002     28926.95996  289.1529.59998  289.46
30.91003  289.6931.32996  289.7432.89001     29033.69995  290.1537.31995     291
38.91992  291.3342.09998  292.0542.23999  292.0943.76001  292.4244.03003  292.48
44.54993   292.645.51001   292.845.67993  292.8245.82996  292.8546.73999  292.93
46.83997  292.9447.78992     29349.65002  293.0250.17993  293.0651.48999  293.03
51.92993  293.0152.40002     29352.57996  292.9952.78003  292.9853.45996  292.94
53.72998  292.9461.29993  293.0862.21997     29362.51001  292.95   64.87     292
66.42993  291.2867.16992     29168.95996  290.2469.55994     29070.19995  289.73
71.93994     28973.33997  288.4175.82996  287.3876.73999     287    77.5  286.67
79.16992     28680.01001  285.6681.57996     28582.73999  284.5784.20996     284
86.67993     283   86.75  282.9888.77002     28289.42993  281.7190.81995     281
92.48999  280.2795.10999  279.1395.40002     27997.68994     27898.03003  277.88
100.2899     277  100.65  276.84102.6699     276  103.27  275.76  105.37     275
  105.74  274.84107.1699  274.35  108.03     274  110.21  273.15110.5599     273
112.4399  272.25  113.01     272114.4399  271.35  115.26     271116.4399  270.47
  117.53     270119.2899  269.27   119.9     269  122.11  268.08  122.28     268
  122.58  267.89   123.2  267.65  124.51  267.09  124.71     267125.0699  266.88
  127.99     266  130.13  265.33  131.12     265  133.75  264.08  134.01     264
  136.28  263.26137.0599     263  138.34  262.57  140.02     262  141.21   261.6
  144.25     261  162.84     261169.8199  261.74170.5399  261.81  172.21     262
  179.35     263183.2899     263  184.15  262.97   184.4  262.96  187.03  262.73
  192.49     262  198.53  261.99   207.5  261.99210.0399     262  210.26     262
  213.66  262.03  214.98  262.03  217.14  262.05  217.86  262.04  222.62     262
  228.76  261.99  232.27  261.99  237.03     262  257.36     262  266.46  262.13
266.9199  262.14269.3099  262.18273.4299  262.35  287.46  262.99  290.48  262.99
294.6799  262.98   299.9     263  318.72     263  325.39  262.55  328.45  262.37
  328.72  262.38  330.72  262.35  346.91  262.57  347.87  262.59  349.51  262.63
  351.39  262.68  352.64   262.7  354.87  262.74  363.24     263  366.98  263.49
  372.26     264  376.84     264  381.49  263.92  395.24  263.03  395.52  263.01
  395.65  263.01     396     263  396.21     263  396.91  263.04  401.66  263.19
  405.37  263.25  405.85  263.23  406.28  263.22  406.84  263.21  407.61  263.22
  429.47     263  433.12     263  433.39  262.99  433.65  262.99  440.83  262.76
  446.58  262.61  447.28  262.59  458.93  262.71  478.39     263  478.91     263
  479.19  263.03  481.22  263.26  491.87     264  495.64     264  502.41  263.28
   504.8     263   505.5     263  505.95  262.99   507.4  262.99  508.31  262.98
  509.25  262.98  524.48  262.45  539.22     262  540.27  261.98  540.95  261.98
  549.22  261.85  559.03     262  582.31     262  585.39  261.99  586.18  261.99
  589.09     262  593.55     262  596.14  262.65  597.34     263  599.89   263.7
  601.08     264  603.48  264.48  605.84     265  614.14     265  617.73  264.36
  619.94     264  624.47   263.3  626.24     263  628.77  262.63  629.17  262.58
  632.78     262  635.54  261.99  639.65  261.99   640.8  261.98   642.1  261.91
  643.97  261.82  651.75  261.55  652.65  261.57  653.36  261.55  655.93  261.57
  656.78  261.55  658.06  261.51   658.5  261.49  659.53  261.47  668.69     261
  669.96  260.86  670.22  260.82  673.22  260.44  676.18  260.04  676.54     260
  687.71  259.98696.0699  259.98  698.11  259.99  704.96  259.99  705.92     260
  709.25     260  711.33  260.18   721.5  260.96  721.92  260.99  721.99     261
  724.95  261.02  725.08  261.02  727.77     261   727.9     261  728.55  260.87
  732.98     260   734.6     260  744.83  259.97  745.45  259.97  757.22     260
760.5699  260.25  763.13  260.43  769.86  260.94  770.31  260.97  770.39  260.98
  770.49  260.99  770.63     261   770.7     261  770.89  261.01774.2599  261.08
     775  261.08  778.68  261.11  782.04  261.16   783.2  261.16  789.87  261.15
  794.21  261.16  802.79  261.02   803.8     261  804.89     261  806.05  260.99
  808.46  260.99  809.47  260.98  810.28  260.99  814.03  260.99  815.24     261
  823.89     261  824.54  261.01     828  261.03  828.61  261.04  828.68  261.04
  829.64  261.06  830.05  261.09   831.4   261.2  837.58     262  852.35     262
  854.62  261.71  859.71  261.14  860.12  261.09  860.44  261.05  860.83     261
  864.02  260.48   868.1     260  868.53  259.99  891.24  259.98  899.45  259.45
  903.48   259.2  903.79  259.19  906.12  259.18  908.37  259.18  908.59  259.19
  913.03  259.03  913.97  259.03  914.73  259.02  921.52  259.02922.3099  259.03
  923.36  259.03  927.58  259.02  929.01  259.01  931.75  259.01  934.78     259
  935.62  258.98  935.75  258.97  935.83  258.97  937.51  258.93  939.05  258.89
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 939.73 | 258.87 | 940.4299 | 258.86 | 952.96 | 258.6 | 959.73 | 258.47 | 959.9 | 258.46 |
| 986.8199 | 258.01 | 988.25 | 258.01 | 1000.15 | 258 | 1001.62 | 257.98 | 1004.47 | 257.95 |
| 1005.6 | 257.94 | 1005.85 | 257.94 | 1010.73 | 258 | 1033.81 | 258 | 1034.71 | 257.97 |
| 1038.37 | 257.95 | 1042 | 257.96 | 1043.13 | 258 | 1043.53 | 258.02 | 1046.87 | 258.15 |
| 1047.73 | 258.25 | 1048.7 | 258.31 | 1048.95 | 258.34 | 1050.41 | 258.46 | 1051.38 | 258.51 |
| 1054.68 | 258.56 | 1057.13 | 258.56 | 1057.87 | 258.55 | 1059.57 | 258.5 | 1060.72 | 258.43 |
| 1062.92 | 258.29 | 1065.86 | 258.03 | 1066.09 | 258 | 1067.79 | 257.96 | 1072.9 | 257.79 |
| 1075.73 | 257.99 | 1080.13 | 257.99 | 1083.28 | 257.98 | 1102.46 | 257.99 | 1103.56 | 257.94 |
| 1107.63 | 257.68 | 1108.88 | 257.67 | 1110.39 | 257.67 | 1112.84 | 257.66 | 1113.33 | 257.66 |
| 1113.53 | 257.67 | 1116.38 | 257.62 | 1118.94 | 257.6 | 1120.63 | 257.59 | 1127.08 | 257.64 |
| 1132.33 | 257.67 | 1133.15 | 257.66 | 1136.55 | 257.61 | 1141.27 | 257.53 | 1141.64 | 257.52 |
| 1145.91 | 257.45 | 1149.95 | 257.4 | 1154.53 | 257.55 | 1159.33 | 257.88 | 1161.34 | 257.94 |
| 1167.25 | 257.94 | 1174.22 | 257.91 | 1196.24 | 257.18 | 1200.22 | 257.12 | 1205.41 | 257.07 |
| 1210.36 | 257 | 1219.59 | 257 | 1224.39 | 257.32 | 1225.2 | 257.37 | 1229.32 | 257.56 |
| 1234.61 | 258 | 1238.43 | 258.38 | 1244.1 | 259 | 1245.14 | 259.13 | 1246.92 | 259.33 |
| 1251.7 | 259.85 | 1251.92 | 259.86 | 1253.27 | 260 | 1259.04 | 260.73 | 1259.88 | 260.83 |
| 1260.07 | 260.85 | 1260.47 | 260.86 | 1261.93 | 261 | 1267 | 261.5 | 1271.33 | 261.88 |
| 1271.5 | 261.89 | 1272.12 | 261.94 | 1272.49 | 261.96 | 1273.75 | 262 | 1274.06 | 262 |
| 1274.88 | 261.92 | 1274.94 | 261.93 | 1275.08 | 261.94 | 1276.82 | 261.7 | 1277.1 | 261.71 |
| 1281.15 | 261.57 | 1293.57 | 261.01 | 1294.25 | 261 | 1303.25 | 260.3 | 1306.93 | 260 |
| 1307.19 | 260 | 1308.62 | 259.85 | 1310.74 | 260 | 1311.91 | 260.05 | 1312.36 | 260.06 |
| 1314.03 | 260.11 | 1315.84 | 260.09 | 1317.1 | 260 | 1317.72 | 259.94 | 1317.91 | 259.93 |
| 1320.1 | 259.69 | 1320.79 | 259.63 | 1325.37 | 259.06 | 1325.94 | 259 | 1326.62 | 258.93 |
| 1328.71 | 258.84 | 1329.62 | 258.84 | 1330.45 | 258.86 | 1334.74 | 258.99 | 1334.86 | 259 |
| 1335.8 | 259.06 | 1337.61 | 259.23 | 1339.54 | 259.45 | 1343.86 | 260 | 1344.8 | 260.01 |
| 1345.14 | 260.01 | 1346.44 | 260.02 | 1346.82 | 260.02 | 1350.51 | 260.04 | 1350.79 | 260.04 |
| 1357.63 | 260 | 1360.84 | 259.47 | 1361.64 | 259.32 | 1362.03 | 259.24 | 1363.25 | 259 |
| 1366.52 | 258.39 | 1367.07 | 258.29 | 1369.01 | 258 | 1374.56 | 257.21 | 1375.99 | 257 |
| 1376.49 | 256.98 | 1376.96 | 256.96 | 1377.17 | 256.95 | 1377.44 | 256.94 | 1390.62 | 256.41 |
| 1398.8 | 256.02 | 1398.98 | 256.02 | 1399.29 | 256 | 1411.5 | 255.58 | 1413.82 | 255.54 |
| 1417.64 | 255.45 | 1419.65 | 255.39 | 1423.86 | 255.25 | 1424.1 | 255.25 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 935.62 | .04 | 1424.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 935.62 | 1424.1 | 387.55 | 768.02 | 1015.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 600

INPUT
Description:
Station Elevation Data num= 479

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 275.786.159912 | | 27515.66992 | | 274.2716.66992 | | 274.2117.81995 | | 274.13 |
| 19.45996 | | 27420.58997 | 273.6322.57996 | | 27325.41992 | | 272.07 | 25.62 | 272 |
| 25.97998 | 271.8827.28992 | | 271.4628.15002 | | 271.2128.85999 | | 271 | 29.37 | 270.8 |
| 29.78003 | 270.6731.68994 | | 27033.27002 | | 269.4234.48999 | | 26936.30994 | | 268.32 |
| 37.12 | | 26838.52002 | 267.3839.43994 | | 26740.27002 | | 266.5641.44995 | | 266 |
| 42.28992 | 265.6 | 43.5 | 26544.65002 | | 264.4345.51001 | | 264 | 46 | 263.77 |
| 47.54993 | | 26347.97998 | 262.849.58997 | | 26250.60999 | | 261.5551.66992 | | 261 |
| 55.91992 | 260.2457.78992 | | 26064.77002 | | 259.2865.01001 | | 259.27 | 65.87 | 259.22 |
| 66.5 | 259.1968.69995 | | 259.169.10999 | | 259.0970.59998 | | 25974.93994 | | 258.83 |
| 75.97998 | 258.7578.76001 | | 258.683.30994 | | 258.1884.28992 | | 258.1 | 85.13 | 258 |
| 87.27002 | 257.7189.22998 | | 257.4292.26001 | | 25793.80994 | | 256.7696.18994 | | 256.39 |
| 97.70996 | 256.16 | 98.75 | 256 | 103.2 | 255.62104.3199 | | 255.54 | 111.5 | 255 |
| 111.98 | | 255112.2899 | 255 | 115.51 | 255 | 120.23 | 255 | 120.76 | 255 |
| 123.28 | 255 | 124.78 | 255126.2899 | | 255126.6599 | | 255 | 127.03 | 255 |
| 127.14 | 255 | 127.53 | 255 | 127.65 | 255128.4299 | | 255 | 128.62 | 255 |
| 129.89 | | 255130.0399 | 255 | 138.86 | 255.01 | 144.1 | 255.01 | 158.08 | 255 |
| 158.1 | 255 | 158.12 | 255 | 158.13 | 255158.1799 | | 255158.1899 | | 255 |
| 172.91 | 255.13 | 185.03 | 255.18 | 185.45 | 255.18189.1299 | | 255.17 | 189.3 | 255.17 |
| 195.59 | 255.14 | 202.42 | 255.1 | 202.65 | 255.09 | 212.39 | 255214.8199 | | 255 |
| 217.53 | 255 | 217.56 | 255 | 217.59 | 255 | 217.62 | 255 | 220.67 | 255.01 |
| 225.8799 | 255.05 | 235.1 | 255.08 | 236.66 | 255.06 | 237.68 | 255.05 | 238.9 | 255.05 |
| 238.97 | 255.05 | 240.3 | 255.05 | 241.98 | 255.06 | 244.23 | 255.07 | 267.97 | 255.09 |
| 273.81 | 255.06 | 290.96 | 255.01 | 291.17 | 255.01 | 291.73 | 255.01 | 291.83 | 255.01 |
| 292.3799 | 255.01292.4399 | | 255 | 293.09 | 255293.1299 | | 255 | 293.49 | 255 |
| 293.8799 | 255 | 293.89 | 255 | 293.95 | 255 | 293.97 | 255 | 294.33 | 255 |
| 294.77 | 255 | 294.9 | 255 | 295.27 | 255 | 295.34 | 255 | 295.56 | 255 |
| 295.7599 | 255 | 296.64 | 255299.8199 | | 255.01 | 301.62 | 255 | 304.83 | 255.03 |
| 304.84 | 255.03 | 311.74 | 255 | 314.1 | 255 | 315.17 | 255.01 | 322.95 | 255.01 |
| 325.98 | 255.01 | 332.89 | 255.01340.3199 | | 255 | 341.2 | 255 | 346.93 | 254.98 |
| 347.0699 | 254.98 | 347.45 | 254.98 | 350.47 | 254.99 | 353.85 | 255 | 354 | 255 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 354.2599 | 255 | 357.1299 | 255.05 | 361.6899 | 255.13 | 364.22 | 255.17 | 366.53 | 255.21 |
| 371.86 | 255.27 | 376.41 | 255.32 | 390.18 | 255.32 | 404.49 | 255.3 | 405.16 | 255.29 |
| 416.7 | 255.23 | 421.81 | 255.23 | 427.25 | 255.24 | 428.1899 | 255.26 | 429.5 | 255.26 |
| 430.1 | 255.27 | 430.42 | 255.27 | 431.5699 | 255.28 | 432.56 | 255.29 | 433.22 | 255.29 |
| 433.47 | 255.29 | 444.97 | 255.24 | 458.67 | 255.16 | 458.9 | 255.16 | 459.4 | 255.15 |
| 467.5099 | 255 | 467.75 | 255 | 467.96 | 255 | 468.11 | 255 | 469.02 | 255 |
| 469.96 | 255 | 473.59 | 255.01 | 476.64 | 255 | 480.95 | 255 | 481.35 | 255 |
| 481.8199 | 255 | 485.2599 | 255 | 485.81 | 255 | 485.93 | 255 | 486.16 | 255 |
| 487.73 | 255 | 488.08 | 255 | 488.2599 | 255 | 489.16 | 255 | 489.75 | 255 |
| 490.55 | 255 | 490.66 | 255 | 492.28 | 254.99 | 492.98 | 254.99 | 496.45 | 254.98 |
| 507.73 | 254.76 | 520.1299 | 254.56 | 520.16 | 254.55 | 530.1299 | 254.58 | 541.1 | 254.61 |
| 549.3199 | 254.85 | 553.58 | 254.99 | 553.9399 | 254.99 | 554.27 | 254.99 | 554.34 | 254.99 |
| 555.81 | 254.99 | 556.14 | 254.99 | 556.48 | 254.99 | 557.16 | 255 | 558.02 | 255 |
| 559 | 255 | 559.67 | 255 | 560.87 | 255 | 561.77 | 255.01 | 562.5 | 255.01 |
| 563.42 | 255.01 | 564.71 | 255.01 | 565.35 | 255.01 | 566.2599 | 255 | 566.96 | 255 |
| 568.03 | 255 | 568.12 | 255 | 568.35 | 255 | 568.3799 | 255 | 568.7599 | 254.96 |
| 571.16 | 254.7 | 572.55 | 254.56 | 574.14 | 254.49 | 575.12 | 254.4 | 576.33 | 254.28 |
| 576.79 | 254.25 | 577.17 | 254.23 | 578.12 | 254.24 | 580.16 | 254.18 | 581.47 | 254.16 |
| 581.86 | 254.16 | 582.49 | 254.16 | 583.1899 | 254.17 | 586.33 | 254.23 | 587.45 | 254.25 |
| 588.52 | 254.27 | 589.85 | 254.3 | 596.71 | 254.38 | 602.45 | 254.42 | 603.24 | 254.42 |
| 609.04 | 254.32 | 610.15 | 254.31 | 612.23 | 254.29 | 612.62 | 254.28 | 615.86 | 254.26 |
| 617.87 | 254.24 | 619.72 | 254.24 | 620.34 | 254.25 | 629.4399 | 254.25 | 629.7 | 254.25 |
| 630.43 | 254.23 | 630.97 | 254.22 | 631.98 | 254.21 | 632.14 | 254.21 | 632.75 | 254.23 |
| 637.58 | 254.22 | 642.41 | 254.23 | 643.09 | 254.24 | 654.22 | 254.38 | 661.8799 | 254.48 |
| 670.72 | 254.46 | 680.16 | 254.44 | 680.95 | 254.43 | 681.61 | 254.42 | 681.9299 | 254.42 |
| 682.98 | 254.42 | 688.37 | 254.44 | 694.86 | 254.51 | 696.41 | 254.53 | 698.1 | 254.56 |
| 698.51 | 254.57 | 704.58 | 254.71 | 714.78 | 254.95 | 715.52 | 254.96 | 715.98 | 254.97 |
| 716.28 | 254.98 | 716.3099 | 254.98 | 717.14 | 254.98 | 717.29 | 254.98 | 717.48 | 254.98 |
| 717.78 | 254.98 | 717.85 | 254.98 | 717.9299 | 254.98 | 718 | 254.97 | 718.74 | 254.97 |
| 724.92 | 254.96 | 726.1799 | 254.95 | 728.74 | 254.93 | 730.8099 | 254.91 | 738.72 | 254.94 |
| 738.78 | 254.94 | 739.4399 | 254.94 | 739.83 | 254.95 | 740.2 | 254.94 | 741.79 | 254.92 |
| 742.87 | 254.9 | 744.14 | 254.9 | 747.0699 | 254.84 | 747.9299 | 254.83 | 748.9299 | 254.81 |
| 752.77 | 254.73 | 755.98 | 254.68 | 760.48 | 254.57 | 768.15 | 254.48 | 768.65 | 254.47 |
| 769.13 | 254.47 | 770.1899 | 254.45 | 775.09 | 254.44 | 775.99 | 254.44 | 777.67 | 254.43 |
| 778.6899 | 254.45 | 779.28 | 254.44 | 786.12 | 254.42 | 794.65 | 254.3 | 798.11 | 254.2 |
| 798.86 | 254.18 | 805.6 | 254.01 | 806.11 | 254.01 | 806.5 | 254.01 | 806.8199 | 254.01 |
| 808.27 | 254.01 | 809.6 | 254.01 | 810.79 | 254.01 | 811.64 | 254 | 812.35 | 254 |
| 812.7999 | 254 | 813.6899 | 254 | 813.79 | 254 | 816.04 | 253.92 | 841.28 | 253.01 |
| 841.73 | 253.01 | 841.92 | 253 | 843.1 | 253 | 843.3099 | 253 | 843.48 | 253 |
| 846.51 | 253 | 849.35 | 253 | 853 | 253 | 853.89 | 253 | 858.79 | 253 |
| 859.5499 | 253 | 859.84 | 252.99 | 863.46 | 252.9 | 863.72 | 252.91 | 863.83 | 252.91 |
| 864 | 252.91 | 867.14 | 252.89 | 867.9 | 252.91 | 878.33 | 252.82 | 880.42 | 252.85 |
| 883.26 | 252.84 | 886.62 | 252.82 | 887.67 | 252.8 | 888.97 | 252.78 | 889.62 | 252.77 |
| 891.03 | 252.75 | 898.47 | 252.65 | 904.22 | 252.58 | 905.26 | 252.57 | 909.95 | 252.52 |
| 912.29 | 252.5 | 914.23 | 252.48 | 914.86 | 252.47 | 917.52 | 252.44 | 919.9 | 252.42 |
| 920.99 | 252.41 | 923.9399 | 252.39 | 927.2 | 252.35 | 928.85 | 252.34 | 929.98 | 252.33 |
| 932.39 | 252.3 | 935 | 252.27 | 937.54 | 252.25 | 952.03 | 252.03 | 952.99 | 252.02 |
| 953.27 | 252.02 | 955.05 | 252.01 | 956.0599 | 252.01 | 958.41 | 252 | 958.4399 | 252 |
| 964.72 | 251.98 | 966.91 | 251.98 | 972.52 | 251.97 | 979.75 | 251.99 | 981.85 | 251.99 |
| 986.52 | 252 | 994.78 | 252 | 999.38 | 252 | 1001.13 | 252 | 1011.83 | 252 |
| 1012.24 | 252 | 1012.25 | 252 | 1012.27 | 252 | 1012.57 | 252 | 1013.53 | 252 |
| 1013.59 | 252 | 1013.66 | 252 | 1013.78 | 252 | 1014.73 | 252 | 1014.92 | 252 |
| 1015.12 | 252 | 1015.17 | 252 | 1015.41 | 252 | 1015.42 | 252 | 1019.15 | 251.93 |
| 1022.94 | 251.87 | 1026.08 | 251.79 | 1045.4 | 251.39 | 1054.28 | 251.11 | 1056.81 | 251.02 |
| 1057.32 | 251 | 1057.33 | 251 | 1057.34 | 251 | 1060.82 | 250.99 | 1065.3 | 250.97 |
| 1066.87 | 250.98 | 1068.78 | 250.98 | 1072.05 | 250.99 | 1074.11 | 251 | 1074.3 | 251 |
| 1075.58 | 251 | 1075.81 | 251 | 1077.77 | 251.03 | 1082.08 | 251.08 | 1086.02 | 251.11 |
| 1086.14 | 251.11 | 1094.93 | 251 | 1095.95 | 251 | 1096.3 | 251 | 1096.94 | 251 |
| 1100.28 | 251.01 | 1102.13 | 251.01 | 1104.41 | 251.01 | 1105.77 | 251.01 | 1111.12 | 251.01 |
| 1113.49 | 251.01 | 1116.79 | 251 | 1116.88 | 251 | 1117.57 | 251 | 1119.88 | 251 |
| 1122.87 | 251 | 1125.04 | 251 | 1125.46 | 251 | 1126.05 | 251 | 1126.39 | 250.99 |
| 1126.58 | 251 | 1127.09 | 251 | 1128.83 | 251 | 1129.55 | 251 | 1131.84 | 251 |
| 1132 | 251 | 1132.03 | 251 | 1133.27 | 251 | 1133.36 | 251 | 1134.66 | 251 |
| 1134.7 | 251 | 1135.01 | 251 | 1140.51 | 251 | 1147.03 | 250.99 | 1151.7 | 250.99 |
| 1154.12 | 250.98 | 1156.47 | 250.98 | 1158.8 | 250.98 | 1162.88 | 250.99 | 1173.18 | 251 |
| 1173.21 | 251 | 1173.25 | 251 | 1173.32 | 251 | 1189.72 | 250.34 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 891.03 | .04 | 1189.72 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 891.03 | 1189.72 | 501.85 | 500 | 454.32 | .1 | .3 |

CROSS SECTION

RIVER: WASH25B
REACH: Centerline Align RS: 100

INPUT
Description:
Station Elevation Data num= 334

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 267.15 | 9299316 | 2671.539917 | 266.98 | 2.23999 | 266.973 | 049927 | 266.95 | |
| 3.199951 | 266.943 | 349976 | 266.944.089966 | 266.954.589966 | | 266.944.849976 | | 266.94 | |
| 7.519897 | 266.468.839966 | | 266.399.669922 | 266.289.839966 | | 266.2614.05994 | | 266 | |
| 14.12988 | 266 | 16.0199 | 265.9218.45996 | 265.8618.52991 | | 265.8518.88989 | | 265.83 | |
| 19.75989 | 265.8421.35999 | | 265.8921.83997 | 265.822.09998 | | 265.7822.17993 | | 265.75 | |
| 23.50989 | 265.3223.65991 | | 265.2624.35999 | 26527.90991 | | 264.1628.52991 | | 264 | |
| 32.58997 | 263.2136.82996 | | 262.7850.40991 | 261.2952.65991 | | 261.0152.72998 | | 261 | |
| 53.5199 | 260.9153.62988 | | 260.9154.59998 | 260.7955.20996 | | 260.7656.98999 | | 260.55 | |
| 57.58997 | 260.5364.55994 | | 260.0664.72998 | 260.0666.71997 | | 260.0466.95996 | | 260.04 | |
| 68.20996 | 260.0269.07996 | | 260.0269.98999 | 260.0170.28992 | | 26070.41992 | | 260 | |
| 71.0199 | 259.9472.03992 | | 259.8575.81995 | 259.4980.54993 | | 259.0280.78992 | | 259.01 | |
| 81.41992 | 259 | 84.7699 | 258.4785.67993 | 258.31 | 87.5 | 25896.07996 | | 257.38 | |
| 100.35 | 257.1101.8099 | | 257 | 103.48 | 256.85115.0699 | 256121.2799 | | 255.47 | |
| 123.84 | 255.23 | 124.21 | 255.19 | 124.36 | 255.17 | 125.97 | 255139.2999 | 254 | |
| 148.14 | 253150.7599 | | 253152.2499 | 252.99153.6299 | | 253 | 159.46 | 253 | |
| 160.95 | 252.83 | 169.47 | 252 | 179.9 | 251.01179.9999 | 251.01180.1599 | | 251 | |
| 181.0099 | 251 | 181.21 | 250.99 | 182.45 | 250.99186.2499 | 250.85188.9099 | | 250.72 | |
| 200.84 | 250.03 | 203.4 | 250.03 | 203.97 | 250.01204.8799 | 250.01205.3799 | | 250 | |
| 205.5499 | 250209.1699 | | 249.38 | 210.72 | 249.13211.5599 | 249212.7999 | | 249 | |
| 216.84 | 249.01221.3499 | | 249.01222.2299 | 249.05 | 225.9 | 249.11232.3099 | | 249.2 | |
| 232.4199 | 249.2 | 234.03 | 249.17 | 235.77 | 249.13239.1899 | 249266.1699 | | 249.01 | |
| 271.7599 | 249275.5999 | | 249279.3799 | 249.03 | 279.58 | 249.03281.3099 | | 249.05 | |
| 281.7299 | 249.05282.2399 | | 249.06 | 285.9 | 249.1289.2399 | 249.18 | 290.71 | 249.2 | |
| 299.8099 | 249.36 | 302.4 | 249.39302.9099 | 249.41304.3199 | | 249.44305.9899 | | 249.48 | |
| 307.0999 | 249.5309.5999 | | 249.55321.8099 | 249.87322.2499 | | 249.88322.9999 | | 249.9 | |
| 327.09 | 250 | 330.21 | 250.2330.3699 | 250.21333.8099 | | 250.36333.9199 | | 250.36 | |
| 338.3799 | 250.44342.2599 | | 250.44 | 345.95 | 250.32346.9899 | 250.28348.1599 | | 250.24 | |
| 348.4999 | 250.22348.6699 | | 250.22352.9299 | 250367.0599 | | 249.29373.2499 | | 249 | |
| 374.1599 | 249375.4999 | | 248.99377.7899 | 248.99382.6799 | | 248.97387.8799 | | 248.9 | |
| 407.14 | 248.71 | 407.83 | 248.7 | 436.59 | 248.79437.4999 | 248.77 | 438.09 | 248.78 | |
| 438.65 | 248.78442.6299 | | 248.71443.5499 | 248.68 | 444.45 | 248.69 | 444.9 | 248.69 | |
| 445.71 | 248.67447.2999 | | 248.66449.6899 | 248.62450.8599 | | 248.61451.4199 | | 248.6 | |
| 451.8699 | 248.59458.4099 | | 248.48460.1699 | 248.44469.2999 | | 248.35 | 469.65 | 248.36 | |
| 471.2299 | 248.33 | 471.96 | 248.34472.4799 | 248.34472.8599 | | 248.33 | 476.09 | 248.29 | |
| 476.9299 | 248.3477.4199 | | 248.32477.5399 | 248.32 | 479.39 | 248.29483.1099 | | 248.4 | |
| 502.02 | 248.4523.0099 | | 248.33523.3199 | 248.33 | 523.78 | 248.32524.3599 | | 248.31 | |
| 536.33 | 248.18 | 541.53 | 248.15545.4299 | 248.14 | 545.84 | 248.14 | 546.59 | 248.13 | |
| 567.5599 | 248.15 | 567.97 | 248.14 | 572.89 | 248.16586.1599 | 248.16596.1899 | | 248.24 | |
| 596.7499 | 248.24602.4999 | | 248.28611.8799 | 248.39621.3699 | | 248.47 | 622.58 | 248.5 | |
| 625.5499 | 248.58628.7899 | | 248.59632.1099 | 248.57 | 634.22 | 248.65635.0699 | | 248.65 | |
| 635.77 | 248.66642.8499 | | 248.96643.6799 | 248.99644.8099 | | 249648.8699 | | 249 | |
| 655.6599 | 248.97 | 655.78 | 248.97 | 660.33 | 248.96660.6199 | 248.96660.7399 | | 248.95 | |
| 660.8799 | 248.95661.1199 | | 248.94 | 662.11 | 248.92662.2999 | 248.91665.2699 | | 248.82 | |
| 673.0599 | 248.55 | 677.2 | 248.4 | 677.97 | 248.37690.8999 | 248 | 717.35 | 247.99 | |
| 721.45 | 248739.4299 | | 248757.0399 | 248.43 | 757.46 | 248.43757.8799 | | 248.45 | |
| 765.1299 | 248.56 | 770.59 | 248.59770.6599 | 248.58 | 770.85 | 248.59771.1699 | | 248.59 | |
| 771.71 | 248.6776.7499 | | 248.87778.7999 | 248.99 | 778.98 | 248.99784.3799 | | 249 | |
| 785.3799 | 248.99789.2599 | | 249 | 808.98 | 249809.6299 | 248.98809.9199 | | 248.97 | |
| 810.2899 | 248.98811.2699 | | 249 | 814.21 | 249816.0099 | 248.99 | 817.86 | 248.99 | |
| 818.2799 | 248.98 | 821.89 | 248.98823.3099 | 248.97 | 823.45 | 248.98 | 823.71 | 248.97 | |
| 824.1499 | 248.98824.2599 | | 248.97 | 828.89 | 248.69838.4099 | 248.13 | 842.35 | 248 | |
| 842.6599 | 248843.4999 | | 247.99 | 851.35 | 247.88854.9299 | 247.84 | 858.58 | 247.78 | |
| 870.6599 | 247.62 | 876.1 | 247.53878.1499 | 247.5879.2699 | | 247.49 | 885.59 | 247.39 | |
| 886.35 | 247.38 | 896.85 | 247.02929.7599 | 247.01932.3099 | | 247933.9099 | | 247 | |
| 938.22 | 246.95938.5299 | | 246.95943.0099 | 246.86943.6099 | | 246.85943.9199 | | 246.83 | |
| 949.85 | 246.53954.1799 | | 246.49 | 957.84 | 246.54 | 962.97 | 246.68964.2899 | 246.74 | |
| 964.34 | 246.74965.2299 | | 246.78965.5699 | 246.78 | 966.65 | 246.8 | 967.1 | 246.81 | |
| 967.4 | 246.82967.6099 | | 246.82969.7899 | 246.85972.1099 | | 246.87 | 972.77 | 246.89 | |
| 975.71 | 246.89 | 978.7 | 246.9979.0099 | 246.91 | 990.83 | 247995.1799 | | 247 | |
| 998.7599 | 246.96999.2799 | | 246.96 | 1000.08 | 246.94 | 1000.29 | 246.94 | 1000.53 | 246.93 |
| 1002.51 | 246.89 | 1002.69 | 246.89 | 1011.72 | 246.68 | 1017.84 | 246.49 | 1024.61 | 246.33 |
| 1031.01 | 246.06 | 1032.25 | 246 | 1033.48 | 246 | 1037.45 | 245.99 | 1041.48 | 246 |
| 1048.13 | 246 | 1049.15 | 245.99 | 1049.93 | 245.99 | 1052.51 | 246.01 | 1055.93 | 246.01 |
| 1056.93 | 246 | 1057.54 | 246 | 1060.44 | 245.99 | 1061.29 | 245.99 | 1062.59 | 246 |
| 1118.59 | 246 | 1121.26 | 245.99 | 1121.34 | 245.99 | 1125.01 | 246 | 1126.66 | 246 |
| 1135.89 | 245.92 | 1139.87 | 245.9 | 1140.82 | 245.91 | 1151.39 | 246 | 1152.12 | 246 |
| 1155.82 | 245.99 | 1159.12 | 245.99 | 1162.23 | 246 | 1169.44 | 246 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 854.9299 | .04 | 1169.44 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 854.9299 | 1169.44 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align  RS: 10130.27

INPUT
Description:
Station Elevation Data  num=  297

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 357.99.6099854 | | 358.6900024 | | 358.8200073 | | 358.9899902 | | 358 |
| 1.140015 | 3584.220032 | | 358.176.580017 | | 358.276.960022 | | 358.25 | 10.38 | 358 |
| 16.42999 | 357.4120.78998 | | 35723.85999 | | 356.7225.79999 | | 356.5726.53003 | | 356.51 |
| 27.27002 | 356.4431.82001 | | 35634.39001 | | 355.837.39001 | | 355.5238.29999 | | 355.45 |
| 39.78003 | 355.3740.10004 | | 355.3441.10004 | | 355.2841.57001 | | 355.2541.72998 | | 355.24 |
| 44.91003 | 355.145.10004 | | 355.08 | 45.94 | 355.0445.98999 | | 355.04 | 46.56 | 355 |
| 50.21002 | 354.8351.22998 | | 354.7756.53003 | | 354.54 | 59.81 | 354.3860.28003 | | 354.35 |
| 60.70001 | 354.3365.28998 | | 35470.91998 | | 353.671.58002 | | 353.5872.48999 | | 353.54 |
| 73.58002 | 353.49 | 79.69 | 35385.46002 | | 352.61 | 86.44 | 352.59 | 87.56 | 352.54 |
| 88.95001 | 352.4889.85999 | | 352.4497.70001 | | 352 | 107.31 | 351.37 | 113.38 | 351 |
| 113.56 | 351 | 113.83 | 350.99 | 113.89 | 350.99 | 114.46 | 350.98 | 118.86 | 350.93 |
| 121.6 | 350.89 | 124.56 | 350.61 | 128.16 | 350.4 | 128.41 | 350.39 | 128.65 | 350.4 |
| 128.9 | 350.4 | 130.69 | 350.48 | 131.39 | 350.48 | 131.79 | 350.49 | 133.4 | 350.47 |
| 135.22 | 350.42 | 135.43 | 350.41 | 136.24 | 350.4 | 138.63 | 350.45 | 141.78 | 350.3 |
| 144.35 | 350.3 | 145.66 | 350.28 | 149.26 | 350.2 | 153.6 | 350.01 | 154.13 | 350.01 |
| 154.41 | 350.01 | 154.75 | 350.01 | 155.19 | 350.01 | 155.7 | 350.01 | 156.2 | 350.01 |
| 158.37 | 350 | 158.43 | 350 | 158.48 | 350 | 158.51 | 350 | 163.61 | 349.68 |
| 170.93 | 349 | 181.75 | 348.99 | 188.62 | 348.99 | 192.05 | 348.99 | 199.77 | 349 |
| 206.33 | 349 | 207.41 | 349 | 208.8 | 349 | 209.09 | 349 | 210.27 | 348.99 |
| 210.96 | 348.98 | 212.73 | 348.99 | 215.73 | 348.89 | 216.02 | 348.87 | 216.98 | 348.85 |
| 217.94 | 348.81 | 217.98 | 348.8 | 219.66 | 348.7 | 226.07 | 348.44 | 229.14 | 348.34 |
| 232.07 | 348.32 | 235.18 | 348.3 | 240.8 | 348.19 | 241.17 | 348.18 | 249.8 | 348 |
| 251.49 | 348 | 252.68 | 348 | 252.81 | 348 | 256.38 | 348 | 256.55 | 348 |
| 260.86 | 348 | 262.81 | 348 | 271.15 | 348.47 | 275.88 | 348.85 | 276.88 | 348.91 |
| 277.88 | 349 | 279.57 | 349.01 | 281.22 | 349.02 | 287.4 | 349.04 | 287.88 | 349.04 |
| 288.43 | 349.04 | 297.52 | 349.01 | 298.42 | 349.01 | 298.56 | 349.01 | 300 | 349.07 |
| 319.69 | 349.81 | 322.83 | 349.99 | 323.05 | 349.99 | 323.3 | 349.99 | 323.86 | 350 |
| 325.09 | 350 | 326.28 | 350 | 326.97 | 350 | 329 | 350 | 332.8 | 350 |
| 334.05 | 350 | 334.16 | 350 | 344.75 | 349.99 | 354.59 | 350 | 355.74 | 350 |
| 355.95 | 350 | 357.31 | 350 | 357.42 | 350 | 357.51 | 350 | 362.7 | 350 |
| 364.51 | 350 | 370.3 | 350 | 372.01 | 350 | 373.03 | 350 | 374.79 | 350.02 |
| 397.94 | 350.29 | 425.31 | 350.56 | 437.65 | 350.68 | 437.83 | 350.68 | 447.96 | 350.85 |
| 454.92 | 350.98 | 456.19 | 351 | 456.82 | 351 | 457.36 | 351 | 458.09 | 351 |
| 461.4 | 351 | 465.22 | 351 | 466.47 | 351 | 467.01 | 351 | 471.06 | 351 |
| 471.59 | 351 | 473.75 | 351 | 474.27 | 351 | 475.94 | 351 | 476.02 | 351 |
| 482.26 | 351.1 | 486.5 | 351.12 | 491.16 | 351.14 | 491.99 | 351.14 | 492.65 | 351.15 |
| 496.94 | 351.16 | 502.52 | 351.2 | 504.75 | 351.22 | 507.74 | 351.26 | 512.13 | 351.33 |
| 519.43 | 351.44 | 519.9 | 351.44 | 532.31 | 351.59 | 539.63 | 351.67 | 540.36 | 351.68 |
| 541.96 | 351.71 | 544.64 | 351.74 | 560.87 | 352 | 561.12 | 352 | 561.39 | 352 |
| 561.65 | 352 | 562.7 | 352 | 563.59 | 352 | 564.76 | 352 | 565.49 | 352 |
| 567.42 | 352 | 573.67 | 352 | 576.32 | 352 | 576.52 | 352 | 576.82 | 352 |
| 576.84 | 352 | 576.96 | 352 | 577.53 | 352 | 578.62 | 352 | 579.16 | 352 |
| 579.89 | 352 | 580.37 | 352 | 583.91 | 352.01 | 585.12 | 352.01 | 586 | 352 |
| 586.31 | 352.01 | 586.45 | 352.01 | 586.86 | 352.01 | 591.61 | 352.13 | 596.39 | 352.19 |
| 615 | 352.49 | 642.52 | 353 | 643.07 | 353 | 643.24 | 353 | 643.33 | 353 |
| 645.41 | 353 | 645.5 | 353 | 645.58 | 353 | 645.62 | 353 | 646.78 | 353 |
| 649.76 | 353.01 | 652.44 | 353.01 | 653.39 | 353.01 | 654.02 | 353.01 | 683.49 | 353.77 |
| 690.39 | 353.94 | 692.27 | 353.97 | 692.5 | 353.98 | 693.63 | 354 | 693.9 | 354 |
| 694.32 | 354 | 694.33 | 354 | 694.38 | 354 | 694.56 | 354 | 695.09 | 354 |
| 699.49 | 354 | 701.74 | 354 | 702.79 | 354 | 704.16 | 354 | 708.68 | 354 |
| 710.79 | 354 | 711.15 | 354 | 712.28 | 354 | 712.73 | 354 | 713.52 | 354 |
| 714.22 | 354 | 716.82 | 354 | 721.58 | 354 | 723.78 | 354 | 724 | 354 |
| 724.54 | 354 | 724.77 | 354 | 727.34 | 354.1 | 754.4 | 355 | 756.51 | 355 |
| 756.56 | 355 | 756.69 | 355 | 767.85 | 355.26 | 777.44 | 355.45 | 804.23 | 356 |
| 804.57 | 356 | 804.6 | 356 | 804.73 | 356 | 805.37 | 356 | 805.65 | 356 |
| 805.67 | 356 | 805.69 | 356 | 806.45 | 356 | 806.93 | 356 | 807.37 | 356 |
| 807.73 | 356 | 808.25 | 356.01 | 808.52 | 356.01 | 855.86 | 356.9 | 860.68 | 357 |
| 862.21 | 357.05 | 869.66 | 357.27 | 872 | 357.33 | 874.5 | 357.4 | 876.6 | 357.44 |
| 890.01 | 357.77 | 892.48 | 357.82 | 894.68 | 357.86 | 900.3 | 358 | 907.66 | 358.28 |
| 911.51 | 358.43 | 919.07 | 358.78 | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 149.26 | .04 | 397.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 149.26 | 397.94 | 620.16 | 630.27 | 703.75 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align  RS: 9500

INPUT
Description:
Station Elevation Data  num=  257

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 353.68 | 5.369995 | 353.26 | 6.130005 | 353.27 | 2.210022 | 353.13 | 8.600037 | 353 |
| 10.62 | 352.82 | 11.47003 | 352.77 | 14.46002 | 352.59 | 17.40002 | 352.42 | 3.39001 | 352 |
| 24.82001 | 351.98 | 29.97003 | 351.72 | 34.42004 | 351.56 | 43.08002 | 352 | 43.15002 | 352.01 |
| 43.17999 | 352.01 | 49.48999 | 352.29 | 50 | 352.27 | 51.11005 | 352.32 | 51.97003 | 352.27 |
| 52.20001 | 352.26 | 52.42004 | 352.25 | 54.71002 | 352.38 | 59.89001 | 352.15 | 60.98999 | 352.08 |
| 62.82001 | 352.06 | 65.21002 | 352.03 | 66.90002 | 352.01 | 68.28003 | 352 | 69.08002 | 351.94 |
| 69.5 | 351.97 | 4.79004 | 351.49 | 75.70001 | 351.39 | 76.69 | 351.32 | 79.79004 | 351 |
| 81.44 | 350.79 | 85.76001 | 350 | 85.88 | 349.98 | 90.69 | 349 | 92.06 | 348.81 |
| 97.32001 | 348 | 108.27 | 347.04 | 108.84 | 347 | 109.33 | 346.95 | 120.04 | 346 |
| 123.22 | 345.21 | 124.1 | 345 | 124.63 | 344.86 | 124.88 | 344.87 | 135.3 | 344.7 |
| 143.96 | 344.73 | 151.41 | 345 | 152.59 | 345 | 154.46 | 345 | 155.77 | 345 |
| 157.04 | 345 | 160.51 | 345 | 161.29 | 345 | 162.46 | 345 | 162.56 | 345 |
| 163.17 | 345 | 163.29 | 345 | 163.48 | 345 | 163.78 | 345 | 164.39 | 344.97 |
| 165.04 | 344.9 | 165.07 | 344.9 | 166.07 | 344.76 | 166.36 | 344.72 | 166.79 | 344.75 |
| 167.14 | 344.77 | 168.11 | 344.79 | 182.53 | 344.66 | 197.72 | 344.83 | 200.81 | 345 |
| 205.38 | 345 | 209.51 | 345 | 217.51 | 345 | 219.91 | 344.99 | 220.65 | 344.99 |
| 223.18 | 344.97 | 224.08 | 344.97 | 224.92 | 344.97 | 226.12 | 344.96 | 226.61 | 344.96 |
| 228.62 | 344.98 | 232.57 | 345 | 244.98 | 345.02 | 248.81 | 345.03 | 254.91 | 345.02 |
| 259.01 | 345.02 | 269.69 | 345 | 269.86 | 345 | 272.2 | 344.96 | 279.2 | 344.8 |
| 296.01 | 344.43 | 306.36 | 344.21 | 314.63 | 344 | 315.69 | 344 | 315.77 | 344 |
| 316 | 344 | 316.31 | 344 | 317.06 | 344 | 317.11 | 344 | 317.14 | 344 |
| 317.63 | 344.01 | 322.33 | 344.15 | 342.88 | 344.23 | 362.42 | 344.2 | 363.78 | 344.23 |
| 364.15 | 344.2 | 364.87 | 344.17 | 366.32 | 344.19 | 368.14 | 344.22 | 374.7 | 344.65 |
| 374.94 | 344.66 | 379.75 | 345 | 379.9 | 345 | 380.19 | 345 | 380.4 | 345 |
| 385.32 | 345.1 | 392.81 | 345.24 | 395.51 | 345.3 | 396.42 | 345.31 | 399.65 | 345.38 |
| 402.41 | 345.44 | 403.69 | 345.46 | 412.23 | 345.62 | 417.08 | 345.69 | 425.61 | 345.89 |
| 429.93 | 345.99 | 430.36 | 345.99 | 430.64 | 345.99 | 431.65 | 346 | 431.8 | 346 |
| 440.83 | 346.2 | 448.71 | 346.37 | 455.23 | 346.49 | 462.97 | 346.62 | 473.05 | 346.82 |
| 477.56 | 346.91 | 478.89 | 346.94 | 481.02 | 346.97 | 481.57 | 346.98 | 481.7 | 346.98 |
| 481.82 | 346.98 | 483.54 | 347 | 483.77 | 347 | 484.6 | 347 | 484.66 | 347 |
| 484.67 | 347 | 486.63 | 347 | 487.95 | 347 | 488.6 | 347 | 490.35 | 347 |
| 490.64 | 347 | 491.67 | 347 | 491.82 | 347 | 492.44 | 347 | 492.59 | 347 |
| 493.21 | 347 | 494.36 | 347.03 | 501.79 | 347.24 | 506.57 | 347.38 | 513.01 | 347.54 |
| 518.03 | 347.64 | 520.51 | 347.69 | 533.5 | 348 | 534.86 | 348 | 535.33 | 348 |
| 535.53 | 348 | 535.86 | 348 | 536.13 | 348 | 536.4 | 348.01 | 536.6801 | 348.01 |
| 537.42 | 348.01 | 537.69 | 348.01 | 538.72 | 348.01 | 540.28 | 348.01 | 541.27 | 348.01 |
| 541.78 | 348.01 | 542.01 | 348.01 | 545.28 | 348.1 | 556.97 | 348.38 | 561.91 | 348.45 |
| 569.46 | 348.58 | 570.97 | 348.61 | 572.34 | 348.63 | 574.63 | 348.67 | 576.5 | 348.7 |
| 578.02 | 348.72 | 585.39 | 348.83 | 595.41 | 348.98 | 596.47 | 349 | 596.49 | 349 |
| 596.59 | 349 | 597.52 | 349 | 598.35 | 349 | 599.83 | 349 | 599.99 | 349 |
| 600.15 | 349 | 603.45 | 349 | 604.22 | 349 | 604.65 | 349 | 606.01 | 349 |
| 606.41 | 349 | 607 | 349 | 607.54 | 349 | 607.99 | 349 | 608.8 | 349 |
| 609.44 | 349 | 609.91 | 349 | 610.57 | 349 | 611.82 | 349 | 612.81 | 349 |
| 614.22 | 349 | 614.69 | 349 | 615.06 | 349 | 615.28 | 349 | 615.4 | 349 |
| 615.72 | 349.01 | 615.79 | 349.01 | 615.92 | 349.01 | 615.98 | 349.01 | 616.1801 | 349.02 |
| 616.36 | 349.02 | 617.97 | 349.08 | 620.39 | 349.14 | 650.05 | 349.99 | 651.74 | 350 |
| 651.93 | 350 | 653.07 | 350 | 657.27 | 350 | 657.64 | 350 | 661.23 | 350 |
| 665.59 | 350.01 | 666.75 | 350.01 | 671.28 | 350 | 672.65 | 350 | 672.67 | 350 |
| 672.71 | 350 | 672.73 | 350.01 | 672.78 | 350.01 | 672.81 | 350.01 | 673.12 | 350.02 |
| 690.11 | 350.97 | 692.69 | 350.99 | 692.86 | 351 | 692.96 | 351 | 693.16 | 351 |
| 696.15 | 351.22 | 696.45 | 351.23 | 697.77 | 351.3 | 699.21 | 351.41 | 699.37 | 351.42 |
| 700.34 | 351.46 | 700.77 | 351.5 | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 120.04 | .04 | 429.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 120.04 | 429.93 | 418.22 | 500 | 592.04 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align  RS: 9000

INPUT
Description:
Station Elevation Data  num=  328

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 358.09 | 4.23999 | 358.14 | .859985 | 358.09 | 5.709961 | 358.08 | 10.31 | 358.02 |
| 12.77997 | 358.03 | 13.53998 | 358.03 | 14.34998 | 358.03 | 18.53998 | 358.01 | 18.87 | 358.01 |
| 20.16998 | 358 | 20.45996 | 358 | 21.59998 | 357.94 | 22.03998 | 357.92 | 28.47998 | 357.54 |
| 31.88 | 357.39 | 34.76001 | 357.23 | 35.35999 | 357.23 | 6.83997 | 357.18 | 38.90997 | 357.15 |
| 40.70996 | 357.16 | 45.35999 | 357.22 | 47.34998 | 357.33 | 50.38995 | 357.36 | 51.72998 | 357.44 |
| 51.89996 | 357.44 | 55.91998 | 357.65 | 7.17999 | 357.67 | 58.95996 | 357.75 | 62.13 | 357.92 |
| 63.69 | 358 | 64.94 | 358.06 | 65.21997 | 358.08 | 66.26996 | 358.02 | 66.47998 | 358 |
| 71.06 | 357.62 | 73.56 | 357.42 | 74.88 | 357.32 | 75.53998 | 357.28 | 76.06 | 357.25 |
| 77.87 | 357.14 | 78.39996 | 357.11 | 78.59998 | 357.11 | 78.65997 | 357.11 | 78.75 | 357.11 |
| 78.77997 | 357.11 | 78.84998 | 357.18 | 1.34998 | 357.84 | 99 | 356.86 | 84.38995 | 356.83 |
| 87.76996 | 356.67 | 96.76996 | 356.14 | 97.44 | 356.09 | 97.60999 | 356.08 | 98.19 | 356.06 |
| 98.88995 | 356 | 102.12 | 355.82 | 102.93 | 355.8 | 103.37 | 355.78 | 103.93 | 355.75 |
| 108.26 | 355.55 | 109.66 | 355.46 | 113.76 | 355 | 119.37 | 354.39 | 122.38 | 354 |
| 122.48 | 353.99 | 130.65 | 353 | 131.27 | 352.92 | 132.01 | 352.82 | 135.25 | 352.41 |
| 136.87 | 352.2 | 138.68 | 352 | 140.44 | 351.85 | 141.63 | 351.77 | 143.73 | 351.64 |
| 144.99 | 351.62 | 147.35 | 351.53 | 149.49 | 351.53 | 150.22 | 351.5 | 150.77 | 351.5 |
| 151.38 | 351.48 | 152.03 | 351.46 | 152.96 | 351.42 | 153.52 | 351.4 | 154.89 | 351.32 |
| 155.74 | 351.27 | 157.98 | 351.12 | 159.48 | 351.02 | 159.58 | 351.02 | 159.77 | 351 |
| 161.74 | 350.52 | 162.15 | 350.41 | 162.57 | 350.29 | 163.52 | 350 | 165.59 | 349.2 |
| 166.19 | 349 | 166.71 | 348.77 | 168.58 | 348 | 169.39 | 347.67 | 171.03 | 347 |
| 171.91 | 346.64 | 173.44 | 346 | 174.27 | 345.68 | 175.9 | 345 | 178.34 | 344.1 |
| 178.59 | 344 | 179.53 | 343.67 | 181.57 | 343 | 184.45 | 342.06 | 184.55 | 342.02 |
| 184.61 | 342 | 191.19 | 341.29 | 191.93 | 341.21 | 193.99 | 341 | 207.74 | 340.98 |
| 208.25 | 340.98 | 212.68 | 340.98 | 215.32 | 340.99 | 220.94 | 341 | 221.11 | 341 |
| 221.55 | 341 | 221.57 | 341 | 221.58 | 341 | 221.61 | 341 | 221.62 | 341 |
| 221.7 | 341 | 221.97 | 341 | 222.16 | 341.01 | 223.68 | 341.03 | 224.13 | 341.03 |
| 225.17 | 341.04 | 226.22 | 341.06 | 226.34 | 341.06 | 226.4 | 341.06 | 226.52 | 341.06 |
| 228.95 | 341.03 | 229.92 | 341.03 | 234.45 | 341 | 238.97 | 340.97 | 239.05 | 340.97 |
| 240.43 | 340.96 | 243.25 | 340.96 | 244.31 | 340.95 | 246.66 | 340.97 | 247.92 | 340.97 |
| 248.28 | 340.98 | 248.44 | 340.98 | 249.03 | 340.98 | 251.67 | 340.58 | 252.45 | 340.42 |
| 253.04 | 340.34 | 253.35 | 340.27 | 254.23 | 340.28 | 254.81 | 340.18 | 254.98 | 340.14 |
| 255.57 | 340.23 | 255.87 | 340.16 | 257.04 | 340.29 | 263.56 | 340.28 | 273.62 | 340.45 |
| 277.52 | 340.54 | 283.63 | 340.66 | 287.3 | 340.73 | 294.3 | 341 | 302.27 | 341.25 |
| 302.71 | 341.25 | 317.56 | 341.21 | 327.46 | 341.06 | 337.79 | 341.01 | 337.9 | 341 |
| 338.27 | 341 | 338.28 | 341 | 340.82 | 341 | 342.11 | 341 | 343.37 | 341 |
| 351.87 | 341 | 353.68 | 341 | 361.72 | 341 | 363.41 | 341 | 364.09 | 341 |
| 364.1 | 341 | 366.07 | 340.99 | 366.43 | 340.99 | 368.03 | 341 | 368.85 | 341 |
| 371.62 | 341.05 | 401.33 | 341.19 | 428.59 | 341.13 | 429.7 | 341.1 | 431.07 | 341.03 |
| 432.13 | 341.03 | 432.87 | 341.03 | 433.1 | 341.03 | 433.71 | 341.03 | 434.87 | 341.03 |
| 435.69 | 341.03 | 436.62 | 341.01 | 437.38 | 341.02 | 437.64 | 341.01 | 438.04 | 341.01 |
| 438.26 | 341.01 | 438.53 | 341 | 438.66 | 341 | 442.76 | 341 | 443.66 | 341 |
| 446.08 | 340.98 | 453.34 | 340.92 | 466.92 | 340.87 | 467.47 | 340.89 | 467.59 | 340.89 |
| 468.52 | 340.89 | 477.55 | 340.83 | 485.61 | 340.8 | 486.03 | 340.81 | 487.66 | 340.83 |
| 488.91 | 340.86 | 491.19 | 340.86 | 492.08 | 340.86 | 493.77 | 340.9 | 496.22 | 340.88 |
| 500.04 | 340.84 | 501.23 | 340.81 | 501.33 | 340.81 | 501.56 | 340.8 | 503.54 | 340.75 |
| 508.62 | 340.63 | 508.87 | 340.62 | 510.99 | 340.58 | 518.6 | 340.41 | 531.17 | 340.14 |
| 534.35 | 340.1 | 534.52 | 340.11 | 537.53 | 340 | 537.66 | 340 | 537.75 | 340 |
| 537.87 | 340 | 537.98 | 340 | 539.54 | 340 | 540.42 | 339.99 | 540.55 | 339.99 |
| 541.75 | 340 | 541.98 | 340 | 542.38 | 340 | 542.61 | 340 | 542.68 | 340 |
| 542.97 | 340 | 543.8 | 340 | 552.0699 | 340.45 | 555.52 | 340.64 | 560.35 | 340.99 |
| 560.45 | 341 | 567.39 | 341 | 569.28 | 341 | 572.36 | 341 | 572.69 | 341 |
| 577.4 | 341 | 579.27 | 341 | 583.3 | 341 | 583.35 | 341 | 585.47 | 341 |
| 589.03 | 341 | 593.3 | 341 | 596.8199 | 341 | 599.43 | 341 | 599.87 | 341 |
| 613.98 | 340.93 | 620.14 | 340.89 | 642.34 | 340.94 | 644.06 | 340.97 | 645.23 | 341 |
| 645.52 | 341 | 646.23 | 341 | 646.38 | 341 | 648.36 | 341 | 648.88 | 341 |
| 649.7 | 341 | 650 | 341 | 652.15 | 340.99 | 654.24 | 341 | 656.15 | 341 |
| 656.76 | 341 | 657.4 | 341 | 657.53 | 341 | 689.15 | 341.88 | 691.43 | 341.94 |
| 694.79 | 342 | 694.81 | 342 | 696.82 | 342.01 | 698.72 | 342.03 | 702.58 | 342.06 |
| 705.66 | 342.04 | 708.44 | 342.03 | 713 | 342.17 | 720.65 | 342.13 | 721.27 | 342.12 |
| 721.54 | 342.13 | 722.4 | 342.12 | 722.59 | 342.13 | 723.08 | 342.14 | 723.36 | 342.15 |
| 723.97 | 342.18 | 726.96 | 342.29 | 741.97 | 342.88 | 744.72 | 343 | 744.92 | 343 |
| 745.03 | 343 | 745.99 | 343.01 | 747.35 | 343.01 | 748.19 | 343.01 | 748.87 | 343.02 |
| 749.01 | 343.02 | 762.47 | 343.37 | 773.35 | 343.64 | 787.67 | 344 | 787.86 | 344 |
| 789.75 | 344 | 790.37 | 344.02 | 791.14 | 344.02 | 792.6 | 344.05 | 792.85 | 344.05 |
| 792.99 | 344.05 | 794.05 | 344.06 | 796.81 | 344.07 | 802.22 | 344.26 | 810.28 | 344.49 |
| 813.25 | 344.58 | 814.61 | 344.61 | 815.17 | 344.62 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 184.61 | .04 | 689.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 184.61 | 689.15 | 649.58 | 500 | 334.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH30

REACH: Centerline Align  RS: 8500

INPUT
Description:
Station Elevation Data  num=  296

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.4 | 31.869995 | 337.43 | 5.97998 | 337.36 | 6.570007 | 337.36 | 13.42999 | 337.3 |
| 13.72998 | 337.29 | 14.58002 | 337.26 | 25.38 | 337.11 | 26.64001 | 337.07 | 27.04999 | 337.07 |
| 27.41998 | 337.06 | 27.60999 | 337.06 | 35.91003 | 337.02 | 36.07001 | 337.02 | 36.12 | 337.02 |
| 37.60999 | 337.02 | 37.76001 | 337.02 | 40.70001 | 337.03 | 40.72003 | 337.03 | 46.71002 | 337.07 |
| 46.77002 | 337.07 | 47.46002 | 337.07 | 48.25 | 337.08 | 49.76001 | 337.15 | 0.22003 | 337.11 |
| 57.72998 | 337.21 | 63.40002 | 337.27 | 63.91003 | 337.27 | 65.17999 | 337.29 | 68.79999 | 337.36 |
| 75.5 | 337.53 | 77.5 | 337.57 | 86.01001 | | 33886.22003 | | 33886.79999 | 338 |
| 87.09003 | | 33887.64001 | | 33887.92999 | | 33888.29999 | 338 | 88.38 | 338 |
| 95.22998 | 338 | 101.66 | 338 | 102.31 | 338 | 104.45 | 338 | 104.64 | 338 |
| 107.63 | 338 | 116.51 | 338 | 117.92 | 337.8 | 123.47 | 337 | 124.31 | 336.92 |
| 124.58 | 336.91 | 124.93 | 336.9 | 127.27 | 336.74 | 127.7 | 336.73 | 128.19 | 336.71 |
| 136.8 | 336.33 | 143.68 | 336.02 | 143.98 | 336.01 | 144.36 | 336.01 | 144.47 | 336 |
| 144.54 | 336 | 145.02 | 336 | 145.48 | 335.99 | 146.67 | 335.98 | 147.14 | 335.98 |
| 148.54 | 336 | 150.78 | 336 | 152.24 | 336 | 155.05 | 336 | 155.37 | 336 |
| 155.59 | 336 | 155.61 | 336 | 156.37 | 336 | 160.21 | 335.99 | 169.18 | 335.96 |
| 170.08 | 335.96 | 171.18 | 335.95 | 182.14 | 335.99 | 182.66 | 335.99 | 184.85 | 336 |
| 187.37 | 336 | 191.62 | 336.01 | 195.95 | 336 | 198.38 | 336 | 198.5 | 336 |
| 199.88 | 335.98 | 201.16 | 336 | 201.33 | 336 | 201.49 | 336 | 208.11 | 336.6 |
| 212.4 | 337 | 212.7 | 337 | 213.05 | 337 | 214.52 | 337.01 | 216.88 | 337.02 |
| 218.57 | 337.02 | 218.78 | 337.02 | 219.14 | 337.02 | 221.54 | 337.01 | 223.72 | 337 |
| 226.7 | 336.99 | 227.12 | 336.98 | 229.74 | 337 | 230.18 | 337 | 230.24 | 337 |
| 230.59 | 337 | 230.79 | 336.99 | 231.91 | 336.92 | 232.29 | 336.91 | 242.96 | 336 |
| 243 | 336 | 243.07 | 336 | 244.25 | 336 | 244.9 | 336 | 245.53 | 336 |
| 253.31 | 336.05 | 257.07 | 336.07 | 264.45 | 336.04 | 269.54 | 336 | 272.05 | 336 |
| 273.1 | 336 | 275.09 | 336 | 277.5 | 336 | 282.79 | 336.04 | 283.55 | 336.04 |
| 284.62 | 336.04 | 287.31 | 336.03 | 291 | 336 | 293.52 | 336 | 296.09 | 336 |
| 296.8 | 336 | 300.79 | 336 | 301.53 | 336 | 301.59 | 336 | 301.65 | 336 |
| 308.72 | 336.47 | 311.74 | 336.65 | 312.17 | 336.65 | 312.54 | 336.66 | 312.55 | 336.66 |
| 315.67 | 336.96 | 316.08 | 337 | 316.49 | 337 | 319.96 | 336.99 | 320.13 | 336.99 |
| 320.26 | 336.99 | 322.26 | 336.99 | 322.77 | 336.99 | 323.59 | 337 | 325.11 | 337 |
| 328.86 | 337 | 329.59 | 337 | 329.88 | 337 | 331.32 | 337 | 332.25 | 337 |
| 332.46 | 337 | 332.9 | 337 | 333.01 | 337 | 333.17 | 337 | 335.66 | 337 |
| 336.41 | 337 | 338.69 | 337 | 338.86 | 337 | 338.99 | 337 | 339.6 | 337 |
| 339.93 | 337 | 349.46 | 337.01 | 355.23 | 337.01 | 365.53 | 337 | 365.74 | 337 |
| 367.66 | 337 | 371.5 | 337 | 374.2 | 337 | 374.79 | 337 | 377.73 | 337 |
| 378.01 | 337 | 378.12 | 337 | 378.62 | 337 | 381.16 | 337 | 392.65 | 337 |
| 400.43 | 337 | 402.87 | 337 | 406.88 | 337 | 408.78 | 337 | 410.2 | 336.99 |
| 410.43 | 336.99 | 410.52 | 336.99 | 412.68 | 337 | 413.84 | 337 | 417.22 | 337 |
| 425.47 | 337 | 427.77 | 337 | 437.01 | 337 | 438.19 | 336.97 | 439.89 | 336.94 |
| 440.57 | 336.95 | 442.63 | 337 | 443.14 | 337.13 | 443.21 | 337.14 | 443.31 | 337.16 |
| 443.35 | 337.17 | 443.39 | 337.17 | 443.41 | 337.17 | 446.72 | 337.25 | 450.08 | 337.16 |
| 450.12 | 337.16 | 450.15 | 337.15 | 451.23 | 337 | 453.7 | 336.89 | 454 | 336.88 |
| 456.2 | 336.98 | 456.68 | 337 | 456.86 | 337 | 457.77 | 337.01 | 458.54 | 337.02 |
| 458.68 | 337.02 | 458.89 | 337.02 | 458.9 | 337.02 | 459.45 | 337.02 | 460.42 | 337.03 |
| 463.58 | 337.03 | 483.78 | 337.36 | 501.21 | 337.61 | 508.71 | 337.68 | 514.12 | 337.72 |
| 531.82 | 337.92 | 538.01 | 337.99 | 538.48 | 337.99 | 539.06 | 337.99 | 539.07 | 337.99 |
| 543.87 | 338 | 544.22 | 338 | 544.37 | 338 | 544.4 | 338 | 544.8 | 338 |
| 550.35 | 338 | 552.01 | 338 | 554.12 | 338 | 554.35 | 338 | 554.64 | 338 |
| 554.85 | 338 | 555.11 | 338 | 557.33 | 338 | 559.9 | 338 | 565.07 | 338 |
| 569.11 | 338 | 574.36 | 338 | 575.36 | 338 | 576.28 | 338 | 577.98 | 338 |
| 578.17 | 338 | 582.86 | 338.05 | 582.92 | 338.05 | 583.83 | 338.06 | 584.35 | 338.06 |
| 584.91 | 338.06 | 585.07 | 338.06 | 585.34 | 338.06 | 588.42 | 338.11 | 588.57 | 338.11 |
| 589.08 | 338.11 | 599.7 | 338.18 | 664.4 | 338.67 | 705.74 | 339 | 705.81 | 339 |
| 707.1 | 339 | 708.57 | 339 | 708.97 | 339 | 709.39 | 339 | 709.59 | 339 |
| 712.72 | 339 | 712.9 | 339 | 713.05 | 339 | 715.02 | 339 | 716 | 339 |
| 716.7 | 339 | 717.81 | 339 | 718.13 | 339 | 718.45 | 339 | 722.73 | 339 |
| 723.59 | 339 | 723.74 | 339 | 725.5 | 339.04 | 739.42 | 339.33 | 744.99 | 339.37 |
| 745.8 | 339.38 | 747.34 | 339.4 | 749.46 | 339.41 | 750.6 | 339.43 | 756.09 | 339.47 |
| 762.65 | 339.51 | 772.07 | 339.58 | 785.73 | 339.69 | 805.69 | 339.85 | 814.25 | 339.93 |
| 820.82 | 339.99 | | | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 116.51 | .04 | 514.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 116.51 | 514.12 | 177.36 | 500 | 886.37 | .1 | .3 |

Left Levee  Station=  107.82  Elevation=  338.03

CROSS SECTION

RIVER: WASH30

REACH: Centerline Align  RS: 8000

INPUT
Description:
Station Elevation Data  num=  443

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.928.899963 | | 336.1310.34998 | | 33621.84998 | | 335.2725.91998 | | 335 |
| 27.70996 | 334.94 | 27.87 | 334.93 | 37.87 | 334.638.85999 | | 334.5839.41998 | | 334.57 |
| 46.78998 | 334.33 | 48.44 | 334.3258.84998 | | 334.1770.33997 | | 33471.47998 | | 334 |
| 71.88995 | 33472.29999 | | 334 | 73.44 | 33487.98999 | | 334 | 90.37 | 334 |
| 91.21997 | 33493.79999 | | 333.9995.54999 | | 333.99 | 121.89 | 333.94 | 123.06 | 333.94 |
| 124.33 | 333.94 | 124.44 | 333.94 | 125.08 | 333.93 | 125.86 | 333.92 | 126.15 | 333.92 |
| 136.56 | 333.91 | 146.75 | 333.9 | 156.77 | 333.97 | 160.7 | 334 | 161.53 | 334 |
| 162.02 | 334 | 162.66 | 334 | 163.23 | 334 | 163.37 | 334 | 164.28 | 334 |
| 165.89 | 334 | 166.16 | 334 | 166.61 | 334 | 166.89 | 334 | 171.31 | 334 |
| 176.3799 | 334.01 | 185.78 | 334 | 185.81 | 334 | 185.89 | 334 | 185.92 | 334 |
| 188.0099 | 334 | 189.11 | 334 | 190.17 | 334 | 195.65 | 334 | 198.45 | 334.01 |
| 200.9 | 334 | 205.05 | 334 | 205.12 | 334 | 205.15 | 334 | 205.24 | 334 |
| 208.29 | 334 | 208.71 | 334 | 208.91 | 334 | 209.29 | 334 | 219.17 | 334 |
| 219.8199 | 334 | 219.96 | 334 | 220.17 | 334 | 222.35 | 334 | 232.31 | 334 |
| 240.59 | 334241.0099 | | 334 | 241.46 | 334 | 242.9 | 334 | 242.93 | 334 |
| 244.93 | 334 | 245.31 | 334248.2599 | | 334 | 251.42 | 334.01256.5099 | | 334.02 |
| 260.53 | 334.02 | 266.27 | 334.02 | 266.9 | 334.02 | 267.89 | 334.02 | 268.12 | 334.02 |
| 270.06 | 334.01 | 274.03 | 334274.1299 | | 334 | 274.53 | 334 | 274.89 | 334 |
| 275.6299 | 334 | 278.19 | 334 | 283.54 | 333.99 | 290.95 | 334 | 292 | 334 |
| 294.96 | 334 | 295.9 | 334.01 | 297.3 | 334 | 298.42 | 334 | 300.91 | 334 |
| 302.14 | 333.97 | 306.46 | 333.84 | 309.81 | 333.75 | 316.62 | 333.6321.7599 | | 333.49 |
| 324.58 | 333.41 | 328.44 | 333.3 | 330.34 | 333.26 | 339.37 | 333 | 341.72 | 332.62 |
| 342.33 | 332.6 | 342.79 | 332.61 | 343.48 | 332.64 | 347.74 | 332.31 | 351.24 | 332.39 |
| 357.74 | 332.58 | 358.25 | 332.6 | 359.52 | 332.65 | 363.25 | 332.77 | 363.64 | 332.79 |
| 365.73 | 332.84 | 365.86 | 332.85 | 366.17 | 332.87 | 367.56 | 332.93368.0699 | | 332.95 |
| 368.71 | 332.96 | 369.21 | 332.96 | 371.71 | 332.98 | 371.74 | 332.98 | 372.06 | 332.96 |
| 373.49 | 332.89 | 374.5 | 332.88 | 375.23 | 332.82 | 377.29 | 332.74 | 378.15 | 332.69 |
| 384.17 | 332 | 385.99 | 332 | 386.68 | 331.99 | 387.68 | 331.99 | 389.41 | 332 |
| 392.93 | 332.11 | 395.27 | 332.14 | 398.81 | 332.07 | 401.16 | 332.06 | 405.25 | 332.06 |
| 405.85 | 332.06406.5099 | | 332.05 | 407.36 | 332.06 | 407.42 | 332.06 | 407.74 | 332.05 |
| 409.6299 | 332.01 | 410.21 | 332 | 410.31 | 332 | 410.59 | 332 | 411.21 | 332 |
| 411.28 | 332 | 412.02 | 332 | 412.94 | 332413.6299 | | 332 | 413.65 | 332 |
| 414.93 | 332.58415.8799 | | 333 | 416.46 | 333 | 416.56 | 333 | 417.58 | 333 |
| 425.5699 | 333 | 426.44 | 333 | 427.05 | 333 | 427.58 | 333 | 428.19 | 333 |
| 437.09 | 332.59 | 449.7 | 332 | 450.61 | 332 | 452.71 | 331.99 | 453.28 | 331.99 |
| 456.4 | 332 | 456.75 | 332.01 | 458.33 | 332.02 | 458.55 | 332.02 | 458.78 | 332.02 |
| 459.36 | 332462.0099 | | 332 | 462.66 | 332 | 464.56 | 331.99 | 465.54 | 331.99 |
| 467.0099 | 331.99 | 468.17 | 331.99 | 471.93 | 332 | 474.74 | 332.86 | 475.23 | 333 |
| 475.87 | 333478.1299 | | 333 | 478.75 | 333 | 482.18 | 333 | 487.48 | 333 |
| 488.8 | 333 | 489.38 | 333 | 489.48 | 333 | 489.92 | 333 | 495.63 | 333 |
| 497.09 | 333 | 497.62 | 333 | 504.73 | 333 | 509.78 | 333 | 510.83 | 333 |
| 511.26 | 333 | 511.72 | 333513.5599 | | 333 | 514.27 | 333 | 516.21 | 333.01 |
| 516.62 | 333.01520.3199 | | 333 | 525.41 | 333 | 526.2 | 333 | 526.42 | 333 |
| 528.3 | 333 | 530.64 | 333 | 530.91 | 333 | 532.55 | 333 | 533.65 | 333 |
| 535.27 | 333 | 542.52 | 333.01 | 543.24 | 333.01 | 543.83 | 333.01545.0599 | | 333.01 |
| 545.48 | 333.01 | 562.42 | 333.31 | 577.95 | 333.58582.5699 | | 333.57585.1899 | | 333.68 |
| 589.3099 | 333.89 | 589.96 | 333.93 | 590.3 | 333.93 | 590.38 | 333.92 | 590.83 | 333.91 |
| 591.04 | 333.9 | 591.34 | 333.88 | 592.03 | 333.92592.1899 | | 333.89 | 592.25 | 333.89 |
| 592.98 | 333.9 | 593.74 | 333.91 | 594.55 | 333.96594.5599 | | 333.96594.5699 | | 333.96 |
| 595.51 | 334 | 595.98 | 334 | 596.91 | 334 | 596.95 | 334597.6899 | | 333.99 |
| 598.61 | 333.98 | 600.1 | 334 | 600.25 | 334 | 600.62 | 334 | 601.48 | 333.97 |
| 602.08 | 334 | 602.25 | 333.99 | 607.71 | 333.96 | 608.85 | 333.96 | 612.7 | 333.9 |
| 615 | 333.94615.3199 | | 333.94619.1899 | | 334619.3199 | | 334 | 624.42 | 334 |
| 626.7 | 334 | 628.03 | 334628.5699 | | 334 | 631.35 | 334 | 631.88 | 334 |
| 638.85 | 334 | 640.89 | 334 | 645.89 | 334646.3199 | | 334 | 649.67 | 334 |
| 659.03 | 334 | 659.17 | 334 | 659.97 | 334 | 660.08 | 334660.1799 | | 334 |
| 662.75 | 334 | 666.1 | 333.05 | 666.33 | 333 | 666.59 | 332.99 | 667.2 | 332.98 |
| 667.97 | 332.99668.1899 | | 333 | 668.87 | 333.12 | 674.99 | 334 | 675.29 | 334.01 |
| 676.0699 | 334.01 | 676.77 | 334.01 | 682.62 | 334.19 | 684.61 | 334.3 | 693.58 | 334.6 |
| 695.04 | 334.72 | 696.73 | 334.79 | 699.41 | 335 | 699.86 | 335701.4399 | | 335 |
| 705.54 | 335 | 706.76 | 335 | 707.41 | 335 | 708.52 | 334.99 | 708.84 | 334.99 |
| 709.04 | 334.99 | 712.63 | 334.98 | 713.76 | 334.94 | 718.46 | 334.75 | 725.03 | 334.63 |
| 726.96 | 334.71 | 730.23 | 334.89 | 731.37 | 334.97 | 731.77 | 335 | 732.2 | 335 |
| 732.67 | 335733.5699 | | 335 | 734.35 | 335 | 736.26 | 335 | 737.16 | 335 |
| 738.62 | 335 | 739.6 | 335 | 740.71 | 335744.0699 | | 335 | 747.53 | 335 |
| 751.01 | 334.98 | 753.38 | 334.97 | 755.09 | 334.97760.5599 | | 335 | 760.92 | 335 |
| 761.43 | 334.99 | 761.55 | 334.99 | 762.21 | 335 | 762.64 | 335 | 762.67 | 335 |
| 762.98 | 335 | 763.12 | 335 | 763.14 | 335 | 763.25 | 335 | 763.36 | 335 |
| 763.4 | 335 | 767.92 | 335 | 773.77 | 335 | 774.01 | 335 | 774.04 | 335 |
| 774.1 | 335 | 776.38 | 335 | 777.16 | 335 | 779.62 | 335 | 783.04 | 335 |
| 784.74 | 335790.9399 | | 335 | 791.18 | 334.82 | 792.4 | 334 | 795.21 | 333.94 |
| 798.6899 | 333.87 | 798.74 | 333.87 | 798.75 | 333.87 | 799.13 | 333.88 | 804.63 | 334 |
| 808.04 | 334.72 | 809.54 | 334.97 | 809.71 | 335 | 809.88 | 335809.9399 | | 335 |

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  809.98     335  811.47  335.01  812.37  335.02  813.46  335.02  815.18  335.03
  818.65  335.02  840.12  335.41  841.35  335.43  857.68  335.62  866.77  335.68
  867.41  335.68  869.48  335.64872.3199  335.56  879.33  335.33  879.68  335.33
  880.62   335.3  889.49     335  893.11  334.37895.1899     334  898.25  333.95
  898.53  333.95  901.79     334  901.86     334  901.87     334  901.88     334
904.9399     335   905.8  335.03912.0099  335.19  916.49   335.3919.0699  335.33
  920.13   335.4  920.55  335.41   923.5  335.57  925.65  335.67  929.43  335.96
  931.58     336  933.63     336  934.29     336  935.52     336  936.47     336
   936.8     336  937.92     336942.4399     336  942.47     336  942.53     336
  950.14     336  955.33  336.01  959.52     336   962.7     336962.8799     336
  963.21     336  963.75     336  964.93     336  965.59     336966.0099     336
  967.28     336970.1299     336  975.91     336  976.69     336   977.7     336
  977.98     336  978.39     336   978.9     336  979.58     336  980.33     336
  980.95     336  982.04     336  982.24     336  982.98     336  983.93  335.97
  985.86  335.94986.0699  335.95  986.64  335.96988.3799  335.98  988.56  335.98
  988.81  335.98     990     336  990.16     336

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05321.7599     .04  674.99     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      321.7599  674.99           425.34     500  594.89              .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 7500

INPUT
Description:
Station Elevation Data    num=     314
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  333.57 11.1001  333.02   11.12  333.0111.41003     33311.68005  332.99
30.47009     33241.23004  331.5143.25006  331.4251.56006     33161.21002  330.51
63.56006  330.4166.28003  330.2973.90002     33075.07007  329.9875.47003  329.97
76.01007  329.9776.09003  329.9781.90002  329.8882.67004  329.8786.15002  329.81
86.72003   329.895.89001  329.65  102.21  329.55  104.47  329.55  113.39  329.43
119.3701  329.37  119.77  329.37  123.84  329.34  127.36  329.32  140.65  329.26
   156.9  329.16  156.98  329.16  161.64  329.16166.2001  329.16166.2601  329.16
  166.35  329.16  166.72  329.16167.0701  329.16173.0101  329.18  174.09  329.19
174.3101  329.19  183.91  329.23192.6301  329.26  193.86  329.26  206.39  329.22
220.5101  329.17  223.67  329.16  226.55  329.15  227.02  329.15230.7001  329.13
  232.73  329.13234.7501  329.13237.2601  329.13  237.48  329.13   253.8  329.04
260.4901  329.05262.2401  329.04282.3701     329  286.72     329287.8701     329
290.3101     329   292.8     329  300.98  329.01315.4401  329.03318.3201  329.02
  335.98     329337.9401     329  338.02     329   338.3     329  338.89     329
  339.41     329  340.79     329  342.03     329342.7001     329343.4901     329
  344.97     329  348.72  329.01351.7401  329.02  357.16  329.03358.5601  329.03
367.9501     329  370.23     329372.0701     329374.2401     329378.1801     329
  378.58     329  379.61  329.01380.2601  329.01  386.05  329.04399.8201  329.12
  402.04  329.13411.2401  329.09  427.58     329429.4901     329  431.04     329
435.8701     329440.8101     329  443.47     329452.6201     329  453.89     329
  454.41  328.83456.7401     328  465.59  327.91  466.14  327.91   466.6  327.91
  471.48  327.95  476.21     328479.8101  328.04480.3101  328.04  481.11  328.04
  490.48  328.36  499.61     329500.0001  329.02  513.05  329.71518.8101     330
  521.97     330  522.27     330523.7601     330  524.28     330  525.72     330
527.4501     330  527.89     330  529.65     330529.7501     330531.9301     330
531.9901     330532.4301     330  532.46     330  532.54     330  533.08  330.01
534.1801  330.01  554.35  330.15574.1201  330.27  578.11  330.29  578.41  330.29
585.9301  330.35  597.22  330.44610.2001  330.61639.4301     331  639.53     331
   640.8     331  642.54     331  643.79     331  646.15     331  646.42     331
  647.03     331648.3301     331     649     331649.7001     331650.9501     331
   652.1     331652.7001     331  655.04     331655.3201     331656.1901     331
656.5601     331  658.26     331661.6801     331   662.8     331   666.5  330.99
668.9501  330.99675.0901     331  679.26     331679.6901     331  679.73     331
  679.79     331   682.3     331683.1801     331683.4301     331  685.52     331
  685.97     331   687.5     331  688.75     331  688.78     331688.9901     331
  693.38     331  694.38     331   694.8     331  696.28     331696.8201     331
  698.52     331699.4301     331700.5601     331  701.61     331703.2401     331
704.8201     331  710.75     331713.3301     331  715.29     331  715.66     331
718.4401     331718.6801     331719.8201     331  720.63     331  720.72     331
  720.91     331  721.42     331  721.97     331721.9901     331  722.64     331
   722.8     331722.8101     331722.8301     331  724.02     331  724.26  331.02
  728.89   331.2729.2401  331.21740.0901  331.55741.3201  331.59746.7401  331.61
752.6801  331.65760.3101  331.79   763.8  331.84767.8301  331.86  769.15  331.86
  771.02  331.88  772.54  331.89  775.38  331.89775.7401  331.89782.8701   331.9
  790.16  331.91  790.47  331.91  790.77  331.92     791  331.92  802.25  331.98
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| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 804.9401 | 332 | 807.21 | 332 | 809.9301 | 332 | 810.21 | 332 | 810.9401 | 332 | | |
| 811.14 | 332 | 811.89 | 332 | 812.2001 | 332 | 812.7501 | 332 | 813.28 | 332 | | |
| 824.61 | 332 | 824.85 | 332 | 825.0601 | 332 | 826.59 | 332 | 826.85 | 332 | | |
| 827.9901 | 332 | 829.67 | 332 | 829.98 | 332 | 830.66 | 332 | 830.84 | 332 | | |
| 832.3101 | 332 | 832.8 | 332 | 833.3101 | 332 | 840.0001 | 332 | 846.89 | 331.99 | | |
| 850.1801 | 332 | 851.23 | 332 | 858.8 | 332 | 859.2501 | 332 | 889.91 | 332.61 | | |
| 897.98 | 332.76 | 898.96 | 332.78 | 899.0601 | 332.78 | 907.4401 | 332.99 | 907.86 | 332.99 | | |
| 909.3201 | 332.99 | 909.8 | 332.99 | 910.51 | 332.99 | 910.77 | 332.99 | 911.39 | 332.99 | | |
| 911.8701 | 332.99 | 915.85 | 332.99 | 918.27 | 333 | 919.09 | 333 | 919.96 | 333 | | |
| 920.9 | 333 | 921.7401 | 333 | 923.3701 | 333.06 | 923.61 | 333.07 | 924.59 | 333.1 | | |
| 945.0801 | 333.81 | 947.5701 | 333.89 | 951.52 | 333.99 | 952.2001 | 333.99 | 952.8301 | 333.99 | | |
| 953.0001 | 333.99 | 953.3 | 333.99 | 954.22 | 333.99 | 954.78 | 333.99 | 955.42 | 333.99 | | |
| 956.2501 | 333.99 | 957.17 | 334 | 957.84 | 334 | 957.8801 | 334 | 957.9 | 334 | | |
| 957.92 | 334 | 958.0001 | 334 | 958.03 | 334 | 961.42 | 334.08 | 967.02 | 334.25 | | |
| 990.6301 | 334.99 | 991.17 | 334.99 | 993.09 | 335 | 1000.01 | 335.17 | 1000.35 | 335.17 | | |
| 1005.56 | 335.29 | 1035.79 | 336 | 1035.84 | 336 | 1036.79 | 336 | 1037.3 | 336 | | |
| 1039.52 | 336 | 1040.93 | 336 | 1042.06 | 336 | 1043.03 | 336 | 1043.72 | 336 | | |
| 1047.18 | 336 | 1051.86 | 336.12 | 1053.13 | 336.15 | 1062.42 | 336.43 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 66.28003 | .04 | 554.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 66.28003 | 554.35 | 362.78 | 500 | 670.29 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 7000

INPUT
Description:
Station Elevation Data num= 333

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.824 | .83 | 332.678 | 4.9 | 332 | 10.9 | 331.088 | 11.6 | 331 |
| 16.32 | 330.456 | 20.26 | 330 | 20.91 | 329.926 | 21.79 | 329.838 | 26.29 | 329.396 |
| 30.37 | 329 | 36.65 | 328.392 | 41 | 328 | 51.15 | 327.135 | 52.7 | 327 |
| 53.74 | 326.934 | 53.85 | 326.927 | 54 | 326.921 | 54.52 | 326.895 | 59.85 | 326.655 |
| 61.94 | 326.606 | 62.96 | 326.56 | 66.9 | 326.456 | 68.5 | 326.387 | 68.99 | 326.378 |
| 77.15 | 326.144 | 78.94 | 326.075 | 81.59 | 326.003 | 81.68 | 326 | 81.7 | 326 |
| 85.66 | 325.971 | 89.48 | 325.945 | 93.78 | 325.92 | 94.08 | 325.919 | 96.21 | 325.903 |
| 101.5 | 325.864 | 106.39 | 325.833 | 109.26 | 325.815 | 112.02 | 325.8 | 127.61 | 325.793 |
| 143.33 | 325.806 | 144.76 | 325.811 | 147.64 | 325.82 | 150.29 | 325.826 | 152 | 325.824 |
| 153.32 | 325.824 | 154.65 | 325.824 | 156.97 | 325.817 | 160.43 | 325.798 | 164.73 | 325.772 |
| 165.66 | 325.766 | 182.99 | 325.708 | 198.11 | 325.669 | 199.72 | 325.671 | 200.36 | 325.669 |
| 202.33 | 325.665 | 203.2 | 325.663 | 207.1 | 325.655 | 211.22 | 325.643 | 213.11 | 325.634 |
| 213.84 | 325.63 | 214.05 | 325.629 | 230.5 | 325.63 | 247.35 | 325.644 | 248 | 325.65 |
| 248.33 | 325.65 | 248.49 | 325.651 | 254.54 | 325.674 | 259.59 | 325.674 | 264.66 | 325.673 |
| 265.02 | 325.671 | 266.21 | 325.673 | 267.05 | 325.67 | 268.49 | 325.668 | 268.83 | 325.668 |
| 270.78 | 325.657 | 287.29 | 325.68 | 305.24 | 325.715 | 305.73 | 325.717 | 310.49 | 325.755 |
| 310.76 | 325.757 | 313.66 | 325.782 | 316.05 | 325.8 | 317.87 | 325.807 | 320.85 | 325.803 |
| 324 | 325.796 | 326.47 | 325.775 | 328.48 | 325.779 | 329.19 | 325.771 | 329.59 | 325.769 |
| 335.65 | 325.709 | 347.08 | 325.564 | 348.93 | 325.545 | 363.49 | 325.299 | 377.27 | 325.069 |
| 378.21 | 325.054 | 381.53 | 325 | 381.89 | 325 | 382.78 | 325 | 383.64 | 325 |
| 384.51 | 325 | 399.7 | 325.383 | 417.42 | 325.798 | 425.74 | 325.995 | 425.86 | 325.995 |
| 426.09 | 325.996 | 426.32 | 325.996 | 426.39 | 325.996 | 429.57 | 326 | 431.98 | 326.014 |
| 442.21 | 326.03 | 446.1 | 326.042 | 449.06 | 326.037 | 455.05 | 326.021 | 457.06 | 326.016 |
| 462.87 | 326 | 466.15 | 325.37 | 468.06 | 325 | 469.37 | 324.999 | 473.24 | 324.996 |
| 473.49 | 324.996 | 473.68 | 324.996 | 475.02 | 324.997 | 477.71 | 324.999 | 478.82 | 325 |
| 480.2 | 325.06 | 481.09 | 325.096 | 485.37 | 325.281 | 502.54 | 325.992 | 502.88 | 325.994 |
| 503.09 | 325.994 | 503.22 | 325.994 | 504.05 | 325.995 | 506.31 | 326 | 513.14 | 326.04 |
| 513.6 | 326.043 | 515.7 | 326.045 | 516.67 | 326.042 | 519.72 | 326.038 | 526.01 | 326 |
| 527.92 | 325.996 | 528.65 | 325.997 | 531.24 | 325.995 | 533.84 | 325.997 | 534.21 | 325.998 |
| 536.22 | 326 | 536.55 | 326.001 | 536.56 | 326.001 | 537.61 | 326.003 | 537.8 | 326.003 |
| 540.87 | 326.043 | 543.11 | 326.082 | 545.03 | 326.107 | 545.91 | 326.118 | 549.24 | 326.073 |
| 552.44 | 326 | 553.3 | 326 | 554.16 | 326 | 556.13 | 326 | 557.68 | 326 |
| 558.81 | 326 | 559.56 | 326 | 562.05 | 326.04 | 562.69 | 326.049 | 565.62 | 326.003 |
| 565.74 | 326.001 | 565.81 | 326 | 565.83 | 326 | 565.86 | 325.99 | 569.25 | 325 |
| 580.7 | 324.895 | 583 | 324.877 | 596.33 | 324.996 | 596.74 | 325 | 599.33 | 325.131 |
| 616.33 | 326 | 616.98 | 326.001 | 617.84 | 326.001 | 617.91 | 326.001 | 618.19 | 326.001 |
| 622.06 | 326.003 | 623.09 | 326.004 | 625.59 | 326.005 | 635.08 | 326.01 | 641.59 | 326.008 |
| 648.08 | 326.01 | 657.66 | 326.005 | 665 | 326 | 666.81 | 325.993 | 667.13 | 325.992 |
| 668.83 | 325.995 | 670.12 | 326 | 677.39 | 326.036 | 691.44 | 326.232 | 707.04 | 326.328 |
| 707.52 | 326.324 | 708.14 | 326.321 | 709.08 | 326.316 | 710 | 326.311 | 711.99 | 326.308 |
| 713.15 | 326.299 | 714.38 | 326.307 | 720.75 | 326.316 | 727.01 | 326.319 | 731.73 | 326.291 |
| 735.72 | 326.269 | 753.37 | 326.058 | 755.84 | 326.023 | 757.75 | 326.022 | 757.93 | 326.022 |
| 758.73 | 326.02 | 760.1 | 326.018 | 762.7 | 326.013 | 764.86 | 326.01 | 765.99 | 326.009 |

```
  766.59 326.008  768.21 326.006  768.62 326.006  770.44 326.004  772.62 326.003
  775.01     326  777.07 325.959  777.81 325.946  778.78 325.963  779.99 325.977
   781.7     326  786.86 326.021  787.51 326.022  788.49  326.02  791.18 326.017
  793.01 326.012  797.23 326.002  797.61 326.001   797.7 326.001  797.74     326
  797.78     326  797.79     326  797.95 326.005  797.96 326.006  798.01 326.008
  798.06  326.01  798.68 326.034  800.83 326.127  807.38  326.42  821.58     327
  823.46 327.001  824.14 327.001  824.78 327.001   825.1 327.001  827.39 327.001
   830.4     327  830.83 326.999  837.97 326.998  846.19 326.997  853.38 326.996
  863.75 326.998  873.18     327  875.64 327.029  888.16 327.156  889.21 327.174
  892.36 327.213  898.88   327.3  899.57 327.309  903.94 327.351   909.9 327.421
  928.15 327.718  930.32 327.754  945.16     328  948.55 328.072  948.93 328.078
  963.81 328.388  967.69 328.438  977.33 328.554  984.04 328.608  984.62 328.611
  985.77 328.614  986.58 328.623  997.53 328.715 1013.37   328.9 1015.91 328.943
 1018.43 328.997  1020.6     329 1020.61     329 1020.77     329 1021.76 329.001
 1023.27 329.033 1029.33 329.138 1029.45 329.141 1029.51 329.142 1032.33 329.209
 1032.58  329.21 1037.06 329.273 1045.97 329.418 1053.57 329.571  1058.4 329.659
 1065.33 329.784 1068.59 329.839 1077.63     330    1079 330.034 1079.19 330.037
 1079.26 330.038 1080.07 330.053 1096.13 330.383 1102.48 330.494 1113.21 330.727
 1114.72 330.759 1115.53 330.779  1127.2     331 1132.74 331.117 1137.01 331.216
  1144.4 331.414 1153.82 331.659 1166.02     332 1176.55 332.332 1188.99 332.761
 1192.26 332.873 1196.02     333  1210.3 333.556 1211.71 333.607 1222.69 333.978
 1223.29     334 1234.71 334.514 1242.13 334.863 1243.97 334.949 1245.18     335
 1263.07 335.981 1263.11 335.983 1263.12 335.984 1263.41     336  1265.5 336.112
 1282.23     337  1285.1  337.15 1288.28 337.312

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   68.99     .04  807.38     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         68.99  807.38           643.27     500  349.76              .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 6500

INPUT
Description:
Station Elevation Data    num=     356
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  323.53     .06  323.53 4.01001  323.257.600098     32323.49011  322.07
   24.75     322 24.8501     32226.36011  321.9926.99011  321.9932.52002  321.88
33.64001  321.8733.99011  321.86   34.37  321.8635.05005  321.8436.86011  321.81
45.71008  321.6446.42004  321.63 54.1001  321.5368.99011  321.2982.01001  321.02
83.16003     32183.17004     321 83.2301     32193.65002  320.36  102.16     320
102.6001     320103.5701  319.99   103.9  319.98103.9801  319.98105.3501  319.99
  106.27     320  107.53  320.02109.3201  320.03  112.02  320.02115.6801     320
  118.29  319.99119.9701  319.99  122.88     320123.9901     320  124.55  320.01
125.2101  320.01  125.51  320.01130.7401  320.02  135.52  320.03  135.91  320.03
  136.38  320.04  139.87  320.05  144.53  320.03   146.8  320.02152.9901     320
155.1001  319.95  155.17  319.94155.3601  319.95  157.16  319.99  157.52     320
  163.55  320.29  164.03  320.28  168.78  320.31  174.88  320.36  181.15  320.45
  187.03  320.53  193.54  320.66197.1801  320.72204.4501  320.81  204.98  320.82
  216.36     321216.7601     321217.3301     321  217.54     321217.8801     321
  218.91     321  219.85     321220.3701     321  221.41     321  223.61  320.99
  225.28     321  229.29  320.99  230.61     321232.3901     321232.4401     321
  235.67     321236.6401     321238.9901     321239.0701     321  239.53     321
246.7001  321.11  246.78  321.11262.8201     321263.5101     321  263.66     321
264.1201     321266.8701     321283.4601     321  283.97     321284.7401     321
289.4501     321289.7001     321  289.86     321  290.65     321  292.29     321
294.8701     321  295.84     321298.2601     321298.9601     321  300.17     321
305.2401     321307.0101     321314.2701  321.01  329.36     321  335.55     321
335.8301     321336.4901     321336.6901     321345.5201  321.01346.3801  321.01
350.0701     321  351.91     321357.1901     321   360.8  320.48  362.47   320.4
363.7101  320.37365.6801  320.27  368.41  320.12  369.36  320.05  370.29     320
  374.09  319.99   376.1  319.99376.4501  319.99376.8101  319.99379.1301  319.99
383.3901     320390.0101  320.15  414.23     321  415.03  321.12415.4301  321.17
421.1201     322425.3301     322  427.42     322428.4301     322428.5601     322
  470.29  321.28479.4301  321.13486.7701     321  486.91     321487.7601     321
  490.22     321490.3301     321  490.59     321490.9401     321491.4601     321
  492.35     321500.1301  321.01501.0601  321.01  504.59  321.01520.0201  321.16
   539.1  321.31  540.73  321.31559.4901  321.08563.5701  321.02564.8701  321.01
565.1901  321.01  565.78  321.01   566.6  321.01568.9501     321571.0701     321
  577.34     321577.3801     321579.5001  320.96580.3301  320.97  581.66     321
  598.03  321.01  604.04  321.02  622.73     321  623.59     321626.7001     321
630.2101     321  631.41  320.99634.1801     321635.1301     321635.9601     321
636.7001  321.03  649.04   321.4655.8201  321.46661.6201  321.68665.1401  321.86
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  667.67  321.99667.8301     322  672.28     322  675.23     322679.0801  322.01
681.3101     322  682.54     322  686.73     322689.8101     322  692.11     322
692.2001     322  694.65  321.99696.3101  321.98697.4701  321.98  697.91  321.98
  700.41  321.99  703.23     322  713.48  322.02723.1901  322.03723.7401  322.04
727.3501  322.03   743.8  322.17747.1901  322.14  747.29  322.14  748.64  322.15
  750.17  322.16751.9301   322.2  755.66  322.33  756.17  322.36  761.03   322.3
762.3401  322.26  762.42  322.27762.4301  322.27  762.67  322.27  770.55   322.5
  784.65  322.97785.8101  322.97  786.05  322.97  786.15  322.97786.3101  322.97
786.4501  322.98786.5001  322.98  787.03  322.98   791.3  322.98791.7201  322.98
791.8801  322.98  792.03  322.98  794.65  322.98  795.89  322.98796.8201  322.98
  797.36  322.98  798.66  322.98799.4401  322.99802.9401  322.98  804.05  322.98
806.4601     323  807.04     323  807.11     323807.4301     323807.9301     323
  808.79     323  809.67     323809.8701     323  810.61  323.01811.8401  323.01
  818.76  323.01  819.66  323.01  820.15  323.01822.3201  323.02823.6301  323.02
824.8701  323.02826.4901  323.02847.0601  323.23  849.76  323.24  851.54  323.27
852.3101  323.28854.0901  323.31   854.8  323.32   866.3  323.45  874.27  323.53
875.6301  323.53  877.03  323.54878.3201  323.55880.4701  323.56  887.27  323.61
895.6901  323.69911.3801  323.94911.5901  323.94  912.01  323.95915.2001     324
915.4701     324  915.51     324915.6201     324   915.8     324915.8301     324
917.6301     324  919.55     324921.4601     324  921.79     324922.3101     324
  922.64     324923.8701     324923.9501     324924.1801  324.01  924.66  324.02
952.9501     325  953.03     325953.0801     325  953.15     325  956.65  325.02
970.7601  325.46979.3701  325.69980.3301  325.71981.2001  325.72992.0901     326
  992.73  326.03992.8901  326.03997.3701  326.24 1003.54  326.49 1005.54  326.58
  1015.5     327 1019.63   327.2 1021.22  327.27 1029.82  327.68 1030.56  327.71
 1032.05  327.75 1036.77     328 1038.04  328.08 1039.56  328.19 1050.59     329
 1066.85  329.79  1069.4  329.92 1070.71  329.98 1071.13     330 1072.24  330.01
 1083.38  330.49 1088.34  330.69 1091.44  330.75 1093.24  330.83 1093.53  330.84
 1093.66  330.84 1097.84     331 1110.75  331.42 1112.98  331.52 1117.68  331.67
 1124.35  331.91 1124.48  331.92 1126.17     332 1126.19     332 1126.29     332
 1130.75  332.16 1145.36     333 1146.97  333.11 1159.13     334 1167.42  334.63
 1171.89     335 1177.86   335.5  1179.8  335.65 1184.13  335.98 1184.61     336
 1190.89  336.67 1192.12  336.79 1193.14  336.88 1194.51     337 1195.72  337.13
 1195.87  337.14 1196.35  337.17 1196.96  337.22 1198.53  337.35 1198.86  337.37
 1200.93  337.51

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0536.86011     .04661.6201     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      36.86011661.6201           352.22     500  705.99              .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 6000

INPUT
Description:
Station Elevation Data    num=     446
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  324.111.180054     32412.51001  323.1213.12012  323.0814.18005     323
 15.3501  322.9127.80005     32234.19006  321.58   34.25  321.5835.65002  321.49
45.70007     32152.97009  320.6661.53003  320.2767.07007     32076.89001  319.63
79.52002  319.5283.39001  319.3884.64001  319.3488.05005  319.2192.93005     319
  102.38  318.64106.0801  318.51108.1901  318.44112.8301  318.29114.9301  318.22
119.9701  318.07  122.15     318  122.41     318122.4901     318  122.54     318
  122.67     318  128.13  317.75141.9501     317149.4301  316.98  149.64  316.98
  153.01  316.99  157.54     317160.8501     317  165.05     317  165.92     317
  168.27     317173.7101     317   186.4  316.95  193.88  316.92209.1901  316.98
  213.89     317216.3101  317.01237.0901  317.47246.5901  317.59  255.15  317.49
  271.25  317.24271.4401  317.23  281.14     317282.6001   316.6294.2401  316.77
296.3401  316.84300.7301  316.89  307.88  316.99308.2301  316.99  308.42     317
     318   317.3  321.38   317.4   322.3  317.41  327.25  317.55  337.26  317.69
  342.65  317.76342.8101  317.76  344.25  317.76344.6001  317.76  344.77  317.77
345.2201  317.76350.4701  317.79354.4601  317.81358.6201  317.78364.9501  317.72
376.7401   317.6  385.54  317.54   392.9  317.47  403.03  317.36407.6801  317.31
422.0801  317.12422.4801  317.12  425.79  317.09427.7601  317.07428.3801  317.07
429.0201  317.07429.2001  317.07429.3101  317.07429.4401  317.07  436.11  317.01
436.1801  317.01436.8301     317437.0601     317  437.72     317437.9901     317
439.0201     317443.4301  316.96449.5201  316.91456.0201  316.85461.6801   316.8
463.7601  316.78  472.98  316.83483.6501   316.9  483.78  316.91   483.8  316.91
  484.04  316.91  484.23  316.91  484.28  316.91   484.3  316.91490.4401  316.88
  490.97  316.89494.3201  316.92  496.79  316.92499.7401   316.9521.8301  316.91
545.5101  316.97546.0701  316.98  546.35  316.97546.7501  316.97  546.79  316.96
546.9401  316.96547.6801  316.96547.7601  316.96547.9601  316.96  547.97  316.96
547.9901  316.96548.0001  316.96  550.23  316.93552.3301   316.9  552.85   316.9
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556.8201  316.97557.9001  316.99558.4501  316.98559.3901  316.98559.7101  316.98
560.1301  316.98560.8801  316.98561.5801  316.98  562.11  316.98  563.53  316.97
565.3701  316.97565.4601  316.97565.5201  316.97566.0101  316.96567.4301  316.97
568.5201  316.97569.1901  316.97  569.55  316.97579.6201  316.97580.5001  316.97
583.7101  316.98  583.92  316.98  584.22  316.98585.5701  316.98586.0601  316.98
  588.42  316.98  610.67  316.44  619.16  316.29620.4001  316.28626.0001  316.33
  631.47  316.38634.0901  316.41  636.11  316.47  636.61  316.47644.0201  316.74
650.6401  316.99651.1801  316.99  651.48  316.99  652.05  316.99653.7401  316.99
653.8301  316.99655.2501     317656.5101     317  657.36     317658.7701     317
  658.86     317  659.61     317   660.1     317662.5801     317663.1801     317
  664.23     317666.9001  316.99668.7501  316.99670.4901  316.99672.3201  316.99
676.9401  316.99  687.61     317687.9001     317  688.23     317  688.73     317
688.7601     317688.8101     317688.9401     317691.9601     317692.8701     317
  695.35     317  696.97     317  699.28     317704.0801     317  704.11     317
706.1401     317706.6501     317  708.28     317709.3901     317710.2001     317
   711.3     317712.4001     317713.6801     317719.2101     317719.3901     317
719.5601     317719.6801     317720.4401     317720.4501     317720.4601     317
722.4901     317  723.97     317  727.41     317727.4501     317728.9001     317
  729.47     317  730.23     317  733.61     317733.9601     317736.7401     317
737.4901     317  737.86     317737.9001     317739.1501     317742.0001  317.03
  742.03  317.03  747.22  317.07  749.16  317.09  753.03  317.14753.7101  317.15
   756.6  317.17771.5701   317.3   782.8  317.38784.0001  317.39  787.03  317.45
793.7501  317.59  796.78  317.61799.6801  317.68801.4901   317.7  802.98  317.73
807.3301  317.82810.6801  317.87816.3401     318824.5801  318.01826.0601  318.02
827.2001  318.01  828.04  318.01  829.54  318.01829.6201  318.01829.7001  318.01
  832.55  318.01835.1301  318.01  838.53  318.01847.8301  318.03857.8101  318.01
858.0901  318.01860.2001  318.01860.4501  318.01860.7701  318.01863.8901  318.01
864.2701  318.01868.3101  318.01   891.6  318.03910.1501  318.01  910.79  318.01
  917.36     318  917.85     318  918.03     318919.1201     318920.4401     318
   923.1  318.03924.0001  318.04928.1901   318.1  934.22  318.19943.7501  318.37
952.8401  318.55976.1801     319  985.14   319.3 1003.38  319.84 1004.62  319.88
 1008.48     320 1020.92  320.45 1036.15     321 1040.71   321.2 1043.65  321.33
 1046.87  321.48 1055.64  321.89  1057.8     322 1057.99     322 1058.01     322
 1071.06  322.56 1074.91  322.71 1082.08  322.97  1082.2  322.97 1083.08  322.98
 1084.92  322.99 1086.84  322.99 1087.31     323 1088.26     323 1092.24   323.3
 1096.91  323.68 1102.97     324 1121.84  324.92 1123.24     325 1134.13  325.57
 1136.16  325.67 1143.71     326 1147.74  326.18 1162.35     327 1164.31  327.11
 1164.85  327.14  1179.4     328 1181.55  328.12 1184.08  328.25 1185.96  328.35
 1191.98   328.6 1196.49  328.79 1200.92     329 1205.57  329.19 1206.56  329.23
 1208.69   329.3 1212.05  329.39  1213.1  329.43 1215.14  329.48  1220.2  329.61
 1224.22  329.73 1231.87     330 1236.43   330.2 1245.84     331 1249.05   331.4
 1254.05     332 1261.62  332.73 1264.03     333 1265.69  333.18 1269.41  333.47
 1272.15  333.71 1272.36  333.73 1275.68     334 1279.24  334.55 1281.71     335
 1282.99  335.27 1286.81     336 1287.03  336.05 1287.22  336.08 1287.34   336.1
 1288.16  336.24 1289.32  336.42 1290.52  336.53 1291.21  336.61 1291.33  336.62
 1293.14  336.74  1294.9  336.85 1297.97     337 1299.46   337.1 1299.77  337.12
 1302.03  337.15 1302.22  337.15  1302.6  337.12 1305.31     337 1306.64  336.95
 1306.74  336.94  1312.8  336.48 1315.43  336.29 1318.74     336 1323.39  335.98
 1325.46  335.98 1325.63  335.98 1325.81  335.99 1326.04     336 1327.21  336.03
 1328.34  336.04 1338.48  336.58 1342.59  336.74 1343.36  336.78 1344.03  336.78
 1344.49   336.8 1344.72   336.8 1346.03  336.81 1346.39  336.82 1349.99  336.82
 1355.04  336.86 1356.26  336.89 1357.14   336.9 1357.15   336.9 1357.32   336.9
  1357.5   336.9 1358.94   336.9 1363.24  336.99 1364.12  336.98 1367.16  336.98
 1372.64     337 1372.65     337 1372.69     337  1378.5  337.35 1381.91  337.51
    1384   337.6 1385.19  337.63 1386.07  337.67 1394.13  337.84 1395.31  337.89
 1398.61  337.99  1399.1  337.99 1400.05  337.99 1403.14     338 1404.48  338.02
 1404.59  338.02 1404.72  338.03 1404.92  338.03 1405.28  338.06 1408.28  338.28
 1412.56  338.53 1415.05  338.74 1415.84  338.81 1417.22  338.92 1417.59  338.95
 1418.61  338.99 1418.66  338.99 1418.69  338.99 1418.95     339 1420.46  339.01
 1420.71  339.01 1420.72  339.01 1420.77  339.01 1424.16  339.01 1425.07  339.01
 1427.77  339.01 1429.17  339.02 1431.88  339.02 1432.46  339.02 1432.67  339.02
 1433.11  339.02 1433.58  339.02  1438.8  339.27 1439.95  339.32 1442.23  339.41
 1444.64  339.49 1444.65  339.49 1444.72  339.49  1444.8  339.49 1450.08  339.65
 1451.56   339.7

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  128.13     .04  787.03     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        128.13  787.03           739.24     500  229.09              .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 5500

INPUT
```

Description:
Station Elevation Data num= 372

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.751.689941 | | 312.7 | 3.01001 | 312.665.339966 | | 312.598.410034 | | 312.51 |
| 9.459961 | 312.4910.48999 | | 312.4612.09998 | | 312.4121.46997 | | 312.27 | 22.87 | 312.23 |
| 29.66003 | 312.0631.04993 | | 312.02 | 32.38 | 31239.44995 | | 311.8347.98999 | | 311.67 |
| 53.98999 | 311.5854.79993 | | 311.5756.43994 | | 311.5457.32996 | | 311.5261.44995 | | 311.46 |
| 63.44995 | 311.4265.58997 | | 311.3967.40002 | | 311.3668.56995 | | 311.3470.72998 | | 311.33 |
| 72.91992 | 311.29 | 73.62 | 311.2992.08997 | | 311.0993.69995 | | 311.06104.6799 | | 311 |
| 104.75 | 311 | 104.77 | 311 | 105.15 | 310.99 | 106.38 | 310.99 | 107.75 | 310.99 |
| 108.49 | 311 | 114.88 | 311.01 | 115.61 | 311.01118.6799 | | 311.01122.3199 | | 311.01 |
| 131.99 | 311 | 132.48 | 311 | 132.91 | 311 | 133.26 | 311 | 133.53 | 311 |
| 134.26 | 311 | 135.24 | 311 | 135.63 | 311145.4199 | | 311.19 | 146.96 | 311.23 |
| 150.99 | 311.31 | 178.36 | 311.89183.1899 | | 312 | 183.24 | 312 | 183.27 | 312 |
| 196.03 | 312 | 199.66 | 312 | 205.03 | 312 | 216.08 | 312 | 218.85 | 311.26 |
| 219.77 | 311220.9299 | | 311221.4299 | | 311 | 227.86 | 310.99 | 230.03 | 310.99 |
| 236.33 | 311 | 254.12 | 311.04 | 264.63 | 311.05 | 278.39 | 311.03 | 281.88 | 311.02 |
| 287.2 | 311.02 | 292.85 | 311.04 | 292.98 | 311.04 | 293.7 | 311.04 | 294.45 | 311.04 |
| 295 | 311.05 | 295.96 | 311.07 | 296.22 | 311.07 | 296.84 | 311.08 | 297.02 | 311.08 |
| 297.41 | 311.09300.0699 | | 311.13 | 306.61 | 311.26322.1699 | | 311.22 | 342.65 | 311.02 |
| 342.6899 | 311.02 | 343.25 | 311355.8199 | | 310.58364.7999 | | 310.52 | 373.51 | 310.56 |
| 378.28 | 311 | 380.22 | 311.01 | 383.46 | 311.02 | 385.87 | 311.01 | 388.18 | 311 |
| 392.12 | 311 | 405.41 | 311 | 418 | 311 | 418.46 | 311 | 421.47 | 311 |
| 422.01 | 311 | 424.73 | 311 | 424.99 | 311 | 425.39 | 311 | 425.96 | 311 |
| 426.66 | 311 | 426.91 | 311.01 | 427.09 | 311.01 | 427.37 | 311 | 427.73 | 311 |
| 429.47 | 311 | 429.7 | 311 | 431.64 | 311 | 432.48 | 311 | 432.72 | 311 |
| 432.93 | 311 | 433.09 | 311 | 433.29 | 311 | 433.83 | 311 | 435.71 | 311 |
| 435.72 | 311 | 436.08 | 311 | 437.5 | 311 | 440.09 | 311 | 442.1 | 311 |
| 442.15 | 311 | 442.68 | 311 | 442.85 | 311 | 443.85 | 311 | 445.57 | 311 |
| 446.28 | 311 | 447.26 | 311 | 447.46 | 311 | 447.64 | 311 | 448.03 | 311 |
| 448.28 | 311 | 450.24 | 310.99 | 450.57 | 310.99 | 450.61 | 310.99 | 451.1 | 310.99 |
| 452.21 | 310.99 | 452.43 | 310.99 | 454.89 | 310.99 | 456.81 | 311 | 457.26 | 311 |
| 457.43 | 311 | 464.75 | 311 | 467.7 | 311 | 468.32 | 311 | 469.17 | 311 |
| 469.35 | 311 | 470.4 | 311 | 471.06 | 311 | 471.61 | 311 | 471.93 | 311 |
| 472.63 | 311 | 476.29 | 310.99 | 477.92 | 310.99 | 482.2 | 310.99 | 485.52 | 311 |
| 486.8 | 311 | 488.68 | 311 | 488.81 | 311 | 491.88 | 311 | 497.59 | 311.01 |
| 497.78 | 311.01 | 498.17 | 311.01 | 500.09 | 311.01 | 536.61 | 312 | 536.65 | 312 |
| 536.68 | 312 | 537.82 | 312 | 538.78 | 312 | 539.14 | 312 | 539.21 | 312 |
| 540.86 | 311.97 | 544.36 | 311.88 | 545.12 | 311.87 | 547.01 | 311.81 | 547.33 | 311.81 |
| 552.91 | 311.63 | 560.76 | 311.51 | 566.28 | 311.44 | 569.61 | 311.45 | 573.21 | 311.47 |
| 587.58 | 311.79 | 596.57 | 311.99 | 596.91 | 311.99 | 597.29 | 311.99 | 598.17 | 311.99 |
| 605.45 | 312 | 607.37 | 312 | 607.59 | 312 | 609.75 | 312 | 609.83 | 312 |
| 611.2 | 312 | 611.29 | 312 | 612.73 | 312 | 615.61 | 312.01 | 620.69 | 312.02 |
| 629.62 | 312.04 | 633.04 | 312.05 | 634.24 | 312.05 | 634.81 | 312.05 | 634.87 | 312.05 |
| 638.51 | 312.04 | 656.59 | 312.06 | 670.17 | 312.08 | 695.02 | 312.02 | 697.25 | 312.02 |
| 701.73 | 312.07 | 702.03 | 312.06 | 702.47 | 312.07 | 703.14 | 312.1 | 703.22 | 312.1 |
| 703.49 | 312.1 | 703.68 | 312.1 | 703.89 | 312.11 | 704.36 | 312.11 | 704.55 | 312.11 |
| 705.09 | 312.12 | 705.38 | 312.12 | 705.45 | 312.12 | 710.64 | 312.24 | 711.98 | 312.24 |
| 713.33 | 312.24 | 716.55 | 312.31 | 720.85 | 312.41 | 721.87 | 312.41 | 722.28 | 312.41 |
| 723.88 | 312.45 | 746.07 | 312.53 | 763.91 | 312.56 | 770.34 | 312.48 | 775.83 | 312.42 |
| 777.67 | 312.4 | 789.8 | 312.4 | 805.26 | 312.51 | 805.46 | 312.51 | 807.1 | 312.56 |
| 808.7 | 312.58 | 812.74 | 312.61 | 813.18 | 312.61 | 821.99 | 312.69 | 833.8 | 312.82 |
| 843.78 | 313 | 845.79 | 313 | 846.18 | 313 | 850.23 | 313.01 | 850.87 | 313.01 |
| 851.31 | 313.01 | 853.8 | 313.06 | 871.3 | 313.4 | 901.72 | 313.98 | 901.75 | 313.98 |
| 903.1 | 313.98 | 904.02 | 313.98910.0699 | | 313.99 | 910.36 | 313.99 | 910.72 | 313.99 |
| 915.24 | 314 | 918.52 | 314.12 | 927.09 | 314.39933.0599 | | 314.59 | 938.03 | 314.76 |
| 945.0599 | 315962.0699 | | 315.73 | 970.09 | 316979.4399 | | 316.32 | 980.91 | 316.38 |
| 983.04 | 316.46 | 994.91 | 316.99 | 995 | 316.99 | 995.11 | 317 | 995.23 | 317.01 |
| 1014.7 | 318 | 1028.08 | 318.63 | 1036.65 | 319 | 1057.41 | 319.89 | 1059.79 | 320 |
| 1060.44 | 320.03 | 1061.12 | 320.07 | 1065.96 | 320.33 | 1079.75 | 321 | 1085.46 | 321.33 |
| 1087.67 | 321.45 | 1090.87 | 321.64 | 1097.04 | 322 | 1113.18 | 322.9 | 1114.38 | 322.95 |
| 1114.76 | 322.97 | 1114.83 | 322.97 | 1114.95 | 322.97 | 1115.73 | 323 | 1116.73 | 323 |
| 1117.84 | 323.01 | 1120.94 | 323 | 1121.68 | 323 | 1121.77 | 323 | 1123.25 | 323.01 |
| 1124.73 | 323.08 | 1130.31 | 323.24 | 1130.67 | 323.24 | 1133.89 | 323.35 | 1137.58 | 323.6 |
| 1140.53 | 323.89 | 1148.52 | 324 | 1156.56 | 324.59 | 1160.1 | 325 | 1160.26 | 325 |
| 1160.39 | 325 | 1160.57 | 325 | 1160.85 | 325.01 | 1160.96 | 325.01 | 1161.07 | 325.01 |
| 1161.82 | 325.01 | 1162.08 | 325.01 | 1162.72 | 325.02 | 1163.31 | 325.02 | 1163.69 | 325.02 |
| 1164.05 | 325.02 | 1164.09 | 325.03 | 1165.21 | 325.03 | 1165.94 | 325.03 | 1183.66 | 325.93 |
| 1185.5 | 326 | 1186.02 | 326.01 | 1186.36 | 326.01 | 1187.71 | 326.03 | 1188.36 | 326.03 |
| 1198.94 | 326.45 | 1207.51 | 326.78 | 1213.28 | 327 | 1221.68 | 327.41 | 1233.15 | 328 |
| 1240.3 | 328.3 | 1246.21 | 328.54 | 1258.15 | 329 | 1277.62 | 329.7 | 1280.04 | 329.77 |
| 1281.54 | 329.81 | 1282.41 | 329.83 | 1285.87 | 330 | 1286.98 | 330.01 | 1287.59 | 330.01 |
| 1294.7 | 330.25 | 1302.64 | 330.48 | 1303.72 | 330.52 | 1304.51 | 330.53 | 1307.54 | 330.67 |
| 1314.6 | 331 | 1321.31 | 331.24 | 1323.67 | 331.32 | 1336.74 | 331.78 | 1344.09 | 332 |
| 1346.45 | 332.09 | 1351.82 | 332.35 | 1360.33 | 332.73 | 1362.6 | 332.83 | 1363.58 | 332.86 |
| 1365.43 | 333 | 1367.51 | 333.19 | 1379.94 | 334 | 1388.25 | 334.83 | 1389.8 | 335 |
| 1390.35 | 335.05 | 1393.19 | 335.31 | 1400.42 | 336 | 1403.92 | 336.54 | 1405.72 | 336.82 |
| 1406.46 | 336.93 | 1406.73 | 336.97 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 22.87 | .04 | 703.14 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 22.87 | 703.14 | 124.19 | 500 | 877.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 5000

INPUT
Description:
Station Elevation Data num= 410

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 311.37 | 6.280029 | 3 | 1142.85999 | 3 | 1044.05005 | 3 | 1047.73999 | 309.99 |
| 51.03003 | 309.99 | 67.12 | 309.7 | 67.5 | 309.6 | 967.81995 | 309.6 | 968.93005 | 309.67 |
| 69.63 | 309.66 | 87.22998 | 309.3 | 87.67004 | 309.2 | 988.43005 | 309.28 | 116.8 | 309.01 |
| 117.41 | 309.01 | 147.86 | 309 | 153.05 | 309.01 | 154.74 | 309 | 181.7 | 309 |
| 185.97 | 309.03 | 188.02 | 309.03 | 193.89 | 309.1 | 194.0601 | 309.1 | 194.79 | 309.09 |
| 195.85 | 309.09 | 214.8101 | 309.06 | 227.54 | 309.1 | 252.5 | 309.08 | 263.99 | 309.03 |
| 265.41 | 309.02 | 267.26 | 309.02 | 270.5699 | 3 | 09272.1801 | 3 | 09273.3199 | 308.99 |
| 286.22 | 308.72 | 286.51 | 308.71 | 298.08 | 308.54 | 305.54 | 308.46 | 312.3101 | 308.37 |
| 322.54 | 308.18 | 323.51 | 308.16 | 323.73 | 308.15 | 324.77 | 308.14 | 325.25 | 308.14 |
| 325.73 | 308.13 | 326.14 | 308.12 | 331.16 | 308.03 | 334.42 | 308.03 | 339.03 | 308.04 |
| 339.59 | 308.04 | 339.95 | 308.05 | 347.96 | 308.07 | 367.01 | 308.02 | 368.86 | 308.02 |
| 369.39 | 308.01 | 370.49 | 308.01 | 370.6899 | 308 | 371.47 | 308 | 378.61 | 307.99 |
| 384.1 | 307.99 | 396.08 | 308.01 | 398.93 | 308.01 | 401.54 | 308.02 | 422.24 | 308.01 |
| 424.39 | 308 | 432.35 | 307.67 | 436.49 | 307.54 | 449.77 | 307.01 | 450.01 | 307.01 |
| 450.25 | 307 | 451.35 | 307 | 461.71 | 306.67 | 485.31 | 306 | 493.02 | 306 |
| 495.08 | 306.56 | 496.14 | 306.7 | 496.7 | 306.79 | 497.68 | 307 | 498.86 | 307.33 |
| 499.34 | 307.47 | 500.25 | 307.73 | 501.07 | 308 | 516.02 | 308.72 | 517.16 | 308.78 |
| 521.98 | 309 | 559.26 | 309 | 571.21 | 308.81 | 578.76 | 308.8 | 586.4 | 308.82 |
| 586.49 | 308.82 | 594.19 | 308.6 | 594.64 | 308.6 | 595.92 | 308.56 | 596.4 | 308.55 |
| 597.36 | 308.52 | 599.86 | 308.46 | 600.03 | 308.45 | 612.53 | 308.02 | 613.49 | 308.02 |
| 613.82 | 308.01 | 619.09 | 308.01 | 620.12 | 308 | 633.7 | 307.98 | 639.2 | 307.99 |
| 653.76 | 307.98 | 654.4 | 307.99 | 656.98 | 307.99 | 658.79 | 308 | 659.97 | 308.01 |
| 675.31 | 308.42 | 679.35 | 308.52 | 684.5 | 308.66 | 698.62 | 309 | 729.36 | 309.87 |
| 733.11 | 309.99 | 733.44 | 309.99 | 735.4 | 310.02 | 736.67 | 310.02 | 750.49 | 310.54 |
| 753.66 | 310.65 | 754.31 | 310.67 | 763.75 | 311 | 788.79 | 311.82 | 794.8 | 312 |
| 795.06 | 312 | 802.36 | 312.21 | 812.06 | 312.47 | 812.53 | 312.49 | 822.96 | 312.71 |
| 823.99 | 312.71 | 824.76 | 312.72 | 825.09 | 312.74 | 829.15 | 312.96 | 830.41 | 312.96 |
| 831.27 | 312.97 | 831.59 | 312.97 | 836.7 | 313 | 837.64 | 313.01 | 837.79 | 313.01 |
| 840.15 | 313.12 | 840.82 | 313.14 | 844.05 | 313.27 | 860.44 | 313.96 | 860.93 | 313.98 |
| 861.45 | 314 | 866.62 | 314.02 | 867.11 | 314.02 | 881.59 | 314.68 | 886.11 | 314.88 |
| 886.31 | 314.88 | 888.33 | 314.98 | 891.45 | 315 | 893.91 | 315 | 895.12 | 314.99 |
| 895.38 | 314.99 | 895.72 | 314.98 | 896.26 | 314.98 | 896.47 | 314.97 | 896.57 | 314.98 |
| 897.01 | 314.98 | 897.22 | 314.99 | 897.77 | 315 | 898.74 | 315 | 902.11 | 315.13 |
| 904.35 | 315.21 | 914.3 | 315.58 | 916.41 | 315.65 | 917.18 | 315.68 | 924.67 | 315.95 |
| 925.27 | 315.97 | 926.29 | 316 | 929.21 | 316 | 930.1 | 316.01 | 932.9 | 316.01 |
| 937.31 | 316.17 | 949.52 | 316.59 | 952.06 | 316.66 | 963 | 317 | 965.97 | 317 |
| 977.91 | 317.42 | 979.59 | 317.5 | 981.17 | 317.57 | 989.61 | 317.97 | 990.59 | 318 |
| 1004.73 | 318.51 | 1006.25 | 318.56 | 1011.87 | 318.73 | 1014.38 | 318.8 | 1017.94 | 318.95 |
| 1019.18 | 319 | 1023.19 | 319.14 | 1035.02 | 319.52 | 1035.6 | 319.55 | 1040.04 | 319.71 |
| 1041.69 | 319.73 | 1043.16 | 319.74 | 1047.6 | 319.9 | 1047.92 | 319.9 | 1049.58 | 319.98 |
| 1049.87 | 320 | 1052.06 | 320.01 | 1072.14 | 320.68 | 1077 | 320.83 | 1078.03 | 320.86 |
| 1079.88 | 320.91 | 1080.21 | 320.92 | 1084.19 | 321 | 1086.7 | 321.01 | 1088.82 | 321.01 |
| 1090.48 | 321.02 | 1091.57 | 321.03 | 1094.25 | 321.03 | 1105.39 | 321.07 | 1106.52 | 321.08 |
| 1107 | 321.07 | 1108.49 | 321.08 | 1120.93 | 321.08 | 1123.37 | 321.07 | 1126.55 | 321.07 |
| 1130.36 | 321.08 | 1132.92 | 321.08 | 1141.63 | 321.05 | 1145.46 | 321.2 | 1145.55 | 321.2 |
| 1145.86 | 321.21 | 1146.38 | 321.22 | 1146.97 | 321.24 | 1147.15 | 321.24 | 1151.29 | 321.48 |
| 1159.27 | 321.97 | 1159.84 | 321.97 | 1163.78 | 321.99 | 1164.81 | 321.99 | 1166.87 | 322 |
| 1167.04 | 322.02 | 1170.75 | 322.28 | 1179.98 | 322.97 | 1180.35 | 323 | 1180.59 | 322.99 |
| 1188.16 | 323.63 | 1193.6 | 323.92 | 1193.92 | 323.93 | 1194.28 | 323.94 | 1195.31 | 323.96 |
| 1195.97 | 323.99 | 1200.5 | 323.9 | 1203.04 | 323.95 | 1203.68 | 323.97 | 1205.26 | 324 |
| 1205.79 | 324 | 1206.27 | 324.01 | 1206.71 | 324.01 | 1207.09 | 324.02 | 1207.91 | 324.05 |
| 1213.99 | 324.65 | 1214.27 | 324.69 | 1214.94 | 324.75 | 1216.11 | 324.88 | 1216.42 | 324.91 |
| 1217.33 | 325 | 1225.2 | 325.95 | 1225.66 | 326 | 1227.49 | 326.12 | 1228.93 | 326.2 |
| 1229.23 | 326.26 | 1229.98 | 326.3 | 1230.31 | 326.33 | 1230.75 | 326.35 | 1231.47 | 326.49 |
| 1231.59 | 326.5 | 1231.98 | 326.55 | 1234.2 | 327 | 1237.51 | 327.55 | 1238.54 | 327.71 |
| 1240.12 | 328 | 1242.35 | 328.36 | 1242.52 | 328.39 | 1242.68 | 328.41 | 1242.78 | 328.42 |
| 1244.32 | 328.66 | 1244.55 | 328.68 | 1245.03 | 328.73 | 1245.77 | 328.78 | 1249.86 | 329 |
| 1254.19 | 329.18 | 1255.31 | 329.21 | 1256.29 | 329.24 | 1257.21 | 329.26 | 1258.1 | 329.25 |
| 1258.72 | 329.22 | 1259.39 | 329.19 | 1261.28 | 329 | 1262.58 | 328.72 | 1263.92 | 328.95 |
| 1264.47 | 328.93 | 1264.77 | 328.93 | 1265.85 | 329 | 1269.54 | 329.98 | 1269.61 | 330 |
| 1269.66 | 330.02 | 1269.74 | 330.04 | 1269.93 | 330.08 | 1272.4 | 330.71 | 1272.75 | 330.76 |
| 1274.4 | 331 | 1276.31 | 331.3 | 1276.91 | 331.37 | 1277.97 | 331.49 | 1279.09 | 331.58 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1281.25 | 331.75 | 1281.64 | 331.75 | 1283.1 | 331.82 | 1284.75 | 331.8 | 1287.65 | 331.81 |
| 1289.07 | 331.77 | 1290.99 | 331.65 | 1292.44 | 331.59 | 1293.13 | 331.51 | 1293.79 | 331.52 |
| 1294.74 | 331.39 | 1295.45 | 331.42 | 1296.33 | 331.49 | 1298.18 | 331.81 | 1299.19 | 332 |
| 1299.51 | 332.09 | 1302.07 | 333 | 1303.5 | 333.53 | 1304.83 | 334 | 1306.75 | 334.72 |
| 1307.52 | 335 | 1309.33 | 335.64 | 1310.95 | 336 | 1311.13 | 336.06 | 1311.4 | 336.11 |
| 1314.24 | 336.68 | 1315.15 | 336.79 | 1319.01 | 337.24 | 1320.83 | 337.47 | 1323.43 | 337.74 |
| 1324.71 | 337.86 | 1325.8 | 337.95 | 1325.9 | 337.95 | 1328.57 | 338.08 | 1328.97 | 338.1 |
| 1329.96 | 338.12 | 1330.54 | 338.1 | 1330.72 | 338.1 | 1330.82 | 338.09 | 1336.65 | 337.71 |
| 1337.44 | 337.66 | 1338.62 | 337.73 | 1338.86 | 337.74 | 1339.99 | 338 | 1343.73 | 338.82 |
| 1344.39 | 339 | 1347.26 | 339.49 | 1347.82 | 339.49 | 1348.4 | 339.47 | 1349.24 | 339.41 |
| 1350.94 | 339.34 | 1353.67 | 339.07 | 1354.21 | 339 | 1355.75 | 338.79 | 1357.42 | 338.47 |
| 1359.08 | 338 | 1361.83 | 337.36 | 1363.44 | 337 | 1365.91 | 336.53 | 1368.28 | 336 |
| 1370.31 | 335.41 | 1370.5 | 335.37 | 1372.67 | 335 | 1373.57 | 334.72 | 1374.73 | 334.64 |
| 1375.7 | 334.6 | 1376.64 | 334.6 | 1378.58 | 334.8 | 1379.69 | 334.96 | 1380.99 | 334.99 |
| 1381.15 | 335 | 1381.38 | 335 | 1382.29 | 335.19 | 1383.26 | 335.4 | 1385.16 | 335.73 |
| 1385.34 | 335.78 | 1386.19 | 335.97 | 1386.76 | 336 | 1388.65 | 336.51 | 1390.59 | 337 |
| 1391.15 | 337.14 | 1391.6 | 337.26 | 1392.6 | 337.51 | 1394.5 | 338 | 1395.5 | 338.24 |
| 1395.82 | 338.28 | 1396.41 | 338.39 | 1397.49 | 338.5 | 1399.6 | 338.68 | 1401.9 | 339 |
| 1407.51 | 339.46 | 1408.91 | 339.59 | 1410.18 | 339.67 | 1410.57 | 339.71 | 1412.47 | 339.9 |
| 1412.64 | 339.93 | 1413.05 | 339.99 | 1413.17 | 340 | 1413.25 | 340.01 | 1417.5 | 340.36 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 286.51 | .04 | 684.5 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 286.51 | 684.5 | 448.76 | 500 | 562.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 4500

INPUT
Description:
Station Elevation Data num= 380

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.4 | 1.51001 | 307.38 | 2.900024 | 307.37 | 10.70996 | 307.28 | 21.70996 | 307.11 |
| 23.77002 | 307.07 | 23.89001 | 307.07 | 27.59998 | 307 | 35.75 | 306.79 | 36.06006 | 306.8 |
| 38.70996 | 306.79 | 41.67004 | 306.77 | 43.45996 | 306.75 | 45.34998 | 306.72 | 57.14001 | 306.56 |
| 68.59998 | 306.38 | 69.65002 | 306.36 | 75.23999 | 306.28 | 77.85999 | 306.25 | 90.70007 | 306.04 |
| 92.32007 | 306.01 | 94.39001 | 306.01 | 95.18005 | 306 | 96.69006 | 306 | 99.09998 | 305.94 |
| 109.74 | 305.7 | 116.16 | 305.57 | 124.37 | 305.47 | 130.42 | 305.42 | 131.48 | 305.42 |
| 132.0601 | 305.41 | 137.16 | 305.41 | 139.01 | 305.39 | 140.11 | 305.38 | 148.96 | 305.32 |
| 158.47 | 305.34 | 159.52 | 305.34 | 174.98 | 305.44 | 176.61 | 305.44 | 178.15 | 305.45 |
| 180.3101 | 305.45 | 204.71 | 305.38 | 243.5701 | 305.12 | 244.46 | 305.12 | 246.23 | 305.1 |
| 249.52 | 305.01 | 249.73 | 305.01 | 251.49 | 305 | 253.33 | 305 | 255.23 | 304.94 |
| 255.51 | 304.93 | 255.9 | 304.92 | 281.38 | 304.08 | 282.54 | 304.05 | 282.88 | 304.04 |
| 283.8 | 304 | 283.86 | 304 | 284.73 | 303.99 | 285.9301 | 303.99 | 291.47 | 303.89 |
| 304.38 | 303.68 | 304.86 | 303.68 | 340.4501 | 303.49 | 345.3 | 303.47 | 345.55 | 303.47 |
| 348.9 | 303.45 | 352.67 | 303.41 | 358.36 | 303.3 | 360.88 | 303.3 | 362.77 | 303.28 |
| 370.4401 | 303.14 | 375.74 | 303.01 | 378.91 | 303 | 383.54 | 303 | 398.67 | 302.76 |
| 399.2 | 302.76 | 399.72 | 302.75 | 402.08 | 302.75 | 425.3 | 302.71 | 436.8 | 303 |
| 449.51 | 303 | 463.9 | 304 | 479.25 | 304 | 485.54 | 303.58 | 494.49 | 303 |
| 495.77 | 303 | 496.92 | 302.99 | 497.99 | 302.99 | 509.84 | 302.96 | 510.03 | 302.96 |
| 522.27 | 302.98 | 522.67 | 302.99 | 524.57 | 302.99 | 524.82 | 303 | 532.83 | 303 |
| 536.63 | 303.01 | 536.86 | 303.01 | 547.63 | 303 | 549.09 | 302.99 | 558.16 | 302.97 |
| 569.73 | 303 | 576.59 | 303.56 | 580.32 | 303.79 | 583.39 | 303.97 | 583.99 | 304 |
| 587.84 | 304 | 591.64 | 304.01 | 607.08 | 304.01 | 611.59 | 304 | 612.71 | 304 |
| 613.19 | 303.96 | 616.51 | 303.92 | 616.81 | 303.91 | 618.29 | 303.87 | 623.5 | 303.69 |
| 630.68 | 303.47 | 633.44 | 303.35 | 638.29 | 303.17 | 640.03 | 303.1 | 642.97 | 303 |
| 643.83 | 303 | 645.89 | 302.97 | 646.9 | 302.96 | 648.28 | 302.94 | 649.16 | 302.96 |
| 654.2 | 303 | 663.67 | 303.72 | 666.36 | 303.78 | 667.36 | 303.84 | 669.04 | 303.85 |
| 669.62 | 303.88 | 670.71 | 303.9 | 671.48 | 303.91 | 675.23 | 303.89 | 685.35 | 303.97 |
| 686.83 | 303.97 | 688.12 | 303.98 | 691.4 | 303.98 | 695.02 | 304 | 696.59 | 304 |
| 697.74 | 304.03 | 697.87 | 304.03 | 759.41 | 305.66 | 766.18 | 305.86 | 768.24 | 305.91 |
| 771.08 | 306 | 771.44 | 306 | 791.07 | 306.62 | 796.14 | 306.77 | 796.98 | 306.79 |
| 799.66 | 306.87 | 800.47 | 306.89 | 804.17 | 306.99 | 804.78 | 307 | 809.25 | 307.12 |
| 809.67 | 307.13 | 817.86 | 307.37 | 819.84 | 307.43 | 822.47 | 307.53 | 829.29 | 307.76 |
| 833.45 | 307.84 | 843.86 | 308 | 844.85 | 308.02 | 844.95 | 308.02 | 847.82 | 308.1 |
| 850.81 | 308.21 | 855.27 | 308.35 | 859.34 | 308.5 | 874.12 | 309 | 879.59 | 309.23 |
| 880.11 | 309.25 | 880.77 | 309.27 | 888.37 | 309.56 | 890.62 | 309.58 | 892.83 | 309.57 |
| 894.3 | 309.62 | 895.39 | 309.65 | 895.64 | 309.65 | 898.69 | 309.78 | 901.01 | 309.92 |
| 902.15 | 310 | 903.9301 | 310.01 | 904.07 | 310.01 | 905.7 | 310.02 | 906.6 | 310.04 |
| 913.01 | 310.15 | 913.08 | 310.15 | 915.3101 | 310.26 | 916.25 | 310.31 | 919.63 | 310.54 |
| 919.75 | 310.55 | 926.41 | 311 | 949.75 | 312 | 951.92 | 312.09 | 952.51 | 312.12 |
| 955.17 | 312.23 | 965.2 | 312.67 | 969.05 | 312.81 | 970.6801 | 312.86 | 972.97 | 313 |
| 974.14 | 313 | 977.71 | 313.12 | 983.83 | 313.3 | 992.24 | 313.73 | 992.82 | 313.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 993.07 | 313.76 | 993.5 | 313.78 | 993.94 | 313.79 | 999.29 | 313.99 | 1002.29 | 313.99 |
| 1003.13 | 314 | 1003.83 | 313.99 | 1004.09 | 314 | 1006.67 | 314 | 1028.12 | 315 |
| 1043.72 | 315.62 | 1047.96 | 315.78 | 1054.31 | 316 | 1065.54 | 316.37 | 1067.18 | 316.42 |
| 1068.59 | 316.46 | 1074.17 | 316.59 | 1077.38 | 316.71 | 1079.2 | 316.77 | 1086.48 | 317 |
| 1086.74 | 317.01 | 1093.57 | 317.25 | 1095.24 | 317.32 | 1104.72 | 317.59 | 1106.84 | 317.66 |
| 1115.69 | 317.99 | 1116.01 | 317.99 | 1116.59 | 318 | 1120.38 | 318.16 | 1128.09 | 318.5 |
| 1137.31 | 318.94 | 1139.09 | 318.94 | 1139.36 | 318.93 | 1143.14 | 319 | 1143.55 | 319 |
| 1146.21 | 319.06 | 1146.73 | 319.06 | 1152.83 | 319.34 | 1154.39 | 319.39 | 1164.78 | 320 |
| 1166.6 | 320.08 | 1167.57 | 320.14 | 1168.12 | 320.16 | 1168.21 | 320.16 | 1168.83 | 320.19 |
| 1169.77 | 320.24 | 1172.89 | 320.38 | 1181.83 | 320.82 | 1185.12 | 320.94 | 1186.31 | 321 |
| 1187.13 | 321 | 1187.38 | 321.02 | 1189.43 | 321.23 | 1194.32 | 321.59 | 1195.4 | 321.66 |
| 1199.33 | 322 | 1201.21 | 322.18 | 1202.84 | 322.32 | 1202.93 | 322.33 | 1205.36 | 322.42 |
| 1206.13 | 322.44 | 1207.11 | 322.45 | 1209.91 | 322.47 | 1213.15 | 322.4 | 1216.12 | 322.35 |
| 1216.29 | 322.36 | 1218.37 | 322.29 | 1219 | 322.36 | 1221.89 | 322.52 | 1228.89 | 322.99 |
| 1229.19 | 323 | 1229.67 | 323.03 | 1229.78 | 323.04 | 1231.3 | 323.12 | 1235.6 | 323.32 |
| 1238.27 | 323.43 | 1243.85 | 323.7 | 1251.45 | 323.94 | 1251.56 | 323.95 | 1251.66 | 323.95 |
| 1251.88 | 323.96 | 1252.02 | 323.96 | 1253.38 | 324 | 1255.62 | 324.25 | 1256.54 | 324.32 |
| 1257.82 | 324.39 | 1262.89 | 324.66 | 1263.44 | 324.68 | 1263.52 | 324.69 | 1263.59 | 324.7 |
| 1272.15 | 325 | 1273.22 | 325.02 | 1273.28 | 325.02 | 1274.23 | 325.01 | 1274.56 | 325.01 |
| 1274.99 | 325 | 1276.53 | 325 | 1279.3 | 325.26 | 1279.67 | 325.29 | 1280.33 | 325.35 |
| 1288.86 | 326 | 1292.1 | 326.17 | 1292.64 | 326.18 | 1293.81 | 326.22 | 1294.68 | 326.27 |
| 1296.02 | 326.35 | 1297.94 | 326.47 | 1301.92 | 326.69 | 1302.67 | 326.73 | 1306.47 | 327 |
| 1315.19 | 327.59 | 1316.08 | 327.62 | 1316.33 | 327.63 | 1323 | 327.95 | 1324.46 | 327.95 |
| 1325.41 | 327.96 | 1326.49 | 328 | 1329.78 | 328.5 | 1331.46 | 328.67 | 1332.19 | 328.76 |
| 1333.2 | 328.84 | 1333.25 | 328.85 | 1335.54 | 329 | 1337.25 | 329.16 | 1337.36 | 329.17 |
| 1337.48 | 329.18 | 1337.61 | 329.19 | 1337.89 | 329.2 | 1339.62 | 329.38 | 1339.89 | 329.4 |
| 1340.14 | 329.41 | 1340.97 | 329.39 | 1342.75 | 329.31 | 1343.18 | 329.29 | 1344.93 | 329.23 |
| 1345.41 | 329.23 | 1345.68 | 329.26 | 1350.25 | 330 | 1350.74 | 330.1 | 1350.88 | 330.13 |
| 1351.76 | 330.26 | 1353.69 | 330.59 | 1355.08 | 330.75 | 1356.07 | 330.88 | 1358.35 | 330.97 |
| 1358.41 | 330.97 | 1358.52 | 330.97 | 1359.49 | 330.99 | 1359.68 | 331 | 1361.11 | 331.06 |
| 1361.26 | 331.06 | 1362.28 | 331.04 | 1363.09 | 331 | 1363.37 | 330.98 | 1364.11 | 330.91 |
| 1364.64 | 330.97 | 1366.25 | 330.91 | 1367.56 | 330.94 | 1368.16 | 331 | 1372.48 | 331.79 |
| 1375.67 | 332.33 | 1378.65 | 332.82 | 1378.91 | 332.86 | 1380.15 | 333 | 1383.48 | 333.79 |
| 1383.78 | 333.83 | 1384.93 | 333.99 | 1385.05 | 334 | 1386.98 | 334.17 | 1401.41 | 334.91 |
| 1401.51 | 334.94 | 1403.27 | 335 | 1405.41 | 335.1 | 1405.89 | 335.14 | 1406.39 | 335.21 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 255.9 | .04 | 759.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 255.9 | 759.41 | 505.01 | 500 | 504.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 4000

INPUT
Description:
Station Elevation Data num= 467

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 300.6 | 24.64001 | 300.93 | 25.70007 | 300.96 | 27.37 | 30160.89001 | | 301 |
| 61.46008 | 300.98 | 61.90002 | 300.97 | 78.52002 | 300.78 | 129.64 | 301 | 156.52 | 301 |
| 160.37 | 300.99 | 220.41 | 300.99 | 247.77 | 301 | 250.34 | 300.99 | 253.24 | 301 |
| 262.63 | 301 | 269.42 | 300.93 | 270.92 | 300.85 | 271.59 | 300.82 | 287.0801 | 300 |
| 287.62 | 300 | 291.24 | 299.93 | 301.02 | 299.8 | 326.24 | 299.52 | 339 | 299.41 |
| 345.77 | 299.11 | 346.39 | 299.08 | 346.89 | 299.08 | 347.88 | 299.04 | 348.13 | 299.04 |
| 348.8101 | 299 | 352.97 | 298.6 | 356.55 | 298.63 | 359.6801 | 298.65 | 360.91 | 298.63 |
| 384.1 | 298.11 | 384.99 | 298.08 | 388.61 | 298 | 393.8101 | 298 | 397.5601 | 298.01 |
| 402.84 | 298.01 | 407.65 | 298 | 409.53 | 298 | 410.3301 | 297.99 | 415.25 | 297.97 |
| 418.55 | 297.97 | 423.59 | 297.96 | 423.9401 | 297.96 | 428.73 | 297.97 | 429.6901 | 297.97 |
| 430.87 | 297.98 | 436.3101 | 297.98 | 439.28 | 298 | 440.2101 | 298 | 441.14 | 298.04 |
| 443.62 | 298.14 | 443.88 | 298.16 | 446.7001 | 298.26 | 447.4601 | 298.28 | 449.9 | 298.35 |
| 450.09 | 298.36 | 452.59 | 298.45 | 452.9501 | 298.45 | 453.35 | 298.48 | 453.5 | 298.48 |
| 458.48 | 298.68 | 465.63 | 298.99 | 465.74 | 299 | 472.54 | 299 | 477.05 | 298.99 |
| 477.85 | 298.99 | 482.61 | 298.98 | 494.6901 | 298.99 | 496.97 | 299 | 498.8301 | 299.25 |
| 504.4501 | 299.47 | 507.6801 | 299.57 | 508.51 | 299.56 | 509.3201 | 299.56 | 511 | 299.58 |
| 511.49 | 299.56 | 514.37 | 299.57 | 517.25 | 299.56 | 517.73 | 299.56 | 534.22 | 299.3 |
| 537.03 | 299.32 | 539.33 | 299.33 | 550.37 | 299.3 | 563.23 | 299.22 | 579.7 | 299.01 |
| 581.1 | 299.01 | 634.59 | 299.32 | 634.9301 | 299.33 | 635.2401 | 299.33 | 647.08 | 299.19 |
| 654.7 | 299.04 | 655.44 | 299.02 | 658.9901 | 299.02 | 667.35 | 298.98 | 668.14 | 298.97 |
| 670.05 | 298.98 | 672.29 | 299 | 677.13 | 299.01 | 679.23 | 299.01 | 681.9301 | 299 |
| 684.6801 | 299 | 694.05 | 298.97 | 698.27 | 298.99 | 703.1 | 299 | 710.91 | 299.03 |
| 718.11 | 299 | 719.23 | 299 | 728.1801 | 299.07 | 736.58 | 299.12 | 736.96 | 299.14 |
| 737.17 | 299.15 | 737.6801 | 299.16 | 737.96 | 299.16 | 738.48 | 299.18 | 738.7 | 299.18 |
| 746.96 | 299.4 | 751.88 | 299.51 | 752.05 | 299.52 | 752.12 | 299.52 | 752.37 | 299.51 |
| 766.04 | 299.81 | 772.7401 | 299.97 | 772.95 | 299.98 | 782.72 | 299.95 | 787.25 | 299.95 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 791.97 | 299.94 | 793.16 | 299.95 | 795.82 | 299.95 | 800.11 | 299.97 | 804.55 | 299.96 |
| 805.59 | 299.97 | 805.89 | 299.97 | 806.2401 | 299.96 | 806.54 | 299.97 | 810.29 | 299.97 |
| 811.5 | 299.98 | 812.13 | 299.94 | 819.41 | 299.53 | 822.02 | 299.46 | 823.81 | 299.42 |
| 828.6801 | 299.59 | 838.02 | 299.99 | 840.51 | 300 | 843.83 | 300 | 852.63 | 300.34 |
| 868.96 | 300.89 | 870.94 | 300.96 | 871.53 | 300.97 | 872.1801 | 301 | 876.54 | 301.26 |
| 890.45 | 302 | 895.64 | 302.29 | 896.46 | 302.34 | 898.73 | 302.46 | 900.41 | 302.54 |
| 906.87 | 302.86 | 909.61 | 303 | 911.7401 | 303.12 | 916.5 | 303.42 | 918.64 | 303.52 |
| 920.17 | 303.58 | 921.86 | 303.69 | 922.91 | 303.72 | 922.98 | 303.72 | 927.32 | 303.96 |
| 927.77 | 304 | 927.9 | 304 | 929.64 | 304.09 | 942.4901 | 305 | 944.67 | 305.24 |
| 946.13 | 305.39 | 948.81 | 305.67 | 952.56 | 306 | 957.56 | 306.77 | 958.59 | 307 |
| 960.42 | 307.39 | 962.33 | 307.75 | 963.75 | 308 | 964.57 | 308.19 | 968.19 | 309 |
| 969.2401 | 309.25 | 972.54 | 310 | 974.29 | 310.23 | 975.61 | 310.39 | 976.4901 | 310.49 |
| 977.4301 | 310.57 | 978.22 | 310.64 | 978.46 | 310.67 | 979.41 | 310.73 | 980.14 | 310.79 |
| 980.63 | 310.82 | 980.88 | 310.83 | 981.27 | 310.84 | 981.82 | 310.85 | 983.92 | 311 |
| 986.96 | 311.04 | 988.73 | 311.06 | 989.5 | 311.05 | 990.84 | 311.06 | 991.15 | 311.07 |
| 991.86 | 311.07 | 992.53 | 311.08 | 993.1 | 311.08 | 998.87 | 311.57 | 999.37 | 311.59 |
| 999.72 | 311.61 | 1001.23 | 311.65 | 1002.23 | 311.67 | 1004.77 | 311.69 | 1005.14 | 311.7 |
| 1005.94 | 311.7 | 1007.4 | 311.68 | 1009.86 | 311.66 | 1014.62 | 311.66 | 1015.46 | 311.64 |
| 1016.07 | 311.63 | 1016.93 | 311.6 | 1019.39 | 311.6 | 1022.36 | 311.5 | 1023.2 | 311.47 |
| 1024.75 | 311.48 | 1026.4 | 311.4 | 1026.74 | 311.4 | 1029.28 | 311.52 | 1033.24 | 311.93 |
| 1034.54 | 311.96 | 1035.88 | 312 | 1036.29 | 312.01 | 1041.76 | 312.35 | 1045.81 | 312.58 |
| 1046.46 | 312.63 | 1047.54 | 312.69 | 1051.63 | 313 | 1052.46 | 313.04 | 1053.1 | 313.06 |
| 1053.46 | 313.06 | 1058.55 | 313.44 | 1060.35 | 313.51 | 1061.01 | 313.56 | 1066.91 | 314 |
| 1075.55 | 314.83 | 1076.88 | 315 | 1085.06 | 315.94 | 1085.49 | 316 | 1096.04 | 316.82 |
| 1097.22 | 316.91 | 1098.52 | 317 | 1102.14 | 317.31 | 1108.78 | 318 | 1112.81 | 318.5 |
| 1114.16 | 318.7 | 1115.3 | 318.89 | 1115.88 | 319 | 1121.47 | 320 | 1125.06 | 320.71 |
| 1126.44 | 320.92 | 1126.55 | 320.94 | 1126.62 | 320.94 | 1126.68 | 320.95 | 1126.8 | 320.95 |
| 1127.04 | 321 | 1128.72 | 321.36 | 1130.56 | 321.73 | 1131.95 | 322 | 1132.21 | 322.07 |
| 1132.62 | 322.16 | 1136.34 | 323 | 1138.51 | 323.72 | 1139.26 | 324 | 1140.56 | 324.42 |
| 1142.17 | 325 | 1143.74 | 325.59 | 1144.77 | 326 | 1146.79 | 326.77 | 1147.43 | 327 |
| 1148.31 | 327.32 | 1150.42 | 328 | 1152.79 | 328.66 | 1153.9 | 329 | 1156.19 | 329.58 |
| 1157.28 | 329.83 | 1157.68 | 329.92 | 1157.85 | 329.94 | 1158.32 | 330 | 1158.48 | 330.01 |
| 1158.84 | 330.05 | 1158.94 | 330.06 | 1159.62 | 330.1 | 1161.37 | 330.24 | 1162.12 | 330.36 |
| 1162.94 | 330.48 | 1163.78 | 330.64 | 1164.55 | 330.8 | 1165.33 | 331 | 1166.7 | 331.33 |
| 1167.3 | 331.44 | 1169.6 | 331.77 | 1170.24 | 331.84 | 1170.56 | 331.84 | 1172.88 | 331.66 |
| 1174.47 | 331.54 | 1178.25 | 331.18 | 1179.69 | 331 | 1185.69 | 330.23 | 1185.89 | 330.2 |
| 1186.3 | 330.14 | 1187.09 | 330 | 1190.26 | 329.14 | 1190.75 | 329 | 1191.3 | 328.86 |
| 1194.46 | 328 | 1196.91 | 327.34 | 1198.13 | 327 | 1201.39 | 326.22 | 1203.51 | 326.06 |
| 1203.62 | 326.07 | 1203.75 | 326.08 | 1208.51 | 327 | 1210.78 | 327.54 | 1212.9 | 328 |
| 1213.13 | 328.02 | 1213.7 | 328.02 | 1214.12 | 328 | 1215.84 | 327.53 | 1217.55 | 327 |
| 1220.1 | 326.31 | 1220.96 | 326.06 | 1221.58 | 325.94 | 1225.97 | 325 | 1229.59 | 324.32 |
| 1229.98 | 324.35 | 1234.41 | 324.38 | 1239.38 | 324.27 | 1240.2 | 324.22 | 1240.52 | 324.2 |
| 1240.8 | 324.19 | 1241.24 | 324.18 | 1241.89 | 324.16 | 1242.01 | 324.16 | 1242.12 | 324.15 |
| 1242.2 | 324.15 | 1243.51 | 324.14 | 1244.88 | 324.12 | 1245.22 | 324.11 | 1246.2 | 324.12 |
| 1247.36 | 324.14 | 1247.52 | 324.15 | 1247.59 | 324.15 | 1248.06 | 324.17 | 1249.54 | 324.27 |
| 1257.56 | 324.9 | 1258.65 | 325 | 1258.86 | 325 | 1261.68 | 325.02 | 1261.97 | 325.03 |
| 1262.58 | 325.03 | 1272.56 | 325.67 | 1277.47 | 325.96 | 1278.18 | 326 | 1282.79 | 326.42 |
| 1289.02 | 327 | 1289.38 | 327.05 | 1289.53 | 327.07 | 1289.65 | 327.08 | 1293.55 | 327.52 |
| 1294.22 | 327.58 | 1298.47 | 327.83 | 1298.97 | 327.87 | 1299.15 | 327.89 | 1299.38 | 327.91 |
| 1301.24 | 328 | 1306.9 | 328.38 | 1309.93 | 328.41 | 1311.02 | 328.48 | 1311.95 | 328.51 |
| 1318.08 | 328.92 | 1318.21 | 328.93 | 1319.08 | 329 | 1319.24 | 329 | 1321.24 | 329.16 |
| 1321.78 | 329.2 | 1330.03 | 330 | 1335.29 | 330.57 | 1339.03 | 331 | 1339.46 | 331.04 |
| 1342.42 | 331.3 | 1347.83 | 331.75 | 1348.16 | 331.77 | 1348.54 | 331.79 | 1348.7 | 331.8 |
| 1349.14 | 331.81 | 1351.9 | 332 | 1358.95 | 332.67 | 1359.45 | 332.77 | 1360.76 | 333 |
| 1361.63 | 333.01 | 1362.21 | 333.01 | 1363.83 | 333.02 | 1364.54 | 333.02 | 1366.1 | 333 |
| 1369.33 | 332.6 | 1369.8 | 332.55 | 1370.22 | 332.52 | 1371.23 | 332.5 | 1371.9 | 332.43 |
| 1372.06 | 332.41 | 1372.31 | 332.44 | 1375.61 | 332.26 | 1377.02 | 332.35 | 1380.46 | 332.63 |
| 1384.88 | 332.98 | 1385.01 | 332.99 | 1385.08 | 333 | 1385.13 | 333 | 1385.86 | 333.02 |
| 1388.33 | 333.2 | 1394.67 | 333.37 | 1395.92 | 333.45 | 1396.29 | 333.48 | 1398.75 | 333.53 |
| 1401.87 | 333.95 | 1402.35 | 333.96 | 1402.54 | 333.96 | 1404.84 | 333.99 | 1406.29 | 334 |
| 1406.96 | 334.04 | 1407.83 | 334.13 | 1409.93 | 334.32 | 1416.55 | 335 | 1427.66 | 335.02 |
| 1440.43 | 335.14 | 1460.11 | 335.25 | 1460.37 | 335.26 | 1461.18 | 335.23 | 1465.99 | 335.08 |
| 1467.54 | 335.01 | 1467.73 | 335 | 1470.74 | 334.87 | 1473.51 | 334.74 | 1481.24 | 334.56 |
| 1486.55 | 334.51 | 1490.41 | 334.71 | 1491.86 | 334.82 | 1493.96 | 335 | 1499.68 | 335 |
| 1502.66 | 335.01 | 1512.27 | 335.01 | 1517.67 | 335 | 1521.58 | 335 | 1522.77 | 334.99 |
| 1523.1 | 334.99 | 1537.42 | 334.16 | 1537.68 | 334.15 | 1540.27 | 334.01 | 1540.45 | 334 |
| 1540.77 | 334 | 1541.73 | 333.99 | 1541.93 | 334 | 1543.23 | 334 | 1543.4 | 334.01 |
| 1543.8 | 334.01 | 1544.9 | 334.08 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 301.02 | .04 | 838.02 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 301.02 | 838.02 | 353.33 | 500 | 659.77 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align  RS: 3500

INPUT
Description:
Station Elevation Data  num=  430

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 296.76 | 12 | 296.75 | 18.52002 | 296.79 | 23.31995 | 296.81 | 32.38 | 296.81 |
| 41.85999 | 296.83 | 43.47998 | 296.83 | 45.67004 | 296.84 | 47.03003 | 296.84 | 48.33997 | 296.85 |
| 83.29004 | 296.98 | 4.10999 | 296.91 | 89.26001 | 296.91 | 103.88 | 297 | 108.6899 | 297 |
| 147.87 | 296.84 | 154.7 | 296.87 | 162.49 | 296.92 | 171.45 | 297 | 177.3 | 297 |
| 184.38 | 297.05 | 186.8 | 297.06 | 186.87 | 297.06 | 188.1899 | 297.07 | 189.8 | 297.07 |
| 190.26 | 297.08 | 197.99 | 297.12 | 198.36 | 297.13 | 202.73 | 297.16 | 203.6801 | 297.16 |
| 227.97 | 297.19 | 252.84 | 297.14 | 253.73 | 297.13 | 254.55 | 297.14 | 255.13 | 297.14 |
| 257.6899 | 297.13 | 266.76 | 297.13 | 273.75 | 297.11 | 287.1899 | 297.01 | 287.27 | 297 |
| 289.62 | 297 | 294.1801 | 296.99 | 294.98 | 296.99 | 298.4399 | 297 | 325.92 | 297.01 |
| 328.53 | 297 | 352.92 | 297 | 356.45 | 296.98 | 360.11 | 296.92 | 368.8101 | 296.84 |
| 368.91 | 296.84 | 369.46 | 296.82 | 369.61 | 296.81 | 370.02 | 296.8 | 370.48 | 296.79 |
| 374.98 | 296.61 | 375.15 | 296.61 | 382.26 | 296.35 | 390.13 | 296 | 416.22 | 295.08 |
| 417.16 | 295.04 | 418.28 | 295 | 422.61 | 295 | 431.29 | 295.28 | 432.3 | 295.3 |
| 432.48 | 295.3 | 435.51 | 295.41 | 435.89 | 295.41 | 436.67 | 295.44 | 445.96 | 295.59 |
| 451.63 | 295.66 | 456.98 | 295.49 | 465.76 | 295.06 | 469.51 | 295.06 | 471.72 | 295.03 |
| 472.28 | 295.03 | 474.47 | 295.02 | 475.37 | 295.02 | 476.36 | 295.01 | 477.09 | 295.02 |
| 477.26 | 295.01 | 477.39 | 295.01 | 479.17 | 295 | 479.38 | 295 | 483.78 | 294.68 |
| 487.6 | 294.39 | 494.76 | 294 | 497.28 | 294 | 500.13 | 293.99 | 507.6 | 293.99 |
| 510.24 | 294 | 513.67 | 294 | 515.26 | 294.01 | 520.9 | 294.01 | 522.25 | 294 |
| 526.34 | 294 | 529.11 | 294.01 | 530.86 | 294.01 | 532.68 | 294 | 573.82 | 294 |
| 576.71 | 293.99 | 580.78 | 294 | 590.13 | 294 | 590.7 | 293.98 | 591.01 | 293.98 |
| 591.74 | 293.96 | 593.64 | 293.92 | 613.36 | 293.68 | 628.68 | 293.72 | 631.35 | 294 |
| 632.79 | 294.02 | 635.2 | 294.02 | 636.3 | 294 | 638.61 | 293.46 | 638.83 | 293.46 |
| 639.25 | 293.54 | 649.06 | 293.44 | 657.68 | 293.48 | 659.67 | 293.53 | 666.07 | 293.68 |
| 669.48 | 293.75 | 670.52 | 293.78 | 673.38 | 293.85 | 674.25 | 293.86 | 676.37 | 293.91 |
| 677.44 | 293.93 | 677.77 | 293.93 | 682.3 | 293.98 | 682.65 | 293.99 | 684.13 | 293.99 |
| 686.18 | 293.98 | 686.95 | 293.98 | 688.89 | 293.97 | 688.99 | 293.97 | 703.45 | 294.02 |
| 704.88 | 294.03 | 708.69 | 294.01 | 712.29 | 294 | 715.58 | 294 | 716.85 | 294.14 |
| 717.17 | 294.19 | 717.51 | 294.24 | 718.13 | 294.34 | 718.59 | 294.43 | 720.57 | 294.74 |
| 720.79 | 294.78 | 722.4 | 295 | 726.91 | 295 | 740.64 | 294.2 | 745.95 | 294.14 |
| 749.64 | 294.12 | 749.79 | 294.12 | 756.97 | 294.03 | 757.92 | 294.01 | 759.05 | 294.02 |
| 761.48 | 294.02 | 782.8 | 293.98 | 785.15 | 293.98 | 787.33 | 293.99 | 789.79 | 293.99 |
| 793.33 | 294 | 794.17 | 294 | 795.47 | 294.03 | 802.56 | 294.19 | 802.99 | 294.19 |
| 806.02 | 294.24 | 810.79 | 294.3 | 822.36 | 294.52 | 828.63 | 294.62 | 829.47 | 294.63 |
| 836.96 | 294.66 | 843.9 | 294.66 | 844.31 | 294.65 | 846.04 | 294.7 | 849.44 | 294.75 |
| 854.08 | 294.88 | 854.5 | 294.87 | 857.12 | 294.97 | 857.67 | 295 | 857.78 | 295 |
| 861.02 | 295.14 | 863.98 | 295.25 | 878.05 | 295.49 | 879.67 | 295.5 | 880.59 | 295.51 |
| 882.21 | 295.52 | 890.28 | 295.6 | 891.21 | 295.62 | 894.28 | 295.66 | 901.64 | 295.82 |
| 902.71 | 295.83 | 904.72 | 295.89 | 907.04 | 295.97 | 907.09 | 295.97 | 907.98 | 296 |
| 908.13 | 296 | 909.4 | 296.13 | 909.58 | 296.15 | 909.72 | 296.16 | 910.51 | 296.25 |
| 911.99 | 296.44 | 912.7 | 296.48 | 913.43 | 296.57 | 913.77 | 296.57 | 914.8 | 296.71 |
| 919.46 | 296.92 | 920.69 | 296.9 | 921.85 | 296.92 | 924.35 | 297 | 929.05 | 297.49 |
| 933.61 | 298 | 939.77 | 298.75 | 942.38 | 299 | 948.56 | 299.72 | 950.85 | 300 |
| 950.97 | 300 | 951.28 | 300.01 | 952.13 | 300.02 | 952.43 | 300.02 | 952.78 | 300.03 |
| 953.2 | 300.07 | 959.62 | 300.75 | 961.51 | 300.87 | 962.17 | 300.95 | 962.68 | 301 |
| 964.56 | 301.02 | 967.07 | 301.27 | 969.28 | 301.43 | 973.67 | 302 | 978.22 | 302.54 |
| 979.09 | 302.59 | 983.61 | 302.94 | 987.39 | 302.99 | 987.63 | 303 | 987.76 | 303 |
| 989.06 | 303.17 | 989.34 | 303.21 | 992.48 | 303.61 | 993.77 | 303.79 | 995.53 | 304 |
| 1001.94 | 305 | 1002.75 | 305.09 | 1003.51 | 305.16 | 1003.65 | 305.18 | 1003.81 | 305.2 |
| 1003.93 | 305.21 | 1004.5 | 305.28 | 1004.98 | 305.33 | 1006.34 | 305.44 | 1007.05 | 305.51 |
| 1009.68 | 305.76 | 1010.88 | 305.88 | 1012.72 | 306 | 1016.52 | 306.51 | 1021.61 | 307 |
| 1023.83 | 307.18 | 1024.82 | 307.31 | 1025.74 | 307.44 | 1026.64 | 307.56 | 1027.64 | 307.7 |
| 1027.95 | 307.75 | 1028.37 | 307.83 | 1030.02 | 308 | 1035.05 | 308.33 | 1039.12 | 308.76 |
| 1040.57 | 308.9 | 1041.5 | 309 | 1041.64 | 309 | 1041.7 | 309.01 | 1042.65 | 309.07 |
| 1042.98 | 309.08 | 1043.48 | 309.11 | 1044.05 | 309.15 | 1051.44 | 309.49 | 1052.04 | 309.55 |
| 1053.26 | 309.61 | 1053.84 | 309.65 | 1054.5 | 309.66 | 1058.33 | 309.95 | 1059.28 | 309.94 |
| 1060.41 | 309.96 | 1063.32 | 310 | 1070 | 310.69 | 1071.86 | 310.87 | 1073.15 | 311 |
| 1073.81 | 311.06 | 1073.96 | 311.06 | 1082.27 | 311.65 | 1087.3 | 312 | 1096.61 | 312.56 |
| 1101.67 | 312.8 | 1106.29 | 312.98 | 1106.5 | 312.99 | 1106.9 | 313 | 1112.27 | 313.18 |
| 1113.25 | 313.2 | 1114.53 | 313.25 | 1121.56 | 313.4 | 1127.3 | 313.39 | 1131.77 | 313.43 |
| 1132.88 | 313.36 | 1135.52 | 313.13 | 1137.34 | 313 | 1141.96 | 312.7 | 1148.47 | 312.29 |
| 1148.71 | 312.28 | 1152.46 | 312.02 | 1152.73 | 312 | 1153.19 | 312 | 1155.55 | 311.99 |
| 1156.09 | 311.99 | 1158.44 | 312 | 1159.29 | 312 | 1161.34 | 312.01 | 1162.24 | 312.01 |
| 1168.14 | 312.19 | 1168.97 | 312.21 | 1170 | 312.24 | 1172.5 | 312.35 | 1179.79 | 312.7 |
| 1182.12 | 312.77 | 1185.44 | 313 | 1188.62 | 313.21 | 1189.2 | 313.25 | 1190.16 | 313.3 |
| 1191.5 | 313.38 | 1201.33 | 313.95 | 1201.98 | 313.99 | 1202.05 | 313.99 | 1202.27 | 314 |
| 1202.34 | 314 | 1202.46 | 314.02 | 1202.6 | 314.04 | 1203.1 | 314.12 | 1204.85 | 314.44 |
| 1205.99 | 314.54 | 1206.94 | 314.67 | 1208.24 | 314.81 | 1211.83 | 315 | 1212.69 | 315 |
| 1214.09 | 315.08 | 1216.19 | 315.17 | 1218.57 | 315.33 | 1222.26 | 315.55 | 1226.28 | 315.8 |
| 1229.84 | 316 | 1236.52 | 316.46 | 1242.25 | 316.87 | 1243.93 | 317 | 1246.39 | 317.2 |
| 1253.69 | 318 | 1260.14 | 318.99 | 1267 | 319.97 | 1267.19 | 320 | 1268.09 | 320.09 |
| 1276.55 | 321 | 1278.43 | 321.45 | 1280.77 | 322 | 1285.21 | 322.94 | 1285.54 | 323 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1286.55 | 323.2 | 1290.77 | 324 | 1291.78 | 324.2 | 1293.46 | 324.24 | 1295.02 | 324.25 |
| 1295.11 | 324.25 | 1298.68 | 324 | 1303.28 | 323.51 | 1305.9 | 323 | 1307.11 | 322.74 |
| 1309.55 | 322 | 1312.91 | 321.45 | 1316.59 | 321 | 1321.54 | 320.57 | 1326.88 | 320 |
| 1329.75 | 319.74 | 1332.47 | 319.44 | 1336.91 | 319 | 1343.45 | 318.48 | 1346.78 | 318.26 |
| 1347.92 | 318.19 | 1348.59 | 318.16 | 1349.02 | 318.15 | 1351.72 | 318 | 1354.22 | 317.9 |
| 1354.74 | 317.9 | 1355.13 | 317.89 | 1355.24 | 317.89 | 1357.24 | 317.81 | 1357.8 | 317.79 |
| 1360.89 | 317.66 | 1361.54 | 317.65 | 1365.13 | 317.53 | 1367.76 | 317.47 | 1370.25 | 317.49 |
| 1372.48 | 317.47 | 1373.38 | 317.45 | 1374.36 | 317.42 | 1376.18 | 317.44 | 1376.36 | 317.44 |
| 1377.76 | 317.41 | 1380.26 | 317.5 | 1380.73 | 317.51 | 1383.29 | 317.52 | 1386.05 | 317.47 |
| 1387.75 | 317.53 | 1390.11 | 317.65 | 1390.26 | 317.64 | 1390.82 | 317.73 | 1391.12 | 317.77 |
| 1391.28 | 317.76 | 1391.78 | 317.81 | 1391.85 | 317.81 | 1392.05 | 317.82 | 1392.41 | 317.82 |
| 1392.59 | 317.8 | 1392.94 | 317.75 | 1397.53 | 318 | 1397.61 | 318 | 1399.34 | 317.99 |
| 1407.1 | 317.99 | 1411.83 | 318 | 1431.24 | 318 | 1432.38 | 317.99 | 1432.87 | 317.99 |
| 1433.42 | 318 | 1436.75 | 318 | 1439.89 | 318.01 | 1440.34 | 318.01 | 1440.75 | 318.02 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 479.38 | .04 | 857.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 479.38 | 857.12 | 583.36 | 500 | 439.64 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 3000

INPUT
Description:
Station Elevation Data num= 341

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 290.67 | 1.01001 | 290.66 | 11.57996 | 290.66 | 30.10999 | 290.54 | 33.43994 | 290.54 |
| 43.53992 | 290.48 | 46.18994 | 290.47 | 53.69995 | 290.43 | 60.40002 | 290.42 | 61.42993 | 290.42 |
| 63.02002 | 290.41 | 70.56995 | 290.43 | 72.57996 | 290.43 | 75.18994 | 290.44 | 78.69995 | 290.44 |
| 82.37 | 290.45 | 100.7899 | 290.61 | 03.5599 | 290.63 | 116.46 | 290.68 | 117.98 | 290.69 |
| 118.4399 | 290.68 | 119.39 | 290.69 | 120.46 | 290.68 | 122.5 | 290.69 | 151.98 | 290.73 |
| 153.76 | 290.75 | 155.74 | 290.75 | 158.14 | 290.74 | 158.4399 | 290.74 | 162.2899 | 290.75 |
| 166.2999 | 290.77 | 167.9399 | 290.77 | 170 | 290.78 | 173.25 | 290.78 | 175.7999 | 290.76 |
| 177.7799 | 290.77 | 181.1899 | 290.77 | 198.76 | 290.69 | 214.3099 | 290.69 | 219.98 | 290.67 |
| 220.85 | 290.68 | 226.34 | 290.64 | 226.4 | 290.64 | 233.52 | 290.61 | 238.4299 | 290.6 |
| 244.0699 | 290.61 | 250.1699 | 290.64 | 260.6899 | 290.74 | 260.74 | 290.74 | 262.01 | 290.75 |
| 263.51 | 290.75 | 264.97 | 290.76 | 267 | 290.77 | 269.83 | 290.77 | 270.49 | 290.76 |
| 271.49 | 290.77 | 274.01 | 290.78 | 277.4399 | 290.78 | 287.36 | 290.8 | 289.09 | 290.79 |
| 289.35 | 290.8 | 299.52 | 290.79 | 309.96 | 290.82 | 316.71 | 290.87 | 317.3099 | 290.88 |
| 318.98 | 290.9 | 320.26 | 290.91 | 322.88 | 290.91 | 323.47 | 290.92 | 337.5399 | 290.92 |
| 337.85 | 290.91 | 341.9 | 290.89 | 346.2 | 290.88 | 350.33 | 290.86 | 367.76 | 290.84 |
| 385.2 | 290.86 | 389.85 | 290.89 | 389.98 | 290.89 | 409.36 | 290.99 | 436.39 | 291 |
| 437.21 | 291.01 | 437.3199 | 291.02 | 468.1599 | 291.55 | 469.6799 | 291.57 | 474.36 | 291.66 |
| 481.0399 | 291.77 | 483.6599 | 291.8 | 486.1 | 291.82 | 486.24 | 291.82 | 491.21 | 291.87 |
| 491.48 | 291.88 | 491.6799 | 291.88 | 493.6599 | 291.89 | 494.0599 | 291.89 | 505.6 | 291.98 |
| 507.0499 | 291.98 | 509.89 | 291.99 | 511.75 | 291.99 | 514.2799 | 292 | 571.45 | 292 |
| 572.23 | 291.99 | 572.5599 | 291.99 | 573.04 | 291.98 | 573.21 | 291.97 | 584.02 | 291.41 |
| 584.86 | 291.36 | 587.5599 | 291.22 | 591.6299 | 291 | 611.39 | 290.27 | 614.5699 | 290.16 |
| 618.4399 | 290 | 635.59 | 289.33 | 644.6 | 289 | 676.2499 | 289 | 684.8 | 289.05 |
| 697.7499 | 289.1 | 717.39 | 289 | 733.5099 | 289 | 740.1899 | 289.04 | 741.4399 | 289.04 |
| 743.98 | 289.05 | 745.3 | 289.06 | 753.11 | 289.02 | 758.04 | 289.06 | 765.77 | 289 |
| 780.77 | 289 | 785.1299 | 289.01 | 797.52 | 289 | 798.78 | 288.99 | 799.71 | 288.98 |
| 800.53 | 288.98 | 818.96 | 288.27 | 822.9 | 288.14 | 823.72 | 288.13 | 826.05 | 288 |
| 836.83 | 287.97 | 837.15 | 287.97 | 844.43 | 287.99 | 845.0699 | 287.99 | 847.1899 | 288 |
| 851.5699 | 288.01 | 856.59 | 288.01 | 872.77 | 288.5 | 881.93 | 289 | 942.6 | 289 |
| 943.7 | 288.98 | 950.17 | 288.91 | 960.67 | 288.84 | 967.14 | 288.89 | 970.5699 | 289 |
| 988.96 | 288.99 | 990.62 | 289 | 997.49 | 289 | 1001.74 | 289.01 | 1003.29 | 289.01 |
| 1005.84 | 289 | 1022.07 | 289 | 1025.6 | 289.2 | 1040.12 | 290 | 1044.02 | 290.28 |
| 1044.73 | 290.32 | 1048.1 | 290.54 | 1055.39 | 291 | 1056.56 | 291.15 | 1062.62 | 292 |
| 1071.22 | 292.82 | 1072.92 | 293 | 1073 | 293 | 1073.05 | 293.01 | 1076.73 | 294 |
| 1080.34 | 295 | 1080.7 | 295.11 | 1080.97 | 295.19 | 1084.17 | 296 | 1085.41 | 296.37 |
| 1088.17 | 297 | 1088.69 | 297.15 | 1091.73 | 298 | 1092.26 | 298.17 | 1093.2 | 298.51 |
| 1094.13 | 299 | 1094.6 | 299.23 | 1096.26 | 300 | 1098.81 | 300.99 | 1102.63 | 302 |
| 1105.49 | 302.75 | 1106.59 | 303 | 1108.46 | 303.44 | 1110.68 | 304 | 1113.84 | 304.05 |
| 1114.75 | 304.05 | 1115.42 | 304.06 | 1118.17 | 304.42 | 1120.32 | 304.61 | 1120.54 | 304.61 |
| 1126.98 | 304.33 | 1127.13 | 304.32 | 1128.43 | 304.28 | 1129.64 | 304.23 | 1134.28 | 304 |
| 1136.91 | 303.53 | 1140.72 | 303 | 1142.33 | 302.74 | 1145.33 | 302.37 | 1146.56 | 302.2 |
| 1147.94 | 302 | 1149.94 | 301.7 | 1155.14 | 301 | 1156.34 | 300.87 | 1158.26 | 300.68 |
| 1162.4 | 300.29 | 1164.37 | 300.16 | 1166.05 | 300.1 | 1166.38 | 300.08 | 1172.89 | 299.96 |
| 1173.26 | 299.91 | 1174.17 | 299.84 | 1175.91 | 299.66 | 1179.88 | 299 | 1181.36 | 298.23 |
| 1183.39 | 298.12 | 1193.01 | 298.12 | 1193.96 | 298.06 | 1194.05 | 298.07 | 1194.77 | 298.09 |
| 1197.01 | 298.21 | 1198.2 | 298.29 | 1206.02 | 299 | 1208.4 | 299.01 | 1208.69 | 299.01 |
| 1216.87 | 299.56 | 1220.34 | 299.74 | 1223.53 | 300 | 1223.99 | 300 | 1224.08 | 300.01 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1232.86 | 300.61 | 1237.04 | 300.87 | 1239.08 | 301 | 1253.63 | 302 | 1254.16 | 302.04 |
| 1267.59 | 303 | 1268.26 | 303.06 | 1269.21 | 303.13 | 1271.4 | 303.3 | 1273.82 | 303.48 |
| 1279.63 | 304 | 1283.08 | 304.28 | 1284.39 | 304.39 | 1286.77 | 304.54 | 1288.25 | 304.62 |
| 1293.38 | 305 | 1299.92 | 305.69 | 1303 | 306 | 1308.51 | 306.6 | 1311.57 | 307 |
| 1315.51 | 307.6 | 1315.85 | 307.63 | 1318.96 | 307.82 | 1319.26 | 307.85 | 1321.47 | 308 |
| 1321.56 | 308.02 | 1321.92 | 308.06 | 1326.59 | 308.7 | 1328.54 | 308.83 | 1329.85 | 308.99 |
| 1330 | 308.99 | 1330.18 | 309 | 1330.25 | 309 | 1330.67 | 309.07 | 1331.07 | 309.15 |
| 1332.24 | 309.41 | 1334.22 | 309.84 | 1334.92 | 310 | 1336.41 | 310.26 | 1340.77 | 311 |
| 1342.55 | 311.28 | 1347.94 | 312 | 1348.41 | 312.01 | 1348.69 | 312.03 | 1351.75 | 312.16 |
| 1352.71 | 312.19 | 1354.42 | 312.23 | 1355.34 | 312.25 | 1358.38 | 312.31 | 1367.75 | 312.44 |
| 1369.65 | 312.49 | 1370.16 | 312.51 | 1370.7 | 312.53 | 1371.33 | 312.54 | 1374.7 | 312.56 |
| 1375.23 | 312.56 | 1379.13 | 312.61 | 1381.38 | 312.55 | 1382.37 | 312.51 | 1386.73 | 312.53 |
| 1387.11 | 312.53 | 1388.8 | 312.47 | 1391.17 | 312.46 | 1398.75 | 312.73 | 1404.53 | 312.97 |
| 1405.36 | 312.96 | 1416.03 | 312.87 | 1416.6 | 312.86 | 1419.9 | 312.87 | 1421.85 | 312.87 |
| 1423.19 | 312.86 | 1424.88 | 312.84 | 1428.11 | 312.83 | 1428.43 | 312.82 | 1429.44 | 312.82 |
| 1430.74 | 312.8 | 1432.46 | 312.77 | 1433.34 | 312.76 | 1436.94 | 312.7 | 1439.42 | 312.68 |
| 1452.2 | 312.6 | 1465.19 | 312.69 | 1466.09 | 312.72 | 1467.98 | 312.72 | 1472 | 312.7 |
| 1473.83 | 312.68 | 1474.12 | 312.68 | 1475.64 | 312.66 | 1476.93 | 312.64 | 1480.76 | 312.57 |
| 1493.43 | 312.57 | 1496.01 | 312.59 | 1502.24 | 312.52 | 1502.77 | 312.51 | 1503.2 | 312.5 |
| 1509.64 | 312.41 | 1511.88 | 312.37 | 1517.65 | 312.35 | 1523.6 | 312.38 | 1523.78 | 312.38 |
| 1527.61 | 312.51 | 1527.7 | 312.51 | 1533.24 | 312.61 | 1534.76 | 312.64 | 1538.48 | 312.68 |
| 1542.59 | 312.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 611.39 | .04 | 1055.39 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| Left | Right | Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 611.39 | 1055.39 | 680.16 | 500 | 394.42 | .1 | .3 |

Left Levee Station= 572.6 Elevation= 292.52

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 2500

INPUT
Description:
Station Elevation Data num= 440

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 285.82 | 4899902 | 285.87 | 709961 | 285.58 | 25.45996 | 285 | 70.76001 | 284.13 |
| 72.72998 | 284.17 | 8.04004 | 284.03 | 79.72998 | 284 | 146.1901 | 284 | 149.0701 | 283.98 |
| 149.3 | 283.98 | 151.1901 | 283.97 | 154.09 | 283.99 | 160.87 | 283.97 | 164.15 | 283.97 |
| 171.86 | 283.95 | 172.54 | 283.95 | 175.8301 | 283.94 | 194.54 | 284 | 220.29 | 284 |
| 224.5701 | 283.99 | 225.8 | 283.99 | 230.3 | 284 | 237.26 | 284 | 239.36 | 284.1 |
| 239.49 | 284.1 | 241.28 | 284.11 | 244.7001 | 284.09 | 244.85 | 284.09 | 251.1 | 284 |
| 260.86 | 284 | 266.85 | 284.13 | 273.0701 | 284.25 | 273.21 | 284.25 | 297.8301 | 284.35 |
| 298.38 | 284.34 | 298.78 | 284.34 | 312.1901 | 284.28 | 326.8 | 284.16 | 327.05 | 284.16 |
| 330.35 | 284.17 | 331.12 | 284.17 | 331.54 | 284.16 | 332.25 | 284.16 | 334.29 | 284.18 |
| 340.99 | 284.18 | 353.25 | 284.24 | 353.72 | 284.24 | 357.54 | 284.25 | 364.22 | 284.28 |
| 369.61 | 284.29 | 385.54 | 284.39 | 394.05 | 284.43 | 433.9501 | 284.81 | 441.41 | 284.86 |
| 444.5701 | 284.9 | 446.01 | 284.94 | 447.0601 | 284.91 | 448.46 | 284.91 | 449.7001 | 284.92 |
| 450.51 | 284.92 | 451.34 | 284.91 | 453.76 | 284.91 | 481.41 | 284.62 | 504.75 | 284.77 |
| 505.4501 | 284.77 | 516.0601 | 284.99 | 516.3201 | 285 | 628.1 | 285 | 637.6901 | 285.05 |
| 650.52 | 285.08 | 651.8 | 285.08 | 652.23 | 285.09 | 655.3 | 285.09 | 656.0601 | 285.1 |
| 682.3 | 285.27 | 683.02 | 285.27 | 686.25 | 285.29 | 703.62 | 285.33 | 768.44 | 285.66 |
| 769.16 | 285.67 | 781.63 | 285.73 | 795.83 | 285.82 | 796.02 | 285.83 | 797.28 | 285.83 |
| 798.45 | 285.84 | 798.97 | 285.84 | 807.98 | 285.87 | 813.77 | 285.86 | 814.1 | 285.86 |
| 819.74 | 285.89 | 819.91 | 285.89 | 820.09 | 285.88 | 820.19 | 285.88 | 821.69 | 285.89 |
| 830.65 | 285.99 | 854.78 | 285.99 | 859.3 | 285.98 | 862.62 | 285.98 | 869 | 286 |
| 869.91 | 286 | 877.85 | 285.69 | 891.69 | 285 | 900.74 | 284.11 | 901.39 | 284.03 |
| 901.63 | 284 | 902.07 | 283.96 | 902.62 | 283.95 | 903.49 | 283.93 | 903.56 | 283.93 |
| 904.96 | 283.87 | 920.78 | 283.32 | 924.48 | 283.2 | 931.79 | 283.01 | 936.54 | 283.01 |
| 937.5 | 283 | 941.28 | 283 | 945.26 | 282.98 | 957.14 | 282.72 | 968.02 | 282.53 |
| 969.86 | 282.48 | 970.85 | 282.46 | 971.05 | 282.45 | 971.76 | 282.43 | 973.84 | 282.41 |
| 974.17 | 282.4 | 974.32 | 282.4 | 981.45 | 282.27 | 985.37 | 282.22 | 987.05 | 282.22 |
| 987.76 | 282.23 | 988.5 | 282.23 | 991.6 | 282.28 | 996.97 | 282.4 | 1001.54 | 282.43 |
| 1003.28 | 282.48 | 1005.7 | 282.52 | 1008.2 | 282.55 | 1009.34 | 282.56 | 1028.8 | 282.97 |
| 1034.1 | 282.97 | 1036.22 | 282.98 | 1037.21 | 282.98 | 1038.74 | 282.99 | 1039.86 | 282.99 |
| 1045.31 | 283 | 1050.3 | 283.47 | 1052.95 | 283.71 | 1054.99 | 284 | 1065.13 | 284 |
| 1068.45 | 284.01 | 1068.66 | 284.01 | 1074.17 | 284 | 1095.13 | 284 | 1104.31 | 283.98 |
| 1105.44 | 283.98 | 1108.85 | 283.99 | 1110.5 | 283.99 | 1111.12 | 284 | 1113.68 | 284 |
| 1114.55 | 284.01 | 1116.95 | 284.01 | 1117.7 | 284.02 | 1118.39 | 284.02 | 1118.86 | 284.03 |
| 1121.36 | 284.03 | 1122.89 | 284.04 | 1128.38 | 284.04 | 1147.08 | 284.5 | 1157.27 | 284.69 |
| 1157.73 | 284.69 | 1174.81 | 285 | 1186.45 | 285 | 1186.68 | 284.99 | 1203.01 | 284.65 |
| 1207.96 | 284.5 | 1221.03 | 284.08 | 1221.12 | 284.08 | 1221.24 | 284.07 | 1221.93 | 284.05 |
| 1222.24 | 284.03 | 1222.5 | 284.02 | 1222.59 | 284.02 | 1225.23 | 284.01 | 1225.59 | 284.01 |
| 1228.5 | 284 | 1229.9 | 284.03 | 1229.96 | 284.03 | 1230.24 | 284.04 | 1230.99 | 284.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1231.3 | 284.09 | 1239.44 | 284.43 | 1245.5 | 284.71 | 1252.36 | 285 | 1253.71 | 285.15 |
| 1253.76 | 285.15 | 1254.2 | 285.19 | 1255.83 | 285.38 | 1257.12 | 285.5 | 1258.13 | 285.61 |
| 1261.04 | 285.95 | 1261.45 | 286 | 1262.01 | 286.07 | 1265.04 | 286.47 | 1270.56 | 287 |
| 1271.49 | 287.08 | 1272.85 | 287.22 | 1274.33 | 287.38 | 1278.76 | 287.97 | 1279.11 | 287.97 |
| 1279.64 | 287.99 | 1279.7 | 287.99 | 1280.03 | 288 | 1282.59 | 288.35 | 1283.89 | 288.51 |
| 1284.36 | 288.57 | 1288.6 | 289 | 1288.67 | 289 | 1288.73 | 289.01 | 1292.7 | 289.27 |
| 1293.06 | 289.31 | 1293.55 | 289.37 | 1294.73 | 289.46 | 1298.43 | 290 | 1305.9 | 290.98 |
| 1312.22 | 291.64 | 1313.96 | 291.81 | 1315.73 | 292 | 1318.17 | 292.35 | 1320.52 | 292.7 |
| 1322.63 | 293 | 1324 | 293.31 | 1327.45 | 294 | 1329.77 | 294.42 | 1332.72 | 294.92 |
| 1333.19 | 295 | 1333.63 | 295.07 | 1339.26 | 296 | 1341.01 | 296.44 | 1343.63 | 297 |
| 1344.52 | 297.29 | 1345.14 | 297.45 | 1345.54 | 297.52 | 1345.99 | 297.62 | 1346.74 | 297.7 |
| 1350.56 | 298 | 1353.15 | 298.32 | 1354.15 | 298.36 | 1362.34 | 299 | 1363.36 | 299.09 |
| 1363.43 | 299.1 | 1365.6 | 299.39 | 1367.69 | 299.7 | 1368.05 | 299.78 | 1368.27 | 299.82 |
| 1368.59 | 299.77 | 1369.62 | 299.76 | 1371.71 | 299.29 | 1372.54 | 299.14 | 1373.18 | 299 |
| 1373.84 | 298.91 | 1374.32 | 298.87 | 1375.17 | 298.84 | 1375.69 | 298.99 | 1377.23 | 298.99 |
| 1378.57 | 299 | 1379.21 | 299.1 | 1379.77 | 299.31 | 1380.98 | 299.77 | 1381.15 | 299.86 |
| 1381.45 | 300 | 1382.6 | 300.45 | 1384.09 | 301 | 1384.25 | 301.06 | 1384.73 | 301.13 |
| 1385.89 | 301.35 | 1387.2 | 301.57 | 1387.65 | 301.63 | 1387.94 | 301.64 | 1389.34 | 301.68 |
| 1396.34 | 301.96 | 1396.48 | 301.95 | 1397.64 | 301.85 | 1398.95 | 301.88 | 1399.66 | 302 |
| 1399.74 | 302.01 | 1399.81 | 302.02 | 1401.32 | 302.37 | 1403.07 | 302.8 | 1403.27 | 302.85 |
| 1403.41 | 302.88 | 1403.51 | 302.9 | 1403.66 | 302.91 | 1404.19 | 303 | 1404.75 | 303.08 |
| 1406.91 | 303.23 | 1407.31 | 303.28 | 1407.66 | 303.33 | 1408.58 | 303.47 | 1408.67 | 303.5 |
| 1409.3 | 303.63 | 1410.66 | 304 | 1411.35 | 304.13 | 1412.18 | 304.3 | 1412.91 | 304.43 |
| 1413.41 | 304.51 | 1415.29 | 304.86 | 1415.87 | 304.95 | 1416.04 | 305 | 1418.6 | 305.52 |
| 1420.46 | 305.87 | 1420.58 | 305.89 | 1421.22 | 306 | 1421.87 | 306.11 | 1422.5 | 306.19 |
| 1425.9 | 306.65 | 1428.39 | 307 | 1431.1 | 307.31 | 1436.87 | 307.92 | 1437.11 | 307.95 |
| 1437.36 | 308 | 1437.61 | 308 | 1438.19 | 308.1 | 1439.16 | 308.29 | 1440.58 | 308.62 |
| 1440.78 | 308.66 | 1441.03 | 308.72 | 1441.1 | 308.74 | 1442.26 | 309 | 1448.9 | 309.41 |
| 1459.12 | 310 | 1459.52 | 310 | 1459.71 | 310.01 | 1459.82 | 310.01 | 1464.21 | 310.03 |
| 1466.52 | 310.03 | 1467.65 | 310.04 | 1469.41 | 310.04 | 1469.9 | 310.05 | 1470.85 | 310.05 |
| 1485.45 | 310.09 | 1494.4 | 310.14 | 1498.34 | 310.26 | 1513.51 | 310.62 | 1514.27 | 310.61 |
| 1515.52 | 310.58 | 1515.81 | 310.57 | 1518.63 | 310.62 | 1519.11 | 310.61 | 1519.97 | 310.61 |
| 1520.65 | 310.6 | 1521.63 | 310.6 | 1524.83 | 310.53 | 1528.06 | 310.47 | 1529.17 | 310.46 |
| 1530.15 | 310.44 | 1532.41 | 310.42 | 1537.59 | 310.3 | 1537.92 | 310.29 | 1546.76 | 310.13 |
| 1546.82 | 310.13 | 1547.05 | 310.12 | 1552.14 | 310.01 | 1553.99 | 310.01 | 1554.4 | 310 |
| 1555.05 | 310 | 1560.4 | 309.74 | 1562.07 | 309.65 | 1563.15 | 309.59 | 1566.82 | 309.35 |
| 1570.68 | 309.08 | 1571.68 | 309 | 1571.78 | 309 | 1573.55 | 308.75 | 1576.81 | 308.37 |
| 1577.99 | 308.22 | 1579.75 | 308.01 | 1580 | 308.01 | 1580.06 | 308 | 1581.15 | 307.84 |
| 1587.02 | 307 | 1590.6 | 306.48 | 1591.59 | 306.37 | 1592.21 | 306.3 | 1593.77 | 306.17 |
| 1597.75 | 306 | 1598.67 | 306 | 1601.34 | 305.67 | 1601.5 | 305.65 | 1603.11 | 305.46 |
| 1606.38 | 305.09 | 1607.61 | 305 | 1608.94 | 305 | 1611.52 | 304.81 | 1612.73 | 304.74 |
| 1614.7 | 304.64 | 1616.19 | 304.56 | 1618.46 | 304.43 | 1623.21 | 304.21 | 1624.22 | 304.16 |
| 1624.85 | 304.13 | 1625.59 | 304.1 | 1628.26 | 304 | 1639.12 | 303.57 | 1639.77 | 303.54 |
| 1650.34 | 303.11 | 1650.6 | 303.1 | 1651.02 | 303.07 | 1651.39 | 303.06 | 1651.55 | 303.05 |
| 1653.16 | 303 | 1658.08 | 302.82 | 1671.43 | 302 | 1672.97 | 302 | 1674.45 | 302.03 |
| 1674.52 | 302.04 | 1674.77 | 302.04 | 1677.18 | 302.06 | 1680.7 | 302.27 | 1684.98 | 302.35 |
| 1689.33 | 302.32 | 1693.99 | 302.38 | 1694.27 | 302.38 | 1696.17 | 302.4 | 1696.29 | 302.4 |
| 1698.49 | 302.43 | 1699.8 | 302.46 | 1703.5 | 302.55 | 1706.36 | 302.61 | 1717.68 | 302.99 |
| 1717.88 | 302.99 | 1722.79 | 303 | 1726.44 | 303 | 1729.76 | 303.02 | 1729.81 | 303.02 |
| 1730.1 | 303.03 | 1730.97 | 303.07 | 1731.56 | 303.11 | 1738.36 | 303.53 | 1740.52 | 303.66 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 862.62 | .04 | 1274.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 862.62 | 1274.33 | 480.12 | 500 | 529.25 | .1 | .3 |

Left Levee Station= 837.42 Elevation= 286.37

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 2000

INPUT
Description:
Station Elevation Data num= 427

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.362.030029 | 312.1 | 2.27002 | 312.084.439941 | 311.72 | 5.5 | 311.56 | | |
| 6.140015 | 311.467.810059 | 311.338.180054 | 311.298.609985 | 311.279.819946 | 311.22 | | | | |
| 15.28003 | 311.07 | 15.62 | 311.0717.60999 | 311.0417.69995 | 311.0519.93005 | 311.15 | | | |
| 20.69995 | 311.31 | 21.25 | 311.4123.70996 | 31225.16003 | 312.3626.47998 | 312.67 | | | |
| 27.06995 | 312.7927.31995 | 312.8428.40002 | 31333.20996 | 313.4534.19995 | 313.56 | | | | |
| 34.95996 | 313.6338.03003 | 313.8438.89001 | 313.8841.02002 | 31441.08997 | 314 | | | | |
| 42.35999 | 314.05 | 44.62 | 314.0845.67004 | 314.0845.76001 | 314.07 | 47.87 | 314 | | |
| 52.52002 | 313.8154.44995 | 313.7555.84998 | 313.6556.45996 | 313.6157.78003 | 313.5 | | | | |
| 60.10999 | 313.3262.90002 | 31366.03003 | 312.6272.60999 | 31274.26001 | 311.77 | | | | |
| 74.64001 | 311.7179.68994 | 310.96 | 81.87 | 310.7582.44995 | 310.6885.55005 | 310.49 | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 87.38 | 310.36 | 88.45996 | 310.35 | 89.33997 | 310.33 | 91.06006 | 310.49 | 3.06995 | 310.43 | | |
| 93.81006 | 310.48 | 94.81995 | 310.57 | 95.90002 | 310.53 | 97.12 | 310.64 | 97.68994 | 310.64 | | |
| 98.28003 | 310.63 | 100.17 | 310.53 | 100.71 | 310.5 | 101.95 | 310.37 | 104.4301 | 310.01 | | |
| 104.51 | 309.99 | 109.27 | 309 | 110.84 | 308.47 | 111.22 | 308.36 | 113.98 | 307.64 | | |
| 115.53 | 307.26 | 116.7 | 307 | 117.79 | 306.72 | 120.21 | 306 | 123.03 | 305.13 | | |
| 123.46 | 305 | 123.5699 | 304.96 | 126.52 | 304 | 128.95 | 303.37 | 130.36 | 303 | | |
| 130.84 | 302.77 | 131.09 | 302.66 | 132.8101 | 302 | 133.1 | 301.99 | 133.17 | 301.99 | | |
| 134.72 | 301.5 | 136.47 | 301 | 136.6801 | 300.98 | 138.01 | 300.64 | 138.7 | 300.52 | | |
| 139.49 | 300.41 | 140.6 | 300.17 | 141.9399 | 300 | 143.45 | 299.87 | 144.01 | 299.77 | | |
| 146.04 | 299.5 | 146.75 | 299.41 | 147.95 | 299.23 | 148.3 | 299.17 | 148.8 | 299.08 | | |
| 149.16 | 299 | 150.62 | 298.65 | 151.1801 | 298.48 | 152.8 | 298 | 153.1801 | 297.89 | | |
| 154.2 | 297.59 | 155.67 | 297.1 | 155.98 | 297 | 157.45 | 296.71 | 165.9 | 295.21 | | |
| 166.99 | 295 | 167.97 | 294.84 | 172.84 | 294 | 174.49 | 293.72 | 175.63 | 293.5 | | |
| 178.04 | 293 | 180.86 | 292.68 | 184.59 | 292 | 189.05 | 291.1 | 189.76 | 291 | | |
| 196.04 | 290.09 | 196.29 | 290.06 | 196.6899 | 290 | 198.9301 | 289.76 | 206.12 | 289 | | |
| 208.65 | 288.76 | 209.77 | 288.66 | 216.9399 | 288 | 218.52 | 287.92 | 21.9399 | 287.73 | | |
| 224.35 | 287.64 | 235.38 | 287 | 236.09 | 286.96 | 245.38 | 286.23 | 245.59 | 286.22 | | |
| 245.78 | 286.21 | 247.71 | 286.16 | 250.91 | 286 | 263.5699 | 285.39 | 264.55 | 285.32 | | |
| 264.92 | 285.31 | 265.26 | 285.3 | 265.95 | 285.29 | 266.1899 | 285.29 | 269.34 | 285 | | |
| 273.89 | 284.98 | 277.99 | 284.98 | 278.6899 | 284.93 | 279.98 | 284.87 | 287.9 | 284.42 | | |
| 288.01 | 284.43 | 288.3101 | 284.42 | 291.83 | 284 | 294.7 | 283.83 | 304.78 | 283 | | |
| 311.41 | 282.89 | 314.16 | 282.83 | 25.0601 | 282.63 | 325.3 | 282.63 | 326.15 | 282.64 | | |
| 326.59 | 282.65 | 333.51 | 282 | 337.0601 | 282 | 338.21 | 281.95 | 350.36 | 281.38 | | |
| 354.85 | 281.23 | 354.9399 | 281.24 | 356.22 | 281.09 | 356.89 | 281.01 | 357.02 | 281 | | |
| 363.37 | 281 | 374.36 | 280.72 | 397.49 | 280.58 | 414.99 | 280.55 | 415.46 | 280.56 | | |
| 416.55 | 280.56 | 417.01 | 280.57 | 417.67 | 280.58 | 425.78 | 280.49 | 444.77 | 280.01 | | |
| 444.87 | 280 | 563.26 | 280 | 569.4399 | 280.02 | 569.52 | 280.02 | 571.7 | 280.03 | | |
| 572.51 | 280.03 | 573.39 | 280.04 | 575.29 | 280.07 | 582.49 | 280.13 | 582.84 | 280.13 | | |
| 586.48 | 280.17 | 586.84 | 280.18 | 607.89 | 280.4 | 615.01 | 280.46 | 616.41 | 280.48 | | |
| 618.77 | 280.5 | 619.55 | 280.51 | 628.29 | 280.6 | 634.22 | 280.62 | 640.79 | 280.66 | | |
| 645.14 | 280.7 | 645.88 | 280.7 | 671.88 | 280.82 | 679.6801 | 280.88 | 680.04 | 280.88 | | |
| 683.3 | 280.92 | 688.4 | 280.95 | 690.34 | 280.95 | 692.4399 | 280.94 | 696.53 | 280.96 | | |
| 696.64 | 280.96 | 697.83 | 280.97 | 699.98 | 280.97 | 708.55 | 280.99 | 709.7 | 280.99 | | |
| 713.36 | 281 | 724.09 | 281 | 753.35 | 280.93 | 782.96 | 280.95 | 787.4301 | 280.98 | | |
| 789.96 | 280.98 | 793.1 | 281 | 809.97 | 281 | 811.33 | 280.99 | 814.48 | 280.99 | | |
| 815.28 | 281 | 846.2 | 281 | 849.96 | 281.01 | 856.49 | 281.01 | 858.93 | 281 | | |
| 893.99 | 281 | 898.2 | 281.01 | 901.33 | 281.01 | 902.43 | 281 | 917.09 | 281.07 | | |
| 927.27 | 281.05 | 938.21 | 281 | 946.3 | 281 | 950.53 | 281.01 | 951.06 | 281 | | |
| 958.06 | 281.01 | 959.39 | 281.01 | 961.96 | 281.02 | 962.29 | 281.02 | 974.56 | 281 | | |
| 977.29 | 280.56 | 980.83 | 280 | 985.16 | 279.34 | 987.87 | 279 | 996.08 | 279 | | |
| 1001.83 | 278.86 | 1012.03 | 278.79 | 1020.98 | 278.76 | 1022.29 | 278.76 | 1028.53 | 278.74 | | |
| 1036.57 | 278.69 | 1043.65 | 278.84 | 1050.55 | 279 | 1055.58 | 279 | 1056.44 | 278.79 | | |
| 1056.5 | 278.79 | 1060.9 | 278.57 | 1071.39 | 278.01 | 1071.81 | 278.01 | 1072.69 | 278 | | |
| 1083.11 | 278 | 1102.42 | 278.04 | 1105.35 | 278.04 | 1121.82 | 278 | 1133.84 | 278 | | |
| 1134.56 | 278.02 | 1138.29 | 278.01 | 1141.68 | 278.01 | 1151.84 | 278.03 | 1154.3 | 278.04 | | |
| 1163.89 | 278.02 | 1166.12 | 278.01 | 1227.69 | 278 | 1237.55 | 278.41 | 1242.37 | 278.49 | | |
| 1247.23 | 278.64 | 1252.73 | 278.68 | 1259.54 | 278.77 | 1262.02 | 278.83 | 1262.58 | 278.85 | | |
| 1263.04 | 278.86 | 1264.26 | 278.88 | 1277.59 | 278.88 | 1291.29 | 278.92 | 1291.93 | 278.92 | | |
| 1294.02 | 278.94 | 1295.73 | 278.94 | 1296.75 | 278.93 | 1298.2 | 278.91 | 1298.66 | 278.91 | | |
| 1299.87 | 278.89 | 1300.08 | 278.89 | 1304.47 | 278.83 | 1326.15 | 278.46 | 1327.8 | 278.43 | | |
| 1346.08 | 278.14 | 1346.59 | 278.14 | 1347.3 | 278.12 | 1347.84 | 278.11 | 1351.98 | 278.09 | | |
| 1352.7 | 278.08 | 1352.84 | 278.08 | 1353.48 | 278.14 | 1359.78 | 278.77 | 1359.93 | 278.77 | | |
| 1361.28 | 278.94 | 1361.84 | 279 | 1390.68 | 279 | 1412.54 | 278 | 1413.94 | 278 | | |
| 1414.96 | 277.99 | 1416.2 | 278 | 1426.24 | 278 | 1429.78 | 278.31 | 1430 | 278.33 | | |
| 1431.78 | 278.46 | 1432.4 | 278.52 | 1432.66 | 278.53 | 1439.18 | 279 | 1440.55 | 279 | | |
| 1441.05 | 278.99 | 1451.87 | 278.99 | 1457.8 | 279 | 1457.86 | 279 | 1458.02 | 279.01 | | |
| 1458.28 | 279.02 | 1483.15 | 280 | 1483.71 | 280 | 1486.35 | 280.03 | 1491.58 | 280.28 | | |
| 1491.71 | 280.28 | 1510.49 | 280.98 | 1511.98 | 280.98 | 1515.9 | 280.99 | 1517.94 | 281 | | |
| 1528.24 | 281.48 | 1541.81 | 282 | 1553.52 | 282 | 1558.82 | 282.16 | 1561.07 | 282.22 | | |
| 1561.49 | 282.23 | 1561.95 | 282.24 | 1570.27 | 282.59 | 1579.57 | 283 | 1581.4 | 283.02 | | |
| 1582.12 | 283.03 | 1582.9 | 283.03 | 1584.44 | 283.11 | 1591.19 | 283.4 | 1592.05 | 283.42 | | |
| 1593.59 | 283.49 | 1595.03 | 283.51 | 1595.48 | 283.54 | 1602.6 | 283.78 | 1608 | 283.98 | | |
| 1609.47 | 283.99 | 1609.95 | 283.99 | 1612.42 | 284 | 1612.52 | 284 | 1615.52 | 284.02 | | |
| 1618.76 | 284.17 | 1619.89 | 284.21 | 1621.75 | 284.25 | 1624.61 | 284.34 | 1633.46 | 284.64 | | |
| 1639.09 | 284.85 | 1640.59 | 284.9 | 1643.71 | 284.99 | 1645.56 | 285 | 1645.74 | 285 | | |
| 1647.4 | 284.99 | 1655.73 | 284.99 | 1658.45 | 285 | 1658.87 | 285 | 1659.39 | 285.01 | | |
| 1662.01 | 285.18 | 1662.71 | 285.2 | 1678.7 | 285.98 | 1687.92 | 285.98 | 1689.36 | 285.99 | | |
| 1690.37 | 285.98 | 1693.41 | 285.99 | 1693.92 | 285.99 | 1695.55 | 286 | 1696.01 | 286.01 | | |
| 1696.61 | 286.01 | 1697.44 | 286.02 | 1699.25 | 286.02 | 1704.88 | 286.34 | 1715.18 | 286.98 | | |
| 1715.62 | 286.98 | 1715.86 | 286.99 | 1726.17 | 286.99 | 1727.68 | 287 | 1727.99 | 287 | | |
| 1728.47 | 287.01 | 1730.63 | 287.04 | 1731.22 | 287.04 | 1731.81 | 287.05 | 1733.12 | 287.05 | | |
| 1740 | 287.11 | 1740.29 | 287.11 | 1747.24 | 287.1 | 1756.34 | 287.84 | 1758.34 | 288 | | |
| 1760.56 | 288 | 1762.88 | 288.01 | 1767.83 | 288.01 | 1777.09 | 288.33 | 1783.14 | 288.58 | | |
| 1785.05 | 288.64 | 1793.13 | 289 | 1802.71 | 289.62 | 1807.24 | 289.92 | 1808.5 | 290 | | |
| 1820.39 | 291 | 1820.62 | 291.02 | 1821.01 | 291.06 | 1824.37 | 291.38 | 1824.42 | 291.39 | | |
| 1830.84 | 292 | 1831.75 | 292.09 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

```
       0     .05  985.16     .04 1483.15     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        985.16 1483.15           1286.2  656.84  319.02             .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 1343.16

INPUT
Description:
Station Elevation Data    num=     497
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   312.41.919922 312.392.939941 312.386.109985 312.3618.07996 312.04
18.20996  312.0424.32996 312.01   25.12 312.0125.66992     31226.01001     312
   34.12  311.5745.65991 311.0248.32996     31150.06995 310.9951.04993 310.98
51.68994  310.99   52.75 310.99 53.7699     31160.20996 311.0163.18994 311.02
71.41992     31173.08997    31184.14001 311.6786.15991 311.7286.56995 311.74
86.92993  311.7688.20996 311.7989.26001  311.889.56995 311.7989.89001 311.79
90.32996  311.7893.32996 311.8593.85999 311.8395.15991 311.8296.84998 311.74
104.0399  311.86108.2699 311.97  112.26     312  198.62     312  205.14 311.46
  210.35     311226.4399     310  227.98     310  239.14 310.45241.7899 310.66
242.1599  310.68  245.63    311253.1799 311.92  253.24 311.93  253.73     312
254.0399  312.05  260.98    313269.3199 313.36270.1799 313.37279.3199 313.51
285.2899  313.59  287.61  313.6288.2799  313.6293.2899 313.62   295.6 313.62
  297.73  313.64  298.75 313.64299.7799 313.63305.5699 313.53  308.35 313.43
  312.71  313.26  313.38 313.25  318.49     313  322.89 312.55  329.87     312
338.2699     311347.0599 310.15347.8099 310.13  348.73 310.13351.2999 310.39
  352.14  310.46355.0499 310.79356.5699     311  360.51 311.33362.3099 311.44
  364.95  311.57367.1699 311.74368.0499   311.8  368.87 311.77371.0499 311.64
376.6499  311.08  377.74 311.06  379.63 311.04379.9299 311.03386.0699     311
386.7699  310.94387.0299 310.89387.5599 310.81388.2899 310.68388.8099 310.67
389.3099  310.65  394.51 310.62   398.6 310.61399.9199 310.56400.4099  310.5
401.5199  310.43  403.72 310.37  404.11 310.34  406.96 310.14  407.24 310.11
407.6699  310.08  407.73 310.07  407.87 310.05408.5599     310   411.5 309.59
415.5199     309416.8199 308.82  417.61 308.74420.3999 308.36422.2999 308.34
  422.47  308.31422.6699 308.28   423.6 308.26  424.61 308.21424.7999 308.18
  425.14  308.11  425.58     308  427.61  307.2428.0599     307  429.85 306.28
430.6499     306  432.59 305.17  432.96     305  435.09 304.11  435.33     304
  437.51   303.1  437.71     303  438.73   302.5  439.89     302  441.63 301.14
441.9299     301443.9399 300.03  443.99     300  444.58  299.7446.0399     299
446.3199  298.84  448.08    298448.6899  297.7450.0399     297  452.11  296.3
452.8999     296455.5199 295.05455.6599    295455.7699 294.96458.2799     294
458.7999  293.79   459.2 293.61  460.13 293.28  460.84    293461.2699  292.8
  463.21     292464.2799 291.77  466.72    291470.4399 290.24471.5599     290
  473.13  289.69  476.25     289  477.58 288.71479.9399 288.24   480.6 288.11
  481.24     288  481.83  287.9  484.35 287.53488.0199    287493.0399 286.47
496.3099  286.14  496.36 286.13  497.72    286499.6699 285.72502.5499 285.32
  504.89     285  508.75 284.46  511.98     284  518.87 283.12  519.71     283
  521.63 282.78529.0699     282  537.33    281544.8099    280548.5399 279.58
552.0399  279.21  554.12     279  555.24  278.9565.0699     278  572.71 277.28
575.7899     277  581.97 276.3585.0399     276  598.72 275.12599.0699 275.09
  600.49     275  612.71     274  631.11    273640.1899 272.56651.2999     272
  658.48 271.95662.2699 271.94  664.38 271.94  668.99 271.92674.1499 271.91
676.5699 271.91678.1499 271.92678.6499 271.92679.3999 271.93680.0699 271.93
  681.13  271.9683.3999 271.77690.8099 271.42  699.98 271.33  706.13 271.28
707.0299  271.28  728.72 271.85  729.08 271.87729.1599 271.87  729.39 271.88
  729.89 271.89730.0599 271.9730.2999  271.9  730.37 271.91   731.5 271.93
  731.88 271.94732.3199 271.94  732.45 271.95   737.6     272  737.71     272
737.7699 271.99738.4399 271.99738.5499 271.98  739.12 271.94  747.96     271
752.7999     271  756.47 271.07  782.76 271.36  797.45 271.48807.3099 271.48
  826.61   271.6  843.72 271.75846.5499 271.79850.0199 271.81  851.25 271.81
851.9399  271.82  852.61 271.82  863.48 271.96  863.89 271.96865.4399     272
879.3199     272  880.34 271.99884.0399    272887.4099 271.99889.6799 271.99
  890.26     272  893.47    272899.1299 272.04   899.6 272.04  903.22 272.09
  903.97 272.09  927.41 272.14948.9899 272.01  950.34    272965.9899     272
  966.54 271.99966.6299 271.98   966.7 271.98  972.61 271.82  974.29 271.77
974.8099 271.75976.6899 271.69993.7399 271.08  993.95 271.07994.8799 271.04
995.2999 271.03  996.28     271  1012.2    271 1017.62 271.01 1020.34 271.02
 1023.21 271.02 1029.11 271.01 1031.03    271 1032.15 270.99 1039.81 270.95
 1045.68 270.98 1047.08 270.99 1049.17    271 1053.24 271.01 1058.41 271.01
 1059.19    271 1074.38    271 1077.63 270.97  1085.2 270.65 1092.09  270.4
 1092.78 270.38 1099.56 270.27 1103.53 270.22 1103.76 270.22 1104.32 270.23
 1118.17 270.28 1120.36 270.27 1122.41 270.27  1134.6  270.2 1137.32 270.18
 1137.73 270.18  1146.5 270.03 1146.79 270.03 1151.54    270 1152.01    270
 1163.43 269.94 1171.78 269.98 1173.12 269.99 1175.52    270 1218.44 269.99
 1219.39    270 1233.49    270 1235.94 270.01 1239.38 270.01 1239.99    270
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1251.2 | 269.98 | 1273.7 | 269.99 | 1278.08 | 269.98 | 1283.03 | 269.99 | 1297.06 | 269.99 |
| 1299.49 | 270 | 1302.34 | 270.52 | 1304.71 | 271 | 1307.7 | 271.34 | 1310.17 | 271.65 |
| 1312.62 | 271.98 | 1313.26 | 272 | 1313.32 | 272 | 1320.75 | 272.65 | 1322.42 | 272.79 |
| 1324.43 | 272.92 | 1325.28 | 272.86 | 1334.59 | 272.01 | 1336.48 | 272 | 1345.87 | 272 |
| 1353.14 | 271.98 | 1359.24 | 271.99 | 1373.78 | 271.99 | 1377.95 | 272 | 1379.3 | 272 |
| 1382 | 272.08 | 1386.66 | 272.24 | 1404.8 | 273 | 1409.93 | 273.51 | 1414.63 | 274 |
| 1416.72 | 274 | 1417.68 | 274.01 | 1420.03 | 274.01 | 1425.95 | 274.02 | 1428.49 | 274.02 |
| 1439.45 | 274.48 | 1440.13 | 274.49 | 1440.24 | 274.49 | 1444.58 | 274.57 | 1450.86 | 274.71 |
| 1460.04 | 275 | 1467.45 | 275 | 1472.27 | 275.01 | 1484.8 | 275.01 | 1503.33 | 275.36 |
| 1506.51 | 275.38 | 1515.72 | 275.4 | 1524.71 | 275.39 | 1526.18 | 275.39 | 1527.84 | 275.38 |
| 1530.57 | 275.38 | 1532.7 | 275.37 | 1538.42 | 275.41 | 1546.2 | 275.5 | 1551.54 | 275.82 |
| 1554.29 | 275.99 | 1563.72 | 275.99 | 1566.19 | 276 | 1591.56 | 276 | 1594.61 | 276.03 |
| 1594.97 | 276.04 | 1605.02 | 276.24 | 1609.4 | 276.29 | 1610.57 | 276.31 | 1620.84 | 276.39 |
| 1621.94 | 276.4 | 1628.14 | 276.37 | 1635.41 | 276.3 | 1635.51 | 276.29 | 1636.11 | 276.29 |
| 1638.11 | 276.33 | 1641.03 | 276.43 | 1641.42 | 276.44 | 1641.5 | 276.44 | 1651.62 | 276.55 |
| 1653.18 | 276.59 | 1658.82 | 276.74 | 1661.71 | 276.79 | 1662.16 | 276.79 | 1662.54 | 276.8 |
| 1667.43 | 276.87 | 1673.42 | 276.97 | 1673.55 | 276.97 | 1673.72 | 276.98 | 1674.65 | 277 |
| 1687.85 | 277.33 | 1694.76 | 277.45 | 1696.62 | 277.51 | 1697.94 | 277.54 | 1700.89 | 277.57 |
| 1701.51 | 277.58 | 1705.21 | 277.67 | 1706.08 | 277.69 | 1709.72 | 277.78 | 1716.84 | 278 |
| 1718.93 | 278.06 | 1720.01 | 278.1 | 1720.51 | 278.11 | 1733.6 | 278.55 | 1738.94 | 278.74 |
| 1741.17 | 278.8 | 1742.34 | 278.85 | 1746.07 | 278.92 | 1746.76 | 278.94 | 1748.35 | 279 |
| 1752.31 | 279 | 1759.79 | 279.09 | 1759.94 | 279.09 | 1760.27 | 279.1 | 1760.49 | 279.1 |
| 1761.73 | 279.15 | 1763.37 | 279.19 | 1766.05 | 279.25 | 1768.41 | 279.29 | 1768.61 | 279.29 |
| 1772.13 | 279.38 | 1773.4 | 279.36 | 1774.57 | 279.35 | 1776.24 | 279.41 | 1779.76 | 279.47 |
| 1782.82 | 279.49 | 1788.08 | 279.57 | 1789.83 | 279.64 | 1792.17 | 279.76 | 1793.93 | 279.84 |
| 1794.61 | 279.86 | 1797.5 | 279.99 | 1803.71 | 279.99 | 1804.96 | 280 | 1806.64 | 280 |
| 1807.53 | 280.01 | 1812.03 | 280.48 | 1814.01 | 280.66 | 1815.76 | 280.7 | 1817.71 | 280.74 |
| 1823.77 | 281 | 1828.65 | 281.2 | 1829.58 | 281.25 | 1831.04 | 281.32 | 1832.73 | 281.42 |
| 1835.19 | 281.51 | 1837.01 | 281.57 | 1838.07 | 281.64 | 1839.2 | 281.68 | 1839.71 | 281.7 |
| 1842.76 | 281.83 | 1843 | 281.85 | 1844.3 | 281.85 | 1845.4 | 281.9 | 1850.2 | 281.98 |
| 1851.85 | 281.97 | 1854.24 | 281.97 | 1857.87 | 282 | 1868.75 | 282.46 | 1873.75 | 282.74 |
| 1877.83 | 282.99 | 1878.91 | 282.99 | 1879.21 | 283 | 1880.26 | 283 | 1881.07 | 283.06 |
| 1884.22 | 283.31 | 1892.06 | 284 | 1892.41 | 284.01 | 1892.97 | 284.01 | 1897.67 | 284.25 |
| 1901.74 | 284.42 | 1902.81 | 284.48 | 1903.48 | 284.51 | 1904.08 | 284.52 | 1907.44 | 284.65 |
| 1913.45 | 284.94 | 1915.43 | 285.07 | 1915.56 | 285.08 | 1915.62 | 285.08 | 1915.69 | 285.09 |
| 1918.73 | 285.31 | 1922.58 | 285.58 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 739.12 | .04 | 1307.7 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 739.12 | 1307.7 | 343.41 | 343.16 | 334.67 | .1 | .3 |

CROSS SECTION

RIVER: WASH30
REACH: Centerline Align RS: 1000

INPUT
Description:
Station Elevation Data num= 410

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 303.99 | 2700195 | 3047.719971 | | 3047.839966 | 303.9916 | 04993 | 303.52 | |
| 22.43994 | 303.3725 | 27002 | 303.2530 | 03003 | 302.9730 | 93994 | 302.9330 | 98999 | 302.93 |
| 33 | 302.8540 | 09998 | 302.7246 | 52002 | 302.72 | 51.37 | 302.4751 | 54993 | 302.48 |
| 52.66992 | 302.3453 | 84998 | 302.4 | 54.37 | 302.3254 | 54993 | 302.3254 | 80994 | 302.31 |
| 54.91003 | 302.3155 | 06995 | 302.356 | 92993 | 30259.70996 | | 30260.18994 | | 301.99 |
| 60.87 | 301.9970 | 97998 | 301.2571 | 04993 | 301.2575 | 93994 | 30191.81995 | | 301 |
| 92.68994 | 300.94 | 107.64 | 300.06 | 118.16 | 300 | 138.65 | 299.03 | 143.39 | 299 |
| 143.73 | 298.99 | 144.5699 | 298.99 | 144.88 | 298.98 | 148.1899 | 298.96 | 152.9 | 298.06 |
| 153.1 | 298.03 | 153.38 | 298.03 | 153.5699 | 298.02 | 153.66 | 298.01 | 164.37 | 298.19 |
| 168.15 | 298.04 | 168.2899 | 298.03 | 171.9199 | 298 | 173.6 | 297.93 | 173.78 | 297.93 |
| 174.39 | 297.77 | 175.6699 | 297.54 | 176.11 | 297.53 | 179.51 | 297.56 | 181.53 | 297.37 |
| 184.59 | 297.02 | 185.13 | 297.01 | 185.38 | 297.01 | 185.5 | 297 | 185.8099 | 297 |
| 187.39 | 297.69 | 187.51 | 297.71 | 187.61 | 297.72 | 187.84 | 297.75 | 189.83 | 297.51 |
| 195.24 | 297.45 | 205.0599 | 297.12 | 227.2899 | 296.13 | 228.75 | 296.09 | 229.38 | 296.1 |
| 229.4399 | 296.1 | 233.66 | 296.07 | 237.46 | 296.12 | 243.45 | 295.95 | 244.86 | 295.78 |
| 248.58 | 295.58 | 249.47 | 295.49 | 249.52 | 295.48 | 250.72 | 295.33 | 252.87 | 295.23 |
| 253.0599 | 295.21 | 253.45 | 295.19 | 254.11 | 295.17 | 254.3199 | 295.16 | 254.53 | 295.16 |
| 254.86 | 295.18 | 256.3099 | 295.16 | 256.4299 | 295.16 | 257.03 | 295.17 | 257.3199 | 295.19 |
| 257.9299 | 295.25 | 259.63 | 295.22 | 263.0499 | 295.41 | 264.99 | 295.46 | 269.61 | 295.44 |
| 270.63 | 295.42 | 271.35 | 295.39 | 272.85 | 295.39 | 276.8099 | 295.15 | 278.15 | 295.05 |
| 281.08 | 294.95 | 281.9399 | 294.94 | 283.62 | 294.98 | 284.21 | 294.98 | 285.2899 | 295 |
| 288.21 | 295.22 | 288.52 | 295.22 | 289.6899 | 295.25 | 293.1699 | 295.1 | 293.26 | 295.09 |
| 297.51 | 294.97 | 299.6 | 294.95 | 307.97 | 294.99 | 309.2899 | 294.98 | 309.47 | 294.97 |
| 316.26 | 294.93 | 16.6799 | 294.89 | 316.84 | 294.88 | 317 | 294.88 | 330.16 | 294.06 |
| 330.22 | 294.06 | 330.62 | 294 | 331.9399 | 294 | 332.3099 | 293.99 | 337.41 | 294.04 |

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  339.74  294.29  340.72  294.43341.9399  294.55  342.03  294.56  342.12  294.58
342.9299  294.64  343.26  294.68  343.65  294.71  345.64  294.81346.0499  294.79
   347.9  294.76  348.88  294.69352.3199  294.74   352.6  294.72  353.03  294.71
  354.84  294.59356.0599  294.44356.4299  294.42  358.89  294.37  359.46  294.35
  359.65  294.33  360.52  294.26362.4299     294  363.24  293.86  363.65  293.78
367.0399     293  367.53     293  373.14  292.78383.3099  292.75   388.4  292.69
  391.99  292.71  393.08  292.74394.6899  292.74396.5699   292.7397.1899  292.67
  398.35  292.65  403.63  292.71404.3199  292.69  406.62  292.85407.7999  292.96
  407.85  292.96   408.6     293409.6899   293.1   410.9  293.14  411.01  293.15
  413.37  293.15  413.66  293.17  415.48   293.1  416.09  293.09  418.15  293.13
  418.95  293.19  420.13  293.31  422.51     294423.2899  294.27424.0699  294.51
  427.22  295.42  429.52     296429.6699  296.04  431.59  296.48  434.38     297
  435.53  297.13  435.64  297.14437.9399  297.21  438.97  297.16   439.1  297.15
   441.9   296.8  451.35   295.2  453.09  295.25  453.59  295.31454.5399  295.46
   456.4     296458.2899  296.67458.6799  296.79  459.24     297  465.01     299
   468.2  299.96468.3199     300  468.61  300.06   469.5  300.28  473.23  301.44
   475.2     302477.5399  302.83  478.09     303  481.21  303.24  482.48  303.14
  483.83  303.16487.3199  302.11  493.48  300.51   495.6     300  496.27  299.78
499.5399     299  500.63  298.59  502.12     298  503.63  297.36   504.7     297
  505.13  296.84  511.02  295.16  511.53     295  512.76  294.65  512.87  294.62
  514.72  294.22  520.01   293.2  520.77     293  521.33  292.87526.5399  291.26
527.4299     291  530.13  290.17530.2999  290.12  530.37  290.11530.4399  290.09
530.6699  290.06  530.77  290.07  532.91  290.26  533.27  290.26533.4299  290.25
534.3199  290.16  534.89  290.04  535.12  290.02  535.28     290  535.62  289.86
537.2999  289.24  537.66   289.1  537.89  289.02  537.95     289  540.78     288
545.0399     287  546.34  286.81  546.52  286.77549.8199     286  550.58   285.8
  555.27  284.66  556.77  284.27  557.11  284.17  557.65     284  558.53  283.82
  563.62     283  565.08  282.84  579.83     281  588.86     280   601.5     279
603.4399  278.88  607.74  278.76  609.22  278.76609.5399  278.74  610.01  278.73
  619.76   278.1  620.99     278621.3099     278621.5699  277.99  627.35  277.99
  627.98  277.94  631.16   277.8  637.03  277.49  637.95  277.48  639.65  277.41
644.9199   277.4  663.16  276.76685.5399  275.59  700.64     275  720.35  274.01
720.7999     274  741.85     273760.1899  272.47  770.78     272   770.9     272
  772.13  271.98785.2899  271.57  785.95  271.56  793.09   271.4  801.89  271.05
  811.96  271.01  812.22     271  813.02     271  820.27  270.61  828.75     270
  874.41     268     875     268875.4399  267.99  878.23  267.99  878.51  267.98
  879.26  267.98891.0599  267.23  893.34  267.14  894.71     267  950.53     267
955.7899  266.91  956.26  266.86  959.78  266.63  967.65  266.64  977.74  266.81
  984.02     267 1001.59  266.82 1060.39  266.99 1073.51     267 1095.89     268
 1112.64     268  1130.2  267.03 1130.27  267.03 1130.92  267.02 1132.29  267.02
 1132.61  267.01 1133.27  267.01 1133.68     267 1134.29     267    1144     266
  1188.6  266.03  1225.5  265.99 1235.53  265.82 1235.83  265.82 1236.46   265.8
 1236.76   265.8 1236.85  265.79 1266.12  265.54 1266.54  265.53 1273.61  265.77
 1274.33  265.77 1274.89  265.78 1280.48     266 1286.35  266.43 1287.26  266.43
 1290.09  266.63 1290.83   266.6 1303.82     267 1392.16     267 1405.01  267.62
 1410.61     268 1420.27  268.99 1420.39     269 1420.48  269.01 1427.31  269.93
 1427.88     270  1445.8  270.02 1489.23     271  1513.6     271 1528.86  270.59
 1548.16  270.37 1550.64   270.4 1551.08   270.4 1551.32  270.41  1564.9  270.38
 1571.52  270.43 1619.17  270.01 1652.75     270 1657.25  269.87 1662.69     270
 1667.16  269.96 1668.68   269.9 1669.97  269.93  1671.6   269.9  1684.8     270
 1707.98  270.62 1741.27     272 1764.18  273.32  1764.7  273.34 1780.25  273.99
 1780.82     274 1799.28     275 1819.29   276.6 1820.48  276.67    1821  276.71
 1826.32     277 1827.53  277.01 1840.19  277.89 1842.36     278 1847.96  278.05
 1855.93  278.86 1855.99  278.86 1857.16     279    1880     280  1890.6     281
 1910.06     282 1921.04     283 1947.12  284.61  1951.5  284.95 1953.68     285
 1961.17  285.88 1961.84  285.95 1962.05  285.96 1962.13  285.97  1962.3  285.97
 1968.41     286 1977.87  286.77 1979.98     287 1984.95  287.47  1991.6  288.04

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05891.0599     .04 1405.01     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      891.0599 1405.01            658.4     500  415.82              .1       .3

CROSS SECTION


RIVER: WASH30
REACH: Centerline Align   RS: 500

INPUT
Description:
Station Elevation Data    num=     472
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  301.23.7700195   301.1.9200439  301.081.420044     30112.10999  300.02
15.97998  300.0116.32996     30016.40002     30016.92004  299.8821.14001     299
22.39001  298.9623.20996  298.9923.51001  298.9923.89001     29925.97998  299.45
26.56006  299.4727.57996  299.45   29.13  299.6729.58997  299.6630.10999  299.71
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 31.43005 | 299.6333.06995 | | 299.6734.68005 | | 299.6443.42004 | | 299.2444.29004 | | 299.23 | | |
| 46.14001 | 299.3447.28003 | | 299.4348.01001 | | 299.5152.89001 | | 299.954.53003 | | 300 | | |
| 55 | 300.0155.56995 | | 30056.42004 | | 30065.73999 | | 299.5569.14001 | | 299.36 | | |
| 75.42004 | 299.1277.18994 | | 299.0878.30005 | | 299.0878.81995 | | 299.179.18005 | | 299.13 | | |
| 88.40002 | 300 | 94.25 | 300.67 | 103.29 | 301.49 | 110.27 | 302.27 | 111.28 | 302.36 | | |
| 111.91 | 302.43 | 122.37 | 303.38 | 127.35 | 303.97 | 127.54 | 304 | 129.49 | 304.4 | | |
| 131.73 | 305 | 135.84 | 305.96 | 135.99 | 306 | 140.49 | 307 | 143.04 | 307.82 | | |
| 143.74 | 308148.9399 | | 308 | 157.48 | 307.61158.1899 | | 307.6159.5699 | | 307.54 | | |
| 161.16 | 307.44161.9399 | | 307.37 | 162.22 | 307.34 | 164.62 | 307 | 165.73 | 306.71 | | |
| 179.47 | 304 | 184 | 303.18 | 184.2 | 303.16 | 184.36 | 303.15 | 185.28 | 303 | | |
| 185.49 | 302.99 | 185.63 | 302.99 | 185.96 | 302.98 | 186.99 | 302.78 | 188.15 | 302.67 | | |
| 188.52 | 302.62 | 192.79 | 302.21 | 201.22 | 301.53 | 201.29 | 301.52 | 201.34 | 301.52 | | |
| 201.49 | 301.51 | 202.54 | 301.46205.0699 | | 301.47210.6899 | | 301.33211.3199 | | 301.29 | | |
| 211.9301 | 301.27 | 213.25 | 301.11 | 213.3 | 301.1 | 213.38 | 301.09 | 213.95 | 301 | | |
| 217.71 | 300.35218.0601 | | 300.31 | 218.74 | 300.25226.3199 | | 299.31226.8199 | | 299.24 | | |
| 226.98 | 299.24 | 227.21 | 299.22 | 227.79 | 299.19238.9301 | | 298.89 | 239.89 | 298.84 | | |
| 245.58 | 298.31 | 251.75 | 297.52 | 253.26 | 297.25 | 253.8 | 297.17 | 254.61 | 297 | | |
| 262.53 | 296.41 | 263.04 | 296.35 | 263.64 | 296.31 | 267.14 | 296 | 267.35 | 295.99 | | |
| 268.12 | 295.91 | 270.74 | 295.7 | 271.45 | 295.66 | 271.92 | 295.6 | 273.36 | 295.55 | | |
| 274.2 | 295.5 | 283.63 | 294.24 | 284.53 | 294 | 285.37 | 293.97285.8199 | | 293.98 | | |
| 289.78 | 293.99 | 290.97 | 293.98 | 291.45 | 293.92 | 291.54 | 293.91 | 291.6 | 293.91 | | |
| 293.35 | 293.75 | 293.85 | 293.73296.5601 | | 293.67 | 299.23 | 293.72 | 299.5 | 293.71 | | |
| 301.53 | 293.81 | 302.14 | 293.8303.5601 | | 293.84 | 304.2 | 293.82304.8199 | | 293.83 | | |
| 306.8199 | 293.79 | 308.22 | 293.73 | 309.47 | 293.73 | 310.62 | 293.63311.9301 | | 293.6 | | |
| 315.77 | 293.27320.3101 | | 292.8 | 323.02 | 292.6 | 324.76 | 292.51328.4399 | | 292.59 | | |
| 328.61 | 292.59 | 328.74 | 292.6 | 329.42 | 292.63 | 331 | 292.75 | 333.58 | 293 | | |
| 343.77 | 294.77 | 344.21 | 294.86 | 344.35 | 294.88 | 345 | 294.96 | 350.02 | 295.72 | | |
| 356.97 | 296.94 | 357.26 | 297358.5699 | | 297.29361.0699 | | 298 | 361.54 | 298.11 | | |
| 364.37 | 299365.0601 | | 299.08 | 366.52 | 299.35 | 368.41 | 299.61 | 369.79 | 299.65 | | |
| 376.77 | 300.2 | 377.42 | 300.24379.3101 | | 300.2 | 381.73 | 300.04 | 382.1 | 300 | | |
| 382.8 | 299.81 | 384.64 | 299.39 | 385.96 | 299 | 393.51 | 297.01393.5699 | | 296.99 | | |
| 393.71 | 296.97397.4301 | | 296.26 | 398.58 | 296 | 398.83 | 295.94 | 401.62 | 295.2 | | |
| 404.48 | 294.33 | 405.41 | 294 | 408.33 | 293.02 | 408.4 | 292.99410.9301 | | 292 | | |
| 412.51 | 291.48 | 414.26 | 291 | 418.61 | 289.67 | 421.41 | 288.7423.3199 | | 288 | | |
| 423.63 | 287.89 | 425.96 | 287 | 430.5 | 285.45 | 432.34 | 285436.6801 | | 284.19 | | |
| 437.5 | 284.12 | 437.97 | 284.11 | 439.23 | 284.31442.6899 | | 284.78443.3199 | | 284.88 | | |
| 443.98 | 285 | 444.83 | 285.17447.3199 | | 285.71 | 448.58 | 285.91 | 448.63 | 285.92 | | |
| 449.42 | 285.96 | 449.6 | 285.98453.0601 | | 286.07 | 453.33 | 286.07 | 454.95 | 286.17 | | |
| 455.38 | 286.21 | 457.34 | 286.31 | 459.02 | 286.28 | 459.78 | 286.31470.4399 | | 287.29 | | |
| 470.71 | 287.31 | 471.51 | 287.28471.5601 | | 287.28 | 472.61 | 287 | 473.35 | 286.87 | | |
| 477.33 | 285.54 | 483.78 | 283.29 | 484.13 | 283.19 | 484.61 | 283 | 487.58 | 282 | | |
| 490.34 | 281.14 | 490.76 | 281 | 493.29 | 280.21 | 493.91 | 280496.3199 | | 279.23 | | |
| 498.0699 | 278.63 | 501.38 | 277.62 | 503.24 | 277506.0601 | | 276.55 | 508.8 | 276 | | |
| 524.51 | 273.54 | 527.74 | 273 | 533.63 | 272.35 | 536.3 | 272 | 544.01 | 271.22 | | |
| 545.79 | 271 | 547.61 | 270.72 | 553.46 | 270 | 556.09 | 269.96 | 556.45 | 269.96 | | |
| 562.9 | 269.12 | 563.14 | 269.1 | 563.22 | 269.09 | 565.26 | 269 | 566.42 | 269 | | |
| 566.5699 | 268.99 | 568.64 | 268.98 | 570.08 | 268.83 | 570.25 | 268.81 | 571.5 | 268.72 | | |
| 573.26 | 268.56 | 577.59 | 268.4 | 580.75 | 268.18 | 585.16 | 268 | 587.4 | 267.81 | | |
| 587.47 | 267.81590.6899 | | 267.56 | 592.59 | 267.47 | 593.73 | 267.48 | 594.6 | 267.41 | | |
| 595.0699 | 267.43 | 595.38 | 267.41 | 598.85 | 267.35 | 599.26 | 267.3 | 602.38 | 267.09 | | |
| 602.51 | 267.09604.4301 | | 267 | 607.39 | 266.8 | 608.26 | 266.77612.3101 | | 266.57 | | |
| 614.53 | 266.5 | 615.09 | 266.49 | 626.76 | 266.05 | 627.35 | 266.02 | 627.46 | 266.02 | | |
| 628 | 266.01 | 631.66 | 266 | 641.63 | 265.13641.9301 | | 265.11 | 653.85 | 264 | | |
| 655.39 | 263.89656.4399 | | 263.84 | 670.73 | 263689.1899 | | 262.09 | 696.5 | 261.84 | | |
| 696.63 | 261.83 | 696.73 | 261.83 | 723.3 | 261.02723.9399 | | 261.03 | 724.29 | 261.02 | | |
| 740.23 | 261 | 740.61 | 260.99 | 755.9 | 261 | 763.54 | 261.99 | 763.63 | 262 | | |
| 767.3101 | 261.99 | 774.62 | 261.45 | 778.55 | 261.28 | 779 | 261.28 | 779.09 | 261.27 | | |
| 781.08 | 261.18 | 783.85 | 261 | 820.4 | 261 | 822.4 | 260.83 | 823.44 | 260.76 | | |
| 824.51 | 260.76 | 832.19 | 260.11 | 832.6 | 260.07 | 832.68 | 260.06 | 833.81 | 260.03 | | |
| 834.08 | 260.05 | 843.51 | 261 | 853.01 | 261 | 853.42 | 260.99 | 854.48 | 260.99 | | |
| 869.6 | 260.08 | 870.35 | 260 | 870.66 | 260 | 873.33 | 260.14 | 884.98 | 260.27 | | |
| 897.21 | 260 | 899.09 | 260 | 900.79 | 260.28 | 902.6 | 260.52 | 905.56 | 261 | | |
| 908.27 | 261.3 | 909.23 | 261.34 | 914.86 | 261.68 | 917 | 261.75 | 917.48 | 261.73 | | |
| 918.07 | 261.72 | 924.76 | 261.92 | 925.53 | 261.9 | 926.57 | 261.93 | 927.09 | 261.93 | | |
| 927.17 | 261.92 | 927.25 | 261.92 | 927.37 | 261.91 | 928.78 | 261.85 | 934.58 | 261.4 | | |
| 938.4 | 261 | 940.38 | 261 | 940.76 | 260.99 | 942.02 | 260.99 | 942.57 | 261 | | |
| 942.96 | 261 | 943.3 | 260.94 | 948.41 | 260.44 | 956.37 | 260 | 957.43 | 259.99 | | |
| 958.5 | 260 | 959.3 | 260.04 | 967.23 | 260.13 | 967.33 | 260.13 | 969.17 | 260.2 | | |
| 971.2 | 260.36 | 973.05 | 260.56 | 973.9 | 260.56 | 976.77 | 260.78 | 981.96 | 261 | | |
| 982.99 | 261 | 995.1 | 260.67 | 1019.25 | 260.33 | 1019.95 | 260.33 | 1028.67 | 260 | | |
| 1092.49 | 260 | 1092.68 | 259.99 | 1097.71 | 259.86 | 1097.78 | 259.86 | 1114.8 | 259.48 | | |
| 1115.05 | 259.48 | 1133.55 | 259.04 | 1133.68 | 259.04 | 1133.76 | 259.03 | 1135.05 | 259 | | |
| 1159.95 | 259 | 1162.67 | 259.15 | 1169.2 | 259.18 | 1174.75 | 259 | 1198.16 | 259 | | |
| 1210.54 | 259.71 | 1214.41 | 260 | 1215.86 | 260.22 | 1216.24 | 260.27 | 1216.42 | 260.29 | | |
| 1217.28 | 260.36 | 1218.41 | 260.48 | 1219.21 | 260.55 | 1220.57 | 260.62 | 1226.48 | 261 | | |
| 1227.18 | 261.1 | 1227.99 | 261.2 | 1232.75 | 261.72 | 1236.46 | 262 | 1237.08 | 262.06 | | |
| 1237.29 | 262.07 | 1238.3 | 262.14 | 1240.04 | 262.19 | 1248.97 | 262.27 | 1249.35 | 262.26 | | |
| 1249.96 | 262.19 | 1251.41 | 262.1 | 1252.5 | 262.01 | 1252.71 | 262 | 1258.54 | 261.11 | | |
| 1259.53 | 261 | 1271.97 | 260.17 | 1272.34 | 260.15 | 1272.84 | 260.11 | 1273.44 | 260 | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1284.6 | 259.99 | 1288.96 | 260 | 1298.59 | 260.19 | 1311.39 | 261 | 1311.49 | 261.01 |
| 1338.94 | 263 | 1339.02 | 263 | 1351.1 | 263.87 | 1353.43 | 264 | 1422.05 | 264.01 |
| 1422.84 | 264 | 1453.76 | 264.01 | 1462.36 | 264.09 | 1474.9 | 264.01 | 1475.45 | 264 |
| 1478.94 | 264 | 1494.04 | 263.66 | 1494.59 | 263.64 | 1495.03 | 263.64 | 1506.96 | 263.42 |
| 1526.91 | 263.3 | 1531.82 | 263.38 | 1531.89 | 263.39 | 1550.47 | 264 | 1560.06 | 264.46 |
| 1569.47 | 264.82 | 1573.23 | 265 | 1579.07 | 265.39 | 1628.86 | 267.98 | 1629.31 | 268 |
| 1629.37 | 268 | 1629.76 | 268.02 | 1656.87 | 269.07 | 1660.37 | 269.25 | 1661.15 | 269.28 |
| 1674.89 | 270 | 1675 | 270 | 1679.49 | 270.19 | 1708.59 | 271.38 | 1713.44 | 271.61 |
| 1718.51 | 271.8 | 1720.49 | 271.81 | 1724.4 | 272 | 1737.68 | 272.49 | 1739.8 | 272.54 |
| 1745.38 | 272.83 | 1745.49 | 272.84 | 1761.66 | 274 | 1769.47 | 274.96 | 1769.72 | 274.97 |
| 1770.22 | 275 | 1778.22 | 275 | 1779.13 | 275.02 | 1787.1 | 275.4 | 1790.43 | 275.62 |
| 1794.76 | 276 | 1800.75 | 276.6 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 824.51 | .04 | 1311.39 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 824.51 | 1311.39 | .1 | .3 |

CROSS SECTION

RIVER: WASH35
REACH: Centerline Align RS: 5246.65

INPUT
Description:
Station Elevation Data num= 224

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3992.349976 | | 39918.34998 | | 399 | 19.87 | 39920.66003 | | 399 |
| 21.25 | 39921.28003 | | 39921.48999 | | 39921.53998 | | 39929.84998 | | 399 |
| 33.75 | 39939.42999 | | 39941.02002 | | 399 | 43.09 | 399 | 49.38 | 399 |
| 50.58002 | 398.9656.58002 | | 398.7169.64999 | | 398.18 | 73.84 | 39874.45001 | | 397.9 |
| 75.29001 | 397.87 | 77.09 | 397.7878.42001 | | 397.7 | 85.62 | 397.21 | 90.13 | 397 |
| 92.85001 | 396.593.48999 | | 396.34 | 94.72 | 39696.20999 | | 395.5798.32001 | | 395 |
| 106.21 | 394.17 | 108.27 | 394 | 117.07 | 393.31 | 120.69 | 393 | 122.08 | 392.76 |
| 126.51 | 392 | 130.44 | 391.39 | 130.79 | 391.35 | 131.19 | 391.3 | 132.46 | 391.12 |
| 133.35 | 391 | 134.32 | 391 | 137.87 | 391 | 140.52 | 391 | 142.42 | 391 |
| 149.18 | 391.61 | 155.11 | 391.98 | 155.38 | 392 | 156.19 | 392 | 157.05 | 392 |
| 157.38 | 392 | 157.55 | 392 | 159.19 | 391.99 | 161.03 | 391.99 | 162.6 | 391.99 |
| 163.06 | 391.99 | 170.15 | 391.98 | 170.4 | 391.98 | 170.51 | 391.98 | 170.83 | 391.98 |
| 171.63 | 391.98 | 171.89 | 391.98 | 173.98 | 391.98 | 174.33 | 391.99 | 174.58 | 391.99 |
| 175.42 | 391.99 | 176.69 | 391.99 | 176.92 | 391.99 | 177.52 | 391.99 | 178.11 | 391.99 |
| 178.44 | 391.99 | 180.2 | 392 | 180.26 | 392 | 181.29 | 392 | 181.31 | 392 |
| 181.59 | 392 | 181.63 | 392 | 181.84 | 392 | 183.84 | 392 | 184.01 | 392 |
| 184.39 | 392 | 188.89 | 392 | 189.54 | 392 | 189.59 | 392 | 189.79 | 392 |
| 190.19 | 392 | 190.36 | 392 | 191.28 | 392 | 191.3 | 392 | 192.74 | 391.9 |
| 192.76 | 391.9 | 192.88 | 391.89 | 194.88 | 391.7 | 201.27 | 391.37 | 202.14 | 391.31 |
| 206.29 | 391.05 | 207.04 | 391 | 209.1 | 390.88 | 216.08 | 390.48 | 225.23 | 390 |
| 228.01 | 390 | 240.83 | 390 | 250.51 | 390 | 251.68 | 390 | 257.85 | 390 |
| 259.31 | 390 | 263.78 | 390 | 263.8 | 390 | 265.92 | 390 | 266.74 | 390 |
| 268.05 | 390 | 280.44 | 390 | 281.24 | 390 | 284.51 | 389.6 | 291.03 | 389 |
| 308.07 | 388.8 | 309.78 | 388.78 | 311.06 | 388.76 | 319.2 | 388.85 | 330.11 | 389 |
| 332 | 389.81 | 332.47 | 390 | 333.06 | 390.22 | 333.21 | 390.27 | 333.44 | 390.35 |
| 335.18 | 391 | 335.95 | 391.38 | 337.03 | 392 | 338.17 | 392.45 | 341.8 | 393 |
| 342.97 | 393 | 345.27 | 393 | 346.65 | 393 | 346.71 | 393 | 347.33 | 393 |
| 349.77 | 393 | 350.53 | 393 | 352.43 | 393 | 353.65 | 393 | 358.58 | 392.83 |
| 375.37 | 392 | 375.82 | 391.99 | 377.51 | 391.98 | 378.08 | 391.98 | 380.35 | 392 |
| 383.86 | 392.16 | 386.92 | 392.31 | 400.75 | 393 | 404.46 | 393.99 | 404.49 | 394 |
| 404.51 | 394.01 | 406.18 | 395 | 406.65 | 395.28 | 407.94 | 395.99 | 407.96 | 396 |
| 410.34 | 396.41 | 413.68 | 396.94 | 413.98 | 396.98 | 414.11 | 397 | 414.19 | 397 |
| 414.3 | 397 | 414.93 | 397 | 415.38 | 397 | 415.91 | 397 | 417.1 | 397 |
| 417.94 | 396.95 | 418.11 | 396.96 | 419.9 | 396.98 | 420.5 | 396.98 | 421.15 | 396.98 |
| 421.61 | 396.98 | 422.58 | 397 | 424.38 | 397.08 | 427.89 | 397.23 | 428.38 | 397.25 |
| 429.1 | 397.28 | 430.29 | 397.34 | 431.31 | 397.38 | 432.8 | 397.42 | 433.07 | 397.43 |
| 436.52 | 397.59 | 436.87 | 397.6 | 438.35 | 397.65 | 443.11 | 397.95 | 443.24 | 397.95 |
| 444.29 | 397.99 | 444.87 | 398 | 444.88 | 398 | 444.9 | 398 | 454.14 | 398.5 |
| 455.4 | 398.58 | 462.9 | 399 | 469.46 | 399.1 | 469.49 | 399.1 | 469.64 | 399.1 |
| 472.14 | 399.07 | 477.18 | 399 | 477.23 | 398.99 | 477.27 | 398.99 | 485.37 | 398.22 |
| 486.77 | 398.18 | 488.9 | 398.34 | 492.95 | 399 | 495.54 | 399 | 495.74 | 399 |
| 500.3 | 398.49 | 504.57 | 398 | 504.88 | 397.99 | 505.04 | 397.98 | 506.65 | 397.88 |
| 507.85 | 397.95 | 508.47 | 398 | 514.18 | 398.47 | 517.69 | 398.74 | 520.95 | 399 |
| 525.29 | 399.01 | 525.84 | 399.02 | 526.74 | 399.02 | 528.3 | 399.02 | 529.26 | 399.03 |
| 529.44 | 399.03 | 532.25 | 399.04 | 532.88 | 399.04 | 546.13 | 399.23 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 207.04 | .04 | 335.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 207.04 | 335.18 | 362.11 | 281.03 | 222.67 | .1 | .3 |

CROSS SECTION

RIVER: WASH35
REACH: Centerline Align  RS: 4965.62

INPUT
Description:
Station Elevation Data  num=  266

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 396.24 | 3.559998 | 396.27 | 4.159973 | 396.27 | 5.219971 | 396.28 | 5.440002 | 396.28 |
| 18.96997 | 396.36 | 29.72998 | 396.43 | 43.04999 | 396.35 | 61.26001 | 396.22 | 71.13 | 396.05 |
| 74.52997 | 396 | 74.75 | 396 | 75.77997 | 396 | 88.72998 | 395.86 | 103.79 | 395.72 |
| 113.54 | 395.65 | 114.11 | 395.64 | 114.29 | 395.64 | 123.43 | 395.49 | 146.83 | 395.09 |
| 151.37 | 395 | 151.69 | 395 | 151.71 | 395 | 151.74 | 395 | 151.94 | 395 |
| 151.96 | 395 | 152.56 | 395 | 152.59 | 395 | 152.74 | 395 | 153.87 | 395 |
| 154.99 | 394.89 | 157.04 | 394.76 | 157.65 | 394.64 | 157.73 | 394.63 | 158.3 | 394.55 |
| 158.49 | 394.53 | 158.78 | 394.46 | 158.95 | 394.42 | 160.26 | 394 | 161.26 | 393.73 |
| 161.59 | 393.61 | 162.04 | 393.45 | 163.12 | 393 | 167.53 | 392.05 | 167.81 | 392 |
| 167.84 | 392 | 167.95 | 392 | 168.11 | 392 | 168.17 | 392 | 168.44 | 392 |
| 168.65 | 392 | 168.9 | 392 | 168.91 | 392 | 171.02 | 391.84 | 171.24 | 391.83 |
| 182.04 | 391 | 183.59 | 390.7 | 183.89 | 390.65 | 184.03 | 390.63 | 184.7 | 390.56 |
| 185.09 | 390.51 | 186.21 | 390.32 | 188.86 | 390 | 191.39 | 389.63 | 192.81 | 389.48 |
| 194.12 | 389.25 | 195.39 | 389.01 | 195.71 | 389 | 195.75 | 389 | 199.67 | 389 |
| 200.88 | 389 | 203.53 | 388.99 | 204.09 | 388.99 | 205.62 | 388.99 | 206.33 | 388.99 |
| 206.67 | 388.99 | 206.93 | 388.99 | 207.13 | 388.99 | 207.32 | 389 | 211.22 | 389 |
| 216.46 | 388.99 | 217.21 | 388.99 | 217.45 | 388.99 | 218.39 | 389 | 219.31 | 389 |
| 219.75 | 389 | 219.95 | 389 | 221.53 | 389 | 222.1 | 389 | 222.29 | 389 |
| 222.93 | 389 | 223.27 | 389 | 223.94 | 389 | 225.01 | 389 | 225.82 | 389 |
| 226.13 | 389 | 227.88 | 389 | 241.86 | 389.48 | 242.38 | 389.5 | 245.76 | 389.62 |
| 255.57 | 390 | 256.57 | 390 | 256.73 | 390 | 266.37 | 389.13 | 267.95 | 389.03 |
| 268.61 | 389 | 268.73 | 389 | 269.33 | 389 | 269.99 | 389 | 270.23 | 389 |
| 271.57 | 389 | 271.62 | 389 | 272.18 | 389 | 272.56 | 389 | 272.57 | 389 |
| 272.7 | 389 | 274.84 | 389 | 274.98 | 389 | 275.87 | 389 | 275.96 | 389 |
| 282.65 | 389.01 | 285.6 | 389.01 | 287.66 | 389.02 | 291.25 | 389.01 | 295.14 | 389 |
| 296.72 | 389 | 297.54 | 389 | 303.91 | 388.43 | 311.66 | 388 | 312.08 | 388 |
| 313.04 | 388 | 313.37 | 388 | 313.53 | 388 | 315.33 | 388.1 | 317.01 | 388.04 |
| 321.73 | 388.12 | 327.1 | 388.02 | 327.7 | 388 | 330.4 | 387.51 | 332.06 | 387.22 |
| 332.28 | 387.17 | 333.31 | 387 | 333.92 | 386.99 | 334.57 | 386.98 | 343.78 | 386.87 |
| 351.02 | 386.96 | 354.23 | 387 | 360.11 | 387.12 | 360.8 | 387.13 | 361.05 | 387.14 |
| 364.88 | 387.08 | 368.75 | 387 | 374.14 | 386.99 | 378.95 | 386.99 | 379.72 | 386.99 |
| 379.94 | 386.99 | 386.53 | 386.99 | 390.77 | 387 | 392.03 | 387.32 | 394.05 | 388 |
| 398.38 | 388.03 | 398.68 | 388.03 | 399.16 | 388.03 | 402.45 | 388.29 | 409.96 | 388.86 |
| 410.04 | 388.86 | 411.07 | 389 | 412.27 | 389.11 | 414.62 | 389.32 | 422.17 | 389.99 |
| 422.2 | 389.99 | 422.3 | 389.99 | 422.44 | 389.99 | 422.8 | 389.99 | 423.26 | 389.99 |
| 423.67 | 390 | 423.77 | 390 | 424.14 | 390 | 424.3 | 390 | 424.43 | 390 |
| 424.79 | 390 | 425.24 | 390 | 425.25 | 390 | 425.27 | 390 | 425.62 | 390.01 |
| 425.71 | 390.01 | 425.81 | 390.01 | 426.61 | 390.04 | 426.71 | 390.04 | 427 | 390.05 |
| 427.83 | 390.07 | 429.47 | 390.1 | 455.47 | 390.66 | 461.66 | 390.79 | 462.38 | 390.78 |
| 462.91 | 390.79 | 468.18 | 390.92 | 471.49 | 391 | 471.59 | 391 | 472.19 | 391 |
| 472.42 | 391 | 473.68 | 391 | 474.53 | 391 | 474.85 | 391 | 475.11 | 391 |
| 476.22 | 391 | 476.58 | 391 | 478.29 | 391 | 480.15 | 391.01 | 483.21 | 391.01 |
| 484.01 | 391.01 | 485.16 | 391.01 | 487.5 | 391.01 | 489.47 | 391 | 493.03 | 391 |
| 495.04 | 390.97 | 496.16 | 390.96 | 497.34 | 390.95 | 498.62 | 390.95 | 498.88 | 390.95 |
| 499.27 | 390.95 | 501.66 | 391 | 506.46 | 391 | 513.62 | 391.01 | 518.36 | 391.01 |
| 525.96 | 391 | 526.56 | 390.99 | 527.39 | 390.99 | 530.37 | 390.97 | 532.36 | 390.98 |
| 534.54 | 391 | 542.24 | 391.56 | 547.05 | 391.72 | 553.46 | 391.95 | 554.68 | 392 |
| 556.82 | 392.05 | 557.26 | 392.06 | 562.38 | 392.19 | 565.01 | 392.23 | 569.43 | 392.32 |
| 569.99 | 392.33 | 579.91 | 392.51 | 585.66 | 392.61 | 586.57 | 392.63 | 588.71 | 392.65 |
| 590.71 | 392.65 | 591.63 | 392.65 | 591.87 | 392.65 | 592.35 | 392.66 | 592.71 | 392.67 |
| 592.96 | 392.67 | 597.32 | 392.78 | 603.52 | 392.95 | 604.68 | 393 | 605.34 | 393.15 |
| 609.21 | 394 | 610.33 | 394.21 | 614.75 | 395 | 618.46 | 395.58 | 620.71 | 396 |
| 626.82 | 396.4 | 627.39 | 396.44 | 630.36 | 396.56 | 635.34 | 396.82 | 639.5 | 397 |
| 640.31 | 397 | | | | | | | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 194.12 | .04 | 414.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 194.12 | 414.62 | 604.21 | 471.71 | 392.03 | .1 | .3 |

CROSS SECTION

RIVER: WASH35
REACH: Centerline Align  RS: 4493.91

INPUT
Description:
Station Elevation Data  num=  295

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 391.4000244 | | 3912.180054 | | 391 2.27002 | | 3912.360046 | | 391 |
| 2.640015 | 3912.940002 | | 3913.120056 | | 3913.340027 | | 3914.050049 | | 391 |
| 4.590027 | 3915.540039 | | 3915.780029 | | 3917.920044 | | 39113.36005 | | 391 |
| 18.16003 | 390.8525.98004 | | 390.9229.04004 | | 390.9834.97003 | | 39134.99005 | | 391 |
| 35.95001 | 39136.16003 | | 391 | 38.81 | 391 | 40.44 | 391.0143.30002 | | 391 |
| 43.94003 | 39144.10004 | | 39144.55002 | | 39145.19003 | | 39150.37003 | | 390.01 |
| 50.41003 | 39050.42001 | | 39050.47003 | | 389.9954.88004 | | 389.356.76004 | | 389 |
| 57.74002 | 38962.00003 | | 38965.84003 | | 38967.75003 | | 38970.83002 | | 389 |
| 71.03003 | 38971.54004 | | 38973.78003 | | 38979.14001 | | 38980.03003 | | 389 |
| 81.00003 | 38985.78003 | | 38985.93002 | | 38986.51004 | | 38990.98004 | | 389 |
| 91.18002 | 38992.37003 | | 38992.46002 | | 38992.98004 | | 38993.22003 | | 389 |
| 99.66003 | 389 | 100.25 | 389 | 100.37 | 389 | 100.78 | 389 | 100.83 | 389 |
| 101.46 | 389 | 103.39 | 389 | 106.2 | 389 | 108.34 | 389 | 108.61 | 389.01 |
| 108.68 | 389.01 | 114.66 | 389.01 | 163.47 | 389.51 | 183.67 | 389.65 | 184.5 | 389.66 |
| 184.83 | 389.66 | 185.9 | 389.66 | 197.98 | 389.89 | 203.53 | 390 | 203.79 | 390 |
| 204.08 | 390 | 204.4 | 390 | 205.02 | 390 | 205.31 | 390 | 205.86 | 390 |
| 206.69 | 390 | 207.48 | 390 | 208.07 | 390 | 208.74 | 390 | 209.59 | 390 |
| 213.24 | 390 | 214.29 | 390 | 215.07 | 390 | 218.73 | 390 | 218.89 | 390 |
| 218.93 | 390 | 219.63 | 390 | 219.93 | 390 | 227.3 | 390.13 | 243.72 | 390.43 |
| 262.25 | 390.75 | 267.61 | 390.83 | 268.11 | 390.84 | 280.59 | 391 | 280.61 | 391 |
| 280.62 | 391 | 281.18 | 391 | 281.79 | 391 | 281.93 | 391 | 281.95 | 391 |
| 284.43 | 391 | 284.51 | 391 | 284.57 | 391 | 284.78 | 391 | 285.32 | 391 |
| 285.85 | 391 | 286 | 391 | 286.11 | 391 | 286.61 | 391 | 287.07 | 391 |
| 287.59 | 391 | 288.07 | 391 | 289.26 | 391 | 298.11 | 391 | 299.5 | 391 |
| 307.75 | 391 | 315.3 | 391 | 327.59 | 391 | 329.79 | 391 | 337.49 | 390.09 |
| 338.49 | 390 | 342.25 | 389.16 | 343.33 | 389 | 344.34 | 388.84 | 344.79 | 388.79 |
| 345.61 | 388.71 | 346.03 | 388.65 | 346.21 | 388.64 | 347.17 | 388.56 | 347.79 | 388.5 |
| 349.77 | 388.23 | 351.07 | 388.07 | 351.58 | 388 | 354.45 | 387.52 | 354.96 | 387.43 |
| 355.54 | 387.32 | 357.01 | 387 | 357.52 | 386.75 | 358.86 | 386 | 362.27 | 385.38 |
| 368.39 | 385.01 | 368.58 | 385.01 | 368.73 | 385.01 | 369.73 | 385.01 | 370.12 | 385.01 |
| 370.94 | 385.01 | 371 | 385.01 | 371.37 | 385.01 | 371.39 | 385.01 | 371.5 | 385.01 |
| 372.12 | 385.01 | 375.55 | 385 | 377.19 | 385 | 382.63 | 384.23 | 384.27 | 384 |
| 391.84 | 384 | 401.77 | 383.99 | 404.69 | 383.99 | 408.24 | 383.99 | 410.56 | 383.99 |
| 413.57 | 383.99 | 418.96 | 384 | 419.23 | 384 | 424.74 | 383.92 | 426.41 | 383.95 |
| 428.23 | 383.99 | 428.27 | 383.99 | 428.32 | 383.99 | 428.33 | 383.99 | 428.63 | 384 |
| 429.13 | 384.01 | 430.01 | 384.03 | 430.33 | 384.02 | 432.63 | 384.11 | 433.29 | 384.11 |
| 433.54 | 384.13 | 433.87 | 384.13 | 434.65 | 384.13 | 437.52 | 384 | 438 | 384 |
| 438.1 | 384 | 438.12 | 384 | 438.25 | 384 | 441.34 | 384 | 442.43 | 384 |
| 442.53 | 384 | 442.83 | 384 | 443.79 | 384 | 444.51 | 384 | 446.23 | 384 |
| 448.17 | 384 | 449.46 | 384 | 450.18 | 384 | 452.57 | 384 | 452.82 | 384 |
| 455.96 | 384 | 458.65 | 384 | 461.01 | 384 | 461.2 | 384 | 461.3 | 384 |
| 461.6 | 384 | 461.78 | 384 | 462.2 | 384 | 465.1 | 384 | 466.89 | 384 |
| 467.23 | 384 | 468.38 | 384 | 468.8 | 384 | 468.91 | 384 | 472.41 | 384 |
| 473.41 | 384 | 482.82 | 384.54 | 483.06 | 384.52 | 483.33 | 384.49 | 483.46 | 384.51 |
| 483.58 | 384.51 | 484.68 | 384.71 | 486.21 | 385 | 486.22 | 385 | 486.68 | 385 |
| 489.98 | 385.73 | 490.56 | 385.85 | 490.79 | 385.89 | 491.27 | 386 | 491.3 | 386 |
| 491.79 | 386.13 | 492.54 | 386.3 | 492.86 | 386.37 | 493.59 | 386.54 | 495.31 | 386.94 |
| 495.49 | 386.98 | 495.57 | 387 | 495.79 | 387.06 | 496.5 | 387.2 | 497.04 | 387.28 |
| 497.2 | 387.31 | 498.4 | 387.39 | 498.78 | 387.44 | 498.94 | 387.46 | 499.53 | 387.49 |
| 500.16 | 387.55 | 500.97 | 387.57 | 502.7 | 387.62 | 503.25 | 387.59 | 504.25 | 387.51 |
| 504.52 | 387.47 | 510.1 | 387.12 | 510.73 | 387.05 | 510.84 | 387.04 | 511.2 | 387 |
| 514.3 | 386.33 | 515.98 | 386 | 517.22 | 385.88 | 517.87 | 385.98518.0601 | | 385.97 |
| 520.88 | 385.93 | 521.94 | 385.92 | 522.41 | 385.91 | 524.95 | 385.95 | 526.05 | 385.97 |
| 526.42 | 385.98 | 526.65 | 385.98527.6201 | | 386 | 529.58 | 386.7530.1801 | | 386.94 |
| 530.32 | 387530.4901 | | 387.09 | 530.71 | 387.18 | 530.86 | 387.24 | 531.92 | 387.76 |
| 532.38 | 388 | 532.47 | 388.05 | 534.33 | 389 | 534.69 | 389.2 | 535.63 | 389.71 |
| 536.14 | 390 | 536.21 | 390.04 | 536.28 | 390.08 | 537.13 | 390.6 | 537.8 | 391 |
| 538.94 | 391.39539.3701 | | 391.5 | 539.8 | 391.65 | 541.42 | 392 | 541.48 | 392 |
| 541.82 | 392.02 | 542.51 | 392.06543.6201 | | 392.09 | 549.2 | 392.28 | 553.09 | 392.36 |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 362.27 | .04 | 489.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 362.27 | 489.98 | 318.43 | 430.13 | 466.58 | .1 | .3 |

Right Levee  Station=  502.45  Elevation=  387.81

CROSS SECTION

RIVER: WASH35

REACH: Centerline Align  RS: 4063.78

INPUT
Description:
Station Elevation Data  num=  229

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 388.42 | 4.709961 | 388.44 | 8.889954 | 388.39 | 12.06 | 388.42 | 17.07996 | 388.32 |
| 24.64996 | 388.12 | 27.56 | 388 | 33.38995 | 387.74 | 47.72998 | 387.78 | 63.62 | 387.82 |
| 68.54999 | 388 | 69.02997 | 388.03 | 76.07996 | 388.07 | 82.81 | 388.14 | 96.50998 | 388 |
| 96.53998 | 388 | 96.56998 | 388 | 96.58997 | 388 | 112.35 | 387.35 | 124.36 | 387 |
| 133.33 | 386.63 | 139.59 | 386.43 | 142.04 | 386.33 | 145.47 | 386.2 | 150.57 | 386 |
| 150.58 | 386 | 150.59 | 386 | 150.6 | 386 | 150.61 | 386 | 153.5 | 385.62 |
| 159.14 | 385 | 160.32 | 384.99 | 162.01 | 384.98 | 163.26 | 384.98 | 163.49 | 384.98 |
| 163.84 | 384.98 | 164.36 | 384.98 | 165.07 | 384.98 | 165.48 | 384.98 | 165.96 | 384.98 |
| 166.82 | 384.97 | 167.75 | 384.97 | 168.03 | 384.97 | 168.32 | 384.97 | 170.06 | 384.97 |
| 172.8 | 384.97 | 177.09 | 384.89 | 177.76 | 384.9 | 179.24 | 384.89 | 180.23 | 384.87 |
| 181.83 | 384.82 | 182.75 | 384.77 | 187.55 | 384.67 | 188.57 | 384.64 | 197.45 | 384 |
| 197.78 | 384 | 198.11 | 384 | 198.5 | 384 | 198.78 | 384 | 199.15 | 384 |
| 211.76 | 384.73 | 218.68 | 385 | 222.14 | 385.04 | 224.68 | 385.06 | 227.37 | 385.15 |
| 234.28 | 385.25 | 238.37 | 385.19 | 238.83 | 385.18 | 239.25 | 385.17 | 240.56 | 385.16 |
| 241.68 | 385.15 | 241.74 | 385.15 | 246.07 | 385.07 | 249.61 | 385.01 | 249.62 | 385.01 |
| 249.72 | 385.01 | 251.35 | 385 | 251.4 | 385 | 251.51 | 385 | 255.31 | 385.05 |
| 260.78 | 385.12 | 263.79 | 385.08 | 270.06 | 385 | 271.08 | 384.97 | 274.21 | 384.84 |
| 289.33 | 384.27 | 293.81 | 384.01 | 293.85 | 384.01 | 293.9 | 384.01 | 294.05 | 384 |
| 296.35 | 383.79 | 297.62 | 383.73 | 302 | 383.43 | 307.7 | 383.02 | 308.33 | 383.01 |
| 308.62 | 383.01 | 308.75 | 383.01 | 309.79 | 383 | 314.95 | 382.74 | 316.68 | 382.62 |
| 321.85 | 382.23 | 324.72 | 382 | 325.01 | 382 | 325.04 | 382 | 328.93 | 381.58 |
| 330.7 | 381.41 | 331.13 | 381.38 | 331.55 | 381.39 | 332.51 | 381.31 | 332.64 | 381.3 |
| 333.73 | 381.34 | 338.78 | 381.24 | 341.84 | 381.2 | 342.47 | 381.22 | 348.55 | 381.3 |
| 352.68 | 381.42 | 363.71 | 381.8 | 365.09 | 381.86 | 365.91 | 381.88 | 368.9 | 381.99 |
| 369.09 | 381.99 | 369.4 | 381.99 | 370.53 | 382 | 370.66 | 382 | 370.73 | 382 |
| 370.81 | 382 | 371.11 | 382 | 373.8 | 382 | 376.64 | 382 | 376.91 | 382 |
| 377 | 382 | 377.17 | 382 | 377.28 | 382 | 378.37 | 382 | 378.43 | 382 |
| 381.72 | 382.07 | 381.82 | 382.07 | 384.54 | 382.12 | 385.09 | 382.13 | 396.75 | 382.31 |
| 404.5 | 382.42 | 407.65 | 382.43 | 408.7 | 382.45 | 409.87 | 382.48 | 411.5 | 382.52 |
| 412.16 | 382.53 | 416.83 | 382.67 | 418.9 | 382.74 | 422.11 | 382.87 | 425.2 | 383 |
| 425.32 | 383 | 426.96 | 383 | 427.31 | 383 | 434.82 | 383 | 437.32 | 383 |
| 440.64 | 383 | 444.82 | 383 | 447.02 | 383 | 450.77 | 382.72 | 454.31 | 382.53 |
| 463.58 | 382.04 | 463.77 | 382.04 | 464.67 | 382.04 | 465.73 | 382.04 | 471.52 | 382.01 |
| 472.14 | 382.01 | 472.93 | 382.01 | 473.13 | 382.01 | 475.04 | 382 | 477.11 | 381.89 |
| 484.66 | 381.47 | 485.58 | 381.42 | 493.37 | 381 | 518.79 | 380.31 | 530.55 | 380 |
| 536.22 | 379.99 | 542.75 | 379.98 | 549.14 | 379.99 | 554.66 | 380 | 555.37 | 380.12 |
| 561.8199 | 381 | 562.47 | 381.11 | 562.59 | 381.13 | 563.09 | 381.2 | 564.62 | 381.41 |
| 568.15 | 382 | 569.59 | 382.28 | 569.93 | 382.33 | 570.23 | 382.36 | 570.5099 | 382.38 |
| 570.63 | 382.4 | 572.05 | 382.56 | 574.62 | 382.84 | 576.27 | 383 | 576.28 | 383 |
| 576.41 | 383.03 | 576.75 | 383.07 | 580.44 | 383.71 | 581.14 | 383.79 | 582.29 | 384 |
| 583.8199 | 384.03 | 584.35 | 384.07 | 586.41 | 384.14 | 587 | 384.1 | 587.34 | 384.08 |
| 588 | 384.08 | 588.02 | 384.08 | 588.5099 | 384.08 | 589.06 | 384.15 | 589.3199 | 384.11 |
| 590.9 | 384.13 | 594.12 | 384.13 | 594.42 | 384.15 | 594.54 | 384.16 | 594.59 | 384.16 |
| 594.99 | 384.19 | 595.1 | 384.19 | 595.21 | 384.2 | 596.58 | 384.27 | 596.74 | 384.28 |
| 598.86 | 384.48 | 603.5699 | 384.98 | 603.8199 | 384.98 | 604.5099 | 385 | 605.46 | 385.7 |
| 605.92 | 386 | 605.96 | 386.02 | 606.0699 | 386.08 | 607.41 | 386.84 | | |

Manning's n Values  num=  3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 316.68 | .04 | 569.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 316.68 | 569.93 | 259.64 | 402.17 | 450.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH35
REACH: Centerline Align  RS: 3661.61

INPUT
Description:
Station Elevation Data  num=  308

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 385.06 | 2.570007 | 385 | 2.580017 | 385 | 2.700012 | 385 | 3.030029 | 385 |
| 8.390015 | 385 | 11.91003 | 385 | 11.98004 | 385 | 12.15002 | 385 | 12.19 | 385 |
| 14.96002 | 384.92 | 16.04999 | 384.89 | 19.70001 | 384.99 | 19.89001 | 385 | 19.95001 | 385 |
| 21.12 | 385 | 21.5 | 385 | 21.72003 | 385 | 21.83002 | 385 | 21.98999 | 385 |
| 22.56 | 385 | 24.54004 | 385 | 28.41998 | 385.01 | 31.35004 | 385.01 | 31.85004 | 385.01 |
| 35.38 | 385.06 | 38.23999 | 385.02 | 42.79999 | 385.04 | 43.39001 | 385.04 | 44 | 385.04 |
| 46.16998 | 385.05 | 47.46002 | 385.05 | 52.56 | 385.03 | 54.08002 | 385.02 | 54.97003 | 385.01 |
| 55.91998 | 385 | 56.01001 | 385 | 56.04004 | 385 | 56.12 | 385 | 56.60004 | 384.92 |
| 62.21002 | 384 | 62.48004 | 383.94 | 66.04999 | 383 | 66.37 | 382.98 | 87.95001 | 382 |

```
   88.62     38289.03003     38290.16998     38290.91998     38295.23004     382
95.91998     382  100.37     382  104.87     382  107.23     382  113.13     382
  114.47     382  114.76     382   115.2     382  135.65     382  138.71     382
  139.11     382  139.27     382  139.87     382  142.31     382  143.94  382.25
   144.8  382.41  147.24  382.86  147.84  382.96  147.96  382.98  148.04     383
  148.05     383  148.06     383  148.07     383  148.09     383  148.88  383.01
  152.76  383.04  154.79  383.03  155.36  383.03  166.07  383.89  167.06     384
  167.21     384  167.27     384  167.37     384  167.52     384  169.84     384
  170.84     384  171.22     384  179.03     384  180.48     384  185.05     384
  185.43     384  187.07     384  191.07     384  195.57  383.99   197.9  383.99
  201.61  383.98  205.15  383.98  216.09     384  217.73     384  219.18     384
  219.43     384  223.02     384  223.42     384  236.62     384  239.15     384
  239.85     384  240.52     384  243.95     384  244.62     384  245.01     384
  250.17     384  255.16  383.15  256.18     383   261.2  382.06  261.31  382.03
  261.51     382  264.47  381.88  265.85  381.73  271.75  381.13  271.85  381.12
  272.87     381  272.95     381  272.98     381  273.03     381  273.14     381
  273.25     381  273.38     381  273.47     381   273.5     381  273.88     381
  273.98     381  274.04     381  274.09     381  274.28     381  284.21  380.49
   288.8  380.26  294.95     380  296.62     380  298.88     380  299.83     380
  303.89     380  304.06     380  305.12     380  305.68     380  307.13     380
  308.52     380  309.76     380  310.23     380  310.89     380   316.6  379.72
  332.23     379  336.88  378.14  337.65     378  338.57     378  340.11     378
  343.81  377.99  345.29  377.99  349.81     378  356.88  378.04   363.1  378.06
  365.85  378.07  368.87  378.06  380.34     378  395.13  377.98     396  377.98
  404.09  377.99  412.98     378   419.1  378.72  420.61     379  425.18  379.02
  427.15  379.03  435.59  379.05  451.63  379.01  452.49     379  453.25     379
  453.53     379  453.93     379  454.06     379  462.45     379  464.16     379
  464.69     379  465.94  378.99  466.35  378.99  466.68  378.99  467.24  378.99
  468.14  378.99  469.22  378.99  479.68  378.99   480.9  378.99  481.13  378.99
     483  378.99  483.18  378.99   484.4  378.99  484.48  378.99  487.63  378.99
  497.12  378.99  502.57  378.99  503.11  378.98  511.17  378.78  511.51  378.77
  512.02  378.77  512.84  378.77   513.7  378.76  513.97  378.76   514.9  378.75
  516.42  378.74  517.88  378.72  526.23  378.67  528.63  378.67  530.97  378.66
  531.75  378.65  540.02   378.6   551.8  378.51  554.14  378.47  568.16  378.23
  568.72  378.22  569.57  378.21  570.34   378.2  577.65  378.06  577.75  378.06
  578.16  378.05  580.76     378  591.95  377.76  592.97  377.74  598.53  377.65
  615.26  377.74  631.94  377.96  640.61     378  641.86  378.67  642.58     379
     643  379.21  644.66     380  645.65  380.72  646.16     381  646.43  381.18
  647.02     382  647.14  382.21  647.71     383  648.25  383.99  648.26     384
  648.28  384.04  649.03     385  649.58  385.73  649.76     386  650.44  386.88
  650.52     387  651.19  387.87  651.29     388  651.32  388.05  652.02     389
  652.62  389.53  653.02     390  653.92  390.94  653.96     391  654.88  391.96
   654.9     392  654.94     392  655.03  392.01  655.04  392.01  655.08  392.01
  655.27  392.01  655.82  392.02  656.16  392.02  656.43  392.03  656.94  392.03
  657.98  392.02  660.04     392  660.84  391.81  662.47  391.48  663.91     391
  664.68  390.74  664.76  390.71  665.91  390.24  666.39     390  668.07  389.23
  668.53     389  670.31  388.13   670.5     388   671.2  387.53  672.26     387
   672.3  386.98  673.59  386.25  674.08     386  675.03  385.63  675.09  385.61
  675.17  385.59  676.88     385  677.27  384.98   677.7  384.97  678.14  384.99
  678.19     385  678.52  385.17   680.6     386  681.11   386.2  681.28  386.26
  681.61  386.39  681.98  386.49  682.17  386.54  682.94  386.66   683.5  386.75
  683.98  386.77  684.16  386.78   684.4  386.78  685.67  386.65  685.77  386.64
  685.94  386.64  686.38  386.63  686.45  386.64

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  332.23     .04  642.58     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        332.23  642.58           446.79  661.61  757.47              .1       .3

CROSS SECTION


RIVER: WASH35
REACH: Centerline Align   RS: 3000

INPUT
Description:
Station Elevation Data    num=     432
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  382.37   19.87  382.0325.20996     38226.56995     38228.88995     382
31.78998     38232.08997     382   36.81     382    38.5     38238.75995     382
39.82996     38240.00995     38240.26996     38240.73999     38241.59998     382
41.64996     38242.15997     382    42.5     382   42.56     38242.64996     382
   43.12     38245.50995     38265.82996  382.0172.88995  382.0182.91998  382.01
92.20996  382.0192.83997  382.0193.72998  382.0193.78998  382.0194.96997  382.01
95.73999  382.0196.46997  382.0199.44995  382.01  110.45     382  111.35     382
   111.6     382  113.25     382115.8199  381.77116.5099  381.71   126.7     381
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 127.2 | 380.91 | 128.78 | 380.57 | 130.75 | 380.09 | 131.15 | 380 | 134.91 | 379.17 |
| 135.62 | 379 | 139.24 | 378.18 | 139.77 | 378 | 142.11 | 377.84 | 144.22 | 377.71 |
| 145.77 | 377.62 | 149.6299 | 377.4 | 152.72 | 377 | 162.0699 | 376.52 | 168.2599 | 376.22 |
| 172.54 | 376 | 172.8199 | 376 | 194.24 | 375.65 | 205.52 | 375.47 | 219.31 | 375.45 |
| 232.23 | 375.44 | 234.71 | 375.56 | 239.15 | 375.79 | 239.8199 | 375.84 | 240.35 | 375.86 |
| 242.17 | 375.95 | 242.35 | 375.96 | 242.37 | 375.96 | 243.27 | 375.97 | 243.33 | 375.97 |
| 247.73 | 376 | 248.0699 | 376 | 248.08 | 376 | 248.43 | 376 | 248.45 | 376 |
| 249.59 | 375.99 | 249.6 | 375.99 | 252.29 | 375.95 | 252.43 | 375.95 | 253.14 | 375.93 |
| 254.67 | 375.88 | 269.17 | 375.52 | 275.1899 | 375.37 | 275.8 | 375.36 | 284.81 | 375 |
| 285.98 | 375 | 287.84 | 375 | 290.56 | 375 | 290.8 | 375 | 291.5099 | 375 |
| 294.47 | 375 | 295.08 | 375 | 300.86 | 375.01 | 300.97 | 375.01 | 301.37 | 375.01 |
| 302.04 | 375.01 | 308.86 | 375 | 311.6299 | 374.59 | 317.27 | 374 | 318.11 | 373.99 |
| 318.29 | 373.99 | 319.12 | 374 | 319.17 | 374 | 319.41 | 374 | 319.5099 | 374 |
| 319.59 | 374 | 319.6899 | 374 | 319.75 | 374 | 321.5 | 374.01 | 323.03 | 374.02 |
| 326.11 | 374.03 | 332.06 | 374.05 | 333.48 | 374.05 | 333.89 | 374.05 | 334.66 | 374.04 |
| 335.09 | 374.04 | 335.21 | 374.04 | 335.5099 | 374.04 | 336.04 | 374.04 | 336.41 | 374.04 |
| 336.62 | 374.04 | 338.56 | 374.04 | 338.6299 | 374.04 | 338.71 | 374.04 | 344.36 | 374.03 |
| 352.7599 | 374.03 | 352.96 | 374.03 | 353.25 | 374.03 | 355.5099 | 374.02 | 355.61 | 374.02 |
| 355.74 | 374.01 | 356.33 | 374.02 | 358.15 | 374 | 358.25 | 374 | 358.32 | 374 |
| 358.56 | 374 | 358.6 | 374 | 362.35 | 374 | 363.8 | 374 | 366.3 | 374 |
| 380.43 | 374.48 | 387.92 | 374.67 | 391.42 | 374.78 | 392.79 | 374.81 | 396.22 | 374.91 |
| 399.34 | 375 | 399.37 | 375 | 400.72 | 375 | 400.78 | 375 | 400.82 | 375 |
| 401.75 | 375 | 404.85 | 375 | 404.86 | 375 | 404.87 | 375 | 405.06 | 375 |
| 413.52 | 375 | 413.68 | 375 | 415.69 | 375 | 419.81 | 375 | 420.07 | 375 |
| 422.85 | 375 | 423 | 375 | 424.52 | 375 | 425 | 375 | 428.76 | 375 |
| 430.27 | 375 | 432.5 | 375 | 435.9 | 375 | 437.73 | 375 | 438.68 | 375 |
| 445.91 | 375 | 446.02 | 375 | 446.35 | 375 | 448.86 | 374.66 | 452.12 | 374 |
| 454.46 | 373.52 | 457.13 | 373 | 461.76 | 372.18 | 462.8 | 372 | 467.72 | 372 |
| 483.69 | 372 | 494.86 | 372 | 504.47 | 372 | 504.54 | 372 | 505.57 | 372.41 |
| 506.95 | 373 | 510.01 | 373.89 | 510.31 | 373.98 | 510.36 | 374 | 510.47 | 374.01 |
| 510.56 | 374.01 | 510.6 | 374.02 | 516.23 | 374.44 | 517.74 | 374.52 | 521.7999 | 374.76 |
| 523.25 | 374.83 | 523.91 | 374.83 | 524.48 | 374.85 | 525.59 | 374.87 | 525.7999 | 374.87 |
| 526.15 | 374.88 | 526.7999 | 374.87 | 527.63 | 374.84 | 528.2 | 374.83 | 528.47 | 374.82 |
| 530.01 | 374.76 | 531.29 | 374.69 | 533.62 | 374.56 | 536.76 | 374.39 | 542.98 | 374 |
| 543.29 | 373.97 | 543.33 | 373.97 | 543.41 | 373.97 | 543.63 | 373.97 | 544.0499 | 373.95 |
| 555.78 | 373.42 | 562.28 | 373 | 564.48 | 373 | 564.6799 | 373 | 565.08 | 373 |
| 571.59 | 373 | 575.1899 | 373 | 575.88 | 373 | 576.33 | 373 | 576.52 | 373 |
| 576.65 | 373 | 577.89 | 373 | 579.0599 | 372.96 | 590.12 | 372.61 | 601.95 | 372.28 |
| 602.11 | 372.28 | 602.27 | 372.28 | 604.0699 | 372.15 | 606.0499 | 372 | 606.12 | 372 |
| 606.97 | 372 | 607.28 | 372 | 613.05 | 371.98 | 621.03 | 371.96 | 626.55 | 371.97 |
| 635.5599 | 372 | 636.41 | 372.85 | 636.55 | 373 | 637.2599 | 373.25 | 637.38 | 373.28 |
| 637.71 | 373.35 | 637.9399 | 373.39 | 641.8199 | 374 | 641.97 | 374 | 641.98 | 374 |
| 642.9399 | 374.01 | 645.47 | 374.03 | 646.28 | 374.03 | 648.25 | 374.02 | 652.8099 | 374.04 |
| 659.39 | 374.09 | 667.95 | 374.02 | 669.77 | 374.02 | 673.04 | 374.01 | 673.65 | 374.01 |
| 673.95 | 374 | 675.5699 | 373.87 | 679.29 | 373 | 679.84 | 372.99 | 680.45 | 372.98 |
| 684.22 | 372.94 | 686.43 | 372.96 | 688.99 | 373 | 689.97 | 373.37 | 691.42 | 374 |
| 693.75 | 374.79 | 694.28 | 374.88 | 695.0699 | 374.99 | 695.2 | 375 | 698.72 | 375.38 |
| 699.67 | 375.47 | 700.83 | 375.56 | 701.22 | 375.58 | 701.77 | 375.6 | 702.08 | 375.64 |
| 703.38 | 375.67 | 703.64 | 375.68 | 704.0099 | 375.69 | 704.61 | 375.69 | 704.79 | 375.69 |
| 705.16 | 375.68 | 705.35 | 375.67 | 705.66 | 375.65 | 705.75 | 375.64 | 705.95 | 375.62 |
| 706.12 | 375.63 | 706.23 | 375.63 | 706.35 | 375.64 | 710.12 | 375.02 | 710.18 | 375.02 |
| 710.29 | 375.02 | 710.46 | 375.02 | 711.21 | 375.02 | 711.7599 | 375.02 | 713.05 | 375.02 |
| 713.4399 | 375.02 | 713.47 | 375.02 | 713.68 | 375.02 | 714 | 375.02 | 715.4 | 375.01 |
| 717.9399 | 375.02 | 722.96 | 375.01 | 727.8199 | 375.01 | 729.0599 | 375.01 | 729.89 | 375.01 |
| 731.64 | 375.01 | 732.95 | 375.06 | 749.38 | 375.79 | 749.6899 | 375.79 | 752.52 | 376 |
| 754.6899 | 376.09 | 757.0699 | 376.34 | 760.1899 | 376.58 | 760.84 | 376.57 | 763.17 | 376.9 |
| 763.36 | 376.89 | 763.5699 | 376.93 | 763.65 | 376.92 | 764.11 | 377 | 764.8099 | 377.23 |
| 765.43 | 377.38 | 765.5599 | 377.41 | 766.4399 | 377.52 | 766.87 | 377.57 | 770.64 | 377.76 |
| 773.52 | 377.76 | 775.77 | 377.77 | 776.85 | 377.71 | 778.12 | 377.57 | 778.39 | 377.52 |
| 778.45 | 377.52 | 778.55 | 377.51 | 778.83 | 377.48 | 779.75 | 377.47 | 781.5599 | 377.47 |
| 782.72 | 377.42 | 782.91 | 377.44 | 783.4399 | 377.52 | 783.8199 | 377.52 | 784.22 | 377.54 |
| 785.22 | 377.44 | 787.87 | 377.4 | 789.12 | 377.29 | 789.29 | 377.27 | 795.4 | 377 |
| 795.8099 | 377 | 796.13 | 377 | 796.17 | 377 | 796.39 | 377 | 796.43 | 377 |
| 796.67 | 377 | 796.85 | 377.03 | 796.89 | 377.03 | 796.91 | 377.03 | 802.92 | 377.86 |
| 803.59 | 377.84 | 806.67 | 377.98 | 807.11 | 377.99 | 807.21 | 378 | 807.24 | 378.01 |
| 807.34 | 378.01 | 808.6299 | 378.25 | 809.62 | 378.37 | 810.52 | 378.63 | 810.95 | 378.73 |
| 811.5099 | 378.82 | 812.08 | 378.97 | 812.09 | 378.97 | 812.1 | 378.98 | 812.18 | 379 |
| 815.03 | 379.73 | 816.1 | 380 | 817.8199 | 380.39 | 820.48 | 381 | 822.31 | 381.38 |
| 824.78 | 381.72 | 825.87 | 381.87 | 827.49 | 382 | 827.78 | 382.02 | 828.27 | 382 |
| 828.67 | 381.98 | 828.7 | 381.97 | 830.28 | 381.75 | 831.06 | 381.71 | 831.81 | 381.72 |
| 832.03 | 381.73 | 833.7599 | 382 | 835.55 | 382.41 | 835.81 | 382.46 | 836.8799 | 382.61 |
| 839.4 | 383 | 839.71 | 383.05 | 839.85 | 383.07 | 843.2599 | 383.68 | 845.87 | 383.83 |
| 845.97 | 383.8 | 846.11 | 383.76 | 846.41 | 383.78 | 846.8799 | 383.63 | 847.36 | 383.52 |
| 848.54 | 383.43 | 849.42 | 383.21 | 849.84 | 383.14 | 850.16 | 383.14 | 850.5099 | 383.11 |
| 850.6 | 383.15 | 850.75 | 383.21 | 851.71 | 384 | 852.3199 | 384.53 | 853.03 | 385 |
| 853.61 | 385.34 | 855.03 | 386 | 855.14 | 386.05 | 855.48 | 386.18 | 856.9 | 386.72 |
| 857.4 | 386.9 | 857.64 | 387 | 857.97 | 387.13 | 860.17 | 388 | 861.6899 | 388.62 |
| 862.62 | 389 | 864.75 | 389.88 | 865.04 | 390 | 865.46 | 390.02 | 866.21 | 390.04 |
| 867.29 | 390.08 | 867.72 | 390.09 | | | | | | |

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Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  452.12     .04  691.42     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        452.12  691.42           500.78     500  529.92              .1       .3

CROSS SECTION


RIVER: WASH35
REACH: Centerline Align   RS: 2500

INPUT
Description:
Station Elevation Data    num=     332
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   377.54.660034 377.725.290039 377.766.140015  377.86.740112 377.83
7.560059 377.858.220093 377.869.060059  377.99.180054 377.9111.15002 377.99
 11.4801     378   12.63    37822.64001 378.01 24.2301 378.0227.84009    378
   33.88 377.27 36.1001 377.22   37.75  377.2   42.37 377.43    42.5 377.44
42.96008 377.4643.17004 377.4846.68005 377.6350.46008 377.7853.15002 377.93
56.32007    37872.43005    37878.54004 377.0378.79004    37778.86005 376.97
79.20007 376.8280.93005    37682.49005 375.3783.36005    37585.73004  374.8
94.42004    37494.53003 373.9994.83008 373.9995.29004    37496.17004 374.33
98.54004    37599.80005 375.68100.3101    376101.1401 376.49  101.35 376.59
   102.4    377108.3301 377.89  109.04     378  159.55    378  165.86 377.96
165.9401 377.95170.8301    378  177.29     378  177.86 377.99178.5601 377.99
  194.22 377.12  195.35 377.06195.5601 377.06196.3901 377.03198.3201    377
  209.86     377  210.11 376.97210.2701 376.97210.3701 376.96  212.91 376.71
217.4601     376  217.91 375.88  221.42     375  222.79 374.57223.0701 374.53
223.9401 374.42224.7101 374.33  227.36     374  229.15 373.83229.2601 373.82
233.8101 373.33234.2001 373.29234.5101 373.27  235.23 373.22  236.28 373.19
  239.61 373.05240.5801    373240.7101    373241.2001 372.99241.3701 372.99
242.0201 372.95252.0101 372.44252.2501 372.44  258.92 372.33269.1201 372.14
269.1801 372.14  269.29 372.13271.3201 372.09272.8301 372.05273.5701 372.04
  273.72 372.04275.1401    372  276.78    372280.5101 372.01287.9501 372.01
289.0101    372290.5001    372  291.42 371.88  298.91    371299.0701 370.99
305.2001 370.55  310.55    370  312.54    370313.8301 369.99316.7601    370
  317.78    370   318.8 370.01319.3901 370.01320.6901 370.02  325.98 370.04
326.3901 370.05326.7501 370.05329.6901 370.03335.8301    370337.3801 369.86
337.5201 369.86339.4401 369.71   340.8 369.61  341.29 369.58  341.42 369.58
348.4301 369.68360.1901 369.97  360.59    370363.4401 370.21367.4601 370.49
368.0601  370.5369.1401 370.58369.9301 370.63370.3701 370.64  372.79 370.78
373.8701 370.79375.1901 370.83376.0801 370.86376.6401 370.85  376.85 370.86
377.7401 370.85377.8201 370.85384.8901 370.83387.6301 370.75395.5201  370.5
396.0801 370.49403.1301 370.38407.8801 370.33  407.97 370.33  408.98 370.32
409.4901  370.3410.2101 370.29411.6201 370.25412.8901 370.26414.4501 370.24
  415.47 370.27  415.72 370.28416.7601 370.28416.9901 370.29419.6201 370.26
422.6201 370.19425.0601    370   431.6 369.14  432.54    369  433.23 368.85
437.0201    368438.9401    368  441.03 367.99444.1801 367.99  450.59    368
  457.35 368.51461.5601 368.79463.8201 368.89  465.41 368.97465.8801    369
466.3101    369  466.86 369.09  467.28 369.17467.6401 369.23469.0001 369.45
  471.22 369.79471.5101 369.84472.5601    370   509.3    370  511.41 369.76
  511.85 369.69513.0701 369.53  516.15    369  517.48 368.61520.7101    368
   537.4 367.85554.4401    368   556.9 368.77  557.78    369  559.48 369.27
  564.54    370567.7201 370.42568.7501 370.55  572.98    371576.5701    371
577.6001 370.98579.0701 370.89  585.53    370  586.79 369.59588.7101    369
590.0801 368.65  591.98    368597.1201 367.94  599.41 367.97  599.77 367.97
  600.61 367.98601.2201 367.98602.8101    368602.9501    368605.7101 368.08
  619.54 368.43  619.89 368.44  630.51 368.68631.9301 368.71639.4701 368.88
   642.3 368.96  643.14    369  660.54    369664.8401 368.94  679.26  368.8
680.1001  368.8685.0001 368.95687.6901 368.96689.3701 368.98  690.67 368.98
  691.14 368.97692.3101 368.99   693.3 368.99   693.8    369694.5001 369.05
695.2401  369.1  696.05 369.12713.6901 369.96  715.39    370  724.04 370.11
730.4601 370.17  746.26    370  778.02    370  781.54 370.01   783.3 370.01
786.3201 370.02786.8201 370.02791.1001    370  807.41 369.98809.0801 369.98
  822.36    370  824.15 370.38  824.29  370.4824.8901 370.48  825.53 370.57
825.9601 370.64827.5101 370.96827.6901    371  828.05 371.12830.6401    372
831.3301 372.19  833.05    373834.3101  373.6835.1801    374  837.29 374.99
839.1201 375.03  839.91 375.03853.9901 375.11860.5901 375.07868.0601 375.11
  868.22  375.1872.8701 375.02877.2501 375.02  880.41 375.03  884.23 375.03
891.4601    375   903.8 374.33911.0801    374912.4501    374918.7401  374.1
920.3301 374.11937.2001 374.16  955.11 374.05  955.65 374.06  956.41 374.06
  956.55 374.07956.7501 374.07966.8201 374.09  977.53 374.01977.5801 374.01
  977.79    374977.8801    374  979.72 373.99  980.42 373.99  981.79    374
  992.48 374.57 1000.25    375 1002.18 375.37 1005.67    376 1008.44 376.68
 1009.62    377 1013.89 377.03 1014.34 377.03 1017.47 377.24 1022.28 377.52
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1023.18 | 377.48 | 1026.09 | 377.61 | 1026.73 | 377.58 | 1027.85 | 377.65 | 1028.34 | 377.71 |
| 1030.04 | 377.97 | 1030.18 | 378 | 1033.11 | 378.53 | 1034.98 | 378.85 | 1035.59 | 378.96 |
| 1035.89 | 379 | 1042.29 | 379.57 | 1043.36 | 379.64 | 1044.78 | 379.76 | 1045.08 | 379.79 |
| 1047.11 | 380 | 1058.17 | 380.99 | 1058.26 | 381 | 1064.16 | 381.69 | 1065.18 | 381.78 |
| 1065.41 | 381.8 | 1065.95 | 381.84 | 1066.16 | 381.85 | 1066.24 | 381.86 | 1067.33 | 381.89 |
| 1068 | 381.89 | 1068.68 | 381.88 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 425.0601 | .047 | 13.6901 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 425.0601 | 713.6901 | 563.37 | 500 | 473.57 | .1 | .3 |

CROSS SECTION

RIVER: WASH35
REACH: Centerline Align RS: 2000

INPUT
Description:
Station Elevation Data num= 301

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 375.02 | 7.25 | 375 | 12.05005 | 375 | 18.95007 | 375.02 | 22.95007 | 375.02 |
| 25.69006 | 375.01 | 31.85999 | 375 | 36.92004 | 374.26 | 38.58008 | 374 | 65.58008 | 374 |
| 65.95007 | 373.99 | 89.51001 | 373.48 | 9.59009 | 373.41 | 90 | 373.41 | 90.44006 | 373.4 |
| 93.06006 | 373.62 | 97.37 | 373.99 | 98.08008 | 373.99 | 98.34009 | 374 | 107.63 | 374 |
| 108.22 | 373.99 | 112.3401 | 373.99 | 113.9 | 374 | 206.64 | 374 | 225.76 | 373.01 |
| 226.34 | 373.01 | 226.76 | 373 | 227.47 | 372.64 | 228.78 | 372 | 230.3 | 371.25 |
| 230.76 | 371 | 231.14 | 370.8 | 232.78 | 370 | 233.02 | 369.88 | 234.82 | 369 |
| 234.97 | 368.96 | 235.6201 | 368.62 | 236.7 | 368.06 | 236.84 | 368 | 237.2401 | 367.9 |
| 241.26 | 367 | 249.21 | 366.02 | 249.45 | 366 | 249.6 | 366 | 249.8 | 365.99 |
| 250.15 | 365.99 | 250.28 | 365.98 | 250.98 | 365.98 | 255.4901 | 365.42 | 257.08 | 365.25 |
| 259.02 | 365 | 259.67 | 364.9 | 265.15 | 364.96 | 278.28 | 364.89 | 297.03 | 365 |
| 299.78 | 365.36 | 300.16 | 365.38 | 300.53 | 365.43 | 300.89 | 365.42 | 309.3 | 365.66 |
| 316.78 | 365.94 | 320.9 | 366 | 338.83 | 366 | 339.7 | 365.99 | 344.07 | 365.99 |
| 349.5 | 366 | 380.61 | 366 | 385.8101 | 365.99 | 398.04 | 366 | 398.9301 | 366.03 |
| 402.13 | 366.06 | 409.6 | 366.08 | 411.92 | 366.12 | 413.94 | 366.15 | 414.04 | 366.15 |
| 414.26 | 366.16 | 417.2401 | 366.13 | 421.58 | 366.05 | 423.79 | 366.1 | 424.67 | 366 |
| 428.47 | 365.34 | 429.9 | 365.08 | 430.45 | 365 | 434.65 | 364.25 | 435.42 | 364.11 |
| 435.7401 | 364.06 | 436.07 | 364 | 436.41 | 364 | 444.88 | 363.95 | 447.34 | 363.94 |
| 447.57 | 363.94 | 458.6201 | 364 | 459.27 | 364 | 462.23 | 364.01 | 468.54 | 364.01 |
| 473.03 | 364.26 | 473.16 | 364.25 | 473.3 | 364.25 | 473.44 | 364.24 | 473.5601 | 364.25 |
| 477.8101 | 364 | 496.44 | 363.99 | 498.35 | 364 | 501.9 | 364 | 509.79 | 364.87 |
| 511.59 | 365 | 512.01 | 365 | 512.82 | 365.01 | 512.91 | 365.01 | 515.4301 | 365.03 |
| 516.13 | 365.04 | 516.42 | 365.04 | 520.4901 | 365.15 | 526.42 | 365.03 | 528.46 | 365.03 |
| 529.33 | 365.02 | 533.72 | 365.01 | 535.39 | 365 | 543.7 | 364.23 | 544.8101 | 364.13 |
| 545.75 | 364.05 | 545.88 | 364.04 | 546.17 | 364 | 563.46 | 363.98 | 564.66 | 363.98 |
| 580.46 | 364 | 581.5 | 364 | 581.72 | 364.02 | 585.63 | 364.26 | 586.03 | 364.26 |
| 586.63 | 364.29 | 587.8701 | 364.33 | 595.64 | 364.29 | 606.26 | 364.09 | 607.28 | 364.04 |
| 607.39 | 364.03 | 607.88 | 364 | 608.01 | 364 | 615.5 | 363.9 | 617.45 | 363.88 |
| 623.13 | 363.96 | 625.71 | 363.99 | 625.77 | 364 | 626.04 | 364 | 626.69 | 364.13 |
| 631.2401 | 365 | 638.03 | 365.98 | 638.12 | 366 | 638.4301 | 366.03 | 645.39 | 366.79 |
| 645.61 | 366.82 | 647.27 | 367 | 655.5 | 367 | 657.77 | 366.84 | 665.8101 | 366 |
| 669.7001 | 365.56 | 673.8201 | 365 | 677.66 | 364.23 | 678.86 | 364 | 679.38 | 364 |
| 681.0701 | 363.99 | 681.63 | 363.99 | 683.33 | 364 | 689.03 | 364.76 | 690.61 | 365 |
| 692.83 | 365.32 | 692.9301 | 365.34 | 693.1801 | 365.36 | 693.49 | 365.4 | 694.03 | 365.46 |
| 694.11 | 365.47 | 697.92 | 365.84 | 698.01 | 365.84 | 698.14 | 365.86 | 699.71 | 366 |
| 713.5601 | 366 | 731.9 | 365.83 | 732.6801 | 365.83 | 741.27 | 365.87 | 751.05 | 365.94 |
| 752.6901 | 365.97 | 754.41 | 365.99 | 754.86 | 366 | 759.34 | 366 | 759.91 | 365.99 |
| 760.1801 | 365.99 | 760.89 | 366 | 764.96 | 366.03 | 767.83 | 366.01 | 768.12 | 366.01 |
| 768.87 | 366 | 769.24 | 366 | 772.0601 | 365.98 | 772.49 | 365.97 | 774.72 | 365.97 |
| 799.42 | 365.35 | 810.92 | 365.09 | 813.05 | 365.09 | 813.22 | 365.1 | 813.9501 | 365.11 |
| 815.13 | 365.15 | 815.27 | 365.16 | 824.97 | 365.57 | 827.9301 | 365.7 | 828.71 | 365.73 |
| 829.8201 | 365.78 | 830.8101 | 365.81 | 831.52 | 365.85 | 832.97 | 365.92 | 834.67 | 365.94 |
| 835.8101 | 365.95 | 836.09 | 365.94 | 836.23 | 365.94 | 836.83 | 365.93 | 837.76 | 365.91 |
| 837.85 | 365.91 | 842.54 | 365.79 | 858.51 | 365.49 | 866.3101 | 365.39 | 872.62 | 365.39 |
| 880.71 | 365.44 | 891.88 | 365.53 | 894.64 | 365.57 | 896.35 | 365.6 | 896.46 | 365.6 |
| 914.87 | 365.84 | 924.6 | 365.99 | 925.37 | 366 | 926.41 | 366 | 929.9401 | 366.1 |
| 931.25 | 366.11 | 933.13 | 366.14 | 936.4401 | 366.2 | 959.66 | 366.68 | 961.5 | 366.71 |
| 964.45 | 366.74 | 967.04 | 366.79 | 979.83 | 366.99 | 983.6901 | 366.99 | 985.52 | 367 |
| 995.62 | 367.32 | 997.1 | 367.38 | 1003.45 | 367.59 | 1003.64 | 367.6 | 1007 | 367.67 |
| 1011.49 | 367.85 | 1012.9 | 367.9 | 1018.97 | 367.94 | 1019.35 | 367.95 | 1019.66 | 367.95 |
| 1026.57 | 368.01 | 1031.54 | 368.03 | 1033.92 | 368.01 | 1036.18 | 368 | 1036.59 | 368 |
| 1047.06 | 367.95 | 1057.45 | 367.99 | 1057.88 | 367.99 | 1058.55 | 368 | 1072 | 368 |
| 1072.55 | 367.98 | 1072.68 | 367.98 | 1078.92 | 367.91 | 1079.77 | 367.92 | 1080.58 | 367.91 |
| 1087.1 | 367.99 | 1087.49 | 367.99 | 1088.02 | 368 | 1098.84 | 368.9 | 1099.85 | 368.91 |
| 1101.26 | 368.86 | 1101.32 | 368.86 | 1108.6 | 368 | 1112.01 | 368 | 1113.95 | 368.3 |

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 1115.57  368.57 1117.28  368.86  1118.7     369  1124.7  369.89 1125.46     370
 1127.05  370.49 1128.77     371 1128.85  371.02 1129.11  371.08 1131.42  371.63
 1131.77  371.72  1133.2     372 1135.56  372.56  1137.4     373 1138.02  373.14
 1138.26  373.16 1138.46  373.18 1138.53  373.19 1140.15  373.82 1140.32  373.88
 1142.41  374.69 1143.22     375 1144.02  375.33 1144.77  375.65 1145.51     376
 1145.53  376.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05255.4901     .04638.4301     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      255.4901638.4301           495.22     400  329.08              .1       .3
Right Levee     Station=  655.21      Elevation=  367.24

CROSS SECTION


RIVER: WASH35
REACH: Centerline Align   RS: 1600

INPUT
Description:
Station Elevation Data    num=     343
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  371.018.630005 371.029.700012  371.0216.08002  371.0119.90002  371.01
24.53003     37125.17004     37136.73004 370.2238.78003  370.0939.31006  370.05
   40.25     37040.52002 369.9742.05005  369.5742.57001  369.4543.28003  369.24
   43.69  369.1544.30005     36945.49005  368.73   45.75  368.6546.35004  368.54
      48  368.1348.35004 368.0648.61005     368   49.13  367.8749.97003  367.71
50.06006  367.6951.06006 367.5751.85004  367.4652.01001  367.4252.80005  367.35
   53.25  367.24   53.88     36755.17004  366.6356.95001     36657.34003  365.87
57.81006  365.7758.91003 365.5160.92004     36563.17004  364.4864.90002  364.41
65.80005  364.2966.37006 364.2770.53003     36472.07001  363.872.67004  363.83
73.33002  363.7675.39001 363.4876.77002  363.31   77.19  363.24   77.94  363.12
78.06006  363.1178.67004     36381.26001  362.9682.15002  362.94    82.5  362.94
83.31006  362.92   83.88 362.9288.89001  362.3789.87006  362.43   90.13  362.46
90.52002  362.5290.61005  362.590.84003  362.5491.35004  362.5594.97003  362.95
95.09003  362.9695.33002     36395.86005  363.1296.42004  363.3398.26001     364
  100.61  364.83  101.01     365  101.39  365.15  101.55  365.17  101.66  365.16
101.7401  365.17101.8101 365.17   103.1     365  104.73  364.81  105.38  364.72
  110.11     364  110.58 363.96  110.94  363.93  111.34  363.88   115.1  363.49
  118.19  363.02  118.29     363  120.07  362.92   121.2   362.9  123.84  362.82
  132.58  362.53  135.48 362.44  135.96  362.43  148.73  362.01   149.8  362.01
  150.11     362152.3701     362160.8101  361.55  164.47  361.37  164.82  361.36
  175.63     361  176.94     361  178.16  360.99  188.82  360.96  194.02  360.97
  195.17  360.97  199.16 360.72  200.84  360.74206.0601  360.74  206.66  360.76
207.9901  360.73  209.86 360.66  210.71  360.68  211.63  360.72  211.78  360.73
     212  360.69  212.77  360.6   213.2  360.54  213.27  360.54   213.4  360.52
  213.53  360.51  216.84     360  217.51  359.66  219.58     359  221.89     359
   242.4     360  243.97 360.87  244.21     361  244.75  361.12  245.96  361.43
247.9901  361.93  248.14 361.97  248.28     362  266.04   362.7266.2401  362.71
  273.01     363  273.36     363279.2401  362.69  280.78   362.6  287.84  362.24
  289.78  362.15292.4301     362  298.77     362  299.34  361.99   299.6     362
  311.63     362  337.19 361.43344.5601  361.28  344.97  361.27  345.15  361.26
  347.86  361.22  349.79 361.18   351.2  361.16351.3101  361.16  352.69  361.14
  353.76  361.12  354.73 361.12   355.6  361.11  355.78  361.11  363.94  361.09
372.7401  361.04372.8101 361.04  375.64  361.01377.3701  361.01  377.77  361.02
380.2401  361.02383.8701     361  384.25     361  387.78  360.83  388.58  360.84
  389.64  360.81  390.64 360.79  391.04  360.79  391.32   360.8  397.73  360.99
  398.77  360.99  405.91 360.98  408.17  360.98  420.91  360.99  421.39     361
  426.13     361  428.68 361.01  436.56  361.03  437.61  361.02  444.16  361.01
  444.93  361.01  448.35     361  495.48     361  498.98  360.94  499.43  360.95
  499.84  360.95  500.29 360.94  500.41  360.94  500.56  360.93  500.66  360.93
  501.61     361  503.75 361.48  504.27   361.6  505.24   361.8  505.43  361.84
  505.69  361.89  506.25     362  507.27  362.18  507.57  362.19  507.84  362.22
  508.09  362.25  510.43 362.29   510.7   362.3  511.06  362.33  511.23  362.33
  511.75  362.37  512.24 362.39  512.54   362.4  512.86  362.38   513.6  362.44
  513.74  362.43513.9501 362.39   514.4  362.46515.0601  362.35  516.28  362.48
  541.39  362.99  542.55 362.99  543.04     363554.7001     363554.9501  362.97
  562.78     362566.0701 361.51  569.66     361  584.48     361  588.22   361.2
  588.38  361.21  588.89 361.23  589.12  361.24  603.05  361.87     605  361.94
605.6801  361.96  605.88 361.97606.0601  361.97  606.98     362   620.5     362
  628.02  361.25  630.77     361  633.76     361  638.65   361.1  642.63     361
  659.07     361  661.36 360.99  662.12  360.99  666.38  360.97667.9901  360.98
681.9301  360.96694.2401 360.99     695  360.99  697.09     361  698.82  361.36
  700.23  361.66  700.51 361.71  700.84  361.78701.2401  361.85  701.71  361.92
  702.48     362  703.98     362  704.47  361.92  704.97  361.92  705.02  361.91
707.6901  361.63  709.16  361.5  710.13  361.47  711.27  361.42  717.14  361.06
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  717.23  361.05  718.05     361  721.47     361  723.47  360.99725.1901  360.99
728.6901     361  734.39     361  734.58  361.01  734.67  361.01  734.88  361.02
   741.3   361.1   746.4  361.13  751.21  361.14   751.5  361.14  752.42  361.16
  753.13  361.16755.4901  361.17755.6801  361.17  756.37  361.18  758.55  361.23
  776.51   361.3  779.87  361.36  780.91  361.38  782.34  361.41  783.21  361.43
  791.32  361.41   800.3  361.37  804.85   361.5   805.6  361.47  806.29  361.46
811.3101  361.69  812.32  361.69  817.64     362  821.95   362.3   823.6  362.44
   825.4   362.6  830.05     363  832.46  363.57  834.47     364  835.88  364.33
  839.25     365  843.22  365.69  844.86     366  848.38  366.79  849.27     367
  853.79     368855.9301  368.48  857.92     369  859.45  369.35  862.03     370
  865.15  370.72  866.29     371  869.03  371.68   870.3     372  870.57  372.05
   872.6  372.44  875.58     373  876.58  373.12  880.15  373.5884.7401     374
  887.58  374.16888.3701  374.22  888.73  374.23  895.97  374.56896.2401  374.56
  896.72  374.57  898.59  374.66  899.42  374.71  900.78   374.8   901.4  374.84
   902.7   374.9904.3701     375  907.78     375

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  164.82     .04554.7001     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
        164.82554.7001             .1       .3
Right Levee     Station=  554.19      Elevation=  363.32

CROSS SECTION


RIVER: WASH4
REACH: Wash 4             RS: 1076.68

INPUT
Description:
Station Elevation Data    num=     181
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  501.511.100006  501.51.980011  501.52.720001  501.499.369995  501.44
14.92001  501.4128.35001  501.0830.57001  501.03   30.69  501.0330.83002  501.03
31.93002  501.0233.76001  501.0237.21002  501.0238.45001  501.0139.14001  501.01
   45.25     501   45.97     50147.52002     50147.55002     50147.57001     501
   48.22     501   48.44  500.9551.67001     500   55.56  499.17   56.34     499
56.85001  498.8760.32001     498   62.28  497.9962.89001  497.99   64.66  497.98
64.92001  497.98   70.31  497.6375.01001  497.35   75.59  497.3675.86002  497.34
75.92001  497.34   76.59  497.3176.74002  497.376.89001  497.29   78.16  497.27
79.32001  497.27   81.41  497.4181.68002  497.4182.21002  497.44   82.38  497.45
84.92001  497.58   85.41  497.691.26001     49897.11002  498.56  101.39     499
  106.57  499.71  108.17  499.83  109.01  499.86  110.95   499.9  111.06  499.91
  114.05     500  119.39  500.14  119.94  500.16   121.8  500.27   128.5     501
  128.88  501.09  132.04     502  132.74  502.21  135.27     503   136.6  503.33
  139.67     504  141.01  504.33  141.29  504.35   141.6  504.36  142.61  504.42
  143.36  504.48  148.72     505  149.23  505.03  151.29  505.17   151.3  505.17
  156.32  505.08  160.26  505.13   163.1   505.1  168.56  505.05  168.81  505.05
  169.24  505.04  169.89     505  172.76  504.64  178.44     504  180.75  503.36
  182.08     503  183.24  502.57  185.21     502  188.62  501.02  188.67     501
  188.83  500.96  188.87  500.96  191.73  500.37  194.64  500.07  195.32     500
  195.36     500  196.55     500   197.3  499.99  197.71  499.99  198.68     500
  198.71     500  198.88     500  198.92     500  200.22  500.25  204.13     501
  204.52  501.07  209.83     502  213.91  502.78  215.15     503  218.21  503.62
  220.12     504  224.93  504.63  227.67     505  227.77     505  229.13  505.01
  230.09  505.01  230.97     505  236.52  504.49  241.24  504.07  241.34  504.06
  241.36  504.06  241.98     504  242.67  503.87  243.55  503.67  246.02     503
  248.58   502.4  250.26     502  251.76  501.62  254.62     501  258.92  500.79
  262.69  500.73  274.86  500.32  278.01  500.21  283.73     500  284.84  499.64
  286.63     499   288.5  498.24   289.1     498  290.98   497.1  291.19     497
  291.69  496.99  292.34  496.99  292.94  496.98  296.78  496.95   297.1  496.94
  297.14  496.94  299.01  496.96  302.16  496.99  303.12     497  314.01  497.11
  314.81  497.11  315.57  497.11  315.66  497.11  316.48  497.18   323.7  497.73
  330.56     498  330.68     498  331.95  498.01   333.7  498.02  336.36  498.03
  337.41  498.03   337.7  498.03  337.78  498.04  337.83  498.04  339.71  498.05
  342.58  498.05  345.13  498.06   347.9  498.03  348.39  498.03  353.06     498
  354.99   497.5  356.08     497  361.79  496.97  362.48  496.97  363.57  496.97
  366.33  496.98  369.84     497  374.12  497.02  381.48  497.05   388.1  497.04
  396.29  497.04

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0547.55002     .04  220.12     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      47.55002  220.12           274.59  263.39  253.73             .1       .3
Right Levee     Station=  228.63      Elevation=  505.27
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CROSS SECTION

RIVER: WASH4
REACH: Wash 4 RS: 813.29

INPUT
Description:
Station Elevation Data num= 167

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 497.55 | 2.380005 | 497.473 | .160004 | 497.4516 | .85001 | 497 | 17.19 | 496.99 |
| 18.54001 | 496.97 | 19.57001 | 496.982 | 3.01001 | 496.8423 | .08002 | 496.83 | 23.22 | 496.83 |
| 25.95999 | 496.77 | 26.03 | 496.773 | 4.01999 | 496.91 | 35.97 | 496.97 | 37.44 | 496.97 |
| 43.83 | 497 | 46.07001 | 497 | 47.54001 | 497 | 49.72 | 497 | 50.3 | 497 |
| 51.41 | 497 | 53.04001 | 497 | 53.10001 | 496.99 | 53.11 | 496.99 | 53.14 | 496.99 |
| 53.32001 | 496.97 | 61.77 | 496.016 | 1.93001 | 496 | 62.34 | 495.66 | 3.01001 | 495 |
| 63.41 | 494.76 | 63.53 | 494.68 | 64.28 | 494 | 64.76001 | 493.68 | 65.84 | 493 |
| 66.19 | 493 | 66.3 | 493 | 66.46001 | 493 | 66.95 | 493 | 67.24001 | 493 |
| 71.86 | 493.04 | 71.98 | 493.047 | 2.57001 | 493.03 | 73.34 | 493.03 | 74.04001 | 493.02 |
| 74.74001 | 493.02 | 76.72 | 493.01 | 77.13 | 493 | 77.17 | 493 | 77.33 | 493.02 |
| 77.35001 | 493.01 | 77.37 | 493.01 | 77.44 | 493.01 | 80.38 | 493.05 | 83.09 | 493.08 |
| 85.72 | 493.02 | 88.04001 | 493.029 | 1.60001 | 493.06 | 94.31 | 493.04 | 96.93001 | 493.03 |
| 97.07001 | 493.03 | 97.13 | 493.039 | 7.18001 | 493.03 | 100.57 | 493.04 | 100.93 | 493.04 |
| 101.74 | 493.04 | 104.12 | 493.02 | 106.12 | 493.01 | 106.14 | 493.01 | 106.48 | 493.01 |
| 106.75 | 493 | 107.51 | 493 | 112.03 | 492.96 | 112.07 | 492.96 | 113.84 | 492.98 |
| 115.42 | 492.99 | 116.28 | 493 | 123.6 | 493.43 | 132.18 | 494 | 132.7 | 494.22 |
| 134.49 | 495 | 136.13 | 495.88 | 136.43 | 496 | 137.28 | 496.28 | 139.38 | 497 |
| 141.83 | 497.74 | 141.97 | 497.79 | 142.19 | 497.85 | 142.47 | 497.94 | 142.59 | 497.92 |
| 142.94 | 497.83 | 143.02 | 497.81 | 143.45 | 497.66 | 145.44 | 497 | 147.63 | 496.23 |
| 148.11 | 496 | 148.59 | 495.78 | 150.56 | 495 | 151.99 | 494.39 | 153.36 | 494 |
| 161.28 | 493.62 | 161.81 | 493.6 | 161.87 | 493.6 | 162.42 | 493.58 | 164.78 | 493.53 |
| 168.33 | 493.44 | 169.21 | 493.42 | 170.03 | 493.41 | 170.64 | 493.4 | 171.12 | 493.39 |
| 171.9 | 493.38 | 175.77 | 493.39 | 179.83 | 493.4 | 180.35 | 493.42 | 180.99 | 493.44 |
| 181.26 | 493.45 | 181.45 | 493.45 | 183.15 | 493.43 | 184.72 | 493.41 | 195.4 | 493.62 |
| 213.35 | 493.99 | 215.2 | 494 | 215.3 | 494 | 215.53 | 494 | 216 | 494 |
| 216.02 | 494 | 216.23 | 494 | 216.28 | 494 | 216.77 | 494 | 221.97 | 494 |
| 225.55 | 494 | 227.37 | 494 | 228.53 | 494 | 233.71 | 494 | 235.2 | 494 |
| 235.35 | 494 | 235.86 | 494 | 235.87 | 494 | 235.89 | 494 | 236.13 | 494 |
| 237.44 | 493.99 | 252.83 | 493.77 | 265.35 | 493.72 | 267.26 | 493.66 | 270.46 | 493.53 |
| 271.13 | 493.48 | 271.96 | 493.41 | 273.67 | 493.51 | 273.95 | 493.51 | 277.82 | 493 |
| 281.24 | 492.61 | 292.42 | 492 | 292.55 | 492 | 292.68 | 492 | 292.71 | 492 |
| 292.94 | 492 | 294.64 | 492 | 295.73 | 491.99 | 296.86 | 492 | 298.56 | 492 |
| 298.79 | 492 | 298.8 | 492 | 298.85 | 492 | 298.97 | 492.01 | 299.01 | 492.01 |
| 299.1 | 492.04 | 299.69 | 492.25 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 53.04001 | .04 | 216 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 53.04001 | 216 | 247.47 | 240.01 | 236.22 | .1 | .3 |

Right Levee Station= 221.78 Elevation= 494.09

CROSS SECTION

RIVER: WASH4
REACH: Wash 4 RS: 573.28

INPUT
Description:
Station Elevation Data num= 158

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 494 | .769989 | 494 | 1.820007 | 494 | 2.040009 | 494 | 2.910004 | 493.99 |
| 2.98999 | 493.99 | 3.559998 | 493.992 | 1.53999 | 493.37 | 26.61 | 493.23 | 26.75 | 493.23 |
| 27.04999 | 493.24 | 27.57999 | 493.252 | 8.18999 | 493.27 | 28.5 | 493.292 | 9.90999 | 493 |
| 31.34 | 492.36 | 32.18999 | 492 | 34.2 | 491.063 | 4.31999 | 491 | 36.53 | 490 |
| 36.53999 | 490 | 41.82999 | 489.074 | 2.17999 | 489 | 42.72 | 489 | 43.97 | 488.98 |
| 44.03999 | 488.98 | 44.5 | 488.994 | 4.70999 | 488.99 | 45.56 | 489 | 45.78 | 489 |
| 45.87 | 489 | 50.57999 | 489.01 | 52.12 | 489 | 55.45 | 489 | 59.45 | 488.92 |
| 62.84 | 488.87 | 64.23999 | 488.856 | 8.43999 | 488.94 | 69.92999 | 488.97 | 71.64 | 489 |
| 88.34 | 489.65 | 92.39 | 489.83 | 95.31 | 489.95 | 96.40999 | 490 | 96.48999 | 490 |
| 96.5 | 490 | 96.67999 | 490 | 97.04999 | 490 | 97.56999 | 490 | 101.42 | 490 |
| 103.4 | 489.83 | 110.51 | 489 | 112.85 | 488.99 | 113.21 | 488.99 | 113.65 | 488.99 |
| 114.19 | 488.99 | 114.55 | 488.99 | 114.76 | 488.99 | 114.93 | 488.99 | 118.65 | 488.82 |
| 119.76 | 488.79 | 121.83 | 488.94 | 122.71 | 488.94 | 123.24 | 488.93 | 123.69 | 488.92 |
| 124.34 | 488.92 | 125.38 | 488.9 | 126.3 | 488.92 | 131.17 | 488.94 | 131.45 | 488.94 |
| 133.84 | 489 | 133.91 | 489 | 134.21 | 489.02 | 149.54 | 489.73 | 152.19 | 489.83 |

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  154.01  489.87  154.03  489.87  158.54  489.96  158.94  489.96  159.37  489.96
  159.38  489.96  160.18  489.99   160.2  489.99   160.8  489.99  160.83  489.99
  160.93  489.99     161  489.99  161.07  489.99  167.46  489.78  167.71  489.78
  167.96  489.77  168.48  489.76  170.81  489.68  177.87  489.26  178.32  489.23
   179.3  489.18  181.31  489.08  183.34  489.01  183.66     489  184.14     489
  184.18     489   185.7     489  185.91     489  186.76     489  186.93     489
  187.81     489     188     489  188.77     489  189.44  489.03   190.9  489.08
  217.08     490  217.19     490  217.24     490   217.7     490  218.03     490
  218.91     490   219.1     490  219.11     490  219.43     490  219.85     490
  220.03     490  220.25     490   220.3     490  220.98     490  221.63     490
  223.66     490  225.04     490   226.1     490  226.74     490  226.75     490
  227.13     490  227.15     490  227.73     490  227.81     490  227.94     490
  228.89     490  229.72     490  229.75     490  229.97     490  241.53   490.7
  243.57   490.8  245.67     491  247.31  491.78  247.68     492  248.95  492.94
  249.01     493  252.88  493.53  255.42     494  255.77     494  257.83  494.02
  259.13  494.02  260.19  494.03  260.78  494.03     261  494.03  261.26  494.03
  263.22  494.06  263.35  494.06  265.65  494.06

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0536.53999     .04  217.08     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      36.53999  217.08             258.7  239.52  220.92              .1       .3

CROSS SECTION


RIVER: WASH4
REACH: Wash 4             RS: 333.76

INPUT
Description:
Station Elevation Data    num=     148
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  490.621.350006  490.619.200012  490.4626.42001  490.01   28.33     490
30.64001  489.9933.82001  489.98   35.91  489.9937.51001  489.9939.68001     490
42.85001  490.01   44.11  490.0147.98001     490   48.11     49048.45001     490
   48.66     490   48.86  489.78   49.77     489   50.05  488.6550.95001     488
51.67001  487.6252.79001     487    53.5  486.6355.04001     486   59.08  485.49
   60.97  485.0561.15001     48561.18001     485      63  484.83   64.44  484.71
   66.72  484.57   67.08  484.5667.46001  484.55   68.11  484.55   71.44  484.46
   74.58  484.39   74.77  484.3974.92001  484.3875.15001  484.3784.92001     484
84.96001     484    86.5  483.9986.92001  483.9988.09001     48492.28001  484.31
92.34001  484.31   93.11  484.3494.14001  484.4194.89001   484.596.95001  484.79
   98.72     485   101.9  485.25  104.14  485.39  105.08  485.44  107.19  485.55
  110.82  485.84  111.31  485.88  111.44  485.88  111.76   485.9  111.94  485.91
   112.2  485.92  112.49  485.92  112.82  485.91  112.93  485.91  114.11  485.81
  114.51  485.78  118.57  485.42  118.94  485.39  121.47  485.14  123.25     485
  124.15  484.98  125.89  484.94  125.91  484.94  125.97  484.95  127.21  484.97
  128.13  484.99  128.56     485  130.48  485.16  130.73  485.18  140.04     486
  141.87     486  142.06     486  145.06     486  145.96     486  146.23     486
  149.68     486  154.07     486  154.85     486  155.97     486   156.1     486
  156.42     486  156.54     486  156.72     486  165.79  486.18  170.99  486.12
  176.95  486.06   177.4  486.05  177.52  486.05  180.41     486  180.64     486
  181.33     486  181.76     486  181.78     486  185.31  485.99  187.28  485.99
  187.57  485.99  192.04     486  194.11  486.19  194.22   486.2   194.4  486.21
  194.57  486.22  194.96  486.24  195.05  486.25  195.33  486.27  196.07  486.33
  196.92  486.42  197.08  486.43  197.77   486.5  198.78  486.62  202.88     487
     204  487.47  205.45     488  205.97  488.22   207.5     489  208.22  489.38
  209.45     490  211.71  490.93  211.87     491  212.11  491.05  212.14  491.05
  212.21  491.07  212.26  491.08  216.29     492  219.54     492  224.72     492
  226.53     492  227.71     492  233.24     492  233.73     492  236.22     492
  237.49  491.91  243.28  491.49  244.02  491.44  244.62   491.4  247.18  491.24
  247.45  491.23  247.56  491.22  248.32  491.18

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   59.08     .04  194.11     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
         59.08  194.11              .1       .3

CROSS SECTION


RIVER: WASH40
REACH: Centerline Align   RS: 10653.2
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INPUT
Description:
Station Elevation Data num= 452

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 397.05 | 1199951 | 397.04 | 5.23999 | 3975.380005 | 397 | 11.1001 | 396.18 | |
| 12.28003 | 39613.59009 | | 395.7918.42004 | | 39522.23999 | 394.3123.85999 | | 394 | |
| 24.51001 | 393.8628.21008 | | 39330.55005 | | 392.4432.44006 | 39234.92004 | | 391.43 | |
| 36.68005 | 391 | 39.12 | 390.4140.95007 | | 39042.01001 | 389.9643.07007 | | 389.93 | |
| 44.59009 | 389.9845.09009 | | 389.9845.73999 | | 39047.27002 | 390.2551.78003 | | 391 | |
| 53.47998 | 391.2853.84009 | | 391.3554.91003 | | 391.5856.48999 | 39258.52002 | | 392.48 | |
| 60.69006 | 393 | 63 | 393.6 | 64.5 | 393.95 | 64.75 | 39469.32007 | 394.78 | |
| 71.71008 | 39572.94006 | | 395.1173.02002 | | 395.1273.18005 | 395.1275.10999 | | 395.21 | |
| 78.70007 | 395.1679.30005 | | 395.14 | 80.87 | 395.0780.97009 | 395.06 | 82 | 395 | |
| 83.26001 | 394.9183.56006 | | 394.8784.97998 | | 394.67 | 89.13 | 39490.08008 | 393.85 | |
| 94.37 | 39395.82007 | | 392.6898.59009 | | 392100.1801 | 391.64 | 102.8 | 391 | |
| 103.6801 | 390.79 | 106.78 | 390108.5901 | | 389.51110.5901 | 389 | 112.86 | 388.48 | |
| 115.4 | 388 | 116.3 | 387.85121.6801 | | 387 | 124.02 | 386.91124.4701 | 386.91 | |
| 129.54 | 386.72130.1901 | | 386.69130.3201 | | 386.69 | 134.11 | 386.54138.3301 | 386.32 | |
| 142.05 | 386.15 | 143.76 | 386.06 | 144.99 | 386 | 148.11 | 385.83 | 148.23 | 385.83 |
| 148.73 | 385.79 | 149.49 | 385.74 | 151.13 | 385.65 | 152.12 | 385.56153.9401 | 385.46 | |
| 155.01 | 385.37155.6901 | | 385.33157.5801 | | 385.17160.1001 | 385 | 166.79 | 385 | |
| 168.04 | 384.99 | 168.3 | 384.99169.1001 | | 385169.4601 | 384.99 | 169.62 | 384.99 | |
| 169.78 | 385176.3501 | | 385177.0601 | | 384.99 | 183.64 | 384.99 | 190.39 | 384.51 |
| 193.7101 | 384.28 | 195.9 | 384.18 | 196.64 | 384.14 | 207.17 | 384.01 | 236.89 | 384.02 |
| 240.01 | 384.01 | 251.04 | 384.01 | 255.67 | 384256.0901 | 384261.4501 | | 383.99 | |
| 264.02 | 383.99 | 264.76 | 384278.9301 | | 384282.0601 | 383.99 | 297.91 | 384 | |
| 299.05 | 383.95 | 299.52 | 383.94306.3101 | | 383.84 | 311.88 | 383.78312.2201 | 383.76 | |
| 314.9601 | 383.71 | 324.25 | 383.56330.6801 | | 383.49332.9701 | 383.53 | 333.78 | 383.54 | |
| 339.9501 | 383.68340.4401 | | 383.69344.0701 | | 383.67 | 348.54 | 383.62349.2101 | 383.63 | |
| 349.86 | 383.63 | 351.15 | 383.61 | 351.4 | 383.62 | 355.88 | 383.69361.6801 | 383.8 | |
| 365.23 | 383.94 | 366.89 | 384 | 368.51 | 384370.1801 | 384.01371.4401 | | 384.01 | |
| 373.75 | 384375.5901 | | 384 | 394.38 | 383.61 | 404.13 | 383.5408.1001 | 383 | |
| 409 | 382.63 | 410.8 | 382 | 421.24 | 382 | 421.52 | 382.12 | 423.98 | 383 |
| 424.88 | 383.09 | 425.27 | 383.09 | 433.48 | 383.45437.1801 | 383.59439.4301 | | 383.58 | |
| 440.8501 | 383.57441.5701 | | 383.57 | 442.38 | 383.56 | 442.73 | 383.56443.0601 | 383.57 | |
| 443.39 | 383.57 | 444.14 | 383.59444.8301 | | 383.6 | 448.25 | 383.59 | 451.88 | 383.57 |
| 453.5701 | 383.54 | 463.63 | 383.42 | 470.36 | 383.36 | 472.29 | 383.38 | 475.25 | 383.43 |
| 476.87 | 383.46 | 478.98 | 383.51 | 481.64 | 383.58 | 490.62 | 383.88490.8101 | 383.89 | |
| 493.9 | 384517.7001 | | 384517.9501 | | 383.94521.9501 | 383 | 525.86 | 382.06 | |
| 526.12 | 382 | 559.92 | 381 | 560.88 | 381565.7101 | 381.01590.9701 | | 381.02 | |
| 602.87 | 381606.5801 | | 381 | 609.54 | 380.77611.0801 | 380.67615.0701 | | 380.36 | |
| 615.49 | 380.34615.9401 | | 380.32 | 620.73 | 380 | 622.79 | 379.96 | 625.52 | 379.9 |
| 627.61 | 379.86 | 635.54 | 379.68 | 646.11 | 379.46 | 670.76 | 379.02 | 672.24 | 379.02 |
| 673.4501 | 379.01 | 673.63 | 379.01 | 673.77 | 379 | 682.26 | 379 | 684.75 | 378.99 |
| 687.39 | 379697.8301 | | 379 | 699.24 | 379.35 | 704.24 | 380706.3101 | | 380 |
| 709.8401 | 380.01 | 710.17 | 380.01715.0601 | | 380716.3201 | 380 | 724.11 | 379.98 | |
| 730.1201 | 379.98731.9901 | | 379.99734.0001 | | 379.99 | 734.16 | 379.98 | 746.39 | 379.67 |
| 747.91 | 379.64 | 768.45 | 379 | 769.85 | 378.64 | 772.08 | 378 | 777.91 | 377.99 |
| 783.64 | 377.99 | 788.14 | 378 | 794.36 | 378.98794.5001 | 379 | 795.34 | 379 | |
| 796.1201 | 378.97 | 798.55 | 378.85798.8101 | | 378.85 | 799.98 | 378.78 | 800.6 | 378.78 |
| 810.55 | 378.86 | 818.85 | 378.98 | 819.67 | 379 | 823.45 | 379 | 825.52 | 379.08 |
| 838.6901 | 379.53855.0001 | | 380906.8101 | | 380 | 920.66 | 380.35 | 944.51 | 381 |
| 950.91 | 381 | 955.54 | 381.01 | 960.42 | 381 | 983.01 | 381 | 985.11 | 381.35 |
| 989.1201 | 382998.4301 | | 382 | 999.14 | 381.99 | 1002.06 | 381.99 | 1002.91 | 381.96 |
| 1021.06 | 381.19 | 1023.85 | 381.09 | 1025.62 | 381.05 | 1027.12 | 381.01 | 1027.72 | 381 |
| 1031.16 | 380.66 | 1031.72 | 380.57 | 1032.45 | 380.49 | 1035.67 | 380 | 1038.89 | 379.49 |
| 1039.11 | 379.46 | 1039.75 | 379.36 | 1041.72 | 379 | 1043.72 | 379 | 1046.33 | 379.02 |
| 1046.4 | 379.02 | 1049.55 | 379.04 | 1050.41 | 379.03 | 1050.86 | 379.02 | 1056.09 | 379.03 |
| 1056.52 | 379.04 | 1059.9 | 379.09 | 1060.45 | 379.11 | 1066.94 | 379.26 | 1067.58 | 379.27 |
| 1069.98 | 379.34 | 1071.63 | 379.37 | 1073.6 | 379.41 | 1078.18 | 379.53 | 1080.64 | 379.6 |
| 1082.06 | 379.63 | 1084.64 | 379.67 | 1086.91 | 379.7 | 1088.4 | 379.74 | 1091 | 379.74 |
| 1096.13 | 379.76 | 1101.7 | 379.8 | 1104.51 | 379.81 | 1107.16 | 379.81 | 1112.81 | 379.91 |
| 1115.9 | 380 | 1137.1 | 379.99 | 1169.27 | 380 | 1170.89 | 379.84 | 1175.18 | 379 |
| 1183.86 | 378.99 | 1201.51 | 378.99 | 1207.25 | 379 | 1207.51 | 379 | 1234.89 | 380 |
| 1237.65 | 380 | 1253.89 | 379.7 | 1260.57 | 379.66 | 1261.58 | 379.67 | 1262 | 379.67 |
| 1293.27 | 380 | 1307.5 | 380 | 1314.83 | 380.02 | 1316.58 | 380.02 | 1325.09 | 380 |
| 1325.67 | 380 | 1327.4 | 379.31 | 1328.23 | 379 | 1329.15 | 378.63 | 1330.68 | 378 |
| 1345.48 | 377.95 | 1360.96 | 378 | 1364.93 | 378.44 | 1365.4 | 378.47 | 1369.15 | 378.82 |
| 1369.74 | 378.83 | 1369.85 | 378.84 | 1374.27 | 378.89 | 1375.34 | 378.85 | 1381.19 | 378.59 |
| 1382.05 | 378.55 | 1394.33 | 378 | 1404.05 | 378 | 1405.07 | 378.01 | 1413.4 | 378.03 |
| 1423.07 | 378 | 1424.28 | 378 | 1426.31 | 377.99 | 1427.3 | 378 | 1428.47 | 378 |
| 1439.53 | 378.63 | 1445.36 | 379 | 1468.92 | 379 | 1474.77 | 378.46 | 1478.89 | 378.05 |
| 1479.16 | 378.03 | 1479.44 | 378 | 1482.28 | 377.98 | 1482.54 | 377.98 | 1483.88 | 377.97 |
| 1484.15 | 377.97 | 1484.57 | 377.96 | 1484.94 | 377.96 | 1491.15 | 377.92 | 1500.69 | 377.84 |
| 1502.66 | 377.84 | 1508.11 | 377.89 | 1515.65 | 377.94 | 1516.03 | 377.94 | 1518.01 | 377.96 |
| 1519.28 | 377.97 | 1521.8 | 378 | 1525.5 | 378.69 | 1527.34 | 379 | 1539.13 | 379.1 |
| 1540.71 | 379.11 | 1554.78 | 379 | 1560.64 | 378.25 | 1563.93 | 378 | 1565.12 | 377.98 |
| 1566.41 | 377.98 | 1568.36 | 378 | 1569.72 | 378.02 | 1570.51 | 378.02 | 1573.3 | 378.18 |
| 1578.56 | 378.46 | 1587.42 | 378.63 | 1592.92 | 378.66 | 1593.55 | 378.66 | 1600.55 | 378.33 |

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 1606.56     378 1607.69  377.64 1609.59     377 1612.69  376.11 1612.98     376
 1617.07     376 1623.29  375.98 1625.26  375.98 1629.92     376 1632.27  376.92
 1632.58     377 1632.87  377.22 1633.82     378    1634  378.16 1635.02     379
 1635.38   379.3 1636.24     380 1637.64  380.98 1639.37     382  1640.4  382.48
 1641.38     383 1641.85  383.26 1643.27     384 1644.07  384.41 1645.26     385
 1646.43  385.74 1646.85     386 1647.76  386.53 1648.38     387 1648.53  387.11
 1649.45     388 1649.68  388.24 1650.49     389 1651.01  389.59 1651.47     390
 1652.16  390.76 1652.41     391 1652.73  391.48 1653.25     392 1653.47  392.25
  1654.4     393 1655.06  393.62 1655.48     394  1656.3  394.69 1656.69     395
 1657.58  395.82 1657.85     396 1658.23  396.26 1659.28     397 1660.34  397.72
 1660.75     398 1661.34  398.42 1662.23     399 1662.98  399.71 1663.31     400
 1664.12  400.95 1664.17     401 1664.23  401.07 1665.06     402 1665.94  402.99
 1667.78  403.55 1667.94  403.58 1670.48     404 1676.66  404.93 1677.21     405
 1685.93  405.81 1687.94     406 1699.84  406.85 1701.84     407 1701.89     407
 1704.78  407.16  1712.1  407.54 1714.78  407.67 1715.25   407.7 1720.07     408
 1732.19  408.37 1751.79  408.93

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05606.5801     .04 1637.64     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      606.5801 1637.64         10217.02  619.22  572.79              .1       .3

CROSS SECTION


RIVER: WASH40
REACH: Centerline Align   RS: 10033.98

INPUT
Description:
Station Elevation Data    num=     362
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     400.1900635     400.3699951  399.98 1.72998  399.878.830078  399.24
10.35999  399.1111.70996     39912.92004  398.8913.08008  398.89   21.38  398.06
32.77002  398.0633.03003  398.0735.40002  398.0736.34998  398.06   38.37  398.06
51.80005  398.0153.16003     39856.76001  397.1957.65002     39757.93005  396.92
   61.25     39663.96997  395.1664.57007     39565.27002  394.74   67.25     394
69.06006  393.4270.83997     393   71.63  392.7572.21997  392.5874.71997  392.18
75.15002  392.0876.57007  391.8877.20996  391.8278.28003  391.6479.10999  391.55
82.77002     39183.05005  390.96   84.37  390.71    87.5     39093.53003  389.11
94.21997     38995.35999  388.84  101.41     388  102.65  387.78  103.28  387.67
  106.41  387.14  107.25     387108.8101   386.8  110.46  386.61  111.49   386.5
  116.52     386  127.97  385.19130.3301     385  135.24  384.74  135.79  384.71
  149.96     384   150.5  383.99150.8301  383.99  188.04     383  192.91  382.85
  225.37     382  235.13     382  257.72  381.27258.9301  381.24  267.21  381.01
  271.67  381.01  272.22     381  283.54     381  285.28  380.96   337.8     380
339.4401  379.83347.5601     379  350.38     379  351.26  378.99  352.09  378.99
  353.62     379356.5701     379   359.8  379.02361.0601  379.02363.0701  379.03
  364.65  379.03  365.74  379.02368.5801  379.02  374.99     379  375.24  378.98
  375.66  378.94  379.24  378.57  383.97     378387.9501     378   392.4  378.34
   396.8  378.56  398.27  378.63399.9301  378.69400.2001  378.71  400.46  378.73
  402.38  378.81  403.51  378.84  404.54   378.8  406.37  378.72  406.89  378.68
  407.46  378.67  407.91  378.64409.8301  378.57  411.53  378.47  412.26  378.42
   420.8     378  421.78  378.01423.9401  378.01  426.02     378  433.24     378
437.4401  378.34445.1901     379448.5701     379  463.79  378.04464.4401     378
   470.5     378  474.99  378.05  478.46  378.15  486.85  378.32  488.02  378.32
  507.24   378.4  516.62  378.42528.9301  378.52  529.27  378.52536.4301  378.51
544.1901  378.48  549.86  378.67556.8201     379  563.23  379.11  563.55  379.12
  565.99  379.17579.0801  379.33  588.22  379.42  589.66  379.43  591.39  379.43
   608.2  379.82  613.21     380  622.72     380  623.23  379.99   625.8  379.99
  627.39  379.98  628.38  379.98  628.85  379.97  630.22  379.98  644.45  379.63
   650.9  379.42  654.74  379.34  665.05     379  666.02  378.91  673.76     378
   681.3  377.16  682.88     377  690.59  376.53  700.84     376  757.32  375.99
  758.02  375.96  759.12  375.92  769.22  375.52  769.92  375.52   774.7  375.51
  780.08  375.46  791.74     375  809.69     375   813.8  374.79  814.73  374.75
  816.22  374.67  819.11  374.51  827.75     374  837.59     374  843.27  373.99
  865.12     374  866.84  374.54  868.08     375  870.51  375.76  871.21     376
   871.5     376  879.53  376.25  885.06  376.38  885.41  376.38   889.8  376.44
  890.47  376.45  891.48  376.44  898.01  376.45  905.12  376.48  908.24  376.51
  908.71  376.52  921.84  376.47  940.21  376.33  940.43  376.32  940.91  376.31
  941.75   376.3  942.73  376.27  947.82  376.24  953.11  376.28   953.9  376.28
  958.39  376.45  958.48  376.45  958.57  376.46  960.67  376.49  962.49  376.56
  963.52  376.58  975.15     377  999.31     377  999.68  376.99  1001.3  376.99
 1047.84  376.01 1048.03     376 1048.26     376  1049.8  375.99 1059.91  375.99
 1063.36  375.91 1071.09  375.76  1071.2  375.76 1077.04  375.65 1080.75  375.57
 1082.75  375.53 1083.08  375.52 1093.83  375.51 1104.77  375.53 1104.85  375.53
 1105.11  375.54 1105.36  375.54 1106.31  375.59 1106.79  375.59 1110.41  375.71
```

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1116.47 | 375.99 | 1116.72 | 376 | 1117.19 | 376 | 1118.54 | 376.02 | 1119.28 | 376.04 |
| 1126.24 | 376.21 | 1130.59 | 376.28 | 1130.69 | 376.28 | 1131.87 | 376.29 | 1160.41 | 376.33 |
| 1165.88 | 376.16 | 1170.09 | 376.01 | 1170.75 | 376 | 1171.14 | 376 | 1174.52 | 375.46 |
| 1177.64 | 375.02 | 1178.12 | 375 | 1180.95 | 375 | 1182.27 | 375.04 | 1182.48 | 375.04 |
| 1183.57 | 375.01 | 1184.49 | 375 | 1184.69 | 375 | 1185.46 | 375.01 | 1185.64 | 375.02 |
| 1185.73 | 375.01 | 1187.27 | 375 | 1189.22 | 375.01 | 1191.29 | 375.01 | 1204.03 | 375.18 |
| 1218.16 | 375.33 | 1221.92 | 375.45 | 1222.36 | 375.47 | 1222.84 | 375.49 | 1223.01 | 375.49 |
| 1223.4 | 375.5 | 1232.55 | 375.51 | 1244.7 | 375.33 | 1245.19 | 375.33 | 1251.73 | 375 |
| 1254.6 | 375 | 1263.24 | 374.98 | 1273.76 | 375 | 1331.65 | 375.01 | 1359.37 | 375 |
| 1359.48 | 374.99 | 1369.25 | 374.35 | 1369.89 | 374.32 | 1371.95 | 374.14 | 1372.11 | 374.13 |
| 1373.6 | 374 | 1389.27 | 374 | 1389.84 | 373.99 | 1391.94 | 373.99 | 1392.55 | 374 |
| 1398.13 | 374.01 | 1398.37 | 374.01 | 1399.49 | 374 | 1404.7 | 374 | 1406.7 | 373.89 |
| 1406.96 | 373.87 | 1408.34 | 373.79 | 1421.71 | 373 | 1447.51 | 372.99 | 1453.18 | 373 |
| 1456.73 | 373 | 1458.92 | 373.02 | 1459.57 | 373.02 | 1460.87 | 373.01 | 1461.77 | 373 |
| 1463.54 | 372.92 | 1463.83 | 372.91 | 1473.13 | 372.52 | 1475.75 | 372.46 | 1477.82 | 372.4 |
| 1492.42 | 372 | 1495.82 | 371.99 | 1498.78 | 371.99 | 1500.76 | 371.98 | 1501.81 | 371.98 |
| 1506.92 | 372 | 1507.15 | 372.01 | 1507.28 | 372.01 | 1509.32 | 372.33 | 1509.64 | 372.37 |
| 1509.79 | 372.39 | 1512.88 | 373 | 1514.48 | 373.29 | 1518.63 | 374 | 1521.39 | 374.48 |
| 1524.07 | 375 | 1528.75 | 375.6 | 1531.45 | 376 | 1532.59 | 376.01 | 1532.83 | 376.01 |
| 1539.41 | 376.38 | 1552.75 | 377 | 1554.65 | 377.57 | 1555.88 | 378 | 1557.3 | 378.56 |
| 1558.33 | 379 | 1559.15 | 379.38 | 1560.51 | 380 | 1562.14 | 380.76 | 1562.8 | 381 |
| 1563.1 | 381.1 | 1565.4 | 382 | 1567.38 | 382.82 | 1567.86 | 383 | 1568.47 | 383.26 |
| 1570.36 | 384 | 1571.3 | 384.44 | 1572.73 | 385 | 1574.41 | 385.7 | 1575.07 | 386 |
| 1576.86 | 386.79 | 1577.42 | 387 | 1578.86 | 387.52 | 1579.47 | 387.75 | 1580.14 | 388 |
| 1580.82 | 388.23 | 1581.66 | 388.53 | 1582.89 | 389 | 1584.85 | 389.63 | 1585.17 | 389.76 |
| 1585.56 | 389.91 | 1585.82 | 390 | 1585.89 | 390 | 1585.98 | 390.01 | 1586.78 | 390.05 |
| 1586.92 | 390.05 | 1587.8 | 390.07 | 1591.49 | 390.08 | 1600.61 | 390.85 | 1601.83 | 390.93 |
| 1602.66 | 391 | 1603.52 | 391 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 690.59 | .04 | 1552.75 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 690.59 | 1552.75 | 553.99 | 417.1 | 386.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH40
REACH: Centerline Align RS: 9616.88

INPUT
Description:
Station Elevation Data num= 308

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 395.6 | 3.26001 | 395.38 | 3.799927 | 395.33 | 6.51001 | 395.02 | 6.73999 | 395 |
| 13.15991 | 394.8 | 16.20996 | 394.62 | 1.54993 | 394.12 | 22.16992 | 394.09 | 24.46997 | 394.1 |
| 30.29993 | 394.93 | 30.66992 | 395 | 30.80994 | 395.01 | 30.98999 | 395.01 | 32.66992 | 395.08 |
| 33.06995 | 395.08 | 48.16992 | 397 | 54.12 | 397 | 55.97998 | 396.61 | 56.87 | 396.44 |
| 57.6499 | 396.33 | 66.98999 | 394 | 70.1499 | 393 | 72.57996 | 392.07 | 73.26001 | 391.82 |
| 77.13 | 390.47 | 77.53992 | 390.34 | 78.68994 | 390 | 78.93994 | 389.93 | 86.75 | 388 |
| 88.52991 | 387.5 | 89.16992 | 387.39 | 89.8999 | 387.23 | 91.15991 | 387 | 92.63 | 386.67 |
| 95.38 | 386 | 95.65991 | 385.94 | 95.72998 | 385.91 | 95.93994 | 385.85 | 96.90991 | 385.54 |
| 97.75 | 385.46 | 98.46997 | 385.46 | 98.64001 | 385.45 | 98.72998 | 385.47 | 100.2999 | 385.62 |
| 100.46 | 385.66 | 102.84 | 385.76 | 103.12 | 385.81 | 103.21 | 385.82 | 103.5199 | 385.85 |
| 103.5699 | 385.85 | 112.87 | 385.88 | 113.08 | 385.89 | 113.8099 | 385.95 | 114.1899 | 386 |
| 115.9299 | 386.27 | 116.5599 | 386.38 | 116.6899 | 386.4 | 117.89 | 386.57 | 118.23 | 386.61 |
| 120.21 | 386.77 | 121.11 | 386.81 | 121.5699 | 386.74 | 121.7699 | 386.75 | 122.4199 | 386.73 |
| 123.2799 | 386.67 | 126.71 | 386.3 | 127.13 | 386.28 | 127.49 | 386.27 | 129.5 | 386.08 |
| 129.58 | 386.08 | 129.6499 | 386.07 | 131.3999 | 385.95 | 131.64 | 385.93 | 136.01 | 385.7 |
| 138.33 | 385.49 | 141.98 | 385 | 142.11 | 384.98 | 146.8099 | 384 | 158.2999 | 382.15 |
| 165.74 | 381.08 | 166.12 | 381.02 | 166.2799 | 381 | 172.9099 | 380 | 179.0399 | 379.23 |
| 182.34 | 379 | 205.47 | 378.2 | 206.6699 | 378.18 | 207.1799 | 378.18 | 207.34 | 378.17 |
| 207.39 | 378.17 | 207.74 | 378.18 | 207.8099 | 378.17 | 217.1899 | 378.01 | 237.9299 | 378 |
| 239 | 377.99 | 243.1899 | 378 | 245.59 | 377.93 | 252.83 | 377.87 | 278.85 | 377.34 |
| 281.8999 | 377.39 | 283.1699 | 377.45 | 284.0299 | 377.45 | 284.5 | 377.47 | 285.0199 | 377.46 |
| 285.88 | 377.5 | 292.48 | 377.48 | 305.46 | 377 | 305.51 | 377 | 308.62 | 376.94 |
| 318.26 | 377.09 | 319.33 | 377.09 | 326.7699 | 377.21 | 352.76 | 377.05 | 353.6599 | 377.03 |
| 355.45 | 377.03 | 356.0199 | 377.04 | 375.35 | 377.08 | 406.3099 | 376.96 | 463.47 | 377 |
| 463.72 | 376.99 | 464.3999 | 376.99 | 466.9199 | 376.78 | 474.12 | 376.38 | 478.4399 | 376 |
| 482.63 | 375 | 482.7899 | 374.99 | 486.4199 | 374.97 | 486.96 | 374.96 | 488.24 | 374.95 |
| 495.86 | 374.53 | 496.21 | 374.57 | 500.7899 | 374.51 | 502.39 | 374.38 | 503.85 | 374.22 |
| 504.22 | 374.2 | 505.6799 | 374 | 508.4299 | 373.52 | 514.61 | 373.07 | 514.9299 | 373.07 |
| 518.0499 | 373 | 519.45 | 373 | 521.8999 | 373.33 | 527.48 | 374 | 561.5 | 374 |
| 570.12 | 373.81 | 600.83 | 373.6 | 602.23 | 373.64 | 602.45 | 373.64 | 603.14 | 373.65 |
| 603.4399 | 373.65 | 604.4399 | 373.67 | 607.76 | 373.53 | 616.98 | 373.01 | 625.0099 | 373 |
| 635.1899 | 373.35 | 636.28 | 373.36 | 661.5099 | 374 | 694.6799 | 374 | 695.11 | 373.99 |
| 695.2 | 373.98 | 695.47 | 373.98 | 695.66 | 373.97 | 732.11 | 373 | 791.52 | 372.98 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 792.1899 | 372.99 | 819.2 | 373 | 819.98 | 372.99 | 881.11 | 373 | 889.02 | 372.16 |
| 891.2399 | 372 | 896.45 | 371.99 | 897.04 | 372 | 919.96 | 372 | 920.59 | 371.99 |
| 929.6299 | 372 | 937.33 | 372.39 | 938.7999 | 372.49 | 939.6 | 372.52 | 947.0099 | 373 |
| 961.54 | 373 | 980.79 | 372 | 989.09 | 371 | 1005.24 | 371 | 1005.52 | 371.09 |
| 1006.86 | 371.24 | 1010.65 | 372 | 1020.96 | 372 | 1029.02 | 371.58 | 1048.99 | 371 |
| 1070.57 | 370.91 | 1070.73 | 370.9 | 1071.26 | 370.91 | 1081.73 | 370.96 | 1086.01 | 370.71 |
| 1086.8 | 371 | 1092.43 | 372 | 1098.3 | 372.16 | 1103.92 | 372.3 | 1106.44 | 372.31 |
| 1121.37 | 372.58 | 1137.93 | 372.57 | 1163.4 | 372.85 | 1163.69 | 372.86 | 1163.78 | 372.86 |
| 1165.07 | 372.89 | 1165.13 | 372.89 | 1169.21 | 372.92 | 1170.27 | 372.91 | 1176.64 | 373 |
| 1246.91 | 373 | 1246.99 | 372.99 | 1247.18 | 372.98 | 1262.82 | 372 | 1313.3 | 372 |
| 1325.97 | 371 | 1326.84 | 371 | 1327.62 | 371.03 | 1329.1 | 371.02 | 1330.83 | 371.19 |
| 1332.62 | 371.47 | 1334.93 | 372 | 1344.4 | 372 | 1347.1 | 371 | 1347.69 | 370.69 |
| 1348.91 | 370 | 1359.89 | 370 | 1377.13 | 371 | 1378.49 | 371 | 1394.8 | 371.54 |
| 1411 | 371.89 | 1412.25 | 371.9 | 1413.83 | 371.86 | 1414.53 | 371.88 | 1416.86 | 371.47 |
| 1417.7 | 371.38 | 1419.61 | 371 | 1421.99 | 370 | 1445.53 | 370 | 1454.74 | 370.47 |
| 1455.81 | 370.51 | 1462.53 | 370.84 | 1464.28 | 370.84 | 1465.35 | 370.89 | 1472.61 | 370.86 |
| 1501.12 | 370 | 1520.16 | 370 | 1520.24 | 370.01 | 1520.61 | 370.07 | 1525.71 | 370.84 |
| 1526.87 | 371 | 1529.88 | 371.58 | 1530.79 | 371.69 | 1532.24 | 372 | 1532.31 | 372 |
| 1532.62 | 372.01 | 1532.9 | 372.01 | 1544.75 | 372.41 | 1549.15 | 372.47 | 1555.71 | 373 |
| 1577.78 | 373 | 1580.89 | 373.49 | 1582.63 | 373.71 | 1583.08 | 373.75 | 1583.13 | 373.76 |
| 1583.2 | 373.78 | 1583.83 | 373.79 | 1583.88 | 373.8 | 1584.59 | 373.83 | 1584.68 | 373.85 |
| 1584.89 | 373.85 | 1585.18 | 373.89 | 1585.35 | 373.91 | 1586.13 | 373.91 | 1588.41 | 373.97 |
| 1589.22 | 373.97 | 1590.08 | 373.95 | 1590.26 | 373.94 | 1590.34 | 373.95 | 1592.87 | 373.81 |
| 1594.52 | 373.96 | 1598.59 | 373.93 | 1599.12 | 373.92 | 1600.03 | 373.92 | 1600.22 | 373.91 |
| 1601.31 | 373.91 | 1608.45 | 374 | 1610.94 | 374.5 | 1612.59 | 374.89 | 1613.15 | 375 |
| 1613.81 | 375.2 | 1616.72 | 376 | 1620.93 | 377.34 | 1622.52 | 378 | 1623.94 | 378.63 |
| 1624.68 | 379 | 1626.87 | 380 | 1628.32 | 380.71 | 1628.86 | 381 | 1630.31 | 381.54 |
| 1631.69 | 382 | 1636 | 383 | 1637.26 | 383.18 | 1637.83 | 383.25 | 1639.34 | 383.41 |
| 1639.82 | 383.45 | 1640 | 383.47 | 1641.58 | 383.59 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 505.6799 | .04 | 1594.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 505.6799 | 1594.52 | 574.86 | 855.76 | 907.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH40
REACH: Centerline Align RS: 8761.12

INPUT
Description:
Station Elevation Data num= 368

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 394 | 10.01 | 394 | 12.62 | 393.378 | 13.02 | 393.306 | 14.55 | 393.07 |
| 14.93 | 393 | 15.09 | 392.968 | 18.4 | 392.246 | 21.03 | 391.611 | 25.53 | 390.453 |
| 26.19 | 390.326 | 26.74 | 390.203 | 27.19 | 390.09 | 28.08 | 389.839 | 30.13 | 389.222 |
| 30.49 | 389.103 | 30.84 | 389 | 32.29 | 388.43 | 33 | 388.172 | 33.09 | 388.136 |
| 33.46 | 388 | 39.78 | 386 | 41.2 | 385.704 | 41.3 | 385.687 | 41.64 | 385.62 |
| 42.07 | 385.523 | 44.13 | 385 | 44.94 | 384.762 | 45.26 | 384.675 | 47.88 | 384 |
| 53.13 | 383 | 58.78 | 382.944 | 59.74 | 382.955 | 62.28 | 382.951 | 66.54 | 382.079 |
| 66.77 | 382.059 | 67.11 | 382 | 67.18 | 381.996 | 75.51 | 381.988 | 76.95 | 381.977 |
| 77.58 | 381.869 | 78.06 | 381.843 | 84.33 | 381.036 | 84.9 | 381.034 | 86.13 | 381 |
| 94.09 | 380.246 | 95.32 | 380.166 | 96.06 | 380.148 | 96.12 | 380.155 | 96.3 | 380.149 |
| 96.55 | 380.165 | 98.54 | 380.228 | 99.37 | 380.185 | 100.96 | 380.326 | 101.02 | 380.335 |
| 102.88 | 380.358 | 102.98 | 380.38 | 103.05 | 380.392 | 103.21 | 380.398 | 103.36 | 380.419 |
| 103.75 | 380.44 | 104.11 | 380.469 | 104.65 | 380.496 | 105.01 | 380.494 | 105.97 | 380.517 |
| 109.07 | 381 | 110.24 | 381.14 | 110.84 | 381.175 | 111.4 | 381.193 | 111.56 | 381.208 |
| 113.48 | 381.109 | 113.54 | 381.111 | 113.78 | 381.115 | 113.84 | 381.109 | 113.98 | 381.126 |
| 114.21 | 381.176 | 115.14 | 381.507 | 115.59 | 381.649 | 117.52 | 382.35 | 118.67 | 382.742 |
| 119.01 | 382.838 | 119.63 | 383 | 128.09 | 384.789 | 128.54 | 384.878 | 129.27 | 385 |
| 134.21 | 385 | 135.35 | 384.658 | 137.36 | 384 | 138.77 | 383.403 | 138.93 | 383.342 |
| 139.93 | 383 | 143.42 | 382 | 144.69 | 381.704 | 145.25 | 381.593 | 145.41 | 381.556 |
| 146.3 | 381.405 | 146.83 | 381.282 | 146.92 | 381.266 | 147.2 | 381.223 | 147.6 | 381.205 |
| 147.92 | 381.216 | 148.72 | 381.356 | 149.34 | 381.499 | 151.26 | 382 | 158.01 | 382 |
| 158.62 | 381.942 | 160.41 | 381.661 | 160.99 | 381.535 | 161.64 | 381.423 | 163.2 | 381.072 |
| 163.42 | 381.019 | 163.49 | 381.013 | 163.59 | 381.002 | 163.8 | 380.946 | 164.47 | 380.724 |
| 166.38 | 380 | 169.65 | 379 | 175.01 | 378.114 | 175.81 | 378 | 177.31 | 377.982 |
| 180.95 | 377.718 | 183.15 | 377.615 | 188.27 | 377 | 190.35 | 376.86 | 204.75 | 376.028 |
| 205.06 | 376.002 | 227.28 | 376.003 | 228.87 | 376.091 | 232.79 | 376.194 | 236.55 | 376.187 |
| 236.72 | 376.2 | 237.38 | 376.23 | 243.83 | 376.24 | 244.06 | 376.246 | 244.15 | 376.246 |
| 244.33 | 376.243 | 244.95 | 376.259 | 245.03 | 376.251 | 249.38 | 376.278 | 249.7 | 376.245 |
| 252.62 | 376.223 | 253.71 | 376.198 | 253.91 | 376.181 | 258.47 | 376 | 271.32 | 374.543 |
| 271.93 | 374.491 | 272.06 | 374.483 | 272.44 | 374.454 | 278.73 | 374.095 | 278.8 | 374.088 |
| 278.9 | 374.073 | 281.2 | 373.984 | 282.95 | 373.95 | 289.49 | 373.957 | 289.72 | 373.961 |
| 290.76 | 374 | 293.95 | 374 | 317.33 | 373 | 325.58 | 372.193 | 327.48 | 372.041 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 327.76 | 372.029 | 327.82 | 372.029 | 327.99 | 372.037 | 328.09 | 372.045 | 337.45 | 372.572 |
| 339.6 | 372.618 | 341.5 | 372.62 | 343.39 | 372.743 | 343.46 | 372.743 | 343.74 | 372.761 |
| 343.91 | 372.776 | 344.28 | 372.802 | 352.72 | 373.204 | 353.42 | 373.17 | 359.14 | 373.012 |
| 375.95 | 373 | 403.06 | 372.008 | 415.73 | 371.974 | 423.58 | 371.457 | 427.29 | 371.369 |
| 428.1 | 371.335 | 428.49 | 371.31 | 429.06 | 371.293 | 433.71 | 371.098 | 434.49 | 371.078 |
| 436.32 | 371 | 441.33 | 370.986 | 444.27 | 370.732 | 444.34 | 370.727 | 449.62 | 370.531 |
| 451.05 | 370.51 | 455.79 | 370.575 | 457.07 | 370.628 | 460.98 | 370.536 | 463.23 | 370.672 |
| 463.38 | 370.658 | 463.9 | 370.684 | 464.29 | 370.671 | 465.23 | 370.663 | 466.49 | 370.584 |
| 467.31 | 370.558 | 473.25 | 370.136 | 474.82 | 370 | 504.98 | 369 | 530.38 | 368.989 |
| 562.71 | 368.391 | 586.32 | 368.01 | 600.85 | 367.995 | 623.06 | 367.514 | 640.37 | 367.029 |
| 665.55 | 366.999 | 665.62 | 367 | 676.66 | 367 | 677.22 | 366.991 | 677.33 | 367 |
| 724.95 | 367 | 734.78 | 367.517 | 735.05 | 367.517 | 737.29 | 367.616 | 738.06 | 367.603 |
| 744.63 | 367.791 | 778.53 | 367.634 | 786.8 | 367.454 | 801.17 | 367.284 | 802.18 | 367.276 |
| 812.5 | 367.018 | 848.63 | 366.983 | 853.88 | 366.893 | 856.85 | 367 | 858.04 | 367.288 |
| 858.29 | 367.289 | 858.47 | 367.286 | 858.82 | 367.27 | 858.93 | 367.256 | 859.26 | 367.303 |
| 868.9 | 367.984 | 881.66 | 368 | 899.6 | 367.091 | 903.95 | 367 | 916.47 | 366.302 |
| 920.05 | 366 | 922.05 | 366 | 942.84 | 367 | 1001.02 | 367 | 1023.91 | 367.264 |
| 1039.15 | 367.334 | 1045.81 | 367.189 | 1045.89 | 367.189 | 1056.96 | 367.009 | 1083.05 | 366.994 |
| 1093.24 | 366.729 | 1105.54 | 366.754 | 1115.49 | 366.641 | 1126.91 | 366.703 | 1129.29 | 366.657 |
| 1133.16 | 366.517 | 1135.54 | 366.374 | 1136.01 | 366.354 | 1142.49 | 366 | 1146.81 | 366.02 |
| 1178.07 | 366.99 | 1178.16 | 366.994 | 1184.25 | 366.95 | 1225.26 | 366.008 | 1225.89 | 366.008 |
| 1236.4 | 365.999 | 1269.82 | 365 | 1296.59 | 365 | 1301.04 | 365.646 | 1301.37 | 365.676 |
| 1305.92 | 366 | 1369.03 | 366 | 1369.11 | 365.998 | 1375.59 | 365.701 | 1387.49 | 365 |
| 1390.6 | 364.417 | 1397.53 | 364.023 | 1398.29 | 364.023 | 1400.62 | 364.231 | 1408.67 | 364.001 |
| 1440.67 | 364 | 1442.3 | 364.682 | 1442.9 | 365 | 1446.56 | 365.389 | 1448.92 | 365.692 |
| 1452.3 | 366 | 1462.48 | 366 | 1462.61 | 365.984 | 1466.71 | 365 | 1469.86 | 364.036 |
| 1469.96 | 364 | 1503.35 | 364 | 1506.19 | 364.835 | 1506.82 | 365 | 1512.64 | 365.097 |
| 1520.6 | 365 | 1524 | 364.908 | 1527.43 | 365 | 1540.37 | 365.676 | 1541.45 | 365.749 |
| 1543.01 | 365.822 | 1543.88 | 365.849 | 1543.94 | 365.849 | 1544.06 | 365.854 | 1544.21 | 365.855 |
| 1544.85 | 365.876 | 1545.34 | 365.863 | 1546.02 | 365.825 | 1546.83 | 365.68 | 1547.05 | 365.691 |
| 1548.18 | 365.711 | 1548.53 | 365.732 | 1548.91 | 365.763 | 1548.97 | 365.763 | 1551.16 | 365 |
| 1559.97 | 365 | 1565.13 | 365.361 | 1566.09 | 365.481 | 1567.46 | 365.612 | 1570.67 | 366 |
| 1580.27 | 366.054 | 1598.54 | 365.993 | 1604.53 | 365.74 | 1617.91 | 365 | 1632.58 | 364.895 |
| 1646.39 | 365 | 1657.93 | 366 | 1682.92 | 366 | 1684.99 | 365.075 | 1685.12 | 365 |
| 1685.47 | 364.881 | 1688.9 | 364 | 1699.13 | 363.933 | 1708.97 | 364 | 1711.21 | 364.54 |
| 1714.15 | 365 | 1716.5 | 365.448 | 1717.18 | 365.563 | 1723.85 | 365.328 | 1729.34 | 365.002 |
| 1736.08 | 365.001 | 1738.86 | 365.046 | 1739.48 | 365.043 | 1764.81 | 365.749 | 1768.8 | 365.799 |
| 1768.86 | 365.804 | 1773.11 | 365.9 | 1773.24 | 365.906 | 1773.52 | 365.928 | 1795.48 | 366 |
| 1806.41 | 364.68 | 1811.3 | 364.164 | 1812.22 | 364.129 | 1813.93 | 364.333 | 1816.44 | 365 |
| 1819.71 | 365.317 | 1824.61 | 366 | 1825.17 | 366.431 | 1826.31 | 367 | 1826.98 | 367.521 |
| 1827.46 | 368 | 1828.32 | 368.679 | 1828.65 | 369 | 1828.99 | 369.299 | 1829.83 | 370 |
| 1837.32 | 370.024 | 1855.52 | 370.491 | 1867.51 | 370.516 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 903.95 | .04 | 1826.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 903.95 | 1826.31 | 966.3 | 818.06 | 748.69 | .1 | .3 |

CROSS SECTION

RIVER: WASH40
REACH: Centerline Align RS: 7943.06

INPUT
Description:
Station Elevation Data num= 488

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 388.391.889893 | | 388.912.259888 | | 388.932.759888 | | 388.973.459961 | | 389 |
| 7.549927 | 389.858.329956 | | 3909.929932 | | 390.22 14.2699 | | 39114.41992 | | 391.02 |
| 17.66992 | 391.2818.09998 | | 391.2924.08997 | | 391.5224.57996 | | 391.5626.63989 | | 391.39 |
| 31.06995 | 391.0531.21997 | | 391.0531.41992 | | 39132.63989 | | 390.3533.30994 | | 390 |
| 34.75 | 389 35.5199 | | 388.3435.98999 | | 38837.28992 | | 387.3538.00989 | | 387 |
| 39.27991 | 386.3239.68994 | | 386.1539.84998 | | 386.0840.07996 | | 38640.19995 | | 385.95 |
| 42.30994 | 385.17 | 42.75 | 38544.30994 | | 384.345.05994 | | 384 45.6499 | | 383.7 |
| 45.95996 | 383.58 46.7699 | | 383.25 | 47.75 | 383 49.7699 | | 382.4551.63989 | | 382 |
| 52.62988 | 381.7555.75989 | | 38156.35999 | | 380.8656.42993 | | 380.8556.67993 | | 380.83 |
| 56.80994 | 380.8157.06995 | | 380.7457.98999 | | 380.5560.31995 | | 380 | 60.37 | 379.99 |
| 60.54993 | 379.9564.57996 | | 379.165.06995 | | 379 | 66.87 | 378.55 69.6499 | | 378 |
| 70.54993 | 377.7971.57996 | | 377.5872.10999 | | 377.4973.97998 | | 377.2674.05994 | | 377.24 |
| 75.07996 | 377.03 75.3999 | | 377.0175.52991 | | 37775.68994 | | 37776.31995 | | 376.85 |
| 76.73999 | 376.7 77.1499 | | 376.5678.17993 | | 37680.30994 | | 375.23 80.7699 | | 375 |
| 80.93994 | 374.9282.10999 | | 374.36 | 82.5 | 374.1682.81995 | | 37485.07996 | | 373.04 |
| 85.16992 | 373 85.3999 | | 372.96 85.8999 | | 372.986.31995 | | 372.786.69995 | | 372.58 |
| 87.20996 | 372.3587.60999 | | 372.1988.03992 | | 37288.93994 | | 371.7489.75989 | | 371.38 |
| 90.30994 | 371.1890.70996 | | 37192.09998 | | 370.7192.81995 | | 370.5893.20996 | | 370.52 |
| 94.42993 | 370.2595.20996 | | 370.1995.33997 | | 370.1795.44995 | | 370.1595.55994 | | 370.14 |

| | | | | | |
|---|---|---|---|---|---|
| 96.45996 | 370.0197.20996 | 370.0197.40991 | 37098.25989 | 370100.6599 | 369.49 |
| 101.3799 | 369.36101.5199 | 369.34 102.12 | 369.28 103.37 | 369.24 107.37 | 369.05 |
| 107.59 | 369.04110.1699 | 369111.0099 | 368.99112.3199 | 368.91 112.75 | 368.89 |
| 118.1299 | 368.65 119.24 | 368.55119.6299 | 368.51120.2799 | 368.39120.6899 | 368.31 |
| 121.34 | 368.23 123.99 | 367.72128.3099 | 367130.9099 | 366.7 131.45 | 366.62 |
| 133.72 | 366.33134.7999 | 366.2 136.62 | 366 137.96 | 365.9138.3199 | 365.87 |
| 138.6599 | 365.84143.6599 | 365.49148.2899 | 365154.1799 | 364.55 156.84 | 364.32 |
| 158.2 | 364.19158.7599 | 364.13158.9199 | 364.11160.0099 | 364 175.84 | 363.12 |
| 178.4099 | 363 179.96 | 362.98181.8099 | 362.94 187.86 | 362.85 187.99 | 362.85 |
| 191.8799 | 362.78 194.24 | 362.78200.1699 | 362.73 201.33 | 362.73202.4199 | 362.71 |
| 203.6899 | 362.7204.3899 | 362.68205.1699 | 362.66 211.61 | 362.58 214.2 | 362.5 |
| 216.4299 | 362.44217.6799 | 362.41 218.24 | 362.39223.5699 | 362.21 223.75 | 362.2 |
| 225.23 | 362.16229.1599 | 362.01229.2899 | 362.01 229.35 | 362229.6299 | 362 |
| 230.11 | 361.99 236.96 | 361.83242.0399 | 361.73243.6499 | 361.71245.6599 | 361.67 |
| 248.33 | 361.63259.9299 | 361.31270.7699 | 361281.5299 | 360.77287.3099 | 360.69 |
| 287.47 | 360.68 294.11 | 360.53 296.6 | 360.5304.1599 | 360.39311.5199 | 360.24 |
| 311.9099 | 360.24 313.96 | 360.2 315.33 | 360.18323.7999 | 360.13336.7799 | 360 |
| 363.6299 | 360 374.96 | 360.06375.5599 | 360.06 376.22 | 360.07376.4399 | 360.07 |
| 404.3199 | 360.15404.6599 | 360.15405.0699 | 360.16 406.75 | 360.16407.6399 | 360.18 |
| 454.46 | 360.21 455.71 | 360.2459.1299 | 360.16 459.33 | 360.16 463.33 | 360.17 |
| 467.6799 | 360.17 468.09 | 360.18 469.49 | 360.18470.6599 | 360.19472.3199 | 360.19 |
| 475.47 | 360.24497.7599 | 360.51 498.47 | 360.51503.5399 | 360.52514.0299 | 360.52 |
| 599.5199 | 360.96 601.37 | 360.96 601.74 | 360.95 601.85 | 360.96602.0399 | 360.95 |
| 602.6299 | 360.95602.9399 | 360.94 604.85 | 360.96 606.83 | 360.97607.2799 | 360.97 |
| 607.75 | 360.96608.8799 | 360.93 609.1 | 360.93609.6699 | 360.91 636.7 | 360 |
| 643.2699 | 360653.4099 | 360.02 656.45 | 360.02 677.58 | 360.05 726.34 | 360.01 |
| 727.49 | 360 740.49 | 360749.4399 | 359.93 749.98 | 359.93750.8999 | 359.92 |
| 753.1799 | 359.89 761.59 | 359.7 762.24 | 359.69790.3799 | 359 795.12 | 358.95 |
| 795.97 | 358.94 801.61 | 359802.5099 | 359802.9199 | 359.01 803.35 | 359 |
| 804.52 | 359 804.59 | 358.99806.1799 | 358.98806.6099 | 358.97 808.95 | 358.95 |
| 809.1599 | 358.95813.5099 | 359 814.09 | 359.01814.4899 | 359.01 815.78 | 359.03 |
| 816.6199 | 359.04817.1799 | 359.04 821.22 | 359.1 822.45 | 359.1823.6899 | 359.09 |
| 826.1699 | 359.08828.6099 | 359.2828.6699 | 359.21830.9199 | 359.28 835.84 | 359.45 |
| 842.9399 | 359.54 843.84 | 359.62847.1199 | 359848.1799 | 358.98850.8099 | 358.98 |
| 853.22 | 358.99854.7899 | 358.99 855.15 | 359857.7299 | 359 886.7 | 359.66 |
| 887.2299 | 359.67888.8499 | 359.67 893.02 | 359.69 906.39 | 359.96 908.7 | 359.99 |
| 909.2599 | 360 917.53 | 360 920.02 | 359.99923.8499 | 360938.8099 | 360 |
| 950.5999 | 359.49958.2499 | 359.33962.4399 | 359.27962.7999 | 359.32 963.65 | 359.42 |
| 964.8799 | 359.53 965.15 | 359.55 965.33 | 359.56966.6599 | 359.67967.4999 | 359.72 |
| 967.6099 | 359.73 967.77 | 359.73 968.02 | 359.74968.3699 | 359.76968.4299 | 359.76 |
| 968.77 | 359.78968.8699 | 359.76968.9899 | 359.77976.7899 | 359.65983.6299 | 359.68 |
| 984.34 | 359.7984.5399 | 359.71985.4399 | 359.73 986.39 | 359.74986.6699 | 359.76 |
| 994.78 | 359.96994.8599 | 359.96 995.4 | 359.98996.6299 | 359.99997.0599 | 360 |
| 1003.99 | 360 1005.58 | 359.99 1011.78 | 359.99 1014.19 | 360 1026.27 | 360 |
| 1039.08 | 359.97 1042.51 | 359.98 1047.19 | 359.98 1054.45 | 360 1055.04 | 360 |
| 1056.31 | 360.01 1057.16 | 360.02 1058.56 | 360.02 1061.07 | 360 1073.47 | 360 |
| 1076.14 | 360.01 1077.02 | 360.01 1078.9 | 360 1082.77 | 359.99 1084.81 | 359.99 |
| 1090.7 | 360 1116.2 | 360 1120.54 | 359.66 1127.75 | 359 1130.31 | 359 |
| 1132.29 | 359.02 1132.73 | 359.02 1135.05 | 359.05 1135.96 | 359.04 1142.3 | 359.24 |
| 1155.35 | 359.22 1171.52 | 359.06 1171.66 | 359.06 1173.48 | 359 1177.98 | 358.37 |
| 1178.54 | 358.32 1179.42 | 358.27 1181.01 | 358.08 1181.9 | 358.12 1184.34 | 358.22 |
| 1186.41 | 358.36 1187.04 | 358.4 1195.87 | 359 1201.56 | 359 1202.54 | 358.65 |
| 1204.61 | 358 1211.76 | 357.97 1213.49 | 357.98 1214.12 | 357.98 1218.08 | 358 |
| 1230.65 | 359 1241.35 | 359.98 1241.58 | 360 1262.35 | 360 1269.13 | 359.25 |
| 1270.04 | 359.17 1271.63 | 359 1272.49 | 359 1275.45 | 359.03 1283.08 | 359.09 |
| 1284.69 | 359.08 1292.69 | 359 1318.19 | 358.95 1322.53 | 358.95 1342.32 | 358.99 |
| 1342.94 | 358.99 1344.32 | 359 1356.04 | 359.19 1366.61 | 359.02 1367.3 | 359.01 |
| 1368.13 | 359 1373.84 | 358.98 1374.84 | 358.98 1381.55 | 359 1387.79 | 359 |
| 1388.23 | 358.95 1388.3 | 358.94 1392.36 | 358.5 1393.15 | 358.4 1393.35 | 358.37 |
| 1393.52 | 358.37 1396.49 | 358.2 1399.06 | 358.02 1399.74 | 358 1401.52 | 357.98 |
| 1401.93 | 357.98 1403.1 | 357.97 1404.03 | 357.96 1411.07 | 357.9 1412.73 | 357.89 |
| 1424.7 | 358 1428.19 | 358.38 1435.25 | 359 1439.02 | 359.19 1440.15 | 359.23 |
| 1442.82 | 359.2 1449.47 | 359.01 1449.57 | 359.01 1449.64 | 359 1449.83 | 359 |
| 1450.87 | 358.99 1453.15 | 358.98 1456.55 | 359 1456.69 | 359 1456.81 | 359.01 |
| 1456.97 | 359.01 1457.23 | 359.02 1462.93 | 359.17 1467.16 | 359.27 1472.16 | 359.41 |
| 1476.72 | 359.52 1478.25 | 359.56 1491.76 | 360 1492.26 | 360.01 1497.66 | 360.13 |
| 1497.72 | 360.13 1499.33 | 360.09 1502.43 | 360.03 1502.6 | 360.02 1503.66 | 360 |
| 1503.98 | 360 1505.84 | 359.99 1506.45 | 359.99 1507.13 | 359.98 1508.06 | 359.98 |
| 1511.15 | 360 1521.57 | 360.03 1524.22 | 360.03 1526.03 | 360.04 1527.39 | 360.04 |
| 1533.36 | 360.06 1535.97 | 360.06 1538.94 | 360.05 1547.58 | 360.04 1549 | 360.03 |
| 1554.9 | 360.01 1556.51 | 360.04 1558.57 | 360 1558.88 | 360 1561.53 | 359.62 |
| 1562.32 | 359.49 1562.99 | 359.36 1563.11 | 359.34 1564.28 | 359 1573.51 | 358.87 |
| 1574.66 | 358.86 1584.29 | 358.99 1584.8 | 359 1585.08 | 359 1595.33 | 359.79 |
| 1598.75 | 360 1657.01 | 360.01 1664.34 | 360.11 1664.73 | 360.11 1669.22 | 360.02 |
| 1671.24 | 360.03 1672.42 | 360.03 1674.1 | 360.04 1680.72 | 360 1688.43 | 359.03 |
| 1688.7 | 359 1711.39 | 358.33 1724.78 | 358 1749.36 | 358 1750.23 | 358.19 |
| 1752.54 | 359 1754.94 | 359.14 1756.75 | 359.28 1757.49 | 359.33 1758.13 | 359.38 |
| 1763.58 | 359.71 1766.48 | 360 1769.85 | 360.25 1773.67 | 360.62 1777.68 | 361 |
| 1802.41 | 362 1816.07 | 362.54 1827.44 | 362.94 | | |

```
Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05270.7699     .04 1777.68     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      270.7699 1777.68           781.53  999.93 1577.22              .1       .3

CROSS SECTION


RIVER: WASH40
REACH: Centerline Align   RS: 6943.13

INPUT
Description:
Station Elevation Data    num=     332
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  374.468.439941     374   10.25     37412.33008  373.8412.93994  373.77
15.93994  373.3618.14014     37318.83008   372.919.64014  372.8222.63013  372.45
23.93994  372.3627.13013  372.04 28.6001  372.0429.23999  372.0129.54004  372.01
29.72998     37231.06006  371.66    33.5     37134.42993   370.837.39014     370
40.63013  369.5641.14014  369.4855.72998  366.1357.28003  365.7859.26001  365.37
62.56006  364.4867.79004  363.36 69.3501     36379.09009  361.0279.16992     361
79.28003  360.9879.37012  360.9684.52002     360 89.3501   359.391.17993     359
99.95996     358102.5601  357.79110.4299     357  118.77  356.45123.3901  356.28
123.6001  356.27152.0701  355.99179.9299     356  229.01   355.2258.8901     355
  279.28     355279.6899  354.98285.8301  354.56286.4099  354.55  291.73  354.53
292.0701  354.52320.5801     354362.1799  353.98362.8401  353.99  384.25     354
385.1301  353.96393.0901  353.93395.9399     354     420  354.11421.8201  354.14
429.8999  354.07471.8801     354499.5701     353  502.46     353503.9099  353.04
504.3201  353.04  517.96  353.37541.1101  353.64   543.7  353.64   561.5     354
  597.27     354  625.97  353.59633.5701  353.67  660.21  353.37  669.39     353
  741.26     353  743.55  352.63  744.04  352.56748.3301     352  763.66  351.88
  777.16     352  784.25     353  798.36  352.99  799.96  352.88  801.29  352.83
824.0801  352.99  847.34  352.99  849.03  352.97  891.73  352.99  892.14  352.98
923.5601     353  924.16  353.02  943.23  353.09  988.72     353 1000.11  353.16
 1086.46     353 1097.11  352.08 1097.81     352 1126.87     352 1127.38  351.95
 1127.62  351.92 1127.81  351.89 1131.72  351.36 1132.03   351.3 1134.11     351
 1157.75     351 1164.18  351.63 1171.47  351.99 1191.59  351.88 1205.73  351.34
 1208.19   351.3 1218.39     351 1219.17  350.68 1220.97     350 1236.25     350
 1238.69  350.03 1241.66  350.01 1242.11     350 1243.29     350  1248.2  350.66
 1256.05  350.98 1263.79     351 1265.63  351.29  1270.8     352 1271.56  352.06
 1271.64  352.05 1271.87  352.06 1273.86  352.18 1287.27  352.28 1301.44  352.13
 1308.34  351.76 1325.85     351 1390.72     351 1395.87  351.62 1398.24     352
 1402.27     352  1414.5     351 1419.61     351 1428.34     352 1429.59  352.02
 1431.56     352 1438.54  351.33 1441.69  351.12 1443.14     351 1447.87     351
 1456.66     352 1465.77     352 1489.63     351 1492.84  350.97 1496.55  351.01
 1496.98  351.02 1504.64  351.11 1504.79  351.11 1505.17  351.12 1518.62  350.94
 1533.72  351.04 1540.05     351 1540.83  350.75 1543.47     350 1549.96  349.24
 1551.23  349.16 1552.29  349.05 1552.71  349.07 1554.09  349.07 1561.83  349.28
 1580.62     350 1581.05  350.04 1592.96     351 1602.66     351 1610.07  350.05
 1610.43     350 1618.88     350  1624.2   350.3 1625.74  350.43  1631.3  350.72
 1632.69  350.81 1638.23   351.3  1641.3  351.52 1646.21  351.96 1647.76  351.97
 1648.03  351.98 1649.97  351.99 1650.23     352 1679.32     352    1682  351.58
 1682.94   351.4 1685.78     351 1690.69     351 1703.97  351.76 1712.19  351.36
 1714.05     351 1717.82     351 1719.83  351.25 1723.84  351.67 1725.64  351.89
 1727.17     352  1736.8  352.41 1736.91  352.42 1737.96  352.47 1738.05  352.47
 1747.98  352.61 1758.29  352.03 1762.01  352.01 1762.25     352 1762.83     352
 1768.89   351.1 1769.44     351 1777.08  350.87 1786.48     351 1790.37  351.52
 1791.99  351.69 1792.71  351.69 1794.06  351.85 1807.07  351.16 1819.88     351
 1821.57  350.99 1822.44     351 1838.82  351.65 1845.28     352 1927.16     352
    1928  352.02 1929.09  352.01 1941.27  352.09 1963.19  351.99 1965.37  351.91
 1968.26   351.9 1980.78  351.53 1981.23  351.58 1981.59  351.51 1982.69  351.32
 1982.88  351.32 1984.33     351 1986.82  350.95 1989.14  350.99  1989.5  350.99
 1989.59     351 1990.02     351 1991.16  351.02 1993.33  351.02 1997.24  351.15
 2016.14  351.49 2040.93  351.55  2054.3  351.85 2055.23  351.83 2058.49  351.49
 2058.56  351.48 2059.13  351.38 2059.69   351.3 2059.85  351.27 2060.45  351.17
 2071.85  351.12 2073.62  351.14 2085.99     351 2088.35  350.99 2116.82  351.02
 2125.49  351.17  2138.4  351.01 2142.15     351 2144.18  350.91 2145.94     351
    2150  351.69 2150.52  351.76 2151.96   351.9  2152.5  351.91  2153.2  351.97
 2153.42  351.97 2154.63  351.94  2155.3   351.9 2169.26  351.55 2196.04  351.83
 2203.14     352 2208.07  351.99 2250.01  351.18 2252.55  351.17  2253.1  351.18
 2255.56  351.18  2255.7  351.19 2256.44  351.21  2256.9  351.21 2260.17  351.34
 2261.18  351.32 2290.59  351.58 2328.57     351 2348.96  351.08 2365.79  351.04
  2367.6     351 2387.66  350.99 2388.22  350.98  2431.6     351 2440.41  350.76
  2455.7   350.7 2455.92  350.69 2457.02  350.68 2465.27  350.66  2465.6  350.65
 2491.84   350.3 2505.19  350.29 2513.47  350.18 2514.17  350.18 2521.23  350.65
  2522.2  350.75 2522.37  350.76 2523.02  350.78 2523.48  350.81 2526.41  350.81
```

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 2526.93  350.74 2527.89  350.63 2529.16  350.59 2533.85  350.02 2533.95  350.01
    2534     350 2544.98     351    2556  352.52 2559.13     353 2563.47  353.36
 2569.87     354 2580.96  354.02 2581.27  354.01 2603.96     354 2604.62  354.01
 2604.77  354.02 2611.08  354.15 2612.13  354.14 2618.11     354 2638.41     354
 2639.09   354.1 2646.46     355 2653.13  354.98 2655.69     355 2663.68     356
 2669.18  356.53 2671.77   356.6

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  743.55     .04 2559.13     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        743.55 2559.13           1943.3 1443.13  375.99              .1       .3

CROSS SECTION


RIVER: WASH45
REACH: Centerline Align   RS: 5500

INPUT
Description:
Station Elevation Data    num=     499
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   365.6   .0998  365.62.409912  365.543.429932  365.49 3.47998  365.49
6.709961  365.387.949951  365.349.209961  365.3110.28003  365.2911.15991  365.28
11.90991  365.2812.57007  365.2719.03003  365.0720.59985  365.0123.52002  365.01
27.01001     36527.15991  364.9828.69995  364.7232.68994  364.0733.13989     364
34.80005  363.6436.84009  363.1837.60986     36339.53003  362.4140.45996  362.15
40.76001  362.0741.09009     36243.26001  361.6145.09009  361.1845.76001  361.05
      46     36150.15991     36050.27002  359.9854.62988     35956.88989   358.4
58.19995  358.0858.48999     35859.13989  357.8461.93994     35764.28003  356.43
65.76001     35668.23999  355.2969.34985     35570.97998  354.4871.94995  354.19
72.34985     35475.56006  353.2576.23999     35380.52002     35283.60986  351.31
85.07007     351 89.1499  350.1789.88989     35091.31006  349.73 92.6499  349.49
94.69995  349.0995.19995     34995.84009  348.88100.4199     348103.3301  347.46
  105.78     347109.1799  346.51112.3499     346  119.97     345  120.76  344.87
126.9099     344  129.63  343.84  133.28  343.67  141.71  343.26146.0699  343.04
  147.01  343.02147.1699  343.01  147.65     343  148.03     343  149.87  343.01
  150.02  343.01152.2899  343.02153.5699  343.02  154.47  343.03158.1799  343.03
   162.6     343166.9399  342.99  169.76  342.99179.3099  343.01182.1899  343.02
  184.78  343.02  185.11  343.01  188.09  343.02  192.11  343.02193.1799  343.01
  196.27  343.01  200.84  343.02   207.7  343.08  224.75  343.09  225.83  343.08
230.4299  343.08  258.95     343  289.87  343.01291.0399     343   296.9  343.03
298.9199  343.01  301.48     343  312.99  343.01  315.73     343  360.74     343
  364.86  343.01  366.86  343.01  371.23     343  372.77     343  375.47  342.99
  386.51     343386.8099  343.01393.5399  343.01396.9299  343.02  406.77  343.02
   415.4  342.99  417.14  342.98418.3199  342.99  422.53     343  437.87  343.01
  442.35     343  510.11     343  517.84  343.01519.9099  343.02560.7999  343.28
   561.1  343.26561.3199  343.27  561.96  343.25  562.49  343.26562.9199  343.25
  563.86  343.24  564.11  343.24  568.37   343.2  573.28  343.13  574.03  343.11
  574.24   343.1575.1699  343.09  577.46  343.01582.1799  343.01  582.49     343
  597.76  342.74600.9099  342.68  602.62  342.64  620.86  342.31  625.74  342.23
627.4199  342.21  628.35  342.19  637.65  342.16  638.11  342.18  638.25  342.18
  645.23  342.11650.6699  342.01     653     342654.6699  341.96  674.74  341.72
696.6599  341.62710.1599  341.44   710.9  341.44  714.99  341.31  725.24     341
  728.99  340.98  730.46  340.98   753.1  340.89758.9399  340.91  777.34  340.95
  779.83  340.96  780.46  340.96  783.36  340.99  783.86     341  784.12     341
  789.45     342   789.9  342.08  795.74     343802.5499  343.85803.7899     344
814.6899     344  820.14  343.33  822.73     343  843.63  342.96  857.33  342.99
  862.12  342.99  864.95     343867.8099   343.1  870.61  343.18897.3199     344
901.2999  343.06901.5699     343  913.74  342.21915.0399  342.19  915.86  342.15
   919.7  342.16  921.45  342.15  923.15  342.15923.5499  342.16  924.95  342.25
  933.36  342.93933.9299     343  934.14  343.03  936.51  343.41   937.1  343.48
  938.48  343.64  938.74  343.61  962.28  343.34  979.86  343.08988.6799  343.04
989.5599  343.04   998.6  343.02  999.28  343.02 1001.25  343.01 1002.68     343
    1003  342.98 1019.91     342  1025.1  341.98  1026.4  341.97  1031.6  341.84
 1039.61  341.71 1045.04  341.97 1045.56  341.97 1046.31     342 1056.52  342.09
 1064.86  342.24  1078.8  342.25 1081.17  342.28  1084.3     342 1106.16  341.88
 1107.46  341.89 1126.83     342 1130.23  342.07 1134.25   342.1 1134.71   342.1
 1139.83     342 1142.09     342 1144.59  341.99  1146.6     342 1150.38     342
 1159.37   342.4 1170.38  342.86 1171.94  342.91 1176.28     343 1202.41  342.99
 1205.24     343 1210.36     343 1211.01  342.92 1218.78     342 1218.88     342
 1226.48  341.92 1228.97  341.94 1234.14     342 1241.01  342.87 1241.91     343
  1242.7  343.01 1246.12  343.04 1246.88  343.04 1250.45     343 1251.73  342.79
 1261.17     342 1264.15  341.02 1264.21     341 1277.21  340.99 1282.05     341
    1290     341 1290.22  341.03 1291.53  341.13 1292.61  341.21 1292.72  341.21
 1307.24  341.73 1308.31  341.75 1310.93  341.97 1316.54  341.99 1316.87  341.99
 1317.28     342 1317.81     342 1322.19  342.45 1326.82     343  1344.1  343.81
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1346.57 | 343.91 | 1347.4 | 343.94 | 1347.59 | 343.94 | 1349.18 | 343.97 | 1350.33 | 343.97 |
| 1350.7 | 343.96 | 1351.43 | 343.96 | 1351.83 | 343.95 | 1351.92 | 343.94 | 1358.24 | 343.85 |
| 1362.01 | 343.78 | 1365.25 | 343.73 | 1366.02 | 343.71 | 1372.35 | 343.63 | 1375.41 | 343.6 |
| 1380.19 | 343.57 | 1391.1 | 343.73 | 1402.36 | 343.97 | 1402.99 | 343.98 | 1403.37 | 343.99 |
| 1407.56 | 343.99 | 1410.16 | 344 | 1410.44 | 344 | 1410.9 | 343.99 | 1411.16 | 343.99 |
| 1412.4 | 344 | 1415.78 | 344 | 1416.68 | 343.89 | 1423.26 | 343 | 1424.75 | 343 |
| 1426.62 | 342.99 | 1429.26 | 342.99 | 1432.63 | 343 | 1440.95 | 343.29 | 1441.46 | 343.32 |
| 1444.27 | 343.44 | 1451.94 | 343.86 | 1453.03 | 343.91 | 1454.41 | 344 | 1465.72 | 344 |
| 1469.12 | 343.61 | 1474.7 | 343 | 1474.97 | 343 | 1475.5 | 342.99 | 1477.36 | 342.99 |
| 1479.69 | 343 | 1487.4 | 343 | 1490.57 | 342.99 | 1493.93 | 343 | 1503.22 | 343 |
| 1504.54 | 342.76 | 1508.77 | 342 | 1512.84 | 341.94 | 1516.44 | 341.9 | 1518.72 | 341.92 |
| 1525.01 | 342 | 1528.09 | 342.87 | 1528.51 | 343 | 1529.8 | 343.36 | 1532.16 | 344 |
| 1533.78 | 344.01 | 1548.27 | 344.22 | 1561.58 | 344.38 | 1562.66 | 344.39 | 1574.13 | 344.4 |
| 1587.18 | 344.31 | 1587.97 | 344.29 | 1591.75 | 344.16 | 1595.42 | 344 | 1595.59 | 344 |
| 1597.05 | 343.73 | 1597.99 | 343.58 | 1600.44 | 343.22 | 1602.08 | 343 | 1604.36 | 342.97 |
| 1605.25 | 342.97 | 1606.08 | 342.96 | 1606.56 | 342.95 | 1607.86 | 342.94 | 1609.61 | 342.93 |
| 1609.7 | 342.93 | 1609.98 | 342.94 | 1614.68 | 343 | 1615.59 | 343.19 | 1620.69 | 344 |
| 1623.33 | 344.02 | 1624.08 | 344.03 | 1631.88 | 344.11 | 1632.08 | 344.11 | 1640.48 | 344 |
| 1641.35 | 344 | 1641.63 | 343.99 | 1642.06 | 344 | 1643.88 | 344 | 1650.97 | 344.43 |
| 1660.1 | 345 | 1665.22 | 345 | 1667.91 | 345.01 | 1671.55 | 345 | 1676.92 | 345 |
| 1677.62 | 344.96 | 1679.78 | 344.84 | 1681.48 | 344.76 | 1688.34 | 344.87 | 1692.43 | 344.83 |
| 1697.81 | 344.89 | 1705.42 | 345 | 1707.11 | 345 | 1709.42 | 345.01 | 1710.34 | 345 |
| 1718.97 | 345 | 1720.83 | 344.99 | 1729.41 | 344.99 | 1729.59 | 344.98 | 1736.31 | 345 |
| 1736.96 | 345 | 1741.91 | 345.03 | 1751.67 | 345.07 | 1753.98 | 345.07 | 1758.47 | 345.04 |
| 1766.53 | 345.01 | 1767.35 | 345 | 1767.63 | 345 | 1772.64 | 344.8 | 1784.9 | 344 |
| 1785.14 | 343.99 | 1785.85 | 343.99 | 1786.15 | 344 | 1802.45 | 344.1 | 1806.98 | 344.12 |
| 1818.16 | 344.05 | 1822.61 | 344.03 | 1827.17 | 344 | 1828.24 | 343.97 | 1830.09 | 343.95 |
| 1831.11 | 343.93 | 1831.56 | 343.94 | 1834.07 | 344 | 1840.37 | 344.05 | 1845.45 | 344.01 |
| 1846.16 | 344 | 1846.72 | 343.99 | 1847.22 | 343.99 | 1848.41 | 343.97 | 1848.84 | 343.98 |
| 1850.29 | 344 | 1853.2 | 344.71 | 1854.24 | 345 | 1858.36 | 345.66 | 1860.57 | 346 |
| 1868 | 346 | 1869.46 | 345.98 | 1869.86 | 345.99 | 1870.56 | 346 | 1873.15 | 346 |
| 1873.43 | 345.96 | 1873.83 | 345.89 | 1878.4 | 345 | 1878.81 | 344.99 | 1879.1 | 345 |
| 1883.93 | 345.48 | 1887.06 | 346 | 1895.18 | 346 | 1899.73 | 345.99 | 1899.99 | 345.99 |
| 1904.72 | 346 | 1904.87 | 346 | 1922.18 | 346.3 | 1972.01 | 347 | 1979.6 | 347 |
| 1997.84 | 346.08 | 1999.56 | 346 | 1999.77 | 345.99 | 2000.06 | 345.98 | 2000.13 | 345.99 |
| 2000.44 | 346 | 2014.14 | 346.9 | 2015.24 | 346.97 | 2015.75 | 347 | 2020.25 | 347 |
| 2022.11 | 346.99 | 2023.21 | 346.97 | 2027.49 | 346.96 | 2029.07 | 346.97 | 2029.17 | 346.97 |
| 2033.22 | 346.99 | 2034.24 | 347 | 2047.6 | 347 | 2047.81 | 346.99 | 2048.45 | 346.97 |
| 2048.88 | 346.97 | 2051.33 | 346.91 | 2055.92 | 346.94 | 2059.71 | 346.9 | 2062.34 | 346.89 |
| 2065.29 | 346.92 | 2065.89 | 346.92 | 2068.18 | 346.95 | 2071.6 | 346.98 | 2073.1 | 346.98 |
| 2075 | 347 | 2075.82 | 347 | 2079.86 | 346.66 | 2085.58 | 346.5 | 2087.77 | 346.61 |
| 2091.58 | 346.87 | 2091.99 | 347 | 2092.67 | 347 | 2093.63 | 346.95 | 2101.41 | 346 |
| 2102.65 | 346 | 2106.24 | 346.52 | 2109.28 | 347 | 2141.44 | 347.01 | 2146.02 | 347 |
| 2153.91 | 347 | 2153.96 | 347.01 | 2157.27 | 347.38 | 2158.5 | 347.54 | 2160.37 | 347.75 |
| 2161.03 | 347.82 | 2162.75 | 348 | 2165.27 | 348 | 2166.72 | 348.01 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 638.25 | .04 | 1528.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 638.25 | 1528.09 | 781.84 | 755.7 | 712.12 | .1 | .3 |

CROSS SECTION

RIVER: WASH45
REACH: Centerline Align RS: 4744.3

INPUT
Description:
Station Elevation Data num= 475

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 357.92 | 7399902 | 357.913 | 469971 | 357.94 | 7.23999 | 35811.05005 | | 358.81 |
| 11.32983 | 358.83 | 13.47998 | 358.98 | 13.63989 | 358.98 | 13.95996 | 358.99 | 14.15991 | 359 |
| 27.38989 | 35927.70996 | | 358.99 | 32.81982 | 358.93 | 33.51001 | 358.94 | 33.33984 | 358.95 |
| 37.26001 | 358.99 | 38.3999 | 35952.59998 | | 35954.82996 | | 358.88 | 61.07996 | 358 |
| 66.52991 | 357 | 67.8999 | 356.77 | 73.52991 | 35674.78992 | | 355.75 | 78.2699 | 355 |
| 79.44995 | 354.85 | 79.86987 | 354.88 | 0.17993 | 354.78 | 83.24988 | 354.69 | 84.32996 | 354.62 |
| 85.1499 | 354.57 | 89.90991 | 354.15 | 90.93994 | 354.07 | 91.42993 | 35495.38989 | | 353.25 |
| 95.71997 | 353.19 | 95.8999 | 353.15 | 96.17993 | 353.09 | 96.5199 | 35399.69995 | | 352.3 |
| 101.0299 | 352 | 101.1499 | 351.97 | 101.6199 | 351.85 | 103.4999 | 351.36 | 103.86 | 351.26 |
| 104.7699 | 351 | 108.1899 | 350.07 | 108.4399 | 350 | 110.2 | 349.5 | 110.6 | 349.38 |
| 111.7 | 349 | 115.2499 | 348.02 | 115.33 | 348 | 115.95 | 347.82 | 118.9999 | 347 |
| 119.7999 | 346.81 | 123.3099 | 346 | 125.99 | 345.44 | 128.1799 | 345 | 130.59 | 344.5 |
| 132.7899 | 344.06 | 133.11 | 344 | 133.5699 | 343.92 | 138.6499 | 343 | 142.9099 | 342.41 |
| 145.49 | 342 | 149.7499 | 341.42 | 152.5299 | 341 | 155.6599 | 340.46 | 158.4099 | 340 |
| 160.58 | 339.69 | 165.1199 | 339 | 168.1599 | 338.58 | 171.8699 | 338 | 176.1799 | 337.58 |
| 177.2599 | 337.51 | 180.4999 | 337.22 | 182.49 | 337.02 | 182.86 | 337.02 | 183.09 | 337.01 |

| | | | | | |
|---|---|---|---|---|---|
| 184.1599 | 337.01185.3799 | 337 191.33 | 337 191.95 | 336.94 192.7 | 336.81 |
| 193.97 | 336.6197.2999 | 336198.5499 | 336227.4199 | 335.98 230.48 | 335.99 |
| 238.3099 | 336241.1599 | 336 241.86 | 335.99242.1199 | 336250.4099 | 336 |
| 250.7599 | 336.01252.0099 | 336.01257.8099 | 336.15 265.61 | 336.29 266.58 | 336.3 |
| 266.9299 | 336.29310.2999 | 336.32 327.84 | 336.05328.0099 | 336.05331.2599 | 336 |
| 342.99 | 335.96346.6299 | 335.97351.8799 | 335.97359.9999 | 336 363.84 | 336 |
| 365.2599 | 336.01367.0499 | 336372.2599 | 336373.1599 | 335.99 387.83 | 336 |
| 388.4299 | 336.01399.0299 | 336.25409.1899 | 336.26 419.95 | 336.21420.0499 | 336.21 |
| 425.0299 | 336 425.59 | 336443.1299 | 335.98461.1899 | 335.99 462.98 | 335.98 |
| 465.5199 | 335.98 470.08 | 335.99 482.73 | 336502.4199 | 336.81 505.71 | 337 |
| 507.2 | 337510.2999 | 336.91511.9399 | 336.91 513.86 | 336.9515.9999 | 336.87 |
| 539.1199 | 336.6551.8799 | 336.49 552.47 | 336.49563.6399 | 336.56568.5299 | 336.69 |
| 577.0499 | 337 578.1 | 337584.4399 | 337.02586.6899 | 337.02590.1799 | 337 |
| 594.46 | 336.82 600.73 | 336.61608.3799 | 336.61617.7599 | 336.75 618.98 | 336.8 |
| 621.1199 | 336.85624.5499 | 336.98 624.98 | 336.99625.0699 | 336.99 625.33 | 337 |
| 627.73 | 337 637.1 | 336.83 637.34 | 336.83637.7999 | 336.84640.1899 | 336.88 |
| 643.95 | 336.93648.4999 | 337651.4199 | 337654.2899 | 336.98654.7599 | 336.98 |
| 657.6599 | 336.95663.9199 | 336.9666.4299 | 336.89670.5699 | 336.92678.1899 | 337 |
| 685.0499 | 337.42 694.84 | 337.55705.7899 | 337.36706.1599 | 337.35709.9299 | 337.14 |
| 711.0199 | 337.11 712.47 | 337715.3799 | 336.35 716.35 | 336.14717.0199 | 336 |
| 717.33 | 335.93721.7499 | 335 726.48 | 335760.5699 | 335.99761.8099 | 336 |
| 762.11 | 336762.3999 | 336.01 764.23 | 336.02764.9299 | 336.03778.9199 | 336.7 |
| 782.84 | 336.88784.2799 | 337818.0399 | 337841.0399 | 336.9 859.21 | 336.97 |
| 862.1899 | 336.99 863.08 | 336.99 865.86 | 337 874.71 | 337.37 884.46 | 337.56 |
| 890.49 | 337.61891.5299 | 337.6902.7499 | 337.37917.1299 | 337.03 917.71 | 337.01 |
| 919.3699 | 337.01925.1399 | 337.26 927.74 | 337.22930.7599 | 337.15 930.83 | 337.15 |
| 932.6899 | 337938.7999 | 336.24 940.85 | 336951.3799 | 335.99 958.84 | 336 |
| 962.0199 | 336971.5299 | 336.4 973.71 | 336.45977.3999 | 336.57977.8699 | 336.57 |
| 980.7599 | 336.63 981.08 | 336.64984.8199 | 336.59990.2599 | 336.47998.6799 | 336.01 |
| 998.85 | 336.01 1008.75 | 335.98 1010.2 | 335.98 1018.55 | 336 1026.69 | 336.1 |
| 1031.38 | 336.07 1038.76 | 336 1041.24 | 335.61 1044.34 | 335 1045.83 | 335 |
| 1047.08 | 334.99 1047.93 | 335 1049.35 | 335 1082.7 | 335.89 1084.76 | 335.94 |
| 1085.75 | 335.97 1086.99 | 336 1091.65 | 336.31 1102.71 | 337 1105.7 | 337.01 |
| 1115.06 | 337.01 1116.63 | 337.02 1121.19 | 337.03 1123.91 | 337.03 1132.93 | 337 |
| 1135.42 | 337 1137.56 | 336.99 1137.63 | 336.99 1140.36 | 337 1141.87 | 337 |
| 1142.13 | 337.01 1143.41 | 337.02 1143.83 | 337.02 1145.74 | 337.04 1146.28 | 337.03 |
| 1150.19 | 337 1158.59 | 336.97 1163.25 | 336.99 1166.08 | 336.99 1169.07 | 336.93 |
| 1170.34 | 336.82 1171.32 | 336.84 1172.4 | 336.79 1175.26 | 336.51 1177.38 | 336.33 |
| 1177.94 | 336.28 1178.75 | 336.19 1180.51 | 336 1212.41 | 336 1236.51 | 335.26 |
| 1244.45 | 335 1248.54 | 334.7 1257.8 | 334 1263.87 | 334 1267.16 | 334.01 |
| 1270.27 | 334.01 1270.9 | 334 1275.35 | 333.99 1278.7 | 333.99 1283.93 | 334 |
| 1287.61 | 334 1289.46 | 334.5 1291.09 | 335 1293.41 | 335.63 1294.75 | 336 |
| 1295.8 | 336.25 1298.77 | 337 1299.56 | 337.03 1299.64 | 337.03 1301.7 | 337.02 |
| 1304.17 | 337 1307.35 | 336.94 1310.1 | 336.91 1315.11 | 337 1322.88 | 337.06 |
| 1324.99 | 337.07 1330.29 | 337.03 1336.06 | 337 1339.7 | 336.99 1342 | 336.99 |
| 1345.01 | 336.98 1346.17 | 336.98 1352.14 | 336.97 1365.04 | 336.98 1372.8 | 337 |
| 1372.98 | 337 1402.14 | 337.95 1402.36 | 337.95 1402.71 | 337.96 1403.16 | 337.97 |
| 1403.42 | 337.98 1404.86 | 337.98 1406.48 | 337.94 1407.06 | 337.92 1409.69 | 337.9 |
| 1415.73 | 337.82 1420.84 | 337.74 1459.18 | 337.57 1460.16 | 337.47 1466.74 | 337 |
| 1467.7 | 337 1468.14 | 336.99 1468.59 | 337 1468.77 | 337 1474.75 | 337.01 |
| 1481.76 | 337.01 1485.43 | 337 1487.2 | 337 1495.73 | 336.98 1498.04 | 336.98 |
| 1504.55 | 337 1507.46 | 337 1509.55 | 337.01 1515.57 | 337.02 1526.41 | 337 |
| 1530.47 | 336.92 1538.17 | 336.79 1540.33 | 336.82 1550.85 | 337 1551.58 | 337.11 |
| 1552.28 | 337.1 1553.33 | 337.12 1554.94 | 337.16 1557.11 | 337.24 1568.98 | 337.72 |
| 1571.07 | 337.76 1571.28 | 337.77 1573.53 | 337.84 1574.82 | 337.87 1575.36 | 337.87 |
| 1579.44 | 337.89 1579.72 | 337.89 1581.45 | 337.87 1584.34 | 337.82 1587.1 | 337.79 |
| 1591.6 | 337.6 1595.96 | 337.49 1604.41 | 337 1607.38 | 336.65 1616.47 | 336.66 |
| 1630.31 | 337 1630.67 | 337 1644.53 | 337.04 1656.14 | 337.02 1663.07 | 337.02 |
| 1663.67 | 337.01 1665.95 | 337.02 1668.95 | 337 1670.2 | 337 1681.36 | 336 |
| 1688.34 | 335.93 1690.16 | 335.92 1692.24 | 335.93 1693.72 | 335.94 1697.73 | 335.96 |
| 1702.3 | 335.97 1703.55 | 335.98 1703.93 | 335.98 1704.13 | 335.99 1704.58 | 336 |
| 1704.63 | 336 1706.4 | 336.28 1711.22 | 337 1712.7 | 337.47 1714.31 | 338 |
| 1715.99 | 338.53 1717.98 | 339 1718.07 | 339 1720.63 | 339.05 1721.3 | 339.05 |
| 1722.46 | 339.07 1722.82 | 339.11 1727.11 | 339.49 1727.65 | 339.51 1732.91 | 340 |
| 1741.45 | 340 1742.17 | 340.01 1768.67 | 340 1777.65 | 339.97 1783.38 | 339.97 |
| 1793.09 | 340 1799.8 | 340.39 1802.59 | 340.57 1804.74 | 340.7 1809.87 | 341 |
| 1817.48 | 341 1817.79 | 340.99 1818.27 | 341 1818.9 | 340.99 1831.15 | 340.91 |
| 1836.97 | 340.9 1838.2 | 340.91 1838.49 | 340.91 1840.9 | 340.93 1841.14 | 340.93 |
| 1844.56 | 340.95 1845.76 | 340.96 1846.77 | 340.96 1847.84 | 340.97 1848.39 | 340.97 |
| 1853.57 | 341 1869.33 | 341 1879.6 | 340.99 1885.26 | 341 1890.74 | 341.09 |
| 1893.15 | 341.13 1896.07 | 341.2 1896.18 | 341.2 1907.34 | 341.37 1914.72 | 341.47 |
| 1936.1 | 341.41 1936.28 | 341.41 1938.11 | 341.4 1944.76 | 341.38 1949.59 | 341.43 |
| 1956.2 | 341.53 1959.33 | 341.49 1961.72 | 341.56 1964.81 | 341.48 1965.34 | 341.47 |
| 1966.37 | 341.49 1967.2 | 341.48 1971.75 | 341.48 1972.65 | 341.46 1987.03 | 341.53 |
| 2008.5 | 341.68 2009.19 | 341.69 2014.81 | 341.76 2025.33 | 341.91 2030.37 | 341.89 |
| 2033.47 | 341.97 2035.26 | 341.97 2035.85 | 341.96 2039.15 | 341.9 2039.24 | 341.9 |
| 2044.18 | 341.78 2054.37 | 341.74 2064.68 | 341.79 2065.42 | 341.81 2065.95 | 341.81 |
| 2072.93 | 341.91 2077.36 | 341.99 2078.42 | 341.99 2079.5 | 342 2081.81 | 342 |
| 2083.16 | 341.99 2083.95 | 341.99 2091.82 | 341.94 2092.44 | 341.94 2094.43 | 341.95 |

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Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05171.8699     .04 1714.31     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      171.8699 1714.31           746.69   744.3  702.53              .1       .3

CROSS SECTION


RIVER: WASH45
REACH: Centerline Align   RS: 4000

INPUT
Description:
Station Elevation Data    num=     430
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  355.761.459961 355.081.619995     355    1.75 354.933.539917     354
4.569946 353.515.559937    3536.959961 352.267.439941    3527.959961 351.72
 9.22998     351 10.8999 350.1111.10999     35011.46997 349.812.84998     349
13.97998 348.4114.70996    34816.53992     34717.15991 346.6818.40991     346
20.09998 345.1320.34998    345 20.5199 344.9122.22998    34422.68994 343.77
   24.13    34325.22998 342.4326.04993     342 27.3999 341.3328.05994     341
   28.87   340.6   30.25    34031.72998  339.332.41992    33934.23999  338.2
34.68994     338 35.8999 337.4936.71997 337.1437.05994    33740.79993     336
 42.0199 335.6846.50989 334.4851.15991 333.2552.08997    33355.46997   332.1
   55.88    33258.00989 331.5460.56995     331   62.38 330.7767.28992     330
83.60999 329.9189.70996 329.89  107.49 329.97111.7899     330  112.74 330.03
119.0699 330.55  121.62 330.69123.2999 330.68  123.47 330.68  136.35 330.89
  141.36 330.98142.5099 330.98143.6599 330.99146.8899 330.99  150.24     331
  243.23 331.01257.5399     331  263.97 330.91  264.84 330.89  265.09   330.9
  265.22   330.9  267.36 330.92  268.84 330.94270.1399 330.95  270.84 330.96
271.9199 330.96  276.38 330.92277.1799 330.91  279.59 330.87289.4099 330.72
298.7799 330.82302.6699 330.67305.2599 330.72308.9399  330.5314.6399 330.18
  315.33 330.17316.9099 330.12317.9199    330329.8099 329.48  337.47 329.54
351.3199 329.98353.4299    330354.7699 330.01  364.83  330.1375.5499 330.01
376.1499    330381.9199    330382.7899  330.1383.1399 330.12391.0599 330.94
391.5299 330.95394.5499     331  394.61     331  409.49 331.15424.3899     331
446.6799 330.96452.8999 330.96  468.96 330.99472.4199 330.99  487.24 331.08
     495 331.11499.5299  331.1509.8099 331.05519.8099 331.05522.0099 331.01
522.3199    331526.3199 330.98  527.96 330.98  533.09     331   533.7     331
534.7999 331.13535.1799 331.18538.6399 331.62  541.74    332546.5199     332
547.4399 331.96549.6899 331.84565.2899 331.36  569.87 331.25  570.87 331.25
583.2799 331.15597.1599     331  599.96     331  600.87 330.99     602 330.99
  609.11 331.03  614.59    331614.6599    331629.4299 330.59638.0599 330.58
642.6499     331   649.7 331.01666.0599    331666.5599 330.99670.6399 330.97
674.5299    331675.6499    331679.4099 330.85682.2799 330.57  686.86     330
  688.97 329.98  690.59 329.97  693.87    330699.5099 330.02699.9099 330.02
  702.47 330.01703.6499 330.01  708.13 330.17  709.21  330.2711.0199 330.28
711.5199 330.29712.6799 330.34721.5199     331  724.35 331.04725.4299 331.05
726.8899 331.03728.8099 331.03     730 331.02  740.59 331.35752.0299  331.8
   753.7 331.86757.2899    332772.6499    332776.7999 331.82781.4099 331.57
  784.13 331.43  784.58  331.4791.6599     331  795.09 330.43798.4099     330
  806.59 329.91     815    330819.9399 330.07  829.48 330.13832.0399 330.15
833.3899 330.14833.9199 330.14842.5199 330.08854.5499 330.53  855.59 330.63
860.4399     331  865.97 331.67866.7699 331.76  868.96     332  899.48     332
904.1799 331.15905.0499     331  928.37 331.01  933.83 331.08938.6399 331.01
947.8899 331.01953.0199 331.02953.6799 331.02962.0599    331976.8199 330.93
980.1499 330.91  983.88 330.93999.0099 330.99  999.38     331   999.6     331
 1003.56 331.16 1003.77 331.16 1004.06 331.17  1007.3 331.32 1015.91 331.68
 1021.69 331.54 1022.03 331.54 1024.49 331.61 1055.02 331.12 1059.23 331.12
 1085.23 331.03 1090.96     331 1096.42     331 1100.58 330.99 1103.76 330.99
 1108.32     331 1113.22     331 1114.03 331.01 1115.85     331 1117.56     331
 1120.74 330.86 1126.58 330.64 1138.24 330.01 1138.49 330.01 1138.74 330.02
 1142.15 330.28 1144.02 330.27 1145.83 330.27  1147.4 330.28 1161.85 330.11
 1167.46 330.03 1169.65 330.02 1173.04 330.02 1183.19     330 1183.62     330
 1184.06 329.99 1184.36 329.99  1193.9  329.5 1197.76 329.32 1202.03 329.26
 1205.07 329.23 1206.09 329.21 1206.24 329.21 1208.55 329.31 1216.39 329.72
 1219.83     330 1241.92     330 1253.36 330.03 1255.01 330.03 1266.22     330
 1267.91 329.91 1273.39 329.68 1283.37 329.49 1292.11 329.24 1302.63     329
 1304.42     329 1304.92 329.04 1305.25 329.06 1305.89 329.13 1311.83 329.73
 1312.75 329.77 1313.47 329.79 1317.99     330 1318.48 330.01 1323.97 330.04
 1329.72 330.06 1335.11  330.1 1336.93 330.09 1340.61 330.09 1348.15 330.05
 1348.85 330.05 1349.05 330.04 1349.71 330.04 1358.13 330.03 1358.18 330.02
 1360.32 330.02 1362.03     330 1364.66 329.67 1366.21  329.6 1371.01 329.31
 1372.87 329.23 1374.01 329.23 1375.15  329.3 1375.89 329.26 1379.44 329.25
 1382.92 329.26 1384.76 329.31 1393.89 329.54  1398.8 329.63 1427.57     330
 1430.97     330 1450.47 330.82 1452.86 330.91 1453.16 330.92 1454.92     331
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1456.07 | 331 | 1457.58 | 331.01 | 1458.29 | 331.01 | 1460.44 | 331 | 1460.93 | 331 |
| 1463.24 | 330.99 | 1471.65 | 330.97 | 1473.66 | 330.96 | 1487.45 | 330.99 | 1487.74 | 331 |
| 1488.16 | 331 | 1491.61 | 331.01 | 1499.26 | 331.01 | 1503.1 | 331 | 1504.17 | 331 |
| 1504.93 | 330.99 | 1507.25 | 330.98 | 1508.11 | 330.98 | 1509.98 | 330.97 | 1513.79 | 330.97 |
| 1516.24 | 331 | 1531.39 | 331 | 1533.59 | 330.99 | 1536.7 | 331 | 1582.21 | 331 |
| 1583.12 | 330.98 | 1583.31 | 330.97 | 1584.17 | 331 | 1589.39 | 331 | 1601.2 | 330.96 |
| 1602.48 | 330.96 | 1615.4 | 331 | 1616.25 | 331 | 1616.45 | 331.01 | 1617.84 | 331.01 |
| 1634.09 | 331.79 | 1636.77 | 331.91 | 1636.86 | 331.92 | 1638.41 | 332 | 1638.52 | 332 |
| 1639.36 | 332.01 | 1639.81 | 332.02 | 1640.48 | 332.02 | 1641.35 | 332.03 | 1642.76 | 332.03 |
| 1643.01 | 332.04 | 1643.3 | 332.04 | 1647.83 | 332.07 | 1648.8 | 332.07 | 1656.09 | 332.1 |
| 1660.94 | 332.13 | 1667.67 | 332.07 | 1675.17 | 332.13 | 1676.22 | 332.1 | 1676.37 | 332.11 |
| 1677.55 | 332.11 | 1678.48 | 332.13 | 1679.95 | 332.17 | 1687 | 332.22 | 1693.59 | 332.23 |
| 1694.13 | 332.24 | 1701.73 | 332 | 1707.02 | 332 | 1709.43 | 332.19 | 1711.15 | 332.23 |
| 1711.66 | 332.27 | 1712.07 | 332.27 | 1721.43 | 332.97 | 1723.86 | 332.97 | 1728.62 | 332.96 |
| 1730.9 | 332.97 | 1731.85 | 332.97 | 1734.31 | 332.98 | 1742.68 | 332.99 | 1746.81 | 332.99 |
| 1747.35 | 333 | 1747.66 | 333 | 1748.69 | 332.99 | 1752.03 | 332.99 | 1754.66 | 333 |
| 1755.7 | 333 | 1756.61 | 333.01 | 1795 | 334 | 1802.87 | 334 | 1804.19 | 334.01 |
| 1806.75 | 334.01 | 1826.06 | 334.52 | 1832.83 | 334.67 | 1838.23 | 334.77 | 1841.26 | 334.82 |
| 1841.42 | 334.82 | 1842.81 | 334.85 | 1848.35 | 334.99 | 1850.78 | 334.99 | 1856.39 | 335 |
| 1860.94 | 335 | 1862.88 | 335.01 | 1873.42 | 335.27 | 1887.18 | 335.52 | 1889.03 | 335.56 |
| 1903.99 | 335.97 | 1904.93 | 335.99 | 1905.26 | 335.99 | 1906.08 | 336 | 1919.46 | 336 |
| 1950.09 | 336.65 | 1958.69 | 336.82 | 1959.05 | 336.83 | 1966.32 | 337 | 1971.24 | 337 |
| 1988.56 | 337.32 | 2003.3 | 337.67 | 2005.14 | 337.72 | 2016.36 | 338 | 2016.43 | 338 |
| 2018.84 | 338.25 | 2024.46 | 339 | 2027.93 | 339.61 | 2029.97 | 340 | 2032.6 | 340.45 |
| 2033.83 | 340.49 | 2036.05 | 340.52 | 2038.24 | 340.5 | 2039.55 | 340.41 | 2039.82 | 340.4 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 55.88 | .04 | 1636.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 55.88 | 1636.77 | 580 | 500 | 425.02 | .1 | .3 |

CROSS SECTION

RIVER: WASH45
REACH: Centerline Align RS: 3500

INPUT
Description:
Station Elevation Data num= 259

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 361.2800293 | | 3619.849976 | | 360.1511.27002 | | 36011.58997 | | 359.99 |
| 12.04004 | 359.9916.04993 | | 359.9316.70996 | | 359.9320.29993 | | 359.3622.54004 | | 359.35 |
| 24.97998 | 359.2238.72998 | | 358.9538.80994 | | 358.9538.93994 | | 358.9439.95996 | | 359 |
| 50.88 | 360.03 | 51.12 | 36051.28003 | | 36051.42004 | | 360.01 | 51.5 | 360 |
| 51.57996 | 36051.69995 | | 359.98 | 53.63 | 359.58 | 55.25 | 359.3355.96997 | | 359.19 |
| 57.14001 | 35962.45996 | | 358.0162.51001 | | 35863.19995 | | 357.8263.83997 | | 357.61 |
| 68.93994 | 356.0173.10999 | | 354.376.10999 | | 35377.35999 | | 352.4181.32996 | | 350.73 |
| 82.71997 | 35083.33997 | | 349.6586.64001 | | 348.2687.15002 | | 34889.04004 | | 347.23 |
| 89.55994 | 34791.84998 | | 346.1592.65002 | | 345.8494.46997 | | 345 | 95.63 | 344.44 |
| 96.40002 | 34497.67004 | | 343.3798.34998 | | 343 | 100.28 | 342.11 | 100.5 | 342 |
| 102.61 | 341102.6799 | | 340.97 | 104.62 | 340105.6799 | | 339.51 | 106.92 | 339 |
| 108.52 | 338.29 | 110.45 | 337.63 | 112.03 | 337 | 113.9 | 336.36 | 115.02 | 336 |
| 116.4399 | 335.57 | 118.14 | 335 | 119.62 | 334.56121.1899 | | 334 | 124.16 | 333.05 |
| 124.2999 | 333125.3099 | | 332.76135.8199 | | 330.42 | 137.95 | 330 | 142 | 329.37 |
| 144.03 | 329 | 150.62 | 328 | 160.24 | 327 | 181.97 | 326 | 187.26 | 325.86 |
| 187.89 | 325.83 | 212.83 | 325 | 262.16 | 325.06 | 281.73 | 325.16 | 286.79 | 325.55 |
| 287.76 | 325.68 | 291 | 326 | 295.83 | 326.03 | 301.66 | 326.02 | 308.27 | 326.4 |
| 308.53 | 326.41 | 310.91 | 326.56311.5699 | | 326.59 | 311.84 | 326.59 | 325.79 | 326.96 |
| 325.9299 | 326.95 | 326.12 | 326.94327.3099 | | 326.94 | 328.63 | 326.84 | 333.4 | 326.59 |
| 340.03 | 326 | 353.87 | 325 | 364.67 | 324.92 | 375.84 | 325 | 377.23 | 325.14 |
| 382.97 | 325.22 | 388.86 | 325.12 | 389.03 | 325.11 | 390.08 | 325 | 390.33 | 324.99 |
| 392.11 | 324.96392.4399 | | 324.96394.3199 | | 325 | 402.73 | 326432.6799 | | 326.08 |
| 466.35 | 326 | 476 | 326.22495.7999 | | 326.41 | 505.74 | 326.31 | 517.27 | 326.48 |
| 518.2999 | 326.53 | 519.01 | 326.52 | 519.48 | 326.54520.8099 | | 326.56 | 539.48 | 326.32 |
| 543.22 | 326.14543.4299 | | 326.14 | 546.45 | 326 | 547.14 | 325.99 | 571.5 | 326 |
| 579.5499 | 326.23 | 585.23 | 326586.5599 | | 325.81 | 587.6 | 325.81 | 598.87 | 325.14 |
| 600.29 | 325.1 | 600.4 | 325.09 | 602.72 | 325.11602.9299 | | 325.1 | 603.01 | 325.09 |
| 603.52 | 325.07603.8099 | | 325.05 | 610.33 | 325.16 | 635.5 | 325.09 | 648.66 | 324.9 |
| 654.99 | 325 | 666.03 | 325.91 | 667.45 | 326695.0599 | | 326.06 | 717.22 | 326.27 |
| 717.61 | 326.25717.8099 | | 326.26 | 718.29 | 326.24 | 718.99 | 326.25719.1799 | | 326.25 |
| 725.63 | 326.51 | 729.97 | 327 | 771.48 | 327 | 806.91 | 326.15819.7999 | | 326.01 |
| 846.9299 | 326855.6899 | | 327855.8099 | | 327.01863.9299 | | 327.33 | 880.71 | 327.39 |
| 897.2 | 327.34906.9299 | | 327 | 926.78 | 327927.4399 | | 327.01929.0599 | | 327.01 |
| 929.5699 | 327 | 963.67 | 327 | 964.9 | 327.03 | 965.14 | 327.03965.6799 | | 327.02 |
| 970.64 | 327 | 990.77 | 327 1027.91 | | 326 1038.21 | | 326 1039.01 | | 326.09 |
| 1040.77 | 326.2 | 1051.59 | 326.98 1057.67 | | 327 1058.12 | | 327.01 1058.96 | | 327 |

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 1079.33     327 1092.41   327.1  1101.1     327 1139.62  326.84 1209.06  327.01
 1209.79     327 1211.79  326.59 1215.34     326 1223.22  325.59 1239.43  325.41
 1240.73  325.43 1240.96  325.43 1259.26     325 1269.03  325.01 1281.05     326
 1310.36     326 1310.96  326.01 1344.84     326  1361.5  326.64 1368.74     327
 1369.04  327.01 1379.65  326.83 1379.84  326.83 1392.14  326.56 1393.38  326.57
 1398.13     326 1421.28     326  1426.7     325 1450.42     325 1457.51  325.33
 1466.68     326 1507.86  325.99 1510.04     326 1524.24     327 1565.01     327
 1600.05  327.74 1644.34     329 1645.47     329 1688.54  329.81 1691.05  329.82
  1695.8     330 1707.73     330 1709.31  330.02 1709.38  330.03  1756.3  330.97
 1756.49  330.97 1757.41     331 1758.43  331.09 1758.62   331.1 1765.45  331.63
 1772.97  331.81 1773.96  331.87 1775.38  331.88 1775.67   331.9 1779.41  331.99
 1779.69     332 1785.78  331.99 1800.89  331.64 1805.96  331.72 1809.98  331.99
 1831.06     332 1863.74  332.97 1863.87  332.97 1865.49     333 1882.99     333
  1924.4  333.91 1924.59  333.92    1925  333.92    1938  334.01  1986.1  334.99
 1986.16  334.99 1986.56     335 1996.96     335 2001.67  335.01 2012.58  335.23
 2012.79  335.23  2013.8  335.25 2014.16  335.25 2025.36   335.5

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  150.62     .04 1600.05     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        150.62 1600.05           679.75     500  276.43              .1       .3

CROSS SECTION


RIVER: WASH45
REACH: Centerline Align   RS: 3000

INPUT
Description:
Station Elevation Data    num=     495
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  355.06 .670166 355.024.080078  355.026.540039  355.017.939941  355.01
 8.52002     35511.52002     35512.12012  354.8712.57007  354.7616.45996     354
18.83008  353.6119.17993 353.5620.32007   353.420.65015  353.3423.70996     353
24.12012  352.9924.70996 352.9126.42017  352.7328.05005  352.5328.98999  352.44
32.88013     35233.17017 351.9633.44995  351.9240.30005     35140.58008  350.95
42.26001  350.7443.38013 350.64   44.25  350.6446.07007  350.38   46.25  350.37
46.91016  350.3448.28003 350.1648.98999  350.0749.13013  350.0649.61011     350
53.94995  349.4356.21997 349.1256.91016     34962.76001     34863.05005  347.95
63.15015  347.9463.46997 347.8864.94995  347.6265.20996  347.5766.02002  347.36
66.65015  347.21 67.3501     34767.94995  346.83 70.8501     34673.61011  345.35
74.81006     34577.23999 344.3378.38013     34480.23999  343.5380.96997  343.35
81.58008  343.2282.76001     34383.87012  342.7987.91016     34290.76001  341.47
93.20996     34198.57007  340.199.13013     340  100.47  339.78105.3301     339
108.4102  338.48111.3301     338  117.29     337123.6001     336   128.3  335.17
129.1602     335  129.77 334.87133.8101     334137.3401  333.11  137.71     333
  139.55  332.49  141.51     332142.5901  331.52143.9001     331     146  330.09
   146.2     330146.4202 329.91148.5601     329  150.42  328.14150.7201     328
  151.04  327.85154.9801 326.09155.3601  325.91157.3301     325158.2101  324.66
159.5701     324160.6801 323.62  161.39  323.41  162.91     323164.2201  322.65
  165.15  322.44  167.14     322168.4301  321.76  173.05     321  173.77  320.99
178.8201  320.99  182.55 320.98  184.87  320.98187.8401     321  198.25  321.75
198.6101  321.75199.9301 321.83  212.41  321.77  224.67  321.82  226.24  321.83
232.3301   321.9237.4801 321.92  238.42  321.92  239.91   321.9242.2101  321.88
  244.27  321.83   248.5 321.69   251.3  321.67  252.89  321.65  253.12  321.64
   253.5  321.63  261.87  321.5  267.66  321.43268.6001  321.44  269.13  321.44
   270.5  321.42  270.63 321.42  271.49  321.41  272.15  321.41272.8501  321.42
  281.79  321.29  293.16 321.02  295.29     321295.4301     321303.6001   320.2
  304.76  320.08   305.5     320  305.91     320  306.66  319.99  309.02  319.97
  309.14  319.97  309.78 319.98311.9701  319.99   312.3     320  312.64     320
324.2001  320.49  328.41 320.66   335.8  320.94  336.79  320.97  337.49     321
  343.28     321  349.65 320.36352.8201     320362.0701  319.89  370.27  319.98
371.6101     320  391.88 320.06  411.89     320416.3601  319.22416.6101  319.18
  417.79     319430.0701 318.94  431.38  318.95442.3401     319  443.03  319.14
446.5601     320459.3601     320  464.17  319.25466.8201  319.21  468.91  319.19
470.1001  319.24472.1001 319.33477.7301  319.49  484.49     320  485.62  320.12
497.5701     321497.8401     321502.6101  321.01  505.66     321  510.25     321
  515.88  320.98517.1801 320.98  522.25  320.99  522.52  320.99523.2101     321
  524.49  321.04   535.3 321.35541.0601  321.49  542.17  321.51551.7001  321.48
562.9701  321.42564.9301 321.39  573.26  321.28586.2101  321.05588.1101     321
601.7001     321  602.77 321.01   605.8  321.01  608.02     321  626.39     320
  634.79     320637.1901 319.99639.4601     320  641.14     320644.5601  320.46
  648.27     321653.5801 321.02  654.78  321.02655.6101  321.03  660.05  321.14
  673.05  321.43679.7001 321.39  690.28  321.09  693.02     321697.3401     321
702.9701  320.95705.1001 320.94706.5701  320.95710.8501     321     718  321.48
723.1001     322  751.26     322751.6101  321.99751.8101  321.99  753.67     322
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  764.92  322.01765.8101  322.02781.5801  322.17  782.15  322.18   782.4  322.18
798.9601  322.04   799.9  322.03  800.25  322.02805.4701  322.02807.5701  322.01
823.1101     322830.3201  322.02  834.66  322.04836.1901  322.03  842.64  322.01
845.1101  322.01  847.14     322  848.14  321.99848.7001  321.99  849.17  321.98
850.8501  321.97  852.05  321.97854.4301  321.98861.1001   321.8865.0701  321.68
877.8301  321.56  886.78  321.51  887.42  321.51892.1101  321.73  895.14  321.94
  897.88  321.97  900.29     322  914.25     322  924.49  321.04   924.9     321
930.0701     321  931.78  321.38934.3401     322946.5901  322.16  947.99  322.18
  949.67  322.16  960.13  322.23  960.28  322.24  962.66  322.11  964.38  322.01
965.2201     322965.6901  321.98967.2201  321.78  973.29  321.56  977.87  321.59
978.2301  321.64  980.25     322  985.49  322.03  985.88  322.03990.9501  322.06
992.1901  322.06  996.24  322.05 1010.99  322.24 1012.11  322.26 1013.53  322.28
 1024.22  322.23 1037.11  322.13 1040.01     322 1048.68  321.01 1048.78     321
  1054.2  320.98  1055.3  320.97  1058.1  320.99 1060.05     321 1070.41  321.64
 1077.32     322 1080.39  322.28 1082.93  322.52 1088.84     323  1095.9     323
 1097.29  322.99 1098.29  322.99 1098.87     323 1104.23  323.01 1104.76  323.01
 1107.69     323 1110.22     323 1118.09  322.97 1123.29  322.94 1125.96  322.96
 1135.81     323 1139.92     323 1148.67  322.71 1169.33  322.06 1169.62  322.05
 1169.85  322.04  1171.1     322  1175.9  321.49 1184.14  321.76 1187.47  321.92
 1189.45  321.93 1191.97  321.95 1195.48  321.97 1196.27  321.98 1196.74  321.98
 1199.35     322 1202.18  322.15 1220.26     323 1234.62     323 1236.47  322.98
  1238.6  322.98 1239.31  322.97  1275.2  322.33 1281.51  322.23 1282.59  322.21
 1286.82  322.14 1291.51  322.08 1292.65  322.06 1294.02  322.06 1295.68  322.07
 1296.85  322.13 1298.23  322.12  1303.1  322.38 1305.42   322.5 1312.79  322.93
 1313.93     323 1320.76  323.44 1330.37  323.56 1338.77  323.51 1341.43  323.51
 1349.83     323  1350.7  322.99 1353.85  322.98  1357.3     323 1360.07     323
 1360.84  323.01 1361.53  323.01 1377.13  323.05 1384.03  323.03 1386.17  323.03
 1389.86  323.02 1396.81  323.09 1397.29  323.09 1402.82     323  1405.9     323
 1410.59  322.55 1411.75  322.49 1412.92  322.47 1416.73  322.19 1417.41  322.13
 1422.48  322.14 1429.88  322.19 1470.41  322.38 1470.98  322.35 1476.54  322.75
 1477.31  322.76 1479.57     323 1481.67  323.34 1483.35  323.31 1487.46  323.62
 1510.56  323.71  1517.7  323.68 1521.93  323.35 1522.03  323.34  1535.7  322.26
 1536.04  322.24 1536.34  322.23 1537.42  322.22 1537.93   322.2 1538.17  322.18
 1542.59  322.13 1545.73  322.13 1552.16  322.23 1567.09  322.53 1569.69  322.57
 1573.53  322.65 1583.75  322.84  1584.7  322.86 1592.23     323 1604.09     323
 1608.29  322.99 1616.48     323 1618.48     323 1619.79  323.15 1625.44  323.91
 1626.03     324 1639.45  324.96 1639.95     325  1640.4     325 1671.44  325.87
 1673.72  325.93 1674.29  325.95 1674.42  325.95 1676.56     326 1676.73  326.01
 1676.84  326.01 1678.67  326.03 1682.87  326.03  1697.1   326.3 1709.18  326.46
 1714.07  326.51 1718.93  326.57 1729.86   326.6 1731.78   326.6 1737.48  326.68
 1745.27  326.81 1745.35  326.81  1748.5  326.88 1754.55  326.99 1754.62  326.99
 1755.15     327 1773.38  327.31 1774.66  327.34 1780.57  327.47 1782.16   327.5
 1785.06  327.57 1786.07  327.58 1787.05   327.6 1793.45   327.7 1797.41  327.75
 1809.14  327.88 1813.36  327.96 1816.78  327.96 1821.29     328 1822.99  328.01
 1824.34  328.01 1832.05  328.17 1845.91  328.43 1852.84   328.5 1855.77  328.52
 1861.44   328.6 1866.34  328.68 1867.62  328.69 1869.47  328.71 1871.18  328.72
 1882.99  328.95  1883.1  328.95 1885.98     329 1886.34     329 1899.75  329.15
 1900.79  329.17 1904.55  329.25 1913.37  329.42 1914.56  329.44 1924.41  329.65
 1936.79     330 1952.31     330 1953.62  330.04 1953.67  330.04 1983.16  330.99
 1985.49  330.99 1986.03     331 1994.32     331  1996.6  331.08 2018.48     332
  2026.7     333 2027.52  333.12 2033.94     334 2085.88     334 2086.39  333.99
 2087.46     334 2091.02     334 2096.09  334.01 2101.58     334 2104.39     334
 2105.82  333.99 2105.93  333.99 2106.55     334  2109.9     334 2148.46  334.64
 2154.81  334.77 2164.65     335 2166.02  335.03 2174.25  335.24 2194.55  335.68

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  162.91     .04 1583.75     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        162.91 1583.75           488.17     500   500.7              .1       .3

CROSS SECTION


RIVER: WASH45
REACH: Centerline Align   RS: 2500

INPUT
Description:
Station Elevation Data    num=     490
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  348.611.289795     3481.909912  347.71 3.47998     3474.199951  346.66
5.649902     3467.439941  345.438.099854  345.188.569824     3459.059814  344.98
10.19995  344.6311.11987  344.3712.02002  344.29 14.0498     34415.16992  343.92
16.36987  343.7516.45996  343.72   17.25  343.6718.67993  343.3919.43994  343.29
20.69995   343.221.08984  343.1623.01001  343.0523.23999  343.03 23.2998  343.02
23.44995     34326.32983  342.7126.52002  342.6626.86987  342.5928.77002     342
29.05981   341.929.21997  341.8329.34985  341.7929.98999   341.530.66992  341.22
```

| | | | | | |
|---|---|---|---|---|---|
| 30.92993 | 341.0931.11987 | 34131.76001 | 340.7533.38989 | 340.28 33.7998 | 340.19 |
| 34.0498 | 340.1534.27979 | 340.1434.42993 | 340.1435.10986 | 340.1135.23999 | 340.11 |
| 35.38989 | 340.1235.45996 | 340.1236.83984 | 34040.15991 | 339.7441.33984 | 339.62 |
| 41.47998 | 339.6 41.8999 | 339.5242.65991 | 339.4942.98999 | 339.4643.94995 | 339.34 |
| 44.78979 | 339.2545.19995 | 339.1945.77979 | 339.0946.15991 | 339.0346.37988 | 339 |
| 47.5 | 338.8747.69995 | 338.8647.85986 | 338.8548.73999 | 338.7848.88989 | 338.77 |
| 49.22998 | 338.7349.58984 | 338.7149.98999 | 338.6450.20996 | 338.650.56982 | 338.52 |
| 51.55981 | 338.4851.66992 | 338.4552.11987 | 338.4552.41992 | 338.4152.57983 | 338.41 |
| 53.27002 | 338.4754.42993 | 338.59 55.7998 | 338.7656.03979 | 338.77 56.6499 | 338.79 |
| 57.07983 | 338.7658.21997 | 338.6964.97998 | 337.865.77002 | 337.75 66.5498 | 337.63 |
| 66.72998 | 337.6167.28979 | 337.568.90991 | 337.1569.41992 | 33771.71997 | 336.51 |
| 74.42993 | 33676.03979 | 335.8276.96997 | 335.6378.80981 | 335.3280.94995 | 335 |
| 82.52002 | 334.8482.59985 | 334.8383.42993 | 334.7286.60986 | 33488.19995 | 333.73 |
| 92.38989 | 33393.53979 | 332.8494.56982 | 332.795.22998 | 332.5998.45996 | 332 |
| 99.19995 | 331.86102.5598 | 331.27 103.24 | 331.17103.5498 | 331.13103.6099 | 331.13 |
| 103.74 | 331.11103.8198 | 331.1 105.26 | 331105.5698 | 330.99 105.75 | 331 |
| 106.1299 | 330.94107.4099 | 330.83109.1699 | 330.62 109.97 | 330.54 111.25 | 330.39 |
| 112.02 | 330.29 113.71 | 330115.4099 | 329.74121.3899 | 329125.5999 | 328.44 |
| 126.73 | 328.32129.3298 | 328 130.52 | 327.86137.9199 | 327.01138.1399 | 327 |
| 138.4999 | 327139.1699 | 326.93140.2599 | 326.78147.0999 | 326.02147.7499 | 326.01 |
| 147.8999 | 326.01148.4099 | 326149.3799 | 325.91152.0499 | 325.65154.6499 | 325.39 |
| 155.0599 | 325.35155.6199 | 325.29158.9099 | 325167.3199 | 324.14167.9399 | 324.07 |
| 168.4399 | 324169.1899 | 323.92176.9399 | 323.13181.2198 | 322.7187.9399 | 322 |
| 200.3599 | 321.06201.0599 | 321201.3199 | 320.97210.4899 | 320218.2899 | 319.23 |
| 220.83 | 319241.5699 | 317.9259.5599 | 317261.3699 | 316.94261.9999 | 316.92 |
| 263.5399 | 316.97264.3799 | 317276.1299 | 317.05293.9698 | 317.39311.8099 | 317.67 |
| 321.6699 | 318323.5898 | 318.01324.9399 | 318.02327.5099 | 318.03328.8999 | 318.03 |
| 330.6599 | 318.06331.9899 | 318.05335.6399 | 318344.1099 | 317344.8999 | 316.69 |
| 346.8999 | 316348.7499 | 315.27349.5399 | 315 355.95 | 314.98360.1699 | 314.99 |
| 360.96 | 314.99363.0199 | 315383.2399 | 315.62389.0699 | 315.79391.3899 | 315.85 |
| 394.6199 | 316 398.45 | 316.95 398.7 | 317399.6199 | 317.14404.5199 | 318 |
| 408.0299 | 318.2417.9999 | 318.18430.3599 | 318.01430.4899 | 318430.7999 | 317.96 |
| 434.0199 | 317.5437.5898 | 317439.7999 | 316.64443.8398 | 316446.8499 | 315.23 |
| 450.1699 | 315.2453.8899 | 315.26454.1699 | 315.27456.8699 | 315.37458.9199 | 315.45 |
| 471.45 | 316474.1599 | 316.04 475.2 | 316.05477.2899 | 316.02478.5299 | 316.02 |
| 479.96 | 316488.3199 | 315.99490.1799 | 315.98498.4999 | 316500.0898 | 316 |
| 511.9399 | 317516.7599 | 317524.8099 | 316.97526.3099 | 316.96533.7999 | 316.93 |
| 548.1899 | 316.92552.5898 | 316.95553.6199 | 316.95554.5499 | 316.96563.7599 | 317 |
| 573.2999 | 317.27609.2799 | 317.64 609.58 | 317.63611.7198 | 317.65612.8999 | 317.63 |
| 612.9899 | 317.64621.2198 | 317.64629.9799 | 317.68631.2999 | 317.69631.6899 | 317.7 |
| 631.9399 | 317.71633.2999 | 317.71638.3699 | 317.78645.7699 | 317.79653.5699 | 317.82 |
| 664.5099 | 317.98665.3999 | 318667.0699 | 318667.6199 | 317.99674.6599 | 317.99 |
| 679.3599 | 318733.3799 | 317.99733.6299 | 318786.5999 | 318790.0099 | 318.01 |
| 793.0099 | 318.01798.9999 | 318864.4999 | 318868.8899 | 317.44869.2198 | 317.43 |
| 873.8799 | 317.09874.7499 | 317.08877.2799 | 317.16 878.08 | 317.18880.1099 | 317.24 |
| 899.8099 | 317.86902.4899 | 318913.7699 | 318928.1599 | 317.94945.0499 | 318.01 |
| 948.58 | 318.03972.7799 | 318.05992.0898 | 318 995.45 | 317.53998.8699 | 317 |
| 1014.19 | 316.95 1015.49 | 316.95 1027.73 | 317 1061.78 | 317.99 1062.25 | 317.99 |
| 1063.13 | 318 1064.92 | 318.03 1075.05 | 318.1 1078.9 | 318.08 1086.26 | 318.03 |
| 1088.3 | 318.01 1090.15 | 318 1094.09 | 317.27 1095.53 | 317 1096.27 | 317 |
| 1098.47 | 317.14 1114.9 | 318 1123.74 | 318.22 1150.89 | 318.68 1159.45 | 318.75 |
| 1160.07 | 318.73 1163.37 | 318.58 1163.65 | 318.57 1169.21 | 318.35 1170.34 | 318.31 |
| 1177.55 | 318 1183.93 | 317.2 1185.91 | 317 1199.6 | 317 1208.01 | 317.21 |
| 1234.33 | 318 1237.65 | 318.03 1238.1 | 318.03 1239.28 | 318.04 1247.76 | 318.53 |
| 1252.25 | 318.75 1252.32 | 318.75 1256.18 | 318.48 1257.39 | 318.4 1260.01 | 318.2 |
| 1260.47 | 318.15 1263.24 | 318 1263.66 | 318 1264.22 | 318.02 1264.69 | 318.03 |
| 1292.5 | 319 1327.85 | 319 1338.12 | 319.32 1344.92 | 319.51 1353.89 | 319.52 |
| 1364.88 | 319.63 1372.18 | 319.63 1379.82 | 319.59 1383.85 | 319.67 1384.17 | 319.67 |
| 1385.05 | 319.66 1390.03 | 319.58 1400.1 | 319.32 1403.6 | 319.16 1403.95 | 319.14 |
| 1405.88 | 319.11 1407.37 | 319.11 1407.85 | 319.12 1407.9 | 319.12 1411.48 | 319.32 |
| 1413.85 | 319.42 1415.64 | 319.45 1417.24 | 319.39 1418.48 | 319.35 1449.25 | 319 |
| 1451.69 | 319 1455.68 | 318.53 1459.26 | 318 1469.65 | 317.95 1470.25 | 317.95 |
| 1480.79 | 318 1498.78 | 318.05 1499 | 318.05 1527.3 | 317.97 1531.42 | 317.98 |
| 1536.02 | 317.98 1543.02 | 318 1586.32 | 319 1591.27 | 319 1598.88 | 318.88 |
| 1606.95 | 319 1607.56 | 319.09 1613.94 | 320 1615.25 | 320.03 1626.2 | 320.24 |
| 1626.93 | 320.23 1634.78 | 320.61 1636.68 | 320.65 1636.76 | 320.65 1637.05 | 320.67 |
| 1637.3 | 320.69 1638.18 | 320.67 1638.24 | 320.67 1649.19 | 320.9 1653.58 | 320.9 |
| 1655.97 | 320.97 1657.62 | 320.97 1665.76 | 321 1665.89 | 321 1676.99 | 322 |
| 1680.6 | 322.46 1682.35 | 322.71 1683.21 | 322.82 1683.96 | 322.92 1684.82 | 323 |
| 1689.4 | 323 1689.8 | 322.98 1690.76 | 322.99 1694.53 | 322.94 1696.09 | 322.93 |
| 1697.18 | 322.94 1697.38 | 322.94 1697.83 | 322.95 1698.62 | 322.95 1699.57 | 322.96 |
| 1701.19 | 322.98 1701.48 | 322.97 1706.07 | 322.97 1709.09 | 322.99 1709.78 | 323 |
| 1710.2 | 323 1712.1 | 322.99 1718.24 | 322.99 1719.54 | 322.98 1731.48 | 323 |
| 1737.78 | 323.16 1761.61 | 323.55 1761.82 | 323.55 1765.19 | 323.67 1770.54 | 323.87 |
| 1771.9 | 323.94 1773.11 | 324 1785.44 | 324 1813.43 | 325 1814.44 | 325 |
| 1816.58 | 325.01 1822.08 | 325.01 1828.04 | 325.26 1830.53 | 325.37 1843.93 | 325.98 |
| 1852.72 | 325.98 1853.92 | 325.99 1856.04 | 325.99 1856.8 | 326 1857.76 | 326 |
| 1859.22 | 326.01 1859.75 | 326.02 1860.03 | 326.02 1871.44 | 326.44 1883.88 | 327 |
| 1908.86 | 327.9 1910.15 | 327.94 1911.15 | 327.98 1911.22 | 327.98 1912.08 | 328 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1912.65 | 328 | 1913.84 | 328.02 | 1914.45 | 328.02 | 1916.14 | 328.04 | 1918.39 | 328.04 |
| 1926.96 | 328.33 | 1929.02 | 328.41 | 1931.07 | 328.46 | 1931.24 | 328.46 | 1942.45 | 328.99 |
| 1945.35 | 328.99 | 1946.93 | 329 | 1949.27 | 329.08 | 1970.73 | 330 | 1977.74 | 330.29 |
| 1982.15 | 330.46 | 1994.93 | 331 | 2005.9 | 331.53 | 2016.95 | 332 | 2026.88 | 332.48 |
| 2031.13 | 332.61 | 2032.89 | 332.66 | 2038.51 | 332.97 | 2040.94 | 332.97 | 2043.18 | 332.98 |
| 2044.84 | 333 | 2047.62 | 333.22 | 2048.96 | 333.33 | 2056.97 | 334 | 2069.26 | 334.64 |
| 2076.69 | 335 | 2085.55 | 335.61 | 2091.76 | 336 | 2097.95 | 336.26 | 2099.93 | 336.33 |
| 2102.51 | 336.43 | 2108.95 | 336.66 | 2110.09 | 336.68 | 2111.11 | 336.7 | 2118.07 | 337 |
| 2118.16 | 337 | 2118.22 | 337.01 | 2136.47 | 337.72 | 2138.95 | 337.81 | 2140.17 | 337.85 |
| 2141.37 | 337.9 | 2141.49 | 337.9 | 2143.66 | 337.99 | 2143.85 | 338 | 2144.23 | 338 |
| 2144.77 | 338.02 | 2148.07 | 338.15 | 2167.41 | 339 | 2169 | 339 | 2169.88 | 339.01 |
| 2171.21 | 339.01 | 2171.64 | 339.02 | 2171.85 | 339.02 | 2177.41 | 339.32 | 2179.9 | 339.45 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 220.83 | .04 | 1606.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 220.83 | 1606.95 | 502.84 | 500 | 505.29 | .1 | .3 |

CROSS SECTION

RIVER: WASH45
REACH: Centerline Align RS: 2000

INPUT
Description:
Station Elevation Data num= 361

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 352 | 12.8501 | 352 | 14.33008 | 351.6 | 415.19995 | 351.4 | 716.61987 | 351 |
| 17.03003 | 350.8 | 522.26001 | 349.1 | 22.60986 | 349 | 23.16992 | 348.8 | 324.81006 | 348.45 |
| 29.3999 | 347.5 | 929.98999 | 347.4 | 531.47998 | 347.05 | 31.60986 | 347 | 31.86987 | 346.91 |
| 34.16992 | 346.1 | 434.52002 | 346 | 36.54004 | 345.34 | 37.51001 | 345 | 38.69995 | 344.62 |
| 40.41992 | 344 | 42.6001 | 343.2 | 643.21997 | 343 | 45.67993 | 342.18 | 46.13989 | 342 |
| 52.23999 | 340.04 | 52.35986 | 340 | 55.5 | 339 | 57.44995 | 338.42 | 59.15991 | 338 |
| 61.78003 | 337.56 | 62.18994 | 337.42 | 63.75 | 337.03 | 63.87988 | 337 | 64.48999 | 336.97 |
| 64.55005 | 336.97 | 71.1499 | 336.26 | 73.60986 | 336.09 | 74.03003 | 336.05 | 74.18994 | 336.05 |
| 75.51001 | 336 | 75.95996 | 335.99 | 76.11987 | 335.99 | 76.22998 | 336 | 76.3501 | 335.99 |
| 78.54004 | 335.99 | 79.04004 | 335.95 | 85.19995 | 335.94 | 86.31995 | 335.9 | 91.37 | 335.56 |
| 95.72998 | 335.32 | 96.41992 | 335.27 | 98.78003 | 335.32 | 99.19995 | 335.26 | 99.57996 | 335.26 |
| 100.61 | 335.2 | 107.11 | 335.29 | 107.97 | 335.27 | 109.25 | 335.31 | 112.71 | 335.37 |
| 116.0599 | 335.33 | 120.9399 | 335.39 | 121.77 | 335.31 | 124.0499 | 335.22 | 124.75 | 335.26 |
| 124.9199 | 335.29 | 125.12 | 335.32 | 127 | 335.76 | 127.37 | 335.81 | 128.0699 | 336 |
| 130.53 | 336.84 | 131.04 | 337 | 133.83 | 337.92 | 134.0499 | 338 | 136.7999 | 338.97 |
| 136.86 | 338.99 | 136.91 | 339.01 | 139.95 | 340 | 141.38 | 340.35 | 142.6799 | 340.5 |
| 143.83 | 340.54 | 144.78 | 340.6 | 147.48 | 340.59 | 150.75 | 340.75 | 150.9199 | 340.74 |
| 151.46 | 340.72 | 156.22 | 340.32 | 157.47 | 340.3 | 160.84 | 340.41 | 62.0499 | 340.52 |
| 162.5699 | 340.61 | 164.01 | 341 | 166.27 | 341.46 | 167.01 | 341.48 | 168.1 | 341.39 |
| 169.25 | 341 | 170.84 | 340.32 | 171.65 | 340 | 172.87 | 339.42 | 175.3099 | 338.2 |
| 175.73 | 338 | 177.15 | 337.3 | 177.79 | 337 | 179.12 | 336.32 | 181.99 | 335.01 |
| 182.0499 | 334.99 | 183.95 | 334.15 | 186.01 | 333.36 | 188.4 | 332.49 | 189.2999 | 332.15 |
| 189.72 | 332 | 192.83 | 331.1 | 193.15 | 331 | 196.6899 | 330.08 | 196.96 | 330 |
| 198.16 | 329.67 | 198.58 | 329.54 | 200.1799 | 329 | 202.98 | 328.15 | 203.36 | 328 |
| 204.13 | 327.77 | 206.91 | 327 | 215.1699 | 325 | 217.84 | 324.52 | 220.1799 | 324 |
| 224.64 | 323.4 | 229.64 | 322.66 | 233.28 | 322 | 241.53 | 321 | 253.4199 | 319.83 |
| 279.29 | 318 | 295.35 | 317 | 300.63 | 316.6 | 310.62 | 316 | 317.16 | 315.72 |
| 329.76 | 315 | 343.7999 | 314 | 383.5 | 314 | 389.24 | 313 | 389.83 | 312.84 |
| 389.88 | 312.84 | 391.6699 | 312.92 | 412.8199 | 312.69 | 427.84 | 312.65 | 432.49 | 312.82 |
| 432.58 | 312.82 | 436.53 | 313 | 450.64 | 312.96 | 462.6799 | 313 | 485.97 | 312.99 |
| 498.88 | 312 | 505.79 | 312 | 522.88 | 312.24 | 531.46 | 312.27 | 532.37 | 312.25 |
| 535.96 | 312.42 | 539.13 | 312.44 | 541.54 | 312.4 | 543.58 | 312.32 | 545.04 | 312.47 |
| 545.66 | 312.49 | 546.13 | 312.55 | 547.0599 | 312.47 | 547.95 | 312.43 | 549.3199 | 312.55 |
| 551.8199 | 312.73 | 553.21 | 312.75 | 554.0499 | 312.73 | 554.27 | 312.74 | 554.61 | 312.73 |
| 556.1 | 312.79 | 590.45 | 312.77 | 609.54 | 313 | 625.53 | 313 | 642.26 | 313.98 |
| 642.6899 | 314 | 661.5499 | 314 | 679.13 | 313.52 | 680.5699 | 313.43 | 683.4 | 313.16 |
| 684.6699 | 313 | 692.03 | 313 | 707.28 | 313.54 | 714.8099 | 313.58 | 715.4399 | 313.6 |
| 715.66 | 313.61 | 715.8199 | 313.61 | 716.47 | 313.65 | 738.9 | 313.63 | 772.73 | 313 |
| 847.23 | 313 | 857.5699 | 313.5 | 871.9299 | 314 | 925.0699 | 313.98 | 948.73 | 313.68 |
| 961.01 | 313 | 967.54 | 312 | 977.96 | 312 | 1006.58 | 313 | 1015.67 | 314 |
| 1032.54 | 314.08 | 1044.77 | 314.34 | 1053.6 | 314.17 | 1053.86 | 314.17 | 1054 | 314.16 |
| 1054.22 | 314.16 | 1055.28 | 314.18 | 1062.61 | 314.05 | 1063.39 | 314 | 1071.4 | 313.32 |
| 1071.87 | 313.31 | 1073.47 | 313.18 | 1086.9 | 313.34 | 1111.48 | 314 | 1164.77 | 313.99 |
| 1164.85 | 314 | 1166.16 | 314 | 1186.71 | 315 | 1193.93 | 315 | 1201.06 | 314.63 |
| 1208.89 | 314 | 1227.92 | 314 | 1237.39 | 314.52 | 1254.38 | 315 | 1300.67 | 315 |
| 1301.19 | 314.97 | 1301.28 | 314.97 | 1302.94 | 314.84 | 1308.65 | 314.56 | 1311.81 | 314.46 |
| 1316.83 | 314 | 1321.71 | 313.99 | 1322.29 | 314 | 1323.35 | 314 | 1335.21 | 314.92 |
| 1336.63 | 315 | 1367.01 | 314.98 | 1377.99 | 314.5 | 1378.27 | 314.51 | 1379.89 | 314.37 |
| 1384.64 | 314.33 | 1389.35 | 314 | 1412.8 | 313.99 | 1415.26 | 314 | 1420.18 | 315 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1426.49 | 315 | 1432.95 | 314.45 | 1439.83 | 314 | 1442.24 | 313.98 | 1445.74 | 314 |
| 1455.41 | 314.53 | 1460.96 | 314.69 | 1464.2 | 314.73 | 1470.61 | 314.65 | 1488.63 | 314.99 |
| 1558.34 | 314.98 | 1580.33 | 314.4 | 1592.35 | 314 | 1613.76 | 313.84 | 1635.12 | 313.99 |
| 1635.22 | 314 | 1648.05 | 315 | 1662.97 | 316 | 1669.82 | 316.7 | 1671.94 | 316.87 |
| 1674.26 | 317 | 1675.33 | 317 | 1675.42 | 317.01 | 1688.43 | 317 | 1699.08 | 317.96 |
| 1699.13 | 317.96 | 1700.37 | 317.97 | 1700.71 | 317.98 | 1701.38 | 317.98 | 1701.94 | 318 |
| 1702.26 | 318 | 1703.18 | 318.13 | 1710.94 | 319 | 1721.94 | 320.96 | 1722.21 | 321 |
| 1732.4 | 322 | 1742.1 | 322.32 | 1747.97 | 322.36 | 1754.44 | 322.9 | 1754.7 | 322.9 |
| 1755.8 | 323 | 1774.15 | 323.63 | 1774.66 | 323.64 | 1781.06 | 324 | 1793.3 | 324.02 |
| 1801.15 | 324.23 | 1801.33 | 324.24 | 1801.57 | 324.24 | 1821.42 | 324.91 | 1821.51 | 324.91 |
| 1822.11 | 324.93 | 1822.48 | 324.95 | 1824.05 | 325 | 1824.34 | 325 | 1824.83 | 325.01 |
| 1825.69 | 325.01 | 1851.44 | 325.74 | 1851.65 | 325.74 | 1856.42 | 325.94 | 1857.17 | 325.95 |
| 1858.12 | 326 | 1865.68 | 326.01 | 1882.33 | 326.88 | 1885.45 | 327 | 1892.36 | 327.01 |
| 1893.4 | 327.06 | 1894.42 | 327.07 | 1895.54 | 327.12 | 1895.65 | 327.13 | 1897.22 | 327.19 |
| 1912.22 | 327.99 | 1912.61 | 327.99 | 1912.76 | 328 | 1913.73 | 328 | 1928.54 | 328.82 |
| 1932.51 | 328.95 | 1932.65 | 328.96 | 1934.17 | 329 | 1934.59 | 329 | 1942.15 | 329.1 |
| 1942.29 | 329.1 | 1944.75 | 329.18 | 1966.17 | 330.47 | 2002.28 | 331.72 | 2012.62 | 332.01 |
| 2012.67 | 332.01 | 2016.69 | 332.09 | 2016.82 | 332.1 | 2017.04 | 332.1 | 2029.03 | 332.53 |
| 2032.2 | 332.57 | 2043.38 | 332.99 | 2043.77 | 333 | 2057.22 | 333.56 | 2058.12 | 333.58 |
| 2059.61 | 333.7 | 2060.35 | 333.73 | 2063.23 | 333.96 | 2064.87 | 333.99 | 2065.08 | 334 |
| 2065.55 | 334 | 2073.08 | 334.44 | 2080.03 | 335 | 2089.01 | 336 | 2090.98 | 336.17 |
| 2102.55 | 337 | 2102.85 | 337.03 | 2106.77 | 337.48 | 2112.26 | 338 | 2114.31 | 338.23 |
| 2114.59 | 338.25 | 2117.9 | 338.62 | 2120.95 | 339 | 2121.61 | 339.11 | 2121.98 | 339.16 |
| 2124.98 | 339.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 317.16 | .04 | 1662.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 317.16 | 1662.97 | 500.07 | 500 | 526.86 | .1 | .3 |

CROSS SECTION

RIVER: WASH45
REACH: Centerline Align RS: 1500

INPUT
Description:
Station Elevation Data num= 385

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.2 | 5300293 | 340.16 | 1330078 | 340.13 | 5290039 | 340.04 | 5910034 | 340.04 |
| 7.840088 | 340.1 | 8.76001 | 340.09 | 11.16003 | 340.01 | 12.28003 | 339.92 | 12.56006 | 339.88 |
| 16.53003 | 339.38 | 17.04004 | 339.34 | 17.32007 | 339.33 | 17.47009 | 339.33 | 18.31006 | 339.35 |
| 18.63 | 339.38 | 20.56006 | 339.47 | 22.16003 | 339.63 | 22.85999 | 339.67 | 24.10999 | 339.79 |
| 24.75 | 339.88 | 25.42004 | 340 | 27.09009 | 340.01 | 27.40002 | 340.02 | 30.43005 | 340.05 |
| 33.01001 | 340.04 | 35.29004 | 340.34 | 35.91003 | 340.43 | 6.35999 | 340.41 | 40.75 | 340 |
| 45.32007 | 339.49 | 46.34009 | 339.39 | 46.76001 | 339.36 | 47.7301 | 339.32 | 47.85999 | 339.3 |
| 53.55005 | 339.14 | 53.78003 | 339.15 | 4.35999 | 339.02 | 54.53003 | 339.01 | 54.82007 | 339.02 |
| 55.48999 | 339.03 | 57.6001 | 339.03 | 58.71008 | 339.01 | 58.97009 | 339.01 | 59.25 | 339 |
| 59.57007 | 338.96 | 0.05005 | 338.96 | 6.41003 | 338.05 | 67.05005 | 338.05 | 67.35999 | 338.04 |
| 68.17004 | 338 | 71.67004 | 337.61 | 71.73999 | 337.61 | 76.83008 | 337.09 | 78.83008 | 337 |
| 82.62 | 336.28 | 5.02002 | 335.67 | 87.23999 | 335.13 | 91.54004 | 334 | 93.73999 | 333.52 |
| 95.91003 | 333 | 98.91003 | 332.43 | 111.38 | 330 | 121.88 | 328 | 123.15 | 327.74 |
| 127.5601 | 327 | 128.39 | 326.84 | 131.8 | 326.31 | 135.0701 | 326 | 137.05 | 325.77 |
| 140.42 | 325.59 | 141.8201 | 325.44 | 146.87 | 325.01 | 147.2001 | 325 | 158.74 | 324.04 |
| 163.3301 | 324 | 174.2001 | 323.51 | 175.65 | 323.42 | 176.2301 | 323.4 | 178.4 | 323.27 |
| 178.63 | 323.26 | 184.92 | 322.83 | 190.03 | 322.59 | 191.2101 | 322.55 | 197.91 | 322.15 |
| 199.27 | 322.11 | 99.3301 | 322.12 | 00.3501 | 322 | 211.38 | 321.29 | 213 | 321.21 |
| 214.52 | 321.18 | 225.13 | 320.55 | 225.7301 | 320.5 | 226.61 | 320.45 | 227.01 | 320.42 |
| 229.2101 | 320.33 | 240.37 | 319.55 | 246.62 | 319 | 254.64 | 318.45 | 255.5901 | 318.38 |
| 278.52 | 316.69 | 278.99 | 316.62 | 79.4601 | 316.54 | 284.38 | 316 | 284.61 | 316 |
| 286.1001 | 315.98 | 292.03 | 315.33 | 293.63 | 315.18 | 296.91 | 315 | 301.3501 | 314.97 |
| 315.9 | 314 | 316.52 | 313.98 | 317.27 | 313.98 | 333.4501 | 312.96 | 369.53 | 311.11 |
| 369.9 | 311.13 | 93.4801 | 310 | 421.8501 | 309.01 | 422.4601 | 309.02 | 443.5601 | 309 |
| 464.4401 | 308.85 | 465.4301 | 308.86 | 481.11 | 308.81 | 481.3201 | 308.8 | 484.27 | 309 |
| 486.2301 | 309.63 | 487.55 | 310 | 513.79 | 310 | 519.4701 | 309.45 | 533.52 | 309.01 |
| 533.8301 | 309.01 | 534.17 | 309 | 553.8401 | 309.02 | 554.5801 | 309.01 | 561.4801 | 309.01 |
| 562.13 | 309 | 568.42 | 309.1 | 569.41 | 309.13 | 569.79 | 309.13 | 603.0801 | 309.67 |
| 605.49 | 309.69 | 623.12 | 309.38 | 624.75 | 309.32 | 624.99 | 309.32 | 629.0901 | 309.16 |
| 629.4801 | 309.16 | 632.53 | 309.05 | 632.64 | 309.05 | 634.16 | 309 | 650.4401 | 309 |
| 672.6901 | 308.01 | 672.76 | 308.01 | 672.9801 | 308 | 710.5901 | 308 | 717.76 | 308.83 |
| 719.62 | 309 | 720.74 | 309 | 723.51 | 308.88 | 729.3401 | 308.99 | 742.4701 | 308.99 |
| 743.0601 | 309 | 756.9401 | 309 | 758.7201 | 308.81 | 759.27 | 308.77 | 759.87 | 308.74 |
| 763.4601 | 308.65 | 770.7301 | 308.28 | 772.12 | 308.25 | 779.42 | 308 | 789.1901 | 308 |
| 795.86 | 309 | 798.4701 | 309.23 | 799.26 | 309.33 | 801.87 | 309.57 | 803.16 | 309.65 |
| 803.49 | 309.68 | 803.77 | 309.69 | 804.04 | 309.69 | 804.86 | 309.72 | 806.4601 | 309.68 |
| 807.11 | 309.69 | 812.65 | 309.69 | 812.8201 | 309.72 | 816.87 | 309.83 | 816.9501 | 309.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 818.0601 | 309.88 | 818.91 | 309.96 | 820.05 | 309.96 | 820.49 | 309.97 | 821.04 | 309.97 |
| 821.28 | 309.96 | 825.67 | 309.87 | 828.01 | 309.9 | 842.17 | 309.89842.8401 | | 309.9 |
| 844.8301 | 309.97850.7101 | | 309.41855.1901 | | 309.53858.9301 | | 310889.4701 | | 309.99 |
| 902.0601 | 309.72 | 929.52 | 309929.8201 | | 309.01936.8101 | | 309 | 936.89 | 308.99 |
| 937.9601 | 308.99 | 938.36 | 308.98946.4401 | | 308.98 | 955.73 | 308.69960.7601 | | 308.75 |
| 961.2501 | 308.74 | 963.91 | 309 | 977.17 | 309.86 | 980.03 | 310 | 1002.94 | 310 |
| 1005.78 | 310.05 | 1023.32 | 310.08 | 1043.95 | 309.98 | 1066.29 | 310 | 1066.46 | 309.99 |
| 1076.86 | 309.53 | 1081.11 | 309.41 | 1081.32 | 309.41 | 1088.66 | 309 | 1160.74 | 308.92 |
| 1161.28 | 308.91 | 1173.68 | 309 | 1201.39 | 310 | 1201.96 | 310 | 1202.16 | 310.01 |
| 1203 | 310.01 | 1208.31 | 310.14 | 1236.71 | 310.42 | 1266.08 | 310.5 | 1284.37 | 310.26 |
| 1286.15 | 310.27 | 1299.88 | 310 | 1356.47 | 310 | 1377.79 | 310.09 | 1398.2 | 310 |
| 1399.9 | 309.43 | 1401.03 | 309 | 1403.3 | 309.01 | 1403.72 | 309.02 | 1410.53 | 309.05 |
| 1410.83 | 309.06 | 1413.69 | 309.06 | 1414.36 | 309.07 | 1414.53 | 309.07 | 1414.88 | 309.06 |
| 1424.67 | 309.12 | 1426.46 | 309.06 | 1432.58 | 309.15 | 1464.48 | 310 | 1470.25 | 310.05 |
| 1477.97 | 310.03 | 1484.81 | 310.15 | 1485.26 | 310.15 | 1501.44 | 311 | 1522.74 | 310.99 |
| 1523.44 | 311 | 1557.83 | 310.99 | 1565.12 | 310.39 | 1565.42 | 310.39 | 1570.61 | 310.49 |
| 1571.18 | 310.53 | 1572.84 | 310.59 | 1574.53 | 310.72 | 1575.09 | 310.72 | 1576.8 | 310.83 |
| 1597.07 | 310.88 | 1598.84 | 310.92 | 1601.15 | 310.93 | 1601.67 | 310.94 | 1611.69 | 310.93 |
| 1635.38 | 310.28 | 1641.78 | 310 | 1659.75 | 310 | 1671.7 | 311 | 1699.47 | 310.99 |
| 1699.85 | 311 | 1711.4 | 311 | 1724.95 | 310 | 1730.85 | 310 | 1733.52 | 310.83 |
| 1734.01 | 311 | 1734.18 | 311.07 | 1736.63 | 312 | 1738.17 | 312.98 | 1738.24 | 313.02 |
| 1739.85 | 314 | 1740.36 | 314.28 | 1742.86 | 315.84 | 1743.14 | 316 | 1743.61 | 316.28 |
| 1744.11 | 316.6 | 1744.81 | 317 | 1746.18 | 317.4 | 1747.89 | 318 | 1748.22 | 318 |
| 1749.05 | 318.02 | 1749.49 | 318.02 | 1754.41 | 318.32 | 1757.05 | 318.36 | 1760.94 | 318 |
| 1761.96 | 317.76 | 1762.51 | 317.6 | 1763.46 | 317.25 | 1765.53 | 316.58 | 1765.86 | 316.51 |
| 1766.39 | 316.37 | 1766.66 | 316.35 | 1767.63 | 316.22 | 1769.15 | 316.13 | 1769.63 | 316.11 |
| 1771.77 | 316.09 | 1772.02 | 316.14 | 1772.66 | 316.23 | 1775.2 | 316.97 | 1775.34 | 316.97 |
| 1776.16 | 316.99 | 1776.34 | 316.99 | 1776.92 | 317 | 1779.55 | 318 | 1779.99 | 318.09 |
| 1781.52 | 318.54 | 1782.75 | 318.94 | 1782.89 | 319 | 1782.96 | 319.02 | 1783.1 | 319.05 |
| 1787.13 | 320 | 1788.75 | 320.03 | 1789.56 | 320.03 | 1800.73 | 320.92 | 1800.87 | 320.92 |
| 1801.7 | 321 | 1812.57 | 321.67 | 1813.63 | 321.72 | 1814.96 | 321.75 | 1816.62 | 321.86 |
| 1817.4 | 321.85 | 1818.52 | 322 | 1818.96 | 322.01 | 1819.28 | 322.01 | 1819.6 | 322.02 |
| 1820.9 | 322.02 | 1823.74 | 322.16 | 1824.65 | 322.22 | 1831.43 | 322.33 | 1831.98 | 322.39 |
| 1833.38 | 322.49 | 1837.37 | 322.63 | 1837.72 | 322.65 | 1839.42 | 322.71 | 1840.16 | 322.75 |
| 1842.48 | 322.81 | 1842.65 | 322.82 | 1845.91 | 322.98 | 1846.18 | 323 | 1847.71 | 323 |
| 1848.34 | 322.99 | 1850.92 | 323 | 1853.15 | 323.26 | 1858.67 | 324 | 1858.95 | 324.01 |
| 1859.2 | 324.01 | 1869.95 | 325 | 1883.61 | 326 | 1898.71 | 327 | 1913.31 | 327.81 |
| 1913.99 | 327.84 | 1915.23 | 327.87 | 1917.66 | 327.99 | 1917.81 | 328 | 1931 | 329 |
| 1939.48 | 329.96 | 1939.59 | 329.97 | 1957.4 | 332 | 1957.82 | 332.01 | 1957.9 | 332.01 |
| 1959.96 | 332.04 | 1960.22 | 332.04 | 1974.33 | 332.72 | 1978.35 | 332.8 | 1979.67 | 332.95 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 369.9 | .04 | 1733.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 369.9 | 1733.52 | 515.2 | 500 | 568.86 | .1 | .3 |

CROSS SECTION

RIVER: WASH45
REACH: Centerline Align RS: 1000

INPUT
Description:
Station Elevation Data num= 405

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.84 | 1.300049 | 324.87 | 1.890015 | 324.81 | 5.650024 | 324.83 | 5.910034 | 324.81 |
| 12.79004 | 324.64 | 17.37012 | 324.65 | 19.65002 | 324.56 | 20.71008 | 324.55 | 25.95007 | 324.46 |
| 27.76001 | 324.43 | 0.01001 | 324.33 | 30.41003 | 324.33 | 1.11011 | 324.26 | 37.96008 | 324 |
| 39.03003 | 323.95 | 39.14001 | 323.95 | 42.42004 | 323.79 | 42.54004 | 323.79 | 43.37012 | 323.78 |
| 44.16003 | 323.78 | 49.22009 | 323.55 | 56.36011 | 323.36 | 65.54004 | 323.03 | 67.46008 | 323 |
| 78.6001 | 322.51 | 84.18005 | 322.28 | 87.67004 | 322.13 | 91.06006 | 322 | 91.9801 | 321.96 |
| 92.46008 | 321.95 | 92.76001 | 321.94 | 115.2401 | 321.02 | 115.77 | 321 | 115.92 | 321 |
| 135.1801 | 320 | 137.8701 | 319.83 | 138.65 | 319.81 | 44.1901 | 319.56 | 156.16 | 319.01 |
| 156.4901 | 319.01 | 157.6201 | 319 | 172.25 | 318.14 | 173.4 | 318.06 | 174.5 | 318 |
| 174.9301 | 317.99 | 174.9801 | 317.99 | 175.53 | 317.95 | 183.1101 | 317.28 | 185.8201 | 317.06 |
| 186.7201 | 317 | 187.64 | 316.97 | 190.25 | 316.73 | 190.7401 | 316.7 | 193.14 | 316.5 |
| 195.3401 | 316.46 | 198.1001 | 316.25 | 199.9301 | 316.04 | 201.5 | 316.04 | 206.26 | 316.02 |
| 206.9 | 316.02 | 208.1201 | 316.01 | 210.78 | 316.01 | 212.0601 | 315.89 | 212.76 | 315.89 |
| 212.9901 | 315.88 | 213.28 | 315.86 | 214.16 | 315.79 | 214.28 | 315.78 | 218.2201 | 315.41 |
| 224.5801 | 315 | 226.7401 | 314.78 | 226.88 | 314.78 | 227.7001 | 314.75 | 228.4701 | 314.74 |
| 228.9801 | 314.72 | 230.14 | 314.67 | 232.9501 | 314.57 | 237.78 | 314.07 | 238.2301 | 314.06 |
| 241.0601 | 314.06 | 242.15 | 314.05 | 246.9901 | 314.03 | 251.8 | 314.03 | 253.8201 | 314.02 |
| 256.28 | 314 | 264.9801 | 313.14 | 265.1801 | 313.11 | 266.1801 | 313 | 267.3 | 312.87 |
| 274.9401 | 312 | 282.27 | 311.26 | 284.6001 | 311 | 287.6901 | 310.79 | 289.51 | 310.67 |
| 294.9301 | 310.4 | 299.28 | 310.16 | 303.1901 | 310 | 314.3601 | 309.63 | 323.01 | 309.37 |
| 326.77 | 309.24 | 333.03 | 309 | 336.7301 | 308.84 | 338.42 | 308.83 | 40.1201 | 308.73 |

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  344.17  308.61  345.76  308.56347.8201  308.49351.4301  308.34352.9701  308.29
356.1101  308.17356.8101  308.14  357.02  308.14     371  307.64382.3701  307.27
386.2301  307.15389.8301     307402.2401   306.6414.3601  306.52  425.15  306.54
  428.64  306.58  439.79  306.75  445.89  306.99445.9801     307  447.28     307
451.4601  306.91453.1801  306.91  454.89   306.9455.1201   306.9461.2101  306.86
477.0901  306.68497.9801  306.52  499.91  306.51  520.75     306549.5601     306
   561.5  305.39562.3701  305.34566.8201  305.09568.1801  305.01  568.52     305
587.2201     305590.6201  305.01  595.13  305.01595.4601  305.02595.6001  305.01
  606.15     305611.5701  304.97613.8601  304.97  623.41  304.75624.5601  304.71
627.5801  304.62  628.75  304.59640.8601  304.13  642.04  304.09644.2101     304
662.1001  303.97   663.8  303.97681.5601     304683.3101     304  684.51   304.1
687.8501  304.37695.8201     305702.9801     305704.2301  304.99708.3301  304.97
712.4801  304.98  714.51  304.93724.0601  304.64732.2301  304.16  732.79  304.15
  734.89     304739.2301  303.98739.5701  303.98743.2201     304  744.92     304
  746.42  303.99  750.17  303.98  752.03  303.99  757.55  303.99  758.92     304
  761.67  304.55765.0001     305792.5001     305809.1201     304811.8801  303.99
818.5101  303.95828.7401     304  837.61     305839.9901  305.03  840.41  305.04
844.9301   305.1  847.05  305.08  852.04     305  871.42  304.88891.3101     305
  894.97  305.01  898.29  305.03904.2701  305.03914.0601  305.14   917.6  305.14
   922.3  305.05931.1501   305.1931.3801   305.1941.8401  305.07   942.6  305.06
  943.85  305.04  944.11  305.04  947.91     305950.3301  304.96  953.79  304.92
955.0201  304.93959.4501     305967.8801  305.04968.2001  305.04976.5901  305.08
  979.29  305.06991.7101     305 1006.89  304.45  1012.8  304.31 1023.32     304
 1026.18     304 1030.17  303.99 1031.37  303.99 1037.82  303.98 1049.23     304
 1050.73     304 1065.09     305 1066.44  305.03 1071.15  305.15 1071.37  305.15
    1098  305.61 1106.94  305.72 1109.69   305.7 1111.72   305.7 1128.89  305.99
 1141.34  305.98 1142.08  305.99 1143.41  305.99 1144.91     306 1151.12  306.02
  1155.4  306.01 1157.01  306.01 1158.17     306 1158.24  305.99    1163  305.95
 1164.09  305.96 1169.46     306 1172.28     306 1173.68  306.01 1175.17     306
 1178.03  305.97 1178.38  305.98 1178.77  305.97 1180.19  305.94  1194.1  305.87
 1194.79  305.87 1205.53  305.71 1208.96   305.7 1213.01  305.66 1214.78  305.68
 1216.67  305.71 1217.03   305.7 1217.88  305.68 1218.94  305.68 1220.87  305.64
 1223.43  305.57 1224.66  305.55 1236.31  305.18 1236.76  305.16 1241.87     305
 1248.38  304.98 1250.15  304.98 1257.85     305 1258.25  305.01 1276.15  305.74
  1282.1     306  1287.7     306 1293.88  305.97 1295.01  305.97 1300.62  305.99
 1301.92     306 1302.72     306 1304.06  306.01 1305.45  306.03 1306.91  306.01
  1308.5     306  1311.5     306 1313.45  306.01 1315.63  306.01 1317.52     306
 1322.92  305.99 1358.26  306.01 1362.26     306 1364.41  305.99  1365.9  305.99
 1382.06  305.95 1386.56  305.96 1387.67  305.96 1389.23  305.97 1390.63  305.97
 1401.85     306  1402.9     306 1412.27  306.02 1412.76  306.02 1422.55     306
 1422.85     306 1424.29  305.99 1426.18  305.99  1428.9     306 1431.48     306
 1435.14  306.01 1440.57     306 1443.53     306 1444.28  306.01  1445.8  306.01
 1448.57     306 1454.01  305.89 1461.17   305.8 1461.73  305.79  1462.3   305.8
 1473.41  305.97 1473.83  305.97 1475.14     306 1476.97  306.01 1477.36  306.02
 1479.09  306.04 1480.21  306.03 1484.64  306.12 1484.73  306.12 1484.87  306.11
  1485.4  306.11 1485.88   306.1 1501.08  306.06 1508.27  306.08 1533.52  305.99
  1537.5  305.96 1545.91  306.01 1546.39  306.01 1547.33  306.02 1559.14  306.29
 1568.33  306.42 1569.47  306.44 1570.23  306.43 1572.32  306.36 1573.99  306.27
 1574.16  306.27 1577.79     306 1579.38  305.84 1585.79     305 1586.57  304.99
  1588.7  304.97 1589.14  304.97 1591.06     305 1593.75  305.03 1595.38  305.04
 1596.07  305.05 1597.49  305.03 1600.78     305 1607.79  304.98 1608.09  304.98
 1613.27     305 1615.38     305 1617.48  305.58  1618.9     306 1619.47     306
 1636.32  306.48 1642.58  306.64 1650.88   306.5 1667.68  306.03 1676.44     306
 1678.58     306 1691.94  306.04  1692.4  306.04 1704.74     306 1709.56     306
 1715.56  306.21 1736.67     307 1738.44  307.73 1738.59  307.81 1739.03     308
 1739.13   308.1 1740.38     309 1741.44  309.68 1744.32     310 1745.22  310.01
 1745.81  310.01 1747.27  310.13 1748.33  310.18 1750.65  310.35 1752.28  310.48
 1759.68     311 1761.68  311.06 1762.95  311.06  1770.8   311.5  1772.2  311.55
 1774.16  311.67 1776.11  311.74 1777.52  311.76 1778.15  311.76 1781.14     312
 1781.74  312.01 1783.38  312.09 1783.66   312.1  1788.3   312.3 1788.81  312.32

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05389.8301     .04 1736.67     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      389.8301 1736.67           593.46  621.56  731.14              .1       .3

CROSS SECTION


RIVER: WASH45
REACH: Centerline Align   RS: 378.44

INPUT
Description:
Station Elevation Data    num=     415
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  315.453.609985  315.484.359985  315.4811.77002  315.3912.52991  315.37
```

| | | | | | |
|---|---|---|---|---|---|
| 13.12 | 315.3514.31995 | 315.317.64001 | 315.2218.08997 | 315.219.53992 | 315.15 |
| 22.42993 | 31522.96997 | 314.9723.03992 | 314.9723.20996 | 314.9628.96997 | 314.6 |
| 29.1499 | 314.5835.16992 | 314.1435.45996 | 314.1236.80994 | 314 38.5 | 313.83 |
| 46.58997 | 31356.98999 | 312.1258.43994 | 31266.71997 | 311.5670.31995 | 311.42 |
| 73.63 | 311.2779.06995 | 31179.10999 | 31179.51001 | 310.9979.68994 | 310.98 |
| 92.98999 | 310.5109.5499 | 310.03109.9099 | 310.02110.1699 | 310.01110.2799 | 310.01 |
| 110.35 | 310.01 110.7 | 310 115.24 | 309.86 125.48 | 309.56 135.21 | 309.14 |
| 136.13 | 309.11 139.11 | 309139.3099 | 309 139.74 | 308.99144.4099 | 308.88 |
| 151.7999 | 308.73 152.08 | 308.73 171.02 | 308 172.85 | 307.95 176.26 | 307.91 |
| 178.87 | 307.93 186.08 | 307.59186.7799 | 307.59 188.38 | 307.54188.5499 | 307.53 |
| 189.36 | 307.49 190.76 | 307.41195.2899 | 307.37196.0399 | 307.34198.0499 | 307.3 |
| 200.3199 | 307.25205.4399 | 307.09205.9099 | 307.07206.2899 | 307.05 207.95 | 307 |
| 222.4199 | 306.61224.3099 | 306.56226.7999 | 306.48 234.14 | 306.26 237.21 | 306.16 |
| 241.0699 | 306.06 243.35 | 306243.8099 | 305.99243.8199 | 305.99 243.84 | 305.99 |
| 243.86 | 305.99 248.52 | 305.86249.6799 | 305.84 250.01 | 305.83 250.36 | 305.82 |
| 250.6 | 305.82 250.74 | 305.82257.5299 | 305.53 266.71 | 305.09272.3999 | 305.05 |
| 275.62 | 305.02 275.83 | 305.02 277.62 | 305.01 277.86 | 305.01 278.08 | 305.01 |
| 278.47 | 305 281.2 | 304.59281.7999 | 304.48 282.21 | 304.4 282.22 | 304.4 |
| 288.84 | 304 293.75 | 303.99 294.01 | 303.99305.3799 | 303.23306.9999 | 303.15 |
| 308.67 | 303 308.78 | 303 308.9 | 302.99 308.99 | 302.99308.9999 | 302.99 |
| 309.0099 | 302.99 309.02 | 302.99 309.03 | 302.99 309.04 | 302.99309.5599 | 302.99 |
| 309.77 | 302.99 311.59 | 302.91312.0699 | 302.9323.8699 | 302.54 335.2 | 302.03 |
| 335.27 | 302.03 335.92 | 302.03336.9399 | 302.03 339.9 | 302.02 340.24 | 302.02 |
| 340.85 | 302.02 342.04 | 302.01 347.83 | 302 352.2 | 301.82 356.73 | 301.62 |
| 368.4 | 301 371.11 | 300.01 371.14 | 300 371.22 | 300 372.7 | 300 |
| 397.7 | 300.62 413.98 | 301428.0099 | 301.46433.3199 | 301.55443.8799 | 301.74 |
| 457.33 | 302 460.4 | 302461.2599 | 302 463.85 | 302 464.74 | 302 |
| 465.9999 | 302470.6199 | 301.79 483.8 | 301 484.05 | 300.9 485.73 | 300 |
| 489.04 | 299.94 494.65 | 299.85 497.64 | 299.9 502.09 | 299.98 503.53 | 300 |
| 504.17 | 300.06 505.74 | 300.11 506.3 | 300.13507.1199 | 300.16 510.67 | 300.31 |
| 527.5699 | 301 527.86 | 301 528.09 | 301528.5599 | 301.01529.0699 | 301 |
| 529.5099 | 301539.1799 | 300.97 542.49 | 300.96 548.11 | 300.98 556.16 | 301 |
| 557.33 | 301562.8099 | 301 567.7 | 301 568.46 | 301569.6899 | 301 |
| 572.2499 | 301 575.47 | 300.99579.8099 | 301 582.23 | 301 586.39 | 301 |
| 587.14 | 301 587.22 | 301587.3199 | 301 588.02 | 301 590.35 | 301 |
| 592.23 | 301 592.39 | 301 592.52 | 301592.6899 | 301592.8199 | 301 |
| 593.23 | 301 606.79 | 300.7 610.14 | 300.63 615.7 | 300.52 634.35 | 300.24 |
| 635.91 | 300.21641.7599 | 300.18646.9999 | 300.19 648.22 | 300.32648.7599 | 300.26 |
| 649.53 | 300.39 649.64 | 300.37 652.97 | 301657.5699 | 301.76659.1199 | 302 |
| 661.1799 | 302.01 662.05 | 302.01 663.36 | 302.01664.0699 | 302 665.17 | 302 |
| 665.64 | 302 666.6 | 301.99 666.84 | 301.99668.1199 | 301.99 670.35 | 302 |
| 670.6199 | 302 670.7 | 302 670.83 | 302672.6199 | 302 672.89 | 302 |
| 673.89 | 302 676.49 | 301.99 677.86 | 301.99678.1199 | 301.99 678.72 | 302 |
| 679.3099 | 302 681.16 | 302 681.7 | 302682.6899 | 302683.6199 | 302 |
| 684.66 | 302 685.98 | 301.99 693.46 | 301.74 699.02 | 301.6699.3199 | 301.61 |
| 700.0099 | 301.6700.8699 | 301.62701.3799 | 301.63 704.9 | 301.53 720.05 | 301.46 |
| 745.9299 | 301.19 747.41 | 301.16 748.67 | 301.14751.8799 | 301.1 753.74 | 301.08 |
| 756.4 | 301757.1899 | 301 757.29 | 301757.4999 | 301758.0699 | 301 |
| 758.14 | 301 759.35 | 301 759.47 | 301760.6899 | 301761.1299 | 301 |
| 761.21 | 301762.1799 | 301 762.36 | 301 763.3 | 301766.0599 | 301 |
| 767.14 | 301769.5099 | 301769.9999 | 301 770.34 | 301 772.27 | 301 |
| 773.1799 | 301773.3699 | 301 774.45 | 301 775.21 | 301 776.78 | 301 |
| 783.04 | 300.8806.3799 | 300807.1899 | 299.77 810.23 | 299824.0699 | 298.97 |
| 831.34 | 298.95834.9299 | 298.95 844 | 298.98849.4299 | 298.99850.0099 | 298.99 |
| 854.78 | 299856.9299 | 299.01 857.72 | 299.01 867.08 | 299.04 871.24 | 299.05 |
| 874.7 | 299.07878.4299 | 299.05 889.33 | 299 899.86 | 298.98 907.13 | 298.97 |
| 909.0499 | 298.97911.5099 | 298.97 922.28 | 298.99926.0599 | 299 930.23 | 299.33 |
| 943.64 | 299.48 953.4 | 299.51954.2899 | 299.5964.4199 | 299.49975.5699 | 299.55 |
| 977.27 | 299.59 989.28 | 299.85 989.61 | 299.86 990.36 | 299.87 990.99 | 299.88 |
| 992.73 | 299.92 992.91 | 299.92993.2899 | 299.93993.4299 | 299.93 993.66 | 299.93 |
| 993.75 | 299.93993.9299 | 299.94995.0099 | 299.93 996.24 | 299.93 996.86 | 299.92 |
| 997.08 | 299.91 1003.3 | 299.93 1012.17 | 299.86 1020.14 | 299.92 1028.87 | 300 |
| 1033.74 | 300.02 1034.09 | 300.02 1036.99 | 300.01 1041.41 | 300 1042.98 | 299.96 |
| 1048.32 | 299.84 1052.52 | 299.75 1062.03 | 299.88 1069.42 | 299.85 1073.88 | 299.88 |
| 1078.7 | 299.91 1084.24 | 299.94 1093.58 | 300 1097.88 | 300 1099.88 | 300 |
| 1101.11 | 300 1103.45 | 300 1107.98 | 300 1108.25 | 300 1108.42 | 300 |
| 1108.83 | 300 1108.9 | 300 1115.2 | 300.01 1120.56 | 300.02 1122.25 | 300.02 |
| 1124.72 | 300.01 1127.82 | 300.01 1131.89 | 300 1132.18 | 300 1132.43 | 300 |
| 1135.14 | 300 1135.65 | 300 1135.79 | 300 1136.31 | 300 1136.97 | 299.99 |
| 1139.2 | 300 1139.35 | 300 1140.43 | 300 1140.86 | 300 1140.87 | 300 |
| 1140.97 | 300 1152.75 | 300.01 1156.83 | 300.02 1158.37 | 300.02 1160.25 | 300.02 |
| 1163.3 | 300.01 1165.59 | 300.01 1170.99 | 300 1174.09 | 299.23 1174.86 | 299 |
| 1175.16 | 299 1176.19 | 299 1177.42 | 299 1177.45 | 299 1177.5 | 299 |
| 1178.04 | 299.01 1178.87 | 299.05 1183.11 | 299.13 1183.4 | 299.11 1184.98 | 299.13 |
| 1187.95 | 299.21 1189.25 | 299.31 1191.67 | 299.4 1198.34 | 300 1204.81 | 300.01 |
| 1206.04 | 300.01 1207.04 | 300.01 1208.63 | 300 1211.16 | 300 1212.08 | 300 |
| 1213.26 | 300 1216.04 | 299.99 1223.99 | 299.98 1228.88 | 299.98 1235.12 | 300 |
| 1242.99 | 300 1247.06 | 300 1253.2 | 300 1258.49 | 300 1259.59 | 300 |
| 1273.38 | 299.98 1276.43 | 299.98 1280.72 | 299.98 1288.45 | 299.99 1288.92 | 299.99 |

```
 1292.51     300 1293.19     300 1293.46     300 1294.43     300 1298.39     300
 1300.87  300.01  1302.7  300.01 1304.39  300.01  1305.9  300.01 1308.09  300.01
  1311.3     300 1313.33     300 1313.71  299.86 1315.98     299 1324.71     299

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05       0     .04 1324.71     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
             0 1324.71             .1       .3

CROSS SECTION


RIVER: WASH5
REACH: Center Line Wash   RS: 2398.41

INPUT
Description:
Station Elevation Data    num=     495
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     474.5900269  474.04     .75  474.03 4.02002  474.12 5.77002  474.12
6.470032  474.117.640015  474.087.880005  474.089.690002     474 9.77002  473.99
10.82001  473.9713.41003  473.9613.49005  473.96   14.62  473.9715.74005     474
16.47003     47416.70001  473.99   18.06  473.9118.45001  473.9120.28003  473.81
   21.25  473.7621.99005  473.7424.47003  473.5827.97003  473.3428.54004   473.3
30.36005  473.1430.48004  473.1430.80005  473.12   36.94  472.4538.08002  472.37
38.99005  472.2940.03003  472.2343.54004  472.0843.83002  472.0746.09003     472
46.76001  471.9747.08002  471.9658.90002  471.9459.16003  471.93   59.38  471.92
   59.69  471.9167.80005  471.7368.48004  471.7371.58002  471.8872.51001   471.9
73.55005  471.9473.89001  471.9374.01001  471.92    74.5  471.85   75.06  471.82
76.97003  471.4878.24005   471.478.78003  471.3379.53003  471.2680.46002  471.17
83.53003     471   88.25  470.5889.08002  470.5990.66003  470.5692.92004  470.41
95.35004     47096.40002  469.63   98.38     46999.29004  468.6299.46002  468.57
  100.28  468.38  100.56  468.29  100.76  468.23101.4301  468.07101.6801     468
  102.86  467.71   103.9  467.45  105.65     467  106.05  466.88  108.69  466.02
108.7401     466  110.69     465  111.44   464.6  112.61     464  113.19  463.67
  114.46     463  116.14  462.27  116.69     462119.2401  461.23  119.98     461
  127.44  460.01  127.57     460  129.09     460  130.38  459.99     131  459.99
   132.2  459.98  134.08  459.98  134.64  459.92  141.27  459.24  141.36  459.23
143.6801     459  144.91  458.99  145.61  458.99146.7401     459  147.16     459
  151.92  459.63  155.14     460  155.32     460  156.84  460.01  157.07  460.01
  157.81  460.02  160.35  460.02  160.47  460.03  161.08  460.02  162.76  460.02
  162.92  460.01  164.07     460  166.07  459.48  166.42  459.39  168.26     459
172.6801  458.45  176.51     458  176.62     458  183.63  457.92  185.34  457.94
  189.35  457.97  192.22  457.89  195.07  457.84195.9301  457.81  197.16  457.77
  198.12  457.73  198.41  457.73  202.45  457.58  218.87     457  221.36     457
  229.25     458  237.19  458.92  237.41  458.95  237.87     459  242.76  459.02
  243.13  459.02  244.17  459.01  245.22  459.01  247.32     459  248.72     459
  249.17  459.01  251.39  459.01     260  459.04   260.2  459.04  274.51  459.89
  274.66   459.9  276.64     460  276.77     460  282.21  460.19  283.69  460.25
  298.67  460.81  299.12  460.82  299.42  460.83300.2401  460.86  300.31  460.86
  305.33     461  310.96     461   311.5  461.01  311.71  461.01  312.26  461.02
  316.15  461.05  318.01  461.05  322.97  461.01  323.89  461.01  324.72     461
  328.91  460.87  329.34  460.86   331.8  460.77  333.23  460.72  341.31  460.61
  349.05  460.69  349.73  460.75  352.12  460.32  352.58  460.39  352.84  460.37
354.2401     460  355.35  459.83  358.15     459  370.46  458.92  371.92  458.93
   375.6  458.94  381.39  458.97383.6801     459  386.77  459.41  391.39     460
  400.19  460.45402.1801  460.56  408.31     461  408.66  461.04  412.31  461.33
  414.32  461.47  415.12  461.53  419.35     462  422.72  462.56  424.58     463
  425.35  463.01  428.59  463.02  429.02  463.02  432.54  463.01432.7401  463.01
   435.2     463  435.71     463   437.4  462.98     438  462.98  439.58  462.96
  440.53  462.97   442.3     463  442.87     463  443.46  463.01   443.9  463.01
  451.03  463.39  451.64  463.42  451.91  463.44  454.64  463.59  455.08  463.61
  455.56  463.63   460.8  463.93  461.71     464  462.13     464  465.44  464.28
  466.57  464.41  468.34  464.58469.9301  464.74470.1801  464.77  471.51  464.96
  471.87  464.97472.1801  464.98  472.65     465  480.94  465.96  481.25     466
  481.34     466  482.16  466.06  482.62  466.09  492.12  466.66  495.58     467
  495.72     467  497.15  467.05  506.55  467.34  508.07  467.38  508.15  467.38
   512.7  467.53  515.48   467.6   520.5  467.75  524.58  467.83   529.3  467.94
  529.46  467.95   529.6  467.95531.5701     468  534.49     468  545.84  468.02
  548.33  468.02  553.91  468.01  558.04  468.01  559.46     468  562.67     468
  576.58     467  576.65     467  578.63   466.6  581.54     466582.1801     466
   587.8  466.81  588.02  466.84588.4301  466.89588.9301  466.94  589.39  466.96
  589.75  466.97590.5701  466.96  590.64  466.97   590.7  466.96  590.79  466.95
  591.03  466.91  592.73  466.75  594.77   466.6  595.29  466.55  596.49  466.73
  597.79  466.98  598.38     467  598.48     467  599.74  467.04  600.85  467.17
603.6901  467.45  605.28  467.54  605.83  467.55  606.42  467.57  606.77   467.6
  614.33     468  619.27  468.01  622.23  468.01  627.77     468  628.21     468
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 629.3201 | 467.94 | 629.6901 | 467.91 | 629.76 | 467.91 | 629.99 | 467.9 | 630.14 | 467.89 |
| 636.9401 | 467.49 | 637.26 | 467.5 | 637.66 | 467.56 | 642.3201 | 467.54 | 642.46 | 467.54 |
| 643.88 | 467.6 | 645.03 | 467.63 | 646.5 | 467.64 | 647.63 | 467.63 | 648.02 | 467.62 |
| 648.88 | 467.61 | 650.08 | 467.56 | 650.26 | 467.55 | 651.62 | 467.49 | 652.0701 | 467.46 |
| 652.5701 | 467.42 | 656.85 | 467 | 658.02 | 466.65 | 659.1801 | 466.34 | 659.6 | 466.22 |
| 660.54 | 466 | 661.67 | 465.71 | 664.42 | 465 | 667.41 | 464.15 | 667.95 | 464 |
| 669.85 | 463.29 | 670.58 | 463.02 | 670.64 | 463 | 673.4 | 462 | 689.14 | 461.4 |
| 693.36 | 461.38 | 697.65 | 461.41 | 697.79 | 461.42 | 700.71 | 461.52 | 701.51 | 461.56 |
| 702.36 | 461.67 | 702.9301 | 461.61 | 704.15 | 461.64 | 707.21 | 461.76 | 708.87 | 461.81 |
| 709.02 | 461.8 | 710.6901 | 461.8 | 711.65 | 461.78 | 711.83 | 461.78 | 713.97 | 461.76 |
| 715.88 | 461.69 | 721.92 | 461.56 | 723.12 | 461.53 | 725.54 | 461.43 | 725.6901 | 461.42 |
| 728.26 | 461.34 | 728.45 | 461.34 | 731.84 | 461.36 | 735.09 | 461.37 | 740.03 | 461.23 |
| 740.85 | 461.22 | 741.6901 | 461.2 | 743.86 | 461.14 | 745.14 | 461.12 | 748.38 | 461 |
| 748.48 | 461 | 750.72 | 461.01 | 755.66 | 461.01 | 756.3201 | 461 | 760.95 | 461 |
| 761.28 | 460.99 | 761.83 | 461 | 762.03 | 461 | 776.66 | 462 | 778.3 | 462 |
| 778.44 | 461.99 | 778.57 | 461.99 | 782.96 | 461.96 | 783.36 | 461.95 | 784.02 | 461.95 |
| 784.28 | 461.94 | 784.48 | 461.95 | 787.42 | 462 | 791.16 | 462.73 | 792.79 | 463 |
| 795.88 | 463.97 | 795.96 | 464 | 796.0601 | 464.03 | 796.46 | 464.18 | 798.83 | 465 |
| 799.19 | 465.15 | 801.25 | 466 | 804.11 | 466.56 | 806.03 | 466.96 | 806.21 | 467 |
| 807.85 | 467 | 809.66 | 467.01 | 821.66 | 467.01 | 826.36 | 467.17 | 826.82 | 467.19 |
| 829.33 | 467.29 | 839.39 | 467.2 | 840.17 | 467.22 | 842.54 | 467.3 | 844.6801 | 467.29 |
| 846.24 | 467.33 | 850.21 | 467.32 | 851.32 | 467.31 | 852.32 | 467.29 | 858.69 | 467.18 |
| 860.01 | 467.13 | 862 | 467.05 | 862.23 | 467.05 | 862.69 | 467 | 869.66 | 466.02 |
| 869.9301 | 466 | 870.73 | 466 | 875.77 | 466.93 | 875.86 | 466.95 | 876.23 | 467 |
| 879.7 | 467.15 | 882.22 | 467.24 | 884.3 | 467.3 | 884.77 | 467.31 | 887.5601 | 467.35 |
| 888.82 | 467.35 | 890.11 | 467.34 | 890.42 | 467.33 | 890.75 | 467.32 | 891.65 | 467.34 |
| 894.23 | 467.28 | 894.55 | 467.28 | 901.36 | 467.01 | 901.42 | 467.01 | 903.51 | 466.88 |
| 904.52 | 466.85 | 904.85 | 466.87 | 905.12 | 466.88 | 907.4 | 466.85 | 907.47 | 466.85 |
| 909.67 | 466.98 | 910.08 | 466.98 | 911.27 | 466.97 | 912.16 | 466.98 | 915.53 | 467 |
| 915.9 | 467.03 | 916.6801 | 467.03 | 918.1801 | 467.05 | 926.16 | 467.66 | 928.86 | 467.82 |
| 929.89 | 467.9 | 931.66 | 467.96 | 932.12 | 467.97 | 936.17 | 467.97 | 937.97 | 468 |
| 940.16 | 468 | 940.54 | 468.02 | 943.07 | 468.06 | 943.29 | 468.07 | 951.29 | 468.27 |
| 954.1 | 468.31 | 959.03 | 468.47 | 959.95 | 468.49 | 961.87 | 468.54 | 962.55 | 468.56 |
| 965.95 | 468.64 | 966.28 | 468.66 | 971.72 | 468.97 | 971.94 | 468.97 | 972.62 | 468.98 |
| 973.2401 | 468.98 | 974.76 | 469 | 975.03 | 469 | 976.33 | 469.08 | 976.71 | 469.1 |
| 984.48 | 469.54 | 987.35 | 469.67 | 990.79 | 469.84 | 992.22 | 469.83 | 993.19 | 469.89 |
| 993.44 | 469.89 | 994.59 | 469.9 | 994.92 | 469.9 | 995.65 | 469.89 | 995.83 | 469.89 |
| 995.9901 | 469.88 | 996.2 | 469.88 | 996.61 | 469.86 | 999.44 | 469.68 | 1004.31 | 469.88 |
| 1005.28 | 469.87 | 1007.6 | 469.87 | 1008.65 | 469.88 | 1010.03 | 469.89 | 1010.1 | 469.89 |
| 1010.5 | 469.9 | 1011.92 | 469.91 | 1012.17 | 469.91 | 1013.9 | 469.96 | 1015.06 | 469.99 |
| 1015.39 | 470 | 1015.7 | 470 | 1016.42 | 470.02 | 1016.95 | 470.02 | 1017.65 | 470.03 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 134.64 | .04 | 391.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 134.64 | 391.39 | 271.91 | 259.58 | 276.66 | .1 | .3 |

CROSS SECTION

RIVER: WASH5
REACH: Center Line Wash RS: 2138.83

INPUT
Description:
Station Elevation Data num= 485

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 474.71 | 569946 | 474.64 | 6.359985 | 474.527 | .169922 | 474.58 | .949951 | 474.43 |
| 11.31995 | 474.33 | 12.19995 | 474.31 | 8.67999 | 474 | 29.46997 | 473.56 | 40.69 | 473 |
| 42.79999 | 472.86 | 44.64996 | 472.75 | 48.48999 | 472.51 | 52.12 | 472.35 | 7.14996 | 472 |
| 61.01996 | 471.31 | 63.26996 | 471.01 | 63.34998 | 47 | 163.88995 | 470.85 | 64.72998 | 470.67 |
| 67.32996 | 470 | 68.17999 | 469.75 | 69.46997 | 469.11 | 69.65997 | 469 | 69.81995 | 468.91 |
| 71.35999 | 468 | 72.63995 | 467.32 | 73.23999 | 467 | 74.28998 | 466.44 | 75.10999 | 466 |
| 75.81995 | 465.51 | 76.38 | 465.15 | 76.46997 | 465.09 | 76.60999 | 465 | 77.71997 | 464.47 |
| 78.51996 | 464.1 | 78.62 | 464.06 | 78.71997 | 464.03 | 78.81 | 464 | 80.91998 | 463.19 |
| 81.31 | 463 | 81.84998 | 462.75 | 83.69995 | 462 | 84.19 | 461.82 | 86.19 | 461 |
| 87.69995 | 460.27 | 88.31 | 460 | 90.15997 | 459.08 | 90.32996 | 459 | 91.35999 | 458.67 |
| 93.67999 | 458 | 103.84 | 457.29 | 110.99 | 457 | 111.02 | 457 | 111.04 | 457 |
| 111.9 | 457 | 112.04 | 457 | 112.31 | 457 | 112.9 | 457 | 113.41 | 457 |
| 113.94 | 457 | 116.91 | 457 | 116.99 | 457 | 117.17 | 457 | 117.44 | 457 |
| 117.91 | 457 | 118.13 | 457 | 118.53 | 457 | 118.65 | 457 | 119.11 | 457 |
| 119.22 | 457 | 119.43 | 457 | 119.5699 | 457 | 119.77 | 457 | 119.93 | 457 |
| 119.98 | 457 | 120.14 | 457 | 120.23 | 457 | 121.9 | 456.46 | 123.4 | 456 |
| 124.06 | 455.85 | 127.18 | 455 | 127.27 | 455 | 127.35 | 455 | 127.54 | 455 |
| 127.77 | 455 | 138.49 | 455.82 | 140.87 | 456 | 142.08 | 456.01 | 143.68 | 456.02 |
| 145.49 | 456.04 | 146.59 | 456.07 | 153.67 | 456.22 | 154.05 | 456.23 | 160.3199 | 456 |
| 160.67 | 456 | 161.48 | 456 | 161.72 | 456 | 162.05 | 456 | 162.29 | 456 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 162.52 | 456 | 162.53 | 456 | 162.75 | 456.01 | 173.67 | 456.1 | 181.03 | 456.2 |
| 197.02 | 456.11 | 198.61 | 456.11 | 200.2599 | 456.11 | 200.35 | 456.12 | 201.12 | 456 |
| 202.38 | 455.74 | 206.04 | 455 | 209.16 | 454.99 | 210.05 | 454.99 | 211.03 | 454.99 |
| 211.73 | 454.99 | 219.33 | 454.99 | 224.28 | 454.99 | 224.65 | 454.99 | 224.97 | 454.99 |
| 228.55 | 454.99 | 236.52 | 455 | 237.0699 | 455 | 238.99 | 455 | 239.91 | 455.23 |
| 242.75 | 456 | 246.04 | 456.04 | 246.65 | 456.05 | 247.1 | 456.06 | 248.54 | 456.08 |
| 248.93 | 456.08 | 250.35 | 456.08 | 252.58 | 456.07 | 257.31 | 456 | 260.72 | 455.74 |
| 260.85 | 455.75 | 272.8199 | 455.85 | 274.14 | 455.88 | 280.24 | 455.94 | 281.88 | 455.95 |
| 282.52 | 455.96 | 284.52 | 455.98 | 286.5699 | 456 | 289.3 | 456.03 | 290 | 456.04 |
| 290.05 | 456.04 | 290.7 | 456.04 | 291.56 | 456.05 | 293.95 | 456.05 | 315.52 | 456.77 |
| 320.4 | 456.92 | 322.74 | 457 | 324.39 | 457.01 | 329.39 | 457.05 | 333.79 | 457.07 |
| 340.08 | 457.03 | 345.1 | 457 | 345.21 | 457 | 345.53 | 456.99 | 345.86 | 457 |
| 346.16 | 457 | 348.49 | 457.01 | 351.64 | 457.02 | 354.4 | 457.01 | 358.86 | 457 |
| 358.97 | 456.99 | 359 | 456.99 | 359.5699 | 456.99 | 360.19 | 457 | 365.98 | 457.92 |
| 366.58 | 458 | 367.33 | 458 | 367.45 | 458 | 367.67 | 458 | 370.68 | 458.01 |
| 372.7 | 458.01 | 375.48 | 458.02 | 379.47 | 458.03 | 382.7599 | 458.04 | 383.39 | 458.04 |
| 383.84 | 458.04 | 384.39 | 458.04 | 384.43 | 458.04 | 385.59 | 458.04 | 396.7 | 458.04 |
| 401.29 | 458.05 | 412.3199 | 458.02 | 413.83 | 458.02 | 418.59 | 458.08 | 418.68 | 458.08 |
| 424.35 | 458.01 | 425.75 | 458.01 | 427.7599 | 458.01 | 428.21 | 458.01 | 428.48 | 458.01 |
| 429.89 | 458.01 | 432.37 | 458 | 432.71 | 458 | 433.49 | 458 | 433.88 | 458 |
| 434.31 | 458 | 434.45 | 458 | 436.5699 | 457.99 | 437.22 | 457.99 | 437.83 | 457.99 |
| 438.28 | 457.99 | 439.86 | 457.98 | 440.6 | 457.98 | 445.11 | 458 | 458.16 | 458.99 |
| 458.2599 | 458.99 | 458.31 | 458.99 | 458.3199 | 458.99 | 458.36 | 459 | 458.41 | 459.01 |
| 458.43 | 459.01 | 466.24 | 460 | 470.11 | 460.48 | 474.99 | 461 | 476.0699 | 461.16 |
| 481.7599 | 462 | 481.96 | 462.03 | 487.56 | 463 | 501.64 | 463.9 | 504.56 | 464 |
| 509.73 | 464.03 | 513.1 | 464.04 | 514.28 | 464.03 | 518.8 | 464 | 519.16 | 463.98 |
| 522.65 | 463.72 | 530.15 | 463 | 533.5599 | 462.42 | 534.6 | 462.25 | 536.0599 | 462 |
| 538.58 | 461.34 | 540.09 | 461 | 541.28 | 460.56 | 542.85 | 460 | 544.6 | 459.28 |
| 545.33 | 459 | 547.46 | 458.31 | 548.23 | 458 | 550.54 | 457.84 | 551.87 | 457.77 |
| 555 | 457.61 | 565.23 | 457 | 567.99 | 456.9 | 568.51 | 456.88 | 568.67 | 456.89 |
| 568.73 | 456.89 | 570.85 | 456.56 | 571.22 | 456.63 | 571.63 | 456.67 | 572.58 | 456.82 |
| 573.12 | 457 | 573.38 | 457 | 574.13 | 457.01 | 575.04 | 457 | 575.09 | 457 |
| 576.0699 | 457 | 576.34 | 457 | 576.9399 | 457 | 577.6799 | 457 | 577.72 | 457 |
| 578.09 | 457 | 578.36 | 457.01 | 579.08 | 457.01 | 603.02 | 457.68 | 604.9 | 457.73 |
| 614.6 | 458 | 615.87 | 458.42 | 617.4299 | 459 | 618.4399 | 459.32 | 620.4299 | 460 |
| 622.09 | 460.59 | 623.39 | 461 | 624.6899 | 461.43 | 626.3199 | 461.97 | 626.41 | 462 |
| 626.59 | 462.05 | 629.73 | 463 | 632.04 | 463.3 | 632.25 | 463.32 | 632.96 | 463.39 |
| 633.33 | 463.42 | 634.0699 | 463.48 | 634.39 | 463.5 | 634.88 | 463.52 | 635.02 | 463.53 |
| 636.34 | 463.55 | 636.73 | 463.56 | 637.29 | 463.56 | 637.61 | 463.56 | 637.85 | 463.56 |
| 638.76 | 463.54 | 640.62 | 463.48 | 641.11 | 463.45 | 641.8199 | 463.41 | 642.17 | 463.38 |
| 643.08 | 463.3 | 643.99 | 463.21 | 644.51 | 463.15 | 645.77 | 463 | 647.35 | 462.6 |
| 650.23 | 462 | 652.5699 | 461.5 | 655.1899 | 461.1 | 655.26 | 461.09 | 655.37 | 461.08 |
| 656.03 | 461 | 660.76 | 460.7 | 661.53 | 460.71 | 662.8199 | 460.65 | 663.0699 | 460.64 |
| 663.3099 | 460.64 | 664.87 | 460.63 | 665.51 | 460.63 | 666.17 | 460.64 | 666.71 | 460.66 |
| 670.2 | 460.79 | 671.08 | 460.82 | 671.4399 | 460.83 | 674.6799 | 461 | 680.6 | 461.51 |
| 684.7 | 462 | 687.53 | 462.33 | 691.37 | 463 | 693.85 | 463.17 | 696.7 | 463.37 |
| 703.46 | 464 | 705.49 | 464 | 705.84 | 464 | 706.0599 | 464 | 707.77 | 464 |
| 711.66 | 464 | 712.03 | 464 | 712.65 | 464 | 712.77 | 464 | 723.86 | 464 |
| 725.5 | 464 | 726.28 | 464 | 738.22 | 464 | 742.54 | 464 | 745.37 | 464 |
| 747.45 | 464 | 748.9299 | 464 | 750.3099 | 464 | 751.78 | 464 | 752.96 | 464 |
| 755.76 | 464 | 755.89 | 464 | 756 | 464 | 780.64 | 464.73 | 784.02 | 464.72 |
| 785.84 | 464.71 | 786.8 | 464.68 | 787.98 | 464.64 | 790.15 | 464.59 | 792.01 | 464.63 |
| 794.74 | 464.58 | 798.52 | 464.61 | 800.92 | 464.64 | 801.76 | 464.67 | 804.6899 | 464.77 |
| 807.27 | 464.77 | 808.49 | 464.83 | 811.02 | 464.89 | 811.26 | 464.9 | 813.27 | 464.91 |
| 814.65 | 464.95 | 814.68 | 464.95 | 815.52 | 464.95 | 816.08 | 464.99 | 816.16 | 464.99 |
| 822.51 | 464.98 | 823.66 | 464.98 | 824.6899 | 464.98 | 825.98 | 464.99 | 826.23 | 464.99 |
| 827 | 465 | 830.61 | 465.19 | 832.3199 | 465.26 | 834.11 | 465.33 | 837.83 | 465.54 |
| 840.39 | 465.64 | 841.22 | 465.7 | 841.71 | 465.73 | 841.86 | 465.73 | 845.84 | 466 |
| 855.73 | 466.81 | 858.06 | 466.99 | 858.08 | 466.99 | 858.09 | 466.99 | 858.18 | 467 |
| 860.98 | 467.23 | 862.1899 | 467.3 | 869.4 | 467.83 | 870.9399 | 467.92 | 871.58 | 467.98 |
| 871.6 | 467.98 | 871.64 | 467.98 | 871.9 | 468 | 879.8199 | 468.7 | 882.45 | 468.89 |
| 882.74 | 468.91 | 882.84 | 468.92 | 884.18 | 468.99 | 884.21 | 468.99 | 884.55 | 469 |
| 889.24 | 469.16 | 891.51 | 469.16 | 896.93 | 469.18 | 897.64 | 469.2 | 898.09 | 469.24 |
| 898.77 | 469.31 | 901.05 | 469.72 | 901.66 | 469.8 | 902.67 | 470 | 903.68 | 470.28 |
| 906.56 | 471 | 907.26 | 471.18 | 910.91 | 472 | 912.65 | 472.45 | 914.91 | 473 |
| 916.49 | 473.42 | 919.03 | 474 | 921.06 | 474.54 | 923 | 475 | 926.35 | 475.77 |
| 927.36 | 476 | 931.18 | 476.85 | 931.87 | 477 | 935.5699 | 477.77 | 936.66 | 478 |
| 937.72 | 478.21 | 941.88 | 479 | 949.68 | 479.89 | 950.52 | 480 | 951.01 | 480.05 |
| 951.62 | 480.11 | 954.52 | 480.38 | 960.2 | 481 | 961.05 | 481.08 | 961.93 | 481.14 |
| 962.76 | 481.2 | 968.01 | 481.62 | 968.78 | 481.67 | 969.38 | 481.7 | 969.85 | 481.72 |
| 971.71 | 481.75 | 972.02 | 481.76 | 976.41 | 481.88 | 976.98 | 481.89 | 979.65 | 482 |
| 979.79 | 482 | 979.8 | 482 | 981.48 | 482.03 | 983.11 | 482.03 | 984.65 | 482 |
| 986.25 | 481.93 | 986.34 | 481.93 | 986.5699 | 481.92 | 986.72 | 481.92 | 986.8199 | 481.91 |
| 993.69 | 481.59 | 994.4 | 481.54 | 994.81 | 481.52 | 995.8199 | 481.51 | 996.33 | 481.53 |
| 997.1 | 481.54 | 1000.77 | 481.82 | 1001.39 | 481.86 | 1001.63 | 481.87 | 1002.72 | 482 |
| 1009.39 | 482.57 | 1010.72 | 482.7 | 1011.95 | 482.84 | 1012.01 | 482.84 | 1013.12 | 483 |
| 1015.07 | 483.21 | 1022.37 | 484 | 1025.81 | 484.28 | 1033.14 | 485 | 1034.6 | 485.11 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 121.9 | .04 | 315.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 121.9 | 315.52 | 433.55 | 410.73 | 308.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH5
REACH: Center Line Wash RS: 1728.1

INPUT
Description:
Station Elevation Data num= 389

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 468.58 | 7.72999 | 4689.070007 | 467.8919.47998 | 46720.72998 | 466.87 | | | |
| 26.53003 | 466.48 | 28.12 | 466.3630.45001 | 466.1732.65997 | 466 | 33.19 | 465.94 | | |
| 39.89001 | 465 | 43.81 | 464.345.71997 | 46450.57001 | 463.04 | 50.63 | 463.03 | | |
| 50.84003 | 463 | 51 | 46351.23999 | 462.9951.78998 | 462.9951.95001 | 462.98 | | | |
| 52.21002 | 462.98 | 53.38 | 462.77 | 53.62 | 462.7356.35999 | 462.7156.79999 | 462.66 | | |
| 57.17999 | 462.6257.89001 | 462.5158.16998 | 462.4860.40997 | 462.3360.46002 | 462.32 | | | | |
| 61.03998 | 462.2362.21002 | 46262.46002 | 461.95 | 62.62 | 461.9264.39001 | 461.56 | | | |
| 65.33002 | 461.3 | 66.5 | 461 | 70.25 | 460.4370.92999 | 460.3272.78998 | 460 | | |
| 74.90997 | 459.4575.23999 | 459.35 | 76 | 45977.79999 | 458.9677.96997 | 458.96 | | | |
| 79.35999 | 458.99 | 79.63 | 458.9979.78003 | 459 | 80 | 45981.29999 | 459.5 | | |
| 81.47998 | 459.5583.39001 | 460 | 86.19 | 460.5486.84998 | 460.65 | 87.06 | 460.67 | | |
| 88.21002 | 460.8188.98999 | 460.8990.20001 | 46193.40997 | 461.3194.01001 | 461.34 | | | | |
| 94.38 | 461.3495.92999 | 461.4198.71997 | 461.38 | 103.72 | 461.59 | 104.9 | 461.55 | | |
| 105.68 | 461.56 | 106.05 | 461.55 | 106.45 | 461.53 | 107.87 | 461.41 | 110.49 | 461.14 |
| 110.71 | 461.12 | 111.56 | 461 | 112.99 | 460.53 | 114.62 | 460 | 114.96 | 459.87 |
| 117.14 | 459 | 118.68 | 458.37 | 119.39 | 458 | 119.57 | 457.87 | 121.93 | 457 |
| 123.31 | 456.5 | 124.13 | 456.54 | 125.24 | 456.67 | 126.49 | 457 | 132.28 | 457.84 |
| 132.9 | 457.9 | 134.03 | 458 | 134.98 | 458.08 | 135.56 | 458.1 | 136.32 | 458.12 |
| 136.8 | 458.1 | 137.3 | 458.06 | 137.37 | 458.06 | 137.83 | 458 | 138.74 | 457.96 |
| 138.8 | 457.96 | 138.94 | 457.95 | 139.14 | 457.94 | 139.71 | 457.89 | 145.09 | 457.56 |
| 145.27 | 457.54 | 149.55 | 457 | 155.6 | 456.42 | 157.29 | 456.33 | 160.2 | 456.15 |
| 162.1 | 456.06 | 162.44 | 456.03 | 162.5 | 456.03 | 163.38 | 456.01 | 164.1 | 456 |
| 164.29 | 456 | 166.9 | 455.99 | 168.25 | 455.99 | 168.59 | 456 | 171.75 | 456 |
| 176.08 | 456.01 | 180.81 | 456.01 | 185.16 | 456 | 188.32 | 456 | 189.57 | 455.41 |
| 190.62 | 455 | 191.65 | 454.57 | 193.21 | 454 | 194.41 | 453.51 | 195.72 | 453 |
| 203.52 | 452.29 | 205.63 | 452 | 207.91 | 451.52 | 209.27 | 451.25 | 210.2 | 451.08 |
| 210.28 | 451.06 | 210.51 | 451 | 217.81 | 451 | 222.32 | 450.99 | 236.91 | 451 |
| 239.76 | 451.2 | 240.16 | 451.24 | 241.19 | 451.3 | 243.3 | 451.48 | 246.15 | 451.74 |
| 249.91 | 451.99 | 250.63 | 451.99 | 256.15 | 451.63 | 257.91 | 451.53 | 260.07 | 451.44 |
| 264.29 | 451.25 | 264.76 | 451.22 | 265.8 | 451.16 | 267.02 | 451.15 | 267.41 | 451.12 |
| 269.64 | 451.1 | 271.35 | 451.09 | 275.14 | 451.13 | 277.45 | 451.24 | 279.05 | 451.3 |
| 282.08 | 451.39 | 286.45 | 451.44 | 290.85 | 451.39 | 291.25 | 451.45 | 292.46 | 451.67 |
| 293.33 | 451.81 | 293.75 | 451.79 | 293.89 | 451.79 | 294.03 | 451.8 | 294.61 | 452 |
| 296.9 | 452 | 317.8 | 452.63 | 324.21 | 452.87 | 324.77 | 452.88 | 325.62 | 452.92 |
| 327.48 | 452.99 | 327.72 | 453 | 333.91 | 453 | 335.73 | 453.01 | 337.29 | 453.01 |
| 345.98 | 453.18 | 347.98 | 453.18 | 349.96 | 453.19 | 350.13 | 453.19 | 357.95 | 453.16 |
| 366.49 | 453.11 | 369.96 | 453.11 | 371.98 | 453.1 | 374.14 | 453.11 | 378.33 | 453.15 |
| 382.21 | 453.17 | 382.53 | 453.18 | 386.07 | 453.16 | 387.32 | 453.16 | 388.67 | 453.17 |
| 410.84 | 453.25 | 411.02 | 453.26 | 411.81 | 453.26 | 432.42 | 453.01 | 433.53 | 453.01 |
| 433.98 | 453 | 444.98 | 453 | 445.54 | 453.01 | 447.77 | 453.01 | 450.39 | 453.02 |
| 455 | 453.08 | 465.23 | 453.18 | 468.37 | 453.17 | 471.25 | 453.17 | 517.31 | 453 |
| 557.78 | 453 | 561.31 | 453.15 | 561.62 | 453.14 | 562.65 | 453.1 | 564.72 | 453.01 |
| 564.88 | 453.01 | 564.99 | 453 | 566.4 | 453 | 570.64 | 453.7 | 570.98 | 453.7 |
| 571.13 | 453.73 | 571.21 | 453.73 | 572.36 | 453.67 | 574.47 | 453.19 | 577.15 | 453 |
| 581.19 | 452.22 | 582.45 | 452 | 583.93 | 452 | 586.48 | 452.29 | 586.95 | 452.33 |
| 587.66 | 452.38 | 589.56 | 452.51 | 591.23 | 452.64 | 594.21 | 452.91 | 595.18 | 453 |
| 595.25 | 453 | 596.34 | 453.01 | 596.41 | 453.01 | 597.55 | 453 | 597.81 | 453 |
| 598.57 | 452.98 | 599.67 | 452.97 | 600.03 | 452.96 | 601.06 | 452.98 | 601.97 | 452.99 |
| 602.4 | 453 | 603.22 | 453 | 637.5 | 453.88 | 641.89 | 454 | 652.42 | 454 |
| 654.52 | 454.06 | 654.74 | 454.07 | 654.84 | 454.07 | 655.58 | 454.09 | 656.91 | 454.12 |
| 657.02 | 454.12 | 660.74 | 454.23 | 685.67 | 455 | 686 | 455 | 686.35 | 455.01 |
| 687.74 | 455.01 | 688.22 | 455 | 691.7 | 454.98 | 692.06 | 454.98 | 695.72 | 455 |
| 695.91 | 455 | 696 | 455.01 | 708.03 | 456 | 710.77 | 456.32 | 715.74 | 457 |
| 715.95 | 457.03 | 717.51 | 457.2 | 718.8 | 457.33 | 723.06 | 457.74 | 724.99 | 457.91 |
| 725.93 | 458 | 725.99 | 458 | 727.58 | 458.14 | 728.05 | 458.2 | 729.17 | 458.33 |
| 729.79 | 458.41 | 734.08 | 458.84 | 734.32 | 458.86 | 735.01 | 458.91 | 735.57 | 458.94 |
| 736.49 | 459 | 736.64 | 459 | 736.72 | 459.01 | 737.01 | 459.04 | 741.77 | 459.45 |
| 742.6 | 459.53 | 742.79 | 459.55 | 743.09 | 459.6 | 745.23 | 460 | 749.41 | 460 |
| 749.49 | 460.01 | 749.56 | 460.02 | 750.04 | 460.09 | 750.21 | 460.11 | 750.7 | 460.24 |
| 752.72 | 460.63 | 753.45 | 460.72 | 753.59 | 460.72 | 753.66 | 460.73 | 756.8 | 460.94 |
| 757.16 | 460.97 | 757.54 | 460.98 | 759.01 | 460.99 | 759.46 | 461 | 766.17 | 461.9 |
| 766.86 | 462 | 766.94 | 462 | 767.03 | 462.01 | 767.46 | 462.03 | 767.7 | 462.03 |
| 768.59 | 462.17 | 768.9 | 462.2 | 770.24 | 462.32 | 773 | 462.86 | 773.15 | 462.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 774.32 | 462.95 | 774.51 | 462.95 | 774.85 | 462.97 | 775.06 | 462.98 | 775.29 | 462.99 |
| 775.34 | 462.99 | 775.43 | 463 | 776.15 | 463.31 | 776.63 | 463.38 | 776.91 | 463.5 |
| 778.81 | 463.7 | 779.99 | 463.98 | 780.14 | 463.98 | 781.22 | 464 | 781.37 | 464.03 |
| 782.16 | 464.24 | 783.07 | 464.55 | 783.47 | 464.61 | 784.67 | 464.8 | 784.84 | 464.85 |
| 785.81 | 465 | 787.36 | 465.47 | 789 | 466 | 789.67 | 466.19 | 790.47 | 466.49 |
| 790.81 | 466.67 | 791.58 | 467 | 793.36 | 467.58 | 794.61 | 468 | 795.71 | 468.34 |
| 796.06 | 468.43 | 796.55 | 468.55 | 796.76 | 468.59 | 797.26 | 468.66 | 799.48 | 468.91 |
| 799.72 | 468.93 | 800.08 | 469 | 803.02 | 469.34 | 803.95 | 469.51 | 804.76 | 469.7 |
| 806.16 | 470 | 809.71 | 470.74 | 811.24 | 471 | 812.52 | 471.27 | 815.71 | 472 |
| 816.09 | 472.08 | 817.1 | 472.33 | 819.67 | 473 | 821.53 | 473.46 | 822.06 | 473.6 |
| 822.43 | 473.71 | 823.34 | 474 | 826.69 | 475 | 826.89 | 475.03 | 832.59 | 476 |
| 833.23 | 476.11 | 833.45 | 476.15 | 837.41 | 477 | 838.51 | 477.22 | 842.27 | 478 |
| 845.14 | 478.39 | 847.05 | 478.62 | 849.12 | 479 | 850.37 | 479.22 | 855.73 | 480 |
| 862.36 | 481 | 869.63 | 482 | 871.1 | 482.19 | 874.24 | 482.55 | 878.41 | 483 |
| 886.18 | 483.7 | 889.06 | 484 | 897.21 | 484.59 | 899.25 | 484.72 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 195.72 | .04 | 388.67 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 195.72 | 388.67 | 207.17 | 328.1 | 517.32 | .1 | .3 |

Right Levee Station= 411.51 Elevation= 453.37

CROSS SECTION

RIVER: WASH5
REACH: Center Line Wash RS: 1400

INPUT
Description:
Station Elevation Data num= 304

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 457.1399536 | | 457.2099609 | | 457.4899902 | | 456.991.399963 | | 456.99 |
| 2.509949 | 456.99 | 2.75 | 456.993.139954 | | 456.994.690002 | | 456.985.919983 | | 456.97 |
| 6.22998 | 456.9710.04999 | | 456.63 | 10.37 | 456.6113.63995 | | 456.51 | 13.81 | 456.51 |
| 14.77997 | 456.5115.27997 | | 456.4816.82001 | | 456.5119.40997 | | 456.420.32001 | | 456.41 |
| 21.63995 | 456.423.01996 | | 456.3924.51996 | | 456.36 | 25.31 | 456.3326.17999 | | 456.32 |
| 26.29999 | 456.3231.78998 | | 456.2439.26996 | | 456.0741.57996 | | 45641.67999 | | 456 |
| 42.27997 | 455.9844.01996 | | 455.9246.53998 | | 455.8647.73999 | | 455.8648.85999 | | 455.83 |
| 50.25995 | 455.8150.75995 | | 455.852.45996 | | 455.7452.94995 | | 455.7463.19995 | | 455.41 |
| 75.19995 | 455.0175.47998 | | 455.0175.77997 | | 455.0176.60999 | | 455.0177.47998 | | 455.01 |
| 78.20996 | 455.0179.01996 | | 455.01 | 79.63 | 455.0179.98999 | | 455.0182.66998 | | 455 |
| 85.55997 | 45585.58997 | | 45587.35999 | | 45587.74997 | | 45589.35999 | | 455 |
| 90.32999 | 45590.36996 | | 45590.40997 | | 45590.43997 | | 45591.54999 | | 454.9 |
| 101.76 | 454 | 103.17 | 453.8 | 108.28 | 453 | 110.72 | 452.58 | 113.82 | 452 |
| 119.94 | 451.5 | 124.34 | 451.03 | 124.72 | 451.03 | 125.14 | 451.03 | 125.92 | 451 |
| 127.96 | 450.51 | 130.64 | 450 | 131.88 | 449.57 | 134.07 | 449 | 135.74 | 448.99 |
| 137.67 | 448.98 | 138.33 | 448.97 | 138.66 | 448.97 | 142.01 | 449 | 146.81 | 450 |
| 146.82 | 450 | 146.97 | 450 | 149.62 | 450 | 150.46 | 450 | 150.91 | 450 |
| 153.12 | 449.99 | 154.46 | 449.99 | 154.94 | 449.99 | 155.34 | 449.98 | 155.54 | 449.98 |
| 157.37 | 449.87 | 163.21 | 449.52 | 163.6 | 449.5 | 169.76 | 449 | 188.14 | 448.63 |
| 196.64 | 448.47 | 217.08 | 448.02 | 220.58 | 448 | 222.98 | 447.99 | 224.54 | 447.98 |
| 226.83 | 447.99 | 230.54 | 448 | 232.02 | 448.44 | 232.86 | 448.54 | 233.05 | 448.56 |
| 233.13 | 448.56 | 233.29 | 448.54 | 233.61 | 448.56 | 233.9 | 448.58 | 234.02 | 448.57 |
| 234.34 | 448.53 | 234.54 | 448.5 | 239.22 | 448.74 | 239.66 | 448.79 | 246.05 | 449 |
| 246.37 | 449.01 | 250.16 | 449.16 | 250.21 | 449.16 | 250.24 | 449.16 | 250.7 | 449.17 |
| 250.71 | 449.17 | 257.63 | 449.25 | 258.23 | 449.26 | 258.3 | 449.26 | 258.68 | 449.29 |
| 261.34 | 449.21 | 265.02 | 449 | 270.19 | 449 | 274.23 | 449 | 278.53 | 448.99 |
| 281.5 | 448.99 | 284.24 | 448.99 | 288.82 | 449 | 293.84 | 449 | 300.51 | 449 |
| 306.35 | 449.79 | 306.64 | 449.83 | 307.41 | 449.94 | 316.02 | 449.96 | 320.98 | 449.97 |
| 321.92 | 449.98 | 324.77 | 449.98 | 328.15 | 449.99 | 332.2 | 450 | 332.32 | 450 |
| 333.72 | 450 | 333.73 | 450 | 333.76 | 450 | 333.77 | 450 | 334.05 | 450 |
| 334.11 | 450 | 334.39 | 450 | 336.58 | 450 | 337.27 | 450 | 337.57 | 449.99 |
| 337.69 | 449.99 | 362.83 | 449.29 | 367.63 | 449.19 | 367.82 | 449.2 | 368.63 | 449.24 |
| 368.65 | 449.24 | 369.3 | 449.26 | 369.34 | 449.26 | 370.69 | 449.33 | 376.6 | 449.27 |
| 384.87 | 449.06 | 385.43 | 449 | 386.23 | 449 | 386.27 | 449 | 386.6 | 449 |
| 387.08 | 449 | 388.17 | 449.03 | 388.23 | 449.03 | 396.93 | 449.27 | 412.52 | 449.59 |
| 418.66 | 449.71 | 421.54 | 449.8 | 422.16 | 449.81 | 422.25 | 449.81 | 424.21 | 449.85 |
| 426.26 | 449.88 | 427.15 | 449.91 | 428.37 | 449.91 | 431.81 | 449.92 | 432.77 | 449.94 |
| 438.59 | 450 | 438.7 | 450 | 438.74 | 450 | 442.81 | 450 | 443.28 | 450 |
| 448.05 | 450 | 449.82 | 450 | 450.14 | 450 | 450.34 | 450 | 457.55 | 450.02 |
| 460.79 | 450.04 | 471.93 | 450.09 | 475.06 | 450 | 475.3 | 450 | 475.42 | 450 |
| 476.31 | 450 | 476.65 | 450 | 476.71 | 450 | 476.9 | 450 | 477.03 | 450 |
| 478.14 | 450 | 478.31 | 450 | 479.3 | 450 | 479.6 | 450 | 479.74 | 450 |
| 480.03 | 450 | 480.14 | 450 | 481.24 | 449.92 | 483.32 | 449.77 | 484.06 | 449.72 |
| 484.19 | 449.71 | 487.27 | 449.54 | 489.16 | 449.43 | 489.4 | 449.43 | 489.63 | 449.42 |
| 497.42 | 449.3 | 509.67 | 449.09 | 511.72 | 449 | 511.76 | 449 | 512.47 | 448.99 |

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     513  448.99  513.43  448.98  513.66  448.98  514.87     449  517.97  449.01
520.5699  449.02  522.62  449.01  526.15     449  526.64  448.99  527.34  448.99
     528  448.99  528.64     449532.0699  449.75  532.93     450  533.74  450.23
  536.88     451   539.6  451.65  540.12  451.76  541.01     452  542.97  452.96
  543.09     453  543.59  453.25  545.04     454   545.4  454.18  547.05     455
  547.88  455.44  549.08     456550.0699  456.51   551.1     457  552.03  457.53
  552.94     458  553.78  458.55  554.75     459  555.41  459.32   556.6     460
  557.61  460.54  558.42     461  559.56  461.67  560.14     462  560.64  462.31
  561.88     463  562.61  463.48   563.5     464  564.25  464.47  565.19     465
  566.05  465.51  566.86     466  567.78  466.58  568.43     467  569.37  467.61
570.0099     468  570.82  468.56  571.39  468.84  571.66     469  571.88  469.13
  573.04     470  574.65  470.88  574.86     471  575.05   471.1  576.73     472
  578.52  472.99  578.53     473  578.64  473.04  578.66  473.06  578.86  473.18
  579.19  473.37  580.34     474  580.41     474     581  474.01  581.24  474.01
  582.36  474.03  582.38  474.03  582.43  474.04  586.37  474.33  590.55   474.5
  591.94  474.51  593.97  474.57  595.12  474.62  596.04  474.61

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  131.88     .04532.0699     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        131.88532.0699           398.32  359.24  393.83              .1       .3

CROSS SECTION


RIVER: WASH5
REACH: Center Line Wash   RS: 1040.76

INPUT
Description:
Station Elevation Data    num=     288
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   456.53.029999  456.033.070007  456.023.220001     4563.619995  455.92
 8.47998     45510.10999  454.7311.00998  454.5713.82999     45416.63998  453.44
18.42999     45318.76999  452.9919.60001  452.97   21.28  452.9122.39999  452.93
   24.72  452.7525.76999  452.76   25.97  452.75   26.53  452.7627.07001  452.74
28.16998  452.7128.72998  452.68   29.47  452.61   29.94  452.5930.63998  452.54
30.98999  452.5135.53998     452   37.97  451.65   42.94     45145.20999  450.62
45.73999  450.4848.26999     450   49.06  449.9949.23999  449.99    49.5  449.99
50.10001  449.9951.26999     45052.35001  450.2152.50998  450.2353.07001  450.32
    53.5  450.3654.38998  450.4654.63998  450.48   55.41  450.52   56.78  450.64
57.54999  450.6557.78998  450.66   61.22  450.5966.60001   450.670.29999   450.6
70.67999  450.5974.47998  450.48   78.91  450.5179.82999  450.4680.75998   450.4
81.04999  450.3982.85001  450.3883.45999  450.3586.07999   450.386.63998  450.26
87.26999  450.21    87.5  450.1989.60001     45091.60999  449.8591.79999  449.84
91.94998  449.8392.10001  449.83   92.69  449.7994.76999  449.64   95.31  449.61
95.39999   449.698.78998  449.44  101.04   449.4  101.59   449.4  103.53  449.44
  105.92  449.44  106.27  449.45  106.65  449.44  107.26  449.46   108.8   449.5
   109.3   449.5  109.63   449.5  110.32   449.5  111.04  449.49  113.75   449.4
  114.78  449.37  115.13  449.36  121.52     449  125.68  448.88  129.35  448.88
  131.21     449  132.34  449.05  132.95  449.07  135.85  449.14  136.28  449.15
  136.38  449.14   137.5  449.17  142.33  449.05  148.02  449.09  148.32  449.09
  148.67  449.09  152.83  449.05  158.46     449  164.53  448.55  171.77     448
  174.43  447.46  174.75  447.41  174.96  447.38  175.15  447.37   177.6     447
  180.01  446.28  181.02  446.05  181.29     446  181.36     446  181.55     446
  181.84     446   182.5     446  182.89     446  183.31     446  184.11     446
  186.06     446   186.2     446  186.54     446  186.63     446  188.31  446.04
   191.6  446.06  191.71  446.06  193.33  446.06  194.97  446.05  196.94  446.01
  197.56  446.01   197.9  446.01  198.13  446.01  198.52  446.01  198.96  446.01
  199.45  446.01  200.11  446.01  201.83  446.01  202.38  446.01  202.51  446.01
  202.59  446.01     203  446.01  203.78     446  204.05     446  204.14     446
  204.26     446   205.1     446  207.04  445.99  207.29  445.99  207.42  445.99
  208.01  445.99  214.98  445.29  215.53  445.24  217.48     445  218.74  444.99
  218.89  444.98  223.08  444.94  224.16  444.95  225.56  444.95  227.02  444.96
  227.59  444.96  231.43  444.66  232.04  444.71  232.41  444.72  232.53  444.71
  234.14  444.72  234.44   444.7  234.67  444.69  235.38  444.62   236.7  444.43
  237.03   444.4  239.03     444  239.11     444  239.59     444  239.84     444
  242.04     444  242.69     444   244.9     444  253.03  444.85  254.39     445
  255.87  445.13  260.86  445.66  263.97     446  271.56  446.03  273.28  446.04
   274.1  446.04  282.23  446.05  282.29  446.05  282.99  446.03     283  446.03
  283.03  446.03  283.05  446.02  284.29     446  286.39  445.97  290.43  445.85
  290.84  445.84  292.52  445.79  292.73  445.78  293.18  445.76  294.01  445.73
  296.74  445.57  298.11  445.48  303.14  445.14  304.82  445.05   304.9  445.05
  304.95  445.04   305.2     445  307.58  444.73  313.69     444  314.66  443.99
  315.48  443.99  318.74  443.98  321.52  443.99  323.56     444  324.55  444.04
  326.25  444.08  328.16  444.07  330.69     444  337.74  443.99  341.36  443.99
  344.61  443.98  348.99  443.99  351.53     444  351.56     444  351.67     444
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 351.75 | 444 | 352.24 | 444 | 353.73 | 444 | 354.17 | 444 | 355.21 | 444 |
| 355.5 | 444 | 357.09 | 444 | 359.54 | 444 | 359.59 | 444 | 360.35 | 444 |
| 360.39 | 444 | 363.61 | 443.99 | 366.92 | 444 | 367.13 | 444 | 367.6 | 444.03 |
| 367.68 | 444.03 | 368.01 | 444.07 | 373.15 | 444.45 | 378.69 | 445 | 382.21 | 445.52 |
| 384.54 | 446 | 385.84 | 446.2 | 390.22 | 447 | 391.65 | 447.42 | 393.65 | 448 |
| 394.97 | 448.42 | 396.92 | 449 | 399.06 | 449.65 | 400.23 | 450 | 400.86 | 450.17 |
| 404.12 | 451 | 406.61 | 451.66 | 407.85 | 452 | 409.82 | 452.56 | 411.66 | 453 |
| 414.21 | 453.63 | 415.68 | 454 | 417.06 | 454.35 | 420.11 | 455 | 423.52 | 455.79 |
| 424.35 | 456 | 425.69 | 456.24 | 430.11 | 457 | 432.05 | 457.38 | 435.52 | 458 |
| 438.65 | 458.54 | 441.01 | 459 | 442.64 | 459.27 | 447.12 | 460 | 449.51 | 460.38 |
| 453.18 | 461 | 455.72 | 461.37 | 458.43 | 461.74 | 458.55 | 461.76 | 460.29 | 462 |
| 464.81 | 462.7 | 466.63 | 463 | 466.7 | 463 | 466.79 | 463 | 467.03 | 463 |
| 467.45 | 463 | 467.82 | 463 | 476.68 | 463 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 208.01 | .04 | 384.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 208.01 | 384.54 | 415.98 | 364.15 | 329.77 | .1 | .3 |

CROSS SECTION

RIVER: WASH5
REACH: Center Line Wash RS: 676.61

INPUT
Description:
Station Elevation Data num= 321

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 460.48 | 1.700012 | 460.45 | 2.970032 | 460.47 | 3.140015 | 460.47 | 3.190002 | 460.47 |
| 10.5 | 460.32 | 12.99005 | 460.23 | 23.45001 | | 46023.57001 | | 46025.59003 | 459.92 |
| 26.88 | 459.91 | 27.42004 | 459.89 | 28.29004 | 459.85 | 33.80005 | 459.66 | 35.39001 | 459.59 |
| 40.24005 | 459.38 | 41.36005 | 459.32 | 42.70001 | 459.26 | 44.13 | 459.19 | 47.25 | 459 |
| 50.18005 | 458.78 | 60.61005 | | 45865.74005 | 457.46 | 70.23004 | | 45772.99005 | 456.49 |
| 75.89001 | 456 | 80 | 455.03 | 80.13 | | 45580.31006 | 454.94 | 80.32001 | 454.94 |
| 81.96002 | 454.41 | 82.33002 | 454.38 | 3.95001 | | 45486.36005 | 453.51 | 86.66003 | 453.46 |
| 87.14001 | 453.42 | 87.44 | 453.38 | 87.71002 | 453.37 | 89.18005 | 453.36 | 90.60004 | 453.39 |
| 90.83002 | 453.38 | 93 | 453.27 | 94.17004 | 453.24 | 94.65002 | 453.23 | 95.95001 | 453.24 |
| 96.96002 | 453.29 | 7.16003 | 453.19 | 97.79004 | 453.13 | 98.31006 | 453.08 | 98.86005 | 453 |
| 103.15 | 452.23 | 103.53 | 452.17 | 105.3101 | 452 | 106.6 | 451.82 | 107.39 | 451.8 |
| 107.54 | 451.8 | 112.9 | 451.73 | 113.61 | 451.74 | 114.5601 | 451.72 | 117.76 | 451.79 |
| 118.15 | 451.8 | 119.4 | 451.74 | 120.41 | 451.77 | 120.6801 | 451.77 | 124.6801 | 451.59 |
| 124.8 | 451.59 | 125.07 | 451.58 | 125.91 | 451.57 | 128.52 | 451.61 | 29.0601 | 451.57 |
| 130.45 | 451.44 | 131.1801 | 451.38 | 134.25 | 451.32 | 134.58 | 451.28 | 134.94 | 451.24 |
| 136.78 | 451 | 138.14 | 450.74 | 138.9301 | 450.51 | 39.9901 | 450.08 | 140.54 | 450 |
| 140.85 | 449.5 | 141.29 | 449 | 141.48 | 448.85 | 142.25 | 448 | 142.9 | 447 |
| 142.91 | 447 | 143.83 | 446 | 144.29 | 445.37 | 144.5601 | 445.05 | 144.61 | 445 |
| 144.64 | 444.96 | 145.4 | 444 | 145.48 | 443.92 | 146.9901 | 443 | 147.84 | 442.4 |
| 148.48 | 442 | 149.35 | 441.49 | 149.88 | 441 | 159.25 | 440.93 | 161.89 | 440.92 |
| 172.38 | 440.99 | 173.83 | 441 | 177.51 | 441.16 | 197.93 | 441.99 | 198.64 | 441.99 |
| 199.37 | 442 | 199.89 | 442.02 | 200.51 | 442.04 | 201.26 | 442.03 | 205.8 | 442.08 |
| 205.91 | 442.08 | 206.03 | 442.08 | 211.82 | 442.07 | 214.06 | 442.07 | 219.14 | 442.04 |
| 219.51 | 442.03 | 220.21 | 442.03 | 223.87 | 442.01 | 224.18 | 442.01 | 225.78 | 442 |
| 227.97 | 442 | 228.62 | 442 | 229.05 | 442 | 229.32 | 442 | 230.43 | 442 |
| 231.52 | 442 | 232.62 | 442 | 233.84 | 442 | 233.87 | 442 | 235.62 | 442 |
| 242.11 | 442.01 | 242.53 | 442.01 | 245.51 | 442 | 246.35 | 442 | 247.72 | 442 |
| 248.02 | 442 | 248.18 | 442 | 251.2 | 441.88 | 258.79 | 441.61 | 262.64 | 441.44 |
| 263.21 | 441.42 | 268.06 | 441.23 | 268.63 | 441.21 | 270.96 | 441.11 | 271.86 | 441.08 |
| 274.12 | 441 | 275.92 | 440.97 | 276.6 | 440.97 | 278.84 | 441 | 278.98 | 441 |
| 279.02 | 441 | 279.05 | 441 | 279.11 | 441 | 279.58 | 441 | 279.9 | 441 |
| 280.12 | 441 | 282.18 | 440.7 | 282.95 | 440.65 | 283.75 | 440.57 | 284.98 | 440.45 |
| 289.46 | 440 | 289.79 | 440 | 290.32 | 439.99 | 292.24 | 439.98 | 294.02 | 439.99 |
| 294.87 | 440 | 297.05 | 440 | 297.24 | 440.01 | 297.98 | 440.01 | 304.18 | 440.02 |
| 307.33 | 440.02 | 308.02 | 440.02 | 309.79 | 440.03 | 310.05 | 440.03 | 310.5 | 440.03 |
| 314.13 | 440.02 | 315.14 | 440.02 | 315.36 | 440.01 | 315.65 | 440.02 | 324.3 | 440.32 |
| 330.26 | 440.51 | 330.92 | 440.55 | 331.71 | 440.6 | 332.35 | 440.64 | 339.13 | 441 |
| 350.32 | 441.94 | 350.86 | 442 | 350.92 | 442 | 351.46 | 442.01 | 351.83 | 442.01 |
| 355.42 | 442.16 | 358.9 | 442.28 | 360.76 | 442.35 | 361.35 | 442.37 | 362.52 | 442.42 |
| 362.76 | 442.42 | 362.87 | 442.43 | 363.04 | 442.43 | 372.09 | 442.97 | 372.22 | 442.98 |
| 372.26 | 442.98 | 372.31 | 442.98 | 372.53 | 442.98 | 372.61 | 442.98 | 372.67 | 442.98 |
| 372.78 | 442.98 | 373.27 | 442.98 | 373.7 | 442.98 | 374.13 | 442.98 | 378.19 | 442.78 |
| 385.38 | 442.83 | 385.55 | 442.83 | 387.06 | 442.83 | 389.55 | 442.81 | 391.12 | 442.81 |
| 394.36 | 442.82 | 396.36 | 442.83 | 398.44 | 442.85 | 398.59 | 442.85 | 399.4 | 442.87 |
| 412.91 | 442.99 | 412.92 | 442.99 | 412.94 | 442.99 | 412.96 | 442.99 | 413.18 | 442.99 |
| 413.44 | 442.99 | 413.62 | 442.98 | 415.78 | 442.99 | 415.82 | 442.99 | 417.65 | 442.96 |
| 417.93 | 442.94 | 421.4901 | 442.83 | 422.16 | 442.79 | 423.43 | 442.75 | 423.5 | 442.75 |
| 427.07 | 442.54 | 427.32 | 442.53 | 435.01 | 442.07 | 435.8 | 442.03 | 436.26 | 442 |

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  437.55     442  437.81     442  438.56     442  439.04  442.01  440.01  442.04
  451.25  442.37  468.73     443  469.97  443.08  485.64     444  493.13  444.12
  493.48  444.13  503.15  444.27  506.23  444.29  509.98  444.33  520.77  444.46
  525.11   444.5  530.27  444.55  543.23  444.71  566.48  444.99  566.97     445
567.1901  445.02   580.1     446  581.91  446.51  583.97     447   585.7  447.54
587.2401     448590.0601  448.94  590.27     449  590.89  449.18  593.78     450
     597  450.71  597.46  450.81  598.42     451  598.87   451.1  602.63     452
  605.72  452.72606.8101     453  607.82  453.25  611.35     454   614.7  454.85
   615.4     455  615.94  455.12620.3701     456  622.98  456.57624.4901  456.85
  625.36     457  627.16  457.34     628   457.5  629.86  457.77  631.34     458
  631.42     458  631.57  458.02  632.45  458.09  633.41  458.12  636.23  458.23
  636.95  458.25  638.61  458.27  639.51  458.27  639.77  458.28  642.94  458.24
  643.04  458.24  643.38  458.24  645.11  458.23  648.72     458650.5601  457.83
  651.04  457.78  652.14  457.69  655.44  457.51  657.48  457.42  658.85  457.31
  660.72   457.3  661.27  457.28  662.27  457.31  662.66  457.32664.5601  457.42
666.3101  457.47  668.04  457.61668.0601  457.62  670.23  457.89  671.05     458
  672.78  458.17

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  149.35     .04  350.32     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
        149.35  350.32              .1       .3


SUMMARY OF MANNING'S N VALUES

River:WASH10A

      Reach          River Sta.       n1        n2        n3

 Centerline Align     22483.47           .05       .04       .05
 Centerline Align     22271.22           .05       .04       .05
 Centerline Align     21952.52           .05       .04       .05
 Centerline Align     21621.24           .05       .04       .05


River:WASH10B

      Reach          River Sta.       n1        n2        n3

 Centerline Align     21050.7            .05       .04       .05
 Centerline Align     20571.83           .05       .04       .05
 Centerline Align     20305.7            .05       .04       .05
 Centerline Align     19884.32           .05       .04       .05
 Centerline Align     19500              .05       .04       .05
 Centerline Align     19100              .05       .04       .05
 Centerline Align     18600              .05       .04       .05
 Centerline Align     18100              .05       .04       .05
 Centerline Align     17600              .05       .04       .05


River:WASH15

      Reach          River Sta.       n1        n2        n3

 Centerline Align     3100               .05       .04       .05
 Centerline Align     2600               .05       .04       .05
 Centerline Align     2100               .05       .04       .05
 Centerline Align     1600               .05       .04       .05
 Centerline Align     1100               .05       .04       .05
 Centerline Align     600                .05       .04       .05
 Centerline Align     282.51             .05       .04       .05


River:WASH20

      Reach          River Sta.       n1        n2        n3

 Centerline Align     16636.71           .05       .04       .05
 Centerline Align     16100              .05       .04       .05
 Centerline Align     16000.*            .05       .04       .05
 Centerline Align     15900.*            .05       .04       .05
 Centerline Align     15800.*            .05       .04       .05
 Centerline Align     15700.*            .05       .04       .05
 Centerline Align     15600              .05       .04       .05
 Centerline Align     15513.8*           .05       .04       .05
```

| | | | | |
|---|---|---|---|---|
| Centerline Align | 15427.7* | .05 | .04 | .05 |
| Centerline Align | 15341.6* | .05 | .04 | .05 |
| Centerline Align | 15255.5* | .05 | .04 | .05 |
| Centerline Align | 15169.42 | .05 | .04 | .05 |
| Centerline Align | 15121.9* | .05 | .04 | .05 |
| Centerline Align | 15074.5* | .05 | .04 | .05 |
| Centerline Align | 15027.0* | .05 | .04 | .05 |
| Centerline Align | 14979.6* | .05 | .04 | .05 |
| Centerline Align | 14932.1* | .05 | .04 | .05 |
| Centerline Align | 14884.7* | .05 | .04 | .05 |
| Centerline Align | 14837.2* | .05 | .04 | .05 |
| Centerline Align | 14789.8* | .05 | .04 | .05 |
| Centerline Align | 14742.3* | .05 | .04 | .05 |
| Centerline Align | 14694.9* | .05 | .04 | .05 |
| Centerline Align | 14647.4* | .05 | .04 | .05 |
| Centerline Align | 14600 | .05 | .04 | .05 |
| Centerline Align | 14516.6* | .05 | .04 | .05 |
| Centerline Align | 14433.3* | .05 | .04 | .05 |
| Centerline Align | 14350.* | .05 | .04 | .05 |
| Centerline Align | 14266.6* | .05 | .04 | .05 |
| Centerline Align | 14183.3* | .05 | .04 | .05 |
| Centerline Align | 14100 | .05 | .04 | .05 |
| Centerline Align | 14028.5* | .05 | .04 | .05 |
| Centerline Align | 13957.1* | .05 | .04 | .05 |
| Centerline Align | 13885.7* | .05 | .04 | .05 |
| Centerline Align | 13814.2* | .05 | .04 | .05 |
| Centerline Align | 13742.8* | .05 | .04 | .05 |
| Centerline Align | 13671.4* | .05 | .04 | .05 |
| Centerline Align | 13600 | .05 | .04 | .05 |
| Centerline Align | 13528.5* | .05 | .04 | .05 |
| Centerline Align | 13457.1* | .05 | .04 | .05 |
| Centerline Align | 13385.7* | .05 | .04 | .05 |
| Centerline Align | 13314.2* | .05 | .04 | .05 |
| Centerline Align | 13242.8* | .05 | .04 | .05 |
| Centerline Align | 13171.4* | .05 | .04 | .05 |
| Centerline Align | 13100 | .05 | .04 | .05 |
| Centerline Align | 13028.5* | .05 | .04 | .05 |
| Centerline Align | 12957.1* | .05 | .04 | .05 |
| Centerline Align | 12885.7* | .05 | .04 | .05 |
| Centerline Align | 12814.2* | .05 | .04 | .05 |
| Centerline Align | 12742.8* | .05 | .04 | .05 |
| Centerline Align | 12671.4* | .05 | .04 | .05 |
| Centerline Align | 12600 | .05 | .04 | .05 |
| Centerline Align | 12100 | .05 | .04 | .05 |
| Centerline Align | 11600 | .05 | .04 | .05 |
| Centerline Align | 11329.19 | .05 | .04 | .05 |

River:WASH23

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Wash23 | 3479.12 | .05 | .04 | .05 |
| Wash23 | 3038.38 | .05 | .04 | .05 |
| Wash23 | 2630.84 | .05 | .04 | .05 |
| Wash23 | 2097.72 | .05 | .04 | .05 |
| Wash23 | 1490.24 | .05 | .04 | .05 |
| Wash23 | 1066.16 | .05 | .04 | .05 |
| Wash23 | 780.97 | .05 | .04 | .05 |

River:WASH25A

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Centerline Align | 10806.78 | .05 | .04 | .05 |
| Centerline Align | 10100 | .05 | .04 | .05 |
| Centerline Align | 9600 | .05 | .04 | .05 |
| Centerline Align | 9100 | .05 | .04 | .05 |
| Centerline Align | 8600 | .05 | .04 | .05 |
| Centerline Align | 8100 | .05 | .04 | .05 |
| Centerline Align | 7600 | .05 | .04 | .05 |
| Centerline Align | 7100 | .05 | .04 | .05 |

River:WASH25B

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Centerline Align | 6600 | .05 | .04 | .05 |
| Centerline Align | 6100 | .05 | .04 | .05 |
| Centerline Align | 5600 | .05 | .04 | .05 |
| Centerline Align | 5100 | .05 | .04 | .05 |
| Centerline Align | 4600 | .05 | .04 | .05 |
| Centerline Align | 4100 | .05 | .04 | .05 |
| Centerline Align | 3600 | .05 | .04 | .05 |
| Centerline Align | 3100 | .05 | .04 | .05 |
| Centerline Align | 3000.* | .05 | .04 | .05 |
| Centerline Align | 2900.* | .05 | .04 | .05 |
| Centerline Align | 2800.* | .05 | .04 | .05 |
| Centerline Align | 2700.* | .05 | .04 | .05 |
| Centerline Align | 2600 | .05 | .04 | .05 |
| Centerline Align | 2500.* | .05 | .04 | .05 |
| Centerline Align | 2400.* | .05 | .04 | .05 |
| Centerline Align | 2300.* | .05 | .04 | .05 |
| Centerline Align | 2200.* | .05 | .04 | .05 |
| Centerline Align | 2100 | .05 | .04 | .05 |
| Centerline Align | 1368.02 | .05 | .04 | .05 |
| Centerline Align | 600 | .05 | .04 | .05 |
| Centerline Align | 100 | .05 | .04 | .05 |

River:WASH30

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Centerline Align | 10130.27 | .05 | .04 | .05 |
| Centerline Align | 9500 | .05 | .04 | .05 |
| Centerline Align | 9000 | .05 | .04 | .05 |
| Centerline Align | 8500 | .05 | .04 | .05 |
| Centerline Align | 8000 | .05 | .04 | .05 |
| Centerline Align | 7500 | .05 | .04 | .05 |
| Centerline Align | 7000 | .05 | .04 | .05 |
| Centerline Align | 6500 | .05 | .04 | .05 |
| Centerline Align | 6000 | .05 | .04 | .05 |
| Centerline Align | 5500 | .05 | .04 | .05 |
| Centerline Align | 5000 | .05 | .04 | .05 |
| Centerline Align | 4500 | .05 | .04 | .05 |
| Centerline Align | 4000 | .05 | .04 | .05 |
| Centerline Align | 3500 | .05 | .04 | .05 |
| Centerline Align | 3000 | .05 | .04 | .05 |
| Centerline Align | 2500 | .05 | .04 | .05 |
| Centerline Align | 2000 | .05 | .04 | .05 |
| Centerline Align | 1343.16 | .05 | .04 | .05 |
| Centerline Align | 1000 | .05 | .04 | .05 |
| Centerline Align | 500 | .05 | .04 | .05 |

River:WASH35

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Centerline Align | 5246.65 | .05 | .04 | .05 |
| Centerline Align | 4965.62 | .05 | .04 | .05 |
| Centerline Align | 4493.91 | .05 | .04 | .05 |
| Centerline Align | 4063.78 | .05 | .04 | .05 |
| Centerline Align | 3661.61 | .05 | .04 | .05 |
| Centerline Align | 3000 | .05 | .04 | .05 |
| Centerline Align | 2500 | .05 | .04 | .05 |
| Centerline Align | 2000 | .05 | .04 | .05 |
| Centerline Align | 1600 | .05 | .04 | .05 |

River:WASH4

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Wash 4 | 1076.68 | .05 | .04 | .05 |
| Wash 4 | 813.29 | .05 | .04 | .05 |
| Wash 4 | 573.28 | .05 | .04 | .05 |
| Wash 4 | 333.76 | .05 | .04 | .05 |

River:WASH40

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Centerline Align | 10653.2 | .05 | .04 | .05 |

| | | | | |
|---|---|---|---|---|
| Centerline Align | 10033.98 | .05 | .04 | .05 |
| Centerline Align | 9616.88 | .05 | .04 | .05 |
| Centerline Align | 8761.12 | .05 | .04 | .05 |
| Centerline Align | 7943.06 | .05 | .04 | .05 |
| Centerline Align | 6943.13 | .05 | .04 | .05 |

River:WASH45

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Centerline Align | 5500 | .05 | .04 | .05 |
| Centerline Align | 4744.3 | .05 | .04 | .05 |
| Centerline Align | 4000 | .05 | .04 | .05 |
| Centerline Align | 3500 | .05 | .04 | .05 |
| Centerline Align | 3000 | .05 | .04 | .05 |
| Centerline Align | 2500 | .05 | .04 | .05 |
| Centerline Align | 2000 | .05 | .04 | .05 |
| Centerline Align | 1500 | .05 | .04 | .05 |
| Centerline Align | 1000 | .05 | .04 | .05 |
| Centerline Align | 378.44 | .05 | .04 | .05 |

River:WASH5

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| Center Line Wash | 2398.41 | .05 | .04 | .05 |
| Center Line Wash | 2138.83 | .05 | .04 | .05 |
| Center Line Wash | 1728.1 | .05 | .04 | .05 |
| Center Line Wash | 1400 | .05 | .04 | .05 |
| Center Line Wash | 1040.76 | .05 | .04 | .05 |
| Center Line Wash | 676.61 | .05 | .04 | .05 |

SUMMARY OF REACH LENGTHS

River: WASH10A

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 22483.47 | 212.25 | 212.25 | 212.25 |
| Centerline Align | 22271.22 | 321.94 | 318.7 | 315.11 |
| Centerline Align | 21952.52 | 330.7 | 331.28 | 335.04 |
| Centerline Align | 21621.24 | 581 | 570.54 | 610.89 |

River: WASH10B

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 21050.7 | 555 | 478.87 | 408.02 |
| Centerline Align | 20571.83 | 266.13 | 266.13 | 266.13 |
| Centerline Align | 20305.7 | 215.94 | 421.38 | 586.19 |
| Centerline Align | 19884.32 | 387.82 | 384.32 | 385.74 |
| Centerline Align | 19500 | 475.6 | 400 | 317.56 |
| Centerline Align | 19100 | 513.3 | 500 | 494.8 |
| Centerline Align | 18600 | 637.42 | 500 | 365 |
| Centerline Align | 18100 | 395.71 | 500 | 618.5 |
| Centerline Align | 17600 | 1020.59 | 963.29 | 904 |

River: WASH15

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 3100 | 603.67 | 500 | 391.66 |
| Centerline Align | 2600 | 692.88 | 500 | 324.25 |
| Centerline Align | 2100 | 335 | 500 | 601.81 |
| Centerline Align | 1600 | 573.88 | 500 | 453.79 |
| Centerline Align | 1100 | 542.95 | 500 | 508.25 |
| Centerline Align | 600 | 365.99 | 317.49 | 281.21 |
| Centerline Align | 282.51 | | | |

River: WASH20

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 16636.71 | 464.6 | 536.71 | 587.91 |
| Centerline Align | 16100 | 108.53 | 100 | 93.12 |
| Centerline Align | 16000.* | 108.53 | 100 | 93.12 |
| Centerline Align | 15900.* | 108.53 | 100 | 93.12 |
| Centerline Align | 15800.* | 108.53 | 100 | 93.12 |
| Centerline Align | 15700.* | 108.53 | 100 | 93.12 |
| Centerline Align | 15600 | 59.25 | 86.12 | 98.5 |
| Centerline Align | 15513.8* | 59.25 | 86.12 | 98.5 |
| Centerline Align | 15427.7* | 59.25 | 86.12 | 98.5 |
| Centerline Align | 15341.6* | 59.25 | 86.12 | 98.5 |
| Centerline Align | 15255.5* | 59.25 | 86.12 | 98.5 |
| Centerline Align | 15169.42 | 46.07 | 47.45 | 64.9 |
| Centerline Align | 15121.9* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 15074.5* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 15027.0* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14979.6* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14932.1* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14884.7* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14837.2* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14789.8* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14742.3* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14694.9* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14647.4* | 46.07 | 47.45 | 64.9 |
| Centerline Align | 14600 | 83.8 | 83.33 | 98.93 |
| Centerline Align | 14516.6* | 83.8 | 83.33 | 98.93 |
| Centerline Align | 14433.3* | 83.8 | 83.33 | 98.93 |
| Centerline Align | 14350.* | 83.8 | 83.33 | 98.93 |
| Centerline Align | 14266.6* | 83.8 | 83.33 | 98.93 |
| Centerline Align | 14183.3* | 83.8 | 83.34 | 98.93 |
| Centerline Align | 14100 | 66.38 | 71.43 | 76.65 |
| Centerline Align | 14028.5* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13957.1* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13885.7* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13814.2* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13742.8* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13671.4* | 66.38 | 71.43 | 76.65 |
| Centerline Align | 13600 | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13528.5* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13457.1* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13385.7* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13314.2* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13242.8* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13171.4* | 72.59 | 71.43 | 77.31 |
| Centerline Align | 13100 | 69.11 | 71.43 | 68.36 |
| Centerline Align | 13028.5* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12957.1* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12885.7* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12814.2* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12742.8* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12671.4* | 69.11 | 71.43 | 68.36 |
| Centerline Align | 12600 | 465.92 | 500 | 593.61 |
| Centerline Align | 12100 | 500.02 | 500 | 502.8 |
| Centerline Align | 11600 | 276.49 | 270.81 | 272.92 |
| Centerline Align | 11329.19 | 565.35 | 522.41 | 405.42 |

River: WASH23

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Wash23 | 3479.12 | 420.09 | 440.74 | 457.73 |
| Wash23 | 3038.38 | 415.04 | 407.54 | 407.4 |
| Wash23 | 2630.84 | 516.25 | 533.12 | 545.48 |
| Wash23 | 2097.72 | 557.44 | 607.48 | 682.23 |
| Wash23 | 1490.24 | 470.41 | 424.08 | 375.58 |
| Wash23 | 1066.16 | 285.33 | 285.19 | 284.54 |
| Wash23 | 780.97 | | | |

River: WASH25A

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 10806.78 | 827.5032 | 706.78 | 664.38 |
| Centerline Align | 10100 | 543.6 | 500 | 417.85 |
| Centerline Align | 9600 | 516.03 | 500 | 513.02 |
| Centerline Align | 9100 | 671.36 | 500 | 509.41 |

| | | | | |
|---|---|---|---|---|
| Centerline Align | 8600 | 525.23 | 500 | 422.06 |
| Centerline Align | 8100 | 541.1 | 500 | 502.06 |
| Centerline Align | 7600 | 484.19 | 500 | 513.91 |
| Centerline Align | 7100 | 301.5 | 500 | 665.34 |

River: WASH25B

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 6600 | 487.5 | 500 | 501.18 |
| Centerline Align | 6100 | 525.75 | 500 | 515.16 |
| Centerline Align | 5600 | 390.86 | 500 | 671.59 |
| Centerline Align | 5100 | 547.22 | 500 | 502.03 |
| Centerline Align | 4600 | 198.47 | 500 | 688.19 |
| Centerline Align | 4100 | 519.21 | 500 | 500.1 |
| Centerline Align | 3600 | 547.87 | 500 | 500 |
| Centerline Align | 3100 | 103.92 | 100 | 114.51 |
| Centerline Align | 3000.* | 103.92 | 100 | 114.51 |
| Centerline Align | 2900.* | 103.92 | 100 | 114.51 |
| Centerline Align | 2800.* | 103.92 | 100 | 114.51 |
| Centerline Align | 2700.* | 103.92 | 100 | 114.51 |
| Centerline Align | 2600 | 126.07 | 100 | 65.25 |
| Centerline Align | 2500.* | 126.07 | 100 | 65.25 |
| Centerline Align | 2400.* | 126.07 | 100 | 65.25 |
| Centerline Align | 2300.* | 126.07 | 100 | 65.25 |
| Centerline Align | 2200.* | 126.07 | 100 | 65.25 |
| Centerline Align | 2100 | 107.79 | 731.98 | 1606.73 |
| Centerline Align | 1368.02 | 387.55 | 768.02 | 1015.49 |
| Centerline Align | 600 | 501.85 | 500 | 454.32 |
| Centerline Align | 100 | | | |

River: WASH30

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 10130.27 | 620.16 | 630.27 | 703.75 |
| Centerline Align | 9500 | 418.22 | 500 | 592.04 |
| Centerline Align | 9000 | 649.58 | 500 | 334.26 |
| Centerline Align | 8500 | 177.36 | 500 | 886.37 |
| Centerline Align | 8000 | 425.34 | 500 | 594.89 |
| Centerline Align | 7500 | 362.78 | 500 | 670.29 |
| Centerline Align | 7000 | 643.27 | 500 | 349.76 |
| Centerline Align | 6500 | 352.22 | 500 | 705.99 |
| Centerline Align | 6000 | 739.24 | 500 | 229.09 |
| Centerline Align | 5500 | 124.19 | 500 | 877.92 |
| Centerline Align | 5000 | 448.76 | 500 | 562.51 |
| Centerline Align | 4500 | 505.01 | 500 | 504.15 |
| Centerline Align | 4000 | 353.33 | 500 | 659.77 |
| Centerline Align | 3500 | 583.36 | 500 | 439.64 |
| Centerline Align | 3000 | 680.16 | 500 | 394.42 |
| Centerline Align | 2500 | 480.12 | 500 | 529.25 |
| Centerline Align | 2000 | 1286.2 | 656.84 | 319.02 |
| Centerline Align | 1343.16 | 343.41 | 343.16 | 334.67 |
| Centerline Align | 1000 | 658.4 | 500 | 415.82 |
| Centerline Align | 500 | | | |

River: WASH35

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 5246.65 | 362.11 | 281.03 | 222.67 |
| Centerline Align | 4965.62 | 604.21 | 471.71 | 392.03 |
| Centerline Align | 4493.91 | 318.43 | 430.13 | 466.58 |
| Centerline Align | 4063.78 | 259.64 | 402.17 | 450.05 |
| Centerline Align | 3661.61 | 446.79 | 661.61 | 757.47 |
| Centerline Align | 3000 | 500.78 | 500 | 529.92 |
| Centerline Align | 2500 | 563.37 | 500 | 473.57 |
| Centerline Align | 2000 | 495.22 | 400 | 329.08 |
| Centerline Align | 1600 | | | |

River: WASH4

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Wash 4 | 1076.68 | 274.59 | 263.39 | 253.73 |

| | | | | |
|---|---|---|---|---|
| Wash 4 | 813.29 | 247.47 | 240.01 | 236.22 |
| Wash 4 | 573.28 | 258.7 | 239.52 | 220.92 |
| Wash 4 | 333.76 | | | |

River: WASH40

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 10653.2 | 10217.02 | 619.22 | 572.79 |
| Centerline Align | 10033.98 | 553.99 | 417.1 | 386.34 |
| Centerline Align | 9616.88 | 574.86 | 855.76 | 907.45 |
| Centerline Align | 8761.12 | 966.3 | 818.06 | 748.69 |
| Centerline Align | 7943.06 | 781.53 | 999.93 | 1577.22 |
| Centerline Align | 6943.13 | 1943.3 | 1443.13 | 375.99 |

River: WASH45

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Centerline Align | 5500 | 781.84 | 755.7 | 712.12 |
| Centerline Align | 4744.3 | 746.69 | 744.3 | 702.53 |
| Centerline Align | 4000 | 580 | 500 | 425.02 |
| Centerline Align | 3500 | 679.75 | 500 | 276.43 |
| Centerline Align | 3000 | 488.17 | 500 | 500.7 |
| Centerline Align | 2500 | 502.84 | 500 | 505.29 |
| Centerline Align | 2000 | 500.07 | 500 | 526.86 |
| Centerline Align | 1500 | 515.2 | 500 | 568.86 |
| Centerline Align | 1000 | 593.46 | 621.56 | 731.14 |
| Centerline Align | 378.44 | | | |

River: WASH5

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| Center Line Wash | 2398.41 | 271.91 | 259.58 | 276.66 |
| Center Line Wash | 2138.83 | 433.55 | 410.73 | 308.26 |
| Center Line Wash | 1728.1 | 207.17 | 328.1 | 517.32 |
| Center Line Wash | 1400 | 398.32 | 359.24 | 393.83 |
| Center Line Wash | 1040.76 | 415.98 | 364.15 | 329.77 |
| Center Line Wash | 676.61 | | | |

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: WASH10A

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 22483.47 | .1 | .3 |
| Centerline Align | 22271.22 | .1 | .3 |
| Centerline Align | 21952.52 | .1 | .3 |
| Centerline Align | 21621.24 | .1 | .3 |

River: WASH10B

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 21050.7 | .1 | .3 |
| Centerline Align | 20571.83 | .1 | .3 |
| Centerline Align | 20305.7 | .1 | .3 |
| Centerline Align | 19884.32 | .1 | .3 |
| Centerline Align | 19500 | .1 | .3 |
| Centerline Align | 19100 | .1 | .3 |
| Centerline Align | 18600 | .1 | .3 |
| Centerline Align | 18100 | .1 | .3 |
| Centerline Align | 17600 | .1 | .3 |

River: WASH15

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 3100 | .1 | .3 |

| | | | |
|---|---|---|---|
| Centerline Align | 2600 | .1 | .3 |
| Centerline Align | 2100 | .1 | .3 |
| Centerline Align | 1600 | .1 | .3 |
| Centerline Align | 1100 | .1 | .3 |
| Centerline Align | 600 | .1 | .3 |
| Centerline Align | 282.51 | .1 | .3 |

River: WASH20

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 16636.71 | .1 | .3 |
| Centerline Align | 16100 | .1 | .3 |
| Centerline Align | 16000.* | .1 | .3 |
| Centerline Align | 15900.* | .1 | .3 |
| Centerline Align | 15800.* | .1 | .3 |
| Centerline Align | 15700.* | .1 | .3 |
| Centerline Align | 15600 | .1 | .3 |
| Centerline Align | 15513.8* | .1 | .3 |
| Centerline Align | 15427.7* | .1 | .3 |
| Centerline Align | 15341.6* | .1 | .3 |
| Centerline Align | 15255.5* | .1 | .3 |
| Centerline Align | 15169.42 | .1 | .3 |
| Centerline Align | 15121.9* | .1 | .3 |
| Centerline Align | 15074.5* | .1 | .3 |
| Centerline Align | 15027.0* | .1 | .3 |
| Centerline Align | 14979.6* | .1 | .3 |
| Centerline Align | 14932.1* | .1 | .3 |
| Centerline Align | 14884.7* | .1 | .3 |
| Centerline Align | 14837.2* | .1 | .3 |
| Centerline Align | 14789.8* | .1 | .3 |
| Centerline Align | 14742.3* | .1 | .3 |
| Centerline Align | 14694.9* | .1 | .3 |
| Centerline Align | 14647.4* | .1 | .3 |
| Centerline Align | 14600 | .1 | .3 |
| Centerline Align | 14516.6* | .1 | .3 |
| Centerline Align | 14433.3* | .1 | .3 |
| Centerline Align | 14350.* | .1 | .3 |
| Centerline Align | 14266.6* | .1 | .3 |
| Centerline Align | 14183.3* | .1 | .3 |
| Centerline Align | 14100 | .1 | .3 |
| Centerline Align | 14028.5* | .1 | .3 |
| Centerline Align | 13957.1* | .1 | .3 |
| Centerline Align | 13885.7* | .1 | .3 |
| Centerline Align | 13814.2* | .1 | .3 |
| Centerline Align | 13742.8* | .1 | .3 |
| Centerline Align | 13671.4* | .1 | .3 |
| Centerline Align | 13600 | .1 | .3 |
| Centerline Align | 13528.5* | .1 | .3 |
| Centerline Align | 13457.1* | .1 | .3 |
| Centerline Align | 13385.7* | .1 | .3 |
| Centerline Align | 13314.2* | .1 | .3 |
| Centerline Align | 13242.8* | .1 | .3 |
| Centerline Align | 13171.4* | .1 | .3 |
| Centerline Align | 13100 | .1 | .3 |
| Centerline Align | 13028.5* | .1 | .3 |
| Centerline Align | 12957.1* | .1 | .3 |
| Centerline Align | 12885.7* | .1 | .3 |
| Centerline Align | 12814.2* | .1 | .3 |
| Centerline Align | 12742.8* | .1 | .3 |
| Centerline Align | 12671.4* | .1 | .3 |
| Centerline Align | 12600 | .1 | .3 |
| Centerline Align | 12100 | .1 | .3 |
| Centerline Align | 11600 | .1 | .3 |
| Centerline Align | 11329.19 | .1 | .3 |

River: WASH23

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Wash23 | 3479.12 | .1 | .3 |
| Wash23 | 3038.38 | .1 | .3 |
| Wash23 | 2630.84 | .1 | .3 |
| Wash23 | 2097.72 | .1 | .3 |
| Wash23 | 1490.24 | .1 | .3 |
| Wash23 | 1066.16 | .1 | .3 |
| Wash23 | 780.97 | .1 | .3 |

River: WASH25A

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 10806.78 | .1 | .3 |
| Centerline Align | 10100 | .1 | .3 |
| Centerline Align | 9600 | .1 | .3 |
| Centerline Align | 9100 | .1 | .3 |
| Centerline Align | 8600 | .1 | .3 |
| Centerline Align | 8100 | .1 | .3 |
| Centerline Align | 7600 | .1 | .3 |
| Centerline Align | 7100 | .1 | .3 |

River: WASH25B

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 6600 | .1 | .3 |
| Centerline Align | 6100 | .1 | .3 |
| Centerline Align | 5600 | .1 | .3 |
| Centerline Align | 5100 | .1 | .3 |
| Centerline Align | 4600 | .1 | .3 |
| Centerline Align | 4100 | .1 | .3 |
| Centerline Align | 3600 | .1 | .3 |
| Centerline Align | 3100 | .1 | .3 |
| Centerline Align | 3000.* | .1 | .3 |
| Centerline Align | 2900.* | .1 | .3 |
| Centerline Align | 2800.* | .1 | .3 |
| Centerline Align | 2700.* | .1 | .3 |
| Centerline Align | 2600 | .1 | .3 |
| Centerline Align | 2500.* | .1 | .3 |
| Centerline Align | 2400.* | .1 | .3 |
| Centerline Align | 2300.* | .1 | .3 |
| Centerline Align | 2200.* | .1 | .3 |
| Centerline Align | 2100 | .1 | .3 |
| Centerline Align | 1368.02 | .1 | .3 |
| Centerline Align | 600 | .1 | .3 |
| Centerline Align | 100 | .1 | .3 |

River: WASH30

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 10130.27 | .1 | .3 |
| Centerline Align | 9500 | .1 | .3 |
| Centerline Align | 9000 | .1 | .3 |
| Centerline Align | 8500 | .1 | .3 |
| Centerline Align | 8000 | .1 | .3 |
| Centerline Align | 7500 | .1 | .3 |
| Centerline Align | 7000 | .1 | .3 |
| Centerline Align | 6500 | .1 | .3 |
| Centerline Align | 6000 | .1 | .3 |
| Centerline Align | 5500 | .1 | .3 |
| Centerline Align | 5000 | .1 | .3 |
| Centerline Align | 4500 | .1 | .3 |
| Centerline Align | 4000 | .1 | .3 |
| Centerline Align | 3500 | .1 | .3 |
| Centerline Align | 3000 | .1 | .3 |
| Centerline Align | 2500 | .1 | .3 |
| Centerline Align | 2000 | .1 | .3 |
| Centerline Align | 1343.16 | .1 | .3 |
| Centerline Align | 1000 | .1 | .3 |
| Centerline Align | 500 | .1 | .3 |

River: WASH35

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| Centerline Align | 5246.65 | .1 | .3 |
| Centerline Align | 4965.62 | .1 | .3 |
| Centerline Align | 4493.91 | .1 | .3 |
| Centerline Align | 4063.78 | .1 | .3 |
| Centerline Align | 3661.61 | .1 | .3 |
| Centerline Align | 3000 | .1 | .3 |

```
HEC-RAS Version 4.1.0 Jan 2010
 U.S. Army Corps of Engineers
Hydrologic Engineering Center
      609 Second Street
      Davis, California

X     X  XXXXXX    XXXX        XXXX       XX      XXXX
X     X  X        X    X       X   X     X  X    X
X     X  X        X            X   X    X    X   X
XXXXXXX  XXXX     X       XXX  XXXX     XXXXXX    XXXX
X     X  X        X            X  X     X    X        X
X     X  X        X    X       X   X    X    X        X
X     X  XXXXXX    XXXX        X    X   X    X   XXXXX
```

PROJECT DATA
Project Title: 7323AUGM
Project File : 7323AUGM.prj
Run Date and Time: 6/28/2011 11:22:18 AM

Project in English units

PLAN DATA

Plan Title: Plan 03
Plan File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-AUGM-6-22-2011\7323AUGM.p03

Geometry Title: WASH EG-Verify
Geometry File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-AUGM-6-22-2011\7323AUGM.g02

Flow Title : ALL FIVE FLOW PROFILE
Flow File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-AUGM-6-22-2011\7323AUGM.f02

Plan Summary Information:
Number of: Cross Sections = 626 Multiple Openings = 0
Culverts = 0 Inline Structures = 0
Bridges = 0 Lateral Structures = 0

Computational Information
Water surface calculation tolerance = 0.01
Critical depth calculation tolerance = 0.01
Maximum number of iterations = 20
Maximum difference tolerance = 0.3
Flow tolerance factor = 0.001

Computation Options
Critical depth computed only where necessary
Conveyance Calculation Method: At breaks in n values only
Friction Slope Method: Average Conveyance
Computational Flow Regime: Mixed Flow

FLOW DATA

Flow Title: ALL FIVE FLOW PROFILE
Flow File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-AUGM-6-22-2011\7323AUGM.f02

Flow Data (cfs)

| River | Reach | RS | 100 YR | 25 YR | 10 YR | 5 YR | 2 YR |
|---|---|---|---|---|---|---|---|
| WASH0 | WASH0 | 12718.16 | 788 | 520 | 359 | 233 | 67 |
| WASH60 | WASH60 | 5477.11 | 64 | 38 | 22 | 13 | 3 |
| WASH70 | WASH70 | 3521.27 | 443 | 217 | 99 | 53 | .1 |
| WASH75 | WASH75 | 3066.24 | 189 | 84 | 43 | 4 | .1 |
| WASH80 | WASH80 | 9177.14 | 242 | 147 | 98 | 64 | 22 |
| WASH90 | WASH90 | 6831.23 | 491 | 283 | 117 | 61 | 8 |

Boundary Conditions

| River | Reach | Profile | Upstream | Downstream |
|---|---|---|---|---|
| WASH0 | WASH0 | 100 YR | Normal S = 0.0093 | Normal S = 0.0153 |
| WASH60 | WASH60 | 100 YR | Normal S = 0.0077 | Normal S = 0.0158 |
| WASH70 | WASH70 | 100 YR | | Normal S = 0.0151 |
| WASH75 | WASH75 | 100 YR | Normal S = 0.0103 | |
| WASH80 | WASH80 | 100 YR | Normal S = 0.0177 | |
| WASH90 | WASH90 | 100 YR | Normal S = 0.0073 | Normal S = 0.0215 |

GEOMETRY DATA

Geometry Title: WASH EG-Verify
Geometry File : j:\7323-Blythe\Preliminary Site Investigation\Hydraulics\HECRAS-AUGM-6-22-2011\7323AUGM.g02

Reach Connection Table

| River | Reach | Upstream Boundary | Downstream Boundary |
|---|---|---|---|
| WASH0 | WASH0 | | |
| WASH60 | WASH60 | | |
| WASH70 | WASH70 | W75-80 | |
| WASH75 | WASH75 | | W75-80 |
| WASH80 | WASH80 | | W75-80 |
| WASH90 | WASH90 | | |

JUNCTION INFORMATION

Name: W75-80
Description:
Energy computation Method

| Length across Junction River | Reach | Tributary River | Reach | Length | Angle |
|---|---|---|---|---|---|
| WASH75 | WASH75 | to WASH70 | WASH70 | 570 | |
| WASH80 | WASH80 | to WASH70 | WASH70 | 620 | |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 12718.16

INPUT
Description:
Station Elevation Data num= 278

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 143.93 | 448 | 144.23 | 448 | 144.33 | 448 | 145.36 | 447.95 | 145.78 | 447.92 |
| 146.19 | 447.88 | 146.73 | 447.81 | 147.03 | 447.79 | 147.72 | 447.74 | 147.84 | 447.74 |
| 147.9 | 447.74 | 150.88 | 447.72 | 151.4 | 447.72 | 152.08 | 447.73 | 153.18 | 447.75 |
| 153.48 | 447.76 | 153.57 | 447.76 | 153.96 | 447.76 | 155.48 | 447.73 | 157.54 | 447.72 |
| 157.68 | 447.72 | 158.7 | 447.77 | 159.45 | 447.8 | 160.17 | 447.79 | 162.29 | 447.79 |
| 162.47 | 447.79 | 164.39 | 447.8 | 164.79 | 447.8 | 165.51 | 447.8 | 165.9 | 447.8 |
| 166.59 | 447.79 | 166.84 | 447.79 | 167.2 | 447.78 | 167.73 | 447.76 | 169.29 | 447.68 |
| 169.75 | 447.67 | 170.2 | 447.66 | 172.09 | 447.62 | 175.37 | 447.53 | 176.19 | 447.51 |
| 177.97 | 447.47 | 178.35 | 447.46 | 179.24 | 447.44 | 179.71 | 447.43 | 180.53 | 447.4 |
| 180.84 | 447.39 | 181.21 | 447.38 | 181.3 | 447.37 | 181.6 | 447.35 | 181.81 | 447.33 |
| 184.94 | 447.28 | 187.25 | 447.24 | 187.33 | 447.25 | 187.77 | 447.26 | 189.61 | 447.3 |
| 190.85 | 447.33 | 191.67 | 447.34 | 192.25 | 447.33 | 193.1 | 447.34 | 194.19 | 447.32 |
| 196.15 | 447.37 | 196.52 | 447.38 | 196.92 | 447.38 | 197.09 | 447.39 | 197.21 | 447.4 |
| 197.5 | 447.43 | 197.79 | 447.53 | 197.82 | 447.53 | 200.18 | 447.61 | 200.96 | 447.65 |
| 201.39 | 447.66 | 202.13 | 447.67 | 202.96 | 447.67 | 204.77 | 447.67 | 205.29 | 447.66 |
| 205.73 | 447.66 | 205.91 | 447.66 | 206.23 | 447.66 | 206.31 | 447.67 | 206.68 | 447.71 |
| 206.81 | 447.71 | 207.13 | 447.71 | 207.31 | 447.71 | 207.66 | 447.71 | 207.79 | 447.71 |
| 208.16 | 447.71 | 208.2 | 447.71 | 208.41 | 447.7 | 208.66 | 447.7 | 208.79 | 447.7 |
| 209.16 | 447.68 | 210.15 | 447.63 | 210.82 | 447.58 | 211.37 | 447.55 | 211.81 | 447.53 |
| 212.91 | 447.49 | 213.47 | 447.47 | 214.9 | 447.44 | 216.04 | 447.41 | 219.26 | 447.34 |
| 221.16 | 447.31 | 224.55 | 447.25 | 225.55 | 447.23 | 226.63 | 447.19 | 228.62 | 447.07 |
| 229.55 | 447 | 233.6 | 446.62 | 236.29 | 446.36 | 238.21 | 446 | 244.45 | 445.48 |
| 248.07 | 445 | 249.81 | 444.86 | 250.46 | 444.82 | 251.67 | 444.76 | 253.01 | 444.86 |
| 253.32 | 444.91 | 253.72 | 445 | 254.55 | 445.37 | 255.32 | 446 | 257.31 | 446.19 |
| 257.38 | 446.2 | 257.42 | 446.2 | 257.44 | 446.21 | 257.46 | 446.23 | 259.2 | 446.47 |
| 259.87 | 446.52 | 262.35 | 446.62 | 262.41 | 446.62 | 262.68 | 446.62 | 263.59 | 446.63 |
| 264 | 446.63 | 264.91 | 446.63 | 265.31 | 446.62 | 265.4 | 446.62 | 266.25 | 446.62 |
| 266.54 | 446.62 | 266.96 | 446.62 | 269.83 | 446.58 | 270.37 | 446.57 | 271.8 | 446.54 |
| 272.22 | 446.53 | 275.97 | 446.39 | 279.53 | 446.26 | 280.24 | 446.24 | 281 | 446.2 |
| 281.35 | 446.16 | 281.82 | 446.14 | 284.85 | 446 | 284.93 | 446 | 285.09 | 445.98 |
| 289.34 | 445.56 | 289.85 | 445.52 | 290.8 | 445.45 | 294.74 | 445 | 297.23 | 445 |
| 300.56 | 445 | 303.52 | 445 | 306.22 | 445 | 307.23 | 445 | 308.05 | 445 |
| 308.15 | 444.98 | 314.35 | 444.86 | 319.32 | 444.79 | 322.79 | 444.83 | 323.47 | 444.84 |
| 324.73 | 444.84 | 325.35 | 444.84 | 326.43 | 444.85 | 326.5 | 444.85 | 326.55 | 444.86 |
| 326.65 | 444.87 | 326.78 | 444.87 | 327.46 | 444.88 | 327.51 | 444.88 | 327.58 | 444.88 |
| 327.64 | 444.88 | 327.84 | 444.88 | 327.98 | 444.88 | 328.26 | 444.87 | 330.37 | 444.82 |
| 335.06 | 444.72 | 336.28 | 444.69 | 340.55 | 444.58 | 342.44 | 444.54 | 343.35 | 444.52 |
| 348.44 | 444.41 | 350.61 | 444.36 | 353.49 | 444.3 | 356.16 | 444.23 | 360.34 | 444.14 |
| 361.08 | 444.12 | 362.04 | 444.11 | 362.94 | 444.09 | 364 | 444.06 | 364.01 | 444.06 |
| 364.07 | 444.06 | 364.21 | 444.05 | 364.33 | 444.05 | 364.78 | 444.04 | 364.81 | 444.04 |
| 364.84 | 444.04 | 364.85 | 444.04 | 364.91 | 444.03 | 364.92 | 444.03 | 364.93 | 444.03 |
| 364.96 | 444.03 | 364.98 | 444.03 | 365.02 | 444.03 | 365.05 | 444.03 | 365.16 | 444.03 |
| 365.18 | 444.03 | 365.23 | 444.03 | 365.35 | 444.03 | 365.36 | 444.03 | 365.41 | 444.04 |
| 365.55 | 444.04 | 365.81 | 444.05 | 365.84 | 444.05 | 368.05 | 444.03 | 369.79 | 444 |
| 370.18 | 444 | 372.26 | 444 | 374.14 | 444 | 376.27 | 444 | 381.76 | 444.82 |
| 381.8 | 444.82 | 381.86 | 444.83 | 381.88 | 444.84 | 383.05 | 445 | 383.8 | 445.05 |
| 386.51 | 445.21 | 391.88 | 445.53 | 391.98 | 445.53 | 392.1 | 445.54 | 392.14 | 445.54 |
| 394.51 | 445.61 | 394.95 | 445.63 | 395.68 | 445.64 | 395.96 | 445.65 | 396.59 | 445.66 |
| 396.84 | 445.66 | 399.42 | 445.65 | 399.85 | 445.64 | 400.26 | 445.63 | 400.31 | 445.62 |
| 400.34 | 445.6 | 401.98 | 445.37 | 404.43 | 445.14 | 405.87 | 445.04 | 406.61 | 445 |
| 406.89 | 444.99 | 409.4 | 444.91 | 410.24 | 444.88 | 411.31 | 444.86 | 411.63 | 444.86 |
| 412.18 | 444.86 | 422.35 | 444.96 | 422.5 | 444.96 | 432.97 | 444.98 | 434.42 | 445 |
| 434.89 | 445.02 | 438.81 | 445.26 | 440.19 | 445.41 | 440.8 | 445.47 | 441.47 | 445.57 |
| 444.26 | 446 | 447.88 | 446.52 | 450.87 | 447 | 450.97 | 447.01 | 451.01 | 447.01 |
| 453.88 | 447.2 | 454.08 | 447.22 | 454.13 | 447.23 | 454.24 | 447.24 | 454.3 | 447.24 |
| 454.45 | 447.25 | 454.61 | 447.26 | 457.43 | 447.39 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 143.93 | .05 | 281 | .04 | 447.88 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 281 | 447.88 | 325.54 | 326.68 | 329.73 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 12391.48

INPUT
Description:
Station Elevation Data num= 205

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 143.43 | 445 | 145.29 | 444.7 | 150.93 | 444 | 183.3 | 443.08 | 184.8 | 443.03 |
| 184.98 | 443.03 | 185.29 | 443.02 | 185.42 | 443.02 | 185.53 | 443.02 | 185.55 | 443.02 |
| 185.65 | 443.02 | 185.7 | 443.02 | 185.91 | 443.02 | 186.09 | 443.01 | 186.1 | 443.01 |
| 186.13 | 443.02 | 186.22 | 443.02 | 186.4 | 443.03 | 186.56 | 443.04 | 187.14 | 443 |
| 189.93 | 443 | 190.06 | 443 | 190.53 | 443 | 192.24 | 443 | 193.33 | 443 |
| 193.54 | 443 | 193.94 | 443 | 204.01 | 443.91 | 204.95 | 444 | 205.86 | 444.05 |
| 207.07 | 444.08 | 212 | 444.17 | 213.64 | 444.2 | 218.79 | 444.25 | 223.4 | 444.32 |
| 225.38 | 444.34 | 226.44 | 444.34 | 228.3 | 444.34 | 228.91 | 444.33 | 230.49 | 444.31 |
| 236.91 | 444.22 | 239.57 | 444.19 | 244.52 | 444.12 | 250.05 | 444.06 | 252.01 | 444.04 |
| 254.02 | 444 | 257.33 | 443.85 | 257.72 | 443.84 | 279.8 | 443.01 | 280.27 | 443.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 280.64 | 443.01 | 283.33 | 443 | 286.38 | 442.99 | 289.55 | 442.98 | 291.21 | 442.97 |
| 291.89 | 442.98 | 293.35 | 442.98 | 297.23 | 442.99 | 298.03 | 442.99 | 300.71 | 442.91 |
| 301.76 | 442.99 | 302.3 | 443 | 302.6 | 443 | 302.69 | 443 | 303.57 | 443 |
| 303.96 | 443 | 304.3 | 443 | 305.26 | 442.99 | 305.95 | 442.96 | 307.29 | 442.99 |
| 308.97 | 442.99 | 312 | 442.97 | 313.67 | 442.97 | 315.73 | 442.96 | 316.4 | 442.96 |
| 317.71 | 442.96 | 324.08 | 442.99 | 325.21 | 442.99 | 328.03 | 443 | 328.12 | 443 |
| 328.25 | 443 | 333.76 | 443 | 334.02 | 443 | 334.06 | 443 | 334.59 | 442.93 |
| 338.88 | 442.33 | 341.04 | 442 | 343.27 | 442 | 349.66 | 442 | 350.96 | 442 |
| 358.23 | 442 | 359.11 | 442.18 | 360.13 | 442.34 | 361.52 | 442.33 | 362.72 | 442.26 |
| 366.27 | 442.23 | 367.7401 | 442.19 | 369.58 | 442.12 | 370.73 | 442 | 371.02 | 441.96 |
| 371.48 | 441.82 | 371.84 | 441.74 | 372.61 | 441.71 | 373.06 | 441.66 | 374.01 | 441.63 |
| 374.87 | 441.59 | 375.85 | 441.59 | 376.86 | 441.57 | 377.18 | 441.57 | 378.03 | 441.57 |
| 378.71 | 441.57 | 380.1 | 441.54 | 380.52 | 441.51 | 380.7401 | 441.46 | 383.9901 | 441.45 |
| 387.13 | 441.44 | 388.4 | 441.48 | 388.7 | 441.5 | 389.52 | 441.52 | 390.4 | 441.52 |
| 392.57 | 441.53 | 393.43 | 441.52 | 394.36 | 441.5 | 394.5 | 441.49 | 397.61 | 441.51 |
| 398.45 | 441.51 | 401.01 | 441.53 | 405.75 | 441.65 | 414.52 | 441.85 | 420.37 | 442 |
| 424.8 | 442.63 | 427.03 | 443 | 432.53 | 443.61 | 434.7401 | 443.84 | 434.8 | 443.85 |
| 434.81 | 443.84 | 434.9 | 443.84 | 436.66 | 443.66 | 437.25 | 443.73 | 437.27 | 443.73 |
| 438.19 | 443.76 | 438.4901 | 443.73 | 438.93 | 443.71 | 439.25 | 443.68 | 439.45 | 443.66 |
| 439.85 | 443.63 | 440.4901 | 443.48 | 440.7 | 443.5 | 441.01 | 443.41 | 441.61 | 443.27 |
| 441.93 | 443.23 | 442.86 | 443.15 | 443.46 | 443.19 | 450.2 | 443.48 | 453.43 | 443.61 |
| 454.13 | 443.6 | 456.08 | 443.57 | 457.17 | 443.54 | 459.37 | 443.49 | 462.09 | 443.41 |
| 465.77 | 443.31 | 467.68 | 443.25 | 472.57 | 443.08 | 474.58 | 443 | 474.87 | 443 |
| 475.56 | 443 | 475.74 | 443 | 475.76 | 443 | 476.88 | 443 | 477.67 | 443.02 |
| 477.88 | 443.03 | 488.99 | 443.35 | 490.3 | 443.39 | 491.6 | 443.42 | 492.4 | 443.44 |
| 493.9 | 443.48 | 494.32 | 443.5 | 495.28 | 443.54 | 496.15 | 443.58 | 501.95 | 443.58 |
| 508.33 | 443.54 | 509.2 | 443.57 | 511.5 | 443.63 | 512.73 | 443.65 | 515.03 | 443.66 |
| 515.85 | 443.68 | 516.98 | 443.68 | 518.8 | 443.67 | 522.34 | 443.77 | 522.9901 | 443.77 |
| 524.5 | 443.8 | 526.02 | 443.83 | 526.23 | 443.84 | 526.8701 | 443.85 | 526.95 | 443.85 |
| 527.13 | 443.85 | 527.22 | 443.85 | 527.45 | 443.86 | 527.63 | 443.86 | 528.03 | 443.86 |
| 528.19 | 443.86 | 528.58 | 443.86 | 528.9 | 443.85 | 529.59 | 443.85 | 530.13 | 443.85 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 143.43 | .05 | 289.55 | .04 | 437.25 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 289.55 | 437.25 | 307.28 | 296.34 | 279.57 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 12095.14

INPUT
Description:
Station Elevation Data num= 214

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 164.46 | 441.21 | 167.08 | 441.2 | 167.94 | 441.2 | 168.4 | 441.2 | 169.37 | 441.21 |
| 172.52 | 441.24 | 178.31 | 441.32 | 183.82 | 441.38 | 189.58 | 441.45 | 190.48 | 441.45 |
| 191.39 | 441.45 | 192.41 | 441.44 | 193.22 | 441.43 | 194.85 | 441.41 | 195.48 | 441.4 |
| 196.41 | 441.36 | 196.96 | 441.34 | 198.1 | 441.31 | 198.97 | 441.29 | 199.28 | 441.29 |
| 200.43 | 441.26 | 204.01 | 441.17 | 205.26 | 441.15 | 205.55 | 441.15 | 207.77 | 441.12 |
| 208.91 | 441.12 | 211.62 | 441.11 | 215.32 | 441.01 | 216.95 | 441.01 | 219.8 | 441.01 |
| 221.53 | 441.01 | 222.31 | 441.01 | 222.83 | 441.01 | 225.53 | 441.01 | 227.62 | 441.01 |
| 231.11 | 441.01 | 232.13 | 441.01 | 232.59 | 441.01 | 232.8 | 441.01 | 236.19 | 441 |
| 250.65 | 440.11 | 252.22 | 440 | 252.59 | 440 | 253.09 | 440 | 255.32 | 440 |
| 256.99 | 440 | 258.26 | 440 | 263.46 | 440.01 | 264.91 | 440.02 | 269.08 | 440.01 |
| 271.51 | 440 | 272.4 | 439.86 | 276.62 | 439.25 | 276.86 | 439.27 | 277.39 | 439.41 |
| 277.82 | 439.46 | 277.97 | 439.51 | 278.07 | 439.59 | 281.36 | 439.59 | 284.84 | 439.57 |
| 286.06 | 439.51 | 292.73 | 439.2 | 295.09 | 439.11 | 295.26 | 439.11 | 295.78 | 439.08 |
| 295.86 | 439.07 | 296.16 | 439.06 | 296.21 | 439.06 | 296.29 | 439.06 | 296.32 | 439.05 |
| 296.89 | 439.05 | 297.47 | 439.06 | 297.51 | 439.06 | 297.7 | 439.07 | 298.49 | 439.14 |
| 298.63 | 439.15 | 298.94 | 439.16 | 300.15 | 439.24 | 300.39 | 439.24 | 300.86 | 439.22 |
| 301.59 | 439.22 | 308.53 | 439.56 | 309.18 | 439.55 | 311.58 | 439.67 | 313.12 | 439.74 |
| 313.61 | 439.75 | 314.34 | 439.74 | 314.6 | 439.74 | 314.98 | 439.74 | 315.16 | 439.74 |
| 315.5 | 439.75 | 315.68 | 439.75 | 316.15 | 439.74 | 317.09 | 439.73 | 317.27 | 439.73 |
| 317.58 | 439.72 | 318 | 439.71 | 318.3 | 439.7 | 319.16 | 439.67 | 321.3 | 439.63 |
| 322.55 | 439.6 | 329.16 | 439.41 | 331.44 | 439.36 | 337.42 | 439.2 | 337.47 | 439.2 |
| 338.13 | 439.18 | 341.44 | 439.1 | 346.77 | 439 | 347 | 439 | 347.11 | 439 |
| 348.44 | 439 | 348.69 | 439 | 348.98 | 439 | 349.12 | 439 | 349.3 | 439 |
| 349.44 | 439 | 349.51 | 439 | 349.8 | 439 | 350.09 | 439 | 350.11 | 439 |
| 356.35 | 439 | 357.78 | 439 | 358.78 | 438.99 | 362 | 438.95 | 370.74 | 438.87 |
| 374.48 | 438.92 | 376.09 | 438.95 | 377.83 | 439 | 382.88 | 439.31 | 384.06 | 439.37 |
| 384.64 | 439.4 | 384.97 | 439.42 | 386.01 | 439.46 | 386.73 | 439.48 | 392.72 | 440 |
| 393.5 | 440.08 | 396.62 | 440.02 | 396.9 | 440.02 | 398.6 | 440.01 | 401.13 | 440 |
| 402.21 | 440 | 403.3 | 440 | 403.84 | 440 | 404.52 | 440 | 405.9 | 440 |
| 406.05 | 440 | 406.12 | 440 | 406.18 | 440 | 406.51 | 440 | 406.72 | 440 |
| 406.82 | 440 | 409.58 | 440.25 | 409.76 | 440.26 | 410.1 | 440.25 | 414.47 | 440 |
| 414.71 | 439.99 | 416.31 | 439.92 | 416.68 | 439.88 | 416.81 | 439.81 | 416.97 | 439.8 |
| 417.12 | 439.8 | 417.41 | 439.8 | 419.11 | 439.84 | 421.21 | 439.88 | 422.32 | 439.89 |
| 424.35 | 439.94 | 426.59 | 439.99 | 426.64 | 440 | 431.25 | 440.43 | 433.78 | 440.67 |
| 437.64 | 441 | 439.71 | 441 | 441.77 | 441 | 443.32 | 441 | 444.76 | 441 |
| 446.46 | 441 | 452.42 | 440.99 | 456.3 | 440.98 | 457.11 | 440.98 | 458.5 | 440.98 |
| 459.62 | 440.98 | 468.19 | 441 | 476.08 | 441.4 | 477.87 | 441.48 | 480.06 | 441.58 |
| 480.88 | 441.61 | 482.81 | 441.68 | 483.48 | 441.68 | 486.16 | 441.77 | 486.59 | 441.78 |
| 487.47 | 441.82 | 487.92 | 441.83 | 488.01 | 441.84 | 488.19 | 441.85 | 488.32 | 441.85 |
| 488.41 | 441.85 | 488.67 | 441.84 | 488.84 | 441.84 | 489.2 | 441.83 | 489.7 | 441.83 |
| 489.91 | 441.82 | 490.06 | 441.8 | 490.17 | 441.8 | 490.52 | 441.79 | 491.36 | 441.78 |
| 491.76 | 441.77 | 493.16 | 441.74 | 493.79 | 441.74 | 495.71 | 441.7 | 496.64 | 441.7 |
| 497.01 | 441.72 | 497.51 | 441.77 | 498.88 | 441.74 | 499.13 | 441.74 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 164.46 | .05 | 193.22 | .04 | 406.72 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 193.22 | 406.72 | 306.25 | 293.9 | 254.63 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 11801.24



BSE Document Control Number: 7323HYD101

INPUT
Description:
Station Elevation Data num= 257

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 68.64996 | 443 | 72.62 | 442.167 | 3.39001 | 442 | 73.92999 | 441.897 | 5.02997 | 441.66 |
| 78.67999 | 441 | 80.69 | 440.628 | 5.23999 | 440 | 91.64001 | 439.549 | 2.39001 | 439.48 |
| 96.96997 | 439.159 | 7.83002 | 439.09 | 98.62 | 439 | 124.5 | 438.19 | 129.4 | 438.04 |
| 130.47 | 438 | 133.06 | 437.93 | 140.91 | 437.76 | 151.18 | 437.54 | 153.91 | 437.53 |
| 156.54 | 437.52 | 157.03 | 437.52 | 158.63 | 437.5 | 158.78 | 437.5 | 159.56 | 437.49 |
| 160.93 | 437.49 | 168.43 | 437.44 | 169.13 | 437.42 | 169.95 | 437.39 | 171.73 | 437.31 |
| 177.49 | 437.31 | 177.8 | 437.3 | 178.51 | 437.28 | 179.17 | 437.26 | 181.51 | 437.15 |
| 183.47 | 437.05 | 184.45 | 437 | 185.46 | 436.95 | 187.12 | 436.85 | 188.35 | 436.8 |
| 191.7 | 436.72 | 192.27 | 436.7 | 192.68 | 436.7 | 192.79 | 436.7 | 193.97 | 436.65 |
| 195.28 | 436.61 | 196.16 | 436.6 | 198.25 | 436.61 | 199.35 | 436.61 | 201.45 | 436.63 |
| 202.39 | 436.65 | 203.75 | 436.68 | 204.03 | 436.69 | 205.52 | 436.85 | 206.68 | 437 |
| 206.73 | 437 | 211.72 | 437.36 | 213.11 | 437.44 | 215.1 | 437.55 | 215.91 | 437.59 |
| 217.08 | 437.65 | 217.39 | 437.67 | 218.48 | 437.78 | 220.22 | 437.77 | 222.15 | 437.75 |
| 222.19 | 437.75 | 222.34 | 437.72 | 222.45 | 437.72 | 222.8 | 437.69 | 223.13 | 437.67 |
| 224.16 | 437.58 | 227.61 | 437.18 | 229.05 | 437.05 | 229.1 | 437.05 | 229.64 | 437 |
| 237.07 | 436.59 | 237.68 | 436.59 | 238.34 | 436.55 | 240.16 | 436.38 | 240.18 | 436.38 |
| 240.84 | 436.37 | 241.73 | 436.33 | 242.08 | 436.3 | 242.59 | 436.25 | 242.73 | 436.25 |
| 243.08 | 436.23 | 243.34 | 436.22 | 243.77 | 436.19 | 243.87 | 436.19 | 244.63 | 436.16 |
| 244.64 | 436.16 | 244.7 | 436.16 | 245.14 | 436.15 | 245.54 | 436.14 | 245.67 | 436.13 |
| 245.8 | 436.13 | 246.67 | 436.13 | 247.58 | 436.13 | 247.64 | 436.14 | 247.85 | 436.14 |
| 247.96 | 436.14 | 248.24 | 436.14 | 248.83 | 436.13 | 248.91 | 436.12 | 248.99 | 436.12 |
| 249.4 | 436.14 | 249.82 | 436.15 | 250.45 | 436.18 | 251.33 | 436.22 | 252.85 | 436.28 |
| 253.4 | 436.3 | 255.68 | 436.36 | 258.42 | 436.46 | 259.92 | 436.5 | 276.42 | 437 |
| 278.42 | 437.22 | 285.53 | 438 | 286.45 | 438.04 | 292.5 | 438.28 | 292.96 | 438.29 |
| 293.24 | 438.3 | 293.53 | 438.31 | 295.41 | 438.38 | 297.42 | 438.45 | 301.94 | 438.59 |
| 304.03 | 438.65 | 306.87 | 438.73 | 307.63 | 438.75 | 308.65 | 438.77 | 309.11 | 438.78 |
| 309.81 | 438.8 | 310 | 438.81 | 311.36 | 438.82 | 312.64 | 438.82 | 312.72 | 438.8 |
| 312.87 | 438.79 | 313.35 | 438.78 | 313.65 | 438.77 | 314.32 | 438.75 | 314.75 | 438.72 |
| 316.28 | 438.59 | 317.05 | 438.6 | 322.92 | 438 | 337.68 | 437.12 | 340.19 | 437 |
| 340.69 | 437 | 341.47 | 437 | 344.28 | 437 | 345.62 | 437 | 348.2 | 437 |
| 356.45 | 437.94 | 356.89 | 438 | 357.15 | 438.06 | 357.37 | 438.24 | 359.8 | 438.2 |
| 362.54 | 438.14 | 362.94 | 438.12 | 363.25 | 438.12 | 364.8 | 438.12 | 366.39 | 438.12 |
| 369.93 | 438.09 | 371.12 | 438.06 | 372.47 | 438 | 372.53 | 438 | 387.58 | 437.38 |
| 392.13 | 437.19 | 396.71 | 437 | 401.3 | 436.09 | 401.79 | 436 | 402.4 | 435.99 |
| 404.74 | 435.94 | 407.18 | 435.91 | 408.16 | 435.91 | 411.33 | 435.98 | 412.34 | 436 |
| 428.25 | 436.74 | 431.67 | 437 | 440.52 | 437.46 | 442.01 | 437.5 | 444.52 | 437.55 |
| 450.96 | 437.81 | 452.38 | 437.87 | 453.3 | 437.9 | 453.94 | 437.92 | 454.45 | 437.93 |
| 454.58 | 437.93 | 454.73 | 437.93 | 454.74 | 437.92 | 454.88 | 437.92 | 455 | 437.92 |
| 455.05 | 437.91 | 455.14 | 437.91 | 455.24 | 437.88 | 455.26 | 437.88 | 455.28 | 437.88 |
| 455.33 | 437.88 | 455.36 | 437.88 | 455.43 | 437.89 | 455.47 | 437.89 | 455.61 | 437.9 |
| 455.73 | 437.9 | 456 | 437.9 | 456.11 | 437.89 | 456.38 | 437.88 | 456.69 | 437.87 |
| 456.94 | 437.87 | 457.69 | 437.85 | 457.71 | 437.85 | 458.13 | 437.84 | 458.72 | 437.83 |
| 459.63 | 437.82 | 459.83 | 437.82 | 459.91 | 437.83 | 460.77 | 437.82 | 461.17 | 437.81 |
| 462.65 | 437.8 | 466.28 | 437.67 | 468.32 | 437.61 | 474.43 | 437.43 | 477.03 | 437.35 |
| 489.55 | 437 | 489.72 | 437 | 489.95 | 436.96 | 490.41 | 436.96 | 491.7 | 436.94 |
| 492.17 | 436.93 | 494.84 | 436.87 | 495.95 | 436.85 | 496.71 | 436.84 | 498.77 | 436.8 |
| 499.99 | 436.77 | 502.59 | 436.7 | 502.6 | 436.7 | 502.63 | 436.7 | 502.66 | 436.7 |
| 502.72 | 436.7 | 502.74 | 436.7 | 503.06 | 436.76 | 503.84 | 436.86 | 505.71 | 437 |
| 506.64 | 437.16 | 512.06 | 438 | 515.49 | 438.13 | 516.71 | 438.17 | 518.69 | 438.2 |
| 524.85 | 438.24 | 526.64 | 438.25 | 527.3 | 438.25 | 528.81 | 438.24 | 533.27 | 438.22 |
| 534.23 | 438.22 | 534.51 | 438.22 | 535 | 438.24 | 535.3 | 438.26 | 536.15 | 438.29 |
| 536.78 | 438.28 | 538.15 | 438.25 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 68.64996 | .05 | 158.63 | .04 | 460.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 158.63 | 460.77 | 417.69 | 367.03 | 349.87 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 11434.21

INPUT
Description:
Station Elevation Data num= 342

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 135.33 | 436 | 136.47 | 435.77 | 139.36 | 435 | 141.29 | 434.58 | 145.93 | 434 |
| 146.12 | 433.98 | 146.65 | 433.93 | 146.93 | 433.88 | 146.99 | 433.86 | 147.28 | 433.84 |
| 147.56 | 433.84 | 148.31 | 433.85 | 148.71 | 433.84 | 149.8 | 433.81 | 152.04 | 433.7 |
| 153.31 | 433.74 | 154.73 | 433.79 | 154.89 | 433.95 | 155.05 | 434 | 157.08 | 434.02 |
| 159.06 | 434.05 | 160.55 | 434.03 | 163.53 | 434 | 163.76 | 433.94 | 164.04 | 433.9 |
| 164.34 | 433.9 | 165.09 | 433.9 | 165.45 | 433.91 | 166.84 | 433.95 | 168.15 | 434 |
| 172.02 | 434.32 | 173.13 | 434.29 | 173.67 | 434.32 | 179.68 | 434.85 | 181.42 | 435 |
| 183.39 | 435.23 | 185.69 | 435.43 | 186.22 | 435.44 | 186.96 | 435.34 | 187.3 | 435.24 |
| 187.86 | 435 | 188.83 | 434.46 | 189.67 | 434 | 190.09 | 433.8 | 191.58 | 433 |
| 195.09 | 432.75 | 195.6 | 432.76 | 199.46 | 432.56 | 199.74 | 432.55 | 202.32 | 432.42 |
| 203.03 | 432.38 | 203.05 | 432.38 | 203.44 | 432.33 | 204.17 | 432.26 | 205.73 | 432.27 |
| 207.41 | 432.28 | 207.43 | 432.29 | 207.58 | 432.29 | 207.71 | 432.29 | 208.03 | 432.28 |
| 208.18 | 432.28 | 208.74 | 432.24 | 209.33 | 432.2 | 209.88 | 432.18 | 210.16 | 432.18 |
| 210.37 | 432.17 | 210.88 | 432.17 | 211.12 | 432.18 | 211.52 | 432.18 | 211.68 | 432.18 |
| 211.97 | 432.19 | 212.57 | 432.22 | 213.38 | 432.26 | 213.54 | 432.27 | 213.64 | 432.27 |
| 213.94 | 432.28 | 214.08 | 432.29 | 214.45 | 432.31 | 215.74 | 432.39 | 218.2 | 432.5 |
| 223.73 | 432.73 | 230.11 | 433 | 231.41 | 433.08 | 235.75 | 433.37 | 237.56 | 433.48 |
| 239.21 | 433.58 | 240.42 | 433.63 | 241.78 | 433.69 | 242.39 | 433.71 | 242.89 | 433.7 |
| 243.43 | 433.69 | 243.51 | 433.69 | 243.63 | 433.69 | 244.28 | 433.68 | 244.91 | 433.68 |
| 246.54 | 433.68 | 248.31 | 433.65 | 250.53 | 433.6 | 250.81 | 433.53 | 251.35 | 433.38 |
| 253.21 | 433.13 | 254.7 | 433 | 257.25 | 432.99 | 259.1 | 432.99 | 263.29 | 433 |
| 263.46 | 433 | 263.56 | 433 | 267.53 | 433.28 | 268.31 | 433.36 | 268.84 | 433.46 |
| 271.96 | 433.54 | 274.33 | 433.59 | 275.03 | 433.59 | 278.45 | 433.6 | 279.09 | 433.6 |
| 280.65 | 433.59 | 280.77 | 433.6 | 281.49 | 433.59 | 282.22 | 433.59 | 290.01 | 433.38 |
| 300.88 | 433.07 | 303.55 | 433 | 304.59 | 433 | 308.1 | 433 | 308.17 | 433 |
| 308.47 | 433 | 311.81 | 433 | 312.79 | 433 | 313.27 | 433 | 319.11 | 433.1 |
| 323.71 | 433.17 | 330.34 | 433.14 | 337.77 | 433.07 | 337.88 | 433.07 | 347.07 | 433.09 |
| 348.37 | 433.07 | 351.55 | 433.01 | 351.56 | 433.01 | 351.57 | 433.01 | 352.11 | 433 |
| 353.01 | 433 | 355.56 | 433 | 355.84 | 433 | 357.12 | 433.02 | 357.19 | 433.02 |
| 363.35 | 433.17 | 373.77 | 433.43 | 374.34 | 433.43 | 375.2 | 433.4 | 375.28 | 433.39 |
| 377.55 | 433.38 | 379.72 | 433.37 | 381 | 433.4 | 381.54 | 433.4 | 382.33 | 433.38 |
| 382.66 | 433.38 | 383.41 | 433.38 | 383.89 | 433.39 | 385.22 | 433.42 | 388.62 | 433.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 389.79 | 433.54 | 391.63 | 433.58 | 392.32 | 433.59 | 393.46 | 433.62 | 395.09 | 433.67 |
| 395.61 | 433.69 | 396.6 | 433.72 | 397.11 | 433.74 | 398.99 | 433.81 | 400.99 | 433.87 |
| 405.6 | 434 | 407.47 | 434.06 | 410.27 | 434.14 | 419.8 | 434.38 | 420.09 | 434.39 |
| 420.98 | 434.38 | 421.94 | 434.38 | 424.61 | 434.37 | 425.99 | 434.38 | 428.4 | 434.39 |
| 431.44 | 434.39 | 432.48 | 434.4 | 434.25 | 434.42 | 434.56 | 434.36 | 434.94 | 434.27 |
| 435.16 | 434.08 | 435.33 | 434.02 | 435.63 | 434.01 | 436.04 | 434 | 436.27 | 434 |
| 436.47 | 434 | 436.78 | 434 | 437.13 | 434 | 437.37 | 434 | 437.8 | 434 |
| 440.1 | 434.05 | 445.8 | 434.24 | 446.68 | 434.27 | 447.73 | 434.28 | 450.36 | 434.28 |
| 451.66 | 434.28 | 454.52 | 434.29 | 455.75 | 434.3 | 457.84 | 434.35 | 458.23 | 434.35 |
| 458.32 | 434.35 | 458.42 | 434.35 | 458.44 | 434.34 | 459.99 | 434 | 460.47 | 433.88 |
| 465.04 | 433 | 466.09 | 432.88 | 466.86 | 432.75 | 468.19 | 432.47 | 468.49 | 432.43 |
| 469.75 | 432.3 | 470.76 | 432.31 | 471.84 | 432.33 | 472.19 | 432.39 | 472.37 | 432.41 |
| 473.2 | 432.43 | 473.98 | 432.45 | 475.82 | 432.48 | 476.46 | 432.49 | 477.09 | 432.49 |
| 477.27 | 432.49 | 480.06 | 432.86 | 481.44 | 433 | 481.6 | 433.01 | 488.73 | 433.62 |
| 489.19 | 433.66 | 490.01 | 433.71 | 490.08 | 433.71 | 490.09 | 433.71 | 490.1 | 433.71 |
| 490.12 | 433.71 | 493.36 | 433.61 | 493.96 | 433.59 | 494.23 | 433.57 | 500.21 | 433.16 |
| 502.38 | 433 | 503.2 | 433 | 503.62 | 433 | 507.51 | 432.99 | 508.68 | 432.98 |
| 510.67 | 432.99 | 514.08 | 433 | 515.7 | 433 | 519.19 | 433 | 523.38 | 433 |
| 524.04 | 433 | 524.85 | 433 | 530.57 | 432.84 | 530.85 | 432.84 | 531.31 | 432.83 |
| 531.44 | 432.84 | 531.73 | 432.87 | 532.29 | 432.9 | 532.78 | 432.91 | 533.93 | 432.91 |
| 534.42 | 432.9 | 535.11 | 432.87 | 538.54 | 432.71 | 540.83 | 432.59 | 540.97 | 432.53 |
| 542.39 | 432.51 | 543.71 | 432.49 | 548 | 432.56 | 548.09 | 432.56 | 548.16 | 432.56 |
| 548.61 | 432.58 | 550.69 | 432.68 | 552.25 | 432.75 | 557.18 | 432.9 | 559.34 | 433 |
| 560.05 | 433.06 | 562.64 | 433.3 | 565.05 | 433.25 | 567.86 | 433.18 | 567.89 | 433.12 |
| 568.24 | 433.08 | 569.66 | 433.02 | 570.75 | 433.01 | 573.3 | 433.02 | 573.34 | 433.02 |
| 574.6 | 433.04 | 578.98 | 433.15 | 581.34 | 433.2 | 581.8 | 433.19 | 582.16 | 433.19 |
| 584.1 | 433.14 | 585.64 | 433.11 | 586.14 | 433.11 | 586.47 | 433.13 | 595 | 433.14 |
| 603.61 | 433.13 | 606.75 | 433.02 | 607.13 | 433 | 609.32 | 432.73 | 609.88 | 432.7 |
| 609.93 | 432.7 | 610.25 | 432.69 | 610.58 | 432.68 | 611 | 432.7 | 611.82 | 432.78 |
| 613.44 | 432.89 | 614.63 | 432.92 | 616.89 | 432.92 | 617.66 | 432.92 | 618.68 | 432.91 |
| 619.11 | 432.9 | 620.03 | 432.9 | 620.59 | 432.9 | 624.1 | 432.94 | 627.68 | 432.95 |
| 628.39 | 432.94 | 629.04 | 432.93 | 631.18 | 432.87 | 632.4 | 432.85 | 634.68 | 432.84 |
| 635.36 | 432.84 | 635.97 | 432.89 | 636.49 | 433 | 639.67 | 433.15 | 640.71 | 433.18 |
| 662.57 | 434 | 663.58 | 434 | 667.66 | 434 | 672.32 | 434 | 672.64 | 434 |
| 672.67 | 434 | 673.87 | 434 | 674.64 | 434 | 677.6 | 433.99 | 678.34 | 434 |
| 678.53 | 434 | 678.55 | 434 | 681.13 | 434 | 682.02 | 434 | 683.27 | 434 |
| 683.95 | 434 | 687.04 | 434 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 135.33 | .05 | 188.83 | .04 | 663.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 188.83 | 663.58 | 383.57 | 337.4 | 217.83 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 11096.81

INPUT
Description:
Station Elevation Data num= 300

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 104.79 | 434.47 | 105.66 | 434.47 | 110.02 | 434.49 | 110.31 | 434.51 | 110.87 | 434.52 |
| 111.28 | 434.52 | 112.1 | 434.51 | 112.34 | 434.5 | 112.56 | 434.5 | 139.23 | 434 |
| 140.04 | 433.81 | 140.62 | 433.66 | 141.8799 | 433.31 | 142.98 | 433 | 144.53 | 433 |
| 147.62 | 433.76 | 148.06 | 433.88 | 148.49 | 434 | 148.68 | 434.02 | 149.22 | 434.01 |
| 153.52 | 434.41 | 155.8 | 434.53 | 159.45 | 434 | 160.05 | 433.66 | 161.23 | 433 |
| 161.33 | 432.95 | 162.04 | 432.54 | 162.9399 | 432 | 164.09 | 431.37 | 164.8 | 431 |
| 166.0099 | 430.34 | 166.67 | 430 | 167.95 | 429.3 | 168.61 | 429 | 171.73 | 428.87 |
| 171.86 | 428.86 | 177.89 | 428.52 | 179.74 | 428.44 | 182.2 | 428.47 | 185.08 | 428.52 |
| 185.7599 | 428.64 | 186.11 | 428.67 | 191.55 | 428.84 | 192.84 | 429 | 202.4399 | 429.84 |
| 204.3799 | 430 | 204.43 | 430 | 205 | 429.97 | 207.04 | 429.82 | 207.6 | 429.77 |
| 214.84 | 429 | 219.9 | 429 | 223.4 | 429.2 | 224.3 | 429.27 | 224.68 | 429.31 |
| 225.72 | 429.39 | 226.43 | 429.42 | 230.16 | 429.55 | 230.3 | 429.56 | 230.67 | 429.56 |
| 231.02 | 429.57 | 231.22 | 429.56 | 236 | 429.44 | 236.93 | 429.41 | 237.61 | 429.39 |
| 239.16 | 429.35 | 239.6299 | 429.36 | 240.03 | 429.43 | 240.8199 | 429.45 | 241.8 | 429.45 |
| 244.28 | 429.44 | 245.33 | 429.43 | 247.78 | 429.42 | 50.8799 | 429.34 | 265.64 | 429 |
| 276.59 | 428.59 | 277.79 | 428.55 | 286.28 | 428.24 | 294.01 | 428 | 295.94 | 427.97 |
| 297.54 | 427.92 | 298.53 | 427.91 | 299.1 | 427.92 | 300.19 | 427.97 | 300.35 | 427.98 |
| 300.89 | 428 | 305.8 | 429 | 305.96 | 429.01 | 307.93 | 429.04 | 316.23 | 429.09 |
| 316.66 | 429.09 | 317.44 | 429.1 | 318.07 | 429.09 | 318.16 | 429.09 | 318.22 | 429.08 |
| 318.57 | 429.08 | 318.92 | 429.1 | 319.1 | 429.11 | 320.27 | 429.15 | 320.53 | 429.16 |
| 321.17 | 429.19 | 332.63 | 429.8 | 336.21 | 430 | 337.36 | 430.14 | 338.32 | 430.26 |
| 339.08 | 430.33 | 342.98 | 430.4 | 344.63 | 430.42 | 345.04 | 430.42 | 345.6 | 430.4 |
| 348.11 | 430.4 | 349.82 | 430.42 | 350.52 | 430.43 | 351.99 | 430.46 | 353.04 | 430.45 |
| 355.26 | 430.42 | 355.94 | 430.39 | 357 | 430.31 | 358.1 | 430.27 | 358.85 | 430.25 |
| 360.35 | 430.23 | 360.94 | 430.21 | 361.88 | 430.18 | 362.38 | 430.15 | 363.49 | 430.15 |
| 363.99 | 430.22 | 364.69 | 430.39 | 364.76 | 430.39 | 364.92 | 430.4 | 364.98 | 430.41 |
| 365.19 | 430.41 | 365.25 | 430.4 | 366.86 | 430.23 | 369.43 | 430 | 373.73 | 429.84 |
| 377.26 | 429.74 | 381.76 | 429.65 | 383.27 | 429.65 | 385.37 | 429.67 | 385.97 | 429.69 |
| 386.52 | 429.71 | 386.67 | 429.72 | 388.47 | 429.8 | 391.63 | 429.88 | 393.39 | 429.88 |
| 393.66 | 429.87 | 393.82 | 429.87 | 394.44 | 429.85 | 397.11 | 429.8 | 399.7 | 429.76 |
| 403.95 | 429.61 | 404.88 | 429.57 | 420.18 | 429.01 | 420.33 | 429.01 | 420.38 | 429 |
| 420.47 | 429 | 420.86 | 428.97 | 421.25 | 428.89 | 422.66 | 428.78 | 423.13 | 428.78 |
| 423.69 | 428.77 | 425.23 | 428.76 | 425.95 | 428.73 | 427.26 | 428.67 | 427.96 | 428.69 |
| 428.58 | 428.8 | 429.76 | 428.96 | 430.58 | 429 | 437.64 | 429 | 440.32 | 429.01 |
| 440.97 | 429.01 | 441.71 | 429 | 450.4 | 429 | 451.3 | 428.94 | 455.04 | 428.92 |
| 458.65 | 428.91 | 458.97 | 428.95 | 459.65 | 429 | 463.38 | 429.68 | 465.17 | 430 |
| 477.52 | 430 | 478.31 | 429.96 | 479 | 429.92 | 487.84 | 429.36 | 492.32 | 429.16 |
| 493.58 | 429.08 | 495.15 | 429.08 | 496.73 | 429.16 | 497.03 | 429.18 | 498.04 | 429.21 |
| 499.11 | 429.22 | 500.69 | 429.15 | 501.06 | 429.13 | 501.61 | 429.13 | 501.7 | 429.12 |
| 501.78 | 429.13 | 502.46 | 429.13 | 502.74 | 429.12 | 503.87 | 429.13 | 505.4 | 429.16 |
| 505.55 | 429.17 | 506.19 | 429.21 | 506.59 | 429.23 | 508.94 | 429.43 | 515.97 | 429.96 |
| 516.24 | 429.97 | 516.52 | 430 | 517.78 | 430.12 | 519.95 | 430.26 | 520.83 | 430.28 |
| 522.87 | 430.24 | 527.73 | 430.06 | 528.83 | 430.01 | 529.01 | 430 | 531.49 | 430 |
| 532.95 | 430.08 | 533.3 | 430.1 | 534.96 | 430.18 | 536.48 | 430.26 | 550.87 | 431 |
| 560.53 | 431 | 564.35 | 430.69 | 567.87 | 430.49 | 568.16 | 430.47 | 568.36 | 430.43 |
| 568.7 | 430.42 | 569.0699 | 430.43 | 571.55 | 430.48 | 572.08 | 430.5 | 573.27 | 430.52 |
| 573.62 | 430.53 | 574.23 | 430.52 | 576.96 | 430.67 | 577.21 | 430.68 | 577.83 | 430.7 |
| 579.2599 | 430.73 | 579.85 | 430.74 | 581.72 | 430.74 | 584.59 | 430.69 | 584.73 | 430.68 |
| 585.02 | 430.66 | 586.5599 | 430.56 | 587.49 | 430.51 | 588.29 | 430.48 | 590.59 | 430.4 |
| 593.29 | 430.36 | 594.45 | 430.33 | 596.93 | 430.27 | 598.29 | 430.23 | 600.9399 | 430.14 |
| 601.87 | 430.11 | 604.59 | 430 | 604.9 | 429.94 | 610.03 | 429 | 611.09 | 428.93 |

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     612  428.89613.8099  428.85   614.7  428.85   616.4  428.86  617.16  428.87
  618.41  428.91  618.88  428.95619.3099     429  629.33  429.58  629.73   429.6
  632.49  429.72637.2599     430  640.05  430.41644.3099     431   644.5     431
644.5599  430.94  644.78  430.79644.9399  430.69  646.27   430.7  649.28   430.7
  651.28  430.83  651.43  430.83  651.83  430.85  652.05  430.86653.0599  430.86
   654.6  430.84  654.86  430.84  654.92  430.85  655.23  430.89  655.95  430.89
  656.61   430.9657.0699  430.89  658.36  430.89   659.5  430.87  660.39  430.86
  661.14  430.85661.5099  430.84  662.18  430.83  662.49  430.82  662.98  430.81
  667.54  430.75  668.71  430.73   671.8  430.65  674.55  430.59  675.53  430.58

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
  104.79     .05  161.33     .04  640.05     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        161.33  640.05           432.61  428.48  442.51             .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 10668.33

INPUT
Description:
Station Elevation Data    num=     373
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     4299.800049     42912.67004  428.9414.90002  428.9216.30005  428.89
17.17004  428.8917.51001   428.917.81006   428.9      18  428.8918.45001  428.88
   19.25  428.8619.57001  428.8520.31006  428.8420.76001  428.8321.81006  428.81
22.43005   428.823.83002  428.7736.89001  428.5141.47003  428.4342.60004  428.42
43.48004   428.445.33002  428.3747.06006  428.3547.84003  428.3348.65002  428.33
49.97003   428.350.52002  428.2854.06006  428.2254.67004  428.2256.26001  428.21
57.39001   428.258.62006  428.2160.40002  428.2761.66003  428.2964.37006  428.32
66.42004  428.3266.92004  428.3167.78003   428.368.07001   428.368.72003  428.29
69.29004  428.2873.02002  428.1873.76001  428.1576.05005  428.05   77.25     428
79.41003     428   83.25  428.0584.17004  428.0686.06006  428.0992.59003  428.09
99.78003     428101.3701  427.94101.4901  427.93  107.59  427.72  108.94  427.68
   109.9  427.64  110.29  427.62   112.5  427.53  121.08     427  121.61  426.83
  122.28  426.61   124.1     426  126.38  425.24  127.09     425  129.92  424.14
  130.48     424  132.51  423.87  133.38  423.82133.8101   423.8  135.25  423.73
  136.26  423.69  146.09  423.16  148.38  423.11  148.67  423.09  148.76  423.08
  148.89  423.06  148.95  423.05  149.05  423.04  149.17  423.03  149.65  423.03
  149.85  423.05  150.14  423.06   150.2  423.07   151.1  423.13151.8701   423.1
  152.14  423.13  152.35  423.15  153.94  423.12  154.42  423.19  155.08   423.2
  159.21     424  162.76  424.89  162.96   424.9  163.11  424.94  164.64  424.96
  174.07  424.43  179.26  424.49  179.45   424.5  190.61     425  244.51     425
  250.94   424.5  256.26  424.13  256.91  424.08  258.41     424  262.11     424
263.6801  424.05   264.9  424.07  266.95  424.03  267.59     424  267.65     424
  268.14  423.97  269.25  423.94  269.54  423.93270.4301   423.8  271.09  423.75
  273.25  423.64  273.58  423.59  273.73  423.53  273.84  423.52  274.47  423.52
274.9901  423.53  275.19  423.54  275.51  423.56   276.2  423.65  276.39  423.67
  279.45  423.81282.8101     424  318.79     424319.1801  423.95  319.36  423.95
  321.83  423.77  322.28  423.74  322.79  423.75  323.66  423.68  323.98  423.64
325.7401  423.38326.8701  423.34  327.88  423.32  328.59  423.34  332.27  423.43
  333.16  423.44   333.6  423.44333.9301  423.45  335.36  423.45   338.6   423.5
  339.53   423.5  344.26   423.4  345.78   423.4346.5601  423.39  355.13  423.23
  355.38  423.22  356.51  423.22357.4901  423.19  358.28  423.19  362.21  423.05
  362.33  423.05  363.46     423   368.1     423  370.77  423.21372.2401  423.32
  374.14  423.48  380.42     424  423.71     425   424.9     425   432.3  424.77
  437.16  424.63  437.68  424.63  438.57   424.6  438.85  424.58  439.32  424.52
  439.62   424.5  439.81   424.5  440.23  424.49  451.62  424.48  452.62  424.49
  452.98   424.5  453.96   424.5  456.26  424.57  459.42  424.68  460.14  424.78
  460.67  424.83  461.13  424.85  461.25  424.85  463.93   424.9  466.84  424.98
  467.46     425  468.27  425.13  468.36  425.13  470.07  425.42  470.69  425.37
  472.01  425.31  472.92   425.3   475.8  425.39  477.56  425.42   478.3  425.45
  478.97  425.45  480.33  425.54  481.33  425.51  482.07  425.57  484.65  425.47
  486.47  425.59  487.78  425.68  488.22   425.7  489.31  425.66  490.32  425.69
  490.71   425.7  491.42  425.71   492.7  425.72   493.6  425.69   494.1  425.69
  496.04  425.62  496.49   425.6  497.72   425.6  498.61  425.58   500.7  425.55
  502.65  425.57  504.16  425.57  505.33  425.56   506.8  425.54  507.32  425.53
  511.93  425.49  512.77  425.47514.3201  425.42  515.39  425.38  521.89   425.1
  522.21   425.1  522.97  425.08  523.04  425.08  523.41  425.09  523.92  425.11
  524.09   425.1  524.85     425  571.54  424.05572.0601  424.05  572.34  424.04
  572.85  424.03  573.87     424576.0701  423.87  576.55  423.83  576.97  423.73
578.8201  423.73  580.66  423.72  580.91  423.78  581.34  423.81  582.85   423.9
  585.26     424  586.79  424.07  587.77  424.08  590.25  424.09  593.58  424.08
  594.84  424.08  597.98  424.05  601.42     424  605.67     424  607.01  423.82
  616.24  423.73  624.72  423.73  633.34     424  634.34  424.01  635.67  424.01
  637.64     424  643.79     424  648.76  424.35649.6901  424.42655.4401     425
  667.71     425  673.45  424.83  684.48  424.59   685.5  424.58  686.21  424.58
  687.71  424.61  688.22  424.63  688.91  424.65  689.28  424.67  690.39  424.69
  691.09   424.7  692.62  424.75693.0601  424.76  694.01  424.81  696.67  424.96
  697.36     425  699.66  425.13  700.07  425.15  701.38  425.18  702.34   425.2
  703.92  425.21  704.16  425.19   704.2  425.12  704.54  425.09706.1901  425.04
  707.45  425.01711.4301  424.94  715.48  424.89716.5601  424.88  719.83  424.86
  721.92  424.84   725.2  424.98  725.58  424.99  735.07  424.58  738.52  424.52
  739.25  424.51  740.53  424.51  742.98  424.49  743.84  424.49  745.79  424.51
  746.42  424.53  747.73  424.59  748.09  424.61  748.65  424.61  748.82   424.6
  749.36   424.6  749.61  424.61  749.76  424.64  750.57  424.66   756.1     424
  757.79   423.9  764.14  423.84  770.09  423.85  770.85   423.9  773.33  423.94
  774.28   423.9  779.96     423   780.3  422.99   780.5  422.99  780.55     423
  780.67     423  784.47  423.19  790.16  423.46  790.87  423.49  801.25     424
  801.64  424.03  802.87  424.08  803.34  424.09  804.02  424.11  804.38  424.11
  805.62  424.12  806.67  424.12  808.86   424.1  814.95  424.06819.1801  424.09
819.4901  424.09   819.6  424.08  819.79  424.07819.9301  424.07  820.27  424.09
  820.46   424.1  820.84   424.1  821.02  424.11   821.5  424.12821.7401  424.13
  822.25  424.15824.6901  424.23  826.05  424.23826.5601  424.24   831.6  424.31
833.4301  424.34  835.17  424.36838.5601  424.43840.2401  424.46842.7401  424.52
  848.79  424.69     855  424.85  861.42     425862.9901     425  863.98  425.08
  866.46  425.13  867.39  425.14  877.54  425.28  878.94  425.25  879.29  425.23
879.6201  425.18  880.07  425.14  881.66  425.13

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   124.1     .04  861.42     .05
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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          124.1  861.42            406.95  384.59  335.64              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0               RS: 10283.74

INPUT
Description:
Station Elevation Data    num=     380
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
51.33002  420.9153.42004  420.92   53.94  420.9359.87006  420.9260.79004  420.91
64.36005  420.9168.17004  420.9568.66003  420.9569.02002  420.9669.12006  420.96
69.20001  420.9569.58002  420.9570.10004  420.9470.21002  420.93   70.44  420.92
70.61005  420.9170.97003  420.91   71.13   420.971.41003  420.8972.56006  420.82
74.20001  420.7978.71002  420.64      87  420.0687.79004     42091.04004  419.49
91.98004   419.497.67004     419   100.3     419  100.61  419.02  100.86  419.03
102.8701  419.21  103.51  419.25   106.8   419.4  107.09  419.41107.7401  419.42
  108.15  419.42  109.16  419.45  109.73  419.48  110.59  419.54  111.33  419.62
111.8701  419.69  112.33  419.72  112.96  419.75  113.03  419.76  113.27  419.76
  115.58  419.72  115.92   419.7  116.63  419.67  118.77   419.6   119.2  419.58
  120.28   419.5  121.88  419.32  122.23   419.3  124.23  419.21  125.78  419.12
  126.19  419.09  126.52  419.03  135.04  418.17  135.22  418.15  135.64  418.13
135.7401  418.12136.0601  418.12136.3701  418.21  138.25  418.46  139.08  418.54
  140.07  418.69  142.36     419  143.32   419.1  144.17  419.13144.6201  419.12
  145.92     419146.3101  418.94  146.41  418.95  146.78  418.95   146.9  418.94
  154.67  418.46157.5601  418.26  157.72  418.25  158.05  418.24   158.2  418.23
  158.57  418.21159.1201  418.16  163.13  418.15  164.05  418.19  164.16   418.2
  166.16  418.26  166.51  418.28166.7401  418.29  166.83   418.3  167.29  418.32
  171.52  418.42  172.52  418.53  174.97  418.87  175.52  418.87176.9301     419
  193.63     419  215.17  419.59  227.04     420   236.5     420  241.84     419
  242.42   418.9  245.09  418.64  247.78  418.59  248.35  418.71   249.2  418.79
  252.17  418.89  254.22  418.98  255.17     419  264.29     419  264.66  418.99
264.9301  418.92  265.84  418.87  266.92  418.88  271.11     419  287.09  419.35
  291.69  419.26  298.25  419.07298.3101  419.02  298.41  419.03  298.48  419.03
  298.54  419.02   298.8  419.02  298.94  419.03  299.02  419.03  299.59  419.05
  299.71  419.06  299.88  419.06  313.44  419.46320.5601  419.33320.6201  419.32
  320.96  419.32  321.27  419.34  321.71  419.34  321.78  419.35  322.66  419.41
  324.38  419.45  325.83  419.44   330.1  419.37  330.21  419.36  330.72  419.33
  331.22  419.27  331.95  419.16  332.17  419.15  332.88  419.14  333.03  419.14
  334.34   419.1  334.51   419.1  334.63  419.11334.9901  419.13  335.76  419.18
  336.19  419.23336.8701  419.28   337.8  419.34338.2401  419.35   338.8  419.34
  338.98  419.33  339.64  419.34  340.44  419.37  352.73     420  360.63     420
371.8701  419.59  378.83   419.4  379.89  419.34  380.38  419.33  381.41  419.33
381.9901  419.31  382.17  419.29   383.1  419.25  383.83  419.23  385.03  419.24
  385.34  419.25  385.48  419.25  387.94  419.36  388.52  419.39  391.36   419.6
  394.45  419.79   394.6  419.79  398.69     420399.0601  420.01  399.82  420.01
399.9901     420   400.3     420  400.77  419.89  401.25   419.8  401.88  419.78
  405.13  419.96  405.77     420   423.9     420  425.33  420.03  425.91  420.09
  426.11  420.13  428.45  420.16   428.6   420.1  429.57  420.09  435.89  420.11
  438.05  420.09  438.83  420.09  439.79  420.07   440.1  420.07  441.94     420
  449.27  419.21  453.33  418.87  454.24  418.83  454.78  418.85  456.62  418.97
  457.25     419  463.92  419.44  465.28  419.52  466.52  419.54  467.91  419.53
  469.86  419.55  473.05  419.51  474.31  419.48  487.17  419.41  504.07  419.85
  508.44  419.79  508.57   419.8  509.92  419.53  510.04  419.56  511.33  419.32
   511.4  419.33  513.97  418.93515.1901  418.84  519.41  418.58  520.23  418.54
  522.27  418.48  522.85  418.47  523.97  418.47  525.75  418.44526.3201  418.42
  529.99  418.37532.9401  418.37  533.27  418.35  533.78  418.34  534.13  418.34
  534.85  418.35  535.47  418.37535.8101  418.37  536.29  418.38   537.5  418.43
  545.87   418.7  546.35  418.71  546.54  418.71549.4301  418.79  549.52  418.79
  553.96  418.91555.0701  418.92  555.36  418.92  555.46  418.91  555.53   418.9
   557.3     419  572.77  419.63573.1801  419.65  574.78  419.62  575.08  419.61
  575.63  419.65576.6901  419.67577.8101  419.68  578.08  419.69  579.55  419.69
580.3201  419.66  580.75  419.62  581.11  419.63583.4301  419.32584.2001  419.23
  584.74  419.23  585.65  419.24586.1901  419.24  588.54  419.27  588.76  419.27
  601.86  419.54  606.21  419.62   606.9  419.62   610.6  419.71  610.92  419.73
   611.6  419.76  611.99  419.77   612.1  419.77612.3201  419.78  614.91  419.79
  615.86  419.77  616.25  419.77  616.87  419.75  617.03  419.75  617.86  419.73
  618.21  419.73619.0701  419.72  620.73  419.72  621.23  419.73  621.85  419.73
  622.12  419.72  622.33  419.71  636.77  419.28  637.72  419.27  639.25  419.24
  639.76  419.22644.9401   419.4  645.12  419.43645.2001  419.44  645.54  419.42
646.0601  419.42  647.78  419.37  647.86  419.37  649.61  419.29  649.92  419.26
653.3201  419.14   653.5  419.13653.7001  419.11  654.21  419.07  654.42  419.05
  654.58  419.05  654.72  419.04  655.01  419.04655.0701  419.03  655.39  419.03
  655.48  419.04  655.59  419.05  656.23  419.08  656.53  419.1659.3101  419.21
   665.1  419.54  669.37  419.72  670.53  419.74  670.75  419.75  671.13  419.75
  674.45  419.66  674.92  419.63  676.78  419.53  678.17  419.44  678.82  419.47
  681.14  419.33  682.39  419.36  682.78  419.36  686.15     419  686.71  418.89
  688.01  418.69  688.78  418.63689.2401  418.64  690.76  418.73  691.88  418.76
694.0601  418.72   694.9  418.66698.1801  418.64711.7401  419.24  713.48   419.3
728.4901  419.98  731.72  419.95  733.21  419.98  734.75  419.99739.0601  419.98
   740.3  419.99740.8101  419.98741.1801     420  747.13     420  748.36  420.01
  755.59     420  756.15  419.96  757.89  419.88  763.35  419.82  766.03   419.9
  766.58  419.93  767.66  419.98767.9901     420  772.84  420.17  773.41  420.17
  773.91  420.18  774.01  420.17  774.17  420.15  774.25  420.15  777.87   420.2
  778.57  420.22     779  420.22779.6801  420.23  781.79  420.24  784.04  420.32
  815.04  420.97816.3101     421   859.6  421.04  861.25     421  864.14  420.99

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
51.33002     .05      87     .04  784.04     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
             87  784.04            413.3  412.48  421.09              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0               RS: 9871.26

INPUT
Description:
```

Station Elevation Data num= 299

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 159.62 | 414.99 | 159.7 | 414.98 | 164.48 | 414.02 | 164.61 | 414 | 175.09 | 413.45 |
| 175.53 | 413.42 | 175.79 | 413.36 | 175.87 | 413.35 | 177.26 | 413.29 | 177.41 | 413.29 |
| 177.58 | 413.23 | 177.78 | 413.22 | 178.12 | 413.2 | 180.11 | 413.18 | 180.65 | 413.22 |
| 181.68 | 413.28 | 185.32 | 413.58 | 186.69 | 413.71 | 189.7 | 414 | 216.91 | 414 |
| 219.88 | 413.8 | 221.72 | 413.65 | 222.51 | 413.53 | 222.91 | 413.5 | 227.33 | 413.29 |
| 228.55 | 413.25 | 229.29 | 413.25 | 230.06 | 413.26 | 230.14 | 413.3 | 231.11 | 413.39 |
| 231.97 | 413.41 | 238.7 | 413.37 | 258.58 | 413 | 262.81 | 412.95 | 265.06 | 412.95 |
| 269.16 | 412.97 | 269.84 | 412.98 | 269.96 | 412.98 | 271.56 | 412.95 | 274.38 | 412.93 |
| 280.38 | 412.98 | 281.52 | 413 | 283.18 | 413.12 | 294.58 | 414 | 300.94 | 414.39 |
| 301.41 | 414.38 | 312.43 | 414.43 | 326.06 | 414.23 | 328.23 | 414.17 | 328.78 | 414.15 |
| 328.93 | 414.14 | 329.45 | 414.12 | 330.18 | 414.08 | 330.33 | 414.08 | 330.81 | 414.07 |
| 331.58 | 414.07 | 331.67 | 414.08 | 331.91 | 414.1 | 332.27 | 414.16 | 332.65 | 414.18 |
| 335.08 | 414.34 | 336.4 | 414.38 | 348.19 | 414.89 | 352.41 | 415 | 352.85 | 415 |
| 354.36 | 415.01 | 357.78 | 414.93 | 357.96 | 414.93 | 359.96 | 414.85 | 360.48 | 414.84 |
| 364.8 | 414.68 | 365.56 | 414.68 | 366.07 | 414.67 | 367.89 | 414.59 | 368.62 | 414.59 |
| 371.46 | 414.47 | 372.05 | 414.44 | 376.09 | 414.32 | 377.15 | 414.3 | 377.91 | 414.3 |
| 379.45 | 414.33 | 380.4 | 414.34 | 380.98 | 414.34 | 382.13 | 414.35 | 382.54 | 414.35 |
| 385.27 | 414.31 | 386.44 | 414.31 | 387.01 | 414.32 | 388.1 | 414.36 | 388.54 | 414.38 |
| 390.05 | 414.46 | 392.16 | 414.54 | 393.63 | 414.57 | 400.53 | 414.68 | 409.23 | 414.95 |
| 411.84 | 415.06 | 412.42 | 415.1 | 413.68 | 415.15 | 414.59 | 415.16 | 416.39 | 415.16 |
| 416.87 | 415.15 | 417.12 | 415.16 | 430.89 | 415.17 | 431.24 | 415.15 | 433.18 | 415.1 |
| 434.74 | 415.08 | 447.42 | 415.05 | 449.96 | 415 | 460.43 | 415 | 460.68 | 415.05 |
| 466.12 | 415.12 | 468.15 | 415.01 | 468.42 | 415 | 498.85 | 414.45 | 515.21 | 414 |
| 539.91 | 413 | 540.08 | 412.99 | 540.99 | 412.92 | 546.72 | 412.96 | 546.79 | 412.97 |
| 548.61 | 413 | 560.5 | 413 | 568.26 | 412.85 | 568.9 | 412.87 | 569.19 | 412.89 |
| 570.26 | 413 | 591.05 | 413.31 | 594.99 | 413.21 | 600.64 | 413.01 | 603.31 | 412.96 |
| 607.2 | 412.94 | 608.52 | 412.95 | 608.86 | 412.95 | 609.19 | 412.97 | 609.47 | 413 |
| 617.68 | 414 | 621.12 | 414.19 | 623.97 | 414.4 | 624.39 | 414.42 | 626.12 | 414.44 |
| 627.74 | 414.48 | 628.35 | 414.51 | 634.55 | 414.47 | 634.77 | 414.44 | 638.9 | 414.21 |
| 643.66 | 414.07 | 643.74 | 414.06 | 644.23 | 414.06 | 644.34 | 414.05 | 644.86 | 414.05 |
| 644.97 | 414.04 | 645.05 | 414.04 | 645.26 | 414.05 | 645.63 | 414.05 | 647.98 | 414.07 |
| 658.65 | 414.28 | 660.53 | 414.3 | 672.53 | 414.12 | 674.66 | 414.04 | 676.17 | 414 |
| 678.38 | 413.76 | 680.01 | 413.66 | 682.62 | 413.53 | 683.83 | 413.48 | 684.03 | 413.47 |
| 684.23 | 413.43 | 686.22 | 413.39 | 686.81 | 413.49 | 686.96 | 413.5 | 692.82 | 413.71 |
| 693.97 | 413.74 | 695.16 | 413.73 | 695.72 | 413.7 | 696.88 | 413.62 | 697.2 | 413.62 |
| 717.92 | 414.03 | 725.34 | 414.09 | 727.15 | 414.09 | 732.16 | 414 | 733.06 | 413.97 |
| 733.91 | 413.96 | 736.47 | 413.98 | 736.56 | 413.93 | 738.57 | 413.92 | 746.96 | 413.83 |
| 747.67 | 413.81 | 750.09 | 413.71 | 753.51 | 413.53 | 754.92 | 413.49 | 755.43 | 413.46 |
| 756.54 | 413.38 | 762.05 | 413.42 | 762.67 | 413.51 | 764.02 | 413.63 | 764.53 | 413.66 |
| 765.67 | 413.7 | 766.29 | 413.73 | 773.99 | 414.21 | 784.22 | 414.67 | 785.81 | 414.76 |
| 800.07 | 414.43 | 802.13 | 414.42 | 803.74 | 414.38 | 807.44 | 414.46 | 807.77 | 414.48 |
| 814.43 | 414.41 | 814.82 | 414.4 | 824.71 | 414 | 827.2 | 413.73 | 828.1 | 413.58 |
| 829.99 | 413.43 | 830.55 | 413.4 | 832.39 | 413.32 | 832.47 | 413.33 | 832.56 | 413.4 |
| 832.75 | 413.49 | 833.68 | 413.66 | 836.85 | 413.97 | 837.08 | 414 | 839.11 | 414 |
| 839.94 | 414.01 | 840.06 | 414 | 844.11 | 413.8 | 848.43 | 413.64 | 849.82 | 413.61 |
| 852.35 | 413.53 | 855.14 | 413.4 | 859.74 | 413 | 866.22 | 412.76 | 881.85 | 412.69 |
| 881.94 | 412.71 | 882.17 | 412.73 | 882.21 | 412.79 | 884.25 | 413 | 884.93 | 413.14 |
| 888.5 | 414 | 889.43 | 414.05 | 892.27 | 414.27 | 892.72 | 414.29 | 893.67 | 414.29 |
| 906.69 | 414.07 | 910.56 | 414.04 | 910.83 | 414.04 | 910.89 | 414.03 | 911.71 | 414.03 |
| 911.8 | 414.04 | 911.89 | 414.03 | 912.19 | 414.03 | 912.32 | 414.04 | 912.53 | 414.05 |
| 912.88 | 414.06 | 913.04 | 414.07 | 913.21 | 414.07 | 934.53 | 414.73 | 940.99 | 414.94 |
| 954.64 | 415.13 | 955.69 | 415.13 | 956.66 | 415.11 | 957.61 | 415.08 | 960.75 | 415.03 |
| 969.08 | 415.04 | 973.39 | 415 | 982.97 | 414.6 | 989.51 | 414.07 | 989.74 | 414.05 |
| 989.88 | 414.03 | 989.94 | 414.02 | 990.18 | 414.02 | 990.24 | 414.01 | 990.4 | 414.01 |
| 990.49 | 414.02 | 990.58 | 414.02 | 990.72 | 414.03 | 990.9 | 414.04 | 991.06 | 414.04 |
| 992.04 | 414.08 | 993.38 | 414.12 | 1004.35 | 414.54 | 1006.92 | 414.59 | 1014.27 | 414.86 |
| 1014.4 | 414.86 | 1014.62 | 414.87 | 1015.12 | 414.9 | 1015.25 | 414.9 | 1015.59 | 414.91 |
| 1016.91 | 414.91 | 1017 | 414.9 | 1017.65 | 414.9 | 1018.26 | 414.91 | 1018.49 | 414.91 |
| 1018.8 | 414.92 | 1019.99 | 414.9 | 1020.23 | 414.89 | 1020.36 | 414.89 | 1021.72 | 414.9 |
| 1030.72 | 414.87 | 1038.23 | 415 | 1038.41 | 415 | 1043 | 415.06 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 159.62 | .05 | 186.69 | .04 | 934.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 186.69 | 934.53 | 309 | 308.31 | 309.07 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 9562.95

INPUT
Description:
Station Elevation Data num= 441

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 98.19 | 410.4898.78998 | | 410.5 | 100.58 | 410.53 | 101.38 | 410.53 | 106.9 | 410.41 |
| 107.18 | 410.41 | 111.75 | 410.21 | 113.53 | 410.1 | 117.58 | 409.81 | 119.29 | 409.65 |
| 119.73 | 409.62 | 128.76 | 409.3 | 129.19 | 409.28 | 129.63 | 409.24 | 130.2 | 409.2 |
| 130.29 | 409.19 | 130.35 | 409.19 | 130.85 | 409.18 | 132.15 | 409.2 | 132.2 | 409.21 |
| 132.4 | 409.21 | 132.82 | 409.22 | 133.37 | 409.24 | 133.56 | 409.24 | 135.04 | 409.31 |
| 135.33 | 409.32 | 136.2 | 409.32 | 140.29 | 409.38 | 141.89 | 409.42 | 142.52 | 409.43 |
| 144.02 | 409.43 | 144.73 | 409.42 | 153.1 | 409.2 | 153.25 | 409.2 | 156 | 409.16 |
| 156.46 | 409.16 | 163.27 | 409.06 | 163.42 | 409.06 | 164.2 | 409.05 | 164.27 | 409.05 |
| 164.41 | 409.04 | 164.69 | 409.04 | 164.95 | 409.03 | 165.07 | 409.02 | 165.14 | 409.02 |
| 165.3 | 409.04 | 165.83 | 409.04 | 165.89 | 409.05 | 165.97 | 409.06 | 166.02 | 409.06 |
| 166.3 | 409.08 | 167.41 | 409.14 | 167.53 | 409.15 | 170.97 | 409.35 | 171.27 | 409.37 |
| 171.45 | 409.38 | 171.68 | 409.39 | 172.03 | 409.41 | 172.48 | 409.44 | 173.62 | 409.49 |
| 180.54 | 409.88 | 189.1 | 409.97 | 189.41 | 409.98 | 189.54 | 409.99 | 190.08 | 409.99 |
| 190.16 | 409.98 | 191.27 | 409.99 | 191.53 | 409.98 | 197.64 | 409.92 | 202.29 | 409.81 |
| 212.21 | 409.45 | 212.56 | 409.44 | 212.73 | 409.44 | 215.24 | 409.49 | 216.86 | 409.49 |
| 219.08 | 409.46 | 220.01 | 409.46 | 226.6 | 409.37 | 228.24 | 409.33 | 228.87 | 409.31 |
| 230.93 | 409.23 | 231.29 | 409.21 | 232.46 | 409.13 | 232.88 | 409.13 | 233.39 | 409.14 |
| 233.57 | 409.14 | 234.08 | 409.16 | 234.88 | 409.22 | 236.79 | 409.31 | 237.02 | 409.31 |
| 237.65 | 409.33 | 237.98 | 409.33 | 239.75 | 409.38 | 242.63 | 409.38 | 242.93 | 409.37 |
| 242.99 | 409.36 | 245.33 | 409.32 | 273.12 | 410 | 274 | 410.14 | 274.08 | 410.22 |
| 279.47 | 410.35 | 283.53 | 410.41 | 288.24 | 410.14 | 300.35 | 409.4 | 300.67 | 409.37 |
| 301.44 | 409.28 | 306.35 | 409.32 | 307.64 | 409.39 | 308.22 | 409.43 | 308.38 | 409.44 |
| 308.58 | 409.47 | 309.25 | 409.55 | 310.57 | 409.76 | 312.4 | 410 | 313.81 | 410.27 |
| 315.21 | 410.5 | 315.46 | 410.57 | 315.64 | 410.6 | 316.42 | 410.65 | 317.05 | 410.67 |
| 321.81 | 410.49 | 322.49 | 410.46 | 323.43 | 410.38 | 324.03 | 410.32 | 328.52 | 410 |
| 341.74 | 409.48 | 342.36 | 409.45 | 344.84 | 409.28 | 345.09 | 409.26 | 346.07 | 409.23 |



BSE Document Control Number: 7323HYD101

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 346.89 | 409.22 | 347.61 | 409.24 | 349.24 | 409.31 | 349.61 | 409.31 | 353.44 | 409.34 |
| 354.52 | 409.34 | 356.06 | 409.31 | 356.5 | 409.29 | 356.96 | 409.25 | 357.17 | 409.23 |
| 365.28 | 409 | 368.1 | 409 | 375.49 | 410 | 376.49 | 410.1 | 376.71 | 410.1 |
| 382.04 | 410.55 | 382.77 | 410.6 | 383.2 | 410.62 | 384.03 | 410.64 | 385.11 | 410.68 |
| 386.67 | 410.72 | 386.98 | 410.73 | 387.33 | 410.76 | 391.78 | 410.72 | 391.94 | 410.7 |
| 392.72 | 410.66 | 393.33 | 410.64 | 404.34 | 410.16 | 404.63 | 410.16 | 407.64 | 410 |
| 410.46 | 409.75 | 420.28 | 409.75 | 420.5 | 409.79 | 423.24 | 410 | 424.15 | 410.11 |
| 425.41 | 410.17 | 426.16 | 410.18 | 431.5 | 410 | 431.58 | 410 | 434.68 | 409.93 |
| 436.17 | 409.96 | 436.94 | 410 | 438.82 | 410.01 | 446.2 | 410.21 | 458.85 | 410.18 |
| 460.85 | 410.15 | 461.45 | 410.15 | 461.75 | 410.19 | 475.13 | 410 | 475.2 | 410 |
| 477.52 | 409.93 | 481.32 | 409.88 | 485.2 | 409.87 | 485.77 | 409.9 | 487.15 | 410 |
| 499.43 | 410.48 | 503.03 | 410.59 | 503.59 | 410.6 | 504.37 | 410.6 | 513.53 | 410.37 |
| 514.04 | 410.36 | 514.12 | 410.35 | 514.45 | 410.34 | 515.7 | 410.34 | 515.95 | 410.33 |
| 516.4 | 410.32 | 517.03 | 410.28 | 517.97 | 410.21 | 518.42 | 410.16 | 518.69 | 410.16 |
| 519.37 | 410.15 | 519.62 | 410.15 | 520.22 | 410.17 | 520.95 | 410.18 | 521.15 | 410.2 |
| 521.4 | 410.21 | 521.46 | 410.21 | 522.51 | 410.28 | 531.61 | 410.73 | 531.79 | 410.73 |
| 536.17 | 411 | 536.41 | 411.04 | 538.87 | 411.2 | 539.42 | 411.22 | 539.49 | 411.22 |
| 539.65 | 411.21 | 541.47 | 411.15 | 542.99 | 411.07 | 543.98 | 411.03 | 544.99 | 411 |
| 545.14 | 411 | 557.12 | 410.82 | 584.3199 | 410.82 | 593.05 | 411 | 594.53 | 411 |
| 603.05 | 410.43 | 615.54 | 410.01 | 615.76 | 410 | 616.47 | 410 | 616.75 | 409.99 |
| 618.36 | 409.95 | 622.33 | 409.82 | 623.49 | 409.76 | 625.99 | 409.67 | 627.1 | 409.62 |
| 628.98 | 409.52 | 629.5699 | 409.47 | 630.41 | 409.37 | 631.03 | 409.29 | 631.23 | 409.26 |
| 631.48 | 409.25 | 631.78 | 409.25 | 632.48 | 409.26 | 632.71 | 409.26 | 632.93 | 409.27 |
| 633.03 | 409.27 | 633.73 | 409.31 | 637.23 | 409.47 | 639.96 | 409.64 | 645.04 | 410 |
| 646.48 | 410.28 | 646.71 | 410.36 | 47.3199 | 410.31 | 647.65 | 410.3 | 648.66 | 410.26 |
| 652.75 | 410 | 652.81 | 410 | 666.99 | 409.63 | 670.01 | 409.53 | 671.38 | 409.52 |
| 671.97 | 409.52 | 672.91 | 409.51 | 673.3 | 409.51 | 674.84 | 409.54 | 675.28 | 409.54 |
| 676.23 | 409.55 | 676.63 | 409.55 | 678.03 | 409.57 | 686.44 | 409.78 | 687.7 | 409.78 |
| 688.76 | 409.8 | 689.06 | 409.81 | 690.16 | 409.82 | 690.69 | 409.82 | 692.77 | 409.76 |
| 693.26 | 409.74 | 694.89 | 409.71 | 695.19 | 409.71 | 696.29 | 409.69 | 698.25 | 409.67 |
| 699.4 | 409.64 | 701.29 | 409.58 | 705.75 | 409.4 | 706.25 | 409.39 | 707.53 | 409.35 |
| 710.17 | 409.37 | 10.5699 | 409.29 | 712.04 | 409.29 | 712.76 | 409.28 | 714.37 | 409.28 |
| 715.12 | 409.29 | 715.34 | 409.3 | 715.52 | 409.3 | 731.3 | 409.79 | 732.54 | 409.85 |
| 735.0699 | 409.6 | 735.18 | 409.61 | 735.62 | 409.62 | 736.06 | 409.62 | 736.5699 | 409.63 |
| 736.8199 | 409.64 | 739.7 | 409.69 | 740.24 | 409.68 | 741.12 | 409.64 | 741.96 | 409.62 |
| 742.16 | 409.6 | 747.4 | 409.17 | 747.64 | 409.16 | 747.8199 | 409.15 | 748.08 | 409.14 |
| 748.76 | 409.13 | 749.48 | 409.13 | 749.79 | 409.14 | 750.15 | 409.14 | 750.37 | 409.15 |
| 750.95 | 409.14 | 751.49 | 409.14 | 751.8199 | 409.16 | 752.11 | 409.17 | 753.65 | 409.18 |
| 753.96 | 409.19 | 758.62 | 409.24 | 759.09 | 409.24 | 762.9 | 409.19 | 764.68 | 409.22 |
| 765.49 | 409.24 | 770.23 | 409.28 | 771.79 | 409.27 | 772.4 | 409.24 | 773.29 | 409.24 |
| 775.87 | 409.22 | 777.14 | 409.17 | 779.49 | 409 | 780.37 | 408.95 | 785.18 | 408.59 |
| 786.64 | 408.47 | 786.86 | 408.43 | 787.17 | 408.35 | 787.44 | 408.31 | 787.73 | 408.3 |
| 787.88 | 408.29 | 788.19 | 408.3 | 789.55 | 408.3 | 790.08 | 408.29 | 791.21 | 408.29 |
| 791.69 | 408.3 | 792.37 | 408.3 | 792.55 | 408.31 | 796.97 | 408.45 | 802.86 | 408.76 |
| 803.04 | 408.8 | 804.21 | 408.89 | 805.84 | 408.96 | 805.96 | 408.96 | 807.04 | 409 |
| 811.21 | 409.31 | 811.73 | 409.25 | 812.92 | 409.2 | 813.9 | 409.19 | 815.7 | 409.27 |
| 826.84 | 410 | 827.89 | 410.05 | 828.49 | 410.09 | 830.46 | 410.13 | 831.1 | 410.13 |
| 832.18 | 410.1 | 835.5 | 410.07 | 845.91 | 410.11 | 859.45 | 410.24 | 862.68 | 410.24 |
| 867.91 | 410.29 | 872.06 | 410.24 | 872.93 | 410.22 | 874.06 | 410.18 | 875.41 | 410.15 |
| 881.75 | 410.08 | 885.94 | 410 | 886.33 | 409.99 | 888.26 | 409.9 | 888.63 | 409.89 |
| 889.57 | 409.89 | 890.2 | 409.88 | 894.8 | 409.92 | 895.21 | 409.94 | 895.51 | 409.97 |
| 895.89 | 409.99 | 896.17 | 410 | 901.78 | 410.47 | 909.51 | 411 | 912.77 | 411 |
| 920.41 | 410.09 | 921.06 | 410 | 935.08 | 410 | 936.56 | 410.01 | 940.37 | 410 |
| 949.71 | 409 | 952.41 | 408.86 | 953.22 | 408.83 | 953.52 | 408.83 | 954.04 | 408.81 |
| 954.8 | 408.75 | 955.87 | 408.71 | 957.44 | 408.67 | 960.67 | 408.65 | 961.41 | 408.65 |
| 962.36 | 408.66 | 962.74 | 408.66 | 963.51 | 408.69 | 963.95 | 408.72 | 964.97 | 408.83 |
| 965.25 | 408.83 | 968.05 | 408.9 | 968.36 | 408.92 | 969.35 | 409 | 973.61 | 409.78 |
| 974.73 | 410 | 975.42 | 410.04 | 975.94 | 410.1 | 976.59 | 410.22 | 976.93 | 410.24 |
| 977.14 | 410.25 | 977.85 | 410.25 | 979.65 | 410.22 | 980.29 | 410.2 | 984.82 | 410.21 |
| 990.28 | 410.16 | 996.52 | 410.03 | 996.55 | 410.03 | 997.81 | 410.01 | 998.4 | 410.01 |
| 998.46 | 410.02 | 1000.28 | 410.03 | 1000.38 | 410.04 | 1000.87 | 410.04 | 1010.46 | 410.35 |
| 1011.14 | 410.35 | 1011.37 | 410.33 | 1011.57 | 410.33 | 1012.21 | 410.32 | 1013.68 | 410.32 |
| 1040.24 | 410.66 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 98.19 | .05 | 197.64 | .04 | 996.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 197.64 | 996.55 | 367.74 | 365.95 | 358.85 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 9197

INPUT
Description:
Station Elevation Data num= 412

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 57.51001 | 405.56 | 58.14001 | 405.56 | 59.08002 | 405.57 | 63.39996 | 405.56 | 65.33997 | 405.58 |
| 65.94 | 405.58 | 67 | 405.57 | 67.51001 | 405.57 | 68.46997 | 405.56 | 76.25 | 405.36 |
| 86.38 | 405 | 87.92999 | 405 | 89.02997 | 404.99 | 93.16998 | 405 | 94.28998 | 405.04 |
| 104.45 | 405.19 | 105.54 | 405.2 | 108.13 | 405.2 | 108.78 | 405.17 | 108.96 | 405.16 |
| 118.96 | 404.25 | 121.62 | 404 | 123.65 | 403.84 | 123.92 | 403.83 | 124.07 | 403.83 |
| 124.54 | 403.82 | 124.89 | 403.82 | 129.09 | 403.71 | 133.98 | 403.65 | 137.03 | 403.69 |
| 149.92 | 404 | 162.61 | 404.43 | 163.02 | 404.45 | 163.6 | 404.46 | 165.74 | 404.57 |
| 166.75 | 404.61 | 169.32 | 404.65 | 170.88 | 404.7 | 171.12 | 404.71 | 171.19 | 404.71 |
| 171.33 | 404.74 | 171.54 | 404.76 | 173.81 | 404.77 | 174.05 | 404.73 | 174.3 | 404.68 |
| 174.51 | 404.66 | 175.41 | 404.62 | 177.16 | 404.51 | 177.84 | 404.48 | 179.52 | 404.42 |
| 181.89 | 404.36 | 183.26 | 404.35 | 187.25 | 404.22 | 190.54 | 404.04 | 193.61 | 404.35 |
| 196.72 | 404.78 | 196.88 | 404.78 | 197.41 | 404.86 | 198.45 | 405 | 198.7 | 405.02 |
| 200.4 | 405.13 | 201.34 | 405.17 | 203.16 | 405.22 | 203.96 | 405.23 | 205.16 | 405.22 |
| 205.47 | 405.22 | 209.2 | 405.13 | 215.17 | 405.05 | 217.56 | 405 | 229.62 | 404.8 |
| 234.25 | 404.68 | 238.21 | 404.53 | 239.46 | 404.53 | 240.26 | 404.56 | 240.45 | 404.58 |
| 240.66 | 404.6 | 242.24 | 404.71 | 242.58 | 404.76 | 242.73 | 404.85 | 243.12 | 404.91 |
| 243.99 | 405 | 244.92 | 405.03 | 245.81 | 405.05 | 247.15 | 405.04 | 250.77 | 404.89 |
| 252.45 | 404.85 | 257.41 | 404.8 | 257.86 | 404.8 | 258.53 | 404.79 | 258.6 | 404.79 |
| 258.78 | 404.83 | 258.83 | 404.83 | 262.25 | 404.99 | 262.54 | 405 | 265.77 | 405.08 |
| 272.43 | 405.18 | 278.83 | 405.18 | 280.72 | 405.2 | 291.11 | 405.35 | 292.04 | 405.37 |
| 292.45 | 405.39 | 293.57 | 405.43 | 294.34 | 405.45 | 295.49 | 405.49 | 297.32 | 405.58 |
| 298.73 | 405.62 | 299.23 | 405.63 | 299.7 | 405.63 | 299.76 | 405.64 | 299.87 | 405.67 |
| 300.27 | 405.69 | 300.66 | 405.69 | 303.14 | 405.64 | 304.53 | 405.63 | 304.74 | 405.62 |
| 304.89 | 405.62 | 305.18 | 405.61 | 312.89 | 405.4 | 313.46 | 405.4 | 316.83 | 405.35 |
| 318.39 | 405.36 | 320.22 | 405.41 | 320.35 | 405.45 | 320.51 | 405.46 | 321.32 | 405.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 321.72 | 405.49 | 322.28 | 405.51 | 322.91 | 405.54 | 324.22 | 405.63 | 328.36 | 405.63 |
| 330.17 | 405.33 | 330.24 | 405.33 | 330.38 | 405.32 | 330.69 | 405.32 | 331.03 | 405.29 |
| 331.54 | 405.21 | 331.63 | 405.19 | 332.61 | 405.14 | 333.26 | 405.12 | 333.75 | 405.14 |
| 334.58 | 405.19 | 337.19 | 405.31 | 337.3 | 405.31 | 342.5 | 405.41 | 342.58 | 405.41 |
| 343.16 | 405.43 | 343.51 | 405.43 | 343.94 | 405.45 | 345.86 | 405.58 | 346.19 | 405.6 |
| 346.86 | 405.62 | 347.23 | 405.64 | 347.7 | 405.67 | 349.08 | 405.71 | 351.09 | 405.7 |
| 351.61 | 405.69 | 351.82 | 405.68 | 352.15 | 405.68 | 352.25 | 405.67 | 353.56 | 405.63 |
| 379.09 | 404.72 | 402.69 | 404.05 | 405.86 | 403.99 | 406.84 | 403.96 | 409.42 | 403.94 |
| 412.71 | 404 | 418.29 | 404.17 | 419.57 | 404.2 | 420.16 | 404.22 | 420.37 | 404.22 |
| 428.27 | 404.46 | 428.95 | 404.46 | 430.44 | 404.44 | 431.31 | 404.39 | 434.8 | 404.11 |
| 436.33 | 404 | 437.6 | 403.93 | 440.66 | 403.86 | 443.87 | 403.82 | 448.36 | 403.81 |
| 453.46 | 403.86 | 456.7 | 403.98 | 457.04 | 404 | 459.69 | 404.55 | 461.35 | 404.92 |
| 461.82 | 405 | 462.42 | 405.02 | 479.1 | 405.02 | 479.71 | 405 | 486.49 | 405 |
| 487.49 | 405.03 | 495.67 | 405.19 | 496.78 | 405.23 | 498.18 | 405.25 | 498.58 | 405.22 |
| 499.68 | 405.02 | 499.87 | 405 | 502.05 | 404.87 | 502.18 | 404.87 | 502.92 | 404.82 |
| 508.61 | 404.51 | 509.5 | 404.45 | 510.5 | 404.33 | 510.59 | 404.31 | 510.67 | 404.29 |
| 512.03 | 404.25 | 512.23 | 404.25 | 512.33 | 404.24 | 512.86 | 404.24 | 513.41 | 404.25 |
| 513.61 | 404.26 | 514.06 | 404.3 | 514.43 | 404.32 | 514.57 | 404.3 | 514.87 | 404.23 |
| 516.44 | 404.21 | 517.13 | 404.25 | 523.29 | 404.57 | 524.11 | 404.58 | 528.41 | 404.79 |
| 528.68 | 404.79 | 531.14 | 404.88 | 531.49 | 404.88 | 533.7 | 404.91 | 534.81 | 404.95 |
| 535.56 | 405 | 535.77 | 405.06 | 537.76 | 405.21 | 540.89 | 405 | 545.89 | 404.62 |
| 548.24 | 404.48 | 548.45 | 404.47 | 549.07 | 404.46 | 551.45 | 404.48 | 551.66 | 404.52 |
| 552.08 | 404.55 | 553.48 | 404.61 | 558.02 | 404.85 | 560.19 | 404.93 | 561.57 | 405 |
| 562.63 | 405.04 | 562.84 | 405.04 | 565.36 | 405.13 | 565.87 | 405.13 | 570.83 | 405.31 |
| 571.39 | 405.34 | 571.52 | 405.35 | 574.7 | 405.48 | 575.52 | 405.5 | 580.85 | 405.66 |
| 581.05 | 405.66 | 581.49 | 405.67 | 582.19 | 405.67 | 582.67 | 405.66 | 583.08 | 405.66 |
| 584.08 | 405.67 | 584.59 | 405.67 | 588.33 | 405.64 | 590.12 | 405.64 | 590.36 | 405.65 |
| 590.59 | 405.65 | 591.26 | 405.67 | 591.53 | 405.68 | 591.94 | 405.69 | 592.01 | 405.7 |
| 595.19 | 405.7 | 597.44 | 405.63 | 597.72 | 405.63 | 597.87 | 405.62 | 598.74 | 405.63 |
| 599.49 | 405.63 | 599.83 | 405.65 | 599.95 | 405.64 | 602.19 | 405.55 | 603.22 | 405.48 |
| 607.86 | 405.36 | 614.35 | 405.12 | 614.59 | 405.12 | 617.89 | 405 | 645.88 | 405 |
| 647.07 | 404.95 | 648.71 | 405 | 658.52 | 405.19 | 658.63 | 405.18 | 658.76 | 405.17 |
| 658.87 | 405.16 | 659.09 | 405.17 | 659.46 | 405.18 | 659.56 | 405.19 | 659.87 | 405.21 |
| 670.12 | 405.42 | 681.85 | 405.59 | 682.83 | 405.56 | 683.99 | 405.56 | 684.67 | 405.57 |
| 686.38 | 405.57 | 689.63 | 405.53 | 689.89 | 405.53 | 694.72 | 405.5 | 697.92 | 405.45 |
| 698.32 | 405.44 | 698.82 | 405.44 | 699.76 | 405.42 | 699.83 | 405.44 | 711.23 | 405.47 |
| 718.75 | 405.26 | 721.55 | 405.17 | 721.88 | 405.15 | 722.74 | 405.12 | 727.19 | 405 |
| 731.33 | 404.75 | 734.39 | 404.6 | 737.49 | 404.48 | 737.86 | 404.46 | 738.3 | 404.43 |
| 739.47 | 404.34 | 739.65 | 404.33 | 739.98 | 404.32 | 740.86 | 404.28 | 741.11 | 404.28 |
| 741.81 | 404.3 | 742.31 | 404.3 | 743.65 | 404.32 | 744.28 | 404.32 | 744.91 | 404.33 |
| 746.44 | 404.34 | 747.04 | 404.35 | 747.84 | 404.38 | 748.59 | 404.42 | 748.97 | 404.45 |
| 749.46 | 404.47 | 753.03 | 404.66 | 762.66 | 405 | 764.73 | 405.22 | 765.47 | 405.27 |
| 765.8 | 405.27 | 769.96 | 405.67 | 771.27 | 405.63 | 771.8 | 405.6 | 772.84 | 405.58 |
| 773.49 | 405.59 | 775.01 | 405.65 | 775.66 | 405.66 | 778.32 | 405.82 | 778.62 | 405.86 |
| 779 | 405.84 | 779.1 | 405.83 | 779.31 | 405.83 | 780.17 | 405.82 | 780.79 | 405.76 |
| 786.46 | 405 | 793.11 | 405 | 803.23 | 405 | 805.55 | 404.89 | 806.21 | 404.88 |
| 816 | 404.44 | 817.92 | 404.37 | 819.32 | 404.31 | 819.75 | 404.3 | 820.48 | 404.29 |
| 820.63 | 404.28 | 820.84 | 404.25 | 821.18 | 404.24 | 821.4 | 404.24 | 821.86 | 404.25 |
| 822.04 | 404.26 | 823.09 | 404.33 | 823.21 | 404.33 | 827.65 | 404.51 | 828.18 | 404.51 |
| 828.9 | 404.52 | 829.29 | 404.52 | 830.46 | 404.51 | 833.11 | 404.39 | 833.37 | 404.39 |
| 833.92 | 404.38 | 834.94 | 404.37 | 836.65 | 404.37 | 837.46 | 404.32 | 837.51 | 404.31 |
| 841.51 | 404.33 | 842.35 | 404.36 | 842.79 | 404.37 | 849.05 | 404.51 | 849.72 | 404.53 |
| 872.97 | 405 | 877.52 | 405.54 | 878.15 | 405.56 | 879.12 | 405.56 | 881.35 | 405.75 |
| 881.92 | 405.79 | 882.58 | 405.78 | 883.53 | 405.83 | 885.59 | 405.76 | 889.61 | 405.55 |
| 890.15 | 405.55 | 901.3 | 405.82 | 905.68 | 405.88 | 906.38 | 405.9 | 924.73 | 406.16 |
| 924.88 | 406.16 | 930.44 | 406.27 | 934.02 | 406.3 | 939.41 | 406.32 | 942.31 | 406.31 |
| 944.91 | 406.27 | 947.07 | 406.26 | 953.48 | 406.33 | 959.29 | 406.29 | 981.84 | 406 |
| 982.03 | 406 | 983.18 | 405.96 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 57.51001 | .05 | 118.96 | .04 | 934.02 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 118.96 | 934.02 | 399.37 | 398.85 | 403.04 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8798.15

INPUT
Description:
Station Elevation Data num= 441

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 74.13 | 399.8974.91998 | 399.89 | 75 | 399.8875.15997 | | 399.8876.51001 | | 399.91 | |
| 76.59998 | 399.9180.79999 | 399.9683.52997 | | 400 | 97.5 | 40097.71002 | | 399.97 | |
| 102.98 | 399 | 112.04 | 398.44 | 118.56 | 398 | 120.15 | 397.93 | 121.57 | 397.89 |
| 122.02 | 397.92 | 122.58 | 398 | 126.75 | 398.28 | 128.58 | 398.35 | 131.15 | 398.44 |
| 140.01 | 398.8 | 142.93 | 398.93 | 144.45 | 399 | 145.69 | 399.05 | 148.24 | 399.22 |
| 149.33 | 399.28 | 150.01 | 399.29 | 150.41 | 399.29 | 151.1 | 399.26 | 151.23 | 399.24 |
| 151.59 | 399 | 154.43 | 398.9 | 170.82 | 398.4 | 173.27 | 398.34 | 173.72 | 398.35 |
| 174.22 | 398.37 | 174.53 | 398.46 | 174.73 | 398.47 | 175.21 | 398.49 | 175.75 | 398.5 |
| 177.09 | 398.54 | 177.63 | 398.57 | 178.61 | 398.61 | 179.32 | 398.55 | 185.74 | 398 |
| 186.48 | 397.98 | 188.22 | 397.95 | 189.24 | 397.94 | 191.45 | 397.95 | 192.56 | 397.96 |
| 194.47 | 398 | 194.58 | 398 | 196.76 | 398.17 | 201.61 | 398.58 | 202.27 | 398.63 |
| 203.63 | 398.73 | 204.54 | 398.81 | 208.07 | 399 | 208.2 | 399 | 215.34 | 399.07 |
| 215.63 | 399.06 | 218.01 | 399.01 | 218.29 | 399 | 228.5 | 398.72 | 233.22 | 398.56 |
| 233.47 | 398.55 | 233.61 | 398.52 | 234.47 | 398.43 | 237.65 | 398.43 | 238.1 | 398.44 |
| 238.8 | 398.48 | 239.52 | 398.49 | 240.04 | 398.49 | 241.24 | 398.48 | 244.31 | 398.56 |
| 248.61 | 398.68 | 249.19 | 398.71 | 249.51 | 398.72 | 251.35 | 398.72 | 251.54 | 398.73 |
| 252.59 | 398.77 | 253.23 | 398.79 | 254.35 | 398.79 | 255.38 | 398.81 | 256.04 | 398.81 |
| 256.32 | 398.82 | 256.85 | 398.84 | 257.04 | 398.85 | 257.44 | 398.85 | 257.63 | 398.84 |
| 258.09 | 398.83 | 258.23 | 398.82 | 259.46 | 398.82 | 259.62 | 398.83 | 260.27 | 398.84 |
| 260.84 | 398.84 | 261.3 | 398.82 | 262.58 | 398.76 | 262.77 | 398.75 | 264.57 | 398.76 |
| 264.69 | 398.75 | 265.46 | 398.73 | 266.45 | 398.7 | 271.8 | 398.53 | 273.03 | 398.51 |
| 278.45 | 398.37 | 282.29 | 398.28 | 282.61 | 398.27 | 282.99 | 398.27 | 283.77 | 398.31 |
| 284.07 | 398.32 | 287.54 | 398.18 | 288.72 | 398.14 | 288.98 | 398.13 | 290.85 | 398.09 |
| 290.94 | 398.09 | 291.07 | 398.08 | 291.13 | 398.08 | 291.57 | 398.05 | 291.72 | 398.04 |
| 291.79 | 398.03 | 292.04 | 398.03 | 292.21 | 398.04 | 292.45 | 398.05 | 292.52 | 398.06 |
| 293.12 | 398.12 | 293.8 | 398.12 | 300.04 | 398.75 | 300.95 | 398.83 | 302.12 | 398.94 |
| 302.78 | 399 | 303.8 | 399.03 | 305.21 | 399.03 | 309.53 | 399.04 | 311.84 | 399.02 |
| 312.89 | 399 | 316.32 | 398.81 | 318.9 | 398.63 | 325.62 | 398.2 | 327.98 | 398 |
| 331.46 | 398 | 334.71 | 398.12 | 348.52 | 398.7 | 354.98 | 399 | 355.43 | 399.01 |
| 356.45 | 399.05 | 358.83 | 399.15 | 358.96 | 399.16 | 359.24 | 399.17 | 360.61 | 399.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 361.72 | 399.19 | 363.69 | 399.22 | 364.49 | 399.27 | 365.44 | 399.27 | 368.45 | 399.26 |
| 369.96 | 399.26 | 372.2 | 399.27 | 372.81 | 399.28 | 373.3 | 399.28 | 373.48 | 399.3 |
| 373.66 | 399.29 | 374.17 | 399.28 | 376.06 | 399.23 | 381.19 | 399.08 | 383.77 | 399 |
| 385.52 | 398.8 | 385.75 | 398.82 | 390.43 | 398.39 | 391.62 | 398.44 | 393.43 | 398.33 |
| 393.9 | 398.29 | 394.64 | 398.22 | 394.87 | 398.21 | 395.49 | 398.2 | 395.82 | 398.19 |
| 398.12 | 398.19 | 399.41 | 398.2 | 399.98 | 398.2 | 400.19 | 398.21 | 400.56 | 398.24 |
| 400.79 | 398.25 | 401.17 | 398.27 | 403.51 | 398.38 | 411.77 | 398.73 | 414.21 | 398.83 |
| 418.26 | 398.97 | 419.09 | 399 | 419.35 | 399.01 | 423.74 | 399.3 | 430.75 | 399.26 |
| 439.14 | 399.16 | 439.28 | 399.08 | 440.13 | 399.07 | 441.11 | 399.01 | 442.1 | 399.01 |
| 442.68 | 399 | 443.73 | 399 | 444.04 | 398.95 | 447.7 | 398.89 | 451.05 | 399 |
| 452.35 | 399.05 | 456.25 | 399.18 | 456.77 | 399.2 | 457.06 | 399.2 | 469.24 | 399.58 |
| 474.1 | 399.77 | 475.52 | 399.7 | 484.03 | 399.47 | 484.47 | 399.47 | 485.6 | 399.46 |
| 487.83 | 399.43 | 488.55 | 399.41 | 489.77 | 399.38 | 492.69 | 399.32 | 493.23 | 399.31 |
| 494.51 | 399.28 | 495.96 | 399.28 | 496.12 | 399.29 | 497.84 | 399.36 | 499.21 | 399.44 |
| 499.69 | 399.46 | 499.81 | 399.47 | 500.11 | 399.48 | 503.45 | 399.48 | 503.86 | 399.49 |
| 504.56 | 399.5 | 504.68 | 399.52 | 506.25 | 399.55 | 507.64 | 399.57 | 510.63 | 399.5 |
| 516.63 | 399.38 | 516.87 | 399.38 | 518.96 | 399.34 | 519.4 | 399.33 | 519.57 | 399.32 |
| 520.2 | 399.3 | 521.95 | 399.25 | 523.61 | 399.26 | 525.52 | 399.29 | 525.61 | 399.32 |
| 525.84 | 399.33 | 528.56 | 399.28 | 529.86 | 399.26 | 530.3 | 399.26 | 532.77 | 399.24 |
| 534.88 | 399.21 | 535.02 | 399.2 | 537.83 | 399.18 | 538.14 | 399.18 | 538.97 | 399.15 |
| 540.28 | 399.16 | 540.5 | 399.16 | 541.22 | 399.13 | 542.04 | 399.1 | 542.56 | 399.08 |
| 542.65 | 399.07 | 542.88 | 399.06 | 542.99 | 399.06 | 543.1 | 399.05 | 543.42 | 399.05 |
| 543.49 | 399.06 | 543.7 | 399.06 | 543.77 | 399.07 | 544.48 | 399.08 | 544.54 | 399.08 |
| 544.65 | 399.09 | 545.06 | 399.12 | 546.33 | 399.19 | 547.06 | 399.24 | 549.9 | 399.47 |
| 556.98 | 400 | 575.1 | 400 | 577.94 | 399.86 | 584.25 | 399.99 | 584.4 | 400 |
| 592.65 | 399.87 | 596.2 | 399.8 | 597.58 | 399.78 | 600.77 | 399.74 | 602.35 | 399.73 |
| 605.98 | 399.72 | 615.61 | 399.66 | 615.75 | 399.66 | 617.15 | 399.75 | 619.01 | 399.88 |
| 619.45 | 399.92 | 619.65 | 399.93 | 621.22 | 400 | 629.02 | 400 | 632.55 | 399.61 |
| 634.33 | 399.47 | 634.84 | 399.44 | 635.45 | 399.38 | 635.8 | 399.36 | 636.48 | 399.35 |
| 636.68 | 399.35 | 636.99 | 399.34 | 637.22 | 399.32 | 637.69 | 399.29 | 637.86 | 399.27 |
| 638.1 | 399.23 | 639.1 | 399.21 | 640.16 | 399.21 | 640.34 | 399.22 | 640.41 | 399.23 |
| 640.5 | 399.25 | 640.73 | 399.29 | 641.11 | 399.31 | 644.39 | 399.53 | 644.88 | 399.56 |
| 645.5 | 399.59 | 646.82 | 399.67 | 652.8 | 400 | 654.75 | 400.24 | 660.41 | 401 |
| 682.95 | 401 | 685.91 | 401.03 | 686.04 | 401.01 | 686.71 | 401 | 687.21 | 400.98 |
| 687.27 | 400.98 | 693.66 | 400.77 | 694.47 | 400.77 | 702.32 | 400.5 | 702.79 | 400.51 |
| 704.61 | 400.52 | 706.38 | 400.52 | 707.42 | 400.5 | 709.86 | 400.49 | 711.1 | 400.45 |
| 716.29 | 400.57 | 718.27 | 400.72 | 737.17 | 400.46 | 737.82 | 400.49 | 743.01 | 400.05 |
| 743.56 | 400 | 744.59 | 399.97 | 754.41 | 399.63 | 755.42 | 399.62 | 758 | 399.53 |
| 762.95 | 399.38 | 764.95 | 399.33 | 766.97 | 399.36 | 767.63 | 399.38 | 768.72 | 399.4 |
| 769.34 | 399.4 | 770.88 | 399.39 | 773.73 | 399.36 | 776.27 | 399.34 | 777.35 | 399.34 |
| 779.38 | 399.32 | 779.9 | 399.32 | 780.44 | 399.33 | 780.83 | 399.33 | 781.39 | 399.35 |
| 784.89 | 399.35 | 788.44 | 399.34 | 790.97 | 399.3 | 797 | 399.22 | 799.51 | 399.18 |
| 809.76 | 399 | 811.53 | 398.9 | 813.88 | 398.83 | 815 | 398.82 | 815.82 | 398.82 |
| 818.85 | 398.84 | 819.51 | 398.84 | 821.05 | 398.86 | 823.19 | 398.9 | 824.64 | 399 |
| 824.99 | 399.01 | 827.54 | 399.1 | 828.69 | 399.12 | 829.06 | 399.13 | 829.94 | 399.12 |
| 830.37 | 399.1 | 833.6 | 399.15 | 834.92 | 399.22 | 838.36 | 399.36 | 848.67 | 399.88 |
| 850.99 | 400 | 853.85 | 400.23 | 856.09 | 400.36 | 857.66 | 400.48 | 859.16 | 400.57 |
| 865.56 | 401 | 888.61 | 401.01 | 901.22 | 401 | 903.84 | 400.86 | 903.89 | 400.86 |
| 911.02 | 400.47 | 912.55 | 400.42 | 913.97 | 400.39 | 914.69 | 400.37 | 916.11 | 400.32 |
| 918.02 | 400.26 | 918.45 | 400.25 | 921.07 | 400.23 | 921.28 | 400.22 | 924.75 | 400.22 |
| 926.78 | 400.24 | 927 | 400.24 | 927.9 | 400.27 | 929.61 | 400.31 | 929.97 | 400.32 |
| 930.57 | 400.35 | 932.18 | 400.44 | 932.71 | 400.46 | 933.76 | 400.49 | 934.51 | 400.51 |
| 937.37 | 400.61 | 938.49 | 400.64 | 938.7 | 400.65 | 939.67 | 400.67 | 940.77 | 400.71 |
| 954.33 | 400.96 | 955.08 | 400.98 | 956.68 | 400.99 | 956.79 | 400.99 | 956.86 | 401 |
| 956.98 | 401 | 957.54 | 400.99 | 968.79 | 400.94 | 969.81 | 400.94 | 971.75 | 400.96 |
| 977.11 | 401.06 | 979.07 | 401.07 | 980.17 | 401.05 | 982.32 | 401 | 984.03 | 400.93 |
| 986.09 | 400.84 | 989.8 | 400.67 | 991.94 | 400.61 | 992.48 | 400.61 | 993.48 | 400.62 |
| 996.06 | 400.66 | 997.48 | 400.67 | 998.54 | 400.67 | 1000.78 | 400.69 | 1001.64 | 400.72 |
| 1001.81 | 400.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 74.13 | .05 | 97.71002 | .04 | 848.67 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 97.71002 | 848.67 | 355.93 | 353.61 | 359.03 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8444.54

INPUT
Description:
Station Elevation Data num= 342

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 93.45996 | 394.78 | 95.5199 | 394.82 | 97.1499 | 394.8497.73999 | | 394.8498.47998 | | 394.85 |
| 98.67993 | 394.8599.06995 | | 394.8699.73999 | | 394.87100.2699 | | 394.87100.4199 | | 394.86 |
| 100.74 | 394.85 | 101.34 | 394.82102.6699 | | 394.8 | 102.85 | 394.8 | 103.08 | 394.81 |
| 103.1599 | 394.82103.6499 | | 394.82105.0199 | | 394.79106.5499 | | 394.77107.3199 | | 394.75 |
| 113.3799 | 394.52116.1299 | | 394.36125.0699 | | 394 | 131.6 | 393.66132.8799 | | 393.55 |
| 133.4399 | 393.49 | 133.84 | 393.47134.0299 | | 393.47134.8799 | | 393.52136.2899 | | 393.55 |
| 137.2 | 393.56138.0299 | | 393.56138.6399 | | 393.58138.8999 | | 393.66 | 141.95 | 393.87 |
| 142.6699 | 394143.5099 | | 394.08144.6499 | | 394.16146.2599 | | 394.1148.1699 | | 394.01 |
| 148.37 | 393.93 | 148.75 | 393.73 | 150.34 | 393150.8099 | | 392.98151.3799 | | 393 |
| 155.5399 | 393156.1299 | | 393.22156.6699 | | 393.26159.4799 | | 393.35159.6199 | | 393.36 |
| 159.72 | 393.37159.8499 | | 393.37160.3099 | | 393.38160.6299 | | 393.38170.1799 | | 393.28 |
| 178.0099 | 393.11179.7399 | | 393.09181.4099 | | 393.05181.7499 | | 393.04183.0099 | | 393.04 |
| 183.58 | 393.05 | 183.65 | 393.05185.3599 | | 393.06186.1899 | | 393.08 | 191.46 | 393.26 |
| 197.46 | 393.34206.5099 | | 393.51206.8699 | | 393.51207.6199 | | 393.5 | 208.03 | 393.5 |
| 208.7399 | 393.49208.9299 | | 393.49209.4799 | | 393.47 | 210.28 | 393.45 | 210.78 | 393.42 |
| 212.0499 | 393.33 | 212.47 | 393.33212.6799 | | 393.32212.9899 | | 393.29 | 215.53 | 393.11 |
| 217.28 | 393.05 | 218.34 | 393.05223.6799 | | 393.15227.4199 | | 393.15 | 241.27 | 393 |
| 241.39 | 393245.8099 | | 392.94252.1199 | | 392.97 | 254.2 | 392.95 | 254.47 | 392.9 |
| 259.4999 | 392.86262.8099 | | 393270.8499 | | 393.91272.0699 | | 394274.8099 | | 394 |
| 275.1899 | 393.82277.6099 | | 393.99 | 279.28 | 393.99 | 282.2 | 393.89 | 286.15 | 393.81 |
| 288.8599 | 393.79296.7499 | | 393.92 | 296.95 | 393.95 | 298.4 | 393.99 | 299.45 | 393.98 |
| 301.5499 | 393.87 | 302.27 | 393.8303.1699 | | 393.66312.6699 | | 393.57317.1099 | | 393.64 |
| 318.21 | 393.67 | 318.52 | 393.69 | 318.84 | 393.73319.2499 | | 393.87 | 319.97 | 393.93 |
| 320.77 | 393.96322.6799 | | 394322.7899 | | 394323.8199 | | 393.98 | 324.34 | 393.98 |
| 347.77 | 393.25 | 349.83 | 393.23350.3099 | | 393.21 | 353.2 | 393353.5399 | | 392.97 |
| 354.5099 | 392.94358.9099 | | 392.87361.6799 | | 392.8362.2499 | | 392.81 | 365.65 | 393 |
| 368.3699 | 393.31369.3499 | | 393.32 | 369.64 | 393.31370.4199 | | 393.23373.9999 | | 393.27 |
| 390.9099 | 393.92 | 393.64 | 394 | 394.59 | 394.02395.3599 | | 394.01395.6299 | | 394 |
| 401.59 | 393.49 | 408.33 | 393 | 408.39 | 393408.5099 | | 392.99408.8499 | | 392.98 |

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  409.64  392.98409.7899     393   423.4     394  432.83     394  443.03  393.07
443.7499     393  444.47     393450.8499  393.49451.5599  393.53452.6699  393.55
  453.34  393.54457.7899  393.38460.4099  393.26461.4399  393.17461.5699  393.17
  462.21  393.15463.3199  393.17  463.46  393.19  463.97  393.21  464.03  393.21
  464.46  393.28465.5499  393.36466.6299  393.45467.0699  393.48476.6199     394
   480.9  394.28481.3699   394.3  488.53  394.73493.2399  394.87493.8099   394.9
498.6899  394.99498.7599     395  502.14  395.01  510.78  395.06512.4899  395.09
  513.84  395.09514.7299  395.11515.0999  395.11  526.97  395.33529.5499  395.36
   534.2  395.36535.6799  395.38   536.2  395.37536.6799  395.35  537.58  395.34
  538.46  395.35541.2599  395.43541.7499  395.45  542.09  395.49  542.46  395.51
547.5499  395.66  550.96  395.69552.2299  395.72552.5499  395.73  552.72  395.73
553.0599  395.74553.5499  395.77  554.46   395.8554.6599  395.81555.1299  395.85
  555.21  395.86555.3599  395.86555.4399  395.87557.6199  395.87557.9899  395.86
558.0999  395.85  558.21  395.82559.0699  395.74559.2999  395.71559.4399  395.69
559.9299  395.65561.2999  395.67565.4399  395.34565.8799  395.32570.1899  395.02
570.4199     395578.5499  394.15579.8599     394582.0699     394584.9299  394.36
590.4999     395611.4199  395.95612.6699     396629.8699     396631.1699  395.92
  631.33   395.9631.4799  395.89  632.39  395.79  632.96  395.74  634.72  395.57
  639.28     395  640.09  394.89641.0999  394.68  641.15  394.68643.6299  394.75
645.4199  394.77646.0399  394.77647.2599  394.76647.7599  394.76651.8599  394.61
  654.78  394.53654.9999  394.53655.3799  394.55655.6299  394.55671.7499  394.74
673.1699  394.77675.1299  394.84675.5699  394.86  675.97  394.89678.0599     395
686.5499     395687.1899  395.01  711.59     395  713.33  394.92714.5699  394.83
717.0399   394.7718.4299  394.67  718.72  394.68  718.96   394.7719.1299  394.77
719.7899  394.79  720.45  394.78732.1299  394.48  734.34  394.41  735.95  394.34
736.6199  394.33737.7999  394.33740.5699  394.45  740.96  394.45741.2899  394.46
  751.36  394.53754.3799  394.62763.2499     395  777.47     396782.1499   396.8
  783.39     397786.7499     397794.7899  396.73  797.36  396.67798.1199  396.68
807.9999  396.64  810.58  396.66811.1899  396.67812.0699  396.71813.5699  396.89
  813.58  396.99814.1699     397840.0099  397.01843.1599     397846.5499   396.5
849.2999     396852.5599  395.79  854.47  395.62  854.71  395.57855.0199  395.51
855.2799  395.47856.0699  395.45857.4399   395.4  857.59  395.38863.5699  395.29
  864.14   395.3867.2699  395.44  870.08   395.6  872.71   395.7   876.7  395.92
876.7599  395.93878.1699     396  885.22  396.01886.5099     396893.0299     396
893.9099  395.99  904.11     396912.0599   396.4913.2399  396.39918.0699   396.6
918.9899  396.59922.2799   396.7922.3699  396.71922.9099  396.75  922.97  396.76
923.0299  396.78923.5599  396.81  923.72  396.81924.1199  396.82924.2599  396.82
924.3599  396.83925.7299  396.83  925.96  396.84  926.77  396.84927.5099  396.83
927.8799  396.83928.2799  396.82   929.4  396.81929.7399  396.81931.9799  396.79
932.3099  396.79933.4399  396.76

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
93.45996     .05113.3799     .04  777.47     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      113.3799  777.47            45.93   47.93      55             .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 8396.61*

INPUT
Description:
Station Elevation Data    num=     496
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
   86.27  394.14   87.17  394.14   87.28  394.15   87.76  394.15    88.7  394.16
   89.32  394.17   89.41  394.18   91.33  394.21   92.72  394.21   93.69  394.22
   93.99  394.22   94.88  394.24    95.4  394.24   95.61  394.25   95.79  394.24
   96.49  394.24   97.82  394.19   97.92  394.18   98.65  394.17   99.69  394.15
   100.2  394.15  100.35  394.16  100.77  394.16  101.02  394.17  101.21  394.16
  101.97  394.16   102.3  394.17  105.62  394.17  106.76  394.16  107.92  394.14
  110.54  394.09  113.36  394.02  113.48  394.02  113.99  393.98  115.72  393.86
  118.51  393.71  127.55  393.36  134.16  393.04  135.46  392.93  136.02  392.88
  136.43  392.86  136.62  392.86  137.48   392.9  138.91  392.93  139.26  392.93
  139.83  392.94  140.67  392.94  141.28  392.95  141.55  393.03  143.48  393.15
  144.63  393.22  145.36  393.34  146.21  393.42  147.33  393.49  147.87  393.48
  148.99  393.44  150.93  393.36  151.13  393.28  151.51   393.1  153.12  392.43
   153.6  392.41  154.18  392.43  158.39  392.43  158.98  392.64  159.53  392.67
   162.2  392.75  162.62  392.78  163.54  392.78  164.45  392.77  167.92  392.72
  168.24  392.71  171.52  392.66   173.2  392.61  173.68  392.61  176.12  392.54
  177.76  392.49  180.65  392.43  181.12  392.43  182.87  392.41  184.56  392.38
  186.18  392.38  187.98  392.41  188.56  392.41   189.4  392.43  191.99  392.52
  194.73  392.62  195.94  392.64  199.08  392.68  199.31  392.69  200.81  392.71
   207.9  392.85  208.13  392.85  209.18  392.87  209.96  392.88  210.33  392.89
  211.09  392.88   211.5  392.88  212.41  392.87  212.97  392.85  213.78  392.83
  214.28  392.81  215.57  392.73  215.99  392.73  216.21  392.72  216.52  392.69
  217.84   392.6  219.09  392.52  220.86  392.47  221.93  392.47  225.92  392.54
  226.41  392.55  227.34  392.56  231.12  392.56  231.51  392.55  232.56  392.55
  232.85  392.54  233.41  392.54  245.14  392.39  245.43  392.39  248.85  392.34
  249.73  392.34  256.12  392.41  258.22  392.41   258.5  392.36  259.27  392.36
  263.58  392.33  266.93  392.46  273.07  393.09  273.87  393.17  274.45  393.22
  275.07  393.29   276.3  393.37  279.08  393.36  279.46  393.19  279.96  393.22
   280.6  393.25  281.91  393.34   283.6  393.34  284.79  393.31  285.45   393.3
  286.05  393.28  286.56  393.27  288.74  393.24  290.55  393.21  291.02  393.21
  293.29  393.19   295.6  393.22   295.8  393.23  301.28   393.3  301.48  393.32
  302.95  393.36  304.01  393.34  306.14  393.24  306.86  393.17  307.78  393.04
  317.39  392.94  321.88  392.99  322.99  393.01  323.31  393.03  323.63  393.07
  324.05   393.2  324.78  393.25  325.59  393.28  327.52  393.31  327.63  393.31
   329.2  393.28  335.46  393.07  345.31  392.75  345.46  392.75  346.59  392.72
  349.41  392.63  352.91  392.53  354.99  392.52  355.48   392.5   358.4   392.3
  358.75  392.28  359.73  392.25  363.91  392.19  364.18  392.18  366.98  392.11
  367.71  392.12     371   392.3  373.63  392.59  374.58   392.6  374.86  392.59
  375.61  392.51  379.08  392.55  382.56  392.68  383.15   392.7   384.3  392.75
  385.18  392.78  395.43  393.18  398.07  393.26  398.99  393.28  399.73  393.27
  399.99  393.26  405.76   392.8  412.28  392.36  412.45  392.35  413.54  392.35
  413.69  392.37  422.94  393.03   423.8   393.1  423.97  393.12  426.85  393.35
  430.26  393.38  433.91   393.4  435.97   393.4  439.29  393.12  441.57  392.92
  445.59  392.57  446.53  392.49  447.23  392.49  449.41  392.65  449.92  392.69
  451.95  392.84   453.4  392.95  454.04  392.99  455.16  393.02  455.35  393.01
  455.81  393.01  455.95     393  457.88  392.93   459.1  392.89  460.11  392.85
  462.64  392.74  463.64  392.65  464.38  392.63  465.46  392.65  465.59  392.67
  466.14  392.68  466.56  392.75  467.61  392.82  469.08  392.93   478.1  393.37
  478.32  393.38  479.45  393.45  482.46  393.62  482.91  393.64   485.8  393.79
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 486.29 | 393.81 | 486.87 | 393.84 | 489.84 | 394.02 | 490.5 | 394.04 | 494.39 | 394.15 |
| 494.94 | 394.18 | 496.01 | 394.21 | 499.66 | 394.28 | 499.73 | 394.29 | 503 | 394.31 |
| 506.56 | 394.34 | 511.36 | 394.36 | 513.01 | 394.39 | 514.31 | 394.39 | 515.17 | 394.41 |
| 515.53 | 394.4 | 520.17 | 394.48 | 525.68 | 394.56 | 527.01 | 394.59 | 529.51 | 394.61 |
| 533.42 | 394.61 | 534 | 394.6 | 534.48 | 394.61 | 535.44 | 394.62 | 535.94 | 394.61 |
| 536.4 | 394.59 | 537.27 | 394.58 | 538.12 | 394.59 | 540.83 | 394.67 | 541.31 | 394.68 |
| 541.63 | 394.72 | 541.99 | 394.74 | 546.91 | 394.88 | 547.08 | 394.88 | 550.04 | 394.92 |
| 550.21 | 394.93 | 551.44 | 394.96 | 551.75 | 394.98 | 552.24 | 394.99 | 552.72 | 395.02 |
| 553.6 | 395.05 | 553.79 | 395.06 | 554.25 | 395.1 | 554.55 | 395.12 | 556.65 | 395.12 |
| 557.12 | 395.11 | 557.22 | 395.08 | 558.06 | 395.01 | 558.41 | 394.96 | 558.89 | 394.92 |
| 558.98 | 394.93 | 560.21 | 394.94 | 564.22 | 394.64 | 564.64 | 394.62 | 568.81 | 394.35 |
| 569.03 | 394.33 | 572.82 | 393.96 | 574.83 | 393.76 | 576.89 | 393.55 | 578.16 | 393.41 |
| 580.3 | 393.41 | 583.06 | 393.75 | 588.45 | 394.34 | 591.09 | 394.45 | 591.82 | 394.49 |
| 593.65 | 394.56 | 599.7 | 394.82 | 604.67 | 395.01 | 608.68 | 395.18 | 609.89 | 395.23 |
| 616.19 | 395.23 | 618.61 | 395.24 | 623.83 | 395.24 | 626.53 | 395.23 | 627.78 | 395.16 |
| 628.62 | 395.07 | 629.51 | 394.99 | 630.33 | 394.91 | 631.22 | 394.83 | 632.37 | 394.7 |
| 635.63 | 394.31 | 636.41 | 394.21 | 637.39 | 394.01 | 639.83 | 394.08 | 641.56 | 394.1 |
| 642.16 | 394.1 | 642.31 | 394.09 | 643.83 | 394.09 | 647.79 | 393.96 | 649.68 | 393.91 |
| 650.62 | 393.89 | 650.83 | 393.89 | 651.2 | 393.91 | 651.44 | 393.91 | 661.27 | 394.03 |
| 667.03 | 394.1 | 668.4 | 394.12 | 670.57 | 394.2 | 671.11 | 394.24 | 673.13 | 394.34 |
| 676.76 | 394.34 | 677.59 | 394.33 | 681.34 | 394.33 | 681.96 | 394.34 | 685.39 | 394.33 |
| 693.9 | 394.33 | 699.17 | 394.32 | 700.22 | 394.32 | 703.85 | 394.31 | 705.56 | 394.31 |
| 707.24 | 394.23 | 708.44 | 394.15 | 710.83 | 394.03 | 712.15 | 394 | 712.45 | 394.01 |
| 712.68 | 394.03 | 712.85 | 394.1 | 713.49 | 394.12 | 714.12 | 394.11 | 715.04 | 394.09 |
| 715.77 | 394.08 | 716.12 | 394.09 | 725.42 | 393.87 | 725.86 | 393.85 | 727.56 | 393.8 |
| 729.11 | 393.73 | 729.76 | 393.72 | 730.9 | 393.72 | 731.17 | 393.73 | 733.58 | 393.83 |
| 733.96 | 393.83 | 734.38 | 393.84 | 741.12 | 393.87 | 744.02 | 393.88 | 746.35 | 393.94 |
| 747.83 | 393.99 | 754.61 | 394.27 | 755.19 | 394.29 | 756.42 | 394.37 | 757.71 | 394.45 |
| 758.4 | 394.51 | 759.68 | 394.61 | 760.11 | 394.65 | 769.27 | 395.27 | 771.71 | 395.62 |
| 771.91 | 395.65 | 774.33 | 395.99 | 775.67 | 396.18 | 778.58 | 396.17 | 779.31 | 396.17 |
| 779.53 | 396.16 | 781.22 | 396.11 | 781.62 | 396.09 | 785.93 | 395.96 | 787.36 | 395.92 |
| 787.76 | 395.9 | 788 | 395.9 | 790.12 | 395.84 | 790.85 | 395.83 | 791.61 | 395.85 |
| 793.31 | 395.85 | 801.14 | 395.83 | 802.29 | 395.81 | 804.01 | 395.81 | 804.2 | 395.8 |
| 805.08 | 395.81 | 805.74 | 395.81 | 806.07 | 395.83 | 806.7 | 395.85 | 807.14 | 395.9 |
| 808.32 | 396.01 | 808.33 | 396.1 | 809 | 396.11 | 809.48 | 396.1 | 810.5 | 396.1 |
| 811.02 | 396.09 | 811.54 | 396.1 | 812.11 | 396.09 | 812.45 | 396.1 | 813.51 | 396.1 |
| 814.63 | 396.11 | 814.98 | 396.11 | 815.98 | 396.13 | 817.91 | 396.13 | 818.77 | 396.12 |
| 823.75 | 396.15 | 824.48 | 396.16 | 836.92 | 396.16 | 840.33 | 396.15 | 840.46 | 396.14 |
| 841.05 | 396.06 | 843.99 | 395.69 | 845.92 | 395.39 | 846.61 | 395.29 | 846.97 | 395.23 |
| 848.83 | 395.13 | 850.49 | 395.03 | 851.93 | 394.91 | 852.56 | 394.87 | 852.82 | 394.82 |
| 853.44 | 394.73 | 853.89 | 394.72 | 854.29 | 394.72 | 854.67 | 394.71 | 855.46 | 394.68 |
| 855.64 | 394.68 | 855.94 | 394.65 | 856.64 | 394.64 | 857.01 | 394.63 | 857.34 | 394.63 |
| 862.4 | 394.54 | 863.02 | 394.55 | 866.41 | 394.66 | 869.45 | 394.8 | 872.29 | 394.88 |
| 873.93 | 394.95 | 874.72 | 394.98 | 875.88 | 395.04 | 876.61 | 395.07 | 876.67 | 395.08 |
| 878.2 | 395.14 | 879.63 | 395.14 | 880.11 | 395.15 | 880.89 | 395.16 | 885.82 | 395.16 |
| 887.22 | 395.15 | 894.27 | 395.15 | 895.22 | 395.14 | 898.16 | 395.15 | 906.26 | 395.17 |
| 907.25 | 395.21 | 907.87 | 395.24 | 909.46 | 395.29 | 910.94 | 395.35 | 914.86 | 395.52 |
| 916.13 | 395.51 | 920.11 | 395.66 | 921.36 | 395.71 | 922.35 | 395.7 | 922.9 | 395.71 |
| 924.84 | 395.77 | 925.73 | 395.79 | 926.59 | 395.85 | 926.72 | 395.88 | 927.3 | 395.91 |
| 927.9 | 395.92 | 928.16 | 395.94 | 929.64 | 395.94 | 929.89 | 395.96 | 931.97 | 395.96 |
| 932.4 | 395.95 | 934.3 | 395.95 | 935.95 | 395.94 | 936.76 | 395.94 | 937.43 | 395.92 |
| 937.98 | 395.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 86.27 | .05 | 115.72 | .04 | 769.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 115.72 | 769.27 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8348.68*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 79.08 | 393.49 | 80.5 | 393.5 | 81.05 | 393.49 | 82.3 | 393.5 | 83.11 | 393.53 |
| 83.24 | 393.53 | 85.01 | 393.56 | 85.24 | 393.57 | 85.78 | 393.57 | 86.3 | 393.58 |
| 87.62 | 393.58 | 88.91 | 393.59 | 89.3 | 393.59 | 90.06 | 393.6 | 90.35 | 393.61 |
| 90.93 | 393.61 | 91.01 | 393.62 | 91.81 | 393.62 | 92.13 | 393.61 | 92.6 | 393.61 |
| 93.01 | 393.6 | 93.33 | 393.58 | 94.09 | 393.56 | 94.5 | 393.54 | 95.47 | 393.52 |
| 96.02 | 393.52 | 96.84 | 393.5 | 97.13 | 393.51 | 97.52 | 393.5 | 97.72 | 393.51 |
| 98.28 | 393.5 | 98.46 | 393.51 | 99.54 | 393.51 | 100.44 | 393.53 | 101.03 | 393.55 |
| 103.19 | 393.55 | 103.31 | 393.56 | 106.21 | 393.56 | 107.74 | 393.55 | 111.21 | 393.53 |
| 114.94 | 393.47 | 115.27 | 393.45 | 115.36 | 393.43 | 115.78 | 393.4 | 118.07 | 393.21 |
| 120.88 | 393.06 | 130.03 | 392.73 | 136.72 | 392.41 | 138.03 | 392.32 | 138.6 | 392.26 |
| 139.21 | 392.24 | 140.08 | 392.28 | 141.52 | 392.3 | 141.88 | 392.31 | 143.3 | 392.31 |
| 143.93 | 392.33 | 144.19 | 392.39 | 146.15 | 392.5 | 147.32 | 392.57 | 148.05 | 392.68 |
| 148.91 | 392.75 | 150.05 | 392.82 | 150.59 | 392.81 | 151.73 | 392.78 | 153.69 | 392.7 |
| 153.89 | 392.64 | 154.28 | 392.47 | 155.91 | 391.85 | 156.39 | 391.84 | 156.97 | 391.86 |
| 157.38 | 391.86 | 161.23 | 391.87 | 161.84 | 392.06 | 161.96 | 392.06 | 162.39 | 392.09 |
| 165.09 | 392.16 | 165.27 | 392.17 | 166.11 | 392.19 | 166.44 | 392.18 | 167.36 | 392.17 |
| 170.88 | 392.1 | 171.2 | 392.09 | 174.52 | 392.02 | 176.22 | 391.95 | 176.71 | 391.94 |
| 177.06 | 391.94 | 179.17 | 391.86 | 180.53 | 391.81 | 180.84 | 391.81 | 184.24 | 391.74 |
| 186.01 | 391.74 | 187.72 | 391.72 | 188.07 | 391.71 | 189.36 | 391.72 | 189.94 | 391.74 |
| 191.17 | 391.75 | 191.76 | 391.76 | 192.61 | 391.78 | 195.23 | 391.88 | 198.01 | 391.98 |
| 202.4 | 392.05 | 202.63 | 392.05 | 211.33 | 392.22 | 211.56 | 392.22 | 212.63 | 392.25 |
| 213.42 | 392.26 | 213.79 | 392.26 | 214.55 | 392.25 | 214.97 | 392.26 | 215.89 | 392.25 |
| 216.46 | 392.23 | 217.28 | 392.22 | 217.79 | 392.19 | 219.09 | 392.12 | 219.51 | 392.12 |
| 219.73 | 392.11 | 221.38 | 392.01 | 222.65 | 391.94 | 224.44 | 391.89 | 225.53 | 391.89 |
| 229.57 | 391.96 | 230.05 | 391.96 | 231 | 391.97 | 231.71 | 391.97 | 234.8 | 391.96 |
| 236.28 | 391.96 | 237.14 | 391.94 | 249.01 | 391.78 | 249.3 | 391.78 | 250.67 | 391.75 |
| 252.76 | 391.73 | 253.65 | 391.73 | 260.11 | 391.86 | 260.67 | 391.86 | 262.24 | 391.87 |
| 262.52 | 391.83 | 263.3 | 391.83 | 267.67 | 391.8 | 271.06 | 391.92 | 277.27 | 392.5 |
| 278.07 | 392.56 | 279.29 | 392.66 | 280.41 | 392.72 | 280.54 | 392.73 | 283.36 | 392.71 |
| 283.73 | 392.56 | 284.89 | 392.6 | 286.21 | 392.68 | 287.02 | 392.68 | 287.15 | 392.69 |
| 287.92 | 392.69 | 290.4 | 392.65 | 290.91 | 392.64 | 293.12 | 392.63 | 294.96 | 392.61 |
| 295.43 | 392.61 | 297.73 | 392.59 | 300.07 | 392.62 | 300.26 | 392.62 | 305.81 | 392.67 |
| 306.01 | 392.69 | 307.5 | 392.72 | 308.57 | 392.71 | 310.72 | 392.61 | 311.46 | 392.54 |
| 312.38 | 392.42 | 322.11 | 392.3 | 326.65 | 392.34 | 327.78 | 392.36 | 328.42 | 392.41 |
| 328.84 | 392.52 | 329.58 | 392.57 | 330.4 | 392.59 | 332.36 | 392.62 | 333 | 392.61 |
| 333.52 | 392.59 | 334.06 | 392.59 | 340.39 | 392.35 | 350.35 | 392.02 | 350.51 | 392.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 351.65 | 391.99 | 354.5 | 391.91 | 358.04 | 391.82 | 360.15 | 391.8 | 360.64 | 391.79 |
| 363.6 | 391.61 | 363.95 | 391.58 | 364.95 | 391.56 | 369.17 | 391.5 | 369.45 | 391.49 |
| 372.29 | 391.43 | 372.64 | 391.43 | 373.18 | 391.44 | 376.35 | 391.6 | 378.89 | 391.86 |
| 380.08 | 391.87 | 380.81 | 391.8 | 384.15 | 391.84 | 390.05 | 392.05 | 399.95 | 392.44 |
| 402.5 | 392.51 | 403.39 | 392.53 | 404.11 | 392.53 | 404.36 | 392.52 | 409.93 | 392.11 |
| 416.22 | 391.73 | 416.71 | 391.71 | 417.45 | 391.71 | 417.59 | 391.73 | 426.53 | 392.36 |
| 427.36 | 392.44 | 427.52 | 392.46 | 430.3 | 392.7 | 433.6 | 392.77 | 437.12 | 392.79 |
| 439.11 | 392.8 | 442.32 | 392.55 | 444.52 | 392.37 | 448.41 | 392.05 | 449.31 | 391.98 |
| 449.99 | 391.98 | 452.1 | 392.13 | 452.59 | 392.16 | 454.54 | 392.31 | 455.94 | 392.42 |
| 456.57 | 392.45 | 456.61 | 392.46 | 457.65 | 392.48 | 458.27 | 392.48 | 458.41 | 392.47 |
| 459.74 | 392.43 | 460.28 | 392.41 | 461.45 | 392.36 | 462.43 | 392.33 | 464.88 | 392.21 |
| 464.96 | 392.21 | 465.84 | 392.14 | 466.56 | 392.12 | 467.59 | 392.13 | 468.26 | 392.16 |
| 468.66 | 392.21 | 470.69 | 392.35 | 471.1 | 392.37 | 479.8 | 392.76 | 481.11 | 392.82 |
| 484.02 | 392.96 | 484.46 | 392.97 | 487.25 | 393.09 | 487.92 | 393.13 | 488.28 | 393.14 |
| 491.14 | 393.31 | 491.79 | 393.32 | 495.54 | 393.44 | 496.08 | 393.46 | 497.11 | 393.49 |
| 500.64 | 393.57 | 500.7 | 393.58 | 503.86 | 393.6 | 507.3 | 393.64 | 511.93 | 393.67 |
| 513.53 | 393.69 | 514.79 | 393.69 | 515.62 | 393.7 | 515.97 | 393.7 | 520.44 | 393.75 |
| 525.77 | 393.82 | 526.24 | 393.83 | 527.05 | 393.84 | 529.46 | 393.86 | 533.24 | 393.85 |
| 534.27 | 393.85 | 535.19 | 393.86 | 536.13 | 393.84 | 536.97 | 393.83 | 537.79 | 393.83 |
| 540.4 | 393.9 | 540.86 | 393.92 | 541.18 | 393.95 | 541.52 | 393.97 | 546.28 | 394.1 |
| 547.12 | 394.12 | 549.29 | 394.16 | 549.47 | 394.16 | 551.11 | 394.23 | 551.43 | 394.24 |
| 551.88 | 394.27 | 552.73 | 394.3 | 553.65 | 394.36 | 555.69 | 394.37 | 556.03 | 394.37 |
| 556.24 | 394.34 | 557.26 | 394.25 | 557.39 | 394.23 | 557.84 | 394.2 | 559.12 | 394.22 |
| 562.99 | 393.95 | 563.4 | 393.93 | 567.43 | 393.68 | 567.64 | 393.67 | 571.3 | 393.33 |
| 573.25 | 393.14 | 575.24 | 392.96 | 576.46 | 392.83 | 578.53 | 392.83 | 581.2 | 393.13 |
| 586.4 | 393.68 | 588.95 | 393.78 | 589.66 | 393.82 | 591.42 | 393.88 | 597.27 | 394.11 |
| 600.55 | 394.22 | 602.07 | 394.26 | 605.95 | 394.42 | 607.11 | 394.46 | 613.2 | 394.46 |
| 615.54 | 394.47 | 623.18 | 394.47 | 624.4 | 394.4 | 625.2 | 394.32 | 625.54 | 394.28 |
| 626.07 | 394.24 | 626.85 | 394.16 | 627.71 | 394.09 | 628.83 | 393.97 | 631.97 | 393.62 |
| 632.73 | 393.52 | 633.67 | 393.34 | 636.04 | 393.4 | 637.71 | 393.42 | 639.89 | 393.42 |
| 643.72 | 393.31 | 646.45 | 393.25 | 646.66 | 393.25 | 647.01 | 393.27 | 647.25 | 393.27 |
| 656.75 | 393.39 | 662.3 | 393.45 | 663.63 | 393.48 | 665.46 | 393.54 | 668.2 | 393.68 |
| 668.65 | 393.68 | 671.7 | 393.67 | 672.5 | 393.67 | 674.04 | 393.66 | 676.13 | 393.65 |
| 676.73 | 393.66 | 680.05 | 393.65 | 688.26 | 393.65 | 693.35 | 393.64 | 694.37 | 393.64 |
| 697.88 | 393.62 | 699.52 | 393.62 | 701.15 | 393.55 | 702.31 | 393.47 | 704.61 | 393.36 |
| 705.89 | 393.34 | 706.18 | 393.35 | 706.41 | 393.37 | 706.57 | 393.43 | 707.18 | 393.45 |
| 708.69 | 393.43 | 709.39 | 393.43 | 709.73 | 393.45 | 718.71 | 393.25 | 719.14 | 393.24 |
| 720.77 | 393.19 | 722.28 | 393.12 | 722.9 | 393.11 | 724.01 | 393.11 | 726.59 | 393.21 |
| 726.96 | 393.21 | 727.36 | 393.22 | 733.88 | 393.24 | 736.67 | 393.24 | 738.92 | 393.29 |
| 739.5 | 393.3 | 740.36 | 393.33 | 746.91 | 393.58 | 747.02 | 393.58 | 747.78 | 393.61 |
| 748.66 | 393.67 | 749.9 | 393.75 | 750.57 | 393.81 | 751.81 | 393.91 | 752.22 | 393.96 |
| 761.07 | 394.53 | 763.69 | 394.85 | 763.91 | 394.88 | 766.51 | 395.19 | 767.95 | 395.35 |
| 771.08 | 395.34 | 771.86 | 395.34 | 772.1 | 395.33 | 773.92 | 395.28 | 774.36 | 395.25 |
| 778.98 | 395.13 | 780.52 | 395.08 | 781.04 | 395.07 | 781.22 | 395.06 | 783.49 | 395 |
| 784.27 | 394.99 | 785.09 | 395.01 | 786.44 | 395.02 | 786.92 | 395.03 | 795.34 | 395.01 |
| 796.59 | 394.98 | 798.34 | 394.96 | 798.64 | 394.95 | 799.71 | 394.95 | 800.65 | 394.97 |
| 801.51 | 395.01 | 801.92 | 395.05 | 803.07 | 395.13 | 803.08 | 395.22 | 803.8 | 395.22 |
| 804.32 | 395.21 | 804.95 | 395.19 | 805.97 | 395.19 | 806.53 | 395.2 | 806.97 | 395.19 |
| 808.32 | 395.19 | 808.53 | 395.2 | 809.86 | 395.21 | 810.23 | 395.22 | 810.92 | 395.25 |
| 811.31 | 395.26 | 813.38 | 395.26 | 814.05 | 395.24 | 814.31 | 395.24 | 817.81 | 395.28 |
| 819.67 | 395.29 | 820.45 | 395.31 | 822.14 | 395.31 | 833.83 | 395.32 | 837.49 | 395.31 |
| 838.27 | 395.22 | 841.44 | 394.88 | 843.51 | 394.61 | 844.64 | 394.46 | 848.43 | 394.27 |
| 849.98 | 394.15 | 850.65 | 394.12 | 851.29 | 394.03 | 851.77 | 393.99 | 852.32 | 393.99 |
| 852.51 | 393.98 | 854.03 | 393.95 | 854.2 | 393.93 | 854.45 | 393.92 | 855.43 | 393.9 |
| 855.79 | 393.9 | 861.24 | 393.79 | 861.9 | 393.8 | 865.54 | 393.89 | 868.81 | 393.99 |
| 871.87 | 394.05 | 874.49 | 394.14 | 876.51 | 394.22 | 876.58 | 394.23 | 878.22 | 394.29 |
| 880.28 | 394.29 | 881.12 | 394.31 | 886.43 | 394.32 | 887.93 | 394.31 | 895.51 | 394.31 |
| 896.54 | 394.3 | 899.69 | 394.3 | 908.4 | 394.34 | 909.7 | 394.39 | 910.14 | 394.4 |
| 911.84 | 394.43 | 913.44 | 394.49 | 917.65 | 394.65 | 919.03 | 394.64 | 924.65 | 394.81 |
| 925.72 | 394.8 | 926.31 | 394.82 | 928.39 | 394.87 | 929.65 | 394.91 | 930.28 | 394.95 |
| 930.42 | 394.98 | 931.03 | 395.01 | 931.22 | 395.01 | 931.96 | 395.04 | 933.56 | 395.06 |
| 933.83 | 395.07 | 934.77 | 395.08 | 935.63 | 395.08 | 935.97 | 395.09 | 937.15 | 395.09 |
| 937.46 | 395.1 | 937.56 | 395.09 | 940.83 | 395.09 | 941.03 | 395.08 | 941.94 | 395.07 |
| 942.53 | 395.05 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 79.08 | .05 | 118.07 | .04 | 761.07 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 118.07 | 761.07 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8300.75*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 71.89 | 392.85 | 73.66 | 392.85 | 74.25 | 392.84 | 75.72 | 392.84 | 75.89 | 392.85 |
| 76.91 | 392.88 | 77.07 | 392.89 | 79.27 | 392.93 | 79.55 | 392.93 | 80.88 | 392.95 |
| 82.52 | 392.95 | 84.12 | 392.96 | 84.61 | 392.96 | 85.56 | 392.98 | 86.41 | 392.98 |
| 86.93 | 393 | 87.58 | 392.99 | 88.48 | 392.99 | 89.23 | 392.97 | 89.3 | 392.96 |
| 91.08 | 392.9 | 92.97 | 392.87 | 94 | 392.85 | 94.16 | 392.86 | 95.09 | 392.86 |
| 95.78 | 392.84 | 96.01 | 392.86 | 96.5 | 392.85 | 97.08 | 392.85 | 97.76 | 392.87 |
| 98.47 | 392.9 | 99.21 | 392.92 | 100.05 | 392.92 | 102.05 | 392.94 | 103.77 | 392.96 |
| 105.65 | 392.97 | 111.87 | 392.97 | 116.52 | 392.91 | 116.93 | 392.89 | 117.05 | 392.86 |
| 117.56 | 392.82 | 120.41 | 392.55 | 123.26 | 392.42 | 132.52 | 392.09 | 139.28 | 391.79 |
| 140.61 | 391.7 | 141.19 | 391.65 | 141.6 | 391.63 | 141.8 | 391.63 | 142.68 | 391.67 |
| 144.5 | 391.68 | 145.08 | 391.69 | 145.94 | 391.69 | 146.57 | 391.7 | 146.84 | 391.76 |
| 148.82 | 391.86 | 149.16 | 391.87 | 150 | 391.92 | 150.35 | 391.96 | 150.75 | 392.02 |
| 151.62 | 392.09 | 152.77 | 392.15 | 153.31 | 392.14 | 154.47 | 392.11 | 156.44 | 392.05 |
| 156.65 | 391.99 | 157.04 | 391.84 | 158.69 | 391.28 | 159.18 | 391.27 | 159.77 | 391.28 |
| 160.18 | 391.28 | 163.88 | 391.3 | 164.08 | 391.3 | 164.69 | 391.47 | 165.25 | 391.5 |
| 167.98 | 391.57 | 168.41 | 391.59 | 169.02 | 391.59 | 169.35 | 391.58 | 170.28 | 391.57 |
| 173.84 | 391.49 | 177.52 | 391.38 | 179.24 | 391.28 | 179.73 | 391.28 | 180.09 | 391.27 |
| 182.22 | 391.18 | 183.91 | 391.12 | 186.86 | 391.06 | 189.14 | 391.06 | 191.22 | 391.05 |
| 193.19 | 391.08 | 194.96 | 391.11 | 195.82 | 391.13 | 198.47 | 391.23 | 201.28 | 391.34 |
| 202.52 | 391.37 | 205.73 | 391.42 | 205.96 | 391.42 | 207.5 | 391.45 | 214.76 | 391.6 |
| 214.99 | 391.6 | 216.07 | 391.62 | 216.87 | 391.63 | 217.24 | 391.64 | 218.02 | 391.63 |
| 219.38 | 391.63 | 219.95 | 391.61 | 220.77 | 391.6 | 221.29 | 391.58 | 222.61 | 391.52 |
| 223.04 | 391.52 | 224.93 | 391.42 | 226.21 | 391.35 | 228.03 | 391.31 | 229.12 | 391.31 |
| 230.27 | 391.33 | 233.21 | 391.37 | 233.7 | 391.38 | 234.65 | 391.38 | 235.38 | 391.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 238.53 | 391.37 | 238.93 | 391.36 | 239.06 | 391.37 | 240 | 391.37 | 240.87 | 391.35 |
| 252.87 | 391.17 | 253.17 | 391.17 | 254.56 | 391.14 | 256.68 | 391.12 | 257.58 | 391.13 |
| 264.11 | 391.3 | 264.67 | 391.31 | 266.27 | 391.33 | 266.55 | 391.29 | 267.34 | 391.3 |
| 271.75 | 391.28 | 275.18 | 391.38 | 281.46 | 391.91 | 282.28 | 391.95 | 282.88 | 391.99 |
| 283.51 | 392.04 | 284.65 | 392.09 | 284.77 | 392.1 | 287.61 | 392.07 | 288.01 | 391.92 |
| 288.82 | 391.95 | 289.18 | 391.95 | 290.51 | 392.03 | 291.33 | 392.03 | 291.46 | 392.04 |
| 292.24 | 392.05 | 293.46 | 392.03 | 294.75 | 392.03 | 295.27 | 392.02 | 299.45 | 392 |
| 299.84 | 392.01 | 302.16 | 391.99 | 303.01 | 392 | 304.73 | 392.01 | 310.34 | 392.05 |
| 310.54 | 392.07 | 312.05 | 392.09 | 313.13 | 392.07 | 315.31 | 391.97 | 316.05 | 391.91 |
| 316.99 | 391.8 | 326.83 | 391.67 | 331.43 | 391.69 | 332.56 | 391.7 | 333.22 | 391.75 |
| 333.64 | 391.85 | 334.39 | 391.89 | 335.22 | 391.91 | 337.19 | 391.93 | 337.84 | 391.92 |
| 338.38 | 391.9 | 338.91 | 391.89 | 345.32 | 391.64 | 355.4 | 391.3 | 355.56 | 391.29 |
| 356.71 | 391.26 | 359.6 | 391.19 | 363.18 | 391.1 | 365.32 | 391.09 | 365.81 | 391.07 |
| 368.81 | 390.91 | 369.16 | 390.89 | 370.16 | 390.87 | 374.44 | 390.81 | 374.72 | 390.8 |
| 377.59 | 390.74 | 378.13 | 390.74 | 378.64 | 390.75 | 381.7 | 390.9 | 384.16 | 391.14 |
| 385.04 | 391.15 | 385.3 | 391.14 | 386 | 391.08 | 389.23 | 391.12 | 392.48 | 391.23 |
| 394.92 | 391.32 | 404.47 | 391.69 | 406.93 | 391.77 | 407.79 | 391.79 | 408.48 | 391.79 |
| 408.72 | 391.78 | 414.1 | 391.43 | 420.17 | 391.09 | 420.33 | 391.08 | 421.35 | 391.08 |
| 421.49 | 391.1 | 430.11 | 391.69 | 430.91 | 391.78 | 431.07 | 391.79 | 433.75 | 392.05 |
| 436.93 | 392.15 | 440.33 | 392.19 | 442.25 | 392.2 | 445.34 | 391.98 | 447.47 | 391.82 |
| 451.22 | 391.53 | 451.44 | 391.52 | 452.09 | 391.46 | 452.74 | 391.47 | 454.78 | 391.61 |
| 455.25 | 391.64 | 458.49 | 391.88 | 459.09 | 391.92 | 460.13 | 391.95 | 460.87 | 391.94 |
| 462.15 | 391.9 | 463.8 | 391.84 | 464.75 | 391.8 | 467.11 | 391.69 | 467.19 | 391.68 |
| 468.04 | 391.62 | 468.73 | 391.6 | 469.73 | 391.61 | 469.86 | 391.62 | 470.37 | 391.63 |
| 470.76 | 391.68 | 472.71 | 391.8 | 473.11 | 391.82 | 481.51 | 392.14 | 485.58 | 392.3 |
| 486 | 392.31 | 488.69 | 392.4 | 489.34 | 392.43 | 489.69 | 392.44 | 492.45 | 392.59 |
| 493.07 | 392.61 | 496.7 | 392.72 | 497.21 | 392.75 | 498.21 | 392.78 | 501.61 | 392.86 |
| 501.67 | 392.87 | 504.72 | 392.9 | 508.04 | 392.95 | 512.51 | 392.97 | 514.05 | 392.99 |
| 515.26 | 392.99 | 516.07 | 393 | 516.4 | 392.99 | 520.72 | 393.03 | 525.85 | 393.08 |
| 527.1 | 393.1 | 529.42 | 393.11 | 533.07 | 393.1 | 533.61 | 393.09 | 534.06 | 393.1 |
| 535.42 | 393.1 | 535.85 | 393.08 | 536.66 | 393.07 | 537.45 | 393.07 | 539.98 | 393.14 |
| 540.42 | 393.15 | 540.72 | 393.18 | 541.06 | 393.2 | 545.64 | 393.32 | 548.55 | 393.39 |
| 550.3 | 393.47 | 551.05 | 393.52 | 551.87 | 393.55 | 552.76 | 393.61 | 554.72 | 393.63 |
| 555.15 | 393.62 | 555.25 | 393.59 | 556.03 | 393.54 | 556.36 | 393.5 | 556.8 | 393.47 |
| 558.04 | 393.49 | 561.77 | 393.25 | 562.16 | 393.23 | 566.05 | 393.01 | 566.26 | 393 |
| 569.79 | 392.69 | 571.66 | 392.53 | 573.58 | 392.36 | 574.76 | 392.24 | 576.76 | 392.24 |
| 579.33 | 392.52 | 584.35 | 393.02 | 586.82 | 393.11 | 587.49 | 393.14 | 589.19 | 393.21 |
| 594.83 | 393.4 | 598 | 393.49 | 599.47 | 393.51 | 603.21 | 393.65 | 604.33 | 393.69 |
| 610.21 | 393.69 | 612.46 | 393.71 | 617.33 | 393.71 | 619.84 | 393.7 | 621.01 | 393.63 |
| 621.29 | 393.61 | 622.11 | 393.53 | 622.62 | 393.49 | 623.38 | 393.42 | 624.21 | 393.35 |
| 625.28 | 393.25 | 629.05 | 392.84 | 629.96 | 392.68 | 632.24 | 392.73 | 633.85 | 392.75 |
| 634.55 | 392.75 | 635.51 | 392.74 | 635.96 | 392.75 | 639.66 | 392.65 | 641.41 | 392.62 |
| 642.49 | 392.61 | 643.05 | 392.62 | 652.22 | 392.75 | 657.58 | 392.81 | 658.86 | 392.83 |
| 660.63 | 392.89 | 661.38 | 392.93 | 663.27 | 393.02 | 663.7 | 393.02 | 666.65 | 393.01 |
| 667.42 | 393 | 668.9 | 392.99 | 670.92 | 392.98 | 671.5 | 392.99 | 674.7 | 392.98 |
| 682.62 | 392.97 | 687.54 | 392.96 | 688.51 | 392.95 | 691.9 | 392.92 | 693.49 | 392.92 |
| 695.06 | 392.86 | 696.17 | 392.79 | 698.4 | 392.69 | 699.64 | 392.67 | 700.13 | 392.7 |
| 700.28 | 392.75 | 700.88 | 392.78 | 701.47 | 392.78 | 702.33 | 392.77 | 703.01 | 392.77 |
| 703.34 | 392.81 | 712 | 392.64 | 712.41 | 392.63 | 713.99 | 392.58 | 715.44 | 392.52 |
| 716.05 | 392.51 | 717.11 | 392.5 | 719.61 | 392.59 | 720.35 | 392.59 | 726.63 | 392.6 |
| 729.33 | 392.59 | 732.59 | 392.65 | 732.89 | 392.66 | 739.21 | 392.89 | 740.05 | 392.92 |
| 740.89 | 392.97 | 742.09 | 393.05 | 743.93 | 393.22 | 744.33 | 393.27 | 752.86 | 393.8 |
| 755.67 | 394.08 | 755.91 | 394.11 | 760.23 | 394.53 | 763.59 | 394.51 | 764.42 | 394.51 |
| 764.67 | 394.5 | 766.62 | 394.45 | 767.09 | 394.41 | 772.04 | 394.3 | 773.69 | 394.25 |
| 774.43 | 394.23 | 776.86 | 394.15 | 777.63 | 394.15 | 777.7 | 394.16 | 778.58 | 394.18 |
| 780.02 | 394.2 | 780.53 | 394.21 | 789.55 | 394.19 | 790.88 | 394.15 | 792.76 | 394.12 |
| 792.86 | 394.11 | 794.09 | 394.1 | 794.85 | 394.1 | 795.23 | 394.11 | 796.15 | 394.15 |
| 796.59 | 394.19 | 797.81 | 394.25 | 797.83 | 394.33 | 799.15 | 394.31 | 800.32 | 394.28 |
| 800.92 | 394.28 | 801.53 | 394.29 | 802 | 394.28 | 802.69 | 394.28 | 803.8 | 394.29 |
| 805.08 | 394.32 | 805.45 | 394.32 | 805.48 | 394.33 | 806.22 | 394.37 | 806.76 | 394.39 |
| 807.88 | 394.39 | 808.85 | 394.38 | 809.57 | 394.36 | 809.84 | 394.36 | 813.59 | 394.41 |
| 815.58 | 394.44 | 816.41 | 394.46 | 816.46 | 394.47 | 830.74 | 394.47 | 834.66 | 394.46 |
| 834.82 | 394.44 | 835.49 | 394.38 | 838.88 | 394.07 | 841.89 | 393.73 | 842.3 | 393.69 |
| 844.45 | 393.6 | 846.36 | 393.51 | 848.02 | 393.4 | 848.74 | 393.37 | 849.03 | 393.33 |
| 849.75 | 393.26 | 850.27 | 393.25 | 850.73 | 393.25 | 851.06 | 393.24 | 852.08 | 393.23 |
| 852.81 | 393.2 | 853.86 | 393.17 | 854.24 | 393.17 | 860.07 | 393.05 | 860.78 | 393.05 |
| 864.68 | 393.11 | 868.18 | 393.19 | 871.45 | 393.23 | 873.34 | 393.27 | 874.25 | 393.3 |
| 875.59 | 393.34 | 878.25 | 393.43 | 879.9 | 393.43 | 881.35 | 393.46 | 887.03 | 393.47 |
| 888.64 | 393.46 | 896.75 | 393.46 | 897.85 | 393.45 | 901.23 | 393.46 | 910.55 | 393.51 |
| 911.69 | 393.55 | 912.41 | 393.56 | 914.23 | 393.58 | 915.94 | 393.63 | 920.45 | 393.77 |
| 921.92 | 393.76 | 926.5 | 393.88 | 927.93 | 393.92 | 929.08 | 393.91 | 929.71 | 393.92 |
| 931.94 | 393.97 | 933.29 | 394.01 | 933.96 | 394.05 | 934.11 | 394.08 | 934.97 | 394.12 |
| 935.47 | 394.13 | 935.77 | 394.15 | 937.47 | 394.17 | 937.76 | 394.19 | 939.69 | 394.21 |
| 940.06 | 394.22 | 940.65 | 394.22 | 941.03 | 394.23 | 941.86 | 394.24 | 942.12 | 394.23 |
| 942.46 | 394.24 | 944.73 | 394.24 | 945.22 | 394.23 | 945.66 | 394.23 | 946.44 | 394.22 |
| 947.07 | 394.2 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 71.89 | .05 | 120.41 | .04 | 752.86 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 120.41 | 752.86 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8252.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 64.7 | 392.2 | 64.82 | 392.21 | 66.82 | 392.2 | 67.52 | 392.19 | 69.42 | 392.19 |
| 69.49 | 392.2 | 70.71 | 392.23 | 70.89 | 392.24 | 73.53 | 392.29 | 73.87 | 392.3 |
| 75.46 | 392.32 | 76.58 | 392.32 | 77.42 | 392.31 | 79.33 | 392.33 | 79.91 | 392.33 |
| 81.05 | 392.35 | 81.67 | 392.35 | 81.94 | 392.36 | 82.34 | 392.36 | 82.46 | 392.37 |
| 83.66 | 392.37 | 84.13 | 392.36 | 84.55 | 392.36 | 85.44 | 392.34 | 86.32 | 392.3 |
| 86.95 | 392.28 | 87.67 | 392.27 | 89.11 | 392.23 | 89.93 | 392.22 | 91.15 | 392.2 |
| 91.34 | 392.21 | 92.46 | 392.21 | 93.18 | 392.18 | 93.78 | 392.21 | 94.14 | 392.2 |
| 95.11 | 392.2 | 95.63 | 392.23 | 96.3 | 392.25 | 97.01 | 392.28 | 97.39 | 392.29 |
| 98.39 | 392.3 | 100.6 | 392.33 | 100.78 | 392.33 | 102.85 | 392.36 | 107.37 | 392.38 |
| 112.54 | 392.41 | 118.1 | 392.36 | 118.59 | 392.33 | 118.73 | 392.29 | 122.75 | 391.9 |
| 125.63 | 391.77 | 135 | 391.45 | 141.84 | 391.17 | 143.77 | 391.04 | 144.19 | 391.02 |
| 144.39 | 391.02 | 145.28 | 391.05 | 146.75 | 391.06 | 148.58 | 391.06 | 149.22 | 391.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 149.49 | 391.13 | 149.85 | 391.14 | 151.49 | 391.21 | 151.83 | 391.23 | 152.68 | 391.26 |
| 153.44 | 391.36 | 154.32 | 391.42 | 155.48 | 391.48 | 155.51 | 391.49 | 156.03 | 391.48 |
| 159.2 | 391.4 | 159.81 | 391.21 | 161.47 | 390.71 | 161.97 | 390.69 | 162.56 | 390.71 |
| 162.98 | 390.71 | 166.72 | 390.74 | 166.92 | 390.74 | 167.54 | 390.89 | 168.11 | 390.92 |
| 170.87 | 390.98 | 171.2 | 390.99 | 172.26 | 390.99 | 173.2 | 390.97 | 176.8 | 390.87 |
| 177.12 | 390.86 | 180.52 | 390.74 | 182.26 | 390.62 | 182.76 | 390.62 | 183.12 | 390.61 |
| 185.28 | 390.5 | 186.67 | 390.44 | 187.47 | 390.42 | 189.97 | 390.38 | 190.46 | 390.37 |
| 191.3 | 390.37 | 191.5 | 390.38 | 192.28 | 390.38 | 194.38 | 390.39 | 195.7 | 390.41 |
| 196.37 | 390.43 | 198.16 | 390.46 | 198.9 | 390.47 | 199.03 | 390.48 | 201.72 | 390.58 |
| 204.56 | 390.7 | 205.81 | 390.73 | 209.05 | 390.79 | 209.29 | 390.79 | 210.84 | 390.81 |
| 218.19 | 390.97 | 218.42 | 390.97 | 219.51 | 391 | 220.32 | 391.01 | 222.86 | 391.01 |
| 224.27 | 390.99 | 224.8 | 390.97 | 226.13 | 390.91 | 226.79 | 390.91 | 227.11 | 390.89 |
| 228.48 | 390.83 | 229.77 | 390.77 | 231.61 | 390.73 | 232.72 | 390.73 | 233.88 | 390.75 |
| 236.85 | 390.79 | 238.31 | 390.79 | 239.04 | 390.78 | 242.2 | 390.77 | 242.77 | 390.77 |
| 242.97 | 390.78 | 243.71 | 390.78 | 244.59 | 390.76 | 256.74 | 390.56 | 257.04 | 390.56 |
| 258.45 | 390.52 | 260.59 | 390.51 | 261.5 | 390.52 | 268.11 | 390.74 | 270.29 | 390.78 |
| 270.57 | 390.76 | 271.37 | 390.77 | 275.84 | 390.75 | 279.31 | 390.85 | 285.66 | 391.32 |
| 286.48 | 391.34 | 287.09 | 391.37 | 287.73 | 391.41 | 288.88 | 391.46 | 289.01 | 391.46 |
| 291.89 | 391.42 | 292.28 | 391.29 | 292.79 | 391.31 | 293.46 | 391.3 | 294.81 | 391.37 |
| 295.77 | 391.38 | 296.56 | 391.4 | 297.8 | 391.39 | 298.48 | 391.4 | 304.25 | 391.4 |
| 306.6 | 391.39 | 307.46 | 391.4 | 309.19 | 391.41 | 314.87 | 391.42 | 315.08 | 391.44 |
| 316.59 | 391.45 | 317.69 | 391.44 | 319.89 | 391.34 | 320.65 | 391.29 | 321.59 | 391.18 |
| 331.55 | 391.03 | 336.2 | 391.04 | 337.35 | 391.05 | 337.67 | 391.06 | 338.01 | 391.09 |
| 338.44 | 391.18 | 339.19 | 391.21 | 340.03 | 391.23 | 342.15 | 391.24 | 342.69 | 391.22 |
| 343.23 | 391.21 | 343.77 | 391.19 | 350.25 | 390.92 | 360.45 | 390.57 | 360.61 | 390.56 |
| 361.77 | 390.53 | 364.7 | 390.46 | 368.32 | 390.39 | 370.48 | 390.37 | 370.98 | 390.36 |
| 374.01 | 390.22 | 374.36 | 390.19 | 375.38 | 390.17 | 376.13 | 390.17 | 379.71 | 390.12 |
| 379.99 | 390.11 | 382.89 | 390.05 | 383.61 | 390.05 | 384.1 | 390.06 | 387.06 | 390.2 |
| 389.42 | 390.42 | 390.27 | 390.43 | 390.52 | 390.42 | 391.2 | 390.37 | 394.31 | 390.4 |
| 397.44 | 390.51 | 397.97 | 390.52 | 399.79 | 390.59 | 408.99 | 390.95 | 411.36 | 391.03 |
| 412.19 | 391.05 | 412.86 | 391.05 | 413.09 | 391.04 | 418.27 | 390.74 | 424.12 | 390.45 |
| 424.57 | 390.44 | 425.26 | 390.45 | 425.39 | 390.46 | 433.69 | 391.03 | 434.62 | 391.13 |
| 437.2 | 391.4 | 440.27 | 391.54 | 443.54 | 391.58 | 445.39 | 391.6 | 448.37 | 391.41 |
| 450.42 | 391.27 | 454.03 | 391.01 | 454.25 | 391 | 454.87 | 390.95 | 455.5 | 390.95 |
| 457.92 | 391.11 | 459.74 | 391.24 | 461.04 | 391.35 | 462.01 | 391.4 | 462.62 | 391.42 |
| 463.34 | 391.41 | 464.56 | 391.37 | 466.16 | 391.31 | 467.07 | 391.28 | 469.34 | 391.17 |
| 470.24 | 391.1 | 470.9 | 391.08 | 471.87 | 391.08 | 471.99 | 391.1 | 472.48 | 391.11 |
| 472.86 | 391.15 | 474.74 | 391.25 | 475.12 | 391.26 | 483.22 | 391.53 | 483.42 | 391.53 |
| 487.13 | 391.64 | 487.54 | 391.64 | 490.14 | 391.71 | 490.58 | 391.73 | 491.09 | 391.74 |
| 493.76 | 391.88 | 494.36 | 391.9 | 497.85 | 392.01 | 498.34 | 392.03 | 499.31 | 392.06 |
| 502.58 | 392.15 | 502.64 | 392.16 | 505.58 | 392.2 | 508.78 | 392.25 | 513.08 | 392.27 |
| 514.57 | 392.29 | 516.83 | 392.29 | 520.99 | 392.3 | 525.94 | 392.34 | 526.38 | 392.34 |
| 527.14 | 392.35 | 529.38 | 392.36 | 532.89 | 392.34 | 533.85 | 392.34 | 534.7 | 392.35 |
| 535.15 | 392.34 | 535.57 | 392.32 | 536.35 | 392.31 | 537.12 | 392.31 | 537.45 | 392.32 |
| 539.55 | 392.37 | 539.97 | 392.39 | 540.27 | 392.42 | 540.59 | 392.43 | 545.01 | 392.54 |
| 545.16 | 392.54 | 545.79 | 392.57 | 547.81 | 392.63 | 549.07 | 392.7 | 549.5 | 392.72 |
| 550.22 | 392.77 | 551.01 | 392.8 | 551.86 | 392.86 | 553.75 | 392.88 | 554.08 | 392.88 |
| 554.27 | 392.85 | 554.81 | 392.82 | 555.33 | 392.77 | 555.84 | 392.75 | 556.95 | 392.77 |
| 560.54 | 392.55 | 560.93 | 392.54 | 564.67 | 392.35 | 564.87 | 392.33 | 568.27 | 392.06 |
| 570.08 | 391.91 | 571.93 | 391.76 | 573.07 | 391.66 | 574.98 | 391.66 | 577.47 | 391.91 |
| 582.31 | 392.36 | 584.68 | 392.44 | 585.33 | 392.47 | 586.97 | 392.53 | 592.4 | 392.69 |
| 595.45 | 392.76 | 596.86 | 392.76 | 600.47 | 392.89 | 601.56 | 392.92 | 607.22 | 392.92 |
| 610.52 | 392.95 | 614.08 | 392.95 | 616.49 | 392.93 | 617.62 | 392.87 | 617.89 | 392.85 |
| 618.68 | 392.77 | 619.9 | 392.67 | 620.7 | 392.61 | 621.74 | 392.52 | 624.66 | 392.23 |
| 625.37 | 392.15 | 626.24 | 392.01 | 628.44 | 392.06 | 629.99 | 392.07 | 631.59 | 392.07 |
| 632.03 | 392.08 | 635.59 | 392 | 637.28 | 391.98 | 638.12 | 391.96 | 638.64 | 391.98 |
| 638.86 | 391.98 | 652.86 | 392.17 | 654.09 | 392.19 | 655.79 | 392.24 | 656.52 | 392.28 |
| 658.34 | 392.35 | 658.76 | 392.35 | 661.6 | 392.34 | 662.34 | 392.34 | 663.77 | 392.32 |
| 665.65 | 392.3 | 666.27 | 392.31 | 669.35 | 392.3 | 676.99 | 392.3 | 681.72 | 392.28 |
| 682.66 | 392.27 | 685.92 | 392.23 | 687.45 | 392.23 | 688.96 | 392.18 | 690.04 | 392.11 |
| 692.19 | 392.02 | 693.38 | 392 | 693.85 | 392.03 | 694 | 392.08 | 694.57 | 392.11 |
| 695.97 | 392.11 | 696.62 | 392.12 | 696.94 | 392.17 | 705.29 | 392.02 | 706.32 | 392 |
| 707.21 | 391.97 | 708.61 | 391.91 | 709.19 | 391.9 | 710.21 | 391.89 | 710.45 | 391.9 |
| 712.62 | 391.97 | 713.33 | 391.97 | 719.39 | 391.96 | 721.99 | 391.95 | 724.08 | 391.97 |
| 725.13 | 391.99 | 731.5 | 392.2 | 732.31 | 392.22 | 734.28 | 392.34 | 734.9 | 392.42 |
| 736.06 | 392.52 | 736.43 | 392.58 | 744.66 | 393.07 | 747.65 | 393.32 | 750.87 | 393.58 |
| 752.52 | 393.71 | 756.09 | 393.68 | 757.25 | 393.68 | 758.88 | 393.63 | 759.32 | 393.62 |
| 759.82 | 393.57 | 765.09 | 393.47 | 766.85 | 393.41 | 767.35 | 393.41 | 767.64 | 393.39 |
| 770.23 | 393.31 | 771.05 | 393.31 | 771.13 | 393.32 | 773.6 | 393.37 | 774.15 | 393.39 |
| 783.75 | 393.37 | 785.17 | 393.33 | 787.17 | 393.28 | 787.52 | 393.26 | 788.59 | 393.25 |
| 789.81 | 393.25 | 790.57 | 393.28 | 791.25 | 393.33 | 792.56 | 393.38 | 792.57 | 393.44 |
| 793.4 | 393.43 | 794.71 | 393.38 | 795.87 | 393.38 | 796.52 | 393.39 | 797.02 | 393.38 |
| 797.76 | 393.38 | 798.56 | 393.39 | 798.94 | 393.39 | 800.7 | 393.43 | 800.73 | 393.44 |
| 801.52 | 393.49 | 802.29 | 393.52 | 803.29 | 393.52 | 804.33 | 393.51 | 805.09 | 393.48 |
| 805.38 | 393.48 | 809.37 | 393.55 | 811.49 | 393.58 | 812.38 | 393.62 | 827.64 | 393.62 |
| 831.82 | 393.61 | 836.32 | 393.26 | 839.97 | 392.92 | 842.26 | 392.84 | 844.3 | 392.74 |
| 846.06 | 392.64 | 846.83 | 392.61 | 847.14 | 392.59 | 847.91 | 392.52 | 848.73 | 392.52 |
| 848.95 | 392.51 | 849.42 | 392.51 | 850.39 | 392.5 | 850.77 | 392.49 | 850.97 | 392.47 |
| 851.17 | 392.47 | 852.28 | 392.44 | 852.7 | 392.44 | 858.91 | 392.3 | 859.66 | 392.3 |
| 863.82 | 392.33 | 867.54 | 392.39 | 871.03 | 392.41 | 873.04 | 392.44 | 875.44 | 392.49 |
| 876.41 | 392.52 | 878.28 | 392.57 | 880.04 | 392.57 | 881.58 | 392.62 | 898 | 392.62 |
| 899.16 | 392.61 | 902.76 | 392.61 | 912.7 | 392.68 | 913.27 | 392.7 | 913.91 | 392.71 |
| 914.17 | 392.72 | 916.62 | 392.72 | 918.44 | 392.76 | 923.25 | 392.89 | 924.81 | 392.88 |
| 929.7 | 393 | 931.22 | 393.03 | 932.44 | 393.02 | 935.49 | 393.07 | 936.59 | 393.1 |
| 936.81 | 393.1 | 937.64 | 393.16 | 937.8 | 393.18 | 938.51 | 393.22 | 938.72 | 393.22 |
| 939.57 | 393.25 | 941.39 | 393.29 | 941.69 | 393.3 | 943.75 | 393.34 | 944.14 | 393.34 |
| 944.24 | 393.35 | 945.18 | 393.37 | 946.06 | 393.38 | 950.12 | 393.38 | 950.66 | 393.37 |
| 951.62 | 393.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 64.7 | .05 | 122.75 | .04 | 744.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 122.75 | 744.66 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8204.90*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 57.51 | 391.56 | 59.57 | 391.55 | 60.8 | 391.54 | 60.92 | 391.53 | 62.85 | 391.53 |
| 64.72 | 391.6 | 67.79 | 391.66 | 68.18 | 391.66 | 69.13 | 391.68 | 70.03 | 391.69 |
| 71.34 | 391.69 | 72.32 | 391.68 | 74.55 | 391.7 | 75.22 | 391.71 | 76.55 | 391.72 |
| 77.27 | 391.72 | 78.05 | 391.74 | 78.19 | 391.75 | 78.95 | 391.75 | 80.13 | 391.73 |
| 80.62 | 391.73 | 81.92 | 391.7 | 82.68 | 391.67 | 84.02 | 391.63 | 84.25 | 391.63 |
| 85.92 | 391.58 | 86.88 | 391.58 | 88.31 | 391.55 | 88.53 | 391.57 | 89.82 | 391.56 |
| 90.15 | 391.54 | 90.42 | 391.54 | 90.67 | 391.52 | 91.11 | 391.55 | 91.79 | 391.54 |
| 92.6 | 391.54 | 92.97 | 391.55 | 94.3 | 391.62 | 95.57 | 391.67 | 96.73 | 391.68 |
| 99.3 | 391.71 | 99.52 | 391.72 | 101.92 | 391.75 | 104.54 | 391.78 | 107.19 | 391.8 |
| 113.2 | 391.84 | 119.68 | 391.8 | 120.25 | 391.77 | 120.41 | 391.73 | 121.13 | 391.65 |
| 125.1 | 391.24 | 128.01 | 391.12 | 137.48 | 390.82 | 144.4 | 390.55 | 145.76 | 390.47 |
| 146.35 | 390.42 | 146.98 | 390.41 | 147.88 | 390.43 | 149.41 | 390.43 | 149.74 | 390.44 |
| 151.21 | 390.44 | 151.86 | 390.45 | 152.14 | 390.5 | 152.5 | 390.51 | 154.16 | 390.57 |
| 155.37 | 390.61 | 156.13 | 390.7 | 157.02 | 390.76 | 158.2 | 390.82 | 159.94 | 390.79 |
| 161.96 | 390.74 | 162.17 | 390.7 | 162.57 | 390.57 | 164.26 | 390.13 | 164.76 | 390.12 |
| 165.36 | 390.14 | 165.78 | 390.14 | 169.56 | 390.17 | 169.77 | 390.17 | 170.39 | 390.31 |
| 170.97 | 390.33 | 173.76 | 390.39 | 174.34 | 390.4 | 175.16 | 390.39 | 176.11 | 390.37 |
| 180.09 | 390.24 | 183.52 | 390.11 | 185.28 | 389.95 | 186.15 | 389.95 | 188.33 | 389.82 |
| 189.74 | 389.75 | 190.54 | 389.73 | 193.08 | 389.69 | 194.43 | 389.69 | 194.63 | 389.7 |
| 195.41 | 389.71 | 197.54 | 389.72 | 198.88 | 389.75 | 200.76 | 389.8 | 202.11 | 389.82 |
| 202.25 | 389.83 | 204.96 | 389.94 | 207.83 | 390.06 | 209.1 | 390.09 | 212.38 | 390.15 |
| 212.62 | 390.15 | 214.19 | 390.18 | 221.62 | 390.34 | 221.86 | 390.35 | 224.16 | 390.39 |
| 224.95 | 390.38 | 225.39 | 390.39 | 226.34 | 390.39 | 228.3 | 390.36 | 229.65 | 390.31 |
| 230.31 | 390.31 | 230.64 | 390.29 | 232.02 | 390.23 | 233.33 | 390.18 | 235.19 | 390.15 |
| 236.31 | 390.16 | 236.91 | 390.16 | 237.49 | 390.17 | 240.49 | 390.21 | 240.99 | 390.21 |
| 242.71 | 390.19 | 245.9 | 390.18 | 246.34 | 390.17 | 246.68 | 390.19 | 247.43 | 390.19 |
| 248.32 | 390.17 | 260.61 | 389.95 | 260.91 | 389.94 | 262.33 | 389.91 | 264.5 | 389.89 |
| 265.42 | 389.92 | 272.1 | 390.18 | 272.68 | 390.2 | 274.31 | 390.24 | 274.6 | 390.22 |
| 275.41 | 390.24 | 279.92 | 390.22 | 283.43 | 390.31 | 289.86 | 390.73 | 289.95 | 390.72 |
| 290.69 | 390.73 | 291.31 | 390.75 | 291.95 | 390.79 | 293.11 | 390.83 | 293.24 | 390.83 |
| 296.15 | 390.78 | 296.55 | 390.66 | 297.38 | 390.67 | 297.75 | 390.65 | 299.11 | 390.72 |
| 299.95 | 390.72 | 300.09 | 390.73 | 300.88 | 390.75 | 302.13 | 390.75 | 302.82 | 390.77 |
| 303.98 | 390.77 | 306.27 | 390.79 | 308.16 | 390.8 | 308.65 | 390.8 | 311.03 | 390.79 |
| 311.9 | 390.8 | 313.45 | 390.81 | 313.65 | 390.8 | 319.4 | 390.8 | 319.61 | 390.81 |
| 321.14 | 390.82 | 322.26 | 390.8 | 324.48 | 390.71 | 325.24 | 390.66 | 326.2 | 390.56 |
| 336.26 | 390.4 | 340.97 | 390.39 | 342.13 | 390.39 | 342.8 | 390.42 | 343.24 | 390.51 |
| 344 | 390.53 | 344.85 | 390.54 | 346.87 | 390.55 | 348.08 | 390.51 | 348.63 | 390.5 |
| 355.19 | 390.2 | 365.5 | 389.84 | 365.66 | 389.83 | 366.84 | 389.8 | 369.79 | 389.74 |
| 373.46 | 389.67 | 375.64 | 389.66 | 376.15 | 389.65 | 379.21 | 389.52 | 379.57 | 389.5 |
| 380.6 | 389.48 | 381.36 | 389.48 | 384.98 | 389.43 | 385.26 | 389.43 | 388.2 | 389.37 |
| 389.57 | 389.37 | 392.41 | 389.5 | 394.68 | 389.7 | 395.5 | 389.71 | 395.74 | 389.7 |
| 396.39 | 389.65 | 399.38 | 389.69 | 402.39 | 389.78 | 403.9 | 389.83 | 404.41 | 389.85 |
| 404.66 | 389.85 | 413.51 | 390.21 | 415.79 | 390.29 | 416.59 | 390.31 | 417.23 | 390.31 |
| 417.45 | 390.3 | 422.43 | 390.05 | 428.06 | 389.81 | 429.16 | 389.82 | 429.28 | 389.83 |
| 437.28 | 390.36 | 438.17 | 390.47 | 440.65 | 390.75 | 443.6 | 390.92 | 446.75 | 390.98 |
| 448.53 | 391 | 451.4 | 390.85 | 456.84 | 390.49 | 457.66 | 390.44 | 458.26 | 390.44 |
| 460.14 | 390.56 | 462.34 | 390.71 | 463.59 | 390.81 | 464.15 | 390.84 | 464.18 | 390.85 |
| 465.11 | 390.88 | 465.8 | 390.88 | 466.98 | 390.84 | 468.51 | 390.78 | 469.39 | 390.75 |
| 471.57 | 390.65 | 472.43 | 390.58 | 473.08 | 390.56 | 474.01 | 390.56 | 474.6 | 390.58 |
| 474.96 | 390.62 | 475.87 | 390.65 | 476.77 | 390.7 | 484.92 | 390.92 | 486.09 | 390.93 |
| 488.69 | 390.98 | 489.09 | 390.98 | 491.58 | 391.01 | 492.01 | 391.03 | 492.5 | 391.04 |
| 495.07 | 391.17 | 495.64 | 391.18 | 499 | 391.29 | 499.85 | 391.32 | 500.4 | 391.35 |
| 503.55 | 391.44 | 503.61 | 391.45 | 506.44 | 391.5 | 509.51 | 391.56 | 515.52 | 391.59 |
| 516.21 | 391.58 | 516.96 | 391.59 | 517.26 | 391.58 | 521.27 | 391.58 | 526.03 | 391.6 |
| 527.18 | 391.61 | 529.34 | 391.61 | 532.72 | 391.59 | 533.64 | 391.58 | 534.46 | 391.59 |
| 535.29 | 391.56 | 536.05 | 391.55 | 537.1 | 391.56 | 539.53 | 391.62 | 539.81 | 391.65 |
| 540.12 | 391.66 | 544.37 | 391.76 | 544.52 | 391.76 | 545.13 | 391.8 | 547.07 | 391.87 |
| 547.22 | 391.87 | 548.28 | 391.94 | 549.39 | 392.02 | 550.15 | 392.05 | 550.71 | 392.09 |
| 550.97 | 392.1 | 552.79 | 392.13 | 553.19 | 392.13 | 553.28 | 392.11 | 554 | 392.07 |
| 554.31 | 392.04 | 554.79 | 392.02 | 555.86 | 392.04 | 559.32 | 391.85 | 559.69 | 391.84 |
| 563.29 | 391.68 | 563.48 | 391.66 | 566.75 | 391.43 | 568.49 | 391.3 | 570.27 | 391.16 |
| 571.37 | 391.07 | 573.21 | 391.07 | 575.6 | 391.3 | 580.26 | 391.69 | 582.54 | 391.77 |
| 583.17 | 391.8 | 584.74 | 391.85 | 589.97 | 391.97 | 592.91 | 392.02 | 594.26 | 392.01 |
| 597.73 | 392.12 | 598.78 | 392.15 | 604.22 | 392.15 | 606.31 | 392.18 | 610.82 | 392.18 |
| 613.15 | 392.17 | 614.23 | 392.11 | 616.43 | 391.92 | 617.2 | 391.88 | 618.2 | 391.8 |
| 621.01 | 391.54 | 621.69 | 391.47 | 622.53 | 391.34 | 624.64 | 391.38 | 626.14 | 391.4 |
| 627.68 | 391.4 | 628.09 | 391.41 | 631.52 | 391.35 | 633.96 | 391.32 | 634.67 | 391.34 |
| 643.17 | 391.46 | 648.14 | 391.52 | 649.32 | 391.54 | 650.96 | 391.59 | 653.41 | 391.69 |
| 656.54 | 391.68 | 658.63 | 391.65 | 660.44 | 391.63 | 661.03 | 391.64 | 664 | 391.62 |
| 671.35 | 391.62 | 675.9 | 391.59 | 676.81 | 391.59 | 679.95 | 391.54 | 681.42 | 391.54 |
| 682.87 | 391.49 | 683.91 | 391.43 | 685.97 | 391.35 | 687.13 | 391.34 | 687.58 | 391.36 |
| 687.72 | 391.41 | 688.27 | 391.44 | 688.82 | 391.44 | 690.24 | 391.46 | 690.55 | 391.53 |
| 698.58 | 391.41 | 699.57 | 391.38 | 700.43 | 391.36 | 701.77 | 391.3 | 703.32 | 391.28 |
| 703.55 | 391.29 | 705.63 | 391.35 | 705.96 | 391.34 | 706.32 | 391.35 | 712.15 | 391.33 |
| 714.65 | 391.3 | 716.66 | 391.32 | 717.67 | 391.32 | 717.94 | 391.33 | 723.8 | 391.51 |
| 724.58 | 391.53 | 725.36 | 391.57 | 726.47 | 391.64 | 727.07 | 391.72 | 728.18 | 391.82 |
| 728.54 | 391.89 | 736.46 | 392.33 | 739.63 | 392.55 | 739.9 | 392.56 | 743.05 | 392.77 |
| 744.8 | 392.88 | 748.59 | 392.85 | 749.82 | 392.85 | 751.55 | 392.8 | 752.02 | 392.79 |
| 752.55 | 392.72 | 758.15 | 392.64 | 760.02 | 392.58 | 760.86 | 392.56 | 763.61 | 392.47 |
| 764.56 | 392.48 | 765.55 | 392.51 | 767.59 | 392.56 | 767.76 | 392.57 | 777.96 | 392.55 |
| 781.59 | 392.43 | 781.95 | 392.41 | 783.1 | 392.39 | 783.96 | 392.39 | 785.2 | 392.42 |
| 785.42 | 392.44 | 785.92 | 392.46 | 787.31 | 392.5 | 787.32 | 392.56 | 788.2 | 392.54 |
| 788.82 | 392.52 | 789.59 | 392.48 | 790.15 | 392.47 | 790.83 | 392.47 | 791.51 | 392.49 |
| 792.04 | 392.47 | 792.83 | 392.47 | 793.67 | 392.48 | 795.98 | 392.54 | 796.82 | 392.61 |
| 797.29 | 392.64 | 799.8 | 392.64 | 800.61 | 392.59 | 800.92 | 392.59 | 805.15 | 392.69 |
| 807.41 | 392.73 | 808.35 | 392.77 | 809.59 | 392.77 | 810.41 | 392.78 | 824.55 | 392.77 |
| 828.99 | 392.77 | 829.17 | 392.75 | 833.77 | 392.45 | 836.27 | 392.25 | 837.17 | 392.18 |
| 837.64 | 392.15 | 840.07 | 392.08 | 842.23 | 391.98 | 844.11 | 391.88 | 844.92 | 391.86 |
| 846.06 | 391.79 | 846.65 | 391.78 | 847.18 | 391.78 | 847.55 | 391.77 | 847.67 | 391.78 |
| 849.1 | 391.76 | 849.52 | 391.74 | 850.71 | 391.71 | 851.15 | 391.71 | 857.74 | 391.55 |
| 858.54 | 391.54 | 862.95 | 391.56 | 866.91 | 391.59 | 870.61 | 391.59 | 872.74 | 391.6 |
| 873.78 | 391.61 | 875.29 | 391.64 | 876.32 | 391.67 | 878.31 | 391.71 | 880.18 | 391.71 |
| 881.81 | 391.77 | 888.24 | 391.78 | 890.05 | 391.77 | 899.24 | 391.77 | 900.48 | 391.76 |
| 904.3 | 391.76 | 914.84 | 391.85 | 915.45 | 391.87 | 916.14 | 391.88 | 916.95 | 391.88 |
| 919.01 | 391.86 | 920.94 | 391.9 | 926.04 | 392.01 | 927.71 | 392.01 | 932.89 | 392.11 |
| 934.51 | 392.13 | 935.8 | 392.12 | 936.52 | 392.13 | 940.57 | 392.21 | 941.33 | 392.26 |
| 941.5 | 392.28 | 942.24 | 392.32 | 942.47 | 392.32 | 943.37 | 392.36 | 945.3 | 392.4 |
| 945.62 | 392.42 | 947.81 | 392.46 | 948.33 | 392.48 | 949.42 | 392.5 | 950.03 | 392.52 |
| 951.36 | 392.52 | 953.52 | 392.53 | 954.1 | 392.53 | 954.35 | 392.52 | 955.44 | 392.51 |
| 956.16 | 392.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 57.51 | .05 | 125.1 | .04 | 736.46 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

125.1 736.46 45.93 47.93 55 .1 .3

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8156.97*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 50.32 | 390.92 | 52.67 | 390.9 | 52.96 | 390.91 | 53.14 | 390.9 | 54.07 | 390.89 |
| 54.22 | 390.88 | 56.6 | 390.88 | 56.68 | 390.89 | 58.55 | 390.95 | 63.58 | 391.05 |
| 64.61 | 391.05 | 66.1 | 391.06 | 67.22 | 391.05 | 69.76 | 391.07 | 70.53 | 391.08 |
| 72.04 | 391.09 | 72.61 | 391.1 | 73.4 | 391.1 | 74.22 | 391.13 | 74.69 | 391.13 |
| 74.78 | 391.12 | 75.51 | 391.12 | 76.13 | 391.1 | 77.07 | 391.1 | 77.27 | 391.09 |
| 78.17 | 391.07 | 79.04 | 391.03 | 80.83 | 390.99 | 82.74 | 390.94 | 83.83 | 390.93 |
| 85.46 | 390.9 | 85.71 | 390.92 | 86.68 | 390.91 | 87.19 | 390.91 | 88.16 | 390.86 |
| 88.95 | 390.9 | 89.43 | 390.89 | 90.49 | 390.89 | 91.44 | 390.93 | 92.3 | 390.98 |
| 93.75 | 391.04 | 95.08 | 391.06 | 98.01 | 391.1 | 98.25 | 391.11 | 101 | 391.15 |
| 106.91 | 391.21 | 107.01 | 391.21 | 113.87 | 391.28 | 121.26 | 391.24 | 121.91 | 391.21 |
| 122.09 | 391.16 | 122.85 | 391.07 | 122.91 | 391.07 | 127.44 | 390.59 | 130.39 | 390.47 |
| 139.96 | 390.18 | 146.96 | 389.92 | 148.33 | 389.85 | 148.93 | 389.81 | 149.57 | 389.79 |
| 150.48 | 389.81 | 153.85 | 389.81 | 154.51 | 389.82 | 154.78 | 389.86 | 157.18 | 389.93 |
| 158.05 | 389.96 | 158.42 | 389.99 | 158.82 | 390.04 | 159.72 | 390.09 | 160.91 | 390.15 |
| 161.48 | 390.14 | 162.67 | 390.13 | 164.72 | 390.09 | 164.93 | 390.05 | 165.34 | 389.94 |
| 167.04 | 389.56 | 167.55 | 389.55 | 168.16 | 389.57 | 168.58 | 389.57 | 172.41 | 389.6 |
| 172.61 | 389.6 | 173.25 | 389.73 | 173.82 | 389.75 | 176.66 | 389.8 | 177.73 | 389.8 |
| 179.03 | 389.77 | 182.71 | 389.64 | 183.05 | 389.62 | 186.52 | 389.47 | 188.3 | 389.29 |
| 189.18 | 389.29 | 191.39 | 389.14 | 192.81 | 389.06 | 193.13 | 389.05 | 193.62 | 389.05 |
| 196.18 | 389.01 | 197.75 | 389.01 | 198.54 | 389.03 | 200.33 | 389.05 | 202.05 | 389.09 |
| 203.95 | 389.15 | 205.32 | 389.17 | 205.46 | 389.18 | 208.2 | 389.29 | 211.1 | 389.42 |
| 212.38 | 389.46 | 215.7 | 389.52 | 215.95 | 389.52 | 217.53 | 389.55 | 225.05 | 389.72 |
| 225.29 | 389.72 | 226.4 | 389.75 | 227.23 | 389.76 | 228.42 | 389.76 | 228.86 | 389.77 |
| 229.62 | 389.76 | 229.82 | 389.77 | 230.41 | 389.76 | 231.27 | 389.76 | 231.81 | 389.74 |
| 233.17 | 389.7 | 233.61 | 389.71 | 235.57 | 389.64 | 236.89 | 389.6 | 238.77 | 389.57 |
| 239.91 | 389.58 | 240.51 | 389.58 | 241.1 | 389.6 | 244.13 | 389.62 | 244.64 | 389.62 |
| 246.38 | 389.6 | 249.6 | 389.58 | 250.05 | 389.58 | 250.39 | 389.6 | 251.15 | 389.6 |
| 252.05 | 389.58 | 264.48 | 389.34 | 264.78 | 389.33 | 266.22 | 389.3 | 268.41 | 389.28 |
| 269.34 | 389.32 | 276.1 | 389.63 | 278.33 | 389.7 | 278.62 | 389.69 | 279.44 | 389.71 |
| 284.01 | 389.69 | 287.56 | 389.77 | 294.05 | 390.14 | 294.15 | 390.13 | 295.52 | 390.13 |
| 296.17 | 390.16 | 297.48 | 390.19 | 300.43 | 390.13 | 300.82 | 390.03 | 301.66 | 390.03 |
| 302.03 | 389.99 | 303.42 | 390.06 | 304.26 | 390.07 | 304.4 | 390.08 | 305.2 | 390.1 |
| 306.47 | 390.11 | 307.8 | 390.15 | 308.33 | 390.15 | 310.65 | 390.18 | 312.57 | 390.2 |
| 313.06 | 390.2 | 315.47 | 390.19 | 316.35 | 390.2 | 318.12 | 390.2 | 323.92 | 390.17 |
| 324.14 | 390.18 | 325.69 | 390.19 | 326.82 | 390.17 | 329.07 | 390.08 | 329.84 | 390.03 |
| 330.8 | 389.94 | 340.98 | 389.76 | 345.74 | 389.74 | 346.92 | 389.74 | 347.59 | 389.76 |
| 348.03 | 389.83 | 348.81 | 389.85 | 349.66 | 389.86 | 351.83 | 389.85 | 352.38 | 389.84 |
| 353.49 | 389.8 | 360.12 | 389.49 | 370.55 | 389.11 | 370.71 | 389.1 | 371.9 | 389.07 |
| 374.89 | 389.02 | 378.59 | 388.96 | 380.8 | 388.95 | 381.32 | 388.94 | 384.41 | 388.82 |
| 385.82 | 388.79 | 386.59 | 388.78 | 390.24 | 388.74 | 390.53 | 388.74 | 393.5 | 388.68 |
| 394.57 | 388.68 | 395.03 | 388.69 | 397.76 | 388.8 | 399.94 | 388.97 | 400.96 | 388.98 |
| 401.59 | 388.94 | 404.46 | 388.97 | 407.35 | 389.06 | 407.84 | 389.07 | 409.29 | 389.12 |
| 409.53 | 389.12 | 418.03 | 389.47 | 420.22 | 389.54 | 420.99 | 389.56 | 421.82 | 389.57 |
| 426.6 | 389.36 | 432.01 | 389.18 | 432.43 | 389.17 | 433.06 | 389.18 | 433.18 | 389.19 |
| 440.86 | 389.69 | 441.72 | 389.81 | 444.11 | 390.1 | 446.94 | 390.31 | 449.97 | 390.37 |
| 451.67 | 390.4 | 454.43 | 390.28 | 456.32 | 390.17 | 459.66 | 389.97 | 460.44 | 389.93 |
| 461.02 | 389.93 | 462.83 | 390.04 | 463.25 | 390.06 | 464.93 | 390.18 | 466.67 | 390.31 |
| 467.6 | 390.35 | 468.13 | 390.35 | 468.26 | 390.34 | 469.86 | 390.3 | 470.87 | 390.26 |
| 473.81 | 390.12 | 474.63 | 390.07 | 475.25 | 390.05 | 476.14 | 390.04 | 476.25 | 390.05 |
| 476.71 | 390.05 | 477.06 | 390.08 | 477.93 | 390.11 | 478.8 | 390.15 | 479.15 | 390.16 |
| 486.63 | 390.3 | 487.75 | 390.3 | 490.25 | 390.32 | 490.63 | 390.31 | 493.03 | 390.32 |
| 493.6 | 390.34 | 493.91 | 390.34 | 496.37 | 390.46 | 496.93 | 390.47 | 500.15 | 390.57 |
| 500.97 | 390.6 | 501.5 | 390.63 | 504.53 | 390.73 | 504.58 | 390.74 | 507.3 | 390.79 |
| 510.25 | 390.86 | 516.02 | 390.89 | 516.69 | 390.88 | 517.7 | 390.88 | 521.54 | 390.86 |
| 526.12 | 390.85 | 526.52 | 390.86 | 529.29 | 390.86 | 532.54 | 390.83 | 534.21 | 390.83 |
| 535.02 | 390.81 | 535.74 | 390.8 | 536.75 | 390.8 | 538.69 | 390.84 | 539.36 | 390.88 |
| 539.65 | 390.89 | 543.74 | 390.98 | 544.46 | 391.02 | 546.33 | 391.1 | 548.55 | 391.27 |
| 549.28 | 391.3 | 549.45 | 391.3 | 550.07 | 391.35 | 551.82 | 391.38 | 552.21 | 391.38 |
| 552.8 | 391.34 | 552.98 | 391.34 | 553.28 | 391.31 | 553.75 | 391.3 | 554.77 | 391.31 |
| 558.1 | 391.16 | 558.45 | 391.15 | 561.91 | 391.01 | 565.24 | 390.8 | 566.91 | 390.68 |
| 568.62 | 390.57 | 569.67 | 390.49 | 571.44 | 390.49 | 573.74 | 390.68 | 578.21 | 391.03 |
| 580.4 | 391.1 | 581 | 391.13 | 582.52 | 391.17 | 587.54 | 391.26 | 590.36 | 391.29 |
| 591.66 | 391.26 | 595 | 391.36 | 596 | 391.38 | 601.23 | 391.38 | 603.24 | 391.42 |
| 607.57 | 391.42 | 609.8 | 391.4 | 610.85 | 391.35 | 611.83 | 391.27 | 612.96 | 391.17 |
| 613.7 | 391.14 | 614.65 | 391.07 | 617.36 | 390.85 | 618.01 | 390.79 | 618.82 | 390.67 |
| 620.85 | 390.71 | 622.28 | 390.72 | 622.9 | 390.72 | 624.16 | 390.73 | 627.45 | 390.7 |
| 629.02 | 390.69 | 629.97 | 390.68 | 630.48 | 390.7 | 638.64 | 390.82 | 643.41 | 390.88 |
| 644.55 | 390.9 | 646.13 | 390.94 | 646.48 | 390.96 | 648.48 | 391.03 | 651.49 | 391.02 |
| 652.17 | 391.01 | 653.49 | 390.98 | 655.23 | 390.96 | 655.8 | 390.96 | 658.66 | 390.95 |
| 665.71 | 390.94 | 670.09 | 390.91 | 670.96 | 390.9 | 673.97 | 390.85 | 675.39 | 390.85 |
| 676.78 | 390.8 | 677.78 | 390.75 | 679.76 | 390.68 | 680.87 | 390.67 | 681.3 | 390.7 |
| 681.44 | 390.74 | 681.97 | 390.77 | 682.5 | 390.77 | 683.26 | 390.78 | 683.86 | 390.81 |
| 684.16 | 390.89 | 691.87 | 390.8 | 692.82 | 390.77 | 693.64 | 390.75 | 694.94 | 390.69 |
| 696.42 | 390.67 | 696.64 | 390.68 | 698.64 | 390.72 | 699.3 | 390.73 | 704.9 | 390.69 |
| 707.3 | 390.66 | 710.47 | 390.66 | 716.09 | 390.82 | 716.57 | 390.83 | 717.6 | 390.87 |
| 718.66 | 390.93 | 719.24 | 391.02 | 720.3 | 391.13 | 720.65 | 391.21 | 728.26 | 391.6 |
| 731.62 | 391.78 | 731.9 | 391.79 | 735.23 | 391.97 | 737.08 | 392.06 | 741.09 | 392.02 |
| 742.39 | 392.02 | 744.23 | 391.98 | 744.72 | 391.96 | 745.28 | 391.88 | 751.21 | 391.81 |
| 753.18 | 391.75 | 753.74 | 391.74 | 754.07 | 391.72 | 756.98 | 391.62 | 757.98 | 391.64 |
| 760.76 | 391.72 | 761.37 | 391.75 | 772.16 | 391.73 | 773.76 | 391.67 | 776.01 | 391.59 |
| 776.39 | 391.56 | 777.6 | 391.54 | 778.25 | 391.54 | 778.51 | 391.53 | 778.96 | 391.54 |
| 780.06 | 391.58 | 780.33 | 391.6 | 780.59 | 391.6 | 782.06 | 391.62 | 782.07 | 391.67 |
| 782.99 | 391.65 | 784.47 | 391.58 | 785.78 | 391.56 | 786.3 | 391.59 | 786.5 | 391.59 |
| 787.06 | 391.56 | 788.79 | 391.58 | 789.22 | 391.58 | 791.15 | 391.64 | 792.12 | 391.73 |
| 792.76 | 391.77 | 794.11 | 391.77 | 795.27 | 391.76 | 796.13 | 391.71 | 796.46 | 391.71 |
| 800.94 | 391.82 | 803.32 | 391.87 | 804.32 | 391.92 | 804.37 | 391.93 | 821.46 | 391.93 |
| 826.16 | 391.92 | 827.15 | 391.86 | 831.21 | 391.64 | 833.86 | 391.47 | 835.31 | 391.38 |
| 837.88 | 391.32 | 840.16 | 391.22 | 842.15 | 391.12 | 843.01 | 391.11 | 844.22 | 391.05 |
| 845.4 | 391.05 | 845.79 | 391.04 | 847.34 | 391.04 | 847.55 | 391.02 | 847.88 | 391.02 |
| 848.63 | 390.99 | 849.14 | 390.98 | 849.6 | 390.98 | 856.57 | 390.8 | 857.42 | 390.79 |
| 862.09 | 390.78 | 866.28 | 390.78 | 870.2 | 390.76 | 872.45 | 390.76 | 873.55 | 390.77 |
| 875.14 | 390.8 | 876.14 | 390.81 | 876.23 | 390.82 | 878.33 | 390.86 | 880.31 | 390.85 |
| 880.97 | 390.88 | 882.04 | 390.92 | 888.84 | 390.93 | 890.76 | 390.92 | 905.83 | 390.92 |
| 916.99 | 391.02 | 917.63 | 391.04 | 918.36 | 391.05 | 919.22 | 391.05 | 921.4 | 391 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 923.44 | 391.04 | 928.84 | 391.14 | 930.6 | 391.13 | 936.08 | 391.22 | 937.8 | 391.24 |
| 939.17 | 391.23 | 942.59 | 391.28 | 943.82 | 391.3 | 945.01 | 391.36 | 945.19 | 391.38 |
| 945.98 | 391.42 | 946.22 | 391.42 | 946.81 | 391.45 | 949.56 | 391.53 | 952.31 | 391.6 |
| 952.42 | 391.61 | 953.01 | 391.62 | 954.21 | 391.67 | 954.34 | 391.66 | 955.36 | 391.66 |
| 955.62 | 391.67 | 957.91 | 391.68 | 958.53 | 391.68 | 959.63 | 391.66 | 959.94 | 391.66 |
| 960.7 | 391.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 50.32 | .05 | 127.44 | .04 | 728.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 127.44 | 728.26 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8109.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 43.14 | 390.27 | 46.1 | 390.26 | 46.3 | 390.25 | 47.35 | 390.23 | 49.97 | 390.22 |
| 52.38 | 390.31 | 56.32 | 390.39 | 56.82 | 390.39 | 58.03 | 390.42 | 59.19 | 390.42 |
| 60.86 | 390.43 | 62.12 | 390.42 | 64.97 | 390.44 | 65.84 | 390.45 | 67.54 | 390.46 |
| 68.18 | 390.47 | 69.07 | 390.47 | 69.65 | 390.5 | 70.62 | 390.5 | 72.13 | 390.48 |
| 72.75 | 390.48 | 73.41 | 390.46 | 74.09 | 390.45 | 74.8 | 390.42 | 76.34 | 390.37 |
| 77.12 | 390.36 | 79.56 | 390.29 | 80.78 | 390.29 | 82.62 | 390.25 | 82.9 | 390.27 |
| 83.98 | 390.26 | 84.56 | 390.26 | 85.33 | 390.22 | 85.8 | 390.21 | 86.21 | 390.24 |
| 86.54 | 390.25 | 87.08 | 390.23 | 87.75 | 390.23 | 88.6 | 390.25 | 90.3 | 390.34 |
| 91.36 | 390.4 | 91.93 | 390.42 | 93.42 | 390.44 | 96.71 | 390.49 | 96.99 | 390.5 |
| 100.07 | 390.54 | 103.42 | 390.59 | 114.54 | 390.72 | 122.84 | 390.69 | 123.19 | 390.66 |
| 123.57 | 390.65 | 123.78 | 390.59 | 124.63 | 390.49 | 124.7 | 390.49 | 129.78 | 389.93 |
| 132.76 | 389.82 | 142.45 | 389.54 | 149.52 | 389.3 | 151.95 | 389.18 | 153.08 | 389.19 |
| 157.15 | 389.19 | 157.43 | 389.23 | 159.5 | 389.28 | 159.86 | 389.28 | 160.74 | 389.31 |
| 161.52 | 389.38 | 162.43 | 389.43 | 163.63 | 389.48 | 164.2 | 389.48 | 165.41 | 389.47 |
| 167.47 | 389.44 | 168.1 | 389.31 | 169.83 | 388.99 | 170.33 | 388.98 | 171.38 | 388.99 |
| 175.25 | 389.04 | 175.46 | 389.04 | 176.1 | 389.14 | 176.68 | 389.16 | 179.55 | 389.21 |
| 180.13 | 389.21 | 180.63 | 389.2 | 181.95 | 389.16 | 185.67 | 389.02 | 186.01 | 389 |
| 189.52 | 388.83 | 191.32 | 388.62 | 191.83 | 388.63 | 192.21 | 388.62 | 194.44 | 388.46 |
| 195.88 | 388.38 | 196.7 | 388.36 | 199.29 | 388.32 | 199.8 | 388.32 | 200.88 | 388.33 |
| 203.49 | 388.39 | 203.86 | 388.39 | 205.22 | 388.43 | 205.92 | 388.46 | 207.14 | 388.5 |
| 208.53 | 388.52 | 208.67 | 388.53 | 211.44 | 388.65 | 214.38 | 388.77 | 215.67 | 388.82 |
| 219.03 | 388.89 | 219.27 | 388.89 | 220.88 | 388.92 | 228.48 | 389.09 | 228.72 | 389.1 |
| 231.07 | 389.14 | 233.1 | 389.14 | 233.3 | 389.15 | 233.9 | 389.14 | 234.77 | 389.14 |
| 236.69 | 389.1 | 237.37 | 389.1 | 240.46 | 389.01 | 242.35 | 388.99 | 243.5 | 389 |
| 244.7 | 389.02 | 247.77 | 389.04 | 248.29 | 389.04 | 249.29 | 389.02 | 250.04 | 389 |
| 253.76 | 388.99 | 254.1 | 389.01 | 254.87 | 389.01 | 255.78 | 388.99 | 268.34 | 388.72 |
| 268.65 | 388.72 | 270.11 | 388.68 | 272.32 | 388.67 | 273.26 | 388.71 | 280.1 | 389.07 |
| 280.69 | 389.1 | 282.35 | 389.16 | 282.65 | 389.15 | 283.48 | 389.18 | 288.09 | 389.17 |
| 291.68 | 389.23 | 298.25 | 389.55 | 298.34 | 389.53 | 299.1 | 389.52 | 299.73 | 389.52 |
| 300.39 | 389.54 | 301.71 | 389.56 | 304.69 | 389.49 | 305.09 | 389.39 | 305.94 | 389.39 |
| 306.32 | 389.34 | 307.72 | 389.41 | 308.57 | 389.42 | 308.71 | 389.43 | 310.8 | 389.48 |
| 312.15 | 389.52 | 315.03 | 389.57 | 316.97 | 389.6 | 322.38 | 389.6 | 322.58 | 389.59 |
| 328.45 | 389.55 | 328.67 | 389.56 | 330.24 | 389.55 | 331.38 | 389.53 | 333.65 | 389.45 |
| 334.43 | 389.4 | 335.41 | 389.32 | 345.7 | 389.13 | 351.7 | 389.08 | 352.39 | 389.1 |
| 352.83 | 389.16 | 353.61 | 389.18 | 354.48 | 389.18 | 356.55 | 389.16 | 357.23 | 389.15 |
| 357.78 | 389.12 | 358.35 | 389.1 | 365.05 | 388.77 | 375.59 | 388.38 | 375.76 | 388.38 |
| 376.96 | 388.34 | 379.98 | 388.29 | 383.73 | 388.24 | 385.96 | 388.23 | 386.48 | 388.22 |
| 389.61 | 388.13 | 389.98 | 388.11 | 395.51 | 388.05 | 395.8 | 388.05 | 398.8 | 387.99 |
| 400.06 | 387.99 | 400.49 | 388 | 403.11 | 388.1 | 405.2 | 388.25 | 406.18 | 388.26 |
| 406.78 | 388.22 | 409.54 | 388.25 | 412.31 | 388.33 | 412.78 | 388.34 | 414.17 | 388.39 |
| 414.4 | 388.39 | 422.55 | 388.72 | 424.65 | 388.8 | 425.38 | 388.82 | 426.18 | 388.83 |
| 430.77 | 388.67 | 435.96 | 388.54 | 436.97 | 388.55 | 437.08 | 388.56 | 444.45 | 389.02 |
| 445.27 | 389.14 | 447.56 | 389.45 | 450.27 | 389.69 | 453.18 | 389.77 | 454.81 | 389.8 |
| 457.45 | 389.71 | 459.27 | 389.62 | 462.66 | 389.44 | 463.22 | 389.42 | 463.77 | 389.42 |
| 465.51 | 389.52 | 465.91 | 389.53 | 467.53 | 389.65 | 468.68 | 389.74 | 469.55 | 389.79 |
| 470.23 | 389.82 | 472.25 | 389.77 | 474.02 | 389.7 | 476.49 | 389.58 | 476.83 | 389.55 |
| 477.43 | 389.53 | 478.28 | 389.52 | 478.83 | 389.53 | 479.16 | 389.55 | 480 | 389.57 |
| 480.83 | 389.6 | 481.17 | 389.6 | 488.34 | 389.69 | 488.52 | 389.68 | 489.41 | 389.67 |
| 491.81 | 389.66 | 492.17 | 389.65 | 494.47 | 389.63 | 494.86 | 389.64 | 495.32 | 389.64 |
| 497.68 | 389.74 | 498.21 | 389.76 | 501.31 | 389.86 | 502.09 | 389.89 | 502.6 | 389.92 |
| 505.5 | 390.02 | 508.16 | 390.09 | 510.99 | 390.17 | 514.81 | 390.18 | 516.12 | 390.2 |
| 516.52 | 390.2 | 517.16 | 390.18 | 517.85 | 390.18 | 518.13 | 390.17 | 521.82 | 390.13 |
| 526.2 | 390.11 | 526.59 | 390.12 | 527.27 | 390.12 | 529.25 | 390.11 | 532.37 | 390.08 |
| 532.83 | 390.07 | 533.97 | 390.07 | 534.74 | 390.05 | 535.43 | 390.04 | 536.4 | 390.04 |
| 538.64 | 390.09 | 539.19 | 390.12 | 543.1 | 390.2 | 543.8 | 390.25 | 545.59 | 390.34 |
| 547.08 | 390.46 | 547.72 | 390.52 | 548.42 | 390.55 | 548.58 | 390.55 | 549.18 | 390.6 |
| 550.85 | 390.64 | 551.22 | 390.64 | 551.31 | 390.62 | 551.79 | 390.61 | 552.25 | 390.58 |
| 552.7 | 390.57 | 553.69 | 390.59 | 556.87 | 390.46 | 560.53 | 390.34 | 565.32 | 390.07 |
| 566.96 | 389.97 | 567.97 | 389.9 | 569.67 | 389.9 | 571.87 | 390.07 | 576.16 | 390.37 |
| 578.26 | 390.43 | 578.84 | 390.46 | 580.29 | 390.49 | 585.11 | 390.55 | 587.81 | 390.56 |
| 589.06 | 390.51 | 592.26 | 390.59 | 593.22 | 390.62 | 598.24 | 390.62 | 600.16 | 390.65 |
| 601.17 | 390.66 | 604.32 | 390.66 | 606.46 | 390.63 | 607.46 | 390.59 | 608.12 | 390.54 |
| 608.4 | 390.51 | 609.48 | 390.43 | 610.19 | 390.4 | 611.11 | 390.35 | 613.7 | 390.15 |
| 614.32 | 390.1 | 615.1 | 390.01 | 617.05 | 390.04 | 618.43 | 390.05 | 619.02 | 390.05 |
| 620.23 | 390.06 | 623.38 | 390.05 | 624.88 | 390.05 | 625.8 | 390.04 | 626.28 | 390.06 |
| 634.11 | 390.18 | 638.69 | 390.23 | 639.78 | 390.25 | 641.63 | 390.3 | 641.94 | 390.32 |
| 643.55 | 390.37 | 643.92 | 390.37 | 646.43 | 390.35 | 647.09 | 390.34 | 648.36 | 390.3 |
| 650.03 | 390.28 | 650.57 | 390.29 | 653.31 | 390.27 | 660.07 | 390.26 | 664.27 | 390.23 |
| 665.1 | 390.22 | 668 | 390.15 | 669.35 | 390.15 | 670.69 | 390.12 | 671.65 | 390.08 |
| 673.55 | 390.02 | 674.6 | 390 | 675.02 | 390.03 | 675.15 | 390.07 | 676.17 | 390.11 |
| 676.9 | 390.12 | 677.48 | 390.15 | 677.76 | 390.25 | 685.16 | 390.18 | 685.51 | 390.18 |
| 686.86 | 390.13 | 688.62 | 390.07 | 689.52 | 390.06 | 689.73 | 390.07 | 691.66 | 390.1 |
| 692.29 | 390.1 | 697.66 | 390.06 | 699.96 | 390.01 | 701.81 | 390 | 703 | 390 |
| 708.39 | 390.14 | 708.49 | 390.13 | 709.11 | 390.14 | 709.83 | 390.17 | 710.85 | 390.23 |
| 711.4 | 390.32 | 712.43 | 390.43 | 712.76 | 390.52 | 720.05 | 390.87 | 723.6 | 391.01 |
| 723.9 | 391.02 | 727.41 | 391.16 | 729.36 | 391.24 | 734.64 | 391.19 | 734.96 | 391.19 |
| 736.9 | 391.15 | 737.42 | 391.12 | 738.01 | 391.04 | 744.26 | 390.98 | 746.34 | 390.91 |
| 746.93 | 390.91 | 747.28 | 390.89 | 750.35 | 390.78 | 751.41 | 390.8 | 752.52 | 390.84 |
| 754.34 | 390.89 | 754.99 | 390.93 | 766.37 | 390.91 | 770.42 | 390.74 | 770.83 | 390.71 |
| 772.1 | 390.69 | 772.27 | 390.68 | 773.54 | 390.68 | 774.7 | 390.72 | 774.98 | 390.74 |
| 776.8 | 390.74 | 776.82 | 390.78 | 777.75 | 390.76 | 777.79 | 390.75 | 778.5 | 390.72 |
| 779.35 | 390.67 | 779.97 | 390.66 | 780.73 | 390.66 | 781.49 | 390.68 | 782.09 | 390.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 782.96 | 390.66 | 783.91 | 390.67 | 784.36 | 390.68 | 786.48 | 390.76 | 787.42 | 390.85 |
| 788.1 | 390.9 | 789.52 | 390.9 | 790.74 | 390.89 | 791.65 | 390.83 | 791.99 | 390.83 |
| 796.72 | 390.96 | 799.24 | 391.01 | 800.29 | 391.07 | 800.34 | 391.08 | 801.68 | 391.08 |
| 802.58 | 391.09 | 818.37 | 391.08 | 823.32 | 391.07 | 824.38 | 391.02 | 828.65 | 390.83 |
| 832.97 | 390.6 | 835.69 | 390.55 | 838.1 | 390.46 | 840.19 | 390.36 | 841.1 | 390.36 |
| 841.47 | 390.35 | 842.38 | 390.31 | 842.61 | 390.32 | 843.03 | 390.31 | 843.36 | 390.32 |
| 843.62 | 390.31 | 844.17 | 390.31 | 844.9 | 390.3 | 845.12 | 390.32 | 845.67 | 390.31 |
| 846.24 | 390.29 | 848.05 | 390.24 | 855.41 | 390.06 | 856.3 | 390.04 | 861.22 | 390 |
| 865.64 | 389.98 | 869.78 | 389.94 | 872.15 | 389.93 | 873.31 | 389.93 | 876.05 | 389.96 |
| 876.14 | 389.97 | 878.36 | 390 | 880.45 | 390 | 881.14 | 390.02 | 882.27 | 390.08 |
| 901.72 | 390.08 | 903.1 | 390.07 | 907.37 | 390.07 | 919.14 | 390.19 | 919.82 | 390.21 |
| 920.88 | 390.22 | 921.49 | 390.21 | 923.79 | 390.15 | 925.94 | 390.17 | 931.64 | 390.26 |
| 933.49 | 390.25 | 939.28 | 390.33 | 941.08 | 390.35 | 942.53 | 390.34 | 943.33 | 390.34 |
| 947.44 | 390.4 | 948.69 | 390.46 | 948.88 | 390.48 | 949.71 | 390.52 | 950.6 | 390.55 |
| 950.97 | 390.57 | 953.13 | 390.63 | 953.49 | 390.65 | 954.76 | 390.68 | 955.92 | 390.72 |
| 956.51 | 390.73 | 957.62 | 390.78 | 958.4 | 390.81 | 958.53 | 390.8 | 959.43 | 390.8 |
| 959.89 | 390.81 | 962.3 | 390.83 | 962.91 | 390.82 | 963.47 | 390.82 | 964.45 | 390.81 |
| 965.25 | 390.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 43.14 | .05 | 129.78 | .04 | 720.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 129.78 | 720.05 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8061.11*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 35.95 | 389.63 | 38.87 | 389.61 | 40.62 | 389.58 | 43.77 | 389.57 | 43.88 | 389.58 |
| 46.2 | 389.66 | 52.48 | 389.79 | 53.76 | 389.79 | 55.62 | 389.8 | 57.02 | 389.79 |
| 60.18 | 389.81 | 61.15 | 389.82 | 63.03 | 389.83 | 64.06 | 389.84 | 65.17 | 389.86 |
| 65.75 | 389.88 | 66.33 | 389.88 | 66.45 | 389.87 | 67.35 | 389.87 | 68.13 | 389.85 |
| 68.82 | 389.85 | 69.55 | 389.83 | 70.31 | 389.82 | 70.68 | 389.8 | 71.1 | 389.79 |
| 71.77 | 389.76 | 72.81 | 389.74 | 72.96 | 389.73 | 73.99 | 389.71 | 76.38 | 389.65 |
| 77.74 | 389.64 | 79.77 | 389.6 | 79.96 | 389.59 | 80.08 | 389.63 | 81.28 | 389.61 |
| 81.93 | 389.61 | 82.78 | 389.56 | 83.3 | 389.55 | 84.12 | 389.6 | 84.72 | 389.58 |
| 85.87 | 389.58 | 86.41 | 389.6 | 87.22 | 389.64 | 88.3 | 389.7 | 89.47 | 389.77 |
| 90.11 | 389.79 | 91.76 | 389.82 | 95.42 | 389.88 | 95.72 | 389.89 | 99.15 | 389.94 |
| 106.52 | 390.04 | 106.64 | 390.04 | 115.2 | 390.16 | 124.42 | 390.13 | 125.23 | 390.09 |
| 125.46 | 390.02 | 126.48 | 389.9 | 132.12 | 389.28 | 135.14 | 389.17 | 144.93 | 388.9 |
| 152.08 | 388.68 | 153.48 | 388.62 | 154.1 | 388.58 | 154.74 | 388.57 | 155.68 | 388.58 |
| 157.22 | 388.57 | 158.22 | 388.57 | 159.13 | 388.56 | 159.79 | 388.57 | 160.08 | 388.6 |
| 160.45 | 388.6 | 162.17 | 388.63 | 163.42 | 388.66 | 163.79 | 388.68 | 164.21 | 388.72 |
| 166.34 | 388.81 | 166.92 | 388.81 | 170.23 | 388.78 | 170.45 | 388.76 | 170.87 | 388.68 |
| 172.61 | 388.41 | 173.12 | 388.41 | 174.19 | 388.42 | 178.09 | 388.47 | 178.31 | 388.47 |
| 178.95 | 388.56 | 179.54 | 388.58 | 182.44 | 388.62 | 182.62 | 388.61 | 183.53 | 388.6 |
| 184.86 | 388.56 | 188.63 | 388.4 | 188.97 | 388.38 | 192.52 | 388.19 | 194.34 | 387.96 |
| 194.86 | 387.97 | 195.24 | 387.96 | 197.5 | 387.79 | 198.95 | 387.69 | 199.78 | 387.67 |
| 202.4 | 387.64 | 202.92 | 387.64 | 204 | 387.65 | 204.81 | 387.68 | 207.01 | 387.73 |
| 208.4 | 387.78 | 209.1 | 387.8 | 210.34 | 387.85 | 211.74 | 387.87 | 211.88 | 387.88 |
| 214.68 | 388 | 217.65 | 388.13 | 218.96 | 388.18 | 222.35 | 388.25 | 222.6 | 388.26 |
| 224.22 | 388.29 | 231.9 | 388.47 | 232.15 | 388.47 | 233.29 | 388.5 | 235.35 | 388.52 |
| 236.58 | 388.52 | 236.79 | 388.53 | 237.39 | 388.52 | 238.81 | 388.52 | 240.2 | 388.5 |
| 240.89 | 388.5 | 242.66 | 388.45 | 244.02 | 388.43 | 245.93 | 388.41 | 247.09 | 388.42 |
| 248.31 | 388.44 | 251.41 | 388.46 | 252.94 | 388.43 | 253.71 | 388.41 | 257.01 | 388.39 |
| 257.46 | 388.39 | 258.02 | 388.42 | 258.59 | 388.42 | 259.51 | 388.4 | 272.21 | 388.11 |
| 272.52 | 388.11 | 273.99 | 388.07 | 276.23 | 388.06 | 277.18 | 388.11 | 284.1 | 388.51 |
| 286.37 | 388.62 | 286.67 | 388.61 | 287.51 | 388.65 | 292.18 | 388.64 | 295.81 | 388.69 |
| 302.45 | 388.96 | 302.54 | 388.94 | 303.31 | 388.91 | 303.94 | 388.9 | 305.95 | 388.93 |
| 308.95 | 388.84 | 309.37 | 388.76 | 309.9 | 388.76 | 310.22 | 388.75 | 310.6 | 388.69 |
| 312.02 | 388.75 | 312.88 | 388.77 | 313.85 | 388.81 | 315.14 | 388.84 | 315.85 | 388.87 |
| 319.41 | 388.96 | 321.37 | 389 | 325.24 | 389 | 327.05 | 388.99 | 332.98 | 388.92 |
| 333.2 | 388.93 | 334.79 | 388.92 | 335.94 | 388.89 | 338.24 | 388.81 | 339.03 | 388.77 |
| 340.01 | 388.7 | 350.42 | 388.49 | 355.28 | 388.44 | 356.83 | 388.43 | 357.18 | 388.44 |
| 357.63 | 388.49 | 358.42 | 388.5 | 361.39 | 388.47 | 362.07 | 388.46 | 362.63 | 388.43 |
| 363.2 | 388.41 | 369.98 | 388.05 | 380.64 | 387.65 | 380.81 | 387.65 | 382.03 | 387.61 |
| 385.08 | 387.57 | 388.87 | 387.53 | 391.12 | 387.52 | 391.65 | 387.51 | 395.19 | 387.42 |
| 400.78 | 387.36 | 401.07 | 387.36 | 404.1 | 387.3 | 405.54 | 387.3 | 405.96 | 387.31 |
| 408.46 | 387.4 | 410.47 | 387.53 | 411.19 | 387.54 | 411.98 | 387.51 | 414.61 | 387.54 |
| 417.27 | 387.61 | 419.05 | 387.65 | 419.26 | 387.66 | 427.07 | 387.98 | 429.08 | 388.06 |
| 429.78 | 388.08 | 430.55 | 388.09 | 434.94 | 387.99 | 439.91 | 387.9 | 440.29 | 387.9 |
| 440.98 | 387.93 | 448.03 | 388.35 | 448.82 | 388.48 | 451.01 | 388.8 | 453.61 | 389.08 |
| 456.39 | 389.16 | 457.95 | 389.2 | 460.48 | 389.14 | 462.22 | 389.07 | 465.28 | 388.93 |
| 466 | 388.9 | 466.53 | 388.91 | 468.58 | 389.01 | 470.13 | 389.11 | 471.23 | 389.2 |
| 471.72 | 389.23 | 472.06 | 389.26 | 472.57 | 389.28 | 473.18 | 389.28 | 474.65 | 389.24 |
| 476.34 | 389.17 | 478.7 | 389.06 | 479.03 | 389.03 | 479.6 | 389.01 | 480.42 | 389 |
| 480.94 | 389 | 481.26 | 389.02 | 482.86 | 389.04 | 483.18 | 389.05 | 490.21 | 389.07 |
| 491.08 | 389.04 | 493.37 | 389 | 493.71 | 388.99 | 495.92 | 388.94 | 496.73 | 388.94 |
| 499.5 | 389.05 | 502.46 | 389.14 | 503.2 | 389.17 | 503.69 | 389.2 | 506.47 | 389.31 |
| 506.53 | 389.31 | 509.02 | 389.39 | 511.73 | 389.47 | 515.38 | 389.48 | 516.64 | 389.5 |
| 517.02 | 389.5 | 517.64 | 389.48 | 518.56 | 389.46 | 522.09 | 389.41 | 526.29 | 389.37 |
| 527.31 | 389.37 | 529.21 | 389.36 | 532.19 | 389.32 | 533 | 389.31 | 533.72 | 389.31 |
| 534.46 | 389.29 | 535.12 | 389.28 | 536.05 | 389.28 | 537.84 | 389.32 | 538.2 | 389.32 |
| 538.72 | 389.35 | 542.47 | 389.43 | 542.59 | 389.43 | 543.13 | 389.47 | 544.85 | 389.57 |
| 546.64 | 389.75 | 547.56 | 389.8 | 547.71 | 389.8 | 548.28 | 389.84 | 549.89 | 389.89 |
| 550.96 | 389.87 | 551.23 | 389.85 | 552.6 | 389.86 | 555.65 | 389.76 | 555.97 | 389.76 |
| 559.15 | 389.67 | 559.32 | 389.66 | 562.2 | 389.53 | 565.31 | 389.37 | 566.27 | 389.31 |
| 567.9 | 389.32 | 570.01 | 389.46 | 574.11 | 389.71 | 576.12 | 389.76 | 576.68 | 389.79 |
| 578.07 | 389.81 | 582.68 | 389.84 | 585.27 | 389.82 | 586.46 | 389.75 | 589.52 | 389.83 |
| 590.44 | 389.85 | 595.24 | 389.85 | 597.09 | 389.89 | 598.05 | 389.9 | 601.06 | 389.9 |
| 603.11 | 389.87 | 604.3 | 389.81 | 605.39 | 389.73 | 606.01 | 389.68 | 606.69 | 389.66 |
| 607.57 | 389.62 | 610.05 | 389.46 | 610.64 | 389.42 | 611.39 | 389.34 | 613.25 | 389.37 |
| 615.14 | 389.37 | 616.29 | 389.39 | 619.31 | 389.39 | 620.75 | 389.4 | 621.63 | 389.4 |
| 622.09 | 389.41 | 629.59 | 389.54 | 633.97 | 389.59 | 636.46 | 389.64 | 637.08 | 389.67 |
| 638.62 | 389.71 | 638.97 | 389.71 | 641.38 | 389.69 | 642.01 | 389.68 | 643.22 | 389.63 |
| 644.82 | 389.61 | 645.34 | 389.61 | 647.96 | 389.59 | 654.44 | 389.59 | 658.45 | 389.55 |
| 659.25 | 389.54 | 662.02 | 389.46 | 663.32 | 389.46 | 664.6 | 389.43 | 665.51 | 389.4 |
| 667.33 | 389.35 | 668.34 | 389.33 | 668.75 | 389.36 | 668.87 | 389.4 | 669.84 | 389.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 670.54 | 389.46 | 671.1 | 389.5 | 671.37 | 389.61 | 678.45 | 389.57 | 679.33 | 389.55 |
| 680.08 | 389.52 | 681.26 | 389.48 | 682.63 | 389.45 | 682.83 | 389.45 | 684.67 | 389.48 |
| 685.27 | 389.48 | 690.41 | 389.42 | 692.62 | 389.37 | 694.39 | 389.35 | 695.28 | 389.33 |
| 695.52 | 389.33 | 700.69 | 389.45 | 701.13 | 389.44 | 702.07 | 389.47 | 703.04 | 389.52 |
| 703.57 | 389.62 | 704.55 | 389.74 | 704.87 | 389.83 | 711.85 | 390.14 | 715.58 | 390.25 |
| 715.89 | 390.25 | 719.59 | 390.36 | 721.64 | 390.41 | 727.2 | 390.36 | 727.54 | 390.36 |
| 729.57 | 390.32 | 730.12 | 390.29 | 730.74 | 390.2 | 737.32 | 390.15 | 739.51 | 390.08 |
| 740.24 | 390.07 | 740.49 | 390.05 | 743.73 | 389.94 | 744.84 | 389.96 | 746 | 390.01 |
| 747.92 | 390.07 | 748.4 | 390.09 | 748.6 | 390.11 | 760.57 | 390.09 | 762.34 | 390.01 |
| 764.84 | 389.9 | 765.26 | 389.86 | 766.61 | 389.83 | 767.33 | 389.83 | 767.62 | 389.82 |
| 769.07 | 389.85 | 769.63 | 389.88 | 769.92 | 389.88 | 771.55 | 389.86 | 771.57 | 389.9 |
| 772.59 | 389.86 | 774.23 | 389.77 | 775.68 | 389.75 | 776.26 | 389.78 | 776.48 | 389.78 |
| 777.11 | 389.75 | 779.02 | 389.77 | 779.5 | 389.78 | 781.21 | 389.84 | 781.65 | 389.86 |
| 782.72 | 389.97 | 783.27 | 390.02 | 783.68 | 390.03 | 784.93 | 390.03 | 786.22 | 390.02 |
| 787.17 | 389.95 | 787.53 | 389.95 | 792.5 | 390.1 | 795.15 | 390.16 | 796.26 | 390.23 |
| 797.72 | 390.23 | 798.67 | 390.24 | 815.28 | 390.23 | 820.7 | 390.22 | 821.6 | 390.18 |
| 826.09 | 390.02 | 829.04 | 389.9 | 830.09 | 389.86 | 830.64 | 389.83 | 833.5 | 389.79 |
| 836.03 | 389.7 | 838.24 | 389.6 | 839.19 | 389.61 | 840.53 | 389.58 | 842.42 | 389.58 |
| 843.19 | 389.57 | 843.42 | 389.59 | 844.1 | 389.58 | 844.35 | 389.56 | 844.59 | 389.56 |
| 845.43 | 389.54 | 845.99 | 389.52 | 846.5 | 389.51 | 854.24 | 389.31 | 855.18 | 389.29 |
| 860.36 | 389.23 | 865.01 | 389.18 | 869.36 | 389.12 | 871.86 | 389.09 | 873.08 | 389.09 |
| 874.85 | 389.1 | 875.96 | 389.11 | 876.05 | 389.12 | 878.39 | 389.14 | 880.58 | 389.14 |
| 881.31 | 389.17 | 882.5 | 389.23 | 908.9 | 389.23 | 921.29 | 389.36 | 922.8 | 389.38 |
| 923.76 | 389.37 | 926.18 | 389.29 | 928.44 | 389.31 | 934.43 | 389.38 | 936.38 | 389.38 |
| 942.47 | 389.44 | 944.37 | 389.45 | 945.89 | 389.44 | 949.7 | 389.48 | 951.06 | 389.5 |
| 952.38 | 389.56 | 952.58 | 389.58 | 953.45 | 389.62 | 954.38 | 389.65 | 954.77 | 389.67 |
| 957.04 | 389.75 | 957.42 | 389.76 | 958.76 | 389.81 | 959.98 | 389.84 | 960.6 | 389.86 |
| 961.76 | 389.91 | 962.59 | 389.95 | 962.73 | 389.94 | 963.22 | 389.94 | 963.67 | 389.95 |
| 964.15 | 389.95 | 966.69 | 389.97 | 967.67 | 389.97 | 967.92 | 389.96 | 968.6 | 389.96 |
| 969.79 | 389.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 35.95 | .05 | 132.12 | .04 | 711.85 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 132.12 | 711.85 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 8013.19*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 28.76 | 388.99 | 28.97 | 388.99 | 31.98 | 388.96 | 32.62 | 388.96 | 33.89 | 388.93 |
| 34.09 | 388.92 | 37.1 | 388.91 | 37.47 | 388.93 | 39.69 | 389 | 40.03 | 389.02 |
| 44.84 | 389.12 | 46.93 | 389.16 | 48.34 | 389.16 | 50.38 | 389.17 | 51.91 | 389.16 |
| 55.4 | 389.18 | 58.53 | 389.21 | 59.65 | 389.21 | 60.88 | 389.23 | 61.1 | 389.25 |
| 62.15 | 389.26 | 62.28 | 389.25 | 63.28 | 389.24 | 64.13 | 389.22 | 64.89 | 389.22 |
| 65.69 | 389.21 | 66.52 | 389.19 | 66.74 | 389.17 | 67.39 | 389.16 | 68.13 | 389.13 |
| 69.27 | 389.1 | 69.44 | 389.1 | 73.2 | 389 | 74.69 | 388.99 | 76.92 | 388.95 |
| 77.13 | 388.94 | 77.27 | 388.98 | 78.59 | 388.97 | 78.75 | 388.96 | 79.3 | 388.97 |
| 80.09 | 388.91 | 80.8 | 388.89 | 81.31 | 388.93 | 81.71 | 388.94 | 82.37 | 388.92 |
| 83.19 | 388.92 | 83.82 | 388.93 | 85.12 | 388.99 | 86.3 | 389.06 | 86.66 | 389.09 |
| 87.59 | 389.14 | 88.29 | 389.16 | 90.1 | 389.19 | 94.12 | 389.26 | 94.46 | 389.28 |
| 98.22 | 389.34 | 106.32 | 389.46 | 106.46 | 389.46 | 115.87 | 389.6 | 126 | 389.57 |
| 126.89 | 389.52 | 127.14 | 389.45 | 128.26 | 389.32 | 134.47 | 388.62 | 137.51 | 388.53 |
| 147.41 | 388.27 | 154.64 | 388.05 | 156.06 | 388 | 156.68 | 387.97 | 157.12 | 387.96 |
| 158.27 | 387.96 | 159.84 | 387.94 | 162.44 | 387.94 | 163.1 | 387.97 | 164.84 | 387.99 |
| 165.2 | 387.99 | 166.1 | 388.01 | 166.9 | 388.06 | 167.83 | 388.1 | 169.06 | 388.14 |
| 169.64 | 388.15 | 170.88 | 388.14 | 172.99 | 388.13 | 173.63 | 388.05 | 175.39 | 387.84 |
| 175.91 | 387.84 | 176.99 | 387.85 | 180.94 | 387.9 | 181.15 | 387.91 | 181.8 | 387.98 |
| 182.4 | 387.99 | 185.33 | 388.02 | 185.92 | 388.02 | 186.43 | 388 | 187.78 | 387.96 |
| 191.59 | 387.79 | 191.93 | 387.76 | 195.52 | 387.55 | 197.36 | 387.29 | 198.27 | 387.3 |
| 200.55 | 387.11 | 202.02 | 387 | 202.86 | 386.98 | 205.51 | 386.95 | 206.03 | 386.96 |
| 207.13 | 386.97 | 207.95 | 387 | 210.17 | 387.07 | 212.2 | 387.14 | 212.28 | 387.15 |
| 213.53 | 387.2 | 214.95 | 387.22 | 215.09 | 387.23 | 217.92 | 387.35 | 220.92 | 387.49 |
| 222.25 | 387.55 | 225.68 | 387.62 | 225.93 | 387.62 | 227.57 | 387.66 | 235.33 | 387.84 |
| 235.58 | 387.84 | 236.73 | 387.87 | 237.99 | 387.89 | 238.82 | 387.89 | 239.27 | 387.9 |
| 240.88 | 387.9 | 241.76 | 387.91 | 242.32 | 387.9 | 243.72 | 387.89 | 244.18 | 387.9 |
| 246.21 | 387.86 | 247.58 | 387.84 | 249.52 | 387.83 | 250.69 | 387.84 | 251.92 | 387.86 |
| 255.05 | 387.87 | 255.58 | 387.87 | 257.37 | 387.82 | 260.71 | 387.8 | 261.17 | 387.8 |
| 261.74 | 387.83 | 262.31 | 387.83 | 263.24 | 387.81 | 276.08 | 387.5 | 276.4 | 387.5 |
| 277.88 | 387.46 | 280.14 | 387.45 | 281.11 | 387.5 | 288.7 | 387.99 | 290.4 | 388.08 |
| 290.7 | 388.08 | 291.54 | 388.12 | 296.26 | 388.11 | 299.93 | 388.15 | 306.64 | 388.36 |
| 306.74 | 388.34 | 307.52 | 388.3 | 308.16 | 388.28 | 308.83 | 388.29 | 310.18 | 388.29 |
| 313.22 | 388.2 | 313.64 | 388.13 | 314.18 | 388.12 | 314.5 | 388.1 | 314.89 | 388.04 |
| 316.32 | 388.1 | 317.19 | 388.11 | 317.33 | 388.13 | 318.17 | 388.16 | 319.47 | 388.2 |
| 320.85 | 388.27 | 321.4 | 388.28 | 323.79 | 388.35 | 325.77 | 388.39 | 325.87 | 388.4 |
| 329.68 | 388.4 | 331.3 | 388.39 | 331.51 | 388.38 | 337.51 | 388.3 | 339.34 | 388.28 |
| 340.5 | 388.26 | 342.83 | 388.18 | 343.62 | 388.14 | 344.62 | 388.08 | 355.14 | 387.86 |
| 360.06 | 387.79 | 361.27 | 387.77 | 361.97 | 387.78 | 362.43 | 387.81 | 363.22 | 387.82 |
| 364.11 | 387.81 | 366.92 | 387.77 | 368.06 | 387.71 | 374.91 | 387.34 | 385.69 | 386.92 |
| 385.86 | 386.92 | 387.09 | 386.89 | 390.18 | 386.84 | 394.01 | 386.81 | 396.29 | 386.81 |
| 400.02 | 386.73 | 400.39 | 386.73 | 402.27 | 386.71 | 406.04 | 386.68 | 406.34 | 386.67 |
| 409.41 | 386.62 | 411.42 | 386.62 | 413.81 | 386.7 | 415.73 | 386.81 | 416.62 | 386.81 |
| 417.17 | 386.79 | 419.69 | 386.82 | 423.92 | 386.92 | 424.13 | 386.93 | 431.59 | 387.24 |
| 433.51 | 387.31 | 434.18 | 387.34 | 434.91 | 387.35 | 439.11 | 387.3 | 443.85 | 387.27 |
| 444.77 | 387.28 | 444.88 | 387.29 | 451.61 | 387.68 | 452.24 | 387.79 | 452.36 | 387.82 |
| 454.46 | 388.15 | 456.94 | 388.46 | 459.6 | 388.56 | 461.1 | 388.6 | 463.51 | 388.57 |
| 465.17 | 388.52 | 468.1 | 388.41 | 468.78 | 388.39 | 469.29 | 388.4 | 470.88 | 388.47 |
| 471.25 | 388.48 | 472.72 | 388.58 | 474.25 | 388.7 | 475.06 | 388.75 | 475.64 | 388.75 |
| 477.04 | 388.71 | 477.93 | 388.68 | 478.66 | 388.64 | 480.51 | 388.55 | 480.92 | 388.54 |
| 481.32 | 388.51 | 481.77 | 388.49 | 483.01 | 388.48 | 483.36 | 388.49 | 485.19 | 388.49 |
| 491.75 | 388.46 | 491.91 | 388.45 | 494.93 | 388.34 | 495.26 | 388.32 | 497.36 | 388.24 |
| 498.14 | 388.23 | 500.3 | 388.32 | 500.78 | 388.33 | 503.61 | 388.42 | 504.32 | 388.45 |
| 504.79 | 388.49 | 507.45 | 388.6 | 509.88 | 388.69 | 512.47 | 388.78 | 515.96 | 388.79 |
| 517.52 | 388.8 | 518.11 | 388.78 | 522.37 | 388.69 | 526.38 | 388.63 | 527.35 | 388.63 |
| 529.17 | 388.61 | 533.48 | 388.55 | 533.85 | 388.55 | 534.18 | 388.53 | 534.82 | 388.52 |
| 535.7 | 388.52 | 537.41 | 388.55 | 538.25 | 388.58 | 541.83 | 388.65 | 541.95 | 388.65 |
| 542.47 | 388.7 | 544.11 | 388.81 | 545.13 | 388.92 | 545.82 | 389 | 546.7 | 389.04 |
| 547.39 | 389.09 | 549.26 | 389.15 | 549.78 | 389.14 | 550.2 | 389.12 | 550.61 | 389.12 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 551.51 | 389.14 | 554.42 | 389.07 | 554.73 | 389.06 | 557.77 | 389 | 557.93 | 389 |
| 560.69 | 388.9 | 562.15 | 388.84 | 564.57 | 388.73 | 566.13 | 388.73 | 568.14 | 388.85 |
| 572.06 | 389.05 | 573.98 | 389.09 | 574.51 | 389.12 | 575.84 | 389.13 | 580.25 | 389.13 |
| 582.72 | 389.09 | 583.86 | 389 | 586.79 | 389.06 | 587.66 | 389.08 | 592.25 | 389.08 |
| 594.01 | 389.13 | 597.81 | 389.13 | 599.77 | 389.1 | 600.9 | 389.05 | 601.54 | 389 |
| 601.94 | 388.98 | 602.54 | 388.93 | 604.02 | 388.9 | 606.96 | 388.74 | 607.67 | 388.67 |
| 609.45 | 388.69 | 610.71 | 388.7 | 611.26 | 388.7 | 612.36 | 388.72 | 615.25 | 388.74 |
| 616.62 | 388.76 | 617.46 | 388.76 | 617.9 | 388.77 | 625.06 | 388.9 | 629.24 | 388.95 |
| 630.24 | 388.96 | 631.62 | 389 | 632.21 | 389.01 | 633.69 | 389.05 | 634.03 | 389.05 |
| 636.33 | 389.03 | 636.93 | 389.01 | 638.08 | 388.96 | 639.61 | 388.94 | 640.11 | 388.93 |
| 642.61 | 388.92 | 648.8 | 388.91 | 652.64 | 388.87 | 653.4 | 388.85 | 656.04 | 388.77 |
| 657.28 | 388.77 | 661.12 | 388.68 | 662.1 | 388.67 | 662.3 | 388.68 | 662.59 | 388.72 |
| 663.05 | 388.75 | 664.19 | 388.8 | 664.72 | 388.84 | 664.97 | 388.98 | 671.74 | 388.95 |
| 672.58 | 388.94 | 673.29 | 388.91 | 674.43 | 388.87 | 675.73 | 388.84 | 677.68 | 388.86 |
| 678.26 | 388.86 | 683.17 | 388.78 | 685.27 | 388.72 | 686.97 | 388.69 | 688.05 | 388.66 |
| 692.98 | 388.76 | 693.07 | 388.75 | 693.64 | 388.75 | 694.3 | 388.77 | 695.24 | 388.82 |
| 695.74 | 388.92 | 696.67 | 389.04 | 696.98 | 389.14 | 703.65 | 389.4 | 707.56 | 389.48 |
| 707.89 | 389.48 | 713.92 | 389.59 | 718.59 | 389.54 | 720.11 | 389.53 | 722.25 | 389.49 |
| 722.82 | 389.46 | 723.47 | 389.36 | 730.38 | 389.31 | 732.67 | 389.25 | 733.32 | 389.24 |
| 733.71 | 389.22 | 737.1 | 389.09 | 738.27 | 389.12 | 739.49 | 389.17 | 741.5 | 389.24 |
| 742.22 | 389.28 | 754.78 | 389.28 | 756.63 | 389.18 | 759.26 | 389.06 | 759.7 | 389.01 |
| 762.17 | 388.96 | 763.7 | 388.99 | 764.29 | 389.02 | 764.59 | 389.02 | 766.3 | 388.98 |
| 766.32 | 389.01 | 767.39 | 388.97 | 768.17 | 388.93 | 769.11 | 388.87 | 769.8 | 388.85 |
| 770.63 | 388.84 | 771.24 | 388.88 | 771.47 | 388.88 | 772.13 | 388.84 | 773.1 | 388.85 |
| 774.14 | 388.87 | 774.64 | 388.87 | 776.43 | 388.95 | 776.94 | 388.96 | 776.99 | 388.98 |
| 778.02 | 389.09 | 778.6 | 389.14 | 779.03 | 389.16 | 780.34 | 389.16 | 781.69 | 389.14 |
| 782.69 | 389.07 | 783.07 | 389.07 | 788.29 | 389.23 | 791.06 | 389.3 | 792.23 | 389.38 |
| 792.28 | 389.39 | 794.76 | 389.39 | 812.19 | 389.38 | 817.65 | 389.38 | 818.82 | 389.34 |
| 823.54 | 389.21 | 826.63 | 389.11 | 828.31 | 389.06 | 831.3 | 389.03 | 833.97 | 388.94 |
| 836.28 | 388.84 | 837.28 | 388.86 | 837.69 | 388.85 | 838.37 | 388.85 | 838.69 | 388.84 |
| 839.41 | 388.84 | 840.06 | 388.85 | 840.52 | 388.84 | 840.67 | 388.85 | 841.48 | 388.84 |
| 841.65 | 388.86 | 842.95 | 388.84 | 844.42 | 388.79 | 844.95 | 388.78 | 853.08 | 388.56 |
| 854.06 | 388.54 | 859.5 | 388.45 | 864.37 | 388.38 | 868.94 | 388.29 | 871.56 | 388.26 |
| 872.84 | 388.25 | 874.7 | 388.25 | 878.41 | 388.28 | 880.72 | 388.28 | 882.73 | 388.39 |
| 890.65 | 388.39 | 892.89 | 388.38 | 910.44 | 388.38 | 923.43 | 388.53 | 925.02 | 388.55 |
| 925.36 | 388.55 | 926.02 | 388.53 | 928.57 | 388.43 | 930.94 | 388.44 | 937.23 | 388.5 |
| 939.28 | 388.5 | 945.66 | 388.55 | 947.66 | 388.56 | 949.26 | 388.55 | 950.14 | 388.55 |
| 953.25 | 388.58 | 954.68 | 388.6 | 956.06 | 388.66 | 956.27 | 388.68 | 958.4 | 388.77 |
| 958.58 | 388.78 | 960.95 | 388.86 | 961.35 | 388.88 | 962.76 | 388.93 | 964.69 | 388.99 |
| 965.38 | 389.03 | 966.31 | 389.06 | 966.78 | 389.09 | 966.92 | 389.08 | 967.43 | 389.08 |
| 968.42 | 389.1 | 971.08 | 389.12 | 971.8 | 389.12 | 972.1 | 389.11 | 973.45 | 389.1 |
| 974.33 | 389.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 28.76 | .05 | 134.47 | .04 | 703.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 134.47 | 703.65 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7965.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 21.57 | 388.34 | 21.8 | 388.34 | 25.08 | 388.31 | 25.77 | 388.31 | 27.17 | 388.28 |
| 27.38 | 388.27 | 30.94 | 388.26 | 31.07 | 388.27 | 33.49 | 388.36 | 33.86 | 388.37 |
| 39.1 | 388.48 | 41.38 | 388.52 | 42.92 | 388.53 | 45.14 | 388.54 | 46.33 | 388.53 |
| 46.81 | 388.52 | 50.61 | 388.55 | 54.02 | 388.58 | 55.25 | 388.58 | 56.06 | 388.59 |
| 56.83 | 388.62 | 57.28 | 388.63 | 57.97 | 388.63 | 58.12 | 388.62 | 59.2 | 388.62 |
| 60.13 | 388.59 | 60.96 | 388.59 | 61.35 | 388.58 | 61.83 | 388.58 | 62.74 | 388.56 |
| 64.49 | 388.49 | 65.74 | 388.46 | 65.92 | 388.46 | 70.02 | 388.36 | 71.64 | 388.35 |
| 74.08 | 388.3 | 74.3 | 388.29 | 74.45 | 388.33 | 74.92 | 388.33 | 75.89 | 388.32 |
| 76.67 | 388.32 | 77.68 | 388.25 | 78.11 | 388.23 | 79.29 | 388.29 | 80.01 | 388.27 |
| 81.39 | 388.27 | 83.01 | 388.35 | 84.3 | 388.42 | 84.69 | 388.45 | 85.7 | 388.51 |
| 86.46 | 388.54 | 88.45 | 388.57 | 92.83 | 388.65 | 93.19 | 388.66 | 97.3 | 388.73 |
| 101.75 | 388.81 | 106.13 | 388.87 | 106.28 | 388.87 | 116.53 | 389.04 | 127.58 | 389.02 |
| 128.55 | 388.96 | 128.82 | 388.88 | 136.81 | 387.97 | 139.89 | 387.88 | 149.89 | 387.63 |
| 157.2 | 387.43 | 159.26 | 387.36 | 159.92 | 387.34 | 160.87 | 387.34 | 162.45 | 387.32 |
| 163.47 | 387.32 | 164.4 | 387.31 | 165.08 | 387.31 | 165.37 | 387.33 | 167.88 | 387.34 |
| 168.79 | 387.35 | 169.47 | 387.39 | 169.59 | 387.39 | 170.53 | 387.43 | 171.77 | 387.47 |
| 171.81 | 387.48 | 175.75 | 387.48 | 176.4 | 387.42 | 178.18 | 387.27 | 178.7 | 387.27 |
| 179.34 | 387.28 | 179.79 | 387.28 | 183.78 | 387.34 | 184 | 387.34 | 184.66 | 387.4 |
| 185.26 | 387.41 | 188.22 | 387.43 | 188.68 | 387.43 | 188.82 | 387.42 | 189.69 | 387.4 |
| 190.7 | 387.36 | 194.55 | 387.17 | 194.89 | 387.15 | 198.52 | 386.91 | 200.38 | 386.63 |
| 201.3 | 386.64 | 203.61 | 386.43 | 205.09 | 386.31 | 205.94 | 386.29 | 208.62 | 386.27 |
| 209.15 | 386.27 | 210.04 | 386.28 | 212.95 | 386.39 | 213.33 | 386.4 | 215.46 | 386.49 |
| 216.73 | 386.54 | 217.37 | 386.55 | 218.16 | 386.57 | 218.3 | 386.58 | 221.17 | 386.71 |
| 224.2 | 386.85 | 225.54 | 386.91 | 229 | 386.99 | 229.26 | 386.99 | 238.76 | 387.22 |
| 239.01 | 387.22 | 240.18 | 387.25 | 242.29 | 387.27 | 242.74 | 387.27 | 244.37 | 387.29 |
| 247.95 | 387.29 | 248.3 | 387.28 | 251.14 | 387.26 | 253.1 | 387.25 | 254.28 | 387.26 |
| 255.53 | 387.28 | 258.7 | 387.29 | 259.23 | 387.28 | 261.04 | 387.23 | 264.41 | 387.2 |
| 264.88 | 387.2 | 265.02 | 387.22 | 265.45 | 387.24 | 266.03 | 387.24 | 266.97 | 387.22 |
| 279.95 | 386.89 | 280.27 | 386.89 | 281.77 | 386.84 | 284.06 | 386.84 | 285.03 | 386.9 |
| 292.09 | 387.4 | 292.7 | 387.44 | 294.42 | 387.54 | 294.72 | 387.54 | 295.58 | 387.59 |
| 300.35 | 387.58 | 304.05 | 387.62 | 310.84 | 387.77 | 310.94 | 387.75 | 311.72 | 387.69 |
| 312.37 | 387.66 | 313.05 | 387.67 | 314.42 | 387.66 | 317.48 | 387.55 | 317.91 | 387.5 |
| 318.46 | 387.48 | 318.79 | 387.46 | 319.17 | 387.39 | 320.62 | 387.44 | 321.5 | 387.46 |
| 322.49 | 387.51 | 323.81 | 387.56 | 324.53 | 387.61 | 325.76 | 387.66 | 328.18 | 387.74 |
| 330.18 | 387.79 | 330.7 | 387.8 | 334.13 | 387.8 | 335.76 | 387.78 | 335.98 | 387.78 |
| 342.04 | 387.67 | 342.26 | 387.67 | 343.89 | 387.65 | 345.06 | 387.62 | 347.41 | 387.55 |
| 348.22 | 387.52 | 349.23 | 387.46 | 359.86 | 387.22 | 366.06 | 387.12 | 366.76 | 387.12 |
| 367.22 | 387.14 | 368.03 | 387.14 | 368.92 | 387.13 | 371.06 | 387.09 | 371.76 | 387.07 |
| 372.92 | 387.01 | 379.84 | 386.62 | 390.74 | 386.19 | 390.91 | 386.19 | 392.15 | 386.16 |
| 395.27 | 386.12 | 399.14 | 386.1 | 401.45 | 386.09 | 401.99 | 386.09 | 405.22 | 386.04 |
| 405.6 | 386.03 | 406.69 | 386.02 | 407.49 | 386.02 | 411.31 | 385.99 | 411.61 | 385.98 |
| 414.71 | 385.93 | 416.5 | 385.93 | 419.17 | 386 | 420.99 | 386.08 | 421.84 | 386.09 |
| 422.37 | 386.08 | 424.77 | 386.1 | 427.19 | 386.16 | 427.6 | 386.16 | 428.8 | 386.19 |
| 429 | 386.2 | 436.11 | 386.5 | 437.94 | 386.57 | 439.1 | 386.61 | 443.28 | 386.61 |
| 447.8 | 386.63 | 448.15 | 386.63 | 448.78 | 386.66 | 455.2 | 387.01 | 455.8 | 387.13 |
| 455.91 | 387.16 | 457.91 | 387.5 | 460.28 | 387.85 | 462.81 | 387.95 | 464.24 | 388 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 466.54 | 388 | 468.12 | 387.97 | 470.91 | 387.89 | 471.56 | 387.88 | 472.05 | 387.89 |
| 473.56 | 387.95 | 473.91 | 387.96 | 475.32 | 388.05 | 476.33 | 388.13 | 476.8 | 388.16 |
| 477.08 | 388.19 | 477.68 | 388.22 | 478.1 | 388.22 | 479.05 | 388.2 | 479.44 | 388.18 |
| 480.98 | 388.12 | 482.74 | 388.03 | 483.13 | 388.02 | 483.95 | 387.98 | 484.69 | 387.95 |
| 484.78 | 387.96 | 485.13 | 387.95 | 486.19 | 387.95 | 487.21 | 387.94 | 493.46 | 387.84 |
| 496.49 | 387.68 | 496.8 | 387.66 | 498.81 | 387.55 | 499.15 | 387.55 | 499.54 | 387.53 |
| 501.6 | 387.61 | 502.07 | 387.62 | 504.76 | 387.71 | 505.44 | 387.73 | 505.89 | 387.77 |
| 508.42 | 387.89 | 508.47 | 387.89 | 513.21 | 388.08 | 516.53 | 388.09 | 518.02 | 388.1 |
| 519.43 | 388.05 | 522.64 | 387.96 | 526.47 | 387.89 | 529.12 | 387.86 | 531.84 | 387.81 |
| 532.24 | 387.81 | 533.24 | 387.79 | 535.1 | 387.76 | 535.36 | 387.76 | 536.98 | 387.79 |
| 537.31 | 387.79 | 537.78 | 387.81 | 541.2 | 387.87 | 541.31 | 387.87 | 541.8 | 387.92 |
| 543.36 | 388.04 | 544.34 | 388.17 | 544.99 | 388.25 | 545.83 | 388.29 | 546.49 | 388.34 |
| 548.2 | 388.4 | 549.08 | 388.4 | 549.5 | 388.39 | 549.57 | 388.4 | 550.42 | 388.41 |
| 553.2 | 388.37 | 553.5 | 388.37 | 556.39 | 388.33 | 556.54 | 388.33 | 559.17 | 388.27 |
| 560.57 | 388.22 | 562 | 388.18 | 562.87 | 388.14 | 564.36 | 388.15 | 566.28 | 388.23 |
| 570.01 | 388.39 | 571.85 | 388.42 | 572.35 | 388.44 | 573.62 | 388.45 | 577.81 | 388.42 |
| 580.17 | 388.36 | 581.26 | 388.25 | 584.05 | 388.3 | 584.89 | 388.31 | 589.26 | 388.31 |
| 590.94 | 388.36 | 591.81 | 388.37 | 594.56 | 388.37 | 596.43 | 388.33 | 597.3 | 388.3 |
| 597.88 | 388.27 | 599.06 | 388.18 | 599.68 | 388.18 | 600.48 | 388.17 | 602.74 | 388.08 |
| 603.28 | 388.05 | 603.96 | 388 | 605.66 | 388.02 | 607.37 | 388.02 | 608.43 | 388.05 |
| 613.14 | 388.12 | 620.53 | 388.25 | 624.52 | 388.3 | 626.79 | 388.35 | 628.76 | 388.38 |
| 629.08 | 388.38 | 631.27 | 388.36 | 631.85 | 388.35 | 632.95 | 388.29 | 634.4 | 388.26 |
| 634.88 | 388.26 | 637.26 | 388.24 | 643.16 | 388.23 | 646.82 | 388.19 | 647.55 | 388.17 |
| 650.07 | 388.08 | 651.25 | 388.08 | 652.42 | 388.06 | 653.25 | 388.04 | 654.91 | 388.01 |
| 655.84 | 388 | 656.31 | 388.05 | 656.75 | 388.08 | 657.19 | 388.1 | 657.83 | 388.14 |
| 658.33 | 388.19 | 658.58 | 388.34 | 665.34 | 388.34 | 665.83 | 388.33 | 666.51 | 388.3 |
| 667.59 | 388.26 | 668.83 | 388.23 | 670.69 | 388.24 | 671.24 | 388.24 | 675.92 | 388.15 |
| 677.93 | 388.08 | 679.55 | 388.03 | 680.36 | 388 | 680.58 | 388 | 685.28 | 388.07 |
| 685.36 | 388.06 | 685.91 | 388.06 | 686.54 | 388.07 | 687.43 | 388.11 | 687.91 | 388.23 |
| 688.8 | 388.35 | 689.09 | 388.45 | 695.45 | 388.67 | 699.54 | 388.71 | 699.89 | 388.71 |
| 703.95 | 388.75 | 706.2 | 388.77 | 711.1 | 388.71 | 712.68 | 388.7 | 714.92 | 388.66 |
| 715.52 | 388.63 | 716.21 | 388.52 | 723.43 | 388.48 | 725.84 | 388.41 | 726.52 | 388.41 |
| 726.92 | 388.38 | 730.47 | 388.25 | 731.59 | 388.28 | 731.7 | 388.29 | 735.08 | 388.42 |
| 735.83 | 388.46 | 748.98 | 388.46 | 750.93 | 388.35 | 753.67 | 388.21 | 754.14 | 388.16 |
| 755.62 | 388.13 | 755.8 | 388.12 | 756.4 | 388.12 | 756.68 | 388.11 | 757.28 | 388.11 |
| 758.94 | 388.16 | 759.26 | 388.16 | 761.05 | 388.1 | 761.07 | 388.12 | 762.19 | 388.08 |
| 763 | 388.03 | 763.99 | 387.96 | 765.58 | 387.94 | 766.22 | 387.98 | 766.47 | 387.98 |
| 767.15 | 387.94 | 767.99 | 387.95 | 769.26 | 387.96 | 769.78 | 387.97 | 772.14 | 388.07 |
| 772.24 | 388.09 | 773.32 | 388.22 | 773.93 | 388.27 | 774.38 | 388.29 | 775.74 | 388.29 |
| 777.16 | 388.27 | 778.21 | 388.19 | 778.61 | 388.19 | 784.07 | 388.37 | 786.98 | 388.45 |
| 788.19 | 388.53 | 788.26 | 388.54 | 789.8 | 388.54 | 790.85 | 388.55 | 809.1 | 388.54 |
| 815.05 | 388.53 | 816.04 | 388.5 | 820.98 | 388.4 | 824.21 | 388.33 | 825.37 | 388.31 |
| 825.98 | 388.29 | 829.11 | 388.27 | 831.9 | 388.17 | 834.32 | 388.09 | 835.37 | 388.11 |
| 838.76 | 388.11 | 838.92 | 388.12 | 839.77 | 388.11 | 839.94 | 388.13 | 841.31 | 388.11 |
| 842.84 | 388.06 | 843.41 | 388.05 | 851.91 | 387.81 | 852.95 | 387.79 | 858.63 | 387.67 |
| 863.74 | 387.57 | 868.52 | 387.47 | 871.27 | 387.42 | 872.61 | 387.41 | 874.55 | 387.4 |
| 878.44 | 387.43 | 880.85 | 387.42 | 881.66 | 387.46 | 882.96 | 387.54 | 911.97 | 387.54 |
| 925.58 | 387.7 | 927.24 | 387.72 | 928.29 | 387.69 | 930.95 | 387.57 | 933.44 | 387.58 |
| 940.03 | 387.63 | 942.17 | 387.63 | 948.86 | 387.67 | 950.95 | 387.67 | 952.62 | 387.66 |
| 953.55 | 387.66 | 956.8 | 387.68 | 958.3 | 387.7 | 959.74 | 387.77 | 962.38 | 387.88 |
| 964.87 | 387.97 | 966.76 | 388.05 | 968.1 | 388.09 | 968.77 | 388.12 | 970.06 | 388.19 |
| 970.47 | 388.2 | 970.97 | 388.23 | 971.54 | 388.22 | 971.65 | 388.23 | 972.37 | 388.23 |
| 972.68 | 388.24 | 975.47 | 388.27 | 976.23 | 388.27 | 977.57 | 388.25 | 977.95 | 388.25 |
| 978.88 | 388.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 21.57 | .05 | 136.81 | .04 | 695.45 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136.81 | 695.45 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7917.33*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 14.38 | 387.7 | 14.63 | 387.7 | 18.18 | 387.67 | 18.65 | 387.67 | 20.44 | 387.62 |
| 20.68 | 387.62 | 24.22 | 387.6 | 24.67 | 387.62 | 27.28 | 387.71 | 27.69 | 387.73 |
| 33.36 | 387.85 | 35.83 | 387.89 | 37.49 | 387.9 | 39.9 | 387.91 | 41.19 | 387.89 |
| 41.71 | 387.89 | 45.82 | 387.92 | 49.52 | 387.95 | 50.44 | 387.96 | 51.72 | 387.96 |
| 52.3 | 387.98 | 52.56 | 388 | 53.05 | 388.01 | 53.8 | 388.01 | 53.95 | 388 |
| 55.12 | 387.99 | 56.13 | 387.97 | 57.03 | 387.97 | 58.82 | 387.93 | 60.85 | 387.86 |
| 62.2 | 387.82 | 63.31 | 387.81 | 63.74 | 387.79 | 66.83 | 387.71 | 68.59 | 387.7 |
| 71.23 | 387.65 | 71.47 | 387.64 | 71.64 | 387.68 | 72.14 | 387.68 | 73.2 | 387.67 |
| 74.03 | 387.67 | 74.64 | 387.62 | 75.6 | 387.57 | 76.41 | 387.62 | 76.88 | 387.64 |
| 77.66 | 387.61 | 78.63 | 387.61 | 79.85 | 387.64 | 80.9 | 387.7 | 82.73 | 387.82 |
| 83.82 | 387.88 | 84.64 | 387.91 | 91.53 | 388.04 | 91.93 | 388.05 | 96.37 | 388.13 |
| 101.19 | 388.21 | 105.93 | 388.29 | 106.09 | 388.29 | 117.2 | 388.47 | 129.16 | 388.46 |
| 130.21 | 388.4 | 130.51 | 388.31 | 131.73 | 388.16 | 131.83 | 388.16 | 139.15 | 387.31 |
| 142.26 | 387.23 | 152.38 | 386.99 | 159.76 | 386.81 | 161.21 | 386.77 | 162.3 | 386.73 |
| 163.47 | 386.72 | 165.07 | 386.7 | 166.1 | 386.69 | 167.73 | 386.69 | 168.02 | 386.7 |
| 170.18 | 386.7 | 170.55 | 386.69 | 171.47 | 386.7 | 171.85 | 386.71 | 173.23 | 386.77 |
| 174.49 | 386.81 | 175.09 | 386.81 | 176.35 | 386.82 | 178.51 | 386.82 | 179.16 | 386.79 |
| 180.96 | 386.69 | 181.49 | 386.69 | 182.14 | 386.7 | 182.59 | 386.7 | 186.62 | 386.77 |
| 186.84 | 386.77 | 187.65 | 386.82 | 188.12 | 386.82 | 191.11 | 386.84 | 191.72 | 386.83 |
| 192.6 | 386.8 | 193.62 | 386.76 | 197.86 | 386.53 | 201.52 | 386.28 | 203.4 | 385.96 |
| 203.94 | 385.98 | 204.33 | 385.97 | 206.66 | 385.75 | 208.16 | 385.63 | 209.02 | 385.61 |
| 211.72 | 385.58 | 213.16 | 385.6 | 214.22 | 385.65 | 216.1 | 385.72 | 216.49 | 385.74 |
| 218.56 | 385.83 | 218.64 | 385.84 | 219.92 | 385.89 | 220.57 | 385.9 | 221.37 | 385.92 |
| 221.51 | 385.93 | 224.41 | 386.06 | 227.47 | 386.21 | 228.82 | 386.27 | 232.33 | 386.36 |
| 232.58 | 386.36 | 242.19 | 386.59 | 242.45 | 386.59 | 243.62 | 386.62 | 244.5 | 386.63 |
| 244.9 | 386.64 | 245.75 | 386.65 | 246.22 | 386.65 | 247.23 | 386.66 | 248.76 | 386.68 |
| 250.76 | 386.68 | 251.48 | 386.69 | 251.83 | 386.68 | 253.3 | 386.68 | 254.7 | 386.67 |
| 256.68 | 386.67 | 257.88 | 386.68 | 259.13 | 386.7 | 262.34 | 386.71 | 262.88 | 386.7 |
| 264.71 | 386.63 | 268.12 | 386.61 | 268.59 | 386.61 | 268.73 | 386.63 | 269.16 | 386.65 |
| 269.75 | 386.65 | 270.7 | 386.63 | 283.81 | 386.28 | 284.14 | 386.28 | 285.66 | 386.23 |
| 287.97 | 386.22 | 288.95 | 386.3 | 296.09 | 386.84 | 296.7 | 386.89 | 298.44 | 386.99 |
| 299.61 | 387.06 | 304.43 | 387.06 | 308.18 | 387.08 | 315.04 | 387.18 | 315.13 | 387.15 |
| 315.93 | 387.09 | 316.58 | 387.05 | 317.27 | 387.04 | 318.51 | 387.03 | 318.65 | 387.02 |
| 321.75 | 386.91 | 322.18 | 386.86 | 323.07 | 386.82 | 323.46 | 386.74 | 324.92 | 386.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 325.81 | 386.81 | 325.96 | 386.82 | 328.14 | 386.92 | 328.87 | 386.97 | 329.55 | 387.01 |
| 330.11 | 387.03 | 332.56 | 387.13 | 334.58 | 387.19 | 335.1 | 387.2 | 338.57 | 387.2 |
| 340.23 | 387.18 | 340.44 | 387.17 | 346.57 | 387.05 | 346.8 | 387.05 | 348.44 | 387.02 |
| 349.62 | 386.99 | 352 | 386.92 | 352.81 | 386.89 | 353.83 | 386.84 | 364.58 | 386.59 |
| 369.6 | 386.49 | 370.84 | 386.46 | 371.56 | 386.46 | 372.02 | 386.47 | 372.83 | 386.46 |
| 373.74 | 386.44 | 375.9 | 386.4 | 376.61 | 386.38 | 377.78 | 386.32 | 384.78 | 385.9 |
| 395.78 | 385.46 | 395.96 | 385.46 | 397.21 | 385.43 | 400.37 | 385.4 | 404.28 | 385.38 |
| 406.61 | 385.38 | 407.15 | 385.37 | 410.42 | 385.34 | 411.9 | 385.33 | 412.72 | 385.33 |
| 416.58 | 385.3 | 416.88 | 385.29 | 420.01 | 385.24 | 421.99 | 385.24 | 424.52 | 385.3 |
| 426.25 | 385.36 | 427.06 | 385.37 | 427.56 | 385.36 | 429.85 | 385.39 | 432.14 | 385.43 |
| 432.53 | 385.43 | 433.68 | 385.46 | 433.87 | 385.46 | 440.63 | 385.76 | 442.37 | 385.83 |
| 443.47 | 385.87 | 443.64 | 385.87 | 447.45 | 385.92 | 451.75 | 385.99 | 452.68 | 386.02 |
| 458.78 | 386.34 | 459.35 | 386.47 | 461.36 | 386.85 | 463.61 | 387.23 | 466.02 | 387.35 |
| 467.38 | 387.4 | 469.56 | 387.44 | 471.07 | 387.42 | 473.72 | 387.37 | 474.8 | 387.37 |
| 476.24 | 387.43 | 476.58 | 387.43 | 477.92 | 387.52 | 479.3 | 387.62 | 479.33 | 387.63 |
| 480.16 | 387.69 | 480.46 | 387.68 | 481.46 | 387.67 | 481.83 | 387.66 | 484.97 | 387.51 |
| 485.34 | 387.5 | 486.12 | 387.46 | 486.83 | 387.43 | 488.25 | 387.41 | 488.94 | 387.39 |
| 489.22 | 387.39 | 495.17 | 387.23 | 496.06 | 387.16 | 498.04 | 387.02 | 498.34 | 386.99 |
| 500.25 | 386.86 | 500.71 | 386.85 | 500.95 | 386.83 | 502.91 | 386.9 | 503.35 | 386.91 |
| 505.92 | 386.99 | 506.56 | 387.02 | 506.99 | 387.06 | 509.39 | 387.18 | 509.44 | 387.18 |
| 513.94 | 387.39 | 517.11 | 387.39 | 518.53 | 387.4 | 519.86 | 387.35 | 522.92 | 387.24 |
| 526.55 | 387.14 | 526.88 | 387.15 | 529.08 | 387.11 | 531.66 | 387.06 | 532.36 | 387.04 |
| 532.99 | 387.04 | 533.63 | 387.02 | 534.76 | 387 | 535.01 | 387 | 536.55 | 387.02 |
| 537.08 | 387.04 | 537.32 | 387.04 | 540.56 | 387.09 | 540.67 | 387.09 | 541.14 | 387.15 |
| 542.62 | 387.28 | 543.86 | 387.45 | 544.17 | 387.5 | 544.97 | 387.54 | 545.6 | 387.58 |
| 547.22 | 387.65 | 548.15 | 387.66 | 549.34 | 387.69 | 551.98 | 387.67 | 555.15 | 387.66 |
| 557.65 | 387.63 | 558.98 | 387.61 | 561.18 | 387.56 | 562.59 | 387.56 | 564.41 | 387.62 |
| 567.96 | 387.73 | 569.71 | 387.75 | 570.19 | 387.77 | 571.39 | 387.77 | 575.38 | 387.71 |
| 577.62 | 387.63 | 578.66 | 387.5 | 582.11 | 387.54 | 586.27 | 387.54 | 587.86 | 387.6 |
| 588.7 | 387.61 | 591.31 | 387.61 | 593.08 | 387.57 | 593.91 | 387.54 | 594.69 | 387.5 |
| 595.05 | 387.47 | 595.59 | 387.44 | 596.18 | 387.44 | 596.94 | 387.45 | 599.08 | 387.38 |
| 599.6 | 387.37 | 600.25 | 387.34 | 601.86 | 387.35 | 603.49 | 387.35 | 604.49 | 387.38 |
| 608.35 | 387.47 | 608.97 | 387.47 | 609.52 | 387.49 | 616 | 387.61 | 619.8 | 387.66 |
| 620.7 | 387.67 | 622.49 | 387.71 | 624.13 | 387.72 | 626.22 | 387.7 | 626.76 | 387.68 |
| 627.81 | 387.62 | 629.65 | 387.58 | 631.92 | 387.56 | 637.52 | 387.55 | 641.69 | 387.49 |
| 644.09 | 387.38 | 645.22 | 387.38 | 646.33 | 387.37 | 649.58 | 387.33 | 650.03 | 387.38 |
| 650.87 | 387.44 | 651.47 | 387.47 | 651.95 | 387.53 | 652.19 | 387.7 | 658.32 | 387.72 |
| 658.61 | 387.73 | 659.08 | 387.71 | 660.76 | 387.66 | 661.18 | 387.64 | 661.94 | 387.62 |
| 664.16 | 387.62 | 664.23 | 387.61 | 668.68 | 387.51 | 670.59 | 387.43 | 672.12 | 387.37 |
| 672.51 | 387.36 | 673.11 | 387.33 | 677.58 | 387.38 | 677.66 | 387.37 | 678.77 | 387.37 |
| 679.62 | 387.41 | 680.07 | 387.53 | 680.92 | 387.65 | 681.2 | 387.77 | 687.24 | 387.94 |
| 698.49 | 387.94 | 703.6 | 387.88 | 705.25 | 387.87 | 707.59 | 387.83 | 708.22 | 387.8 |
| 708.94 | 387.68 | 716.49 | 387.65 | 719 | 387.58 | 719.71 | 387.58 | 720.13 | 387.55 |
| 723.84 | 387.41 | 725.01 | 387.44 | 725.12 | 387.45 | 726.46 | 387.5 | 728.66 | 387.59 |
| 729.44 | 387.64 | 743.19 | 387.64 | 745.22 | 387.52 | 748.09 | 387.37 | 748.24 | 387.34 |
| 748.58 | 387.31 | 750.12 | 387.27 | 750.94 | 387.26 | 751.23 | 387.25 | 751.85 | 387.25 |
| 753.59 | 387.3 | 753.93 | 387.29 | 755.8 | 387.22 | 755.82 | 387.24 | 756.94 | 387.19 |
| 756.99 | 387.18 | 757.84 | 387.13 | 758.87 | 387.06 | 759.62 | 387.04 | 760.54 | 387.03 |
| 761.2 | 387.07 | 761.46 | 387.07 | 762.18 | 387.03 | 763.23 | 387.04 | 764.92 | 387.07 |
| 767.49 | 387.19 | 768.62 | 387.34 | 769.26 | 387.4 | 769.73 | 387.41 | 771.15 | 387.41 |
| 772.64 | 387.4 | 773.73 | 387.3 | 774.14 | 387.3 | 779.85 | 387.51 | 782.89 | 387.59 |
| 784.16 | 387.68 | 784.23 | 387.69 | 785.84 | 387.69 | 786.93 | 387.7 | 806 | 387.69 |
| 812.23 | 387.68 | 813.26 | 387.66 | 818.42 | 387.59 | 821.8 | 387.54 | 823.01 | 387.53 |
| 823.65 | 387.52 | 826.92 | 387.5 | 829.84 | 387.41 | 832.36 | 387.33 | 833.46 | 387.36 |
| 833.91 | 387.36 | 834.51 | 387.37 | 835.79 | 387.37 | 836.19 | 387.38 | 838.05 | 387.38 |
| 838.32 | 387.41 | 838.55 | 387.41 | 839.39 | 387.38 | 839.67 | 387.38 | 841.27 | 387.33 |
| 841.86 | 387.32 | 850.74 | 387.07 | 851.83 | 387.04 | 857.77 | 386.89 | 863.11 | 386.77 |
| 868.1 | 386.65 | 870.97 | 386.58 | 872.37 | 386.56 | 875.79 | 386.56 | 878.47 | 386.57 |
| 880.99 | 386.57 | 881.83 | 386.61 | 883.19 | 386.69 | 913.51 | 386.69 | 927.73 | 386.87 |
| 929.47 | 386.89 | 930.56 | 386.86 | 933.34 | 386.72 | 935.94 | 386.72 | 942.82 | 386.75 |
| 945.06 | 386.75 | 952.05 | 386.78 | 955.98 | 386.76 | 956.95 | 386.76 | 960.35 | 386.79 |
| 961.91 | 386.8 | 963.65 | 386.88 | 964.66 | 386.92 | 964.96 | 386.94 | 966.18 | 386.99 |
| 968.78 | 387.09 | 970.76 | 387.17 | 972.72 | 387.24 | 973.62 | 387.29 | 974.21 | 387.33 |
| 974.64 | 387.34 | 975.15 | 387.38 | 975.75 | 387.36 | 975.87 | 387.37 | 976.4 | 387.37 |
| 976.95 | 387.38 | 979.86 | 387.42 | 980.98 | 387.41 | 981.28 | 387.4 | 982.46 | 387.4 |
| 983.42 | 387.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 14.38 | .05 | 139.15 | .04 | 687.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 139.15 | 687.24 | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7869.40*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 7.19 | 387.05 | 7.46 | 387.05 | 11.28 | 387.02 | 11.78 | 387.02 | 13.72 | 386.97 |
| 13.97 | 386.96 | 18.11 | 386.95 | 18.26 | 386.96 | 21.08 | 387.06 | 21.51 | 387.08 |
| 27.62 | 387.21 | 28.39 | 387.22 | 30.28 | 387.26 | 32.07 | 387.27 | 34.66 | 387.28 |
| 36.05 | 387.26 | 36.61 | 387.26 | 41.04 | 387.29 | 45.01 | 387.32 | 46 | 387.33 |
| 46.44 | 387.33 | 47.39 | 387.34 | 48.28 | 387.37 | 48.81 | 387.38 | 49.62 | 387.38 |
| 49.79 | 387.37 | 51.05 | 387.37 | 52.13 | 387.34 | 53.1 | 387.34 | 53.77 | 387.33 |
| 55.02 | 387.3 | 55.45 | 387.28 | 55.69 | 387.28 | 56.27 | 387.26 | 57.21 | 387.22 |
| 58.67 | 387.19 | 58.88 | 387.19 | 60.32 | 387.16 | 63.65 | 387.07 | 65.55 | 387.06 |
| 68.39 | 387 | 68.65 | 386.99 | 68.82 | 387.04 | 69.37 | 387.04 | 70.5 | 387.02 |
| 71.4 | 387.02 | 72.05 | 386.97 | 73.08 | 386.91 | 73.96 | 386.96 | 74.46 | 386.98 |
| 75.3 | 386.96 | 76.91 | 386.96 | 77.55 | 386.98 | 78.74 | 387.06 | 78.8 | 387.06 |
| 81.93 | 387.25 | 82.82 | 387.29 | 90.24 | 387.42 | 90.66 | 387.44 | 95.45 | 387.53 |
| 100.64 | 387.62 | 105.74 | 387.7 | 105.91 | 387.7 | 117.86 | 387.91 | 130.74 | 387.91 |
| 131.28 | 387.87 | 131.87 | 387.84 | 132.19 | 387.74 | 133.5 | 387.58 | 133.62 | 387.57 |
| 141.5 | 386.66 | 144.64 | 386.58 | 154.86 | 386.36 | 162.32 | 386.19 | 164.43 | 386.13 |
| 165.1 | 386.12 | 167.68 | 386.07 | 168.72 | 386.07 | 169.67 | 386.06 | 170.37 | 386.06 |
| 170.67 | 386.07 | 171.06 | 386.06 | 172.85 | 386.05 | 174.15 | 386.05 | 174.98 | 386.07 |
| 177.2 | 386.14 | 177.81 | 386.15 | 179.08 | 386.16 | 181.49 | 386.17 | 183.74 | 386.12 |
| 184.28 | 386.12 | 184.93 | 386.13 | 185.39 | 386.13 | 189.47 | 386.21 | 189.69 | 386.21 |
| 190.36 | 386.23 | 190.98 | 386.24 | 194 | 386.25 | 195.51 | 386.2 | 196.53 | 386.16 |
| 200.46 | 385.94 | 200.82 | 385.91 | 204.52 | 385.64 | 206.42 | 385.3 | 207.36 | 385.31 |
| 209.72 | 385.07 | 211.23 | 384.94 | 212.1 | 384.92 | 214.83 | 384.9 | 215.37 | 384.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 216.29 | 384.92 | 219.26 | 385.06 | 219.65 | 385.08 | 221.09 | 385.14 | 221.82 | 385.18 |
| 223.12 | 385.24 | 223.77 | 385.25 | 224.58 | 385.27 | 224.72 | 385.28 | 227.65 | 385.42 |
| 230.75 | 385.57 | 232.11 | 385.64 | 235.65 | 385.72 | 235.91 | 385.72 | 237.6 | 385.76 |
| 245.62 | 385.97 | 245.88 | 385.97 | 247.07 | 386 | 248.36 | 386.01 | 249.69 | 386.03 |
| 252.26 | 386.06 | 252.83 | 386.07 | 254.28 | 386.08 | 256.84 | 386.08 | 258.26 | 386.09 |
| 260.26 | 386.1 | 261.47 | 386.1 | 262.74 | 386.12 | 265.98 | 386.12 | 266.52 | 386.11 |
| 268.37 | 386.04 | 271.82 | 386.01 | 272.29 | 386.01 | 272.66 | 386.05 | 272.88 | 386.06 |
| 273.47 | 386.06 | 274.43 | 386.04 | 287.68 | 385.67 | 288.01 | 385.67 | 289.54 | 385.61 |
| 291.88 | 385.61 | 292.87 | 385.69 | 300.08 | 386.28 | 300.71 | 386.33 | 303.65 | 386.53 |
| 308.52 | 386.53 | 312.3 | 386.54 | 319.23 | 386.59 | 319.33 | 386.56 | 320.13 | 386.48 |
| 320.8 | 386.43 | 321.49 | 386.42 | 322.75 | 386.39 | 322.89 | 386.39 | 326.02 | 386.27 |
| 326.45 | 386.23 | 327.01 | 386.21 | 327.35 | 386.18 | 327.74 | 386.09 | 329.22 | 386.13 |
| 330.12 | 386.15 | 330.27 | 386.17 | 331.13 | 386.21 | 332.48 | 386.28 | 333.9 | 386.39 |
| 334.47 | 386.41 | 336.94 | 386.52 | 338.98 | 386.59 | 339.51 | 386.6 | 343.02 | 386.6 |
| 344.69 | 386.57 | 344.91 | 386.57 | 351.1 | 386.42 | 351.33 | 386.42 | 356.59 | 386.29 |
| 358.44 | 386.22 | 369.3 | 385.95 | 374.37 | 385.84 | 375.98 | 385.8 | 376.35 | 385.8 |
| 377.64 | 385.78 | 380.74 | 385.71 | 381.45 | 385.69 | 382.04 | 385.66 | 382.64 | 385.62 |
| 389.71 | 385.19 | 400.83 | 384.73 | 401.01 | 384.73 | 402.28 | 384.7 | 405.46 | 384.67 |
| 409.42 | 384.67 | 411.77 | 384.66 | 412.32 | 384.66 | 415.62 | 384.65 | 416.01 | 384.64 |
| 417.94 | 384.64 | 421.84 | 384.61 | 422.15 | 384.6 | 425.32 | 384.56 | 427.81 | 384.56 |
| 429.87 | 384.6 | 431.52 | 384.64 | 432.11 | 384.65 | 432.76 | 384.65 | 434.92 | 384.67 |
| 437.1 | 384.71 | 437.47 | 384.71 | 438.74 | 384.73 | 445.15 | 385.01 | 446.81 | 385.08 |
| 447.85 | 385.13 | 448.01 | 385.13 | 451.62 | 385.23 | 455.69 | 385.35 | 456.01 | 385.37 |
| 456.58 | 385.39 | 462.37 | 385.67 | 463.01 | 385.83 | 464.81 | 386.2 | 466.95 | 386.62 |
| 469.23 | 386.74 | 470.52 | 386.8 | 472.59 | 386.87 | 474.02 | 386.87 | 476.54 | 386.85 |
| 477.12 | 386.85 | 477.56 | 386.86 | 479.24 | 386.91 | 480.51 | 386.98 | 481.42 | 387.06 |
| 481.85 | 387.09 | 482.1 | 387.12 | 482.52 | 387.15 | 483.02 | 387.15 | 483.88 | 387.14 |
| 484.99 | 387.1 | 487.2 | 386.99 | 487.56 | 386.98 | 487.83 | 386.96 | 488.97 | 386.91 |
| 490.31 | 386.87 | 490.97 | 386.84 | 496.87 | 386.61 | 497.72 | 386.53 | 499.6 | 386.36 |
| 499.89 | 386.33 | 501.7 | 386.16 | 502 | 386.16 | 502.36 | 386.13 | 504.64 | 386.19 |
| 507.07 | 386.28 | 507.68 | 386.3 | 508.08 | 386.34 | 510.37 | 386.47 | 510.41 | 386.47 |
| 512.45 | 386.58 | 514.68 | 386.69 | 517.68 | 386.7 | 519.03 | 386.7 | 519.53 | 386.68 |
| 520.07 | 386.65 | 523.19 | 386.51 | 526.64 | 386.4 | 526.95 | 386.4 | 529.04 | 386.36 |
| 531.85 | 386.29 | 532.75 | 386.28 | 533.35 | 386.26 | 534.43 | 386.24 | 534.66 | 386.24 |
| 536.85 | 386.27 | 540.03 | 386.31 | 540.47 | 386.37 | 541.88 | 386.51 | 542.76 | 386.65 |
| 543.35 | 386.75 | 544.11 | 386.79 | 544.7 | 386.83 | 546.02 | 386.9 | 546.76 | 386.93 |
| 547.12 | 386.93 | 547.48 | 386.95 | 548.25 | 386.96 | 550.75 | 386.97 | 551.02 | 386.98 |
| 553.63 | 387 | 556.14 | 387 | 558.69 | 386.98 | 559.48 | 386.97 | 560.82 | 386.98 |
| 565.92 | 387.07 | 567.57 | 387.08 | 568.02 | 387.1 | 569.17 | 387.09 | 572.95 | 387 |
| 575.08 | 386.89 | 576.06 | 386.75 | 578.57 | 386.77 | 583.27 | 386.77 | 584.79 | 386.83 |
| 585.58 | 386.84 | 588.05 | 386.84 | 590.52 | 386.78 | 591.05 | 386.76 | 591.26 | 386.74 |
| 592.11 | 386.69 | 593.39 | 386.72 | 595.43 | 386.69 | 596.53 | 386.67 | 599.61 | 386.67 |
| 600.26 | 386.7 | 603.04 | 386.79 | 604.22 | 386.82 | 605.32 | 386.84 | 611.48 | 386.97 |
| 615.08 | 387.02 | 615.94 | 387.03 | 617.12 | 387.05 | 617.63 | 387.05 | 619.19 | 387.06 |
| 621.16 | 387.03 | 621.68 | 387.02 | 622.68 | 386.95 | 623.99 | 386.91 | 624.42 | 386.91 |
| 626.57 | 386.89 | 631.89 | 386.88 | 635.19 | 386.82 | 635.84 | 386.8 | 638.12 | 386.69 |
| 640.23 | 386.69 | 640.98 | 386.68 | 642.48 | 386.67 | 643.32 | 386.67 | 643.64 | 386.69 |
| 643.74 | 386.71 | 645.12 | 386.81 | 645.57 | 386.88 | 645.79 | 387.06 | 651.61 | 387.11 |
| 652.33 | 387.1 | 653.92 | 387.05 | 654.33 | 387.04 | 655.04 | 387.01 | 656.95 | 387 |
| 657.21 | 386.99 | 661.43 | 386.88 | 665.07 | 386.7 | 665.43 | 386.67 | 669.87 | 386.69 |
| 670.23 | 386.67 | 671.01 | 386.67 | 671.81 | 386.7 | 672.24 | 386.83 | 673.05 | 386.96 |
| 673.31 | 387.08 | 679.04 | 387.2 | 683.51 | 387.18 | 683.88 | 387.17 | 688.31 | 387.14 |
| 690.77 | 387.12 | 696.1 | 387.05 | 697.83 | 387.04 | 700.27 | 387 | 700.92 | 386.97 |
| 701.67 | 386.84 | 709.54 | 386.82 | 712.17 | 386.74 | 712.91 | 386.74 | 713.35 | 386.71 |
| 717.22 | 386.56 | 718.44 | 386.6 | 718.55 | 386.61 | 722.24 | 386.77 | 722.82 | 386.8 |
| 723.06 | 386.82 | 737.39 | 386.82 | 739.51 | 386.7 | 742.5 | 386.52 | 743.01 | 386.46 |
| 744.62 | 386.42 | 744.83 | 386.41 | 745.48 | 386.41 | 745.78 | 386.4 | 746.43 | 386.4 |
| 747.57 | 386.42 | 748.25 | 386.44 | 748.59 | 386.43 | 751.73 | 386.3 | 751.79 | 386.29 |
| 752.67 | 386.24 | 753.75 | 386.15 | 755.28 | 386.13 | 755.49 | 386.13 | 756.18 | 386.17 |
| 756.45 | 386.17 | 757.2 | 386.13 | 758.11 | 386.14 | 759.49 | 386.15 | 760.06 | 386.16 |
| 762.11 | 386.26 | 762.69 | 386.28 | 762.74 | 386.3 | 763.92 | 386.46 | 764.58 | 386.52 |
| 765.07 | 386.54 | 766.56 | 386.54 | 768.11 | 386.52 | 769.25 | 386.42 | 769.68 | 386.42 |
| 775.64 | 386.64 | 778.81 | 386.74 | 780.13 | 386.84 | 780.2 | 386.85 | 781.88 | 386.85 |
| 783.02 | 386.86 | 802.91 | 386.84 | 809.4 | 386.84 | 810.48 | 386.82 | 815.87 | 386.78 |
| 819.39 | 386.76 | 820.65 | 386.76 | 821.31 | 386.75 | 824.73 | 386.74 | 827.77 | 386.65 |
| 830.41 | 386.57 | 831.55 | 386.6 | 832.02 | 386.62 | 832.64 | 386.63 | 833.16 | 386.63 |
| 833.45 | 386.64 | 835.25 | 386.64 | 835.42 | 386.65 | 836.34 | 386.65 | 836.62 | 386.68 |
| 837.3 | 386.67 | 837.44 | 386.66 | 838.02 | 386.66 | 839.02 | 386.62 | 839.69 | 386.6 |
| 840.31 | 386.59 | 849.58 | 386.32 | 850.71 | 386.29 | 856.91 | 386.12 | 867.68 | 385.83 |
| 870.68 | 385.75 | 872.14 | 385.72 | 874.26 | 385.71 | 881.12 | 385.71 | 882 | 385.75 |
| 883.42 | 385.85 | 915.04 | 385.85 | 929.87 | 386.04 | 930.73 | 386.05 | 931.69 | 386.05 |
| 932.83 | 386.02 | 935.73 | 385.86 | 938.44 | 385.85 | 945.62 | 385.87 | 947.96 | 385.87 |
| 955.25 | 385.89 | 957.52 | 385.88 | 959.35 | 385.87 | 960.36 | 385.87 | 965.53 | 385.9 |
| 966.04 | 385.92 | 968.4 | 386.03 | 969.98 | 386.09 | 972.7 | 386.2 | 974.76 | 386.29 |
| 976.22 | 386.35 | 976.81 | 386.37 | 977.75 | 386.43 | 978.35 | 386.46 | 978.49 | 386.46 |
| 979.34 | 386.52 | 979.96 | 386.5 | 980.09 | 386.51 | 980.64 | 386.51 | 981.21 | 386.53 |
| 984.25 | 386.56 | 985.07 | 386.56 | 985.42 | 386.55 | 986.54 | 386.54 | 986.96 | 386.54 |
| 987.97 | 386.51 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 7.19 | .05 | 141.5 | .04 | 679.04 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 141.5 | 679.04 | | 45.93 | 47.93 | 55 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7821.48

INPUT
Description:
Station Elevation Data num= 388

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 386.41 | 2900391 | 386.41 | 4380005 | 386.37 | 4919922 | 386.37 | 5.25 | 386.36 |
| 6.98999 | 386.32 | 7.26001 | 386.31 | 11.34998 | 386.29 | 11.69995 | 386.31 | 1.85999 | 386.31 |
| 14.94995 | 386.42 | 15.33997 | 386.44 | 21.88 | 386.58 | 22.70996 | 386.59 | 24.72998 | 386.63 |
| 29.41992 | 386.65 | 31.04993 | 386.63 | 31.51001 | 386.63 | 41.56995 | 386.74 | 2.04004 | 386.7 |
| 42.71997 | 386.71 | 43.04993 | 386.71 | 43.70996 | 386.73 | 44.01001 | 386.75 | 44.57996 | 386.76 |
| 45.43994 | 386.76 | 45.62 | 386.75 | 46.51001 | 386.74 | 46.96997 | 386.74 | 48.13 | 386.71 |
| 49.16992 | 386.71 | 49.66003 | 386.74 | 9.89001 | 386.75 | 1.22998 | 386.67 | 51.39001 | 386.67 |
| 51.59998 | 386.66 | 51.68994 | 386.65 | 51.93994 | 386.65 | 53.56995 | 386.59 | 55.13 | 386.55 |
| 55.35999 | 386.55 | 56.41003 | 386.53 | 60.46997 | 386.42 | 62.5 | 386.41 | 65.54004 | 386.35 |
| 65.81995 | 386.34 | 65.90002 | 386.36 | 66.01001 | 386.39 | 66.58997 | 386.39 | 68.02002 | 386.37 |

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68.77002  386.3769.84998  386.2970.56995  386.2570.81995  386.2671.51001  386.31
72.04993  386.3372.94995   386.374.06995   386.374.66992  386.3174.91992  386.32
75.34998  386.3375.46997  386.34   76.63  386.4176.68994  386.4178.29993  386.51
78.79004  386.5580.04993  386.62      81  386.6688.93994  386.8189.40002  386.83
  105.54  387.12  105.73  387.12  118.53  387.35  132.32  387.35   132.9  387.31
  133.53  387.28  133.87  387.17  135.28     387   135.4  386.99  143.84     386
  170.34  385.45   170.7  385.45  173.71  385.43  175.52  385.41   175.9   385.4
  177.23   385.4  177.54  385.41  179.92  385.47  180.53  385.48  187.84  385.56
  188.19  385.56  192.31  385.64  193.36  385.65  196.89  385.66  199.45  385.56
  203.42  385.32  203.78  385.29  207.52     385  209.45  384.63  209.99  384.65
  210.39  384.65  212.77  384.39   214.3  384.25  214.65  384.24  215.18  384.23
  217.94  384.21  219.41  384.24  219.63  384.25  226.31  384.59  227.79  384.62
  230.89  384.77   235.4     385  238.98  385.09  239.24  385.09  249.05  385.34
  249.31  385.34  250.51  385.37  258.28  385.48  260.39  385.49  265.72  385.53
  266.35  385.54  269.62  385.54  270.17  385.53  272.04  385.45  275.52  385.42
     276  385.42  276.15  385.44  276.37  385.46  276.59  385.47  277.19  385.47
  277.53  385.46  278.16  385.45  291.56  385.06  291.88  385.06  293.43     385
  295.79     385  304.71  385.78  307.68     386  323.43     386  323.53  385.96
  324.34  385.87  325.01  385.81  326.98  385.76   330.3  385.62  331.29  385.57
  331.63  385.54  332.03  385.44  334.43   385.5  334.58  385.52  336.81  385.64
  337.56  385.71  338.25  385.76  341.32  385.91  343.49  385.99  343.92     386
  347.46     386  349.15  385.97  349.37  385.96   386.3     385  394.64  384.47
  405.88     384  406.06     384  407.34  383.97  410.56  383.95  423.17  383.95
  427.11  383.92  430.62  383.87  432.95  383.87  442.06  383.98  442.41  383.98
  443.09  383.99  443.44     384  443.61     384  465.95     385  466.46  385.14
  466.56  385.17  470.28     386  472.44  386.14  475.62   386.3  476.97  386.32
  479.35  386.33  481.61  386.38  481.91  386.38  483.11  386.45  484.35  386.55
  484.61  386.58  485.12  386.62  485.48  386.62  486.29  386.61  486.62   386.6
  487.34  386.57  489.49  386.46  489.77  386.46  498.58     386  499.38   385.9
  503.14  385.47  503.43  385.46  503.55  385.45  503.77  385.43  505.92  385.48
   508.8  385.58  509.18  385.63  515.42     386  519.53     386  523.47  385.79
  526.73  385.66  527.02  385.66  531.31  385.55  531.94  385.53  534.31  385.48
  539.39  385.53  539.81   385.6  541.14  385.75  542.53     386  545.75  386.19
  546.43  386.22  554.62  386.37  555.81  386.38  565.43  386.41  565.86  386.43
  566.94  386.41  570.52  386.29  572.53  386.16  573.46     386  580.28     386
  581.71  386.07  582.46  386.08   584.8  386.08  587.63     386  588.64  385.94
  589.85     386  595.73     386  600.09  386.18  606.95  386.33  612.45   386.4
  614.24   386.4  616.11  386.37   616.6  386.35  617.54  386.28  618.78  386.24
  621.22  386.21  626.25   386.2  629.37  386.14  629.99  386.12  632.14     386
  637.05     386  638.76  386.15  639.19  386.22   639.4  386.42  645.16   386.5
  645.58  386.49   648.3   386.4   650.2  386.37654.1899  386.24  657.28  386.06
  657.97  386.01  658.16     386  662.17     386  662.24  385.99  662.51  385.98
  663.24  385.97     664     386  664.41  386.13  665.17  386.26  665.42  386.39
  670.84  386.47  675.49  386.41  675.88   386.4   688.6  386.22   690.4  386.21
692.9399  386.17  693.62  386.14   694.4     386   702.6  385.99  705.33  385.91
   706.1  385.91  706.24   385.9  706.45  385.89  706.51  385.88  710.59  385.72
  711.98  385.77715.8199  385.94  716.42  385.98  716.67     386   731.6     386
  736.92  385.68  737.08  385.65  737.45  385.61  739.34  385.56  740.02  385.55
  740.33  385.54  741.01  385.54  742.53  385.57   742.9  385.58  743.04  385.58
  743.26  385.57  746.59   385.4  747.51  385.34  748.63  385.25  749.45  385.23
  750.22  385.22750.4399  385.22  751.16  385.27751.4399  385.27  752.22  385.22
  752.52  385.22  753.17  385.23  753.37  385.23  754.61  385.25  754.97  385.26
   755.2  385.26  757.33  385.37  757.88  385.39757.9399  385.39  757.99  385.41
  759.22  385.58  759.91  385.65  760.11  385.66  760.42  385.67  761.97  385.67
  763.58  385.65  764.77  385.54  765.22  385.54  771.42  385.78  774.72  385.88
   776.1  385.99  776.17     386  777.92     386  779.11  386.01  806.58  385.99
   807.7  385.98  816.98  385.97  818.29  385.98  822.54  385.98  828.45  385.81
  830.13  385.87830.9399  385.89  831.62   385.9  832.17   385.9   832.6  385.91
  833.49  385.91  833.67  385.92  834.63  385.92  834.77  385.93  834.83  385.94
  834.92  385.95  835.17  385.95  835.52  385.94  835.63  385.94  835.93  385.93
  836.38  385.93  837.42  385.89  838.12  385.87  838.76  385.86  870.38  384.91
   871.9  384.88  874.11  384.86  881.26  384.85  882.17   384.9  883.65     385
  916.58     385  932.91  385.22  933.91  385.22  934.31  385.21   935.1  385.18
  938.12     385  940.94  384.99  958.44     385  963.76  384.97  967.45  384.99
  969.15     385  980.89   385.5   982.5   385.6  982.64   385.6  982.97  385.62
  983.53  385.66   983.7  385.65  983.87  385.65     984  385.64  984.31  385.65
  985.12  385.66  985.48  385.67  988.64  385.71  989.44  385.71  989.86   385.7
  991.03  385.69  991.46  385.69  992.51  385.66

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  143.84     .04  670.84     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        143.84  670.84            48.11   47.96   41.26             .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 7773.52*

INPUT
Description:
Station Elevation Data    num=     496
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  385.77     .29  385.77    4.41  385.74    4.96  385.74    7.04  385.69
    7.31  385.68   11.43  385.67   11.95  385.69   15.06  385.79   15.45  385.81
   22.04  385.94   22.88  385.95   24.91  385.99   29.64  386.01   31.28  385.99
   31.75  385.99   41.88  386.06   42.35  386.06   44.04  386.08   44.34   386.1
   44.91  386.11   45.78  386.11   45.96   386.1   47.32  386.09   48.49  386.07
   49.54  386.07   50.26  386.06   51.61  386.03   53.97  385.96   55.54  385.92
   56.83   385.9   60.92   385.8   62.42  385.79   62.97  385.79   66.03  385.73
   66.31  385.72    66.5  385.77   67.09  385.77   68.53  385.75   69.28  385.75
   70.37  385.67    71.1  385.64   72.04  385.69   72.59  385.71    73.5  385.68
   74.62  385.68   75.23  385.69   76.03  385.72   77.26  385.78   79.38  385.91
   80.65  385.98   81.61  386.01    86.4   386.1   86.72   386.1    89.6  386.15
   90.07  386.17  105.18  386.42  106.52  386.44  114.77  386.58  115.24  386.59
  119.42  386.66  128.28  386.66   128.5  386.65  133.31  386.65  133.89  386.61
  134.53  386.58  134.87  386.48  136.41  386.31  140.34  385.88  143.43  385.54
  144.92  385.38  149.24  385.28  150.73  385.25  153.76  385.17  155.35  385.14
  158.88  385.06  170.82   384.8  172.01   384.8  173.25  384.79  175.88  384.76
  176.25  384.75  177.55  384.75  177.86  384.76  179.91   384.8  180.13  384.81
  180.78  384.81  187.92  384.89  188.27  384.89  192.29  384.96  193.32  384.97
  195.14  384.97     196  384.98  196.77  384.98  199.27  384.88  200.31  384.82
  200.54   384.8  202.37  384.69  203.15  384.65   204.4  384.56  204.75  384.53
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 207.04 | 384.36 | 207.16 | 384.36 | 207.83 | 384.23 | 209.05 | 384.01 | 209.58 | 384.03 |
| 209.97 | 384.03 | 211.95 | 383.83 | 212.29 | 383.79 | 213.79 | 383.66 | 214.65 | 383.64 |
| 217.35 | 383.62 | 219 | 383.66 | 225.53 | 383.98 | 226.71 | 384.01 | 226.98 | 384.01 |
| 230.4 | 384.18 | 230.68 | 384.2 | 233.96 | 384.36 | 234.41 | 384.38 | 236.38 | 384.43 |
| 237.91 | 384.46 | 238.17 | 384.47 | 239.3 | 384.49 | 240.81 | 384.53 | 247.76 | 384.69 |
| 248.01 | 384.68 | 249.18 | 384.71 | 254.89 | 384.78 | 255.43 | 384.79 | 256.78 | 384.8 |
| 258.84 | 384.81 | 262.02 | 384.83 | 262.9 | 384.83 | 264.67 | 384.85 | 267.86 | 384.84 |
| 268.4 | 384.83 | 270.23 | 384.75 | 273.63 | 384.73 | 274.1 | 384.73 | 274.68 | 384.77 |
| 275.26 | 384.77 | 276.21 | 384.75 | 289.31 | 384.39 | 289.62 | 384.39 | 291.14 | 384.33 |
| 293.44 | 384.33 | 295.11 | 384.47 | 302.16 | 385.07 | 305.07 | 385.27 | 320.46 | 385.29 |
| 320.71 | 385.23 | 322.01 | 385.11 | 323.93 | 385.07 | 327.18 | 384.94 | 328.15 | 384.89 |
| 328.48 | 384.86 | 328.87 | 384.77 | 331.21 | 384.83 | 331.36 | 384.85 | 333.54 | 384.96 |
| 334.27 | 385.03 | 334.95 | 385.07 | 337.95 | 385.22 | 340.07 | 385.29 | 340.49 | 385.3 |
| 343.95 | 385.31 | 345.6 | 385.28 | 345.82 | 385.27 | 356.77 | 385.01 | 361.01 | 384.9 |
| 362.66 | 384.86 | 365.14 | 384.79 | 368.15 | 384.71 | 369.45 | 384.68 | 381.92 | 384.35 |
| 385.73 | 384.11 | 389.95 | 383.85 | 390.07 | 383.84 | 401.06 | 383.39 | 402.48 | 383.36 |
| 405.43 | 383.34 | 408.3 | 383.34 | 417.96 | 383.33 | 421.81 | 383.3 | 425.24 | 383.25 |
| 427.41 | 383.25 | 434.65 | 383.33 | 438.39 | 383.38 | 438.99 | 383.4 | 443.31 | 383.57 |
| 452.04 | 383.95 | 454.07 | 384.05 | 463.26 | 384.43 | 463.92 | 384.59 | 467.96 | 385.38 |
| 470.3 | 385.51 | 471.85 | 385.59 | 473.76 | 385.67 | 474.89 | 385.69 | 475.22 | 385.69 |
| 477.81 | 385.71 | 480.26 | 385.75 | 480.59 | 385.75 | 480.8 | 385.77 | 481.89 | 385.82 |
| 483.24 | 385.9 | 483.52 | 385.93 | 484.08 | 385.97 | 485.35 | 385.95 | 486.49 | 385.91 |
| 488.82 | 385.8 | 489.13 | 385.8 | 490.24 | 385.74 | 490.93 | 385.71 | 492.29 | 385.67 |
| 493.2 | 385.62 | 494.41 | 385.56 | 494.74 | 385.55 | 497.34 | 385.43 | 498.69 | 385.36 |
| 499.56 | 385.27 | 500.73 | 385.16 | 503.65 | 384.87 | 503.96 | 384.86 | 504.33 | 384.83 |
| 505.46 | 384.85 | 505.98 | 384.87 | 506.67 | 384.88 | 509.79 | 384.99 | 510.21 | 385.03 |
| 516.99 | 385.4 | 518.25 | 385.41 | 521.45 | 385.41 | 525.73 | 385.21 | 527.12 | 385.16 |
| 527.82 | 385.13 | 529.27 | 385.08 | 529.58 | 385.08 | 533.28 | 385 | 534.24 | 384.97 |
| 535.32 | 384.93 | 537.5 | 384.89 | 541.44 | 384.93 | 542.49 | 384.95 | 543.02 | 384.95 |
| 543.48 | 385.01 | 544.92 | 385.14 | 545.88 | 385.28 | 546.43 | 385.37 | 548.2 | 385.46 |
| 549.93 | 385.52 | 550.39 | 385.52 | 552.12 | 385.56 | 555.16 | 385.67 | 556.52 | 385.7 |
| 558.65 | 385.72 | 559.07 | 385.74 | 560.85 | 385.75 | 563.12 | 385.75 | 569.75 | 385.74 |
| 571.3 | 385.73 | 571.77 | 385.75 | 572.94 | 385.72 | 573.67 | 385.68 | 574.41 | 385.65 |
| 576.83 | 385.59 | 578.28 | 385.52 | 579.01 | 385.48 | 580.02 | 385.34 | 581.67 | 385.36 |
| 585.4 | 385.36 | 587.43 | 385.37 | 588.98 | 385.44 | 589.58 | 385.45 | 591.17 | 385.46 |
| 592.34 | 385.46 | 593.29 | 385.44 | 595.41 | 385.37 | 596.34 | 385.31 | 596.51 | 385.31 |
| 597.82 | 385.35 | 599.12 | 385.33 | 604.21 | 385.33 | 605.8 | 385.39 | 606.27 | 385.42 |
| 608.95 | 385.51 | 611.24 | 385.55 | 612.04 | 385.56 | 613.66 | 385.57 | 614.59 | 385.58 |
| 614.96 | 385.59 | 616.4 | 385.61 | 618.38 | 385.63 | 620.02 | 385.66 | 620.79 | 385.69 |
| 621.93 | 385.71 | 623.05 | 385.72 | 623.7 | 385.71 | 624.31 | 385.71 | 626.35 | 385.68 |
| 626.88 | 385.65 | 627.9 | 385.58 | 629.25 | 385.53 | 630.13 | 385.52 | 631.18 | 385.5 |
| 631.88 | 385.48 | 632.91 | 385.48 | 633.28 | 385.49 | 634.39 | 385.5 | 635.25 | 385.53 |
| 637.49 | 385.54 | 640.17 | 385.49 | 640.46 | 385.49 | 641.42 | 385.46 | 643.13 | 385.39 |
| 643.76 | 385.36 | 645.85 | 385.34 | 646.35 | 385.33 | 649.09 | 385.33 | 650.95 | 385.47 |
| 651.41 | 385.54 | 651.64 | 385.72 | 654.08 | 385.75 | 655.03 | 385.77 | 657.9 | 385.8 |
| 658.35 | 385.79 | 659.91 | 385.74 | 660.51 | 385.73 | 661.31 | 385.7 | 663.37 | 385.66 |
| 667.7 | 385.51 | 668.69 | 385.46 | 669.34 | 385.42 | 670.33 | 385.37 | 670.79 | 385.34 |
| 670.97 | 385.34 | 671.31 | 385.31 | 672.06 | 385.28 | 674.21 | 385.31 | 675.25 | 385.31 |
| 676.37 | 385.32 | 676.74 | 385.3 | 677.53 | 385.29 | 678.36 | 385.33 | 678.8 | 385.45 |
| 679.63 | 385.58 | 679.9 | 385.7 | 680.15 | 385.7 | 682.11 | 385.73 | 682.41 | 385.73 |
| 684.18 | 385.78 | 685.34 | 385.8 | 685.79 | 385.8 | 686.38 | 385.8 | 688.94 | 385.76 |
| 690.39 | 385.74 | 690.78 | 385.73 | 703.37 | 385.52 | 705.15 | 385.5 | 707.67 | 385.45 |
| 708.34 | 385.42 | 709.11 | 385.29 | 711.04 | 385.28 | 711.99 | 385.28 | 715.52 | 385.27 |
| 715.71 | 385.28 | 717.23 | 385.29 | 719.93 | 385.23 | 720.7 | 385.24 | 721.41 | 385.2 |
| 721.82 | 385.19 | 725.14 | 385.07 | 726.52 | 385.12 | 730.32 | 385.28 | 731.16 | 385.33 |
| 738.49 | 385.33 | 741.11 | 385.31 | 744.58 | 385.31 | 745.94 | 385.32 | 746.79 | 385.28 |
| 747.39 | 385.24 | 749.65 | 385.13 | 751.21 | 385.05 | 751.37 | 385.02 | 751.73 | 384.99 |
| 753.61 | 384.95 | 754.28 | 384.95 | 754.59 | 384.94 | 755.26 | 384.94 | 755.52 | 384.95 |
| 757.13 | 384.99 | 757.27 | 384.99 | 758.96 | 384.91 | 760.78 | 384.83 | 761.97 | 384.75 |
| 762.8 | 384.68 | 763.62 | 384.66 | 764.6 | 384.65 | 765.31 | 384.7 | 765.61 | 384.7 |
| 766.36 | 384.65 | 767.5 | 384.66 | 769.31 | 384.69 | 771.42 | 384.79 | 772.02 | 384.81 |
| 772.07 | 384.83 | 773.29 | 384.98 | 773.97 | 385.05 | 774.48 | 385.07 | 776.01 | 385.07 |
| 777.6 | 385.05 | 778.78 | 384.94 | 779.23 | 384.94 | 785.37 | 385.16 | 788.63 | 385.24 |
| 790.07 | 385.35 | 791.8 | 385.35 | 792.53 | 385.36 | 797.48 | 385.36 | 798.54 | 385.37 |
| 806.54 | 385.38 | 820.18 | 385.38 | 821.28 | 385.37 | 823.53 | 385.36 | 824.92 | 385.36 |
| 830.47 | 385.35 | 831.77 | 385.36 | 835.98 | 385.36 | 841.83 | 385.2 | 841.96 | 385.2 |
| 843.49 | 385.25 | 844.29 | 385.27 | 844.97 | 385.28 | 845.51 | 385.28 | 845.94 | 385.29 |
| 846.82 | 385.29 | 847 | 385.3 | 847.95 | 385.3 | 848.23 | 385.33 | 849.23 | 385.31 |
| 849.68 | 385.31 | 851.4 | 385.26 | 852.03 | 385.25 | 856.61 | 385.12 | 874 | 384.63 |
| 881.73 | 384.42 | 882.23 | 384.4 | 883.34 | 384.37 | 884.76 | 384.35 | 884.84 | 384.34 |
| 885.47 | 384.34 | 886.9 | 384.33 | 888.58 | 384.33 | 888.89 | 384.32 | 889.51 | 384.32 |
| 892.2 | 384.31 | 894.11 | 384.31 | 895.01 | 384.36 | 896.48 | 384.45 | 902.65 | 384.45 |
| 913.94 | 384.43 | 914.44 | 384.44 | 919.61 | 384.46 | 920.74 | 384.46 | 923.01 | 384.47 |
| 929.08 | 384.48 | 932.33 | 384.53 | 935.2 | 384.56 | 945.25 | 384.69 | 946.24 | 384.69 |
| 947.41 | 384.65 | 950.4 | 384.48 | 953.2 | 384.47 | 963.23 | 384.47 | 965.45 | 384.48 |
| 966.86 | 384.48 | 970.52 | 384.47 | 975.79 | 384.44 | 978.44 | 384.44 | 978.7 | 384.43 |
| 979.44 | 384.44 | 981.12 | 384.45 | 985.16 | 384.61 | 985.23 | 384.62 | 992.75 | 384.93 |
| 994.34 | 385.03 | 994.48 | 385.03 | 995.36 | 385.09 | 995.83 | 385.07 | 997.29 | 385.11 |
| 997.65 | 385.11 | 1000.42 | 385.15 | 1001.21 | 385.15 | 1001.63 | 385.14 | 1003.21 | 385.13 |
| 1004.25 | 385.11 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 144.92 | .04 | 685.79 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 144.92 | 685.79 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7725.56*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 385.13 | .29 | 385.13 | 4.45 | 385.1 | 5.33 | 385.09 | 7.09 | 385.06 |
| 7.37 | 385.05 | 11.52 | 385.04 | 12.04 | 385.06 | 15.17 | 385.16 | 15.57 | 385.18 |
| 22.21 | 385.3 | 23.05 | 385.31 | 25.1 | 385.35 | 29.86 | 385.37 | 31.51 | 385.35 |
| 31.98 | 385.35 | 42.19 | 385.41 | 43.69 | 385.42 | 44.36 | 385.44 | 44.67 | 385.46 |
| 45.25 | 385.47 | 46.12 | 385.47 | 46.3 | 385.46 | 47.67 | 385.45 | 48.85 | 385.42 |
| 50.64 | 385.42 | 52 | 385.39 | 54.37 | 385.32 | 55.95 | 385.29 | 57.25 | 385.27 |
| 61.37 | 385.18 | 63.43 | 385.17 | 66.52 | 385.11 | 66.8 | 385.1 | 67 | 385.15 |
| 67.59 | 385.15 | 69.04 | 385.13 | 69.8 | 385.13 | 70.89 | 385.06 | 71.63 | 385.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 72.58 | 385.07 | 73.13 | 385.09 | 74.04 | 385.06 | 75.18 | 385.06 | 75.79 | 385.07 |
| 76.6 | 385.1 | 79.47 | 385.24 | 79.97 | 385.28 | 81.25 | 385.34 | 82.21 | 385.37 |
| 87.05 | 385.44 | 87.36 | 385.45 | 90.27 | 385.49 | 90.74 | 385.51 | 105.96 | 385.74 |
| 107.31 | 385.76 | 115.62 | 385.89 | 116.09 | 385.9 | 120.3 | 385.96 | 125.12 | 385.97 |
| 128.57 | 385.96 | 129.45 | 385.96 | 134.3 | 385.95 | 134.89 | 385.91 | 135.53 | 385.89 |
| 135.87 | 385.79 | 137.42 | 385.63 | 141.38 | 385.23 | 142.93 | 385.06 | 144.49 | 384.9 |
| 145.99 | 384.76 | 150.22 | 384.66 | 151.67 | 384.62 | 154.63 | 384.53 | 155.12 | 384.53 |
| 156.19 | 384.5 | 159.63 | 384.41 | 171.3 | 384.16 | 173.68 | 384.14 | 176.24 | 384.11 |
| 176.61 | 384.1 | 177.88 | 384.1 | 178.17 | 384.11 | 179.69 | 384.14 | 180.45 | 384.14 |
| 181.03 | 384.15 | 188.01 | 384.21 | 188.34 | 384.21 | 192.28 | 384.28 | 193.28 | 384.29 |
| 196.65 | 384.29 | 199.1 | 384.19 | 199.23 | 384.19 | 200.11 | 384.13 | 201 | 384.08 |
| 202.89 | 383.98 | 203.23 | 383.95 | 204.45 | 383.87 | 206.8 | 383.71 | 208.65 | 383.4 |
| 209.54 | 383.41 | 210.01 | 383.37 | 211.48 | 383.22 | 212.38 | 383.14 | 213.28 | 383.07 |
| 214.12 | 383.05 | 216.75 | 383.04 | 218.06 | 383.06 | 218.37 | 383.07 | 224.75 | 383.38 |
| 225.9 | 383.4 | 226.74 | 383.43 | 229.51 | 383.57 | 229.78 | 383.59 | 233.43 | 383.76 |
| 234.96 | 383.79 | 235.46 | 383.81 | 236.85 | 383.84 | 237.09 | 383.84 | 239.41 | 383.9 |
| 239.67 | 383.9 | 246.46 | 384.03 | 249.51 | 384.07 | 253.43 | 384.1 | 253.96 | 384.11 |
| 255.28 | 384.12 | 257.29 | 384.13 | 260.39 | 384.14 | 261.26 | 384.14 | 262.02 | 384.15 |
| 262.98 | 384.15 | 266.11 | 384.14 | 266.63 | 384.13 | 268.42 | 384.06 | 271.74 | 384.03 |
| 272.2 | 384.03 | 272.55 | 384.07 | 273.66 | 384.07 | 274.26 | 384.06 | 287.06 | 383.72 |
| 287.36 | 383.72 | 288.84 | 383.67 | 291.1 | 383.67 | 292.72 | 383.8 | 299.62 | 384.35 |
| 302.45 | 384.55 | 317.49 | 384.58 | 317.74 | 384.53 | 319 | 384.41 | 320.88 | 384.37 |
| 324.05 | 384.26 | 325 | 384.22 | 325.32 | 384.19 | 325.71 | 384.1 | 328 | 384.16 |
| 328.14 | 384.18 | 330.27 | 384.28 | 330.99 | 384.35 | 331.65 | 384.39 | 334.58 | 384.52 |
| 336.65 | 384.6 | 337.06 | 384.61 | 340.44 | 384.61 | 342.06 | 384.59 | 342.27 | 384.58 |
| 352.97 | 384.34 | 353.73 | 384.32 | 356.87 | 384.26 | 357.55 | 384.23 | 358.24 | 384.22 |
| 358.72 | 384.2 | 361.14 | 384.14 | 364.08 | 384.06 | 365.35 | 384.03 | 377.53 | 383.69 |
| 380.8 | 383.49 | 381.26 | 383.47 | 385.38 | 383.21 | 385.5 | 383.21 | 396.23 | 382.78 |
| 397.63 | 382.75 | 400.51 | 382.73 | 403.3 | 382.72 | 412.74 | 382.71 | 416.51 | 382.67 |
| 419.86 | 382.62 | 421.88 | 382.62 | 429.68 | 382.71 | 432.56 | 382.76 | 433.34 | 382.78 |
| 434.17 | 382.79 | 434.94 | 382.82 | 439.03 | 382.95 | 448.46 | 383.37 | 450.65 | 383.47 |
| 460.56 | 383.86 | 461.28 | 384.01 | 465.64 | 384.75 | 468.17 | 384.89 | 469.84 | 384.96 |
| 470.17 | 384.98 | 471.18 | 385.01 | 471.9 | 385.04 | 473.22 | 385.06 | 473.48 | 385.07 |
| 476.27 | 385.08 | 478.92 | 385.13 | 479.27 | 385.13 | 480.68 | 385.18 | 483.03 | 385.31 |
| 483.45 | 385.31 | 484.79 | 385.28 | 485.63 | 385.25 | 488.15 | 385.13 | 488.48 | 385.13 |
| 489.69 | 385.07 | 490.43 | 385.04 | 491.13 | 385.05 | 491.89 | 385.02 | 492.58 | 385 |
| 492.88 | 384.98 | 494.18 | 384.92 | 494.54 | 384.91 | 497.35 | 384.79 | 498.81 | 384.72 |
| 500.82 | 384.55 | 501.33 | 384.51 | 504.16 | 384.26 | 504.89 | 384.22 | 505.52 | 384.23 |
| 506.68 | 384.27 | 507.41 | 384.28 | 510.79 | 384.39 | 511.24 | 384.44 | 518.55 | 384.8 |
| 521.54 | 384.82 | 523.37 | 384.82 | 527.99 | 384.63 | 529.49 | 384.59 | 530.25 | 384.55 |
| 531.81 | 384.51 | 532.15 | 384.51 | 536.13 | 384.43 | 537.92 | 384.36 | 538.34 | 384.34 |
| 540.69 | 384.31 | 543.84 | 384.33 | 546.08 | 384.37 | 546.65 | 384.37 | 547.14 | 384.43 |
| 548.7 | 384.53 | 550.33 | 384.74 | 552.24 | 384.82 | 554.1 | 384.84 | 554.97 | 384.84 |
| 555.88 | 384.86 | 556.47 | 384.88 | 560.19 | 385.06 | 561.22 | 385.08 | 563.51 | 385.1 |
| 564.5 | 385.12 | 566.63 | 385.12 | 568.34 | 385.11 | 575.49 | 385.08 | 577.17 | 385.06 |
| 577.68 | 385.07 | 579.44 | 385.01 | 579.72 | 384.97 | 580.04 | 384.95 | 583.14 | 384.89 |
| 585.5 | 384.8 | 586.43 | 384.69 | 586.59 | 384.68 | 588.37 | 384.72 | 592.21 | 384.73 |
| 592.39 | 384.72 | 594.58 | 384.73 | 596.26 | 384.8 | 596.9 | 384.82 | 598.62 | 384.84 |
| 599.88 | 384.84 | 600.66 | 384.82 | 601.44 | 384.81 | 601.51 | 384.8 | 602.22 | 384.78 |
| 603.2 | 384.74 | 604.38 | 384.67 | 604.71 | 384.69 | 605.8 | 384.7 | 607.2 | 384.67 |
| 612.69 | 384.67 | 614.41 | 384.72 | 614.92 | 384.76 | 617.8 | 384.84 | 621.14 | 384.88 |
| 622.89 | 384.87 | 624.3 | 384.87 | 625.43 | 384.88 | 625.84 | 384.89 | 627.98 | 384.9 |
| 629.75 | 384.96 | 630.8 | 385 | 632.29 | 385.03 | 633.73 | 385.03 | 636.58 | 384.98 |
| 637.16 | 384.96 | 638.26 | 384.88 | 640.67 | 384.8 | 641.8 | 384.77 | 642.87 | 384.75 |
| 643.66 | 384.76 | 645.26 | 384.8 | 645.68 | 384.84 | 646.19 | 384.85 | 648.47 | 384.88 |
| 649.25 | 384.88 | 651.5 | 384.83 | 652.85 | 384.81 | 654.7 | 384.74 | 655.2 | 384.73 |
| 655.59 | 384.71 | 657.63 | 384.68 | 658.61 | 384.66 | 661.13 | 384.66 | 663.13 | 384.79 |
| 663.64 | 384.85 | 663.88 | 385.02 | 666.51 | 385.05 | 666.68 | 385.06 | 670.63 | 385.1 |
| 671.13 | 385.09 | 672.8 | 385.04 | 673.2 | 385.04 | 674.32 | 385 | 676.54 | 384.95 |
| 681.22 | 384.78 | 682.28 | 384.73 | 683.83 | 384.64 | 684.55 | 384.62 | 685.11 | 384.59 |
| 685.92 | 384.56 | 687.57 | 384.61 | 687.91 | 384.6 | 688.24 | 384.61 | 690.57 | 384.63 |
| 690.66 | 384.62 | 691.83 | 384.62 | 692.72 | 384.65 | 693.2 | 384.77 | 694.09 | 384.89 |
| 694.38 | 385.01 | 694.65 | 385.01 | 696.76 | 385.04 | 697.09 | 385.04 | 697.79 | 385.06 |
| 699.59 | 385.12 | 700.74 | 385.14 | 703.86 | 385.09 | 705.68 | 385.05 | 718.14 | 384.81 |
| 719.91 | 384.79 | 722.4 | 384.74 | 723.06 | 384.71 | 723.83 | 384.58 | 725.73 | 384.56 |
| 726.68 | 384.56 | 730.17 | 384.55 | 730.35 | 384.56 | 731.86 | 384.58 | 734.54 | 384.56 |
| 735.29 | 384.57 | 735.9 | 384.54 | 736.4 | 384.54 | 739.69 | 384.42 | 744.82 | 384.61 |
| 745.65 | 384.67 | 752.49 | 384.67 | 752.91 | 384.66 | 754.35 | 384.65 | 755.5 | 384.62 |
| 758.93 | 384.62 | 760.29 | 384.64 | 761.72 | 384.57 | 763.14 | 384.51 | 763.5 | 384.51 |
| 763.96 | 384.48 | 765.5 | 384.42 | 766.02 | 384.36 | 767.87 | 384.34 | 768.84 | 384.34 |
| 771.5 | 384.4 | 774.56 | 384.27 | 775.88 | 384.2 | 776.98 | 384.12 | 777.78 | 384.1 |
| 778.75 | 384.09 | 779.46 | 384.13 | 779.76 | 384.13 | 780.49 | 384.08 | 781.62 | 384.09 |
| 782.84 | 384.11 | 783.42 | 384.11 | 785.5 | 384.21 | 786.1 | 384.22 | 786.15 | 384.24 |
| 787.36 | 384.39 | 788.03 | 384.45 | 788.53 | 384.47 | 790.05 | 384.47 | 791.63 | 384.45 |
| 792.79 | 384.35 | 793.24 | 384.35 | 799.31 | 384.53 | 802.55 | 384.61 | 803.55 | 384.67 |
| 803.9 | 384.7 | 805.68 | 384.7 | 806.4 | 384.71 | 809.48 | 384.71 | 810.56 | 384.72 |
| 811.31 | 384.72 | 812.36 | 384.73 | 820.27 | 384.75 | 820.84 | 384.75 | 823.35 | 384.76 |
| 827.44 | 384.77 | 832.81 | 384.77 | 834.87 | 384.75 | 838.47 | 384.75 | 843.96 | 384.74 |
| 849.41 | 384.74 | 855.2 | 384.58 | 855.34 | 384.58 | 856.85 | 384.63 | 858.31 | 384.66 |
| 859.27 | 384.67 | 860.14 | 384.67 | 860.32 | 384.68 | 861.26 | 384.68 | 861.55 | 384.71 |
| 862.13 | 384.7 | 862.98 | 384.7 | 864 | 384.66 | 865.31 | 384.64 | 869.84 | 384.52 |
| 883.18 | 384.17 | 893.24 | 383.91 | 894.71 | 383.88 | 895.2 | 383.86 | 896.3 | 383.83 |
| 897.44 | 383.82 | 898.41 | 383.8 | 899.82 | 383.79 | 902.4 | 383.79 | 905.07 | 383.77 |
| 906.96 | 383.77 | 908.85 | 383.88 | 909.3 | 383.9 | 915.41 | 383.9 | 926.59 | 383.87 |
| 927.09 | 383.87 | 933.32 | 383.93 | 935.57 | 383.94 | 941.58 | 383.96 | 944.8 | 384.01 |
| 947.63 | 384.05 | 957.58 | 384.15 | 958.56 | 384.15 | 959.73 | 384.12 | 962.69 | 383.96 |
| 965.45 | 383.95 | 972.69 | 383.94 | 973.42 | 383.94 | 975.38 | 383.95 | 982.6 | 383.95 |
| 987.82 | 383.91 | 989.14 | 383.91 | 990.45 | 383.9 | 990.62 | 383.88 | 991.43 | 383.89 |
| 993.1 | 383.9 | 996.6 | 384.04 | 997.16 | 384.06 | 1004.61 | 384.37 | 1004.72 | 384.37 |
| 1006.18 | 384.46 | 1006.32 | 384.46 | 1007.19 | 384.52 | 1007.65 | 384.51 | 1008.75 | 384.53 |
| 1008.85 | 384.54 | 1012.2 | 384.59 | 1012.99 | 384.59 | 1013.3 | 384.58 | 1014.96 | 384.58 |
| 1015.99 | 384.55 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 145.99 | .04 | 700.74 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 145.99 | 700.74 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7677.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 384.49 | 4.48 | 384.47 | 5.37 | 384.46 | 7.15 | 384.43 | 11.6 | 384.42 |
| 14.3 | 384.51 | 15.29 | 384.53 | 15.68 | 384.55 | 22.37 | 384.67 | 23.22 | 384.67 |
| 25.28 | 384.71 | 30.08 | 384.72 | 32.22 | 384.71 | 42.5 | 384.77 | 42.98 | 384.77 |
| 44.69 | 384.79 | 45 | 384.81 | 45.58 | 384.82 | 46.46 | 384.82 | 46.64 | 384.81 |
| 48.02 | 384.8 | 49.21 | 384.78 | 50.27 | 384.78 | 52.38 | 384.75 | 54.77 | 384.69 |
| 56.37 | 384.66 | 57.68 | 384.64 | 61.83 | 384.55 | 63.9 | 384.55 | 67.01 | 384.49 |
| 67.3 | 384.49 | 67.49 | 384.53 | 68.08 | 384.52 | 69.55 | 384.51 | 70.31 | 384.51 |
| 71.42 | 384.44 | 72.15 | 384.41 | 73.67 | 384.47 | 74.59 | 384.45 | 75.73 | 384.44 |
| 77.16 | 384.47 | 80.06 | 384.61 | 80.56 | 384.64 | 81.85 | 384.69 | 82.82 | 384.72 |
| 87.69 | 384.79 | 88.01 | 384.79 | 90.93 | 384.83 | 91.41 | 384.85 | 106.74 | 385.06 |
| 108.1 | 385.07 | 116.47 | 385.21 | 116.95 | 385.21 | 121.19 | 385.27 | 130.19 | 385.27 |
| 130.41 | 385.26 | 135.29 | 385.25 | 136.52 | 385.19 | 136.87 | 385.1 | 138.44 | 384.95 |
| 142.42 | 384.58 | 143.99 | 384.42 | 145.56 | 384.27 | 147.07 | 384.13 | 149.52 | 384.08 |
| 152.61 | 383.99 | 155.5 | 383.9 | 156.54 | 383.88 | 157.02 | 383.86 | 160.38 | 383.76 |
| 171.78 | 383.51 | 174.1 | 383.49 | 174.92 | 383.49 | 175.8 | 383.47 | 176.61 | 383.46 |
| 177.42 | 383.46 | 178.2 | 383.45 | 178.49 | 383.46 | 179.97 | 383.48 | 181.28 | 383.48 |
| 188.09 | 383.54 | 188.42 | 383.54 | 192.26 | 383.6 | 193.24 | 383.6 | 193.77 | 383.61 |
| 196.53 | 383.61 | 198.92 | 383.51 | 200.78 | 383.4 | 201.88 | 383.34 | 202.29 | 383.33 |
| 203.81 | 383.23 | 206.33 | 383.07 | 206.44 | 383.07 | 207.09 | 382.97 | 208.24 | 382.78 |
| 208.75 | 382.8 | 209.12 | 382.8 | 209.58 | 382.76 | 211.34 | 382.59 | 212.77 | 382.48 |
| 213.59 | 382.47 | 216.16 | 382.45 | 217.43 | 382.47 | 217.74 | 382.48 | 223.97 | 382.77 |
| 225.09 | 382.8 | 225.35 | 382.8 | 228.61 | 382.97 | 229.28 | 383 | 232.01 | 383.11 |
| 232.44 | 383.13 | 235.78 | 383.22 | 237.1 | 383.24 | 238.29 | 383.27 | 238.54 | 383.27 |
| 245.17 | 383.38 | 245.41 | 383.37 | 246.53 | 383.39 | 248.14 | 383.41 | 251.97 | 383.43 |
| 252.49 | 383.44 | 253.78 | 383.45 | 255.74 | 383.44 | 258.77 | 383.45 | 259.62 | 383.45 |
| 260.36 | 383.46 | 261.3 | 383.46 | 264.35 | 383.43 | 264.86 | 383.42 | 266.61 | 383.36 |
| 269.85 | 383.34 | 270.3 | 383.34 | 270.85 | 383.38 | 271.41 | 383.38 | 272.31 | 383.36 |
| 284.81 | 383.05 | 285.11 | 383.05 | 286.55 | 383 | 288.75 | 383 | 290.34 | 383.12 |
| 297.07 | 383.64 | 299.84 | 383.82 | 314.53 | 383.86 | 314.62 | 383.83 | 315.37 | 383.76 |
| 316 | 383.72 | 317.84 | 383.68 | 320.93 | 383.58 | 321.86 | 383.54 | 322.17 | 383.51 |
| 322.55 | 383.44 | 324.78 | 383.49 | 324.92 | 383.51 | 327 | 383.61 | 328.34 | 383.7 |
| 331.21 | 383.83 | 333.23 | 383.9 | 333.63 | 383.91 | 336.93 | 383.92 | 338.51 | 383.9 |
| 338.71 | 383.89 | 349.16 | 383.68 | 349.91 | 383.66 | 352.51 | 383.61 | 354.31 | 383.56 |
| 354.78 | 383.54 | 357.14 | 383.48 | 361.26 | 383.38 | 373.15 | 383.04 | 376.33 | 382.85 |
| 376.79 | 382.83 | 380.81 | 382.58 | 380.93 | 382.58 | 391.41 | 382.17 | 392.77 | 382.14 |
| 395.58 | 382.12 | 398.31 | 382.11 | 407.53 | 382.08 | 411.2 | 382.05 | 414.48 | 382 |
| 416.34 | 382 | 424.72 | 382.09 | 425.02 | 382.09 | 429.54 | 382.19 | 430.36 | 382.22 |
| 434.76 | 382.34 | 444.88 | 382.78 | 447.23 | 382.9 | 457.87 | 383.29 | 458.63 | 383.43 |
| 463.31 | 384.13 | 466.03 | 384.26 | 467.83 | 384.34 | 469.26 | 384.39 | 470.03 | 384.41 |
| 471.73 | 384.44 | 474.73 | 384.46 | 477.57 | 384.5 | 477.95 | 384.5 | 479.46 | 384.55 |
| 481.02 | 384.61 | 481.99 | 384.66 | 483.87 | 384.62 | 484.78 | 384.59 | 487.49 | 384.47 |
| 487.84 | 384.47 | 489.13 | 384.41 | 489.93 | 384.38 | 490.68 | 384.4 | 492.56 | 384.35 |
| 493.96 | 384.28 | 494.34 | 384.27 | 497.36 | 384.15 | 498.68 | 384.09 | 498.92 | 384.09 |
| 499.93 | 384.01 | 501.08 | 383.93 | 501.63 | 383.9 | 504.66 | 383.66 | 505.03 | 383.65 |
| 505.46 | 383.62 | 506.13 | 383.63 | 507.37 | 383.67 | 508.16 | 383.69 | 511.78 | 383.8 |
| 512.26 | 383.84 | 520.12 | 384.21 | 523.32 | 384.23 | 525.29 | 384.23 | 530.24 | 384.06 |
| 531.86 | 384.01 | 532.67 | 383.97 | 534.35 | 383.93 | 534.71 | 383.93 | 538.99 | 383.86 |
| 541.36 | 383.75 | 543.89 | 383.72 | 547.26 | 383.75 | 549.14 | 383.77 | 549.2 | 383.78 |
| 550.23 | 383.8 | 550.28 | 383.79 | 550.81 | 383.84 | 552.48 | 383.93 | 553.59 | 384.03 |
| 554.23 | 384.1 | 556.28 | 384.17 | 558.28 | 384.17 | 558.82 | 384.15 | 559.21 | 384.15 |
| 560.19 | 384.17 | 560.82 | 384.2 | 564.34 | 384.42 | 564.81 | 384.44 | 565.92 | 384.46 |
| 568.38 | 384.47 | 568.91 | 384.49 | 571.73 | 384.49 | 573.57 | 384.47 | 581.24 | 384.42 |
| 583.04 | 384.38 | 583.59 | 384.39 | 585.39 | 384.32 | 585.78 | 384.25 | 586.65 | 384.23 |
| 589.45 | 384.19 | 591.13 | 384.14 | 591.98 | 384.12 | 593.15 | 384.02 | 595.06 | 384.08 |
| 599.38 | 384.09 | 601.73 | 384.1 | 603.53 | 384.17 | 604.47 | 384.19 | 606.07 | 384.21 |
| 606.38 | 384.22 | 607.42 | 384.22 | 608.25 | 384.2 | 609.09 | 384.19 | 609.93 | 384.16 |
| 610.98 | 384.11 | 612.25 | 384.04 | 612.6 | 384.05 | 613.77 | 384.05 | 615.28 | 384 |
| 621.17 | 384 | 623.02 | 384.05 | 623.56 | 384.11 | 626.66 | 384.17 | 629.32 | 384.2 |
| 630.24 | 384.19 | 632.11 | 384.16 | 633.63 | 384.15 | 634.84 | 384.16 | 635.29 | 384.17 |
| 637.85 | 384.18 | 638.2 | 384.2 | 639.49 | 384.25 | 640.61 | 384.31 | 642.21 | 384.34 |
| 643 | 384.35 | 643.76 | 384.34 | 644.46 | 384.34 | 646.14 | 384.3 | 646.82 | 384.29 |
| 647.43 | 384.26 | 648.62 | 384.18 | 650.18 | 384.12 | 653.23 | 384.03 | 654.42 | 384.04 |
| 654.85 | 384.05 | 656.29 | 384.11 | 656.59 | 384.16 | 657.14 | 384.18 | 659.58 | 384.23 |
| 660.42 | 384.22 | 662.84 | 384.17 | 663.5 | 384.17 | 666.26 | 384.1 | 666.8 | 384.08 |
| 669.41 | 384.02 | 670.47 | 383.99 | 673.17 | 383.99 | 675.32 | 384.11 | 675.86 | 384.17 |
| 676.12 | 384.33 | 678.95 | 384.35 | 679.12 | 384.36 | 680.04 | 384.37 | 683.37 | 384.39 |
| 683.9 | 384.39 | 685.7 | 384.34 | 686.13 | 384.34 | 687.32 | 384.3 | 689.71 | 384.23 |
| 694.73 | 384.05 | 695.88 | 384 | 696.63 | 383.95 | 697.78 | 383.9 | 698.31 | 383.89 |
| 698.91 | 383.86 | 699.78 | 383.85 | 701.55 | 383.91 | 701.91 | 383.9 | 702.27 | 383.92 |
| 703.47 | 383.93 | 704.78 | 383.95 | 704.86 | 383.94 | 706.12 | 383.94 | 707.08 | 383.98 |
| 707.59 | 384.09 | 708.55 | 384.21 | 708.87 | 384.32 | 710.72 | 384.33 | 711.77 | 384.35 |
| 712.46 | 384.38 | 712.52 | 384.37 | 713.82 | 384.43 | 714.58 | 384.46 | 715.69 | 384.47 |
| 718.78 | 384.42 | 720.58 | 384.38 | 732.91 | 384.11 | 734.66 | 384.08 | 737.12 | 384.02 |
| 737.78 | 383.99 | 738.54 | 383.87 | 740.43 | 383.85 | 740.61 | 383.84 | 741.36 | 383.84 |
| 744.82 | 383.83 | 745 | 383.84 | 746.5 | 383.88 | 749.14 | 383.88 | 749.89 | 383.9 |
| 750.41 | 383.88 | 750.99 | 383.88 | 754.25 | 383.78 | 755.6 | 383.82 | 759.32 | 383.95 |
| 760.15 | 384 | 767.32 | 384 | 768.75 | 383.97 | 770.26 | 383.93 | 771.74 | 383.93 |
| 773.29 | 383.94 | 774.63 | 383.96 | 775.97 | 383.91 | 776.05 | 383.9 | 777.45 | 383.86 |
| 777.81 | 383.86 | 778.26 | 383.84 | 779.79 | 383.79 | 780.3 | 383.74 | 783.1 | 383.74 |
| 785.23 | 383.79 | 785.59 | 383.81 | 788.29 | 383.72 | 789.17 | 383.68 | 789.83 | 383.64 |
| 790.33 | 383.6 | 791.15 | 383.55 | 791.95 | 383.53 | 792.91 | 383.52 | 793.6 | 383.56 |
| 793.9 | 383.56 | 794.63 | 383.51 | 796.95 | 383.53 | 797.52 | 383.54 | 799.59 | 383.63 |
| 800.18 | 383.64 | 800.23 | 383.66 | 801.42 | 383.79 | 802.09 | 383.85 | 802.59 | 383.87 |
| 804.09 | 383.87 | 805.65 | 383.85 | 806.81 | 383.75 | 807.24 | 383.75 | 813.26 | 383.91 |
| 816.46 | 383.97 | 817.8 | 384.05 | 817.87 | 384.06 | 823.32 | 384.06 | 826.17 | 384.09 |
| 834.01 | 384.13 | 837.54 | 384.14 | 841.1 | 384.16 | 845.33 | 384.16 | 845.77 | 384.15 |
| 847.37 | 384.15 | 848.45 | 384.14 | 852.02 | 384.14 | 857.46 | 384.12 | 858.73 | 384.13 |
| 862.85 | 384.12 | 868.58 | 383.97 | 868.72 | 383.97 | 870.21 | 384.02 | 871 | 384.04 |
| 871.66 | 384.04 | 873.47 | 384.06 | 873.65 | 384.07 | 874.58 | 384.07 | 874.86 | 384.09 |
| 875.44 | 384.08 | 876.28 | 384.08 | 877.96 | 384.03 | 878.58 | 384.03 | 883.07 | 383.93 |
| 896.28 | 383.61 | 900.11 | 383.5 | 906.23 | 383.36 | 906.59 | 383.36 | 907.68 | 383.33 |
| 910.73 | 383.27 | 912.75 | 383.26 | 915.3 | 383.26 | 917.94 | 383.24 | 918.57 | 383.23 |
| 919.81 | 383.23 | 920.7 | 383.27 | 922.13 | 383.36 | 928.18 | 383.34 | 939.24 | 383.3 |
| 939.73 | 383.31 | 944.8 | 383.38 | 948.13 | 383.41 | 954.08 | 383.44 | 957.27 | 383.49 |
| 960.07 | 383.53 | 969.92 | 383.62 | 970.89 | 383.62 | 972.04 | 383.59 | 974.97 | 383.44 |
| 977.71 | 383.42 | 985.6 | 383.42 | 987.54 | 383.43 | 991.1 | 383.43 | 994.68 | 383.42 |
| 999.85 | 383.38 | 1001.16 | 383.38 | 1002.23 | 383.35 | 1002.62 | 383.33 | 1003.43 | 383.34 |
| 1005.07 | 383.35 | 1009.1 | 383.5 | 1016.46 | 383.8 | 1019.02 | 383.95 | 1019.48 | 383.94 |
| 1021.27 | 383.99 | 1023.98 | 384.03 | 1024.76 | 384.03 | 1025.07 | 384.02 | 1026.72 | 384.02 |
| 1027.74 | 384 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 147.07 | .04 | 715.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 147.07 | 715.69 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7629.65*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 383.84 | .3 | 383.85 | 4.51 | 383.83 | 5.41 | 383.83 | 7.2 | 383.8 |
| 11.69 | 383.8 | 12.21 | 383.82 | 14.12 | 383.87 | 15.8 | 383.92 | 22.53 | 384.03 |
| 23.39 | 384.03 | 25.47 | 384.07 | 30.3 | 384.08 | 32.45 | 384.07 | 42.81 | 384.13 |
| 44.34 | 384.13 | 45.33 | 384.16 | 45.91 | 384.17 | 46.8 | 384.17 | 46.98 | 384.16 |
| 48.37 | 384.16 | 49.57 | 384.14 | 50.64 | 384.14 | 52.76 | 384.11 | 53.24 | 384.09 |
| 53.49 | 384.1 | 55.17 | 384.05 | 56.78 | 384.02 | 58.1 | 384.01 | 62.28 | 383.93 |
| 63.81 | 383.93 | 64.37 | 383.92 | 67.5 | 383.88 | 67.79 | 383.87 | 67.98 | 383.9 |
| 70.05 | 383.89 | 70.83 | 383.88 | 71.94 | 383.82 | 72.68 | 383.79 | 73.65 | 383.84 |
| 74.2 | 383.85 | 75.13 | 383.83 | 76.28 | 383.82 | 77.73 | 383.85 | 80.64 | 383.97 |
| 81.15 | 384 | 82.44 | 384.05 | 83.42 | 384.08 | 88.33 | 384.14 | 88.65 | 384.14 |
| 91.6 | 384.18 | 92.07 | 384.19 | 107.52 | 384.37 | 108.89 | 384.39 | 117.32 | 384.52 |
| 117.8 | 384.52 | 122.07 | 384.58 | 126.96 | 384.58 | 130.46 | 384.57 | 131.36 | 384.57 |
| 136.28 | 384.55 | 137.52 | 384.49 | 137.87 | 384.41 | 139.45 | 384.27 | 143.46 | 383.92 |
| 145.04 | 383.77 | 146.62 | 383.64 | 148.14 | 383.51 | 152.17 | 383.41 | 156.37 | 383.26 |
| 157.39 | 383.24 | 157.86 | 383.22 | 161.14 | 383.12 | 172.25 | 382.87 | 175.32 | 382.84 |
| 176.18 | 382.82 | 176.97 | 382.82 | 178.52 | 382.8 | 178.81 | 382.81 | 180.25 | 382.82 |
| 181.53 | 382.82 | 188.18 | 382.86 | 188.5 | 382.86 | 192.25 | 382.92 | 193.72 | 382.92 |
| 194.5 | 382.93 | 195.69 | 382.93 | 196.41 | 382.92 | 197.37 | 382.89 | 198.74 | 382.83 |
| 200.56 | 382.72 | 201.48 | 382.67 | 202.36 | 382.64 | 203.84 | 382.55 | 206.09 | 382.42 |
| 207.22 | 382.26 | 207.84 | 382.16 | 208.33 | 382.18 | 208.7 | 382.18 | 210.86 | 381.99 |
| 212.26 | 381.89 | 213.06 | 381.88 | 215.57 | 381.86 | 217.11 | 381.9 | 223.18 | 382.17 |
| 224.53 | 382.19 | 227.72 | 382.36 | 228.37 | 382.39 | 231.03 | 382.49 | 231.46 | 382.51 |
| 232.91 | 382.54 | 233.39 | 382.56 | 234.71 | 382.59 | 234.95 | 382.59 | 236 | 382.62 |
| 237.41 | 382.64 | 243.88 | 382.72 | 246.14 | 382.74 | 246.78 | 382.75 | 250.51 | 382.76 |
| 252.28 | 382.77 | 254.2 | 382.76 | 257.97 | 382.76 | 258.7 | 382.77 | 262.59 | 382.73 |
| 263.09 | 382.72 | 264.8 | 382.66 | 267.96 | 382.64 | 268.4 | 382.64 | 268.94 | 382.68 |
| 269.48 | 382.68 | 282.56 | 382.38 | 282.85 | 382.38 | 284.26 | 382.33 | 286.41 | 382.33 |
| 287.95 | 382.44 | 294.52 | 382.93 | 297.23 | 383.1 | 311.56 | 383.15 | 311.65 | 383.12 |
| 313 | 383.02 | 314.79 | 382.99 | 318.71 | 382.86 | 319.02 | 382.84 | 319.38 | 382.77 |
| 321.57 | 382.82 | 321.7 | 382.83 | 323.73 | 382.93 | 325.04 | 383.02 | 327.84 | 383.14 |
| 330.2 | 383.21 | 333.42 | 383.22 | 335.16 | 383.2 | 345.36 | 383.02 | 347.12 | 382.98 |
| 349.08 | 382.95 | 349.73 | 382.92 | 350.39 | 382.91 | 350.84 | 382.89 | 353.15 | 382.83 |
| 355.95 | 382.75 | 357.16 | 382.72 | 368.77 | 382.39 | 371.87 | 382.21 | 372.31 | 382.18 |
| 376.24 | 381.95 | 376.35 | 381.94 | 386.58 | 381.56 | 387.91 | 381.53 | 390.66 | 381.51 |
| 390.84 | 381.5 | 393.32 | 381.5 | 402.32 | 381.46 | 405.9 | 381.42 | 409.09 | 381.37 |
| 410.8 | 381.37 | 419.76 | 381.47 | 420.08 | 381.47 | 422.45 | 381.52 | 423.05 | 381.55 |
| 423.95 | 381.57 | 424.44 | 381.57 | 425.14 | 381.59 | 425.79 | 381.62 | 430.48 | 381.73 |
| 441.29 | 382.2 | 443.8 | 382.32 | 455.17 | 382.71 | 455.99 | 382.85 | 460.99 | 383.51 |
| 463.9 | 383.64 | 465.81 | 383.71 | 466.19 | 383.73 | 467.9 | 383.77 | 468.75 | 383.8 |
| 469.99 | 383.81 | 473.19 | 383.83 | 476.22 | 383.88 | 478.24 | 383.91 | 479.91 | 383.96 |
| 480.94 | 384 | 482.96 | 383.96 | 483.93 | 383.92 | 486.82 | 383.81 | 487.19 | 383.8 |
| 488.58 | 383.74 | 489.43 | 383.71 | 490.06 | 383.75 | 491.11 | 383.74 | 492.24 | 383.71 |
| 494.14 | 383.62 | 497.37 | 383.51 | 499.04 | 383.45 | 500.12 | 383.38 | 501.93 | 383.28 |
| 505.17 | 383.06 | 506.02 | 383.01 | 508.06 | 383.07 | 508.91 | 383.09 | 512.78 | 383.2 |
| 513.29 | 383.25 | 521.68 | 383.61 | 523.24 | 383.63 | 525.11 | 383.64 | 527.21 | 383.64 |
| 532.5 | 383.48 | 534.23 | 383.44 | 535.09 | 383.39 | 536.89 | 383.35 | 537.28 | 383.35 |
| 541.85 | 383.28 | 543.89 | 383.19 | 544.38 | 383.16 | 547.08 | 383.14 | 550.69 | 383.16 |
| 551.64 | 383.18 | 552.75 | 383.19 | 553.26 | 383.21 | 553.91 | 383.22 | 554.47 | 383.25 |
| 556.26 | 383.32 | 557.45 | 383.41 | 558.13 | 383.47 | 560.32 | 383.53 | 562.46 | 383.5 |
| 562.93 | 383.48 | 563.04 | 383.46 | 563.45 | 383.46 | 564.5 | 383.48 | 565.17 | 383.51 |
| 569.35 | 383.82 | 570.62 | 383.83 | 573.25 | 383.84 | 573.72 | 383.86 | 575.98 | 383.87 |
| 578.79 | 383.83 | 586.99 | 383.76 | 588.92 | 383.71 | 589.49 | 383.71 | 591.42 | 383.63 |
| 591.84 | 383.54 | 592.77 | 383.52 | 595.76 | 383.5 | 597.56 | 383.45 | 598.46 | 383.44 |
| 599.16 | 383.38 | 599.71 | 383.35 | 601.76 | 383.44 | 606.16 | 383.46 | 606.37 | 383.45 |
| 608.88 | 383.46 | 609.76 | 383.49 | 611.54 | 383.56 | 611.81 | 383.56 | 613.51 | 383.59 |
| 614.96 | 383.6 | 615.85 | 383.58 | 616.83 | 383.57 | 618.76 | 383.48 | 620.12 | 383.4 |
| 620.49 | 383.42 | 621.75 | 383.4 | 623.36 | 383.33 | 629.65 | 383.33 | 631.62 | 383.38 |
| 632.2 | 383.45 | 635.51 | 383.51 | 638.36 | 383.52 | 639.34 | 383.51 | 641.66 | 383.45 |
| 642.51 | 383.44 | 644.74 | 383.44 | 647.19 | 383.46 | 647.84 | 383.47 | 649.22 | 383.54 |
| 650.17 | 383.6 | 651.58 | 383.65 | 652.13 | 383.66 | 653.78 | 383.66 | 654.54 | 383.65 |
| 657.05 | 383.59 | 657.71 | 383.56 | 658.98 | 383.48 | 660.64 | 383.41 | 661.74 | 383.38 |
| 663.9 | 383.3 | 664.27 | 383.3 | 665.63 | 383.33 | 667.01 | 383.4 | 667.49 | 383.48 |
| 668.08 | 383.5 | 670.69 | 383.57 | 671.59 | 383.57 | 674.17 | 383.52 | 675.71 | 383.5 |
| 677.83 | 383.45 | 678.86 | 383.43 | 681.2 | 383.36 | 681.82 | 383.33 | 682.32 | 383.32 |
| 685.21 | 383.32 | 687.5 | 383.43 | 688.08 | 383.48 | 688.37 | 383.63 | 691.38 | 383.65 |
| 691.57 | 383.66 | 692.55 | 383.67 | 696.11 | 383.69 | 698.6 | 383.64 | 698.81 | 383.65 |
| 700.33 | 383.59 | 702.89 | 383.52 | 708.25 | 383.32 | 709.47 | 383.27 | 710.27 | 383.22 |
| 711.5 | 383.17 | 712.07 | 383.16 | 712.71 | 383.13 | 713.43 | 383.12 | 715.53 | 383.21 |
| 717.59 | 383.23 | 718.98 | 383.26 | 720.42 | 383.27 | 721.44 | 383.31 | 721.99 | 383.41 |
| 723.01 | 383.53 | 723.35 | 383.62 | 723.65 | 383.63 | 725.33 | 383.64 | 726.08 | 383.65 |
| 727.25 | 383.69 | 729.32 | 383.79 | 730.63 | 383.81 | 731.21 | 383.8 | 735.1 | 383.72 |
| 735.47 | 383.7 | 747.69 | 383.4 | 749.41 | 383.37 | 751.85 | 383.31 | 752.51 | 383.28 |
| 753.26 | 383.16 | 755.12 | 383.13 | 756.05 | 383.11 | 759.47 | 383.11 | 759.65 | 383.13 |
| 761.13 | 383.18 | 763.75 | 383.21 | 764.82 | 383.23 | 765.18 | 383.21 | 765.58 | 383.22 |
| 768.8 | 383.13 | 770.13 | 383.16 | 773.82 | 383.29 | 774.64 | 383.33 | 781.74 | 383.33 |
| 783.15 | 383.3 | 784.64 | 383.24 | 786.11 | 383.24 | 787.65 | 383.25 | 788.97 | 383.28 |
| 789.79 | 383.26 | 790.38 | 383.23 | 791.77 | 383.2 | 792.12 | 383.21 | 792.57 | 383.19 |
| 794.08 | 383.16 | 794.59 | 383.12 | 796.4 | 383.13 | 798.01 | 383.15 | 798.26 | 383.17 |
| 799.47 | 383.2 | 799.82 | 383.22 | 802.95 | 383.13 | 803.36 | 383.11 | 804.02 | 383.06 |
| 805.32 | 382.98 | 806.11 | 382.96 | 807.06 | 382.95 | 807.75 | 382.99 | 808.05 | 382.99 |
| 809.06 | 382.94 | 809.42 | 382.95 | 811.06 | 382.96 | 811.63 | 382.97 | 813.68 | 383.05 |
| 814.31 | 383.07 | 815.49 | 383.2 | 816.34 | 383.26 | 818.13 | 383.27 | 819.68 | 383.25 |
| 820.82 | 383.16 | 821.25 | 383.15 | 827.2 | 383.28 | 830.37 | 383.33 | 831.36 | 383.38 |
| 831.76 | 383.41 | 837.16 | 383.41 | 838.22 | 383.42 | 838.96 | 383.44 | 839.98 | 383.45 |
| 847.74 | 383.5 | 848.29 | 383.5 | 850.75 | 383.52 | 851.24 | 383.52 | 854.76 | 383.55 |
| 858.95 | 383.55 | 859.38 | 383.54 | 860.96 | 383.54 | 862.04 | 383.53 | 864.21 | 383.52 |
| 865.57 | 383.53 | 870.95 | 383.5 | 872.21 | 383.51 | 876.29 | 383.49 | 881.96 | 383.35 |
| 883.57 | 383.4 | 885 | 383.43 | 885.94 | 383.44 | 886.8 | 383.44 | 886.97 | 383.45 |
| 887.89 | 383.45 | 888.17 | 383.47 | 888.85 | 383.47 | 890.57 | 383.44 | 891.24 | 383.42 |
| 891.86 | 383.42 | 896.29 | 383.33 | 909.37 | 383.04 | 913.16 | 382.94 | 919.22 | 382.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 919.57 | 382.81 | 923.33 | 382.74 | 925.8 | 382.72 | 927.3 | 382.73 | 928.2 | 382.72 |
| 930.81 | 382.7 | 931.44 | 382.69 | 932.66 | 382.69 | 934.51 | 382.78 | 934.96 | 382.81 |
| 940.94 | 382.79 | 951.9 | 382.74 | 952.38 | 382.75 | 958.49 | 382.86 | 960.69 | 382.88 |
| 966.58 | 382.92 | 969.73 | 382.97 | 972.51 | 383.01 | 982.25 | 383.09 | 983.21 | 383.09 |
| 984.36 | 383.05 | 987.26 | 382.92 | 989.96 | 382.9 | 997.05 | 382.89 | 997.78 | 382.89 |
| 999.69 | 382.91 | 1003.22 | 382.91 | 1006.77 | 382.9 | 1011.87 | 382.85 | 1012.94 | 382.85 |
| 1014.23 | 382.81 | 1014.62 | 382.78 | 1015.42 | 382.78 | 1017.05 | 382.8 | 1021.03 | 382.94 |
| 1028.32 | 383.23 | 1029.87 | 383.33 | 1030.86 | 383.38 | 1031.31 | 383.38 | 1032.73 | 383.42 |
| 1033.08 | 383.42 | 1036.53 | 383.47 | 1036.84 | 383.46 | 1038.06 | 383.46 | 1038.47 | 383.47 |
| 1039.48 | 383.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 148.14 | .04 | 730.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 148.14 | 730.63 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7581.69*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 383.2 | 5.1 | 383.2 | 5.45 | 383.19 | 7.25 | 383.18 | 7.53 | 383.17 |
| 12.14 | 383.18 | 12.3 | 383.19 | 14.22 | 383.24 | 15.91 | 383.29 | 22.7 | 383.39 |
| 25.65 | 383.42 | 30.52 | 383.44 | 32.69 | 383.43 | 43.12 | 383.48 | 43.61 | 383.48 |
| 45.34 | 383.5 | 45.66 | 383.52 | 47.14 | 383.53 | 47.33 | 383.52 | 48.73 | 383.51 |
| 49.93 | 383.49 | 51.75 | 383.49 | 53.88 | 383.46 | 55.57 | 383.42 | 57.19 | 383.39 |
| 58.52 | 383.38 | 62.73 | 383.31 | 64.28 | 383.31 | 64.84 | 383.3 | 67.99 | 383.26 |
| 68.28 | 383.25 | 68.48 | 383.28 | 69.08 | 383.28 | 70.56 | 383.26 | 71.34 | 383.26 |
| 73.21 | 383.18 | 74.18 | 383.22 | 74.74 | 383.23 | 75.68 | 383.21 | 77.46 | 383.21 |
| 78.29 | 383.23 | 79.56 | 383.27 | 81.23 | 383.34 | 83.04 | 383.41 | 84.03 | 383.43 |
| 88.97 | 383.48 | 89.29 | 383.48 | 92.26 | 383.52 | 92.74 | 383.53 | 108.3 | 383.69 |
| 118.17 | 383.83 | 118.66 | 383.83 | 122.96 | 383.89 | 127.88 | 383.89 | 132.09 | 383.88 |
| 132.31 | 383.87 | 137.27 | 383.85 | 138.52 | 383.8 | 138.87 | 383.72 | 140.34 | 383.6 |
| 140.46 | 383.6 | 144.51 | 383.27 | 146.09 | 383.13 | 147.69 | 383 | 149.22 | 382.89 |
| 151.55 | 382.83 | 153.14 | 382.78 | 154.5 | 382.73 | 157.24 | 382.62 | 158.69 | 382.59 |
| 161.89 | 382.47 | 172.73 | 382.22 | 174.94 | 382.2 | 178.85 | 382.15 | 179.12 | 382.16 |
| 180.99 | 382.17 | 181.19 | 382.15 | 181.78 | 382.15 | 188.26 | 382.19 | 188.57 | 382.19 |
| 192.23 | 382.24 | 193.66 | 382.24 | 194.43 | 382.25 | 195.59 | 382.25 | 196.29 | 382.24 |
| 196.65 | 382.22 | 198.57 | 382.15 | 199.72 | 382.07 | 202.2 | 381.96 | 205.62 | 381.78 |
| 205.73 | 381.78 | 207.44 | 381.55 | 208.28 | 381.56 | 210.08 | 381.42 | 210.39 | 381.39 |
| 211.74 | 381.3 | 212.53 | 381.29 | 214.98 | 381.28 | 216.47 | 381.31 | 222.4 | 381.56 |
| 223.48 | 381.58 | 224.25 | 381.61 | 226.83 | 381.75 | 227.46 | 381.78 | 230.06 | 381.87 |
| 230.47 | 381.89 | 231.89 | 381.92 | 232.36 | 381.94 | 236.03 | 382.01 | 236.27 | 382.01 |
| 242.58 | 382.07 | 242.81 | 382.06 | 243.88 | 382.07 | 244.8 | 382.07 | 245.41 | 382.08 |
| 249.06 | 382.08 | 249.55 | 382.09 | 250.77 | 382.09 | 252.65 | 382.08 | 255.53 | 382.07 |
| 257.94 | 382.07 | 260.84 | 382.03 | 261.33 | 382.02 | 262.98 | 381.97 | 266.07 | 381.95 |
| 266.5 | 381.95 | 267.02 | 381.98 | 268.42 | 381.97 | 280.31 | 381.71 | 280.59 | 381.71 |
| 281.97 | 381.67 | 284.06 | 381.67 | 285.57 | 381.77 | 291.98 | 382.22 | 294.61 | 382.37 |
| 308.59 | 382.44 | 308.68 | 382.41 | 309.99 | 382.32 | 311.74 | 382.29 | 314.69 | 382.21 |
| 315.57 | 382.18 | 315.87 | 382.16 | 316.22 | 382.1 | 318.35 | 382.15 | 318.48 | 382.16 |
| 320.46 | 382.25 | 321.13 | 382.3 | 321.74 | 382.33 | 324.47 | 382.45 | 326.39 | 382.51 |
| 329.91 | 382.53 | 331.61 | 382.51 | 341.55 | 382.35 | 343.27 | 382.32 | 345.4 | 382.29 |
| 346.9 | 382.23 | 349.15 | 382.18 | 351.88 | 382.1 | 353.06 | 382.07 | 364.38 | 381.74 |
| 367.41 | 381.56 | 367.84 | 381.54 | 371.68 | 381.32 | 371.78 | 381.31 | 381.76 | 380.95 |
| 383.05 | 380.92 | 385.73 | 380.89 | 388.33 | 380.89 | 397.1 | 380.84 | 400.6 | 380.8 |
| 403.71 | 380.75 | 405.27 | 380.75 | 414.79 | 380.85 | 415.14 | 380.85 | 417.66 | 380.91 |
| 418.3 | 380.94 | 420.27 | 380.98 | 421.21 | 381.01 | 426.2 | 381.12 | 437.71 | 381.62 |
| 440.38 | 381.75 | 452.48 | 382.14 | 453.35 | 382.27 | 458.67 | 382.88 | 461.76 | 383.01 |
| 463.8 | 383.08 | 464.2 | 383.1 | 466.02 | 383.14 | 466.92 | 383.17 | 468.24 | 383.19 |
| 471.64 | 383.21 | 474.88 | 383.25 | 477.02 | 383.28 | 478.8 | 383.32 | 479.9 | 383.35 |
| 482.04 | 383.3 | 486.15 | 383.14 | 486.55 | 383.14 | 488.02 | 383.08 | 488.93 | 383.05 |
| 489.6 | 383.1 | 490.71 | 383.1 | 491.92 | 383.07 | 493.51 | 382.99 | 493.94 | 382.98 |
| 497.37 | 382.88 | 499.15 | 382.81 | 500.3 | 382.75 | 502.23 | 382.66 | 505.68 | 382.46 |
| 506.13 | 382.42 | 506.58 | 382.41 | 507.35 | 382.42 | 508.07 | 382.44 | 508.75 | 382.47 |
| 509.65 | 382.49 | 513.77 | 382.61 | 514.32 | 382.65 | 523.25 | 383.01 | 526.89 | 383.05 |
| 529.12 | 383.05 | 534.76 | 382.9 | 536.6 | 382.87 | 537.52 | 382.81 | 539.42 | 382.77 |
| 539.84 | 382.77 | 544.7 | 382.71 | 545.98 | 382.65 | 547.4 | 382.57 | 550.27 | 382.55 |
| 555.46 | 382.59 | 556.31 | 382.61 | 556.91 | 382.64 | 557.54 | 382.64 | 558.14 | 382.67 |
| 560.04 | 382.71 | 561.3 | 382.78 | 562.03 | 382.84 | 564.36 | 382.89 | 566.63 | 382.82 |
| 567.14 | 382.8 | 567.69 | 382.77 | 568.8 | 382.8 | 569.52 | 382.83 | 573.52 | 383.17 |
| 573.97 | 383.2 | 575.32 | 383.21 | 578.12 | 383.21 | 578.87 | 383.24 | 581.03 | 383.24 |
| 581.92 | 383.23 | 584.01 | 383.19 | 592.74 | 383.1 | 594.79 | 383.03 | 595.4 | 383.02 |
| 596.95 | 382.96 | 597.55 | 382.92 | 597.9 | 382.83 | 598.89 | 382.81 | 602.07 | 382.8 |
| 603.98 | 382.76 | 604.94 | 382.76 | 605.69 | 382.71 | 606.28 | 382.69 | 608.45 | 382.8 |
| 613.14 | 382.82 | 613.36 | 382.81 | 616.03 | 382.83 | 616.97 | 382.85 | 618.08 | 382.9 |
| 618.86 | 382.92 | 619.15 | 382.94 | 620.96 | 382.97 | 622.5 | 382.98 | 623.44 | 382.96 |
| 624.49 | 382.95 | 626.55 | 382.85 | 627.99 | 382.77 | 628.39 | 382.78 | 629.72 | 382.75 |
| 631.43 | 382.67 | 638.13 | 382.67 | 640.23 | 382.71 | 640.85 | 382.79 | 644.37 | 382.84 |
| 647.4 | 382.85 | 648.45 | 382.83 | 650.57 | 382.76 | 650.91 | 382.74 | 652.3 | 382.72 |
| 654.18 | 382.72 | 657.09 | 382.73 | 658.96 | 382.83 | 659.97 | 382.91 | 661.47 | 382.96 |
| 662.48 | 382.98 | 662.95 | 382.98 | 664.61 | 382.96 | 667.29 | 382.9 | 667.99 | 382.87 |
| 669.33 | 382.78 | 671.11 | 382.71 | 672.27 | 382.67 | 674.58 | 382.57 | 675.93 | 382.59 |
| 676.42 | 382.61 | 677.88 | 382.7 | 678.45 | 382.8 | 679.02 | 382.83 | 681.79 | 382.91 |
| 681.97 | 382.92 | 682.75 | 382.91 | 685.5 | 382.86 | 689.4 | 382.81 | 690.49 | 382.79 |
| 692.98 | 382.7 | 694.18 | 382.65 | 697.24 | 382.65 | 699.69 | 382.75 | 700.31 | 382.8 |
| 700.61 | 382.93 | 703.82 | 382.95 | 705.06 | 382.98 | 708.85 | 382.99 | 712.17 | 382.94 |
| 713.34 | 382.89 | 716.06 | 382.81 | 722.56 | 382.56 | 723.7 | 382.5 | 723.92 | 382.48 |
| 724.95 | 382.44 | 725.83 | 382.43 | 726.51 | 382.4 | 727.27 | 382.4 | 729.51 | 382.51 |
| 729.93 | 382.51 | 730.33 | 382.53 | 731.7 | 382.54 | 733.18 | 382.58 | 733.67 | 382.57 |
| 734.71 | 382.59 | 735.8 | 382.64 | 736.38 | 382.74 | 737.47 | 382.84 | 737.83 | 382.93 |
| 738.15 | 382.94 | 739.94 | 382.95 | 740.73 | 382.96 | 741.98 | 383 | 743.46 | 383.09 |
| 744.19 | 383.12 | 744.99 | 383.14 | 745.58 | 383.14 | 748.61 | 383.08 | 750.37 | 383.03 |
| 762.46 | 382.7 | 764.17 | 382.66 | 766.58 | 382.59 | 767.23 | 382.56 | 767.97 | 382.45 |
| 769.82 | 382.42 | 770.73 | 382.39 | 774.12 | 382.39 | 774.3 | 382.41 | 775.76 | 382.47 |
| 778.35 | 382.53 | 779.09 | 382.56 | 779.77 | 382.55 | 780.16 | 382.57 | 783.35 | 382.48 |
| 784.67 | 382.51 | 788.89 | 382.65 | 789.13 | 382.67 | 795.76 | 382.67 | 797.56 | 382.62 |
| 798.67 | 382.56 | 799.03 | 382.55 | 800.48 | 382.55 | 802 | 382.56 | 803.31 | 382.6 |
| 804.63 | 382.57 | 804.71 | 382.56 | 806.08 | 382.55 | 806.43 | 382.56 | 806.87 | 382.54 |
| 808.37 | 382.53 | 808.87 | 382.5 | 810.67 | 382.52 | 811.61 | 382.54 | 813.7 | 382.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 814.18 | 382.63 | 814.39 | 382.62 | 816.69 | 382.57 | 817.96 | 382.51 | 819.5 | 382.41 |
| 821.22 | 382.39 | 821.9 | 382.42 | 822.19 | 382.42 | 822.91 | 382.38 | 824 | 382.38 |
| 825.74 | 382.4 | 827.76 | 382.46 | 828.28 | 382.48 | 829.56 | 382.6 | 830.21 | 382.65 |
| 830.7 | 382.66 | 832.17 | 382.67 | 833.7 | 382.65 | 834.83 | 382.56 | 835.26 | 382.56 |
| 841.15 | 382.66 | 844.29 | 382.69 | 845.66 | 382.76 | 850.37 | 382.76 | 852.78 | 382.79 |
| 853.8 | 382.81 | 861.47 | 382.88 | 862.02 | 382.88 | 864.46 | 382.9 | 864.94 | 382.9 |
| 868.42 | 382.93 | 868.76 | 382.94 | 870.63 | 382.94 | 870.98 | 382.95 | 872.39 | 382.93 |
| 874.56 | 382.93 | 875.62 | 382.92 | 877.77 | 382.91 | 879.11 | 382.91 | 884.44 | 382.89 |
| 885.68 | 382.89 | 889.72 | 382.87 | 895.34 | 382.74 | 895.47 | 382.74 | 897.7 | 382.8 |
| 899.28 | 382.82 | 900.13 | 382.82 | 900.3 | 382.83 | 901.21 | 382.83 | 901.4 | 382.85 |
| 902.16 | 382.85 | 904.53 | 382.81 | 905.13 | 382.81 | 909.52 | 382.73 | 922.46 | 382.47 |
| 926.21 | 382.38 | 932.21 | 382.27 | 932.56 | 382.27 | 935.18 | 382.22 | 936.54 | 382.2 |
| 938.72 | 382.19 | 940.2 | 382.2 | 943.68 | 382.16 | 944.3 | 382.15 | 945.52 | 382.16 |
| 946.38 | 382.19 | 947.79 | 382.26 | 953.71 | 382.24 | 964.55 | 382.17 | 965.03 | 382.18 |
| 969.99 | 382.3 | 971.07 | 382.32 | 973.25 | 382.35 | 979.07 | 382.4 | 982.2 | 382.46 |
| 984.95 | 382.49 | 994.59 | 382.55 | 995.54 | 382.55 | 996.67 | 382.52 | 999.54 | 382.4 |
| 1002.22 | 382.38 | 1009.95 | 382.37 | 1013.98 | 382.39 | 1015.34 | 382.39 | 1018.85 | 382.37 |
| 1023.9 | 382.32 | 1024.95 | 382.32 | 1026.24 | 382.27 | 1026.45 | 382.27 | 1026.62 | 382.23 |
| 1027.41 | 382.23 | 1029.02 | 382.25 | 1032.42 | 382.36 | 1032.96 | 382.38 | 1040.18 | 382.67 |
| 1040.29 | 382.67 | 1041.71 | 382.76 | 1041.84 | 382.76 | 1042.69 | 382.82 | 1043.13 | 382.81 |
| 1044.2 | 382.84 | 1044.29 | 382.85 | 1048.3 | 382.91 | 1048.7 | 382.9 | 1050.22 | 382.91 |
| 1051.22 | 382.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 149.22 | .04 | 745.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 149.22 | 745.58 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7533.74*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 382.56 | 4.58 | 382.56 | 5.14 | 382.57 | 5.49 | 382.56 | 7.3 | 382.55 |
| 7.59 | 382.54 | 11.86 | 382.55 | 12.39 | 382.57 | 14.62 | 382.63 | 16.03 | 382.66 |
| 22.86 | 382.75 | 25.84 | 382.78 | 30.74 | 382.8 | 32.92 | 382.79 | 43.43 | 382.84 |
| 43.93 | 382.84 | 45.67 | 382.86 | 46.58 | 382.88 | 47.48 | 382.88 | 47.67 | 382.87 |
| 49.08 | 382.87 | 50.29 | 382.85 | 52.13 | 382.85 | 54.27 | 382.82 | 55.97 | 382.78 |
| 57.6 | 382.76 | 58.94 | 382.75 | 63.18 | 382.69 | 65.3 | 382.68 | 68.48 | 382.64 |
| 68.77 | 382.63 | 68.97 | 382.66 | 69.58 | 382.66 | 71.07 | 382.64 | 71.85 | 382.64 |
| 72.98 | 382.59 | 74 | 382.57 | 74.72 | 382.6 | 75.28 | 382.61 | 76.22 | 382.59 |
| 78.02 | 382.59 | 78.86 | 382.61 | 81.81 | 382.7 | 82.32 | 382.73 | 83.64 | 382.77 |
| 84.63 | 382.79 | 89.61 | 382.83 | 89.94 | 382.83 | 92.93 | 382.86 | 93.41 | 382.87 |
| 109.09 | 383.01 | 110.47 | 383.03 | 119.03 | 383.14 | 119.51 | 383.15 | 123.85 | 383.19 |
| 128.81 | 383.2 | 132.36 | 383.18 | 133.27 | 383.18 | 138.26 | 383.15 | 139.52 | 383.1 |
| 139.87 | 383.03 | 141.35 | 382.92 | 141.47 | 382.92 | 145.55 | 382.62 | 147.14 | 382.48 |
| 148.75 | 382.37 | 150.29 | 382.27 | 152.56 | 382.21 | 154.12 | 382.16 | 158.11 | 381.98 |
| 159.53 | 381.95 | 162.65 | 381.82 | 173.21 | 381.58 | 173.52 | 381.57 | 175.37 | 381.55 |
| 178.45 | 381.51 | 179.44 | 381.5 | 181.26 | 381.51 | 181.45 | 381.49 | 182.03 | 381.48 |
| 188.35 | 381.52 | 188.65 | 381.52 | 192.21 | 381.56 | 194.35 | 381.56 | 194.73 | 381.57 |
| 196.18 | 381.55 | 197.08 | 381.52 | 198.51 | 381.46 | 199.51 | 381.39 | 201.21 | 381.31 |
| 201.32 | 381.32 | 202.92 | 381.24 | 203.24 | 381.23 | 205.26 | 381.14 | 207.04 | 380.93 |
| 207.85 | 380.94 | 209.61 | 380.81 | 211.23 | 380.71 | 211.99 | 380.7 | 214.38 | 380.69 |
| 215.84 | 380.72 | 221.62 | 380.96 | 222.9 | 380.98 | 223.43 | 381.01 | 226.55 | 381.17 |
| 229.08 | 381.25 | 229.48 | 381.27 | 232.58 | 381.34 | 232.8 | 381.34 | 234.9 | 381.38 |
| 241.29 | 381.41 | 243.45 | 381.41 | 244.05 | 381.42 | 247.6 | 381.41 | 249.27 | 381.41 |
| 251.1 | 381.4 | 253.91 | 381.38 | 256.25 | 381.38 | 259.56 | 381.32 | 261.17 | 381.27 |
| 264.18 | 381.25 | 264.6 | 381.25 | 264.92 | 381.28 | 265.92 | 381.28 | 266.47 | 381.27 |
| 278.06 | 381.04 | 278.33 | 381.04 | 279.67 | 381 | 281.72 | 381 | 283.19 | 381.09 |
| 289.43 | 381.5 | 292 | 381.65 | 305.62 | 381.73 | 305.71 | 381.7 | 306.99 | 381.62 |
| 308.69 | 381.6 | 312.42 | 381.51 | 312.71 | 381.49 | 313.06 | 381.43 | 315.14 | 381.48 |
| 315.27 | 381.49 | 317.19 | 381.57 | 317.84 | 381.62 | 318.44 | 381.65 | 321.1 | 381.75 |
| 323.34 | 381.82 | 326.41 | 381.83 | 328.06 | 381.82 | 337.75 | 381.69 | 339.42 | 381.66 |
| 340.86 | 381.65 | 341.9 | 381.61 | 342.53 | 381.6 | 342.96 | 381.58 | 345.15 | 381.52 |
| 348.97 | 381.42 | 360 | 381.08 | 363.37 | 380.9 | 367.11 | 380.69 | 367.21 | 380.68 |
| 376.93 | 380.34 | 378.2 | 380.31 | 380.81 | 380.28 | 383.34 | 380.27 | 391.89 | 380.22 |
| 395.3 | 380.18 | 398.33 | 380.13 | 399.73 | 380.13 | 409.83 | 380.23 | 410.67 | 380.24 |
| 412.87 | 380.3 | 413.55 | 380.33 | 414.56 | 380.36 | 415.11 | 380.36 | 416.63 | 380.41 |
| 421.93 | 380.51 | 434.12 | 381.03 | 436.96 | 381.17 | 449.78 | 381.57 | 450.71 | 381.69 |
| 456.35 | 382.26 | 459.62 | 382.39 | 461.79 | 382.46 | 462.21 | 382.48 | 463.52 | 382.51 |
| 464.14 | 382.51 | 464.45 | 382.53 | 466.49 | 382.56 | 470.1 | 382.58 | 473.53 | 382.63 |
| 475.81 | 382.64 | 478.85 | 382.69 | 481.13 | 382.64 | 485.48 | 382.48 | 485.91 | 382.47 |
| 487.47 | 382.41 | 488.43 | 382.38 | 489.33 | 382.46 | 490.32 | 382.46 | 491.6 | 382.43 |
| 493.28 | 382.35 | 493.74 | 382.34 | 497.38 | 382.24 | 499.27 | 382.17 | 500.48 | 382.12 |
| 502.53 | 382.05 | 506.19 | 381.85 | 506.61 | 381.84 | 506.66 | 381.81 | 507.14 | 381.8 |
| 508.72 | 381.84 | 509.45 | 381.87 | 510.4 | 381.89 | 514.77 | 382.01 | 515.35 | 382.05 |
| 524.81 | 382.41 | 526.57 | 382.44 | 528.68 | 382.46 | 531.04 | 382.45 | 537.02 | 382.32 |
| 538.97 | 382.29 | 539.94 | 382.23 | 541.96 | 382.2 | 542.4 | 382.2 | 547.56 | 382.14 |
| 548.91 | 382.07 | 549.87 | 382.01 | 550.42 | 381.99 | 553.46 | 381.97 | 557.53 | 381.99 |
| 559.86 | 382.03 | 560.5 | 382.06 | 561.16 | 382.06 | 561.8 | 382.08 | 563.82 | 382.1 |
| 565.16 | 382.16 | 565.93 | 382.21 | 568.4 | 382.25 | 570.81 | 382.15 | 571.35 | 382.12 |
| 571.46 | 382.09 | 571.93 | 382.08 | 573.11 | 382.11 | 573.87 | 382.15 | 578.12 | 382.54 |
| 578.59 | 382.58 | 580.02 | 382.59 | 582.99 | 382.58 | 583.58 | 382.61 | 587.02 | 382.61 |
| 589.23 | 382.56 | 598.49 | 382.44 | 600.66 | 382.36 | 601.31 | 382.34 | 602.95 | 382.27 |
| 603.59 | 382.23 | 603.96 | 382.12 | 604.36 | 382.1 | 608.38 | 382.1 | 610.41 | 382.07 |
| 611.43 | 382.08 | 612.22 | 382.04 | 612.84 | 382.03 | 615.14 | 382.16 | 620.11 | 382.19 |
| 620.35 | 382.17 | 623.18 | 382.19 | 624.18 | 382.22 | 625.35 | 382.27 | 626.18 | 382.29 |
| 626.49 | 382.31 | 628.41 | 382.35 | 630.04 | 382.35 | 631.04 | 382.34 | 631.36 | 382.35 |
| 632.15 | 382.33 | 633.07 | 382.29 | 634.33 | 382.22 | 635.63 | 382.14 | 636.28 | 382.15 |
| 637.7 | 382.1 | 639.51 | 382 | 646.61 | 382 | 648.84 | 382.04 | 649.49 | 382.14 |
| 653.23 | 382.17 | 656.44 | 382.17 | 657.55 | 382.15 | 659.8 | 382.05 | 661.63 | 382 |
| 663.63 | 382 | 666.71 | 382.01 | 668.69 | 382.12 | 670.05 | 382.23 | 671.97 | 382.29 |
| 672.92 | 382.3 | 673.83 | 382.29 | 676.71 | 382.23 | 678.27 | 382.17 | 679.69 | 382.08 |
| 683.97 | 381.9 | 684.28 | 381.88 | 685.66 | 381.84 | 686.69 | 381.87 | 688.75 | 382 |
| 688.94 | 382.02 | 689.35 | 382.12 | 689.96 | 382.15 | 692.9 | 382.25 | 693.92 | 382.26 |
| 697.23 | 382.19 | 698.58 | 382.19 | 700.96 | 382.16 | 701.61 | 382.16 | 704.76 | 382.04 |
| 705.46 | 382 | 706.03 | 381.98 | 709.28 | 381.98 | 711.88 | 382.07 | 712.53 | 382.11 |
| 712.85 | 382.23 | 716.25 | 382.25 | 717.57 | 382.28 | 721.58 | 382.29 | 724.39 | 382.25 |
| 724.91 | 382.25 | 725.23 | 382.23 | 726.35 | 382.19 | 729.23 | 382.1 | 735.28 | 381.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 736.12 | 381.82 | 737.07 | 381.78 | 737.56 | 381.75 | 738.95 | 381.7 | 739.59 | 381.7 |
| 740.31 | 381.67 | 741.37 | 381.69 | 743.49 | 381.82 | 743.93 | 381.81 | 744.36 | 381.83 |
| 745.81 | 381.85 | 747.38 | 381.89 | 747.9 | 381.89 | 749.01 | 381.92 | 750.16 | 381.96 |
| 750.78 | 382.06 | 751.93 | 382.16 | 752.31 | 382.24 | 752.66 | 382.25 | 754.55 | 382.26 |
| 755.81 | 382.28 | 756.71 | 382.32 | 758.28 | 382.42 | 759.05 | 382.45 | 759.9 | 382.47 |
| 760.53 | 382.47 | 761.1 | 382.47 | 763.53 | 382.41 | 764.9 | 382.37 | 765.27 | 382.35 |
| 777.23 | 381.99 | 778.92 | 381.95 | 781.31 | 381.88 | 781.95 | 381.84 | 782.68 | 381.74 |
| 784.51 | 381.7 | 785.42 | 381.67 | 788.77 | 381.67 | 788.94 | 381.7 | 790.39 | 381.77 |
| 792.96 | 381.85 | 794.01 | 381.9 | 794.36 | 381.88 | 794.75 | 381.91 | 797.9 | 381.83 |
| 799.21 | 381.86 | 802.82 | 381.96 | 803.62 | 382 | 810.18 | 382 | 811.96 | 381.94 |
| 813.07 | 381.87 | 813.42 | 381.86 | 814.86 | 381.86 | 816.36 | 381.87 | 817.66 | 381.91 |
| 820.39 | 381.89 | 820.74 | 381.91 | 821.18 | 381.9 | 822.66 | 381.9 | 823.16 | 381.87 |
| 824.93 | 381.91 | 826.5 | 381.96 | 826.75 | 381.98 | 828.28 | 382.03 | 828.62 | 382.03 |
| 830.02 | 382 | 831.35 | 381.98 | 832.15 | 381.94 | 832.68 | 381.9 | 833.67 | 381.85 |
| 834.44 | 381.83 | 835.37 | 381.82 | 836.05 | 381.85 | 837.04 | 381.81 | 838.13 | 381.81 |
| 839.85 | 381.82 | 841.85 | 381.88 | 842.42 | 381.89 | 842.47 | 381.91 | 844.27 | 382.05 |
| 844.75 | 382.06 | 846.92 | 382.06 | 847.72 | 382.04 | 848.84 | 381.96 | 849.27 | 381.96 |
| 855.1 | 382.03 | 858.2 | 382.06 | 859.16 | 382.09 | 859.5 | 382.11 | 861.21 | 382.11 |
| 862.33 | 382.12 | 862.73 | 382.11 | 864.22 | 382.11 | 865.89 | 382.13 | 867.61 | 382.17 |
| 875.2 | 382.26 | 878.16 | 382.27 | 878.63 | 382.29 | 882.08 | 382.32 | 882.74 | 382.32 |
| 885.19 | 382.34 | 886.01 | 382.32 | 887.23 | 382.31 | 888.15 | 382.31 | 889.21 | 382.3 |
| 892.66 | 382.3 | 897.93 | 382.27 | 899.16 | 382.27 | 903.16 | 382.25 | 908.71 | 382.12 |
| 908.85 | 382.12 | 911.06 | 382.18 | 913.62 | 382.21 | 914.53 | 382.21 | 914.71 | 382.23 |
| 916.17 | 382.23 | 917.81 | 382.2 | 918.41 | 382.2 | 922.75 | 382.13 | 935.55 | 381.9 |
| 939.27 | 381.82 | 946.61 | 381.71 | 948.14 | 381.68 | 949.57 | 381.67 | 950.16 | 381.66 |
| 951.64 | 381.65 | 953.41 | 381.66 | 956.55 | 381.62 | 958.37 | 381.62 | 959.22 | 381.65 |
| 960.61 | 381.71 | 966.47 | 381.69 | 977.2 | 381.6 | 977.67 | 381.62 | 983.65 | 381.79 |
| 985.81 | 381.82 | 991.57 | 381.88 | 994.66 | 381.94 | 997.38 | 381.97 | 1006.93 | 382.02 |
| 1007.87 | 382.02 | 1008.99 | 381.99 | 1011.83 | 381.87 | 1014.48 | 381.86 | 1021.42 | 381.84 |
| 1022.12 | 381.84 | 1024 | 381.86 | 1026.12 | 381.87 | 1027.45 | 381.87 | 1030.93 | 381.84 |
| 1035.93 | 381.79 | 1036.97 | 381.79 | 1038.45 | 381.72 | 1038.62 | 381.68 | 1039.4 | 381.68 |
| 1041 | 381.7 | 1044.36 | 381.8 | 1052.04 | 382.1 | 1052.15 | 382.1 | 1054.52 | 382.25 |
| 1054.96 | 382.24 | 1055.25 | 382.26 | 1056.69 | 382.3 | 1060.08 | 382.35 | 1061.97 | 382.35 |
| 1062.96 | 382.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 150.29 | .04 | 760.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 150.29 | 760.53 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7485.78*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 381.92 | 4.61 | 381.93 | 5.52 | 381.93 | 7.36 | 381.92 | 7.64 | 381.91 |
| 11.94 | 381.93 | 12.48 | 381.94 | 14.72 | 382 | 16.14 | 382.03 | 23.9 | 382.12 |
| 26.02 | 382.14 | 30.96 | 382.16 | 33.16 | 382.15 | 43.75 | 382.2 | 45.3 | 382.2 |
| 46.91 | 382.23 | 48.01 | 382.23 | 50.65 | 382.21 | 51.74 | 382.21 | 52.5 | 382.2 |
| 54.08 | 382.19 | 56.37 | 382.15 | 58.02 | 382.13 | 59.36 | 382.12 | 63.63 | 382.06 |
| 65.77 | 382.06 | 68.97 | 382.02 | 69.26 | 382.01 | 69.46 | 382.04 | 70.07 | 382.04 |
| 71.58 | 382.02 | 72.37 | 382.02 | 74.26 | 381.95 | 75.82 | 381.99 | 76.77 | 381.97 |
| 78.58 | 381.97 | 80.7 | 382.02 | 82.4 | 382.07 | 82.91 | 382.09 | 85.24 | 382.14 |
| 90.25 | 382.18 | 93.59 | 382.2 | 94.08 | 382.21 | 109.87 | 382.33 | 111.26 | 382.35 |
| 119.88 | 382.46 | 120.37 | 382.46 | 124.73 | 382.5 | 129.73 | 382.51 | 133.3 | 382.49 |
| 134.22 | 382.48 | 139.24 | 382.45 | 140.52 | 382.4 | 140.88 | 382.34 | 142.36 | 382.24 |
| 142.49 | 382.24 | 146.59 | 381.97 | 148.2 | 381.84 | 149.82 | 381.73 | 151.37 | 381.65 |
| 155.09 | 381.53 | 156.38 | 381.47 | 158.99 | 381.34 | 160.36 | 381.31 | 163.4 | 381.18 |
| 173.69 | 380.93 | 175.79 | 380.91 | 176.53 | 380.89 | 179.5 | 380.85 | 181.53 | 380.85 |
| 181.72 | 380.83 | 182.27 | 380.82 | 188.73 | 380.84 | 192.2 | 380.87 | 193.08 | 380.88 |
| 195.39 | 380.88 | 196.06 | 380.87 | 196.39 | 380.85 | 196.94 | 380.84 | 198.21 | 380.78 |
| 199.31 | 380.71 | 200.74 | 380.64 | 201.25 | 380.64 | 201.86 | 380.61 | 204.9 | 380.49 |
| 205.01 | 380.49 | 206.06 | 380.38 | 206.64 | 380.31 | 207.43 | 380.33 | 209.43 | 380.19 |
| 209.93 | 380.17 | 210.72 | 380.12 | 211.46 | 380.11 | 213.79 | 380.11 | 215.03 | 380.12 |
| 215.21 | 380.13 | 220.84 | 380.35 | 221.86 | 380.37 | 222.6 | 380.4 | 225.64 | 380.56 |
| 228.1 | 380.63 | 228.5 | 380.65 | 229.85 | 380.67 | 230.29 | 380.69 | 233.78 | 380.76 |
| 234.01 | 380.75 | 240 | 380.76 | 240.22 | 380.75 | 242.1 | 380.75 | 242.68 | 380.76 |
| 246.14 | 380.73 | 246.61 | 380.74 | 252.28 | 380.7 | 252.56 | 380.69 | 254.04 | 380.69 |
| 257.32 | 380.62 | 257.79 | 380.62 | 259.36 | 380.57 | 262.7 | 380.56 | 263.01 | 380.58 |
| 263.99 | 380.58 | 275.81 | 380.37 | 276.08 | 380.37 | 277.38 | 380.33 | 279.37 | 380.33 |
| 280.8 | 380.41 | 286.88 | 380.79 | 289.39 | 380.92 | 302.65 | 381.01 | 303.42 | 380.95 |
| 303.98 | 380.93 | 305.64 | 380.91 | 309.28 | 380.83 | 309.9 | 380.76 | 311.92 | 380.81 |
| 312.05 | 380.82 | 313.93 | 380.89 | 315.14 | 380.96 | 317.72 | 381.06 | 319.91 | 381.12 |
| 322.9 | 381.14 | 324.51 | 381.13 | 333.94 | 381.03 | 334.62 | 381.01 | 335.57 | 381 |
| 337.39 | 380.99 | 339.02 | 380.92 | 341.16 | 380.87 | 343.75 | 380.79 | 344.87 | 380.77 |
| 355.62 | 380.43 | 358.49 | 380.27 | 358.9 | 380.26 | 362.54 | 380.05 | 362.64 | 380.05 |
| 372.11 | 379.73 | 373.34 | 379.7 | 375.88 | 379.67 | 378.35 | 379.66 | 386.67 | 379.59 |
| 389.99 | 379.55 | 392.95 | 379.5 | 394.19 | 379.5 | 404.87 | 379.61 | 405.75 | 379.62 |
| 408.08 | 379.68 | 408.79 | 379.72 | 409.36 | 379.74 | 411.28 | 379.78 | 412.06 | 379.81 |
| 417.65 | 379.89 | 430.54 | 380.45 | 433.53 | 380.6 | 447.09 | 381 | 448.06 | 381.11 |
| 454.03 | 381.64 | 457.49 | 381.76 | 459.78 | 381.83 | 460.22 | 381.85 | 461.6 | 381.88 |
| 462.27 | 381.88 | 462.58 | 381.9 | 463.48 | 381.91 | 464.25 | 381.93 | 464.75 | 381.93 |
| 468.56 | 381.96 | 472.98 | 382.01 | 474.59 | 382.01 | 476.58 | 382.02 | 477.81 | 382.04 |
| 479.69 | 382 | 480.21 | 381.98 | 484.81 | 381.82 | 485.26 | 381.81 | 487.93 | 381.71 |
| 488.68 | 381.8 | 488.88 | 381.81 | 489.93 | 381.81 | 491.28 | 381.79 | 493.06 | 381.71 |
| 493.54 | 381.7 | 497.39 | 381.6 | 499.07 | 381.54 | 499.38 | 381.54 | 502.13 | 381.45 |
| 502.38 | 381.45 | 506.69 | 381.25 | 507.14 | 381.24 | 507.19 | 381.21 | 507.7 | 381.2 |
| 508.56 | 381.21 | 510.14 | 381.27 | 511.15 | 381.29 | 515.76 | 381.42 | 516.37 | 381.46 |
| 526.38 | 381.82 | 528.24 | 381.85 | 530.46 | 381.87 | 532.96 | 381.86 | 539.28 | 381.75 |
| 541.34 | 381.72 | 542.37 | 381.65 | 544.5 | 381.62 | 544.97 | 381.62 | 550.42 | 381.57 |
| 552.85 | 381.43 | 553.44 | 381.4 | 556.65 | 381.38 | 560.96 | 381.41 | 562.09 | 381.42 |
| 564.02 | 381.47 | 564.09 | 381.48 | 565.06 | 381.48 | 565.47 | 381.49 | 567.6 | 381.5 |
| 569.01 | 381.53 | 569.83 | 381.58 | 572.44 | 381.61 | 574.99 | 381.48 | 575.55 | 381.44 |
| 575.68 | 381.4 | 576.18 | 381.39 | 577.42 | 381.42 | 578.22 | 381.46 | 582.71 | 381.92 |
| 583.2 | 381.96 | 584.72 | 381.97 | 587.85 | 381.95 | 588.41 | 381.98 | 592.11 | 381.98 |
| 594.46 | 381.92 | 604.23 | 381.78 | 606.53 | 381.68 | 607.22 | 381.66 | 609.52 | 381.55 |
| 610.02 | 381.41 | 610.45 | 381.39 | 614.69 | 381.4 | 616.83 | 381.39 | 617.91 | 381.39 |
| 618.75 | 381.37 | 619.4 | 381.37 | 621.84 | 381.52 | 627.09 | 381.55 | 627.34 | 381.53 |
| 630.33 | 381.56 | 631.39 | 381.58 | 633.83 | 381.68 | 635.85 | 381.73 | 638.97 | 381.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 639.71 | 381.72 | 640.78 | 381.67 | 642.11 | 381.6 | 643.48 | 381.51 | 644.18 | 381.51 |
| 645.67 | 381.45 | 647.59 | 381.33 | 655.1 | 381.33 | 657.44 | 381.37 | 658 | 381.47 |
| 658.14 | 381.48 | 662.08 | 381.5 | 665.47 | 381.5 | 666.65 | 381.46 | 669.41 | 381.33 |
| 670.42 | 381.3 | 672.06 | 381.28 | 676.28 | 381.28 | 678.43 | 381.42 | 679.86 | 381.54 |
| 681.24 | 381.59 | 682.38 | 381.61 | 682.9 | 381.61 | 684.76 | 381.59 | 686.9 | 381.54 |
| 688.26 | 381.49 | 690.05 | 381.38 | 692.04 | 381.29 | 693.34 | 381.24 | 694.9 | 381.16 |
| 696.18 | 381.11 | 697.62 | 381.15 | 699.62 | 381.3 | 699.83 | 381.33 | 700.26 | 381.44 |
| 700.9 | 381.47 | 704.01 | 381.6 | 705.09 | 381.6 | 708.58 | 381.53 | 710.01 | 381.53 |
| 713.21 | 381.52 | 713.75 | 381.5 | 716.54 | 381.38 | 717.28 | 381.33 | 717.89 | 381.31 |
| 721.32 | 381.31 | 724.06 | 381.39 | 724.75 | 381.43 | 725.09 | 381.53 | 728.68 | 381.55 |
| 730.08 | 381.58 | 734.32 | 381.59 | 738.18 | 381.54 | 739.35 | 381.49 | 742.4 | 381.39 |
| 748.79 | 381.14 | 749.69 | 381.09 | 750.69 | 381.05 | 751.2 | 381.02 | 752.67 | 380.97 |
| 753.34 | 380.97 | 754.11 | 380.94 | 754.58 | 380.96 | 755.23 | 380.97 | 757.47 | 381.12 |
| 757.94 | 381.11 | 758.39 | 381.14 | 759.93 | 381.16 | 761.58 | 381.21 | 762.13 | 381.21 |
| 763.3 | 381.24 | 764.52 | 381.29 | 765.17 | 381.38 | 766.39 | 381.48 | 766.79 | 381.55 |
| 767.16 | 381.56 | 769.16 | 381.56 | 770.49 | 381.59 | 771.45 | 381.63 | 773.91 | 381.79 |
| 775.48 | 381.81 | 776.04 | 381.8 | 778.44 | 381.74 | 779.81 | 381.7 | 780.17 | 381.68 |
| 792 | 381.29 | 793.68 | 381.24 | 796.04 | 381.16 | 796.67 | 381.13 | 797.44 | 381.03 |
| 799.2 | 380.98 | 800.1 | 380.95 | 803.42 | 380.95 | 803.59 | 380.98 | 805.02 | 381.07 |
| 807.56 | 381.18 | 808.41 | 381.23 | 808.95 | 381.22 | 809.33 | 381.25 | 812.46 | 381.18 |
| 813.75 | 381.21 | 817.32 | 381.3 | 818.11 | 381.33 | 824.6 | 381.33 | 826.36 | 381.27 |
| 827.46 | 381.18 | 827.81 | 381.17 | 829.23 | 381.17 | 830.72 | 381.18 | 832 | 381.23 |
| 832.79 | 381.24 | 833.36 | 381.23 | 834.71 | 381.24 | 835.05 | 381.27 | 835.49 | 381.25 |
| 836.95 | 381.27 | 837.44 | 381.25 | 840.12 | 381.34 | 842.64 | 381.45 | 842.85 | 381.44 |
| 844.24 | 381.42 | 845.1 | 381.42 | 846.34 | 381.36 | 847.84 | 381.28 | 848.61 | 381.26 |
| 849.53 | 381.25 | 850.2 | 381.28 | 851.18 | 381.24 | 852.25 | 381.24 | 853.95 | 381.25 |
| 855.94 | 381.3 | 856.55 | 381.32 | 857.69 | 381.41 | 858.34 | 381.45 | 858.81 | 381.46 |
| 860.95 | 381.46 | 861.75 | 381.44 | 862.86 | 381.37 | 863.27 | 381.36 | 869.04 | 381.41 |
| 872.11 | 381.42 | 873.4 | 381.46 | 875.09 | 381.46 | 876.2 | 381.47 | 876.6 | 381.46 |
| 878.07 | 381.46 | 880.24 | 381.5 | 881.42 | 381.53 | 888.94 | 381.63 | 889.47 | 381.63 |
| 891.86 | 381.65 | 892.33 | 381.67 | 895.74 | 381.71 | 896.4 | 381.71 | 898.81 | 381.73 |
| 899.62 | 381.71 | 900.4 | 381.71 | 900.84 | 381.7 | 901.75 | 381.7 | 902.79 | 381.69 |
| 906.21 | 381.69 | 911.42 | 381.66 | 912.64 | 381.65 | 916.59 | 381.63 | 922.09 | 381.51 |
| 923.66 | 381.55 | 925.04 | 381.57 | 927.97 | 381.6 | 928.34 | 381.62 | 928.67 | 381.61 |
| 929.47 | 381.61 | 930.44 | 381.59 | 931.68 | 381.59 | 935.98 | 381.53 | 948.65 | 381.33 |
| 952.32 | 381.25 | 958.2 | 381.18 | 959.58 | 381.17 | 961.1 | 381.14 | 962.18 | 381.14 |
| 963.1 | 381.12 | 964.57 | 381.12 | 966.31 | 381.13 | 969.42 | 381.08 | 971.22 | 381.08 |
| 973.01 | 381.15 | 973.44 | 381.16 | 979.24 | 381.14 | 989.85 | 381.04 | 990.32 | 381.06 |
| 995.18 | 381.22 | 996.24 | 381.25 | 998.37 | 381.29 | 1004.07 | 381.36 | 1007.13 | 381.42 |
| 1009.82 | 381.45 | 1019.26 | 381.49 | 1020.19 | 381.49 | 1021.3 | 381.46 | 1024.11 | 381.35 |
| 1026.73 | 381.34 | 1033.6 | 381.31 | 1036.16 | 381.34 | 1038.25 | 381.35 | 1039.57 | 381.34 |
| 1043.01 | 381.32 | 1047.96 | 381.26 | 1049.22 | 381.25 | 1050.25 | 381.18 | 1050.46 | 381.18 |
| 1050.62 | 381.12 | 1051.39 | 381.13 | 1052.97 | 381.14 | 1056.3 | 381.25 | 1056.83 | 381.26 |
| 1063.89 | 381.53 | 1065.39 | 381.62 | 1065.52 | 381.62 | 1066.35 | 381.68 | 1066.79 | 381.68 |
| 1068.5 | 381.73 | 1071.1 | 381.78 | 1071.85 | 381.79 | 1073.33 | 381.79 | 1073.73 | 381.8 |
| 1074.7 | 381.79 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 151.37 | .04 | 775.48 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 151.37 | 775.48 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7437.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 381.28 | 4.64 | 381.29 | 5.21 | 381.3 | 5.56 | 381.29 | 7.69 | 381.29 |
| 12.03 | 381.31 | 14.53 | 381.36 | 16.26 | 381.4 | 26.21 | 381.5 | 31.18 | 381.52 |
| 33.39 | 381.51 | 44.06 | 381.55 | 44.55 | 381.55 | 46.32 | 381.57 | 46.64 | 381.58 |
| 49.78 | 381.58 | 51.01 | 381.56 | 52.11 | 381.57 | 54.29 | 381.55 | 56.77 | 381.51 |
| 59.78 | 381.49 | 64.09 | 381.44 | 66.24 | 381.44 | 69.46 | 381.4 | 69.76 | 381.39 |
| 69.96 | 381.42 | 70.57 | 381.42 | 72.09 | 381.4 | 72.88 | 381.4 | 74.03 | 381.36 |
| 75.06 | 381.34 | 76.36 | 381.37 | 77.31 | 381.35 | 79.14 | 381.35 | 79.98 | 381.36 |
| 82.98 | 381.43 | 83.5 | 381.45 | 85.84 | 381.5 | 91.23 | 381.52 | 94.26 | 381.54 |
| 94.75 | 381.55 | 110.65 | 381.65 | 112.05 | 381.66 | 120.73 | 381.77 | 121.22 | 381.77 |
| 125.62 | 381.81 | 130.65 | 381.81 | 134.25 | 381.79 | 135.18 | 381.79 | 140.23 | 381.75 |
| 141.52 | 381.71 | 141.88 | 381.65 | 143.37 | 381.56 | 143.5 | 381.56 | 147.63 | 381.32 |
| 149.25 | 381.19 | 150.88 | 381.1 | 152.44 | 381.02 | 154.6 | 380.96 | 156.07 | 380.91 |
| 159.86 | 380.7 | 160.77 | 380.69 | 164.15 | 380.53 | 174.17 | 380.28 | 176.93 | 380.25 |
| 178.42 | 380.22 | 179.13 | 380.22 | 179.82 | 380.2 | 181.37 | 380.2 | 181.79 | 380.19 |
| 181.98 | 380.16 | 182.52 | 380.15 | 188.52 | 380.17 | 192.18 | 380.19 | 193.04 | 380.2 |
| 193.51 | 380.19 | 194.21 | 380.2 | 195.29 | 380.2 | 196.27 | 380.17 | 198.04 | 380.1 |
| 198.9 | 380.05 | 199.67 | 379.99 | 200.71 | 379.96 | 201.39 | 379.96 | 202.33 | 379.92 |
| 204.55 | 379.85 | 205.22 | 379.8 | 206.24 | 379.69 | 207.01 | 379.71 | 207.41 | 379.69 |
| 208.96 | 379.59 | 210.21 | 379.53 | 210.93 | 379.52 | 213.2 | 379.52 | 214.58 | 379.54 |
| 220.06 | 379.74 | 221.05 | 379.76 | 221.77 | 379.79 | 224.15 | 379.93 | 224.73 | 379.95 |
| 227.13 | 380.01 | 227.51 | 380.03 | 228.82 | 380.05 | 229.26 | 380.07 | 230.66 | 380.09 |
| 232.65 | 380.13 | 232.87 | 380.12 | 238.7 | 380.1 | 239.9 | 380.09 | 240.75 | 380.09 |
| 241.32 | 380.1 | 244.68 | 380.06 | 246.27 | 380.06 | 250.66 | 380.01 | 250.94 | 380 |
| 252.37 | 380 | 252.89 | 379.99 | 255.57 | 379.92 | 257.55 | 379.88 | 260.8 | 379.86 |
| 261.28 | 379.89 | 262.57 | 379.88 | 273.56 | 379.69 | 275.09 | 379.67 | 277.02 | 379.67 |
| 278.42 | 379.74 | 284.34 | 380.08 | 286.77 | 380.2 | 299.69 | 380.3 | 300.43 | 380.25 |
| 300.98 | 380.23 | 302.6 | 380.22 | 305.32 | 380.17 | 306.41 | 380.14 | 306.74 | 380.09 |
| 308.7 | 380.14 | 308.83 | 380.15 | 310.66 | 380.22 | 311.84 | 380.28 | 314.35 | 380.37 |
| 316.13 | 380.42 | 319.39 | 380.44 | 320.95 | 380.44 | 330.14 | 380.36 | 331.42 | 380.35 |
| 331.72 | 380.34 | 333.25 | 380.34 | 333.69 | 380.33 | 334.08 | 380.3 | 334.67 | 380.29 |
| 335.08 | 380.26 | 337.16 | 380.22 | 339.68 | 380.14 | 340.77 | 380.11 | 351.23 | 379.78 |
| 354.03 | 379.63 | 354.43 | 379.62 | 357.97 | 379.42 | 358.07 | 379.42 | 367.29 | 379.12 |
| 368.48 | 379.09 | 370.96 | 379.06 | 373.36 | 379.05 | 381.46 | 378.97 | 384.69 | 378.93 |
| 387.57 | 378.88 | 388.66 | 378.88 | 399.9 | 378.99 | 400.84 | 379 | 403.29 | 379.07 |
| 403.91 | 379.1 | 404.04 | 379.12 | 405.17 | 379.15 | 405.78 | 379.15 | 407.48 | 379.21 |
| 413.37 | 379.28 | 426.96 | 379.86 | 430.11 | 380.02 | 444.39 | 380.43 | 445.42 | 380.52 |
| 451.7 | 381.01 | 455.35 | 381.14 | 457.76 | 381.21 | 458.23 | 381.23 | 460.39 | 381.26 |
| 461.67 | 381.29 | 463 | 381.31 | 467.02 | 381.33 | 471.68 | 381.38 | 473.37 | 381.37 |
| 475.47 | 381.38 | 476.77 | 381.38 | 478.74 | 381.34 | 480.52 | 381.28 | 484.15 | 381.15 |
| 484.62 | 381.14 | 486.36 | 381.08 | 487.43 | 381.05 | 488.22 | 381.15 | 488.43 | 381.16 |
| 489.53 | 381.17 | 490.96 | 381.15 | 492.83 | 381.07 | 493.34 | 381.06 | 497.4 | 380.96 |
| 499.17 | 380.9 | 499.5 | 380.9 | 500.85 | 380.87 | 503.13 | 380.81 | 507.67 | 380.63 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 507.73 | 380.6 | 508.26 | 380.59 | 509.17 | 380.61 | 510.83 | 380.67 | 511.9 | 380.69 |
| 516.76 | 380.83 | 517.4 | 380.86 | 527.94 | 381.22 | 529.9 | 381.25 | 532.25 | 381.27 |
| 534.88 | 381.27 | 541.54 | 381.17 | 543.71 | 381.14 | 544.79 | 381.07 | 547.04 | 381.04 |
| 547.53 | 381.04 | 553.27 | 381 | 554.78 | 380.91 | 555.84 | 380.84 | 556.46 | 380.81 |
| 559.84 | 380.8 | 564.38 | 380.82 | 565.97 | 380.84 | 566.97 | 380.86 | 567.68 | 380.9 |
| 569.13 | 380.91 | 571.38 | 380.89 | 572.87 | 380.91 | 573.73 | 380.94 | 576.48 | 380.97 |
| 579.76 | 380.76 | 579.89 | 380.72 | 580.42 | 380.7 | 581.73 | 380.73 | 582.57 | 380.78 |
| 587.3 | 381.29 | 587.82 | 381.34 | 589.42 | 381.35 | 592.72 | 381.32 | 593.61 | 381.36 |
| 593.78 | 381.35 | 597.21 | 381.35 | 599.68 | 381.28 | 609.98 | 381.12 | 613.13 | 380.98 |
| 614.95 | 380.89 | 615.66 | 380.84 | 616.08 | 380.7 | 616.53 | 380.68 | 617.24 | 380.68 |
| 621 | 380.7 | 623.26 | 380.7 | 624.39 | 380.71 | 625.75 | 380.7 | 628.53 | 380.87 |
| 634.07 | 380.92 | 634.33 | 380.9 | 637.48 | 380.92 | 638.59 | 380.95 | 639.9 | 381 |
| 640.1 | 381 | 641.16 | 381.05 | 643.72 | 381.11 | 647.02 | 381.11 | 648.49 | 381.05 |
| 649.9 | 380.97 | 651.34 | 380.87 | 652.07 | 380.88 | 653.65 | 380.8 | 655.67 | 380.67 |
| 663.58 | 380.67 | 666.05 | 380.69 | 666.63 | 380.81 | 666.78 | 380.82 | 670.94 | 380.83 |
| 674.51 | 380.82 | 675.75 | 380.78 | 678.26 | 380.65 | 678.66 | 380.62 | 680.3 | 380.57 |
| 681.45 | 380.56 | 685.96 | 380.56 | 688.16 | 380.71 | 689.67 | 380.85 | 691.12 | 380.9 |
| 692.32 | 380.93 | 693.89 | 380.92 | 694.84 | 380.9 | 697.09 | 380.84 | 698.82 | 380.78 |
| 700.41 | 380.68 | 703.88 | 380.53 | 705.52 | 380.44 | 706.6 | 380.39 | 707.06 | 380.39 |
| 708.2 | 380.42 | 708.77 | 380.46 | 710.5 | 380.6 | 710.71 | 380.63 | 711.17 | 380.76 |
| 711.85 | 380.8 | 715.32 | 380.95 | 716.25 | 380.95 | 719.94 | 380.87 | 721.44 | 380.88 |
| 724.09 | 380.87 | 724.82 | 380.88 | 725.38 | 380.86 | 729.11 | 380.67 | 729.74 | 380.65 |
| 733.36 | 380.64 | 736.25 | 380.71 | 736.98 | 380.74 | 737.33 | 380.83 | 741.12 | 380.85 |
| 742.59 | 380.88 | 747.77 | 380.88 | 750.18 | 380.85 | 750.94 | 380.85 | 752.36 | 380.79 |
| 755.57 | 380.68 | 762.31 | 380.41 | 763.25 | 380.36 | 764.3 | 380.32 | 764.85 | 380.28 |
| 766.07 | 380.24 | 767.1 | 380.24 | 767.91 | 380.21 | 769.09 | 380.26 | 771.45 | 380.42 |
| 771.95 | 380.41 | 772.43 | 380.44 | 774.04 | 380.47 | 775.79 | 380.52 | 777.59 | 380.56 |
| 778.88 | 380.62 | 779.57 | 380.7 | 780.47 | 380.77 | 780.85 | 380.79 | 781.28 | 380.86 |
| 781.66 | 380.87 | 783.77 | 380.87 | 784.7 | 380.88 | 786.1 | 380.95 | 786.18 | 380.94 |
| 787.92 | 381.07 | 788.78 | 381.12 | 789.73 | 381.14 | 790.43 | 381.14 | 790.98 | 381.13 |
| 793.36 | 381.07 | 795.07 | 381.01 | 806.77 | 380.58 | 808.43 | 380.53 | 810.77 | 380.44 |
| 811.39 | 380.41 | 812.11 | 380.33 | 813.9 | 380.27 | 814.07 | 380.25 | 814.79 | 380.23 |
| 818.06 | 380.23 | 818.24 | 380.26 | 819.66 | 380.36 | 822.17 | 380.5 | 823.2 | 380.57 |
| 823.44 | 380.55 | 823.92 | 380.6 | 827.01 | 380.54 | 828.29 | 380.56 | 831.82 | 380.64 |
| 832.6 | 380.67 | 839.02 | 380.67 | 839.41 | 380.66 | 840.77 | 380.59 | 841.85 | 380.5 |
| 842.58 | 380.47 | 843.6 | 380.47 | 845.07 | 380.5 | 846.34 | 380.55 | 847.69 | 380.56 |
| 849.02 | 380.58 | 849.36 | 380.62 | 849.79 | 380.6 | 851.24 | 380.64 | 851.73 | 380.63 |
| 853.47 | 380.7 | 855 | 380.77 | 855.24 | 380.79 | 856.87 | 380.86 | 857.07 | 380.85 |
| 858.45 | 380.84 | 859.3 | 380.84 | 859.75 | 380.83 | 862.02 | 380.71 | 863.68 | 380.69 |
| 864.34 | 380.71 | 865.32 | 380.67 | 867.52 | 380.67 | 870.53 | 380.73 | 872.4 | 380.85 |
| 872.87 | 380.86 | 874.98 | 380.86 | 875.77 | 380.84 | 876.87 | 380.77 | 882.99 | 380.78 |
| 886.02 | 380.78 | 886.97 | 380.8 | 887.36 | 380.82 | 890.47 | 380.82 | 891.91 | 380.81 |
| 893.55 | 380.84 | 894.25 | 380.87 | 895.24 | 380.89 | 902.67 | 381.01 | 903.2 | 381.01 |
| 905.56 | 381.03 | 906.02 | 381.05 | 909.4 | 381.1 | 910.05 | 381.1 | 912.44 | 381.12 |
| 912.61 | 381.11 | 913.83 | 381.09 | 915.34 | 381.09 | 916.37 | 381.08 | 918.46 | 381.07 |
| 919.76 | 381.08 | 924.91 | 381.04 | 926.12 | 381.04 | 930.03 | 381.01 | 935.47 | 380.89 |
| 937.02 | 380.93 | 938.89 | 380.96 | 939.29 | 380.96 | 941.29 | 380.98 | 941.65 | 381 |
| 941.98 | 380.99 | 944.37 | 380.98 | 944.96 | 380.97 | 949.21 | 380.94 | 961.74 | 380.76 |
| 965.38 | 380.69 | 971.19 | 380.63 | 973.03 | 380.62 | 974.83 | 380.6 | 977.49 | 380.58 |
| 978.78 | 380.6 | 979.79 | 380.59 | 982.29 | 380.54 | 984.07 | 380.54 | 985.84 | 380.6 |
| 986.27 | 380.61 | 992 | 380.58 | 1002.5 | 380.47 | 1007.77 | 380.69 | 1008.82 | 380.72 |
| 1010.93 | 380.77 | 1016.57 | 380.84 | 1019.6 | 380.9 | 1022.26 | 380.93 | 1031.6 | 380.96 |
| 1032.89 | 380.95 | 1033.61 | 380.93 | 1036.39 | 380.83 | 1038.99 | 380.82 | 1045.78 | 380.79 |
| 1046.47 | 380.79 | 1048.31 | 380.82 | 1050.38 | 380.83 | 1055.09 | 380.79 | 1059.99 | 380.73 |
| 1061.01 | 380.72 | 1062.25 | 380.64 | 1062.46 | 380.64 | 1062.62 | 380.57 | 1063.38 | 380.58 |
| 1064.95 | 380.59 | 1068.24 | 380.69 | 1068.77 | 380.7 | 1075.75 | 380.96 | 1078.18 | 381.11 |
| 1078.61 | 381.11 | 1080.31 | 381.17 | 1082.88 | 381.22 | 1083.62 | 381.23 | 1085.48 | 381.24 |
| 1086.45 | 381.23 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 152.44 | .04 | 790.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 152.44 | 790.43 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7389.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 380.64 | 4.67 | 380.66 | 7.75 | 380.66 | 12.11 | 380.68 | 12.66 | 380.7 |
| 14.93 | 380.75 | 16.37 | 380.77 | 23.35 | 380.84 | 24.24 | 380.84 | 26.39 | 380.86 |
| 31.4 | 380.87 | 33.63 | 380.87 | 44.37 | 380.91 | 45.95 | 380.91 | 47.58 | 380.94 |
| 48.5 | 380.94 | 48.69 | 380.93 | 50.13 | 380.93 | 51.37 | 380.92 | 53.25 | 380.92 |
| 55.07 | 380.91 | 55.43 | 380.9 | 57.17 | 380.88 | 59.08 | 380.87 | 64.54 | 380.82 |
| 66.71 | 380.82 | 69.95 | 380.78 | 70.45 | 380.8 | 71.07 | 380.79 | 72.6 | 380.78 |
| 73.4 | 380.78 | 74.55 | 380.74 | 75.32 | 380.72 | 75.58 | 380.73 | 76.9 | 380.75 |
| 79.05 | 380.73 | 80.55 | 380.74 | 81.85 | 380.77 | 84.09 | 380.81 | 85.44 | 380.84 |
| 86.45 | 380.85 | 91.53 | 380.87 | 94.92 | 380.88 | 95.42 | 380.89 | 111.43 | 380.97 |
| 112.84 | 380.98 | 121.58 | 381.08 | 122.08 | 381.08 | 126.51 | 381.12 | 131.57 | 381.12 |
| 135.2 | 381.1 | 136.13 | 381.09 | 141.22 | 381.05 | 142.51 | 381.01 | 142.88 | 380.97 |
| 144.38 | 380.88 | 144.51 | 380.88 | 148.67 | 380.66 | 150.3 | 380.55 | 151.94 | 380.47 |
| 153.52 | 380.4 | 155.61 | 380.34 | 157.05 | 380.28 | 158.26 | 380.21 | 160.73 | 380.06 |
| 161.62 | 380.05 | 164.91 | 379.88 | 174.65 | 379.64 | 174.94 | 379.63 | 177.34 | 379.6 |
| 178.09 | 379.58 | 179.48 | 379.57 | 180.14 | 379.55 | 181.65 | 379.54 | 182.06 | 379.53 |
| 182.24 | 379.5 | 182.77 | 379.49 | 188.88 | 379.49 | 192.17 | 379.51 | 193.45 | 379.51 |
| 194.14 | 379.52 | 195.19 | 379.52 | 196.14 | 379.49 | 197.86 | 379.42 | 198.7 | 379.37 |
| 199.45 | 379.31 | 200.26 | 379.29 | 200.56 | 379.3 | 204.19 | 379.2 | 205.29 | 379.13 |
| 205.83 | 379.08 | 206.58 | 379.09 | 208.2 | 379.01 | 208.48 | 378.99 | 209.7 | 378.94 |
| 212.6 | 378.93 | 213.95 | 378.95 | 219.28 | 379.14 | 220.46 | 379.16 | 220.94 | 379.18 |
| 223.25 | 379.32 | 223.82 | 379.34 | 226.53 | 379.4 | 227.8 | 379.42 | 228.22 | 379.44 |
| 229.38 | 379.47 | 230.51 | 379.49 | 231.74 | 379.5 | 237.41 | 379.45 | 237.62 | 379.44 |
| 238.57 | 379.44 | 239.4 | 379.42 | 239.95 | 379.43 | 243.23 | 379.39 | 244.77 | 379.38 |
| 246.45 | 379.35 | 249.04 | 379.32 | 249.31 | 379.31 | 250.7 | 379.31 | 251.2 | 379.29 |
| 253.81 | 379.22 | 255.74 | 379.18 | 258.9 | 379.17 | 259.37 | 379.19 | 260.62 | 379.18 |
| 271.31 | 379.02 | 272.8 | 379 | 274.68 | 379 | 276.03 | 379.06 | 281.79 | 379.36 |
| 284.16 | 379.47 | 296.72 | 379.59 | 296.92 | 379.57 | 297.98 | 379.53 | 299.55 | 379.52 |
| 302.2 | 379.49 | 303.26 | 379.46 | 303.58 | 379.43 | 305.49 | 379.47 | 305.61 | 379.48 |
| 307.39 | 379.54 | 308.53 | 379.59 | 310.98 | 379.67 | 313.06 | 379.73 | 315.88 | 379.75 |
| 317.23 | 379.75 | 317.4 | 379.74 | 326.34 | 379.7 | 326.97 | 379.69 | 327.88 | 379.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 329.6 | 379.68 | 331.14 | 379.61 | 333.16 | 379.56 | 336.68 | 379.46 | 346.85 | 379.13 |
| 349.96 | 378.97 | 353.4 | 378.79 | 353.5 | 378.79 | 362.46 | 378.51 | 363.63 | 378.48 |
| 366.03 | 378.45 | 368.37 | 378.44 | 376.25 | 378.35 | 379.39 | 378.3 | 382.19 | 378.25 |
| 383.12 | 378.25 | 395.92 | 378.38 | 398.49 | 378.46 | 399.29 | 378.51 | 400.48 | 378.55 |
| 401.12 | 378.55 | 402.9 | 378.61 | 409.1 | 378.67 | 423.37 | 379.28 | 426.69 | 379.45 |
| 441.7 | 379.86 | 442.78 | 379.94 | 449.38 | 380.39 | 453.22 | 380.51 | 455.75 | 380.58 |
| 456.24 | 380.6 | 458.51 | 380.63 | 459.62 | 380.66 | 461.26 | 380.68 | 465.48 | 380.71 |
| 470.37 | 380.76 | 472.15 | 380.74 | 474.36 | 380.73 | 475.72 | 380.73 | 476.36 | 380.71 |
| 477.8 | 380.68 | 479.66 | 380.62 | 483.48 | 380.49 | 483.98 | 380.48 | 485.8 | 380.41 |
| 486.92 | 380.38 | 487.76 | 380.5 | 489.14 | 380.53 | 490.63 | 380.51 | 492.61 | 380.42 |
| 493.14 | 380.42 | 497.4 | 380.33 | 499.27 | 380.26 | 501.03 | 380.24 | 503.43 | 380.2 |
| 507.71 | 380.04 | 508.2 | 380.03 | 508.26 | 379.99 | 508.83 | 379.99 | 510.67 | 380.03 |
| 511.52 | 380.07 | 517.75 | 380.23 | 518.43 | 380.26 | 529.51 | 380.62 | 531.57 | 380.66 |
| 534.03 | 380.68 | 536.8 | 380.68 | 543.79 | 380.59 | 546.08 | 380.57 | 547.21 | 380.49 |
| 549.58 | 380.47 | 550.1 | 380.47 | 556.13 | 380.42 | 557.71 | 380.33 | 559.48 | 380.22 |
| 563.04 | 380.21 | 567.8 | 380.23 | 569.06 | 380.26 | 569.48 | 380.26 | 570.53 | 380.28 |
| 571.19 | 380.31 | 571.27 | 380.33 | 572.8 | 380.32 | 575.16 | 380.28 | 576.72 | 380.28 |
| 577.63 | 380.31 | 580.52 | 380.33 | 583.34 | 380.13 | 583.97 | 380.08 | 584.11 | 380.03 |
| 584.66 | 380 | 586.03 | 380.05 | 586.92 | 380.1 | 591.89 | 380.66 | 592.56 | 380.72 |
| 594.12 | 380.73 | 597.59 | 380.69 | 598.21 | 380.73 | 599.09 | 380.73 | 601.2 | 380.72 |
| 602.31 | 380.72 | 604.9 | 380.64 | 615.73 | 380.46 | 618.27 | 380.33 | 619.04 | 380.3 |
| 620.95 | 380.2 | 621.7 | 380.14 | 622.14 | 379.99 | 622.61 | 379.97 | 623.36 | 379.97 |
| 627.31 | 380 | 629.68 | 380.01 | 630.88 | 380.03 | 631.8 | 380.03 | 632.53 | 380.05 |
| 635.23 | 380.23 | 641.04 | 380.28 | 641.32 | 380.26 | 644.63 | 380.29 | 645.8 | 380.31 |
| 647.17 | 380.36 | 648.5 | 380.42 | 651.19 | 380.49 | 654.66 | 380.49 | 656.2 | 380.42 |
| 657.68 | 380.34 | 659.2 | 380.24 | 659.97 | 380.25 | 661.62 | 380.15 | 663.74 | 380 |
| 672.06 | 380 | 674.66 | 380.02 | 675.27 | 380.15 | 675.43 | 380.16 | 679.8 | 380.16 |
| 683.55 | 380.14 | 684.85 | 380.1 | 687.49 | 379.94 | 687.91 | 379.91 | 689.03 | 379.87 |
| 691.34 | 379.83 | 691.97 | 379.84 | 695.21 | 379.84 | 695.52 | 379.83 | 697.89 | 380 |
| 699.15 | 380.13 | 699.48 | 380.15 | 701.01 | 380.21 | 702.27 | 380.24 | 703.91 | 380.23 |
| 704.91 | 380.21 | 707.28 | 380.15 | 708.23 | 380.12 | 709.1 | 380.08 | 710.77 | 379.98 |
| 712.97 | 379.88 | 714.42 | 379.82 | 715.78 | 379.74 | 717.27 | 379.66 | 717.75 | 379.66 |
| 718.95 | 379.7 | 719.56 | 379.74 | 721.37 | 379.9 | 721.6 | 379.93 | 722.08 | 380.08 |
| 722.79 | 380.12 | 726.44 | 380.29 | 727.42 | 380.29 | 731.29 | 380.21 | 731.77 | 380.22 |
| 732.87 | 380.22 | 735.66 | 380.23 | 736.42 | 380.24 | 737.02 | 380.22 | 740.11 | 380.05 |
| 740.93 | 380 | 741.59 | 379.98 | 745.4 | 379.97 | 748.44 | 380.03 | 749.2 | 380.06 |
| 749.57 | 380.14 | 753.55 | 380.14 | 753.8 | 380.16 | 755.1 | 380.19 | 760.54 | 380.18 |
| 763.08 | 380.15 | 763.37 | 380.16 | 764.06 | 380.14 | 768.74 | 379.96 | 775.82 | 379.68 |
| 776.81 | 379.63 | 777.92 | 379.59 | 778.49 | 379.55 | 779.78 | 379.51 | 780.86 | 379.51 |
| 781.71 | 379.48 | 782.66 | 379.52 | 785.43 | 379.72 | 785.95 | 379.71 | 786.46 | 379.75 |
| 788.15 | 379.78 | 789.99 | 379.84 | 790.59 | 379.85 | 791.89 | 379.89 | 793.24 | 379.94 |
| 793.96 | 380.02 | 794.91 | 380.09 | 795.31 | 380.11 | 795.76 | 380.17 | 796.16 | 380.18 |
| 798.38 | 380.18 | 799.36 | 380.19 | 800.91 | 380.26 | 802.74 | 380.4 | 803.64 | 380.45 |
| 805.38 | 380.48 | 805.92 | 380.47 | 808.28 | 380.4 | 809.61 | 380.35 | 809.97 | 380.33 |
| 821.54 | 379.88 | 823.18 | 379.82 | 825.49 | 379.73 | 826.11 | 379.7 | 826.82 | 379.62 |
| 828.59 | 379.55 | 829.47 | 379.51 | 832.48 | 379.5 | 832.89 | 379.55 | 834.29 | 379.66 |
| 837.6 | 379.89 | 838.13 | 379.89 | 838.5 | 379.94 | 841.56 | 379.89 | 842.83 | 379.91 |
| 846.32 | 379.98 | 847.1 | 380 | 853.45 | 380 | 853.83 | 379.99 | 855.17 | 379.92 |
| 856.24 | 379.81 | 856.97 | 379.78 | 857.97 | 379.78 | 859.43 | 379.81 | 860.69 | 379.87 |
| 861.46 | 379.89 | 862.02 | 379.89 | 863.34 | 379.93 | 863.67 | 379.97 | 864.1 | 379.96 |
| 865.53 | 380.01 | 866.01 | 380.01 | 868.35 | 380.12 | 869.49 | 380.19 | 870.97 | 380.26 |
| 873.5 | 380.26 | 874.33 | 380.24 | 874.95 | 380.2 | 876.19 | 380.14 | 877.84 | 380.12 |
| 878.49 | 380.14 | 879.46 | 380.1 | 882.17 | 380.1 | 884.71 | 380.15 | 885.83 | 380.22 |
| 886.92 | 380.26 | 889.01 | 380.26 | 889.8 | 380.24 | 890.88 | 380.18 | 891.29 | 380.17 |
| 896.93 | 380.16 | 899.94 | 380.14 | 901.19 | 380.17 | 906.37 | 380.17 | 907.38 | 380.19 |
| 908.08 | 380.22 | 909.05 | 380.25 | 916.4 | 380.38 | 916.93 | 380.38 | 919.26 | 380.41 |
| 919.72 | 380.43 | 923.7 | 380.49 | 926.07 | 380.51 | 926.24 | 380.5 | 927.44 | 380.48 |
| 928.94 | 380.47 | 929.96 | 380.47 | 932.02 | 380.46 | 933.3 | 380.46 | 938.41 | 380.42 |
| 939.6 | 380.42 | 943.47 | 380.39 | 948.85 | 380.28 | 950.38 | 380.31 | 951.11 | 380.33 |
| 951.73 | 380.33 | 954.47 | 380.36 | 954.74 | 380.38 | 955.66 | 380.37 | 956.07 | 380.38 |
| 957.65 | 380.36 | 958.23 | 380.36 | 962.44 | 380.34 | 974.83 | 380.19 | 978.43 | 380.13 |
| 985.54 | 380.08 | 986 | 380.08 | 988.97 | 380.05 | 990.41 | 380.05 | 991.69 | 380.07 |
| 995.16 | 380 | 996.92 | 380 | 997.75 | 380.02 | 999.09 | 380.07 | 1004.77 | 380.03 |
| 1015.15 | 379.91 | 1020.36 | 380.15 | 1023.49 | 380.24 | 1029.07 | 380.32 | 1032.06 | 380.39 |
| 1034.7 | 380.41 | 1043.94 | 380.42 | 1044.85 | 380.42 | 1045.93 | 380.4 | 1048.68 | 380.31 |
| 1051.24 | 380.29 | 1057.97 | 380.26 | 1058.65 | 380.26 | 1060.47 | 380.29 | 1062.51 | 380.31 |
| 1063.81 | 380.3 | 1072.02 | 380.2 | 1073.25 | 380.18 | 1074.39 | 380.09 | 1074.62 | 380.02 |
| 1076.92 | 380.04 | 1080.17 | 380.13 | 1080.7 | 380.14 | 1087.61 | 380.4 | 1087.72 | 380.4 |
| 1090.01 | 380.54 | 1090.17 | 380.54 | 1092.12 | 380.61 | 1094.67 | 380.66 | 1096.75 | 380.68 |
| 1098.19 | 380.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 153.52 | .04 | 805.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 153.52 | 805.38 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7341.91*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 380 | 4.71 | 380.02 | 5.29 | 380.03 | 7.8 | 380.03 | 12.2 | 380.06 |
| 14.74 | 380.11 | 15.04 | 380.12 | 16.49 | 380.14 | 23.52 | 380.2 | 24.41 | 380.2 |
| 26.58 | 380.22 | 31.62 | 380.23 | 33.87 | 380.23 | 44.68 | 380.26 | 45.18 | 380.27 |
| 46.27 | 380.27 | 47.3 | 380.29 | 50.48 | 380.29 | 51.73 | 380.28 | 53.62 | 380.28 |
| 55.06 | 380.27 | 57.57 | 380.24 | 59.25 | 380.23 | 60.63 | 380.23 | 64.99 | 380.2 |
| 66.59 | 380.2 | 67.17 | 380.19 | 70.44 | 380.16 | 71.57 | 380.17 | 73.91 | 380.16 |
| 75.85 | 380.11 | 76.86 | 380.13 | 77.44 | 380.13 | 79.61 | 380.11 | 80.25 | 380.11 |
| 82.42 | 380.14 | 84.68 | 380.18 | 87.06 | 380.21 | 92.17 | 380.22 | 92.51 | 380.21 |
| 95.59 | 380.22 | 96.08 | 380.23 | 112.21 | 380.29 | 113.63 | 380.3 | 122.43 | 380.4 |
| 122.93 | 380.39 | 127.39 | 380.42 | 132.49 | 380.43 | 136.14 | 380.4 | 137.08 | 380.4 |
| 142.21 | 380.35 | 143.51 | 380.32 | 143.88 | 380.28 | 145.52 | 380.2 | 149.71 | 380.01 |
| 151.36 | 379.9 | 153.01 | 379.83 | 154.59 | 379.78 | 156.63 | 379.72 | 158.02 | 379.66 |
| 159.2 | 379.59 | 161.6 | 379.42 | 162.47 | 379.41 | 165.66 | 379.23 | 175.13 | 378.99 |
| 176.07 | 378.97 | 177.06 | 378.97 | 178.47 | 378.93 | 179.14 | 378.93 | 182.33 | 378.87 |
| 182.55 | 378.83 | 182.88 | 378.82 | 188.96 | 378.82 | 192.15 | 378.83 | 193.4 | 378.83 |
| 194.41 | 378.84 | 195.7 | 378.82 | 196.51 | 378.79 | 198.5 | 378.69 | 199.23 | 378.63 |
| 200.21 | 378.61 | 200.3 | 378.63 | 201.74 | 378.59 | 202.02 | 378.59 | 203.94 | 378.56 |
| 204.47 | 378.53 | 205.43 | 378.46 | 206.16 | 378.47 | 206.54 | 378.46 | 207.73 | 378.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 209.19 | 378.35 | 212.01 | 378.35 | 213.15 | 378.36 | 213.32 | 378.37 | 218.5 | 378.53 |
| 219.43 | 378.55 | 220.11 | 378.58 | 222.36 | 378.71 | 222.91 | 378.73 | 226.78 | 378.8 |
| 227.19 | 378.82 | 228.51 | 378.84 | 229.41 | 378.86 | 230.61 | 378.87 | 236.12 | 378.79 |
| 237.25 | 378.78 | 238.05 | 378.76 | 238.59 | 378.77 | 241.77 | 378.71 | 243.27 | 378.7 |
| 244.9 | 378.67 | 248.12 | 378.62 | 248.74 | 378.62 | 249.52 | 378.6 | 252.05 | 378.52 |
| 253.93 | 378.48 | 257 | 378.47 | 257.29 | 378.49 | 258.18 | 378.49 | 258.67 | 378.48 |
| 269.06 | 378.35 | 270.5 | 378.33 | 272.33 | 378.33 | 273.65 | 378.38 | 279.24 | 378.65 |
| 281.55 | 378.75 | 293.75 | 378.88 | 293.95 | 378.86 | 294.97 | 378.83 | 296.5 | 378.83 |
| 299.07 | 378.81 | 299.84 | 378.8 | 300.41 | 378.76 | 302.39 | 378.8 | 304.12 | 378.86 |
| 305.23 | 378.91 | 307.61 | 378.98 | 309.63 | 379.03 | 313.68 | 379.06 | 313.85 | 379.05 |
| 322.53 | 379.04 | 323.15 | 379.03 | 325.7 | 379.03 | 326.25 | 378.99 | 326.81 | 378.98 |
| 327.2 | 378.95 | 329.17 | 378.91 | 332.58 | 378.81 | 342.47 | 378.47 | 345.11 | 378.34 |
| 345.49 | 378.33 | 348.83 | 378.16 | 348.93 | 378.16 | 357.64 | 377.89 | 358.77 | 377.87 |
| 361.11 | 377.84 | 363.38 | 377.82 | 371.03 | 377.73 | 374.09 | 377.68 | 376.81 | 377.63 |
| 377.58 | 377.63 | 389.98 | 377.75 | 390.42 | 377.75 | 391.01 | 377.77 | 393.7 | 377.84 |
| 394.55 | 377.9 | 395.78 | 377.94 | 396.46 | 377.94 | 397.11 | 377.97 | 398.32 | 378.01 |
| 404.82 | 378.06 | 419.79 | 378.69 | 423.27 | 378.87 | 439 | 379.29 | 440.14 | 379.36 |
| 447.06 | 379.77 | 451.08 | 379.89 | 453.74 | 379.96 | 454.26 | 379.98 | 455.86 | 380 |
| 456.01 | 379.99 | 457.8 | 380.03 | 459.51 | 380.06 | 463.94 | 380.08 | 469.07 | 380.13 |
| 470.94 | 380.11 | 473.25 | 380.08 | 473.73 | 380.08 | 475.35 | 380.06 | 476.86 | 380.02 |
| 478.81 | 379.96 | 482.81 | 379.82 | 483.33 | 379.81 | 485.25 | 379.75 | 486.42 | 379.72 |
| 487.3 | 379.85 | 487.54 | 379.87 | 488.75 | 379.89 | 490.31 | 379.87 | 492.38 | 379.78 |
| 492.94 | 379.78 | 497.41 | 379.69 | 499.37 | 379.62 | 501.22 | 379.61 | 503.73 | 379.58 |
| 508.22 | 379.44 | 508.73 | 379.43 | 508.8 | 379.39 | 509.39 | 379.38 | 510.39 | 379.4 |
| 511.32 | 379.43 | 512.22 | 379.47 | 518.75 | 379.64 | 519.46 | 379.67 | 531.07 | 380.02 |
| 533.23 | 380.07 | 535.82 | 380.09 | 538.72 | 380.09 | 546.05 | 380.01 | 548.45 | 379.99 |
| 549.64 | 379.91 | 552.12 | 379.89 | 552.66 | 379.89 | 558.99 | 379.85 | 560.64 | 379.75 |
| 562.49 | 379.63 | 566.23 | 379.62 | 571.23 | 379.65 | 572.54 | 379.67 | 572.98 | 379.67 |
| 574.08 | 379.7 | 574.86 | 379.75 | 575.68 | 379.75 | 578.94 | 379.67 | 580.58 | 379.66 |
| 581.53 | 379.68 | 584.56 | 379.69 | 587.52 | 379.46 | 588.17 | 379.4 | 588.32 | 379.34 |
| 588.9 | 379.31 | 590.34 | 379.36 | 591.27 | 379.41 | 596.48 | 380.04 | 597.18 | 380.1 |
| 598.82 | 380.11 | 602.46 | 380.06 | 603.24 | 380.11 | 604.03 | 380.1 | 606.24 | 380.09 |
| 607.41 | 380.09 | 610.13 | 380 | 621.48 | 379.8 | 624.15 | 379.65 | 624.95 | 379.62 |
| 626.96 | 379.5 | 627.61 | 379.47 | 627.74 | 379.45 | 628.2 | 379.28 | 628.69 | 379.25 |
| 629.48 | 379.25 | 633.62 | 379.3 | 636.11 | 379.32 | 637.36 | 379.35 | 638.33 | 379.36 |
| 639.09 | 379.38 | 641.92 | 379.59 | 648.02 | 379.65 | 648.31 | 379.62 | 651.78 | 379.65 |
| 653.01 | 379.68 | 655.47 | 379.77 | 655.84 | 379.79 | 658.2 | 379.86 | 658.66 | 379.87 |
| 662.3 | 379.87 | 663.91 | 379.8 | 665.46 | 379.71 | 667.06 | 379.6 | 667.86 | 379.61 |
| 669.59 | 379.5 | 671.82 | 379.33 | 680.54 | 379.33 | 683.27 | 379.35 | 683.91 | 379.49 |
| 684.07 | 379.51 | 688.65 | 379.49 | 692.59 | 379.47 | 693.95 | 379.41 | 696.72 | 379.24 |
| 697.16 | 379.21 | 698.96 | 379.14 | 700.24 | 379.13 | 700.76 | 379.11 | 705.2 | 379.11 |
| 707.63 | 379.29 | 708.94 | 379.43 | 709.29 | 379.46 | 711.66 | 379.55 | 712.82 | 379.56 |
| 713.94 | 379.55 | 714.99 | 379.52 | 717.47 | 379.46 | 719.05 | 379.4 | 721.13 | 379.28 |
| 724.95 | 379.1 | 726.38 | 379.02 | 726.75 | 378.99 | 727.95 | 378.94 | 728.45 | 378.93 |
| 729.71 | 378.98 | 730.34 | 379.02 | 732.24 | 379.2 | 732.48 | 379.24 | 732.98 | 379.4 |
| 733.73 | 379.45 | 737.56 | 379.63 | 738.59 | 379.64 | 742.16 | 379.56 | 742.85 | 379.55 |
| 743.15 | 379.56 | 744.3 | 379.57 | 747.23 | 379.58 | 748.02 | 379.6 | 748.65 | 379.57 |
| 751.89 | 379.39 | 752.75 | 379.33 | 753.45 | 379.31 | 757.44 | 379.3 | 760.62 | 379.35 |
| 761.42 | 379.37 | 761.81 | 379.44 | 765.99 | 379.44 | 766.25 | 379.46 | 767.61 | 379.49 |
| 772.53 | 379.48 | 773.31 | 379.47 | 775.98 | 379.45 | 776.61 | 379.46 | 781.91 | 379.25 |
| 789.34 | 378.95 | 790.38 | 378.9 | 791.54 | 378.86 | 791.85 | 378.83 | 793.84 | 378.77 |
| 794.62 | 378.78 | 795.51 | 378.75 | 796.06 | 378.79 | 796.81 | 378.82 | 799.41 | 379.03 |
| 799.96 | 379.01 | 800.49 | 379.05 | 802.27 | 379.09 | 806.18 | 379.21 | 807.6 | 379.27 |
| 808.36 | 379.34 | 809.35 | 379.41 | 809.77 | 379.43 | 810.24 | 379.48 | 812.99 | 379.48 |
| 814.54 | 379.51 | 815.56 | 379.58 | 815.64 | 379.57 | 817.57 | 379.73 | 818.51 | 379.79 |
| 819.56 | 379.81 | 820.33 | 379.81 | 820.87 | 379.8 | 823.2 | 379.73 | 824.86 | 379.66 |
| 836.32 | 379.17 | 837.94 | 379.11 | 840.84 | 378.98 | 841.58 | 378.91 | 844.16 | 378.79 |
| 847.13 | 378.78 | 847.53 | 378.83 | 848.92 | 378.96 | 851.38 | 379.15 | 852.39 | 379.24 |
| 852.62 | 379.22 | 853.09 | 379.28 | 856.11 | 379.24 | 860.82 | 379.31 | 861.36 | 379.33 |
| 867.87 | 379.33 | 868.25 | 379.32 | 869.57 | 379.24 | 870.63 | 379.12 | 871.35 | 379.09 |
| 872.35 | 379.09 | 873.79 | 379.12 | 875.03 | 379.19 | 875.8 | 379.22 | 876.35 | 379.22 |
| 877.65 | 379.27 | 877.98 | 379.32 | 878.4 | 379.31 | 879.82 | 379.38 | 880.3 | 379.38 |
| 882 | 379.48 | 883.74 | 379.6 | 885.2 | 379.67 | 886.87 | 379.68 | 887.71 | 379.69 |
| 888.14 | 379.68 | 888.9 | 379.64 | 890.36 | 379.58 | 891.1 | 379.56 | 891.99 | 379.55 |
| 892.64 | 379.57 | 893.86 | 379.53 | 896.28 | 379.53 | 898.79 | 379.57 | 900.52 | 379.65 |
| 903.05 | 379.66 | 903.82 | 379.64 | 904.89 | 379.58 | 905.3 | 379.57 | 910.88 | 379.54 |
| 913.85 | 379.51 | 914.78 | 379.51 | 915.09 | 379.52 | 920.22 | 379.52 | 921.21 | 379.55 |
| 922.86 | 379.61 | 930.14 | 379.76 | 930.65 | 379.76 | 932.96 | 379.79 | 933.42 | 379.81 |
| 937.36 | 379.88 | 939.7 | 379.9 | 939.86 | 379.89 | 941.65 | 379.86 | 942.53 | 379.86 |
| 943.54 | 379.85 | 946.85 | 379.85 | 956.9 | 379.77 | 962.22 | 379.66 | 965.08 | 379.72 |
| 966.92 | 379.74 | 967.79 | 379.74 | 968.05 | 379.76 | 969.36 | 379.76 | 970.3 | 379.75 |
| 971.51 | 379.75 | 975.67 | 379.74 | 987.93 | 379.62 | 991.48 | 379.56 | 997.17 | 379.54 |
| 998.97 | 379.54 | 1000.73 | 379.52 | 1001.34 | 379.53 | 1003.21 | 379.51 | 1003.33 | 379.52 |
| 1005.02 | 379.53 | 1005.58 | 379.52 | 1008.03 | 379.46 | 1009.77 | 379.46 | 1011.92 | 379.52 |
| 1017.53 | 379.48 | 1027.8 | 379.34 | 1028.26 | 379.37 | 1032.96 | 379.61 | 1033.99 | 379.65 |
| 1036.05 | 379.71 | 1041.57 | 379.8 | 1044.53 | 379.87 | 1047.13 | 379.89 | 1056.27 | 379.89 |
| 1058.24 | 379.87 | 1060.96 | 379.79 | 1063.5 | 379.77 | 1070.15 | 379.74 | 1070.82 | 379.74 |
| 1072.62 | 379.77 | 1074.65 | 379.79 | 1075.93 | 379.78 | 1079.26 | 379.74 | 1084.05 | 379.67 |
| 1085.26 | 379.65 | 1086.26 | 379.55 | 1086.46 | 379.55 | 1086.62 | 379.47 | 1088.9 | 379.49 |
| 1092.11 | 379.57 | 1092.63 | 379.59 | 1099.47 | 379.83 | 1100.92 | 379.92 | 1102 | 379.97 |
| 1103.93 | 380.04 | 1106.45 | 380.09 | 1107.17 | 380.11 | 1108.6 | 380.12 | 1108.98 | 380.13 |
| 1109.93 | 380.13 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 154.59 | .04 | 820.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 154.59 | 820.33 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7293.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 379.36 | .31 | 379.36 | 4.74 | 379.39 | 5.68 | 379.4 | 7.86 | 379.4 |
| 12.28 | 379.44 | 14.84 | 379.49 | 15.14 | 379.5 | 23.68 | 379.56 | 24.58 | 379.56 |
| 26.76 | 379.58 | 31.84 | 379.59 | 34.1 | 379.59 | 44.99 | 379.62 | 46.23 | 379.63 |
| 47.3 | 379.63 | 47.63 | 379.64 | 50.83 | 379.64 | 52.09 | 379.63 | 53.21 | 379.64 |
| 53.74 | 379.63 | 55.84 | 379.63 | 56.21 | 379.62 | 59.66 | 379.6 | 61.05 | 379.6 |
| 65.44 | 379.58 | 67.06 | 379.58 | 67.64 | 379.57 | 70.93 | 379.54 | 72.07 | 379.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 73.61 | 379.54 | 74.43 | 379.54 | 75.59 | 379.51 | 76.64 | 379.5 | 77.97 | 379.51 |
| 80.16 | 379.49 | 80.81 | 379.49 | 83 | 379.51 | 85.27 | 379.54 | 87.66 | 379.56 |
| 93.16 | 379.56 | 96.75 | 379.57 | 112.99 | 379.61 | 114.42 | 379.62 | 123.28 | 379.71 |
| 123.79 | 379.7 | 128.28 | 379.73 | 133.41 | 379.74 | 137.09 | 379.71 | 143.2 | 379.65 |
| 144.51 | 379.62 | 144.88 | 379.59 | 146.53 | 379.52 | 150.75 | 379.36 | 152.41 | 379.26 |
| 154.07 | 379.2 | 155.67 | 379.16 | 157.65 | 379.09 | 159 | 379.03 | 160.14 | 378.96 |
| 162.47 | 378.79 | 163.31 | 378.77 | 163.7 | 378.75 | 166.41 | 378.59 | 175.61 | 378.35 |
| 175.88 | 378.34 | 177.48 | 378.32 | 178.85 | 378.28 | 179.5 | 378.28 | 182.22 | 378.23 |
| 182.6 | 378.21 | 182.77 | 378.17 | 183.14 | 378.15 | 193.35 | 378.15 | 194.33 | 378.16 |
| 194.98 | 378.15 | 195.88 | 378.12 | 197.51 | 378.05 | 199.01 | 377.95 | 199.96 | 377.94 |
| 200.76 | 377.94 | 203.48 | 377.91 | 204.1 | 377.9 | 205.03 | 377.84 | 205.74 | 377.86 |
| 207.26 | 377.8 | 208.68 | 377.76 | 211.42 | 377.76 | 212.52 | 377.77 | 212.69 | 377.78 |
| 217.71 | 377.93 | 219.28 | 377.97 | 221.46 | 378.1 | 222 | 378.12 | 224.2 | 378.15 |
| 225.76 | 378.18 | 227.25 | 378.22 | 229.47 | 378.24 | 235.92 | 378.12 | 236.7 | 378.1 |
| 237.22 | 378.11 | 240.31 | 378.04 | 240.73 | 378.04 | 243.35 | 377.99 | 245.8 | 377.94 |
| 247.08 | 377.93 | 247.84 | 377.91 | 250.3 | 377.81 | 250.71 | 377.81 | 252.12 | 377.79 |
| 255.21 | 377.78 | 255.38 | 377.79 | 256.72 | 377.79 | 266.8 | 377.68 | 268.21 | 377.67 |
| 269.99 | 377.67 | 271.27 | 377.71 | 276.7 | 377.94 | 278.93 | 378.02 | 290.78 | 378.17 |
| 290.98 | 378.15 | 291.97 | 378.13 | 293.45 | 378.14 | 295.95 | 378.13 | 296.7 | 378.12 |
| 297.25 | 378.09 | 299.17 | 378.13 | 300.85 | 378.18 | 301.41 | 378.21 | 301.93 | 378.22 |
| 304.24 | 378.29 | 305.87 | 378.33 | 306.2 | 378.33 | 308.86 | 378.36 | 310.3 | 378.36 |
| 318.73 | 378.37 | 321.43 | 378.37 | 321.58 | 378.38 | 322.88 | 378.32 | 323.26 | 378.29 |
| 325.17 | 378.26 | 327.49 | 378.18 | 328.49 | 378.16 | 338.08 | 377.82 | 340.65 | 377.7 |
| 341.02 | 377.69 | 344.26 | 377.53 | 344.36 | 377.52 | 352.81 | 377.28 | 353.91 | 377.26 |
| 356.18 | 377.23 | 356.33 | 377.22 | 358.38 | 377.21 | 365.82 | 377.11 | 368.78 | 377.06 |
| 371.43 | 377.01 | 372.05 | 377.01 | 385.01 | 377.13 | 385.48 | 377.13 | 388.91 | 377.23 |
| 389.8 | 377.29 | 391.09 | 377.34 | 391.79 | 377.34 | 392.8 | 377.37 | 393.75 | 377.41 |
| 400.55 | 377.45 | 416.21 | 378.11 | 419.84 | 378.3 | 436.31 | 378.71 | 437.49 | 378.78 |
| 444.74 | 379.14 | 448.94 | 379.26 | 451.72 | 379.33 | 452.27 | 379.35 | 453.94 | 379.37 |
| 454.1 | 379.36 | 455.97 | 379.4 | 457.76 | 379.43 | 462.4 | 379.46 | 466.8 | 379.5 |
| 467.76 | 379.5 | 469.72 | 379.47 | 473.63 | 379.42 | 475.91 | 379.36 | 477.96 | 379.3 |
| 482.14 | 379.16 | 482.69 | 379.15 | 484.69 | 379.08 | 485.92 | 379.05 | 486.84 | 379.2 |
| 487.09 | 379.22 | 488.35 | 379.25 | 489.99 | 379.23 | 492.16 | 379.14 | 492.75 | 379.14 |
| 497.42 | 379.05 | 499.47 | 378.98 | 499.84 | 378.99 | 503.18 | 378.97 | 504.03 | 378.97 |
| 508.72 | 378.84 | 509.26 | 378.82 | 509.33 | 378.78 | 509.95 | 378.78 | 511 | 378.8 |
| 511.97 | 378.83 | 512.91 | 378.87 | 519.74 | 379.04 | 520.48 | 379.07 | 532.64 | 379.43 |
| 534.9 | 379.47 | 537.6 | 379.5 | 540.64 | 379.5 | 548.31 | 379.43 | 550.81 | 379.42 |
| 552.06 | 379.33 | 554.66 | 379.31 | 555.22 | 379.31 | 561.84 | 379.28 | 563.58 | 379.17 |
| 564.8 | 379.08 | 565.51 | 379.04 | 569.42 | 379.04 | 574.65 | 379.06 | 576.02 | 379.09 |
| 576.48 | 379.09 | 577.64 | 379.12 | 578.45 | 379.17 | 579.31 | 379.17 | 580.13 | 379.15 |
| 582.72 | 379.07 | 584.44 | 379.03 | 585.43 | 379.05 | 588.6 | 379.05 | 592.38 | 378.72 |
| 592.53 | 378.66 | 593.14 | 378.62 | 594.65 | 378.67 | 595.62 | 378.73 | 601.07 | 379.41 |
| 601.8 | 379.48 | 603.52 | 379.49 | 607.33 | 379.43 | 608.14 | 379.48 | 608.97 | 379.47 |
| 611.28 | 379.46 | 612.5 | 379.46 | 615.35 | 379.36 | 627.23 | 379.13 | 630.02 | 378.98 |
| 630.85 | 378.94 | 633.64 | 378.77 | 633.78 | 378.75 | 634.25 | 378.56 | 634.77 | 378.54 |
| 635.6 | 378.54 | 639.93 | 378.61 | 642.53 | 378.63 | 643.84 | 378.67 | 644.86 | 378.69 |
| 645.65 | 378.72 | 648.61 | 378.95 | 655 | 379.01 | 655.3 | 378.98 | 658.93 | 379.02 |
| 660.21 | 379.04 | 661.72 | 379.1 | 661.95 | 379.1 | 663.18 | 379.16 | 665.64 | 379.24 |
| 666.13 | 379.25 | 669.93 | 379.25 | 671.62 | 379.18 | 673.25 | 379.08 | 674.91 | 378.97 |
| 675.75 | 378.98 | 677.57 | 378.85 | 679.9 | 378.67 | 689.02 | 378.67 | 691.87 | 378.68 |
| 692.54 | 378.83 | 692.71 | 378.85 | 697.51 | 378.82 | 701.63 | 378.79 | 703.05 | 378.73 |
| 706.41 | 378.5 | 707.63 | 378.44 | 708.3 | 378.42 | 709.63 | 378.41 | 710.17 | 378.39 |
| 714.41 | 378.39 | 714.75 | 378.38 | 717.36 | 378.58 | 718.74 | 378.74 | 719.1 | 378.77 |
| 720.78 | 378.84 | 722.16 | 378.88 | 722.79 | 378.88 | 725.06 | 378.84 | 727.66 | 378.77 |
| 729.66 | 378.69 | 731.49 | 378.58 | 733.9 | 378.46 | 735.49 | 378.39 | 736.98 | 378.3 |
| 737.37 | 378.27 | 738.62 | 378.21 | 739.15 | 378.2 | 740.47 | 378.25 | 741.13 | 378.3 |
| 743.12 | 378.49 | 743.36 | 378.54 | 743.89 | 378.72 | 744.67 | 378.77 | 748.45 | 378.96 |
| 748.68 | 378.98 | 749.75 | 378.98 | 753.49 | 378.9 | 754.52 | 378.9 | 755.73 | 378.91 |
| 759.63 | 378.95 | 760.28 | 378.93 | 763.67 | 378.73 | 764.57 | 378.67 | 765.3 | 378.64 |
| 769.48 | 378.63 | 772.81 | 378.67 | 773.65 | 378.69 | 774.05 | 378.74 | 778.42 | 378.74 |
| 778.69 | 378.77 | 780.12 | 378.79 | 785.27 | 378.78 | 786.09 | 378.77 | 788.87 | 378.75 |
| 789.54 | 378.76 | 791.38 | 378.68 | 795.08 | 378.54 | 802.85 | 378.22 | 803.94 | 378.17 |
| 805.15 | 378.13 | 805.78 | 378.08 | 807.19 | 378.04 | 808.01 | 378.04 | 808.38 | 378.05 |
| 808.87 | 378.03 | 809.31 | 378.03 | 810.67 | 378.1 | 813.4 | 378.33 | 813.96 | 378.31 |
| 814.52 | 378.36 | 816.38 | 378.4 | 818.39 | 378.47 | 818.53 | 378.47 | 820.48 | 378.54 |
| 821.96 | 378.6 | 823.8 | 378.73 | 824.23 | 378.74 | 824.72 | 378.79 | 827.59 | 378.79 |
| 829.22 | 378.82 | 830.29 | 378.89 | 830.37 | 378.88 | 832.39 | 379.06 | 833.37 | 379.12 |
| 834.47 | 379.14 | 835.28 | 379.14 | 835.81 | 379.13 | 838.11 | 379.06 | 839.76 | 378.98 |
| 851.09 | 378.47 | 854.95 | 378.3 | 855.56 | 378.27 | 856.3 | 378.2 | 857.98 | 378.12 |
| 858.15 | 378.1 | 858.84 | 378.07 | 861.78 | 378.06 | 862.18 | 378.11 | 863.55 | 378.25 |
| 865.98 | 378.48 | 866.98 | 378.57 | 867.22 | 378.56 | 867.68 | 378.63 | 870.67 | 378.59 |
| 871.9 | 378.61 | 875.32 | 378.65 | 876.08 | 378.67 | 882.29 | 378.67 | 883.98 | 378.56 |
| 885.02 | 378.43 | 885.74 | 378.4 | 886.72 | 378.4 | 888.14 | 378.43 | 889.37 | 378.51 |
| 890.13 | 378.54 | 890.68 | 378.55 | 891.96 | 378.62 | 892.29 | 378.67 | 892.71 | 378.67 |
| 894.11 | 378.75 | 894.58 | 378.76 | 896.26 | 378.87 | 897.98 | 379 | 899.43 | 379.08 |
| 899.75 | 379.09 | 902.34 | 379.11 | 903.78 | 379.03 | 904.54 | 379.01 | 905.95 | 378.99 |
| 906.79 | 379 | 908 | 378.96 | 910.38 | 378.96 | 912.28 | 378.98 | 912.87 | 378.98 |
| 914.58 | 379.05 | 917.08 | 379.06 | 917.85 | 379.04 | 918.91 | 378.99 | 919.31 | 378.98 |
| 924.83 | 378.91 | 927.76 | 378.87 | 934.06 | 378.87 | 935.04 | 378.9 | 935.72 | 378.94 |
| 936.68 | 378.97 | 943.87 | 379.14 | 944.38 | 379.14 | 946.66 | 379.17 | 947.11 | 379.19 |
| 950.38 | 379.26 | 951.01 | 379.27 | 953.32 | 379.29 | 953.49 | 379.28 | 955.26 | 379.25 |
| 956.13 | 379.25 | 957.13 | 379.24 | 959.14 | 379.23 | 960.4 | 379.24 | 965.39 | 379.19 |
| 970.34 | 379.15 | 975.6 | 379.05 | 977.1 | 379.08 | 979.3 | 379.11 | 981.28 | 379.13 |
| 981.36 | 379.14 | 988.9 | 379.14 | 1001.02 | 379.06 | 1004.54 | 379 | 1010.16 | 378.99 |
| 1010.48 | 379 | 1011.94 | 379 | 1012.93 | 378.99 | 1014.29 | 378.99 | 1014.85 | 378.98 |
| 1016.26 | 378.98 | 1017.51 | 379 | 1018.48 | 378.99 | 1020.9 | 378.93 | 1021.48 | 378.92 |
| 1022.62 | 378.92 | 1024.75 | 378.97 | 1030.3 | 378.93 | 1040.45 | 378.77 | 1040.9 | 378.8 |
| 1045.55 | 379.07 | 1046.57 | 379.11 | 1048.61 | 379.18 | 1054.07 | 379.28 | 1057 | 379.35 |
| 1059.57 | 379.38 | 1068.61 | 379.36 | 1069.85 | 379.35 | 1070.56 | 379.33 | 1073.25 | 379.27 |
| 1075.76 | 379.25 | 1082.33 | 379.21 | 1083 | 379.21 | 1084.78 | 379.25 | 1086.78 | 379.26 |
| 1088.05 | 379.26 | 1096.07 | 379.14 | 1097.06 | 379.13 | 1098.26 | 379.01 | 1098.46 | 379 |
| 1098.62 | 378.92 | 1099.36 | 378.92 | 1100.87 | 378.94 | 1104.5 | 379.02 | 1104.57 | 379.03 |
| 1111.33 | 379.26 | 1112.76 | 379.35 | 1113.83 | 379.41 | 1115.74 | 379.48 | 1120.27 | 379.57 |
| 1121.67 | 379.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 155.67 | .04 | 835.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 155.67 | 835.28 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0



BSE Document Control Number: 7323HYD101

REACH: WASH0 RS: 7246.*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 378.71 | .32 | 378.72 | 4.77 | 378.75 | 5.36 | 378.76 | 7.91 | 378.77 |
| 12.37 | 378.82 | 14.94 | 378.86 | 15.25 | 378.87 | 16.72 | 378.88 | 23.84 | 378.92 |
| 24.75 | 378.92 | 26.95 | 378.94 | 32.06 | 378.95 | 34.34 | 378.95 | 45.3 | 378.98 |
| 46.91 | 378.98 | 48.58 | 379 | 49.52 | 379 | 49.71 | 378.99 | 56.6 | 378.99 |
| 60.08 | 378.97 | 61.47 | 378.97 | 65.89 | 378.95 | 68.11 | 378.95 | 71.42 | 378.93 |
| 72.56 | 378.93 | 74.12 | 378.92 | 76.12 | 378.89 | 77.17 | 378.88 | 78.51 | 378.89 |
| 79.49 | 378.88 | 80.71 | 378.88 | 81.37 | 378.87 | 81.64 | 378.88 | 83.57 | 378.88 |
| 85.32 | 378.9 | 87.23 | 378.91 | 93.46 | 378.91 | 93.8 | 378.9 | 97.42 | 378.91 |
| 113.77 | 378.92 | 115.22 | 378.94 | 124.14 | 379.02 | 124.64 | 379.02 | 129.16 | 379.04 |
| 134.34 | 379.05 | 138.04 | 379.01 | 138.99 | 379.01 | 144.19 | 378.95 | 145.51 | 378.92 |
| 145.88 | 378.9 | 147.42 | 378.85 | 147.55 | 378.84 | 151.8 | 378.71 | 153.46 | 378.61 |
| 155.14 | 378.56 | 156.74 | 378.54 | 158.66 | 378.47 | 159.97 | 378.41 | 161.09 | 378.33 |
| 163.34 | 378.15 | 164.54 | 378.12 | 167.17 | 377.94 | 176.08 | 377.7 | 176.98 | 377.68 |
| 177.9 | 377.67 | 178.54 | 377.65 | 180.14 | 377.63 | 182.5 | 377.57 | 182.87 | 377.55 |
| 183.04 | 377.51 | 183.39 | 377.49 | 188.86 | 377.47 | 193.92 | 377.47 | 194.24 | 377.48 |
| 194.88 | 377.47 | 195.75 | 377.43 | 196.23 | 377.42 | 197.33 | 377.37 | 198.78 | 377.27 |
| 199.71 | 377.26 | 199.8 | 377.28 | 201.15 | 377.27 | 203.22 | 377.27 | 204.63 | 377.23 |
| 205.31 | 377.24 | 206.8 | 377.2 | 208.17 | 377.17 | 210.82 | 377.17 | 211.9 | 377.18 |
| 212.06 | 377.19 | 216.93 | 377.32 | 218.01 | 377.34 | 218.46 | 377.36 | 220.28 | 377.48 |
| 221.09 | 377.51 | 223.23 | 377.53 | 224.74 | 377.55 | 225.12 | 377.57 | 227.22 | 377.61 |
| 228.34 | 377.61 | 233.53 | 377.48 | 235.35 | 377.44 | 235.86 | 377.45 | 238.85 | 377.36 |
| 239.26 | 377.36 | 241.81 | 377.31 | 244.18 | 377.25 | 245.42 | 377.24 | 248.54 | 377.11 |
| 250.31 | 377.09 | 253.2 | 377.08 | 253.31 | 377.09 | 254.77 | 377.09 | 264.55 | 377.01 |
| 265.92 | 377 | 267.64 | 377 | 268.88 | 377.03 | 274.15 | 377.23 | 276.32 | 377.3 |
| 287.81 | 377.45 | 288 | 377.44 | 293.8 | 377.44 | 294.09 | 377.42 | 295.84 | 377.45 |
| 295.95 | 377.46 | 297.58 | 377.5 | 298.63 | 377.54 | 300.87 | 377.6 | 302.77 | 377.64 |
| 305.35 | 377.67 | 306.75 | 377.67 | 314.92 | 377.71 | 316.33 | 377.71 | 317.91 | 377.72 |
| 318.43 | 377.68 | 318.96 | 377.67 | 319.32 | 377.64 | 321.17 | 377.6 | 323.42 | 377.53 |
| 324.39 | 377.51 | 333.7 | 377.17 | 336.19 | 377.05 | 336.54 | 377.05 | 339.7 | 376.9 |
| 339.78 | 376.89 | 347.99 | 376.67 | 351.26 | 376.61 | 353.39 | 376.6 | 360.61 | 376.48 |
| 363.48 | 376.43 | 366.04 | 376.38 | 366.51 | 376.38 | 380.05 | 376.51 | 380.54 | 376.51 |
| 384.12 | 376.62 | 385.03 | 376.68 | 386.39 | 376.73 | 387.13 | 376.74 | 389.17 | 376.8 |
| 396.27 | 376.84 | 412.62 | 377.52 | 416.42 | 377.72 | 433.61 | 378.14 | 434.85 | 378.2 |
| 442.41 | 378.52 | 446.81 | 378.63 | 449.71 | 378.71 | 450.28 | 378.73 | 452.03 | 378.74 |
| 452.19 | 378.73 | 454.15 | 378.77 | 456.02 | 378.8 | 460.86 | 378.83 | 466.46 | 378.88 |
| 472.59 | 378.76 | 474.97 | 378.7 | 477.1 | 378.63 | 484.14 | 378.42 | 485.42 | 378.39 |
| 486.38 | 378.55 | 486.64 | 378.57 | 487.96 | 378.61 | 489.67 | 378.59 | 491.93 | 378.5 |
| 497.43 | 378.41 | 499.57 | 378.35 | 503.44 | 378.35 | 503.76 | 378.36 | 504.33 | 378.35 |
| 509.23 | 378.23 | 509.8 | 378.22 | 509.87 | 378.17 | 510.51 | 378.17 | 511.61 | 378.19 |
| 513.6 | 378.27 | 514.88 | 378.3 | 520.74 | 378.45 | 521.51 | 378.48 | 534.2 | 378.83 |
| 536.56 | 378.88 | 539.39 | 378.91 | 542.56 | 378.91 | 550.57 | 378.86 | 553.18 | 378.84 |
| 554.49 | 378.75 | 557.2 | 378.74 | 557.79 | 378.73 | 564.7 | 378.71 | 566.51 | 378.58 |
| 568.53 | 378.45 | 572.61 | 378.45 | 578.07 | 378.48 | 579.51 | 378.5 | 579.99 | 378.5 |
| 581.11 | 378.54 | 582.05 | 378.59 | 582.94 | 378.59 | 586.5 | 378.46 | 588.29 | 378.41 |
| 589.32 | 378.42 | 592.64 | 378.41 | 595.87 | 378.11 | 596.59 | 378.04 | 596.75 | 377.97 |
| 597.38 | 377.93 | 598.96 | 377.98 | 599.97 | 378.05 | 605.67 | 378.79 | 606.43 | 378.86 |
| 608.22 | 378.86 | 612.2 | 378.8 | 613.05 | 378.86 | 613.91 | 378.85 | 616.33 | 378.84 |
| 617.6 | 378.83 | 620.57 | 378.73 | 632.98 | 378.47 | 635.89 | 378.3 | 636.76 | 378.26 |
| 638.96 | 378.12 | 639.82 | 378.06 | 640.31 | 377.85 | 640.85 | 377.83 | 641.72 | 377.83 |
| 646.24 | 377.91 | 648.96 | 377.94 | 650.33 | 377.99 | 651.39 | 378.01 | 652.22 | 378.06 |
| 655.31 | 378.31 | 661.97 | 378.38 | 662.29 | 378.34 | 667.42 | 378.41 | 668.99 | 378.46 |
| 670.52 | 378.53 | 673.09 | 378.62 | 675.27 | 378.63 | 676.62 | 378.63 | 677.05 | 378.64 |
| 678.11 | 378.62 | 679.34 | 378.56 | 681.03 | 378.45 | 682.77 | 378.33 | 683.65 | 378.34 |
| 685.54 | 378.2 | 687.98 | 378 | 697.5 | 378 | 700.48 | 378.01 | 701.18 | 378.17 |
| 701.36 | 378.19 | 706.36 | 378.16 | 710.67 | 378.12 | 712.16 | 378.05 | 715.18 | 377.83 |
| 715.66 | 377.79 | 716.94 | 377.73 | 717.63 | 377.71 | 719.02 | 377.69 | 719.59 | 377.67 |
| 724.44 | 377.66 | 725.01 | 377.7 | 727.1 | 377.87 | 728.53 | 378.04 | 728.92 | 378.08 |
| 731.5 | 378.18 | 732.77 | 378.19 | 733.99 | 378.18 | 737.85 | 378.08 | 738.94 | 378.03 |
| 739.57 | 378.01 | 741.85 | 377.88 | 746.02 | 377.68 | 747.58 | 377.58 | 747.63 | 377.57 |
| 749.3 | 377.48 | 749.85 | 377.47 | 751.22 | 377.53 | 751.91 | 377.59 | 753.99 | 377.79 |
| 754.25 | 377.84 | 754.8 | 378.04 | 755.61 | 378.1 | 759.56 | 378.31 | 759.8 | 378.32 |
| 760.92 | 378.33 | 765.36 | 378.24 | 765.9 | 378.24 | 767.16 | 378.26 | 770.36 | 378.29 |
| 771.23 | 378.31 | 771.91 | 378.29 | 775.45 | 378.07 | 776.39 | 378 | 777.16 | 377.97 |
| 781.52 | 377.96 | 785.87 | 378 | 786.3 | 378.04 | 790.86 | 378.04 | 791.14 | 378.07 |
| 792.63 | 378.09 | 798.01 | 378.08 | 798.86 | 378.07 | 801.77 | 378.05 | 802.46 | 378.06 |
| 804.39 | 377.98 | 808.26 | 377.83 | 816.37 | 377.49 | 817.5 | 377.44 | 818.21 | 377.42 |
| 819.43 | 377.35 | 820.9 | 377.31 | 822.14 | 377.32 | 822.65 | 377.3 | 823.11 | 377.3 |
| 823.71 | 377.34 | 824.53 | 377.38 | 827.38 | 377.63 | 827.97 | 377.62 | 828.55 | 377.66 |
| 830.49 | 377.7 | 832.59 | 377.78 | 832.74 | 377.79 | 834.77 | 377.86 | 836.32 | 377.93 |
| 837.15 | 377.98 | 839.2 | 378.09 | 839.67 | 378.1 | 842.2 | 378.1 | 843.9 | 378.13 |
| 845.02 | 378.21 | 845.1 | 378.2 | 847.21 | 378.39 | 848.24 | 378.45 | 849.38 | 378.48 |
| 850.22 | 378.48 | 850.75 | 378.47 | 853.03 | 378.39 | 854.66 | 378.31 | 865.86 | 377.77 |
| 870.28 | 377.55 | 871.01 | 377.49 | 872.68 | 377.4 | 872.84 | 377.38 | 873.53 | 377.35 |
| 876.43 | 377.34 | 876.66 | 377.35 | 876.83 | 377.4 | 878.18 | 377.55 | 880.59 | 377.8 |
| 881.57 | 377.91 | 881.81 | 377.89 | 882.26 | 377.97 | 885.22 | 377.94 | 886.44 | 377.95 |
| 889.82 | 377.99 | 890.35 | 378 | 896.71 | 378 | 898.38 | 377.89 | 899.42 | 377.74 |
| 900.12 | 377.71 | 901.09 | 377.71 | 902.5 | 377.74 | 903.72 | 377.83 | 904.47 | 377.87 |
| 905 | 377.88 | 906.28 | 377.96 | 906.6 | 378.02 | 907.01 | 378.02 | 908.87 | 378.14 |
| 911.4 | 378.34 | 912.23 | 378.41 | 913.66 | 378.49 | 913.98 | 378.5 | 915.29 | 378.51 |
| 916.11 | 378.54 | 916.91 | 378.52 | 917.51 | 378.48 | 918.71 | 378.44 | 920.11 | 378.42 |
| 921.21 | 378.42 | 922.13 | 378.39 | 924.29 | 378.39 | 924.49 | 378.38 | 926.37 | 378.4 |
| 926.95 | 378.4 | 928.81 | 378.45 | 931.11 | 378.46 | 931.87 | 378.44 | 932.92 | 378.39 |
| 933.31 | 378.38 | 938.77 | 378.29 | 941.68 | 378.23 | 942.58 | 378.22 | 944.49 | 378.22 |
| 945.14 | 378.23 | 945.54 | 378.22 | 947.31 | 378.22 | 948.88 | 378.26 | 949.55 | 378.3 |
| 950.49 | 378.33 | 957.6 | 378.51 | 958.11 | 378.51 | 960.37 | 378.55 | 960.81 | 378.58 |
| 964.04 | 378.65 | 964.66 | 378.65 | 966.95 | 378.68 | 967.72 | 378.65 | 968.45 | 378.65 |
| 969.73 | 378.63 | 970.71 | 378.63 | 972.7 | 378.62 | 973.95 | 378.63 | 978.88 | 378.57 |
| 980.04 | 378.56 | 983.78 | 378.52 | 988.98 | 378.44 | 989.1 | 378.43 | 990.46 | 378.46 |
| 991.77 | 378.48 | 995.96 | 378.53 | 998.06 | 378.53 | 1002.12 | 378.54 | 1014.11 | 378.49 |
| 1017.59 | 378.44 | 1023.15 | 378.45 | 1024.91 | 378.46 | 1026.64 | 378.45 | 1027.23 | 378.46 |
| 1029.06 | 378.44 | 1029.18 | 378.45 | 1030.42 | 378.47 | 1031.38 | 378.45 | 1033.77 | 378.39 |
| 1034.35 | 378.38 | 1035.47 | 378.38 | 1037.16 | 378.42 | 1037.58 | 378.42 | 1043.06 | 378.38 |
| 1053.11 | 378.21 | 1053.55 | 378.24 | 1058.15 | 378.53 | 1059.15 | 378.58 | 1061.17 | 378.65 |
| 1066.57 | 378.76 | 1069.46 | 378.83 | 1072.01 | 378.86 | 1080.94 | 378.82 | 1081.82 | 378.82 |
| 1085.53 | 378.75 | 1088.01 | 378.73 | 1094.51 | 378.69 | 1095.17 | 378.69 | 1096.93 | 378.73 |
| 1098.91 | 378.74 | 1100.16 | 378.74 | 1103.42 | 378.69 | 1108.1 | 378.61 | 1109.08 | 378.6 |
| 1110.27 | 378.47 | 1110.46 | 378.46 | 1110.62 | 378.37 | 1111.35 | 378.37 | 1112.85 | 378.39 |
| 1115.99 | 378.45 | 1116.5 | 378.47 | 1123.18 | 378.7 | 1123.29 | 378.7 | 1125.66 | 378.84 |
| 1126.91 | 378.9 | 1127.54 | 378.92 | 1130.01 | 378.97 | 1130.71 | 378.98 | 1132.49 | 379.02 |
| 1133.41 | 379.02 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 156.74 | .04 | 850.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 156.74 | 850.22 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7198.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 378.07 | .32 | 378.08 | 5.76 | 378.13 | 7.67 | 378.14 | 7.97 | 378.15 |
| 12.45 | 378.19 | 15.04 | 378.23 | 15.35 | 378.24 | 16.83 | 378.25 | 24.01 | 378.28 |
| 24.92 | 378.29 | 27.13 | 378.29 | 32.28 | 378.31 | 34.57 | 378.31 | 45.61 | 378.33 |
| 46.13 | 378.34 | 47.96 | 378.34 | 48.29 | 378.35 | 56.99 | 378.35 | 58.78 | 378.34 |
| 61.89 | 378.34 | 66.35 | 378.33 | 68.57 | 378.33 | 71.91 | 378.31 | 73.06 | 378.31 |
| 74.63 | 378.3 | 77.43 | 378.27 | 79.05 | 378.27 | 80.04 | 378.26 | 81.27 | 378.26 |
| 82.8 | 378.25 | 84.08 | 378.26 | 85.91 | 378.26 | 86.45 | 378.27 | 88.87 | 378.27 |
| 94.1 | 378.26 | 94.44 | 378.25 | 98.09 | 378.25 | 114.55 | 378.24 | 115.8 | 378.25 |
| 116.01 | 378.26 | 124.99 | 378.33 | 135.26 | 378.35 | 138.99 | 378.32 | 145.18 | 378.25 |
| 146.51 | 378.23 | 146.88 | 378.21 | 148.43 | 378.17 | 148.56 | 378.16 | 152.84 | 378.05 |
| 154.51 | 377.97 | 156.2 | 377.93 | 157.82 | 377.91 | 159.68 | 377.85 | 160.95 | 377.78 |
| 162.03 | 377.7 | 164.22 | 377.51 | 165.01 | 377.5 | 165.37 | 377.48 | 167.92 | 377.29 |
| 176.56 | 377.06 | 177.43 | 377.03 | 178.95 | 377.01 | 180.23 | 376.98 | 180.85 | 376.98 |
| 182.78 | 376.91 | 183.14 | 376.89 | 183.34 | 376.84 | 183.77 | 376.82 | 188.94 | 376.8 |
| 192.85 | 376.79 | 193.24 | 376.78 | 193.85 | 376.79 | 194.78 | 376.79 | 195.34 | 376.76 |
| 196.09 | 376.74 | 197.15 | 376.69 | 198.56 | 376.59 | 199.28 | 376.58 | 199.55 | 376.61 |
| 201.12 | 376.61 | 202.86 | 376.62 | 203.35 | 376.63 | 204.23 | 376.61 | 205.24 | 376.62 |
| 207.66 | 376.58 | 210.23 | 376.59 | 211.43 | 376.6 | 216.15 | 376.72 | 217.01 | 376.73 |
| 217.63 | 376.75 | 219.68 | 376.89 | 220.18 | 376.9 | 222.25 | 376.91 | 223.71 | 376.93 |
| 224.09 | 376.95 | 225.3 | 376.97 | 227.01 | 376.99 | 227.21 | 376.98 | 233.27 | 376.8 |
| 234 | 376.77 | 234.49 | 376.78 | 237.4 | 376.69 | 238.76 | 376.67 | 242.55 | 376.57 |
| 243.19 | 376.55 | 243.76 | 376.55 | 246.79 | 376.41 | 246.89 | 376.4 | 248.5 | 376.39 |
| 251.56 | 376.39 | 252.14 | 376.4 | 252.83 | 376.39 | 262.3 | 376.34 | 263.63 | 376.33 |
| 265.3 | 376.33 | 266.5 | 376.35 | 271.6 | 376.51 | 273.71 | 376.57 | 284.85 | 376.74 |
| 285.96 | 376.74 | 287.36 | 376.75 | 289.7 | 376.76 | 290.65 | 376.76 | 290.93 | 376.75 |
| 292.63 | 376.78 | 292.73 | 376.79 | 294.31 | 376.82 | 294.84 | 376.84 | 299.34 | 376.94 |
| 301.84 | 376.97 | 303.19 | 376.98 | 311.12 | 377.05 | 311.68 | 377.04 | 313.66 | 377.06 |
| 314.01 | 377.07 | 314.51 | 377.03 | 315.38 | 376.98 | 317.17 | 376.95 | 320.29 | 376.85 |
| 329.31 | 376.52 | 331.73 | 376.41 | 332.07 | 376.4 | 335.13 | 376.26 | 335.21 | 376.26 |
| 343.16 | 376.06 | 346.33 | 376 | 348.4 | 375.99 | 355.39 | 375.86 | 358.18 | 375.81 |
| 360.66 | 375.76 | 360.97 | 375.76 | 375.09 | 375.89 | 375.6 | 375.89 | 379.33 | 376.01 |
| 380.28 | 376.07 | 381.7 | 376.13 | 382.46 | 376.13 | 383.21 | 376.16 | 384.59 | 376.2 |
| 391.99 | 376.22 | 409.04 | 376.94 | 413 | 377.15 | 430.92 | 377.57 | 432.21 | 377.62 |
| 440.09 | 377.9 | 444.67 | 378.01 | 447.7 | 378.08 | 448.29 | 378.1 | 450.99 | 378.11 |
| 452.32 | 378.15 | 453.62 | 378.16 | 454.27 | 378.18 | 464.11 | 378.24 | 465.16 | 378.25 |
| 469.91 | 378.14 | 471.55 | 378.11 | 474.72 | 378.02 | 476.25 | 377.97 | 480.81 | 377.83 |
| 481.4 | 377.82 | 483.58 | 377.75 | 484.92 | 377.72 | 485.92 | 377.9 | 486.19 | 377.92 |
| 487.57 | 377.96 | 488.82 | 377.96 | 489.35 | 377.95 | 491.71 | 377.85 | 492.35 | 377.85 |
| 497.43 | 377.78 | 499.66 | 377.71 | 503.71 | 377.73 | 504.04 | 377.74 | 510.33 | 377.62 |
| 510.4 | 377.56 | 512.21 | 377.59 | 513.28 | 377.62 | 514.29 | 377.67 | 515.63 | 377.7 |
| 521.73 | 377.85 | 522.54 | 377.88 | 535.77 | 378.23 | 538.23 | 378.29 | 541.17 | 378.32 |
| 544.48 | 378.32 | 552.83 | 378.28 | 555.55 | 378.27 | 556.91 | 378.17 | 560.35 | 378.16 |
| 567.56 | 378.13 | 569.44 | 378 | 571.55 | 377.86 | 575.8 | 377.87 | 581.49 | 377.89 |
| 582.99 | 377.92 | 583.49 | 377.92 | 584.75 | 377.95 | 585.54 | 378 | 585.64 | 378.02 |
| 586.49 | 378.02 | 587.46 | 377.97 | 590.28 | 377.85 | 592.15 | 377.78 | 593.22 | 377.78 |
| 596.68 | 377.77 | 600.05 | 377.44 | 600.8 | 377.36 | 600.96 | 377.28 | 601.62 | 377.24 |
| 603.27 | 377.3 | 604.32 | 377.37 | 610.26 | 378.16 | 611.05 | 378.24 | 612.92 | 378.24 |
| 617.06 | 378.17 | 617.95 | 378.23 | 618.85 | 378.22 | 621.37 | 378.21 | 622.7 | 378.2 |
| 625.79 | 378.09 | 638.72 | 377.81 | 641.76 | 377.63 | 642.67 | 377.58 | 644.96 | 377.43 |
| 645.71 | 377.39 | 645.85 | 377.36 | 646.37 | 377.14 | 646.94 | 377.12 | 647.83 | 377.12 |
| 652.55 | 377.21 | 655.38 | 377.26 | 656.81 | 377.31 | 657.91 | 377.34 | 658.78 | 377.4 |
| 662 | 377.67 | 668.95 | 377.74 | 669.28 | 377.71 | 673.23 | 377.75 | 674.63 | 377.77 |
| 676.26 | 377.83 | 677.85 | 377.9 | 680.54 | 377.99 | 681.06 | 378 | 682.81 | 378.01 |
| 684.22 | 378.01 | 685.21 | 378.02 | 685.77 | 378 | 687.05 | 377.93 | 688.81 | 377.82 |
| 690.63 | 377.7 | 691.54 | 377.71 | 693.52 | 377.55 | 696.05 | 377.33 | 705.98 | 377.33 |
| 709.09 | 377.34 | 709.82 | 377.52 | 710 | 377.53 | 715.22 | 377.49 | 719.7 | 377.44 |
| 721.26 | 377.37 | 724.41 | 377.13 | 724.91 | 377.08 | 726.96 | 376.99 | 728.42 | 376.97 |
| 729.01 | 376.95 | 733.62 | 376.94 | 733.99 | 376.93 | 734.66 | 376.98 | 736.83 | 377.17 |
| 738.33 | 377.35 | 738.73 | 377.38 | 740.55 | 377.46 | 742.06 | 377.51 | 742.74 | 377.51 |
| 744.02 | 377.49 | 745.21 | 377.46 | 748.04 | 377.38 | 749.17 | 377.34 | 752.21 | 377.19 |
| 754.83 | 377.05 | 756.56 | 376.97 | 758.61 | 376.83 | 759.97 | 376.75 | 760.54 | 376.75 |
| 762.21 | 376.82 | 764.86 | 377.09 | 765.13 | 377.14 | 765.71 | 377.36 | 766.56 | 377.42 |
| 770.67 | 377.65 | 770.92 | 377.66 | 772.09 | 377.67 | 776.71 | 377.58 | 777.28 | 377.58 |
| 781.93 | 377.65 | 782.83 | 377.67 | 783.55 | 377.65 | 787.24 | 377.41 | 788.22 | 377.33 |
| 789.01 | 377.3 | 793.56 | 377.29 | 797.18 | 377.31 | 798.09 | 377.32 | 798.54 | 377.34 |
| 803.29 | 377.34 | 803.59 | 377.37 | 805.14 | 377.4 | 810.74 | 377.37 | 811.63 | 377.37 |
| 814.67 | 377.35 | 815.01 | 377.37 | 815.84 | 377.35 | 817.4 | 377.28 | 821.43 | 377.12 |
| 831.06 | 376.71 | 831.8 | 376.69 | 833.07 | 376.62 | 834.61 | 376.58 | 835.49 | 376.58 |
| 835.9 | 376.59 | 836.43 | 376.57 | 836.91 | 376.57 | 837.54 | 376.62 | 837.89 | 376.63 |
| 838.39 | 376.67 | 841.36 | 376.93 | 841.98 | 376.92 | 842.58 | 376.97 | 844.6 | 377.01 |
| 847.52 | 377.13 | 850.68 | 377.25 | 851.54 | 377.31 | 853.68 | 377.4 | 854.17 | 377.41 |
| 856.81 | 377.41 | 857.99 | 377.42 | 858.58 | 377.44 | 859.74 | 377.52 | 859.84 | 377.51 |
| 862.03 | 377.71 | 863.1 | 377.78 | 864.29 | 377.81 | 865.17 | 377.81 | 865.69 | 377.8 |
| 867.95 | 377.72 | 869.22 | 377.65 | 869.56 | 377.64 | 880.63 | 377.06 | 884.41 | 376.87 |
| 885.72 | 376.78 | 888.21 | 376.63 | 891.09 | 376.62 | 891.31 | 376.63 | 891.48 | 376.68 |
| 892.82 | 376.85 | 895.19 | 377.12 | 896.17 | 377.24 | 896.4 | 377.23 | 896.85 | 377.31 |
| 899.77 | 377.3 | 900.98 | 377.3 | 904.32 | 377.33 | 911.14 | 377.33 | 911.5 | 377.32 |
| 912.78 | 377.21 | 913.81 | 377.06 | 914.5 | 377.02 | 915.46 | 377.02 | 916.86 | 377.06 |
| 918.8 | 377.2 | 919.33 | 377.21 | 920.59 | 377.31 | 920.91 | 377.38 | 921.32 | 377.37 |
| 922.69 | 377.48 | 925.39 | 377.71 | 926.48 | 377.81 | 927.89 | 377.9 | 929.51 | 377.93 |
| 930.31 | 377.96 | 930.73 | 377.96 | 931.47 | 377.93 | 932.15 | 377.89 | 933.6 | 377.86 |
| 934.46 | 377.85 | 935.35 | 377.85 | 936.01 | 377.83 | 938.09 | 377.81 | 940.98 | 377.81 |
| 941.03 | 377.82 | 942.16 | 377.83 | 942.87 | 377.85 | 945.14 | 377.86 | 945.89 | 377.84 |
| 946.93 | 377.79 | 952.72 | 377.66 | 955.59 | 377.59 | 956.48 | 377.58 | 959.01 | 377.58 |
| 959.41 | 377.57 | 961.16 | 377.57 | 962.71 | 377.61 | 963.37 | 377.65 | 964.3 | 377.69 |
| 971.33 | 377.89 | 971.84 | 377.89 | 974.07 | 377.93 | 974.51 | 377.96 | 977.7 | 378.03 |
| 980.58 | 378.07 | 981.33 | 378.04 | 983.32 | 378.02 | 984.3 | 378.02 | 986.27 | 378.01 |
| 987.49 | 378.01 | 993.51 | 377.95 | 997.21 | 377.9 | 1002.36 | 377.82 | 1005.12 | 377.86 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1007.74 | 377.89 | 1007.91 | 377.9 | 1008.87 | 377.9 | 1009.26 | 377.91 | 1010.16 | 377.91 |
| 1015.35 | 377.95 | 1027.2 | 377.92 | 1030.64 | 377.88 | 1036.14 | 377.9 | 1036.46 | 377.91 |
| 1037.44 | 377.91 | 1037.88 | 377.92 | 1038.85 | 377.92 | 1039.59 | 377.91 | 1040.18 | 377.92 |
| 1040.72 | 377.91 | 1042.1 | 377.91 | 1043.32 | 377.94 | 1044.28 | 377.92 | 1046.64 | 377.85 |
| 1047.21 | 377.84 | 1050 | 377.87 | 1050.4 | 377.87 | 1055.83 | 377.82 | 1065.76 | 377.64 |
| 1066.2 | 377.68 | 1070.74 | 377.99 | 1071.73 | 378.04 | 1073.73 | 378.12 | 1079.07 | 378.24 |
| 1081.93 | 378.32 | 1084.45 | 378.34 | 1093.28 | 378.29 | 1094.5 | 378.28 | 1097.81 | 378.23 |
| 1106.7 | 378.16 | 1107.35 | 378.16 | 1109.09 | 378.2 | 1111.04 | 378.22 | 1112.28 | 378.21 |
| 1115.5 | 378.16 | 1120.13 | 378.08 | 1121.31 | 378.05 | 1122.27 | 377.93 | 1122.47 | 377.92 |
| 1122.62 | 377.81 | 1124.82 | 377.84 | 1128.43 | 377.91 | 1135.04 | 378.13 | 1135.15 | 378.13 |
| 1137.64 | 378.28 | 1139.35 | 378.36 | 1141.79 | 378.41 | 1142.48 | 378.42 | 1144.24 | 378.46 |
| 1145.16 | 378.47 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 157.82 | .04 | 865.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 157.82 | 865.17 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7150.08*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 377.43 | .32 | 377.44 | 4.84 | 377.49 | 7.72 | 377.52 | 8.02 | 377.52 |
| 12.54 | 377.57 | 15.15 | 377.61 | 15.46 | 377.62 | 16.95 | 377.62 | 24.17 | 377.64 |
| 25.09 | 377.65 | 27.32 | 377.65 | 32.5 | 377.66 | 34.81 | 377.67 | 45.92 | 377.69 |
| 47.56 | 377.69 | 48.28 | 377.7 | 53.17 | 377.7 | 54.32 | 377.71 | 69.04 | 377.71 |
| 72.4 | 377.69 | 73.56 | 377.68 | 75.14 | 377.68 | 77.96 | 377.65 | 79.59 | 377.65 |
| 80.59 | 377.64 | 81.82 | 377.64 | 82.49 | 377.63 | 88.43 | 377.63 | 89.48 | 377.62 |
| 94.74 | 377.6 | 95.09 | 377.59 | 98.76 | 377.59 | 115.33 | 377.56 | 116.8 | 377.57 |
| 125.84 | 377.65 | 126.35 | 377.64 | 136.18 | 377.66 | 139.93 | 377.62 | 140.9 | 377.62 |
| 146.17 | 377.55 | 147.51 | 377.53 | 149.57 | 377.49 | 153.88 | 377.4 | 155.57 | 377.32 |
| 157.27 | 377.29 | 158.89 | 377.29 | 160.69 | 377.22 | 161.92 | 377.16 | 162.97 | 377.07 |
| 165.09 | 376.87 | 165.85 | 376.86 | 166.21 | 376.84 | 168.68 | 376.65 | 177.04 | 376.41 |
| 177.29 | 376.4 | 178.75 | 376.38 | 180 | 376.34 | 181.19 | 376.33 | 183.06 | 376.26 |
| 183.41 | 376.23 | 183.57 | 376.18 | 184.02 | 376.16 | 189.03 | 376.13 | 189.27 | 376.12 |
| 192.09 | 376.11 | 193.19 | 376.1 | 194.08 | 376.11 | 194.68 | 376.1 | 195.5 | 376.06 |
| 195.94 | 376.05 | 197.7 | 375.96 | 198.34 | 375.91 | 199.21 | 375.91 | 199.69 | 375.94 |
| 200.56 | 375.94 | 200.81 | 375.95 | 203.36 | 376 | 203.82 | 375.99 | 204.8 | 376 |
| 206.1 | 375.99 | 206.5 | 376 | 207.75 | 375.99 | 210.8 | 376.01 | 215.37 | 376.11 |
| 216.8 | 376.15 | 218.78 | 376.28 | 219.27 | 376.29 | 221.59 | 376.29 | 222.69 | 376.3 |
| 223.05 | 376.32 | 225.02 | 376.36 | 225.89 | 376.36 | 226.07 | 376.35 | 230.94 | 376.17 |
| 231.12 | 376.17 | 232.65 | 376.11 | 233.13 | 376.12 | 235.94 | 376.01 | 236.32 | 376.01 |
| 237.26 | 375.99 | 238.71 | 375.94 | 241.55 | 375.86 | 242.1 | 375.86 | 242.79 | 375.83 |
| 245.03 | 375.71 | 245.13 | 375.7 | 246.69 | 375.7 | 249.4 | 375.69 | 249.5 | 375.7 |
| 250.88 | 375.7 | 260.05 | 375.67 | 262.95 | 375.67 | 264.11 | 375.68 | 271.09 | 375.85 |
| 282.5 | 376.04 | 282.96 | 376.04 | 284.31 | 376.06 | 287.77 | 376.09 | 289.41 | 376.11 |
| 289.51 | 376.12 | 295.61 | 376.24 | 295.91 | 376.24 | 298.33 | 376.28 | 299.64 | 376.29 |
| 307.31 | 376.38 | 307.86 | 376.38 | 309.78 | 376.41 | 310.12 | 376.41 | 310.6 | 376.37 |
| 311.1 | 376.36 | 311.44 | 376.33 | 313.18 | 376.29 | 315.29 | 376.22 | 316.2 | 376.2 |
| 324.93 | 375.86 | 327.27 | 375.76 | 327.6 | 375.76 | 330.56 | 375.63 | 330.64 | 375.63 |
| 338.34 | 375.45 | 341.41 | 375.39 | 343.41 | 375.37 | 350.18 | 375.24 | 352.88 | 375.18 |
| 355.28 | 375.13 | 355.44 | 375.13 | 370.12 | 375.27 | 370.65 | 375.27 | 374.54 | 375.39 |
| 375.54 | 375.47 | 377 | 375.52 | 377.74 | 375.52 | 378.95 | 375.57 | 380.02 | 375.6 |
| 387.72 | 375.61 | 405.45 | 376.35 | 409.57 | 376.57 | 428.22 | 377 | 429.57 | 377.04 |
| 437.77 | 377.27 | 442.53 | 377.38 | 445.68 | 377.46 | 446.3 | 377.48 | 448.2 | 377.49 |
| 449.11 | 377.48 | 450.5 | 377.52 | 450.78 | 377.52 | 452.53 | 377.55 | 457.78 | 377.58 |
| 463.85 | 377.63 | 466.07 | 377.57 | 468.8 | 377.5 | 469.38 | 377.48 | 471.3 | 377.43 |
| 473.81 | 377.36 | 475.4 | 377.31 | 480.14 | 377.17 | 480.76 | 377.15 | 483.03 | 377.09 |
| 484.42 | 377.06 | 485.46 | 377.25 | 485.74 | 377.28 | 487.17 | 377.32 | 488.47 | 377.32 |
| 489.03 | 377.31 | 491.48 | 377.21 | 492.15 | 377.21 | 497.44 | 377.14 | 499.76 | 377.07 |
| 500.19 | 377.07 | 504.93 | 377.12 | 510.25 | 377.03 | 510.86 | 377.01 | 510.94 | 376.96 |
| 512.82 | 376.98 | 513.93 | 377.02 | 514.99 | 377.07 | 516.38 | 377.1 | 522.73 | 377.26 |
| 523.57 | 377.28 | 537.33 | 377.63 | 539.89 | 377.69 | 542.96 | 377.73 | 546.4 | 377.73 |
| 557.92 | 377.69 | 559.34 | 377.59 | 570.41 | 377.56 | 572.38 | 377.42 | 573.77 | 377.33 |
| 574.57 | 377.27 | 578.99 | 377.28 | 584.92 | 377.31 | 586.48 | 377.33 | 587 | 377.33 |
| 588.3 | 377.37 | 589.13 | 377.42 | 589.23 | 377.44 | 590.11 | 377.44 | 594.06 | 377.24 |
| 596 | 377.16 | 597.12 | 377.15 | 600.72 | 377.13 | 605 | 376.68 | 605.18 | 376.6 |
| 605.86 | 376.55 | 607.57 | 376.61 | 608.67 | 376.68 | 614.85 | 377.54 | 615.68 | 377.62 |
| 617.62 | 377.62 | 621.93 | 377.54 | 622.86 | 377.61 | 623.79 | 377.59 | 626.41 | 377.58 |
| 627.79 | 377.57 | 631.02 | 377.45 | 644.47 | 377.15 | 651.74 | 376.69 | 651.89 | 376.67 |
| 652.43 | 376.43 | 653.02 | 376.4 | 653.95 | 376.41 | 661.81 | 376.57 | 663.29 | 376.63 |
| 664.44 | 376.67 | 665.34 | 376.74 | 668.7 | 377.03 | 675.92 | 377.11 | 676.27 | 377.07 |
| 680.38 | 377.12 | 681.83 | 377.14 | 683.54 | 377.19 | 684.75 | 377.25 | 685.19 | 377.28 |
| 687.98 | 377.37 | 688.53 | 377.38 | 690.35 | 377.39 | 691.81 | 377.39 | 692.84 | 377.4 |
| 693.43 | 377.38 | 694.76 | 377.31 | 696.6 | 377.19 | 698.48 | 377.06 | 699.44 | 377.07 |
| 701.49 | 376.9 | 704.13 | 376.67 | 717.69 | 376.67 | 718.45 | 376.86 | 718.65 | 376.88 |
| 724.08 | 376.82 | 728.74 | 376.77 | 730.36 | 376.68 | 734.16 | 376.38 | 735.55 | 376.3 |
| 736.3 | 376.28 | 737.81 | 376.25 | 738.42 | 376.23 | 739.21 | 376.23 | 743.23 | 376.21 |
| 743.69 | 376.21 | 744.3 | 376.26 | 746.57 | 376.46 | 748.12 | 376.65 | 748.54 | 376.69 |
| 750.43 | 376.78 | 752 | 376.82 | 754.04 | 376.81 | 755.29 | 376.77 | 758.23 | 376.69 |
| 759.41 | 376.64 | 760.1 | 376.62 | 762.56 | 376.49 | 765.3 | 376.34 | 767.09 | 376.25 |
| 768.79 | 376.14 | 769.23 | 376.1 | 770.65 | 376.03 | 771.24 | 376.02 | 772.73 | 376.08 |
| 773.48 | 376.15 | 775.74 | 376.39 | 776.02 | 376.45 | 776.61 | 376.68 | 777.5 | 376.75 |
| 781.77 | 376.99 | 782.04 | 377.01 | 783.25 | 377.02 | 787.49 | 376.93 | 788.66 | 376.92 |
| 790.02 | 376.95 | 793.49 | 377 | 794.44 | 377.03 | 795.18 | 377 | 799.02 | 376.75 |
| 800.04 | 376.67 | 800.87 | 376.63 | 805.59 | 376.62 | 809.37 | 376.63 | 810.31 | 376.63 |
| 810.78 | 376.64 | 815.73 | 376.64 | 816.03 | 376.67 | 817.65 | 376.7 | 823.48 | 376.67 |
| 824.41 | 376.67 | 827.56 | 376.65 | 827.92 | 376.67 | 828.31 | 376.67 | 834.6 | 376.4 |
| 843.4 | 376.03 | 844.63 | 375.98 | 845.4 | 375.96 | 846 | 375.93 | 846.72 | 375.88 |
| 848.31 | 375.84 | 848.74 | 375.84 | 849.66 | 375.86 | 850.21 | 375.84 | 850.71 | 375.84 |
| 852.25 | 375.95 | 855.34 | 376.24 | 855.98 | 376.22 | 856.61 | 376.27 | 858.72 | 376.32 |
| 861 | 376.42 | 861.75 | 376.44 | 865.04 | 376.58 | 865.94 | 376.63 | 867.12 | 376.68 |
| 868.67 | 376.72 | 871.42 | 376.71 | 872.64 | 376.73 | 873.26 | 376.75 | 874.47 | 376.84 |
| 874.57 | 376.83 | 876.85 | 377.04 | 877.97 | 377.12 | 879.21 | 377.15 | 880.12 | 377.15 |
| 880.64 | 377.14 | 882.86 | 377.05 | 884.46 | 376.96 | 895.4 | 376.36 | 896.95 | 376.27 |
| 899.72 | 376.12 | 900.44 | 376.07 | 902.07 | 375.97 | 902.9 | 375.91 | 905.74 | 375.9 |
| 905.96 | 375.91 | 906.12 | 375.97 | 907.45 | 376.14 | 910.46 | 376.54 | 910.76 | 376.57 |
| 911.08 | 376.57 | 911.43 | 376.66 | 914.32 | 376.65 | 915.52 | 376.65 | 918.82 | 376.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 919.34 | 376.67 | 925.56 | 376.67 | 925.92 | 376.65 | 927.19 | 376.54 | 928.2 | 376.37 |
| 928.52 | 376.34 | 928.89 | 376.33 | 929.84 | 376.33 | 931.21 | 376.37 | 932.4 | 376.47 |
| 933.14 | 376.52 | 933.66 | 376.54 | 934.91 | 376.65 | 935.22 | 376.73 | 935.62 | 376.73 |
| 937.43 | 376.89 | 939.65 | 377.11 | 940.72 | 377.21 | 941.81 | 377.28 | 942.12 | 377.31 |
| 943.72 | 377.35 | 944.52 | 377.39 | 945.3 | 377.37 | 945.88 | 377.33 | 948.42 | 377.29 |
| 949.5 | 377.28 | 950.14 | 377.26 | 952.2 | 377.24 | 955.11 | 377.23 | 956.76 | 377.24 |
| 957.2 | 377.25 | 959.18 | 377.26 | 959.92 | 377.24 | 961.33 | 377.19 | 969.5 | 376.96 |
| 970.39 | 376.93 | 972.89 | 376.93 | 973.28 | 376.92 | 975.01 | 376.92 | 975.59 | 376.93 |
| 976.54 | 376.97 | 977.2 | 377.01 | 978.12 | 377.05 | 985.07 | 377.26 | 985.56 | 377.26 |
| 987.77 | 377.31 | 988.2 | 377.34 | 991.36 | 377.42 | 994.2 | 377.46 | 994.95 | 377.43 |
| 996.07 | 377.41 | 996.92 | 377.41 | 997.88 | 377.4 | 999.83 | 377.39 | 1001.04 | 377.4 |
| 1005.87 | 377.34 | 1006.99 | 377.33 | 1015.73 | 377.21 | 1015.85 | 377.2 | 1019.31 | 377.25 |
| 1021.05 | 377.27 | 1021.17 | 377.28 | 1021.91 | 377.28 | 1022.17 | 377.29 | 1024.06 | 377.3 |
| 1024.61 | 377.31 | 1028.58 | 377.35 | 1040.3 | 377.35 | 1043.7 | 377.31 | 1049.13 | 377.36 |
| 1050.41 | 377.37 | 1050.85 | 377.38 | 1052.54 | 377.38 | 1053.04 | 377.39 | 1054.91 | 377.37 |
| 1055.02 | 377.38 | 1056.23 | 377.4 | 1057.17 | 377.38 | 1059.51 | 377.31 | 1060.08 | 377.3 |
| 1062.83 | 377.33 | 1063.23 | 377.32 | 1068.59 | 377.27 | 1078.41 | 377.08 | 1078.84 | 377.11 |
| 1083.34 | 377.45 | 1084.32 | 377.51 | 1086.29 | 377.59 | 1091.57 | 377.72 | 1094.39 | 377.8 |
| 1096.88 | 377.82 | 1105.62 | 377.76 | 1110.1 | 377.71 | 1118.88 | 377.64 | 1119.52 | 377.64 |
| 1121.24 | 377.68 | 1123.18 | 377.7 | 1124.4 | 377.69 | 1127.58 | 377.63 | 1132.16 | 377.55 |
| 1133.11 | 377.53 | 1133.32 | 377.51 | 1134.28 | 377.38 | 1134.47 | 377.37 | 1134.62 | 377.26 |
| 1136.8 | 377.29 | 1140.37 | 377.35 | 1146.9 | 377.56 | 1148.29 | 377.64 | 1148.69 | 377.67 |
| 1150.54 | 377.77 | 1151.16 | 377.79 | 1153.57 | 377.85 | 1154.26 | 377.86 | 1155.54 | 377.9 |
| 1156.9 | 377.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 158.89 | .04 | 880.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 158.89 | 880.12 | 48.11 | 47.96 | 41.26 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7102.13

INPUT
Description:
Station Elevation Data num= 428

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 376.79 | 15.25 | 376.98 | 15.55994 | 376.99 | 68.91003 | 377.09 | 95.38 | 376.95 |
| 95.72998 | 376.94 | 116.11 | 376.88 | 126.6899 | 376.96 | 127.21 | 376.95 | 137.1 | 376.97 |
| 140.88 | 376.93 | 141.61 | 376.93 | 141.85 | 376.92 | 154.9199 | 376.75 | 156.62 | 376.68 |
| 158.33 | 376.66 | 159.97 | 376.67 | 161.71 | 376.6 | 162.9 | 376.53 | 163.91 | 376.44 |
| 165.96 | 376.23 | 166.2999 | 376.23 | 166.7 | 376.22 | 167.04 | 376.21 | 69.4299 | 376 |
| 178.33 | 375.74 | 179.1699 | 375.73 | 180.38 | 375.69 | 181.53 | 375.68 | 183.34 | 375.6 |
| 183.6799 | 375.57 | 183.83 | 375.52 | 184.15 | 375.49 | 193.14 | 375.42 | 193.71 | 375.43 |
| 194 | 375.43 | 194.58 | 375.42 | 195.37 | 375.38 | 195.7999 | 375.37 | 196.84 | 375.32 |
| 196.89 | 375.31 | 197.5 | 375.28 | 197.66 | 375.26 | 198.12 | 375.23 | 198.79 | 375.23 |
| 198.9 | 375.24 | 198.96 | 375.24 | 199.04 | 375.26 | 199.1899 | 375.26 | 199.51 | 375.27 |
| 200.27 | 375.28 | 200.51 | 375.29 | 202.0599 | 375.33 | 202.6 | 375.36 | 202.97 | 375.37 |
| 204.37 | 375.39 | 205.39 | 375.39 | 206.01 | 375.4 | 209.95 | 375.42 | 215.39 | 375.52 |
| 215.97 | 375.54 | 217.89 | 375.67 | 218.08 | 375.67 | 218.36 | 375.68 | 220.2999 | 375.67 |
| 221.6699 | 375.68 | 221.9399 | 375.69 | 222.02 | 375.7 | 223.9199 | 375.73 | 224.76 | 375.73 |
| 224.9399 | 375.72 | 231.2999 | 375.45 | 231.76 | 375.46 | 234.48 | 375.34 | 234.85 | 375.34 |
| 239.3099 | 375.19 | 239.53 | 375.18 | 239.91 | 375.17 | 240.4399 | 375.17 | 243.37 | 375 |
| 261.73 | 375 | 279.08 | 375.32 | 279.72 | 375.34 | 303.51 | 375.72 | 304.04 | 375.72 |
| 304.54 | 375.73 | 304.79 | 375.73 | 305.89 | 375.75 | 306.02 | 375.76 | 306.22 | 375.76 |
| 306.38 | 375.75 | 306.6899 | 375.72 | 307.1699 | 375.7 | 307.25 | 375.69 | 307.3099 | 375.67 |
| 307.5 | 375.67 | 309.1799 | 375.64 | 311.22 | 375.57 | 312.1 | 375.55 | 322.81 | 375.12 |
| 323.13 | 375.12 | 325.99 | 375 | 336.48 | 374.78 | 338.42 | 374.76 | 349.9 | 374.51 |
| 365.16 | 374.65 | 365.71 | 374.65 | 366.2 | 374.66 | 366.43 | 374.67 | 369.75 | 374.78 |
| 370.6 | 374.84 | 370.79 | 374.86 | 372.31 | 374.92 | 373.07 | 374.92 | 375.44 | 375 |
| 383.44 | 375 | 401.87 | 375.77 | 406.15 | 376 | 443.67 | 376.83 | 444.31 | 376.85 |
| 446.28 | 376.86 | 446.47 | 376.85 | 447.23 | 376.85 | 448.67 | 376.89 | 448.97 | 376.89 |
| 450.07 | 376.91 | 450.28 | 376.92 | 462.55 | 377 | 482.47 | 376.42 | 483.92 | 376.39 |
| 485 | 376.6 | 485.29 | 376.63 | 486.78 | 376.68 | 488.13 | 376.68 | 488.71 | 376.67 |
| 491.26 | 376.57 | 491.95 | 376.57 | 497.45 | 376.5 | 499.86 | 376.43 | 504.23 | 376.49 |
| 504.59 | 376.5 | 505.23 | 376.5 | 511.21 | 376.42 | 511.39 | 376.41 | 511.47 | 376.35 |
| 513.43 | 376.38 | 514.58 | 376.42 | 515.68 | 376.47 | 541.56 | 377.1 | 544.74 | 377.14 |
| 560.29 | 377.12 | 561.76 | 377.01 | 573.27 | 376.99 | 577.59 | 376.68 | 588.34 | 376.72 |
| 589.96 | 376.75 | 590.5 | 376.75 | 591.76 | 376.79 | 591.86 | 376.79 | 592.72 | 376.84 |
| 592.82 | 376.86 | 593.74 | 376.86 | 594.21 | 376.83 | 599.86 | 376.53 | 604.76 | 376.49 |
| 609.21 | 376 | 609.39 | 375.91 | 609.75 | 375.89 | 610.1 | 375.86 | 611.88 | 375.92 |
| 613.02 | 376 | 619.44 | 376.91 | 620.15 | 376.99 | 620.3 | 377 | 622.32 | 377 |
| 626.8 | 376.91 | 627.6 | 376.97 | 627.7 | 376.97 | 627.76 | 376.98 | 628.01 | 376.98 |
| 628.24 | 376.97 | 632.89 | 376.94 | 636.24 | 376.81 | 650.22 | 376.49 | 657.77 | 376 |
| 657.93 | 375.97 | 658.49 | 375.72 | 659.1 | 375.69 | 660.07 | 375.7 | 668.23 | 375.88 |
| 670.97 | 376 | 671.61 | 376.05 | 675.39 | 376.39 | 682.9 | 376.47 | 683.26 | 376.43 |
| 689.04 | 376.5 | 691.08 | 376.57 | 692.07 | 376.62 | 692.36 | 376.64 | 695.43 | 376.75 |
| 696 | 376.76 | 699.41 | 376.77 | 699.89 | 376.78 | 700.48 | 376.78 | 700.94 | 376.77 |
| 701.09 | 376.76 | 702.47 | 376.69 | 706.34 | 376.43 | 707.33 | 376.44 | 712.21 | 376 |
| 726.3 | 376 | 727.09 | 376.2 | 727.29 | 376.22 | 737.78 | 376.09 | 739.46 | 376 |
| 742.87 | 375.72 | 743.41 | 375.67 | 744.85 | 375.59 | 745.63 | 375.56 | 747.2 | 375.53 |
| 747.84 | 375.51 | 752.83 | 375.49 | 753.23 | 375.48 | 753.31 | 375.49 | 753.95 | 375.54 |
| 756.3 | 375.75 | 757.92 | 375.96 | 758.35 | 376 | 760.32 | 376.09 | 761.95 | 376.14 |
| 762.69 | 376.14 | 764.07 | 376.12 | 768.42 | 376 | 770.36 | 375.92 | 777.63 | 375.54 |
| 779.39 | 375.42 | 779.44 | 375.41 | 779.85 | 375.38 | 781.32 | 375.3 | 781.69 | 375.29 |
| 781.94 | 375.29 | 783.49 | 375.36 | 783.74 | 375.38 | 784.27 | 375.43 | 786.61 | 375.69 |
| 786.9 | 375.75 | 787.44 | 375.97 | 787.52 | 376 | 788.44 | 376.07 | 793.16 | 376.35 |
| 794.42 | 376.36 | 798.82 | 376.27 | 799.05 | 376.27 | 799.42 | 376.26 | 799.67 | 376.26 |
| 805.06 | 376.36 | 806.04 | 376.39 | 806.81 | 376.36 | 810.8 | 376.09 | 811.86 | 376 |
| 812.72 | 375.96 | 828.16 | 375.94 | 828.48 | 375.97 | 830.16 | 376 | 840.46 | 375.95 |
| 840.53 | 375.96 | 840.83 | 375.97 | 841.24 | 375.97 | 841.48 | 375.96 | 841.55 | 375.96 |
| 841.65 | 375.95 | 841.73 | 375.95 | 858.1899 | 375.25 | 858.99 | 375.23 | 859.62 | 375.2 |
| 860.01 | 375.17 | 860.08 | 375.16 | 860.16 | 375.16 | 860.36 | 375.15 | 862.02 | 375.11 |
| 862.46 | 375.11 | 862.98 | 375.12 | 863.15 | 375.13 | 863.42 | 375.13 | 863.58 | 375.12 |
| 863.8099 | 375.12 | 864.18 | 375.11 | 864.51 | 375.11 | 865.1899 | 375.17 | 865.74 | 375.2 |
| 866.11 | 375.23 | 869.3199 | 375.54 | 869.99 | 375.52 | 870.64 | 375.58 | 872.83 | 375.63 |
| 881.5599 | 376 | 883.17 | 376.03 | 886.03 | 376.02 | 887.3 | 376.04 | 887.9399 | 376.06 |
| 889.2 | 376.15 | 889.3 | 376.14 | 891.67 | 376.37 | 892.83 | 376.45 | 893.05 | 376.45 |
| 894.12 | 376.48 | 895.0699 | 376.48 | 895.58 | 376.47 | 897.78 | 376.38 | 915.15 | 375.36 |
| 916.76 | 375.25 | 916.92 | 375.23 | 917.58 | 375.19 | 920.39 | 375.18 | 920.61 | 375.19 |
| 920.77 | 375.25 | 925.36 | 375.91 | 925.51 | 375.9 | 925.58 | 375.9 | 925.67 | 375.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 926.02 | 376 | 939.98 | 376 | 940.34 | 375.98 | 941.59 | 375.86 | 942.59 | 375.68 |
| 942.91 | 375.65 | 943.27 | 375.64 | 944.21 | 375.64 | 945.5699 | 375.68 | 947.47 | 375.85 |
| 947.92 | 375.87 | 947.99 | 375.87 | 949.22 | 376 | 949.53 | 376.08 | 949.93 | 376.08 |
| 954.97 | 376.62 | 956.4399 | 376.72 | 957.93 | 376.77 | 958.72 | 376.81 | 959.13 | 376.81 |
| 959.85 | 376.78 | 960.0699 | 376.76 | 960.33 | 376.76 | 960.51 | 376.75 | 963.64 | 376.71 |
| 964.86 | 376.68 | 970.29 | 376.64 | 973.21 | 376.66 | 984.29 | 376.29 | 984.86 | 376.28 |
| 986.76 | 376.28 | 987.52 | 376.27 | 988.86 | 376.27 | 989.43 | 376.28 | 990.37 | 376.32 |
| 990.85 | 376.36 | 991.02 | 376.37 | 991.93 | 376.41 | 998.8 | 376.64 | 999.29 | 376.64 |
| 1001.47 | 376.69 | 1001.69 | 376.7 | 1001.9 | 376.72 | 1005.02 | 376.81 | 1005.26 | 376.81 |
| 1005.32 | 376.82 | 1005.62 | 376.82 | 1007 | 376.84 | 1007.31 | 376.85 | 1007.83 | 376.85 |
| 1007.99 | 376.84 | 1008.57 | 376.82 | 1008.73 | 376.82 | 1009.11 | 376.81 | 1009.28 | 376.81 |
| 1009.68 | 376.8 | 1013.39 | 376.78 | 1014.23 | 376.79 | 1014.59 | 376.79 | 1029.23 | 376.59 |
| 1041.81 | 376.75 | 1053.39 | 376.78 | 1056.75 | 376.75 | 1062.12 | 376.81 | 1062.43 | 376.82 |
| 1063.39 | 376.83 | 1063.82 | 376.84 | 1065.49 | 376.84 | 1065.76 | 376.85 | 1065.99 | 376.85 |
| 1066.6 | 376.84 | 1067.83 | 376.84 | 1069.14 | 376.87 | 1069.27 | 376.87 | 1069.54 | 376.86 |
| 1070.07 | 376.85 | 1072.38 | 376.77 | 1072.94 | 376.76 | 1075.66 | 376.78 | 1081.36 | 376.72 |
| 1091.06 | 376.51 | 1091.49 | 376.55 | 1095.93 | 376.91 | 1096.9 | 376.97 | 1098.85 | 377.06 |
| 1106.86 | 377.28 | 1109.32 | 377.3 | 1131.06 | 377.11 | 1131.7 | 377.11 | 1133.4 | 377.16 |
| 1135.31 | 377.18 | 1136.52 | 377.17 | 1145.13 | 377 | 1145.34 | 376.98 | 1146.28 | 376.84 |
| 1146.41 | 376.83 | 1146.47 | 376.83 | 1146.62 | 376.71 | 1146.69 | 376.71 | 1151.81 | 376.78 |
| 1152.24 | 376.78 | 1152.3 | 376.79 | 1158.86 | 377 | 1162.44 | 377.21 | 1162.97 | 377.23 |
| 1166.3 | 377.31 | 1167.3 | 377.34 | 1168.64 | 377.36 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 159.97 | .04895.0699 | | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 159.97895.0699 | | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7055.36*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 5.47 | 376 | 8.04 | 376.03 | 19.92 | 376.18 | 29.42 | 376.2 | 32.76 | 376.21 |
| 40.31 | 376.22 | 44.22 | 376.23 | 64.8 | 376.26 | 70.77 | 376.27 | 80.19 | 376.23 |
| 95.85 | 376.15 | 96.18 | 376.14 | 97.78 | 376.14 | 103.06 | 376.12 | 113.38 | 376.09 |
| 114.9 | 376.09 | 115.49 | 376.08 | 116.1 | 376.09 | 117.11 | 376.09 | 125.51 | 376.16 |
| 126.01 | 376.15 | 128.68 | 376.15 | 135.38 | 376.17 | 137.87 | 376.14 | 139.65 | 376.13 |
| 139.88 | 376.12 | 145.86 | 376.05 | 146.88 | 376.03 | 148.1 | 376.02 | 152.26 | 375.96 |
| 153.87 | 375.89 | 154.51 | 375.89 | 155.49 | 375.87 | 157.05 | 375.88 | 158.7 | 375.82 |
| 159.82 | 375.75 | 161.01 | 375.65 | 162.72 | 375.47 | 163.75 | 375.45 | 166.01 | 375.26 |
| 174.45 | 375.01 | 175.25 | 375 | 176.39 | 374.97 | 177.48 | 374.96 | 178.45 | 374.91 |
| 179.2 | 374.88 | 179.52 | 374.85 | 179.97 | 374.78 | 180.27 | 374.78 | 188.49 | 374.71 |
| 189.3 | 374.72 | 189.85 | 374.71 | 190.6 | 374.67 | 191.01 | 374.66 | 192.62 | 374.58 |
| 193.21 | 374.53 | 193.84 | 374.53 | 194.08 | 374.56 | 195.25 | 374.57 | 196.94 | 374.62 |
| 197.81 | 374.66 | 199.13 | 374.67 | 200.1 | 374.67 | 200.69 | 374.68 | 204.42 | 374.7 |
| 206.05 | 374.73 | 206.52 | 374.73 | 209.58 | 374.79 | 210.13 | 374.81 | 211.95 | 374.93 |
| 212.39 | 374.94 | 214.23 | 374.93 | 215.53 | 374.94 | 215.86 | 374.96 | 217.67 | 374.98 |
| 218.63 | 374.97 | 224.66 | 374.73 | 225.1 | 374.74 | 227.68 | 374.62 | 228.03 | 374.62 |
| 232.25 | 374.49 | 232.82 | 374.47 | 233.32 | 374.47 | 236.1 | 374.31 | 253.51 | 374.31 |
| 265.59 | 374.53 | 269.95 | 374.6 | 271.49 | 374.64 | 274.25 | 374.65 | 276.87 | 374.64 |
| 285.73 | 374.77 | 293.1 | 374.87 | 293.61 | 374.87 | 295.68 | 374.91 | 296.12 | 374.87 |
| 296.89 | 374.82 | 298.48 | 374.79 | 300.42 | 374.72 | 301.25 | 374.71 | 306.4 | 374.5 |
| 311.4 | 374.3 | 311.71 | 374.3 | 314.42 | 374.19 | 315.12 | 374.17 | 324.08 | 373.98 |
| 326.2 | 373.96 | 327.63 | 373.93 | 337.08 | 373.72 | 339.49 | 373.74 | 339.97 | 373.75 |
| 352.44 | 373.86 | 353.07 | 373.86 | 354.37 | 373.9 | 357.07 | 373.99 | 358.11 | 374.07 |
| 359.64 | 374.13 | 360.41 | 374.13 | 362.79 | 374.21 | 368.42 | 374.23 | 369.65 | 374.23 |
| 370.85 | 374.22 | 378.14 | 374.48 | 380.6 | 374.57 | 385.13 | 374.73 | 385.5 | 374.75 |
| 388.08 | 374.84 | 389.4 | 374.9 | 393.71 | 375.11 | 399.89 | 375.25 | 416.44 | 375.61 |
| 418.55 | 375.7 | 420.19 | 375.76 | 421.49 | 375.79 | 425.39 | 375.86 | 430.29 | 375.96 |
| 432.12 | 376.01 | 434.11 | 376.01 | 435.06 | 376 | 436.51 | 376.04 | 437.92 | 376.05 |
| 438.13 | 376.06 | 440.48 | 376.07 | 442.72 | 376.09 | 448.11 | 376.13 | 448.9 | 376.13 |
| 450.49 | 376.15 | 467.29 | 375.71 | 470.54 | 375.63 | 472 | 375.6 | 473.08 | 375.8 |
| 473.38 | 375.82 | 474.88 | 375.87 | 476.24 | 375.87 | 476.82 | 375.86 | 479.39 | 375.77 |
| 480.08 | 375.77 | 482.9 | 375.73 | 485.62 | 375.7 | 488.04 | 375.64 | 493.45 | 375.7 |
| 497.69 | 375.65 | 499.47 | 375.62 | 499.73 | 375.56 | 501.7 | 375.57 | 502.86 | 375.59 |
| 503.84 | 375.63 | 504.78 | 375.65 | 505.2 | 375.65 | 510 | 375.76 | 510.46 | 375.79 |
| 512.02 | 375.84 | 520.41 | 376.08 | 521.32 | 376.11 | 521.69 | 376.11 | 524.73 | 376.2 |
| 529.29 | 376.28 | 530.02 | 376.3 | 531.59 | 376.31 | 533.22 | 376.29 | 534.05 | 376.27 |
| 540.59 | 376.27 | 548.88 | 376.28 | 550.36 | 376.18 | 561.94 | 376.18 | 562.16 | 376.17 |
| 566.29 | 375.9 | 567.47 | 375.91 | 569.42 | 375.91 | 572.19 | 375.92 | 575.37 | 375.91 |
| 577.11 | 375.9 | 578.75 | 375.92 | 579.6 | 375.92 | 580.66 | 375.95 | 581.52 | 376 |
| 581.62 | 376.02 | 582.55 | 376.02 | 583.02 | 376 | 588.71 | 375.73 | 590.7 | 375.72 |
| 592.04 | 375.72 | 593.64 | 375.71 | 598.12 | 375.26 | 598.31 | 375.18 | 599.02 | 375.13 |
| 600.81 | 375.19 | 601.96 | 375.26 | 603.14 | 375.42 | 608.42 | 376.1 | 609.29 | 376.19 |
| 611.32 | 376.19 | 615.83 | 376.11 | 616.8 | 376.18 | 618.48 | 376.16 | 621.96 | 376.14 |
| 625.33 | 376.02 | 639.41 | 375.75 | 642.2 | 375.59 | 643.87 | 375.51 | 645.53 | 375.42 |
| 647.01 | 375.33 | 647.17 | 375.3 | 647.73 | 375.07 | 648.35 | 375.05 | 649.32 | 375.06 |
| 652.56 | 375.13 | 657.54 | 375.23 | 660.3 | 375.32 | 660.94 | 375.36 | 662.92 | 375.52 |
| 663.11 | 375.53 | 664.75 | 375.67 | 672.31 | 375.73 | 672.67 | 375.69 | 678.49 | 375.75 |
| 680.54 | 375.81 | 681.54 | 375.85 | 681.83 | 375.87 | 684.92 | 375.97 | 685.49 | 375.98 |
| 688.93 | 375.98 | 690 | 375.99 | 690.62 | 375.97 | 692.01 | 375.9 | 694.14 | 375.77 |
| 695.9 | 375.65 | 696.9 | 375.66 | 701.81 | 375.24 | 704.92 | 375.23 | 708.15 | 375.21 |
| 714.16 | 375.21 | 716 | 375.22 | 716.79 | 375.4 | 716.99 | 375.42 | 718.75 | 375.41 |
| 719.61 | 375.4 | 721.65 | 375.39 | 726.01 | 375.35 | 727.55 | 375.34 | 729.24 | 375.25 |
| 731.83 | 375.06 | 733.22 | 374.94 | 734.67 | 374.87 | 735.8 | 374.83 | 737.04 | 374.81 |
| 737.68 | 374.79 | 742.13 | 374.76 | 743.19 | 374.76 | 745.38 | 374.93 | 746.2 | 375 |
| 746.88 | 375.09 | 747.83 | 375.2 | 748.26 | 375.24 | 750.24 | 375.34 | 751.44 | 375.39 |
| 752.63 | 375.41 | 754.02 | 375.4 | 755.72 | 375.38 | 755.81 | 375.37 | 757.02 | 375.35 |
| 758.4 | 375.31 | 760.35 | 375.24 | 761.96 | 375.16 | 763.11 | 375.11 | 767.67 | 374.87 |
| 769.44 | 374.75 | 769.9 | 374.71 | 771.76 | 374.62 | 772.01 | 374.62 | 773.57 | 374.68 |
| 774.35 | 374.74 | 776.71 | 374.98 | 777 | 375.03 | 777.62 | 375.26 | 778.55 | 375.33 |
| 781.66 | 375.5 | 783.3 | 375.6 | 784.57 | 375.61 | 787.11 | 375.58 | 789.6 | 375.54 |
| 792.72 | 375.6 | 795.28 | 375.63 | 796.27 | 375.66 | 797.04 | 375.63 | 800.63 | 375.4 |
| 802.13 | 375.29 | 802.99 | 375.25 | 805.5 | 375.24 | 818.54 | 375.24 | 818.86 | 375.27 |
| 821.06 | 375.31 | 823.6 | 375.29 | 830.16 | 375.23 | 830.92 | 375.23 | 831.4 | 375.25 |
| 832.28 | 375.22 | 836.14 | 375.05 | 836.55 | 375.04 | 838.72 | 374.96 | 840.22 | 374.91 |
| 841.19 | 374.9 | 843.64 | 374.81 | 845.01 | 374.75 | 845.15 | 374.75 | 847.86 | 374.64 |
| 848.74 | 374.6 | 849.57 | 374.58 | 850.95 | 374.5 | 851.73 | 374.47 | 852.62 | 374.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 853.06 | 374.45 | 854.03 | 374.47 | 854.19 | 374.46 | 855.13 | 374.46 | 856.74 | 374.57 |
| 859.97 | 374.85 | 860.64 | 374.83 | 861.3 | 374.89 | 863.5 | 374.94 | 872.21 | 375.28 |
| 872.29 | 375.29 | 873.91 | 375.32 | 875.08 | 375.31 | 876.79 | 375.31 | 878.07 | 375.33 |
| 878.71 | 375.36 | 879.98 | 375.44 | 880.28 | 375.45 | 882.47 | 375.65 | 883.64 | 375.73 |
| 883.86 | 375.73 | 884.94 | 375.77 | 885.89 | 375.77 | 886.42 | 375.77 | 887.94 | 375.72 |
| 888.72 | 375.7 | 893.85 | 375.47 | 893.92 | 375.46 | 905.45 | 374.89 | 908.45 | 374.73 |
| 908.65 | 374.7 | 909.34 | 374.67 | 912.27 | 374.66 | 912.5 | 374.67 | 912.66 | 374.73 |
| 916.15 | 375.17 | 917.44 | 375.34 | 917.77 | 375.34 | 918.13 | 375.42 | 919.46 | 375.42 |
| 921.41 | 375.41 | 922.84 | 375.39 | 929.71 | 375.38 | 930.56 | 375.38 | 931.03 | 375.39 |
| 932.67 | 375.39 | 933.05 | 375.38 | 934.35 | 375.27 | 935.39 | 375.11 | 936.1 | 375.07 |
| 937.08 | 375.07 | 938.49 | 375.11 | 940.47 | 375.27 | 941.01 | 375.28 | 942.24 | 375.4 |
| 942.61 | 375.47 | 943.04 | 375.47 | 945.01 | 375.67 | 947.19 | 375.88 | 948.52 | 376 |
| 949.82 | 376.08 | 951.37 | 376.13 | 952.19 | 376.17 | 952.62 | 376.17 | 953.37 | 376.15 |
| 954.06 | 376.12 | 957.32 | 376.09 | 958.59 | 376.06 | 959.87 | 376.06 | 960.6 | 376.04 |
| 964.24 | 376 | 967.45 | 375.99 | 971.9 | 375.86 | 972.48 | 375.84 | 978.83 | 375.67 |
| 979.42 | 375.66 | 981.4 | 375.67 | 982.19 | 375.66 | 983.59 | 375.66 | 984.18 | 375.67 |
| 985.16 | 375.71 | 985.84 | 375.76 | 986.78 | 375.8 | 993.94 | 376.03 | 994.45 | 376.03 |
| 995.3 | 376.05 | 995.93 | 376.05 | 997.17 | 376.09 | 999.67 | 376.15 | 1000.73 | 376.18 |
| 1002.34 | 376.2 | 1002.8 | 376.22 | 1003.35 | 376.22 | 1004.12 | 376.19 | 1005.27 | 376.17 |
| 1007.3 | 376.17 | 1007.63 | 376.16 | 1009.14 | 376.16 | 1009.32 | 376.17 | 1010.39 | 376.18 |
| 1010.94 | 376.17 | 1020.45 | 376.07 | 1021.54 | 376.06 | 1025.64 | 376.01 | 1035.22 | 376.11 |
| 1037.08 | 376.12 | 1038.18 | 376.12 | 1039.27 | 376.13 | 1040.96 | 376.17 | 1041.85 | 376.17 |
| 1048.62 | 376.21 | 1049.47 | 376.22 | 1050.8 | 376.22 | 1054.3 | 376.2 | 1059.49 | 376.25 |
| 1060.22 | 376.26 | 1061.22 | 376.26 | 1061.67 | 376.27 | 1063.4 | 376.26 | 1063.93 | 376.27 |
| 1065.84 | 376.25 | 1067.21 | 376.27 | 1068.59 | 376.24 | 1069.84 | 376.17 | 1070.86 | 376.14 |
| 1073.89 | 376.15 | 1074 | 376.16 | 1078.85 | 376.14 | 1079.94 | 376.13 | 1090.04 | 375.93 |
| 1093.95 | 376.23 | 1095.66 | 376.35 | 1096.8 | 376.41 | 1098.15 | 376.47 | 1099.74 | 376.51 |
| 1106.5 | 376.67 | 1107.96 | 376.68 | 1109.39 | 376.68 | 1113.74 | 376.66 | 1115.29 | 376.65 |
| 1117.42 | 376.63 | 1118.99 | 376.61 | 1121.52 | 376.57 | 1126.16 | 376.54 | 1128.16 | 376.53 |
| 1131.7 | 376.49 | 1132.37 | 376.49 | 1134.14 | 376.53 | 1136.13 | 376.54 | 1138.98 | 376.49 |
| 1142.95 | 376.43 | 1143.37 | 376.42 | 1146.36 | 376.38 | 1147.56 | 376.24 | 1147.76 | 376.23 |
| 1147.91 | 376.12 | 1148.12 | 376.12 | 1151.08 | 376.22 | 1155.61 | 376.34 | 1160.66 | 376.47 |
| 1161.65 | 376.51 | 1164.39 | 376.66 | 1164.94 | 376.67 | 1168.41 | 376.75 | 1169.45 | 376.78 |
| 1170.85 | 376.8 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 5.47 | .05 | 157.05 | .04 | 885.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 157.05 | 885.89 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 7008.59*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 10.94 | 375.21 | 13.37 | 375.24 | 24.59 | 375.37 | 24.87 | 375.38 | 33.57 | 375.39 |
| 36.72 | 375.4 | 43.85 | 375.41 | 47.54 | 375.42 | 66.98 | 375.45 | 72.62 | 375.46 |
| 81.52 | 375.41 | 94.39 | 375.36 | 96.31 | 375.35 | 96.63 | 375.34 | 98.14 | 375.34 |
| 103.13 | 375.33 | 112.88 | 375.3 | 114.12 | 375.29 | 115.44 | 375.29 | 116.4 | 375.3 |
| 124.34 | 375.35 | 127.33 | 375.35 | 133.65 | 375.37 | 137.04 | 375.34 | 143.56 | 375.26 |
| 144.51 | 375.24 | 145.67 | 375.23 | 149.6 | 375.17 | 151.12 | 375.11 | 152.65 | 375.09 |
| 154.12 | 375.09 | 155.68 | 375.03 | 156.75 | 374.97 | 157.87 | 374.88 | 159.49 | 374.72 |
| 160.15 | 374.71 | 160.46 | 374.69 | 162.6 | 374.52 | 170.57 | 374.29 | 171.32 | 374.28 |
| 172.41 | 374.24 | 173.44 | 374.23 | 175.06 | 374.16 | 175.36 | 374.14 | 175.5 | 374.09 |
| 176.07 | 374.06 | 183.84 | 374 | 185.13 | 374 | 185.83 | 373.96 | 187.15 | 373.91 |
| 188.3 | 373.83 | 188.9 | 373.83 | 189.12 | 373.85 | 191.83 | 373.91 | 192.64 | 373.94 |
| 193.9 | 373.96 | 195.37 | 373.96 | 198.9 | 373.98 | 200.88 | 374.01 | 203.77 | 374.06 |
| 204.29 | 374.08 | 206.01 | 374.19 | 209.39 | 374.19 | 209.71 | 374.21 | 211.41 | 374.24 |
| 212.32 | 374.23 | 218.02 | 374 | 218.43 | 374.01 | 220.87 | 373.91 | 221.2 | 373.91 |
| 225.2 | 373.78 | 225.39 | 373.77 | 226.21 | 373.77 | 228.83 | 373.62 | 245.28 | 373.63 |
| 256.7 | 373.83 | 260.82 | 373.89 | 261.4 | 373.91 | 262.28 | 373.92 | 264.89 | 373.89 |
| 267.36 | 373.84 | 275.74 | 373.94 | 282.7 | 374.02 | 283.18 | 374.02 | 284.84 | 374.04 |
| 285.14 | 374.05 | 285.99 | 374 | 286.28 | 373.97 | 287.79 | 373.94 | 289.62 | 373.88 |
| 290.4 | 373.86 | 295.27 | 373.66 | 300 | 373.48 | 300.28 | 373.48 | 302.85 | 373.37 |
| 303.51 | 373.36 | 311.97 | 373.18 | 312.24 | 373.17 | 313.98 | 373.15 | 315.33 | 373.12 |
| 317.88 | 373.07 | 324.27 | 372.93 | 326.69 | 372.95 | 327.18 | 372.96 | 339.73 | 373.07 |
| 340.36 | 373.07 | 341.67 | 373.11 | 344.38 | 373.2 | 345.44 | 373.28 | 346.98 | 373.34 |
| 347.75 | 373.34 | 350.15 | 373.42 | 355.81 | 373.46 | 357.05 | 373.46 | 358.25 | 373.45 |
| 363.08 | 373.58 | 368.07 | 373.74 | 373 | 373.88 | 375.61 | 373.97 | 376.93 | 374.02 |
| 381.27 | 374.23 | 387.49 | 374.36 | 404.15 | 374.73 | 405.78 | 374.83 | 406.27 | 374.85 |
| 407.92 | 374.95 | 411.96 | 375.01 | 413.16 | 375.03 | 418.09 | 375.12 | 419.94 | 375.16 |
| 421.93 | 375.16 | 422.13 | 375.15 | 422.9 | 375.15 | 424.35 | 375.18 | 425.77 | 375.2 |
| 430.6 | 375.22 | 436.03 | 375.27 | 436.57 | 375.27 | 437.26 | 375.29 | 438.42 | 375.31 |
| 455.34 | 374.9 | 456.64 | 374.88 | 458.61 | 374.83 | 460.08 | 374.81 | 461.17 | 374.99 |
| 461.46 | 375.02 | 462.97 | 375.06 | 464.93 | 375.06 | 467.51 | 374.97 | 468.21 | 374.98 |
| 469.06 | 374.97 | 470.34 | 374.93 | 471.05 | 374.92 | 473.79 | 374.9 | 476.23 | 374.84 |
| 480.66 | 374.9 | 481.67 | 374.91 | 485.94 | 374.86 | 487.73 | 374.82 | 487.91 | 374.81 |
| 487.99 | 374.76 | 490.35 | 374.76 | 491.93 | 374.78 | 494.41 | 374.83 | 495.73 | 374.85 |
| 498.33 | 374.91 | 498.79 | 374.94 | 500.37 | 375.02 | 508.8 | 375.3 | 510.1 | 375.33 |
| 513.16 | 375.42 | 517.75 | 375.47 | 519.22 | 375.51 | 520.07 | 375.49 | 522.18 | 375.41 |
| 523.73 | 375.4 | 527.63 | 375.4 | 529.12 | 375.42 | 537.47 | 375.44 | 538.95 | 375.35 |
| 550.62 | 375.37 | 550.84 | 375.36 | 555 | 375.12 | 556.18 | 375.13 | 557.25 | 375.13 |
| 558.14 | 375.14 | 560.93 | 375.14 | 564.13 | 375.11 | 565.89 | 375.08 | 568.08 | 375.08 |
| 569.36 | 375.12 | 570.33 | 375.16 | 570.43 | 375.18 | 571.36 | 375.18 | 576.48 | 374.97 |
| 577.56 | 374.93 | 580.91 | 374.93 | 582.53 | 374.92 | 582.92 | 374.89 | 587.04 | 374.52 |
| 587.22 | 374.44 | 587.94 | 374.4 | 589.74 | 374.45 | 590.9 | 374.52 | 592.09 | 374.67 |
| 597.4 | 375.3 | 598.12 | 375.37 | 600.32 | 375.38 | 603.77 | 375.33 | 604.86 | 375.31 |
| 605.84 | 375.37 | 606.32 | 375.36 | 607.53 | 375.36 | 609.69 | 375.35 | 611.03 | 375.34 |
| 613.33 | 375.26 | 614.43 | 375.23 | 628.6 | 375.02 | 631.41 | 374.88 | 634.76 | 374.74 |
| 636.25 | 374.66 | 636.41 | 374.64 | 636.98 | 374.43 | 637.59 | 374.4 | 641.83 | 374.49 |
| 642.87 | 374.51 | 644.9 | 374.54 | 646.85 | 374.58 | 647.37 | 374.6 | 649.62 | 374.65 |
| 650.27 | 374.68 | 651.75 | 374.77 | 654.1 | 374.94 | 661.71 | 374.99 | 662.08 | 374.95 |
| 667.93 | 374.99 | 670 | 375.05 | 671.3 | 375.1 | 674.41 | 375.19 | 678.44 | 375.19 |
| 679.53 | 375.2 | 680.14 | 375.18 | 681.54 | 375.12 | 682.9 | 375.04 | 685.46 | 374.88 |
| 686.47 | 374.88 | 691.41 | 374.48 | 694.54 | 374.46 | 696.48 | 374.43 | 697.79 | 374.43 |
| 698.8 | 374.42 | 703.84 | 374.42 | 705.69 | 374.44 | 706.49 | 374.61 | 706.69 | 374.63 |
| 708.47 | 374.62 | 709.33 | 374.62 | 711.38 | 374.61 | 716.14 | 374.6 | 717.32 | 374.58 |
| 719.03 | 374.51 | 723.03 | 374.22 | 724.49 | 374.15 | 725.62 | 374.11 | 726.87 | 374.09 |
| 727.52 | 374.07 | 732.98 | 374.02 | 733.71 | 374.07 | 736.09 | 374.25 | 737.73 | 374.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 738.17 | 374.49 | 740.17 | 374.6 | 741.37 | 374.65 | 742.57 | 374.68 | 743.97 | 374.69 |
| 745.77 | 374.68 | 746.98 | 374.66 | 750.34 | 374.56 | 753.12 | 374.44 | 757.71 | 374.2 |
| 759.49 | 374.09 | 759.96 | 374.05 | 761.45 | 373.97 | 762.07 | 373.96 | 763.9 | 374.02 |
| 764.44 | 374.06 | 766.81 | 374.26 | 767.1 | 374.31 | 767.73 | 374.52 | 768.66 | 374.58 |
| 771.79 | 374.75 | 773.44 | 374.85 | 774.72 | 374.87 | 777.28 | 374.85 | 779.18 | 374.83 |
| 780.04 | 374.83 | 781.95 | 374.87 | 783.09 | 374.88 | 785.5 | 374.91 | 786.5 | 374.93 |
| 787.28 | 374.9 | 790.88 | 374.69 | 791.76 | 374.62 | 792.39 | 374.58 | 793.27 | 374.54 |
| 795.79 | 374.53 | 799.13 | 374.53 | 808.91 | 374.55 | 809.24 | 374.57 | 810.94 | 374.61 |
| 813.07 | 374.61 | 814.01 | 374.6 | 820.61 | 374.51 | 821.45 | 374.51 | 822.17 | 374.52 |
| 822.75 | 374.5 | 826.63 | 374.33 | 827.04 | 374.31 | 828.77 | 374.26 | 829.23 | 374.24 |
| 830.53 | 374.22 | 830.74 | 374.21 | 831.28 | 374.23 | 833.63 | 374.17 | 835.56 | 374.1 |
| 835.71 | 374.09 | 838.43 | 373.98 | 840.15 | 373.92 | 840.79 | 373.89 | 841.54 | 373.84 |
| 843.22 | 373.8 | 843.67 | 373.8 | 844.64 | 373.82 | 845.75 | 373.8 | 846.44 | 373.85 |
| 847.37 | 373.9 | 850.62 | 374.16 | 851.3 | 374.15 | 851.96 | 374.2 | 854.18 | 374.25 |
| 862.94 | 374.57 | 864.66 | 374.6 | 865.83 | 374.6 | 867.55 | 374.61 | 868.84 | 374.63 |
| 869.49 | 374.65 | 870.77 | 374.74 | 871.06 | 374.75 | 873.27 | 374.94 | 874.44 | 375.02 |
| 875.75 | 375.05 | 876.71 | 375.06 | 877.27 | 375.06 | 879.65 | 375.01 | 885.06 | 374.84 |
| 897.05 | 374.35 | 898.47 | 374.29 | 900.17 | 374.2 | 900.38 | 374.18 | 901.1 | 374.15 |
| 904.14 | 374.14 | 904.38 | 374.15 | 904.55 | 374.2 | 908.18 | 374.61 | 909.53 | 374.77 |
| 909.87 | 374.77 | 910.24 | 374.84 | 910.69 | 374.84 | 913.65 | 374.81 | 915.14 | 374.79 |
| 922.28 | 374.76 | 923.66 | 374.77 | 925.36 | 374.79 | 925.75 | 374.77 | 927.11 | 374.68 |
| 928.19 | 374.54 | 928.54 | 374.51 | 929.94 | 374.51 | 931.42 | 374.54 | 933.48 | 374.68 |
| 934.04 | 374.7 | 935.32 | 374.8 | 935.7 | 374.87 | 936.14 | 374.87 | 940.46 | 375.25 |
| 941.85 | 375.36 | 943.19 | 375.44 | 944.81 | 375.49 | 945.66 | 375.53 | 946.11 | 375.53 |
| 947.6 | 375.49 | 948.65 | 375.49 | 950.99 | 375.47 | 952.31 | 375.45 | 953.75 | 375.44 |
| 954.4 | 375.42 | 958.2 | 375.35 | 961.36 | 375.33 | 962.89 | 375.28 | 966.16 | 375.2 |
| 966.77 | 375.19 | 973.36 | 375.05 | 973.98 | 375.04 | 976.04 | 375.05 | 978.31 | 375.05 |
| 979.95 | 375.1 | 980.65 | 375.15 | 981.64 | 375.19 | 986.13 | 375.33 | 986.88 | 375.35 |
| 989.08 | 375.42 | 990.61 | 375.43 | 992.21 | 375.45 | 992.44 | 375.47 | 995.04 | 375.51 |
| 996.47 | 375.55 | 998.26 | 375.58 | 999.03 | 375.58 | 1000.25 | 375.55 | 1003.32 | 375.54 |
| 1005.08 | 375.55 | 1005.79 | 375.56 | 1006.69 | 375.56 | 1006.76 | 375.55 | 1016.65 | 375.47 |
| 1017.79 | 375.47 | 1022.04 | 375.42 | 1032.01 | 375.52 | 1033.95 | 375.5 | 1036.15 | 375.5 |
| 1036.22 | 375.51 | 1037.59 | 375.56 | 1037.98 | 375.58 | 1038.35 | 375.57 | 1038.91 | 375.58 |
| 1045.94 | 375.65 | 1048.21 | 375.67 | 1050.04 | 375.66 | 1051.85 | 375.66 | 1052.94 | 375.67 |
| 1057.25 | 375.69 | 1058.01 | 375.7 | 1059.51 | 375.7 | 1061.86 | 375.69 | 1063.85 | 375.66 |
| 1065.41 | 375.68 | 1065.71 | 375.66 | 1066.72 | 375.64 | 1067.1 | 375.62 | 1067.41 | 375.58 |
| 1068.78 | 375.52 | 1069.88 | 375.51 | 1072.23 | 375.53 | 1077.38 | 375.54 | 1078.51 | 375.53 |
| 1089.02 | 375.35 | 1089.48 | 375.39 | 1090.26 | 375.44 | 1093.09 | 375.64 | 1094.29 | 375.72 |
| 1096.05 | 375.82 | 1097.46 | 375.87 | 1098.65 | 375.9 | 1099.11 | 375.92 | 1106.13 | 376.06 |
| 1107.65 | 376.07 | 1108.2 | 376.06 | 1109.14 | 376.07 | 1113.66 | 376.06 | 1115.27 | 376.05 |
| 1119.13 | 376 | 1120.27 | 375.97 | 1121.76 | 375.95 | 1126.58 | 375.92 | 1130.57 | 375.9 |
| 1133.04 | 375.87 | 1134.88 | 375.91 | 1135.59 | 375.91 | 1136.95 | 375.89 | 1138.26 | 375.88 |
| 1139.92 | 375.84 | 1144.04 | 375.79 | 1144.48 | 375.78 | 1147.59 | 375.76 | 1148.83 | 375.63 |
| 1149.04 | 375.62 | 1149.2 | 375.52 | 1152.5 | 375.69 | 1154.82 | 375.78 | 1155.36 | 375.79 |
| 1157.21 | 375.84 | 1162.46 | 375.93 | 1163.49 | 375.97 | 1166.34 | 376.1 | 1166.91 | 376.12 |
| 1173.06 | 376.24 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 10.94 | .05 | 154.12 | .04 | 876.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 154.12 | 876.71 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6961.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 16.42 | 374.42 | 18.7 | 374.44 | 29.27 | 374.57 | 37.71 | 374.59 | 40.68 | 374.6 |
| 47.39 | 374.61 | 50.87 | 374.61 | 69.17 | 374.63 | 74.48 | 374.64 | 82.85 | 374.6 |
| 94.97 | 374.56 | 96.78 | 374.55 | 97.07 | 374.54 | 98.5 | 374.54 | 103.19 | 374.53 |
| 112.37 | 374.5 | 113.72 | 374.5 | 114.78 | 374.49 | 115.69 | 374.5 | 123.16 | 374.55 |
| 123.6 | 374.54 | 125.98 | 374.55 | 131.93 | 374.57 | 135.11 | 374.54 | 139.71 | 374.49 |
| 141.25 | 374.47 | 142.15 | 374.45 | 143.24 | 374.44 | 146.94 | 374.38 | 147.59 | 374.36 |
| 148.38 | 374.32 | 149.82 | 374.3 | 151.2 | 374.3 | 152.67 | 374.25 | 153.67 | 374.2 |
| 154.52 | 374.13 | 156.25 | 373.96 | 156.88 | 373.95 | 159.18 | 373.78 | 166.69 | 373.56 |
| 167.4 | 373.55 | 168.42 | 373.52 | 169.39 | 373.51 | 170.92 | 373.44 | 171.33 | 373.38 |
| 171.87 | 373.35 | 180.4 | 373.28 | 181.43 | 373.24 | 182.86 | 373.17 | 183.39 | 373.13 |
| 183.95 | 373.13 | 184.56 | 373.16 | 185.4 | 373.17 | 186.71 | 373.2 | 187.48 | 373.23 |
| 189.52 | 373.24 | 190.04 | 373.25 | 193.37 | 373.25 | 194.82 | 373.28 | 195.23 | 373.28 |
| 198.45 | 373.34 | 200.07 | 373.44 | 200.46 | 373.45 | 202.1 | 373.44 | 203.26 | 373.45 |
| 203.55 | 373.47 | 205.16 | 373.49 | 206.02 | 373.48 | 211.38 | 373.28 | 211.77 | 373.29 |
| 214.07 | 373.19 | 214.38 | 373.19 | 218.14 | 373.08 | 218.65 | 373.06 | 219.09 | 373.06 |
| 221.57 | 372.93 | 237.06 | 372.94 | 247.81 | 373.12 | 251.7 | 373.17 | 252.24 | 373.19 |
| 253.07 | 373.2 | 255.52 | 373.14 | 257.85 | 373.04 | 265.74 | 373.11 | 272.3 | 373.17 |
| 272.76 | 373.17 | 274.32 | 373.19 | 274.59 | 373.2 | 274.99 | 373.16 | 275.4 | 373.15 |
| 275.67 | 373.12 | 277.09 | 373.09 | 278.81 | 373.03 | 279.56 | 373.02 | 284.14 | 372.83 |
| 288.59 | 372.65 | 288.86 | 372.65 | 291.9 | 372.54 | 299.87 | 372.38 | 300.13 | 372.37 |
| 301.76 | 372.35 | 311.45 | 372.14 | 313.89 | 372.17 | 314.38 | 372.17 | 321.22 | 372.22 |
| 322.37 | 372.24 | 328.08 | 372.29 | 331.7 | 372.41 | 332.76 | 372.48 | 334.31 | 372.54 |
| 335.08 | 372.55 | 337.5 | 372.64 | 343.2 | 372.69 | 345.66 | 372.67 | 350.52 | 372.77 |
| 353.05 | 372.84 | 360.51 | 373.02 | 363.13 | 373.1 | 364.46 | 373.15 | 368.83 | 373.34 |
| 375.09 | 373.47 | 391.86 | 373.85 | 393.5 | 373.97 | 394 | 374 | 395.66 | 374.13 |
| 396.32 | 374.13 | 396.97 | 374.15 | 399.72 | 374.18 | 405.89 | 374.29 | 407.1 | 374.3 |
| 407.75 | 374.32 | 409.95 | 374.31 | 410.73 | 374.3 | 412.2 | 374.33 | 413.63 | 374.34 |
| 413.84 | 374.35 | 416.21 | 374.35 | 418.48 | 374.36 | 423.95 | 374.41 | 424.74 | 374.42 |
| 425.19 | 374.44 | 426.36 | 374.46 | 443.38 | 374.09 | 443.66 | 374.08 | 444.7 | 374.08 |
| 446.67 | 374.04 | 448.15 | 374.02 | 449.25 | 374.19 | 449.55 | 374.21 | 451.07 | 374.25 |
| 453.04 | 374.25 | 455.64 | 374.18 | 457.2 | 374.17 | 457.77 | 374.14 | 459.2 | 374.12 |
| 461.95 | 374.1 | 464.41 | 374.05 | 469.89 | 374.11 | 474.19 | 374.08 | 475.99 | 374.02 |
| 476.47 | 373.96 | 478.25 | 373.94 | 479.43 | 373.94 | 479.91 | 373.95 | 481.79 | 373.96 |
| 482.71 | 373.98 | 485.23 | 374.02 | 486.66 | 374.06 | 487.12 | 374.1 | 488.71 | 374.2 |
| 497.2 | 374.51 | 501.59 | 374.64 | 506.2 | 374.66 | 506.95 | 374.69 | 507.69 | 374.7 |
| 508.54 | 374.68 | 510.66 | 374.55 | 512.23 | 374.53 | 515.27 | 374.53 | 517.65 | 374.56 |
| 526.05 | 374.6 | 527.55 | 374.52 | 539.29 | 374.56 | 543.7 | 374.34 | 545.97 | 374.36 |
| 546.86 | 374.36 | 549.67 | 374.37 | 552.9 | 374.32 | 554.66 | 374.26 | 555.26 | 374.25 |
| 557.18 | 374.25 | 558.25 | 374.28 | 559.13 | 374.32 | 559.23 | 374.34 | 560.17 | 374.35 |
| 560.65 | 374.33 | 565.32 | 374.17 | 566.41 | 374.14 | 571.41 | 374.14 | 571.81 | 374.11 |
| 575.95 | 373.77 | 576.14 | 373.71 | 576.86 | 373.67 | 578.68 | 373.72 | 579.84 | 373.78 |
| 586.39 | 374.49 | 587.26 | 374.56 | 588.72 | 374.56 | 589.32 | 374.57 | 592.8 | 374.53 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 593.89 | 374.51 | 594.87 | 374.57 | 595.36 | 374.56 | 596.58 | 374.56 | 598.76 | 374.55 |
| 599.96 | 374.54 | 600.92 | 374.5 | 602.42 | 374.47 | 603.52 | 374.44 | 617.78 | 374.28 |
| 620.62 | 374.16 | 623.99 | 374.06 | 625.48 | 373.99 | 625.65 | 373.97 | 626.22 | 373.78 |
| 626.84 | 373.76 | 627.83 | 373.77 | 632.15 | 373.86 | 635.7 | 373.91 | 636.68 | 373.94 |
| 638.95 | 373.97 | 640.22 | 374.02 | 641.8 | 374.11 | 643.46 | 374.22 | 651.12 | 374.24 |
| 651.49 | 374.21 | 657.38 | 374.24 | 659.46 | 374.29 | 660.77 | 374.33 | 663.9 | 374.41 |
| 667.96 | 374.4 | 669.05 | 374.41 | 669.67 | 374.39 | 671.08 | 374.33 | 672.44 | 374.25 |
| 673.24 | 374.21 | 675.03 | 374.1 | 676.04 | 374.1 | 681.01 | 373.72 | 684.17 | 373.69 |
| 686.12 | 373.65 | 687.43 | 373.64 | 690.72 | 373.64 | 693.52 | 373.63 | 695.39 | 373.65 |
| 696.19 | 373.81 | 696.4 | 373.83 | 698.18 | 373.83 | 699.05 | 373.84 | 701.12 | 373.83 |
| 706.14 | 373.84 | 707.1 | 373.83 | 708.81 | 373.76 | 711.43 | 373.59 | 712.29 | 373.54 |
| 712.84 | 373.49 | 714.31 | 373.43 | 715.45 | 373.39 | 716.71 | 373.37 | 717.36 | 373.35 |
| 722.86 | 373.29 | 725.16 | 373.44 | 725.99 | 373.5 | 727.64 | 373.69 | 728.08 | 373.73 |
| 730.09 | 373.85 | 731.75 | 373.93 | 732.51 | 373.95 | 733.91 | 373.97 | 735.73 | 373.98 |
| 738.35 | 373.94 | 740.33 | 373.88 | 741.96 | 373.82 | 743.13 | 373.77 | 747.75 | 373.53 |
| 749.54 | 373.42 | 750.01 | 373.38 | 751.89 | 373.29 | 752.14 | 373.29 | 753.72 | 373.33 |
| 754.52 | 373.37 | 756.9 | 373.55 | 757.2 | 373.59 | 757.83 | 373.78 | 758.77 | 373.84 |
| 761.21 | 373.96 | 763.59 | 374.1 | 764.87 | 374.12 | 767.45 | 374.12 | 770.23 | 374.11 |
| 771.09 | 374.14 | 772.15 | 374.16 | 773.13 | 374.16 | 773.29 | 374.17 | 774.67 | 374.17 |
| 775.72 | 374.18 | 776.72 | 374.2 | 777.51 | 374.17 | 781.14 | 373.97 | 782.66 | 373.87 |
| 783.54 | 373.83 | 786.08 | 373.81 | 799.29 | 373.85 | 799.61 | 373.88 | 801.85 | 373.92 |
| 803.47 | 373.92 | 804.42 | 373.9 | 811.06 | 373.79 | 811.83 | 373.78 | 812.32 | 373.8 |
| 813.21 | 373.77 | 817.54 | 373.58 | 819.74 | 373.53 | 821.05 | 373.51 | 821.8 | 373.55 |
| 822.24 | 373.55 | 824.17 | 373.51 | 826.11 | 373.45 | 826.26 | 373.44 | 829 | 373.33 |
| 829.89 | 373.29 | 830.73 | 373.27 | 832.13 | 373.19 | 832.92 | 373.16 | 833.83 | 373.14 |
| 834.27 | 373.14 | 835.25 | 373.16 | 835.42 | 373.15 | 836.36 | 373.15 | 838 | 373.24 |
| 841.27 | 373.48 | 841.95 | 373.46 | 842.62 | 373.51 | 844.85 | 373.55 | 853.67 | 373.86 |
| 855.4 | 373.89 | 856.58 | 373.89 | 858.32 | 373.9 | 859.61 | 373.92 | 860.41 | 373.95 |
| 861.85 | 374.05 | 864.07 | 374.22 | 865.25 | 374.3 | 865.48 | 374.3 | 866.57 | 374.34 |
| 867.54 | 374.35 | 868.11 | 374.36 | 870.59 | 374.33 | 875.89 | 374.23 | 890.12 | 373.75 |
| 891.89 | 373.67 | 892.86 | 373.62 | 896.02 | 373.62 | 896.27 | 373.63 | 896.45 | 373.68 |
| 900.22 | 374.06 | 901.61 | 374.19 | 901.97 | 374.19 | 902.35 | 374.26 | 903.79 | 374.25 |
| 905.89 | 374.22 | 907.44 | 374.18 | 914.85 | 374.15 | 915.77 | 374.15 | 918.05 | 374.18 |
| 918.46 | 374.17 | 919.87 | 374.09 | 920.99 | 373.96 | 921.35 | 373.94 | 922.81 | 373.94 |
| 924.34 | 373.97 | 926.48 | 374.1 | 927.06 | 374.11 | 928.39 | 374.21 | 928.79 | 374.27 |
| 929.25 | 374.26 | 931.38 | 374.44 | 934.92 | 374.71 | 936.57 | 374.8 | 938.25 | 374.85 |
| 939.13 | 374.89 | 940.4 | 374.88 | 940.65 | 374.86 | 942.23 | 374.86 | 944.67 | 374.85 |
| 946.04 | 374.83 | 947.43 | 374.83 | 948.21 | 374.8 | 952.15 | 374.71 | 955.43 | 374.66 |
| 957.03 | 374.62 | 960.41 | 374.55 | 961.05 | 374.53 | 968.54 | 374.42 | 970.67 | 374.44 |
| 973.04 | 374.45 | 973.68 | 374.46 | 974.74 | 374.5 | 975.47 | 374.54 | 976.49 | 374.58 |
| 981.16 | 374.72 | 981.94 | 374.74 | 984.22 | 374.81 | 985.41 | 374.82 | 986.87 | 374.82 |
| 987.71 | 374.84 | 990.41 | 374.87 | 991.55 | 374.91 | 991.89 | 374.91 | 993.75 | 374.95 |
| 995.82 | 374.92 | 999.01 | 374.92 | 1000.83 | 374.93 | 1001.98 | 374.95 | 1002.58 | 374.93 |
| 1012.85 | 374.88 | 1014.03 | 374.88 | 1018.45 | 374.84 | 1028.79 | 374.93 | 1031.53 | 374.88 |
| 1033.17 | 374.88 | 1035 | 374.99 | 1035.96 | 374.98 | 1043.27 | 375.08 | 1044.19 | 375.1 |
| 1045.62 | 375.11 | 1049.4 | 375.11 | 1050.53 | 375.12 | 1055.01 | 375.13 | 1057.36 | 375.13 |
| 1059.23 | 375.11 | 1059.8 | 375.11 | 1061.87 | 375.08 | 1063.49 | 375.08 | 1065.24 | 375.02 |
| 1065.55 | 374.96 | 1067.28 | 374.89 | 1070.56 | 374.9 | 1070.67 | 374.91 | 1075.91 | 374.95 |
| 1077.09 | 374.94 | 1088 | 374.78 | 1089.28 | 374.85 | 1092.23 | 375.05 | 1094.07 | 375.15 |
| 1095.3 | 375.23 | 1096.76 | 375.28 | 1098.47 | 375.32 | 1105.77 | 375.45 | 1108.89 | 375.45 |
| 1113.59 | 375.46 | 1115.26 | 375.45 | 1117.56 | 375.42 | 1118.9 | 375.39 | 1119.26 | 375.39 |
| 1120.05 | 375.36 | 1121.99 | 375.32 | 1123.28 | 375.31 | 1126.05 | 375.31 | 1126.28 | 375.3 |
| 1129.16 | 375.3 | 1132.99 | 375.26 | 1133.71 | 375.25 | 1135.62 | 375.28 | 1136.36 | 375.28 |
| 1137.77 | 375.25 | 1139.13 | 375.23 | 1140.85 | 375.19 | 1145.13 | 375.15 | 1145.59 | 375.14 |
| 1148.82 | 375.14 | 1150.11 | 375.03 | 1150.33 | 375.02 | 1150.49 | 374.93 | 1150.72 | 374.93 |
| 1153.92 | 375.16 | 1154.76 | 375.21 | 1156.88 | 375.3 | 1158.81 | 375.34 | 1164.26 | 375.4 |
| 1165.33 | 375.43 | 1168.29 | 375.55 | 1172.63 | 375.62 | 1173.76 | 375.65 | 1174.18 | 375.65 |
| 1175.26 | 375.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 16.42 | .05 | 151.2 | .04 | 867.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 151.2 | 867.54 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6915.05*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 21.89 | 373.63 | 24.03 | 373.65 | 33.94 | 373.76 | 34.18 | 373.77 | 41.86 | 373.78 |
| 44.64 | 373.79 | 50.94 | 373.8 | 54.19 | 373.81 | 71.35 | 373.81 | 76.33 | 373.82 |
| 84.19 | 373.79 | 95.55 | 373.76 | 97.24 | 373.75 | 97.52 | 373.74 | 98.86 | 373.74 |
| 111.87 | 373.71 | 114.13 | 373.69 | 114.97 | 373.7 | 121.98 | 373.75 | 122.39 | 373.74 |
| 124.62 | 373.74 | 130.21 | 373.77 | 133.19 | 373.74 | 133.96 | 373.74 | 137.51 | 373.69 |
| 138.95 | 373.68 | 140.81 | 373.64 | 143.75 | 373.6 | 144.89 | 373.57 | 145.63 | 373.53 |
| 147.03 | 373.51 | 148.27 | 373.52 | 149.65 | 373.47 | 150.59 | 373.42 | 151.58 | 373.34 |
| 153.02 | 373.2 | 153.87 | 373.18 | 155.76 | 373.04 | 162.81 | 372.83 | 163.47 | 372.82 |
| 164.43 | 372.79 | 165.34 | 372.78 | 166.15 | 372.75 | 167.04 | 372.7 | 167.42 | 372.64 |
| 167.67 | 372.64 | 174.53 | 372.57 | 175.21 | 372.58 | 177.46 | 372.5 | 178.48 | 372.43 |
| 179.14 | 372.43 | 179.2 | 372.45 | 181.6 | 372.49 | 182.02 | 372.51 | 183.42 | 372.53 |
| 184.23 | 372.52 | 184.72 | 372.53 | 187.84 | 372.53 | 189.59 | 372.55 | 192.61 | 372.61 |
| 194.13 | 372.7 | 194.5 | 372.71 | 196.03 | 372.7 | 197.12 | 372.71 | 198.9 | 372.75 |
| 199.71 | 372.74 | 204.74 | 372.55 | 205.11 | 372.56 | 207.26 | 372.48 | 207.55 | 372.48 |
| 211.08 | 372.38 | 211.98 | 372.36 | 214.3 | 372.25 | 228.83 | 372.25 | 238.93 | 372.42 |
| 242.57 | 372.46 | 243.85 | 372.48 | 246.16 | 372.39 | 248.34 | 372.23 | 255.75 | 372.28 |
| 261.9 | 372.33 | 262.33 | 372.32 | 264.05 | 372.34 | 264.81 | 372.3 | 264.92 | 372.27 |
| 266.4 | 372.25 | 268.01 | 372.19 | 268.71 | 372.17 | 273.01 | 372 | 277.19 | 371.83 |
| 277.44 | 371.83 | 279.7 | 371.74 | 280.29 | 371.73 | 287.77 | 371.57 | 289.54 | 371.55 |
| 292.99 | 371.47 | 298.63 | 371.35 | 301.09 | 371.38 | 301.58 | 371.38 | 308.47 | 371.43 |
| 309.63 | 371.45 | 314.3 | 371.49 | 315.6 | 371.51 | 319.01 | 371.62 | 320.08 | 371.69 |
| 321.64 | 371.75 | 322.42 | 371.76 | 324.85 | 371.85 | 330.59 | 371.92 | 331.4 | 371.92 |
| 333.07 | 371.89 | 340.5 | 372.01 | 343.02 | 372.07 | 347.63 | 372.15 | 350.65 | 372.23 |
| 351.99 | 372.28 | 356.38 | 372.46 | 362.69 | 372.58 | 379.57 | 372.96 | 381.22 | 373.12 |
| 383.39 | 373.31 | 384.05 | 373.31 | 384.72 | 373.34 | 388.69 | 373.37 | 393.69 | 373.45 |
| 395.56 | 373.47 | 397.59 | 373.47 | 398.56 | 373.45 | 400.04 | 373.48 | 401.48 | 373.48 |
| 401.69 | 373.49 | 404.08 | 373.48 | 406.37 | 373.49 | 412.67 | 373.56 | 413.11 | 373.59 |
| 414.29 | 373.62 | 431.43 | 373.28 | 432.75 | 373.28 | 436.23 | 373.23 | 437.34 | 373.38 |
| 437.64 | 373.4 | 439.17 | 373.44 | 440.55 | 373.45 | 441.15 | 373.44 | 443.77 | 373.38 |
| 445.34 | 373.37 | 445.91 | 373.34 | 447.35 | 373.31 | 450.12 | 373.3 | 452.6 | 373.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 457.08 | 373.31 | 458.11 | 373.31 | 462.44 | 373.29 | 464.25 | 373.23 | 464.52 | 373.17 |
| 466.53 | 373.13 | 468.2 | 373.12 | 468.84 | 373.11 | 471.02 | 373.13 | 474.15 | 373.18 |
| 474.99 | 373.21 | 475.46 | 373.26 | 477.05 | 373.38 | 485.6 | 373.72 | 486.91 | 373.76 |
| 490.01 | 373.87 | 494.66 | 373.86 | 496.15 | 373.9 | 497.01 | 373.86 | 499.07 | 373.69 |
| 500.73 | 373.66 | 503.79 | 373.66 | 506.19 | 373.71 | 514.64 | 373.76 | 516.15 | 373.69 |
| 527.97 | 373.75 | 528.19 | 373.75 | 532.4 | 373.56 | 534.39 | 373.58 | 535.59 | 373.58 |
| 538.41 | 373.59 | 541.66 | 373.52 | 543.44 | 373.45 | 544.52 | 373.42 | 545.66 | 373.41 |
| 547.05 | 373.44 | 547.94 | 373.48 | 548.04 | 373.5 | 548.98 | 373.51 | 549.47 | 373.49 |
| 554.17 | 373.36 | 555.27 | 373.34 | 557.3 | 373.35 | 558.66 | 373.35 | 560.3 | 373.36 |
| 564.87 | 373.03 | 565.05 | 372.97 | 565.78 | 372.94 | 567.61 | 372.99 | 568.78 | 373.05 |
| 569.98 | 373.16 | 575.37 | 373.69 | 576.25 | 373.75 | 578.33 | 373.75 | 582.93 | 373.71 |
| 583.75 | 373.76 | 585.63 | 373.76 | 587.82 | 373.75 | 589.54 | 373.72 | 590 | 373.7 |
| 592.62 | 373.65 | 606.97 | 373.55 | 609.82 | 373.45 | 611.52 | 373.42 | 613.21 | 373.38 |
| 614.72 | 373.33 | 614.89 | 373.31 | 615.46 | 373.14 | 616.09 | 373.12 | 617.08 | 373.13 |
| 621.43 | 373.22 | 623.49 | 373.24 | 625 | 373.26 | 626 | 373.29 | 628.28 | 373.29 |
| 629.43 | 373.32 | 630.96 | 373.39 | 632.81 | 373.49 | 640.52 | 373.5 | 640.89 | 373.47 |
| 646.83 | 373.49 | 648.92 | 373.52 | 649.94 | 373.55 | 650.24 | 373.57 | 653.97 | 373.63 |
| 657.47 | 373.61 | 657.97 | 373.62 | 659.2 | 373.6 | 660.62 | 373.54 | 662.79 | 373.43 |
| 664.59 | 373.33 | 665.61 | 373.32 | 670.62 | 372.96 | 673.79 | 372.92 | 675.75 | 372.87 |
| 677.08 | 372.85 | 680.38 | 372.85 | 682.64 | 372.84 | 685.08 | 372.87 | 685.89 | 373.02 |
| 686.1 | 373.04 | 690.85 | 373.06 | 695.29 | 373.09 | 696.87 | 373.08 | 698.59 | 373.01 |
| 702.1 | 372.81 | 702.65 | 372.77 | 704.13 | 372.7 | 707.2 | 372.62 | 712.73 | 372.56 |
| 713.47 | 372.6 | 715.05 | 372.7 | 715.88 | 372.76 | 716.59 | 372.83 | 717.55 | 372.94 |
| 717.99 | 372.98 | 720.01 | 373.1 | 721.23 | 373.16 | 721.68 | 373.19 | 722.44 | 373.22 |
| 723.86 | 373.25 | 725.6 | 373.28 | 725.69 | 373.29 | 728.33 | 373.25 | 730.32 | 373.2 |
| 731.97 | 373.15 | 733.14 | 373.1 | 737.78 | 372.86 | 740.06 | 372.72 | 741.57 | 372.64 |
| 742.21 | 372.63 | 743.8 | 372.65 | 744.6 | 372.69 | 747 | 372.83 | 747.3 | 372.87 |
| 747.94 | 373.04 | 748.88 | 373.1 | 751.33 | 373.21 | 752.05 | 373.26 | 752.9 | 373.3 |
| 753.73 | 373.35 | 755.02 | 373.38 | 757.61 | 373.39 | 760.16 | 373.39 | 761.28 | 373.42 |
| 762.35 | 373.44 | 762.42 | 373.45 | 764.89 | 373.45 | 766.95 | 373.47 | 767.74 | 373.44 |
| 771.4 | 373.25 | 771.84 | 373.23 | 772.93 | 373.15 | 773.81 | 373.12 | 776.37 | 373.1 |
| 779.75 | 373.11 | 789.66 | 373.16 | 789.99 | 373.18 | 791.72 | 373.21 | 792.24 | 373.23 |
| 794.83 | 373.21 | 801.52 | 373.07 | 802.29 | 373.06 | 803.09 | 373.07 | 803.68 | 373.05 |
| 807.62 | 372.87 | 810.24 | 372.81 | 811.57 | 372.81 | 812.32 | 372.87 | 814.7 | 372.85 |
| 816.66 | 372.79 | 816.81 | 372.79 | 819.57 | 372.68 | 821.96 | 372.58 | 822.72 | 372.53 |
| 823.95 | 372.49 | 825.41 | 372.49 | 826.26 | 372.5 | 826.98 | 372.49 | 827.68 | 372.54 |
| 828.63 | 372.58 | 831.92 | 372.79 | 832.61 | 372.78 | 833.28 | 372.82 | 835.53 | 372.86 |
| 844.41 | 373.14 | 844.49 | 373.15 | 846.14 | 373.18 | 847.33 | 373.18 | 849.08 | 373.19 |
| 851.04 | 373.24 | 852.63 | 373.34 | 854.87 | 373.51 | 855.18 | 373.52 | 856.06 | 373.58 |
| 857.38 | 373.63 | 858.36 | 373.65 | 860.65 | 373.64 | 861.52 | 373.65 | 867.02 | 373.6 |
| 867.34 | 373.6 | 880.26 | 373.26 | 881.78 | 373.21 | 884.62 | 373.1 | 887.89 | 373.1 |
| 888.34 | 373.15 | 892.25 | 373.5 | 893.69 | 373.62 | 893.95 | 373.61 | 894.46 | 373.68 |
| 894.94 | 373.68 | 898.68 | 373.61 | 899.74 | 373.58 | 907.42 | 373.53 | 908.91 | 373.54 |
| 910.75 | 373.57 | 911.17 | 373.56 | 912.62 | 373.5 | 913.79 | 373.39 | 914.58 | 373.37 |
| 917.19 | 373.4 | 917.27 | 373.41 | 919.48 | 373.52 | 920.09 | 373.53 | 921.47 | 373.61 |
| 921.87 | 373.66 | 922.35 | 373.66 | 924.56 | 373.82 | 927.01 | 373.99 | 928.23 | 374.07 |
| 929.95 | 374.15 | 931.68 | 374.21 | 932.61 | 374.25 | 934.69 | 374.23 | 935.82 | 374.24 |
| 938.34 | 374.23 | 939.77 | 374.21 | 940.55 | 374.22 | 941.31 | 374.21 | 942.02 | 374.18 |
| 946.1 | 374.07 | 949.51 | 374 | 949.69 | 373.99 | 954.67 | 373.89 | 955.33 | 373.88 |
| 962.43 | 373.8 | 963.1 | 373.8 | 965.31 | 373.82 | 966.2 | 373.82 | 968.43 | 373.85 |
| 969.52 | 373.89 | 970.28 | 373.93 | 971.34 | 373.97 | 976.18 | 374.11 | 976.99 | 374.13 |
| 979.36 | 374.2 | 980.6 | 374.21 | 980.89 | 374.2 | 982.47 | 374.2 | 982.97 | 374.22 |
| 985.78 | 374.24 | 986.96 | 374.27 | 987.31 | 374.27 | 989.89 | 374.32 | 990.75 | 374.3 |
| 992.05 | 374.29 | 994.32 | 374.29 | 994.69 | 374.3 | 996.38 | 374.31 | 997.36 | 374.33 |
| 998.32 | 374.33 | 998.4 | 374.32 | 1009.04 | 374.29 | 1010.27 | 374.29 | 1014.85 | 374.25 |
| 1025.58 | 374.34 | 1027.67 | 374.27 | 1028.42 | 374.26 | 1030.12 | 374.26 | 1032.02 | 374.4 |
| 1033.02 | 374.39 | 1041.74 | 374.54 | 1045 | 374.56 | 1046.95 | 374.56 | 1047.87 | 374.57 |
| 1053.58 | 374.57 | 1055.2 | 374.56 | 1057.15 | 374.53 | 1057.62 | 374.54 | 1058.44 | 374.51 |
| 1059.88 | 374.49 | 1061.56 | 374.48 | 1063.38 | 374.42 | 1063.7 | 374.34 | 1064.35 | 374.31 |
| 1065.84 | 374.26 | 1066.37 | 374.26 | 1069.01 | 374.28 | 1074.44 | 374.35 | 1075.66 | 374.34 |
| 1086.98 | 374.2 | 1088.31 | 374.27 | 1091.36 | 374.45 | 1092.66 | 374.53 | 1093.27 | 374.55 |
| 1094.55 | 374.63 | 1096.06 | 374.69 | 1097.35 | 374.71 | 1097.84 | 374.73 | 1105.41 | 374.83 |
| 1107.04 | 374.84 | 1107.64 | 374.83 | 1108.64 | 374.84 | 1113.52 | 374.86 | 1115.25 | 374.85 |
| 1118.63 | 374.79 | 1119.02 | 374.79 | 1120.22 | 374.74 | 1122.23 | 374.7 | 1123.57 | 374.69 |
| 1126.44 | 374.69 | 1126.67 | 374.68 | 1129.66 | 374.68 | 1131.72 | 374.67 | 1134.38 | 374.63 |
| 1136.55 | 374.65 | 1137.73 | 374.63 | 1138.5 | 374.6 | 1140 | 374.58 | 1141.74 | 374.54 |
| 1146.22 | 374.51 | 1146.7 | 374.5 | 1150.05 | 374.51 | 1151.39 | 374.42 | 1151.61 | 374.42 |
| 1151.79 | 374.33 | 1152.01 | 374.34 | 1155.34 | 374.62 | 1156.21 | 374.69 | 1158.41 | 374.8 |
| 1160.41 | 374.83 | 1166.06 | 374.87 | 1167.17 | 374.88 | 1170.86 | 375.01 | 1174.74 | 375.06 |
| 1177.47 | 375.11 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 21.89 | .05 | 148.27 | .04 | 858.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 148.27 | 858.36 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6868.28*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 27.36 | 372.84 | 29.36 | 372.86 | 38.61 | 372.96 | 46 | 372.97 | 48.61 | 372.98 |
| 54.48 | 372.99 | 57.52 | 373 | 73.54 | 373 | 78.19 | 373.01 | 85.52 | 372.98 |
| 96.13 | 372.96 | 99.22 | 372.94 | 103.33 | 372.94 | 111.36 | 372.91 | 112.38 | 372.91 |
| 113.47 | 372.89 | 114.26 | 372.9 | 120.8 | 372.94 | 123.27 | 372.94 | 128.48 | 372.96 |
| 130.42 | 372.95 | 131.81 | 372.95 | 131.99 | 372.94 | 135.3 | 372.9 | 137.43 | 372.87 |
| 138.39 | 372.85 | 141.63 | 372.8 | 142.88 | 372.75 | 144.14 | 372.73 | 145.35 | 372.73 |
| 147.52 | 372.64 | 148.44 | 372.57 | 149.78 | 372.45 | 150.33 | 372.44 | 152.35 | 372.29 |
| 158.93 | 372.1 | 159.55 | 372.1 | 160.45 | 372.07 | 161.3 | 372.06 | 162.05 | 372.03 |
| 162.89 | 371.98 | 163.23 | 371.93 | 163.47 | 371.93 | 169.88 | 371.86 | 170.52 | 371.87 |
| 172.62 | 371.79 | 173.57 | 371.73 | 174.19 | 371.73 | 174.59 | 371.75 | 176.48 | 371.78 |
| 176.88 | 371.8 | 178.19 | 371.81 | 182.31 | 371.81 | 183.58 | 371.82 | 185.46 | 371.85 |
| 186.77 | 371.88 | 188.19 | 371.96 | 188.53 | 371.97 | 189.97 | 371.96 | 191.18 | 371.97 |
| 191.24 | 371.98 | 192.65 | 372 | 193.4 | 371.99 | 198.1 | 371.83 | 198.44 | 371.84 |
| 200.46 | 371.76 | 200.73 | 371.76 | 204.03 | 371.67 | 204.86 | 371.66 | 207.03 | 371.56 |
| 220.61 | 371.56 | 230.04 | 371.71 | 233.44 | 371.74 | 234.64 | 371.76 | 236.79 | 371.63 |
| 238.83 | 371.43 | 245.75 | 371.46 | 251.5 | 371.48 | 253.27 | 371.48 | 253.51 | 371.49 |
| 254.46 | 371.43 | 255.7 | 371.4 | 257.21 | 371.34 | 257.86 | 371.33 | 261.88 | 371.16 |
| 265.78 | 371.01 | 266.02 | 371.01 | 268.68 | 370.91 | 275.67 | 370.77 | 275.89 | 370.76 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 278.44 | 370.72 | 280.55 | 370.67 | 285.82 | 370.56 | 288.29 | 370.59 | 288.78 | 370.6 |
| 295.71 | 370.64 | 296.88 | 370.66 | 301.58 | 370.7 | 302.9 | 370.72 | 306.33 | 370.83 |
| 307.4 | 370.9 | 308.97 | 370.96 | 309.76 | 370.97 | 312.21 | 371.06 | 317.98 | 371.15 |
| 318.8 | 371.15 | 320.47 | 371.12 | 325.4 | 371.16 | 327.96 | 371.19 | 329.57 | 371.22 |
| 330.49 | 371.23 | 335.14 | 371.29 | 338.17 | 371.36 | 339.52 | 371.4 | 343.94 | 371.57 |
| 350.29 | 371.69 | 367.28 | 372.08 | 368.94 | 372.26 | 371.13 | 372.49 | 371.79 | 372.49 |
| 372.02 | 372.52 | 375.24 | 372.53 | 376.46 | 372.54 | 381.49 | 372.61 | 383.38 | 372.63 |
| 385.41 | 372.62 | 386.39 | 372.61 | 387.88 | 372.63 | 388.19 | 372.62 | 389.55 | 372.63 |
| 391.95 | 372.62 | 394.25 | 372.63 | 399.79 | 372.69 | 400.34 | 372.7 | 402.23 | 372.77 |
| 419.48 | 372.47 | 420.81 | 372.49 | 424.31 | 372.44 | 425.42 | 372.58 | 425.72 | 372.6 |
| 427.26 | 372.63 | 428.66 | 372.64 | 431.89 | 372.58 | 433.47 | 372.58 | 434.05 | 372.54 |
| 435.38 | 372.5 | 435.5 | 372.51 | 438.29 | 372.5 | 440.78 | 372.46 | 446.33 | 372.52 |
| 450.69 | 372.5 | 452.7 | 372.42 | 452.78 | 372.38 | 454.8 | 372.32 | 456.79 | 372.27 |
| 458.39 | 372.27 | 459.32 | 372.29 | 460.67 | 372.3 | 462.48 | 372.33 | 463.32 | 372.36 |
| 463.79 | 372.42 | 465.39 | 372.56 | 474 | 372.94 | 475.32 | 372.98 | 478.44 | 373.09 |
| 483.12 | 373.05 | 484.62 | 373.1 | 485.49 | 373.05 | 487.16 | 372.87 | 487.7 | 372.82 |
| 490.2 | 372.79 | 492.3 | 372.8 | 493.2 | 372.81 | 494.72 | 372.85 | 503.23 | 372.91 |
| 504.75 | 372.86 | 516.64 | 372.95 | 521.11 | 372.78 | 521.55 | 372.78 | 523.1 | 372.8 |
| 524.31 | 372.81 | 527.15 | 372.81 | 530.42 | 372.72 | 532.82 | 372.6 | 534.76 | 372.58 |
| 536.24 | 372.62 | 536.84 | 372.66 | 537.79 | 372.67 | 543.01 | 372.56 | 544.12 | 372.54 |
| 547.53 | 372.57 | 549.18 | 372.57 | 549.58 | 372.55 | 553.78 | 372.29 | 553.97 | 372.24 |
| 554.7 | 372.21 | 556.54 | 372.25 | 557.72 | 372.31 | 558.93 | 372.41 | 564.35 | 372.88 |
| 565.24 | 372.94 | 567.33 | 372.94 | 570.85 | 372.92 | 571.96 | 372.91 | 572.95 | 372.96 |
| 574.68 | 372.96 | 576.88 | 372.95 | 578.1 | 372.93 | 578.61 | 372.91 | 580.59 | 372.87 |
| 581.71 | 372.86 | 596.16 | 372.81 | 599.03 | 372.73 | 600.74 | 372.72 | 603.05 | 372.69 |
| 603.96 | 372.66 | 604.13 | 372.64 | 604.71 | 372.49 | 605.34 | 372.48 | 606.34 | 372.49 |
| 609.66 | 372.56 | 612.79 | 372.59 | 614.31 | 372.61 | 615.31 | 372.64 | 617.6 | 372.61 |
| 618.89 | 372.63 | 620.49 | 372.69 | 622.17 | 372.77 | 629.93 | 372.76 | 630.3 | 372.73 |
| 636.27 | 372.73 | 638.38 | 372.76 | 639.71 | 372.8 | 642.88 | 372.84 | 647.49 | 372.83 |
| 648.73 | 372.81 | 651.54 | 372.69 | 654.15 | 372.55 | 655.18 | 372.54 | 660.22 | 372.2 |
| 663.41 | 372.15 | 665.39 | 372.08 | 667.75 | 372.06 | 670.05 | 372.06 | 672.32 | 372.05 |
| 674.78 | 372.09 | 675.59 | 372.22 | 675.8 | 372.24 | 678.49 | 372.27 | 680.58 | 372.28 |
| 685.05 | 372.33 | 686.64 | 372.32 | 688.38 | 372.26 | 691.03 | 372.13 | 692.46 | 372.04 |
| 693.95 | 371.98 | 696.38 | 371.92 | 697.04 | 371.9 | 701.61 | 371.84 | 702.61 | 371.83 |
| 705.53 | 371.99 | 706.49 | 372.07 | 707.5 | 372.19 | 708.7 | 372.28 | 709.93 | 372.36 |
| 711.16 | 372.42 | 712.38 | 372.49 | 713.81 | 372.54 | 715.56 | 372.58 | 715.65 | 372.59 |
| 716.89 | 372.58 | 718.3 | 372.56 | 720.31 | 372.52 | 723.14 | 372.43 | 727.82 | 372.19 |
| 729.64 | 372.09 | 730.12 | 372.05 | 732.02 | 371.96 | 733.88 | 371.97 | 734.68 | 372 |
| 737.1 | 372.12 | 737.51 | 372.17 | 738.04 | 372.3 | 738.99 | 372.35 | 741.46 | 372.46 |
| 742.18 | 372.51 | 743.04 | 372.55 | 743.87 | 372.6 | 745.17 | 372.63 | 747.78 | 372.66 |
| 749.72 | 372.67 | 750.6 | 372.68 | 751.47 | 372.71 | 752.55 | 372.73 | 756.17 | 372.73 |
| 757.18 | 372.74 | 757.98 | 372.72 | 761.65 | 372.53 | 762.1 | 372.51 | 763.19 | 372.44 |
| 764.08 | 372.41 | 766.66 | 372.38 | 770.06 | 372.39 | 780.04 | 372.46 | 780.37 | 372.48 |
| 782.11 | 372.51 | 782.49 | 372.51 | 782.63 | 372.54 | 784.28 | 372.53 | 785.24 | 372.51 |
| 791.97 | 372.34 | 793.24 | 372.35 | 794.15 | 372.32 | 798.11 | 372.14 | 800.29 | 372.1 |
| 802.09 | 372.11 | 802.85 | 372.19 | 803.29 | 372.2 | 805.24 | 372.19 | 805.81 | 372.18 |
| 807.36 | 372.13 | 810.14 | 372.03 | 811.9 | 371.96 | 813.31 | 371.88 | 814.11 | 371.85 |
| 815.03 | 371.83 | 815.48 | 371.83 | 816.48 | 371.85 | 816.64 | 371.84 | 817.6 | 371.84 |
| 818.3 | 371.88 | 819.25 | 371.91 | 822.57 | 372.1 | 823.26 | 372.09 | 823.94 | 372.13 |
| 826.2 | 372.17 | 835.14 | 372.43 | 836.88 | 372.46 | 839.84 | 372.49 | 841.15 | 372.51 |
| 841.96 | 372.54 | 842.8 | 372.6 | 845.98 | 372.81 | 847.09 | 372.87 | 849.18 | 372.94 |
| 849.8 | 372.95 | 851.56 | 372.95 | 852.46 | 372.96 | 858.49 | 372.98 | 871.86 | 372.71 |
| 875.34 | 372.62 | 875.58 | 372.6 | 876.38 | 372.58 | 880.04 | 372.59 | 880.23 | 372.63 |
| 884.28 | 372.94 | 885.77 | 373.05 | 886.04 | 373.04 | 886.57 | 373.1 | 887.07 | 373.1 |
| 890.38 | 373.03 | 892.04 | 372.97 | 900 | 372.91 | 900.3 | 372.91 | 903.44 | 372.96 |
| 903.87 | 372.96 | 905.38 | 372.91 | 906.59 | 372.82 | 906.98 | 372.81 | 908.55 | 372.81 |
| 910.19 | 372.84 | 912.49 | 372.93 | 913.11 | 372.94 | 914.54 | 373.01 | 914.97 | 373.06 |
| 915.46 | 373.05 | 917.75 | 373.21 | 920.28 | 373.36 | 921.55 | 373.43 | 923.32 | 373.51 |
| 925.66 | 373.59 | 926.57 | 373.61 | 927.44 | 373.61 | 928.24 | 373.6 | 929.4 | 373.61 |
| 932.02 | 373.61 | 933.49 | 373.6 | 934.98 | 373.6 | 935.82 | 373.56 | 940.05 | 373.42 |
| 943.58 | 373.33 | 945.29 | 373.29 | 948.93 | 373.23 | 949.61 | 373.23 | 956.97 | 373.18 |
| 957.66 | 373.18 | 959.95 | 373.21 | 960.87 | 373.21 | 962.49 | 373.23 | 964.31 | 373.28 |
| 965.1 | 373.32 | 966.2 | 373.36 | 971.21 | 373.5 | 972.05 | 373.53 | 974.82 | 373.59 |
| 976.5 | 373.59 | 976.71 | 373.58 | 977.72 | 373.58 | 978.24 | 373.59 | 981.14 | 373.6 |
| 982.74 | 373.64 | 984.73 | 373.68 | 985.6 | 373.68 | 987.16 | 373.67 | 987.64 | 373.66 |
| 990.38 | 373.67 | 992.12 | 373.7 | 994.13 | 373.72 | 994.22 | 373.7 | 1005.24 | 373.69 |
| 1006.51 | 373.7 | 1011.26 | 373.67 | 1022.37 | 373.74 | 1024.54 | 373.66 | 1025.31 | 373.64 |
| 1027.07 | 373.64 | 1029.03 | 373.81 | 1030.07 | 373.8 | 1037.92 | 373.96 | 1039.58 | 373.98 |
| 1040.45 | 374 | 1042.48 | 374.01 | 1044.51 | 374.01 | 1045.72 | 374.03 | 1050.52 | 374.02 |
| 1052.53 | 374 | 1055.06 | 373.96 | 1055.67 | 373.96 | 1056.41 | 373.93 | 1057.89 | 373.9 |
| 1059.47 | 373.89 | 1060.6 | 373.85 | 1061.51 | 373.81 | 1061.85 | 373.72 | 1063.71 | 373.64 |
| 1064.61 | 373.64 | 1067.23 | 373.65 | 1067.35 | 373.66 | 1072.98 | 373.76 | 1074.24 | 373.75 |
| 1085.95 | 373.62 | 1086.47 | 373.65 | 1087.34 | 373.68 | 1090.5 | 373.86 | 1092.47 | 373.96 |
| 1093.8 | 374.04 | 1095.37 | 374.09 | 1096.7 | 374.12 | 1097.21 | 374.14 | 1105.04 | 374.22 |
| 1106.74 | 374.23 | 1106.95 | 374.21 | 1113.44 | 374.26 | 1114.54 | 374.25 | 1117.71 | 374.21 |
| 1119.14 | 374.18 | 1120.81 | 374.1 | 1122.47 | 374.07 | 1123.93 | 374.06 | 1126.02 | 374.07 |
| 1127.07 | 374.07 | 1127.84 | 374.06 | 1130.16 | 374.07 | 1132.3 | 374.05 | 1135.05 | 374.01 |
| 1137.3 | 374.02 | 1137.89 | 374.01 | 1139.41 | 373.96 | 1142.67 | 373.89 | 1147.32 | 373.87 |
| 1147.81 | 373.87 | 1151.28 | 373.89 | 1152.9 | 373.81 | 1153.08 | 373.74 | 1153.31 | 373.75 |
| 1156.76 | 374.09 | 1157.66 | 374.17 | 1159.94 | 374.3 | 1162.01 | 374.33 | 1167.86 | 374.33 |
| 1169.01 | 374.34 | 1172.19 | 374.44 | 1176.85 | 374.5 | 1178.06 | 374.52 | 1178.52 | 374.52 |
| 1179.68 | 374.55 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 27.36 | .05 | 145.35 | .04 | 849.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 145.35 | 849.18 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6821.51*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 32.83 | 372.05 | 34.69 | 372.06 | 43.28 | 372.15 | 43.49 | 372.16 | 50.15 | 372.17 |
| 52.57 | 372.18 | 58.02 | 372.18 | 60.85 | 372.19 | 75.73 | 372.18 | 80.04 | 372.19 |
| 86.85 | 372.17 | 96.71 | 372.16 | 99.58 | 372.14 | 103.39 | 372.14 | 110.86 | 372.12 |
| 112.38 | 372.1 | 113.55 | 372.1 | 119.63 | 372.14 | 121.92 | 372.14 | 126.76 | 372.16 |
| 128.56 | 372.16 | 130.01 | 372.14 | 133.09 | 372.11 | 135.07 | 372.08 | 135.96 | 372.06 |
| 138.97 | 372.01 | 140.13 | 371.96 | 141.3 | 371.94 | 142.43 | 371.94 | 143.62 | 371.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 144.44 | 371.86 | 145.3 | 371.8 | 146.54 | 371.69 | 147.29 | 371.67 | 148.93 | 371.55 |
| 155.05 | 371.38 | 155.63 | 371.37 | 156.46 | 371.34 | 157.25 | 371.33 | 158.73 | 371.27 |
| 158.83 | 371.24 | 159.27 | 371.22 | 165.23 | 371.15 | 166.22 | 371.15 | 166.76 | 371.12 |
| 168.23 | 371.06 | 168.65 | 371.03 | 169.23 | 371.03 | 169.61 | 371.05 | 170.3 | 371.05 |
| 171.36 | 371.07 | 171.99 | 371.09 | 176.79 | 371.09 | 178.31 | 371.1 | 179.71 | 371.12 |
| 180.93 | 371.15 | 182.25 | 371.22 | 184.84 | 371.22 | 185.08 | 371.24 | 187.09 | 371.25 |
| 191.46 | 371.11 | 191.78 | 371.11 | 193.65 | 371.05 | 193.9 | 371.05 | 196.97 | 370.97 |
| 197.75 | 370.96 | 199.76 | 370.87 | 212.38 | 370.88 | 221.15 | 371.01 | 224.31 | 371.03 |
| 225.43 | 371.04 | 227.43 | 370.88 | 229.33 | 370.62 | 235.76 | 370.63 | 243.08 | 370.63 |
| 243.85 | 370.58 | 245 | 370.55 | 247.01 | 370.48 | 250.75 | 370.33 | 254.37 | 370.19 |
| 254.59 | 370.19 | 256.56 | 370.11 | 263.57 | 369.96 | 265.11 | 369.94 | 266.14 | 369.91 |
| 273 | 369.77 | 275.49 | 369.8 | 275.98 | 369.81 | 282.96 | 369.85 | 284.14 | 369.86 |
| 288.87 | 369.92 | 290.19 | 369.93 | 293.64 | 370.04 | 294.53 | 370.09 | 294.73 | 370.11 |
| 296.31 | 370.17 | 297.1 | 370.18 | 299.56 | 370.27 | 305.37 | 370.38 | 306.2 | 370.38 |
| 307.88 | 370.34 | 312.84 | 370.35 | 315.41 | 370.37 | 317.96 | 370.4 | 322.64 | 370.43 |
| 323.02 | 370.44 | 325.69 | 370.49 | 327.05 | 370.53 | 331.5 | 370.68 | 337.89 | 370.8 |
| 354.99 | 371.19 | 356.66 | 371.41 | 357.17 | 371.46 | 358.86 | 371.67 | 359.53 | 371.67 |
| 359.76 | 371.7 | 364.23 | 371.7 | 369.29 | 371.77 | 371.19 | 371.78 | 373.24 | 371.77 |
| 373.44 | 371.76 | 374.23 | 371.76 | 375.72 | 371.77 | 377.4 | 371.77 | 379.82 | 371.76 |
| 382.14 | 371.76 | 387.7 | 371.83 | 388.52 | 371.85 | 388.97 | 371.88 | 390.16 | 371.92 |
| 407.52 | 371.66 | 407.8 | 371.66 | 408.86 | 371.69 | 410.88 | 371.66 | 412.39 | 371.65 |
| 413.51 | 371.77 | 413.81 | 371.79 | 415.36 | 371.82 | 417.37 | 371.83 | 420.02 | 371.78 |
| 421.61 | 371.78 | 422.2 | 371.73 | 423.53 | 371.7 | 426.46 | 371.7 | 428.96 | 371.67 |
| 434.55 | 371.72 | 438.93 | 371.71 | 440.96 | 371.62 | 441.04 | 371.58 | 443.08 | 371.51 |
| 443.46 | 371.49 | 444.27 | 371.47 | 445.29 | 371.43 | 446.68 | 371.43 | 450.19 | 371.46 |
| 450.8 | 371.47 | 451.65 | 371.51 | 452.12 | 371.58 | 453.74 | 371.74 | 462.4 | 372.15 |
| 463.73 | 372.19 | 466.87 | 372.31 | 471.58 | 372.24 | 473.09 | 372.3 | 473.45 | 372.26 |
| 473.96 | 372.24 | 475.64 | 372.01 | 476.19 | 371.96 | 477.72 | 371.93 | 478.71 | 371.92 |
| 480.82 | 371.93 | 483.25 | 371.99 | 491.82 | 372.07 | 493.34 | 372.03 | 505.32 | 372.14 |
| 505.54 | 372.13 | 509.81 | 372 | 511.02 | 372.02 | 512.12 | 372.02 | 513.03 | 372.03 |
| 515.9 | 372.03 | 519.19 | 371.92 | 520.99 | 371.81 | 522.09 | 371.76 | 522.67 | 371.75 |
| 523.55 | 371.75 | 525.04 | 371.78 | 525.65 | 371.82 | 526.6 | 371.83 | 527.09 | 371.82 |
| 531.86 | 371.75 | 532.97 | 371.74 | 535.03 | 371.77 | 538.07 | 371.79 | 542.69 | 371.55 |
| 542.88 | 371.5 | 543.62 | 371.48 | 545.47 | 371.52 | 546.66 | 371.57 | 547.88 | 371.66 |
| 553.33 | 372.07 | 554.07 | 372.12 | 556.33 | 372.13 | 559.87 | 372.12 | 560.99 | 372.11 |
| 561.99 | 372.16 | 562.49 | 372.15 | 563.73 | 372.16 | 567.32 | 372.13 | 568.16 | 372.1 |
| 570.81 | 372.07 | 585.35 | 372.07 | 588.24 | 372.01 | 589.96 | 372.02 | 591.67 | 372.02 |
| 593.2 | 371.99 | 593.37 | 371.97 | 593.95 | 371.84 | 594.58 | 371.83 | 598.93 | 371.92 |
| 600 | 371.93 | 602.08 | 371.94 | 603.61 | 371.96 | 604.62 | 371.98 | 606.93 | 371.94 |
| 608.23 | 371.94 | 609.64 | 371.97 | 611.53 | 372.04 | 619.34 | 372.02 | 619.71 | 371.99 |
| 625.72 | 371.98 | 627.84 | 372 | 629.17 | 372.03 | 632.37 | 372.06 | 632.96 | 372.06 |
| 636.51 | 372.04 | 637.01 | 372.04 | 638.25 | 372.02 | 639.69 | 371.97 | 641.89 | 371.87 |
| 643.71 | 371.77 | 644.74 | 371.76 | 649.82 | 371.44 | 653.03 | 371.38 | 655.02 | 371.3 |
| 657.4 | 371.27 | 659.71 | 371.27 | 662 | 371.26 | 664.47 | 371.31 | 665.3 | 371.43 |
| 665.5 | 371.44 | 667.32 | 371.47 | 668.21 | 371.49 | 670.32 | 371.5 | 674.82 | 371.58 |
| 676.41 | 371.57 | 678.16 | 371.52 | 680.84 | 371.4 | 682.27 | 371.32 | 683.77 | 371.26 |
| 686.21 | 371.2 | 686.88 | 371.18 | 691.48 | 371.11 | 692.48 | 371.1 | 693.23 | 371.13 |
| 695.43 | 371.24 | 696.39 | 371.32 | 697.36 | 371.43 | 698.62 | 371.53 | 699.86 | 371.61 |
| 701.55 | 371.71 | 703.76 | 371.82 | 705.52 | 371.89 | 706.86 | 371.89 | 710.3 | 371.84 |
| 711.97 | 371.8 | 713.15 | 371.76 | 714.51 | 371.69 | 717.86 | 371.53 | 720.17 | 371.39 |
| 721.7 | 371.31 | 722.34 | 371.29 | 724.21 | 371.3 | 727.2 | 371.4 | 727.5 | 371.43 |
| 728.06 | 371.55 | 729.1 | 371.61 | 731.58 | 371.71 | 732.31 | 371.76 | 733.17 | 371.8 |
| 734.01 | 371.85 | 735.32 | 371.89 | 737.95 | 371.93 | 740.52 | 371.96 | 742.74 | 372.02 |
| 743.74 | 372.01 | 743.91 | 372.02 | 745.32 | 372.01 | 747.41 | 372.01 | 748.21 | 371.99 |
| 751.91 | 371.82 | 752.81 | 371.76 | 754.36 | 371.7 | 756.95 | 371.67 | 760.37 | 371.68 |
| 770.41 | 371.76 | 770.75 | 371.78 | 772.49 | 371.82 | 772.88 | 371.82 | 773.02 | 371.84 |
| 774.68 | 371.84 | 775.65 | 371.82 | 782.42 | 371.62 | 784.02 | 371.62 | 784.61 | 371.6 |
| 788.6 | 371.41 | 789.02 | 371.4 | 790.79 | 371.38 | 791.26 | 371.38 | 792.81 | 371.42 |
| 793.37 | 371.51 | 793.82 | 371.53 | 795.78 | 371.53 | 797.91 | 371.48 | 800.71 | 371.38 |
| 803.13 | 371.27 | 803.9 | 371.22 | 804.71 | 371.19 | 805.63 | 371.17 | 806.09 | 371.17 |
| 806.81 | 371.19 | 808.22 | 371.19 | 808.93 | 371.22 | 809.5 | 371.23 | 813.22 | 371.41 |
| 813.92 | 371.4 | 814.6 | 371.44 | 816.87 | 371.48 | 825.87 | 371.72 | 827.63 | 371.75 |
| 830.6 | 371.78 | 832.59 | 371.83 | 836.47 | 372.07 | 837.67 | 372.15 | 837.9 | 372.15 |
| 839.02 | 372.2 | 840 | 372.23 | 842.46 | 372.26 | 843.39 | 372.28 | 849.28 | 372.35 |
| 849.63 | 372.35 | 863.46 | 372.17 | 865.1 | 372.14 | 868.13 | 372.06 | 871.92 | 372.07 |
| 872.12 | 372.11 | 877.86 | 372.48 | 878.13 | 372.47 | 878.68 | 372.52 | 879.2 | 372.52 |
| 882.62 | 372.43 | 883.47 | 372.4 | 884.34 | 372.36 | 892.57 | 372.29 | 896.13 | 372.36 |
| 898.14 | 372.32 | 899.39 | 372.25 | 900.24 | 372.24 | 903.11 | 372.27 | 905.49 | 372.35 |
| 906.14 | 372.36 | 907.61 | 372.42 | 908.06 | 372.46 | 908.56 | 372.45 | 910.93 | 372.59 |
| 913.55 | 372.73 | 914.09 | 372.75 | 916.7 | 372.87 | 919.12 | 372.95 | 920.06 | 372.97 |
| 921.78 | 372.97 | 922.99 | 372.99 | 925.7 | 372.99 | 927.22 | 372.98 | 928.06 | 372.99 |
| 928.88 | 372.98 | 929.63 | 372.94 | 934.01 | 372.78 | 937.66 | 372.67 | 937.85 | 372.66 |
| 939.43 | 372.63 | 943.9 | 372.57 | 951.5 | 372.56 | 954.59 | 372.6 | 955.54 | 372.6 |
| 957.21 | 372.62 | 959.1 | 372.67 | 959.91 | 372.71 | 961.05 | 372.75 | 966.24 | 372.89 |
| 967.1 | 372.92 | 969.64 | 372.97 | 969.98 | 372.98 | 971.27 | 372.98 | 971.93 | 372.96 |
| 973.25 | 372.96 | 973.51 | 372.97 | 976.51 | 372.96 | 977.41 | 372.98 | 979.72 | 373.04 |
| 981.12 | 373.05 | 981.85 | 373.04 | 983.23 | 373.04 | 986.06 | 373.05 | 988.92 | 373.1 |
| 989.95 | 373.1 | 990.04 | 373.08 | 1001.44 | 373.1 | 1002.75 | 373.12 | 1007.66 | 373.09 |
| 1019.16 | 373.15 | 1021.4 | 373.05 | 1022.2 | 373.02 | 1023.94 | 373.01 | 1025.61 | 373.18 |
| 1026.05 | 373.22 | 1027.12 | 373.21 | 1035.24 | 373.39 | 1037.86 | 373.44 | 1039.96 | 373.46 |
| 1042.06 | 373.47 | 1043.31 | 373.48 | 1048.28 | 373.46 | 1050.35 | 373.43 | 1052.98 | 373.38 |
| 1053.6 | 373.38 | 1054.37 | 373.35 | 1055.9 | 373.31 | 1057.7 | 373.29 | 1059.65 | 373.21 |
| 1060 | 373.11 | 1060.7 | 373.06 | 1062.29 | 373.01 | 1062.85 | 373.01 | 1065.69 | 373.03 |
| 1071.51 | 373.16 | 1072.81 | 373.16 | 1084.93 | 373.04 | 1085.47 | 373.07 | 1086.36 | 373.1 |
| 1089.63 | 373.27 | 1091.68 | 373.36 | 1093.05 | 373.45 | 1094.67 | 373.5 | 1096.57 | 373.54 |
| 1104.68 | 373.61 | 1106.43 | 373.61 | 1106.65 | 373.59 | 1107.07 | 373.6 | 1113.37 | 373.66 |
| 1114.5 | 373.65 | 1117.78 | 373.6 | 1119.26 | 373.57 | 1120.99 | 373.48 | 1122.7 | 373.45 |
| 1124.22 | 373.44 | 1126.38 | 373.45 | 1127.46 | 373.45 | 1128.27 | 373.44 | 1130.67 | 373.45 |
| 1132.87 | 373.44 | 1135.72 | 373.4 | 1137.85 | 373.4 | 1139.31 | 373.36 | 1140.14 | 373.31 |
| 1141.75 | 373.29 | 1143.6 | 373.24 | 1148.92 | 373.23 | 1152.51 | 373.27 | 1153.2 | 373.25 |
| 1153.94 | 373.21 | 1154.18 | 373.21 | 1154.37 | 373.15 | 1154.61 | 373.15 | 1158.17 | 373.56 |
| 1159.11 | 373.65 | 1161.16 | 373.79 | 1161.47 | 373.8 | 1163.61 | 373.83 | 1169.66 | 373.8 |
| 1170.85 | 373.8 | 1174.14 | 373.88 | 1174.8 | 373.89 | 1178.96 | 373.94 | 1180.21 | 373.95 |
| 1181.89 | 373.99 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 32.83 | .05 | 142.43 | .04 | 840 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 142.43 | 840 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0

REACH: WASH0 RS: 6774.75*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 38.31 | 371.26 | 40.02 | 371.27 | 47.95 | 371.35 | 54.3 | 371.36 | 56.53 | 371.37 |
| 61.56 | 371.38 | 64.17 | 371.38 | 77.91 | 371.37 | 81.9 | 371.38 | 88.19 | 371.36 |
| 97.29 | 371.36 | 99.94 | 371.34 | 103.46 | 371.35 | 110.35 | 371.32 | 111.23 | 371.32 |
| 111.76 | 371.3 | 112.84 | 371.3 | 118.45 | 371.34 | 118.78 | 371.33 | 120.57 | 371.34 |
| 125.04 | 371.36 | 126.7 | 371.36 | 128.04 | 371.35 | 130.88 | 371.32 | 132.71 | 371.29 |
| 133.53 | 371.27 | 135.88 | 371.23 | 136.79 | 371.21 | 137.81 | 371.16 | 138.47 | 371.15 |
| 139.5 | 371.15 | 140.61 | 371.12 | 142.16 | 371.03 | 143.31 | 370.93 | 143.78 | 370.93 |
| 144 | 370.91 | 145.51 | 370.81 | 151.17 | 370.65 | 152.47 | 370.62 | 153.2 | 370.61 |
| 154.57 | 370.55 | 154.66 | 370.52 | 155.07 | 370.51 | 160.58 | 370.44 | 161.13 | 370.44 |
| 162.93 | 370.38 | 163.74 | 370.33 | 165.11 | 370.34 | 165.26 | 370.35 | 167.71 | 370.38 |
| 168.36 | 370.37 | 172.66 | 370.37 | 175.08 | 370.41 | 176.3 | 370.48 | 178.71 | 370.48 |
| 180.14 | 370.51 | 180.78 | 370.5 | 184.82 | 370.38 | 185.12 | 370.39 | 186.85 | 370.33 |
| 187.08 | 370.33 | 189.91 | 370.27 | 190.63 | 370.26 | 192.49 | 370.18 | 204.16 | 370.19 |
| 212.26 | 370.31 | 215.18 | 370.31 | 216.22 | 370.32 | 218.07 | 370.12 | 219.82 | 369.82 |
| 225.76 | 369.8 | 230.7 | 369.78 | 232.43 | 369.78 | 233.24 | 369.73 | 234.31 | 369.7 |
| 235.6 | 369.65 | 236.16 | 369.64 | 239.62 | 369.49 | 242.97 | 369.37 | 243.17 | 369.37 |
| 244.99 | 369.3 | 251.46 | 369.16 | 252.89 | 369.14 | 253.84 | 369.11 | 255.66 | 369.07 |
| 260.18 | 368.99 | 262.69 | 369.01 | 263.19 | 369.02 | 270.21 | 369.06 | 271.39 | 369.07 |
| 276.15 | 369.13 | 276.81 | 369.13 | 278.15 | 369.16 | 280.96 | 369.26 | 283.64 | 369.38 |
| 284.43 | 369.39 | 286.91 | 369.48 | 292.76 | 369.6 | 293.59 | 369.6 | 295.29 | 369.56 |
| 300.28 | 369.54 | 304.7 | 369.56 | 305.43 | 369.57 | 310.53 | 369.57 | 313.21 | 369.62 |
| 314.58 | 369.66 | 319.06 | 369.8 | 325.49 | 369.91 | 342.69 | 370.31 | 344.38 | 370.55 |
| 344.89 | 370.61 | 346.59 | 370.86 | 347.27 | 370.85 | 347.5 | 370.88 | 350.77 | 370.87 |
| 352 | 370.87 | 357.09 | 370.93 | 358.33 | 370.93 | 359 | 370.94 | 362.06 | 370.91 |
| 363.88 | 370.92 | 365.03 | 370.91 | 365.25 | 370.92 | 367.69 | 370.9 | 370.02 | 370.9 |
| 375.62 | 370.97 | 376.44 | 370.99 | 376.9 | 371.03 | 378.1 | 371.08 | 395.57 | 370.85 |
| 395.85 | 370.85 | 396.92 | 370.89 | 398.95 | 370.87 | 400.46 | 370.87 | 401.59 | 370.97 |
| 403.46 | 371.01 | 405.48 | 371.02 | 408.15 | 370.98 | 408.87 | 370.99 | 409.75 | 370.99 |
| 410.34 | 370.93 | 411.07 | 370.9 | 414.63 | 370.89 | 417.15 | 370.87 | 422.77 | 370.93 |
| 427.18 | 370.92 | 429.22 | 370.82 | 429.3 | 370.79 | 431.35 | 370.69 | 431.74 | 370.68 |
| 433.06 | 370.62 | 433.58 | 370.59 | 434.55 | 370.59 | 434.98 | 370.58 | 438.51 | 370.61 |
| 439.12 | 370.62 | 439.98 | 370.66 | 440.45 | 370.74 | 442.08 | 370.92 | 450.8 | 371.37 |
| 452.14 | 371.41 | 455.3 | 371.54 | 460.03 | 371.44 | 461.56 | 371.5 | 461.92 | 371.45 |
| 462.43 | 371.42 | 464.13 | 371.16 | 464.68 | 371.1 | 466.22 | 371.06 | 467.21 | 371.05 |
| 469.34 | 371.06 | 470.24 | 371.08 | 471.78 | 371.14 | 480.4 | 371.23 | 481.94 | 371.2 |
| 493.99 | 371.33 | 494.22 | 371.32 | 498.51 | 371.22 | 499.74 | 371.24 | 500.84 | 371.25 |
| 501.76 | 371.25 | 503.97 | 371.26 | 504.64 | 371.25 | 507.95 | 371.12 | 509.76 | 370.99 |
| 510.87 | 370.92 | 512.34 | 370.91 | 513.45 | 370.93 | 514.45 | 370.98 | 515.91 | 370.99 |
| 521.82 | 370.94 | 523.89 | 370.98 | 526.95 | 371 | 527.36 | 370.99 | 531.61 | 370.81 |
| 531.8 | 370.77 | 532.54 | 370.75 | 534.4 | 370.79 | 535.6 | 370.83 | 542.32 | 371.27 |
| 543.06 | 371.31 | 544.71 | 371.31 | 545.33 | 371.32 | 548.89 | 371.32 | 550.02 | 371.31 |
| 550.86 | 371.35 | 552.78 | 371.36 | 556.24 | 371.33 | 557.23 | 371.3 | 558.77 | 371.28 |
| 559.9 | 371.28 | 574.53 | 371.34 | 577.44 | 371.3 | 579.18 | 371.33 | 581.52 | 371.34 |
| 582.61 | 371.31 | 583.19 | 371.2 | 583.83 | 371.19 | 588.21 | 371.27 | 589.28 | 371.28 |
| 592.92 | 371.3 | 593.93 | 371.33 | 596.25 | 371.26 | 596.92 | 371.25 | 598.45 | 371.25 |
| 600.88 | 371.32 | 608.74 | 371.28 | 609.12 | 371.26 | 615.17 | 371.23 | 617.3 | 371.24 |
| 618.64 | 371.26 | 621.86 | 371.28 | 622.45 | 371.28 | 626.02 | 371.25 | 626.53 | 371.25 |
| 627.78 | 371.23 | 629.23 | 371.18 | 631.45 | 371.09 | 633.28 | 371 | 634.31 | 370.98 |
| 639.42 | 370.68 | 642.66 | 370.62 | 644.66 | 370.52 | 646.01 | 370.49 | 649.38 | 370.49 |
| 652.26 | 370.48 | 654.17 | 370.52 | 655.21 | 370.65 | 657.04 | 370.68 | 657.93 | 370.7 |
| 660.05 | 370.73 | 664.58 | 370.82 | 666.19 | 370.82 | 667.94 | 370.77 | 670.64 | 370.66 |
| 672.08 | 370.59 | 673.59 | 370.54 | 676.05 | 370.48 | 676.72 | 370.46 | 681.35 | 370.38 |
| 682.36 | 370.37 | 684.73 | 370.47 | 685.57 | 370.51 | 686.29 | 370.57 | 686.83 | 370.63 |
| 688.53 | 370.78 | 691.03 | 370.94 | 691.49 | 370.98 | 693.7 | 371.1 | 695.48 | 371.19 |
| 695.57 | 371.2 | 696.82 | 371.2 | 698.26 | 371.19 | 700.29 | 371.16 | 701.97 | 371.13 |
| 703.16 | 371.09 | 704.53 | 371.02 | 707.9 | 370.86 | 710.22 | 370.72 | 712.15 | 370.63 |
| 714.29 | 370.62 | 714.85 | 370.63 | 717.3 | 370.69 | 717.71 | 370.72 | 718.25 | 370.83 |
| 719.21 | 370.87 | 721.71 | 370.96 | 722.44 | 371.01 | 724.15 | 371.09 | 725.47 | 371.14 |
| 728.12 | 371.2 | 730.71 | 371.24 | 731.85 | 371.28 | 732.94 | 371.31 | 734.12 | 371.3 |
| 735.53 | 371.28 | 737.64 | 371.28 | 738.44 | 371.26 | 742.17 | 371.1 | 743.73 | 371.02 |
| 744.63 | 370.99 | 747.23 | 370.96 | 750.68 | 370.97 | 760.79 | 371.07 | 761.12 | 371.09 |
| 762.88 | 371.12 | 763.27 | 371.12 | 763.42 | 371.15 | 765.08 | 371.15 | 766.05 | 371.12 |
| 772.87 | 370.9 | 773.66 | 370.89 | 774.16 | 370.9 | 775.08 | 370.87 | 779.1 | 370.68 |
| 779.52 | 370.67 | 781.3 | 370.66 | 783.12 | 370.7 | 783.33 | 370.72 | 783.89 | 370.83 |
| 784.34 | 370.85 | 786.9 | 370.86 | 788.31 | 370.83 | 788.47 | 370.82 | 791.28 | 370.72 |
| 793.06 | 370.65 | 794.28 | 370.58 | 795.31 | 370.53 | 795.75 | 370.52 | 796.69 | 370.52 |
| 797.24 | 370.53 | 798.84 | 370.53 | 800.51 | 370.59 | 803.87 | 370.73 | 804.57 | 370.72 |
| 805.25 | 370.75 | 807.55 | 370.79 | 816.6 | 371 | 818.37 | 371.04 | 821.36 | 371.07 |
| 822.69 | 371.1 | 823.52 | 371.13 | 824.99 | 371.23 | 827.27 | 371.36 | 827.58 | 371.37 |
| 828.48 | 371.43 | 829.83 | 371.49 | 830.83 | 371.52 | 831.48 | 371.54 | 833.37 | 371.57 |
| 834.33 | 371.6 | 840.41 | 371.73 | 840.77 | 371.73 | 855.07 | 371.63 | 859.89 | 371.54 |
| 863.81 | 371.55 | 864.01 | 371.58 | 868.34 | 371.82 | 869.94 | 371.9 | 870.35 | 371.9 |
| 870.79 | 371.94 | 872.44 | 371.91 | 874.86 | 371.84 | 875.74 | 371.79 | 876.64 | 371.76 |
| 885.14 | 371.68 | 886.79 | 371.7 | 888.82 | 371.75 | 889.28 | 371.75 | 890.9 | 371.73 |
| 892.19 | 371.68 | 893.07 | 371.67 | 896.04 | 371.7 | 898.49 | 371.76 | 899.16 | 371.77 |
| 900.69 | 371.82 | 901.08 | 371.85 | 901.67 | 371.84 | 904.11 | 371.98 | 906.82 | 372.1 |
| 908.47 | 372.16 | 910.07 | 372.23 | 912.58 | 372.31 | 913.55 | 372.33 | 914.48 | 372.34 |
| 914.76 | 372.33 | 916.57 | 372.36 | 919.37 | 372.37 | 922.54 | 372.37 | 923.44 | 372.32 |
| 927.96 | 372.14 | 931.73 | 372 | 931.93 | 371.99 | 933.56 | 371.96 | 937.45 | 371.92 |
| 938.18 | 371.92 | 946.04 | 371.94 | 950.21 | 371.99 | 952.68 | 372.03 | 954.51 | 372.09 |
| 955.9 | 372.14 | 961.26 | 372.28 | 962.16 | 372.31 | 964.78 | 372.36 | 966.15 | 372.37 |
| 966.92 | 372.36 | 967.58 | 372.34 | 968.78 | 372.34 | 971.88 | 372.32 | 973.58 | 372.37 |
| 976.44 | 372.42 | 976.64 | 372.41 | 978.82 | 372.41 | 981.34 | 372.42 | 983.62 | 372.46 |
| 983.85 | 372.47 | 985.17 | 372.49 | 985.77 | 372.49 | 985.86 | 372.47 | 997.64 | 372.51 |
| 999 | 372.53 | 1004.07 | 372.5 | 1015.95 | 372.56 | 1018.26 | 372.43 | 1019.09 | 372.4 |
| 1020.97 | 372.39 | 1023.07 | 372.63 | 1024.18 | 372.62 | 1032.57 | 372.83 | 1035.27 | 372.88 |
| 1037.44 | 372.91 | 1039.61 | 372.92 | 1040.9 | 372.93 | 1046.04 | 372.9 | 1046.94 | 372.89 |
| 1050.89 | 372.8 | 1051.54 | 372.8 | 1052.33 | 372.77 | 1053.92 | 372.73 | 1056.12 | 372.68 |
| 1057.79 | 372.61 | 1058.15 | 372.49 | 1058.87 | 372.44 | 1060.51 | 372.39 | 1061.1 | 372.38 |
| 1063.9 | 372.4 | 1064.03 | 372.41 | 1070.04 | 372.57 | 1083.91 | 372.47 | 1085.39 | 372.51 |
| 1088.77 | 372.68 | 1090.2 | 372.74 | 1090.88 | 372.76 | 1092.3 | 372.86 | 1095.4 | 372.93 |
| 1095.94 | 372.95 | 1104.32 | 373 | 1106.13 | 373 | 1106.36 | 372.98 | 1107.9 | 372.99 |
| 1113.29 | 373.05 | 1114.47 | 373.05 | 1117.85 | 373 | 1119.39 | 372.96 | 1121.17 | 372.86 |
| 1122.94 | 372.82 | 1126.74 | 372.82 | 1127.86 | 372.83 | 1128.69 | 372.82 | 1131.17 | 372.84 |
| 1133.45 | 372.83 | 1135.57 | 372.79 | 1136.39 | 372.78 | 1138.79 | 372.77 | 1140.1 | 372.72 |
| 1140.96 | 372.67 | 1142.62 | 372.64 | 1144.53 | 372.6 | 1150.03 | 372.59 | 1153.73 | 372.65 |
| 1155.47 | 372.61 | 1155.66 | 372.55 | 1155.91 | 372.56 | 1159.59 | 373.03 | 1160.56 | 373.13 |
| 1162.36 | 373.27 | 1162.99 | 373.31 | 1165.21 | 373.33 | 1171.46 | 373.26 | 1172.69 | 373.26 |
| 1176.09 | 373.33 | 1176.77 | 373.34 | 1181.07 | 373.37 | 1182.36 | 373.39 | 1182.85 | 373.39 |
| 1184.09 | 373.43 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 38.31 | .05 | 139.5 | .04 | 830.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 139.5 | 830.83 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6727.98*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 43.78 | 370.47 | 45.35 | 370.48 | 52.63 | 370.54 | 58.44 | 370.55 | 60.49 | 370.56 |
| 65.11 | 370.57 | 67.5 | 370.58 | 80.1 | 370.55 | 83.75 | 370.56 | 89.52 | 370.55 |
| 97.87 | 370.56 | 100.3 | 370.54 | 103.53 | 370.55 | 109.85 | 370.53 | 110.78 | 370.52 |
| 111.51 | 370.5 | 112.13 | 370.5 | 117.27 | 370.53 | 119.21 | 370.53 | 123.31 | 370.56 |
| 124.84 | 370.56 | 128.67 | 370.53 | 130.35 | 370.5 | 131.1 | 370.48 | 133.26 | 370.44 |
| 134.1 | 370.42 | 134.64 | 370.39 | 135.63 | 370.36 | 136.58 | 370.36 | 137.59 | 370.33 |
| 138.88 | 370.27 | 140.07 | 370.18 | 140.7 | 370.16 | 142.1 | 370.07 | 147.29 | 369.92 |
| 148.48 | 369.89 | 149.16 | 369.88 | 150.41 | 369.83 | 150.87 | 369.8 | 155.93 | 369.73 |
| 156.43 | 369.73 | 157.48 | 369.7 | 158.83 | 369.63 | 159.37 | 369.64 | 160.23 | 369.64 |
| 161.45 | 369.66 | 163.43 | 369.66 | 165.73 | 369.64 | 166.91 | 369.65 | 167.02 | 369.64 |
| 169.24 | 369.68 | 170.64 | 369.74 | 172.73 | 369.74 | 172.77 | 369.75 | 174.48 | 369.76 |
| 178.19 | 369.66 | 178.45 | 369.66 | 180.04 | 369.62 | 180.26 | 369.62 | 183.21 | 369.55 |
| 183.52 | 369.56 | 185.23 | 369.49 | 195.94 | 369.5 | 203.37 | 369.6 | 207 | 369.6 |
| 208.7 | 369.37 | 210.31 | 369.02 | 220.3 | 368.93 | 221.69 | 368.92 | 222.16 | 368.9 |
| 225.32 | 368.79 | 228.49 | 368.66 | 231.56 | 368.55 | 233.42 | 368.48 | 239.36 | 368.36 |
| 243.21 | 368.27 | 247.36 | 368.2 | 249.88 | 368.22 | 250.39 | 368.23 | 257.45 | 368.27 |
| 258.65 | 368.28 | 263.44 | 368.34 | 264.09 | 368.34 | 264.78 | 368.36 | 265.45 | 368.36 |
| 268.27 | 368.47 | 269.37 | 368.52 | 270.97 | 368.58 | 271.77 | 368.6 | 274.27 | 368.69 |
| 280.16 | 368.83 | 280.99 | 368.83 | 282.7 | 368.79 | 287.72 | 368.73 | 290.32 | 368.72 |
| 291.97 | 368.73 | 292.9 | 368.73 | 298.03 | 368.71 | 300.73 | 368.75 | 302.11 | 368.78 |
| 306.62 | 368.91 | 313.09 | 369.02 | 330.4 | 369.42 | 332.1 | 369.7 | 332.61 | 369.77 |
| 334.33 | 370.04 | 335.01 | 370.03 | 335.24 | 370.07 | 335.69 | 370.06 | 338.53 | 370.04 |
| 339.77 | 370.04 | 344.89 | 370.09 | 346.82 | 370.09 | 349.89 | 370.06 | 351.63 | 370.07 |
| 351.73 | 370.06 | 353.11 | 370.06 | 355.56 | 370.03 | 357.9 | 370.03 | 363.54 | 370.11 |
| 364.37 | 370.13 | 364.82 | 370.18 | 366.03 | 370.23 | 383.62 | 370.04 | 384.97 | 370.09 |
| 387.01 | 370.08 | 388.54 | 370.08 | 389.98 | 370.18 | 391.55 | 370.2 | 393.59 | 370.21 |
| 396.27 | 370.19 | 397.89 | 370.19 | 398.48 | 370.13 | 399.82 | 370.08 | 399.95 | 370.09 |
| 402.79 | 370.09 | 405.33 | 370.08 | 409.94 | 370.12 | 410.32 | 370.13 | 415.43 | 370.13 |
| 417.48 | 370.02 | 417.56 | 369.99 | 420.01 | 369.86 | 420.84 | 369.81 | 421.34 | 369.79 |
| 421.87 | 369.75 | 422.84 | 369.75 | 423.28 | 369.74 | 424.23 | 369.75 | 425.61 | 369.75 |
| 426.83 | 369.76 | 427.86 | 369.78 | 428.31 | 369.81 | 428.79 | 369.9 | 430.42 | 370.1 |
| 439.2 | 370.58 | 440.54 | 370.62 | 443.72 | 370.76 | 448.49 | 370.63 | 450.02 | 370.7 |
| 450.39 | 370.64 | 450.91 | 370.61 | 452.61 | 370.3 | 453.02 | 370.25 | 453.47 | 370.22 |
| 454.71 | 370.19 | 455.71 | 370.18 | 457.86 | 370.2 | 458.77 | 370.22 | 460.32 | 370.28 |
| 468.99 | 370.39 | 470.54 | 370.37 | 482.66 | 370.52 | 482.89 | 370.52 | 487.21 | 370.44 |
| 489.25 | 370.47 | 490.48 | 370.48 | 492.71 | 370.48 | 493.38 | 370.47 | 496.71 | 370.32 |
| 498.54 | 370.17 | 499.65 | 370.09 | 501.13 | 370.08 | 502.65 | 370.11 | 503.26 | 370.14 |
| 504.72 | 370.15 | 509.55 | 370.14 | 510.67 | 370.14 | 512.76 | 370.19 | 514.15 | 370.21 |
| 515.84 | 370.22 | 516.25 | 370.21 | 520.52 | 370.06 | 520.71 | 370.03 | 521.46 | 370.02 |
| 523.34 | 370.05 | 524.54 | 370.09 | 525.77 | 370.16 | 531.3 | 370.46 | 532.2 | 370.5 |
| 533.71 | 370.5 | 534.33 | 370.51 | 537.92 | 370.52 | 539.05 | 370.51 | 540.06 | 370.55 |
| 541.82 | 370.55 | 544.07 | 370.54 | 545.31 | 370.53 | 545.84 | 370.5 | 547.85 | 370.49 |
| 549 | 370.49 | 563.72 | 370.6 | 566.65 | 370.58 | 568.39 | 370.63 | 570.13 | 370.66 |
| 571.68 | 370.65 | 571.84 | 370.64 | 572.43 | 370.55 | 574.1 | 370.56 | 577.48 | 370.63 |
| 578.56 | 370.64 | 580.67 | 370.64 | 582.22 | 370.65 | 583.24 | 370.68 | 585.58 | 370.58 |
| 586.76 | 370.55 | 587.79 | 370.55 | 590.24 | 370.59 | 598.15 | 370.54 | 598.53 | 370.52 |
| 604.62 | 370.48 | 606.76 | 370.48 | 608.11 | 370.49 | 611.35 | 370.5 | 611.95 | 370.49 |
| 615.54 | 370.46 | 616.05 | 370.46 | 618.76 | 370.39 | 621 | 370.31 | 622.84 | 370.22 |
| 623.88 | 370.2 | 629.02 | 369.92 | 632.28 | 369.85 | 634.29 | 369.74 | 635.65 | 369.7 |
| 639.04 | 369.7 | 641.94 | 369.69 | 643.87 | 369.74 | 644.7 | 369.84 | 644.91 | 369.85 |
| 646.75 | 369.89 | 647.65 | 369.92 | 649.78 | 369.95 | 654.34 | 370.07 | 655.96 | 370.06 |
| 657.73 | 370.02 | 660.44 | 369.93 | 661.32 | 369.89 | 663.41 | 369.82 | 665.88 | 369.76 |
| 666.56 | 369.74 | 671.21 | 369.65 | 672.23 | 369.64 | 672.99 | 369.66 | 674.62 | 369.72 |
| 675.47 | 369.76 | 676.19 | 369.81 | 677.63 | 369.96 | 678.45 | 370.03 | 679.7 | 370.12 |
| 680.96 | 370.2 | 681.42 | 370.24 | 683.65 | 370.39 | 685.53 | 370.5 | 686.79 | 370.51 |
| 688.23 | 370.5 | 690.28 | 370.48 | 691.97 | 370.45 | 693.17 | 370.42 | 694.55 | 370.35 |
| 697.94 | 370.19 | 700.28 | 370.06 | 701.82 | 369.98 | 702.48 | 369.96 | 704.11 | 369.94 |
| 704.93 | 369.94 | 707.4 | 369.97 | 707.82 | 370 | 708.36 | 370.09 | 711.84 | 370.2 |
| 712.57 | 370.26 | 713.45 | 370.29 | 714.3 | 370.34 | 715.62 | 370.39 | 718.28 | 370.47 |
| 720.26 | 370.51 | 722.04 | 370.57 | 723.14 | 370.59 | 724.32 | 370.58 | 726.83 | 370.55 |
| 727.86 | 370.55 | 728.68 | 370.53 | 733.13 | 370.35 | 733.34 | 370.33 | 734.9 | 370.28 |
| 737.52 | 370.24 | 740.99 | 370.26 | 751.17 | 370.37 | 751.5 | 370.39 | 753.27 | 370.42 |
| 753.66 | 370.42 | 753.81 | 370.46 | 755.48 | 370.46 | 756.46 | 370.43 | 763.33 | 370.18 |
| 764.94 | 370.17 | 765.55 | 370.15 | 769.59 | 369.95 | 771.81 | 369.94 | 772.28 | 369.95 |
| 773.64 | 370 | 773.85 | 370.02 | 774.42 | 370.15 | 774.87 | 370.18 | 776.86 | 370.2 |
| 777.44 | 370.2 | 779.02 | 370.17 | 781.85 | 370.07 | 784.31 | 369.96 | 784.87 | 369.92 |
| 785.9 | 369.88 | 786.83 | 369.86 | 787.3 | 369.86 | 788.31 | 369.88 | 789.46 | 369.88 |
| 791.14 | 369.92 | 794.52 | 370.04 | 795.23 | 370.03 | 795.91 | 370.06 | 798.22 | 370.09 |
| 807.33 | 370.29 | 812.13 | 370.37 | 814.14 | 370.42 | 815.77 | 370.52 | 818.07 | 370.64 |
| 818.38 | 370.65 | 819.29 | 370.71 | 821.65 | 370.81 | 824.27 | 370.88 | 831.54 | 371.1 |
| 831.92 | 371.11 | 846.67 | 371.08 | 850.51 | 371.04 | 851.65 | 371.02 | 855.69 | 371.03 |
| 855.91 | 371.06 | 860.37 | 371.26 | 862.02 | 371.33 | 862.45 | 371.33 | 862.9 | 371.36 |
| 864.6 | 371.32 | 867.1 | 371.24 | 868.01 | 371.19 | 868.94 | 371.15 | 877.72 | 371.06 |
| 878.05 | 371.06 | 881.99 | 371.15 | 883.66 | 371.14 | 884.99 | 371.1 | 887.15 | 371.12 |
| 888.96 | 371.13 | 892.09 | 371.19 | 892.19 | 371.18 | 893.76 | 371.22 | 894.17 | 371.24 |
| 894.77 | 371.24 | 897.3 | 371.36 | 900.09 | 371.47 | 901.49 | 371.52 | 901.8 | 371.52 |
| 903.45 | 371.59 | 905.44 | 371.64 | 906.49 | 371.68 | 908.88 | 371.71 | 910.16 | 371.74 |
| 913.05 | 371.75 | 914.67 | 371.75 | 915.57 | 371.76 | 916.44 | 371.75 | 917.24 | 371.7 |
| 921.91 | 371.49 | 926.02 | 371.33 | 927.69 | 371.3 | 931.71 | 371.27 | 932.46 | 371.27 |
| 940.57 | 371.32 | 943.87 | 371.37 | 944.88 | 371.38 | 947.42 | 371.42 | 950.76 | 371.53 |
| 956.29 | 371.67 | 957.21 | 371.7 | 959.91 | 371.75 | 961.33 | 371.76 | 961.8 | 371.74 |
| 963.05 | 371.72 | 964.05 | 371.72 | 967.25 | 371.68 | 968.61 | 371.72 | 970.67 | 371.77 |
| 971.56 | 371.78 | 974.42 | 371.78 | 977.01 | 371.8 | 977.44 | 371.8 | 979.36 | 371.85 |
| 980.48 | 371.87 | 981.58 | 371.88 | 981.68 | 371.85 | 993.84 | 371.91 | 995.24 | 371.94 |
| 1000.48 | 371.92 | 1012.74 | 371.96 | 1015.12 | 371.82 | 1015.98 | 371.79 | 1017.24 | 371.77 |
| 1017.92 | 371.77 | 1020.09 | 372.04 | 1021.23 | 372.03 | 1029.89 | 372.27 | 1031.72 | 372.31 |
| 1032.68 | 372.32 | 1034.92 | 372.36 | 1037.16 | 372.37 | 1038.5 | 372.39 | 1043.8 | 372.34 |
| 1046.58 | 372.28 | 1048.81 | 372.22 | 1049.47 | 372.22 | 1051.93 | 372.14 | 1053.67 | 372.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1055.92 | 372.01 | 1056.3 | 371.87 | 1057.04 | 371.82 | 1057.99 | 371.78 | 1058.74 | 371.76 |
| 1059.34 | 371.76 | 1062.36 | 371.78 | 1068.57 | 371.97 | 1069.96 | 371.97 | 1082.89 | 371.89 |
| 1084.42 | 371.93 | 1087.9 | 372.09 | 1090.47 | 372.18 | 1091.54 | 372.27 | 1094.74 | 372.34 |
| 1095.31 | 372.36 | 1103.95 | 372.39 | 1105.82 | 372.39 | 1106.06 | 372.36 | 1106.5 | 372.36 |
| 1107.65 | 372.38 | 1113.22 | 372.45 | 1114.43 | 372.45 | 1115.2 | 372.44 | 1119.06 | 372.37 |
| 1119.94 | 372.33 | 1121.35 | 372.24 | 1123.18 | 372.2 | 1124.79 | 372.19 | 1127.09 | 372.2 |
| 1128.25 | 372.21 | 1129.11 | 372.2 | 1131.67 | 372.22 | 1134.02 | 372.21 | 1136.21 | 372.17 |
| 1139.54 | 372.14 | 1140.89 | 372.09 | 1141.77 | 372.02 | 1143.49 | 371.99 | 1145.47 | 371.95 |
| 1151.14 | 371.95 | 1154.96 | 372.03 | 1155.24 | 372.03 | 1156.75 | 372 | 1156.95 | 371.96 |
| 1157.21 | 371.97 | 1161.01 | 372.5 | 1162 | 372.61 | 1163.87 | 372.77 | 1164.52 | 372.81 |
| 1166.81 | 372.82 | 1173.27 | 372.73 | 1174.53 | 372.71 | 1178.74 | 372.78 | 1184.52 | 372.82 |
| 1186.3 | 372.87 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 43.78 | .05 | 136.58 | .04 | 821.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136.58 | 821.65 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6681.21*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 49.25 | 369.68 | 50.68 | 369.68 | 57.3 | 369.74 | 62.59 | 369.75 | 64.45 | 369.76 |
| 68.65 | 369.76 | 70.83 | 369.77 | 82.29 | 369.73 | 85.61 | 369.74 | 90.86 | 369.74 |
| 98.45 | 369.76 | 99.58 | 369.75 | 103.59 | 369.75 | 109.34 | 369.73 | 110.07 | 369.73 |
| 110.85 | 369.7 | 111.42 | 369.7 | 116.1 | 369.73 | 117.86 | 369.73 | 121.59 | 369.76 |
| 123.97 | 369.76 | 124.09 | 369.75 | 126.46 | 369.74 | 127.99 | 369.71 | 128.67 | 369.69 |
| 130.63 | 369.65 | 131.4 | 369.63 | 131.89 | 369.6 | 132.79 | 369.58 | 133.66 | 369.57 |
| 135.21 | 369.53 | 135.75 | 369.5 | 136.84 | 369.42 | 137.23 | 369.41 | 138.68 | 369.33 |
| 144.5 | 369.17 | 145.11 | 369.16 | 146.67 | 369.09 | 152.04 | 369.01 | 152.69 | 368.99 |
| 153.92 | 368.93 | 155.19 | 368.93 | 156.3 | 368.94 | 156.5 | 368.95 | 157.24 | 368.94 |
| 158.11 | 368.94 | 160.21 | 368.92 | 161.38 | 368.92 | 163.09 | 368.94 | 164.42 | 368.99 |
| 165.7 | 368.99 | 167.63 | 369.01 | 168.17 | 369.01 | 171.55 | 368.93 | 171.79 | 368.94 |
| 173.43 | 368.9 | 176.4 | 368.85 | 177.96 | 368.8 | 187.71 | 368.82 | 194.48 | 368.9 |
| 196.93 | 368.88 | 197.79 | 368.88 | 199.34 | 368.62 | 200.8 | 368.21 | 205.77 | 368.14 |
| 210.58 | 368.07 | 211.34 | 368.07 | 212.02 | 368.03 | 214 | 367.96 | 214.47 | 367.95 |
| 217.35 | 367.83 | 220.16 | 367.73 | 220.33 | 367.72 | 222.24 | 367.66 | 227.26 | 367.55 |
| 228.45 | 367.53 | 230.76 | 367.48 | 234.55 | 367.41 | 237.08 | 367.43 | 237.59 | 367.44 |
| 244.7 | 367.48 | 245.9 | 367.49 | 250.72 | 367.55 | 251.38 | 367.55 | 252.07 | 367.57 |
| 252.75 | 367.57 | 255.59 | 367.68 | 256.69 | 367.73 | 258.3 | 367.79 | 259.11 | 367.81 |
| 261.62 | 367.91 | 267.55 | 368.06 | 268.39 | 368.06 | 270.1 | 368.01 | 275.15 | 367.92 |
| 277.78 | 367.9 | 280.37 | 367.9 | 285.14 | 367.85 | 285.53 | 367.85 | 288.25 | 367.88 |
| 289.64 | 367.91 | 294.18 | 368.03 | 300.69 | 368.13 | 318.11 | 368.54 | 319.82 | 368.84 |
| 320.34 | 368.92 | 322.06 | 369.22 | 322.75 | 369.21 | 322.98 | 369.25 | 323.43 | 369.24 |
| 326.29 | 369.21 | 327.54 | 369.21 | 332.7 | 369.25 | 334.63 | 369.25 | 337.2 | 369.21 |
| 339.57 | 369.21 | 340.96 | 369.2 | 343.43 | 369.17 | 345.79 | 369.17 | 351.46 | 369.25 |
| 352.29 | 369.28 | 352.75 | 369.33 | 353.97 | 369.38 | 371.66 | 369.24 | 371.95 | 369.24 |
| 373.03 | 369.29 | 376.62 | 369.29 | 377.76 | 369.36 | 378.07 | 369.37 | 379.65 | 369.39 |
| 381.7 | 369.4 | 384.4 | 369.39 | 386.02 | 369.39 | 386.62 | 369.32 | 387.36 | 369.29 |
| 390.96 | 369.29 | 393.52 | 369.28 | 398.15 | 369.33 | 399.21 | 369.33 | 403.68 | 369.34 |
| 405.74 | 369.22 | 406.05 | 369.19 | 407.9 | 369.07 | 408.29 | 369.05 | 410.29 | 368.91 |
| 411.58 | 368.89 | 412.53 | 368.9 | 413.92 | 368.89 | 415.77 | 368.91 | 416.64 | 368.95 |
| 417.12 | 369.06 | 418.77 | 369.28 | 427.6 | 369.79 | 428.95 | 369.84 | 432.15 | 369.99 |
| 436.95 | 369.83 | 438.49 | 369.9 | 438.86 | 369.83 | 439.38 | 369.8 | 441.18 | 369.43 |
| 441.65 | 369.37 | 443.21 | 369.32 | 444.22 | 369.32 | 446.37 | 369.33 | 447.29 | 369.36 |
| 448.85 | 369.42 | 457.58 | 369.55 | 459.14 | 369.54 | 471.34 | 369.71 | 471.57 | 369.71 |
| 475.92 | 369.66 | 477.97 | 369.69 | 479.21 | 369.7 | 481.45 | 369.7 | 482.12 | 369.69 |
| 485.48 | 369.52 | 487.31 | 369.35 | 488.43 | 369.26 | 489.03 | 369.26 | 489.93 | 369.24 |
| 491.45 | 369.27 | 492.06 | 369.3 | 493.04 | 369.32 | 498.39 | 369.33 | 501.62 | 369.39 |
| 503.03 | 369.42 | 504.72 | 369.44 | 509.44 | 369.32 | 509.63 | 369.3 | 510.38 | 369.29 |
| 512.27 | 369.32 | 513.48 | 369.35 | 514.72 | 369.41 | 520.28 | 369.66 | 521.19 | 369.69 |
| 522.71 | 369.69 | 523.33 | 369.7 | 526.94 | 369.72 | 528.08 | 369.71 | 529.37 | 369.75 |
| 530.87 | 369.75 | 533.14 | 369.74 | 534.39 | 369.73 | 534.91 | 369.7 | 536.94 | 369.69 |
| 538.09 | 369.7 | 552.91 | 369.87 | 555.85 | 369.86 | 557.61 | 369.94 | 559.36 | 369.99 |
| 561.08 | 369.98 | 561.68 | 369.91 | 563.35 | 369.92 | 566.76 | 369.99 | 567.84 | 370 |
| 569.97 | 369.99 | 571.53 | 370 | 572.55 | 370.02 | 574.91 | 369.91 | 576.09 | 369.86 |
| 577.67 | 369.85 | 577.87 | 369.84 | 579.59 | 369.87 | 587.55 | 369.79 | 587.94 | 369.78 |
| 594.06 | 369.72 | 600.84 | 369.72 | 601.44 | 369.71 | 605.06 | 369.67 | 605.56 | 369.67 |
| 606.84 | 369.64 | 609.72 | 369.56 | 610.55 | 369.53 | 612.4 | 369.45 | 613.45 | 369.42 |
| 618.62 | 369.16 | 621.9 | 369.08 | 623.93 | 368.95 | 625.3 | 368.92 | 626.35 | 368.91 |
| 628.71 | 368.91 | 631.63 | 368.9 | 633.56 | 368.96 | 634.61 | 369.06 | 636.46 | 369.1 |
| 637.37 | 369.13 | 639.52 | 369.18 | 644.1 | 369.31 | 644.74 | 369.32 | 645.73 | 369.31 |
| 647.51 | 369.27 | 650.24 | 369.2 | 651.13 | 369.17 | 651.7 | 369.14 | 656.4 | 369.02 |
| 661.08 | 368.92 | 662.19 | 368.91 | 664.51 | 368.98 | 665.36 | 369.01 | 666.09 | 369.06 |
| 666.63 | 369.12 | 668.36 | 369.27 | 669.63 | 369.37 | 670.89 | 369.46 | 671.35 | 369.5 |
| 673.6 | 369.67 | 675.49 | 369.8 | 676.76 | 369.82 | 680.27 | 369.8 | 681.97 | 369.78 |
| 683.18 | 369.75 | 684.56 | 369.68 | 687.98 | 369.52 | 690.33 | 369.39 | 692.54 | 369.29 |
| 694.19 | 369.26 | 697.49 | 369.26 | 697.92 | 369.28 | 698.46 | 369.35 | 701.96 | 369.45 |
| 702.71 | 369.51 | 703.58 | 369.54 | 704.44 | 369.59 | 705.77 | 369.65 | 708.45 | 369.74 |
| 710.44 | 369.79 | 712.24 | 369.85 | 713.34 | 369.88 | 714.53 | 369.87 | 715.96 | 369.84 |
| 718.09 | 369.82 | 718.91 | 369.8 | 722.68 | 369.67 | 723.6 | 369.62 | 725.17 | 369.57 |
| 727.81 | 369.53 | 731.31 | 369.55 | 741.54 | 369.68 | 741.88 | 369.69 | 744.05 | 369.73 |
| 744.2 | 369.77 | 745.89 | 369.77 | 746.67 | 369.73 | 746.87 | 369.73 | 753.78 | 369.46 |
| 755.09 | 369.45 | 756.01 | 369.42 | 760.08 | 369.22 | 762.31 | 369.23 | 762.79 | 369.24 |
| 764.16 | 369.3 | 764.37 | 369.32 | 764.94 | 369.47 | 765.4 | 369.51 | 767.4 | 369.54 |
| 767.98 | 369.54 | 769.57 | 369.52 | 772.42 | 369.42 | 774.22 | 369.34 | 775.46 | 369.27 |
| 776.5 | 369.22 | 777.44 | 369.2 | 777.9 | 369.2 | 778.63 | 369.22 | 779.72 | 369.22 |
| 779.96 | 369.23 | 781.38 | 369.25 | 785.17 | 369.35 | 785.88 | 369.35 | 786.57 | 369.37 |
| 788.89 | 369.4 | 798.06 | 369.57 | 798.15 | 369.58 | 799.86 | 369.61 | 801.09 | 369.62 |
| 804.23 | 369.69 | 805.07 | 369.72 | 805.93 | 369.77 | 806.56 | 369.82 | 808.87 | 369.93 |
| 809.18 | 369.94 | 811.46 | 370.06 | 812.47 | 370.1 | 813.17 | 370.13 | 815.17 | 370.19 |
| 822.67 | 370.48 | 823.06 | 370.49 | 838.28 | 370.54 | 840.07 | 370.53 | 842.24 | 370.51 |
| 843.41 | 370.49 | 847.27 | 370.51 | 852.4 | 370.7 | 854.11 | 370.76 | 854.55 | 370.76 |
| 855.01 | 370.78 | 856.77 | 370.74 | 859.34 | 370.65 | 860.28 | 370.59 | 861.24 | 370.54 |
| 870.29 | 370.44 | 870.64 | 370.44 | 872.04 | 370.48 | 874.7 | 370.54 | 876.42 | 370.55 |
| 877.79 | 370.53 | 878.45 | 370.54 | 881.89 | 370.56 | 884.5 | 370.6 | 885.21 | 370.6 |
| 887.33 | 370.64 | 887.88 | 370.63 | 890.48 | 370.75 | 893.36 | 370.84 | 893.96 | 370.85 |
| 896.83 | 370.95 | 898.88 | 371 | 899.96 | 371.04 | 901.51 | 371.07 | 902.42 | 371.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 903.75 | 371.11 | 906.72 | 371.13 | 908.4 | 371.13 | 910.1 | 371.14 | 911.05 | 371.07 |
| 915.87 | 370.85 | 920.1 | 370.66 | 921.83 | 370.64 | 925.97 | 370.61 | 926.74 | 370.61 |
| 935.11 | 370.7 | 938.5 | 370.75 | 941.39 | 370.8 | 943.47 | 370.85 | 945.61 | 370.92 |
| 951.32 | 371.06 | 952.27 | 371.09 | 955.05 | 371.14 | 956.52 | 371.15 | 957.58 | 371.11 |
| 958.04 | 371.11 | 962.62 | 371.04 | 964.02 | 371.08 | 967.06 | 371.15 | 969.46 | 371.15 |
| 970.01 | 371.16 | 972.69 | 371.18 | 973.12 | 371.18 | 975.35 | 371.24 | 976.76 | 371.26 |
| 977.4 | 371.26 | 977.49 | 371.24 | 990.04 | 371.32 | 991.48 | 371.35 | 996.88 | 371.34 |
| 1009.53 | 371.37 | 1011.99 | 371.21 | 1013.43 | 371.15 | 1014.79 | 371.14 | 1016.62 | 371.39 |
| 1017.11 | 371.45 | 1018.28 | 371.44 | 1028.57 | 371.74 | 1030.09 | 371.77 | 1032.4 | 371.81 |
| 1035.79 | 371.84 | 1036.09 | 371.84 | 1041.56 | 371.78 | 1043.84 | 371.73 | 1044.43 | 371.71 |
| 1046.72 | 371.65 | 1047.41 | 371.64 | 1049.94 | 371.55 | 1051.74 | 371.5 | 1054.06 | 371.41 |
| 1054.45 | 371.25 | 1055.21 | 371.2 | 1056.19 | 371.16 | 1057.59 | 371.13 | 1060.56 | 371.15 |
| 1060.7 | 371.16 | 1067.1 | 371.38 | 1068.54 | 371.38 | 1081.87 | 371.31 | 1083.44 | 371.34 |
| 1087.04 | 371.5 | 1089.29 | 371.57 | 1089.69 | 371.59 | 1090.79 | 371.68 | 1092.58 | 371.72 |
| 1094.67 | 371.76 | 1103.59 | 371.78 | 1105.52 | 371.77 | 1105.76 | 371.75 | 1107.4 | 371.76 |
| 1113.15 | 371.85 | 1114.4 | 371.85 | 1115.19 | 371.84 | 1118 | 371.79 | 1119.17 | 371.76 |
| 1120.08 | 371.72 | 1121.53 | 371.62 | 1123.41 | 371.57 | 1123.66 | 371.58 | 1125.08 | 371.57 |
| 1127.45 | 371.58 | 1128.37 | 371.6 | 1128.65 | 371.59 | 1129.53 | 371.59 | 1132.17 | 371.61 |
| 1134.6 | 371.6 | 1136.85 | 371.55 | 1140.07 | 371.51 | 1140.97 | 371.49 | 1141.68 | 371.45 |
| 1142.59 | 371.38 | 1144.36 | 371.34 | 1146.4 | 371.3 | 1152.25 | 371.31 | 1156.19 | 371.41 |
| 1156.96 | 371.4 | 1158.04 | 371.4 | 1158.24 | 371.37 | 1158.51 | 371.37 | 1162.43 | 371.97 |
| 1163.45 | 372.09 | 1165.38 | 372.27 | 1165.97 | 372.31 | 1168.4 | 372.32 | 1175.07 | 372.2 |
| 1176.37 | 372.17 | 1179.99 | 372.22 | 1180.72 | 372.22 | 1186.67 | 372.26 | 1187.19 | 372.26 |
| 1188.51 | 372.31 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 49.25 | .05 | 133.66 | .04 | 812.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 133.66 | 812.47 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6634.44*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 54.72 | 368.89 | 56.01 | 368.89 | 61.97 | 368.93 | 66.73 | 368.94 | 68.41 | 368.95 |
| 72.19 | 368.95 | 74.15 | 368.96 | 84.47 | 368.92 | 87.47 | 368.93 | 92.19 | 368.92 |
| 99.02 | 368.96 | 100.04 | 368.95 | 101.01 | 368.95 | 103.66 | 368.96 | 108.84 | 368.94 |
| 109.6 | 368.93 | 110.2 | 368.9 | 110.71 | 368.91 | 114.92 | 368.93 | 116.51 | 368.93 |
| 119.87 | 368.96 | 122.12 | 368.96 | 124.26 | 368.94 | 125.63 | 368.92 | 126.24 | 368.9 |
| 128.7 | 368.84 | 129.46 | 368.8 | 130.73 | 368.79 | 131.57 | 368.77 | 132.62 | 368.73 |
| 133.6 | 368.66 | 133.96 | 368.66 | 135.26 | 368.59 | 139.53 | 368.47 | 140.51 | 368.44 |
| 141.55 | 368.42 | 142.47 | 368.37 | 146.62 | 368.3 | 147.31 | 368.3 | 148.71 | 368.25 |
| 149.01 | 368.23 | 152 | 368.23 | 154.68 | 368.2 | 155.65 | 368.2 | 155.74 | 368.19 |
| 157.28 | 368.21 | 158.48 | 368.25 | 160.29 | 368.25 | 160.42 | 368.26 | 161.86 | 368.27 |
| 164.91 | 368.21 | 165.13 | 368.21 | 168.74 | 368.16 | 170.69 | 368.11 | 179.49 | 368.13 |
| 185.6 | 368.19 | 188.58 | 368.16 | 189.97 | 367.86 | 191.29 | 367.41 | 195.78 | 367.31 |
| 200 | 367.23 | 200.71 | 367.22 | 201.42 | 367.18 | 203.2 | 367.12 | 206.22 | 366.99 |
| 208.75 | 366.9 | 208.9 | 366.9 | 210.63 | 366.84 | 216.23 | 366.73 | 218.32 | 366.68 |
| 221.73 | 366.62 | 224.28 | 366.65 | 224.79 | 366.65 | 231.95 | 366.68 | 233.16 | 366.7 |
| 238.01 | 366.76 | 238.6 | 366.76 | 239.17 | 366.78 | 240.05 | 366.78 | 242.91 | 366.89 |
| 244.02 | 366.94 | 245.64 | 367 | 246.45 | 367.02 | 248.98 | 367.12 | 254.94 | 367.29 |
| 255.78 | 367.29 | 257.51 | 367.24 | 262.59 | 367.12 | 265.23 | 367.08 | 267.1 | 367.07 |
| 272.64 | 366.99 | 275.78 | 367.01 | 281.74 | 367.14 | 288.29 | 367.24 | 305.82 | 367.65 |
| 307.54 | 367.99 | 308.06 | 368.07 | 309.8 | 368.4 | 310.11 | 368.41 | 310.48 | 368.39 |
| 310.72 | 368.43 | 311.17 | 368.43 | 314.05 | 368.39 | 315.3 | 368.38 | 320.5 | 368.41 |
| 321.9 | 368.41 | 324.54 | 368.37 | 325.56 | 368.36 | 327.41 | 368.36 | 331.29 | 368.31 |
| 333.67 | 368.3 | 339.38 | 368.39 | 340.22 | 368.42 | 340.68 | 368.48 | 341.9 | 368.54 |
| 359.71 | 368.43 | 360 | 368.43 | 361.08 | 368.49 | 363.15 | 368.49 | 364.7 | 368.5 |
| 366.16 | 368.56 | 367.75 | 368.58 | 369.81 | 368.6 | 373.26 | 368.59 | 374.16 | 368.6 |
| 374.76 | 368.52 | 376.12 | 368.47 | 376.25 | 368.48 | 379.13 | 368.49 | 381.7 | 368.49 |
| 387.43 | 368.54 | 391.93 | 368.55 | 393.81 | 368.43 | 394.31 | 368.39 | 396.18 | 368.26 |
| 398.58 | 368.07 | 399.88 | 368.05 | 400.84 | 368.05 | 402.23 | 368.04 | 404.1 | 368.06 |
| 404.97 | 368.1 | 405.45 | 368.21 | 407.11 | 368.46 | 415.99 | 369.01 | 417.36 | 369.05 |
| 420.58 | 369.21 | 425.41 | 369.02 | 426.96 | 369.09 | 427.23 | 369.04 | 427.85 | 368.98 |
| 429.67 | 368.57 | 429.99 | 368.52 | 430.45 | 368.49 | 431.71 | 368.45 | 432.72 | 368.45 |
| 434.89 | 368.46 | 435.81 | 368.49 | 437.38 | 368.57 | 446.17 | 368.71 | 447.73 | 368.71 |
| 460.01 | 368.9 | 464.62 | 368.88 | 466.68 | 368.91 | 467.93 | 368.92 | 470.86 | 368.92 |
| 474.24 | 368.72 | 477.21 | 368.43 | 478.39 | 368.41 | 479.74 | 368.42 | 480.25 | 368.43 |
| 480.87 | 368.46 | 481.85 | 368.48 | 482.35 | 368.48 | 487.24 | 368.53 | 488.38 | 368.55 |
| 491.9 | 368.63 | 493.6 | 368.65 | 494.02 | 368.65 | 498.35 | 368.58 | 498.54 | 368.56 |
| 499.3 | 368.56 | 501.2 | 368.58 | 502.42 | 368.61 | 503.67 | 368.66 | 509.26 | 368.85 |
| 510.02 | 368.87 | 512.34 | 368.88 | 515.97 | 368.92 | 517.11 | 368.91 | 517.97 | 368.94 |
| 519.92 | 368.95 | 522.2 | 368.94 | 523.61 | 368.92 | 524.47 | 368.89 | 527.19 | 368.91 |
| 542.1 | 369.13 | 545.06 | 369.15 | 546.83 | 369.24 | 548.58 | 369.31 | 550.32 | 369.31 |
| 550.92 | 369.26 | 551.57 | 369.26 | 556.03 | 369.35 | 557.12 | 369.35 | 559.26 | 369.34 |
| 560.83 | 369.35 | 561.87 | 369.37 | 564.92 | 369.19 | 565.57 | 369.16 | 567.21 | 369.13 |
| 568.95 | 369.14 | 576.96 | 369.05 | 577.34 | 369.04 | 583.51 | 368.97 | 585.69 | 368.96 |
| 590.33 | 368.93 | 590.93 | 368.93 | 594.57 | 368.88 | 595.08 | 368.88 | 597.84 | 368.82 |
| 599.26 | 368.78 | 600.1 | 368.75 | 601.96 | 368.67 | 603.02 | 368.64 | 608.23 | 368.4 |
| 611.52 | 368.31 | 613.56 | 368.17 | 614.94 | 368.13 | 616 | 368.12 | 618.37 | 368.12 |
| 620.72 | 368.11 | 621.31 | 368.12 | 623.26 | 368.18 | 624.31 | 368.26 | 627.09 | 368.35 |
| 629.25 | 368.4 | 633.86 | 368.56 | 635.5 | 368.56 | 637.3 | 368.53 | 640.04 | 368.47 |
| 641.51 | 368.42 | 646.23 | 368.3 | 650.95 | 368.19 | 652.07 | 368.18 | 652.75 | 368.2 |
| 654.4 | 368.23 | 655.01 | 368.25 | 655.99 | 368.31 | 656.99 | 368.4 | 657.45 | 368.45 |
| 658.28 | 368.52 | 660.82 | 368.72 | 662.08 | 368.83 | 663.55 | 368.95 | 665.35 | 369.09 |
| 665.45 | 369.11 | 666.73 | 369.12 | 670.26 | 369.12 | 671.97 | 369.11 | 673.19 | 369.08 |
| 674.58 | 369.01 | 678.01 | 368.85 | 679.89 | 368.75 | 681.95 | 368.65 | 682.61 | 368.63 |
| 685.1 | 368.57 | 687.59 | 368.54 | 688.02 | 368.55 | 688.56 | 368.61 | 689.55 | 368.64 |
| 692.09 | 368.7 | 692.84 | 368.76 | 693.72 | 368.79 | 694.58 | 368.84 | 695.92 | 368.9 |
| 698.62 | 369.01 | 701.26 | 369.09 | 702.43 | 369.14 | 703.54 | 369.17 | 704.73 | 369.15 |
| 707.27 | 369.1 | 708.32 | 369.09 | 709.14 | 369.07 | 712.94 | 368.95 | 713.66 | 368.92 |
| 713.86 | 368.9 | 714.53 | 368.89 | 715.45 | 368.86 | 718.1 | 368.81 | 721.62 | 368.84 |
| 731.92 | 368.98 | 734.05 | 369.03 | 734.45 | 369.03 | 734.59 | 369.08 | 736.29 | 369.07 |
| 737.28 | 369.04 | 744.23 | 368.74 | 745.43 | 368.73 | 746.2 | 368.7 | 746.48 | 368.7 |
| 750.57 | 368.5 | 751 | 368.49 | 752.82 | 368.51 | 753.3 | 368.52 | 754.68 | 368.6 |
| 754.89 | 368.63 | 755.46 | 368.79 | 755.92 | 368.83 | 758.22 | 368.89 | 758.52 | 368.88 |
| 760.12 | 368.86 | 762.99 | 368.77 | 763.95 | 368.73 | 764.8 | 368.68 | 765.48 | 368.65 |
| 766.05 | 368.61 | 767.09 | 368.56 | 767.54 | 368.55 | 768.51 | 368.55 | 770.69 | 368.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 775.82 | 368.66 | 776.54 | 368.66 | 777.23 | 368.68 | 779.57 | 368.71 | 788.8 | 368.86 |
| 790.6 | 368.9 | 791.84 | 368.91 | 793.65 | 368.95 | 795.69 | 369.01 | 797.34 | 369.11 |
| 799.67 | 369.21 | 799.99 | 369.22 | 800.9 | 369.28 | 803.29 | 369.4 | 804.02 | 369.42 |
| 806.08 | 369.49 | 807.13 | 369.55 | 813.81 | 369.85 | 814.2 | 369.87 | 829.88 | 369.99 |
| 831.73 | 369.99 | 834.24 | 369.98 | 835.17 | 369.97 | 839.15 | 369.99 | 839.69 | 370.01 |
| 844.44 | 370.15 | 846.19 | 370.19 | 846.5 | 370.18 | 847.12 | 370.2 | 847.71 | 370.19 |
| 848.93 | 370.15 | 851.59 | 370.05 | 852.25 | 370.02 | 852.55 | 369.99 | 853.53 | 369.94 |
| 862.86 | 369.82 | 863.22 | 369.82 | 863.95 | 369.85 | 864.66 | 369.86 | 866.89 | 369.93 |
| 869.17 | 369.96 | 870.59 | 369.96 | 871.55 | 369.97 | 872.5 | 369.99 | 874.81 | 369.99 |
| 877.5 | 370.01 | 878.24 | 370.01 | 880.42 | 370.04 | 880.98 | 370.03 | 883.67 | 370.13 |
| 886.64 | 370.21 | 888.45 | 370.25 | 890.2 | 370.31 | 892.31 | 370.36 | 893.43 | 370.4 |
| 895.97 | 370.45 | 897.33 | 370.49 | 902.13 | 370.52 | 903.08 | 370.53 | 904 | 370.52 |
| 904.86 | 370.45 | 913.95 | 370.01 | 914.18 | 370 | 915.96 | 369.97 | 921.02 | 369.96 |
| 929.64 | 370.08 | 930.45 | 370.09 | 934.22 | 370.16 | 936.12 | 370.19 | 938.25 | 370.24 |
| 940.46 | 370.31 | 946.34 | 370.45 | 947.32 | 370.48 | 950.19 | 370.53 | 951.7 | 370.54 |
| 952.79 | 370.49 | 953.27 | 370.49 | 953.97 | 370.47 | 954.58 | 370.47 | 957.99 | 370.41 |
| 959 | 370.43 | 959.43 | 370.45 | 961.62 | 370.5 | 962.24 | 370.5 | 962.98 | 370.52 |
| 964.79 | 370.52 | 965.6 | 370.53 | 968.36 | 370.55 | 970.86 | 370.61 | 973.21 | 370.65 |
| 973.31 | 370.62 | 986.23 | 370.73 | 987.72 | 370.76 | 993.29 | 370.75 | 1006.31 | 370.78 |
| 1008.85 | 370.59 | 1010.34 | 370.53 | 1011.74 | 370.52 | 1014.13 | 370.86 | 1014.61 | 370.84 |
| 1015.34 | 370.84 | 1024.54 | 371.14 | 1025.93 | 371.18 | 1029.89 | 371.26 | 1033.38 | 371.29 |
| 1033.68 | 371.29 | 1039.31 | 371.22 | 1039.7 | 371.22 | 1042.27 | 371.14 | 1044.64 | 371.07 |
| 1045.21 | 371.07 | 1047.95 | 370.96 | 1049.81 | 370.9 | 1052.2 | 370.81 | 1052.59 | 370.63 |
| 1053.38 | 370.58 | 1054.77 | 370.52 | 1055.83 | 370.51 | 1059.04 | 370.53 | 1065.63 | 370.78 |
| 1067.11 | 370.78 | 1080.85 | 370.73 | 1082.47 | 370.76 | 1086.17 | 370.9 | 1088.49 | 370.97 |
| 1088.9 | 370.99 | 1090.04 | 371.08 | 1093.44 | 371.15 | 1094.04 | 371.17 | 1103.23 | 371.17 |
| 1105.21 | 371.16 | 1105.46 | 371.13 | 1105.93 | 371.13 | 1113.07 | 371.25 | 1114.36 | 371.25 |
| 1115.18 | 371.24 | 1118.07 | 371.18 | 1119.75 | 371.14 | 1121.21 | 371.03 | 1121.71 | 371 |
| 1123.65 | 370.95 | 1125.37 | 370.94 | 1127.81 | 370.96 | 1128.76 | 370.98 | 1129.04 | 370.97 |
| 1129.95 | 370.97 | 1132.67 | 370.99 | 1135.17 | 370.98 | 1137.5 | 370.94 | 1138.4 | 370.92 |
| 1140.81 | 370.89 | 1141.74 | 370.86 | 1142.47 | 370.82 | 1143.41 | 370.73 | 1145.23 | 370.7 |
| 1147.33 | 370.65 | 1152.78 | 370.67 | 1153.36 | 370.67 | 1157.72 | 370.79 | 1159.24 | 370.79 |
| 1159.53 | 370.77 | 1159.81 | 370.78 | 1163.85 | 371.43 | 1164.9 | 371.58 | 1166.88 | 371.76 |
| 1167.23 | 371.8 | 1167.58 | 371.81 | 1170 | 371.82 | 1176.87 | 371.66 | 1177.24 | 371.66 |
| 1178.21 | 371.63 | 1181.94 | 371.66 | 1182.69 | 371.67 | 1187.4 | 371.69 | 1188.82 | 371.69 |
| 1190.72 | 371.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 54.72 | .05 | 130.73 | .04 | 803.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 130.73 | 803.29 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6587.67*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 60.2 | 368.1 | 61.34 | 368.1 | 66.64 | 368.13 | 70.88 | 368.13 | 72.37 | 368.14 |
| 75.73 | 368.15 | 77.48 | 368.15 | 86.66 | 368.1 | 89.32 | 368.11 | 93.52 | 368.11 |
| 99.6 | 368.16 | 100.51 | 368.15 | 101.37 | 368.15 | 103.73 | 368.16 | 108.33 | 368.14 |
| 108.92 | 368.14 | 109.54 | 368.11 | 113.96 | 368.12 | 119.25 | 368.17 | 120.15 | 368.16 |
| 122.05 | 368.15 | 123.27 | 368.13 | 123.82 | 368.11 | 125.39 | 368.07 | 126 | 368.06 |
| 126.68 | 368.01 | 127.81 | 368 | 129.06 | 367.97 | 130.37 | 367.91 | 131.85 | 367.85 |
| 136.01 | 367.73 | 137.01 | 367.71 | 137.93 | 367.68 | 138.27 | 367.66 | 143.11 | 367.57 |
| 144.1 | 367.53 | 145.02 | 367.52 | 146.17 | 367.52 | 147.47 | 367.5 | 150.02 | 367.47 |
| 150.09 | 367.46 | 151.47 | 367.48 | 152.54 | 367.51 | 154.27 | 367.51 | 154.31 | 367.52 |
| 155.55 | 367.52 | 158.27 | 367.48 | 158.46 | 367.49 | 159.78 | 367.47 | 161.69 | 367.45 |
| 162.17 | 367.45 | 163.42 | 367.43 | 171.26 | 367.44 | 176.71 | 367.49 | 178.67 | 367.45 |
| 179.37 | 367.44 | 180.61 | 367.11 | 181.79 | 366.61 | 189.1 | 366.39 | 189.65 | 366.37 |
| 190.33 | 366.36 | 190.81 | 366.33 | 191.53 | 366.31 | 192.77 | 366.26 | 195.09 | 366.16 |
| 197.35 | 366.08 | 199.02 | 366.03 | 203.05 | 365.95 | 203.18 | 365.94 | 204.65 | 365.9 |
| 208.91 | 365.83 | 211.48 | 365.86 | 212 | 365.87 | 219.2 | 365.89 | 220.41 | 365.91 |
| 225.29 | 365.97 | 226.41 | 365.99 | 227.34 | 365.99 | 230.22 | 366.1 | 231.34 | 366.15 |
| 232.97 | 366.21 | 233.79 | 366.23 | 236.33 | 366.33 | 242.33 | 366.52 | 243.18 | 366.52 |
| 244.92 | 366.46 | 250.03 | 366.31 | 252.69 | 366.26 | 255.32 | 366.23 | 260.15 | 366.13 |
| 260.54 | 366.12 | 263.3 | 366.14 | 264.7 | 366.17 | 269.29 | 366.25 | 275.89 | 366.35 |
| 293.53 | 366.77 | 295.26 | 367.13 | 295.78 | 367.22 | 297.53 | 367.59 | 298.22 | 367.57 |
| 298.46 | 367.61 | 298.91 | 367.61 | 303.07 | 367.54 | 308.3 | 367.57 | 309.71 | 367.57 |
| 312.37 | 367.53 | 313.39 | 367.51 | 315.16 | 367.51 | 315.26 | 367.5 | 316.66 | 367.49 |
| 319.16 | 367.45 | 321.55 | 367.44 | 327.3 | 367.53 | 327.87 | 367.56 | 328.14 | 367.56 |
| 328.61 | 367.62 | 329.84 | 367.69 | 347.76 | 367.62 | 348.04 | 367.62 | 349.14 | 367.7 |
| 351.22 | 367.7 | 352.77 | 367.71 | 354.25 | 367.76 | 355.84 | 367.78 | 357.29 | 367.79 |
| 360.65 | 367.79 | 361.39 | 367.8 | 362.3 | 367.8 | 362.9 | 367.72 | 363.65 | 367.68 |
| 364.34 | 367.66 | 364.4 | 367.68 | 369.89 | 367.7 | 374.58 | 367.73 | 375.65 | 367.74 |
| 380.17 | 367.76 | 382.07 | 367.64 | 382.57 | 367.59 | 385.69 | 367.34 | 386.51 | 367.25 |
| 387.73 | 367.22 | 388.17 | 367.2 | 389.14 | 367.2 | 390.54 | 367.19 | 392.42 | 367.21 |
| 393.3 | 367.25 | 393.78 | 367.37 | 395.45 | 367.64 | 404.39 | 368.22 | 405.77 | 368.27 |
| 409.01 | 368.43 | 413.86 | 368.21 | 415.43 | 368.29 | 415.7 | 368.23 | 416.32 | 368.17 |
| 418.06 | 367.74 | 418.56 | 367.65 | 418.94 | 367.63 | 420.21 | 367.59 | 421.22 | 367.58 |
| 423.41 | 367.59 | 424.33 | 367.63 | 425.91 | 367.71 | 434.75 | 367.87 | 436.33 | 367.88 |
| 448.69 | 368.09 | 453.32 | 368.1 | 454.58 | 368.13 | 455.4 | 368.13 | 455.71 | 368.14 |
| 456.65 | 368.14 | 458.92 | 368.15 | 459.61 | 368.14 | 463 | 367.92 | 465.49 | 367.65 |
| 466 | 367.6 | 467.51 | 367.57 | 469.56 | 367.61 | 469.67 | 367.62 | 471.16 | 367.65 |
| 476.08 | 367.72 | 479.35 | 367.81 | 480.77 | 367.84 | 482.49 | 367.87 | 482.91 | 367.87 |
| 487.26 | 367.84 | 488.22 | 367.83 | 490.13 | 367.85 | 491.35 | 367.87 | 492.62 | 367.91 |
| 498.25 | 368.04 | 499.01 | 368.06 | 500.7 | 368.06 | 501.34 | 368.07 | 504.99 | 368.11 |
| 506.15 | 368.11 | 507.18 | 368.14 | 508.97 | 368.15 | 511.26 | 368.14 | 512.53 | 368.12 |
| 513.54 | 368.09 | 515.12 | 368.1 | 516.28 | 368.12 | 531.29 | 368.4 | 534.27 | 368.43 |
| 536.05 | 368.54 | 537.81 | 368.63 | 539.39 | 368.65 | 540.16 | 368.61 | 545.31 | 368.7 |
| 546.41 | 368.71 | 548.56 | 368.69 | 550.14 | 368.69 | 551.18 | 368.72 | 553.56 | 368.55 |
| 554.9 | 368.47 | 556.56 | 368.42 | 558.3 | 368.42 | 566.37 | 368.31 | 566.75 | 368.3 |
| 572.96 | 368.22 | 575.15 | 368.19 | 576.21 | 368.19 | 576.52 | 368.18 | 579.82 | 368.15 |
| 584.09 | 368.09 | 584.6 | 368.09 | 585.73 | 368.07 | 585.89 | 368.06 | 587.37 | 368.03 |
| 589.65 | 367.97 | 591.53 | 367.89 | 592.59 | 367.86 | 597.83 | 367.64 | 601.15 | 367.54 |
| 603.2 | 367.39 | 604.58 | 367.34 | 608.04 | 367.34 | 610.4 | 367.32 | 610.99 | 367.33 |
| 612.95 | 367.39 | 614.02 | 367.47 | 615.89 | 367.53 | 616.81 | 367.57 | 618.98 | 367.62 |
| 623.63 | 367.8 | 624.27 | 367.81 | 627.08 | 367.78 | 629.84 | 367.73 | 631.32 | 367.69 |
| 632.86 | 367.66 | 635.39 | 367.6 | 636.07 | 367.58 | 640.82 | 367.46 | 642.22 | 367.45 |
| 644.29 | 367.49 | 645.16 | 367.52 | 645.89 | 367.56 | 646.95 | 367.65 | 648.19 | 367.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 649.47 | 367.88 | 650.75 | 367.98 | 651.22 | 368.03 | 653.5 | 368.23 | 655.41 | 368.41 |
| 656.69 | 368.43 | 658.17 | 368.44 | 661.97 | 368.44 | 663.19 | 368.41 | 664.6 | 368.34 |
| 668.05 | 368.18 | 669.94 | 368.09 | 669.99 | 368.08 | 672.68 | 367.96 | 674.34 | 367.91 |
| 677.69 | 367.83 | 678.12 | 367.83 | 678.67 | 367.87 | 679.66 | 367.89 | 682.22 | 367.95 |
| 682.97 | 368.01 | 683.86 | 368.04 | 686.07 | 368.16 | 688.79 | 368.28 | 690.8 | 368.35 |
| 692.62 | 368.43 | 693.81 | 368.46 | 696.39 | 368.39 | 697.5 | 368.38 | 699.37 | 368.34 |
| 703.2 | 368.23 | 704.12 | 368.19 | 704.8 | 368.18 | 705.72 | 368.15 | 708.39 | 368.1 |
| 711.93 | 368.12 | 722.29 | 368.28 | 724.44 | 368.33 | 724.84 | 368.33 | 724.99 | 368.38 |
| 726.69 | 368.38 | 727.48 | 368.34 | 727.69 | 368.34 | 734.68 | 368.01 | 735.57 | 368.01 |
| 736.95 | 367.97 | 741.07 | 367.77 | 741.5 | 367.76 | 743.33 | 367.79 | 743.81 | 367.81 |
| 745.19 | 367.89 | 745.41 | 367.93 | 745.98 | 368.11 | 746.45 | 368.16 | 748.76 | 368.23 |
| 750.68 | 368.21 | 753.56 | 368.11 | 755.39 | 368.03 | 757.69 | 367.9 | 758.14 | 367.89 |
| 759.11 | 367.89 | 760.14 | 367.91 | 760.96 | 367.91 | 762.04 | 367.93 | 763.03 | 367.93 |
| 766.47 | 367.98 | 767.19 | 367.97 | 767.89 | 367.99 | 770.24 | 368.02 | 779.53 | 368.15 |
| 782.59 | 368.2 | 784.41 | 368.25 | 785.77 | 368.28 | 786.62 | 368.31 | 787.49 | 368.36 |
| 788.13 | 368.41 | 790.79 | 368.5 | 793.1 | 368.64 | 794.12 | 368.69 | 796.98 | 368.8 |
| 798.07 | 368.86 | 804.94 | 369.23 | 805.34 | 369.24 | 821.48 | 369.45 | 826.93 | 369.45 |
| 831.03 | 369.47 | 831.58 | 369.49 | 836.47 | 369.59 | 839.23 | 369.62 | 839.83 | 369.61 |
| 841.09 | 369.57 | 843.83 | 369.46 | 844.51 | 369.42 | 844.82 | 369.39 | 845.83 | 369.33 |
| 855.43 | 369.21 | 856.63 | 369.23 | 859.59 | 369.32 | 861.93 | 369.37 | 865.36 | 369.42 |
| 867.64 | 369.43 | 873.06 | 369.43 | 873.51 | 369.44 | 873.63 | 369.42 | 874.09 | 369.42 |
| 876.85 | 369.52 | 879.91 | 369.58 | 881.44 | 369.6 | 885.75 | 369.72 | 887.5 | 369.78 |
| 889.51 | 369.82 | 890.92 | 369.86 | 894.08 | 369.89 | 895.86 | 369.9 | 896.83 | 369.91 |
| 897.65 | 369.91 | 898.67 | 369.83 | 903.77 | 369.56 | 908.03 | 369.34 | 908.26 | 369.33 |
| 910.09 | 369.31 | 914.48 | 369.3 | 915.31 | 369.31 | 924.18 | 369.45 | 925.01 | 369.47 |
| 927.78 | 369.52 | 928.89 | 369.55 | 930.84 | 369.59 | 931.67 | 369.6 | 933.74 | 369.66 |
| 933.99 | 369.66 | 935.32 | 369.7 | 941.37 | 369.84 | 942.38 | 369.87 | 945.33 | 369.92 |
| 946.88 | 369.92 | 948.01 | 369.88 | 949.85 | 369.84 | 953.35 | 369.77 | 957.09 | 369.87 |
| 958.73 | 369.88 | 960.36 | 369.89 | 964.03 | 369.93 | 966.6 | 369.99 | 966.86 | 370 |
| 969.03 | 370.04 | 969.13 | 370 | 982.43 | 370.14 | 983.97 | 370.18 | 989.69 | 370.17 |
| 1003.1 | 370.19 | 1005.71 | 369.98 | 1006.65 | 369.93 | 1007.25 | 369.91 | 1008.77 | 369.9 |
| 1011.14 | 370.27 | 1011.65 | 370.25 | 1012.39 | 370.25 | 1021.86 | 370.58 | 1023.3 | 370.62 |
| 1024.91 | 370.65 | 1027.37 | 370.71 | 1030.96 | 370.74 | 1031.27 | 370.74 | 1037.07 | 370.67 |
| 1038.09 | 370.64 | 1039.49 | 370.59 | 1040.12 | 370.58 | 1042.55 | 370.49 | 1043.14 | 370.49 |
| 1045.96 | 370.38 | 1047.87 | 370.31 | 1048.46 | 370.28 | 1050.34 | 370.2 | 1050.74 | 370.02 |
| 1051.56 | 369.95 | 1052.6 | 369.91 | 1054.07 | 369.88 | 1057.23 | 369.9 | 1057.38 | 369.91 |
| 1064.17 | 370.19 | 1065.69 | 370.19 | 1079.83 | 370.16 | 1081.5 | 370.17 | 1085.31 | 370.31 |
| 1086.93 | 370.36 | 1087.69 | 370.37 | 1088.12 | 370.39 | 1088.34 | 370.42 | 1089.29 | 370.49 |
| 1092.79 | 370.56 | 1093.41 | 370.58 | 1102.86 | 370.56 | 1104.91 | 370.55 | 1105.17 | 370.51 |
| 1105.65 | 370.51 | 1106.91 | 370.53 | 1113 | 370.65 | 1114.32 | 370.65 | 1115.16 | 370.64 |
| 1118.14 | 370.58 | 1119.88 | 370.53 | 1120.35 | 370.5 | 1121.89 | 370.38 | 1123.89 | 370.32 |
| 1124.15 | 370.33 | 1125.66 | 370.32 | 1128.17 | 370.34 | 1129.15 | 370.36 | 1129.44 | 370.35 |
| 1130.38 | 370.35 | 1133.18 | 370.38 | 1135.75 | 370.37 | 1139.07 | 370.3 | 1141.55 | 370.26 |
| 1142.5 | 370.23 | 1143.26 | 370.18 | 1144.23 | 370.09 | 1144.34 | 370.09 | 1148.26 | 370 |
| 1153.87 | 370.03 | 1154.47 | 370.04 | 1158.65 | 370.16 | 1159.47 | 370.18 | 1161.11 | 370.19 |
| 1165.26 | 370.9 | 1166.35 | 371.06 | 1168.39 | 371.26 | 1169.1 | 371.32 | 1171.6 | 371.32 |
| 1178.67 | 371.13 | 1180.05 | 371.09 | 1183.89 | 371.11 | 1189.51 | 371.12 | 1191.52 | 371.13 |
| 1192.92 | 371.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 60.2 | .05 | 127.81 | .04 | 794.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 127.81 | 794.12 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6540.90*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 65.67 | 367.31 | 66.67 | 367.3 | 71.31 | 367.32 | 75.02 | 367.33 | 76.33 | 367.34 |
| 79.28 | 367.34 | 80.8 | 367.35 | 88.84 | 367.29 | 91.18 | 367.29 | 94.86 | 367.3 |
| 100.18 | 367.36 | 100.97 | 367.35 | 101.73 | 367.35 | 103.79 | 367.37 | 107.83 | 367.35 |
| 108.42 | 367.34 | 108.89 | 367.31 | 112.56 | 367.32 | 113.8 | 367.32 | 116.42 | 367.36 |
| 117.39 | 367.37 | 118.18 | 367.37 | 119.84 | 367.36 | 120.91 | 367.34 | 121.39 | 367.32 |
| 122.76 | 367.28 | 123.3 | 367.27 | 123.64 | 367.24 | 124.88 | 367.21 | 126.45 | 367.18 |
| 128.43 | 367.11 | 131.77 | 367.01 | 133.65 | 366.97 | 134.07 | 366.95 | 137.32 | 366.88 |
| 137.64 | 366.88 | 138.71 | 366.85 | 139.5 | 366.82 | 140.08 | 366.82 | 141.53 | 366.8 |
| 142.15 | 366.78 | 144.38 | 366.75 | 144.45 | 366.74 | 145.22 | 366.74 | 146.6 | 366.77 |
| 148.15 | 366.77 | 149.24 | 366.78 | 151.63 | 366.76 | 152.96 | 366.76 | 155.06 | 366.75 |
| 156.15 | 366.74 | 163.04 | 366.75 | 167.82 | 366.78 | 169.54 | 366.74 | 170.15 | 366.72 |
| 171.24 | 366.35 | 172.28 | 365.8 | 175.79 | 365.66 | 179.18 | 365.52 | 179.72 | 365.51 |
| 180.2 | 365.48 | 181.59 | 365.43 | 181.92 | 365.41 | 183.96 | 365.32 | 185.94 | 365.26 |
| 187.41 | 365.21 | 190.95 | 365.14 | 192.36 | 365.1 | 193.43 | 365.08 | 196.1 | 365.04 |
| 198.68 | 365.07 | 199.2 | 365.08 | 206.44 | 365.1 | 207.67 | 365.12 | 212.58 | 365.18 |
| 213.7 | 365.2 | 214.64 | 365.2 | 217.54 | 365.31 | 218.46 | 365.35 | 218.66 | 365.35 |
| 220.3 | 365.42 | 221.12 | 365.44 | 223.68 | 365.54 | 229.72 | 365.75 | 230.57 | 365.75 |
| 232.32 | 365.68 | 237.47 | 365.5 | 240.14 | 365.43 | 242.03 | 365.41 | 248.05 | 365.26 |
| 250.82 | 365.27 | 252.23 | 365.29 | 256.85 | 365.37 | 263.49 | 365.46 | 281.24 | 365.88 |
| 282.98 | 366.28 | 283.51 | 366.38 | 285.27 | 366.77 | 285.96 | 366.75 | 286.2 | 366.8 |
| 289.57 | 366.73 | 290.84 | 366.71 | 296.1 | 366.73 | 297.52 | 366.72 | 300.2 | 366.68 |
| 301.22 | 366.66 | 303.1 | 366.65 | 304.52 | 366.63 | 307.03 | 366.58 | 309.44 | 366.57 |
| 315.22 | 366.67 | 316.07 | 366.71 | 316.53 | 366.77 | 317.7 | 366.85 | 335.8 | 366.81 |
| 336.09 | 366.82 | 337.19 | 366.9 | 340.85 | 366.92 | 342.33 | 366.95 | 343.94 | 366.97 |
| 345.4 | 366.98 | 348.78 | 366.99 | 350.43 | 367.01 | 351.04 | 366.91 | 352.42 | 366.86 |
| 352.55 | 366.87 | 355.47 | 366.89 | 358.07 | 366.9 | 362.79 | 366.94 | 363.87 | 366.94 |
| 368.42 | 366.97 | 370.33 | 366.84 | 370.84 | 366.8 | 372.73 | 366.63 | 373.12 | 366.6 |
| 375.02 | 366.4 | 376.47 | 366.36 | 377.45 | 366.36 | 378.86 | 366.34 | 380.11 | 366.34 |
| 380.75 | 366.35 | 381.63 | 366.4 | 382.12 | 366.53 | 383.8 | 366.82 | 392.79 | 367.44 |
| 394.17 | 367.48 | 397.43 | 367.66 | 402.32 | 367.41 | 403.89 | 367.49 | 404.27 | 367.41 |
| 404.8 | 367.35 | 406.54 | 366.88 | 406.96 | 366.8 | 407.43 | 366.76 | 408.7 | 366.72 |
| 409.73 | 366.71 | 411.92 | 366.73 | 412.86 | 366.76 | 414.45 | 366.86 | 423.34 | 367.03 |
| 424.93 | 367.05 | 437.36 | 367.28 | 437.59 | 367.29 | 442.03 | 367.32 | 443.29 | 367.35 |
| 445.38 | 367.37 | 447.66 | 367.37 | 448.35 | 367.36 | 451.77 | 367.12 | 453.64 | 366.9 |
| 454.78 | 366.77 | 455.97 | 366.74 | 457.44 | 366.75 | 458.48 | 366.78 | 459.98 | 366.81 |
| 464.93 | 366.92 | 466.08 | 366.95 | 468.22 | 367.02 | 469.65 | 367.06 | 471.37 | 367.09 |
| 476.18 | 367.1 | 476.76 | 367.09 | 477.14 | 367.1 | 479.06 | 367.12 | 481.56 | 367.16 |
| 488 | 367.25 | 489.7 | 367.25 | 494.02 | 367.31 | 494.69 | 367.31 | 496.73 | 367.34 |
| 498.02 | 367.35 | 500.33 | 367.34 | 501.6 | 367.32 | 502.14 | 367.29 | 502.62 | 367.29 |
| 504.2 | 367.31 | 505.37 | 367.33 | 520.47 | 367.66 | 523.47 | 367.72 | 525.26 | 367.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 527.04 | 367.95 | 528.63 | 367.98 | 529.41 | 367.97 | 534.58 | 368.06 | 535.69 | 368.06 |
| 537.85 | 368.04 | 539.44 | 368.04 | 540.49 | 368.06 | 542.89 | 367.87 | 544.24 | 367.77 |
| 545.15 | 367.73 | 545.9 | 367.71 | 547.66 | 367.69 | 555.77 | 367.57 | 556.16 | 367.56 |
| 562.4 | 367.46 | 564.61 | 367.43 | 565.99 | 367.42 | 569.31 | 367.37 | 575.42 | 367.27 |
| 578.35 | 367.21 | 579.2 | 367.19 | 582.16 | 367.08 | 587.43 | 366.88 | 590.77 | 366.77 |
| 592.83 | 366.6 | 594.23 | 366.56 | 595.3 | 366.55 | 597.7 | 366.55 | 600.08 | 366.53 |
| 600.68 | 366.54 | 602.65 | 366.61 | 603.72 | 366.67 | 605.61 | 366.74 | 606.53 | 366.78 |
| 608.72 | 366.85 | 613.39 | 367.05 | 615.05 | 367.05 | 619.64 | 367 | 621.13 | 366.97 |
| 622.68 | 366.93 | 623.53 | 366.92 | 625.91 | 366.85 | 630.69 | 366.73 | 632.1 | 366.72 |
| 632.51 | 366.73 | 634.18 | 366.74 | 635.79 | 366.8 | 638.11 | 367.02 | 640.68 | 367.24 |
| 643.44 | 367.52 | 645.27 | 367.7 | 645.37 | 367.72 | 646.66 | 367.74 | 650.24 | 367.76 |
| 651.97 | 367.76 | 653.2 | 367.74 | 654.61 | 367.67 | 660.49 | 367.4 | 662.08 | 367.32 |
| 662.75 | 367.3 | 664.42 | 367.23 | 667.79 | 367.11 | 668.22 | 367.1 | 668.77 | 367.13 |
| 672.34 | 367.2 | 673.1 | 367.26 | 673.99 | 367.29 | 674.86 | 367.34 | 678.95 | 367.55 |
| 681.23 | 367.64 | 682.81 | 367.71 | 683.93 | 367.74 | 685.14 | 367.72 | 686.61 | 367.67 |
| 688.78 | 367.63 | 693.45 | 367.52 | 694.18 | 367.49 | 694.39 | 367.47 | 695.37 | 367.46 |
| 695.99 | 367.44 | 698.68 | 367.38 | 702.24 | 367.41 | 712.67 | 367.59 | 713.01 | 367.6 |
| 715.23 | 367.64 | 715.38 | 367.69 | 717.1 | 367.69 | 717.89 | 367.65 | 718.1 | 367.65 |
| 725.14 | 367.29 | 726.35 | 367.28 | 727.13 | 367.25 | 727.41 | 367.25 | 731.56 | 367.04 |
| 731.99 | 367.04 | 733.83 | 367.07 | 734.32 | 367.09 | 735.71 | 367.19 | 735.93 | 367.23 |
| 736.51 | 367.43 | 736.97 | 367.48 | 739.3 | 367.57 | 741.23 | 367.55 | 744.13 | 367.46 |
| 745.1 | 367.42 | 745.97 | 367.37 | 746.65 | 367.34 | 747.23 | 367.3 | 748.28 | 367.25 |
| 748.74 | 367.24 | 750.28 | 367.24 | 751.17 | 367.26 | 751.93 | 367.26 | 752.66 | 367.27 |
| 753.66 | 367.27 | 757.12 | 367.29 | 757.85 | 367.29 | 760.92 | 367.33 | 770.26 | 367.43 |
| 770.35 | 367.44 | 773.34 | 367.49 | 777.24 | 367.6 | 778.91 | 367.7 | 781.59 | 367.79 |
| 782.76 | 367.86 | 784.94 | 367.98 | 785.7 | 368.01 | 787.89 | 368.11 | 789 | 368.18 |
| 796.07 | 368.6 | 796.49 | 368.62 | 813.09 | 368.9 | 815.05 | 368.92 | 817.41 | 368.93 |
| 818.69 | 368.93 | 822.9 | 368.95 | 823.47 | 368.96 | 828.5 | 369.03 | 830.36 | 369.04 |
| 831.34 | 369.04 | 831.96 | 369.03 | 833.26 | 368.98 | 836.07 | 368.86 | 836.77 | 368.82 |
| 837.09 | 368.79 | 838.13 | 368.73 | 848.01 | 368.59 | 848.39 | 368.59 | 849.16 | 368.62 |
| 849.91 | 368.63 | 852.82 | 368.73 | 856.91 | 368.84 | 858.21 | 368.86 | 860.66 | 368.86 |
| 863.51 | 368.85 | 864.18 | 368.84 | 866.26 | 368.84 | 866.72 | 368.82 | 867.2 | 368.82 |
| 870.04 | 368.9 | 873.18 | 368.95 | 873.83 | 368.95 | 875.1 | 368.97 | 879.19 | 369.08 |
| 880.99 | 369.14 | 882.07 | 369.17 | 882.4 | 369.17 | 884.5 | 369.24 | 887.75 | 369.27 |
| 889.58 | 369.28 | 890.59 | 369.3 | 891.57 | 369.29 | 892.47 | 369.21 | 897.72 | 368.92 |
| 902.1 | 368.68 | 902.34 | 368.67 | 904.23 | 368.64 | 908.74 | 368.65 | 909.59 | 368.65 |
| 918.72 | 368.83 | 922.42 | 368.91 | 923.56 | 368.93 | 926.42 | 369 | 928.81 | 369.05 |
| 930.17 | 369.09 | 936.39 | 369.23 | 937.43 | 369.26 | 940.47 | 369.31 | 942.07 | 369.31 |
| 942.59 | 369.28 | 942.96 | 369.28 | 943.34 | 369.26 | 944.48 | 369.23 | 945.12 | 369.22 |
| 948.72 | 369.13 | 950.16 | 369.17 | 950.7 | 369.18 | 952.57 | 369.23 | 955.93 | 369.27 |
| 956.79 | 369.27 | 959.71 | 369.3 | 960.18 | 369.31 | 962.62 | 369.39 | 963.61 | 369.4 |
| 964.84 | 369.42 | 964.95 | 369.39 | 978.63 | 369.54 | 980.21 | 369.59 | 986.1 | 369.58 |
| 999.89 | 369.59 | 1002.58 | 369.36 | 1003.54 | 369.31 | 1004.15 | 369.29 | 1005.63 | 369.27 |
| 1005.72 | 369.28 | 1007.63 | 369.6 | 1008.16 | 369.68 | 1008.68 | 369.66 | 1009.45 | 369.66 |
| 1019.19 | 370.01 | 1020.66 | 370.06 | 1024.85 | 370.16 | 1027.36 | 370.18 | 1028.87 | 370.2 |
| 1034.83 | 370.11 | 1035.88 | 370.08 | 1037.96 | 370.01 | 1040.74 | 369.91 | 1041.07 | 369.91 |
| 1042.13 | 369.86 | 1043.98 | 369.79 | 1045.94 | 369.71 | 1046.54 | 369.69 | 1047.33 | 369.65 |
| 1047.94 | 369.63 | 1048.47 | 369.6 | 1048.89 | 369.4 | 1049.73 | 369.33 | 1051.2 | 369.27 |
| 1052.32 | 369.26 | 1055.72 | 369.28 | 1062.7 | 369.59 | 1064.26 | 369.59 | 1079.45 | 369.58 |
| 1080.52 | 369.59 | 1084.44 | 369.72 | 1086.9 | 369.78 | 1087.33 | 369.8 | 1088.54 | 369.9 |
| 1090.49 | 369.94 | 1092.14 | 369.96 | 1092.77 | 369.98 | 1102.5 | 369.94 | 1104.6 | 369.93 |
| 1104.87 | 369.9 | 1106.19 | 369.91 | 1112.92 | 370.05 | 1114.29 | 370.05 | 1115.15 | 370.04 |
| 1119.49 | 369.94 | 1120.48 | 369.89 | 1122.07 | 369.76 | 1124.12 | 369.7 | 1125.94 | 369.69 |
| 1128.53 | 369.72 | 1129.53 | 369.74 | 1129.83 | 369.73 | 1130.8 | 369.73 | 1133.68 | 369.76 |
| 1136.32 | 369.75 | 1139.74 | 369.68 | 1142.29 | 369.63 | 1143.27 | 369.6 | 1144.05 | 369.55 |
| 1145.04 | 369.44 | 1145.16 | 369.44 | 1149.2 | 369.35 | 1154.97 | 369.39 | 1155.58 | 369.4 |
| 1160.2 | 369.55 | 1161.61 | 369.58 | 1162.41 | 369.59 | 1166.68 | 370.37 | 1167.8 | 370.54 |
| 1169.9 | 370.76 | 1170.54 | 370.82 | 1173.2 | 370.81 | 1180.47 | 370.6 | 1180.86 | 370.59 |
| 1181.89 | 370.54 | 1185.84 | 370.55 | 1186.63 | 370.56 | 1193.12 | 370.56 | 1193.69 | 370.57 |
| 1195.13 | 370.62 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 65.67 | .05 | 124.88 | .04 | 784.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 124.88 | 784.94 | 50.68 | 46.77 | 36.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6494.14

INPUT
Description:
Station Elevation Data num= 422

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 71.14001 | 366.52 | 72 | 366.5179.17004 | | 366.5280.29004 | | 366.5382.82007 | | 366.53 |
| 84.13 | 366.5491.03003 | | 366.4796.19006 | | 366.49 | 100.76 | 366.56 | 102.09 | 366.55 |
| 103.86 | 366.57107.3201 | | 366.55 | 107.76 | 366.55107.8301 | | 366.54 | 108.23 | 366.51 |
| 108.5701 | 366.51112.4501 | | 366.52 | 115.53 | 366.57 | 117.63 | 366.57118.2101 | | 366.56 |
| 118.55 | 366.55118.9601 | | 366.53 | 120.14 | 366.49 | 120.6 | 366.48 | 121.11 | 366.44 |
| 121.4601 | 366.43121.9601 | | 366.42123.3101 | | 366.41 | 129.25 | 366.25 | 129.87 | 366.24 |
| 138.65 | 366.02 | 138.75 | 366.02138.8101 | | 366.01 | 139.47 | 366.01 | 139.61 | 366.02 |
| 158.9301 | 366.08160.9401 | | 366 | 161.88 | 365.6 | 162.77 | 365 | 165.79 | 364.83 |
| 168.3 | 364.69172.8301 | | 364.49 | 175.8 | 364.4 | 178.85 | 364.34180.0601 | | 364.3 |
| 180.98 | 364.28 | 183.28 | 364.25 | 185.88 | 364.28 | 186.4 | 364.29193.6901 | | 364.31 |
| 194.22 | 364.32 | 194.51 | 364.32 | 194.74 | 364.33 | 194.92 | 364.33 | 200.54 | 364.4 |
| 201.05 | 364.41201.9401 | | 364.41 | 217.11 | 364.98 | 217.97 | 364.98 | 218.3 | 364.96 |
| 218.4401 | 364.96 | 224.91 | 364.69 | 227.6 | 364.61 | 229.3 | 364.58 | 229.5 | 364.58 |
| 230.26 | 364.56 | 235.15 | 364.41 | 235.55 | 364.4 | 238.34 | 364.4 | 251.09 | 364.57 |
| 268.9501 | 365270.7001 | | 365.42 | 271.23 | 365.53 | 273 | 365.95273.3201 | | 365.95 |
| 273.7001 | 365.93 | 273.89 | 365.96273.9401 | | 365.98 | 274.13 | 365.97 | 274.4 | 365.97 |
| 277.3301 | 365.9 | 278.61 | 365.88 | 283.9 | 365.89285.3301 | | 365.88 | 288.52 | 365.82 |
| 290.85 | 365.8 | 294.9 | 365.72297.3201 | | 365.71 | 303.14 | 365.81 | 303.72 | 365.84 |
| 303.99 | 365.85304.4601 | | 365.92 | 305.63 | 366 | 323.85 | 366 | 324.14 | 366.01 |
| 325.25 | 366.1338.5701 | | 366.21339.1801 | | 366.11339.9401 | | 366.07340.5701 | | 366.05 |
| 340.64 | 366.05340.7001 | | 366.07 | 356.67 | 366.18 | 359.1 | 366 | 361.4 | 365.78 |
| 362.77 | 365.63 | 363.09 | 365.58 | 363.31 | 365.56 | 364.32 | 365.53 | 364.77 | 365.51 |
| 365.75 | 365.51 | 367.17 | 365.49368.4301 | | 365.49 | 369.07 | 365.5369.4901 | | 365.52 |
| 369.96 | 365.55 | 370.45 | 365.69 | 372.14 | 366 | 381.19 | 366.65382.1801 | | 366.69 |
| 382.58 | 366.7 | 385.86 | 366.88 | 390.78 | 366.6 | 392.36 | 366.69 | 392.64 | 366.62 |
| 392.7401 | 366.6 | 393.27 | 366.54 | 395.12 | 366 | 395.45 | 365.94 | 395.53 | 365.93 |
| 395.6 | 365.92 | 395.92 | 365.9 | 397.2 | 365.85 | 398.23 | 365.84 | 400.44 | 365.86 |
| 401.38 | 365.9 | 402.98 | 366 | 426.27 | 366.48 | 431.2 | 366.55 | 432 | 366.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 432.83 | 366.58 | 433.15 | 366.58 | 434.1 | 366.59 | 436.4 | 366.59 | 436.82 | 366.58 |
| 437.09 | 366.58 | 440.53 | 366.32 | 443.05 | 366 | 443.56 | 365.94 | 445.09 | 365.9 |
| 446.65 | 365.92 | 453.77 | 366.11 | 457.08 | 366.23 | 458.52 | 366.27 | 460.6801 | 366.31 |
| 470.51 | 366.41 | 478.7 | 366.44 | 483.04 | 366.51 | 483.72 | 366.51 | 487.07 | 366.55 |
| 489.39 | 366.54 | 490.67 | 366.52 | 490.81 | 366.51 | 491.21 | 366.49 | 491.7 | 366.49 |
| 493.29 | 366.51 | 512.6801 | 367 | 514.48 | 367.15 | 516.27 | 367.27 | 516.91 | 367.29 |
| 523.86 | 367.42 | 524.97 | 367.42 | 527.15 | 367.39 | 528.75 | 367.39 | 529.8 | 367.41 |
| 533.4301 | 367.09 | 533.57 | 367.08 | 534.4901 | 367.03 | 535.05 | 367.01 | 535.25 | 367 |
| 567.9 | 366.43 | 568.75 | 366.41 | 580.39 | 366 | 582.47 | 365.82 | 583.87 | 365.77 |
| 584.95 | 365.76 | 587.37 | 365.76 | 589.76 | 365.74 | 590.36 | 365.75 | 595.32 | 365.95 |
| 596.25 | 366 | 598.45 | 366.07 | 603.15 | 366.29 | 603.55 | 366.3 | 603.8 | 366.3 |
| 609.44 | 366.27 | 613.72 | 366.19 | 620.56 | 366 | 620.69 | 366 | 621.98 | 365.99 |
| 624.07 | 366 | 624.69 | 366.01 | 625.69 | 366.05 | 626.25 | 366.1 | 626.76 | 366.14 |
| 628.02 | 366.27 | 630.61 | 366.5 | 635.23 | 367 | 635.33 | 367.02 | 636.63 | 367.05 |
| 641.97 | 367.09 | 643.21 | 367.07 | 644.52 | 367.01 | 644.63 | 367 | 658.32 | 366.38 |
| 662.47 | 366.45 | 663.23 | 366.51 | 664.13 | 366.54 | 669.12 | 366.82 | 673 | 367 |
| 674.13 | 367.03 | 674.21 | 367.03 | 675.17 | 367 | 675.35 | 367 | 676.82 | 366.95 |
| 683.71 | 366.8 | 684.16 | 366.78 | 684.44 | 366.77 | 684.65 | 366.76 | 685.64 | 366.75 |
| 688.97 | 366.67 | 692.55 | 366.7 | 705.62 | 366.94 | 705.77 | 367 | 707.5 | 367 |
| 708.3 | 366.95 | 708.51 | 366.95 | 715.59 | 366.57 | 716.4901 | 366.56 | 716.9301 | 366.55 |
| 717.19 | 366.54 | 717.88 | 366.52 | 722.05 | 366.31 | 722.4901 | 366.31 | 724.34 | 366.35 |
| 724.83 | 366.38 | 726.23 | 366.49 | 726.45 | 366.53 | 727.03 | 366.75 | 727.5 | 366.81 |
| 729.55 | 366.9 | 729.71 | 366.9 | 729.84 | 366.91 | 730.15 | 366.91 | 731.62 | 366.9 |
| 731.78 | 366.9 | 734.7 | 366.81 | 735.65 | 366.77 | 738.88 | 366.59 | 739.34 | 366.58 |
| 740.33 | 366.58 | 742.4301 | 366.61 | 748.44 | 366.6 | 749.1 | 366.61 | 760.9901 | 366.72 |
| 764.09 | 366.78 | 768.17 | 366.9 | 769.05 | 366.95 | 769.7 | 367 | 772.39 | 367.07 |
| 775.76 | 367.27 | 778.79 | 367.42 | 787.2 | 367.98 | 787.28 | 367.98 | 787.54 | 368 |
| 787.63 | 368 | 804.69 | 368.36 | 809.13 | 368.4 | 820.53 | 368.47 | 822.9301 | 368.47 |
| 824.09 | 368.45 | 825.42 | 368.4 | 828.31 | 368.27 | 829.03 | 368.22 | 829.36 | 368.19 |
| 830.4301 | 368.12 | 840.58 | 367.97 | 840.97 | 367.97 | 841.76 | 368 | 841.84 | 368 |
| 842.54 | 368.02 | 849.73 | 368.27 | 851.07 | 368.29 | 853.48 | 368.29 | 859.13 | 368.24 |
| 859.34 | 368.24 | 859.6 | 368.23 | 859.67 | 368.23 | 859.8101 | 368.21 | 860.13 | 368.21 |
| 863.22 | 368.29 | 866.45 | 368.32 | 867.12 | 368.32 | 868.42 | 368.33 | 873.3201 | 368.46 |
| 878.09 | 368.61 | 884.34 | 368.68 | 885.21 | 368.68 | 885.35 | 368.67 | 886.28 | 368.59 |
| 896.42 | 368 | 898.36 | 367.98 | 903 | 367.99 | 903.87 | 368 | 931.42 | 368.62 |
| 932.49 | 368.65 | 936.03 | 368.7 | 937.25 | 368.7 | 937.63 | 368.68 | 937.79 | 368.67 |
| 938.17 | 368.66 | 938.4401 | 368.64 | 938.5601 | 368.64 | 938.96 | 368.63 | 939.24 | 368.62 |
| 940.1801 | 368.6 | 944.09 | 368.49 | 948.04 | 368.6 | 948.67 | 368.6 | 949.0701 | 368.61 |
| 955.38 | 368.68 | 955.87 | 368.69 | 958.37 | 368.77 | 960.66 | 368.81 | 960.77 | 368.77 |
| 974.83 | 368.95 | 976.45 | 369 | 996.6801 | 369 | 999.4401 | 368.75 | 1000.43 | 368.69 |
| 1001.06 | 368.67 | 1002.19 | 368.65 | 1002.58 | 368.65 | 1002.67 | 368.66 | 1004.63 | 369 |
| 1005.18 | 369.09 | 1005.54 | 369.09 | 1005.65 | 369.08 | 1005.71 | 369.07 | 1006.5 | 369.07 |
| 1016.51 | 369.45 | 1017.77 | 369.49 | 1018.03 | 369.5 | 1018.63 | 369.51 | 1022.33 | 369.61 |
| 1026.13 | 369.65 | 1026.46 | 369.65 | 1032.59 | 369.55 | 1032.94 | 369.54 | 1033.01 | 369.54 |
| 1038.66 | 369.33 | 1039 | 369.33 | 1045.97 | 369.03 | 1046.06 | 369.03 | 1046.61 | 369 |
| 1047.04 | 368.78 | 1047.9 | 368.71 | 1049.41 | 368.65 | 1050.56 | 368.63 | 1053.9 | 368.65 |
| 1061.23 | 369 | 1079.55 | 369 | 1083.58 | 369.13 | 1086.1 | 369.18 | 1086.55 | 369.2 |
| 1086.93 | 369.24 | 1087.79 | 369.31 | 1091.49 | 369.37 | 1092.14 | 369.39 | 1104.3 | 369.32 |
| 1104.57 | 369.28 | 1105.08 | 369.28 | 1106.41 | 369.3 | 1112.85 | 369.45 | 1114.25 | 369.45 |
| 1115.14 | 369.44 | 1118.29 | 369.37 | 1119.6 | 369.33 | 1120.12 | 369.31 | 1120.62 | 369.28 |
| 1121.7 | 369.18 | 1122.25 | 369.14 | 1124.36 | 369.07 | 1124.64 | 369.08 | 1126.13 | 369.07 |
| 1126.23 | 369.07 | 1128.89 | 369.1 | 1129.92 | 369.12 | 1130.23 | 369.11 | 1131.22 | 369.11 |
| 1134.18 | 369.15 | 1136.9 | 369.14 | 1143.28 | 369 | 1144.04 | 368.97 | 1144.84 | 368.91 |
| 1145.86 | 368.8 | 1150.13 | 368.7 | 1150.2 | 368.7 | 1156.06 | 368.75 | 1156.69 | 368.76 |
| 1161.97 | 368.95 | 1163.71 | 369 | 1168.1 | 369.84 | 1169.15 | 370 | 1169.25 | 370.02 |
| 1171.78 | 370.3 | 1172.07 | 370.32 | 1174.8 | 370.31 | 1182.67 | 370.05 | 1183.73 | 370 |
| 1195.86 | 370 | 1197.34 | 370.06 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 71.14001 | .05 | 121.9601 | .04 | 775.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 121.9601 | 775.76 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6474.37*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 85.39 | 366.34 | 86.22 | 366.33 | 93.11 | 366.33 | 93.53 | 366.34 | 96.62 | 366.34 |
| 97.88 | 366.35 | 104.51 | 366.27 | 109.46 | 366.29 | 113.85 | 366.35 | 115.13 | 366.34 |
| 116.83 | 366.36 | 120.16 | 366.34 | 120.58 | 366.33 | 121.03 | 366.3 | 125.09 | 366.3 |
| 128.05 | 366.35 | 130.06 | 366.34 | 130.95 | 366.32 | 131.34 | 366.3 | 132.48 | 366.26 |
| 132.92 | 366.25 | 133.41 | 366.21 | 134.22 | 366.19 | 134.76 | 366.15 | 135.94 | 366.12 |
| 137.03 | 366.08 | 140.05 | 366.02 | 141.34 | 366 | 141.65 | 366 | 142.54 | 365.97 |
| 143.46 | 365.96 | 144.28 | 365.96 | 145.25 | 365.95 | 146.95 | 365.89 | 148.47 | 365.85 |
| 149.83 | 365.84 | 151.86 | 365.81 | 152.72 | 365.79 | 155.44 | 365.75 | 156.48 | 365.75 |
| 156.66 | 365.76 | 157.92 | 365.76 | 158.42 | 365.77 | 158.79 | 365.76 | 161.29 | 365.73 |
| 161.78 | 365.74 | 162.79 | 365.74 | 164.9 | 365.75 | 165.58 | 365.76 | 166.86 | 365.76 |
| 167.37 | 365.75 | 167.58 | 365.76 | 170.61 | 365.76 | 171.58 | 365.75 | 173.25 | 365.75 |
| 173.65 | 365.77 | 174.5 | 365.78 | 174.59 | 365.79 | 175.3 | 365.79 | 175.49 | 365.8 |
| 176.33 | 365.8 | 179.78 | 365.82 | 180.9 | 365.83 | 183.12 | 365.75 | 183.77 | 365.73 |
| 184.96 | 365.34 | 185.19 | 365.23 | 186.09 | 364.77 | 187.68 | 364.71 | 187.92 | 364.71 |
| 189.34 | 364.65 | 189.73 | 364.62 | 193.12 | 364.47 | 195.61 | 364.37 | 196.82 | 364.3 |
| 197.56 | 364.27 | 198.88 | 364.24 | 199.55 | 364.23 | 202.49 | 364.16 | 202.6 | 364.15 |
| 203.81 | 364.14 | 206.56 | 364.09 | 209.24 | 364.02 | 210.68 | 363.99 | 211.33 | 363.99 |
| 212.12 | 363.97 | 212.6 | 363.97 | 213.81 | 363.99 | 214.75 | 364 | 215.52 | 364.02 |
| 217.6 | 364.03 | 218.25 | 364.03 | 222.67 | 364.05 | 223.47 | 364.05 | 223.87 | 364.06 |
| 225.71 | 364.09 | 230.44 | 364.14 | 231.36 | 364.17 | 238.91 | 364.46 | 244.15 | 364.65 |
| 245.64 | 364.71 | 246.49 | 364.71 | 253.29 | 364.42 | 255.93 | 364.34 | 258.54 | 364.29 |
| 263.34 | 364.14 | 263.73 | 364.13 | 266.47 | 364.13 | 267.03 | 364.14 | 278.98 | 364.32 |
| 286.88 | 364.52 | 288.36 | 364.56 | 296.5 | 364.75 | 298.21 | 365.15 | 298.73 | 365.26 |
| 300.47 | 365.66 | 300.78 | 365.66 | 301.16 | 365.64 | 301.39 | 365.69 | 304.72 | 365.61 |
| 305.97 | 365.59 | 311.16 | 365.6 | 312.56 | 365.59 | 315.69 | 365.54 | 316.48 | 365.53 |
| 317.98 | 365.52 | 321.95 | 365.43 | 324.33 | 365.42 | 330.03 | 365.52 | 330.87 | 365.56 |
| 331.33 | 365.62 | 332.42 | 365.7 | 345.66 | 365.7 | 350.35 | 365.69 | 350.64 | 365.7 |
| 351.72 | 365.79 | 352.49 | 365.79 | 358.14 | 365.84 | 358.83 | 365.85 | 360.61 | 365.86 |
| 364.79 | 365.9 | 365.39 | 365.81 | 366.13 | 365.77 | 366.82 | 365.75 | 366.88 | 365.77 |
| 367.53 | 365.77 | 378.19 | 365.85 | 379.29 | 365.86 | 381.94 | 365.89 | 382.55 | 365.89 |
| 384.93 | 365.72 | 387.19 | 365.51 | 388.53 | 365.37 | 389.06 | 365.3 | 390.05 | 365.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 390.49 | 365.25 | 391.6 | 365.25 | 392.85 | 365.23 | 394.08 | 365.23 | 395.12 | 365.25 |
| 395.58 | 365.28 | 396.06 | 365.42 | 397.72 | 365.71 | 405.49 | 366.24 | 406.6 | 366.32 |
| 407.57 | 366.36 | 407.96 | 366.36 | 409.81 | 366.46 | 411.18 | 366.53 | 415.37 | 366.29 |
| 416.01 | 366.25 | 416.11 | 366.26 | 417.56 | 366.34 | 417.93 | 366.25 | 418.45 | 366.2 |
| 420.1 | 365.72 | 420.26 | 365.68 | 420.74 | 365.6 | 421.05 | 365.58 | 422.3 | 365.54 |
| 423.31 | 365.53 | 425.48 | 365.55 | 426.95 | 365.63 | 427.97 | 365.7 | 428.86 | 365.73 |
| 435.11 | 365.86 | 437.11 | 365.9 | 442.88 | 366.02 | 445.04 | 366.06 | 446.83 | 366.1 |
| 450.82 | 366.18 | 452.28 | 366.2 | 454.13 | 366.23 | 455.66 | 366.25 | 456.44 | 366.27 |
| 457.26 | 366.28 | 460.76 | 366.28 | 461.44 | 366.27 | 464.81 | 366.02 | 467.28 | 365.71 |
| 467.78 | 365.66 | 469.28 | 365.62 | 470.81 | 365.63 | 474.12 | 365.72 | 477.8 | 365.81 |
| 481.04 | 365.92 | 482.46 | 365.95 | 484.58 | 365.99 | 490.86 | 366.04 | 493.51 | 366.07 |
| 494.81 | 366.07 | 498.5 | 366.08 | 500.32 | 366.09 | 501.12 | 366.1 | 502.25 | 366.1 |
| 505.36 | 366.16 | 506.51 | 366.18 | 507.18 | 366.18 | 508.2 | 366.2 | 510.46 | 366.22 |
| 512.74 | 366.21 | 514 | 366.19 | 514.53 | 366.16 | 515.01 | 366.16 | 516.57 | 366.18 |
| 518.02 | 366.21 | 523.51 | 366.34 | 530.37 | 366.51 | 532.81 | 366.56 | 535.59 | 366.63 |
| 537.35 | 366.78 | 539.11 | 366.89 | 539.74 | 366.91 | 543.27 | 366.97 | 546.55 | 367.03 |
| 547.64 | 367.03 | 549.78 | 367 | 551.35 | 367 | 552.38 | 367.02 | 553.52 | 366.93 |
| 554.37 | 366.85 | 556.08 | 366.71 | 557.73 | 366.64 | 561.22 | 366.58 | 575.02 | 366.37 |
| 589.76 | 366.12 | 590.59 | 366.1 | 595.06 | 365.95 | 599.58 | 365.78 | 602.01 | 365.7 |
| 604.05 | 365.52 | 605.42 | 365.48 | 606.48 | 365.47 | 607.49 | 365.47 | 608.7 | 365.46 |
| 611.79 | 365.45 | 616.65 | 365.65 | 617.57 | 365.69 | 619.72 | 365.76 | 624.06 | 365.96 |
| 624.73 | 365.98 | 626.09 | 365.97 | 630.5 | 365.95 | 634.7 | 365.88 | 641.41 | 365.7 |
| 642.81 | 365.69 | 644.86 | 365.71 | 645.46 | 365.72 | 646.45 | 365.75 | 647.5 | 365.84 |
| 648.73 | 365.97 | 651.27 | 366.19 | 655.8 | 366.67 | 655.9 | 366.69 | 657.18 | 366.72 |
| 657.44 | 366.72 | 662.42 | 366.76 | 663.63 | 366.74 | 664.92 | 366.69 | 665.03 | 366.68 |
| 672.32 | 366.36 | 674.11 | 366.28 | 678.45 | 366.08 | 682.53 | 366.15 | 683.27 | 366.2 |
| 684.15 | 366.23 | 689.05 | 366.5 | 692.86 | 366.67 | 694.04 | 366.7 | 695.16 | 366.67 |
| 696.6 | 366.62 | 703.36 | 366.48 | 704.28 | 366.44 | 705.25 | 366.43 | 708.52 | 366.35 |
| 712.03 | 366.38 | 724.85 | 366.61 | 725 | 366.66 | 726.7 | 366.66 | 727.48 | 366.61 |
| 727.69 | 366.61 | 733.38 | 366.31 | 734.63 | 366.25 | 735.52 | 366.24 | 736.34 | 366.22 |
| 737.59 | 366.17 | 740.44 | 366.03 | 740.96 | 366.01 | 741.4 | 366.01 | 743.22 | 366.07 |
| 743.7 | 366.1 | 745.07 | 366.22 | 745.29 | 366.26 | 745.86 | 366.47 | 746.32 | 366.53 |
| 748.61 | 366.62 | 750.52 | 366.62 | 753.38 | 366.53 | 754.31 | 366.49 | 757.48 | 366.32 |
| 758.9 | 366.32 | 760.96 | 366.35 | 766.86 | 366.34 | 767.51 | 366.35 | 779.17 | 366.46 |
| 782.21 | 366.52 | 786.21 | 366.64 | 787.08 | 366.69 | 787.71 | 366.74 | 790.35 | 366.81 |
| 793.66 | 367 | 794.41 | 367.04 | 796.64 | 367.15 | 800.84 | 367.42 | 801.87 | 367.48 |
| 803 | 367.56 | 805.46 | 367.7 | 806.25 | 367.71 | 809.22 | 367.77 | 811.65 | 367.83 |
| 813.03 | 367.85 | 814.9 | 367.89 | 816.93 | 367.92 | 820.82 | 367.99 | 822.08 | 368.01 |
| 822.62 | 368.01 | 826.44 | 368.04 | 837.64 | 368.11 | 840 | 368.11 | 841.14 | 368.09 |
| 841.49 | 368.07 | 842.45 | 368.04 | 845.28 | 367.91 | 845.99 | 367.87 | 846.32 | 367.84 |
| 847.37 | 367.77 | 857.34 | 367.63 | 857.72 | 367.63 | 858.5 | 367.66 | 859.26 | 367.68 |
| 866.33 | 367.92 | 867.64 | 367.94 | 870.01 | 367.94 | 875.56 | 367.9 | 876.09 | 367.89 |
| 876.23 | 367.87 | 876.54 | 367.87 | 877.48 | 367.89 | 879.58 | 367.95 | 882.75 | 367.98 |
| 883.41 | 367.98 | 884.69 | 367.99 | 889.5 | 368.13 | 894.19 | 368.28 | 897.45 | 368.32 |
| 897.65 | 368.32 | 901.18 | 368.36 | 902.23 | 368.27 | 905.32 | 368.1 | 912.2 | 367.74 |
| 914.23 | 367.73 | 918.66 | 367.74 | 919.51 | 367.75 | 946.58 | 368.36 | 947.63 | 368.39 |
| 951.11 | 368.44 | 952.31 | 368.44 | 953.48 | 368.38 | 955.19 | 368.34 | 959.03 | 368.24 |
| 962.91 | 368.35 | 963.53 | 368.35 | 963.92 | 368.36 | 970.12 | 368.43 | 970.6 | 368.44 |
| 973.06 | 368.51 | 975.3 | 368.55 | 975.41 | 368.51 | 989.23 | 368.69 | 990.35 | 368.73 |
| 990.82 | 368.74 | 993.54 | 368.74 | 1007.95 | 368.75 | 1010.69 | 368.75 | 1011.17 | 368.71 |
| 1012.19 | 368.61 | 1013.4 | 368.51 | 1014.33 | 368.45 | 1014.99 | 368.43 | 1016.1 | 368.41 |
| 1016.58 | 368.42 | 1018.5 | 368.75 | 1019.04 | 368.83 | 1019.56 | 368.82 | 1020.34 | 368.82 |
| 1028.14 | 369.11 | 1030.17 | 369.19 | 1032.25 | 369.24 | 1035.89 | 369.34 | 1039.62 | 369.38 |
| 1039.95 | 369.38 | 1042.82 | 369.34 | 1043.21 | 369.33 | 1045.97 | 369.29 | 1046.38 | 369.28 |
| 1051.93 | 369.08 | 1052.27 | 369.08 | 1053.3 | 369.04 | 1056.15 | 368.92 | 1059.11 | 368.79 |
| 1059.74 | 368.76 | 1060.16 | 368.55 | 1061.01 | 368.49 | 1062.49 | 368.43 | 1063.62 | 368.41 |
| 1066.9 | 368.43 | 1074.1 | 368.77 | 1078.18 | 368.77 | 1092.1 | 368.76 | 1094.78 | 368.85 |
| 1096.06 | 368.89 | 1098.54 | 368.94 | 1098.98 | 368.96 | 1099.35 | 369 | 1100.2 | 369.06 |
| 1103.83 | 369.12 | 1104.47 | 369.14 | 1112.3 | 369.1 | 1113.39 | 369.09 | 1116.42 | 369.08 |
| 1116.68 | 369.04 | 1117.18 | 369.04 | 1118.49 | 369.06 | 1124.82 | 369.2 | 1126.19 | 369.2 |
| 1127.07 | 369.19 | 1130.16 | 369.13 | 1131.96 | 369.07 | 1132.45 | 369.04 | 1133.51 | 368.95 |
| 1134.05 | 368.91 | 1136.12 | 368.84 | 1136.4 | 368.85 | 1137.96 | 368.84 | 1140.57 | 368.87 |
| 1141.59 | 368.89 | 1141.89 | 368.88 | 1142.86 | 368.88 | 1144.67 | 368.91 | 1145.77 | 368.92 |
| 1148.44 | 368.91 | 1148.94 | 368.9 | 1154.71 | 368.77 | 1155.46 | 368.75 | 1156.24 | 368.69 |
| 1157.25 | 368.58 | 1160.84 | 368.5 | 1161.66 | 368.49 | 1163.77 | 368.5 | 1166.4 | 368.52 |
| 1167.88 | 368.54 | 1173.07 | 368.72 | 1174.78 | 368.77 | 1179.09 | 369.58 | 1180.13 | 369.73 |
| 1180.22 | 369.75 | 1182.03 | 369.95 | 1182.99 | 370.04 | 1185.68 | 370.03 | 1193.24 | 369.79 |
| 1193.84 | 369.76 | 1194.45 | 369.74 | 1195.54 | 369.74 | 1201.51 | 369.73 | 1206.37 | 369.73 |
| 1207.82 | 369.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 85.39 | .05 | 134.22 | .04 | 793.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 134.22 | 793.66 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6454.60*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 99.65 | 366.15 | 100.44 | 366.14 | 107.05 | 366.14 | 107.46 | 366.15 | 111.62 | 366.15 |
| 117.98 | 366.08 | 122.74 | 366.09 | 126.95 | 366.14 | 128.17 | 366.13 | 129.81 | 366.15 |
| 132.99 | 366.12 | 133.4 | 366.12 | 133.83 | 366.08 | 137.72 | 366.08 | 140.56 | 366.12 |
| 142.5 | 366.12 | 143.35 | 366.1 | 143.72 | 366.08 | 145.23 | 366.03 | 145.7 | 365.99 |
| 146.49 | 365.97 | 147.14 | 365.88 | 148.57 | 365.83 | 149.9 | 365.77 | 153.55 | 365.71 |
| 155.5 | 365.71 | 155.98 | 365.7 | 156.57 | 365.67 | 157.7 | 365.68 | 159.55 | 365.68 |
| 160.84 | 365.64 | 161.93 | 365.59 | 163.78 | 365.55 | 165.14 | 365.55 | 165.43 | 365.54 |
| 167.89 | 365.53 | 168.93 | 365.51 | 172.22 | 365.49 | 172.47 | 365.48 | 173.49 | 365.48 |
| 173.7 | 365.49 | 174.51 | 365.49 | 175.84 | 365.51 | 178.34 | 365.45 | 179.44 | 365.43 |
| 179.91 | 365.44 | 181.15 | 365.45 | 183.38 | 365.46 | 183.61 | 365.47 | 184.53 | 365.47 |
| 185.38 | 365.48 | 186.7 | 365.46 | 186.96 | 365.47 | 190.63 | 365.47 | 191.81 | 365.45 |
| 192.5 | 365.45 | 193.2 | 365.44 | 194.11 | 365.45 | 194.32 | 365.47 | 196.17 | 365.52 |
| 197.57 | 365.52 | 201.75 | 365.57 | 203.5 | 365.57 | 205.81 | 365.48 | 206.59 | 365.46 |
| 208.04 | 365.09 | 209.42 | 364.55 | 211.34 | 364.49 | 212.46 | 364.47 | 213.83 | 364.41 |
| 213.86 | 364.4 | 214.78 | 364.37 | 214.88 | 364.36 | 217.67 | 364.26 | 217.94 | 364.24 |
| 220.96 | 364.14 | 221.77 | 364.09 | 222.43 | 364.04 | 223.33 | 364.01 | 224.93 | 363.99 |
| 225.75 | 363.99 | 227.25 | 363.96 | 227.44 | 363.95 | 228.33 | 363.94 | 228.43 | 363.93 |
| 229.45 | 363.9 | 230.52 | 363.89 | 230.91 | 363.9 | 232.2 | 363.88 | 234.21 | 363.83 |
| 236.08 | 363.79 | 237.5 | 363.75 | 239.24 | 363.72 | 240.04 | 363.72 | 241.13 | 363.68 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 241.77 | 363.69 | 242.96 | 363.72 | 243.88 | 363.73 | 244.63 | 363.75 | 246.68 | 363.76 |
| 247.32 | 363.76 | 251.76 | 363.78 | 252.83 | 363.8 | 254.63 | 363.82 | 258.24 | 363.87 |
| 258.72 | 363.88 | 259.58 | 363.88 | 260.17 | 363.91 | 267.58 | 364.19 | 272.71 | 364.38 |
| 274.17 | 364.43 | 275 | 364.43 | 275.45 | 364.41 | 281.68 | 364.15 | 284.27 | 364.08 |
| 285.9 | 364.04 | 286.82 | 364.03 | 291.53 | 363.88 | 291.91 | 363.87 | 293.7 | 363.87 |
| 294.33 | 363.86 | 295.15 | 363.87 | 306.86 | 364.07 | 316.06 | 364.32 | 324.04 | 364.5 |
| 325.72 | 364.89 | 326.23 | 364.99 | 327.94 | 365.37 | 328.61 | 365.35 | 328.84 | 365.4 |
| 332.1 | 365.32 | 333.33 | 365.31 | 338.42 | 365.32 | 339.8 | 365.31 | 342.87 | 365.25 |
| 343.64 | 365.25 | 345.11 | 365.23 | 349 | 365.15 | 351.33 | 365.14 | 354.69 | 365.18 |
| 356.93 | 365.22 | 357.75 | 365.26 | 358.2 | 365.33 | 359.27 | 365.4 | 372.25 | 365.4 |
| 377.13 | 365.39 | 378.2 | 365.48 | 378.95 | 365.48 | 384.49 | 365.52 | 386.92 | 365.55 |
| 391.01 | 365.59 | 391.6 | 365.5 | 393 | 365.45 | 393.06 | 365.47 | 393.7 | 365.47 |
| 404.15 | 365.55 | 406.08 | 365.57 | 406.77 | 365.59 | 408.42 | 365.61 | 410.76 | 365.45 |
| 412.97 | 365.24 | 414.29 | 365.1 | 414.81 | 365.04 | 415.78 | 365.01 | 416.21 | 364.99 |
| 417.31 | 364.99 | 418.52 | 364.97 | 420.35 | 364.97 | 421.21 | 365.02 | 421.68 | 365.14 |
| 423.3 | 365.42 | 430.92 | 365.92 | 432.01 | 365.99 | 433.35 | 366.03 | 435.16 | 366.12 |
| 436.5 | 366.18 | 439.25 | 366.03 | 440.08 | 365.97 | 441.23 | 365.9 | 442.75 | 365.99 |
| 443.02 | 365.92 | 443.63 | 365.85 | 445.41 | 365.36 | 445.87 | 365.28 | 447.41 | 365.23 |
| 448.4 | 365.22 | 450.53 | 365.25 | 451.43 | 365.29 | 452.97 | 365.4 | 453.84 | 365.43 |
| 459.97 | 365.57 | 461.93 | 365.61 | 467.58 | 365.73 | 469.71 | 365.77 | 470.08 | 365.77 |
| 471.46 | 365.8 | 475.37 | 365.88 | 476.81 | 365.9 | 478.61 | 365.93 | 480.11 | 365.94 |
| 480.88 | 365.96 | 482.9 | 365.98 | 485.12 | 365.98 | 485.78 | 365.97 | 489.09 | 365.72 |
| 492 | 365.37 | 493.48 | 365.33 | 494.98 | 365.35 | 498.22 | 365.43 | 501.83 | 365.51 |
| 505.01 | 365.61 | 506.39 | 365.64 | 508.47 | 365.67 | 512.26 | 365.7 | 513.31 | 365.7 |
| 516.17 | 365.72 | 517.24 | 365.73 | 517.93 | 365.73 | 518.51 | 365.74 | 522.12 | 365.74 |
| 523.91 | 365.75 | 524.69 | 365.76 | 525.51 | 365.76 | 525.81 | 365.77 | 528.85 | 365.84 |
| 531.63 | 365.87 | 533.86 | 365.89 | 536.09 | 365.88 | 537.32 | 365.86 | 537.84 | 365.83 |
| 539.84 | 365.84 | 541.27 | 365.87 | 546.65 | 365.99 | 553.38 | 366.15 | 555.77 | 366.2 |
| 558.49 | 366.26 | 560.22 | 366.4 | 561.95 | 366.51 | 562.56 | 366.53 | 566.02 | 366.59 |
| 569.25 | 366.64 | 570.32 | 366.64 | 572.41 | 366.61 | 572.49 | 366.62 | 573.95 | 366.62 |
| 574.96 | 366.64 | 576.08 | 366.55 | 578.59 | 366.34 | 579.47 | 366.3 | 580.2 | 366.28 |
| 583.63 | 366.23 | 588.11 | 366.16 | 597.16 | 366.05 | 611.61 | 365.81 | 612.43 | 365.79 |
| 616.81 | 365.65 | 621.24 | 365.48 | 623.63 | 365.4 | 625.63 | 365.23 | 626.97 | 365.18 |
| 628.01 | 365.17 | 630.34 | 365.17 | 632.64 | 365.15 | 633.22 | 365.16 | 637.99 | 365.34 |
| 638.88 | 365.39 | 641 | 365.45 | 645.25 | 365.64 | 645.9 | 365.66 | 647.24 | 365.65 |
| 651.57 | 365.64 | 655.69 | 365.57 | 662.27 | 365.41 | 663.63 | 365.4 | 665.64 | 365.41 |
| 666.24 | 365.42 | 667.2 | 365.46 | 667.74 | 365.51 | 668.23 | 365.54 | 669.44 | 365.66 |
| 671.93 | 365.88 | 676.38 | 366.34 | 676.62 | 366.37 | 677.98 | 366.39 | 682.86 | 366.43 |
| 684.05 | 366.42 | 685.42 | 366.35 | 692.57 | 366.05 | 694.33 | 365.97 | 698.59 | 365.78 |
| 701.44 | 365.83 | 702.58 | 365.84 | 703.31 | 365.9 | 704.72 | 365.95 | 708.98 | 366.18 |
| 712.71 | 366.34 | 713.87 | 366.37 | 716.38 | 366.3 | 723.45 | 366.14 | 723.92 | 366.12 |
| 724.87 | 366.11 | 728.07 | 366.03 | 731.52 | 366.06 | 744.09 | 366.27 | 744.23 | 366.33 |
| 745.9 | 366.32 | 746.67 | 366.28 | 746.87 | 366.28 | 752.45 | 365.99 | 753.68 | 365.93 |
| 754.54 | 365.92 | 755.88 | 365.88 | 759.37 | 365.73 | 759.88 | 365.71 | 760.32 | 365.72 |
| 762.1 | 365.79 | 762.57 | 365.82 | 763.91 | 365.95 | 764.13 | 365.99 | 764.68 | 366.19 |
| 765.14 | 366.24 | 767.11 | 366.33 | 767.68 | 366.34 | 769.25 | 366.33 | 772.06 | 366.25 |
| 772.98 | 366.22 | 776.08 | 366.06 | 776.52 | 366.05 | 777.48 | 366.05 | 779.5 | 366.08 |
| 785.28 | 366.08 | 785.91 | 366.09 | 797.35 | 366.21 | 800.33 | 366.27 | 804.26 | 366.38 |
| 805.1 | 366.43 | 805.73 | 366.48 | 808.32 | 366.55 | 811.56 | 366.73 | 812.29 | 366.77 |
| 814.48 | 366.87 | 818.61 | 367.14 | 819.63 | 367.19 | 820.73 | 367.26 | 822.92 | 367.39 |
| 823.92 | 367.4 | 826.84 | 367.46 | 829.23 | 367.52 | 831.92 | 367.56 | 832.42 | 367.57 |
| 834.41 | 367.59 | 838.23 | 367.64 | 840.01 | 367.65 | 843.75 | 367.68 | 854.75 | 367.74 |
| 857.07 | 367.74 | 858.19 | 367.72 | 859.47 | 367.68 | 862.26 | 367.56 | 864.3 | 367.42 |
| 874.1 | 367.29 | 874.47 | 367.29 | 875.24 | 367.32 | 875.99 | 367.34 | 882.92 | 367.57 |
| 884.22 | 367.59 | 886.54 | 367.59 | 891.99 | 367.55 | 892.51 | 367.54 | 892.65 | 367.52 |
| 892.96 | 367.52 | 893.88 | 367.55 | 895.94 | 367.61 | 899.06 | 367.64 | 899.7 | 367.65 |
| 900.96 | 367.66 | 905.68 | 367.79 | 910.29 | 367.95 | 913.49 | 367.99 | 913.69 | 367.99 |
| 916.32 | 368.03 | 917.16 | 368.03 | 918.19 | 367.95 | 921.22 | 367.79 | 924.23 | 367.65 |
| 927.97 | 367.48 | 929.97 | 367.48 | 934.32 | 367.49 | 935.16 | 367.5 | 961.74 | 368.1 |
| 962.77 | 368.12 | 966.19 | 368.17 | 967.36 | 368.17 | 968.25 | 368.14 | 968.51 | 368.12 |
| 973.96 | 367.99 | 977.77 | 368.09 | 978.77 | 368.1 | 984.86 | 368.17 | 985.33 | 368.18 |
| 987.74 | 368.26 | 989.95 | 368.29 | 990.06 | 368.26 | 1003.62 | 368.43 | 1004.72 | 368.47 |
| 1005.18 | 368.48 | 1007.86 | 368.48 | 1022.01 | 368.49 | 1024.7 | 368.49 | 1026.17 | 368.37 |
| 1027.36 | 368.26 | 1028.27 | 368.21 | 1028.93 | 368.19 | 1030.02 | 368.17 | 1030.48 | 368.18 |
| 1032.37 | 368.5 | 1032.9 | 368.58 | 1033.25 | 368.58 | 1033.41 | 368.56 | 1034.18 | 368.56 |
| 1041.84 | 368.85 | 1045.3 | 368.97 | 1045.88 | 368.98 | 1049.45 | 369.07 | 1053.12 | 369.11 |
| 1053.43 | 369.12 | 1056.25 | 369.07 | 1056.64 | 369.07 | 1059.35 | 369.03 | 1059.75 | 369.02 |
| 1065.2 | 368.83 | 1065.53 | 368.83 | 1066.54 | 368.79 | 1069.35 | 368.67 | 1072.26 | 368.56 |
| 1072.87 | 368.53 | 1073.29 | 368.33 | 1074.12 | 368.26 | 1075.58 | 368.21 | 1076.69 | 368.19 |
| 1079.91 | 368.21 | 1086.98 | 368.53 | 1104.65 | 368.53 | 1108.54 | 368.65 | 1111.41 | 368.71 |
| 1111.77 | 368.75 | 1112.6 | 368.81 | 1116.17 | 368.87 | 1116.8 | 368.89 | 1124.49 | 368.85 |
| 1125.56 | 368.84 | 1128.53 | 368.83 | 1128.79 | 368.79 | 1129.29 | 368.79 | 1130.57 | 368.81 |
| 1136.78 | 368.95 | 1138.13 | 368.96 | 1138.99 | 368.95 | 1143.29 | 368.85 | 1144.28 | 368.8 |
| 1145.32 | 368.71 | 1145.85 | 368.68 | 1147.89 | 368.61 | 1148.16 | 368.62 | 1149.69 | 368.61 |
| 1152.26 | 368.64 | 1153.25 | 368.66 | 1153.55 | 368.65 | 1154.51 | 368.65 | 1156.28 | 368.68 |
| 1157.36 | 368.69 | 1159.99 | 368.68 | 1166.14 | 368.55 | 1166.87 | 368.52 | 1167.65 | 368.47 |
| 1168.63 | 368.36 | 1172.16 | 368.29 | 1172.75 | 368.27 | 1172.96 | 368.28 | 1175.04 | 368.29 |
| 1177.62 | 368.31 | 1178.47 | 368.31 | 1179.08 | 368.32 | 1184.17 | 368.5 | 1185.85 | 368.54 |
| 1190.09 | 369.31 | 1191.2 | 369.48 | 1193.64 | 369.74 | 1193.92 | 369.76 | 1196.55 | 369.75 |
| 1203.98 | 369.52 | 1204.14 | 369.52 | 1205.17 | 369.47 | 1213.07 | 369.47 | 1216.87 | 369.46 |
| 1218.3 | 369.51 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 99.65 | .05 | 146.49 | .04 | 811.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 146.49 | 811.56 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6434.84*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 113.9 | 365.97 | 114.66 | 365.96 | 125.37 | 365.96 | 131.46 | 365.88 | 136.01 | 365.89 |
| 140.04 | 365.93 | 141.22 | 365.92 | 141.9 | 365.93 | 142.78 | 365.93 | 145.83 | 365.91 |
| 146.22 | 365.9 | 146.64 | 365.87 | 150.36 | 365.86 | 153.08 | 365.9 | 154.93 | 365.89 |
| 155.74 | 365.87 | 156.1 | 365.85 | 157.55 | 365.8 | 158 | 365.76 | 158.75 | 365.74 |
| 159.52 | 365.61 | 161.2 | 365.54 | 162.76 | 365.46 | 167.06 | 365.41 | 169.34 | 365.42 |
| 169.91 | 365.41 | 170.23 | 365.38 | 171.14 | 365.37 | 171.93 | 365.39 | 173.05 | 365.4 |
| 174.47 | 365.4 | 176.91 | 365.29 | 177.95 | 365.28 | 179.08 | 365.24 | 180.68 | 365.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 183.91 | 365.25 | 185.13 | 365.23 | 189.19 | 365.22 | 190.5 | 365.22 | 190.75 | 365.23 |
| 192.26 | 365.23 | 192.55 | 365.25 | 193.26 | 365.25 | 193.79 | 365.23 | 196.2 | 365.16 |
| 197.37 | 365.13 | 199.5 | 365.16 | 203.48 | 365.19 | 204.48 | 365.19 | 206.03 | 365.17 |
| 206.34 | 365.18 | 210.47 | 365.18 | 210.65 | 365.17 | 212.04 | 365.15 | 212.58 | 365.15 |
| 213.41 | 365.13 | 214.78 | 365.15 | 214.98 | 365.18 | 217.17 | 365.25 | 218.81 | 365.25 |
| 223.73 | 365.31 | 224.2 | 365.32 | 225.33 | 365.32 | 225.78 | 365.31 | 228.5 | 365.21 |
| 229.42 | 365.19 | 231.13 | 364.83 | 232.74 | 364.32 | 235.01 | 364.27 | 235.34 | 364.28 |
| 236.32 | 364.26 | 237.37 | 364.22 | 238.33 | 364.17 | 239.16 | 364.15 | 242.44 | 364.04 |
| 242.77 | 364.02 | 246.31 | 363.9 | 247.27 | 363.84 | 248.05 | 363.77 | 248.19 | 363.78 |
| 249.1 | 363.74 | 250.99 | 363.74 | 251.24 | 363.73 | 251.94 | 363.75 | 253.7 | 363.71 |
| 254.83 | 363.7 | 256.29 | 363.65 | 258.01 | 363.65 | 259.52 | 363.64 | 261.89 | 363.58 |
| 264.09 | 363.54 | 265.75 | 363.49 | 267.81 | 363.45 | 268.06 | 363.46 | 268.74 | 363.45 |
| 269.87 | 363.41 | 269.92 | 363.4 | 270.81 | 363.4 | 270.95 | 363.42 | 273.01 | 363.46 |
| 275.76 | 363.49 | 276.38 | 363.49 | 278.69 | 363.51 | 280.62 | 363.52 | 281.4 | 363.52 |
| 281.78 | 363.53 | 283.55 | 363.55 | 287.08 | 363.6 | 288.1 | 363.61 | 288.98 | 363.65 |
| 296.24 | 363.93 | 301.27 | 364.11 | 302.71 | 364.16 | 303.52 | 364.16 | 303.96 | 364.14 |
| 310.06 | 363.88 | 312.6 | 363.81 | 315.11 | 363.76 | 319.72 | 363.61 | 320.09 | 363.6 |
| 322.72 | 363.6 | 334.75 | 363.82 | 342.34 | 364.04 | 343.77 | 364.08 | 351.59 | 364.25 |
| 353.24 | 364.62 | 353.74 | 364.71 | 355.41 | 365.08 | 356.07 | 365.06 | 356.29 | 365.11 |
| 359.49 | 365.04 | 360.7 | 365.02 | 365.68 | 365.03 | 367.03 | 365.02 | 370.04 | 364.97 |
| 372.24 | 364.95 | 376.06 | 364.86 | 378.34 | 364.85 | 381.63 | 364.89 | 383.82 | 364.93 |
| 384.63 | 364.97 | 385.07 | 365.03 | 386.12 | 365.1 | 391.42 | 365.11 | 394.25 | 365.11 |
| 398.03 | 365.1 | 398.85 | 365.09 | 403.35 | 365.08 | 403.63 | 365.09 | 404.67 | 365.16 |
| 405.41 | 365.17 | 410.84 | 365.21 | 413.22 | 365.24 | 417.23 | 365.28 | 417.81 | 365.2 |
| 418.52 | 365.16 | 419.18 | 365.15 | 419.24 | 365.17 | 419.87 | 365.17 | 430.11 | 365.26 |
| 432 | 365.28 | 432.68 | 365.3 | 434.3 | 365.32 | 436.59 | 365.17 | 438.53 | 365 |
| 438.76 | 364.97 | 440.05 | 364.84 | 440.56 | 364.78 | 441.94 | 364.73 | 443.01 | 364.73 |
| 444.2 | 364.71 | 445.39 | 364.7 | 446.39 | 364.72 | 446.83 | 364.75 | 447.29 | 364.87 |
| 448.88 | 365.13 | 456.35 | 365.59 | 457.42 | 365.66 | 458.35 | 365.69 | 458.73 | 365.69 |
| 460.5 | 365.77 | 461.82 | 365.84 | 465.85 | 365.6 | 466.56 | 365.56 | 467.95 | 365.64 |
| 468.31 | 365.56 | 468.81 | 365.51 | 469.6 | 365.29 | 470.55 | 365.04 | 470.86 | 364.98 |
| 471.31 | 364.95 | 472.51 | 364.91 | 473.48 | 364.91 | 475.43 | 364.94 | 475.99 | 364.96 |
| 476.98 | 365.03 | 477.96 | 365.11 | 478.82 | 365.14 | 484.82 | 365.28 | 486.75 | 365.32 |
| 489.98 | 365.38 | 492.29 | 365.43 | 494.37 | 365.47 | 496.09 | 365.51 | 499.92 | 365.58 |
| 503.1 | 365.63 | 504.57 | 365.64 | 505.33 | 365.66 | 506.11 | 365.67 | 509.48 | 365.67 |
| 510.13 | 365.66 | 513.37 | 365.43 | 515.75 | 365.14 | 516.23 | 365.09 | 517.67 | 365.05 |
| 519.14 | 365.06 | 522.32 | 365.13 | 525.85 | 365.2 | 528.97 | 365.3 | 532.37 | 365.35 |
| 536.08 | 365.37 | 537.11 | 365.36 | 539.92 | 365.38 | 540.37 | 365.39 | 541.31 | 365.39 |
| 541.64 | 365.4 | 545.75 | 365.4 | 547.5 | 365.41 | 549.36 | 365.43 | 552.35 | 365.51 |
| 553.45 | 365.53 | 554.09 | 365.53 | 556.44 | 365.56 | 557.25 | 365.56 | 559.44 | 365.55 |
| 561.62 | 365.49 | 563.12 | 365.51 | 563.53 | 365.51 | 569.79 | 365.64 | 576.39 | 365.79 |
| 578.73 | 365.83 | 581.4 | 365.9 | 583.1 | 366.03 | 584.78 | 366.13 | 585.39 | 366.15 |
| 588.78 | 366.21 | 591.94 | 366.25 | 592.99 | 366.25 | 594.53 | 366.23 | 596.55 | 366.23 |
| 597.54 | 366.25 | 598.64 | 366.17 | 598.94 | 366.14 | 600.29 | 366.04 | 600.96 | 365.98 |
| 601.1 | 365.98 | 602.68 | 365.91 | 606.04 | 365.88 | 610.43 | 365.82 | 619.3 | 365.73 |
| 633.47 | 365.5 | 634.27 | 365.48 | 638.57 | 365.34 | 641.38 | 365.23 | 645.24 | 365.1 |
| 647.2 | 364.93 | 648.52 | 364.89 | 649.54 | 364.88 | 651.67 | 364.88 | 651.82 | 364.87 |
| 654.64 | 364.86 | 659.32 | 365.04 | 660.2 | 365.08 | 662.27 | 365.14 | 666.44 | 365.32 |
| 667.08 | 365.34 | 668.39 | 365.33 | 672.63 | 365.32 | 676.67 | 365.26 | 683.12 | 365.11 |
| 684.46 | 365.1 | 686.43 | 365.12 | 687.01 | 365.13 | 687.96 | 365.16 | 690.15 | 365.36 |
| 692.6 | 365.57 | 696.95 | 366.02 | 697.41 | 366.04 | 698.52 | 366.07 | 703.31 | 366.11 |
| 704.48 | 366.09 | 705.82 | 366.03 | 714.54 | 365.67 | 718.72 | 365.49 | 722.64 | 365.54 |
| 723.35 | 365.59 | 724.2 | 365.62 | 724.73 | 365.65 | 728.91 | 365.86 | 732.57 | 366.01 |
| 733.71 | 366.04 | 736.17 | 365.97 | 742.66 | 365.83 | 743.35 | 365.8 | 744.48 | 365.79 |
| 747.62 | 365.71 | 751 | 365.74 | 763.32 | 365.94 | 763.46 | 365.99 | 765.1 | 365.99 |
| 765.85 | 365.94 | 766.05 | 365.94 | 772.72 | 365.61 | 773.57 | 365.6 | 774.36 | 365.58 |
| 778.3 | 365.42 | 778.81 | 365.41 | 779.23 | 365.42 | 780.97 | 365.5 | 781.44 | 365.54 |
| 782.76 | 365.68 | 782.96 | 365.71 | 783.51 | 365.91 | 783.95 | 365.96 | 786.16 | 366.05 |
| 787.99 | 366.05 | 790.74 | 365.98 | 791.64 | 365.94 | 794.68 | 365.79 | 796.05 | 365.79 |
| 798.03 | 365.82 | 803.7 | 365.82 | 804.32 | 365.83 | 815.53 | 365.95 | 818.45 | 366.01 |
| 822.3 | 366.13 | 823.13 | 366.17 | 823.74 | 366.22 | 826.28 | 366.29 | 829.46 | 366.47 |
| 830.18 | 366.5 | 832.33 | 366.6 | 836.38 | 366.85 | 837.38 | 366.9 | 840.29 | 367.06 |
| 841.59 | 367.1 | 844.46 | 367.15 | 846.81 | 367.21 | 848.14 | 367.23 | 849.45 | 367.24 |
| 849.94 | 367.25 | 851.89 | 367.27 | 857.39 | 367.3 | 861.07 | 367.33 | 871.86 | 367.38 |
| 874.14 | 367.38 | 875.24 | 367.36 | 875.57 | 367.34 | 876.5 | 367.31 | 879.23 | 367.2 |
| 879.91 | 367.16 | 880.23 | 367.13 | 881.24 | 367.07 | 890.85 | 366.95 | 891.22 | 366.95 |
| 891.97 | 366.98 | 892.71 | 367 | 899.52 | 367.22 | 900.79 | 367.24 | 903.07 | 367.24 |
| 908.43 | 367.21 | 909.37 | 367.18 | 910.27 | 367.21 | 912.3 | 367.26 | 915.36 | 367.31 |
| 917.22 | 367.32 | 921.87 | 367.46 | 926.38 | 367.61 | 929.53 | 367.66 | 929.72 | 367.67 |
| 933.13 | 367.71 | 934.14 | 367.63 | 937.12 | 367.48 | 940.07 | 367.36 | 943.75 | 367.22 |
| 949.98 | 367.25 | 950.8 | 367.26 | 976.9 | 367.83 | 977.91 | 367.86 | 981.27 | 367.91 |
| 982.42 | 367.91 | 983.29 | 367.88 | 983.55 | 367.86 | 984.31 | 367.84 | 985.2 | 367.83 |
| 988.9 | 367.74 | 992.64 | 367.84 | 993.62 | 367.85 | 999.59 | 367.92 | 1000.06 | 367.93 |
| 1002.43 | 368 | 1004.59 | 368.04 | 1004.7 | 368 | 1018.02 | 368.18 | 1019.55 | 368.22 |
| 1021.38 | 368.23 | 1022.18 | 368.23 | 1036.07 | 368.24 | 1038.71 | 368.24 | 1041.33 | 368.02 |
| 1042.22 | 367.97 | 1042.86 | 367.95 | 1043.93 | 367.93 | 1044.39 | 367.94 | 1046.24 | 368.24 |
| 1046.76 | 368.32 | 1047.27 | 368.31 | 1048.01 | 368.31 | 1055.54 | 368.59 | 1057.5 | 368.66 |
| 1059.5 | 368.71 | 1063.01 | 368.81 | 1066.61 | 368.85 | 1066.92 | 368.85 | 1069.69 | 368.81 |
| 1070.07 | 368.81 | 1072.73 | 368.77 | 1073.12 | 368.76 | 1078.48 | 368.58 | 1078.8 | 368.58 |
| 1082.55 | 368.43 | 1085.4 | 368.32 | 1086.01 | 368.29 | 1086.41 | 368.1 | 1087.23 | 368.04 |
| 1088.66 | 367.99 | 1089.75 | 367.97 | 1092.91 | 367.99 | 1099.85 | 368.3 | 1103.78 | 368.3 |
| 1117.21 | 368.29 | 1121.02 | 368.41 | 1123.41 | 368.45 | 1123.84 | 368.47 | 1124.2 | 368.51 |
| 1125.01 | 368.57 | 1128.52 | 368.62 | 1129.13 | 368.64 | 1136.68 | 368.6 | 1137.73 | 368.6 |
| 1140.65 | 368.59 | 1140.91 | 368.55 | 1141.39 | 368.55 | 1142.65 | 368.57 | 1148.75 | 368.71 |
| 1150.07 | 368.71 | 1150.92 | 368.7 | 1153.9 | 368.64 | 1155.14 | 368.61 | 1156.11 | 368.56 |
| 1157.65 | 368.44 | 1159.65 | 368.38 | 1159.92 | 368.39 | 1161.42 | 368.39 | 1163.94 | 368.41 |
| 1164.92 | 368.43 | 1165.21 | 368.42 | 1166.15 | 368.42 | 1167.89 | 368.45 | 1168.95 | 368.46 |
| 1171.53 | 368.45 | 1177.57 | 368.32 | 1178.29 | 368.3 | 1179.05 | 368.24 | 1180.02 | 368.15 |
| 1183.48 | 368.07 | 1184.27 | 368.06 | 1186.3 | 368.07 | 1188.85 | 368.09 | 1189.68 | 368.09 |
| 1190.27 | 368.1 | 1195.28 | 368.27 | 1196.92 | 368.31 | 1201.08 | 369.05 | 1202.08 | 369.19 |
| 1202.17 | 369.21 | 1203.92 | 369.39 | 1204.84 | 369.47 | 1207.43 | 369.47 | 1214.72 | 369.26 |
| 1215.89 | 369.21 | 1216.94 | 369.21 | 1222.69 | 369.2 | 1223.64 | 369.2 | 1227.38 | 369.18 |
| 1228.78 | 369.23 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 113.9 | .05 | 158.75 | .04 | 829.46 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 158.75 | 829.46 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6415.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 128.16 | 365.79 | 128.88 | 365.78 | 134.93 | 365.77 | 135.87 | 365.77 | 138.01 | 365.76 |
| 139.11 | 365.77 | 144.93 | 365.68 | 149.28 | 365.68 | 153.14 | 365.73 | 154.26 | 365.71 |
| 155.75 | 365.72 | 158.67 | 365.69 | 159.04 | 365.69 | 159.44 | 365.65 | 163 | 365.64 |
| 165.59 | 365.67 | 167.36 | 365.66 | 168.14 | 365.64 | 168.49 | 365.62 | 169.87 | 365.57 |
| 170.3 | 365.54 | 171.02 | 365.52 | 171.9 | 365.35 | 173.83 | 365.25 | 175.43 | 365.16 |
| 175.62 | 365.16 | 180.56 | 365.1 | 182.68 | 365.13 | 183.84 | 365.12 | 184.21 | 365.08 |
| 184.8 | 365.07 | 186.52 | 365.11 | 187.5 | 365.11 | 188.67 | 365.12 | 188.97 | 365.13 |
| 189.49 | 365.1 | 190.85 | 365.05 | 191.88 | 364.99 | 193.08 | 364.98 | 194.38 | 364.93 |
| 196.23 | 364.96 | 196.61 | 364.95 | 199.94 | 364.97 | 201.34 | 364.95 | 206.58 | 364.95 |
| 207.8 | 364.97 | 209.74 | 364.97 | 209.86 | 364.99 | 210.69 | 364.99 | 214.06 | 364.87 |
| 215.4 | 364.83 | 216.19 | 364.85 | 217.85 | 364.87 | 220.87 | 364.89 | 221.32 | 364.89 |
| 222.43 | 364.91 | 223.58 | 364.91 | 224.8 | 364.88 | 225.71 | 364.89 | 230.47 | 364.89 |
| 230.67 | 364.88 | 232.72 | 364.84 | 233.21 | 364.84 | 233.85 | 364.82 | 235 | 364.83 |
| 235.65 | 364.88 | 237.2 | 364.95 | 238.17 | 364.98 | 240.05 | 364.98 | 245.71 | 365.05 |
| 247.55 | 365.07 | 248.06 | 365.06 | 251.2 | 364.95 | 252.25 | 364.92 | 254.21 | 364.58 |
| 256.06 | 364.09 | 258.67 | 364.06 | 260.17 | 364.05 | 261.38 | 364.01 | 262.48 | 363.96 |
| 267.21 | 363.81 | 267.59 | 363.8 | 271.66 | 363.67 | 272.76 | 363.6 | 273.66 | 363.51 |
| 273.82 | 363.52 | 274.63 | 363.48 | 276.33 | 363.49 | 277.32 | 363.48 | 278.13 | 363.5 |
| 280.16 | 363.47 | 280.42 | 363.46 | 281.75 | 363.45 | 283.14 | 363.4 | 284.58 | 363.4 |
| 285.11 | 363.41 | 286.69 | 363.4 | 286.85 | 363.39 | 289.57 | 363.33 | 292.09 | 363.28 |
| 296.37 | 363.17 | 296.66 | 363.19 | 297.45 | 363.18 | 298.31 | 363.15 | 298.74 | 363.12 |
| 299.98 | 363.12 | 300.12 | 363.14 | 302.15 | 363.19 | 305.44 | 363.23 | 309.71 | 363.25 |
| 310.74 | 363.27 | 315.93 | 363.33 | 317.22 | 363.35 | 317.79 | 363.38 | 324.9 | 363.66 |
| 329.83 | 363.84 | 331.24 | 363.88 | 332.03 | 363.88 | 332.47 | 363.86 | 338.45 | 363.62 |
| 340.93 | 363.54 | 343.39 | 363.49 | 348.28 | 363.34 | 349.99 | 363.33 | 350.85 | 363.33 |
| 351.38 | 363.34 | 362.63 | 363.57 | 371.47 | 363.83 | 379.13 | 364 | 380.75 | 364.35 |
| 381.24 | 364.44 | 382.87 | 364.79 | 383.52 | 364.77 | 383.74 | 364.82 | 386.87 | 364.75 |
| 388.06 | 364.73 | 392.94 | 364.74 | 394.27 | 364.73 | 397.21 | 364.68 | 397.95 | 364.68 |
| 399.37 | 364.66 | 403.11 | 364.58 | 405.34 | 364.56 | 408.56 | 364.6 | 410.72 | 364.63 |
| 411.5 | 364.67 | 411.94 | 364.73 | 412.97 | 364.8 | 418.16 | 364.81 | 420.93 | 364.81 |
| 424.64 | 364.8 | 425.44 | 364.79 | 429.64 | 364.77 | 430.12 | 364.78 | 431.15 | 364.85 |
| 431.87 | 364.86 | 437.19 | 364.9 | 437.84 | 364.9 | 439.52 | 364.93 | 443.45 | 364.97 |
| 444.02 | 364.89 | 444.72 | 364.86 | 445.36 | 364.85 | 445.42 | 364.87 | 446.03 | 364.87 |
| 456.07 | 364.96 | 457.92 | 364.98 | 458.59 | 365.01 | 460.17 | 365.03 | 462.42 | 364.89 |
| 464.54 | 364.71 | 465.81 | 364.58 | 466.31 | 364.52 | 467.66 | 364.47 | 468.71 | 364.47 |
| 469.87 | 364.45 | 471.04 | 364.44 | 472.02 | 364.46 | 472.45 | 364.48 | 472.9 | 364.6 |
| 474.47 | 364.84 | 481.78 | 365.27 | 482.83 | 365.33 | 484.11 | 365.36 | 485.85 | 365.43 |
| 487.14 | 365.49 | 489.78 | 365.34 | 490.58 | 365.28 | 491.79 | 365.21 | 493.15 | 365.29 |
| 493.5 | 365.21 | 493.99 | 365.16 | 494.2 | 365.11 | 495.7 | 364.71 | 496.14 | 364.65 |
| 496.44 | 364.63 | 497.62 | 364.6 | 498.57 | 364.6 | 500.48 | 364.63 | 501.48 | 364.68 |
| 502.96 | 364.81 | 503.79 | 364.85 | 509.68 | 364.99 | 511.57 | 365.03 | 514.73 | 365.09 |
| 516.99 | 365.14 | 519.03 | 365.17 | 520.72 | 365.21 | 524.47 | 365.28 | 530.54 | 365.36 |
| 531.71 | 365.37 | 533.83 | 365.36 | 534.47 | 365.35 | 537.65 | 365.13 | 539.98 | 364.85 |
| 540.45 | 364.8 | 541.86 | 364.77 | 543.3 | 364.78 | 546.42 | 364.84 | 549.88 | 364.9 |
| 552.94 | 364.98 | 554.27 | 365.01 | 556.27 | 365.03 | 560.53 | 365.04 | 560.91 | 365.03 |
| 563.66 | 365.05 | 564.68 | 365.05 | 565.02 | 365.06 | 569.38 | 365.06 | 571.09 | 365.07 |
| 572.63 | 365.09 | 575.84 | 365.18 | 576.92 | 365.2 | 577.55 | 365.2 | 578.51 | 365.22 |
| 580.65 | 365.23 | 582.79 | 365.21 | 583.97 | 365.19 | 584.47 | 365.16 | 586.39 | 365.17 |
| 587.76 | 365.2 | 592.93 | 365.29 | 599.4 | 365.43 | 601.69 | 365.47 | 604.31 | 365.53 |
| 605.97 | 365.65 | 607.62 | 365.75 | 608.21 | 365.77 | 610.98 | 365.82 | 611.54 | 365.82 |
| 614.64 | 365.86 | 615.66 | 365.86 | 617.17 | 365.84 | 619.15 | 365.84 | 620.12 | 365.86 |
| 621.2 | 365.79 | 622.82 | 365.66 | 623.61 | 365.61 | 624.46 | 365.57 | 625.16 | 365.55 |
| 628.45 | 365.52 | 632.75 | 365.47 | 641.44 | 365.41 | 655.32 | 365.19 | 656.11 | 365.18 |
| 660.32 | 365.04 | 664.57 | 364.87 | 666.86 | 364.79 | 668.78 | 364.64 | 670.08 | 364.6 |
| 672.02 | 364.58 | 673.31 | 364.58 | 675.52 | 364.56 | 676.07 | 364.57 | 680.65 | 364.73 |
| 681.51 | 364.77 | 683.55 | 364.83 | 687.63 | 365 | 688.26 | 365.02 | 689.54 | 365.01 |
| 693.7 | 365.01 | 697.65 | 364.95 | 703.97 | 364.81 | 705.28 | 364.81 | 707.22 | 364.82 |
| 707.79 | 364.83 | 708.71 | 364.87 | 709.7 | 364.95 | 710.86 | 365.06 | 713.26 | 365.26 |
| 717.53 | 365.69 | 719.06 | 365.74 | 723.75 | 365.78 | 724.9 | 365.76 | 726.21 | 365.71 |
| 733.08 | 365.44 | 734.76 | 365.37 | 738.86 | 365.19 | 741.09 | 365.22 | 741.6 | 365.22 |
| 742.69 | 365.24 | 743.39 | 365.29 | 744.23 | 365.31 | 744.75 | 365.34 | 748.84 | 365.54 |
| 752.42 | 365.69 | 753.54 | 365.71 | 755.95 | 365.64 | 762.31 | 365.51 | 763.18 | 365.47 |
| 764.1 | 365.46 | 767.17 | 365.39 | 770.48 | 365.42 | 782.56 | 365.6 | 782.7 | 365.65 |
| 784.29 | 365.65 | 785.23 | 365.61 | 791.77 | 365.28 | 792.6 | 365.28 | 793.88 | 365.25 |
| 797.23 | 365.11 | 797.73 | 365.11 | 799.85 | 365.22 | 800.3 | 365.26 | 801.6 | 365.4 |
| 801.8 | 365.44 | 802.34 | 365.63 | 802.77 | 365.68 | 804.93 | 365.77 | 806.73 | 365.77 |
| 809.42 | 365.7 | 810.3 | 365.67 | 813.28 | 365.53 | 813.71 | 365.52 | 814.62 | 365.52 |
| 816.56 | 365.55 | 822.12 | 365.56 | 822.73 | 365.57 | 833.71 | 365.7 | 836.58 | 365.76 |
| 840.34 | 365.87 | 841.16 | 365.91 | 841.76 | 365.96 | 844.24 | 366.02 | 847.36 | 366.2 |
| 850.17 | 366.33 | 854.15 | 366.57 | 854.55 | 366.58 | 856.19 | 366.67 | 857.99 | 366.76 |
| 858.53 | 366.78 | 859.27 | 366.79 | 862.08 | 366.84 | 864.38 | 366.9 | 866.98 | 366.92 |
| 867.46 | 366.93 | 869.37 | 366.94 | 873.06 | 366.94 | 873.32 | 366.95 | 874.25 | 366.95 |
| 874.77 | 366.94 | 878.38 | 366.97 | 888.97 | 367.01 | 891.21 | 367.01 | 892.28 | 366.99 |
| 893.52 | 366.95 | 896.21 | 366.85 | 897.18 | 366.78 | 898.18 | 366.72 | 907.61 | 366.61 |
| 907.98 | 366.61 | 908.71 | 366.64 | 909.44 | 366.65 | 916.12 | 366.87 | 917.36 | 366.89 |
| 919.61 | 366.89 | 924.86 | 366.86 | 925.36 | 366.86 | 925.79 | 366.84 | 926.67 | 366.86 |
| 928.66 | 366.92 | 931.66 | 366.97 | 932.28 | 366.97 | 933.49 | 366.99 | 938.05 | 367.13 |
| 942.48 | 367.28 | 945.57 | 367.33 | 945.76 | 367.34 | 948.29 | 367.38 | 949.1 | 367.38 |
| 950.1 | 367.31 | 953.02 | 367.17 | 955.91 | 367.07 | 959.52 | 366.96 | 961.33 | 366.98 |
| 965.64 | 367 | 966.45 | 367.01 | 992.06 | 367.57 | 993.05 | 367.6 | 996.34 | 367.65 |
| 997.48 | 367.65 | 998.58 | 367.6 | 999.33 | 367.59 | 1003.84 | 367.48 | 1007.51 | 367.58 |
| 1014.33 | 367.66 | 1014.79 | 367.67 | 1017.11 | 367.74 | 1019.24 | 367.78 | 1019.34 | 367.75 |
| 1032.41 | 367.92 | 1033.92 | 367.96 | 1036.5 | 367.97 | 1050.13 | 367.99 | 1052.72 | 367.99 |
| 1055.29 | 367.77 | 1056.21 | 367.72 | 1057.85 | 367.69 | 1058.29 | 367.7 | 1060.63 | 368.07 |
| 1061.12 | 368.05 | 1061.85 | 368.05 | 1069.23 | 368.32 | 1072.57 | 368.44 | 1073.13 | 368.45 |
| 1076.57 | 368.54 | 1080.1 | 368.58 | 1080.41 | 368.58 | 1083.12 | 368.55 | 1083.49 | 368.54 |
| 1086.11 | 368.51 | 1086.5 | 368.5 | 1091.75 | 368.33 | 1092.06 | 368.33 | 1093.04 | 368.29 |
| 1095.74 | 368.19 | 1098.54 | 368.08 | 1099.14 | 368.06 | 1099.54 | 367.87 | 1100.34 | 367.82 |
| 1101.74 | 367.77 | 1102.81 | 367.75 | 1105.92 | 367.77 | 1112.73 | 368.06 | 1116.58 | 368.07 |
| 1129.76 | 368.06 | 1132.29 | 368.13 | 1133.51 | 368.17 | 1135.85 | 368.21 | 1136.27 | 368.23 |
| 1137.42 | 368.32 | 1140.86 | 368.37 | 1141.46 | 368.39 | 1148.87 | 368.35 | 1149.9 | 368.35 |
| 1152.77 | 368.34 | 1153.02 | 368.31 | 1153.49 | 368.31 | 1154.73 | 368.33 | 1160.71 | 368.46 |
| 1162.02 | 368.46 | 1162.84 | 368.45 | 1165.77 | 368.4 | 1166.99 | 368.37 | 1167.94 | 368.33 |
| 1168.94 | 368.24 | 1169.45 | 368.21 | 1171.41 | 368.15 | 1171.67 | 368.16 | 1173.15 | 368.16 |
| 1176.58 | 368.2 | 1177.79 | 368.2 | 1180.54 | 368.23 | 1183.07 | 368.22 | 1189 | 368.1 |
| 1189.71 | 368.07 | 1190.45 | 368.02 | 1191.4 | 367.93 | 1194.8 | 367.86 | 1195.58 | 367.85 |
| 1200.07 | 367.87 | 1201.47 | 367.88 | 1206.38 | 368.04 | 1207.99 | 368.08 | 1212.08 | 368.79 |
| 1213.14 | 368.94 | 1214.86 | 369.11 | 1215.77 | 369.19 | 1218.3 | 369.19 | 1225.46 | 368.99 |
| 1226.6 | 368.95 | 1227.64 | 368.95 | 1233.29 | 368.93 | 1234.22 | 368.93 | 1237.88 | 368.91 |
| 1239.26 | 368.95 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 128.16 | .05 | 171.02 | .04 | 847.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 171.02 | 847.36 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6395.30*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 142.41 | 365.61 | 143.1 | 365.59 | 148.87 | 365.58 | 149.77 | 365.58 | 151.8 | 365.57 |
| 152.86 | 365.57 | 158.41 | 365.49 | 162.56 | 365.48 | 166.23 | 365.52 | 167.3 | 365.5 |
| 167.92 | 365.51 | 168.72 | 365.51 | 171.51 | 365.48 | 172.24 | 365.44 | 175.63 | 365.42 |
| 178.11 | 365.45 | 179.8 | 365.43 | 180.54 | 365.41 | 180.87 | 365.39 | 182.19 | 365.35 |
| 182.6 | 365.31 | 183.28 | 365.29 | 184.28 | 365.08 | 188.26 | 364.86 | 188.48 | 364.85 |
| 194.07 | 364.8 | 196.47 | 364.84 | 197.77 | 364.83 | 198.18 | 364.79 | 198.68 | 364.77 |
| 199.37 | 364.78 | 200.4 | 364.82 | 201.91 | 364.83 | 203.23 | 364.85 | 203.7 | 364.85 |
| 204.16 | 364.82 | 205.69 | 364.76 | 206.86 | 364.69 | 208.21 | 364.68 | 209.68 | 364.63 |
| 211.77 | 364.66 | 212.2 | 364.66 | 215.96 | 364.69 | 217.55 | 364.67 | 222.58 | 364.69 |
| 222.96 | 364.68 | 223.86 | 364.7 | 224.52 | 364.69 | 224.85 | 364.7 | 226.31 | 364.7 |
| 227.04 | 364.71 | 227.18 | 364.73 | 228.11 | 364.73 | 228.8 | 364.7 | 231.92 | 364.58 |
| 232.32 | 364.56 | 233.44 | 364.53 | 234.33 | 364.55 | 236.21 | 364.58 | 239.62 | 364.6 |
| 240.13 | 364.61 | 242.52 | 364.63 | 242.67 | 364.62 | 244.06 | 364.59 | 245.09 | 364.6 |
| 250.31 | 364.6 | 250.7 | 364.58 | 252.5 | 364.54 | 253.56 | 364.54 | 254.28 | 364.51 |
| 254.63 | 364.51 | 256 | 364.54 | 256.32 | 364.59 | 258.07 | 364.67 | 259.74 | 364.71 |
| 261.29 | 364.71 | 267.68 | 364.8 | 268.06 | 364.81 | 269.77 | 364.81 | 270.34 | 364.8 |
| 273.89 | 364.68 | 275.08 | 364.65 | 277.29 | 364.32 | 278.34 | 364.09 | 279.39 | 363.87 |
| 282.33 | 363.84 | 283.24 | 363.85 | 284.02 | 363.84 | 284.34 | 363.82 | 285.4 | 363.8 |
| 286.12 | 363.76 | 287.73 | 363.71 | 291.98 | 363.59 | 292.41 | 363.58 | 297.02 | 363.44 |
| 298.26 | 363.35 | 299.27 | 363.25 | 299.46 | 363.26 | 300.64 | 363.21 | 302.29 | 363.23 |
| 303.41 | 363.23 | 304.33 | 363.26 | 306.62 | 363.22 | 308.08 | 363.21 | 310.51 | 363.14 |
| 311.61 | 363.15 | 312.21 | 363.17 | 314.18 | 363.15 | 317.25 | 363.08 | 317.3 | 363.07 |
| 320.1 | 363.03 | 322.27 | 362.97 | 324.94 | 362.9 | 325.26 | 362.92 | 326.93 | 362.88 |
| 327.61 | 362.84 | 329.16 | 362.84 | 329.29 | 362.86 | 331.28 | 362.92 | 333.91 | 362.95 |
| 334.51 | 362.96 | 336.72 | 362.98 | 339.32 | 362.99 | 339.69 | 363 | 341.39 | 363.02 |
| 344.78 | 363.07 | 345.24 | 363.07 | 346.05 | 363.09 | 346.6 | 363.12 | 353.56 | 363.39 |
| 358.4 | 363.57 | 359.77 | 363.61 | 360.55 | 363.61 | 360.98 | 363.59 | 366.83 | 363.35 |
| 369.26 | 363.27 | 371.67 | 363.22 | 376.46 | 363.07 | 378.13 | 363.07 | 378.98 | 363.06 |
| 379.5 | 363.07 | 390.52 | 363.32 | 397.81 | 363.55 | 399.17 | 363.59 | 406.68 | 363.75 |
| 408.26 | 364.08 | 408.74 | 364.17 | 410.34 | 364.5 | 410.98 | 364.49 | 411.19 | 364.53 |
| 414.26 | 364.46 | 415.42 | 364.45 | 421.5 | 364.45 | 424.39 | 364.4 | 426.49 | 364.38 |
| 430.16 | 364.29 | 432.35 | 364.28 | 436.65 | 364.32 | 437.61 | 364.34 | 438.38 | 364.38 |
| 438.81 | 364.43 | 439.82 | 364.5 | 444.9 | 364.51 | 447.61 | 364.51 | 451.25 | 364.49 |
| 452.03 | 364.49 | 456.14 | 364.46 | 456.62 | 364.47 | 457.62 | 364.54 | 458.33 | 364.54 |
| 463.54 | 364.58 | 465.82 | 364.62 | 469.67 | 364.67 | 470.22 | 364.59 | 470.91 | 364.56 |
| 471.55 | 364.55 | 472.2 | 364.57 | 483.05 | 364.67 | 483.84 | 364.69 | 484.49 | 364.72 |
| 485.49 | 364.74 | 486.05 | 364.74 | 488.11 | 364.62 | 490.11 | 364.46 | 491.57 | 364.32 |
| 492.06 | 364.26 | 492.97 | 364.23 | 494.02 | 364.21 | 495.55 | 364.19 | 497.27 | 364.18 |
| 498.08 | 364.21 | 498.52 | 364.32 | 500.05 | 364.55 | 507.22 | 364.94 | 508.24 | 365 |
| 509.49 | 365.02 | 512.46 | 365.14 | 515.04 | 364.99 | 515.83 | 364.93 | 516.91 | 364.86 |
| 518.34 | 364.93 | 518.69 | 364.86 | 519.17 | 364.82 | 519.93 | 364.63 | 520.84 | 364.39 |
| 521.28 | 364.33 | 522.72 | 364.29 | 523.65 | 364.29 | 525.52 | 364.33 | 526.06 | 364.35 |
| 527 | 364.42 | 527.95 | 364.51 | 528.77 | 364.56 | 534.53 | 364.7 | 536.38 | 364.74 |
| 539.48 | 364.8 | 541.7 | 364.84 | 545.34 | 364.91 | 549.03 | 364.99 | 550.38 | 365.01 |
| 552.07 | 365.02 | 554.96 | 365.06 | 556.11 | 365.06 | 558.19 | 365.05 | 558.82 | 365.04 |
| 561.93 | 364.83 | 564.67 | 364.52 | 566.06 | 364.48 | 567.47 | 364.49 | 570.51 | 364.55 |
| 573.91 | 364.6 | 576.9 | 364.67 | 578.21 | 364.69 | 580.16 | 364.71 | 584.34 | 364.71 |
| 584.71 | 364.7 | 585.96 | 364.7 | 587.84 | 364.71 | 588.41 | 364.72 | 594.22 | 364.72 |
| 596.18 | 364.75 | 599.33 | 364.86 | 601.01 | 364.87 | 601.95 | 364.89 | 604.04 | 364.91 |
| 607.3 | 364.86 | 607.79 | 364.83 | 610.06 | 364.84 | 611.01 | 364.86 | 616.07 | 364.94 |
| 622.4 | 365.07 | 624.65 | 365.11 | 627.21 | 365.16 | 628.84 | 365.28 | 630.46 | 365.37 |
| 631.04 | 365.39 | 634.3 | 365.44 | 637.33 | 365.47 | 638.33 | 365.47 | 639.81 | 365.45 |
| 641.75 | 365.46 | 642.7 | 365.48 | 643.76 | 365.41 | 644.04 | 365.38 | 646.11 | 365.24 |
| 647.63 | 365.19 | 650.85 | 365.17 | 655.07 | 365.12 | 663.58 | 365.09 | 677.18 | 364.88 |
| 677.95 | 364.87 | 682.07 | 364.74 | 684.77 | 364.62 | 685.47 | 364.6 | 688.48 | 364.49 |
| 690.36 | 364.34 | 691.63 | 364.3 | 692.6 | 364.29 | 694.65 | 364.29 | 694.79 | 364.28 |
| 697.5 | 364.27 | 702.83 | 364.46 | 704.82 | 364.52 | 709.07 | 364.69 | 709.66 | 364.7 |
| 710.69 | 364.69 | 714.76 | 364.69 | 718.64 | 364.64 | 724.83 | 364.52 | 726.11 | 364.51 |
| 728 | 364.53 | 729.47 | 364.57 | 729.97 | 364.62 | 730.44 | 364.65 | 731.58 | 364.76 |
| 733.92 | 364.95 | 738.1 | 365.36 | 738.19 | 365.38 | 739.61 | 365.41 | 744.2 | 365.45 |
| 745.32 | 365.44 | 746.61 | 365.38 | 753.33 | 365.13 | 758.99 | 364.89 | 761.18 | 364.91 |
| 762.75 | 364.93 | 763.44 | 364.98 | 764.25 | 365 | 764.76 | 365.03 | 768.76 | 365.22 |
| 772.28 | 365.36 | 773.37 | 365.38 | 775.73 | 365.31 | 781.97 | 365.18 | 782.82 | 365.15 |
| 783.71 | 365.14 | 786.73 | 365.07 | 789.96 | 365.09 | 801.79 | 365.27 | 801.93 | 365.31 |
| 803.49 | 365.31 | 804.41 | 365.27 | 809.65 | 365.02 | 810.81 | 364.96 | 811.63 | 364.96 |
| 812.88 | 364.93 | 813.53 | 364.9 | 816.17 | 364.81 | 816.65 | 364.81 | 817.06 | 364.83 |
| 818.73 | 364.94 | 820.44 | 365.13 | 820.64 | 365.17 | 821.16 | 365.35 | 821.59 | 365.4 |
| 823.71 | 365.48 | 825.46 | 365.48 | 828.1 | 365.42 | 828.96 | 365.39 | 831.89 | 365.26 |
| 833.2 | 365.26 | 835.1 | 365.29 | 840.54 | 365.3 | 841.13 | 365.31 | 851.89 | 365.44 |
| 854.7 | 365.5 | 858.39 | 365.61 | 859.77 | 365.7 | 862.21 | 365.76 | 865.26 | 365.93 |
| 868.02 | 366.05 | 871.92 | 366.28 | 872.68 | 366.31 | 875.69 | 366.45 | 876 | 366.47 |
| 876.94 | 366.48 | 879.7 | 366.53 | 881.96 | 366.58 | 883.24 | 366.6 | 884.5 | 366.6 |
| 884.98 | 366.61 | 886.86 | 366.61 | 890.47 | 366.6 | 891.64 | 366.6 | 892.15 | 366.59 |
| 895.69 | 366.61 | 906.09 | 366.65 | 908.27 | 366.65 | 909.33 | 366.63 | 910.55 | 366.59 |
| 913.18 | 366.49 | 915.11 | 366.37 | 924.37 | 366.27 | 924.73 | 366.27 | 925.45 | 366.3 |
| 926.16 | 366.31 | 932.72 | 366.52 | 933.94 | 366.54 | 936.14 | 366.54 | 941.29 | 366.52 |
| 942.2 | 366.5 | 943.07 | 366.52 | 945.02 | 366.58 | 947.96 | 366.63 | 948.58 | 366.63 |
| 949.76 | 366.65 | 954.23 | 366.79 | 958.58 | 366.95 | 961.6 | 367.01 | 961.79 | 367.01 |
| 965.07 | 367.06 | 966.05 | 366.99 | 968.92 | 366.86 | 975.3 | 366.7 | 977.07 | 366.73 |
| 981.3 | 366.75 | 982.09 | 366.76 | 1007.22 | 367.31 | 1008.19 | 367.34 | 1011.42 | 367.38 |
| 1012.53 | 367.39 | 1013.62 | 367.34 | 1014.35 | 367.33 | 1018.77 | 367.23 | 1022.37 | 367.33 |
| 1023.31 | 367.34 | 1029.07 | 367.41 | 1029.52 | 367.42 | 1031.8 | 367.49 | 1033.88 | 367.52 |
| 1033.98 | 367.49 | 1046.81 | 367.66 | 1048.28 | 367.7 | 1050.82 | 367.71 | 1064.19 | 367.74 |
| 1066.73 | 367.74 | 1068.12 | 367.62 | 1069.25 | 367.53 | 1070.11 | 367.48 | 1071.76 | 367.46 |
| 1072.2 | 367.46 | 1073.98 | 367.74 | 1074.49 | 367.81 | 1075.69 | 367.8 | 1082.93 | 368.06 |
| 1084.82 | 368.13 | 1090.13 | 368.27 | 1093.59 | 368.31 | 1093.89 | 368.31 | 1096.56 | 368.28 |
| 1096.92 | 368.28 | 1099.48 | 368.25 | 1099.87 | 368.24 | 1105.02 | 368.07 | 1105.33 | 368.08 |
| 1106.29 | 368.04 | 1108.94 | 367.95 | 1111.69 | 367.85 | 1112.27 | 367.82 | 1112.66 | 367.65 |
| 1113.45 | 367.59 | 1114.82 | 367.55 | 1115.87 | 367.53 | 1118.92 | 367.55 | 1125.6 | 367.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1129.39 | 367.83 | 1142.31 | 367.82 | 1144.8 | 367.89 | 1145.99 | 367.93 | 1148.7 | 367.98 |
| 1149.04 | 368.02 | 1149.83 | 368.07 | 1153.2 | 368.12 | 1153.79 | 368.14 | 1161.06 | 368.11 |
| 1162.07 | 368.1 | 1164.88 | 368.1 | 1165.13 | 368.06 | 1165.59 | 368.06 | 1166.81 | 368.08 |
| 1172.68 | 368.21 | 1174.77 | 368.21 | 1177.64 | 368.15 | 1178.84 | 368.13 | 1179.77 | 368.09 |
| 1180.75 | 368.01 | 1181.25 | 367.98 | 1183.18 | 367.93 | 1184.88 | 367.93 | 1188.25 | 367.97 |
| 1189.43 | 367.97 | 1192.13 | 368 | 1195.07 | 367.99 | 1200.43 | 367.87 | 1201.13 | 367.85 |
| 1201.86 | 367.8 | 1202.79 | 367.71 | 1206.68 | 367.63 | 1206.74 | 367.64 | 1208.84 | 367.64 |
| 1212.09 | 367.65 | 1212.66 | 367.66 | 1217.48 | 367.82 | 1219.07 | 367.86 | 1223.07 | 368.52 |
| 1224.12 | 368.67 | 1226.43 | 368.89 | 1226.69 | 368.91 | 1229.18 | 368.91 | 1236.2 | 368.73 |
| 1237.32 | 368.68 | 1238.34 | 368.68 | 1243.88 | 368.67 | 1244.79 | 368.66 | 1248.39 | 368.64 |
| 1249.74 | 368.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 142.41 | .05 | 183.28 | .04 | 865.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 183.28 | 865.26 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6375.54*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 156.66 | 365.42 | 157.32 | 365.41 | 162.81 | 365.39 | 163.67 | 365.39 | 165.6 | 365.38 |
| 166.6 | 365.38 | 171.88 | 365.29 | 175.83 | 365.28 | 179.33 | 365.31 | 180.34 | 365.29 |
| 180.93 | 365.3 | 181.7 | 365.3 | 184.34 | 365.26 | 184.68 | 365.26 | 185.04 | 365.22 |
| 188.27 | 365.2 | 190.63 | 365.22 | 192.23 | 365.21 | 192.94 | 365.19 | 193.25 | 365.17 |
| 194.5 | 365.12 | 194.89 | 365.09 | 195.55 | 365.07 | 196.65 | 364.81 | 199.09 | 364.67 |
| 201.1 | 364.55 | 201.35 | 364.54 | 207.57 | 364.49 | 210.88 | 364.55 | 211.71 | 364.54 |
| 212.16 | 364.49 | 212.72 | 364.47 | 213.49 | 364.48 | 214.63 | 364.53 | 215.09 | 364.54 |
| 216.32 | 364.55 | 218.16 | 364.58 | 218.83 | 364.54 | 219.99 | 364.5 | 221.84 | 364.39 |
| 223.35 | 364.38 | 224.99 | 364.32 | 227.31 | 364.37 | 227.8 | 364.37 | 231.99 | 364.41 |
| 233.76 | 364.39 | 239.37 | 364.42 | 240.26 | 364.43 | 241.53 | 364.43 | 241.89 | 364.44 |
| 244.08 | 364.44 | 244.5 | 364.47 | 245.53 | 364.47 | 246.3 | 364.44 | 250.23 | 364.27 |
| 251.47 | 364.23 | 254.56 | 364.29 | 258.36 | 364.31 | 260.33 | 364.34 | 261.77 | 364.34 |
| 263.31 | 364.3 | 264.75 | 364.31 | 270.29 | 364.32 | 270.72 | 364.29 | 272.73 | 364.24 |
| 273.51 | 364.24 | 274.72 | 364.2 | 275.1 | 364.2 | 276.17 | 364.22 | 276.64 | 364.24 |
| 276.99 | 364.3 | 278.76 | 364.39 | 280.16 | 364.43 | 280.8 | 364.44 | 282.53 | 364.44 |
| 290.34 | 364.55 | 290.5 | 364.56 | 291.98 | 364.56 | 296.58 | 364.41 | 297.9 | 364.38 |
| 300.37 | 364.07 | 301.54 | 363.85 | 302.71 | 363.64 | 306.12 | 363.62 | 306.38 | 363.64 |
| 307.88 | 363.63 | 308.24 | 363.61 | 309.42 | 363.59 | 310.22 | 363.54 | 310.8 | 363.52 |
| 316.76 | 363.37 | 317.23 | 363.35 | 322.37 | 363.2 | 323.75 | 363.1 | 324.88 | 362.98 |
| 325.09 | 363 | 326.41 | 362.95 | 328.25 | 362.98 | 329.5 | 362.98 | 330.52 | 363.02 |
| 333.08 | 362.98 | 333.4 | 362.97 | 334.7 | 362.97 | 336.58 | 362.92 | 337.42 | 362.89 |
| 338.78 | 362.92 | 341.51 | 362.91 | 344.93 | 362.82 | 348.11 | 362.77 | 350.53 | 362.7 |
| 353.51 | 362.63 | 353.87 | 362.65 | 354.43 | 362.65 | 355.72 | 362.6 | 356.82 | 362.55 |
| 357.42 | 362.56 | 358.34 | 362.55 | 358.47 | 362.58 | 359.56 | 362.62 | 361.1 | 362.66 |
| 362.99 | 362.68 | 363.57 | 362.69 | 365.74 | 362.71 | 367.67 | 362.72 | 368.65 | 362.74 |
| 370.31 | 362.75 | 374.87 | 362.82 | 375.41 | 362.86 | 382.23 | 363.13 | 386.96 | 363.3 |
| 388.3 | 363.34 | 389.07 | 363.33 | 389.48 | 363.31 | 395.21 | 363.08 | 397.6 | 363.01 |
| 399.1 | 362.97 | 399.95 | 362.96 | 404.64 | 362.81 | 406.28 | 362.8 | 407.11 | 362.8 |
| 407.62 | 362.81 | 418.4 | 363.07 | 425.54 | 363.31 | 426.88 | 363.35 | 434.22 | 363.5 |
| 435.77 | 363.82 | 436.24 | 363.9 | 437.81 | 364.21 | 438.43 | 364.2 | 438.64 | 364.24 |
| 441.65 | 364.17 | 442.78 | 364.16 | 447.47 | 364.17 | 448.73 | 364.16 | 453.62 | 364.09 |
| 457.21 | 364.01 | 459.35 | 363.99 | 462.44 | 364.01 | 464.51 | 364.05 | 465.26 | 364.08 |
| 465.68 | 364.14 | 466.67 | 364.2 | 471.64 | 364.21 | 474.3 | 364.21 | 477.85 | 364.19 |
| 478.62 | 364.19 | 482.65 | 364.15 | 483.11 | 364.16 | 484.09 | 364.23 | 484.78 | 364.23 |
| 489.89 | 364.27 | 490.51 | 364.27 | 492.12 | 364.31 | 495.89 | 364.36 | 496.43 | 364.29 |
| 497.11 | 364.26 | 497.73 | 364.25 | 498.37 | 364.27 | 507.99 | 364.36 | 509.77 | 364.39 |
| 510.4 | 364.43 | 511.93 | 364.46 | 513.94 | 364.34 | 515.9 | 364.19 | 517.33 | 364.05 |
| 517.61 | 364.01 | 519.1 | 363.96 | 519.97 | 363.96 | 520.11 | 363.95 | 521.23 | 363.93 |
| 522.91 | 363.92 | 523.7 | 363.95 | 524.13 | 364.05 | 525.63 | 364.27 | 533.65 | 364.67 |
| 534.88 | 364.69 | 536.54 | 364.74 | 537.78 | 364.79 | 540.31 | 364.65 | 541.08 | 364.58 |
| 541.57 | 364.56 | 542.14 | 364.51 | 542.23 | 364.52 | 543.54 | 364.58 | 543.79 | 364.53 |
| 544.35 | 364.47 | 545.84 | 364.11 | 545.98 | 364.07 | 546.41 | 364.01 | 547.83 | 363.98 |
| 548.74 | 363.98 | 550.7 | 364.02 | 552.02 | 364.12 | 552.95 | 364.21 | 553.75 | 364.26 |
| 559.39 | 364.41 | 561.2 | 364.45 | 564.23 | 364.51 | 566.4 | 364.55 | 568.36 | 364.58 |
| 569.97 | 364.62 | 573.58 | 364.69 | 574.9 | 364.71 | 577.94 | 364.73 | 578.65 | 364.75 |
| 582.55 | 364.75 | 583.16 | 364.74 | 586.21 | 364.53 | 588.89 | 364.23 | 590.25 | 364.2 |
| 591.63 | 364.21 | 594.61 | 364.26 | 597.94 | 364.3 | 600.87 | 364.36 | 602.14 | 364.38 |
| 604.06 | 364.39 | 607.55 | 364.39 | 608.51 | 364.37 | 611.57 | 364.37 | 612.13 | 364.38 |
| 617.82 | 364.38 | 620.02 | 364.42 | 622.83 | 364.53 | 623.86 | 364.54 | 625.39 | 364.57 |
| 626.67 | 364.57 | 627.43 | 364.58 | 629.49 | 364.55 | 630.62 | 364.53 | 631.1 | 364.5 |
| 632.94 | 364.5 | 639.21 | 364.59 | 645.41 | 364.71 | 647.61 | 364.74 | 650.12 | 364.79 |
| 651.71 | 364.91 | 653.3 | 365 | 657.05 | 365.06 | 660.02 | 365.08 | 661.01 | 365.08 |
| 662.45 | 365.07 | 664.35 | 365.07 | 665.28 | 365.09 | 666.32 | 365.03 | 666.59 | 365 |
| 668.5 | 364.88 | 669.44 | 364.84 | 670.11 | 364.83 | 673.26 | 364.82 | 677.39 | 364.77 |
| 685.72 | 364.77 | 699.03 | 364.57 | 699.79 | 364.56 | 703.82 | 364.44 | 706.47 | 364.32 |
| 707.9 | 364.26 | 710.1 | 364.19 | 711.94 | 364.05 | 713.18 | 364.01 | 714.14 | 364 |
| 715.04 | 364 | 718.4 | 363.97 | 718.93 | 363.98 | 723.32 | 364.12 | 724.15 | 364.16 |
| 726.09 | 364.21 | 730.26 | 364.37 | 735.83 | 364.37 | 739.62 | 364.33 | 745.68 | 364.22 |
| 746.94 | 364.22 | 748.79 | 364.23 | 749.34 | 364.24 | 750.22 | 364.28 | 751.17 | 364.35 |
| 752.29 | 364.45 | 754.58 | 364.64 | 758.67 | 365.03 | 758.76 | 365.05 | 760.15 | 365.08 |
| 764.64 | 365.12 | 765.74 | 365.11 | 766.9 | 365.07 | 767 | 365.06 | 773.59 | 364.82 |
| 775.2 | 364.76 | 779.13 | 364.59 | 781.27 | 364.61 | 782.8 | 364.63 | 783.48 | 364.68 |
| 784.77 | 364.72 | 788.69 | 364.9 | 792.13 | 365.03 | 793.2 | 365.05 | 794.21 | 365.03 |
| 795.51 | 364.99 | 801.62 | 364.86 | 802.45 | 364.83 | 803.33 | 364.82 | 806.28 | 364.76 |
| 809.45 | 364.77 | 821.03 | 364.93 | 821.16 | 364.98 | 822.69 | 364.97 | 823.4 | 364.93 |
| 823.59 | 364.93 | 828.72 | 364.69 | 829.86 | 364.64 | 831.04 | 364.63 | 832.52 | 364.59 |
| 835.1 | 364.5 | 835.57 | 364.51 | 837.61 | 364.66 | 839.28 | 364.86 | 839.48 | 364.9 |
| 839.99 | 365.07 | 840.41 | 365.11 | 842.48 | 365.2 | 844.2 | 365.2 | 847.63 | 365.12 |
| 850.49 | 365 | 850.89 | 364.99 | 851.77 | 365 | 853.63 | 365.03 | 858.96 | 365.04 |
| 859.54 | 365.06 | 870.07 | 365.19 | 872.82 | 365.25 | 876.43 | 365.35 | 877.79 | 365.44 |
| 880.17 | 365.5 | 883.15 | 365.67 | 883.84 | 365.69 | 885.86 | 365.78 | 889.69 | 366 |
| 890.63 | 366.02 | 891.66 | 366.08 | 893.39 | 366.15 | 897.32 | 366.22 | 899.54 | 366.27 |
| 900.79 | 366.29 | 902.03 | 366.28 | 902.5 | 366.29 | 904.34 | 366.28 | 909.03 | 366.24 |
| 909.53 | 366.23 | 913 | 366.25 | 923.2 | 366.28 | 925.34 | 366.28 | 926.38 | 366.26 |
| 927.57 | 366.23 | 930.16 | 366.13 | 932.05 | 366.03 | 941.13 | 365.93 | 941.48 | 365.93 |
| 942.88 | 365.97 | 949.31 | 366.17 | 950.51 | 366.19 | 952.67 | 366.19 | 957.72 | 366.17 |
| 958.2 | 366.17 | 958.62 | 366.15 | 961.38 | 366.24 | 966.03 | 366.32 | 970.41 | 366.46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 974.68 | 366.62 | 977.64 | 366.68 | 977.83 | 366.68 | 981.05 | 366.73 | 982 | 366.67 |
| 984.81 | 366.56 | 987.6 | 366.5 | 991.07 | 366.44 | 992.81 | 366.48 | 992.93 | 366.49 |
| 996.96 | 366.5 | 997.74 | 366.51 | 1022.38 | 367.05 | 1023.33 | 367.07 | 1026.5 | 367.12 |
| 1027.59 | 367.12 | 1028.66 | 367.08 | 1033.71 | 366.98 | 1037.24 | 367.07 | 1038.16 | 367.08 |
| 1043.81 | 367.15 | 1044.24 | 367.16 | 1046.48 | 367.23 | 1048.53 | 367.26 | 1048.63 | 367.23 |
| 1061.2 | 367.4 | 1062.22 | 367.43 | 1062.65 | 367.45 | 1065.13 | 367.45 | 1078.25 | 367.48 |
| 1078.98 | 367.49 | 1080.47 | 367.49 | 1081.18 | 367.45 | 1082.11 | 367.37 | 1083.21 | 367.29 |
| 1084.06 | 367.24 | 1084.66 | 367.23 | 1086.02 | 367.22 | 1088.35 | 367.56 | 1088.82 | 367.54 |
| 1089.53 | 367.55 | 1096.63 | 367.8 | 1098.48 | 367.86 | 1099.84 | 367.91 | 1100.38 | 367.92 |
| 1103.69 | 368 | 1107.09 | 368.04 | 1107.38 | 368.05 | 1109.99 | 368.02 | 1110.35 | 368.02 |
| 1112.86 | 367.98 | 1113.24 | 367.98 | 1118.29 | 367.82 | 1118.6 | 367.82 | 1125.4 | 367.59 |
| 1125.79 | 367.42 | 1126.56 | 367.37 | 1127.91 | 367.33 | 1128.94 | 367.31 | 1131.92 | 367.33 |
| 1138.48 | 367.6 | 1142.19 | 367.6 | 1154.86 | 367.59 | 1157.3 | 367.65 | 1158.47 | 367.69 |
| 1161.12 | 367.74 | 1162.23 | 367.82 | 1165.54 | 367.87 | 1166.12 | 367.89 | 1173.25 | 367.86 |
| 1174.24 | 367.86 | 1177 | 367.85 | 1177.24 | 367.82 | 1177.7 | 367.82 | 1178.89 | 367.84 |
| 1184.65 | 367.96 | 1185.9 | 367.97 | 1186.7 | 367.96 | 1189.51 | 367.91 | 1191.15 | 367.87 |
| 1191.6 | 367.85 | 1193.05 | 367.75 | 1194.94 | 367.7 | 1195.19 | 367.71 | 1196.61 | 367.7 |
| 1199.91 | 367.74 | 1201.08 | 367.74 | 1203.72 | 367.77 | 1206.16 | 367.77 | 1211.86 | 367.65 |
| 1212.54 | 367.63 | 1213.26 | 367.58 | 1214.17 | 367.49 | 1217.99 | 367.42 | 1220.11 | 367.42 |
| 1222.51 | 367.43 | 1223.86 | 367.44 | 1228.58 | 367.59 | 1230.14 | 367.63 | 1234.06 | 368.26 |
| 1235 | 368.38 | 1235.09 | 368.4 | 1237.61 | 368.63 | 1240.06 | 368.63 | 1246.94 | 368.46 |
| 1248.04 | 368.42 | 1249.03 | 368.42 | 1254.47 | 368.4 | 1255.37 | 368.4 | 1258.89 | 368.37 |
| 1260.21 | 368.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 156.66 | .05 | 195.55 | .04 | 883.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 195.55 | 883.15 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6355.77*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 170.92 | 365.24 | 171.54 | 365.23 | 176.75 | 365.2 | 177.56 | 365.2 | 179.4 | 365.19 |
| 180.35 | 365.19 | 185.36 | 365.1 | 189.1 | 365.08 | 192.42 | 365.1 | 193.39 | 365.08 |
| 194.67 | 365.09 | 197.18 | 365.05 | 197.84 | 365.01 | 200.91 | 364.98 | 203.14 | 365 |
| 205.09 | 364.97 | 207.19 | 364.86 | 207.81 | 364.84 | 209.03 | 364.55 | 211.72 | 364.39 |
| 213.94 | 364.24 | 214.21 | 364.23 | 221.08 | 364.19 | 224.03 | 364.25 | 224.73 | 364.26 |
| 225.85 | 364.23 | 226.14 | 364.19 | 226.97 | 364.17 | 228.87 | 364.24 | 232.35 | 364.3 |
| 232.93 | 364.3 | 233.49 | 364.26 | 234.77 | 364.21 | 235.38 | 364.18 | 236.82 | 364.09 |
| 238.48 | 364.08 | 240.29 | 364.02 | 242.85 | 364.07 | 243.39 | 364.07 | 248.01 | 364.13 |
| 249.96 | 364.1 | 256.16 | 364.15 | 256.62 | 364.15 | 257.72 | 364.17 | 258.53 | 364.17 |
| 258.94 | 364.18 | 260.45 | 364.17 | 261.36 | 364.18 | 261.81 | 364.21 | 262.95 | 364.21 |
| 263.8 | 364.17 | 267.64 | 364 | 269.51 | 363.93 | 270.61 | 363.96 | 272.92 | 364 |
| 277.11 | 364.03 | 277.74 | 364.03 | 279.29 | 364.06 | 280.87 | 364.06 | 282.2 | 364.03 |
| 282.57 | 364.01 | 283.35 | 364.01 | 284.16 | 364.02 | 290.27 | 364.03 | 290.74 | 364 |
| 292.96 | 363.94 | 294.26 | 363.93 | 295.15 | 363.89 | 296.75 | 363.91 | 297.27 | 363.94 |
| 297.66 | 364 | 299.61 | 364.11 | 299.81 | 364.11 | 301.16 | 364.16 | 301.86 | 364.17 |
| 303.77 | 364.16 | 311.64 | 364.29 | 314.2 | 364.31 | 314.91 | 364.29 | 319.27 | 364.14 |
| 320.73 | 364.11 | 323.45 | 363.81 | 323.97 | 363.72 | 325.64 | 363.48 | 326.03 | 363.41 |
| 329.79 | 363.4 | 330.08 | 363.42 | 330.77 | 363.43 | 331.74 | 363.42 | 332.13 | 363.4 |
| 333.43 | 363.38 | 334.59 | 363.31 | 336.3 | 363.28 | 341.53 | 363.15 | 342.05 | 363.13 |
| 347.72 | 362.97 | 349.25 | 362.86 | 350.49 | 362.72 | 350.72 | 362.74 | 351.56 | 362.7 |
| 352.18 | 362.68 | 354.21 | 362.72 | 355.59 | 362.73 | 356.71 | 362.78 | 359.53 | 362.74 |
| 359.9 | 362.73 | 361.74 | 362.72 | 364.32 | 362.64 | 366.42 | 362.68 | 368.61 | 362.67 |
| 368.83 | 362.66 | 372.62 | 362.57 | 376.12 | 362.52 | 378.79 | 362.44 | 382.07 | 362.36 |
| 382.47 | 362.38 | 383.09 | 362.38 | 384.77 | 362.32 | 385.45 | 362.27 | 386.44 | 362.28 |
| 387.51 | 362.27 | 387.64 | 362.3 | 388.71 | 362.35 | 390.22 | 362.39 | 392.06 | 362.42 |
| 392.64 | 362.42 | 394.76 | 362.45 | 397.25 | 362.46 | 397.6 | 362.47 | 402.47 | 362.53 |
| 403.69 | 362.56 | 404.22 | 362.6 | 410.89 | 362.86 | 415.52 | 363.03 | 416.84 | 363.06 |
| 417.58 | 363.06 | 417.99 | 363.04 | 423.6 | 362.81 | 425.93 | 362.74 | 428.23 | 362.69 |
| 432.82 | 362.54 | 434.43 | 362.53 | 435.24 | 362.53 | 435.74 | 362.54 | 446.29 | 362.82 |
| 453.27 | 363.07 | 454.58 | 363.11 | 461.77 | 363.25 | 463.29 | 363.55 | 463.75 | 363.63 |
| 465.28 | 363.92 | 465.89 | 363.91 | 466.09 | 363.94 | 466.49 | 363.94 | 470.14 | 363.87 |
| 474.73 | 363.88 | 475.97 | 363.87 | 478.73 | 363.83 | 479.43 | 363.83 | 480.75 | 363.81 |
| 484.26 | 363.72 | 486.36 | 363.7 | 489.38 | 363.72 | 490.48 | 363.73 | 491.4 | 363.75 |
| 492.14 | 363.79 | 492.55 | 363.84 | 493.52 | 363.9 | 498.38 | 363.91 | 500.98 | 363.91 |
| 504.46 | 363.89 | 505.21 | 363.89 | 509.15 | 363.85 | 509.61 | 363.85 | 510.57 | 363.91 |
| 511.24 | 363.92 | 516.24 | 363.95 | 518.42 | 363.99 | 522.11 | 364.05 | 522.64 | 363.98 |
| 523.91 | 363.95 | 524.54 | 363.97 | 533.95 | 364.06 | 535.69 | 364.09 | 536.31 | 364.14 |
| 537.8 | 364.17 | 539.77 | 364.07 | 541.69 | 363.92 | 543.09 | 363.79 | 543.37 | 363.75 |
| 544.82 | 363.7 | 545.67 | 363.7 | 545.81 | 363.69 | 548 | 363.65 | 548.55 | 363.65 |
| 549.32 | 363.68 | 549.75 | 363.77 | 551.21 | 363.98 | 558.08 | 364.29 | 559.05 | 364.34 |
| 560.26 | 364.35 | 563.1 | 364.44 | 565.58 | 364.3 | 566.33 | 364.24 | 567.37 | 364.17 |
| 568.74 | 364.23 | 568.98 | 364.18 | 569.53 | 364.13 | 571.13 | 363.75 | 571.48 | 363.7 |
| 571.82 | 363.68 | 572.41 | 363.67 | 573.82 | 363.67 | 575.61 | 363.72 | 576.55 | 363.77 |
| 577.94 | 363.91 | 578.73 | 363.97 | 584.25 | 364.12 | 586.02 | 364.16 | 588.99 | 364.21 |
| 591.11 | 364.26 | 593.02 | 364.29 | 593.36 | 364.29 | 594.6 | 364.32 | 598.13 | 364.39 |
| 599.42 | 364.41 | 602.4 | 364.43 | 603.81 | 364.45 | 604.92 | 364.45 | 606.91 | 364.44 |
| 607.51 | 364.43 | 610.49 | 364.23 | 613.12 | 363.95 | 614.44 | 363.92 | 615.79 | 363.92 |
| 618.71 | 363.97 | 621.96 | 364 | 624.83 | 364.05 | 627.95 | 364.07 | 631.37 | 364.06 |
| 631.96 | 364.05 | 632.31 | 364.03 | 633.51 | 364.03 | 634.89 | 364.04 | 636.47 | 364.04 |
| 637 | 364.05 | 640.25 | 364.04 | 641.42 | 364.04 | 642.57 | 364.06 | 643.57 | 364.09 |
| 646.32 | 364.2 | 647.33 | 364.22 | 647.92 | 364.22 | 648.82 | 364.24 | 650.83 | 364.25 |
| 653.95 | 364.2 | 654.42 | 364.17 | 656.59 | 364.17 | 662.36 | 364.24 | 668.42 | 364.35 |
| 670.57 | 364.38 | 673.03 | 364.43 | 674.59 | 364.53 | 676.14 | 364.62 | 679.29 | 364.67 |
| 679.81 | 364.67 | 682.72 | 364.7 | 683.68 | 364.69 | 685.64 | 364.68 | 686.95 | 364.69 |
| 687.86 | 364.71 | 688.88 | 364.65 | 691.01 | 364.51 | 692.42 | 364.47 | 695.67 | 364.47 |
| 699.71 | 364.43 | 707.86 | 364.45 | 720.89 | 364.26 | 721.63 | 364.25 | 725.58 | 364.14 |
| 728.16 | 364.01 | 729.57 | 363.96 | 731.71 | 363.89 | 733.52 | 363.75 | 734.73 | 363.71 |
| 735.67 | 363.7 | 737.62 | 363.7 | 737.76 | 363.69 | 740.36 | 363.68 | 744.66 | 363.82 |
| 745.46 | 363.85 | 747.37 | 363.9 | 751.2 | 364.04 | 751.79 | 364.05 | 752.99 | 364.05 |
| 756.89 | 364.06 | 760.6 | 364.02 | 766.53 | 363.92 | 767.76 | 363.92 | 770.11 | 363.95 |
| 770.98 | 363.98 | 771.91 | 364.05 | 773 | 364.15 | 775.24 | 364.33 | 779.25 | 364.7 |
| 779.33 | 364.72 | 780.69 | 364.75 | 785.09 | 364.79 | 786.16 | 364.78 | 787.4 | 364.74 |
| 793.84 | 364.52 | 795.42 | 364.46 | 799.26 | 364.29 | 801.36 | 364.31 | 802.86 | 364.33 |
| 803.52 | 364.37 | 804.79 | 364.41 | 808.62 | 364.58 | 811.99 | 364.7 | 813.03 | 364.72 |
| 814.02 | 364.7 | 815.3 | 364.66 | 821.27 | 364.54 | 821.66 | 364.52 | 822.94 | 364.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 825.83 | 364.44 | 828.93 | 364.45 | 840.26 | 364.6 | 840.39 | 364.64 | 841.89 | 364.64 |
| 848.9 | 364.32 | 850.06 | 364.31 | 854.03 | 364.2 | 854.49 | 364.21 | 856.49 | 364.38 |
| 856.91 | 364.43 | 858.24 | 364.61 | 858.82 | 364.78 | 859.22 | 364.83 | 861.25 | 364.91 |
| 862.93 | 364.91 | 865.46 | 364.87 | 869.09 | 364.73 | 870.34 | 364.73 | 872.16 | 364.76 |
| 877.37 | 364.79 | 877.95 | 364.8 | 888.25 | 364.93 | 890.94 | 364.99 | 894.48 | 365.1 |
| 895.24 | 365.14 | 895.8 | 365.18 | 898.13 | 365.24 | 901.05 | 365.4 | 901.72 | 365.42 |
| 903.71 | 365.51 | 907.46 | 365.71 | 908.19 | 365.72 | 909.39 | 365.78 | 911.38 | 365.85 |
| 911.46 | 365.86 | 912.29 | 365.86 | 914.94 | 365.91 | 917.11 | 365.96 | 918.34 | 365.98 |
| 919.56 | 365.96 | 920.01 | 365.97 | 921.82 | 365.96 | 925.3 | 365.9 | 926.91 | 365.88 |
| 930.31 | 365.9 | 940.31 | 365.92 | 942.41 | 365.92 | 943.43 | 365.9 | 947.13 | 365.78 |
| 948.05 | 365.72 | 948.99 | 365.68 | 957.89 | 365.59 | 958.23 | 365.59 | 959.61 | 365.63 |
| 965.91 | 365.82 | 967.09 | 365.84 | 969.2 | 365.84 | 974.34 | 365.83 | 975.03 | 365.81 |
| 975.86 | 365.83 | 977.74 | 365.9 | 982.3 | 365.98 | 986.59 | 366.13 | 990.78 | 366.29 |
| 993.68 | 366.35 | 993.87 | 366.35 | 996.26 | 366.4 | 997.02 | 366.41 | 997.96 | 366.35 |
| 1000.71 | 366.25 | 1003.45 | 366.21 | 1006.85 | 366.18 | 1008.55 | 366.23 | 1008.67 | 366.24 |
| 1012.62 | 366.26 | 1013.38 | 366.27 | 1038.47 | 366.81 | 1041.58 | 366.86 | 1042.65 | 366.86 |
| 1043.69 | 366.82 | 1045.22 | 366.8 | 1048.65 | 366.73 | 1052.11 | 366.82 | 1053.01 | 366.83 |
| 1058.54 | 366.9 | 1061.17 | 366.97 | 1063.17 | 367.01 | 1063.27 | 366.98 | 1075.6 | 367.15 |
| 1077.02 | 367.19 | 1079.45 | 367.19 | 1092.31 | 367.23 | 1094.76 | 367.23 | 1096.09 | 367.12 |
| 1097.18 | 367.04 | 1098 | 367 | 1099.93 | 366.98 | 1102.21 | 367.3 | 1103.37 | 367.29 |
| 1110.33 | 367.54 | 1112.14 | 367.6 | 1114 | 367.65 | 1117.25 | 367.73 | 1120.58 | 367.78 |
| 1123.43 | 367.76 | 1123.78 | 367.75 | 1126.24 | 367.72 | 1126.61 | 367.72 | 1131.56 | 367.57 |
| 1131.86 | 367.57 | 1135.33 | 367.46 | 1138.53 | 367.35 | 1138.91 | 367.2 | 1139.67 | 367.15 |
| 1140.99 | 367.11 | 1142 | 367.09 | 1144.93 | 367.11 | 1151.35 | 367.36 | 1154.19 | 367.36 |
| 1154.99 | 367.37 | 1167.42 | 367.35 | 1169.81 | 367.41 | 1170.95 | 367.45 | 1173.16 | 367.48 |
| 1174.64 | 367.58 | 1177.89 | 367.62 | 1178.46 | 367.64 | 1185.44 | 367.61 | 1189.12 | 367.61 |
| 1189.35 | 367.58 | 1189.8 | 367.58 | 1190.97 | 367.6 | 1196.61 | 367.71 | 1197.84 | 367.72 |
| 1201.38 | 367.67 | 1202.99 | 367.63 | 1203.43 | 367.61 | 1204.86 | 367.51 | 1206.71 | 367.47 |
| 1206.95 | 367.48 | 1208.35 | 367.47 | 1210.68 | 367.5 | 1211.58 | 367.52 | 1211.85 | 367.51 |
| 1212.72 | 367.51 | 1215.32 | 367.54 | 1217.7 | 367.54 | 1223.29 | 367.42 | 1223.96 | 367.4 |
| 1224.66 | 367.36 | 1225.56 | 367.28 | 1229.3 | 367.21 | 1233.73 | 367.21 | 1235.05 | 367.22 |
| 1239.68 | 367.36 | 1241.21 | 367.4 | 1245.06 | 368 | 1245.98 | 368.11 | 1246.06 | 368.13 |
| 1247.68 | 368.27 | 1248.28 | 368.33 | 1248.54 | 368.34 | 1250.93 | 368.35 | 1257.68 | 368.19 |
| 1258.76 | 368.16 | 1259.73 | 368.16 | 1265.06 | 368.14 | 1265.94 | 368.13 | 1269.4 | 368.1 |
| 1270.69 | 368.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 170.92 | .05 | 207.81 | .04 | 901.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 207.81 | 901.05 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6336.00*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 185.17 | 365.06 | 185.76 | 365.05 | 190.69 | 365.02 | 191.46 | 365.02 | 194.09 | 364.99 |
| 198.83 | 364.9 | 202.38 | 364.88 | 205.51 | 364.89 | 206.96 | 364.88 | 210.02 | 364.83 |
| 210.32 | 364.83 | 210.88 | 364.79 | 213.54 | 364.76 | 215.66 | 364.77 | 217.1 | 364.75 |
| 218.01 | 364.71 | 219.14 | 364.67 | 219.49 | 364.63 | 220.07 | 364.61 | 221.41 | 364.28 |
| 224.35 | 364.1 | 227.07 | 363.92 | 234.58 | 363.88 | 237.81 | 363.96 | 238.58 | 363.97 |
| 239.8 | 363.94 | 240.12 | 363.89 | 241.03 | 363.87 | 241.72 | 363.89 | 243.65 | 363.97 |
| 245.13 | 363.99 | 247.36 | 364.03 | 248.16 | 363.98 | 249.56 | 363.93 | 251.8 | 363.79 |
| 253.61 | 363.78 | 255.59 | 363.71 | 258.39 | 363.78 | 258.98 | 363.78 | 264.03 | 363.85 |
| 266.17 | 363.82 | 272.95 | 363.89 | 273.45 | 363.89 | 274.66 | 363.91 | 277.96 | 363.91 |
| 278.94 | 363.93 | 279.13 | 363.95 | 280.38 | 363.96 | 281.3 | 363.91 | 285.5 | 363.71 |
| 286.04 | 363.68 | 287.55 | 363.63 | 288.23 | 363.65 | 291.27 | 363.71 | 295.86 | 363.74 |
| 298.24 | 363.77 | 299.77 | 363.78 | 299.97 | 363.77 | 301.42 | 363.74 | 301.83 | 363.72 |
| 302.68 | 363.71 | 303.22 | 363.73 | 310.25 | 363.74 | 310.76 | 363.7 | 313.18 | 363.64 |
| 314.13 | 363.63 | 315.59 | 363.59 | 316.05 | 363.59 | 317.73 | 363.62 | 317.97 | 363.64 |
| 318.33 | 363.71 | 320.46 | 363.83 | 322.15 | 363.89 | 322.92 | 363.9 | 325.01 | 363.89 |
| 333.61 | 364.03 | 334.63 | 364.05 | 336.42 | 364.05 | 337.19 | 364.03 | 341.96 | 363.87 |
| 343.56 | 363.85 | 346.54 | 363.56 | 347.1 | 363.47 | 348.77 | 363.27 | 349.36 | 363.19 |
| 353.46 | 363.18 | 353.9 | 363.21 | 354.54 | 363.22 | 355.59 | 363.21 | 356.02 | 363.19 |
| 357.45 | 363.17 | 358.42 | 363.11 | 359.12 | 363.08 | 360.58 | 363.06 | 366.3 | 362.93 |
| 366.87 | 362.91 | 373.07 | 362.74 | 374.74 | 362.61 | 376.1 | 362.46 | 376.36 | 362.48 |
| 377.59 | 362.42 | 377.95 | 362.42 | 380.17 | 362.47 | 381.67 | 362.48 | 382.91 | 362.54 |
| 385.99 | 362.49 | 386.39 | 362.48 | 388.21 | 362.48 | 388.41 | 362.47 | 391.23 | 362.39 |
| 392.7 | 362.41 | 392.87 | 362.43 | 393.52 | 362.44 | 396.16 | 362.42 | 400.3 | 362.32 |
| 404.13 | 362.26 | 410.64 | 362.08 | 411.07 | 362.11 | 411.75 | 362.11 | 413.58 | 362.04 |
| 414.33 | 361.99 | 415.47 | 362 | 416.69 | 361.99 | 416.82 | 362.02 | 417.86 | 362.07 |
| 419.33 | 362.12 | 421.7 | 362.16 | 423.78 | 362.18 | 425.62 | 362.19 | 426.56 | 362.21 |
| 428.15 | 362.22 | 431.32 | 362.27 | 432.23 | 362.28 | 433.03 | 362.34 | 439.55 | 362.6 |
| 444.08 | 362.76 | 445.37 | 362.79 | 446.1 | 362.78 | 446.5 | 362.76 | 451.98 | 362.54 |
| 454.26 | 362.47 | 455.87 | 362.44 | 461 | 362.28 | 463.37 | 362.26 | 463.85 | 362.27 |
| 474.17 | 362.57 | 481 | 362.82 | 482.28 | 362.87 | 489.32 | 363 | 490.8 | 363.28 |
| 491.25 | 363.35 | 492.75 | 363.63 | 493.34 | 363.62 | 493.55 | 363.65 | 493.94 | 363.65 |
| 496.42 | 363.6 | 497.5 | 363.59 | 503.2 | 363.59 | 507.88 | 363.52 | 511.31 | 363.44 |
| 513.37 | 363.42 | 516.32 | 363.43 | 517.4 | 363.44 | 518.3 | 363.46 | 519.02 | 363.49 |
| 519.42 | 363.54 | 520.36 | 363.6 | 525.12 | 363.62 | 527.67 | 363.61 | 531.07 | 363.59 |
| 531.8 | 363.58 | 535.66 | 363.54 | 536.1 | 363.55 | 537.04 | 363.6 | 537.7 | 363.6 |
| 542.59 | 363.64 | 543.18 | 363.64 | 544.73 | 363.68 | 548.33 | 363.74 | 548.85 | 363.68 |
| 550.09 | 363.65 | 550.7 | 363.67 | 560.86 | 363.78 | 561.61 | 363.8 | 562.22 | 363.85 |
| 563.68 | 363.88 | 565.61 | 363.79 | 567.48 | 363.65 | 568.85 | 363.53 | 569.12 | 363.49 |
| 570.54 | 363.44 | 571.51 | 363.44 | 572.58 | 363.41 | 573.65 | 363.39 | 574.19 | 363.39 |
| 574.94 | 363.41 | 575.36 | 363.5 | 576.79 | 363.69 | 584.46 | 364.01 | 585.64 | 364.02 |
| 588.42 | 364.09 | 590.84 | 363.96 | 591.58 | 363.89 | 592.59 | 363.82 | 593.93 | 363.88 |
| 594.17 | 363.83 | 594.7 | 363.78 | 596.27 | 363.43 | 596.62 | 363.38 | 598.04 | 363.35 |
| 598.91 | 363.36 | 600.78 | 363.41 | 602.05 | 363.51 | 602.94 | 363.62 | 603.7 | 363.68 |
| 609.1 | 363.83 | 610.83 | 363.87 | 613.74 | 363.92 | 615.81 | 363.96 | 617.69 | 363.99 |
| 622.68 | 364.09 | 623.94 | 364.11 | 626.86 | 364.13 | 627.54 | 364.14 | 629.32 | 364.14 |
| 631.27 | 364.13 | 631.85 | 364.12 | 634.77 | 363.93 | 636.9 | 363.71 | 637.34 | 363.67 |
| 638.63 | 363.63 | 639.96 | 363.64 | 642.81 | 363.67 | 645.99 | 363.7 | 648.8 | 363.74 |
| 650.02 | 363.75 | 651.85 | 363.75 | 655.19 | 363.73 | 655.77 | 363.72 | 656.11 | 363.7 |
| 659.04 | 363.7 | 659.57 | 363.71 | 659.89 | 363.7 | 660.7 | 363.71 | 663.88 | 363.7 |
| 665.02 | 363.7 | 666.14 | 363.72 | 667.13 | 363.75 | 669.81 | 363.87 | 670.81 | 363.89 |
| 671.38 | 363.89 | 672.26 | 363.91 | 674.22 | 363.92 | 676.19 | 363.89 | 678.15 | 363.83 |
| 679.86 | 363.83 | 680.75 | 363.85 | 685.5 | 363.89 | 691.43 | 363.99 | 693.53 | 364.01 |
| 695.93 | 364.06 | 697.46 | 364.16 | 698.98 | 364.24 | 702.05 | 364.29 | 702.57 | 364.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 705.41 | 364.31 | 705.72 | 364.3 | 708.27 | 364.29 | 709.56 | 364.3 | 710.45 | 364.32 |
| 711.43 | 364.26 | 712.92 | 364.18 | 713.52 | 364.14 | 714.9 | 364.11 | 718.08 | 364.11 |
| 722.03 | 364.08 | 730.01 | 364.13 | 743.46 | 363.94 | 747.33 | 363.83 | 749.86 | 363.71 |
| 751.23 | 363.65 | 753.33 | 363.59 | 755.1 | 363.46 | 756.28 | 363.42 | 757.2 | 363.41 |
| 758.07 | 363.41 | 761.28 | 363.38 | 761.78 | 363.39 | 765.99 | 363.51 | 766.78 | 363.54 |
| 768.64 | 363.59 | 772.97 | 363.73 | 774.14 | 363.73 | 777.96 | 363.74 | 781.59 | 363.71 |
| 787.39 | 363.63 | 788.59 | 363.63 | 790.89 | 363.66 | 791.73 | 363.69 | 792.64 | 363.75 |
| 793.71 | 363.85 | 795.91 | 364.02 | 799.91 | 364.39 | 801.23 | 364.42 | 805.54 | 364.46 |
| 806.59 | 364.45 | 807.7 | 364.42 | 807.79 | 364.41 | 814.09 | 364.21 | 819.4 | 364 |
| 821.44 | 364.01 | 822.91 | 364.03 | 823.56 | 364.06 | 824.32 | 364.08 | 828.55 | 364.26 |
| 831.84 | 364.37 | 832.87 | 364.39 | 833.83 | 364.37 | 835.08 | 364.33 | 840.92 | 364.22 |
| 841.54 | 364.19 | 842.56 | 364.18 | 845.38 | 364.12 | 848.41 | 364.13 | 859.49 | 364.26 |
| 859.62 | 364.3 | 861.09 | 364.3 | 861.94 | 364.26 | 866.86 | 364.04 | 867.95 | 364 |
| 869.08 | 363.99 | 870.5 | 363.95 | 872.96 | 363.89 | 873.79 | 363.94 | 875.36 | 364.1 |
| 875.78 | 364.15 | 877.15 | 364.35 | 877.64 | 364.5 | 878.04 | 364.55 | 880.03 | 364.63 |
| 881.67 | 364.63 | 884.15 | 364.59 | 884.95 | 364.57 | 887.69 | 364.47 | 888.08 | 364.46 |
| 890.7 | 364.5 | 895.79 | 364.53 | 896.35 | 364.54 | 906.43 | 364.68 | 909.06 | 364.74 |
| 912.52 | 364.84 | 913.27 | 364.88 | 913.82 | 364.92 | 916.1 | 364.98 | 918.95 | 365.13 |
| 919.61 | 365.16 | 921.56 | 365.23 | 925.23 | 365.43 | 925.94 | 365.43 | 927.12 | 365.48 |
| 928.78 | 365.53 | 929.28 | 365.55 | 932.56 | 365.6 | 934.69 | 365.65 | 935.9 | 365.66 |
| 937.09 | 365.64 | 937.53 | 365.65 | 939.3 | 365.63 | 942.71 | 365.56 | 943.81 | 365.54 |
| 944.29 | 365.52 | 947.62 | 365.54 | 957.42 | 365.56 | 959.48 | 365.55 | 961.62 | 365.5 |
| 964.1 | 365.42 | 965.01 | 365.37 | 965.93 | 365.33 | 974.65 | 365.25 | 974.98 | 365.25 |
| 982.51 | 365.47 | 983.66 | 365.49 | 990.76 | 365.49 | 991.44 | 365.47 | 992.26 | 365.49 |
| 994.1 | 365.55 | 996.87 | 365.61 | 998.57 | 365.65 | 1002.78 | 365.79 | 1006.87 | 365.95 |
| 1009.72 | 366.02 | 1009.9 | 366.03 | 1012.24 | 366.07 | 1013.11 | 366.08 | 1013.91 | 366.03 |
| 1016.61 | 365.94 | 1019.29 | 365.92 | 1022.62 | 365.92 | 1024.29 | 365.98 | 1024.41 | 365.99 |
| 1028.28 | 366.01 | 1029.03 | 366.02 | 1052.7 | 366.52 | 1053.62 | 366.55 | 1056.66 | 366.59 |
| 1057.7 | 366.6 | 1058.73 | 366.56 | 1060.22 | 366.54 | 1063.58 | 366.48 | 1066.98 | 366.57 |
| 1073.28 | 366.64 | 1075.85 | 366.71 | 1077.82 | 366.75 | 1077.91 | 366.72 | 1089.99 | 366.89 |
| 1091.39 | 366.93 | 1093.04 | 366.93 | 1093.77 | 366.94 | 1106.37 | 366.98 | 1108.77 | 366.98 |
| 1110.07 | 366.87 | 1111.14 | 366.8 | 1111.95 | 366.76 | 1113.84 | 366.74 | 1116.07 | 367.04 |
| 1116.53 | 367.03 | 1117.2 | 367.04 | 1124.03 | 367.27 | 1125.8 | 367.34 | 1127.11 | 367.38 |
| 1127.63 | 367.38 | 1130.81 | 367.47 | 1134.07 | 367.51 | 1137.21 | 367.49 | 1139.62 | 367.46 |
| 1139.98 | 367.46 | 1144.84 | 367.32 | 1145.13 | 367.32 | 1146.03 | 367.29 | 1148.53 | 367.22 |
| 1151.67 | 367.12 | 1152.04 | 366.97 | 1152.78 | 366.92 | 1155.06 | 366.87 | 1157.93 | 366.89 |
| 1164.23 | 367.13 | 1167.79 | 367.13 | 1179.97 | 367.12 | 1182.31 | 367.18 | 1185.6 | 367.24 |
| 1185.98 | 367.25 | 1187.05 | 367.33 | 1190.23 | 367.37 | 1190.79 | 367.39 | 1197.63 | 367.36 |
| 1198.58 | 367.37 | 1201.23 | 367.36 | 1201.47 | 367.33 | 1203.05 | 367.35 | 1208.58 | 367.47 |
| 1210.55 | 367.47 | 1213.25 | 367.43 | 1214.83 | 367.39 | 1215.26 | 367.37 | 1216.66 | 367.28 |
| 1218.47 | 367.24 | 1218.71 | 367.25 | 1220.08 | 367.24 | 1222.36 | 367.27 | 1223.25 | 367.29 |
| 1223.51 | 367.28 | 1224.36 | 367.28 | 1226.91 | 367.31 | 1229.24 | 367.31 | 1234.73 | 367.2 |
| 1235.38 | 367.18 | 1236.07 | 367.14 | 1236.94 | 367.06 | 1240.09 | 367 | 1242.65 | 366.99 |
| 1244.95 | 367 | 1246.25 | 367 | 1250.78 | 367.14 | 1252.28 | 367.17 | 1256.05 | 367.73 |
| 1257.04 | 367.85 | 1258.62 | 367.99 | 1259.21 | 368.05 | 1259.46 | 368.06 | 1261.81 | 368.07 |
| 1268.43 | 367.93 | 1269.48 | 367.89 | 1270.43 | 367.89 | 1275.65 | 367.87 | 1279.9 | 367.83 |
| 1281.17 | 367.85 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 185.17 | .05 | 220.07 | .04 | 918.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 220.07 | 918.95 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6316.24*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 199.43 | 364.87 | 199.98 | 364.86 | 204.63 | 364.83 | 205.35 | 364.83 | 207.84 | 364.8 |
| 212.31 | 364.7 | 215.65 | 364.68 | 218.61 | 364.68 | 219.97 | 364.67 | 222.86 | 364.62 |
| 223.45 | 364.58 | 226.18 | 364.55 | 228.17 | 364.55 | 229.91 | 364.51 | 231.46 | 364.44 |
| 231.79 | 364.41 | 232.34 | 364.39 | 233.79 | 364.01 | 236.98 | 363.81 | 239.62 | 363.63 |
| 239.94 | 363.62 | 248.09 | 363.58 | 251.59 | 363.67 | 252.42 | 363.68 | 253.75 | 363.65 |
| 254.1 | 363.59 | 255.09 | 363.57 | 255.84 | 363.6 | 257.33 | 363.67 | 259.54 | 363.71 |
| 261.47 | 363.75 | 262.16 | 363.75 | 262.59 | 363.72 | 264.34 | 363.65 | 266.77 | 363.49 |
| 268.74 | 363.48 | 270.89 | 363.41 | 273.94 | 363.48 | 274.57 | 363.48 | 280.06 | 363.57 |
| 282.38 | 363.54 | 289.73 | 363.62 | 290.28 | 363.62 | 291.59 | 363.64 | 292.55 | 363.64 |
| 293.03 | 363.65 | 295.9 | 363.65 | 296.24 | 363.66 | 296.44 | 363.69 | 297.8 | 363.7 |
| 298.8 | 363.64 | 303.95 | 363.39 | 305.58 | 363.33 | 305.83 | 363.33 | 306.88 | 363.37 |
| 309.63 | 363.42 | 314.61 | 363.45 | 317.19 | 363.49 | 319.07 | 363.49 | 320.65 | 363.45 |
| 321.09 | 363.43 | 322.01 | 363.42 | 322.6 | 363.44 | 330.22 | 363.45 | 330.78 | 363.41 |
| 334.16 | 363.32 | 334.96 | 363.32 | 335.27 | 363.3 | 336.02 | 363.28 | 336.52 | 363.28 |
| 337.92 | 363.3 | 338.53 | 363.33 | 339 | 363.41 | 341.31 | 363.55 | 343.15 | 363.61 |
| 343.99 | 363.63 | 346.26 | 363.62 | 355.59 | 363.78 | 356.69 | 363.8 | 358.63 | 363.8 |
| 359.47 | 363.78 | 364.65 | 363.6 | 366.39 | 363.58 | 369.62 | 363.3 | 370.23 | 363.22 |
| 371.15 | 363.13 | 372.68 | 362.96 | 376.98 | 362.96 | 377.61 | 363 | 379.45 | 363 |
| 379.92 | 362.98 | 381.46 | 362.96 | 382.59 | 362.89 | 384.64 | 362.84 | 384.87 | 362.84 |
| 391.08 | 362.71 | 391.7 | 362.69 | 398.42 | 362.5 | 400.24 | 362.36 | 401.71 | 362.19 |
| 401.99 | 362.22 | 402.98 | 362.18 | 403.14 | 362.16 | 403.72 | 362.15 | 406.13 | 362.21 |
| 407.27 | 362.23 | 407.76 | 362.23 | 409.1 | 362.29 | 412.45 | 362.25 | 412.53 | 362.24 |
| 414.58 | 362.24 | 415.07 | 362.23 | 417.35 | 362.16 | 418.13 | 362.14 | 419.92 | 362.18 |
| 420.62 | 362.2 | 423.49 | 362.18 | 427.98 | 362.07 | 428.05 | 362.06 | 432.14 | 362.01 |
| 439.2 | 361.81 | 439.67 | 361.84 | 440.41 | 361.84 | 442.1 | 361.78 | 443.1 | 361.72 |
| 443.21 | 361.7 | 444.49 | 361.71 | 445.87 | 361.7 | 445.99 | 361.74 | 447.01 | 361.8 |
| 448.02 | 361.83 | 450.76 | 361.89 | 455.51 | 361.94 | 460.17 | 362 | 461.33 | 362.03 |
| 461.84 | 362.07 | 468.22 | 362.33 | 472.64 | 362.49 | 473.9 | 362.51 | 474.61 | 362.51 |
| 475 | 362.49 | 480.36 | 362.27 | 482.59 | 362.2 | 484.17 | 362.17 | 489.18 | 362.01 |
| 491.49 | 361.99 | 491.97 | 362 | 502.06 | 362.32 | 508.74 | 362.58 | 509.99 | 362.63 |
| 516.86 | 362.75 | 518.31 | 363.01 | 518.75 | 363.08 | 520.22 | 363.34 | 520.8 | 363.33 |
| 521 | 363.36 | 521.38 | 363.36 | 523.81 | 363.31 | 524.87 | 363.3 | 529.25 | 363.31 |
| 530.43 | 363.3 | 533.08 | 363.26 | 533.74 | 363.26 | 535.01 | 363.24 | 538.37 | 363.15 |
| 540.37 | 363.13 | 543.26 | 363.14 | 544.31 | 363.15 | 545.19 | 363.17 | 545.9 | 363.2 |
| 546.29 | 363.24 | 547.21 | 363.3 | 551.87 | 363.32 | 554.35 | 363.32 | 557.68 | 363.29 |
| 562.16 | 363.23 | 562.6 | 363.24 | 563.52 | 363.29 | 564.16 | 363.29 | 568.94 | 363.32 |
| 569.52 | 363.33 | 571.03 | 363.37 | 574.55 | 363.43 | 575.06 | 363.37 | 575.69 | 363.35 |
| 576.27 | 363.35 | 576.87 | 363.37 | 586.8 | 363.48 | 587.53 | 363.5 | 588.13 | 363.56 |
| 589.04 | 363.59 | 589.55 | 363.59 | 591.44 | 363.51 | 593.27 | 363.38 | 595.06 | 363.22 |
| 595.89 | 363.2 | 596.27 | 363.18 | 597.21 | 363.18 | 598.26 | 363.15 | 599.3 | 363.13 |
| 600.18 | 363.13 | 600.57 | 363.15 | 600.97 | 363.23 | 602.37 | 363.4 | 608.94 | 363.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 609.87 | 363.68 | 611.03 | 363.68 | 613.74 | 363.75 | 616.11 | 363.61 | 616.83 | 363.54 |
| 617.82 | 363.47 | 619.13 | 363.53 | 619.45 | 363.47 | 619.88 | 363.44 | 621.42 | 363.11 |
| 621.69 | 363.07 | 622.08 | 363.05 | 623.14 | 363.04 | 623.99 | 363.05 | 625.7 | 363.1 |
| 626.19 | 363.13 | 627.06 | 363.21 | 627.93 | 363.32 | 628.68 | 363.39 | 633.96 | 363.54 |
| 635.65 | 363.59 | 638.49 | 363.63 | 640.52 | 363.67 | 642.35 | 363.69 | 643.86 | 363.73 |
| 648.47 | 363.81 | 651.32 | 363.83 | 651.98 | 363.84 | 653.72 | 363.84 | 655.63 | 363.83 |
| 656.2 | 363.82 | 659.05 | 363.64 | 661.14 | 363.42 | 661.56 | 363.38 | 662.83 | 363.35 |
| 664.12 | 363.35 | 666.91 | 363.38 | 670.02 | 363.39 | 672.76 | 363.43 | 675.75 | 363.43 |
| 679.01 | 363.4 | 679.57 | 363.39 | 679.91 | 363.37 | 681.05 | 363.36 | 682.78 | 363.36 |
| 683.3 | 363.37 | 684.4 | 363.37 | 687.51 | 363.36 | 689.05 | 363.36 | 690.68 | 363.42 |
| 693.3 | 363.55 | 694.59 | 363.56 | 695.7 | 363.59 | 697.62 | 363.59 | 699.54 | 363.56 |
| 701.45 | 363.5 | 703.13 | 363.5 | 704 | 363.51 | 708.64 | 363.54 | 714.43 | 363.63 |
| 716.49 | 363.65 | 718.84 | 363.69 | 720.33 | 363.78 | 721.81 | 363.86 | 722.34 | 363.87 |
| 724.82 | 363.9 | 725.33 | 363.91 | 728.1 | 363.92 | 729.02 | 363.91 | 730.9 | 363.9 |
| 732.16 | 363.91 | 733.15 | 363.93 | 734.71 | 363.84 | 736.03 | 363.77 | 737.54 | 363.74 |
| 740.49 | 363.76 | 744.35 | 363.73 | 752.15 | 363.81 | 765.3 | 363.63 | 769.08 | 363.53 |
| 771.55 | 363.41 | 772.9 | 363.35 | 774.95 | 363.29 | 776.67 | 363.16 | 777.83 | 363.13 |
| 779.58 | 363.11 | 780.6 | 363.11 | 780.73 | 363.1 | 783.21 | 363.09 | 787.32 | 363.21 |
| 788.09 | 363.24 | 789.92 | 363.27 | 794.14 | 363.41 | 795.29 | 363.41 | 799.02 | 363.43 |
| 802.57 | 363.4 | 808.24 | 363.33 | 809.42 | 363.33 | 811.15 | 363.35 | 812.49 | 363.39 |
| 812.95 | 363.43 | 814.42 | 363.54 | 816.57 | 363.71 | 820.4 | 364.05 | 820.8 | 364.07 |
| 821.78 | 364.09 | 825.98 | 364.14 | 827.01 | 364.13 | 828.19 | 364.09 | 834.35 | 363.91 |
| 839.53 | 363.7 | 841.53 | 363.71 | 841.99 | 363.72 | 842.97 | 363.72 | 843.6 | 363.76 |
| 844.81 | 363.8 | 848.48 | 363.94 | 851.7 | 364.04 | 852.7 | 364.06 | 853.64 | 364.04 |
| 854.86 | 364 | 860.57 | 363.89 | 861.18 | 363.87 | 862.17 | 363.86 | 864.93 | 363.8 |
| 867.9 | 363.81 | 878.73 | 363.93 | 878.85 | 363.96 | 880.29 | 363.96 | 881.12 | 363.93 |
| 885.93 | 363.72 | 886.99 | 363.68 | 888.1 | 363.67 | 891.89 | 363.59 | 892.34 | 363.61 |
| 894.24 | 363.81 | 895.99 | 364.08 | 896.47 | 364.22 | 896.86 | 364.26 | 898.8 | 364.34 |
| 900.41 | 364.35 | 902.83 | 364.31 | 903.61 | 364.29 | 906.29 | 364.2 | 907.49 | 364.2 |
| 909.23 | 364.23 | 914.21 | 364.27 | 914.76 | 364.28 | 924.61 | 364.42 | 927.18 | 364.48 |
| 930.56 | 364.58 | 931.83 | 364.65 | 934.06 | 364.72 | 936.85 | 364.86 | 937.49 | 364.89 |
| 939.4 | 364.96 | 943 | 365.14 | 943.7 | 365.14 | 944.85 | 365.19 | 946.84 | 365.24 |
| 950.18 | 365.29 | 952.27 | 365.34 | 953.45 | 365.35 | 954.61 | 365.32 | 955.05 | 365.33 |
| 956.79 | 365.3 | 961.67 | 365.17 | 964.94 | 365.18 | 974.53 | 365.19 | 976.55 | 365.19 |
| 977.53 | 365.17 | 981.08 | 365.07 | 981.96 | 365.02 | 982.86 | 364.98 | 991.4 | 364.91 |
| 991.73 | 364.91 | 993.05 | 364.95 | 999.11 | 365.12 | 1000.23 | 365.14 | 1002.01 | 365.14 |
| 1002.26 | 365.15 | 1007.47 | 365.14 | 1007.86 | 365.13 | 1008.66 | 365.15 | 1010.46 | 365.21 |
| 1013.18 | 365.28 | 1014.83 | 365.31 | 1018.96 | 365.46 | 1022.97 | 365.62 | 1025.76 | 365.69 |
| 1025.94 | 365.7 | 1028.23 | 365.75 | 1028.97 | 365.76 | 1029.87 | 365.71 | 1032.51 | 365.63 |
| 1035.13 | 365.64 | 1038.4 | 365.66 | 1040.03 | 365.73 | 1040.15 | 365.74 | 1043.94 | 365.76 |
| 1044.67 | 365.77 | 1067.86 | 366.26 | 1068.76 | 366.28 | 1071.74 | 366.33 | 1072.76 | 366.33 |
| 1073.76 | 366.3 | 1078.52 | 366.23 | 1081.84 | 366.31 | 1088.02 | 366.39 | 1090.54 | 366.46 |
| 1092.46 | 366.49 | 1092.56 | 366.47 | 1104.39 | 366.63 | 1105.75 | 366.67 | 1107.38 | 366.67 |
| 1108.09 | 366.68 | 1120.43 | 366.72 | 1121.12 | 366.73 | 1122.51 | 366.73 | 1123.18 | 366.7 |
| 1125.1 | 366.55 | 1125.89 | 366.52 | 1127.74 | 366.5 | 1129.93 | 366.79 | 1131.04 | 366.78 |
| 1139.47 | 367.07 | 1141.25 | 367.12 | 1144.36 | 367.2 | 1147.56 | 367.24 | 1150.64 | 367.23 |
| 1153 | 367.2 | 1153.35 | 367.2 | 1158.11 | 367.07 | 1158.39 | 367.07 | 1159.28 | 367.04 |
| 1161.72 | 366.98 | 1164.8 | 366.88 | 1165.16 | 366.74 | 1165.88 | 366.7 | 1167.16 | 366.66 |
| 1168.12 | 366.65 | 1170.93 | 366.67 | 1177.1 | 366.89 | 1180.59 | 366.9 | 1192.52 | 366.88 |
| 1194.81 | 366.94 | 1198.03 | 367 | 1198.41 | 367.01 | 1198.73 | 367.04 | 1199.46 | 367.08 |
| 1202.57 | 367.12 | 1203.12 | 367.14 | 1209.82 | 367.12 | 1213.35 | 367.12 | 1213.58 | 367.09 |
| 1214.01 | 367.09 | 1215.13 | 367.11 | 1220.55 | 367.22 | 1222.47 | 367.22 | 1225.12 | 367.18 |
| 1226.66 | 367.15 | 1227.99 | 367.07 | 1228.46 | 367.05 | 1230.23 | 367.01 | 1230.47 | 367.02 |
| 1231.81 | 367.02 | 1234.05 | 367.04 | 1234.91 | 367.06 | 1235.17 | 367.05 | 1236.01 | 367.05 |
| 1238.5 | 367.08 | 1240.79 | 367.08 | 1246.16 | 366.97 | 1246.8 | 366.95 | 1247.47 | 366.91 |
| 1248.33 | 366.84 | 1251.92 | 366.78 | 1257.44 | 366.78 | 1261.89 | 366.91 | 1263.35 | 366.94 |
| 1267.04 | 367.47 | 1268.01 | 367.58 | 1270.39 | 367.78 | 1272.68 | 367.78 | 1279.17 | 367.66 |
| 1280.2 | 367.63 | 1281.13 | 367.63 | 1286.25 | 367.6 | 1287.09 | 367.6 | 1290.41 | 367.55 |
| 1291.65 | 367.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 199.43 | .05 | 232.34 | .04 | 936.85 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 232.34 | 936.85 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6296.47*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 213.68 | 364.69 | 214.2 | 364.68 | 218.57 | 364.64 | 219.25 | 364.64 | 220.79 | 364.61 |
| 221.59 | 364.61 | 225.78 | 364.51 | 228.92 | 364.47 | 231.7 | 364.47 | 233.59 | 364.45 |
| 235.69 | 364.4 | 236.45 | 364.36 | 238.82 | 364.33 | 240.69 | 364.32 | 241.97 | 364.3 |
| 243.77 | 364.21 | 244.08 | 364.18 | 244.6 | 364.16 | 246.17 | 363.74 | 249.61 | 363.52 |
| 252.45 | 363.32 | 252.66 | 363.34 | 252.8 | 363.31 | 261.59 | 363.27 | 265.37 | 363.38 |
| 266.27 | 363.39 | 267.7 | 363.36 | 268.08 | 363.29 | 269.14 | 363.27 | 269.95 | 363.3 |
| 271.57 | 363.38 | 272.21 | 363.4 | 273.87 | 363.42 | 273.95 | 363.43 | 276.56 | 363.48 |
| 277.24 | 363.44 | 279.13 | 363.36 | 279.91 | 363.32 | 281.75 | 363.19 | 283.88 | 363.18 |
| 286.2 | 363.1 | 289.48 | 363.19 | 290.17 | 363.19 | 296.08 | 363.29 | 298.59 | 363.26 |
| 306.52 | 363.35 | 308.52 | 363.38 | 312.01 | 363.38 | 313.54 | 363.4 | 313.76 | 363.43 |
| 315.22 | 363.44 | 315.52 | 363.41 | 316.31 | 363.38 | 321.22 | 363.13 | 323.62 | 363.03 |
| 323.88 | 363.03 | 325.02 | 363.07 | 327.98 | 363.12 | 333.35 | 363.16 | 334.15 | 363.17 |
| 336.14 | 363.21 | 337.93 | 363.21 | 339.87 | 363.16 | 340.51 | 363.13 | 341.34 | 363.13 |
| 341.97 | 363.15 | 350.2 | 363.16 | 350.8 | 363.11 | 353.64 | 363.03 | 355.31 | 363.01 |
| 355.65 | 362.99 | 356.46 | 362.97 | 356.99 | 362.97 | 358.51 | 362.99 | 359.25 | 363.04 |
| 359.67 | 363.12 | 362.16 | 363.27 | 364.14 | 363.34 | 365.05 | 363.36 | 367.5 | 363.35 |
| 377.57 | 363.52 | 378.76 | 363.55 | 380.85 | 363.55 | 387.34 | 363.33 | 389.21 | 363.31 |
| 392.7 | 363.05 | 393.36 | 362.97 | 394.35 | 362.89 | 396 | 362.73 | 400.81 | 362.75 |
| 401.19 | 362.78 | 402.07 | 362.79 | 403.31 | 362.79 | 403.81 | 362.77 | 405.48 | 362.75 |
| 406.96 | 362.66 | 408.91 | 362.62 | 409.15 | 362.62 | 415.85 | 362.48 | 416.52 | 362.46 |
| 423.77 | 362.27 | 425.73 | 362.12 | 427.32 | 361.93 | 427.62 | 361.96 | 429.06 | 361.89 |
| 429.48 | 361.89 | 432.09 | 361.96 | 433.32 | 361.98 | 433.85 | 361.98 | 435.29 | 362.05 |
| 438.9 | 362.01 | 439.37 | 361.99 | 441.74 | 361.99 | 444.75 | 361.89 | 445.04 | 361.89 |
| 446.51 | 361.92 | 446.96 | 361.94 | 447.72 | 361.95 | 450.53 | 361.94 | 450.81 | 361.93 |
| 455.66 | 361.81 | 460 | 361.75 | 460.15 | 361.75 | 463.56 | 361.65 | 467.77 | 361.54 |
| 468.28 | 361.57 | 469.07 | 361.57 | 471.22 | 361.49 | 472.09 | 361.42 | 473.51 | 361.43 |
| 475.04 | 361.42 | 475.16 | 361.46 | 476.16 | 361.52 | 477.15 | 361.56 | 479.29 | 361.61 |
| 481.81 | 361.65 | 483.47 | 361.66 | 483.57 | 361.67 | 485.98 | 361.69 | 489.02 | 361.73 |
| 489.89 | 361.75 | 490.65 | 361.81 | 496.88 | 362.07 | 501.2 | 362.22 | 502.43 | 362.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 503.51 | 362.22 | 508.75 | 362.01 | 510.93 | 361.94 | 512.3 | 361.9 | 513.08 | 361.89 |
| 517.36 | 361.75 | 518.87 | 361.73 | 520.09 | 361.74 | 529.95 | 362.07 | 536.47 | 362.34 |
| 537.69 | 362.38 | 544.41 | 362.5 | 545.82 | 362.74 | 547.69 | 363.05 | 548.25 | 363.04 |
| 548.45 | 363.07 | 548.82 | 363.07 | 551.19 | 363.02 | 552.23 | 363.01 | 556.51 | 363.02 |
| 557.67 | 363.01 | 560.25 | 362.98 | 562.14 | 362.95 | 565.42 | 362.87 | 567.38 | 362.84 |
| 570.2 | 362.84 | 571.23 | 362.85 | 572.09 | 362.87 | 572.78 | 362.9 | 573.16 | 362.95 |
| 574.06 | 363 | 578.61 | 363.02 | 581.04 | 363.02 | 584.29 | 362.99 | 588.67 | 362.92 |
| 589.09 | 362.93 | 589.99 | 362.98 | 590.62 | 362.98 | 595.29 | 363.01 | 595.85 | 363.01 |
| 597.33 | 363.06 | 600.78 | 363.12 | 601.27 | 363.07 | 601.88 | 363.05 | 602.45 | 363.05 |
| 603.04 | 363.07 | 611.83 | 363.17 | 613.46 | 363.21 | 614.04 | 363.26 | 614.93 | 363.3 |
| 615.43 | 363.31 | 617.27 | 363.23 | 617.4 | 363.23 | 619.26 | 363.1 | 620.81 | 362.96 |
| 621.62 | 362.94 | 621.99 | 362.92 | 622.91 | 362.92 | 623.93 | 362.89 | 625.47 | 362.86 |
| 626.19 | 362.88 | 626.59 | 362.95 | 627.96 | 363.11 | 635.28 | 363.35 | 636.41 | 363.35 |
| 637.93 | 363.37 | 639.06 | 363.4 | 641.37 | 363.26 | 642.08 | 363.19 | 642.52 | 363.17 |
| 643.13 | 363.12 | 644.33 | 363.18 | 644.63 | 363.13 | 645.06 | 363.09 | 645.74 | 362.96 |
| 646.56 | 362.78 | 646.95 | 362.74 | 648.25 | 362.73 | 649.08 | 362.74 | 650.87 | 362.8 |
| 651.63 | 362.86 | 652.93 | 363.02 | 653.66 | 363.09 | 660.47 | 363.3 | 665.22 | 363.37 |
| 667.33 | 363.41 | 672.99 | 363.51 | 674.51 | 363.52 | 675.77 | 363.52 | 676.42 | 363.53 |
| 678.12 | 363.53 | 679.98 | 363.52 | 680.54 | 363.51 | 683.33 | 363.34 | 685.78 | 363.1 |
| 687.02 | 363.07 | 688.28 | 363.07 | 691.01 | 363.09 | 694.05 | 363.09 | 697.89 | 363.12 |
| 699.64 | 363.11 | 702.83 | 363.08 | 703.71 | 363.04 | 704.83 | 363.03 | 708.09 | 363.03 |
| 711.13 | 363.02 | 712.64 | 363.02 | 714.23 | 363.08 | 716.8 | 363.22 | 717.75 | 363.23 |
| 719.14 | 363.26 | 721.01 | 363.26 | 722.89 | 363.23 | 723.92 | 363.2 | 724.36 | 363.17 |
| 726.4 | 363.16 | 727.25 | 363.17 | 731.78 | 363.19 | 737.44 | 363.27 | 739.45 | 363.28 |
| 741.75 | 363.32 | 743.2 | 363.41 | 744.65 | 363.48 | 747.59 | 363.52 | 748.08 | 363.53 |
| 750.8 | 363.53 | 751.1 | 363.52 | 753.46 | 363.51 | 753.53 | 363.52 | 754.76 | 363.53 |
| 755.61 | 363.55 | 756.55 | 363.5 | 758.66 | 363.4 | 759.86 | 363.39 | 760.02 | 363.38 |
| 762.9 | 363.41 | 766.67 | 363.39 | 774.29 | 363.49 | 786.46 | 363.33 | 787.14 | 363.32 |
| 790.83 | 363.23 | 793.25 | 363.1 | 794.56 | 363.05 | 796.57 | 362.98 | 798.25 | 362.87 |
| 799.39 | 362.83 | 801.09 | 362.82 | 804.15 | 362.79 | 804.64 | 362.8 | 808.66 | 362.9 |
| 809.41 | 362.93 | 811.19 | 362.96 | 814.77 | 363.07 | 815.32 | 363.09 | 816.44 | 363.09 |
| 820.09 | 363.11 | 823.55 | 363.09 | 829.09 | 363.03 | 831.93 | 363.06 | 833.25 | 363.1 |
| 835.13 | 363.24 | 837.23 | 363.39 | 840.97 | 363.72 | 841.05 | 363.73 | 842.32 | 363.76 |
| 846.43 | 363.81 | 847.43 | 363.8 | 848.58 | 363.77 | 854.6 | 363.6 | 856.08 | 363.55 |
| 859.66 | 363.4 | 862.07 | 363.41 | 863.02 | 363.42 | 863.64 | 363.45 | 864.83 | 363.49 |
| 868.41 | 363.62 | 871.55 | 363.72 | 872.53 | 363.73 | 874.64 | 363.68 | 880.22 | 363.57 |
| 880.98 | 363.54 | 881.78 | 363.54 | 884.48 | 363.48 | 887.38 | 363.49 | 897.96 | 363.59 |
| 898.08 | 363.63 | 899.48 | 363.62 | 900.3 | 363.59 | 905 | 363.39 | 906.03 | 363.36 |
| 907.12 | 363.35 | 907.89 | 363.33 | 910.82 | 363.28 | 911.26 | 363.31 | 913.12 | 363.53 |
| 914.65 | 363.77 | 915.3 | 363.94 | 915.68 | 363.98 | 917.57 | 364.06 | 919.14 | 364.06 |
| 922.28 | 364.02 | 924.89 | 363.93 | 926.07 | 363.94 | 927.77 | 363.97 | 932.63 | 364.01 |
| 933.17 | 364.02 | 942.79 | 364.17 | 945.3 | 364.23 | 948.61 | 364.32 | 949.85 | 364.39 |
| 952.02 | 364.45 | 954.75 | 364.6 | 957.25 | 364.69 | 960.77 | 364.86 | 961.46 | 364.85 |
| 962.58 | 364.89 | 964.18 | 364.92 | 964.46 | 364.94 | 965.31 | 364.94 | 967.81 | 364.98 |
| 969.85 | 365.03 | 971 | 365.04 | 972.14 | 365.01 | 972.57 | 365.01 | 974.27 | 364.97 |
| 977.53 | 364.86 | 977.76 | 364.86 | 979.05 | 364.81 | 982.25 | 364.82 | 991.64 | 364.83 |
| 993.62 | 364.82 | 994.58 | 364.81 | 998.05 | 364.71 | 999.8 | 364.63 | 1008.16 | 364.57 |
| 1008.48 | 364.57 | 1009.78 | 364.61 | 1015.7 | 364.77 | 1016.81 | 364.79 | 1018.55 | 364.79 |
| 1018.79 | 364.8 | 1023.62 | 364.8 | 1024.27 | 364.78 | 1025.06 | 364.8 | 1026.82 | 364.87 |
| 1031.1 | 364.98 | 1035.14 | 365.13 | 1039.07 | 365.29 | 1041.8 | 365.36 | 1041.97 | 365.37 |
| 1044.22 | 365.42 | 1045.05 | 365.43 | 1045.82 | 365.39 | 1048.41 | 365.32 | 1050.98 | 365.35 |
| 1054.17 | 365.4 | 1055.88 | 365.49 | 1059.6 | 365.51 | 1060.31 | 365.52 | 1083.01 | 366 |
| 1083.9 | 366.02 | 1086.81 | 366.07 | 1087.82 | 366.07 | 1088.8 | 366.04 | 1093.45 | 365.98 |
| 1096.71 | 366.06 | 1102.76 | 366.14 | 1103.16 | 366.14 | 1105.22 | 366.2 | 1107.11 | 366.23 |
| 1107.2 | 366.21 | 1118.78 | 366.37 | 1120.12 | 366.41 | 1134.49 | 366.47 | 1135.16 | 366.48 |
| 1136.53 | 366.48 | 1137.19 | 366.45 | 1138.04 | 366.38 | 1139.06 | 366.31 | 1139.84 | 366.27 |
| 1141.65 | 366.26 | 1143.34 | 366.48 | 1143.79 | 366.53 | 1144.23 | 366.52 | 1144.88 | 366.53 |
| 1151.42 | 366.75 | 1153.13 | 366.81 | 1154.17 | 366.84 | 1154.88 | 366.85 | 1157.92 | 366.93 |
| 1161.06 | 366.97 | 1161.33 | 366.98 | 1166.38 | 366.94 | 1166.72 | 366.94 | 1171.38 | 366.82 |
| 1172.52 | 366.8 | 1177.4 | 366.66 | 1177.93 | 366.65 | 1178.29 | 366.52 | 1178.99 | 366.48 |
| 1180.24 | 366.44 | 1181.19 | 366.43 | 1183.94 | 366.45 | 1189.98 | 366.66 | 1192.64 | 366.66 |
| 1193.4 | 366.67 | 1205.07 | 366.65 | 1207.32 | 366.7 | 1210.47 | 366.76 | 1210.84 | 366.77 |
| 1211.86 | 366.83 | 1214.91 | 366.87 | 1215.45 | 366.88 | 1222.01 | 366.87 | 1225.47 | 366.87 |
| 1225.69 | 366.85 | 1227.21 | 366.86 | 1232.51 | 366.97 | 1233.67 | 366.98 | 1236.99 | 366.94 |
| 1238.5 | 366.91 | 1240.26 | 366.82 | 1242 | 366.78 | 1242.23 | 366.79 | 1243.54 | 366.79 |
| 1245.73 | 366.81 | 1246.58 | 366.83 | 1246.83 | 366.82 | 1249.16 | 366.85 | 1252.33 | 366.85 |
| 1252.74 | 366.84 | 1257.59 | 366.75 | 1258.21 | 366.73 | 1259.45 | 366.65 | 1259.71 | 366.62 |
| 1263.41 | 366.57 | 1265.18 | 366.56 | 1268.64 | 366.56 | 1272.99 | 366.68 | 1274.42 | 366.71 |
| 1278.04 | 367.21 | 1278.99 | 367.31 | 1281.31 | 367.5 | 1283.56 | 367.5 | 1289.91 | 367.39 |
| 1290.92 | 367.36 | 1291.83 | 367.37 | 1296.84 | 367.34 | 1297.67 | 367.33 | 1300.91 | 367.28 |
| 1302.13 | 367.29 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 213.68 | .05 | 244.6 | .04 | 954.75 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 244.6 | 954.75 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6276.70*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 227.94 | 364.51 | 228.43 | 364.5 | 232.51 | 364.45 | 233.14 | 364.45 | 234.58 | 364.42 |
| 235.33 | 364.42 | 239.26 | 364.31 | 242.2 | 364.27 | 244.8 | 364.27 | 245.99 | 364.24 |
| 246.56 | 364.24 | 248.53 | 364.19 | 249.24 | 364.15 | 251.45 | 364.11 | 253.21 | 364.1 |
| 254.73 | 364.06 | 255.83 | 364 | 256.38 | 363.96 | 256.87 | 363.94 | 258.18 | 363.57 |
| 258.55 | 363.48 | 262.24 | 363.23 | 265.29 | 363.02 | 265.66 | 363 | 275.1 | 362.97 |
| 279.15 | 363.08 | 280.12 | 363.09 | 281.37 | 363.08 | 281.65 | 363.07 | 282.06 | 363 |
| 282.9 | 362.97 | 283.2 | 362.97 | 284.07 | 363 | 285.8 | 363.09 | 286.49 | 363.11 |
| 288.35 | 363.14 | 290.59 | 363.2 | 291.15 | 363.21 | 291.89 | 363.16 | 293.92 | 363.08 |
| 294.75 | 363.03 | 296.73 | 362.89 | 299.01 | 362.88 | 301.5 | 362.79 | 305.02 | 362.89 |
| 305.76 | 362.89 | 312.11 | 363.01 | 314.79 | 362.98 | 323.31 | 363.09 | 324.79 | 363.1 |
| 325.46 | 363.12 | 330.45 | 363.12 | 331.07 | 363.17 | 332.65 | 363.18 | 332.97 | 363.15 |
| 333.81 | 363.11 | 339.09 | 362.84 | 339.76 | 362.8 | 341.94 | 362.73 | 343.16 | 362.77 |
| 346.34 | 362.83 | 352.1 | 362.88 | 355.09 | 362.92 | 357.01 | 362.93 | 359.09 | 362.87 |
| 359.78 | 362.84 | 360.67 | 362.84 | 361.35 | 362.86 | 370.18 | 362.87 | 370.83 | 362.82 |
| 373.87 | 362.73 | 375.67 | 362.71 | 376.89 | 362.66 | 377.47 | 362.66 | 379.09 | 362.69 |
| 379.8 | 362.72 | 380.34 | 362.82 | 383.01 | 362.99 | 385.14 | 363.07 | 386.11 | 363.09 |
| 388.74 | 363.08 | 399.54 | 363.26 | 399.92 | 363.28 | 400.82 | 363.29 | 403.07 | 363.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 404.04 | 363.27 | 410.03 | 363.06 | 412.04 | 363.04 | 415.78 | 362.79 | 416.49 | 362.72 |
| 417.55 | 362.65 | 419.33 | 362.51 | 424.49 | 362.53 | 425.04 | 362.57 | 425.84 | 362.58 |
| 427.19 | 362.57 | 429.49 | 362.53 | 430.71 | 362.47 | 431.08 | 362.44 | 433.17 | 362.41 |
| 433.43 | 362.4 | 440.62 | 362.26 | 441.34 | 362.24 | 449.13 | 362.04 | 451.23 | 361.87 |
| 452.94 | 361.67 | 453.25 | 361.7 | 454.8 | 361.63 | 455.25 | 361.62 | 458.05 | 361.7 |
| 459.37 | 361.73 | 459.69 | 361.72 | 461.49 | 361.81 | 465.36 | 361.76 | 465.86 | 361.75 |
| 468.15 | 361.75 | 470.68 | 361.68 | 471.63 | 361.64 | 471.94 | 361.64 | 473.52 | 361.67 |
| 474.82 | 361.71 | 477.84 | 361.7 | 478.14 | 361.69 | 483.34 | 361.56 | 488 | 361.5 |
| 488.16 | 361.5 | 491.82 | 361.39 | 496.33 | 361.27 | 496.88 | 361.3 | 497.73 | 361.3 |
| 499.69 | 361.23 | 500.97 | 361.14 | 502.54 | 361.15 | 504.22 | 361.14 | 504.34 | 361.18 |
| 505.31 | 361.25 | 506.27 | 361.29 | 508.37 | 361.34 | 510.83 | 361.38 | 513.42 | 361.41 |
| 514.9 | 361.42 | 517.86 | 361.46 | 518.97 | 361.5 | 519.46 | 361.55 | 525.54 | 361.8 |
| 529.76 | 361.95 | 531.65 | 361.96 | 532.02 | 361.94 | 537.13 | 361.74 | 539.26 | 361.67 |
| 540.76 | 361.64 | 545.54 | 361.48 | 547.75 | 361.46 | 548.2 | 361.47 | 557.83 | 361.82 |
| 565.39 | 362.14 | 571.95 | 362.25 | 573.34 | 362.48 | 575.15 | 362.76 | 575.71 | 362.75 |
| 575.9 | 362.78 | 576.26 | 362.78 | 578.58 | 362.74 | 579.59 | 362.73 | 584.9 | 362.73 |
| 587.42 | 362.69 | 588.06 | 362.69 | 589.27 | 362.67 | 592.47 | 362.58 | 594.38 | 362.55 |
| 597.14 | 362.55 | 598.14 | 362.56 | 598.98 | 362.58 | 599.66 | 362.61 | 600.03 | 362.65 |
| 600.91 | 362.7 | 605.35 | 362.72 | 607.72 | 362.72 | 610.89 | 362.69 | 615.17 | 362.62 |
| 615.59 | 362.62 | 616.46 | 362.67 | 617.08 | 362.67 | 621.64 | 362.69 | 622.19 | 362.7 |
| 623.63 | 362.75 | 627 | 362.81 | 627.48 | 362.76 | 628.63 | 362.75 | 629.2 | 362.77 |
| 637.79 | 362.87 | 639.38 | 362.91 | 639.95 | 362.97 | 640.82 | 363.01 | 641.31 | 363.02 |
| 643.1 | 362.95 | 643.23 | 362.95 | 645.05 | 362.83 | 646.56 | 362.7 | 647.35 | 362.68 |
| 647.71 | 362.66 | 648.61 | 362.66 | 649.61 | 362.63 | 651.11 | 362.6 | 651.81 | 362.61 |
| 652.2 | 362.68 | 653.54 | 362.82 | 659.8 | 362.99 | 661.47 | 363.02 | 661.79 | 363.01 |
| 664.38 | 363.05 | 666.64 | 362.92 | 667.32 | 362.85 | 668.27 | 362.78 | 669.52 | 362.83 |
| 669.82 | 362.78 | 670.24 | 362.75 | 671.58 | 362.49 | 671.97 | 362.43 | 672.23 | 362.42 |
| 673.35 | 362.42 | 674.16 | 362.43 | 675.8 | 362.49 | 676.26 | 362.52 | 677.09 | 362.6 |
| 677.92 | 362.72 | 678.63 | 362.8 | 685.29 | 363.01 | 687.99 | 363.04 | 689.93 | 363.08 |
| 691.68 | 363.1 | 691.98 | 363.11 | 697.51 | 363.21 | 699 | 363.22 | 700.23 | 363.22 |
| 700.86 | 363.23 | 702.52 | 363.23 | 704.89 | 363.2 | 707.61 | 363.04 | 710 | 362.81 |
| 711.21 | 362.78 | 712.45 | 362.78 | 715.11 | 362.8 | 718.08 | 362.79 | 720.69 | 362.8 |
| 721.83 | 362.8 | 723.54 | 362.79 | 726.65 | 362.75 | 727.19 | 362.73 | 727.51 | 362.7 |
| 728.6 | 362.69 | 731.79 | 362.69 | 734.76 | 362.67 | 736.23 | 362.68 | 737.79 | 362.74 |
| 740.29 | 362.89 | 741.22 | 362.91 | 741.76 | 362.91 | 742.58 | 362.94 | 743.73 | 362.94 |
| 744.4 | 362.93 | 747.25 | 362.87 | 747.68 | 362.84 | 749.32 | 362.83 | 754.92 | 362.83 |
| 760.45 | 362.91 | 762.41 | 362.92 | 764.65 | 362.96 | 766.08 | 363.04 | 767.49 | 363.1 |
| 768 | 363.11 | 770.36 | 363.14 | 773.49 | 363.14 | 775.66 | 363.12 | 777.36 | 363.14 |
| 778.19 | 363.16 | 781.17 | 363.03 | 782.5 | 363.02 | 785.31 | 363.05 | 788.99 | 363.04 |
| 796.43 | 363.17 | 808.31 | 363.02 | 808.98 | 363.01 | 812.59 | 362.93 | 814.94 | 362.8 |
| 816.23 | 362.74 | 818.19 | 362.68 | 819.83 | 362.57 | 820.94 | 362.54 | 822.6 | 362.52 |
| 823.58 | 362.52 | 823.7 | 362.51 | 826.07 | 362.5 | 830.72 | 362.62 | 832.46 | 362.65 |
| 835.96 | 362.75 | 836.5 | 362.77 | 837.59 | 362.77 | 841.15 | 362.79 | 844.54 | 362.78 |
| 849.95 | 362.73 | 850.05 | 362.74 | 851.07 | 362.74 | 853.21 | 362.77 | 854 | 362.8 |
| 854.85 | 362.86 | 855.84 | 362.94 | 857.89 | 363.08 | 861.54 | 363.39 | 861.93 | 363.41 |
| 862.86 | 363.43 | 866.87 | 363.48 | 867.85 | 363.47 | 868.89 | 363.45 | 868.98 | 363.44 |
| 874.85 | 363.29 | 876.3 | 363.24 | 879.8 | 363.1 | 882.15 | 363.11 | 883.47 | 363.13 |
| 883.68 | 363.15 | 884.39 | 363.16 | 884.84 | 363.18 | 888.34 | 363.3 | 891.41 | 363.39 |
| 892.36 | 363.4 | 894.43 | 363.35 | 899.87 | 363.25 | 900.23 | 363.23 | 904.03 | 363.16 |
| 906.86 | 363.17 | 917.2 | 363.26 | 917.31 | 363.29 | 918.68 | 363.28 | 925.08 | 363.03 |
| 926.89 | 363.02 | 927.46 | 363 | 929.76 | 362.97 | 930.18 | 363.01 | 932 | 363.25 |
| 933.49 | 363.5 | 934.12 | 363.66 | 934.49 | 363.7 | 936.12 | 363.76 | 937.88 | 363.78 |
| 940.94 | 363.74 | 943.49 | 363.67 | 944.64 | 363.67 | 946.3 | 363.71 | 951.05 | 363.75 |
| 951.57 | 363.76 | 960.97 | 363.91 | 963.42 | 363.97 | 966.65 | 364.07 | 967.86 | 364.13 |
| 969.99 | 364.19 | 972.65 | 364.33 | 975.09 | 364.41 | 978.54 | 364.57 | 979.39 | 364.56 |
| 980.32 | 364.6 | 981.88 | 364.62 | 982.15 | 364.63 | 982.98 | 364.63 | 985.43 | 364.67 |
| 987.42 | 364.72 | 988.55 | 364.73 | 989.67 | 364.69 | 990.09 | 364.69 | 991.75 | 364.65 |
| 994.95 | 364.51 | 995.17 | 364.51 | 996.43 | 364.46 | 1010.69 | 364.46 | 1011.91 | 364.43 |
| 1012.7 | 364.42 | 1015.61 | 364.33 | 1015.87 | 364.31 | 1016.74 | 364.28 | 1024.92 | 364.23 |
| 1025.24 | 364.23 | 1026.5 | 364.26 | 1032.3 | 364.42 | 1033.38 | 364.44 | 1035.09 | 364.44 |
| 1035.32 | 364.45 | 1040.32 | 364.45 | 1040.69 | 364.44 | 1041.45 | 364.46 | 1043.18 | 364.53 |
| 1047.37 | 364.64 | 1051.32 | 364.8 | 1055.17 | 364.96 | 1057.84 | 365.04 | 1058.01 | 365.04 |
| 1060.21 | 365.09 | 1060.91 | 365.11 | 1061.77 | 365.07 | 1064.31 | 365.01 | 1066.82 | 365.06 |
| 1069.95 | 365.14 | 1071.62 | 365.24 | 1075.26 | 365.27 | 1075.96 | 365.27 | 1098.17 | 365.74 |
| 1099.04 | 365.76 | 1101.89 | 365.8 | 1102.88 | 365.81 | 1103.31 | 365.79 | 1104.48 | 365.77 |
| 1105.24 | 365.77 | 1108.39 | 365.73 | 1112.08 | 365.81 | 1112.41 | 365.81 | 1117.5 | 365.88 |
| 1119.91 | 365.94 | 1121.75 | 365.98 | 1121.84 | 365.95 | 1133.18 | 366.12 | 1134.49 | 366.15 |
| 1136.73 | 366.16 | 1148.55 | 366.22 | 1150.8 | 366.22 | 1152.03 | 366.13 | 1153.79 | 366.03 |
| 1155.56 | 366.02 | 1157.21 | 366.23 | 1157.65 | 366.28 | 1158.08 | 366.27 | 1158.72 | 366.28 |
| 1165.12 | 366.49 | 1168.5 | 366.59 | 1171.48 | 366.66 | 1174.55 | 366.71 | 1177.49 | 366.7 |
| 1180.1 | 366.68 | 1184.65 | 366.57 | 1184.93 | 366.57 | 1190.55 | 366.43 | 1191.06 | 366.41 |
| 1191.41 | 366.29 | 1192.1 | 366.25 | 1193.32 | 366.22 | 1194.25 | 366.21 | 1196.94 | 366.23 |
| 1202.85 | 366.43 | 1206.2 | 366.43 | 1217.63 | 366.41 | 1219.82 | 366.46 | 1220.88 | 366.48 |
| 1222.91 | 366.51 | 1224.27 | 366.59 | 1227.25 | 366.62 | 1227.78 | 366.63 | 1234.2 | 366.62 |
| 1235.1 | 366.63 | 1237.58 | 366.63 | 1237.8 | 366.6 | 1239.29 | 366.62 | 1244.48 | 366.72 |
| 1245.61 | 366.73 | 1246.33 | 366.72 | 1248.87 | 366.7 | 1250.74 | 366.66 | 1251.62 | 366.6 |
| 1252.06 | 366.58 | 1253.76 | 366.55 | 1253.99 | 366.56 | 1255.27 | 366.56 | 1257.41 | 366.58 |
| 1258.24 | 366.6 | 1258.49 | 366.59 | 1260.77 | 366.62 | 1263.87 | 366.62 | 1264.28 | 366.61 |
| 1269.02 | 366.52 | 1270.28 | 366.47 | 1271.1 | 366.41 | 1274.05 | 366.36 | 1274.72 | 366.36 |
| 1278.61 | 366.34 | 1279.83 | 366.34 | 1284.09 | 366.45 | 1285.49 | 366.48 | 1289.03 | 366.94 |
| 1289.96 | 367.04 | 1291.45 | 367.16 | 1292.23 | 367.21 | 1294.43 | 367.22 | 1300.65 | 367.13 |
| 1301.64 | 367.1 | 1302.53 | 367.1 | 1307.43 | 367.07 | 1308.24 | 367.06 | 1311.42 | 367.01 |
| 1312.61 | 367.02 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 227.94 | .05 | 256.87 | .04 | 972.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 256.87 | 972.65 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6256.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 242.19 | 364.33 | 242.65 | 364.31 | 246.45 | 364.26 | 247.04 | 364.26 | 249.08 | 364.22 |
| 252.73 | 364.11 | 255.47 | 364.07 | 257.89 | 364.06 | 259.01 | 364.03 | 259.54 | 364.03 |
| 261.64 | 363.96 | 262.03 | 363.93 | 264.09 | 363.89 | 265.72 | 363.87 | 267.14 | 363.83 |
| 268.41 | 363.76 | 269.13 | 363.71 | 270.53 | 363.31 | 270.93 | 363.21 | 274.87 | 362.94 |
| 278.13 | 362.71 | 278.36 | 362.73 | 278.52 | 362.69 | 288.61 | 362.66 | 292.93 | 362.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 293.97 | 362.8 | 295.3 | 362.79 | 295.6 | 362.77 | 296.04 | 362.7 | 297.26 | 362.67 |
| 298.19 | 362.71 | 300.03 | 362.81 | 300.77 | 362.83 | 302.76 | 362.86 | 305.15 | 362.92 |
| 305.75 | 362.93 | 306.53 | 362.88 | 308.7 | 362.79 | 309.59 | 362.74 | 311.71 | 362.59 |
| 314.14 | 362.58 | 316.8 | 362.49 | 320.56 | 362.6 | 320.79 | 362.59 | 328.13 | 362.73 |
| 331 | 362.7 | 340.09 | 362.82 | 341.68 | 362.84 | 342.39 | 362.86 | 343.58 | 362.85 |
| 344.18 | 362.86 | 347.72 | 362.86 | 348.39 | 362.91 | 350.07 | 362.92 | 350.41 | 362.89 |
| 351.31 | 362.85 | 356.95 | 362.55 | 357.67 | 362.51 | 360 | 362.43 | 361.3 | 362.48 |
| 364.69 | 362.54 | 370.85 | 362.59 | 371.76 | 362.6 | 374.04 | 362.64 | 376.37 | 362.64 |
| 378.31 | 362.58 | 379.05 | 362.55 | 380 | 362.55 | 380.73 | 362.57 | 390.16 | 362.58 |
| 390.85 | 362.53 | 394.1 | 362.43 | 395.02 | 362.41 | 396.02 | 362.4 | 397.33 | 362.35 |
| 397.94 | 362.35 | 399.68 | 362.38 | 400.43 | 362.42 | 401.01 | 362.53 | 403.86 | 362.71 |
| 406.14 | 362.8 | 407.17 | 362.82 | 409.98 | 362.8 | 421.52 | 363.01 | 422.89 | 363.04 |
| 425.28 | 363.04 | 426.32 | 363.01 | 432.72 | 362.8 | 434.87 | 362.77 | 438.86 | 362.54 |
| 439.62 | 362.47 | 440.76 | 362.4 | 441.86 | 362.34 | 442.65 | 362.28 | 448.16 | 362.31 |
| 448.4 | 362.34 | 449.61 | 362.37 | 451.02 | 362.36 | 453.51 | 362.32 | 454.02 | 362.3 |
| 454.9 | 362.24 | 455.75 | 362.21 | 457.72 | 362.19 | 465.39 | 362.04 | 474.48 | 361.8 |
| 476.72 | 361.63 | 478.55 | 361.41 | 478.89 | 361.44 | 480.11 | 361.39 | 480.54 | 361.36 |
| 481.02 | 361.36 | 484.01 | 361.45 | 486.03 | 361.48 | 487.68 | 361.57 | 491.82 | 361.52 |
| 491.92 | 361.51 | 494.45 | 361.51 | 495.06 | 361.5 | 497.49 | 361.43 | 498.51 | 361.39 |
| 498.85 | 361.39 | 500.54 | 361.42 | 501.05 | 361.45 | 501.92 | 361.47 | 505.47 | 361.45 |
| 511.02 | 361.31 | 511.11 | 361.3 | 516 | 361.25 | 516.16 | 361.24 | 520.08 | 361.13 |
| 524.9 | 360.99 | 525.48 | 361.03 | 526.39 | 361.03 | 527.08 | 361.01 | 528.85 | 360.93 |
| 529.85 | 360.86 | 531.56 | 360.87 | 533.39 | 360.86 | 533.51 | 360.91 | 535.2 | 361.01 |
| 535.8 | 361.03 | 537.44 | 361.07 | 539.84 | 361.12 | 541.43 | 361.13 | 541.52 | 361.14 |
| 542.38 | 361.14 | 546.71 | 361.2 | 547.54 | 361.22 | 548.27 | 361.29 | 554.21 | 361.54 |
| 558.32 | 361.68 | 559.5 | 361.69 | 560.52 | 361.67 | 565.52 | 361.47 | 567.59 | 361.4 |
| 569.64 | 361.35 | 573.73 | 361.22 | 575.88 | 361.19 | 576.32 | 361.2 | 585.72 | 361.57 |
| 591.93 | 361.85 | 593.1 | 361.9 | 599.5 | 362 | 602.62 | 362.48 | 603.16 | 362.46 |
| 603.35 | 362.49 | 603.7 | 362.49 | 605.96 | 362.45 | 606.95 | 362.44 | 611.03 | 362.45 |
| 612.14 | 362.44 | 614.6 | 362.41 | 615.21 | 362.41 | 619.52 | 362.3 | 621.39 | 362.27 |
| 624.08 | 362.26 | 625.88 | 362.28 | 626.53 | 362.31 | 626.9 | 362.35 | 627.76 | 362.4 |
| 632.09 | 362.43 | 634.41 | 362.42 | 637.5 | 362.39 | 638.17 | 362.38 | 641.68 | 362.31 |
| 642.08 | 362.31 | 642.94 | 362.35 | 643.54 | 362.35 | 647.99 | 362.38 | 648.53 | 362.38 |
| 649.93 | 362.44 | 653.22 | 362.5 | 653.69 | 362.46 | 654.81 | 362.45 | 655.37 | 362.47 |
| 663.75 | 362.57 | 664.62 | 362.59 | 665.3 | 362.62 | 665.86 | 362.68 | 666.71 | 362.72 |
| 667.18 | 362.73 | 668.94 | 362.68 | 670.83 | 362.56 | 671.89 | 362.48 | 672.31 | 362.44 |
| 673.43 | 362.4 | 674.31 | 362.4 | 676.26 | 362.34 | 677.44 | 362.35 | 677.81 | 362.41 |
| 679.12 | 362.53 | 685.23 | 362.67 | 686.1 | 362.68 | 687.17 | 362.68 | 689.7 | 362.7 |
| 691.91 | 362.57 | 692.57 | 362.5 | 693.5 | 362.43 | 694.72 | 362.48 | 695.01 | 362.43 |
| 695.42 | 362.4 | 696.07 | 362.29 | 696.72 | 362.16 | 697.36 | 362.1 | 698.45 | 362.1 |
| 699.25 | 362.12 | 700.84 | 362.18 | 701.3 | 362.21 | 702.11 | 362.3 | 702.91 | 362.42 |
| 703.61 | 362.51 | 710.1 | 362.72 | 712.75 | 362.75 | 714.63 | 362.79 | 716.34 | 362.8 |
| 717.75 | 362.84 | 722.04 | 362.91 | 723.48 | 362.92 | 726.93 | 362.92 | 729.23 | 362.89 |
| 731.89 | 362.74 | 733.83 | 362.56 | 734.23 | 362.53 | 735.41 | 362.5 | 739.21 | 362.5 |
| 742.1 | 362.49 | 745.77 | 362.49 | 747.44 | 362.47 | 750.47 | 362.42 | 751 | 362.4 |
| 751.31 | 362.37 | 752.38 | 362.36 | 753.61 | 362.36 | 754.75 | 362.35 | 755.49 | 362.36 |
| 758.39 | 362.33 | 759.82 | 362.34 | 760.45 | 362.36 | 761.34 | 362.41 | 763.78 | 362.57 |
| 764.98 | 362.58 | 766.01 | 362.61 | 767.14 | 362.61 | 767.8 | 362.6 | 769.59 | 362.56 |
| 771.37 | 362.5 | 772.6 | 362.49 | 773.74 | 362.49 | 778.06 | 362.48 | 783.46 | 362.55 |
| 785.38 | 362.55 | 787.56 | 362.59 | 788.95 | 362.66 | 790.33 | 362.72 | 793.13 | 362.76 |
| 796.18 | 362.75 | 797.04 | 362.75 | 798.3 | 362.73 | 799.96 | 362.75 | 800.89 | 362.77 |
| 802.34 | 362.72 | 803.57 | 362.67 | 804.97 | 362.66 | 807.72 | 362.7 | 811.31 | 362.69 |
| 818.57 | 362.85 | 830.17 | 362.71 | 830.82 | 362.71 | 834.34 | 362.62 | 836.64 | 362.49 |
| 837.89 | 362.44 | 839.8 | 362.38 | 841.41 | 362.28 | 842.49 | 362.25 | 844.11 | 362.23 |
| 847.03 | 362.2 | 851.32 | 362.29 | 852.04 | 362.31 | 853.74 | 362.34 | 857.15 | 362.43 |
| 857.67 | 362.45 | 858.74 | 362.45 | 862.22 | 362.48 | 865.52 | 362.47 | 870.8 | 362.44 |
| 873.51 | 362.47 | 874.76 | 362.51 | 875.58 | 362.56 | 876.55 | 362.64 | 878.55 | 362.77 |
| 882.12 | 363.06 | 883.4 | 363.11 | 887.32 | 363.15 | 888.27 | 363.15 | 889.37 | 363.12 |
| 895.11 | 362.99 | 896.51 | 362.94 | 899.93 | 362.8 | 901.8 | 362.81 | 903.14 | 362.81 |
| 903.72 | 362.84 | 904.85 | 362.87 | 908.27 | 362.98 | 911.26 | 363.06 | 912.19 | 363.07 |
| 914.21 | 363.02 | 920.09 | 362.91 | 923.58 | 362.84 | 926.35 | 362.85 | 936.43 | 362.92 |
| 936.55 | 362.95 | 937.88 | 362.95 | 943.13 | 362.74 | 944.12 | 362.71 | 945.89 | 362.7 |
| 946.44 | 362.69 | 948.69 | 362.67 | 949.45 | 362.76 | 951.25 | 363.03 | 952.33 | 363.23 |
| 952.95 | 363.38 | 953.31 | 363.41 | 954.89 | 363.48 | 956.62 | 363.5 | 958.87 | 363.48 |
| 962.09 | 363.4 | 963.21 | 363.41 | 964.83 | 363.44 | 969.47 | 363.49 | 969.98 | 363.5 |
| 979.15 | 363.66 | 981.55 | 363.71 | 984.69 | 363.81 | 985.87 | 363.87 | 987.95 | 363.93 |
| 990.55 | 364.06 | 992.94 | 364.14 | 996.31 | 364.29 | 997.15 | 364.27 | 998.05 | 364.3 |
| 999.63 | 364.31 | 1000.03 | 364.33 | 1000.66 | 364.32 | 1003.05 | 364.36 | 1005 | 364.41 |
| 1006.1 | 364.41 | 1007.2 | 364.37 | 1007.61 | 364.37 | 1009.23 | 364.32 | 1013.81 | 364.1 |
| 1016.87 | 364.11 | 1025.86 | 364.1 | 1027.76 | 364.09 | 1028.67 | 364.08 | 1029.72 | 364.05 |
| 1032 | 364 | 1032.83 | 363.96 | 1033.67 | 363.93 | 1041.68 | 363.89 | 1041.99 | 363.89 |
| 1043.23 | 363.92 | 1048.9 | 364.07 | 1049.95 | 364.09 | 1051.62 | 364.1 | 1056.74 | 364.11 |
| 1057.1 | 364.1 | 1057.85 | 364.12 | 1059.54 | 364.19 | 1063.64 | 364.3 | 1067.5 | 364.46 |
| 1071.27 | 364.63 | 1073.88 | 364.71 | 1074.05 | 364.71 | 1076.2 | 364.77 | 1076.99 | 364.78 |
| 1077.73 | 364.75 | 1080.21 | 364.7 | 1082.66 | 364.77 | 1085.73 | 364.88 | 1087.36 | 364.99 |
| 1090.92 | 365.02 | 1091.6 | 365.03 | 1113.33 | 365.48 | 1114.18 | 365.5 | 1116.97 | 365.54 |
| 1117.93 | 365.55 | 1118.87 | 365.52 | 1119.5 | 365.52 | 1123.33 | 365.47 | 1126.44 | 365.55 |
| 1132.23 | 365.63 | 1132.62 | 365.63 | 1134.59 | 365.69 | 1136.4 | 365.72 | 1136.48 | 365.7 |
| 1147.58 | 365.86 | 1148.85 | 365.89 | 1151.04 | 365.9 | 1162.61 | 365.96 | 1163.25 | 365.97 |
| 1164.56 | 365.97 | 1165.19 | 365.94 | 1166.01 | 365.88 | 1166.99 | 365.82 | 1167.73 | 365.79 |
| 1168.27 | 365.78 | 1169.46 | 365.78 | 1171.52 | 366.02 | 1172.56 | 366.02 | 1178.82 | 366.23 |
| 1181.45 | 366.31 | 1182.12 | 366.32 | 1185.04 | 366.4 | 1188.04 | 366.44 | 1190.92 | 366.44 |
| 1193.14 | 366.42 | 1193.47 | 366.41 | 1197.92 | 366.32 | 1198.19 | 366.32 | 1201.31 | 366.25 |
| 1203.69 | 366.19 | 1204.19 | 366.17 | 1204.53 | 366.06 | 1205.21 | 366.03 | 1206.4 | 366 |
| 1207.31 | 365.99 | 1209.95 | 366.01 | 1215.73 | 366.19 | 1219 | 366.2 | 1230.18 | 366.18 |
| 1233.36 | 366.24 | 1235.34 | 366.27 | 1235.7 | 366.28 | 1236.68 | 366.34 | 1239.6 | 366.37 |
| 1240.11 | 366.38 | 1246.39 | 366.37 | 1247.27 | 366.38 | 1249.7 | 366.38 | 1250.32 | 366.36 |
| 1256.44 | 366.48 | 1258.25 | 366.48 | 1261.77 | 366.44 | 1262.57 | 366.42 | 1263.86 | 366.35 |
| 1265.52 | 366.32 | 1265.74 | 366.33 | 1267 | 366.33 | 1269.91 | 366.37 | 1270.93 | 366.37 |
| 1273.27 | 366.4 | 1275.42 | 366.39 | 1275.81 | 366.38 | 1280.45 | 366.3 | 1281.68 | 366.25 |
| 1282.48 | 366.19 | 1285.37 | 366.15 | 1286.03 | 366.15 | 1287.72 | 366.13 | 1289.84 | 366.12 |
| 1290.82 | 366.12 | 1291.03 | 366.13 | 1295.19 | 366.23 | 1296.56 | 366.25 | 1300.03 | 366.68 |
| 1300.93 | 366.77 | 1302.93 | 366.92 | 1303.16 | 366.93 | 1305.31 | 366.94 | 1311.39 | 366.86 |
| 1312.35 | 366.84 | 1313.23 | 366.84 | 1318.02 | 366.8 | 1318.82 | 366.8 | 1321.92 | 366.74 |
| 1323.09 | 366.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 242.19 | .05 | 269.13 | .04 | 990.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 269.13 | 990.55 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6237.17*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 256.44 | 364.14 | 256.87 | 364.13 | 260.39 | 364.08 | 262.82 | 364.03 | 266.21 | 363.92 |
| 268.74 | 363.87 | 270.99 | 363.85 | 274.21 | 363.76 | 274.82 | 363.72 | 276.73 | 363.67 |
| 278.24 | 363.65 | 279.27 | 363.62 | 281.39 | 363.48 | 283.3 | 362.94 | 287.5 | 362.65 |
| 290.97 | 362.4 | 291.21 | 362.42 | 291.39 | 362.39 | 302.11 | 362.36 | 306.72 | 362.5 |
| 307.81 | 362.51 | 309.23 | 362.5 | 309.55 | 362.48 | 310.02 | 362.4 | 311.31 | 362.37 |
| 312.3 | 362.41 | 314.27 | 362.52 | 315.05 | 362.54 | 317.17 | 362.58 | 319.7 | 362.65 |
| 320.35 | 362.66 | 321.49 | 362.59 | 323.49 | 362.51 | 324.44 | 362.45 | 326.68 | 362.29 |
| 329.28 | 362.28 | 332.1 | 362.18 | 336.11 | 362.3 | 336.94 | 362.31 | 344.16 | 362.44 |
| 347.21 | 362.42 | 357.6 | 362.56 | 358.41 | 362.58 | 359.32 | 362.59 | 363.58 | 362.59 |
| 364.04 | 362.6 | 365 | 362.6 | 365.44 | 362.61 | 365.71 | 362.65 | 367.49 | 362.66 |
| 367.86 | 362.63 | 375.58 | 362.22 | 378.05 | 362.13 | 378.71 | 362.16 | 379.44 | 362.18 |
| 383.05 | 362.25 | 389.59 | 362.3 | 390.57 | 362.31 | 392.99 | 362.36 | 395.17 | 362.36 |
| 397.54 | 362.29 | 398.32 | 362.26 | 399.33 | 362.26 | 400.11 | 362.28 | 410.13 | 362.29 |
| 410.87 | 362.23 | 414.33 | 362.13 | 415.31 | 362.11 | 416.37 | 362.1 | 416.78 | 362.07 |
| 417.76 | 362.04 | 418.42 | 362.04 | 420.26 | 362.07 | 421.17 | 362.13 | 421.68 | 362.24 |
| 424.72 | 362.43 | 427.13 | 362.53 | 427.57 | 362.53 | 428.24 | 362.55 | 431.22 | 362.53 |
| 443.5 | 362.75 | 443.92 | 362.77 | 444.67 | 362.77 | 444.95 | 362.79 | 447.5 | 362.79 |
| 448.6 | 362.75 | 455.41 | 362.53 | 457.7 | 362.5 | 461.95 | 362.28 | 462.75 | 362.22 |
| 463.96 | 362.16 | 465.13 | 362.11 | 465.97 | 362.06 | 471.63 | 362.09 | 472.3 | 362.14 |
| 473.38 | 362.16 | 474.91 | 362.15 | 475.49 | 362.13 | 477.52 | 362.11 | 478.07 | 362.09 |
| 479 | 362.02 | 479.91 | 362 | 481.71 | 361.97 | 482 | 361.97 | 490.17 | 361.82 |
| 490.98 | 361.8 | 499.83 | 361.57 | 502.22 | 361.38 | 504.16 | 361.14 | 504.52 | 361.18 |
| 506.28 | 361.1 | 506.79 | 361.09 | 509.97 | 361.19 | 512.11 | 361.23 | 513.87 | 361.32 |
| 518.27 | 361.27 | 518.84 | 361.26 | 521.73 | 361.26 | 524.31 | 361.18 | 525.4 | 361.14 |
| 525.75 | 361.14 | 527.55 | 361.18 | 529.02 | 361.22 | 532.45 | 361.21 | 538.7 | 361.05 |
| 544 | 360.99 | 544.17 | 360.99 | 548.33 | 360.86 | 553.46 | 360.72 | 554.08 | 360.76 |
| 555.05 | 360.76 | 555.79 | 360.74 | 557.28 | 360.68 | 558.59 | 360.59 | 558.74 | 360.57 |
| 559.29 | 360.57 | 560.58 | 360.59 | 562.57 | 360.57 | 562.68 | 360.63 | 563.61 | 360.7 |
| 564.33 | 360.74 | 564.92 | 360.76 | 566.52 | 360.8 | 567.02 | 360.82 | 568.86 | 360.85 |
| 571.33 | 360.88 | 572.74 | 360.89 | 575.56 | 360.93 | 576.37 | 360.95 | 577.08 | 361.02 |
| 582.87 | 361.27 | 586.89 | 361.41 | 588.03 | 361.42 | 588.68 | 361.41 | 589.03 | 361.39 |
| 593.9 | 361.2 | 595.92 | 361.13 | 597.93 | 361.08 | 601.91 | 360.95 | 603.8 | 360.92 |
| 604.44 | 360.94 | 613.6 | 361.32 | 619.67 | 361.61 | 620.8 | 361.66 | 627.04 | 361.75 |
| 628.36 | 361.94 | 628.76 | 361.99 | 630.09 | 362.19 | 630.62 | 362.18 | 630.8 | 362.2 |
| 631.14 | 362.19 | 634.31 | 362.15 | 638.29 | 362.16 | 641.77 | 362.13 | 643.52 | 362.1 |
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| 668.18 | 362 | 668.58 | 362 | 669.41 | 362.04 | 670 | 362.04 | 674.34 | 362.06 |
| 674.86 | 362.07 | 676.23 | 362.13 | 679.44 | 362.19 | 679.9 | 362.16 | 680.99 | 362.15 |
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| 700.01 | 362.14 | 701.91 | 362.08 | 702.71 | 362.07 | 703.06 | 362.08 | 703.43 | 362.13 |
| 704.7 | 362.24 | 710.66 | 362.34 | 712.26 | 362.35 | 712.56 | 362.34 | 713.97 | 362.34 |
| 715.03 | 362.35 | 717.17 | 362.23 | 717.82 | 362.15 | 718.24 | 362.13 | 718.73 | 362.08 |
| 719.92 | 362.12 | 720.2 | 362.08 | 720.6 | 362.06 | 721.99 | 361.82 | 722.3 | 361.79 |
| 723.56 | 361.79 | 725.89 | 361.88 | 726.33 | 361.91 | 727.12 | 362 | 727.91 | 362.13 |
| 728.59 | 362.22 | 733.38 | 362.39 | 734.92 | 362.43 | 737.5 | 362.46 | 739.34 | 362.49 |
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| 751.33 | 362.61 | 753.06 | 362.6 | 753.58 | 362.59 | 756.17 | 362.44 | 758.45 | 362.25 |
| 759.6 | 362.22 | 760.62 | 362.21 | 763.31 | 362.21 | 766.13 | 362.19 | 768.62 | 362.18 |
| 771.33 | 362.15 | 774.29 | 362.09 | 774.81 | 362.07 | 775.11 | 362.04 | 776.15 | 362.02 |
| 779.19 | 362.02 | 782.01 | 361.99 | 783.02 | 361.99 | 784.02 | 362.02 | 784.89 | 362.07 |
| 787.28 | 362.24 | 788.44 | 362.25 | 789.45 | 362.29 | 791.19 | 362.27 | 792.94 | 362.23 |
| 794.68 | 362.17 | 795.87 | 362.16 | 796.2 | 362.15 | 796.99 | 362.16 | 801.2 | 362.13 |
| 806.47 | 362.19 | 808.34 | 362.19 | 810.47 | 362.22 | 811.82 | 362.29 | 813.17 | 362.34 |
| 813.65 | 362.35 | 815.9 | 362.38 | 816.36 | 362.38 | 818.88 | 362.36 | 819.71 | 362.36 |
| 821.41 | 362.35 | 823.35 | 362.39 | 823.46 | 362.38 | 824.88 | 362.34 | 825.54 | 362.31 |
| 826.08 | 362.3 | 827.45 | 362.3 | 830.13 | 362.35 | 833.63 | 362.35 | 840.71 | 362.53 |
| 852.02 | 362.41 | 852.66 | 362.4 | 856.09 | 362.32 | 858.34 | 362.19 | 859.56 | 362.13 |
| 861.42 | 362.08 | 862.99 | 361.98 | 864.04 | 361.95 | 865.62 | 361.94 | 866.55 | 361.92 |
| 868.92 | 361.91 | 872.66 | 361.99 | 873.36 | 362.01 | 875.01 | 362.03 | 878.34 | 362.11 |
| 878.85 | 362.13 | 879.89 | 362.13 | 883.28 | 362.16 | 886.5 | 362.17 | 891.65 | 362.14 |
| 894.29 | 362.17 | 895.51 | 362.21 | 896.32 | 362.26 | 897.27 | 362.33 | 899.21 | 362.46 |
| 903.06 | 362.76 | 903.95 | 362.78 | 907.76 | 362.82 | 908.7 | 362.82 | 909.68 | 362.8 |
| 909.77 | 362.79 | 915.36 | 362.68 | 916.73 | 362.64 | 920.07 | 362.51 | 921.89 | 362.5 |
| 922.3 | 362.51 | 923.19 | 362.51 | 928.2 | 362.66 | 931.12 | 362.73 | 932.03 | 362.74 |
| 933.99 | 362.69 | 939.18 | 362.6 | 939.73 | 362.58 | 940.63 | 362.57 | 943.13 | 362.52 |
| 945.83 | 362.52 | 955.66 | 362.59 | 955.78 | 362.62 | 957.08 | 362.61 | 957.84 | 362.58 |
| 962.2 | 362.42 | 963.17 | 362.39 | 964.89 | 362.38 | 965.43 | 362.37 | 967.62 | 362.36 |
| 968.36 | 362.46 | 970.12 | 362.75 | 971.34 | 362.99 | 971.78 | 363.1 | 972.13 | 363.13 |
| 973.89 | 363.2 | 975.35 | 363.21 | 977.55 | 363.2 | 978.26 | 363.19 | 980.69 | 363.14 |
| 981.79 | 363.15 | 983.37 | 363.18 | 987.89 | 363.23 | 988.39 | 363.24 | 997.33 | 363.4 |
| 999.67 | 363.46 | 1002.74 | 363.55 | 1003.89 | 363.61 | 1005.91 | 363.67 | 1008.45 | 363.79 |
| 1010.79 | 363.87 | 1014.08 | 364 | 1014.9 | 363.98 | 1015.78 | 364 | 1017.27 | 364.01 |
| 1017.53 | 364.02 | 1018.33 | 364.02 | 1020.67 | 364.05 | 1022.58 | 364.1 | 1023.66 | 364.1 |
| 1024.73 | 364.05 | 1025.13 | 364.05 | 1026.71 | 363.99 | 1029.77 | 363.82 | 1031.19 | 363.75 |
| 1034.18 | 363.75 | 1042.98 | 363.74 | 1044.83 | 363.73 | 1045.99 | 363.7 | 1046.75 | 363.69 |
| 1048.98 | 363.64 | 1050.61 | 363.58 | 1058.44 | 363.55 | 1058.74 | 363.55 | 1065.49 | 363.72 |
| 1066.53 | 363.74 | 1068.39 | 363.75 | 1072.74 | 363.76 | 1074.25 | 363.77 | 1075.9 | 363.84 |
| 1079.91 | 363.97 | 1083.69 | 364.13 | 1087.37 | 364.3 | 1089.92 | 364.38 | 1090.08 | 364.39 |
| 1092.19 | 364.44 | 1092.86 | 364.46 | 1093.68 | 364.43 | 1096.1 | 364.39 | 1098.51 | 364.49 |
| 1101.5 | 364.62 | 1103.1 | 364.74 | 1106.58 | 364.77 | 1107.25 | 364.78 | 1128.49 | 365.21 |
| 1129.32 | 365.23 | 1132.05 | 365.28 | 1133.28 | 365.28 | 1133.91 | 365.26 | 1135.25 | 365.25 |
| 1138.26 | 365.22 | 1141.31 | 365.3 | 1146.97 | 365.37 | 1149.28 | 365.43 | 1151.04 | 365.46 |
| 1151.13 | 365.44 | 1161.97 | 365.6 | 1163.22 | 365.63 | 1164.71 | 365.64 | 1165.36 | 365.65 |
| 1176.67 | 365.71 | 1177.3 | 365.72 | 1178.58 | 365.72 | 1179.19 | 365.69 | 1179.99 | 365.63 |
| 1181.68 | 365.55 | 1182.2 | 365.54 | 1183.07 | 365.54 | 1183.44 | 365.55 | 1185.38 | 365.77 |
| 1185.79 | 365.76 | 1186.39 | 365.77 | 1195.75 | 366.06 | 1198.6 | 366.13 | 1201.53 | 366.17 |
| 1204.35 | 366.17 | 1206.51 | 366.16 | 1206.84 | 366.15 | 1214.51 | 366.01 | 1217.33 | 365.94 |
| 1217.66 | 365.84 | 1218.32 | 365.81 | 1219.49 | 365.78 | 1220.37 | 365.77 | 1222.95 | 365.79 |
| 1228.6 | 365.96 | 1231.09 | 365.96 | 1231.8 | 365.97 | 1242.73 | 365.94 | 1245.84 | 366 |
| 1247.78 | 366.03 | 1249.08 | 366.09 | 1251.94 | 366.12 | 1252.44 | 366.13 | 1258.58 | 366.12 |
| 1259.44 | 366.13 | 1261.82 | 366.14 | 1262.03 | 366.12 | 1263.44 | 366.13 | 1268.41 | 366.23 |
| 1270.18 | 366.23 | 1273.62 | 366.2 | 1274.4 | 366.18 | 1275.66 | 366.12 | 1277.29 | 366.1 |
| 1278.73 | 366.1 | 1281.58 | 366.14 | 1282.58 | 366.14 | 1284.86 | 366.17 | 1287.34 | 366.16 |
| 1292.46 | 366.06 | 1293.08 | 366.03 | 1293.87 | 365.97 | 1296.69 | 365.93 | 1297.33 | 365.93 |
| 1298.99 | 365.91 | 1301.06 | 365.9 | 1302.02 | 365.9 | 1302.22 | 365.91 | 1307.63 | 366.03 |
| 1311.02 | 366.42 | 1311.91 | 366.5 | 1314.08 | 366.65 | 1316.19 | 366.66 | 1322.13 | 366.6 |
| 1323.07 | 366.57 | 1323.93 | 366.58 | 1328.62 | 366.54 | 1329.39 | 366.53 | 1332.43 | 366.47 |



BSE Document Control Number: 7323HYD101

1333.57 366.46

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 256.44 | .05 | 281.39 | .04 | 1008.45 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 281.39 | 1008.45 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6217.40*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 270.7 | 363.96 | 271.09 | 363.95 | 274.83 | 363.88 | 276.57 | 363.84 | 279.68 | 363.72 |
| 282.02 | 363.67 | 284.08 | 363.64 | 285.48 | 363.6 | 287.27 | 363.53 | 287.61 | 363.5 |
| 289.36 | 363.45 | 290.75 | 363.42 | 291.7 | 363.39 | 292.84 | 363.32 | 293.66 | 363.26 |
| 295.68 | 362.67 | 300.13 | 362.36 | 303.8 | 362.1 | 304.07 | 362.12 | 304.25 | 362.08 |
| 315.62 | 362.05 | 320.5 | 362.21 | 321.66 | 362.22 | 323.16 | 362.21 | 323.51 | 362.19 |
| 324 | 362.1 | 325.37 | 362.08 | 326.42 | 362.11 | 328.5 | 362.23 | 329.33 | 362.26 |
| 331.58 | 362.3 | 334.26 | 362.37 | 334.95 | 362.38 | 336.16 | 362.31 | 338.28 | 362.22 |
| 339.28 | 362.16 | 341.66 | 361.99 | 344.41 | 361.98 | 347.41 | 361.88 | 351.65 | 362.01 |
| 351.9 | 362 | 352.54 | 362.01 | 360.18 | 362.16 | 363.42 | 362.13 | 373.67 | 362.29 |
| 375.46 | 362.31 | 376.26 | 362.33 | 382.27 | 362.33 | 382.74 | 362.35 | 383.02 | 362.39 |
| 384.91 | 362.41 | 385.3 | 362.37 | 386.1 | 362.32 | 386.31 | 362.32 | 392.67 | 361.97 |
| 393.49 | 361.92 | 396.11 | 361.83 | 396.8 | 361.86 | 397.58 | 361.88 | 401.4 | 361.96 |
| 408.34 | 362.01 | 409.38 | 362.03 | 411.94 | 362.07 | 414.56 | 362.07 | 416.76 | 362.01 |
| 417.58 | 361.97 | 418.66 | 361.97 | 419.48 | 361.99 | 430.11 | 362 | 430.89 | 361.94 |
| 434.56 | 361.82 | 435.98 | 361.81 | 436.72 | 361.79 | 438.19 | 361.73 | 438.89 | 361.73 |
| 440.85 | 361.77 | 441.7 | 361.81 | 442.35 | 361.94 | 445.57 | 362.15 | 445.91 | 362.16 |
| 448.13 | 362.25 | 448.59 | 362.25 | 449.3 | 362.28 | 452.46 | 362.26 | 465.47 | 362.5 |
| 467.01 | 362.53 | 469.72 | 362.53 | 470.89 | 362.5 | 478.1 | 362.26 | 480.52 | 362.23 |
| 485.03 | 362.03 | 485.88 | 361.97 | 487.27 | 361.92 | 489.3 | 361.83 | 495.29 | 361.87 |
| 496.17 | 361.93 | 497.14 | 361.95 | 498.77 | 361.94 | 499.38 | 361.92 | 501.54 | 361.9 |
| 503.01 | 361.82 | 503.45 | 361.79 | 505.97 | 361.75 | 506.28 | 361.75 | 514.94 | 361.6 |
| 515.81 | 361.57 | 525.18 | 361.33 | 527.71 | 361.13 | 529.77 | 360.88 | 530.15 | 360.92 |
| 531.53 | 360.86 | 532.02 | 360.83 | 532.56 | 360.83 | 535.93 | 360.94 | 538.2 | 360.98 |
| 540.07 | 361.08 | 544.73 | 361.03 | 544.85 | 361.02 | 547.7 | 361.02 | 548.39 | 361.01 |
| 551.13 | 360.93 | 552.28 | 360.89 | 552.66 | 360.89 | 554.56 | 360.93 | 555.14 | 360.96 |
| 556.12 | 360.98 | 559.76 | 360.97 | 566.38 | 360.8 | 572 | 360.74 | 572.18 | 360.73 |
| 576.59 | 360.6 | 582.03 | 360.45 | 582.25 | 360.45 | 582.69 | 360.49 | 583.71 | 360.49 |
| 584.49 | 360.47 | 586.49 | 360.38 | 587.46 | 360.31 | 587.62 | 360.29 | 588.22 | 360.29 |
| 589.61 | 360.31 | 591.75 | 360.29 | 591.86 | 360.35 | 592.76 | 360.42 | 594.04 | 360.49 |
| 595.6 | 360.54 | 597.88 | 360.59 | 599.38 | 360.6 | 600.29 | 360.61 | 601.66 | 360.62 |
| 604.41 | 360.66 | 605.2 | 360.69 | 605.89 | 360.76 | 611.53 | 361.01 | 615.45 | 361.14 |
| 616.56 | 361.14 | 617.54 | 361.12 | 622.28 | 360.93 | 625.5 | 360.83 | 626.21 | 360.82 |
| 630.09 | 360.69 | 631.45 | 360.67 | 631.94 | 360.65 | 632.56 | 360.67 | 641.49 | 361.07 |
| 647.4 | 361.37 | 648.51 | 361.42 | 654.59 | 361.5 | 655.87 | 361.68 | 656.26 | 361.72 |
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| 666.6 | 361.87 | 668.94 | 361.84 | 669.53 | 361.84 | 673.62 | 361.73 | 675.4 | 361.69 |
| 677.96 | 361.67 | 678.89 | 361.68 | 680.09 | 361.71 | 680.64 | 361.76 | 681.45 | 361.8 |
| 685.57 | 361.83 | 687.77 | 361.82 | 691.35 | 361.77 | 694.69 | 361.7 | 694.86 | 361.69 |
| 695.89 | 361.73 | 696.46 | 361.73 | 700.68 | 361.75 | 701.2 | 361.76 | 702.53 | 361.81 |
| 705.66 | 361.89 | 706.1 | 361.85 | 707.18 | 361.85 | 707.71 | 361.87 | 715.67 | 361.98 |
| 716.5 | 362 | 717.15 | 362.03 | 717.67 | 362.1 | 718.48 | 362.15 | 718.93 | 362.16 |
| 720.6 | 362.12 | 722.4 | 362.02 | 723.8 | 361.92 | 724.88 | 361.89 | 725.71 | 361.88 |
| 727.56 | 361.82 | 728.68 | 361.81 | 729.04 | 361.86 | 730.28 | 361.95 | 736.09 | 362.02 |
| 736.92 | 362.02 | 739.32 | 362 | 740.35 | 362.01 | 742.44 | 361.88 | 743.07 | 361.8 |
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| 747.49 | 361.47 | 748.66 | 361.48 | 750.93 | 361.57 | 751.37 | 361.6 | 752.14 | 361.7 |
| 752.9 | 361.83 | 753.57 | 361.92 | 758.24 | 362.1 | 759.74 | 362.14 | 762.25 | 362.17 |
| 764.05 | 362.2 | 765.67 | 362.21 | 767 | 362.25 | 769.99 | 362.3 | 772.46 | 362.32 |
| 773.6 | 362.31 | 774.19 | 362.32 | 774.8 | 362.31 | 775.73 | 362.31 | 777.92 | 362.28 |
| 780.45 | 362.14 | 782.67 | 361.96 | 783.79 | 361.93 | 784.94 | 361.93 | 787.41 | 361.92 |
| 790.16 | 361.89 | 793.64 | 361.86 | 795.23 | 361.83 | 798.12 | 361.77 | 798.91 | 361.71 |
| 799.93 | 361.69 | 801.1 | 361.68 | 802.88 | 361.68 | 805.64 | 361.65 | 806.62 | 361.65 |
| 807.6 | 361.68 | 810.77 | 361.91 | 811.9 | 361.92 | 812.89 | 361.96 | 814.59 | 361.94 |
| 816.29 | 361.9 | 817.98 | 361.84 | 819.15 | 361.82 | 820.24 | 361.82 | 824.34 | 361.78 |
| 829.47 | 361.83 | 831.3 | 361.83 | 833.37 | 361.85 | 834.69 | 361.91 | 836.01 | 361.96 |
| 836.47 | 361.97 | 838.67 | 361.99 | 839.11 | 361.99 | 841.57 | 361.97 | 842.39 | 361.97 |
| 844.04 | 361.96 | 846.04 | 362 | 848.07 | 361.94 | 849.37 | 361.93 | 852.54 | 361.99 |
| 855.95 | 362 | 862.85 | 362.21 | 873.88 | 362.1 | 874.5 | 362.09 | 877.84 | 362.02 |
| 880.03 | 361.88 | 881.22 | 361.83 | 883.04 | 361.78 | 884.56 | 361.69 | 885.59 | 361.66 |
| 887.14 | 361.64 | 889.91 | 361.61 | 890.35 | 361.62 | 893.99 | 361.68 | 894.67 | 361.7 |
| 896.29 | 361.72 | 899.53 | 361.79 | 900.03 | 361.81 | 901.04 | 361.81 | 904.35 | 361.85 |
| 907.49 | 361.86 | 912.5 | 361.84 | 912.6 | 361.85 | 913.55 | 361.85 | 915.53 | 361.89 |
| 917.05 | 361.96 | 917.98 | 362.03 | 919.88 | 362.15 | 923.27 | 362.41 | 923.62 | 362.43 |
| 924.49 | 362.45 | 928.21 | 362.49 | 929.12 | 362.49 | 935.61 | 362.37 | 936.95 | 362.33 |
| 940.2 | 362.21 | 941.98 | 362.2 | 942.38 | 362.21 | 943.25 | 362.21 | 943.8 | 362.23 |
| 944.88 | 362.25 | 948.12 | 362.34 | 950.97 | 362.4 | 951.86 | 362.41 | 952.69 | 362.39 |
| 958.83 | 362.28 | 959.36 | 362.26 | 960.24 | 362.25 | 962.69 | 362.2 | 965.31 | 362.2 |
| 974.9 | 362.25 | 975.01 | 362.28 | 976.28 | 362.27 | 977.02 | 362.25 | 981.27 | 362.1 |
| 982.21 | 362.07 | 983.89 | 362.06 | 984.42 | 362.05 | 986.55 | 362.06 | 987.27 | 362.17 |
| 988.63 | 362.41 | 990.18 | 362.72 | 990.6 | 362.82 | 990.95 | 362.85 | 992.45 | 362.91 |
| 994.09 | 362.93 | 996.23 | 362.92 | 999.3 | 362.87 | 1000.36 | 362.88 | 1001.9 | 362.92 |
| 1006.31 | 362.97 | 1015.51 | 363.15 | 1017.79 | 363.2 | 1020.78 | 363.29 | 1021.9 | 363.35 |
| 1023.88 | 363.41 | 1026.35 | 363.52 | 1028.63 | 363.59 | 1031.85 | 363.72 | 1032.65 | 363.69 |
| 1033.51 | 363.71 | 1035.02 | 363.7 | 1038.29 | 363.74 | 1040.15 | 363.79 | 1041.21 | 363.79 |
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| 1096.18 | 363.63 | 1099.87 | 363.8 | 1103.46 | 363.96 | 1105.96 | 364.05 | 1106.12 | 364.06 |
| 1108.17 | 364.12 | 1108.93 | 364.13 | 1109.64 | 364.11 | 1112 | 364.09 | 1114.35 | 364.2 |
| 1117.28 | 364.36 | 1118.84 | 364.49 | 1122.24 | 364.52 | 1122.89 | 364.53 | 1143.65 | 364.95 |
| 1144.46 | 364.97 | 1147.13 | 365.01 | 1148.05 | 365.02 | 1148.94 | 365 | 1153.2 | 364.97 |
| 1156.18 | 365.04 | 1161.71 | 365.12 | 1162.08 | 365.12 | 1163.96 | 365.17 | 1165.69 | 365.2 |
| 1165.77 | 365.19 | 1176.37 | 365.34 | 1177.23 | 365.37 | 1179.04 | 365.38 | 1179.68 | 365.39 |
| 1190.73 | 365.46 | 1192.83 | 365.46 | 1193.98 | 365.38 | 1194.91 | 365.33 | 1196.13 | 365.3 |
| 1196.98 | 365.3 | 1197.35 | 365.31 | 1198.82 | 365.47 | 1199.24 | 365.51 | 1200.23 | 365.51 |
| 1208.73 | 365.78 | 1209.37 | 365.79 | 1212.16 | 365.86 | 1215.03 | 365.9 | 1215.27 | 365.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1217.78 | 365.91 | 1219.89 | 365.9 | 1220.21 | 365.89 | 1224.47 | 365.82 | 1227.71 | 365.76 |
| 1230.46 | 365.7 | 1230.78 | 365.61 | 1231.43 | 365.58 | 1233.44 | 365.55 | 1235.95 | 365.57 |
| 1241.48 | 365.72 | 1244.6 | 365.73 | 1255.28 | 365.71 | 1257.34 | 365.74 | 1258.32 | 365.76 |
| 1260.22 | 365.79 | 1260.56 | 365.79 | 1261.49 | 365.84 | 1264.28 | 365.87 | 1264.77 | 365.88 |
| 1270.78 | 365.88 | 1271.61 | 365.89 | 1273.93 | 365.89 | 1274.52 | 365.88 | 1275.52 | 365.89 |
| 1280.38 | 365.98 | 1281.43 | 365.99 | 1282.1 | 365.98 | 1284.48 | 365.97 | 1285.46 | 365.96 |
| 1286.23 | 365.94 | 1287.05 | 365.9 | 1289.05 | 365.87 | 1290.38 | 365.87 | 1290.46 | 365.88 |
| 1293.24 | 365.91 | 1294.22 | 365.91 | 1296.45 | 365.94 | 1298.88 | 365.93 | 1303.31 | 365.85 |
| 1303.88 | 365.83 | 1305.01 | 365.77 | 1305.25 | 365.75 | 1308.01 | 365.72 | 1308.64 | 365.72 |
| 1312.28 | 365.68 | 1313.22 | 365.68 | 1313.41 | 365.69 | 1317.39 | 365.77 | 1318.7 | 365.8 |
| 1322.01 | 366.15 | 1322.88 | 366.23 | 1325.01 | 366.37 | 1327.06 | 366.38 | 1332.87 | 366.33 |
| 1333.79 | 366.31 | 1334.63 | 366.31 | 1339.21 | 366.27 | 1339.96 | 366.26 | 1342.93 | 366.19 |
| 1344.05 | 366.19 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 270.7 | .05 | 293.66 | .04 | 1026.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 293.66 | 1026.35 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6197.64*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 284.95 | 363.78 | 285.31 | 363.76 | 288.73 | 363.69 | 289.77 | 363.66 | 293.16 | 363.53 |
| 295.29 | 363.47 | 297.17 | 363.43 | 298.45 | 363.39 | 299.88 | 363.33 | 300.4 | 363.29 |
| 302 | 363.23 | 303.27 | 363.2 | 304.38 | 363.15 | 305.36 | 363.08 | 305.92 | 363.03 |
| 307.59 | 362.54 | 308.06 | 362.41 | 316.64 | 361.79 | 316.92 | 361.81 | 317.11 | 361.77 |
| 329.12 | 361.75 | 334.28 | 361.92 | 335.51 | 361.93 | 337.09 | 361.92 | 337.46 | 361.9 |
| 337.98 | 361.8 | 339.43 | 361.78 | 340.54 | 361.82 | 342.74 | 361.94 | 343.61 | 361.97 |
| 345.98 | 362.02 | 348.82 | 362.1 | 349.55 | 362.11 | 349.84 | 362.1 | 350.83 | 362.03 |
| 353.06 | 361.94 | 356.64 | 361.7 | 359.54 | 361.68 | 362.71 | 361.57 | 367.19 | 361.71 |
| 368.13 | 361.72 | 376.21 | 361.88 | 379.62 | 361.85 | 390.45 | 362.02 | 391.27 | 362.03 |
| 393.19 | 362.07 | 394.61 | 362.06 | 395.32 | 362.07 | 397.96 | 362.06 | 398.48 | 362.07 |
| 399.54 | 362.07 | 400.04 | 362.09 | 400.34 | 362.13 | 402.34 | 362.15 | 402.75 | 362.11 |
| 403.81 | 362.05 | 410.53 | 361.68 | 411.39 | 361.63 | 414.16 | 361.53 | 415.71 | 361.59 |
| 419.76 | 361.67 | 428.18 | 361.74 | 430.89 | 361.79 | 433.66 | 361.79 | 435.98 | 361.72 |
| 436.85 | 361.68 | 437.99 | 361.67 | 439.41 | 361.71 | 450.09 | 361.71 | 450.91 | 361.65 |
| 454.79 | 361.52 | 455.89 | 361.5 | 457.07 | 361.49 | 457.53 | 361.46 | 458.63 | 361.42 |
| 459.36 | 361.42 | 461.43 | 361.46 | 462.33 | 361.51 | 463.02 | 361.65 | 466.42 | 361.87 |
| 466.78 | 361.89 | 469.12 | 361.98 | 469.62 | 361.98 | 470.36 | 362.01 | 473.7 | 361.99 |
| 487.45 | 362.24 | 488.25 | 362.27 | 489.08 | 362.28 | 491.93 | 362.28 | 500.79 | 361.99 |
| 503.35 | 361.96 | 508.11 | 361.77 | 509.01 | 361.72 | 511.68 | 361.64 | 512.62 | 361.6 |
| 518.95 | 361.65 | 519.7 | 361.71 | 520.91 | 361.73 | 522.63 | 361.73 | 523.28 | 361.71 |
| 525.55 | 361.69 | 526.17 | 361.66 | 527.21 | 361.59 | 528.23 | 361.56 | 530.24 | 361.53 |
| 530.57 | 361.53 | 539.71 | 361.38 | 540.63 | 361.35 | 550.53 | 361.1 | 553.21 | 360.89 |
| 555.38 | 360.62 | 555.78 | 360.66 | 557.24 | 360.6 | 557.48 | 360.58 | 558.33 | 360.56 |
| 561.89 | 360.68 | 563.57 | 360.72 | 564.29 | 360.73 | 566.26 | 360.84 | 571.19 | 360.79 |
| 571.82 | 360.77 | 574.33 | 360.78 | 575.06 | 360.77 | 578.61 | 360.66 | 579.56 | 360.64 |
| 581.58 | 360.68 | 582.19 | 360.71 | 583.22 | 360.74 | 587.06 | 360.73 | 594.06 | 360.55 |
| 600 | 360.48 | 600.19 | 360.48 | 604.85 | 360.34 | 610.59 | 360.17 | 611.29 | 360.22 |
| 612.37 | 360.22 | 613.2 | 360.2 | 614.87 | 360.13 | 616.34 | 360.03 | 616.5 | 360.01 |
| 618.63 | 360.02 | 620.92 | 360.01 | 621.03 | 360.07 | 621.91 | 360.15 | 622.78 | 360.2 |
| 624.67 | 360.27 | 626.9 | 360.32 | 628.74 | 360.35 | 630.58 | 360.36 | 633.26 | 360.4 |
| 634.02 | 360.42 | 634.7 | 360.5 | 640.19 | 360.74 | 644.01 | 360.86 | 645.09 | 360.87 |
| 645.71 | 360.86 | 646.05 | 360.84 | 650.67 | 360.66 | 652.59 | 360.6 | 654.49 | 360.55 |
| 658.27 | 360.42 | 660.26 | 360.39 | 660.67 | 360.4 | 669.37 | 360.82 | 675.13 | 361.12 |
| 676.21 | 361.18 | 682.13 | 361.25 | 683.38 | 361.41 | 683.76 | 361.45 | 685.03 | 361.61 |
| 685.53 | 361.6 | 686.03 | 361.61 | 689.04 | 361.58 | 693.84 | 361.58 | 696.12 | 361.56 |
| 697.78 | 361.53 | 700.68 | 361.44 | 702.4 | 361.41 | 704.9 | 361.38 | 705.8 | 361.38 |
| 706.56 | 361.4 | 707.51 | 361.46 | 708.3 | 361.5 | 712.32 | 361.53 | 714.46 | 361.52 |
| 717.95 | 361.47 | 721.19 | 361.39 | 721.57 | 361.39 | 722.36 | 361.42 | 722.92 | 361.41 |
| 727.03 | 361.43 | 727.53 | 361.44 | 728.84 | 361.5 | 731.88 | 361.58 | 732.31 | 361.55 |
| 733.31 | 361.54 | 733.87 | 361.57 | 741.63 | 361.68 | 742.44 | 361.7 | 743.07 | 361.73 |
| 743.58 | 361.81 | 744.37 | 361.86 | 744.81 | 361.87 | 746.55 | 361.84 | 748.19 | 361.75 |
| 749.55 | 361.66 | 750.6 | 361.63 | 751.41 | 361.62 | 753.21 | 361.56 | 754.31 | 361.54 |
| 754.66 | 361.59 | 755.86 | 361.66 | 761.52 | 361.69 | 762.33 | 361.69 | 763.32 | 361.67 |
| 764.67 | 361.66 | 765.67 | 361.66 | 767.71 | 361.54 | 768.32 | 361.46 | 769.26 | 361.38 |
| 770.31 | 361.42 | 770.96 | 361.37 | 771.56 | 361.29 | 772.16 | 361.19 | 772.63 | 361.15 |
| 773.77 | 361.17 | 775.98 | 361.27 | 776.4 | 361.3 | 777.15 | 361.39 | 777.9 | 361.53 |
| 778.54 | 361.63 | 783.1 | 361.81 | 784.56 | 361.85 | 787 | 361.87 | 788.75 | 361.9 |
| 790.61 | 361.92 | 791.63 | 361.95 | 794.54 | 362 | 796.95 | 362.02 | 798.06 | 362.01 |
| 799.45 | 362.01 | 801.78 | 361.98 | 802.27 | 361.97 | 804.73 | 361.85 | 806.53 | 361.7 |
| 806.89 | 361.68 | 807.99 | 361.65 | 809.1 | 361.64 | 811.51 | 361.63 | 814.19 | 361.58 |
| 816.55 | 361.56 | 819.12 | 361.51 | 821.94 | 361.44 | 822.42 | 361.42 | 822.71 | 361.37 |
| 823.7 | 361.35 | 824.84 | 361.35 | 825.19 | 361.34 | 826.58 | 361.34 | 829.26 | 361.31 |
| 830.22 | 361.31 | 831.17 | 361.34 | 832 | 361.4 | 834.26 | 361.58 | 835.59 | 361.6 |
| 836.33 | 361.63 | 837.37 | 361.63 | 837.98 | 361.62 | 840.55 | 361.54 | 841.29 | 361.51 |
| 842.73 | 361.48 | 843.48 | 361.48 | 847.48 | 361.43 | 852.48 | 361.47 | 854.26 | 361.46 |
| 856.28 | 361.49 | 857.56 | 361.54 | 859.3 | 361.59 | 861.44 | 361.61 | 861.87 | 361.61 |
| 864.27 | 361.58 | 866.23 | 361.57 | 867.76 | 361.59 | 868.51 | 361.61 | 869.96 | 361.59 |
| 871.2 | 361.56 | 872.4 | 361.57 | 874.95 | 361.64 | 878.27 | 361.65 | 885 | 361.88 |
| 895.73 | 361.79 | 899.6 | 361.72 | 901.73 | 361.58 | 902.89 | 361.53 | 904.66 | 361.48 |
| 906.14 | 361.39 | 907.91 | 361.35 | 908.65 | 361.35 | 909.53 | 361.33 | 911.78 | 361.32 |
| 915.32 | 361.38 | 917.56 | 361.41 | 920.72 | 361.47 | 921.2 | 361.49 | 922.19 | 361.49 |
| 925.41 | 361.53 | 928.47 | 361.55 | 933.45 | 361.55 | 935.87 | 361.58 | 937.02 | 361.62 |
| 938.69 | 361.73 | 940.54 | 361.84 | 943.84 | 362.08 | 944.19 | 362.1 | 945.03 | 362.12 |
| 948.66 | 362.17 | 949.54 | 362.17 | 950.56 | 362.15 | 955.87 | 362.07 | 957.17 | 362.03 |
| 960.34 | 361.91 | 962.06 | 361.9 | 962.46 | 361.91 | 963.3 | 361.9 | 964.49 | 361.93 |
| 964.89 | 361.95 | 968.05 | 362.02 | 970.83 | 362.07 | 971.69 | 362.08 | 972.51 | 362.06 |
| 978.48 | 361.95 | 979.86 | 361.93 | 982.24 | 361.88 | 984.79 | 361.88 | 994.13 | 361.92 |
| 994.24 | 361.94 | 995.48 | 361.93 | 996.2 | 361.91 | 1000.34 | 361.77 | 1001.26 | 361.75 |
| 1002.21 | 361.74 | 1003.41 | 361.74 | 1005.48 | 361.75 | 1006.19 | 361.87 | 1007.51 | 362.12 |
| 1008.86 | 362.42 | 1009.43 | 362.54 | 1009.77 | 362.57 | 1011.23 | 362.62 | 1012.71 | 362.64 |
| 1012.82 | 362.65 | 1015.59 | 362.64 | 1017.9 | 362.61 | 1018.93 | 362.62 | 1020.43 | 362.65 |
| 1024.73 | 362.71 | 1033.69 | 362.89 | 1035.91 | 362.95 | 1038.82 | 363.04 | 1039.92 | 363.09 |
| 1041.84 | 363.15 | 1044.25 | 363.26 | 1044.81 | 363.27 | 1046.48 | 363.32 | 1049.62 | 363.43 |
| 1049.94 | 363.43 | 1050.24 | 363.4 | 1051.24 | 363.41 | 1052.67 | 363.4 | 1053.09 | 363.41 |
| 1053.68 | 363.4 | 1055.91 | 363.43 | 1057.73 | 363.48 | 1058.76 | 363.47 | 1059.78 | 363.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1060.16 | 363.41 | 1061.68 | 363.34 | 1064.6 | 363.12 | 1065.95 | 363.04 | 1068.81 | 363.03 |
| 1077.2 | 363.01 | 1078.96 | 363 | 1079.82 | 362.98 | 1080.8 | 362.97 | 1082.92 | 362.93 |
| 1084.48 | 362.88 | 1092.24 | 362.87 | 1093.4 | 362.9 | 1098.69 | 363.02 | 1099.68 | 363.04 |
| 1105.61 | 363.07 | 1106.34 | 363.07 | 1107.04 | 363.09 | 1108.62 | 363.16 | 1110.99 | 363.25 |
| 1111.49 | 363.26 | 1116.05 | 363.46 | 1119.56 | 363.63 | 1122 | 363.72 | 1122.16 | 363.73 |
| 1124.8 | 363.81 | 1125.59 | 363.79 | 1127.9 | 363.78 | 1130.2 | 363.91 | 1133.05 | 364.1 |
| 1134.58 | 364.24 | 1137.9 | 364.27 | 1138.54 | 364.28 | 1158.81 | 364.69 | 1159.6 | 364.71 |
| 1162.21 | 364.75 | 1163.1 | 364.76 | 1163.98 | 364.74 | 1165.26 | 364.74 | 1168.14 | 364.72 |
| 1171.04 | 364.79 | 1176.45 | 364.86 | 1178.65 | 364.92 | 1180.33 | 364.94 | 1180.41 | 364.93 |
| 1190.76 | 365.09 | 1191.6 | 365.11 | 1193.37 | 365.12 | 1194 | 365.13 | 1204.79 | 365.21 |
| 1206.84 | 365.21 | 1208.87 | 365.09 | 1210.07 | 365.06 | 1211.25 | 365.07 | 1213.1 | 365.26 |
| 1213.49 | 365.25 | 1214.07 | 365.26 | 1219.92 | 365.44 | 1221.44 | 365.49 | 1223 | 365.52 |
| 1225.72 | 365.59 | 1228.52 | 365.64 | 1230.91 | 365.64 | 1231.21 | 365.65 | 1233.27 | 365.64 |
| 1233.58 | 365.63 | 1237.74 | 365.56 | 1237.99 | 365.57 | 1238.76 | 365.55 | 1240.9 | 365.52 |
| 1243.59 | 365.47 | 1243.91 | 365.39 | 1244.54 | 365.36 | 1246.5 | 365.33 | 1248.96 | 365.35 |
| 1254.35 | 365.49 | 1256.73 | 365.49 | 1257.4 | 365.5 | 1267.83 | 365.47 | 1269.84 | 365.5 |
| 1270.8 | 365.52 | 1272.66 | 365.54 | 1273.9 | 365.59 | 1276.62 | 365.62 | 1277.1 | 365.63 |
| 1282.97 | 365.63 | 1283.78 | 365.64 | 1286.05 | 365.65 | 1286.62 | 365.63 | 1287.6 | 365.65 |
| 1292.34 | 365.73 | 1294.03 | 365.74 | 1296.35 | 365.73 | 1297.31 | 365.72 | 1299.26 | 365.66 |
| 1300.81 | 365.64 | 1302.19 | 365.65 | 1304.91 | 365.68 | 1305.86 | 365.68 | 1308.04 | 365.71 |
| 1310.41 | 365.7 | 1315.3 | 365.61 | 1316.64 | 365.54 | 1319.33 | 365.51 | 1319.94 | 365.51 |
| 1321.52 | 365.48 | 1323.5 | 365.47 | 1324.42 | 365.46 | 1324.61 | 365.47 | 1328.5 | 365.55 |
| 1329.78 | 365.57 | 1333.01 | 365.89 | 1333.85 | 365.96 | 1335.93 | 366.08 | 1337.94 | 366.1 |
| 1343.61 | 366.06 | 1344.05 | 366.05 | 1345.33 | 366.05 | 1349.8 | 366.01 | 1353.44 | 365.92 |
| 1354.53 | 365.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 284.95 | .05 | 305.92 | .04 | 1044.25 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 305.92 | 1044.25 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6177.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 299.21 | 363.59 | 302.21 | 363.51 | 303.57 | 363.46 | 304.06 | 363.45 | 306.64 | 363.33 |
| 308.56 | 363.26 | 310.27 | 363.22 | 311.43 | 363.18 | 313.19 | 363.08 | 314.63 | 363.01 |
| 315.79 | 362.97 | 316.79 | 362.92 | 318.19 | 362.81 | 319.94 | 362.28 | 320.44 | 362.14 |
| 325.39 | 361.78 | 329.48 | 361.48 | 329.77 | 361.51 | 329.98 | 361.46 | 342.63 | 361.44 |
| 348.06 | 361.63 | 349.35 | 361.64 | 351.02 | 361.63 | 351.41 | 361.61 | 351.96 | 361.51 |
| 353.09 | 361.48 | 353.49 | 361.48 | 354.65 | 361.52 | 356.97 | 361.66 | 357.89 | 361.69 |
| 360.28 | 361.73 | 360.39 | 361.74 | 363.38 | 361.82 | 364.14 | 361.83 | 364.46 | 361.82 |
| 365.5 | 361.75 | 367.85 | 361.65 | 368.97 | 361.59 | 371.62 | 361.4 | 374.68 | 361.38 |
| 378.01 | 361.27 | 382.73 | 361.42 | 383.02 | 361.41 | 383.72 | 361.42 | 392.23 | 361.6 |
| 395.83 | 361.57 | 407.24 | 361.75 | 408.1 | 361.77 | 409.23 | 361.78 | 410.12 | 361.8 |
| 415.14 | 361.8 | 415.69 | 361.81 | 416.81 | 361.81 | 417.34 | 361.83 | 417.65 | 361.87 |
| 419.76 | 361.89 | 420.19 | 361.85 | 421.32 | 361.79 | 428.39 | 361.39 | 429.3 | 361.34 |
| 431.83 | 361.24 | 432.22 | 361.23 | 433.85 | 361.29 | 438.11 | 361.38 | 446.99 | 361.45 |
| 449.84 | 361.51 | 452.42 | 361.51 | 455.21 | 361.43 | 456.12 | 361.39 | 457.32 | 361.38 |
| 458.81 | 361.42 | 470.07 | 361.42 | 470.41 | 361.38 | 470.94 | 361.35 | 475.02 | 361.22 |
| 476.18 | 361.2 | 477.42 | 361.19 | 477.9 | 361.15 | 479.06 | 361.11 | 479.84 | 361.11 |
| 482.01 | 361.15 | 482.96 | 361.21 | 483.69 | 361.35 | 487.27 | 361.59 | 487.65 | 361.61 |
| 490.12 | 361.71 | 490.64 | 361.71 | 491.42 | 361.74 | 494.94 | 361.72 | 509.43 | 361.99 |
| 509.92 | 362.01 | 510.81 | 362.01 | 511.14 | 362.03 | 514.15 | 362.03 | 515.45 | 361.99 |
| 523.48 | 361.72 | 526.18 | 361.69 | 531.19 | 361.51 | 532.14 | 361.47 | 533.57 | 361.44 |
| 533.69 | 361.43 | 534.95 | 361.41 | 535.94 | 361.38 | 542.61 | 361.44 | 542.86 | 361.44 |
| 543.59 | 361.5 | 544.68 | 361.52 | 546.49 | 361.52 | 547.17 | 361.5 | 549.57 | 361.48 |
| 550.21 | 361.45 | 551.2 | 361.39 | 551.32 | 361.37 | 552.38 | 361.34 | 554.5 | 361.31 |
| 554.85 | 361.31 | 564.49 | 361.15 | 565.45 | 361.13 | 575.89 | 360.87 | 578.7 | 360.64 |
| 580.99 | 360.35 | 581.42 | 360.4 | 582.95 | 360.34 | 583.2 | 360.31 | 584.1 | 360.3 |
| 587.85 | 360.43 | 589.62 | 360.47 | 590.38 | 360.48 | 592.45 | 360.6 | 597.64 | 360.54 |
| 598.31 | 360.53 | 600.95 | 360.54 | 601.72 | 360.53 | 606.05 | 360.39 | 606.47 | 360.39 |
| 608.59 | 360.44 | 608.95 | 360.44 | 609.24 | 360.47 | 610.32 | 360.49 | 614.77 | 360.48 |
| 621.74 | 360.3 | 621.85 | 360.29 | 627.99 | 360.23 | 628.2 | 360.22 | 633.11 | 360.08 |
| 639.16 | 359.9 | 639.89 | 359.95 | 641.03 | 359.95 | 641.9 | 359.93 | 643.66 | 359.85 |
| 645.21 | 359.74 | 645.38 | 359.72 | 646.07 | 359.72 | 647.65 | 359.74 | 649.65 | 359.72 |
| 650.1 | 359.72 | 650.2 | 359.79 | 651.06 | 359.88 | 651.91 | 359.93 | 653.75 | 360 |
| 657.34 | 360.08 | 658.2 | 360.08 | 659.5 | 360.09 | 662.1 | 360.13 | 662.46 | 360.14 |
| 663.08 | 360.18 | 663.51 | 360.24 | 668.86 | 360.47 | 672.57 | 360.59 | 673.63 | 360.59 |
| 674.55 | 360.57 | 679.05 | 360.39 | 680.92 | 360.33 | 682.77 | 360.28 | 686.45 | 360.16 |
| 688.39 | 360.12 | 697.26 | 360.57 | 702.86 | 360.88 | 703.91 | 360.93 | 709.68 | 361 |
| 712.5 | 361.32 | 712.98 | 361.31 | 713.47 | 361.32 | 716.4 | 361.29 | 720.08 | 361.3 |
| 723.29 | 361.27 | 723.85 | 361.27 | 727.73 | 361.16 | 729.41 | 361.12 | 731.84 | 361.09 |
| 732.72 | 361.09 | 734.05 | 361.13 | 734.38 | 361.16 | 735.15 | 361.2 | 739.06 | 361.23 |
| 741.14 | 361.23 | 744.54 | 361.17 | 747.7 | 361.08 | 748.83 | 361.1 | 749.38 | 361.1 |
| 753.38 | 361.12 | 753.87 | 361.13 | 755.14 | 361.19 | 758.1 | 361.27 | 758.52 | 361.24 |
| 759.49 | 361.24 | 760.04 | 361.26 | 767.6 | 361.38 | 768.99 | 361.43 | 769.49 | 361.52 |
| 770.26 | 361.57 | 770.69 | 361.58 | 772.38 | 361.56 | 773.8 | 361.49 | 775.3 | 361.4 |
| 776.32 | 361.37 | 777.11 | 361.36 | 777.99 | 361.33 | 778.86 | 361.29 | 779.93 | 361.28 |
| 780.27 | 361.31 | 781.44 | 361.37 | 786.95 | 361.37 | 788.43 | 361.35 | 790.01 | 361.31 |
| 790.99 | 361.31 | 792.97 | 361.19 | 793.57 | 361.11 | 793.96 | 361.09 | 794.41 | 361.04 |
| 795.51 | 361.07 | 795.77 | 361.04 | 796.14 | 361.03 | 796.3 | 361 | 797.31 | 360.87 |
| 797.66 | 360.84 | 798.45 | 360.84 | 799.59 | 360.89 | 801.02 | 360.96 | 801.43 | 360.99 |
| 802.16 | 361.09 | 803.52 | 361.34 | 807.95 | 361.52 | 809.37 | 361.56 | 811.75 | 361.58 |
| 813.46 | 361.61 | 814.99 | 361.62 | 816.26 | 361.65 | 819.09 | 361.7 | 821.43 | 361.72 |
| 823.65 | 361.7 | 824.54 | 361.7 | 826.13 | 361.67 | 826.61 | 361.67 | 829.01 | 361.55 |
| 831.11 | 361.39 | 832.18 | 361.37 | 835.61 | 361.34 | 838.22 | 361.28 | 840.52 | 361.25 |
| 841.52 | 361.23 | 843.02 | 361.19 | 845.76 | 361.11 | 846.23 | 361.09 | 846.51 | 361.04 |
| 847.47 | 361.02 | 849.36 | 361.01 | 852.89 | 360.97 | 853.83 | 360.97 | 854.18 | 360.98 |
| 855.55 | 361.06 | 857.76 | 361.26 | 858.83 | 361.27 | 859.77 | 361.31 | 861.37 | 361.29 |
| 863.88 | 361.21 | 863.97 | 361.2 | 865.7 | 361.15 | 866.73 | 361.14 | 870.62 | 361.08 |
| 875.49 | 361.11 | 877.22 | 361.1 | 879.18 | 361.12 | 880.44 | 361.17 | 881.68 | 361.21 |
| 882.13 | 361.21 | 884.21 | 361.23 | 884.63 | 361.23 | 886.96 | 361.19 | 888.87 | 361.18 |
| 891.09 | 361.23 | 892.12 | 361.21 | 893.12 | 361.2 | 894.35 | 361.2 | 894.88 | 361.21 |
| 897.36 | 361.29 | 900.6 | 361.31 | 907.14 | 361.56 | 917.59 | 361.48 | 921.35 | 361.42 |
| 923.42 | 361.27 | 924.55 | 361.22 | 926.27 | 361.17 | 927.72 | 361.1 | 928.69 | 361.07 |
| 930.16 | 361.05 | 932.79 | 361.02 | 933.21 | 361.02 | 936.66 | 361.07 | 937.3 | 361.09 |
| 938.83 | 361.1 | 941.91 | 361.15 | 942.56 | 361.17 | 943.35 | 361.17 | 946.48 | 361.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 949.45 | 361.24 | 954.3 | 361.25 | 955.2 | 361.26 | 957.08 | 361.3 | 958.52 | 361.37 |
| 959.4 | 361.43 | 961.2 | 361.53 | 964.41 | 361.75 | 964.48 | 361.76 | 965.57 | 361.79 |
| 969.1 | 361.84 | 969.96 | 361.84 | 970.87 | 361.83 | 970.95 | 361.82 | 976.12 | 361.76 |
| 977.39 | 361.73 | 980.47 | 361.61 | 982.15 | 361.6 | 983.36 | 361.6 | 983.89 | 361.62 |
| 987.98 | 361.7 | 991.52 | 361.75 | 993.34 | 361.71 | 998.13 | 361.63 | 998.78 | 361.61 |
| 999.47 | 361.61 | 1001.79 | 361.57 | 1004.28 | 361.56 | 1013.37 | 361.58 | 1013.47 | 361.6 |
| 1014.67 | 361.6 | 1015.38 | 361.57 | 1019.41 | 361.45 | 1020.93 | 361.42 | 1022.39 | 361.42 |
| 1024.42 | 361.45 | 1025.1 | 361.58 | 1026.39 | 361.84 | 1027.7 | 362.14 | 1028.26 | 362.26 |
| 1028.58 | 362.28 | 1030.01 | 362.34 | 1031.56 | 362.36 | 1033.59 | 362.37 | 1034.25 | 362.36 |
| 1036.5 | 362.34 | 1037.51 | 362.35 | 1038.97 | 362.39 | 1043.15 | 362.45 | 1051.87 | 362.64 |
| 1054.03 | 362.69 | 1056.87 | 362.78 | 1057.93 | 362.83 | 1059.8 | 362.88 | 1062.15 | 362.99 |
| 1064.32 | 363.04 | 1067.4 | 363.15 | 1067.99 | 363.11 | 1068.97 | 363.12 | 1070.37 | 363.09 |
| 1070.78 | 363.1 | 1071.35 | 363.09 | 1073.53 | 363.12 | 1075.31 | 363.17 | 1076.31 | 363.16 |
| 1077.31 | 363.09 | 1077.68 | 363.1 | 1079.16 | 363.01 | 1082.01 | 362.78 | 1083.33 | 362.68 |
| 1094.31 | 362.64 | 1096.03 | 362.63 | 1097.12 | 362.61 | 1099.9 | 362.57 | 1101.42 | 362.53 |
| 1108.99 | 362.53 | 1110.12 | 362.56 | 1116.25 | 362.69 | 1117.98 | 362.7 | 1123.44 | 362.74 |
| 1124.98 | 362.82 | 1127.78 | 362.93 | 1128.71 | 362.96 | 1132.23 | 363.13 | 1135.66 | 363.3 |
| 1138.04 | 363.4 | 1138.19 | 363.4 | 1140.77 | 363.48 | 1141.54 | 363.47 | 1143.8 | 363.47 |
| 1146.04 | 363.62 | 1148.83 | 363.84 | 1150.32 | 363.99 | 1154.18 | 364.04 | 1173.97 | 364.43 |
| 1174.74 | 364.44 | 1177.28 | 364.49 | 1178.82 | 364.49 | 1179.01 | 364.48 | 1180.26 | 364.48 |
| 1183.07 | 364.47 | 1186.36 | 364.54 | 1186.65 | 364.54 | 1191.18 | 364.61 | 1193.33 | 364.66 |
| 1194.98 | 364.69 | 1195.06 | 364.67 | 1205.16 | 364.83 | 1206.32 | 364.86 | 1208.32 | 364.87 |
| 1218.85 | 364.95 | 1219.43 | 364.96 | 1220.63 | 364.96 | 1221.2 | 364.94 | 1221.95 | 364.89 |
| 1223.51 | 364.82 | 1225.16 | 364.83 | 1226.96 | 365 | 1227.91 | 365.01 | 1233.61 | 365.18 |
| 1236.19 | 365.25 | 1239.28 | 365.32 | 1242.01 | 365.37 | 1244.35 | 365.38 | 1244.63 | 365.39 |
| 1246.65 | 365.38 | 1246.95 | 365.37 | 1251.01 | 365.31 | 1254.1 | 365.28 | 1256.72 | 365.23 |
| 1257.03 | 365.16 | 1257.65 | 365.14 | 1258.73 | 365.12 | 1259.56 | 365.12 | 1261.96 | 365.13 |
| 1267.23 | 365.26 | 1269.55 | 365.26 | 1270.21 | 365.27 | 1280.39 | 365.24 | 1282.35 | 365.26 |
| 1283.28 | 365.28 | 1285.09 | 365.3 | 1286.31 | 365.35 | 1288.96 | 365.37 | 1289.43 | 365.38 |
| 1295.16 | 365.38 | 1295.95 | 365.39 | 1298.17 | 365.4 | 1298.73 | 365.39 | 1299.68 | 365.4 |
| 1304.31 | 365.48 | 1305.95 | 365.49 | 1308.22 | 365.48 | 1309.53 | 365.47 | 1311.06 | 365.42 |
| 1312.78 | 365.41 | 1315.83 | 365.44 | 1316.57 | 365.45 | 1317.51 | 365.45 | 1319.63 | 365.48 |
| 1321.95 | 365.47 | 1326.17 | 365.4 | 1327.29 | 365.36 | 1328.02 | 365.32 | 1330.65 | 365.29 |
| 1331.25 | 365.29 | 1334.72 | 365.25 | 1335.8 | 365.25 | 1339.6 | 365.32 | 1340.85 | 365.34 |
| 1344 | 365.63 | 1344.83 | 365.69 | 1346.85 | 365.8 | 1348.81 | 365.82 | 1354.35 | 365.8 |
| 1355.23 | 365.78 | 1356.03 | 365.79 | 1361.11 | 365.73 | 1363.94 | 365.65 | 1364.36 | 365.65 |
| 1365.01 | 365.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 299.21 | .05 | 318.19 | .04 | 1062.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 318.19 | 1062.15 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6158.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 313.46 | 363.41 | 316.15 | 363.32 | 317.37 | 363.27 | 317.8 | 363.26 | 320.11 | 363.13 |
| 321.84 | 363.06 | 323.36 | 363.01 | 324.4 | 362.97 | 325.56 | 362.9 | 325.97 | 362.86 |
| 327.27 | 362.79 | 328.3 | 362.75 | 329 | 362.71 | 329.84 | 362.64 | 330.45 | 362.58 |
| 332.3 | 362.02 | 332.82 | 361.87 | 338.02 | 361.49 | 342.32 | 361.18 | 342.62 | 361.2 |
| 342.84 | 361.15 | 356.13 | 361.14 | 361.84 | 361.33 | 363.2 | 361.35 | 364.96 | 361.34 |
| 365.36 | 361.31 | 365.94 | 361.21 | 367.12 | 361.18 | 367.54 | 361.18 | 368.77 | 361.22 |
| 371.2 | 361.37 | 372.17 | 361.4 | 374.68 | 361.45 | 374.8 | 361.46 | 377.94 | 361.55 |
| 378.74 | 361.56 | 379.07 | 361.55 | 379.77 | 361.49 | 380.16 | 361.47 | 382.64 | 361.37 |
| 383.81 | 361.3 | 386.6 | 361.1 | 389.81 | 361.09 | 393.31 | 360.96 | 398.27 | 361.12 |
| 399.31 | 361.13 | 408.26 | 361.32 | 412.04 | 361.29 | 424.03 | 361.49 | 424.93 | 361.5 |
| 427.06 | 361.54 | 434.09 | 361.54 | 434.64 | 361.57 | 434.97 | 361.62 | 437.18 | 361.63 |
| 437.64 | 361.59 | 438.82 | 361.52 | 446.25 | 361.1 | 447.21 | 361.04 | 449.87 | 360.94 |
| 450.27 | 360.93 | 451.09 | 360.97 | 456.47 | 361.09 | 464.58 | 361.15 | 468.79 | 361.22 |
| 471.86 | 361.22 | 474.43 | 361.14 | 475.15 | 361.1 | 476.17 | 361.1 | 476.65 | 361.09 |
| 477.61 | 361.12 | 478.22 | 361.13 | 490.05 | 361.13 | 490.4 | 361.09 | 490.96 | 361.06 |
| 495.25 | 360.92 | 496.46 | 360.9 | 496.91 | 360.9 | 497.77 | 360.88 | 498.28 | 360.85 |
| 499.5 | 360.8 | 500.31 | 360.8 | 502.6 | 360.85 | 503.29 | 360.88 | 503.72 | 360.92 |
| 504.35 | 361.06 | 508.12 | 361.31 | 508.52 | 361.33 | 511.12 | 361.44 | 511.66 | 361.44 |
| 512.48 | 361.46 | 516.18 | 361.44 | 531.4 | 361.73 | 532.29 | 361.76 | 533.2 | 361.77 |
| 536.36 | 361.77 | 537.74 | 361.73 | 546.17 | 361.45 | 549.01 | 361.42 | 554.27 | 361.26 |
| 555.27 | 361.22 | 556.77 | 361.2 | 556.9 | 361.19 | 558.22 | 361.18 | 559.27 | 361.15 |
| 566.28 | 361.22 | 566.54 | 361.22 | 566.85 | 361.26 | 567.31 | 361.29 | 568.44 | 361.31 |
| 570.35 | 361.31 | 571.06 | 361.29 | 573.58 | 361.27 | 574.26 | 361.24 | 575.82 | 361.14 |
| 576.54 | 361.12 | 579.13 | 361.1 | 589.26 | 360.93 | 590.27 | 360.91 | 601.24 | 360.63 |
| 604.2 | 360.39 | 606.6 | 360.09 | 607.05 | 360.14 | 608.66 | 360.07 | 609.23 | 360.04 |
| 609.87 | 360.03 | 613.81 | 360.17 | 615.67 | 360.22 | 616.47 | 360.23 | 618.65 | 360.36 |
| 624.1 | 360.3 | 624.8 | 360.28 | 627.58 | 360.29 | 628.38 | 360.28 | 631.59 | 360.19 |
| 632.1 | 360.16 | 632.93 | 360.14 | 633.37 | 360.14 | 635.98 | 360.2 | 636.28 | 360.22 |
| 637.42 | 360.25 | 641.68 | 360.24 | 649.42 | 360.04 | 649.54 | 360.04 | 655.99 | 359.97 |
| 656.21 | 359.97 | 661.37 | 359.81 | 667.72 | 359.63 | 667.98 | 359.64 | 668.49 | 359.69 |
| 669.69 | 359.68 | 670.61 | 359.66 | 672.45 | 359.58 | 672.94 | 359.55 | 674.26 | 359.44 |
| 674.99 | 359.44 | 676.68 | 359.46 | 678.8 | 359.44 | 679.28 | 359.44 | 679.38 | 359.51 |
| 680.21 | 359.6 | 680.86 | 359.65 | 682.83 | 359.73 | 684.93 | 359.79 | 686.68 | 359.82 |
| 688.42 | 359.82 | 690.95 | 359.86 | 691.68 | 359.89 | 692.31 | 359.98 | 697.52 | 360.21 |
| 701.13 | 360.32 | 702.16 | 360.32 | 702.74 | 360.31 | 703.06 | 360.29 | 707.44 | 360.13 |
| 709.26 | 360.06 | 711.05 | 360.01 | 714.63 | 359.89 | 715.89 | 359.87 | 716.34 | 359.85 |
| 716.91 | 359.87 | 725.14 | 360.32 | 730.59 | 360.64 | 731.62 | 360.69 | 737.23 | 360.75 |
| 738.41 | 360.87 | 738.77 | 360.9 | 739.97 | 361.03 | 740.44 | 361.02 | 740.6 | 361.04 |
| 740.91 | 361.03 | 742.89 | 361.01 | 748.31 | 361.01 | 750.46 | 360.99 | 751 | 360.99 |
| 752.04 | 360.96 | 754.78 | 360.87 | 756.42 | 360.83 | 758.78 | 360.8 | 759.63 | 360.8 |
| 760.35 | 360.81 | 762.04 | 360.9 | 765.8 | 360.94 | 767.83 | 360.93 | 770.54 | 360.88 |
| 771.13 | 360.86 | 774.2 | 360.77 | 775.31 | 360.79 | 779.73 | 360.8 | 780.21 | 360.81 |
| 781.44 | 360.88 | 784.32 | 360.96 | 784.73 | 360.94 | 785.67 | 360.94 | 786.21 | 360.96 |
| 793.56 | 361.09 | 794.32 | 361.11 | 794.91 | 361.14 | 795.4 | 361.23 | 796.56 | 361.3 |
| 798.1 | 361.29 | 798.21 | 361.28 | 799.6 | 361.23 | 801.05 | 361.14 | 802.04 | 361.11 |
| 802.81 | 361.1 | 803.66 | 361.07 | 804.52 | 361.03 | 805.55 | 361.01 | 805.88 | 361.04 |
| 807.03 | 361.08 | 812.38 | 361.04 | 813.15 | 361.03 | 814.09 | 361 | 815.36 | 360.97 |
| 816.31 | 360.96 | 818.24 | 360.85 | 818.82 | 360.76 | 819.2 | 360.74 | 819.63 | 360.69 |
| 820.7 | 360.72 | 821.32 | 360.68 | 821.89 | 360.62 | 822.57 | 360.53 | 823.11 | 360.52 |
| 823.98 | 360.54 | 826.07 | 360.65 | 826.8 | 360.73 | 827.18 | 360.79 | 828.5 | 361.05 |
| 832.81 | 361.23 | 834.19 | 361.27 | 836.51 | 361.29 | 838.16 | 361.32 | 839.66 | 361.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 840.89 | 361.36 | 843.64 | 361.4 | 845.92 | 361.42 | 847.52 | 361.4 | 848.29 | 361.4 |
| 850.49 | 361.37 | 850.96 | 361.36 | 853.29 | 361.25 | 854.99 | 361.13 | 855.34 | 361.11 |
| 856.37 | 361.08 | 857.43 | 361.07 | 859.71 | 361.04 | 862.24 | 360.98 | 865.46 | 360.91 |
| 866.92 | 360.87 | 869.58 | 360.78 | 870.04 | 360.76 | 870.32 | 360.71 | 871.25 | 360.68 |
| 873.08 | 360.67 | 873.33 | 360.66 | 873.98 | 360.67 | 876.52 | 360.63 | 877.43 | 360.63 |
| 877.77 | 360.64 | 878.9 | 360.71 | 881.25 | 360.93 | 882.29 | 360.94 | 883.2 | 360.98 |
| 884.77 | 360.96 | 886.34 | 360.91 | 887.9 | 360.84 | 893.76 | 360.73 | 898.5 | 360.75 |
| 900.18 | 360.73 | 902.09 | 360.75 | 904.52 | 360.83 | 904.95 | 360.83 | 906.98 | 360.85 |
| 909.65 | 360.8 | 911.51 | 360.79 | 913.67 | 360.84 | 914.46 | 360.84 | 914.67 | 360.83 |
| 916.22 | 360.83 | 917.36 | 360.85 | 919.77 | 360.93 | 922.92 | 360.96 | 929.28 | 361.24 |
| 939.44 | 361.17 | 943.1 | 361.11 | 945.12 | 360.97 | 946.22 | 360.92 | 947.89 | 360.87 |
| 949.3 | 360.8 | 950.25 | 360.78 | 951.67 | 360.76 | 952.5 | 360.74 | 954.64 | 360.73 |
| 957.99 | 360.77 | 958.62 | 360.78 | 960.11 | 360.79 | 963.1 | 360.83 | 963.73 | 360.85 |
| 964.5 | 360.85 | 967.54 | 360.9 | 970.44 | 360.93 | 975.06 | 360.95 | 975.15 | 360.96 |
| 976.02 | 360.97 | 977.86 | 361.01 | 978.53 | 361.03 | 981.86 | 361.22 | 985.32 | 361.44 |
| 986.11 | 361.46 | 989.55 | 361.51 | 990.39 | 361.51 | 996.38 | 361.45 | 997.61 | 361.42 |
| 1000.61 | 361.31 | 1002.24 | 361.3 | 1003.75 | 361.3 | 1004.92 | 361.33 | 1007.91 | 361.38 |
| 1010.54 | 361.42 | 1011.35 | 361.42 | 1012.13 | 361.41 | 1013.12 | 361.38 | 1017.78 | 361.31 |
| 1018.42 | 361.29 | 1019.09 | 361.29 | 1021.34 | 361.25 | 1023.76 | 361.24 | 1032.6 | 361.25 |
| 1032.7 | 361.27 | 1033.87 | 361.26 | 1038.48 | 361.12 | 1039.35 | 361.1 | 1041.38 | 361.1 |
| 1043.35 | 361.14 | 1044.01 | 361.28 | 1045.26 | 361.56 | 1046.54 | 361.87 | 1047.08 | 361.98 |
| 1047.4 | 362 | 1048.79 | 362.05 | 1050.19 | 362.08 | 1052.91 | 362.09 | 1055.1 | 362.07 |
| 1057.5 | 362.12 | 1061.57 | 362.19 | 1062.01 | 362.21 | 1070.06 | 362.38 | 1074.91 | 362.52 |
| 1075.95 | 362.57 | 1077.77 | 362.62 | 1080.05 | 362.72 | 1082.17 | 362.77 | 1085.17 | 362.86 |
| 1085.91 | 362.81 | 1086.71 | 362.82 | 1088.06 | 362.78 | 1091.15 | 362.81 | 1092.88 | 362.86 |
| 1093.87 | 362.85 | 1094.84 | 362.77 | 1095.2 | 362.78 | 1096.64 | 362.68 | 1099.42 | 362.43 |
| 1100.71 | 362.33 | 1103.43 | 362.32 | 1111.42 | 362.28 | 1113.1 | 362.27 | 1113.92 | 362.25 |
| 1116.87 | 362.22 | 1118.36 | 362.19 | 1125.74 | 362.19 | 1126.3 | 362.21 | 1131.88 | 362.32 |
| 1132.82 | 362.34 | 1133.42 | 362.34 | 1138.47 | 362.39 | 1139.84 | 362.4 | 1141.34 | 362.48 |
| 1143.6 | 362.57 | 1144.98 | 362.63 | 1148.42 | 362.8 | 1151.76 | 362.97 | 1154.08 | 363.07 |
| 1154.23 | 363.08 | 1156.75 | 363.16 | 1157.5 | 363.15 | 1159.7 | 363.16 | 1161.88 | 363.33 |
| 1164.6 | 363.58 | 1166.06 | 363.74 | 1169.82 | 363.79 | 1189.13 | 364.17 | 1192.36 | 364.22 |
| 1193.86 | 364.23 | 1194.05 | 364.22 | 1198.01 | 364.22 | 1200.78 | 364.28 | 1205.92 | 364.35 |
| 1208.02 | 364.4 | 1209.62 | 364.43 | 1209.7 | 364.42 | 1219.55 | 364.57 | 1220.69 | 364.6 |
| 1222.63 | 364.62 | 1232.91 | 364.7 | 1233.48 | 364.71 | 1234.65 | 364.71 | 1235.2 | 364.69 |
| 1235.93 | 364.64 | 1236.8 | 364.6 | 1237.46 | 364.58 | 1239.06 | 364.59 | 1240.82 | 364.74 |
| 1241.75 | 364.75 | 1247.31 | 364.92 | 1248.76 | 364.96 | 1250.25 | 364.99 | 1252.84 | 365.06 |
| 1255.5 | 365.1 | 1257.78 | 365.12 | 1260.32 | 365.11 | 1264.28 | 365.06 | 1265.26 | 365.05 |
| 1267.3 | 365.04 | 1269.41 | 365 | 1269.86 | 365 | 1270.16 | 364.93 | 1270.76 | 364.91 |
| 1271.82 | 364.9 | 1272.62 | 364.9 | 1274.96 | 364.91 | 1280.1 | 365.02 | 1283.01 | 365.03 |
| 1292.94 | 365 | 1294.85 | 365.02 | 1295.76 | 365.04 | 1297.84 | 365.06 | 1298.71 | 365.1 |
| 1301.31 | 365.12 | 1301.76 | 365.13 | 1307.35 | 365.13 | 1308.12 | 365.15 | 1310.28 | 365.16 |
| 1310.83 | 365.15 | 1311.76 | 365.16 | 1316.28 | 365.24 | 1320.09 | 365.24 | 1321.37 | 365.23 |
| 1322.86 | 365.19 | 1324.34 | 365.18 | 1324.54 | 365.19 | 1325.65 | 365.19 | 1331.22 | 365.25 |
| 1333.48 | 365.24 | 1338.13 | 365.16 | 1338.69 | 365.14 | 1339.41 | 365.1 | 1341.97 | 365.08 |
| 1342.56 | 365.08 | 1344.06 | 365.05 | 1345.94 | 365.03 | 1347 | 365.03 | 1351.92 | 365.11 |
| 1354.99 | 365.36 | 1355.8 | 365.42 | 1357.09 | 365.48 | 1357.78 | 365.52 | 1359.69 | 365.54 |
| 1365.21 | 365.53 | 1365.51 | 365.52 | 1366.73 | 365.52 | 1371.69 | 365.46 | 1374.45 | 365.38 |
| 1375.49 | 365.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 313.46 | .05 | 330.45 | .04 | 1080.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 330.45 | 1080.05 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6138.34*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 327.71 | 363.23 | 330.09 | 363.14 | 331.55 | 363.06 | 333.59 | 362.94 | 335.11 | 362.86 |
| 336.46 | 362.81 | 338.54 | 362.67 | 339.91 | 362.57 | 341.61 | 362.47 | 341.83 | 362.44 |
| 342.71 | 362.36 | 344.65 | 361.76 | 345.2 | 361.6 | 355.15 | 360.87 | 355.48 | 360.9 |
| 355.7 | 360.85 | 369.64 | 360.83 | 375.62 | 361.04 | 377.05 | 361.06 | 378.89 | 361.05 |
| 379.31 | 361.02 | 379.91 | 360.91 | 381.16 | 360.88 | 381.6 | 360.88 | 382.88 | 360.93 |
| 385.44 | 361.08 | 386.46 | 361.12 | 389.21 | 361.17 | 392.5 | 361.27 | 393.34 | 361.29 |
| 394.83 | 361.19 | 397.42 | 361.09 | 398.65 | 361.01 | 401.57 | 360.8 | 404.94 | 360.79 |
| 408.62 | 360.65 | 413.82 | 360.83 | 414.13 | 360.82 | 414.91 | 360.84 | 424.28 | 361.04 |
| 428.25 | 361.01 | 440.82 | 361.22 | 442.8 | 361.26 | 443.99 | 361.28 | 446.46 | 361.28 |
| 449.52 | 361.27 | 450.12 | 361.28 | 451.36 | 361.28 | 451.94 | 361.3 | 452.29 | 361.36 |
| 454.6 | 361.37 | 455.08 | 361.33 | 456.32 | 361.26 | 464.11 | 360.81 | 464.24 | 360.81 |
| 465.12 | 360.75 | 467.9 | 360.64 | 468.33 | 360.63 | 469.18 | 360.67 | 470.13 | 360.7 |
| 474.82 | 360.8 | 483.33 | 360.86 | 484.6 | 360.88 | 487.74 | 360.94 | 490.58 | 360.94 |
| 493.65 | 360.85 | 494.4 | 360.81 | 495.48 | 360.81 | 495.98 | 360.8 | 496.99 | 360.83 |
| 497.62 | 360.84 | 510.02 | 360.84 | 510.4 | 360.8 | 510.98 | 360.76 | 515.48 | 360.61 |
| 516.75 | 360.59 | 518.12 | 360.58 | 518.66 | 360.54 | 519.93 | 360.49 | 520.79 | 360.49 |
| 523.18 | 360.54 | 524.23 | 360.6 | 525.02 | 360.77 | 528.97 | 361.03 | 529.39 | 361.05 |
| 532.11 | 361.16 | 532.68 | 361.16 | 533.55 | 361.19 | 537.42 | 361.17 | 553.38 | 361.47 |
| 553.93 | 361.5 | 554.91 | 361.5 | 555.27 | 361.52 | 558.58 | 361.52 | 560.02 | 361.47 |
| 568.86 | 361.18 | 571.83 | 361.15 | 577.36 | 361 | 578.4 | 360.97 | 579.97 | 360.96 |
| 580.11 | 360.95 | 581.78 | 360.94 | 582.59 | 360.92 | 589.94 | 361 | 590.21 | 361.01 |
| 590.81 | 361.07 | 592.21 | 361.1 | 594.16 | 361.1 | 594.96 | 361.08 | 597.6 | 361.06 |
| 599.95 | 360.92 | 603.03 | 360.88 | 603.42 | 360.88 | 614.03 | 360.71 | 615.09 | 360.68 |
| 626.59 | 360.4 | 629.69 | 360.15 | 632.21 | 359.83 | 632.68 | 359.88 | 634.38 | 359.81 |
| 634.97 | 359.77 | 635.64 | 359.77 | 639.76 | 359.92 | 641.72 | 359.97 | 642.55 | 359.98 |
| 644.84 | 360.11 | 650.56 | 360.05 | 651.29 | 360.04 | 654.2 | 360.05 | 655.05 | 360.04 |
| 658.41 | 359.94 | 659.82 | 359.89 | 660.28 | 359.89 | 663.01 | 359.95 | 663.33 | 359.98 |
| 664.52 | 360.01 | 668.98 | 360 | 669.43 | 359.99 | 677.1 | 359.79 | 677.22 | 359.79 |
| 683.99 | 359.72 | 684.22 | 359.71 | 689.62 | 359.55 | 696.29 | 359.36 | 696.56 | 359.36 |
| 697.1 | 359.42 | 698.35 | 359.42 | 701.25 | 359.3 | 701.76 | 359.27 | 703.14 | 359.16 |
| 703.91 | 359.16 | 705.7 | 359.18 | 707.95 | 359.16 | 708.45 | 359.16 | 708.55 | 359.23 |
| 709.36 | 359.33 | 710.5 | 359.4 | 712.34 | 359.48 | 715.3 | 359.55 | 716.1 | 359.55 |
| 717.34 | 359.56 | 719.8 | 359.6 | 720.51 | 359.62 | 721.12 | 359.71 | 726.18 | 359.94 |
| 729.69 | 360.05 | 730.69 | 360.05 | 731.57 | 360.02 | 735.82 | 359.86 | 738.71 | 359.76 |
| 739.34 | 359.75 | 742.81 | 359.63 | 744.65 | 359.59 | 745.03 | 359.6 | 753.03 | 360.07 |
| 758.33 | 360.4 | 759.32 | 360.45 | 764.77 | 360.5 | 765.92 | 360.61 | 766.27 | 360.63 |
| 767.43 | 360.74 | 767.89 | 360.73 | 768.35 | 360.74 | 770.28 | 360.73 | 771.12 | 360.72 |
| 775.54 | 360.72 | 777.64 | 360.71 | 779.17 | 360.68 | 781.83 | 360.59 | 783.42 | 360.55 |
| 785.71 | 360.5 | 786.55 | 360.5 | 787.81 | 360.54 | 788.12 | 360.57 | 788.88 | 360.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 792.54 | 360.64 | 794.51 | 360.63 | 797.15 | 360.58 | 800.71 | 360.46 | 801.78 | 360.48 |
| 806.08 | 360.49 | 806.54 | 360.5 | 807.74 | 360.57 | 810.54 | 360.65 | 810.94 | 360.64 |
| 811.85 | 360.64 | 812.38 | 360.66 | 819.52 | 360.79 | 820.25 | 360.81 | 820.84 | 360.84 |
| 821.31 | 360.94 | 822.03 | 361 | 822.44 | 361.01 | 824.04 | 361.01 | 825.39 | 360.96 |
| 826.8 | 360.88 | 827.76 | 360.85 | 828.41 | 360.85 | 830.17 | 360.77 | 831.17 | 360.74 |
| 831.5 | 360.76 | 832.61 | 360.8 | 837.82 | 360.72 | 838.56 | 360.7 | 840.71 | 360.63 |
| 841.63 | 360.61 | 843.5 | 360.5 | 844.07 | 360.41 | 844.44 | 360.39 | 844.86 | 360.34 |
| 845.9 | 360.37 | 846.5 | 360.34 | 847.71 | 360.21 | 848.24 | 360.2 | 849.08 | 360.23 |
| 851.12 | 360.35 | 851.5 | 360.38 | 852.19 | 360.49 | 852.88 | 360.64 | 853.48 | 360.75 |
| 857.66 | 360.94 | 859.01 | 360.98 | 861.26 | 361 | 862.87 | 361.02 | 864.32 | 361.03 |
| 865.52 | 361.06 | 868.19 | 361.1 | 869.17 | 361.12 | 871.43 | 361.1 | 871.96 | 361.1 |
| 874.85 | 361.06 | 875.31 | 361.05 | 877.57 | 360.95 | 879.56 | 360.82 | 880.56 | 360.8 |
| 881.59 | 360.79 | 883.8 | 360.75 | 888.45 | 360.62 | 890.81 | 360.55 | 893.4 | 360.46 |
| 893.85 | 360.43 | 894.12 | 360.38 | 895.02 | 360.35 | 896.08 | 360.34 | 896.39 | 360.33 |
| 897.67 | 360.33 | 900.14 | 360.29 | 901.03 | 360.29 | 901.37 | 360.3 | 902.45 | 360.37 |
| 904.74 | 360.6 | 905.76 | 360.61 | 906.64 | 360.66 | 908.16 | 360.63 | 909.69 | 360.58 |
| 910.88 | 360.52 | 912.25 | 360.48 | 913.23 | 360.47 | 916.9 | 360.38 | 921.5 | 360.39 |
| 923.14 | 360.37 | 925 | 360.38 | 926.18 | 360.42 | 927.36 | 360.45 | 930.14 | 360.46 |
| 932.35 | 360.41 | 934.15 | 360.4 | 934.56 | 360.42 | 936.25 | 360.46 | 936.35 | 360.45 |
| 937.59 | 360.46 | 938.17 | 360.45 | 939.34 | 360.47 | 942.17 | 360.58 | 945.24 | 360.61 |
| 951.42 | 360.92 | 961.3 | 360.86 | 964.85 | 360.81 | 966.82 | 360.67 | 967.88 | 360.61 |
| 969.51 | 360.57 | 970.88 | 360.51 | 972.51 | 360.47 | 973.18 | 360.47 | 974.1 | 360.45 |
| 975.67 | 360.43 | 976.06 | 360.43 | 979.32 | 360.46 | 979.94 | 360.47 | 981.38 | 360.48 |
| 984.29 | 360.51 | 985.65 | 360.53 | 988.61 | 360.58 | 991.42 | 360.62 | 995.92 | 360.66 |
| 996.85 | 360.67 | 998.63 | 360.71 | 999.66 | 360.75 | 1000.82 | 360.82 | 1002.52 | 360.91 |
| 1005.56 | 361.09 | 1005.63 | 361.1 | 1006.66 | 361.13 | 1009.99 | 361.18 | 1011.74 | 361.18 |
| 1016.63 | 361.15 | 1017.83 | 361.12 | 1020.74 | 361.02 | 1023.47 | 360.99 | 1023.97 | 361.01 |
| 1024.93 | 361.02 | 1027.84 | 361.06 | 1030.39 | 361.09 | 1031.19 | 361.09 | 1032.9 | 361.06 |
| 1037.43 | 360.99 | 1037.91 | 360.97 | 1040.89 | 360.93 | 1043.24 | 360.92 | 1051.84 | 360.91 |
| 1051.93 | 360.93 | 1053.07 | 360.92 | 1053.74 | 360.9 | 1057.55 | 360.8 | 1058.39 | 360.78 |
| 1059.9 | 360.78 | 1062.28 | 360.83 | 1062.63 | 360.92 | 1064.14 | 361.28 | 1065.38 | 361.6 |
| 1065.91 | 361.7 | 1066.22 | 361.72 | 1067.96 | 361.78 | 1070.95 | 361.81 | 1074 | 361.81 |
| 1074.65 | 361.83 | 1076.03 | 361.86 | 1079.98 | 361.93 | 1080.42 | 361.95 | 1088.24 | 362.13 |
| 1090.27 | 362.18 | 1092.96 | 362.26 | 1093.96 | 362.31 | 1095.73 | 362.36 | 1097.94 | 362.46 |
| 1098.47 | 362.46 | 1102.94 | 362.58 | 1103.66 | 362.52 | 1104.44 | 362.53 | 1105.76 | 362.48 |
| 1106.15 | 362.49 | 1106.7 | 362.48 | 1108.77 | 362.5 | 1110.46 | 362.55 | 1111.42 | 362.54 |
| 1112.36 | 362.45 | 1112.72 | 362.46 | 1114.13 | 362.35 | 1116.83 | 362.08 | 1117.71 | 362.01 |
| 1118.09 | 361.97 | 1120.74 | 361.96 | 1130.17 | 361.9 | 1131.21 | 361.88 | 1131.87 | 361.88 |
| 1133.85 | 361.86 | 1135.3 | 361.84 | 1142.23 | 361.85 | 1143.57 | 361.87 | 1149.4 | 361.99 |
| 1149.98 | 361.99 | 1154.9 | 362.04 | 1155.59 | 362.04 | 1156.23 | 362.06 | 1157.7 | 362.13 |
| 1161.25 | 362.29 | 1164.6 | 362.46 | 1167.86 | 362.64 | 1170.12 | 362.74 | 1170.26 | 362.75 |
| 1172.72 | 362.83 | 1173.45 | 362.83 | 1175.6 | 362.85 | 1177.73 | 363.05 | 1180.38 | 363.32 |
| 1181.7 | 363.48 | 1181.8 | 363.5 | 1184.87 | 363.53 | 1185.47 | 363.54 | 1204.29 | 363.9 |
| 1205.02 | 363.92 | 1207.44 | 363.96 | 1208.53 | 363.97 | 1208.64 | 363.96 | 1210.28 | 363.96 |
| 1212.95 | 363.97 | 1215.65 | 364.02 | 1220.66 | 364.1 | 1220.99 | 364.11 | 1224.27 | 364.17 |
| 1224.34 | 364.16 | 1233.95 | 364.31 | 1235.05 | 364.34 | 1236.95 | 364.36 | 1246.97 | 364.45 |
| 1247.53 | 364.46 | 1248.66 | 364.46 | 1249.21 | 364.44 | 1249.92 | 364.39 | 1251.41 | 364.34 |
| 1251.87 | 364.34 | 1252.97 | 364.36 | 1254.68 | 364.49 | 1255.58 | 364.5 | 1261.01 | 364.65 |
| 1263.46 | 364.72 | 1266.4 | 364.79 | 1269 | 364.83 | 1269.22 | 364.84 | 1271.22 | 364.85 |
| 1271.49 | 364.86 | 1273.7 | 364.85 | 1278.5 | 364.8 | 1280.49 | 364.79 | 1282.55 | 364.77 |
| 1282.99 | 364.76 | 1283.28 | 364.71 | 1283.87 | 364.69 | 1284.9 | 364.68 | 1285.69 | 364.68 |
| 1287.97 | 364.69 | 1292.98 | 364.79 | 1295.18 | 364.79 | 1295.81 | 364.8 | 1305.49 | 364.77 |
| 1307.35 | 364.78 | 1308.24 | 364.8 | 1310.27 | 364.82 | 1311.12 | 364.85 | 1313.65 | 364.87 |
| 1314.09 | 364.88 | 1319.54 | 364.89 | 1320.29 | 364.9 | 1322.93 | 364.91 | 1323.84 | 364.92 |
| 1328.24 | 364.99 | 1329.2 | 365 | 1331.96 | 365 | 1333.55 | 364.99 | 1334.66 | 364.96 |
| 1336.11 | 364.95 | 1336.3 | 364.96 | 1337.38 | 364.96 | 1342.81 | 365.02 | 1344.67 | 365.02 |
| 1345.02 | 365.01 | 1349.03 | 364.95 | 1350.1 | 364.92 | 1350.79 | 364.88 | 1353.3 | 364.86 |
| 1353.86 | 364.87 | 1355.33 | 364.83 | 1357.16 | 364.81 | 1358.19 | 364.81 | 1361.8 | 364.87 |
| 1362.99 | 364.88 | 1365.99 | 365.1 | 1366.77 | 365.15 | 1368.03 | 365.2 | 1368.7 | 365.24 |
| 1370.57 | 365.26 | 1375.94 | 365.27 | 1376.24 | 365.26 | 1377.42 | 365.26 | 1381.58 | 365.21 |
| 1385.96 | 365.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 327.71 | .05 | 342.71 | .04 | 1097.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 342.71 | 1097.94 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6118.57*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 341.97 | 363.04 | 344.02 | 362.95 | 345.29 | 362.87 | 347.06 | 362.74 | 348.38 | 362.66 |
| 349.55 | 362.6 | 351.23 | 362.47 | 351.55 | 362.43 | 352.54 | 362.35 | 353.33 | 362.3 |
| 354.21 | 362.22 | 354.98 | 362.13 | 357 | 361.5 | 357.58 | 361.34 | 363.28 | 360.91 |
| 367.99 | 360.56 | 368.33 | 360.59 | 368.57 | 360.54 | 383.14 | 360.53 | 389.4 | 360.75 |
| 390.89 | 360.77 | 392.82 | 360.75 | 393.26 | 360.73 | 393.89 | 360.61 | 395.2 | 360.58 |
| 395.66 | 360.58 | 397 | 360.63 | 399.67 | 360.8 | 400.74 | 360.83 | 403.48 | 360.89 |
| 403.62 | 360.89 | 407.06 | 361 | 407.94 | 361.01 | 408.3 | 361 | 409.07 | 360.94 |
| 412.21 | 360.8 | 413.49 | 360.72 | 416.55 | 360.5 | 420.07 | 360.49 | 423.92 | 360.35 |
| 429.36 | 360.53 | 430.5 | 360.54 | 440.31 | 360.76 | 444.45 | 360.73 | 457.6 | 360.96 |
| 458.59 | 360.97 | 460.92 | 361.01 | 466.71 | 361.01 | 467.34 | 361.02 | 468.63 | 361.02 |
| 469.24 | 361.04 | 469.6 | 361.1 | 472.03 | 361.11 | 473.55 | 361 | 473.82 | 360.99 |
| 481.97 | 360.52 | 482.11 | 360.52 | 483.02 | 360.46 | 485.94 | 360.34 | 486.38 | 360.33 |
| 487.28 | 360.37 | 488.27 | 360.4 | 493.18 | 360.51 | 503.4 | 360.59 | 506.69 | 360.66 |
| 509.66 | 360.66 | 510.06 | 360.65 | 512.88 | 360.56 | 513.66 | 360.52 | 514.78 | 360.52 |
| 515.31 | 360.51 | 516.37 | 360.54 | 517.03 | 360.55 | 530 | 360.55 | 530.39 | 360.51 |
| 531 | 360.47 | 535.7 | 360.31 | 537.04 | 360.29 | 537.53 | 360.29 | 538.47 | 360.27 |
| 539.03 | 360.23 | 540.37 | 360.19 | 541.26 | 360.19 | 543.77 | 360.23 | 544.52 | 360.27 |
| 545 | 360.32 | 545.69 | 360.47 | 549.82 | 360.75 | 553.11 | 360.89 | 553.71 | 360.89 |
| 554.61 | 360.92 | 558.66 | 360.9 | 575.36 | 361.22 | 576.33 | 361.25 | 576.95 | 361.25 |
| 577.33 | 361.27 | 580.8 | 361.27 | 591.55 | 360.91 | 594.66 | 360.88 | 600.44 | 360.75 |
| 601.53 | 360.71 | 603.18 | 360.72 | 603.32 | 360.71 | 604.77 | 360.71 | 605.07 | 360.7 |
| 605.91 | 360.7 | 613.6 | 360.78 | 613.89 | 360.79 | 614.23 | 360.83 | 614.73 | 360.86 |
| 615.98 | 360.89 | 618.02 | 360.89 | 618.85 | 360.87 | 621.61 | 360.85 | 623.5 | 360.74 |
| 623.63 | 360.72 | 624.86 | 360.69 | 627.3 | 360.66 | 627.7 | 360.66 | 638.81 | 360.49 |
| 639.91 | 360.46 | 651.94 | 360.17 | 655.19 | 359.9 | 657.82 | 359.56 | 658.15 | 359.62 |
| 658.32 | 359.62 | 660.09 | 359.55 | 660.37 | 359.52 | 661.41 | 359.5 | 665.72 | 359.66 |
| 667.77 | 359.72 | 668.64 | 359.73 | 671.03 | 359.87 | 677.02 | 359.81 | 677.79 | 359.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 680.83 | 359.81 | 681.71 | 359.8 | 685.23 | 359.69 | 686.7 | 359.64 | 687.18 | 359.64 |
| 689.63 | 359.7 | 690.04 | 359.7 | 690.37 | 359.73 | 691.63 | 359.77 | 696.29 | 359.75 |
| 696.76 | 359.75 | 704.78 | 359.54 | 704.91 | 359.53 | 711.99 | 359.46 | 712.23 | 359.46 |
| 724.85 | 359.08 | 725.14 | 359.09 | 725.7 | 359.15 | 727.01 | 359.15 | 730.04 | 359.03 |
| 731.83 | 358.9 | 732.02 | 358.87 | 732.84 | 358.87 | 734.72 | 358.9 | 737.1 | 358.87 |
| 737.63 | 358.87 | 737.72 | 358.95 | 738.51 | 359.05 | 739.62 | 359.13 | 741.4 | 359.21 |
| 742.96 | 359.26 | 744.61 | 359.29 | 746.25 | 359.29 | 748.65 | 359.33 | 749.33 | 359.36 |
| 749.93 | 359.45 | 754.85 | 359.68 | 758.25 | 359.78 | 759.22 | 359.77 | 760.07 | 359.75 |
| 764.2 | 359.59 | 765.92 | 359.53 | 767.62 | 359.48 | 771 | 359.36 | 772.78 | 359.32 |
| 773.14 | 359.33 | 780.92 | 359.82 | 786.06 | 360.15 | 787.02 | 360.21 | 792.32 | 360.25 |
| 793.43 | 360.34 | 793.77 | 360.36 | 794.9 | 360.45 | 795.35 | 360.44 | 795.8 | 360.45 |
| 797.67 | 360.44 | 798.48 | 360.43 | 801.86 | 360.44 | 802.77 | 360.43 | 805.32 | 360.42 |
| 806.3 | 360.39 | 808.88 | 360.3 | 810.43 | 360.26 | 812.65 | 360.21 | 813.46 | 360.21 |
| 814.51 | 360.24 | 814.99 | 360.27 | 815.73 | 360.3 | 819.28 | 360.34 | 821.2 | 360.33 |
| 823.76 | 360.28 | 827.21 | 360.16 | 828.26 | 360.17 | 828.75 | 360.16 | 832.43 | 360.17 |
| 832.88 | 360.18 | 834.04 | 360.26 | 836.76 | 360.34 | 837.15 | 360.33 | 838.08 | 360.34 |
| 838.54 | 360.36 | 845.48 | 360.49 | 846.19 | 360.51 | 846.76 | 360.55 | 847.22 | 360.65 |
| 847.92 | 360.71 | 848.31 | 360.72 | 849.87 | 360.73 | 851.18 | 360.69 | 852.55 | 360.62 |
| 853.48 | 360.59 | 854.21 | 360.59 | 855.02 | 360.54 | 856.5 | 360.48 | 858.19 | 360.51 |
| 863.25 | 360.39 | 863.97 | 360.37 | 864.85 | 360.33 | 866.95 | 360.26 | 868.77 | 360.16 |
| 869.32 | 360.07 | 870.16 | 359.99 | 871.1 | 360.02 | 871.68 | 359.99 | 872.86 | 359.89 |
| 873.17 | 359.88 | 874.19 | 359.92 | 876.16 | 360.04 | 876.54 | 360.08 | 877.21 | 360.18 |
| 877.88 | 360.34 | 878.45 | 360.46 | 882.52 | 360.65 | 883.82 | 360.69 | 886.01 | 360.7 |
| 887.57 | 360.73 | 888.98 | 360.73 | 890.15 | 360.76 | 892.74 | 360.8 | 893.7 | 360.82 |
| 895.89 | 360.8 | 896.4 | 360.8 | 897.74 | 360.78 | 899.65 | 360.74 | 901.85 | 360.65 |
| 903.78 | 360.54 | 907.9 | 360.46 | 913.33 | 360.28 | 914.71 | 360.23 | 917.22 | 360.13 |
| 917.66 | 360.1 | 917.92 | 360.04 | 918.8 | 360.01 | 920.13 | 359.99 | 920.53 | 360 |
| 921.37 | 359.99 | 923.77 | 359.95 | 924.96 | 359.95 | 926.21 | 360.06 | 928.23 | 360.28 |
| 928.98 | 360.28 | 930.08 | 360.33 | 931.01 | 360.32 | 933.85 | 360.21 | 933.94 | 360.2 |
| 935.8 | 360.14 | 936.47 | 360.13 | 940.05 | 360.03 | 944.51 | 360.03 | 946.1 | 360 |
| 947.9 | 360.02 | 949.05 | 360.05 | 950.2 | 360.07 | 952.9 | 360.08 | 955.04 | 360.02 |
| 956.79 | 360.01 | 957.19 | 360.03 | 958.83 | 360.07 | 959.58 | 360.08 | 960.69 | 360.08 |
| 961.24 | 360.09 | 962.31 | 360.13 | 964.58 | 360.23 | 967.56 | 360.26 | 973.56 | 360.6 |
| 983.15 | 360.55 | 983.7 | 360.54 | 986.61 | 360.51 | 988.51 | 360.36 | 989.55 | 360.31 |
| 991.13 | 360.27 | 992.46 | 360.21 | 993.35 | 360.19 | 994.69 | 360.17 | 995.48 | 360.15 |
| 997.49 | 360.14 | 1000.66 | 360.16 | 1001.25 | 360.16 | 1005.48 | 360.19 | 1005.66 | 360.2 |
| 1006.8 | 360.21 | 1009.67 | 360.27 | 1012.4 | 360.31 | 1016.85 | 360.36 | 1019.41 | 360.42 |
| 1020.73 | 360.47 | 1021.53 | 360.52 | 1023.19 | 360.6 | 1026.14 | 360.77 | 1027.2 | 360.8 |
| 1031.23 | 360.86 | 1032.07 | 360.86 | 1032.14 | 360.85 | 1036.88 | 360.84 | 1038.05 | 360.82 |
| 1040.88 | 360.72 | 1042.42 | 360.7 | 1043.84 | 360.69 | 1044.01 | 360.7 | 1047.77 | 360.74 |
| 1050.25 | 360.76 | 1051.02 | 360.76 | 1052.68 | 360.73 | 1057.08 | 360.66 | 1057.55 | 360.65 |
| 1060.44 | 360.61 | 1062.73 | 360.6 | 1071.07 | 360.58 | 1071.17 | 360.59 | 1072.91 | 360.57 |
| 1076.62 | 360.47 | 1077.43 | 360.46 | 1078.54 | 360.46 | 1079.35 | 360.47 | 1081.21 | 360.53 |
| 1083.33 | 361.08 | 1084.23 | 361.33 | 1084.74 | 361.42 | 1086.35 | 361.48 | 1087.67 | 361.51 |
| 1090.24 | 361.54 | 1092.3 | 361.54 | 1093.23 | 361.56 | 1094.57 | 361.6 | 1098.4 | 361.68 |
| 1106.42 | 361.87 | 1111 | 362.01 | 1111.98 | 362.05 | 1113.69 | 362.1 | 1115.84 | 362.19 |
| 1117.86 | 362.22 | 1120.71 | 362.29 | 1121 | 362.28 | 1121.26 | 362.23 | 1122.17 | 362.23 |
| 1123.46 | 362.17 | 1123.84 | 362.18 | 1124.37 | 362.17 | 1126.39 | 362.19 | 1128.04 | 362.24 |
| 1128.97 | 362.22 | 1129.89 | 362.13 | 1130.24 | 362.14 | 1131.61 | 362.03 | 1134.43 | 361.72 |
| 1135.47 | 361.62 | 1138.05 | 361.6 | 1147.24 | 361.54 | 1148.01 | 361.52 | 1148.9 | 361.52 |
| 1150.82 | 361.51 | 1152.23 | 361.49 | 1159.25 | 361.51 | 1165.08 | 361.62 | 1165.97 | 361.64 |
| 1167.57 | 361.65 | 1171.33 | 361.7 | 1172 | 361.7 | 1172.63 | 361.72 | 1174.06 | 361.79 |
| 1176.65 | 361.91 | 1177.52 | 361.96 | 1180.78 | 362.13 | 1183.95 | 362.3 | 1186.3 | 362.42 |
| 1188.69 | 362.51 | 1189.41 | 362.51 | 1191.5 | 362.54 | 1193.57 | 362.76 | 1196.15 | 363.06 |
| 1197.45 | 363.23 | 1197.54 | 363.25 | 1200.53 | 363.28 | 1201.11 | 363.29 | 1219.45 | 363.64 |
| 1220.16 | 363.66 | 1222.52 | 363.7 | 1224.66 | 363.7 | 1225.28 | 363.71 | 1227.88 | 363.72 |
| 1230.51 | 363.77 | 1235.4 | 363.85 | 1235.72 | 363.85 | 1237.39 | 363.89 | 1238.99 | 363.91 |
| 1248.34 | 364.06 | 1249.42 | 364.08 | 1251.27 | 364.1 | 1261.03 | 364.19 | 1261.57 | 364.2 |
| 1262.68 | 364.2 | 1263.21 | 364.19 | 1263.9 | 364.14 | 1264.72 | 364.11 | 1265.8 | 364.1 |
| 1266.81 | 364.11 | 1266.87 | 364.12 | 1268.18 | 364.21 | 1268.86 | 364.24 | 1269.42 | 364.24 |
| 1276.09 | 364.43 | 1277.1 | 364.45 | 1279.96 | 364.52 | 1282.49 | 364.57 | 1284.65 | 364.59 |
| 1284.92 | 364.6 | 1287.07 | 364.59 | 1290.83 | 364.56 | 1291.75 | 364.55 | 1293.69 | 364.55 |
| 1295.69 | 364.53 | 1296.12 | 364.53 | 1296.41 | 364.48 | 1297.98 | 364.46 | 1298.75 | 364.46 |
| 1300.97 | 364.47 | 1305.85 | 364.55 | 1308 | 364.56 | 1308.61 | 364.57 | 1318.04 | 364.53 |
| 1320.73 | 364.56 | 1322.4 | 364.57 | 1323.53 | 364.6 | 1325.99 | 364.62 | 1326.42 | 364.63 |
| 1331.73 | 364.64 | 1334.52 | 364.67 | 1335.04 | 364.66 | 1335.92 | 364.67 | 1340.21 | 364.74 |
| 1341.14 | 364.75 | 1345.38 | 364.75 | 1346.1 | 364.73 | 1347.87 | 364.72 | 1348.06 | 364.73 |
| 1349.11 | 364.73 | 1352.44 | 364.77 | 1354.41 | 364.79 | 1356.22 | 364.79 | 1356.55 | 364.78 |
| 1360.46 | 364.72 | 1360.97 | 364.71 | 1361.97 | 364.67 | 1364.62 | 364.65 | 1365.17 | 364.65 |
| 1366.6 | 364.62 | 1368.38 | 364.59 | 1369.39 | 364.59 | 1372.9 | 364.64 | 1374.06 | 364.65 |
| 1376.98 | 364.84 | 1377.75 | 364.88 | 1378.97 | 364.92 | 1379.62 | 364.95 | 1381.44 | 364.98 |
| 1386.57 | 365 | 1387.39 | 364.99 | 1388.12 | 365 | 1392.84 | 364.93 | 1395.46 | 364.84 |
| 1396.44 | 364.8 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 341.97 | .05 | 354.98 | .04 | 1115.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 354.98 | 1115.84 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6098.80*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 356.22 | 362.86 | 357.96 | 362.76 | 359.04 | 362.68 | 360.54 | 362.54 | 362.65 | 362.39 |
| 363.32 | 362.33 | 365.18 | 362.13 | 365.85 | 362.07 | 366.85 | 361.96 | 367.24 | 361.9 |
| 369.36 | 361.24 | 369.96 | 361.07 | 375.91 | 360.63 | 380.83 | 360.26 | 381.06 | 360.26 |
| 381.18 | 360.29 | 381.43 | 360.23 | 396.65 | 360.22 | 403.18 | 360.46 | 404.74 | 360.48 |
| 406.75 | 360.46 | 407.21 | 360.44 | 407.87 | 360.31 | 409.23 | 360.28 | 409.71 | 360.28 |
| 411.12 | 360.34 | 413.9 | 360.51 | 415.02 | 360.55 | 417.88 | 360.61 | 418.02 | 360.61 |
| 421.62 | 360.72 | 422.54 | 360.74 | 422.91 | 360.72 | 423.72 | 360.66 | 426.99 | 360.52 |
| 428.34 | 360.43 | 431.53 | 360.2 | 435.21 | 360.19 | 439.22 | 360.04 | 444.9 | 360.24 |
| 445.24 | 360.23 | 446.09 | 360.25 | 456.33 | 360.48 | 460.66 | 360.45 | 474.39 | 360.69 |
| 476.56 | 360.73 | 477.86 | 360.75 | 485.91 | 360.75 | 486.54 | 360.78 | 486.92 | 360.84 |
| 489.45 | 360.85 | 489.97 | 360.8 | 491.04 | 360.74 | 491.32 | 360.73 | 499.84 | 360.23 |
| 499.97 | 360.23 | 500.93 | 360.16 | 503.98 | 360.04 | 504.44 | 360.03 | 506.41 | 360.11 |
| 511.53 | 360.21 | 520.82 | 360.29 | 521.81 | 360.31 | 522.21 | 360.31 | 525.64 | 360.37 |
| 529.16 | 360.37 | 532.1 | 360.27 | 533.2 | 360.22 | 534.64 | 360.22 | 535.74 | 360.25 |
| 536.44 | 360.26 | 549.98 | 360.26 | 550.39 | 360.22 | 551.02 | 360.18 | 555.93 | 360.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 557.33 | 359.98 | 558.83 | 359.97 | 559.41 | 359.93 | 560.8 | 359.88 | 561.73 | 359.88 |
| 564.35 | 359.93 | 565.49 | 359.99 | 566.36 | 360.18 | 570.67 | 360.47 | 574.11 | 360.62 |
| 574.73 | 360.62 | 575.67 | 360.65 | 579.91 | 360.63 | 597.33 | 360.96 | 597.93 | 360.99 |
| 598.35 | 361 | 599 | 361 | 599.4 | 361.01 | 603.01 | 361.01 | 614.24 | 360.65 |
| 617.49 | 360.61 | 623.52 | 360.49 | 624.66 | 360.46 | 626.38 | 360.48 | 626.52 | 360.47 |
| 628.04 | 360.48 | 628.36 | 360.47 | 629.23 | 360.47 | 637.26 | 360.56 | 637.56 | 360.57 |
| 638.21 | 360.64 | 638.44 | 360.64 | 639.74 | 360.68 | 641.87 | 360.68 | 641.92 | 360.67 |
| 645.63 | 360.63 | 646.41 | 360.6 | 647.73 | 360.51 | 648.2 | 360.49 | 649.02 | 360.47 |
| 651.57 | 360.44 | 651.99 | 360.44 | 663.58 | 360.27 | 664.74 | 360.24 | 677.29 | 359.93 |
| 680.68 | 359.66 | 683.44 | 359.3 | 683.78 | 359.36 | 683.95 | 359.36 | 685.8 | 359.28 |
| 686.45 | 359.24 | 687.17 | 359.24 | 691.68 | 359.41 | 693.82 | 359.46 | 694.33 | 359.46 |
| 694.73 | 359.48 | 697.23 | 359.63 | 703.47 | 359.57 | 704.28 | 359.55 | 707.45 | 359.56 |
| 708.37 | 359.55 | 712.04 | 359.44 | 713.58 | 359.39 | 714.09 | 359.39 | 717.08 | 359.46 |
| 717.42 | 359.49 | 718.73 | 359.52 | 723.59 | 359.51 | 724.08 | 359.5 | 732.47 | 359.28 |
| 732.59 | 359.28 | 739.99 | 359.21 | 740.23 | 359.2 | 746.14 | 359.03 | 753.42 | 358.81 |
| 753.72 | 358.82 | 754.3 | 358.88 | 755.67 | 358.88 | 756.72 | 358.84 | 758.83 | 358.75 |
| 759.39 | 358.72 | 760.7 | 358.62 | 760.9 | 358.59 | 761.76 | 358.59 | 763.75 | 358.62 |
| 766.25 | 358.59 | 766.8 | 358.59 | 766.9 | 358.68 | 767.66 | 358.78 | 768.25 | 358.83 |
| 768.74 | 358.86 | 770.46 | 358.94 | 771.98 | 358.99 | 773.25 | 359.02 | 774.01 | 359.02 |
| 775.17 | 359.03 | 777.49 | 359.06 | 778.16 | 359.09 | 778.74 | 359.19 | 783.51 | 359.41 |
| 786.81 | 359.51 | 787.76 | 359.5 | 792.59 | 359.32 | 794.25 | 359.26 | 795.31 | 359.23 |
| 798.93 | 359.11 | 800.33 | 359.07 | 800.43 | 359.05 | 800.74 | 359.05 | 801.26 | 359.07 |
| 808.8 | 359.57 | 813.79 | 359.91 | 814.73 | 359.97 | 819.86 | 360 | 822.37 | 360.16 |
| 822.8 | 360.15 | 823.24 | 360.16 | 825.05 | 360.15 | 830.01 | 360.15 | 832.48 | 360.14 |
| 833.43 | 360.11 | 835.93 | 360.02 | 837.43 | 359.97 | 839.59 | 359.92 | 840.38 | 359.92 |
| 841.04 | 359.93 | 842.58 | 360 | 846.02 | 360.04 | 847.88 | 360.03 | 850.37 | 359.98 |
| 853.72 | 359.85 | 854.73 | 359.86 | 855.21 | 359.85 | 858.78 | 359.86 | 859.21 | 359.87 |
| 860.34 | 359.95 | 862.98 | 360.03 | 863.83 | 360.03 | 864.71 | 360.06 | 871.44 | 360.19 |
| 872.68 | 360.25 | 873.12 | 360.36 | 873.81 | 360.42 | 874.19 | 360.43 | 875.69 | 360.45 |
| 876.97 | 360.42 | 878.17 | 360.36 | 879.21 | 360.33 | 879.91 | 360.33 | 880.69 | 360.28 |
| 882.42 | 360.21 | 882.72 | 360.22 | 883.77 | 360.22 | 888.68 | 360.07 | 890.24 | 360 |
| 891.4 | 359.94 | 892.27 | 359.92 | 894.04 | 359.81 | 894.57 | 359.72 | 894.91 | 359.7 |
| 895.38 | 359.64 | 896.29 | 359.67 | 896.53 | 359.65 | 896.86 | 359.65 | 897.38 | 359.62 |
| 897.9 | 359.57 | 898.5 | 359.57 | 899.29 | 359.61 | 901.21 | 359.73 | 901.57 | 359.77 |
| 902.22 | 359.88 | 903.43 | 360.17 | 907.38 | 360.36 | 908.64 | 360.4 | 910.76 | 360.41 |
| 912.28 | 360.44 | 913.65 | 360.43 | 914.78 | 360.47 | 917.29 | 360.5 | 918.22 | 360.52 |
| 920.35 | 360.5 | 920.84 | 360.49 | 923.57 | 360.45 | 924 | 360.44 | 926.13 | 360.35 |
| 927.69 | 360.27 | 928.95 | 360.23 | 929.92 | 360.22 | 932 | 360.17 | 936.38 | 360 |
| 937.27 | 359.96 | 938.61 | 359.91 | 941.04 | 359.8 | 941.47 | 359.77 | 941.72 | 359.71 |
| 942.57 | 359.68 | 944.25 | 359.66 | 945.07 | 359.65 | 947.4 | 359.6 | 948.55 | 359.61 |
| 949.05 | 359.65 | 949.77 | 359.72 | 951.73 | 359.95 | 952.69 | 359.96 | 953.52 | 360 |
| 954.42 | 359.99 | 957.18 | 359.88 | 957.27 | 359.87 | 959.07 | 359.8 | 959.72 | 359.79 |
| 963.19 | 359.68 | 967.52 | 359.67 | 969.06 | 359.64 | 970.81 | 359.65 | 973.03 | 359.69 |
| 975.28 | 359.7 | 977.73 | 359.64 | 979.43 | 359.62 | 979.77 | 359.64 | 980.76 | 359.66 |
| 982.14 | 359.7 | 983.75 | 359.72 | 984.79 | 359.77 | 986.99 | 359.87 | 989.88 | 359.92 |
| 995.7 | 360.28 | 1005.01 | 360.24 | 1005.54 | 360.24 | 1008.36 | 360.21 | 1010.21 | 360.06 |
| 1011.21 | 360.01 | 1012.75 | 359.97 | 1014.03 | 359.92 | 1014.9 | 359.9 | 1016.2 | 359.88 |
| 1016.97 | 359.86 | 1018.55 | 359.84 | 1021.99 | 359.85 | 1022.57 | 359.86 | 1023.93 | 359.86 |
| 1026.67 | 359.87 | 1027.95 | 359.89 | 1030.74 | 359.95 | 1033.39 | 360 | 1037.62 | 360.06 |
| 1037.7 | 360.07 | 1038.5 | 360.08 | 1039.8 | 360.11 | 1040.8 | 360.14 | 1041.46 | 360.17 |
| 1043.85 | 360.29 | 1046.71 | 360.44 | 1047.74 | 360.48 | 1051.65 | 360.53 | 1052.53 | 360.53 |
| 1057.14 | 360.54 | 1058.26 | 360.51 | 1061.01 | 360.42 | 1062.51 | 360.4 | 1064.05 | 360.39 |
| 1064.96 | 360.4 | 1067.7 | 360.42 | 1070.1 | 360.43 | 1070.85 | 360.43 | 1072.47 | 360.4 |
| 1076.73 | 360.34 | 1079.99 | 360.29 | 1082.21 | 360.28 | 1090.3 | 360.25 | 1092.09 | 360.23 |
| 1095.68 | 360.15 | 1096.48 | 360.14 | 1097.55 | 360.14 | 1098.34 | 360.16 | 1100.14 | 360.22 |
| 1101.9 | 360.71 | 1103.07 | 361.06 | 1103.2 | 361.09 | 1103.85 | 361.15 | 1105.12 | 361.2 |
| 1106.41 | 361.23 | 1108.31 | 361.25 | 1108.9 | 361.26 | 1111.19 | 361.28 | 1111.8 | 361.3 |
| 1113.1 | 361.33 | 1117.23 | 361.43 | 1126.52 | 361.67 | 1129.04 | 361.75 | 1129.99 | 361.79 |
| 1131.66 | 361.84 | 1133.74 | 361.92 | 1135.71 | 361.95 | 1138.48 | 362.01 | 1138.76 | 361.99 |
| 1139.02 | 361.94 | 1139.9 | 361.93 | 1141.16 | 361.87 | 1141.53 | 361.88 | 1142.05 | 361.86 |
| 1144.01 | 361.88 | 1145.61 | 361.93 | 1146.52 | 361.91 | 1147.42 | 361.82 | 1147.76 | 361.82 |
| 1149.09 | 361.7 | 1151.66 | 361.39 | 1152.85 | 361.26 | 1155.37 | 361.24 | 1162.75 | 361.19 |
| 1165.06 | 361.16 | 1165.92 | 361.16 | 1167.8 | 361.15 | 1168.48 | 361.14 | 1169.17 | 361.14 |
| 1175.75 | 361.17 | 1177.02 | 361.19 | 1181.68 | 361.27 | 1182.54 | 361.29 | 1184.11 | 361.3 |
| 1187.77 | 361.35 | 1189.03 | 361.37 | 1190.42 | 361.45 | 1192.51 | 361.56 | 1193.79 | 361.62 |
| 1196.96 | 361.8 | 1200.05 | 361.97 | 1202.2 | 362.08 | 1202.34 | 362.09 | 1204.67 | 362.18 |
| 1205.36 | 362.19 | 1207.4 | 362.23 | 1209.41 | 362.47 | 1211.93 | 362.8 | 1213.19 | 362.98 |
| 1213.27 | 363 | 1216.19 | 363.04 | 1216.76 | 363.05 | 1234.61 | 363.38 | 1237.6 | 363.43 |
| 1238.39 | 363.44 | 1239.5 | 363.44 | 1239.68 | 363.45 | 1240.29 | 363.45 | 1242.82 | 363.46 |
| 1245.38 | 363.52 | 1250.14 | 363.59 | 1250.45 | 363.6 | 1253.56 | 363.66 | 1253.63 | 363.65 |
| 1262.74 | 363.8 | 1263.79 | 363.82 | 1265.04 | 363.83 | 1265.59 | 363.84 | 1275.09 | 363.94 |
| 1275.62 | 363.95 | 1276.69 | 363.95 | 1277.21 | 363.93 | 1277.88 | 363.89 | 1279.3 | 363.86 |
| 1280.72 | 363.87 | 1280.78 | 363.88 | 1282.41 | 363.98 | 1283.26 | 363.99 | 1288.41 | 364.13 |
| 1290.56 | 364.18 | 1291.12 | 364.2 | 1295.98 | 364.3 | 1296.19 | 364.3 | 1298.09 | 364.33 |
| 1300.44 | 364.33 | 1304.1 | 364.31 | 1306.88 | 364.31 | 1308.84 | 364.29 | 1309.25 | 364.29 |
| 1309.53 | 364.25 | 1310.09 | 364.24 | 1311.81 | 364.24 | 1313.98 | 364.25 | 1318.73 | 364.32 |
| 1321.41 | 364.33 | 1330.6 | 364.3 | 1332.36 | 364.31 | 1333.21 | 364.32 | 1335.13 | 364.33 |
| 1335.94 | 364.36 | 1338.33 | 364.37 | 1338.75 | 364.38 | 1343.92 | 364.39 | 1344.64 | 364.41 |
| 1346.63 | 364.42 | 1348 | 364.43 | 1352.17 | 364.49 | 1355.7 | 364.51 | 1357.21 | 364.51 |
| 1358.27 | 364.49 | 1359.63 | 364.49 | 1359.81 | 364.5 | 1362.57 | 364.53 | 1363.24 | 364.54 |
| 1364.08 | 364.54 | 1365.27 | 364.56 | 1367.76 | 364.56 | 1368.08 | 364.55 | 1371.89 | 364.5 |
| 1372.39 | 364.49 | 1373.56 | 364.45 | 1376.48 | 364.44 | 1377.87 | 364.4 | 1379.61 | 364.37 |
| 1380.58 | 364.37 | 1384 | 364.41 | 1385.13 | 364.42 | 1388.72 | 364.61 | 1390.55 | 364.67 |
| 1392.32 | 364.7 | 1397.31 | 364.73 | 1398.82 | 364.73 | 1403.41 | 364.66 | 1405.96 | 364.56 |
| 1406.92 | 364.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 356.22 | .05 | 367.24 | .04 | 1133.74 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 367.24 | 1133.74 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6079.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 370.48 | 362.68 | 371.9 | 362.57 | 374.01 | 362.35 | 375.74 | 362.18 | 376.29 | 362.12 |
| 376.91 | 362.04 | 377.13 | 362 | 377.82 | 361.91 | 378.36 | 361.85 | 379.51 | 361.68 |
| 381.71 | 360.99 | 382.33 | 360.8 | 388.54 | 360.34 | 393.67 | 359.95 | 394.03 | 359.98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 394.29 | 359.92 | 410.15 | 359.92 | 416.97 | 360.17 | 418.59 | 360.19 | 420.68 | 360.17 |
| 421.17 | 360.15 | 421.85 | 360.01 | 423.27 | 359.98 | 423.77 | 359.98 | 425.23 | 360.04 |
| 428.28 | 360.23 | 429.3 | 360.26 | 432.28 | 360.33 | 432.43 | 360.33 | 436.18 | 360.45 |
| 437.14 | 360.46 | 437.53 | 360.45 | 438.37 | 360.38 | 441.78 | 360.23 | 443.18 | 360.14 |
| 446.51 | 359.9 | 450.34 | 359.89 | 454.52 | 359.74 | 460.44 | 359.94 | 461.68 | 359.95 |
| 472.36 | 360.2 | 476.87 | 360.16 | 491.18 | 360.42 | 493.43 | 360.46 | 493.68 | 360.46 |
| 494.79 | 360.49 | 497.6 | 360.49 | 501.08 | 360.48 | 501.77 | 360.49 | 503.18 | 360.49 |
| 503.84 | 360.52 | 504.23 | 360.58 | 506.87 | 360.6 | 507.42 | 360.54 | 508.53 | 360.47 |
| 508.82 | 360.46 | 517.7 | 359.94 | 517.84 | 359.94 | 518.84 | 359.87 | 522.01 | 359.74 |
| 522.49 | 359.73 | 524.54 | 359.81 | 529.89 | 359.92 | 539.57 | 360 | 540.59 | 360.02 |
| 541.01 | 360.02 | 544.59 | 360.09 | 547.83 | 360.09 | 548.25 | 360.08 | 551.32 | 359.99 |
| 552.47 | 359.93 | 553.4 | 359.93 | 553.97 | 359.92 | 555.12 | 359.96 | 555.84 | 359.97 |
| 569.96 | 359.97 | 571.04 | 359.88 | 576.16 | 359.71 | 577.62 | 359.68 | 578.15 | 359.68 |
| 579.18 | 359.66 | 579.78 | 359.62 | 581.24 | 359.57 | 582.21 | 359.57 | 584.94 | 359.62 |
| 585.76 | 359.66 | 586.12 | 359.69 | 587.03 | 359.88 | 591.53 | 360.19 | 592 | 360.22 |
| 595.1 | 360.35 | 595.75 | 360.35 | 596.73 | 360.38 | 601.15 | 360.36 | 619.31 | 360.71 |
| 620.37 | 360.74 | 621.05 | 360.74 | 621.46 | 360.76 | 625.23 | 360.76 | 626.87 | 360.71 |
| 636.93 | 360.38 | 640.31 | 360.34 | 646.6 | 360.24 | 647.79 | 360.21 | 651.31 | 360.25 |
| 651.64 | 360.24 | 652.56 | 360.24 | 660.92 | 360.34 | 661.24 | 360.35 | 661.61 | 360.4 |
| 662.15 | 360.43 | 663.51 | 360.46 | 665.73 | 360.47 | 665.78 | 360.46 | 666.64 | 360.44 |
| 669.64 | 360.42 | 670.46 | 360.39 | 671.69 | 360.31 | 671.84 | 360.29 | 672.32 | 360.27 |
| 672.76 | 360.27 | 673.18 | 360.25 | 675.83 | 360.22 | 676.27 | 360.22 | 688.35 | 360.05 |
| 702.64 | 359.7 | 706.18 | 359.41 | 709.05 | 359.04 | 709.4 | 359.1 | 709.58 | 359.1 |
| 711.51 | 359.02 | 711.82 | 358.99 | 712.94 | 358.97 | 717.64 | 359.15 | 719.87 | 359.21 |
| 720.4 | 359.21 | 720.82 | 359.23 | 723.42 | 359.39 | 729.93 | 359.32 | 730.77 | 359.3 |
| 734.08 | 359.32 | 735.04 | 359.31 | 740.47 | 359.14 | 740.99 | 359.14 | 744.11 | 359.21 |
| 744.46 | 359.24 | 745.83 | 359.28 | 750.9 | 359.27 | 751.41 | 359.26 | 760.15 | 359.03 |
| 760.28 | 359.03 | 767.99 | 358.95 | 768.24 | 358.95 | 774.4 | 358.76 | 781.98 | 358.54 |
| 782.3 | 358.55 | 782.6 | 358.59 | 782.9 | 358.61 | 784.33 | 358.61 | 785.43 | 358.57 |
| 787.63 | 358.48 | 789.57 | 358.34 | 789.79 | 358.31 | 790.69 | 358.31 | 792.77 | 358.33 |
| 795.39 | 358.31 | 795.98 | 358.31 | 796.07 | 358.4 | 796.81 | 358.5 | 797.38 | 358.56 |
| 797.85 | 358.58 | 799.13 | 358.66 | 799.53 | 358.67 | 801 | 358.73 | 802.55 | 358.76 |
| 804.09 | 358.76 | 806.34 | 358.8 | 806.65 | 358.8 | 806.99 | 358.83 | 807.55 | 358.93 |
| 812.17 | 359.15 | 815.38 | 359.24 | 816.81 | 359.21 | 820.97 | 359.05 | 822.59 | 359 |
| 823.61 | 358.96 | 827.12 | 358.84 | 828.47 | 358.8 | 828.57 | 358.78 | 828.87 | 358.78 |
| 829.38 | 358.8 | 836.69 | 359.32 | 841.52 | 359.67 | 842.43 | 359.73 | 847.41 | 359.75 |
| 849.84 | 359.87 | 850.68 | 359.87 | 852.44 | 359.86 | 857.24 | 359.86 | 859.64 | 359.85 |
| 860.55 | 359.82 | 862.99 | 359.73 | 866.53 | 359.63 | 867.29 | 359.62 | 868.28 | 359.65 |
| 869.43 | 359.7 | 872.76 | 359.74 | 874.57 | 359.73 | 876.98 | 359.67 | 877.49 | 359.66 |
| 880.22 | 359.54 | 885.13 | 359.54 | 885.55 | 359.55 | 886.65 | 359.63 | 889.2 | 359.72 |
| 889.57 | 359.72 | 890.44 | 359.74 | 890.88 | 359.76 | 897.4 | 359.89 | 898.07 | 359.92 |
| 898.6 | 359.96 | 899.03 | 360.07 | 899.7 | 360.13 | 900.07 | 360.15 | 901.52 | 360.17 |
| 902.76 | 360.15 | 902.91 | 360.14 | 904.93 | 360.07 | 905.61 | 360.07 | 906.37 | 360.02 |
| 907.51 | 359.96 | 908.04 | 359.94 | 909.35 | 359.93 | 914.11 | 359.74 | 915.38 | 359.68 |
| 915.62 | 359.66 | 916.75 | 359.6 | 917.59 | 359.57 | 919.3 | 359.47 | 919.82 | 359.37 |
| 920.15 | 359.35 | 920.61 | 359.29 | 921.49 | 359.31 | 922.18 | 359.3 | 923.05 | 359.25 |
| 923.63 | 359.25 | 924.03 | 359.27 | 926.25 | 359.43 | 926.61 | 359.47 | 927.24 | 359.58 |
| 928.41 | 359.88 | 932.23 | 360.07 | 933.46 | 360.11 | 935.51 | 360.12 | 936.98 | 360.14 |
| 938.31 | 360.14 | 939.4 | 360.17 | 941.85 | 360.21 | 942.74 | 360.22 | 944.81 | 360.2 |
| 946.55 | 360.17 | 948.34 | 360.13 | 950.41 | 360.06 | 951.92 | 359.99 | 952.23 | 359.97 |
| 954.08 | 359.93 | 956.1 | 359.88 | 958.35 | 359.77 | 960.34 | 359.69 | 962.5 | 359.59 |
| 964.87 | 359.47 | 965.27 | 359.44 | 965.52 | 359.38 | 966.35 | 359.34 | 968.77 | 359.31 |
| 971.02 | 359.26 | 971.83 | 359.26 | 972.14 | 359.27 | 973.32 | 359.38 | 975.22 | 359.62 |
| 976.15 | 359.63 | 976.96 | 359.68 | 977.83 | 359.66 | 980.51 | 359.55 | 980.59 | 359.54 |
| 982.34 | 359.47 | 982.97 | 359.45 | 986.33 | 359.33 | 990.53 | 359.31 | 992.02 | 359.27 |
| 993.72 | 359.28 | 994.8 | 359.3 | 998.05 | 359.32 | 1000.43 | 359.25 | 1000.65 | 359.24 |
| 1002.08 | 359.24 | 1004.69 | 359.32 | 1006.17 | 359.35 | 1006.26 | 359.36 | 1007.27 | 359.4 |
| 1009.4 | 359.52 | 1012.2 | 359.57 | 1017.85 | 359.96 | 1026.87 | 359.93 | 1027.38 | 359.93 |
| 1030.11 | 359.91 | 1031.9 | 359.75 | 1032.88 | 359.7 | 1034.36 | 359.67 | 1035.61 | 359.62 |
| 1036.45 | 359.6 | 1038.46 | 359.57 | 1038.55 | 359.56 | 1039.99 | 359.55 | 1048.03 | 359.55 |
| 1049.1 | 359.57 | 1051.8 | 359.63 | 1054.37 | 359.69 | 1058.48 | 359.77 | 1060.96 | 359.83 |
| 1061.89 | 359.86 | 1064.51 | 359.98 | 1067.28 | 360.11 | 1067.58 | 360.13 | 1068.28 | 360.15 |
| 1071.33 | 360.2 | 1072.07 | 360.2 | 1072.93 | 360.21 | 1077.39 | 360.23 | 1078.48 | 360.21 |
| 1081.14 | 360.12 | 1082.59 | 360.09 | 1082.93 | 360.1 | 1083.93 | 360.08 | 1084.97 | 360.1 |
| 1090.68 | 360.1 | 1092.25 | 360.07 | 1096.39 | 360.02 | 1099.54 | 359.97 | 1101.69 | 359.95 |
| 1109.54 | 359.91 | 1109.63 | 359.92 | 1111.27 | 359.9 | 1114.75 | 359.82 | 1116.57 | 359.82 |
| 1117.33 | 359.84 | 1119.07 | 359.92 | 1119.66 | 360.1 | 1120.78 | 360.43 | 1121.91 | 360.79 |
| 1122.04 | 360.82 | 1122.67 | 360.87 | 1124.26 | 360.92 | 1126.99 | 360.98 | 1127.56 | 360.99 |
| 1129.5 | 361.01 | 1130.37 | 361.03 | 1131.63 | 361.07 | 1135.64 | 361.17 | 1142.78 | 361.36 |
| 1144.64 | 361.42 | 1147.09 | 361.49 | 1148 | 361.53 | 1149.62 | 361.58 | 1151.64 | 361.65 |
| 1152.12 | 361.66 | 1156.25 | 361.72 | 1156.52 | 361.7 | 1156.77 | 361.65 | 1157.63 | 361.64 |
| 1158.85 | 361.56 | 1159.22 | 361.57 | 1159.72 | 361.55 | 1161.63 | 361.57 | 1163.19 | 361.62 |
| 1164.07 | 361.6 | 1164.95 | 361.5 | 1165.27 | 361.5 | 1166.57 | 361.37 | 1169.07 | 361.04 |
| 1170.23 | 360.91 | 1172.68 | 360.89 | 1179.86 | 360.82 | 1181.38 | 360.81 | 1182.33 | 360.79 |
| 1186.11 | 360.79 | 1192.5 | 360.83 | 1198.27 | 360.92 | 1199.65 | 360.94 | 1200.64 | 360.95 |
| 1204.2 | 361.01 | 1204.63 | 361.01 | 1205.43 | 361.03 | 1206.78 | 361.11 | 1208.81 | 361.22 |
| 1210.05 | 361.28 | 1213.14 | 361.46 | 1216.15 | 361.64 | 1218.24 | 361.75 | 1218.37 | 361.76 |
| 1220.09 | 361.83 | 1220.64 | 361.86 | 1221.31 | 361.87 | 1223.29 | 361.93 | 1225.26 | 362.18 |
| 1227.71 | 362.54 | 1228.93 | 362.73 | 1229.01 | 362.75 | 1231.85 | 362.79 | 1249.77 | 363.12 |
| 1252.68 | 363.17 | 1253.44 | 363.18 | 1254.27 | 363.18 | 1254.52 | 363.19 | 1255.29 | 363.19 |
| 1257.76 | 363.21 | 1260.25 | 363.26 | 1264.87 | 363.34 | 1265.18 | 363.34 | 1268.2 | 363.4 |
| 1268.27 | 363.39 | 1277.13 | 363.54 | 1277.85 | 363.56 | 1279.37 | 363.57 | 1279.91 | 363.58 |
| 1289.15 | 363.69 | 1289.66 | 363.7 | 1290.71 | 363.7 | 1291.87 | 363.65 | 1293.24 | 363.62 |
| 1293.67 | 363.62 | 1294.68 | 363.64 | 1296.49 | 363.73 | 1297.1 | 363.73 | 1302.11 | 363.87 |
| 1304.2 | 363.92 | 1304.75 | 363.93 | 1309.47 | 364.03 | 1309.68 | 364.03 | 1311.52 | 364.06 |
| 1311.78 | 364.07 | 1313.81 | 364.07 | 1317.37 | 364.06 | 1318.25 | 364.06 | 1320.08 | 364.07 |
| 1322.04 | 364.06 | 1322.65 | 364.03 | 1323.2 | 364.02 | 1324.87 | 364.02 | 1326.98 | 364.03 |
| 1331.6 | 364.08 | 1333.64 | 364.09 | 1334.21 | 364.1 | 1343.15 | 364.06 | 1344.87 | 364.07 |
| 1345.69 | 364.08 | 1347.56 | 364.09 | 1348.34 | 364.11 | 1350.68 | 364.13 | 1356.11 | 364.14 |
| 1356.81 | 364.16 | 1358.75 | 364.18 | 1359.24 | 364.18 | 1364.14 | 364.24 | 1365.58 | 364.26 |
| 1367.57 | 364.27 | 1369.04 | 364.27 | 1370.07 | 364.26 | 1371.57 | 364.27 | 1374.25 | 364.3 |
| 1374.9 | 364.31 | 1375.72 | 364.31 | 1376.88 | 364.33 | 1379.62 | 364.33 | 1383.32 | 364.27 |
| 1384.75 | 364.24 | 1384.95 | 364.23 | 1387.26 | 364.22 | 1387.78 | 364.23 | 1389.13 | 364.19 |
| 1391.38 | 364.15 | 1391.78 | 364.15 | 1395.11 | 364.19 | 1396.2 | 364.2 | 1399.69 | 364.34 |
| 1401.29 | 364.38 | 1401.47 | 364.39 | 1403.19 | 364.42 | 1408.05 | 364.47 | 1408.43 | 364.46 |
| 1408.82 | 364.47 | 1409.52 | 364.47 | 1413.35 | 364.41 | 1413.99 | 364.39 | 1416.47 | 364.29 |
| 1417.4 | 364.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 370.48 | .05 | 379.51 | .04 | 1151.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 379.51 | 1151.64 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6059.27*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 384.73 | 362.5 | 384.85 | 362.48 | 385.84 | 362.38 | 386.53 | 362.29 | 388.2 | 362.05 |
| 389.26 | 361.91 | 390.45 | 361.69 | 391.3 | 361.55 | 391.77 | 361.45 | 394.06 | 360.73 |
| 394.71 | 360.53 | 401.17 | 360.05 | 406.5 | 359.64 | 406.76 | 359.65 | 406.89 | 359.68 |
| 407.15 | 359.62 | 423.66 | 359.61 | 430.75 | 359.87 | 432.44 | 359.9 | 434.62 | 359.88 |
| 435.12 | 359.85 | 435.83 | 359.72 | 437.31 | 359.68 | 437.83 | 359.68 | 439.35 | 359.74 |
| 442.52 | 359.94 | 443.58 | 359.98 | 446.69 | 360.04 | 446.84 | 360.05 | 450.74 | 360.17 |
| 451.73 | 360.19 | 452.14 | 360.17 | 453.5 | 360.08 | 456.57 | 359.95 | 458.02 | 359.86 |
| 461.48 | 359.6 | 465.47 | 359.59 | 469.83 | 359.43 | 475.99 | 359.65 | 476.36 | 359.64 |
| 477.28 | 359.66 | 488.38 | 359.92 | 493.08 | 359.88 | 507.96 | 360.16 | 510.31 | 360.2 |
| 510.56 | 360.2 | 511.72 | 360.23 | 513.67 | 360.22 | 518.27 | 360.22 | 518.99 | 360.23 |
| 520.45 | 360.23 | 521.14 | 360.25 | 521.55 | 360.32 | 524.29 | 360.34 | 524.86 | 360.28 |
| 526.02 | 360.21 | 526.33 | 360.2 | 535.56 | 359.65 | 535.71 | 359.65 | 536.75 | 359.58 |
| 540.05 | 359.44 | 540.55 | 359.43 | 541.56 | 359.48 | 542.68 | 359.51 | 548.24 | 359.63 |
| 558.32 | 359.71 | 559.38 | 359.73 | 559.82 | 359.73 | 563.54 | 359.81 | 566.91 | 359.81 |
| 567.35 | 359.8 | 570.54 | 359.7 | 571.43 | 359.65 | 571.74 | 359.64 | 572.71 | 359.64 |
| 573.3 | 359.63 | 574.5 | 359.67 | 575.25 | 359.68 | 589.93 | 359.68 | 590.38 | 359.63 |
| 591.07 | 359.59 | 596.39 | 359.4 | 597.9 | 359.38 | 598.46 | 359.38 | 599.53 | 359.36 |
| 600.16 | 359.31 | 601.67 | 359.26 | 602.68 | 359.26 | 605.52 | 359.31 | 606.37 | 359.36 |
| 606.91 | 359.41 | 607.7 | 359.59 | 612.38 | 359.91 | 612.87 | 359.94 | 616.1 | 360.07 |
| 616.77 | 360.07 | 617.8 | 360.11 | 622.39 | 360.08 | 641.29 | 360.45 | 641.94 | 360.48 |
| 642.39 | 360.49 | 643.1 | 360.49 | 643.52 | 360.51 | 647.45 | 360.51 | 649.15 | 360.45 |
| 659.62 | 360.11 | 663.14 | 360.07 | 669.69 | 359.98 | 670.92 | 359.96 | 672.78 | 359.99 |
| 674.58 | 360.01 | 675.88 | 360.02 | 684.59 | 360.13 | 684.91 | 360.14 | 685.62 | 360.21 |
| 685.87 | 360.22 | 687.28 | 360.25 | 689.59 | 360.26 | 689.64 | 360.25 | 690.53 | 360.23 |
| 693.66 | 360.21 | 694.5 | 360.17 | 695.79 | 360.09 | 695.94 | 360.07 | 696.44 | 360.05 |
| 700.1 | 360.01 | 700.55 | 360.01 | 713.12 | 359.82 | 728 | 359.47 | 731.67 | 359.16 |
| 734.66 | 358.78 | 735.03 | 358.84 | 735.21 | 358.84 | 737.22 | 358.76 | 737.92 | 358.71 |
| 738.71 | 358.71 | 743.6 | 358.9 | 745.92 | 358.96 | 746.47 | 358.96 | 746.9 | 358.98 |
| 749.61 | 359.14 | 756.39 | 359.08 | 757.26 | 359.06 | 760.7 | 359.08 | 761.7 | 359.07 |
| 765.68 | 358.95 | 766.59 | 358.91 | 767.35 | 358.89 | 767.9 | 358.89 | 771.14 | 358.96 |
| 771.51 | 359 | 772.93 | 359.04 | 778.21 | 359.03 | 778.74 | 359.02 | 787.83 | 358.78 |
| 787.97 | 358.78 | 795.98 | 358.7 | 796.25 | 358.69 | 802.66 | 358.5 | 810.55 | 358.27 |
| 810.87 | 358.27 | 811.19 | 358.32 | 811.51 | 358.34 | 812.99 | 358.34 | 814.13 | 358.3 |
| 816.42 | 358.2 | 817.03 | 358.16 | 818.67 | 358.03 | 819.61 | 358.03 | 821.79 | 358.05 |
| 824.54 | 358.03 | 825.16 | 358.03 | 825.24 | 358.12 | 825.96 | 358.23 | 826.52 | 358.28 |
| 828.21 | 358.39 | 828.59 | 358.41 | 830.02 | 358.46 | 831.21 | 358.49 | 833.01 | 358.49 |
| 835.19 | 358.53 | 835.48 | 358.53 | 835.82 | 358.56 | 836.36 | 358.66 | 840.83 | 358.88 |
| 843.94 | 358.97 | 844.82 | 358.95 | 845.32 | 358.93 | 849.36 | 358.78 | 850.92 | 358.73 |
| 851.91 | 358.69 | 852.46 | 358.68 | 855.31 | 358.57 | 855.54 | 358.57 | 856.62 | 358.53 |
| 857.16 | 358.52 | 857.5 | 358.53 | 864.57 | 359.07 | 869.26 | 359.43 | 870.13 | 359.48 |
| 874.95 | 359.5 | 875.97 | 359.54 | 876.28 | 359.54 | 877.31 | 359.58 | 879.82 | 359.58 |
| 880.57 | 359.57 | 886.79 | 359.57 | 887.68 | 359.54 | 890.04 | 359.45 | 893.47 | 359.33 |
| 894.21 | 359.33 | 896.27 | 359.4 | 899.51 | 359.45 | 901.25 | 359.44 | 903.58 | 359.37 |
| 904.09 | 359.35 | 906.73 | 359.23 | 911.48 | 359.23 | 911.89 | 359.24 | 912.95 | 359.32 |
| 915.42 | 359.41 | 916.62 | 359.44 | 917.05 | 359.46 | 923.36 | 359.6 | 924.01 | 359.62 |
| 924.53 | 359.66 | 924.94 | 359.78 | 925.58 | 359.85 | 927.26 | 359.9 | 927.35 | 359.89 |
| 928.55 | 359.88 | 930.39 | 359.82 | 931.31 | 359.81 | 932.05 | 359.76 | 933.15 | 359.7 |
| 934.93 | 359.64 | 939.54 | 359.42 | 940.77 | 359.34 | 942.1 | 359.26 | 942.91 | 359.22 |
| 944.57 | 359.12 | 945.07 | 359.02 | 945.39 | 359 | 945.77 | 358.95 | 947.22 | 358.96 |
| 948.2 | 358.93 | 948.68 | 358.93 | 949.5 | 358.98 | 950.1 | 359.03 | 951.3 | 359.12 |
| 951.64 | 359.16 | 952.25 | 359.28 | 953.39 | 359.58 | 957.09 | 359.78 | 958.28 | 359.82 |
| 960.27 | 359.83 | 961.69 | 359.85 | 962.97 | 359.84 | 964.03 | 359.87 | 966.4 | 359.91 |
| 967.26 | 359.92 | 968.36 | 359.91 | 969.26 | 359.89 | 969.73 | 359.89 | 972.69 | 359.82 |
| 974.69 | 359.76 | 976.45 | 359.69 | 978.24 | 359.65 | 980.2 | 359.58 | 982.38 | 359.47 |
| 984.31 | 359.38 | 985.14 | 359.33 | 986.4 | 359.27 | 988.69 | 359.14 | 989.08 | 359.11 |
| 989.32 | 359.05 | 990.12 | 359.01 | 991.33 | 358.98 | 992.46 | 358.98 | 994.65 | 358.92 |
| 995.43 | 358.92 | 995.73 | 358.93 | 996.69 | 359.02 | 996.87 | 359.05 | 998.71 | 359.29 |
| 999.61 | 359.3 | 999.79 | 359.32 | 1000.39 | 359.35 | 1001.24 | 359.33 | 1003.09 | 359.25 |
| 1004.43 | 359.18 | 1005.61 | 359.13 | 1006.22 | 359.12 | 1009.47 | 358.98 | 1013.53 | 358.95 |
| 1014.98 | 358.91 | 1016.62 | 358.91 | 1018.71 | 358.93 | 1021.17 | 358.93 | 1023.34 | 358.85 |
| 1024.72 | 358.85 | 1026.58 | 358.91 | 1027.25 | 358.94 | 1028.27 | 358.96 | 1029.63 | 359.04 |
| 1029.74 | 359.04 | 1031.81 | 359.17 | 1034.52 | 359.22 | 1039.99 | 359.64 | 1048.72 | 359.62 |
| 1049.22 | 359.62 | 1051.86 | 359.6 | 1053.6 | 359.45 | 1054.54 | 359.4 | 1055.98 | 359.37 |
| 1057.19 | 359.33 | 1058 | 359.31 | 1059.23 | 359.29 | 1059.94 | 359.27 | 1061.43 | 359.25 |
| 1064.66 | 359.24 | 1066.48 | 359.24 | 1069.21 | 359.23 | 1070.25 | 359.25 | 1072.87 | 359.32 |
| 1075.35 | 359.38 | 1079.33 | 359.47 | 1081.73 | 359.53 | 1082.93 | 359.58 | 1087.86 | 359.78 |
| 1088.14 | 359.8 | 1088.83 | 359.82 | 1091.77 | 359.87 | 1092.5 | 359.88 | 1093.32 | 359.88 |
| 1097.64 | 359.92 | 1098.7 | 359.91 | 1101.28 | 359.82 | 1102.68 | 359.79 | 1103.69 | 359.78 |
| 1104.66 | 359.78 | 1104.98 | 359.79 | 1109.81 | 359.77 | 1110.51 | 359.77 | 1112.03 | 359.75 |
| 1116.04 | 359.69 | 1116.58 | 359.68 | 1117.16 | 359.68 | 1119.09 | 359.65 | 1121.18 | 359.63 |
| 1128.77 | 359.58 | 1129.86 | 359.57 | 1133.82 | 359.5 | 1135.58 | 359.5 | 1136.32 | 359.52 |
| 1138.01 | 359.61 | 1139.65 | 360.15 | 1140.75 | 360.52 | 1140.88 | 360.55 | 1141.49 | 360.59 |
| 1142.68 | 360.63 | 1145.68 | 360.7 | 1148.1 | 360.75 | 1150.17 | 360.8 | 1154.05 | 360.91 |
| 1160.96 | 361.11 | 1162.76 | 361.16 | 1165.13 | 361.23 | 1166.02 | 361.27 | 1167.58 | 361.32 |
| 1169.54 | 361.39 | 1171.4 | 361.4 | 1174.02 | 361.44 | 1174.67 | 361.35 | 1175.37 | 361.34 |
| 1176.55 | 361.26 | 1177.39 | 361.25 | 1179.25 | 361.26 | 1180.77 | 361.31 | 1181.63 | 361.29 |
| 1182.47 | 361.18 | 1182.79 | 361.18 | 1184.06 | 361.04 | 1186.48 | 360.69 | 1186.65 | 360.68 |
| 1187.61 | 360.55 | 1189.99 | 360.53 | 1196.98 | 360.46 | 1199.16 | 360.43 | 1199.97 | 360.43 |
| 1201.74 | 360.44 | 1203.04 | 360.44 | 1209.26 | 360.49 | 1210.46 | 360.51 | 1214.87 | 360.57 |
| 1216.21 | 360.59 | 1217.17 | 360.6 | 1221.24 | 360.67 | 1221.82 | 360.69 | 1223.14 | 360.77 |
| 1225.12 | 360.88 | 1229.33 | 361.13 | 1232.25 | 361.31 | 1234.41 | 361.44 | 1236.08 | 361.51 |
| 1236.7 | 361.53 | 1239.19 | 361.62 | 1241.1 | 361.9 | 1243.48 | 362.28 | 1244.67 | 362.48 |
| 1244.75 | 362.5 | 1247.51 | 362.54 | 1264.93 | 362.86 | 1267.75 | 362.9 | 1268.5 | 362.92 |
| 1269.3 | 362.92 | 1269.55 | 362.93 | 1270.3 | 362.93 | 1272.69 | 362.96 | 1275.11 | 363.01 |
| 1279.61 | 363.08 | 1279.91 | 363.09 | 1281.44 | 363.12 | 1282.91 | 363.14 | 1291.53 | 363.28 |
| 1292.23 | 363.3 | 1292.52 | 363.3 | 1294.22 | 363.33 | 1303.21 | 363.44 | 1303.71 | 363.45 |
| 1304.73 | 363.45 | 1305.85 | 363.4 | 1307.22 | 363.37 | 1308.3 | 363.39 | 1309.79 | 363.45 |
| 1310.13 | 363.47 | 1310.94 | 363.48 | 1317.84 | 363.65 | 1318.37 | 363.66 | 1320.64 | 363.72 |
| 1322.97 | 363.76 | 1323.17 | 363.77 | 1324.96 | 363.8 | 1325.2 | 363.81 | 1331.49 | 363.81 |
| 1333.28 | 363.82 | 1335.52 | 363.82 | 1335.78 | 363.8 | 1337.94 | 363.8 | 1339.98 | 363.81 |
| 1344.47 | 363.85 | 1346.45 | 363.86 | 1347.02 | 363.87 | 1355.7 | 363.83 | 1357.37 | 363.83 |
| 1358.17 | 363.84 | 1359.71 | 363.85 | 1363.02 | 363.88 | 1363.42 | 363.88 | 1368.3 | 363.9 |
| 1370.87 | 363.93 | 1372.16 | 363.94 | 1376.11 | 364 | 1376.96 | 364.01 | 1377.51 | 364.01 |
| 1379.44 | 364.02 | 1380.24 | 364.03 | 1381.87 | 364.03 | 1384.31 | 364.05 | 1386.57 | 364.08 |
| 1387.36 | 364.08 | 1388.49 | 364.1 | 1391.15 | 364.1 | 1394.75 | 364.05 | 1396.14 | 364.02 |
| 1396.34 | 364.01 | 1398.99 | 364.01 | 1399.09 | 364.02 | 1400.4 | 363.97 | 1402.59 | 363.93 |
| 1402.97 | 363.93 | 1407.27 | 363.97 | 1409.96 | 364.05 | 1410.61 | 364.06 | 1410.67 | 364.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1411.8 | 364.09 | 1412.4 | 364.11 | 1414.07 | 364.14 | 1418.79 | 364.2 | 1419.54 | 364.2 |
| 1420.22 | 364.21 | 1423.95 | 364.14 | 1424.56 | 364.12 | 1426.97 | 364.02 | 1427.33 | 364.01 |
| 1427.88 | 363.97 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 384.73 | .05 | 391.77 | .04 | 1169.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 391.77 | 1169.54 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6039.50*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 398.99 | 362.31 | 399.78 | 362.19 | 399.9 | 362.18 | 401.47 | 361.85 | 402.24 | 361.7 |
| 403.09 | 361.47 | 403.4 | 361.4 | 404.04 | 361.23 | 406.42 | 360.47 | 407.09 | 360.27 |
| 413.8 | 359.76 | 419.34 | 359.34 | 419.74 | 359.37 | 420.02 | 359.31 | 437.16 | 359.31 |
| 444.53 | 359.58 | 446.28 | 359.61 | 448.55 | 359.59 | 449.07 | 359.56 | 449.81 | 359.42 |
| 451.34 | 359.38 | 451.88 | 359.38 | 453.46 | 359.45 | 456.61 | 359.65 | 456.76 | 359.65 |
| 457.86 | 359.69 | 461.09 | 359.76 | 461.25 | 359.77 | 465.3 | 359.9 | 466.33 | 359.91 |
| 466.76 | 359.9 | 467.66 | 359.83 | 468.16 | 359.8 | 471.35 | 359.66 | 472.87 | 359.57 |
| 476.46 | 359.3 | 480.61 | 359.29 | 485.13 | 359.13 | 491.53 | 359.35 | 492.87 | 359.36 |
| 504.41 | 359.64 | 509.28 | 359.6 | 524.75 | 359.89 | 527.19 | 359.93 | 527.45 | 359.93 |
| 528.66 | 359.96 | 531.69 | 359.96 | 535.46 | 359.95 | 536.2 | 359.96 | 537.73 | 359.96 |
| 538.44 | 359.99 | 538.86 | 360.06 | 541.72 | 360.08 | 542.31 | 360.02 | 543.51 | 359.94 |
| 543.83 | 359.93 | 553.42 | 359.36 | 553.57 | 359.36 | 554.65 | 359.28 | 558.08 | 359.14 |
| 558.6 | 359.13 | 559.66 | 359.18 | 560.82 | 359.22 | 566.6 | 359.34 | 577.06 | 359.43 |
| 578.17 | 359.45 | 578.62 | 359.45 | 582.49 | 359.52 | 585.99 | 359.52 | 586.45 | 359.51 |
| 589.77 | 359.41 | 590.69 | 359.36 | 591.01 | 359.35 | 592.01 | 359.35 | 592.63 | 359.34 |
| 593.87 | 359.38 | 594.65 | 359.39 | 609.91 | 359.39 | 610.37 | 359.34 | 611.09 | 359.29 |
| 616.62 | 359.1 | 618.19 | 359.07 | 618.77 | 359.07 | 619.88 | 359.05 | 620.53 | 359.01 |
| 622.11 | 358.95 | 623.16 | 358.95 | 626.11 | 359.01 | 626.99 | 359.05 | 627.39 | 359.08 |
| 628.37 | 359.29 | 633.23 | 359.63 | 633.74 | 359.66 | 637.09 | 359.8 | 637.8 | 359.8 |
| 638.86 | 359.84 | 643.63 | 359.81 | 663.26 | 360.2 | 664.41 | 360.23 | 665.14 | 360.23 |
| 665.59 | 360.25 | 669.66 | 360.25 | 671.43 | 360.2 | 682.31 | 359.84 | 685.97 | 359.81 |
| 692.77 | 359.73 | 694.05 | 359.71 | 695.99 | 359.75 | 697.86 | 359.78 | 699.2 | 359.79 |
| 708.25 | 359.91 | 708.59 | 359.92 | 708.99 | 359.97 | 709.58 | 360 | 711.04 | 360.04 |
| 713.44 | 360.05 | 713.5 | 360.04 | 714.43 | 360.02 | 717.67 | 360 | 718.55 | 359.96 |
| 719.89 | 359.88 | 720.05 | 359.86 | 721.49 | 359.82 | 724.36 | 359.79 | 724.84 | 359.79 |
| 737.9 | 359.6 | 739.2 | 359.57 | 753.35 | 359.23 | 757.17 | 358.92 | 760.27 | 358.51 |
| 760.65 | 358.58 | 760.85 | 358.58 | 762.93 | 358.49 | 763.27 | 358.46 | 764.48 | 358.44 |
| 769.56 | 358.64 | 771.97 | 358.71 | 772.54 | 358.71 | 772.99 | 358.73 | 775.81 | 358.9 |
| 782.84 | 358.83 | 783.75 | 358.81 | 787.33 | 358.83 | 788.37 | 358.82 | 792.5 | 358.7 |
| 793.45 | 358.66 | 794.24 | 358.64 | 794.8 | 358.64 | 798.17 | 358.72 | 798.55 | 358.75 |
| 800.03 | 358.79 | 805.51 | 358.78 | 806.06 | 358.77 | 815.51 | 358.53 | 815.65 | 358.52 |
| 823.98 | 358.44 | 824.26 | 358.44 | 830.91 | 358.24 | 839.11 | 357.99 | 839.45 | 358 |
| 839.78 | 358.05 | 840.11 | 358.07 | 841.65 | 358.07 | 842.84 | 358.03 | 845.22 | 357.93 |
| 845.84 | 357.89 | 847.32 | 357.77 | 847.55 | 357.74 | 848.54 | 357.74 | 850.82 | 357.77 |
| 853.69 | 357.74 | 854.33 | 357.74 | 854.42 | 357.84 | 855.11 | 357.95 | 855.65 | 358.01 |
| 857.28 | 358.12 | 859.03 | 358.2 | 860.48 | 358.23 | 861.93 | 358.23 | 864.04 | 358.26 |
| 864.64 | 358.3 | 865.17 | 358.4 | 869.5 | 358.62 | 872.5 | 358.7 | 873.35 | 358.67 |
| 873.84 | 358.66 | 877.74 | 358.51 | 880.21 | 358.43 | 883.5 | 358.31 | 884.76 | 358.27 |
| 884.86 | 358.25 | 885.29 | 358.25 | 885.61 | 358.27 | 892.46 | 358.82 | 896.99 | 359.18 |
| 897.84 | 359.24 | 902.5 | 359.25 | 904.78 | 359.29 | 911.71 | 359.29 | 913.95 | 359.28 |
| 914.81 | 359.25 | 917.09 | 359.16 | 920.41 | 359.04 | 921.12 | 359.03 | 923.12 | 359.1 |
| 926.25 | 359.15 | 927.94 | 359.14 | 930.19 | 359.07 | 930.68 | 359.05 | 933.23 | 358.93 |
| 933.53 | 358.92 | 934.15 | 358.92 | 934.59 | 358.91 | 937.83 | 358.91 | 938.22 | 358.92 |
| 939.25 | 359.01 | 941.64 | 359.11 | 941.98 | 359.11 | 942.84 | 359.15 | 943.21 | 359.16 |
| 949.32 | 359.3 | 949.95 | 359.33 | 950.45 | 359.37 | 950.85 | 359.49 | 951.47 | 359.56 |
| 953.1 | 359.62 | 954.48 | 359.61 | 955.25 | 359.58 | 956.12 | 359.56 | 957.01 | 359.55 |
| 957.72 | 359.5 | 958.79 | 359.44 | 960.52 | 359.35 | 964.97 | 359.09 | 965.6 | 359.05 |
| 967.44 | 358.91 | 968.23 | 358.87 | 969.83 | 358.78 | 970.32 | 358.68 | 970.63 | 358.66 |
| 971.06 | 358.6 | 971.88 | 358.61 | 972.87 | 358.61 | 973.34 | 358.6 | 974.26 | 358.64 |
| 976.34 | 358.82 | 976.68 | 358.86 | 977.27 | 358.97 | 977.85 | 359.15 | 978.36 | 359.29 |
| 981.94 | 359.49 | 983.09 | 359.53 | 985.02 | 359.53 | 986.39 | 359.55 | 987.64 | 359.55 |
| 988.66 | 359.58 | 991.79 | 359.62 | 992.84 | 359.61 | 994.64 | 359.57 | 996.64 | 359.52 |
| 997.03 | 359.52 | 998.97 | 359.46 | 1000.67 | 359.4 | 1002.41 | 359.36 | 1004.3 | 359.29 |
| 1006.41 | 359.17 | 1008.27 | 359.06 | 1009.08 | 359.02 | 1012.51 | 358.82 | 1012.89 | 358.78 |
| 1013.12 | 358.71 | 1013.9 | 358.67 | 1014.8 | 358.66 | 1015.62 | 358.64 | 1016.16 | 358.64 |
| 1018.27 | 358.58 | 1019.03 | 358.58 | 1019.32 | 358.59 | 1019.77 | 358.63 | 1020.43 | 358.71 |
| 1022.21 | 358.97 | 1022.87 | 358.97 | 1023.83 | 359.03 | 1024.65 | 359.01 | 1025.13 | 358.98 |
| 1026.44 | 358.92 | 1027.74 | 358.85 | 1028.87 | 358.8 | 1029.46 | 358.78 | 1032.61 | 358.63 |
| 1036.54 | 358.59 | 1037.94 | 358.54 | 1039.53 | 358.54 | 1040.54 | 358.55 | 1043.59 | 358.55 |
| 1043.93 | 358.54 | 1046.02 | 358.46 | 1047.36 | 358.46 | 1047.67 | 358.48 | 1048.57 | 358.5 |
| 1049.16 | 358.52 | 1049.81 | 358.56 | 1050.79 | 358.59 | 1054.22 | 358.81 | 1056.84 | 358.88 |
| 1062.13 | 359.32 | 1071.05 | 359.31 | 1073.62 | 359.3 | 1075.29 | 359.14 | 1076.2 | 359.09 |
| 1077.6 | 359.06 | 1078.77 | 359.03 | 1080.16 | 359.01 | 1080.74 | 358.99 | 1081.43 | 358.98 |
| 1081.52 | 358.97 | 1085.99 | 358.94 | 1086.52 | 358.94 | 1090.24 | 358.91 | 1091.4 | 358.93 |
| 1093.93 | 359 | 1096.34 | 359.07 | 1100.18 | 359.17 | 1100.98 | 359.2 | 1102.51 | 359.24 |
| 1103.67 | 359.28 | 1104.38 | 359.31 | 1108.43 | 359.45 | 1108.71 | 359.47 | 1109.37 | 359.49 |
| 1112.22 | 359.54 | 1113.72 | 359.56 | 1117.9 | 359.62 | 1118.92 | 359.6 | 1122.77 | 359.49 |
| 1123.75 | 359.48 | 1125 | 359.48 | 1127.49 | 359.46 | 1129.67 | 359.44 | 1130.35 | 359.44 |
| 1135.69 | 359.37 | 1136.1 | 359.36 | 1136.77 | 359.36 | 1138.65 | 359.33 | 1140.66 | 359.31 |
| 1149.06 | 359.23 | 1152.89 | 359.17 | 1153.61 | 359.18 | 1154.59 | 359.18 | 1155.3 | 359.21 |
| 1156.94 | 359.31 | 1157.49 | 359.51 | 1159.67 | 360.27 | 1160.04 | 360.29 | 1161.46 | 360.34 |
| 1162.62 | 360.37 | 1162.71 | 360.38 | 1164.36 | 360.42 | 1164.89 | 360.44 | 1167.52 | 360.5 |
| 1168.7 | 360.54 | 1172.45 | 360.65 | 1179.14 | 360.85 | 1180.88 | 360.9 | 1183.17 | 360.98 |
| 1183.67 | 360.99 | 1184.03 | 361.01 | 1185.55 | 361.05 | 1187.44 | 361.12 | 1187.89 | 361.12 |
| 1191.79 | 361.15 | 1192.05 | 361.13 | 1192.28 | 361.07 | 1193.1 | 361.05 | 1194.25 | 360.95 |
| 1194.59 | 360.96 | 1195.07 | 360.94 | 1196.87 | 360.95 | 1198.34 | 361 | 1199.18 | 360.97 |
| 1200 | 360.86 | 1200.31 | 360.86 | 1201.54 | 360.72 | 1203.9 | 360.35 | 1204.99 | 360.2 |
| 1207.3 | 360.17 | 1214.09 | 360.09 | 1215.52 | 360.08 | 1216.42 | 360.06 | 1217 | 360.07 |
| 1218.72 | 360.08 | 1219.15 | 360.09 | 1219.98 | 360.09 | 1226.02 | 360.15 | 1227.19 | 360.17 |
| 1231.47 | 360.22 | 1233.7 | 360.25 | 1237.06 | 360.32 | 1238.22 | 360.34 | 1241.42 | 360.54 |
| 1241.82 | 360.57 | 1242.59 | 360.61 | 1245.51 | 360.8 | 1248.35 | 360.98 | 1250.44 | 361.11 |
| 1252.07 | 361.18 | 1252.58 | 361.21 | 1253.22 | 361.23 | 1255.09 | 361.31 | 1256.95 | 361.61 |
| 1259.26 | 362.02 | 1260.41 | 362.23 | 1260.49 | 362.25 | 1263.69 | 362.3 | 1280.09 | 362.59 |
| 1280.72 | 362.61 | 1284.34 | 362.66 | 1284.58 | 362.67 | 1287.63 | 362.71 | 1290.59 | 362.76 |
| 1294.35 | 362.83 | 1294.64 | 362.83 | 1296.13 | 362.86 | 1297.56 | 362.88 | 1305.93 | 363.03 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1306.89 | 363.04 | 1308.54 | 363.07 | 1317.27 | 363.18 | 1317.75 | 363.19 | 1318.74 | 363.19 | | |
| 1319.22 | 363.18 | 1319.84 | 363.15 | 1321.16 | 363.13 | 1322.21 | 363.15 | 1323.66 | 363.2 | | |
| 1324.77 | 363.23 | 1329.5 | 363.34 | 1331.99 | 363.4 | 1336.46 | 363.5 | 1338.39 | 363.53 | | |
| 1338.63 | 363.54 | 1340.55 | 363.55 | 1343.92 | 363.56 | 1344.74 | 363.56 | 1346.47 | 363.58 | | |
| 1348.9 | 363.58 | 1349.42 | 363.57 | 1350.31 | 363.58 | 1351 | 363.58 | 1352.99 | 363.59 | | |
| 1357.35 | 363.62 | 1359.27 | 363.62 | 1359.82 | 363.63 | 1368.25 | 363.59 | 1370.65 | 363.59 | | |
| 1372.15 | 363.6 | 1372.42 | 363.61 | 1373.16 | 363.61 | 1375.36 | 363.63 | 1375.75 | 363.63 | | |
| 1380.49 | 363.65 | 1381.15 | 363.67 | 1382.98 | 363.69 | 1383.45 | 363.69 | 1388.91 | 363.76 | | |
| 1389.44 | 363.76 | 1392.09 | 363.79 | 1392.7 | 363.79 | 1395.09 | 363.81 | 1397.62 | 363.84 | | |
| 1399.01 | 363.86 | 1400.1 | 363.87 | 1402.69 | 363.87 | 1406.18 | 363.82 | 1406.64 | 363.82 | | |
| 1407.53 | 363.8 | 1409.9 | 363.79 | 1410.39 | 363.8 | 1411.67 | 363.76 | 1413.27 | 363.72 | | |
| 1414.17 | 363.71 | 1417.31 | 363.73 | 1418.34 | 363.74 | 1420.96 | 363.79 | 1421.58 | 363.79 | | |
| 1421.64 | 363.8 | 1423.32 | 363.82 | 1424.95 | 363.86 | 1429.53 | 363.94 | 1429.89 | 363.93 | | |
| 1430.26 | 363.94 | 1430.92 | 363.94 | 1434.54 | 363.88 | 1435.14 | 363.86 | 1437.48 | 363.75 | | |
| 1438.36 | 363.7 | | | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 398.99 | .05 | 404.04 | .04 | 1187.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 404.04 | 1187.44 | 14.41 | 19.77 | 28.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 6019.74

INPUT
Description:
Station Elevation Data num= 364

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 413.24 | 362.13 | 413.75 | 362 | 415.1499 | 361.51 | 416.2999 | 361 | 418.7699 | 360.21 |
| 419.47 | 360 | 432.1799 | 359.03 | 432.45 | 359.04 | 432.59 | 359.07 | 432.88 | 359 |
| 450.6699 | 359 | 458.3099 | 359.29 | 460.13 | 359.32 | 462.48 | 359.3 | 463.0199 | 359.27 |
| 463.7899 | 359.12 | 465.38 | 359.08 | 465.9399 | 359.08 | 467.58 | 359.15 | 470.84 | 359.36 |
| 472.1399 | 359.41 | 475.49 | 359.48 | 479.86 | 359.62 | 480.9299 | 359.64 | 481.37 | 359.62 |
| 482.3099 | 359.55 | 482.83 | 359.52 | 486.1399 | 359.38 | 487.71 | 359.28 | 491.4399 | 359 |
| 495.74 | 358.99 | 500.4299 | 358.82 | 507.0699 | 359.06 | 507.4199 | 359.06 | 507.47 | 359.05 |
| 508.46 | 359.07 | 520.4299 | 359.36 | 525.49 | 359.32 | 544.0699 | 359.67 | 544.34 | 359.67 |
| 545.59 | 359.7 | 552.6499 | 359.69 | 553.4199 | 359.7 | 555 | 359.7 | 555.74 | 359.73 |
| 556.1799 | 359.8 | 559.1399 | 359.82 | 559.75 | 359.76 | 561 | 359.68 | 561.33 | 359.67 |
| 571.2799 | 359.07 | 571.4399 | 359.07 | 572.5599 | 358.99 | 576.12 | 358.84 | 576.23 | 358.83 |
| 576.6599 | 358.83 | 577.7499 | 358.88 | 578.96 | 358.92 | 584.95 | 359.05 | 595.8099 | 359.14 |
| 596.96 | 359.16 | 597.4299 | 359.16 | 601.4399 | 359.24 | 605.0699 | 359.24 | 605.5499 | 359.23 |
| 608.9899 | 359.12 | 609.95 | 359.07 | 610.28 | 359.06 | 611.3199 | 359.06 | 611.96 | 359.05 |
| 613.2499 | 359.09 | 613.58 | 359.09 | 614.0599 | 359.1 | 629.89 | 359.16 | 30.3699 | 359.05 |
| 631.1099 | 359 | 636.85 | 358.8 | 638.48 | 358.77 | 639.08 | 358.77 | 640.23 | 358.75 |
| 640.91 | 358.7 | 642.54 | 358.64 | 643.6299 | 358.64 | 646.6899 | 358.76 | 47.6099 | 358.75 |
| 648.02 | 358.78 | 648.1899 | 358.81 | 649.04 | 359 | 654.08 | 359.35 | 654.6099 | 359.38 |
| 658.09 | 359.53 | 658.8199 | 359.53 | 659.9199 | 359.57 | 664.8699 | 359.54 | 685.2399 | 359.94 |
| 685.9399 | 359.97 | 686.4299 | 359.98 | 687.1899 | 359.98 | 687.65 | 360 | 691.8799 | 360 |
| 704.9999 | 359.57 | 717.1799 | 359.46 | 719.1899 | 359.51 | 719.3599 | 359.51 | 721.1299 | 359.55 |
| 721.4999 | 359.55 | 731.91 | 359.69 | 732.2599 | 359.7 | 732.6799 | 359.75 | 733.02 | 359.78 |
| 733.29 | 359.79 | 734.8099 | 359.83 | 737.2999 | 359.84 | 737.3599 | 359.83 | 738.3199 | 359.81 |
| 741.6899 | 359.79 | 742.6 | 359.75 | 743.9899 | 359.66 | 744.15 | 359.64 | 744.6899 | 359.62 |
| 744.96 | 359.62 | 745.65 | 359.67 | 48.6299 | 359.57 | 749.1199 | 359.57 | 762.6699 | 359.38 |
| 778.7 | 359 | 782.66 | 358.67 | 785.8799 | 358.25 | 786.28 | 358.32 | 786.48 | 358.32 |
| 788.64 | 358.23 | 788.9899 | 358.2 | 789.4 | 358.18 | 790.2499 | 358.18 | 795.52 | 358.39 |
| 798.0599 | 358.46 | 798.6099 | 358.46 | 799.08 | 358.48 | 801.9999 | 358.66 | 809.2999 | 358.59 |
| 809.4899 | 358.58 | 810.2399 | 358.57 | 813.95 | 358.59 | 814.5499 | 358.58 | 815.03 | 358.58 |
| 819.3199 | 358.45 | 820.0099 | 358.42 | 821.1199 | 358.39 | 821.71 | 358.39 | 824.6899 | 358.46 |
| 825.2 | 358.47 | 825.6 | 358.51 | 827.1299 | 358.55 | 832.8199 | 358.54 | 833.39 | 358.53 |
| 843.34 | 358.27 | 851.98 | 358.19 | 867.6799 | 357.72 | 868.03 | 357.73 | 868.3699 | 357.78 |
| 868.71 | 357.8 | 870.3099 | 357.8 | 871.54 | 357.76 | 874.0099 | 357.65 | 874.66 | 357.61 |
| 876.1899 | 357.49 | 876.4299 | 357.46 | 877.46 | 357.46 | 879.84 | 357.49 | 882.84 | 357.46 |
| 883.5099 | 357.46 | 883.59 | 357.56 | 884.2599 | 357.68 | 884.78 | 357.74 | 886.3599 | 357.85 |
| 886.72 | 357.87 | 888.0499 | 357.93 | 889.23 | 357.96 | 890.85 | 357.96 | 893.16 | 358 |
| 893.47 | 358.03 | 893.98 | 358.14 | 898.16 | 358.35 | 901.0599 | 358.43 | 912.91 | 358 |
| 912.9999 | 357.98 | 913.27 | 357.98 | 913.73 | 358 | 924.72 | 358.94 | 925.54 | 359 |
| 941.1099 | 359 | 947.35 | 358.75 | 948.04 | 358.74 | 949.9399 | 358.89 | 52.9899 | 358.85 |
| 954.6199 | 358.84 | 956.7999 | 358.77 | 957.27 | 358.75 | 959.7399 | 358.62 | 961.0499 | 358.6 |
| 964.1799 | 358.69 | 64.5599 | 358.61 | 965.5499 | 358.79 | 69.3799 | 358.86 | 975.28 | 359 |
| 975.89 | 359.03 | 976.3699 | 359.07 | 976.7599 | 359.29 | 77.3599 | 359.27 | 978.9299 | 359.34 |
| 980.1299 | 359.34 | 982.48 | 359.29 | 982.71 | 359.29 | 990.4 | 358.77 | 992.79 | 358.57 |
| 995.1 | 358.43 | 995.5699 | 358.33 | 995.8699 | 358.31 | 996.28 | 358.25 | 997.7 | 358.27 |
| 998.03 | 358.28 | 998.4899 | 358.28 | 998.9399 | 358.33 | 999.3799 | 358.33 | 1001.39 | 358.51 |
| 1001.71 | 358.55 | 1002.28 | 358.67 | 1003.34 | 359 | 1006.8 | 359.2 | 1007.91 | 359.24 |
| 1009.77 | 359.24 | 1011.1 | 359.26 | 1012.3 | 359.25 | 1012.51 | 359.26 | 1013.29 | 359.28 |
| 1016.31 | 359.32 | 1017.33 | 359.31 | 1026.46 | 359.08 | 1028.4 | 359 | 1036.33 | 358.49 |
| 1036.7 | 358.45 | 1036.92 | 358.38 | 1037.67 | 358.34 | 1038.54 | 358.32 | 1038.8 | 358.31 |
| 1039.14 | 358.31 | 1039.34 | 358.3 | 1039.86 | 358.3 | 1041.9 | 358.24 | 1042.63 | 358.24 |
| 1042.91 | 358.25 | 1043.35 | 358.29 | 1043.81 | 358.35 | 1045.7 | 358.64 | 1046.04 | 358.64 |
| 1046.54 | 358.65 | 1047.27 | 358.7 | 1048.06 | 358.68 | 1052.14 | 358.46 | 1052.71 | 358.44 |
| 1055.75 | 358.28 | 1059.55 | 358.23 | 1060.9 | 358.18 | 1066.36 | 358.17 | 1066.69 | 358.16 |
| 1068.71 | 358.07 | 1070 | 358.07 | 1070.34 | 358.09 | 1071.82 | 358.14 | 1072.37 | 358.18 |
| 1072.54 | 358.18 | 1072.84 | 358.2 | 1073.32 | 358.22 | 1076.63 | 358.46 | 1079.16 | 358.53 |
| 1084.27 | 359 | 1095.37 | 359 | 1096.99 | 358.84 | 1097.41 | 358.82 | 1097.87 | 358.79 |
| 1102.25 | 358.7 | 1102.92 | 358.68 | 1111.43 | 358.59 | 1112.55 | 358.61 | 1129.14 | 359.13 |
| 1129.27 | 359.14 | 1129.91 | 359.16 | 1138.15 | 359.31 | 1139.14 | 359.3 | 1142.86 | 359.19 |
| 1143.16 | 359.19 | 1144.07 | 359.17 | 1145.01 | 359.17 | 1171.96 | 358.85 | 1173.6 | 358.86 |
| 1174.29 | 358.89 | 1175.87 | 359 | 1176.16 | 359.12 | 1178.51 | 360 | 1205.34 | 360.85 |
| 1205.78 | 360.85 | 1209.56 | 360.87 | 1209.81 | 360.84 | 1210.04 | 360.78 | 1210.17 | 360.77 |
| 1210.83 | 360.75 | 1211.99 | 360.64 | 1212.28 | 360.65 | 1212.74 | 360.63 | 1214.49 | 360.64 |
| 1215.92 | 360.69 | 1216.73 | 360.66 | 1217.53 | 360.54 | 1217.83 | 360.54 | 1219.02 | 360.39 |
| 1221.31 | 360 | 1221.47 | 359.98 | 1222.37 | 359.84 | 1233.46 | 359.7 | 1249.33 | 359.89 |
| 1250.06 | 359.9 | 1254.62 | 360 | 1266.36 | 360.77 | 1266.48 | 360.78 | 1270.99 | 361 |
| 1272.79 | 361.32 | 1276.23 | 362 | 1320.98 | 362.78 | 1322.37 | 362.8 | 1322.86 | 362.81 |
| 1331.33 | 362.93 | 1331.8 | 362.94 | 1332.76 | 362.94 | 1332.85 | 362.93 | 1333.22 | 362.93 |
| 1333.82 | 362.9 | 1335.08 | 362.89 | 1343.2 | 363.08 | 1351.83 | 363.27 | 1352.06 | 363.28 |
| 1357.99 | 363.31 | 1359.67 | 363.34 | 1372.09 | 363.39 | 1372.62 | 363.4 | 1382.38 | 363.35 |
| 1392.68 | 363.4 | 1393.32 | 363.42 | 1411.71 | 363.64 | 1414.22 | 363.64 | 1418.92 | 363.58 |
| 1421.22 | 363.58 | 1421.7 | 363.59 | 1422.94 | 363.54 | 1424.49 | 363.5 | 1425.21 | 363.49 |
| 1433.68 | 363.53 | 1440.27 | 363.67 | 1440.62 | 363.67 | 1441.28 | 363.68 | 1441.62 | 363.68 |
| 1445.13 | 363.61 | 1445.71 | 363.59 | 1448.32 | 363.46 | 1448.84 | 363.42 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 413.24 | .05 | 416.2999 | .04 | 1205.34 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 416.2999 | 1205.34 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5999.98*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 400.45 | 362.02 | 402.69 | 361.86 | 403.39 | 361.8 | 403.85 | 361.74 | 405.06 | 361.62 |
| 405.76 | 361.57 | 406.44 | 361.46 | 406.6 | 361.45 | 407.6 | 361.33 | 408.08 | 361.29 |
| 408.65 | 361.29 | 409.15 | 361.23 | 409.58 | 361.23 | 410.48 | 361.15 | 410.83 | 361.13 |
| 411.4 | 361.04 | 411.47 | 361.05 | 412.08 | 360.95 | 412.82 | 360.95 | 413.12 | 360.92 |
| 413.85 | 360.82 | 416.37 | 360.05 | 417.08 | 359.84 | 418.28 | 359.74 | 420.74 | 359.56 |
| 421.8 | 359.46 | 428.81 | 358.94 | 430.01 | 358.85 | 430.43 | 358.88 | 430.72 | 358.81 |
| 433.42 | 358.8 | 435.3 | 358.78 | 435.64 | 358.78 | 435.92 | 358.8 | 437.81 | 358.8 |
| 439.6 | 358.81 | 440.25 | 358.81 | 441.36 | 358.8 | 442.5 | 358.8 | 446.43 | 358.77 |
| 448.83 | 358.77 | 449.47 | 358.8 | 450.24 | 358.82 | 452.13 | 358.89 | 452.78 | 358.91 |
| 455.58 | 359.01 | 456.6 | 359.05 | 458.45 | 359.08 | 460.84 | 359.06 | 461.39 | 359.04 |
| 462.17 | 358.89 | 463.02 | 358.88 | 463.79 | 358.86 | 464.36 | 358.86 | 466.03 | 358.93 |
| 469.35 | 359.13 | 470.74 | 359.18 | 474.08 | 359.24 | 475.42 | 359.28 | 476.45 | 359.3 |
| 478.58 | 359.37 | 479.61 | 359.39 | 480.06 | 359.37 | 481.02 | 359.3 | 481.55 | 359.27 |
| 484.92 | 359.15 | 486.51 | 359.06 | 487.46 | 358.99 | 490.31 | 358.8 | 493.26 | 358.79 |
| 494.68 | 358.79 | 497.11 | 358.71 | 499.45 | 358.63 | 506.21 | 358.86 | 506.62 | 358.85 |
| 507.63 | 358.87 | 510.78 | 358.95 | 512.83 | 358.99 | 516.49 | 359.07 | 516.68 | 359.07 |
| 519.8 | 359.13 | 523.59 | 359.08 | 524.95 | 359.08 | 527.24 | 359.12 | 527.74 | 359.14 |
| 530.2 | 359.18 | 531.63 | 359.21 | 539.17 | 359.32 | 539.35 | 359.32 | 541.51 | 359.36 |
| 542.14 | 359.36 | 543.7 | 359.38 | 545.4 | 359.42 | 547.3 | 359.41 | 550.32 | 359.41 |
| 550.87 | 359.42 | 552.59 | 359.41 | 553.37 | 359.42 | 554.98 | 359.42 | 555.73 | 359.45 |
| 556.18 | 359.51 | 559.19 | 359.53 | 559.81 | 359.47 | 561.08 | 359.4 | 561.42 | 359.39 |
| 565.25 | 359.18 | 566.02 | 359.14 | 571.32 | 358.84 | 571.71 | 358.83 | 572.78 | 358.76 |
| 572.84 | 358.75 | 573.74 | 358.71 | 576.47 | 358.6 | 577.02 | 358.59 | 577.79 | 358.62 |
| 579.36 | 358.67 | 585.45 | 358.78 | 593.89 | 358.82 | 594.53 | 358.82 | 597.34 | 358.85 |
| 597.53 | 358.86 | 598.15 | 358.86 | 599.43 | 358.89 | 601.06 | 358.94 | 601.15 | 358.95 |
| 602.23 | 358.98 | 605.73 | 358.98 | 608.67 | 358.89 | 609.21 | 358.86 | 609.91 | 358.84 |
| 610.89 | 358.79 | 611.22 | 358.78 | 612.28 | 358.78 | 612.93 | 358.77 | 613.63 | 358.79 |
| 615.07 | 358.81 | 616.53 | 358.81 | 619.94 | 358.82 | 631.18 | 358.84 | 631.66 | 358.79 |
| 632.42 | 358.74 | 636.37 | 358.62 | 638.26 | 358.57 | 639.92 | 358.55 | 641.7 | 358.54 |
| 642.39 | 358.49 | 643.32 | 358.47 | 644.05 | 358.44 | 645.16 | 358.44 | 648.27 | 358.49 |
| 649.21 | 358.54 | 649.8 | 358.59 | 650.66 | 358.77 | 651.54 | 358.83 | 655.79 | 359.1 |
| 656.94 | 359.15 | 658.72 | 359.22 | 659.87 | 359.27 | 660.61 | 359.27 | 661.29 | 359.3 |
| 661.73 | 359.31 | 665.51 | 359.29 | 666.94 | 359.29 | 669.9 | 359.35 | 672.7 | 359.4 |
| 673.12 | 359.41 | 683.67 | 359.59 | 687.49 | 359.65 | 688.8 | 359.68 | 689.48 | 359.67 |
| 689.95 | 359.69 | 691.4 | 359.67 | 693.53 | 359.65 | 694.25 | 359.65 | 697.44 | 359.55 |
| 697.7 | 359.55 | 707.6 | 359.24 | 719.99 | 359.14 | 720.32 | 359.14 | 722.04 | 359.17 |
| 724.01 | 359.19 | 724.83 | 359.19 | 727.19 | 359.21 | 731 | 359.26 | 734.98 | 359.32 |
| 735.35 | 359.33 | 736.11 | 359.4 | 737.93 | 359.45 | 739.82 | 359.46 | 740.46 | 359.46 |
| 740.52 | 359.45 | 741.5 | 359.43 | 744.93 | 359.4 | 745.86 | 359.36 | 747.27 | 359.28 |
| 747.43 | 359.26 | 747.98 | 359.24 | 748.96 | 359.22 | 751.99 | 359.2 | 752.49 | 359.2 |
| 754.53 | 359.17 | 756.22 | 359.15 | 766.28 | 358.99 | 771.03 | 358.87 | 771.36 | 358.87 |
| 772.31 | 358.84 | 775.56 | 358.77 | 775.75 | 358.77 | 778.52 | 358.71 | 781.67 | 358.65 |
| 782.59 | 358.64 | 782.62 | 358.63 | 783.99 | 358.53 | 785.16 | 358.45 | 786.62 | 358.34 |
| 789.89 | 357.94 | 790.3 | 358.01 | 790.5 | 358.01 | 791.61 | 357.96 | 792.7 | 357.92 |
| 793.47 | 357.86 | 794.34 | 357.86 | 798.18 | 357.99 | 799.64 | 358.06 | 800.18 | 358.08 |
| 801.58 | 358.12 | 802.84 | 358.13 | 803.32 | 358.15 | 806.29 | 358.31 | 806.83 | 358.3 |
| 808.68 | 358.28 | 810.67 | 358.27 | 811.98 | 358.25 | 813.72 | 358.24 | 813.91 | 358.23 |
| 814.68 | 358.23 | 818.45 | 358.25 | 819.06 | 358.24 | 819.55 | 358.25 | 820.22 | 358.23 |
| 823.92 | 358.13 | 824.62 | 358.1 | 825.75 | 358.07 | 826.35 | 358.07 | 829.9 | 358.15 |
| 830.31 | 358.18 | 831.86 | 358.21 | 837.65 | 358.18 | 838.23 | 358.17 | 840.81 | 358.09 |
| 843.64 | 358.02 | 844.96 | 357.99 | 848.1 | 357.94 | 848.28 | 357.93 | 850.18 | 357.93 |
| 850.37 | 357.92 | 851.1 | 357.92 | 851.79 | 357.91 | 857.15 | 357.85 | 871.21 | 357.42 |
| 873.12 | 357.37 | 873.48 | 357.38 | 873.82 | 357.42 | 874.17 | 357.44 | 875.8 | 357.44 |
| 877.05 | 357.4 | 879.56 | 357.3 | 880.22 | 357.26 | 881.78 | 357.14 | 882.02 | 357.11 |
| 883 | 357.11 | 885.26 | 357.14 | 888.11 | 357.11 | 888.75 | 357.11 | 888.83 | 357.21 |
| 889.48 | 357.32 | 889.99 | 357.38 | 891.54 | 357.49 | 891.89 | 357.5 | 893.19 | 357.56 |
| 894.34 | 357.59 | 895.92 | 357.59 | 898.18 | 357.63 | 898.48 | 357.66 | 898.98 | 357.76 |
| 903.07 | 357.96 | 905.9 | 358.04 | 908.67 | 357.94 | 917.49 | 357.64 | 917.84 | 357.62 |
| 918.29 | 357.64 | 929.03 | 358.54 | 929.83 | 358.6 | 945.05 | 358.62 | 951.15 | 358.39 |
| 951.82 | 358.38 | 953.68 | 358.44 | 956.66 | 358.49 | 958.26 | 358.48 | 960.39 | 358.41 |
| 960.85 | 358.4 | 963.26 | 358.27 | 964.54 | 358.26 | 967.6 | 358.26 | 967.97 | 358.27 |
| 968.94 | 358.36 | 972.68 | 358.51 | 977.31 | 358.62 | 978.45 | 358.65 | 979.05 | 358.68 |
| 979.52 | 358.72 | 979.9 | 358.84 | 980.48 | 358.91 | 981.3 | 358.94 | 982.02 | 358.98 |
| 983.19 | 358.98 | 985.49 | 358.93 | 985.71 | 358.93 | 993.23 | 358.44 | 995.57 | 358.26 |
| 997.82 | 358.12 | 998.33 | 358.02 | 998.58 | 358.01 | 998.98 | 357.95 | 1001.14 | 357.98 |
| 1002.01 | 358.03 | 1003.97 | 358.2 | 1004.28 | 358.24 | 1004.84 | 358.35 | 1005.88 | 358.66 |
| 1009.26 | 358.85 | 1010.34 | 358.89 | 1012.16 | 358.89 | 1013.46 | 358.91 | 1014.64 | 358.9 |
| 1015.6 | 358.93 | 1016.24 | 358.93 | 1018.56 | 358.96 | 1019.55 | 358.95 | 1026.38 | 358.77 |
| 1028.48 | 358.71 | 1028.61 | 358.71 | 1029.62 | 358.66 | 1030.37 | 358.63 | 1031.44 | 358.56 |
| 1036.66 | 358.24 | 1038.1 | 358.15 | 1038.49 | 358.11 | 1038.7 | 358.05 | 1039.43 | 358.01 |
| 1041.07 | 357.97 | 1041.57 | 357.97 | 1043.57 | 357.92 | 1044.28 | 357.92 | 1044.56 | 357.93 |
| 1044.99 | 357.97 | 1045.95 | 358.1 | 1047.28 | 358.31 | 1048.1 | 358.32 | 1048.82 | 358.37 |
| 1049.59 | 358.35 | 1052.34 | 358.21 | 1054.13 | 358.11 | 1057.07 | 357.96 | 1057.11 | 357.95 |
| 1060.82 | 357.9 | 1062.14 | 357.86 | 1063.98 | 357.86 | 1064.46 | 357.85 | 1067.61 | 357.85 |
| 1069.77 | 357.76 | 1071.04 | 357.76 | 1071.37 | 357.78 | 1072.81 | 357.83 | 1073.35 | 357.87 |
| 1074.28 | 357.91 | 1077.52 | 358.15 | 1079.99 | 358.22 | 1084.98 | 358.69 | 1095.83 | 358.72 |
| 1097.42 | 358.57 | 1097.83 | 358.56 | 1098.28 | 358.53 | 1102.56 | 358.46 | 1103.21 | 358.44 |
| 1104.17 | 358.43 | 1104.94 | 358.43 | 1105.53 | 358.42 | 1107.4 | 358.4 | 1111.53 | 358.35 |
| 1112.63 | 358.37 | 1121.03 | 358.61 | 1127.87 | 358.79 | 1128.84 | 358.82 | 1129.59 | 358.85 |
| 1131.34 | 358.87 | 1132.73 | 358.9 | 1133.74 | 358.91 | 1137.39 | 358.97 | 1137.65 | 358.98 |
| 1138.62 | 358.97 | 1142.25 | 358.85 | 1143.44 | 358.83 | 1144.35 | 358.83 | 1152.22 | 358.72 |
| 1156.67 | 358.67 | 1168.35 | 358.56 | 1170.7 | 358.54 | 1171.16 | 358.55 | 1172.3 | 358.54 |
| 1172.97 | 358.57 | 1174.52 | 358.68 | 1174.8 | 358.79 | 1177.1 | 359.63 | 1189.83 | 360.04 |
| 1203.32 | 360.47 | 1203.76 | 360.47 | 1207.51 | 360.49 | 1207.98 | 360.41 | 1208.77 | 360.38 |
| 1209.92 | 360.28 | 1210.2 | 360.29 | 1210.66 | 360.27 | 1212.39 | 360.28 | 1213.81 | 360.33 |
| 1214.61 | 360.3 | 1215.41 | 360.19 | 1215.7 | 360.19 | 1216.88 | 360.05 | 1219.15 | 359.68 |
| 1220.2 | 359.53 | 1231.2 | 359.41 | 1239.75 | 359.51 | 1247.65 | 359.62 | 1252.17 | 359.72 |
| 1256.33 | 359.99 | 1261.33 | 360.31 | 1263.81 | 360.47 | 1266.96 | 360.63 | 1268.4 | 360.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1270.18 | 361 | 1273.59 | 361.66 | 1276.5 | 361.72 | 1279.75 | 361.78 | 1284.23 | 361.87 |
| 1288.05 | 361.94 | 1289.79 | 361.98 | 1302.7 | 362.27 | 1312.75 | 362.48 | 1317.95 | 362.58 |
| 1319.81 | 362.61 | 1326.09 | 362.72 | 1328.21 | 362.75 | 1328.67 | 362.76 | 1330.08 | 362.76 |
| 1330.68 | 362.73 | 1331.93 | 362.72 | 1343.58 | 363.01 | 1348.53 | 363.12 | 1348.76 | 363.13 |
| 1353.04 | 363.15 | 1354.63 | 363.17 | 1356.12 | 363.2 | 1357.11 | 363.2 | 1360.47 | 363.22 |
| 1362.88 | 363.23 | 1365.11 | 363.23 | 1368.61 | 363.26 | 1369.14 | 363.27 | 1374.72 | 363.26 |
| 1378.81 | 363.26 | 1382.71 | 363.3 | 1383.24 | 363.31 | 1384.34 | 363.31 | 1389.02 | 363.35 |
| 1389.65 | 363.37 | 1407.88 | 363.65 | 1410.37 | 363.66 | 1415.03 | 363.62 | 1417.31 | 363.63 |
| 1417.79 | 363.64 | 1419.01 | 363.59 | 1421.26 | 363.55 | 1423.26 | 363.57 | 1423.96 | 363.57 |
| 1426.13 | 363.59 | 1429.66 | 363.61 | 1432.03 | 363.66 | 1433.33 | 363.68 | 1436.15 | 363.74 |
| 1437.53 | 363.75 | 1439.46 | 363.71 | 1441.01 | 363.69 | 1441.58 | 363.67 | 1444.17 | 363.55 |
| 1444.69 | 363.51 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 400.45 | .05 | 413.85 | .04 | 1203.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 413.85 | 1203.32 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5980.22*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 387.66 | 361.91 | 388.45 | 361.88 | 391.62 | 361.72 | 392.87 | 361.65 | 393.69 | 361.58 |
| 395.83 | 361.43 | 397.07 | 361.38 | 398.27 | 361.23 | 398.32 | 361.23 | 400.7 | 361.03 |
| 401.23 | 361.01 | 402.12 | 361.05 | 402.48 | 361.05 | 403.21 | 360.99 | 403.7 | 361.03 |
| 404.38 | 361 | 404.69 | 361 | 406.06 | 360.95 | 406.56 | 360.9 | 406.96 | 360.84 |
| 407.18 | 360.85 | 407.71 | 360.8 | 408.27 | 360.72 | 409.47 | 360.79 | 410.11 | 360.77 |
| 411.38 | 360.64 | 411.41 | 360.63 | 413.97 | 359.89 | 414.69 | 359.69 | 415.91 | 359.58 |
| 417.32 | 359.48 | 418.41 | 359.39 | 419.49 | 359.28 | 426.63 | 358.76 | 427.84 | 358.66 |
| 428.12 | 358.67 | 428.27 | 358.7 | 428.57 | 358.63 | 431.31 | 358.6 | 433.22 | 358.57 |
| 433.74 | 358.57 | 433.85 | 358.6 | 437.59 | 358.62 | 438.26 | 358.62 | 440.06 | 358.6 |
| 440.55 | 358.6 | 444.54 | 358.55 | 445.2 | 358.54 | 446.98 | 358.54 | 448.42 | 358.6 |
| 450.09 | 358.65 | 451 | 358.66 | 453.85 | 358.76 | 454.89 | 358.8 | 456.77 | 358.84 |
| 459.2 | 358.83 | 459.87 | 358.78 | 460.56 | 358.67 | 461.3 | 358.66 | 461.35 | 358.65 |
| 462.78 | 358.64 | 464.48 | 358.71 | 466.16 | 358.81 | 467.86 | 358.9 | 469.15 | 358.94 |
| 469.27 | 358.95 | 472.67 | 359.01 | 474.03 | 359.03 | 475.08 | 359.05 | 477.25 | 359.11 |
| 478.3 | 359.13 | 478.75 | 359.11 | 479.73 | 359.05 | 481.95 | 358.97 | 483.69 | 358.92 |
| 486.28 | 358.78 | 489.18 | 358.59 | 492.18 | 358.6 | 493.63 | 358.59 | 496.1 | 358.52 |
| 498.48 | 358.45 | 505.35 | 358.67 | 505.77 | 358.66 | 506.79 | 358.68 | 510 | 358.75 |
| 512.08 | 358.79 | 515.81 | 358.85 | 516 | 358.86 | 519.18 | 358.9 | 522.35 | 358.85 |
| 522.64 | 358.84 | 524.42 | 358.84 | 526.74 | 358.88 | 527.25 | 358.91 | 529.75 | 358.95 |
| 530.8 | 358.97 | 531.21 | 358.97 | 538.88 | 359.06 | 541.26 | 359.08 | 541.89 | 359.09 |
| 543.92 | 359.1 | 545.22 | 359.13 | 547.15 | 359.13 | 550.22 | 359.14 | 552.52 | 359.14 |
| 553.87 | 359.15 | 554.96 | 359.14 | 555.72 | 359.16 | 556.18 | 359.22 | 559.24 | 359.24 |
| 559.87 | 359.18 | 561.17 | 359.11 | 561.51 | 359.11 | 565.4 | 358.91 | 566.19 | 358.88 |
| 570.68 | 358.64 | 571.8 | 358.59 | 571.97 | 358.59 | 573.13 | 358.51 | 574.04 | 358.48 |
| 576.81 | 358.36 | 577.37 | 358.34 | 578.5 | 358.38 | 579.75 | 358.41 | 585.95 | 358.5 |
| 594.54 | 358.52 | 595.19 | 358.52 | 598.23 | 358.55 | 600.17 | 358.59 | 602.64 | 358.71 |
| 603.02 | 358.72 | 606.58 | 358.72 | 606.9 | 358.7 | 609.2 | 358.63 | 609.98 | 358.59 |
| 610.83 | 358.56 | 611.83 | 358.51 | 612.17 | 358.5 | 613.24 | 358.5 | 613.91 | 358.49 |
| 614.62 | 358.5 | 615.24 | 358.52 | 617.56 | 358.52 | 621.04 | 358.53 | 632.46 | 358.57 |
| 632.96 | 358.53 | 633.73 | 358.49 | 637.74 | 358.38 | 640.26 | 358.33 | 641.35 | 358.32 |
| 641.97 | 358.33 | 643.16 | 358.32 | 643.87 | 358.29 | 645.2 | 358.26 | 645.55 | 358.24 |
| 646.68 | 358.24 | 649.85 | 358.29 | 651.23 | 358.35 | 652.28 | 358.55 | 658.05 | 358.87 |
| 658.67 | 358.89 | 660.48 | 358.96 | 661.65 | 359.01 | 662.4 | 359.01 | 662.71 | 359.03 |
| 663.54 | 359.05 | 665.27 | 359.04 | 668.66 | 359.04 | 668.84 | 359.05 | 669.78 | 359.06 |
| 671.85 | 359.11 | 674.7 | 359.15 | 675.13 | 359.16 | 684.05 | 359.29 | 689.75 | 359.35 |
| 690.47 | 359.38 | 691.76 | 359.37 | 692.24 | 359.38 | 693.72 | 359.35 | 695.89 | 359.3 |
| 696.62 | 359.3 | 699.86 | 359.21 | 700.13 | 359.21 | 703.04 | 359.12 | 710.2 | 358.91 |
| 722.8 | 358.81 | 723.14 | 358.82 | 724.88 | 358.83 | 727.27 | 358.83 | 727.72 | 358.82 |
| 730.12 | 358.83 | 732.54 | 358.86 | 734 | 358.89 | 738.05 | 358.94 | 738.43 | 358.96 |
| 739.2 | 359.03 | 739.48 | 359.03 | 741.05 | 359.07 | 742.98 | 359.08 | 743.63 | 359.08 |
| 743.69 | 359.07 | 744.68 | 359.05 | 748.17 | 359.02 | 749.11 | 358.98 | 750.06 | 358.92 |
| 750.55 | 358.9 | 750.72 | 358.88 | 751.27 | 358.86 | 752.27 | 358.84 | 755.35 | 358.83 |
| 757.2 | 358.82 | 757.94 | 358.81 | 769.88 | 358.6 | 774.72 | 358.48 | 776.02 | 358.44 |
| 779.32 | 358.38 | 779.52 | 358.37 | 782.34 | 358.32 | 782.95 | 358.32 | 785.54 | 358.29 |
| 786.51 | 358.27 | 787.9 | 358.18 | 789.09 | 358.11 | 790.57 | 358.01 | 791.14 | 357.95 |
| 793.9 | 357.63 | 794.32 | 357.69 | 794.52 | 357.69 | 795.65 | 357.65 | 796.76 | 357.6 |
| 797.12 | 357.57 | 798.05 | 357.53 | 798.43 | 357.53 | 802.34 | 357.66 | 803.82 | 357.74 |
| 805.49 | 357.79 | 806.51 | 357.81 | 807.56 | 357.82 | 809.07 | 357.89 | 810.59 | 357.95 |
| 811.14 | 357.95 | 813.01 | 357.92 | 815.04 | 357.91 | 816.37 | 357.9 | 818.14 | 357.9 |
| 819.11 | 357.88 | 822.95 | 357.92 | 824.76 | 357.9 | 828.51 | 357.81 | 829.23 | 357.78 |
| 830.37 | 357.75 | 830.99 | 357.75 | 834.6 | 357.82 | 835.01 | 357.86 | 836.59 | 357.88 |
| 842.48 | 357.82 | 845.69 | 357.72 | 848.57 | 357.65 | 849.92 | 357.62 | 853.11 | 357.59 |
| 855.42 | 357.6 | 856.87 | 357.58 | 862.31 | 357.51 | 868.97 | 357.3 | 876.62 | 357.07 |
| 878.56 | 357.02 | 878.92 | 357.02 | 879.28 | 357.07 | 879.63 | 357.09 | 881.54 | 357.08 |
| 882.56 | 357.05 | 885.79 | 356.91 | 887.37 | 356.8 | 887.62 | 356.77 | 888.54 | 356.77 |
| 890.69 | 356.8 | 893.39 | 356.77 | 893.99 | 356.77 | 894.07 | 356.86 | 894.71 | 356.97 |
| 895.2 | 357.02 | 897.05 | 357.14 | 898.32 | 357.19 | 899.45 | 357.22 | 901 | 357.22 |
| 903.2 | 357.26 | 903.5 | 357.29 | 903.99 | 357.39 | 907.98 | 357.58 | 910.75 | 357.65 |
| 913.45 | 357.56 | 922.06 | 357.28 | 922.41 | 357.26 | 922.85 | 357.28 | 933.34 | 358.15 |
| 934.12 | 358.21 | 948.99 | 358.24 | 954.95 | 358.02 | 955.61 | 358.01 | 957.42 | 358.07 |
| 960.34 | 358.12 | 961.89 | 358.12 | 963.97 | 358.06 | 966.78 | 357.93 | 968.03 | 357.91 |
| 971.02 | 357.92 | 971.38 | 357.93 | 972.33 | 358.01 | 975.99 | 358.16 | 980.51 | 358.27 |
| 981.62 | 358.3 | 982.66 | 358.36 | 983.03 | 358.48 | 983.61 | 358.55 | 985.11 | 358.61 |
| 986.25 | 358.61 | 988.5 | 358.57 | 988.72 | 358.57 | 993.37 | 358.28 | 996.06 | 358.12 |
| 998.34 | 357.94 | 1000.55 | 357.81 | 1001 | 357.72 | 1001.28 | 357.71 | 1001.67 | 357.65 |
| 1003.78 | 357.68 | 1004.63 | 357.72 | 1006.86 | 357.92 | 1007.4 | 358.03 | 1008.42 | 358.33 |
| 1011.72 | 358.5 | 1012.78 | 358.54 | 1014.56 | 358.54 | 1015.83 | 358.56 | 1016.97 | 358.55 |
| 1017.17 | 358.56 | 1018.54 | 358.58 | 1020.8 | 358.6 | 1021.78 | 358.59 | 1026.57 | 358.47 |
| 1028.45 | 358.41 | 1030.49 | 358.35 | 1031.61 | 358.29 | 1032.35 | 358.26 | 1033.39 | 358.19 |
| 1038.48 | 357.89 | 1039.89 | 357.81 | 1040.27 | 357.77 | 1040.48 | 357.71 | 1041.2 | 357.68 |
| 1042.79 | 357.64 | 1043.29 | 357.64 | 1045.24 | 357.6 | 1045.93 | 357.6 | 1046.2 | 357.61 |
| 1047.06 | 357.7 | 1047.56 | 357.78 | 1048.87 | 357.97 | 1049.67 | 357.98 | 1050.37 | 358.03 |
| 1051.12 | 358.02 | 1053.8 | 357.89 | 1055.02 | 357.82 | 1055.56 | 357.78 | 1058.43 | 357.63 |
| 1062.09 | 357.58 | 1062.86 | 357.55 | 1063.38 | 357.54 | 1065.18 | 357.53 | 1068.91 | 357.53 |
| 1070.84 | 357.45 | 1072.07 | 357.46 | 1072.4 | 357.48 | 1073.81 | 357.52 | 1074.33 | 357.56 |
| 1075.24 | 357.6 | 1078.4 | 357.84 | 1080.82 | 357.92 | 1085.7 | 358.37 | 1096.3 | 358.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1097.84 | 358.31 | 1098.68 | 358.27 | 1103.51 | 358.2 | 1104.65 | 358.2 | 1105.77 | 358.18 |
| 1107.59 | 358.16 | 1111.63 | 358.11 | 1112.7 | 358.12 | 1120.91 | 358.34 | 1127.59 | 358.49 |
| 1129.28 | 358.53 | 1130.98 | 358.55 | 1132.34 | 358.58 | 1133.33 | 358.59 | 1136.89 | 358.64 |
| 1138.09 | 358.63 | 1139.59 | 358.58 | 1141.65 | 358.52 | 1141.93 | 358.52 | 1142.8 | 358.49 |
| 1143.7 | 358.49 | 1151.38 | 358.37 | 1155.73 | 358.32 | 1167.14 | 358.25 | 1169.88 | 358.24 |
| 1171 | 358.22 | 1171.66 | 358.25 | 1172.79 | 358.32 | 1173.17 | 358.35 | 1173.44 | 358.46 |
| 1175.69 | 359.26 | 1188.13 | 359.67 | 1201.31 | 360.08 | 1201.74 | 360.09 | 1205.45 | 360.11 |
| 1205.7 | 360.09 | 1206.05 | 360.02 | 1206.7 | 360.01 | 1207.84 | 359.91 | 1208.13 | 359.92 |
| 1208.58 | 359.9 | 1210.3 | 359.92 | 1211.7 | 359.96 | 1212.5 | 359.94 | 1213.28 | 359.83 |
| 1213.58 | 359.83 | 1214.75 | 359.7 | 1217 | 359.35 | 1217.15 | 359.34 | 1218.04 | 359.21 |
| 1228.93 | 359.11 | 1237.41 | 359.22 | 1244.53 | 359.33 | 1245.24 | 359.34 | 1249.72 | 359.45 |
| 1253.84 | 359.71 | 1258.8 | 360.02 | 1261.26 | 360.17 | 1261.38 | 360.18 | 1264.38 | 360.32 |
| 1265.72 | 360.38 | 1265.81 | 360.39 | 1267.57 | 360.69 | 1270.95 | 361.32 | 1273.84 | 361.39 |
| 1277.05 | 361.45 | 1281.5 | 361.54 | 1287 | 361.67 | 1299.8 | 362.02 | 1309.76 | 362.26 |
| 1314.92 | 362.38 | 1316.28 | 362.4 | 1316.77 | 362.42 | 1322.99 | 362.54 | 1326.49 | 362.59 |
| 1327.53 | 362.56 | 1328.77 | 362.55 | 1336.75 | 362.76 | 1340.33 | 362.85 | 1345.23 | 362.96 |
| 1345.45 | 362.97 | 1349.7 | 363 | 1351.28 | 363.02 | 1352.75 | 363.06 | 1353.73 | 363.06 |
| 1357.07 | 363.08 | 1359.45 | 363.09 | 1361.67 | 363.09 | 1365.13 | 363.13 | 1365.65 | 363.14 |
| 1371.19 | 363.16 | 1375.24 | 363.18 | 1380.72 | 363.25 | 1385.36 | 363.3 | 1385.99 | 363.33 |
| 1404.06 | 363.66 | 1406.52 | 363.67 | 1411.14 | 363.65 | 1413.4 | 363.67 | 1413.87 | 363.68 |
| 1415.09 | 363.65 | 1416.61 | 363.62 | 1417.32 | 363.62 | 1419.3 | 363.64 | 1420.8 | 363.66 |
| 1422.14 | 363.67 | 1425.64 | 363.69 | 1427.99 | 363.74 | 1429.27 | 363.76 | 1432.07 | 363.81 |
| 1433.44 | 363.82 | 1434.79 | 363.8 | 1436.89 | 363.76 | 1437.46 | 363.74 | 1440.02 | 363.63 |
| 1440.53 | 363.6 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 387.66 | .05 | 411.41 | .04 | 1201.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 411.41 | 1201.31 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5960.46*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 374.87 | 361.8 | 376.01 | 361.76 | 380.56 | 361.59 | 382.36 | 361.5 | 383.53 | 361.42 |
| 386.61 | 361.24 | 388.38 | 361.19 | 390.11 | 360.99 | 393.05 | 360.78 | 393.58 | 360.75 |
| 394.35 | 360.73 | 395.63 | 360.81 | 396.15 | 360.82 | 396.86 | 360.78 | 396.99 | 360.75 |
| 397.36 | 360.76 | 397.9 | 360.82 | 398.88 | 360.8 | 399.61 | 360.81 | 400.38 | 360.78 |
| 401.28 | 360.77 | 402.58 | 360.64 | 402.89 | 360.65 | 403.65 | 360.6 | 404.46 | 360.49 |
| 404.93 | 360.54 | 406.33 | 360.64 | 407.1 | 360.61 | 408.96 | 360.45 | 411.56 | 359.73 |
| 411.74 | 359.69 | 412.3 | 359.53 | 413.54 | 359.41 | 414.98 | 359.31 | 416.09 | 359.22 |
| 416.58 | 359.16 | 417.19 | 359.1 | 424.44 | 358.58 | 425.68 | 358.48 | 426.11 | 358.51 |
| 426.41 | 358.44 | 429.2 | 358.4 | 431.15 | 358.35 | 431.67 | 358.36 | 431.79 | 358.4 |
| 433.74 | 358.42 | 437.42 | 358.42 | 438.59 | 358.4 | 442.66 | 358.32 | 443.33 | 358.31 |
| 445.14 | 358.31 | 446.6 | 358.37 | 448.3 | 358.42 | 448.55 | 358.41 | 449.22 | 358.42 |
| 452.13 | 358.52 | 453.18 | 358.56 | 455.09 | 358.6 | 457.57 | 358.59 | 458.13 | 358.57 |
| 458.94 | 358.44 | 460.62 | 358.42 | 461.21 | 358.42 | 462.93 | 358.49 | 466.36 | 358.67 |
| 467.8 | 358.71 | 471.26 | 358.77 | 471.96 | 358.79 | 472.64 | 358.78 | 473.71 | 358.8 |
| 475.58 | 358.85 | 475.91 | 358.85 | 476.98 | 358.88 | 477.45 | 358.86 | 478.98 | 358.78 |
| 482.47 | 358.68 | 484.12 | 358.61 | 485.1 | 358.56 | 488.04 | 358.39 | 491.1 | 358.4 |
| 492.57 | 358.4 | 497.5 | 358.26 | 504.49 | 358.47 | 504.91 | 358.46 | 505.96 | 358.48 |
| 509.21 | 358.55 | 511.34 | 358.59 | 515.13 | 358.64 | 518.55 | 358.66 | 521.78 | 358.61 |
| 522.2 | 358.59 | 522.88 | 358.59 | 523.22 | 358.6 | 523.88 | 358.6 | 525.73 | 358.63 |
| 526.48 | 358.65 | 526.76 | 358.67 | 529.3 | 358.72 | 530.37 | 358.73 | 530.79 | 358.74 |
| 538.59 | 358.8 | 541 | 358.81 | 541.65 | 358.81 | 543.72 | 358.82 | 545.03 | 358.85 |
| 546.99 | 358.84 | 550.12 | 358.86 | 552.46 | 358.86 | 553.83 | 358.87 | 554.93 | 358.86 |
| 555.71 | 358.88 | 556.18 | 358.94 | 557.48 | 358.94 | 559.29 | 358.95 | 560.36 | 358.87 |
| 561.6 | 358.82 | 565.56 | 358.64 | 566.14 | 358.63 | 570.92 | 358.4 | 572.07 | 358.35 |
| 572.24 | 358.35 | 573.41 | 358.28 | 577.16 | 358.12 | 577.73 | 358.1 | 578.53 | 358.12 |
| 578.88 | 358.14 | 580.15 | 358.16 | 586.45 | 358.23 | 595.18 | 358.22 | 595.85 | 358.22 |
| 598.94 | 358.25 | 599.08 | 358.26 | 600.07 | 358.27 | 600.51 | 358.29 | 600.92 | 358.29 |
| 603.42 | 358.45 | 607.43 | 358.45 | 608.13 | 358.43 | 610.1 | 358.36 | 610.88 | 358.31 |
| 612.76 | 358.24 | 613.39 | 358.22 | 614.21 | 358.22 | 614.88 | 358.21 | 617.09 | 358.24 |
| 618.6 | 358.23 | 622.13 | 358.25 | 633.75 | 358.31 | 634.25 | 358.27 | 635.03 | 358.23 |
| 639.12 | 358.14 | 641.07 | 358.1 | 642.79 | 358.1 | 643.32 | 358.11 | 644.63 | 358.11 |
| 645.35 | 358.08 | 646.31 | 358.07 | 647.06 | 358.05 | 648.21 | 358.04 | 649.37 | 358.06 |
| 651.43 | 358.08 | 652.83 | 358.14 | 653.01 | 358.16 | 653.9 | 358.32 | 654.82 | 358.37 |
| 659.21 | 358.59 | 660.4 | 358.63 | 662.24 | 358.7 | 663.43 | 358.75 | 663.68 | 358.75 |
| 665.35 | 358.79 | 667.11 | 358.79 | 667.51 | 358.78 | 669.72 | 358.78 | 673.81 | 358.86 |
| 676.7 | 358.9 | 677.14 | 358.91 | 686.21 | 359.02 | 688.05 | 359.03 | 692 | 359.06 |
| 692.74 | 359.08 | 693.35 | 359.08 | 694.05 | 359.06 | 694.54 | 359.07 | 698.25 | 358.95 |
| 698.99 | 358.95 | 702.29 | 358.86 | 702.56 | 358.87 | 705.52 | 358.78 | 712.8 | 358.59 |
| 725.61 | 358.49 | 725.96 | 358.5 | 727.91 | 358.49 | 729.77 | 358.47 | 730.16 | 358.46 |
| 733.06 | 358.45 | 735.52 | 358.48 | 737 | 358.51 | 741.12 | 358.57 | 741.5 | 358.58 |
| 742.28 | 358.65 | 743.36 | 358.68 | 744.17 | 358.69 | 746.13 | 358.7 | 746.79 | 358.7 |
| 746.85 | 358.69 | 747.86 | 358.67 | 751.41 | 358.63 | 752.37 | 358.59 | 754 | 358.5 |
| 754.57 | 358.48 | 755.58 | 358.47 | 758.71 | 358.45 | 759.23 | 358.46 | 760.59 | 358.45 |
| 763.08 | 358.42 | 773.49 | 358.22 | 778.74 | 358.07 | 783.09 | 357.98 | 783.29 | 357.98 |
| 786.15 | 357.93 | 786.78 | 357.94 | 789.41 | 357.92 | 790.39 | 357.91 | 790.85 | 357.88 |
| 793.02 | 357.77 | 794.7 | 357.67 | 795.11 | 357.62 | 797.91 | 357.32 | 798.34 | 357.38 |
| 798.55 | 357.38 | 799.69 | 357.33 | 800.82 | 357.29 | 801.98 | 357.21 | 802.51 | 357.21 |
| 805.56 | 357.3 | 806.49 | 357.32 | 808 | 357.41 | 810 | 357.47 | 811.81 | 357.49 |
| 813.34 | 357.55 | 814.88 | 357.6 | 816.64 | 357.57 | 817.35 | 357.57 | 819.41 | 357.56 |
| 820.76 | 357.55 | 822.56 | 357.55 | 822.76 | 357.54 | 823.55 | 357.54 | 827.46 | 357.58 |
| 828.09 | 357.57 | 828.41 | 357.58 | 829.29 | 357.58 | 835 | 357.43 | 835.62 | 357.43 |
| 839.3 | 357.5 | 839.62 | 357.53 | 841.33 | 357.54 | 847.91 | 357.44 | 850.58 | 357.35 |
| 850.65 | 357.34 | 854.51 | 357.26 | 858.39 | 357.25 | 860.05 | 357.27 | 860.47 | 357.27 |
| 861.94 | 357.25 | 867.48 | 357.17 | 874.25 | 356.95 | 882.03 | 356.72 | 884 | 356.66 |
| 884.37 | 356.67 | 884.73 | 356.71 | 885.09 | 356.73 | 887.03 | 356.72 | 888.06 | 356.69 |
| 890.66 | 356.59 | 892.96 | 356.45 | 893.21 | 356.42 | 894.09 | 356.42 | 896.11 | 356.45 |
| 898.66 | 356.42 | 899.23 | 356.42 | 899.3 | 356.51 | 899.93 | 356.61 | 900.41 | 356.66 |
| 901.89 | 356.76 | 902.22 | 356.77 | 903.46 | 356.83 | 904.56 | 356.85 | 906.07 | 356.85 |
| 908.23 | 356.89 | 908.51 | 356.91 | 908.99 | 357.01 | 912.89 | 357.19 | 915.59 | 357.26 |
| 918.23 | 357.17 | 926.98 | 356.91 | 927.4 | 356.92 | 937.65 | 357.75 | 938.42 | 357.81 |
| 952.93 | 357.85 | 958.75 | 357.66 | 959.39 | 357.65 | 961.17 | 357.71 | 964.01 | 357.76 |
| 965.53 | 357.76 | 968 | 357.69 | 970.3 | 357.58 | 971.52 | 357.57 | 974.44 | 357.58 |
| 974.8 | 357.59 | 975.72 | 357.67 | 979.29 | 357.81 | 983.7 | 357.92 | 984.79 | 357.95 |
| 985.81 | 358.01 | 986.17 | 358.12 | 986.73 | 358.18 | 988.19 | 358.25 | 989.31 | 358.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 991.5 | 358.21 | 991.72 | 358.21 | 996.27 | 357.94 | 998.89 | 357.79 | 1000.99 | 357.63 |
| 1001.12 | 357.63 | 1003.27 | 357.51 | 1003.71 | 357.42 | 1003.99 | 357.41 | 1004.37 | 357.35 |
| 1006.43 | 357.38 | 1007.26 | 357.42 | 1009.14 | 357.57 | 1009.43 | 357.61 | 1009.97 | 357.71 |
| 1010.95 | 357.99 | 1014.18 | 358.16 | 1015.21 | 358.19 | 1016.95 | 358.19 | 1018.19 | 358.21 |
| 1019.5 | 358.2 | 1020.84 | 358.23 | 1023.05 | 358.24 | 1024 | 358.23 | 1028.68 | 358.11 |
| 1030.51 | 358.04 | 1032.51 | 357.98 | 1033.6 | 357.92 | 1034.32 | 357.89 | 1040.31 | 357.54 |
| 1040.82 | 357.52 | 1041.69 | 357.47 | 1042.06 | 357.44 | 1042.26 | 357.38 | 1042.96 | 357.34 |
| 1044.02 | 357.32 | 1045 | 357.32 | 1046.91 | 357.27 | 1047.59 | 357.28 | 1048.26 | 357.32 |
| 1049.18 | 357.45 | 1050.45 | 357.64 | 1051.23 | 357.65 | 1051.91 | 357.7 | 1052.65 | 357.69 |
| 1053.25 | 357.66 | 1054.51 | 357.61 | 1055.27 | 357.57 | 1056.98 | 357.45 | 1059.79 | 357.3 |
| 1062.69 | 357.26 | 1063.36 | 357.26 | 1064.62 | 357.21 | 1069.47 | 357.21 | 1069.71 | 357.22 |
| 1071.21 | 357.17 | 1071.9 | 357.14 | 1073.11 | 357.15 | 1073.42 | 357.17 | 1074.8 | 357.22 |
| 1075.75 | 357.28 | 1076.2 | 357.3 | 1079.29 | 357.53 | 1081.65 | 357.61 | 1086.41 | 358.06 |
| 1096.76 | 358.16 | 1098.27 | 358.04 | 1099.09 | 358.01 | 1103.17 | 357.97 | 1103.8 | 357.96 |
| 1105.45 | 357.96 | 1107.79 | 357.92 | 1111.73 | 357.86 | 1112.78 | 357.88 | 1120.8 | 358.07 |
| 1127.32 | 358.18 | 1128.96 | 358.22 | 1130.63 | 358.23 | 1131.95 | 358.25 | 1132.92 | 358.27 |
| 1136.4 | 358.31 | 1137.57 | 358.3 | 1141.04 | 358.18 | 1143.04 | 358.15 | 1150.54 | 358.01 |
| 1154.79 | 357.97 | 1165.93 | 357.94 | 1168.61 | 357.93 | 1169.42 | 357.9 | 1170.34 | 357.93 |
| 1171.45 | 358 | 1171.82 | 358.03 | 1172.09 | 358.13 | 1174.28 | 358.89 | 1186.42 | 359.3 |
| 1199.29 | 359.7 | 1199.72 | 359.7 | 1203.4 | 359.73 | 1203.64 | 359.71 | 1203.99 | 359.65 |
| 1204.64 | 359.64 | 1205.77 | 359.55 | 1206.05 | 359.56 | 1206.5 | 359.54 | 1208.2 | 359.55 |
| 1209.59 | 359.6 | 1210.38 | 359.58 | 1211.16 | 359.48 | 1211.45 | 359.48 | 1212.61 | 359.36 |
| 1214.84 | 359.03 | 1215 | 359.02 | 1215.87 | 358.9 | 1226.67 | 358.82 | 1235.07 | 358.93 |
| 1242.12 | 359.05 | 1242.83 | 359.06 | 1247.27 | 359.17 | 1251.36 | 359.43 | 1256.27 | 359.73 |
| 1258.71 | 359.87 | 1258.82 | 359.88 | 1261.8 | 360.02 | 1263.21 | 360.08 | 1264.97 | 360.37 |
| 1268.32 | 360.98 | 1273.24 | 361.1 | 1274.36 | 361.13 | 1278.77 | 361.22 | 1282.52 | 361.32 |
| 1284.22 | 361.36 | 1296.91 | 361.77 | 1306.78 | 362.05 | 1311.89 | 362.18 | 1313.72 | 362.22 |
| 1319.89 | 362.36 | 1322.42 | 362.41 | 1323.81 | 362.41 | 1324.39 | 362.39 | 1325.62 | 362.39 |
| 1333.52 | 362.6 | 1337.07 | 362.7 | 1341.93 | 362.81 | 1342.15 | 362.82 | 1346.36 | 362.85 |
| 1350.35 | 362.93 | 1353.66 | 362.94 | 1356.02 | 362.95 | 1357.36 | 362.94 | 1358.22 | 362.95 |
| 1361.65 | 363 | 1362.17 | 363.01 | 1367.65 | 363.05 | 1371.67 | 363.09 | 1377.1 | 363.19 |
| 1381.7 | 363.26 | 1382.32 | 363.28 | 1400.23 | 363.66 | 1402.67 | 363.69 | 1407.25 | 363.69 |
| 1409.49 | 363.72 | 1409.96 | 363.73 | 1411.16 | 363.7 | 1412.67 | 363.68 | 1413.37 | 363.68 |
| 1416.83 | 363.73 | 1421.62 | 363.77 | 1423.55 | 363.81 | 1423.95 | 363.81 | 1425.22 | 363.83 |
| 1428 | 363.88 | 1429.35 | 363.89 | 1431.25 | 363.86 | 1432.77 | 363.84 | 1435.88 | 363.72 |
| 1436.38 | 363.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 374.87 | .05 | 408.96 | .04 | 1199.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 408.96 | 1199.29 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5940.70*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 362.08 | 361.69 | 363.57 | 361.65 | 369.49 | 361.45 | 371.84 | 361.35 | 373.37 | 361.26 |
| 377.38 | 361.05 | 379.68 | 361 | 381.94 | 360.76 | 382.47 | 360.72 | 385.78 | 360.51 |
| 386.47 | 360.47 | 387.37 | 360.46 | 387.47 | 360.45 | 389.13 | 360.57 | 389.82 | 360.59 |
| 390.74 | 360.55 | 390.91 | 360.5 | 391.39 | 360.53 | 392.2 | 360.62 | 393.37 | 360.6 |
| 394.32 | 360.62 | 395.33 | 360.59 | 395.92 | 360.6 | 396.51 | 360.59 | 397.07 | 360.55 |
| 398.39 | 360.42 | 398.56 | 360.46 | 399.59 | 360.39 | 400.64 | 360.26 | 400.81 | 360.26 |
| 401.26 | 360.33 | 402.89 | 360.47 | 403.09 | 360.48 | 404.08 | 360.46 | 406.47 | 360.27 |
| 406.52 | 360.26 | 409.16 | 359.57 | 409.91 | 359.38 | 411.17 | 359.25 | 413.29 | 359.1 |
| 414.88 | 358.92 | 422.25 | 358.4 | 423.51 | 358.3 | 423.95 | 358.32 | 424.26 | 358.26 |
| 427.09 | 358.2 | 429.07 | 358.13 | 429.6 | 358.14 | 429.72 | 358.2 | 431.71 | 358.22 |
| 434.28 | 358.23 | 436.22 | 358.21 | 440.77 | 358.1 | 441.57 | 358.07 | 443.29 | 358.09 |
| 444.78 | 358.14 | 446.19 | 358.18 | 446.77 | 358.17 | 447.45 | 358.18 | 450.4 | 358.28 |
| 451.47 | 358.32 | 453.41 | 358.36 | 455.93 | 358.35 | 456.62 | 358.32 | 457.33 | 358.22 |
| 459.03 | 358.2 | 459.63 | 358.2 | 461.38 | 358.27 | 463.11 | 358.36 | 464.87 | 358.44 |
| 466.33 | 358.48 | 469.85 | 358.54 | 470.92 | 358.55 | 471.26 | 358.53 | 472.34 | 358.55 |
| 475.67 | 358.62 | 476.14 | 358.61 | 477.14 | 358.56 | 479.44 | 358.49 | 481.24 | 358.45 |
| 482.92 | 358.39 | 486.91 | 358.19 | 490.02 | 358.2 | 491.51 | 358.2 | 494.07 | 358.13 |
| 494.37 | 358.13 | 496.53 | 358.07 | 503.63 | 358.28 | 504.06 | 358.27 | 510.59 | 358.39 |
| 514.44 | 358.42 | 517.93 | 358.43 | 521.21 | 358.36 | 522.01 | 358.34 | 522.32 | 358.35 |
| 523.34 | 358.35 | 524.02 | 358.37 | 525.22 | 358.38 | 525.65 | 358.39 | 526.27 | 358.44 |
| 528.86 | 358.48 | 529.94 | 358.5 | 530.36 | 358.5 | 538.29 | 358.54 | 543.51 | 358.54 |
| 544.84 | 358.56 | 546.84 | 358.56 | 550.02 | 358.58 | 550.59 | 358.59 | 552.4 | 358.58 |
| 553.79 | 358.59 | 554.91 | 358.58 | 555.7 | 358.6 | 556.17 | 358.65 | 557.5 | 358.65 |
| 559.34 | 358.66 | 559.99 | 358.61 | 561.33 | 358.55 | 561.68 | 358.54 | 565.71 | 358.38 |
| 566.53 | 358.36 | 571.16 | 358.15 | 572.33 | 358.1 | 572.5 | 358.1 | 573.7 | 358.04 |
| 577.51 | 357.88 | 578.09 | 357.86 | 579.25 | 357.89 | 580.55 | 357.91 | 586.96 | 357.95 |
| 595.83 | 357.93 | 596.5 | 357.92 | 598.57 | 357.93 | 599.45 | 357.95 | 600.79 | 357.97 |
| 601.25 | 357.99 | 601.66 | 357.99 | 603.37 | 358.13 | 604.2 | 358.19 | 608.28 | 358.19 |
| 610.99 | 358.08 | 611.37 | 358.07 | 612.08 | 358.02 | 613.7 | 357.96 | 615.17 | 357.94 |
| 615.85 | 357.92 | 616.59 | 357.93 | 617.23 | 357.95 | 617.59 | 357.94 | 618.1 | 357.95 |
| 619.63 | 357.94 | 623.02 | 357.96 | 623.22 | 357.97 | 635.04 | 358.04 | 636.34 | 357.97 |
| 640.49 | 357.89 | 642.48 | 357.87 | 643.18 | 357.87 | 644.77 | 357.89 | 646.1 | 357.9 |
| 646.83 | 357.87 | 647.81 | 357.87 | 648.57 | 357.85 | 649.74 | 357.84 | 650.92 | 357.86 |
| 653.01 | 357.87 | 654.43 | 357.93 | 654.61 | 357.95 | 655.52 | 358.1 | 660.92 | 358.34 |
| 661.48 | 358.36 | 662.13 | 358.37 | 664 | 358.44 | 665.21 | 358.49 | 665.46 | 358.49 |
| 667.16 | 358.53 | 671.6 | 358.53 | 675.76 | 358.61 | 678.7 | 358.65 | 679.14 | 358.66 |
| 688.36 | 358.75 | 690.24 | 358.76 | 694.25 | 358.77 | 695.53 | 358.79 | 696.34 | 358.76 |
| 696.83 | 358.76 | 698.36 | 358.7 | 700.61 | 358.6 | 701.36 | 358.59 | 704.71 | 358.52 |
| 704.99 | 358.53 | 708 | 358.44 | 715.39 | 358.26 | 728.43 | 358.17 | 730.58 | 358.15 |
| 730.76 | 358.14 | 732.65 | 358.11 | 733.51 | 358.09 | 735.99 | 358.07 | 738.5 | 358.09 |
| 740 | 358.13 | 744.18 | 358.2 | 744.58 | 358.21 | 745.01 | 358.25 | 745.66 | 358.28 |
| 746.46 | 358.3 | 747.29 | 358.31 | 749.28 | 358.32 | 750.02 | 358.31 | 751.04 | 358.28 |
| 754.65 | 358.25 | 755.62 | 358.21 | 757.28 | 358.12 | 757.86 | 358.1 | 758.89 | 358.09 |
| 762.07 | 358.08 | 762.6 | 358.09 | 763.99 | 358.08 | 766.52 | 358.05 | 777.09 | 357.83 |
| 782.1 | 357.69 | 783.44 | 357.65 | 786.85 | 357.59 | 787.06 | 357.59 | 789.97 | 357.54 |
| 790.4 | 357.56 | 793.28 | 357.55 | 794.28 | 357.55 | 795.72 | 357.47 | 796.95 | 357.43 |
| 798.02 | 357.38 | 798.66 | 357.34 | 801.93 | 357.01 | 802.35 | 357.06 | 802.57 | 357.06 |
| 803.73 | 357.02 | 804.88 | 356.97 | 806.21 | 356.88 | 806.6 | 356.88 | 809.69 | 356.96 |
| 810.65 | 356.98 | 812.18 | 357.08 | 812.75 | 357.11 | 814.21 | 357.15 | 815.14 | 357.16 |
| 815.55 | 357.15 | 816.05 | 357.16 | 817.61 | 357.21 | 819.17 | 357.25 | 821.68 | 357.21 |
| 823.78 | 357.21 | 825.15 | 357.2 | 826.98 | 357.2 | 827.19 | 357.19 | 827.99 | 357.19 |
| 831.96 | 357.24 | 832.93 | 357.24 | 833.82 | 357.25 | 837.7 | 357.16 | 839.63 | 357.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 840.26 | 357.11 | 843.99 | 357.18 | 844.42 | 357.21 | 846.06 | 357.21 | 852.15 | 357.09 |
| 855.47 | 356.97 | 859.46 | 356.89 | 859.84 | 356.89 | 863.4 | 356.91 | 865.09 | 356.94 |
| 867.02 | 356.92 | 872.65 | 356.82 | 879.53 | 356.6 | 887.43 | 356.36 | 889.44 | 356.31 |
| 889.82 | 356.32 | 890.18 | 356.36 | 890.54 | 356.37 | 892.26 | 356.37 | 893.57 | 356.33 |
| 896.21 | 356.24 | 898.55 | 356.1 | 898.8 | 356.08 | 899.63 | 356.08 | 901.53 | 356.1 |
| 903.93 | 356.08 | 904.47 | 356.08 | 904.54 | 356.16 | 905.15 | 356.25 | 905.62 | 356.3 |
| 907.39 | 356.41 | 908.6 | 356.46 | 909.67 | 356.48 | 911.15 | 356.48 | 913.25 | 356.52 |
| 913.53 | 356.54 | 913.99 | 356.63 | 917.8 | 356.8 | 920.44 | 356.87 | 923.01 | 356.79 |
| 931.22 | 356.56 | 931.54 | 356.55 | 931.96 | 356.57 | 941.96 | 357.36 | 942.71 | 357.41 |
| 956.87 | 357.47 | 962.55 | 357.29 | 963.18 | 357.29 | 964.91 | 357.34 | 967.68 | 357.4 |
| 969.17 | 357.39 | 971.15 | 357.35 | 973.82 | 357.24 | 975.02 | 357.23 | 977.86 | 357.24 |
| 978.21 | 357.25 | 979.11 | 357.32 | 982.59 | 357.47 | 986.9 | 357.57 | 987.96 | 357.6 |
| 988.95 | 357.66 | 989.31 | 357.76 | 989.85 | 357.82 | 990.61 | 357.86 | 991.28 | 357.88 |
| 992.37 | 357.89 | 994.51 | 357.85 | 994.72 | 357.85 | 999.16 | 357.6 | 1001.72 | 357.46 |
| 1003.89 | 357.31 | 1005.99 | 357.2 | 1006.42 | 357.12 | 1007.07 | 357.06 | 1008.36 | 357.07 |
| 1009.49 | 357.09 | 1011.72 | 357.26 | 1012.01 | 357.29 | 1012.53 | 357.39 | 1013.49 | 357.65 |
| 1016.64 | 357.81 | 1017.65 | 357.84 | 1019.34 | 357.84 | 1021.28 | 357.85 | 1021.64 | 357.84 |
| 1022.54 | 357.87 | 1025.29 | 357.88 | 1026.22 | 357.87 | 1030.79 | 357.75 | 1032.58 | 357.68 |
| 1034.53 | 357.61 | 1035.6 | 357.55 | 1042.14 | 357.2 | 1043.48 | 357.13 | 1043.84 | 357.1 |
| 1044.04 | 357.04 | 1044.73 | 357.01 | 1045.75 | 356.99 | 1046.72 | 356.99 | 1048.57 | 356.95 |
| 1049.24 | 356.96 | 1049.89 | 357 | 1050.31 | 357.05 | 1052.03 | 357.3 | 1052.8 | 357.32 |
| 1053.46 | 357.37 | 1054.18 | 357.36 | 1054.77 | 357.34 | 1056.74 | 357.24 | 1058.15 | 357.16 |
| 1058.18 | 357.13 | 1059.67 | 357.05 | 1061.14 | 356.98 | 1061.18 | 356.97 | 1063.22 | 356.95 |
| 1064.63 | 356.93 | 1065.86 | 356.89 | 1068.02 | 356.89 | 1070.83 | 356.9 | 1072.3 | 356.86 |
| 1072.97 | 356.83 | 1074.14 | 356.84 | 1074.45 | 356.86 | 1075.8 | 356.91 | 1076.3 | 356.95 |
| 1077.16 | 356.99 | 1080.17 | 357.22 | 1082.47 | 357.31 | 1087.12 | 357.75 | 1097.22 | 357.88 |
| 1098.7 | 357.78 | 1099.5 | 357.75 | 1103.48 | 357.73 | 1104.09 | 357.72 | 1105.86 | 357.72 |
| 1107.99 | 357.68 | 1111.83 | 357.62 | 1112.85 | 357.63 | 1120.68 | 357.8 | 1127.04 | 357.88 |
| 1127.95 | 357.89 | 1128.65 | 357.91 | 1130.27 | 357.91 | 1132.51 | 357.95 | 1135.9 | 357.98 |
| 1137.05 | 357.96 | 1140.43 | 357.84 | 1142.39 | 357.81 | 1149.71 | 357.66 | 1153.85 | 357.62 |
| 1166.91 | 357.62 | 1167.34 | 357.63 | 1168.13 | 357.59 | 1169.03 | 357.61 | 1170.46 | 357.7 |
| 1170.73 | 357.8 | 1172.87 | 358.52 | 1184.72 | 358.93 | 1197.28 | 359.32 | 1197.7 | 359.32 |
| 1201.35 | 359.35 | 1201.59 | 359.33 | 1201.81 | 359.28 | 1202.57 | 359.26 | 1203.69 | 359.18 |
| 1206.1 | 359.19 | 1207.48 | 359.24 | 1208.27 | 359.22 | 1209.04 | 359.13 | 1209.33 | 359.13 |
| 1210.48 | 359.01 | 1212.84 | 358.69 | 1213.71 | 358.59 | 1224.41 | 358.52 | 1232.73 | 358.64 |
| 1239.72 | 358.76 | 1240.43 | 358.78 | 1244.83 | 358.89 | 1248.87 | 359.14 | 1253.74 | 359.43 |
| 1256.15 | 359.57 | 1257.12 | 359.61 | 1259.22 | 359.72 | 1260.54 | 359.77 | 1262.36 | 360.05 |
| 1265.68 | 360.64 | 1268.51 | 360.72 | 1271.67 | 360.8 | 1276.03 | 360.9 | 1279.76 | 361 |
| 1281.44 | 361.05 | 1294.01 | 361.53 | 1303.79 | 361.83 | 1310.67 | 362.02 | 1316.78 | 362.17 |
| 1319.3 | 362.23 | 1320.22 | 362.24 | 1321.25 | 362.22 | 1322.46 | 362.22 | 1330.3 | 362.44 |
| 1333.81 | 362.54 | 1338.62 | 362.65 | 1338.85 | 362.66 | 1343.02 | 362.7 | 1344.57 | 362.73 |
| 1346.02 | 362.77 | 1346.98 | 362.79 | 1350.25 | 362.8 | 1352.59 | 362.81 | 1353.92 | 362.8 |
| 1354.77 | 362.81 | 1358.69 | 362.88 | 1364.12 | 362.94 | 1368.1 | 363 | 1371.9 | 363.1 |
| 1373.48 | 363.12 | 1378.04 | 363.21 | 1378.66 | 363.23 | 1396.4 | 363.67 | 1398.83 | 363.71 |
| 1403.36 | 363.73 | 1405.58 | 363.76 | 1406.04 | 363.78 | 1407.24 | 363.75 | 1408.73 | 363.74 |
| 1412.05 | 363.79 | 1412.85 | 363.81 | 1414.16 | 363.82 | 1417.6 | 363.84 | 1419.91 | 363.89 |
| 1421.17 | 363.9 | 1423.92 | 363.95 | 1425.26 | 363.96 | 1429.21 | 363.9 | 1431.73 | 363.8 |
| 1432.23 | 363.77 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 362.08 | .05 | 406.52 | .04 | 1197.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 406.52 | 1197.28 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5920.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 349.3 | 361.58 | 351.12 | 361.54 | 358.43 | 361.31 | 361.32 | 361.21 | 362.34 | 361.15 |
| 363.2 | 361.09 | 368.15 | 360.86 | 370.99 | 360.82 | 373.77 | 360.52 | 378.51 | 360.23 |
| 379.36 | 360.19 | 380.59 | 360.18 | 382.64 | 360.33 | 383.11 | 360.34 | 383.21 | 360.36 |
| 384.42 | 360.33 | 384.83 | 360.26 | 385.42 | 360.3 | 386.29 | 360.41 | 386.61 | 360.42 |
| 387.86 | 360.4 | 388.57 | 360.41 | 389.04 | 360.43 | 390.28 | 360.41 | 391.01 | 360.42 |
| 391.73 | 360.41 | 392.9 | 360.32 | 394.05 | 360.22 | 394.26 | 360.26 | 395.54 | 360.19 |
| 396.83 | 360.03 | 397.33 | 360.07 | 397.59 | 360.12 | 399.59 | 360.31 | 399.85 | 360.33 |
| 401.07 | 360.31 | 404.01 | 360.09 | 404.07 | 360.08 | 407.52 | 359.22 | 408.8 | 359.08 |
| 410.96 | 358.93 | 411.43 | 358.88 | 412.57 | 358.73 | 420.06 | 358.21 | 421.34 | 358.11 |
| 421.79 | 358.13 | 422.1 | 358.07 | 424.99 | 358 | 427.19 | 357.91 | 427.53 | 357.93 |
| 427.65 | 358 | 431.59 | 358.04 | 432.29 | 358.04 | 434.69 | 358 | 438.89 | 357.87 |
| 439.7 | 357.84 | 441.45 | 357.86 | 442.96 | 357.91 | 444.4 | 357.95 | 445.67 | 357.94 |
| 448.67 | 358.03 | 449.75 | 358.07 | 451.11 | 358.11 | 451.73 | 358.12 | 454.29 | 358.12 |
| 454.88 | 358.1 | 455.71 | 357.99 | 456.61 | 357.99 | 457.98 | 357.98 | 458.05 | 357.99 |
| 459.83 | 358.05 | 461.59 | 358.14 | 463.38 | 358.21 | 464.86 | 358.25 | 467.84 | 358.29 |
| 468.83 | 358.31 | 469.53 | 358.31 | 469.6 | 358.29 | 470.97 | 358.3 | 472.91 | 358.34 |
| 473.25 | 358.34 | 474.35 | 358.37 | 476.42 | 358.29 | 478.18 | 358.25 | 480.02 | 358.22 |
| 481.72 | 358.17 | 482.74 | 358.12 | 485.78 | 357.99 | 488.93 | 358 | 490.45 | 358 |
| 493.05 | 357.94 | 493.36 | 357.94 | 495.55 | 357.89 | 502.77 | 358.08 | 503.21 | 358.07 |
| 507.65 | 358.15 | 509.84 | 358.18 | 513.76 | 358.21 | 517.3 | 358.2 | 520.63 | 358.12 |
| 521.07 | 358.1 | 521.77 | 358.11 | 522.8 | 358.11 | 523.49 | 358.13 | 524.71 | 358.14 |
| 525.49 | 358.17 | 525.78 | 358.21 | 528.41 | 358.25 | 529.94 | 358.26 | 538 | 358.28 |
| 540.5 | 358.27 | 541.17 | 358.26 | 543.01 | 358.26 | 543.3 | 358.25 | 544.66 | 358.28 |
| 546.69 | 358.27 | 549.92 | 358.3 | 550.28 | 358.31 | 553.75 | 358.31 | 554.89 | 358.3 |
| 555.7 | 358.31 | 556.17 | 358.36 | 559.39 | 358.36 | 560.5 | 358.3 | 561.77 | 358.26 |
| 565.86 | 358.11 | 566.69 | 358.1 | 571.41 | 357.91 | 572.59 | 357.86 | 572.77 | 357.86 |
| 577.86 | 357.63 | 578.44 | 357.62 | 579.63 | 357.64 | 580.94 | 357.65 | 587.46 | 357.68 |
| 596.48 | 357.63 | 597.16 | 357.62 | 599.27 | 357.63 | 601 | 357.65 | 601.98 | 357.7 |
| 602.4 | 357.69 | 604.14 | 357.86 | 604.99 | 357.92 | 605.39 | 357.93 | 609.13 | 357.93 |
| 609.47 | 357.9 | 609.86 | 357.89 | 611.88 | 357.81 | 613 | 357.74 | 613.6 | 357.73 |
| 614.64 | 357.68 | 616.13 | 357.66 | 616.83 | 357.64 | 618.23 | 357.66 | 619.11 | 357.66 |
| 620.67 | 357.65 | 636.32 | 357.78 | 636.84 | 357.75 | 637.65 | 357.72 | 641.87 | 357.65 |
| 644.6 | 357.64 | 645.66 | 357.65 | 646.31 | 357.67 | 647.57 | 357.69 | 648.3 | 357.67 |
| 649.3 | 357.67 | 650.08 | 357.65 | 651.26 | 357.64 | 652.46 | 357.66 | 654.59 | 357.67 |
| 656.04 | 357.71 | 657.14 | 357.87 | 658.09 | 357.91 | 663.2 | 358.1 | 663.86 | 358.11 |
| 665.76 | 358.17 | 666.99 | 358.23 | 667.24 | 358.23 | 668.98 | 358.27 | 673.01 | 358.27 |
| 675.53 | 358.32 | 677.71 | 358.36 | 680.7 | 358.4 | 681.15 | 358.41 | 690.52 | 358.47 |
| 692.42 | 358.48 | 696.51 | 358.48 | 697.9 | 358.49 | 698.63 | 358.45 | 699.13 | 358.44 |
| 700.68 | 358.38 | 702.96 | 358.25 | 703.73 | 358.24 | 707.14 | 358.17 | 707.42 | 358.19 |
| 710.47 | 358.1 | 717.99 | 357.93 | 731.24 | 357.85 | 731.59 | 357.85 | 733.42 | 357.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 733.61 | 357.8 | 735.93 | 357.74 | 736.4 | 357.72 | 738.93 | 357.69 | 741.47 | 357.71 |
| 743 | 357.76 | 747.25 | 357.83 | 747.65 | 357.84 | 748.75 | 357.9 | 749.57 | 357.92 |
| 750.41 | 357.93 | 752.43 | 357.94 | 754.22 | 357.9 | 757.89 | 357.86 | 758.88 | 357.82 |
| 760.56 | 357.74 | 761.71 | 357.71 | 768.15 | 357.71 | 769.95 | 357.68 | 780.7 | 357.44 |
| 787.15 | 357.25 | 790.62 | 357.19 | 790.83 | 357.19 | 793.78 | 357.15 | 794.43 | 357.18 |
| 797.15 | 357.19 | 798.17 | 357.18 | 799.63 | 357.12 | 800.88 | 357.09 | 801.97 | 357.05 |
| 802.62 | 357.01 | 805.94 | 356.7 | 806.37 | 356.75 | 806.59 | 356.75 | 807.77 | 356.71 |
| 808.94 | 356.66 | 810.3 | 356.56 | 810.69 | 356.56 | 814.8 | 356.65 | 816.36 | 356.76 |
| 818.43 | 356.83 | 820.29 | 356.83 | 821.88 | 356.87 | 823.47 | 356.9 | 823.5 | 356.89 |
| 825.28 | 356.86 | 828.14 | 356.85 | 832.43 | 356.85 | 836.46 | 356.91 | 837.11 | 356.9 |
| 837.63 | 356.92 | 838.35 | 356.92 | 842.3 | 356.84 | 844.26 | 356.79 | 844.9 | 356.79 |
| 848.14 | 356.85 | 848.69 | 356.85 | 849.02 | 356.88 | 850.79 | 356.87 | 856.98 | 356.73 |
| 857.6 | 356.71 | 860.35 | 356.6 | 864.41 | 356.52 | 864.79 | 356.53 | 868.14 | 356.57 |
| 868.42 | 356.57 | 870.13 | 356.61 | 871.09 | 356.61 | 877.81 | 356.48 | 884.81 | 356.25 |
| 892.84 | 356.01 | 894.88 | 355.96 | 895.26 | 355.97 | 896 | 356.02 | 897.74 | 356.01 |
| 899.08 | 355.97 | 901.77 | 355.88 | 902.47 | 355.85 | 904.14 | 355.76 | 904.4 | 355.73 |
| 905.17 | 355.73 | 906.96 | 355.76 | 909.21 | 355.73 | 909.71 | 355.73 | 909.78 | 355.81 |
| 910.37 | 355.9 | 910.83 | 355.94 | 912.24 | 356.03 | 913.74 | 356.09 | 914.78 | 356.11 |
| 916.22 | 356.12 | 918.27 | 356.15 | 918.54 | 356.17 | 919 | 356.25 | 922.71 | 356.42 |
| 925.28 | 356.48 | 927.79 | 356.41 | 935.79 | 356.2 | 936.11 | 356.19 | 936.52 | 356.21 |
| 946.27 | 356.96 | 947 | 357.01 | 960.81 | 357.09 | 966.35 | 356.93 | 966.96 | 356.93 |
| 968.65 | 356.98 | 971.36 | 357.03 | 972.8 | 357.03 | 975.15 | 356.98 | 977.34 | 356.89 |
| 978.51 | 356.88 | 981.28 | 356.9 | 981.62 | 356.91 | 982.5 | 356.98 | 985.9 | 357.12 |
| 990.1 | 357.22 | 991.67 | 357.27 | 992.1 | 357.31 | 992.45 | 357.41 | 992.98 | 357.46 |
| 994.37 | 357.52 | 995.44 | 357.52 | 997.73 | 357.49 | 1002.05 | 357.26 | 1004.55 | 357.13 |
| 1006.55 | 357 | 1006.67 | 357 | 1008.72 | 356.89 | 1009.14 | 356.82 | 1009.77 | 356.76 |
| 1011.73 | 356.78 | 1012.52 | 356.81 | 1014.3 | 356.95 | 1014.58 | 356.98 | 1015.09 | 357.07 |
| 1016.03 | 357.31 | 1019.1 | 357.46 | 1020.08 | 357.49 | 1021.74 | 357.49 | 1022.92 | 357.5 |
| 1024.17 | 357.5 | 1025.43 | 357.52 | 1027.54 | 357.53 | 1028.44 | 357.51 | 1032.9 | 357.39 |
| 1034.64 | 357.32 | 1036.54 | 357.25 | 1037.59 | 357.18 | 1038.27 | 357.15 | 1039.23 | 357.09 |
| 1043.97 | 356.85 | 1045.28 | 356.79 | 1045.63 | 356.76 | 1045.82 | 356.71 | 1046.49 | 356.68 |
| 1047.79 | 356.67 | 1048.8 | 356.65 | 1050.24 | 356.63 | 1050.89 | 356.64 | 1051.53 | 356.68 |
| 1052.4 | 356.79 | 1053.61 | 356.97 | 1054.36 | 356.98 | 1055.01 | 357.03 | 1055.71 | 357.03 |
| 1057.48 | 356.96 | 1059.33 | 356.85 | 1059.58 | 356.84 | 1059.61 | 356.8 | 1061.06 | 356.72 |
| 1062.5 | 356.65 | 1065.26 | 356.61 | 1065.9 | 356.61 | 1067.1 | 356.57 | 1069.21 | 356.57 |
| 1072.07 | 356.58 | 1073.38 | 356.54 | 1074.03 | 356.53 | 1075.18 | 356.54 | 1076.79 | 356.6 |
| 1077.28 | 356.64 | 1078.12 | 356.68 | 1081.06 | 356.91 | 1083.3 | 357 | 1087.84 | 357.43 |
| 1097.69 | 357.6 | 1099.12 | 357.51 | 1099.9 | 357.49 | 1104.39 | 357.48 | 1105.95 | 357.49 |
| 1106.49 | 357.47 | 1108.18 | 357.44 | 1111.94 | 357.38 | 1112.93 | 357.39 | 1120.56 | 357.53 |
| 1126.76 | 357.57 | 1127.65 | 357.58 | 1127.76 | 357.59 | 1129.92 | 357.59 | 1131.18 | 357.61 |
| 1135.41 | 357.65 | 1136.52 | 357.63 | 1140.09 | 357.5 | 1140.9 | 357.48 | 1141.73 | 357.47 |
| 1148.87 | 357.31 | 1152.91 | 357.27 | 1163.51 | 357.31 | 1165.64 | 357.31 | 1166.06 | 357.32 |
| 1166.84 | 357.27 | 1167.71 | 357.29 | 1168.76 | 357.35 | 1169.11 | 357.38 | 1169.37 | 357.47 |
| 1171.45 | 358.15 | 1183.01 | 358.56 | 1195.26 | 358.94 | 1195.68 | 358.94 | 1199.29 | 358.98 |
| 1199.88 | 358.9 | 1200.51 | 358.89 | 1201.62 | 358.82 | 1201.9 | 358.83 | 1202.34 | 358.81 |
| 1204.01 | 358.83 | 1205.38 | 358.88 | 1206.15 | 358.86 | 1206.92 | 358.77 | 1207.2 | 358.77 |
| 1208.34 | 358.67 | 1210.68 | 358.37 | 1211.54 | 358.27 | 1222.15 | 358.23 | 1230.4 | 358.35 |
| 1237.32 | 358.48 | 1238.02 | 358.5 | 1242.38 | 358.61 | 1246.39 | 358.86 | 1251.21 | 359.14 |
| 1253.6 | 359.27 | 1254.56 | 359.31 | 1256.64 | 359.42 | 1257.95 | 359.46 | 1259.75 | 359.74 |
| 1263.04 | 360.3 | 1265.85 | 360.39 | 1273.3 | 360.58 | 1276.99 | 360.69 | 1278.66 | 360.75 |
| 1291.11 | 361.28 | 1300.81 | 361.62 | 1307.16 | 361.81 | 1307.62 | 361.83 | 1313.68 | 361.99 |
| 1316.17 | 362.05 | 1317.53 | 362.06 | 1318.1 | 362.04 | 1319.31 | 362.05 | 1327.07 | 362.29 |
| 1330.55 | 362.39 | 1335.32 | 362.5 | 1335.54 | 362.51 | 1339.68 | 362.55 | 1342.65 | 362.63 |
| 1343.6 | 362.65 | 1346.85 | 362.67 | 1349.17 | 362.67 | 1350.48 | 362.65 | 1351.32 | 362.67 |
| 1354.69 | 362.74 | 1355.2 | 362.76 | 1360.59 | 362.83 | 1364.53 | 362.92 | 1368.3 | 363.03 |
| 1369.86 | 363.06 | 1374.38 | 363.16 | 1374.99 | 363.19 | 1392.58 | 363.68 | 1394.98 | 363.73 |
| 1399.47 | 363.76 | 1402.13 | 363.82 | 1404.8 | 363.8 | 1405.48 | 363.81 | 1408.87 | 363.88 |
| 1410.17 | 363.9 | 1413.58 | 363.92 | 1415.87 | 363.97 | 1417.12 | 363.98 | 1419.84 | 364.02 |
| 1421.17 | 364.03 | 1422.49 | 364.01 | 1423.03 | 364.01 | 1425.08 | 363.98 | 1427.58 | 363.89 |
| 1428.08 | 363.86 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 349.3 | .05 | 404.07 | .04 | 1195.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 404.07 | 1195.26 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5901.18*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 336.51 | 361.47 | 338.68 | 361.42 | 347.36 | 361.17 | 350.8 | 361.06 | 350.88 | 361.06 |
| 353.04 | 360.93 | 358.92 | 360.67 | 362.3 | 360.63 | 365.61 | 360.29 | 366.39 | 360.24 |
| 371.23 | 359.96 | 372.25 | 359.91 | 373.71 | 359.9 | 376.15 | 360.09 | 376.83 | 360.13 |
| 378.51 | 360.08 | 378.75 | 360.02 | 379.45 | 360.06 | 379.8 | 360.12 | 380.49 | 360.2 |
| 380.87 | 360.21 | 382.36 | 360.2 | 383.76 | 360.24 | 385.23 | 360.22 | 386.1 | 360.24 |
| 386.95 | 360.23 | 388.34 | 360.13 | 389.24 | 360.04 | 389.75 | 360.01 | 390.03 | 360.07 |
| 390.33 | 360.04 | 391.48 | 359.98 | 393.02 | 359.8 | 393.61 | 359.85 | 393.92 | 359.91 |
| 396.3 | 360.15 | 396.6 | 360.17 | 398.06 | 360.15 | 401.56 | 359.9 | 401.63 | 359.89 |
| 404.36 | 359.25 | 405.13 | 359.06 | 406.44 | 358.92 | 408.62 | 358.77 | 410.26 | 358.55 |
| 417.87 | 358.03 | 419.17 | 357.93 | 419.63 | 357.95 | 419.95 | 357.89 | 422.88 | 357.8 |
| 425.12 | 357.69 | 425.46 | 357.71 | 425.59 | 357.8 | 427.64 | 357.83 | 429.58 | 357.85 |
| 430.29 | 357.85 | 431.5 | 357.83 | 432.73 | 357.8 | 437 | 357.65 | 437.7 | 357.61 |
| 439.6 | 357.63 | 441.14 | 357.68 | 442.6 | 357.72 | 443.19 | 357.7 | 443.89 | 357.7 |
| 446.94 | 357.79 | 448.04 | 357.83 | 450.05 | 357.88 | 452.65 | 357.88 | 453.18 | 357.87 |
| 454.1 | 357.77 | 454.69 | 357.76 | 456.02 | 357.76 | 456.47 | 357.77 | 458.29 | 357.83 |
| 461.89 | 357.99 | 463.4 | 358.02 | 466.42 | 358.06 | 468.14 | 358.07 | 468.21 | 358.04 |
| 469.6 | 358.05 | 471.57 | 358.08 | 473.03 | 358.11 | 473.52 | 358.1 | 475.13 | 358.04 |
| 476.93 | 358.01 | 478.79 | 357.99 | 481.56 | 357.91 | 484.65 | 357.78 | 487.85 | 357.8 |
| 489.4 | 357.8 | 492.04 | 357.75 | 492.35 | 357.75 | 494.58 | 357.7 | 501.91 | 357.88 |
| 503.45 | 357.89 | 506.87 | 357.95 | 509.1 | 357.98 | 513.08 | 358 | 513.28 | 357.99 |
| 516.67 | 357.97 | 520.06 | 357.88 | 520.89 | 357.85 | 521.58 | 357.87 | 522.27 | 357.87 |
| 522.97 | 357.89 | 524.65 | 357.91 | 525.29 | 357.97 | 525.89 | 357.99 | 529.08 | 358.02 |
| 529.52 | 358.03 | 537.89 | 358.02 | 540.24 | 358 | 542.62 | 357.97 | 543.09 | 357.97 |
| 544.47 | 357.99 | 546.53 | 357.99 | 549.82 | 358.02 | 550.18 | 358.03 | 552.27 | 358.03 |
| 553.71 | 358.04 | 554.87 | 358.02 | 555.69 | 358.03 | 556.17 | 358.07 | 559.44 | 358.07 |
| 560.57 | 358.01 | 561.5 | 357.98 | 561.86 | 357.98 | 566.02 | 357.85 | 566.86 | 357.83 |
| 571.65 | 357.66 | 573.03 | 357.62 | 578.2 | 357.39 | 578.8 | 357.37 | 580 | 357.39 |
| 581.34 | 357.4 | 587.96 | 357.4 | 597.12 | 357.33 | 597.82 | 357.32 | 599.96 | 357.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 601.75 | 357.35 | 602.71 | 357.4 | 603.14 | 357.4 | 605.01 | 357.59 | 605.77 | 357.66 |
| 606.18 | 357.67 | 609.98 | 357.67 | 610.72 | 357.62 | 612.78 | 357.54 | 613.91 | 357.46 |
| 614.52 | 357.45 | 615.58 | 357.4 | 617.09 | 357.38 | 617.8 | 357.36 | 619.22 | 357.37 |
| 620.12 | 357.37 | 621.7 | 357.36 | 625.41 | 357.4 | 637.61 | 357.52 | 638.96 | 357.46 |
| 643.24 | 357.41 | 646.02 | 357.41 | 647.66 | 357.44 | 647.76 | 357.45 | 649.03 | 357.47 |
| 649.78 | 357.46 | 650.8 | 357.47 | 651.58 | 357.45 | 652.79 | 357.45 | 654.01 | 357.46 |
| 656.17 | 357.46 | 657.19 | 357.48 | 657.64 | 357.5 | 658.77 | 357.64 | 659.72 | 357.67 |
| 664.33 | 357.83 | 664.92 | 357.84 | 667.52 | 357.91 | 668.54 | 357.95 | 668.76 | 357.97 |
| 669.57 | 357.98 | 669.89 | 358 | 670.79 | 358.01 | 673.05 | 358.01 | 675.37 | 358.02 |
| 676 | 358.04 | 679.66 | 358.12 | 682.7 | 358.15 | 683.16 | 358.16 | 692.68 | 358.2 |
| 694.61 | 358.2 | 698.76 | 358.18 | 700.18 | 358.19 | 703 | 358.05 | 705.32 | 357.9 |
| 706.1 | 357.89 | 709.56 | 357.83 | 709.85 | 357.86 | 712.95 | 357.76 | 720.59 | 357.6 |
| 734.05 | 357.52 | 734.41 | 357.53 | 736.46 | 357.46 | 738.41 | 357.4 | 739.3 | 357.36 |
| 741.86 | 357.31 | 744.45 | 357.33 | 746 | 357.38 | 750.32 | 357.45 | 751.17 | 357.49 |
| 751.55 | 357.52 | 753.53 | 357.55 | 755.58 | 357.56 | 757.4 | 357.52 | 761.13 | 357.48 |
| 763.67 | 357.37 | 763.85 | 357.35 | 765.5 | 357.33 | 768.79 | 357.34 | 771.56 | 357.34 |
| 773.38 | 357.31 | 784.31 | 357.05 | 789.47 | 356.9 | 789.82 | 356.88 | 790.86 | 356.85 |
| 794.38 | 356.8 | 794.6 | 356.8 | 797.6 | 356.76 | 798.26 | 356.79 | 801.02 | 356.82 |
| 802.06 | 356.82 | 803.54 | 356.77 | 804.81 | 356.75 | 806.39 | 356.7 | 807 | 356.65 |
| 809.95 | 356.39 | 810.39 | 356.43 | 810.61 | 356.43 | 811.81 | 356.39 | 813 | 356.34 |
| 813.89 | 356.28 | 814.21 | 356.24 | 814.78 | 356.23 | 817.97 | 356.3 | 818.95 | 356.31 |
| 820.6 | 356.44 | 822.32 | 356.5 | 823.6 | 356.51 | 824.53 | 356.5 | 826.14 | 356.54 |
| 827.8 | 356.54 | 829.61 | 356.5 | 833.93 | 356.5 | 835.82 | 356.51 | 836.03 | 356.5 |
| 836.86 | 356.51 | 840.96 | 356.57 | 841.96 | 356.57 | 842.89 | 356.59 | 846.89 | 356.52 |
| 847.66 | 356.49 | 848.88 | 356.47 | 849.54 | 356.47 | 853.39 | 356.53 | 853.73 | 356.55 |
| 855.52 | 356.54 | 861.81 | 356.37 | 862.44 | 356.35 | 865.24 | 356.23 | 865.31 | 356.22 |
| 868.31 | 356.17 | 869.75 | 356.16 | 873.16 | 356.23 | 873.43 | 356.22 | 875.18 | 356.28 |
| 876.41 | 356.28 | 877.17 | 356.27 | 882.98 | 356.14 | 890.09 | 355.9 | 898.25 | 355.66 |
| 900.32 | 355.61 | 900.71 | 355.61 | 901.09 | 355.65 | 901.46 | 355.66 | 903.23 | 355.65 |
| 904.59 | 355.62 | 907.32 | 355.53 | 908.04 | 355.5 | 909.73 | 355.41 | 909.99 | 355.39 |
| 910.71 | 355.39 | 912.38 | 355.41 | 914.48 | 355.39 | 914.95 | 355.39 | 915.02 | 355.46 |
| 915.6 | 355.54 | 916.05 | 355.58 | 917.72 | 355.68 | 918.87 | 355.72 | 919.89 | 355.74 |
| 921.29 | 355.75 | 923.29 | 355.78 | 923.56 | 355.8 | 924 | 355.88 | 927.62 | 356.03 |
| 930.12 | 356.09 | 932.57 | 356.02 | 940.37 | 355.84 | 940.68 | 355.83 | 941.08 | 355.85 |
| 950.58 | 356.57 | 951.29 | 356.62 | 964.76 | 356.71 | 970.15 | 356.57 | 970.75 | 356.56 |
| 972.39 | 356.62 | 975.03 | 356.67 | 976.44 | 356.67 | 978.73 | 356.62 | 980.87 | 356.55 |
| 982 | 356.54 | 984.7 | 356.56 | 985.03 | 356.57 | 985.89 | 356.64 | 989.2 | 356.77 |
| 993.29 | 356.87 | 994.83 | 356.92 | 995.25 | 356.95 | 995.58 | 357.05 | 996.1 | 357.1 |
| 997.46 | 357.16 | 998.5 | 357.16 | 1000.73 | 357.13 | 1004.95 | 356.92 | 1007.38 | 356.81 |
| 1009.45 | 356.68 | 1011.44 | 356.58 | 1011.85 | 356.51 | 1012.46 | 356.46 | 1013.69 | 356.47 |
| 1014.76 | 356.49 | 1015.14 | 356.51 | 1017.16 | 356.66 | 1017.65 | 356.75 | 1018.57 | 356.98 |
| 1021.56 | 357.11 | 1022.52 | 357.14 | 1024.13 | 357.14 | 1025.97 | 357.15 | 1026.32 | 357.14 |
| 1027.17 | 357.16 | 1029.78 | 357.17 | 1030.67 | 357.15 | 1035.01 | 357.03 | 1036.71 | 356.95 |
| 1038.56 | 356.88 | 1039.58 | 356.81 | 1041.18 | 356.72 | 1045.8 | 356.5 | 1047.1 | 356.45 |
| 1047.42 | 356.42 | 1047.61 | 356.37 | 1049.23 | 356.33 | 1050.5 | 356.33 | 1051.91 | 356.31 |
| 1052.79 | 356.33 | 1053.56 | 356.4 | 1054.02 | 356.47 | 1055.2 | 356.63 | 1055.92 | 356.65 |
| 1056.56 | 356.7 | 1057.24 | 356.7 | 1058.96 | 356.64 | 1061.01 | 356.52 | 1061.04 | 356.47 |
| 1062.46 | 356.39 | 1063.86 | 356.32 | 1065.83 | 356.3 | 1067.17 | 356.28 | 1068.34 | 356.25 |
| 1070.39 | 356.25 | 1073.35 | 356.26 | 1075.1 | 356.22 | 1076.21 | 356.23 | 1076.51 | 356.25 |
| 1077.78 | 356.29 | 1078.26 | 356.33 | 1079.08 | 356.37 | 1081.94 | 356.6 | 1084.13 | 356.7 |
| 1088.55 | 357.12 | 1098.15 | 357.33 | 1099.55 | 357.24 | 1100.31 | 357.22 | 1106.36 | 357.25 |
| 1108.38 | 357.2 | 1112.04 | 357.14 | 1113.01 | 357.14 | 1120.44 | 357.27 | 1127.35 | 357.27 |
| 1128.02 | 357.28 | 1129.56 | 357.27 | 1131.69 | 357.3 | 1135.14 | 357.31 | 1136 | 357.3 |
| 1137.35 | 357.25 | 1139.22 | 357.17 | 1140.26 | 357.14 | 1141.07 | 357.13 | 1148.03 | 356.95 |
| 1151.97 | 356.91 | 1164.79 | 357.01 | 1165.54 | 356.95 | 1166.39 | 356.97 | 1167.76 | 357.05 |
| 1168.01 | 357.14 | 1170.04 | 357.78 | 1181.31 | 358.19 | 1193.24 | 358.56 | 1193.66 | 358.56 |
| 1197.24 | 358.6 | 1197.82 | 358.53 | 1198.44 | 358.52 | 1199.54 | 358.45 | 1200.25 | 358.45 |
| 1201.91 | 358.47 | 1203.27 | 358.51 | 1204.03 | 358.5 | 1204.79 | 358.42 | 1205.08 | 358.42 |
| 1206.2 | 358.32 | 1208.37 | 358.06 | 1209.38 | 357.96 | 1219.88 | 357.93 | 1228.06 | 358.06 |
| 1234.92 | 358.2 | 1239.93 | 358.34 | 1243.9 | 358.58 | 1248.68 | 358.85 | 1251.05 | 358.97 |
| 1252 | 359.01 | 1254.06 | 359.11 | 1255.44 | 359.16 | 1257.14 | 359.42 | 1260.4 | 359.97 |
| 1263.18 | 360.06 | 1265.19 | 360.11 | 1266.28 | 360.15 | 1270.57 | 360.26 | 1274.22 | 360.38 |
| 1275.88 | 360.44 | 1288.22 | 361.04 | 1297.82 | 361.41 | 1302.8 | 361.57 | 1304.58 | 361.63 |
| 1310.58 | 361.81 | 1313.96 | 361.89 | 1314.96 | 361.87 | 1316.15 | 361.88 | 1323.85 | 362.13 |
| 1327.3 | 362.23 | 1332.02 | 362.35 | 1332.24 | 362.35 | 1336.34 | 362.4 | 1337.86 | 362.44 |
| 1339.45 | 362.5 | 1340.22 | 362.51 | 1343.44 | 362.53 | 1345.74 | 362.53 | 1347.04 | 362.51 |
| 1351.22 | 362.61 | 1351.72 | 362.63 | 1357.05 | 362.73 | 1360.96 | 362.83 | 1364.69 | 362.96 |
| 1370.72 | 363.11 | 1371.33 | 363.14 | 1388.75 | 363.69 | 1391.13 | 363.74 | 1395.58 | 363.8 |
| 1397.76 | 363.85 | 1398.21 | 363.87 | 1399.39 | 363.86 | 1400.86 | 363.86 | 1401.54 | 363.87 |
| 1403.76 | 363.93 | 1406.18 | 363.97 | 1409.56 | 364 | 1411.83 | 364.05 | 1413.07 | 364.05 |
| 1415.77 | 364.09 | 1417.09 | 364.1 | 1418.39 | 364.08 | 1420.41 | 364.07 | 1423.43 | 363.97 |
| 1423.93 | 363.95 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 336.51 | .05 | 401.63 | .04 | 1193.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 401.63 | 1193.24 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5881.43*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 323.72 | 361.36 | 326.23 | 361.31 | 336.3 | 361.03 | 340.28 | 360.91 | 341.53 | 360.84 |
| 341.68 | 360.84 | 342.88 | 360.77 | 349.69 | 360.48 | 349.92 | 360.48 | 353.61 | 360.44 |
| 357.44 | 360.05 | 358.35 | 360 | 363.96 | 359.68 | 365.14 | 359.63 | 366.83 | 359.62 |
| 369.66 | 359.85 | 370.3 | 359.87 | 370.45 | 359.9 | 372.39 | 359.85 | 372.67 | 359.77 |
| 373.49 | 359.83 | 373.89 | 359.9 | 374.86 | 360.01 | 376.85 | 360 | 377.82 | 360.02 |
| 378.47 | 360.05 | 380.18 | 360.03 | 381.18 | 360.06 | 382.18 | 360.05 | 382.57 | 360.03 |
| 383.79 | 359.94 | 385.05 | 359.82 | 385.41 | 359.8 | 385.74 | 359.87 | 387.42 | 359.78 |
| 389.2 | 359.57 | 389.48 | 359.58 | 390.25 | 359.7 | 393.01 | 359.99 | 393.36 | 360.02 |
| 395.05 | 360 | 399.1 | 359.72 | 399.18 | 359.71 | 401.96 | 359.09 | 402.74 | 358.91 |
| 404.07 | 358.75 | 405.6 | 358.66 | 406.29 | 358.6 | 406.78 | 358.54 | 407.95 | 358.37 |
| 415.69 | 357.85 | 417.01 | 357.75 | 417.47 | 357.76 | 417.79 | 357.7 | 420.77 | 357.6 |
| 423.05 | 357.47 | 423.4 | 357.5 | 423.52 | 357.6 | 425.61 | 357.64 | 427.58 | 357.66 |
| 428.3 | 357.66 | 429.53 | 357.64 | 430.78 | 357.6 | 435.11 | 357.42 | 435.83 | 357.38 |
| 437.76 | 357.4 | 439.32 | 357.45 | 441.13 | 357.49 | 441.4 | 357.46 | 442.12 | 357.45 |
| 445.21 | 357.54 | 446.33 | 357.59 | 448.38 | 357.63 | 451.01 | 357.64 | 451.62 | 357.63 |
| 452.48 | 357.54 | 454.43 | 357.54 | 454.9 | 357.55 | 456.74 | 357.61 | 458.55 | 357.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 460.39 | 357.76 | 465 | 357.82 | 465.61 | 357.83 | 466.74 | 357.83 | 466.82 | 357.79 |
| 468.23 | 357.8 | 470.23 | 357.83 | 470.58 | 357.83 | 471.72 | 357.86 | 473.27 | 357.81 |
| 475.68 | 357.77 | 477.57 | 357.76 | 479.33 | 357.72 | 480.38 | 357.69 | 483.51 | 357.58 |
| 488.34 | 357.61 | 491.02 | 357.56 | 491.34 | 357.56 | 493.6 | 357.51 | 501.06 | 357.69 |
| 501.5 | 357.68 | 502.62 | 357.7 | 508.35 | 357.78 | 512.6 | 357.78 | 516.05 | 357.74 |
| 519.49 | 357.63 | 520.33 | 357.6 | 521.03 | 357.63 | 521.73 | 357.63 | 524.25 | 357.67 |
| 524.8 | 357.74 | 527.52 | 357.78 | 529.1 | 357.79 | 537.41 | 357.76 | 537.6 | 357.75 |
| 539.99 | 357.73 | 540.68 | 357.71 | 542.4 | 357.69 | 542.88 | 357.69 | 544.29 | 357.71 |
| 546.38 | 357.7 | 550.31 | 357.76 | 552.21 | 357.75 | 553.67 | 357.76 | 554.85 | 357.74 |
| 555.68 | 357.75 | 556.17 | 357.78 | 559.49 | 357.78 | 560.18 | 357.74 | 561.58 | 357.7 |
| 561.95 | 357.7 | 566.17 | 357.58 | 567.03 | 357.57 | 572.87 | 357.39 | 573.3 | 357.38 |
| 575.55 | 357.29 | 578.55 | 357.15 | 579.16 | 357.13 | 581.74 | 357.15 | 588.46 | 357.13 |
| 597.77 | 357.03 | 598.48 | 357.02 | 600.65 | 357.03 | 602.47 | 357.05 | 603.45 | 357.1 |
| 603.88 | 357.1 | 605.68 | 357.31 | 606.55 | 357.4 | 606.97 | 357.41 | 610.83 | 357.41 |
| 611.18 | 357.37 | 611.58 | 357.36 | 613.67 | 357.27 | 614.51 | 357.2 | 615.44 | 357.17 |
| 616.89 | 357.11 | 618.05 | 357.1 | 618.77 | 357.08 | 621.13 | 357.09 | 622.74 | 357.07 |
| 626.3 | 357.11 | 626.5 | 357.12 | 638.9 | 357.25 | 640.26 | 357.2 | 644.62 | 357.16 |
| 646.71 | 357.18 | 649.1 | 357.22 | 649.21 | 357.23 | 650.5 | 357.26 | 651.26 | 357.25 |
| 652.54 | 357.27 | 653.09 | 357.25 | 657.75 | 357.25 | 658.78 | 357.27 | 659.43 | 357.3 |
| 660.39 | 357.42 | 661.36 | 357.44 | 666.04 | 357.58 | 667.32 | 357.6 | 669.28 | 357.65 |
| 670.32 | 357.69 | 670.54 | 357.71 | 671.36 | 357.72 | 672.6 | 357.76 | 674.48 | 357.76 |
| 674.9 | 357.75 | 676.76 | 357.76 | 677.89 | 357.79 | 681.61 | 357.87 | 684.7 | 357.9 |
| 685.16 | 357.9 | 694.84 | 357.93 | 696.8 | 357.93 | 701.01 | 357.89 | 702.45 | 357.89 |
| 703.2 | 357.84 | 703.72 | 357.82 | 705.32 | 357.73 | 707.68 | 357.55 | 708.47 | 357.54 |
| 711.99 | 357.48 | 712.28 | 357.52 | 715.43 | 357.42 | 723.19 | 357.27 | 736.86 | 357.2 |
| 737.23 | 357.2 | 739.12 | 357.13 | 741.29 | 357.04 | 742.19 | 356.99 | 744.8 | 356.93 |
| 747.42 | 356.95 | 749 | 357.01 | 753.39 | 357.08 | 753.8 | 357.09 | 754.94 | 357.15 |
| 756.65 | 357.17 | 759.44 | 357.17 | 759.51 | 357.16 | 760.58 | 357.14 | 764.37 | 357.09 |
| 766.95 | 356.99 | 767.13 | 356.97 | 768.81 | 356.95 | 774.16 | 356.98 | 776.82 | 356.95 |
| 787.91 | 356.66 | 793.16 | 356.5 | 794.57 | 356.46 | 798.15 | 356.4 | 798.37 | 356.41 |
| 801.42 | 356.37 | 802.08 | 356.41 | 804.89 | 356.45 | 805.94 | 356.46 | 806.42 | 356.44 |
| 807.45 | 356.42 | 808.74 | 356.41 | 810.35 | 356.37 | 813.96 | 356.08 | 814.63 | 356.12 |
| 815.86 | 356.08 | 817.06 | 356.03 | 817.91 | 355.97 | 818.29 | 355.92 | 818.87 | 355.91 |
| 822.11 | 355.97 | 823.11 | 355.97 | 824.71 | 356.11 | 825.31 | 356.14 | 826.85 | 356.18 |
| 827.82 | 356.18 | 828.78 | 356.17 | 830.41 | 356.2 | 832.09 | 356.19 | 832.65 | 356.17 |
| 834.69 | 356.14 | 836.88 | 356.15 | 838.32 | 356.14 | 840.25 | 356.16 | 841.3 | 356.16 |
| 845.46 | 356.23 | 846.14 | 356.23 | 846.68 | 356.25 | 847.42 | 356.26 | 851.49 | 356.19 |
| 852.26 | 356.17 | 853.51 | 356.15 | 854.17 | 356.15 | 858.09 | 356.21 | 858.54 | 356.23 |
| 860.26 | 356.2 | 866.64 | 356.01 | 870.12 | 355.85 | 873.24 | 355.8 | 874.71 | 355.79 |
| 878.17 | 355.89 | 878.45 | 355.88 | 880.46 | 355.96 | 882.24 | 355.94 | 888.14 | 355.8 |
| 895.37 | 355.55 | 903.66 | 355.31 | 905.76 | 355.26 | 906.16 | 355.26 | 906.92 | 355.3 |
| 909 | 355.29 | 912.87 | 355.18 | 913.6 | 355.15 | 915.32 | 355.06 | 915.58 | 355.04 |
| 916.25 | 355.04 | 917.8 | 355.06 | 920.19 | 355.04 | 920.25 | 355.11 | 920.82 | 355.19 |
| 921.26 | 355.23 | 922.59 | 355.3 | 925 | 355.38 | 926.37 | 355.38 | 928.31 | 355.41 |
| 928.57 | 355.43 | 929 | 355.5 | 932.52 | 355.64 | 934.97 | 355.7 | 937.35 | 355.64 |
| 944.95 | 355.48 | 945.25 | 355.47 | 945.64 | 355.49 | 955.58 | 356.22 | 968.7 | 356.32 |
| 973.95 | 356.2 | 974.53 | 356.2 | 976.13 | 356.25 | 978.7 | 356.3 | 980.07 | 356.31 |
| 982.31 | 356.27 | 984.39 | 356.2 | 985.49 | 356.2 | 988.13 | 356.22 | 988.45 | 356.23 |
| 989.28 | 356.29 | 992.51 | 356.42 | 996.49 | 356.52 | 997.99 | 356.57 | 998.39 | 356.6 |
| 998.72 | 356.69 | 999.23 | 356.74 | 1000.55 | 356.79 | 1001.56 | 356.8 | 1003.73 | 356.77 |
| 1007.84 | 356.58 | 1010.21 | 356.48 | 1012.1 | 356.37 | 1012.22 | 356.37 | 1014.17 | 356.28 |
| 1014.56 | 356.21 | 1015.16 | 356.16 | 1016.36 | 356.17 | 1017.4 | 356.19 | 1019.46 | 356.32 |
| 1020.21 | 356.43 | 1021.11 | 356.64 | 1024.02 | 356.77 | 1024.95 | 356.79 | 1026.52 | 356.79 |
| 1028.31 | 356.8 | 1028.65 | 356.79 | 1029.49 | 356.81 | 1032.03 | 356.81 | 1032.89 | 356.79 |
| 1037.12 | 356.67 | 1038.77 | 356.59 | 1040.58 | 356.51 | 1041.57 | 356.44 | 1043.13 | 356.35 |
| 1047.62 | 356.16 | 1048.87 | 356.11 | 1049.39 | 356.04 | 1050.97 | 356 | 1052.21 | 356 |
| 1054.2 | 355.99 | 1054.43 | 356 | 1055.19 | 356.08 | 1056.78 | 356.3 | 1057.07 | 356.3 |
| 1058.1 | 356.36 | 1058.77 | 356.37 | 1059.31 | 356.36 | 1060.45 | 356.32 | 1061.14 | 356.28 |
| 1062.44 | 356.19 | 1062.47 | 356.14 | 1063.85 | 356.06 | 1065.22 | 356 | 1065.24 | 355.99 |
| 1067.84 | 355.96 | 1068.45 | 355.96 | 1069.58 | 355.92 | 1073.96 | 355.94 | 1074.46 | 355.94 |
| 1076.16 | 355.91 | 1077.25 | 355.92 | 1077.53 | 355.94 | 1079.39 | 356.02 | 1082.83 | 356.29 |
| 1084.96 | 356.39 | 1089.26 | 356.81 | 1098.61 | 357.05 | 1099.98 | 356.98 | 1100.72 | 356.96 |
| 1104.41 | 357 | 1104.97 | 357 | 1106.46 | 357.02 | 1106.96 | 357 | 1108.57 | 356.96 |
| 1112.14 | 356.9 | 1113.08 | 356.9 | 1120.32 | 357 | 1126.21 | 356.96 | 1127.7 | 356.97 |
| 1129.2 | 356.95 | 1131.27 | 356.98 | 1134.64 | 356.98 | 1135.48 | 356.96 | 1139.63 | 356.8 |
| 1140.42 | 356.79 | 1147.19 | 356.6 | 1151.03 | 356.56 | 1161.09 | 356.68 | 1163.12 | 356.7 |
| 1163.51 | 356.71 | 1164.25 | 356.63 | 1165.08 | 356.65 | 1166.07 | 356.7 | 1166.41 | 356.73 |
| 1166.65 | 356.81 | 1168.63 | 357.41 | 1179.6 | 357.82 | 1191.23 | 358.17 | 1191.64 | 358.18 |
| 1195.19 | 358.22 | 1195.64 | 358.16 | 1196.38 | 358.15 | 1197.47 | 358.09 | 1198.17 | 358.09 |
| 1199.82 | 358.11 | 1201.16 | 358.15 | 1201.92 | 358.14 | 1202.67 | 358.06 | 1202.95 | 358.07 |
| 1204.07 | 357.98 | 1206.22 | 357.74 | 1207.21 | 357.65 | 1217.62 | 357.64 | 1225.72 | 357.77 |
| 1232.52 | 357.92 | 1237.48 | 358.06 | 1241.42 | 358.29 | 1246.15 | 358.55 | 1248.5 | 358.67 |
| 1249.44 | 358.71 | 1251.48 | 358.81 | 1252.77 | 358.85 | 1254.54 | 359.11 | 1257.76 | 359.63 |
| 1260.52 | 359.73 | 1262.51 | 359.78 | 1263.59 | 359.82 | 1267.84 | 359.93 | 1271.46 | 360.07 |
| 1273.1 | 360.13 | 1285.32 | 360.79 | 1294.84 | 361.19 | 1299.77 | 361.37 | 1307.48 | 361.63 |
| 1309.48 | 361.68 | 1309.92 | 361.7 | 1311.25 | 361.71 | 1311.82 | 361.7 | 1313 | 361.72 |
| 1320.62 | 361.97 | 1324.04 | 362.08 | 1328.72 | 362.19 | 1328.94 | 362.2 | 1333 | 362.25 |
| 1335.91 | 362.35 | 1336.84 | 362.37 | 1340.03 | 362.39 | 1342.31 | 362.39 | 1343.59 | 362.37 |
| 1344.43 | 362.38 | 1347.74 | 362.48 | 1348.23 | 362.5 | 1353.52 | 362.62 | 1357.39 | 362.74 |
| 1361.59 | 362.91 | 1362.63 | 362.93 | 1367.06 | 363.07 | 1367.66 | 363.1 | 1384.92 | 363.7 |
| 1387.28 | 363.76 | 1391.69 | 363.84 | 1394.3 | 363.91 | 1395.46 | 363.91 | 1397.59 | 363.94 |
| 1400.92 | 364.03 | 1402.2 | 364.05 | 1405.54 | 364.08 | 1407.4 | 364.12 | 1409.02 | 364.13 |
| 1411.69 | 364.16 | 1413 | 364.17 | 1414.82 | 364.16 | 1416.83 | 364.13 | 1419.28 | 364.06 |
| 1419.77 | 364.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 323.72 | .05 | 399.18 | .04 | 1191.23 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 399.18 | 1191.23 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5861.67*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 310.93 | 361.25 | 312.05 | 361.23 | 312.13 | 361.22 | 313.66 | 361.2 | 313.79 | 361.19 |
| 325.23 | 360.89 | 329.76 | 360.77 | 332.71 | 360.6 | 340.46 | 360.29 | 340.72 | 360.29 |
| 344.92 | 360.25 | 349.27 | 359.82 | 349.46 | 359.82 | 350.3 | 359.76 | 356.69 | 359.41 |
| 358.02 | 359.35 | 359.95 | 359.34 | 363.17 | 359.62 | 363.89 | 359.64 | 364.06 | 359.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 365.95 | 359.63 | 366.27 | 359.61 | 366.59 | 359.53 | 367.52 | 359.6 | 367.98 | 359.67 |
| 369.08 | 359.8 | 369.39 | 359.81 | 371.34 | 359.8 | 371.54 | 359.82 | 372.45 | 359.83 |
| 373.19 | 359.86 | 375.13 | 359.85 | 376.27 | 359.88 | 377.4 | 359.88 | 379.23 | 359.75 |
| 380.41 | 359.64 | 381.04 | 359.6 | 381.46 | 359.68 | 383.37 | 359.57 | 385.47 | 359.33 |
| 386.17 | 359.42 | 386.58 | 359.5 | 389.72 | 359.83 | 390.12 | 359.86 | 392.04 | 359.84 |
| 396.64 | 359.54 | 396.74 | 359.52 | 399.56 | 358.93 | 399.75 | 358.9 | 400.35 | 358.75 |
| 401.7 | 358.59 | 403.95 | 358.44 | 404.45 | 358.38 | 404.99 | 358.28 | 405.64 | 358.19 |
| 413.5 | 357.67 | 414.84 | 357.57 | 415.31 | 357.57 | 415.64 | 357.52 | 418.66 | 357.4 |
| 420.97 | 357.26 | 421.33 | 357.28 | 421.45 | 357.4 | 423.57 | 357.44 | 425.58 | 357.46 |
| 426.31 | 357.46 | 428.38 | 357.42 | 433.23 | 357.2 | 433.95 | 357.15 | 435.91 | 357.17 |
| 437.5 | 357.22 | 439.01 | 357.25 | 440.34 | 357.21 | 443.48 | 357.3 | 444.62 | 357.34 |
| 446.04 | 357.38 | 446.7 | 357.39 | 449.37 | 357.41 | 449.92 | 357.4 | 450.87 | 357.32 |
| 452.85 | 357.32 | 453.32 | 357.33 | 455.19 | 357.39 | 457.03 | 357.47 | 458.9 | 357.53 |
| 463.58 | 357.59 | 465.35 | 357.59 | 465.43 | 357.55 | 466.86 | 357.55 | 468.89 | 357.57 |
| 470.4 | 357.6 | 471.98 | 357.56 | 474.42 | 357.53 | 476.34 | 357.52 | 478.13 | 357.5 |
| 482.38 | 357.38 | 487.28 | 357.41 | 490.01 | 357.37 | 490.33 | 357.36 | 492.63 | 357.33 |
| 500.2 | 357.49 | 501.78 | 357.5 | 505.31 | 357.56 | 507.61 | 357.58 | 511.71 | 357.57 |
| 511.92 | 357.56 | 515.42 | 357.51 | 518.92 | 357.39 | 519.37 | 357.36 | 520.48 | 357.38 |
| 523.75 | 357.43 | 524.31 | 357.51 | 527.07 | 357.55 | 528.67 | 357.55 | 537.12 | 357.5 |
| 537.31 | 357.49 | 539.74 | 357.46 | 540.44 | 357.44 | 542.67 | 357.4 | 544.1 | 357.42 |
| 546.22 | 357.42 | 549.61 | 357.47 | 549.99 | 357.48 | 553.63 | 357.48 | 554.82 | 357.46 |
| 555.67 | 357.46 | 556.17 | 357.5 | 556.62 | 357.49 | 559.54 | 357.49 | 560.7 | 357.44 |
| 566.33 | 357.31 | 567.2 | 357.31 | 572.14 | 357.17 | 573.56 | 357.14 | 575.85 | 357.05 |
| 578.9 | 356.91 | 579.51 | 356.89 | 582.13 | 356.89 | 588.96 | 356.86 | 598.41 | 356.74 |
| 599.13 | 356.72 | 601.34 | 356.73 | 603.18 | 356.75 | 603.7 | 356.77 | 604.18 | 356.81 |
| 604.62 | 356.8 | 606.45 | 357.04 | 606.55 | 357.04 | 607.33 | 357.14 | 611.68 | 357.14 |
| 612.03 | 357.1 | 612.44 | 357.09 | 614.56 | 357 | 615.42 | 356.92 | 618.14 | 356.83 |
| 619.02 | 356.82 | 620.53 | 356.79 | 621.22 | 356.8 | 622.14 | 356.8 | 623.77 | 356.78 |
| 627.39 | 356.83 | 627.6 | 356.83 | 640.18 | 356.99 | 640.73 | 356.96 | 641.57 | 356.95 |
| 645.99 | 356.92 | 648.11 | 356.94 | 649.97 | 356.98 | 650.66 | 357.01 | 651.97 | 357.05 |
| 652.74 | 357.05 | 654.03 | 357.07 | 654.6 | 357.05 | 659.33 | 357.05 | 660.85 | 357.07 |
| 662.01 | 357.19 | 663 | 357.21 | 667.75 | 357.32 | 669.04 | 357.34 | 671.04 | 357.39 |
| 673.49 | 357.48 | 674.41 | 357.5 | 676.32 | 357.5 | 676.75 | 357.49 | 678.64 | 357.5 |
| 679.79 | 357.54 | 681.27 | 357.58 | 683.56 | 357.62 | 686.7 | 357.65 | 696.99 | 357.66 |
| 698.99 | 357.65 | 703.27 | 357.6 | 704.73 | 357.59 | 706.01 | 357.51 | 707.64 | 357.4 |
| 710.03 | 357.2 | 714.41 | 357.14 | 714.71 | 357.18 | 717.91 | 357.08 | 725.79 | 356.94 |
| 739.67 | 356.88 | 740.04 | 356.88 | 741.96 | 356.79 | 744.17 | 356.68 | 745.09 | 356.63 |
| 747.73 | 356.55 | 750.4 | 356.57 | 752 | 356.63 | 756.46 | 356.71 | 757.73 | 356.76 |
| 758.89 | 356.79 | 759.77 | 356.8 | 762.6 | 356.79 | 762.67 | 356.78 | 763.77 | 356.76 |
| 767.61 | 356.7 | 768.64 | 356.67 | 770.41 | 356.59 | 772.12 | 356.57 | 775.52 | 356.59 |
| 776.08 | 356.6 | 778.37 | 356.61 | 780.25 | 356.58 | 791.52 | 356.28 | 796.85 | 356.11 |
| 797.21 | 356.09 | 798.28 | 356.06 | 801.91 | 356.01 | 802.13 | 356.02 | 805.23 | 355.98 |
| 805.7 | 356.03 | 805.91 | 356.03 | 809.79 | 356.1 | 809.83 | 356.09 | 811.36 | 356.06 |
| 812.68 | 356.07 | 814.34 | 356.04 | 814.93 | 356 | 817.97 | 355.77 | 818.66 | 355.8 |
| 821.12 | 355.72 | 822.04 | 355.65 | 822.37 | 355.6 | 822.95 | 355.59 | 826.25 | 355.63 |
| 827.26 | 355.63 | 828.89 | 355.78 | 829.5 | 355.81 | 831.06 | 355.86 | 832.05 | 355.86 |
| 833.02 | 355.84 | 834.68 | 355.86 | 836.38 | 355.84 | 838.25 | 355.79 | 841.25 | 355.8 |
| 842.71 | 355.79 | 845.74 | 355.82 | 849.97 | 355.89 | 851 | 355.9 | 851.18 | 355.92 |
| 851.95 | 355.94 | 856.09 | 355.87 | 856.87 | 355.85 | 858.14 | 355.83 | 858.81 | 355.83 |
| 862.21 | 355.88 | 862.79 | 355.88 | 863.24 | 355.9 | 864.99 | 355.87 | 871.47 | 355.65 |
| 875.01 | 355.48 | 878.18 | 355.43 | 879.27 | 355.42 | 879.66 | 355.43 | 883.18 | 355.55 |
| 883.46 | 355.54 | 885.26 | 355.63 | 885.72 | 355.63 | 887.32 | 355.61 | 893.31 | 355.46 |
| 900.64 | 355.2 | 909.07 | 354.95 | 911.21 | 354.91 | 911.6 | 354.91 | 911.99 | 354.94 |
| 914.49 | 354.93 | 919.16 | 354.8 | 920.9 | 354.72 | 921.18 | 354.7 | 923.22 | 354.71 |
| 925.43 | 354.7 | 925.49 | 354.76 | 926.47 | 354.87 | 927.76 | 354.94 | 929.15 | 354.99 |
| 930.11 | 355.01 | 931.44 | 355.01 | 933.34 | 355.04 | 934.01 | 355.12 | 937.43 | 355.26 |
| 939.81 | 355.31 | 942.13 | 355.25 | 949.52 | 355.12 | 950.2 | 355.13 | 959.2 | 355.78 |
| 959.88 | 355.82 | 972.64 | 355.94 | 977.75 | 355.84 | 978.32 | 355.84 | 979.87 | 355.89 |
| 982.37 | 355.94 | 983.71 | 355.95 | 985.5 | 355.92 | 987.91 | 355.85 | 988.98 | 355.85 |
| 991.55 | 355.88 | 991.86 | 355.89 | 992.67 | 355.95 | 995.81 | 356.07 | 999.69 | 356.18 |
| 1000.64 | 356.2 | 1001.54 | 356.25 | 1001.86 | 356.33 | 1002.35 | 356.38 | 1003.64 | 356.43 |
| 1004.62 | 356.43 | 1006.55 | 356.41 | 1006.73 | 356.42 | 1010.73 | 356.24 | 1013.04 | 356.15 |
| 1015 | 356.05 | 1016.89 | 355.97 | 1017.28 | 355.91 | 1017.86 | 355.86 | 1019.02 | 355.87 |
| 1020.04 | 355.89 | 1022.05 | 356.01 | 1022.31 | 356.03 | 1022.78 | 356.11 | 1023.64 | 356.3 |
| 1026.48 | 356.42 | 1027.39 | 356.44 | 1028.91 | 356.44 | 1030 | 356.45 | 1031.16 | 356.44 |
| 1031.8 | 356.45 | 1034.27 | 356.45 | 1035.11 | 356.43 | 1039.23 | 356.31 | 1040.84 | 356.23 |
| 1042.59 | 356.15 | 1043.56 | 356.07 | 1044.18 | 356.03 | 1045.08 | 355.99 | 1049.9 | 355.79 |
| 1050.68 | 355.77 | 1051.17 | 355.7 | 1053.15 | 355.67 | 1055.25 | 355.66 | 1055.85 | 355.67 |
| 1056.44 | 355.71 | 1058.36 | 355.96 | 1059.05 | 355.98 | 1059.65 | 356.03 | 1060.3 | 356.04 |
| 1061.93 | 356 | 1062.6 | 355.96 | 1063.87 | 355.87 | 1063.9 | 355.81 | 1065.24 | 355.73 |
| 1066.57 | 355.67 | 1068.44 | 355.65 | 1069.72 | 355.63 | 1070.82 | 355.6 | 1075.08 | 355.62 |
| 1075.57 | 355.62 | 1077.22 | 355.6 | 1078.28 | 355.61 | 1078.56 | 355.63 | 1079.77 | 355.68 |
| 1081 | 355.76 | 1083.72 | 355.98 | 1085.79 | 356.09 | 1089.98 | 356.49 | 1099.08 | 356.77 |
| 1100.4 | 356.71 | 1101.12 | 356.7 | 1104.71 | 356.76 | 1105.26 | 356.76 | 1106.07 | 356.78 |
| 1106.86 | 356.78 | 1107.2 | 356.76 | 1108.77 | 356.72 | 1112.24 | 356.65 | 1113.16 | 356.65 |
| 1120.21 | 356.73 | 1126.76 | 356.65 | 1126.86 | 356.66 | 1128.85 | 356.63 | 1130.01 | 356.65 |
| 1134.14 | 356.65 | 1134.95 | 356.63 | 1136.24 | 356.58 | 1138.25 | 356.49 | 1139.76 | 356.45 |
| 1146.36 | 356.24 | 1150.09 | 356.21 | 1159.88 | 356.37 | 1161.85 | 356.39 | 1162.24 | 356.4 |
| 1162.96 | 356.31 | 1163.76 | 356.33 | 1165.06 | 356.4 | 1165.29 | 356.48 | 1167.22 | 357.03 |
| 1177.9 | 357.45 | 1189.21 | 357.79 | 1189.62 | 357.79 | 1193.14 | 357.84 | 1193.7 | 357.78 |
| 1194.32 | 357.78 | 1195.4 | 357.72 | 1196.09 | 357.72 | 1197.72 | 357.74 | 1199.05 | 357.79 |
| 1199.8 | 357.78 | 1200.55 | 357.71 | 1200.83 | 357.71 | 1201.93 | 357.63 | 1204.06 | 357.42 |
| 1205.05 | 357.33 | 1215.36 | 357.34 | 1223.38 | 357.48 | 1230.11 | 357.64 | 1235.03 | 357.78 |
| 1238.93 | 358.01 | 1243.62 | 358.26 | 1245.95 | 358.37 | 1246.88 | 358.41 | 1248.9 | 358.51 |
| 1250.25 | 358.55 | 1251.93 | 358.79 | 1255.13 | 359.29 | 1257.85 | 359.39 | 1259.83 | 359.45 |
| 1260.9 | 359.49 | 1265.11 | 359.61 | 1268.69 | 359.75 | 1270.32 | 359.82 | 1282.43 | 360.54 |
| 1291.86 | 360.98 | 1298.03 | 361.22 | 1298.48 | 361.23 | 1304.37 | 361.45 | 1306.36 | 361.5 |
| 1306.8 | 361.52 | 1307.69 | 361.54 | 1308.67 | 361.53 | 1309.85 | 361.55 | 1317.4 | 361.81 |
| 1320.78 | 361.92 | 1325.42 | 362.04 | 1325.63 | 362.05 | 1329.66 | 362.1 | 1331.15 | 362.15 |
| 1332.54 | 362.21 | 1333.47 | 362.23 | 1336.62 | 362.25 | 1338.88 | 362.25 | 1340.15 | 362.22 |
| 1340.98 | 362.24 | 1344.26 | 362.35 | 1344.75 | 362.37 | 1349.99 | 362.51 | 1353.83 | 362.66 |
| 1357.98 | 362.84 | 1359.01 | 362.87 | 1363.4 | 363.02 | 1364 | 363.05 | 1381.1 | 363.71 |
| 1383.43 | 363.78 | 1387.8 | 363.88 | 1389.94 | 363.94 | 1390.39 | 363.96 | 1391.54 | 363.97 |
| 1393.65 | 364 | 1395.83 | 364.07 | 1398.21 | 364.13 | 1401.52 | 364.16 | 1403.36 | 364.2 |
| 1404.96 | 364.2 | 1407.61 | 364.23 | 1408.91 | 364.24 | 1412.17 | 364.22 | 1415.14 | 364.15 |
| 1415.62 | 364.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 310.93 | .05 | 396.74 | .04 | 1189.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 396.74 | 1189.21 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5841.91*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 298.14 | 361.14 | 299.39 | 361.12 | 299.49 | 361.11 | 301.35 | 361.08 | 314.17 | 360.76 |
| 319.24 | 360.62 | 320.83 | 360.53 | 321.03 | 360.53 | 322.55 | 360.44 | 331.23 | 360.1 |
| 331.52 | 360.1 | 336.22 | 360.06 | 341.11 | 359.58 | 341.31 | 359.58 | 342.26 | 359.52 |
| 349.41 | 359.13 | 350.91 | 359.07 | 353.07 | 359.06 | 356.67 | 359.38 | 357.49 | 359.4 |
| 357.68 | 359.44 | 359.79 | 359.4 | 360.15 | 359.38 | 360.2 | 359.34 | 360.51 | 359.29 |
| 361.55 | 359.36 | 362.07 | 359.45 | 363.31 | 359.6 | 365.84 | 359.61 | 367.08 | 359.64 |
| 367.9 | 359.67 | 370.08 | 359.66 | 371.36 | 359.7 | 372.63 | 359.7 | 374.67 | 359.56 |
| 376.29 | 359.41 | 376.75 | 359.39 | 377.17 | 359.48 | 378.31 | 359.41 | 379.31 | 359.37 |
| 381.67 | 359.1 | 381.93 | 359.12 | 382.46 | 359.2 | 382.91 | 359.29 | 386.43 | 359.68 |
| 386.88 | 359.71 | 389.02 | 359.69 | 394.19 | 359.35 | 394.29 | 359.34 | 397.15 | 358.77 |
| 397.35 | 358.74 | 397.96 | 358.6 | 399.33 | 358.42 | 400.91 | 358.33 | 401.62 | 358.27 |
| 402.12 | 358.21 | 402.67 | 358.11 | 403.33 | 358.01 | 411.31 | 357.49 | 412.67 | 357.38 |
| 413.15 | 357.38 | 413.48 | 357.33 | 416.55 | 357.2 | 418.68 | 357.05 | 418.9 | 357.04 |
| 419.26 | 357.07 | 419.39 | 357.2 | 421.54 | 357.24 | 423.57 | 357.27 | 424.32 | 357.27 |
| 426.42 | 357.22 | 426.87 | 357.2 | 431.34 | 356.97 | 432.08 | 356.92 | 434.07 | 356.94 |
| 435.68 | 357 | 437.54 | 357.02 | 437.83 | 356.99 | 438.56 | 356.97 | 441.75 | 357.06 |
| 442.91 | 357.1 | 444.35 | 357.14 | 445.02 | 357.15 | 447.74 | 357.17 | 448.36 | 357.16 |
| 449.25 | 357.09 | 450.21 | 357.1 | 451.26 | 357.1 | 451.74 | 357.11 | 453.64 | 357.17 |
| 455.51 | 357.25 | 457.41 | 357.3 | 458.99 | 357.32 | 463.21 | 357.36 | 463.96 | 357.35 |
| 464.03 | 357.3 | 465.49 | 357.3 | 467.91 | 357.32 | 469.09 | 357.35 | 471.29 | 357.31 |
| 473.17 | 357.29 | 475.12 | 357.29 | 478.01 | 357.26 | 481.25 | 357.17 | 484.61 | 357.21 |
| 486.23 | 357.21 | 488.99 | 357.17 | 489.32 | 357.17 | 491.65 | 357.14 | 499.34 | 357.29 |
| 500.95 | 357.3 | 504.53 | 357.36 | 506.86 | 357.37 | 511.24 | 357.35 | 514.8 | 357.27 |
| 518.35 | 357.15 | 518.67 | 357.12 | 519.21 | 357.11 | 519.93 | 357.14 | 521.39 | 357.16 |
| 522.68 | 357.17 | 523.25 | 357.19 | 523.83 | 357.27 | 524.45 | 357.29 | 527.8 | 357.32 |
| 528.25 | 357.32 | 536.83 | 357.24 | 537.02 | 357.23 | 539.48 | 357.18 | 540.2 | 357.16 |
| 542.47 | 357.12 | 543.91 | 357.14 | 546.07 | 357.13 | 549.51 | 357.19 | 549.9 | 357.2 |
| 553.59 | 357.2 | 554.8 | 357.18 | 555.66 | 357.18 | 556.17 | 357.21 | 557.61 | 357.19 |
| 559.59 | 357.2 | 560.77 | 357.15 | 562.13 | 357.13 | 566.48 | 357.05 | 567.36 | 357.05 |
| 572.38 | 356.92 | 573.83 | 356.9 | 575.05 | 356.86 | 579.24 | 356.67 | 579.87 | 356.65 |
| 580.75 | 356.64 | 581.13 | 356.65 | 582.53 | 356.64 | 589.46 | 356.58 | 599.06 | 356.44 |
| 599.79 | 356.42 | 602.98 | 356.43 | 603.19 | 356.45 | 604.43 | 356.46 | 604.92 | 356.51 |
| 605.36 | 356.5 | 607.22 | 356.77 | 607.32 | 356.77 | 608.12 | 356.88 | 612.53 | 356.88 |
| 612.75 | 356.85 | 613.3 | 356.82 | 615.46 | 356.73 | 615.87 | 356.7 | 616.49 | 356.63 |
| 617.28 | 356.61 | 619.09 | 356.55 | 619.98 | 356.54 | 621.51 | 356.51 | 623.15 | 356.51 |
| 624.81 | 356.49 | 628.48 | 356.54 | 628.69 | 356.55 | 641.47 | 356.72 | 642.02 | 356.7 |
| 642.88 | 356.69 | 647.37 | 356.68 | 649.52 | 356.71 | 651.41 | 356.76 | 652.1 | 356.79 |
| 653.43 | 356.83 | 654.22 | 356.84 | 655.28 | 356.87 | 657.37 | 356.85 | 658.65 | 356.85 |
| 660.91 | 356.84 | 661.97 | 356.85 | 662.65 | 356.87 | 663.63 | 356.96 | 670.07 | 357.08 |
| 670.77 | 357.08 | 672.8 | 357.13 | 675.28 | 357.22 | 676.22 | 357.24 | 678.59 | 357.24 |
| 680.52 | 357.25 | 681.68 | 357.29 | 683.19 | 357.33 | 685.51 | 357.37 | 688.7 | 357.4 |
| 699.15 | 357.39 | 701.17 | 357.37 | 705.52 | 357.3 | 707.01 | 357.29 | 709.96 | 357.08 |
| 712.39 | 356.85 | 716.83 | 356.79 | 717.13 | 356.84 | 720.38 | 356.74 | 728.39 | 356.62 |
| 742.48 | 356.55 | 742.86 | 356.56 | 745.01 | 356.44 | 747.05 | 356.32 | 747.98 | 356.26 |
| 750.67 | 356.17 | 753.38 | 356.19 | 755.01 | 356.25 | 759.53 | 356.34 | 760.42 | 356.37 |
| 761.99 | 356.41 | 762.88 | 356.42 | 765.77 | 356.41 | 765.84 | 356.4 | 766.95 | 356.38 |
| 770.85 | 356.32 | 773.51 | 356.22 | 774.32 | 356.2 | 775.43 | 356.2 | 778.88 | 356.22 |
| 779.44 | 356.23 | 781.77 | 356.24 | 783.68 | 356.21 | 795.12 | 355.89 | 800.53 | 355.71 |
| 800.9 | 355.69 | 801.99 | 355.66 | 805.68 | 355.62 | 809.11 | 355.6 | 809.74 | 355.65 |
| 812.64 | 355.72 | 813.72 | 355.73 | 815.27 | 355.71 | 816.61 | 355.73 | 818.3 | 355.71 |
| 821.98 | 355.45 | 822.68 | 355.49 | 823.94 | 355.45 | 825.18 | 355.4 | 826.06 | 355.33 |
| 826.62 | 355.26 | 827.04 | 355.26 | 830.39 | 355.3 | 831.42 | 355.3 | 833.07 | 355.45 |
| 833.69 | 355.49 | 834.94 | 355.53 | 836.28 | 355.53 | 836.72 | 355.52 | 838.95 | 355.52 |
| 842.57 | 355.43 | 845.62 | 355.44 | 847.1 | 355.44 | 850.17 | 355.47 | 854.47 | 355.56 |
| 855.16 | 355.56 | 856.48 | 355.61 | 860.68 | 355.55 | 861.48 | 355.53 | 862.77 | 355.51 |
| 863.45 | 355.51 | 866.9 | 355.55 | 867.95 | 355.58 | 869.72 | 355.53 | 876.3 | 355.28 |
| 879.9 | 355.11 | 879.97 | 355.1 | 883.11 | 355.06 | 884.22 | 355.05 | 884.62 | 355.06 |
| 888.19 | 355.21 | 888.48 | 355.2 | 890.31 | 355.3 | 892.39 | 355.28 | 898.48 | 355.12 |
| 905.92 | 354.85 | 914.47 | 354.6 | 916.65 | 354.55 | 917.84 | 354.59 | 919.98 | 354.57 |
| 921.11 | 354.55 | 923.97 | 354.47 | 926.49 | 354.37 | 926.77 | 354.35 | 927.34 | 354.35 |
| 928.65 | 354.37 | 930.67 | 354.35 | 930.73 | 354.41 | 931.68 | 354.51 | 932.94 | 354.57 |
| 934.28 | 354.62 | 935.22 | 354.64 | 936.52 | 354.64 | 938.36 | 354.67 | 938.6 | 354.68 |
| 939.01 | 354.75 | 942.34 | 354.87 | 944.65 | 354.92 | 946.91 | 354.87 | 954.1 | 354.77 |
| 954.75 | 354.77 | 963.51 | 355.38 | 964.17 | 355.42 | 976.58 | 355.56 | 981.55 | 355.47 |
| 982.1 | 355.47 | 983.62 | 355.52 | 986.05 | 355.58 | 987.35 | 355.59 | 989.08 | 355.57 |
| 991.43 | 355.51 | 992.47 | 355.51 | 995.27 | 355.54 | 996.06 | 355.6 | 999.11 | 355.72 |
| 1002.88 | 355.83 | 1003.82 | 355.85 | 1004.68 | 355.9 | 1004.99 | 355.97 | 1005.47 | 356.01 |
| 1006.72 | 356.06 | 1007.68 | 356.07 | 1009.55 | 356.05 | 1009.74 | 356.06 | 1013.63 | 355.9 |
| 1015.87 | 355.82 | 1017.66 | 355.74 | 1019.61 | 355.66 | 1020.55 | 355.56 | 1022.32 | 355.58 |
| 1023.03 | 355.6 | 1024.88 | 355.72 | 1025.34 | 355.79 | 1026.18 | 355.97 | 1028.94 | 356.07 |
| 1029.82 | 356.09 | 1031.31 | 356.09 | 1032.37 | 356.1 | 1033.49 | 356.09 | 1034.63 | 356.1 |
| 1036.52 | 356.09 | 1037.33 | 356.07 | 1041.34 | 355.95 | 1044.61 | 355.78 | 1045.55 | 355.7 |
| 1046.16 | 355.66 | 1047.03 | 355.62 | 1051.28 | 355.46 | 1052.46 | 355.43 | 1052.95 | 355.37 |
| 1053.55 | 355.35 | 1055.62 | 355.35 | 1056.92 | 355.34 | 1057.5 | 355.35 | 1058.07 | 355.39 |
| 1058.86 | 355.48 | 1059.95 | 355.63 | 1060.62 | 355.65 | 1061.2 | 355.7 | 1061.83 | 355.71 |
| 1063.42 | 355.67 | 1064.07 | 355.64 | 1065.3 | 355.55 | 1065.33 | 355.48 | 1066.64 | 355.4 |
| 1067.93 | 355.34 | 1070.41 | 355.31 | 1070.99 | 355.31 | 1072.06 | 355.28 | 1073.56 | 355.28 |
| 1073.96 | 355.29 | 1076.21 | 355.3 | 1076.68 | 355.31 | 1078.29 | 355.29 | 1079.32 | 355.31 |
| 1080.77 | 355.37 | 1081.96 | 355.45 | 1084.6 | 355.67 | 1086.62 | 355.78 | 1090.69 | 356.18 |
| 1099.54 | 356.49 | 1100.83 | 356.44 | 1101.53 | 356.44 | 1105.56 | 356.52 | 1106.73 | 356.55 |
| 1108.97 | 356.49 | 1112.34 | 356.41 | 1113.23 | 356.41 | 1120.09 | 356.46 | 1125.66 | 356.35 |
| 1126.56 | 356.35 | 1128.49 | 356.31 | 1129.62 | 356.33 | 1133.64 | 356.32 | 1135.68 | 356.24 |
| 1137.39 | 356.16 | 1139.11 | 356.11 | 1145.52 | 355.89 | 1149.15 | 355.86 | 1158.67 | 356.05 |
| 1160.97 | 356.09 | 1161.66 | 356 | 1162.45 | 356.01 | 1163.71 | 356.08 | 1163.94 | 356.15 |
| 1165.81 | 356.66 | 1176.19 | 357.08 | 1187.2 | 357.41 | 1187.6 | 357.41 | 1191.08 | 357.46 |
| 1191.64 | 357.41 | 1192.25 | 357.41 | 1193.32 | 357.36 | 1194.01 | 357.36 | 1195.62 | 357.38 |
| 1196.94 | 357.42 | 1197.69 | 357.41 | 1198.42 | 357.36 | 1198.7 | 357.36 | 1199.8 | 357.29 |
| 1201.9 | 357.1 | 1202.88 | 357.02 | 1213.1 | 357.05 | 1221.04 | 357.19 | 1227.71 | 357.36 |
| 1232.58 | 357.51 | 1236.45 | 357.73 | 1241.09 | 357.97 | 1243.4 | 358.07 | 1244.32 | 358.1 |
| 1246.32 | 358.21 | 1247.66 | 358.24 | 1249.32 | 358.47 | 1252.49 | 358.95 | 1255.19 | 359.06 |
| 1257.15 | 359.12 | 1258.21 | 359.17 | 1262.37 | 359.29 | 1265.93 | 359.44 | 1267.53 | 359.52 |
| 1279.53 | 360.3 | 1288.87 | 360.77 | 1293.7 | 360.97 | 1301.27 | 361.27 | 1303.24 | 361.33 |
| 1304.98 | 361.37 | 1305.53 | 361.36 | 1306.69 | 361.38 | 1317.52 | 361.77 | 1322.12 | 361.88 |
| 1322.33 | 361.89 | 1326.31 | 361.95 | 1329.17 | 362.07 | 1330.09 | 362.09 | 1333.22 | 362.11 |
| 1335.45 | 362.11 | 1336.71 | 362.08 | 1337.53 | 362.1 | 1341.27 | 362.24 | 1346.45 | 362.4 |
| 1350.26 | 362.57 | 1353.88 | 362.75 | 1355.39 | 362.81 | 1359.74 | 362.97 | 1360.33 | 363 |
| 1377.27 | 363.71 | 1379.58 | 363.79 | 1383.91 | 363.91 | 1386.47 | 364.01 | 1387.61 | 364.02 |
| 1389.7 | 364.06 | 1392.97 | 364.18 | 1394.22 | 364.2 | 1397.5 | 364.24 | 1399.7 | 364.28 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1400.91 | 364.28 | 1404.82 | 364.31 | 1406.08 | 364.3 | 1408.58 | 364.29 | 1410.99 | 364.23 |
| 1411.47 | 364.21 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 298.14 | .05 | 394.29 | .04 | 1187.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 394.29 | 1187.2 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5822.15*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 285.35 | 361.04 | 285.66 | 361.02 | 288.9 | 360.97 | 303.1 | 360.62 | 308.73 | 360.47 |
| 308.86 | 360.47 | 312.39 | 360.28 | 322 | 359.91 | 327.53 | 359.88 | 332.94 | 359.35 |
| 333.17 | 359.35 | 334.22 | 359.28 | 342.14 | 358.86 | 343.8 | 358.8 | 346.19 | 358.78 |
| 350.18 | 359.14 | 351.08 | 359.17 | 351.29 | 359.21 | 354.04 | 359.15 | 354.43 | 359.04 |
| 355.58 | 359.13 | 356.16 | 359.23 | 357.27 | 359.37 | 357.9 | 359.4 | 360.33 | 359.41 |
| 361.7 | 359.44 | 362.62 | 359.48 | 365.03 | 359.47 | 366.45 | 359.52 | 367.85 | 359.52 |
| 369.38 | 359.41 | 370.12 | 359.37 | 371.59 | 359.23 | 372.42 | 359.18 | 372.52 | 359.23 |
| 372.88 | 359.29 | 374.15 | 359.21 | 375.25 | 359.17 | 377.76 | 358.87 | 378.16 | 358.9 |
| 378.74 | 358.98 | 379.24 | 359.08 | 383.14 | 359.52 | 383.63 | 359.55 | 386.01 | 359.54 |
| 391.73 | 359.17 | 391.85 | 359.15 | 394.75 | 358.61 | 395.57 | 358.44 | 396.96 | 358.26 |
| 398.56 | 358.16 | 399.28 | 358.1 | 399.8 | 358.04 | 400.36 | 357.93 | 401.03 | 357.82 |
| 409.12 | 357.31 | 410.5 | 357.2 | 410.99 | 357.2 | 411.33 | 357.15 | 414.44 | 357 |
| 416.83 | 356.82 | 417.19 | 356.85 | 417.32 | 356.99 | 417.42 | 357 | 419.51 | 357.05 |
| 421.57 | 357.08 | 422.33 | 357.08 | 423.61 | 357.05 | 424.92 | 357 | 429.46 | 356.74 |
| 430.34 | 356.68 | 432.22 | 356.71 | 433.86 | 356.77 | 435.75 | 356.79 | 436.04 | 356.75 |
| 436.79 | 356.73 | 440.03 | 356.81 | 441.2 | 356.86 | 442.66 | 356.9 | 443.34 | 356.91 |
| 446.66 | 356.93 | 447.64 | 356.86 | 450.16 | 356.89 | 452.09 | 356.95 | 453.99 | 357.02 |
| 455.92 | 357.07 | 457.52 | 357.09 | 460.74 | 357.12 | 462.16 | 357.12 | 462.56 | 357.11 |
| 462.64 | 357.06 | 462.93 | 357.05 | 464.12 | 357.05 | 466.21 | 357.06 | 467.77 | 357.09 |
| 468.29 | 357.09 | 470 | 357.06 | 471.91 | 357.05 | 473.89 | 357.06 | 476.83 | 357.04 |
| 480.12 | 356.97 | 483.53 | 357.01 | 485.17 | 357.01 | 488.31 | 356.98 | 490.68 | 356.95 |
| 498.48 | 357.1 | 498.95 | 357.09 | 500.11 | 357.11 | 503.75 | 357.16 | 506.12 | 357.17 |
| 510.35 | 357.14 | 510.56 | 357.13 | 514.17 | 357.04 | 517.77 | 356.9 | 518.65 | 356.86 |
| 519.38 | 356.9 | 520.12 | 356.9 | 520.86 | 356.92 | 522.18 | 356.93 | 522.75 | 356.95 |
| 523.34 | 357.04 | 523.97 | 357.06 | 526.17 | 357.08 | 527.83 | 357.08 | 536.53 | 356.98 |
| 536.73 | 356.97 | 539.23 | 356.91 | 541.76 | 356.84 | 543.73 | 356.85 | 545.92 | 356.85 |
| 549.41 | 356.91 | 550.03 | 356.93 | 552.02 | 356.92 | 552.92 | 356.93 | 554.78 | 356.9 |
| 555.65 | 356.9 | 556.17 | 356.92 | 557.63 | 356.9 | 559.64 | 356.91 | 560.36 | 356.88 |
| 561.83 | 356.85 | 562.22 | 356.85 | 566.64 | 356.78 | 567.53 | 356.79 | 575.33 | 356.62 |
| 580.22 | 356.4 | 581.51 | 356.4 | 582.93 | 356.39 | 589.96 | 356.31 | 599.71 | 356.14 |
| 600.45 | 356.12 | 602.72 | 356.12 | 603.69 | 356.13 | 604.07 | 356.15 | 605.16 | 356.16 |
| 605.65 | 356.21 | 606.11 | 356.2 | 607.99 | 356.49 | 608.9 | 356.62 | 613.38 | 356.62 |
| 613.74 | 356.57 | 616.35 | 356.46 | 617.23 | 356.37 | 617.55 | 356.35 | 620.03 | 356.27 |
| 620.94 | 356.26 | 621.69 | 356.23 | 623.21 | 356.23 | 625.84 | 356.21 | 629.57 | 356.26 |
| 629.78 | 356.27 | 642.75 | 356.46 | 643.32 | 356.44 | 644.19 | 356.43 | 648.74 | 356.43 |
| 651.7 | 356.5 | 653.44 | 356.56 | 654.9 | 356.62 | 655.7 | 356.63 | 656.78 | 356.67 |
| 658.89 | 356.65 | 660.19 | 356.65 | 662.49 | 356.63 | 663.57 | 356.64 | 664.25 | 356.66 |
| 665.25 | 356.74 | 666.27 | 356.75 | 671.17 | 356.82 | 672.5 | 356.82 | 674.56 | 356.87 |
| 676.74 | 356.95 | 677.08 | 356.97 | 678.03 | 356.98 | 680.44 | 356.98 | 682.39 | 356.99 |
| 683.57 | 357.04 | 685.11 | 357.08 | 687.47 | 357.13 | 691.18 | 357.15 | 701.31 | 357.12 |
| 703.36 | 357.09 | 707.77 | 357.01 | 709.28 | 356.99 | 710.06 | 356.92 | 710.61 | 356.89 |
| 712.29 | 356.75 | 714.75 | 356.5 | 715.16 | 356.48 | 715.57 | 356.49 | 719.26 | 356.45 |
| 719.56 | 356.5 | 722.86 | 356.4 | 730.99 | 356.29 | 745.29 | 356.23 | 745.68 | 356.23 |
| 747.66 | 356.11 | 747.85 | 356.09 | 749.93 | 355.96 | 750.88 | 355.89 | 753.6 | 355.79 |
| 756.35 | 355.81 | 758.01 | 355.88 | 762.6 | 355.96 | 763.9 | 356.01 | 766 | 356.04 |
| 768.93 | 356.03 | 770.13 | 355.99 | 774.09 | 355.93 | 775.15 | 355.9 | 776.79 | 355.84 |
| 777.61 | 355.82 | 778.74 | 355.82 | 782.24 | 355.85 | 782.81 | 355.86 | 785.17 | 355.87 |
| 787.12 | 355.84 | 798.73 | 355.5 | 805.7 | 355.26 | 809.45 | 355.22 | 809.67 | 355.23 |
| 812.87 | 355.21 | 813.56 | 355.27 | 816.51 | 355.35 | 817.56 | 355.37 | 819.18 | 355.36 |
| 820.54 | 355.39 | 821.71 | 355.39 | 822.86 | 355.35 | 826 | 355.14 | 826.7 | 355.17 |
| 827.98 | 355.14 | 829.24 | 355.09 | 830.19 | 355.02 | 830.7 | 354.94 | 831.13 | 354.94 |
| 834.53 | 354.97 | 835.57 | 354.96 | 837.25 | 355.13 | 837.88 | 355.17 | 839.15 | 355.21 |
| 840.51 | 355.21 | 840.95 | 355.19 | 843.21 | 355.18 | 845.56 | 355.11 | 847.69 | 355.07 |
| 849.99 | 355.09 | 851.49 | 355.09 | 853.51 | 355.12 | 854.61 | 355.13 | 858.97 | 355.22 |
| 860.03 | 355.23 | 861.02 | 355.28 | 865.28 | 355.23 | 866.09 | 355.21 | 868.09 | 355.2 |
| 871.59 | 355.23 | 872.19 | 355.23 | 872.66 | 355.25 | 874.45 | 355.2 | 881.14 | 354.92 |
| 881.81 | 354.89 | 884.78 | 354.74 | 884.86 | 354.73 | 888.05 | 354.69 | 889.17 | 354.68 |
| 889.58 | 354.69 | 893.2 | 354.87 | 893.49 | 354.86 | 895.35 | 354.97 | 897.47 | 354.95 |
| 903.64 | 354.78 | 911.2 | 354.5 | 919.88 | 354.25 | 922.09 | 354.2 | 922.5 | 354.2 |
| 923.3 | 354.23 | 925.18 | 354.22 | 926.62 | 354.19 | 929.52 | 354.12 | 932.36 | 354.01 |
| 934.07 | 354.02 | 935.9 | 354.01 | 935.97 | 354.06 | 936.89 | 354.15 | 938.11 | 354.21 |
| 940.34 | 354.27 | 941.59 | 354.27 | 943.38 | 354.3 | 944.01 | 354.37 | 947.25 | 354.48 |
| 949.5 | 354.53 | 951.69 | 354.48 | 958.68 | 354.41 | 959.31 | 354.41 | 967.82 | 354.99 |
| 968.46 | 355.03 | 980.52 | 355.18 | 985.35 | 355.11 | 985.89 | 355.11 | 987.36 | 355.16 |
| 989.72 | 355.21 | 990.98 | 355.22 | 992.67 | 355.21 | 994.95 | 355.16 | 998.39 | 355.2 |
| 998.68 | 355.2 | 999.45 | 355.26 | 1002.42 | 355.37 | 1006.08 | 355.48 | 1006.99 | 355.5 |
| 1007.83 | 355.54 | 1008.13 | 355.61 | 1008.6 | 355.65 | 1009.81 | 355.7 | 1010.74 | 355.71 |
| 1012.74 | 355.7 | 1016.52 | 355.56 | 1018.7 | 355.5 | 1020.55 | 355.42 | 1022.34 | 355.35 |
| 1022.7 | 355.3 | 1023.25 | 355.26 | 1025.31 | 355.28 | 1027.21 | 355.39 | 1027.9 | 355.46 |
| 1028.72 | 355.63 | 1031.4 | 355.72 | 1032.26 | 355.74 | 1033.7 | 355.74 | 1034.73 | 355.75 |
| 1035.35 | 355.74 | 1036.93 | 355.74 | 1038.77 | 355.73 | 1039.56 | 355.71 | 1043.45 | 355.59 |
| 1044.97 | 355.5 | 1046.63 | 355.41 | 1047.54 | 355.33 | 1048.98 | 355.25 | 1053.11 | 355.11 |
| 1054.27 | 355.09 | 1054.73 | 355.04 | 1055.31 | 355.02 | 1058.59 | 355.02 | 1059.37 | 355.04 |
| 1060.07 | 355.11 | 1061.53 | 355.29 | 1062.4 | 355.33 | 1062.75 | 355.36 | 1063.86 | 355.38 |
| 1064.9 | 355.35 | 1065.54 | 355.32 | 1066.73 | 355.23 | 1066.76 | 355.15 | 1068.03 | 355.07 |
| 1069.29 | 355.02 | 1069.31 | 355.01 | 1071.05 | 355 | 1072.26 | 354.98 | 1073.3 | 354.96 |
| 1074.76 | 354.96 | 1075.14 | 354.97 | 1077.33 | 354.99 | 1078.78 | 354.99 | 1079.35 | 354.98 |
| 1080.35 | 355 | 1080.62 | 355.02 | 1081.76 | 355.06 | 1082.92 | 355.14 | 1085.49 | 355.36 |
| 1087.45 | 355.48 | 1091.4 | 355.87 | 1100 | 356.21 | 1101.26 | 356.18 | 1101.94 | 356.18 |
| 1105.33 | 356.27 | 1107.22 | 356.31 | 1109.16 | 356.25 | 1112.44 | 356.17 | 1113.31 | 356.17 |
| 1119.97 | 356.19 | 1126.16 | 356.03 | 1126.76 | 356.03 | 1128.14 | 355.99 | 1130.04 | 356.01 |
| 1132.93 | 355.99 | 1133.9 | 355.96 | 1135.12 | 355.91 | 1137.72 | 355.79 | 1138.45 | 355.77 |
| 1144.68 | 355.54 | 1148.21 | 355.51 | 1157.46 | 355.74 | 1159.69 | 355.79 | 1160.37 | 355.68 |
| 1161.13 | 355.69 | 1162.35 | 355.75 | 1162.58 | 355.82 | 1164.4 | 356.29 | 1174.49 | 356.71 |
| 1185.18 | 357.03 | 1185.58 | 357.03 | 1189.03 | 357.08 | 1189.47 | 357.04 | 1190.19 | 357.03 |
| 1191.25 | 356.99 | 1193.53 | 357.02 | 1194.83 | 357.06 | 1195.57 | 357.05 | 1196.3 | 357 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1196.57 | 357.01 | 1197.66 | 356.94 | 1199.75 | 356.77 | 1200.72 | 356.71 | 1210.83 | 356.76 |
| 1218.7 | 356.9 | 1225.31 | 357.08 | 1230.14 | 357.23 | 1233.96 | 357.44 | 1238.56 | 357.67 |
| 1240.85 | 357.77 | 1241.76 | 357.8 | 1243.74 | 357.9 | 1244.99 | 357.93 | 1246.71 | 358.16 |
| 1249.85 | 358.61 | 1252.53 | 358.73 | 1254.46 | 358.79 | 1255.51 | 358.84 | 1259.64 | 358.97 |
| 1263.16 | 359.13 | 1264.75 | 359.21 | 1276.64 | 360.05 | 1285.89 | 360.55 | 1290.67 | 360.77 |
| 1298.17 | 361.08 | 1300.12 | 361.15 | 1301.42 | 361.19 | 1302.39 | 361.19 | 1303.54 | 361.21 |
| 1310.94 | 361.49 | 1314.27 | 361.62 | 1318.82 | 361.73 | 1319.03 | 361.74 | 1322.97 | 361.8 |
| 1324.44 | 361.86 | 1325.81 | 361.93 | 1326.71 | 361.95 | 1329.81 | 361.97 | 1332.02 | 361.97 |
| 1333.27 | 361.94 | 1334.08 | 361.96 | 1337.78 | 362.11 | 1342.92 | 362.3 | 1346.69 | 362.48 |
| 1350.77 | 362.71 | 1351.77 | 362.74 | 1356.08 | 362.92 | 1356.67 | 362.96 | 1373.44 | 363.72 |
| 1375.73 | 363.81 | 1380.02 | 363.95 | 1382.56 | 364.05 | 1383.69 | 364.07 | 1385.76 | 364.13 |
| 1388.99 | 364.25 | 1390.23 | 364.28 | 1393.49 | 364.32 | 1395.66 | 364.36 | 1396.86 | 364.35 |
| 1400.73 | 364.38 | 1402.13 | 364.37 | 1402.5 | 364.38 | 1403.93 | 364.37 | 1406.84 | 364.32 |
| 1407.31 | 364.3 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 285.35 | .05 | 391.85 | .04 | 1185.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 391.85 | 1185.18 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5802.39*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 272.56 | 360.93 | 272.91 | 360.91 | 274.09 | 360.9 | 274.2 | 360.89 | 276.46 | 360.85 |
| 292.04 | 360.48 | 298.21 | 360.32 | 298.35 | 360.32 | 300.13 | 360.22 | 300.38 | 360.22 |
| 302.23 | 360.12 | 312.77 | 359.73 | 313.13 | 359.72 | 318.84 | 359.69 | 324.77 | 359.11 |
| 325.02 | 359.11 | 326.17 | 359.04 | 334.87 | 358.58 | 336.69 | 358.52 | 339.31 | 358.51 |
| 343.69 | 358.9 | 344.68 | 358.93 | 344.91 | 358.98 | 347.47 | 358.93 | 347.92 | 358.91 |
| 347.97 | 358.87 | 348.35 | 358.8 | 349.62 | 358.9 | 350.25 | 359 | 351.75 | 359.19 |
| 352.16 | 359.2 | 354.83 | 359.21 | 356.33 | 359.25 | 357.34 | 359.29 | 359.98 | 359.28 |
| 360.74 | 359.32 | 361.53 | 359.34 | 363.07 | 359.34 | 364.54 | 359.24 | 365.56 | 359.18 |
| 367.53 | 359 | 368.08 | 358.97 | 368.2 | 359.03 | 368.6 | 359.09 | 369.12 | 359.05 |
| 371.19 | 358.96 | 371.85 | 358.89 | 373.95 | 358.64 | 374.38 | 358.67 | 375.02 | 358.76 |
| 375.57 | 358.87 | 379.85 | 359.36 | 380.39 | 359.4 | 383 | 359.38 | 389.27 | 358.99 |
| 389.4 | 358.97 | 392.35 | 358.46 | 393.18 | 358.28 | 394.59 | 358.09 | 396.22 | 358 |
| 396.95 | 357.94 | 397.47 | 357.87 | 398.04 | 357.75 | 398.72 | 357.64 | 406.93 | 357.13 |
| 408.34 | 357.02 | 408.83 | 357.01 | 409.17 | 356.96 | 412.33 | 356.8 | 414.75 | 356.6 |
| 415.12 | 356.64 | 415.26 | 356.79 | 415.35 | 356.8 | 417.47 | 356.86 | 419.57 | 356.89 |
| 420.34 | 356.89 | 421.63 | 356.86 | 422.97 | 356.8 | 427.57 | 356.52 | 428.46 | 356.45 |
| 430.38 | 356.49 | 432.04 | 356.54 | 433.61 | 356.56 | 433.96 | 356.55 | 434.25 | 356.51 |
| 435.01 | 356.49 | 438.3 | 356.57 | 440.97 | 356.66 | 444.46 | 356.7 | 445.1 | 356.69 |
| 446.02 | 356.64 | 448.58 | 356.67 | 450.54 | 356.73 | 452.47 | 356.8 | 454.43 | 356.84 |
| 455.92 | 356.86 | 456.05 | 356.85 | 459.31 | 356.88 | 460.76 | 356.88 | 461.17 | 356.87 |
| 461.25 | 356.81 | 461.54 | 356.8 | 462.75 | 356.8 | 465.24 | 356.81 | 466.45 | 356.84 |
| 468.72 | 356.81 | 470.66 | 356.81 | 472.67 | 356.83 | 474.54 | 356.83 | 475.65 | 356.82 |
| 478.98 | 356.77 | 482.44 | 356.81 | 484.11 | 356.81 | 487.29 | 356.79 | 489.7 | 356.77 |
| 497.62 | 356.9 | 499.28 | 356.91 | 502.97 | 356.96 | 505.37 | 356.97 | 509.66 | 356.93 |
| 509.89 | 356.92 | 513.55 | 356.81 | 517.2 | 356.66 | 517.54 | 356.63 | 518.09 | 356.62 |
| 518.45 | 356.64 | 520.34 | 356.68 | 522.15 | 356.7 | 522.53 | 356.74 | 522.85 | 356.81 |
| 523.49 | 356.82 | 526.94 | 356.85 | 527.4 | 356.85 | 536.24 | 356.72 | 536.44 | 356.71 |
| 538.98 | 356.64 | 539.71 | 356.61 | 542.05 | 356.55 | 543.54 | 356.57 | 545.76 | 356.56 |
| 549.31 | 356.63 | 549.94 | 356.65 | 553.51 | 356.65 | 554.76 | 356.62 | 555.64 | 356.61 |
| 556.17 | 356.63 | 557.65 | 356.61 | 559.69 | 356.62 | 560.91 | 356.58 | 562.31 | 356.57 |
| 566.79 | 356.52 | 567.7 | 356.53 | 572.87 | 356.43 | 573.9 | 356.42 | 575.69 | 356.38 |
| 576.75 | 356.33 | 580.58 | 356.16 | 581.88 | 356.15 | 590.46 | 356.03 | 600.35 | 355.84 |
| 601.1 | 355.82 | 603.41 | 355.82 | 604.39 | 355.83 | 605.88 | 355.86 | 606.39 | 355.92 |
| 606.85 | 355.9 | 608.76 | 356.22 | 609.68 | 356.35 | 610.12 | 356.36 | 614.22 | 356.36 |
| 614.6 | 356.3 | 617.25 | 356.18 | 618.47 | 356.07 | 620.27 | 356.01 | 621.9 | 355.98 |
| 622.67 | 355.95 | 623.48 | 355.94 | 624.6 | 355.94 | 625.17 | 355.93 | 626.88 | 355.92 |
| 630.66 | 355.98 | 630.88 | 355.98 | 644.04 | 356.2 | 644.61 | 356.18 | 645.5 | 356.17 |
| 650.12 | 356.19 | 653.12 | 356.27 | 655 | 356.34 | 656.37 | 356.41 | 657.18 | 356.43 |
| 658.27 | 356.47 | 660.42 | 356.45 | 661.74 | 356.45 | 664.07 | 356.43 | 665.65 | 356.43 |
| 666.87 | 356.51 | 672.88 | 356.56 | 673.51 | 356.57 | 674.23 | 356.56 | 676.32 | 356.6 |
| 677.94 | 356.68 | 678.88 | 356.71 | 681.84 | 356.73 | 682.29 | 356.72 | 684.79 | 356.75 |
| 685.47 | 356.79 | 687.02 | 356.83 | 689.42 | 356.88 | 693.19 | 356.9 | 703.46 | 356.84 |
| 705.55 | 356.82 | 710.03 | 356.72 | 711.56 | 356.69 | 712.9 | 356.58 | 714.61 | 356.42 |
| 717.11 | 356.15 | 717.52 | 356.13 | 717.94 | 356.14 | 721.68 | 356.1 | 721.99 | 356.16 |
| 725.34 | 356.06 | 733.58 | 355.96 | 748.11 | 355.91 | 748.5 | 355.91 | 750.5 | 355.77 |
| 750.7 | 355.75 | 753.77 | 355.53 | 756.54 | 355.41 | 759.33 | 355.43 | 761.01 | 355.5 |
| 765.67 | 355.59 | 766.58 | 355.61 | 767.31 | 355.64 | 769.12 | 355.66 | 771.34 | 355.65 |
| 772.16 | 355.64 | 773.31 | 355.61 | 777.33 | 355.55 | 779.51 | 355.47 | 780.9 | 355.44 |
| 782.05 | 355.44 | 785.6 | 355.48 | 786.18 | 355.49 | 788.58 | 355.5 | 790.55 | 355.48 |
| 802.34 | 355.11 | 807.91 | 354.92 | 808.29 | 354.9 | 809.41 | 354.87 | 813.21 | 354.83 |
| 813.44 | 354.84 | 816.68 | 354.82 | 817.39 | 354.89 | 821.45 | 355.01 | 822 | 355 |
| 823.09 | 355 | 824.47 | 355.06 | 825.66 | 355.06 | 826.37 | 355.05 | 830.01 | 354.83 |
| 830.72 | 354.86 | 832.02 | 354.82 | 833.3 | 354.77 | 834.26 | 354.7 | 834.61 | 354.63 |
| 835.22 | 354.61 | 838.66 | 354.63 | 839.72 | 354.62 | 841.43 | 354.8 | 842.07 | 354.84 |
| 843.7 | 354.89 | 844.73 | 354.88 | 845.74 | 354.86 | 847.48 | 354.84 | 849.23 | 354.78 |
| 849.86 | 354.75 | 851.22 | 354.72 | 852.02 | 354.72 | 854.35 | 354.74 | 855.88 | 354.74 |
| 857.93 | 354.77 | 859.05 | 354.78 | 863.47 | 354.88 | 864.55 | 354.9 | 865.55 | 354.95 |
| 870.7 | 354.89 | 872.72 | 354.88 | 877.36 | 354.92 | 879.18 | 354.86 | 886.65 | 354.53 |
| 889.67 | 354.36 | 892.98 | 354.32 | 894.12 | 354.31 | 894.54 | 354.33 | 898.21 | 354.53 |
| 898.51 | 354.52 | 900.39 | 354.64 | 901.44 | 354.64 | 902.54 | 354.62 | 908.81 | 354.44 |
| 916.48 | 354.15 | 925.29 | 353.9 | 927.53 | 353.85 | 928.35 | 353.87 | 930.66 | 353.86 |
| 932.13 | 353.83 | 935.85 | 353.74 | 937.96 | 353.66 | 939.49 | 353.67 | 941.14 | 353.66 |
| 941.2 | 353.7 | 942.1 | 353.79 | 943.56 | 353.85 | 945.45 | 353.9 | 946.66 | 353.9 |
| 948.4 | 353.93 | 949.02 | 353.99 | 952.16 | 354.1 | 954.34 | 354.14 | 956.47 | 354.1 |
| 963.25 | 354.05 | 963.87 | 354.06 | 972.75 | 354.63 | 984.46 | 354.79 | 989.15 | 354.75 |
| 989.67 | 354.75 | 991.1 | 354.8 | 993.39 | 354.85 | 994.62 | 354.86 | 996.61 | 354.85 |
| 998.47 | 354.82 | 999.46 | 354.82 | 1001.81 | 354.85 | 1002.84 | 354.91 | 1005.72 | 355.03 |
| 1009.28 | 355.13 | 1010.16 | 355.15 | 1010.98 | 355.19 | 1011.27 | 355.25 | 1011.72 | 355.29 |
| 1012.9 | 355.34 | 1015.74 | 355.34 | 1019.41 | 355.22 | 1021.53 | 355.17 | 1025.06 | 355.05 |
| 1025.41 | 355 | 1025.95 | 354.97 | 1027.02 | 354.97 | 1027.95 | 354.98 | 1029.79 | 355.07 |
| 1030.46 | 355.14 | 1031.26 | 355.29 | 1033.86 | 355.38 | 1034.69 | 355.39 | 1039.23 | 355.39 |
| 1041.78 | 355.36 | 1045.56 | 355.23 | 1047.03 | 355.14 | 1048.64 | 355.05 | 1049.53 | 354.96 |
| 1050.92 | 354.88 | 1054.94 | 354.77 | 1056.05 | 354.75 | 1056.51 | 354.7 | 1057.07 | 354.69 |
| 1059.03 | 354.69 | 1060.26 | 354.7 | 1061.02 | 354.72 | 1061.69 | 354.78 | 1063.11 | 354.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1063.74 | 354.98 | 1064.29 | 355.03 | 1065.37 | 355.05 | 1066.39 | 355.03 | 1067 | 355 |
| 1068.17 | 354.9 | 1068.19 | 354.83 | 1069.43 | 354.74 | 1070.65 | 354.69 | 1072.36 | 354.67 |
| 1074.54 | 354.63 | 1076.33 | 354.65 | 1078.45 | 354.67 | 1080.42 | 354.67 | 1081.39 | 354.69 |
| 1081.64 | 354.71 | 1083.3 | 354.79 | 1086.37 | 355.06 | 1088.28 | 355.17 | 1092.12 | 355.56 |
| 1100.47 | 355.93 | 1101.68 | 355.91 | 1102.35 | 355.92 | 1106.88 | 356.07 | 1107.61 | 356.07 |
| 1109.36 | 356.01 | 1112.54 | 355.93 | 1113.39 | 355.92 | 1119.85 | 355.92 | 1125.11 | 355.74 |
| 1126.44 | 355.71 | 1127.78 | 355.67 | 1129.63 | 355.69 | 1132.44 | 355.66 | 1133.38 | 355.63 |
| 1136.18 | 355.49 | 1137.8 | 355.43 | 1143.85 | 355.18 | 1147.27 | 355.16 | 1156.25 | 355.43 |
| 1158.42 | 355.48 | 1159.07 | 355.36 | 1159.81 | 355.37 | 1161 | 355.43 | 1161.22 | 355.49 |
| 1162.99 | 355.92 | 1172.78 | 356.34 | 1183.16 | 356.64 | 1183.56 | 356.65 | 1186.98 | 356.7 |
| 1187.53 | 356.66 | 1188.12 | 356.66 | 1189.17 | 356.63 | 1189.85 | 356.63 | 1191.43 | 356.66 |
| 1192.72 | 356.7 | 1193.45 | 356.69 | 1194.18 | 356.65 | 1194.45 | 356.65 | 1195.52 | 356.6 |
| 1197.59 | 356.45 | 1198.55 | 356.39 | 1208.57 | 356.46 | 1216.37 | 356.61 | 1222.91 | 356.8 |
| 1223.57 | 356.81 | 1227.69 | 356.95 | 1231.48 | 357.16 | 1236.04 | 357.38 | 1238.29 | 357.47 |
| 1239.2 | 357.5 | 1241.16 | 357.6 | 1242.48 | 357.63 | 1244.1 | 357.84 | 1247.21 | 358.27 |
| 1249.86 | 358.4 | 1251.78 | 358.46 | 1252.82 | 358.51 | 1256.91 | 358.65 | 1260.39 | 358.81 |
| 1261.97 | 358.9 | 1273.74 | 359.8 | 1282.9 | 360.34 | 1288.9 | 360.62 | 1295.06 | 360.9 |
| 1297.42 | 360.99 | 1298.7 | 361.02 | 1299.24 | 361.02 | 1300.38 | 361.05 | 1307.72 | 361.33 |
| 1311.01 | 361.46 | 1315.52 | 361.58 | 1315.72 | 361.58 | 1319.63 | 361.65 | 1322.44 | 361.79 |
| 1323.34 | 361.81 | 1326.4 | 361.84 | 1328.6 | 361.83 | 1329.83 | 361.79 | 1330.63 | 361.82 |
| 1333.82 | 361.96 | 1339.39 | 362.19 | 1343.12 | 362.4 | 1346.68 | 362.62 | 1348.15 | 362.68 |
| 1352.42 | 362.88 | 1353 | 362.91 | 1369.62 | 363.73 | 1371.88 | 363.83 | 1376.13 | 363.99 |
| 1378.64 | 364.1 | 1381.81 | 364.19 | 1383.64 | 364.28 | 1384.27 | 364.29 | 1385.02 | 364.33 |
| 1386.24 | 364.36 | 1389.47 | 364.39 | 1391.25 | 364.43 | 1392.81 | 364.42 | 1395.38 | 364.44 |
| 1395.57 | 364.45 | 1396.64 | 364.45 | 1397.88 | 364.44 | 1398.02 | 364.45 | 1399.81 | 364.45 |
| 1403.16 | 364.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 272.56 | .05 | 389.4 | .04 | 1183.16 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 389.4 | 1183.16 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5782.63*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 259.77 | 360.82 | 260.15 | 360.8 | 261.43 | 360.79 | 261.56 | 360.78 | 264.01 | 360.74 |
| 280.97 | 360.34 | 287.69 | 360.18 | 289.78 | 360.07 | 290.05 | 360.06 | 292.06 | 359.95 |
| 303.54 | 359.54 | 303.93 | 359.53 | 310.15 | 359.5 | 316.6 | 358.88 | 316.88 | 358.88 |
| 318.13 | 358.8 | 327.59 | 358.31 | 329.58 | 358.24 | 332.43 | 358.23 | 337.2 | 358.66 |
| 338.28 | 358.7 | 338.52 | 358.75 | 341.32 | 358.7 | 341.8 | 358.68 | 341.86 | 358.63 |
| 342.27 | 358.56 | 343.07 | 358.61 | 343.65 | 358.66 | 344.33 | 358.78 | 345.67 | 358.96 |
| 346.42 | 359 | 349.32 | 359.01 | 350.96 | 359.05 | 352.05 | 359.1 | 354.93 | 359.1 |
| 355.76 | 359.14 | 356.62 | 359.16 | 358.3 | 359.16 | 360.13 | 359.04 | 361.01 | 358.99 |
| 362.76 | 358.83 | 363.75 | 358.77 | 363.88 | 358.83 | 364.31 | 358.89 | 364.88 | 358.85 |
| 365.04 | 358.86 | 365.82 | 358.81 | 367.14 | 358.76 | 370.14 | 358.41 | 370.61 | 358.44 |
| 371.3 | 358.54 | 371.9 | 358.66 | 376.56 | 359.2 | 377.15 | 359.24 | 379.99 | 359.23 |
| 386.96 | 358.79 | 389.95 | 358.3 | 390.79 | 358.13 | 392.22 | 357.93 | 393.87 | 357.83 |
| 394.62 | 357.77 | 395.14 | 357.7 | 395.72 | 357.58 | 396.41 | 357.46 | 404.75 | 356.95 |
| 406.17 | 356.83 | 406.67 | 356.82 | 407.02 | 356.78 | 410.22 | 356.6 | 412.68 | 356.38 |
| 413.05 | 356.43 | 413.19 | 356.59 | 413.29 | 356.6 | 415.44 | 356.66 | 417.56 | 356.7 |
| 418.34 | 356.7 | 419.66 | 356.66 | 421.02 | 356.6 | 425.69 | 356.29 | 426.59 | 356.22 |
| 428.54 | 356.26 | 430.22 | 356.31 | 431.82 | 356.33 | 432.17 | 356.32 | 432.46 | 356.28 |
| 433.23 | 356.24 | 436.57 | 356.32 | 437.78 | 356.37 | 439.28 | 356.42 | 442.82 | 356.46 |
| 443.47 | 356.46 | 444.41 | 356.41 | 445.41 | 356.43 | 447.01 | 356.45 | 448.99 | 356.51 |
| 450.95 | 356.58 | 454.45 | 356.63 | 454.59 | 356.62 | 457.89 | 356.65 | 459 | 356.65 |
| 459.78 | 356.62 | 459.86 | 356.57 | 460.15 | 356.56 | 461.38 | 356.55 | 463.91 | 356.55 |
| 465.14 | 356.58 | 466.81 | 356.57 | 469.4 | 356.57 | 471.44 | 356.6 | 473.34 | 356.6 |
| 474.47 | 356.61 | 477.85 | 356.57 | 481.36 | 356.61 | 483.05 | 356.62 | 486.28 | 356.6 |
| 488.73 | 356.58 | 496.76 | 356.71 | 497.24 | 356.7 | 498.44 | 356.72 | 502.19 | 356.76 |
| 504.63 | 356.77 | 508.98 | 356.71 | 509.21 | 356.7 | 512.92 | 356.58 | 516.63 | 356.42 |
| 517.11 | 356.38 | 517.53 | 356.37 | 517.89 | 356.4 | 519.81 | 356.44 | 521.65 | 356.46 |
| 522.36 | 356.57 | 523.01 | 356.59 | 525.28 | 356.61 | 526.98 | 356.61 | 535.95 | 356.46 |
| 536.15 | 356.44 | 538.73 | 356.37 | 539.47 | 356.34 | 541.32 | 356.28 | 541.84 | 356.27 |
| 543.35 | 356.28 | 545.61 | 356.28 | 549.61 | 356.37 | 553.47 | 356.37 | 554.74 | 356.34 |
| 555.63 | 356.33 | 556.16 | 356.34 | 557.67 | 356.32 | 559.75 | 356.33 | 560.48 | 356.3 |
| 562 | 356.28 | 562.39 | 356.29 | 566.94 | 356.25 | 567.87 | 356.27 | 573.11 | 356.19 |
| 574.16 | 356.18 | 575.98 | 356.14 | 577.05 | 356.1 | 580.94 | 355.92 | 581.86 | 355.9 |
| 583.72 | 355.88 | 590.97 | 355.76 | 601 | 355.54 | 601.76 | 355.52 | 604.1 | 355.52 |
| 606.61 | 355.56 | 607.12 | 355.62 | 607.59 | 355.61 | 609.53 | 355.95 | 610.47 | 356.09 |
| 610.91 | 356.1 | 615.07 | 356.1 | 615.45 | 356.03 | 615.88 | 356.02 | 618.14 | 355.91 |
| 618.57 | 355.88 | 619.05 | 355.81 | 619.38 | 355.79 | 621.21 | 355.73 | 622.86 | 355.7 |
| 623.64 | 355.67 | 625.2 | 355.66 | 627.91 | 355.63 | 631.75 | 355.69 | 631.97 | 355.7 |
| 645.33 | 355.93 | 645.91 | 355.92 | 646.8 | 355.92 | 651.5 | 355.95 | 653.75 | 356.02 |
| 654.53 | 356.04 | 656.44 | 356.12 | 657.83 | 356.19 | 659.77 | 356.27 | 661.95 | 356.25 |
| 663.28 | 356.25 | 665.65 | 356.22 | 667.26 | 356.22 | 668.49 | 356.29 | 669.54 | 356.29 |
| 674.59 | 356.31 | 675.96 | 356.31 | 678.07 | 356.34 | 679.44 | 356.4 | 679.72 | 356.42 |
| 680.67 | 356.45 | 681.65 | 356.46 | 683.68 | 356.47 | 684.13 | 356.46 | 686.14 | 356.48 |
| 687.85 | 356.55 | 688.94 | 356.58 | 691.37 | 356.63 | 694.69 | 356.65 | 695.2 | 356.65 |
| 705.62 | 356.57 | 707.74 | 356.54 | 712.28 | 356.42 | 713.72 | 356.4 | 714.64 | 356.31 |
| 715.2 | 356.27 | 716.93 | 356.1 | 719.46 | 355.8 | 720.31 | 355.78 | 724.11 | 355.76 |
| 724.42 | 355.82 | 727.82 | 355.72 | 736.18 | 355.63 | 750.92 | 355.58 | 751.31 | 355.59 |
| 753.35 | 355.43 | 753.55 | 355.41 | 756.66 | 355.16 | 759.47 | 355.03 | 762.3 | 355.05 |
| 764.01 | 355.13 | 768.73 | 355.22 | 770.4 | 355.26 | 772.24 | 355.28 | 774.49 | 355.27 |
| 775.33 | 355.26 | 776.49 | 355.23 | 780.56 | 355.16 | 781.67 | 355.13 | 782.78 | 355.09 |
| 784.19 | 355.06 | 785.36 | 355.06 | 789.55 | 355.12 | 791.98 | 355.14 | 793.98 | 355.11 |
| 805.94 | 354.72 | 811.88 | 354.51 | 813.12 | 354.47 | 816.98 | 354.43 | 817.21 | 354.44 |
| 820.5 | 354.43 | 820.99 | 354.5 | 824.25 | 354.62 | 825.33 | 354.64 | 827 | 354.65 |
| 828.4 | 354.72 | 830.32 | 354.72 | 830.79 | 354.7 | 834.02 | 354.52 | 834.5 | 354.55 |
| 836.06 | 354.51 | 837.36 | 354.46 | 838.28 | 354.39 | 838.87 | 354.29 | 842.8 | 354.3 |
| 843.88 | 354.29 | 845.61 | 354.48 | 846.25 | 354.52 | 847.56 | 354.56 | 848.75 | 354.56 |
| 849.42 | 354.54 | 851.75 | 354.5 | 853.52 | 354.43 | 853.56 | 354.42 | 855.54 | 354.36 |
| 856.36 | 354.36 | 858.72 | 354.38 | 860.27 | 354.38 | 863.49 | 354.44 | 867.97 | 354.55 |
| 869.07 | 354.57 | 870.08 | 354.62 | 876.65 | 354.56 | 877.36 | 354.56 | 880.97 | 354.58 |
| 882.07 | 354.6 | 883.92 | 354.53 | 890.8 | 354.2 | 894.55 | 353.99 | 894.63 | 353.98 |
| 897.91 | 353.94 | 899.49 | 353.96 | 903.22 | 354.19 | 903.53 | 354.18 | 905.44 | 354.31 |
| 906.79 | 354.31 | 907.61 | 354.29 | 913.98 | 354.09 | 921.76 | 353.8 | 930.7 | 353.54 |
| 932.97 | 353.5 | 934.21 | 353.52 | 936.15 | 353.5 | 940.62 | 353.41 | 941.41 | 353.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 943.96 | 353.31 | 944.92 | 353.33 | 946.38 | 353.31 | 946.44 | 353.35 | 947.31 | 353.43 |
| 948.73 | 353.49 | 950.56 | 353.53 | 951.74 | 353.53 | 953.42 | 353.56 | 954.02 | 353.61 |
| 957.07 | 353.71 | 959.19 | 353.75 | 961.25 | 353.71 | 967.83 | 353.69 | 968.43 | 353.7 |
| 976.45 | 354.2 | 977.04 | 354.23 | 988.4 | 354.41 | 992.95 | 354.38 | 993.46 | 354.39 |
| 997.07 | 354.49 | 998.26 | 354.5 | 1000.19 | 354.5 | 1001.99 | 354.47 | 1005.23 | 354.51 |
| 1006.23 | 354.57 | 1009.02 | 354.68 | 1012.47 | 354.78 | 1013.33 | 354.8 | 1014.12 | 354.84 |
| 1014.41 | 354.89 | 1014.84 | 354.93 | 1015.99 | 354.97 | 1016.86 | 354.98 | 1018.75 | 354.98 |
| 1022.3 | 354.88 | 1024.36 | 354.84 | 1027.79 | 354.74 | 1028.13 | 354.7 | 1028.65 | 354.67 |
| 1030.26 | 354.67 | 1030.91 | 354.69 | 1032.37 | 354.76 | 1033.02 | 354.82 | 1033.8 | 354.95 |
| 1036.32 | 355.03 | 1037.13 | 355.04 | 1041.53 | 355.04 | 1044 | 355 | 1047.67 | 354.87 |
| 1050.66 | 354.68 | 1051.52 | 354.58 | 1052.87 | 354.51 | 1056.77 | 354.42 | 1057.84 | 354.4 |
| 1058.29 | 354.37 | 1058.84 | 354.36 | 1060.06 | 354.36 | 1061.92 | 354.38 | 1062.66 | 354.4 |
| 1063.7 | 354.5 | 1064.7 | 354.62 | 1065.31 | 354.65 | 1065.84 | 354.7 | 1066.42 | 354.72 |
| 1067.87 | 354.71 | 1068.47 | 354.68 | 1069.6 | 354.58 | 1069.62 | 354.5 | 1070.82 | 354.41 |
| 1072 | 354.36 | 1074.27 | 354.33 | 1074.8 | 354.33 | 1075.78 | 354.31 | 1077.16 | 354.32 |
| 1077.52 | 354.33 | 1079.57 | 354.35 | 1081.48 | 354.36 | 1082.42 | 354.39 | 1084.28 | 354.48 |
| 1087.26 | 354.75 | 1089.1 | 354.87 | 1092.83 | 355.24 | 1100.93 | 355.65 | 1102.42 | 355.65 |
| 1105.95 | 355.78 | 1107.31 | 355.84 | 1107.86 | 355.83 | 1109.56 | 355.77 | 1112.64 | 355.69 |
| 1113.46 | 355.68 | 1119.73 | 355.65 | 1125.56 | 355.41 | 1126.12 | 355.4 | 1127.43 | 355.35 |
| 1129.22 | 355.36 | 1132.14 | 355.32 | 1134 | 355.24 | 1135.57 | 355.15 | 1135.79 | 355.15 |
| 1136.45 | 355.11 | 1137.14 | 355.09 | 1143.01 | 354.83 | 1146.33 | 354.81 | 1155.04 | 355.11 |
| 1157.14 | 355.17 | 1157.78 | 355.04 | 1158.5 | 355.05 | 1159.65 | 355.1 | 1159.86 | 355.16 |
| 1161.58 | 355.55 | 1171.08 | 355.97 | 1181.15 | 356.26 | 1181.54 | 356.27 | 1184.92 | 356.32 |
| 1185.35 | 356.29 | 1186.06 | 356.29 | 1187.1 | 356.26 | 1189.33 | 356.3 | 1190.61 | 356.33 |
| 1191.34 | 356.33 | 1192.32 | 356.3 | 1193.39 | 356.25 | 1195.44 | 356.13 | 1196.38 | 356.08 |
| 1206.31 | 356.17 | 1214.03 | 356.32 | 1221.16 | 356.53 | 1225.24 | 356.67 | 1228.99 | 356.88 |
| 1233.51 | 357.09 | 1236.64 | 357.2 | 1238.58 | 357.3 | 1239.81 | 357.32 | 1241.5 | 357.52 |
| 1244.57 | 357.93 | 1247.2 | 358.07 | 1249.1 | 358.14 | 1250.13 | 358.19 | 1254.18 | 358.32 |
| 1257.63 | 358.5 | 1259.19 | 358.59 | 1270.85 | 359.56 | 1279.92 | 360.13 | 1285.86 | 360.42 |
| 1286.29 | 360.45 | 1291.96 | 360.72 | 1294.29 | 360.81 | 1296.1 | 360.85 | 1297.23 | 360.88 |
| 1304.49 | 361.17 | 1307.75 | 361.31 | 1312.21 | 361.42 | 1312.42 | 361.43 | 1316.29 | 361.5 |
| 1317.73 | 361.57 | 1319.07 | 361.65 | 1319.96 | 361.67 | 1323 | 361.7 | 1325.17 | 361.69 |
| 1326.39 | 361.65 | 1327.19 | 361.67 | 1330.34 | 361.83 | 1330.82 | 361.85 | 1335.86 | 362.08 |
| 1339.55 | 362.31 | 1343.07 | 362.55 | 1343.55 | 362.57 | 1349.34 | 362.86 | 1365.79 | 363.74 |
| 1368.04 | 363.85 | 1372.24 | 364.02 | 1374.3 | 364.12 | 1374.73 | 364.15 | 1375.84 | 364.18 |
| 1377.22 | 364.23 | 1379.67 | 364.35 | 1382.26 | 364.44 | 1385.45 | 364.47 | 1387.21 | 364.51 |
| 1388.76 | 364.5 | 1391.31 | 364.51 | 1391.49 | 364.52 | 1396.21 | 364.52 | 1398.54 | 364.49 |
| 1399.01 | 364.48 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 259.77 | .05 | 386.96 | .04 | 1181.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 386.96 | 1181.15 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5762.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 246.98 | 360.71 | 247.39 | 360.69 | 248.78 | 360.68 | 248.92 | 360.66 | 251.57 | 360.63 |
| 277.17 | 360.03 | 279.44 | 359.91 | 279.73 | 359.91 | 281.9 | 359.79 | 294.31 | 359.35 |
| 294.73 | 359.34 | 301.45 | 359.31 | 308.44 | 358.64 | 308.73 | 358.64 | 310.09 | 358.56 |
| 320.32 | 358.03 | 322.46 | 357.96 | 325.55 | 357.95 | 330.7 | 358.42 | 331.87 | 358.46 |
| 332.14 | 358.52 | 332.83 | 358.5 | 335.16 | 358.47 | 335.68 | 358.45 | 335.75 | 358.39 |
| 336.19 | 358.31 | 337.68 | 358.43 | 338.42 | 358.56 | 339.86 | 358.75 | 340.19 | 358.78 |
| 340.68 | 358.79 | 343.81 | 358.81 | 344.13 | 358.83 | 345.58 | 358.86 | 346.77 | 358.91 |
| 349.88 | 358.91 | 350.78 | 358.95 | 351.71 | 358.97 | 353.52 | 358.98 | 354.23 | 358.94 |
| 355.5 | 358.85 | 356.45 | 358.8 | 358.76 | 358.59 | 359.42 | 358.56 | 359.56 | 358.63 |
| 360.02 | 358.7 | 360.64 | 358.65 | 360.81 | 358.66 | 361.65 | 358.61 | 363.08 | 358.55 |
| 363.85 | 358.47 | 366.32 | 358.18 | 366.83 | 358.21 | 367.58 | 358.32 | 368.23 | 358.46 |
| 373.27 | 359.04 | 373.9 | 359.09 | 376.97 | 359.08 | 384.36 | 358.62 | 384.51 | 358.6 |
| 387.75 | 358.11 | 388.41 | 357.97 | 389.85 | 357.76 | 391.53 | 357.67 | 392.28 | 357.61 |
| 392.82 | 357.53 | 393.4 | 357.4 | 394.1 | 357.28 | 402.56 | 356.77 | 404 | 356.65 |
| 404.5 | 356.64 | 404.86 | 356.59 | 408.11 | 356.4 | 410.6 | 356.17 | 410.99 | 356.21 |
| 411.12 | 356.39 | 411.22 | 356.4 | 413.41 | 356.46 | 415.56 | 356.5 | 416.35 | 356.5 |
| 418.58 | 356.43 | 419.06 | 356.4 | 423.8 | 356.07 | 424.72 | 355.99 | 426.69 | 356.03 |
| 428.4 | 356.08 | 430.02 | 356.1 | 430.37 | 356.09 | 430.67 | 356.04 | 431.46 | 356 |
| 434.84 | 356.08 | 436.07 | 356.13 | 437.6 | 356.18 | 441.18 | 356.22 | 441.85 | 356.22 |
| 442.79 | 356.19 | 443.81 | 356.21 | 445.43 | 356.23 | 449.43 | 356.35 | 451.44 | 356.38 |
| 456.47 | 356.41 | 457.59 | 356.41 | 458.38 | 356.38 | 458.47 | 356.32 | 460.01 | 356.3 |
| 462.58 | 356.3 | 463.82 | 356.33 | 466.15 | 356.32 | 468.15 | 356.33 | 470.22 | 356.36 |
| 473.29 | 356.39 | 476.72 | 356.36 | 480.28 | 356.41 | 482 | 356.42 | 485.27 | 356.41 |
| 487.75 | 356.39 | 495.9 | 356.51 | 497.61 | 356.52 | 501.41 | 356.56 | 503.88 | 356.57 |
| 508.3 | 356.5 | 512.29 | 356.35 | 516.26 | 356.16 | 516.55 | 356.13 | 516.97 | 356.13 |
| 517.74 | 356.17 | 519.28 | 356.2 | 521.15 | 356.22 | 521.54 | 356.27 | 521.87 | 356.34 |
| 522.53 | 356.36 | 524.83 | 356.38 | 526.08 | 356.38 | 535.65 | 356.19 | 538.47 | 356.1 |
| 539.23 | 356.06 | 541.11 | 356 | 541.55 | 355.98 | 543.17 | 355.99 | 545.46 | 355.99 |
| 549.51 | 356.09 | 549.76 | 356.1 | 551.83 | 356.09 | 553.43 | 356.09 | 554.72 | 356.06 |
| 555.62 | 356.05 | 556.16 | 356.06 | 556.65 | 356.04 | 557.69 | 356.03 | 559.8 | 356.04 |
| 561.04 | 356.01 | 562.48 | 356 | 567.1 | 355.98 | 568.04 | 356.01 | 573.36 | 355.94 |
| 574.42 | 355.94 | 576.26 | 355.9 | 577.35 | 355.86 | 580.63 | 355.7 | 582.63 | 355.65 |
| 584.12 | 355.63 | 591.47 | 355.48 | 601.65 | 355.25 | 602.42 | 355.21 | 604.79 | 355.22 |
| 605.8 | 355.23 | 607.34 | 355.26 | 607.86 | 355.32 | 608.33 | 355.31 | 610.29 | 355.68 |
| 610.4 | 355.68 | 611.25 | 355.83 | 615.92 | 355.83 | 616.31 | 355.77 | 619.03 | 355.64 |
| 619.47 | 355.6 | 619.95 | 355.53 | 620.97 | 355.49 | 623.83 | 355.42 | 625.45 | 355.37 |
| 626.19 | 355.37 | 628.95 | 355.34 | 632.84 | 355.41 | 633.07 | 355.41 | 646.61 | 355.67 |
| 648.11 | 355.66 | 652.87 | 355.7 | 655.95 | 355.81 | 659.3 | 355.98 | 660.14 | 356.01 |
| 661.26 | 356.07 | 663.47 | 356.05 | 664.83 | 356.05 | 667.23 | 356.01 | 669.07 | 356.01 |
| 670.11 | 356.06 | 676.3 | 356.06 | 677.69 | 356.05 | 679.83 | 356.08 | 681.22 | 356.14 |
| 681.51 | 356.16 | 682.47 | 356.19 | 683.46 | 356.2 | 685.98 | 356.21 | 688.02 | 356.23 |
| 690.86 | 356.34 | 693.32 | 356.38 | 697.2 | 356.4 | 707.78 | 356.3 | 709.93 | 356.26 |
| 714.53 | 356.13 | 715.99 | 356.1 | 717.49 | 355.96 | 719.25 | 355.77 | 721.82 | 355.45 |
| 722.25 | 355.43 | 726.53 | 355.41 | 726.85 | 355.48 | 730.3 | 355.39 | 738.78 | 355.3 |
| 753.73 | 355.26 | 754.13 | 355.26 | 756.19 | 355.09 | 759.56 | 354.79 | 762.41 | 354.66 |
| 765.28 | 354.67 | 767.01 | 354.75 | 772.23 | 354.86 | 772.75 | 354.86 | 773.17 | 354.88 |
| 774.42 | 354.9 | 777.65 | 354.89 | 778.49 | 354.88 | 779.67 | 354.85 | 783.8 | 354.78 |
| 786.05 | 354.7 | 787.49 | 354.68 | 788.66 | 354.68 | 792.92 | 354.75 | 794.52 | 354.77 |
| 795.39 | 354.77 | 797.42 | 354.74 | 809.55 | 354.34 | 815.29 | 354.13 | 816.83 | 354.07 |
| 820.74 | 354.04 | 820.98 | 354.05 | 824.32 | 354.04 | 824.82 | 354.12 | 828.12 | 354.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 829.22 | 354.28 | 829.79 | 354.28 | 830.91 | 354.3 | 832.33 | 354.38 | 834.28 | 354.39 |
| 834.76 | 354.37 | 838.03 | 354.21 | 838.77 | 354.23 | 840.1 | 354.2 | 841.42 | 354.15 |
| 842.41 | 354.07 | 842.77 | 353.99 | 843.39 | 353.96 | 846.94 | 353.97 | 848.03 | 353.95 |
| 849.79 | 354.15 | 850.44 | 354.2 | 851.77 | 354.24 | 853.19 | 354.23 | 853.65 | 354.21 |
| 856.02 | 354.16 | 858.46 | 354.04 | 859.86 | 354.01 | 860.69 | 354 | 863.09 | 354.03 |
| 864.66 | 354.03 | 866.77 | 354.08 | 867.92 | 354.1 | 872.48 | 354.21 | 873.59 | 354.23 |
| 874.61 | 354.3 | 881.27 | 354.24 | 882 | 354.24 | 885.65 | 354.26 | 886.77 | 354.27 |
| 888.65 | 354.19 | 895.63 | 353.84 | 899.44 | 353.62 | 899.52 | 353.61 | 902.85 | 353.57 |
| 904.45 | 353.59 | 908.23 | 353.85 | 908.54 | 353.84 | 910.48 | 353.98 | 910.97 | 353.99 |
| 912.69 | 353.96 | 919.14 | 353.75 | 927.04 | 353.45 | 936.11 | 353.19 | 938.84 | 353.14 |
| 939.67 | 353.16 | 941.94 | 353.14 | 943.15 | 353.12 | 946.18 | 353.06 | 946.97 | 353.04 |
| 949.15 | 352.97 | 950.34 | 352.98 | 951.62 | 352.97 | 951.68 | 353 | 952.52 | 353.07 |
| 954.83 | 353.15 | 955.67 | 353.16 | 956.81 | 353.16 | 958.45 | 353.19 | 959.02 | 353.24 |
| 961.98 | 353.32 | 964.03 | 353.36 | 966.03 | 353.33 | 972.41 | 353.33 | 972.99 | 353.34 |
| 980.76 | 353.8 | 981.34 | 353.83 | 992.34 | 354.03 | 997.24 | 354.02 | 998.58 | 354.07 |
| 1000.74 | 354.12 | 1001.89 | 354.14 | 1003.77 | 354.14 | 1005.51 | 354.13 | 1008.65 | 354.17 |
| 1009.62 | 354.23 | 1012.33 | 354.33 | 1015.67 | 354.43 | 1016.2 | 354.44 | 1017.27 | 354.49 |
| 1017.54 | 354.54 | 1017.97 | 354.57 | 1019.08 | 354.61 | 1019.93 | 354.62 | 1021.75 | 354.62 |
| 1025.2 | 354.54 | 1028.88 | 354.48 | 1030.51 | 354.43 | 1031.34 | 354.37 | 1032.91 | 354.37 |
| 1033.53 | 354.39 | 1035.18 | 354.46 | 1035.58 | 354.5 | 1036.33 | 354.62 | 1038.78 | 354.68 |
| 1039.56 | 354.69 | 1042.38 | 354.69 | 1042.67 | 354.68 | 1043.83 | 354.68 | 1045.5 | 354.66 |
| 1046.22 | 354.64 | 1049.77 | 354.51 | 1051.16 | 354.41 | 1052.77 | 354.31 | 1053.51 | 354.21 |
| 1054.24 | 354.16 | 1058.59 | 354.07 | 1059.66 | 354.06 | 1060.07 | 354.03 | 1061.78 | 354.03 |
| 1064.11 | 354.07 | 1064.62 | 354.1 | 1065.31 | 354.17 | 1066.28 | 354.29 | 1067.08 | 354.33 |
| 1067.39 | 354.36 | 1068.4 | 354.4 | 1069.94 | 354.36 | 1071.03 | 354.26 | 1071.06 | 354.17 |
| 1072.21 | 354.08 | 1073.36 | 354.04 | 1075.56 | 354.01 | 1076.64 | 353.99 | 1078.35 | 354 |
| 1078.7 | 354.01 | 1080.7 | 354.03 | 1082.02 | 354.05 | 1082.55 | 354.05 | 1083.46 | 354.08 |
| 1084.74 | 354.14 | 1085.8 | 354.22 | 1088.14 | 354.44 | 1089.93 | 354.56 | 1093.55 | 354.93 |
| 1101.39 | 355.37 | 1102.54 | 355.38 | 1103.16 | 355.4 | 1106.73 | 355.56 | 1107.42 | 355.6 |
| 1107.98 | 355.61 | 1108.4 | 355.58 | 1109.75 | 355.53 | 1112.74 | 355.44 | 1113.54 | 355.43 |
| 1119.62 | 355.38 | 1124.56 | 355.13 | 1125.36 | 355.1 | 1127.07 | 355.02 | 1128.07 | 355.04 |
| 1128.81 | 355.04 | 1131.45 | 354.99 | 1132.33 | 354.96 | 1135.18 | 354.81 | 1135.82 | 354.77 |
| 1136.48 | 354.75 | 1142.17 | 354.48 | 1145.39 | 354.46 | 1153.83 | 354.8 | 1155.53 | 354.85 |
| 1155.87 | 354.87 | 1156.49 | 354.73 | 1157.18 | 354.73 | 1158.3 | 354.78 | 1160.17 | 355.18 |
| 1169.37 | 355.59 | 1179.13 | 355.88 | 1179.52 | 355.88 | 1182.87 | 355.94 | 1183.3 | 355.92 |
| 1184 | 355.92 | 1185.02 | 355.9 | 1187.24 | 355.93 | 1188.51 | 355.97 | 1189.22 | 355.97 |
| 1189.93 | 355.94 | 1190.2 | 355.95 | 1191.25 | 355.91 | 1194.22 | 355.76 | 1204.04 | 355.87 |
| 1211.69 | 356.03 | 1218.75 | 356.25 | 1222.79 | 356.4 | 1226.51 | 356.59 | 1230.98 | 356.79 |
| 1234.08 | 356.9 | 1236 | 357 | 1237.22 | 357.01 | 1238.89 | 357.21 | 1241.94 | 357.59 |
| 1244.54 | 357.73 | 1246.42 | 357.81 | 1247.44 | 357.86 | 1251.45 | 358 | 1254.86 | 358.19 |
| 1256.41 | 358.28 | 1267.95 | 359.31 | 1276.93 | 359.91 | 1283.25 | 360.25 | 1288.86 | 360.54 |
| 1292.02 | 360.66 | 1294.07 | 360.71 | 1301.27 | 361.02 | 1304.49 | 361.15 | 1308.91 | 361.27 |
| 1309.12 | 361.28 | 1312.95 | 361.35 | 1315.7 | 361.51 | 1316.58 | 361.53 | 1319.59 | 361.56 |
| 1321.74 | 361.55 | 1322.95 | 361.51 | 1323.74 | 361.53 | 1326.86 | 361.7 | 1327.33 | 361.73 |
| 1332.32 | 361.97 | 1335.98 | 362.22 | 1339.47 | 362.48 | 1339.94 | 362.51 | 1340.92 | 362.55 |
| 1345.1 | 362.78 | 1345.67 | 362.82 | 1361.96 | 363.75 | 1364.19 | 363.86 | 1368.35 | 364.06 |
| 1370.39 | 364.17 | 1371.91 | 364.23 | 1373.92 | 364.32 | 1375.71 | 364.42 | 1376.33 | 364.44 |
| 1377.06 | 364.48 | 1378.27 | 364.51 | 1381.43 | 364.55 | 1383.54 | 364.59 | 1384.7 | 364.57 |
| 1387.27 | 364.58 | 1387.41 | 364.59 | 1389.82 | 364.59 | 1390.18 | 364.6 | 1392.08 | 364.6 |
| 1394.86 | 364.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 246.98 | .05 | 384.51 | .04 | 1179.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 384.51 | 1179.13 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5743.12*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 234.19 | 360.6 | 235.07 | 360.57 | 236.12 | 360.57 | 236.27 | 360.55 | 239.12 | 360.51 |
| 258.84 | 360.06 | 266.65 | 359.88 | 266.83 | 359.88 | 269.09 | 359.76 | 269.4 | 359.75 |
| 271.74 | 359.63 | 285.08 | 359.16 | 285.54 | 359.15 | 292.76 | 359.13 | 300.27 | 358.41 |
| 300.59 | 358.41 | 302.05 | 358.32 | 313.05 | 357.76 | 315.35 | 357.68 | 318.67 | 357.67 |
| 324.21 | 358.18 | 325.41 | 358.23 | 325.76 | 358.28 | 329 | 358.23 | 329.57 | 358.21 |
| 329.64 | 358.16 | 330.12 | 358.07 | 331.71 | 358.2 | 332.51 | 358.34 | 334.41 | 358.58 |
| 334.93 | 358.59 | 338.31 | 358.61 | 338.65 | 358.63 | 340.21 | 358.67 | 341.48 | 358.72 |
| 344.83 | 358.72 | 345.79 | 358.77 | 346.8 | 358.79 | 348.75 | 358.8 | 349.16 | 358.79 |
| 350.61 | 358.69 | 350.87 | 358.66 | 351.89 | 358.61 | 353.94 | 358.42 | 355.09 | 358.35 |
| 355.23 | 358.43 | 355.73 | 358.5 | 356.4 | 358.45 | 356.59 | 358.46 | 357.49 | 358.41 |
| 359.02 | 358.35 | 359.85 | 358.26 | 362.51 | 357.95 | 363.06 | 357.99 | 363.86 | 358.1 |
| 364.56 | 358.25 | 369.98 | 358.88 | 370.66 | 358.93 | 373.96 | 358.92 | 381.9 | 358.44 |
| 382.07 | 358.42 | 385.35 | 357.95 | 386.02 | 357.82 | 387.48 | 357.6 | 389.18 | 357.51 |
| 389.95 | 357.44 | 390.49 | 357.36 | 391.08 | 357.23 | 391.79 | 357.09 | 400.37 | 356.59 |
| 401.83 | 356.47 | 402.34 | 356.45 | 402.71 | 356.4 | 406 | 356.2 | 408.53 | 355.95 |
| 408.92 | 356 | 409.06 | 356.19 | 409.16 | 356.2 | 411.37 | 356.27 | 413.56 | 356.31 |
| 414.36 | 356.31 | 415.72 | 356.27 | 417.11 | 356.2 | 421.91 | 355.84 | 422.85 | 355.76 |
| 424.85 | 355.8 | 426.58 | 355.85 | 428.22 | 355.87 | 428.58 | 355.86 | 428.89 | 355.8 |
| 429.68 | 355.76 | 433.11 | 355.83 | 435.91 | 355.94 | 439.54 | 355.99 | 440.22 | 355.99 |
| 441.18 | 355.96 | 442.21 | 355.98 | 445.89 | 356.07 | 447.91 | 356.13 | 449.95 | 356.15 |
| 455.05 | 356.18 | 456.19 | 356.17 | 456.99 | 356.14 | 457.07 | 356.07 | 458.64 | 356.04 |
| 461.24 | 356.04 | 462.51 | 356.07 | 464.22 | 356.07 | 464.87 | 356.08 | 466.9 | 356.09 |
| 468.99 | 356.13 | 470.95 | 356.16 | 472.11 | 356.17 | 475.59 | 356.16 | 479.2 | 356.21 |
| 480.94 | 356.22 | 483.91 | 356.21 | 484.26 | 356.22 | 486.78 | 356.21 | 495.04 | 356.31 |
| 496.77 | 356.32 | 500.63 | 356.36 | 503.13 | 356.36 | 507.62 | 356.28 | 511.67 | 356.12 |
| 515.69 | 355.92 | 515.83 | 355.89 | 516.42 | 355.88 | 517.19 | 355.93 | 518.76 | 355.96 |
| 520.15 | 355.96 | 520.65 | 355.98 | 521.05 | 356.03 | 521.38 | 356.11 | 522.05 | 356.13 |
| 524.38 | 356.14 | 526.14 | 356.14 | 535.36 | 355.93 | 538.22 | 355.83 | 538.98 | 355.79 |
| 540.89 | 355.71 | 541.43 | 355.7 | 542.98 | 355.71 | 545.3 | 355.71 | 549.42 | 355.81 |
| 549.66 | 355.82 | 553.39 | 355.82 | 554.69 | 355.78 | 555.61 | 355.76 | 556.16 | 355.77 |
| 556.66 | 355.75 | 557.71 | 355.74 | 559.85 | 355.75 | 561.11 | 355.72 | 567.25 | 355.72 |
| 568.2 | 355.75 | 573.6 | 355.69 | 575.15 | 355.69 | 576.47 | 355.67 | 577.65 | 355.62 |
| 581.65 | 355.43 | 584.51 | 355.37 | 591.97 | 355.21 | 602.29 | 354.95 | 603.08 | 354.91 |
| 605.48 | 354.92 | 606.51 | 354.92 | 606.74 | 354.94 | 608.07 | 354.96 | 608.59 | 355.03 |
| 609.07 | 355.01 | 611.06 | 355.4 | 612.03 | 355.57 | 616.77 | 355.57 | 617.16 | 355.5 |
| 619.93 | 355.37 | 620.37 | 355.33 | 621.2 | 355.23 | 621.89 | 355.22 | 624.79 | 355.13 |
| 626.44 | 355.09 | 629.98 | 355.05 | 633.93 | 355.12 | 634.16 | 355.13 | 647.9 | 355.4 |
| 649.42 | 355.4 | 654.25 | 355.46 | 657.37 | 355.58 | 659.34 | 355.68 | 660.77 | 355.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 662.76 | 355.87 | 665 | 355.85 | 666.38 | 355.85 | 668.81 | 355.81 | 670.68 | 355.8 |
| 671.73 | 355.83 | 672.81 | 355.83 | 678.01 | 355.8 | 679.42 | 355.79 | 681.59 | 355.82 |
| 684.27 | 355.94 | 684.74 | 355.93 | 685.27 | 355.94 | 687.83 | 355.95 | 689.89 | 355.97 |
| 690.44 | 355.99 | 691.44 | 356.05 | 692.77 | 356.09 | 695.27 | 356.14 | 699.21 | 356.15 |
| 709.94 | 356.03 | 712.11 | 355.98 | 716.79 | 355.84 | 718.27 | 355.8 | 719.21 | 355.7 |
| 719.79 | 355.65 | 721.57 | 355.45 | 724.18 | 355.1 | 724.61 | 355.08 | 728.95 | 355.07 |
| 729.28 | 355.14 | 732.77 | 355.05 | 741.38 | 354.98 | 756.54 | 354.94 | 756.95 | 354.94 |
| 759.04 | 354.75 | 761.46 | 354.52 | 762.45 | 354.43 | 765.34 | 354.28 | 768.25 | 354.29 |
| 770.01 | 354.38 | 774.87 | 354.47 | 775.33 | 354.49 | 776.59 | 354.5 | 777.52 | 354.52 |
| 780.8 | 354.51 | 781.66 | 354.5 | 782.85 | 354.47 | 787.04 | 354.39 | 788.18 | 354.36 |
| 789.32 | 354.32 | 790.78 | 354.3 | 791.97 | 354.3 | 796.29 | 354.37 | 797.91 | 354.4 |
| 798.79 | 354.4 | 800.85 | 354.37 | 813.16 | 353.95 | 820.54 | 353.67 | 824.51 | 353.65 |
| 824.75 | 353.66 | 828.13 | 353.65 | 828.87 | 353.75 | 831.99 | 353.88 | 833.11 | 353.92 |
| 833.68 | 353.92 | 834.82 | 353.95 | 836.26 | 354.04 | 837.5 | 354.06 | 838.72 | 354.05 |
| 842.04 | 353.9 | 842.54 | 353.92 | 844.14 | 353.88 | 845.48 | 353.83 | 846.49 | 353.75 |
| 847.03 | 353.64 | 851.08 | 353.64 | 852.19 | 353.61 | 853.97 | 353.83 | 854.63 | 353.87 |
| 855.98 | 353.92 | 857.2 | 353.91 | 857.89 | 353.88 | 858.47 | 353.87 | 860.28 | 353.82 |
| 862.1 | 353.72 | 862.77 | 353.69 | 864.19 | 353.65 | 865.02 | 353.65 | 867.46 | 353.68 |
| 869.06 | 353.68 | 871.19 | 353.73 | 872.36 | 353.75 | 878.1 | 353.9 | 879.15 | 353.97 |
| 883.66 | 353.93 | 886.64 | 353.92 | 890.34 | 353.94 | 891.48 | 353.95 | 893.38 | 353.86 |
| 900.46 | 353.48 | 901.17 | 353.43 | 904.32 | 353.25 | 904.41 | 353.24 | 907.78 | 353.2 |
| 908.97 | 353.21 | 909.41 | 353.23 | 913.24 | 353.5 | 913.56 | 353.5 | 915.52 | 353.65 |
| 916.02 | 353.66 | 917.76 | 353.63 | 924.31 | 353.41 | 932.32 | 353.1 | 941.51 | 352.84 |
| 943.85 | 352.79 | 945.13 | 352.8 | 947.43 | 352.78 | 948.65 | 352.76 | 951.73 | 352.7 |
| 954.44 | 352.63 | 955.05 | 352.62 | 955.76 | 352.63 | 956.86 | 352.62 | 956.92 | 352.65 |
| 957.73 | 352.71 | 959.06 | 352.76 | 959.97 | 352.78 | 961.89 | 352.8 | 963.47 | 352.81 |
| 964.03 | 352.86 | 966.89 | 352.94 | 968.87 | 352.97 | 970.81 | 352.95 | 976.98 | 352.97 |
| 977.54 | 352.98 | 985.07 | 353.41 | 985.63 | 353.44 | 996.28 | 353.65 | 1000.55 | 353.65 |
| 1001.03 | 353.66 | 1004.41 | 353.76 | 1005.53 | 353.78 | 1007.34 | 353.79 | 1009.03 | 353.78 |
| 1009.93 | 353.79 | 1012.07 | 353.83 | 1013.01 | 353.88 | 1015.63 | 353.98 | 1018.87 | 354.08 |
| 1020.09 | 354.11 | 1020.41 | 354.13 | 1020.68 | 354.18 | 1021.66 | 354.23 | 1022.99 | 354.25 |
| 1024.75 | 354.26 | 1028.09 | 354.2 | 1030.02 | 354.19 | 1031.65 | 354.16 | 1033.23 | 354.12 |
| 1034.04 | 354.07 | 1035.55 | 354.07 | 1037.54 | 354.14 | 1038.15 | 354.18 | 1038.87 | 354.28 |
| 1041.24 | 354.33 | 1042 | 354.34 | 1044.73 | 354.34 | 1045 | 354.33 | 1046.13 | 354.33 |
| 1047.75 | 354.3 | 1048.45 | 354.28 | 1051.88 | 354.16 | 1053.23 | 354.05 | 1054.69 | 353.95 |
| 1055.5 | 353.84 | 1056.21 | 353.79 | 1060.42 | 353.72 | 1061.7 | 353.72 | 1062.37 | 353.69 |
| 1063.51 | 353.7 | 1065.26 | 353.73 | 1065.76 | 353.75 | 1066.57 | 353.81 | 1067.86 | 353.95 |
| 1068.94 | 354.03 | 1069.92 | 354.07 | 1070.84 | 354.06 | 1071.4 | 354.04 | 1072.46 | 353.94 |
| 1072.49 | 353.84 | 1073.61 | 353.75 | 1074.72 | 353.71 | 1076.85 | 353.68 | 1078.26 | 353.67 |
| 1079.89 | 353.68 | 1081.82 | 353.71 | 1084.49 | 353.77 | 1084.73 | 353.79 | 1085.74 | 353.83 |
| 1086.76 | 353.91 | 1089.03 | 354.13 | 1090.76 | 354.26 | 1094.26 | 354.62 | 1101.86 | 355.09 |
| 1102.96 | 355.11 | 1103.57 | 355.14 | 1107.84 | 355.37 | 1108.23 | 355.37 | 1109.95 | 355.29 |
| 1112.85 | 355.2 | 1119.5 | 355.11 | 1124.28 | 354.83 | 1124.97 | 354.8 | 1126.71 | 354.7 |
| 1127.69 | 354.72 | 1128.4 | 354.72 | 1130.95 | 354.66 | 1132.88 | 354.57 | 1134.36 | 354.48 |
| 1135.83 | 354.41 | 1141.33 | 354.12 | 1144.45 | 354.11 | 1152.63 | 354.48 | 1154.59 | 354.56 |
| 1155.19 | 354.41 | 1155.87 | 354.41 | 1156.68 | 354.43 | 1156.95 | 354.45 | 1158.75 | 354.81 |
| 1167.67 | 355.22 | 1177.12 | 355.49 | 1180.82 | 355.57 | 1181.35 | 355.54 | 1181.93 | 355.55 |
| 1182.95 | 355.53 | 1185.14 | 355.57 | 1186.4 | 355.61 | 1187.11 | 355.61 | 1189.12 | 355.57 |
| 1191.12 | 355.48 | 1192.05 | 355.45 | 1201.78 | 355.58 | 1209.35 | 355.74 | 1216.34 | 355.97 |
| 1220.34 | 356.12 | 1224.02 | 356.31 | 1228.45 | 356.5 | 1230.64 | 356.57 | 1231.52 | 356.59 |
| 1233.43 | 356.69 | 1234.7 | 356.71 | 1236.28 | 356.89 | 1239.3 | 357.25 | 1241.87 | 357.4 |
| 1243.73 | 357.48 | 1244.74 | 357.53 | 1248.71 | 357.68 | 1252.1 | 357.88 | 1253.63 | 357.98 |
| 1265.05 | 359.07 | 1273.95 | 359.7 | 1279.77 | 360.03 | 1280.2 | 360.05 | 1285.76 | 360.36 |
| 1287.63 | 360.44 | 1289.29 | 360.5 | 1290.92 | 360.54 | 1298.04 | 360.86 | 1301.24 | 361 |
| 1305.61 | 361.11 | 1305.81 | 361.12 | 1309.61 | 361.2 | 1311.01 | 361.28 | 1312.33 | 361.37 |
| 1313.2 | 361.39 | 1316.18 | 361.42 | 1318.31 | 361.41 | 1319.51 | 361.36 | 1320.29 | 361.39 |
| 1323.85 | 361.6 | 1328.79 | 361.87 | 1332.41 | 362.14 | 1335.86 | 362.41 | 1337.3 | 362.49 |
| 1341.44 | 362.73 | 1342.01 | 362.77 | 1358.14 | 363.75 | 1360.34 | 363.88 | 1366.48 | 364.21 |
| 1366.9 | 364.24 | 1369.98 | 364.38 | 1371.75 | 364.49 | 1372.36 | 364.51 | 1373.09 | 364.55 |
| 1374.28 | 364.59 | 1377.41 | 364.63 | 1379.5 | 364.67 | 1380.65 | 364.65 | 1383.19 | 364.65 |
| 1383.33 | 364.66 | 1385.72 | 364.66 | 1386.08 | 364.67 | 1387.96 | 364.67 | 1390.25 | 364.66 |
| 1390.7 | 364.65 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 234.19 | .05 | 382.07 | .04 | 1177.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 382.07 | 1177.12 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5723.36*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 221.41 | 360.49 | 222.34 | 360.46 | 223.47 | 360.45 | 223.63 | 360.44 | 226.45 | 360.4 |
| 226.68 | 360.4 | 247.78 | 359.93 | 256.13 | 359.74 | 258.74 | 359.6 | 259.07 | 359.6 |
| 261.57 | 359.46 | 275.86 | 358.97 | 276.34 | 358.96 | 284.07 | 358.94 | 292.1 | 358.17 |
| 292.44 | 358.17 | 294 | 358.07 | 305.78 | 357.48 | 308.24 | 357.4 | 311.79 | 357.39 |
| 317.72 | 357.94 | 319.06 | 357.99 | 319.37 | 358.05 | 322.85 | 358 | 323.45 | 357.98 |
| 323.52 | 357.92 | 324.04 | 357.83 | 325.02 | 357.9 | 325.75 | 357.97 | 326.6 | 358.11 |
| 328.26 | 358.34 | 328.63 | 358.37 | 329.19 | 358.39 | 332.8 | 358.41 | 333.17 | 358.43 |
| 334.84 | 358.47 | 336.2 | 358.54 | 339.78 | 358.54 | 340.81 | 358.59 | 341.88 | 358.61 |
| 343.97 | 358.62 | 344.41 | 358.61 | 344.78 | 358.58 | 347.34 | 358.41 | 350 | 358.18 |
| 350.75 | 358.14 | 350.91 | 358.23 | 351.45 | 358.31 | 352.16 | 358.25 | 352.36 | 358.26 |
| 353.32 | 358.21 | 354.97 | 358.14 | 355.85 | 358.05 | 358.7 | 357.72 | 359.28 | 357.76 |
| 360.14 | 357.88 | 360.89 | 358.04 | 366.68 | 358.72 | 367.42 | 358.78 | 370.95 | 358.77 |
| 379.44 | 358.26 | 379.62 | 358.23 | 382.74 | 357.82 | 383.63 | 357.66 | 385.11 | 357.43 |
| 386.84 | 357.34 | 387.61 | 357.28 | 388.16 | 357.19 | 388.76 | 357.05 | 389.48 | 356.91 |
| 398.18 | 356.4 | 399.67 | 356.29 | 400.18 | 356.26 | 400.55 | 356.22 | 403.9 | 356 |
| 406.22 | 355.75 | 406.46 | 355.73 | 406.85 | 355.78 | 406.99 | 355.99 | 407.09 | 356 |
| 409.34 | 356.08 | 411.55 | 356.12 | 412.37 | 356.12 | 413.74 | 356.08 | 415.16 | 356 |
| 420.03 | 355.62 | 420.97 | 355.53 | 423 | 355.57 | 424.76 | 355.62 | 426.43 | 355.64 |
| 426.79 | 355.62 | 427.1 | 355.57 | 427.9 | 355.52 | 431.38 | 355.59 | 434.22 | 355.7 |
| 437.91 | 355.75 | 439.56 | 355.74 | 440.6 | 355.76 | 444.34 | 355.85 | 446.38 | 355.91 |
| 450.1 | 355.93 | 450.18 | 355.92 | 453.63 | 355.94 | 454.78 | 355.94 | 455.6 | 355.9 |
| 455.68 | 355.83 | 457.27 | 355.79 | 459.91 | 355.79 | 461.19 | 355.82 | 463.59 | 355.83 |
| 465.64 | 355.85 | 467.77 | 355.9 | 469.75 | 355.94 | 470.93 | 355.95 | 474.46 | 355.96 |
| 478.12 | 356.01 | 479.88 | 356.02 | 482.9 | 356.02 | 483.25 | 356.03 | 485.8 | 356.02 |
| 494.18 | 356.12 | 494.69 | 356.12 | 499.84 | 356.16 | 502.39 | 356.16 | 506.93 | 356.07 |
| 511.04 | 355.88 | 514.91 | 355.69 | 515.42 | 355.64 | 515.86 | 355.63 | 516.64 | 355.68 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 518.23 | 355.72 | 519.64 | 355.72 | 520.15 | 355.74 | 520.55 | 355.79 | 520.89 | 355.88 |
| 521.57 | 355.89 | 523.94 | 355.91 | 525.22 | 355.91 | 525.71 | 355.9 | 535.07 | 355.67 |
| 537.97 | 355.56 | 538.74 | 355.51 | 540.68 | 355.43 | 541.13 | 355.42 | 545.15 | 355.42 |
| 548.9 | 355.52 | 549.32 | 355.54 | 553.35 | 355.54 | 554.67 | 355.5 | 555.61 | 355.48 |
| 556.16 | 355.48 | 557.73 | 355.45 | 559.9 | 355.45 | 561.18 | 355.43 | 562.66 | 355.44 |
| 567.41 | 355.45 | 568.11 | 355.49 | 568.37 | 355.49 | 573.84 | 355.45 | 575.42 | 355.45 |
| 576.75 | 355.43 | 577.95 | 355.38 | 581.33 | 355.22 | 582.97 | 355.16 | 583.38 | 355.16 |
| 584.91 | 355.12 | 592.47 | 354.94 | 602.94 | 354.65 | 603.73 | 354.61 | 606.18 | 354.62 |
| 607.21 | 354.62 | 607.45 | 354.64 | 608.79 | 354.66 | 609.33 | 354.73 | 609.81 | 354.71 |
| 611.83 | 355.13 | 611.95 | 355.14 | 612.82 | 355.31 | 617.62 | 355.31 | 618.02 | 355.23 |
| 620.82 | 355.1 | 621.27 | 355.06 | 621.77 | 354.98 | 622.11 | 354.95 | 622.81 | 354.94 |
| 624.02 | 354.9 | 624.88 | 354.88 | 627.42 | 354.8 | 628.19 | 354.8 | 629.21 | 354.78 |
| 631.02 | 354.76 | 635.02 | 354.84 | 635.25 | 354.85 | 649.19 | 355.14 | 650.73 | 355.15 |
| 655.62 | 355.22 | 658.7 | 355.35 | 660.66 | 355.45 | 662.24 | 355.56 | 663.09 | 355.6 |
| 664.25 | 355.67 | 665.15 | 355.67 | 666.53 | 355.65 | 667.92 | 355.65 | 670.39 | 355.6 |
| 672.28 | 355.58 | 673.35 | 355.61 | 679.72 | 355.55 | 681.15 | 355.53 | 683.35 | 355.56 |
| 686.07 | 355.68 | 686.54 | 355.67 | 687.09 | 355.68 | 689.2 | 355.7 | 689.68 | 355.69 |
| 691.77 | 355.72 | 692.32 | 355.74 | 693.55 | 355.81 | 694.69 | 355.84 | 697.22 | 355.89 |
| 701.22 | 355.9 | 712.09 | 355.76 | 714.3 | 355.71 | 720.54 | 355.5 | 721.5 | 355.4 |
| 723.89 | 355.12 | 726.53 | 354.75 | 726.97 | 354.73 | 731.38 | 354.72 | 731.71 | 354.8 |
| 735.25 | 354.71 | 743.98 | 354.65 | 759.35 | 354.62 | 759.76 | 354.62 | 762.1 | 354.39 |
| 765.35 | 354.06 | 768.28 | 353.9 | 771.23 | 353.9 | 773.01 | 354 | 778.38 | 354.11 |
| 778.91 | 354.11 | 779.68 | 354.13 | 780.63 | 354.14 | 781.6 | 354.14 | 783.95 | 354.13 |
| 786.03 | 354.09 | 790.28 | 354 | 793.39 | 353.92 | 794.72 | 353.92 | 799.66 | 354 |
| 801.3 | 354.03 | 802.2 | 354.04 | 804.28 | 354.01 | 816.76 | 353.56 | 822.66 | 353.34 |
| 823.06 | 353.31 | 824.25 | 353.28 | 828.27 | 353.25 | 828.37 | 353.26 | 831.95 | 353.26 |
| 832.46 | 353.35 | 832.7 | 353.37 | 835.86 | 353.52 | 838.73 | 353.59 | 840.19 | 353.7 |
| 841.45 | 353.73 | 842.2 | 353.74 | 846.05 | 353.59 | 846.81 | 353.6 | 848.18 | 353.57 |
| 849.54 | 353.52 | 850.5 | 353.44 | 850.93 | 353.34 | 851.11 | 353.32 | 851.57 | 353.32 |
| 855.22 | 353.3 | 856.34 | 353.28 | 858.22 | 353.51 | 858.82 | 353.55 | 860.55 | 353.6 |
| 862.12 | 353.56 | 864.55 | 353.48 | 867.07 | 353.33 | 868.51 | 353.29 | 869.36 | 353.29 |
| 871.83 | 353.32 | 873.45 | 353.33 | 876.8 | 353.41 | 881.48 | 353.54 | 882.62 | 353.56 |
| 882.84 | 353.59 | 883.68 | 353.64 | 888.26 | 353.61 | 891.27 | 353.6 | 895.03 | 353.61 |
| 896.06 | 353.63 | 898.11 | 353.52 | 906.01 | 353.07 | 909.21 | 352.87 | 912.72 | 352.83 |
| 913.92 | 352.84 | 914.36 | 352.86 | 918.25 | 353.16 | 918.57 | 353.16 | 920.56 | 353.32 |
| 921.07 | 353.33 | 921.98 | 353.32 | 922.84 | 353.3 | 929.48 | 353.07 | 937.6 | 352.75 |
| 946.92 | 352.48 | 949.29 | 352.44 | 950.59 | 352.45 | 952.61 | 352.42 | 952.93 | 352.42 |
| 957.28 | 352.35 | 960.03 | 352.29 | 960.33 | 352.28 | 962.1 | 352.28 | 962.16 | 352.3 |
| 962.94 | 352.35 | 964.23 | 352.39 | 965.11 | 352.41 | 966.96 | 352.43 | 968.49 | 352.44 |
| 969.03 | 352.48 | 971.8 | 352.55 | 973.72 | 352.58 | 975.59 | 352.56 | 981.56 | 352.61 |
| 982.1 | 352.62 | 989.92 | 353.04 | 1000.22 | 353.26 | 1004.35 | 353.29 | 1004.81 | 353.3 |
| 1008.09 | 353.4 | 1009.17 | 353.42 | 1010.61 | 353.43 | 1012.55 | 353.43 | 1015.49 | 353.49 |
| 1016.4 | 353.54 | 1018.93 | 353.63 | 1022.07 | 353.73 | 1023.24 | 353.76 | 1023.82 | 353.82 |
| 1025.25 | 353.88 | 1026.05 | 353.89 | 1027.76 | 353.9 | 1030.98 | 353.86 | 1032.85 | 353.86 |
| 1034.43 | 353.85 | 1035.96 | 353.82 | 1036.74 | 353.77 | 1038.2 | 353.77 | 1038.79 | 353.78 |
| 1040.12 | 353.82 | 1040.71 | 353.86 | 1041.41 | 353.94 | 1044.43 | 353.99 | 1047.07 | 353.99 |
| 1048 | 353.98 | 1049.99 | 353.94 | 1050.67 | 353.92 | 1053.99 | 353.8 | 1055.29 | 353.69 |
| 1056.71 | 353.58 | 1057.49 | 353.47 | 1058.18 | 353.42 | 1058.72 | 353.41 | 1062.25 | 353.38 |
| 1063.49 | 353.38 | 1063.63 | 353.36 | 1065.85 | 353.38 | 1066.93 | 353.41 | 1067.6 | 353.44 |
| 1068.19 | 353.48 | 1069.45 | 353.62 | 1070.19 | 353.67 | 1071.43 | 353.74 | 1072.33 | 353.74 |
| 1072.87 | 353.71 | 1073.89 | 353.61 | 1073.92 | 353.51 | 1075 | 353.42 | 1076.07 | 353.38 |
| 1077.58 | 353.37 | 1079.51 | 353.35 | 1081.08 | 353.36 | 1082.94 | 353.39 | 1085.53 | 353.47 |
| 1087.01 | 353.54 | 1087.72 | 353.6 | 1089.92 | 353.82 | 1091.59 | 353.95 | 1094.97 | 354.3 |
| 1102.32 | 354.81 | 1103.67 | 354.86 | 1106.87 | 355.05 | 1108.29 | 355.14 | 1110.15 | 355.05 |
| 1112.95 | 354.96 | 1113.69 | 354.94 | 1119.38 | 354.84 | 1124.01 | 354.52 | 1125.18 | 354.46 |
| 1126.36 | 354.38 | 1127.3 | 354.4 | 1127.99 | 354.39 | 1130.46 | 354.33 | 1131.29 | 354.29 |
| 1133.75 | 354.14 | 1135.17 | 354.07 | 1140.5 | 353.77 | 1143.51 | 353.76 | 1151.42 | 354.17 |
| 1153.32 | 354.25 | 1153.9 | 354.09 | 1154.55 | 354.09 | 1155.33 | 354.11 | 1155.79 | 354.16 |
| 1157.34 | 354.44 | 1165.96 | 354.85 | 1175.1 | 355.11 | 1178.76 | 355.19 | 1179.18 | 355.17 |
| 1179.87 | 355.18 | 1180.87 | 355.17 | 1183.05 | 355.21 | 1184.29 | 355.25 | 1184.99 | 355.25 |
| 1185.69 | 355.23 | 1185.95 | 355.24 | 1186.98 | 355.22 | 1188.97 | 355.16 | 1189.89 | 355.14 |
| 1199.52 | 355.28 | 1207.01 | 355.45 | 1213.3 | 355.67 | 1213.93 | 355.69 | 1217.89 | 355.84 |
| 1221.54 | 356.03 | 1225.92 | 356.21 | 1228.09 | 356.27 | 1228.96 | 356.29 | 1230.85 | 356.39 |
| 1232.04 | 356.4 | 1233.67 | 356.57 | 1236.66 | 356.91 | 1239.21 | 357.07 | 1241.05 | 357.15 |
| 1242.05 | 357.2 | 1245.98 | 357.36 | 1249.33 | 357.56 | 1250.85 | 357.67 | 1262.16 | 358.82 |
| 1270.96 | 359.49 | 1275.52 | 359.76 | 1277.15 | 359.86 | 1282.65 | 360.18 | 1285.75 | 360.31 |
| 1286.67 | 360.33 | 1294.82 | 360.7 | 1297.98 | 360.84 | 1302.31 | 360.96 | 1302.51 | 360.97 |
| 1306.27 | 361.05 | 1309.12 | 361.23 | 1309.83 | 361.26 | 1312.78 | 361.28 | 1314.88 | 361.27 |
| 1316.07 | 361.22 | 1316.84 | 361.25 | 1320.36 | 361.47 | 1325.26 | 361.76 | 1328.84 | 362.05 |
| 1332.26 | 362.34 | 1337.78 | 362.69 | 1338.34 | 362.72 | 1354.31 | 363.76 | 1356.49 | 363.9 |
| 1360.57 | 364.13 | 1362.57 | 364.26 | 1365.41 | 364.41 | 1367.78 | 364.56 | 1368.4 | 364.58 |
| 1369.11 | 364.63 | 1370.29 | 364.67 | 1373.39 | 364.71 | 1375.1 | 364.74 | 1376.6 | 364.72 |
| 1379.11 | 364.72 | 1379.25 | 364.73 | 1381.48 | 364.73 | 1381.97 | 364.74 | 1383.83 | 364.75 |
| 1386.55 | 364.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 221.41 | .05 | 379.62 | .04 | 1175.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 379.62 | 1175.1 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5703.60*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 208.62 | 360.38 | 209.61 | 360.35 | 210.82 | 360.34 | 210.98 | 360.33 | 213.99 | 360.29 |
| 214.24 | 360.28 | 236.71 | 359.79 | 245.61 | 359.59 | 248.39 | 359.45 | 248.75 | 359.44 |
| 251.41 | 359.3 | 266.63 | 358.78 | 267.14 | 358.77 | 275.38 | 358.75 | 283.94 | 357.94 |
| 284.3 | 357.94 | 285.96 | 357.83 | 298.5 | 357.21 | 301.13 | 357.12 | 304.91 | 357.11 |
| 311.23 | 357.71 | 311.75 | 357.72 | 312.66 | 357.76 | 312.99 | 357.82 | 316.69 | 357.77 |
| 317.33 | 357.74 | 317.41 | 357.68 | 317.96 | 357.58 | 319.01 | 357.66 | 319.78 | 357.73 |
| 320.69 | 357.89 | 322.45 | 358.13 | 322.85 | 358.17 | 323.45 | 358.18 | 327.29 | 358.21 |
| 327.69 | 358.23 | 329.46 | 358.28 | 330.92 | 358.35 | 334.73 | 358.35 | 335.83 | 358.4 |
| 336.97 | 358.43 | 339.19 | 358.45 | 339.67 | 358.43 | 341.31 | 358.31 | 342.78 | 358.22 |
| 345.62 | 357.98 | 346.42 | 357.94 | 346.59 | 358.03 | 346.97 | 358.1 | 347.16 | 358.11 |
| 347.92 | 358.06 | 348.13 | 358.06 | 349.16 | 358.01 | 350.91 | 357.94 | 351.85 | 357.84 |
| 354.88 | 357.49 | 355.51 | 357.53 | 356.42 | 357.67 | 357.22 | 357.83 | 363.39 | 358.56 |
| 364.17 | 358.62 | 367.94 | 358.61 | 376.99 | 358.07 | 377.18 | 358.05 | 380.34 | 357.66 |
| 381.24 | 357.5 | 382.75 | 357.27 | 384.49 | 357.18 | 385.28 | 357.11 | 385.84 | 357.03 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 386.44 | 356.87 | 387.17 | 356.73 | 395.99 | 356.22 | 397.5 | 356.1 | 398.02 | 356.07 |
| 398.39 | 356.03 | 401.79 | 355.8 | 404.15 | 355.54 | 404.38 | 355.51 | 404.78 | 355.57 |
| 404.92 | 355.79 | 405.03 | 355.8 | 407.3 | 355.88 | 409.55 | 355.93 | 410.38 | 355.93 |
| 411.77 | 355.88 | 413.2 | 355.8 | 418.14 | 355.39 | 418.96 | 355.3 | 421.16 | 355.34 |
| 422.94 | 355.39 | 424.63 | 355.4 | 425 | 355.39 | 425.31 | 355.33 | 426.13 | 355.28 |
| 429.65 | 355.35 | 430.93 | 355.4 | 433.26 | 355.47 | 436.96 | 355.52 | 437.94 | 355.51 |
| 439 | 355.54 | 444.86 | 355.68 | 448.57 | 355.7 | 448.71 | 355.69 | 452.21 | 355.71 |
| 453.38 | 355.7 | 454.2 | 355.66 | 454.29 | 355.58 | 455.9 | 355.54 | 458.57 | 355.53 |
| 460.44 | 355.57 | 462.31 | 355.58 | 464.39 | 355.61 | 466.54 | 355.67 | 468.55 | 355.71 |
| 469.74 | 355.74 | 473.32 | 355.75 | 477.04 | 355.81 | 478.83 | 355.83 | 484.83 | 355.83 |
| 493.32 | 355.92 | 495.1 | 355.93 | 499.06 | 355.97 | 501.64 | 355.96 | 506.25 | 355.86 |
| 506.49 | 355.84 | 510.42 | 355.65 | 514.55 | 355.43 | 514.85 | 355.39 | 515.3 | 355.39 |
| 516.09 | 355.44 | 516.89 | 355.46 | 519.14 | 355.48 | 519.76 | 355.5 | 520.06 | 355.55 |
| 520.4 | 355.64 | 521.09 | 355.66 | 523.49 | 355.68 | 525.29 | 355.66 | 534.77 | 355.41 |
| 537.71 | 355.29 | 538.5 | 355.24 | 540.92 | 355.13 | 542.61 | 355.14 | 544.99 | 355.14 |
| 548.8 | 355.24 | 549.48 | 355.27 | 551.64 | 355.26 | 553.31 | 355.26 | 554.65 | 355.22 |
| 557.75 | 355.16 | 559.95 | 355.16 | 560.73 | 355.15 | 562.33 | 355.15 | 562.75 | 355.16 |
| 567.56 | 355.18 | 568.27 | 355.23 | 574.09 | 355.2 | 575.68 | 355.21 | 577.12 | 355.19 |
| 582.36 | 354.95 | 583.34 | 354.92 | 585.31 | 354.87 | 592.97 | 354.66 | 603.58 | 354.35 |
| 604.39 | 354.31 | 606.87 | 354.32 | 607.92 | 354.32 | 608.16 | 354.34 | 608.94 | 354.34 |
| 609.52 | 354.36 | 610.06 | 354.44 | 610.55 | 354.41 | 612.6 | 354.86 | 612.72 | 354.87 |
| 613.6 | 355.05 | 618.47 | 355.05 | 618.87 | 354.97 | 621.71 | 354.83 | 622.17 | 354.78 |
| 622.85 | 354.68 | 623.73 | 354.66 | 624.96 | 354.62 | 625.83 | 354.6 | 627.53 | 354.54 |
| 629.6 | 354.5 | 630.22 | 354.5 | 632.05 | 354.47 | 636.11 | 354.56 | 636.35 | 354.56 |
| 650.47 | 354.88 | 652.03 | 354.89 | 657 | 354.97 | 660.21 | 355.13 | 662.11 | 355.23 |
| 663.7 | 355.34 | 664.57 | 355.39 | 665.75 | 355.47 | 666.02 | 355.48 | 668.05 | 355.45 |
| 669.47 | 355.44 | 671.97 | 355.39 | 673.89 | 355.37 | 674.98 | 355.38 | 676.09 | 355.36 |
| 681.42 | 355.3 | 682.87 | 355.27 | 685.11 | 355.3 | 686.3 | 355.34 | 686.86 | 355.38 |
| 687.86 | 355.42 | 688.35 | 355.41 | 688.9 | 355.42 | 691.04 | 355.44 | 691.52 | 355.43 |
| 693.65 | 355.46 | 694.21 | 355.48 | 695.23 | 355.55 | 696.6 | 355.59 | 699.17 | 355.64 |
| 702.69 | 355.65 | 703.22 | 355.64 | 714.25 | 355.49 | 716.49 | 355.43 | 721.29 | 355.25 |
| 722.94 | 355.2 | 723.79 | 355.09 | 726.21 | 354.8 | 728.89 | 354.4 | 729.34 | 354.38 |
| 733.8 | 354.38 | 734.14 | 354.47 | 737.73 | 354.37 | 746.58 | 354.32 | 762.16 | 354.29 |
| 762.58 | 354.29 | 764.73 | 354.07 | 764.95 | 354.04 | 767.22 | 353.81 | 767.69 | 353.75 |
| 768.24 | 353.7 | 771.21 | 353.52 | 774.21 | 353.52 | 776.01 | 353.62 | 781.48 | 353.74 |
| 781.99 | 353.73 | 782.78 | 353.75 | 783.74 | 353.76 | 784.72 | 353.76 | 787.1 | 353.75 |
| 789.21 | 353.71 | 793.52 | 353.62 | 794.69 | 353.59 | 795.86 | 353.55 | 796.67 | 353.54 |
| 798.03 | 353.54 | 804.69 | 353.66 | 805.6 | 353.67 | 807.72 | 353.64 | 820.37 | 353.17 |
| 826.35 | 352.94 | 827.96 | 352.88 | 832.04 | 352.86 | 832.28 | 352.87 | 835.76 | 352.87 |
| 836.29 | 352.97 | 839.73 | 353.15 | 840.88 | 353.19 | 841.47 | 353.2 | 842.64 | 353.24 |
| 844.12 | 353.36 | 845.4 | 353.4 | 846.16 | 353.41 | 846.65 | 353.4 | 850.07 | 353.28 |
| 850.58 | 353.29 | 852.23 | 353.25 | 853.74 | 353.2 | 854.63 | 353.12 | 855 | 353.02 |
| 855.66 | 352.99 | 859.36 | 352.97 | 860.12 | 352.94 | 860.49 | 352.94 | 862.4 | 353.18 |
| 863.01 | 353.22 | 864.39 | 353.27 | 865.65 | 353.26 | 866.35 | 353.23 | 868.82 | 353.15 |
| 870.69 | 353.02 | 871.37 | 352.98 | 872.83 | 352.94 | 873.69 | 352.94 | 876.2 | 352.97 |
| 877.84 | 352.98 | 881.23 | 353.06 | 885.98 | 353.2 | 887.14 | 353.23 | 888.21 | 353.31 |
| 892.85 | 353.29 | 893.74 | 353.28 | 895.91 | 353.28 | 899.72 | 353.29 | 900.89 | 353.29 |
| 902.85 | 353.19 | 910.13 | 352.75 | 910.86 | 352.71 | 914.1 | 352.5 | 914.18 | 352.49 |
| 917.65 | 352.46 | 918.88 | 352.47 | 919.32 | 352.5 | 923.27 | 352.82 | 923.59 | 352.81 |
| 925.61 | 353 | 926.12 | 353 | 927.91 | 352.98 | 934.64 | 352.73 | 942.88 | 352.4 |
| 952.33 | 352.13 | 954.73 | 352.09 | 956.05 | 352.09 | 958.1 | 352.06 | 959.67 | 352.05 |
| 962.83 | 352 | 966.13 | 351.93 | 966.61 | 351.94 | 967.34 | 351.93 | 967.82 | 351.98 |
| 969.39 | 352.03 | 972.03 | 352.06 | 973.51 | 352.07 | 974.04 | 352.11 | 976.71 | 352.16 |
| 978.56 | 352.19 | 980.37 | 352.18 | 986.14 | 352.25 | 986.66 | 352.26 | 993.69 | 352.62 |
| 994.21 | 352.64 | 1004.16 | 352.88 | 1008.15 | 352.93 | 1008.6 | 352.93 | 1009.81 | 352.98 |
| 1011.76 | 353.03 | 1014.2 | 353.07 | 1014.5 | 353.08 | 1016.91 | 353.1 | 1018.91 | 353.15 |
| 1019.79 | 353.19 | 1022.24 | 353.28 | 1025.26 | 353.38 | 1026.4 | 353.41 | 1026.96 | 353.46 |
| 1027.87 | 353.5 | 1029.11 | 353.53 | 1030.76 | 353.54 | 1033.88 | 353.52 | 1035.68 | 353.53 |
| 1037.2 | 353.53 | 1038.68 | 353.51 | 1039.43 | 353.47 | 1040.85 | 353.47 | 1042.7 | 353.51 |
| 1043.27 | 353.54 | 1043.95 | 353.61 | 1046.16 | 353.64 | 1048.91 | 353.64 | 1050.72 | 353.62 |
| 1052.89 | 353.56 | 1056.1 | 353.44 | 1057.36 | 353.32 | 1058.73 | 353.21 | 1058.82 | 353.21 |
| 1059.48 | 353.1 | 1060.14 | 353.05 | 1060.67 | 353.04 | 1064.43 | 353.03 | 1065.27 | 353.04 |
| 1065.89 | 353.03 | 1067.29 | 353.05 | 1069.07 | 353.11 | 1069.82 | 353.16 | 1071.25 | 353.3 |
| 1072.95 | 353.42 | 1073.81 | 353.42 | 1074.33 | 353.39 | 1075.32 | 353.29 | 1075.35 | 353.18 |
| 1076.4 | 353.09 | 1077.43 | 353.06 | 1079.42 | 353.03 | 1080.75 | 353.02 | 1084.07 | 353.07 |
| 1085.27 | 353.12 | 1086.56 | 353.16 | 1087.99 | 353.23 | 1090.8 | 353.51 | 1092.42 | 353.65 |
| 1095.69 | 353.99 | 1102.78 | 354.53 | 1104.38 | 354.61 | 1107.61 | 354.84 | 1108.24 | 354.89 |
| 1108.74 | 354.9 | 1110.34 | 354.81 | 1113.05 | 354.72 | 1113.76 | 354.7 | 1119.26 | 354.58 |
| 1123.73 | 354.22 | 1126 | 354.06 | 1126.91 | 354.08 | 1127.57 | 354.07 | 1129.96 | 354 |
| 1131.77 | 353.9 | 1133.91 | 353.76 | 1134.52 | 353.73 | 1139.66 | 353.41 | 1142.57 | 353.4 |
| 1150.21 | 353.86 | 1152.05 | 353.95 | 1152.61 | 353.77 | 1153.23 | 353.77 | 1154.24 | 353.8 |
| 1155.93 | 354.07 | 1164.26 | 354.48 | 1173.08 | 354.73 | 1176.71 | 354.81 | 1177.24 | 354.8 |
| 1177.8 | 354.81 | 1178.8 | 354.8 | 1179.45 | 354.81 | 1182.18 | 354.88 | 1182.88 | 354.89 |
| 1183.82 | 354.89 | 1184.84 | 354.88 | 1187.72 | 354.82 | 1197.26 | 354.99 | 1204.67 | 355.16 |
| 1210.9 | 355.39 | 1211.53 | 355.41 | 1215.45 | 355.57 | 1219.05 | 355.74 | 1223.39 | 355.91 |
| 1226.4 | 355.99 | 1228.27 | 356.09 | 1229.52 | 356.1 | 1234.02 | 356.57 | 1236.55 | 356.74 |
| 1238.37 | 356.82 | 1239.36 | 356.88 | 1243.25 | 357.04 | 1246.56 | 357.25 | 1248.07 | 357.36 |
| 1259.26 | 358.57 | 1267.98 | 359.27 | 1272.49 | 359.56 | 1279.55 | 360 | 1283.01 | 360.15 |
| 1283.53 | 360.16 | 1291.59 | 360.54 | 1294.72 | 360.69 | 1299.01 | 360.81 | 1299.21 | 360.81 |
| 1302.93 | 360.9 | 1305.75 | 361.09 | 1306.45 | 361.12 | 1309.37 | 361.14 | 1311.45 | 361.13 |
| 1312.63 | 361.07 | 1313.39 | 361.11 | 1316.88 | 361.34 | 1321.72 | 361.65 | 1325.27 | 361.97 |
| 1329.11 | 362.31 | 1330.06 | 362.36 | 1334.67 | 362.68 | 1350.48 | 363.77 | 1356.68 | 364.17 |
| 1359.07 | 364.33 | 1360.14 | 364.39 | 1362.09 | 364.51 | 1363.82 | 364.63 | 1364.43 | 364.65 |
| 1365.14 | 364.7 | 1366.3 | 364.74 | 1371.07 | 364.82 | 1371.42 | 364.82 | 1372.55 | 364.79 |
| 1375.03 | 364.79 | 1375.17 | 364.8 | 1377.37 | 364.8 | 1377.86 | 364.82 | 1379.21 | 364.83 |
| 1382.4 | 364.83 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 208.62 | .05 | 377.18 | .04 | 1173.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 377.18 | 1173.08 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5683.84*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 195.83 | 360.27 | 196.88 | 360.24 | 198.16 | 360.23 | 198.34 | 360.22 | 201.53 | 360.17 |
| 201.79 | 360.17 | 225.65 | 359.65 | 235.1 | 359.44 | 238.04 | 359.29 | 238.42 | 359.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 241.25 | 359.14 | 257.4 | 358.59 | 257.94 | 358.58 | 266.69 | 358.56 | 275.77 | 357.7 |
| 276.15 | 357.7 | 277.92 | 357.59 | 291.23 | 356.93 | 294.02 | 356.84 | 297.65 | 356.84 |
| 298.03 | 356.83 | 304.74 | 357.47 | 305.29 | 357.48 | 306.25 | 357.52 | 306.6 | 357.59 |
| 310.53 | 357.54 | 311.21 | 357.51 | 311.3 | 357.44 | 311.88 | 357.34 | 312.99 | 357.42 |
| 313.81 | 357.5 | 314.78 | 357.67 | 316.65 | 357.92 | 317.08 | 357.96 | 317.71 | 357.98 |
| 321.79 | 358.01 | 322.21 | 358.03 | 324.09 | 358.08 | 325.63 | 358.16 | 329.68 | 358.16 |
| 330.85 | 358.22 | 332.06 | 358.25 | 334.42 | 358.27 | 334.92 | 358.25 | 335.34 | 358.21 |
| 336.67 | 358.13 | 336.99 | 358.1 | 338.23 | 358.03 | 340.7 | 357.82 | 341.24 | 357.77 |
| 342.09 | 357.73 | 342.27 | 357.82 | 342.87 | 357.92 | 343.68 | 357.86 | 343.9 | 357.86 |
| 344.99 | 357.8 | 346.85 | 357.73 | 347.85 | 357.63 | 351.07 | 357.26 | 351.73 | 357.3 |
| 352.71 | 357.45 | 353.55 | 357.62 | 360.1 | 358.4 | 360.93 | 358.47 | 364.93 | 358.46 |
| 374.53 | 357.89 | 374.73 | 357.86 | 377.94 | 357.5 | 380.38 | 357.1 | 382.15 | 357.01 |
| 382.94 | 356.95 | 383.51 | 356.86 | 384.13 | 356.7 | 384.87 | 356.55 | 393.8 | 356.04 |
| 395.33 | 355.92 | 395.86 | 355.89 | 396.24 | 355.85 | 399.68 | 355.6 | 402.31 | 355.29 |
| 402.71 | 355.35 | 402.86 | 355.59 | 402.96 | 355.6 | 405.27 | 355.68 | 407.55 | 355.74 |
| 408.39 | 355.74 | 409.8 | 355.68 | 411.25 | 355.6 | 416.26 | 355.17 | 417.23 | 355.06 |
| 419.31 | 355.11 | 421.12 | 355.17 | 422.83 | 355.17 | 423.21 | 355.16 | 423.52 | 355.09 |
| 424.35 | 355.04 | 427.93 | 355.1 | 430.84 | 355.21 | 431.58 | 355.23 | 434.63 | 355.28 |
| 436.33 | 355.28 | 437.18 | 355.3 | 437.4 | 355.32 | 443.34 | 355.46 | 445.47 | 355.47 |
| 447.1 | 355.47 | 447.24 | 355.46 | 451.5 | 355.47 | 452.37 | 355.45 | 452.81 | 355.42 |
| 452.9 | 355.34 | 453.21 | 355.32 | 454.53 | 355.29 | 457.24 | 355.28 | 458.56 | 355.31 |
| 459.13 | 355.31 | 463.13 | 355.37 | 465.32 | 355.43 | 467.35 | 355.49 | 468.56 | 355.52 |
| 472.19 | 355.55 | 475.95 | 355.62 | 477.77 | 355.63 | 483.85 | 355.65 | 492.46 | 355.72 |
| 492.92 | 355.73 | 494.27 | 355.73 | 498.28 | 355.77 | 500.9 | 355.76 | 505.57 | 355.64 |
| 505.81 | 355.63 | 509.79 | 355.42 | 513.77 | 355.2 | 514.29 | 355.15 | 514.74 | 355.14 |
| 515.54 | 355.2 | 517.18 | 355.23 | 519.15 | 355.25 | 519.44 | 355.29 | 519.91 | 355.41 |
| 520.61 | 355.43 | 523.04 | 355.44 | 524.36 | 355.44 | 524.87 | 355.43 | 534.48 | 355.15 |
| 537.46 | 355.01 | 538.26 | 354.96 | 540.71 | 354.85 | 542.42 | 354.86 | 544.84 | 354.85 |
| 548.7 | 354.96 | 549.39 | 354.99 | 551.58 | 354.98 | 553.27 | 354.98 | 555.59 | 354.91 |
| 557.77 | 354.87 | 560 | 354.87 | 561.32 | 354.86 | 562.84 | 354.87 | 567.72 | 354.92 |
| 568.71 | 354.97 | 574.33 | 354.96 | 575.45 | 354.97 | 575.74 | 354.96 | 577.4 | 354.95 |
| 578.55 | 354.9 | 582.02 | 354.74 | 583.71 | 354.67 | 585.7 | 354.61 | 593.47 | 354.39 |
| 604.23 | 354.05 | 605.05 | 354.01 | 607.56 | 354.01 | 608.62 | 354.02 | 610.25 | 354.06 |
| 610.8 | 354.14 | 611.3 | 354.11 | 613.37 | 354.59 | 613.49 | 354.6 | 614.38 | 354.78 |
| 614.86 | 354.79 | 619.32 | 354.79 | 619.73 | 354.7 | 620.19 | 354.68 | 622.61 | 354.55 |
| 623.07 | 354.51 | 623.58 | 354.42 | 623.94 | 354.4 | 625.9 | 354.34 | 626.78 | 354.33 |
| 627.67 | 354.29 | 629.39 | 354.23 | 630.61 | 354.22 | 633.09 | 354.18 | 637.2 | 354.27 |
| 637.44 | 354.28 | 651.76 | 354.61 | 653.34 | 354.63 | 658.37 | 354.73 | 661.54 | 354.9 |
| 661.63 | 354.9 | 663.55 | 355.01 | 665.17 | 355.13 | 667.24 | 355.27 | 667.72 | 355.28 |
| 669.58 | 355.25 | 671.01 | 355.24 | 673.55 | 355.19 | 674.74 | 355.16 | 675.49 | 355.15 |
| 676.6 | 355.16 | 677.72 | 355.13 | 683.13 | 355.04 | 684.6 | 355.01 | 686.87 | 355.03 |
| 688.07 | 355.08 | 688.64 | 355.12 | 689.66 | 355.16 | 690.71 | 355.16 | 692.88 | 355.18 |
| 693.37 | 355.17 | 695.52 | 355.21 | 696.09 | 355.23 | 697.35 | 355.31 | 698.52 | 355.34 |
| 701.13 | 355.39 | 704.69 | 355.4 | 705.23 | 355.39 | 716.41 | 355.21 | 718.68 | 355.15 |
| 723.55 | 354.96 | 725.21 | 354.9 | 726.67 | 354.71 | 728.53 | 354.48 | 731.25 | 354.05 |
| 731.7 | 354.02 | 732.16 | 354.03 | 736.23 | 354.03 | 736.56 | 354.13 | 740.21 | 354.03 |
| 749.18 | 353.99 | 765.4 | 353.97 | 767.58 | 353.73 | 767.8 | 353.7 | 770.1 | 353.45 |
| 771.14 | 353.33 | 774.15 | 353.14 | 777.18 | 353.14 | 779.01 | 353.25 | 784.55 | 353.37 |
| 785.08 | 353.36 | 786.84 | 353.38 | 787.84 | 353.38 | 790.25 | 353.37 | 792.39 | 353.32 |
| 796.76 | 353.23 | 799.14 | 353.17 | 799.95 | 353.16 | 801.33 | 353.16 | 805.76 | 353.25 |
| 808.08 | 353.29 | 809.01 | 353.3 | 811.15 | 353.27 | 823.97 | 352.78 | 830.04 | 352.55 |
| 830.45 | 352.52 | 831.67 | 352.48 | 835.8 | 352.46 | 836.05 | 352.48 | 839.58 | 352.49 |
| 840.11 | 352.59 | 840.35 | 352.6 | 843.6 | 352.78 | 844.76 | 352.83 | 845.37 | 352.84 |
| 846.55 | 352.89 | 848.05 | 353.02 | 849.35 | 353.07 | 850.12 | 353.08 | 850.62 | 353.07 |
| 854.08 | 352.97 | 854.86 | 352.97 | 856.27 | 352.94 | 857.66 | 352.89 | 858.71 | 352.8 |
| 859.28 | 352.67 | 859.74 | 352.67 | 863.49 | 352.64 | 864.65 | 352.6 | 866.5 | 352.85 |
| 867.2 | 352.9 | 868.6 | 352.95 | 870.1 | 352.93 | 870.59 | 352.9 | 873.09 | 352.81 |
| 874.98 | 352.66 | 875.67 | 352.62 | 877.15 | 352.58 | 878.03 | 352.58 | 880.56 | 352.62 |
| 882.23 | 352.63 | 885.67 | 352.72 | 890.48 | 352.86 | 891.66 | 352.89 | 891.88 | 352.92 |
| 892.74 | 352.98 | 897.45 | 352.97 | 898.34 | 352.96 | 900.55 | 352.96 | 904.41 | 352.97 |
| 905.59 | 352.97 | 907.58 | 352.85 | 914.96 | 352.39 | 918.98 | 352.13 | 919.07 | 352.12 |
| 922.59 | 352.09 | 923.83 | 352.1 | 924.28 | 352.13 | 928.28 | 352.48 | 928.51 | 352.46 |
| 930.65 | 352.67 | 931.79 | 352.67 | 932.99 | 352.65 | 939.81 | 352.39 | 948.15 | 352.05 |
| 957.74 | 351.78 | 960.62 | 351.73 | 961.51 | 351.73 | 963.58 | 351.71 | 963.91 | 351.7 |
| 965.18 | 351.69 | 968.38 | 351.64 | 969.22 | 351.63 | 971.21 | 351.59 | 972.58 | 351.59 |
| 973.04 | 351.62 | 974.34 | 351.66 | 976.11 | 351.68 | 978.53 | 351.7 | 979.04 | 351.73 |
| 983.41 | 351.8 | 985.15 | 351.79 | 991.22 | 351.9 | 998 | 352.22 | 998.5 | 352.25 |
| 1008.11 | 352.5 | 1011.95 | 352.56 | 1012.38 | 352.57 | 1015.43 | 352.67 | 1017.78 | 352.72 |
| 1019.6 | 352.74 | 1022.33 | 352.81 | 1023.18 | 352.85 | 1025.54 | 352.94 | 1028.46 | 353.03 |
| 1029.56 | 353.06 | 1030.09 | 353.1 | 1030.98 | 353.14 | 1033.62 | 353.18 | 1036.77 | 353.18 |
| 1039.98 | 353.22 | 1041.4 | 353.2 | 1042.13 | 353.17 | 1043.77 | 353.17 | 1045.28 | 353.2 |
| 1045.83 | 353.22 | 1046.49 | 353.27 | 1048.62 | 353.29 | 1051.27 | 353.29 | 1053.02 | 353.26 |
| 1055.11 | 353.2 | 1058.21 | 353.08 | 1059.42 | 352.96 | 1060.83 | 352.84 | 1061.47 | 352.73 |
| 1062.11 | 352.68 | 1062.61 | 352.67 | 1065.91 | 352.68 | 1067.06 | 352.7 | 1067.2 | 352.69 |
| 1069.26 | 352.73 | 1071.16 | 352.81 | 1071.77 | 352.86 | 1072.61 | 352.95 | 1073.58 | 353.03 |
| 1074.46 | 353.09 | 1075.3 | 353.1 | 1075.8 | 353.07 | 1076.76 | 352.97 | 1076.78 | 352.85 |
| 1077.79 | 352.76 | 1078.79 | 352.73 | 1080.19 | 352.72 | 1081.99 | 352.7 | 1083.15 | 352.71 |
| 1085.56 | 352.77 | 1087.6 | 352.85 | 1089.06 | 352.93 | 1091.69 | 353.2 | 1093.25 | 353.34 |
| 1096.4 | 353.68 | 1103.24 | 354.25 | 1104.79 | 354.35 | 1107.49 | 354.57 | 1108.64 | 354.66 |
| 1108.99 | 354.67 | 1109.36 | 354.64 | 1110.54 | 354.58 | 1113.15 | 354.48 | 1119.14 | 354.31 |
| 1123.46 | 353.91 | 1124.07 | 353.87 | 1125.65 | 353.74 | 1127.16 | 353.75 | 1129.47 | 353.67 |
| 1131.21 | 353.56 | 1133.28 | 353.42 | 1133.86 | 353.39 | 1138.82 | 353.06 | 1141.63 | 353.05 |
| 1149 | 353.54 | 1150.77 | 353.64 | 1151.31 | 353.45 | 1152.65 | 353.46 | 1153.07 | 353.5 |
| 1154.52 | 353.7 | 1162.55 | 354.11 | 1171.07 | 354.35 | 1174.66 | 354.43 | 1175.18 | 354.42 |
| 1177.36 | 354.45 | 1180.07 | 354.52 | 1180.76 | 354.53 | 1182.71 | 354.53 | 1184.66 | 354.52 |
| 1185.56 | 354.51 | 1194.99 | 354.7 | 1202.34 | 354.87 | 1208.5 | 355.11 | 1209.12 | 355.13 |
| 1213 | 355.29 | 1216.57 | 355.46 | 1220.86 | 355.62 | 1223.84 | 355.69 | 1225.69 | 355.79 |
| 1226.93 | 355.79 | 1228.46 | 355.94 | 1231.38 | 356.24 | 1233.88 | 356.41 | 1235.69 | 356.49 |
| 1236.67 | 356.55 | 1240.52 | 356.72 | 1243.8 | 356.94 | 1245.28 | 357.05 | 1256.37 | 358.33 |
| 1264.99 | 359.06 | 1269.46 | 359.36 | 1271.06 | 359.46 | 1276.45 | 359.81 | 1279.48 | 359.96 |
| 1280.38 | 359.99 | 1281.46 | 360.04 | 1288.36 | 360.38 | 1291.46 | 360.53 | 1295.71 | 360.65 |
| 1295.9 | 360.66 | 1299.58 | 360.75 | 1302.38 | 360.95 | 1303.07 | 360.98 | 1305.96 | 361.01 |
| 1308.03 | 360.99 | 1309.19 | 360.93 | 1309.94 | 360.97 | 1318.19 | 361.54 | 1321.7 | 361.88 |
| 1325.05 | 362.21 | 1326.44 | 362.3 | 1331.01 | 362.63 | 1346.66 | 363.78 | 1352.79 | 364.21 |
| 1355.16 | 364.38 | 1356.21 | 364.44 | 1358.14 | 364.57 | 1360.14 | 364.72 | 1360.46 | 364.72 |
| 1361.16 | 364.78 | 1362.31 | 364.82 | 1367.03 | 364.9 | 1367.38 | 364.9 | 1368.5 | 364.87 |
| 1370.96 | 364.86 | 1371.1 | 364.87 | 1373.27 | 364.87 | 1373.76 | 364.89 | 1375.58 | 364.91 |
| 1378.25 | 364.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 195.83 | .05 | 374.73 | .04 | 1171.07 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 374.73 | 1171.07 | 13.39 | 19.76 | 27.15 | .1 | .3 |



BSE Document Control Number: 7323HYD101

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5664.08*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 183.04 | 360.16 | 184.16 | 360.13 | 185.51 | 360.12 | 185.7 | 360.1 | 189.07 | 360.06 |
| 189.35 | 360.06 | 214.58 | 359.51 | 224.58 | 359.29 | 224.81 | 359.29 | 227.7 | 359.14 |
| 228.09 | 359.13 | 231.09 | 358.98 | 248.17 | 358.4 | 248.75 | 358.39 | 257.99 | 358.38 |
| 267.6 | 357.47 | 268.01 | 357.47 | 269.88 | 357.35 | 283.96 | 356.66 | 286.9 | 356.56 |
| 291.15 | 356.56 | 298.24 | 357.23 | 299.85 | 357.29 | 300.22 | 357.36 | 301.16 | 357.35 |
| 304.37 | 357.3 | 305.1 | 357.28 | 305.19 | 357.21 | 305.8 | 357.1 | 306.98 | 357.19 |
| 307.84 | 357.27 | 308.65 | 357.4 | 308.86 | 357.45 | 310.85 | 357.71 | 311.3 | 357.76 |
| 311.96 | 357.78 | 316.28 | 357.81 | 316.72 | 357.84 | 318.72 | 357.89 | 320.35 | 357.97 |
| 324.63 | 357.97 | 325.86 | 358.04 | 327.15 | 358.07 | 329.64 | 358.09 | 330.17 | 358.07 |
| 330.62 | 358.03 | 332.02 | 357.94 | 332.36 | 357.91 | 333.67 | 357.84 | 336.29 | 357.61 |
| 337.76 | 357.52 | 337.94 | 357.62 | 338.58 | 357.72 | 339.44 | 357.66 | 339.68 | 357.67 |
| 340.83 | 357.6 | 342.79 | 357.53 | 343.85 | 357.42 | 347.26 | 357.03 | 347.45 | 357.03 |
| 347.96 | 357.08 | 348.99 | 357.23 | 349.88 | 357.42 | 356.81 | 358.24 | 357.69 | 358.31 |
| 361.91 | 358.31 | 372.07 | 357.71 | 372.29 | 357.68 | 375.54 | 357.34 | 375.76 | 357.32 |
| 376.46 | 357.19 | 378.01 | 356.94 | 379.8 | 356.85 | 380.61 | 356.78 | 381.18 | 356.69 |
| 381.81 | 356.52 | 382.56 | 356.36 | 391.62 | 355.86 | 393.7 | 355.7 | 394.08 | 355.66 |
| 397.57 | 355.4 | 399.99 | 355.1 | 400.24 | 355.08 | 400.65 | 355.14 | 400.79 | 355.39 |
| 400.9 | 355.4 | 403.24 | 355.49 | 405.55 | 355.54 | 406.39 | 355.54 | 407.83 | 355.49 |
| 409.3 | 355.4 | 414.37 | 354.94 | 415.36 | 354.83 | 419.3 | 354.94 | 421.03 | 354.94 |
| 421.41 | 354.93 | 421.74 | 354.85 | 422.57 | 354.79 | 426.2 | 354.86 | 429.15 | 354.97 |
| 429.9 | 354.99 | 433.62 | 355.05 | 434.71 | 355.06 | 437.54 | 355.14 | 441.82 | 355.24 |
| 443.98 | 355.24 | 445.78 | 355.23 | 449.37 | 355.24 | 450.97 | 355.21 | 451.42 | 355.18 |
| 451.5 | 355.09 | 451.83 | 355.07 | 453.16 | 355.04 | 455.91 | 355.02 | 457.24 | 355.05 |
| 459.74 | 355.09 | 461.88 | 355.13 | 464.09 | 355.2 | 466.16 | 355.27 | 467.38 | 355.3 |
| 471.06 | 355.35 | 474.87 | 355.42 | 476.71 | 355.43 | 479.85 | 355.44 | 480.22 | 355.45 |
| 482.88 | 355.46 | 491.6 | 355.53 | 492.13 | 355.53 | 497.5 | 355.57 | 500.15 | 355.55 |
| 504.89 | 355.43 | 505.13 | 355.41 | 509.16 | 355.19 | 513.19 | 354.96 | 513.56 | 354.91 |
| 514.18 | 354.89 | 515 | 354.96 | 516.65 | 354.99 | 518.12 | 354.99 | 518.77 | 355.02 |
| 519.07 | 355.08 | 519.42 | 355.18 | 520.13 | 355.2 | 522.59 | 355.21 | 524.45 | 355.19 |
| 534.19 | 354.89 | 534.41 | 354.87 | 537.21 | 354.74 | 538.01 | 354.69 | 540.03 | 354.58 |
| 540.5 | 354.57 | 544.69 | 354.57 | 549.29 | 354.71 | 552.53 | 354.71 | 553.23 | 354.7 |
| 556.68 | 354.6 | 557.79 | 354.58 | 560.85 | 354.58 | 561.38 | 354.57 | 562.49 | 354.59 |
| 562.93 | 354.59 | 567.87 | 354.65 | 568.87 | 354.71 | 574.57 | 354.71 | 575.71 | 354.72 |
| 577.6 | 354.72 | 578.85 | 354.67 | 582.37 | 354.5 | 583.08 | 354.46 | 584.51 | 354.41 |
| 593.97 | 354.11 | 604.88 | 353.76 | 605.71 | 353.71 | 609.33 | 353.71 | 609.57 | 353.73 |
| 610.38 | 353.74 | 610.98 | 353.76 | 611.53 | 353.84 | 612.04 | 353.82 | 614.14 | 354.31 |
| 614.26 | 354.32 | 615.16 | 354.52 | 620.17 | 354.52 | 620.58 | 354.43 | 621.05 | 354.41 |
| 623.5 | 354.28 | 623.97 | 354.24 | 624.49 | 354.15 | 624.85 | 354.12 | 627.73 | 354.05 |
| 628.64 | 354.01 | 630.38 | 353.95 | 634.12 | 353.89 | 638.29 | 353.99 | 638.53 | 354 |
| 653.05 | 354.35 | 654.65 | 354.38 | 659.75 | 354.49 | 662.19 | 354.62 | 665 | 354.79 |
| 666.64 | 354.92 | 668.74 | 355.07 | 669.22 | 355.08 | 669.67 | 355.07 | 671.11 | 355.06 |
| 672.56 | 355.04 | 676.34 | 354.95 | 678.22 | 354.93 | 679.36 | 354.9 | 684.84 | 354.79 |
| 685.54 | 354.77 | 686.33 | 354.76 | 688.63 | 354.77 | 689.85 | 354.82 | 690.42 | 354.86 |
| 691.46 | 354.91 | 692.52 | 354.9 | 694.72 | 354.92 | 695.22 | 354.92 | 697.4 | 354.95 |
| 699.03 | 355.05 | 700.44 | 355.1 | 703.08 | 355.15 | 706.69 | 355.15 | 718.57 | 354.94 |
| 720.86 | 354.87 | 727.49 | 354.6 | 728.36 | 354.48 | 730.85 | 354.15 | 733.61 | 353.7 |
| 734.06 | 353.67 | 734.53 | 353.68 | 738.65 | 353.69 | 738.99 | 353.79 | 742.68 | 353.69 |
| 751.77 | 353.66 | 768.22 | 353.65 | 770.43 | 353.39 | 770.65 | 353.36 | 772.98 | 353.09 |
| 774.03 | 352.96 | 777.08 | 352.76 | 780.16 | 352.76 | 782.01 | 352.87 | 787.61 | 352.99 |
| 788.16 | 352.98 | 789.95 | 353.01 | 790.96 | 353 | 793.41 | 352.99 | 795.57 | 352.94 |
| 800 | 352.85 | 802.41 | 352.79 | 803.03 | 352.78 | 804.63 | 352.78 | 805.21 | 352.79 |
| 809.12 | 352.88 | 809.77 | 352.89 | 811.48 | 352.93 | 812.41 | 352.93 | 814.58 | 352.9 |
| 827.58 | 352.4 | 833.72 | 352.15 | 834.14 | 352.12 | 835.38 | 352.08 | 839.57 | 352.07 |
| 839.82 | 352.09 | 843.4 | 352.1 | 843.93 | 352.2 | 844.18 | 352.22 | 847.47 | 352.41 |
| 849.26 | 352.48 | 850.46 | 352.54 | 851.98 | 352.68 | 853.86 | 352.75 | 854.58 | 352.75 |
| 858.09 | 352.66 | 860.31 | 352.63 | 861.72 | 352.57 | 861.87 | 352.57 | 862.72 | 352.49 |
| 863.16 | 352.38 | 863.36 | 352.35 | 863.83 | 352.34 | 867.63 | 352.31 | 868.8 | 352.26 |
| 870.76 | 352.53 | 871.38 | 352.58 | 872.81 | 352.63 | 874.1 | 352.61 | 877.35 | 352.47 |
| 879.28 | 352.31 | 879.98 | 352.27 | 881.48 | 352.22 | 882.36 | 352.22 | 884.93 | 352.27 |
| 886.62 | 352.27 | 890.11 | 352.38 | 894.99 | 352.52 | 896.17 | 352.56 | 896.41 | 352.59 |
| 897.28 | 352.66 | 902.04 | 352.64 | 905.19 | 352.64 | 909.1 | 352.65 | 910.17 | 352.65 |
| 912.31 | 352.52 | 919.79 | 352.03 | 923.87 | 351.76 | 923.96 | 351.75 | 927.52 | 351.72 |
| 928.78 | 351.74 | 929.24 | 351.76 | 933.29 | 352.14 | 933.52 | 352.12 | 935.69 | 352.34 |
| 936.22 | 352.35 | 937.16 | 352.34 | 938.06 | 352.32 | 944.97 | 352.05 | 953.43 | 351.7 |
| 963.14 | 351.43 | 966.07 | 351.38 | 966.97 | 351.38 | 969.07 | 351.35 | 974.79 | 351.28 |
| 976.8 | 351.25 | 977.82 | 351.24 | 978.27 | 351.27 | 978.58 | 351.27 | 980.52 | 351.31 |
| 981.22 | 351.31 | 983.56 | 351.33 | 984.04 | 351.35 | 986.53 | 351.39 | 988.25 | 351.41 |
| 989.93 | 351.41 | 995.29 | 351.53 | 1002.8 | 351.85 | 1012.05 | 352.12 | 1016.16 | 352.21 |
| 1017.29 | 352.25 | 1020.07 | 352.33 | 1021.65 | 352.37 | 1023.12 | 352.4 | 1025.76 | 352.47 |
| 1028.84 | 352.59 | 1033 | 352.72 | 1033.59 | 352.76 | 1034.52 | 352.79 | 1036.63 | 352.82 |
| 1039.66 | 352.84 | 1041.33 | 352.88 | 1042.67 | 352.9 | 1044.13 | 352.89 | 1045.67 | 352.87 |
| 1046.67 | 352.87 | 1048.39 | 352.9 | 1049.02 | 352.93 | 1051.08 | 352.94 | 1053.63 | 352.94 |
| 1054.47 | 352.92 | 1055.32 | 352.91 | 1057.34 | 352.84 | 1060.32 | 352.72 | 1061.49 | 352.6 |
| 1062.76 | 352.48 | 1063.46 | 352.36 | 1064.08 | 352.31 | 1064.56 | 352.31 | 1067.73 | 352.33 |
| 1068.61 | 352.36 | 1068.98 | 352.36 | 1070.72 | 352.4 | 1070.97 | 352.4 | 1073.07 | 352.51 |
| 1074.19 | 352.62 | 1075.98 | 352.76 | 1076.78 | 352.77 | 1077.27 | 352.75 | 1078.19 | 352.65 |
| 1078.21 | 352.52 | 1079.18 | 352.43 | 1080.15 | 352.4 | 1081.5 | 352.39 | 1082 | 352.38 |
| 1083.23 | 352.38 | 1084.34 | 352.39 | 1086.47 | 352.44 | 1088.63 | 352.55 | 1089.71 | 352.6 |
| 1090.14 | 352.63 | 1092.57 | 352.89 | 1094.08 | 353.03 | 1097.11 | 353.36 | 1103.71 | 353.98 |
| 1105.19 | 354.09 | 1109.07 | 354.43 | 1110.74 | 354.34 | 1113.25 | 354.23 | 1113.92 | 354.21 |
| 1119.03 | 354.04 | 1123.18 | 353.61 | 1124.23 | 353.52 | 1125.29 | 353.42 | 1126.75 | 353.43 |
| 1128.97 | 353.33 | 1129.72 | 353.29 | 1131.93 | 353.14 | 1132.65 | 353.08 | 1133.2 | 353.05 |
| 1137.98 | 352.71 | 1140.69 | 352.7 | 1147.79 | 353.23 | 1149.22 | 353.32 | 1149.5 | 353.33 |
| 1150.02 | 353.14 | 1150.6 | 353.13 | 1151.54 | 353.15 | 1153.11 | 353.33 | 1160.85 | 353.74 |
| 1169.05 | 353.96 | 1172.61 | 354.05 | 1173.12 | 354.05 | 1174.65 | 354.07 | 1175.28 | 354.09 |
| 1176.76 | 354.12 | 1177.96 | 354.16 | 1180.57 | 354.19 | 1182.63 | 354.19 | 1183.39 | 354.2 |
| 1192.73 | 354.4 | 1200 | 354.58 | 1206.09 | 354.83 | 1206.71 | 354.85 | 1210.55 | 355.01 |
| 1214.08 | 355.18 | 1218.33 | 355.33 | 1220.43 | 355.37 | 1221.28 | 355.38 | 1223.11 | 355.48 |
| 1224.26 | 355.48 | 1224.33 | 355.49 | 1228.75 | 355.9 | 1231.22 | 356.07 | 1233 | 356.16 |
| 1233.97 | 356.22 | 1237.78 | 356.39 | 1241.03 | 356.63 | 1242.5 | 356.75 | 1253.47 | 358.08 |
| 1262.01 | 358.85 | 1266.43 | 359.15 | 1267.6 | 359.24 | 1268.01 | 359.26 | 1273.35 | 359.63 |
| 1276.35 | 359.78 | 1278.3 | 359.87 | 1285.14 | 360.22 | 1288.21 | 360.38 | 1292.41 | 360.5 |
| 1292.6 | 360.5 | 1296.24 | 360.6 | 1299.01 | 360.81 | 1299.69 | 360.84 | 1302.55 | 360.87 |
| 1304.6 | 360.85 | 1305.75 | 360.79 | 1306.5 | 360.82 | 1309.47 | 361.05 | 1309.91 | 361.08 |
| 1314.66 | 361.44 | 1318.13 | 361.79 | 1321.45 | 362.14 | 1321.9 | 362.17 | 1326.8 | 362.54 |
| 1327.34 | 362.59 | 1342.83 | 363.79 | 1344.94 | 363.95 | 1348.9 | 364.24 | 1352.29 | 364.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1353.59 | 364.59 | 1356.17 | 364.79 | 1356.49 | 364.8 | 1357.18 | 364.85 | 1358.33 | 364.9 |
| 1361.33 | 364.94 | 1363.34 | 364.98 | 1364.44 | 364.94 | 1366.88 | 364.93 | 1367.02 | 364.94 |
| 1368.02 | 364.94 | 1369.17 | 364.95 | 1370.97 | 364.98 | 1371.46 | 364.98 | 1373.66 | 365 |
| 1374.09 | 365 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 183.04 | .05 | 372.29 | .04 | 1169.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 372.29 | 1169.05 | 13.39 | 19.76 | 27.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5644.32*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 170.25 | 360.05 | 171.43 | 360.02 | 172.85 | 360.01 | 173.05 | 359.99 | 176.61 | 359.94 |
| 176.9 | 359.94 | 203.52 | 359.37 | 214.06 | 359.15 | 214.31 | 359.14 | 217.35 | 358.98 |
| 217.77 | 358.98 | 220.92 | 358.81 | 238.94 | 358.21 | 239.55 | 358.2 | 249.3 | 358.19 |
| 259.44 | 357.23 | 259.86 | 357.23 | 261.83 | 357.11 | 276.68 | 356.38 | 279.79 | 356.28 |
| 284.27 | 356.28 | 291.75 | 356.99 | 293.44 | 357.05 | 293.83 | 357.13 | 294.83 | 357.12 |
| 298.22 | 357.07 | 298.98 | 357.04 | 299.07 | 356.97 | 299.72 | 356.85 | 301.88 | 357.03 |
| 302.95 | 357.22 | 305.04 | 357.51 | 305.52 | 357.55 | 306.22 | 357.57 | 310.78 | 357.61 |
| 311.24 | 357.64 | 313.34 | 357.69 | 315.06 | 357.78 | 319.58 | 357.79 | 320.88 | 357.85 |
| 322.23 | 357.89 | 324.87 | 357.91 | 325.43 | 357.89 | 325.89 | 357.85 | 327.38 | 357.76 |
| 327.74 | 357.73 | 329.12 | 357.65 | 332.47 | 357.36 | 333.42 | 357.32 | 333.62 | 357.42 |
| 334.08 | 357.51 | 334.3 | 357.53 | 335.2 | 357.46 | 335.45 | 357.47 | 336.66 | 357.4 |
| 338.74 | 357.32 | 339.85 | 357.21 | 343.44 | 356.8 | 343.64 | 356.8 | 344.18 | 356.85 |
| 345.27 | 357.01 | 346.21 | 357.21 | 353.52 | 358.08 | 354.44 | 358.16 | 358.9 | 358.15 |
| 369.62 | 357.52 | 369.84 | 357.49 | 373.36 | 357.16 | 374.07 | 357.03 | 375.64 | 356.77 |
| 377.46 | 356.68 | 378.27 | 356.62 | 378.86 | 356.52 | 379.49 | 356.35 | 380.25 | 356.18 |
| 389.43 | 355.68 | 391 | 355.55 | 391.93 | 355.48 | 395.46 | 355.2 | 398.16 | 354.86 |
| 398.58 | 354.92 | 398.73 | 355.19 | 398.83 | 355.2 | 401.2 | 355.3 | 403.54 | 355.35 |
| 404.4 | 355.35 | 405.85 | 355.3 | 407.34 | 355.2 | 412.49 | 354.72 | 413.33 | 354.61 |
| 413.48 | 354.6 | 417.48 | 354.71 | 419.24 | 354.71 | 419.62 | 354.69 | 419.95 | 354.62 |
| 420.8 | 354.55 | 424.47 | 354.61 | 425.8 | 354.67 | 427.46 | 354.73 | 428.22 | 354.75 |
| 431.99 | 354.81 | 432.22 | 354.81 | 433.82 | 354.85 | 434.2 | 354.87 | 435.96 | 354.92 |
| 438.15 | 354.97 | 440.3 | 355.01 | 442.49 | 355.01 | 444.22 | 355 | 444.31 | 354.99 |
| 447.95 | 355 | 449.16 | 354.99 | 450.02 | 354.94 | 450.11 | 354.85 | 450.44 | 354.83 |
| 451.79 | 354.79 | 454.16 | 354.77 | 454.57 | 354.77 | 455.93 | 354.8 | 457.77 | 354.83 |
| 458.46 | 354.85 | 460.62 | 354.89 | 462.87 | 354.97 | 464.96 | 355.04 | 466.2 | 355.09 |
| 469.93 | 355.15 | 473.79 | 355.22 | 478.84 | 355.25 | 479.21 | 355.26 | 481.9 | 355.27 |
| 490.74 | 355.33 | 491.28 | 355.33 | 496.72 | 355.37 | 499.41 | 355.35 | 504.2 | 355.21 |
| 504.45 | 355.2 | 508.54 | 354.96 | 512.62 | 354.71 | 513.16 | 354.66 | 513.62 | 354.65 |
| 514.45 | 354.71 | 516.13 | 354.75 | 517.62 | 354.75 | 518.15 | 354.77 | 518.45 | 354.81 |
| 518.93 | 354.94 | 519.65 | 354.96 | 522.15 | 354.97 | 523.5 | 354.97 | 524.02 | 354.96 |
| 533.89 | 354.63 | 534.12 | 354.61 | 536.95 | 354.47 | 537.77 | 354.41 | 539.82 | 354.3 |
| 540.29 | 354.28 | 542.05 | 354.29 | 544.53 | 354.28 | 548.49 | 354.41 | 549.2 | 354.44 |
| 551.45 | 354.43 | 553.19 | 354.43 | 555.57 | 354.34 | 556.68 | 354.31 | 557.81 | 354.29 |
| 561.45 | 354.29 | 563.02 | 354.31 | 568.03 | 354.39 | 569.04 | 354.45 | 574.82 | 354.47 |
| 575.97 | 354.48 | 577.89 | 354.48 | 577.97 | 354.47 | 579.15 | 354.43 | 582.71 | 354.26 |
| 583.43 | 354.22 | 584.89 | 354.16 | 586.5 | 354.11 | 594.48 | 353.84 | 605.52 | 353.46 |
| 606.36 | 353.41 | 610.03 | 353.41 | 610.28 | 353.43 | 611.1 | 353.44 | 611.7 | 353.46 |
| 612.27 | 353.55 | 612.78 | 353.52 | 614.91 | 354.04 | 615.03 | 354.05 | 615.95 | 354.26 |
| 621.02 | 354.26 | 621.44 | 354.17 | 621.91 | 354.14 | 624.4 | 354.01 | 624.87 | 353.96 |
| 625.39 | 353.87 | 625.76 | 353.84 | 628.68 | 353.77 | 631.36 | 353.66 | 635.16 | 353.6 |
| 639.38 | 353.7 | 639.63 | 353.71 | 654.33 | 354.08 | 655.96 | 354.12 | 661.12 | 354.24 |
| 664.47 | 354.44 | 665.77 | 354.53 | 666.44 | 354.57 | 669.01 | 354.77 | 670.23 | 354.87 |
| 670.72 | 354.88 | 671.18 | 354.87 | 672.63 | 354.86 | 674.1 | 354.84 | 676.71 | 354.77 |
| 678.71 | 354.72 | 680.8 | 354.68 | 680.99 | 354.67 | 686.55 | 354.54 | 688.06 | 354.5 |
| 690.39 | 354.51 | 691.62 | 354.56 | 692.21 | 354.6 | 693.25 | 354.65 | 693.76 | 354.64 |
| 694.33 | 354.65 | 696.56 | 354.67 | 697.06 | 354.66 | 699.27 | 354.7 | 699.86 | 354.72 |
| 700.62 | 354.78 | 701.15 | 354.81 | 702.35 | 354.85 | 705.03 | 354.9 | 708.69 | 354.9 |
| 720.72 | 354.67 | 723.05 | 354.6 | 728.05 | 354.37 | 729.64 | 354.3 | 729.76 | 354.3 |
| 731.26 | 354.09 | 733.17 | 353.83 | 735.96 | 353.35 | 736.43 | 353.32 | 736.9 | 353.32 |
| 741.08 | 353.34 | 741.42 | 353.45 | 745.16 | 353.35 | 754.37 | 353.33 | 771.03 | 353.32 |
| 773.5 | 353.02 | 776.93 | 352.6 | 780.02 | 352.38 | 783.13 | 352.38 | 785.01 | 352.5 |
| 790.7 | 352.62 | 791.69 | 352.61 | 793.05 | 352.63 | 794.08 | 352.62 | 796.56 | 352.61 |
| 803.24 | 352.46 | 805.68 | 352.4 | 807.93 | 352.4 | 808.52 | 352.41 | 812.49 | 352.5 |
| 813.14 | 352.52 | 814.87 | 352.56 | 815.82 | 352.57 | 818.02 | 352.54 | 837.41 | 351.76 |
| 837.84 | 351.73 | 839.09 | 351.69 | 843.33 | 351.67 | 843.59 | 351.69 | 847.21 | 351.71 |
| 847.76 | 351.82 | 848 | 351.84 | 851.34 | 352.05 | 853.16 | 352.12 | 854.37 | 352.18 |
| 855.91 | 352.34 | 858.03 | 352.43 | 862.63 | 352.34 | 864.35 | 352.31 | 865.78 | 352.26 |
| 866.86 | 352.17 | 867.24 | 352.05 | 867.44 | 352.02 | 867.92 | 352.02 | 871.77 | 351.97 |
| 872.96 | 351.93 | 874.86 | 352.2 | 875.57 | 352.25 | 877.01 | 352.3 | 878.55 | 352.28 |
| 879.06 | 352.25 | 881.62 | 352.13 | 883.57 | 351.96 | 884.28 | 351.91 | 885.8 | 351.87 |
| 886.7 | 351.87 | 889.3 | 351.91 | 891.01 | 351.92 | 894.55 | 352.03 | 899.49 | 352.19 |
| 900.69 | 352.22 | 901.81 | 352.33 | 906.64 | 352.32 | 914.47 | 352.32 | 914.88 | 352.33 |
| 917.04 | 352.18 | 924.62 | 351.67 | 925.38 | 351.61 | 928.75 | 351.38 | 928.84 | 351.37 |
| 932.46 | 351.35 | 933.73 | 351.37 | 934.19 | 351.4 | 938.3 | 351.8 | 938.54 | 351.78 |
| 940.74 | 352.01 | 941.27 | 352.02 | 942.23 | 352.01 | 943.14 | 351.99 | 950.14 | 351.7 |
| 958.71 | 351.35 | 968.55 | 351.07 | 971.05 | 351.03 | 972.42 | 351.02 | 976.19 | 350.97 |
| 979.48 | 350.94 | 982.39 | 350.9 | 983.11 | 350.9 | 984.69 | 350.93 | 986.33 | 350.94 |
| 988.58 | 350.96 | 989.05 | 350.97 | 993.09 | 351.02 | 994.71 | 351.02 | 999.87 | 351.17 |
| 1000.34 | 351.19 | 1006.62 | 351.43 | 1007.09 | 351.45 | 1015.99 | 351.73 | 1019.55 | 351.83 |
| 1019.95 | 351.85 | 1021.04 | 351.88 | 1022.78 | 351.94 | 1024.96 | 352.01 | 1025.23 | 352.01 |
| 1027.39 | 352.07 | 1029.18 | 352.13 | 1032.15 | 352.24 | 1036.37 | 352.38 | 1036.71 | 352.4 |
| 1038.29 | 352.44 | 1042.56 | 352.5 | 1045.45 | 352.59 | 1046.85 | 352.59 | 1047.12 | 352.58 |
| 1048.34 | 352.57 | 1050.45 | 352.57 | 1051.56 | 352.59 | 1055.24 | 352.59 | 1056.68 | 352.58 |
| 1059.56 | 352.48 | 1062.43 | 352.36 | 1063.55 | 352.23 | 1064.78 | 352.11 | 1064.86 | 352.11 |
| 1065.45 | 351.99 | 1066.04 | 351.94 | 1066.51 | 351.94 | 1069.56 | 351.99 | 1070.76 | 352.03 |
| 1071.83 | 352.05 | 1073.6 | 352.12 | 1075 | 352.21 | 1075.97 | 352.3 | 1076.42 | 352.33 |
| 1077.49 | 352.44 | 1078.27 | 352.45 | 1078.73 | 352.43 | 1079.62 | 352.32 | 1079.64 | 352.19 |
| 1080.58 | 352.1 | 1081.5 | 352.08 | 1083.69 | 352.06 | 1084.16 | 352.05 | 1085.54 | 352.07 |
| 1087.78 | 352.13 | 1088.51 | 352.18 | 1090.71 | 352.29 | 1091.57 | 352.37 | 1093.46 | 352.58 |
| 1094.9 | 352.73 | 1097.83 | 353.05 | 1104.17 | 353.7 | 1105.1 | 353.78 | 1108.1 | 354.08 |
| 1109.05 | 354.18 | 1109.5 | 354.2 | 1109.84 | 354.17 | 1110.93 | 354.1 | 1113.35 | 353.99 |
| 1113.99 | 353.97 | 1118.91 | 353.77 | 1122.91 | 353.3 | 1124.94 | 353.1 | 1125.75 | 353.11 |
| 1126.34 | 353.1 | 1128.48 | 353 | 1129.19 | 352.96 | 1130.09 | 352.89 | 1132.55 | 352.71 |
| 1137.15 | 352.35 | 1139.75 | 352.35 | 1146.58 | 352.91 | 1148.22 | 353.03 | 1148.72 | 352.82 |

```
 1149.96  352.81  1151.7  352.96 1159.14  353.37 1167.04  353.58 1170.55  353.67
  1173.2  353.72 1176.53  353.81 1177.44  353.83 1178.44  353.84 1181.23  353.88
 1190.47  354.11 1197.66  354.29 1203.69  354.55  1204.3  354.57  1208.1  354.73
  1211.6  354.89  1215.8  355.03 1217.88  355.07 1218.72  355.08 1220.53  355.18
 1221.74  355.18 1226.11  355.56 1228.55  355.74 1230.32  355.83 1231.28   355.9
 1235.05  356.07 1238.27  356.31 1239.72  356.44 1250.58  357.84 1259.02  358.63
  1263.4  358.95 1264.96  359.07 1270.24  359.45 1272.02  359.54 1272.41  359.57
  1273.6  359.63 1275.15   359.7 1281.91  360.06 1284.95  360.22  1289.1  360.34
  1289.3  360.35  1292.9  360.45 1295.49  360.66 1296.32   360.7 1299.15  360.73
 1301.17  360.71 1302.31  360.64 1303.05  360.68 1305.99  360.92 1306.43  360.95
 1311.12  361.33 1317.84  362.07 1318.29  362.11 1319.21  362.17 1323.14  362.49
 1323.68  362.54    1339   363.8 1341.09  363.97 1345.01  364.28 1346.93  364.44
 1349.65  364.65 1351.93  364.84 1352.52  364.87 1353.21  364.93 1354.34  364.97
 1358.96  365.05  1359.3  365.05 1360.39  365.02 1362.77     365 1362.94  365.01
 1363.93  365.01 1365.07  365.02 1365.55  365.04 1366.85  365.05 1369.51  365.09
 1369.94  365.09

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
  170.25     .05  369.84     .04 1167.04     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        369.84 1167.04            13.39   19.76   27.16              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0               RS: 5624.57

INPUT
Description:
Station Elevation Data     num=     431
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
157.4601  359.94158.0801  359.92158.4401  359.92158.7001  359.91160.2001   359.9
  160.41  359.88  164.15  359.83164.4601  359.83  203.54     359   203.8  358.99
     207  358.83207.4401  358.82  210.76  358.65229.7101  358.02230.3501  358.01
  240.61     358  251.27     357251.7201     357  253.79  356.87  269.41  356.11
272.6801     356276.9401     356  277.14  355.99  277.39     356  285.26  356.75
  285.91  356.77286.9601  356.82  287.04  356.82287.4501   356.9292.0601  356.84
  292.86  356.81292.9601  356.73293.3301  356.66  293.64  356.61294.9501  356.71
  295.91   356.8   296.8  356.95  297.04     357  299.24   357.3  299.74  357.35
  300.48  357.37  305.27  357.41  305.76  357.44307.9701   357.5  309.78  357.59
  314.53   357.6   315.9  357.67317.3201  357.71320.0901  357.73320.6801  357.71
  321.17  357.67  322.73  357.57  323.11  357.54324.5601  357.46327.4601  357.21
  327.89  357.18328.0901  357.16  328.99  357.12  329.04  357.11329.0901  357.11
  329.15  357.17   329.3  357.22  329.78  357.31  330.01  357.33330.9601  357.26
331.2201  357.27   332.5   357.2334.6801  357.12335.8501     357  339.63  356.57
339.8401  356.57340.1001  356.59  340.41  356.62  341.55  356.79  342.54     357
  350.23  357.92   351.2     358  355.89     358  367.16  357.34   367.4  357.31
  370.96     357  373.27  356.61  375.11  356.52375.9401  356.45  376.53  356.35
  377.17  356.17377.9401     356387.2401   355.5  393.35     355  395.84  354.67
  396.09  354.64  396.29  354.67  396.51  354.71  396.66  354.99  396.77     355
  399.17   355.1  401.54  355.16  402.41  355.16403.8801   355.1404.7501  355.04
  404.86  355.04  405.39     355   410.6  354.49  411.46  354.38  411.61  354.37
  414.58  354.45414.6301  354.45  415.66  354.48417.4401  354.48  417.83  354.46
  418.16  354.38  419.02  354.31422.7401  354.37  425.77  354.49  430.36  354.58
  430.59  354.58  432.21  354.63432.3701  354.63  432.45  354.64  432.51  354.64
   432.6  354.65  433.64  354.68  433.83  354.69434.1801   354.7   434.3   354.7
  438.78  354.79442.6901  354.77  442.84  354.76  446.53  354.77  447.76  354.75
  448.17  354.73448.6301   354.7  448.72   354.6  449.05  354.58  450.42  354.54
452.8201  354.51453.2401  354.51459.3701  354.65  465.02  354.87  472.71  355.02
477.8201  355.06   478.2  355.07495.9401  355.17  498.66  355.15  503.52     355
  503.77  354.98  512.05  354.47  512.27  354.45512.4301  354.42  512.59  354.41
512.9301   354.4513.0601   354.4  513.46  354.44   513.9  354.47   515.6  354.51
  517.11  354.51  517.65  354.53  517.77  354.54  517.95  354.57  518.08   354.6
518.4401  354.71  519.17  354.73   521.7  354.74523.0701  354.73   523.6  354.72
   533.6  354.37  533.83  354.35   536.7   354.2  537.53  354.14   539.6  354.02
  540.08     354544.3801     354  548.39  354.13  548.84  354.15548.9301  354.15
  549.11  354.16  553.15  354.15556.6901  354.02  557.83     354  561.52     354
568.1801  354.12568.9301  354.18  569.21  354.19575.0601  354.22  576.23  354.24
  578.17  354.24  579.45  354.19584.8201  353.93  606.17  353.16  606.23  353.15
606.6901  353.13  607.02  353.11610.7401  353.11610.9901  353.13  611.16  353.13
611.5701  353.14  611.79  353.14612.4301  353.16613.0001  353.25  613.52  353.22
615.6801  353.77   615.8  353.78  616.73     354621.8701     354  622.29   353.9
  625.29  353.74  625.77  353.69   626.3  353.59626.4901  353.57  626.67  353.56
  629.52  353.49629.6301  353.49  632.35  353.38636.1901  353.31  640.47  353.42
  640.72  353.43662.5001     354  665.79  354.21  665.89  354.21  667.89  354.35
  671.73  354.67  672.02  354.68  672.22  354.68  675.65  354.64682.4301  354.45
682.6301  354.44  689.79  354.24  692.15  354.25   693.4   354.3693.9901  354.34
  695.05  354.39695.5601  354.38   698.4  354.41  698.91   354.4  701.15  354.44
701.7401  354.47  702.51  354.53  703.05  354.56  704.27   354.6  706.98  354.65
710.6901  354.65  711.03  354.64711.2501  354.64722.8801   354.4725.2401  354.32
  732.04     354735.4901   353.5738.3201     353  738.79  352.97743.5001     353
  743.85  353.11  747.64  353.01  773.85     353779.8201  352.23  782.95     352
  786.11     352  788.01  352.12  793.78  352.25  794.33  352.23  796.16  352.25
  799.71  352.23  808.95  352.02  811.23  352.02  818.26  352.19  819.22   352.2
  821.45  352.17   841.1  351.36  841.41  351.34  841.53  351.33   842.8  351.29
   847.1  351.28   847.2  351.29  847.36   351.3  851.03  351.32   851.1  351.34
  851.58  351.44  851.83  351.46855.2101  351.68  856.47  351.74  857.05  351.76
  858.28  351.83  859.84     352861.1901  352.07861.8101  352.09861.9901   352.1
  862.51   352.1  868.39     352869.9901  351.94870.9301  351.85871.3201  351.73
  871.52   351.7  875.91  351.64  876.72   351.6  877.11  351.59  879.04  351.87
  879.76  351.93  881.22  351.98  881.61  351.98  882.78  351.95  885.89  351.79
  887.91   351.6888.5801  351.56  890.12  351.51  891.03  351.51  893.67  351.56
   895.4  351.57905.2101  351.89905.4301  351.92  906.34     352919.5801     352
  933.64  351.01  933.73     351  937.39  350.98938.6801     351939.0701  351.03
  939.15  351.03943.3101  351.46  943.55  351.44  945.78  351.68946.0701  351.69
946.3201  351.69946.9601  351.68  947.29  351.68947.8101  351.66948.2101  351.66
963.9901     351973.9601  350.72  980.05  350.63  980.38  350.63   988.3  350.55
999.4901  350.64 1038.05  351.98 1038.17  351.99 1038.46  351.99 1040.29  352.05
 1045.45  352.16 1048.23  352.27 1049.86  352.28  1058.8  352.23 1059.92   352.2
 1064.54     352 1065.62  351.87 1066.87  351.74 1067.44  351.62 1068.01  351.57
 1068.46  351.57 1071.39  351.64 1071.69  351.65  1072.2  351.68 1074.38  351.75
 1076.61  351.88 1077.98     352 1079.01  352.11 1079.75  352.13  1080.2  352.11
 1081.05     352 1081.07  351.86 1081.97  351.77 1082.86  351.75 1084.11  351.74
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1084.57 | 351.73 | 1085.41 | 351.73 | 1086.74 | 351.75 | 1087.01 | 351.76 | 1088.56 | 351.8 |
| 1088.78 | 351.81 | 1089.59 | 351.87 | 1091.93 | 352 | 1109.32 | 353.94 | 1109.44 | 353.95 |
| 1109.59 | 353.96 | 1109.75 | 353.96 | 1109.85 | 353.95 | 1110.08 | 353.93 | 1111.13 | 353.86 |
| 1118.79 | 353.5 | 1122.63 | 353 | 1124.58 | 352.78 | 1125.36 | 352.79 | 1125.93 | 352.78 |
| 1127.98 | 352.67 | 1129.53 | 352.56 | 1136.31 | 352 | 1138.81 | 352 | 1145.37 | 352.6 |
| 1146.95 | 352.72 | 1147.43 | 352.5 | 1148.62 | 352.49 | 1157.44 | 353 | 1165.02 | 353.2 |
| 1195.32 | 354 | 1209.11 | 354.61 | 1213.27 | 354.74 | 1216.16 | 354.78 | 1217.95 | 354.88 |
| 1219.08 | 354.87 | 1225.89 | 355.41 | 1227.64 | 355.5 | 1228.59 | 355.57 | 1232.32 | 355.75 |
| 1235.5 | 356 | 1236.94 | 356.13 | 1247.68 | 357.59 | 1256.04 | 358.42 | 1267.14 | 359.27 |
| 1281.69 | 360.07 | 1289.56 | 360.3 | 1292.12 | 360.52 | 1292.94 | 360.56 | 1295.74 | 360.59 |
| 1297.74 | 360.57 | 1298.87 | 360.5 | 1299.6 | 360.54 | 1307.59 | 361.22 | 1314.24 | 362 |
| 1314.68 | 362.04 | 1315.59 | 362.11 | 1347.97 | 364.91 | 1348.24 | 364.93 | 1348.55 | 364.94 |
| 1349.23 | 365 | 1350.35 | 365.05 | 1354.92 | 365.13 | 1355.26 | 365.13 | 1356.34 | 365.09 |
| 1358.69 | 365.07 | 1358.86 | 365.08 | 1360.97 | 365.09 | 1361.1 | 365.1 | 1361.44 | 365.11 |
| 1365.79 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 157.4601 | .05 | 367.4 | .04 | 1165.02 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 367.4 | 1165.02 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5605.08*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 166.52 | 359.64 | 167.78 | 359.61 | 169.31 | 359.6 | 169.53 | 359.59 | 171.57 | 359.56 |
| 173.34 | 359.51 | 173.65 | 359.51 | 178.18 | 359.35 | 184.09 | 359.18 | 196.68 | 358.88 |
| 196.91 | 358.88 | 204.22 | 358.71 | 209.53 | 358.59 | 212.79 | 358.52 | 213.84 | 358.49 |
| 217.02 | 358.34 | 218.18 | 358.3 | 220.85 | 358.17 | 235.92 | 357.7 | 238.29 | 357.63 |
| 239.33 | 357.59 | 240.83 | 357.56 | 250.01 | 357.57 | 251.28 | 357.57 | 256.29 | 357.13 |
| 262.15 | 356.62 | 262.61 | 356.62 | 264.72 | 356.49 | 276.8 | 355.94 | 280.64 | 355.76 |
| 280.71 | 355.75 | 281.98 | 355.71 | 283.98 | 355.64 | 287.53 | 355.64 | 288.32 | 355.65 |
| 288.52 | 355.64 | 289.01 | 355.67 | 296.8 | 356.37 | 297.47 | 356.39 | 298.62 | 356.44 |
| 299.04 | 356.52 | 303.74 | 356.47 | 304.55 | 356.44 | 304.65 | 356.37 | 305.35 | 356.25 |
| 306.68 | 356.35 | 307.66 | 356.44 | 308.81 | 356.63 | 311.21 | 356.93 | 311.56 | 356.96 |
| 312.32 | 356.98 | 312.96 | 356.98 | 315.75 | 357.01 | 317.2 | 357.02 | 317.7 | 357.05 |
| 319.95 | 357.11 | 320.88 | 357.16 | 321.66 | 357.19 | 322.86 | 357.19 | 324.12 | 357.2 |
| 326.64 | 357.2 | 327.86 | 357.27 | 329.54 | 357.31 | 332.31 | 357.3 | 332.91 | 357.27 |
| 335.35 | 357.07 | 336.87 | 356.98 | 340.47 | 356.7 | 341.48 | 356.66 | 341.55 | 356.72 |
| 342.19 | 356.85 | 342.42 | 356.87 | 343.39 | 356.82 | 343.66 | 356.83 | 344.42 | 356.79 |
| 345.93 | 356.74 | 347.18 | 356.71 | 348.38 | 356.6 | 352.23 | 356.19 | 352.44 | 356.19 |
| 353.02 | 356.24 | 354.19 | 356.4 | 355.2 | 356.6 | 362.8 | 357.45 | 364.02 | 357.54 |
| 368.81 | 357.51 | 370.23 | 357.42 | 372.08 | 357.32 | 377.79 | 357.05 | 378.59 | 357 |
| 380.29 | 356.92 | 380.54 | 356.89 | 381.28 | 356.82 | 382.05 | 356.76 | 384.03 | 356.59 |
| 386.3 | 356.21 | 388.1 | 356.13 | 388.91 | 356.06 | 389.49 | 355.96 | 390.12 | 355.79 |
| 390.87 | 355.63 | 391.92 | 355.58 | 394.4 | 355.44 | 399.99 | 355.14 | 405.98 | 354.65 |
| 408.67 | 354.3 | 409.08 | 354.36 | 409.23 | 354.63 | 409.34 | 354.64 | 411.69 | 354.73 |
| 414.02 | 354.78 | 414.87 | 354.77 | 416.31 | 354.71 | 417.79 | 354.61 | 422.9 | 354.13 |
| 423.57 | 354.04 | 423.89 | 354.01 | 427.86 | 354.13 | 429.61 | 354.13 | 429.99 | 354.11 |
| 430.31 | 354.04 | 431.16 | 353.97 | 433.67 | 354.02 | 434.8 | 354.03 | 437.77 | 354.15 |
| 439.65 | 354.18 | 442.28 | 354.23 | 442.5 | 354.23 | 444.09 | 354.28 | 446.02 | 354.36 |
| 450.53 | 354.43 | 454.37 | 354.41 | 454.51 | 354.4 | 458.13 | 354.4 | 459.34 | 354.38 |
| 460.19 | 354.33 | 460.28 | 354.24 | 460.6 | 354.22 | 461.95 | 354.18 | 464.3 | 354.15 |
| 464.71 | 354.14 | 465.28 | 354.16 | 467.72 | 354.2 | 470.72 | 354.27 | 476.26 | 354.47 |
| 483.8 | 354.62 | 488.81 | 354.66 | 489.18 | 354.66 | 493.15 | 354.69 | 497.13 | 354.71 |
| 498.14 | 354.72 | 499.02 | 354.72 | 506.58 | 354.77 | 509.25 | 354.76 | 514.01 | 354.62 |
| 514.26 | 354.6 | 522.38 | 354.12 | 522.91 | 354.07 | 523.37 | 354.06 | 523.76 | 354.1 |
| 524.19 | 354.12 | 525.86 | 354.16 | 527.34 | 354.17 | 527.99 | 354.19 | 528.29 | 354.25 |
| 528.64 | 354.36 | 529.36 | 354.38 | 531.84 | 354.39 | 533.7 | 354.37 | 543.51 | 354.05 |
| 543.73 | 354.03 | 546.55 | 353.89 | 547.36 | 353.83 | 549.39 | 353.72 | 549.86 | 353.7 |
| 554.08 | 353.7 | 558.01 | 353.82 | 558.72 | 353.85 | 562.68 | 353.84 | 566.15 | 353.71 |
| 567.27 | 353.69 | 570.88 | 353.68 | 575.27 | 353.75 | 577.42 | 353.79 | 578.43 | 353.85 |
| 584.16 | 353.88 | 585.31 | 353.9 | 587.21 | 353.9 | 588.47 | 353.85 | 591.38 | 353.72 |
| 593.73 | 353.61 | 594.93 | 353.58 | 601.83 | 353.34 | 603.91 | 353.24 | 607.07 | 353.13 |
| 609.05 | 353.07 | 610.57 | 353.01 | 614.5 | 352.88 | 615.5 | 352.83 | 619.15 | 352.83 |
| 619.39 | 352.85 | 620.18 | 352.86 | 620.8 | 352.88 | 621.36 | 352.96 | 621.87 | 352.93 |
| 623.99 | 353.46 | 624.11 | 353.47 | 625.02 | 353.68 | 628.88 | 353.68 | 630.06 | 353.69 |
| 630.47 | 353.59 | 633.41 | 353.44 | 633.89 | 353.39 | 634.41 | 353.3 | 634.77 | 353.27 |
| 636.49 | 353.22 | 637.67 | 353.2 | 640.34 | 353.09 | 643.43 | 353.03 | 644.1 | 353.01 |
| 648.3 | 353.12 | 649.31 | 353.15 | 651.15 | 353.18 | 654.28 | 353.26 | 654.52 | 353.27 |
| 658.74 | 353.38 | 661.66 | 353.46 | 666.59 | 353.59 | 669.78 | 353.68 | 669.9 | 353.68 |
| 672.35 | 353.84 | 673.23 | 353.88 | 675.19 | 354.02 | 678.43 | 354.28 | 678.95 | 354.33 |
| 679.43 | 354.34 | 680.85 | 354.32 | 682.8 | 354.3 | 687.67 | 354.17 | 688.23 | 354.16 |
| 689.64 | 354.11 | 692.07 | 354.04 | 695.39 | 353.95 | 696.66 | 353.91 | 698.97 | 353.92 |
| 700.2 | 353.96 | 700.78 | 354 | 701.82 | 354.05 | 702.32 | 354.04 | 705.1 | 354.06 |
| 705.6 | 354.05 | 707.8 | 354.09 | 709.66 | 354.2 | 710.86 | 354.24 | 713.52 | 354.28 |
| 717.15 | 354.28 | 717.7 | 354.27 | 724.51 | 354.12 | 729.11 | 354.03 | 731.42 | 353.94 |
| 731.67 | 353.92 | 732.6 | 353.88 | 733.9 | 353.81 | 736.48 | 353.7 | 738.09 | 353.62 |
| 740.29 | 353.31 | 741.47 | 353.15 | 744.25 | 352.68 | 744.71 | 352.65 | 749.33 | 352.69 |
| 749.67 | 352.8 | 752.79 | 352.72 | 753.39 | 352.71 | 754.29 | 352.72 | 756.51 | 352.73 |
| 768.58 | 352.73 | 769.78 | 352.72 | 779.09 | 352.72 | 784.94 | 351.98 | 788.01 | 351.75 |
| 791.11 | 351.75 | 792.97 | 351.86 | 798.63 | 351.99 | 799.17 | 351.97 | 800.96 | 351.99 |
| 804.44 | 351.97 | 810.07 | 351.86 | 811.87 | 351.83 | 813.5 | 351.79 | 815.74 | 351.8 |
| 819.34 | 351.89 | 820.4 | 351.92 | 823.15 | 351.98 | 825.76 | 351.95 | 845.03 | 351.18 |
| 845.45 | 351.15 | 846.7 | 351.11 | 849.06 | 351.11 | 850.91 | 351.1 | 851.17 | 351.12 |
| 854.77 | 351.13 | 855.3 | 351.24 | 855.55 | 351.26 | 858.86 | 351.46 | 860.1 | 351.52 |
| 860.67 | 351.53 | 861.87 | 351.6 | 863.4 | 351.76 | 864.73 | 351.82 | 865.75 | 351.85 |
| 866.33 | 351.84 | 871.79 | 351.73 | 873.36 | 351.67 | 874.28 | 351.58 | 874.66 | 351.46 |
| 874.86 | 351.43 | 879.16 | 351.36 | 880.34 | 351.31 | 882.23 | 351.58 | 882.94 | 351.63 |
| 884.37 | 351.68 | 884.75 | 351.68 | 885.9 | 351.65 | 888.95 | 351.5 | 890.93 | 351.32 |
| 891.59 | 351.28 | 893.1 | 351.23 | 893.99 | 351.23 | 896.58 | 351.28 | 898.27 | 351.29 |
| 907.89 | 351.6 | 909 | 351.7 | 915.86 | 351.7 | 920.72 | 351.72 | 921.98 | 351.72 |
| 925.3 | 351.5 | 935.77 | 350.78 | 935.86 | 350.77 | 938.68 | 350.76 | 939.45 | 350.75 |
| 940.71 | 350.77 | 941.17 | 350.8 | 944.1 | 351.09 | 945.25 | 351.2 | 945.49 | 351.18 |
| 947.67 | 351.41 | 948.2 | 351.42 | 949.15 | 351.41 | 950.06 | 351.39 | 955.46 | 351.16 |
| 963.81 | 350.77 | 965.53 | 350.7 | 971.41 | 350.52 | 975.1 | 350.42 | 975.3 | 350.42 |
| 981.28 | 350.32 | 981.6 | 350.32 | 988.96 | 350.24 | 989.37 | 350.23 | 995.35 | 350.28 |
| 998.2 | 350.3 | 1000.51 | 350.32 | 1009.16 | 350.61 | 1015.74 | 350.84 | 1032.72 | 351.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1036.07 | 351.54 | 1041.16 | 351.7 | 1046.3 | 351.81 | 1049.07 | 351.92 | 1050.69 | 351.93 |
| 1052.19 | 351.92 | 1054.18 | 351.92 | 1059.6 | 351.88 | 1060.71 | 351.85 | 1061.79 | 351.81 |
| 1064.19 | 351.71 | 1065.31 | 351.65 | 1066.1 | 351.56 | 1067.64 | 351.4 | 1068.2 | 351.29 |
| 1068.77 | 351.24 | 1069.22 | 351.24 | 1069.81 | 351.26 | 1072.14 | 351.31 | 1072.95 | 351.35 |
| 1075.12 | 351.42 | 1077.34 | 351.55 | 1078.7 | 351.67 | 1079.73 | 351.78 | 1080.47 | 351.8 |
| 1080.91 | 351.78 | 1081.76 | 351.68 | 1081.78 | 351.55 | 1082.68 | 351.47 | 1083.56 | 351.45 |
| 1084.81 | 351.45 | 1085.27 | 351.44 | 1086.17 | 351.44 | 1089.24 | 351.52 | 1090.27 | 351.59 |
| 1092.6 | 351.72 | 1101.68 | 352.72 | 1108.45 | 353.44 | 1109.92 | 353.59 | 1110.35 | 353.61 |
| 1110.68 | 353.58 | 1111.73 | 353.52 | 1119.36 | 353.18 | 1119.53 | 353.15 | 1123.18 | 352.69 |
| 1125.13 | 352.48 | 1126.47 | 352.47 | 1128.51 | 352.36 | 1130.06 | 352.26 | 1136.81 | 351.71 |
| 1138.04 | 351.7 | 1139.3 | 351.7 | 1140.54 | 351.82 | 1145.84 | 352.3 | 1147.41 | 352.42 |
| 1147.89 | 352.22 | 1149.07 | 352.21 | 1149.96 | 352.26 | 1155.35 | 352.61 | 1157.86 | 352.78 |
| 1158.17 | 352.79 | 1161.36 | 352.93 | 1162.38 | 352.97 | 1165.41 | 353.11 | 1169.41 | 353.24 |
| 1176.11 | 353.47 | 1183.3 | 353.71 | 1184.36 | 353.74 | 1191.06 | 353.96 | 1194.58 | 354.07 |
| 1198.18 | 354.26 | 1198.52 | 354.27 | 1206.06 | 354.65 | 1207.13 | 354.71 | 1207.85 | 354.74 |
| 1211.86 | 354.89 | 1213.41 | 354.92 | 1214.64 | 354.95 | 1216.36 | 355.06 | 1217.45 | 355.06 |
| 1219.19 | 355.2 | 1224.01 | 355.61 | 1225.69 | 355.71 | 1226.61 | 355.78 | 1230.2 | 355.97 |
| 1233.26 | 356.22 | 1234.64 | 356.35 | 1244.98 | 357.79 | 1245.98 | 357.89 | 1253.03 | 358.62 |
| 1259.34 | 359.13 | 1263.72 | 359.47 | 1272.78 | 359.98 | 1274.49 | 360.08 | 1277.42 | 360.24 |
| 1278.79 | 360.29 | 1281.61 | 360.36 | 1282.07 | 360.38 | 1283.09 | 360.4 | 1285.3 | 360.46 |
| 1287.76 | 360.66 | 1288.55 | 360.69 | 1291.25 | 360.71 | 1293.17 | 360.69 | 1294.26 | 360.62 |
| 1294.96 | 360.65 | 1301.25 | 361.17 | 1302.66 | 361.28 | 1306.54 | 361.72 | 1307.45 | 361.82 |
| 1309.06 | 362.02 | 1310.36 | 362.13 | 1314.76 | 362.53 | 1320.32 | 363.03 | 1324.43 | 363.39 |
| 1325.61 | 363.5 | 1332.12 | 364.06 | 1335.81 | 364.37 | 1339.73 | 364.71 | 1341.53 | 364.87 |
| 1342.09 | 364.9 | 1342.74 | 364.96 | 1343.82 | 365.01 | 1348.22 | 365.1 | 1348.54 | 365.1 |
| 1349.58 | 365.07 | 1351.85 | 365.06 | 1352.01 | 365.07 | 1354.04 | 365.08 | 1354.49 | 365.1 |
| 1358.68 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 166.52 | .05 | 380.54 | .04 | 1165.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 380.54 | 1165.41 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5585.60*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 175.58 | 359.35 | 176.07 | 359.33 | 178.42 | 359.31 | 178.64 | 359.29 | 180.04 | 359.28 |
| 182.85 | 359.19 | 185.41 | 359.07 | 187.46 | 358.96 | 193.49 | 358.75 | 206.31 | 358.42 |
| 206.55 | 358.41 | 211.85 | 358.28 | 214 | 358.23 | 219.41 | 358.09 | 222.73 | 358.03 |
| 225.81 | 357.91 | 227.04 | 357.85 | 227.5 | 357.85 | 228.22 | 357.81 | 230.95 | 357.69 |
| 246.3 | 357.25 | 249.54 | 357.14 | 250.64 | 357.11 | 251.3 | 357.11 | 260.66 | 357.13 |
| 261.96 | 357.13 | 267.06 | 356.73 | 273.03 | 356.24 | 273.5 | 356.23 | 275.65 | 356.12 |
| 287.96 | 355.59 | 291.88 | 355.4 | 295.28 | 355.28 | 298.9 | 355.29 | 300.17 | 355.3 |
| 308.35 | 356 | 309.02 | 356.02 | 310.19 | 356.07 | 310.62 | 356.14 | 315.41 | 356.1 |
| 316.24 | 356.07 | 316.35 | 356 | 317.05 | 355.9 | 318.41 | 355.99 | 319.41 | 356.07 |
| 320.58 | 356.26 | 321.83 | 356.41 | 323.03 | 356.54 | 323.39 | 356.57 | 324.81 | 356.59 |
| 327.66 | 356.62 | 329.13 | 356.64 | 329.64 | 356.66 | 331.94 | 356.72 | 333.06 | 356.78 |
| 333.57 | 356.79 | 334.9 | 356.79 | 336.18 | 356.8 | 338.75 | 356.81 | 340.18 | 356.88 |
| 341.71 | 356.9 | 344.53 | 356.87 | 345.14 | 356.84 | 345.65 | 356.78 | 347.27 | 356.63 |
| 347.63 | 356.59 | 349.17 | 356.5 | 352.63 | 356.26 | 353.12 | 356.23 | 353.88 | 356.21 |
| 354.1 | 356.31 | 354.6 | 356.4 | 354.84 | 356.42 | 355.82 | 356.37 | 356.09 | 356.38 |
| 357.42 | 356.34 | 359.69 | 356.29 | 360.9 | 356.19 | 364.83 | 355.81 | 365.05 | 355.81 |
| 365.64 | 355.86 | 366.82 | 356.01 | 367.85 | 356.2 | 374.04 | 356.84 | 375.66 | 357.01 |
| 376.85 | 357.08 | 381.72 | 357.02 | 383.18 | 356.93 | 385.06 | 356.83 | 391.14 | 356.6 |
| 391.7 | 356.57 | 393.43 | 356.5 | 393.68 | 356.47 | 394.4 | 356.4 | 397.1 | 356.18 |
| 399.32 | 355.82 | 401.09 | 355.73 | 401.89 | 355.67 | 402.45 | 355.58 | 403.07 | 355.42 |
| 403.81 | 355.26 | 407.27 | 355.08 | 412.75 | 354.77 | 418.62 | 354.29 | 421.01 | 353.98 |
| 421.25 | 353.96 | 421.66 | 354.02 | 421.8 | 354.27 | 421.91 | 354.28 | 423.7 | 354.34 |
| 426.49 | 354.39 | 427.33 | 354.39 | 428.74 | 354.32 | 430.19 | 354.22 | 432.05 | 354.05 |
| 435.2 | 353.77 | 436.17 | 353.66 | 440.06 | 353.77 | 441.77 | 353.78 | 442.15 | 353.76 |
| 442.46 | 353.69 | 443.29 | 353.63 | 445.75 | 353.68 | 446.87 | 353.69 | 448.3 | 353.74 |
| 449.78 | 353.8 | 451.62 | 353.84 | 454.19 | 353.89 | 454.41 | 353.89 | 455.97 | 353.94 |
| 456.34 | 353.96 | 457.74 | 354.01 | 462.28 | 354.08 | 466.04 | 354.05 | 466.19 | 354.04 |
| 469.73 | 354.03 | 470.91 | 354.01 | 471.75 | 353.96 | 471.84 | 353.87 | 472.15 | 353.85 |
| 474.93 | 353.79 | 476.18 | 353.78 | 479.13 | 353.82 | 479.93 | 353.84 | 482.07 | 353.88 |
| 487.5 | 354.08 | 494.89 | 354.21 | 499.8 | 354.25 | 500.17 | 354.26 | 504.06 | 354.28 |
| 504.83 | 354.29 | 506.07 | 354.29 | 506.3 | 354.3 | 507.96 | 354.31 | 508.95 | 354.31 |
| 509.81 | 354.32 | 517.22 | 354.37 | 519.83 | 354.36 | 524.51 | 354.24 | 524.75 | 354.22 |
| 532.7 | 353.77 | 533.22 | 353.72 | 533.67 | 353.71 | 534.48 | 353.78 | 536.12 | 353.82 |
| 537.57 | 353.82 | 538.09 | 353.84 | 538.5 | 353.9 | 538.85 | 354 | 539.55 | 354.02 |
| 541.98 | 354.04 | 543.8 | 354.02 | 553.42 | 353.73 | 553.64 | 353.71 | 556.39 | 353.58 |
| 557.19 | 353.53 | 559.18 | 353.42 | 559.64 | 353.4 | 563.78 | 353.4 | 567.63 | 353.52 |
| 568.06 | 353.54 | 571.73 | 353.54 | 572.21 | 353.53 | 575.61 | 353.4 | 576.7 | 353.38 |
| 580.25 | 353.36 | 584.55 | 353.42 | 586.65 | 353.46 | 587.64 | 353.52 | 593.26 | 353.55 |
| 594.39 | 353.56 | 596.25 | 353.56 | 597.48 | 353.52 | 600.34 | 353.39 | 603.11 | 353.28 |
| 605.5 | 353.21 | 610.58 | 353.04 | 612.62 | 352.93 | 616.9 | 352.79 | 617.66 | 352.77 |
| 619.15 | 352.71 | 623 | 352.6 | 623.98 | 352.54 | 627.56 | 352.54 | 627.8 | 352.56 |
| 629.18 | 352.59 | 629.73 | 352.67 | 630.23 | 352.65 | 632.3 | 353.15 | 632.42 | 353.16 |
| 633.31 | 353.36 | 636.78 | 353.37 | 638.25 | 353.37 | 638.66 | 353.28 | 641.54 | 353.14 |
| 642 | 353.09 | 642.51 | 353 | 642.87 | 352.97 | 645.71 | 352.9 | 648.33 | 352.79 |
| 652.02 | 352.72 | 656.13 | 352.82 | 658.93 | 352.87 | 661.99 | 352.94 | 662.23 | 352.95 |
| 666.36 | 353.06 | 669.23 | 353.14 | 670.36 | 353.18 | 674.06 | 353.27 | 677.19 | 353.36 |
| 677.3 | 353.36 | 679.7 | 353.51 | 681.76 | 353.63 | 682.48 | 353.68 | 685.66 | 353.94 |
| 686.45 | 353.99 | 689.94 | 353.97 | 691.21 | 353.93 | 691.47 | 353.93 | 694.72 | 353.84 |
| 695.02 | 353.84 | 696.46 | 353.79 | 696.65 | 353.79 | 698.43 | 353.73 | 698.72 | 353.73 |
| 703.53 | 353.58 | 705.8 | 353.59 | 707 | 353.63 | 708.59 | 353.71 | 709.08 | 353.7 |
| 711.81 | 353.72 | 712.3 | 353.71 | 714.45 | 353.74 | 715.02 | 353.76 | 716.28 | 353.84 |
| 717.45 | 353.87 | 720.05 | 353.91 | 723.62 | 353.9 | 730.83 | 353.75 | 734.81 | 353.67 |
| 735.77 | 353.64 | 737.6 | 353.56 | 738.35 | 353.51 | 742.56 | 353.31 | 744.14 | 353.24 |
| 747.45 | 352.8 | 750.17 | 352.36 | 750.63 | 352.34 | 755.15 | 352.39 | 755.49 | 352.49 |
| 758.54 | 352.42 | 759.13 | 352.41 | 762.19 | 352.44 | 762.65 | 352.45 | 775.2 | 352.45 |
| 775.81 | 352.44 | 779.51 | 352.44 | 784.32 | 352.43 | 788.29 | 351.95 | 790.06 | 351.73 |
| 793.07 | 351.5 | 796.11 | 351.5 | 797.93 | 351.61 | 803.48 | 351.73 | 804.01 | 351.71 |
| 805.76 | 351.73 | 807.06 | 351.72 | 809.18 | 351.72 | 814.69 | 351.63 | 816.45 | 351.59 |
| 818.06 | 351.57 | 820.25 | 351.58 | 823.78 | 351.67 | 824.82 | 351.7 | 827.51 | 351.76 |
| 830.07 | 351.73 | 848.96 | 351 | 850.59 | 350.94 | 851.81 | 350.94 | 852.28 | 350.93 |
| 854.72 | 350.92 | 854.97 | 350.93 | 858.5 | 350.94 | 859.03 | 351.04 | 859.27 | 351.06 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 862.52 | 351.24 | 865.47 | 351.36 | 866.97 | 351.51 | 868.27 | 351.57 | 869.03 | 351.59 |
| 869.83 | 351.58 | 875.19 | 351.46 | 876.72 | 351.39 | 877.63 | 351.31 | 878 | 351.2 |
| 878.19 | 351.17 | 882.41 | 351.08 | 883.57 | 351.03 | 885.42 | 351.28 | 886.11 | 351.34 |
| 887.52 | 351.38 | 889.02 | 351.36 | 892 | 351.21 | 893.95 | 351.04 | 894.59 | 351 |
| 896.07 | 350.96 | 896.94 | 350.96 | 899.48 | 351 | 901.14 | 351.01 | 910.57 | 351.3 |
| 910.78 | 351.33 | 911.66 | 351.4 | 918.38 | 351.4 | 923.15 | 351.44 | 924.38 | 351.44 |
| 926.34 | 351.32 | 927.63 | 351.23 | 937.9 | 350.55 | 937.98 | 350.54 | 940.75 | 350.53 |
| 941.5 | 350.52 | 942.74 | 350.54 | 943.19 | 350.57 | 946.06 | 350.84 | 947.19 | 350.95 |
| 947.42 | 350.93 | 949.57 | 351.14 | 950.08 | 351.15 | 950.7 | 351.14 | 951.52 | 351.11 |
| 951.9 | 351.11 | 957.2 | 350.89 | 958.66 | 350.81 | 965.38 | 350.47 | 967.07 | 350.39 |
| 972.83 | 350.21 | 976.45 | 350.12 | 976.65 | 350.11 | 982.5 | 350.02 | 982.82 | 350.01 |
| 990.04 | 349.92 | 990.43 | 349.92 | 996.4 | 349.97 | 999.23 | 349.98 | 1001.54 | 350 |
| 1010.15 | 350.29 | 1014.71 | 350.44 | 1016.7 | 350.51 | 1033.62 | 351.09 | 1035.05 | 351.13 |
| 1036.96 | 351.19 | 1039.8 | 351.29 | 1042.02 | 351.36 | 1047.15 | 351.47 | 1049.9 | 351.57 |
| 1051.52 | 351.58 | 1054.99 | 351.58 | 1060.39 | 351.54 | 1061.5 | 351.51 | 1062.58 | 351.46 |
| 1066.09 | 351.31 | 1066.87 | 351.22 | 1068.4 | 351.07 | 1068.97 | 350.96 | 1069.53 | 350.92 |
| 1070.84 | 350.93 | 1071.6 | 350.96 | 1072.89 | 350.98 | 1073.69 | 351.02 | 1075.85 | 351.09 |
| 1078.07 | 351.22 | 1079.43 | 351.34 | 1080.45 | 351.45 | 1081.18 | 351.47 | 1081.63 | 351.46 |
| 1082.47 | 351.37 | 1082.49 | 351.24 | 1083.39 | 351.17 | 1084.27 | 351.16 | 1085.51 | 351.16 |
| 1085.97 | 351.15 | 1088.12 | 351.18 | 1089.93 | 351.24 | 1090.95 | 351.31 | 1093.27 | 351.44 |
| 1102.31 | 352.41 | 1110.53 | 353.25 | 1110.95 | 353.27 | 1111.28 | 353.24 | 1112.32 | 353.18 |
| 1119.93 | 352.85 | 1123.74 | 352.38 | 1125.67 | 352.17 | 1126.44 | 352.18 | 1127.01 | 352.17 |
| 1129.04 | 352.06 | 1130.58 | 351.95 | 1137.31 | 351.41 | 1138.53 | 351.41 | 1139.48 | 351.4 |
| 1139.79 | 351.41 | 1141.03 | 351.52 | 1146.3 | 352 | 1147.87 | 352.12 | 1148.35 | 351.93 |
| 1149.53 | 351.93 | 1150.41 | 351.99 | 1155.78 | 352.37 | 1158.28 | 352.55 | 1161.76 | 352.77 |
| 1164.91 | 352.96 | 1165.8 | 353.03 | 1169.64 | 353.18 | 1183 | 353.72 | 1190.46 | 354.01 |
| 1193.84 | 354.15 | 1197.3 | 354.34 | 1199.9 | 354.49 | 1204.87 | 354.77 | 1206.6 | 354.87 |
| 1210.45 | 355.05 | 1213.12 | 355.12 | 1214.78 | 355.23 | 1215.82 | 355.24 | 1217.49 | 355.4 |
| 1222.12 | 355.81 | 1223.74 | 355.92 | 1224.62 | 355.99 | 1226.27 | 356.09 | 1228.07 | 356.19 |
| 1231.02 | 356.45 | 1232.35 | 356.58 | 1242.29 | 357.99 | 1243.25 | 358.09 | 1250.02 | 358.82 |
| 1256.09 | 359.33 | 1260.29 | 359.66 | 1269 | 360.17 | 1270.65 | 360.27 | 1273.76 | 360.44 |
| 1274.78 | 360.47 | 1277.49 | 360.54 | 1281.04 | 360.62 | 1283.41 | 360.8 | 1284.17 | 360.83 |
| 1286.76 | 360.84 | 1287.66 | 360.82 | 1288.61 | 360.81 | 1289.65 | 360.74 | 1290.33 | 360.77 |
| 1294.98 | 361.12 | 1296.37 | 361.24 | 1297.72 | 361.34 | 1302.62 | 361.88 | 1304.31 | 362.08 |
| 1305.12 | 362.15 | 1309.36 | 362.55 | 1314.7 | 363.05 | 1316.12 | 363.19 | 1317.88 | 363.34 |
| 1321.57 | 363.67 | 1326.04 | 364.05 | 1330.68 | 364.44 | 1334.05 | 364.73 | 1335.08 | 364.83 |
| 1335.62 | 364.86 | 1336.25 | 364.92 | 1337.29 | 364.97 | 1341.52 | 365.07 | 1342.83 | 365.04 |
| 1345 | 365.04 | 1345.16 | 365.05 | 1347.11 | 365.07 | 1347.23 | 365.08 | 1348.94 | 365.13 |
| 1351.57 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 175.58 | .05 | 393.68 | .04 | 1165.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 393.68 | 1165.8 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5566.12*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 184.64 | 359.05 | 185.95 | 359.02 | 187.54 | 359.01 | 187.76 | 359 | 189.18 | 358.98 |
| 189.88 | 358.96 | 192.04 | 358.87 | 193.55 | 358.78 | 196.74 | 358.58 | 202.88 | 358.32 |
| 215.95 | 357.95 | 216.18 | 357.94 | 221.59 | 357.8 | 223.77 | 357.75 | 229.28 | 357.6 |
| 232.67 | 357.53 | 233.76 | 357.5 | 235.51 | 357.43 | 235.81 | 357.41 | 237.53 | 357.36 |
| 240.65 | 357.23 | 256.68 | 356.8 | 259.14 | 356.72 | 260.22 | 356.68 | 261.1 | 356.66 |
| 261.78 | 356.66 | 271.31 | 356.7 | 272.63 | 356.7 | 277.83 | 356.32 | 283.92 | 355.85 |
| 284.39 | 355.85 | 286.58 | 355.74 | 299.12 | 355.23 | 303.11 | 355.05 | 306.57 | 354.92 |
| 310.27 | 354.93 | 311.29 | 354.94 | 311.8 | 354.97 | 319.89 | 355.62 | 320.58 | 355.64 |
| 321.77 | 355.69 | 322.21 | 355.76 | 327.09 | 355.73 | 327.93 | 355.71 | 328.04 | 355.64 |
| 328.76 | 355.54 | 330.14 | 355.63 | 331.16 | 355.71 | 332.1 | 355.84 | 332.36 | 355.89 |
| 333.62 | 356.03 | 334.68 | 356.14 | 335.21 | 356.18 | 336.66 | 356.2 | 339.56 | 356.23 |
| 341.07 | 356.25 | 341.58 | 356.28 | 343.92 | 356.34 | 345.06 | 356.39 | 346.94 | 356.39 |
| 348.25 | 356.4 | 350.87 | 356.41 | 352.13 | 356.48 | 353.88 | 356.5 | 356.75 | 356.44 |
| 357.37 | 356.4 | 359.54 | 356.16 | 359.91 | 356.11 | 361.48 | 356.02 | 361.88 | 355.99 |
| 365.22 | 355.78 | 366.27 | 355.76 | 366.5 | 355.85 | 367 | 355.94 | 367.25 | 355.96 |
| 368.25 | 355.93 | 368.53 | 355.94 | 370.89 | 355.89 | 372.19 | 355.88 | 373.43 | 355.79 |
| 377.43 | 355.43 | 377.65 | 355.43 | 378.25 | 355.48 | 379.46 | 355.62 | 380.51 | 355.8 |
| 386.81 | 356.41 | 388.65 | 356.58 | 389.67 | 356.62 | 394.64 | 356.53 | 396.12 | 356.43 |
| 398.04 | 356.34 | 403.96 | 356.18 | 404.8 | 356.14 | 406.12 | 356.1 | 406.82 | 356.05 |
| 407.53 | 355.98 | 410.17 | 355.76 | 412.35 | 355.42 | 414.08 | 355.34 | 414.86 | 355.28 |
| 415.42 | 355.19 | 416.02 | 355.04 | 416.74 | 354.89 | 418.22 | 354.82 | 420.13 | 354.72 |
| 425.5 | 354.41 | 431.25 | 353.94 | 433.83 | 353.61 | 434.23 | 353.67 | 434.37 | 353.91 |
| 436.23 | 353.97 | 438.97 | 354.01 | 439.79 | 354 | 441.17 | 353.93 | 442.59 | 353.83 |
| 447.5 | 353.4 | 448.45 | 353.3 | 452.26 | 353.42 | 453.94 | 353.43 | 454.31 | 353.42 |
| 454.62 | 353.35 | 455.43 | 353.3 | 457.84 | 353.35 | 458.93 | 353.36 | 460.34 | 353.4 |
| 461.78 | 353.46 | 463.59 | 353.5 | 466.32 | 353.54 | 467.85 | 353.59 | 469.7 | 353.67 |
| 470.88 | 353.69 | 474.03 | 353.72 | 477.72 | 353.68 | 481.33 | 353.66 | 482.49 | 353.64 |
| 483.31 | 353.59 | 483.39 | 353.51 | 483.71 | 353.49 | 485 | 353.45 | 487.26 | 353.42 |
| 487.65 | 353.41 | 488.2 | 353.42 | 491.32 | 353.45 | 493.42 | 353.5 | 498.74 | 353.68 |
| 505.99 | 353.81 | 510.8 | 353.85 | 514.96 | 353.87 | 515.72 | 353.88 | 516.73 | 353.88 |
| 516.93 | 353.89 | 518.78 | 353.9 | 520.6 | 353.92 | 527.86 | 353.98 | 530.42 | 353.97 |
| 535 | 353.85 | 535.23 | 353.84 | 543.03 | 353.43 | 543.54 | 353.38 | 543.98 | 353.37 |
| 544.36 | 353.41 | 544.77 | 353.43 | 546.37 | 353.47 | 547.8 | 353.48 | 548.3 | 353.49 |
| 548.59 | 353.53 | 549.05 | 353.65 | 549.73 | 353.67 | 552.12 | 353.68 | 553.41 | 353.68 |
| 553.91 | 353.67 | 563.32 | 353.4 | 566.24 | 353.27 | 567.02 | 353.22 | 569.43 | 353.1 |
| 573.47 | 353.1 | 577.25 | 353.21 | 577.93 | 353.24 | 581.27 | 353.23 | 581.73 | 353.22 |
| 585.07 | 353.09 | 586.14 | 353.07 | 589.61 | 353.05 | 593.83 | 353.09 | 595.89 | 353.12 |
| 596.86 | 353.18 | 602.36 | 353.21 | 603.47 | 353.23 | 605.29 | 353.23 | 609.3 | 353.06 |
| 610.78 | 353 | 614.35 | 352.91 | 619.33 | 352.74 | 620.47 | 352.68 | 620.58 | 352.66 |
| 621.33 | 352.62 | 622.2 | 352.6 | 624.37 | 352.52 | 626.26 | 352.47 | 627.73 | 352.42 |
| 631.5 | 352.31 | 632.46 | 352.26 | 635.96 | 352.26 | 636.2 | 352.28 | 636.95 | 352.29 |
| 637.55 | 352.31 | 638.09 | 352.39 | 638.58 | 352.36 | 640.62 | 352.84 | 640.73 | 352.85 |
| 641.6 | 353.04 | 645.31 | 353.05 | 646.44 | 353.06 | 646.84 | 352.97 | 647.99 | 352.92 |
| 649.66 | 352.83 | 650.12 | 352.79 | 650.62 | 352.71 | 650.96 | 352.68 | 653.75 | 352.61 |
| 656.31 | 352.5 | 659.29 | 352.43 | 659.93 | 352.42 | 663.96 | 352.51 | 664.93 | 352.54 |
| 665.65 | 352.55 | 666.19 | 352.54 | 669.7 | 352.62 | 672.12 | 352.69 | 673.99 | 352.73 |
| 676.79 | 352.81 | 677.9 | 352.86 | 681.52 | 352.95 | 684.59 | 353.04 | 684.7 | 353.04 |
| 687.05 | 353.19 | 687.9 | 353.23 | 689.07 | 353.3 | 689.78 | 353.35 | 692.89 | 353.6 |
| 693.67 | 353.65 | 697.09 | 353.63 | 698.84 | 353.59 | 699.29 | 353.57 | 700.01 | 353.56 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 701.77 | 353.52 | 702.31 | 353.5 | 705.41 | 353.41 | 710.4 | 353.25 | 712.62 | 353.25 |
| 713.8 | 353.29 | 715.35 | 353.36 | 715.84 | 353.35 | 718.51 | 353.37 | 718.99 | 353.36 |
| 721.1 | 353.38 | 722.38 | 353.46 | 724.04 | 353.51 | 726.59 | 353.54 | 730.08 | 353.53 |
| 730.61 | 353.52 | 737.15 | 353.37 | 741.05 | 353.3 | 741.99 | 353.26 | 744.02 | 353.16 |
| 744.52 | 353.12 | 746.16 | 353.04 | 748.65 | 352.93 | 750.19 | 352.87 | 751.97 | 352.63 |
| 753.44 | 352.45 | 756.1 | 352.04 | 756.54 | 352.02 | 760.98 | 352.08 | 761.31 | 352.17 |
| 764.3 | 352.12 | 764.88 | 352.12 | 767.88 | 352.16 | 778.96 | 352.17 | 780.62 | 352.17 |
| 781.22 | 352.16 | 784.84 | 352.16 | 789.56 | 352.15 | 793.44 | 351.69 | 794 | 351.63 |
| 795.18 | 351.48 | 798.13 | 351.26 | 798.74 | 351.25 | 801.1 | 351.25 | 802.89 | 351.35 |
| 808.33 | 351.46 | 808.84 | 351.45 | 810.57 | 351.46 | 813.91 | 351.46 | 819.31 | 351.39 |
| 821.04 | 351.36 | 822.61 | 351.34 | 824.76 | 351.35 | 829.24 | 351.48 | 831.87 | 351.54 |
| 832.83 | 351.54 | 834.38 | 351.52 | 852.88 | 350.82 | 854.49 | 350.76 | 856.14 | 350.76 |
| 856.76 | 350.75 | 858.63 | 350.74 | 858.78 | 350.75 | 862.24 | 350.75 | 862.75 | 350.84 |
| 862.99 | 350.86 | 866.17 | 351.02 | 867.36 | 351.07 | 867.9 | 351.08 | 869.06 | 351.13 |
| 870.53 | 351.27 | 871.8 | 351.32 | 872.56 | 351.34 | 878.58 | 351.19 | 880.09 | 351.12 |
| 880.97 | 351.03 | 881.53 | 350.9 | 885.66 | 350.81 | 886.43 | 350.76 | 886.79 | 350.75 |
| 888.61 | 350.99 | 889.29 | 351.04 | 890.66 | 351.08 | 892.13 | 351.06 | 895.06 | 350.92 |
| 896.96 | 350.76 | 897.6 | 350.73 | 899.05 | 350.68 | 899.9 | 350.68 | 902.39 | 350.73 |
| 904.02 | 350.73 | 913.26 | 351.01 | 914.32 | 351.1 | 920.91 | 351.1 | 925.58 | 351.16 |
| 926.79 | 351.16 | 929.4 | 351.01 | 929.97 | 350.97 | 940.03 | 350.32 | 942.82 | 350.3 |
| 943.56 | 350.29 | 944.77 | 350.31 | 945.22 | 350.33 | 949.13 | 350.69 | 949.36 | 350.67 |
| 951.46 | 350.87 | 952.3 | 350.87 | 953.37 | 350.84 | 953.75 | 350.84 | 958.94 | 350.61 |
| 966.95 | 350.16 | 968.61 | 350.09 | 974.26 | 349.91 | 977.8 | 349.82 | 977.99 | 349.81 |
| 983.73 | 349.71 | 984.04 | 349.71 | 991.11 | 349.61 | 991.5 | 349.6 | 997.44 | 349.65 |
| 1000.26 | 349.67 | 1002.56 | 349.69 | 1011.14 | 349.96 | 1015.69 | 350.11 | 1017.67 | 350.17 |
| 1034.52 | 350.75 | 1035.95 | 350.79 | 1042.89 | 351.01 | 1047.99 | 351.12 | 1050.74 | 351.22 |
| 1052.35 | 351.23 | 1055.06 | 351.23 | 1055.81 | 351.24 | 1061.19 | 351.19 | 1062.3 | 351.16 |
| 1063.37 | 351.12 | 1065.74 | 351.02 | 1066.86 | 350.96 | 1069.17 | 350.73 | 1069.73 | 350.63 |
| 1070.29 | 350.59 | 1070.74 | 350.59 | 1071.82 | 350.61 | 1072.35 | 350.63 | 1073.64 | 350.66 |
| 1076.59 | 350.76 | 1078.8 | 350.9 | 1080.15 | 351.01 | 1081.17 | 351.12 | 1081.9 | 351.15 |
| 1082.34 | 351.13 | 1083.19 | 351.05 | 1083.2 | 350.93 | 1084.09 | 350.86 | 1086.66 | 350.86 |
| 1087.56 | 350.87 | 1088.81 | 350.9 | 1090.83 | 350.97 | 1091.63 | 351.03 | 1093.94 | 351.16 |
| 1102.95 | 352.11 | 1111.13 | 352.9 | 1111.56 | 352.92 | 1111.88 | 352.89 | 1112.92 | 352.83 |
| 1120.49 | 352.53 | 1124.29 | 352.07 | 1126.22 | 351.87 | 1127.55 | 351.86 | 1129.58 | 351.75 |
| 1131.11 | 351.65 | 1137.81 | 351.12 | 1139.03 | 351.11 | 1140.28 | 351.11 | 1141.51 | 351.22 |
| 1146.77 | 351.7 | 1148.33 | 351.83 | 1148.8 | 351.65 | 1149.98 | 351.65 | 1150.86 | 351.71 |
| 1156.21 | 352.13 | 1158.7 | 352.33 | 1159.01 | 352.35 | 1163.19 | 352.68 | 1165.3 | 352.85 |
| 1166.19 | 352.94 | 1169.88 | 353.11 | 1176.06 | 353.42 | 1182.69 | 353.74 | 1183.68 | 353.78 |
| 1189.85 | 354.07 | 1193.1 | 354.22 | 1196.74 | 354.45 | 1203.69 | 354.9 | 1204.67 | 354.96 |
| 1205.34 | 355.01 | 1209.04 | 355.2 | 1211.6 | 355.29 | 1213.19 | 355.41 | 1214.19 | 355.43 |
| 1215.8 | 355.59 | 1216.89 | 355.69 | 1220.24 | 356.02 | 1221.8 | 356.13 | 1222.64 | 356.2 |
| 1224.22 | 356.31 | 1225.95 | 356.41 | 1228.77 | 356.67 | 1230.05 | 356.8 | 1239.59 | 358.19 |
| 1240.51 | 358.29 | 1247.01 | 359.01 | 1252.84 | 359.53 | 1256.87 | 359.86 | 1265.23 | 360.37 |
| 1266.81 | 360.46 | 1269.51 | 360.6 | 1270.78 | 360.66 | 1273.37 | 360.71 | 1276.78 | 360.78 |
| 1279.05 | 360.94 | 1279.78 | 360.96 | 1282.26 | 360.96 | 1283.13 | 360.94 | 1284.04 | 360.93 |
| 1285.04 | 360.86 | 1285.69 | 360.88 | 1290.15 | 361.2 | 1291.49 | 361.31 | 1292.79 | 361.4 |
| 1296.37 | 361.77 | 1297.49 | 361.9 | 1298.69 | 362.05 | 1303.95 | 362.58 | 1309.08 | 363.08 |
| 1312.13 | 363.37 | 1319.96 | 364.05 | 1323.37 | 364.32 | 1326.98 | 364.63 | 1328.64 | 364.79 |
| 1329.16 | 364.82 | 1329.76 | 364.88 | 1330.75 | 364.93 | 1334.81 | 365.04 | 1336.07 | 365.02 |
| 1338.16 | 365.03 | 1338.31 | 365.04 | 1340.18 | 365.07 | 1340.6 | 365.09 | 1342.6 | 365.13 |
| 1344.46 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 184.64 | .05 | 406.82 | .04 | 1166.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 406.82 | 1166.19 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5546.64*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 193.69 | 358.75 | 195.03 | 358.73 | 196.65 | 358.72 | 196.87 | 358.7 | 198.32 | 358.69 |
| 200.55 | 358.59 | 201.24 | 358.55 | 203.89 | 358.36 | 206.02 | 358.19 | 212.27 | 357.89 |
| 225.58 | 357.48 | 225.82 | 357.48 | 231.32 | 357.32 | 239.16 | 357.11 | 242.61 | 357.04 |
| 245.5 | 356.94 | 245.81 | 356.92 | 248.24 | 356.85 | 248.31 | 356.84 | 250.74 | 356.76 |
| 251.14 | 356.74 | 267.06 | 356.34 | 269.57 | 356.27 | 270.43 | 356.23 | 271.56 | 356.21 |
| 272.25 | 356.21 | 281.96 | 356.26 | 283.31 | 356.27 | 288.6 | 355.91 | 294.8 | 355.47 |
| 295.28 | 355.47 | 297.51 | 355.36 | 310.28 | 354.88 | 314.35 | 354.69 | 315.21 | 354.67 |
| 315.52 | 354.65 | 317.87 | 354.56 | 321.63 | 354.58 | 322.68 | 354.59 | 323.19 | 354.62 |
| 331.43 | 355.25 | 333.35 | 355.31 | 333.79 | 355.38 | 338.76 | 355.36 | 339.62 | 355.34 |
| 339.73 | 355.28 | 340.46 | 355.18 | 341.87 | 355.27 | 342.91 | 355.35 | 344.13 | 355.51 |
| 345.42 | 355.65 | 346.5 | 355.75 | 347.04 | 355.78 | 348.51 | 355.81 | 351.46 | 355.84 |
| 353 | 355.86 | 353.53 | 355.89 | 355.91 | 355.95 | 357.07 | 356 | 358.67 | 356 |
| 358.98 | 355.99 | 360.31 | 356 | 362.72 | 356.01 | 364.26 | 356.08 | 366.05 | 356.1 |
| 368.97 | 356.01 | 369.6 | 355.97 | 370.13 | 355.89 | 372.18 | 355.63 | 373.85 | 355.54 |
| 376.91 | 355.36 | 377.88 | 355.32 | 378.67 | 355.31 | 378.9 | 355.4 | 379.41 | 355.49 |
| 379.66 | 355.51 | 380.68 | 355.48 | 380.96 | 355.5 | 382.34 | 355.48 | 384.69 | 355.46 |
| 385.95 | 355.38 | 390.03 | 355.05 | 390.26 | 355.05 | 390.87 | 355.1 | 392.1 | 355.24 |
| 393.17 | 355.41 | 399.59 | 355.97 | 401.45 | 356.13 | 402.5 | 356.16 | 407.55 | 356.04 |
| 409.06 | 355.93 | 411.02 | 355.85 | 417.05 | 355.74 | 417.9 | 355.7 | 419.53 | 355.66 |
| 419.96 | 355.62 | 420.65 | 355.56 | 423.24 | 355.35 | 425.37 | 355.03 | 426.67 | 354.96 |
| 427.07 | 354.95 | 427.83 | 354.89 | 428.38 | 354.81 | 428.97 | 354.66 | 429.68 | 354.52 |
| 431.13 | 354.45 | 433 | 354.35 | 438.25 | 354.05 | 443.89 | 353.59 | 446.42 | 353.27 |
| 446.8 | 353.32 | 446.94 | 353.55 | 449.26 | 353.61 | 451.44 | 353.62 | 452.24 | 353.61 |
| 453.6 | 353.54 | 454.4 | 353.48 | 454.99 | 353.45 | 456.78 | 353.29 | 459.8 | 353.04 |
| 460.73 | 352.95 | 463.47 | 353.03 | 464.46 | 353.07 | 466.11 | 353.08 | 466.47 | 353.07 |
| 466.77 | 353.01 | 467.56 | 352.96 | 469.92 | 353.01 | 470.99 | 353.02 | 472.37 | 353.06 |
| 473.79 | 353.11 | 475.55 | 353.15 | 478.23 | 353.19 | 480.09 | 353.27 | 481.42 | 353.32 |
| 482.69 | 353.34 | 485.79 | 353.37 | 489.39 | 353.32 | 489.53 | 353.31 | 492.93 | 353.29 |
| 494.07 | 353.27 | 494.87 | 353.23 | 494.95 | 353.14 | 496.52 | 353.09 | 497.92 | 353.07 |
| 498.73 | 353.05 | 501.95 | 353.06 | 504.77 | 353.11 | 509.99 | 353.29 | 517.08 | 353.41 |
| 521.79 | 353.44 | 522.14 | 353.45 | 528.03 | 353.48 | 530.56 | 353.51 | 531.39 | 353.51 |
| 538.5 | 353.58 | 541.01 | 353.57 | 545.49 | 353.47 | 545.72 | 353.46 | 553.36 | 353.08 |
| 553.86 | 353.03 | 554.29 | 353.03 | 555.06 | 353.09 | 556.63 | 353.13 | 558.02 | 353.13 |
| 558.8 | 353.18 | 559.25 | 353.3 | 559.92 | 353.32 | 562.26 | 353.33 | 563.52 | 353.33 |
| 564.01 | 353.32 | 573.23 | 353.08 | 576.09 | 352.96 | 576.86 | 352.91 | 579.21 | 352.8 |
| 583.17 | 352.8 | 586.87 | 352.9 | 587.53 | 352.93 | 591.26 | 352.92 | 594.53 | 352.78 |
| 595.58 | 352.76 | 598.98 | 352.73 | 603.1 | 352.76 | 605.12 | 352.79 | 606.07 | 352.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 611.47 | 352.87 | 612.55 | 352.89 | 614.33 | 352.89 | 615.51 | 352.85 | 618.26 | 352.73 |
| 619.71 | 352.68 | 620.91 | 352.66 | 623.21 | 352.6 | 628.08 | 352.44 | 628.85 | 352.4 |
| 629.3 | 352.35 | 630.04 | 352.3 | 630.89 | 352.29 | 633.02 | 352.22 | 634.87 | 352.17 |
| 636.31 | 352.12 | 640 | 352.03 | 640.94 | 351.98 | 643.67 | 351.97 | 644.37 | 351.98 |
| 645.93 | 352.02 | 646.46 | 352.1 | 646.93 | 352.08 | 648.93 | 352.53 | 649.04 | 352.54 |
| 649.89 | 352.72 | 653.22 | 352.74 | 654.64 | 352.74 | 655.14 | 352.66 | 657.79 | 352.53 |
| 658.23 | 352.49 | 658.72 | 352.41 | 659.06 | 352.39 | 660.68 | 352.35 | 661.79 | 352.31 |
| 664.3 | 352.21 | 667.21 | 352.14 | 667.84 | 352.13 | 671.79 | 352.21 | 673.45 | 352.24 |
| 673.97 | 352.23 | 677.41 | 352.3 | 679.78 | 352.37 | 681.61 | 352.41 | 684.36 | 352.49 |
| 685.44 | 352.54 | 688.99 | 352.64 | 691.99 | 352.72 | 695.09 | 352.9 | 695.23 | 352.9 |
| 697.08 | 353.02 | 700.62 | 353.3 | 701.07 | 353.31 | 704.23 | 353.29 | 705.45 | 353.27 |
| 706.71 | 353.23 | 707.1 | 353.23 | 708.82 | 353.19 | 709.35 | 353.17 | 712.38 | 353.08 |
| 715.4 | 352.98 | 717.27 | 352.93 | 719.45 | 352.92 | 720.6 | 352.96 | 721.15 | 352.99 |
| 722.12 | 353.02 | 722.59 | 353.01 | 725.21 | 353.02 | 725.68 | 353.01 | 727.75 | 353.03 |
| 728.29 | 353.05 | 729 | 353.1 | 730.63 | 353.15 | 733.13 | 353.17 | 736.55 | 353.16 |
| 737.06 | 353.14 | 743.47 | 353 | 747.29 | 352.93 | 748.21 | 352.89 | 749.97 | 352.79 |
| 750.68 | 352.74 | 753.14 | 352.62 | 756.24 | 352.49 | 758.3 | 352.23 | 759.42 | 352.1 |
| 762.03 | 351.73 | 762.46 | 351.71 | 766.8 | 351.77 | 767.13 | 351.86 | 770.06 | 351.82 |
| 771.48 | 351.83 | 773.56 | 351.88 | 784.41 | 351.9 | 786.04 | 351.89 | 786.63 | 351.88 |
| 790.18 | 351.88 | 794.79 | 351.87 | 798.6 | 351.43 | 799.77 | 351.3 | 800.3 | 351.23 |
| 803.19 | 351.01 | 803.79 | 351 | 806.1 | 351 | 807.85 | 351.1 | 813.17 | 351.2 |
| 813.68 | 351.18 | 815.37 | 351.2 | 816.62 | 351.19 | 818.64 | 351.2 | 823.93 | 351.15 |
| 827.16 | 351.11 | 829.27 | 351.13 | 832.66 | 351.24 | 836.23 | 351.32 | 837.17 | 351.32 |
| 838.69 | 351.3 | 856.81 | 350.65 | 857.21 | 350.62 | 858.38 | 350.59 | 859.55 | 350.58 |
| 860.61 | 350.58 | 862.35 | 350.56 | 862.59 | 350.57 | 865.97 | 350.55 | 866.48 | 350.64 |
| 866.71 | 350.66 | 869.83 | 350.81 | 871.52 | 350.85 | 872.66 | 350.9 | 874.1 | 351.02 |
| 875.34 | 351.07 | 876.6 | 351.08 | 876.84 | 351.07 | 881.98 | 350.92 | 883.46 | 350.85 |
| 884.32 | 350.76 | 884.87 | 350.63 | 888.92 | 350.53 | 889.66 | 350.48 | 890.02 | 350.47 |
| 891.8 | 350.7 | 892.47 | 350.74 | 893.81 | 350.78 | 895.25 | 350.76 | 898.12 | 350.63 |
| 899.98 | 350.48 | 900.6 | 350.45 | 902.02 | 350.41 | 902.86 | 350.41 | 905.29 | 350.45 |
| 906.89 | 350.46 | 915.94 | 350.71 | 916.14 | 350.74 | 916.98 | 350.8 | 923.43 | 350.8 |
| 928 | 350.88 | 929.19 | 350.88 | 932.3 | 350.71 | 942.16 | 350.1 | 942.24 | 350.09 |
| 944.89 | 350.07 | 946.8 | 350.08 | 947.24 | 350.1 | 949.99 | 350.34 | 951.07 | 350.43 |
| 951.29 | 350.42 | 953.35 | 350.6 | 954.17 | 350.6 | 955.22 | 350.57 | 955.59 | 350.57 |
| 960.68 | 350.34 | 962.08 | 350.25 | 968.52 | 349.86 | 970.14 | 349.78 | 975.68 | 349.6 |
| 979.15 | 349.51 | 979.34 | 349.51 | 984.96 | 349.4 | 985.26 | 349.4 | 992.19 | 349.29 |
| 992.56 | 349.29 | 1001.3 | 349.35 | 1003.58 | 349.37 | 1012.13 | 349.63 | 1016.66 | 349.78 |
| 1018.63 | 349.84 | 1035.42 | 350.41 | 1036.84 | 350.45 | 1041.55 | 350.6 | 1043.76 | 350.66 |
| 1048.84 | 350.77 | 1051.58 | 350.87 | 1053.18 | 350.88 | 1054.67 | 350.88 | 1056.63 | 350.9 |
| 1061.99 | 350.85 | 1063.09 | 350.82 | 1064.16 | 350.77 | 1067.64 | 350.62 | 1068.7 | 350.51 |
| 1069.93 | 350.4 | 1070.49 | 350.3 | 1071.06 | 350.26 | 1071.5 | 350.26 | 1072.58 | 350.29 |
| 1074.38 | 350.33 | 1077.33 | 350.43 | 1079.52 | 350.57 | 1080.87 | 350.69 | 1081.89 | 350.79 |
| 1082.62 | 350.82 | 1083.06 | 350.81 | 1083.9 | 350.73 | 1083.92 | 350.62 | 1084.8 | 350.56 |
| 1085.68 | 350.56 | 1088.25 | 350.58 | 1091.29 | 350.68 | 1092.31 | 350.75 | 1094.61 | 350.88 |
| 1103.58 | 351.81 | 1110.28 | 352.42 | 1111.73 | 352.56 | 1112.16 | 352.57 | 1113.52 | 352.49 |
| 1121.06 | 352.2 | 1124.84 | 351.76 | 1126.76 | 351.57 | 1127.53 | 351.57 | 1128.09 | 351.55 |
| 1130.11 | 351.45 | 1131.64 | 351.34 | 1138.31 | 350.83 | 1139.52 | 350.81 | 1140.77 | 350.81 |
| 1142 | 350.92 | 1147.23 | 351.4 | 1148.79 | 351.53 | 1149.26 | 351.36 | 1150.43 | 351.38 |
| 1151.31 | 351.43 | 1156.64 | 351.88 | 1159.12 | 352.11 | 1159.43 | 352.13 | 1163.59 | 352.54 |
| 1165.7 | 352.74 | 1166.58 | 352.85 | 1170.12 | 353.05 | 1176.03 | 353.39 | 1182.39 | 353.75 |
| 1189.25 | 354.12 | 1192.36 | 354.29 | 1195.84 | 354.54 | 1197.93 | 354.7 | 1202.5 | 355.02 |
| 1204.09 | 355.14 | 1207.62 | 355.35 | 1210.08 | 355.46 | 1211.61 | 355.59 | 1212.57 | 355.61 |
| 1214.1 | 355.78 | 1218.36 | 356.22 | 1219.85 | 356.33 | 1220.66 | 356.41 | 1223.83 | 356.64 |
| 1226.53 | 356.89 | 1227.76 | 357.02 | 1236.89 | 358.39 | 1237.78 | 358.49 | 1244 | 359.21 |
| 1249.58 | 359.74 | 1253.45 | 360.06 | 1261.45 | 360.56 | 1262.97 | 360.65 | 1265.56 | 360.79 |
| 1266.77 | 360.84 | 1269.26 | 360.88 | 1269.66 | 360.9 | 1272.52 | 360.94 | 1274.69 | 361.08 |
| 1275.39 | 361.1 | 1277.77 | 361.09 | 1279.47 | 361.04 | 1280.43 | 360.97 | 1281.06 | 361 |
| 1285.33 | 361.28 | 1286.61 | 361.38 | 1287.85 | 361.46 | 1291.28 | 361.8 | 1292.36 | 361.92 |
| 1293.51 | 362.07 | 1294.66 | 362.18 | 1298.55 | 362.6 | 1303.46 | 363.1 | 1306.38 | 363.39 |
| 1309.78 | 363.7 | 1313.88 | 364.04 | 1317.14 | 364.29 | 1320.61 | 364.59 | 1322.2 | 364.75 |
| 1322.69 | 364.78 | 1323.27 | 364.84 | 1324.22 | 364.89 | 1328.4 | 365.02 | 1329.32 | 365 |
| 1331.32 | 365.01 | 1331.46 | 365.02 | 1333.26 | 365.06 | 1334.93 | 365.12 | 1335.57 | 365.13 |
| 1337.36 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 193.69 | .05 | 419.96 | .04 | 1166.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 419.96 | 1166.58 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5527.15*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 202.75 | 358.46 | 204.11 | 358.43 | 205.76 | 358.42 | 205.99 | 358.41 | 207.46 | 358.4 |
| 209.73 | 358.28 | 210.43 | 358.23 | 212 | 358.1 | 215.3 | 357.8 | 221.67 | 357.46 |
| 235.22 | 357.02 | 235.46 | 357.01 | 241.06 | 356.84 | 243.33 | 356.78 | 249.04 | 356.61 |
| 252.55 | 356.54 | 253.69 | 356.51 | 255.5 | 356.45 | 255.8 | 356.43 | 257.11 | 356.39 |
| 257.59 | 356.39 | 258.36 | 356.36 | 260.83 | 356.28 | 261.23 | 356.26 | 277.44 | 355.89 |
| 279.99 | 355.81 | 281.12 | 355.77 | 282.73 | 355.76 | 292.61 | 355.83 | 293.98 | 355.83 |
| 299.37 | 355.51 | 305.68 | 355.09 | 306.17 | 355.09 | 308.45 | 354.98 | 321.44 | 354.52 |
| 325.58 | 354.34 | 327.02 | 354.29 | 328.59 | 354.22 | 329.52 | 354.21 | 333 | 354.22 |
| 333.85 | 354.24 | 334.06 | 354.23 | 334.59 | 354.27 | 342.97 | 354.87 | 344.84 | 354.93 |
| 345.38 | 355 | 350.43 | 354.99 | 351.31 | 354.97 | 351.42 | 354.91 | 352.17 | 354.83 |
| 353.61 | 354.91 | 354.66 | 354.99 | 355.9 | 355.14 | 357.21 | 355.27 | 358.31 | 355.36 |
| 358.86 | 355.39 | 360.36 | 355.42 | 361.29 | 355.42 | 363.37 | 355.46 | 364.93 | 355.47 |
| 365.47 | 355.5 | 367.89 | 355.56 | 369.07 | 355.61 | 369.73 | 355.61 | 370.21 | 355.59 |
| 371.02 | 355.59 | 372.37 | 355.61 | 374.82 | 355.61 | 376.4 | 355.69 | 377.91 | 355.7 |
| 381.19 | 355.58 | 381.83 | 355.53 | 384.09 | 355.21 | 384.64 | 355.14 | 386.09 | 355.06 |
| 389.28 | 354.9 | 390.26 | 354.86 | 391.06 | 354.85 | 391.29 | 354.94 | 391.82 | 355.03 |
| 392.07 | 355.05 | 393.18 | 355.04 | 393.4 | 355.05 | 394.81 | 355.05 | 395.85 | 355.04 |
| 397.2 | 355.05 | 397.78 | 355.03 | 402.63 | 354.67 | 403.48 | 354.71 | 404.74 | 354.85 |
| 405.82 | 355.01 | 412.36 | 355.54 | 413.77 | 355.65 | 414.26 | 355.68 | 415.32 | 355.71 |
| 420.47 | 355.55 | 422.01 | 355.44 | 424 | 355.36 | 430.13 | 355.31 | 431 | 355.27 |
| 432.66 | 355.24 | 433.1 | 355.2 | 434.49 | 355.08 | 436.31 | 354.94 | 438.4 | 354.63 |
| 440.06 | 354.55 | 440.81 | 354.5 | 441.34 | 354.42 | 441.92 | 354.28 | 442.61 | 354.15 |
| 444.03 | 354.09 | 445.86 | 353.99 | 451.01 | 353.69 | 456.52 | 353.23 | 459 | 352.93 |
| 459.38 | 352.98 | 459.51 | 353.19 | 461.3 | 353.23 | 463.92 | 353.24 | 464.7 | 353.22 |
| 466.03 | 353.15 | 466.82 | 353.09 | 467.39 | 353.06 | 469.14 | 352.91 | 472.1 | 352.68 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 473.01 | 352.59 | 476.67 | 352.71 | 478.27 | 352.73 | 478.62 | 352.72 | 478.92 | 352.66 |
| 479.7 | 352.62 | 482.01 | 352.68 | 483.06 | 352.68 | 484.4 | 352.72 | 485.79 | 352.77 |
| 487.52 | 352.81 | 489.49 | 352.83 | 491.61 | 352.9 | 493.38 | 352.98 | 497.54 | 353.01 |
| 501.07 | 352.96 | 501.2 | 352.95 | 504.53 | 352.93 | 505.64 | 352.9 | 506.43 | 352.86 |
| 506.51 | 352.78 | 506.81 | 352.76 | 508.05 | 352.73 | 509.41 | 352.71 | 510.59 | 352.68 |
| 513.36 | 352.68 | 516.13 | 352.73 | 521.23 | 352.89 | 528.17 | 353.01 | 532.78 | 353.04 |
| 536.77 | 353.06 | 537.5 | 353.07 | 538.67 | 353.07 | 538.89 | 353.08 | 540.44 | 353.1 |
| 541.55 | 353.1 | 542.18 | 353.11 | 549.14 | 353.18 | 551.6 | 353.18 | 555.98 | 353.09 |
| 556.21 | 353.07 | 563.68 | 352.73 | 564.17 | 352.69 | 564.6 | 352.68 | 565.35 | 352.74 |
| 566.89 | 352.78 | 568.74 | 352.8 | 569.13 | 352.86 | 569.45 | 352.94 | 570.11 | 352.96 |
| 572.4 | 352.98 | 574.11 | 352.98 | 583.14 | 352.76 | 585.94 | 352.65 | 588.56 | 352.51 |
| 588.99 | 352.5 | 592.87 | 352.5 | 597.14 | 352.62 | 600.79 | 352.61 | 603.98 | 352.47 |
| 605.01 | 352.45 | 608.34 | 352.41 | 612.38 | 352.43 | 614.36 | 352.46 | 615.29 | 352.51 |
| 620.57 | 352.54 | 621.62 | 352.55 | 623.38 | 352.55 | 627.21 | 352.41 | 628.81 | 352.36 |
| 632.06 | 352.3 | 636.83 | 352.15 | 637.59 | 352.1 | 638.75 | 351.99 | 639.58 | 351.98 |
| 641.66 | 351.91 | 642.77 | 351.89 | 643.48 | 351.86 | 644.88 | 351.82 | 648.5 | 351.74 |
| 649.42 | 351.7 | 652.78 | 351.69 | 653 | 351.71 | 654.3 | 351.74 | 654.82 | 351.81 |
| 655.29 | 351.79 | 657.24 | 352.22 | 658.19 | 352.4 | 662.83 | 352.43 | 663.21 | 352.35 |
| 664.99 | 352.28 | 665.91 | 352.23 | 666.35 | 352.19 | 667.16 | 352.09 | 669.83 | 352.02 |
| 672.29 | 351.91 | 675.14 | 351.84 | 675.75 | 351.83 | 680.55 | 351.93 | 681.24 | 351.93 |
| 681.76 | 351.91 | 685.12 | 351.98 | 687.44 | 352.05 | 689.23 | 352.09 | 691.92 | 352.17 |
| 692.98 | 352.22 | 699.51 | 352.41 | 701.76 | 352.54 | 703.36 | 352.62 | 704.37 | 352.68 |
| 707.84 | 352.96 | 708.28 | 352.97 | 709.59 | 352.96 | 711.38 | 352.96 | 712.81 | 352.93 |
| 713.8 | 352.9 | 714.18 | 352.9 | 716.38 | 352.85 | 717.68 | 352.8 | 719.92 | 352.73 |
| 722.31 | 352.66 | 722.97 | 352.63 | 724.14 | 352.6 | 726.27 | 352.59 | 727.4 | 352.62 |
| 727.93 | 352.65 | 728.89 | 352.68 | 729.35 | 352.67 | 731.92 | 352.67 | 732.38 | 352.66 |
| 734.4 | 352.68 | 736.11 | 352.76 | 737.22 | 352.78 | 739.66 | 352.8 | 743.01 | 352.78 |
| 743.52 | 352.77 | 749.79 | 352.62 | 753.52 | 352.56 | 756.15 | 352.41 | 756.85 | 352.35 |
| 759.26 | 352.23 | 762.29 | 352.11 | 764 | 351.9 | 765.4 | 351.75 | 767.95 | 351.41 |
| 768.38 | 351.39 | 772.63 | 351.46 | 772.95 | 351.55 | 775.82 | 351.52 | 776.37 | 351.52 |
| 779.24 | 351.6 | 789.87 | 351.62 | 793.84 | 351.59 | 795.51 | 351.59 | 800.03 | 351.58 |
| 803.75 | 351.17 | 804.9 | 351.05 | 805.42 | 350.98 | 808.25 | 350.76 | 808.83 | 350.75 |
| 811.1 | 350.75 | 812.81 | 350.84 | 818.02 | 350.94 | 818.52 | 350.92 | 820.17 | 350.94 |
| 821.39 | 350.93 | 823.38 | 350.95 | 828.56 | 350.91 | 831.72 | 350.89 | 833.78 | 350.91 |
| 837.1 | 351.02 | 840.12 | 351.09 | 840.2 | 351.1 | 841.51 | 351.1 | 843 | 351.08 |
| 860.74 | 350.47 | 861.13 | 350.44 | 862.28 | 350.41 | 863.42 | 350.41 | 864.45 | 350.4 |
| 866.16 | 350.37 | 866.39 | 350.39 | 869.71 | 350.36 | 870.2 | 350.45 | 873.48 | 350.59 |
| 875.14 | 350.63 | 876.25 | 350.67 | 877.66 | 350.78 | 879.82 | 350.83 | 880.35 | 350.81 |
| 885.38 | 350.65 | 886.82 | 350.57 | 887.67 | 350.49 | 888.02 | 350.39 | 888.2 | 350.37 |
| 892.17 | 350.25 | 893.25 | 350.19 | 894.99 | 350.4 | 895.64 | 350.45 | 896.96 | 350.49 |
| 897.31 | 350.49 | 898.37 | 350.46 | 901.18 | 350.34 | 903 | 350.2 | 903.61 | 350.17 |
| 905 | 350.13 | 905.82 | 350.13 | 908.2 | 350.17 | 909.76 | 350.18 | 918.62 | 350.42 |
| 919.64 | 350.5 | 925.95 | 350.5 | 930.43 | 350.6 | 931.59 | 350.61 | 934.64 | 350.44 |
| 944.28 | 349.87 | 944.37 | 349.86 | 946.96 | 349.84 | 948.83 | 349.85 | 949.26 | 349.87 |
| 951.96 | 350.09 | 953.01 | 350.18 | 953.23 | 350.16 | 955.24 | 350.33 | 956.31 | 350.32 |
| 957.44 | 350.29 | 962.41 | 350.07 | 963.79 | 349.97 | 970.1 | 349.56 | 971.68 | 349.48 |
| 977.1 | 349.29 | 980.5 | 349.21 | 980.68 | 349.21 | 986.18 | 349.09 | 986.48 | 349.09 |
| 993.26 | 348.98 | 993.63 | 348.97 | 999.52 | 349.02 | 1002.33 | 349.03 | 1004.61 | 349.05 |
| 1013.12 | 349.3 | 1017.63 | 349.45 | 1019.6 | 349.51 | 1036.32 | 350.07 | 1039.62 | 350.17 |
| 1042.83 | 350.26 | 1044.63 | 350.32 | 1049.69 | 350.42 | 1052.42 | 350.52 | 1054.01 | 350.53 |
| 1055.49 | 350.53 | 1056.59 | 350.54 | 1057.45 | 350.56 | 1062.78 | 350.5 | 1063.88 | 350.47 |
| 1064.95 | 350.43 | 1067.3 | 350.33 | 1068.68 | 350.25 | 1069.18 | 350.19 | 1070.7 | 350.06 |
| 1071.26 | 349.97 | 1071.82 | 349.93 | 1072.84 | 349.94 | 1073.86 | 349.98 | 1075.13 | 350 |
| 1076.54 | 350.05 | 1077.44 | 350.07 | 1078.07 | 350.1 | 1080.25 | 350.24 | 1081.6 | 350.36 |
| 1082.61 | 350.46 | 1083.33 | 350.49 | 1083.77 | 350.48 | 1084.61 | 350.42 | 1084.63 | 350.31 |
| 1085.51 | 350.26 | 1086.38 | 350.26 | 1088.06 | 350.28 | 1090.19 | 350.33 | 1092.19 | 350.41 |
| 1092.99 | 350.47 | 1095.28 | 350.6 | 1104.22 | 351.51 | 1110.89 | 352.09 | 1112.46 | 352.22 |
| 1114.11 | 352.15 | 1121.63 | 351.88 | 1125.39 | 351.45 | 1127.31 | 351.26 | 1128.63 | 351.25 |
| 1130.64 | 351.14 | 1132.16 | 351.04 | 1138.81 | 350.53 | 1140.96 | 350.51 | 1141.27 | 350.52 |
| 1147.7 | 351.1 | 1149.25 | 351.23 | 1149.72 | 351.08 | 1150.89 | 351.1 | 1151.76 | 351.16 |
| 1157.07 | 351.64 | 1159.54 | 351.89 | 1159.85 | 351.91 | 1162.98 | 352.27 | 1163.46 | 352.33 |
| 1166.09 | 352.63 | 1166.97 | 352.77 | 1170.35 | 352.98 | 1176.01 | 353.37 | 1182.09 | 353.77 |
| 1182.99 | 353.82 | 1191.62 | 354.37 | 1194.66 | 354.61 | 1194.95 | 354.64 | 1201.31 | 355.15 |
| 1202.83 | 355.27 | 1206.21 | 355.5 | 1208.56 | 355.63 | 1210.02 | 355.77 | 1210.94 | 355.8 |
| 1212.41 | 355.97 | 1216.48 | 356.42 | 1217.9 | 356.54 | 1218.67 | 356.62 | 1220.12 | 356.74 |
| 1221.71 | 356.86 | 1224.29 | 357.12 | 1225.46 | 357.25 | 1234.2 | 358.59 | 1241 | 359.41 |
| 1246.33 | 359.94 | 1250.02 | 360.25 | 1257.68 | 360.75 | 1259.13 | 360.84 | 1261.85 | 360.99 |
| 1262.76 | 361.02 | 1266.39 | 361.08 | 1268.25 | 361.09 | 1270.34 | 361.22 | 1271 | 361.23 |
| 1273.28 | 361.21 | 1274.91 | 361.16 | 1275.83 | 361.09 | 1276.42 | 361.11 | 1280.51 | 361.36 |
| 1281.73 | 361.45 | 1282.92 | 361.52 | 1286.2 | 361.83 | 1287.74 | 362 | 1288.71 | 362.13 |
| 1289.42 | 362.2 | 1293.14 | 362.63 | 1297.84 | 363.13 | 1299.09 | 363.26 | 1300.63 | 363.41 |
| 1302.31 | 363.56 | 1303.88 | 363.71 | 1307.8 | 364.03 | 1310.92 | 364.27 | 1314.24 | 364.55 |
| 1315.76 | 364.71 | 1316.78 | 364.79 | 1317.69 | 364.85 | 1321.68 | 364.99 | 1322.56 | 364.98 |
| 1324.47 | 365 | 1324.61 | 365.01 | 1326.33 | 365.05 | 1326.43 | 365.06 | 1329.41 | 365.16 |
| 1330.25 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 202.75 | .05 | 433.1 | .04 | 1166.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 433.1 | 1166.97 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5507.67*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 211.81 | 358.16 | 212.74 | 358.14 | 214.87 | 358.13 | 216.6 | 358.1 | 217.34 | 358.07 |
| 218.91 | 357.97 | 219.63 | 357.91 | 222.38 | 357.65 | 224.58 | 357.42 | 231.06 | 357.03 |
| 244.85 | 356.55 | 250.8 | 356.35 | 253.11 | 356.3 | 258.92 | 356.12 | 262.49 | 356.05 |
| 265.8 | 355.94 | 267.13 | 355.9 | 267.62 | 355.9 | 268.4 | 355.87 | 270.92 | 355.8 |
| 271.33 | 355.78 | 287.82 | 355.43 | 290.42 | 355.36 | 291.31 | 355.32 | 292.49 | 355.3 |
| 293.2 | 355.3 | 303.26 | 355.4 | 304.66 | 355.4 | 310.15 | 355.1 | 316.56 | 354.71 |
| 317.06 | 354.7 | 319.38 | 354.61 | 332.6 | 354.17 | 336.82 | 353.99 | 338.03 | 353.95 |
| 338.28 | 353.93 | 339.88 | 353.86 | 340.83 | 353.85 | 344.37 | 353.86 | 345.23 | 353.89 |
| 345.45 | 353.88 | 345.98 | 353.92 | 354.52 | 354.49 | 355.24 | 354.51 | 356.5 | 354.56 |
| 356.96 | 354.62 | 362.11 | 354.62 | 363 | 354.6 | 363.11 | 354.55 | 363.87 | 354.47 |
| 365.34 | 354.55 | 366.41 | 354.62 | 367.67 | 354.77 | 369.6 | 354.94 | 370.69 | 355 |
| 373.16 | 355.03 | 375.27 | 355.07 | 376.86 | 355.09 | 377.41 | 355.11 | 379.88 | 355.17 |
| 381.08 | 355.22 | 381.74 | 355.22 | 382.24 | 355.18 | 382.73 | 355.2 | 383.06 | 355.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 384.44 | 355.21 | 387.2 | 355.22 | 388.53 | 355.29 | 390.07 | 355.3 | 390.38 | 355.29 |
| 393.41 | 355.15 | 394.06 | 355.1 | 396.74 | 354.68 | 398.4 | 354.58 | 402.34 | 354.41 |
| 403.46 | 354.4 | 403.69 | 354.49 | 404.49 | 354.6 | 405.61 | 354.59 | 405.84 | 354.61 |
| 406.67 | 354.62 | 407.27 | 354.61 | 409.7 | 354.64 | 411.01 | 354.58 | 415.23 | 354.29 |
| 416.1 | 354.33 | 417.37 | 354.46 | 418.48 | 354.61 | 425.13 | 355.11 | 426.57 | 355.21 |
| 427.06 | 355.23 | 428.15 | 355.25 | 433.38 | 355.06 | 434.95 | 354.94 | 436.97 | 354.87 |
| 443.51 | 354.87 | 444.11 | 354.83 | 445.97 | 354.81 | 446.24 | 354.78 | 449.38 | 354.53 |
| 451.42 | 354.24 | 453.05 | 354.16 | 453.78 | 354.11 | 454.3 | 354.04 | 454.87 | 353.91 |
| 455.55 | 353.78 | 456.93 | 353.72 | 458.73 | 353.63 | 463.76 | 353.32 | 469.16 | 352.88 |
| 471.36 | 352.61 | 471.58 | 352.59 | 471.95 | 352.63 | 472.08 | 352.82 | 472.18 | 352.83 |
| 473.83 | 352.86 | 476.39 | 352.85 | 477.16 | 352.84 | 478.46 | 352.76 | 479.79 | 352.67 |
| 481.51 | 352.52 | 484.4 | 352.32 | 485.29 | 352.24 | 487.91 | 352.32 | 488.87 | 352.36 |
| 490.44 | 352.38 | 490.78 | 352.37 | 491.07 | 352.32 | 491.83 | 352.28 | 494.1 | 352.34 |
| 495.12 | 352.34 | 496.44 | 352.37 | 497.8 | 352.43 | 502.05 | 352.5 | 503.83 | 352.58 |
| 505.11 | 352.63 | 505.95 | 352.65 | 509.29 | 352.66 | 512.74 | 352.6 | 512.88 | 352.59 |
| 516.13 | 352.56 | 517.22 | 352.53 | 517.99 | 352.49 | 518.07 | 352.42 | 518.36 | 352.4 |
| 522.06 | 352.31 | 525.51 | 352.31 | 527.48 | 352.35 | 532.47 | 352.5 | 539.26 | 352.6 |
| 543.77 | 352.63 | 544.11 | 352.64 | 547.68 | 352.65 | 549.34 | 352.66 | 549.75 | 352.67 |
| 552.97 | 352.71 | 559.78 | 352.78 | 562.18 | 352.78 | 566.48 | 352.71 | 566.7 | 352.69 |
| 574.01 | 352.38 | 574.35 | 352.35 | 574.9 | 352.34 | 575.64 | 352.4 | 577.15 | 352.43 |
| 578.48 | 352.44 | 578.96 | 352.46 | 579.34 | 352.51 | 579.66 | 352.59 | 580.3 | 352.61 |
| 582.53 | 352.63 | 584.21 | 352.63 | 593.05 | 352.44 | 595.78 | 352.34 | 596.09 | 352.32 |
| 598.35 | 352.21 | 598.77 | 352.2 | 602.57 | 352.2 | 606.51 | 352.3 | 606.75 | 352.31 |
| 609.88 | 352.31 | 610.32 | 352.3 | 613.44 | 352.17 | 614.45 | 352.14 | 617.71 | 352.09 |
| 621.66 | 352.1 | 623.59 | 352.13 | 624.5 | 352.18 | 629.67 | 352.2 | 630.7 | 352.21 |
| 632.42 | 352.21 | 633.55 | 352.18 | 636.17 | 352.08 | 637.08 | 352.05 | 638.72 | 352.03 |
| 640.91 | 351.99 | 645.58 | 351.85 | 646.32 | 351.8 | 646.75 | 351.74 | 647.46 | 351.68 |
| 648.27 | 351.67 | 653.46 | 351.52 | 657 | 351.46 | 657.9 | 351.41 | 660.52 | 351.4 |
| 662.68 | 351.46 | 663.18 | 351.52 | 663.64 | 351.51 | 665.55 | 351.91 | 666.48 | 352.08 |
| 669.66 | 352.1 | 669.95 | 352.11 | 671.02 | 352.11 | 671.39 | 352.04 | 672.47 | 352 |
| 674.04 | 351.93 | 674.46 | 351.89 | 674.93 | 351.82 | 675.26 | 351.8 | 676.81 | 351.76 |
| 680.28 | 351.62 | 683.06 | 351.55 | 683.67 | 351.54 | 687.45 | 351.61 | 689.03 | 351.62 |
| 689.54 | 351.6 | 692.84 | 351.67 | 693.05 | 351.67 | 695.11 | 351.73 | 696.85 | 351.77 |
| 699.49 | 351.85 | 700.53 | 351.91 | 703.92 | 352 | 706.91 | 352.09 | 709.11 | 352.22 |
| 709.9 | 352.25 | 711.67 | 352.35 | 714.59 | 352.58 | 715.49 | 352.62 | 716.77 | 352.63 |
| 718.52 | 352.62 | 719.69 | 352.6 | 720.59 | 352.57 | 721.27 | 352.57 | 723.42 | 352.52 |
| 724.69 | 352.48 | 726.33 | 352.42 | 726.59 | 352.42 | 729.22 | 352.33 | 729.87 | 352.3 |
| 731.01 | 352.27 | 733.1 | 352.26 | 734.2 | 352.29 | 735.66 | 352.34 | 736.11 | 352.33 |
| 738.62 | 352.33 | 739.07 | 352.32 | 741.05 | 352.33 | 742.73 | 352.4 | 743.8 | 352.42 |
| 746.2 | 352.43 | 749.48 | 352.41 | 749.97 | 352.4 | 756.1 | 352.25 | 759.76 | 352.19 |
| 760.64 | 352.14 | 762.33 | 352.03 | 763.39 | 351.94 | 764.56 | 351.88 | 768.33 | 351.73 |
| 770.01 | 351.54 | 771.38 | 351.4 | 773.88 | 351.09 | 774.3 | 351.07 | 778.46 | 351.16 |
| 778.77 | 351.24 | 781.57 | 351.22 | 782.11 | 351.22 | 782.93 | 351.25 | 785.35 | 351.32 |
| 795.32 | 351.34 | 799.21 | 351.31 | 800.84 | 351.31 | 805.27 | 351.3 | 808.91 | 350.91 |
| 809.43 | 350.86 | 810.54 | 350.73 | 813.3 | 350.51 | 813.88 | 350.5 | 816.1 | 350.5 |
| 817.77 | 350.58 | 822.87 | 350.67 | 823.36 | 350.66 | 824.97 | 350.67 | 826.17 | 350.67 |
| 828.11 | 350.69 | 833.18 | 350.68 | 834.8 | 350.66 | 836.27 | 350.66 | 838.28 | 350.69 |
| 841.53 | 350.8 | 843.69 | 350.85 | 844.49 | 350.88 | 845.85 | 350.88 | 847.31 | 350.86 |
| 864.67 | 350.29 | 865.05 | 350.27 | 866.17 | 350.24 | 867.72 | 350.23 | 869.97 | 350.19 |
| 870.2 | 350.2 | 873.44 | 350.17 | 873.93 | 350.25 | 877.13 | 350.37 | 878.76 | 350.4 |
| 879.85 | 350.43 | 881.22 | 350.53 | 882.96 | 350.57 | 883.86 | 350.55 | 888.78 | 350.38 |
| 890.19 | 350.3 | 891.02 | 350.22 | 891.54 | 350.1 | 895.42 | 349.97 | 896.48 | 349.91 |
| 898.18 | 350.11 | 898.82 | 350.15 | 900.11 | 350.19 | 901.49 | 350.17 | 904.23 | 350.05 |
| 906.02 | 349.92 | 906.61 | 349.89 | 907.97 | 349.86 | 908.77 | 349.86 | 911.11 | 349.89 |
| 912.63 | 349.9 | 921.3 | 350.12 | 922.3 | 350.2 | 928.48 | 350.2 | 932.86 | 350.31 |
| 933.99 | 350.33 | 936.44 | 350.21 | 946.41 | 349.64 | 946.49 | 349.63 | 949.03 | 349.61 |
| 950.87 | 349.62 | 951.28 | 349.64 | 954.96 | 349.92 | 955.17 | 349.9 | 957.14 | 350.05 |
| 957.61 | 350.06 | 958.93 | 350.02 | 959.28 | 350.02 | 964.15 | 349.8 | 971.67 | 349.25 |
| 973.22 | 349.18 | 978.52 | 348.98 | 981.85 | 348.91 | 982.03 | 348.9 | 987.41 | 348.79 |
| 987.7 | 348.78 | 994.33 | 348.66 | 994.7 | 348.66 | 1000.57 | 348.7 | 1003.36 | 348.71 |
| 1005.63 | 348.73 | 1014.11 | 348.98 | 1020.56 | 349.18 | 1037.22 | 349.73 | 1040.5 | 349.82 |
| 1043.31 | 349.91 | 1045.49 | 349.97 | 1050.54 | 350.08 | 1053.25 | 350.17 | 1056.32 | 350.19 |
| 1058.27 | 350.21 | 1063.58 | 350.15 | 1064.67 | 350.13 | 1065.73 | 350.09 | 1068.08 | 349.99 |
| 1069.19 | 349.93 | 1069.95 | 349.85 | 1071.47 | 349.73 | 1072.02 | 349.64 | 1072.58 | 349.61 |
| 1073.59 | 349.61 | 1074.61 | 349.65 | 1075.88 | 349.67 | 1077.29 | 349.72 | 1078.17 | 349.74 |
| 1078.8 | 349.77 | 1080.98 | 349.91 | 1082.32 | 350.03 | 1083.33 | 350.13 | 1084.05 | 350.16 |
| 1084.49 | 350.16 | 1085.32 | 350.1 | 1085.34 | 350 | 1086.22 | 349.96 | 1089.64 | 350.01 |
| 1090.88 | 350.05 | 1092.87 | 350.13 | 1093.66 | 350.19 | 1095.95 | 350.32 | 1104.85 | 351.21 |
| 1111.5 | 351.75 | 1113.21 | 351.88 | 1114.71 | 351.81 | 1122.2 | 351.55 | 1125.95 | 351.14 |
| 1127.85 | 350.96 | 1128.61 | 350.96 | 1129.17 | 350.94 | 1131.17 | 350.83 | 1132.69 | 350.73 |
| 1139.31 | 350.24 | 1141.45 | 350.21 | 1141.76 | 350.22 | 1148.17 | 350.8 | 1148.68 | 350.85 |
| 1149.71 | 350.93 | 1150.18 | 350.79 | 1151.34 | 350.82 | 1152.21 | 350.88 | 1157.5 | 351.4 |
| 1160.27 | 351.69 | 1163.39 | 352.11 | 1164.39 | 352.25 | 1166.49 | 352.52 | 1167.37 | 352.68 |
| 1170.59 | 352.92 | 1175.99 | 353.35 | 1181.78 | 353.78 | 1182.64 | 353.84 | 1188.04 | 354.23 |
| 1190.88 | 354.44 | 1193.78 | 354.7 | 1194.05 | 354.73 | 1200.13 | 355.27 | 1201.57 | 355.4 |
| 1204.8 | 355.66 | 1206.05 | 355.73 | 1207.04 | 355.8 | 1208.43 | 355.94 | 1209.31 | 355.99 |
| 1211.66 | 356.28 | 1214.59 | 356.62 | 1215.95 | 356.75 | 1216.69 | 356.83 | 1218.07 | 356.96 |
| 1219.58 | 357.08 | 1222.05 | 357.34 | 1223.17 | 357.47 | 1231.5 | 358.79 | 1232.31 | 358.89 |
| 1237.99 | 359.61 | 1243.07 | 360.15 | 1246.6 | 360.45 | 1253.9 | 360.94 | 1255.28 | 361.03 |
| 1256.79 | 361.12 | 1258.75 | 361.21 | 1261.02 | 361.23 | 1262.22 | 361.25 | 1263.99 | 361.25 |
| 1265.98 | 361.36 | 1266.62 | 361.37 | 1268.79 | 361.33 | 1270.34 | 361.28 | 1271.22 | 361.21 |
| 1271.78 | 361.23 | 1275.68 | 361.44 | 1276.85 | 361.52 | 1277.98 | 361.58 | 1281.11 | 361.85 |
| 1282.59 | 362.02 | 1283.14 | 362.1 | 1284.19 | 362.22 | 1287.74 | 362.65 | 1292.22 | 363.15 |
| 1293.41 | 363.28 | 1294.89 | 363.43 | 1297.98 | 363.72 | 1301.73 | 364.03 | 1304.7 | 364.24 |
| 1307.86 | 364.51 | 1309.31 | 364.67 | 1310.29 | 364.75 | 1311.16 | 364.81 | 1314.97 | 364.96 |
| 1315.81 | 364.95 | 1317.63 | 364.98 | 1319.4 | 365.04 | 1320.93 | 365.11 | 1321.51 | 365.12 |
| 1323.14 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 211.81 | .05 | 446.24 | .04 | 1167.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 446.24 | 1167.37 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5488.19*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 220.87 | 357.86 | 222.28 | 357.84 | 223.98 | 357.83 | 224.22 | 357.82 | 225.75 | 357.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 226.5 | 357.77 | 228.09 | 357.66 | 228.82 | 357.59 | 230.44 | 357.42 | 231.62 | 357.29 |
| 233.86 | 357.03 | 240.45 | 356.6 | 254.74 | 356.07 | 260.54 | 355.87 | 262.88 | 355.81 |
| 268.8 | 355.62 | 272.43 | 355.56 | 275.8 | 355.45 | 277.65 | 355.41 | 281 | 355.32 |
| 281.42 | 355.3 | 298.21 | 354.98 | 300.85 | 354.9 | 302.01 | 354.86 | 303.68 | 354.85 |
| 313.91 | 354.96 | 315.33 | 354.97 | 320.92 | 354.69 | 327.44 | 354.32 | 327.96 | 354.32 |
| 330.31 | 354.23 | 343.76 | 353.81 | 348.05 | 353.63 | 349.54 | 353.58 | 351.17 | 353.51 |
| 352.13 | 353.49 | 355.73 | 353.51 | 357.12 | 353.54 | 357.38 | 353.56 | 366.06 | 354.12 |
| 368.08 | 354.18 | 368.55 | 354.24 | 373.78 | 354.25 | 374.69 | 354.24 | 374.81 | 354.19 |
| 375.58 | 354.11 | 377.07 | 354.19 | 378.16 | 354.26 | 379.44 | 354.4 | 380.8 | 354.51 |
| 381.94 | 354.59 | 382.51 | 354.61 | 385.03 | 354.64 | 387.18 | 354.68 | 388.79 | 354.7 |
| 389.35 | 354.72 | 391.86 | 354.78 | 393.17 | 354.83 | 393.76 | 354.82 | 394.26 | 354.78 |
| 394.77 | 354.8 | 395.1 | 354.79 | 396.5 | 354.81 | 399.04 | 354.82 | 400.67 | 354.9 |
| 401.02 | 354.89 | 402.24 | 354.9 | 402.55 | 354.89 | 405.63 | 354.71 | 406.29 | 354.66 |
| 406.86 | 354.56 | 408.63 | 354.27 | 409.02 | 354.2 | 411.14 | 354.08 | 414 | 353.97 |
| 414.72 | 353.95 | 415.85 | 353.95 | 416.09 | 354.03 | 416.64 | 354.12 | 416.9 | 354.14 |
| 418.04 | 354.15 | 418.27 | 354.17 | 420.81 | 354.19 | 422.2 | 354.22 | 422.81 | 354.21 |
| 423.53 | 354.17 | 427.83 | 353.91 | 428.71 | 353.95 | 430.01 | 354.07 | 431.13 | 354.21 |
| 437.9 | 354.67 | 439.67 | 354.78 | 440.97 | 354.79 | 446.3 | 354.57 | 447.89 | 354.45 |
| 449.95 | 354.38 | 456.31 | 354.43 | 457.21 | 354.4 | 458.62 | 354.4 | 459.38 | 354.36 |
| 460.03 | 354.3 | 462.45 | 354.12 | 464.45 | 353.84 | 465.67 | 353.78 | 466.04 | 353.77 |
| 466.75 | 353.72 | 467.26 | 353.65 | 467.82 | 353.53 | 468.48 | 353.42 | 469.4 | 353.37 |
| 469.84 | 353.36 | 471.59 | 353.26 | 476.52 | 352.96 | 481.79 | 352.53 | 483.95 | 352.27 |
| 484.16 | 352.25 | 484.52 | 352.28 | 484.65 | 352.46 | 484.75 | 352.47 | 486.82 | 352.49 |
| 488.87 | 352.47 | 489.62 | 352.45 | 490.89 | 352.38 | 492.2 | 352.28 | 493.87 | 352.14 |
| 496.7 | 351.96 | 497.57 | 351.88 | 501.07 | 352 | 502.61 | 352.03 | 502.94 | 352.02 |
| 503.23 | 351.98 | 503.97 | 351.94 | 506.18 | 352.01 | 507.18 | 352.01 | 508.47 | 352.03 |
| 509.8 | 352.08 | 511.46 | 352.12 | 513.34 | 352.14 | 515.36 | 352.21 | 516.95 | 352.29 |
| 517.38 | 352.3 | 521.04 | 352.3 | 524.42 | 352.24 | 524.55 | 352.23 | 527.74 | 352.19 |
| 528.8 | 352.16 | 529.55 | 352.12 | 529.63 | 352.05 | 531.1 | 352 | 532.41 | 351.98 |
| 533.53 | 351.95 | 534.03 | 351.95 | 536.18 | 351.93 | 536.9 | 351.93 | 538.83 | 351.96 |
| 543.71 | 352.1 | 550.35 | 352.2 | 554.77 | 352.23 | 558.59 | 352.25 | 559.28 | 352.26 |
| 560.4 | 352.26 | 560.61 | 352.27 | 562.09 | 352.29 | 562.98 | 352.29 | 570.42 | 352.38 |
| 572.77 | 352.39 | 576.97 | 352.32 | 577.18 | 352.31 | 584.34 | 352.04 | 584.8 | 352 |
| 585.21 | 352 | 585.94 | 352.05 | 587.4 | 352.09 | 589.18 | 352.11 | 589.55 | 352.16 |
| 589.86 | 352.24 | 592.67 | 352.28 | 594.32 | 352.28 | 602.95 | 352.12 | 605.63 | 352.03 |
| 605.93 | 352.01 | 608.14 | 351.91 | 608.55 | 351.9 | 612.27 | 351.9 | 615.73 | 351.98 |
| 616.12 | 352 | 619.42 | 352 | 619.84 | 351.99 | 622.9 | 351.86 | 623.89 | 351.83 |
| 627.07 | 351.78 | 630.94 | 351.77 | 632.83 | 351.79 | 633.72 | 351.84 | 638.77 | 351.86 |
| 641.46 | 351.88 | 645.13 | 351.75 | 646.49 | 351.71 | 648.26 | 351.71 | 649.77 | 351.69 |
| 654.33 | 351.55 | 655.38 | 351.46 | 655.48 | 351.43 | 656.17 | 351.37 | 656.96 | 351.36 |
| 658.96 | 351.3 | 660.02 | 351.28 | 662.04 | 351.22 | 665.5 | 351.17 | 666.38 | 351.13 |
| 668.94 | 351.12 | 670.5 | 351.15 | 671.05 | 351.17 | 671.55 | 351.24 | 672 | 351.22 |
| 673.86 | 351.6 | 674.77 | 351.76 | 679.21 | 351.8 | 679.57 | 351.73 | 681.28 | 351.67 |
| 682.16 | 351.63 | 683.36 | 351.5 | 684.87 | 351.47 | 685.91 | 351.43 | 688.26 | 351.33 |
| 690.99 | 351.25 | 691.58 | 351.24 | 695.28 | 351.3 | 696.16 | 351.32 | 697.32 | 351.29 |
| 697.79 | 351.29 | 700.55 | 351.35 | 700.76 | 351.35 | 702.77 | 351.41 | 704.48 | 351.44 |
| 707.05 | 351.53 | 708.07 | 351.59 | 711.39 | 351.68 | 714.31 | 351.77 | 716.46 | 351.89 |
| 718.32 | 351.97 | 721.82 | 352.24 | 722.28 | 352.27 | 723.96 | 352.29 | 725.67 | 352.28 |
| 727.04 | 352.26 | 727.69 | 352.24 | 728.35 | 352.24 | 730.46 | 352.19 | 733.3 | 352.1 |
| 736.13 | 352 | 736.77 | 351.97 | 737.88 | 351.94 | 739.92 | 351.93 | 741 | 351.95 |
| 742.43 | 351.99 | 742.87 | 351.98 | 745.32 | 351.98 | 745.76 | 351.97 | 747.7 | 351.98 |
| 748.21 | 351.99 | 749.34 | 352.04 | 752.73 | 352.07 | 755.94 | 352.03 | 756.42 | 352.02 |
| 762.42 | 351.87 | 766 | 351.82 | 768.51 | 351.64 | 769.18 | 351.58 | 771.48 | 351.46 |
| 772.97 | 351.4 | 774.38 | 351.35 | 776.02 | 351.18 | 777.36 | 351.05 | 779.81 | 350.77 |
| 780.21 | 350.76 | 784.28 | 350.85 | 784.59 | 350.92 | 787.86 | 350.92 | 790.61 | 351.03 |
| 791.02 | 351.04 | 800.78 | 351.06 | 804.58 | 351.03 | 806.18 | 351.03 | 810.5 | 351.01 |
| 814.57 | 350.61 | 815.66 | 350.48 | 818.36 | 350.26 | 818.93 | 350.25 | 821.09 | 350.25 |
| 822.73 | 350.33 | 827.72 | 350.41 | 828.19 | 350.4 | 829.78 | 350.41 | 830.94 | 350.41 |
| 832.84 | 350.43 | 837.8 | 350.44 | 839.38 | 350.43 | 840.82 | 350.43 | 842.79 | 350.47 |
| 845.97 | 350.58 | 846.9 | 350.6 | 848.87 | 350.66 | 849.7 | 350.67 | 851.62 | 350.65 |
| 868.6 | 350.11 | 868.97 | 350.09 | 870.07 | 350.06 | 871.16 | 350.06 | 873.78 | 350.01 |
| 874.01 | 350.02 | 877.18 | 349.98 | 877.65 | 350.05 | 880.79 | 350.15 | 881.88 | 350.17 |
| 882.38 | 350.17 | 883.44 | 350.2 | 884.79 | 350.29 | 886.85 | 350.32 | 892.17 | 350.1 |
| 893.56 | 350.03 | 894.37 | 349.95 | 894.88 | 349.84 | 898.67 | 349.69 | 899.71 | 349.63 |
| 901.37 | 349.82 | 902 | 349.85 | 903.26 | 349.89 | 904.6 | 349.87 | 907.29 | 349.76 |
| 909.04 | 349.64 | 909.62 | 349.61 | 910.95 | 349.58 | 911.73 | 349.58 | 914.01 | 349.61 |
| 915.51 | 349.62 | 923.98 | 349.83 | 924.96 | 349.9 | 931 | 349.9 | 935.29 | 350.03 |
| 936.4 | 350.05 | 939.31 | 349.92 | 948.54 | 349.41 | 948.62 | 349.4 | 951.1 | 349.39 |
| 951.78 | 349.38 | 952.9 | 349.39 | 953.3 | 349.41 | 956.9 | 349.66 | 957.1 | 349.65 |
| 959.03 | 349.78 | 959.5 | 349.79 | 961.13 | 349.74 | 965.89 | 349.53 | 967.21 | 349.42 |
| 973.24 | 348.95 | 974.76 | 348.87 | 979.94 | 348.67 | 983.19 | 348.61 | 983.37 | 348.6 |
| 988.63 | 348.48 | 988.92 | 348.48 | 995.41 | 348.35 | 995.76 | 348.34 | 1001.61 | 348.38 |
| 1004.39 | 348.39 | 1006.65 | 348.41 | 1015.1 | 348.65 | 1019.58 | 348.79 | 1021.53 | 348.84 |
| 1038.12 | 349.39 | 1041.39 | 349.48 | 1046.36 | 349.62 | 1051.38 | 349.73 | 1054.09 | 349.82 |
| 1058.23 | 349.85 | 1059.08 | 349.87 | 1064.38 | 349.81 | 1065.47 | 349.78 | 1066.52 | 349.74 |
| 1068.86 | 349.64 | 1070.23 | 349.56 | 1071.01 | 349.48 | 1072.23 | 349.39 | 1072.79 | 349.31 |
| 1073.34 | 349.28 | 1074.63 | 349.29 | 1074.85 | 349.31 | 1076.63 | 349.35 | 1076.92 | 349.35 |
| 1078.03 | 349.39 | 1078.91 | 349.41 | 1079.54 | 349.44 | 1081.71 | 349.59 | 1083.04 | 349.7 |
| 1084.05 | 349.8 | 1084.77 | 349.83 | 1085.2 | 349.83 | 1086.03 | 349.78 | 1086.05 | 349.69 |
| 1086.93 | 349.66 | 1089.01 | 349.69 | 1090.28 | 349.72 | 1090.34 | 349.73 | 1091.57 | 349.77 |
| 1093.56 | 349.85 | 1094.34 | 349.91 | 1096.62 | 350.05 | 1105.49 | 350.91 | 1113.55 | 351.52 |
| 1113.96 | 351.53 | 1115.31 | 351.46 | 1122.76 | 351.23 | 1126.5 | 350.84 | 1128.4 | 350.66 |
| 1129.71 | 350.63 | 1131.71 | 350.53 | 1133.22 | 350.43 | 1139.81 | 349.95 | 1141.01 | 349.92 |
| 1141.82 | 349.91 | 1142.25 | 349.92 | 1143.46 | 350.03 | 1148.63 | 350.51 | 1150.17 | 350.63 |
| 1150.64 | 350.51 | 1151.8 | 350.54 | 1152.66 | 350.6 | 1157.93 | 351.16 | 1160.38 | 351.44 |
| 1160.69 | 351.47 | 1163.79 | 351.95 | 1166.88 | 352.41 | 1167.76 | 352.59 | 1170.82 | 352.85 |
| 1175.96 | 353.32 | 1181.48 | 353.8 | 1182.3 | 353.86 | 1187.44 | 354.29 | 1190.13 | 354.52 |
| 1192.9 | 354.79 | 1194.97 | 355 | 1198.94 | 355.39 | 1199.76 | 355.48 | 1203.39 | 355.81 |
| 1205.53 | 355.97 | 1206.85 | 356.12 | 1207.68 | 356.17 | 1209.92 | 356.47 | 1212.71 | 356.83 |
| 1214 | 356.96 | 1216.02 | 357.18 | 1217.46 | 357.3 | 1219.81 | 357.57 | 1220.87 | 357.7 |
| 1228.8 | 358.99 | 1229.57 | 359.09 | 1234.98 | 359.81 | 1239.82 | 360.35 | 1243.18 | 360.65 |
| 1250.13 | 361.14 | 1251.44 | 361.22 | 1253.92 | 361.36 | 1254.74 | 361.39 | 1258.04 | 361.42 |
| 1259.73 | 361.41 | 1261.62 | 361.5 | 1262.23 | 361.5 | 1264.3 | 361.46 | 1265.77 | 361.4 |
| 1266.61 | 361.33 | 1267.15 | 361.34 | 1270.86 | 361.52 | 1271.97 | 361.59 | 1273.05 | 361.64 |
| 1276.03 | 361.88 | 1276.96 | 361.97 | 1277.96 | 362.12 | 1278.96 | 362.24 | 1282.33 | 362.68 |
| 1286.6 | 363.18 | 1287.74 | 363.31 | 1290.66 | 363.6 | 1292.09 | 363.73 | 1295.65 | 364.02 |
| 1298.48 | 364.22 | 1301.49 | 364.47 | 1302.87 | 364.63 | 1303.8 | 364.71 | 1304.63 | 364.77 |
| 1308.25 | 364.93 | 1309.05 | 364.93 | 1310.79 | 364.97 | 1312.47 | 365.03 | 1312.82 | 365.06 |
| 1316.03 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 220.87 | .05 | 459.38 | .04 | 1167.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 459.38 | 1167.76 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5468.71*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 229.93 | 357.57 | 230.64 | 357.55 | 233.09 | 357.54 | 233.34 | 357.53 | 234.89 | 357.52 |
| 235.65 | 357.47 | 237.27 | 357.34 | 238.02 | 357.27 | 239.66 | 357.08 | 243.14 | 356.64 |
| 249.85 | 356.17 | 264.12 | 355.62 | 270.27 | 355.39 | 272.66 | 355.33 | 278.68 | 355.13 |
| 282.37 | 355.06 | 283.17 | 355.03 | 285.8 | 354.96 | 287.68 | 354.92 | 291.52 | 354.83 |
| 308.59 | 354.52 | 311.28 | 354.45 | 312.46 | 354.4 | 314.15 | 354.4 | 324.56 | 354.53 |
| 326.01 | 354.54 | 331.69 | 354.29 | 338.33 | 353.94 | 338.85 | 353.94 | 341.24 | 353.85 |
| 354.92 | 353.46 | 359.28 | 353.28 | 360.54 | 353.24 | 360.8 | 353.22 | 362.45 | 353.15 |
| 363.44 | 353.13 | 367.1 | 353.15 | 368.22 | 353.18 | 368.77 | 353.21 | 377.6 | 353.74 |
| 379.66 | 353.8 | 380.13 | 353.86 | 385.46 | 353.88 | 386.38 | 353.87 | 386.5 | 353.82 |
| 387.29 | 353.76 | 388.8 | 353.83 | 389.91 | 353.9 | 391.21 | 354.03 | 392.6 | 354.13 |
| 393.93 | 354.21 | 396.89 | 354.25 | 399.08 | 354.29 | 400.72 | 354.31 | 401.29 | 354.34 |
| 403.84 | 354.39 | 405.18 | 354.44 | 405.78 | 354.43 | 406.29 | 354.38 | 406.8 | 354.4 |
| 411.15 | 354.42 | 412.8 | 354.5 | 413.16 | 354.49 | 414.65 | 354.49 | 414.71 | 354.48 |
| 417.85 | 354.28 | 418.53 | 354.23 | 419.1 | 354.12 | 421.3 | 353.73 | 421.49 | 353.71 |
| 423.45 | 353.6 | 427.09 | 353.49 | 428.25 | 353.5 | 428.49 | 353.58 | 429.31 | 353.69 |
| 430.41 | 353.7 | 431.57 | 353.75 | 432.19 | 353.75 | 433.29 | 353.77 | 434.71 | 353.81 |
| 435.32 | 353.8 | 436.06 | 353.77 | 440.43 | 353.54 | 441.33 | 353.57 | 442.65 | 353.68 |
| 443.79 | 353.81 | 450.68 | 354.24 | 452.41 | 354.33 | 453.8 | 354.33 | 459.22 | 354.08 |
| 460.83 | 353.95 | 462.93 | 353.89 | 469.4 | 354 | 470.31 | 353.97 | 471.75 | 353.98 |
| 472.52 | 353.94 | 473.15 | 353.88 | 475.52 | 353.7 | 477.47 | 353.44 | 478.67 | 353.39 |
| 479.73 | 353.33 | 480.23 | 353.26 | 480.77 | 353.15 | 481.42 | 353.05 | 482.74 | 352.99 |
| 484.46 | 352.9 | 489.27 | 352.6 | 494.43 | 352.18 | 496.74 | 351.9 | 497.1 | 351.94 |
| 497.22 | 352.1 | 497.32 | 352.11 | 499.34 | 352.11 | 501.35 | 352.09 | 502.08 | 352.06 |
| 503.32 | 351.99 | 506.23 | 351.76 | 509 | 351.59 | 509.85 | 351.53 | 512.36 | 351.61 |
| 513.27 | 351.65 | 515.1 | 351.68 | 515.38 | 351.63 | 516.11 | 351.61 | 518.27 | 351.67 |
| 519.25 | 351.67 | 520.51 | 351.69 | 521.81 | 351.74 | 523.42 | 351.78 | 525.26 | 351.79 |
| 525.88 | 351.81 | 527.57 | 351.89 | 528.45 | 351.92 | 528.91 | 351.95 | 529.96 | 351.96 |
| 532.79 | 351.95 | 536.09 | 351.88 | 536.22 | 351.87 | 539.34 | 351.82 | 540.38 | 351.79 |
| 541.11 | 351.75 | 541.19 | 351.69 | 541.46 | 351.67 | 542.62 | 351.64 | 543.9 | 351.62 |
| 545 | 351.58 | 545.49 | 351.58 | 547.59 | 351.55 | 548.3 | 351.55 | 550.18 | 351.58 |
| 554.95 | 351.71 | 561.44 | 351.8 | 565.76 | 351.82 | 566.08 | 351.83 | 569.49 | 351.84 |
| 570.17 | 351.85 | 571.26 | 351.85 | 572.92 | 351.89 | 574.55 | 351.9 | 581.06 | 351.99 |
| 583.36 | 351.99 | 587.46 | 351.94 | 587.67 | 351.93 | 594.66 | 351.69 | 595.41 | 351.65 |
| 596.23 | 351.7 | 597.66 | 351.74 | 598.94 | 351.75 | 599.65 | 351.79 | 600.06 | 351.88 |
| 600.68 | 351.9 | 602.81 | 351.93 | 604.42 | 351.93 | 612.86 | 351.8 | 613.06 | 351.79 |
| 615.77 | 351.71 | 616.18 | 351.68 | 617.93 | 351.61 | 618.33 | 351.6 | 621.96 | 351.6 |
| 625.81 | 351.69 | 625.96 | 351.7 | 628.95 | 351.69 | 629.37 | 351.68 | 632.36 | 351.55 |
| 633.32 | 351.52 | 636.44 | 351.46 | 640.22 | 351.44 | 642.06 | 351.46 | 642.7 | 351.5 |
| 647.87 | 351.52 | 648.86 | 351.54 | 650.5 | 351.54 | 651.58 | 351.51 | 654.09 | 351.42 |
| 655.58 | 351.4 | 657.14 | 351.4 | 658.62 | 351.39 | 663.09 | 351.26 | 664.11 | 351.15 |
| 664.2 | 351.12 | 664.88 | 351.05 | 665.66 | 351.05 | 667.6 | 351 | 668.64 | 350.98 |
| 670.62 | 350.92 | 674 | 350.89 | 674.86 | 350.85 | 677.36 | 350.83 | 678 | 350.84 |
| 678.21 | 350.86 | 679.43 | 350.89 | 679.91 | 350.95 | 680.35 | 350.94 | 682.17 | 351.29 |
| 682.27 | 351.29 | 683.06 | 351.44 | 687.4 | 351.48 | 687.76 | 351.42 | 688.79 | 351.39 |
| 690.29 | 351.33 | 691.14 | 351.23 | 691.45 | 351.21 | 692.93 | 351.17 | 696.25 | 351.03 |
| 698.92 | 350.95 | 699.49 | 350.94 | 703.11 | 351 | 703.3 | 351.01 | 704.62 | 351.01 |
| 705.11 | 350.97 | 708.26 | 351.03 | 708.47 | 351.03 | 710.43 | 351.09 | 712.1 | 351.12 |
| 714.61 | 351.2 | 715.61 | 351.27 | 718.86 | 351.36 | 721.71 | 351.45 | 723.82 | 351.57 |
| 725.63 | 351.64 | 729.05 | 351.9 | 729.5 | 351.93 | 731.14 | 351.95 | 733.93 | 351.93 |
| 734.79 | 351.9 | 735.44 | 351.91 | 737.01 | 351.88 | 737.5 | 351.86 | 740.28 | 351.77 |
| 744.75 | 351.61 | 746.75 | 351.6 | 747.8 | 351.61 | 749.2 | 351.65 | 749.63 | 351.64 |
| 752.03 | 351.63 | 752.46 | 351.62 | 754.35 | 351.62 | 755.5 | 351.67 | 756.98 | 351.69 |
| 759.27 | 351.7 | 762.4 | 351.66 | 762.88 | 351.65 | 768.74 | 351.5 | 772.24 | 351.45 |
| 772.7 | 351.42 | 774.69 | 351.26 | 775.35 | 351.19 | 776.82 | 351.11 | 779.05 | 351.02 |
| 780.43 | 350.98 | 782.03 | 350.81 | 783.35 | 350.7 | 785.74 | 350.45 | 786.13 | 350.44 |
| 790.11 | 350.54 | 790.4 | 350.61 | 793.09 | 350.62 | 794.39 | 350.66 | 796.3 | 350.75 |
| 796.7 | 350.76 | 806.23 | 350.79 | 807.72 | 350.77 | 809.95 | 350.75 | 811.51 | 350.75 |
| 815.74 | 350.73 | 819.22 | 350.4 | 820.3 | 350.29 | 820.78 | 350.23 | 823.42 | 350.02 |
| 823.97 | 350 | 826.09 | 350 | 827.7 | 350.07 | 832.57 | 350.15 | 833.03 | 350.14 |
| 834.58 | 350.15 | 835.72 | 350.15 | 837.58 | 350.18 | 842.42 | 350.2 | 845.38 | 350.2 |
| 847.3 | 350.24 | 850.41 | 350.36 | 851.32 | 350.38 | 853.24 | 350.44 | 854.05 | 350.45 |
| 855.93 | 350.43 | 872.53 | 349.93 | 872.89 | 349.91 | 873.96 | 349.89 | 875.45 | 349.88 |
| 877.59 | 349.83 | 877.81 | 349.84 | 880.91 | 349.79 | 881.59 | 349.86 | 884.44 | 349.93 |
| 885.51 | 349.94 | 887.03 | 349.97 | 888.35 | 350.04 | 889.49 | 350.06 | 890.45 | 350.06 |
| 895.57 | 349.83 | 896.92 | 349.75 | 897.72 | 349.68 | 898.21 | 349.57 | 901.92 | 349.42 |
| 902.93 | 349.35 | 904.56 | 349.52 | 905.17 | 349.56 | 906.41 | 349.59 | 907.72 | 349.57 |
| 910.35 | 349.47 | 912.05 | 349.36 | 913.92 | 349.31 | 914.69 | 349.31 | 916.92 | 349.34 |
| 918.38 | 349.34 | 926.66 | 349.53 | 927.62 | 349.6 | 933.53 | 349.6 | 937.71 | 349.75 |
| 938.8 | 349.77 | 940.34 | 349.71 | 940.52 | 349.71 | 950.67 | 349.18 | 950.75 | 349.17 |
| 953.18 | 349.16 | 953.84 | 349.15 | 955.32 | 349.17 | 957.85 | 349.34 | 958.84 | 349.4 |
| 959.04 | 349.39 | 960.92 | 349.51 | 961.17 | 349.52 | 962.2 | 349.5 | 962.97 | 349.47 |
| 967.63 | 349.26 | 968.91 | 349.14 | 974.82 | 348.64 | 976.3 | 348.57 | 981.37 | 348.36 |
| 984.54 | 348.3 | 984.72 | 348.3 | 989.86 | 348.17 | 990.14 | 348.17 | 996.48 | 348.03 |
| 996.83 | 348.03 | 1002.65 | 348.07 | 1005.42 | 348.07 | 1007.68 | 348.1 | 1016.09 | 348.32 |
| 1020.55 | 348.46 | 1022.49 | 348.51 | 1039.02 | 349.05 | 1042.28 | 349.14 | 1047.23 | 349.28 |
| 1052.23 | 349.38 | 1054.93 | 349.47 | 1057.97 | 349.49 | 1059.9 | 349.53 | 1065.17 | 349.46 |
| 1067.31 | 349.4 | 1069.64 | 349.3 | 1070.74 | 349.24 | 1071.79 | 349.14 | 1073 | 349.06 |
| 1073.55 | 348.98 | 1074.1 | 348.95 | 1075.24 | 348.96 | 1076.12 | 349 | 1077.67 | 349.02 |
| 1078.77 | 349.06 | 1079.65 | 349.08 | 1080.28 | 349.11 | 1082.44 | 349.26 | 1083.77 | 349.37 |
| 1084.77 | 349.47 | 1085.92 | 349.51 | 1086.74 | 349.47 | 1086.76 | 349.38 | 1087.64 | 349.36 |
| 1088.5 | 349.37 | 1090.16 | 349.41 | 1092.26 | 349.48 | 1092.52 | 349.5 | 1094.24 | 349.57 |
| 1095.02 | 349.63 | 1097.29 | 349.77 | 1106.13 | 350.61 | 1114.15 | 351.17 | 1114.66 | 351.18 |
| 1114.89 | 351.16 | 1115.9 | 351.12 | 1123.33 | 350.9 | 1123.5 | 350.89 | 1127.05 | 350.53 |
| 1128.94 | 350.36 | 1130.25 | 350.33 | 1132.24 | 350.22 | 1133.74 | 350.12 | 1140.32 | 349.65 |
| 1142.43 | 349.62 | 1142.74 | 349.63 | 1143.94 | 349.73 | 1149.1 | 350.21 | 1150.63 | 350.34 |
| 1151.1 | 350.22 | 1152.25 | 350.26 | 1153.11 | 350.32 | 1158.35 | 350.91 | 1160.8 | 351.22 |
| 1161.11 | 351.25 | 1164.67 | 351.86 | 1165.2 | 351.96 | 1167.28 | 352.31 | 1168.15 | 352.51 |
| 1171.06 | 352.79 | 1175.94 | 353.3 | 1181.18 | 353.81 | 1181.95 | 353.88 | 1186.83 | 354.34 |
| 1189.39 | 354.59 | 1192.02 | 354.88 | 1197.76 | 355.52 | 1199.06 | 355.67 | 1201.98 | 355.96 |
| 1204.01 | 356.14 | 1205.26 | 356.3 | 1206.05 | 356.36 | 1208.18 | 356.67 | 1210.83 | 357.03 |
| 1212.06 | 357.17 | 1212.72 | 357.26 | 1213.97 | 357.39 | 1215.34 | 357.52 | 1217.57 | 357.79 |
| 1218.58 | 357.92 | 1226.11 | 359.19 | 1231.97 | 360 | 1236.57 | 360.55 | 1239.75 | 360.85 |
| 1247.6 | 361.42 | 1248.96 | 361.49 | 1249.73 | 361.52 | 1250.73 | 361.58 | 1252.78 | 361.58 |
| 1253.87 | 361.59 | 1255.47 | 361.57 | 1257.27 | 361.63 | 1257.84 | 361.64 | 1259.8 | 361.58 |
| 1261.21 | 361.52 | 1262 | 361.45 | 1262.51 | 361.46 | 1266.04 | 361.6 | 1267.09 | 361.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1268.11 | 361.7 | 1270.94 | 361.91 | 1271.83 | 361.99 | 1272.27 | 362.06 | 1276.93 | 362.7 |
| 1280.98 | 363.2 | 1282.06 | 363.33 | 1283.39 | 363.47 | 1286.19 | 363.74 | 1289.57 | 364.01 |
| 1292.26 | 364.19 | 1295.12 | 364.43 | 1296.03 | 364.54 | 1297.31 | 364.67 | 1298.1 | 364.73 |
| 1301.3 | 364.89 | 1303.94 | 364.95 | 1305.54 | 365.02 | 1305.87 | 365.05 | 1306.93 | 365.1 |
| 1308.92 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 229.93 | .05 | 472.52 | .04 | 1168.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 472.52 | 1168.15 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5449.22*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 238.99 | 357.27 | 240.44 | 357.25 | 242.21 | 357.24 | 242.45 | 357.23 | 244.03 | 357.22 |
| 244.81 | 357.17 | 246.46 | 357.03 | 247.21 | 356.95 | 248.89 | 356.74 | 250.1 | 356.58 |
| 252.42 | 356.25 | 259.24 | 355.74 | 273.75 | 355.15 | 280.01 | 354.91 | 282.44 | 354.85 |
| 288.56 | 354.64 | 292.31 | 354.57 | 293.53 | 354.52 | 295.47 | 354.48 | 297.19 | 354.44 |
| 297.71 | 354.44 | 301.61 | 354.35 | 318.97 | 354.07 | 321.7 | 353.99 | 322.9 | 353.95 |
| 324.63 | 353.95 | 335.21 | 354.09 | 336.68 | 354.1 | 342.46 | 353.88 | 349.21 | 353.56 |
| 349.74 | 353.56 | 352.17 | 353.48 | 366.09 | 353.11 | 370.52 | 352.92 | 371.46 | 352.9 |
| 372.06 | 352.86 | 373.74 | 352.79 | 374.74 | 352.77 | 378.46 | 352.8 | 379.9 | 352.84 |
| 380.16 | 352.86 | 389.15 | 353.37 | 391.24 | 353.43 | 391.72 | 353.48 | 397.13 | 353.51 |
| 398.07 | 353.5 | 398.19 | 353.46 | 398.99 | 353.4 | 400.53 | 353.47 | 401.66 | 353.54 |
| 402.52 | 353.61 | 402.99 | 353.66 | 405.02 | 353.79 | 406.16 | 353.83 | 408.76 | 353.86 |
| 412.66 | 353.93 | 413.23 | 353.95 | 415.83 | 354.01 | 417.19 | 354.05 | 417.68 | 354.04 |
| 418.31 | 353.98 | 419.18 | 354 | 420.63 | 354.02 | 423.25 | 354.03 | 424.21 | 354.07 |
| 424.94 | 354.11 | 425.3 | 354.09 | 426.56 | 354.09 | 426.88 | 354.08 | 430.07 | 353.85 |
| 430.76 | 353.79 | 433.17 | 353.33 | 433.77 | 353.23 | 435.32 | 353.14 | 439.47 | 353.03 |
| 440.64 | 353.05 | 440.71 | 353.09 | 441.72 | 353.23 | 442.84 | 353.26 | 444.02 | 353.31 |
| 445.77 | 353.34 | 447.21 | 353.39 | 447.84 | 353.4 | 448.59 | 353.36 | 453.03 | 353.16 |
| 453.94 | 353.19 | 455.28 | 353.29 | 456.45 | 353.41 | 463.45 | 353.8 | 464.96 | 353.88 |
| 465.48 | 353.89 | 466.62 | 353.87 | 472.13 | 353.59 | 473.78 | 353.45 | 475.91 | 353.4 |
| 482.48 | 353.56 | 482.79 | 353.56 | 483.41 | 353.53 | 485.19 | 353.55 | 485.66 | 353.52 |
| 486.28 | 353.46 | 488.59 | 353.29 | 490.5 | 353.05 | 492.7 | 352.94 | 493.19 | 352.88 |
| 493.72 | 352.77 | 494.35 | 352.68 | 497.32 | 352.54 | 502.02 | 352.24 | 507.06 | 351.82 |
| 509.32 | 351.56 | 509.67 | 351.59 | 509.79 | 351.74 | 511.87 | 351.74 | 513.82 | 351.7 |
| 514.54 | 351.67 | 515.75 | 351.6 | 516.67 | 351.52 | 518.6 | 351.38 | 521.3 | 351.23 |
| 522.13 | 351.17 | 524.58 | 351.26 | 525.47 | 351.3 | 526.94 | 351.33 | 527.26 | 351.33 |
| 527.53 | 351.29 | 528.24 | 351.27 | 530.35 | 351.34 | 531.31 | 351.33 | 532.54 | 351.35 |
| 533.81 | 351.39 | 535.39 | 351.43 | 537.19 | 351.44 | 537.79 | 351.46 | 539.12 | 351.52 |
| 540.64 | 351.6 | 541.78 | 351.61 | 544.54 | 351.59 | 547.77 | 351.51 | 550.94 | 351.45 |
| 551.95 | 351.42 | 552.67 | 351.38 | 552.74 | 351.33 | 553.02 | 351.31 | 556.47 | 351.22 |
| 559 | 351.17 | 559.69 | 351.17 | 561.53 | 351.19 | 566.19 | 351.31 | 572.54 | 351.39 |
| 576.75 | 351.42 | 580.4 | 351.43 | 581.06 | 351.44 | 581.95 | 351.44 | 582.33 | 351.46 |
| 583.75 | 351.48 | 584.6 | 351.48 | 585.34 | 351.5 | 591.7 | 351.59 | 593.94 | 351.6 |
| 597.95 | 351.56 | 598.16 | 351.55 | 604.99 | 351.34 | 605.44 | 351.31 | 605.82 | 351.31 |
| 606.52 | 351.36 | 609.61 | 351.42 | 610.26 | 351.53 | 610.86 | 351.55 | 614.08 | 351.58 |
| 614.52 | 351.58 | 622.77 | 351.47 | 622.96 | 351.46 | 625.33 | 351.41 | 627.72 | 351.31 |
| 628.12 | 351.3 | 631.66 | 351.3 | 635.42 | 351.38 | 635.57 | 351.39 | 638.49 | 351.38 |
| 638.9 | 351.37 | 641.82 | 351.24 | 642.76 | 351.21 | 645.8 | 351.14 | 649.49 | 351.11 |
| 651.3 | 351.13 | 652.15 | 351.17 | 656.97 | 351.19 | 657.94 | 351.2 | 659.54 | 351.2 |
| 663.05 | 351.1 | 664.34 | 351.07 | 665.42 | 351.09 | 667.48 | 351.08 | 671.84 | 350.96 |
| 672.84 | 350.85 | 672.93 | 350.81 | 673.59 | 350.74 | 674.35 | 350.74 | 676.25 | 350.69 |
| 677.26 | 350.68 | 679.19 | 350.62 | 682.5 | 350.6 | 683.34 | 350.57 | 685.78 | 350.55 |
| 686.41 | 350.56 | 687.8 | 350.6 | 688.27 | 350.66 | 688.7 | 350.65 | 690.49 | 350.98 |
| 690.58 | 350.98 | 691.35 | 351.12 | 694.33 | 351.16 | 695.59 | 351.17 | 695.94 | 351.11 |
| 697.57 | 351.06 | 698.41 | 351.02 | 698.81 | 350.99 | 699.4 | 350.92 | 701 | 350.88 |
| 701.99 | 350.84 | 704.24 | 350.74 | 706.84 | 350.66 | 707.41 | 350.65 | 711.78 | 350.71 |
| 712.42 | 350.7 | 712.89 | 350.66 | 713.34 | 350.66 | 715.97 | 350.71 | 716.17 | 350.71 |
| 718.09 | 350.77 | 719.72 | 350.8 | 722.18 | 350.88 | 723.15 | 350.95 | 726.32 | 351.04 |
| 729.01 | 351.13 | 729.11 | 351.13 | 731.17 | 351.24 | 732.94 | 351.31 | 733.56 | 351.35 |
| 736.29 | 351.56 | 737.13 | 351.6 | 738.33 | 351.61 | 739.96 | 351.61 | 741.05 | 351.6 |
| 741.5 | 351.58 | 742.17 | 351.57 | 742.52 | 351.58 | 744.54 | 351.54 | 745.72 | 351.49 |
| 747.76 | 351.42 | 751.63 | 351.28 | 753.57 | 351.26 | 755.96 | 351.31 | 756.39 | 351.3 |
| 758.73 | 351.29 | 759.15 | 351.27 | 761 | 351.27 | 762.12 | 351.31 | 763.57 | 351.33 |
| 765.81 | 351.33 | 768.87 | 351.29 | 769.33 | 351.28 | 775.06 | 351.12 | 778.48 | 351.08 |
| 779.3 | 351.02 | 780.87 | 350.88 | 781.86 | 350.78 | 783.71 | 350.69 | 785.13 | 350.64 |
| 786.48 | 350.6 | 788.05 | 350.45 | 789.33 | 350.36 | 791.66 | 350.13 | 792.05 | 350.13 |
| 795.94 | 350.23 | 796.22 | 350.3 | 798.85 | 350.31 | 800.12 | 350.36 | 801.98 | 350.47 |
| 802.37 | 350.48 | 811.69 | 350.51 | 812.13 | 350.51 | 813.14 | 350.49 | 815.32 | 350.47 |
| 816.84 | 350.47 | 820.97 | 350.45 | 824.38 | 350.14 | 825.43 | 350.04 | 825.9 | 349.98 |
| 828.48 | 349.77 | 829.02 | 349.75 | 831.09 | 349.75 | 832.66 | 349.82 | 837.42 | 349.89 |
| 837.87 | 349.88 | 839.38 | 349.89 | 840.5 | 349.88 | 842.31 | 349.92 | 847.04 | 349.97 |
| 848.55 | 349.97 | 849.93 | 349.98 | 851.81 | 350.02 | 854.85 | 350.14 | 855.74 | 350.16 |
| 857.61 | 350.22 | 858.4 | 350.23 | 858.88 | 350.22 | 860.24 | 350.21 | 877.86 | 349.71 |
| 879.31 | 349.7 | 881.4 | 349.65 | 881.62 | 349.66 | 884.65 | 349.6 | 885.31 | 349.66 |
| 888.1 | 349.71 | 890.63 | 349.73 | 891.92 | 349.8 | 893.69 | 349.81 | 894.37 | 349.78 |
| 898.97 | 349.56 | 900.29 | 349.48 | 901.06 | 349.4 | 901.55 | 349.3 | 905.17 | 349.14 |
| 906.16 | 349.07 | 907.76 | 349.23 | 908.35 | 349.26 | 909.55 | 349.29 | 910.84 | 349.27 |
| 913.41 | 349.18 | 915.07 | 349.08 | 916.9 | 349.03 | 917.65 | 349.03 | 919.82 | 349.06 |
| 921.25 | 349.06 | 929.35 | 349.24 | 930.28 | 349.3 | 936.05 | 349.3 | 940.14 | 349.47 |
| 941.2 | 349.49 | 942.71 | 349.45 | 943.99 | 349.39 | 952.8 | 348.95 | 955.25 | 348.93 |
| 955.89 | 348.92 | 957.35 | 348.94 | 960.78 | 349.15 | 960.98 | 349.13 | 962.82 | 349.24 |
| 963.79 | 349.23 | 964.49 | 349.2 | 964.82 | 349.2 | 969.37 | 348.99 | 970.62 | 348.86 |
| 976.39 | 348.34 | 977.84 | 348.27 | 982.79 | 348.05 | 985.89 | 348 | 986.06 | 347.99 |
| 991.09 | 347.86 | 991.36 | 347.86 | 997.56 | 347.72 | 997.89 | 347.71 | 1003.7 | 347.75 |
| 1006.46 | 347.75 | 1008.7 | 347.78 | 1017.08 | 347.99 | 1021.52 | 348.14 | 1023.46 | 348.18 |
| 1039.92 | 348.71 | 1041.31 | 348.75 | 1043.16 | 348.79 | 1048.1 | 348.93 | 1053.08 | 349.03 |
| 1055.76 | 349.12 | 1057.34 | 349.14 | 1058.79 | 349.14 | 1059.87 | 349.16 | 1060.72 | 349.19 |
| 1065.97 | 349.12 | 1067.05 | 349.09 | 1068.1 | 349.05 | 1070.42 | 348.95 | 1071.51 | 348.89 |
| 1072.56 | 348.8 | 1073.76 | 348.72 | 1074.31 | 348.65 | 1074.86 | 348.62 | 1075.87 | 348.63 |
| 1076.87 | 348.67 | 1078.13 | 348.69 | 1080.39 | 348.75 | 1081.01 | 348.78 | 1083.17 | 348.93 |
| 1084.49 | 349.04 | 1085.49 | 349.14 | 1086.2 | 349.18 | 1086.63 | 349.18 | 1087.46 | 349.15 |
| 1087.47 | 349.07 | 1088.34 | 349.05 | 1089.2 | 349.07 | 1091.73 | 349.15 | 1093.21 | 349.21 |
| 1094.92 | 349.29 | 1095.7 | 349.35 | 1097.96 | 349.49 | 1106.76 | 350.31 | 1113.33 | 350.74 |
| 1115.17 | 350.84 | 1116.5 | 350.78 | 1123.9 | 350.58 | 1124.06 | 350.56 | 1127.61 | 350.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1129.49 | 350.05 | 1130.24 | 350.04 | 1130.79 | 350.02 | 1132.77 | 349.92 | 1134.27 | 349.82 |
| 1140.82 | 349.36 | 1142.27 | 349.32 | 1143.23 | 349.33 | 1144.43 | 349.43 | 1149.56 | 349.91 |
| 1151.09 | 350.04 | 1151.55 | 349.94 | 1152.7 | 349.98 | 1153.56 | 350.05 | 1158.78 | 350.67 |
| 1159.51 | 350.77 | 1161.52 | 351.03 | 1165.6 | 351.81 | 1167.67 | 352.2 | 1168.54 | 352.42 |
| 1171.29 | 352.72 | 1175.91 | 353.27 | 1180.87 | 353.83 | 1181.61 | 353.9 | 1186.23 | 354.4 |
| 1188.65 | 354.66 | 1191.14 | 354.97 | 1197.3 | 355.73 | 1197.81 | 355.8 | 1200.57 | 356.11 |
| 1202.49 | 356.31 | 1203.67 | 356.48 | 1204.42 | 356.54 | 1205.62 | 356.74 | 1208.95 | 357.23 |
| 1210.11 | 357.38 | 1210.74 | 357.47 | 1211.92 | 357.61 | 1213.21 | 357.74 | 1215.32 | 358.01 |
| 1216.28 | 358.14 | 1223.41 | 359.39 | 1228.96 | 360.2 | 1233.31 | 360.76 | 1236.33 | 361.04 |
| 1243.76 | 361.61 | 1245.04 | 361.68 | 1245.78 | 361.71 | 1246.72 | 361.76 | 1248.67 | 361.75 |
| 1249.69 | 361.76 | 1251.21 | 361.73 | 1252.91 | 361.77 | 1253.45 | 361.77 | 1255.31 | 361.7 |
| 1256.64 | 361.64 | 1257.39 | 361.57 | 1257.88 | 361.57 | 1261.21 | 361.68 | 1262.21 | 361.73 |
| 1263.18 | 361.76 | 1265.86 | 361.93 | 1266.7 | 362.01 | 1267.12 | 362.08 | 1271.53 | 362.73 |
| 1275.36 | 363.23 | 1277.64 | 363.49 | 1280.29 | 363.76 | 1283.49 | 364.01 | 1286.83 | 364.22 |
| 1288.74 | 364.39 | 1289.61 | 364.5 | 1290.82 | 364.63 | 1291.56 | 364.69 | 1294.6 | 364.86 |
| 1295.54 | 364.88 | 1297.1 | 364.94 | 1298.61 | 365.02 | 1299.92 | 365.1 | 1300.42 | 365.11 |
| 1301.81 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 238.99 | .05 | 485.66 | .04 | 1168.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 485.66 | 1168.54 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5429.74*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 248.05 | 356.98 | 248.79 | 356.96 | 251.32 | 356.95 | 251.57 | 356.94 | 253.17 | 356.93 |
| 253.96 | 356.88 | 255.64 | 356.72 | 256.41 | 356.63 | 258.11 | 356.4 | 259.35 | 356.22 |
| 261.7 | 355.87 | 268.63 | 355.31 | 283.38 | 354.69 | 283.65 | 354.67 | 289.75 | 354.43 |
| 292.22 | 354.37 | 298.43 | 354.14 | 302.25 | 354.07 | 303.08 | 354.04 | 305.46 | 353.99 |
| 305.8 | 353.97 | 307.22 | 353.95 | 308.5 | 353.94 | 308.57 | 353.93 | 311.71 | 353.87 |
| 329.35 | 353.61 | 332.13 | 353.54 | 333.35 | 353.49 | 335.1 | 353.5 | 345.86 | 353.66 |
| 347.36 | 353.67 | 353.23 | 353.47 | 360.09 | 353.18 | 360.63 | 353.17 | 363.1 | 353.1 |
| 377.25 | 352.75 | 381.75 | 352.57 | 383.05 | 352.53 | 383.32 | 352.51 | 385.03 | 352.43 |
| 386.05 | 352.41 | 389.83 | 352.44 | 391.56 | 352.51 | 400.69 | 352.99 | 402.81 | 353.05 |
| 403.3 | 353.1 | 408.81 | 353.14 | 409.77 | 353.13 | 409.88 | 353.09 | 410.7 | 353.04 |
| 412.26 | 353.11 | 413.41 | 353.17 | 414.76 | 353.29 | 416.19 | 353.37 | 417.57 | 353.43 |
| 418.87 | 353.44 | 419.61 | 353.46 | 420.63 | 353.47 | 424.59 | 353.54 | 425.17 | 353.56 |
| 427.81 | 353.62 | 429.19 | 353.66 | 429.81 | 353.64 | 430.34 | 353.58 | 430.87 | 353.6 |
| 432.69 | 353.62 | 435.36 | 353.63 | 437.07 | 353.72 | 437.44 | 353.7 | 439.05 | 353.68 |
| 442.29 | 353.42 | 442.99 | 353.36 | 443.58 | 353.23 | 445.44 | 352.86 | 445.85 | 352.77 |
| 447.63 | 352.66 | 452.16 | 352.57 | 452.91 | 352.6 | 453.29 | 352.67 | 454.14 | 352.78 |
| 455.27 | 352.81 | 455.58 | 352.84 | 456.47 | 352.88 | 458.24 | 352.92 | 459.71 | 352.98 |
| 460.35 | 352.99 | 465.63 | 352.78 | 466.56 | 352.81 | 467.92 | 352.9 | 468.88 | 353 |
| 476.22 | 353.37 | 478.01 | 353.44 | 479.45 | 353.41 | 485.05 | 353.09 | 486.72 | 352.96 |
| 488.89 | 352.91 | 495.57 | 353.13 | 496.52 | 353.1 | 497.93 | 353.13 | 498.8 | 353.1 |
| 500.03 | 352.99 | 501.66 | 352.88 | 503.52 | 352.65 | 505.01 | 352.59 | 505.67 | 352.55 |
| 506.15 | 352.49 | 507.29 | 352.31 | 508.55 | 352.26 | 510.18 | 352.17 | 514.78 | 351.87 |
| 519.7 | 351.47 | 521.91 | 351.22 | 522.24 | 351.24 | 522.37 | 351.38 | 524.39 | 351.37 |
| 526.3 | 351.32 | 527 | 351.29 | 528.18 | 351.21 | 528.88 | 351.15 | 529.4 | 351.12 |
| 530.96 | 351 | 533.59 | 350.87 | 534.41 | 350.82 | 536.8 | 350.9 | 537.67 | 350.94 |
| 539.1 | 350.98 | 540.38 | 350.93 | 542.44 | 351.01 | 543.37 | 350.99 | 544.58 | 351 |
| 545.81 | 351.05 | 547.36 | 351.09 | 549.11 | 351.1 | 549.51 | 351.11 | 552.59 | 351.26 |
| 553.59 | 351.27 | 556.3 | 351.24 | 559.44 | 351.15 | 562.54 | 351.08 | 563.53 | 351.05 |
| 564.23 | 351.01 | 564.3 | 350.96 | 566.89 | 350.89 | 567.61 | 350.86 | 570.41 | 350.79 |
| 571.09 | 350.78 | 572.88 | 350.81 | 577.43 | 350.92 | 583.63 | 350.99 | 587.74 | 351.01 |
| 588.05 | 351.02 | 591.31 | 351.03 | 591.95 | 351.04 | 592.99 | 351.04 | 594.58 | 351.08 |
| 596.13 | 351.09 | 602.34 | 351.19 | 604.53 | 351.21 | 608.45 | 351.18 | 608.65 | 351.17 |
| 615.32 | 350.99 | 615.62 | 350.97 | 616.13 | 350.97 | 616.81 | 351.01 | 618.18 | 351.05 |
| 619.39 | 351.06 | 619.93 | 351.08 | 620.47 | 351.18 | 623.09 | 351.22 | 624.62 | 351.23 |
| 632.68 | 351.15 | 632.86 | 351.14 | 635.17 | 351.1 | 635.84 | 351.07 | 637.9 | 351 |
| 641.36 | 351 | 644.95 | 351.08 | 648.03 | 351.08 | 648.43 | 351.07 | 651.28 | 350.93 |
| 652.2 | 350.9 | 655.17 | 350.82 | 658.77 | 350.78 | 660.53 | 350.8 | 661.14 | 350.83 |
| 666.08 | 350.85 | 667.02 | 350.86 | 668.58 | 350.86 | 669.61 | 350.84 | 672.01 | 350.77 |
| 672.84 | 350.76 | 673.27 | 350.74 | 673.43 | 350.76 | 673.94 | 350.76 | 674.92 | 350.78 |
| 676.33 | 350.78 | 680.59 | 350.66 | 681.26 | 350.59 | 681.66 | 350.51 | 682.3 | 350.43 |
| 683.04 | 350.43 | 684.9 | 350.39 | 685.89 | 350.38 | 687.77 | 350.33 | 691 | 350.32 |
| 691.82 | 350.28 | 694.82 | 350.27 | 695.02 | 350.29 | 696.18 | 350.32 | 696.64 | 350.37 |
| 697.06 | 350.36 | 698.8 | 350.67 | 698.89 | 350.67 | 699.64 | 350.79 | 702.55 | 350.84 |
| 703.78 | 350.85 | 704.12 | 350.8 | 705.11 | 350.78 | 706.54 | 350.72 | 707.65 | 350.62 |
| 709.06 | 350.59 | 710.03 | 350.55 | 712.23 | 350.44 | 714.77 | 350.36 | 715.32 | 350.35 |
| 718.77 | 350.4 | 720.21 | 350.39 | 720.67 | 350.34 | 721.11 | 350.34 | 723.68 | 350.39 |
| 723.88 | 350.39 | 725.75 | 350.45 | 727.34 | 350.48 | 729.74 | 350.56 | 730.69 | 350.64 |
| 733.79 | 350.72 | 736.41 | 350.81 | 736.51 | 350.82 | 738.52 | 350.92 | 740.25 | 350.98 |
| 740.85 | 351.02 | 743.52 | 351.22 | 744.18 | 351.25 | 745.51 | 351.27 | 747.11 | 351.27 |
| 748.38 | 351.26 | 748.99 | 351.24 | 749.61 | 351.25 | 751.57 | 351.21 | 752.73 | 351.17 |
| 754.22 | 351.11 | 754.46 | 351.11 | 756.86 | 351.01 | 758.5 | 350.95 | 760.4 | 350.93 |
| 761.4 | 350.94 | 761.88 | 350.96 | 762.73 | 350.97 | 763.14 | 350.96 | 765.43 | 350.94 |
| 765.84 | 350.93 | 767.65 | 350.92 | 769.18 | 350.96 | 772.34 | 350.96 | 775.78 | 350.9 |
| 781.38 | 350.75 | 784.71 | 350.71 | 787.05 | 350.5 | 787.68 | 350.42 | 789.09 | 350.34 |
| 791.21 | 350.26 | 792.53 | 350.22 | 794.06 | 350.08 | 795.31 | 350.01 | 797.59 | 349.82 |
| 797.97 | 349.81 | 801.76 | 349.93 | 802.04 | 349.99 | 804.6 | 350.01 | 805.84 | 350.07 |
| 807.66 | 350.18 | 808.04 | 350.19 | 817.14 | 350.23 | 818.56 | 350.21 | 820.69 | 350.19 |
| 822.18 | 350.19 | 826.21 | 350.16 | 830.01 | 349.84 | 831.02 | 349.73 | 833.54 | 349.52 |
| 834.07 | 349.5 | 836.09 | 349.5 | 837.62 | 349.56 | 842.26 | 349.62 | 842.71 | 349.61 |
| 844.18 | 349.62 | 845.27 | 349.62 | 847.04 | 349.66 | 851.66 | 349.73 | 853.14 | 349.73 |
| 854.48 | 349.75 | 856.32 | 349.8 | 859.28 | 349.92 | 860.15 | 349.94 | 861.98 | 350 |
| 863.22 | 350.01 | 864.55 | 349.99 | 880.38 | 349.58 | 881.75 | 349.53 | 882.77 | 349.53 |
| 885.22 | 349.47 | 885.43 | 349.47 | 888.38 | 349.4 | 889.03 | 349.46 | 892.76 | 349.5 |
| 893.23 | 349.49 | 894.22 | 349.5 | 895.48 | 349.55 | 897.21 | 349.56 | 897.88 | 349.53 |
| 902.37 | 349.29 | 903.66 | 349.21 | 904.41 | 349.13 | 904.89 | 349.04 | 908.42 | 348.86 |
| 909.39 | 348.79 | 910.95 | 348.93 | 911.53 | 348.96 | 912.7 | 348.99 | 913.96 | 348.98 |
| 916.46 | 348.9 | 918.09 | 348.8 | 918.63 | 348.78 | 919.87 | 348.76 | 920.6 | 348.76 |
| 924.12 | 348.79 | 932.03 | 348.95 | 932.94 | 349 | 938.57 | 349 | 942.57 | 349.19 |
| 943.6 | 349.21 | 945.07 | 349.18 | 946.32 | 349.13 | 954.93 | 348.72 | 957.32 | 348.7 |
| 958.99 | 348.7 | 959.37 | 348.71 | 962.72 | 348.89 | 962.91 | 348.88 | 964.71 | 348.97 |
| 965.66 | 348.96 | 966.67 | 348.92 | 971.11 | 348.71 | 972.33 | 348.58 | 977.96 | 348.04 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 979.38 | 347.96 | 984.21 | 347.75 | 987.24 | 347.7 | 987.41 | 347.69 | 992.31 | 347.56 |
| 992.58 | 347.55 | 998.63 | 347.4 | 998.96 | 347.39 | 1004.74 | 347.43 | 1007.49 | 347.44 |
| 1009.72 | 347.46 | 1018.07 | 347.67 | 1022.49 | 347.81 | 1024.42 | 347.85 | 1040.82 | 348.37 |
| 1042.21 | 348.41 | 1044.05 | 348.45 | 1046.81 | 348.53 | 1048.96 | 348.58 | 1053.93 | 348.69 |
| 1056.6 | 348.77 | 1058.17 | 348.79 | 1059.62 | 348.8 | 1060.69 | 348.82 | 1061.53 | 348.85 |
| 1066.77 | 348.77 | 1068.89 | 348.71 | 1071.2 | 348.61 | 1072.29 | 348.55 | 1073.33 | 348.46 |
| 1074.53 | 348.39 | 1075.08 | 348.32 | 1075.63 | 348.3 | 1076.62 | 348.3 | 1077.62 | 348.34 |
| 1078.88 | 348.36 | 1081.13 | 348.42 | 1081.75 | 348.45 | 1083.9 | 348.6 | 1086.21 | 348.81 |
| 1086.92 | 348.85 | 1087.35 | 348.86 | 1088.17 | 348.83 | 1088.19 | 348.76 | 1089.05 | 348.75 |
| 1092.36 | 348.86 | 1092.42 | 348.87 | 1093.9 | 348.93 | 1095.6 | 349.01 | 1096.38 | 349.07 |
| 1098.63 | 349.21 | 1107.4 | 350.01 | 1113.94 | 350.4 | 1115.36 | 350.48 | 1115.77 | 350.49 |
| 1116.09 | 350.47 | 1117.1 | 350.44 | 1124.47 | 350.25 | 1124.63 | 350.24 | 1128.16 | 349.91 |
| 1130.03 | 349.75 | 1131.33 | 349.72 | 1133.3 | 349.61 | 1134.8 | 349.52 | 1141.32 | 349.07 |
| 1142.5 | 349.04 | 1142.76 | 349.02 | 1143.42 | 349.02 | 1144.92 | 349.14 | 1150.03 | 349.61 |
| 1151.55 | 349.74 | 1152.01 | 349.65 | 1153.16 | 349.7 | 1154.01 | 349.77 | 1159.21 | 350.43 |
| 1161.94 | 350.81 | 1165.01 | 351.46 | 1165.48 | 351.55 | 1168.07 | 352.09 | 1168.93 | 352.34 |
| 1171.53 | 352.65 | 1175.89 | 353.25 | 1180.57 | 353.85 | 1181.26 | 353.92 | 1185.62 | 354.45 |
| 1187.91 | 354.74 | 1195.38 | 355.76 | 1196.55 | 355.93 | 1199.16 | 356.27 | 1200.16 | 356.38 |
| 1200.97 | 356.48 | 1202.09 | 356.65 | 1202.8 | 356.73 | 1204.7 | 357.06 | 1207.06 | 357.43 |
| 1208.16 | 357.58 | 1208.75 | 357.68 | 1209.87 | 357.83 | 1211.09 | 357.96 | 1213.99 | 358.37 |
| 1220.71 | 359.59 | 1221.37 | 359.69 | 1225.95 | 360.4 | 1230.06 | 360.96 | 1232.9 | 361.24 |
| 1239.92 | 361.8 | 1241.13 | 361.87 | 1241.82 | 361.89 | 1242.72 | 361.95 | 1244.55 | 361.93 |
| 1245.51 | 361.93 | 1246.95 | 361.89 | 1248.55 | 361.91 | 1249.07 | 361.91 | 1250.82 | 361.83 |
| 1252.07 | 361.76 | 1252.78 | 361.69 | 1253.24 | 361.69 | 1256.39 | 361.75 | 1257.33 | 361.8 |
| 1258.24 | 361.82 | 1260.77 | 361.96 | 1261.56 | 362.03 | 1266.12 | 362.75 | 1270.7 | 363.38 |
| 1271.89 | 363.52 | 1272.41 | 363.56 | 1274.39 | 363.77 | 1277.42 | 364 | 1279.82 | 364.14 |
| 1280.56 | 364.19 | 1282.37 | 364.35 | 1283.19 | 364.46 | 1284.33 | 364.59 | 1285.03 | 364.65 |
| 1287.9 | 364.84 | 1288.78 | 364.86 | 1290.26 | 364.93 | 1291.69 | 365.01 | 1292.4 | 365.06 |
| 1294.71 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 248.05 | .05 | 498.8 | .04 | 1168.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 498.8 | 1168.93 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5410.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 257.1 | 356.68 | 258.61 | 356.66 | 262.31 | 356.64 | 263.12 | 356.58 | 264.82 | 356.41 |
| 267.33 | 356.06 | 268.59 | 355.87 | 270.98 | 355.48 | 278.03 | 354.88 | 293.02 | 354.22 |
| 299.49 | 353.95 | 301.99 | 353.88 | 308.31 | 353.65 | 312.19 | 353.58 | 313.45 | 353.53 |
| 315.45 | 353.5 | 315.79 | 353.48 | 317.24 | 353.47 | 321.35 | 353.41 | 321.8 | 353.39 |
| 339.73 | 353.16 | 342.56 | 353.09 | 343.8 | 353.04 | 344.8 | 353.04 | 345.58 | 353.05 |
| 356.52 | 353.23 | 358.03 | 353.24 | 364 | 353.07 | 370.97 | 352.79 | 371.52 | 352.79 |
| 374.03 | 352.72 | 388.41 | 352.4 | 392.99 | 352.22 | 394.43 | 352.17 | 394.58 | 352.15 |
| 396.32 | 352.07 | 397.35 | 352.05 | 401.2 | 352.08 | 401.62 | 352.11 | 402.68 | 352.14 |
| 402.95 | 352.16 | 412.23 | 352.61 | 414.39 | 352.67 | 414.89 | 352.72 | 420.48 | 352.77 |
| 421.46 | 352.77 | 421.58 | 352.73 | 422.4 | 352.69 | 425.16 | 352.81 | 426.05 | 352.88 |
| 427.98 | 352.99 | 429.2 | 353.04 | 430.71 | 353.05 | 431.46 | 353.07 | 432.49 | 353.07 |
| 434.79 | 353.13 | 436.52 | 353.15 | 437.11 | 353.17 | 439.8 | 353.23 | 441.2 | 353.27 |
| 441.71 | 353.25 | 442.36 | 353.18 | 442.9 | 353.2 | 444.76 | 353.22 | 447.47 | 353.23 |
| 449.21 | 353.32 | 449.58 | 353.3 | 450.88 | 353.29 | 451.22 | 353.27 | 454.51 | 352.99 |
| 455.22 | 352.92 | 458.17 | 352.29 | 459.93 | 352.18 | 460.39 | 352.17 | 463.45 | 352.13 |
| 464.54 | 352.12 | 465.31 | 352.14 | 465.69 | 352.21 | 466.55 | 352.32 | 467.7 | 352.37 |
| 468.92 | 352.44 | 470.72 | 352.49 | 472.22 | 352.56 | 472.87 | 352.58 | 473.64 | 352.56 |
| 478.23 | 352.4 | 478.8 | 352.41 | 480.56 | 352.51 | 481.76 | 352.62 | 488.99 | 352.93 |
| 490.56 | 352.99 | 491.09 | 352.99 | 492.27 | 352.95 | 497.96 | 352.6 | 499.66 | 352.46 |
| 501.87 | 352.42 | 508.66 | 352.69 | 508.97 | 352.7 | 509.62 | 352.66 | 511.05 | 352.71 |
| 511.79 | 352.69 | 511.93 | 352.67 | 513.14 | 352.57 | 514.73 | 352.47 | 516.55 | 352.26 |
| 518.65 | 352.16 | 519.11 | 352.11 | 519.61 | 352.02 | 520.22 | 351.94 | 521.45 | 351.89 |
| 523.05 | 351.81 | 527.53 | 351.51 | 532.33 | 351.12 | 534.49 | 350.88 | 534.82 | 350.9 |
| 534.94 | 351.02 | 536.49 | 351 | 538.77 | 350.93 | 539.46 | 350.9 | 540.61 | 350.82 |
| 543.32 | 350.62 | 545.89 | 350.51 | 546.69 | 350.46 | 549.02 | 350.55 | 549.87 | 350.59 |
| 551.27 | 350.63 | 551.84 | 350.6 | 552.51 | 350.59 | 554.53 | 350.67 | 556.04 | 350.65 |
| 556.61 | 350.66 | 557.82 | 350.71 | 559.32 | 350.74 | 561.04 | 350.75 | 561.43 | 350.76 |
| 562.88 | 350.83 | 564.33 | 350.91 | 565.41 | 350.92 | 568.05 | 350.88 | 571.12 | 350.79 |
| 571.24 | 350.78 | 574.14 | 350.71 | 575.11 | 350.68 | 575.79 | 350.64 | 575.86 | 350.6 |
| 577.2 | 350.55 | 578.39 | 350.53 | 579.41 | 350.48 | 581.82 | 350.41 | 582.48 | 350.4 |
| 584.23 | 350.43 | 588.67 | 350.52 | 594.72 | 350.59 | 598.74 | 350.61 | 602.21 | 350.62 |
| 603.69 | 350.63 | 604.05 | 350.65 | 606.92 | 350.69 | 612.98 | 350.79 | 615.12 | 350.81 |
| 619.14 | 350.79 | 625.64 | 350.65 | 626.34 | 350.62 | 627.1 | 350.67 | 630.05 | 350.73 |
| 630.67 | 350.82 | 631.24 | 350.84 | 633.23 | 350.87 | 634.72 | 350.88 | 642.58 | 350.83 |
| 642.77 | 350.82 | 645.02 | 350.79 | 645.67 | 350.76 | 647.68 | 350.7 | 651.06 | 350.7 |
| 654.21 | 350.76 | 654.57 | 350.77 | 657.57 | 350.77 | 657.95 | 350.76 | 660.74 | 350.62 |
| 661.63 | 350.59 | 664.53 | 350.51 | 668.05 | 350.44 | 669.77 | 350.46 | 670.58 | 350.5 |
| 675.18 | 350.51 | 676.1 | 350.52 | 677.62 | 350.52 | 678.63 | 350.5 | 680.96 | 350.44 |
| 682.2 | 350.42 | 682.85 | 350.45 | 683.81 | 350.47 | 685.18 | 350.47 | 689.34 | 350.36 |
| 690 | 350.29 | 690.38 | 350.2 | 691.01 | 350.11 | 691.73 | 350.12 | 693.55 | 350.08 |
| 694.51 | 350.08 | 696.35 | 350.03 | 699.63 | 350.03 | 700.3 | 350 | 702.63 | 349.98 |
| 704.55 | 350.04 | 705 | 350.09 | 705.41 | 350.08 | 707.11 | 350.36 | 707.2 | 350.36 |
| 707.93 | 350.47 | 711.97 | 350.54 | 712.4 | 350.49 | 713.27 | 350.47 | 714.66 | 350.42 |
| 715.61 | 350.33 | 717.13 | 350.3 | 717.22 | 350.28 | 718.07 | 350.25 | 720.21 | 350.15 |
| 722.7 | 350.07 | 723.23 | 350.06 | 726.6 | 350.09 | 727.4 | 350.1 | 728.01 | 350.08 |
| 728.46 | 350.03 | 728.88 | 350.03 | 732.21 | 350.08 | 733.41 | 350.13 | 734.97 | 350.15 |
| 737.31 | 350.24 | 738.23 | 350.32 | 741.26 | 350.4 | 743.91 | 350.5 | 745.88 | 350.6 |
| 747.56 | 350.65 | 750.75 | 350.88 | 751.4 | 350.91 | 752.69 | 350.93 | 755.29 | 350.93 |
| 756.09 | 350.9 | 756.69 | 350.92 | 758.61 | 350.88 | 761.2 | 350.79 | 763.77 | 350.69 |
| 764.35 | 350.66 | 765.37 | 350.63 | 767.22 | 350.6 | 769.5 | 350.63 | 769.9 | 350.61 |
| 772.13 | 350.59 | 772.54 | 350.58 | 774.76 | 350.57 | 775.79 | 350.6 | 776.75 | 350.6 |
| 778.88 | 350.59 | 782.24 | 350.53 | 787.7 | 350.37 | 790.95 | 350.34 | 791.74 | 350.27 |
| 794.18 | 350.01 | 795.22 | 349.95 | 795.94 | 349.92 | 798.58 | 349.84 | 800.07 | 349.72 |
| 801.29 | 349.66 | 803.52 | 349.5 | 803.89 | 349.49 | 807.59 | 349.62 | 807.86 | 349.68 |
| 810.36 | 349.71 | 810.84 | 349.73 | 813.35 | 349.9 | 813.72 | 349.91 | 822.6 | 349.95 |
| 823.98 | 349.93 | 824.49 | 349.93 | 826.06 | 349.9 | 827.51 | 349.9 | 831.45 | 349.88 |
| 835.69 | 349.54 | 836.14 | 349.48 | 838.6 | 349.27 | 839.11 | 349.25 | 841.08 | 349.25 |
| 842.58 | 349.3 | 847.11 | 349.36 | 847.55 | 349.35 | 848.98 | 349.36 | 850.05 | 349.36 |
| 851.77 | 349.41 | 856.29 | 349.49 | 857.73 | 349.5 | 859.04 | 349.52 | 860.83 | 349.58 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 863.72 | 349.71 | 864.57 | 349.72 | 866.36 | 349.78 | 867.57 | 349.79 | 868.86 | 349.78 |
| 884.31 | 349.4 | 884.65 | 349.38 | 885.65 | 349.36 | 887.03 | 349.35 | 887.54 | 349.33 |
| 889.23 | 349.29 | 892.12 | 349.21 | 892.75 | 349.26 | 895.4 | 349.27 | 897.82 | 349.27 |
| 899.04 | 349.31 | 900.1 | 349.31 | 900.92 | 349.3 | 901.39 | 349.27 | 905.76 | 349.02 |
| 907.02 | 348.94 | 907.76 | 348.86 | 908.22 | 348.77 | 911.68 | 348.58 | 912.62 | 348.52 |
| 914.14 | 348.64 | 914.7 | 348.67 | 915.85 | 348.69 | 917.08 | 348.68 | 919.52 | 348.61 |
| 921.11 | 348.52 | 921.64 | 348.5 | 922.85 | 348.48 | 923.56 | 348.48 | 927 | 348.51 |
| 934.71 | 348.65 | 935.6 | 348.7 | 941.1 | 348.7 | 944.99 | 348.91 | 946.01 | 348.93 |
| 947.44 | 348.91 | 948.66 | 348.86 | 957.06 | 348.49 | 959.39 | 348.47 | 961.02 | 348.47 |
| 961.39 | 348.48 | 964.66 | 348.63 | 964.85 | 348.62 | 966.6 | 348.7 | 967.03 | 348.7 |
| 968.51 | 348.65 | 972.84 | 348.44 | 974.04 | 348.3 | 979.53 | 347.73 | 980.92 | 347.66 |
| 985.63 | 347.44 | 988.59 | 347.4 | 988.75 | 347.39 | 993.54 | 347.25 | 993.8 | 347.24 |
| 1000.03 | 347.08 | 1005.78 | 347.12 | 1008.52 | 347.12 | 1010.75 | 347.14 | 1019.06 | 347.34 |
| 1023.47 | 347.48 | 1025.39 | 347.51 | 1041.72 | 348.03 | 1043.1 | 348.07 | 1044.94 | 348.11 |
| 1048.08 | 348.19 | 1049.83 | 348.24 | 1054.77 | 348.34 | 1057.44 | 348.42 | 1059 | 348.44 |
| 1060.44 | 348.45 | 1061.51 | 348.47 | 1062.35 | 348.51 | 1067.56 | 348.43 | 1068.64 | 348.4 |
| 1071.98 | 348.27 | 1073.06 | 348.2 | 1074.1 | 348.12 | 1075.29 | 348.05 | 1075.84 | 347.99 |
| 1076.39 | 347.97 | 1077.38 | 347.97 | 1078.38 | 348.02 | 1079.62 | 348.03 | 1081 | 348.06 |
| 1082.49 | 348.12 | 1084.63 | 348.28 | 1085.94 | 348.39 | 1086.92 | 348.48 | 1087.63 | 348.52 |
| 1088.06 | 348.53 | 1088.88 | 348.52 | 1088.9 | 348.45 | 1089.76 | 348.45 | 1091.81 | 348.53 |
| 1092.25 | 348.54 | 1094.33 | 348.63 | 1094.59 | 348.65 | 1096.28 | 348.73 | 1097.06 | 348.79 |
| 1099.3 | 348.93 | 1108.03 | 349.71 | 1114.55 | 350.06 | 1115.96 | 350.13 | 1116.47 | 350.14 |
| 1117.7 | 350.09 | 1125.03 | 349.93 | 1125.2 | 349.91 | 1128.71 | 349.6 | 1130.58 | 349.45 |
| 1131.87 | 349.41 | 1133.84 | 349.3 | 1135.32 | 349.21 | 1141.82 | 348.77 | 1143.8 | 348.72 |
| 1144.21 | 348.74 | 1145.4 | 348.84 | 1150.5 | 349.31 | 1152.01 | 349.44 | 1152.47 | 349.37 |
| 1153.61 | 349.42 | 1154.46 | 349.49 | 1159.64 | 350.18 | 1162.06 | 350.55 | 1162.36 | 350.59 |
| 1165.42 | 351.29 | 1166.41 | 351.52 | 1168.46 | 351.98 | 1169.32 | 352.25 | 1171.77 | 352.59 |
| 1175.87 | 353.22 | 1180.27 | 353.86 | 1185.02 | 354.51 | 1187.17 | 354.81 | 1189.58 | 355.18 |
| 1191.03 | 355.41 | 1194.2 | 355.89 | 1195.29 | 356.06 | 1197.75 | 356.42 | 1198.69 | 356.54 |
| 1199.45 | 356.65 | 1200.5 | 356.83 | 1201.17 | 356.91 | 1202.23 | 357.12 | 1205.18 | 357.64 |
| 1206.21 | 357.79 | 1206.77 | 357.89 | 1207.82 | 358.05 | 1208.97 | 358.19 | 1210.84 | 358.46 |
| 1211.69 | 358.59 | 1218.02 | 359.79 | 1222.94 | 360.6 | 1226.81 | 361.16 | 1229.48 | 361.44 |
| 1235.03 | 361.91 | 1236.08 | 361.99 | 1237.87 | 362.08 | 1238.71 | 362.13 | 1240.43 | 362.1 |
| 1241.34 | 362.1 | 1242.69 | 362.05 | 1244.2 | 362.05 | 1244.68 | 362.04 | 1246.33 | 361.95 |
| 1247.51 | 361.87 | 1248.17 | 361.81 | 1248.6 | 361.8 | 1251.56 | 361.83 | 1252.45 | 361.87 |
| 1253.31 | 361.88 | 1255.69 | 361.99 | 1256.25 | 362.03 | 1256.8 | 362.11 | 1257.23 | 362.19 |
| 1258.02 | 362.31 | 1260.72 | 362.78 | 1264.12 | 363.28 | 1266.14 | 363.54 | 1266.63 | 363.58 |
| 1268.5 | 363.78 | 1271.34 | 364 | 1274.3 | 364.16 | 1276 | 364.31 | 1276.77 | 364.42 |
| 1277.84 | 364.55 | 1278.5 | 364.61 | 1281.19 | 364.81 | 1282.03 | 364.84 | 1283.41 | 364.91 |
| 1284.76 | 365 | 1285.03 | 365.03 | 1285.92 | 365.09 | 1286.36 | 365.1 | 1286.99 | 365.15 |
| 1287.6 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 257.1 | .05 | 511.93 | .04 | 1169.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 511.93 | 1169.32 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5390.78*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 266.16 | 356.38 | 266.75 | 356.38 | 267.69 | 356.36 | 269.54 | 356.36 | 269.8 | 356.35 |
| 271.45 | 356.34 | 272.27 | 356.28 | 274 | 356.1 | 276.55 | 355.72 | 277.83 | 355.51 |
| 280.26 | 355.09 | 287.42 | 354.45 | 302.65 | 353.75 | 302.93 | 353.74 | 309.22 | 353.47 |
| 311.77 | 353.4 | 318.19 | 353.15 | 322.13 | 353.08 | 322.99 | 353.05 | 325.79 | 352.99 |
| 327.8 | 352.98 | 328.66 | 352.96 | 331.44 | 352.93 | 331.9 | 352.91 | 350.12 | 352.71 |
| 352.98 | 352.63 | 354.25 | 352.58 | 356.05 | 352.6 | 367.17 | 352.79 | 368.71 | 352.8 |
| 374.77 | 352.66 | 381.85 | 352.41 | 382.41 | 352.41 | 384.96 | 352.34 | 399.57 | 352.04 |
| 404.22 | 351.86 | 405.56 | 351.82 | 405.84 | 351.8 | 407.61 | 351.71 | 408.65 | 351.69 |
| 412.56 | 351.73 | 414.07 | 351.79 | 414.35 | 351.81 | 423.77 | 352.24 | 425.97 | 352.3 |
| 426.47 | 352.34 | 432.16 | 352.4 | 433.15 | 352.4 | 433.27 | 352.37 | 434.11 | 352.33 |
| 436.91 | 352.45 | 438.3 | 352.54 | 440.44 | 352.64 | 441.2 | 352.65 | 442.35 | 352.65 |
| 442.54 | 352.66 | 444.36 | 352.68 | 446.7 | 352.74 | 448.45 | 352.76 | 449.06 | 352.78 |
| 451.78 | 352.84 | 453.21 | 352.88 | 453.85 | 352.85 | 454.39 | 352.78 | 455.3 | 352.8 |
| 456.82 | 352.82 | 459.57 | 352.84 | 461.34 | 352.93 | 461.72 | 352.9 | 463.05 | 352.89 |
| 463.38 | 352.87 | 466.73 | 352.56 | 467.45 | 352.48 | 469.98 | 351.91 | 470.45 | 351.81 |
| 472.24 | 351.7 | 472.71 | 351.69 | 475.82 | 351.66 | 476.93 | 351.66 | 477.77 | 351.69 |
| 478.09 | 351.76 | 478.68 | 351.84 | 480.13 | 351.92 | 481.37 | 352.01 | 483.2 | 352.07 |
| 484.72 | 352.15 | 485.38 | 352.17 | 490.83 | 352.02 | 491.41 | 352.03 | 493.19 | 352.13 |
| 494.42 | 352.22 | 501.76 | 352.5 | 503.35 | 352.55 | 503.68 | 352.55 | 505.1 | 352.49 |
| 510.88 | 352.11 | 512.61 | 351.97 | 514.84 | 351.92 | 521.74 | 352.26 | 522.72 | 352.23 |
| 524.18 | 352.28 | 524.59 | 352.28 | 525.07 | 352.25 | 525.65 | 352.2 | 527.8 | 352.05 |
| 529.57 | 351.86 | 531.62 | 351.77 | 532.07 | 351.72 | 532.56 | 351.64 | 533.15 | 351.57 |
| 534.36 | 351.53 | 535.91 | 351.45 | 540.28 | 351.15 | 544.97 | 350.76 | 547.07 | 350.54 |
| 547.39 | 350.55 | 547.51 | 350.66 | 549.43 | 350.62 | 551.25 | 350.55 | 553.04 | 350.43 |
| 553.71 | 350.37 | 555.69 | 350.24 | 558.97 | 350.11 | 561.24 | 350.2 | 562.07 | 350.24 |
| 563.44 | 350.28 | 564.65 | 350.25 | 566.61 | 350.34 | 568.09 | 350.31 | 568.64 | 350.32 |
| 569.82 | 350.36 | 571.29 | 350.4 | 572.96 | 350.4 | 573.52 | 350.42 | 575.06 | 350.51 |
| 576.27 | 350.57 | 577.23 | 350.58 | 579.8 | 350.53 | 582.8 | 350.43 | 582.91 | 350.42 |
| 585.74 | 350.34 | 587.35 | 350.28 | 587.42 | 350.23 | 589.88 | 350.16 | 591.33 | 350.11 |
| 593.23 | 350.03 | 593.87 | 350.02 | 595.58 | 350.04 | 599.92 | 350.13 | 605.81 | 350.19 |
| 613.12 | 350.21 | 613.73 | 350.23 | 614.56 | 350.22 | 614.91 | 350.24 | 616.23 | 350.27 |
| 617.02 | 350.27 | 617.71 | 350.29 | 623.62 | 350.39 | 625.71 | 350.42 | 629.62 | 350.41 |
| 635.97 | 350.3 | 636.26 | 350.28 | 636.75 | 350.28 | 637.39 | 350.32 | 638.69 | 350.36 |
| 639.85 | 350.37 | 640.36 | 350.39 | 640.87 | 350.47 | 641.43 | 350.49 | 643.37 | 350.52 |
| 644.83 | 350.53 | 652.49 | 350.51 | 652.67 | 350.5 | 654.87 | 350.48 | 657.46 | 350.4 |
| 660.76 | 350.4 | 663.83 | 350.45 | 664.18 | 350.46 | 667.1 | 350.46 | 667.48 | 350.45 |
| 670.19 | 350.31 | 673.9 | 350.19 | 677.33 | 350.11 | 679 | 350.13 | 679.58 | 350.16 |
| 684.28 | 350.18 | 685.18 | 350.19 | 686.66 | 350.19 | 687.64 | 350.17 | 689.92 | 350.11 |
| 691.13 | 350.1 | 692.7 | 350.16 | 694.04 | 350.17 | 698.09 | 350.07 | 699.02 | 349.94 |
| 699.11 | 349.89 | 699.72 | 349.8 | 700.42 | 349.81 | 702.19 | 349.78 | 703.74 | 349.76 |
| 704.93 | 349.73 | 708 | 349.75 | 708.78 | 349.72 | 711.05 | 349.7 | 711.63 | 349.71 |
| 712.93 | 349.75 | 713.37 | 349.8 | 713.76 | 349.79 | 715.42 | 350.05 | 716.22 | 350.15 |
| 718.99 | 350.21 | 720.17 | 350.22 | 720.58 | 350.18 | 721.43 | 350.17 | 722.79 | 350.12 |
| 723.56 | 350.05 | 725.19 | 350 | 728.2 | 349.86 | 730.62 | 349.77 | 731.14 | 349.76 |
| 734.43 | 349.79 | 735.21 | 349.79 | 735.8 | 349.77 | 736.24 | 349.71 | 736.66 | 349.71 |
| 739.91 | 349.76 | 741.07 | 349.81 | 742.59 | 349.83 | 744.87 | 349.92 | 745.78 | 350 |
| 748.72 | 350.08 | 751.22 | 350.18 | 753.23 | 350.27 | 753.79 | 350.29 | 754.58 | 350.3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 755.45 | 350.35 | 757.98 | 350.54 | 758.61 | 350.57 | 759.88 | 350.59 | 761.4 | 350.6 |
| 762.61 | 350.59 | 763.45 | 350.57 | 763.78 | 350.59 | 765.65 | 350.55 | 768.17 | 350.46 |
| 770.68 | 350.36 | 771.24 | 350.33 | 772.24 | 350.3 | 774.05 | 350.27 | 776.27 | 350.28 |
| 776.66 | 350.27 | 778.84 | 350.24 | 779.23 | 350.23 | 781.4 | 350.22 | 782.4 | 350.24 |
| 783.34 | 350.24 | 785.42 | 350.22 | 788.26 | 350.17 | 788.69 | 350.15 | 794.01 | 350 |
| 797.19 | 349.96 | 797.61 | 349.93 | 799.61 | 349.71 | 800.34 | 349.62 | 801.35 | 349.57 |
| 803.37 | 349.49 | 804.63 | 349.46 | 806.08 | 349.35 | 806.35 | 349.35 | 807.27 | 349.31 |
| 809.44 | 349.18 | 809.8 | 349.18 | 813.41 | 349.31 | 813.68 | 349.36 | 816.12 | 349.41 |
| 817.3 | 349.48 | 819.03 | 349.62 | 819.39 | 349.63 | 828.05 | 349.68 | 828.46 | 349.68 |
| 829.41 | 349.65 | 829.89 | 349.65 | 831.43 | 349.62 | 832.84 | 349.62 | 836.68 | 349.6 |
| 839.84 | 349.36 | 840.29 | 349.33 | 841.26 | 349.23 | 843.66 | 349.02 | 844.16 | 349 |
| 846.08 | 349 | 847.54 | 349.05 | 851.96 | 349.1 | 852.38 | 349.09 | 853.79 | 349.1 |
| 854.82 | 349.1 | 856.51 | 349.15 | 860.91 | 349.26 | 862.31 | 349.27 | 863.59 | 349.3 |
| 865.34 | 349.36 | 868.16 | 349.49 | 868.99 | 349.5 | 870.73 | 349.56 | 871.91 | 349.57 |
| 873.18 | 349.56 | 888.24 | 349.22 | 889.54 | 349.18 | 890.51 | 349.18 | 891.39 | 349.16 |
| 892.84 | 349.11 | 893.04 | 349.11 | 895.85 | 349.02 | 896.47 | 349.06 | 899.06 | 349.06 |
| 900.47 | 349.04 | 901.41 | 349.04 | 902.61 | 349.06 | 903.64 | 349.06 | 904.26 | 349.05 |
| 909.16 | 348.75 | 910.39 | 348.66 | 911.11 | 348.59 | 911.56 | 348.5 | 914.93 | 348.3 |
| 915.85 | 348.24 | 917.33 | 348.35 | 917.88 | 348.37 | 919 | 348.39 | 920.19 | 348.38 |
| 922.58 | 348.32 | 924.13 | 348.24 | 924.64 | 348.22 | 925.82 | 348.2 | 926.52 | 348.2 |
| 929.87 | 348.23 | 937.39 | 348.36 | 938.26 | 348.4 | 943.62 | 348.4 | 947.42 | 348.63 |
| 948.41 | 348.65 | 949.81 | 348.64 | 951 | 348.6 | 959.19 | 348.27 | 959.26 | 348.26 |
| 961.46 | 348.25 | 962.06 | 348.24 | 963.41 | 348.24 | 965.7 | 348.35 | 966.6 | 348.38 |
| 966.78 | 348.37 | 968.49 | 348.43 | 968.91 | 348.43 | 970.05 | 348.38 | 970.36 | 348.38 |
| 974.58 | 348.17 | 975.75 | 348.03 | 981.11 | 347.43 | 982.45 | 347.35 | 987.05 | 347.13 |
| 990.1 | 347.09 | 994.77 | 346.94 | 995.02 | 346.94 | 1001.09 | 346.76 | 1006.83 | 346.8 |
| 1009.55 | 346.8 | 1011.77 | 346.82 | 1020.05 | 347.01 | 1024.44 | 347.15 | 1026.35 | 347.18 |
| 1042.62 | 347.69 | 1043.01 | 347.71 | 1045.82 | 347.76 | 1048.56 | 347.84 | 1048.95 | 347.84 |
| 1050.7 | 347.89 | 1055.62 | 347.99 | 1058.28 | 348.07 | 1059.83 | 348.09 | 1061.27 | 348.1 |
| 1062.33 | 348.13 | 1063.17 | 348.17 | 1068.36 | 348.08 | 1070.46 | 348.02 | 1072.76 | 347.92 |
| 1073.84 | 347.86 | 1074.1 | 347.83 | 1074.87 | 347.78 | 1076.06 | 347.72 | 1076.6 | 347.66 |
| 1077.15 | 347.64 | 1078.41 | 347.65 | 1079.13 | 347.69 | 1081.74 | 347.73 | 1082.61 | 347.76 |
| 1085.35 | 347.95 | 1086.66 | 348.06 | 1087.64 | 348.15 | 1088.35 | 348.19 | 1089.59 | 348.2 |
| 1089.61 | 348.14 | 1090.47 | 348.15 | 1092.51 | 348.23 | 1095.28 | 348.36 | 1096.97 | 348.45 |
| 1097.74 | 348.51 | 1099.97 | 348.65 | 1108.67 | 349.41 | 1115.15 | 349.72 | 1116.56 | 349.79 |
| 1117.07 | 349.79 | 1118.29 | 349.75 | 1125.6 | 349.6 | 1125.76 | 349.59 | 1129.26 | 349.29 |
| 1131.13 | 349.14 | 1132.41 | 349.1 | 1134.37 | 349 | 1135.85 | 348.91 | 1142.32 | 348.48 |
| 1143.97 | 348.42 | 1144.7 | 348.44 | 1145.89 | 348.54 | 1150.96 | 349.01 | 1152.47 | 349.14 |
| 1152.93 | 349.08 | 1154.39 | 349.17 | 1154.91 | 349.22 | 1160.07 | 349.94 | 1160.79 | 350.05 |
| 1162.48 | 350.33 | 1162.78 | 350.37 | 1165.83 | 351.13 | 1168.85 | 351.87 | 1169.71 | 352.16 |
| 1172 | 352.52 | 1175.84 | 353.2 | 1179.97 | 353.88 | 1180.58 | 353.97 | 1184.42 | 354.56 |
| 1186.43 | 354.88 | 1190.04 | 355.51 | 1193.01 | 356.01 | 1193.62 | 356.12 | 1196.33 | 356.57 |
| 1197.22 | 356.7 | 1197.93 | 356.82 | 1198.92 | 357.01 | 1199.54 | 357.1 | 1200.54 | 357.31 |
| 1203.3 | 357.84 | 1204.26 | 358 | 1204.79 | 358.1 | 1205.77 | 358.26 | 1206.85 | 358.41 |
| 1208.6 | 358.68 | 1209.39 | 358.81 | 1215.32 | 359.99 | 1219.93 | 360.8 | 1223.55 | 361.37 |
| 1226.06 | 361.63 | 1231.25 | 362.1 | 1232.23 | 362.18 | 1233.3 | 362.24 | 1234.09 | 362.27 |
| 1234.7 | 362.32 | 1236.31 | 362.28 | 1237.16 | 362.27 | 1238.43 | 362.21 | 1240.29 | 362.18 |
| 1241.84 | 362.08 | 1242.94 | 361.99 | 1243.56 | 361.92 | 1246.74 | 361.91 | 1247.57 | 361.94 |
| 1248.38 | 361.94 | 1250.6 | 362.02 | 1251.3 | 362.07 | 1252.3 | 362.24 | 1255.31 | 362.8 |
| 1258.5 | 363.3 | 1259.35 | 363.43 | 1260.4 | 363.56 | 1262.6 | 363.79 | 1265.26 | 363.99 |
| 1267.38 | 364.09 | 1268.03 | 364.13 | 1269.62 | 364.27 | 1270.34 | 364.38 | 1271.35 | 364.51 |
| 1271.97 | 364.57 | 1274.49 | 364.78 | 1275.27 | 364.81 | 1277.83 | 364.99 | 1278.09 | 365.02 |
| 1280.49 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 266.16 | .05 | 525.07 | .04 | 1169.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 525.07 | 1169.71 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5371.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 275.22 | 356.09 | 276.27 | 356.07 | 278.65 | 356.07 | 278.92 | 356.06 | 280.6 | 356.05 |
| 281.43 | 355.98 | 283.19 | 355.79 | 283.6 | 355.72 | 285.77 | 355.38 | 287.07 | 355.16 |
| 289.54 | 354.71 | 296.81 | 354.01 | 312.28 | 353.29 | 312.56 | 353.27 | 318.96 | 352.99 |
| 321.55 | 352.92 | 328.07 | 352.66 | 332.07 | 352.59 | 333.37 | 352.54 | 335.44 | 352.51 |
| 335.79 | 352.5 | 337.83 | 352.49 | 341.53 | 352.45 | 341.99 | 352.44 | 360.5 | 352.25 |
| 363.41 | 352.18 | 364.69 | 352.13 | 366.53 | 352.15 | 377.82 | 352.36 | 379.38 | 352.37 |
| 385.54 | 352.26 | 392.74 | 352.03 | 393.3 | 352.03 | 395.89 | 351.97 | 410.73 | 351.69 |
| 415.46 | 351.51 | 416.46 | 351.48 | 417.1 | 351.44 | 418.89 | 351.35 | 419.96 | 351.33 |
| 423.93 | 351.37 | 424.37 | 351.4 | 425.14 | 351.42 | 425.74 | 351.46 | 435.32 | 351.86 |
| 437.45 | 351.92 | 438.06 | 351.96 | 443.83 | 352.03 | 444.84 | 352.03 | 444.96 | 352 |
| 445.81 | 351.98 | 447.46 | 352.04 | 448.66 | 352.09 | 450.07 | 352.17 | 451.57 | 352.23 |
| 453.02 | 352.26 | 454.38 | 352.26 | 455.16 | 352.28 | 456.23 | 352.29 | 458.6 | 352.35 |
| 460.38 | 352.38 | 461 | 352.4 | 463.77 | 352.45 | 464.9 | 352.48 | 465.21 | 352.5 |
| 465.86 | 352.45 | 466.41 | 352.38 | 467.34 | 352.4 | 468.88 | 352.42 | 471.68 | 352.44 |
| 473.48 | 352.53 | 473.86 | 352.5 | 475.21 | 352.49 | 475.55 | 352.46 | 478.95 | 352.13 |
| 479.68 | 352.05 | 480.3 | 351.9 | 482.69 | 351.34 | 482.89 | 351.32 | 484.55 | 351.22 |
| 485.02 | 351.22 | 488.18 | 351.2 | 489.31 | 351.2 | 490.09 | 351.24 | 491.09 | 351.38 |
| 491.37 | 351.41 | 492.57 | 351.48 | 493.83 | 351.57 | 494.49 | 351.6 | 495.68 | 351.64 |
| 497.23 | 351.74 | 497.89 | 351.76 | 498.69 | 351.75 | 503.43 | 351.64 | 504.01 | 351.65 |
| 505.83 | 351.74 | 507.07 | 351.82 | 514.54 | 352.06 | 516.15 | 352.1 | 516.48 | 352.1 |
| 517.92 | 352.04 | 523.79 | 351.62 | 525.55 | 351.47 | 527.82 | 351.43 | 534.83 | 351.82 |
| 535.16 | 351.83 | 535.82 | 351.8 | 537.3 | 351.86 | 537.72 | 351.86 | 538.21 | 351.83 |
| 538.78 | 351.78 | 540.87 | 351.64 | 542.6 | 351.47 | 544.59 | 351.38 | 546.09 | 351.2 |
| 547.26 | 351.16 | 548.78 | 351.08 | 553.04 | 350.79 | 557.6 | 350.41 | 559.65 | 350.19 |
| 559.96 | 350.2 | 560.08 | 350.3 | 561.95 | 350.25 | 564.37 | 350.13 | 566.12 | 349.98 |
| 568.05 | 349.86 | 570.49 | 349.78 | 571.25 | 349.75 | 573.47 | 349.84 | 574.27 | 349.88 |
| 575.9 | 349.94 | 576.14 | 349.92 | 576.78 | 349.92 | 578.7 | 350 | 580.14 | 349.97 |
| 580.68 | 349.98 | 581.83 | 350.02 | 583.26 | 350.06 | 584.89 | 350.05 | 586.64 | 350.14 |
| 588.02 | 350.22 | 589.04 | 350.23 | 591.55 | 350.17 | 594.47 | 350.07 | 594.58 | 350.06 |
| 598.26 | 349.94 | 598.91 | 349.91 | 598.98 | 349.87 | 601.38 | 349.8 | 602.35 | 349.75 |
| 602.79 | 349.74 | 604.65 | 349.65 | 605.27 | 349.64 | 606.93 | 349.66 | 611.16 | 349.73 |
| 616.9 | 349.78 | 620.72 | 349.8 | 624.03 | 349.81 | 624.62 | 349.82 | 625.59 | 349.82 |
| 625.77 | 349.84 | 627.06 | 349.87 | 628.5 | 349.88 | 634.26 | 349.99 | 636.29 | 350.02 |
| 640.11 | 350.03 | 647.05 | 349.94 | 647.35 | 349.96 | 648.95 | 350.01 | 650.48 | 350.04 |
| 651.07 | 350.12 | 653.51 | 350.17 | 654.93 | 350.18 | 662.4 | 350.19 | 662.57 | 350.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 664.72 | 350.17 | 667.24 | 350.1 | 670.46 | 350.1 | 673.99 | 350.16 | 676.64 | 350.15 |
| 677.01 | 350.14 | 679.65 | 350 | 683.26 | 349.87 | 686.61 | 349.78 | 688.24 | 349.8 |
| 688.8 | 349.82 | 693.38 | 349.84 | 694.25 | 349.85 | 695.7 | 349.85 | 698.88 | 349.78 |
| 699.65 | 349.79 | 700.06 | 349.78 | 701.58 | 349.85 | 702.89 | 349.86 | 706.84 | 349.77 |
| 707.47 | 349.69 | 707.75 | 349.63 | 707.83 | 349.58 | 708.43 | 349.49 | 709.12 | 349.5 |
| 710.84 | 349.47 | 711.76 | 349.47 | 713.51 | 349.43 | 716.5 | 349.46 | 717.26 | 349.44 |
| 719.47 | 349.41 | 721.3 | 349.47 | 721.73 | 349.51 | 722.12 | 349.51 | 723.73 | 349.74 |
| 724.52 | 349.83 | 727.21 | 349.89 | 728.36 | 349.91 | 728.77 | 349.87 | 730.15 | 349.85 |
| 731.27 | 349.8 | 731.94 | 349.74 | 733.25 | 349.71 | 734.16 | 349.66 | 736.19 | 349.56 |
| 738.55 | 349.47 | 739.06 | 349.47 | 742.25 | 349.49 | 743.02 | 349.49 | 743.6 | 349.47 |
| 744.03 | 349.4 | 744.43 | 349.4 | 747.6 | 349.44 | 748.73 | 349.49 | 750.21 | 349.51 |
| 752.44 | 349.59 | 753.12 | 349.67 | 753.32 | 349.68 | 756.19 | 349.76 | 758.62 | 349.86 |
| 760.58 | 349.95 | 762.18 | 349.98 | 765.22 | 350.2 | 765.98 | 350.23 | 767.06 | 350.25 |
| 768.54 | 350.26 | 769.73 | 350.26 | 770.29 | 350.24 | 770.86 | 350.25 | 772.26 | 350.24 |
| 772.69 | 350.22 | 775.14 | 350.13 | 777.59 | 350.03 | 778.14 | 350 | 779.11 | 349.97 |
| 780.87 | 349.94 | 781.8 | 349.93 | 783.04 | 349.94 | 783.42 | 349.93 | 785.54 | 349.9 |
| 785.92 | 349.89 | 787.6 | 349.87 | 789.02 | 349.88 | 791.95 | 349.85 | 795.14 | 349.78 |
| 800.33 | 349.62 | 803.43 | 349.59 | 804.17 | 349.52 | 805.6 | 349.35 | 806.18 | 349.26 |
| 807.49 | 349.18 | 808.17 | 349.15 | 809.45 | 349.11 | 810.68 | 349.09 | 812.1 | 348.99 |
| 813.26 | 348.96 | 815.37 | 348.86 | 815.72 | 348.86 | 819.24 | 349 | 819.5 | 349.05 |
| 821.88 | 349.11 | 823.03 | 349.19 | 824.71 | 349.34 | 825.07 | 349.35 | 833.51 | 349.4 |
| 833.91 | 349.4 | 834.83 | 349.37 | 835.3 | 349.37 | 835.55 | 349.35 | 836.79 | 349.34 |
| 838.18 | 349.34 | 841.92 | 349.31 | 845 | 349.1 | 845.44 | 349.08 | 846.38 | 348.98 |
| 848.72 | 348.78 | 849.21 | 348.75 | 851.08 | 348.75 | 852.5 | 348.79 | 856.81 | 348.84 |
| 857.22 | 348.83 | 858.59 | 348.84 | 859.6 | 348.83 | 861.24 | 348.9 | 865.53 | 349.02 |
| 866.9 | 349.04 | 868.15 | 349.07 | 869.85 | 349.13 | 872.6 | 349.27 | 873.4 | 349.28 |
| 875.1 | 349.34 | 876.25 | 349.35 | 877.49 | 349.34 | 892.17 | 349.04 | 893.44 | 349.01 |
| 894.39 | 349 | 895.24 | 348.98 | 896.65 | 348.93 | 896.85 | 348.93 | 899.59 | 348.83 |
| 900 | 348.86 | 900.19 | 348.85 | 902.71 | 348.84 | 904.09 | 348.81 | 905.01 | 348.8 |
| 906.17 | 348.82 | 907.64 | 348.79 | 907.96 | 348.79 | 912.56 | 348.48 | 913.76 | 348.39 |
| 914.46 | 348.32 | 914.9 | 348.24 | 919.08 | 347.96 | 921.06 | 348.08 | 922.44 | 348.09 |
| 923.31 | 348.08 | 925.64 | 348.03 | 927.15 | 347.96 | 928.8 | 347.93 | 929.48 | 347.93 |
| 931.45 | 347.95 | 932.74 | 347.95 | 940.07 | 348.06 | 940.92 | 348.1 | 946.14 | 348.1 |
| 949.85 | 348.35 | 950.81 | 348.37 | 952.17 | 348.37 | 953.33 | 348.34 | 961.32 | 348.04 |
| 961.38 | 348.03 | 963.53 | 348.02 | 964.12 | 348.01 | 965.43 | 348.01 | 967.66 | 348.1 |
| 968.54 | 348.12 | 968.72 | 348.11 | 970.39 | 348.16 | 971.05 | 348.15 | 972.2 | 348.1 |
| 976.32 | 347.9 | 977.46 | 347.75 | 982.68 | 347.13 | 983.99 | 347.05 | 988.48 | 346.82 |
| 991.29 | 346.79 | 991.44 | 346.78 | 995.99 | 346.63 | 996.24 | 346.63 | 1002.16 | 346.45 |
| 1007.87 | 346.48 | 1010.59 | 346.48 | 1012.79 | 346.51 | 1021.04 | 346.68 | 1025.41 | 346.82 |
| 1027.32 | 346.85 | 1043.52 | 347.35 | 1043.91 | 347.37 | 1046.71 | 347.42 | 1049.83 | 347.5 |
| 1051.57 | 347.54 | 1056.47 | 347.64 | 1059.11 | 347.71 | 1060.66 | 347.74 | 1062.09 | 347.75 |
| 1063.15 | 347.78 | 1063.27 | 347.8 | 1063.99 | 347.83 | 1070.22 | 347.71 | 1073.54 | 347.58 |
| 1075.64 | 347.44 | 1076.83 | 347.38 | 1077.37 | 347.34 | 1078.34 | 347.31 | 1079.26 | 347.33 |
| 1079.88 | 347.37 | 1081.41 | 347.38 | 1081.89 | 347.4 | 1082.49 | 347.4 | 1083.35 | 347.43 |
| 1086.08 | 347.62 | 1087.38 | 347.73 | 1088.36 | 347.82 | 1089.49 | 347.88 | 1090.3 | 347.88 |
| 1090.32 | 347.83 | 1092.02 | 347.88 | 1094.45 | 348 | 1094.51 | 348.01 | 1095.97 | 348.08 |
| 1097.65 | 348.17 | 1098.42 | 348.23 | 1100.64 | 348.37 | 1109.3 | 349.11 | 1117.43 | 349.45 |
| 1118.89 | 349.41 | 1126.17 | 349.28 | 1126.33 | 349.27 | 1129.82 | 348.98 | 1131.67 | 348.84 |
| 1132.95 | 348.8 | 1134.9 | 348.69 | 1136.38 | 348.6 | 1142.82 | 348.19 | 1143.99 | 348.15 |
| 1144.25 | 348.13 | 1144.89 | 348.13 | 1146.38 | 348.24 | 1151.43 | 348.71 | 1151.93 | 348.75 |
| 1152.93 | 348.85 | 1153.39 | 348.8 | 1154.52 | 348.87 | 1155.36 | 348.94 | 1160.5 | 349.7 |
| 1163.2 | 350.15 | 1166.23 | 350.97 | 1167.21 | 351.23 | 1169.25 | 351.76 | 1170.1 | 352.08 |
| 1172.24 | 352.46 | 1175.82 | 353.17 | 1179.66 | 353.89 | 1183.81 | 354.62 | 1185.69 | 354.96 |
| 1187.61 | 355.33 | 1187.8 | 355.36 | 1189.06 | 355.61 | 1191.82 | 356.13 | 1192.78 | 356.33 |
| 1196.41 | 356.99 | 1197.33 | 357.19 | 1197.91 | 357.29 | 1199.47 | 357.64 | 1201.41 | 358.04 |
| 1202.8 | 358.31 | 1203.72 | 358.48 | 1204.72 | 358.63 | 1207.1 | 359.04 | 1212.62 | 360.19 |
| 1216.92 | 360.99 | 1220.3 | 361.57 | 1222.63 | 361.83 | 1227.48 | 362.29 | 1228.39 | 362.37 |
| 1229.39 | 362.43 | 1229.96 | 362.44 | 1230.69 | 362.5 | 1232.2 | 362.45 | 1232.44 | 362.46 |
| 1232.99 | 362.44 | 1234.17 | 362.37 | 1235.91 | 362.31 | 1237.35 | 362.2 | 1238.37 | 362.11 |
| 1238.96 | 362.04 | 1239.33 | 362.03 | 1241.92 | 361.99 | 1242.69 | 362.01 | 1243.44 | 362.01 |
| 1245.52 | 362.04 | 1246.17 | 362.09 | 1247.56 | 362.35 | 1249.91 | 362.83 | 1252.88 | 363.33 |
| 1253.67 | 363.45 | 1254.65 | 363.58 | 1255.71 | 363.69 | 1256.7 | 363.81 | 1259.18 | 363.98 |
| 1261.77 | 364.1 | 1263.25 | 364.23 | 1263.64 | 364.28 | 1264.35 | 364.4 | 1265.44 | 364.53 |
| 1267.79 | 364.75 | 1268.52 | 364.79 | 1269.73 | 364.88 | 1270.9 | 364.98 | 1271.92 | 365.08 |
| 1273.38 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 275.22 | .05 | 538.21 | .04 | 1170.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 538.21 | 1170.1 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5351.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 284.28 | 355.79 | 285.53 | 355.78 | 285.86 | 355.77 | 287.76 | 355.77 | 288.03 | 355.76 |
| 289.74 | 355.76 | 290.58 | 355.69 | 292.37 | 355.48 | 293.18 | 355.34 | 295 | 355.04 |
| 296.32 | 354.8 | 298.83 | 354.32 | 306.21 | 353.58 | 321.92 | 352.82 | 322.2 | 352.8 |
| 328.7 | 352.51 | 331.33 | 352.44 | 337.95 | 352.16 | 342.02 | 352.1 | 343.33 | 352.04 |
| 345.43 | 352.02 | 345.79 | 352.01 | 347.3 | 352 | 348.67 | 352 | 348.75 | 351.99 |
| 351.62 | 351.97 | 352.08 | 351.96 | 370.88 | 351.8 | 373.84 | 351.72 | 375.14 | 351.67 |
| 377.01 | 351.7 | 388.47 | 351.92 | 390.06 | 351.94 | 396.31 | 351.85 | 403.62 | 351.65 |
| 406.82 | 351.59 | 421.89 | 351.34 | 426.69 | 351.15 | 428.08 | 351.11 | 428.36 | 351.08 |
| 430.18 | 350.99 | 431.26 | 350.97 | 435.29 | 351.02 | 436.27 | 351.07 | 436.53 | 351.07 |
| 437.13 | 351.11 | 446.86 | 351.49 | 447.69 | 351.5 | 449.02 | 351.54 | 449.65 | 351.58 |
| 455.51 | 351.65 | 456.53 | 351.66 | 456.65 | 351.64 | 457.52 | 351.62 | 460.41 | 351.72 |
| 461.35 | 351.78 | 463.37 | 351.86 | 464.05 | 351.87 | 466.22 | 351.87 | 467.02 | 351.89 |
| 468.1 | 351.9 | 470.51 | 351.96 | 472.31 | 351.99 | 472.94 | 352.01 | 475.75 | 352.07 |
| 477.22 | 352.11 | 477.88 | 352.06 | 478.1 | 352.01 | 478.44 | 351.98 | 480.95 | 352.03 |
| 483.79 | 352.04 | 485.61 | 352.14 | 486 | 352.11 | 487.37 | 352.09 | 487.72 | 352.06 |
| 491.17 | 351.7 | 491.91 | 351.61 | 492.54 | 351.46 | 494.96 | 350.86 | 496.85 | 350.74 |
| 501.69 | 350.74 | 502.62 | 350.79 | 502.88 | 350.85 | 503.79 | 350.95 | 505 | 351.03 |
| 506.28 | 351.14 | 508.16 | 351.22 | 510.41 | 351.36 | 511.22 | 351.34 | 516.03 | 351.26 |
| 517.02 | 351.28 | 518.47 | 351.35 | 519.73 | 351.42 | 527.31 | 351.63 | 528.95 | 351.66 |
| 529.51 | 351.65 | 530.74 | 351.58 | 536.71 | 351.13 | 538.49 | 350.98 | 540.8 | 350.94 |
| 547.92 | 351.38 | 548.25 | 351.39 | 548.93 | 351.36 | 550.43 | 351.43 | 551.05 | 351.43 |
| 551.35 | 351.41 | 552.47 | 351.32 | 553.94 | 351.23 | 555.63 | 351.07 | 557.57 | 350.98 |
| 558 | 350.95 | 559.02 | 350.83 | 560.17 | 350.79 | 561.64 | 350.72 | 565.79 | 350.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 570.24 | 350.06 | 572.23 | 349.85 | 572.54 | 349.86 | 572.65 | 349.94 | 574.09 | 349.89 |
| 576.2 | 349.78 | 576.83 | 349.74 | 578.54 | 349.59 | 580.41 | 349.48 | 583.53 | 349.4 |
| 585.69 | 349.49 | 586.48 | 349.53 | 588.05 | 349.59 | 588.29 | 349.57 | 588.92 | 349.58 |
| 590.78 | 349.67 | 591.63 | 349.64 | 592.71 | 349.63 | 593.83 | 349.67 | 595.23 | 349.71 |
| 596.81 | 349.71 | 597.17 | 349.72 | 599.86 | 349.88 | 600.55 | 349.89 | 603.3 | 349.82 |
| 606.15 | 349.71 | 606.26 | 349.7 | 608.94 | 349.61 | 610.47 | 349.54 | 610.54 | 349.51 |
| 612.88 | 349.44 | 613.52 | 349.4 | 614.25 | 349.37 | 616.06 | 349.27 | 616.66 | 349.26 |
| 618.29 | 349.27 | 622.4 | 349.34 | 627.99 | 349.38 | 634.93 | 349.4 | 635.52 | 349.42 |
| 636.3 | 349.41 | 636.63 | 349.43 | 637.89 | 349.46 | 638.64 | 349.46 | 639.29 | 349.48 |
| 644.9 | 349.6 | 646.88 | 349.63 | 650.6 | 349.65 | 656.62 | 349.6 | 657.27 | 349.59 |
| 657.97 | 349.63 | 660.31 | 349.68 | 661.01 | 349.72 | 661.28 | 349.76 | 661.81 | 349.78 |
| 663.65 | 349.82 | 665.03 | 349.83 | 672.31 | 349.86 | 674.56 | 349.86 | 675.17 | 349.84 |
| 677.02 | 349.8 | 680.15 | 349.8 | 683.07 | 349.84 | 683.4 | 349.85 | 686.18 | 349.85 |
| 689.11 | 349.69 | 689.94 | 349.66 | 692.63 | 349.55 | 695.88 | 349.45 | 697.47 | 349.47 |
| 698.02 | 349.49 | 702.48 | 349.5 | 703.33 | 349.51 | 704.74 | 349.51 | 705.68 | 349.5 |
| 707.84 | 349.46 | 708.98 | 349.45 | 709.58 | 349.5 | 710.47 | 349.53 | 711.75 | 349.56 |
| 715.59 | 349.47 | 716.2 | 349.39 | 716.56 | 349.28 | 717.14 | 349.18 | 717.81 | 349.19 |
| 719.49 | 349.17 | 720.38 | 349.17 | 722.08 | 349.13 | 725 | 349.18 | 725.74 | 349.15 |
| 727.9 | 349.13 | 729.05 | 349.16 | 730.09 | 349.22 | 730.47 | 349.22 | 732.04 | 349.43 |
| 732.81 | 349.51 | 735.43 | 349.58 | 736.55 | 349.59 | 736.95 | 349.56 | 738.29 | 349.54 |
| 739.04 | 349.52 | 739.77 | 349.46 | 741.32 | 349.42 | 741.4 | 349.4 | 742.2 | 349.37 |
| 744.18 | 349.27 | 746.47 | 349.18 | 746.97 | 349.17 | 750.08 | 349.19 | 750.83 | 349.18 |
| 751.39 | 349.16 | 751.81 | 349.09 | 752.2 | 349.08 | 755.29 | 349.12 | 756.39 | 349.17 |
| 757.83 | 349.19 | 760 | 349.27 | 760.86 | 349.37 | 763.66 | 349.44 | 766.03 | 349.54 |
| 766.12 | 349.54 | 768.47 | 349.64 | 769.22 | 349.64 | 770.04 | 349.69 | 772.45 | 349.85 |
| 773.19 | 349.88 | 774.25 | 349.91 | 775.69 | 349.92 | 776.84 | 349.92 | 777.39 | 349.9 |
| 777.71 | 349.92 | 779.31 | 349.91 | 780.77 | 349.86 | 782.12 | 349.8 | 782.57 | 349.79 |
| 784.5 | 349.7 | 785.04 | 349.67 | 785.98 | 349.64 | 787.7 | 349.6 | 789.81 | 349.6 |
| 790.18 | 349.59 | 794.25 | 349.51 | 795.63 | 349.52 | 798.49 | 349.48 | 801.6 | 349.41 |
| 806.65 | 349.25 | 809.66 | 349.22 | 810.39 | 349.15 | 811.78 | 348.97 | 812.34 | 348.88 |
| 812.65 | 348.85 | 814.28 | 348.77 | 815.53 | 348.73 | 816.73 | 348.71 | 818.36 | 348.62 |
| 819.24 | 348.61 | 821.3 | 348.54 | 821.64 | 348.55 | 825.07 | 348.7 | 825.32 | 348.74 |
| 827.63 | 348.81 | 828.75 | 348.89 | 830.4 | 349.05 | 830.74 | 349.07 | 838.96 | 349.12 |
| 839.35 | 349.12 | 840.71 | 349.09 | 840.95 | 349.07 | 842.16 | 349.06 | 843.51 | 349.06 |
| 847.15 | 349.03 | 851.08 | 348.78 | 851.5 | 348.73 | 853.78 | 348.53 | 854.25 | 348.5 |
| 856.08 | 348.5 | 857.46 | 348.54 | 861.66 | 348.58 | 862.06 | 348.57 | 863.39 | 348.58 |
| 864.37 | 348.57 | 865.97 | 348.64 | 870.15 | 348.78 | 871.48 | 348.8 | 872.7 | 348.84 |
| 874.36 | 348.91 | 877.03 | 349.05 | 877.82 | 349.06 | 878.81 | 349.1 | 879.86 | 349.13 |
| 881.8 | 349.12 | 896.1 | 348.86 | 897.33 | 348.83 | 898.26 | 348.83 | 898.61 | 348.82 |
| 900.46 | 348.74 | 900.65 | 348.74 | 903.32 | 348.64 | 903.91 | 348.65 | 906.37 | 348.62 |
| 908.6 | 348.57 | 909.73 | 348.57 | 911.17 | 348.54 | 911.9 | 348.5 | 915.96 | 348.21 |
| 917.12 | 348.12 | 917.81 | 348.04 | 918.24 | 347.97 | 921.43 | 347.75 | 922.3 | 347.68 |
| 923.71 | 347.76 | 924.23 | 347.78 | 925.29 | 347.79 | 926.43 | 347.79 | 928.69 | 347.74 |
| 930.16 | 347.68 | 931.77 | 347.65 | 932.43 | 347.65 | 934.36 | 347.67 | 935.61 | 347.67 |
| 942.75 | 347.77 | 943.58 | 347.8 | 948.67 | 347.8 | 952.28 | 348.07 | 953.21 | 348.09 |
| 954.54 | 348.1 | 955.67 | 348.07 | 963.44 | 347.81 | 963.51 | 347.8 | 965.6 | 347.79 |
| 966.17 | 347.78 | 967.45 | 347.78 | 969.63 | 347.85 | 970.48 | 347.86 | 970.66 | 347.85 |
| 972.28 | 347.89 | 973.14 | 347.87 | 974.05 | 347.83 | 978.06 | 347.63 | 979.17 | 347.47 |
| 984.25 | 346.82 | 989.9 | 346.51 | 992.64 | 346.49 | 992.79 | 346.48 | 997.46 | 346.32 |
| 1003.22 | 346.13 | 1008.91 | 346.17 | 1011.62 | 346.16 | 1013.82 | 346.19 | 1022.03 | 346.36 |
| 1026.38 | 346.49 | 1028.28 | 346.52 | 1044.42 | 347.02 | 1045.78 | 347.05 | 1047.6 | 347.08 |
| 1050.31 | 347.15 | 1050.7 | 347.15 | 1052.43 | 347.2 | 1057.32 | 347.3 | 1059.95 | 347.36 |
| 1061.49 | 347.39 | 1062.92 | 347.41 | 1063.97 | 347.44 | 1064.8 | 347.49 | 1069.95 | 347.39 |
| 1072.04 | 347.33 | 1074.32 | 347.23 | 1075.39 | 347.17 | 1076.13 | 347.11 | 1078.13 | 347.01 |
| 1078.67 | 346.99 | 1079.65 | 346.99 | 1080.64 | 347.04 | 1081.87 | 347.05 | 1082.64 | 347.07 |
| 1083.23 | 347.07 | 1084.09 | 347.1 | 1086.81 | 347.29 | 1088.11 | 347.4 | 1089.08 | 347.49 |
| 1089.78 | 347.54 | 1091.01 | 347.57 | 1091.03 | 347.52 | 1091.89 | 347.55 | 1094.35 | 347.67 |
| 1095.2 | 347.72 | 1098.33 | 347.89 | 1099.1 | 347.95 | 1101.31 | 348.09 | 1109.94 | 348.8 |
| 1116.37 | 349.05 | 1118.27 | 349.1 | 1119.49 | 349.07 | 1126.74 | 348.95 | 1126.9 | 348.94 |
| 1130.37 | 348.67 | 1132.22 | 348.54 | 1133.49 | 348.49 | 1135.43 | 348.39 | 1136.9 | 348.3 |
| 1143.32 | 347.89 | 1144.48 | 347.85 | 1144.74 | 347.83 | 1145.39 | 347.83 | 1146.86 | 347.95 |
| 1151.89 | 348.41 | 1152.4 | 348.45 | 1153.39 | 348.55 | 1153.84 | 348.51 | 1154.97 | 348.59 |
| 1155.81 | 348.66 | 1160.93 | 349.46 | 1161.64 | 349.58 | 1163.62 | 349.93 | 1167.61 | 351.08 |
| 1169.64 | 351.65 | 1170.49 | 351.99 | 1172.47 | 352.39 | 1175.79 | 353.15 | 1179.36 | 353.91 |
| 1179.89 | 354.01 | 1183.21 | 354.67 | 1184.95 | 355.03 | 1186.73 | 355.42 | 1186.9 | 355.45 |
| 1188.07 | 355.71 | 1190.64 | 356.26 | 1191.53 | 356.46 | 1193.51 | 356.88 | 1194.28 | 357.03 |
| 1194.89 | 357.16 | 1195.74 | 357.36 | 1196.28 | 357.47 | 1197.14 | 357.69 | 1197.73 | 357.83 |
| 1199.53 | 358.24 | 1201.67 | 358.7 | 1202.6 | 358.85 | 1204.8 | 359.26 | 1209.93 | 360.39 |
| 1213.91 | 361.19 | 1217.04 | 361.78 | 1219.21 | 362.03 | 1223.7 | 362.48 | 1224.55 | 362.56 |
| 1225.47 | 362.62 | 1226 | 362.63 | 1226.68 | 362.68 | 1228.08 | 362.63 | 1228.81 | 362.61 |
| 1229.91 | 362.52 | 1231.13 | 362.47 | 1231.52 | 362.44 | 1233.81 | 362.23 | 1234.35 | 362.16 |
| 1234.7 | 362.14 | 1237.09 | 362.07 | 1237.81 | 362.08 | 1238.51 | 362.07 | 1240.43 | 362.07 |
| 1240.88 | 362.09 | 1241.34 | 362.16 | 1242.32 | 362.37 | 1244.51 | 362.85 | 1247.99 | 363.48 |
| 1248.9 | 363.6 | 1249.3 | 363.64 | 1250.8 | 363.82 | 1253.11 | 363.98 | 1254.94 | 364.04 |
| 1255.5 | 364.07 | 1256.88 | 364.19 | 1257.24 | 364.24 | 1257.9 | 364.36 | 1258.91 | 364.49 |
| 1261.09 | 364.72 | 1261.76 | 364.77 | 1262.88 | 364.87 | 1264.91 | 365.08 | 1265.27 | 365.09 |
| 1266.27 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 284.28 | .05 | 551.35 | .04 | 1170.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 551.35 | 1170.49 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5332.33*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 293.34 | 355.49 | 294.14 | 355.48 | 296.88 | 355.48 | 297.15 | 355.47 | 298.88 | 355.47 |
| 299.74 | 355.39 | 301.55 | 355.17 | 301.98 | 355.09 | 304.22 | 354.7 | 305.56 | 354.45 |
| 308.11 | 353.93 | 315.6 | 353.15 | 331.55 | 352.35 | 331.84 | 352.34 | 338.43 | 352.03 |
| 341.1 | 351.95 | 347.83 | 351.67 | 351.96 | 351.6 | 352.85 | 351.56 | 353.3 | 351.55 |
| 355.43 | 351.53 | 355.56 | 351.52 | 357.32 | 351.51 | 357.89 | 351.52 | 358.79 | 351.51 |
| 361.7 | 351.49 | 362.18 | 351.48 | 381.26 | 351.34 | 384.27 | 351.27 | 385.59 | 351.22 |
| 386.65 | 351.23 | 387.48 | 351.25 | 399.12 | 351.49 | 400.73 | 351.5 | 407.08 | 351.44 |
| 414.5 | 351.26 | 415.08 | 351.26 | 417.76 | 351.21 | 433.05 | 350.98 | 437.93 | 350.8 |
| 439.46 | 350.75 | 439.62 | 350.73 | 441.47 | 350.63 | 442.57 | 350.61 | 446.66 | 350.66 |
| 447.12 | 350.69 | 447.91 | 350.72 | 448.53 | 350.76 | 458.4 | 351.11 | 460.6 | 351.16 |
| 461.23 | 351.2 | 467.18 | 351.28 | 468.22 | 351.29 | 469.23 | 351.26 | 472.16 | 351.36 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 473.31 | 351.42 | 475.16 | 351.48 | 476.46 | 351.49 | 476.86 | 351.47 | 477.1 | 351.48 |
| 477.85 | 351.47 | 478.87 | 351.5 | 479.96 | 351.51 | 482.41 | 351.57 | 484.25 | 351.6 |
| 484.88 | 351.62 | 487.73 | 351.68 | 489.23 | 351.72 | 489.77 | 351.68 | 490.12 | 351.61 |
| 490.46 | 351.58 | 491.04 | 351.61 | 491.42 | 351.6 | 493.01 | 351.63 | 495.89 | 351.64 |
| 497.75 | 351.74 | 498.15 | 351.71 | 499.53 | 351.69 | 499.88 | 351.66 | 503.39 | 351.27 |
| 504.14 | 351.18 | 504.78 | 351.01 | 506.8 | 350.5 | 507.29 | 350.38 | 509.16 | 350.26 |
| 509.65 | 350.26 | 512.91 | 350.28 | 513.72 | 350.28 | 514.07 | 350.29 | 515.01 | 350.34 |
| 515.28 | 350.39 | 516.2 | 350.5 | 517.43 | 350.59 | 518.73 | 350.7 | 519.42 | 350.74 |
| 520.64 | 350.79 | 522.23 | 350.91 | 522.92 | 350.95 | 528.63 | 350.88 | 529.63 | 350.9 |
| 531.11 | 350.96 | 532.38 | 351.02 | 540.08 | 351.19 | 541.74 | 351.22 | 542.32 | 351.2 |
| 543.57 | 351.12 | 549.63 | 350.64 | 551.44 | 350.48 | 553.78 | 350.45 | 561.01 | 350.95 |
| 561.34 | 350.96 | 562.03 | 350.93 | 563.55 | 351.01 | 564.18 | 351.01 | 564.49 | 350.99 |
| 565.58 | 350.9 | 567.01 | 350.82 | 568.65 | 350.68 | 570.54 | 350.59 | 570.96 | 350.56 |
| 571.96 | 350.46 | 573.07 | 350.43 | 574.51 | 350.36 | 578.55 | 350.06 | 582.87 | 349.7 |
| 584.64 | 349.53 | 585.11 | 349.51 | 585.3 | 349.57 | 586.62 | 349.52 | 588.67 | 349.4 |
| 590.33 | 349.26 | 590.95 | 349.2 | 591.4 | 349.17 | 592.77 | 349.1 | 595.09 | 349.06 |
| 595.81 | 349.04 | 597.91 | 349.13 | 598.68 | 349.17 | 600.21 | 349.24 | 600.45 | 349.23 |
| 601.06 | 349.24 | 602.87 | 349.33 | 604.24 | 349.29 | 604.75 | 349.29 | 605.84 | 349.33 |
| 607.19 | 349.37 | 608.74 | 349.36 | 609.25 | 349.38 | 611.88 | 349.54 | 612.68 | 349.54 |
| 615.05 | 349.46 | 617.82 | 349.34 | 617.93 | 349.34 | 620.54 | 349.24 | 622.03 | 349.17 |
| 622.09 | 349.14 | 623.3 | 349.1 | 624.37 | 349.08 | 627.47 | 348.89 | 628.06 | 348.88 |
| 629.64 | 348.89 | 633.64 | 348.94 | 639.09 | 348.98 | 642.71 | 348.99 | 645.84 | 348.99 |
| 646.41 | 349.01 | 647.17 | 349 | 647.5 | 349.03 | 648.71 | 349.06 | 649.44 | 349.06 |
| 650.08 | 349.08 | 655.54 | 349.2 | 657.47 | 349.23 | 660.91 | 349.27 | 661.09 | 349.26 |
| 666.95 | 349.26 | 667.67 | 349.25 | 667.95 | 349.27 | 669.47 | 349.32 | 670.92 | 349.35 |
| 671.48 | 349.41 | 675.13 | 349.49 | 682.22 | 349.54 | 684.41 | 349.55 | 686.81 | 349.5 |
| 689.85 | 349.5 | 692.69 | 349.53 | 693.01 | 349.54 | 695.71 | 349.54 | 698.57 | 349.38 |
| 699.38 | 349.35 | 701.99 | 349.24 | 705.16 | 349.12 | 706.71 | 349.13 | 707.44 | 349.15 |
| 711.58 | 349.17 | 713.79 | 349.17 | 716.8 | 349.13 | 717.53 | 349.14 | 717.91 | 349.13 |
| 718.05 | 349.15 | 718.84 | 349.2 | 719.36 | 349.22 | 720.6 | 349.25 | 724.34 | 349.18 |
| 724.94 | 349.09 | 725.2 | 349.02 | 725.28 | 348.97 | 725.85 | 348.86 | 726.5 | 348.89 |
| 728.13 | 348.86 | 729 | 348.87 | 730.66 | 348.83 | 733.5 | 348.89 | 734.22 | 348.87 |
| 736.32 | 348.84 | 738.05 | 348.9 | 738.82 | 348.94 | 741.1 | 349.19 | 743.65 | 349.26 |
| 744.74 | 349.28 | 745.04 | 349.26 | 746.44 | 349.24 | 747.5 | 349.2 | 748.14 | 349.15 |
| 749.38 | 349.12 | 750.24 | 349.07 | 752.16 | 348.98 | 754.4 | 348.88 | 754.88 | 348.87 |
| 757.91 | 348.88 | 758.64 | 348.88 | 759.19 | 348.85 | 759.59 | 348.77 | 759.97 | 348.77 |
| 762.23 | 348.79 | 762.98 | 348.8 | 764.05 | 348.85 | 765.46 | 348.86 | 767.57 | 348.95 |
| 767.66 | 348.97 | 768.4 | 349.05 | 771.13 | 349.13 | 773.43 | 349.22 | 775.29 | 349.3 |
| 775.81 | 349.31 | 776.54 | 349.31 | 777.34 | 349.35 | 779.68 | 349.51 | 780.4 | 349.54 |
| 781.43 | 349.57 | 783.96 | 349.59 | 784.73 | 349.57 | 784.8 | 349.59 | 786.36 | 349.58 |
| 786.76 | 349.57 | 789.09 | 349.48 | 791.41 | 349.37 | 791.93 | 349.34 | 792.85 | 349.31 |
| 794.52 | 349.27 | 795.41 | 349.26 | 796.57 | 349.26 | 799.31 | 349.19 | 800.9 | 349.16 |
| 802.24 | 349.16 | 803.11 | 349.15 | 805.02 | 349.11 | 807.65 | 349.05 | 808.05 | 349.03 |
| 812.97 | 348.87 | 815.9 | 348.85 | 816.61 | 348.77 | 817.96 | 348.58 | 818.51 | 348.49 |
| 818.81 | 348.46 | 820.4 | 348.38 | 821.62 | 348.35 | 822.78 | 348.33 | 824.12 | 348.26 |
| 825.22 | 348.26 | 827.22 | 348.22 | 827.56 | 348.23 | 830.89 | 348.39 | 831.14 | 348.43 |
| 833.39 | 348.51 | 834.48 | 348.6 | 836.08 | 348.77 | 836.42 | 348.79 | 844.42 | 348.85 |
| 844.8 | 348.85 | 846.12 | 348.81 | 846.35 | 348.79 | 847.53 | 348.78 | 848.84 | 348.78 |
| 852.39 | 348.74 | 855.31 | 348.58 | 855.73 | 348.57 | 856.22 | 348.53 | 856.62 | 348.48 |
| 858.84 | 348.28 | 859.3 | 348.25 | 861.07 | 348.25 | 862.42 | 348.28 | 866.51 | 348.31 |
| 869.15 | 348.31 | 870.71 | 348.38 | 874.77 | 348.54 | 876.07 | 348.57 | 878.87 | 348.69 |
| 881.47 | 348.83 | 882.24 | 348.84 | 883.91 | 348.91 | 886.11 | 348.91 | 900.02 | 348.68 |
| 900.33 | 348.67 | 902.13 | 348.65 | 902.94 | 348.63 | 904.27 | 348.56 | 904.46 | 348.56 |
| 907.06 | 348.45 | 907.63 | 348.45 | 910.02 | 348.4 | 910.91 | 348.37 | 912.19 | 348.34 |
| 913.3 | 348.33 | 914.69 | 348.29 | 915.41 | 348.24 | 919.36 | 347.94 | 920.49 | 347.84 |
| 921.15 | 347.77 | 921.43 | 347.72 | 924.68 | 347.47 | 925.53 | 347.4 | 926.9 | 347.47 |
| 928.44 | 347.49 | 929.55 | 347.49 | 931.75 | 347.45 | 933.18 | 347.4 | 934.75 | 347.38 |
| 937.26 | 347.39 | 938.49 | 347.39 | 945.44 | 347.47 | 946.24 | 347.5 | 951.19 | 347.5 |
| 954.7 | 347.79 | 955.61 | 347.82 | 956.91 | 347.83 | 958.01 | 347.81 | 965.57 | 347.58 |
| 967.67 | 347.56 | 968.23 | 347.55 | 969.48 | 347.55 | 971.59 | 347.6 | 972.42 | 347.61 |
| 972.59 | 347.6 | 974.17 | 347.62 | 975.89 | 347.56 | 979.8 | 347.36 | 980.88 | 347.19 |
| 985.83 | 346.52 | 987.07 | 346.44 | 991.32 | 346.2 | 994.13 | 346.18 | 998.68 | 346.01 |
| 1004.29 | 345.82 | 1009.95 | 345.85 | 1012.65 | 345.84 | 1014.84 | 345.87 | 1023.02 | 346.03 |
| 1027.36 | 346.16 | 1029.25 | 346.18 | 1045.32 | 346.68 | 1046.68 | 346.71 | 1048.49 | 346.74 |
| 1051.19 | 346.8 | 1053.3 | 346.85 | 1058.17 | 346.95 | 1060.79 | 347.01 | 1062.32 | 347.04 |
| 1063.74 | 347.06 | 1064.8 | 347.09 | 1064.91 | 347.11 | 1065.62 | 347.15 | 1070.75 | 347.04 |
| 1072.83 | 346.98 | 1075.09 | 346.89 | 1076.9 | 346.77 | 1078.36 | 346.71 | 1079.43 | 346.66 |
| 1080.41 | 346.66 | 1081.39 | 346.71 | 1082.62 | 346.72 | 1083.38 | 346.74 | 1083.97 | 346.74 |
| 1084.83 | 346.76 | 1085.44 | 346.81 | 1088.83 | 347.07 | 1089.8 | 347.16 | 1090.92 | 347.23 |
| 1091.73 | 347.25 | 1091.74 | 347.21 | 1092.59 | 347.24 | 1094.61 | 347.36 | 1095.04 | 347.38 |
| 1097.09 | 347.5 | 1097.34 | 347.51 | 1099.01 | 347.61 | 1099.78 | 347.67 | 1101.98 | 347.81 |
| 1110.57 | 348.5 | 1116.98 | 348.71 | 1118.38 | 348.75 | 1120.08 | 348.73 | 1127.3 | 348.63 |
| 1127.47 | 348.62 | 1130.92 | 348.36 | 1132.76 | 348.23 | 1133.5 | 348.21 | 1135.97 | 348.08 |
| 1143.82 | 347.6 | 1145.45 | 347.53 | 1146.18 | 347.55 | 1147.35 | 347.65 | 1152.36 | 348.11 |
| 1153.85 | 348.25 | 1154.3 | 348.23 | 1155.42 | 348.31 | 1156.26 | 348.39 | 1161.36 | 349.21 |
| 1162.07 | 349.34 | 1163.74 | 349.66 | 1164.04 | 349.71 | 1168.02 | 350.94 | 1170.04 | 351.54 |
| 1170.89 | 351.9 | 1172.71 | 352.33 | 1175.77 | 353.12 | 1179.06 | 353.92 | 1182.6 | 354.73 |
| 1184.21 | 355.11 | 1186.01 | 355.55 | 1189.45 | 356.38 | 1189.94 | 356.51 | 1192.1 | 357.03 |
| 1192.81 | 357.19 | 1194.16 | 357.54 | 1194.65 | 357.66 | 1195.99 | 358.03 | 1197.65 | 358.45 |
| 1199.62 | 358.91 | 1200.48 | 359.07 | 1201.87 | 359.35 | 1202.51 | 359.49 | 1207.23 | 360.59 |
| 1210.91 | 361.39 | 1213.79 | 361.98 | 1215.79 | 362.22 | 1219.93 | 362.68 | 1220.71 | 362.75 |
| 1221.56 | 362.8 | 1222.05 | 362.81 | 1222.67 | 362.87 | 1223.96 | 362.8 | 1224.64 | 362.78 |
| 1225.64 | 362.68 | 1226.77 | 362.61 | 1227.13 | 362.58 | 1228.36 | 362.45 | 1229.24 | 362.35 |
| 1229.74 | 362.28 | 1230.06 | 362.26 | 1232.27 | 362.15 | 1232.93 | 362.15 | 1233.57 | 362.13 |
| 1235.35 | 362.1 | 1235.76 | 362.11 | 1236.18 | 362.18 | 1236.69 | 362.29 | 1239.1 | 362.88 |
| 1241.64 | 363.38 | 1242.32 | 363.5 | 1243.15 | 363.62 | 1244.91 | 363.83 | 1247.03 | 363.97 |
| 1249.24 | 364.04 | 1250.51 | 364.15 | 1250.84 | 364.2 | 1251.08 | 364.26 | 1252.37 | 364.45 |
| 1254.38 | 364.69 | 1256.04 | 364.85 | 1257.25 | 365 | 1257.91 | 365.07 | 1258.24 | 365.09 |
| 1259.16 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 293.34 | .05 | 564.49 | .04 | 1170.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 564.49 | 1170.89 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5312.85*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 302.4 | 355.2 | 303.49 | 355.18 | 306.26 | 355.18 | 308.02 | 355.17 | 308.89 | 355.09 |
| 310.73 | 354.85 | 311.17 | 354.78 | 311.57 | 354.7 | 313.44 | 354.36 | 314.8 | 354.09 |
| 317.39 | 353.55 | 325 | 352.72 | 341.19 | 351.89 | 341.48 | 351.87 | 348.17 | 351.55 |
| 350.88 | 351.47 | 357.71 | 351.18 | 361.9 | 351.11 | 362.81 | 351.06 | 363.26 | 351.05 |
| 365.42 | 351.04 | 365.56 | 351.03 | 368.75 | 351.03 | 368.84 | 351.02 | 371.79 | 351.01 |
| 372.27 | 351 | 391.64 | 350.89 | 394.69 | 350.82 | 396.03 | 350.76 | 397.96 | 350.8 |
| 409.77 | 351.06 | 411.41 | 351.07 | 417.85 | 351.04 | 425.38 | 350.88 | 425.97 | 350.88 |
| 428.69 | 350.84 | 444.21 | 350.63 | 449.16 | 350.45 | 450.21 | 350.42 | 450.88 | 350.37 |
| 452.76 | 350.28 | 453.45 | 350.26 | 453.87 | 350.26 | 458.03 | 350.3 | 458.49 | 350.34 |
| 459.92 | 350.4 | 469.94 | 350.73 | 470.8 | 350.75 | 472.17 | 350.79 | 472.82 | 350.82 |
| 478.86 | 350.91 | 479.91 | 350.93 | 480.04 | 350.91 | 480.93 | 350.91 | 483.91 | 351 |
| 485.39 | 351.06 | 486.96 | 351.1 | 488.47 | 351.1 | 488.68 | 351.08 | 489.69 | 351.08 |
| 490.72 | 351.11 | 491.83 | 351.12 | 494.31 | 351.18 | 496.18 | 351.22 | 496.82 | 351.23 |
| 499.72 | 351.29 | 501.23 | 351.33 | 501.91 | 351.27 | 502.14 | 351.21 | 502.49 | 351.17 |
| 503.07 | 351.21 | 503.46 | 351.2 | 505.08 | 351.23 | 508 | 351.25 | 508.32 | 351.26 |
| 509.07 | 351.31 | 509.88 | 351.35 | 510.29 | 351.31 | 511.69 | 351.28 | 512.05 | 351.25 |
| 515.61 | 350.84 | 516.38 | 350.74 | 519.52 | 349.91 | 519.74 | 349.89 | 521.47 | 349.78 |
| 521.96 | 349.78 | 525.27 | 349.81 | 526.45 | 349.83 | 527.34 | 349.88 | 527.68 | 349.94 |
| 528.61 | 350.04 | 529.86 | 350.14 | 530.2 | 350.18 | 531.18 | 350.27 | 531.88 | 350.3 |
| 533.12 | 350.37 | 535.43 | 350.54 | 536.27 | 350.54 | 541.23 | 350.5 | 542.25 | 350.52 |
| 543.74 | 350.57 | 544.8 | 350.62 | 545.04 | 350.62 | 552.85 | 350.76 | 554.54 | 350.77 |
| 555.12 | 350.75 | 556.39 | 350.66 | 562.54 | 350.15 | 564.38 | 349.98 | 566.76 | 349.96 |
| 574.09 | 350.51 | 574.43 | 350.53 | 575.13 | 350.5 | 576.68 | 350.59 | 577.11 | 350.59 |
| 577.63 | 350.57 | 578.15 | 350.52 | 578.69 | 350.48 | 580.08 | 350.41 | 581.68 | 350.28 |
| 582.94 | 350.23 | 583.92 | 350.18 | 584.36 | 350.13 | 584.89 | 350.09 | 585.97 | 350.06 |
| 587.37 | 349.99 | 591.3 | 349.7 | 595.51 | 349.35 | 597.22 | 349.18 | 597.69 | 349.16 |
| 597.86 | 349.21 | 599.52 | 349.13 | 601.15 | 349.01 | 602.76 | 348.87 | 603.36 | 348.81 |
| 603.8 | 348.79 | 605.14 | 348.71 | 607.39 | 348.7 | 608.09 | 348.69 | 610.13 | 348.78 |
| 612.1 | 348.88 | 613.19 | 348.9 | 614.96 | 349 | 616.29 | 348.95 | 616.78 | 348.95 |
| 617.84 | 348.99 | 619.16 | 349.03 | 620.66 | 349.01 | 623.55 | 349.19 | 624.2 | 349.2 |
| 626.8 | 349.1 | 629.5 | 348.98 | 629.6 | 348.98 | 632.14 | 348.87 | 633.59 | 348.8 |
| 633.65 | 348.78 | 634.82 | 348.74 | 635.87 | 348.71 | 638.88 | 348.52 | 639.45 | 348.5 |
| 640.99 | 348.51 | 644.88 | 348.55 | 650.18 | 348.58 | 653.96 | 348.58 | 656.74 | 348.59 |
| 657.3 | 348.6 | 658.19 | 348.6 | 658.36 | 348.62 | 659.54 | 348.66 | 660.39 | 348.66 |
| 660.87 | 348.67 | 666.18 | 348.8 | 668.05 | 348.84 | 671.4 | 348.88 | 677.28 | 348.91 |
| 677.54 | 348.9 | 677.97 | 348.91 | 678.55 | 348.94 | 679.72 | 348.97 | 680.76 | 348.99 |
| 681.34 | 349.02 | 681.68 | 349.06 | 685.23 | 349.14 | 692.12 | 349.22 | 694.26 | 349.23 |
| 694.5 | 349.24 | 696.26 | 349.2 | 699.55 | 349.2 | 702.31 | 349.23 | 705.25 | 349.23 |
| 708.03 | 349.08 | 708.82 | 349.04 | 711.36 | 348.92 | 714.44 | 348.79 | 715.94 | 348.8 |
| 716.65 | 348.82 | 720.68 | 348.83 | 721.49 | 348.83 | 722.83 | 348.84 | 725.76 | 348.8 |
| 726.47 | 348.82 | 726.84 | 348.81 | 726.97 | 348.83 | 727.74 | 348.89 | 729.45 | 348.95 |
| 733.1 | 348.88 | 733.67 | 348.78 | 733.93 | 348.72 | 734.01 | 348.66 | 734.56 | 348.55 |
| 735.19 | 348.58 | 736.78 | 348.56 | 737.63 | 348.57 | 739.24 | 348.53 | 742 | 348.61 |
| 742.7 | 348.59 | 744.74 | 348.56 | 745.26 | 348.57 | 745.55 | 348.59 | 746.43 | 348.62 |
| 746.82 | 348.65 | 747.18 | 348.65 | 749.39 | 348.87 | 752.93 | 348.97 | 753.22 | 348.95 |
| 754.58 | 348.93 | 755.62 | 348.9 | 756.11 | 348.86 | 757.44 | 348.83 | 757.52 | 348.81 |
| 758.28 | 348.78 | 760.15 | 348.68 | 762.33 | 348.58 | 765.92 | 348.58 | 766.45 | 348.57 |
| 766.98 | 348.54 | 767.38 | 348.46 | 767.75 | 348.45 | 769.95 | 348.47 | 770.67 | 348.48 |
| 771.72 | 348.53 | 773.08 | 348.54 | 775.13 | 348.63 | 775.94 | 348.73 | 778.59 | 348.81 |
| 780.84 | 348.9 | 780.92 | 348.91 | 782.64 | 348.98 | 783.19 | 348.99 | 783.86 | 348.98 |
| 784.63 | 349.02 | 786.91 | 349.17 | 787.62 | 349.2 | 788.61 | 349.23 | 789.98 | 349.25 |
| 791.07 | 349.26 | 791.59 | 349.23 | 791.89 | 349.26 | 793.4 | 349.25 | 794.65 | 349.21 |
| 796.07 | 349.15 | 798.32 | 349.04 | 799.72 | 348.98 | 801.35 | 348.94 | 802.21 | 348.93 |
| 805.65 | 348.86 | 806 | 348.84 | 807.95 | 348.8 | 808.85 | 348.8 | 811.56 | 348.74 |
| 814.5 | 348.66 | 819.29 | 348.5 | 822.14 | 348.48 | 822.83 | 348.4 | 824.14 | 348.2 |
| 824.68 | 348.1 | 825.88 | 348.02 | 827.7 | 347.97 | 828.82 | 347.95 | 830.13 | 347.9 |
| 831.2 | 347.91 | 833.15 | 347.9 | 833.47 | 347.91 | 836.72 | 348.08 | 836.96 | 348.11 |
| 839.15 | 348.21 | 839.57 | 348.24 | 841.77 | 348.49 | 842.09 | 348.51 | 849.87 | 348.57 |
| 850.24 | 348.57 | 851.53 | 348.53 | 851.75 | 348.51 | 852.9 | 348.5 | 854.18 | 348.5 |
| 857.63 | 348.46 | 860.47 | 348.33 | 861.35 | 348.28 | 861.74 | 348.23 | 863.9 | 348.03 |
| 864.34 | 348 | 866.07 | 348 | 867.38 | 348.02 | 871.36 | 348.05 | 873.93 | 348.05 |
| 875.44 | 348.13 | 879.39 | 348.31 | 880.66 | 348.34 | 881.81 | 348.39 | 883.38 | 348.47 |
| 885.91 | 348.61 | 886.65 | 348.62 | 887.59 | 348.67 | 888.28 | 348.69 | 890.42 | 348.69 |
| 903.95 | 348.5 | 905.12 | 348.48 | 906.34 | 348.47 | 908.09 | 348.38 | 908.27 | 348.38 |
| 910.79 | 348.25 | 911.34 | 348.25 | 913.67 | 348.18 | 915.79 | 348.1 | 916.86 | 348.08 |
| 918.34 | 348.03 | 918.92 | 347.99 | 922.75 | 347.67 | 923.86 | 347.57 | 924.5 | 347.5 |
| 924.91 | 347.44 | 928.76 | 347.12 | 930.59 | 347.19 | 931.86 | 347.2 | 934.81 | 347.16 |
| 936.66 | 347.11 | 937.72 | 347.1 | 938.35 | 347.1 | 940.17 | 347.11 | 941.36 | 347.11 |
| 948.12 | 347.18 | 948.9 | 347.2 | 953.72 | 347.2 | 957.13 | 347.5 | 958.02 | 347.54 |
| 959.42 | 347.56 | 960.34 | 347.54 | 967.7 | 347.35 | 969.75 | 347.33 | 970.29 | 347.32 |
| 971.5 | 347.32 | 973.56 | 347.35 | 974.36 | 347.35 | 974.53 | 347.34 | 976.06 | 347.35 |
| 976.44 | 347.34 | 977.74 | 347.28 | 981.54 | 347.09 | 982.58 | 346.91 | 987.4 | 346.21 |
| 988.61 | 346.14 | 992.74 | 345.89 | 995.48 | 345.88 | 999.9 | 345.7 | 1005.36 | 345.5 |
| 1011 | 345.54 | 1013.68 | 345.52 | 1015.86 | 345.55 | 1024.01 | 345.7 | 1028.33 | 345.83 |
| 1030.21 | 345.85 | 1046.22 | 346.34 | 1047.57 | 346.37 | 1049.37 | 346.39 | 1052.07 | 346.45 |
| 1054.17 | 346.5 | 1059.01 | 346.6 | 1061.62 | 346.66 | 1063.15 | 346.69 | 1064.57 | 346.71 |
| 1065.62 | 346.75 | 1066.09 | 346.79 | 1066.44 | 346.8 | 1071.55 | 346.7 | 1073.62 | 346.64 |
| 1075.87 | 346.55 | 1077.67 | 346.43 | 1080.19 | 346.33 | 1081.17 | 346.33 | 1082.15 | 346.39 |
| 1084.72 | 346.41 | 1085.57 | 346.43 | 1086.18 | 346.48 | 1088.27 | 346.64 | 1090.52 | 346.83 |
| 1091.22 | 346.88 | 1092.44 | 346.93 | 1092.46 | 346.9 | 1093.3 | 346.94 | 1094.14 | 346.99 |
| 1095.31 | 347.07 | 1095.74 | 347.09 | 1096.59 | 347.15 | 1098.03 | 347.23 | 1099.7 | 347.33 |
| 1100.46 | 347.39 | 1102.65 | 347.53 | 1111.21 | 348.2 | 1117.59 | 348.37 | 1119.38 | 348.41 |
| 1120.68 | 348.38 | 1127.87 | 348.3 | 1128.03 | 348.3 | 1131.48 | 348.05 | 1133.31 | 347.93 |
| 1134.57 | 347.88 | 1137.95 | 347.69 | 1144.32 | 347.31 | 1145.48 | 347.26 | 1145.94 | 347.23 |
| 1146.26 | 347.23 | 1147.24 | 347.31 | 1147.83 | 347.35 | 1152.83 | 347.81 | 1154.31 | 347.95 |
| 1154.76 | 347.94 | 1156.12 | 348.05 | 1156.71 | 348.11 | 1161.79 | 348.97 | 1162.49 | 349.11 |
| 1164.46 | 349.49 | 1168.42 | 350.79 | 1170.43 | 351.44 | 1171.28 | 351.82 | 1172.95 | 352.26 |
| 1175.75 | 353.1 | 1178.75 | 353.94 | 1179.2 | 354.05 | 1182 | 354.78 | 1183.47 | 355.18 |
| 1184.97 | 355.6 | 1188.27 | 356.51 | 1190.69 | 357.18 | 1191.34 | 357.35 | 1192.57 | 357.72 |
| 1193.03 | 357.84 | 1193.75 | 358.07 | 1194.25 | 358.22 | 1195.77 | 358.65 | 1197.57 | 359.13 |
| 1198.35 | 359.29 | 1200.21 | 359.71 | 1204.53 | 360.79 | 1207.9 | 361.59 | 1210.54 | 362.18 |
| 1212.36 | 362.42 | 1216.15 | 362.87 | 1216.87 | 362.95 | 1217.65 | 362.99 | 1218.09 | 362.99 |
| 1218.66 | 363.05 | 1219.84 | 362.97 | 1220.03 | 362.98 | 1220.46 | 362.95 | 1221.38 | 362.84 |
| 1222.41 | 362.75 | 1224.67 | 362.47 | 1225.13 | 362.4 | 1225.42 | 362.37 | 1227.45 | 362.23 |
| 1228.05 | 362.22 | 1228.64 | 362.19 | 1230.26 | 362.12 | 1230.77 | 362.14 | 1231.5 | 362.31 |
| 1231.86 | 362.41 | 1233.7 | 362.9 | 1236.02 | 363.4 | 1236.64 | 363.52 | 1237.4 | 363.64 |
| 1237.74 | 363.67 | 1239.01 | 363.84 | 1240.95 | 363.96 | 1242.49 | 363.99 | 1242.97 | 364.01 |
| 1244.13 | 364.11 | 1244.43 | 364.16 | 1244.66 | 364.22 | 1245.84 | 364.41 | 1247.82 | 364.68 |
| 1248.25 | 364.72 | 1249.2 | 364.84 | 1250.57 | 365.02 | 1250.91 | 365.07 | 1251.21 | 365.09 |
| 1252.05 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 302.4 | .05 | 577.63 | .04 | 1171.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 577.63 | 1171.28 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5293.36*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 311.45 | 354.9 | 312.28 | 354.89 | 315.1 | 354.89 | 315.38 | 354.88 | 317.16 | 354.88 |
| 318.05 | 354.79 | 319.91 | 354.54 | 320.77 | 354.38 | 322.66 | 354.02 | 324.04 | 353.74 |
| 326.67 | 353.16 | 334.39 | 352.29 | 350.82 | 351.42 | 351.12 | 351.4 | 357.91 | 351.07 |
| 360.66 | 350.99 | 367.58 | 350.68 | 371.84 | 350.61 | 371.93 | 350.6 | 373.22 | 350.56 |
| 375.41 | 350.55 | 375.78 | 350.53 | 377.37 | 350.54 | 381.88 | 350.54 | 382.37 | 350.52 |
| 402.02 | 350.43 | 405.12 | 350.36 | 406.48 | 350.31 | 408.43 | 350.35 | 420.42 | 350.62 |
| 422.08 | 350.64 | 428.62 | 350.63 | 436.27 | 350.5 | 436.86 | 350.5 | 439.62 | 350.46 |
| 455.38 | 350.27 | 460.4 | 350.09 | 461.98 | 350.04 | 462.14 | 350.02 | 464.05 | 349.92 |
| 464.75 | 349.9 | 465.18 | 349.9 | 469.39 | 349.95 | 469.86 | 349.98 | 471.02 | 350.04 |
| 471.32 | 350.05 | 481.49 | 350.36 | 483.75 | 350.41 | 484.4 | 350.44 | 490.53 | 350.54 |
| 491.6 | 350.56 | 491.73 | 350.55 | 492.64 | 350.55 | 494.38 | 350.6 | 496.64 | 350.67 |
| 497.16 | 350.69 | 498.75 | 350.72 | 499.46 | 350.72 | 500.29 | 350.71 | 500.5 | 350.69 |
| 501.74 | 350.69 | 502.57 | 350.72 | 503.7 | 350.72 | 506.22 | 350.8 | 508.76 | 350.84 |
| 511.7 | 350.9 | 513.24 | 350.94 | 513.8 | 350.89 | 514.1 | 350.83 | 514.51 | 350.77 |
| 515.11 | 350.81 | 515.5 | 350.8 | 517.14 | 350.83 | 520.11 | 350.85 | 521.19 | 350.91 |
| 522.02 | 350.95 | 522.43 | 350.91 | 523.85 | 350.88 | 524.14 | 350.86 | 527.83 | 350.41 |
| 528.61 | 350.31 | 531.34 | 349.56 | 531.8 | 349.43 | 532.02 | 349.41 | 533.77 | 349.3 |
| 534.28 | 349.3 | 537.63 | 349.35 | 538.47 | 349.37 | 538.83 | 349.37 | 539.66 | 349.43 |
| 540.72 | 349.56 | 542.29 | 349.7 | 542.36 | 349.7 | 543.63 | 349.83 | 545.6 | 349.94 |
| 547.24 | 350.08 | 547.95 | 350.13 | 548.8 | 350.13 | 553.82 | 350.12 | 554.45 | 350.13 |
| 556.38 | 350.18 | 557.7 | 350.23 | 565.62 | 350.32 | 567.34 | 350.33 | 567.69 | 350.32 |
| 569.22 | 350.2 | 575.46 | 349.66 | 577.32 | 349.49 | 579.74 | 349.47 | 587.18 | 350.08 |
| 587.52 | 350.09 | 588.23 | 350.06 | 589.8 | 350.16 | 590.24 | 350.17 | 590.77 | 350.14 |
| 591.8 | 350.06 | 593.15 | 349.99 | 594.7 | 349.88 | 596.88 | 349.79 | 597.83 | 349.72 |
| 598.54 | 349.7 | 598.88 | 349.7 | 600.24 | 349.63 | 604.05 | 349.34 | 608.14 | 349 |
| 609.81 | 348.84 | 610.26 | 348.82 | 610.43 | 348.85 | 611.68 | 348.78 | 613.63 | 348.63 |
| 614.21 | 348.58 | 615.78 | 348.42 | 617.5 | 348.33 | 620.37 | 348.33 | 622.36 | 348.42 |
| 623.08 | 348.47 | 624.27 | 348.53 | 625.33 | 348.56 | 627.04 | 348.66 | 628.33 | 348.61 |
| 628.82 | 348.61 | 631.13 | 348.68 | 632.59 | 348.66 | 635.11 | 348.82 | 635.48 | 348.85 |
| 636.31 | 348.85 | 638.56 | 348.75 | 641.17 | 348.62 | 641.27 | 348.62 | 644.57 | 348.46 |
| 645.43 | 348.41 | 647.36 | 348.35 | 650.29 | 348.14 | 650.85 | 348.11 | 652.34 | 348.12 |
| 656.12 | 348.15 | 661.27 | 348.17 | 664.69 | 348.18 | 667.65 | 348.18 | 668.19 | 348.2 |
| 668.91 | 348.19 | 669.22 | 348.22 | 670.37 | 348.25 | 671.06 | 348.25 | 671.66 | 348.27 |
| 676.82 | 348.4 | 678.64 | 348.44 | 681.89 | 348.5 | 682.06 | 348.5 | 687.6 | 348.56 |
| 687.97 | 348.56 | 689.98 | 348.63 | 690.99 | 348.65 | 691.55 | 348.67 | 691.88 | 348.7 |
| 692.37 | 348.72 | 695.34 | 348.79 | 702.03 | 348.9 | 704.11 | 348.92 | 704.66 | 348.92 |
| 706.05 | 348.9 | 709.25 | 348.9 | 711.93 | 348.92 | 714.79 | 348.92 | 715.12 | 348.91 |
| 717.49 | 348.77 | 720.72 | 348.6 | 723.72 | 348.46 | 725.18 | 348.47 | 725.68 | 348.48 |
| 729.79 | 348.49 | 730.57 | 348.5 | 731.87 | 348.5 | 734.72 | 348.47 | 735.41 | 348.49 |
| 735.77 | 348.49 | 736.32 | 348.55 | 737.14 | 348.6 | 738.31 | 348.64 | 741.85 | 348.58 |
| 742.41 | 348.48 | 742.66 | 348.41 | 742.73 | 348.35 | 743.27 | 348.24 | 743.88 | 348.27 |
| 745.43 | 348.25 | 746.25 | 348.27 | 747.82 | 348.24 | 750.5 | 348.32 | 751.18 | 348.31 |
| 753.16 | 348.27 | 754.8 | 348.33 | 755.18 | 348.36 | 755.53 | 348.37 | 757.68 | 348.55 |
| 760.1 | 348.63 | 760.32 | 348.64 | 761.28 | 348.65 | 761.4 | 348.64 | 762.22 | 348.64 |
| 763.73 | 348.6 | 764.34 | 348.57 | 765.51 | 348.54 | 765.59 | 348.52 | 766.32 | 348.49 |
| 768.14 | 348.39 | 770.25 | 348.29 | 770.71 | 348.28 | 773.74 | 348.28 | 774.26 | 348.27 |
| 774.78 | 348.23 | 775.16 | 348.14 | 777.66 | 348.15 | 778.36 | 348.16 | 779.38 | 348.21 |
| 780.7 | 348.22 | 782.7 | 348.31 | 783.48 | 348.41 | 786.06 | 348.49 | 788.24 | 348.59 |
| 789.99 | 348.65 | 790.59 | 348.66 | 791.18 | 348.65 | 791.93 | 348.69 | 794.14 | 348.83 |
| 794.83 | 348.86 | 795.8 | 348.89 | 797.12 | 348.91 | 798.19 | 348.92 | 798.69 | 348.9 |
| 799.2 | 348.93 | 800.45 | 348.92 | 801.66 | 348.88 | 803.04 | 348.82 | 805.23 | 348.72 |
| 805.72 | 348.69 | 808.17 | 348.61 | 809.01 | 348.59 | 809.4 | 348.59 | 810.45 | 348.56 |
| 814.19 | 348.46 | 815.11 | 348.44 | 815.47 | 348.44 | 816.28 | 348.42 | 820.96 | 348.29 |
| 825.61 | 348.12 | 828.38 | 348.11 | 829.05 | 348.02 | 830.32 | 347.82 | 830.84 | 347.72 |
| 831.13 | 347.69 | 832.63 | 347.61 | 834.87 | 347.57 | 836.14 | 347.53 | 837.18 | 347.56 |
| 839.08 | 347.59 | 839.39 | 347.6 | 842.55 | 347.77 | 842.78 | 347.8 | 844.91 | 347.9 |
| 845.32 | 347.95 | 845.94 | 348.01 | 847.45 | 348.21 | 847.77 | 348.22 | 855.33 | 348.29 |
| 855.69 | 348.29 | 856.94 | 348.25 | 857.28 | 348.23 | 858.27 | 348.21 | 859.51 | 348.21 |
| 862.86 | 348.18 | 865.62 | 348.07 | 866.02 | 348.06 | 866.48 | 348.03 | 866.86 | 347.98 |
| 868.95 | 347.78 | 869.39 | 347.75 | 871.07 | 347.75 | 872.34 | 347.77 | 876.2 | 347.79 |
| 876.57 | 347.78 | 877.8 | 347.79 | 878.7 | 347.79 | 880.17 | 347.87 | 884.02 | 348.07 |
| 885.24 | 348.11 | 886.36 | 348.16 | 887.89 | 348.25 | 890.35 | 348.4 | 891.07 | 348.4 |
| 891.98 | 348.45 | 892.59 | 348.47 | 893.62 | 348.48 | 894.73 | 348.47 | 907.88 | 348.33 |
| 908.17 | 348.32 | 909.87 | 348.3 | 910.64 | 348.27 | 912.07 | 348.19 | 914.53 | 348.06 |
| 915.06 | 348.05 | 917.33 | 347.96 | 918.17 | 347.92 | 918.56 | 347.91 | 919.38 | 347.87 |
| 920.43 | 347.84 | 922.03 | 347.77 | 922.42 | 347.73 | 926.15 | 347.4 | 927.22 | 347.3 |
| 927.85 | 347.23 | 928.25 | 347.17 | 931.96 | 346.84 | 933.76 | 346.89 | 935 | 346.9 |
| 937.87 | 346.87 | 939.67 | 346.83 | 943.07 | 346.83 | 944.23 | 346.84 | 950.8 | 346.88 |
| 951.56 | 346.9 | 956.24 | 346.9 | 959.56 | 347.22 | 960.42 | 347.26 | 961.64 | 347.29 |
| 962.68 | 347.28 | 969.83 | 347.12 | 971.82 | 347.1 | 972.34 | 347.1 | 973.2 | 347.08 |
| 973.52 | 347.08 | 975.52 | 347.1 | 976.46 | 347.08 | 978.15 | 347.07 | 978.55 | 347.06 |
| 979.58 | 347.01 | 983.28 | 346.81 | 984.29 | 346.63 | 988.97 | 345.91 | 990.15 | 345.83 |
| 994.16 | 345.59 | 996.68 | 345.58 | 996.82 | 345.57 | 1000.9 | 345.4 | 1001.12 | 345.4 |
| 1006.42 | 345.19 | 1012.04 | 345.22 | 1014.71 | 345.21 | 1016.89 | 345.23 | 1025 | 345.37 |
| 1029.3 | 345.5 | 1031.18 | 345.52 | 1047.12 | 346 | 1048.47 | 346.03 | 1050.26 | 346.05 |
| 1053.32 | 346.12 | 1055.04 | 346.15 | 1059.86 | 346.25 | 1062.46 | 346.31 | 1063.98 | 346.34 |
| 1065.39 | 346.36 | 1066.44 | 346.4 | 1066.91 | 346.45 | 1067.26 | 346.46 | 1072.34 | 346.35 |
| 1074.41 | 346.29 | 1076.65 | 346.2 | 1077.97 | 346.11 | 1079.89 | 346.04 | 1080.03 | 346.03 |
| 1081.38 | 346 | 1081.93 | 346 | 1082.9 | 346.06 | 1084.87 | 346.08 | 1085.46 | 346.08 |
| 1086.31 | 346.1 | 1086.91 | 346.15 | 1089 | 346.31 | 1091.24 | 346.5 | 1092.35 | 346.58 |
| 1093.15 | 346.61 | 1093.17 | 346.6 | 1094.01 | 346.64 | 1094.84 | 346.69 | 1097.29 | 346.86 |
| 1098.72 | 346.95 | 1100.38 | 347.05 | 1101.13 | 347.11 | 1103.32 | 347.25 | 1111.84 | 347.9 |
| 1118.2 | 348.03 | 1119.58 | 348.06 | 1121.28 | 348.04 | 1128.44 | 347.98 | 1132.03 | 347.74 |
| 1133.85 | 347.63 | 1134.58 | 347.6 | 1137.03 | 347.47 | 1138.48 | 347.38 | 1144.82 | 347.01 |
| 1145.97 | 346.96 | 1146.44 | 346.93 | 1146.75 | 346.93 | 1147.73 | 347.01 | 1148.32 | 347.05 |
| 1153.29 | 347.51 | 1154.77 | 347.65 | 1155.22 | 347.66 | 1156.57 | 347.77 | 1157.16 | 347.83 |
| 1162.22 | 348.73 | 1162.92 | 348.87 | 1164.87 | 349.27 | 1168.32 | 350.47 | 1168.82 | 350.65 |
| 1170.83 | 351.33 | 1171.67 | 351.73 | 1173.18 | 352.2 | 1175.72 | 353.07 | 1178.45 | 353.95 |
| 1181.39 | 354.84 | 1182.73 | 355.25 | 1185.12 | 356.02 | 1187.08 | 356.63 | 1187.76 | 356.85 |
| 1189.86 | 357.51 | 1190.99 | 357.9 | 1191.4 | 358.03 | 1192.06 | 358.27 | 1192.5 | 358.42 |
| 1193.88 | 358.85 | 1194.52 | 359.04 | 1195.52 | 359.35 | 1196.23 | 359.51 | 1197.92 | 359.93 |
| 1201.84 | 360.99 | 1204.89 | 361.79 | 1207.28 | 362.39 | 1208.94 | 362.62 | 1212.38 | 363.06 |
| 1213.03 | 363.14 | 1213.73 | 363.18 | 1214.14 | 363.18 | 1214.66 | 363.24 | 1215.72 | 363.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1216.29 | 363.12 | 1217.12 | 363 | 1218.36 | 362.85 | 1219.38 | 362.69 | 1220.52 | 362.52 |
| 1222.62 | 362.3 | 1223.17 | 362.29 | 1225.18 | 362.15 | 1225.64 | 362.16 | 1226.62 | 362.42 |
| 1228.29 | 362.93 | 1230.4 | 363.43 | 1230.96 | 363.55 | 1231.66 | 363.67 | 1231.96 | 363.69 |
| 1232.41 | 363.76 | 1233.11 | 363.85 | 1234.87 | 363.96 | 1236.27 | 363.97 | 1236.71 | 363.98 |
| 1237.76 | 364.07 | 1238.24 | 364.18 | 1239.31 | 364.37 | 1240.98 | 364.63 | 1242.35 | 364.82 |
| 1242.42 | 364.84 | 1243.19 | 364.95 | 1243.6 | 365.02 | 1244.18 | 365.08 | 1244.57 | 365.14 |
| 1244.95 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 311.45 | .05 | 590.77 | .04 | 1171.67 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 590.77 | 1171.67 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5273.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 320.51 | 354.6 | 321.35 | 354.6 | 321.64 | 354.59 | 326.31 | 354.59 | 327.2 | 354.5 |
| 329.1 | 354.23 | 331.89 | 353.68 | 333.29 | 353.38 | 335.95 | 352.77 | 343.78 | 351.86 |
| 360.45 | 350.95 | 360.75 | 350.93 | 367.65 | 350.59 | 370.44 | 350.51 | 377.46 | 350.19 |
| 381.78 | 350.12 | 382.72 | 350.07 | 383.18 | 350.06 | 385.4 | 350.05 | 385.78 | 350.04 |
| 387.39 | 350.05 | 387.98 | 350.06 | 388.84 | 350.06 | 388.92 | 350.05 | 391.97 | 350.06 |
| 392.46 | 350.05 | 412.41 | 349.98 | 415.55 | 349.91 | 416.93 | 349.85 | 418.04 | 349.88 |
| 418.91 | 349.89 | 431.07 | 350.19 | 432.76 | 350.2 | 439.39 | 350.22 | 447.15 | 350.12 |
| 447.75 | 350.11 | 450.55 | 350.08 | 466.54 | 349.92 | 471.63 | 349.74 | 472.71 | 349.71 |
| 473.1 | 349.69 | 473.4 | 349.66 | 475.33 | 349.56 | 476.05 | 349.54 | 476.48 | 349.54 |
| 480.76 | 349.59 | 481.23 | 349.63 | 482.41 | 349.69 | 482.71 | 349.7 | 493.03 | 349.98 |
| 495.33 | 350.03 | 495.99 | 350.06 | 502.21 | 350.17 | 503.29 | 350.19 | 504.34 | 350.19 |
| 506.11 | 350.24 | 507.41 | 350.27 | 508.4 | 350.31 | 508.93 | 350.32 | 510.55 | 350.34 |
| 511.27 | 350.34 | 512.11 | 350.32 | 512.32 | 350.3 | 513.58 | 350.3 | 514.42 | 350.32 |
| 515.57 | 350.33 | 518.12 | 350.41 | 520.04 | 350.44 | 520.7 | 350.46 | 523.69 | 350.51 |
| 525.25 | 350.55 | 525.81 | 350.5 | 526.12 | 350.43 | 526.54 | 350.37 | 527.14 | 350.41 |
| 527.54 | 350.4 | 529.2 | 350.44 | 532.22 | 350.45 | 533.31 | 350.52 | 534.15 | 350.56 |
| 534.57 | 350.52 | 536.02 | 350.48 | 536.39 | 350.45 | 540.05 | 349.98 | 540.84 | 349.87 |
| 543.61 | 349.09 | 544.07 | 348.95 | 544.3 | 348.94 | 546.08 | 348.82 | 551.21 | 348.91 |
| 552.05 | 348.98 | 553.13 | 349.1 | 554.72 | 349.25 | 556.08 | 349.4 | 556.8 | 349.44 |
| 558.08 | 349.52 | 559.74 | 349.67 | 560.46 | 349.73 | 561.32 | 349.73 | 566.42 | 349.74 |
| 567.06 | 349.75 | 569.02 | 349.79 | 570.35 | 349.83 | 578.4 | 349.89 | 580.14 | 349.89 |
| 580.5 | 349.87 | 582.04 | 349.74 | 588.37 | 349.17 | 590.26 | 348.99 | 592.71 | 348.98 |
| 600.27 | 349.64 | 600.62 | 349.66 | 601.34 | 349.63 | 602.93 | 349.74 | 603.02 | 349.75 |
| 603.59 | 349.74 | 603.91 | 349.72 | 604.4 | 349.68 | 606.23 | 349.58 | 607.73 | 349.49 |
| 608.64 | 349.45 | 609.85 | 349.41 | 610.76 | 349.35 | 611.45 | 349.33 | 611.78 | 349.33 |
| 613.1 | 349.27 | 620.78 | 348.65 | 622.4 | 348.5 | 622.83 | 348.47 | 623 | 348.49 |
| 624.22 | 348.41 | 626.67 | 348.19 | 628.19 | 348.03 | 629.86 | 347.95 | 631.99 | 347.97 |
| 632.44 | 347.97 | 634.61 | 348.07 | 636.44 | 348.18 | 637.46 | 348.23 | 639.13 | 348.33 |
| 639.88 | 348.29 | 640.85 | 348.26 | 641.85 | 348.3 | 643.1 | 348.34 | 644.51 | 348.32 |
| 646.04 | 348.42 | 646.29 | 348.43 | 647.23 | 348.5 | 647.85 | 348.51 | 648.13 | 348.5 |
| 652.85 | 348.26 | 652.95 | 348.25 | 656.14 | 348.09 | 656.98 | 348.04 | 657.87 | 348.02 |
| 658.86 | 347.99 | 659.43 | 347.94 | 660.08 | 347.9 | 661.7 | 347.76 | 662.24 | 347.73 |
| 663.69 | 347.74 | 667.36 | 347.76 | 672.36 | 347.77 | 678.56 | 347.77 | 679.08 | 347.79 |
| 679.78 | 347.78 | 680.08 | 347.81 | 681.2 | 347.85 | 681.87 | 347.85 | 682.45 | 347.87 |
| 687.46 | 348 | 689.23 | 348.05 | 692.39 | 348.12 | 692.55 | 348.12 | 697.93 | 348.21 |
| 698.59 | 348.22 | 698.85 | 348.24 | 701.85 | 348.33 | 702.09 | 348.35 | 702.56 | 348.36 |
| 704.2 | 348.41 | 705.44 | 348.44 | 711.94 | 348.58 | 713.95 | 348.61 | 714.49 | 348.61 |
| 715.84 | 348.6 | 718.95 | 348.6 | 721.9 | 348.61 | 722.02 | 348.62 | 724.33 | 348.62 |
| 726.95 | 348.46 | 727.69 | 348.41 | 730.09 | 348.28 | 732.99 | 348.13 | 734.42 | 348.14 |
| 735.09 | 348.15 | 738.89 | 348.15 | 739.65 | 348.16 | 741.74 | 348.16 | 743.67 | 348.15 |
| 744.34 | 348.17 | 744.69 | 348.16 | 744.82 | 348.19 | 745.55 | 348.26 | 746.02 | 348.29 |
| 747.16 | 348.34 | 750.6 | 348.28 | 751.14 | 348.18 | 751.38 | 348.11 | 751.46 | 348.05 |
| 751.98 | 347.93 | 752.58 | 347.96 | 754.08 | 347.95 | 755.38 | 347.96 | 756.39 | 347.94 |
| 759 | 348.04 | 759.66 | 348.02 | 761.59 | 347.99 | 762.76 | 348.03 | 763.55 | 348.07 |
| 763.89 | 348.08 | 765.97 | 348.23 | 768.32 | 348.31 | 769.31 | 348.34 | 769.47 | 348.33 |
| 770.87 | 348.33 | 771.85 | 348.3 | 772.43 | 348.27 | 773.57 | 348.25 | 773.65 | 348.23 |
| 774.36 | 348.19 | 776.13 | 348.1 | 778.18 | 347.99 | 781.57 | 347.98 | 782.57 | 347.93 |
| 782.94 | 347.83 | 783.29 | 347.82 | 785.37 | 347.83 | 786.05 | 347.84 | 787.04 | 347.89 |
| 788.33 | 347.9 | 790.26 | 347.98 | 791.03 | 348.1 | 793.53 | 348.17 | 795.64 | 348.27 |
| 797.34 | 348.33 | 797.93 | 348.33 | 798.74 | 348.32 | 801.38 | 348.49 | 801.59 | 348.49 |
| 802.98 | 348.55 | 805.3 | 348.59 | 805.79 | 348.57 | 806.29 | 348.6 | 807.5 | 348.6 |
| 808.81 | 348.55 | 810.01 | 348.49 | 810.42 | 348.48 | 812.14 | 348.39 | 812.62 | 348.36 |
| 814.99 | 348.28 | 817.21 | 348.22 | 819.39 | 348.15 | 820.84 | 348.11 | 822.87 | 348.06 |
| 827.05 | 347.92 | 827.41 | 347.91 | 831.92 | 347.75 | 834.61 | 347.74 | 835.26 | 347.65 |
| 836.67 | 347.41 | 837.01 | 347.33 | 837.28 | 347.3 | 838.15 | 347.25 | 839.86 | 347.2 |
| 840.92 | 347.2 | 842.16 | 347.17 | 843.16 | 347.21 | 845.31 | 347.28 | 848.37 | 347.47 |
| 848.6 | 347.49 | 850.67 | 347.6 | 851.66 | 347.72 | 853.13 | 347.92 | 853.44 | 347.94 |
| 860.78 | 348.01 | 861.13 | 348.01 | 862.34 | 347.97 | 862.67 | 347.95 | 863.64 | 347.93 |
| 864.84 | 347.93 | 868.1 | 347.89 | 871.16 | 347.8 | 871.61 | 347.77 | 871.98 | 347.73 |
| 874.44 | 347.5 | 876.07 | 347.5 | 877.3 | 347.51 | 881.05 | 347.52 | 883.48 | 347.52 |
| 884.91 | 347.61 | 888.64 | 347.83 | 889.83 | 347.87 | 890.91 | 347.94 | 892.39 | 348.02 |
| 894.78 | 348.18 | 895.49 | 348.18 | 896.37 | 348.23 | 896.96 | 348.25 | 897.59 | 348.25 |
| 897.97 | 348.26 | 899.04 | 348.25 | 911.81 | 348.15 | 912.09 | 348.14 | 913.74 | 348.12 |
| 914.48 | 348.09 | 915.71 | 348.02 | 918.26 | 347.87 | 918.78 | 347.85 | 923.99 | 347.59 |
| 925.27 | 347.53 | 925.93 | 347.47 | 929.55 | 347.13 | 931.2 | 346.96 | 931.58 | 346.91 |
| 934.96 | 346.58 | 935.22 | 346.56 | 936.47 | 346.59 | 937.89 | 346.6 | 938.9 | 346.6 |
| 940.92 | 346.58 | 942.24 | 346.56 | 943.67 | 346.55 | 944.26 | 346.55 | 945.98 | 346.56 |
| 947.1 | 346.56 | 953.48 | 346.59 | 954.22 | 346.6 | 958.76 | 346.6 | 961.99 | 346.94 |
| 962.82 | 346.98 | 964.01 | 347.02 | 965.02 | 347.02 | 971.96 | 346.89 | 973.89 | 346.88 |
| 975.24 | 346.85 | 977.48 | 346.85 | 978.25 | 346.84 | 978.4 | 346.83 | 979.85 | 346.8 |
| 980.62 | 346.78 | 981.43 | 346.73 | 985.01 | 346.54 | 986 | 346.36 | 990.54 | 345.61 |
| 991.69 | 345.53 | 995.59 | 345.28 | 998.03 | 345.28 | 998.17 | 345.27 | 1007.22 | 344.88 |
| 1007.49 | 344.87 | 1013.08 | 344.9 | 1015.75 | 344.89 | 1017.91 | 344.92 | 1025.99 | 345.05 |
| 1030.27 | 345.17 | 1032.14 | 345.19 | 1048.02 | 345.66 | 1049.36 | 345.69 | 1051.15 | 345.71 |
| 1053.82 | 345.76 | 1055.9 | 345.81 | 1060.71 | 345.91 | 1064.82 | 345.99 | 1066.22 | 346.02 |
| 1067.26 | 346.06 | 1067.37 | 346.08 | 1068.07 | 346.12 | 1073.14 | 346 | 1074.18 | 345.98 |
| 1075.19 | 345.95 | 1077.43 | 345.86 | 1079.22 | 345.74 | 1079.49 | 345.74 | 1080.66 | 345.7 |
| 1081.72 | 345.68 | 1082.68 | 345.68 | 1083.65 | 345.73 | 1085.14 | 345.74 | 1085.62 | 345.75 |
| 1086.2 | 345.75 | 1087.05 | 345.77 | 1087.65 | 345.82 | 1089.73 | 345.98 | 1091.96 | 346.17 |
| 1093.07 | 346.25 | 1093.86 | 346.3 | 1093.88 | 346.29 | 1094.72 | 346.34 | 1097.98 | 346.57 |
| 1099.16 | 346.65 | 1099.41 | 346.66 | 1100.85 | 346.76 | 1101.81 | 346.82 | 1103.99 | 346.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1112.48 | 347.6 | 1118.81 | 347.7 | 1120.19 | 347.71 | 1120.9 | 347.71 | 1121.87 | 347.7 |
| 1129.01 | 347.65 | 1129.17 | 347.65 | 1132.58 | 347.43 | 1134.4 | 347.32 | 1135.12 | 347.29 |
| 1137.56 | 347.16 | 1139.01 | 347.08 | 1145.32 | 346.72 | 1146.47 | 346.66 | 1146.72 | 346.64 |
| 1147.36 | 346.64 | 1147.65 | 346.66 | 1148.81 | 346.76 | 1153.76 | 347.21 | 1155.23 | 347.35 |
| 1155.68 | 347.37 | 1156.79 | 347.47 | 1157.11 | 347.51 | 1157.61 | 347.55 | 1162.65 | 348.49 |
| 1163.35 | 348.63 | 1165 | 348.99 | 1165.29 | 349.05 | 1168.27 | 350.15 | 1168.72 | 350.31 |
| 1169.22 | 350.5 | 1171.22 | 351.22 | 1172.06 | 351.64 | 1173.42 | 352.13 | 1175.7 | 353.05 |
| 1178.15 | 353.97 | 1178.51 | 354.09 | 1180.79 | 354.89 | 1184.13 | 356.12 | 1185.89 | 356.75 |
| 1187.87 | 357.49 | 1188.39 | 357.68 | 1189.4 | 358.07 | 1190.36 | 358.46 | 1190.76 | 358.61 |
| 1192 | 359.05 | 1192.89 | 359.36 | 1193.47 | 359.57 | 1195.15 | 360.02 | 1195.62 | 360.16 |
| 1199.48 | 361.29 | 1201.88 | 361.98 | 1204.03 | 362.59 | 1205.52 | 362.81 | 1208.6 | 363.25 |
| 1209.18 | 363.33 | 1209.82 | 363.37 | 1210.18 | 363.36 | 1210.65 | 363.42 | 1211.61 | 363.32 |
| 1212.11 | 363.29 | 1212.86 | 363.16 | 1213.7 | 363.03 | 1214.89 | 362.82 | 1215.54 | 362.7 |
| 1216.15 | 362.6 | 1217.8 | 362.38 | 1218.29 | 362.36 | 1220.09 | 362.18 | 1220.4 | 362.17 |
| 1220.71 | 362.23 | 1221.09 | 362.34 | 1222.89 | 362.95 | 1224.78 | 363.45 | 1225.28 | 363.57 |
| 1225.91 | 363.69 | 1226.18 | 363.71 | 1226.58 | 363.78 | 1227.21 | 363.87 | 1228.8 | 363.95 |
| 1230.05 | 363.94 | 1230.44 | 363.95 | 1231.39 | 364.03 | 1231.63 | 364.08 | 1231.81 | 364.14 |
| 1232.78 | 364.33 | 1234.39 | 364.62 | 1236.26 | 364.94 | 1236.9 | 365.06 | 1237.15 | 365.08 |
| 1237.84 | 365.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 320.51 | .05 | 603.91 | .04 | 1172.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 603.91 | 1172.06 | 13.83 | 19.48 | 21.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5254.40*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 329.57 | 354.31 | 330.22 | 354.31 | 330.42 | 354.3 | 333.32 | 354.3 | 333.61 | 354.29 |
| 335.45 | 354.29 | 336.36 | 354.2 | 338.28 | 353.92 | 341.11 | 353.34 | 342.53 | 353.03 |
| 345.23 | 352.39 | 353.18 | 351.43 | 370.09 | 350.49 | 370.39 | 350.47 | 377.38 | 350.11 |
| 380.21 | 350.02 | 387.34 | 349.69 | 391.72 | 349.62 | 391.82 | 349.61 | 392.67 | 349.58 |
| 393.14 | 349.57 | 395.4 | 349.56 | 395.78 | 349.55 | 397.41 | 349.56 | 398.01 | 349.57 |
| 398.97 | 349.57 | 402.05 | 349.58 | 402.56 | 349.57 | 422.79 | 349.52 | 425.97 | 349.45 |
| 427.37 | 349.4 | 428.51 | 349.42 | 429.38 | 349.44 | 441.72 | 349.75 | 443.43 | 349.77 |
| 450.16 | 349.82 | 458.03 | 349.74 | 458.65 | 349.73 | 461.48 | 349.7 | 477.7 | 349.56 |
| 482.87 | 349.38 | 483.96 | 349.35 | 486.62 | 349.2 | 487.35 | 349.18 | 487.79 | 349.18 |
| 492.12 | 349.24 | 493.18 | 349.3 | 493.45 | 349.32 | 494.11 | 349.35 | 504.57 | 349.6 |
| 505.46 | 349.62 | 506.9 | 349.66 | 507.57 | 349.67 | 513.88 | 349.8 | 516.05 | 349.84 |
| 519.16 | 349.91 | 520.17 | 349.94 | 520.7 | 349.94 | 522.35 | 349.96 | 523.07 | 349.95 |
| 524.14 | 349.91 | 525.19 | 349.9 | 526.27 | 349.93 | 527.43 | 349.94 | 530.03 | 350.02 |
| 531.97 | 350.05 | 532.64 | 350.07 | 535.67 | 350.12 | 537.25 | 350.16 | 537.83 | 350.1 |
| 538.2 | 350.02 | 538.56 | 349.97 | 539.18 | 350.01 | 539.58 | 350 | 541.27 | 350.04 |
| 544.32 | 350.06 | 544.65 | 350.08 | 546.29 | 350.16 | 546.71 | 350.12 | 548.18 | 350.08 |
| 548.55 | 350.04 | 552.27 | 349.54 | 553.07 | 349.44 | 555.88 | 348.61 | 556.35 | 348.48 |
| 556.58 | 348.46 | 558.39 | 348.34 | 558.91 | 348.35 | 562.36 | 348.43 | 562.95 | 348.44 |
| 563.59 | 348.46 | 564.45 | 348.52 | 564.67 | 348.55 | 565.54 | 348.64 | 565.85 | 348.68 |
| 567.15 | 348.81 | 568.53 | 348.96 | 569.26 | 349.01 | 570.56 | 349.09 | 572.98 | 349.32 |
| 573.85 | 349.32 | 579.02 | 349.36 | 582.76 | 349.43 | 591.17 | 349.45 | 592.93 | 349.44 |
| 593.3 | 349.43 | 593.54 | 349.4 | 594.87 | 349.28 | 603.21 | 348.5 | 605.69 | 348.49 |
| 613.35 | 349.21 | 613.71 | 349.22 | 614.44 | 349.19 | 616.05 | 349.31 | 616.14 | 349.32 |
| 616.72 | 349.32 | 617.05 | 349.3 | 617.53 | 349.26 | 618.02 | 349.23 | 619.3 | 349.17 |
| 620.75 | 349.09 | 621.64 | 349.05 | 621.91 | 349.05 | 622.81 | 349.02 | 623.7 | 348.98 |
| 624.69 | 348.97 | 625.97 | 348.9 | 629.56 | 348.61 | 634.98 | 348.16 | 635.41 | 348.12 |
| 635.57 | 348.13 | 636.75 | 348.04 | 638.58 | 347.86 | 640.05 | 347.7 | 640.75 | 347.63 |
| 642.23 | 347.57 | 644.93 | 347.62 | 646.8 | 347.71 | 646.83 | 347.72 | 648.6 | 347.83 |
| 649.6 | 347.89 | 651.21 | 347.99 | 651.94 | 347.96 | 652.43 | 347.93 | 652.89 | 347.92 |
| 653.86 | 347.96 | 655.06 | 347.99 | 656.44 | 347.97 | 658.07 | 348.08 | 658.82 | 348.14 |
| 659.16 | 348.16 | 659.94 | 348.16 | 664.52 | 347.9 | 664.62 | 347.89 | 666.95 | 347.76 |
| 667.98 | 347.7 | 670.35 | 347.62 | 671.54 | 347.53 | 673.11 | 347.38 | 673.64 | 347.35 |
| 675.04 | 347.35 | 678.6 | 347.36 | 683.45 | 347.37 | 689.46 | 347.37 | 689.97 | 347.39 |
| 690.65 | 347.38 | 690.94 | 347.41 | 692.02 | 347.44 | 692.67 | 347.44 | 693.24 | 347.46 |
| 698.1 | 347.61 | 699.82 | 347.66 | 702.88 | 347.74 | 703.04 | 347.74 | 708.26 | 347.87 |
| 708.6 | 347.87 | 709.43 | 347.9 | 710.5 | 347.93 | 712.06 | 347.98 | 712.29 | 348 |
| 712.75 | 348.01 | 714.34 | 348.06 | 715.54 | 348.09 | 721.85 | 348.26 | 721.99 | 348.26 |
| 724.32 | 348.31 | 725.63 | 348.3 | 728.64 | 348.3 | 731.17 | 348.31 | 733.86 | 348.31 |
| 736.41 | 348.15 | 737.12 | 348.1 | 739.45 | 347.97 | 742.27 | 347.8 | 743.65 | 347.81 |
| 744.3 | 347.81 | 747.99 | 347.82 | 752.63 | 347.82 | 753.28 | 347.84 | 753.62 | 347.84 |
| 753.75 | 347.87 | 754.91 | 347.98 | 756.02 | 348.03 | 759.35 | 347.99 | 759.88 | 347.88 |
| 760.11 | 347.8 | 760.18 | 347.74 | 760.69 | 347.61 | 761.27 | 347.65 | 762.72 | 347.64 |
| 763.5 | 347.66 | 763.99 | 347.66 | 764.97 | 347.64 | 767.5 | 347.75 | 768.14 | 347.74 |
| 770.01 | 347.7 | 771.01 | 347.74 | 771.55 | 347.77 | 772.24 | 347.79 | 774.26 | 347.91 |
| 776.75 | 348.01 | 778.54 | 348.03 | 779.66 | 348.01 | 780.53 | 347.98 | 781.64 | 347.95 |
| 781.71 | 347.93 | 782.4 | 347.9 | 784.11 | 347.8 | 786.1 | 347.7 | 786.53 | 347.69 |
| 789.23 | 347.67 | 789.88 | 347.66 | 790.37 | 347.62 | 790.73 | 347.51 | 793.08 | 347.51 |
| 793.23 | 347.52 | 793.74 | 347.52 | 794.7 | 347.57 | 795.95 | 347.57 | 797.83 | 347.66 |
| 798.4 | 347.76 | 798.57 | 347.78 | 800.99 | 347.85 | 803.05 | 347.95 | 804.7 | 348 |
| 805.2 | 348.01 | 805.26 | 348 | 806.05 | 347.99 | 808.61 | 348.15 | 808.81 | 348.15 |
| 810.17 | 348.21 | 811.42 | 348.24 | 812.42 | 348.25 | 812.89 | 348.23 | 813.38 | 348.27 |
| 814.55 | 348.27 | 814.91 | 348.26 | 815.69 | 348.22 | 815.82 | 348.22 | 816.99 | 348.17 |
| 819.05 | 348.06 | 819.51 | 348.03 | 821.82 | 347.95 | 822.61 | 347.92 | 823.97 | 347.88 |
| 825.76 | 347.81 | 827.49 | 347.75 | 828.69 | 347.72 | 829.46 | 347.69 | 833.51 | 347.55 |
| 833.86 | 347.54 | 838.24 | 347.37 | 840.85 | 347.37 | 841.2 | 347.32 | 842.84 | 347.02 |
| 843.17 | 346.95 | 843.44 | 346.92 | 844.86 | 346.84 | 845.94 | 346.82 | 846.97 | 346.82 |
| 848.17 | 346.8 | 848.38 | 346.82 | 850.93 | 346.95 | 854.2 | 347.16 | 854.42 | 347.18 |
| 856.42 | 347.3 | 857.39 | 347.42 | 858.82 | 347.64 | 859.12 | 347.66 | 866.24 | 347.74 |
| 866.58 | 347.74 | 867.35 | 347.7 | 868.07 | 347.67 | 869.01 | 347.65 | 870.18 | 347.65 |
| 873.33 | 347.61 | 875.93 | 347.55 | 876.31 | 347.55 | 876.74 | 347.52 | 877.1 | 347.48 |
| 879.48 | 347.25 | 881.06 | 347.25 | 882.26 | 347.26 | 888.25 | 347.26 | 889.64 | 347.36 |
| 893.26 | 347.6 | 894.41 | 347.64 | 896.9 | 347.8 | 899.22 | 347.96 | 899.9 | 347.96 |
| 900.76 | 348.01 | 901.34 | 348.03 | 901.94 | 348.03 | 902.31 | 348.04 | 903.35 | 348.04 |
| 915.74 | 347.97 | 916.01 | 347.97 | 917.61 | 347.95 | 918.33 | 347.92 | 922 | 347.68 |
| 924.64 | 347.52 | 925.43 | 347.48 | 926.57 | 347.4 | 927.55 | 347.35 | 928.41 | 347.3 |
| 928.91 | 347.26 | 929.06 | 347.26 | 929.43 | 347.22 | 932.95 | 346.86 | 933.95 | 346.75 |
| 934.55 | 346.69 | 934.92 | 346.64 | 937.69 | 346.36 | 938.42 | 346.28 | 939.66 | 346.29 |
| 940.11 | 346.3 | 942.02 | 346.3 | 943.98 | 346.29 | 945.25 | 346.28 | 949.98 | 346.28 |
| 956.16 | 346.29 | 956.3 | 346.3 | 961.29 | 346.3 | 964.41 | 346.66 | 965.22 | 346.7 |

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  966.37  346.75  966.97  346.76  967.35  346.75  974.09  346.66  975.96  346.65
  977.27  346.62  977.56  346.62  979.45   346.6  980.34  346.57  981.74  346.53
  981.93  346.53  983.28  346.46  986.75  346.27  987.71  346.08  992.12   345.3
  993.23  345.23  997.01  344.97  999.51  344.97 1003.56  344.78  1008.3  344.57
 1008.55  344.56 1014.13  344.59 1016.78  344.57 1018.93   344.6 1026.98  344.72
 1031.25  344.84 1033.11  344.85 1048.92  345.32 1050.26  345.35 1052.03  345.36
 1055.07  345.43 1056.77  345.46 1061.56  345.56 1065.65  345.64 1067.04  345.67
 1068.08  345.71 1068.19  345.73 1068.89  345.78 1073.94  345.66 1075.98   345.6
 1078.21  345.51 1079.52  345.42 1079.99   345.4 1080.26   345.4 1081.42  345.37
 1081.56  345.36 1082.48  345.35 1083.44  345.35 1084.41  345.41 1085.89  345.41
 1086.37  345.42 1086.95  345.42 1087.79  345.44 1090.46  345.66 1091.73  345.76
 1092.68  345.84 1093.37  345.89 1093.78  345.93 1094.59  345.98 1096.25   346.1
 1098.62  346.28 1098.68  346.29 1099.85  346.36 1101.54  346.48 1102.49  346.54
 1104.66  346.69 1113.11   347.3 1119.42  347.36 1122.47  347.36 1129.57  347.33
 1133.14  347.13 1134.94  347.02 1135.67  346.99  1138.1  346.85 1139.53  346.78
 1145.82  346.43 1146.96  346.37 1147.43  346.34 1147.74  346.34 1148.71  346.42
 1149.29  346.46 1154.22  346.91 1155.69  347.06 1156.14  347.09 1157.24  347.19
 1158.06  347.28 1163.08  348.24 1163.77   348.4 1165.42  348.77 1165.71  348.83
 1168.67  349.98 1169.63  350.36 1171.62  351.11 1172.45  351.56 1173.65  352.07
 1175.67  353.02 1177.84  353.98 1178.16  354.11 1180.18  354.95 1181.24   355.4
 1183.15  356.22 1184.71  356.88 1185.25  357.12 1186.92  357.84 1188.14   358.4
 1189.02  358.81 1190.12  359.25 1191.42  359.78 1191.98  359.96 1193.33  360.38
 1198.87  362.18 1200.77   362.8 1202.09  363.01 1204.83  363.45 1205.34  363.52
  1205.9  363.55 1206.23  363.55 1206.64  363.61 1207.49   363.5 1207.63   363.5
 1207.94  363.46  1208.6  363.32 1209.58  363.12 1210.39  362.94 1210.97  362.82
 1211.51  362.72 1212.97  362.46 1213.41  362.43 1215.01   362.2 1215.28  362.19
 1215.56  362.25 1216.16  362.46 1217.48  362.98 1219.16  363.48 1219.61   363.6
 1220.16  363.71  1220.4  363.73 1221.32  363.88 1222.72  363.95 1223.83  363.92
 1224.18  363.92 1225.01  363.99 1225.23  364.04 1225.39   364.1 1225.92  364.22
 1227.57  364.57 1227.99  364.65 1228.67   364.8 1229.66  365.01 1230.12  365.07
 1230.73  365.18

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
  329.57     .05  617.05     .04 1172.45     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        617.05 1172.45            13.83   19.48   21.91              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0               RS: 5234.92

INPUT
Description:
Station Elevation Data    num=     369
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
338.6301  354.01  339.29  354.01  339.79     354  344.59     354345.5101   353.9
347.4601  353.61350.3301     353351.7701  352.67354.5101     352362.5701     351
  379.72  350.02  380.03     350387.1201  349.63389.9901  349.54  397.22   349.2
  401.66  349.13401.7601  349.12402.6301  349.08402.8701  349.08   403.1  349.07
405.3901  349.07  405.54  349.06  405.78  349.06  408.92  349.09409.0101  349.08
412.1401   349.1  412.34  349.09  433.17  349.07   436.4     349437.5101  348.95
437.8201  348.94452.3701  349.32460.9301  349.41  488.86  349.21   494.1  349.03
494.1901  349.03495.2101     349  495.61  348.98495.7501  348.97  495.92  348.95
  497.91  348.84498.8301  348.82  499.09  348.82503.4901  348.88  503.98  348.92
505.5001     349531.9301  349.57534.1401  349.58534.8801  349.57535.7401  349.54
535.9601  349.52  537.03  349.51538.1201  349.54   539.3  349.55541.9301  349.63
  548.91  349.76  549.15  349.77549.2601  349.77  549.84  349.71  549.98  349.69
  550.16  349.64  550.22  349.62  550.59  349.57551.2101  349.61551.6201   349.6
553.3301  349.64556.4301  349.66557.5601  349.73  558.42  349.77  558.85  349.72
  560.34  349.68  560.72  349.64   565.3     349568.6301     348  568.86  347.98
570.7701  347.86570.9901  347.86  571.22  347.87  575.97     348  576.84  348.07
  579.66  348.37  580.98  348.53  583.04  348.67585.4901  348.91  595.41  349.03
603.9401  349.02  605.73     349606.0201  348.98   606.1  348.98  616.15     348
  618.67     348626.4401  348.77   626.8  348.79  627.54  348.76629.1801  348.89
629.2701   348.9629.6401   348.9  630.03  348.89630.1901  348.88  630.65  348.84
631.1301  348.81634.6401  348.66  637.28   348.6  637.59   348.6638.8301  348.54
  649.28  347.67  653.16  347.24  654.59  347.19657.0101  347.26  659.04  347.36
   663.3  347.66  664.48  347.59  664.92  347.58  667.03  347.65  668.36  347.62
  670.92  347.81  671.22  347.82671.5001  347.82671.7601  347.81679.3901  347.34
  681.85  347.26683.0001  347.16684.5201     347  685.03  346.97700.3701  346.96
  700.86  346.98701.5201  346.97  701.65  346.98   701.8     347  702.85  347.04
  703.48  347.04   703.6  347.05  704.03  347.06  733.86     348   743.4     348
  751.55  347.47761.5901  347.49762.2201  347.52  762.55  347.52  762.67  347.55
763.3501  347.63   763.8  347.67764.8701  347.73768.1001  347.69  768.61  347.58
768.8401   347.5  768.91  347.43   769.4   347.3769.9601  347.34771.3701  347.34
772.1201  347.36772.6001  347.36  773.55  347.34776.0001  347.47778.4301  347.42
  784.76  347.68784.9601  347.69785.8401  347.71  786.03  347.71786.7001  347.72
  787.16  347.72789.7001  347.66  789.77  347.64  794.03   347.4797.2001  347.37
797.6901  347.35  798.16  347.31  798.51   347.2798.8401  347.19  800.79  347.19
800.9401   347.2801.4301   347.2  802.36  347.25803.5701  347.25  805.39  347.34
805.4701  347.36805.9501  347.44  806.05  347.45  806.11  347.46808.4601  347.53
810.4501  347.63  812.05  347.68812.5001  347.68813.1301  347.66  813.36  347.66
815.8401  347.81  816.04  347.81817.3501  347.87819.3701  347.92  819.53  347.92
819.7001  347.91  819.76  347.91819.9901   347.9820.2001  347.91  820.26  347.93
820.4601  347.94821.6001  347.94  821.79  347.93821.9501  347.93823.9601  347.84
  824.14  347.84  824.27  347.83824.3401  347.82825.9601  347.73  826.41   347.7
844.5601     347847.0901     347847.7001   346.9  849.02  346.64849.3401  346.56
849.6001  346.53  850.41  346.48850.9701  346.46  852.02  346.44854.1801  346.44
  854.39  346.46862.1801     347863.1201  347.13864.5001  347.36  864.79  347.38
871.6901  347.46  872.02  347.46  872.77  347.42  873.16  347.41  873.36  347.39
873.4701  347.39874.3801  347.37  875.51  347.37881.0901  347.29881.4501  347.29
881.8701  347.27  884.53     347  893.03     347897.8801  347.36899.0001  347.41
  903.66  347.74904.3201  347.74  905.15  347.79  905.76  347.81  906.03  347.81
  906.65  347.82  919.86  347.79  921.48  347.77  921.78  347.76922.1801  347.74
932.5801     347  932.64  346.99  932.78  346.98932.9401  346.96  941.65     346
963.8101     346966.8401  346.38968.7401  346.48968.8701  346.48969.3201  346.49
969.6901  346.49  978.03  346.42  981.41  346.35984.1801  346.24988.4901     346
  989.42   345.8993.6901     345998.4301  344.66 1000.73  344.67 1009.37  344.25
 1009.62  344.24 1015.17  344.27 1017.81  344.25 1027.97  344.39 1032.22  344.51
 1034.07  344.52 1049.82  344.98 1049.99  344.99  1050.2  344.99 1051.15  345.01
 1052.92  345.02 1067.87  345.32  1068.9  345.37 1069.01  345.39 1069.37  345.42
 1069.71  345.44 1076.77  345.26 1078.99  345.17 1080.29  345.08 1080.76  345.06
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1082.33 | 345.03 | 1084.2 | 345.02 | 1084.32 | 345.03 | 1084.46 | 345.03 | 1084.55 | 345.04 |
| 1084.67 | 345.05 | 1085.16 | 345.08 | 1087.69 | 345.09 | 1088.53 | 345.11 | 1099.37 | 346 |
| 1113.75 | 347 | 1120.03 | 347.02 | 1130.3 | 347 | 1147.46 | 346.07 | 1147.71 | 346.05 |
| 1147.78 | 346.05 | 1147.92 | 346.04 | 1148.23 | 346.04 | 1148.34 | 346.05 | 1148.62 | 346.07 |
| 1149.2 | 346.12 | 1149.78 | 346.16 | 1155.18 | 346.66 | 1157.93 | 346.94 | 1158.01 | 346.95 |
| 1158.51 | 347 | 1163.51 | 348 | 1164.2 | 348.16 | 1166.13 | 348.61 | 1169.08 | 349.82 |
| 1169.53 | 350 | 1170.03 | 350.21 | 1172.01 | 351 | 1172.84 | 351.47 | 1173.89 | 352 |
| 1175.65 | 353 | 1177.54 | 354 | 1177.82 | 354.13 | 1179.58 | 355 | 1181.45 | 355.96 |
| 1181.54 | 356 | 1182.16 | 356.32 | 1183.52 | 357 | 1183.8 | 357.15 | 1185.45 | 358 |
| 1186.97 | 358.84 | 1187.28 | 359 | 1189.37 | 360 | 1194.01 | 361.69 | 1197.52 | 363 |
| 1201.05 | 363.64 | 1201.5 | 363.71 | 1201.99 | 363.74 | 1202.27 | 363.73 | 1202.63 | 363.79 |
| 1203.37 | 363.67 | 1203.49 | 363.67 | 1203.76 | 363.63 | 1206.15 | 363 | 1208.15 | 362.54 |
| 1208.53 | 362.5 | 1209.92 | 362.23 | 1210.16 | 362.21 | 1210.24 | 362.22 | 1210.4 | 362.27 |
| 1210.7 | 362.38 | 1212.08 | 363 | 1213.54 | 363.5 | 1213.93 | 363.62 | 1214.41 | 363.73 |
| 1214.62 | 363.75 | 1214.93 | 363.81 | 1215.42 | 363.89 | 1216.64 | 363.94 | 1217.61 | 363.89 |
| 1217.91 | 363.89 | 1218.64 | 363.95 | 1218.83 | 364 | 1218.97 | 364.06 | 1222.69 | 365 |
| 1222.9 | 365.05 | 1223.09 | 365.07 | 1223.36 | 365.13 | 1223.62 | 365.18 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 338.6301 | .05 | 630.1901 | .04 | 1172.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 630.1901 | 1172.84 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5214.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 327.71 | 353.83 | 328.39 | 353.83 | 328.91 | 353.82 | 333.91 | 353.82 | 334.86 | 353.72 |
| 336.35 | 353.52 | 336.83 | 353.45 | 336.89 | 353.45 | 337.51 | 353.32 | 337.96 | 353.24 |
| 340.05 | 352.82 | 341.38 | 352.53 | 344.23 | 351.88 | 352.61 | 350.9 | 353.45 | 350.85 |
| 357.86 | 350.61 | 358.35 | 350.59 | 358.81 | 350.56 | 360.43 | 350.48 | 361.18 | 350.44 |
| 363.62 | 350.3 | 365.26 | 350.21 | 370.45 | 349.93 | 371.22 | 349.89 | 375.96 | 349.65 |
| 376 | 349.65 | 378.15 | 349.54 | 379.83 | 349.5 | 379.97 | 349.49 | 381.28 | 349.46 |
| 383.48 | 349.35 | 383.74 | 349.34 | 388.66 | 349.12 | 393.28 | 349.04 | 394.28 | 348.99 |
| 394.77 | 348.98 | 397.16 | 348.98 | 397.56 | 348.97 | 400.83 | 348.99 | 400.92 | 348.98 |
| 404.18 | 349 | 404.39 | 348.99 | 405.67 | 348.99 | 416.86 | 348.96 | 424.8 | 348.94 |
| 426.05 | 348.94 | 426.28 | 348.93 | 428.42 | 348.9 | 429.17 | 348.88 | 429.41 | 348.88 |
| 430.57 | 348.83 | 430.89 | 348.82 | 432.03 | 348.85 | 434.75 | 348.91 | 436.85 | 348.95 |
| 441.21 | 349.05 | 446.3 | 349.18 | 447.85 | 349.19 | 448.28 | 349.2 | 449.05 | 349.2 |
| 450.45 | 349.22 | 451.05 | 349.22 | 451.49 | 349.23 | 452.18 | 349.23 | 452.58 | 349.24 |
| 454.15 | 349.24 | 455.02 | 349.25 | 457 | 349.22 | 459.61 | 349.22 | 460.03 | 349.21 |
| 467.77 | 349.15 | 469.14 | 349.14 | 483.99 | 349.02 | 489.44 | 348.84 | 490.05 | 348.83 |
| 490.59 | 348.81 | 491.16 | 348.78 | 491.33 | 348.76 | 493.4 | 348.65 | 494.36 | 348.63 |
| 495.89 | 348.64 | 498.52 | 348.67 | 499.23 | 348.68 | 499.91 | 348.73 | 501.3 | 348.79 |
| 502.24 | 348.81 | 503.5 | 348.83 | 505.15 | 348.87 | 505.52 | 348.87 | 506.59 | 348.9 |
| 508.04 | 348.92 | 509.38 | 348.95 | 510.86 | 348.98 | 511.03 | 348.99 | 514.43 | 349.06 |
| 525.1 | 349.25 | 528.79 | 349.32 | 531.09 | 349.32 | 531.86 | 349.31 | 532.76 | 349.28 |
| 532.98 | 349.26 | 534.1 | 349.25 | 535.23 | 349.27 | 536.46 | 349.28 | 539.2 | 349.35 |
| 544.05 | 349.42 | 544.26 | 349.43 | 545.6 | 349.46 | 545.86 | 349.47 | 546.46 | 349.47 |
| 546.82 | 349.48 | 547.57 | 349.4 | 547.82 | 349.33 | 548.2 | 349.28 | 548.85 | 349.32 |
| 549.51 | 349.31 | 550.06 | 349.33 | 550.91 | 349.34 | 551.05 | 349.35 | 551.5 | 349.35 |
| 553.37 | 349.36 | 553.9 | 349.37 | 554.34 | 349.37 | 555.45 | 349.44 | 556.35 | 349.48 |
| 556.8 | 349.43 | 558.31 | 349.39 | 558.5 | 349.38 | 563 | 348.79 | 563.51 | 348.73 |
| 566.22 | 347.96 | 566.97 | 347.76 | 567.21 | 347.74 | 569.2 | 347.62 | 569.43 | 347.62 |
| 570.02 | 347.64 | 571.41 | 347.67 | 572.57 | 347.7 | 573.26 | 347.71 | 574.61 | 347.75 |
| 575.51 | 347.81 | 578.44 | 348.1 | 579.82 | 348.26 | 581.96 | 348.39 | 584.51 | 348.62 |
| 585.43 | 348.63 | 585.76 | 348.64 | 594.83 | 348.74 | 603.7 | 348.73 | 604.93 | 348.72 |
| 605.57 | 348.72 | 605.95 | 348.7 | 610.28 | 348.3 | 610.32 | 348.29 | 616.4 | 347.74 |
| 619.03 | 347.73 | 622.02 | 348 | 622.75 | 348.07 | 625.01 | 348.28 | 627.11 | 348.48 |
| 627.48 | 348.5 | 628.25 | 348.47 | 628.97 | 348.52 | 630.05 | 348.61 | 630.44 | 348.61 |
| 631.01 | 348.59 | 631.47 | 348.55 | 631.97 | 348.52 | 634.11 | 348.43 | 635.48 | 348.37 |
| 637.96 | 348.31 | 638.45 | 348.31 | 639.69 | 348.25 | 640.52 | 348.18 | 642.43 | 348.03 |
| 643.25 | 347.96 | 650.19 | 347.41 | 654.09 | 346.99 | 655.13 | 346.96 | 655.53 | 346.94 |
| 657.96 | 347.01 | 658.99 | 347.06 | 659.45 | 347.09 | 660 | 347.11 | 661.36 | 347.21 |
| 664.28 | 347.41 | 665.48 | 347.34 | 665.91 | 347.33 | 666.64 | 347.36 | 667.1 | 347.37 |
| 668.03 | 347.4 | 668.71 | 347.39 | 669.38 | 347.37 | 671.93 | 347.55 | 672.6 | 347.56 |
| 675.39 | 347.39 | 675.97 | 347.36 | 676.85 | 347.3 | 676.93 | 347.3 | 680.44 | 347.09 |
| 682.92 | 347.01 | 684.07 | 346.91 | 685.6 | 346.76 | 686.11 | 346.73 | 694.07 | 346.73 |
| 696.97 | 346.72 | 701.52 | 346.72 | 702.02 | 346.74 | 702.68 | 346.74 | 703.1 | 346.77 |
| 704.02 | 346.8 | 704.65 | 346.8 | 704.77 | 346.81 | 706.28 | 346.85 | 706.88 | 346.87 |
| 709.2 | 346.94 | 710.46 | 346.98 | 713.1 | 347.06 | 715.56 | 347.13 | 716.39 | 347.16 |
| 720.02 | 347.27 | 723.78 | 347.38 | 729.65 | 347.55 | 731.17 | 347.6 | 735.17 | 347.71 |
| 736.73 | 347.71 | 740.5 | 347.69 | 741.22 | 347.69 | 743.13 | 347.68 | 744.76 | 347.68 |
| 752.95 | 347.15 | 763.03 | 347.16 | 763.67 | 347.19 | 764 | 347.19 | 764.12 | 347.22 |
| 764.43 | 347.25 | 764.8 | 347.3 | 765.26 | 347.33 | 766.33 | 347.39 | 766.55 | 347.39 |
| 769.58 | 347.35 | 770.09 | 347.25 | 770.32 | 347.17 | 770.39 | 347.1 | 770.88 | 346.98 |
| 771.44 | 347.02 | 772.86 | 347.02 | 773.61 | 347.04 | 774.24 | 347.04 | 775.05 | 347.02 |
| 777.44 | 347.13 | 777.51 | 347.14 | 779.95 | 347.1 | 780.92 | 347.14 | 781.92 | 347.19 |
| 783.74 | 347.27 | 786.31 | 347.37 | 786.52 | 347.38 | 787.4 | 347.4 | 788.26 | 347.41 |
| 788.73 | 347.41 | 790.77 | 347.36 | 791.28 | 347.35 | 791.35 | 347.33 | 792.46 | 347.26 |
| 792.89 | 347.24 | 795.63 | 347.08 | 798.81 | 347.04 | 799.31 | 347.02 | 799.78 | 346.98 |
| 800.13 | 346.87 | 800.46 | 346.86 | 802.42 | 346.86 | 802.57 | 346.87 | 803.06 | 346.87 |
| 803.91 | 346.91 | 804 | 346.92 | 805.21 | 346.92 | 807.04 | 347 | 807.61 | 347.1 |
| 807.77 | 347.12 | 810.13 | 347.19 | 810.25 | 347.2 | 812.13 | 347.29 | 813.73 | 347.34 |
| 814.19 | 347.34 | 814.82 | 347.32 | 815.05 | 347.32 | 817.54 | 347.46 | 817.74 | 347.46 |
| 819.06 | 347.52 | 820.48 | 347.55 | 821.25 | 347.57 | 821.71 | 347.55 | 822.18 | 347.58 |
| 823.33 | 347.58 | 823.68 | 347.57 | 825.7 | 347.48 | 827.71 | 347.37 | 828.16 | 347.34 |
| 838.35 | 346.94 | 844.03 | 346.73 | 846.4 | 346.63 | 848.94 | 346.63 | 849.55 | 346.54 |
| 850.88 | 346.28 | 851.2 | 346.21 | 851.46 | 346.18 | 852.28 | 346.13 | 852.84 | 346.11 |
| 853.89 | 346.09 | 856.06 | 346.09 | 856.28 | 346.11 | 856.82 | 346.14 | 857.79 | 346.21 |
| 859.61 | 346.33 | 862.19 | 346.51 | 864.1 | 346.63 | 864.49 | 346.69 | 864.63 | 346.7 |
| 865.05 | 346.76 | 866.43 | 346.98 | 866.73 | 347 | 869.71 | 347.02 | 872.04 | 347.04 |
| 873.99 | 347.05 | 874.74 | 347.01 | 875.13 | 347 | 875.48 | 346.98 | 876.36 | 346.96 |
| 877.5 | 346.96 | 878.54 | 346.95 | 883.1 | 346.89 | 883.46 | 346.89 | 883.89 | 346.87 |
| 886.56 | 346.61 | 895.1 | 346.61 | 896.7 | 346.72 | 897.42 | 346.78 | 898.11 | 346.82 |
| 899.97 | 346.96 | 901.1 | 347.01 | 905.78 | 347.32 | 906.44 | 347.32 | 907.28 | 347.37 |
| 907.89 | 347.39 | 908.78 | 347.4 | 913.74 | 347.4 | 922.06 | 347.39 | 923.68 | 347.37 |
| 924.64 | 347.33 | 927.89 | 347.11 | 934.84 | 346.63 | 936.96 | 346.4 | 943.95 | 345.65 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 966.22 | 345.65 | 969.26 | 346.02 | 971.17 | 346.12 | 972.12 | 346.13 | 978.27 | 346.08 |
| 980.5 | 346.06 | 983.9 | 345.99 | 986.68 | 345.88 | 987.3 | 345.85 | 988.28 | 345.79 |
| 991.01 | 345.65 | 992 | 345.44 | 996.19 | 344.68 | 996.24 | 344.68 | 999.98 | 344.41 |
| 1001 | 344.34 | 1003.31 | 344.35 | 1008.24 | 344.11 | 1010.21 | 344.02 | 1011.46 | 343.96 |
| 1012.24 | 343.93 | 1017.68 | 343.96 | 1020.26 | 343.94 | 1030.21 | 344.07 | 1030.71 | 344.09 |
| 1034.38 | 344.19 | 1036.19 | 344.2 | 1047.26 | 344.52 | 1050.45 | 344.62 | 1051.99 | 344.66 |
| 1052.92 | 344.68 | 1053.57 | 344.68 | 1054.65 | 344.69 | 1057.3 | 344.75 | 1059.39 | 344.79 |
| 1061.16 | 344.84 | 1062.33 | 344.88 | 1062.76 | 344.9 | 1064.75 | 344.96 | 1069.29 | 345.07 |
| 1069.94 | 345.11 | 1070.3 | 345.12 | 1070.41 | 345.14 | 1071.09 | 345.19 | 1072.39 | 345.16 |
| 1078.01 | 345.02 | 1079.16 | 344.98 | 1080.18 | 344.94 | 1081.45 | 344.85 | 1081.91 | 344.83 |
| 1083.45 | 344.81 | 1085.28 | 344.8 | 1085.74 | 344.83 | 1086.22 | 344.85 | 1088.7 | 344.87 |
| 1089.52 | 344.89 | 1100.14 | 345.75 | 1100.37 | 345.77 | 1106.21 | 346.17 | 1110.13 | 346.44 |
| 1114.22 | 346.72 | 1120.37 | 346.75 | 1123.89 | 346.74 | 1126.06 | 346.74 | 1129.65 | 346.73 |
| 1130.43 | 346.73 | 1147.24 | 345.84 | 1147.69 | 345.81 | 1147.99 | 345.81 | 1148.94 | 345.89 |
| 1149.51 | 345.93 | 1152.63 | 346.21 | 1154.8 | 346.42 | 1157.49 | 346.69 | 1158.06 | 346.75 |
| 1159.29 | 346.99 | 1162.96 | 347.72 | 1163.63 | 347.88 | 1165.52 | 348.32 | 1168.41 | 349.49 |
| 1169.34 | 349.87 | 1171.28 | 350.64 | 1172.09 | 351.09 | 1173.16 | 351.61 | 1174.08 | 352.11 |
| 1174.95 | 352.59 | 1175.31 | 352.77 | 1176.72 | 353.49 | 1178.95 | 354.55 | 1180.86 | 355.49 |
| 1183.25 | 356.65 | 1184.16 | 357.11 | 1184.93 | 357.49 | 1186.48 | 358.31 | 1186.79 | 358.47 |
| 1188.39 | 359.21 | 1188.92 | 359.46 | 1192.06 | 360.57 | 1194.53 | 361.46 | 1195.29 | 361.73 |
| 1196.2 | 362.07 | 1197.21 | 362.44 | 1198.1 | 362.61 | 1199.33 | 362.83 | 1200.8 | 363.1 |
| 1201.27 | 363.18 | 1201.76 | 363.21 | 1202.05 | 363.21 | 1202.42 | 363.27 | 1203.08 | 363.18 |
| 1203.29 | 363.17 | 1203.57 | 363.13 | 1205.03 | 362.79 | 1205.26 | 362.73 | 1206 | 362.56 |
| 1207.2 | 362.32 | 1207.76 | 362.2 | 1208.03 | 362.15 | 1208.42 | 362.12 | 1209.84 | 361.87 |
| 1210.08 | 361.85 | 1210.32 | 361.91 | 1210.67 | 362.04 | 1212.03 | 362.62 | 1213.52 | 363.11 |
| 1213.92 | 363.22 | 1214.41 | 363.33 | 1214.62 | 363.35 | 1214.94 | 363.41 | 1215.43 | 363.48 |
| 1216.68 | 363.53 | 1217.66 | 363.49 | 1217.97 | 363.49 | 1218.71 | 363.54 | 1219.05 | 363.65 |
| 1221.14 | 364.15 | 1221.19 | 364.17 | 1221.68 | 364.28 | 1223.05 | 364.61 | 1223.24 | 364.63 |
| 1223.78 | 364.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 327.71 | .05 | 631.01 | .04 | 1172.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 631.01 | 1172.09 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5195.06*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 316.78 | 353.66 | 317.5 | 353.66 | 318.04 | 353.65 | 318.58 | 353.65 | 321.15 | 353.64 |
| 323.22 | 353.64 | 324.22 | 353.55 | 325.76 | 353.35 | 326.26 | 353.29 | 327.43 | 353.08 |
| 329.29 | 352.74 | 330.98 | 352.4 | 333.94 | 351.76 | 342.65 | 350.79 | 343.52 | 350.75 |
| 349.09 | 350.47 | 350.78 | 350.39 | 351.55 | 350.35 | 354.09 | 350.21 | 354.7 | 350.18 |
| 356.17 | 350.1 | 361.18 | 349.84 | 361.98 | 349.8 | 366.91 | 349.56 | 369.18 | 349.46 |
| 370.92 | 349.41 | 372.5 | 349.38 | 372.77 | 349.36 | 373.47 | 349.33 | 374.71 | 349.27 |
| 374.99 | 349.26 | 380.09 | 349.04 | 384.89 | 348.95 | 385.94 | 348.9 | 386.45 | 348.89 |
| 388.92 | 348.89 | 389.34 | 348.88 | 392.74 | 348.9 | 392.83 | 348.89 | 396.21 | 348.9 |
| 396.43 | 348.89 | 397.77 | 348.88 | 409.39 | 348.85 | 417.64 | 348.81 | 417.75 | 348.8 |
| 419.18 | 348.8 | 422.18 | 348.76 | 423.96 | 348.7 | 425.14 | 348.73 | 426.58 | 348.76 |
| 430.15 | 348.81 | 434.68 | 348.9 | 435.57 | 348.93 | 436.31 | 348.94 | 439.97 | 349.03 |
| 441.58 | 349.05 | 442.07 | 349.05 | 442.66 | 349.06 | 442.82 | 349.05 | 444.28 | 349.07 |
| 444.9 | 349.07 | 445.36 | 349.08 | 445.95 | 349.08 | 446.01 | 349.09 | 447.16 | 349.09 |
| 447.53 | 349.08 | 448.12 | 349.08 | 449.02 | 349.09 | 451.08 | 349.05 | 454.24 | 349.05 |
| 460.95 | 348.99 | 462.5 | 348.98 | 463.7 | 348.96 | 479.12 | 348.83 | 483.55 | 348.69 |
| 484.78 | 348.65 | 485.42 | 348.64 | 486.41 | 348.6 | 486.74 | 348.57 | 488.89 | 348.46 |
| 489.89 | 348.44 | 490.17 | 348.44 | 494.21 | 348.47 | 494.92 | 348.47 | 494.95 | 348.48 |
| 495.65 | 348.52 | 497.1 | 348.58 | 498.08 | 348.6 | 499.38 | 348.62 | 501.09 | 348.66 |
| 501.48 | 348.66 | 502.6 | 348.69 | 504.1 | 348.71 | 505.49 | 348.74 | 507.03 | 348.77 |
| 507.2 | 348.77 | 510.74 | 348.84 | 514.22 | 348.9 | 521.82 | 349.01 | 525.66 | 349.06 |
| 528.04 | 349.06 | 528.84 | 349.05 | 529.77 | 349.02 | 530.01 | 349 | 531.17 | 348.98 |
| 532.34 | 349.01 | 533.62 | 349.01 | 536.46 | 349.07 | 541.5 | 349.13 | 541.72 | 349.13 |
| 542.67 | 349.17 | 543.11 | 349.18 | 543.57 | 349.18 | 544.38 | 349.19 | 545.16 | 349.11 |
| 545.42 | 349.05 | 545.82 | 349 | 546.49 | 349.03 | 547.18 | 349.02 | 548.63 | 349.05 |
| 548.78 | 349.06 | 549.25 | 349.06 | 551.18 | 349.07 | 551.74 | 349.08 | 552.2 | 349.08 |
| 552.9 | 349.12 | 554.28 | 349.18 | 554.74 | 349.14 | 556.32 | 349.1 | 556.76 | 349.06 |
| 557.47 | 348.97 | 561.18 | 348.52 | 561.71 | 348.45 | 562.3 | 348.3 | 564.54 | 347.71 |
| 565.31 | 347.51 | 565.56 | 347.49 | 567.62 | 347.38 | 567.86 | 347.37 | 568.48 | 347.39 |
| 569.92 | 347.42 | 571.12 | 347.45 | 571.84 | 347.46 | 573.24 | 347.49 | 574.18 | 347.56 |
| 577.23 | 347.84 | 578.66 | 347.98 | 580.88 | 348.11 | 583.53 | 348.34 | 584.48 | 348.34 |
| 584.82 | 348.35 | 594.25 | 348.45 | 603.47 | 348.45 | 604.96 | 348.44 | 605.4 | 348.43 |
| 605.8 | 348.41 | 610.29 | 348.02 | 610.34 | 348.02 | 616.66 | 347.47 | 619.38 | 347.47 |
| 621.1 | 347.61 | 621.67 | 347.65 | 623.08 | 347.77 | 623.25 | 347.79 | 625.59 | 348 |
| 627.78 | 348.19 | 628.17 | 348.21 | 628.88 | 348.19 | 628.97 | 348.18 | 630.71 | 348.3 |
| 630.84 | 348.32 | 631.24 | 348.32 | 631.83 | 348.3 | 632.3 | 348.26 | 632.8 | 348.23 |
| 634.95 | 348.14 | 636.32 | 348.08 | 638.82 | 348.02 | 639.3 | 348.02 | 640.55 | 347.96 |
| 641.39 | 347.89 | 643.3 | 347.74 | 644.13 | 347.68 | 651.1 | 347.15 | 651.65 | 347.09 |
| 655.02 | 346.75 | 655.08 | 346.74 | 656.46 | 346.7 | 658.91 | 346.77 | 660.41 | 346.84 |
| 660.95 | 346.87 | 662.33 | 346.96 | 665.26 | 347.16 | 666.46 | 347.09 | 666.89 | 347.08 |
| 667.63 | 347.11 | 668.09 | 347.12 | 669.02 | 347.15 | 669.71 | 347.14 | 670.38 | 347.12 |
| 672.95 | 347.3 | 673.62 | 347.3 | 675.59 | 347.19 | 676.16 | 347.15 | 676.42 | 347.14 |
| 677.13 | 347.09 | 681.5 | 346.83 | 683.98 | 346.75 | 685.14 | 346.66 | 686.68 | 346.51 |
| 687.19 | 346.48 | 692.85 | 346.48 | 695.19 | 346.49 | 702.68 | 346.49 | 703.17 | 346.51 |
| 703.84 | 346.5 | 704.26 | 346.53 | 705.18 | 346.57 | 705.82 | 346.57 | 705.94 | 346.58 |
| 706.37 | 346.58 | 710.39 | 346.7 | 711.65 | 346.73 | 714.31 | 346.81 | 716.78 | 346.88 |
| 717.61 | 346.9 | 721.26 | 347.01 | 723.34 | 347.06 | 725.04 | 347.11 | 730.93 | 347.28 |
| 732.46 | 347.32 | 736.49 | 347.42 | 738.05 | 347.42 | 741.84 | 347.39 | 744.48 | 347.35 |
| 746.12 | 347.35 | 754.34 | 346.84 | 764.48 | 346.83 | 765.12 | 346.86 | 765.45 | 346.86 |
| 765.57 | 346.89 | 766.71 | 347 | 767.25 | 347.03 | 767.79 | 347.05 | 768.01 | 347.05 |
| 771.05 | 347.01 | 771.57 | 346.91 | 771.8 | 346.84 | 771.87 | 346.77 | 772.36 | 346.65 |
| 772.93 | 346.69 | 774.35 | 346.7 | 775.11 | 346.72 | 775.74 | 346.72 | 776.55 | 346.69 |
| 778.95 | 346.8 | 779.03 | 346.81 | 781.48 | 346.78 | 783.45 | 346.88 | 785.28 | 346.96 |
| 787.87 | 347.06 | 788.96 | 347.08 | 789.83 | 347.09 | 790.29 | 347.09 | 792.34 | 347.05 |
| 792.86 | 347.03 | 792.93 | 347.01 | 794.04 | 346.95 | 794.48 | 346.92 | 797.23 | 346.76 |
| 800.43 | 346.71 | 800.92 | 346.69 | 801.4 | 346.65 | 801.75 | 346.54 | 802.08 | 346.53 |
| 804.05 | 346.53 | 804.2 | 346.54 | 804.7 | 346.54 | 805.55 | 346.58 | 805.64 | 346.59 |
| 806.86 | 346.58 | 808.7 | 346.66 | 809.26 | 346.76 | 809.42 | 346.77 | 811.79 | 346.85 |
| 811.92 | 346.86 | 813.8 | 346.94 | 815.42 | 346.99 | 815.87 | 346.99 | 816.51 | 346.97 |
| 816.74 | 346.97 | 819.24 | 347.11 | 819.45 | 347.11 | 820.77 | 347.17 | 822.2 | 347.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 822.97 | 347.21 | 823.43 | 347.19 | 823.91 | 347.23 | 825.06 | 347.22 | 825.41 | 347.21 |
| 827.44 | 347.12 | 829.46 | 347.01 | 829.92 | 346.98 | 840.15 | 346.58 | 845.86 | 346.36 |
| 846.82 | 346.32 | 848.24 | 346.27 | 850.79 | 346.27 | 851.41 | 346.17 | 852.74 | 345.93 |
| 853.06 | 345.85 | 853.33 | 345.82 | 854.14 | 345.78 | 854.71 | 345.76 | 855.77 | 345.74 |
| 857.95 | 345.73 | 858.71 | 345.79 | 859.68 | 345.85 | 863.83 | 346.12 | 866.03 | 346.27 |
| 866.97 | 346.39 | 868.37 | 346.6 | 868.66 | 346.61 | 871.65 | 346.63 | 875.96 | 346.65 |
| 876.42 | 346.62 | 877.11 | 346.6 | 877.31 | 346.58 | 878.34 | 346.56 | 879.48 | 346.56 |
| 880.53 | 346.54 | 885.12 | 346.48 | 885.48 | 346.48 | 885.9 | 346.46 | 888.59 | 346.21 |
| 897.17 | 346.22 | 899.5 | 346.38 | 902.06 | 346.56 | 903.2 | 346.6 | 907.9 | 346.91 |
| 908.57 | 346.91 | 909.4 | 346.96 | 910.02 | 346.98 | 910.95 | 346.99 | 915.9 | 346.98 |
| 924.25 | 346.99 | 925.89 | 346.97 | 926.6 | 346.95 | 926.85 | 346.93 | 930.12 | 346.72 |
| 930.84 | 346.67 | 933.6 | 346.49 | 937.09 | 346.25 | 939.23 | 346.03 | 946.25 | 345.3 |
| 953.12 | 345.3 | 953.34 | 345.29 | 954.04 | 345.29 | 954.47 | 345.3 | 968.62 | 345.3 |
| 971.68 | 345.66 | 973.6 | 345.75 | 974.56 | 345.76 | 980.74 | 345.72 | 982.98 | 345.7 |
| 986.39 | 345.63 | 989.18 | 345.52 | 989.81 | 345.49 | 990.67 | 345.44 | 990.79 | 345.44 |
| 993.54 | 345.29 | 994.53 | 345.1 | 998.79 | 344.35 | 1001.99 | 344.13 | 1003.57 | 344.02 |
| 1005.89 | 344.03 | 1010.85 | 343.8 | 1012.38 | 343.73 | 1012.83 | 343.7 | 1014.07 | 343.65 |
| 1014.87 | 343.61 | 1020.19 | 343.64 | 1022.72 | 343.62 | 1032.46 | 343.76 | 1032.94 | 343.77 |
| 1036.53 | 343.87 | 1038.31 | 343.88 | 1049.15 | 344.19 | 1052.26 | 344.29 | 1053.77 | 344.33 |
| 1055.32 | 344.36 | 1056.38 | 344.36 | 1058.97 | 344.42 | 1061.02 | 344.46 | 1062.75 | 344.54 |
| 1063.9 | 344.59 | 1066.26 | 344.7 | 1070.71 | 344.83 | 1071.7 | 344.88 | 1071.8 | 344.9 |
| 1072.48 | 344.95 | 1079.24 | 344.79 | 1080.37 | 344.75 | 1081.37 | 344.71 | 1082.62 | 344.63 |
| 1083.07 | 344.61 | 1084.58 | 344.58 | 1086.37 | 344.57 | 1087.29 | 344.63 | 1089.71 | 344.64 |
| 1090.52 | 344.66 | 1100.91 | 345.5 | 1101.13 | 345.52 | 1106.86 | 345.91 | 1110.69 | 346.18 |
| 1114.7 | 346.45 | 1120.72 | 346.47 | 1124.16 | 346.47 | 1126.29 | 346.46 | 1130.57 | 346.46 |
| 1147.02 | 345.61 | 1147.46 | 345.58 | 1147.75 | 345.58 | 1148.68 | 345.66 | 1149.24 | 345.69 |
| 1152.29 | 345.97 | 1154.42 | 346.17 | 1157.05 | 346.44 | 1157.61 | 346.5 | 1158.81 | 346.74 |
| 1162.4 | 347.45 | 1164.92 | 348.02 | 1167.74 | 349.16 | 1168.18 | 349.33 | 1168.66 | 349.53 |
| 1170.55 | 350.27 | 1171.35 | 350.71 | 1172.44 | 351.22 | 1173.37 | 351.7 | 1174.26 | 352.17 |
| 1176.05 | 353.06 | 1176.51 | 353.26 | 1178.33 | 354.09 | 1180.27 | 355.01 | 1181 | 355.36 |
| 1182.41 | 356.01 | 1182.7 | 356.16 | 1183.63 | 356.6 | 1184.41 | 356.98 | 1185.98 | 357.79 |
| 1186.3 | 357.94 | 1188.47 | 358.91 | 1191.67 | 360.02 | 1193.27 | 360.58 | 1194.17 | 360.9 |
| 1195.87 | 361.51 | 1196.91 | 361.88 | 1197.81 | 362.05 | 1199.06 | 362.28 | 1201.03 | 362.65 |
| 1201.54 | 362.69 | 1201.83 | 362.69 | 1202.2 | 362.75 | 1202.97 | 362.66 | 1203.09 | 362.67 |
| 1203.37 | 362.64 | 1204.56 | 362.39 | 1204.86 | 362.32 | 1205.1 | 362.28 | 1205.85 | 362.12 |
| 1207.07 | 361.91 | 1207.92 | 361.76 | 1208.31 | 361.73 | 1209.11 | 361.62 | 1209.75 | 361.51 |
| 1210 | 361.5 | 1210.25 | 361.55 | 1210.6 | 361.68 | 1211.99 | 362.24 | 1213.5 | 362.71 |
| 1213.9 | 362.82 | 1214.4 | 362.93 | 1214.62 | 362.95 | 1215.45 | 363.08 | 1216.71 | 363.13 |
| 1217.72 | 363.08 | 1218.03 | 363.08 | 1218.78 | 363.14 | 1218.98 | 363.18 | 1219.12 | 363.24 |
| 1221.25 | 363.73 | 1221.8 | 363.85 | 1222.98 | 364.12 | 1223.39 | 364.18 | 1223.67 | 364.24 |
| 1223.94 | 364.28 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 316.78 | .05 | 631.83 | .04 | 1171.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 631.83 | 1171.35 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5175.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 305.86 | 353.48 | 306.6 | 353.48 | 307.16 | 353.47 | 307.72 | 353.47 | 310.39 | 353.46 |
| 311.4 | 353.45 | 312.54 | 353.46 | 313.57 | 353.37 | 315.69 | 353.12 | 315.76 | 353.12 |
| 316.9 | 352.93 | 319.4 | 352.49 | 320.59 | 352.26 | 323.66 | 351.64 | 332.69 | 350.69 |
| 333.59 | 350.64 | 338.35 | 350.42 | 341.12 | 350.29 | 341.92 | 350.26 | 344.55 | 350.12 |
| 345.19 | 350.09 | 346.72 | 350.01 | 351.91 | 349.76 | 352.74 | 349.71 | 357.85 | 349.47 |
| 357.9 | 349.47 | 360.21 | 349.37 | 362.01 | 349.33 | 363.1 | 349.31 | 363.58 | 349.31 |
| 364.16 | 349.27 | 365.95 | 349.19 | 366.24 | 349.18 | 371.53 | 348.95 | 376.51 | 348.87 |
| 376.92 | 348.84 | 377.59 | 348.81 | 378.12 | 348.8 | 380.69 | 348.8 | 381.12 | 348.79 |
| 384.64 | 348.8 | 384.74 | 348.79 | 388.25 | 348.8 | 388.48 | 348.79 | 389.86 | 348.78 |
| 401.92 | 348.73 | 410.47 | 348.68 | 410.76 | 348.66 | 411.12 | 348.67 | 412.07 | 348.67 |
| 414.37 | 348.65 | 415.18 | 348.64 | 417.04 | 348.58 | 418.46 | 348.61 | 418.76 | 348.62 |
| 419.74 | 348.63 | 423.45 | 348.68 | 428.15 | 348.76 | 433.21 | 348.88 | 433.64 | 348.88 |
| 435.31 | 348.9 | 435.82 | 348.9 | 436.43 | 348.91 | 437.45 | 348.91 | 438.76 | 348.93 |
| 439.79 | 348.93 | 439.84 | 348.94 | 440.65 | 348.94 | 441.09 | 348.93 | 442.09 | 348.92 |
| 443.03 | 348.93 | 444.53 | 348.89 | 445.16 | 348.87 | 446.85 | 348.89 | 448.44 | 348.89 |
| 455.4 | 348.83 | 456.77 | 348.81 | 457 | 348.8 | 458.25 | 348.79 | 474.24 | 348.64 |
| 478.84 | 348.5 | 480.12 | 348.47 | 480.78 | 348.45 | 481.36 | 348.44 | 481.81 | 348.42 |
| 482.16 | 348.39 | 484.39 | 348.27 | 485.42 | 348.25 | 486.85 | 348.25 | 487.07 | 348.26 |
| 489.9 | 348.27 | 490.66 | 348.27 | 491.4 | 348.32 | 492.89 | 348.38 | 494.66 | 348.4 |
| 495.73 | 348.42 | 496.51 | 348.44 | 497.04 | 348.44 | 498.6 | 348.48 | 500.16 | 348.49 |
| 501.12 | 348.51 | 501.6 | 348.53 | 503.2 | 348.56 | 503.92 | 348.57 | 507.05 | 348.62 |
| 510.66 | 348.67 | 518.54 | 348.77 | 522.52 | 348.81 | 524.99 | 348.8 | 525.82 | 348.79 |
| 526.79 | 348.76 | 527.03 | 348.74 | 528.23 | 348.72 | 529.46 | 348.74 | 530.78 | 348.74 |
| 533.73 | 348.79 | 538.96 | 348.84 | 539.18 | 348.84 | 540.62 | 348.9 | 541.55 | 348.9 |
| 541.94 | 348.91 | 542.75 | 348.83 | 543.02 | 348.76 | 543.43 | 348.71 | 544.13 | 348.74 |
| 544.84 | 348.73 | 546.99 | 348.77 | 549 | 348.78 | 549.57 | 348.79 | 550.05 | 348.79 |
| 550.78 | 348.83 | 552.21 | 348.89 | 552.69 | 348.85 | 554.33 | 348.81 | 554.47 | 348.81 |
| 555.52 | 348.69 | 559.37 | 348.24 | 559.92 | 348.18 | 562.85 | 347.46 | 563.65 | 347.27 |
| 563.91 | 347.25 | 566.05 | 347.13 | 566.3 | 347.13 | 566.94 | 347.15 | 568.44 | 347.17 |
| 569.68 | 347.2 | 570.43 | 347.21 | 571.88 | 347.24 | 572.85 | 347.3 | 576.01 | 347.57 |
| 577.49 | 347.71 | 579.8 | 347.84 | 582.55 | 348.05 | 583.89 | 348.06 | 593.67 | 348.16 |
| 603.23 | 348.16 | 604.55 | 348.15 | 605.24 | 348.15 | 605.65 | 348.13 | 610.31 | 347.75 |
| 610.36 | 347.74 | 616.91 | 347.21 | 619.74 | 347.2 | 621.75 | 347.36 | 622.57 | 347.41 |
| 623.57 | 347.49 | 623.75 | 347.51 | 626.18 | 347.71 | 628.45 | 347.9 | 628.85 | 347.92 |
| 629.59 | 347.9 | 629.68 | 347.89 | 631.07 | 347.98 | 631.62 | 348.02 | 632.03 | 348.02 |
| 632.65 | 348 | 633.62 | 347.94 | 635.78 | 347.85 | 637.16 | 347.79 | 640.16 | 347.73 |
| 641.41 | 347.67 | 642.25 | 347.61 | 644.18 | 347.46 | 652.01 | 346.89 | 652.57 | 346.83 |
| 655.95 | 346.5 | 657 | 346.46 | 657.4 | 346.45 | 659.85 | 346.52 | 661.36 | 346.59 |
| 661.91 | 346.62 | 666.23 | 346.9 | 667.43 | 346.84 | 667.88 | 346.84 | 670.02 | 346.9 |
| 670.47 | 346.9 | 671.38 | 346.87 | 673.41 | 347 | 673.96 | 347.04 | 674.55 | 347.05 |
| 674.81 | 347.04 | 676.61 | 346.93 | 677.19 | 346.89 | 678.04 | 346.84 | 678.16 | 346.84 |
| 679.01 | 346.78 | 682.55 | 346.58 | 685.05 | 346.5 | 686.21 | 346.41 | 687.76 | 346.27 |
| 688.27 | 346.24 | 693.96 | 346.24 | 696.31 | 346.25 | 703.83 | 346.25 | 704.33 | 346.27 |
| 705 | 346.27 | 705.42 | 346.3 | 706.35 | 346.33 | 706.99 | 346.33 | 707.54 | 346.35 |
| 707.85 | 346.35 | 708.63 | 346.38 | 709.24 | 346.39 | 711.58 | 346.45 | 712.85 | 346.49 |
| 715.52 | 346.56 | 718 | 346.62 | 718.84 | 346.65 | 722.5 | 346.75 | 724.59 | 346.8 |
| 726.3 | 346.85 | 732.22 | 347 | 733.76 | 347.04 | 737.8 | 347.14 | 739.37 | 347.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 743.17 | 347.08 | 743.9 | 347.08 | 745.83 | 347.03 | 747.47 | 347.03 | 755.74 | 346.52 |
| 765.92 | 346.51 | 766.56 | 346.53 | 766.9 | 346.53 | 767.02 | 346.56 | 767.71 | 346.63 |
| 769.04 | 346.71 | 769.47 | 346.71 | 772.57 | 346.67 | 773.04 | 346.58 | 773.28 | 346.5 |
| 773.35 | 346.44 | 773.85 | 346.33 | 774.41 | 346.37 | 775.84 | 346.38 | 776.6 | 346.4 |
| 777.09 | 346.4 | 777.24 | 346.39 | 778.05 | 346.37 | 779.14 | 346.41 | 780.46 | 346.47 |
| 780.54 | 346.48 | 783 | 346.47 | 783.98 | 346.52 | 784.99 | 346.56 | 786.83 | 346.65 |
| 789.42 | 346.74 | 789.63 | 346.75 | 790.52 | 346.77 | 791.39 | 346.78 | 791.86 | 346.78 |
| 793.92 | 346.74 | 794.43 | 346.72 | 794.51 | 346.7 | 796.07 | 346.6 | 798.83 | 346.44 |
| 802.04 | 346.38 | 802.54 | 346.36 | 803.02 | 346.32 | 803.37 | 346.21 | 803.71 | 346.2 |
| 805.68 | 346.2 | 805.84 | 346.21 | 806.33 | 346.21 | 807.19 | 346.25 | 807.28 | 346.26 |
| 808.5 | 346.25 | 810.35 | 346.32 | 810.43 | 346.34 | 811.08 | 346.43 | 813.46 | 346.51 |
| 813.59 | 346.52 | 815.48 | 346.6 | 817.1 | 346.65 | 817.56 | 346.65 | 818.43 | 346.63 |
| 820.95 | 346.76 | 821.15 | 346.76 | 822.48 | 346.82 | 823.91 | 346.85 | 824.69 | 346.86 |
| 825.16 | 346.84 | 825.63 | 346.87 | 826.79 | 346.87 | 827.14 | 346.85 | 829.18 | 346.76 |
| 831.21 | 346.65 | 831.67 | 346.62 | 841.95 | 346.21 | 847.68 | 345.99 | 848.65 | 345.95 |
| 850.08 | 345.9 | 852.64 | 345.9 | 853.26 | 345.81 | 854.6 | 345.57 | 854.92 | 345.5 |
| 855.19 | 345.47 | 856.01 | 345.42 | 856.58 | 345.4 | 857.64 | 345.38 | 859.83 | 345.38 |
| 860.05 | 345.4 | 861.57 | 345.49 | 865.74 | 345.76 | 866.02 | 345.78 | 867.95 | 345.9 |
| 868.9 | 346.02 | 870.3 | 346.21 | 870.6 | 346.23 | 873.6 | 346.23 | 875.96 | 346.24 |
| 877.93 | 346.24 | 878.69 | 346.2 | 879.43 | 346.17 | 880.32 | 346.15 | 881.47 | 346.15 |
| 882.52 | 346.14 | 887.13 | 346.08 | 887.49 | 346.08 | 887.92 | 346.06 | 890.62 | 345.82 |
| 899.24 | 345.83 | 900.85 | 345.93 | 902.27 | 346.03 | 904.16 | 346.15 | 905.29 | 346.2 |
| 910.02 | 346.49 | 910.69 | 346.49 | 911.53 | 346.54 | 912.15 | 346.56 | 913.05 | 346.57 |
| 918.05 | 346.57 | 926.45 | 346.58 | 928.4 | 346.57 | 932.34 | 346.33 | 933.06 | 346.29 |
| 935.84 | 346.11 | 939.35 | 345.88 | 941.5 | 345.66 | 948.55 | 344.96 | 953.99 | 344.95 |
| 954.79 | 344.95 | 955.45 | 344.94 | 957.46 | 344.94 | 957.71 | 344.95 | 969.98 | 344.96 |
| 971.03 | 344.96 | 974.1 | 345.3 | 976.03 | 345.39 | 976.99 | 345.4 | 983.2 | 345.36 |
| 985.45 | 345.34 | 988.88 | 345.27 | 991.69 | 345.16 | 992.63 | 345.11 | 993.3 | 345.08 |
| 996.06 | 344.94 | 997 | 344.76 | 1001.17 | 344.05 | 1001.33 | 344.03 | 1004.56 | 343.81 |
| 1005.11 | 343.77 | 1006.14 | 343.71 | 1008.47 | 343.71 | 1013.45 | 343.48 | 1015.44 | 343.39 |
| 1016.69 | 343.33 | 1017.49 | 343.3 | 1022.7 | 343.33 | 1025.17 | 343.31 | 1034.7 | 343.44 |
| 1035.17 | 343.45 | 1038.69 | 343.55 | 1040.43 | 343.56 | 1051.03 | 343.87 | 1054.08 | 343.96 |
| 1055.56 | 344 | 1057.08 | 344.03 | 1058.11 | 344.04 | 1060.65 | 344.09 | 1062.65 | 344.14 |
| 1065.46 | 344.29 | 1065.88 | 344.32 | 1067.78 | 344.43 | 1072.13 | 344.58 | 1072.76 | 344.62 |
| 1073.1 | 344.63 | 1073.2 | 344.65 | 1073.86 | 344.7 | 1075.1 | 344.67 | 1080.48 | 344.55 |
| 1081.58 | 344.51 | 1082.56 | 344.48 | 1083.78 | 344.4 | 1084.22 | 344.38 | 1085.7 | 344.36 |
| 1087.45 | 344.35 | 1087.89 | 344.38 | 1088.35 | 344.4 | 1090.73 | 344.42 | 1091.51 | 344.44 |
| 1101.68 | 345.25 | 1101.9 | 345.27 | 1107.5 | 345.65 | 1111.25 | 345.91 | 1115.17 | 346.17 |
| 1121.06 | 346.2 | 1124.43 | 346.19 | 1130.7 | 346.19 | 1146.79 | 345.38 | 1147.23 | 345.35 |
| 1147.52 | 345.35 | 1148.97 | 345.46 | 1151.96 | 345.73 | 1154.04 | 345.93 | 1156.62 | 346.19 |
| 1157.16 | 346.25 | 1158.34 | 346.48 | 1161.85 | 347.17 | 1162.5 | 347.32 | 1164.31 | 347.73 |
| 1167.08 | 348.83 | 1167.97 | 349.19 | 1169.82 | 349.91 | 1170.6 | 350.33 | 1171.71 | 350.83 |
| 1172.66 | 351.3 | 1173.56 | 351.76 | 1173.93 | 351.94 | 1175.39 | 352.63 | 1177.7 | 353.64 |
| 1179.67 | 354.54 | 1179.77 | 354.57 | 1180.42 | 354.88 | 1181.85 | 355.52 | 1183.09 | 356.1 |
| 1183.89 | 356.47 | 1185.49 | 357.26 | 1185.82 | 357.41 | 1188.02 | 358.37 | 1191.27 | 359.47 |
| 1192.91 | 360.03 | 1193.82 | 360.35 | 1194.61 | 360.62 | 1195.55 | 360.96 | 1196.6 | 361.33 |
| 1197.52 | 361.5 | 1200.31 | 362.03 | 1200.8 | 362.11 | 1201.31 | 362.16 | 1201.61 | 362.16 |
| 1201.99 | 362.23 | 1202.06 | 362.23 | 1202.77 | 362.16 | 1203.18 | 362.14 | 1205.7 | 361.68 |
| 1206.94 | 361.5 | 1207.8 | 361.37 | 1208.2 | 361.35 | 1209.02 | 361.25 | 1209.67 | 361.15 |
| 1210 | 361.15 | 1210.53 | 361.32 | 1211.94 | 361.86 | 1213.48 | 362.32 | 1213.89 | 362.43 |
| 1214.4 | 362.53 | 1214.62 | 362.54 | 1214.95 | 362.6 | 1215.46 | 362.67 | 1216.75 | 362.72 |
| 1217.77 | 362.68 | 1218.08 | 362.68 | 1218.85 | 362.73 | 1219.2 | 362.83 | 1223.12 | 363.68 |
| 1224.1 | 363.83 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 305.86 | .05 | 632.65 | .04 | 1170.6 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 632.65 | 1170.6 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5155.21*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 294.94 | 353.3 | 295.7 | 353.3 | 296.28 | 353.29 | 296.86 | 353.29 | 299.86 | 353.28 |
| 300.67 | 353.27 | 301.86 | 353.27 | 302.33 | 353.23 | 302.92 | 353.19 | 304.59 | 353.02 |
| 305.12 | 352.96 | 305.88 | 352.85 | 308.38 | 352.45 | 308.97 | 352.35 | 310.19 | 352.13 |
| 313.37 | 351.52 | 322.73 | 350.59 | 323.67 | 350.54 | 328.59 | 350.32 | 329.14 | 350.3 |
| 329.66 | 350.27 | 331.46 | 350.2 | 331.86 | 350.19 | 333.28 | 350.12 | 334.63 | 350.05 |
| 334.73 | 350.05 | 335.68 | 349.99 | 337.26 | 349.92 | 343.5 | 349.63 | 348.8 | 349.39 |
| 348.84 | 349.38 | 351.24 | 349.29 | 353.11 | 349.24 | 354.23 | 349.23 | 354.81 | 349.23 |
| 355.33 | 349.19 | 355.85 | 349.17 | 357.18 | 349.11 | 357.48 | 349.1 | 362.97 | 348.87 |
| 368.12 | 348.78 | 368.55 | 348.75 | 369.25 | 348.72 | 369.79 | 348.71 | 372.45 | 348.71 |
| 372.9 | 348.69 | 376.55 | 348.7 | 376.66 | 348.69 | 380.29 | 348.7 | 380.52 | 348.69 |
| 381.96 | 348.68 | 394.44 | 348.61 | 403.31 | 348.55 | 403.43 | 348.53 | 403.98 | 348.53 |
| 404.96 | 348.54 | 408.46 | 348.51 | 410.11 | 348.46 | 411.58 | 348.49 | 411.9 | 348.5 |
| 412.91 | 348.51 | 414.42 | 348.52 | 416.76 | 348.54 | 421.62 | 348.61 | 427.31 | 348.74 |
| 429.04 | 348.76 | 430.37 | 348.76 | 431.09 | 348.77 | 431.26 | 348.76 | 432.61 | 348.78 |
| 433.43 | 348.78 | 433.68 | 348.79 | 434.57 | 348.79 | 436.06 | 348.76 | 436.94 | 348.77 |
| 437.03 | 348.76 | 438.59 | 348.72 | 439.24 | 348.7 | 440.99 | 348.72 | 441.62 | 348.73 |
| 442.64 | 348.73 | 449.85 | 348.66 | 451.27 | 348.63 | 452.8 | 348.62 | 469.37 | 348.46 |
| 474.13 | 348.31 | 475.45 | 348.28 | 476.14 | 348.27 | 477.21 | 348.23 | 477.57 | 348.2 |
| 479.88 | 348.09 | 480.95 | 348.06 | 482.66 | 348.06 | 485.59 | 348.07 | 486.38 | 348.07 |
| 486.82 | 348.1 | 487.72 | 348.13 | 488.69 | 348.17 | 489.75 | 348.18 | 491.15 | 348.2 |
| 492.04 | 348.22 | 494.6 | 348.26 | 496.22 | 348.28 | 497.71 | 348.31 | 499.37 | 348.34 |
| 500.12 | 348.36 | 503.35 | 348.4 | 507.1 | 348.45 | 515.26 | 348.53 | 519.38 | 348.56 |
| 521.95 | 348.55 | 522.81 | 348.53 | 524.06 | 348.48 | 525.3 | 348.46 | 526.57 | 348.47 |
| 527.94 | 348.47 | 530.99 | 348.51 | 536.41 | 348.54 | 538.43 | 348.62 | 538.63 | 348.61 |
| 539.1 | 348.61 | 539.5 | 348.62 | 540.34 | 348.54 | 540.62 | 348.47 | 541.05 | 348.43 |
| 541.77 | 348.45 | 542.24 | 348.44 | 542.89 | 348.44 | 543.12 | 348.45 | 544.73 | 348.48 |
| 546.81 | 348.49 | 547.4 | 348.5 | 547.9 | 348.5 | 548.65 | 348.54 | 550.14 | 348.6 |
| 550.64 | 348.55 | 552.37 | 348.53 | 553.57 | 348.4 | 557.56 | 347.96 | 558.13 | 347.9 |
| 558.76 | 347.76 | 561.99 | 347.02 | 562.26 | 347 | 564.48 | 346.89 | 565.39 | 346.9 |
| 566.95 | 346.93 | 569.01 | 346.96 | 570.52 | 346.99 | 571.53 | 347.05 | 574.8 | 347.3 |
| 576.33 | 347.44 | 578.72 | 347.56 | 581.57 | 347.76 | 582.96 | 347.77 | 593.09 | 347.86 |
| 602.99 | 347.88 | 604.6 | 347.87 | 605.41 | 347.85 | 605.5 | 347.84 | 610.33 | 347.47 |
| 610.38 | 347.47 | 617.17 | 346.95 | 620.1 | 346.94 | 621.94 | 347.07 | 623.03 | 347.13 |
| 624.25 | 347.22 | 626.77 | 347.43 | 629.12 | 347.61 | 629.54 | 347.63 | 630.39 | 347.61 |
| 631.19 | 347.65 | 632.4 | 347.73 | 632.83 | 347.73 | 633.47 | 347.71 | 633.94 | 347.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 636.62 | 347.56 | 638.01 | 347.5 | 641.01 | 347.44 | 642.28 | 347.38 | 643.12 | 347.32 |
| 645.05 | 347.17 | 645.89 | 347.12 | 652.92 | 346.62 | 653.48 | 346.57 | 656.88 | 346.25 |
| 658.34 | 346.21 | 660.8 | 346.27 | 661.85 | 346.32 | 662.32 | 346.35 | 662.87 | 346.37 |
| 667.21 | 346.65 | 668.43 | 346.59 | 668.86 | 346.59 | 670.6 | 346.64 | 671.01 | 346.66 |
| 671.82 | 346.64 | 672.38 | 346.62 | 674.42 | 346.75 | 674.98 | 346.78 | 675.57 | 346.79 |
| 675.83 | 346.78 | 678.48 | 346.62 | 679.07 | 346.59 | 680.05 | 346.52 | 683.61 | 346.32 |
| 685.46 | 346.26 | 686.11 | 346.25 | 687.29 | 346.16 | 688.83 | 346.02 | 689.35 | 346 |
| 695.07 | 346 | 697.43 | 346.01 | 703.74 | 346.01 | 704.99 | 346.02 | 705.48 | 346.04 |
| 706.16 | 346.03 | 706.44 | 346.06 | 706.59 | 346.06 | 707.51 | 346.09 | 708.15 | 346.09 |
| 708.28 | 346.1 | 708.88 | 346.11 | 709.02 | 346.12 | 710.41 | 346.15 | 712.77 | 346.21 |
| 714.05 | 346.24 | 716.73 | 346.31 | 720.06 | 346.39 | 723.75 | 346.49 | 733.51 | 346.72 |
| 735.05 | 346.76 | 739.11 | 346.85 | 740.69 | 346.84 | 744.51 | 346.78 | 745.24 | 346.77 |
| 747.18 | 346.71 | 748.83 | 346.7 | 757.14 | 346.21 | 767.37 | 346.18 | 768.01 | 346.2 |
| 768.35 | 346.2 | 768.47 | 346.23 | 769.16 | 346.3 | 769.62 | 346.33 | 770.16 | 346.35 |
| 770.71 | 346.38 | 770.93 | 346.38 | 774 | 346.34 | 774.52 | 346.24 | 774.76 | 346.17 |
| 774.83 | 346.11 | 775.33 | 346 | 775.9 | 346.05 | 777.33 | 346.06 | 778.39 | 346.09 |
| 778.73 | 346.07 | 779.56 | 346.05 | 780.64 | 346.08 | 781.97 | 346.14 | 784.53 | 346.15 |
| 786.52 | 346.25 | 788.37 | 346.34 | 790.98 | 346.43 | 791.18 | 346.44 | 792.08 | 346.46 |
| 792.96 | 346.47 | 793.42 | 346.47 | 795.49 | 346.42 | 796.01 | 346.4 | 796.6 | 346.35 |
| 797.21 | 346.31 | 797.65 | 346.29 | 800.43 | 346.12 | 803.66 | 346.05 | 804.15 | 346.03 |
| 804.63 | 345.99 | 804.99 | 345.89 | 805.1 | 345.88 | 806.91 | 345.88 | 807.31 | 345.87 |
| 807.47 | 345.88 | 807.97 | 345.88 | 808.82 | 345.92 | 808.91 | 345.93 | 810.15 | 345.92 |
| 812 | 345.98 | 812.08 | 346 | 812.73 | 346.09 | 815.13 | 346.17 | 815.25 | 346.18 |
| 817.16 | 346.26 | 818.79 | 346.3 | 819.25 | 346.3 | 819.89 | 346.28 | 820.12 | 346.28 |
| 822.65 | 346.42 | 822.85 | 346.42 | 824.19 | 346.47 | 825.63 | 346.5 | 826.41 | 346.51 |
| 826.88 | 346.48 | 827.36 | 346.52 | 828.52 | 346.51 | 828.88 | 346.5 | 831.31 | 346.38 |
| 832.96 | 346.29 | 833.42 | 346.26 | 843.75 | 345.85 | 849.51 | 345.63 | 850.48 | 345.59 |
| 851.92 | 345.54 | 854.49 | 345.53 | 855.12 | 345.44 | 856.46 | 345.21 | 856.79 | 345.14 |
| 857.88 | 345.07 | 858.45 | 345.05 | 859.52 | 345.03 | 861.72 | 345.03 | 863.46 | 345.14 |
| 865.31 | 345.24 | 867.93 | 345.42 | 869.87 | 345.54 | 870.83 | 345.65 | 872.23 | 345.83 |
| 872.53 | 345.85 | 875.55 | 345.84 | 879.9 | 345.84 | 880.66 | 345.79 | 881.41 | 345.76 |
| 884.51 | 345.73 | 889.14 | 345.68 | 889.51 | 345.68 | 889.93 | 345.66 | 892.65 | 345.43 |
| 901.31 | 345.44 | 902.93 | 345.54 | 903.66 | 345.59 | 904.36 | 345.63 | 906.25 | 345.75 |
| 907.39 | 345.79 | 912.14 | 346.08 | 912.81 | 346.08 | 913.66 | 346.12 | 914.28 | 346.14 |
| 915.22 | 346.15 | 920.21 | 346.16 | 928.65 | 346.18 | 930.6 | 346.17 | 931.27 | 346.14 |
| 934.56 | 345.95 | 935.29 | 345.9 | 938.08 | 345.73 | 941.61 | 345.5 | 941.98 | 345.47 |
| 943.77 | 345.29 | 950.85 | 344.61 | 956.32 | 344.6 | 956.82 | 344.6 | 957.11 | 344.59 |
| 960.41 | 344.59 | 972.38 | 344.61 | 973.43 | 344.61 | 976.52 | 344.94 | 978.46 | 345.03 |
| 979.42 | 345.04 | 985.66 | 345 | 987.92 | 344.98 | 991.37 | 344.91 | 994.19 | 344.8 |
| 995.14 | 344.76 | 995.81 | 344.72 | 998.58 | 344.59 | 999.59 | 344.4 | 1003.72 | 343.73 |
| 1003.88 | 343.7 | 1007.12 | 343.49 | 1007.68 | 343.45 | 1008.71 | 343.39 | 1011.05 | 343.39 |
| 1016.05 | 343.17 | 1017.6 | 343.09 | 1018.05 | 343.07 | 1020.11 | 342.99 | 1025.2 | 343.01 |
| 1027.63 | 343 | 1036.95 | 343.12 | 1037.41 | 343.13 | 1040.85 | 343.23 | 1042.54 | 343.24 |
| 1052.92 | 343.54 | 1055.9 | 343.63 | 1057.34 | 343.67 | 1058.83 | 343.7 | 1059.84 | 343.71 |
| 1062.32 | 343.77 | 1064.28 | 343.81 | 1067.03 | 343.99 | 1067.44 | 344.03 | 1069.3 | 344.17 |
| 1073.55 | 344.33 | 1074.5 | 344.39 | 1074.6 | 344.41 | 1075.24 | 344.45 | 1076.46 | 344.43 |
| 1081.72 | 344.32 | 1082.8 | 344.28 | 1083.76 | 344.25 | 1084.95 | 344.17 | 1085.38 | 344.15 |
| 1086.82 | 344.13 | 1088.54 | 344.12 | 1089.42 | 344.18 | 1091.74 | 344.19 | 1092.51 | 344.21 |
| 1102.45 | 345 | 1102.67 | 345.02 | 1108.14 | 345.39 | 1111.81 | 345.64 | 1115.65 | 345.9 |
| 1121.41 | 345.92 | 1130.83 | 345.92 | 1146.57 | 345.15 | 1147 | 345.12 | 1147.38 | 345.13 |
| 1148.7 | 345.23 | 1151.62 | 345.49 | 1153.66 | 345.68 | 1156.18 | 345.94 | 1156.71 | 346 |
| 1157.86 | 346.23 | 1161.3 | 346.89 | 1161.93 | 347.04 | 1163.7 | 347.44 | 1166.82 | 348.66 |
| 1167.28 | 348.85 | 1169.1 | 349.54 | 1169.86 | 349.96 | 1170.98 | 350.44 | 1171.95 | 350.9 |
| 1172.87 | 351.35 | 1174.72 | 352.2 | 1175.19 | 352.39 | 1177.08 | 353.19 | 1179.08 | 354.06 |
| 1179.84 | 354.4 | 1181.3 | 355.03 | 1181.6 | 355.17 | 1183.37 | 355.96 | 1183.93 | 356.22 |
| 1185 | 356.74 | 1187.01 | 357.59 | 1187.57 | 357.83 | 1190.87 | 358.91 | 1192.54 | 359.47 |
| 1193.47 | 359.79 | 1194.27 | 360.06 | 1195.23 | 360.4 | 1196.3 | 360.77 | 1197.23 | 360.94 |
| 1198.53 | 361.19 | 1200.07 | 361.49 | 1200.56 | 361.58 | 1201.09 | 361.64 | 1201.39 | 361.64 |
| 1201.77 | 361.72 | 1202.57 | 361.65 | 1202.69 | 361.66 | 1202.98 | 361.64 | 1204.53 | 361.4 |
| 1205.54 | 361.24 | 1206.81 | 361.09 | 1207.69 | 360.97 | 1208.09 | 360.96 | 1208.92 | 360.89 |
| 1209.58 | 360.79 | 1209.93 | 360.79 | 1210.46 | 360.96 | 1211.9 | 361.48 | 1213.46 | 361.92 |
| 1213.88 | 362.03 | 1214.39 | 362.12 | 1214.62 | 362.14 | 1214.95 | 362.2 | 1215.48 | 362.27 |
| 1216.78 | 362.31 | 1217.82 | 362.27 | 1218.14 | 362.27 | 1218.92 | 362.33 | 1219.13 | 362.37 |
| 1219.28 | 362.42 | 1221.48 | 362.88 | 1223.26 | 363.23 | 1223.49 | 363.28 | 1223.69 | 363.29 |
| 1224.26 | 363.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 294.94 | .05 | 633.47 | .04 | 1169.86 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 633.47 | 1169.86 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5135.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 284.01 | 353.12 | 284.81 | 353.13 | 285.41 | 353.12 | 286.01 | 353.12 | 288.86 | 353.1 |
| 289.95 | 353.09 | 291.17 | 353.09 | 291.66 | 353.05 | 292.28 | 353.01 | 294.62 | 352.79 |
| 295.34 | 352.69 | 295.85 | 352.61 | 297.92 | 352.3 | 299.8 | 351.99 | 303.09 | 351.4 |
| 312.77 | 350.49 | 313.74 | 350.44 | 318.84 | 350.22 | 321.81 | 350.11 | 322.67 | 350.08 |
| 325.49 | 349.94 | 326.17 | 349.9 | 327.81 | 349.83 | 334.26 | 349.54 | 339.74 | 349.3 |
| 339.79 | 349.29 | 342.27 | 349.2 | 344.2 | 349.16 | 345.37 | 349.15 | 345.96 | 349.15 |
| 347.04 | 349.09 | 348.42 | 349.04 | 348.73 | 349.02 | 354.4 | 348.79 | 359.74 | 348.69 |
| 360.9 | 348.64 | 361.47 | 348.62 | 362.29 | 348.62 | 364.22 | 348.61 | 364.69 | 348.6 |
| 368.46 | 348.61 | 368.57 | 348.6 | 372.33 | 348.59 | 372.57 | 348.58 | 374.05 | 348.58 |
| 386.97 | 348.5 | 396.15 | 348.41 | 396.46 | 348.39 | 397.48 | 348.41 | 400.32 | 348.4 |
| 401.47 | 348.39 | 403.18 | 348.34 | 404.7 | 348.37 | 405.03 | 348.38 | 406.08 | 348.38 |
| 407.64 | 348.39 | 410.06 | 348.4 | 415.1 | 348.46 | 419.16 | 348.55 | 420.52 | 348.59 |
| 420.98 | 348.59 | 422.77 | 348.61 | 423.31 | 348.61 | 423.96 | 348.62 | 424.15 | 348.61 |
| 424.89 | 348.62 | 425.77 | 348.62 | 426.46 | 348.63 | 427.31 | 348.63 | 427.57 | 348.64 |
| 428.49 | 348.64 | 429.38 | 348.62 | 430.03 | 348.6 | 431.04 | 348.6 | 433.33 | 348.53 |
| 434.11 | 348.54 | 435.13 | 348.56 | 435.78 | 348.56 | 436.61 | 348.57 | 436.84 | 348.56 |
| 444.3 | 348.49 | 445.77 | 348.46 | 446.02 | 348.46 | 447.36 | 348.44 | 464.5 | 348.27 |
| 469.43 | 348.12 | 470.79 | 348.09 | 471.5 | 348.08 | 472.61 | 348.04 | 472.98 | 348.01 |
| 475.37 | 347.9 | 476.48 | 347.87 | 478.25 | 347.87 | 481.28 | 347.86 | 482.1 | 347.87 |
| 482.88 | 347.91 | 484.49 | 347.96 | 485.58 | 347.97 | 487.03 | 347.99 | 487.95 | 348.01 |
| 488.66 | 348.02 | 489.37 | 348.02 | 490.6 | 348.05 | 492.28 | 348.06 | 493.31 | 348.09 |
| 495.54 | 348.13 | 496.31 | 348.14 | 499.66 | 348.19 | 503.53 | 348.23 | 511.98 | 348.28 |
| 516.24 | 348.31 | 518.9 | 348.29 | 519.79 | 348.27 | 520.82 | 348.23 | 521.08 | 348.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 522.37 | 348.19 | 523.68 | 348.2 | 525.1 | 348.2 | 528.26 | 348.23 | 533.86 | 348.25 |
| 534.1 | 348.25 | 535.16 | 348.31 | 535.95 | 348.34 | 536.12 | 348.33 | 537.06 | 348.33 |
| 537.93 | 348.25 | 538.14 | 348.2 | 538.66 | 348.14 | 539.41 | 348.16 | 539.9 | 348.15 |
| 540.56 | 348.15 | 540.8 | 348.16 | 541.79 | 348.17 | 542.47 | 348.19 | 544.62 | 348.2 |
| 545.24 | 348.2 | 545.75 | 348.21 | 546.53 | 348.24 | 547.03 | 348.27 | 548.07 | 348.3 |
| 548.58 | 348.26 | 550.34 | 348.24 | 550.83 | 348.2 | 551.62 | 348.11 | 556.33 | 347.63 |
| 559.47 | 346.96 | 560.33 | 346.78 | 560.61 | 346.76 | 562.9 | 346.65 | 563.45 | 346.65 |
| 564.46 | 346.67 | 565.46 | 346.68 | 567.59 | 346.71 | 569.15 | 346.74 | 570.2 | 346.79 |
| 573.58 | 347.04 | 575.17 | 347.17 | 577.65 | 347.28 | 580.59 | 347.47 | 581.65 | 347.48 |
| 582.03 | 347.49 | 592.51 | 347.57 | 602.76 | 347.59 | 604.42 | 347.59 | 604.91 | 347.58 |
| 605.35 | 347.56 | 610.35 | 347.2 | 610.4 | 347.19 | 617.42 | 346.68 | 620.45 | 346.67 |
| 622.36 | 346.79 | 622.6 | 346.81 | 622.99 | 346.82 | 623.91 | 346.88 | 624.75 | 346.94 |
| 627.36 | 347.14 | 629.79 | 347.31 | 630.22 | 347.33 | 631.11 | 347.32 | 631.93 | 347.36 |
| 633.19 | 347.44 | 633.63 | 347.44 | 634.29 | 347.42 | 634.76 | 347.38 | 635.27 | 347.35 |
| 637.45 | 347.27 | 638.85 | 347.21 | 641.87 | 347.15 | 643.14 | 347.09 | 646.77 | 346.83 |
| 653.84 | 346.36 | 657.81 | 346 | 659.27 | 345.96 | 661.75 | 346.03 | 662.8 | 346.07 |
| 663.83 | 346.13 | 665.22 | 346.22 | 668.19 | 346.4 | 669.24 | 346.35 | 669.85 | 346.34 |
| 670.95 | 346.37 | 671.06 | 346.38 | 672.01 | 346.41 | 672.82 | 346.39 | 673.38 | 346.37 |
| 675.43 | 346.49 | 676.3 | 346.53 | 676.67 | 346.53 | 678.67 | 346.41 | 679.51 | 346.37 |
| 681 | 346.27 | 681.08 | 346.26 | 684.66 | 346.07 | 687.18 | 345.99 | 688.36 | 345.91 |
| 689.91 | 345.78 | 690.43 | 345.76 | 696.17 | 345.76 | 698.55 | 345.77 | 702.44 | 345.77 |
| 704.25 | 345.78 | 706.14 | 345.78 | 706.64 | 345.8 | 707.32 | 345.8 | 707.75 | 345.83 |
| 708.68 | 345.86 | 709.32 | 345.85 | 709.45 | 345.86 | 710.19 | 345.88 | 711.59 | 345.91 |
| 713.96 | 345.97 | 717.94 | 346.06 | 720.45 | 346.12 | 721.28 | 346.13 | 724.99 | 346.23 |
| 727.09 | 346.27 | 728.82 | 346.32 | 734.79 | 346.45 | 740.42 | 346.56 | 742.01 | 346.55 |
| 745.85 | 346.47 | 746.58 | 346.46 | 748.54 | 346.39 | 750.19 | 346.38 | 758.53 | 345.89 |
| 768.81 | 345.85 | 769.46 | 345.87 | 769.8 | 345.87 | 769.92 | 345.9 | 770.62 | 345.96 |
| 771.62 | 346.02 | 772.4 | 346.04 | 775.48 | 346 | 775.88 | 345.92 | 776 | 345.91 |
| 776.24 | 345.84 | 776.31 | 345.78 | 776.81 | 345.68 | 777.38 | 345.72 | 778.83 | 345.74 |
| 779.88 | 345.77 | 780.23 | 345.75 | 781.06 | 345.72 | 782.15 | 345.75 | 783.49 | 345.81 |
| 786.05 | 345.83 | 787.04 | 345.89 | 789.91 | 346.03 | 792.53 | 346.12 | 792.74 | 346.13 |
| 794.52 | 346.15 | 794.99 | 346.15 | 797.07 | 346.11 | 797.59 | 346.09 | 797.66 | 346.07 |
| 799.24 | 345.97 | 802.02 | 345.8 | 805.27 | 345.72 | 805.77 | 345.7 | 806.25 | 345.65 |
| 806.61 | 345.56 | 806.72 | 345.55 | 809.6 | 345.55 | 810.46 | 345.59 | 811.79 | 345.58 |
| 813.65 | 345.64 | 813.74 | 345.66 | 814.39 | 345.75 | 816.8 | 345.83 | 816.92 | 345.84 |
| 818.83 | 345.92 | 820.47 | 345.96 | 820.93 | 345.96 | 821.81 | 345.94 | 824.35 | 346.07 |
| 824.56 | 346.07 | 825.9 | 346.12 | 827.35 | 346.15 | 828.13 | 346.15 | 828.6 | 346.13 |
| 829.08 | 346.16 | 830.25 | 346.15 | 830.61 | 346.14 | 832.67 | 346.04 | 834.71 | 345.93 |
| 835.17 | 345.9 | 845.55 | 345.49 | 851.34 | 345.26 | 852.31 | 345.22 | 853.75 | 345.17 |
| 856.34 | 345.16 | 856.97 | 345.08 | 858.32 | 344.86 | 858.65 | 344.79 | 858.91 | 344.76 |
| 859.74 | 344.72 | 860.32 | 344.7 | 861.39 | 344.68 | 863.6 | 344.67 | 863.82 | 344.69 |
| 865.36 | 344.78 | 867.21 | 344.88 | 869.85 | 345.06 | 871.79 | 345.17 | 872.33 | 345.24 |
| 872.76 | 345.28 | 874.17 | 345.45 | 874.47 | 345.46 | 877.5 | 345.44 | 879.88 | 345.43 |
| 881.87 | 345.43 | 882.34 | 345.4 | 883.03 | 345.38 | 883.24 | 345.36 | 884.28 | 345.34 |
| 885.44 | 345.34 | 886.51 | 345.32 | 891.15 | 345.27 | 891.95 | 345.26 | 894.67 | 345.03 |
| 903.38 | 345.04 | 905 | 345.15 | 906.44 | 345.23 | 908.34 | 345.35 | 909.49 | 345.39 |
| 914.26 | 345.66 | 914.93 | 345.66 | 915.78 | 345.71 | 917.32 | 345.73 | 922.37 | 345.74 |
| 930.84 | 345.78 | 932.5 | 345.78 | 933.48 | 345.74 | 937.52 | 345.52 | 940.32 | 345.35 |
| 943.87 | 345.13 | 944.23 | 345.09 | 946.03 | 344.92 | 953.15 | 344.26 | 958.64 | 344.25 |
| 959.15 | 344.25 | 959.44 | 344.24 | 962.75 | 344.24 | 974.78 | 344.26 | 975.84 | 344.26 |
| 978.94 | 344.58 | 980.89 | 344.67 | 981.86 | 344.68 | 988.12 | 344.64 | 990.4 | 344.62 |
| 993.86 | 344.55 | 996.69 | 344.44 | 998.32 | 344.37 | 1001.1 | 344.23 | 1002.11 | 344.05 |
| 1006.26 | 343.4 | 1006.43 | 343.38 | 1009.68 | 343.17 | 1010.24 | 343.14 | 1011.28 | 343.07 |
| 1013.63 | 343.07 | 1018.66 | 342.85 | 1020.67 | 342.76 | 1021.93 | 342.71 | 1022.48 | 342.68 |
| 1022.74 | 342.68 | 1027.71 | 342.7 | 1030.08 | 342.68 | 1039.19 | 342.8 | 1039.64 | 342.82 |
| 1043 | 342.91 | 1044.66 | 342.92 | 1054.8 | 343.21 | 1057.72 | 343.3 | 1059.13 | 343.34 |
| 1060.58 | 343.37 | 1061.57 | 343.38 | 1063.99 | 343.44 | 1065.91 | 343.49 | 1067.53 | 343.61 |
| 1068.6 | 343.7 | 1069 | 343.74 | 1070.81 | 343.9 | 1074.97 | 344.08 | 1075.57 | 344.13 |
| 1075.9 | 344.14 | 1076 | 344.16 | 1076.63 | 344.21 | 1077.81 | 344.19 | 1082.96 | 344.08 |
| 1084.95 | 344.02 | 1086.11 | 343.94 | 1086.53 | 343.93 | 1087.94 | 343.91 | 1089.62 | 343.9 |
| 1090.04 | 343.93 | 1090.48 | 343.95 | 1092.75 | 343.97 | 1093.5 | 343.99 | 1103.22 | 344.76 |
| 1103.43 | 344.77 | 1108.78 | 345.13 | 1112.37 | 345.38 | 1116.12 | 345.62 | 1121.75 | 345.65 |
| 1124.97 | 345.65 | 1126.96 | 345.64 | 1130.25 | 345.64 | 1130.96 | 345.65 | 1146.76 | 344.89 |
| 1147.04 | 344.89 | 1148.43 | 345 | 1151.29 | 345.25 | 1153.28 | 345.44 | 1155.74 | 345.7 |
| 1156.26 | 345.75 | 1157.39 | 345.97 | 1160.75 | 346.62 | 1161.36 | 346.76 | 1163.09 | 347.14 |
| 1165.74 | 348.17 | 1166.59 | 348.51 | 1168.37 | 349.18 | 1169.11 | 349.58 | 1170.26 | 350.04 |
| 1171.24 | 350.49 | 1172.17 | 350.94 | 1172.55 | 351.1 | 1174.06 | 351.77 | 1174.54 | 351.96 |
| 1176.45 | 352.73 | 1178.49 | 353.59 | 1178.74 | 353.69 | 1182.03 | 355.09 | 1182.85 | 355.45 |
| 1184.5 | 356.21 | 1184.84 | 356.36 | 1187.12 | 357.28 | 1190.48 | 358.36 | 1192.17 | 358.92 |
| 1193.12 | 359.23 | 1193.93 | 359.5 | 1194.9 | 359.84 | 1195.99 | 360.21 | 1198.26 | 360.64 |
| 1200.33 | 361.05 | 1200.86 | 361.11 | 1201.17 | 361.12 | 1201.56 | 361.2 | 1202.27 | 361.15 |
| 1202.5 | 361.16 | 1202.79 | 361.14 | 1204.04 | 360.98 | 1204.36 | 360.93 | 1205.39 | 360.8 |
| 1206.68 | 360.68 | 1207.57 | 360.58 | 1207.98 | 360.58 | 1208.83 | 360.52 | 1209.5 | 360.43 |
| 1209.85 | 360.43 | 1210.39 | 360.6 | 1211.85 | 361.11 | 1213.44 | 361.53 | 1213.87 | 361.63 |
| 1214.39 | 361.72 | 1214.62 | 361.74 | 1215.49 | 361.86 | 1216.82 | 361.91 | 1217.87 | 361.87 |
| 1218.2 | 361.87 | 1219 | 361.92 | 1219.36 | 362.01 | 1221.59 | 362.45 | 1223.41 | 362.79 |
| 1224.42 | 362.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 284.01 | .05 | 634.29 | .04 | 1169.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 634.29 | 1169.11 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5115.36*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 273.09 | 352.95 | 273.91 | 352.95 | 274.53 | 352.94 | 275.15 | 352.94 | 278.1 | 352.91 |
| 278.35 | 352.92 | 279.22 | 352.91 | 280.49 | 352.91 | 281 | 352.87 | 281.63 | 352.84 |
| 283.98 | 352.63 | 285.33 | 352.46 | 287.46 | 352.16 | 289.4 | 351.85 | 292.81 | 351.28 |
| 302.81 | 350.38 | 309.08 | 350.13 | 309.67 | 350.11 | 310.22 | 350.08 | 313.04 | 349.99 |
| 315.95 | 349.85 | 316.66 | 349.81 | 317.92 | 349.75 | 318.35 | 349.74 | 325.02 | 349.45 |
| 330.69 | 349.21 | 330.74 | 349.2 | 333.3 | 349.12 | 335.3 | 349.08 | 336.86 | 349.07 |
| 337.11 | 349.08 | 337.42 | 349.05 | 338.23 | 349.01 | 339.65 | 348.96 | 339.97 | 348.94 |
| 345.84 | 348.71 | 351.35 | 348.6 | 352.85 | 348.54 | 353.99 | 348.54 | 355.98 | 348.52 |
| 356.17 | 348.51 | 360.37 | 348.51 | 360.48 | 348.5 | 364.36 | 348.49 | 364.61 | 348.48 |
| 379.5 | 348.38 | 388.98 | 348.28 | 389.3 | 348.26 | 389.7 | 348.26 | 390.75 | 348.28 |
| 393.3 | 348.27 | 394.2 | 348.27 | 394.49 | 348.26 | 396.25 | 348.22 | 397.83 | 348.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 398.16 | 348.26 | 403.36 | 348.26 | 408.57 | 348.32 | 414.17 | 348.44 | 414.65 | 348.44 |
| 416.5 | 348.46 | 417 | 348.47 | 417.73 | 348.47 | 417.92 | 348.46 | 418.69 | 348.47 |
| 419.59 | 348.47 | 420.31 | 348.48 | 421.2 | 348.48 | 421.66 | 348.5 | 422.41 | 348.49 |
| 422.9 | 348.47 | 424.01 | 348.45 | 425.04 | 348.44 | 426.71 | 348.38 | 427.41 | 348.35 |
| 428.21 | 348.37 | 429.95 | 348.4 | 431.04 | 348.4 | 438.75 | 348.32 | 440.27 | 348.29 |
| 441.91 | 348.27 | 459.63 | 348.08 | 464.72 | 347.93 | 466.13 | 347.9 | 466.87 | 347.89 |
| 468.01 | 347.85 | 468.39 | 347.82 | 470.86 | 347.71 | 472.01 | 347.68 | 473.59 | 347.68 |
| 473.84 | 347.67 | 476.97 | 347.66 | 477.82 | 347.66 | 478.4 | 347.7 | 478.63 | 347.7 |
| 480.29 | 347.75 | 482.24 | 347.77 | 482.91 | 347.77 | 484.88 | 347.81 | 485.33 | 347.81 |
| 486.61 | 347.84 | 488.34 | 347.85 | 489.93 | 347.88 | 491.7 | 347.91 | 492.5 | 347.93 |
| 495.97 | 347.97 | 499.97 | 348.01 | 508.7 | 348.04 | 513.1 | 348.05 | 515.85 | 348.03 |
| 516.77 | 348.01 | 517.84 | 347.97 | 518.11 | 347.95 | 519.44 | 347.93 | 520.79 | 347.94 |
| 522.26 | 347.93 | 525.52 | 347.95 | 531.32 | 347.95 | 531.56 | 347.96 | 533.16 | 348.05 |
| 533.69 | 348.04 | 534.62 | 348.04 | 535.52 | 347.96 | 535.81 | 347.9 | 536.27 | 347.85 |
| 537.04 | 347.87 | 537.55 | 347.86 | 538.49 | 347.86 | 539.51 | 347.88 | 540.21 | 347.9 |
| 542.44 | 347.9 | 543.6 | 347.92 | 546 | 348.01 | 546.53 | 347.97 | 548.34 | 347.95 |
| 548.56 | 347.94 | 549.67 | 347.82 | 553.93 | 347.41 | 554.54 | 347.36 | 555.22 | 347.22 |
| 557.78 | 346.71 | 558.67 | 346.53 | 558.96 | 346.51 | 561.6 | 346.4 | 562.31 | 346.42 |
| 562.94 | 346.42 | 563.97 | 346.43 | 565.35 | 346.45 | 567.79 | 346.48 | 568.87 | 346.54 |
| 572.37 | 346.77 | 574.01 | 346.89 | 576.57 | 347 | 579.61 | 347.19 | 581.04 | 347.19 |
| 581.1 | 347.2 | 591.93 | 347.28 | 602.52 | 347.31 | 603.99 | 347.3 | 604.74 | 347.3 |
| 605.2 | 347.28 | 610.36 | 346.92 | 610.42 | 346.92 | 617.68 | 346.42 | 620.81 | 346.4 |
| 622.78 | 346.52 | 623.94 | 346.57 | 625.25 | 346.66 | 627.94 | 346.86 | 630.46 | 347.02 |
| 630.9 | 347.04 | 631.82 | 347.03 | 632.67 | 347.07 | 633.97 | 347.15 | 634.43 | 347.15 |
| 635.11 | 347.13 | 635.59 | 347.09 | 636.1 | 347.06 | 638.29 | 346.98 | 639.69 | 346.92 |
| 642.72 | 346.86 | 644 | 346.8 | 644.85 | 346.74 | 646.8 | 346.61 | 647.64 | 346.55 |
| 654.91 | 346.09 | 655.31 | 346.05 | 658.74 | 345.76 | 659.8 | 345.72 | 660.21 | 345.71 |
| 662.7 | 345.78 | 664.23 | 345.85 | 664.78 | 345.88 | 666.18 | 345.97 | 669.17 | 346.15 |
| 670.23 | 346.1 | 670.83 | 346.09 | 671.59 | 346.11 | 671.94 | 346.13 | 673 | 346.16 |
| 674.39 | 346.12 | 676.44 | 346.24 | 677 | 346.27 | 677.69 | 346.27 | 679.69 | 346.16 |
| 680.54 | 346.11 | 682.03 | 346.01 | 682.12 | 346.01 | 685.71 | 345.81 | 688.24 | 345.74 |
| 689.43 | 345.66 | 690.99 | 345.54 | 691.52 | 345.51 | 697.28 | 345.52 | 699.67 | 345.53 |
| 702.63 | 345.53 | 703.57 | 345.54 | 706.04 | 345.54 | 707.29 | 345.55 | 707.8 | 345.57 |
| 708.48 | 345.56 | 708.91 | 345.59 | 709.84 | 345.62 | 710.49 | 345.62 | 711.06 | 345.63 |
| 712.16 | 345.66 | 712.77 | 345.67 | 715.15 | 345.72 | 716.44 | 345.75 | 719.15 | 345.82 |
| 721.67 | 345.86 | 726.23 | 345.97 | 728.34 | 346.01 | 730.07 | 346.05 | 736.08 | 346.17 |
| 737.64 | 346.2 | 741.74 | 346.27 | 743.33 | 346.26 | 747.19 | 346.17 | 747.92 | 346.15 |
| 749.89 | 346.06 | 751.55 | 346.05 | 759.93 | 345.57 | 770.26 | 345.52 | 770.91 | 345.54 |
| 771.25 | 345.54 | 771.37 | 345.57 | 772.07 | 345.63 | 772.53 | 345.66 | 773.42 | 345.7 |
| 773.86 | 345.7 | 776.95 | 345.66 | 777.48 | 345.57 | 777.71 | 345.51 | 777.83 | 345.45 |
| 778.29 | 345.36 | 778.87 | 345.4 | 780.32 | 345.42 | 781.09 | 345.45 | 781.38 | 345.45 |
| 781.73 | 345.43 | 782.56 | 345.4 | 783.66 | 345.42 | 785 | 345.48 | 787.58 | 345.51 |
| 789.59 | 345.63 | 791.45 | 345.72 | 794.09 | 345.81 | 795.2 | 345.83 | 796.56 | 345.84 |
| 798.64 | 345.8 | 799.17 | 345.78 | 799.24 | 345.76 | 799.76 | 345.73 | 800.82 | 345.65 |
| 803.62 | 345.48 | 806.88 | 345.39 | 807.39 | 345.36 | 807.87 | 345.32 | 808.23 | 345.23 |
| 808.34 | 345.22 | 811.23 | 345.22 | 812.1 | 345.26 | 813.44 | 345.25 | 815.31 | 345.3 |
| 815.88 | 345.39 | 816.05 | 345.4 | 818.46 | 345.49 | 818.59 | 345.5 | 820.51 | 345.57 |
| 822.16 | 345.61 | 823.5 | 345.6 | 826.05 | 345.72 | 826.26 | 345.72 | 827.61 | 345.77 |
| 829.85 | 345.8 | 830.54 | 345.78 | 830.6 | 345.8 | 831.98 | 345.79 | 832.34 | 345.78 |
| 834.41 | 345.69 | 834.8 | 345.67 | 836.46 | 345.57 | 836.93 | 345.55 | 847.35 | 345.12 |
| 853.17 | 344.9 | 854.14 | 344.85 | 855.59 | 344.81 | 858.2 | 344.8 | 858.82 | 344.71 |
| 860.18 | 344.5 | 860.51 | 344.43 | 860.78 | 344.41 | 861.61 | 344.37 | 862.19 | 344.35 |
| 863.27 | 344.33 | 865.49 | 344.32 | 865.7 | 344.34 | 867.25 | 344.42 | 869.12 | 344.52 |
| 871.48 | 344.68 | 871.76 | 344.69 | 873.72 | 344.81 | 874.68 | 344.91 | 876.1 | 345.07 |
| 876.4 | 345.08 | 879.45 | 345.05 | 881.84 | 345.03 | 883.5 | 345.03 | 884.31 | 345 |
| 884.61 | 344.98 | 885.36 | 344.95 | 886.26 | 344.93 | 887.43 | 344.93 | 888.5 | 344.92 |
| 893.17 | 344.87 | 893.54 | 344.87 | 893.97 | 344.85 | 896.7 | 344.64 | 905.45 | 344.65 |
| 907.08 | 344.75 | 907.82 | 344.79 | 908.52 | 344.84 | 910.43 | 344.95 | 911.59 | 344.99 |
| 916.38 | 345.25 | 917.06 | 345.25 | 917.91 | 345.29 | 918.54 | 345.31 | 919.45 | 345.32 |
| 924.53 | 345.33 | 933.04 | 345.38 | 934.71 | 345.38 | 935.43 | 345.36 | 935.69 | 345.34 |
| 939.01 | 345.17 | 939.75 | 345.14 | 942.56 | 344.98 | 946.12 | 344.76 | 946.49 | 344.72 |
| 948.3 | 344.55 | 955.45 | 343.91 | 960.97 | 343.9 | 961.77 | 343.89 | 962.45 | 343.89 |
| 962.68 | 343.88 | 963.39 | 343.88 | 963.83 | 343.89 | 965.1 | 343.89 | 977.18 | 343.91 |
| 978.24 | 343.91 | 981.36 | 344.22 | 983.31 | 344.3 | 984.29 | 344.31 | 990.59 | 344.28 |
| 992.87 | 344.26 | 996.35 | 344.19 | 999.19 | 344.09 | 999.83 | 344.05 | 1000.83 | 344.01 |
| 1003.63 | 343.88 | 1004.64 | 343.71 | 1008.81 | 343.08 | 1008.98 | 343.05 | 1012.24 | 342.85 |
| 1012.81 | 342.82 | 1013.85 | 342.75 | 1016.22 | 342.75 | 1021.26 | 342.53 | 1023.28 | 342.44 |
| 1025.36 | 342.36 | 1030.22 | 342.39 | 1032.54 | 342.37 | 1041.44 | 342.49 | 1041.88 | 342.5 |
| 1045.16 | 342.59 | 1046.78 | 342.6 | 1056.69 | 342.88 | 1059.54 | 342.97 | 1060.91 | 343.01 |
| 1062.33 | 343.04 | 1063.3 | 343.05 | 1065.67 | 343.11 | 1067.54 | 343.16 | 1069.12 | 343.3 |
| 1070.17 | 343.4 | 1070.56 | 343.45 | 1072.33 | 343.63 | 1076.4 | 343.84 | 1077.3 | 343.9 |
| 1078.01 | 343.96 | 1084.19 | 343.85 | 1085.22 | 343.82 | 1086.14 | 343.78 | 1087.69 | 343.7 |
| 1089.07 | 343.68 | 1090.7 | 343.68 | 1091.01 | 343.69 | 1091.54 | 343.73 | 1093.76 | 343.74 |
| 1094.5 | 343.76 | 1104 | 344.51 | 1104.2 | 344.52 | 1109.43 | 344.87 | 1112.93 | 345.11 |
| 1116.59 | 345.35 | 1122.1 | 345.37 | 1131.1 | 345.37 | 1146.13 | 344.68 | 1146.53 | 344.66 |
| 1146.8 | 344.66 | 1147.65 | 344.73 | 1148.16 | 344.76 | 1150.95 | 345.01 | 1152.89 | 345.2 |
| 1155.3 | 345.45 | 1155.81 | 345.5 | 1160.19 | 346.34 | 1160.8 | 346.47 | 1162.49 | 346.85 |
| 1165.07 | 347.84 | 1165.91 | 348.16 | 1167.64 | 348.81 | 1168.37 | 349.2 | 1169.53 | 349.65 |
| 1170.53 | 350.09 | 1171.86 | 350.69 | 1173.39 | 351.34 | 1173.88 | 351.52 | 1175.83 | 352.28 |
| 1178 | 353.15 | 1178.68 | 353.43 | 1180.19 | 354.04 | 1180.5 | 354.18 | 1182.33 | 354.94 |
| 1184.35 | 355.83 | 1186.09 | 356.51 | 1186.67 | 356.74 | 1190.08 | 357.81 | 1191.8 | 358.36 |
| 1192.76 | 358.68 | 1193.59 | 358.95 | 1195.69 | 359.65 | 1197.99 | 360.1 | 1200.09 | 360.52 |
| 1200.64 | 360.58 | 1200.95 | 360.6 | 1201.34 | 360.68 | 1202.07 | 360.65 | 1202.3 | 360.66 |
| 1202.6 | 360.65 | 1203.86 | 360.51 | 1204.44 | 360.44 | 1205.24 | 360.36 | 1206.55 | 360.26 |
| 1207.16 | 360.22 | 1207.45 | 360.19 | 1207.88 | 360.2 | 1208.73 | 360.15 | 1209.41 | 360.08 |
| 1209.68 | 360.07 | 1209.95 | 360.12 | 1211.81 | 360.73 | 1213.42 | 361.13 | 1213.85 | 361.23 |
| 1214.38 | 361.32 | 1215.5 | 361.45 | 1216.85 | 361.5 | 1217.93 | 361.46 | 1218.26 | 361.46 |
| 1219.07 | 361.51 | 1219.43 | 361.6 | 1221.71 | 362.03 | 1223.78 | 362.39 | 1223.99 | 362.4 |
| 1224.58 | 362.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 273.09 | .05 | 635.11 | .04 | 1168.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 635.11 | 1168.37 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5095.43*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 262.17 | 352.77 | 263.01 | 352.77 | 263.65 | 352.76 | 264.29 | 352.76 | 267.34 | 352.73 |
| 267.6 | 352.74 | 268.5 | 352.72 | 269.81 | 352.73 | 270.33 | 352.69 | 270.99 | 352.66 |
| 273.41 | 352.46 | 273.48 | 352.46 | 274.25 | 352.37 | 274.8 | 352.3 | 277.38 | 351.96 |
| 279.01 | 351.72 | 282.52 | 351.16 | 292.86 | 350.28 | 293.89 | 350.23 | 299.32 | 350.03 |
| 302.49 | 349.92 | 303.41 | 349.9 | 306.42 | 349.76 | 307.15 | 349.72 | 308.9 | 349.64 |
| 314.84 | 349.4 | 315.78 | 349.36 | 321.63 | 349.12 | 321.68 | 349.11 | 324.33 | 349.03 |
| 326.39 | 348.99 | 328.01 | 348.99 | 328.27 | 349 | 328.59 | 348.97 | 329.42 | 348.93 |
| 330.89 | 348.88 | 331.22 | 348.86 | 337.27 | 348.63 | 342.97 | 348.51 | 344.21 | 348.46 |
| 344.6 | 348.45 | 345.69 | 348.45 | 347.75 | 348.43 | 348.25 | 348.42 | 352.39 | 348.41 |
| 356.4 | 348.39 | 356.66 | 348.38 | 358.24 | 348.37 | 372.03 | 348.26 | 381.82 | 348.15 |
| 382.15 | 348.12 | 383.64 | 348.15 | 386.28 | 348.15 | 387.5 | 348.14 | 389.32 | 348.1 |
| 390.35 | 348.13 | 390.95 | 348.13 | 391.3 | 348.14 | 392.42 | 348.14 | 394.08 | 348.13 |
| 396.66 | 348.13 | 402.04 | 348.17 | 402.63 | 348.18 | 403.97 | 348.21 | 408.32 | 348.3 |
| 410.23 | 348.32 | 411.56 | 348.32 | 411.7 | 348.31 | 412.49 | 348.32 | 413.42 | 348.32 |
| 414.71 | 348.34 | 414.89 | 348.33 | 415.4 | 348.34 | 415.48 | 348.35 | 416.05 | 348.35 |
| 417.28 | 348.3 | 419.05 | 348.28 | 421.49 | 348.18 | 422.32 | 348.2 | 424.72 | 348.24 |
| 425.24 | 348.24 | 433.2 | 348.15 | 434.77 | 348.12 | 435.04 | 348.12 | 436.46 | 348.09 |
| 454.75 | 347.89 | 460.01 | 347.74 | 461.59 | 347.72 | 462.89 | 347.68 | 463.8 | 347.64 |
| 466.36 | 347.52 | 467.53 | 347.49 | 467.87 | 347.49 | 472.66 | 347.46 | 473.53 | 347.46 |
| 474.37 | 347.5 | 475.01 | 347.51 | 476.09 | 347.54 | 478.1 | 347.56 | 478.8 | 347.56 |
| 480.83 | 347.6 | 481.29 | 347.6 | 482.61 | 347.63 | 484.39 | 347.63 | 485.5 | 347.66 |
| 487.87 | 347.7 | 492.27 | 347.75 | 496.41 | 347.79 | 505.42 | 347.8 | 509.97 | 347.8 |
| 512.8 | 347.77 | 513.75 | 347.75 | 514.85 | 347.71 | 515.13 | 347.69 | 516.51 | 347.67 |
| 517.9 | 347.67 | 519.42 | 347.66 | 522.79 | 347.67 | 528.89 | 347.66 | 530.68 | 347.77 |
| 531 | 347.77 | 531.73 | 347.75 | 532.18 | 347.75 | 533.11 | 347.67 | 533.41 | 347.61 |
| 533.89 | 347.57 | 534.68 | 347.58 | 535.21 | 347.57 | 536.18 | 347.57 | 537.44 | 347.59 |
| 537.96 | 347.61 | 540.25 | 347.61 | 541.46 | 347.63 | 543.93 | 347.72 | 544.48 | 347.68 |
| 546.35 | 347.66 | 546.87 | 347.62 | 547.72 | 347.53 | 552.12 | 347.14 | 552.75 | 347.08 |
| 553.45 | 346.96 | 556.1 | 346.46 | 557.02 | 346.29 | 557.31 | 346.27 | 559.76 | 346.16 |
| 560.34 | 346.17 | 561.42 | 346.17 | 562.49 | 346.18 | 563.91 | 346.2 | 566.42 | 346.23 |
| 567.54 | 346.28 | 571.15 | 346.5 | 572.85 | 346.62 | 575.49 | 346.72 | 578.63 | 346.9 |
| 579.76 | 346.9 | 580.17 | 346.91 | 591.35 | 346.99 | 591.5 | 346.99 | 602.28 | 347.02 |
| 604.05 | 347.02 | 604.58 | 347.01 | 605.05 | 346.99 | 610.38 | 346.65 | 610.44 | 346.64 |
| 617.93 | 346.16 | 621.16 | 346.14 | 623.2 | 346.25 | 624.4 | 346.29 | 625.55 | 346.36 |
| 625.75 | 346.38 | 628.53 | 346.57 | 631.12 | 346.73 | 631.59 | 346.75 | 632.53 | 346.74 |
| 633.41 | 346.78 | 633.89 | 346.81 | 634.6 | 346.84 | 634.64 | 346.85 | 635.73 | 346.85 |
| 635.93 | 346.84 | 636.41 | 346.8 | 636.92 | 346.77 | 639.12 | 346.69 | 640.53 | 346.63 |
| 643.58 | 346.57 | 644.86 | 346.51 | 645.71 | 346.45 | 647.68 | 346.32 | 655.83 | 345.83 |
| 656.22 | 345.79 | 659.67 | 345.51 | 661.14 | 345.47 | 663.64 | 345.53 | 664.71 | 345.58 |
| 665.18 | 345.61 | 665.74 | 345.63 | 667.15 | 345.72 | 670.14 | 345.9 | 671.82 | 345.84 |
| 672.58 | 345.86 | 672.93 | 345.88 | 674 | 345.91 | 674.66 | 345.9 | 674.97 | 345.88 |
| 675.39 | 345.87 | 678.02 | 346.01 | 678.7 | 346.01 | 680.72 | 345.9 | 681.3 | 345.86 |
| 682.17 | 345.82 | 683.16 | 345.75 | 686.77 | 345.56 | 688.64 | 345.5 | 689.31 | 345.49 |
| 690.5 | 345.41 | 692.07 | 345.29 | 692.6 | 345.27 | 698.39 | 345.28 | 700.78 | 345.29 |
| 703.77 | 345.3 | 707.19 | 345.3 | 708.45 | 345.31 | 708.95 | 345.33 | 709.63 | 345.33 |
| 710.07 | 345.36 | 711.01 | 345.38 | 711.66 | 345.38 | 711.78 | 345.39 | 712.23 | 345.39 |
| 713.34 | 345.42 | 713.95 | 345.43 | 716.34 | 345.48 | 720.35 | 345.57 | 722.89 | 345.61 |
| 723.73 | 345.62 | 727.47 | 345.71 | 729.59 | 345.75 | 731.33 | 345.79 | 737.37 | 345.9 |
| 738.93 | 345.92 | 743.05 | 345.98 | 744.65 | 345.97 | 749.26 | 345.84 | 751.24 | 345.74 |
| 752.91 | 345.73 | 761.33 | 345.26 | 771.7 | 345.2 | 772.35 | 345.22 | 772.69 | 345.21 |
| 772.82 | 345.24 | 773.99 | 345.32 | 774.54 | 345.34 | 775.09 | 345.37 | 775.32 | 345.36 |
| 778.43 | 345.32 | 778.84 | 345.25 | 778.96 | 345.24 | 779.19 | 345.18 | 779.27 | 345.12 |
| 779.77 | 345.03 | 780.35 | 345.08 | 781.81 | 345.1 | 782.58 | 345.13 | 782.87 | 345.13 |
| 783.23 | 345.11 | 784.06 | 345.08 | 785.16 | 345.09 | 786.51 | 345.15 | 789.1 | 345.19 |
| 790.1 | 345.26 | 791.12 | 345.31 | 793 | 345.41 | 795.64 | 345.49 | 795.85 | 345.5 |
| 796.76 | 345.52 | 797.65 | 345.53 | 798.12 | 345.53 | 800.22 | 345.49 | 800.75 | 345.46 |
| 800.82 | 345.44 | 801.35 | 345.41 | 802.41 | 345.34 | 805.22 | 345.16 | 808.5 | 345.06 |
| 809 | 345.03 | 809.49 | 344.99 | 809.85 | 344.9 | 809.96 | 344.89 | 812.21 | 344.89 |
| 812.36 | 344.9 | 812.87 | 344.89 | 813.74 | 344.93 | 815.08 | 344.92 | 816.96 | 344.96 |
| 817.7 | 345.06 | 820.13 | 345.15 | 820.26 | 345.16 | 822.19 | 345.23 | 823.84 | 345.27 |
| 824.31 | 345.27 | 824.96 | 345.25 | 825.19 | 345.25 | 827.76 | 345.37 | 827.96 | 345.37 |
| 829.32 | 345.42 | 831.4 | 345.45 | 832.05 | 345.42 | 832.53 | 345.45 | 833.71 | 345.43 |
| 834.07 | 345.42 | 836.15 | 345.33 | 838.21 | 345.22 | 838.68 | 345.19 | 849.15 | 344.76 |
| 854.99 | 344.53 | 855.98 | 344.49 | 857.43 | 344.44 | 860.05 | 344.43 | 860.68 | 344.35 |
| 862.04 | 344.14 | 862.37 | 344.08 | 863.48 | 344.01 | 865.14 | 343.98 | 867.37 | 343.97 |
| 869.14 | 344.06 | 871.02 | 344.16 | 873.39 | 344.31 | 873.67 | 344.33 | 875.64 | 344.44 |
| 876.04 | 344.49 | 876.61 | 344.54 | 878.04 | 344.69 | 878.34 | 344.69 | 881.4 | 344.66 |
| 883.8 | 344.63 | 885.81 | 344.62 | 886.58 | 344.58 | 887.34 | 344.54 | 888.24 | 344.53 |
| 895.18 | 344.47 | 895.55 | 344.47 | 895.98 | 344.45 | 898.73 | 344.25 | 907.51 | 344.26 |
| 909.16 | 344.36 | 910.61 | 344.44 | 912.53 | 344.54 | 913.68 | 344.58 | 918.5 | 344.83 |
| 919.18 | 344.83 | 920.04 | 344.87 | 920.67 | 344.89 | 921.62 | 344.9 | 926.68 | 344.92 |
| 935.24 | 344.98 | 936.91 | 344.98 | 937.9 | 344.95 | 941.24 | 344.79 | 944.8 | 344.6 |
| 948.38 | 344.38 | 948.75 | 344.35 | 950.57 | 344.18 | 957.75 | 343.57 | 963.29 | 343.55 |
| 963.81 | 343.55 | 964.1 | 343.54 | 964.78 | 343.54 | 965.01 | 343.53 | 966.44 | 343.53 |
| 966.83 | 343.54 | 967.44 | 343.54 | 979.58 | 343.57 | 980.65 | 343.57 | 983.78 | 343.86 |
| 985.74 | 343.94 | 986.72 | 343.95 | 993.05 | 343.91 | 995.34 | 343.9 | 998.83 | 343.83 |
| 1001.7 | 343.73 | 1002.66 | 343.68 | 1006.15 | 343.53 | 1007.17 | 343.36 | 1011.36 | 342.75 |
| 1011.52 | 342.73 | 1014.81 | 342.53 | 1015.37 | 342.5 | 1016.42 | 342.43 | 1018.8 | 342.43 |
| 1023.87 | 342.22 | 1025.89 | 342.13 | 1027.98 | 342.05 | 1032.73 | 342.07 | 1034.99 | 342.06 |
| 1043.68 | 342.17 | 1044.11 | 342.18 | 1047.32 | 342.27 | 1048.9 | 342.28 | 1058.58 | 342.55 |
| 1061.35 | 342.64 | 1062.7 | 342.68 | 1064.09 | 342.71 | 1065.03 | 342.72 | 1067.34 | 342.78 |
| 1069.17 | 342.83 | 1070.71 | 342.99 | 1071.73 | 343.11 | 1072.11 | 343.16 | 1073.85 | 343.37 |
| 1077.82 | 343.59 | 1078.38 | 343.64 | 1078.7 | 343.65 | 1078.79 | 343.67 | 1079.39 | 343.71 |
| 1080.52 | 343.7 | 1085.43 | 343.61 | 1087.33 | 343.55 | 1088.84 | 343.47 | 1091.79 | 343.45 |
| 1092.19 | 343.48 | 1092.61 | 343.5 | 1094.77 | 343.52 | 1095.49 | 343.54 | 1104.77 | 344.26 |
| 1104.96 | 344.27 | 1110.07 | 344.62 | 1117.07 | 345.07 | 1122.44 | 345.1 | 1131.23 | 345.1 |
| 1145.91 | 344.45 | 1146.3 | 344.43 | 1146.57 | 344.43 | 1147.4 | 344.5 | 1147.89 | 344.53 |
| 1150.61 | 344.77 | 1152.51 | 344.95 | 1154.87 | 345.2 | 1155.36 | 345.25 | 1156.43 | 345.46 |
| 1159.64 | 346.06 | 1161.88 | 346.56 | 1164.4 | 347.51 | 1164.79 | 347.66 | 1166.91 | 348.45 |
| 1167.62 | 348.82 | 1168.8 | 349.26 | 1169.82 | 349.69 | 1170.78 | 350.11 | 1172.73 | 350.91 |
| 1173.22 | 351.09 | 1175.2 | 351.83 | 1177.57 | 352.74 | 1179.63 | 353.55 | 1180.96 | 354.09 |
| 1181.81 | 354.42 | 1183.52 | 355.16 | 1183.86 | 355.3 | 1186.21 | 356.19 | 1189.69 | 357.26 |
| 1192.41 | 358.12 | 1193.25 | 358.39 | 1194.26 | 358.73 | 1195.38 | 359.09 | 1196.37 | 359.28 |
| 1197.72 | 359.55 | 1199.34 | 359.88 | 1199.86 | 359.98 | 1200.41 | 360.06 | 1200.73 | 360.08 |
| 1201.13 | 360.16 | 1201.86 | 360.14 | 1202.4 | 360.15 | 1205.09 | 359.92 | 1207.34 | 359.8 |
| 1207.77 | 359.81 | 1208.64 | 359.79 | 1209.33 | 359.72 | 1209.6 | 359.71 | 1209.87 | 359.76 |
| 1211.76 | 360.35 | 1213.4 | 360.74 | 1213.84 | 360.83 | 1214.38 | 360.92 | 1214.62 | 360.94 |
| 1215.52 | 361.05 | 1216.89 | 361.09 | 1217.98 | 361.06 | 1218.32 | 361.06 | 1219.14 | 361.11 |
| 1219.51 | 361.19 | 1221.82 | 361.6 | 1222.41 | 361.7 | 1223.93 | 361.95 | 1224.14 | 361.96 |
| 1224.74 | 362.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 262.17 | .05 | 635.93 | .04 | 1167.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 635.93 | 1167.62 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5075.51*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 251.24 | 352.59 | 252.11 | 352.6 | 252.78 | 352.59 | 253.43 | 352.59 | 256.58 | 352.55 |
| 257.77 | 352.54 | 259.12 | 352.55 | 259.66 | 352.51 | 260.34 | 352.48 | 262.23 | 352.35 |
| 262.84 | 352.3 | 264.27 | 352.15 | 266.94 | 351.82 | 268.62 | 351.58 | 272.24 | 351.04 |
| 282.9 | 350.18 | 283.96 | 350.13 | 289.57 | 349.93 | 290.78 | 349.89 | 292.84 | 349.83 |
| 293.78 | 349.81 | 296.45 | 349.69 | 296.89 | 349.66 | 297.64 | 349.63 | 299.44 | 349.55 |
| 305.57 | 349.31 | 306.54 | 349.28 | 312.58 | 349.03 | 315.36 | 348.95 | 317.49 | 348.91 |
| 318.99 | 348.91 | 319.34 | 348.93 | 319.6 | 348.92 | 320.02 | 348.88 | 320.61 | 348.85 |
| 322.13 | 348.8 | 322.47 | 348.78 | 328.71 | 348.54 | 334.58 | 348.42 | 335.86 | 348.37 |
| 336.27 | 348.36 | 337.39 | 348.36 | 339.51 | 348.34 | 339.71 | 348.33 | 344.18 | 348.32 |
| 344.3 | 348.31 | 348.44 | 348.29 | 348.7 | 348.28 | 350.34 | 348.27 | 364.56 | 348.15 |
| 374.65 | 348.02 | 374.99 | 347.99 | 375.42 | 347.99 | 376.53 | 348.02 | 380.52 | 348.02 |
| 382.39 | 347.98 | 383.46 | 348.01 | 384.07 | 348.01 | 384.43 | 348.02 | 385.59 | 348.01 |
| 387.3 | 348 | 389.96 | 347.99 | 395.51 | 348.02 | 399.98 | 348.11 | 401.48 | 348.15 |
| 401.98 | 348.15 | 403.95 | 348.17 | 404.55 | 348.17 | 405.27 | 348.18 | 405.33 | 348.17 |
| 407.25 | 348.17 | 408.58 | 348.19 | 409.29 | 348.19 | 409.38 | 348.2 | 409.96 | 348.2 |
| 411.23 | 348.15 | 411.95 | 348.13 | 413.06 | 348.12 | 414.83 | 348.04 | 415.57 | 348 |
| 416.43 | 348.03 | 417.56 | 348.06 | 418.9 | 348.08 | 419.44 | 348.08 | 427.65 | 347.98 |
| 429.27 | 347.95 | 429.54 | 347.94 | 431.01 | 347.92 | 449.88 | 347.7 | 455.3 | 347.55 |
| 457.59 | 347.52 | 458.81 | 347.48 | 459.22 | 347.45 | 461.85 | 347.33 | 463.06 | 347.3 |
| 465.01 | 347.29 | 468.35 | 347.26 | 469.25 | 347.26 | 470.12 | 347.3 | 471.88 | 347.33 |
| 473.96 | 347.35 | 474.68 | 347.35 | 476.15 | 347.38 | 477.25 | 347.38 | 478.61 | 347.42 |
| 480.45 | 347.41 | 481.59 | 347.44 | 484.04 | 347.49 | 488.58 | 347.54 | 492.84 | 347.56 |
| 502.14 | 347.56 | 506.83 | 347.55 | 509.75 | 347.51 | 510.73 | 347.49 | 511.87 | 347.45 |
| 512.16 | 347.43 | 513.57 | 347.4 | 515.01 | 347.4 | 516.57 | 347.39 | 520.05 | 347.39 |
| 526.22 | 347.37 | 526.48 | 347.37 | 527.65 | 347.45 | 528.52 | 347.49 | 528.75 | 347.47 |
| 529.6 | 347.47 | 530.7 | 347.39 | 530.93 | 347.34 | 531.5 | 347.28 | 532.32 | 347.29 |
| 533.16 | 347.27 | 534.94 | 347.3 | 535.7 | 347.32 | 538.07 | 347.32 | 539.31 | 347.34 |
| 540.72 | 347.39 | 541.86 | 347.42 | 542.42 | 347.39 | 544.35 | 347.37 | 544.9 | 347.33 |
| 545.76 | 347.25 | 550.3 | 346.86 | 550.95 | 346.81 | 551.67 | 346.69 | 554.41 | 346.21 |
| 555.36 | 346.04 | 555.66 | 346.02 | 558.19 | 345.92 | 558.78 | 345.92 | 559.23 | 345.93 |
| 559.9 | 345.93 | 562.47 | 345.95 | 565.06 | 345.98 | 566.21 | 346.02 | 569.94 | 346.24 |
| 571.69 | 346.35 | 574.41 | 346.44 | 577.65 | 346.61 | 578.82 | 346.61 | 579.23 | 346.62 |
| 590.77 | 346.7 | 590.92 | 346.7 | 602.04 | 346.74 | 603.61 | 346.73 | 604.41 | 346.73 |
| 604.9 | 346.71 | 610.4 | 346.37 | 610.46 | 346.37 | 618.19 | 345.89 | 621.52 | 345.87 |
| 623.62 | 345.97 | 624.86 | 346.01 | 626.25 | 346.09 | 629.12 | 346.29 | 631.79 | 346.44 |
| 632.27 | 346.46 | 633.25 | 346.45 | 634.64 | 346.51 | 634.88 | 346.53 | 635.54 | 346.56 |
| 636.51 | 346.56 | 636.75 | 346.54 | 637.75 | 346.48 | 639.96 | 346.4 | 641.37 | 346.34 |
| 644.43 | 346.28 | 645.72 | 346.22 | 646.58 | 346.16 | 649.4 | 345.99 | 656.74 | 345.57 |
| 657.14 | 345.53 | 660.6 | 345.26 | 662.08 | 345.22 | 664.59 | 345.29 | 665.66 | 345.33 |
| 666.14 | 345.36 | 666.7 | 345.38 | 668.11 | 345.47 | 671.12 | 345.64 | 672.8 | 345.59 |
| 673.57 | 345.62 | 674.99 | 345.66 | 675.46 | 345.66 | 675.97 | 345.63 | 676.39 | 345.62 |
| 678.46 | 345.73 | 679.34 | 345.76 | 679.72 | 345.75 | 681.75 | 345.64 | 682.33 | 345.6 |
| 682.61 | 345.6 | 684.11 | 345.5 | 684.2 | 345.49 | 687.82 | 345.3 | 690.38 | 345.23 |
| 691.57 | 345.16 | 693.15 | 345.05 | 693.68 | 345.03 | 699.5 | 345.04 | 701.9 | 345.05 |
| 704.9 | 345.06 | 707.68 | 345.06 | 708.34 | 345.07 | 709.6 | 345.08 | 710.11 | 345.09 |
| 710.79 | 345.09 | 711.23 | 345.12 | 712.17 | 345.15 | 712.83 | 345.14 | 712.95 | 345.15 |
| 713.71 | 345.16 | 717.53 | 345.24 | 718.83 | 345.26 | 721.56 | 345.32 | 724.11 | 345.36 |
| 724.96 | 345.37 | 728.71 | 345.45 | 730.85 | 345.48 | 732.59 | 345.52 | 738.65 | 345.62 |
| 744.36 | 345.69 | 745.97 | 345.68 | 749.86 | 345.56 | 750.61 | 345.54 | 752.59 | 345.42 |
| 754.27 | 345.41 | 762.73 | 344.94 | 773.15 | 344.87 | 773.8 | 344.89 | 774.14 | 344.88 |
| 774.27 | 344.9 | 774.97 | 344.96 | 775.44 | 344.99 | 776.55 | 345.03 | 776.78 | 345.03 |
| 779.9 | 344.98 | 780.32 | 344.92 | 780.67 | 344.85 | 780.75 | 344.79 | 781.25 | 344.71 |
| 781.84 | 344.75 | 783.3 | 344.78 | 784.08 | 344.81 | 784.37 | 344.81 | 785.56 | 344.75 |
| 786.67 | 344.76 | 788.03 | 344.81 | 788.11 | 344.82 | 790.63 | 344.88 | 792.66 | 345 |
| 794.54 | 345.1 | 797.2 | 345.18 | 797.41 | 345.19 | 799.21 | 345.21 | 799.69 | 345.21 |
| 801.8 | 345.18 | 802.33 | 345.15 | 802.4 | 345.13 | 802.93 | 345.1 | 803.54 | 345.05 |
| 806.82 | 344.84 | 810.11 | 344.73 | 810.62 | 344.7 | 811.11 | 344.66 | 811.47 | 344.57 |
| 811.81 | 344.56 | 813.84 | 344.56 | 813.99 | 344.57 | 814.5 | 344.57 | 815.38 | 344.6 |
| 816.72 | 344.58 | 818.61 | 344.63 | 818.83 | 344.65 | 819.36 | 344.72 | 821.8 | 344.81 |
| 821.93 | 344.82 | 823.86 | 344.89 | 825.53 | 344.92 | 826.89 | 344.91 | 829.46 | 345.02 |
| 829.67 | 345.02 | 831.03 | 345.06 | 832.49 | 345.09 | 833.29 | 345.09 | 833.99 | 345.07 |
| 834.05 | 345.09 | 835.44 | 345.08 | 835.8 | 345.06 | 837.89 | 344.97 | 839.96 | 344.86 |
| 840.43 | 344.83 | 850.95 | 344.39 | 856.82 | 344.16 | 857.81 | 344.12 | 859.27 | 344.07 |
| 861.9 | 344.06 | 862.53 | 343.99 | 863.9 | 343.79 | 864.23 | 343.73 | 864.5 | 343.7 |
| 865.34 | 343.66 | 865.93 | 343.64 | 867.01 | 343.63 | 869.26 | 343.62 | 870.04 | 343.65 |
| 871.04 | 343.71 | 872.92 | 343.8 | 875.31 | 343.95 | 875.59 | 343.97 | 877.56 | 344.08 |
| 879.97 | 344.3 | 880.27 | 344.31 | 883.35 | 344.26 | 885.76 | 344.23 | 887.43 | 344.22 |
| 887.78 | 344.21 | 888.25 | 344.18 | 888.96 | 344.16 | 889.31 | 344.14 | 890.23 | 344.12 |
| 891.4 | 344.12 | 892.48 | 344.1 | 897.19 | 344.06 | 898 | 344.05 | 900.76 | 343.85 |
| 909.58 | 343.87 | 912.69 | 344.04 | 914.62 | 344.14 | 915.78 | 344.18 | 920.62 | 344.42 |
| 921.3 | 344.42 | 922.16 | 344.46 | 923.76 | 344.48 | 928.84 | 344.5 | 937.43 | 344.58 |
| 939.12 | 344.58 | 940.1 | 344.55 | 943.46 | 344.4 | 944.2 | 344.37 | 947.04 | 344.22 |
| 950.64 | 344.01 | 951.01 | 343.97 | 952.83 | 343.82 | 960.05 | 343.22 | 965.62 | 343.19 |
| 966.43 | 343.19 | 967.11 | 343.18 | 969.17 | 343.18 | 969.79 | 343.19 | 981.98 | 343.22 |
| 983.05 | 343.22 | 986.2 | 343.5 | 988.17 | 343.58 | 989.16 | 343.59 | 995.51 | 343.55 |
| 997.82 | 343.53 | 1000.83 | 343.48 | 1001.32 | 343.47 | 1004.2 | 343.37 | 1005.16 | 343.32 |
| 1008.67 | 343.17 | 1009.7 | 343.01 | 1013.9 | 342.43 | 1014.07 | 342.4 | 1017.37 | 342.21 |
| 1018.99 | 342.12 | 1021.38 | 342.11 | 1026.47 | 341.9 | 1028.21 | 341.82 | 1029.79 | 341.77 |
| 1030.61 | 341.74 | 1035.24 | 341.76 | 1037.44 | 341.75 | 1045.93 | 341.85 | 1046.34 | 341.86 |
| 1049.47 | 341.95 | 1051.02 | 341.96 | 1060.46 | 342.23 | 1064.17 | 342.34 | 1065.28 | 342.37 |
| 1066.76 | 342.4 | 1069.01 | 342.46 | 1070.8 | 342.51 | 1072.31 | 342.68 | 1073.3 | 342.81 |
| 1073.67 | 342.87 | 1075.36 | 343.1 | 1079.24 | 343.34 | 1080.77 | 343.47 | 1081.88 | 343.45 |
| 1086.67 | 343.38 | 1088.52 | 343.32 | 1089.61 | 343.26 | 1090 | 343.25 | 1091.31 | 343.23 |
| 1092.87 | 343.23 | 1093.67 | 343.28 | 1095.79 | 343.29 | 1096.49 | 343.31 | 1105.54 | 344.01 |
| 1105.73 | 344.02 | 1110.71 | 344.36 | 1114.05 | 344.58 | 1117.54 | 344.8 | 1122.79 | 344.83 |
| 1131.36 | 344.83 | 1145.69 | 344.22 | 1146.07 | 344.2 | 1146.33 | 344.2 | 1147.14 | 344.27 |
| 1147.62 | 344.3 | 1150.28 | 344.53 | 1152.13 | 344.71 | 1154.91 | 345 | 1155.96 | 345.2 |
| 1159.09 | 345.79 | 1159.66 | 345.91 | 1161.27 | 346.26 | 1163.74 | 347.18 | 1164.53 | 347.48 |
| 1166.18 | 348.08 | 1166.88 | 348.44 | 1168.08 | 348.87 | 1169.11 | 349.28 | 1170.09 | 349.7 |
| 1170.48 | 349.86 | 1172.06 | 350.48 | 1172.57 | 350.65 | 1174.58 | 351.37 | 1176.98 | 352.26 |
| 1179.08 | 353.06 | 1179.4 | 353.19 | 1181.28 | 353.91 | 1183.02 | 354.63 | 1183.38 | 354.77 |
| 1185.76 | 355.65 | 1189.29 | 356.71 | 1191.07 | 357.25 | 1192.06 | 357.57 | 1192.91 | 357.83 |
| 1193.93 | 358.17 | 1195.08 | 358.54 | 1196.08 | 358.73 | 1197.45 | 359 | 1199.62 | 359.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1200.18 | 359.53 | 1200.5 | 359.56 | 1200.92 | 359.64 | 1201.76 | 359.64 | 1202.21 | 359.65 |
| 1203.52 | 359.57 | 1203.85 | 359.54 | 1204.94 | 359.49 | 1206.29 | 359.44 | 1207.22 | 359.41 |
| 1207.66 | 359.43 | 1208.54 | 359.42 | 1209.25 | 359.36 | 1209.61 | 359.36 | 1210.14 | 359.5 |
| 1210.18 | 359.52 | 1211.71 | 359.97 | 1213.38 | 360.35 | 1213.83 | 360.44 | 1214.38 | 360.52 |
| 1214.62 | 360.54 | 1215.53 | 360.64 | 1216.92 | 360.69 | 1218.03 | 360.65 | 1218.38 | 360.65 |
| 1219.21 | 360.7 | 1219.59 | 360.78 | 1221.93 | 361.18 | 1222.54 | 361.26 | 1223.84 | 361.47 |
| 1224.9 | 361.59 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 251.24 | .05 | 636.75 | .04 | 1166.88 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 636.75 | 1166.88 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5055.58*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 240.32 | 352.42 | 241.22 | 352.42 | 241.9 | 352.41 | 242.58 | 352.41 | 245.82 | 352.37 |
| 247.05 | 352.36 | 248.44 | 352.37 | 248.99 | 352.33 | 249.69 | 352.3 | 251.64 | 352.18 |
| 252.35 | 352.13 | 253.75 | 351.99 | 256.78 | 351.64 | 258.22 | 351.45 | 261.95 | 350.92 |
| 272.94 | 350.07 | 274.03 | 350.03 | 279.81 | 349.83 | 280.45 | 349.82 | 281.06 | 349.79 |
| 283.18 | 349.74 | 284.16 | 349.72 | 286.9 | 349.6 | 288.13 | 349.53 | 289.99 | 349.46 |
| 296.3 | 349.23 | 303.52 | 348.94 | 306.39 | 348.86 | 308.58 | 348.82 | 308.77 | 348.83 |
| 310.13 | 348.83 | 310.49 | 348.85 | 310.76 | 348.84 | 311.19 | 348.8 | 311.8 | 348.77 |
| 313.36 | 348.72 | 313.71 | 348.7 | 320.15 | 348.46 | 326.2 | 348.34 | 326.7 | 348.31 |
| 327.93 | 348.27 | 329.09 | 348.27 | 331.28 | 348.25 | 331.81 | 348.24 | 336.09 | 348.22 |
| 336.21 | 348.21 | 340.48 | 348.19 | 340.75 | 348.18 | 342.43 | 348.17 | 357.09 | 348.03 |
| 367.49 | 347.89 | 367.84 | 347.85 | 369 | 347.87 | 369.43 | 347.89 | 372.23 | 347.9 |
| 373.53 | 347.9 | 375.47 | 347.86 | 376.56 | 347.89 | 378.76 | 347.89 | 380.52 | 347.86 |
| 383.27 | 347.85 | 388.98 | 347.88 | 389.61 | 347.88 | 390.1 | 347.89 | 391.03 | 347.92 |
| 393.59 | 347.96 | 395.13 | 348 | 395.65 | 348 | 397.68 | 348.03 | 399.04 | 348.03 |
| 399.25 | 348.02 | 400.09 | 348.03 | 400.29 | 348.02 | 401.08 | 348.02 | 401.87 | 348.04 |
| 403.12 | 348.04 | 403.18 | 348.05 | 403.87 | 348.05 | 405.18 | 347.99 | 405.92 | 347.97 |
| 407.06 | 347.96 | 409.66 | 347.83 | 410.54 | 347.86 | 412.44 | 347.91 | 413.08 | 347.92 |
| 413.64 | 347.92 | 422.1 | 347.81 | 423.77 | 347.78 | 424.05 | 347.77 | 425.57 | 347.75 |
| 445.01 | 347.51 | 450.6 | 347.37 | 452.15 | 347.34 | 452.95 | 347.33 | 454.21 | 347.29 |
| 454.63 | 347.26 | 457.34 | 347.14 | 458.59 | 347.11 | 460.33 | 347.1 | 460.6 | 347.09 |
| 464.04 | 347.06 | 464.94 | 347.05 | 464.97 | 347.06 | 465.86 | 347.09 | 466.54 | 347.1 |
| 467.68 | 347.13 | 469.82 | 347.13 | 471.13 | 347.15 | 472.08 | 347.17 | 473.21 | 347.17 |
| 474.62 | 347.21 | 476.51 | 347.2 | 477.68 | 347.23 | 480.21 | 347.27 | 484.89 | 347.32 |
| 489.28 | 347.34 | 498.86 | 347.32 | 503.69 | 347.29 | 506.7 | 347.25 | 507.71 | 347.23 |
| 508.88 | 347.19 | 509.18 | 347.17 | 510.64 | 347.14 | 512.13 | 347.14 | 513.73 | 347.12 |
| 517.32 | 347.11 | 523.68 | 347.07 | 523.81 | 347.07 | 525.15 | 347.17 | 526.05 | 347.21 |
| 526.28 | 347.19 | 527.3 | 347.18 | 528.29 | 347.1 | 528.61 | 347.04 | 529.12 | 346.99 |
| 529.96 | 347 | 530.83 | 346.98 | 532.66 | 347 | 533.44 | 347.03 | 535.88 | 347.03 |
| 537.16 | 347.05 | 538.61 | 347.1 | 539.79 | 347.13 | 540.37 | 347.1 | 542.54 | 347.08 |
| 543.81 | 346.96 | 548.49 | 346.58 | 549.16 | 346.54 | 552.72 | 345.96 | 553.16 | 345.88 |
| 553.7 | 345.8 | 554.01 | 345.78 | 556.61 | 345.68 | 558.38 | 345.68 | 561.03 | 345.7 |
| 561.93 | 345.7 | 563.7 | 345.72 | 564.88 | 345.77 | 568.72 | 345.97 | 570.52 | 346.08 |
| 573.33 | 346.17 | 576.67 | 346.32 | 578.3 | 346.33 | 590.18 | 346.41 | 590.35 | 346.41 |
| 601.81 | 346.45 | 603.69 | 346.45 | 604.75 | 346.43 | 610.42 | 346.09 | 610.48 | 346.09 |
| 618.44 | 345.63 | 621.88 | 345.61 | 624.32 | 345.71 | 624.76 | 345.71 | 625.32 | 345.73 |
| 626.75 | 345.81 | 629.71 | 346 | 632.46 | 346.15 | 632.95 | 346.17 | 633.96 | 346.16 |
| 635.65 | 346.23 | 636.32 | 346.27 | 636.82 | 346.27 | 637.57 | 346.25 | 638.57 | 346.19 |
| 642.21 | 346.06 | 645.29 | 345.99 | 646.58 | 345.93 | 647.44 | 345.87 | 650.28 | 345.7 |
| 657.48 | 345.32 | 658.05 | 345.27 | 661.53 | 345.02 | 661.59 | 345.01 | 662.6 | 344.98 |
| 663.02 | 344.98 | 665.54 | 345.04 | 666.61 | 345.08 | 672.1 | 345.39 | 673.17 | 345.36 |
| 673.79 | 345.35 | 675.99 | 345.41 | 676.46 | 345.41 | 676.97 | 345.38 | 677.39 | 345.37 |
| 679.47 | 345.47 | 680.36 | 345.5 | 680.92 | 345.49 | 682.77 | 345.38 | 683.64 | 345.34 |
| 685.14 | 345.24 | 685.23 | 345.23 | 688.88 | 345.05 | 690.77 | 344.99 | 691.44 | 344.98 |
| 692.64 | 344.91 | 694.23 | 344.8 | 694.76 | 344.78 | 700.6 | 344.8 | 703.02 | 344.81 |
| 706.03 | 344.82 | 706.98 | 344.82 | 708.83 | 344.83 | 709.48 | 344.83 | 710.75 | 344.84 |
| 711.27 | 344.86 | 711.95 | 344.86 | 712.39 | 344.89 | 713.34 | 344.91 | 714.12 | 344.91 |
| 714.88 | 344.92 | 715.69 | 344.94 | 718.72 | 344.99 | 720.03 | 345.02 | 722.77 | 345.07 |
| 726.18 | 345.11 | 729.95 | 345.19 | 732.1 | 345.22 | 733.85 | 345.26 | 739.94 | 345.35 |
| 741.52 | 345.36 | 745.68 | 345.41 | 747.29 | 345.39 | 751.2 | 345.25 | 751.95 | 345.23 |
| 753.94 | 345.1 | 755.62 | 345.08 | 764.12 | 344.63 | 774.59 | 344.54 | 775.25 | 344.56 |
| 775.59 | 344.55 | 775.72 | 344.57 | 776.43 | 344.63 | 778.01 | 344.69 | 778.24 | 344.69 |
| 781.42 | 344.64 | 781.91 | 344.57 | 782.23 | 344.47 | 782.74 | 344.38 | 783.32 | 344.43 |
| 784.79 | 344.46 | 785.57 | 344.49 | 785.87 | 344.49 | 787.06 | 344.43 | 788.18 | 344.43 |
| 789.54 | 344.48 | 789.62 | 344.49 | 792.15 | 344.56 | 793.16 | 344.63 | 796.08 | 344.8 |
| 798.75 | 344.87 | 798.96 | 344.88 | 800.78 | 344.9 | 801.26 | 344.9 | 803.37 | 344.86 |
| 803.9 | 344.83 | 804.51 | 344.78 | 805.13 | 344.74 | 805.58 | 344.7 | 808.42 | 344.52 |
| 811.73 | 344.4 | 812.24 | 344.37 | 812.73 | 344.33 | 813.09 | 344.24 | 813.44 | 344.23 |
| 815.47 | 344.23 | 816.14 | 344.24 | 817.01 | 344.27 | 818.37 | 344.25 | 820.27 | 344.29 |
| 821.02 | 344.38 | 823.47 | 344.47 | 823.59 | 344.48 | 825.54 | 344.54 | 827.21 | 344.58 |
| 828.58 | 344.57 | 831.16 | 344.67 | 831.37 | 344.67 | 832.74 | 344.71 | 834.21 | 344.74 |
| 835.01 | 344.74 | 835.71 | 344.72 | 835.98 | 344.74 | 837.17 | 344.72 | 837.53 | 344.7 |
| 839.63 | 344.61 | 841.71 | 344.5 | 842.18 | 344.47 | 852.75 | 344.03 | 858.65 | 343.8 |
| 859.64 | 343.76 | 861.11 | 343.71 | 863.75 | 343.7 | 864.38 | 343.62 | 865.76 | 343.43 |
| 866.09 | 343.37 | 866.37 | 343.35 | 867.21 | 343.31 | 867.79 | 343.29 | 868.89 | 343.27 |
| 871.14 | 343.26 | 871.36 | 343.28 | 871.93 | 343.3 | 874.82 | 343.44 | 877.22 | 343.59 |
| 877.5 | 343.61 | 879.48 | 343.71 | 880.03 | 343.77 | 880.46 | 343.8 | 881.9 | 343.92 |
| 882.21 | 343.93 | 885.3 | 343.87 | 887.72 | 343.83 | 889.4 | 343.81 | 889.74 | 343.81 |
| 890.53 | 343.76 | 891.29 | 343.73 | 892.21 | 343.71 | 893.38 | 343.71 | 899.2 | 343.66 |
| 900.02 | 343.65 | 902.79 | 343.46 | 911.65 | 343.48 | 914.07 | 343.61 | 914.77 | 343.64 |
| 916.71 | 343.74 | 917.88 | 343.77 | 922.74 | 344 | 923.43 | 344 | 924.29 | 344.04 |
| 924.93 | 344.06 | 925.89 | 344.06 | 931 | 344.09 | 939.63 | 344.17 | 941.63 | 344.18 |
| 942.31 | 344.16 | 945.69 | 344.02 | 946.43 | 343.98 | 949.28 | 343.84 | 952.89 | 343.63 |
| 955.1 | 343.45 | 962.35 | 342.87 | 967.94 | 342.84 | 968.76 | 342.84 | 969.44 | 342.83 |
| 971.52 | 342.83 | 972.13 | 342.84 | 984.39 | 342.87 | 985.46 | 342.87 | 988.62 | 343.14 |
| 990.6 | 343.22 | 991.59 | 343.22 | 997.97 | 343.19 | 1000.29 | 343.17 | 1003.32 | 343.12 |
| 1003.81 | 343.11 | 1006.7 | 343.01 | 1011.2 | 342.82 | 1012.16 | 342.67 | 1012.22 | 342.67 |
| 1016.45 | 342.1 | 1016.62 | 342.08 | 1019.93 | 341.89 | 1021.56 | 341.8 | 1023.96 | 341.79 |
| 1029.08 | 341.58 | 1031.12 | 341.49 | 1032.41 | 341.45 | 1033.23 | 341.42 | 1037.75 | 341.45 |
| 1039.9 | 341.43 | 1048.17 | 341.53 | 1048.58 | 341.55 | 1051.63 | 341.63 | 1053.14 | 341.64 |
| 1062.35 | 341.9 | 1065.96 | 342.01 | 1067.04 | 342.04 | 1068.49 | 342.07 | 1070.69 | 342.13 |
| 1072.43 | 342.18 | 1073.9 | 342.37 | 1074.87 | 342.51 | 1075.23 | 342.58 | 1076.88 | 342.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1080.66 | 343.1 | 1081.2 | 343.15 | 1082.16 | 343.22 | 1083.23 | 343.21 | 1087.91 | 343.14 |
| 1088.86 | 343.12 | 1089.71 | 343.09 | 1090.77 | 343.03 | 1091.15 | 343.02 | 1092.43 | 343.01 |
| 1094.17 | 343.01 | 1094.74 | 343.05 | 1096.8 | 343.07 | 1097.48 | 343.09 | 1106.31 | 343.76 |
| 1106.5 | 343.77 | 1111.36 | 344.1 | 1114.61 | 344.31 | 1118.02 | 344.52 | 1123.13 | 344.55 |
| 1127.86 | 344.55 | 1130.84 | 344.56 | 1131.49 | 344.56 | 1145.46 | 343.99 | 1146.09 | 343.97 |
| 1146.88 | 344.03 | 1149.94 | 344.29 | 1151.75 | 344.47 | 1154.46 | 344.75 | 1155.48 | 344.95 |
| 1158.53 | 345.51 | 1159.1 | 345.63 | 1160.67 | 345.97 | 1163.07 | 346.86 | 1165.45 | 347.72 |
| 1166.13 | 348.06 | 1167.35 | 348.48 | 1168.4 | 348.88 | 1169.39 | 349.29 | 1171.4 | 350.05 |
| 1171.91 | 350.22 | 1173.95 | 350.92 | 1176.12 | 351.69 | 1176.23 | 351.72 | 1176.95 | 351.99 |
| 1178.52 | 352.56 | 1178.85 | 352.69 | 1179.89 | 353.08 | 1180.76 | 353.4 | 1182.89 | 354.24 |
| 1184.71 | 354.89 | 1185.31 | 355.11 | 1188.9 | 356.15 | 1191.71 | 357.01 | 1192.57 | 357.27 |
| 1193.61 | 357.61 | 1194.77 | 357.98 | 1195.79 | 358.18 | 1197.18 | 358.46 | 1199.39 | 358.92 |
| 1199.96 | 359 | 1200.28 | 359.03 | 1200.7 | 359.12 | 1201.56 | 359.13 | 1202.01 | 359.16 |
| 1203.95 | 359.07 | 1204.79 | 359.05 | 1206.79 | 359.02 | 1207.11 | 359.02 | 1207.55 | 359.05 |
| 1208.45 | 359.05 | 1209.16 | 359 | 1209.44 | 359 | 1209.72 | 359.05 | 1211.67 | 359.59 |
| 1213.36 | 359.95 | 1213.81 | 360.04 | 1214.37 | 360.12 | 1214.62 | 360.13 | 1214.98 | 360.18 |
| 1215.54 | 360.24 | 1216.96 | 360.28 | 1218.09 | 360.25 | 1218.43 | 360.25 | 1219.28 | 360.3 |
| 1219.66 | 360.37 | 1222.11 | 360.76 | 1222.66 | 360.83 | 1223.98 | 361.03 | 1224.44 | 361.07 |
| 1225.06 | 361.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 240.32 | .05 | 637.57 | .04 | 1166.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 637.57 | 1166.13 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5035.66*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 229.39 | 352.24 | 230.32 | 352.24 | 231.02 | 352.23 | 231.72 | 352.23 | 235.06 | 352.19 |
| 236.33 | 352.18 | 237.76 | 352.19 | 238.33 | 352.15 | 239.05 | 352.13 | 241.7 | 351.97 |
| 243.22 | 351.84 | 245.63 | 351.58 | 246.34 | 351.5 | 247.83 | 351.31 | 251.67 | 350.8 |
| 262.98 | 349.97 | 264.1 | 349.92 | 270.72 | 349.72 | 271.34 | 349.7 | 273.52 | 349.65 |
| 274.53 | 349.63 | 277.36 | 349.51 | 278.62 | 349.44 | 280.53 | 349.37 | 287.04 | 349.14 |
| 288.07 | 349.1 | 294.47 | 348.86 | 294.52 | 348.85 | 297.42 | 348.78 | 299.68 | 348.74 |
| 301.27 | 348.75 | 301.64 | 348.77 | 301.92 | 348.76 | 302.36 | 348.72 | 302.99 | 348.7 |
| 304.6 | 348.64 | 304.96 | 348.62 | 311.58 | 348.38 | 317.81 | 348.25 | 318.33 | 348.22 |
| 319.6 | 348.18 | 320.79 | 348.18 | 323.05 | 348.16 | 323.59 | 348.15 | 332.51 | 348.09 |
| 332.79 | 348.08 | 334.53 | 348.06 | 349.61 | 347.91 | 360.33 | 347.76 | 360.47 | 347.73 |
| 361.14 | 347.72 | 362.32 | 347.75 | 365.2 | 347.77 | 366.55 | 347.77 | 368.1 | 347.75 |
| 368.54 | 347.75 | 369.66 | 347.77 | 370.7 | 347.77 | 371.93 | 347.76 | 373.74 | 347.73 |
| 376.57 | 347.71 | 382.45 | 347.73 | 387.2 | 347.82 | 388.78 | 347.86 | 389.32 | 347.86 |
| 391.41 | 347.88 | 392.87 | 347.88 | 393.02 | 347.87 | 393.89 | 347.88 | 394.09 | 347.87 |
| 395.72 | 347.89 | 397.01 | 347.89 | 397.08 | 347.9 | 397.78 | 347.9 | 398.65 | 347.86 |
| 399.89 | 347.81 | 401.07 | 347.8 | 403.74 | 347.66 | 403.84 | 347.65 | 404.65 | 347.69 |
| 405.85 | 347.73 | 407.27 | 347.75 | 407.84 | 347.75 | 416.55 | 347.65 | 418.27 | 347.6 |
| 418.56 | 347.6 | 420.12 | 347.57 | 440.14 | 347.32 | 445.89 | 347.18 | 447.49 | 347.15 |
| 448.32 | 347.14 | 449.61 | 347.1 | 450.04 | 347.07 | 452.83 | 346.95 | 454.12 | 346.92 |
| 454.49 | 346.92 | 456.19 | 346.9 | 460.69 | 346.85 | 461.6 | 346.89 | 463.48 | 346.92 |
| 465.68 | 346.92 | 466.45 | 346.93 | 468.01 | 346.96 | 469.17 | 346.96 | 470.62 | 347 |
| 472.57 | 346.98 | 473.78 | 347.01 | 474.37 | 347.03 | 476.38 | 347.06 | 477.28 | 347.07 |
| 481.19 | 347.1 | 485.72 | 347.12 | 495.58 | 347.08 | 500.55 | 347.04 | 503.65 | 346.99 |
| 504.69 | 346.97 | 505.9 | 346.93 | 506.21 | 346.91 | 507.71 | 346.87 | 509.24 | 346.87 |
| 510.89 | 346.85 | 514.58 | 346.84 | 521.13 | 346.78 | 521.41 | 346.78 | 522.65 | 346.88 |
| 523.21 | 346.92 | 523.57 | 346.92 | 523.81 | 346.9 | 524.87 | 346.89 | 525.68 | 346.83 |
| 526.21 | 346.75 | 526.73 | 346.71 | 527.6 | 346.71 | 528.18 | 346.69 | 529.23 | 346.69 |
| 530.38 | 346.71 | 531.18 | 346.74 | 533.7 | 346.74 | 535.01 | 346.76 | 535.92 | 346.78 |
| 537.71 | 346.84 | 538.32 | 346.81 | 540.55 | 346.79 | 540.94 | 346.75 | 541.86 | 346.67 |
| 546.68 | 346.31 | 547.37 | 346.26 | 548.13 | 346.15 | 551.03 | 345.71 | 551.49 | 345.63 |
| 552.04 | 345.55 | 555.35 | 345.43 | 555.67 | 345.44 | 558.02 | 345.44 | 559.58 | 345.45 |
| 560.51 | 345.45 | 562.33 | 345.47 | 563.55 | 345.51 | 567.51 | 345.7 | 569.36 | 345.8 |
| 572.25 | 345.89 | 575.69 | 346.04 | 577.3 | 346.04 | 577.37 | 346.05 | 589.6 | 346.12 |
| 589.77 | 346.12 | 601.57 | 346.17 | 603.51 | 346.17 | 604.08 | 346.16 | 604.6 | 346.14 |
| 610.43 | 345.82 | 610.5 | 345.82 | 618.7 | 345.37 | 622.23 | 345.34 | 624.74 | 345.44 |
| 625.77 | 345.45 | 626.27 | 345.47 | 627.25 | 345.53 | 630.3 | 345.71 | 633.13 | 345.86 |
| 633.64 | 345.88 | 634.56 | 345.88 | 634.68 | 345.87 | 636.41 | 345.94 | 637.1 | 345.98 |
| 637.62 | 345.98 | 638.39 | 345.96 | 639.4 | 345.9 | 643.05 | 345.77 | 646.14 | 345.7 |
| 647.44 | 345.64 | 648.31 | 345.58 | 651.16 | 345.42 | 658.39 | 345.06 | 658.96 | 345.01 |
| 662.45 | 344.77 | 663.95 | 344.73 | 666.49 | 344.8 | 668.05 | 344.86 | 668.61 | 344.89 |
| 670.04 | 344.98 | 673.08 | 345.14 | 674.16 | 345.11 | 674.77 | 345.1 | 675.9 | 345.13 |
| 676.02 | 345.14 | 676.98 | 345.17 | 677.45 | 345.16 | 678.39 | 345.12 | 680.48 | 345.21 |
| 681.06 | 345.24 | 681.67 | 345.24 | 681.94 | 345.23 | 683.8 | 345.13 | 684.39 | 345.09 |
| 685.27 | 345.05 | 686.27 | 344.97 | 689.93 | 344.8 | 691.83 | 344.74 | 692.51 | 344.73 |
| 693.71 | 344.66 | 695.3 | 344.56 | 695.84 | 344.54 | 701.71 | 344.56 | 704.14 | 344.57 |
| 707.16 | 344.58 | 708.12 | 344.59 | 710.63 | 344.59 | 711.91 | 344.6 | 712.42 | 344.62 |
| 713.11 | 344.62 | 713.41 | 344.65 | 714.51 | 344.67 | 715.17 | 344.67 | 715.29 | 344.68 |
| 715.91 | 344.68 | 716.06 | 344.69 | 716.87 | 344.7 | 721.22 | 344.77 | 723.98 | 344.82 |
| 727.4 | 344.86 | 731.19 | 344.93 | 733.35 | 344.96 | 735.11 | 344.99 | 742.82 | 345.09 |
| 746.99 | 345.12 | 748.61 | 345.1 | 753.29 | 344.92 | 755.29 | 344.77 | 756.98 | 344.76 |
| 765.52 | 344.31 | 776.04 | 344.21 | 776.7 | 344.23 | 777.04 | 344.22 | 777.49 | 344.27 |
| 778.35 | 344.32 | 779.26 | 344.35 | 779.7 | 344.35 | 782.9 | 344.3 | 783.39 | 344.23 |
| 783.63 | 344.18 | 783.7 | 344.14 | 784.22 | 344.06 | 784.8 | 344.11 | 786.28 | 344.14 |
| 787.36 | 344.18 | 787.72 | 344.15 | 788.57 | 344.11 | 789.68 | 344.1 | 791.05 | 344.15 |
| 791.13 | 344.16 | 793.68 | 344.24 | 795.73 | 344.38 | 797.63 | 344.49 | 800.31 | 344.56 |
| 801.44 | 344.58 | 802.82 | 344.58 | 804.95 | 344.55 | 805.48 | 344.52 | 805.56 | 344.5 |
| 806.09 | 344.47 | 806.71 | 344.42 | 810.02 | 344.2 | 813.34 | 344.07 | 813.85 | 344.04 |
| 814.34 | 344 | 814.71 | 343.91 | 815.06 | 343.9 | 817.1 | 343.9 | 817.77 | 343.91 |
| 818.65 | 343.94 | 820.01 | 343.92 | 821.92 | 343.95 | 822.5 | 344.02 | 822.67 | 344.03 |
| 825.13 | 344.13 | 825.26 | 344.14 | 827.22 | 344.2 | 828.89 | 344.23 | 830.27 | 344.22 |
| 832.86 | 344.32 | 833.07 | 344.32 | 834.45 | 344.36 | 835.93 | 344.39 | 836.56 | 344.39 |
| 836.91 | 344.37 | 837.43 | 344.36 | 837.7 | 344.38 | 839.26 | 344.35 | 841.37 | 344.25 |
| 843.47 | 344.14 | 843.94 | 344.11 | 854.55 | 343.66 | 860.48 | 343.43 | 861.47 | 343.39 |
| 862.95 | 343.34 | 865.6 | 343.33 | 866.24 | 343.26 | 867.96 | 343.02 | 868.23 | 343 |
| 869.08 | 342.96 | 869.66 | 342.94 | 870.76 | 342.92 | 873.03 | 342.91 | 873.82 | 342.94 |
| 876.72 | 343.08 | 879.13 | 343.23 | 879.41 | 343.24 | 881.41 | 343.35 | 881.82 | 343.39 |
| 883.84 | 343.54 | 884.14 | 343.54 | 887.25 | 343.47 | 889.68 | 343.43 | 891.37 | 343.41 |
| 893.12 | 343.33 | 894.19 | 343.31 | 896.46 | 343.29 | 901.22 | 343.26 | 901.59 | 343.26 |
| 902.03 | 343.24 | 904.82 | 343.07 | 913.72 | 343.09 | 915.39 | 343.17 | 916.86 | 343.25 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 918.8 | 343.34 | 919.98 | 343.37 | 924.86 | 343.59 | 925.55 | 343.59 | 927.06 | 343.64 |
| 928.02 | 343.65 | 933.16 | 343.68 | 941.83 | 343.77 | 943.84 | 343.78 | 944.26 | 343.77 |
| 948.66 | 343.6 | 951.53 | 343.46 | 955.15 | 343.26 | 957.37 | 343.08 | 964.65 | 342.52 |
| 970.27 | 342.49 | 971.09 | 342.49 | 972.01 | 342.47 | 972.73 | 342.47 | 973.18 | 342.48 |
| 974.21 | 342.48 | 974.48 | 342.49 | 986.79 | 342.52 | 987.87 | 342.52 | 991.04 | 342.78 |
| 993.03 | 342.85 | 994.03 | 342.86 | 1000.44 | 342.83 | 1002.76 | 342.81 | 1006.3 | 342.75 |
| 1009.2 | 342.65 | 1010.87 | 342.58 | 1013.72 | 342.47 | 1014.75 | 342.32 | 1019 | 341.78 |
| 1019.17 | 341.75 | 1022.49 | 341.56 | 1023.07 | 341.54 | 1024.13 | 341.48 | 1026.54 | 341.47 |
| 1031.68 | 341.27 | 1033.43 | 341.19 | 1035.03 | 341.14 | 1035.85 | 341.11 | 1040.26 | 341.13 |
| 1042.35 | 341.12 | 1050.41 | 341.22 | 1053.79 | 341.31 | 1055.26 | 341.32 | 1064.23 | 341.57 |
| 1069.34 | 341.73 | 1070.22 | 341.74 | 1074.06 | 341.85 | 1076.44 | 342.22 | 1076.79 | 342.29 |
| 1078.4 | 342.57 | 1082.08 | 342.85 | 1082.9 | 342.92 | 1083.27 | 342.96 | 1083.54 | 342.97 |
| 1084.59 | 342.97 | 1089.14 | 342.91 | 1090.08 | 342.89 | 1090.9 | 342.86 | 1092.31 | 342.79 |
| 1093.56 | 342.78 | 1095.04 | 342.78 | 1095.8 | 342.83 | 1097.81 | 342.85 | 1098.48 | 342.86 |
| 1107.08 | 343.51 | 1107.26 | 343.52 | 1112 | 343.84 | 1118.49 | 344.25 | 1123.47 | 344.28 |
| 1128.08 | 344.28 | 1130.99 | 344.29 | 1131.63 | 344.29 | 1145.24 | 343.76 | 1145.85 | 343.74 |
| 1147.08 | 343.83 | 1149.61 | 344.05 | 1151.37 | 344.22 | 1154.01 | 344.5 | 1155.01 | 344.69 |
| 1157.98 | 345.24 | 1158.53 | 345.35 | 1160.06 | 345.68 | 1162.4 | 346.53 | 1162.76 | 346.65 |
| 1163.16 | 346.8 | 1164.73 | 347.36 | 1165.39 | 347.68 | 1166.62 | 348.09 | 1167.68 | 348.48 |
| 1169.1 | 349.02 | 1170.73 | 349.62 | 1173.33 | 350.47 | 1175.53 | 351.22 | 1175.8 | 351.3 |
| 1176.37 | 351.51 | 1177.97 | 352.07 | 1179.36 | 352.58 | 1180.24 | 352.89 | 1180.86 | 353.12 |
| 1182.03 | 353.58 | 1184.86 | 354.56 | 1188.5 | 355.6 | 1190.33 | 356.14 | 1191.35 | 356.45 |
| 1192.23 | 356.71 | 1193.29 | 357.06 | 1194.47 | 357.42 | 1195.5 | 357.62 | 1196.92 | 357.91 |
| 1199.16 | 358.39 | 1199.73 | 358.48 | 1200.06 | 358.51 | 1200.49 | 358.61 | 1201.26 | 358.62 |
| 1201.5 | 358.65 | 1201.82 | 358.66 | 1203.17 | 358.63 | 1203.78 | 358.61 | 1204.63 | 358.61 |
| 1206.03 | 358.62 | 1206.67 | 358.62 | 1207.44 | 358.66 | 1208.35 | 358.69 | 1209.08 | 358.64 |
| 1209.36 | 358.64 | 1209.64 | 358.69 | 1210.04 | 358.8 | 1211.62 | 359.21 | 1213.34 | 359.56 |
| 1213.8 | 359.64 | 1214.37 | 359.72 | 1214.62 | 359.73 | 1215.56 | 359.83 | 1217 | 359.87 |
| 1218.14 | 359.84 | 1218.49 | 359.84 | 1219.35 | 359.89 | 1219.58 | 359.92 | 1219.74 | 359.97 |
| 1222.16 | 360.33 | 1222.78 | 360.4 | 1224.12 | 360.58 | 1224.37 | 360.62 | 1224.6 | 360.63 |
| 1225.22 | 360.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 229.39 | .05 | 638.39 | .04 | 1165.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 638.39 | 1165.39 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 5015.73*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 218.47 | 352.06 | 219.42 | 352.07 | 220.14 | 352.06 | 220.86 | 352.06 | 224.3 | 352.01 |
| 225.6 | 352 | 227.07 | 352.01 | 227.66 | 351.97 | 228.4 | 351.95 | 231.21 | 351.8 |
| 232.69 | 351.68 | 235.18 | 351.43 | 235.91 | 351.35 | 237.43 | 351.17 | 241.39 | 350.68 |
| 253.02 | 349.87 | 254.18 | 349.82 | 260.98 | 349.62 | 261.62 | 349.6 | 264.9 | 349.54 |
| 267.81 | 349.42 | 269.1 | 349.35 | 271.08 | 349.28 | 277.77 | 349.05 | 278.83 | 349.01 |
| 285.41 | 348.77 | 285.47 | 348.76 | 288.45 | 348.69 | 290.77 | 348.66 | 292.41 | 348.67 |
| 292.79 | 348.7 | 293.07 | 348.69 | 293.53 | 348.64 | 295.83 | 348.56 | 296.21 | 348.54 |
| 303.02 | 348.3 | 309.43 | 348.16 | 310.83 | 348.1 | 311.51 | 348.09 | 312.49 | 348.09 |
| 314.81 | 348.07 | 315.37 | 348.05 | 319.9 | 348.03 | 320.03 | 348.02 | 324.55 | 347.99 |
| 324.84 | 347.98 | 326.62 | 347.96 | 342.14 | 347.8 | 353.16 | 347.63 | 353.31 | 347.59 |
| 353.53 | 347.58 | 355.21 | 347.62 | 358.18 | 347.65 | 359.56 | 347.65 | 361.16 | 347.63 |
| 361.61 | 347.63 | 362.77 | 347.65 | 363.83 | 347.65 | 365.1 | 347.64 | 366.97 | 347.6 |
| 369.87 | 347.57 | 375.92 | 347.58 | 380.81 | 347.67 | 382.44 | 347.71 | 382.99 | 347.71 |
| 385.14 | 347.74 | 385.79 | 347.73 | 386.58 | 347.74 | 386.8 | 347.72 | 387.69 | 347.73 |
| 387.9 | 347.72 | 389.57 | 347.74 | 390.9 | 347.74 | 391.06 | 347.76 | 392.01 | 347.74 |
| 393.08 | 347.68 | 393.87 | 347.65 | 395.07 | 347.64 | 397.01 | 347.53 | 397.82 | 347.48 |
| 398.76 | 347.52 | 399.99 | 347.56 | 401.45 | 347.59 | 402.04 | 347.59 | 411 | 347.48 |
| 412.77 | 347.43 | 413.07 | 347.43 | 414.67 | 347.4 | 435.26 | 347.13 | 441.18 | 346.99 |
| 442.83 | 346.96 | 443.68 | 346.96 | 445.21 | 346.9 | 445.45 | 346.88 | 448.32 | 346.77 |
| 449.65 | 346.73 | 450.03 | 346.73 | 451.78 | 346.71 | 455.42 | 346.66 | 456.41 | 346.65 |
| 457.35 | 346.68 | 459.28 | 346.71 | 461.55 | 346.71 | 462.93 | 346.73 | 463.93 | 346.75 |
| 465.13 | 346.75 | 466.62 | 346.79 | 468.63 | 346.77 | 469.87 | 346.8 | 472.55 | 346.84 |
| 473.48 | 346.86 | 477.5 | 346.89 | 482.15 | 346.9 | 492.3 | 346.83 | 497.42 | 346.79 |
| 501.67 | 346.71 | 502.92 | 346.67 | 503.23 | 346.65 | 504.78 | 346.61 | 506.35 | 346.6 |
| 508.05 | 346.58 | 511.85 | 346.56 | 518.58 | 346.49 | 518.87 | 346.49 | 520.14 | 346.59 |
| 520.73 | 346.63 | 521.09 | 346.64 | 521.34 | 346.61 | 522.43 | 346.6 | 523.26 | 346.54 |
| 523.72 | 346.48 | 524.34 | 346.42 | 525.24 | 346.43 | 525.83 | 346.4 | 526.92 | 346.4 |
| 528.1 | 346.42 | 528.92 | 346.44 | 531.51 | 346.45 | 532.86 | 346.47 | 533.8 | 346.49 |
| 534.4 | 346.51 | 535.64 | 346.54 | 536.26 | 346.51 | 537.3 | 346.51 | 538.56 | 346.5 |
| 538.96 | 346.46 | 539.91 | 346.38 | 544.86 | 346.03 | 545.57 | 345.99 | 549.34 | 345.46 |
| 550.38 | 345.31 | 550.71 | 345.29 | 553.47 | 345.19 | 554.12 | 345.19 | 554.61 | 345.2 |
| 555.34 | 345.19 | 556.54 | 345.19 | 558.14 | 345.2 | 559.1 | 345.2 | 560.97 | 345.22 |
| 562.23 | 345.26 | 566.29 | 345.43 | 568.2 | 345.53 | 571.17 | 345.61 | 574.71 | 345.75 |
| 576.37 | 345.75 | 576.44 | 345.76 | 589.02 | 345.83 | 589.2 | 345.83 | 601.33 | 345.88 |
| 603.92 | 345.88 | 604.45 | 345.86 | 610.45 | 345.54 | 610.51 | 345.54 | 618.95 | 345.1 |
| 622.59 | 345.07 | 624.88 | 345.16 | 625.64 | 345.16 | 626.23 | 345.17 | 627.01 | 345.21 |
| 627.75 | 345.24 | 630.88 | 345.43 | 633.8 | 345.57 | 634.32 | 345.59 | 635.27 | 345.59 |
| 635.39 | 345.58 | 637.17 | 345.65 | 637.89 | 345.69 | 638.42 | 345.69 | 639.21 | 345.67 |
| 640.22 | 345.61 | 643.9 | 345.48 | 647 | 345.41 | 648.31 | 345.35 | 649.17 | 345.29 |
| 651.17 | 345.18 | 659.3 | 344.8 | 659.88 | 344.75 | 663.38 | 344.52 | 664.47 | 344.49 |
| 664.89 | 344.49 | 667.44 | 344.55 | 668.52 | 344.59 | 669 | 344.62 | 669.57 | 344.64 |
| 671 | 344.73 | 674.05 | 344.89 | 675.14 | 344.86 | 675.76 | 344.85 | 676.89 | 344.88 |
| 677.55 | 344.91 | 677.98 | 344.92 | 678.52 | 344.91 | 679.39 | 344.87 | 681.5 | 344.96 |
| 682.07 | 344.98 | 682.77 | 344.98 | 684.82 | 344.87 | 685.42 | 344.83 | 685.7 | 344.83 |
| 687.22 | 344.73 | 687.31 | 344.71 | 690.99 | 344.54 | 692.9 | 344.48 | 693.57 | 344.47 |
| 694.78 | 344.41 | 696.38 | 344.32 | 696.92 | 344.3 | 702.82 | 344.32 | 708.29 | 344.34 |
| 709.26 | 344.35 | 711.12 | 344.35 | 711.78 | 344.36 | 713.06 | 344.37 | 713.58 | 344.39 |
| 714.27 | 344.39 | 714.71 | 344.42 | 715.67 | 344.43 | 716.33 | 344.43 | 716.46 | 344.44 |
| 717.08 | 344.44 | 717.23 | 344.45 | 721.1 | 344.5 | 722.42 | 344.53 | 725.19 | 344.57 |
| 727.77 | 344.59 | 728.63 | 344.6 | 732.43 | 344.67 | 734.6 | 344.69 | 736.37 | 344.72 |
| 742.51 | 344.79 | 744.11 | 344.81 | 748.3 | 344.83 | 749.93 | 344.81 | 753.88 | 344.64 |
| 754.63 | 344.61 | 756.64 | 344.45 | 758.34 | 344.43 | 766.92 | 343.99 | 777.48 | 343.89 |
| 778.49 | 343.9 | 779.33 | 343.96 | 780.93 | 344.02 | 781.16 | 344.01 | 784.33 | 343.96 |
| 784.87 | 343.9 | 785.11 | 343.85 | 785.18 | 343.81 | 785.7 | 343.74 | 786.29 | 343.78 |
| 787.77 | 343.82 | 788.86 | 343.86 | 789.22 | 343.83 | 790.07 | 343.78 | 791.19 | 343.77 |
| 792.56 | 343.82 | 792.64 | 343.83 | 795.2 | 343.92 | 796.21 | 344 | 797.26 | 344.07 |
| 799.17 | 344.18 | 801.86 | 344.25 | 803.9 | 344.27 | 804.39 | 344.27 | 806.52 | 344.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 806.84 | 344.21 | 808.29 | 344.1 | 811.62 | 343.87 | 814.95 | 343.74 | 815.47 | 343.71 |
| 815.96 | 343.67 | 816.33 | 343.58 | 816.68 | 343.57 | 818.73 | 343.57 | 819.4 | 343.58 |
| 820.38 | 343.61 | 821.66 | 343.58 | 823.57 | 343.61 | 824.33 | 343.69 | 826.8 | 343.79 |
| 826.93 | 343.8 | 828.9 | 343.86 | 830.58 | 343.89 | 831.96 | 343.88 | 834.57 | 343.97 |
| 834.78 | 343.97 | 836.16 | 344.01 | 837.64 | 344.04 | 838.45 | 344.03 | 838.93 | 344.01 |
| 839.43 | 344.02 | 841 | 343.99 | 843.11 | 343.89 | 845.22 | 343.78 | 845.69 | 343.75 |
| 856.35 | 343.3 | 862.31 | 343.07 | 863.31 | 343.02 | 864.79 | 342.98 | 867.45 | 342.96 |
| 868.09 | 342.89 | 869.48 | 342.72 | 869.82 | 342.66 | 870.09 | 342.64 | 871.53 | 342.59 |
| 872.64 | 342.57 | 874.91 | 342.56 | 876.71 | 342.63 | 878.62 | 342.72 | 881.04 | 342.86 |
| 881.33 | 342.88 | 883.33 | 342.98 | 883.74 | 343.02 | 885.77 | 343.16 | 886.08 | 343.16 |
| 889.2 | 343.08 | 891.64 | 343.03 | 893.34 | 343 | 894.17 | 342.97 | 894.47 | 342.95 |
| 895.24 | 342.92 | 896.17 | 342.9 | 897.36 | 342.9 | 898.45 | 342.88 | 903.23 | 342.85 |
| 904.05 | 342.84 | 906.85 | 342.68 | 915.79 | 342.7 | 917.46 | 342.78 | 918.23 | 342.81 |
| 918.94 | 342.85 | 920.9 | 342.94 | 922.07 | 342.97 | 926.98 | 343.17 | 927.67 | 343.17 |
| 928.55 | 343.21 | 930.16 | 343.23 | 935.31 | 343.26 | 944.02 | 343.37 | 946.04 | 343.38 |
| 946.73 | 343.36 | 950.13 | 343.24 | 953.77 | 343.09 | 957.41 | 342.88 | 959.64 | 342.71 |
| 966.95 | 342.17 | 972.6 | 342.14 | 973.42 | 342.14 | 974.35 | 342.12 | 975.07 | 342.12 |
| 975.52 | 342.13 | 976.56 | 342.13 | 976.82 | 342.14 | 989.19 | 342.17 | 990.27 | 342.18 |
| 993.46 | 342.42 | 995.46 | 342.49 | 996.46 | 342.5 | 1002.9 | 342.47 | 1005.23 | 342.45 |
| 1008.79 | 342.39 | 1011.71 | 342.29 | 1012.35 | 342.26 | 1016.24 | 342.11 | 1017.28 | 341.97 |
| 1021.71 | 341.43 | 1025.06 | 341.24 | 1025.64 | 341.22 | 1026.7 | 341.16 | 1029.12 | 341.15 |
| 1034.28 | 340.95 | 1036.35 | 340.86 | 1037.65 | 340.82 | 1038.48 | 340.8 | 1042.77 | 340.82 |
| 1044.81 | 340.81 | 1052.66 | 340.9 | 1055.94 | 340.99 | 1057.37 | 341 | 1066.12 | 341.24 |
| 1069.84 | 341.36 | 1070.58 | 341.39 | 1071.95 | 341.41 | 1074.04 | 341.47 | 1075.69 | 341.53 |
| 1077.08 | 341.76 | 1078.01 | 341.92 | 1078.35 | 342 | 1079.92 | 342.31 | 1083.5 | 342.6 |
| 1084.38 | 342.69 | 1084.92 | 342.73 | 1085.95 | 342.72 | 1090.38 | 342.67 | 1092.1 | 342.63 |
| 1093.1 | 342.58 | 1093.46 | 342.57 | 1094.68 | 342.56 | 1096.12 | 342.56 | 1096.87 | 342.6 |
| 1098.82 | 342.62 | 1099.47 | 342.64 | 1107.85 | 343.26 | 1108.03 | 343.27 | 1112.64 | 343.58 |
| 1118.96 | 343.97 | 1123.82 | 344 | 1126.59 | 344.01 | 1128.31 | 344.01 | 1131.14 | 344.02 |
| 1131.76 | 344.02 | 1145.02 | 343.53 | 1145.62 | 343.51 | 1146.82 | 343.6 | 1149.27 | 343.81 |
| 1150.99 | 343.98 | 1153.11 | 344.2 | 1153.56 | 344.25 | 1154.53 | 344.43 | 1157.43 | 344.96 |
| 1159.45 | 345.38 | 1161.73 | 346.2 | 1164 | 346.99 | 1164.64 | 347.3 | 1165.9 | 347.7 |
| 1166.97 | 348.07 | 1168.41 | 348.61 | 1170.07 | 349.19 | 1170.6 | 349.35 | 1172.7 | 350.01 |
| 1174.94 | 350.74 | 1175.05 | 350.77 | 1175.79 | 351.03 | 1177.41 | 351.58 | 1179.72 | 352.38 |
| 1181.54 | 353.05 | 1181.91 | 353.18 | 1184.41 | 354.02 | 1188.1 | 355.05 | 1189.96 | 355.59 |
| 1191.89 | 356.16 | 1192.96 | 356.5 | 1194.16 | 356.86 | 1196.65 | 357.36 | 1198.92 | 357.85 |
| 1199.51 | 357.95 | 1199.84 | 357.99 | 1200.27 | 358.09 | 1201.05 | 358.12 | 1201.62 | 358.16 |
| 1202.99 | 358.16 | 1203.35 | 358.15 | 1204.48 | 358.17 | 1206.88 | 358.24 | 1207.33 | 358.28 |
| 1208.26 | 358.32 | 1208.99 | 358.28 | 1209.28 | 358.28 | 1209.57 | 358.33 | 1209.97 | 358.44 |
| 1211.58 | 358.83 | 1213.32 | 359.16 | 1213.79 | 359.24 | 1214.36 | 359.32 | 1214.61 | 359.33 |
| 1215.57 | 359.43 | 1217.03 | 359.46 | 1218.19 | 359.44 | 1218.55 | 359.44 | 1219.42 | 359.48 |
| 1219.82 | 359.56 | 1222.28 | 359.9 | 1222.34 | 359.9 | 1224.52 | 360.17 | 1224.75 | 360.18 |
| 1225.38 | 360.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 218.47 | .05 | 639.21 | .04 | 1164.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 639.21 | 1164.64 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4995.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 207.55 | 351.88 | 208.53 | 351.89 | 209.27 | 351.88 | 210.01 | 351.88 | 214.88 | 351.81 |
| 216.39 | 351.82 | 216.99 | 351.79 | 217.75 | 351.77 | 219.88 | 351.68 | 222.17 | 351.53 |
| 225.15 | 351.25 | 225.47 | 351.21 | 227.04 | 351.04 | 231.1 | 350.56 | 243.06 | 349.76 |
| 244.25 | 349.72 | 250.54 | 349.54 | 251.24 | 349.53 | 251.9 | 349.51 | 254.21 | 349.46 |
| 255.27 | 349.45 | 258.26 | 349.33 | 259.59 | 349.26 | 261.1 | 349.2 | 261.62 | 349.19 |
| 268.5 | 348.96 | 269.59 | 348.93 | 276.36 | 348.68 | 276.42 | 348.67 | 279.48 | 348.6 |
| 281.86 | 348.57 | 282.07 | 348.58 | 283.55 | 348.59 | 284.04 | 348.62 | 284.7 | 348.57 |
| 285.37 | 348.54 | 287.07 | 348.48 | 287.45 | 348.46 | 294.46 | 348.22 | 301.04 | 348.07 |
| 302.48 | 348.01 | 303.18 | 348 | 304.19 | 348 | 306.58 | 347.98 | 307.15 | 347.96 |
| 311.81 | 347.93 | 311.95 | 347.92 | 316.59 | 347.89 | 316.89 | 347.88 | 318.72 | 347.86 |
| 334.67 | 347.68 | 346 | 347.5 | 346.15 | 347.46 | 346.38 | 347.44 | 346.85 | 347.45 |
| 347.64 | 347.48 | 348.11 | 347.49 | 352.23 | 347.53 | 352.57 | 347.53 | 354.22 | 347.51 |
| 354.68 | 347.51 | 355.87 | 347.53 | 356.97 | 347.53 | 358.27 | 347.52 | 360.19 | 347.47 |
| 363.17 | 347.44 | 369.4 | 347.43 | 370.62 | 347.45 | 371.62 | 347.48 | 374.42 | 347.52 |
| 376.09 | 347.56 | 376.66 | 347.56 | 378.87 | 347.59 | 380.35 | 347.59 | 380.57 | 347.57 |
| 381.49 | 347.58 | 381.7 | 347.57 | 383.43 | 347.59 | 384.48 | 347.59 | 385.04 | 347.61 |
| 385.93 | 347.59 | 387.03 | 347.52 | 387.84 | 347.49 | 388.96 | 347.48 | 389.08 | 347.47 |
| 391.07 | 347.36 | 391.9 | 347.31 | 392.87 | 347.35 | 394.13 | 347.39 | 395.64 | 347.43 |
| 396.24 | 347.43 | 405.45 | 347.31 | 407.27 | 347.26 | 407.58 | 347.26 | 409.23 | 347.22 |
| 430.39 | 346.95 | 436.48 | 346.8 | 439.04 | 346.77 | 439.81 | 346.75 | 440.61 | 346.71 |
| 443.82 | 346.58 | 445.18 | 346.54 | 445.57 | 346.54 | 447.07 | 346.52 | 447.37 | 346.51 |
| 451.11 | 346.46 | 452.12 | 346.45 | 453.09 | 346.48 | 453.83 | 346.48 | 455.07 | 346.5 |
| 458.21 | 346.5 | 458.83 | 346.51 | 459.35 | 346.53 | 460.22 | 346.53 | 460.56 | 346.54 |
| 461.09 | 346.53 | 462.62 | 346.57 | 464.69 | 346.55 | 465.96 | 346.58 | 466.6 | 346.6 |
| 468.71 | 346.63 | 469.67 | 346.64 | 473.81 | 346.67 | 478.59 | 346.67 | 489.02 | 346.59 |
| 494.28 | 346.53 | 497.56 | 346.48 | 498.66 | 346.45 | 499.93 | 346.4 | 501.84 | 346.35 |
| 503.46 | 346.33 | 505.21 | 346.3 | 509.11 | 346.28 | 516.04 | 346.19 | 516.33 | 346.2 |
| 517.64 | 346.31 | 518.24 | 346.35 | 518.62 | 346.36 | 518.87 | 346.33 | 519.82 | 346.32 |
| 520.85 | 346.25 | 521.41 | 346.18 | 521.96 | 346.14 | 522.88 | 346.14 | 523.49 | 346.11 |
| 524.31 | 346.1 | 524.61 | 346.11 | 525.82 | 346.13 | 526.66 | 346.15 | 529.32 | 346.15 |
| 530.08 | 346.17 | 531.68 | 346.2 | 532.3 | 346.22 | 533.57 | 346.25 | 534.21 | 346.22 |
| 536.42 | 346.22 | 536.83 | 346.18 | 537.96 | 346.1 | 543.05 | 345.76 | 543.78 | 345.71 |
| 544.59 | 345.61 | 547.66 | 345.21 | 548.72 | 345.06 | 551.89 | 344.95 | 553.82 | 344.95 |
| 555.05 | 344.94 | 556.7 | 344.96 | 557.68 | 344.95 | 559.61 | 344.96 | 560.9 | 345 |
| 565.08 | 345.17 | 567.04 | 345.26 | 570.09 | 345.33 | 573.73 | 345.46 | 575.04 | 345.46 |
| 575.51 | 345.47 | 588.44 | 345.53 | 588.62 | 345.53 | 601.1 | 345.6 | 603.15 | 345.6 |
| 604.18 | 345.58 | 604.3 | 345.57 | 610.47 | 345.27 | 610.53 | 345.26 | 619.21 | 344.84 |
| 622.95 | 344.81 | 625.6 | 344.89 | 626.08 | 344.88 | 626.69 | 344.89 | 627.49 | 344.93 |
| 628.25 | 344.96 | 631.47 | 345.14 | 634.47 | 345.28 | 635.01 | 345.3 | 636.1 | 345.3 |
| 637.12 | 345.33 | 637.94 | 345.36 | 638.49 | 345.39 | 639.8 | 345.39 | 640.03 | 345.38 |
| 640.52 | 345.34 | 644.74 | 345.19 | 647.86 | 345.12 | 648.78 | 345.08 | 652.05 | 344.9 |
| 652.91 | 344.86 | 660.21 | 344.53 | 660.79 | 344.49 | 664.31 | 344.27 | 665.41 | 344.24 |
| 665.83 | 344.24 | 668.38 | 344.3 | 669.47 | 344.34 | 671.97 | 344.48 | 675.03 | 344.64 |
| 676.12 | 344.61 | 676.74 | 344.6 | 677.52 | 344.62 | 677.88 | 344.64 | 678.97 | 344.67 |
| 679.52 | 344.66 | 680.4 | 344.62 | 683.09 | 344.72 | 683.79 | 344.72 | 685.85 | 344.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 686.45 | 344.57 | 686.73 | 344.57 | 688.35 | 344.46 | 692.04 | 344.29 | 693.96 | 344.23 |
| 694.64 | 344.22 | 695.86 | 344.16 | 697.46 | 344.07 | 698 | 344.06 | 703.93 | 344.08 |
| 706.38 | 344.09 | 709.43 | 344.11 | 710.39 | 344.11 | 712.26 | 344.12 | 712.93 | 344.12 |
| 714.22 | 344.13 | 714.73 | 344.15 | 715.43 | 344.15 | 715.73 | 344.18 | 716.84 | 344.2 |
| 717.5 | 344.19 | 717.63 | 344.2 | 719.85 | 344.23 | 722.29 | 344.26 | 726.4 | 344.32 |
| 728.99 | 344.34 | 729.85 | 344.35 | 733.68 | 344.41 | 735.85 | 344.43 | 737.63 | 344.46 |
| 743.8 | 344.52 | 745.4 | 344.53 | 749.61 | 344.54 | 751.25 | 344.52 | 755.22 | 344.33 |
| 755.97 | 344.3 | 757.99 | 344.13 | 759.7 | 344.11 | 768.31 | 343.68 | 778.93 | 343.56 |
| 779.94 | 343.57 | 780.79 | 343.63 | 781.26 | 343.65 | 782.63 | 343.68 | 785.81 | 343.63 |
| 786.59 | 343.52 | 786.66 | 343.48 | 787.18 | 343.41 | 787.77 | 343.46 | 789.26 | 343.5 |
| 790.35 | 343.54 | 790.71 | 343.51 | 791.57 | 343.46 | 792.7 | 343.45 | 794.16 | 343.49 |
| 796.73 | 343.6 | 797.74 | 343.68 | 798.79 | 343.75 | 800.71 | 343.87 | 803.42 | 343.93 |
| 803.63 | 343.94 | 805.47 | 343.96 | 805.95 | 343.96 | 808.1 | 343.93 | 810.34 | 343.75 |
| 813.22 | 343.55 | 816.57 | 343.41 | 817.58 | 343.34 | 817.95 | 343.26 | 818.07 | 343.25 |
| 819.95 | 343.25 | 820.36 | 343.24 | 821.04 | 343.25 | 822.02 | 343.28 | 823.3 | 343.25 |
| 825.22 | 343.27 | 825.98 | 343.35 | 828.47 | 343.45 | 828.6 | 343.46 | 830.57 | 343.52 |
| 832.26 | 343.55 | 832.74 | 343.55 | 833.65 | 343.53 | 836.27 | 343.63 | 836.48 | 343.63 |
| 837.87 | 343.66 | 839.36 | 343.68 | 840.17 | 343.68 | 840.66 | 343.65 | 841.15 | 343.67 |
| 842.73 | 343.63 | 844.85 | 343.53 | 846.97 | 343.42 | 847.44 | 343.39 | 858.15 | 342.93 |
| 864.13 | 342.7 | 865.14 | 342.66 | 866.63 | 342.61 | 869.3 | 342.59 | 869.95 | 342.53 |
| 871.34 | 342.36 | 871.68 | 342.31 | 871.95 | 342.29 | 872.81 | 342.25 | 874.51 | 342.22 |
| 876.8 | 342.2 | 877.59 | 342.23 | 878.61 | 342.28 | 880.52 | 342.35 | 882.96 | 342.5 |
| 883.24 | 342.52 | 885.25 | 342.62 | 885.8 | 342.67 | 886.25 | 342.69 | 887.7 | 342.78 |
| 888.01 | 342.78 | 891.15 | 342.69 | 893.6 | 342.63 | 895.3 | 342.6 | 895.65 | 342.59 |
| 896.45 | 342.54 | 897.22 | 342.51 | 900.44 | 342.48 | 905.24 | 342.45 | 906.06 | 342.44 |
| 908.88 | 342.28 | 917.86 | 342.31 | 919.54 | 342.38 | 920.31 | 342.42 | 922.99 | 342.53 |
| 924.17 | 342.56 | 929.1 | 342.76 | 929.79 | 342.76 | 930.67 | 342.79 | 932.29 | 342.81 |
| 937.47 | 342.85 | 946.22 | 342.97 | 948.25 | 342.98 | 948.94 | 342.97 | 952.36 | 342.86 |
| 956.01 | 342.71 | 959.67 | 342.51 | 961.9 | 342.34 | 969.25 | 341.83 | 974.92 | 341.79 |
| 975.75 | 341.78 | 976.44 | 341.78 | 976.68 | 341.77 | 978.15 | 341.77 | 978.54 | 341.78 |
| 979.17 | 341.78 | 991.59 | 341.83 | 992.68 | 341.83 | 995.88 | 342.06 | 997.89 | 342.13 |
| 998.5 | 342.13 | 998.89 | 342.14 | 1005.36 | 342.11 | 1007.71 | 342.09 | 1011.28 | 342.03 |
| 1014.21 | 341.93 | 1014.86 | 341.9 | 1015.89 | 341.87 | 1018.76 | 341.76 | 1019.81 | 341.62 |
| 1024.26 | 341.1 | 1027.62 | 340.92 | 1028.2 | 340.9 | 1029.27 | 340.84 | 1031.7 | 340.83 |
| 1036.89 | 340.63 | 1038.49 | 340.57 | 1038.66 | 340.56 | 1040.83 | 340.49 | 1045.27 | 340.5 |
| 1047.26 | 340.49 | 1054.9 | 340.58 | 1058.1 | 340.67 | 1059.49 | 340.68 | 1068 | 340.91 |
| 1071.63 | 341.03 | 1072.34 | 341.06 | 1073.67 | 341.08 | 1075.71 | 341.15 | 1077.32 | 341.2 |
| 1079.57 | 341.62 | 1079.91 | 341.71 | 1081.43 | 342.04 | 1084.92 | 342.35 | 1085.42 | 342.41 |
| 1086.31 | 342.48 | 1087.3 | 342.48 | 1091.62 | 342.44 | 1093.29 | 342.4 | 1094.27 | 342.35 |
| 1094.62 | 342.34 | 1095.8 | 342.33 | 1097.21 | 342.33 | 1097.93 | 342.38 | 1099.83 | 342.4 |
| 1100.47 | 342.41 | 1108.62 | 343.01 | 1108.79 | 343.03 | 1113.28 | 343.32 | 1116.29 | 343.51 |
| 1119.44 | 343.7 | 1124.16 | 343.73 | 1128.53 | 343.73 | 1131.29 | 343.75 | 1131.89 | 343.75 |
| 1145.38 | 343.28 | 1146.55 | 343.37 | 1148.94 | 343.57 | 1150.61 | 343.73 | 1152.68 | 343.95 |
| 1153.11 | 344 | 1154.06 | 344.18 | 1156.87 | 344.68 | 1158.85 | 345.09 | 1161.78 | 346.12 |
| 1163.27 | 346.63 | 1163.89 | 346.93 | 1165.17 | 347.31 | 1166.26 | 347.67 | 1167.31 | 348.05 |
| 1169.41 | 348.76 | 1172.08 | 349.56 | 1174.35 | 350.27 | 1174.63 | 350.35 | 1175.21 | 350.55 |
| 1177.2 | 351.2 | 1178.29 | 351.57 | 1179.2 | 351.87 | 1179.84 | 352.09 | 1181.05 | 352.53 |
| 1183.33 | 353.27 | 1183.96 | 353.48 | 1187.71 | 354.5 | 1191.55 | 355.6 | 1192.64 | 355.94 |
| 1193.86 | 356.3 | 1196.38 | 356.82 | 1198.69 | 357.32 | 1199.28 | 357.43 | 1199.62 | 357.47 |
| 1200.06 | 357.57 | 1200.85 | 357.61 | 1201.43 | 357.67 | 1202.82 | 357.68 | 1204.33 | 357.73 |
| 1206.43 | 357.83 | 1206.76 | 357.84 | 1207.22 | 357.89 | 1208.16 | 357.96 | 1208.91 | 357.92 |
| 1209.3 | 357.93 | 1211.53 | 358.45 | 1213.3 | 358.77 | 1213.78 | 358.84 | 1214.36 | 358.91 |
| 1215.59 | 359.02 | 1217.07 | 359.06 | 1218.24 | 359.03 | 1218.61 | 359.04 | 1219.49 | 359.08 |
| 1219.89 | 359.15 | 1222.39 | 359.48 | 1223.03 | 359.54 | 1224.67 | 359.73 | 1224.9 | 359.74 |
| 1225.54 | 359.8 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 207.55 | .05 | 640.03 | .04 | 1163.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 640.03 | 1163.89 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4975.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 196.62 | 351.71 | 197.63 | 351.71 | 198.39 | 351.7 | 199.15 | 351.7 | 204.15 | 351.63 |
| 205.7 | 351.64 | 206.33 | 351.61 | 207.11 | 351.59 | 209.29 | 351.51 | 210.08 | 351.47 |
| 211.64 | 351.37 | 214.26 | 351.14 | 214.45 | 351.13 | 216.64 | 350.9 | 220.82 | 350.45 |
| 233.1 | 349.66 | 234.32 | 349.61 | 240.79 | 349.44 | 241.51 | 349.43 | 242.18 | 349.41 |
| 244.56 | 349.37 | 245.65 | 349.36 | 248.72 | 349.24 | 250.08 | 349.17 | 251.63 | 349.11 |
| 252.16 | 349.1 | 259.23 | 348.87 | 260.35 | 348.84 | 267.3 | 348.59 | 267.36 | 348.58 |
| 270.5 | 348.52 | 272.96 | 348.49 | 273.17 | 348.5 | 274.69 | 348.51 | 275.09 | 348.55 |
| 275.39 | 348.54 | 275.57 | 348.51 | 276.56 | 348.46 | 278.31 | 348.4 | 278.7 | 348.38 |
| 285.89 | 348.13 | 292.66 | 347.98 | 294.14 | 347.92 | 294.85 | 347.91 | 295.9 | 347.91 |
| 298.34 | 347.88 | 298.94 | 347.87 | 303.86 | 347.83 | 308.63 | 347.78 | 308.93 | 347.77 |
| 310.82 | 347.76 | 327.2 | 347.57 | 338.83 | 347.36 | 339.23 | 347.31 | 340.52 | 347.34 |
| 341 | 347.36 | 344.13 | 347.4 | 345.59 | 347.41 | 347.28 | 347.39 | 347.75 | 347.39 |
| 348.98 | 347.41 | 350.1 | 347.41 | 351.44 | 347.39 | 353.41 | 347.34 | 356.48 | 347.3 |
| 362.87 | 347.29 | 363.56 | 347.29 | 364.12 | 347.3 | 365.16 | 347.33 | 368.02 | 347.38 |
| 369.74 | 347.42 | 370.33 | 347.42 | 372.6 | 347.44 | 373.29 | 347.44 | 374.11 | 347.45 |
| 374.18 | 347.43 | 376.4 | 347.43 | 377.28 | 347.44 | 378.36 | 347.44 | 378.93 | 347.46 |
| 379.85 | 347.44 | 380.98 | 347.37 | 381.81 | 347.33 | 382.96 | 347.32 | 385.12 | 347.19 |
| 385.99 | 347.13 | 386.97 | 347.18 | 388.28 | 347.23 | 389.82 | 347.27 | 390.44 | 347.27 |
| 399.9 | 347.14 | 402.08 | 347.08 | 403.78 | 347.05 | 425.52 | 346.76 | 431.77 | 346.61 |
| 434.4 | 346.58 | 435.19 | 346.56 | 436.28 | 346.51 | 439.31 | 346.39 | 441.11 | 346.34 |
| 442.96 | 346.32 | 446.8 | 346.25 | 447.84 | 346.24 | 448.84 | 346.28 | 449.6 | 346.28 |
| 450.87 | 346.29 | 454.09 | 346.29 | 455.79 | 346.32 | 457.06 | 346.32 | 458.63 | 346.36 |
| 460.75 | 346.33 | 462.06 | 346.37 | 464.88 | 346.41 | 465.86 | 346.43 | 470.11 | 346.45 |
| 475.03 | 346.45 | 485.74 | 346.35 | 491.14 | 346.28 | 494.51 | 346.22 | 495.64 | 346.19 |
| 496.95 | 346.14 | 497.28 | 346.12 | 498.91 | 346.08 | 500.57 | 346.07 | 502.37 | 346.03 |
| 506.38 | 346 | 513.49 | 345.9 | 513.79 | 345.9 | 515.75 | 346.07 | 516.14 | 346.08 |
| 516.4 | 346.04 | 517.38 | 346.03 | 518.64 | 345.95 | 519.01 | 345.89 | 519.57 | 345.85 |
| 520.52 | 345.85 | 521.14 | 345.82 | 521.99 | 345.81 | 522.29 | 345.82 | 523.54 | 345.83 |
| 524.41 | 345.86 | 527.14 | 345.86 | 527.92 | 345.88 | 529.56 | 345.91 | 530.19 | 345.93 |
| 531.5 | 345.96 | 532.16 | 345.93 | 534.43 | 345.93 | 534.85 | 345.89 | 536.01 | 345.81 |
| 541.24 | 345.48 | 541.99 | 345.44 | 542.82 | 345.34 | 545.97 | 344.95 | 547.06 | 344.82 |
| 547.41 | 344.8 | 550.32 | 344.71 | 551.52 | 344.71 | 552.3 | 344.7 | 553.56 | 344.7 |
| 555.26 | 344.71 | 556.27 | 344.7 | 558.24 | 344.71 | 559.57 | 344.75 | 563.86 | 344.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 565.88 | 344.99 | 569.01 | 345.05 | 572.75 | 345.17 | 574.09 | 345.17 | 574.57 | 345.18 |
| 587.86 | 345.24 | 588.04 | 345.24 | 600.86 | 345.31 | 602.66 | 345.31 | 602.96 | 345.32 |
| 603.59 | 345.31 | 604.15 | 345.29 | 610.49 | 344.99 | 610.55 | 344.99 | 619.46 | 344.58 |
| 623.3 | 344.54 | 625.72 | 344.61 | 626.52 | 344.6 | 627.15 | 344.61 | 627.97 | 344.65 |
| 628.75 | 344.68 | 632.06 | 344.86 | 635.14 | 344.99 | 635.46 | 344.99 | 635.69 | 345.01 |
| 636.82 | 345.01 | 637.86 | 345.04 | 639.45 | 345.1 | 640.57 | 345.1 | 640.85 | 345.08 |
| 641.34 | 345.05 | 644.13 | 344.94 | 645.58 | 344.9 | 648.71 | 344.83 | 649.64 | 344.79 |
| 652.92 | 344.61 | 653.79 | 344.57 | 661.12 | 344.27 | 661.7 | 344.23 | 665.24 | 344.03 |
| 666.76 | 343.99 | 670.42 | 344.09 | 672.93 | 344.23 | 676.01 | 344.39 | 677.1 | 344.36 |
| 677.73 | 344.35 | 678.51 | 344.37 | 678.87 | 344.39 | 679.97 | 344.42 | 680.45 | 344.42 |
| 680.82 | 344.39 | 681.4 | 344.37 | 683.52 | 344.45 | 684.42 | 344.47 | 684.8 | 344.46 |
| 686.88 | 344.35 | 688.5 | 344.27 | 689.38 | 344.2 | 693.09 | 344.03 | 695.02 | 343.98 |
| 695.71 | 343.97 | 698.54 | 343.83 | 699.08 | 343.81 | 705.03 | 343.84 | 707.5 | 343.86 |
| 710.56 | 343.87 | 711.53 | 343.87 | 713.41 | 343.88 | 714.08 | 343.88 | 715.37 | 343.9 |
| 715.89 | 343.92 | 716.59 | 343.92 | 717.04 | 343.95 | 718 | 343.96 | 718.8 | 343.96 |
| 721.03 | 343.99 | 723.48 | 344.02 | 727.61 | 344.08 | 730.21 | 344.09 | 731.08 | 344.09 |
| 734.92 | 344.16 | 737.1 | 344.17 | 738.89 | 344.19 | 745.09 | 344.24 | 746.7 | 344.25 |
| 750.93 | 344.25 | 752.57 | 344.23 | 756.55 | 344.03 | 757.31 | 344 | 759.34 | 343.81 |
| 761.06 | 343.78 | 769.71 | 343.36 | 780.37 | 343.23 | 781.39 | 343.24 | 781.85 | 343.27 |
| 782.72 | 343.31 | 783.63 | 343.34 | 784.09 | 343.34 | 787.28 | 343.29 | 787.82 | 343.23 |
| 788.07 | 343.19 | 788.14 | 343.15 | 788.66 | 343.09 | 789.26 | 343.14 | 790.76 | 343.18 |
| 791.85 | 343.22 | 792.21 | 343.19 | 793.07 | 343.14 | 794.2 | 343.12 | 795.67 | 343.16 |
| 798.25 | 343.28 | 799.27 | 343.37 | 800.33 | 343.44 | 802.25 | 343.56 | 804.97 | 343.62 |
| 805.18 | 343.63 | 806.12 | 343.64 | 807.52 | 343.64 | 809.68 | 343.62 | 810.22 | 343.58 |
| 810.29 | 343.56 | 810.83 | 343.53 | 811.46 | 343.47 | 811.92 | 343.44 | 814.81 | 343.23 |
| 818.18 | 343.08 | 819.2 | 343.01 | 819.69 | 342.92 | 821.58 | 342.92 | 821.99 | 342.91 |
| 823.57 | 342.94 | 823.66 | 342.95 | 824.94 | 342.92 | 826.88 | 342.93 | 827.64 | 343.01 |
| 830.14 | 343.11 | 830.27 | 343.12 | 832.25 | 343.17 | 833.95 | 343.2 | 835.34 | 343.19 |
| 837.97 | 343.28 | 838.18 | 343.28 | 839.58 | 343.31 | 841.08 | 343.33 | 841.72 | 343.33 |
| 842.07 | 343.31 | 842.6 | 343.3 | 842.88 | 343.31 | 844.09 | 343.29 | 844.46 | 343.27 |
| 847 | 343.15 | 848.72 | 343.06 | 849.19 | 343.03 | 859.96 | 342.57 | 865.96 | 342.34 |
| 866.97 | 342.29 | 868.47 | 342.25 | 871.15 | 342.23 | 871.8 | 342.17 | 873.54 | 341.96 |
| 874.68 | 341.9 | 876.39 | 341.87 | 878.68 | 341.85 | 880.5 | 341.92 | 882.43 | 341.99 |
| 885.16 | 342.16 | 887.17 | 342.25 | 887.73 | 342.3 | 889.64 | 342.39 | 889.95 | 342.39 |
| 893.1 | 342.29 | 895.56 | 342.22 | 897.27 | 342.19 | 899.04 | 342.11 | 900.13 | 342.09 |
| 902.43 | 342.07 | 907.25 | 342.05 | 908.08 | 342.04 | 910.91 | 341.89 | 919.93 | 341.92 |
| 925.08 | 342.13 | 926.27 | 342.16 | 931.22 | 342.34 | 931.92 | 342.34 | 933.45 | 342.39 |
| 934.43 | 342.39 | 939.63 | 342.44 | 948.42 | 342.57 | 950.14 | 342.58 | 950.88 | 342.58 |
| 951.15 | 342.57 | 954.58 | 342.47 | 955.34 | 342.45 | 958.25 | 342.33 | 961.92 | 342.14 |
| 964.17 | 341.97 | 971.55 | 341.48 | 977.25 | 341.44 | 977.77 | 341.44 | 978.77 | 341.42 |
| 980.88 | 341.42 | 981.51 | 341.43 | 993.99 | 341.48 | 995.08 | 341.48 | 998.3 | 341.7 |
| 1000.32 | 341.77 | 1001.33 | 341.77 | 1007.82 | 341.75 | 1010.18 | 341.73 | 1013.77 | 341.67 |
| 1016.71 | 341.57 | 1017.37 | 341.54 | 1018.4 | 341.51 | 1021.29 | 341.4 | 1022.27 | 341.28 |
| 1022.33 | 341.28 | 1026.81 | 340.78 | 1030.18 | 340.6 | 1030.77 | 340.58 | 1031.84 | 340.53 |
| 1034.28 | 340.51 | 1039.49 | 340.32 | 1041.57 | 340.23 | 1042.89 | 340.2 | 1043.72 | 340.17 |
| 1047.78 | 340.19 | 1049.71 | 340.18 | 1057.15 | 340.26 | 1057.52 | 340.28 | 1060.26 | 340.35 |
| 1061.61 | 340.36 | 1069.89 | 340.59 | 1072.26 | 340.66 | 1074.25 | 340.73 | 1075.4 | 340.76 |
| 1078.95 | 340.87 | 1080.27 | 341.14 | 1081.14 | 341.33 | 1081.47 | 341.42 | 1082.95 | 341.78 |
| 1086.34 | 342.11 | 1087.1 | 342.18 | 1087.44 | 342.22 | 1087.69 | 342.23 | 1088.66 | 342.23 |
| 1092.85 | 342.2 | 1093.72 | 342.19 | 1094.48 | 342.17 | 1095.43 | 342.12 | 1096.92 | 342.11 |
| 1098.29 | 342.11 | 1098.99 | 342.15 | 1100.85 | 342.17 | 1101.46 | 342.19 | 1109.39 | 342.77 |
| 1113.93 | 343.06 | 1116.85 | 343.24 | 1119.91 | 343.42 | 1124.51 | 343.45 | 1127.13 | 343.46 |
| 1128.76 | 343.46 | 1131.44 | 343.47 | 1132.02 | 343.48 | 1144.58 | 343.06 | 1145.14 | 343.05 |
| 1145.85 | 343.11 | 1146.28 | 343.13 | 1148.6 | 343.33 | 1150.23 | 343.49 | 1152.24 | 343.71 |
| 1152.66 | 343.75 | 1153.58 | 343.92 | 1156.32 | 344.41 | 1156.83 | 344.51 | 1158.24 | 344.8 |
| 1160.4 | 345.54 | 1161.09 | 345.78 | 1162.54 | 346.26 | 1163.15 | 346.55 | 1164.44 | 346.92 |
| 1165.55 | 347.27 | 1166.61 | 347.64 | 1168.74 | 348.33 | 1169.28 | 348.48 | 1171.45 | 349.11 |
| 1173.75 | 349.79 | 1174.04 | 349.87 | 1176.3 | 350.59 | 1176.65 | 350.71 | 1178.68 | 351.36 |
| 1180.55 | 352 | 1180.94 | 352.13 | 1183.51 | 352.93 | 1187.31 | 353.94 | 1189.23 | 354.48 |
| 1190.3 | 354.79 | 1191.22 | 355.04 | 1192.32 | 355.39 | 1193.55 | 355.75 | 1194.63 | 355.96 |
| 1196.11 | 356.27 | 1197.89 | 356.66 | 1198.45 | 356.79 | 1199.06 | 356.9 | 1199.4 | 356.95 |
| 1199.84 | 357.05 | 1200.65 | 357.11 | 1201.24 | 357.17 | 1202.65 | 357.21 | 1204.18 | 357.29 |
| 1205.64 | 357.39 | 1206.64 | 357.45 | 1207.11 | 357.51 | 1208.07 | 357.59 | 1208.82 | 357.56 |
| 1209.22 | 357.58 | 1209.42 | 357.62 | 1211.48 | 358.07 | 1213.76 | 358.45 | 1214.36 | 358.51 |
| 1215.6 | 358.61 | 1217.1 | 358.65 | 1218.3 | 358.63 | 1218.67 | 358.63 | 1219.57 | 358.67 |
| 1219.97 | 358.74 | 1222.5 | 359.05 | 1223.15 | 359.11 | 1224.81 | 359.29 | 1225.05 | 359.29 |
| 1225.7 | 359.35 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 196.62 | .05 | 640.85 | .04 | 1163.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 640.85 | 1163.15 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4955.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 185.7 | 351.53 | 186.53 | 351.54 | 186.73 | 351.53 | 188.29 | 351.53 | 192.02 | 351.47 |
| 192.33 | 351.47 | 193.43 | 351.45 | 195.02 | 351.46 | 195.66 | 351.43 | 196.46 | 351.42 |
| 198.7 | 351.34 | 200.44 | 351.26 | 201.11 | 351.21 | 203.8 | 351 | 204.6 | 350.93 |
| 206.25 | 350.77 | 210.54 | 350.33 | 223.14 | 349.56 | 224.4 | 349.51 | 231.03 | 349.35 |
| 232.46 | 349.31 | 234.9 | 349.28 | 236.02 | 349.27 | 239.17 | 349.15 | 239.69 | 349.11 |
| 240.57 | 349.07 | 242.71 | 349 | 249.96 | 348.79 | 258.25 | 348.5 | 258.31 | 348.49 |
| 261.53 | 348.43 | 264.05 | 348.41 | 265.57 | 348.42 | 265.83 | 348.43 | 266.24 | 348.47 |
| 266.55 | 348.46 | 266.73 | 348.43 | 267.75 | 348.38 | 269.54 | 348.32 | 269.94 | 348.3 |
| 277.33 | 348.05 | 284.27 | 347.89 | 285.79 | 347.84 | 285.86 | 347.83 | 286.53 | 347.82 |
| 287.6 | 347.82 | 290.11 | 347.79 | 290.72 | 347.78 | 295.63 | 347.74 | 295.77 | 347.73 |
| 300.66 | 347.68 | 300.98 | 347.67 | 302.91 | 347.65 | 319.73 | 347.45 | 331.67 | 347.23 |
| 331.83 | 347.19 | 332.07 | 347.17 | 332.57 | 347.18 | 333.89 | 347.23 | 337.11 | 347.27 |
| 338.6 | 347.28 | 340.82 | 347.27 | 342.08 | 347.29 | 343.23 | 347.29 | 344.6 | 347.27 |
| 346.63 | 347.21 | 349.78 | 347.16 | 356.34 | 347.14 | 361.63 | 347.23 | 363.4 | 347.27 |
| 364 | 347.27 | 366.32 | 347.3 | 367.88 | 347.3 | 368.12 | 347.28 | 369.09 | 347.29 |
| 369.32 | 347.28 | 370.23 | 347.28 | 371.79 | 347.3 | 372.24 | 347.29 | 372.74 | 347.31 |
| 373.43 | 347.31 | 374.94 | 347.21 | 375.78 | 347.17 | 377.09 | 347.15 | 379.18 | 347.02 |
| 380.07 | 346.96 | 380.19 | 346.96 | 381.08 | 347.01 | 383.27 | 347.09 | 384.64 | 347.11 |
| 394.35 | 346.97 | 396.59 | 346.91 | 398.33 | 346.88 | 420.65 | 346.57 | 427.06 | 346.42 |
| 429.77 | 346.39 | 431.2 | 346.35 | 431.69 | 346.32 | 434.8 | 346.2 | 436.65 | 346.15 |
| 438.23 | 346.13 | 438.54 | 346.12 | 442.49 | 346.05 | 443.56 | 346.04 | 444.58 | 346.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 445.36 | 346.07 | 446.67 | 346.09 | 448.09 | 346.08 | 449.98 | 346.08 | 451.72 | 346.11 |
| 453.02 | 346.11 | 454.63 | 346.15 | 456.81 | 346.12 | 458.15 | 346.16 | 461.05 | 346.2 |
| 462.06 | 346.21 | 466.42 | 346.24 | 471.46 | 346.23 | 482.46 | 346.11 | 488 | 346.03 |
| 491.46 | 345.96 | 492.62 | 345.93 | 493.96 | 345.88 | 494.31 | 345.86 | 495.98 | 345.82 |
| 497.69 | 345.8 | 499.53 | 345.76 | 503.64 | 345.72 | 510.94 | 345.6 | 511.25 | 345.61 |
| 512.63 | 345.74 | 513.27 | 345.79 | 513.89 | 345.78 | 513.93 | 345.76 | 514.56 | 345.74 |
| 514.93 | 345.74 | 516.23 | 345.66 | 516.51 | 345.62 | 517.19 | 345.56 | 518.16 | 345.56 |
| 519.15 | 345.52 | 519.98 | 345.52 | 521.26 | 345.54 | 522.15 | 345.57 | 524.95 | 345.57 |
| 525.75 | 345.59 | 528.09 | 345.63 | 529.43 | 345.66 | 530.1 | 345.64 | 532.59 | 345.64 |
| 532.87 | 345.6 | 534.06 | 345.52 | 539.42 | 345.2 | 540.19 | 345.17 | 541.04 | 345.08 |
| 544.79 | 344.64 | 545.4 | 344.57 | 549.09 | 344.46 | 549.98 | 344.47 | 550.77 | 344.45 |
| 552.08 | 344.45 | 553.81 | 344.46 | 554.85 | 344.45 | 556.88 | 344.46 | 558.24 | 344.49 |
| 562.65 | 344.63 | 564.71 | 344.71 | 567.94 | 344.77 | 571.77 | 344.89 | 573.15 | 344.88 |
| 573.64 | 344.89 | 587.28 | 344.95 | 587.47 | 344.95 | 600.62 | 345.03 | 602.78 | 345.03 |
| 604 | 345.01 | 610.5 | 344.72 | 610.57 | 344.71 | 619.72 | 344.31 | 623.66 | 344.28 |
| 626.14 | 344.34 | 626.97 | 344.33 | 627.6 | 344.33 | 628.45 | 344.36 | 632.65 | 344.57 |
| 635.81 | 344.7 | 636.14 | 344.7 | 636.37 | 344.72 | 637.53 | 344.72 | 638.6 | 344.75 |
| 640.24 | 344.81 | 640.81 | 344.81 | 641.67 | 344.79 | 642.17 | 344.76 | 644.97 | 344.65 |
| 646.42 | 344.61 | 649.57 | 344.54 | 650.5 | 344.5 | 650.89 | 344.49 | 651.77 | 344.43 |
| 653.8 | 344.33 | 654.67 | 344.29 | 662.03 | 344.01 | 662.62 | 343.97 | 666.17 | 343.78 |
| 667.28 | 343.75 | 667.7 | 343.75 | 670.28 | 343.81 | 671.38 | 343.85 | 671.87 | 343.88 |
| 672.44 | 343.9 | 673.89 | 343.98 | 676.99 | 344.13 | 678.09 | 344.11 | 678.71 | 344.11 |
| 679.5 | 344.12 | 680.53 | 344.17 | 681.44 | 344.17 | 682.38 | 344.12 | 682.4 | 344.13 |
| 684.53 | 344.19 | 685.11 | 344.21 | 685.82 | 344.2 | 687.9 | 344.1 | 688.51 | 344.06 |
| 689.4 | 344.02 | 690.42 | 343.94 | 694.15 | 343.78 | 696.08 | 343.72 | 696.77 | 343.71 |
| 698 | 343.66 | 699.62 | 343.58 | 700.16 | 343.57 | 706.14 | 343.59 | 708.61 | 343.62 |
| 711.69 | 343.63 | 712.67 | 343.64 | 714.55 | 343.64 | 715.22 | 343.65 | 716.52 | 343.66 |
| 717.05 | 343.68 | 717.89 | 343.69 | 718.05 | 343.71 | 719.17 | 343.72 | 719.84 | 343.72 |
| 719.97 | 343.73 | 720.75 | 343.73 | 722.21 | 343.75 | 724.67 | 343.77 | 728.81 | 343.83 |
| 731.43 | 343.83 | 732.3 | 343.84 | 736.16 | 343.9 | 738.35 | 343.9 | 740.15 | 343.93 |
| 746.37 | 343.97 | 747.99 | 343.97 | 752.24 | 343.96 | 753.9 | 343.94 | 757.89 | 343.72 |
| 758.65 | 343.69 | 760.69 | 343.48 | 762.42 | 343.46 | 771.11 | 343.05 | 781.82 | 342.9 |
| 782.84 | 342.91 | 783.3 | 342.94 | 784.17 | 342.98 | 785.09 | 343 | 785.55 | 343 |
| 788.76 | 342.95 | 789.3 | 342.89 | 789.67 | 342.81 | 790.15 | 342.76 | 790.74 | 342.82 |
| 792.25 | 342.86 | 793.35 | 342.9 | 793.71 | 342.86 | 794.57 | 342.81 | 795.71 | 342.79 |
| 797.18 | 342.83 | 799.78 | 342.97 | 801.86 | 343.13 | 803.8 | 343.25 | 806.53 | 343.31 |
| 808.6 | 343.33 | 809.09 | 343.33 | 811.25 | 343.3 | 813.05 | 343.16 | 813.51 | 343.12 |
| 816.41 | 342.91 | 819.79 | 342.75 | 820.32 | 342.72 | 820.82 | 342.67 | 821.31 | 342.59 |
| 824.31 | 342.59 | 825.3 | 342.61 | 826.59 | 342.58 | 828.53 | 342.59 | 829.3 | 342.66 |
| 831.8 | 342.77 | 831.93 | 342.78 | 833.93 | 342.83 | 835.63 | 342.86 | 837.03 | 342.85 |
| 839.67 | 342.93 | 839.89 | 342.93 | 841.28 | 342.96 | 842.79 | 342.98 | 843.61 | 342.97 |
| 844.1 | 342.95 | 844.6 | 342.96 | 845.82 | 342.93 | 846.19 | 342.91 | 848.74 | 342.79 |
| 850.47 | 342.7 | 850.95 | 342.67 | 861.76 | 342.2 | 867.79 | 341.97 | 868.8 | 341.92 |
| 870.3 | 341.88 | 873 | 341.86 | 873.65 | 341.8 | 875.06 | 341.65 | 875.4 | 341.6 |
| 875.68 | 341.58 | 877.14 | 341.53 | 878.26 | 341.51 | 880.56 | 341.5 | 881.37 | 341.52 |
| 882.39 | 341.56 | 884.33 | 341.63 | 886.78 | 341.78 | 887.07 | 341.79 | 889.1 | 341.89 |
| 889.65 | 341.93 | 891.57 | 342.01 | 891.88 | 342.01 | 895.04 | 341.9 | 897.52 | 341.82 |
| 899.24 | 341.78 | 900.08 | 341.75 | 900.39 | 341.73 | 901.17 | 341.7 | 902.11 | 341.68 |
| 903.31 | 341.68 | 904.42 | 341.66 | 909.27 | 341.64 | 910.1 | 341.63 | 912.93 | 341.5 |
| 922 | 341.53 | 925.19 | 341.66 | 927.17 | 341.73 | 928.37 | 341.76 | 933.34 | 341.93 |
| 934.04 | 341.93 | 934.93 | 341.96 | 936.56 | 341.98 | 941.78 | 342.02 | 950.61 | 342.17 |
| 952.34 | 342.18 | 953.36 | 342.18 | 956.81 | 342.09 | 960.49 | 341.95 | 964.18 | 341.76 |
| 964.56 | 341.73 | 966.44 | 341.6 | 973.85 | 341.13 | 979.57 | 341.09 | 980.1 | 341.09 |
| 981.35 | 341.06 | 982.08 | 341.06 | 982.54 | 341.07 | 983.23 | 341.07 | 983.86 | 341.08 |
| 996.39 | 341.13 | 997.49 | 341.13 | 1000.72 | 341.35 | 1002.75 | 341.4 | 1003.76 | 341.41 |
| 1010.29 | 341.39 | 1012.65 | 341.37 | 1016.26 | 341.31 | 1019.21 | 341.21 | 1020.78 | 341.16 |
| 1020.91 | 341.15 | 1023.81 | 341.05 | 1024.86 | 340.93 | 1029.36 | 340.45 | 1032.75 | 340.28 |
| 1033.33 | 340.26 | 1034.41 | 340.21 | 1036.86 | 340.19 | 1042.1 | 340 | 1043.71 | 339.93 |
| 1043.88 | 339.93 | 1045.51 | 339.88 | 1046.35 | 339.86 | 1050.29 | 339.88 | 1052.17 | 339.87 |
| 1059.39 | 339.95 | 1062.41 | 340.03 | 1063.73 | 340.04 | 1071.77 | 340.26 | 1074.08 | 340.33 |
| 1076.02 | 340.4 | 1077.13 | 340.43 | 1079.06 | 340.49 | 1080.58 | 340.55 | 1081.86 | 340.83 |
| 1082.71 | 341.03 | 1083.02 | 341.13 | 1084.47 | 341.51 | 1087.76 | 341.86 | 1088.24 | 341.92 |
| 1089.07 | 341.99 | 1090.01 | 341.99 | 1094.09 | 341.97 | 1094.93 | 341.96 | 1095.67 | 341.94 |
| 1096.93 | 341.89 | 1098.05 | 341.88 | 1099.56 | 341.89 | 1100.06 | 341.93 | 1101.86 | 341.95 |
| 1102.45 | 341.96 | 1110.16 | 342.52 | 1114.57 | 342.8 | 1120.39 | 343.15 | 1124.85 | 343.18 |
| 1127.4 | 343.19 | 1128.98 | 343.19 | 1131.59 | 343.2 | 1132.16 | 343.21 | 1144.36 | 342.83 |
| 1144.9 | 342.82 | 1146.01 | 342.9 | 1148.27 | 343.09 | 1149.85 | 343.25 | 1151.8 | 343.46 |
| 1152.21 | 343.5 | 1155.77 | 344.13 | 1157.63 | 344.5 | 1160.41 | 345.44 | 1161.81 | 345.9 |
| 1162.4 | 346.17 | 1163.72 | 346.52 | 1164.84 | 346.86 | 1165.91 | 347.22 | 1168.08 | 347.9 |
| 1170.83 | 348.65 | 1173.16 | 349.32 | 1174.05 | 349.58 | 1175.75 | 350.1 | 1177.22 | 350.56 |
| 1178.16 | 350.85 | 1178.81 | 351.06 | 1180.45 | 351.6 | 1182.41 | 352.19 | 1183.06 | 352.39 |
| 1186.92 | 353.39 | 1189.94 | 354.23 | 1190.88 | 354.48 | 1191.99 | 354.83 | 1193.24 | 355.19 |
| 1194.34 | 355.41 | 1195.84 | 355.72 | 1197.64 | 356.12 | 1198.22 | 356.26 | 1199.18 | 356.43 |
| 1199.63 | 356.53 | 1200.55 | 356.61 | 1201.04 | 356.67 | 1202.84 | 356.76 | 1204.03 | 356.85 |
| 1205.51 | 356.98 | 1206.53 | 357.06 | 1207 | 357.13 | 1207.97 | 357.22 | 1208.74 | 357.2 |
| 1209.14 | 357.22 | 1209.71 | 357.34 | 1211.44 | 357.69 | 1213.26 | 357.98 | 1213.75 | 358.05 |
| 1214.35 | 358.11 | 1214.61 | 358.12 | 1215.61 | 358.21 | 1217.14 | 358.24 | 1218.35 | 358.22 |
| 1219.64 | 358.26 | 1220.05 | 358.33 | 1222.62 | 358.63 | 1223.28 | 358.68 | 1224.7 | 358.82 |
| 1225.86 | 358.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 185.7 | .05 | 641.67 | .04 | 1162.4 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 641.67 | 1162.4 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4936.03*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 174.78 | 351.35 | 175.84 | 351.36 | 176.64 | 351.35 | 177.44 | 351.35 | 181.25 | 351.29 |
| 181.58 | 351.29 | 182.7 | 351.27 | 184.34 | 351.28 | 184.99 | 351.25 | 185.81 | 351.24 |
| 188.11 | 351.17 | 189.9 | 351.1 | 190.59 | 351.06 | 193.35 | 350.85 | 193.82 | 350.82 |
| 195.86 | 350.63 | 200.25 | 350.21 | 213.18 | 349.46 | 214.47 | 349.41 | 221.28 | 349.25 |
| 222.03 | 349.24 | 222.75 | 349.22 | 225.24 | 349.19 | 225.78 | 349.19 | 227.75 | 349.13 |
| 229.62 | 349.06 | 230.16 | 349.02 | 231.06 | 348.98 | 233.25 | 348.91 | 240.69 | 348.7 |
| 249.19 | 348.41 | 249.26 | 348.4 | 252.56 | 348.35 | 255.15 | 348.32 | 255.37 | 348.33 |
| 256.7 | 348.34 | 256.97 | 348.35 | 257.4 | 348.39 | 257.71 | 348.39 | 257.89 | 348.35 |
| 258.94 | 348.3 | 260.78 | 348.24 | 261.19 | 348.22 | 268.77 | 347.97 | 275.89 | 347.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 276.49 | 347.78 | 278.2 | 347.73 | 279.3 | 347.73 | 281.87 | 347.7 | 282.5 | 347.69 |
| 287.54 | 347.64 | 287.68 | 347.63 | 292.7 | 347.58 | 293.02 | 347.57 | 295.01 | 347.55 |
| 312.26 | 347.33 | 324.5 | 347.1 | 324.67 | 347.06 | 324.92 | 347.04 | 325.43 | 347.05 |
| 326.79 | 347.1 | 330.08 | 347.15 | 331.62 | 347.16 | 333.9 | 347.15 | 335.18 | 347.17 |
| 336.37 | 347.17 | 337.77 | 347.14 | 339.85 | 347.08 | 343.08 | 347.02 | 349.81 | 346.99 |
| 351.13 | 347.01 | 352.22 | 347.04 | 355.24 | 347.08 | 357.05 | 347.13 | 357.66 | 347.12 |
| 360.05 | 347.15 | 361.65 | 347.15 | 361.89 | 347.13 | 362.89 | 347.14 | 363.12 | 347.13 |
| 364.06 | 347.13 | 365.66 | 347.15 | 366.12 | 347.14 | 366.63 | 347.16 | 367.34 | 347.16 |
| 368.33 | 347.09 | 369.76 | 347.01 | 371.1 | 346.99 | 373.24 | 346.85 | 374.15 | 346.78 |
| 374.27 | 346.78 | 375.19 | 346.84 | 376.56 | 346.9 | 378.19 | 346.94 | 378.84 | 346.94 |
| 388.8 | 346.8 | 391.1 | 346.74 | 392.88 | 346.7 | 415.77 | 346.38 | 422.35 | 346.23 |
| 424.18 | 346.21 | 425.13 | 346.21 | 426.83 | 346.15 | 427.1 | 346.13 | 430.29 | 346.01 |
| 432.19 | 345.96 | 433.81 | 345.94 | 434.13 | 345.93 | 438.18 | 345.85 | 439.28 | 345.84 |
| 439.88 | 345.85 | 440.33 | 345.87 | 441.12 | 345.87 | 442.47 | 345.88 | 443.93 | 345.87 |
| 445.86 | 345.87 | 447.64 | 345.9 | 448.98 | 345.9 | 450.63 | 345.94 | 452.87 | 345.9 |
| 454.93 | 345.96 | 457.22 | 345.99 | 458.25 | 346 | 462.73 | 346.02 | 467.9 | 346.01 |
| 479.18 | 345.87 | 484.87 | 345.78 | 488.41 | 345.7 | 489.6 | 345.67 | 490.98 | 345.62 |
| 491.33 | 345.6 | 493.05 | 345.56 | 494.8 | 345.53 | 496.69 | 345.49 | 500.91 | 345.44 |
| 508.4 | 345.31 | 508.71 | 345.32 | 510.13 | 345.45 | 510.78 | 345.5 | 511.19 | 345.51 |
| 511.47 | 345.47 | 512.67 | 345.45 | 513.6 | 345.39 | 514.21 | 345.32 | 514.8 | 345.28 |
| 515.8 | 345.27 | 516.82 | 345.23 | 517.66 | 345.23 | 518.98 | 345.25 | 519.89 | 345.28 |
| 522.77 | 345.28 | 523.59 | 345.3 | 525.31 | 345.32 | 525.98 | 345.34 | 527.36 | 345.37 |
| 528.05 | 345.35 | 530.61 | 345.35 | 531.05 | 345.31 | 532.1 | 345.23 | 537.61 | 344.93 |
| 538.4 | 344.89 | 539.27 | 344.81 | 542.59 | 344.45 | 543.11 | 344.39 | 543.74 | 344.33 |
| 544.11 | 344.31 | 547.17 | 344.22 | 548.44 | 344.22 | 550.59 | 344.2 | 552.37 | 344.21 |
| 553.43 | 344.2 | 555.52 | 344.21 | 556.91 | 344.24 | 561.43 | 344.37 | 563.55 | 344.44 |
| 566.86 | 344.5 | 570.79 | 344.6 | 572.2 | 344.59 | 572.71 | 344.61 | 586.7 | 344.66 |
| 586.89 | 344.66 | 600.38 | 344.74 | 602.6 | 344.75 | 603.26 | 344.74 | 603.85 | 344.72 |
| 610.52 | 344.44 | 610.59 | 344.44 | 619.97 | 344.05 | 624.01 | 344.01 | 626.56 | 344.07 |
| 626.89 | 344.07 | 627.41 | 344.05 | 628.06 | 344.05 | 628.93 | 344.08 | 629.5 | 344.11 |
| 629.75 | 344.11 | 633.24 | 344.29 | 636.48 | 344.4 | 636.86 | 344.42 | 638.24 | 344.43 |
| 639.93 | 344.48 | 640.23 | 344.48 | 641.02 | 344.52 | 641.61 | 344.52 | 642.49 | 344.5 |
| 642.99 | 344.47 | 645.8 | 344.36 | 647.26 | 344.32 | 650.42 | 344.25 | 651.75 | 344.2 |
| 652.64 | 344.14 | 654.67 | 344.04 | 655.55 | 344.01 | 662.95 | 343.75 | 663.53 | 343.71 |
| 667.1 | 343.53 | 668.63 | 343.5 | 671.23 | 343.56 | 672.33 | 343.6 | 672.82 | 343.63 |
| 674.86 | 343.74 | 677.96 | 343.88 | 679.07 | 343.86 | 679.7 | 343.86 | 680.85 | 343.89 |
| 681.53 | 343.92 | 682.44 | 343.92 | 682.97 | 343.89 | 683.4 | 343.88 | 685.54 | 343.94 |
| 686.75 | 343.95 | 687.03 | 343.94 | 688.93 | 343.84 | 689.54 | 343.8 | 689.82 | 343.8 |
| 690.43 | 343.76 | 691.46 | 343.68 | 695.2 | 343.52 | 697.15 | 343.47 | 697.84 | 343.46 |
| 700.7 | 343.34 | 701.24 | 343.33 | 707.25 | 343.35 | 709.73 | 343.38 | 712.82 | 343.39 |
| 713.8 | 343.4 | 715.7 | 343.4 | 717.68 | 343.43 | 718.2 | 343.45 | 718.91 | 343.45 |
| 719.36 | 343.48 | 720.33 | 343.49 | 721.01 | 343.48 | 721.14 | 343.49 | 721.92 | 343.49 |
| 723.38 | 343.51 | 725.86 | 343.53 | 727.2 | 343.55 | 730.02 | 343.58 | 733.52 | 343.58 |
| 737.4 | 343.64 | 739.6 | 343.64 | 741.41 | 343.66 | 747.66 | 343.69 | 749.29 | 343.69 |
| 753.55 | 343.68 | 755.22 | 343.65 | 759.23 | 343.42 | 760 | 343.38 | 762.04 | 343.16 |
| 763.77 | 343.14 | 772.5 | 342.73 | 783.26 | 342.58 | 784.29 | 342.58 | 785.63 | 342.64 |
| 786.77 | 342.67 | 787.01 | 342.66 | 790.23 | 342.61 | 790.78 | 342.56 | 791.15 | 342.48 |
| 791.63 | 342.44 | 792.23 | 342.49 | 794.84 | 342.58 | 795.21 | 342.54 | 796.07 | 342.49 |
| 797.21 | 342.46 | 798.62 | 342.49 | 798.7 | 342.5 | 801.3 | 342.65 | 802.33 | 342.74 |
| 803.4 | 342.82 | 805.34 | 342.94 | 808.08 | 343 | 810.16 | 343.02 | 810.65 | 343.02 |
| 812.83 | 342.99 | 813.37 | 342.95 | 813.45 | 342.93 | 813.99 | 342.9 | 815.1 | 342.8 |
| 818.01 | 342.59 | 821.41 | 342.42 | 821.93 | 342.39 | 822.44 | 342.34 | 822.93 | 342.26 |
| 825.94 | 342.26 | 826.94 | 342.28 | 828.23 | 342.25 | 830.18 | 342.25 | 830.95 | 342.32 |
| 833.47 | 342.43 | 833.6 | 342.44 | 835.6 | 342.49 | 837.32 | 342.51 | 838.72 | 342.5 |
| 841.38 | 342.58 | 842.99 | 342.61 | 844.51 | 342.63 | 845.33 | 342.62 | 845.82 | 342.59 |
| 846.33 | 342.6 | 847.55 | 342.57 | 850.08 | 342.45 | 852.22 | 342.34 | 852.7 | 342.31 |
| 863.56 | 341.84 | 870.63 | 341.56 | 872.14 | 341.52 | 874.85 | 341.49 | 875.51 | 341.44 |
| 876.92 | 341.29 | 877.54 | 341.23 | 879.01 | 341.18 | 880.14 | 341.16 | 882.45 | 341.14 |
| 884.29 | 341.21 | 886.23 | 341.27 | 888.69 | 341.42 | 891.02 | 341.52 | 891.44 | 341.56 |
| 892.03 | 341.57 | 893.51 | 341.63 | 893.82 | 341.63 | 896.99 | 341.5 | 899.48 | 341.42 |
| 901.56 | 341.37 | 903.15 | 341.29 | 906.42 | 341.26 | 911.28 | 341.24 | 912.11 | 341.23 |
| 914.96 | 341.1 | 924.07 | 341.13 | 927.27 | 341.26 | 929.26 | 341.33 | 930.46 | 341.35 |
| 935.46 | 341.51 | 936.16 | 341.51 | 937.05 | 341.54 | 938.69 | 341.56 | 943.94 | 341.61 |
| 954.55 | 341.79 | 955.57 | 341.78 | 959.03 | 341.7 | 959.8 | 341.68 | 962.73 | 341.57 |
| 966.44 | 341.39 | 966.82 | 341.36 | 968.7 | 341.23 | 976.15 | 340.78 | 981.9 | 340.74 |
| 982.43 | 340.74 | 983.68 | 340.71 | 984.42 | 340.71 | 984.88 | 340.72 | 985.57 | 340.72 |
| 986.2 | 340.73 | 998.79 | 340.78 | 999.89 | 340.78 | 1003.14 | 340.99 | 1005.17 | 341.04 |
| 1006.19 | 341.05 | 1012.75 | 341.03 | 1015.13 | 341.01 | 1018.75 | 340.95 | 1021.72 | 340.85 |
| 1023.29 | 340.8 | 1023.42 | 340.79 | 1026.33 | 340.7 | 1027.39 | 340.58 | 1031.73 | 340.15 |
| 1031.9 | 340.13 | 1035.31 | 339.96 | 1035.9 | 339.94 | 1036.98 | 339.89 | 1039.44 | 339.87 |
| 1044.7 | 339.68 | 1046.8 | 339.6 | 1048.13 | 339.57 | 1048.7 | 339.55 | 1052.8 | 339.56 |
| 1054.62 | 339.55 | 1061.64 | 339.63 | 1064.57 | 339.71 | 1065.85 | 339.72 | 1073.66 | 339.93 |
| 1075.9 | 340 | 1077.78 | 340.07 | 1078.86 | 340.1 | 1080.73 | 340.17 | 1082.21 | 340.22 |
| 1083.45 | 340.52 | 1084.28 | 340.74 | 1084.58 | 340.84 | 1085.98 | 341.25 | 1089.18 | 341.61 |
| 1089.64 | 341.67 | 1090.46 | 341.74 | 1091.37 | 341.75 | 1095.33 | 341.73 | 1096.86 | 341.71 |
| 1098.08 | 341.66 | 1100.46 | 341.66 | 1101.12 | 341.7 | 1102.87 | 341.72 | 1103.45 | 341.74 |
| 1110.93 | 342.27 | 1115.21 | 342.54 | 1117.97 | 342.71 | 1120.86 | 342.87 | 1125.2 | 342.9 |
| 1127.67 | 342.91 | 1129.21 | 342.92 | 1131.74 | 342.93 | 1132.29 | 342.94 | 1144.14 | 342.6 |
| 1144.67 | 342.59 | 1145.74 | 342.67 | 1147.93 | 342.85 | 1149.47 | 343 | 1151.36 | 343.21 |
| 1151.76 | 343.25 | 1152.63 | 343.41 | 1155.22 | 343.85 | 1155.69 | 343.95 | 1157.03 | 344.21 |
| 1159.72 | 345.1 | 1161.08 | 345.53 | 1161.66 | 345.79 | 1162.99 | 346.13 | 1164.13 | 346.46 |
| 1165.22 | 346.81 | 1167.41 | 347.47 | 1167.97 | 347.61 | 1170.2 | 348.2 | 1172.86 | 348.92 |
| 1175.19 | 349.61 | 1178.3 | 350.54 | 1179.57 | 350.95 | 1179.96 | 351.07 | 1182.61 | 351.84 |
| 1186.52 | 352.84 | 1188.49 | 353.37 | 1190.54 | 353.93 | 1191.67 | 354.27 | 1192.94 | 354.63 |
| 1195.57 | 355.18 | 1197.98 | 355.72 | 1198.6 | 355.85 | 1198.96 | 355.9 | 1199.42 | 356.01 |
| 1200.85 | 356.17 | 1202.3 | 356.27 | 1202.96 | 356.32 | 1203.88 | 356.41 | 1205.38 | 356.57 |
| 1206.07 | 356.63 | 1206.89 | 356.74 | 1207.87 | 356.86 | 1208.66 | 356.84 | 1209.06 | 356.86 |
| 1209.69 | 356.99 | 1211.39 | 357.32 | 1213.24 | 357.59 | 1213.74 | 357.65 | 1214.35 | 357.71 |
| 1215.01 | 357.76 | 1215.63 | 357.8 | 1217.17 | 357.84 | 1218.4 | 357.82 | 1218.78 | 357.82 |
| 1219.71 | 357.86 | 1220.13 | 357.92 | 1222.73 | 358.2 | 1223.4 | 358.25 | 1224.84 | 358.38 |
| 1226.02 | 358.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 174.78 | .05 | 642.49 | .04 | 1161.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 642.49 | 1161.66 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4916.10*

INPUT

Description:

Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 163.85 | 351.18 | 164.94 | 351.18 | 165.76 | 351.17 | 166.58 | 351.17 | 170.49 | 351.1 |
| 170.82 | 351.11 | 171.98 | 351.08 | 173.48 | 351.1 | 174.05 | 351.09 | 174.33 | 351.07 |
| 175.17 | 351.06 | 178.27 | 350.98 | 179.36 | 350.94 | 180.06 | 350.9 | 182.89 | 350.71 |
| 183.72 | 350.65 | 185.46 | 350.5 | 189.97 | 350.09 | 203.22 | 349.35 | 204.54 | 349.31 |
| 211.52 | 349.15 | 212.3 | 349.14 | 213.03 | 349.12 | 215.59 | 349.09 | 216.14 | 349.1 |
| 218.15 | 349.04 | 220.08 | 348.97 | 220.21 | 348.95 | 221.55 | 348.89 | 223.8 | 348.82 |
| 231.42 | 348.61 | 231.93 | 348.59 | 232.63 | 348.58 | 240.14 | 348.33 | 240.2 | 348.31 |
| 243.59 | 348.26 | 246.24 | 348.24 | 246.47 | 348.25 | 247.84 | 348.26 | 248.11 | 348.27 |
| 248.55 | 348.32 | 248.87 | 348.31 | 249.39 | 348.25 | 250.13 | 348.22 | 252.01 | 348.16 |
| 252.44 | 348.14 | 260.2 | 347.89 | 267.5 | 347.72 | 268.12 | 347.69 | 269.49 | 347.65 |
| 271 | 347.65 | 274.28 | 347.6 | 279.44 | 347.54 | 279.59 | 347.54 | 284.74 | 347.48 |
| 285.07 | 347.47 | 287.1 | 347.45 | 304.78 | 347.22 | 317.34 | 346.97 | 317.51 | 346.92 |
| 317.76 | 346.9 | 319.16 | 346.94 | 319.68 | 346.97 | 323.06 | 347.02 | 324.25 | 347.04 |
| 326.97 | 347.03 | 328.29 | 347.05 | 329.5 | 347.05 | 330.94 | 347.02 | 333.07 | 346.95 |
| 336.38 | 346.89 | 343.28 | 346.85 | 344.03 | 346.85 | 345.75 | 346.89 | 348.85 | 346.94 |
| 350.7 | 346.98 | 351.33 | 346.98 | 353.78 | 347.01 | 354.53 | 347 | 355.42 | 347.01 |
| 355.67 | 346.98 | 356.69 | 346.99 | 356.93 | 346.98 | 357.88 | 346.98 | 358.84 | 347 |
| 360.01 | 346.99 | 360.52 | 347.02 | 361.25 | 347.01 | 361.61 | 346.99 | 362.84 | 346.9 |
| 363.73 | 346.85 | 365.1 | 346.83 | 367.3 | 346.68 | 368.23 | 346.61 | 368.36 | 346.61 |
| 369.3 | 346.67 | 370.7 | 346.73 | 372.37 | 346.78 | 373.04 | 346.78 | 383.25 | 346.64 |
| 385.26 | 346.57 | 385.61 | 346.57 | 387.44 | 346.53 | 410.9 | 346.19 | 417.65 | 346.04 |
| 419.52 | 346.02 | 420.49 | 346.02 | 422 | 345.97 | 425.78 | 345.82 | 427.72 | 345.77 |
| 429.39 | 345.75 | 429.72 | 345.74 | 433.88 | 345.65 | 434.99 | 345.63 | 436.07 | 345.66 |
| 436.89 | 345.66 | 438.27 | 345.67 | 439.76 | 345.66 | 441.74 | 345.66 | 443.57 | 345.69 |
| 444.35 | 345.69 | 444.94 | 345.68 | 446.64 | 345.73 | 448.93 | 345.69 | 450.34 | 345.73 |
| 453.39 | 345.77 | 454.45 | 345.78 | 459.03 | 345.8 | 464.33 | 345.78 | 475.9 | 345.63 |
| 481.73 | 345.52 | 485.36 | 345.44 | 486.58 | 345.41 | 487.99 | 345.36 | 488.36 | 345.34 |
| 490.12 | 345.29 | 491.91 | 345.26 | 493.85 | 345.22 | 498.17 | 345.16 | 505.85 | 345.02 |
| 506.17 | 345.02 | 507.63 | 345.17 | 508.29 | 345.22 | 508.71 | 345.23 | 509 | 345.19 |
| 510.23 | 345.16 | 511.18 | 345.1 | 511.81 | 345.03 | 512.42 | 344.99 | 513.43 | 344.98 |
| 514.48 | 344.94 | 515.35 | 344.94 | 516.97 | 344.96 | 517.63 | 344.99 | 520.58 | 344.99 |
| 521.42 | 345.01 | 523.19 | 345.03 | 523.88 | 345.05 | 525.29 | 345.08 | 526 | 345.06 |
| 528.62 | 345.06 | 528.9 | 345.03 | 530.15 | 344.95 | 535.8 | 344.65 | 536.61 | 344.62 |
| 537.5 | 344.54 | 542.08 | 344.08 | 545.6 | 343.98 | 546.9 | 343.98 | 547.73 | 343.96 |
| 549.1 | 343.95 | 550.93 | 343.96 | 552.02 | 343.95 | 554.15 | 343.95 | 555.58 | 343.98 |
| 560.22 | 344.1 | 562.39 | 344.17 | 565.78 | 344.22 | 569.81 | 344.31 | 571.7 | 344.31 |
| 571.78 | 344.32 | 586.12 | 344.37 | 586.32 | 344.37 | 600.15 | 344.46 | 602.09 | 344.46 |
| 602.42 | 344.47 | 603.7 | 344.44 | 610.54 | 344.16 | 610.61 | 344.16 | 620.23 | 343.79 |
| 624.37 | 343.74 | 626.99 | 343.79 | 627.85 | 343.77 | 629.11 | 343.79 | 630.25 | 343.83 |
| 633.82 | 344 | 637.74 | 344.13 | 638.96 | 344.14 | 640.69 | 344.19 | 640.99 | 344.19 |
| 641.6 | 344.22 | 643.05 | 344.22 | 643.32 | 344.21 | 644.35 | 344.15 | 646.64 | 344.07 |
| 648.1 | 344.03 | 651.28 | 343.96 | 652.61 | 343.91 | 653.5 | 343.85 | 655.55 | 343.76 |
| 656.43 | 343.73 | 663.86 | 343.49 | 664.45 | 343.45 | 668.03 | 343.29 | 669.14 | 343.26 |
| 669.57 | 343.26 | 672.17 | 343.32 | 673.28 | 343.35 | 675.82 | 343.49 | 678.94 | 343.63 |
| 680.05 | 343.61 | 680.69 | 343.61 | 681.84 | 343.64 | 682.96 | 343.68 | 683.51 | 343.67 |
| 683.97 | 343.64 | 684.4 | 343.63 | 686.55 | 343.68 | 687.77 | 343.69 | 688.05 | 343.68 |
| 689.96 | 343.58 | 690.57 | 343.54 | 690.85 | 343.54 | 692.4 | 343.44 | 692.5 | 343.42 |
| 696.26 | 343.27 | 698.21 | 343.21 | 698.9 | 343.21 | 700.14 | 343.16 | 702.32 | 343.08 |
| 708.36 | 343.11 | 710.85 | 343.14 | 713.96 | 343.15 | 714.94 | 343.16 | 717.52 | 343.17 |
| 718.83 | 343.19 | 719.36 | 343.21 | 720.21 | 343.22 | 720.37 | 343.24 | 721.5 | 343.25 |
| 722.94 | 343.25 | 723.09 | 343.26 | 723.93 | 343.26 | 724.56 | 343.27 | 728.4 | 343.3 |
| 731.23 | 343.33 | 734.75 | 343.33 | 738.64 | 343.38 | 740.85 | 343.38 | 742.66 | 343.4 |
| 748.95 | 343.42 | 750.58 | 343.41 | 754.87 | 343.39 | 756.54 | 343.35 | 760.57 | 343.11 |
| 761.34 | 343.07 | 763.39 | 342.84 | 765.13 | 342.81 | 773.9 | 342.41 | 784.7 | 342.25 |
| 785.74 | 342.25 | 787.08 | 342.31 | 788.01 | 342.33 | 788.47 | 342.32 | 791.71 | 342.27 |
| 792.51 | 342.19 | 792.58 | 342.16 | 793.11 | 342.12 | 793.71 | 342.17 | 795.23 | 342.22 |
| 796.34 | 342.27 | 796.7 | 342.22 | 797.57 | 342.17 | 798.72 | 342.13 | 800.13 | 342.16 |
| 800.21 | 342.17 | 802.83 | 342.33 | 803.86 | 342.42 | 804.93 | 342.5 | 806.88 | 342.63 |
| 809.64 | 342.68 | 809.85 | 342.69 | 810.8 | 342.7 | 812.22 | 342.7 | 814.4 | 342.68 |
| 815.03 | 342.62 | 816.68 | 342.49 | 819.61 | 342.27 | 823.55 | 342.06 | 824.06 | 342.01 |
| 824.55 | 341.93 | 827.57 | 341.93 | 828.57 | 341.95 | 829.88 | 341.92 | 831.83 | 341.91 |
| 832.61 | 341.98 | 835.14 | 342.09 | 835.27 | 342.1 | 837.28 | 342.14 | 839 | 342.17 |
| 840.41 | 342.16 | 843.08 | 342.23 | 844.7 | 342.26 | 846.22 | 342.28 | 846.88 | 342.27 |
| 847.23 | 342.25 | 848.05 | 342.24 | 849.65 | 342.2 | 853.97 | 341.98 | 854.45 | 341.96 |
| 865.36 | 341.47 | 871.44 | 341.24 | 872.47 | 341.19 | 873.98 | 341.15 | 876.71 | 341.13 |
| 878.78 | 340.93 | 879.13 | 340.89 | 880.28 | 340.84 | 882.01 | 340.81 | 884.33 | 340.79 |
| 885.15 | 340.81 | 886.18 | 340.85 | 888.13 | 340.91 | 890.61 | 341.05 | 890.9 | 341.07 |
| 892.94 | 341.16 | 893.5 | 341.2 | 893.95 | 341.2 | 895.44 | 341.25 | 895.75 | 341.24 |
| 898.94 | 341.11 | 901.44 | 341.02 | 903.53 | 340.96 | 904.03 | 340.93 | 905.12 | 340.89 |
| 906.07 | 340.87 | 908.41 | 340.85 | 913.68 | 340.84 | 914.13 | 340.83 | 916.99 | 340.71 |
| 926.14 | 340.74 | 927.85 | 340.81 | 928.63 | 340.83 | 929.36 | 340.86 | 931.36 | 340.93 |
| 932.56 | 340.95 | 937.58 | 341.1 | 938.29 | 341.1 | 940.13 | 341.14 | 940.83 | 341.14 |
| 946.1 | 341.2 | 955.01 | 341.36 | 956.75 | 341.39 | 957.5 | 341.39 | 957.78 | 341.38 |
| 961.26 | 341.31 | 962.02 | 341.29 | 964.97 | 341.19 | 969.08 | 340.99 | 970.97 | 340.86 |
| 978.45 | 340.43 | 984.22 | 340.39 | 984.76 | 340.39 | 986.02 | 340.36 | 987.51 | 340.36 |
| 988.55 | 340.38 | 1001.19 | 340.44 | 1002.3 | 340.44 | 1005.56 | 340.63 | 1007.6 | 340.68 |
| 1008.63 | 340.68 | 1015.21 | 340.67 | 1017.6 | 340.65 | 1020.73 | 340.61 | 1021.24 | 340.59 |
| 1024.22 | 340.5 | 1024.88 | 340.47 | 1025.93 | 340.44 | 1028.86 | 340.34 | 1029.92 | 340.24 |
| 1034.28 | 339.82 | 1034.45 | 339.8 | 1037.87 | 339.64 | 1038.46 | 339.62 | 1039.55 | 339.57 |
| 1042.03 | 339.55 | 1047.31 | 339.37 | 1048.94 | 339.3 | 1050.75 | 339.26 | 1051.59 | 339.23 |
| 1055.31 | 339.25 | 1057.08 | 339.24 | 1063.88 | 339.31 | 1066.73 | 339.39 | 1067.97 | 339.4 |
| 1075.54 | 339.6 | 1077.72 | 339.67 | 1079.54 | 339.74 | 1080.59 | 339.77 | 1082.4 | 339.84 |
| 1083.84 | 339.9 | 1085.04 | 340.21 | 1085.84 | 340.44 | 1086.14 | 340.55 | 1087.5 | 340.98 |
| 1090.61 | 341.36 | 1091.05 | 341.43 | 1091.84 | 341.49 | 1092.72 | 341.5 | 1096.57 | 341.5 |
| 1098.05 | 341.48 | 1098.92 | 341.44 | 1100.29 | 341.43 | 1101.54 | 341.44 | 1102.19 | 341.48 |
| 1104.44 | 341.51 | 1111.7 | 342.02 | 1115.86 | 342.28 | 1118.53 | 342.44 | 1121.34 | 342.6 |
| 1125.54 | 342.63 | 1127.94 | 342.64 | 1129.43 | 342.64 | 1131.89 | 342.66 | 1132.42 | 342.67 |
| 1143.91 | 342.37 | 1144.43 | 342.36 | 1147.6 | 342.61 | 1149.08 | 342.76 | 1151.31 | 343 |
| 1152.15 | 343.15 | 1154.66 | 343.58 | 1156.42 | 343.92 | 1158.39 | 344.55 | 1160.36 | 345.17 |
| 1160.91 | 345.41 | 1162.26 | 345.74 | 1163.42 | 346.05 | 1164.52 | 346.4 | 1166.75 | 347.04 |
| 1169.58 | 347.75 | 1171.98 | 348.37 | 1172.28 | 348.44 | 1172.89 | 348.62 | 1175 | 349.22 |
| 1177.12 | 349.83 | 1179.47 | 350.54 | 1182.16 | 351.3 | 1186.13 | 352.29 | 1189.24 | 353.12 |
| 1190.2 | 353.37 | 1191.35 | 353.71 | 1192.63 | 354.07 | 1193.76 | 354.3 | 1195.31 | 354.63 |
| 1197.16 | 355.05 | 1197.75 | 355.19 | 1198.38 | 355.32 | 1198.74 | 355.38 | 1199.29 | 355.51 |
| 1200.15 | 355.6 | 1200.65 | 355.68 | 1202.13 | 355.8 | 1203.73 | 355.97 | 1205.25 | 356.16 |
| 1206.3 | 356.28 | 1206.78 | 356.36 | 1207.78 | 356.49 | 1208.57 | 356.48 | 1208.88 | 356.49 |
| 1209.63 | 356.63 | 1211.35 | 356.94 | 1213.22 | 357.19 | 1214.34 | 357.31 | 1214.61 | 357.32 |
| 1215.64 | 357.4 | 1217.21 | 357.43 | 1218.46 | 357.41 | 1219.78 | 357.45 | 1220.2 | 357.51 |
| 1222.84 | 357.78 | 1222.91 | 357.77 | 1224.98 | 357.93 | 1225.25 | 357.96 | 1225.5 | 357.96 |
| 1226.18 | 358.01 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 163.85 | .05 | 643.32 | .04 | 1160.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 643.32 | 1160.91 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4896.18*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 152.93 | 351 | 154.88 | 351 | 155.72 | 350.99 | 159.73 | 350.92 | 160.07 | 350.93 |
| 161.25 | 350.9 | 162.8 | 350.92 | 163.37 | 350.91 | 163.66 | 350.89 | 164.52 | 350.88 |
| 166.93 | 350.84 | 168.81 | 350.78 | 169.53 | 350.75 | 172.43 | 350.56 | 172.93 | 350.53 |
| 175.07 | 350.36 | 179.68 | 349.97 | 193.26 | 349.25 | 194.62 | 349.2 | 201.76 | 349.05 |
| 205.93 | 349 | 207.14 | 348.99 | 208.56 | 348.95 | 210.53 | 348.88 | 210.66 | 348.86 |
| 212.04 | 348.8 | 213.75 | 348.74 | 214.34 | 348.73 | 222.16 | 348.52 | 223.39 | 348.49 |
| 231.08 | 348.24 | 231.15 | 348.23 | 234.62 | 348.18 | 237.34 | 348.15 | 237.57 | 348.16 |
| 238.97 | 348.18 | 239.26 | 348.19 | 239.7 | 348.24 | 240.03 | 348.23 | 240.56 | 348.17 |
| 241.32 | 348.14 | 243.25 | 348.08 | 243.68 | 348.06 | 251.64 | 347.81 | 259.12 | 347.63 |
| 260.75 | 347.57 | 261.16 | 347.56 | 262.7 | 347.56 | 266.06 | 347.51 | 271.35 | 347.45 |
| 271.5 | 347.44 | 276.78 | 347.38 | 277.11 | 347.37 | 279.2 | 347.35 | 297.31 | 347.1 |
| 310.18 | 346.84 | 310.35 | 346.79 | 310.61 | 346.77 | 311.15 | 346.78 | 312.04 | 346.81 |
| 312.57 | 346.84 | 316.04 | 346.9 | 317.26 | 346.91 | 320.04 | 346.91 | 321.39 | 346.93 |
| 322.64 | 346.93 | 324.11 | 346.9 | 326.29 | 346.82 | 329.69 | 346.75 | 336.75 | 346.7 |
| 337.52 | 346.7 | 339.28 | 346.74 | 342.45 | 346.79 | 344.36 | 346.83 | 345 | 346.83 |
| 347.51 | 346.86 | 349.19 | 346.86 | 349.44 | 346.83 | 350.48 | 346.84 | 350.73 | 346.83 |
| 351.71 | 346.83 | 352.69 | 346.85 | 353.65 | 346.84 | 354.24 | 346.85 | 354.42 | 346.87 |
| 355.16 | 346.86 | 355.53 | 346.84 | 356.79 | 346.74 | 357.7 | 346.69 | 359.11 | 346.67 |
| 362.32 | 346.44 | 363.41 | 346.5 | 364.85 | 346.56 | 366.56 | 346.62 | 367.24 | 346.62 |
| 377.7 | 346.47 | 379.76 | 346.4 | 380.12 | 346.4 | 381.99 | 346.36 | 406.03 | 346 |
| 412.94 | 345.85 | 415.01 | 345.84 | 415.85 | 345.83 | 416.73 | 345.81 | 417.64 | 345.77 |
| 421.28 | 345.64 | 422.83 | 345.59 | 424.97 | 345.55 | 425.31 | 345.54 | 429.57 | 345.45 |
| 430.71 | 345.43 | 431.81 | 345.46 | 432.65 | 345.45 | 434.06 | 345.46 | 435.6 | 345.46 |
| 436.71 | 345.45 | 438.33 | 345.45 | 439.5 | 345.48 | 439.91 | 345.47 | 440.29 | 345.48 |
| 440.9 | 345.47 | 442.64 | 345.52 | 444.98 | 345.47 | 447.15 | 345.53 | 449.55 | 345.56 |
| 450.64 | 345.57 | 455.34 | 345.59 | 460.77 | 345.56 | 472.62 | 345.38 | 478.59 | 345.27 |
| 483.56 | 345.15 | 485.01 | 345.1 | 485.38 | 345.08 | 487.18 | 345.03 | 489.02 | 345 |
| 491.01 | 344.95 | 495.44 | 344.88 | 503.3 | 344.72 | 503.63 | 344.73 | 505.12 | 344.88 |
| 505.81 | 344.94 | 506.23 | 344.95 | 506.53 | 344.9 | 507.2 | 344.88 | 507.6 | 344.88 |
| 508.77 | 344.81 | 510.03 | 344.7 | 511.07 | 344.69 | 511.76 | 344.66 | 512.7 | 344.64 |
| 513.04 | 344.65 | 514.42 | 344.66 | 515.37 | 344.7 | 518.39 | 344.69 | 519.25 | 344.72 |
| 521.07 | 344.74 | 521.77 | 344.76 | 523.22 | 344.78 | 525.15 | 344.76 | 526.63 | 344.77 |
| 526.92 | 344.74 | 528.2 | 344.66 | 534.81 | 344.34 | 535.73 | 344.27 | 540.42 | 343.84 |
| 540.81 | 343.82 | 544.4 | 343.73 | 544.79 | 343.74 | 546.21 | 343.72 | 547.61 | 343.71 |
| 549.49 | 343.71 | 550.6 | 343.7 | 552.79 | 343.7 | 554.25 | 343.72 | 559 | 343.83 |
| 561.23 | 343.89 | 564.7 | 343.94 | 568.83 | 344.03 | 569.09 | 344.02 | 570.76 | 344.02 |
| 570.85 | 344.03 | 585.54 | 344.08 | 585.74 | 344.08 | 599.91 | 344.17 | 602.24 | 344.18 |
| 603.55 | 344.16 | 610.56 | 343.89 | 610.63 | 343.89 | 620.48 | 343.52 | 624.73 | 343.48 |
| 627.41 | 343.52 | 627.74 | 343.52 | 628.29 | 343.49 | 629.58 | 343.51 | 630.75 | 343.55 |
| 634.41 | 343.72 | 637.82 | 343.82 | 638.42 | 343.84 | 639.67 | 343.85 | 641.45 | 343.9 |
| 641.75 | 343.9 | 642.38 | 343.93 | 643.87 | 343.93 | 644.14 | 343.92 | 645.17 | 343.86 |
| 647.47 | 343.78 | 648.94 | 343.74 | 652.13 | 343.67 | 653.47 | 343.62 | 654.37 | 343.56 |
| 656.42 | 343.47 | 657.3 | 343.44 | 664.77 | 343.23 | 665.36 | 343.2 | 668.96 | 343.04 |
| 670.08 | 343.01 | 670.51 | 343.01 | 673.12 | 343.07 | 674.23 | 343.1 | 674.73 | 343.14 |
| 675.32 | 343.16 | 676.79 | 343.24 | 679.92 | 343.38 | 681.67 | 343.36 | 682.47 | 343.38 |
| 683.51 | 343.42 | 683.95 | 343.43 | 684.51 | 343.42 | 684.97 | 343.39 | 685.41 | 343.38 |
| 687.56 | 343.43 | 688.87 | 343.43 | 690.98 | 343.32 | 692.5 | 343.25 | 693.53 | 343.17 |
| 697.31 | 343.01 | 699.27 | 342.96 | 699.97 | 342.95 | 701.21 | 342.91 | 702.85 | 342.85 |
| 703.41 | 342.84 | 709.46 | 342.87 | 711.97 | 342.9 | 715.09 | 342.91 | 716.08 | 342.92 |
| 717.99 | 342.93 | 721.23 | 342.98 | 721.53 | 343 | 722.66 | 343.01 | 723.94 | 343.01 |
| 724.11 | 343.02 | 725.1 | 343.02 | 725.74 | 343.03 | 728.24 | 343.04 | 729.6 | 343.06 |
| 732.44 | 343.08 | 735.09 | 343.07 | 735.97 | 343.07 | 739.88 | 343.12 | 742.11 | 343.11 |
| 743.92 | 343.13 | 750.24 | 343.14 | 756.18 | 343.1 | 757.86 | 343.06 | 761.91 | 342.81 |
| 762.68 | 342.76 | 764.74 | 342.52 | 766.49 | 342.49 | 775.3 | 342.1 | 786.15 | 341.92 |
| 787.19 | 341.92 | 788.05 | 341.96 | 789.47 | 341.99 | 789.93 | 341.99 | 793.19 | 341.93 |
| 793.99 | 341.86 | 794.06 | 341.83 | 794.59 | 341.79 | 795.2 | 341.85 | 796.72 | 341.9 |
| 797.84 | 341.95 | 798.2 | 341.9 | 799.08 | 341.84 | 800.23 | 341.8 | 801.64 | 341.83 |
| 801.72 | 341.84 | 804.35 | 342.01 | 805.39 | 342.11 | 806.46 | 342.19 | 808.42 | 342.32 |
| 811.19 | 342.37 | 811.41 | 342.38 | 812.36 | 342.39 | 813.78 | 342.39 | 815.98 | 342.37 |
| 816.31 | 342.33 | 817.16 | 342.27 | 818.27 | 342.17 | 821.21 | 341.95 | 825.17 | 341.73 |
| 825.67 | 341.68 | 826.17 | 341.6 | 829.21 | 341.6 | 830.21 | 341.62 | 831.52 | 341.59 |
| 833.49 | 341.57 | 833.72 | 341.58 | 834.27 | 341.64 | 836.81 | 341.75 | 836.94 | 341.76 |
| 838.96 | 341.8 | 840.69 | 341.82 | 842.1 | 341.81 | 844.78 | 341.88 | 846.41 | 341.91 |
| 847.94 | 341.92 | 848.77 | 341.91 | 849.27 | 341.88 | 849.78 | 341.89 | 851.39 | 341.84 |
| 853.56 | 341.74 | 853.97 | 341.71 | 855.72 | 341.62 | 856.21 | 341.6 | 867.16 | 341.11 |
| 873.27 | 340.87 | 874.3 | 340.82 | 875.82 | 340.78 | 878.56 | 340.76 | 879.22 | 340.71 |
| 881.27 | 340.52 | 882.14 | 340.49 | 883.88 | 340.46 | 886.45 | 340.44 | 890.03 | 340.55 |
| 892.52 | 340.69 | 892.81 | 340.71 | 894.87 | 340.79 | 895.43 | 340.83 | 895.88 | 340.83 |
| 897.37 | 340.86 | 897.69 | 340.86 | 900.89 | 340.72 | 903.4 | 340.62 | 905.5 | 340.56 |
| 906.31 | 340.51 | 907.1 | 340.48 | 908.05 | 340.46 | 909.27 | 340.46 | 910.4 | 340.44 |
| 915.3 | 340.43 | 916.15 | 340.43 | 919.02 | 340.32 | 928.21 | 340.35 | 930.71 | 340.44 |
| 933.45 | 340.52 | 934.66 | 340.54 | 939.7 | 340.68 | 940.41 | 340.68 | 941.31 | 340.71 |
| 941.97 | 340.72 | 942.96 | 340.72 | 948.26 | 340.78 | 957.2 | 340.96 | 958.96 | 340.99 |
| 959.98 | 340.99 | 963.48 | 340.93 | 964.25 | 340.91 | 967.21 | 340.82 | 971.34 | 340.62 |
| 973.24 | 340.49 | 980.75 | 340.09 | 986.55 | 340.04 | 987.09 | 340.04 | 988.35 | 340.01 |
| 989.85 | 340.01 | 990.89 | 340.03 | 1003.59 | 340.09 | 1004.7 | 340.09 | 1007.98 | 340.27 |
| 1010.03 | 340.31 | 1011.06 | 340.32 | 1017.67 | 340.31 | 1020.07 | 340.29 | 1023.21 | 340.25 |
| 1023.73 | 340.23 | 1026.72 | 340.14 | 1027.39 | 340.11 | 1031.38 | 339.99 | 1032.44 | 339.89 |
| 1036.83 | 339.5 | 1037 | 339.48 | 1040.43 | 339.32 | 1042.12 | 339.26 | 1044.61 | 339.23 |
| 1049.91 | 339.05 | 1051.55 | 338.98 | 1054.21 | 338.92 | 1057.82 | 338.94 | 1059.53 | 338.93 |
| 1066.13 | 338.99 | 1066.45 | 339.01 | 1068.89 | 339.07 | 1070.09 | 339.08 | 1077.43 | 339.27 |
| 1079.54 | 339.34 | 1081.3 | 339.41 | 1082.32 | 339.44 | 1084.08 | 339.51 | 1085.47 | 339.57 |
| 1086.64 | 339.9 | 1087.41 | 340.14 | 1087.7 | 340.26 | 1089.02 | 340.72 | 1092.03 | 341.12 |
| 1092.46 | 341.18 | 1093.22 | 341.25 | 1094.08 | 341.26 | 1098.57 | 341.26 | 1099.25 | 341.25 |
| 1100.09 | 341.21 | 1101.41 | 341.21 | 1102.8 | 341.22 | 1103.25 | 341.25 | 1104.89 | 341.27 |
| 1105.44 | 341.29 | 1112.62 | 341.78 | 1116.5 | 342.02 | 1119.09 | 342.17 | 1121.81 | 342.32 |
| 1125.89 | 342.36 | 1128.21 | 342.37 | 1129.66 | 342.37 | 1132.03 | 342.39 | 1132.55 | 342.4 |
| 1143.69 | 342.14 | 1144.19 | 342.13 | 1145.2 | 342.2 | 1147.26 | 342.37 | 1148.7 | 342.51 |
| 1150.86 | 342.75 | 1151.68 | 342.9 | 1154.11 | 343.3 | 1154.56 | 343.38 | 1155.81 | 343.62 |
| 1157.73 | 344.22 | 1159.63 | 344.81 | 1160.17 | 345.03 | 1161.54 | 345.35 | 1162.71 | 345.65 |
| 1164.28 | 346.11 | 1166.08 | 346.61 | 1166.66 | 346.74 | 1168.95 | 347.29 | 1171.39 | 347.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1174.08 | 348.62 | 1174.45 | 348.73 | 1176.6 | 349.32 | 1177.28 | 349.51 | 1178.58 | 349.9 |
| 1181.03 | 350.57 | 1181.71 | 350.76 | 1185.73 | 351.73 | 1188.89 | 352.56 | 1189.86 | 352.81 |
| 1191.03 | 353.16 | 1192.33 | 353.51 | 1195.04 | 354.08 | 1196.92 | 354.51 | 1197.51 | 354.66 |
| 1198.52 | 354.86 | 1198.99 | 354.98 | 1199.84 | 355.08 | 1200.46 | 355.18 | 1201.95 | 355.33 |
| 1203.57 | 355.53 | 1205.12 | 355.75 | 1206.18 | 355.89 | 1206.68 | 355.98 | 1207.68 | 356.13 |
| 1208.49 | 356.13 | 1208.9 | 356.15 | 1209.5 | 356.26 | 1211.3 | 356.56 | 1213.2 | 356.8 |
| 1214.34 | 356.91 | 1214.61 | 356.92 | 1215.65 | 356.99 | 1217.24 | 357.02 | 1218.9 | 357.01 |
| 1219.85 | 357.05 | 1220.28 | 357.1 | 1222.96 | 357.35 | 1223.65 | 357.38 | 1225.4 | 357.51 |
| 1226.34 | 357.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 152.93 | .05 | 644.14 | .04 | 1160.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 644.14 | 1160.17 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4876.25*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 142.01 | 350.82 | 143.14 | 350.83 | 144.01 | 350.82 | 144.87 | 350.82 | 148.97 | 350.74 |
| 149.32 | 350.75 | 150.53 | 350.72 | 152.11 | 350.74 | 152.7 | 350.73 | 152.99 | 350.71 |
| 153.87 | 350.71 | 156.34 | 350.67 | 158.27 | 350.62 | 159.01 | 350.59 | 162.48 | 350.39 |
| 169.4 | 349.85 | 183.3 | 349.15 | 184.69 | 349.1 | 192.01 | 348.96 | 192.82 | 348.95 |
| 193.59 | 348.93 | 197.51 | 348.9 | 198.97 | 348.86 | 200.98 | 348.79 | 201.12 | 348.77 |
| 202.53 | 348.71 | 204.28 | 348.65 | 204.89 | 348.64 | 212.89 | 348.43 | 214.16 | 348.4 |
| 222.03 | 348.15 | 222.1 | 348.14 | 225.65 | 348.09 | 228.43 | 348.07 | 228.67 | 348.08 |
| 230.1 | 348.1 | 230.4 | 348.11 | 230.85 | 348.17 | 231.19 | 348.16 | 231.39 | 348.12 |
| 231.73 | 348.09 | 232.51 | 348.06 | 234.48 | 348 | 234.93 | 347.98 | 243.08 | 347.72 |
| 250.73 | 347.54 | 252.41 | 347.48 | 252.82 | 347.47 | 254.4 | 347.47 | 257.84 | 347.42 |
| 263.26 | 347.35 | 263.41 | 347.35 | 268.81 | 347.28 | 269.16 | 347.27 | 270.99 | 347.24 |
| 271.29 | 347.24 | 289.84 | 346.98 | 303.01 | 346.71 | 303.19 | 346.65 | 303.46 | 346.63 |
| 304.01 | 346.64 | 305.47 | 346.7 | 309.01 | 346.77 | 310.26 | 346.79 | 313.11 | 346.79 |
| 315 | 346.82 | 315.77 | 346.81 | 317.28 | 346.77 | 319.51 | 346.69 | 322.99 | 346.61 |
| 330.22 | 346.55 | 331.64 | 346.57 | 332.82 | 346.6 | 336.06 | 346.64 | 338.01 | 346.69 |
| 338.67 | 346.69 | 341.24 | 346.71 | 342.96 | 346.71 | 343.22 | 346.69 | 344.28 | 346.69 |
| 344.54 | 346.68 | 346.54 | 346.7 | 348.13 | 346.7 | 348.31 | 346.72 | 349.46 | 346.7 |
| 350.14 | 346.63 | 351.67 | 346.53 | 353.11 | 346.51 | 355.42 | 346.34 | 356.4 | 346.26 |
| 356.53 | 346.26 | 357.52 | 346.33 | 358.99 | 346.4 | 359.93 | 346.43 | 361.11 | 346.46 |
| 361.44 | 346.46 | 372.15 | 346.3 | 374.26 | 346.23 | 374.62 | 346.23 | 376.54 | 346.18 |
| 401.16 | 345.81 | 408.23 | 345.66 | 410.2 | 345.65 | 411.22 | 345.64 | 412.11 | 345.62 |
| 413.04 | 345.58 | 416.77 | 345.45 | 418.36 | 345.4 | 420.55 | 345.36 | 420.9 | 345.35 |
| 425.26 | 345.25 | 426.39 | 345.23 | 427.24 | 345.25 | 431.43 | 345.25 | 432.57 | 345.23 |
| 433.51 | 345.23 | 434.23 | 345.24 | 435.43 | 345.27 | 435.85 | 345.26 | 436.24 | 345.27 |
| 436.86 | 345.26 | 438.64 | 345.31 | 441.04 | 345.26 | 442.52 | 345.3 | 445.72 | 345.34 |
| 446.84 | 345.36 | 451.65 | 345.37 | 457.21 | 345.34 | 469.34 | 345.14 | 475.45 | 345.02 |
| 479.27 | 344.92 | 480.54 | 344.89 | 482.03 | 344.84 | 482.41 | 344.82 | 484.25 | 344.77 |
| 486.13 | 344.73 | 488.17 | 344.68 | 492.7 | 344.6 | 500.76 | 344.43 | 501.09 | 344.44 |
| 503.32 | 344.66 | 503.76 | 344.66 | 504.06 | 344.62 | 505.16 | 344.59 | 506.35 | 344.52 |
| 507 | 344.46 | 507.64 | 344.42 | 508.71 | 344.4 | 509.42 | 344.37 | 510.72 | 344.35 |
| 512.13 | 344.37 | 513.12 | 344.41 | 516.21 | 344.4 | 517.09 | 344.43 | 519.67 | 344.46 |
| 521.15 | 344.49 | 521.89 | 344.47 | 523.13 | 344.47 | 524.71 | 344.48 | 524.94 | 344.45 |
| 526.25 | 344.37 | 532.17 | 344.1 | 533.02 | 344.07 | 533.96 | 344 | 537.53 | 343.7 |
| 538.76 | 343.59 | 542.83 | 343.49 | 543.82 | 343.49 | 544.69 | 343.47 | 546.13 | 343.46 |
| 548.04 | 343.46 | 549.19 | 343.44 | 551.42 | 343.45 | 552.93 | 343.47 | 557.79 | 343.57 |
| 560.07 | 343.62 | 563.62 | 343.66 | 567.85 | 343.74 | 569.37 | 343.73 | 569.91 | 343.74 |
| 584.96 | 343.79 | 585.17 | 343.79 | 599.67 | 343.88 | 601.71 | 343.89 | 602.06 | 343.9 |
| 602.76 | 343.89 | 603.4 | 343.87 | 610.57 | 343.61 | 610.65 | 343.61 | 620.74 | 343.26 |
| 625.08 | 343.21 | 627.83 | 343.25 | 628.73 | 343.22 | 630.05 | 343.22 | 630.37 | 343.24 |
| 631.25 | 343.27 | 635 | 343.43 | 638.49 | 343.53 | 639.11 | 343.55 | 640.38 | 343.56 |
| 641.57 | 343.59 | 642.2 | 343.6 | 643.16 | 343.63 | 643.21 | 343.64 | 644.63 | 343.64 |
| 644.96 | 343.63 | 646 | 343.57 | 648.31 | 343.49 | 649.79 | 343.45 | 652.99 | 343.38 |
| 654.33 | 343.33 | 655.23 | 343.27 | 657.29 | 343.19 | 658.18 | 343.16 | 665.68 | 342.97 |
| 666.27 | 342.94 | 669.89 | 342.79 | 671.44 | 342.76 | 674.07 | 342.82 | 675.19 | 342.86 |
| 676.27 | 342.92 | 677.75 | 342.99 | 680.9 | 343.13 | 682.66 | 343.11 | 683.46 | 343.13 |
| 684.51 | 343.17 | 684.95 | 343.18 | 685.51 | 343.17 | 685.97 | 343.14 | 686.41 | 343.13 |
| 689.17 | 343.18 | 690.08 | 343.16 | 692.01 | 343.07 | 692.62 | 343.03 | 692.91 | 343.03 |
| 693.53 | 342.99 | 694.57 | 342.91 | 698.36 | 342.76 | 700.33 | 342.7 | 701.03 | 342.7 |
| 702.28 | 342.67 | 703.93 | 342.61 | 704.49 | 342.6 | 710.57 | 342.63 | 713.09 | 342.66 |
| 716.22 | 342.68 | 717.21 | 342.69 | 719.13 | 342.69 | 721.14 | 342.72 | 721.67 | 342.74 |
| 722.53 | 342.75 | 722.84 | 342.77 | 723.83 | 342.78 | 724.51 | 342.77 | 724.64 | 342.78 |
| 726.28 | 342.78 | 726.92 | 342.79 | 729.43 | 342.8 | 733.65 | 342.83 | 736.31 | 342.82 |
| 737.2 | 342.82 | 741.12 | 342.86 | 743.36 | 342.85 | 745.18 | 342.87 | 751.52 | 342.86 |
| 753.17 | 342.86 | 757.49 | 342.81 | 759.18 | 342.77 | 763.24 | 342.5 | 764.02 | 342.45 |
| 766.09 | 342.19 | 767.85 | 342.16 | 776.7 | 341.78 | 787.59 | 341.59 | 788.64 | 341.59 |
| 789.99 | 341.64 | 791.39 | 341.65 | 794.7 | 341.59 | 795.46 | 341.53 | 795.54 | 341.5 |
| 796.07 | 341.47 | 796.68 | 341.52 | 798.21 | 341.58 | 799.33 | 341.63 | 799.7 | 341.58 |
| 800.58 | 341.52 | 801.73 | 341.47 | 803.15 | 341.5 | 803.24 | 341.51 | 805.87 | 341.69 |
| 806.92 | 341.79 | 808 | 341.88 | 809.97 | 342.02 | 812.75 | 342.06 | 814.85 | 342.08 |
| 815.35 | 342.08 | 817.55 | 342.06 | 818.18 | 341.99 | 818.74 | 341.96 | 819.38 | 341.89 |
| 819.85 | 341.86 | 822.81 | 341.63 | 826.25 | 341.43 | 827.29 | 341.35 | 827.67 | 341.28 |
| 828.03 | 341.27 | 830.84 | 341.27 | 831.85 | 341.29 | 833.16 | 341.25 | 835.14 | 341.23 |
| 835.92 | 341.29 | 838.47 | 341.41 | 838.61 | 341.42 | 840.63 | 341.46 | 842.37 | 341.48 |
| 843.79 | 341.47 | 846.48 | 341.53 | 848.12 | 341.56 | 849.66 | 341.57 | 850.32 | 341.56 |
| 850.99 | 341.53 | 851.5 | 341.53 | 852.74 | 341.5 | 855.71 | 341.36 | 857.47 | 341.26 |
| 857.96 | 341.24 | 868.96 | 340.74 | 875.1 | 340.51 | 876.13 | 340.46 | 877.66 | 340.42 |
| 880.41 | 340.39 | 881.07 | 340.34 | 882.5 | 340.22 | 882.85 | 340.18 | 884.01 | 340.14 |
| 885.76 | 340.11 | 888.1 | 340.08 | 888.92 | 340.1 | 891.93 | 340.19 | 894.43 | 340.33 |
| 896.79 | 340.43 | 897.21 | 340.46 | 897.81 | 340.46 | 899.31 | 340.48 | 899.62 | 340.47 |
| 902.84 | 340.32 | 905.36 | 340.22 | 907.47 | 340.15 | 909.08 | 340.07 | 912.39 | 340.04 |
| 917.71 | 340.03 | 918.16 | 340.02 | 921.05 | 339.92 | 930.28 | 339.96 | 932 | 340.02 |
| 932.79 | 340.04 | 933.53 | 340.07 | 935.54 | 340.12 | 936.76 | 340.14 | 941.82 | 340.27 |
| 942.53 | 340.27 | 943.43 | 340.29 | 950.41 | 340.37 | 959.4 | 340.56 | 961.16 | 340.59 |
| 962.19 | 340.59 | 965.7 | 340.54 | 969.45 | 340.44 | 973.21 | 340.27 | 973.27 | 340.26 |
| 975.51 | 340.13 | 983.05 | 339.74 | 988.88 | 339.69 | 989.41 | 339.69 | 990.44 | 339.67 |
| 990.68 | 339.65 | 991.43 | 339.65 | 993.24 | 339.68 | 1005.99 | 339.74 | 1007.11 | 339.74 |
| 1010.4 | 339.91 | 1012.46 | 339.95 | 1013.49 | 339.96 | 1020.14 | 339.95 | 1022.55 | 339.93 |
| 1025.7 | 339.89 | 1026.22 | 339.87 | 1029.22 | 339.78 | 1029.89 | 339.75 | 1033.9 | 339.64 |
| 1034.97 | 339.54 | 1039.49 | 339.16 | 1039.55 | 339.15 | 1043 | 339 | 1044.69 | 338.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1047.19 | 338.91 | 1052.51 | 338.73 | 1054.64 | 338.65 | 1055.99 | 338.63 | 1056.57 | 338.61 |
| 1060.33 | 338.62 | 1061.99 | 338.61 | 1068.37 | 338.68 | 1071.04 | 338.75 | 1072.2 | 338.76 |
| 1079.31 | 338.94 | 1081.35 | 339.01 | 1082.94 | 339.08 | 1085.75 | 339.18 | 1087.09 | 339.24 |
| 1088.23 | 339.59 | 1088.98 | 339.85 | 1089.26 | 339.97 | 1090.53 | 340.45 | 1093.45 | 340.87 |
| 1093.87 | 340.94 | 1094.6 | 341 | 1095.44 | 341.01 | 1099.04 | 341.03 | 1100.44 | 341.01 |
| 1101.55 | 340.98 | 1102.54 | 340.98 | 1103.71 | 340.99 | 1104.31 | 341.03 | 1106.43 | 341.06 |
| 1113.39 | 341.53 | 1117.14 | 341.76 | 1119.65 | 341.91 | 1122.28 | 342.05 | 1126.23 | 342.08 |
| 1128.48 | 342.09 | 1132.18 | 342.12 | 1132.69 | 342.12 | 1143.47 | 341.91 | 1143.95 | 341.9 |
| 1144.93 | 341.97 | 1146.93 | 342.13 | 1148.32 | 342.27 | 1150.41 | 342.5 | 1151.2 | 342.64 |
| 1153.56 | 343.02 | 1155.2 | 343.33 | 1157.66 | 344.07 | 1158.9 | 344.44 | 1159.42 | 344.65 |
| 1160.81 | 344.96 | 1162 | 345.25 | 1163.59 | 345.7 | 1165.42 | 346.18 | 1168.32 | 346.84 |
| 1170.79 | 347.42 | 1171.1 | 347.49 | 1171.73 | 347.66 | 1173.53 | 348.13 | 1175.08 | 348.55 |
| 1176.77 | 348.99 | 1178.09 | 349.37 | 1180.57 | 350.02 | 1181.26 | 350.21 | 1185.33 | 351.18 |
| 1187.39 | 351.71 | 1188.53 | 352.01 | 1189.52 | 352.25 | 1190.7 | 352.6 | 1192.02 | 352.96 |
| 1193.18 | 353.2 | 1194.77 | 353.54 | 1196.67 | 353.98 | 1197.28 | 354.13 | 1198.3 | 354.34 |
| 1198.77 | 354.46 | 1199.63 | 354.58 | 1200.27 | 354.68 | 1201.78 | 354.86 | 1202.47 | 354.95 |
| 1203.42 | 355.09 | 1204.99 | 355.34 | 1205.71 | 355.44 | 1207.59 | 355.76 | 1208.4 | 355.77 |
| 1208.83 | 355.79 | 1209.49 | 355.91 | 1211.26 | 356.18 | 1213.7 | 356.46 | 1214.33 | 356.51 |
| 1215.67 | 356.58 | 1217.28 | 356.62 | 1218.56 | 356.6 | 1219.92 | 356.64 | 1220.36 | 356.69 |
| 1223.07 | 356.93 | 1223.14 | 356.92 | 1223.77 | 356.95 | 1225.55 | 357.07 | 1225.8 | 357.07 |
| 1226.5 | 357.11 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 142.01 | .05 | 644.96 | .04 | 1159.42 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 644.96 | 1159.42 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4856.33*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 131.08 | 350.65 | 132.25 | 350.65 | 133.13 | 350.64 | 134.01 | 350.64 | 138.21 | 350.56 |
| 138.56 | 350.57 | 139.8 | 350.54 | 141.42 | 350.56 | 142.03 | 350.55 | 142.32 | 350.53 |
| 143.23 | 350.53 | 145.76 | 350.5 | 147.73 | 350.46 | 148.48 | 350.44 | 151.52 | 350.27 |
| 152.04 | 350.25 | 154.28 | 350.09 | 159.12 | 349.73 | 173.34 | 349.04 | 174.76 | 349 |
| 182.25 | 348.86 | 183.08 | 348.85 | 183.87 | 348.83 | 187.21 | 348.82 | 187.88 | 348.81 |
| 189.37 | 348.77 | 191.44 | 348.7 | 191.58 | 348.68 | 193.02 | 348.61 | 194.81 | 348.56 |
| 195.43 | 348.55 | 203.62 | 348.34 | 204.92 | 348.31 | 212.97 | 348.06 | 213.04 | 348.05 |
| 216.68 | 348.01 | 219.53 | 347.99 | 219.77 | 348 | 221.24 | 348.02 | 221.54 | 348.03 |
| 222 | 348.09 | 222.34 | 348.08 | 222.9 | 348.01 | 223.69 | 347.98 | 225.72 | 347.92 |
| 226.18 | 347.9 | 234.51 | 347.64 | 242.35 | 347.45 | 244.06 | 347.39 | 244.49 | 347.38 |
| 246.1 | 347.38 | 248.93 | 347.34 | 249.62 | 347.32 | 255.17 | 347.26 | 255.33 | 347.25 |
| 260.85 | 347.18 | 261.2 | 347.17 | 263.08 | 347.14 | 263.39 | 347.14 | 282.37 | 346.87 |
| 295.85 | 346.58 | 296.03 | 346.52 | 296.3 | 346.5 | 297.8 | 346.54 | 298.36 | 346.57 |
| 301.99 | 346.65 | 303.27 | 346.67 | 306.18 | 346.67 | 308.11 | 346.7 | 308.9 | 346.69 |
| 310.45 | 346.65 | 312.74 | 346.56 | 316.29 | 346.47 | 323.69 | 346.4 | 325.15 | 346.42 |
| 326.35 | 346.45 | 329.67 | 346.49 | 331.66 | 346.54 | 332.34 | 346.54 | 334.97 | 346.57 |
| 335.77 | 346.56 | 336.73 | 346.57 | 336.99 | 346.54 | 338.08 | 346.55 | 338.34 | 346.53 |
| 340.39 | 346.55 | 342.02 | 346.55 | 342.21 | 346.57 | 343.38 | 346.55 | 344.07 | 346.48 |
| 344.69 | 346.43 | 345.64 | 346.37 | 347.12 | 346.35 | 349.48 | 346.17 | 350.48 | 346.09 |
| 350.61 | 346.09 | 351.63 | 346.16 | 354.09 | 346.27 | 355.3 | 346.3 | 355.64 | 346.3 |
| 366.6 | 346.13 | 369.13 | 346.05 | 371.1 | 346.01 | 396.28 | 345.62 | 403.53 | 345.47 |
| 405.54 | 345.46 | 406.58 | 345.46 | 408.2 | 345.41 | 408.75 | 345.38 | 412.26 | 345.26 |
| 413.89 | 345.21 | 416.13 | 345.17 | 420.95 | 345.05 | 422.11 | 345.03 | 423.3 | 345.05 |
| 424.18 | 345.04 | 427.27 | 345.04 | 428.44 | 345.02 | 429.39 | 345.02 | 430.13 | 345.03 |
| 431.36 | 345.06 | 432.82 | 345.04 | 434.65 | 345.1 | 437.1 | 345.04 | 439.37 | 345.1 |
| 441.89 | 345.13 | 443.03 | 345.14 | 447.95 | 345.15 | 453.64 | 345.12 | 466.05 | 344.9 |
| 472.32 | 344.76 | 476.22 | 344.66 | 477.52 | 344.63 | 479.04 | 344.57 | 481.32 | 344.5 |
| 483.24 | 344.46 | 485.33 | 344.41 | 489.97 | 344.32 | 498.21 | 344.14 | 498.56 | 344.14 |
| 500.12 | 344.31 | 500.83 | 344.37 | 501.28 | 344.38 | 501.59 | 344.33 | 502.72 | 344.3 |
| 504.18 | 344.22 | 504.6 | 344.17 | 505.26 | 344.13 | 506.35 | 344.11 | 507.08 | 344.08 |
| 508.41 | 344.06 | 509.85 | 344.08 | 510.86 | 344.12 | 514.02 | 344.11 | 514.92 | 344.14 |
| 515.57 | 344.15 | 516.82 | 344.15 | 517.56 | 344.17 | 519.08 | 344.2 | 519.84 | 344.18 |
| 521.1 | 344.18 | 522.41 | 344.19 | 522.65 | 344.2 | 522.96 | 344.16 | 524.3 | 344.08 |
| 530.36 | 343.82 | 531.22 | 343.8 | 532.19 | 343.73 | 535.84 | 343.45 | 537.1 | 343.35 |
| 537.51 | 343.33 | 540.88 | 343.25 | 542.28 | 343.25 | 543.17 | 343.23 | 544.64 | 343.21 |
| 546.6 | 343.21 | 547.77 | 343.19 | 550.06 | 343.19 | 551.6 | 343.21 | 556.57 | 343.3 |
| 558.9 | 343.35 | 562.54 | 343.38 | 566.87 | 343.45 | 568.43 | 343.44 | 568.98 | 343.45 |
| 584.38 | 343.5 | 584.59 | 343.5 | 599.44 | 343.6 | 601.88 | 343.61 | 603.25 | 343.59 |
| 610.59 | 343.34 | 610.67 | 343.34 | 620.99 | 343 | 625.44 | 342.95 | 628.6 | 342.97 |
| 629.17 | 342.94 | 630.52 | 342.94 | 630.85 | 342.96 | 631.76 | 342.98 | 635.59 | 343.15 |
| 639.57 | 343.25 | 640.95 | 343.28 | 641.1 | 343.27 | 642.96 | 343.31 | 644.15 | 343.35 |
| 644.81 | 343.35 | 645.78 | 343.33 | 646.82 | 343.28 | 649.14 | 343.2 | 650.63 | 343.16 |
| 653.32 | 343.1 | 654.79 | 343.06 | 656.1 | 342.98 | 659.06 | 342.88 | 666.59 | 342.7 |
| 667.19 | 342.68 | 670.82 | 342.54 | 671.95 | 342.52 | 672.38 | 342.52 | 675.02 | 342.58 |
| 676.14 | 342.61 | 678.71 | 342.75 | 681.88 | 342.87 | 683 | 342.87 | 683.18 | 342.86 |
| 684.44 | 342.88 | 685.5 | 342.93 | 686.43 | 342.93 | 686.97 | 342.89 | 687.41 | 342.88 |
| 689.59 | 342.92 | 690.51 | 342.92 | 691.1 | 342.9 | 693.03 | 342.81 | 693.65 | 342.77 |
| 693.94 | 342.77 | 695.61 | 342.65 | 699.42 | 342.5 | 701.4 | 342.45 | 702.1 | 342.45 |
| 703.35 | 342.42 | 705.01 | 342.36 | 705.57 | 342.36 | 711.68 | 342.39 | 714.21 | 342.42 |
| 717.35 | 342.44 | 718.35 | 342.45 | 720.96 | 342.46 | 722.29 | 342.49 | 723.55 | 342.51 |
| 723.85 | 342.53 | 725 | 342.54 | 725.68 | 342.53 | 725.81 | 342.54 | 727.45 | 342.54 |
| 728.1 | 342.55 | 730.62 | 342.55 | 731.99 | 342.57 | 734.86 | 342.58 | 737.53 | 342.56 |
| 738.42 | 342.56 | 742.36 | 342.6 | 744.61 | 342.59 | 746.44 | 342.6 | 752.81 | 342.59 |
| 754.46 | 342.58 | 758.81 | 342.52 | 760.5 | 342.48 | 764.58 | 342.2 | 765.36 | 342.15 |
| 767.44 | 341.87 | 769.21 | 341.84 | 778.09 | 341.47 | 789.04 | 341.27 | 790.09 | 341.26 |
| 790.96 | 341.29 | 792.03 | 341.31 | 792.85 | 341.31 | 796.14 | 341.26 | 796.69 | 341.22 |
| 797.02 | 341.17 | 797.55 | 341.14 | 798.16 | 341.2 | 799.7 | 341.26 | 800.83 | 341.31 |
| 801.2 | 341.26 | 802.08 | 341.2 | 803.24 | 341.14 | 804.67 | 341.17 | 804.75 | 341.18 |
| 807.4 | 341.38 | 808.45 | 341.48 | 809.53 | 341.57 | 811.51 | 341.71 | 814.3 | 341.75 |
| 815.48 | 341.76 | 816.92 | 341.76 | 819.13 | 341.74 | 819.46 | 341.7 | 820.32 | 341.64 |
| 821.44 | 341.54 | 824.41 | 341.31 | 827.86 | 341.1 | 828.91 | 341.02 | 829.29 | 340.96 |
| 829.65 | 340.94 | 832.48 | 340.94 | 833.49 | 340.96 | 834.81 | 340.92 | 836.79 | 340.89 |
| 837.58 | 340.95 | 840.14 | 341.07 | 840.27 | 341.08 | 842.31 | 341.11 | 844.05 | 341.13 |
| 845.48 | 341.13 | 849.83 | 341.21 | 851.37 | 341.22 | 852.04 | 341.21 | 852.94 | 341.17 |
| 853.22 | 341.18 | 854.47 | 341.14 | 857.04 | 341.02 | 859.22 | 340.91 | 859.71 | 340.88 |
| 870.76 | 340.38 | 876.93 | 340.14 | 877.96 | 340.09 | 879.5 | 340.05 | 882.26 | 340.03 |
| 882.92 | 339.98 | 884.71 | 339.83 | 886.49 | 339.77 | 887.63 | 339.75 | 889.99 | 339.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 890.81 | 339.74 | 891.86 | 339.78 | 893.83 | 339.83 | 896.34 | 339.97 | 898.71 | 340.06 |
| 899.28 | 340.1 | 899.74 | 340.09 | 901.24 | 340.1 | 901.56 | 340.09 | 904.79 | 339.93 |
| 907.32 | 339.82 | 909.08 | 339.76 | 910.26 | 339.7 | 911.05 | 339.67 | 912.01 | 339.65 |
| 914.38 | 339.63 | 919.72 | 339.63 | 920.18 | 339.62 | 923.08 | 339.53 | 932.35 | 339.57 |
| 934.87 | 339.64 | 935.61 | 339.67 | 937.63 | 339.72 | 938.85 | 339.74 | 943.94 | 339.85 |
| 944.65 | 339.85 | 945.56 | 339.87 | 947.23 | 339.89 | 952.57 | 339.96 | 961.6 | 340.16 |
| 964.13 | 340.2 | 964.4 | 340.19 | 968.71 | 340.14 | 971.69 | 340.06 | 975.47 | 339.89 |
| 977.77 | 339.76 | 985.35 | 339.39 | 991.2 | 339.34 | 991.74 | 339.34 | 993.02 | 339.3 |
| 994.94 | 339.31 | 995.58 | 339.33 | 1008.39 | 339.39 | 1009.52 | 339.39 | 1012.82 | 339.55 |
| 1014.89 | 339.59 | 1015.93 | 339.6 | 1022.6 | 339.59 | 1025.02 | 339.57 | 1028.19 | 339.53 |
| 1028.7 | 339.51 | 1031.72 | 339.42 | 1032.4 | 339.39 | 1032.74 | 339.39 | 1036.42 | 339.28 |
| 1037.5 | 339.19 | 1041.92 | 338.85 | 1042.09 | 338.83 | 1045.56 | 338.68 | 1047.26 | 338.62 |
| 1049.77 | 338.59 | 1055.12 | 338.42 | 1056.77 | 338.35 | 1059.46 | 338.29 | 1062.83 | 338.31 |
| 1064.44 | 338.3 | 1070.62 | 338.36 | 1073.2 | 338.43 | 1074.32 | 338.44 | 1081.2 | 338.62 |
| 1083.17 | 338.68 | 1084.13 | 338.72 | 1085.11 | 338.77 | 1085.78 | 338.79 | 1087.43 | 338.86 |
| 1088.72 | 338.92 | 1089.82 | 339.29 | 1090.55 | 339.55 | 1090.82 | 339.68 | 1092.05 | 340.18 |
| 1094.87 | 340.62 | 1095.27 | 340.69 | 1095.78 | 340.74 | 1096.79 | 340.77 | 1100.28 | 340.79 |
| 1100.99 | 340.79 | 1102.42 | 340.76 | 1103.66 | 340.76 | 1104.95 | 340.77 | 1105.38 | 340.8 |
| 1106.92 | 340.82 | 1107.43 | 340.84 | 1114.02 | 341.27 | 1117.79 | 341.5 | 1120.22 | 341.64 |
| 1122.76 | 341.77 | 1126.57 | 341.81 | 1128.75 | 341.82 | 1130.1 | 341.82 | 1132.33 | 341.85 |
| 1132.82 | 341.85 | 1143.25 | 341.68 | 1143.72 | 341.67 | 1146.59 | 341.89 | 1147.94 | 342.03 |
| 1149.97 | 342.25 | 1150.73 | 342.38 | 1153.42 | 342.82 | 1154.6 | 343.04 | 1158.17 | 344.08 |
| 1158.68 | 344.27 | 1160.08 | 344.57 | 1161.29 | 344.84 | 1162.44 | 345.16 | 1164.75 | 345.75 |
| 1167.7 | 346.39 | 1170.2 | 346.95 | 1170.51 | 347.01 | 1171.15 | 347.18 | 1174.55 | 348.04 |
| 1176.26 | 348.48 | 1178.01 | 348.95 | 1180.11 | 349.48 | 1180.81 | 349.67 | 1184.94 | 350.63 |
| 1187.02 | 351.15 | 1188.18 | 351.45 | 1189.18 | 351.69 | 1190.38 | 352.04 | 1191.72 | 352.4 |
| 1192.89 | 352.64 | 1194.5 | 352.99 | 1196.43 | 353.44 | 1197.05 | 353.6 | 1198.08 | 353.82 |
| 1198.56 | 353.94 | 1199.55 | 354.09 | 1200.07 | 354.19 | 1201.6 | 354.39 | 1202.3 | 354.49 |
| 1203.27 | 354.65 | 1204.86 | 354.93 | 1205.95 | 355.1 | 1206.46 | 355.21 | 1207.49 | 355.39 |
| 1208.64 | 355.42 | 1209.42 | 355.55 | 1211.21 | 355.8 | 1213.17 | 356.01 | 1214.33 | 356.11 |
| 1215.03 | 356.14 | 1215.68 | 356.18 | 1217.32 | 356.21 | 1219.02 | 356.2 | 1219.99 | 356.23 |
| 1220.43 | 356.28 | 1223.19 | 356.5 | 1223.25 | 356.49 | 1223.89 | 356.52 | 1225.7 | 356.63 |
| 1226.66 | 356.66 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 131.08 | .05 | 645.78 | .04 | 1158.68 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 645.78 | 1158.68 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4836.40*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 120.16 | 350.47 | 122.25 | 350.47 | 123.15 | 350.46 | 127.45 | 350.38 | 127.81 | 350.39 |
| 129.08 | 350.35 | 130.92 | 350.37 | 131.66 | 350.35 | 132.58 | 350.35 | 136.1 | 350.32 |
| 137.95 | 350.28 | 141.06 | 350.13 | 141.98 | 350.08 | 148.83 | 349.61 | 163.38 | 348.94 |
| 164.84 | 348.89 | 172.5 | 348.76 | 174.15 | 348.74 | 176.96 | 348.72 | 177.57 | 348.73 |
| 178.25 | 348.72 | 179.78 | 348.68 | 181.89 | 348.61 | 182.04 | 348.59 | 183.51 | 348.52 |
| 185.34 | 348.47 | 185.98 | 348.46 | 194.35 | 348.26 | 203.92 | 347.97 | 203.99 | 347.96 |
| 207.71 | 347.92 | 210.62 | 347.9 | 210.87 | 347.91 | 212.68 | 347.95 | 213.15 | 348.02 |
| 213.5 | 348.01 | 213.71 | 347.96 | 214.88 | 347.9 | 216.96 | 347.84 | 217.42 | 347.82 |
| 225.95 | 347.56 | 233.97 | 347.36 | 234.15 | 347.36 | 235.72 | 347.3 | 236.15 | 347.29 |
| 237.8 | 347.29 | 240.7 | 347.25 | 241.4 | 347.23 | 247.07 | 347.16 | 247.24 | 347.15 |
| 252.89 | 347.08 | 253.25 | 347.07 | 255.17 | 347.04 | 255.48 | 347.04 | 274.9 | 346.75 |
| 288.68 | 346.44 | 288.87 | 346.39 | 289.15 | 346.36 | 289.73 | 346.37 | 291.25 | 346.44 |
| 294.96 | 346.52 | 296.69 | 346.55 | 299.26 | 346.55 | 301.23 | 346.58 | 302.04 | 346.57 |
| 303.62 | 346.52 | 305.96 | 346.43 | 309.59 | 346.33 | 317.17 | 346.26 | 317.99 | 346.26 |
| 318.65 | 346.27 | 319.88 | 346.3 | 323.28 | 346.35 | 325.32 | 346.4 | 326.01 | 346.39 |
| 328.7 | 346.42 | 330.49 | 346.42 | 330.77 | 346.39 | 331.88 | 346.4 | 332.15 | 346.39 |
| 333.2 | 346.39 | 334.24 | 346.4 | 335.53 | 346.4 | 336.2 | 346.43 | 337.3 | 346.4 |
| 338.01 | 346.33 | 339.62 | 346.21 | 340.98 | 346.19 | 343.54 | 346 | 344.56 | 345.91 |
| 344.7 | 345.91 | 345.73 | 345.99 | 347.28 | 346.07 | 349.11 | 346.13 | 349.84 | 346.13 |
| 361.06 | 345.96 | 363.26 | 345.89 | 365.65 | 345.83 | 391.41 | 345.44 | 398.82 | 345.28 |
| 400.87 | 345.27 | 401.94 | 345.27 | 403.6 | 345.22 | 404.16 | 345.19 | 407.75 | 345.07 |
| 409.41 | 345.02 | 411.71 | 344.97 | 416.64 | 344.84 | 417.83 | 344.82 | 418.55 | 344.83 |
| 419.05 | 344.85 | 419.94 | 344.84 | 421.46 | 344.84 | 423.1 | 344.83 | 424.3 | 344.81 |
| 425.28 | 344.81 | 427.28 | 344.84 | 428.13 | 344.84 | 428.79 | 344.83 | 430.65 | 344.88 |
| 433.16 | 344.82 | 435.48 | 344.89 | 438.06 | 344.92 | 439.22 | 344.93 | 444.26 | 344.94 |
| 450.08 | 344.9 | 462.77 | 344.66 | 469.18 | 344.51 | 473.17 | 344.41 | 474.51 | 344.37 |
| 476.06 | 344.31 | 478.39 | 344.24 | 480.36 | 344.2 | 482.49 | 344.14 | 487.24 | 344.04 |
| 495.66 | 343.84 | 496.02 | 343.85 | 497.62 | 344.02 | 498.35 | 344.09 | 498.8 | 344.1 |
| 499.12 | 344.05 | 500.27 | 344.01 | 501.52 | 343.95 | 502.2 | 343.89 | 502.87 | 343.85 |
| 503.99 | 343.82 | 504.73 | 343.79 | 506.09 | 343.77 | 507.88 | 343.79 | 508.6 | 343.83 |
| 511.84 | 343.82 | 512.76 | 343.85 | 513.42 | 343.86 | 514.7 | 343.86 | 515.46 | 343.88 |
| 517.01 | 343.9 | 517.79 | 343.89 | 519.08 | 343.89 | 520.66 | 343.91 | 520.97 | 343.87 |
| 522.35 | 343.79 | 528.55 | 343.55 | 529.43 | 343.52 | 530.42 | 343.46 | 534.15 | 343.2 |
| 535.44 | 343.1 | 539.31 | 343.01 | 540.12 | 343.01 | 541.65 | 342.98 | 543.15 | 342.96 |
| 545.16 | 342.96 | 546.35 | 342.94 | 548.7 | 342.94 | 550.27 | 342.96 | 555.36 | 343.03 |
| 557.74 | 343.08 | 561.46 | 343.1 | 565.89 | 343.16 | 567.48 | 343.15 | 568.05 | 343.17 |
| 584.01 | 343.2 | 599.2 | 343.31 | 601.69 | 343.33 | 602.96 | 343.31 | 603.1 | 343.3 |
| 610.61 | 343.06 | 610.69 | 343.06 | 621.25 | 342.73 | 625.8 | 342.68 | 629.03 | 342.7 |
| 629.61 | 342.66 | 630.99 | 342.66 | 631.33 | 342.68 | 632.26 | 342.7 | 636.17 | 342.86 |
| 639.83 | 342.95 | 640.48 | 342.97 | 643.71 | 343.02 | 644.72 | 343.05 | 646.31 | 343.05 |
| 646.6 | 343.04 | 647.1 | 343.01 | 649.98 | 342.91 | 651.47 | 342.87 | 654.17 | 342.81 |
| 654.36 | 342.81 | 655.65 | 342.77 | 656.96 | 342.7 | 659.04 | 342.62 | 667.5 | 342.44 |
| 671.75 | 342.3 | 672.88 | 342.27 | 673.32 | 342.27 | 675.97 | 342.33 | 677.09 | 342.36 |
| 677.6 | 342.4 | 678.19 | 342.42 | 679.68 | 342.5 | 682.85 | 342.62 | 684.63 | 342.62 |
| 685.43 | 342.63 | 686.49 | 342.68 | 687.43 | 342.68 | 687.97 | 342.64 | 688.41 | 342.63 |
| 690.6 | 342.66 | 691.53 | 342.66 | 692.12 | 342.64 | 694.06 | 342.55 | 694.68 | 342.51 |
| 694.97 | 342.51 | 695.6 | 342.48 | 696.55 | 342.41 | 696.65 | 342.39 | 700.47 | 342.25 |
| 702.46 | 342.2 | 704.43 | 342.17 | 706.09 | 342.12 | 706.65 | 342.11 | 712.79 | 342.15 |
| 715.33 | 342.18 | 718.49 | 342.2 | 719.49 | 342.21 | 722.11 | 342.22 | 723.45 | 342.25 |
| 723.98 | 342.27 | 724.85 | 342.28 | 725.17 | 342.3 | 728.63 | 342.3 | 729.28 | 342.31 |
| 731.81 | 342.31 | 736.07 | 342.34 | 738.75 | 342.31 | 739.65 | 342.31 | 743.61 | 342.34 |
| 745.86 | 342.33 | 747.7 | 342.34 | 754.1 | 342.31 | 755.76 | 342.3 | 760.12 | 342.24 |
| 761.82 | 342.19 | 765.92 | 341.89 | 766.7 | 341.84 | 768.79 | 341.55 | 770.56 | 341.51 |
| 779.49 | 341.15 | 790.48 | 340.94 | 791.53 | 340.93 | 792.9 | 340.97 | 794.08 | 340.98 |
| 794.32 | 340.97 | 797.61 | 340.92 | 798.42 | 340.86 | 798.5 | 340.84 | 799.04 | 340.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 799.65 | 340.88 | 801.19 | 340.94 | 802.32 | 340.99 | 802.7 | 340.94 | 803.58 | 340.87 |
| 804.75 | 340.81 | 806.18 | 340.84 | 806.26 | 340.85 | 808.92 | 341.06 | 809.98 | 341.16 |
| 811.07 | 341.25 | 813.05 | 341.4 | 815.86 | 341.43 | 816.07 | 341.44 | 817.04 | 341.45 |
| 818.48 | 341.45 | 820.71 | 341.43 | 821.04 | 341.39 | 821.9 | 341.33 | 822.55 | 341.26 |
| 823.03 | 341.22 | 826.01 | 340.99 | 829.48 | 340.77 | 830.53 | 340.69 | 831.03 | 340.62 |
| 833.57 | 340.62 | 834.11 | 340.61 | 835.13 | 340.63 | 836.45 | 340.59 | 838.45 | 340.55 |
| 839.23 | 340.61 | 841.81 | 340.73 | 841.94 | 340.74 | 843.99 | 340.77 | 845.74 | 340.79 |
| 847.17 | 340.78 | 849.89 | 340.84 | 851.54 | 340.86 | 853.09 | 340.87 | 854.18 | 340.84 |
| 854.43 | 340.82 | 854.95 | 340.82 | 856.2 | 340.78 | 859.2 | 340.64 | 860.97 | 340.55 |
| 861.46 | 340.52 | 872.56 | 340.01 | 878.76 | 339.77 | 879.8 | 339.72 | 881.34 | 339.69 |
| 884.11 | 339.66 | 884.78 | 339.62 | 886.86 | 339.46 | 888.36 | 339.42 | 889.51 | 339.4 |
| 891.87 | 339.38 | 892.7 | 339.39 | 893.75 | 339.42 | 895.73 | 339.46 | 898.25 | 339.6 |
| 898.55 | 339.62 | 900.63 | 339.7 | 901.2 | 339.73 | 901.66 | 339.72 | 903.17 | 339.72 |
| 903.49 | 339.71 | 906.74 | 339.53 | 909.28 | 339.41 | 911.41 | 339.34 | 912.23 | 339.29 |
| 913.03 | 339.26 | 915.23 | 339.24 | 916.37 | 339.22 | 922.19 | 339.22 | 925.11 | 339.14 |
| 934.41 | 339.18 | 936.16 | 339.23 | 939.73 | 339.32 | 940.95 | 339.33 | 946.05 | 339.44 |
| 946.78 | 339.44 | 948.35 | 339.47 | 949.36 | 339.47 | 954.73 | 339.55 | 965.57 | 339.79 |
| 966.61 | 339.8 | 970.15 | 339.77 | 970.94 | 339.76 | 973.93 | 339.68 | 977.94 | 339.51 |
| 980.04 | 339.39 | 987.66 | 339.04 | 993.53 | 338.99 | 994.07 | 338.99 | 994.39 | 338.97 |
| 995.35 | 338.95 | 996.87 | 338.95 | 997.55 | 338.97 | 997.93 | 338.97 | 1010.79 | 339.05 |
| 1011.92 | 339.05 | 1015.24 | 339.19 | 1017.32 | 339.23 | 1025.06 | 339.23 | 1027.49 | 339.21 |
| 1030.67 | 339.17 | 1031.19 | 339.15 | 1034.23 | 339.06 | 1034.9 | 339.03 | 1035.25 | 339.03 |
| 1038.95 | 338.93 | 1044.47 | 338.52 | 1044.64 | 338.5 | 1048.12 | 338.36 | 1049.83 | 338.3 |
| 1052.35 | 338.27 | 1057.72 | 338.1 | 1059.87 | 338.02 | 1061.81 | 337.99 | 1062.08 | 337.98 |
| 1065.34 | 337.99 | 1066.89 | 337.99 | 1072.86 | 338.04 | 1075.36 | 338.11 | 1076.44 | 338.12 |
| 1083.08 | 338.29 | 1084.99 | 338.35 | 1085.91 | 338.39 | 1086.87 | 338.44 | 1087.51 | 338.46 |
| 1089.1 | 338.53 | 1090.35 | 338.59 | 1091.41 | 338.98 | 1092.11 | 339.26 | 1092.38 | 339.39 |
| 1093.57 | 339.92 | 1096.29 | 340.38 | 1096.68 | 340.45 | 1097.37 | 340.51 | 1101.52 | 340.56 |
| 1102.21 | 340.56 | 1103.58 | 340.53 | 1104.78 | 340.53 | 1106.03 | 340.55 | 1106.44 | 340.57 |
| 1108.42 | 340.61 | 1114.79 | 341.02 | 1114.92 | 341.03 | 1118.43 | 341.24 | 1120.78 | 341.37 |
| 1123.23 | 341.5 | 1126.92 | 341.53 | 1129.03 | 341.55 | 1130.33 | 341.55 | 1132.48 | 341.57 |
| 1132.95 | 341.58 | 1143.03 | 341.45 | 1143.54 | 341.45 | 1144.39 | 341.5 | 1146.26 | 341.65 |
| 1147.56 | 341.78 | 1149.52 | 342 | 1150.25 | 342.13 | 1152.45 | 342.47 | 1153.99 | 342.74 |
| 1155.99 | 343.31 | 1157.44 | 343.71 | 1157.93 | 343.9 | 1159.35 | 344.18 | 1160.58 | 344.44 |
| 1161.74 | 344.75 | 1162.21 | 344.86 | 1164.09 | 345.32 | 1164.69 | 345.44 | 1167.07 | 345.93 |
| 1169.61 | 346.47 | 1169.73 | 346.49 | 1170.57 | 346.7 | 1172.42 | 347.14 | 1174.01 | 347.54 |
| 1175.04 | 347.78 | 1177.1 | 348.32 | 1179.65 | 348.94 | 1180.36 | 349.13 | 1184.54 | 350.08 |
| 1186.65 | 350.6 | 1187.83 | 350.9 | 1188.84 | 351.14 | 1190.06 | 351.49 | 1191.41 | 351.84 |
| 1192.6 | 352.09 | 1194.23 | 352.44 | 1196.19 | 352.9 | 1196.2 | 352.91 | 1197.48 | 353.22 |
| 1197.86 | 353.29 | 1198.34 | 353.42 | 1199.35 | 353.59 | 1199.88 | 353.69 | 1201.43 | 353.92 |
| 1203.12 | 354.21 | 1204.72 | 354.52 | 1205.83 | 354.71 | 1207.4 | 355.03 | 1208.23 | 355.05 |
| 1208.67 | 355.08 | 1209.35 | 355.19 | 1211.16 | 355.42 | 1213.67 | 355.66 | 1215.03 | 355.74 |
| 1215.7 | 355.77 | 1217.35 | 355.8 | 1219.07 | 355.8 | 1220.06 | 355.83 | 1220.51 | 355.87 |
| 1223.3 | 356.08 | 1223.37 | 356.07 | 1224.02 | 356.09 | 1225.56 | 356.17 | 1226.1 | 356.18 |
| 1226.82 | 356.21 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 120.16 | .05 | 646.6 | .04 | 1157.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 646.6 | 1157.93 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4816.47*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 109.24 | 350.29 | 110.45 | 350.3 | 111.38 | 350.29 | 112.3 | 350.29 | 116.69 | 350.2 |
| 117.06 | 350.21 | 118.36 | 350.17 | 120.24 | 350.19 | 120.99 | 350.17 | 121.94 | 350.18 |
| 124.58 | 350.17 | 125.42 | 350.15 | 127.43 | 350.13 | 130.6 | 349.98 | 131.54 | 349.94 |
| 133.49 | 349.82 | 138.55 | 349.49 | 153.43 | 348.84 | 154.91 | 348.79 | 162.74 | 348.66 |
| 163.61 | 348.66 | 164.43 | 348.64 | 167.3 | 348.63 | 167.93 | 348.64 | 168.63 | 348.63 |
| 170.19 | 348.59 | 172.34 | 348.51 | 172.96 | 348.47 | 174 | 348.43 | 176.52 | 348.36 |
| 185.08 | 348.17 | 185.65 | 348.15 | 186.44 | 348.14 | 194.86 | 347.88 | 194.93 | 347.87 |
| 198.74 | 347.83 | 201.72 | 347.82 | 201.97 | 347.83 | 203.82 | 347.87 | 204.3 | 347.94 |
| 204.66 | 347.93 | 204.88 | 347.89 | 205.24 | 347.86 | 206.07 | 347.82 | 208.19 | 347.76 |
| 208.67 | 347.74 | 217.38 | 347.48 | 225.58 | 347.28 | 227.37 | 347.21 | 227.93 | 347.2 |
| 229.5 | 347.2 | 232.47 | 347.16 | 233.19 | 347.14 | 238.98 | 347.06 | 239.15 | 347.06 |
| 244.93 | 346.97 | 245.29 | 346.97 | 247.26 | 346.94 | 247.58 | 346.94 | 267.43 | 346.63 |
| 281.52 | 346.31 | 281.71 | 346.25 | 282 | 346.23 | 282.59 | 346.24 | 284.15 | 346.31 |
| 287.94 | 346.4 | 289.28 | 346.42 | 292.33 | 346.43 | 294.34 | 346.46 | 295.17 | 346.45 |
| 296.79 | 346.4 | 299.18 | 346.3 | 302.9 | 346.2 | 310.64 | 346.11 | 311.48 | 346.11 |
| 312.16 | 346.12 | 313.41 | 346.16 | 316.88 | 346.2 | 318.97 | 346.25 | 319.67 | 346.25 |
| 322.42 | 346.28 | 323.18 | 346.27 | 324.26 | 346.27 | 324.54 | 346.24 | 325.68 | 346.25 |
| 325.95 | 346.24 | 327.03 | 346.24 | 328.88 | 346.26 | 329.41 | 346.25 | 329.88 | 346.26 |
| 329.99 | 346.28 | 330.81 | 346.27 | 331.22 | 346.25 | 331.95 | 346.17 | 333.59 | 346.05 |
| 334.99 | 346.03 | 337.6 | 345.83 | 338.65 | 345.74 | 338.78 | 345.74 | 339.84 | 345.82 |
| 341.42 | 345.9 | 343.29 | 345.97 | 344.04 | 345.97 | 355.51 | 345.79 | 357.76 | 345.72 |
| 360.2 | 345.66 | 386.54 | 345.25 | 394.11 | 345.09 | 396.38 | 345.09 | 397.3 | 345.08 |
| 399 | 345.03 | 403.25 | 344.88 | 404.94 | 344.83 | 407.29 | 344.78 | 412.33 | 344.64 |
| 413.55 | 344.62 | 414.79 | 344.64 | 415.71 | 344.63 | 417.26 | 344.63 | 418.93 | 344.62 |
| 420.16 | 344.6 | 421.16 | 344.6 | 423.21 | 344.63 | 424.08 | 344.63 | 424.75 | 344.62 |
| 426.65 | 344.67 | 429.22 | 344.61 | 431.59 | 344.67 | 434.23 | 344.7 | 435.42 | 344.71 |
| 440.56 | 344.72 | 446.52 | 344.67 | 459.49 | 344.42 | 466.04 | 344.26 | 470.12 | 344.15 |
| 471.49 | 344.11 | 473.48 | 344.03 | 477.47 | 343.93 | 479.65 | 343.87 | 484.5 | 343.76 |
| 493.12 | 343.55 | 493.48 | 343.56 | 495.11 | 343.74 | 495.86 | 343.81 | 496.33 | 343.82 |
| 496.65 | 343.76 | 498.03 | 343.72 | 499.1 | 343.66 | 499.8 | 343.6 | 500.49 | 343.56 |
| 501.63 | 343.53 | 502.8 | 343.48 | 503.41 | 343.47 | 503.78 | 343.48 | 505.29 | 343.49 |
| 506.34 | 343.54 | 509.65 | 343.53 | 510.59 | 343.56 | 511.27 | 343.57 | 512.58 | 343.57 |
| 514.94 | 343.61 | 515.73 | 343.6 | 517.05 | 343.6 | 518.67 | 343.62 | 518.99 | 343.58 |
| 520.39 | 343.51 | 526.73 | 343.27 | 527.64 | 343.25 | 528.64 | 343.2 | 532.46 | 342.95 |
| 533.06 | 342.9 | 533.79 | 342.86 | 538.14 | 342.76 | 539.19 | 342.76 | 540.13 | 342.74 |
| 541.66 | 342.72 | 543.72 | 342.71 | 544.94 | 342.69 | 547.33 | 342.69 | 548.94 | 342.7 |
| 554.14 | 342.77 | 556.58 | 342.8 | 560.38 | 342.83 | 564.91 | 342.88 | 565.2 | 342.87 |
| 566.54 | 342.86 | 567.12 | 342.88 | 583.44 | 342.91 | 598.96 | 343.03 | 601.14 | 343.04 |
| 601.51 | 343.05 | 602.27 | 343.04 | 610.63 | 342.79 | 610.71 | 342.78 | 621.5 | 342.47 |
| 626.15 | 342.41 | 629.09 | 342.43 | 629.46 | 342.42 | 630.06 | 342.38 | 631.47 | 342.38 |
| 632.76 | 342.42 | 636.76 | 342.57 | 640.49 | 342.66 | 640.88 | 342.66 | 641.16 | 342.68 |
| 642.37 | 342.7 | 643.79 | 342.71 | 645.5 | 342.76 | 647.12 | 342.76 | 647.42 | 342.75 |
| 647.92 | 342.72 | 650.81 | 342.62 | 652.31 | 342.58 | 655.03 | 342.52 | 656.51 | 342.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 657.83 | 342.41 | 660.82 | 342.31 | 668.41 | 342.18 | 669.01 | 342.16 | 672.68 | 342.05 |
| 673.82 | 342.03 | 674.25 | 342.03 | 676.91 | 342.08 | 678.04 | 342.11 | 678.55 | 342.15 |
| 679.15 | 342.17 | 680.64 | 342.25 | 683.83 | 342.37 | 685.61 | 342.37 | 686.92 | 342.4 |
| 687.49 | 342.43 | 688.43 | 342.43 | 688.97 | 342.39 | 689.41 | 342.38 | 691.61 | 342.4 |
| 692.21 | 342.41 | 693.13 | 342.39 | 695.71 | 342.26 | 696 | 342.26 | 697.59 | 342.15 |
| 697.68 | 342.13 | 701.53 | 342 | 703.52 | 341.94 | 704.23 | 341.94 | 705.5 | 341.92 |
| 707.73 | 341.87 | 713.89 | 341.91 | 716.44 | 341.94 | 719.62 | 341.96 | 720.62 | 341.97 |
| 722.57 | 341.98 | 724.6 | 342.01 | 725.14 | 342.03 | 725.86 | 342.04 | 726.17 | 342.06 |
| 727.33 | 342.07 | 728.02 | 342.06 | 729.81 | 342.06 | 730.46 | 342.07 | 733 | 342.07 |
| 734.38 | 342.08 | 737.27 | 342.09 | 740.87 | 342.05 | 744.85 | 342.08 | 747.11 | 342.06 |
| 748.96 | 342.07 | 755.38 | 342.04 | 757.05 | 342.02 | 761.43 | 341.95 | 763.14 | 341.9 |
| 767.26 | 341.58 | 768.05 | 341.53 | 770.14 | 341.23 | 771.92 | 341.19 | 780.89 | 340.83 |
| 791.93 | 340.61 | 792.98 | 340.6 | 794.36 | 340.63 | 795.78 | 340.64 | 799.09 | 340.58 |
| 800.41 | 340.49 | 801.13 | 340.55 | 803.51 | 340.66 | 803.82 | 340.67 | 804.19 | 340.62 |
| 805.08 | 340.55 | 806.25 | 340.48 | 807.69 | 340.5 | 810.45 | 340.74 | 811.51 | 340.85 |
| 812.6 | 340.94 | 814.59 | 341.09 | 817.41 | 341.12 | 817.63 | 341.13 | 818.81 | 341.13 |
| 820.05 | 341.14 | 822.28 | 341.12 | 822.92 | 341.05 | 823.48 | 341.01 | 824.61 | 340.91 |
| 827.61 | 340.67 | 831.09 | 340.44 | 832.15 | 340.36 | 832.65 | 340.29 | 835.2 | 340.29 |
| 835.74 | 340.28 | 836.77 | 340.3 | 838.1 | 340.25 | 840.1 | 340.21 | 840.89 | 340.27 |
| 843.48 | 340.39 | 843.61 | 340.4 | 845.66 | 340.43 | 847.42 | 340.45 | 848.86 | 340.44 |
| 851.59 | 340.49 | 853.25 | 340.51 | 854.81 | 340.52 | 855.47 | 340.5 | 856.39 | 340.46 |
| 856.67 | 340.46 | 857.93 | 340.42 | 860.94 | 340.28 | 862.72 | 340.19 | 863.22 | 340.16 |
| 874.36 | 339.65 | 880.58 | 339.41 | 881.63 | 339.36 | 883.18 | 339.32 | 885.96 | 339.29 |
| 886.63 | 339.25 | 888.08 | 339.15 | 888.43 | 339.12 | 889.61 | 339.08 | 891.38 | 339.05 |
| 893.76 | 339.02 | 894.59 | 339.03 | 895.64 | 339.06 | 897.64 | 339.1 | 900.17 | 339.24 |
| 900.46 | 339.26 | 902.56 | 339.33 | 902.98 | 339.36 | 903.59 | 339.35 | 905.11 | 339.34 |
| 905.43 | 339.32 | 908.69 | 339.14 | 911.24 | 339.01 | 913.01 | 338.95 | 913.88 | 338.9 |
| 915.01 | 338.85 | 918.36 | 338.82 | 924.21 | 338.82 | 927.14 | 338.74 | 936.48 | 338.79 |
| 938.23 | 338.83 | 939.78 | 338.87 | 941.82 | 338.91 | 943.05 | 338.93 | 948.17 | 339.02 |
| 948.9 | 339.02 | 950.48 | 339.05 | 951.5 | 339.05 | 956.89 | 339.13 | 965.99 | 339.35 |
| 968.1 | 339.4 | 968.82 | 339.4 | 972.38 | 339.38 | 973.16 | 339.37 | 976.17 | 339.3 |
| 979.98 | 339.14 | 982.31 | 339.02 | 989.96 | 338.7 | 995.85 | 338.64 | 996.4 | 338.64 |
| 996.72 | 338.62 | 997.68 | 338.6 | 999.21 | 338.6 | 999.89 | 338.62 | 1000.27 | 338.62 |
| 1013.19 | 338.7 | 1014.33 | 338.7 | 1017.66 | 338.83 | 1020.39 | 338.87 | 1027.52 | 338.87 |
| 1029.97 | 338.85 | 1033.16 | 338.81 | 1033.68 | 338.79 | 1038.48 | 338.65 | 1041.47 | 338.58 |
| 1042.55 | 338.5 | 1047.01 | 338.19 | 1047.19 | 338.18 | 1050.68 | 338.04 | 1052.4 | 337.98 |
| 1054.93 | 337.95 | 1060.33 | 337.79 | 1061.99 | 337.72 | 1063.85 | 337.69 | 1064.43 | 337.67 |
| 1067.85 | 337.68 | 1069.35 | 337.68 | 1075.1 | 337.72 | 1075.39 | 337.74 | 1077.51 | 337.79 |
| 1078.56 | 337.8 | 1084.97 | 337.96 | 1086.81 | 338.02 | 1087.7 | 338.06 | 1088.62 | 338.11 |
| 1089.24 | 338.13 | 1091.98 | 338.26 | 1093.01 | 338.67 | 1093.68 | 338.96 | 1093.93 | 339.1 |
| 1095.08 | 339.65 | 1098.09 | 340.2 | 1098.75 | 340.26 | 1099.5 | 340.28 | 1103.42 | 340.33 |
| 1104.75 | 340.31 | 1105.01 | 340.3 | 1106.96 | 340.32 | 1107.51 | 340.35 | 1109.42 | 340.39 |
| 1115.56 | 340.78 | 1115.69 | 340.78 | 1119.07 | 340.98 | 1121.34 | 341.11 | 1123.71 | 341.22 |
| 1127.26 | 341.26 | 1129.3 | 341.27 | 1132.63 | 341.3 | 1133.08 | 341.31 | 1142.81 | 341.22 |
| 1143.3 | 341.22 | 1144.12 | 341.27 | 1145.92 | 341.4 | 1148.74 | 341.71 | 1149.07 | 341.75 |
| 1149.78 | 341.87 | 1151.9 | 342.19 | 1153.38 | 342.45 | 1156.71 | 343.35 | 1157.18 | 343.52 |
| 1158.63 | 343.79 | 1159.87 | 344.04 | 1161.52 | 344.45 | 1163.43 | 344.89 | 1164.03 | 345.01 |
| 1166.45 | 345.48 | 1169.02 | 346 | 1169.34 | 346.06 | 1172.25 | 346.74 | 1173.48 | 347.04 |
| 1174.52 | 347.27 | 1175.23 | 347.44 | 1177.03 | 347.9 | 1179.19 | 348.4 | 1179.9 | 348.58 |
| 1184.15 | 349.52 | 1186.28 | 350.05 | 1187.48 | 350.34 | 1188.5 | 350.58 | 1189.73 | 350.93 |
| 1191.11 | 351.28 | 1193.96 | 351.9 | 1195.95 | 352.37 | 1197.25 | 352.69 | 1197.64 | 352.77 |
| 1198.13 | 352.9 | 1199.15 | 353.08 | 1199.68 | 353.19 | 1201.66 | 353.52 | 1202.97 | 353.77 |
| 1204.59 | 354.11 | 1205.72 | 354.32 | 1206.24 | 354.44 | 1207.3 | 354.66 | 1208.15 | 354.69 |
| 1208.81 | 354.75 | 1209.28 | 354.83 | 1211.12 | 355.04 | 1213.13 | 355.22 | 1214.32 | 355.3 |
| 1215.04 | 355.33 | 1215.71 | 355.37 | 1217.39 | 355.4 | 1219.13 | 355.39 | 1220.14 | 355.42 |
| 1220.59 | 355.46 | 1223.41 | 355.65 | 1223.48 | 355.64 | 1224.14 | 355.66 | 1225.7 | 355.73 |
| 1226.98 | 355.76 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 109.24 | .05 | 647.42 | .04 | 1157.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 647.42 | 1157.18 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4796.55*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 98.31 | 350.11 | 99.56 | 350.12 | 100.5 | 350.11 | 101.44 | 350.11 | 105.93 | 350.02 |
| 106.31 | 350.03 | 107.63 | 349.99 | 109.55 | 350.01 | 110.32 | 349.99 | 111.29 | 350 |
| 113.99 | 350 | 116.9 | 349.97 | 121.1 | 349.8 | 128.26 | 349.37 | 143.47 | 348.73 |
| 144.98 | 348.69 | 152.98 | 348.57 | 153.87 | 348.56 | 154.71 | 348.54 | 157.65 | 348.54 |
| 158.29 | 348.55 | 159 | 348.54 | 160.59 | 348.5 | 162.8 | 348.42 | 163.43 | 348.38 |
| 164.49 | 348.34 | 167.07 | 348.27 | 177.2 | 348.05 | 185.81 | 347.8 | 185.88 | 347.78 |
| 189.77 | 347.75 | 192.81 | 347.73 | 193.07 | 347.75 | 194.64 | 347.78 | 194.96 | 347.8 |
| 195.45 | 347.86 | 195.82 | 347.85 | 196.04 | 347.81 | 196.42 | 347.78 | 197.26 | 347.74 |
| 199.43 | 347.68 | 199.91 | 347.66 | 208.82 | 347.4 | 217.2 | 347.19 | 219.03 | 347.12 |
| 219.6 | 347.11 | 221.2 | 347.11 | 224.23 | 347.06 | 230.89 | 346.97 | 231.06 | 346.96 |
| 236.96 | 346.87 | 237.34 | 346.86 | 239.35 | 346.83 | 239.67 | 346.83 | 259.95 | 346.52 |
| 274.36 | 346.18 | 274.55 | 346.12 | 274.84 | 346.09 | 275.45 | 346.1 | 277.04 | 346.18 |
| 282.28 | 346.3 | 285.4 | 346.31 | 287.46 | 346.34 | 288.31 | 346.33 | 289.96 | 346.28 |
| 292.4 | 346.17 | 296.2 | 346.06 | 304.11 | 345.96 | 305.66 | 345.98 | 306.94 | 346.01 |
| 310.49 | 346.05 | 312.62 | 346.1 | 313.34 | 346.1 | 316.15 | 346.13 | 318.03 | 346.13 |
| 318.32 | 346.09 | 319.48 | 346.1 | 319.76 | 346.09 | 320.86 | 346.09 | 321.95 | 346.11 |
| 322.75 | 346.11 | 323.29 | 346.1 | 323.89 | 346.13 | 324.72 | 346.12 | 325.14 | 346.1 |
| 325.88 | 346.02 | 326.54 | 345.96 | 327.56 | 345.89 | 329.14 | 345.86 | 331.66 | 345.66 |
| 332.73 | 345.57 | 332.87 | 345.57 | 333.95 | 345.65 | 336.59 | 345.78 | 337.88 | 345.81 |
| 338.24 | 345.81 | 349.96 | 345.63 | 352.26 | 345.54 | 352.66 | 345.54 | 354.75 | 345.49 |
| 381.67 | 345.06 | 389.4 | 344.9 | 392.67 | 344.9 | 393.64 | 344.87 | 394.98 | 344.82 |
| 398.74 | 344.69 | 400.47 | 344.64 | 402.88 | 344.59 | 403.25 | 344.57 | 408.02 | 344.44 |
| 409.26 | 344.42 | 410.53 | 344.44 | 411.47 | 344.42 | 413.05 | 344.42 | 414.77 | 344.41 |
| 416.02 | 344.39 | 417.04 | 344.39 | 419.14 | 344.42 | 420.03 | 344.42 | 420.71 | 344.41 |
| 422.65 | 344.46 | 425.28 | 344.39 | 426.9 | 344.44 | 427.7 | 344.46 | 430.4 | 344.49 |
| 431.61 | 344.5 | 436.87 | 344.5 | 442.95 | 344.45 | 456.21 | 344.18 | 462.9 | 344.01 |
| 468.47 | 343.85 | 470.09 | 343.79 | 470.51 | 343.77 | 472.52 | 343.71 | 474.58 | 343.66 |
| 476.8 | 343.6 | 481.77 | 343.48 | 490.57 | 343.25 | 490.94 | 343.26 | 492.61 | 343.45 |
| 493.37 | 343.52 | 493.85 | 343.53 | 494.18 | 343.48 | 495.38 | 343.44 | 496.68 | 343.37 |
| 498.1 | 343.27 | 499.27 | 343.24 | 500.47 | 343.19 | 501.47 | 343.18 | 503.01 | 343.2 |
| 504.08 | 343.25 | 507.46 | 343.24 | 508.43 | 343.27 | 509.11 | 343.28 | 510.46 | 343.28 |



BSE Document Control Number: 7323HYD101

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| 511.25 | 343.29 | 512.87 | 343.32 | 513.68 | 343.31 | 515.03 | 343.31 | 516.68 | 343.33 |
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| 530.77 | 342.7 | 531.39 | 342.65 | 532.13 | 342.61 | 536.16 | 342.53 | 537.01 | 342.52 |
| 538.61 | 342.49 | 540.18 | 342.47 | 542.27 | 342.46 | 543.52 | 342.44 | 545.97 | 342.44 |
| 547.61 | 342.45 | 552.93 | 342.5 | 555.42 | 342.53 | 559.3 | 342.55 | 563.93 | 342.59 |
| 566.09 | 342.58 | 566.19 | 342.59 | 582.86 | 342.62 | 598.73 | 342.74 | 600.95 | 342.76 |
| 601.33 | 342.76 | 602.8 | 342.74 | 610.64 | 342.51 | 610.73 | 342.51 | 621.76 | 342.21 |
| 626.51 | 342.15 | 629.51 | 342.16 | 629.88 | 342.15 | 630.5 | 342.11 | 631.94 | 342.1 |
| 632.96 | 342.13 | 633.26 | 342.13 | 637.35 | 342.29 | 641.16 | 342.37 | 641.56 | 342.37 |
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| 647.94 | 342.47 | 648.24 | 342.46 | 648.74 | 342.43 | 651.65 | 342.33 | 653.15 | 342.29 |
| 655.88 | 342.24 | 657.37 | 342.19 | 658.69 | 342.12 | 660.79 | 342.05 | 661.7 | 342.03 |
| 669.32 | 341.92 | 669.93 | 341.9 | 673.61 | 341.8 | 674.75 | 341.78 | 675.19 | 341.78 |
| 677.86 | 341.84 | 679 | 341.87 | 680.1 | 341.93 | 681.61 | 342 | 684.81 | 342.12 |
| 686.6 | 342.12 | 687.79 | 342.15 | 688.93 | 342.19 | 689.68 | 342.17 | 689.97 | 342.14 |
| 690.41 | 342.13 | 692.62 | 342.15 | 693.22 | 342.15 | 694.15 | 342.13 | 696.11 | 342.04 |
| 696.74 | 342 | 697.03 | 342 | 698.63 | 341.89 | 698.72 | 341.87 | 702.58 | 341.74 |
| 704.59 | 341.69 | 705.3 | 341.69 | 706.57 | 341.67 | 708.25 | 341.63 | 708.81 | 341.63 |
| 715 | 341.67 | 717.56 | 341.7 | 720.75 | 341.72 | 721.76 | 341.74 | 723.71 | 341.74 |
| 724.41 | 341.75 | 725.75 | 341.78 | 726.29 | 341.8 | 727.17 | 341.81 | 727.49 | 341.83 |
| 728.49 | 341.83 | 729.19 | 341.82 | 729.32 | 341.83 | 729.97 | 341.82 | 730.13 | 341.83 |
| 731.64 | 341.83 | 734.19 | 341.82 | 735.58 | 341.83 | 738.48 | 341.84 | 741.19 | 341.8 |
| 742.09 | 341.8 | 746.09 | 341.82 | 748.36 | 341.8 | 750.22 | 341.81 | 756.67 | 341.76 |
| 758.34 | 341.74 | 762.74 | 341.66 | 764.46 | 341.61 | 768.6 | 341.28 | 769.39 | 341.22 |
| 771.49 | 340.9 | 773.28 | 340.86 | 782.28 | 340.52 | 793.37 | 340.28 | 794.43 | 340.27 |
| 795.32 | 340.29 | 796.4 | 340.3 | 797.24 | 340.3 | 800.56 | 340.24 | 801.38 | 340.2 |
| 801.84 | 340.16 | 802.29 | 340.21 | 802.62 | 340.23 | 804.18 | 340.3 | 805.32 | 340.36 |
| 805.69 | 340.3 | 806.58 | 340.23 | 807.76 | 340.15 | 809.2 | 340.17 | 811.97 | 340.42 |
| 813.04 | 340.53 | 814.13 | 340.63 | 816.14 | 340.78 | 818.97 | 340.81 | 820.16 | 340.82 |
| 821.62 | 340.82 | 823.86 | 340.81 | 824.19 | 340.76 | 825.06 | 340.7 | 825.72 | 340.63 |
| 829.2 | 340.35 | 832.71 | 340.11 | 833.77 | 340.03 | 834.27 | 339.96 | 836.84 | 339.96 |
| 837.38 | 339.95 | 838.4 | 339.97 | 839.74 | 339.92 | 841.75 | 339.88 | 841.99 | 339.88 |
| 842.55 | 339.92 | 845.14 | 340.05 | 845.28 | 340.06 | 847.34 | 340.09 | 849.6 | 340.1 |
| 850.55 | 340.09 | 853.29 | 340.14 | 854.96 | 340.16 | 856.52 | 340.17 | 857.19 | 340.15 |
| 858.11 | 340.11 | 858.4 | 340.11 | 860.04 | 340.05 | 864.47 | 339.83 | 864.97 | 339.8 |
| 876.16 | 339.28 | 882.41 | 339.04 | 883.46 | 338.99 | 885.02 | 338.96 | 887.81 | 338.92 |
| 888.48 | 338.89 | 890.3 | 338.77 | 891.48 | 338.73 | 893.26 | 338.7 | 895.64 | 338.67 |
| 896.48 | 338.68 | 897.53 | 338.71 | 899.54 | 338.74 | 902.08 | 338.88 | 905.05 | 338.99 |
| 907.04 | 338.95 | 907.36 | 338.94 | 910.64 | 338.75 | 913.2 | 338.61 | 914.98 | 338.54 |
| 915.35 | 338.53 | 916.18 | 338.48 | 916.98 | 338.45 | 917.95 | 338.43 | 920.35 | 338.41 |
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| 943.91 | 338.51 | 945.15 | 338.52 | 950.29 | 338.61 | 951.02 | 338.61 | 953.63 | 338.64 |
| 959.04 | 338.72 | 968.19 | 338.95 | 971.03 | 339.01 | 974.6 | 339 | 975.39 | 338.99 |
| 978.41 | 338.92 | 982.24 | 338.77 | 984.58 | 338.65 | 992.26 | 338.35 | 998.18 | 338.29 |
| 998.73 | 338.29 | 999.04 | 338.27 | 999.77 | 338.26 | 1000.02 | 338.24 | 1000.78 | 338.24 |
| 1002.62 | 338.27 | 1015.59 | 338.35 | 1016.73 | 338.35 | 1020.08 | 338.47 | 1022.82 | 338.51 |
| 1029.99 | 338.51 | 1032.44 | 338.48 | 1035.65 | 338.45 | 1036.17 | 338.43 | 1040.99 | 338.29 |
| 1043.99 | 338.22 | 1045.08 | 338.15 | 1049.56 | 337.87 | 1049.74 | 337.85 | 1053.25 | 337.72 |
| 1054.97 | 337.67 | 1057.51 | 337.63 | 1062.93 | 337.47 | 1064.61 | 337.4 | 1067.05 | 337.36 |
| 1070.36 | 337.37 | 1071.8 | 337.36 | 1077.35 | 337.41 | 1079.67 | 337.47 | 1080.68 | 337.48 |
| 1086.85 | 337.63 | 1088.63 | 337.69 | 1089.49 | 337.73 | 1090.37 | 337.78 | 1090.97 | 337.8 |
| 1093.61 | 337.94 | 1094.6 | 338.36 | 1095.25 | 338.66 | 1095.49 | 338.81 | 1096.6 | 339.39 |
| 1099.13 | 339.88 | 1099.49 | 339.96 | 1099.95 | 340 | 1100.86 | 340.04 | 1103.99 | 340.09 |
| 1105.2 | 340.09 | 1105.91 | 340.08 | 1107.03 | 340.08 | 1108.05 | 340.1 | 1108.57 | 340.12 |
| 1110.41 | 340.16 | 1116.33 | 340.53 | 1116.45 | 340.53 | 1119.71 | 340.72 | 1121.9 | 340.84 |
| 1124.18 | 340.95 | 1127.61 | 340.98 | 1132.78 | 341.03 | 1133.22 | 341.04 | 1142.58 | 340.98 |
| 1143.06 | 340.99 | 1143.85 | 341.04 | 1145.59 | 341.16 | 1148.3 | 341.47 | 1148.62 | 341.5 |
| 1149.3 | 341.62 | 1151.35 | 341.92 | 1152.78 | 342.16 | 1154.39 | 342.57 | 1154.63 | 342.64 |
| 1155.99 | 342.98 | 1156.44 | 343.14 | 1157.9 | 343.4 | 1159.16 | 343.63 | 1160.35 | 343.92 |
| 1162.76 | 344.46 | 1163.37 | 344.57 | 1168.75 | 345.58 | 1171.7 | 346.25 | 1174 | 346.76 |
| 1174.72 | 346.93 | 1176.11 | 347.27 | 1176.54 | 347.37 | 1178.73 | 347.86 | 1179.45 | 348.04 |
| 1183.75 | 348.97 | 1187.12 | 349.78 | 1188.16 | 350.02 | 1189.41 | 350.37 | 1190.8 | 350.72 |
| 1192.02 | 350.98 | 1193.7 | 351.35 | 1195.7 | 351.83 | 1196.34 | 352 | 1197.41 | 352.25 |
| 1197.92 | 352.38 | 1198.82 | 352.55 | 1199.11 | 352.62 | 1201.08 | 352.98 | 1201.81 | 353.12 |
| 1202.82 | 353.33 | 1204.46 | 353.7 | 1205.23 | 353.85 | 1206.13 | 354.06 | 1207.21 | 354.3 |
| 1208.07 | 354.33 | 1208.51 | 354.36 | 1209.21 | 354.47 | 1211.07 | 354.66 | 1213.11 | 354.83 |
| 1214.32 | 354.9 | 1215.72 | 354.96 | 1217.42 | 354.99 | 1219.19 | 354.99 | 1220.47 | 355.03 |
| 1220.67 | 355.05 | 1223.53 | 355.23 | 1223.6 | 355.22 | 1224.26 | 355.23 | 1226.14 | 355.3 |
| 1227.14 | 355.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 98.31 | .05 | 648.24 | .04 | 1156.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 648.24 | 1156.44 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4776.62*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 87.39 | 349.94 | 89.62 | 349.94 | 90.58 | 349.93 | 95.17 | 349.84 | 95.55 | 349.85 |
| 96.91 | 349.81 | 98.87 | 349.83 | 99.66 | 349.81 | 100.64 | 349.82 | 103.4 | 349.83 |
| 104.28 | 349.82 | 105.55 | 349.82 | 106.37 | 349.81 | 110.25 | 349.67 | 112.7 | 349.54 |
| 117.98 | 349.25 | 133.51 | 348.63 | 135.06 | 348.58 | 143.23 | 348.47 | 144.99 | 348.45 |
| 147.99 | 348.45 | 148.64 | 348.46 | 149.37 | 348.45 | 151 | 348.41 | 153.25 | 348.33 |
| 153.89 | 348.29 | 154.98 | 348.25 | 156.94 | 348.19 | 157.61 | 348.18 | 167.96 | 347.96 |
| 176.75 | 347.71 | 176.83 | 347.69 | 180.8 | 347.66 | 183.9 | 347.65 | 185.77 | 347.7 |
| 186.1 | 347.72 | 186.6 | 347.79 | 186.98 | 347.78 | 187.2 | 347.73 | 187.59 | 347.7 |
| 188.45 | 347.66 | 190.66 | 347.6 | 191.16 | 347.58 | 200.26 | 347.31 | 208.81 | 347.1 |
| 209.53 | 347.08 | 210.68 | 347.03 | 211.27 | 347.02 | 212.9 | 347.02 | 216.75 | 346.96 |
| 222.8 | 346.87 | 222.97 | 346.86 | 229 | 346.77 | 229.39 | 346.76 | 231.43 | 346.73 |
| 231.77 | 346.73 | 252.48 | 346.4 | 267.19 | 346.05 | 267.39 | 345.98 | 267.69 | 345.95 |
| 269.33 | 346.01 | 269.93 | 346.05 | 273.89 | 346.15 | 275.73 | 346.18 | 278.47 | 346.19 |
| 280.02 | 346.22 | 281.44 | 346.21 | 283.13 | 346.15 | 285.62 | 346.04 | 289.5 | 345.92 |
| 297.58 | 345.82 | 298.46 | 345.82 | 299.16 | 345.83 | 300.48 | 345.86 | 304.1 | 345.91 |
| 306.27 | 345.96 | 307.01 | 345.95 | 309.88 | 345.99 | 310.67 | 345.98 | 311.8 | 345.98 |
| 312.09 | 345.94 | 313.28 | 345.95 | 313.57 | 345.94 | 314.69 | 345.94 | 315.8 | 345.96 |
| 316.62 | 345.96 | 317.17 | 345.95 | 317.78 | 345.98 | 318.63 | 345.97 | 319.06 | 345.95 |
| 319.82 | 345.87 | 320.49 | 345.81 | 321.53 | 345.74 | 323.14 | 345.7 | 325.72 | 345.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 326.81 | 345.39 | 326.96 | 345.39 | 328.06 | 345.48 | 329.71 | 345.57 | 330.75 | 345.61 |
| 332.07 | 345.65 | 332.44 | 345.65 | 344.41 | 345.46 | 346.76 | 345.37 | 347.17 | 345.37 |
| 349.31 | 345.31 | 376.8 | 344.87 | 384.7 | 344.71 | 388.03 | 344.71 | 389.03 | 344.68 |
| 390.4 | 344.63 | 394.23 | 344.5 | 396 | 344.45 | 398.84 | 344.38 | 403.71 | 344.24 |
| 404.98 | 344.21 | 406.28 | 344.23 | 407.24 | 344.22 | 410.6 | 344.2 | 411.88 | 344.18 |
| 412.93 | 344.17 | 413.73 | 344.18 | 415.07 | 344.21 | 415.54 | 344.2 | 415.98 | 344.21 |
| 416.67 | 344.19 | 418.66 | 344.25 | 421.34 | 344.18 | 422.99 | 344.23 | 426.56 | 344.27 |
| 427.81 | 344.28 | 433.18 | 344.28 | 439.39 | 344.23 | 452.93 | 343.93 | 459.77 | 343.75 |
| 465.45 | 343.59 | 467.11 | 343.53 | 467.53 | 343.51 | 471.69 | 343.39 | 473.96 | 343.33 |
| 479.03 | 343.2 | 488.02 | 342.96 | 488.4 | 342.97 | 490.11 | 343.17 | 490.89 | 343.24 |
| 491.37 | 343.25 | 491.71 | 343.19 | 492.94 | 343.15 | 494.27 | 343.08 | 495.71 | 342.99 |
| 496.91 | 342.95 | 498.13 | 342.9 | 499.15 | 342.89 | 500.73 | 342.91 | 501.83 | 342.96 |
| 505.28 | 342.94 | 506.96 | 342.99 | 508.34 | 342.99 | 510.8 | 343.02 | 513.01 | 343.02 |
| 514.78 | 343.04 | 515.03 | 343 | 516.49 | 342.93 | 523.11 | 342.72 | 524.05 | 342.7 |
| 525.1 | 342.66 | 529.09 | 342.45 | 530.47 | 342.37 | 534.59 | 342.28 | 535.46 | 342.28 |
| 536.11 | 342.27 | 537.09 | 342.24 | 538.69 | 342.22 | 540.83 | 342.21 | 542.11 | 342.19 |
| 544.61 | 342.18 | 546.28 | 342.19 | 551.71 | 342.23 | 554.26 | 342.26 | 558.23 | 342.27 |
| 562.95 | 342.3 | 564.65 | 342.29 | 565.26 | 342.3 | 582.29 | 342.33 | 598.49 | 342.46 |
| 600.77 | 342.47 | 601.15 | 342.48 | 601.94 | 342.47 | 602.65 | 342.45 | 610.66 | 342.24 |
| 610.75 | 342.23 | 622.01 | 341.94 | 626.86 | 341.88 | 629.93 | 341.88 | 630.31 | 341.87 |
| 630.94 | 341.83 | 632.41 | 341.82 | 633.46 | 341.85 | 633.76 | 341.85 | 637.94 | 342 |
| 641.83 | 342.08 | 642.24 | 342.08 | 642.53 | 342.1 | 643.79 | 342.12 | 645.27 | 342.13 |
| 646.33 | 342.15 | 647.11 | 342.18 | 648.7 | 342.18 | 649.06 | 342.17 | 649.57 | 342.14 |
| 652.48 | 342.04 | 653.99 | 342 | 656.73 | 341.95 | 658.23 | 341.9 | 659.56 | 341.83 |
| 661.67 | 341.77 | 662.57 | 341.75 | 670.23 | 341.66 | 670.84 | 341.64 | 674.54 | 341.56 |
| 675.68 | 341.53 | 678.81 | 341.59 | 679.95 | 341.62 | 680.46 | 341.66 | 681.06 | 341.68 |
| 682.57 | 341.75 | 685.79 | 341.87 | 687.58 | 341.87 | 688.4 | 341.89 | 689.92 | 341.94 |
| 690.68 | 341.92 | 690.97 | 341.89 | 691.42 | 341.88 | 693.63 | 341.89 | 694.57 | 341.89 |
| 694.97 | 341.88 | 697.14 | 341.78 | 697.77 | 341.74 | 698.06 | 341.74 | 698.7 | 341.71 |
| 699.76 | 341.62 | 703.63 | 341.49 | 705.65 | 341.43 | 707.64 | 341.42 | 709.89 | 341.38 |
| 716.11 | 341.43 | 718.68 | 341.46 | 722.9 | 341.5 | 725.56 | 341.51 | 726.91 | 341.54 |
| 727.45 | 341.56 | 728.18 | 341.57 | 728.49 | 341.59 | 732.82 | 341.59 | 735.38 | 341.58 |
| 736.77 | 341.59 | 739.69 | 341.59 | 742.41 | 341.55 | 743.32 | 341.54 | 747.33 | 341.56 |
| 749.61 | 341.54 | 751.48 | 341.54 | 757.96 | 341.49 | 759.64 | 341.46 | 764.06 | 341.37 |
| 765.78 | 341.32 | 769.94 | 340.97 | 770.73 | 340.91 | 772.85 | 340.58 | 774.64 | 340.54 |
| 783.68 | 340.2 | 794.82 | 339.96 | 795.88 | 339.94 | 796.02 | 339.95 | 796.77 | 339.95 |
| 798.23 | 339.97 | 802.04 | 339.9 | 802.86 | 339.87 | 802.94 | 339.85 | 803.37 | 339.84 |
| 803.78 | 339.89 | 804.1 | 339.91 | 805.67 | 339.98 | 806.81 | 340.04 | 807.19 | 339.98 |
| 808.08 | 339.9 | 809.27 | 339.82 | 810.72 | 339.84 | 813.5 | 340.1 | 814.57 | 340.22 |
| 815.67 | 340.32 | 817.68 | 340.47 | 820.52 | 340.5 | 821.72 | 340.51 | 823.18 | 340.51 |
| 825.43 | 340.5 | 825.77 | 340.45 | 826.08 | 340.43 | 827.3 | 340.32 | 827.78 | 340.27 |
| 830.8 | 340.03 | 834.32 | 339.78 | 835.38 | 339.7 | 835.89 | 339.63 | 838.47 | 339.63 |
| 839.01 | 339.62 | 839.95 | 339.64 | 840.04 | 339.63 | 841.39 | 339.59 | 843.4 | 339.54 |
| 843.64 | 339.54 | 844.2 | 339.58 | 846.81 | 339.71 | 846.95 | 339.72 | 850.79 | 339.76 |
| 852.25 | 339.75 | 855 | 339.79 | 856.67 | 339.81 | 858.24 | 339.81 | 859.09 | 339.79 |
| 859.6 | 339.76 | 859.9 | 339.76 | 861.39 | 339.7 | 861.77 | 339.69 | 866.22 | 339.47 |
| 866.72 | 339.44 | 877.96 | 338.92 | 884.24 | 338.68 | 885.29 | 338.62 | 886.86 | 338.59 |
| 889.66 | 338.56 | 891.8 | 338.44 | 892.16 | 338.41 | 893.34 | 338.38 | 895.13 | 338.35 |
| 897.53 | 338.32 | 898.36 | 338.32 | 899.43 | 338.35 | 901.44 | 338.38 | 903.99 | 338.52 |
| 906.4 | 338.6 | 906.98 | 338.63 | 907.44 | 338.61 | 909.3 | 338.56 | 912.59 | 338.35 |
| 915.16 | 338.21 | 916.95 | 338.14 | 917.83 | 338.09 | 918.96 | 338.04 | 921.19 | 338.02 |
| 922.34 | 338 | 927.38 | 338.01 | 928.24 | 338.01 | 931.19 | 337.96 | 940.62 | 338.01 |
| 942.39 | 338.05 | 943.19 | 338.06 | 943.94 | 338.08 | 946 | 338.11 | 947.24 | 338.12 |
| 952.41 | 338.19 | 953.15 | 338.19 | 954.07 | 338.21 | 955.77 | 338.22 | 961.2 | 338.31 |
| 970.38 | 338.55 | 972.96 | 338.61 | 976.83 | 338.61 | 977.62 | 338.6 | 980.65 | 338.55 |
| 984.49 | 338.4 | 986.84 | 338.28 | 994.56 | 338 | 1000.5 | 337.94 | 1001.06 | 337.94 |
| 1001.37 | 337.92 | 1002.1 | 337.91 | 1002.35 | 337.89 | 1003.11 | 337.89 | 1004.96 | 337.92 |
| 1017.99 | 338 | 1019.14 | 338 | 1022.5 | 338.11 | 1024.61 | 338.14 | 1032.45 | 338.14 |
| 1034.91 | 338.12 | 1038.13 | 338.09 | 1038.66 | 338.07 | 1042.77 | 337.95 | 1043.5 | 337.94 |
| 1046.52 | 337.87 | 1047.61 | 337.81 | 1052.28 | 337.53 | 1055.81 | 337.4 | 1056.42 | 337.39 |
| 1057.54 | 337.35 | 1060.09 | 337.31 | 1065.54 | 337.15 | 1067.22 | 337.09 | 1069.68 | 337.05 |
| 1069.95 | 337.04 | 1072.87 | 337.05 | 1074.26 | 337.05 | 1079.59 | 337.09 | 1081.83 | 337.15 |
| 1082.8 | 337.16 | 1088.74 | 337.3 | 1090.44 | 337.36 | 1091.27 | 337.4 | 1092.12 | 337.45 |
| 1094.12 | 337.55 | 1095.24 | 337.61 | 1096.19 | 338.05 | 1096.82 | 338.37 | 1097.05 | 338.52 |
| 1098.12 | 339.12 | 1100.55 | 339.63 | 1100.9 | 339.71 | 1101.52 | 339.77 | 1102.21 | 339.79 |
| 1105.23 | 339.85 | 1106.39 | 339.86 | 1107.32 | 339.85 | 1109.13 | 339.87 | 1109.64 | 339.9 |
| 1111.41 | 339.94 | 1117.1 | 340.28 | 1117.22 | 340.28 | 1120.36 | 340.47 | 1122.46 | 340.57 |
| 1124.65 | 340.67 | 1127.95 | 340.71 | 1129.84 | 340.73 | 1131 | 340.73 | 1133.35 | 340.77 |
| 1142.36 | 340.75 | 1142.82 | 340.76 | 1145.25 | 340.92 | 1146.42 | 341.05 | 1147.86 | 341.22 |
| 1148.17 | 341.25 | 1148.82 | 341.36 | 1150.79 | 341.64 | 1152.17 | 341.86 | 1153.72 | 342.24 |
| 1154.22 | 342.37 | 1155.26 | 342.62 | 1155.69 | 342.76 | 1157.17 | 343 | 1158.45 | 343.23 |
| 1160.14 | 343.62 | 1162.1 | 344.03 | 1165.2 | 344.57 | 1167.83 | 345.05 | 1168.84 | 345.25 |
| 1170.75 | 345.67 | 1171.15 | 345.75 | 1172.41 | 346.03 | 1173.48 | 346.25 | 1174.21 | 346.41 |
| 1176.06 | 346.84 | 1178.27 | 347.32 | 1179 | 347.49 | 1183.36 | 348.42 | 1186.77 | 349.23 |
| 1187.82 | 349.46 | 1189.09 | 349.82 | 1190.5 | 350.17 | 1191.73 | 350.43 | 1193.43 | 350.8 |
| 1195.46 | 351.29 | 1196.11 | 351.47 | 1197.19 | 351.73 | 1197.7 | 351.87 | 1198.62 | 352.05 |
| 1199.29 | 352.2 | 1200.91 | 352.51 | 1201.65 | 352.66 | 1202.67 | 352.89 | 1204.33 | 353.28 |
| 1205.11 | 353.45 | 1207.11 | 353.93 | 1208.32 | 353.99 | 1209.14 | 354.11 | 1211.03 | 354.28 |
| 1213.64 | 354.47 | 1215.05 | 354.53 | 1215.74 | 354.55 | 1217.46 | 354.58 | 1218.83 | 354.58 |
| 1220.28 | 354.61 | 1220.74 | 354.64 | 1223.64 | 354.8 | 1223.71 | 354.79 | 1224.38 | 354.8 |
| 1227.3 | 354.87 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 87.39 | .05 | 649.06 | .04 | 1155.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 649.06 | 1155.69 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4756.70*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 76.46 | 349.76 | 77.76 | 349.77 | 78.75 | 349.76 | 79.73 | 349.76 | 84.41 | 349.66 |
| 84.8 | 349.66 | 86.18 | 349.63 | 88.19 | 349.65 | 88.99 | 349.63 | 90 | 349.64 |
| 92.81 | 349.66 | 95.85 | 349.66 | 99.81 | 349.53 | 102.31 | 349.41 | 107.7 | 349.13 |
| 123.55 | 348.53 | 125.13 | 348.48 | 133.47 | 348.37 | 134.4 | 348.37 | 135.27 | 348.35 |
| 138.33 | 348.36 | 139 | 348.37 | 139.74 | 348.36 | 141.4 | 348.32 | 143.7 | 348.24 |
| 144.36 | 348.2 | 145.47 | 348.15 | 147.47 | 348.1 | 148.16 | 348.09 | 158.72 | 347.87 |
| 167.7 | 347.62 | 167.77 | 347.6 | 171.83 | 347.58 | 175 | 347.57 | 176.91 | 347.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 177.24 | 347.64 | 177.75 | 347.71 | 178.14 | 347.7 | 178.37 | 347.65 | 178.76 | 347.62 |
| 181.9 | 347.52 | 182.41 | 347.5 | 191.69 | 347.23 | 200.43 | 347.01 | 201.16 | 346.99 |
| 202.93 | 346.93 | 204.6 | 346.93 | 207.76 | 346.88 | 208.53 | 346.87 | 214.7 | 346.77 |
| 214.88 | 346.77 | 221.04 | 346.67 | 221.43 | 346.66 | 223.52 | 346.63 | 223.86 | 346.63 |
| 245.01 | 346.28 | 260.03 | 345.92 | 260.23 | 345.85 | 260.54 | 345.82 | 261.17 | 345.83 |
| 262.4 | 345.89 | 262.83 | 345.92 | 266.87 | 346.02 | 268.75 | 346.06 | 271.54 | 346.07 |
| 273.12 | 346.1 | 273.69 | 346.1 | 274.57 | 346.08 | 276.3 | 346.03 | 278.84 | 345.91 |
| 282.8 | 345.78 | 291.05 | 345.67 | 291.95 | 345.67 | 292.67 | 345.68 | 294.01 | 345.72 |
| 297.71 | 345.76 | 299.93 | 345.81 | 300.68 | 345.81 | 303.61 | 345.84 | 304.41 | 345.83 |
| 305.57 | 345.83 | 305.87 | 345.8 | 307.08 | 345.81 | 307.37 | 345.79 | 308.52 | 345.79 |
| 309.65 | 345.81 | 310.48 | 345.81 | 311.05 | 345.8 | 311.67 | 345.83 | 312.54 | 345.82 |
| 312.98 | 345.8 | 313.76 | 345.71 | 314.44 | 345.65 | 315.5 | 345.58 | 317.15 | 345.54 |
| 319.78 | 345.32 | 320.89 | 345.22 | 321.04 | 345.22 | 322.17 | 345.31 | 323.85 | 345.4 |
| 324.92 | 345.45 | 325.84 | 345.48 | 326.64 | 345.48 | 338.86 | 345.29 | 341.26 | 345.2 |
| 343.86 | 345.14 | 371.92 | 344.68 | 379.99 | 344.53 | 382.23 | 344.52 | 383.39 | 344.52 |
| 385.2 | 344.47 | 385.81 | 344.44 | 389.72 | 344.32 | 391.53 | 344.26 | 394.43 | 344.19 |
| 399.4 | 344.04 | 400.7 | 344.01 | 402.02 | 344.03 | 403 | 344.01 | 406.44 | 343.99 |
| 407.74 | 343.97 | 408.81 | 343.96 | 409.63 | 343.97 | 410.99 | 344 | 412.63 | 343.98 |
| 414.66 | 344.04 | 417.4 | 343.96 | 419.09 | 344.01 | 419.92 | 344.03 | 422.73 | 344.06 |
| 424 | 344.07 | 429.48 | 344.07 | 435.83 | 344.01 | 449.65 | 343.69 | 456.63 | 343.5 |
| 460.98 | 343.37 | 462.43 | 343.33 | 464.12 | 343.27 | 464.55 | 343.25 | 466.66 | 343.18 |
| 468.8 | 343.13 | 471.12 | 343.06 | 476.3 | 342.92 | 485.48 | 342.67 | 485.86 | 342.67 |
| 487.6 | 342.88 | 488.4 | 342.96 | 488.9 | 342.97 | 489.24 | 342.91 | 490.71 | 342.85 |
| 492.13 | 342.78 | 492.6 | 342.74 | 493.33 | 342.7 | 494.55 | 342.66 | 495.8 | 342.61 |
| 496.84 | 342.6 | 498.45 | 342.62 | 499.57 | 342.67 | 503.09 | 342.65 | 504.81 | 342.7 |
| 506.21 | 342.69 | 507.04 | 342.71 | 508.73 | 342.73 | 510.98 | 342.73 | 512.44 | 342.75 |
| 512.7 | 342.76 | 513.04 | 342.71 | 514.54 | 342.64 | 521.29 | 342.44 | 522.26 | 342.43 |
| 523.33 | 342.39 | 527.4 | 342.2 | 528.81 | 342.12 | 533.02 | 342.04 | 534.57 | 342.03 |
| 535.57 | 342 | 537.2 | 341.97 | 539.39 | 341.96 | 540.69 | 341.94 | 543.24 | 341.93 |
| 544.95 | 341.93 | 550.5 | 341.97 | 553.1 | 341.99 | 557.15 | 341.99 | 561.97 | 342.01 |
| 563.7 | 342 | 564.32 | 342.02 | 581.71 | 342.04 | 598.25 | 342.17 | 600.58 | 342.19 |
| 600.97 | 342.2 | 602.5 | 342.17 | 610.68 | 341.96 | 610.77 | 341.96 | 622.26 | 341.68 |
| 627.22 | 341.61 | 630.35 | 341.61 | 630.74 | 341.6 | 631.38 | 341.55 | 632.18 | 341.54 |
| 632.88 | 341.54 | 633.95 | 341.57 | 634.26 | 341.57 | 638.53 | 341.72 | 642.5 | 341.78 |
| 643.21 | 341.81 | 644.5 | 341.83 | 646.01 | 341.84 | 646.74 | 341.86 | 647.1 | 341.86 |
| 648.07 | 341.89 | 648.8 | 341.89 | 649.88 | 341.87 | 650.95 | 341.83 | 653.32 | 341.75 |
| 654.84 | 341.71 | 657.59 | 341.66 | 659.09 | 341.61 | 660.42 | 341.54 | 662.54 | 341.48 |
| 663.45 | 341.47 | 671.14 | 341.4 | 671.75 | 341.38 | 676.62 | 341.29 | 677.06 | 341.29 |
| 679.76 | 341.34 | 680.9 | 341.37 | 681.42 | 341.41 | 682.02 | 341.43 | 683.53 | 341.51 |
| 686.76 | 341.61 | 688.57 | 341.62 | 689.39 | 341.64 | 690.47 | 341.69 | 691.42 | 341.69 |
| 691.81 | 341.65 | 692.4 | 341.63 | 694.64 | 341.64 | 695.99 | 341.62 | 698.17 | 341.52 |
| 698.8 | 341.48 | 699.09 | 341.49 | 699.87 | 341.44 | 700.8 | 341.36 | 704.69 | 341.23 |
| 706.71 | 341.18 | 707.43 | 341.18 | 708.71 | 341.17 | 710.4 | 341.14 | 710.97 | 341.14 |
| 717.22 | 341.19 | 719.8 | 341.22 | 724.03 | 341.26 | 726 | 341.27 | 726.7 | 341.28 |
| 729.49 | 341.34 | 729.81 | 341.36 | 730.82 | 341.36 | 731.53 | 341.35 | 734 | 341.35 |
| 736.57 | 341.34 | 740.9 | 341.34 | 743.63 | 341.3 | 744.54 | 341.29 | 748.57 | 341.3 |
| 750.86 | 341.27 | 752.74 | 341.28 | 759.24 | 341.21 | 760.93 | 341.18 | 765.37 | 341.08 |
| 767.1 | 341.03 | 771.27 | 340.67 | 772.07 | 340.61 | 774.2 | 340.26 | 776 | 340.22 |
| 785.08 | 339.89 | 796.26 | 339.63 | 797.47 | 339.61 | 797.81 | 339.62 | 798.72 | 339.62 |
| 799.92 | 339.63 | 800.16 | 339.62 | 803.51 | 339.56 | 803.96 | 339.54 | 804.34 | 339.54 |
| 804.8 | 339.51 | 805.26 | 339.56 | 805.59 | 339.58 | 807.99 | 339.7 | 808.31 | 339.72 |
| 808.69 | 339.66 | 809.59 | 339.58 | 810.77 | 339.49 | 812.23 | 339.51 | 817.2 | 340.01 |
| 819.22 | 340.16 | 822.07 | 340.19 | 824.75 | 340.19 | 827.01 | 340.18 | 827.66 | 340.11 |
| 828.22 | 340.07 | 828.88 | 340 | 832.4 | 339.71 | 836.48 | 339.41 | 837.52 | 339.3 |
| 840.65 | 339.3 | 841.58 | 339.31 | 841.68 | 339.3 | 843.03 | 339.25 | 845.06 | 339.2 |
| 845.29 | 339.2 | 845.86 | 339.24 | 848.48 | 339.37 | 848.61 | 339.38 | 850.69 | 339.4 |
| 852.48 | 339.41 | 853.94 | 339.41 | 856.7 | 339.44 | 859.96 | 339.46 | 860.63 | 339.44 |
| 861.56 | 339.4 | 861.85 | 339.4 | 863.12 | 339.35 | 867.97 | 339.11 | 868.47 | 339.08 |
| 879.76 | 338.55 | 886.07 | 338.31 | 887.12 | 338.26 | 888.69 | 338.22 | 891.51 | 338.19 |
| 892.19 | 338.16 | 894.02 | 338.06 | 895.84 | 338.01 | 897 | 338 | 899.41 | 337.97 |
| 900.25 | 337.97 | 901.32 | 337.99 | 903.34 | 338.02 | 905.9 | 338.16 | 908.9 | 338.26 |
| 909.37 | 338.24 | 910.91 | 338.19 | 914.54 | 337.96 | 917.12 | 337.81 | 918.92 | 337.73 |
| 919.8 | 337.68 | 920.78 | 337.64 | 921.91 | 337.62 | 924.33 | 337.6 | 929.39 | 337.61 |
| 930.26 | 337.61 | 933.22 | 337.56 | 942.69 | 337.61 | 944.46 | 337.65 | 945.27 | 337.66 |
| 946.03 | 337.68 | 948.09 | 337.71 | 949.34 | 337.72 | 954.53 | 337.78 | 955.27 | 337.78 |
| 956.87 | 337.8 | 957.9 | 337.8 | 963.36 | 337.89 | 972.58 | 338.15 | 975.17 | 338.21 |
| 979.05 | 338.22 | 979.85 | 338.22 | 982.9 | 338.17 | 986.75 | 338.02 | 989.11 | 337.91 |
| 996.86 | 337.65 | 1002.83 | 337.58 | 1003.38 | 337.58 | 1004.68 | 337.54 | 1005.45 | 337.54 |
| 1005.93 | 337.55 | 1006.65 | 337.55 | 1007.31 | 337.57 | 1020.4 | 337.65 | 1021.54 | 337.66 |
| 1024.92 | 337.75 | 1027.04 | 337.78 | 1034.91 | 337.78 | 1037.38 | 337.76 | 1040.62 | 337.73 |
| 1041.15 | 337.71 | 1044.92 | 337.6 | 1045.27 | 337.6 | 1046.01 | 337.58 | 1049.04 | 337.52 |
| 1054.65 | 337.22 | 1054.83 | 337.2 | 1058.37 | 337.07 | 1058.98 | 337.07 | 1060.11 | 337.03 |
| 1062.67 | 336.99 | 1068.14 | 336.84 | 1069.83 | 336.77 | 1070.32 | 336.76 | 1071.7 | 336.75 |
| 1072.58 | 336.73 | 1075.38 | 336.74 | 1076.71 | 336.74 | 1081.84 | 336.77 | 1083.98 | 336.83 |
| 1084.92 | 336.84 | 1090.62 | 336.98 | 1092.26 | 337.03 | 1093.06 | 337.07 | 1093.64 | 337.11 |
| 1095.79 | 337.22 | 1096.87 | 337.28 | 1097.78 | 337.74 | 1098.39 | 338.07 | 1098.61 | 338.23 |
| 1099.63 | 338.86 | 1101.97 | 339.39 | 1102.31 | 339.47 | 1102.73 | 339.51 | 1103.57 | 339.55 |
| 1106.47 | 339.62 | 1107.59 | 339.63 | 1108.48 | 339.62 | 1110.22 | 339.65 | 1110.7 | 339.67 |
| 1111.98 | 339.7 | 1112.4 | 339.72 | 1117.87 | 340.03 | 1117.99 | 340.03 | 1121 | 340.21 |
| 1123.02 | 340.31 | 1125.13 | 340.4 | 1128.3 | 340.44 | 1131.23 | 340.46 | 1133.48 | 340.5 |
| 1142.37 | 340.52 | 1143.31 | 340.57 | 1144.92 | 340.68 | 1147.42 | 340.97 | 1147.72 | 341 |
| 1148.35 | 341.1 | 1150.59 | 341.42 | 1151.56 | 341.57 | 1153.05 | 341.91 | 1153.53 | 342.03 |
| 1154.53 | 342.25 | 1154.95 | 342.38 | 1156.45 | 342.61 | 1157.73 | 342.83 | 1158.96 | 343.1 |
| 1161.43 | 343.6 | 1162.06 | 343.7 | 1167.37 | 344.59 | 1168.26 | 344.77 | 1170.2 | 345.17 |
| 1170.6 | 345.26 | 1171.88 | 345.53 | 1173.7 | 345.89 | 1175.57 | 346.31 | 1177.81 | 346.78 |
| 1178.55 | 346.95 | 1182.96 | 347.87 | 1185.18 | 348.38 | 1186.42 | 348.67 | 1187.48 | 348.9 |
| 1188.76 | 349.26 | 1190.19 | 349.61 | 1191.44 | 349.87 | 1193.16 | 350.26 | 1195.22 | 350.76 |
| 1197.49 | 351.35 | 1198.42 | 351.54 | 1199.1 | 351.7 | 1200.74 | 352.04 | 1201.48 | 352.2 |
| 1202.51 | 352.46 | 1204.2 | 352.87 | 1204.98 | 353.05 | 1205.91 | 353.29 | 1207.02 | 353.56 |
| 1207.9 | 353.61 | 1208.35 | 353.65 | 1209.07 | 353.75 | 1210.98 | 353.9 | 1213.07 | 354.04 |
| 1214.31 | 354.1 | 1215.05 | 354.12 | 1215.75 | 354.15 | 1217.49 | 354.18 | 1219.31 | 354.18 |
| 1220.35 | 354.2 | 1220.62 | 354.22 | 1223.75 | 354.38 | 1223.83 | 354.36 | 1226.13 | 354.4 |
| 1227.46 | 354.42 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 76.46 | .05 | 649.88 | .04 | 1154.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 649.88 | 1154.95 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4736.77*



BSE Document Control Number: 7323HYD101

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 65.54 | 349.58 | 66.87 | 349.59 | 67.87 | 349.58 | 68.87 | 349.58 | 73.65 | 349.48 |
| 74.05 | 349.48 | 75.46 | 349.44 | 77.3 | 349.47 | 78.32 | 349.45 | 79.35 | 349.47 |
| 82.22 | 349.5 | 83.26 | 349.49 | 84.46 | 349.5 | 85.32 | 349.5 | 88.77 | 349.4 |
| 89.36 | 349.39 | 97.41 | 349.01 | 113.59 | 348.43 | 115.2 | 348.38 | 123.72 | 348.27 |
| 124.66 | 348.27 | 125.55 | 348.26 | 128.68 | 348.26 | 129.36 | 348.28 | 130.12 | 348.27 |
| 131.81 | 348.23 | 134.16 | 348.15 | 134.83 | 348.11 | 135.96 | 348.06 | 138 | 348.01 |
| 138.7 | 348 | 148.01 | 347.82 | 148.63 | 347.8 | 149.48 | 347.79 | 158.64 | 347.53 |
| 158.72 | 347.51 | 162.86 | 347.49 | 166.09 | 347.48 | 166.37 | 347.5 | 168.04 | 347.54 |
| 168.38 | 347.56 | 168.9 | 347.64 | 169.3 | 347.63 | 169.53 | 347.58 | 169.93 | 347.54 |
| 173.13 | 347.44 | 173.65 | 347.42 | 183.13 | 347.15 | 192.04 | 346.92 | 192.24 | 346.92 |
| 193.99 | 346.86 | 194.93 | 346.84 | 196.31 | 346.84 | 200.31 | 346.78 | 206.61 | 346.68 |
| 206.79 | 346.67 | 213.07 | 346.57 | 213.48 | 346.56 | 215.61 | 346.53 | 215.96 | 346.53 |
| 237.54 | 346.17 | 252.86 | 345.79 | 253.07 | 345.72 | 253.38 | 345.68 | 254.02 | 345.7 |
| 255.28 | 345.76 | 255.72 | 345.79 | 259.84 | 345.9 | 261.3 | 345.93 | 261.76 | 345.93 |
| 263.99 | 345.95 | 264.61 | 345.95 | 266.23 | 345.98 | 266.81 | 345.98 | 267.71 | 345.96 |
| 269.47 | 345.9 | 272.06 | 345.78 | 276.11 | 345.65 | 284.52 | 345.52 | 285.44 | 345.52 |
| 286.17 | 345.53 | 287.54 | 345.57 | 291.31 | 345.61 | 293.58 | 345.67 | 294.35 | 345.66 |
| 297.34 | 345.69 | 299.34 | 345.69 | 299.64 | 345.65 | 300.88 | 345.66 | 301.18 | 345.64 |
| 302.35 | 345.64 | 303.51 | 345.66 | 304.35 | 345.66 | 304.93 | 345.65 | 305.35 | 345.66 |
| 305.57 | 345.69 | 306.45 | 345.67 | 306.9 | 345.65 | 307.69 | 345.56 | 308.39 | 345.5 |
| 309.48 | 345.42 | 311.15 | 345.38 | 313.84 | 345.15 | 314.98 | 345.04 | 315.13 | 345.04 |
| 316.28 | 345.14 | 317.99 | 345.24 | 320.03 | 345.32 | 320.84 | 345.32 | 333.31 | 345.12 |
| 335.76 | 345.03 | 338.41 | 344.96 | 367.05 | 344.49 | 375.28 | 344.34 | 377.57 | 344.33 |
| 378.75 | 344.33 | 380.6 | 344.28 | 387.06 | 344.07 | 389.62 | 344.01 | 390.02 | 343.99 |
| 395.09 | 343.84 | 396.41 | 343.81 | 397.21 | 343.81 | 397.77 | 343.83 | 398.77 | 343.81 |
| 400.45 | 343.8 | 402.27 | 343.78 | 403.6 | 343.76 | 404.69 | 343.75 | 405.53 | 343.76 |
| 406.92 | 343.79 | 408.59 | 343.77 | 410.66 | 343.83 | 413.46 | 343.74 | 415.18 | 343.8 |
| 418.9 | 343.84 | 420.19 | 343.86 | 425.79 | 343.85 | 432.26 | 343.78 | 446.37 | 343.45 |
| 453.49 | 343.25 | 457.93 | 343.11 | 459.41 | 343.07 | 461.14 | 343.01 | 461.58 | 342.99 |
| 463.73 | 342.92 | 465.91 | 342.86 | 468.28 | 342.79 | 473.56 | 342.64 | 482.93 | 342.37 |
| 483.32 | 342.38 | 485.1 | 342.59 | 485.91 | 342.68 | 486.42 | 342.69 | 486.77 | 342.62 |
| 488.27 | 342.56 | 489.72 | 342.49 | 490.94 | 342.42 | 493.46 | 342.32 | 494.12 | 342.3 |
| 494.52 | 342.31 | 496.17 | 342.32 | 497.31 | 342.37 | 500.91 | 342.36 | 502.66 | 342.41 |
| 504.09 | 342.4 | 504.93 | 342.41 | 506.66 | 342.44 | 507.52 | 342.43 | 508.96 | 342.44 |
| 510.45 | 342.46 | 510.71 | 342.47 | 511.06 | 342.42 | 511.27 | 342.42 | 512.59 | 342.36 |
| 519.48 | 342.17 | 520.46 | 342.15 | 521.56 | 342.12 | 525.71 | 341.94 | 527.15 | 341.88 |
| 531.44 | 341.8 | 533.03 | 341.78 | 534.05 | 341.75 | 535.71 | 341.73 | 537.95 | 341.72 |
| 539.28 | 341.69 | 541.88 | 341.68 | 543.63 | 341.68 | 551.93 | 341.71 | 556.07 | 341.71 |
| 560.99 | 341.73 | 561.3 | 341.72 | 562.76 | 341.71 | 563.39 | 341.73 | 581.13 | 341.75 |
| 598.01 | 341.89 | 600.39 | 341.9 | 600.79 | 341.91 | 602.19 | 341.89 | 602.35 | 341.88 |
| 610.7 | 341.68 | 610.78 | 341.68 | 622.52 | 341.42 | 627.58 | 341.35 | 630.77 | 341.34 |
| 631.17 | 341.32 | 631.82 | 341.27 | 632.64 | 341.26 | 633.36 | 341.26 | 634.45 | 341.28 |
| 639.11 | 341.43 | 643.17 | 341.49 | 645.21 | 341.54 | 646.75 | 341.55 | 647.49 | 341.57 |
| 647.86 | 341.57 | 648.61 | 341.59 | 650.38 | 341.59 | 650.7 | 341.58 | 651.77 | 341.54 |
| 654.15 | 341.46 | 655.68 | 341.42 | 658.44 | 341.37 | 659.95 | 341.32 | 661.29 | 341.25 |
| 664.33 | 341.18 | 672.06 | 341.14 | 672.67 | 341.12 | 677.55 | 341.04 | 678 | 341.04 |
| 680.7 | 341.1 | 681.85 | 341.12 | 682.37 | 341.16 | 684.5 | 341.26 | 687.74 | 341.36 |
| 689.08 | 341.37 | 690.38 | 341.39 | 691.46 | 341.44 | 692.42 | 341.44 | 692.81 | 341.4 |
| 693.4 | 341.38 | 696.27 | 341.38 | 697.21 | 341.35 | 699.83 | 341.23 | 700.12 | 341.23 |
| 701.74 | 341.12 | 701.83 | 341.1 | 705.74 | 340.98 | 707.77 | 340.93 | 708.49 | 340.93 |
| 709.78 | 340.92 | 711.48 | 340.9 | 712.05 | 340.9 | 718.32 | 340.95 | 720.92 | 340.99 |
| 724.15 | 341.01 | 725.17 | 341.02 | 727.15 | 341.03 | 727.85 | 341.04 | 729.21 | 341.07 |
| 729.76 | 341.09 | 730.5 | 341.1 | 730.81 | 341.12 | 731.99 | 341.12 | 732.69 | 341.11 |
| 735.18 | 341.11 | 737.76 | 341.09 | 739.16 | 341.1 | 742.11 | 341.09 | 744.85 | 341.04 |
| 745.77 | 341.03 | 749.81 | 341.05 | 752.11 | 341.01 | 754 | 341.01 | 760.53 | 340.93 |
| 762.23 | 340.9 | 766.68 | 340.79 | 768.42 | 340.74 | 772.61 | 340.36 | 773.41 | 340.3 |
| 775.55 | 339.94 | 777.36 | 339.89 | 786.47 | 339.57 | 797.71 | 339.3 | 798.78 | 339.28 |
| 799.68 | 339.29 | 801.62 | 339.29 | 804.99 | 339.22 | 806.33 | 339.19 | 806.74 | 339.24 |
| 807.07 | 339.26 | 809.49 | 339.38 | 809.8 | 339.4 | 810.18 | 339.34 | 811.09 | 339.26 |
| 812.28 | 339.17 | 813.74 | 339.18 | 816.55 | 339.47 | 817.62 | 339.59 | 818.74 | 339.69 |
| 820.76 | 339.85 | 823.63 | 339.87 | 823.85 | 339.88 | 826.31 | 339.88 | 828.59 | 339.87 |
| 828.93 | 339.82 | 829.8 | 339.76 | 830.47 | 339.68 | 834 | 339.39 | 838.1 | 339.08 |
| 839.14 | 338.97 | 843.32 | 338.97 | 844.67 | 338.92 | 846.71 | 338.86 | 846.95 | 338.86 |
| 847.52 | 338.9 | 850.14 | 339.03 | 850.28 | 339.04 | 852.37 | 339.06 | 854.66 | 339.07 |
| 855.63 | 339.06 | 858.4 | 339.09 | 861.67 | 339.11 | 862.35 | 339.09 | 863.04 | 339.05 |
| 863.35 | 339.05 | 864.85 | 338.99 | 869.72 | 338.75 | 870.23 | 338.72 | 881.57 | 338.19 |
| 887.89 | 337.95 | 888.96 | 337.89 | 890.53 | 337.86 | 893.36 | 337.82 | 895.52 | 337.73 |
| 895.88 | 337.7 | 896.17 | 337.7 | 897.08 | 337.67 | 898.88 | 337.64 | 901.3 | 337.61 |
| 902.14 | 337.61 | 903.21 | 337.63 | 905.24 | 337.66 | 907.82 | 337.79 | 908.12 | 337.81 |
| 910.25 | 337.87 | 910.83 | 337.89 | 912.84 | 337.81 | 913.17 | 337.79 | 916.49 | 337.56 |
| 919.08 | 337.41 | 920.89 | 337.32 | 921.26 | 337.31 | 922.09 | 337.26 | 922.75 | 337.23 |
| 923.9 | 337.22 | 925.16 | 337.2 | 926.32 | 337.19 | 931.4 | 337.21 | 932.28 | 337.21 |
| 935.25 | 337.17 | 944.76 | 337.22 | 946.54 | 337.26 | 950.19 | 337.31 | 951.44 | 337.31 |
| 956.65 | 337.36 | 957.39 | 337.36 | 959 | 337.38 | 960.04 | 337.38 | 965.52 | 337.48 |
| 974.78 | 337.75 | 976.59 | 337.8 | 977.66 | 337.82 | 981.27 | 337.84 | 982.07 | 337.84 |
| 985.14 | 337.79 | 989.01 | 337.65 | 991.38 | 337.54 | 999.16 | 337.3 | 1005.16 | 337.23 |
| 1005.71 | 337.23 | 1007.02 | 337.19 | 1008.57 | 337.19 | 1009.65 | 337.22 | 1022.8 | 337.31 |
| 1023.95 | 337.31 | 1027.34 | 337.39 | 1029.46 | 337.41 | 1030.11 | 337.42 | 1037.37 | 337.42 |
| 1039.86 | 337.4 | 1043.11 | 337.37 | 1043.64 | 337.35 | 1047.43 | 337.24 | 1048.52 | 337.22 |
| 1051.56 | 337.16 | 1052.66 | 337.11 | 1057.38 | 336.88 | 1060.93 | 336.75 | 1061.55 | 336.75 |
| 1062.68 | 336.71 | 1065.25 | 336.67 | 1070.74 | 336.52 | 1072.94 | 336.44 | 1075.2 | 336.42 |
| 1077.89 | 336.43 | 1079.16 | 336.42 | 1084.08 | 336.45 | 1084.33 | 336.47 | 1086.14 | 336.51 |
| 1087.04 | 336.52 | 1092.51 | 336.65 | 1094.08 | 336.7 | 1097.47 | 336.89 | 1098.5 | 336.96 |
| 1099.38 | 337.43 | 1099.95 | 337.78 | 1100.17 | 337.94 | 1101.15 | 338.59 | 1103.72 | 339.22 |
| 1104.12 | 339.26 | 1104.93 | 339.3 | 1107.7 | 339.38 | 1108.27 | 339.4 | 1109.63 | 339.4 |
| 1111.3 | 339.43 | 1111.76 | 339.45 | 1113.39 | 339.49 | 1118.64 | 339.78 | 1118.75 | 339.79 |
| 1121.64 | 339.95 | 1123.58 | 340.04 | 1125.6 | 340.12 | 1128.64 | 340.16 | 1131.45 | 340.19 |
| 1133.61 | 340.23 | 1141.92 | 340.29 | 1142.14 | 340.29 | 1143.04 | 340.34 | 1144.58 | 340.44 |
| 1145.66 | 340.56 | 1147.27 | 340.75 | 1147.87 | 340.85 | 1149.69 | 341.09 | 1150.96 | 341.27 |
| 1152.38 | 341.59 | 1153.8 | 341.89 | 1154.2 | 342 | 1155.72 | 342.22 | 1157.02 | 342.42 |
| 1158.27 | 342.68 | 1158.77 | 342.79 | 1160.77 | 343.17 | 1163.95 | 343.67 | 1166.65 | 344.1 |
| 1166.99 | 344.15 | 1167.68 | 344.29 | 1170.05 | 344.76 | 1171.34 | 345.02 | 1173.19 | 345.38 |
| 1174.63 | 345.69 | 1177.35 | 346.24 | 1178.1 | 346.41 | 1182.56 | 347.31 | 1186.07 | 348.12 |
| 1187.15 | 348.35 | 1188.44 | 348.7 | 1189.89 | 349.05 | 1191.15 | 349.32 | 1192.89 | 349.71 |
| 1194.98 | 350.22 | 1196.35 | 350.59 | 1197.27 | 350.83 | 1197.38 | 350.85 | 1198.91 | 351.2 |
| 1200.56 | 351.57 | 1201.32 | 351.75 | 1204.07 | 352.46 | 1205.25 | 352.76 | 1205.8 | 352.91 |
| 1206.92 | 353.2 | 1207.81 | 353.25 | 1208.28 | 353.29 | 1209 | 353.39 | 1210.94 | 353.53 |
| 1213.61 | 353.67 | 1214.3 | 353.7 | 1214.61 | 353.7 | 1215.76 | 353.74 | 1217.53 | 353.77 |
| 1218.93 | 353.77 | 1220.42 | 353.8 | 1223.87 | 353.95 | 1224.63 | 353.94 | 1226.28 | 353.96 |
| 1227.62 | 353.97 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 65.54 | .05 | 650.7 | .04 | 1154.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 650.7 | 1154.2 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4716.84*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 54.62 | 349.41 | 56.99 | 349.41 | 58.01 | 349.4 | 62.88 | 349.29 | 63.29 | 349.3 |
| 64.73 | 349.26 | 66.61 | 349.29 | 67.66 | 349.27 | 68.7 | 349.29 | 71.63 | 349.33 |
| 72.7 | 349.33 | 73.92 | 349.35 | 74.79 | 349.35 | 78.32 | 349.26 | 79.35 | 349.23 |
| 81.52 | 349.14 | 87.13 | 348.89 | 103.63 | 348.32 | 105.27 | 348.28 | 113.96 | 348.18 |
| 115.84 | 348.16 | 119.02 | 348.17 | 119.71 | 348.19 | 120.49 | 348.18 | 122.22 | 348.14 |
| 124.61 | 348.06 | 124.78 | 348.04 | 126.45 | 347.97 | 128.53 | 347.92 | 129.25 | 347.91 |
| 138.74 | 347.73 | 139.37 | 347.71 | 140.24 | 347.7 | 149.59 | 347.44 | 149.67 | 347.42 |
| 153.89 | 347.41 | 157.19 | 347.4 | 157.47 | 347.42 | 159.17 | 347.46 | 159.52 | 347.48 |
| 160.06 | 347.56 | 160.46 | 347.55 | 160.69 | 347.5 | 161.1 | 347.46 | 164.37 | 347.36 |
| 164.9 | 347.34 | 174.57 | 347.07 | 183.66 | 346.83 | 183.86 | 346.83 | 185.64 | 346.77 |
| 186.13 | 346.76 | 188.01 | 346.76 | 191.29 | 346.7 | 192.09 | 346.68 | 198.52 | 346.58 |
| 198.7 | 346.57 | 205.11 | 346.47 | 207.7 | 346.42 | 208.05 | 346.42 | 230.07 | 346.05 |
| 245.7 | 345.66 | 245.91 | 345.58 | 246.23 | 345.55 | 246.88 | 345.56 | 247.97 | 345.61 |
| 248.61 | 345.66 | 254.3 | 345.81 | 254.78 | 345.81 | 257.05 | 345.83 | 257.69 | 345.83 |
| 259.33 | 345.86 | 259.92 | 345.86 | 260.84 | 345.84 | 262.63 | 345.78 | 265.28 | 345.65 |
| 269.41 | 345.51 | 277.99 | 345.38 | 278.93 | 345.38 | 279.68 | 345.39 | 281.07 | 345.42 |
| 284.92 | 345.47 | 287.23 | 345.52 | 288.02 | 345.51 | 291.07 | 345.55 | 291.9 | 345.54 |
| 293.11 | 345.54 | 293.42 | 345.5 | 294.68 | 345.51 | 294.98 | 345.49 | 296.17 | 345.49 |
| 297.36 | 345.51 | 298.22 | 345.51 | 298.82 | 345.5 | 299.24 | 345.51 | 299.46 | 345.54 |
| 300.36 | 345.52 | 300.82 | 345.5 | 301.63 | 345.41 | 302.34 | 345.34 | 303.45 | 345.26 |
| 305.16 | 345.22 | 307.9 | 344.98 | 309.06 | 344.87 | 309.21 | 344.87 | 310.39 | 344.97 |
| 312.13 | 345.07 | 313.25 | 345.12 | 314.65 | 345.16 | 315.04 | 345.16 | 327.76 | 344.95 |
| 330.26 | 344.86 | 332.97 | 344.79 | 362.18 | 344.3 | 370.58 | 344.15 | 374.12 | 344.15 |
| 375.18 | 344.11 | 376 | 344.09 | 382.59 | 343.88 | 385.2 | 343.82 | 385.61 | 343.8 |
| 390.78 | 343.64 | 392.13 | 343.61 | 392.17 | 343.6 | 393.51 | 343.62 | 394.53 | 343.6 |
| 396.24 | 343.59 | 398.11 | 343.57 | 399.46 | 343.55 | 400.57 | 343.54 | 401.43 | 343.55 |
| 402.15 | 343.57 | 402.85 | 343.58 | 403.82 | 343.57 | 404.55 | 343.55 | 406.67 | 343.62 |
| 409.52 | 343.53 | 411.27 | 343.58 | 412.15 | 343.6 | 415.07 | 343.63 | 416.39 | 343.64 |
| 422.1 | 343.63 | 428.7 | 343.56 | 443.09 | 343.21 | 450.35 | 342.99 | 454.88 | 342.85 |
| 456.39 | 342.81 | 458.15 | 342.75 | 458.6 | 342.73 | 463.03 | 342.59 | 465.44 | 342.52 |
| 470.83 | 342.36 | 480.38 | 342.08 | 480.78 | 342.09 | 482.6 | 342.31 | 483.42 | 342.39 |
| 483.94 | 342.4 | 484.3 | 342.34 | 485.12 | 342.3 | 487.02 | 342.22 | 488.56 | 342.13 |
| 491.13 | 342.03 | 491.8 | 342.01 | 492.21 | 342.01 | 493.89 | 342.03 | 495.05 | 342.08 |
| 498.72 | 342.07 | 500.51 | 342.12 | 501.97 | 342.11 | 504.59 | 342.14 | 505.47 | 342.14 |
| 506.93 | 342.15 | 508.45 | 342.17 | 508.73 | 342.18 | 509.08 | 342.14 | 510.64 | 342.07 |
| 517.67 | 341.89 | 518.67 | 341.88 | 519.79 | 341.85 | 524.02 | 341.69 | 525.49 | 341.63 |
| 525.96 | 341.62 | 529.87 | 341.56 | 530.32 | 341.55 | 531.49 | 341.54 | 532.52 | 341.51 |
| 534.23 | 341.48 | 536.5 | 341.47 | 537.86 | 341.44 | 540.52 | 341.42 | 542.3 | 341.42 |
| 548.07 | 341.43 | 550.77 | 341.44 | 554.99 | 341.43 | 560.33 | 341.44 | 561.81 | 341.42 |
| 562.46 | 341.44 | 580.56 | 341.46 | 600.2 | 341.62 | 600.61 | 341.63 | 601.44 | 341.62 |
| 602.2 | 341.6 | 610.71 | 341.41 | 610.8 | 341.41 | 622.77 | 341.15 | 627.93 | 341.08 |
| 631.19 | 341.06 | 631.6 | 341.05 | 632.26 | 341 | 633.1 | 340.98 | 633.83 | 340.98 |
| 635.26 | 341 | 639.7 | 341.15 | 643.84 | 341.2 | 645.92 | 341.25 | 647.49 | 341.26 |
| 648.25 | 341.28 | 648.62 | 341.28 | 649.39 | 341.3 | 651.19 | 341.3 | 651.52 | 341.29 |
| 652.57 | 341.25 | 652.6 | 341.24 | 654.99 | 341.17 | 656.52 | 341.14 | 659.29 | 341.08 |
| 660.81 | 341.03 | 662.15 | 340.96 | 664.29 | 340.91 | 665.21 | 340.9 | 672.97 | 340.87 |
| 673.58 | 340.86 | 677.33 | 340.82 | 678.49 | 340.79 | 681.65 | 340.85 | 682.81 | 340.88 |
| 683.93 | 340.94 | 685.46 | 341.01 | 688.72 | 341.11 | 690.06 | 341.12 | 691.37 | 341.14 |
| 692.45 | 341.19 | 693.41 | 341.19 | 694.4 | 341.13 | 696.66 | 341.13 | 697.28 | 341.12 |
| 698.22 | 341.09 | 700.22 | 341.01 | 700.86 | 340.97 | 701.15 | 340.97 | 702.77 | 340.86 |
| 702.87 | 340.84 | 706.8 | 340.72 | 708.84 | 340.67 | 710.85 | 340.67 | 712.56 | 340.66 |
| 713.13 | 340.65 | 719.43 | 340.7 | 722.04 | 340.75 | 725.28 | 340.77 | 726.31 | 340.79 |
| 728.29 | 340.8 | 729 | 340.8 | 730.37 | 340.84 | 731.81 | 340.87 | 732.13 | 340.89 |
| 733.15 | 340.88 | 734 | 340.88 | 734.48 | 340.87 | 736.35 | 340.87 | 738.95 | 340.85 |
| 740.36 | 340.85 | 743.32 | 340.84 | 746.07 | 340.79 | 746.99 | 340.78 | 751.05 | 340.79 |
| 753.36 | 340.75 | 755.25 | 340.75 | 761.82 | 340.66 | 763.52 | 340.62 | 768 | 340.51 |
| 769.74 | 340.45 | 773.95 | 340.06 | 774.75 | 339.99 | 776.9 | 339.61 | 778.71 | 339.57 |
| 787.87 | 339.25 | 799.15 | 338.97 | 800.23 | 338.95 | 802.23 | 338.95 | 802.6 | 338.96 |
| 806.91 | 338.87 | 807.76 | 338.86 | 808.22 | 338.92 | 810.14 | 339.02 | 810.98 | 339.07 |
| 811.3 | 339.08 | 811.68 | 339.01 | 812.59 | 338.93 | 813.79 | 338.84 | 815.26 | 338.85 |
| 818.07 | 339.15 | 819.15 | 339.27 | 820.27 | 339.38 | 822.31 | 339.54 | 826.4 | 339.57 |
| 827.88 | 339.57 | 830.16 | 339.56 | 830.5 | 339.51 | 831.38 | 339.44 | 832.54 | 339.32 |
| 835.6 | 339.07 | 839.16 | 338.79 | 839.71 | 338.75 | 840.76 | 338.64 | 844.96 | 338.64 |
| 846.32 | 338.59 | 848.36 | 338.52 | 848.6 | 338.52 | 851.81 | 338.69 | 851.95 | 338.7 |
| 855.85 | 338.72 | 857.32 | 338.72 | 863.39 | 338.76 | 864.51 | 338.71 | 866.58 | 338.63 |
| 871.47 | 338.39 | 871.98 | 338.37 | 883.37 | 337.82 | 889.72 | 337.58 | 890.79 | 337.52 |
| 892.37 | 337.49 | 895.21 | 337.46 | 898.03 | 337.34 | 898.94 | 337.32 | 900.75 | 337.29 |
| 903.18 | 337.26 | 904.03 | 337.26 | 905.11 | 337.28 | 907.14 | 337.3 | 909.73 | 337.43 |
| 912.75 | 337.53 | 913.22 | 337.5 | 914.78 | 337.43 | 915.1 | 337.41 | 918.43 | 337.17 |
| 921.04 | 337.01 | 922.85 | 336.92 | 923.74 | 336.87 | 924.89 | 336.82 | 927.15 | 336.8 |
| 928.32 | 336.78 | 933.42 | 336.8 | 934.29 | 336.8 | 937.28 | 336.78 | 946.83 | 336.83 |
| 949.43 | 336.87 | 950.19 | 336.89 | 952.28 | 336.9 | 958.77 | 336.95 | 959.51 | 336.95 |
| 960.45 | 336.96 | 961.44 | 336.96 | 962.17 | 336.97 | 967.67 | 337.07 | 976.97 | 337.34 |
| 978.79 | 337.4 | 979.87 | 337.42 | 983.5 | 337.45 | 984.3 | 337.45 | 987.38 | 337.41 |
| 991.27 | 337.27 | 991.67 | 337.26 | 993.64 | 337.17 | 1001.46 | 336.96 | 1007.48 | 336.88 |
| 1008.04 | 336.88 | 1009.1 | 336.85 | 1009.35 | 336.83 | 1010.13 | 336.83 | 1010.91 | 336.84 |
| 1012 | 336.87 | 1025.2 | 336.96 | 1026.35 | 336.96 | 1029.76 | 337.03 | 1031.89 | 337.05 |
| 1032.96 | 337.05 | 1039.84 | 337.06 | 1042.33 | 337.04 | 1045.6 | 337.01 | 1046.13 | 336.99 |
| 1049.93 | 336.88 | 1051.03 | 336.87 | 1054.08 | 336.81 | 1055.19 | 336.77 | 1059.75 | 336.57 |
| 1059.93 | 336.55 | 1063.5 | 336.43 | 1064.11 | 336.43 | 1065.25 | 336.39 | 1067.84 | 336.35 |
| 1073.35 | 336.2 | 1075.05 | 336.14 | 1075.55 | 336.13 | 1076.94 | 336.12 | 1077.82 | 336.1 |
| 1080.4 | 336.11 | 1081.62 | 336.11 | 1086.33 | 336.14 | 1086.56 | 336.15 | 1088.3 | 336.19 |
| 1089.15 | 336.2 | 1094.39 | 336.32 | 1095.9 | 336.37 | 1097.07 | 336.44 | 1100.13 | 336.63 |
| 1100.97 | 337.12 | 1101.52 | 337.48 | 1101.73 | 337.65 | 1102.67 | 338.33 | 1104.82 | 338.89 |
| 1105.12 | 338.98 | 1105.67 | 339.03 | 1106.28 | 339.06 | 1108.94 | 339.15 | 1109.97 | 339.17 |
| 1110.79 | 339.17 | 1112.38 | 339.2 | 1112.83 | 339.22 | 1114 | 339.25 | 1119.41 | 339.53 |
| 1119.52 | 339.54 | 1122.29 | 339.69 | 1124.14 | 339.77 | 1126.08 | 339.85 | 1128.99 | 339.89 |
| 1130.65 | 339.91 | 1131.68 | 339.91 | 1133.75 | 339.96 | 1141.7 | 340.06 | 1141.91 | 340.06 |
| 1144.25 | 340.2 | 1146.82 | 340.5 | 1147.4 | 340.59 | 1149.13 | 340.81 | 1150.35 | 340.98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1151.71 | 341.26 | 1152.16 | 341.34 | 1153.07 | 341.53 | 1153.46 | 341.62 | 1154.99 | 341.83 |
| 1156.31 | 342.02 | 1158.08 | 342.37 | 1160.1 | 342.74 | 1160.34 | 342.77 | 1163.32 | 343.21 |
| 1166.4 | 343.67 | 1167.1 | 343.81 | 1170.81 | 344.52 | 1172.68 | 344.86 | 1174.59 | 345.25 |
| 1176.89 | 345.7 | 1177.65 | 345.86 | 1182.17 | 346.76 | 1184.44 | 347.27 | 1185.71 | 347.56 |
| 1186.81 | 347.79 | 1188.12 | 348.14 | 1189.58 | 348.49 | 1192.62 | 349.16 | 1194.73 | 349.68 |
| 1195.4 | 349.87 | 1196.53 | 350.16 | 1197.16 | 350.34 | 1198.14 | 350.56 | 1198.71 | 350.71 |
| 1200.39 | 351.1 | 1201.15 | 351.29 | 1203.94 | 352.05 | 1205.14 | 352.36 | 1205.69 | 352.52 |
| 1206.83 | 352.83 | 1208.08 | 352.92 | 1208.93 | 353.03 | 1210.89 | 353.15 | 1213.03 | 353.25 |
| 1214.3 | 353.3 | 1214.61 | 353.3 | 1215.78 | 353.34 | 1217.56 | 353.36 | 1219.42 | 353.37 |
| 1220.49 | 353.39 | 1223.98 | 353.53 | 1224.06 | 353.51 | 1224.75 | 353.51 | 1226.42 | 353.52 |
| 1227.78 | 353.52 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 54.62 | .05 | 651.52 | .04 | 1153.46 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 651.52 | 1153.46 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4696.92*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 43.69 | 349.23 | 45.07 | 349.24 | 46.12 | 349.23 | 47.16 | 349.23 | 52.12 | 349.11 |
| 52.54 | 349.12 | 54.01 | 349.08 | 55.92 | 349.11 | 56.99 | 349.09 | 61.04 | 349.16 |
| 62.13 | 349.16 | 63.38 | 349.19 | 64.27 | 349.19 | 67.86 | 349.11 | 68.92 | 349.09 |
| 71.12 | 349 | 76.84 | 348.77 | 93.67 | 348.22 | 95.35 | 348.17 | 104.2 | 348.08 |
| 105.19 | 348.08 | 106.12 | 348.06 | 109.37 | 348.08 | 110.07 | 348.09 | 110.86 | 348.09 |
| 112.62 | 348.05 | 115.07 | 347.97 | 115.23 | 347.95 | 116.94 | 347.88 | 119.06 | 347.83 |
| 119.79 | 347.82 | 129.47 | 347.64 | 131.01 | 347.61 | 140.53 | 347.35 | 140.61 | 347.34 |
| 144.92 | 347.32 | 148.28 | 347.32 | 150.31 | 347.38 | 150.66 | 347.4 | 151.21 | 347.48 |
| 151.61 | 347.47 | 151.86 | 347.42 | 152.27 | 347.38 | 155.61 | 347.28 | 156.15 | 347.26 |
| 166 | 346.99 | 175.27 | 346.75 | 177.3 | 346.68 | 177.8 | 346.67 | 179.71 | 346.67 |
| 183.06 | 346.61 | 183.87 | 346.59 | 190.43 | 346.48 | 190.62 | 346.48 | 197.15 | 346.37 |
| 199.79 | 346.32 | 200.15 | 346.32 | 222.6 | 345.94 | 238.54 | 345.53 | 238.75 | 345.45 |
| 239.07 | 345.41 | 239.74 | 345.43 | 240.85 | 345.48 | 241.51 | 345.52 | 245.8 | 345.65 |
| 247.79 | 345.69 | 250.11 | 345.71 | 250.76 | 345.71 | 252.43 | 345.74 | 253.04 | 345.74 |
| 253.97 | 345.72 | 255.8 | 345.66 | 258.51 | 345.52 | 262.71 | 345.37 | 271.46 | 345.23 |
| 272.42 | 345.23 | 273.18 | 345.24 | 274.6 | 345.28 | 278.53 | 345.32 | 280.89 | 345.37 |
| 281.69 | 345.37 | 284.8 | 345.4 | 285.74 | 345.39 | 286.88 | 345.4 | 287.19 | 345.35 |
| 288.48 | 345.36 | 288.79 | 345.34 | 291.21 | 345.36 | 293.13 | 345.36 | 293.36 | 345.39 |
| 294.27 | 345.37 | 294.74 | 345.35 | 295.56 | 345.25 | 296.29 | 345.18 | 297.42 | 345.1 |
| 299 | 345.06 | 299.17 | 345.06 | 301.96 | 344.81 | 303.14 | 344.7 | 303.3 | 344.7 |
| 304.5 | 344.8 | 307.41 | 344.96 | 308.84 | 345 | 309.24 | 345 | 322.21 | 344.78 |
| 324.76 | 344.69 | 327.52 | 344.62 | 357.31 | 344.12 | 365.87 | 343.96 | 369.48 | 343.96 |
| 370.56 | 343.93 | 372.04 | 343.88 | 378.12 | 343.69 | 378.66 | 343.68 | 381.2 | 343.61 |
| 386.47 | 343.44 | 387.85 | 343.4 | 389.25 | 343.42 | 390.29 | 343.39 | 392.04 | 343.38 |
| 393.94 | 343.36 | 395.33 | 343.33 | 396.46 | 343.33 | 397.33 | 343.34 | 398.06 | 343.36 |
| 398.78 | 343.37 | 399.76 | 343.36 | 400.51 | 343.34 | 402.67 | 343.41 | 405.57 | 343.31 |
| 407.37 | 343.37 | 408.26 | 343.39 | 411.24 | 343.42 | 412.58 | 343.43 | 418.4 | 343.42 |
| 425.13 | 343.34 | 439.81 | 342.97 | 447.22 | 342.74 | 451.83 | 342.6 | 453.37 | 342.54 |
| 455.17 | 342.48 | 455.63 | 342.47 | 457.86 | 342.39 | 460.14 | 342.33 | 462.6 | 342.25 |
| 468.09 | 342.08 | 477.84 | 341.79 | 478.25 | 341.79 | 480.09 | 342.02 | 480.94 | 342.11 |
| 481.47 | 342.12 | 481.76 | 342.09 | 481.83 | 342.05 | 483.39 | 341.99 | 484.6 | 341.93 |
| 485.4 | 341.88 | 486.17 | 341.84 | 488.79 | 341.74 | 489.48 | 341.72 | 489.9 | 341.72 |
| 491.6 | 341.74 | 492.79 | 341.79 | 496.53 | 341.78 | 498.36 | 341.83 | 499.85 | 341.82 |
| 502.52 | 341.85 | 503.41 | 341.85 | 504.91 | 341.86 | 506.46 | 341.88 | 506.74 | 341.89 |
| 507.1 | 341.85 | 508.69 | 341.78 | 515.85 | 341.61 | 516.88 | 341.61 | 518.02 | 341.58 |
| 522.33 | 341.44 | 523.01 | 341.41 | 524.31 | 341.38 | 528.3 | 341.31 | 529.24 | 341.3 |
| 529.95 | 341.3 | 531 | 341.26 | 532.74 | 341.23 | 535.06 | 341.22 | 536.44 | 341.18 |
| 539.15 | 341.17 | 549.61 | 341.17 | 553.91 | 341.16 | 559.36 | 341.15 | 560.87 | 341.13 |
| 561.53 | 341.15 | 579.98 | 341.17 | 597.54 | 341.32 | 600.01 | 341.34 | 600.43 | 341.34 |
| 602.05 | 341.32 | 610.73 | 341.13 | 610.82 | 341.13 | 623.03 | 340.89 | 628.29 | 340.82 |
| 631.61 | 340.79 | 632.03 | 340.78 | 632.7 | 340.72 | 634.3 | 340.69 | 634.69 | 340.71 |
| 635.76 | 340.72 | 640.29 | 340.86 | 644.51 | 340.91 | 646.63 | 340.97 | 646.81 | 340.96 |
| 648.24 | 340.97 | 649.01 | 340.98 | 650.17 | 341.01 | 652 | 341.01 | 652.34 | 341 |
| 653.42 | 340.95 | 655.82 | 340.88 | 657.36 | 340.85 | 660.15 | 340.79 | 661.67 | 340.74 |
| 663.02 | 340.67 | 665.16 | 340.63 | 666.09 | 340.62 | 673.88 | 340.61 | 674.5 | 340.6 |
| 678.26 | 340.57 | 679.42 | 340.55 | 679.87 | 340.55 | 682.6 | 340.6 | 683.76 | 340.63 |
| 684.28 | 340.67 | 684.89 | 340.69 | 686.42 | 340.76 | 689.7 | 340.86 | 690.86 | 340.88 |
| 691.05 | 340.87 | 692.35 | 340.89 | 693.45 | 340.94 | 694.41 | 340.94 | 694.97 | 340.9 |
| 695.41 | 340.88 | 697.67 | 340.87 | 699.24 | 340.84 | 701.24 | 340.75 | 701.88 | 340.71 |
| 702.18 | 340.72 | 702.97 | 340.67 | 703.81 | 340.6 | 703.91 | 340.58 | 707.85 | 340.47 |
| 709.9 | 340.42 | 711.92 | 340.42 | 714.21 | 340.41 | 720.54 | 340.46 | 723.16 | 340.51 |
| 726.41 | 340.53 | 727.44 | 340.55 | 729.44 | 340.56 | 730.15 | 340.57 | 731.52 | 340.6 |
| 732.08 | 340.62 | 732.82 | 340.63 | 733.14 | 340.65 | 734.32 | 340.65 | 735.65 | 340.63 |
| 737.53 | 340.63 | 740.14 | 340.6 | 741.56 | 340.61 | 744.53 | 340.59 | 747.29 | 340.53 |
| 748.21 | 340.52 | 752.29 | 340.53 | 754.62 | 340.48 | 756.51 | 340.48 | 763.1 | 340.38 |
| 764.81 | 340.35 | 769.31 | 340.22 | 771.06 | 340.16 | 775.29 | 339.75 | 776.09 | 339.68 |
| 778.25 | 339.29 | 780.07 | 339.24 | 789.27 | 338.94 | 800.6 | 338.65 | 801.68 | 338.62 |
| 804.06 | 338.62 | 807.94 | 338.55 | 808.39 | 338.53 | 809.04 | 338.54 | 809.25 | 338.53 |
| 809.71 | 338.59 | 812.48 | 338.75 | 812.8 | 338.76 | 813.18 | 338.69 | 815.29 | 338.51 |
| 816.77 | 338.52 | 819.6 | 338.83 | 820.68 | 338.96 | 821.8 | 339.07 | 823.85 | 339.24 |
| 826.74 | 339.25 | 831.74 | 339.25 | 832.08 | 339.19 | 832.97 | 339.13 | 833.63 | 339.05 |
| 834.13 | 339.01 | 837.2 | 338.75 | 840.77 | 338.46 | 841.33 | 338.42 | 842.25 | 338.33 |
| 842.63 | 338.31 | 846.6 | 338.31 | 847.96 | 338.25 | 850.25 | 338.17 | 850.83 | 338.21 |
| 853.48 | 338.35 | 853.62 | 338.36 | 857.53 | 338.38 | 859.01 | 338.38 | 862.03 | 338.39 |
| 865.1 | 338.41 | 867.02 | 338.33 | 870.97 | 338.14 | 873.22 | 338.03 | 873.73 | 338.01 |
| 885.17 | 337.46 | 891.55 | 337.21 | 892.62 | 337.16 | 894.21 | 337.13 | 897.07 | 337.09 |
| 897.75 | 337.07 | 899.24 | 337.01 | 900.81 | 336.97 | 902.63 | 336.94 | 905.92 | 336.9 |
| 907 | 336.92 | 909.04 | 336.94 | 911.64 | 337.07 | 914.09 | 337.14 | 914.68 | 337.16 |
| 917.04 | 337.02 | 920.38 | 336.78 | 923 | 336.61 | 924.82 | 336.51 | 925.19 | 336.5 |
| 926.04 | 336.45 | 926.71 | 336.42 | 927.86 | 336.4 | 930.31 | 336.38 | 935.43 | 336.4 |
| 936.31 | 336.4 | 939.31 | 336.38 | 948.9 | 336.44 | 950.69 | 336.47 | 951.51 | 336.47 |
| 952.28 | 336.49 | 954.37 | 336.5 | 955.64 | 336.5 | 960.89 | 336.53 | 961.64 | 336.53 |
| 963.26 | 336.55 | 964.3 | 336.55 | 969.83 | 336.65 | 979.17 | 336.94 | 981 | 337 |
| 982.07 | 337.02 | 986.53 | 337.07 | 989.62 | 337.03 | 993.52 | 336.9 | 993.93 | 336.88 |
| 995.91 | 336.81 | 1003.76 | 336.61 | 1009.81 | 336.53 | 1010.37 | 336.53 | 1011.43 | 336.5 |
| 1011.69 | 336.48 | 1012.46 | 336.48 | 1013.25 | 336.49 | 1014.34 | 336.52 | 1027.6 | 336.61 |
| 1028.76 | 336.61 | 1032.18 | 336.67 | 1034.32 | 336.69 | 1035.39 | 336.69 | 1042.3 | 336.7 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1044.8 | 336.68 | 1048.08 | 336.65 | 1048.62 | 336.63 | 1051.74 | 336.55 | 1052.44 | 336.52 |
| 1053.54 | 336.51 | 1056.61 | 336.46 | 1057.72 | 336.42 | 1062.29 | 336.24 | 1062.47 | 336.23 |
| 1066.06 | 336.11 | 1066.68 | 336.11 | 1067.82 | 336.08 | 1070.42 | 336.03 | 1075.95 | 335.89 |
| 1077.66 | 335.82 | 1078.17 | 335.81 | 1080.45 | 335.79 | 1082.9 | 335.8 | 1084.07 | 335.8 |
| 1088.57 | 335.82 | 1088.79 | 335.83 | 1090.45 | 335.87 | 1091.27 | 335.88 | 1096.28 | 335.99 |
| 1097.72 | 336.04 | 1098.83 | 336.11 | 1099.13 | 336.14 | 1099.62 | 336.16 | 1100.82 | 336.24 |
| 1101.76 | 336.31 | 1102.56 | 336.82 | 1103.09 | 337.18 | 1103.29 | 337.36 | 1104.18 | 338.06 |
| 1106.53 | 338.73 | 1106.9 | 338.77 | 1107.64 | 338.82 | 1110.7 | 338.93 | 1111.16 | 338.94 |
| 1111.94 | 338.94 | 1113.47 | 338.98 | 1113.89 | 339 | 1115.38 | 339.04 | 1120.18 | 339.28 |
| 1120.29 | 339.29 | 1122.93 | 339.43 | 1124.7 | 339.51 | 1126.55 | 339.57 | 1129.33 | 339.61 |
| 1131.9 | 339.64 | 1133.88 | 339.69 | 1141.47 | 339.83 | 1141.68 | 339.83 | 1143.91 | 339.96 |
| 1144.89 | 340.08 | 1146.37 | 340.25 | 1146.92 | 340.33 | 1149.74 | 340.69 | 1151.05 | 340.93 |
| 1151.25 | 340.96 | 1152.34 | 341.16 | 1152.71 | 341.24 | 1155.6 | 341.61 | 1156.87 | 341.86 |
| 1159.44 | 342.31 | 1162.7 | 342.76 | 1165.81 | 343.2 | 1168.53 | 343.69 | 1168.95 | 343.77 |
| 1172.17 | 344.35 | 1174.1 | 344.72 | 1176.43 | 345.16 | 1177.2 | 345.32 | 1181.77 | 346.21 |
| 1184.07 | 346.72 | 1185.36 | 347 | 1186.47 | 347.23 | 1187.79 | 347.59 | 1189.27 | 347.93 |
| 1190.57 | 348.21 | 1192.35 | 348.62 | 1194.49 | 349.15 | 1195.17 | 349.34 | 1196.31 | 349.64 |
| 1196.95 | 349.82 | 1197.81 | 350.02 | 1198.12 | 350.11 | 1200.65 | 350.74 | 1200.99 | 350.83 |
| 1202.06 | 351.14 | 1203.81 | 351.64 | 1205.02 | 351.97 | 1205.58 | 352.14 | 1206.73 | 352.46 |
| 1208.12 | 352.58 | 1208.86 | 352.67 | 1210.84 | 352.77 | 1213.58 | 352.87 | 1214.3 | 352.9 |
| 1214.61 | 352.9 | 1215.79 | 352.93 | 1217.6 | 352.95 | 1219.04 | 352.96 | 1221.05 | 353 |
| 1224.1 | 353.1 | 1224.17 | 353.08 | 1224.88 | 353.07 | 1226.87 | 353.08 | 1227.15 | 353.07 |
| 1227.94 | 353.07 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 43.69 | .05 | 652.34 | .04 | 1152.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 652.34 | 1152.71 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4676.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 32.77 | 349.05 | 34.17 | 349.06 | 35.24 | 349.05 | 36.3 | 349.05 | 41.36 | 348.93 |
| 41.79 | 348.94 | 43.28 | 348.9 | 45.23 | 348.92 | 45.96 | 348.92 | 46.32 | 348.91 |
| 50.46 | 348.99 | 51.56 | 349 | 52.83 | 349.03 | 53.74 | 349.04 | 58.48 | 348.95 |
| 60.73 | 348.86 | 66.56 | 348.65 | 83.71 | 348.12 | 85.42 | 348.07 | 94.45 | 347.98 |
| 95.45 | 347.98 | 96.4 | 347.97 | 99.71 | 347.99 | 100.43 | 348 | 101.23 | 348 |
| 103.03 | 347.96 | 105.52 | 347.88 | 106.23 | 347.83 | 107.43 | 347.79 | 110.34 | 347.72 |
| 120.2 | 347.55 | 121.77 | 347.52 | 131.48 | 347.27 | 131.56 | 347.25 | 135.95 | 347.24 |
| 139.38 | 347.23 | 139.67 | 347.25 | 141.44 | 347.3 | 141.8 | 347.32 | 142.36 | 347.41 |
| 142.77 | 347.4 | 143.02 | 347.34 | 143.45 | 347.31 | 144.4 | 347.27 | 146.84 | 347.2 |
| 147.39 | 347.18 | 157.44 | 346.9 | 166.89 | 346.66 | 168.95 | 346.59 | 169.46 | 346.58 |
| 171.41 | 346.58 | 174.82 | 346.52 | 175.65 | 346.5 | 182.34 | 346.39 | 182.53 | 346.38 |
| 189.19 | 346.27 | 191.88 | 346.22 | 192.24 | 346.22 | 215.12 | 345.82 | 231.37 | 345.39 |
| 231.59 | 345.31 | 231.92 | 345.28 | 232.6 | 345.29 | 233.93 | 345.36 | 234.4 | 345.39 |
| 238.77 | 345.52 | 240.31 | 345.56 | 240.81 | 345.56 | 243.83 | 345.6 | 245.54 | 345.62 |
| 246.15 | 345.62 | 247.11 | 345.6 | 248.97 | 345.53 | 251.73 | 345.39 | 256.01 | 345.23 |
| 264.94 | 345.08 | 265.91 | 345.08 | 266.69 | 345.09 | 268.13 | 345.13 | 272.14 | 345.17 |
| 274.54 | 345.23 | 275.35 | 345.22 | 278.52 | 345.26 | 279.39 | 345.25 | 280.64 | 345.25 |
| 280.97 | 345.2 | 282.28 | 345.21 | 282.59 | 345.2 | 283.83 | 345.2 | 285.06 | 345.22 |
| 285.96 | 345.22 | 286.58 | 345.21 | 287.25 | 345.24 | 288.19 | 345.23 | 288.66 | 345.2 |
| 289.5 | 345.1 | 290.24 | 345.03 | 291.39 | 344.94 | 293 | 344.9 | 293.17 | 344.89 |
| 296.02 | 344.64 | 297.22 | 344.52 | 297.38 | 344.52 | 298.6 | 344.63 | 300.42 | 344.74 |
| 302.58 | 344.83 | 303.44 | 344.84 | 316.66 | 344.62 | 319.26 | 344.51 | 319.71 | 344.51 |
| 322.07 | 344.44 | 352.43 | 343.93 | 361.16 | 343.77 | 364.84 | 343.77 | 365.95 | 343.74 |
| 367.46 | 343.69 | 373.65 | 343.5 | 374.2 | 343.49 | 376.36 | 343.43 | 376.78 | 343.41 |
| 382.16 | 343.23 | 383.56 | 343.2 | 384.41 | 343.2 | 385 | 343.21 | 386.06 | 343.19 |
| 389.78 | 343.15 | 391.19 | 343.12 | 392.34 | 343.12 | 394.71 | 343.15 | 395.71 | 343.15 |
| 396.48 | 343.13 | 398.67 | 343.19 | 401.63 | 343.1 | 403.46 | 343.15 | 404.37 | 343.17 |
| 407.41 | 343.2 | 408.78 | 343.21 | 414.71 | 343.2 | 421.57 | 343.12 | 436.53 | 342.73 |
| 448.78 | 342.34 | 450.36 | 342.28 | 452.19 | 342.22 | 452.65 | 342.21 | 454.93 | 342.13 |
| 457.25 | 342.06 | 465.36 | 341.8 | 475.29 | 341.49 | 475.71 | 341.5 | 477.59 | 341.74 |
| 478.45 | 341.83 | 478.99 | 341.84 | 479.36 | 341.77 | 480.95 | 341.7 | 483.78 | 341.56 |
| 486.46 | 341.44 | 487.58 | 341.43 | 489.32 | 341.45 | 490.53 | 341.5 | 494.35 | 341.49 |
| 496.21 | 341.54 | 497.73 | 341.53 | 500.44 | 341.56 | 501.36 | 341.56 | 502.88 | 341.57 |
| 504.46 | 341.6 | 504.75 | 341.6 | 505.12 | 341.56 | 506.73 | 341.49 | 514.04 | 341.34 |
| 516.24 | 341.32 | 520.64 | 341.19 | 521.34 | 341.16 | 522.66 | 341.13 | 526.72 | 341.07 |
| 527.19 | 341.07 | 528.4 | 341.05 | 529.48 | 341.02 | 531.25 | 340.98 | 533.62 | 340.97 |
| 535.03 | 340.93 | 537.79 | 340.92 | 539.64 | 340.91 | 545.64 | 340.9 | 548.45 | 340.89 |
| 552.83 | 340.88 | 560.49 | 340.85 | 560.6 | 340.86 | 579.41 | 340.87 | 597.3 | 341.03 |
| 599.82 | 341.05 | 600.24 | 341.06 | 601.73 | 341.04 | 601.9 | 341.03 | 610.75 | 340.86 |
| 610.84 | 340.86 | 623.28 | 340.63 | 628.65 | 340.55 | 632.03 | 340.52 | 632.45 | 340.5 |
| 633.15 | 340.44 | 634.77 | 340.41 | 635.93 | 340.44 | 636.26 | 340.44 | 640.88 | 340.58 |
| 645.18 | 340.62 | 645.63 | 340.62 | 645.95 | 340.64 | 647.34 | 340.68 | 648.98 | 340.68 |
| 650.15 | 340.69 | 650.94 | 340.72 | 652.76 | 340.72 | 653.16 | 340.71 | 654.25 | 340.66 |
| 656.66 | 340.59 | 658.2 | 340.56 | 661 | 340.5 | 662.53 | 340.45 | 663.88 | 340.39 |
| 666.04 | 340.34 | 666.97 | 340.34 | 674.97 | 340.35 | 675.41 | 340.34 | 679.25 | 340.32 |
| 680.36 | 340.3 | 680.81 | 340.31 | 684.71 | 340.38 | 685.24 | 340.42 | 685.85 | 340.45 |
| 687.39 | 340.51 | 690.67 | 340.61 | 691.84 | 340.63 | 692.51 | 340.63 | 693.73 | 340.66 |
| 694.9 | 340.7 | 695.67 | 340.68 | 695.8 | 340.66 | 696.41 | 340.63 | 698.69 | 340.62 |
| 699.65 | 340.6 | 700.26 | 340.58 | 702.27 | 340.49 | 702.91 | 340.45 | 703.21 | 340.46 |
| 704 | 340.41 | 704.85 | 340.34 | 704.95 | 340.32 | 708.9 | 340.21 | 710.96 | 340.16 |
| 711.69 | 340.17 | 715.3 | 340.17 | 721.65 | 340.22 | 724.27 | 340.27 | 727.54 | 340.29 |
| 728.58 | 340.31 | 730.58 | 340.32 | 731.3 | 340.33 | 732.68 | 340.37 | 734.3 | 340.41 |
| 734.46 | 340.42 | 736.2 | 340.4 | 737.16 | 340.4 | 738.71 | 340.39 | 741.33 | 340.36 |
| 742.75 | 340.36 | 745.73 | 340.35 | 748.51 | 340.28 | 749.44 | 340.27 | 753.54 | 340.27 |
| 755.87 | 340.22 | 757.77 | 340.22 | 764.39 | 340.11 | 766.11 | 340.07 | 770.62 | 339.93 |
| 772.38 | 339.87 | 777.44 | 339.37 | 779.6 | 338.97 | 781.43 | 338.92 | 790.67 | 338.62 |
| 802.04 | 338.32 | 803.13 | 338.29 | 804.04 | 338.29 | 804.54 | 338.28 | 805.76 | 338.28 |
| 806.01 | 338.27 | 809.99 | 338.2 | 810.73 | 338.21 | 811.19 | 338.27 | 814.29 | 338.45 |
| 814.68 | 338.37 | 816.8 | 338.18 | 818.28 | 338.18 | 818.37 | 338.2 | 821.12 | 338.51 |
| 822.21 | 338.64 | 823.34 | 338.76 | 825.39 | 338.93 | 828.29 | 338.94 | 833.31 | 338.94 |
| 833.66 | 338.88 | 834.55 | 338.81 | 835.71 | 338.69 | 842.39 | 338.13 | 842.94 | 338.09 |
| 844 | 337.99 | 846.01 | 337.99 | 846.46 | 337.98 | 848.24 | 337.98 | 849.61 | 337.92 |
| 851.91 | 337.83 | 852.48 | 337.87 | 855.15 | 338.01 | 855.29 | 338.02 | 857.4 | 338.03 |
| 860.7 | 338.03 | 863.51 | 338.05 | 865.22 | 338.05 | 866.82 | 338.06 | 870.25 | 337.9 |
| 870.43 | 337.9 | 872.71 | 337.79 | 873.14 | 337.76 | 874.98 | 337.67 | 875.48 | 337.65 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 886.97 | 337.09 | 893.38 | 336.85 | 894.45 | 336.79 | 896.05 | 336.76 | 898.92 | 336.72 |
| 901.76 | 336.64 | 902.68 | 336.62 | 906.95 | 336.55 | 907.81 | 336.55 | 908.89 | 336.56 |
| 910.95 | 336.57 | 913.55 | 336.71 | 916.01 | 336.78 | 916.6 | 336.79 | 918.97 | 336.64 |
| 922.33 | 336.38 | 924.96 | 336.2 | 926.79 | 336.11 | 928.01 | 336.04 | 928.84 | 336.01 |
| 929.84 | 336 | 931.12 | 335.98 | 932.3 | 335.97 | 937.44 | 336 | 938.32 | 336 |
| 941.34 | 335.99 | 950.97 | 336.05 | 954.36 | 336.09 | 956.46 | 336.1 | 957.73 | 336.1 |
| 963.01 | 336.12 | 964.7 | 336.12 | 965.39 | 336.13 | 966.44 | 336.13 | 971.99 | 336.24 |
| 981.37 | 336.54 | 983.2 | 336.6 | 984.28 | 336.63 | 987.95 | 336.68 | 988.76 | 336.68 |
| 991.86 | 336.65 | 995.78 | 336.52 | 996.19 | 336.51 | 998.18 | 336.44 | 1006.06 | 336.26 |
| 1012.13 | 336.18 | 1012.7 | 336.18 | 1013.02 | 336.16 | 1013.76 | 336.15 | 1014.02 | 336.13 |
| 1014.8 | 336.13 | 1016.69 | 336.16 | 1030 | 336.26 | 1031.17 | 336.26 | 1034.6 | 336.31 |
| 1036.75 | 336.33 | 1037.83 | 336.33 | 1044.76 | 336.34 | 1047.28 | 336.32 | 1050.57 | 336.29 |
| 1051.11 | 336.27 | 1054.25 | 336.19 | 1055.3 | 336.16 | 1059.13 | 336.1 | 1060.25 | 336.07 |
| 1064.84 | 335.92 | 1065.02 | 335.9 | 1068.62 | 335.79 | 1069.24 | 335.79 | 1070.39 | 335.76 |
| 1073 | 335.71 | 1078.56 | 335.57 | 1080.28 | 335.51 | 1080.78 | 335.5 | 1082.18 | 335.49 |
| 1082.79 | 335.48 | 1086.53 | 335.48 | 1090.82 | 335.5 | 1091.03 | 335.51 | 1092.61 | 335.55 |
| 1093.39 | 335.56 | 1098.16 | 335.66 | 1099.54 | 335.71 | 1100.6 | 335.78 | 1100.88 | 335.81 |
| 1102.49 | 335.91 | 1103.39 | 335.98 | 1104.15 | 336.51 | 1104.66 | 336.89 | 1104.84 | 337.07 |
| 1105.7 | 337.8 | 1107.66 | 338.4 | 1107.94 | 338.49 | 1108.99 | 338.57 | 1111.41 | 338.68 |
| 1112.35 | 338.71 | 1112.9 | 338.71 | 1113.76 | 338.73 | 1114.55 | 338.76 | 1116.02 | 338.8 |
| 1116.38 | 338.82 | 1120.95 | 339.03 | 1121.05 | 339.04 | 1123.57 | 339.17 | 1125.26 | 339.24 |
| 1127.02 | 339.3 | 1129.67 | 339.34 | 1132.13 | 339.37 | 1133.67 | 339.4 | 1134.01 | 339.42 |
| 1141.25 | 339.6 | 1141.45 | 339.6 | 1142.23 | 339.64 | 1143.58 | 339.72 | 1145.92 | 340 |
| 1146.45 | 340.08 | 1148.03 | 340.26 | 1149.13 | 340.39 | 1150.38 | 340.6 | 1151.62 | 340.8 |
| 1151.97 | 340.87 | 1153.54 | 341.05 | 1154.89 | 341.21 | 1156.18 | 341.44 | 1156.7 | 341.54 |
| 1158.77 | 341.88 | 1159.43 | 341.96 | 1164.88 | 342.68 | 1165.22 | 342.72 | 1165.94 | 342.85 |
| 1167.98 | 343.2 | 1168.4 | 343.28 | 1169.74 | 343.51 | 1171.65 | 343.83 | 1173.15 | 344.11 |
| 1173.62 | 344.19 | 1175.97 | 344.62 | 1176.75 | 344.78 | 1181.38 | 345.66 | 1183.71 | 346.16 |
| 1185.01 | 346.45 | 1186.13 | 346.67 | 1187.47 | 347.03 | 1188.97 | 347.38 | 1190.28 | 347.66 |
| 1192.09 | 348.07 | 1194.25 | 348.61 | 1195.67 | 349.01 | 1196.74 | 349.3 | 1197.74 | 349.55 |
| 1198.32 | 349.71 | 1200.04 | 350.16 | 1200.82 | 350.37 | 1203.68 | 351.23 | 1204.5 | 351.46 |
| 1206.64 | 352.1 | 1208.04 | 352.22 | 1208.79 | 352.31 | 1210.8 | 352.39 | 1213.57 | 352.48 |
| 1214.29 | 352.49 | 1215.81 | 352.53 | 1217.64 | 352.55 | 1219.54 | 352.56 | 1221.13 | 352.59 |
| 1224.21 | 352.68 | 1224.29 | 352.66 | 1225 | 352.64 | 1226.71 | 352.64 | 1227.02 | 352.63 |
| 1228.1 | 352.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 32.77 | .05 | 653.16 | .04 | 1151.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 653.16 | 1151.97 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4657.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 21.85 | 348.87 | 22.99 | 348.88 | 24.36 | 348.88 | 25.44 | 348.87 | 30.6 | 348.75 |
| 31.04 | 348.76 | 32.56 | 348.71 | 34.55 | 348.74 | 35.29 | 348.74 | 35.65 | 348.73 |
| 36.76 | 348.76 | 39.87 | 348.83 | 40.99 | 348.83 | 42.29 | 348.87 | 43.21 | 348.88 |
| 46.94 | 348.82 | 47.58 | 348.82 | 48.04 | 348.8 | 50.34 | 348.73 | 56.28 | 348.53 |
| 73.75 | 348.01 | 75.49 | 347.97 | 84.69 | 347.88 | 85.71 | 347.88 | 86.68 | 347.87 |
| 90.05 | 347.89 | 90.79 | 347.91 | 91.61 | 347.91 | 93.44 | 347.87 | 95.97 | 347.79 |
| 96.7 | 347.74 | 97.92 | 347.69 | 100.12 | 347.64 | 100.88 | 347.63 | 110.93 | 347.46 |
| 112.53 | 347.44 | 122.42 | 347.18 | 122.51 | 347.16 | 126.98 | 347.15 | 130.47 | 347.15 |
| 130.77 | 347.17 | 132.57 | 347.22 | 132.94 | 347.24 | 133.51 | 347.33 | 133.93 | 347.32 |
| 134.18 | 347.27 | 134.62 | 347.23 | 135.59 | 347.19 | 138.08 | 347.12 | 138.64 | 347.1 |
| 148.88 | 346.82 | 158.5 | 346.57 | 159.31 | 346.55 | 160.61 | 346.5 | 161.13 | 346.49 |
| 163.11 | 346.49 | 166.59 | 346.43 | 167.44 | 346.41 | 174.24 | 346.29 | 174.44 | 346.29 |
| 181.22 | 346.16 | 181.66 | 346.16 | 183.96 | 346.12 | 184.34 | 346.12 | 207.65 | 345.7 |
| 224.21 | 345.26 | 224.43 | 345.18 | 224.77 | 345.14 | 225.46 | 345.16 | 226.82 | 345.23 |
| 227.29 | 345.26 | 231.75 | 345.4 | 233.32 | 345.44 | 233.82 | 345.44 | 236.9 | 345.48 |
| 238.64 | 345.5 | 239.27 | 345.5 | 240.24 | 345.48 | 242.14 | 345.41 | 244.95 | 345.26 |
| 249.32 | 345.1 | 258.41 | 344.93 | 259.4 | 344.93 | 260.19 | 344.94 | 261.67 | 344.98 |
| 265.74 | 345.02 | 268.19 | 345.08 | 269.02 | 345.07 | 272.25 | 345.11 | 273.14 | 345.1 |
| 274.41 | 345.1 | 274.74 | 345.06 | 276.08 | 345.07 | 276.4 | 345.05 | 277.66 | 345.05 |
| 278.92 | 345.07 | 279.83 | 345.07 | 280.46 | 345.06 | 280.91 | 345.07 | 281.14 | 345.1 |
| 282.1 | 345.08 | 282.58 | 345.05 | 284.19 | 344.87 | 285.37 | 344.78 | 287.01 | 344.74 |
| 287.18 | 344.73 | 290.08 | 344.47 | 291.31 | 344.35 | 291.47 | 344.35 | 292.71 | 344.46 |
| 294.56 | 344.57 | 295.74 | 344.63 | 296.76 | 344.67 | 297.64 | 344.67 | 311.11 | 344.45 |
| 313.76 | 344.34 | 316.62 | 344.27 | 347.56 | 343.74 | 356.45 | 343.58 | 360.2 | 343.58 |
| 362.2 | 343.53 | 362.87 | 343.5 | 369.18 | 343.31 | 369.74 | 343.3 | 371.94 | 343.24 |
| 372.37 | 343.22 | 377.85 | 343.03 | 379.28 | 343 | 380.34 | 343 | 380.74 | 343.01 |
| 381.82 | 342.98 | 385.61 | 342.94 | 387.05 | 342.91 | 388.22 | 342.9 | 389.13 | 342.91 |
| 389.89 | 342.93 | 390.63 | 342.94 | 391.16 | 342.93 | 392.44 | 342.92 | 394.67 | 342.98 |
| 397.69 | 342.88 | 399.55 | 342.94 | 400.48 | 342.96 | 403.57 | 342.99 | 404.97 | 343 |
| 411.02 | 342.98 | 418.01 | 342.89 | 433.25 | 342.48 | 440.94 | 342.24 | 445.73 | 342.08 |
| 447.34 | 342.02 | 449.2 | 341.96 | 449.68 | 341.94 | 452 | 341.87 | 454.36 | 341.79 |
| 462.62 | 341.53 | 472.74 | 341.2 | 473.17 | 341.21 | 475.09 | 341.45 | 475.96 | 341.55 |
| 476.51 | 341.56 | 476.82 | 341.52 | 476.89 | 341.48 | 480.08 | 341.34 | 481.4 | 341.27 |
| 484.12 | 341.15 | 484.83 | 341.13 | 485.27 | 341.14 | 487.04 | 341.15 | 487.41 | 341.16 |
| 488.28 | 341.21 | 492.16 | 341.19 | 493.27 | 341.23 | 494.2 | 341.25 | 495.6 | 341.23 |
| 499.31 | 341.27 | 500.86 | 341.28 | 502.47 | 341.31 | 502.76 | 341.32 | 503.13 | 341.27 |
| 504.78 | 341.21 | 512.23 | 341.06 | 513.29 | 341.06 | 514.47 | 341.05 | 521.01 | 340.89 |
| 525.15 | 340.83 | 526.86 | 340.81 | 527.96 | 340.77 | 529.76 | 340.74 | 532.18 | 340.72 |
| 533.61 | 340.68 | 536.42 | 340.66 | 538.31 | 340.66 | 544.42 | 340.63 | 547.29 | 340.62 |
| 551.75 | 340.6 | 557.07 | 340.58 | 557.41 | 340.57 | 558.98 | 340.56 | 559.66 | 340.58 |
| 578.83 | 340.58 | 597.07 | 340.75 | 599.63 | 340.77 | 600.06 | 340.78 | 600.95 | 340.76 |
| 601.75 | 340.75 | 610.76 | 340.58 | 610.86 | 340.58 | 623.54 | 340.36 | 629 | 340.28 |
| 632.45 | 340.25 | 632.88 | 340.23 | 633.59 | 340.16 | 635.25 | 340.13 | 636.42 | 340.15 |
| 641.46 | 340.29 | 645.85 | 340.33 | 646.3 | 340.33 | 646.63 | 340.35 | 648.05 | 340.39 |
| 649.72 | 340.39 | 650.91 | 340.4 | 651.72 | 340.42 | 653.63 | 340.42 | 653.98 | 340.41 |
| 655.07 | 340.37 | 657.49 | 340.3 | 659.04 | 340.27 | 661.85 | 340.21 | 663.39 | 340.16 |
| 664.75 | 340.1 | 666.91 | 340.06 | 667.84 | 340.05 | 675.7 | 340.09 | 676.32 | 340.08 |
| 680.18 | 340.07 | 681.29 | 340.05 | 681.74 | 340.06 | 685.66 | 340.13 | 686.19 | 340.17 |
| 688.35 | 340.27 | 692.82 | 340.38 | 693.49 | 340.38 | 694.33 | 340.4 | 695.43 | 340.45 |
| 696.41 | 340.45 | 696.8 | 340.41 | 697.43 | 340.38 | 699.7 | 340.36 | 700.32 | 340.35 |
| 701.28 | 340.32 | 703.94 | 340.2 | 704.24 | 340.2 | 705.89 | 340.09 | 705.98 | 340.07 |
| 709.96 | 339.96 | 712.02 | 339.91 | 712.76 | 339.91 | 714.07 | 339.92 | 715.8 | 339.92 |
| 716.38 | 339.93 | 722.75 | 339.98 | 725.39 | 340.03 | 729.72 | 340.07 | 731.73 | 340.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 732.44 | 340.09 | 735.46 | 340.18 | 737.37 | 340.16 | 738.33 | 340.16 | 739.89 | 340.15 |
| 742.52 | 340.12 | 743.95 | 340.12 | 746.94 | 340.1 | 749.73 | 340.03 | 750.66 | 340.01 |
| 754.78 | 340.01 | 757.12 | 339.96 | 759.03 | 339.95 | 765.68 | 339.83 | 767.4 | 339.79 |
| 773.7 | 339.58 | 777.96 | 339.14 | 778.78 | 339.07 | 780.95 | 338.65 | 782.79 | 338.59 |
| 792.06 | 338.3 | 803.49 | 337.99 | 805.07 | 337.95 | 806 | 337.95 | 806.6 | 337.94 |
| 807.47 | 337.94 | 811.34 | 337.86 | 812 | 337.89 | 812.21 | 337.88 | 812.67 | 337.95 |
| 815.79 | 338.13 | 816.17 | 338.05 | 817.09 | 337.96 | 818.31 | 337.85 | 819.79 | 337.85 |
| 822.65 | 338.19 | 823.74 | 338.33 | 824.87 | 338.44 | 826.93 | 338.62 | 829.85 | 338.62 |
| 830.08 | 338.63 | 832.58 | 338.63 | 834.89 | 338.62 | 835.55 | 338.54 | 836.13 | 338.5 |
| 837.3 | 338.37 | 840.4 | 338.11 | 844 | 337.8 | 844.56 | 337.76 | 845.62 | 337.66 |
| 847.64 | 337.66 | 848.09 | 337.65 | 849.87 | 337.65 | 853.56 | 337.49 | 854.14 | 337.53 |
| 856.81 | 337.67 | 856.95 | 337.68 | 859.08 | 337.69 | 862.39 | 337.69 | 865.21 | 337.7 |
| 868.54 | 337.7 | 870.47 | 337.62 | 874.45 | 337.43 | 874.88 | 337.4 | 876.73 | 337.31 |
| 877.24 | 337.29 | 888.77 | 336.73 | 895.2 | 336.48 | 896.29 | 336.42 | 897.89 | 336.4 |
| 901.46 | 336.34 | 903.62 | 336.28 | 904.54 | 336.27 | 905.18 | 336.25 | 906.38 | 336.24 |
| 908.83 | 336.2 | 909.69 | 336.19 | 910.78 | 336.2 | 912.85 | 336.21 | 915.47 | 336.34 |
| 915.77 | 336.36 | 918.38 | 336.42 | 919.01 | 336.39 | 920.58 | 336.28 | 920.91 | 336.25 |
| 924.28 | 335.99 | 926.92 | 335.8 | 929.66 | 335.65 | 930.82 | 335.6 | 933.1 | 335.58 |
| 934.29 | 335.56 | 939.45 | 335.59 | 940.34 | 335.6 | 943.37 | 335.6 | 953.04 | 335.66 |
| 954.85 | 335.68 | 955.67 | 335.68 | 956.44 | 335.69 | 958.56 | 335.7 | 965.88 | 335.7 |
| 966.83 | 335.71 | 968.57 | 335.71 | 974.15 | 335.83 | 983.56 | 336.14 | 985.41 | 336.2 |
| 986.49 | 336.23 | 990.17 | 336.29 | 990.98 | 336.3 | 994.1 | 336.28 | 998.04 | 336.15 |
| 998.45 | 336.14 | 1000.45 | 336.07 | 1008.36 | 335.91 | 1014.46 | 335.83 | 1015.02 | 335.83 |
| 1015.35 | 335.81 | 1016.35 | 335.78 | 1017.93 | 335.78 | 1019.03 | 335.81 | 1032.4 | 335.92 |
| 1033.57 | 335.92 | 1037.02 | 335.95 | 1039.33 | 335.96 | 1040.26 | 335.97 | 1047.22 | 335.98 |
| 1049.75 | 335.96 | 1053.06 | 335.93 | 1053.6 | 335.91 | 1057.45 | 335.81 | 1057.81 | 335.81 |
| 1058.56 | 335.79 | 1061.65 | 335.75 | 1062.77 | 335.72 | 1067.39 | 335.59 | 1067.57 | 335.58 |
| 1071.18 | 335.47 | 1071.81 | 335.47 | 1072.96 | 335.44 | 1075.58 | 335.39 | 1081.16 | 335.25 |
| 1082.89 | 335.19 | 1083.39 | 335.18 | 1084.8 | 335.18 | 1085.41 | 335.17 | 1088.98 | 335.17 |
| 1093.07 | 335.18 | 1093.26 | 335.2 | 1094.77 | 335.23 | 1095.51 | 335.24 | 1100.05 | 335.34 |
| 1101.35 | 335.38 | 1102.37 | 335.45 | 1102.64 | 335.48 | 1104.16 | 335.58 | 1105.02 | 335.65 |
| 1105.75 | 336.2 | 1106.22 | 336.59 | 1106.4 | 336.78 | 1107.22 | 337.53 | 1109.35 | 338.24 |
| 1109.82 | 338.29 | 1110.35 | 338.33 | 1112.65 | 338.44 | 1113.12 | 338.47 | 1114.25 | 338.49 |
| 1115.63 | 338.53 | 1116.02 | 338.55 | 1117.37 | 338.59 | 1121.73 | 338.78 | 1121.82 | 338.79 |
| 1124.21 | 338.91 | 1125.82 | 338.97 | 1127.5 | 339.02 | 1130.02 | 339.06 | 1131.46 | 339.09 |
| 1132.35 | 339.1 | 1133.82 | 339.13 | 1134.14 | 339.15 | 1141.03 | 339.37 | 1141.22 | 339.37 |
| 1143.24 | 339.48 | 1145.24 | 339.72 | 1145.97 | 339.82 | 1147.48 | 339.98 | 1148.53 | 340.1 |
| 1149.71 | 340.27 | 1150.89 | 340.43 | 1151.22 | 340.49 | 1154.18 | 340.81 | 1156.01 | 341.12 |
| 1158.11 | 341.45 | 1161.45 | 341.85 | 1164.28 | 342.2 | 1164.64 | 342.24 | 1167.42 | 342.71 |
| 1169.21 | 343.01 | 1171.14 | 343.31 | 1175.51 | 344.08 | 1176.3 | 344.23 | 1180.98 | 345.1 |
| 1183.34 | 345.61 | 1184.66 | 345.89 | 1185.79 | 346.12 | 1187.15 | 346.47 | 1188.66 | 346.82 |
| 1189.99 | 347.11 | 1191.82 | 347.52 | 1194.01 | 348.07 | 1194.02 | 348.08 | 1195.87 | 348.6 |
| 1197.41 | 349.01 | 1199.87 | 349.69 | 1200.66 | 349.92 | 1201.76 | 350.26 | 1203.55 | 350.82 |
| 1204.79 | 351.19 | 1206.54 | 351.73 | 1207.96 | 351.86 | 1208.72 | 351.95 | 1210.75 | 352.01 |
| 1212.97 | 352.06 | 1213.56 | 352.08 | 1215.08 | 352.11 | 1217.67 | 352.14 | 1219.14 | 352.15 |
| 1220.7 | 352.17 | 1224.32 | 352.25 | 1224.4 | 352.23 | 1225.12 | 352.21 | 1226.85 | 352.19 |
| 1228.26 | 352.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 21.85 | .05 | 653.98 | .04 | 1151.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 653.98 | 1151.22 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4637.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 10.92 | 348.7 | 12.38 | 348.71 | 13.49 | 348.7 | 14.59 | 348.7 | 19.84 | 348.57 |
| 20.28 | 348.58 | 21.83 | 348.53 | 23.86 | 348.56 | 24.61 | 348.56 | 24.99 | 348.55 |
| 29.28 | 348.66 | 30.42 | 348.67 | 31.74 | 348.71 | 32.69 | 348.73 | 36.49 | 348.68 |
| 37.61 | 348.66 | 45.99 | 348.41 | 65.57 | 347.86 | 74.94 | 347.79 | 75.98 | 347.79 |
| 76.96 | 347.78 | 80.4 | 347.8 | 81.14 | 347.82 | 81.98 | 347.82 | 83.84 | 347.78 |
| 86.43 | 347.7 | 87.16 | 347.65 | 88.41 | 347.6 | 90.65 | 347.55 | 91.43 | 347.54 |
| 101.67 | 347.37 | 103.29 | 347.35 | 113.37 | 347.09 | 113.45 | 347.07 | 118.01 | 347.07 |
| 121.57 | 347.06 | 121.87 | 347.08 | 123.71 | 347.14 | 124.08 | 347.16 | 124.66 | 347.26 |
| 125.09 | 347.25 | 125.35 | 347.19 | 125.79 | 347.15 | 126.78 | 347.11 | 129.31 | 347.04 |
| 129.88 | 347.02 | 140.31 | 346.74 | 150.12 | 346.48 | 150.94 | 346.46 | 152.26 | 346.41 |
| 152.79 | 346.4 | 154.81 | 346.4 | 158.36 | 346.33 | 158.69 | 346.33 | 166.15 | 346.19 |
| 166.35 | 346.19 | 173.26 | 346.06 | 173.7 | 346.06 | 176.05 | 346.01 | 176.43 | 346.01 |
| 200.18 | 345.59 | 217.04 | 345.13 | 217.27 | 345.04 | 217.61 | 345.01 | 218.32 | 345.02 |
| 219.49 | 345.08 | 220.19 | 345.13 | 224.72 | 345.27 | 226.84 | 345.32 | 229.97 | 345.36 |
| 231.75 | 345.38 | 232.38 | 345.38 | 233.38 | 345.36 | 235.31 | 345.28 | 238.17 | 345.13 |
| 242.62 | 344.96 | 251.88 | 344.79 | 252.89 | 344.79 | 253.7 | 344.8 | 255.2 | 344.84 |
| 259.35 | 344.88 | 261.85 | 344.94 | 262.69 | 344.93 | 265.98 | 344.97 | 266.88 | 344.96 |
| 268.18 | 344.96 | 268.52 | 344.91 | 269.88 | 344.92 | 270.2 | 344.9 | 271.49 | 344.9 |
| 272.77 | 344.92 | 273.7 | 344.92 | 274.34 | 344.91 | 274.8 | 344.92 | 275.04 | 344.95 |
| 276.01 | 344.93 | 276.5 | 344.9 | 277.37 | 344.79 | 278.14 | 344.72 | 279.34 | 344.62 |
| 281.01 | 344.58 | 281.18 | 344.57 | 284.14 | 344.3 | 285.39 | 344.17 | 285.55 | 344.17 |
| 286.82 | 344.29 | 288.71 | 344.41 | 290.95 | 344.5 | 291.84 | 344.51 | 305.56 | 344.28 |
| 308.26 | 344.17 | 308.72 | 344.16 | 311.18 | 344.09 | 342.69 | 343.55 | 351.75 | 343.39 |
| 354.46 | 343.39 | 355.57 | 343.4 | 356.71 | 343.36 | 358.28 | 343.32 | 362.67 | 343.18 |
| 364.71 | 343.12 | 365.28 | 343.11 | 367.52 | 343.04 | 367.96 | 343.02 | 373.54 | 342.83 |
| 375 | 342.79 | 375.88 | 342.79 | 376.49 | 342.8 | 379.44 | 342.75 | 381.45 | 342.73 |
| 382.91 | 342.7 | 384.11 | 342.69 | 385.03 | 342.7 | 385.81 | 342.72 | 386.56 | 342.73 |
| 387.6 | 342.72 | 388.4 | 342.7 | 390.68 | 342.77 | 393.75 | 342.67 | 395.65 | 342.72 |
| 396.59 | 342.74 | 399.74 | 342.77 | 401.17 | 342.78 | 407.32 | 342.77 | 414.44 | 342.67 |
| 429.97 | 342.24 | 437.8 | 341.98 | 442.68 | 341.82 | 444.32 | 341.76 | 446.22 | 341.7 |
| 446.7 | 341.68 | 451.47 | 341.52 | 454.08 | 341.44 | 459.89 | 341.25 | 470.2 | 340.9 |
| 470.63 | 340.91 | 472.58 | 341.17 | 473.48 | 341.26 | 474.04 | 341.27 | 474.35 | 341.23 |
| 474.42 | 341.2 | 475.83 | 341.13 | 477.66 | 341.05 | 479.01 | 340.98 | 481.79 | 340.86 |
| 482.51 | 340.84 | 482.95 | 340.84 | 484.76 | 340.86 | 485.13 | 340.87 | 486.02 | 340.92 |
| 489.98 | 340.9 | 491.11 | 340.94 | 492.05 | 340.96 | 493.48 | 340.94 | 497.25 | 340.98 |
| 498.83 | 340.99 | 500.47 | 341.02 | 500.77 | 341.03 | 501.15 | 340.98 | 502.83 | 340.92 |
| 510.41 | 340.79 | 511.5 | 340.78 | 512.7 | 340.78 | 517.27 | 340.69 | 518.85 | 340.65 |
| 519.36 | 340.65 | 523.58 | 340.59 | 525.32 | 340.56 | 526.44 | 340.53 | 528.28 | 340.49 |
| 530.73 | 340.47 | 532.2 | 340.43 | 535.06 | 340.41 | 543.21 | 340.37 | 550.67 | 340.32 |
| 556.08 | 340.29 | 556.43 | 340.29 | 558.03 | 340.27 | 558.73 | 340.29 | 578.26 | 340.29 |
| 596.83 | 340.46 | 599.44 | 340.48 | 599.88 | 340.49 | 601.6 | 340.47 | 610.78 | 340.31 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 610.88 | 340.31 | 623.79 | 340.1 | 632.87 | 339.97 | 633.31 | 339.95 | 634.03 | 339.89 |
| 634.93 | 339.86 | 635.72 | 339.85 | 636.13 | 339.86 | 637.26 | 339.87 | 642.05 | 340.01 |
| 646.52 | 340.04 | 646.98 | 340.04 | 647.31 | 340.06 | 648.76 | 340.1 | 650.46 | 340.1 |
| 651.68 | 340.11 | 652.5 | 340.13 | 654.45 | 340.13 | 654.8 | 340.12 | 655.9 | 340.08 |
| 658.33 | 340.01 | 659.88 | 339.98 | 662.71 | 339.92 | 664.25 | 339.87 | 665.61 | 339.81 |
| 667.79 | 339.77 | 668.72 | 339.77 | 676.61 | 339.83 | 677.24 | 339.82 | 681.11 | 339.83 |
| 682.23 | 339.81 | 682.68 | 339.81 | 685.44 | 339.87 | 686.62 | 339.89 | 687.15 | 339.93 |
| 687.76 | 339.95 | 689.32 | 340.02 | 693.81 | 340.13 | 695.32 | 340.15 | 696.43 | 340.2 |
| 697.4 | 340.2 | 697.8 | 340.16 | 698.43 | 340.13 | 700.71 | 340.11 | 702.3 | 340.06 |
| 704.32 | 339.98 | 704.97 | 339.94 | 705.27 | 339.95 | 706.07 | 339.9 | 706.92 | 339.83 |
| 707.02 | 339.81 | 711.01 | 339.71 | 713.09 | 339.65 | 713.82 | 339.66 | 716.87 | 339.68 |
| 717.46 | 339.68 | 723.86 | 339.74 | 726.51 | 339.79 | 729.81 | 339.82 | 730.85 | 339.84 |
| 732.88 | 339.85 | 733.59 | 339.86 | 734.98 | 339.89 | 736.62 | 339.94 | 736.78 | 339.95 |
| 737.82 | 339.93 | 738.67 | 339.93 | 740.39 | 339.91 | 741.07 | 339.91 | 743.71 | 339.87 |
| 745.14 | 339.88 | 748.15 | 339.85 | 750.95 | 339.77 | 751.89 | 339.76 | 756.02 | 339.75 |
| 758.37 | 339.69 | 760.29 | 339.69 | 766.96 | 339.56 | 768.7 | 339.51 | 773.25 | 339.35 |
| 775.02 | 339.29 | 779.3 | 338.84 | 780.12 | 338.76 | 782.3 | 338.32 | 784.15 | 338.27 |
| 793.46 | 337.99 | 804.93 | 337.66 | 806.52 | 337.62 | 807.46 | 337.61 | 808.44 | 337.61 |
| 812.37 | 337.53 | 812.95 | 337.53 | 813.48 | 337.56 | 813.69 | 337.56 | 814.16 | 337.62 |
| 817.28 | 337.81 | 817.67 | 337.73 | 819.81 | 337.52 | 821.31 | 337.52 | 824.17 | 337.88 |
| 825.27 | 338.01 | 826.41 | 338.13 | 828.48 | 338.31 | 836.46 | 338.31 | 836.81 | 338.25 |
| 837.71 | 338.18 | 838.88 | 338.06 | 841.99 | 337.79 | 846.18 | 337.42 | 847.24 | 337.33 |
| 849.27 | 337.33 | 849.72 | 337.32 | 851.51 | 337.32 | 852.89 | 337.25 | 855.22 | 337.15 |
| 855.8 | 337.18 | 858.62 | 337.34 | 864.08 | 337.34 | 866.91 | 337.35 | 870.25 | 337.35 |
| 870.95 | 337.32 | 871.66 | 337.28 | 872.19 | 337.26 | 876.63 | 337.05 | 878.48 | 336.95 |
| 878.99 | 336.93 | 890.57 | 336.36 | 897.03 | 336.12 | 898.12 | 336.06 | 899.73 | 336.03 |
| 902.62 | 335.99 | 903.32 | 335.97 | 906.41 | 335.91 | 908.25 | 335.88 | 910.72 | 335.85 |
| 910.96 | 335.84 | 911.58 | 335.84 | 912.68 | 335.85 | 914.75 | 335.85 | 917.38 | 335.98 |
| 917.69 | 335.99 | 919.86 | 336.04 | 920.45 | 336.06 | 922.51 | 335.9 | 922.84 | 335.87 |
| 926.23 | 335.59 | 928.88 | 335.4 | 931.1 | 335.28 | 931.96 | 335.23 | 932.63 | 335.2 |
| 933.8 | 335.18 | 936.28 | 335.16 | 941.47 | 335.19 | 942.36 | 335.19 | 945.4 | 335.2 |
| 955.11 | 335.27 | 956.92 | 335.28 | 958.53 | 335.3 | 960.65 | 335.29 | 969.96 | 335.29 |
| 970.71 | 335.3 | 976.3 | 335.41 | 985.76 | 335.74 | 987.96 | 335.81 | 988.7 | 335.84 |
| 992.4 | 335.91 | 993.21 | 335.91 | 996.34 | 335.9 | 1000.29 | 335.78 | 1000.36 | 335.77 |
| 1002.71 | 335.7 | 1010.66 | 335.56 | 1016.78 | 335.48 | 1017.35 | 335.48 | 1017.68 | 335.46 |
| 1018.43 | 335.44 | 1018.69 | 335.42 | 1019.47 | 335.42 | 1020.27 | 335.43 | 1021.38 | 335.46 |
| 1034.8 | 335.57 | 1035.98 | 335.57 | 1039.44 | 335.59 | 1041.61 | 335.6 | 1042.69 | 335.6 |
| 1049.69 | 335.62 | 1052.22 | 335.6 | 1055.54 | 335.57 | 1056.09 | 335.56 | 1059.95 | 335.45 |
| 1060.31 | 335.45 | 1064.17 | 335.4 | 1065.3 | 335.38 | 1069.93 | 335.27 | 1070.12 | 335.25 |
| 1073.75 | 335.15 | 1074.37 | 335.15 | 1075.53 | 335.12 | 1078.16 | 335.07 | 1083.77 | 334.94 |
| 1085.5 | 334.88 | 1086.01 | 334.87 | 1088.32 | 334.85 | 1090.43 | 334.86 | 1091.44 | 334.86 |
| 1095.32 | 334.87 | 1095.5 | 334.88 | 1096.92 | 334.91 | 1097.63 | 334.92 | 1101.93 | 335.01 |
| 1103.17 | 335.05 | 1104.13 | 335.12 | 1104.39 | 335.15 | 1105.84 | 335.26 | 1106.65 | 335.33 |
| 1107.34 | 335.89 | 1107.79 | 336.3 | 1107.96 | 336.49 | 1108.73 | 337.27 | 1110.5 | 337.9 |
| 1110.75 | 338 | 1111.7 | 338.08 | 1113.89 | 338.21 | 1115.23 | 338.26 | 1116.01 | 338.28 |
| 1116.72 | 338.31 | 1118.05 | 338.35 | 1118.37 | 338.37 | 1122.5 | 338.54 | 1122.58 | 338.54 |
| 1124.86 | 338.65 | 1126.38 | 338.71 | 1127.97 | 338.74 | 1130.36 | 338.79 | 1132.58 | 338.82 |
| 1134.28 | 338.87 | 1140.81 | 339.14 | 1141.25 | 339.15 | 1141.47 | 339.17 | 1142.91 | 339.24 |
| 1143.75 | 339.34 | 1145.5 | 339.57 | 1146.92 | 339.71 | 1147.19 | 339.73 | 1149.41 | 339.98 |
| 1150.48 | 340.11 | 1152.09 | 340.27 | 1153.47 | 340.4 | 1155.32 | 340.71 | 1157.44 | 341.02 |
| 1158.12 | 341.1 | 1160.82 | 341.4 | 1164.05 | 341.77 | 1164.78 | 341.88 | 1166.87 | 342.22 |
| 1167.3 | 342.28 | 1168.67 | 342.5 | 1170.63 | 342.8 | 1172.16 | 343.06 | 1175.05 | 343.54 |
| 1175.85 | 343.69 | 1180.59 | 344.55 | 1182.97 | 345.05 | 1184.3 | 345.34 | 1185.45 | 345.56 |
| 1186.82 | 345.92 | 1188.36 | 346.26 | 1189.7 | 346.55 | 1191.55 | 346.98 | 1193.76 | 347.54 |
| 1195.22 | 347.95 | 1196.2 | 348.24 | 1197.2 | 348.51 | 1200.15 | 349.35 | 1203.42 | 350.41 |
| 1204.26 | 350.67 | 1206.45 | 351.37 | 1207.76 | 351.49 | 1208.65 | 351.59 | 1210.71 | 351.63 |
| 1212.95 | 351.67 | 1214.28 | 351.69 | 1217.71 | 351.73 | 1219.19 | 351.75 | 1219.66 | 351.75 |
| 1221.28 | 351.78 | 1224.44 | 351.83 | 1224.52 | 351.81 | 1225.25 | 351.78 | 1227.61 | 351.74 |
| 1228.42 | 351.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 10.92 | .05 | 654.8 | .04 | 1150.48 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 654.8 | 1150.48 | 12.25 | 19.93 | 22.58 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4617.22

INPUT
Description:
Station Elevation Data num= 403

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.521.189941 | 348.53 | 3.72998 | 348.529.079956 | 348.399.529907 | 348.4 | | | |
| 11.10999 | 348.3513.16992 | 348.3813.93994 | 348.3814.31995 | 348.3718.68994 | 348.49 | | | | |
| 19.71997 | 348.521.19995 | 348.5522.15991 | 348.5726.02991 | 348.5326.68994 | 348.53 | | | | |
| 27.16992 | 348.5255.64001 | 347.7665.17993 | 347.6966.23999 | 347.6967.23999 | 347.68 | | | | |
| 70.73999 | 347.71 | 71.5 | 347.7372.34998 | 347.73 | 74.25 | 347.69 | 76.88 | 347.61 | |
| 77.05994 | 347.59 | 77.63 | 347.56 78.8999 | 347.5181.17993 | 347.4681.96997 | 347.45 | | | |
| 94.04993 | 347.26104.3099 | 347104.3999 | 346.98112.6599 | 346.98 | 112.97 | 347 | | | |
| 114.84 | 347.06 | 115.22 | 347.08115.8099 | 347.18 | 115.95 | 347.18 | 116.25 | 347.17 | |
| 116.51 | 347.11 | 116.96 | 347.07 | 117.97 | 347.03120.5499 | 346.96 | 121.13 | 346.94 | |
| 142.5699 | 346.37144.0199 | 346.32 | 144.6 | 346.31 | 146.51 | 346.31 | 168.14 | 345.91 | |
| 168.5299 | 345.91 | 192.71 | 345.47 | 209.88 | 345 | 210.11 | 344.91 | 210.46 | 344.87 |
| 211.1799 | 344.89 | 212.37 | 344.95 | 213.08 | 345 | 217.7 | 345.15 | 219.33 | 345.19 |
| 224.85 | 345.26 | 225.5 | 345.26225.8999 | 345.25 | 226.51 | 345.24 | 228.48 | 345.16 | |
| 231.39 | 345235.9199 | 344.82 | 245.35 | 344.64 | 246.38 | 344.64 | 247.2 | 344.65 | |
| 248.73 | 344.69 | 252.96 | 344.73255.4999 | 344.79 | 256.36 | 344.78 | 259.71 | 344.82 | |
| 260.6299 | 344.81 | 260.73 | 344.81 | 261.95 | 344.81262.0499 | 344.78 | 262.29 | 344.76 | |
| 263.6799 | 344.77264.0099 | 344.75265.3199 | 344.75266.6199 | 344.77267.5699 | 344.77 | | | | |
| 267.9 | 344.76 | 268.22 | 344.76268.6899 | 344.77 | 268.79 | 344.78268.9299 | 344.8 | | |
| 269.0599 | 344.8 | 269.92 | 344.78 | 270.42 | 344.75271.3099 | 344.64 | 272.09 | 344.56 | |
| 273.3099 | 344.46275.1899 | 344.41 | 278.2 | 344.13 | 279.47 | 344 | 279.64 | 344 | |
| 280.9299 | 344.12 | 282.85 | 344.24284.0699 | 344.3285.1299 | 344.34 | 285.61 | 344.35 | | |
| 286.04 | 344.35300.0099 | 344.11302.7599 | 344 | 303.23 | 343.99 | 305.73 | 343.92 | | |
| 347.04 | 343.2350.9299 | 343.21 | 363.1 | 342.85363.5499 | 342.83 | 369.23 | 342.63 | | |
| 370.7599 | 342.59 | 371.61 | 342.59 | 372.23 | 342.6 | 373.35 | 342.57 | 377.28 | 342.52 |
| 378.77 | 342.49379.9899 | 342.48380.9299 | 342.49 | 381.72 | 342.51382.4899 | 342.52 | | | |
| 383.04 | 342.51383.5499 | 342.51 | 384.36 | 342.49386.6799 | 342.56389.8099 | 342.45 | | | |
| 391.7399 | 342.51 | 392.7 | 342.53 | 395.91 | 342.56 | 396.27 | 342.56 | 397.36 | 342.57 |
| 403.6299 | 342.55410.8799 | 342.45426.6899 | 342 | 467.65 | 340.61 | 467.86 | 340.61 | | |
| 468.09 | 340.62 | 470.08 | 340.88470.9899 | 340.98471.5599 | 340.99471.8799 | 340.95 | | | |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 471.95 | 340.91 | 479.45 | 340.57 | 480.1899 | 340.55 | 480.64 | 340.55 | 482.48 | 340.57 | | |
| 482.86 | 340.58 | 483.7599 | 340.63 | 487.79 | 340.61 | 488.9399 | 340.65 | 489.9 | 340.67 | | |
| 491.36 | 340.65 | 496.8099 | 340.7 | 498.48 | 340.73 | 498.78 | 340.74 | 498.8799 | 340.73 | | |
| 498.9399 | 340.72 | 499.17 | 340.69 | 500.8799 | 340.63 | 508.6 | 340.51 | 510.9299 | 340.51 | | |
| 515.58 | 340.44 | 516.3099 | 340.42 | 523.78 | 340.32 | 524.92 | 340.28 | 526.79 | 340.24 | | |
| 529.29 | 340.22 | 530.78 | 340.18 | 555.46 | 340 | 557.09 | 339.98 | 557.6899 | 339.99 | | |
| 557.7999 | 340 | 577.6799 | 340 | 599.2499 | 340.2 | 599.7 | 340.21 | 610.7999 | 340.03 | | |
| 610.9 | 340.03 | 633.29 | 339.76 | 33.7399 | 339.68 | 634.47 | 339.61 | 635.39 | 339.58 | | |
| 636.1899 | 339.57 | 636.61 | 339.58 | 637.41 | 339.59 | 637.7599 | 339.59 | 642.64 | 339.72 | | |
| 647.66 | 339.75 | 647.72 | 339.76 | 649.47 | 339.81 | 651.2 | 339.81 | 652.03 | 339.82 | | |
| 652.4399 | 339.82 | 653.28 | 339.84 | 655.2 | 339.84 | 655.6199 | 339.83 | 656.72 | 339.79 | | |
| 659.16 | 339.72 | 663.5599 | 339.63 | 665.11 | 339.58 | 666.48 | 339.52 | 668.66 | 339.49 | | |
| 669.6 | 339.49 | 677.71 | 339.57 | 678.15 | 339.56 | 682.04 | 339.58 | 683.16 | 339.56 | | |
| 687.5699 | 339.64 | 688.1 | 339.68 | 690.28 | 339.77 | 694.79 | 339.88 | 694.98 | 339.88 | | |
| 696.3099 | 339.9 | 696.7 | 339.92 | 696.83 | 339.92 | 697.42 | 339.95 | 698.4 | 339.95 | | |
| 698.48 | 339.94 | 698.6199 | 339.93 | 698.67 | 339.93 | 698.7999 | 339.91 | 698.97 | 339.9 | | |
| 699.4299 | 339.88 | 701.72 | 339.85 | 703.11 | 339.81 | 705.35 | 339.72 | 705.9999 | 339.68 | | |
| 706.2999 | 339.69 | 706.96 | 339.65 | 707.1 | 339.64 | 707.96 | 339.57 | 708.0599 | 339.55 | | |
| 714.15 | 339.4 | 724.97 | 339.57 | 27.6299 | 339.55 | 730.9399 | 339.58 | 731.9899 | 339.6 | | |
| 734.02 | 339.61 | 734.7399 | 339.62 | 737.9399 | 339.71 | 740.52 | 339.68 | 740.6799 | 339.68 | | |
| 741.5699 | 339.67 | 742.2499 | 339.67 | 744.9 | 339.63 | 746.34 | 339.63 | 749.36 | 339.6 | | |
| 752.17 | 339.52 | 753.11 | 339.57 | 57.2599 | 339.49 | 759.6199 | 339.43 | 761.5499 | 339.42 | | |
| 768.25 | 339.28 | 769.99 | 339.23 | 776.34 | 339 | 780.64 | 338.53 | 781.46 | 338.45 | | |
| 783.65 | 338 | 807.97 | 337.29 | 809.52 | 337.27 | 809.9 | 337.27 | 810.24 | 337.26 | | |
| 810.39 | 337.26 | 813.89 | 337.19 | 814.2999 | 337.19 | 814.8199 | 337.22 | 814.96 | 337.23 | | |
| 815.1699 | 337.23 | 815.22 | 337.24 | 815.64 | 337.3 | 818.78 | 337.49 | 819.1699 | 337.41 | | |
| 821.3199 | 337.19 | 822.8199 | 337.19 | 826.7999 | 337.78 | 27.9399 | 337.82 | 830.02 | 338 | | |
| 838.0399 | 338 | 838.39 | 337.94 | 839.2899 | 337.87 | 839.97 | 337.79 | 840.47 | 337.74 | | |
| 848.86 | 337 | 850.9 | 337 | 851.83 | 336.99 | 853.0499 | 336.99 | 856.87 | 336.81 | | |
| 860.2899 | 337 | 871.97 | 337 | 892.37 | 336 | 898.86 | 335.75 | 899.95 | 335.69 | | |
| 913.47 | 335.48 | 914.5699 | 335.49 | 916.65 | 335.49 | 919.2899 | 335.62 | 919.52 | 335.63 | | |
| 919.6 | 335.63 | 922.23 | 335.69 | 922.3799 | 335.69 | 928.1799 | 335.2 | 930.84 | 335 | | |
| 933.6 | 334.84 | 934.77 | 334.79 | 938.27 | 334.75 | 959 | 334.89 | 959.83 | 334.89 | | |
| 960.61 | 334.99 | 69.4199 | 334.87 | 972.84 | 334.88 | 978.46 | 335 | 990.9099 | 335.44 | | |
| 994.62 | 335.52 | 995.4399 | 335.53 | 998.58 | 335.52 | 1004.98 | 335.33 | 1019.11 | 335.13 | | |
| 1019.68 | 335.13 | 1020.01 | 335.11 | 1020.76 | 335.09 | 1021.02 | 335.07 | 1021.81 | 335.07 | | |
| 1022.3 | 335.08 | 1022.61 | 335.08 | 1023.04 | 335.09 | 1023.32 | 335.1 | 1023.43 | 335.1 | | |
| 1023.72 | 335.11 | 1037.2 | 335.22 | 1037.75 | 335.22 | 1052.15 | 335.26 | 1058.03 | 335.21 | | |
| 1062.46 | 335.09 | 1062.82 | 335.09 | 1063.44 | 335.08 | 1063.58 | 335.08 | 1067.76 | 335.03 | | |
| 1067.83 | 335.03 | 1072.48 | 334.94 | 1072.61 | 334.93 | 1076.31 | 334.83 | 1076.94 | 334.83 | | |
| 1086.37 | 334.62 | 1088.11 | 334.56 | 1088.29 | 334.56 | 1088.62 | 334.55 | 1090.04 | 334.55 | | |
| 1090.94 | 334.54 | 1097.56 | 334.55 | 1097.62 | 334.56 | 1097.73 | 334.56 | 1103.82 | 334.68 | | |
| 1104.99 | 334.72 | 1105.97 | 334.8 | 1106.14 | 334.82 | 1107.51 | 334.93 | 1108.28 | 335 | | |
| 1108.93 | 335.58 | 1109.36 | 336 | 1109.52 | 336.2 | 1110.25 | 337 | 1112.16 | 337.75 | | |
| 1113.06 | 337.84 | 1115.55 | 338 | 1123.35 | 338.29 | 1125.5 | 338.39 | 1126.94 | 338.44 | | |
| 1132 | 338.54 | 1132.8 | 338.55 | 1134.12 | 338.59 | 1142.57 | 339 | 1145.02 | 339.31 | | |
| 1149.73 | 339.73 | 1152.76 | 340 | 1154.63 | 340.29 | 1156.78 | 340.59 | 1163.46 | 341.29 | | |
| 1168.14 | 342 | 1170.12 | 342.28 | 1174.59 | 343 | 1180.19 | 344 | 1183.95 | 344.78 | | |
| 1185.11 | 345 | 1186.5 | 345.36 | 1189.41 | 346 | 1191.28 | 346.43 | 1193.52 | 347 | | |
| 1196.1 | 347.75 | 1197 | 348 | 1199.52 | 348.75 | 1199.98 | 348.89 | 1200.33 | 349 | | |
| 1203.29 | 350 | 1204.14 | 350.27 | 1206.35 | 351 | 1208.58 | 351.23 | 1224.55 | 351.4 | | |
| 1224.63 | 351.38 | 1225.37 | 351.35 | 1228.58 | 351.28 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 655.6199 | .04 | 1149.73 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 655.6199 | 1149.73 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4597.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.6 | 1.2 | 348.61 | 3.75 | 348.59 | 9.12 | 348.46 | 9.58 | 348.47 |
| 11.16 | 348.42 | 13.23 | 348.44 | 14.39 | 348.43 | 18.78 | 348.54 | 19.82 | 348.55 |
| 21.3 | 348.59 | 22.27 | 348.61 | 26.16 | 348.56 | 27.3 | 348.55 | 43.31 | 348.12 |
| 55.91 | 347.79 | 57.07 | 347.78 | 58.13 | 347.78 | 62.97 | 347.74 | 63.49 | 347.74 |
| 65.28 | 347.72 | 66.56 | 347.72 | 67.57 | 347.7 | 71.08 | 347.73 | 72.7 | 347.74 |
| 75.1 | 347.68 | 77.25 | 347.61 | 78.01 | 347.56 | 79.28 | 347.51 | 82.37 | 347.45 |
| 88.98 | 347.33 | 90.42 | 347.29 | 91.59 | 347.27 | 94.51 | 347.23 | 94.63 | 347.22 |
| 96.9 | 347.17 | 98.66 | 347.15 | 101.44 | 347.08 | 103.94 | 347.01 | 104.82 | 346.98 |
| 104.91 | 346.96 | 105.93 | 346.97 | 106.85 | 346.97 | 107.53 | 346.96 | 108.98 | 346.96 |
| 113.21 | 346.95 | 113.52 | 346.97 | 115.78 | 347.03 | 116.37 | 347.13 | 116.82 | 347.12 |
| 117.08 | 347.06 | 117.53 | 347.02 | 119.37 | 346.95 | 121.49 | 346.89 | 121.93 | 346.87 |
| 123.42 | 346.83 | 129.94 | 346.63 | 134.7 | 346.49 | 137.86 | 346.4 | 139.14 | 346.36 |
| 143.26 | 346.25 | 144.72 | 346.2 | 145.26 | 346.19 | 147.22 | 346.19 | 148.88 | 346.17 |
| 149.75 | 346.15 | 155.83 | 346.04 | 157.23 | 346.01 | 161.8 | 345.94 | 162.7 | 345.92 |
| 167.41 | 345.85 | 168.96 | 345.82 | 169.35 | 345.82 | 171.11 | 345.79 | 173.52 | 345.74 |
| 175.29 | 345.71 | 178.76 | 345.63 | 184.33 | 345.51 | 184.6 | 345.5 | 190.48 | 345.38 |
| 190.8 | 345.37 | 192.72 | 345.34 | 193.65 | 345.32 | 196.81 | 345.23 | 202.04 | 345.06 |
| 203.04 | 345.04 | 203.51 | 345.02 | 206.18 | 344.95 | 210.86 | 344.81 | 211.13 | 344.72 |
| 211.48 | 344.69 | 212.21 | 344.7 | 214.37 | 344.81 | 218.76 | 344.94 | 220.4 | 344.98 |
| 223.4 | 345.02 | 226.6 | 345.03 | 227.61 | 345 | 228.46 | 344.96 | 229.59 | 344.92 |
| 232.52 | 344.76 | 237.07 | 344.58 | 246.54 | 344.38 | 247.58 | 344.38 | 249.94 | 344.42 |
| 251.33 | 344.43 | 251.64 | 344.44 | 252.63 | 344.44 | 254.19 | 344.45 | 254.91 | 344.47 |
| 256.74 | 344.5 | 257.61 | 344.49 | 260.46 | 344.52 | 260.97 | 344.53 | 261.61 | 344.52 |
| 263.23 | 344.52 | 263.57 | 344.47 | 264.96 | 344.49 | 265.3 | 344.47 | 266.61 | 344.47 |
| 268.64 | 344.5 | 269.53 | 344.48 | 270 | 344.49 | 270.24 | 344.52 | 271.27 | 344.49 |
| 271.74 | 344.46 | 272.63 | 344.35 | 274.64 | 344.18 | 276.53 | 344.13 | 279.55 | 343.86 |
| 280.83 | 343.74 | 281 | 343.74 | 282.31 | 343.85 | 284.23 | 343.96 | 285.45 | 344.02 |
| 286.83 | 344.06 | 287.43 | 344.06 | 292.88 | 343.94 | 293.91 | 343.93 | 296.49 | 343.88 |
| 298.78 | 343.84 | 300.27 | 343.8 | 301.47 | 343.78 | 303.69 | 343.69 | 303.94 | 343.67 |
| 305.13 | 343.64 | 305.6 | 343.62 | 307.22 | 343.58 | 308.28 | 343.57 | 312.61 | 343.5 |
| 315.3 | 343.47 | 316.62 | 343.45 | 318.09 | 343.42 | 321.13 | 343.35 | 322.73 | 343.33 |
| 324.67 | 343.29 | 345.69 | 342.94 | 348.73 | 342.87 | 352.64 | 342.86 | 355.68 | 342.76 |
| 359.65 | 342.65 | 364.87 | 342.51 | 365.32 | 342.49 | 369.12 | 342.36 | 371.03 | 342.3 |
| 372.57 | 342.26 | 374.09 | 342.27 | 375.17 | 342.24 | 379.12 | 342.19 | 380.61 | 342.16 |
| 381.84 | 342.15 | 382.78 | 342.15 | 384.35 | 342.18 | 385.42 | 342.17 | 386.23 | 342.15 |
| 388.56 | 342.21 | 391.71 | 342.1 | 392.87 | 342.14 | 395.13 | 342.19 | 395.86 | 342.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 397.84 | 342.21 | 399.29 | 342.21 | 401.64 | 342.2 | 403.01 | 342.2 | 405.19 | 342.19 |
| 406.29 | 342.19 | 407.66 | 342.16 | 412.88 | 342.09 | 416.18 | 342.02 | 417.97 | 341.97 |
| 418.43 | 341.95 | 421.65 | 341.85 | 422.43 | 341.82 | 425.86 | 341.73 | 426.42 | 341.71 |
| 428.77 | 341.65 | 447.32 | 341.05 | 469.93 | 340.3 | 470.37 | 340.31 | 472.37 | 340.55 |
| 473.28 | 340.64 | 473.86 | 340.65 | 474.18 | 340.61 | 474.25 | 340.57 | 481.23 | 340.27 |
| 481.78 | 340.24 | 482.53 | 340.22 | 482.98 | 340.23 | 484.83 | 340.25 | 485.21 | 340.26 |
| 486.12 | 340.32 | 487.61 | 340.31 | 488.89 | 340.31 | 490.16 | 340.3 | 492.29 | 340.35 |
| 493.75 | 340.32 | 499.23 | 340.36 | 500.91 | 340.38 | 501.21 | 340.39 | 501.6 | 340.34 |
| 503.32 | 340.28 | 505.98 | 340.24 | 507.68 | 340.21 | 511.08 | 340.16 | 512.02 | 340.16 |
| 512.21 | 340.17 | 513.42 | 340.17 | 518.09 | 340.1 | 519.32 | 340.07 | 519.77 | 340.07 |
| 523.88 | 340.01 | 526.33 | 339.98 | 527.48 | 339.94 | 529.35 | 339.91 | 532 | 339.89 |
| 533.36 | 339.86 | 537 | 339.83 | 538.37 | 339.83 | 538.62 | 339.82 | 540.14 | 339.82 |
| 542 | 339.8 | 548.36 | 339.74 | 553.55 | 339.7 | 556.96 | 339.68 | 559.66 | 339.65 |
| 560.52 | 339.66 | 565.16 | 339.65 | 566.46 | 339.65 | 580.49 | 339.63 | 581.48 | 339.64 |
| 584.45 | 339.65 | 585.03 | 339.66 | 595.58 | 339.74 | 598.94 | 339.76 | 602.17 | 339.79 |
| 602.62 | 339.8 | 613.77 | 339.63 | 613.87 | 339.63 | 636.37 | 339.32 | 636.83 | 339.3 |
| 637.56 | 339.23 | 638.48 | 339.2 | 639.29 | 339.19 | 640.86 | 339.21 | 644 | 339.29 |
| 645.77 | 339.37 | 646.87 | 339.39 | 650.81 | 339.41 | 650.87 | 339.42 | 652.63 | 339.47 |
| 654.37 | 339.47 | 655.62 | 339.48 | 656.46 | 339.5 | 658.39 | 339.5 | 658.81 | 339.49 |
| 661.12 | 339.4 | 663.56 | 339.34 | 666.58 | 339.28 | 668.1 | 339.23 | 669.44 | 339.17 |
| 671.57 | 339.14 | 672.49 | 339.14 | 676.8 | 339.18 | 678.29 | 339.2 | 680.43 | 339.22 |
| 680.86 | 339.21 | 684.67 | 339.23 | 685.76 | 339.21 | 688.87 | 339.27 | 690.08 | 339.29 |
| 690.6 | 339.32 | 692.73 | 339.41 | 696.36 | 339.49 | 697.15 | 339.51 | 698.63 | 339.53 |
| 699.72 | 339.58 | 700.68 | 339.58 | 701.07 | 339.54 | 701.69 | 339.51 | 702.22 | 339.51 |
| 703.93 | 339.48 | 705.29 | 339.44 | 707.48 | 339.36 | 708.12 | 339.32 | 708.41 | 339.33 |
| 709.06 | 339.29 | 710.13 | 339.2 | 716.09 | 339.05 | 720.92 | 339.1 | 726.68 | 339.15 |
| 729.29 | 339.19 | 732.53 | 339.22 | 733.55 | 339.24 | 735.54 | 339.25 | 736.24 | 339.26 |
| 739.38 | 339.34 | 742.93 | 339.31 | 743.59 | 339.31 | 746.19 | 339.27 | 747.6 | 339.27 |
| 750.55 | 339.24 | 753.3 | 339.16 | 754.22 | 339.14 | 756.83 | 339.13 | 758.28 | 339.13 |
| 760.59 | 339.07 | 762.48 | 339.06 | 769.04 | 338.92 | 770.74 | 338.87 | 776.96 | 338.65 |
| 781.17 | 338.2 | 781.97 | 338.12 | 784.11 | 337.69 | 801.64 | 337.16 | 806.4 | 337.01 |
| 807.91 | 336.96 | 809.8 | 336.94 | 811.38 | 336.9 | 812.54 | 336.88 | 813.64 | 336.85 |
| 814.11 | 336.85 | 814.96 | 336.89 | 815.42 | 336.96 | 818.49 | 337.15 | 818.87 | 337.07 |
| 820.98 | 336.87 | 822.45 | 336.87 | 823.11 | 336.96 | 826.34 | 337.37 | 827.46 | 337.49 |
| 829.49 | 337.67 | 837.34 | 337.69 | 837.68 | 337.64 | 838.56 | 337.57 | 839.23 | 337.5 |
| 840.38 | 337.4 | 843.64 | 337.13 | 847.93 | 336.76 | 850.67 | 336.76 | 850.84 | 336.75 |
| 852.03 | 336.75 | 855.77 | 336.57 | 859.12 | 336.75 | 870.55 | 336.71 | 875.25 | 336.48 |
| 883.67 | 336.05 | 890.51 | 335.69 | 896.86 | 335.44 | 897.93 | 335.38 | 903.69 | 335.28 |
| 907.63 | 335.21 | 911.16 | 335.16 | 912.24 | 335.17 | 914.27 | 335.17 | 917.08 | 335.3 |
| 919.88 | 335.35 | 923.98 | 335.02 | 925.56 | 334.89 | 928.14 | 334.71 | 930.86 | 334.56 |
| 932.01 | 334.52 | 935.43 | 334.49 | 937.09 | 334.5 | 939.02 | 334.52 | 939.91 | 334.52 |
| 947.21 | 334.54 | 957.3 | 334.6 | 965.92 | 334.57 | 969.27 | 334.57 | 974.77 | 334.69 |
| 985.32 | 335.04 | 986.95 | 335.1 | 990.58 | 335.18 | 991.38 | 335.19 | 994.46 | 335.18 |
| 998.35 | 335.07 | 999.2 | 335.05 | 1000.72 | 335 | 1004.66 | 334.95 | 1005.14 | 334.94 |
| 1009.39 | 334.88 | 1010.05 | 334.88 | 1010.92 | 334.86 | 1012.56 | 334.84 | 1014.55 | 334.81 |
| 1015.11 | 334.81 | 1016.16 | 334.77 | 1016.42 | 334.75 | 1017.97 | 334.76 | 1019.06 | 334.79 |
| 1032.25 | 334.88 | 1032.79 | 334.88 | 1039.58 | 334.9 | 1042.06 | 334.9 | 1046.88 | 334.91 |
| 1052.64 | 334.86 | 1056.97 | 334.74 | 1058.7 | 334.73 | 1059.12 | 334.72 | 1062.74 | 334.68 |
| 1065.56 | 334.62 | 1066.78 | 334.6 | 1066.91 | 334.59 | 1070.24 | 334.5 | 1071.15 | 334.49 |
| 1080.34 | 334.28 | 1081.3 | 334.24 | 1082.58 | 334.21 | 1083.97 | 334.21 | 1084.85 | 334.2 |
| 1091.32 | 334.21 | 1091.49 | 334.22 | 1094.29 | 334.28 | 1097.45 | 334.34 | 1098.59 | 334.38 |
| 1099.72 | 334.48 | 1101.06 | 334.58 | 1101.81 | 334.65 | 1102.45 | 335.2 | 1102.87 | 335.61 |
| 1103.03 | 335.8 | 1103.74 | 336.56 | 1105.61 | 337.29 | 1106.49 | 337.38 | 1108.92 | 337.55 |
| 1109.26 | 337.56 | 1116.56 | 337.83 | 1118.1 | 337.9 | 1119.6 | 337.94 | 1120.07 | 337.96 |
| 1123.2 | 338 | 1125.8 | 338.03 | 1127.09 | 338.07 | 1134.73 | 338.52 | 1135.36 | 338.56 |
| 1136.13 | 338.66 | 1137.92 | 338.91 | 1140.97 | 339.22 | 1142.37 | 339.39 | 1143.32 | 339.51 |
| 1144.16 | 339.6 | 1145.32 | 339.74 | 1146.72 | 340.01 | 1147.07 | 340.14 | 1147.59 | 340.29 |
| 1147.71 | 340.4 | 1148.07 | 340.5 | 1149.24 | 340.66 | 1155.74 | 341.34 | 1160.31 | 342.02 |
| 1161.26 | 342.15 | 1162.82 | 342.38 | 1164.19 | 342.6 | 1166.59 | 342.97 | 1172.05 | 343.92 |
| 1175.71 | 344.66 | 1176.84 | 344.87 | 1178.2 | 345.22 | 1181.03 | 345.82 | 1182.85 | 346.23 |
| 1184.04 | 346.53 | 1185.04 | 346.77 | 1187.55 | 347.48 | 1188.43 | 347.72 | 1190.88 | 348.43 |
| 1191.67 | 348.67 | 1194.56 | 349.62 | 1195.38 | 349.87 | 1197.54 | 350.56 | 1199.71 | 350.78 |
| 1211.36 | 350.89 | 1213.49 | 350.9 | 1215.27 | 350.92 | 1216.07 | 350.88 | 1216.33 | 350.88 |
| 1219.2 | 350.82 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 658.81 | .04 | 1142.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 658.81 | 1142.37 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4578.69*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.68 | 1.2 | 348.68 | 3.77 | 348.66 | 9.17 | 348.53 | 9.62 | 348.54 |
| 11.22 | 348.49 | 13.3 | 348.51 | 14.46 | 348.49 | 18.87 | 348.59 | 19.91 | 348.59 |
| 21.41 | 348.63 | 22.38 | 348.65 | 26.28 | 348.6 | 27.43 | 348.59 | 43.52 | 348.15 |
| 56.18 | 347.83 | 58.23 | 347.81 | 58.41 | 347.82 | 63.28 | 347.78 | 63.79 | 347.77 |
| 67.89 | 347.73 | 71.43 | 347.74 | 72.16 | 347.76 | 73.05 | 347.75 | 74.97 | 347.7 |
| 75.46 | 347.68 | 77.63 | 347.61 | 78.39 | 347.56 | 79.67 | 347.51 | 81.23 | 347.48 |
| 82.77 | 347.44 | 89.41 | 347.31 | 90.48 | 347.27 | 93.53 | 347.21 | 95.09 | 347.19 |
| 97.37 | 347.15 | 99.14 | 347.14 | 101.08 | 347.1 | 101.93 | 347.07 | 105.11 | 346.97 |
| 105.42 | 346.95 | 108.05 | 346.95 | 109.51 | 346.94 | 113.76 | 346.92 | 115.96 | 346.97 |
| 116.34 | 346.99 | 116.94 | 347.08 | 117.38 | 347.06 | 117.64 | 347.01 | 118.1 | 346.97 |
| 119.95 | 346.9 | 122.91 | 346.8 | 124.02 | 346.77 | 129.57 | 346.57 | 130.57 | 346.54 |
| 139.47 | 346.26 | 139.82 | 346.24 | 145.42 | 346.09 | 145.96 | 346.08 | 147.94 | 346.08 |
| 149.6 | 346.05 | 150.48 | 346.04 | 154.4 | 345.97 | 156.58 | 345.92 | 160.65 | 345.86 |
| 161.72 | 345.84 | 165.51 | 345.8 | 168.22 | 345.75 | 170.17 | 345.73 | 171.94 | 345.7 |
| 174.36 | 345.65 | 179.63 | 345.53 | 185.22 | 345.37 | 185.49 | 345.37 | 191.41 | 345.23 |
| 191.73 | 345.22 | 193.11 | 345.21 | 194.59 | 345.17 | 197.77 | 345.07 | 199.3 | 345.01 |
| 200.82 | 344.96 | 201.73 | 344.92 | 203.02 | 344.88 | 205.27 | 344.83 | 211.88 | 344.62 |
| 212.16 | 344.54 | 212.51 | 344.5 | 214.44 | 344.56 | 215.4 | 344.61 | 219.82 | 344.73 |
| 221.47 | 344.77 | 224.49 | 344.81 | 227.04 | 344.8 | 227.7 | 344.79 | 228.72 | 344.76 |
| 229.57 | 344.72 | 230.7 | 344.68 | 233.64 | 344.52 | 238.22 | 344.34 | 239.18 | 344.32 |
| 247.74 | 344.13 | 248.78 | 344.12 | 251.15 | 344.15 | 252.55 | 344.16 | 252.85 | 344.17 |
| 253.86 | 344.17 | 255.42 | 344.18 | 257.37 | 344.21 | 258.86 | 344.2 | 261.72 | 344.23 |
| 262.24 | 344.24 | 263.17 | 344.22 | 263.27 | 344.23 | 264.5 | 344.23 | 264.84 | 344.19 |
| 266.25 | 344.2 | 266.58 | 344.19 | 267.9 | 344.19 | 268.69 | 344.21 | 270.18 | 344.23 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 270.51 | 344.21 | 271.31 | 344.21 | 271.55 | 344.23 | 272.58 | 344.2 | 273.05 | 344.17 |
| 274.74 | 343.99 | 275.97 | 343.9 | 277.64 | 343.85 | 277.87 | 343.85 | 280.91 | 343.6 |
| 282.19 | 343.48 | 282.36 | 343.48 | 283.68 | 343.58 | 286.39 | 343.72 | 288.22 | 343.77 |
| 288.83 | 343.77 | 290.66 | 343.72 | 291.56 | 343.7 | 294.3 | 343.63 | 295.34 | 343.61 |
| 297.55 | 343.58 | 300.23 | 343.51 | 301.72 | 343.48 | 302.93 | 343.45 | 304.47 | 343.38 |
| 304.84 | 343.37 | 305.41 | 343.33 | 306.61 | 343.3 | 307.08 | 343.28 | 308.71 | 343.25 |
| 310.4 | 343.23 | 314.13 | 343.18 | 316.83 | 343.16 | 318.16 | 343.14 | 319.63 | 343.11 |
| 322.68 | 343.02 | 324.29 | 343 | 326.24 | 342.96 | 347.36 | 342.63 | 350.42 | 342.54 |
| 354.35 | 342.52 | 357.4 | 342.41 | 361.39 | 342.3 | 366.64 | 342.17 | 367.09 | 342.15 |
| 372.83 | 341.97 | 374.37 | 341.93 | 375.23 | 341.93 | 375.9 | 341.94 | 376.99 | 341.91 |
| 380.95 | 341.85 | 382.46 | 341.82 | 383.69 | 341.81 | 386.21 | 341.84 | 387.28 | 341.83 |
| 388.1 | 341.81 | 390.45 | 341.87 | 393.61 | 341.76 | 395.55 | 341.81 | 397.04 | 341.84 |
| 399.77 | 341.85 | 401.23 | 341.86 | 403.58 | 341.84 | 404.96 | 341.84 | 407.47 | 341.83 |
| 407.62 | 341.84 | 409.64 | 341.81 | 412.66 | 341.75 | 414.06 | 341.74 | 416.77 | 341.71 |
| 418.19 | 341.68 | 420 | 341.63 | 421.72 | 341.57 | 424.48 | 341.46 | 427.92 | 341.37 |
| 428.48 | 341.36 | 430.84 | 341.3 | 449.49 | 340.74 | 472.2 | 339.98 | 472.65 | 339.99 |
| 474.66 | 340.22 | 475.58 | 340.31 | 476.15 | 340.31 | 476.47 | 340.28 | 476.55 | 340.24 |
| 483.56 | 339.94 | 484.12 | 339.91 | 485.32 | 339.9 | 487.56 | 339.95 | 488.47 | 340 |
| 489.01 | 340.01 | 489.97 | 340.01 | 491.26 | 339.99 | 492.54 | 339.98 | 493.7 | 340.01 |
| 494.67 | 340.02 | 496.14 | 339.99 | 497.46 | 340 | 501.65 | 340.02 | 503.33 | 340.04 |
| 503.64 | 340.05 | 504.03 | 340 | 505.76 | 339.94 | 508.43 | 339.89 | 510.14 | 339.87 |
| 513.55 | 339.82 | 515.91 | 339.82 | 520.6 | 339.76 | 521.34 | 339.74 | 522.29 | 339.73 |
| 525.82 | 339.68 | 526.42 | 339.68 | 528.88 | 339.64 | 531.29 | 339.58 | 531.92 | 339.57 |
| 534.57 | 339.56 | 535.95 | 339.53 | 539.6 | 339.52 | 540.49 | 339.51 | 542.2 | 339.51 |
| 543.98 | 339.49 | 544.63 | 339.49 | 549.98 | 339.42 | 551.02 | 339.42 | 555.11 | 339.37 |
| 556.23 | 339.37 | 559.66 | 339.35 | 560.87 | 339.34 | 562.37 | 339.32 | 562.51 | 339.31 |
| 563.23 | 339.33 | 567.9 | 339.3 | 569.21 | 339.3 | 575.87 | 339.27 | 583.3 | 339.26 |
| 584.3 | 339.27 | 587.28 | 339.27 | 587.87 | 339.28 | 598.47 | 339.34 | 601.85 | 339.35 |
| 605.09 | 339.38 | 605.54 | 339.39 | 616.75 | 339.23 | 616.85 | 339.23 | 639.46 | 338.93 |
| 639.91 | 338.91 | 640.65 | 338.85 | 641.58 | 338.82 | 642.38 | 338.81 | 643.97 | 338.83 |
| 647.12 | 338.91 | 648.9 | 339.01 | 650.01 | 339.05 | 654.03 | 339.08 | 655.79 | 339.13 |
| 657.54 | 339.13 | 658.79 | 339.14 | 659.64 | 339.16 | 661.58 | 339.16 | 662 | 339.15 |
| 662.79 | 339.11 | 664.26 | 339.06 | 664.88 | 339.03 | 666.65 | 338.99 | 669.61 | 338.93 |
| 671.09 | 338.88 | 672.4 | 338.83 | 674.49 | 338.8 | 675.39 | 338.8 | 679.6 | 338.84 |
| 683.15 | 338.87 | 683.57 | 338.86 | 687.3 | 338.88 | 688.37 | 338.86 | 692.59 | 338.93 |
| 693.1 | 338.97 | 695.19 | 339.05 | 698.74 | 339.13 | 700.96 | 339.16 | 702.02 | 339.21 |
| 702.96 | 339.21 | 703.34 | 339.17 | 703.94 | 339.14 | 706.14 | 339.12 | 707.47 | 339.08 |
| 709.61 | 339 | 710.23 | 338.96 | 710.52 | 338.97 | 712.11 | 338.86 | 712.21 | 338.84 |
| 718.04 | 338.71 | 722.76 | 338.75 | 728.4 | 338.79 | 730.94 | 338.84 | 734.11 | 338.86 |
| 735.12 | 338.88 | 737.06 | 338.89 | 737.75 | 338.9 | 740.81 | 338.98 | 744.29 | 338.94 |
| 744.94 | 338.94 | 747.48 | 338.9 | 748.85 | 338.9 | 751.74 | 338.87 | 754.44 | 338.8 |
| 755.34 | 338.78 | 757.89 | 338.78 | 759.31 | 338.77 | 761.57 | 338.71 | 763.41 | 338.7 |
| 769.83 | 338.56 | 771.49 | 338.52 | 777.57 | 338.3 | 781.69 | 337.86 | 782.48 | 337.79 |
| 784.57 | 337.37 | 800.43 | 336.87 | 801.72 | 336.84 | 806.37 | 336.69 | 807.85 | 336.64 |
| 809.34 | 336.61 | 811.25 | 336.56 | 813.45 | 336.52 | 814 | 336.52 | 814.86 | 336.57 |
| 815.2 | 336.62 | 818.2 | 336.81 | 818.58 | 336.74 | 820.64 | 336.55 | 822.07 | 336.56 |
| 825.88 | 337.04 | 826.97 | 337.16 | 828.96 | 337.33 | 836.64 | 337.39 | 836.98 | 337.34 |
| 837.84 | 337.28 | 838.49 | 337.21 | 839.62 | 337.12 | 841.27 | 337 | 842.8 | 336.87 |
| 847 | 336.53 | 848.95 | 336.53 | 851.01 | 336.51 | 854.67 | 336.33 | 857.94 | 336.49 |
| 869.12 | 336.43 | 873.73 | 336.19 | 881.96 | 335.75 | 886.63 | 335.49 | 888.65 | 335.39 |
| 894.87 | 335.13 | 895.91 | 335.07 | 900.41 | 334.98 | 905.4 | 334.89 | 908.85 | 334.84 |
| 911.9 | 334.84 | 914.43 | 334.96 | 914.72 | 334.97 | 917.38 | 335.02 | 919.32 | 334.86 |
| 922.94 | 334.58 | 925.47 | 334.42 | 928.13 | 334.28 | 929.25 | 334.24 | 932.6 | 334.22 |
| 936.1 | 334.26 | 940.46 | 334.26 | 944.12 | 334.25 | 952.44 | 334.29 | 953.98 | 334.3 |
| 962.42 | 334.26 | 965.69 | 334.27 | 971.07 | 334.37 | 982.99 | 334.76 | 986.54 | 334.84 |
| 987.33 | 334.85 | 990.33 | 334.84 | 991.32 | 334.82 | 994.14 | 334.74 | 996.46 | 334.68 |
| 1000.32 | 334.63 | 1000.78 | 334.62 | 1004.94 | 334.56 | 1005.59 | 334.56 | 1006.44 | 334.54 |
| 1008.05 | 334.52 | 1009.99 | 334.49 | 1010.53 | 334.49 | 1011.57 | 334.45 | 1011.82 | 334.43 |
| 1013.34 | 334.44 | 1014.4 | 334.47 | 1027.31 | 334.55 | 1036.9 | 334.55 | 1041.62 | 334.56 |
| 1047.25 | 334.51 | 1051.49 | 334.4 | 1053.17 | 334.38 | 1053.59 | 334.38 | 1055.38 | 334.35 |
| 1056.91 | 334.34 | 1057.13 | 334.33 | 1059.89 | 334.28 | 1061.08 | 334.25 | 1061.2 | 334.24 |
| 1064.46 | 334.15 | 1065.35 | 334.14 | 1074.35 | 333.93 | 1076.04 | 333.87 | 1076.53 | 333.86 |
| 1077.89 | 333.86 | 1078.75 | 333.85 | 1085.09 | 333.87 | 1085.25 | 333.88 | 1087.99 | 333.94 |
| 1091.08 | 334 | 1092.2 | 334.04 | 1094.61 | 334.23 | 1095.34 | 334.3 | 1095.97 | 334.83 |
| 1096.38 | 335.21 | 1096.53 | 335.4 | 1097.23 | 336.13 | 1099.06 | 336.83 | 1099.92 | 336.92 |
| 1102.3 | 337.1 | 1102.63 | 337.11 | 1109.76 | 337.36 | 1111.82 | 337.45 | 1113.2 | 337.48 |
| 1116.31 | 337.49 | 1118.35 | 337.51 | 1119.62 | 337.54 | 1120.41 | 337.58 | 1123.9 | 337.81 |
| 1127.54 | 338.06 | 1128.15 | 338.11 | 1128.9 | 338.23 | 1130.65 | 338.49 | 1133.64 | 338.84 |
| 1135 | 339.05 | 1136.65 | 339.3 | 1137.88 | 339.47 | 1138.3 | 339.56 | 1139.24 | 339.8 |
| 1139.59 | 339.99 | 1140.09 | 340.22 | 1140.21 | 340.42 | 1140.56 | 340.58 | 1141.69 | 340.73 |
| 1148.03 | 341.38 | 1152.47 | 342.04 | 1154.35 | 342.29 | 1156.26 | 342.59 | 1158.59 | 342.95 |
| 1163.9 | 343.85 | 1167.47 | 344.55 | 1168.57 | 344.75 | 1169.89 | 345.07 | 1172.65 | 345.65 |
| 1174.43 | 346.03 | 1175.59 | 346.32 | 1176.55 | 346.55 | 1179 | 347.22 | 1179.85 | 347.44 |
| 1182.24 | 348.11 | 1183.01 | 348.34 | 1185.82 | 349.24 | 1186.63 | 349.48 | 1188.73 | 350.13 |
| 1190.84 | 350.33 | 1202.18 | 350.42 | 1204.26 | 350.42 | 1205.99 | 350.45 | 1206.07 | 350.43 |
| 1209.82 | 350.35 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 662 | .04 | 1135 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 662 | 1135 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4559.43*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.76 | 1.21 | 348.76 | 3.78 | 348.73 | 9.21 | 348.6 | 9.67 | 348.6 |
| 11.27 | 348.55 | 13.36 | 348.57 | 14.53 | 348.55 | 18.96 | 348.63 | 20.01 | 348.64 |
| 22.48 | 348.69 | 26.41 | 348.63 | 27.57 | 348.62 | 43.73 | 348.18 | 56.45 | 347.86 |
| 58.51 | 347.84 | 58.69 | 347.85 | 59.77 | 347.85 | 63.58 | 347.82 | 65.91 | 347.78 |
| 66.13 | 347.77 | 67.21 | 347.77 | 68.22 | 347.75 | 71.77 | 347.76 | 72.54 | 347.77 |
| 73.41 | 347.76 | 75.33 | 347.7 | 75.82 | 347.68 | 78 | 347.61 | 78.76 | 347.56 |
| 80.05 | 347.51 | 81.62 | 347.48 | 83.17 | 347.44 | 89.84 | 347.29 | 90.91 | 347.24 |
| 92.48 | 347.2 | 95.42 | 347.16 | 97.84 | 347.12 | 99.61 | 347.13 | 101.56 | 347.09 |
| 102.42 | 347.06 | 105.61 | 346.96 | 105.92 | 346.93 | 106.95 | 346.94 | 107.89 | 346.94 |
| 114.31 | 346.88 | 114.62 | 346.9 | 116.9 | 346.94 | 117.5 | 347.02 | 117.95 | 347.01 |
| 118.21 | 346.96 | 118.67 | 346.92 | 122.31 | 346.78 | 123.5 | 346.74 | 124.61 | 346.71 |
| 131.2 | 346.45 | 136.01 | 346.28 | 139.19 | 346.18 | 140.93 | 346.11 | 142.01 | 346.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 143.44 | 346.04 | 146.12 | 345.97 | 146.67 | 345.96 | 148.65 | 345.96 | 151.21 | 345.93 |
| 154.56 | 345.87 | 155.14 | 345.85 | 157.34 | 345.8 | 161.42 | 345.74 | 162.5 | 345.73 |
| 163.36 | 345.73 | 166.31 | 345.7 | 169.03 | 345.66 | 170.6 | 345.63 | 170.99 | 345.63 |
| 175.2 | 345.56 | 176.99 | 345.52 | 180.5 | 345.42 | 186.12 | 345.24 | 186.39 | 345.24 |
| 192.65 | 345.07 | 194.36 | 345.06 | 198.72 | 344.91 | 200.26 | 344.85 | 203.37 | 344.71 |
| 205.49 | 344.67 | 208.18 | 344.59 | 212.9 | 344.43 | 213.18 | 344.35 | 213.53 | 344.32 |
| 214.26 | 344.33 | 215.5 | 344.37 | 216.44 | 344.41 | 220.88 | 344.53 | 222.53 | 344.56 |
| 225.57 | 344.59 | 228.13 | 344.57 | 228.79 | 344.56 | 229.82 | 344.53 | 230.67 | 344.48 |
| 231.82 | 344.44 | 234.77 | 344.28 | 239.37 | 344.1 | 240.33 | 344.08 | 248.93 | 343.87 |
| 249.98 | 343.86 | 252.36 | 343.89 | 253.77 | 343.89 | 254.07 | 343.9 | 256.65 | 343.9 |
| 258.61 | 343.92 | 260.1 | 343.91 | 262.99 | 343.94 | 264.54 | 343.93 | 265.78 | 343.94 |
| 266.12 | 343.9 | 267.53 | 343.92 | 267.87 | 343.9 | 269.2 | 343.91 | 271.48 | 343.96 |
| 272.14 | 343.93 | 272.61 | 343.93 | 272.99 | 343.95 | 274.37 | 343.88 | 275.27 | 343.78 |
| 276.06 | 343.71 | 277.3 | 343.62 | 278.98 | 343.57 | 279.21 | 343.57 | 282.79 | 343.29 |
| 283.55 | 343.22 | 283.72 | 343.22 | 285.05 | 343.32 | 286.98 | 343.41 | 287.77 | 343.44 |
| 289.29 | 343.48 | 290.22 | 343.48 | 292.06 | 343.43 | 294.46 | 343.35 | 296.76 | 343.3 |
| 298.38 | 343.28 | 299.36 | 343.26 | 301.68 | 343.19 | 304.39 | 343.12 | 305.94 | 343.05 |
| 306.89 | 342.99 | 308.09 | 342.96 | 308.56 | 342.94 | 310.2 | 342.91 | 311.9 | 342.89 |
| 315.64 | 342.86 | 317.25 | 342.85 | 318.36 | 342.85 | 319.69 | 342.84 | 320.06 | 342.82 |
| 321.17 | 342.79 | 322.92 | 342.73 | 324.24 | 342.7 | 325.86 | 342.67 | 327.82 | 342.62 |
| 349.04 | 342.31 | 352.11 | 342.22 | 352.31 | 342.21 | 356.06 | 342.17 | 359.12 | 342.05 |
| 368.4 | 341.82 | 368.86 | 341.81 | 372.7 | 341.69 | 376.18 | 341.6 | 377.04 | 341.6 |
| 377.72 | 341.61 | 378.8 | 341.58 | 382.79 | 341.52 | 384.3 | 341.49 | 385.54 | 341.48 |
| 386.49 | 341.48 | 387.3 | 341.5 | 389.15 | 341.49 | 389.97 | 341.47 | 392.33 | 341.52 |
| 395.5 | 341.41 | 397.46 | 341.46 | 398.95 | 341.49 | 401.69 | 341.5 | 403.16 | 341.5 |
| 405.53 | 341.48 | 406.92 | 341.48 | 409.12 | 341.47 | 410.23 | 341.48 | 414.64 | 341.39 |
| 416.06 | 341.37 | 416.88 | 341.38 | 418.78 | 341.36 | 419.73 | 341.34 | 420.21 | 341.34 |
| 422.02 | 341.29 | 423.75 | 341.23 | 425.74 | 341.14 | 426.53 | 341.1 | 429.98 | 341.02 |
| 430.55 | 341 | 432.92 | 340.95 | 451.66 | 340.42 | 474.48 | 339.67 | 474.93 | 339.68 |
| 476.95 | 339.89 | 477.87 | 339.97 | 478.45 | 339.97 | 478.77 | 339.94 | 478.84 | 339.9 |
| 485.89 | 339.61 | 486.45 | 339.58 | 487.2 | 339.57 | 489.91 | 339.63 | 490.83 | 339.69 |
| 491.37 | 339.7 | 492.34 | 339.7 | 493.63 | 339.68 | 494.91 | 339.67 | 497.06 | 339.7 |
| 498.54 | 339.67 | 499.86 | 339.66 | 504.07 | 339.67 | 505.76 | 339.69 | 506.07 | 339.7 |
| 506.46 | 339.65 | 508.2 | 339.59 | 510.88 | 339.55 | 512.6 | 339.52 | 516.03 | 339.47 |
| 516.99 | 339.47 | 517.17 | 339.48 | 518.39 | 339.48 | 523.11 | 339.42 | 523.85 | 339.4 |
| 524.81 | 339.39 | 528.36 | 339.34 | 528.96 | 339.34 | 531.43 | 339.31 | 532.59 | 339.27 |
| 534.28 | 339.24 | 537.02 | 339.24 | 537.15 | 339.23 | 538.53 | 339.21 | 542.2 | 339.2 |
| 543.1 | 339.19 | 545.37 | 339.19 | 545.88 | 339.18 | 547.26 | 339.17 | 552.63 | 339.1 |
| 553.67 | 339.09 | 557.79 | 339.04 | 558.92 | 339.04 | 562.36 | 339.02 | 563.57 | 339.01 |
| 565.08 | 338.98 | 565.95 | 338.99 | 570.64 | 338.95 | 571.95 | 338.95 | 578.65 | 338.9 |
| 586.12 | 338.89 | 590.7 | 338.89 | 601.35 | 338.94 | 604.75 | 338.94 | 608 | 338.97 |
| 608.46 | 338.98 | 619.72 | 338.83 | 619.82 | 338.83 | 642.54 | 338.55 | 643 | 338.53 |
| 643.74 | 338.47 | 644.67 | 338.44 | 645.48 | 338.43 | 647.08 | 338.45 | 650.24 | 338.52 |
| 652.03 | 338.66 | 653.14 | 338.72 | 657.12 | 338.74 | 657.18 | 338.75 | 658.96 | 338.79 |
| 660.71 | 338.79 | 662.82 | 338.81 | 665.04 | 338.81 | 665.2 | 338.8 | 667.4 | 338.71 |
| 668 | 338.68 | 669.73 | 338.64 | 671.14 | 338.6 | 672.63 | 338.57 | 674.08 | 338.53 |
| 675.36 | 338.48 | 677.4 | 338.45 | 678.28 | 338.45 | 682.4 | 338.49 | 685.87 | 338.52 |
| 686.28 | 338.51 | 689.93 | 338.53 | 690.97 | 338.51 | 695.1 | 338.58 | 695.6 | 338.61 |
| 697.64 | 338.69 | 701.11 | 338.76 | 703.28 | 338.79 | 704.32 | 338.84 | 705.24 | 338.84 |
| 705.77 | 338.79 | 707.21 | 338.76 | 708.35 | 338.75 | 711.74 | 338.64 | 712.35 | 338.6 |
| 712.63 | 338.61 | 713.38 | 338.57 | 714.28 | 338.49 | 719.98 | 338.36 | 724.6 | 338.4 |
| 730.11 | 338.44 | 732.6 | 338.48 | 736.68 | 338.52 | 738.58 | 338.53 | 739.25 | 338.54 |
| 742.25 | 338.61 | 745.65 | 338.58 | 746.28 | 338.58 | 748.76 | 338.54 | 750.11 | 338.54 |
| 752.94 | 338.51 | 755.57 | 338.44 | 756.45 | 338.42 | 758.94 | 338.42 | 760.33 | 338.41 |
| 762.54 | 338.35 | 764.35 | 338.34 | 770.62 | 338.21 | 772.25 | 338.16 | 778.19 | 337.95 |
| 782.98 | 337.45 | 785.03 | 337.06 | 800.54 | 336.55 | 803.57 | 336.46 | 807.8 | 336.31 |
| 810.06 | 336.26 | 811.12 | 336.22 | 813.27 | 336.18 | 813.81 | 336.18 | 814.54 | 336.22 |
| 814.98 | 336.28 | 817.92 | 336.47 | 818.28 | 336.4 | 820.29 | 336.23 | 821.7 | 336.24 |
| 825.42 | 336.72 | 826.49 | 336.83 | 828.44 | 337 | 835.94 | 337.08 | 836.27 | 337.03 |
| 837.11 | 336.98 | 837.75 | 336.92 | 838.85 | 336.84 | 840.47 | 336.73 | 841.97 | 336.61 |
| 846.07 | 336.29 | 847.98 | 336.29 | 849.99 | 336.27 | 852.58 | 336.14 | 853.57 | 336.1 |
| 855.93 | 336.21 | 856.77 | 336.24 | 867.7 | 336.14 | 872.2 | 335.9 | 880.25 | 335.45 |
| 884.82 | 335.19 | 886.8 | 335.08 | 892.87 | 334.82 | 893.89 | 334.76 | 898.29 | 334.65 |
| 899.4 | 334.63 | 902.07 | 334.59 | 906.55 | 334.51 | 907.58 | 334.52 | 909.52 | 334.52 |
| 912.28 | 334.63 | 914.89 | 334.68 | 916.78 | 334.54 | 918.81 | 334.38 | 922.79 | 334.12 |
| 925.39 | 334 | 926.48 | 333.97 | 929.76 | 333.96 | 933.19 | 334 | 937.45 | 333.99 |
| 941.02 | 333.96 | 949.16 | 333.99 | 950.67 | 334 | 958.92 | 333.96 | 962.12 | 333.96 |
| 967.38 | 334.06 | 975.73 | 334.31 | 979.03 | 334.42 | 982.5 | 334.5 | 983.27 | 334.51 |
| 986.21 | 334.51 | 987.17 | 334.48 | 990.75 | 334.39 | 992.2 | 334.35 | 995.97 | 334.31 |
| 996.43 | 334.3 | 1000.49 | 334.24 | 1001.13 | 334.24 | 1001.96 | 334.22 | 1003.53 | 334.2 |
| 1005.43 | 334.17 | 1005.96 | 334.17 | 1006.27 | 334.15 | 1007.21 | 334.12 | 1007.95 | 334.11 |
| 1009.74 | 334.14 | 1022.36 | 334.21 | 1036.35 | 334.21 | 1041.86 | 334.16 | 1046 | 334.05 |
| 1047.65 | 334.04 | 1048.06 | 334.03 | 1049.81 | 334.01 | 1050.83 | 333.99 | 1051.52 | 333.99 |
| 1054.21 | 333.94 | 1055.5 | 333.9 | 1058.69 | 333.81 | 1059.56 | 333.8 | 1068.35 | 333.59 |
| 1069.26 | 333.55 | 1070.49 | 333.52 | 1071.82 | 333.52 | 1072.66 | 333.51 | 1078.85 | 333.53 |
| 1079.01 | 333.54 | 1081.69 | 333.6 | 1084.7 | 333.66 | 1085.8 | 333.7 | 1086.87 | 333.79 |
| 1088.88 | 333.95 | 1089.89 | 334.82 | 1090.03 | 334.99 | 1090.72 | 335.69 | 1092.5 | 336.36 |
| 1093.35 | 336.46 | 1095.67 | 336.64 | 1096 | 336.66 | 1102.97 | 336.9 | 1104.45 | 336.96 |
| 1105.88 | 336.99 | 1109.32 | 336.99 | 1109.37 | 336.98 | 1111.06 | 336.99 | 1112.6 | 337.02 |
| 1113.37 | 337.07 | 1116.78 | 337.32 | 1120.34 | 337.61 | 1120.94 | 337.67 | 1121.68 | 337.79 |
| 1123.23 | 338.06 | 1126.3 | 338.46 | 1127.64 | 338.71 | 1127.69 | 338.73 | 1130.44 | 339.21 |
| 1130.85 | 339.31 | 1131.76 | 339.59 | 1132.1 | 339.85 | 1132.59 | 340.15 | 1132.7 | 340.45 |
| 1133.04 | 340.66 | 1134.15 | 340.81 | 1140.31 | 341.43 | 1144.64 | 342.06 | 1146.46 | 342.3 |
| 1150.59 | 342.92 | 1155.76 | 343.77 | 1159.23 | 344.43 | 1160.3 | 344.62 | 1161.59 | 344.93 |
| 1164.27 | 345.47 | 1166 | 345.84 | 1168.07 | 346.32 | 1170.45 | 346.95 | 1171.28 | 347.16 |
| 1173.61 | 347.8 | 1174.35 | 348.01 | 1177.54 | 348.99 | 1177.87 | 349.08 | 1179.91 | 349.69 |
| 1181.97 | 349.88 | 1193.01 | 349.95 | 1195.03 | 349.94 | 1196.72 | 349.97 | 1197.71 | 349.94 |
| 1200.44 | 349.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 665.2 | .04 | 1127.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 665.2 | 1127.64 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4540.17*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.83 | 1.21 | 348.83 | 3.8 | 348.8 | 9.26 | 348.67 | 9.72 | 348.67 |
| 11.33 | 348.62 | 14.21 | 348.63 | 14.6 | 348.62 | 19.05 | 348.68 | 20.1 | 348.68 |
| 21.61 | 348.71 | 22.59 | 348.72 | 26.54 | 348.67 | 27.7 | 348.65 | 43.94 | 348.21 |
| 56.72 | 347.89 | 58.79 | 347.87 | 58.97 | 347.89 | 63.89 | 347.85 | 66.23 | 347.81 |
| 66.45 | 347.8 | 68.55 | 347.78 | 72.12 | 347.77 | 72.89 | 347.78 | 73.76 | 347.77 |
| 76.19 | 347.68 | 78.38 | 347.61 | 78.56 | 347.59 | 80.44 | 347.52 | 83.57 | 347.44 |
| 90.27 | 347.28 | 91.35 | 347.21 | 92.92 | 347.17 | 95.88 | 347.13 | 97.03 | 347.11 |
| 98.31 | 347.1 | 100.09 | 347.12 | 102.05 | 347.09 | 102.92 | 347.05 | 105.45 | 346.96 |
| 106.34 | 346.94 | 106.43 | 346.92 | 109.09 | 346.92 | 110.56 | 346.9 | 114.85 | 346.85 |
| 115.17 | 346.86 | 117.46 | 346.9 | 118.07 | 346.97 | 118.51 | 346.96 | 118.78 | 346.91 |
| 119.24 | 346.87 | 120.27 | 346.82 | 122.9 | 346.72 | 124.6 | 346.67 | 125.21 | 346.64 |
| 130.82 | 346.4 | 131.83 | 346.36 | 136.66 | 346.18 | 139.86 | 346.07 | 140.81 | 346.02 |
| 141.94 | 345.98 | 142.69 | 345.97 | 144.13 | 345.92 | 145.35 | 345.9 | 146.82 | 345.85 |
| 149.36 | 345.85 | 151.93 | 345.82 | 153.05 | 345.79 | 155.3 | 345.76 | 155.89 | 345.74 |
| 158.09 | 345.69 | 162.2 | 345.63 | 164.15 | 345.63 | 169.84 | 345.57 | 171.41 | 345.54 |
| 171.81 | 345.54 | 176.04 | 345.47 | 181.36 | 345.32 | 187.01 | 345.11 | 187.28 | 345.11 |
| 193.58 | 344.92 | 194.97 | 344.92 | 196.46 | 344.88 | 199.67 | 344.76 | 201.22 | 344.69 |
| 202.76 | 344.61 | 203.99 | 344.54 | 204.98 | 344.52 | 205.99 | 344.51 | 206.47 | 344.49 |
| 208.46 | 344.44 | 209.18 | 344.41 | 213.92 | 344.24 | 214.2 | 344.17 | 214.56 | 344.13 |
| 215.29 | 344.14 | 217.48 | 344.21 | 221.94 | 344.32 | 223.6 | 344.35 | 226.65 | 344.38 |
| 229.23 | 344.35 | 230.92 | 344.29 | 231.78 | 344.24 | 232.93 | 344.2 | 235.9 | 344.04 |
| 240.51 | 343.86 | 241.49 | 343.84 | 250.13 | 343.62 | 252.01 | 343.6 | 253.57 | 343.62 |
| 254.74 | 343.61 | 255.29 | 343.63 | 260.63 | 343.63 | 261.35 | 343.62 | 264.25 | 343.65 |
| 265.81 | 343.64 | 267.05 | 343.65 | 267.4 | 343.62 | 268.82 | 343.64 | 269.15 | 343.62 |
| 270.49 | 343.63 | 271.81 | 343.67 | 272.93 | 343.68 | 273.92 | 343.65 | 274.17 | 343.67 |
| 275.69 | 343.59 | 277.39 | 343.43 | 278.63 | 343.34 | 280.32 | 343.29 | 280.55 | 343.29 |
| 283.62 | 343.07 | 284.91 | 342.96 | 285.09 | 342.96 | 286.41 | 343.05 | 288.36 | 343.13 |
| 289.6 | 343.17 | 290.68 | 343.19 | 291.17 | 343.19 | 293.47 | 343.13 | 294.37 | 343.1 |
| 296.68 | 343.01 | 298.19 | 342.99 | 299.81 | 342.97 | 300.8 | 342.95 | 304.63 | 342.82 |
| 305.85 | 342.79 | 307.41 | 342.72 | 308.66 | 342.64 | 310.04 | 342.6 | 311.68 | 342.58 |
| 311.81 | 342.57 | 313.06 | 342.57 | 313.39 | 342.56 | 318.77 | 342.53 | 319.74 | 342.53 |
| 319.89 | 342.54 | 321.22 | 342.53 | 321.6 | 342.51 | 322.71 | 342.48 | 324.47 | 342.41 |
| 325.8 | 342.37 | 327.42 | 342.35 | 328.23 | 342.32 | 329.39 | 342.29 | 350.71 | 342 |
| 354 | 341.88 | 357.76 | 341.82 | 360.85 | 341.7 | 364.88 | 341.6 | 370.17 | 341.48 |
| 370.63 | 341.46 | 377.98 | 341.27 | 379.53 | 341.28 | 380.62 | 341.25 | 384.63 | 341.19 |
| 387.39 | 341.14 | 389.15 | 341.16 | 391.02 | 341.15 | 391.85 | 341.13 | 394.21 | 341.17 |
| 397.4 | 341.07 | 398.58 | 341.09 | 400.87 | 341.14 | 403.62 | 341.15 | 403.99 | 341.14 |
| 405.1 | 341.14 | 407.47 | 341.12 | 408.87 | 341.12 | 411.08 | 341.11 | 412.19 | 341.12 |
| 416.63 | 341.03 | 418.06 | 341.01 | 418.88 | 341.02 | 422.23 | 341 | 424.05 | 340.95 |
| 425.23 | 340.91 | 425.79 | 340.88 | 427.78 | 340.79 | 428.57 | 340.74 | 432.05 | 340.66 |
| 435 | 340.6 | 453.82 | 340.1 | 476.76 | 339.35 | 477.21 | 339.36 | 479.23 | 339.56 |
| 480.16 | 339.63 | 480.74 | 339.64 | 481.14 | 339.57 | 488.22 | 339.28 | 488.79 | 339.25 |
| 490 | 339.25 | 492.26 | 339.31 | 493.18 | 339.38 | 493.72 | 339.39 | 494.7 | 339.39 |
| 497.29 | 339.35 | 498.46 | 339.37 | 499.44 | 339.37 | 500.93 | 339.34 | 502.26 | 339.33 |
| 506.49 | 339.33 | 508.19 | 339.34 | 508.49 | 339.35 | 508.89 | 339.31 | 510.63 | 339.25 |
| 515.06 | 339.17 | 517.14 | 339.14 | 519.47 | 339.12 | 519.65 | 339.13 | 520.88 | 339.13 |
| 525.62 | 339.08 | 526.36 | 339.06 | 530.89 | 339.01 | 533.98 | 338.97 | 536.41 | 338.91 |
| 539.73 | 338.91 | 541.12 | 338.88 | 544.8 | 338.88 | 546.45 | 338.87 | 547.43 | 338.88 |
| 548.62 | 338.87 | 555.28 | 338.77 | 556.33 | 338.76 | 560.46 | 338.71 | 560.65 | 338.7 |
| 561.6 | 338.71 | 565.05 | 338.69 | 566.28 | 338.68 | 567.79 | 338.65 | 568.66 | 338.66 |
| 573.38 | 338.61 | 574.7 | 338.59 | 581.42 | 338.54 | 588.93 | 338.52 | 590.74 | 338.52 |
| 593.54 | 338.51 | 604.24 | 338.54 | 607.65 | 338.54 | 610.92 | 338.56 | 611.38 | 338.57 |
| 622.7 | 338.42 | 622.8 | 338.42 | 645.62 | 338.16 | 646.83 | 338.09 | 647.76 | 338.06 |
| 649.01 | 338.06 | 650.18 | 338.07 | 653.36 | 338.14 | 655.16 | 338.31 | 656.27 | 338.38 |
| 660.27 | 338.4 | 660.33 | 338.41 | 662.12 | 338.45 | 663.88 | 338.45 | 666 | 338.47 |
| 668.23 | 338.47 | 668.39 | 338.46 | 671.13 | 338.33 | 672.82 | 338.28 | 675.65 | 338.22 |
| 677.07 | 338.18 | 678.32 | 338.13 | 680.32 | 338.11 | 681.18 | 338.11 | 686.59 | 338.15 |
| 688.59 | 338.17 | 689 | 338.16 | 692.55 | 338.18 | 693.58 | 338.16 | 697.61 | 338.23 |
| 698.1 | 338.26 | 700.09 | 338.33 | 703.48 | 338.39 | 704.22 | 338.41 | 705.61 | 338.42 |
| 706.62 | 338.46 | 707.52 | 338.47 | 707.88 | 338.43 | 708.95 | 338.4 | 709.45 | 338.4 |
| 711.83 | 338.35 | 713.88 | 338.27 | 714.47 | 338.24 | 714.74 | 338.25 | 715.35 | 338.22 |
| 716.15 | 338.16 | 716.35 | 338.13 | 721.92 | 338.01 | 726.44 | 338.05 | 731.82 | 338.09 |
| 734.25 | 338.13 | 740.1 | 338.17 | 740.76 | 338.18 | 743.68 | 338.25 | 747 | 338.21 |
| 747.63 | 338.21 | 750.05 | 338.18 | 751.37 | 338.18 | 754.13 | 338.15 | 756.7 | 338.08 |
| 757.56 | 338.07 | 760 | 338.06 | 761.36 | 338.05 | 763.51 | 338 | 765.28 | 337.98 |
| 771.41 | 337.85 | 773 | 337.8 | 778.81 | 337.6 | 782.74 | 337.19 | 783.49 | 337.12 |
| 785.49 | 336.74 | 800.65 | 336.23 | 803.61 | 336.14 | 806.32 | 336.04 | 807.74 | 335.98 |
| 809.16 | 335.95 | 810.98 | 335.88 | 813.09 | 335.84 | 813.53 | 335.84 | 814.32 | 335.88 |
| 814.75 | 335.94 | 817.63 | 336.13 | 817.98 | 336.07 | 819.95 | 335.91 | 821.32 | 335.93 |
| 824.96 | 336.39 | 826.01 | 336.5 | 827.21 | 336.6 | 827.91 | 336.67 | 835.24 | 336.78 |
| 835.56 | 336.73 | 836.39 | 336.69 | 837.01 | 336.63 | 839.66 | 336.46 | 845.14 | 336.05 |
| 847.86 | 336.05 | 848.97 | 336.03 | 851.5 | 335.9 | 852.47 | 335.86 | 854.77 | 335.96 |
| 855.6 | 335.99 | 866.28 | 335.86 | 870.68 | 335.61 | 878.54 | 335.15 | 883.01 | 334.88 |
| 884.94 | 334.78 | 890.87 | 334.5 | 891.87 | 334.44 | 896.17 | 334.33 | 899.87 | 334.27 |
| 904.24 | 334.19 | 905.24 | 334.2 | 907.15 | 334.19 | 909.84 | 334.3 | 912.39 | 334.35 |
| 914.24 | 334.21 | 916.22 | 334.07 | 916.55 | 334.04 | 917.69 | 333.97 | 920.11 | 333.83 |
| 922.65 | 333.73 | 923.72 | 333.7 | 926.92 | 333.69 | 928.47 | 333.72 | 930.27 | 333.74 |
| 931.1 | 333.74 | 934.44 | 333.71 | 937.93 | 333.67 | 945.88 | 333.69 | 947.36 | 333.7 |
| 955.41 | 333.66 | 958.54 | 333.66 | 963.68 | 333.74 | 973.55 | 334.03 | 975.07 | 334.09 |
| 978.46 | 334.16 | 979.21 | 334.17 | 982.09 | 334.17 | 983.03 | 334.15 | 986.52 | 334.06 |
| 987.94 | 334.03 | 991.62 | 333.98 | 992.07 | 333.98 | 996.04 | 333.92 | 996.66 | 333.92 |
| 997.48 | 333.9 | 1000.86 | 333.85 | 1001.39 | 333.85 | 1001.69 | 333.83 | 1002.37 | 333.82 |
| 1002.61 | 333.8 | 1004.07 | 333.8 | 1005.08 | 333.82 | 1017.41 | 333.87 | 1024.26 | 333.87 |
| 1024.99 | 333.86 | 1031.09 | 333.86 | 1036.46 | 333.81 | 1040.52 | 333.71 | 1040.85 | 333.71 |
| 1042.53 | 333.68 | 1045.24 | 333.65 | 1045.91 | 333.65 | 1049.8 | 333.56 | 1052.91 | 333.47 |
| 1053.76 | 333.46 | 1062.35 | 333.24 | 1064.44 | 333.18 | 1066.57 | 333.16 | 1072.61 | 333.19 |
| 1072.77 | 333.2 | 1075.38 | 333.26 | 1078.33 | 333.32 | 1079.4 | 333.36 | 1080.45 | 333.45 |
| 1081.7 | 333.54 | 1082.41 | 333.6 | 1083 | 334.08 | 1083.39 | 334.43 | 1084.21 | 335.25 |
| 1085.95 | 335.9 | 1086.77 | 336 | 1089.05 | 336.19 | 1089.37 | 336.21 | 1096.17 | 336.43 |
| 1097.62 | 336.49 | 1099.45 | 336.51 | 1102.38 | 336.48 | 1102.43 | 336.47 | 1104.81 | 336.48 |
| 1105.58 | 336.5 | 1106.34 | 336.55 | 1109.67 | 336.83 | 1113.15 | 337.16 | 1113.73 | 337.22 |
| 1114.45 | 337.36 | 1115.97 | 337.64 | 1118.87 | 338.07 | 1118.97 | 338.08 | 1120.27 | 338.37 |
| 1121.16 | 338.57 | 1122.99 | 338.95 | 1123.4 | 339.06 | 1124.28 | 339.38 | 1124.56 | 339.62 |
| 1124.61 | 339.71 | 1125.09 | 340.08 | 1125.2 | 340.48 | 1125.53 | 340.74 | 1126.6 | 340.88 |
| 1132.6 | 341.48 | 1136.8 | 342.07 | 1138.58 | 342.31 | 1142.59 | 342.89 | 1147.62 | 343.69 |
| 1150.99 | 344.32 | 1152.03 | 344.49 | 1153.28 | 344.78 | 1155.89 | 345.3 | 1157.57 | 345.64 |
| 1159.2 | 346.01 | 1159.58 | 346.09 | 1161.9 | 346.69 | 1162.71 | 346.89 | 1164.97 | 347.48 |
| 1165.7 | 347.68 | 1168.35 | 348.47 | 1169.12 | 348.68 | 1171.1 | 349.26 | 1173.1 | 349.43 |
| 1183.83 | 349.49 | 1185.8 | 349.46 | 1187.44 | 349.5 | 1187.51 | 349.48 | 1188.41 | 349.48 |
| 1191.06 | 349.42 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 668.39 | .04 | 1120.27 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

668.39 1120.27 23.49 19.26 20.45 .1 .3

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4520.91*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.91 | 1.22 | 348.91 | 3.82 | 348.88 | 9.3 | 348.73 | 9.76 | 348.74 |
| 11.38 | 348.69 | 14.28 | 348.69 | 14.67 | 348.68 | 19.14 | 348.73 | 20.2 | 348.73 |
| 21.72 | 348.76 | 22.7 | 348.76 | 26.66 | 348.7 | 27.34 | 348.7 | 27.83 | 348.68 |
| 44.15 | 348.24 | 56.99 | 347.93 | 58.17 | 347.91 | 59.07 | 347.91 | 59.26 | 347.93 |
| 64.19 | 347.89 | 66.55 | 347.83 | 67.85 | 347.82 | 68.88 | 347.8 | 72.46 | 347.79 |
| 73.24 | 347.8 | 74.11 | 347.78 | 76.55 | 347.68 | 78.75 | 347.61 | 79.52 | 347.57 |
| 80.82 | 347.52 | 82.4 | 347.48 | 83.16 | 347.45 | 90.7 | 347.26 | 91.79 | 347.18 |
| 92.67 | 347.15 | 94.89 | 347.11 | 96.34 | 347.1 | 96.46 | 347.09 | 98.78 | 347.07 |
| 100.57 | 347.12 | 102.54 | 347.08 | 103.41 | 347.04 | 105.96 | 346.94 | 106.85 | 346.92 |
| 106.94 | 346.9 | 108.92 | 346.91 | 111.09 | 346.89 | 115.4 | 346.82 | 115.72 | 346.83 |
| 117.64 | 346.84 | 118.02 | 346.85 | 118.63 | 346.92 | 119.08 | 346.9 | 119.81 | 346.82 |
| 120.84 | 346.77 | 121.68 | 346.74 | 123.48 | 346.66 | 125.19 | 346.61 | 131.45 | 346.31 |
| 137.31 | 346.07 | 140.8 | 345.94 | 142.62 | 345.86 | 143.37 | 345.85 | 144.82 | 345.8 |
| 146.04 | 345.78 | 148.07 | 345.73 | 150.08 | 345.73 | 152.66 | 345.71 | 153.78 | 345.68 |
| 156.04 | 345.65 | 157.58 | 345.6 | 158.85 | 345.57 | 160.27 | 345.55 | 162.97 | 345.52 |
| 165.86 | 345.52 | 167.91 | 345.51 | 170.65 | 345.47 | 172.63 | 345.45 | 176.88 | 345.38 |
| 178.69 | 345.33 | 182.23 | 345.21 | 188.17 | 344.97 | 194.5 | 344.77 | 196.23 | 344.77 |
| 197.4 | 344.73 | 200.63 | 344.6 | 203.73 | 344.44 | 204.97 | 344.36 | 207.46 | 344.32 |
| 208.24 | 344.29 | 209.46 | 344.26 | 210.18 | 344.23 | 214.95 | 344.06 | 215.22 | 343.98 |
| 215.58 | 343.95 | 216.32 | 343.96 | 218.27 | 344.01 | 218.52 | 344.01 | 223 | 344.11 |
| 224.67 | 344.14 | 227.73 | 344.17 | 230.32 | 344.12 | 230.99 | 344.1 | 232.89 | 344 |
| 234.04 | 343.95 | 237.02 | 343.8 | 241.66 | 343.62 | 242.64 | 343.6 | 251.32 | 343.36 |
| 253.22 | 343.34 | 254.78 | 343.35 | 255.95 | 343.34 | 256.51 | 343.36 | 258.31 | 343.36 |
| 259.12 | 343.35 | 261.72 | 343.35 | 262.6 | 343.33 | 265.51 | 343.36 | 266.03 | 343.36 |
| 266.68 | 343.34 | 267.66 | 343.36 | 268.33 | 343.36 | 268.68 | 343.33 | 270.1 | 343.35 |
| 270.44 | 343.34 | 271.34 | 343.35 | 273.85 | 343.41 | 274.23 | 343.41 | 275.23 | 343.37 |
| 275.48 | 343.39 | 277 | 343.31 | 277.91 | 343.21 | 279.96 | 343.06 | 281.66 | 343.01 |
| 281.89 | 343.01 | 284.97 | 342.8 | 286.27 | 342.7 | 286.45 | 342.7 | 287.78 | 342.78 |
| 289.74 | 342.85 | 292.07 | 342.9 | 293 | 342.89 | 295.77 | 342.8 | 297.29 | 342.73 |
| 298.41 | 342.69 | 301.24 | 342.66 | 302.23 | 342.64 | 306.09 | 342.49 | 307.31 | 342.46 |
| 308.88 | 342.38 | 310.13 | 342.3 | 311.52 | 342.26 | 313.17 | 342.24 | 314.26 | 342.24 |
| 314.89 | 342.23 | 318.67 | 342.22 | 322.76 | 342.22 | 324.25 | 342.17 | 326.02 | 342.09 |
| 327.35 | 342.04 | 328.99 | 342.02 | 329.8 | 341.99 | 330.96 | 341.96 | 352.39 | 341.69 |
| 355.49 | 341.56 | 355.69 | 341.56 | 359.47 | 341.48 | 362.57 | 341.34 | 366.62 | 341.25 |
| 371.94 | 341.14 | 372.4 | 341.12 | 376.27 | 341.03 | 378.22 | 340.97 | 379.79 | 340.94 |
| 381.34 | 340.95 | 382.44 | 340.92 | 386.46 | 340.86 | 387.99 | 340.82 | 390.2 | 340.81 |
| 391.8 | 340.82 | 392.89 | 340.81 | 393.72 | 340.79 | 396.09 | 340.82 | 399.3 | 340.72 |
| 400.49 | 340.74 | 402.78 | 340.79 | 407.03 | 340.79 | 409.42 | 340.76 | 410.82 | 340.76 |
| 413.04 | 340.75 | 414.16 | 340.77 | 415.56 | 340.74 | 418.62 | 340.66 | 420.05 | 340.65 |
| 420.88 | 340.66 | 422.8 | 340.67 | 424.94 | 340.64 | 427.26 | 340.57 | 429.83 | 340.43 |
| 430.62 | 340.38 | 434.11 | 340.31 | 434.68 | 340.29 | 437.08 | 340.25 | 455.99 | 339.78 |
| 479.03 | 339.04 | 479.48 | 339.05 | 481.52 | 339.23 | 482.46 | 339.29 | 483.04 | 339.3 |
| 483.44 | 339.23 | 490.56 | 338.95 | 491.12 | 338.92 | 491.88 | 338.92 | 494.23 | 338.98 |
| 495.54 | 339.07 | 497.06 | 339.08 | 499.66 | 339.04 | 501.83 | 339.05 | 503.32 | 339.01 |
| 504.66 | 339 | 508.9 | 338.99 | 510.92 | 339 | 511.32 | 338.96 | 513.07 | 338.9 |
| 517.52 | 338.82 | 519.61 | 338.79 | 521.95 | 338.78 | 522.13 | 338.79 | 523.37 | 338.79 |
| 528.13 | 338.74 | 528.88 | 338.72 | 533.43 | 338.67 | 536.53 | 338.63 | 537.7 | 338.6 |
| 539.61 | 338.57 | 542.31 | 338.58 | 543.7 | 338.56 | 547.4 | 338.56 | 548.8 | 338.55 |
| 549.06 | 338.56 | 551.12 | 338.56 | 551.24 | 338.55 | 552.51 | 338.54 | 557.93 | 338.44 |
| 558.99 | 338.43 | 563.14 | 338.37 | 564.28 | 338.38 | 566.16 | 338.38 | 568.98 | 338.35 |
| 571.27 | 338.31 | 571.38 | 338.32 | 576.9 | 338.25 | 577.44 | 338.24 | 584.2 | 338.17 |
| 591.74 | 338.15 | 592.82 | 338.15 | 593.56 | 338.14 | 595.77 | 338.13 | 610.55 | 338.13 |
| 613.84 | 338.15 | 614.3 | 338.16 | 625.67 | 338.02 | 625.77 | 338.02 | 648.71 | 337.78 |
| 649.92 | 337.71 | 650.86 | 337.68 | 652.11 | 337.68 | 653.29 | 337.69 | 656.48 | 337.75 |
| 658.28 | 337.95 | 659.41 | 338.04 | 663.43 | 338.06 | 663.49 | 338.07 | 665.28 | 338.11 |
| 668.32 | 338.11 | 669.18 | 338.13 | 671.42 | 338.13 | 671.58 | 338.12 | 674.26 | 337.98 |
| 675.91 | 337.93 | 678.67 | 337.87 | 681.28 | 337.79 | 683.23 | 337.76 | 684.07 | 337.76 |
| 689.36 | 337.8 | 691.31 | 337.82 | 691.71 | 337.81 | 695.18 | 337.83 | 696.18 | 337.81 |
| 699.02 | 337.86 | 700.12 | 337.87 | 700.6 | 337.9 | 702.54 | 337.96 | 705.86 | 338.02 |
| 706.57 | 338.04 | 707.93 | 338.05 | 708.92 | 338.09 | 709.87 | 338.09 | 710.15 | 338.06 |
| 711.2 | 338.03 | 712.76 | 338.02 | 716.01 | 337.91 | 716.59 | 337.88 | 716.85 | 337.89 |
| 717.44 | 337.86 | 718.43 | 337.78 | 723.87 | 337.67 | 728.28 | 337.7 | 733.53 | 337.74 |
| 735.91 | 337.77 | 741.62 | 337.81 | 745.12 | 337.88 | 748.36 | 337.85 | 748.97 | 337.85 |
| 751.34 | 337.81 | 752.62 | 337.81 | 755.32 | 337.79 | 757.83 | 337.72 | 758.67 | 337.71 |
| 761.06 | 337.7 | 762.38 | 337.69 | 764.49 | 337.64 | 766.21 | 337.62 | 772.2 | 337.49 |
| 773.75 | 337.45 | 779.42 | 337.25 | 783.27 | 336.86 | 784 | 336.79 | 785.96 | 336.43 |
| 800.75 | 335.91 | 803.65 | 335.82 | 806.3 | 335.71 | 807.68 | 335.66 | 809.41 | 335.61 |
| 810.85 | 335.54 | 812.91 | 335.5 | 813.34 | 335.5 | 814.16 | 335.55 | 814.53 | 335.6 |
| 817.34 | 335.79 | 817.69 | 335.73 | 819.61 | 335.59 | 820.95 | 335.61 | 821.55 | 335.69 |
| 824.5 | 336.06 | 825.52 | 336.17 | 827.38 | 336.33 | 834.54 | 336.47 | 834.86 | 336.43 |
| 835.66 | 336.39 | 836.27 | 336.34 | 837.32 | 336.29 | 838.86 | 336.2 | 840.3 | 336.09 |
| 844.21 | 335.81 | 846.03 | 335.82 | 847.14 | 335.81 | 847.95 | 335.79 | 850.42 | 335.66 |
| 851.37 | 335.62 | 854.42 | 335.74 | 864.86 | 335.57 | 869.15 | 335.32 | 876.83 | 334.85 |
| 881.19 | 334.58 | 883.08 | 334.47 | 888.88 | 334.19 | 889.85 | 334.13 | 894.05 | 334.01 |
| 897.66 | 333.94 | 898.71 | 333.93 | 901.93 | 333.87 | 904.77 | 333.87 | 907.41 | 333.97 |
| 909.89 | 334.01 | 911.7 | 333.88 | 913.63 | 333.75 | 915.07 | 333.66 | 917.43 | 333.54 |
| 919.91 | 333.45 | 920.96 | 333.42 | 924.08 | 333.43 | 925.6 | 333.46 | 927.36 | 333.48 |
| 928.17 | 333.48 | 931.42 | 333.44 | 934.84 | 333.37 | 942.6 | 333.4 | 943.35 | 333.39 |
| 944.04 | 333.4 | 951.91 | 333.35 | 954.97 | 333.35 | 959.99 | 333.43 | 967.96 | 333.64 |
| 969.63 | 333.69 | 971.11 | 333.75 | 974.43 | 333.82 | 975.16 | 333.83 | 977.96 | 333.83 |
| 983.68 | 333.7 | 987.28 | 333.66 | 987.71 | 333.65 | 991.59 | 333.6 | 992.2 | 333.6 |
| 993 | 333.58 | 996.3 | 333.53 | 996.81 | 333.53 | 997.11 | 333.51 | 997.78 | 333.5 |
| 998.01 | 333.48 | 999.43 | 333.48 | 1000.42 | 333.5 | 1012.46 | 333.53 | 1019.15 | 333.52 |
| 1025.82 | 333.52 | 1031.07 | 333.46 | 1035.03 | 333.36 | 1036.99 | 333.34 | 1038.66 | 333.31 |
| 1040.3 | 333.3 | 1043.98 | 333.23 | 1044.1 | 333.22 | 1047.14 | 333.13 | 1047.97 | 333.12 |
| 1056.36 | 332.9 | 1058.4 | 332.83 | 1059.67 | 332.83 | 1060.47 | 332.82 | 1066.38 | 332.85 |
| 1066.53 | 332.86 | 1069.08 | 332.91 | 1069.69 | 332.93 | 1073 | 333.02 | 1075.25 | 333.19 |
| 1075.94 | 333.25 | 1076.67 | 333.83 | 1077.7 | 334.81 | 1079.4 | 335.44 | 1080.2 | 335.54 |
| 1082.42 | 335.74 | 1082.73 | 335.76 | 1089.38 | 335.97 | 1090.79 | 336.02 | 1091.3 | 336.03 |
| 1092.58 | 336.03 | 1095.44 | 335.98 | 1095.49 | 335.96 | 1097.39 | 335.96 | 1098.57 | 335.98 |
| 1098.99 | 336.01 | 1102.56 | 336.34 | 1105.95 | 336.71 | 1106.52 | 336.78 | 1108.71 | 337.22 |
| 1108.86 | 337.24 | 1111.54 | 337.69 | 1111.64 | 337.7 | 1112.91 | 338.03 | 1113.77 | 338.26 |
| 1115.55 | 338.69 | 1115.95 | 338.8 | 1116.8 | 339.17 | 1117.07 | 339.45 | 1117.12 | 339.57 |
| 1117.32 | 339.73 | 1117.59 | 340.02 | 1117.7 | 340.5 | 1118.02 | 340.82 | 1119.06 | 340.95 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1124.88 | 341.53 | 1128.97 | 342.09 | 1130.69 | 342.31 | 1132.44 | 342.57 | 1134.59 | 342.86 |
| 1139.47 | 343.62 | 1142.75 | 344.2 | 1143.76 | 344.37 | 1144.98 | 344.64 | 1147.51 | 345.12 |
| 1149.15 | 345.44 | 1150.21 | 345.68 | 1151.1 | 345.87 | 1154.13 | 346.61 | 1156.33 | 347.16 |
| 1157.04 | 347.35 | 1159.62 | 348.09 | 1162.29 | 348.82 | 1164.23 | 348.98 | 1174.66 | 349.02 |
| 1176.43 | 348.97 | 1176.57 | 348.98 | 1178.16 | 349.02 | 1178.96 | 349 | 1179.1 | 349.01 |
| 1181.67 | 348.96 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 671.58 | .04 | 1112.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 671.58 | 1112.91 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4501.65*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.99 | 3.84 | 348.95 | 9.35 | 348.8 | 9.81 | 348.81 | 11.43 | 348.76 |
| 13.55 | 348.76 | 14.74 | 348.74 | 19.24 | 348.78 | 20.3 | 348.78 | 21.82 | 348.8 |
| 22.81 | 348.8 | 27.47 | 348.73 | 27.96 | 348.72 | 44.36 | 348.26 | 57.27 | 347.96 |
| 59.35 | 347.94 | 59.54 | 347.96 | 60.63 | 347.96 | 64.5 | 347.92 | 66.86 | 347.86 |
| 68.18 | 347.85 | 69.2 | 347.83 | 72.81 | 347.81 | 73.59 | 347.81 | 74.46 | 347.79 |
| 76.42 | 347.71 | 76.92 | 347.68 | 79.13 | 347.61 | 79.9 | 347.57 | 81.2 | 347.52 |
| 82.8 | 347.48 | 84.36 | 347.43 | 91.13 | 347.24 | 92.22 | 347.16 | 93.81 | 347.1 |
| 96.8 | 347.06 | 97.95 | 347.05 | 99.25 | 347.05 | 101.05 | 347.11 | 103.03 | 347.07 |
| 103.9 | 347.03 | 107.45 | 346.89 | 110.14 | 346.89 | 111.62 | 346.87 | 115.95 | 346.79 |
| 118.19 | 346.8 | 118.59 | 346.81 | 119.19 | 346.87 | 119.65 | 346.85 | 119.91 | 346.8 |
| 120.38 | 346.77 | 122.26 | 346.68 | 124.07 | 346.6 | 126.41 | 346.52 | 132.07 | 346.22 |
| 133.09 | 346.18 | 137.96 | 345.97 | 141.47 | 345.83 | 142.51 | 345.77 | 144.05 | 345.73 |
| 145.5 | 345.68 | 146.73 | 345.66 | 148.82 | 345.61 | 150.79 | 345.62 | 152.48 | 345.6 |
| 153.38 | 345.6 | 154.51 | 345.57 | 156.79 | 345.54 | 158.32 | 345.49 | 159.6 | 345.46 |
| 161.04 | 345.44 | 163.75 | 345.41 | 164.84 | 345.41 | 166.64 | 345.42 | 168.71 | 345.41 |
| 173.05 | 345.36 | 173.45 | 345.36 | 175.25 | 345.33 | 177.72 | 345.28 | 179.54 | 345.23 |
| 183.09 | 345.11 | 188.8 | 344.85 | 195.43 | 344.62 | 197.16 | 344.63 | 201.58 | 344.44 |
| 203.15 | 344.36 | 204.69 | 344.27 | 205.94 | 344.18 | 207.96 | 344.15 | 209.23 | 344.12 |
| 211.17 | 344.05 | 215.97 | 343.87 | 216.25 | 343.8 | 216.61 | 343.77 | 217.35 | 343.77 |
| 218.57 | 343.79 | 224.06 | 343.9 | 225.74 | 343.93 | 228.82 | 343.96 | 231.42 | 343.89 |
| 233.13 | 343.81 | 233.99 | 343.76 | 235.15 | 343.71 | 238.15 | 343.57 | 242.81 | 343.39 |
| 243.79 | 343.36 | 252.52 | 343.11 | 254.42 | 343.08 | 256 | 343.08 | 257.17 | 343.07 |
| 257.73 | 343.1 | 258.75 | 343.08 | 259.54 | 343.08 | 262.96 | 343.06 | 263.85 | 343.05 |
| 267.3 | 343.07 | 267.94 | 343.05 | 269.6 | 343.08 | 269.95 | 343.04 | 271.38 | 343.07 |
| 271.72 | 343.06 | 272.63 | 343.07 | 273.87 | 343.1 | 275.15 | 343.14 | 276.54 | 343.09 |
| 276.92 | 343.1 | 277.31 | 343.07 | 278.32 | 343.02 | 280.04 | 342.86 | 281.29 | 342.78 |
| 283 | 342.73 | 283.23 | 342.73 | 286.33 | 342.53 | 287.63 | 342.44 | 287.81 | 342.44 |
| 289.15 | 342.51 | 291.11 | 342.57 | 292.37 | 342.6 | 293.95 | 342.61 | 296.27 | 342.54 |
| 297.18 | 342.5 | 298.7 | 342.42 | 299.51 | 342.39 | 301.03 | 342.36 | 302.67 | 342.35 |
| 303.67 | 342.33 | 306.02 | 342.23 | 307.54 | 342.17 | 308.77 | 342.13 | 311.05 | 342.01 |
| 311.6 | 341.96 | 313 | 341.92 | 314.66 | 341.9 | 321.82 | 341.9 | 324.29 | 341.92 |
| 327.57 | 341.77 | 328.91 | 341.72 | 330.55 | 341.7 | 331.36 | 341.66 | 332.54 | 341.63 |
| 354.06 | 341.38 | 357.18 | 341.23 | 357.38 | 341.23 | 361.18 | 341.13 | 364.29 | 340.98 |
| 368.36 | 340.9 | 373.71 | 340.8 | 374.17 | 340.78 | 378.06 | 340.69 | 380.02 | 340.64 |
| 381.59 | 340.61 | 383.15 | 340.62 | 384.26 | 340.59 | 391.09 | 340.47 | 393.66 | 340.48 |
| 394.75 | 340.47 | 395.59 | 340.45 | 397.98 | 340.48 | 400.89 | 340.38 | 403.18 | 340.41 |
| 404.7 | 340.44 | 408.24 | 340.44 | 411.37 | 340.4 | 412.77 | 340.4 | 415.01 | 340.39 |
| 415.4 | 340.41 | 416.13 | 340.41 | 417.54 | 340.38 | 420.61 | 340.3 | 422.05 | 340.29 |
| 424.81 | 340.32 | 425.77 | 340.32 | 426.96 | 340.3 | 429.29 | 340.23 | 429.85 | 340.2 |
| 432.67 | 340.03 | 436.17 | 339.95 | 439.15 | 339.89 | 458.16 | 339.46 | 481.31 | 338.73 |
| 481.76 | 338.73 | 484.75 | 338.96 | 485.34 | 338.96 | 485.74 | 338.9 | 492.89 | 338.62 |
| 492.99 | 338.6 | 493.77 | 338.59 | 494.68 | 338.61 | 496.97 | 338.68 | 497.89 | 338.75 |
| 498.44 | 338.77 | 499.42 | 338.77 | 500.74 | 338.75 | 502.04 | 338.72 | 503.22 | 338.73 |
| 504.21 | 338.72 | 505.71 | 338.68 | 507.06 | 338.66 | 511.32 | 338.65 | 513.04 | 338.65 |
| 513.35 | 338.66 | 513.75 | 338.62 | 515.51 | 338.56 | 518.24 | 338.5 | 519.98 | 338.47 |
| 524.43 | 338.43 | 524.62 | 338.44 | 525.86 | 338.44 | 530.64 | 338.4 | 532.36 | 338.37 |
| 535.96 | 338.33 | 539.08 | 338.29 | 540.25 | 338.26 | 541.54 | 338.24 | 544.88 | 338.25 |
| 546.29 | 338.23 | 550 | 338.24 | 551.41 | 338.23 | 551.93 | 338.25 | 553.86 | 338.24 |
| 555.14 | 338.22 | 561.64 | 338.1 | 565.82 | 338.04 | 566.96 | 338.05 | 568.85 | 338.05 |
| 571.69 | 338.02 | 573.22 | 337.99 | 574.09 | 337.98 | 580.19 | 337.89 | 586.98 | 337.81 |
| 594.56 | 337.78 | 595.57 | 337.78 | 596.38 | 337.76 | 599.21 | 337.75 | 610.01 | 337.73 |
| 613.45 | 337.72 | 616.76 | 337.74 | 617.22 | 337.75 | 628.64 | 337.62 | 628.75 | 337.62 |
| 651.79 | 337.39 | 652.25 | 337.38 | 653 | 337.33 | 654.77 | 337.3 | 655.21 | 337.31 |
| 656.39 | 337.31 | 659.6 | 337.37 | 661.84 | 337.65 | 662.54 | 337.71 | 666.64 | 337.73 |
| 668.44 | 337.77 | 671.5 | 337.77 | 672.36 | 337.79 | 674.34 | 337.79 | 674.77 | 337.78 |
| 675.73 | 337.72 | 677.39 | 337.63 | 677.86 | 337.62 | 680.31 | 337.54 | 681.7 | 337.52 |
| 684.24 | 337.44 | 686.14 | 337.41 | 686.96 | 337.41 | 692.12 | 337.45 | 694.03 | 337.47 |
| 694.42 | 337.46 | 697.81 | 337.48 | 698.79 | 337.47 | 701.55 | 337.51 | 702.63 | 337.52 |
| 703.1 | 337.55 | 705 | 337.6 | 708.23 | 337.66 | 710.25 | 337.68 | 711.22 | 337.72 |
| 712.15 | 337.72 | 712.98 | 337.67 | 714.97 | 337.65 | 716.18 | 337.62 | 718.14 | 337.55 |
| 718.7 | 337.52 | 718.97 | 337.53 | 719.54 | 337.5 | 720.5 | 337.43 | 725.81 | 337.32 |
| 730.11 | 337.35 | 735.25 | 337.38 | 737.57 | 337.42 | 740.45 | 337.43 | 741.37 | 337.45 |
| 743.14 | 337.45 | 746.56 | 337.51 | 749.72 | 337.48 | 750.31 | 337.48 | 752.63 | 337.45 |
| 753.88 | 337.45 | 756.52 | 337.42 | 758.97 | 337.36 | 759.79 | 337.35 | 763.4 | 337.33 |
| 765.46 | 337.28 | 767.14 | 337.26 | 772.99 | 337.13 | 774.5 | 337.09 | 780.04 | 336.9 |
| 783.79 | 336.52 | 784.51 | 336.46 | 786.42 | 336.12 | 800.86 | 335.59 | 803.69 | 335.5 |
| 807.62 | 335.33 | 808.98 | 335.28 | 809.31 | 335.28 | 810.72 | 335.2 | 812.72 | 335.16 |
| 813.23 | 335.17 | 814 | 335.22 | 814.31 | 335.27 | 817.05 | 335.45 | 817.39 | 335.4 |
| 819.27 | 335.28 | 820.57 | 335.3 | 824.04 | 335.73 | 826.18 | 335.94 | 826.85 | 336 |
| 833.85 | 336.16 | 834.15 | 336.13 | 834.94 | 336.1 | 835.96 | 336.03 | 836.55 | 336.01 |
| 838.06 | 335.93 | 839.46 | 335.84 | 843.28 | 335.58 | 845.73 | 335.58 | 846.93 | 335.55 |
| 850.27 | 335.38 | 852.46 | 335.46 | 853.25 | 335.48 | 863.43 | 335.28 | 867.62 | 335.04 |
| 875.12 | 334.56 | 879.38 | 334.27 | 881.22 | 334.16 | 886.88 | 333.88 | 887.83 | 333.82 |
| 891.93 | 333.69 | 895.46 | 333.62 | 896.47 | 333.61 | 899.62 | 333.55 | 902.39 | 333.54 |
| 904.97 | 333.64 | 907.39 | 333.67 | 909.16 | 333.55 | 911.36 | 333.41 | 912.45 | 333.35 |
| 914.75 | 333.25 | 917.18 | 333.17 | 918.2 | 333.15 | 921.25 | 333.17 | 924.44 | 333.22 |
| 928.41 | 333.17 | 931.74 | 333.08 | 939.32 | 333.1 | 940.05 | 333.09 | 940.73 | 333.1 |
| 948.41 | 333.05 | 951.39 | 333.05 | 956.29 | 333.11 | 964.07 | 333.31 | 965.7 | 333.35 |
| 967.51 | 333.42 | 970.39 | 333.48 | 971.1 | 333.49 | 973.84 | 333.49 | 974.73 | 333.48 |
| 979.42 | 333.37 | 982.93 | 333.34 | 983.36 | 333.33 | 987.14 | 333.28 | 987.74 | 333.28 |
| 988.51 | 333.26 | 991.74 | 333.21 | 992.24 | 333.21 | 993.18 | 333.18 | 993.41 | 333.16 |
| 994.79 | 333.16 | 995.76 | 333.18 | 1008 | 333.2 | 1014.05 | 333.18 | 1014.75 | 333.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1015.31 | 333.18 | 1016.25 | 333.17 | 1020.55 | 333.17 | 1025.68 | 333.11 | 1029.54 | 333.02 |
| 1031.46 | 332.99 | 1034.05 | 332.96 | 1034.68 | 332.96 | 1037.19 | 332.91 | 1038.39 | 332.87 |
| 1042.17 | 332.77 | 1050.36 | 332.55 | 1052.36 | 332.49 | 1053.59 | 332.49 | 1054.38 | 332.48 |
| 1060.14 | 332.51 | 1060.29 | 332.52 | 1062.78 | 332.57 | 1063.38 | 332.6 | 1065.59 | 332.65 |
| 1066.61 | 332.68 | 1067.61 | 332.76 | 1068.8 | 332.84 | 1069.47 | 332.9 | 1070.04 | 333.33 |
| 1070.41 | 333.64 | 1070.55 | 333.79 | 1071.19 | 334.38 | 1072.85 | 334.98 | 1073.63 | 335.07 |
| 1075.8 | 335.29 | 1076.1 | 335.31 | 1082.59 | 335.5 | 1083.96 | 335.55 | 1084.46 | 335.56 |
| 1085.71 | 335.55 | 1088.5 | 335.47 | 1088.55 | 335.45 | 1090.81 | 335.45 | 1091.55 | 335.47 |
| 1092.27 | 335.53 | 1095.44 | 335.85 | 1099 | 336.29 | 1099.31 | 336.34 | 1101.59 | 336.83 |
| 1104.21 | 337.31 | 1104.3 | 337.32 | 1105.55 | 337.69 | 1107.11 | 338.15 | 1108.11 | 338.42 |
| 1108.49 | 338.55 | 1109.32 | 338.96 | 1109.58 | 339.29 | 1109.64 | 339.42 | 1109.83 | 339.62 |
| 1110.09 | 339.95 | 1110.19 | 340.53 | 1110.5 | 340.9 | 1111.51 | 341.02 | 1117.17 | 341.57 |
| 1121.13 | 342.11 | 1122.81 | 342.32 | 1124.51 | 342.56 | 1126.59 | 342.84 | 1131.33 | 343.54 |
| 1134.51 | 344.09 | 1135.5 | 344.24 | 1136.67 | 344.49 | 1139.14 | 344.94 | 1140.72 | 345.24 |
| 1142.26 | 345.57 | 1142.62 | 345.64 | 1144.8 | 346.16 | 1145.56 | 346.33 | 1147.69 | 346.84 |
| 1148.38 | 347.02 | 1150.89 | 347.71 | 1151.61 | 347.89 | 1153.48 | 348.39 | 1155.36 | 348.54 |
| 1165.48 | 348.55 | 1167.2 | 348.49 | 1168.88 | 348.55 | 1168.95 | 348.53 | 1169.8 | 348.54 |
| 1172.29 | 348.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 674.77 | .04 | 1105.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 674.77 | 1105.55 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4482.39*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.07 | 1.23 | 349.06 | 3.86 | 349.02 | 9.39 | 348.87 | 9.85 | 348.87 |
| 11.49 | 348.82 | 13.62 | 348.82 | 14.81 | 348.8 | 19.33 | 348.83 | 20.39 | 348.82 |
| 21.92 | 348.84 | 22.92 | 348.84 | 28.1 | 348.75 | 44.57 | 348.29 | 57.54 | 347.99 |
| 59.63 | 347.97 | 59.82 | 348 | 60.92 | 348 | 64.8 | 347.96 | 65.33 | 347.95 |
| 67.18 | 347.89 | 69.53 | 347.85 | 73.15 | 347.82 | 73.94 | 347.82 | 74.82 | 347.8 |
| 76.78 | 347.71 | 77.28 | 347.68 | 79.5 | 347.61 | 80.28 | 347.57 | 81.59 | 347.52 |
| 83.19 | 347.48 | 84.76 | 347.43 | 91.57 | 347.23 | 92.66 | 347.13 | 93.55 | 347.09 |
| 95.79 | 347.04 | 98.42 | 347.02 | 99.72 | 347.02 | 101.53 | 347.1 | 103.51 | 347.07 |
| 104.39 | 347.02 | 106.96 | 346.91 | 107.86 | 346.89 | 107.96 | 346.87 | 109.96 | 346.88 |
| 112.15 | 346.85 | 116.5 | 346.75 | 116.82 | 346.76 | 119.15 | 346.76 | 119.76 | 346.81 |
| 120.21 | 346.8 | 120.48 | 346.75 | 120.95 | 346.72 | 124.86 | 346.53 | 125.47 | 346.52 |
| 127.01 | 346.45 | 132.7 | 346.14 | 133.72 | 346.09 | 138.62 | 345.87 | 142.14 | 345.72 |
| 143.19 | 345.65 | 144.31 | 345.62 | 144.73 | 345.62 | 146.19 | 345.56 | 149.48 | 345.5 |
| 151.5 | 345.5 | 152.33 | 345.49 | 154.11 | 345.49 | 155.24 | 345.46 | 157.53 | 345.43 |
| 158.12 | 345.4 | 159.07 | 345.38 | 160.36 | 345.34 | 161.8 | 345.32 | 164.52 | 345.3 |
| 165.62 | 345.3 | 166.5 | 345.32 | 169.51 | 345.31 | 172.28 | 345.29 | 173.87 | 345.26 |
| 175.41 | 345.25 | 178.56 | 345.19 | 180.39 | 345.14 | 183.96 | 345 | 189.69 | 344.72 |
| 196.02 | 344.49 | 196.35 | 344.47 | 197.77 | 344.49 | 199.28 | 344.43 | 202.53 | 344.28 |
| 204.11 | 344.2 | 205.66 | 344.1 | 206.92 | 344 | 207.91 | 343.98 | 208.94 | 343.98 |
| 209.43 | 343.97 | 211.76 | 343.89 | 212.17 | 343.87 | 216.99 | 343.68 | 217.27 | 343.61 |
| 217.63 | 343.58 | 218.38 | 343.58 | 220.6 | 343.61 | 225.12 | 343.7 | 226.8 | 343.72 |
| 229.9 | 343.75 | 232.51 | 343.66 | 234.23 | 343.58 | 235.1 | 343.52 | 236.27 | 343.47 |
| 239.28 | 343.33 | 243.96 | 343.15 | 253.71 | 342.85 | 255.62 | 342.82 | 257.21 | 342.82 |
| 258.39 | 342.8 | 258.95 | 342.83 | 259.98 | 342.81 | 262.32 | 342.8 | 265.1 | 342.76 |
| 268.03 | 342.78 | 269.62 | 342.76 | 270.88 | 342.79 | 271.23 | 342.76 | 272.67 | 342.79 |
| 273.01 | 342.78 | 273.92 | 342.79 | 275.17 | 342.82 | 276.45 | 342.87 | 276.69 | 342.87 |
| 277.85 | 342.81 | 278.1 | 342.82 | 279.64 | 342.73 | 280.56 | 342.64 | 281.36 | 342.58 |
| 282.62 | 342.5 | 284.34 | 342.45 | 284.57 | 342.45 | 287.68 | 342.27 | 288.99 | 342.18 |
| 289.17 | 342.18 | 290.52 | 342.24 | 292.49 | 342.3 | 294.85 | 342.33 | 295.79 | 342.31 |
| 297.67 | 342.24 | 298.58 | 342.2 | 301.05 | 342.07 | 302.46 | 342.05 | 305.11 | 342.02 |
| 309 | 341.84 | 310.23 | 341.8 | 311.81 | 341.72 | 313.08 | 341.62 | 314.48 | 341.58 |
| 316.15 | 341.57 | 321.7 | 341.57 | 323.34 | 341.58 | 324.32 | 341.6 | 325.83 | 341.61 |
| 327.33 | 341.54 | 329.12 | 341.44 | 330.46 | 341.39 | 332.11 | 341.37 | 332.93 | 341.33 |
| 334.11 | 341.3 | 355.74 | 341.06 | 359.07 | 340.9 | 362.89 | 340.78 | 366.02 | 340.63 |
| 370.11 | 340.55 | 375.47 | 340.45 | 379.85 | 340.36 | 381.81 | 340.31 | 383.4 | 340.28 |
| 384.97 | 340.29 | 386.07 | 340.26 | 392.94 | 340.14 | 395.53 | 340.14 | 396.62 | 340.13 |
| 397.46 | 340.11 | 399.86 | 340.13 | 403.09 | 340.03 | 405.09 | 340.06 | 406.61 | 340.09 |
| 409.4 | 340.09 | 409.78 | 340.08 | 410.9 | 340.08 | 413.31 | 340.04 | 414.73 | 340.04 |
| 416.97 | 340.03 | 417.36 | 340.05 | 418.1 | 340.06 | 419.51 | 340.02 | 422.6 | 339.94 |
| 424.05 | 339.92 | 426.82 | 339.98 | 427.79 | 339.98 | 428.98 | 339.96 | 430.59 | 339.92 |
| 431.89 | 339.85 | 433.91 | 339.73 | 434.71 | 339.67 | 441.23 | 339.54 | 460.32 | 339.14 |
| 483.59 | 338.41 | 484.04 | 338.42 | 487.04 | 338.62 | 487.63 | 338.62 | 488.03 | 338.56 |
| 495.22 | 338.29 | 495.32 | 338.27 | 496.56 | 338.27 | 497.02 | 338.28 | 498.92 | 338.35 |
| 500.25 | 338.44 | 500.8 | 338.46 | 501.79 | 338.47 | 504.41 | 338.41 | 505.6 | 338.41 |
| 506.6 | 338.4 | 508.11 | 338.35 | 509.46 | 338.33 | 513.74 | 338.31 | 515.78 | 338.31 |
| 516.18 | 338.27 | 517.95 | 338.21 | 520.69 | 338.15 | 522.44 | 338.12 | 526.91 | 338.08 |
| 527.1 | 338.1 | 528.34 | 338.1 | 533.15 | 338.06 | 534.88 | 338.03 | 538.5 | 337.99 |
| 539.11 | 337.98 | 541.63 | 337.96 | 542.81 | 337.93 | 544.74 | 337.9 | 547.33 | 337.92 |
| 548.87 | 337.91 | 552.61 | 337.92 | 553.52 | 337.91 | 555.27 | 337.94 | 556.48 | 337.92 |
| 557.76 | 337.91 | 563.24 | 337.79 | 568.49 | 337.7 | 569.64 | 337.72 | 571.54 | 337.72 |
| 574.39 | 337.69 | 575.93 | 337.65 | 576.81 | 337.65 | 581.59 | 337.56 | 582.93 | 337.54 |
| 589.75 | 337.45 | 597.37 | 337.4 | 598.38 | 337.41 | 598.46 | 337.4 | 601.44 | 337.36 |
| 602.04 | 337.36 | 612.9 | 337.33 | 616.35 | 337.31 | 619.67 | 337.33 | 620.14 | 337.34 |
| 631.62 | 337.22 | 631.72 | 337.22 | 654.87 | 337.01 | 656.09 | 336.95 | 657.87 | 336.92 |
| 658.31 | 336.93 | 659.5 | 336.93 | 662.72 | 336.99 | 664.97 | 337.3 | 665.68 | 337.37 |
| 669.79 | 337.39 | 671.6 | 337.43 | 674.68 | 337.43 | 675.54 | 337.45 | 677.53 | 337.45 |
| 677.96 | 337.44 | 679.97 | 337.31 | 680.98 | 337.26 | 682.09 | 337.22 | 683.36 | 337.19 |
| 684.72 | 337.17 | 687.2 | 337.09 | 689.06 | 337.07 | 689.86 | 337.07 | 693.6 | 337.09 |
| 695.84 | 337.11 | 697.13 | 337.11 | 700.44 | 337.13 | 701.39 | 337.12 | 704.09 | 337.16 |
| 705.14 | 337.17 | 705.59 | 337.19 | 707.45 | 337.24 | 713.02 | 337.33 | 713.52 | 337.35 |
| 714.42 | 337.35 | 714.84 | 337.32 | 716.15 | 337.29 | 717.18 | 337.28 | 718.36 | 337.25 |
| 720.27 | 337.19 | 720.82 | 337.16 | 721.08 | 337.17 | 721.64 | 337.14 | 722.57 | 337.07 |
| 727.75 | 336.97 | 731.95 | 337 | 736.96 | 337.03 | 739.22 | 337.06 | 742.04 | 337.07 |
| 742.93 | 337.09 | 744.66 | 337.09 | 747.99 | 337.15 | 751.08 | 337.12 | 751.66 | 337.12 |
| 753.91 | 337.09 | 755.14 | 337.09 | 757.71 | 337.06 | 760.9 | 336.99 | 763.17 | 336.98 |
| 764.43 | 336.97 | 766.44 | 336.92 | 768.08 | 336.9 | 773.78 | 336.78 | 780.66 | 336.55 |
| 785.01 | 336.12 | 786.88 | 335.8 | 800.97 | 335.27 | 802.81 | 335.21 | 806.25 | 335.07 |
| 807.57 | 335 | 809.04 | 334.95 | 810.58 | 334.87 | 812.54 | 334.82 | 813.03 | 334.83 |
| 813.69 | 334.87 | 814.09 | 334.93 | 816.76 | 335.11 | 817.09 | 335.06 | 818.92 | 334.96 |
| 820.2 | 334.98 | 821.68 | 335.17 | 823.58 | 335.4 | 824.55 | 335.5 | 825.67 | 335.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 826.32 | 335.67 | 833.15 | 335.86 | 833.44 | 335.83 | 834.65 | 335.78 | 835.09 | 335.75 |
| 835.79 | 335.73 | 837.26 | 335.66 | 838.62 | 335.58 | 842.35 | 335.34 | 844.88 | 335.34 |
| 845.92 | 335.31 | 848.27 | 335.19 | 849.16 | 335.15 | 851.31 | 335.22 | 852.07 | 335.23 |
| 862.01 | 335 | 866.1 | 334.75 | 873.41 | 334.26 | 877.57 | 333.97 | 879.36 | 333.86 |
| 884.89 | 333.57 | 885.81 | 333.51 | 889.81 | 333.37 | 894.24 | 333.28 | 897.31 | 333.23 |
| 900.02 | 333.22 | 902.26 | 333.3 | 902.53 | 333.3 | 904.89 | 333.34 | 906.62 | 333.22 |
| 909.83 | 333.05 | 912.08 | 332.95 | 914.44 | 332.89 | 915.43 | 332.87 | 918.41 | 332.9 |
| 921.53 | 332.96 | 922.3 | 332.95 | 925.4 | 332.89 | 928.65 | 332.79 | 936.05 | 332.8 |
| 936.75 | 332.79 | 937.42 | 332.8 | 944.91 | 332.75 | 947.82 | 332.74 | 952.6 | 332.8 |
| 960.19 | 332.97 | 961.78 | 333.01 | 963.54 | 333.08 | 966.35 | 333.14 | 967.04 | 333.15 |
| 969.72 | 333.16 | 973.1 | 333.09 | 973.84 | 333.07 | 975.16 | 333.05 | 978.59 | 333.01 |
| 979 | 333.01 | 982.7 | 332.96 | 984.03 | 332.95 | 987.18 | 332.89 | 987.67 | 332.89 |
| 988.81 | 332.85 | 990.16 | 332.84 | 991.1 | 332.86 | 1003.04 | 332.86 | 1008.94 | 332.84 |
| 1009.62 | 332.83 | 1011.09 | 332.83 | 1015.29 | 332.82 | 1020.29 | 332.76 | 1024.06 | 332.67 |
| 1025.93 | 332.65 | 1027.52 | 332.62 | 1028.64 | 332.61 | 1029.07 | 332.62 | 1031.52 | 332.57 |
| 1032.69 | 332.53 | 1035.59 | 332.44 | 1036.38 | 332.43 | 1044.37 | 332.21 | 1044.4 | 332.2 |
| 1046.31 | 332.15 | 1048.29 | 332.13 | 1053.9 | 332.17 | 1054.05 | 332.18 | 1056.48 | 332.23 |
| 1057.06 | 332.26 | 1059.22 | 332.31 | 1060.21 | 332.34 | 1061.19 | 332.42 | 1063 | 332.55 |
| 1063.7 | 333.07 | 1064.67 | 333.94 | 1066.3 | 334.51 | 1067.06 | 334.61 | 1069.47 | 334.86 |
| 1075.79 | 335.04 | 1077.14 | 335.09 | 1078.84 | 335.06 | 1081.56 | 334.96 | 1081.6 | 334.94 |
| 1083.81 | 334.93 | 1084.53 | 334.95 | 1085.24 | 335.01 | 1088.33 | 335.36 | 1091.56 | 335.81 |
| 1092.11 | 335.89 | 1094.18 | 336.38 | 1096.88 | 336.93 | 1096.97 | 336.94 | 1098.18 | 337.35 |
| 1098.23 | 337.38 | 1099.69 | 337.86 | 1100.67 | 338.16 | 1101.04 | 338.3 | 1101.85 | 338.74 |
| 1102.1 | 339.13 | 1102.15 | 339.28 | 1102.33 | 339.5 | 1102.59 | 339.88 | 1102.69 | 340.56 |
| 1102.99 | 340.98 | 1103.97 | 341.1 | 1109.45 | 341.62 | 1113.3 | 342.13 | 1115.41 | 342.39 |
| 1116.57 | 342.55 | 1118.59 | 342.81 | 1123.19 | 343.46 | 1126.27 | 343.97 | 1127.23 | 344.11 |
| 1128.37 | 344.35 | 1130.76 | 344.77 | 1132.29 | 345.05 | 1134.13 | 345.41 | 1136.25 | 345.89 |
| 1136.99 | 346.05 | 1139.06 | 346.53 | 1139.72 | 346.69 | 1142.85 | 347.5 | 1144.66 | 347.95 |
| 1146.49 | 348.09 | 1156.31 | 348.08 | 1157.97 | 348.01 | 1159.6 | 348.07 | 1160.49 | 348.07 |
| 1162.91 | 348.03 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 677.96 | .04 | 1098.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 677.96 | 1098.18 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4463.13*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.15 | 2.96 | 349.1 | 3.88 | 349.09 | 9.43 | 348.94 | 9.9 | 348.94 |
| 11.54 | 348.89 | 13.68 | 348.88 | 14.88 | 348.86 | 19.42 | 348.88 | 20.49 | 348.87 |
| 23.02 | 348.88 | 27.04 | 348.8 | 27.73 | 348.8 | 28.23 | 348.78 | 44.78 | 348.32 |
| 57.81 | 348.02 | 59.91 | 348 | 60.1 | 348.04 | 65.11 | 347.99 | 65.64 | 347.98 |
| 67.72 | 347.91 | 68.82 | 347.9 | 69.86 | 347.88 | 73.5 | 347.84 | 74.28 | 347.84 |
| 75.17 | 347.81 | 77.14 | 347.71 | 79.87 | 347.61 | 80.65 | 347.57 | 81.97 | 347.52 |
| 83.58 | 347.48 | 92 | 347.21 | 93.09 | 347.1 | 93.99 | 347.05 | 96.24 | 347.01 |
| 97.71 | 347 | 97.84 | 346.99 | 98.88 | 346.99 | 100.19 | 347 | 102 | 347.09 |
| 104 | 347.06 | 107.47 | 346.9 | 108.47 | 346.86 | 111.18 | 346.86 | 112.67 | 346.83 |
| 117.05 | 346.72 | 117.37 | 346.73 | 119.71 | 346.72 | 120.32 | 346.76 | 120.78 | 346.75 |
| 121.05 | 346.7 | 121.52 | 346.67 | 123.42 | 346.58 | 125.25 | 346.48 | 126.06 | 346.46 |
| 127.6 | 346.39 | 133.32 | 346.05 | 139.27 | 345.76 | 142.53 | 345.62 | 144.43 | 345.51 |
| 145.41 | 345.5 | 146.88 | 345.44 | 150.18 | 345.38 | 153.92 | 345.38 | 158.27 | 345.32 |
| 158.87 | 345.29 | 161.11 | 345.23 | 162.56 | 345.21 | 165.29 | 345.19 | 166.4 | 345.19 |
| 168.22 | 345.22 | 170.3 | 345.22 | 173.09 | 345.2 | 174.69 | 345.17 | 176.24 | 345.15 |
| 176.91 | 345.15 | 179.4 | 345.1 | 181.24 | 345.04 | 184.83 | 344.9 | 190.58 | 344.58 |
| 190.86 | 344.58 | 196.95 | 344.34 | 197.28 | 344.32 | 199.03 | 344.34 | 200.22 | 344.28 |
| 203.49 | 344.13 | 205.07 | 344.03 | 206.63 | 343.92 | 207.89 | 343.82 | 208.89 | 343.8 |
| 209.93 | 343.8 | 212.76 | 343.71 | 213.17 | 343.69 | 218.01 | 343.49 | 218.29 | 343.43 |
| 218.66 | 343.4 | 219.41 | 343.39 | 220.64 | 343.41 | 221.64 | 343.4 | 226.18 | 343.49 |
| 227.87 | 343.51 | 230.98 | 343.54 | 234.28 | 343.4 | 235.33 | 343.34 | 236.21 | 343.28 |
| 237.38 | 343.23 | 240.4 | 343.09 | 245.11 | 342.91 | 246.1 | 342.88 | 254.91 | 342.59 |
| 256.83 | 342.56 | 258.42 | 342.55 | 259.6 | 342.53 | 260.17 | 342.56 | 261.2 | 342.54 |
| 262 | 342.54 | 262.81 | 342.52 | 263.56 | 342.52 | 265.6 | 342.47 | 266.35 | 342.47 |
| 269.3 | 342.49 | 270.48 | 342.46 | 271.47 | 342.49 | 272.15 | 342.5 | 272.51 | 342.47 |
| 273.95 | 342.5 | 275.65 | 342.52 | 277.99 | 342.6 | 279.16 | 342.53 | 279.4 | 342.54 |
| 280.83 | 342.45 | 282.69 | 342.3 | 283.96 | 342.22 | 285.68 | 342.17 | 285.91 | 342.17 |
| 290.53 | 341.92 | 291.89 | 341.98 | 293.87 | 342.02 | 295.13 | 342.04 | 296.55 | 342.04 |
| 297.18 | 342.02 | 299.99 | 341.9 | 302.35 | 341.76 | 302.81 | 341.75 | 306.54 | 341.71 |
| 310.45 | 341.51 | 313.28 | 341.39 | 314.25 | 341.3 | 315.04 | 341.26 | 315.96 | 341.24 |
| 317.77 | 341.23 | 319.04 | 341.24 | 319.38 | 341.23 | 323.21 | 341.25 | 324.86 | 341.27 |
| 325.85 | 341.29 | 327.36 | 341.3 | 328.88 | 341.23 | 330.67 | 341.12 | 332.02 | 341.06 |
| 333.68 | 341.05 | 334.5 | 341 | 335.68 | 340.97 | 357.41 | 340.75 | 360.76 | 340.57 |
| 364.6 | 340.44 | 367.74 | 340.27 | 377.24 | 340.11 | 383.61 | 339.98 | 386.08 | 339.95 |
| 386.78 | 339.96 | 387.89 | 339.93 | 391.97 | 339.86 | 393.52 | 339.82 | 395.77 | 339.8 |
| 396.59 | 339.81 | 397.96 | 339.79 | 398.49 | 339.79 | 399.33 | 339.77 | 401.74 | 339.78 |
| 404.99 | 339.68 | 406.79 | 339.71 | 407 | 339.72 | 408.53 | 339.74 | 412.11 | 339.73 |
| 415.26 | 339.68 | 416.68 | 339.68 | 418.93 | 339.67 | 419.26 | 339.69 | 420.07 | 339.7 |
| 424.59 | 339.57 | 426.04 | 339.56 | 426.88 | 339.59 | 428.83 | 339.63 | 430.29 | 339.63 |
| 431 | 339.62 | 432.62 | 339.58 | 433.92 | 339.51 | 436.76 | 339.31 | 440.3 | 339.25 |
| 440.88 | 339.23 | 443.31 | 339.19 | 462.49 | 338.82 | 485.86 | 338.1 | 486.32 | 338.1 |
| 488.39 | 338.23 | 489.33 | 338.28 | 489.93 | 338.28 | 490.33 | 338.23 | 497.55 | 337.96 |
| 497.65 | 337.94 | 498.89 | 337.94 | 501.27 | 338.03 | 501.67 | 338.05 | 502.6 | 338.13 |
| 503.16 | 338.15 | 504.15 | 338.16 | 505.48 | 338.13 | 506.79 | 338.09 | 507.98 | 338.09 |
| 508.98 | 338.07 | 510.5 | 338.02 | 511.86 | 338 | 516.16 | 337.96 | 518.21 | 337.96 |
| 518.61 | 337.93 | 520.39 | 337.87 | 524.9 | 337.77 | 527.02 | 337.75 | 528.59 | 337.75 |
| 529.39 | 337.73 | 529.58 | 337.75 | 530.83 | 337.75 | 535.66 | 337.72 | 537.4 | 337.69 |
| 541.04 | 337.65 | 541.65 | 337.64 | 544.18 | 337.62 | 545.37 | 337.59 | 546.66 | 337.57 |
| 547.31 | 337.57 | 549.91 | 337.59 | 551.45 | 337.58 | 555.21 | 337.6 | 556.13 | 337.59 |
| 557.15 | 337.62 | 559.1 | 337.61 | 560.39 | 337.59 | 565.89 | 337.46 | 566.96 | 337.45 |
| 571.17 | 337.37 | 574.23 | 337.39 | 576.99 | 337.36 | 577.09 | 337.35 | 578.64 | 337.32 |
| 579.53 | 337.31 | 584.33 | 337.21 | 585.68 | 337.19 | 592.53 | 337.08 | 600.18 | 337.03 |
| 601.28 | 337.03 | 602.03 | 337.01 | 604.27 | 336.98 | 604.88 | 336.98 | 615.78 | 336.93 |
| 619.26 | 336.9 | 622.59 | 336.92 | 623.06 | 336.93 | 634.59 | 336.82 | 634.69 | 336.82 |
| 657.96 | 336.62 | 658.42 | 336.61 | 659.18 | 336.57 | 660.97 | 336.54 | 661.41 | 336.55 |
| 662.6 | 336.55 | 665.84 | 336.6 | 667.67 | 336.89 | 668.81 | 337.04 | 672.89 | 337.05 |
| 672.95 | 337.06 | 674.77 | 337.09 | 677.85 | 337.09 | 678.72 | 337.1 | 680.99 | 337.1 |
| 681.16 | 337.09 | 683.11 | 336.96 | 684.09 | 336.91 | 685.18 | 336.87 | 686.42 | 336.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 687.74 | 336.82 | 690.16 | 336.74 | 691.97 | 336.72 | 692.75 | 336.72 | 696.4 | 336.74 |
| 698.58 | 336.76 | 699.84 | 336.76 | 703.07 | 336.78 | 704 | 336.77 | 706.63 | 336.81 |
| 707.65 | 336.81 | 708.09 | 336.84 | 709.9 | 336.88 | 713.8 | 336.93 | 715.33 | 336.96 |
| 715.82 | 336.98 | 716.64 | 336.98 | 717.11 | 336.95 | 720.54 | 336.89 | 722.4 | 336.83 |
| 722.94 | 336.8 | 723.19 | 336.81 | 724.46 | 336.74 | 724.65 | 336.72 | 729.7 | 336.63 |
| 733.79 | 336.66 | 738.67 | 336.68 | 744.49 | 336.73 | 746.77 | 336.73 | 749.43 | 336.78 |
| 752.44 | 336.75 | 753 | 336.75 | 755.2 | 336.72 | 756.4 | 336.72 | 758.9 | 336.7 |
| 762.01 | 336.63 | 765.45 | 336.61 | 767.41 | 336.56 | 769.01 | 336.54 | 774.57 | 336.42 |
| 776.01 | 336.38 | 781.28 | 336.2 | 784.84 | 335.85 | 785.52 | 335.79 | 787.34 | 335.49 |
| 802.87 | 334.88 | 803.77 | 334.85 | 806.23 | 334.74 | 807.51 | 334.67 | 808.79 | 334.62 |
| 810.45 | 334.53 | 811.43 | 334.5 | 812.76 | 334.49 | 813.48 | 334.54 | 813.87 | 334.59 |
| 816.47 | 334.77 | 816.8 | 334.73 | 818.58 | 334.64 | 819.82 | 334.67 | 820.39 | 334.73 |
| 821.27 | 334.85 | 823.13 | 335.07 | 824.07 | 335.17 | 825.8 | 335.33 | 832.45 | 335.55 |
| 833.48 | 335.51 | 834.34 | 335.46 | 835.02 | 335.45 | 836.46 | 335.4 | 841.42 | 335.1 |
| 843.11 | 335.11 | 844.14 | 335.1 | 844.9 | 335.07 | 847.19 | 334.95 | 848.06 | 334.91 |
| 850.15 | 334.97 | 850.9 | 334.98 | 860.59 | 334.71 | 864.57 | 334.46 | 871.7 | 333.96 |
| 875.75 | 333.66 | 877.51 | 333.55 | 882.89 | 333.26 | 883.79 | 333.2 | 887.69 | 333.05 |
| 892.01 | 332.96 | 895.01 | 332.91 | 895.92 | 332.91 | 897.64 | 332.89 | 899.83 | 332.97 |
| 902.4 | 333 | 906.17 | 332.78 | 909.4 | 332.66 | 911.7 | 332.61 | 912.67 | 332.6 |
| 915.57 | 332.64 | 918.61 | 332.7 | 919.36 | 332.69 | 922.39 | 332.62 | 925.55 | 332.5 |
| 932.77 | 332.5 | 933.45 | 332.49 | 934.1 | 332.5 | 941.41 | 332.44 | 944.24 | 332.44 |
| 948.91 | 332.48 | 956.3 | 332.64 | 957.85 | 332.68 | 959.57 | 332.74 | 962.31 | 332.8 |
| 962.99 | 332.81 | 965.59 | 332.82 | 966.44 | 332.81 | 970.9 | 332.72 | 974.24 | 332.69 |
| 974.65 | 332.69 | 978.25 | 332.64 | 979.55 | 332.63 | 982.62 | 332.57 | 983.09 | 332.57 |
| 984.2 | 332.53 | 985.52 | 332.52 | 986.44 | 332.54 | 998.08 | 332.52 | 1003.83 | 332.49 |
| 1004.5 | 332.48 | 1005.03 | 332.49 | 1005.93 | 332.48 | 1010.02 | 332.47 | 1014.9 | 332.41 |
| 1018.57 | 332.33 | 1020.03 | 332.31 | 1021.94 | 332.27 | 1023.04 | 332.26 | 1023.46 | 332.28 |
| 1026.99 | 332.19 | 1029.81 | 332.1 | 1030.58 | 332.09 | 1038.37 | 331.86 | 1040.27 | 331.8 |
| 1041.45 | 331.8 | 1042.19 | 331.79 | 1047.81 | 331.84 | 1050.17 | 331.89 | 1050.74 | 331.92 |
| 1052.85 | 331.97 | 1053.81 | 332 | 1056.53 | 332.2 | 1057.43 | 332.85 | 1057.56 | 332.98 |
| 1058.16 | 333.5 | 1059.74 | 334.05 | 1060.49 | 334.15 | 1062.83 | 334.41 | 1069 | 334.57 |
| 1070.31 | 334.62 | 1071.97 | 334.58 | 1074.62 | 334.46 | 1074.66 | 334.43 | 1076.15 | 334.42 |
| 1076.43 | 334.41 | 1077.52 | 334.43 | 1078.2 | 334.5 | 1081.22 | 334.87 | 1084.36 | 335.35 |
| 1084.9 | 335.45 | 1085.54 | 335.62 | 1086.92 | 335.96 | 1089.55 | 336.55 | 1089.64 | 336.56 |
| 1090.82 | 337.01 | 1091.6 | 337.32 | 1093.23 | 337.9 | 1093.59 | 338.04 | 1094.37 | 338.53 |
| 1094.61 | 338.96 | 1094.66 | 339.14 | 1094.84 | 339.39 | 1095.08 | 339.81 | 1095.18 | 340.58 |
| 1095.48 | 341.05 | 1096.43 | 341.17 | 1101.74 | 341.67 | 1105.46 | 342.15 | 1106.24 | 342.24 |
| 1108.63 | 342.54 | 1110.59 | 342.78 | 1115.04 | 343.38 | 1118.04 | 343.85 | 1118.96 | 343.99 |
| 1120.06 | 344.2 | 1122.38 | 344.59 | 1123.87 | 344.85 | 1124.84 | 345.04 | 1125.31 | 345.12 |
| 1128.41 | 345.77 | 1130.78 | 346.29 | 1133.42 | 346.94 | 1135.85 | 347.52 | 1137.62 | 347.64 |
| 1147.13 | 347.61 | 1148.74 | 347.53 | 1150.33 | 347.6 | 1151.06 | 347.59 | 1151.19 | 347.61 |
| 1153.53 | 347.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 681.16 | .04 | 1090.82 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 681.16 | 1090.82 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4443.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.23 | 1.24 | 349.21 | 2.98 | 349.17 | 3.89 | 349.16 | 9.48 | 349.01 |
| 9.95 | 349.01 | 11.6 | 348.96 | 13.75 | 348.94 | 14.95 | 348.92 | 19.51 | 348.92 |
| 20.58 | 348.91 | 23.13 | 348.92 | 27.17 | 348.84 | 28.36 | 348.82 | 44.99 | 348.35 |
| 58.08 | 348.06 | 59.28 | 348.04 | 60.19 | 348.04 | 60.38 | 348.08 | 65.41 | 348.03 |
| 65.95 | 348.02 | 68.04 | 347.94 | 70.19 | 347.9 | 73.84 | 347.85 | 74.63 | 347.85 |
| 77.5 | 347.71 | 80.25 | 347.61 | 81.03 | 347.57 | 82.36 | 347.52 | 83.97 | 347.48 |
| 85.56 | 347.42 | 92.43 | 347.19 | 93.53 | 347.07 | 93.92 | 347.04 | 95.14 | 347 |
| 98.17 | 346.96 | 99.34 | 346.96 | 100.66 | 346.97 | 102.48 | 347.09 | 104.49 | 347.06 |
| 105.37 | 347.01 | 107.97 | 346.88 | 108.97 | 346.84 | 111 | 346.85 | 113.2 | 346.81 |
| 117.6 | 346.69 | 120.27 | 346.67 | 120.88 | 346.71 | 121.34 | 346.69 | 122.08 | 346.62 |
| 126.03 | 346.41 | 126.65 | 346.4 | 128.2 | 346.33 | 133.95 | 345.96 | 139.92 | 345.66 |
| 143.2 | 345.51 | 144.17 | 345.44 | 144.99 | 345.4 | 146.09 | 345.38 | 147.57 | 345.32 |
| 150.33 | 345.27 | 152.93 | 345.27 | 153.76 | 345.26 | 154.65 | 345.27 | 155.56 | 345.26 |
| 156.7 | 345.23 | 159.01 | 345.21 | 159.61 | 345.18 | 161.87 | 345.11 | 163.32 | 345.09 |
| 166.07 | 345.08 | 167.18 | 345.09 | 169.01 | 345.12 | 171.1 | 345.12 | 173.9 | 345.1 |
| 177.07 | 345.06 | 177.74 | 345.06 | 180.24 | 345.01 | 182.09 | 344.95 | 185.69 | 344.79 |
| 191.48 | 344.45 | 197.87 | 344.19 | 198.2 | 344.18 | 199.63 | 344.2 | 201.15 | 344.13 |
| 204.44 | 343.97 | 206.03 | 343.87 | 207.6 | 343.75 | 208.86 | 343.64 | 209.87 | 343.62 |
| 210.91 | 343.62 | 212.2 | 343.58 | 213.44 | 343.55 | 214.17 | 343.5 | 219.03 | 343.3 |
| 219.32 | 343.24 | 219.68 | 343.21 | 222.42 | 343.21 | 222.68 | 343.2 | 227.24 | 343.28 |
| 228.94 | 343.3 | 232.06 | 343.33 | 235.38 | 343.17 | 236.44 | 343.1 | 237.31 | 343.03 |
| 238.49 | 342.99 | 241.53 | 342.85 | 246.26 | 342.67 | 247.25 | 342.64 | 256.1 | 342.34 |
| 257.18 | 342.31 | 259.63 | 342.28 | 260.82 | 342.26 | 261.39 | 342.29 | 262.43 | 342.27 |
| 264.79 | 342.24 | 266.06 | 342.21 | 266.85 | 342.18 | 267.59 | 342.18 | 270.56 | 342.2 |
| 271.75 | 342.17 | 273.43 | 342.21 | 273.78 | 342.19 | 275.23 | 342.22 | 275.58 | 342.21 |
| 276.95 | 342.24 | 279.29 | 342.33 | 280.46 | 342.25 | 280.71 | 342.25 | 282.14 | 342.16 |
| 284.01 | 342.01 | 285.29 | 341.94 | 287.01 | 341.89 | 287.25 | 341.89 | 290.39 | 341.74 |
| 291.72 | 341.66 | 293.25 | 341.71 | 296.06 | 341.75 | 297.94 | 341.75 | 298.57 | 341.73 |
| 300.47 | 341.65 | 301.4 | 341.6 | 303.76 | 341.45 | 304.23 | 341.44 | 307.98 | 341.4 |
| 310.37 | 341.27 | 311.91 | 341.18 | 313.16 | 341.13 | 315.13 | 341.03 | 315.72 | 340.96 |
| 316.52 | 340.92 | 317.44 | 340.9 | 319.26 | 340.89 | 324.73 | 340.93 | 326.38 | 340.95 |
| 327.53 | 340.98 | 328.9 | 341 | 329.28 | 340.97 | 330.42 | 340.91 | 332.21 | 340.8 |
| 333.58 | 340.74 | 335.24 | 340.72 | 336.07 | 340.67 | 337.26 | 340.64 | 359.09 | 340.44 |
| 362.45 | 340.24 | 366.31 | 340.09 | 369.46 | 339.92 | 373.59 | 339.85 | 379.01 | 339.77 |
| 383.43 | 339.69 | 385.41 | 339.65 | 387.01 | 339.63 | 388.59 | 339.63 | 389.71 | 339.6 |
| 393.81 | 339.53 | 395.37 | 339.49 | 396.64 | 339.47 | 398.45 | 339.47 | 400.36 | 339.45 |
| 401.2 | 339.42 | 403.62 | 339.44 | 406.89 | 339.34 | 408.1 | 339.35 | 408.91 | 339.37 |
| 410.44 | 339.39 | 413.26 | 339.38 | 414.77 | 339.36 | 417.2 | 339.32 | 420.89 | 339.32 |
| 422.04 | 339.35 | 423.46 | 339.31 | 426.58 | 339.21 | 428.04 | 339.2 | 428.88 | 339.23 |
| 430.83 | 339.28 | 432.31 | 339.29 | 433.02 | 339.28 | 434.65 | 339.24 | 435.95 | 339.17 |
| 438 | 339.02 | 438.81 | 338.95 | 445.39 | 338.84 | 464.66 | 338.51 | 488.14 | 337.79 |
| 488.6 | 337.79 | 490.68 | 337.9 | 491.63 | 337.94 | 492.22 | 337.94 | 492.63 | 337.89 |
| 499.88 | 337.63 | 499.99 | 337.61 | 500.78 | 337.61 | 501.7 | 337.63 | 504.02 | 337.73 |
| 504.96 | 337.81 | 505.51 | 337.84 | 506.51 | 337.85 | 507.84 | 337.82 | 509.16 | 337.78 |
| 510.36 | 337.77 | 511.37 | 337.75 | 514.25 | 337.66 | 518.58 | 337.62 | 520.74 | 337.61 |
| 521.04 | 337.58 | 522.83 | 337.52 | 527.36 | 337.42 | 529.49 | 337.4 | 532.06 | 337.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 533.32 | 337.41 | 539.45 | 337.37 | 539.92 | 337.35 | 543.57 | 337.31 | 544.19 | 337.3 |
| 546.73 | 337.28 | 547.92 | 337.25 | 549.87 | 337.24 | 552.48 | 337.27 | 554.04 | 337.26 |
| 557.81 | 337.29 | 558.73 | 337.27 | 559.76 | 337.3 | 560.5 | 337.31 | 561.72 | 337.29 |
| 562.34 | 337.29 | 563.01 | 337.27 | 568.54 | 337.14 | 569.61 | 337.12 | 573.85 | 337.03 |
| 575.01 | 337.05 | 576.92 | 337.06 | 579.7 | 337.03 | 579.8 | 337.02 | 582.13 | 336.97 |
| 582.24 | 336.98 | 587.07 | 336.86 | 588.42 | 336.84 | 595.31 | 336.71 | 602.99 | 336.66 |
| 604.1 | 336.66 | 604.85 | 336.64 | 607.1 | 336.6 | 607.71 | 336.6 | 618.67 | 336.53 |
| 622.16 | 336.49 | 625.51 | 336.51 | 625.98 | 336.52 | 637.56 | 336.42 | 637.67 | 336.42 |
| 661.04 | 336.24 | 662.27 | 336.19 | 664.07 | 336.16 | 664.51 | 336.17 | 665.71 | 336.17 |
| 668.96 | 336.22 | 671.23 | 336.61 | 671.94 | 336.7 | 676.04 | 336.71 | 676.1 | 336.72 |
| 677.93 | 336.75 | 681.03 | 336.75 | 681.91 | 336.76 | 684.19 | 336.76 | 684.35 | 336.75 |
| 685.01 | 336.71 | 686.25 | 336.61 | 687.21 | 336.56 | 689.48 | 336.48 | 690.76 | 336.46 |
| 693.12 | 336.4 | 694.88 | 336.38 | 699.2 | 336.39 | 701.33 | 336.41 | 702.55 | 336.41 |
| 705.7 | 336.43 | 706.6 | 336.42 | 709.16 | 336.46 | 710.16 | 336.46 | 710.59 | 336.48 |
| 712.35 | 336.52 | 716.15 | 336.56 | 717.65 | 336.59 | 718.12 | 336.61 | 718.92 | 336.61 |
| 719.38 | 336.58 | 720.18 | 336.56 | 721.6 | 336.55 | 724.53 | 336.47 | 725.06 | 336.44 |
| 725.3 | 336.45 | 725.95 | 336.42 | 726.72 | 336.36 | 731.64 | 336.28 | 735.63 | 336.31 |
| 740.38 | 336.33 | 742.53 | 336.35 | 745.21 | 336.36 | 746.06 | 336.37 | 748.28 | 336.37 |
| 750.86 | 336.42 | 753.8 | 336.39 | 754.35 | 336.39 | 756.49 | 336.36 | 757.65 | 336.36 |
| 760.09 | 336.34 | 763.12 | 336.27 | 765.28 | 336.27 | 766.48 | 336.25 | 768.38 | 336.2 |
| 769.94 | 336.18 | 775.36 | 336.06 | 776.76 | 336.02 | 781.89 | 335.85 | 786.03 | 335.46 |
| 787.8 | 335.18 | 801.18 | 334.63 | 803.81 | 334.53 | 806.2 | 334.42 | 807.45 | 334.35 |
| 808.85 | 334.29 | 810.32 | 334.19 | 812.18 | 334.15 | 812.64 | 334.16 | 813.27 | 334.2 |
| 813.65 | 334.25 | 816.19 | 334.42 | 816.5 | 334.39 | 818.24 | 334.32 | 819.45 | 334.35 |
| 820.86 | 334.53 | 822.67 | 334.75 | 825.27 | 335 | 831.75 | 335.25 | 832.03 | 335.22 |
| 833.17 | 335.2 | 835.65 | 335.13 | 836.95 | 335.06 | 840.49 | 334.86 | 842.76 | 334.87 |
| 843.88 | 334.83 | 846.11 | 334.71 | 846.96 | 334.67 | 849 | 334.72 | 849.73 | 334.73 |
| 859.16 | 334.42 | 863.05 | 334.17 | 870 | 333.66 | 873.94 | 333.36 | 875.65 | 333.25 |
| 880.89 | 332.95 | 881.77 | 332.89 | 885.57 | 332.73 | 886.53 | 332.71 | 888.84 | 332.65 |
| 889.78 | 332.64 | 892.7 | 332.58 | 895.27 | 332.57 | 897.65 | 332.64 | 899.9 | 332.67 |
| 901.53 | 332.57 | 903.28 | 332.48 | 904.58 | 332.43 | 906.72 | 332.37 | 908.96 | 332.33 |
| 909.91 | 332.33 | 912.74 | 332.37 | 914.1 | 332.41 | 915.7 | 332.44 | 916.43 | 332.43 |
| 919.37 | 332.35 | 922.46 | 332.21 | 929.49 | 332.2 | 930.79 | 332.2 | 937.91 | 332.14 |
| 940.67 | 332.13 | 945.21 | 332.17 | 952.42 | 332.3 | 953.93 | 332.34 | 955.61 | 332.4 |
| 958.27 | 332.46 | 958.93 | 332.47 | 961.47 | 332.48 | 965.38 | 332.42 | 966.64 | 332.39 |
| 970.29 | 332.37 | 973.8 | 332.32 | 975.07 | 332.31 | 976.42 | 332.27 | 978.52 | 332.25 |
| 979.6 | 332.21 | 980.89 | 332.2 | 981.78 | 332.21 | 992.68 | 332.19 | 993.12 | 332.18 |
| 998.73 | 332.15 | 1000.77 | 332.13 | 1004.76 | 332.12 | 1009.51 | 332.07 | 1013.09 | 331.98 |
| 1014.86 | 331.95 | 1017.44 | 331.92 | 1017.85 | 331.93 | 1020.17 | 331.88 | 1021.29 | 331.85 |
| 1024.04 | 331.76 | 1024.79 | 331.75 | 1032.38 | 331.52 | 1032.41 | 331.51 | 1034.22 | 331.46 |
| 1036.1 | 331.44 | 1041.43 | 331.5 | 1043.87 | 331.55 | 1044.43 | 331.58 | 1046.47 | 331.63 |
| 1047.42 | 331.66 | 1048.34 | 331.73 | 1049.45 | 331.8 | 1050.07 | 331.85 | 1050.94 | 332.46 |
| 1051.06 | 332.58 | 1051.65 | 333.06 | 1053.19 | 333.59 | 1053.92 | 333.69 | 1056.2 | 333.96 |
| 1062.2 | 334.11 | 1063.48 | 334.15 | 1064.71 | 334.12 | 1067.68 | 333.95 | 1067.72 | 333.93 |
| 1069.17 | 333.9 | 1070.5 | 333.91 | 1071.17 | 333.99 | 1074.1 | 334.38 | 1077.4 | 334.94 |
| 1078.32 | 335.18 | 1079.66 | 335.55 | 1082.22 | 336.17 | 1082.3 | 336.18 | 1083.45 | 336.67 |
| 1084.21 | 337.01 | 1085.79 | 337.63 | 1086.13 | 337.79 | 1086.89 | 338.32 | 1087.13 | 338.8 |
| 1087.17 | 339 | 1087.35 | 339.27 | 1087.58 | 339.75 | 1087.68 | 340.61 | 1087.96 | 341.13 |
| 1088.88 | 341.24 | 1094.02 | 341.71 | 1097.63 | 342.17 | 1099.15 | 342.34 | 1100.7 | 342.53 |
| 1102.59 | 342.75 | 1106.9 | 343.31 | 1109.8 | 343.74 | 1110.69 | 343.86 | 1111.76 | 344.06 |
| 1114 | 344.41 | 1115.44 | 344.65 | 1117.16 | 344.96 | 1119.15 | 345.36 | 1119.84 | 345.49 |
| 1122.4 | 346.02 | 1124.68 | 346.56 | 1125.34 | 346.7 | 1127.04 | 347.08 | 1128.76 | 347.19 |
| 1137.96 | 347.15 | 1139.52 | 347.05 | 1141.05 | 347.12 | 1141.76 | 347.12 | 1141.88 | 347.14 |
| 1144.15 | 347.1 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 684.35 | .04 | 1083.45 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 684.35 | 1083.45 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4424.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.3 | 2.99 | 349.25 | 3.91 | 349.23 | 9.52 | 349.08 | 9.99 | 349.08 |
| 11.65 | 349.03 | 13.81 | 349.01 | 15.02 | 348.98 | 19.6 | 348.97 | 20.68 | 348.96 |
| 23.24 | 348.96 | 27.3 | 348.87 | 28.49 | 348.85 | 45.2 | 348.38 | 58.35 | 348.09 |
| 60.47 | 348.07 | 60.66 | 348.11 | 61.78 | 348.11 | 65.72 | 348.06 | 66.25 | 348.05 |
| 68.35 | 347.97 | 69.47 | 347.95 | 70.51 | 347.92 | 74.98 | 347.86 | 75.87 | 347.82 |
| 78.37 | 347.69 | 80.62 | 347.61 | 81.41 | 347.57 | 82.74 | 347.52 | 84.36 | 347.48 |
| 85.13 | 347.45 | 92.86 | 347.17 | 93.97 | 347.04 | 94.36 | 347.01 | 95.58 | 346.97 |
| 97.14 | 346.94 | 98.63 | 346.93 | 99.81 | 346.93 | 101.13 | 346.95 | 102.96 | 347.08 |
| 104.98 | 347.05 | 105.86 | 347 | 108.47 | 346.87 | 109.74 | 346.83 | 111.51 | 346.84 |
| 112.22 | 346.83 | 113.73 | 346.79 | 118.14 | 346.66 | 120.43 | 346.63 | 120.83 | 346.63 |
| 121.45 | 346.66 | 121.91 | 346.64 | 122.18 | 346.6 | 123.71 | 346.52 | 126.42 | 346.36 |
| 127.24 | 346.34 | 128.17 | 346.3 | 128.8 | 346.26 | 134.57 | 345.87 | 135.6 | 345.82 |
| 140.57 | 345.55 | 143.87 | 345.4 | 144.85 | 345.32 | 146.01 | 345.27 | 146.63 | 345.27 |
| 148.26 | 345.2 | 151.59 | 345.15 | 156.28 | 345.15 | 157.43 | 345.12 | 159.75 | 345.1 |
| 161.32 | 345.03 | 162.62 | 345 | 164.08 | 344.98 | 166.84 | 344.97 | 167.96 | 344.98 |
| 168.85 | 345.01 | 169.8 | 345.02 | 171.9 | 345.02 | 174.71 | 345.01 | 176.74 | 344.99 |
| 181.08 | 344.92 | 182.94 | 344.85 | 186.56 | 344.68 | 192.37 | 344.32 | 192.65 | 344.31 |
| 198.79 | 344.04 | 199.13 | 344.03 | 200.56 | 344.05 | 201.12 | 344.04 | 202.09 | 343.98 |
| 205.39 | 343.81 | 206.99 | 343.71 | 208.57 | 343.58 | 209.51 | 343.48 | 210.2 | 343.44 |
| 211.89 | 343.45 | 212.39 | 343.44 | 214.43 | 343.37 | 215.1 | 343.34 | 215.17 | 343.32 |
| 220.05 | 343.11 | 220.71 | 343.03 | 221.46 | 343.02 | 222.74 | 343.02 | 223.71 | 343 |
| 228.3 | 343.08 | 230.01 | 343.1 | 233.15 | 343.11 | 235.8 | 342.97 | 237.54 | 342.86 |
| 238.42 | 342.79 | 239.6 | 342.75 | 242.66 | 342.61 | 247.41 | 342.43 | 248.41 | 342.4 |
| 257.3 | 342.08 | 259.24 | 342.03 | 262.03 | 341.99 | 262.61 | 342.02 | 266.03 | 341.96 |
| 267.94 | 341.9 | 268.84 | 341.89 | 271.82 | 341.91 | 273.01 | 341.88 | 274.7 | 341.92 |
| 275.06 | 341.9 | 276.86 | 341.93 | 278.24 | 341.96 | 280.35 | 342.05 | 280.75 | 342.05 |
| 281.77 | 341.97 | 282.02 | 341.97 | 283.06 | 341.89 | 283.46 | 341.87 | 285.34 | 341.73 |
| 286.62 | 341.66 | 288.35 | 341.61 | 288.59 | 341.61 | 291.74 | 341.47 | 293.08 | 341.4 |
| 294.62 | 341.44 | 297.44 | 341.47 | 299.33 | 341.46 | 299.97 | 341.44 | 301.88 | 341.35 |
| 302.8 | 341.3 | 304.35 | 341.19 | 305.18 | 341.14 | 306.73 | 341.11 | 309.41 | 341.09 |
| 313.36 | 340.86 | 316.22 | 340.72 | 316.94 | 340.66 | 317.19 | 340.62 | 317.99 | 340.58 |
| 318.92 | 340.56 | 320.75 | 340.56 | 322.37 | 340.57 | 326.24 | 340.61 | 327.91 | 340.63 |
| 329.05 | 340.67 | 330.43 | 340.69 | 330.81 | 340.66 | 331.96 | 340.6 | 333.76 | 340.48 |
| 335.13 | 340.41 | 336.8 | 340.4 | 337.63 | 340.34 | 338.83 | 340.31 | 360.76 | 340.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 363.94 | 339.92 | 368.02 | 339.74 | 371.19 | 339.56 | 375.33 | 339.5 | 380.78 | 339.43 |
| 385.22 | 339.35 | 388.81 | 339.3 | 390.4 | 339.3 | 391.53 | 339.27 | 397.21 | 339.16 |
| 399.48 | 339.13 | 400.3 | 339.13 | 402.22 | 339.1 | 403.07 | 339.08 | 405.51 | 339.09 |
| 408.79 | 338.99 | 410 | 339 | 411.82 | 339.04 | 413.12 | 339.04 | 416.71 | 339.01 |
| 419.15 | 338.96 | 420.22 | 338.95 | 420.58 | 338.96 | 422.86 | 338.96 | 423.26 | 338.98 |
| 424 | 338.99 | 425.44 | 338.95 | 428.57 | 338.85 | 430.03 | 338.84 | 432.84 | 338.94 |
| 434.33 | 338.95 | 435.04 | 338.94 | 436.68 | 338.9 | 437.41 | 338.86 | 440.04 | 338.67 |
| 440.85 | 338.59 | 444.43 | 338.54 | 445.01 | 338.52 | 447.46 | 338.49 | 466.83 | 338.19 |
| 490.42 | 337.47 | 490.88 | 337.47 | 492.97 | 337.57 | 493.92 | 337.61 | 494.52 | 337.6 |
| 494.93 | 337.56 | 502.21 | 337.3 | 502.32 | 337.28 | 503.11 | 337.28 | 504.04 | 337.31 |
| 506.37 | 337.42 | 507.31 | 337.5 | 507.87 | 337.53 | 508.87 | 337.54 | 510.21 | 337.51 |
| 511.54 | 337.46 | 512.74 | 337.45 | 513.75 | 337.43 | 515.28 | 337.37 | 516.65 | 337.33 |
| 521 | 337.28 | 523.06 | 337.27 | 523.47 | 337.23 | 525.27 | 337.18 | 528.04 | 337.11 |
| 529.82 | 337.08 | 534.35 | 337.04 | 534.54 | 337.06 | 535.81 | 337.06 | 540.68 | 337.04 |
| 541.97 | 337.03 | 542.44 | 337.01 | 546.11 | 336.98 | 549.28 | 336.94 | 551.78 | 336.9 |
| 552.44 | 336.9 | 555.06 | 336.94 | 556.62 | 336.93 | 560.41 | 336.97 | 561.34 | 336.95 |
| 562.45 | 336.99 | 563.69 | 336.99 | 565.64 | 336.96 | 571.19 | 336.81 | 572.27 | 336.79 |
| 576.52 | 336.7 | 577.69 | 336.72 | 579.61 | 336.73 | 582.4 | 336.7 | 582.5 | 336.69 |
| 584.96 | 336.64 | 590.61 | 336.5 | 591.16 | 336.48 | 598.08 | 336.35 | 605.81 | 336.29 |
| 606.84 | 336.29 | 607.67 | 336.26 | 609.93 | 336.22 | 610.54 | 336.22 | 621.55 | 336.13 |
| 625.06 | 336.09 | 628.9 | 336.1 | 640.64 | 336.02 | 664.12 | 335.85 | 664.59 | 335.84 |
| 665.36 | 335.8 | 666.33 | 335.79 | 668.81 | 335.79 | 672.08 | 335.84 | 674.36 | 336.26 |
| 675.08 | 336.36 | 679.19 | 336.38 | 681.09 | 336.4 | 682.9 | 336.4 | 685.09 | 336.42 |
| 687.38 | 336.42 | 687.54 | 336.41 | 688.18 | 336.37 | 689.39 | 336.26 | 690.32 | 336.21 |
| 692.53 | 336.13 | 693.79 | 336.11 | 696.08 | 336.05 | 697.8 | 336.03 | 702 | 336.04 |
| 704.07 | 336.05 | 708.32 | 336.08 | 709.21 | 336.07 | 712.67 | 336.11 | 713.09 | 336.13 |
| 714.81 | 336.16 | 719.55 | 336.21 | 721.19 | 336.24 | 721.64 | 336.21 | 723.81 | 336.18 |
| 724.9 | 336.16 | 727.17 | 336.08 | 727.41 | 336.09 | 728.62 | 336.03 | 728.79 | 336.01 |
| 733.59 | 335.93 | 737.47 | 335.96 | 742.1 | 335.97 | 744.19 | 335.99 | 746.79 | 336 |
| 747.62 | 336.01 | 749.78 | 336.01 | 752.3 | 336.05 | 755.16 | 336.02 | 755.69 | 336.02 |
| 761.29 | 335.97 | 764.24 | 335.92 | 766.33 | 335.91 | 769.36 | 335.85 | 770.87 | 335.83 |
| 776.15 | 335.7 | 777.51 | 335.66 | 782.51 | 335.5 | 785.89 | 335.18 | 786.54 | 335.13 |
| 788.26 | 334.86 | 801.29 | 334.31 | 803.84 | 334.21 | 806.18 | 334.09 | 807.39 | 334.02 |
| 808.91 | 333.95 | 810.18 | 333.85 | 811.99 | 333.81 | 812.45 | 333.82 | 813.06 | 333.86 |
| 813.43 | 333.91 | 815.9 | 334.08 | 816.2 | 334.05 | 817.9 | 334 | 819.08 | 334.04 |
| 820.45 | 334.21 | 822.21 | 334.42 | 824.74 | 334.67 | 831.05 | 334.94 | 831.32 | 334.92 |
| 832.03 | 334.92 | 832.85 | 334.89 | 833.49 | 334.89 | 834.85 | 334.86 | 839.56 | 334.63 |
| 841.9 | 334.63 | 842.86 | 334.59 | 845.03 | 334.47 | 845.86 | 334.43 | 847.84 | 334.47 |
| 848.55 | 334.47 | 857.74 | 334.14 | 861.52 | 333.88 | 868.29 | 333.37 | 872.13 | 333.05 |
| 873.79 | 332.94 | 878.9 | 332.64 | 879.75 | 332.58 | 883.45 | 332.41 | 884.38 | 332.38 |
| 886.63 | 332.33 | 887.55 | 332.32 | 890.39 | 332.26 | 891.26 | 332.26 | 892.89 | 332.24 |
| 895.21 | 332.31 | 897.4 | 332.33 | 898.99 | 332.24 | 900.69 | 332.16 | 901.96 | 332.12 |
| 904.04 | 332.08 | 906.23 | 332.05 | 907.15 | 332.05 | 909.9 | 332.11 | 911.23 | 332.15 |
| 912.78 | 332.18 | 913.49 | 332.17 | 916.36 | 332.07 | 919.37 | 331.92 | 926.21 | 331.9 |
| 927.47 | 331.9 | 934.41 | 331.84 | 937.1 | 331.82 | 941.52 | 331.86 | 948.54 | 331.97 |
| 950 | 332 | 951.64 | 332.06 | 954.23 | 332.12 | 954.88 | 332.13 | 957.35 | 332.14 |
| 960.47 | 332.1 | 962.38 | 332.07 | 965.55 | 332.05 | 965.93 | 332.04 | 969.35 | 332 |
| 970.58 | 331.99 | 971.9 | 331.95 | 973.5 | 331.94 | 975 | 331.89 | 977.12 | 331.89 |
| 987.73 | 331.85 | 988.16 | 331.85 | 993.62 | 331.8 | 994.76 | 331.8 | 995.61 | 331.79 |
| 999.49 | 331.77 | 1004.11 | 331.72 | 1007.6 | 331.63 | 1008.99 | 331.62 | 1010.8 | 331.58 |
| 1011.84 | 331.57 | 1012.24 | 331.59 | 1014.5 | 331.54 | 1015.58 | 331.5 | 1018.99 | 331.4 |
| 1026.38 | 331.17 | 1027.15 | 331.14 | 1028.18 | 331.12 | 1030 | 331.1 | 1035.19 | 331.16 |
| 1037.57 | 331.21 | 1038.11 | 331.24 | 1040.1 | 331.29 | 1041.02 | 331.32 | 1042.99 | 331.45 |
| 1043.6 | 331.5 | 1044.11 | 331.83 | 1044.44 | 332.07 | 1045.14 | 332.63 | 1046.64 | 333.13 |
| 1047.34 | 333.23 | 1049.57 | 333.51 | 1056.65 | 333.68 | 1057.1 | 333.67 | 1058.23 | 333.62 |
| 1060.74 | 333.45 | 1060.78 | 333.42 | 1062.82 | 333.38 | 1063.48 | 333.39 | 1064.13 | 333.47 |
| 1066.99 | 333.89 | 1069.97 | 334.45 | 1070.48 | 334.56 | 1072.4 | 335.13 | 1072.53 | 335.16 |
| 1074.89 | 335.79 | 1074.97 | 335.8 | 1076.09 | 336.33 | 1076.14 | 336.37 | 1076.82 | 336.69 |
| 1078.34 | 337.37 | 1078.68 | 337.53 | 1079.41 | 338.11 | 1079.64 | 338.63 | 1079.69 | 338.85 |
| 1079.85 | 339.16 | 1080.08 | 339.68 | 1080.17 | 340.64 | 1080.25 | 340.76 | 1080.45 | 341.21 |
| 1081.34 | 341.31 | 1086.31 | 341.76 | 1089.79 | 342.19 | 1091.71 | 342.4 | 1092.76 | 342.53 |
| 1094.59 | 342.73 | 1098.76 | 343.23 | 1101.56 | 343.62 | 1102.42 | 343.73 | 1103.45 | 343.92 |
| 1105.62 | 344.24 | 1107.01 | 344.45 | 1107.92 | 344.61 | 1108.68 | 344.73 | 1110.6 | 345.09 |
| 1111.27 | 345.21 | 1113.75 | 345.69 | 1115.95 | 346.18 | 1118.23 | 346.65 | 1119.89 | 346.74 |
| 1128.78 | 346.68 | 1130.29 | 346.57 | 1131.77 | 346.64 | 1132.45 | 346.65 | 1132.58 | 346.67 |
| 1134.77 | 346.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 687.54 | .04 | 1076.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 687.54 | 1076.09 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4405.34*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.38 | 1.25 | 349.36 | 3.93 | 349.3 | 9.57 | 349.15 | 11.7 | 349.09 |
| 14.69 | 349.06 | 15.09 | 349.04 | 19.69 | 349.02 | 23.35 | 348.99 | 27.42 | 348.91 |
| 28.12 | 348.9 | 28.63 | 348.88 | 45.41 | 348.41 | 58.62 | 348.12 | 60.75 | 348.1 |
| 60.95 | 348.15 | 62.07 | 348.15 | 66.02 | 348.1 | 66.56 | 348.09 | 68.44 | 348 |
| 69.79 | 347.98 | 70.84 | 347.95 | 74.53 | 347.89 | 75.33 | 347.88 | 78.74 | 347.69 |
| 81 | 347.61 | 83.13 | 347.53 | 84.75 | 347.48 | 93.29 | 347.16 | 94.4 | 347.01 |
| 94.8 | 346.98 | 96.03 | 346.93 | 97.59 | 346.91 | 99.09 | 346.9 | 100.27 | 346.9 |
| 101.59 | 346.92 | 103.44 | 347.07 | 105.46 | 347.05 | 106.36 | 346.99 | 108.98 | 346.85 |
| 109.99 | 346.81 | 111.06 | 346.82 | 112.03 | 346.82 | 112.74 | 346.81 | 114.26 | 346.77 |
| 119.02 | 346.62 | 121.39 | 346.58 | 122.01 | 346.61 | 122.48 | 346.59 | 122.75 | 346.55 |
| 127.01 | 346.3 | 127.83 | 346.28 | 128.76 | 346.24 | 129.4 | 346.2 | 135.2 | 345.79 |
| 136.23 | 345.73 | 141.23 | 345.45 | 144.54 | 345.28 | 144.82 | 345.27 | 145.88 | 345.18 |
| 146.69 | 345.15 | 147.46 | 345.15 | 148.95 | 345.08 | 152.34 | 345.03 | 154.36 | 345.04 |
| 155.2 | 345.03 | 156.09 | 345.04 | 157.01 | 345.04 | 158.16 | 345.01 | 160.49 | 344.99 |
| 161.1 | 344.95 | 163.38 | 344.88 | 164.84 | 344.86 | 167.62 | 344.86 | 168.74 | 344.87 |
| 169.63 | 344.9 | 170.59 | 344.92 | 172.7 | 344.93 | 175.52 | 344.92 | 178.72 | 344.88 |
| 181.92 | 344.83 | 183.79 | 344.76 | 187.42 | 344.58 | 193.26 | 344.19 | 193.54 | 344.18 |
| 199.71 | 343.89 | 200.05 | 343.88 | 201.49 | 343.91 | 201.83 | 343.91 | 202.85 | 343.84 |
| 206.35 | 343.65 | 207.95 | 343.54 | 209.54 | 343.41 | 210.49 | 343.3 | 211.18 | 343.26 |
| 212.88 | 343.27 | 215.75 | 343.18 | 216.17 | 343.14 | 221.08 | 342.92 | 221.36 | 342.87 |
| 222.49 | 342.83 | 223.77 | 342.83 | 224.75 | 342.8 | 229.36 | 342.87 | 231.08 | 342.89 |
| 234.23 | 342.9 | 236.89 | 342.75 | 238 | 342.67 | 239.53 | 342.55 | 240.72 | 342.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 243.78 | 342.37 | 248.55 | 342.19 | 249.56 | 342.16 | 259.58 | 341.79 | 262.05 | 341.74 |
| 263.25 | 341.71 | 263.83 | 341.75 | 265.68 | 341.72 | 267.26 | 341.68 | 268.54 | 341.64 |
| 269.34 | 341.6 | 270.09 | 341.6 | 273.08 | 341.62 | 274.28 | 341.58 | 275.98 | 341.63 |
| 276.34 | 341.61 | 277.8 | 341.65 | 278.15 | 341.65 | 279.53 | 341.68 | 280.35 | 341.71 |
| 281.66 | 341.78 | 282.05 | 341.78 | 283.08 | 341.69 | 283.33 | 341.69 | 284.38 | 341.6 |
| 284.78 | 341.58 | 285.84 | 341.5 | 287.95 | 341.37 | 289.69 | 341.33 | 293.65 | 341.18 |
| 294.44 | 341.14 | 295.27 | 341.15 | 295.98 | 341.17 | 298 | 341.19 | 299.28 | 341.19 |
| 300.72 | 341.17 | 303.28 | 341.05 | 304.21 | 341 | 306.6 | 340.82 | 307.07 | 340.82 |
| 308.15 | 340.8 | 310.85 | 340.78 | 314.82 | 340.53 | 317.69 | 340.39 | 318.07 | 340.36 |
| 318.67 | 340.28 | 319.47 | 340.24 | 320.4 | 340.22 | 322.24 | 340.22 | 323.22 | 340.24 |
| 323.87 | 340.24 | 327.76 | 340.29 | 329.43 | 340.32 | 330.58 | 340.36 | 331.96 | 340.38 |
| 332.35 | 340.35 | 333.5 | 340.29 | 335.31 | 340.15 | 336.69 | 340.08 | 338.37 | 340.07 |
| 339.2 | 340.01 | 340.4 | 339.98 | 362.44 | 339.81 | 365.63 | 339.59 | 369.72 | 339.4 |
| 372.91 | 339.2 | 377.08 | 339.15 | 382.55 | 339.08 | 383.02 | 339.07 | 387 | 339.02 |
| 389 | 338.99 | 390.62 | 338.97 | 392.22 | 338.97 | 393.34 | 338.94 | 399.06 | 338.83 |
| 400.34 | 338.8 | 402.16 | 338.79 | 404.09 | 338.76 | 404.94 | 338.74 | 407.39 | 338.74 |
| 410.37 | 338.65 | 411.91 | 338.65 | 413.73 | 338.69 | 415.04 | 338.69 | 417.49 | 338.67 |
| 421.1 | 338.6 | 422.17 | 338.59 | 422.54 | 338.6 | 424.82 | 338.6 | 425.97 | 338.64 |
| 430.56 | 338.48 | 432.03 | 338.47 | 432.88 | 338.51 | 434.85 | 338.59 | 435.84 | 338.61 |
| 437.06 | 338.6 | 438.7 | 338.56 | 440.02 | 338.48 | 442.08 | 338.31 | 442.9 | 338.23 |
| 447.08 | 338.17 | 449.54 | 338.14 | 468.99 | 337.87 | 492.7 | 337.16 | 492.92 | 337.15 |
| 495.26 | 337.24 | 496.21 | 337.27 | 496.81 | 337.27 | 497.23 | 337.22 | 504.55 | 336.97 |
| 504.65 | 336.95 | 505.45 | 336.95 | 506.38 | 336.99 | 508.72 | 337.1 | 509.67 | 337.19 |
| 510.23 | 337.22 | 511.24 | 337.23 | 512.58 | 337.2 | 513.91 | 337.15 | 515.13 | 337.13 |
| 516.14 | 337.1 | 517.68 | 337.04 | 519.05 | 337 | 523.42 | 336.94 | 525.49 | 336.92 |
| 525.9 | 336.89 | 527.7 | 336.83 | 530.5 | 336.76 | 532.28 | 336.73 | 534.43 | 336.71 |
| 536.02 | 336.71 | 536.83 | 336.69 | 537.02 | 336.71 | 538.29 | 336.72 | 543.19 | 336.7 |
| 544.48 | 336.69 | 544.95 | 336.67 | 548.64 | 336.64 | 551.83 | 336.6 | 553.03 | 336.58 |
| 555 | 336.57 | 557.64 | 336.61 | 559.21 | 336.61 | 563.01 | 336.65 | 563.95 | 336.63 |
| 564.71 | 336.65 | 564.98 | 336.67 | 565.73 | 336.68 | 567.58 | 336.66 | 573.84 | 336.48 |
| 574.93 | 336.46 | 579.2 | 336.37 | 580.37 | 336.39 | 582.3 | 336.4 | 585.21 | 336.36 |
| 587.56 | 336.3 | 587.67 | 336.31 | 593.91 | 336.13 | 600.86 | 335.99 | 608.62 | 335.92 |
| 609.65 | 335.92 | 610.49 | 335.89 | 613.38 | 335.83 | 624.44 | 335.73 | 627.96 | 335.68 |
| 631.82 | 335.69 | 643.51 | 335.61 | 643.62 | 335.61 | 667.21 | 335.46 | 667.68 | 335.46 |
| 668.45 | 335.42 | 669.42 | 335.41 | 670.7 | 335.41 | 675.2 | 335.45 | 677.49 | 335.92 |
| 678.21 | 336.03 | 682.41 | 336.04 | 684.25 | 336.06 | 686.08 | 336.06 | 688.27 | 336.08 |
| 690.57 | 336.08 | 690.73 | 336.07 | 691.36 | 336.02 | 692.53 | 335.91 | 694.44 | 335.81 |
| 695.59 | 335.78 | 696.81 | 335.76 | 699.04 | 335.7 | 700.71 | 335.69 | 701.43 | 335.68 |
| 704.8 | 335.69 | 705.96 | 335.7 | 706.82 | 335.7 | 710.95 | 335.73 | 711.81 | 335.72 |
| 715.19 | 335.76 | 717.26 | 335.8 | 720.1 | 335.82 | 721.87 | 335.84 | 723.47 | 335.87 |
| 724.26 | 335.83 | 725.09 | 335.83 | 727.08 | 335.79 | 730.13 | 335.7 | 730.87 | 335.66 |
| 735.53 | 335.59 | 739.31 | 335.61 | 743.81 | 335.62 | 745.85 | 335.64 | 748.38 | 335.64 |
| 749.18 | 335.65 | 751.29 | 335.65 | 753.74 | 335.69 | 756.52 | 335.66 | 757.04 | 335.66 |
| 759.06 | 335.63 | 760.17 | 335.63 | 762.48 | 335.61 | 765.35 | 335.56 | 767.39 | 335.55 |
| 768.52 | 335.53 | 770.33 | 335.49 | 771.81 | 335.47 | 776.94 | 335.35 | 778.27 | 335.31 |
| 783.13 | 335.15 | 786.42 | 334.85 | 787.05 | 334.8 | 788.72 | 334.55 | 801.4 | 333.99 |
| 803.88 | 333.89 | 806.15 | 333.77 | 807.34 | 333.69 | 808.52 | 333.63 | 810.05 | 333.51 |
| 811.81 | 333.47 | 812.88 | 333.53 | 813.21 | 333.57 | 815.61 | 333.74 | 815.91 | 333.72 |
| 817.55 | 333.68 | 818.7 | 333.72 | 819.22 | 333.78 | 820.03 | 333.89 | 821.75 | 334.09 |
| 822.62 | 334.18 | 824.21 | 334.33 | 830.35 | 334.63 | 831.7 | 334.61 | 832.73 | 334.61 |
| 834.05 | 334.6 | 835.28 | 334.54 | 838.63 | 334.39 | 840.19 | 334.4 | 841.14 | 334.39 |
| 843.95 | 334.23 | 844.76 | 334.2 | 846.69 | 334.23 | 847.38 | 334.22 | 856.32 | 333.85 |
| 860 | 333.59 | 866.58 | 333.07 | 870.32 | 332.75 | 871.93 | 332.64 | 876.9 | 332.32 |
| 877.73 | 332.26 | 881.33 | 332.09 | 882.24 | 332.06 | 884.42 | 332.01 | 885.32 | 332 |
| 888.08 | 331.94 | 888.92 | 331.94 | 890.52 | 331.92 | 892.54 | 331.97 | 894.9 | 331.99 |
| 896.45 | 331.91 | 898.39 | 331.84 | 901.36 | 331.78 | 904.38 | 331.78 | 907.06 | 331.84 |
| 908.36 | 331.89 | 909.87 | 331.92 | 910.56 | 331.91 | 913.35 | 331.8 | 916.27 | 331.62 |
| 922.93 | 331.6 | 924.16 | 331.6 | 930.9 | 331.53 | 933.52 | 331.52 | 937.82 | 331.54 |
| 944.65 | 331.63 | 946.08 | 331.66 | 947.67 | 331.73 | 950.82 | 331.79 | 953.22 | 331.81 |
| 956.26 | 331.77 | 958.12 | 331.74 | 961.58 | 331.72 | 964.9 | 331.68 | 966.1 | 331.67 |
| 967.38 | 331.63 | 968.98 | 331.62 | 970.4 | 331.57 | 972.46 | 331.57 | 982.78 | 331.51 |
| 983.2 | 331.51 | 989.62 | 331.45 | 990.45 | 331.44 | 994.22 | 331.42 | 998.72 | 331.37 |
| 1002.11 | 331.29 | 1006.24 | 331.22 | 1006.63 | 331.25 | 1009.88 | 331.16 | 1013.2 | 331.06 |
| 1020.39 | 330.83 | 1020.41 | 330.82 | 1022.14 | 330.77 | 1023.22 | 330.77 | 1023.91 | 330.76 |
| 1028.96 | 330.82 | 1031.27 | 330.87 | 1031.79 | 330.9 | 1033.73 | 330.95 | 1034.62 | 330.98 |
| 1037.13 | 331.15 | 1037.95 | 331.67 | 1038.07 | 331.78 | 1038.63 | 332.19 | 1040.09 | 332.66 |
| 1040.77 | 332.77 | 1042.94 | 333.06 | 1048.62 | 333.18 | 1049.82 | 333.21 | 1050.99 | 333.16 |
| 1053.8 | 332.94 | 1053.84 | 332.91 | 1055.21 | 332.87 | 1056.47 | 332.87 | 1057.1 | 332.96 |
| 1059.88 | 333.4 | 1062.78 | 334 | 1063.27 | 334.12 | 1065.26 | 334.75 | 1067.56 | 335.41 |
| 1067.64 | 335.42 | 1068.73 | 335.98 | 1068.77 | 336.03 | 1069.43 | 336.38 | 1070.9 | 337.11 |
| 1071.23 | 337.28 | 1071.93 | 337.9 | 1072.15 | 338.47 | 1072.2 | 338.71 | 1072.36 | 339.04 |
| 1072.48 | 339.39 | 1072.58 | 339.61 | 1072.67 | 340.66 | 1072.93 | 341.29 | 1073.79 | 341.38 |
| 1078.59 | 341.81 | 1081.96 | 342.2 | 1083.81 | 342.41 | 1084.82 | 342.52 | 1086.59 | 342.7 |
| 1090.62 | 343.15 | 1093.32 | 343.51 | 1094.15 | 343.61 | 1095.15 | 343.77 | 1097.24 | 344.06 |
| 1099.89 | 344.46 | 1102.05 | 344.83 | 1102.7 | 344.93 | 1104.84 | 345.32 | 1105.09 | 345.36 |
| 1107.22 | 345.8 | 1107.57 | 345.86 | 1109.41 | 346.21 | 1111.02 | 346.29 | 1119.61 | 346.21 |
| 1121.06 | 346.09 | 1121.18 | 346.09 | 1122.49 | 346.17 | 1123.15 | 346.18 | 1123.27 | 346.2 |
| 1125.39 | 346.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 690.73 | .04 | 1068.73 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 690.73 | 1068.73 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4386.08*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.46 | 1.26 | 349.44 | 3.02 | 349.39 | 3.95 | 349.37 | 9.61 | 349.22 |
| 11.76 | 349.16 | 14.75 | 349.12 | 15.16 | 349.11 | 19.78 | 349.07 | 20.87 | 349.05 |
| 23.45 | 349.03 | 27.55 | 348.94 | 28.76 | 348.92 | 45.62 | 348.43 | 58.89 | 348.16 |
| 61.03 | 348.13 | 61.23 | 348.19 | 66.33 | 348.14 | 66.87 | 348.12 | 68.76 | 348.03 |
| 68.99 | 348.03 | 71.17 | 347.97 | 74.87 | 347.9 | 75.68 | 347.89 | 79.1 | 347.69 |
| 81.37 | 347.61 | 83.51 | 347.53 | 85.15 | 347.48 | 86.76 | 347.41 | 93.72 | 347.14 |
| 94.84 | 346.98 | 95.76 | 346.92 | 96.47 | 346.9 | 98.04 | 346.87 | 99.54 | 346.86 |
| 100.73 | 346.86 | 102.06 | 346.9 | 103.92 | 347.06 | 105.95 | 347.04 | 106.85 | 346.98 |
| 109.48 | 346.83 | 110.4 | 346.81 | 110.76 | 346.79 | 111.57 | 346.81 | 112.55 | 346.81 |
| 114.79 | 346.75 | 119.24 | 346.59 | 119.57 | 346.59 | 121.55 | 346.54 | 122.72 | 346.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 123.32 | 346.5 | 125.73 | 346.36 | 127.59 | 346.24 | 128.42 | 346.22 | 129.36 | 346.18 |
| 130 | 346.14 | 135.82 | 345.7 | 136.86 | 345.64 | 141.88 | 345.34 | 145.21 | 345.17 |
| 146.56 | 345.06 | 147.37 | 345.03 | 148.14 | 345.03 | 149.63 | 344.96 | 150.9 | 344.95 |
| 152.43 | 344.92 | 155.91 | 344.92 | 156.81 | 344.93 | 157.74 | 344.93 | 158.89 | 344.9 |
| 161.24 | 344.88 | 161.84 | 344.84 | 162.82 | 344.8 | 164.13 | 344.76 | 165.61 | 344.75 |
| 168.39 | 344.75 | 169.52 | 344.76 | 170.42 | 344.8 | 171.37 | 344.82 | 173.5 | 344.83 |
| 176.33 | 344.82 | 177.96 | 344.8 | 180.23 | 344.78 | 182.76 | 344.73 | 184.64 | 344.66 |
| 188.29 | 344.47 | 194.16 | 344.06 | 194.43 | 344.05 | 200.64 | 343.74 | 200.97 | 343.73 |
| 202.42 | 343.76 | 202.99 | 343.75 | 203.79 | 343.7 | 207.3 | 343.5 | 208.91 | 343.38 |
| 210.5 | 343.24 | 211.46 | 343.12 | 212.15 | 343.08 | 213.86 | 343.09 | 214.36 | 343.08 |
| 216.74 | 343 | 217.17 | 342.96 | 222.1 | 342.73 | 222.76 | 342.66 | 224.81 | 342.63 |
| 225.79 | 342.6 | 230.42 | 342.66 | 232.14 | 342.68 | 235.31 | 342.69 | 237.99 | 342.52 |
| 239.74 | 342.39 | 240.63 | 342.31 | 244.91 | 342.13 | 249.7 | 341.95 | 250.71 | 341.92 |
| 259.68 | 341.57 | 261.64 | 341.51 | 263.26 | 341.48 | 264.47 | 341.44 | 265.05 | 341.49 |
| 266.1 | 341.45 | 266.91 | 341.45 | 268.5 | 341.4 | 270.43 | 341.32 | 271.34 | 341.31 |
| 274.34 | 341.33 | 275.55 | 341.29 | 277.25 | 341.34 | 277.61 | 341.33 | 279.09 | 341.37 |
| 279.43 | 341.37 | 280.82 | 341.4 | 282.96 | 341.51 | 283.2 | 341.51 | 284.39 | 341.41 |
| 284.78 | 341.39 | 285.69 | 341.31 | 289.28 | 341.09 | 291.03 | 341.05 | 294.45 | 340.94 |
| 295.8 | 340.88 | 297.36 | 340.9 | 300.2 | 340.91 | 301.79 | 340.89 | 302.11 | 340.88 |
| 304.68 | 340.76 | 305.61 | 340.7 | 307.18 | 340.57 | 308.02 | 340.51 | 308.49 | 340.5 |
| 312.29 | 340.47 | 314.71 | 340.31 | 316.27 | 340.2 | 317.54 | 340.14 | 319.16 | 340.05 |
| 319.88 | 339.99 | 320.14 | 339.94 | 320.88 | 339.9 | 321.88 | 339.88 | 323.59 | 339.89 |
| 325.37 | 339.91 | 329.27 | 339.96 | 330.95 | 340 | 332.11 | 340.05 | 333.5 | 340.07 |
| 335.04 | 339.97 | 336.86 | 339.83 | 338.24 | 339.76 | 339.93 | 339.74 | 340.77 | 339.68 |
| 341.98 | 339.65 | 364.11 | 339.5 | 367.32 | 339.27 | 367.53 | 339.25 | 371.43 | 339.05 |
| 374.63 | 338.85 | 378.82 | 338.8 | 384.31 | 338.74 | 384.79 | 338.73 | 388.79 | 338.68 |
| 392.42 | 338.64 | 394.03 | 338.64 | 395.16 | 338.61 | 399.32 | 338.53 | 400.9 | 338.49 |
| 402.19 | 338.47 | 404.84 | 338.44 | 406.82 | 338.4 | 409.27 | 338.39 | 412.58 | 338.3 |
| 414.42 | 338.31 | 415.64 | 338.34 | 416.96 | 338.34 | 419.83 | 338.31 | 420.58 | 338.29 |
| 423.04 | 338.24 | 424.12 | 338.23 | 424.49 | 338.24 | 426.78 | 338.24 | 427.28 | 338.27 |
| 427.94 | 338.28 | 429.39 | 338.24 | 432.55 | 338.12 | 434.03 | 338.11 | 436.86 | 338.25 |
| 437.86 | 338.27 | 439.08 | 338.26 | 440.73 | 338.22 | 442.05 | 338.14 | 444.13 | 337.96 |
| 444.95 | 337.87 | 448.55 | 337.83 | 449.14 | 337.81 | 451.62 | 337.79 | 471.16 | 337.55 |
| 494.97 | 336.84 | 495.44 | 336.84 | 497.54 | 336.91 | 498.51 | 336.93 | 499.11 | 336.93 |
| 499.52 | 336.89 | 506.88 | 336.64 | 506.98 | 336.62 | 507.78 | 336.62 | 508.72 | 336.66 |
| 511.07 | 336.78 | 512.02 | 336.87 | 512.59 | 336.91 | 513.6 | 336.93 | 514.95 | 336.89 |
| 516.29 | 336.83 | 517.51 | 336.81 | 518.52 | 336.78 | 520.07 | 336.71 | 521.45 | 336.66 |
| 525.84 | 336.6 | 527.6 | 336.57 | 528.03 | 336.57 | 528.33 | 336.54 | 530.14 | 336.48 |
| 532.95 | 336.41 | 534.74 | 336.38 | 536.9 | 336.36 | 538.49 | 336.36 | 539.31 | 336.35 |
| 539.51 | 336.37 | 540.78 | 336.37 | 545.7 | 336.36 | 547 | 336.35 | 547.47 | 336.33 |
| 551.18 | 336.3 | 551.8 | 336.29 | 554.38 | 336.27 | 556.91 | 336.23 | 560.21 | 336.28 |
| 561.79 | 336.28 | 565.62 | 336.33 | 566.55 | 336.31 | 567.67 | 336.36 | 568.92 | 336.36 |
| 570.89 | 336.33 | 576.5 | 336.16 | 577.59 | 336.13 | 581.88 | 336.03 | 583.05 | 336.06 |
| 584.99 | 336.07 | 586.64 | 336.06 | 590.39 | 335.97 | 595.28 | 335.82 | 596.65 | 335.78 |
| 603.64 | 335.62 | 611.43 | 335.55 | 612.47 | 335.55 | 613.31 | 335.51 | 615.6 | 335.45 |
| 616.21 | 335.45 | 627.32 | 335.33 | 630.86 | 335.27 | 634.74 | 335.28 | 646.59 | 335.21 |
| 670.29 | 335.08 | 671.54 | 335.04 | 672.51 | 335.03 | 673.8 | 335.03 | 678.32 | 335.07 |
| 680.62 | 335.57 | 681.35 | 335.69 | 685.56 | 335.7 | 687.41 | 335.72 | 689.25 | 335.72 |
| 691.45 | 335.74 | 693.48 | 335.74 | 693.92 | 335.73 | 694.74 | 335.66 | 695.68 | 335.56 |
| 697.53 | 335.46 | 698.65 | 335.43 | 699.83 | 335.41 | 702 | 335.36 | 703.63 | 335.34 |
| 707.6 | 335.34 | 708.73 | 335.36 | 709.56 | 335.35 | 713.58 | 335.38 | 714.41 | 335.37 |
| 716.77 | 335.4 | 717.7 | 335.4 | 719.71 | 335.44 | 722.47 | 335.45 | 724.2 | 335.47 |
| 725.75 | 335.5 | 725.81 | 335.49 | 726.92 | 335.46 | 728.22 | 335.45 | 729.26 | 335.43 |
| 731.41 | 335.36 | 732.12 | 335.35 | 732.94 | 335.3 | 737.47 | 335.24 | 741.14 | 335.26 |
| 745.52 | 335.27 | 747.5 | 335.28 | 749.96 | 335.28 | 750.75 | 335.29 | 752.79 | 335.29 |
| 755.17 | 335.32 | 757.87 | 335.29 | 758.38 | 335.29 | 760.35 | 335.27 | 761.42 | 335.27 |
| 763.67 | 335.25 | 766.46 | 335.2 | 768.45 | 335.19 | 771.3 | 335.13 | 772.74 | 335.11 |
| 777.72 | 334.99 | 783.74 | 334.8 | 786.94 | 334.51 | 787.55 | 334.46 | 789.18 | 334.23 |
| 801.51 | 333.67 | 803.92 | 333.57 | 806.13 | 333.44 | 808.43 | 333.3 | 808.97 | 333.26 |
| 809.92 | 333.17 | 811.63 | 333.13 | 812.67 | 333.19 | 812.98 | 333.23 | 815.32 | 333.4 |
| 815.61 | 333.38 | 817.21 | 333.36 | 818.33 | 333.41 | 818.83 | 333.46 | 819.62 | 333.57 |
| 821.29 | 333.76 | 822.14 | 333.85 | 823.68 | 334 | 829.65 | 334.33 | 830.58 | 334.33 |
| 831.46 | 334.32 | 831.96 | 334.33 | 833.25 | 334.33 | 834.44 | 334.29 | 837.7 | 334.15 |
| 839.91 | 334.16 | 840.14 | 334.15 | 842.88 | 333.99 | 843.66 | 333.96 | 845.54 | 333.98 |
| 846.21 | 333.97 | 854.9 | 333.57 | 858.47 | 333.31 | 864.87 | 332.77 | 868.5 | 332.44 |
| 870.07 | 332.33 | 874.9 | 332.01 | 875.71 | 331.95 | 879.21 | 331.77 | 880.09 | 331.74 |
| 883.09 | 331.67 | 885.77 | 331.62 | 888.14 | 331.6 | 890.1 | 331.64 | 892.4 | 331.66 |
| 893.91 | 331.58 | 895.79 | 331.52 | 898.69 | 331.49 | 900.75 | 331.5 | 901.62 | 331.51 |
| 904.23 | 331.58 | 905.48 | 331.63 | 906.95 | 331.66 | 907.63 | 331.65 | 910.34 | 331.53 |
| 913.18 | 331.33 | 919.65 | 331.3 | 920.85 | 331.3 | 927.4 | 331.23 | 929.95 | 331.21 |
| 934.13 | 331.23 | 940.77 | 331.3 | 942.15 | 331.32 | 943.7 | 331.39 | 946.76 | 331.45 |
| 949.1 | 331.47 | 953.86 | 331.42 | 957.22 | 331.4 | 960.45 | 331.36 | 961.62 | 331.35 |
| 962.86 | 331.31 | 964.37 | 331.3 | 965.79 | 331.26 | 966.38 | 331.25 | 967.8 | 331.25 |
| 977.83 | 331.18 | 978.24 | 331.17 | 983.41 | 331.12 | 984 | 331.11 | 988.96 | 331.07 |
| 993.33 | 331.02 | 996.63 | 330.94 | 998.26 | 330.92 | 999.65 | 330.89 | 1000.64 | 330.88 |
| 1001.01 | 330.9 | 1003.16 | 330.85 | 1007.4 | 330.72 | 1014.39 | 330.48 | 1016.09 | 330.43 |
| 1017.82 | 330.41 | 1022.72 | 330.48 | 1024.97 | 330.53 | 1025.48 | 330.56 | 1027.36 | 330.61 |
| 1028.22 | 330.64 | 1030.66 | 330.8 | 1031.46 | 331.28 | 1032.12 | 331.75 | 1033.54 | 332.2 |
| 1034.2 | 332.31 | 1036.3 | 332.61 | 1041.82 | 332.72 | 1042.99 | 332.75 | 1044.13 | 332.68 |
| 1046.86 | 332.44 | 1046.9 | 332.4 | 1048.23 | 332.36 | 1048.82 | 332.35 | 1049.45 | 332.36 |
| 1050.06 | 332.45 | 1052.77 | 332.91 | 1055.58 | 333.55 | 1056.06 | 333.67 | 1057.87 | 334.29 |
| 1060.23 | 335.03 | 1060.31 | 335.04 | 1061.36 | 335.64 | 1061.4 | 335.69 | 1062.04 | 336.07 |
| 1063.46 | 336.85 | 1063.77 | 337.03 | 1064.46 | 337.69 | 1064.5 | 337.87 | 1064.67 | 338.31 |
| 1064.71 | 338.57 | 1064.87 | 338.92 | 1064.98 | 339.3 | 1065.08 | 339.54 | 1065.16 | 340.69 |
| 1065.24 | 340.84 | 1065.42 | 341.37 | 1066.25 | 341.46 | 1070.88 | 341.86 | 1074.12 | 342.22 |
| 1074.8 | 342.3 | 1075.49 | 342.36 | 1076.89 | 342.51 | 1078.59 | 342.67 | 1082.47 | 343.08 |
| 1085.08 | 343.39 | 1085.88 | 343.48 | 1086.84 | 343.63 | 1090.16 | 344.06 | 1091.71 | 344.28 |
| 1093.5 | 344.56 | 1096.43 | 345.03 | 1098.48 | 345.41 | 1100.6 | 345.78 | 1102.15 | 345.84 |
| 1110.43 | 345.74 | 1111.84 | 345.61 | 1113.22 | 345.69 | 1113.85 | 345.71 | 1113.96 | 345.74 |
| 1116.01 | 345.71 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 693.92 | .04 | 1061.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 693.92 | 1061.36 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4366.82*

INPUT
Description:

Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.54 | 1.27 | 349.51 | 3.03 | 349.46 | 3.97 | 349.44 | 9.65 | 349.29 |
| 11.81 | 349.23 | 14 | 349.2 | 15.23 | 349.17 | 19.87 | 349.12 | 20.97 | 349.1 |
| 23.56 | 349.07 | 27.68 | 348.98 | 28.89 | 348.95 | 45.83 | 348.46 | 59.16 | 348.19 |
| 61.31 | 348.16 | 61.51 | 348.22 | 62.64 | 348.22 | 66.63 | 348.17 | 67.18 | 348.16 |
| 69.31 | 348.05 | 70.43 | 348.03 | 71.5 | 348 | 75.22 | 347.92 | 75.98 | 347.91 |
| 78.95 | 347.73 | 79.46 | 347.69 | 81.75 | 347.61 | 83.89 | 347.53 | 85.54 | 347.48 |
| 86.32 | 347.44 | 87.16 | 347.41 | 94.15 | 347.12 | 95.28 | 346.95 | 96.2 | 346.89 |
| 96.91 | 346.87 | 98.49 | 346.84 | 100 | 346.83 | 101.2 | 346.83 | 102.53 | 346.87 |
| 104.39 | 347.05 | 106.44 | 347.04 | 107.34 | 346.97 | 109.98 | 346.82 | 110.68 | 346.79 |
| 111.27 | 346.78 | 113.07 | 346.79 | 113.78 | 346.78 | 115.31 | 346.73 | 119.79 | 346.56 |
| 120.12 | 346.56 | 122.51 | 346.49 | 123.29 | 346.5 | 123.88 | 346.45 | 126.31 | 346.31 |
| 128.18 | 346.19 | 128.38 | 346.17 | 129.01 | 346.16 | 129.95 | 346.12 | 136.45 | 345.61 |
| 137.49 | 345.54 | 142.53 | 345.24 | 145.87 | 345.06 | 146.86 | 344.97 | 148.04 | 344.91 |
| 148.82 | 344.91 | 150.32 | 344.84 | 151.59 | 344.83 | 153.75 | 344.8 | 155.78 | 344.81 |
| 156.63 | 344.8 | 157.53 | 344.82 | 158.46 | 344.82 | 159.62 | 344.79 | 161.98 | 344.77 |
| 162.59 | 344.73 | 163.57 | 344.69 | 164.88 | 344.65 | 166.37 | 344.63 | 169.17 | 344.64 |
| 170.3 | 344.66 | 171.2 | 344.7 | 172.16 | 344.72 | 174.29 | 344.73 | 177.14 | 344.73 |
| 180.37 | 344.69 | 181.06 | 344.69 | 183.6 | 344.64 | 185.48 | 344.57 | 189.16 | 344.37 |
| 195.05 | 343.92 | 195.33 | 343.92 | 201.56 | 343.59 | 201.9 | 343.58 | 203.35 | 343.62 |
| 203.92 | 343.6 | 208.25 | 343.34 | 209.87 | 343.22 | 211.47 | 343.06 | 212.43 | 342.95 |
| 213.13 | 342.9 | 213.79 | 342.9 | 214.84 | 342.92 | 215.35 | 342.91 | 216.16 | 342.87 |
| 217.42 | 342.84 | 218.1 | 342.8 | 218.17 | 342.78 | 223.12 | 342.54 | 223.41 | 342.5 |
| 224.55 | 342.46 | 225.84 | 342.44 | 226.83 | 342.4 | 233.21 | 342.47 | 236.39 | 342.48 |
| 239.77 | 342.24 | 241.74 | 342.07 | 246.04 | 341.89 | 250.85 | 341.71 | 251.87 | 341.68 |
| 260.88 | 341.31 | 262.85 | 341.25 | 264.47 | 341.21 | 265.68 | 341.17 | 266.27 | 341.22 |
| 267.32 | 341.18 | 268.14 | 341.17 | 269.73 | 341.12 | 271.02 | 341.07 | 271.83 | 341.03 |
| 272.59 | 341.02 | 275.61 | 341.03 | 276.82 | 341 | 278.53 | 341.05 | 278.89 | 341.04 |
| 280.72 | 341.09 | 281.66 | 341.11 | 282.94 | 341.16 | 284.26 | 341.23 | 284.66 | 341.23 |
| 285.7 | 341.13 | 286.09 | 341.11 | 287.04 | 341.02 | 287.54 | 341 | 288.48 | 340.93 |
| 290.61 | 340.81 | 292.61 | 340.76 | 295.81 | 340.67 | 297.34 | 340.61 | 298.73 | 340.64 |
| 301.58 | 340.63 | 303.18 | 340.6 | 304.14 | 340.56 | 306.08 | 340.46 | 307.02 | 340.39 |
| 308.59 | 340.26 | 309.43 | 340.2 | 311 | 340.18 | 313.72 | 340.16 | 316.16 | 339.99 |
| 317.73 | 339.87 | 319 | 339.81 | 320.62 | 339.72 | 321.35 | 339.65 | 321.61 | 339.6 |
| 322.36 | 339.56 | 323.37 | 339.54 | 325.22 | 339.55 | 326.51 | 339.58 | 326.86 | 339.57 |
| 330.79 | 339.64 | 333.48 | 339.72 | 333.64 | 339.74 | 335.03 | 339.77 | 335.42 | 339.73 |
| 336.58 | 339.66 | 338.41 | 339.51 | 339.8 | 339.43 | 341.49 | 339.42 | 342.34 | 339.36 |
| 343.55 | 339.32 | 365.79 | 339.19 | 369.01 | 338.94 | 369.22 | 338.92 | 373.14 | 338.7 |
| 376.36 | 338.49 | 380.56 | 338.44 | 386.08 | 338.4 | 386.56 | 338.39 | 390.58 | 338.35 |
| 392.6 | 338.32 | 394.23 | 338.31 | 395.84 | 338.31 | 396.98 | 338.28 | 401.16 | 338.2 |
| 404.04 | 338.13 | 406.7 | 338.1 | 408.69 | 338.06 | 411.15 | 338.05 | 414.17 | 337.96 |
| 416.33 | 337.96 | 417.56 | 337.99 | 418.87 | 337.99 | 422.51 | 337.94 | 424.99 | 337.88 |
| 426.07 | 337.87 | 426.44 | 337.88 | 428.75 | 337.88 | 429.24 | 337.91 | 429.91 | 337.93 |
| 431.36 | 337.88 | 434.54 | 337.75 | 436.02 | 337.75 | 436.89 | 337.8 | 438.87 | 337.9 |
| 440.37 | 337.93 | 441.1 | 337.93 | 442.76 | 337.88 | 443.5 | 337.84 | 446.17 | 337.61 |
| 446.99 | 337.51 | 450.62 | 337.47 | 451.21 | 337.46 | 453.7 | 337.44 | 473.33 | 337.23 |
| 497.25 | 336.53 | 497.72 | 336.53 | 500.8 | 336.6 | 501.41 | 336.59 | 501.82 | 336.55 |
| 509.8 | 336.29 | 511.06 | 336.34 | 513.02 | 336.44 | 513.42 | 336.47 | 514.94 | 336.61 |
| 515.96 | 336.62 | 517.32 | 336.58 | 518.66 | 336.52 | 519.89 | 336.49 | 522.46 | 336.38 |
| 523.85 | 336.33 | 528.25 | 336.25 | 530.03 | 336.23 | 530.76 | 336.2 | 532.58 | 336.14 |
| 535.4 | 336.07 | 537.2 | 336.03 | 539.37 | 336.01 | 540.97 | 336.02 | 541.79 | 336 |
| 541.99 | 336.02 | 543.27 | 336.03 | 548.21 | 336.02 | 553.71 | 335.96 | 554.34 | 335.95 |
| 556.93 | 335.93 | 558.14 | 335.91 | 560.13 | 335.9 | 562.79 | 335.95 | 563.69 | 335.95 |
| 568.22 | 336.01 | 569.16 | 336 | 569.93 | 336.02 | 570.2 | 336.04 | 570.96 | 336.05 |
| 572.83 | 336.03 | 573.52 | 336.01 | 579.15 | 335.83 | 580.24 | 335.81 | 584.55 | 335.7 |
| 585.74 | 335.73 | 587.68 | 335.74 | 589.34 | 335.73 | 592.2 | 335.66 | 598.02 | 335.47 |
| 599.4 | 335.43 | 606.41 | 335.26 | 614.24 | 335.18 | 615.37 | 335.17 | 616.13 | 335.14 |
| 618.43 | 335.07 | 619.05 | 335.07 | 630.21 | 334.93 | 633.77 | 334.86 | 637.66 | 334.87 |
| 649.57 | 334.81 | 673.37 | 334.7 | 674.63 | 334.66 | 675.61 | 334.65 | 676.9 | 334.65 |
| 681.44 | 334.69 | 683.75 | 335.22 | 684.48 | 335.35 | 688.65 | 335.36 | 688.72 | 335.37 |
| 690.58 | 335.38 | 692.42 | 335.38 | 693.3 | 335.39 | 696.95 | 335.39 | 697.12 | 335.38 |
| 697.91 | 335.31 | 698.82 | 335.21 | 700.62 | 335.11 | 701.7 | 335.07 | 702.85 | 335.06 |
| 704.96 | 335.01 | 706.54 | 334.99 | 710.4 | 334.99 | 711.5 | 335.01 | 712.3 | 335 |
| 713.08 | 335.01 | 717.02 | 335.02 | 719.31 | 335.05 | 720.21 | 335.05 | 722.17 | 335.08 |
| 724.84 | 335.08 | 726.52 | 335.1 | 727.33 | 335.12 | 728.23 | 335.12 | 729.17 | 335.09 |
| 730.43 | 335.08 | 734.22 | 334.99 | 735.01 | 334.95 | 739.42 | 334.9 | 742.98 | 334.91 |
| 747.24 | 334.91 | 749.16 | 334.93 | 754.3 | 334.93 | 756.61 | 334.95 | 758.59 | 334.94 |
| 762.68 | 334.9 | 764.86 | 334.89 | 767.57 | 334.84 | 769.5 | 334.83 | 772.28 | 334.77 |
| 773.67 | 334.75 | 778.51 | 334.63 | 784.36 | 334.45 | 788.06 | 334.13 | 789.64 | 333.92 |
| 801.62 | 333.35 | 803.96 | 333.25 | 806.1 | 333.12 | 807.22 | 333.04 | 808.62 | 332.95 |
| 809.78 | 332.83 | 811.5 | 332.8 | 812.42 | 332.85 | 812.76 | 332.89 | 815.03 | 333.06 |
| 815.31 | 333.05 | 816.87 | 333.04 | 817.95 | 333.09 | 818.44 | 333.14 | 819.21 | 333.24 |
| 820.83 | 333.43 | 821.65 | 333.52 | 823.16 | 333.67 | 828.95 | 334.02 | 830.6 | 334.03 |
| 831.2 | 334.05 | 832.45 | 334.06 | 833.6 | 334.03 | 836.77 | 333.91 | 839.14 | 333.92 |
| 839.8 | 333.87 | 841.8 | 333.75 | 842.56 | 333.72 | 844.48 | 333.73 | 845.03 | 333.72 |
| 853.47 | 333.28 | 856.95 | 333.02 | 863.16 | 332.47 | 866.69 | 332.14 | 868.22 | 332.02 |
| 872.91 | 331.7 | 873.69 | 331.64 | 877.09 | 331.45 | 877.95 | 331.42 | 880.86 | 331.35 |
| 883.47 | 331.3 | 885.76 | 331.27 | 887.67 | 331.31 | 889.91 | 331.32 | 891.37 | 331.26 |
| 892.93 | 331.21 | 894.1 | 331.2 | 896.02 | 331.2 | 898.86 | 331.23 | 901.39 | 331.32 |
| 902.61 | 331.37 | 904.04 | 331.4 | 904.69 | 331.39 | 907.33 | 331.25 | 910.09 | 331.04 |
| 916.37 | 331 | 917.53 | 331 | 923.9 | 330.93 | 926.37 | 330.91 | 930.43 | 330.91 |
| 936.88 | 330.96 | 938.23 | 330.99 | 939.73 | 331.05 | 942.71 | 331.11 | 944.98 | 331.13 |
| 945.72 | 331.13 | 949.6 | 331.09 | 952.86 | 331.08 | 956 | 331.04 | 957.14 | 331.03 |
| 958.35 | 330.99 | 959.86 | 330.98 | 961.76 | 330.93 | 963.14 | 330.93 | 972.89 | 330.84 |
| 973.28 | 330.83 | 980.13 | 330.75 | 983.69 | 330.72 | 987.94 | 330.67 | 991.14 | 330.6 |
| 991.95 | 330.59 | 994.08 | 330.54 | 995.04 | 330.53 | 995.4 | 330.56 | 997.48 | 330.51 |
| 998.48 | 330.48 | 1000.94 | 330.39 | 1001.61 | 330.38 | 1008.4 | 330.14 | 1008.42 | 330.13 |
| 1010.05 | 330.09 | 1011.72 | 330.07 | 1016.48 | 330.14 | 1018.66 | 330.19 | 1019.16 | 330.22 |
| 1020.99 | 330.27 | 1021.83 | 330.3 | 1023.64 | 330.41 | 1024.19 | 330.45 | 1024.97 | 330.89 |
| 1025.61 | 331.31 | 1026.98 | 331.74 | 1027.63 | 331.85 | 1029.42 | 332.12 | 1029.67 | 332.15 |
| 1035.03 | 332.25 | 1036.17 | 332.28 | 1037.61 | 332.17 | 1039.92 | 331.93 | 1039.95 | 331.89 |
| 1041.49 | 331.83 | 1042.44 | 331.84 | 1043.03 | 331.93 | 1045.65 | 332.42 | 1048.59 | 333.14 |
| 1050.61 | 333.87 | 1052.97 | 334.66 | 1054 | 335.3 | 1054.04 | 335.36 | 1054.65 | 335.76 |
| 1056.02 | 336.58 | 1056.32 | 336.77 | 1056.98 | 337.48 | 1057.02 | 337.67 | 1057.18 | 338.14 |
| 1057.22 | 338.43 | 1057.37 | 338.81 | 1057.48 | 339.21 | 1057.58 | 339.47 | 1057.66 | 340.72 |
| 1057.73 | 340.88 | 1057.91 | 341.45 | 1058.7 | 341.53 | 1063.16 | 341.9 | 1066.94 | 342.31 |
| 1068.95 | 342.5 | 1070.59 | 342.64 | 1074.33 | 343 | 1076.84 | 343.28 | 1077.61 | 343.35 |
| 1078.54 | 343.48 | 1081.73 | 343.86 | 1082.94 | 344.02 | 1083.23 | 344.05 | 1084.95 | 344.3 |
| 1085.55 | 344.38 | 1087.77 | 344.7 | 1090.31 | 345.12 | 1091.79 | 345.34 | 1093.28 | 345.39 |
| 1101.26 | 345.28 | 1102.61 | 345.13 | 1103.94 | 345.22 | 1104.55 | 345.24 | 1104.66 | 345.27 |
| 1106.63 | 345.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 697.12 | .04 | 1054 | .05 |



BSE Document Control Number: 7323HYD101

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 697.12 | 1054 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4347.56*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.62 | 1.27 | 349.59 | 3.05 | 349.54 | 3.98 | 349.52 | 9.7 | 349.35 |
| 10.18 | 349.35 | 11.87 | 349.3 | 14.07 | 349.26 | 15.3 | 349.23 | 19.96 | 349.17 |
| 21.06 | 349.14 | 22.64 | 349.13 | 23.67 | 349.11 | 29.02 | 348.98 | 46.04 | 348.49 |
| 59.43 | 348.22 | 61.6 | 348.2 | 61.79 | 348.26 | 62.93 | 348.26 | 66.94 | 348.21 |
| 67.48 | 348.19 | 69.62 | 348.08 | 71.82 | 348.02 | 75.56 | 347.93 | 76.37 | 347.92 |
| 79.31 | 347.73 | 79.83 | 347.69 | 82.12 | 347.62 | 82.31 | 347.6 | 84.28 | 347.53 |
| 85.93 | 347.48 | 86.71 | 347.44 | 87.56 | 347.41 | 94.58 | 347.1 | 95.71 | 346.92 |
| 96.64 | 346.86 | 97.36 | 346.83 | 98.94 | 346.8 | 101.66 | 346.8 | 103 | 346.85 |
| 104.87 | 347.05 | 106.93 | 347.03 | 107.83 | 346.96 | 110.49 | 346.8 | 111.78 | 346.76 |
| 112.6 | 346.78 | 113.58 | 346.78 | 115.84 | 346.71 | 120.34 | 346.53 | 123.07 | 346.45 |
| 123.7 | 346.45 | 124.45 | 346.4 | 126.01 | 346.31 | 128.77 | 346.13 | 128.97 | 346.11 |
| 129.61 | 346.1 | 130.55 | 346.06 | 131.19 | 346.01 | 137.07 | 345.52 | 138.12 | 345.45 |
| 143.18 | 345.14 | 146.54 | 344.95 | 147.91 | 344.83 | 148.72 | 344.79 | 149.36 | 344.8 |
| 151.01 | 344.72 | 152.29 | 344.71 | 153.84 | 344.69 | 157.35 | 344.69 | 159.19 | 344.71 |
| 160.35 | 344.67 | 162.72 | 344.66 | 163.33 | 344.62 | 165.64 | 344.53 | 167.13 | 344.52 |
| 169.94 | 344.53 | 171.08 | 344.55 | 171.99 | 344.59 | 172.95 | 344.62 | 175.09 | 344.64 |
| 177.95 | 344.64 | 181.19 | 344.6 | 181.89 | 344.6 | 184.45 | 344.55 | 186.33 | 344.47 |
| 190.02 | 344.26 | 195.94 | 343.79 | 196.22 | 343.78 | 202.48 | 343.44 | 202.82 | 343.43 |
| 204.28 | 343.48 | 204.86 | 343.46 | 205.85 | 343.39 | 209.21 | 343.18 | 210.83 | 343.05 |
| 212.44 | 342.89 | 213.4 | 342.77 | 214.1 | 342.72 | 214.77 | 342.72 | 215.83 | 342.74 |
| 216.33 | 342.73 | 218.42 | 342.66 | 219.1 | 342.62 | 219.17 | 342.6 | 224.14 | 342.35 |
| 224.81 | 342.29 | 225.57 | 342.27 | 226.88 | 342.25 | 227.87 | 342.2 | 232.54 | 342.24 |
| 234.28 | 342.26 | 237.48 | 342.27 | 241.3 | 341.97 | 242.85 | 341.83 | 247.16 | 341.65 |
| 252 | 341.47 | 253.02 | 341.44 | 262.07 | 341.06 | 264.05 | 340.99 | 266.9 | 340.9 |
| 267.48 | 340.95 | 268.55 | 340.91 | 269.36 | 340.9 | 270.97 | 340.84 | 273.07 | 340.74 |
| 273.83 | 340.73 | 276.87 | 340.74 | 278.08 | 340.7 | 279.8 | 340.76 | 280.17 | 340.76 |
| 281.65 | 340.8 | 282.01 | 340.8 | 284.24 | 340.88 | 284.79 | 340.92 | 285.76 | 340.97 |
| 287.26 | 340.84 | 288.35 | 340.73 | 288.85 | 340.71 | 290.64 | 340.6 | 291.94 | 340.53 |
| 293.71 | 340.48 | 293.95 | 340.48 | 297.16 | 340.41 | 298.7 | 340.35 | 300.09 | 340.37 |
| 302.13 | 340.35 | 302.96 | 340.35 | 304.89 | 340.3 | 305.54 | 340.27 | 307.48 | 340.16 |
| 308.43 | 340.09 | 310 | 339.95 | 310.85 | 339.89 | 312.43 | 339.86 | 314.13 | 339.86 |
| 315.16 | 339.84 | 317.6 | 339.66 | 319.18 | 339.55 | 322.09 | 339.39 | 322.82 | 339.32 |
| 323.08 | 339.26 | 323.83 | 339.22 | 324.85 | 339.2 | 326.57 | 339.21 | 327.7 | 339.24 |
| 328.36 | 339.24 | 332.3 | 339.32 | 334 | 339.37 | 335.01 | 339.41 | 335.16 | 339.43 |
| 336.57 | 339.46 | 336.95 | 339.42 | 338.12 | 339.35 | 339.96 | 339.19 | 341.35 | 339.1 |
| 343.06 | 339.09 | 343.9 | 339.03 | 345.12 | 338.99 | 367.46 | 338.88 | 370.91 | 338.59 |
| 374.85 | 338.36 | 378.08 | 338.14 | 382.3 | 338.09 | 387.85 | 338.06 | 388.33 | 338.05 |
| 392.37 | 338.02 | 394.4 | 337.99 | 396.03 | 337.98 | 397.65 | 337.98 | 398.8 | 337.95 |
| 405.89 | 337.8 | 408.56 | 337.77 | 409.15 | 337.75 | 410.56 | 337.72 | 413.04 | 337.7 |
| 416.38 | 337.61 | 417.62 | 337.61 | 420.01 | 337.65 | 423.69 | 337.6 | 426.93 | 337.52 |
| 428.02 | 337.51 | 428.39 | 337.52 | 430.71 | 337.52 | 431.21 | 337.55 | 431.88 | 337.57 |
| 433.34 | 337.52 | 436.53 | 337.39 | 438.02 | 337.39 | 440.88 | 337.56 | 442.39 | 337.59 |
| 443.12 | 337.59 | 444.79 | 337.54 | 445.54 | 337.5 | 446.12 | 337.45 | 448.21 | 337.25 |
| 449.04 | 337.15 | 452.68 | 337.12 | 453.27 | 337.11 | 455.77 | 337.09 | 475.5 | 336.91 |
| 499.53 | 336.22 | 500 | 336.21 | 502.12 | 336.25 | 503.09 | 336.26 | 503.7 | 336.25 |
| 504.12 | 336.22 | 511.54 | 335.98 | 511.65 | 335.96 | 512.13 | 335.96 | 512.92 | 335.99 |
| 515.77 | 336.15 | 517.3 | 336.3 | 518.32 | 336.31 | 521.04 | 336.21 | 522.27 | 336.16 |
| 523.29 | 336.13 | 524.85 | 336.05 | 526.25 | 336 | 530.67 | 335.91 | 532.78 | 335.88 |
| 533.19 | 335.85 | 535.02 | 335.79 | 537.85 | 335.72 | 539.66 | 335.68 | 541.84 | 335.67 |
| 543.45 | 335.67 | 544.28 | 335.65 | 544.47 | 335.68 | 550.72 | 335.68 | 556.25 | 335.62 |
| 556.88 | 335.61 | 559.48 | 335.59 | 560.7 | 335.57 | 562.03 | 335.56 | 565.37 | 335.62 |
| 565.5 | 335.63 | 566.96 | 335.63 | 570.82 | 335.69 | 571.76 | 335.68 | 572.54 | 335.7 |
| 572.89 | 335.73 | 573.57 | 335.74 | 574.69 | 335.73 | 574.82 | 335.72 | 576.14 | 335.7 |
| 581.8 | 335.5 | 582.9 | 335.48 | 587.23 | 335.36 | 588.42 | 335.4 | 590.37 | 335.41 |
| 592.04 | 335.4 | 594.91 | 335.33 | 595.82 | 335.3 | 600.76 | 335.12 | 602.14 | 335.08 |
| 609.19 | 334.89 | 618.11 | 334.8 | 618.95 | 334.76 | 621.26 | 334.69 | 621.88 | 334.69 |
| 633.1 | 334.53 | 636.67 | 334.45 | 640.58 | 334.46 | 676.46 | 334.31 | 677.72 | 334.28 |
| 678.7 | 334.27 | 680 | 334.27 | 684.56 | 334.3 | 686.88 | 334.88 | 687.61 | 335.02 |
| 691.81 | 335.02 | 691.87 | 335.03 | 693.74 | 335.04 | 695.59 | 335.04 | 696.47 | 335.05 |
| 700.14 | 335.05 | 700.31 | 335.04 | 701.08 | 334.97 | 701.96 | 334.87 | 702.41 | 334.83 |
| 703.71 | 334.76 | 704.76 | 334.72 | 707.92 | 334.66 | 710.11 | 334.64 | 713.2 | 334.65 |
| 714.26 | 334.66 | 715.05 | 334.65 | 716.11 | 334.66 | 719.62 | 334.67 | 721.85 | 334.7 |
| 723.09 | 334.7 | 724.62 | 334.72 | 727.91 | 334.72 | 728.85 | 334.73 | 729.63 | 334.75 |
| 730.5 | 334.75 | 731.04 | 334.73 | 732.64 | 334.71 | 735.19 | 334.66 | 736.32 | 334.63 |
| 737.09 | 334.59 | 741.36 | 334.55 | 744.82 | 334.56 | 748.95 | 334.56 | 750.81 | 334.57 |
| 755.8 | 334.57 | 758.05 | 334.59 | 762.93 | 334.54 | 763.94 | 334.54 | 766.05 | 334.52 |
| 768.69 | 334.48 | 770.56 | 334.47 | 773.25 | 334.41 | 774.6 | 334.39 | 780.52 | 334.24 |
| 784.98 | 334.1 | 788.57 | 333.8 | 790.11 | 333.61 | 801.72 | 333.02 | 802.67 | 332.99 |
| 804 | 332.93 | 806.08 | 332.8 | 807.16 | 332.71 | 808.52 | 332.62 | 809.65 | 332.49 |
| 811.31 | 332.46 | 811.67 | 332.47 | 812.54 | 332.55 | 814.74 | 332.72 | 815.02 | 332.71 |
| 816.53 | 332.72 | 817.58 | 332.78 | 821.17 | 333.19 | 822.63 | 333.33 | 828.25 | 333.72 |
| 828.5 | 333.71 | 829.13 | 333.74 | 829.61 | 333.74 | 830.43 | 333.77 | 831.64 | 333.8 |
| 835.84 | 333.68 | 837.81 | 333.69 | 838.14 | 333.68 | 838.78 | 333.63 | 840.72 | 333.51 |
| 841.46 | 333.48 | 843.32 | 333.48 | 843.86 | 333.46 | 852.05 | 332.99 | 855.42 | 332.73 |
| 861.45 | 332.18 | 864.88 | 331.83 | 866.36 | 331.72 | 870.91 | 331.39 | 871.68 | 331.33 |
| 874.97 | 331.13 | 875.8 | 331.1 | 877.81 | 331.04 | 878.63 | 331.03 | 881.16 | 330.98 |
| 883.39 | 330.95 | 885.24 | 330.98 | 887.41 | 330.99 | 888.83 | 330.93 | 890.34 | 330.89 |
| 891.47 | 330.89 | 893.34 | 330.91 | 895.28 | 330.94 | 896.1 | 330.96 | 898.55 | 331.05 |
| 899.74 | 331.11 | 901.12 | 331.15 | 901.76 | 331.13 | 904.31 | 330.98 | 906.99 | 330.75 |
| 913.09 | 330.7 | 914.22 | 330.7 | 920.4 | 330.62 | 922.8 | 330.6 | 926.74 | 330.6 |
| 933 | 330.63 | 934.31 | 330.65 | 935.76 | 330.71 | 938.65 | 330.77 | 940.85 | 330.79 |
| 943.64 | 330.78 | 945.34 | 330.76 | 948.17 | 330.76 | 948.51 | 330.75 | 952.65 | 330.71 |
| 953.83 | 330.67 | 955.3 | 330.66 | 957.14 | 330.61 | 958.2 | 330.61 | 958.48 | 330.6 |
| 967.94 | 330.5 | 968.32 | 330.5 | 973.19 | 330.43 | 974.21 | 330.42 | 974.97 | 330.4 |
| 978.42 | 330.37 | 982.55 | 330.32 | 985.66 | 330.25 | 987.2 | 330.23 | 988.51 | 330.2 |
| 989.44 | 330.19 | 989.79 | 330.22 | 991.81 | 330.17 | 992.77 | 330.13 | 995.81 | 330.03 |
| 1002.4 | 329.79 | 1004 | 329.74 | 1005.63 | 329.72 | 1010.25 | 329.8 | 1012.36 | 329.85 |
| 1012.84 | 329.88 | 1014.61 | 329.94 | 1015.43 | 329.96 | 1017.19 | 330.06 | 1017.72 | 330.1 |
| 1018.3 | 330.39 | 1019.1 | 330.88 | 1020.43 | 331.28 | 1021.06 | 331.39 | 1022.8 | 331.67 |
| 1023.04 | 331.7 | 1029.34 | 331.81 | 1030.74 | 331.69 | 1032.97 | 331.42 | 1033.01 | 331.38 |
| 1034.5 | 331.32 | 1035.42 | 331.32 | 1036 | 331.42 | 1038.54 | 331.94 | 1041.39 | 332.69 |
| 1043.35 | 333.45 | 1043.46 | 333.5 | 1045.57 | 334.26 | 1045.64 | 334.28 | 1046.63 | 334.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1046.67 | 335.02 | 1047.26 | 335.44 | 1048.87 | 336.52 | 1049.32 | 337.04 | 1049.5 | 337.27 |
| 1049.54 | 337.47 | 1049.7 | 337.98 | 1049.74 | 338.28 | 1049.88 | 338.69 | 1050.08 | 339.41 |
| 1050.16 | 340.74 | 1050.39 | 341.53 | 1051.16 | 341.6 | 1055.45 | 341.95 | 1058.45 | 342.26 |
| 1061.01 | 342.5 | 1062.59 | 342.62 | 1066.19 | 342.92 | 1069.34 | 343.23 | 1070.24 | 343.34 |
| 1072.1 | 343.53 | 1073.3 | 343.66 | 1074.09 | 343.76 | 1074.74 | 343.83 | 1076.98 | 344.1 |
| 1079.11 | 344.37 | 1081.01 | 344.65 | 1082.98 | 344.91 | 1084.41 | 344.94 | 1092.08 | 344.81 |
| 1093.38 | 344.65 | 1093.49 | 344.65 | 1094.66 | 344.74 | 1095.25 | 344.77 | 1095.35 | 344.8 |
| 1097.25 | 344.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 700.31 | .04 | 1046.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 700.31 | 1046.63 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4328.30*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.7 | 3.06 | 349.61 | 4 | 349.59 | 9.74 | 349.42 | 11.92 | 349.36 |
| 14.13 | 349.32 | 15.37 | 349.29 | 21.16 | 349.19 | 22.75 | 349.17 | 23.78 | 349.15 |
| 27.93 | 349.04 | 29.15 | 349.01 | 46.25 | 348.52 | 59.7 | 348.26 | 61.88 | 348.23 |
| 62.07 | 348.3 | 63.22 | 348.29 | 67.24 | 348.24 | 67.79 | 348.23 | 69.94 | 348.11 |
| 75.91 | 347.95 | 76.72 | 347.93 | 79.67 | 347.73 | 80.19 | 347.69 | 82.49 | 347.62 |
| 83.3 | 347.58 | 84.66 | 347.53 | 86.32 | 347.48 | 87.96 | 347.4 | 95.01 | 347.09 |
| 96.15 | 346.89 | 97.08 | 346.82 | 97.8 | 346.8 | 99.39 | 346.77 | 100.92 | 346.77 |
| 101.05 | 346.76 | 102.12 | 346.77 | 103.47 | 346.82 | 105.35 | 347.04 | 107.41 | 347.03 |
| 108.32 | 346.95 | 110.99 | 346.79 | 112.02 | 346.75 | 113.11 | 346.76 | 114.1 | 346.76 |
| 114.82 | 346.75 | 116.37 | 346.7 | 120.89 | 346.5 | 123.23 | 346.41 | 124.27 | 346.4 |
| 125.5 | 346.32 | 126.59 | 346.26 | 129.35 | 346.07 | 129.56 | 346.05 | 130.2 | 346.04 |
| 131.14 | 346 | 131.79 | 345.95 | 137.7 | 345.44 | 138.75 | 345.36 | 143.84 | 345.03 |
| 147.21 | 344.84 | 148.58 | 344.71 | 149.4 | 344.67 | 150.18 | 344.68 | 151.7 | 344.6 |
| 152.98 | 344.59 | 154.54 | 344.57 | 157.21 | 344.58 | 158.06 | 344.57 | 158.97 | 344.59 |
| 159.91 | 344.6 | 161.09 | 344.56 | 163.46 | 344.55 | 164.08 | 344.5 | 165.07 | 344.46 |
| 166.39 | 344.42 | 167.89 | 344.4 | 170.72 | 344.41 | 171.86 | 344.44 | 172.77 | 344.49 |
| 173.74 | 344.52 | 175.89 | 344.54 | 178.76 | 344.54 | 180.42 | 344.53 | 180.84 | 344.52 |
| 182.71 | 344.51 | 185.29 | 344.46 | 187.18 | 344.38 | 190.89 | 344.16 | 196.83 | 343.66 |
| 197.12 | 343.65 | 203.41 | 343.29 | 203.75 | 343.28 | 205.21 | 343.33 | 205.56 | 343.33 |
| 206.6 | 343.25 | 210.16 | 343.03 | 211.8 | 342.89 | 213.41 | 342.72 | 214.71 | 342.55 |
| 215.75 | 342.54 | 216.81 | 342.56 | 217.32 | 342.55 | 219.41 | 342.48 | 220.1 | 342.44 |
| 220.17 | 342.42 | 225.16 | 342.17 | 225.45 | 342.13 | 225.83 | 342.11 | 227.91 | 342.06 |
| 228.91 | 342 | 233.6 | 342.04 | 235.35 | 342.05 | 238.56 | 342.06 | 241.97 | 341.77 |
| 243.96 | 341.59 | 248.29 | 341.41 | 253.15 | 341.23 | 254.17 | 341.2 | 263.27 | 340.8 |
| 266.89 | 340.67 | 268.12 | 340.63 | 268.7 | 340.68 | 269.77 | 340.64 | 270.59 | 340.63 |
| 273.51 | 340.5 | 274.32 | 340.45 | 278.13 | 340.45 | 279.35 | 340.41 | 279.77 | 340.43 |
| 281.08 | 340.47 | 281.45 | 340.47 | 282.94 | 340.52 | 283.29 | 340.52 | 284.24 | 340.55 |
| 285.53 | 340.61 | 287.11 | 340.7 | 289.67 | 340.44 | 290.17 | 340.42 | 291.12 | 340.36 |
| 293.27 | 340.25 | 295.05 | 340.2 | 295.29 | 340.2 | 299.07 | 340.13 | 300.06 | 340.09 |
| 301.46 | 340.1 | 303.51 | 340.08 | 306.28 | 340.01 | 306.93 | 339.98 | 308.88 | 339.86 |
| 309.83 | 339.79 | 311.42 | 339.64 | 312.27 | 339.57 | 313.85 | 339.55 | 315.56 | 339.55 |
| 316.6 | 339.53 | 320.64 | 339.22 | 321.92 | 339.15 | 323.56 | 339.05 | 324.29 | 338.98 |
| 324.56 | 338.93 | 325.31 | 338.88 | 325.83 | 338.86 | 326.33 | 338.86 | 328.19 | 338.88 |
| 329.19 | 338.91 | 329.86 | 338.91 | 333.82 | 339 | 335.52 | 339.05 | 336.69 | 339.11 |
| 338.1 | 339.15 | 339.66 | 339.04 | 341.51 | 338.86 | 342.91 | 338.77 | 344.62 | 338.77 |
| 345.47 | 338.7 | 346.69 | 338.65 | 369.14 | 338.56 | 372.38 | 338.28 | 372.6 | 338.27 |
| 376.56 | 338.01 | 379.8 | 337.78 | 384.05 | 337.74 | 389.62 | 337.71 | 390.1 | 337.71 |
| 394.16 | 337.68 | 396.19 | 337.66 | 397.84 | 337.65 | 399.47 | 337.65 | 400.62 | 337.62 |
| 404.83 | 337.53 | 406.43 | 337.49 | 408.75 | 337.45 | 410.42 | 337.43 | 411.01 | 337.41 |
| 412.43 | 337.38 | 414.92 | 337.35 | 418.28 | 337.26 | 419.52 | 337.26 | 420.35 | 337.27 |
| 421.93 | 337.3 | 424.82 | 337.26 | 426.38 | 337.23 | 428.88 | 337.16 | 429.98 | 337.15 |
| 430.35 | 337.16 | 432.67 | 337.16 | 433.85 | 337.22 | 435.31 | 337.17 | 438.52 | 337.03 |
| 440.02 | 337.02 | 442.89 | 337.21 | 444.41 | 337.25 | 445.14 | 337.25 | 446.81 | 337.2 |
| 447.57 | 337.16 | 448.15 | 337.11 | 450.26 | 336.9 | 451.09 | 336.79 | 454.74 | 336.76 |
| 455.34 | 336.75 | 457.85 | 336.74 | 477.66 | 336.59 | 501.8 | 335.9 | 502.27 | 335.9 |
| 504.41 | 335.92 | 505.39 | 335.92 | 506 | 335.91 | 506.42 | 335.88 | 513.87 | 335.65 |
| 513.98 | 335.63 | 514.46 | 335.63 | 515.26 | 335.66 | 517.72 | 335.81 | 518.12 | 335.83 |
| 519.09 | 335.94 | 519.66 | 335.99 | 520.69 | 336 | 522.06 | 335.95 | 523.41 | 335.89 |
| 525.68 | 335.8 | 528.65 | 335.67 | 535.31 | 335.52 | 537.46 | 335.45 | 540.3 | 335.37 |
| 542.12 | 335.33 | 544.31 | 335.32 | 545.92 | 335.33 | 546.76 | 335.31 | 546.95 | 335.33 |
| 548.24 | 335.34 | 553.23 | 335.34 | 558.78 | 335.28 | 559.42 | 335.27 | 564.59 | 335.23 |
| 565.26 | 335.24 | 567.94 | 335.3 | 568.85 | 335.3 | 573.42 | 335.37 | 574.37 | 335.36 |
| 574.89 | 335.37 | 575.43 | 335.41 | 576.19 | 335.42 | 578.08 | 335.4 | 578.77 | 335.38 |
| 584.45 | 335.17 | 585.56 | 335.15 | 589.91 | 335.03 | 591.1 | 335.07 | 593.07 | 335.09 |
| 594.74 | 335.07 | 596.03 | 335.04 | 597.77 | 334.99 | 603.5 | 334.77 | 611.97 | 334.53 |
| 619.87 | 334.44 | 620.92 | 334.43 | 621.77 | 334.39 | 624.09 | 334.31 | 635.98 | 334.12 |
| 639.57 | 334.04 | 643.5 | 334.05 | 679.54 | 333.93 | 680.81 | 333.9 | 681.79 | 333.89 |
| 683.1 | 333.89 | 687.68 | 333.92 | 689.57 | 334.42 | 690.02 | 334.53 | 690.75 | 334.68 |
| 695.02 | 334.69 | 696.9 | 334.7 | 698.76 | 334.7 | 699.65 | 334.71 | 703.33 | 334.71 |
| 703.5 | 334.7 | 704.06 | 334.65 | 705.1 | 334.52 | 705.54 | 334.48 | 706.8 | 334.4 |
| 707.82 | 334.37 | 708.9 | 334.35 | 709.95 | 334.34 | 710.89 | 334.32 | 712.37 | 334.3 |
| 716 | 334.3 | 717.03 | 334.31 | 717.79 | 334.3 | 718.82 | 334.31 | 722.23 | 334.32 |
| 724.39 | 334.35 | 725.23 | 334.34 | 725.59 | 334.35 | 730.27 | 334.35 | 731.17 | 334.36 |
| 731.93 | 334.38 | 732.78 | 334.38 | 733.29 | 334.36 | 734.85 | 334.35 | 737.32 | 334.3 |
| 737.76 | 334.28 | 738.51 | 334.27 | 739.16 | 334.24 | 743.3 | 334.2 | 746.66 | 334.21 |
| 757.31 | 334.21 | 759.48 | 334.22 | 761.24 | 334.21 | 764.21 | 334.18 | 765.19 | 334.18 |
| 767.25 | 334.16 | 769.8 | 334.12 | 772.62 | 334.1 | 774.22 | 334.05 | 775.54 | 334.03 |
| 781.28 | 333.88 | 785.59 | 333.75 | 788.52 | 333.51 | 789.08 | 333.47 | 790.57 | 333.29 |
| 801.83 | 332.7 | 804.04 | 332.61 | 806.05 | 332.47 | 808.28 | 332.3 | 809.52 | 332.15 |
| 811.13 | 332.12 | 812.04 | 332.18 | 812.32 | 332.21 | 814.46 | 332.38 | 816.18 | 332.4 |
| 817.2 | 332.46 | 819.91 | 332.78 | 821.58 | 332.94 | 822.1 | 333 | 827.55 | 333.41 |
| 829.11 | 333.46 | 829.67 | 333.5 | 830.84 | 333.53 | 831.93 | 333.51 | 834.91 | 333.44 |
| 836.93 | 333.45 | 837.76 | 333.39 | 839.64 | 333.27 | 840.36 | 333.24 | 842.07 | 333.24 |
| 842.68 | 333.21 | 850.63 | 332.71 | 853.9 | 332.44 | 859.74 | 331.88 | 863.06 | 331.53 |
| 864.5 | 331.41 | 868.91 | 331.08 | 869.66 | 331.02 | 872.85 | 330.8 | 873.66 | 330.78 |
| 875.6 | 330.72 | 876.4 | 330.71 | 878.85 | 330.65 | 880.84 | 330.62 | 882.81 | 330.64 |
| 882.96 | 330.65 | 884.91 | 330.65 | 886.29 | 330.6 | 888.01 | 330.58 | 890.66 | 330.61 |
| 892.54 | 330.66 | 895.71 | 330.79 | 896.87 | 330.85 | 898.21 | 330.89 | 898.82 | 330.87 |
| 901.3 | 330.71 | 903.9 | 330.46 | 910.91 | 330.4 | 916.9 | 330.32 | 919.22 | 330.3 |
| 923.05 | 330.28 | 929.11 | 330.29 | 930.38 | 330.31 | 931.79 | 330.37 | 934.04 | 330.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 936.73 | 330.46 | 939.43 | 330.45 | 940.02 | 330.44 | 941.08 | 330.44 | 944.15 | 330.43 |
| 948.17 | 330.39 | 949.31 | 330.35 | 950.73 | 330.34 | 951.99 | 330.3 | 953.82 | 330.28 |
| 962.99 | 330.16 | 963.37 | 330.16 | 968.08 | 330.09 | 968.63 | 330.07 | 973.16 | 330.03 |
| 977.16 | 329.97 | 980.17 | 329.91 | 981.37 | 329.89 | 982.93 | 329.85 | 983.83 | 329.84 |
| 984.18 | 329.87 | 986.98 | 329.8 | 987.07 | 329.79 | 990.02 | 329.69 | 996.41 | 329.45 |
| 996.43 | 329.44 | 997.96 | 329.4 | 999.54 | 329.38 | 1004.01 | 329.46 | 1006.06 | 329.51 |
| 1006.52 | 329.54 | 1008.24 | 329.6 | 1009.03 | 329.62 | 1009.81 | 329.67 | 1011.26 | 329.75 |
| 1011.99 | 330.1 | 1012.59 | 330.44 | 1013.88 | 330.81 | 1014.49 | 330.93 | 1016.17 | 331.22 |
| 1016.4 | 331.25 | 1021.44 | 331.32 | 1022.51 | 331.34 | 1023.55 | 331.24 | 1026.03 | 330.92 |
| 1026.07 | 330.87 | 1027.51 | 330.8 | 1028.4 | 330.8 | 1028.96 | 330.91 | 1031.43 | 331.45 |
| 1034 | 332.19 | 1034.43 | 332.34 | 1034.96 | 332.57 | 1036.2 | 333.08 | 1038.23 | 333.88 |
| 1038.31 | 333.9 | 1039.27 | 334.62 | 1039.31 | 334.68 | 1039.88 | 335.13 | 1040.41 | 335.53 |
| 1041.42 | 336.27 | 1042.02 | 337.06 | 1042.06 | 337.28 | 1042.21 | 337.82 | 1042.25 | 338.14 |
| 1042.39 | 338.58 | 1042.49 | 339.04 | 1042.58 | 339.34 | 1042.65 | 340.77 | 1042.68 | 340.84 |
| 1042.88 | 341.61 | 1047.73 | 342 | 1050.62 | 342.28 | 1051.84 | 342.38 | 1052.2 | 342.42 |
| 1053.07 | 342.49 | 1054.59 | 342.59 | 1058.04 | 342.85 | 1060.36 | 343.05 | 1061.07 | 343.1 |
| 1061.93 | 343.19 | 1064.88 | 343.47 | 1065.63 | 343.55 | 1066.26 | 343.6 | 1067.85 | 343.76 |
| 1070.45 | 344.04 | 1072.28 | 344.27 | 1072.8 | 344.32 | 1074.16 | 344.47 | 1075.54 | 344.49 |
| 1082.91 | 344.34 | 1084.16 | 344.16 | 1085.38 | 344.27 | 1085.95 | 344.3 | 1086.05 | 344.34 |
| 1087.86 | 344.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 703.5 | .04 | 1039.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 703.5 | 1039.27 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4309.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.78 | 3.07 | 349.68 | 4.02 | 349.66 | 9.79 | 349.49 | 11.98 | 349.43 |
| 15.44 | 349.35 | 23.89 | 349.19 | 28.06 | 349.08 | 29.29 | 349.05 | 46.46 | 348.55 |
| 59.97 | 348.29 | 62.16 | 348.26 | 62.35 | 348.33 | 63.5 | 348.33 | 67.55 | 348.28 |
| 68.1 | 348.26 | 70.02 | 348.15 | 71.4 | 348.11 | 72.48 | 348.07 | 77.03 | 347.95 |
| 80.03 | 347.73 | 80.55 | 347.7 | 82.87 | 347.62 | 83.68 | 347.58 | 85.05 | 347.53 |
| 86.71 | 347.48 | 87.5 | 347.44 | 95.45 | 347.07 | 96.58 | 346.87 | 96.99 | 346.82 |
| 97.52 | 346.79 | 98.24 | 346.77 | 99.85 | 346.74 | 101.51 | 346.73 | 102.59 | 346.74 |
| 103.94 | 346.8 | 105.83 | 347.03 | 107.9 | 347.02 | 108.81 | 346.95 | 111.5 | 346.77 |
| 112.8 | 346.73 | 113.63 | 346.75 | 114.62 | 346.75 | 116.9 | 346.68 | 121.44 | 346.46 |
| 123.79 | 346.37 | 124.83 | 346.35 | 126.07 | 346.27 | 127.17 | 346.21 | 128.05 | 346.15 |
| 129.94 | 346.01 | 130.15 | 345.99 | 130.79 | 345.98 | 131.74 | 345.93 | 132.39 | 345.88 |
| 138.32 | 345.35 | 139.38 | 345.27 | 144.49 | 344.93 | 147.88 | 344.73 | 149.25 | 344.59 |
| 149.84 | 344.56 | 150.42 | 344.55 | 150.86 | 344.56 | 152.39 | 344.48 | 155.24 | 344.46 |
| 155.86 | 344.45 | 157.92 | 344.46 | 158.78 | 344.46 | 159.69 | 344.48 | 160.64 | 344.48 |
| 161.82 | 344.45 | 164.2 | 344.44 | 164.82 | 344.39 | 167.15 | 344.3 | 168.65 | 344.29 |
| 171.49 | 344.3 | 172.64 | 344.33 | 173.55 | 344.38 | 174.53 | 344.42 | 176.69 | 344.45 |
| 179.58 | 344.45 | 181.24 | 344.43 | 183.54 | 344.42 | 186.13 | 344.37 | 188.03 | 344.28 |
| 191.76 | 344.05 | 197.73 | 343.53 | 198.01 | 343.52 | 204.67 | 343.13 | 206.15 | 343.19 |
| 206.49 | 343.19 | 207.54 | 343.1 | 211.12 | 342.87 | 212.76 | 342.72 | 214.38 | 342.55 |
| 215.68 | 342.37 | 216.72 | 342.36 | 217.8 | 342.39 | 218.31 | 342.38 | 219.13 | 342.34 |
| 220.41 | 342.3 | 221.1 | 342.26 | 221.16 | 342.24 | 226.18 | 341.98 | 226.85 | 341.92 |
| 228.91 | 341.86 | 229.95 | 341.8 | 236.42 | 341.84 | 239.64 | 341.85 | 242.37 | 341.6 |
| 243.5 | 341.5 | 244.15 | 341.43 | 245.06 | 341.35 | 246.28 | 341.3 | 249.42 | 341.18 |
| 254.3 | 340.99 | 255.33 | 340.96 | 265.57 | 340.5 | 268.11 | 340.41 | 269.33 | 340.36 |
| 269.92 | 340.41 | 270.99 | 340.37 | 271.82 | 340.35 | 273.44 | 340.29 | 275.56 | 340.16 |
| 279.39 | 340.16 | 280.62 | 340.11 | 281.65 | 340.16 | 284.58 | 340.24 | 285.53 | 340.27 |
| 286.83 | 340.33 | 288.16 | 340.42 | 288.57 | 340.42 | 289.11 | 340.35 | 290.95 | 340.16 |
| 293.29 | 340.03 | 294.6 | 339.97 | 296.39 | 339.92 | 296.63 | 339.92 | 299.87 | 339.87 |
| 301.24 | 339.84 | 301.42 | 339.83 | 302.09 | 339.84 | 304.88 | 339.8 | 306.2 | 339.77 |
| 307.67 | 339.73 | 310.28 | 339.57 | 311.24 | 339.49 | 313.68 | 339.26 | 314.16 | 339.25 |
| 318.03 | 339.22 | 322.09 | 338.89 | 323.38 | 338.82 | 325.03 | 338.72 | 325.42 | 338.69 |
| 326.03 | 338.59 | 326.79 | 338.54 | 327.31 | 338.52 | 327.81 | 338.52 | 329.68 | 338.54 |
| 331 | 338.58 | 331.35 | 338.58 | 335.33 | 338.68 | 337.04 | 338.74 | 338.22 | 338.8 |
| 339.63 | 338.85 | 340.03 | 338.81 | 341.21 | 338.72 | 343.06 | 338.54 | 344.47 | 338.45 |
| 346.19 | 338.44 | 347.04 | 338.37 | 348.27 | 338.32 | 370.81 | 338.25 | 374.07 | 337.95 |
| 374.29 | 337.94 | 378.27 | 337.67 | 381.53 | 337.42 | 385.79 | 337.39 | 391.39 | 337.37 |
| 391.87 | 337.37 | 395.95 | 337.35 | 397.99 | 337.33 | 399.64 | 337.32 | 401.28 | 337.32 |
| 402.43 | 337.29 | 406.67 | 337.2 | 408.28 | 337.16 | 410.6 | 337.11 | 412.29 | 337.09 |
| 412.88 | 337.07 | 414.3 | 337.04 | 416.8 | 337 | 419.85 | 336.92 | 421.43 | 336.91 |
| 422.26 | 336.92 | 423.84 | 336.95 | 424.63 | 336.94 | 426.75 | 336.9 | 427.14 | 336.9 |
| 430.83 | 336.8 | 431.93 | 336.79 | 432.3 | 336.8 | 434.64 | 336.8 | 435.14 | 336.84 |
| 435.82 | 336.86 | 437.29 | 336.81 | 440.51 | 336.66 | 442.01 | 336.66 | 444.9 | 336.86 |
| 445.91 | 336.9 | 447.16 | 336.91 | 448.84 | 336.86 | 449.6 | 336.81 | 450.19 | 336.76 |
| 452.3 | 336.54 | 453.13 | 336.44 | 456.81 | 336.41 | 457.41 | 336.4 | 459.93 | 336.39 |
| 479.83 | 336.27 | 504.08 | 335.59 | 504.55 | 335.58 | 506.7 | 335.59 | 507.68 | 335.58 |
| 508.64 | 335.56 | 508.71 | 335.55 | 516.2 | 335.32 | 516.31 | 335.29 | 517.13 | 335.31 |
| 520.06 | 335.49 | 520.47 | 335.52 | 522.02 | 335.68 | 523.05 | 335.69 | 524.43 | 335.64 |
| 527.03 | 335.52 | 528.06 | 335.48 | 531.05 | 335.33 | 537.31 | 335.19 | 538.05 | 335.16 |
| 539.9 | 335.1 | 542.75 | 335.02 | 544.58 | 334.98 | 546.78 | 334.97 | 548.4 | 334.98 |
| 549.24 | 334.96 | 549.43 | 334.99 | 550.73 | 334.99 | 555.74 | 335 | 561.32 | 334.94 |
| 561.96 | 334.93 | 564.58 | 334.92 | 565.81 | 334.9 | 567.15 | 334.89 | 567.83 | 334.9 |
| 570.52 | 334.97 | 572.13 | 334.99 | 576.02 | 335.05 | 576.98 | 335.04 | 577.5 | 335.05 |
| 578.11 | 335.1 | 578.8 | 335.11 | 579.93 | 335.1 | 581.4 | 335.06 | 587.1 | 334.85 |
| 592.58 | 334.7 | 593.78 | 334.73 | 595.76 | 334.76 | 597.44 | 334.74 | 598.73 | 334.71 |
| 601.25 | 334.63 | 606.24 | 334.42 | 607.63 | 334.38 | 614.74 | 334.16 | 622.68 | 334.07 |
| 623.74 | 334.06 | 624.6 | 334.01 | 626.92 | 333.93 | 627.55 | 333.92 | 638.87 | 333.72 |
| 642.47 | 333.63 | 646.42 | 333.64 | 658.49 | 333.61 | 682.62 | 333.54 | 683.11 | 333.54 |
| 683.89 | 333.52 | 684.89 | 333.52 | 685.75 | 333.51 | 686.2 | 333.52 | 687.44 | 333.52 |
| 690.8 | 333.53 | 692.7 | 334.06 | 693.15 | 334.18 | 693.88 | 334.35 | 698.18 | 334.35 |
| 700.06 | 334.36 | 703.26 | 334.36 | 704.17 | 334.37 | 706.52 | 334.37 | 706.69 | 334.36 |
| 707.42 | 334.28 | 708.24 | 334.17 | 708.67 | 334.13 | 709.89 | 334.05 | 710.87 | 334.01 |
| 712.94 | 333.99 | 713.85 | 333.97 | 715.28 | 333.96 | 715.9 | 333.95 | 718.8 | 333.95 |
| 719.8 | 333.96 | 720.53 | 333.95 | 721.53 | 333.96 | 724.83 | 333.97 | 726.92 | 334 |
| 727.74 | 333.99 | 729.52 | 333.99 | 731.97 | 333.98 | 732.49 | 333.99 | 733.5 | 333.99 |
| 734.23 | 334.01 | 735.16 | 334.01 | 735.91 | 333.99 | 737.06 | 333.98 | 741.24 | 333.89 |
| 745.25 | 333.86 | 748.5 | 333.87 | 752.37 | 333.86 | 754.13 | 333.86 | 756.31 | 333.85 |
| 758.81 | 333.85 | 760.92 | 333.86 | 763.76 | 333.83 | 766.45 | 333.81 | 768.44 | 333.8 |
| 770.91 | 333.76 | 773.64 | 333.74 | 775.2 | 333.69 | 776.47 | 333.67 | 782.03 | 333.53 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 786.21 | 333.4 | 789.58 | 333.14 | 791.03 | 332.98 | 801.94 | 332.38 | 804.08 | 332.28 |
| 806.03 | 332.15 | 807.05 | 332.06 | 808.19 | 331.97 | 809.38 | 331.82 | 810.16 | 331.79 |
| 810.95 | 331.78 | 811.86 | 331.85 | 814.17 | 332.04 | 814.42 | 332.04 | 815.84 | 332.08 |
| 816.83 | 332.15 | 817.28 | 332.19 | 817.98 | 332.28 | 819.45 | 332.45 | 820.2 | 332.53 |
| 821.07 | 332.61 | 821.57 | 332.67 | 826.85 | 333.1 | 827.68 | 333.15 | 828.36 | 333.17 |
| 828.9 | 333.22 | 830.04 | 333.27 | 833.98 | 333.2 | 835.33 | 333.21 | 836.14 | 333.21 |
| 836.74 | 333.15 | 838.56 | 333.04 | 839.26 | 333.01 | 840.92 | 332.99 | 841.51 | 332.96 |
| 849.21 | 332.42 | 852.37 | 332.15 | 858.03 | 331.58 | 861.25 | 331.22 | 866.92 | 330.77 |
| 867.64 | 330.71 | 870.73 | 330.48 | 871.51 | 330.46 | 873.39 | 330.4 | 874.16 | 330.39 |
| 876.54 | 330.33 | 878.47 | 330.3 | 880.38 | 330.31 | 882.41 | 330.31 | 883.75 | 330.27 |
| 885.41 | 330.26 | 887.98 | 330.32 | 889.8 | 330.38 | 890.57 | 330.41 | 892.88 | 330.52 |
| 893.99 | 330.58 | 895.29 | 330.63 | 895.89 | 330.6 | 898.29 | 330.43 | 900.8 | 330.17 |
| 907.59 | 330.1 | 915.65 | 329.99 | 919.35 | 329.97 | 925.23 | 329.96 | 926.46 | 329.97 |
| 927.82 | 330.03 | 930 | 330.08 | 932.61 | 330.12 | 935.8 | 330.12 | 936.82 | 330.11 |
| 939.8 | 330.11 | 943.69 | 330.07 | 944.79 | 330.03 | 946.13 | 330.02 | 947.39 | 329.98 |
| 947.91 | 329.98 | 949.17 | 329.96 | 958.04 | 329.83 | 958.41 | 329.82 | 963.51 | 329.73 |
| 963.93 | 329.73 | 964.64 | 329.71 | 967.89 | 329.68 | 971.77 | 329.62 | 974.68 | 329.56 |
| 974.92 | 329.56 | 977.36 | 329.5 | 978.23 | 329.49 | 978.57 | 329.53 | 980.46 | 329.48 |
| 984.22 | 329.35 | 990.41 | 329.1 | 991.58 | 329.06 | 993.44 | 329.04 | 997.77 | 329.12 |
| 999.76 | 329.17 | 1000.21 | 329.21 | 1002.64 | 329.28 | 1004.79 | 329.4 | 1005.6 | 329.76 |
| 1006.08 | 330 | 1007.33 | 330.35 | 1007.92 | 330.47 | 1009.77 | 330.8 | 1014.65 | 330.86 |
| 1015.68 | 330.87 | 1017 | 330.72 | 1019.09 | 330.41 | 1019.13 | 330.36 | 1020.31 | 330.3 |
| 1020.52 | 330.28 | 1021.39 | 330.28 | 1021.93 | 330.39 | 1024.31 | 330.96 | 1026.99 | 331.8 |
| 1028.82 | 332.62 | 1028.93 | 332.66 | 1030.9 | 333.5 | 1030.97 | 333.52 | 1031.91 | 334.28 |
| 1031.94 | 334.35 | 1032.49 | 334.82 | 1033.96 | 336.01 | 1034.54 | 336.84 | 1034.58 | 337.08 |
| 1034.72 | 337.65 | 1034.76 | 338 | 1034.89 | 338.46 | 1035.07 | 339.27 | 1035.15 | 340.79 |
| 1035.21 | 340.99 | 1035.37 | 341.68 | 1036.07 | 341.75 | 1040.02 | 342.04 | 1042.78 | 342.3 |
| 1043.36 | 342.35 | 1045.14 | 342.48 | 1046.59 | 342.56 | 1049.9 | 342.77 | 1052.81 | 342.98 |
| 1053.63 | 343.05 | 1055.35 | 343.18 | 1057.17 | 343.33 | 1057.52 | 343.35 | 1059.3 | 343.5 |
| 1059.83 | 343.54 | 1061.8 | 343.71 | 1064.05 | 343.93 | 1065.35 | 344.04 | 1066.67 | 344.05 |
| 1073.73 | 343.87 | 1074.93 | 343.68 | 1076.1 | 343.79 | 1076.59 | 343.82 | 1076.74 | 343.87 |
| 1078.48 | 343.86 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 706.69 | .04 | 1031.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 706.69 | 1031.91 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4289.78*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.85 | 3.09 | 349.75 | 4.04 | 349.73 | 9.83 | 349.56 | 12.03 | 349.5 |
| 14.26 | 349.45 | 15.51 | 349.41 | 20.24 | 349.31 | 21.35 | 349.28 | 23.99 | 349.23 |
| 28.9 | 349.09 | 29.42 | 349.08 | 46.67 | 348.58 | 60.25 | 348.32 | 62.44 | 348.29 |
| 62.64 | 348.37 | 63.79 | 348.37 | 68.41 | 348.3 | 70.34 | 348.17 | 70.57 | 348.17 |
| 71.72 | 348.13 | 72.81 | 348.1 | 76.59 | 347.98 | 77.42 | 347.96 | 80.92 | 347.7 |
| 83.24 | 347.62 | 84.06 | 347.58 | 85.43 | 347.54 | 87.1 | 347.48 | 95.88 | 347.05 |
| 97.02 | 346.84 | 97.43 | 346.79 | 98.69 | 346.73 | 100.3 | 346.7 | 101.96 | 346.7 |
| 103.05 | 346.71 | 104.41 | 346.77 | 106.31 | 347.02 | 108.39 | 347.02 | 109.31 | 346.94 |
| 112 | 346.76 | 112.94 | 346.72 | 114.14 | 346.73 | 115.14 | 346.73 | 115.87 | 346.72 |
| 117.43 | 346.66 | 121.98 | 346.43 | 122.32 | 346.42 | 124.76 | 346.31 | 125.55 | 346.29 |
| 126.64 | 346.22 | 127.73 | 346.16 | 127.75 | 346.15 | 130.53 | 345.95 | 130.74 | 345.93 |
| 131.38 | 345.92 | 132.33 | 345.87 | 132.99 | 345.82 | 138.95 | 345.26 | 140.01 | 345.18 |
| 145.14 | 344.82 | 148.55 | 344.61 | 148.83 | 344.59 | 149.93 | 344.47 | 150.76 | 344.44 |
| 151.55 | 344.44 | 153.07 | 344.36 | 155.94 | 344.34 | 159.5 | 344.34 | 160.42 | 344.37 |
| 161.36 | 344.37 | 162.55 | 344.34 | 164.94 | 344.33 | 165.57 | 344.28 | 166.56 | 344.23 |
| 167.9 | 344.19 | 169.41 | 344.17 | 172.27 | 344.19 | 173.42 | 344.22 | 174.34 | 344.28 |
| 175.31 | 344.32 | 177.49 | 344.35 | 180.39 | 344.36 | 182.06 | 344.34 | 183.67 | 344.33 |
| 186.97 | 344.28 | 188.88 | 344.19 | 192.62 | 343.95 | 198.62 | 343.4 | 198.91 | 343.39 |
| 205.25 | 343 | 205.6 | 342.98 | 207.08 | 343.04 | 207.42 | 343.04 | 208.66 | 342.94 |
| 212.07 | 342.71 | 213.72 | 342.56 | 215.34 | 342.38 | 216.32 | 342.23 | 216.66 | 342.19 |
| 217.03 | 342.17 | 217.7 | 342.18 | 218.78 | 342.21 | 219.29 | 342.2 | 220.12 | 342.16 |
| 221.73 | 342.11 | 222.16 | 342.06 | 227.21 | 341.79 | 227.5 | 341.76 | 228.66 | 341.71 |
| 229.98 | 341.67 | 230.98 | 341.6 | 235.72 | 341.62 | 237.48 | 341.63 | 240.72 | 341.63 |
| 243.46 | 341.37 | 244.16 | 341.31 | 245.26 | 341.2 | 246.17 | 341.1 | 247.39 | 341.06 |
| 250.54 | 340.94 | 255.45 | 340.76 | 256.48 | 340.72 | 265.66 | 340.29 | 267.66 | 340.2 |
| 269.32 | 340.14 | 270.55 | 340.08 | 271.14 | 340.14 | 272.22 | 340.1 | 273.05 | 340.08 |
| 274.67 | 340.01 | 275.99 | 339.93 | 276.81 | 339.87 | 280.65 | 339.87 | 281.89 | 339.82 |
| 282.92 | 339.87 | 284 | 339.9 | 286.82 | 339.99 | 288.12 | 340.05 | 289.47 | 340.15 |
| 289.87 | 340.15 | 290.07 | 340.12 | 291.74 | 339.92 | 292.26 | 339.87 | 293.77 | 339.79 |
| 295.93 | 339.69 | 297.72 | 339.64 | 301.23 | 339.61 | 302.6 | 339.58 | 304.2 | 339.56 |
| 306.26 | 339.52 | 307.58 | 339.49 | 309.25 | 339.43 | 311.69 | 339.27 | 312.64 | 339.19 |
| 314.24 | 339.03 | 315.1 | 338.95 | 315.58 | 338.94 | 319.47 | 338.91 | 321.95 | 338.7 |
| 323.55 | 338.56 | 324.84 | 338.49 | 326.5 | 338.39 | 327.24 | 338.31 | 327.5 | 338.25 |
| 328.26 | 338.2 | 328.78 | 338.18 | 329.29 | 338.18 | 331.17 | 338.21 | 332.49 | 338.25 |
| 332.85 | 338.25 | 336.85 | 338.36 | 338.56 | 338.42 | 339.75 | 338.49 | 341.17 | 338.54 |
| 341.56 | 338.5 | 342.75 | 338.41 | 344.61 | 338.22 | 346.02 | 338.12 | 347.75 | 338.12 |
| 348.61 | 338.04 | 349.84 | 337.99 | 372.49 | 337.94 | 375.98 | 337.61 | 379.98 | 337.32 |
| 383.25 | 337.07 | 387.53 | 337.04 | 393.64 | 337.03 | 399.79 | 337 | 401.45 | 336.99 |
| 403.09 | 336.99 | 404.25 | 336.96 | 408.51 | 336.86 | 410.12 | 336.83 | 413.31 | 336.76 |
| 414.15 | 336.75 | 414.74 | 336.73 | 416.17 | 336.7 | 418.68 | 336.66 | 422.07 | 336.57 |
| 423.33 | 336.56 | 424.16 | 336.57 | 425.76 | 336.6 | 426.55 | 336.59 | 428.68 | 336.55 |
| 430.25 | 336.51 | 432.77 | 336.44 | 433.88 | 336.43 | 434.25 | 336.44 | 436.6 | 336.44 |
| 437.1 | 336.48 | 437.78 | 336.51 | 439.26 | 336.45 | 442.5 | 336.3 | 444.01 | 336.3 |
| 444.89 | 336.37 | 446.91 | 336.52 | 447.93 | 336.56 | 449.18 | 336.57 | 450.37 | 336.53 |
| 450.87 | 336.52 | 451.63 | 336.47 | 452.22 | 336.42 | 454.34 | 336.19 | 455.18 | 336.08 |
| 458.87 | 336.05 | 459.47 | 336.04 | 462.01 | 336.03 | 482 | 335.96 | 506.36 | 335.27 |
| 506.83 | 335.27 | 508.99 | 335.25 | 509.97 | 335.25 | 510.94 | 335.22 | 511.01 | 335.21 |
| 518.54 | 334.99 | 518.64 | 334.96 | 519.46 | 334.98 | 520.42 | 335.04 | 522.83 | 335.2 |
| 524.38 | 335.37 | 525.41 | 335.38 | 526.79 | 335.33 | 528.16 | 335.26 | 530.45 | 335.15 |
| 533.44 | 335 | 537.93 | 334.89 | 540.49 | 334.82 | 545.21 | 334.67 | 547.04 | 334.64 |
| 549.25 | 334.62 | 550.7 | 334.63 | 550.88 | 334.64 | 551.72 | 334.61 | 551.91 | 334.64 |
| 553.22 | 334.65 | 558.25 | 334.66 | 559.58 | 334.66 | 560.06 | 334.64 | 563.85 | 334.61 |
| 564.5 | 334.6 | 569.71 | 334.56 | 570.39 | 334.57 | 573.1 | 334.64 | 574.71 | 334.66 |
| 578.62 | 334.74 | 579.58 | 334.72 | 580.1 | 334.73 | 580.65 | 334.78 | 581.42 | 334.79 |
| 583.32 | 334.77 | 584.02 | 334.75 | 589.75 | 334.52 | 590.87 | 334.49 | 595.26 | 334.36 |
| 595.46 | 334.36 | 596.46 | 334.4 | 598.45 | 334.43 | 600.13 | 334.41 | 601.43 | 334.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 603.05 | 334.33 | 610.38 | 334.02 | 617.52 | 333.8 | 625.49 | 333.7 | 626.56 | 333.69 |
| 627.42 | 333.64 | 629.75 | 333.55 | 630.39 | 333.54 | 641.75 | 333.32 | 645.37 | 333.23 |
| 649.34 | 333.23 | 661.46 | 333.2 | 685.71 | 333.15 | 686.98 | 333.14 | 690.55 | 333.14 |
| 693.92 | 333.15 | 696.28 | 333.84 | 697.02 | 334.01 | 701.33 | 334.01 | 703.23 | 334.02 |
| 706.44 | 334.02 | 707.35 | 334.03 | 709.72 | 334.03 | 709.88 | 334.02 | 710.41 | 333.96 |
| 711.38 | 333.82 | 711.8 | 333.78 | 712.97 | 333.7 | 713.93 | 333.66 | 715.93 | 333.64 |
| 716.81 | 333.62 | 718.2 | 333.61 | 721.6 | 333.6 | 722.57 | 333.61 | 723.28 | 333.6 |
| 724.24 | 333.61 | 727.44 | 333.62 | 729.46 | 333.64 | 730.59 | 333.64 | 734.34 | 333.61 |
| 734.85 | 333.62 | 735.82 | 333.62 | 737.43 | 333.64 | 738.15 | 333.62 | 740.15 | 333.6 |
| 742 | 333.56 | 743.24 | 333.54 | 743.31 | 333.53 | 747.19 | 333.51 | 750.34 | 333.52 |
| 754.09 | 333.5 | 757.89 | 333.5 | 758.56 | 333.49 | 762.35 | 333.49 | 764.1 | 333.48 |
| 766.79 | 333.45 | 767.71 | 333.45 | 771.42 | 333.41 | 773.72 | 333.4 | 774.67 | 333.38 |
| 781.67 | 333.2 | 782.78 | 333.17 | 786.83 | 333.05 | 790.09 | 332.8 | 791.49 | 332.67 |
| 802.05 | 332.06 | 804.11 | 331.96 | 806 | 331.82 | 808.09 | 331.63 | 809.25 | 331.48 |
| 810.72 | 331.44 | 811.58 | 331.5 | 811.88 | 331.54 | 813.88 | 331.7 | 815.5 | 331.77 |
| 816.45 | 331.83 | 816.89 | 331.87 | 817.56 | 331.96 | 818.99 | 332.12 | 819.72 | 332.19 |
| 821.04 | 332.33 | 826.16 | 332.8 | 827.61 | 332.89 | 828.14 | 332.94 | 829.24 | 333 |
| 833.05 | 332.96 | 834.35 | 332.97 | 834.84 | 332.98 | 835.14 | 332.97 | 835.72 | 332.91 |
| 837.48 | 332.8 | 838.16 | 332.77 | 839.85 | 332.74 | 840.34 | 332.7 | 847.78 | 332.13 |
| 850.85 | 331.86 | 856.33 | 331.28 | 859.44 | 330.92 | 860.78 | 330.8 | 864.92 | 330.46 |
| 865.62 | 330.4 | 868.61 | 330.16 | 869.37 | 330.13 | 871.19 | 330.08 | 871.93 | 330.07 |
| 874.23 | 330.01 | 874.93 | 330 | 876.1 | 329.97 | 877.94 | 329.98 | 879.91 | 329.98 |
| 881.2 | 329.94 | 882.58 | 329.94 | 883.61 | 329.97 | 885.31 | 330.03 | 887.06 | 330.1 |
| 891.12 | 330.32 | 892.38 | 330.37 | 892.95 | 330.34 | 895.28 | 330.16 | 897.71 | 329.87 |
| 904.28 | 329.8 | 909.9 | 329.71 | 912.08 | 329.69 | 915.66 | 329.65 | 921.34 | 329.62 |
| 922.53 | 329.63 | 923.59 | 329.68 | 923.86 | 329.7 | 926.48 | 329.75 | 929.14 | 329.79 |
| 931.57 | 329.79 | 932.56 | 329.78 | 935.44 | 329.79 | 939.21 | 329.75 | 940.27 | 329.71 |
| 941.61 | 329.7 | 942.62 | 329.67 | 944.07 | 329.64 | 944.51 | 329.64 | 953.1 | 329.49 |
| 953.45 | 329.48 | 957.87 | 329.4 | 958.38 | 329.38 | 958.79 | 329.38 | 962.63 | 329.33 |
| 966.37 | 329.27 | 969.2 | 329.21 | 970.32 | 329.2 | 971.79 | 329.16 | 972.63 | 329.15 |
| 972.96 | 329.19 | 974.79 | 329.14 | 978.43 | 329.01 | 984.42 | 328.76 | 985.04 | 328.73 |
| 985.87 | 328.72 | 987.35 | 328.69 | 991.54 | 328.78 | 993.46 | 328.83 | 993.89 | 328.87 |
| 995.5 | 328.92 | 996.86 | 328.97 | 998.32 | 329.05 | 999 | 329.31 | 999.57 | 329.56 |
| 1000.77 | 329.89 | 1003.14 | 330.35 | 1008.85 | 330.4 | 1009.82 | 330.29 | 1012.15 | 329.91 |
| 1012.19 | 329.86 | 1013.53 | 329.77 | 1014.37 | 329.76 | 1014.89 | 329.88 | 1017.2 | 330.47 |
| 1019.61 | 331.29 | 1020.01 | 331.45 | 1020.51 | 331.7 | 1021.56 | 332.2 | 1023.57 | 333.12 |
| 1023.64 | 333.14 | 1024.54 | 333.94 | 1024.58 | 334.01 | 1025.1 | 334.51 | 1026.51 | 335.76 |
| 1027.06 | 336.63 | 1027.1 | 336.88 | 1027.24 | 337.49 | 1027.27 | 337.86 | 1027.4 | 338.35 |
| 1027.49 | 338.87 | 1027.57 | 339.2 | 1027.64 | 340.82 | 1027.7 | 341.03 | 1027.85 | 341.76 |
| 1028.53 | 341.82 | 1032.3 | 342.09 | 1034.95 | 342.32 | 1036.07 | 342.4 | 1037.2 | 342.47 |
| 1038.59 | 342.54 | 1041.76 | 342.69 | 1043.88 | 342.81 | 1046.97 | 343 | 1048.71 | 343.12 |
| 1051.26 | 343.26 | 1053.14 | 343.38 | 1055.09 | 343.52 | 1056.54 | 343.6 | 1057.8 | 343.6 |
| 1064.56 | 343.4 | 1065.7 | 343.2 | 1066.83 | 343.32 | 1067.29 | 343.35 | 1067.44 | 343.4 |
| 1069.1 | 343.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 709.88 | .04 | 1024.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 709.88 | 1024.54 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4270.52*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.93 | 4.06 | 349.8 | 9.88 | 349.63 | 12.08 | 349.57 | 15.16 | 349.49 |
| 15.57 | 349.47 | 20.33 | 349.36 | 23.06 | 349.29 | 24.1 | 349.26 | 28.31 | 349.15 |
| 29.55 | 349.11 | 46.88 | 348.6 | 60.52 | 348.36 | 62.72 | 348.33 | 62.92 | 348.41 |
| 64.08 | 348.41 | 68.16 | 348.35 | 68.71 | 348.33 | 70.66 | 348.2 | 70.89 | 348.2 |
| 73.13 | 348.12 | 76.94 | 348 | 77.77 | 347.97 | 81.28 | 347.7 | 83.62 | 347.62 |
| 87.5 | 347.48 | 89.15 | 347.4 | 96.31 | 347.03 | 97.46 | 346.81 | 97.86 | 346.76 |
| 99.13 | 346.7 | 100.75 | 346.67 | 102.42 | 346.67 | 103.51 | 346.68 | 104.88 | 346.75 |
| 106.78 | 347.02 | 108.88 | 347.01 | 109.8 | 346.93 | 112.5 | 346.74 | 113.22 | 346.71 |
| 113.82 | 346.7 | 114.65 | 346.72 | 115.65 | 346.72 | 116.39 | 346.7 | 117.95 | 346.64 |
| 122.53 | 346.4 | 122.87 | 346.38 | 125.32 | 346.26 | 126.44 | 346.22 | 126.72 | 346.19 |
| 128.31 | 346.1 | 129.2 | 346.04 | 131.32 | 345.87 | 131.97 | 345.86 | 132.93 | 345.81 |
| 133.58 | 345.76 | 139.57 | 345.17 | 140.64 | 345.09 | 145.79 | 344.72 | 149.5 | 344.48 |
| 150.22 | 344.39 | 150.6 | 344.36 | 151.43 | 344.32 | 152.08 | 344.33 | 153.76 | 344.24 |
| 156.64 | 344.22 | 159.35 | 344.23 | 160.22 | 344.23 | 161.14 | 344.25 | 162.09 | 344.26 |
| 163.28 | 344.22 | 165.69 | 344.22 | 166.31 | 344.17 | 167.31 | 344.12 | 168.66 | 344.07 |
| 170.18 | 344.06 | 173.04 | 344.08 | 174.2 | 344.12 | 175.12 | 344.18 | 176.1 | 344.22 |
| 178.28 | 344.25 | 181.2 | 344.27 | 182.88 | 344.25 | 183.3 | 344.25 | 184.5 | 344.23 |
| 185.2 | 344.23 | 187.81 | 344.18 | 189.73 | 344.09 | 193.49 | 343.84 | 199.51 | 343.26 |
| 199.8 | 343.25 | 206.17 | 342.85 | 206.52 | 342.83 | 208.01 | 342.9 | 208.35 | 342.9 |
| 209.6 | 342.79 | 213.02 | 342.55 | 214.68 | 342.4 | 216.31 | 342.2 | 217.29 | 342.05 |
| 217.63 | 342.01 | 218.01 | 341.99 | 218.68 | 342 | 219.76 | 342.03 | 220.28 | 342.02 |
| 222.4 | 341.95 | 223.09 | 341.9 | 223.16 | 341.88 | 228.23 | 341.6 | 228.9 | 341.56 |
| 231.01 | 341.48 | 232.02 | 341.4 | 236.78 | 341.42 | 241.81 | 341.42 | 244.56 | 341.15 |
| 247.28 | 340.86 | 248.5 | 340.82 | 251.67 | 340.7 | 256.6 | 340.52 | 257.63 | 340.48 |
| 266.85 | 340.04 | 267.97 | 339.98 | 270.53 | 339.87 | 271.77 | 339.81 | 272.36 | 339.88 |
| 273.44 | 339.82 | 274.27 | 339.81 | 275.13 | 339.76 | 275.91 | 339.73 | 278.05 | 339.58 |
| 281.92 | 339.58 | 283.15 | 339.53 | 284.91 | 339.61 | 285.28 | 339.61 | 286.79 | 339.67 |
| 288.11 | 339.71 | 289.42 | 339.77 | 289.99 | 339.82 | 291.02 | 339.88 | 291.38 | 339.85 |
| 292.5 | 339.71 | 293.06 | 339.63 | 293.57 | 339.58 | 297.26 | 339.41 | 299.06 | 339.36 |
| 302.58 | 339.34 | 303.15 | 339.34 | 304.15 | 339.31 | 305.56 | 339.3 | 307.64 | 339.24 |
| 308.49 | 339.22 | 310.45 | 339.15 | 311.11 | 339.11 | 313.09 | 338.97 | 314.05 | 338.89 |
| 315.65 | 338.72 | 316.52 | 338.64 | 318.12 | 338.61 | 319.86 | 338.61 | 320.91 | 338.6 |
| 325 | 338.24 | 327.96 | 338.06 | 328.71 | 337.97 | 328.97 | 337.91 | 329.74 | 337.86 |
| 330.26 | 337.84 | 330.77 | 337.84 | 332.66 | 337.87 | 333.67 | 337.91 | 334.35 | 337.91 |
| 338.36 | 338.03 | 340.09 | 338.1 | 341.12 | 338.16 | 341.27 | 338.18 | 342.7 | 338.23 |
| 343.1 | 338.19 | 344.29 | 338.1 | 346.16 | 337.9 | 347.58 | 337.79 | 349.31 | 337.79 |
| 350.17 | 337.71 | 351.41 | 337.66 | 374.16 | 337.63 | 377.67 | 337.28 | 381.68 | 336.97 |
| 384.97 | 336.71 | 389.27 | 336.69 | 394.92 | 336.69 | 395.41 | 336.68 | 399.52 | 336.68 |
| 403.25 | 336.66 | 404.9 | 336.66 | 406.07 | 336.63 | 410.34 | 336.53 | 411.96 | 336.49 |
| 415.17 | 336.42 | 416.01 | 336.41 | 416.61 | 336.39 | 420.57 | 336.31 | 423.65 | 336.23 |
| 425.23 | 336.22 | 426.07 | 336.22 | 427.67 | 336.25 | 428.46 | 336.24 | 430.61 | 336.2 |
| 432.18 | 336.16 | 434.72 | 336.08 | 435.83 | 336.07 | 436.2 | 336.08 | 438.56 | 336.08 |
| 438.91 | 336.11 | 439.75 | 336.15 | 441.24 | 336.09 | 444.49 | 335.94 | 446.01 | 335.94 |
| 448.92 | 336.17 | 450.46 | 336.23 | 451.2 | 336.23 | 452.4 | 336.19 | 452.9 | 336.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 453.66 | 336.13 | 454.25 | 336.08 | 456.38 | 335.84 | 457.23 | 335.72 | 460.93 | 335.7 |
| 461.54 | 335.69 | 464.08 | 335.68 | 484.17 | 335.64 | 508.63 | 334.96 | 511.28 | 334.92 |
| 512.27 | 334.91 | 520.87 | 334.66 | 520.98 | 334.63 | 521.8 | 334.66 | 522.76 | 334.72 |
| 525.18 | 334.89 | 526.73 | 335.06 | 527.77 | 335.08 | 529.16 | 335.02 | 530.54 | 334.95 |
| 531.79 | 334.88 | 532.83 | 334.83 | 534.42 | 334.74 | 535.84 | 334.67 | 540.35 | 334.54 |
| 542.92 | 334.47 | 544.78 | 334.41 | 547.66 | 334.33 | 549.5 | 334.29 | 551.72 | 334.28 |
| 553.36 | 334.29 | 554.2 | 334.26 | 554.4 | 334.3 | 555.71 | 334.3 | 560.76 | 334.32 |
| 562.1 | 334.32 | 562.58 | 334.3 | 566.39 | 334.27 | 567.03 | 334.26 | 572.28 | 334.22 |
| 572.96 | 334.23 | 575.67 | 334.31 | 576.6 | 334.32 | 577.3 | 334.34 | 581.23 | 334.42 |
| 582.19 | 334.4 | 582.98 | 334.43 | 583.34 | 334.47 | 584.03 | 334.48 | 585.17 | 334.47 |
| 586.65 | 334.43 | 592.41 | 334.19 | 593.53 | 334.17 | 597.94 | 334.03 | 599.15 | 334.07 |
| 601.14 | 334.1 | 602.83 | 334.08 | 604.14 | 334.05 | 605.76 | 334 | 606.68 | 333.95 |
| 611.71 | 333.73 | 612.55 | 333.7 | 613.12 | 333.67 | 620.3 | 333.43 | 628.31 | 333.33 |
| 629.38 | 333.31 | 630.24 | 333.26 | 632.59 | 333.16 | 633.22 | 333.16 | 644.64 | 332.92 |
| 648.28 | 332.82 | 652.26 | 332.82 | 664.44 | 332.8 | 688.79 | 332.77 | 690.07 | 332.76 |
| 693.65 | 332.76 | 697.04 | 332.77 | 698.96 | 333.36 | 699.41 | 333.49 | 700.15 | 333.67 |
| 704.42 | 333.67 | 704.48 | 333.68 | 712.91 | 333.68 | 713.08 | 333.67 | 713.58 | 333.62 |
| 714.53 | 333.47 | 714.92 | 333.43 | 716.06 | 333.35 | 716.99 | 333.31 | 719.77 | 333.28 |
| 721.11 | 333.26 | 724.4 | 333.25 | 725.33 | 333.26 | 726.02 | 333.25 | 726.68 | 333.26 |
| 729.35 | 333.27 | 730.04 | 333.28 | 732 | 333.29 | 736.71 | 333.25 | 738.14 | 333.25 |
| 738.38 | 333.26 | 739.78 | 333.27 | 740.73 | 333.25 | 741.48 | 333.25 | 742.33 | 333.23 |
| 744.3 | 333.2 | 745.24 | 333.18 | 749.13 | 333.16 | 752.17 | 333.17 | 755.8 | 333.15 |
| 757.44 | 333.15 | 760.12 | 333.14 | 765.38 | 333.11 | 768.08 | 333.09 | 768.96 | 333.09 |
| 772.56 | 333.05 | 774.78 | 333.04 | 775.69 | 333.02 | 782.46 | 332.84 | 787.45 | 332.7 |
| 790.1 | 332.51 | 791.95 | 332.35 | 802.15 | 331.74 | 804.15 | 331.64 | 805.98 | 331.5 |
| 806.93 | 331.4 | 808.12 | 331.29 | 809.12 | 331.14 | 810.58 | 331.11 | 810.89 | 331.12 |
| 811.66 | 331.2 | 813.59 | 331.36 | 815.16 | 331.45 | 816.5 | 331.56 | 817.15 | 331.64 |
| 818.53 | 331.79 | 820.52 | 332 | 825.46 | 332.49 | 826.23 | 332.56 | 826.87 | 332.6 |
| 827.37 | 332.66 | 828.43 | 332.73 | 829.42 | 332.74 | 832.12 | 332.73 | 833.95 | 332.74 |
| 834.7 | 332.67 | 836.41 | 332.56 | 837.06 | 332.53 | 838.61 | 332.49 | 839.16 | 332.45 |
| 846.36 | 331.85 | 849.32 | 331.58 | 854.62 | 330.99 | 857.63 | 330.61 | 858.93 | 330.49 |
| 863.6 | 330.08 | 866.49 | 329.84 | 867.22 | 329.81 | 868.98 | 329.75 | 869.7 | 329.74 |
| 871.93 | 329.69 | 872.6 | 329.67 | 873.73 | 329.65 | 875.7 | 329.65 | 877.41 | 329.64 |
| 878.66 | 329.62 | 879.99 | 329.62 | 880.99 | 329.66 | 882.63 | 329.74 | 885.05 | 329.87 |
| 888.25 | 330.06 | 889.46 | 330.11 | 890.02 | 330.08 | 892.26 | 329.89 | 894.62 | 329.58 |
| 899.97 | 329.51 | 900.97 | 329.49 | 908.5 | 329.38 | 911.96 | 329.34 | 917.46 | 329.29 |
| 918.61 | 329.3 | 919.89 | 329.36 | 922.42 | 329.41 | 924.99 | 329.45 | 926.81 | 329.46 |
| 928.3 | 329.46 | 930.78 | 329.47 | 931.08 | 329.46 | 934.72 | 329.43 | 935.76 | 329.39 |
| 937.05 | 329.38 | 938.02 | 329.35 | 939.43 | 329.32 | 939.85 | 329.32 | 948.15 | 329.15 |
| 948.49 | 329.15 | 952.76 | 329.06 | 953.26 | 329.04 | 953.66 | 329.04 | 954.32 | 329.02 |
| 957.36 | 328.98 | 960.98 | 328.92 | 963.71 | 328.87 | 963.93 | 328.87 | 966.22 | 328.81 |
| 967.03 | 328.8 | 967.34 | 328.85 | 969.12 | 328.8 | 969.96 | 328.76 | 972.63 | 328.66 |
| 978.42 | 328.41 | 979.83 | 328.37 | 981.26 | 328.35 | 985.3 | 328.44 | 987.15 | 328.49 |
| 987.57 | 328.53 | 989.13 | 328.58 | 991.38 | 328.67 | 991.85 | 328.7 | 992.35 | 328.86 |
| 993.06 | 329.13 | 994.22 | 329.43 | 994.4 | 329.46 | 996.29 | 329.86 | 996.51 | 329.9 |
| 1001.06 | 329.93 | 1002.03 | 329.94 | 1002.96 | 329.81 | 1005.21 | 329.4 | 1005.24 | 329.35 |
| 1006.55 | 329.25 | 1007.35 | 329.25 | 1007.64 | 329.31 | 1010.09 | 329.98 | 1012.41 | 330.83 |
| 1012.58 | 330.9 | 1014.3 | 331.78 | 1016.24 | 332.74 | 1016.31 | 332.76 | 1017.18 | 333.6 |
| 1017.21 | 333.67 | 1017.71 | 334.19 | 1018.17 | 334.65 | 1019.06 | 335.51 | 1019.59 | 336.42 |
| 1019.62 | 336.68 | 1019.75 | 337.33 | 1019.79 | 337.71 | 1019.91 | 338.23 | 1020.07 | 339.14 |
| 1020.14 | 340.85 | 1020.34 | 341.84 | 1020.98 | 341.89 | 1024.59 | 342.14 | 1027.64 | 342.37 |
| 1029.26 | 342.47 | 1030.59 | 342.51 | 1033.61 | 342.62 | 1035.64 | 342.7 | 1036.27 | 342.72 |
| 1037.02 | 342.76 | 1039.6 | 342.87 | 1040.26 | 342.91 | 1040.58 | 342.91 | 1042.2 | 342.97 |
| 1042.68 | 342.98 | 1044.04 | 343.03 | 1046.54 | 343.14 | 1047.73 | 343.17 | 1048.93 | 343.15 |
| 1055.38 | 342.94 | 1056.47 | 342.72 | 1057.55 | 342.84 | 1057.99 | 342.88 | 1058.13 | 342.93 |
| 1059.72 | 342.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 713.08 | .04 | 1017.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 713.08 | 1017.18 | 23.49 | 19.26 | 20.45 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4251.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 350.01 | 1.3 | 349.96 | 4.08 | 349.87 | 9.92 | 349.7 | 10.41 | 349.69 |
| 12.14 | 349.63 | 14.39 | 349.57 | 15.64 | 349.54 | 20.42 | 349.41 | 21.54 | 349.37 |
| 23.16 | 349.33 | 29.16 | 349.16 | 29.68 | 349.15 | 47.09 | 348.63 | 60.79 | 348.39 |
| 63 | 348.36 | 63.2 | 348.44 | 64.36 | 348.44 | 68.46 | 348.38 | 69.02 | 348.37 |
| 70.97 | 348.23 | 73.46 | 348.14 | 77.28 | 348.01 | 78.07 | 347.99 | 81.12 | 347.74 |
| 81.65 | 347.7 | 83.99 | 347.62 | 87.89 | 347.48 | 89.55 | 347.39 | 96.74 | 347.02 |
| 97.89 | 346.78 | 98.3 | 346.73 | 98.84 | 346.69 | 99.58 | 346.66 | 101.2 | 346.63 |
| 102.88 | 346.63 | 103.98 | 346.65 | 105.35 | 346.73 | 107.26 | 347.01 | 109.36 | 347.01 |
| 110.29 | 346.92 | 113.01 | 346.73 | 113.96 | 346.69 | 115.17 | 346.7 | 116.17 | 346.7 |
| 116.91 | 346.69 | 118.48 | 346.62 | 125.46 | 346.24 | 126.52 | 346.19 | 127.78 | 346.11 |
| 128.9 | 346.05 | 131.7 | 345.83 | 131.91 | 345.81 | 132.56 | 345.8 | 133.52 | 345.75 |
| 134.18 | 345.69 | 140.2 | 345.09 | 141.27 | 345 | 146.45 | 344.61 | 149.88 | 344.39 |
| 151.28 | 344.24 | 152.11 | 344.2 | 152.91 | 344.21 | 154.45 | 344.12 | 155.76 | 344.11 |
| 160.93 | 344.11 | 161.86 | 344.14 | 162.81 | 344.15 | 164.01 | 344.11 | 166.43 | 344.11 |
| 167.06 | 344.05 | 168.06 | 344 | 169.41 | 343.96 | 170.94 | 343.94 | 173.82 | 343.97 |
| 174.98 | 344.01 | 175.91 | 344.07 | 176.89 | 344.12 | 179.08 | 344.16 | 182.01 | 344.17 |
| 183.69 | 344.16 | 184.12 | 344.15 | 186.03 | 344.14 | 188.65 | 344.09 | 190.58 | 344 |
| 194.35 | 343.74 | 200.41 | 343.13 | 200.7 | 343.12 | 207.1 | 342.7 | 207.45 | 342.68 |
| 208.94 | 342.75 | 209.29 | 342.75 | 210.54 | 342.64 | 213.98 | 342.4 | 215.64 | 342.23 |
| 217.28 | 342.03 | 218.27 | 341.87 | 218.61 | 341.83 | 218.98 | 341.81 | 219.66 | 341.82 |
| 220.75 | 341.86 | 221.26 | 341.85 | 222.1 | 341.81 | 223.39 | 341.77 | 224.09 | 341.72 |
| 224.16 | 341.7 | 229.93 | 341.37 | 230.72 | 341.34 | 232.05 | 341.28 | 233.06 | 341.2 |
| 237.84 | 341.21 | 242.89 | 341.21 | 245.65 | 340.92 | 246.8 | 340.79 | 248.38 | 340.62 |
| 249.62 | 340.58 | 252.79 | 340.46 | 257.74 | 340.28 | 258.79 | 340.24 | 268.05 | 339.78 |
| 269.17 | 339.72 | 270.07 | 339.68 | 272.98 | 339.54 | 273.58 | 339.61 | 274.67 | 339.55 |
| 275.5 | 339.53 | 277.14 | 339.45 | 278.47 | 339.36 | 279.3 | 339.29 | 283.18 | 339.29 |
| 283.73 | 339.27 | 284.42 | 339.23 | 284.85 | 339.26 | 286.18 | 339.32 | 288.43 | 339.39 |
| 289.86 | 339.45 | 290.71 | 339.5 | 292.07 | 339.6 | 292.48 | 339.6 | 293.55 | 339.46 |
| 293.95 | 339.4 | 294.89 | 339.29 | 295.44 | 339.26 | 297.26 | 339.19 | 298.59 | 339.13 |
| 300.4 | 339.08 | 304.5 | 339.07 | 305.51 | 339.05 | 306.93 | 339.03 | 309.02 | 338.97 |
| 309.87 | 338.94 | 312.03 | 338.85 | 312.5 | 338.81 | 314.49 | 338.68 | 315.45 | 338.59 |
| 317.07 | 338.41 | 317.93 | 338.32 | 319.55 | 338.3 | 321.29 | 338.3 | 322.34 | 338.29 |

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  326.46  337.91  327.76  337.83  329.43  337.72  330.18  337.64  330.45  337.57
  331.21  337.52  331.74   337.5  332.25   337.5  334.01  337.53  334.15  337.54
  335.48  337.58  335.84  337.58  339.88  337.71  341.61  337.79  342.64  337.85
   342.8  337.87  344.24  337.93  344.52  337.89  345.83  337.78  347.71  337.57
  349.13  337.47  350.88  337.47  351.74  337.38  352.99  337.33  375.83  337.31
  379.14  336.97  379.36  336.95  383.39  336.63   386.7  336.36  391.02  336.34
  403.39  336.34  405.06  336.33  406.72  336.33  407.89   336.3  412.18   336.2
  413.81  336.16  416.17  336.11  417.87  336.07  418.47  336.05  419.92  336.02
  422.45  335.96  425.54  335.89  425.87  335.88  427.14  335.87  427.98  335.87
  429.59   335.9  430.38  335.89  434.12   335.8  436.66  335.72  437.78  335.71
  438.16  335.72  440.53  335.72  441.03  335.77  441.72   335.8  443.21  335.74
  446.48  335.57     448  335.57  450.93  335.83  452.47  335.89  453.22  335.89
  454.42  335.85  454.92  335.84  455.69  335.79  456.29  335.73  458.43  335.48
  459.27  335.36     463  335.34   463.6  335.33  466.16  335.33  486.33  335.32
  510.91  334.65  513.56  334.59  515.18  334.56  515.61  334.54   523.2  334.33
  523.31   334.3  524.13  334.33  527.53  334.57  529.09  334.75  530.14  334.77
  531.53  334.71  538.24  334.33  542.77   334.2  545.03  334.14  545.35  334.12
  547.21  334.07  550.11  333.98  551.96  333.94  554.19  333.93  555.65  333.94
  555.83  333.95  556.68  333.92  556.88  333.95  558.19  333.96  563.27  333.98
  564.61  333.98   565.1  333.96  568.92  333.93  569.57  333.92  573.48  333.89
   575.3  333.89  575.52   333.9  578.25  333.98  578.39  333.99  579.88  334.01
  583.83   334.1  584.79  334.08  585.32   334.1  585.87  334.15  586.65  334.16
  587.92  334.14  588.57  334.14  589.27  334.12  595.06  333.87  596.18  333.84
  600.61  333.69  600.81  333.69  601.83  333.74  603.83  333.77  605.53  333.75
  606.84  333.72  608.47  333.66   609.4  333.62  614.45  333.38  615.29  333.35
  615.87  333.32  623.07  333.07  631.12  332.96  632.19  332.94  633.06  332.89
  635.42  332.78  636.06  332.77  647.52  332.52  651.18  332.41  655.18  332.41
   667.3   332.4  691.87  332.39  692.36  332.38  700.16  332.38  702.09     333
  702.54  333.15  703.29  333.34   716.1  333.34  716.27  333.33  716.92  333.25
  717.67  333.12  718.37  333.05  719.15  332.99  720.04  332.95  720.99  332.95
  722.73  332.93  724.02  332.92  724.58  332.91   727.2   332.9   728.1  332.91
  728.77   332.9  729.67  332.91  731.98  332.92  732.65  332.93  734.53  332.94
  735.58  332.93  739.09  332.88  740.47  332.89  741.27  332.89  742.05   332.9
  742.97  332.89  745.84  332.85  747.46  332.82  754.01  332.82  759.09  332.79
  761.69  332.78  766.86  332.75  767.38  332.74  769.37  332.73  770.22  332.72
  772.02  332.71  773.69  332.69  775.83  332.68  776.72  332.66  783.25  332.48
  784.29  332.46  788.06  332.35  790.62  332.17  791.11  332.14  792.41  332.04
  802.26  331.42  804.19  331.32  805.95  331.17  806.87  331.08   807.9  330.97
  808.98   330.8   810.4  330.77  811.19  330.83  811.44  330.86   813.3  331.02
  813.54  331.03  815.71   331.2  816.74  331.32  819.53  331.61  819.99  331.67
  824.76  332.19  826.12  332.32  826.61  332.38  827.63  332.47  828.59  332.48
  831.19  332.49  832.41   332.5  832.86  332.51  833.14   332.5  833.68  332.43
  835.33  332.32  835.96  332.29  837.45  332.25  844.94  331.56   847.8  331.29
  852.91  330.69  855.81  330.31  857.07  330.19  861.58  329.77  864.37  329.52
  865.07  329.49  866.78  329.43  867.47  329.42  869.62  329.37  871.36  329.32
  873.26  329.32  874.92  329.31  876.12  329.29  877.41  329.31  879.95  329.44
  881.59  329.55  882.29  329.59  885.37   329.8  886.55  329.85  887.08  329.82
  889.25  329.61  891.52  329.29   896.7  329.21  897.65  329.19  902.89  329.11
  904.93  329.07  908.27  329.03  913.57  328.95  914.68  328.96  915.92  329.02
  920.23  329.11  920.85  329.12   922.6  329.13  924.04  329.13  926.73  329.14
  929.31  329.12  930.24  329.11  931.24  329.07  932.48  329.06  934.78     329
  935.19     329   943.2  328.82  943.53  328.81  947.66  328.71  948.13  328.69
  949.16  328.68  955.59  328.57  958.81  328.51  959.27  328.51  960.64  328.47
  961.43  328.46  961.73   328.5  963.44  328.45  966.84  328.32  972.43  328.07
  973.01  328.04  973.78  328.03  975.16     328  979.07   328.1  979.17  328.11
  980.85  328.15  981.26  328.19  984.12  328.29  985.38  328.35  985.87  328.48
  986.54  328.69  987.84     329  989.67  329.41  989.87  329.45  994.27  329.46
   995.2  329.47   996.1  329.33  996.38  329.27  998.27   328.9   998.3  328.84
  999.36  328.75  999.84  328.73 1000.34  328.73 1000.82  328.85 1002.97  329.49
 1005.22  330.38 1005.38  330.45 1006.06  330.83 1007.14  331.42 1008.91  332.36
 1008.97  332.38 1009.81  333.26 1009.85  333.34 1010.32  333.88 1010.76  334.36
  1011.6  335.25 1012.11  336.21 1012.14  336.49 1012.27  337.16  1012.3  337.57
 1012.41  338.12  1012.5   338.7 1012.57  339.07 1012.63  340.87 1012.69   341.1
 1012.82  341.92 1019.28  342.35 1019.78  342.39 1021.33  342.46 1022.59  342.48
  1027.4  342.58 1028.71  342.62 1030.21  342.65 1031.17  342.68 1034.11   342.7
  1035.4  342.72 1035.82  342.72 1037.34  342.74 1038.92  342.73 1040.06   342.7
 1046.21  342.47 1047.25  342.24 1048.27  342.37 1048.69  342.41 1048.83  342.47
 1050.34  342.46

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  716.27     .04 1009.81     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        716.27 1009.81            23.49   19.26   20.45             .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 4232

INPUT
Description:
Station Elevation Data    num=     408
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  350.093.130005  349.9747.29993  348.6662.31995   348.463.27991  348.39
63.47998  348.48 64.6499  348.48 68.7699  348.4269.32996   348.471.28992  348.26
78.41992     34882.01001   347.788.27991  347.4897.16992     34798.32996  346.75
98.73999   346.799.27991  346.66100.0199  346.63101.6499   346.6  103.34   346.6
104.4399  346.62105.8199   346.7  107.74     347  109.85     347110.7799  346.91
  113.51  346.71  114.23  346.68  114.84  346.67115.6799  346.69116.6899  346.69
117.4299  346.67  119.01   346.6  129.47     346130.2699  345.94  130.36  345.93
   132.5  345.75132.6699  345.75133.1499  345.74  133.58  345.72  134.12  345.69
134.7799  345.63140.8199     345141.8999  344.91   147.1  344.51150.5499  344.28
  150.84  344.25151.5699  344.16  151.95  344.12152.4299   344.1152.5499  344.09
152.7899  344.08153.1399  344.08153.4399  344.09  153.59  344.09155.1399     344
  158.63  343.99161.6499     344  162.58  344.03163.5399  344.04  164.74     344
167.1699     344167.7999  343.94168.8099  343.89170.1699  343.84   171.7  343.83
  174.59  343.86  175.76   343.9176.6899  343.97177.6799  344.02  179.88  344.06
182.8199  344.08186.1499  344.05  186.86  344.05189.4899     344191.4299   343.9
  195.22  343.63201.2999     343  201.53  342.99  201.59  342.99  208.02  342.55
208.3699  342.53209.8699  342.61  210.22  342.61  210.46  342.59  211.29  342.51
214.9299  342.24   216.6  342.07218.2499  341.86219.2399  341.69  219.58  341.65
  219.96  341.63  220.64  341.64  221.73  341.68222.2499  341.67  223.09  341.63
  224.39  341.59  224.72  341.57  225.09  341.54  225.16  341.52  230.27  341.22
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  233.08  341.09   234.1     341  243.97     341249.4899  340.38259.9399     340
   274.2  339.27  274.47   339.3274.7999  339.34  275.89  339.28  276.73  339.26
278.3799  339.17  279.71  339.07  280.54     339284.4399     339285.6899  338.94
286.7399     339290.6899  339.15292.0099  339.22293.3699  339.33  293.58  339.34
  293.78  339.33295.6799  339.06296.2399     339296.6199  338.98299.9299  338.85
301.7399   338.8305.8599  338.81307.5499  338.78308.2999  338.76311.2499  338.66
  313.23  338.57  315.89  338.38316.8599  338.29  318.48   338.1  319.35  338.01
  319.48  338.01319.6899     338  319.84     338  320.97  337.99  322.72  337.99
323.3799  337.98  323.78  337.98  326.29  337.74  327.91  337.58   330.9  337.39
331.2999  337.35  331.65   337.3331.9199  337.23332.6899  337.18  333.22  337.16
  333.73  337.16  335.64   337.2  336.66  337.24  336.98  337.25  337.34  337.25
  341.39  337.39343.1299  337.47344.1699  337.54  344.33  337.56  345.77  337.62
346.0599  337.58346.1699  337.57347.3699  337.47349.2599  337.25350.6899  337.14
352.4399  337.14353.3099  337.05354.5599     337377.5099     337381.0499  336.62
388.4199     336392.7599  335.99   403.1  336.01  408.53     336427.4399  335.54
  429.04  335.52429.6699  335.52431.4999  335.55432.2999  335.54  435.28  335.47
438.6099  335.36438.8799  335.36  439.27  335.35  439.73  335.35440.1099  335.36
442.4899  335.36  442.84  335.39  442.91   335.4442.9999  335.41443.4199  335.43
443.6899  335.44445.1899  335.38  448.47  335.21449.9999  335.21452.9399  335.48
  453.97  335.53454.4899  335.55455.2399  335.55  456.45  335.51  456.95   335.5
  457.72  335.45458.3199  335.39  460.47  335.13461.3199     335465.0599  334.99
465.6699  334.98488.4999     335  525.53     334  525.64  333.97  526.47     334
  529.85  334.25  531.45  334.44532.4999  334.46   533.9   334.4  540.64     334
552.5599  333.63554.4199  333.59  556.66  333.58558.3099   333.6  559.16  333.57
559.3599  333.61567.1299  333.64567.6199  333.62  571.46  333.59572.1099  333.58
   577.4  333.55577.8599  333.56  580.97  333.66581.7599  333.67586.4299  333.78
   587.4  333.76587.9299  333.78   588.2   333.8  588.48  333.83588.5599  333.84
588.8699  333.84589.2599  333.85589.8599  333.84  590.41  333.84  590.54  333.83
591.1899  333.82   591.9   333.8  597.71  333.54  598.84  333.51  603.29  333.36
603.4899  333.36604.5099  333.41  606.52  333.44  608.23  333.42609.4399  333.39
611.1799  333.33617.1899  333.03  618.03     333618.6099  332.97  625.85   332.7
635.0099  332.57  635.09  332.56635.8799  332.51638.2499   332.4  638.89  332.39
  650.41  332.12  654.08     332703.2799     332705.6699  332.8706.4199     333
719.2899     333  719.46  332.99719.9299  332.93720.8099  332.77721.1799  332.73
  722.24  332.64   723.1   332.6729.9999  332.55  730.87  332.56731.5099  332.55
737.0699  332.59  741.46  332.51743.5699  332.52  744.24  332.53  744.89  332.52
   745.2  332.52   749.4  332.47  755.85  332.47  776.89  332.32788.6799     332
  802.37   331.1  803.14  331.06  803.61  331.03  804.23     331805.9299  330.85
807.8099  330.64  808.85  330.46809.5299  330.44810.1699  330.43810.4999  330.45
811.0099   330.5  815.72  330.92  816.33     331  819.02  331.28825.0699     332
  825.37  332.03  825.84   332.1  826.83   332.2827.7499  332.22  831.87  332.27
  832.14  332.26832.6299  332.19834.2499  332.08836.2999     332836.3799  331.99
  846.27     331   851.2  330.39853.9999     330862.2499   329.2862.9299  329.17
864.5699  329.11  865.24   329.1  868.99     329  873.58  328.96874.8199  328.99
875.0299     329877.2599  329.15882.4999  329.54883.6299  329.59  884.15  329.56
  886.24  329.34888.4299     329909.6899  328.62910.7599  328.62  911.95  328.68
   916.7  328.78  918.39   328.8  918.89   328.8  922.09  328.82  922.37  328.82
  924.86   328.8925.2499   328.8925.7599  328.79  926.72  328.75927.9199  328.74
942.5499  328.37943.0099  328.35943.3799  328.35943.9999  328.33953.7499  328.16
953.9999  328.15955.0699  328.12   955.7  328.11  955.83  328.11  955.99  328.15
  956.12  328.16  957.77  328.11960.5099     328   960.6     328966.4299  327.72
966.9899   327.7969.0699  327.66974.5499  327.81974.9399  327.85978.8199  327.99
   978.9     328979.3799   328.1  981.28  328.54983.2399     329988.3699     329
989.2399  328.85  991.33  328.39  991.36  328.33992.5699  328.22993.3199  328.21
993.7899  328.34  995.86     329  998.02  329.93998.1799     330  998.83  330.39
999.8699     331 1001.58  331.98 1001.64     332 1002.45  332.92 1002.48     333
 1002.93  333.57  1003.3     334 1003.35  334.07 1004.15     335 1004.49   335.7
 1004.63     336 1004.66  336.29 1004.78     337 1004.81  337.43 1004.92     338
    1005  338.61 1005.07     339 1005.13   340.9 1005.15     341 1005.18  341.14
 1005.31     342 1011.92   342.4  1012.7  342.43 1013.39  342.45 1023.34  342.48
 1023.63  342.47 1028.85  342.35 1037.03     342 1038.02  341.76  1038.1  341.77
 1039.44  341.95 1039.52     342 1040.96     342

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  719.46     .04 1002.45     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        719.46 1002.45            33.31   18.91   17.36              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0               RS: 4213.08*

INPUT
Description:
Station Elevation Data     num=     496
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  349.62    3.07  349.49    5.81   349.4    9.43  349.26   11.69   349.2
   12.44  349.17   13.56  349.14   15.33  349.08   23.31  348.83   26.79  348.71
    29.3  348.63   30.89  348.57   36.92  348.37   39.61  348.27   41.42  348.22
   46.44  348.07   47.77  348.05   49.73  348.01   55.32  347.92   59.56  347.86
   61.19  347.84   62.14  347.84   62.33  347.92   63.48  347.93    65.2  347.92
   66.84   347.9   68.08  347.88      70  347.74      77  347.49   77.31  347.47
   80.53  347.21   86.68  346.98   95.41  346.51   96.55  346.27   96.95  346.22
   98.21  346.15   99.81  346.12  101.07  346.11  101.47   346.1  102.55  346.11
  103.91  346.18  105.79  346.44  107.26  346.43  107.86  346.42  108.78  346.32
  109.52  346.25  111.46  346.08  112.16  346.03  112.76  346.01  113.63  346.01
  114.58     346  116.26  345.93  117.52  345.87  127.13  345.34  127.91  345.28
  128.76   345.2   130.1  345.09  130.74  345.08  131.69  345.03  132.34  344.97
   134.3  344.76  135.94  344.59  138.27  344.34  139.43  344.23  139.94  344.19
  140.93  344.13  142.25  344.04  144.44  343.88  147.83  343.67  148.83  343.56
   149.2  343.53  150.03  343.49  150.81   343.5  152.33  343.42  155.76  343.42
  158.73  343.45  159.64  343.48  160.58  343.49  161.76  343.46  163.04  343.47
  164.15  343.49  164.96  343.43  165.76  343.41  167.09   343.4  168.59  343.41
  169.51  343.43  171.43  343.48  172.58  343.53  173.49  343.61  174.47  343.67
  176.01   343.7  176.63  343.72  177.71  343.72  179.51  343.73  182.36  343.69
  183.48  343.67  185.53  343.62  186.06   343.6  187.97  343.49  190.57  343.29
  191.84  343.18  194.76  342.86  197.17  342.58  197.66  342.53  197.94  342.52
  199.89  342.36  200.14  342.35  204.26  342.03   204.6  342.01  206.07  342.07
  206.42  342.07  207.47  341.96  211.04  341.67  212.68  341.49   214.3  341.27
  215.27   341.1  215.61  341.06  215.98  341.04  216.65  341.04  217.72  341.06
  218.23  341.05  218.97  341.01  220.33  340.96  221.09   340.9   226.1  340.59
  228.86  340.46  229.86  340.37  232.76  340.36  234.39  340.35  239.56  340.34
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 244.98 | 339.76 | 255.24 | 339.39 | 269.24 | 338.69 | 269.83 | 338.75 | 270.9 | 338.69 |
| 271.77 | 338.67 | 273.34 | 338.59 | 275.46 | 338.43 | 279.29 | 338.42 | 280.52 | 338.36 |
| 281.55 | 338.42 | 285.43 | 338.55 | 286.73 | 338.61 | 288.06 | 338.71 | 288.46 | 338.71 |
| 290.33 | 338.46 | 290.88 | 338.4 | 291.25 | 338.38 | 293.12 | 338.31 | 294.5 | 338.25 |
| 296.28 | 338.2 | 300.33 | 338.2 | 301.99 | 338.17 | 302.72 | 338.15 | 305.62 | 338.05 |
| 307.56 | 337.96 | 310.17 | 337.78 | 311.13 | 337.7 | 312.72 | 337.52 | 313.57 | 337.43 |
| 315.16 | 337.41 | 316.88 | 337.41 | 317.53 | 337.39 | 317.92 | 337.39 | 320.39 | 337.17 |
| 321.98 | 337.01 | 324.91 | 336.83 | 325.65 | 336.75 | 325.91 | 336.68 | 327.19 | 336.62 |
| 328.02 | 336.62 | 329.57 | 336.65 | 330.88 | 336.7 | 331.24 | 336.7 | 332.65 | 336.74 |
| 335.21 | 336.82 | 336.92 | 336.9 | 337.94 | 336.96 | 338.1 | 336.98 | 339.51 | 337.03 |
| 341.09 | 336.89 | 342.94 | 336.69 | 344.35 | 336.59 | 346.06 | 336.58 | 346.92 | 336.5 |
| 348.15 | 336.45 | 370.68 | 336.45 | 374.16 | 336.1 | 381.39 | 335.52 | 385.65 | 335.5 |
| 395.81 | 335.51 | 398.74 | 335.51 | 399.95 | 335.5 | 400.71 | 335.5 | 403.28 | 335.43 |
| 403.53 | 335.42 | 406.68 | 335.35 | 409.19 | 335.29 | 410.23 | 335.27 | 410.86 | 335.25 |
| 413.76 | 335.18 | 419.71 | 335.04 | 421.28 | 335.02 | 421.9 | 335.02 | 423.69 | 335.04 |
| 424.48 | 335.03 | 427.4 | 334.96 | 430.67 | 334.86 | 431.77 | 334.85 | 432.15 | 334.86 |
| 434.48 | 334.85 | 434.99 | 334.9 | 435.66 | 334.93 | 435.99 | 334.91 | 437.14 | 334.87 |
| 440.36 | 334.71 | 441.86 | 334.71 | 444.75 | 334.96 | 446.25 | 335.02 | 447 | 335.02 |
| 448.19 | 334.98 | 448.68 | 334.97 | 449.44 | 334.92 | 450.03 | 334.87 | 452.14 | 334.62 |
| 452.97 | 334.5 | 454.73 | 334.5 | 456.65 | 334.49 | 457.25 | 334.48 | 477.4 | 334.5 |
| 479.66 | 334.5 | 485.02 | 334.36 | 487.34 | 334.29 | 492.63 | 334.15 | 496.88 | 334.05 |
| 497.59 | 334.04 | 500.15 | 333.97 | 500.82 | 333.96 | 513.51 | 333.63 | 516.02 | 333.56 |
| 516.13 | 333.54 | 516.95 | 333.56 | 520.26 | 333.79 | 521.84 | 333.97 | 522.87 | 333.99 |
| 524.24 | 333.93 | 530.86 | 333.56 | 535.33 | 333.42 | 538.5 | 333.33 | 539.43 | 333.3 |
| 540.05 | 333.29 | 542.56 | 333.21 | 544.39 | 333.18 | 546.59 | 333.17 | 548.21 | 333.19 |
| 549.04 | 333.16 | 549.24 | 333.2 | 556.87 | 333.23 | 557.35 | 333.21 | 559.14 | 333.19 |
| 561.12 | 333.18 | 561.76 | 333.17 | 566.95 | 333.15 | 567.41 | 333.15 | 570.46 | 333.25 |
| 571.23 | 333.26 | 575.82 | 333.36 | 576.77 | 333.35 | 577.29 | 333.36 | 577.91 | 333.42 |
| 578.6 | 333.43 | 579.73 | 333.42 | 581.19 | 333.38 | 583.99 | 333.27 | 585.53 | 333.2 |
| 586.85 | 333.15 | 588.01 | 333.12 | 588.42 | 333.1 | 592.38 | 332.98 | 592.57 | 332.98 |
| 593.57 | 333.02 | 595.55 | 333.05 | 597.23 | 333.03 | 598.81 | 332.99 | 600.12 | 332.95 |
| 606.02 | 332.67 | 606.85 | 332.64 | 607.42 | 332.61 | 608.14 | 332.59 | 614.53 | 332.37 |
| 619.54 | 332.3 | 621.85 | 332.27 | 623.1 | 332.25 | 624.38 | 332.18 | 626.7 | 332.07 |
| 629.57 | 332.02 | 630.9 | 331.99 | 632.15 | 331.97 | 638.64 | 331.83 | 642.25 | 331.71 |
| 654.69 | 331.71 | 687.47 | 331.75 | 690.56 | 331.75 | 692.9 | 332.5 | 693.64 | 332.68 |
| 699.9 | 332.69 | 706.28 | 332.69 | 706.44 | 332.68 | 706.93 | 332.63 | 707.85 | 332.48 |
| 708.23 | 332.44 | 709.33 | 332.36 | 710.23 | 332.32 | 711.21 | 332.31 | 714.45 | 332.29 |
| 715.18 | 332.29 | 717.02 | 332.27 | 718.3 | 332.27 | 718.97 | 332.26 | 721.05 | 332.27 |
| 721.53 | 332.26 | 722.08 | 332.27 | 724.74 | 332.27 | 728.1 | 332.21 | 728.27 | 332.2 |
| 729.31 | 332.19 | 731.5 | 332.2 | 732.2 | 332.21 | 734.21 | 332.19 | 737.56 | 332.17 |
| 740.42 | 332.19 | 742.42 | 332.2 | 745.88 | 332.2 | 748.23 | 332.19 | 749.14 | 332.18 |
| 761.59 | 332.11 | 762.55 | 332.1 | 763.38 | 332.1 | 764.71 | 332.09 | 765.27 | 332.08 |
| 766.13 | 332.08 | 770.39 | 331.97 | 773.62 | 331.88 | 775.18 | 331.83 | 778.38 | 331.74 |
| 782.32 | 331.48 | 792.61 | 330.88 | 793.9 | 330.81 | 794.54 | 330.79 | 796.31 | 330.65 |
| 798.26 | 330.45 | 799.34 | 330.28 | 800.72 | 330.26 | 801.59 | 330.32 | 806.48 | 330.71 |
| 807.12 | 330.79 | 808.63 | 330.93 | 809.91 | 331.04 | 811.22 | 331.17 | 816.2 | 331.68 |
| 817 | 331.77 | 818.03 | 331.86 | 818.99 | 331.88 | 823.27 | 331.91 | 823.55 | 331.9 |
| 824.06 | 331.83 | 825.74 | 331.72 | 826.95 | 331.67 | 827.15 | 331.67 | 827.95 | 331.63 |
| 838.23 | 330.68 | 843.36 | 330.1 | 846.27 | 329.73 | 849.86 | 329.4 | 851.83 | 329.2 |
| 854.84 | 328.94 | 855.59 | 328.9 | 856.45 | 328.89 | 857.25 | 328.86 | 857.58 | 328.86 |
| 861.83 | 328.77 | 862.02 | 328.76 | 862.91 | 328.76 | 863.18 | 328.75 | 864 | 328.75 |
| 866.61 | 328.72 | 867.9 | 328.75 | 868.77 | 328.79 | 870.35 | 328.88 | 870.91 | 328.92 |
| 875.89 | 329.25 | 877.06 | 329.3 | 877.6 | 329.27 | 879.77 | 329.06 | 882.05 | 328.75 |
| 882.48 | 328.74 | 885.43 | 328.7 | 886.05 | 328.68 | 886.51 | 328.68 | 900.55 | 328.44 |
| 900.76 | 328.43 | 902.88 | 328.4 | 904.14 | 328.37 | 905.25 | 328.37 | 906.49 | 328.42 |
| 907.88 | 328.44 | 911.43 | 328.51 | 913.18 | 328.53 | 913.7 | 328.53 | 917.32 | 328.55 |
| 920.84 | 328.52 | 921.84 | 328.48 | 923.09 | 328.47 | 924.14 | 328.45 | 938.29 | 328.13 |
| 938.77 | 328.11 | 939.16 | 328.11 | 939.8 | 328.09 | 944.14 | 328.02 | 944.34 | 328.02 |
| 949.93 | 327.92 | 950.19 | 327.92 | 951.3 | 327.89 | 952.09 | 327.88 | 952.4 | 327.92 |
| 954.11 | 327.87 | 956.96 | 327.76 | 957.05 | 327.76 | 960.48 | 327.6 | 963.61 | 327.47 |
| 965.85 | 327.43 | 966.84 | 327.45 | 970.14 | 327.57 | 971.43 | 327.61 | 971.83 | 327.65 |
| 974.99 | 327.81 | 975.86 | 327.86 | 976.35 | 327.96 | 980.27 | 328.83 | 982.88 | 328.86 |
| 985.49 | 328.92 | 986.38 | 328.8 | 987.71 | 328.56 | 988.51 | 328.43 | 988.6 | 328.37 |
| 989.77 | 328.32 | 990.53 | 328.34 | 991.01 | 328.48 | 993.12 | 329.17 | 995.48 | 330.17 |
| 996.67 | 330.85 | 998.94 | 332.09 | 999 | 332.11 | 999.82 | 332.98 | 999.86 | 333.05 |
| 1000.33 | 333.6 | 1001.61 | 334.95 | 1002.12 | 335.89 | 1002.15 | 336.15 | 1002.28 | 336.82 |
| 1002.31 | 337.21 | 1002.42 | 337.75 | 1002.58 | 338.68 | 1002.61 | 339.42 | 1002.64 | 340.44 |
| 1002.7 | 340.66 | 1002.83 | 341.46 | 1003.85 | 341.53 | 1005.09 | 341.6 | 1007.96 | 341.73 |
| 1009.64 | 341.83 | 1009.91 | 341.84 | 1011.34 | 341.84 | 1011.91 | 341.82 | 1014.07 | 341.77 |
| 1015.29 | 341.75 | 1015.91 | 341.78 | 1017.89 | 341.93 | 1018.29 | 341.94 | 1019.08 | 341.92 |
| 1021.04 | 341.91 | 1021.81 | 341.92 | 1022.51 | 341.9 | 1023.82 | 341.9 | 1025.57 | 341.97 |
| 1026.41 | 341.99 | 1028.28 | 342 | 1028.87 | 341.99 | 1032.71 | 341.88 | 1033.67 | 341.85 |
| 1034.67 | 341.81 | 1036.22 | 341.77 | 1037.26 | 341.55 | 1038.76 | 341.74 | 1038.84 | 341.79 |
| 1040.36 | 341.79 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 706.44 | .04 | 999.82 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 706.44 | 999.82 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4194.17*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 349.16 | 3.02 | 349.01 | 4.8 | 348.94 | 9.25 | 348.75 | 11.47 | 348.69 |
| 13.31 | 348.62 | 15.05 | 348.56 | 22.88 | 348.31 | 26.29 | 348.18 | 28.76 | 348.09 |
| 30.32 | 348.02 | 33.87 | 347.89 | 34.24 | 347.87 | 36.24 | 347.8 | 38.88 | 347.68 |
| 40.66 | 347.62 | 42.66 | 347.58 | 45.59 | 347.49 | 46.31 | 347.48 | 46.89 | 347.46 |
| 48.82 | 347.42 | 54.3 | 347.34 | 58.46 | 347.29 | 59.54 | 347.28 | 60.99 | 347.28 |
| 61.18 | 347.36 | 62.31 | 347.38 | 64.85 | 347.38 | 66.28 | 347.37 | 66.65 | 347.36 |
| 68.71 | 347.23 | 70.67 | 347.16 | 73.12 | 347.06 | 74.01 | 347.04 | 75.88 | 346.96 |
| 79.04 | 346.71 | 85.09 | 346.48 | 93.65 | 346.02 | 94.77 | 345.79 | 95.69 | 345.71 |
| 96.4 | 345.68 | 97.97 | 345.63 | 99.21 | 345.62 | 99.6 | 345.61 | 100.66 | 345.61 |
| 101.99 | 345.65 | 103.84 | 345.88 | 105.29 | 345.86 | 105.88 | 345.83 | 106.77 | 345.72 |
| 107.51 | 345.65 | 109.4 | 345.44 | 110.1 | 345.38 | 110.68 | 345.35 | 111.99 | 345.31 |
| 113.18 | 345.28 | 114.11 | 345.23 | 115.35 | 345.18 | 123.02 | 344.77 | 124.79 | 344.67 |
| 125.56 | 344.62 | 126.39 | 344.54 | 127.71 | 344.43 | 127.87 | 344.43 | 129.27 | 344.36 |
| 131.31 | 344.16 | 131.82 | 344.1 | 133.44 | 343.93 | 135.72 | 343.67 | 136.77 | 343.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 137.36 | 343.53 | 139.63 | 343.39 | 141.78 | 343.25 | 145.1 | 343.06 | 145.38 | 343.04 |
| 146.45 | 342.93 | 147.26 | 342.9 | 148.03 | 342.91 | 149.53 | 342.84 | 152.89 | 342.85 |
| 155.8 | 342.89 | 156.7 | 342.93 | 157.9 | 342.94 | 158.9 | 342.92 | 160.04 | 342.94 |
| 161.12 | 342.98 | 161.73 | 342.94 | 162.7 | 342.94 | 164.01 | 342.95 | 165.49 | 342.98 |
| 166.39 | 343.02 | 168.27 | 343.09 | 169.4 | 343.16 | 170.3 | 343.25 | 171.25 | 343.32 |
| 172.77 | 343.36 | 174.43 | 343.38 | 176.2 | 343.38 | 178.28 | 343.34 | 179.41 | 343.3 |
| 179.75 | 343.3 | 182.11 | 343.23 | 182.63 | 343.21 | 183.43 | 343.15 | 184.5 | 343.08 |
| 187.05 | 342.86 | 188.16 | 342.76 | 191.17 | 342.4 | 193.53 | 342.11 | 194.3 | 342.04 |
| 196.21 | 341.88 | 196.45 | 341.85 | 200.49 | 341.52 | 200.83 | 341.49 | 202.28 | 341.53 |
| 202.84 | 341.5 | 203.64 | 341.41 | 207.15 | 341.09 | 208.76 | 340.91 | 210.35 | 340.68 |
| 211.31 | 340.51 | 212 | 340.44 | 212.66 | 340.43 | 213.76 | 340.44 | 214.21 | 340.43 |
| 214.93 | 340.39 | 216.27 | 340.34 | 216.95 | 340.29 | 217.01 | 340.27 | 221.94 | 339.97 |
| 224.65 | 339.83 | 225.63 | 339.74 | 225.97 | 339.74 | 228.47 | 339.71 | 230.08 | 339.71 |
| 235.14 | 339.69 | 240.46 | 339.14 | 250.53 | 338.78 | 264.28 | 338.11 | 264.86 | 338.16 |
| 265.78 | 338.11 | 266.76 | 338.09 | 268.31 | 338 | 270.39 | 337.85 | 274.15 | 337.84 |
| 275.35 | 337.78 | 276.36 | 337.83 | 280.17 | 337.95 | 281.44 | 338 | 282.75 | 338.09 |
| 283.15 | 338.09 | 284.98 | 337.85 | 285.89 | 337.78 | 289.08 | 337.66 | 290.82 | 337.6 |
| 294.79 | 337.6 | 297.14 | 337.54 | 299.99 | 337.44 | 301.9 | 337.36 | 304.46 | 337.18 |
| 305.39 | 337.1 | 306.96 | 336.93 | 307.79 | 336.85 | 308.27 | 336.84 | 312.06 | 336.81 |
| 316.04 | 336.45 | 318.93 | 336.27 | 319.65 | 336.2 | 319.91 | 336.14 | 320.65 | 336.09 |
| 321.65 | 336.07 | 321.98 | 336.08 | 323.5 | 336.1 | 324.48 | 336.14 | 325.13 | 336.14 |
| 329.04 | 336.25 | 329.85 | 336.29 | 330.71 | 336.32 | 331.72 | 336.38 | 331.87 | 336.4 |
| 333.26 | 336.45 | 333.64 | 336.4 | 334.8 | 336.32 | 336.62 | 336.13 | 338 | 336.03 |
| 339.69 | 336.03 | 340.53 | 335.95 | 341.73 | 335.91 | 346.15 | 335.9 | 363.85 | 335.9 |
| 367.26 | 335.57 | 374.37 | 335.03 | 378.55 | 335.02 | 388.51 | 335.02 | 391.39 | 335.01 |
| 392.58 | 335 | 393.75 | 334.98 | 395.85 | 334.9 | 396.09 | 334.9 | 399.19 | 334.83 |
| 401.65 | 334.77 | 403.29 | 334.75 | 406.13 | 334.68 | 411.97 | 334.54 | 414.12 | 334.51 |
| 415.89 | 334.54 | 416.66 | 334.53 | 419.53 | 334.46 | 422.74 | 334.36 | 423.38 | 334.35 |
| 426.48 | 334.35 | 426.97 | 334.39 | 427.64 | 334.41 | 429.08 | 334.36 | 432.24 | 334.2 |
| 433.72 | 334.2 | 436.55 | 334.43 | 438.03 | 334.49 | 438.77 | 334.49 | 440.42 | 334.44 |
| 441.16 | 334.4 | 442.16 | 334.3 | 443.81 | 334.12 | 444.63 | 334 | 446.35 | 334 |
| 448.23 | 333.99 | 448.82 | 333.98 | 468.61 | 333.99 | 470.82 | 333.99 | 476.08 | 333.86 |
| 478.36 | 333.79 | 483.55 | 333.66 | 487.72 | 333.58 | 488.42 | 333.57 | 489.48 | 333.54 |
| 491.52 | 333.5 | 491.59 | 333.49 | 504.05 | 333.19 | 506.51 | 333.13 | 506.62 | 333.1 |
| 507.42 | 333.13 | 510.68 | 333.34 | 512.22 | 333.5 | 513.23 | 333.51 | 514.58 | 333.46 |
| 521.08 | 333.11 | 525.46 | 332.99 | 528.57 | 332.9 | 530.1 | 332.87 | 532.57 | 332.8 |
| 534.36 | 332.76 | 536.52 | 332.76 | 538.11 | 332.77 | 538.93 | 332.75 | 539.12 | 332.78 |
| 546.61 | 332.81 | 547.08 | 332.8 | 548.84 | 332.78 | 550.78 | 332.77 | 551.41 | 332.76 |
| 556.51 | 332.74 | 556.95 | 332.75 | 559.95 | 332.84 | 560.71 | 332.85 | 565.21 | 332.95 |
| 566.15 | 332.93 | 566.66 | 332.95 | 567.26 | 333 | 567.94 | 333.01 | 569.8 | 332.99 |
| 570.48 | 332.97 | 576.03 | 332.75 | 577.58 | 332.71 | 581.46 | 332.59 | 581.65 | 332.59 |
| 582.64 | 332.64 | 584.57 | 332.66 | 586.22 | 332.64 | 587.39 | 332.62 | 589.07 | 332.57 |
| 594.86 | 332.31 | 595.67 | 332.29 | 596.23 | 332.26 | 596.93 | 332.24 | 603.2 | 332.03 |
| 608.12 | 331.97 | 610.39 | 331.94 | 611.62 | 331.92 | 612.14 | 331.88 | 612.87 | 331.84 |
| 615.16 | 331.74 | 617.97 | 331.7 | 620.5 | 331.66 | 626.88 | 331.53 | 630.41 | 331.43 |
| 642.62 | 331.43 | 674.8 | 331.5 | 677.83 | 331.5 | 680.14 | 332.19 | 680.86 | 332.37 |
| 693.26 | 332.39 | 693.43 | 332.38 | 693.93 | 332.33 | 694.78 | 332.2 | 695.28 | 332.15 |
| 696.43 | 332.07 | 697.35 | 332.04 | 698.38 | 332.03 | 701.74 | 332.01 | 704.4 | 332 |
| 704.79 | 331.99 | 705.73 | 331.99 | 706.42 | 331.98 | 708.59 | 331.97 | 708.75 | 331.96 |
| 712.42 | 331.96 | 715.91 | 331.89 | 716.08 | 331.88 | 717.15 | 331.87 | 719.43 | 331.87 |
| 720.15 | 331.88 | 722.24 | 331.86 | 725.72 | 331.87 | 728.68 | 331.91 | 730.76 | 331.93 |
| 732.67 | 331.94 | 734.36 | 331.94 | 737.74 | 331.92 | 750.66 | 331.87 | 751.12 | 331.86 |
| 752.51 | 331.86 | 753.9 | 331.84 | 755.37 | 331.84 | 759.79 | 331.73 | 764.76 | 331.58 |
| 768.08 | 331.47 | 772.17 | 331.22 | 782.85 | 330.66 | 784.85 | 330.57 | 786.69 | 330.44 |
| 788.71 | 330.26 | 789.84 | 330.11 | 791.26 | 330.08 | 792.17 | 330.14 | 797.25 | 330.5 |
| 797.9 | 330.57 | 799.47 | 330.7 | 800.81 | 330.8 | 802.16 | 330.91 | 807.33 | 331.36 |
| 808.16 | 331.44 | 809.23 | 331.52 | 810.22 | 331.53 | 814.66 | 331.54 | 814.96 | 331.53 |
| 815.48 | 331.47 | 817.23 | 331.36 | 818.69 | 331.3 | 818.98 | 331.3 | 819.53 | 331.27 |
| 830.2 | 330.36 | 835.51 | 329.8 | 838.53 | 329.45 | 842.27 | 329.14 | 843.72 | 328.98 |
| 844.98 | 328.86 | 846.57 | 328.75 | 847.29 | 328.69 | 848.16 | 328.64 | 848.86 | 328.63 |
| 849.32 | 328.64 | 849.93 | 328.61 | 851.65 | 328.59 | 851.7 | 328.58 | 855.23 | 328.52 |
| 856.09 | 328.52 | 859.65 | 328.48 | 861.21 | 328.51 | 861.89 | 328.55 | 863.53 | 328.62 |
| 864.1 | 328.65 | 869.27 | 328.96 | 870.49 | 329 | 871.05 | 328.97 | 873.3 | 328.79 |
| 874.13 | 328.68 | 875.67 | 328.49 | 876.12 | 328.49 | 876.94 | 328.47 | 879.18 | 328.45 |
| 880.29 | 328.43 | 882.21 | 328.41 | 882.69 | 328.4 | 892.46 | 328.25 | 895.09 | 328.19 |
| 896.48 | 328.17 | 897.28 | 328.15 | 898.6 | 328.13 | 899.75 | 328.12 | 901.03 | 328.16 |
| 902.47 | 328.18 | 906.16 | 328.24 | 907.98 | 328.26 | 912.27 | 328.27 | 915.38 | 328.26 |
| 915.93 | 328.25 | 916.96 | 328.21 | 918.26 | 328.21 | 919.35 | 328.18 | 934.04 | 327.89 |
| 934.53 | 327.87 | 935.6 | 327.85 | 940.1 | 327.79 | 940.31 | 327.78 | 946.12 | 327.69 |
| 947.54 | 327.65 | 948.36 | 327.64 | 948.67 | 327.69 | 950.45 | 327.64 | 953.41 | 327.52 |
| 953.5 | 327.52 | 957.06 | 327.36 | 959.79 | 327.25 | 960.98 | 327.22 | 962.64 | 327.19 |
| 964.81 | 327.26 | 965.3 | 327.29 | 967 | 327.36 | 968.31 | 327.4 | 968.72 | 327.45 |
| 971.94 | 327.66 | 972.82 | 327.72 | 975.28 | 328.23 | 977.31 | 328.66 | 979.96 | 328.71 |
| 982.62 | 328.83 | 983.52 | 328.75 | 985.68 | 328.47 | 985.72 | 328.42 | 986.97 | 328.42 |
| 987.74 | 328.47 | 988.23 | 328.61 | 990.37 | 329.34 | 991.74 | 329.92 | 992.78 | 330.34 |
| 993.45 | 330.71 | 994.62 | 331.33 | 996.3 | 332.2 | 996.36 | 332.22 | 997.2 | 333.04 |
| 997.23 | 333.11 | 997.9 | 333.79 | 998.42 | 334.29 | 999.08 | 334.9 | 999.61 | 335.77 |
| 999.64 | 336.02 | 999.77 | 336.63 | 999.8 | 337 | 999.93 | 337.49 | 1000.01 | 338.02 |
| 1000.09 | 338.35 | 1000.16 | 339.98 | 1000.36 | 340.92 | 1001.96 | 341.04 | 1002.73 | 341.07 |
| 1004.58 | 341.12 | 1005.74 | 341.17 | 1007.51 | 341.26 | 1007.91 | 341.27 | 1009.29 | 341.22 |
| 1009.89 | 341.19 | 1012.9 | 341.06 | 1013.32 | 341.03 | 1014.21 | 341.11 | 1015.19 | 341.26 |
| 1016.16 | 341.4 | 1016.3 | 341.41 | 1017.42 | 341.37 | 1019.47 | 341.35 | 1020.6 | 341.34 |
| 1021.56 | 341.34 | 1022.39 | 341.37 | 1024.23 | 341.54 | 1025.11 | 341.61 | 1026.37 | 341.66 |
| 1027.08 | 341.68 | 1027.69 | 341.68 | 1032.95 | 341.59 | 1033.78 | 341.56 | 1035.41 | 341.53 |
| 1036.5 | 341.35 | 1036.59 | 341.35 | 1038.07 | 341.53 | 1038.16 | 341.57 | 1038.81 | 341.58 |
| 1039.75 | 341.58 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 693.43 | .04 | 997.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 693.43 | 997.2 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4175.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.69 | 2.96 | 348.53 | 5.6 | 348.41 | 9.08 | 348.24 | 11.98 | 348.15 |
| 14.77 | 348.04 | 22.46 | 347.78 | 28.67 | 347.52 | 29.75 | 347.46 | 33.23 | 347.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 33.6 | 347.3 | 34.73 | 347.27 | 35.56 | 347.22 | 38.15 | 347.09 | 39.08 | 347.05 |
| 41.86 | 346.99 | 44.73 | 346.9 | 45.44 | 346.89 | 46.01 | 346.87 | 47.9 | 346.83 |
| 53.28 | 346.75 | 57.36 | 346.72 | 59.17 | 346.72 | 59.85 | 346.73 | 60.03 | 346.8 |
| 61.14 | 346.83 | 62.79 | 346.84 | 63.63 | 346.85 | 65.04 | 346.84 | 65.4 | 346.83 |
| 66.67 | 346.76 | 67.42 | 346.71 | 68.23 | 346.69 | 69.85 | 346.63 | 71.75 | 346.55 |
| 72.62 | 346.52 | 74.16 | 346.48 | 74.46 | 346.45 | 77.56 | 346.22 | 83.49 | 345.98 |
| 91.9 | 345.52 | 92.99 | 345.32 | 93.38 | 345.27 | 94.59 | 345.2 | 96.13 | 345.15 |
| 97.73 | 345.11 | 98.77 | 345.1 | 100.08 | 345.13 | 101.89 | 345.32 | 103.31 | 345.29 |
| 103.89 | 345.25 | 104.77 | 345.13 | 107.35 | 344.81 | 108.61 | 344.69 | 109.44 | 344.65 |
| 109.88 | 344.61 | 110.36 | 344.61 | 111.97 | 344.53 | 113.19 | 344.48 | 120.71 | 344.1 |
| 122.44 | 344.01 | 123.28 | 343.95 | 124.02 | 343.88 | 125.31 | 343.77 | 125.92 | 343.75 |
| 126.84 | 343.7 | 128.84 | 343.5 | 129.35 | 343.44 | 130.93 | 343.27 | 133.18 | 343.01 |
| 134.29 | 342.9 | 134.78 | 342.86 | 137.01 | 342.75 | 139.12 | 342.62 | 142.38 | 342.46 |
| 143.7 | 342.34 | 144.5 | 342.31 | 145.25 | 342.33 | 146.72 | 342.27 | 149.89 | 342.28 |
| 150.02 | 342.29 | 152.88 | 342.34 | 153.76 | 342.37 | 154.66 | 342.39 | 155.8 | 342.38 |
| 158.1 | 342.46 | 158.88 | 342.44 | 159.65 | 342.46 | 162.86 | 342.58 | 163.27 | 342.61 |
| 165.11 | 342.71 | 166.22 | 342.79 | 168.04 | 342.97 | 169.52 | 343.02 | 170.12 | 343.03 |
| 172.35 | 343.03 | 174.93 | 342.98 | 176.05 | 342.93 | 176.72 | 342.91 | 179.21 | 342.81 |
| 181.04 | 342.67 | 182.19 | 342.57 | 184.62 | 342.32 | 184.77 | 342.31 | 187.58 | 341.95 |
| 190.37 | 341.58 | 190.65 | 341.57 | 192.52 | 341.39 | 192.76 | 341.36 | 196.73 | 341 |
| 197.06 | 340.98 | 198.48 | 340.99 | 199.04 | 340.96 | 199.82 | 340.86 | 203.26 | 340.52 |
| 204.72 | 340.34 | 206.4 | 340.1 | 207.66 | 339.88 | 208.02 | 339.85 | 208.66 | 339.83 |
| 209.75 | 339.82 | 210.51 | 339.79 | 210.98 | 339.76 | 211.41 | 339.75 | 212.52 | 339.69 |
| 212.94 | 339.65 | 217.77 | 339.34 | 220.43 | 339.2 | 221.39 | 339.11 | 221.73 | 339.11 |
| 224.19 | 339.07 | 230.73 | 339.03 | 235.95 | 338.52 | 245.83 | 338.17 | 259.32 | 337.52 |
| 259.88 | 337.57 | 260.92 | 337.52 | 261.75 | 337.5 | 263.27 | 337.42 | 264.53 | 337.34 |
| 265.31 | 337.28 | 269 | 337.26 | 270.18 | 337.2 | 271.18 | 337.25 | 274.91 | 337.34 |
| 276.16 | 337.39 | 277.65 | 337.48 | 277.83 | 337.47 | 279.63 | 337.25 | 280.52 | 337.18 |
| 283.65 | 337.06 | 285.36 | 337.01 | 289.26 | 336.99 | 291.57 | 336.93 | 294.36 | 336.84 |
| 296.23 | 336.75 | 298.74 | 336.59 | 299.66 | 336.51 | 301.19 | 336.35 | 302.02 | 336.27 |
| 302.48 | 336.26 | 305.2 | 336.24 | 306.21 | 336.22 | 308.58 | 336.02 | 310.11 | 335.88 |
| 312.94 | 335.72 | 313.65 | 335.65 | 313.9 | 335.59 | 315.13 | 335.53 | 317.42 | 335.56 |
| 320.39 | 335.62 | 323.66 | 335.71 | 325.49 | 335.8 | 325.64 | 335.82 | 327 | 335.86 |
| 327.38 | 335.82 | 328.52 | 335.74 | 330.3 | 335.57 | 331.66 | 335.48 | 333.31 | 335.47 |
| 334.13 | 335.4 | 335.32 | 335.36 | 340.81 | 335.36 | 341.55 | 335.35 | 357.02 | 335.36 |
| 360.37 | 335.05 | 367.34 | 334.55 | 371.44 | 334.53 | 381.22 | 334.52 | 384.05 | 334.51 |
| 385.21 | 334.5 | 386.36 | 334.48 | 388.42 | 334.38 | 388.66 | 334.38 | 391.7 | 334.32 |
| 394.11 | 334.26 | 395.72 | 334.24 | 398.51 | 334.17 | 404.24 | 334.03 | 405.75 | 334.01 |
| 406.35 | 334.01 | 408.08 | 334.03 | 408.84 | 334.02 | 411.65 | 333.95 | 414.8 | 333.85 |
| 415.86 | 333.84 | 416.22 | 333.85 | 418.47 | 333.84 | 418.96 | 333.88 | 419.61 | 333.9 |
| 421.03 | 333.85 | 424.13 | 333.7 | 425.58 | 333.7 | 426.08 | 333.73 | 426.92 | 333.8 |
| 428.36 | 333.91 | 429.33 | 333.95 | 430.53 | 333.96 | 432.15 | 333.91 | 432.88 | 333.87 |
| 433.86 | 333.78 | 435.48 | 333.61 | 436.28 | 333.51 | 439.82 | 333.49 | 440.4 | 333.48 |
| 459.81 | 333.49 | 461.99 | 333.49 | 467.14 | 333.36 | 467.7 | 333.35 | 469.38 | 333.3 |
| 474.48 | 333.17 | 479.25 | 333.1 | 482.29 | 333.04 | 482.37 | 333.03 | 494.59 | 332.75 |
| 497.01 | 332.69 | 497.11 | 332.67 | 497.9 | 332.69 | 501.09 | 332.88 | 502.61 | 333.03 |
| 503.6 | 333.04 | 504.92 | 332.99 | 511.3 | 332.67 | 515.6 | 332.55 | 518.65 | 332.47 |
| 519.55 | 332.46 | 520.15 | 332.44 | 522.57 | 332.38 | 524.33 | 332.35 | 526.45 | 332.35 |
| 528.01 | 332.36 | 528.81 | 332.34 | 529 | 332.37 | 536.35 | 332.4 | 536.81 | 332.38 |
| 538.79 | 332.37 | 539.17 | 332.36 | 540.44 | 332.36 | 541.06 | 332.35 | 546.5 | 332.34 |
| 549.44 | 332.43 | 550.18 | 332.44 | 554.6 | 332.53 | 555.52 | 332.52 | 556.02 | 332.53 |
| 556.62 | 332.58 | 557.28 | 332.59 | 558.49 | 332.58 | 559.77 | 332.55 | 563.95 | 332.41 |
| 565.22 | 332.36 | 566.74 | 332.32 | 570.55 | 332.21 | 571.7 | 332.25 | 573.6 | 332.27 |
| 575.22 | 332.25 | 577.39 | 332.21 | 578.01 | 332.19 | 583.69 | 331.95 | 584.49 | 331.93 |
| 585.03 | 331.9 | 585.73 | 331.89 | 591.88 | 331.7 | 596.71 | 331.64 | 598.94 | 331.61 |
| 600.39 | 331.58 | 600.65 | 331.55 | 601.37 | 331.51 | 603.61 | 331.42 | 606.37 | 331.38 |
| 608.85 | 331.36 | 615.11 | 331.24 | 618.58 | 331.14 | 630.56 | 331.14 | 662.13 | 331.25 |
| 665.11 | 331.26 | 667.37 | 331.89 | 668.08 | 332.05 | 674.1 | 332.06 | 674.38 | 332.07 |
| 680.25 | 332.08 | 680.41 | 332.07 | 680.94 | 332.03 | 681.82 | 331.91 | 683.52 | 331.79 |
| 684.48 | 331.76 | 685.54 | 331.75 | 689.02 | 331.73 | 691.79 | 331.72 | 692.19 | 331.71 |
| 695.67 | 331.67 | 696.12 | 331.67 | 697.23 | 331.65 | 698.77 | 331.65 | 700.09 | 331.64 |
| 703.71 | 331.56 | 705 | 331.54 | 707.36 | 331.55 | 708.11 | 331.56 | 710.27 | 331.54 |
| 713.88 | 331.57 | 716.95 | 331.63 | 719.1 | 331.66 | 721.09 | 331.67 | 726.34 | 331.67 |
| 739.72 | 331.62 | 741.65 | 331.62 | 743.08 | 331.6 | 744.61 | 331.6 | 745.89 | 331.58 |
| 749.19 | 331.5 | 752.66 | 331.38 | 754.34 | 331.33 | 757.78 | 331.21 | 762.02 | 330.95 |
| 773.95 | 330.4 | 775.17 | 330.36 | 777.07 | 330.24 | 779.17 | 330.07 | 780.33 | 329.93 |
| 781.81 | 329.91 | 782.74 | 329.96 | 788.01 | 330.29 | 788.69 | 330.36 | 790.31 | 330.48 |
| 791.7 | 330.56 | 793.11 | 330.65 | 798.46 | 331.05 | 799.32 | 331.12 | 800.43 | 331.18 |
| 801.46 | 331.19 | 806.06 | 331.18 | 806.36 | 331.17 | 806.91 | 331.11 | 808.72 | 331 |
| 811.1 | 330.91 | 822.16 | 330.04 | 827.67 | 329.51 | 830.8 | 329.18 | 834.67 | 328.88 |
| 836.79 | 328.64 | 837.48 | 328.58 | 839.12 | 328.48 | 840.12 | 328.41 | 840.91 | 328.37 |
| 841.51 | 328.38 | 841.75 | 328.4 | 842.61 | 328.36 | 843.36 | 328.36 | 844.45 | 328.34 |
| 848.27 | 328.29 | 848.7 | 328.28 | 849.87 | 328.28 | 852.68 | 328.25 | 854.07 | 328.26 |
| 855.01 | 328.3 | 856.7 | 328.36 | 862.66 | 328.67 | 863.92 | 328.71 | 864.5 | 328.68 |
| 866.84 | 328.51 | 867.7 | 328.41 | 869.28 | 328.24 | 869.75 | 328.24 | 870.61 | 328.22 |
| 874.08 | 328.19 | 876.07 | 328.16 | 876.57 | 328.16 | 886.69 | 328.01 | 890.86 | 327.92 |
| 891.69 | 327.91 | 893.05 | 327.88 | 894.24 | 327.87 | 895.57 | 327.91 | 897.07 | 327.91 |
| 900.88 | 327.97 | 902.77 | 327.99 | 907.22 | 328 | 910.01 | 327.99 | 911.01 | 327.98 |
| 912.08 | 327.95 | 913.43 | 327.94 | 914.56 | 327.92 | 929.78 | 327.64 | 930.71 | 327.63 |
| 931.4 | 327.61 | 936.07 | 327.55 | 936.28 | 327.55 | 942.3 | 327.45 | 942.58 | 327.45 |
| 943.77 | 327.42 | 944.62 | 327.41 | 944.95 | 327.45 | 946.79 | 327.4 | 949.85 | 327.28 |
| 949.96 | 327.28 | 953.17 | 327.14 | 953.65 | 327.11 | 956.47 | 327.02 | 957.71 | 326.99 |
| 959.42 | 326.96 | 961.63 | 327.03 | 962.13 | 327.07 | 963.86 | 327.15 | 965.19 | 327.2 |
| 965.6 | 327.24 | 968.88 | 327.51 | 969.4 | 327.56 | 969.77 | 327.58 | 970.28 | 327.67 |
| 974.34 | 328.5 | 977.03 | 328.57 | 978.43 | 328.66 | 979.74 | 328.75 | 980.66 | 328.7 |
| 982.04 | 328.57 | 982.86 | 328.51 | 982.96 | 328.47 | 984.17 | 328.52 | 984.96 | 328.59 |
| 985.45 | 328.75 | 987.63 | 329.5 | 989.02 | 330.09 | 990.05 | 330.51 | 991.95 | 331.47 |
| 993.65 | 332.31 | 993.72 | 332.33 | 994.57 | 333.1 | 994.61 | 333.16 | 995.13 | 333.65 |
| 995.61 | 334.07 | 996.54 | 334.85 | 997.09 | 335.66 | 997.27 | 336.45 | 997.3 | 336.78 |
| 997.43 | 337.24 | 997.52 | 337.72 | 997.6 | 338.03 | 997.67 | 339.52 | 997.73 | 339.71 |
| 997.88 | 340.38 | 998.2 | 340.4 | 999 | 340.48 | 1000.37 | 340.54 | 1002.3 | 340.57 |
| 1002.6 | 340.57 | 1003.52 | 340.6 | 1005.37 | 340.69 | 1005.79 | 340.7 | 1007.23 | 340.61 |
| 1007.87 | 340.56 | 1010.23 | 340.4 | 1010.51 | 340.39 | 1011.2 | 340.33 | 1011.58 | 340.33 |
| 1012.39 | 340.44 | 1013.42 | 340.65 | 1014.44 | 340.87 | 1014.58 | 340.88 | 1015.75 | 340.83 |
| 1017.9 | 340.79 | 1018.75 | 340.79 | 1019.09 | 340.78 | 1019.91 | 340.78 | 1020.96 | 340.84 |
| 1023.37 | 341.18 | 1023.81 | 341.22 | 1025.87 | 341.36 | 1026.51 | 341.38 | 1032.02 | 341.34 |
| 1032.9 | 341.31 | 1034.6 | 341.3 | 1035.74 | 341.14 | 1037.39 | 341.32 | 1037.48 | 341.36 |
| 1039.15 | 341.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 680.41 | .04 | 994.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 680.41 | 994.57 | 33.31 | 18.91 | 17.36 | .1 | .3 |



BSE Document Control Number: 7323HYD101

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4156.35*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 348.22 | 2.9 | 348.05 | 4.62 | 347.96 | 5.49 | 347.92 | 8.91 | 347.72 |
| 11.75 | 347.64 | 12.81 | 347.59 | 22.03 | 347.26 | 25.31 | 347.1 | 27.68 | 347 |
| 29.18 | 346.91 | 32.6 | 346.76 | 34.06 | 346.7 | 34.88 | 346.64 | 37.42 | 346.5 |
| 38.34 | 346.46 | 41.06 | 346.4 | 44.57 | 346.3 | 45.13 | 346.29 | 46.98 | 346.24 |
| 52.26 | 346.17 | 56.26 | 346.15 | 58.04 | 346.16 | 58.7 | 346.17 | 58.89 | 346.24 |
| 59.97 | 346.28 | 61.42 | 346.3 | 62.41 | 346.32 | 63.15 | 346.32 | 64.31 | 346.3 |
| 66.13 | 346.2 | 68.02 | 346.13 | 70.38 | 346.03 | 72.44 | 345.98 | 73.03 | 345.95 |
| 76.08 | 345.72 | 81.89 | 345.49 | 90.14 | 345.03 | 91.21 | 344.84 | 92.1 | 344.76 |
| 94.29 | 344.66 | 95.86 | 344.62 | 96.88 | 344.6 | 98.16 | 344.61 | 99.94 | 344.76 |
| 101.33 | 344.71 | 101.9 | 344.67 | 105.3 | 344.17 | 106.53 | 344.03 | 107.31 | 343.97 |
| 107.78 | 343.92 | 108.25 | 343.91 | 109.83 | 343.83 | 110.4 | 343.82 | 118.4 | 343.43 |
| 120.1 | 343.34 | 121.15 | 343.27 | 122.91 | 343.1 | 123.51 | 343.09 | 125.03 | 342.98 |
| 126.38 | 342.84 | 126.87 | 342.78 | 128.43 | 342.61 | 130.28 | 342.39 | 131.72 | 342.23 |
| 132.2 | 342.19 | 133.14 | 342.16 | 134.39 | 342.1 | 136.45 | 341.99 | 139.65 | 341.85 |
| 140.95 | 341.74 | 141.73 | 341.72 | 142.48 | 341.74 | 143.91 | 341.69 | 146.39 | 341.71 |
| 147.15 | 341.72 | 149.95 | 341.78 | 150.81 | 341.82 | 151.7 | 341.85 | 151.97 | 341.84 |
| 152.94 | 341.85 | 154.03 | 341.89 | 155.07 | 341.95 | 155.85 | 341.95 | 156.59 | 341.99 |
| 157.68 | 342.06 | 157.86 | 342.06 | 159.27 | 342.14 | 161.96 | 342.32 | 163.04 | 342.42 |
| 163.9 | 342.52 | 164.82 | 342.61 | 165.6 | 342.65 | 167.17 | 342.69 | 169.05 | 342.68 |
| 170.12 | 342.66 | 171.58 | 342.61 | 172.68 | 342.56 | 173.34 | 342.54 | 175.78 | 342.41 |
| 177.58 | 342.26 | 178.7 | 342.15 | 180.03 | 342.01 | 181.09 | 341.89 | 184 | 341.5 |
| 186.27 | 341.17 | 187 | 341.09 | 188.84 | 340.9 | 189.08 | 340.87 | 193.29 | 340.46 |
| 194.68 | 340.45 | 195.01 | 340.44 | 196 | 340.31 | 199.38 | 339.95 | 200.8 | 339.76 |
| 202.46 | 339.51 | 203.37 | 339.34 | 204.04 | 339.26 | 204.67 | 339.23 | 206.17 | 339.18 |
| 206.87 | 339.14 | 208.15 | 339.09 | 208.8 | 339.04 | 208.87 | 339.02 | 213.61 | 338.71 |
| 216.21 | 338.56 | 217.16 | 338.48 | 217.49 | 338.47 | 219.9 | 338.43 | 221.44 | 338.41 |
| 226.31 | 338.38 | 231.43 | 337.9 | 241.13 | 337.56 | 254.36 | 336.94 | 254.91 | 336.99 |
| 255.8 | 336.94 | 256.74 | 336.91 | 258.23 | 336.84 | 259.47 | 336.76 | 260.24 | 336.7 |
| 263.86 | 336.68 | 265.02 | 336.62 | 265.99 | 336.66 | 269.65 | 336.74 | 270.88 | 336.78 |
| 272.33 | 336.86 | 272.52 | 336.85 | 274.28 | 336.64 | 275.15 | 336.58 | 278.22 | 336.46 |
| 279.9 | 336.41 | 283.73 | 336.38 | 285.29 | 336.35 | 285.99 | 336.32 | 288.73 | 336.23 |
| 290.56 | 336.15 | 293.03 | 335.99 | 293.93 | 335.92 | 296.24 | 335.69 | 296.55 | 335.68 |
| 299.37 | 335.65 | 300.35 | 335.63 | 302.68 | 335.44 | 304.18 | 335.31 | 305.9 | 335.21 |
| 306.95 | 335.16 | 307.65 | 335.09 | 307.9 | 335.04 | 309.11 | 334.99 | 309.89 | 334.99 |
| 311.35 | 335.01 | 312.3 | 335.03 | 314.26 | 335.06 | 317.47 | 335.14 | 318.3 | 335.17 |
| 319.41 | 335.23 | 320.75 | 335.27 | 322.23 | 335.16 | 323.98 | 335 | 325.31 | 334.92 |
| 326.93 | 334.92 | 327.74 | 334.85 | 328.9 | 334.82 | 333.16 | 334.81 | 350.19 | 334.81 |
| 353.47 | 334.53 | 360.31 | 334.06 | 364.34 | 334.04 | 373.93 | 334.03 | 377.84 | 334 |
| 378.97 | 333.97 | 381.22 | 333.85 | 383.27 | 333.82 | 386.58 | 333.75 | 388.15 | 333.73 |
| 390.89 | 333.67 | 396.51 | 333.53 | 397.99 | 333.51 | 400.27 | 333.52 | 401.02 | 333.51 |
| 403.78 | 333.45 | 406.87 | 333.35 | 407.91 | 333.34 | 408.26 | 333.35 | 410.47 | 333.34 |
| 410.94 | 333.37 | 411.58 | 333.39 | 412.97 | 333.34 | 416.02 | 333.2 | 417.43 | 333.19 |
| 418.75 | 333.28 | 419.97 | 333.37 | 421.12 | 333.42 | 422.3 | 333.43 | 424.6 | 333.35 |
| 425.26 | 333.29 | 427.15 | 333.1 | 427.94 | 333.01 | 431.4 | 332.99 | 431.97 | 332.98 |
| 451.01 | 332.99 | 453.15 | 332.98 | 458.21 | 332.87 | 460.4 | 332.8 | 465.4 | 332.68 |
| 469.41 | 332.64 | 470.08 | 332.63 | 473.14 | 332.57 | 485.13 | 332.31 | 487.5 | 332.25 |
| 487.6 | 332.23 | 488.37 | 332.25 | 491.51 | 332.42 | 492.99 | 332.56 | 493.96 | 332.57 |
| 495.26 | 332.52 | 501.52 | 332.22 | 505.74 | 332.11 | 507.7 | 332.07 | 508.73 | 332.04 |
| 510.2 | 332.02 | 512.57 | 331.97 | 514.3 | 331.94 | 516.38 | 331.93 | 517.91 | 331.95 |
| 518.69 | 331.93 | 518.88 | 331.96 | 526.09 | 331.98 | 526.54 | 331.97 | 528.23 | 331.96 |
| 528.48 | 331.95 | 530.1 | 331.95 | 530.71 | 331.94 | 535.61 | 331.93 | 538.93 | 332.02 |
| 539.66 | 332.03 | 543.99 | 332.11 | 544.89 | 332.1 | 545.63 | 332.13 | 545.97 | 332.16 |
| 546.62 | 332.17 | 547.8 | 332.16 | 549.07 | 332.14 | 551.71 | 332.05 | 553.17 | 332.01 |
| 554.41 | 331.96 | 555.5 | 331.94 | 559.63 | 331.83 | 560.76 | 331.86 | 562.63 | 331.88 |
| 564.21 | 331.87 | 565.34 | 331.84 | 565.71 | 331.84 | 566.95 | 331.81 | 572.53 | 331.59 |
| 574.52 | 331.53 | 580.56 | 331.36 | 585.29 | 331.31 | 587.48 | 331.28 | 588.91 | 331.24 |
| 589.16 | 331.21 | 589.86 | 331.17 | 592.06 | 331.09 | 592.65 | 331.08 | 596.02 | 331.05 |
| 597.21 | 331.05 | 603.34 | 330.94 | 606.75 | 330.86 | 618.5 | 330.86 | 649.47 | 331 |
| 652.39 | 331.01 | 654.6 | 331.59 | 655.3 | 331.73 | 667.39 | 331.77 | 667.94 | 331.72 |
| 668.85 | 331.62 | 669.38 | 331.58 | 670.61 | 331.51 | 671.61 | 331.47 | 672.7 | 331.47 |
| 676.31 | 331.45 | 679.17 | 331.44 | 680.6 | 331.42 | 681.34 | 331.4 | 683.19 | 331.38 |
| 684.19 | 331.35 | 684.96 | 331.35 | 687.77 | 331.33 | 691.51 | 331.24 | 691.7 | 331.23 |
| 692.85 | 331.22 | 695.29 | 331.23 | 696.07 | 331.24 | 698.3 | 331.22 | 702.04 | 331.28 |
| 705.22 | 331.35 | 707.44 | 331.39 | 709.5 | 331.41 | 714.93 | 331.41 | 728.79 | 331.38 |
| 730.78 | 331.38 | 732.27 | 331.35 | 732.89 | 331.36 | 733.84 | 331.36 | 735.17 | 331.34 |
| 738.59 | 331.26 | 742.18 | 331.13 | 743.92 | 331.07 | 747.49 | 330.94 | 751.87 | 330.68 |
| 763.33 | 330.21 | 764.22 | 330.19 | 764.76 | 330.16 | 765.48 | 330.14 | 767.44 | 330.04 |
| 769.62 | 329.89 | 770.82 | 329.76 | 771.61 | 329.74 | 772.73 | 329.75 | 773.32 | 329.79 |
| 778.77 | 330.09 | 781.16 | 330.25 | 782.59 | 330.32 | 784.05 | 330.4 | 789.59 | 330.73 |
| 790.48 | 330.79 | 791.63 | 330.84 | 792.69 | 330.84 | 797.46 | 330.82 | 798.34 | 330.75 |
| 800.21 | 330.64 | 801.31 | 330.6 | 801.56 | 330.58 | 802.68 | 330.55 | 814.12 | 329.72 |
| 819.82 | 329.22 | 823.06 | 328.9 | 827.07 | 328.62 | 829.26 | 328.36 | 830.15 | 328.3 |
| 831.68 | 328.22 | 833.4 | 328.11 | 834.15 | 328.12 | 834.4 | 328.15 | 835.29 | 328.11 |
| 837.19 | 328.1 | 840.4 | 328.06 | 840.83 | 328.05 | 841.9 | 328.05 | 845.72 | 328.01 |
| 847.15 | 328.02 | 847.4 | 328.03 | 850.5 | 328.12 | 856.04 | 328.38 | 857.35 | 328.41 |
| 857.95 | 328.39 | 860.12 | 328.25 | 860.37 | 328.24 | 861.26 | 328.14 | 862.9 | 327.99 |
| 864.27 | 327.97 | 866.67 | 327.96 | 867.87 | 327.94 | 869.93 | 327.92 | 870.44 | 327.92 |
| 880.92 | 327.77 | 882.8 | 327.72 | 883.74 | 327.7 | 885.23 | 327.68 | 886.09 | 327.66 |
| 888.74 | 327.62 | 890.12 | 327.65 | 891.66 | 327.65 | 895.61 | 327.7 | 898.15 | 327.71 |
| 902.17 | 327.73 | 905.05 | 327.71 | 906.09 | 327.71 | 907.21 | 327.68 | 908.59 | 327.67 |
| 909.77 | 327.65 | 925.52 | 327.4 | 926.48 | 327.39 | 927.2 | 327.37 | 932.03 | 327.32 |
| 932.26 | 327.31 | 938.48 | 327.22 | 939.13 | 327.2 | 940.89 | 327.18 | 941.22 | 327.21 |
| 943.13 | 327.16 | 946.3 | 327.04 | 946.41 | 327.04 | 948.78 | 326.94 | 950.23 | 326.87 |
| 953.8 | 326.77 | 956.21 | 326.73 | 957.25 | 326.75 | 958.58 | 326.8 | 958.96 | 326.85 |
| 960.71 | 326.94 | 962.07 | 327 | 965.82 | 327.36 | 966.73 | 327.44 | 967.25 | 327.53 |
| 969.28 | 327.92 | 971.38 | 328.33 | 974.11 | 328.43 | 975.53 | 328.55 | 976.87 | 328.67 |
| 977.8 | 328.65 | 979.2 | 328.57 | 980.04 | 328.55 | 980.14 | 328.52 | 981.37 | 328.62 |
| 982.17 | 328.72 | 982.67 | 328.89 | 984.89 | 329.67 | 986.3 | 330.26 | 987.35 | 330.68 |
| 989.27 | 331.61 | 990.4 | 332.13 | 991.01 | 332.42 | 991.08 | 332.43 | 991.94 | 333.16 |
| 991.98 | 333.22 | 992.53 | 333.68 | 993.46 | 334.4 | 994 | 334.8 | 994.58 | 335.54 |
| 994.62 | 335.75 | 994.76 | 336.26 | 994.8 | 336.57 | 994.93 | 336.98 | 995.11 | 337.7 |
| 995.19 | 339.06 | 995.25 | 339.23 | 995.4 | 339.85 | 995.74 | 339.86 | 996.57 | 339.95 |
| 997.16 | 339.99 | 1000.03 | 340.02 | 1001.3 | 340.04 | 1003.23 | 340.13 | 1003.67 | 340.13 |
| 1003.81 | 340.11 | 1005.18 | 340 | 1005.84 | 339.93 | 1008.32 | 339.71 | 1008.6 | 339.7 |
| 1009.59 | 339.61 | 1009.73 | 339.62 | 1010.57 | 339.76 | 1012.75 | 340.34 | 1013.18 | 340.34 |
| 1014.09 | 340.28 | 1016.33 | 340.22 | 1017.22 | 340.23 | 1017.57 | 340.22 | 1018.43 | 340.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1019.53 | 340.31 | 1020.96 | 340.58 | 1021.3 | 340.63 | 1022.05 | 340.78 | 1022.51 | 340.84 |
| 1023.89 | 340.97 | 1024.67 | 341.03 | 1025.33 | 341.07 | 1030.31 | 341.08 | 1030.86 | 341.09 |
| 1032.01 | 341.06 | 1033.79 | 341.07 | 1034.99 | 340.93 | 1036.7 | 341.11 | 1036.8 | 341.15 |
| 1038.54 | 341.16 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 667.39 | .04 | 991.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 667.39 | 991.94 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4137.43*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 347.76 | 2.85 | 347.57 | 4.53 | 347.47 | 5.38 | 347.43 | 8.73 | 347.21 |
| 10.83 | 347.15 | 14.2 | 347.01 | 21.6 | 346.73 | 24.81 | 346.56 | 27.14 | 346.45 |
| 28.61 | 346.35 | 31.96 | 346.19 | 33.4 | 346.13 | 34.2 | 346.07 | 36.69 | 345.91 |
| 38.37 | 345.84 | 40.26 | 345.81 | 43.02 | 345.73 | 46.07 | 345.65 | 51.24 | 345.58 |
| 55.17 | 345.58 | 56.91 | 345.6 | 57.56 | 345.62 | 57.74 | 345.68 | 60.22 | 345.77 |
| 61.91 | 345.79 | 62.55 | 345.79 | 64.12 | 345.72 | 64.84 | 345.68 | 65.62 | 345.66 |
| 67.18 | 345.6 | 69 | 345.51 | 69.84 | 345.5 | 71.33 | 345.46 | 74.59 | 345.23 |
| 80.29 | 344.99 | 88.38 | 344.54 | 89.44 | 344.36 | 89.81 | 344.32 | 90.59 | 344.27 |
| 92.45 | 344.18 | 93.62 | 344.14 | 93.99 | 344.12 | 94.99 | 344.09 | 96.25 | 344.09 |
| 97.99 | 344.2 | 99.36 | 344.14 | 99.91 | 344.09 | 100.76 | 343.94 | 103.24 | 343.54 |
| 103.9 | 343.44 | 104.45 | 343.37 | 105.22 | 343.29 | 105.68 | 343.23 | 106.81 | 343.19 |
| 107.69 | 343.14 | 108.86 | 343.1 | 116.09 | 342.76 | 117.76 | 342.68 | 118.79 | 342.61 |
| 120.51 | 342.44 | 120.67 | 342.44 | 121.99 | 342.37 | 122.59 | 342.32 | 123.91 | 342.19 |
| 124.4 | 342.12 | 125.22 | 342.03 | 125.92 | 341.94 | 127.74 | 341.73 | 128.08 | 341.68 |
| 129.15 | 341.56 | 129.63 | 341.52 | 130.54 | 341.5 | 131.77 | 341.46 | 133.79 | 341.37 |
| 136.93 | 341.24 | 138.2 | 341.15 | 138.97 | 341.13 | 139.7 | 341.15 | 141.11 | 341.11 |
| 144.28 | 341.15 | 147.03 | 341.23 | 147.87 | 341.27 | 148.75 | 341.3 | 149.96 | 341.31 |
| 151.03 | 341.36 | 152.05 | 341.44 | 152.81 | 341.45 | 153.54 | 341.51 | 154.61 | 341.61 |
| 156.17 | 341.71 | 157.02 | 341.79 | 158.8 | 341.94 | 159.86 | 342.05 | 160.71 | 342.16 |
| 161.61 | 342.26 | 162.37 | 342.31 | 163.61 | 342.34 | 164.61 | 342.34 | 165.75 | 342.33 |
| 166.8 | 342.31 | 168.24 | 342.25 | 169.63 | 342.17 | 169.96 | 342.16 | 171.86 | 342.05 |
| 174.11 | 341.85 | 175.22 | 341.74 | 177.56 | 341.45 | 180.41 | 341.05 | 182.64 | 340.7 |
| 185.39 | 340.38 | 189.2 | 339.97 | 189.52 | 339.94 | 190.89 | 339.91 | 191.42 | 339.87 |
| 192.18 | 339.76 | 195.49 | 339.37 | 196.89 | 339.18 | 198.51 | 338.92 | 199.41 | 338.75 |
| 200.06 | 338.66 | 202.15 | 338.56 | 204.09 | 338.46 | 204.79 | 338.4 | 209.44 | 338.08 |
| 212 | 337.93 | 212.92 | 337.85 | 213.25 | 337.84 | 217.12 | 337.76 | 221.9 | 337.72 |
| 226.92 | 337.28 | 236.43 | 336.95 | 249.4 | 336.36 | 249.94 | 336.4 | 250.93 | 336.35 |
| 251.74 | 336.33 | 253.2 | 336.26 | 255.16 | 336.13 | 258.71 | 336.1 | 259.85 | 336.05 |
| 260.8 | 336.08 | 264.39 | 336.14 | 265.59 | 336.17 | 267.02 | 336.24 | 267.2 | 336.23 |
| 268.93 | 336.04 | 269.44 | 335.99 | 269.79 | 335.98 | 272.8 | 335.86 | 274.44 | 335.81 |
| 278.19 | 335.77 | 279.73 | 335.74 | 280.41 | 335.72 | 283.09 | 335.62 | 284.9 | 335.54 |
| 287.31 | 335.39 | 288.2 | 335.32 | 290.46 | 335.11 | 291.94 | 335.08 | 293.53 | 335.07 |
| 294.49 | 335.05 | 298.25 | 334.75 | 299.93 | 334.65 | 300.97 | 334.6 | 301.65 | 334.54 |
| 301.89 | 334.5 | 302.59 | 334.46 | 303.84 | 334.45 | 305.28 | 334.46 | 306.21 | 334.48 |
| 306.82 | 334.48 | 308.13 | 334.5 | 310.51 | 334.55 | 312.09 | 334.6 | 313.18 | 334.65 |
| 314.49 | 334.69 | 314.86 | 334.65 | 315.95 | 334.59 | 317.67 | 334.44 | 318.97 | 334.37 |
| 320.56 | 334.36 | 321.35 | 334.31 | 322.49 | 334.27 | 326.66 | 334.26 | 343.36 | 334.26 |
| 346.58 | 334 | 353.28 | 333.58 | 357.23 | 333.56 | 366.64 | 333.53 | 369.35 | 333.52 |
| 370.47 | 333.5 | 371.57 | 333.46 | 373.55 | 333.34 | 373.79 | 333.33 | 375.8 | 333.31 |
| 379.04 | 333.23 | 380.58 | 333.23 | 383.26 | 333.16 | 388.77 | 333.03 | 390.23 | 333.01 |
| 392.47 | 333.01 | 393.19 | 333 | 395.9 | 332.94 | 398.93 | 332.85 | 402.46 | 332.83 |
| 402.93 | 332.86 | 403.55 | 332.87 | 404.92 | 332.83 | 407.9 | 332.7 | 409.29 | 332.69 |
| 411.97 | 332.86 | 413.36 | 332.9 | 414.06 | 332.9 | 415.61 | 332.86 | 416.31 | 332.82 |
| 418.82 | 332.6 | 419.59 | 332.51 | 422.99 | 332.49 | 442.22 | 332.48 | 444.31 | 332.48 |
| 449.27 | 332.37 | 449.8 | 332.36 | 451.42 | 332.3 | 456.32 | 332.19 | 460.26 | 332.17 |
| 461.91 | 332.15 | 463.91 | 332.11 | 475.66 | 331.87 | 477.99 | 331.82 | 478.09 | 331.8 |
| 478.85 | 331.81 | 481.92 | 331.97 | 483.38 | 332.08 | 484.33 | 332.09 | 485.6 | 332.05 |
| 491.73 | 331.78 | 495.87 | 331.68 | 497.8 | 331.63 | 499.67 | 331.61 | 502.58 | 331.55 |
| 504.27 | 331.53 | 506.3 | 331.52 | 507.81 | 331.54 | 508.58 | 331.52 | 508.76 | 331.54 |
| 515.83 | 331.57 | 516.27 | 331.56 | 517.93 | 331.55 | 518.17 | 331.54 | 519.77 | 331.54 |
| 520.36 | 331.53 | 525.59 | 331.53 | 528.42 | 331.61 | 529.13 | 331.61 | 533.38 | 331.7 |
| 534.26 | 331.69 | 534.99 | 331.71 | 535.32 | 331.74 | 535.96 | 331.75 | 537.12 | 331.74 |
| 538.36 | 331.72 | 542.38 | 331.61 | 543.6 | 331.57 | 545.06 | 331.53 | 548.72 | 331.44 |
| 549.83 | 331.47 | 551.65 | 331.49 | 553.21 | 331.48 | 555.89 | 331.43 | 561.36 | 331.23 |
| 569.24 | 331.03 | 573.88 | 330.98 | 576.02 | 330.95 | 577.42 | 330.91 | 577.66 | 330.87 |
| 580.51 | 330.76 | 581.1 | 330.75 | 583.17 | 330.74 | 584.4 | 330.74 | 585.56 | 330.75 |
| 591.57 | 330.65 | 594.91 | 330.57 | 606.44 | 330.57 | 636.8 | 330.75 | 639.66 | 330.76 |
| 641.84 | 331.28 | 642.52 | 331.41 | 648.58 | 331.44 | 654.22 | 331.47 | 654.38 | 331.46 |
| 654.94 | 331.42 | 655.99 | 331.32 | 657.7 | 331.22 | 658.73 | 331.19 | 659.87 | 331.18 |
| 664.43 | 331.17 | 666.55 | 331.16 | 668.79 | 331.11 | 670.71 | 331.08 | 671.74 | 331.05 |
| 674.02 | 331.02 | 675.44 | 331.01 | 679.31 | 330.92 | 679.51 | 330.91 | 680.7 | 330.9 |
| 683.22 | 330.91 | 685.17 | 330.91 | 686.34 | 330.9 | 690.2 | 330.98 | 693.49 | 331.07 |
| 695.79 | 331.12 | 697.91 | 331.14 | 699.78 | 331.15 | 701.72 | 331.15 | 702.48 | 331.16 |
| 703.53 | 331.15 | 717.86 | 331.14 | 719.92 | 331.14 | 721.45 | 331.11 | 722.1 | 331.12 |
| 723.08 | 331.12 | 724.46 | 331.1 | 727.99 | 331.02 | 731.71 | 330.88 | 733.5 | 330.82 |
| 737.19 | 330.68 | 741.72 | 330.41 | 753.56 | 329.99 | 754.49 | 329.97 | 755.79 | 329.93 |
| 757.82 | 329.83 | 760.07 | 329.7 | 761.32 | 329.58 | 762.9 | 329.56 | 763.9 | 329.61 |
| 769.54 | 329.88 | 770.27 | 329.93 | 772 | 330.03 | 773.48 | 330.07 | 780.72 | 330.41 |
| 781.08 | 330.42 | 781.64 | 330.46 | 782.83 | 330.51 | 788.86 | 330.45 | 789.18 | 330.44 |
| 789.77 | 330.39 | 791.7 | 330.28 | 794.25 | 330.19 | 806.08 | 329.39 | 811.98 | 328.92 |
| 815.33 | 328.63 | 819.47 | 328.36 | 820.61 | 328.23 | 821.08 | 328.15 | 821.74 | 328.08 |
| 822.66 | 328.02 | 824.24 | 327.95 | 825.64 | 327.88 | 826.01 | 327.85 | 826.79 | 327.87 |
| 827.05 | 327.9 | 827.97 | 327.86 | 833.25 | 327.83 | 834.03 | 327.81 | 835.74 | 327.81 |
| 838.75 | 327.77 | 840.49 | 327.78 | 841.24 | 327.81 | 843.06 | 327.84 | 843.7 | 327.86 |
| 849.43 | 328.08 | 850.78 | 328.12 | 851.4 | 328.1 | 853.64 | 327.97 | 853.9 | 327.96 |
| 854.82 | 327.87 | 856.52 | 327.73 | 857.02 | 327.73 | 857.94 | 327.71 | 860.42 | 327.71 |
| 863.78 | 327.68 | 864.32 | 327.68 | 875.15 | 327.53 | 877.09 | 327.48 | 879.61 | 327.43 |
| 880.5 | 327.42 | 881.95 | 327.39 | 883.23 | 327.38 | 884.66 | 327.39 | 886.25 | 327.38 |
| 890.34 | 327.43 | 892.96 | 327.44 | 897.12 | 327.46 | 900.1 | 327.44 | 901.18 | 327.44 |
| 902.33 | 327.41 | 904.97 | 327.39 | 921.26 | 327.16 | 922.26 | 327.15 | 923 | 327.13 |
| 927.99 | 327.08 | 928.23 | 327.08 | 934.66 | 326.98 | 934.96 | 326.98 | 936.24 | 326.95 |
| 937.15 | 326.95 | 937.5 | 326.98 | 939.47 | 326.93 | 940.05 | 326.91 | 942.75 | 326.8 |
| 942.86 | 326.8 | 945.31 | 326.7 | 946.81 | 326.63 | 949.83 | 326.56 | 950.41 | 326.54 |
| 952.99 | 326.5 | 954.05 | 326.52 | 955.28 | 326.56 | 955.79 | 326.63 | 957.57 | 326.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 958.96 | 326.8 | 959.38 | 326.84 | 963.31 | 327.27 | 963.69 | 327.3 | 964.21 | 327.39 |
| 968.41 | 328.16 | 971.19 | 328.29 | 972.26 | 328.4 | 972.63 | 328.43 | 973.99 | 328.59 |
| 974.94 | 328.6 | 976.37 | 328.57 | 977.22 | 328.59 | 977.25 | 328.56 | 978.57 | 328.72 |
| 979.38 | 328.85 | 979.89 | 329.02 | 982.15 | 329.84 | 982.75 | 330.1 | 983.58 | 330.44 |
| 984.67 | 330.86 | 985.95 | 331.46 | 986.6 | 331.75 | 988.37 | 332.52 | 988.44 | 332.54 |
| 989.32 | 333.22 | 989.36 | 333.27 | 989.92 | 333.7 | 990.9 | 334.38 | 991.46 | 334.75 |
| 992.07 | 335.43 | 992.26 | 336.08 | 992.3 | 336.35 | 992.44 | 336.73 | 992.54 | 337.12 |
| 992.63 | 337.38 | 992.7 | 338.6 | 992.93 | 339.31 | 993.28 | 339.32 | 994.15 | 339.42 |
| 994.76 | 339.46 | 995.64 | 339.47 | 997.75 | 339.46 | 998.6 | 339.46 | 1001.27 | 339.57 |
| 1001.7 | 339.54 | 1003.13 | 339.39 | 1003.82 | 339.3 | 1006.4 | 339.03 | 1006.7 | 339.02 |
| 1007.73 | 338.89 | 1008.75 | 339.08 | 1010.99 | 339.8 | 1011.15 | 339.82 | 1012.75 | 339.71 |
| 1012.89 | 339.72 | 1014.76 | 339.66 | 1016.06 | 339.66 | 1016.53 | 339.65 | 1016.95 | 339.66 |
| 1018.1 | 339.78 | 1019.59 | 340.12 | 1019.95 | 340.19 | 1020.73 | 340.38 | 1021.21 | 340.46 |
| 1023.46 | 340.71 | 1024.16 | 340.76 | 1028.77 | 340.82 | 1030.17 | 340.83 | 1031.12 | 340.81 |
| 1032.98 | 340.83 | 1034.23 | 340.72 | 1036.02 | 340.9 | 1036.12 | 340.93 | 1037.47 | 340.95 |
| 1037.94 | 340.95 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 654.38 | .04 | 989.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 654.38 | 989.32 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4118.52*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 347.29 | 2.79 | 347.09 | 5.28 | 346.94 | 8.56 | 346.69 | 10.61 | 346.64 |
| 12.31 | 346.56 | 13.92 | 346.49 | 21.17 | 346.2 | 24.32 | 346.02 | 26.6 | 345.91 |
| 27.03 | 345.87 | 28.04 | 345.8 | 31.33 | 345.63 | 31.67 | 345.6 | 32.73 | 345.56 |
| 33.52 | 345.49 | 35.96 | 345.32 | 36.84 | 345.27 | 37.61 | 345.25 | 39.46 | 345.23 |
| 42.83 | 345.13 | 43.37 | 345.11 | 45.15 | 345.07 | 50.22 | 345 | 54.07 | 345.01 |
| 55.07 | 345.03 | 55.56 | 345.03 | 56.41 | 345.06 | 56.59 | 345.12 | 59.02 | 345.23 |
| 60.68 | 345.26 | 61.8 | 345.25 | 62.84 | 345.2 | 64.31 | 345.14 | 65.84 | 345.09 |
| 67.63 | 345 | 68.45 | 344.99 | 69.91 | 344.95 | 73.11 | 344.73 | 78.7 | 344.49 |
| 86.62 | 344.05 | 87.66 | 343.88 | 88.02 | 343.84 | 89.16 | 343.77 | 90.62 | 343.69 |
| 91.76 | 343.65 | 93.1 | 343.59 | 94.33 | 343.56 | 96.04 | 343.64 | 97.38 | 343.57 |
| 97.93 | 343.5 | 99.43 | 343.23 | 101.19 | 342.9 | 102.37 | 342.71 | 103.12 | 342.62 |
| 103.58 | 342.54 | 104.68 | 342.49 | 105.55 | 342.44 | 106.69 | 342.4 | 113.78 | 342.1 |
| 116.13 | 341.97 | 116.9 | 341.89 | 118.12 | 341.78 | 119.08 | 341.74 | 120.15 | 341.65 |
| 121.45 | 341.53 | 123.42 | 341.28 | 126.58 | 340.89 | 127.05 | 340.85 | 127.94 | 340.84 |
| 129.15 | 340.81 | 134.47 | 340.62 | 135.12 | 340.57 | 136.2 | 340.54 | 136.92 | 340.56 |
| 138.3 | 340.53 | 141.41 | 340.58 | 144.1 | 340.67 | 144.93 | 340.72 | 145.79 | 340.75 |
| 146.97 | 340.77 | 148.02 | 340.83 | 149.02 | 340.93 | 149.77 | 340.96 | 151.53 | 341.16 |
| 153.51 | 341.33 | 153.9 | 341.38 | 155.64 | 341.55 | 156.68 | 341.68 | 157.51 | 341.8 |
| 158.39 | 341.91 | 159.14 | 341.96 | 160.35 | 342 | 161.33 | 342 | 162.97 | 341.97 |
| 164.89 | 341.89 | 165.94 | 341.81 | 166.25 | 341.8 | 168.44 | 341.66 | 168.92 | 341.62 |
| 170.65 | 341.44 | 171.73 | 341.32 | 173.01 | 341.16 | 174.17 | 341 | 176.82 | 340.6 |
| 179 | 340.24 | 179.71 | 340.14 | 181.7 | 339.89 | 185.44 | 339.46 | 185.75 | 339.42 |
| 187.09 | 339.37 | 187.4 | 339.35 | 188.35 | 339.21 | 191.6 | 338.8 | 192.97 | 338.6 |
| 194.56 | 338.33 | 195.44 | 338.16 | 196.08 | 338.07 | 196.69 | 338.02 | 197.66 | 337.96 |
| 200.03 | 337.84 | 200.66 | 337.79 | 200.72 | 337.77 | 205.27 | 337.46 | 207.78 | 337.3 |
| 208.69 | 337.22 | 211.32 | 337.14 | 217.49 | 337.06 | 222.41 | 336.66 | 231.72 | 336.33 |
| 244.44 | 335.78 | 244.97 | 335.81 | 245.94 | 335.76 | 246.73 | 335.74 | 248.16 | 335.67 |
| 250.09 | 335.55 | 253.56 | 335.51 | 254.68 | 335.47 | 255.61 | 335.49 | 259.14 | 335.54 |
| 260.31 | 335.56 | 261.52 | 335.61 | 261.89 | 335.61 | 263.58 | 335.43 | 264.08 | 335.39 |
| 266.12 | 335.32 | 268.99 | 335.21 | 272.66 | 335.17 | 274.83 | 335.11 | 277.46 | 335.01 |
| 279.23 | 334.93 | 281.6 | 334.79 | 282.46 | 334.73 | 283.91 | 334.6 | 284.8 | 334.53 |
| 286.13 | 334.5 | 287.69 | 334.48 | 288.63 | 334.46 | 292.31 | 334.18 | 295.34 | 334.02 |
| 295.89 | 333.95 | 296.58 | 333.92 | 297.5 | 333.9 | 297.8 | 333.91 | 299.21 | 333.91 |
| 300.11 | 333.93 | 302 | 333.94 | 304.33 | 333.98 | 305.88 | 334.02 | 306.95 | 334.07 |
| 308.24 | 334.1 | 308.59 | 334.07 | 309.66 | 334.01 | 311.35 | 333.88 | 312.62 | 333.81 |
| 314.18 | 333.81 | 314.96 | 333.76 | 316.07 | 333.72 | 320.16 | 333.71 | 336.53 | 333.71 |
| 339.69 | 333.48 | 346.26 | 333.09 | 350.13 | 333.07 | 359.34 | 333.04 | 362.01 | 333.02 |
| 363.1 | 333 | 364.18 | 332.95 | 366.12 | 332.82 | 366.35 | 332.81 | 369.22 | 332.78 |
| 371.5 | 332.72 | 373.01 | 332.72 | 375.64 | 332.65 | 381.04 | 332.53 | 383.03 | 332.5 |
| 384.66 | 332.51 | 385.37 | 332.5 | 388.03 | 332.44 | 391 | 332.35 | 394.46 | 332.32 |
| 394.91 | 332.35 | 395.53 | 332.36 | 396.86 | 332.32 | 399.79 | 332.19 | 401.15 | 332.18 |
| 403.77 | 332.33 | 405.14 | 332.37 | 405.82 | 332.37 | 407.35 | 332.33 | 408.03 | 332.29 |
| 408.96 | 332.22 | 410.49 | 332.09 | 411.24 | 332.01 | 414.58 | 331.99 | 433.42 | 331.98 |
| 435.47 | 331.98 | 440.33 | 331.87 | 440.86 | 331.86 | 442.45 | 331.8 | 447.24 | 331.69 |
| 451.1 | 331.7 | 454.68 | 331.65 | 466.2 | 331.43 | 468.48 | 331.38 | 468.58 | 331.36 |
| 469.32 | 331.38 | 472.33 | 331.51 | 473.76 | 331.61 | 474.7 | 331.62 | 475.94 | 331.58 |
| 481.95 | 331.33 | 487.89 | 331.2 | 489.73 | 331.18 | 490.29 | 331.18 | 492.58 | 331.13 |
| 494.24 | 331.11 | 496.23 | 331.11 | 497.7 | 331.12 | 498.46 | 331.11 | 498.64 | 331.13 |
| 505.57 | 331.16 | 506 | 331.15 | 507.63 | 331.14 | 507.87 | 331.13 | 509.43 | 331.13 |
| 510.01 | 331.12 | 514.72 | 331.12 | 517.9 | 331.2 | 518.61 | 331.2 | 522.77 | 331.28 |
| 523.64 | 331.27 | 524.27 | 331.29 | 524.67 | 331.32 | 525.29 | 331.33 | 525.83 | 331.32 |
| 526.32 | 331.33 | 527.65 | 331.31 | 530.19 | 331.24 | 532.78 | 331.18 | 532.83 | 331.17 |
| 537.8 | 331.06 | 538.89 | 331.09 | 540.68 | 331.1 | 542.21 | 331.09 | 544.84 | 331.05 |
| 550.19 | 330.87 | 550.94 | 330.86 | 552.11 | 330.83 | 557.91 | 330.69 | 562.46 | 330.65 |
| 564.56 | 330.62 | 565.94 | 330.58 | 566.17 | 330.53 | 566.85 | 330.5 | 568.97 | 330.43 |
| 569.43 | 330.42 | 571.57 | 330.42 | 573.91 | 330.44 | 579.81 | 330.35 | 583.08 | 330.29 |
| 594.37 | 330.29 | 624.13 | 330.5 | 626.94 | 330.51 | 629.07 | 330.98 | 629.74 | 331.1 |
| 641.36 | 331.16 | 643.03 | 331.03 | 643.49 | 331 | 644.8 | 330.94 | 645.86 | 330.91 |
| 647.03 | 330.9 | 651.74 | 330.89 | 653.93 | 330.88 | 658.73 | 330.78 | 658.92 | 330.76 |
| 659.95 | 330.73 | 661.1 | 330.71 | 661.65 | 330.71 | 663.12 | 330.69 | 667.11 | 330.59 |
| 668.54 | 330.58 | 671.15 | 330.58 | 671.98 | 330.59 | 672.78 | 330.58 | 674.37 | 330.58 |
| 678.35 | 330.68 | 681.75 | 330.79 | 684.13 | 330.85 | 688.25 | 330.89 | 690.25 | 330.89 |
| 691.04 | 330.9 | 692.13 | 330.9 | 706.92 | 330.89 | 707.19 | 330.9 | 709.05 | 330.9 |
| 710.64 | 330.86 | 711.3 | 330.88 | 712.32 | 330.88 | 713.74 | 330.87 | 717.39 | 330.79 |
| 721.23 | 330.63 | 723.09 | 330.57 | 726.89 | 330.42 | 731.57 | 330.14 | 743.8 | 329.77 |
| 744.76 | 329.75 | 746.1 | 329.71 | 748.2 | 329.63 | 750.53 | 329.51 | 751.81 | 329.41 |
| 752.65 | 329.39 | 753.44 | 329.39 | 754.48 | 329.43 | 760.3 | 329.67 | 762.85 | 329.8 |
| 764.38 | 329.83 | 765.93 | 329.88 | 771.85 | 330.09 | 772.8 | 330.13 | 774.03 | 330.17 |
| 775.16 | 330.16 | 780.25 | 330.09 | 780.59 | 330.08 | 781.19 | 330.03 | 783.19 | 329.92 |
| 784.37 | 329.88 | 784.63 | 329.86 | 785.83 | 329.83 | 798.05 | 329.07 | 804.14 | 328.63 |
| 807.6 | 328.35 | 811.87 | 328.09 | 813.05 | 327.96 | 813.54 | 327.88 | 814.22 | 327.8 |
| 815.17 | 327.74 | 817.63 | 327.65 | 818.77 | 327.58 | 819.43 | 327.61 | 819.7 | 327.65 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 820.65 | 327.61 | 822.68 | 327.61 | 826.11 | 327.59 | 826.57 | 327.58 | 828.68 | 327.58 |
| 831.79 | 327.53 | 833.58 | 327.54 | 834.36 | 327.56 | 836.89 | 327.59 | 842.81 | 327.79 |
| 844.21 | 327.82 | 844.85 | 327.8 | 847.16 | 327.69 | 847.43 | 327.69 | 848.38 | 327.6 |
| 850.14 | 327.48 | 850.65 | 327.48 | 851.6 | 327.46 | 854.16 | 327.46 | 855.44 | 327.45 |
| 858.19 | 327.44 | 869.38 | 327.29 | 872.13 | 327.22 | 874.9 | 327.18 | 876.93 | 327.14 |
| 877.73 | 327.13 | 879.2 | 327.13 | 880.85 | 327.12 | 885.07 | 327.16 | 887.16 | 327.17 |
| 892.07 | 327.18 | 895.15 | 327.17 | 896.26 | 327.17 | 897.45 | 327.14 | 898.93 | 327.14 |
| 900.18 | 327.12 | 917.01 | 326.92 | 917.58 | 326.9 | 923.96 | 326.85 | 924.2 | 326.84 |
| 930.85 | 326.75 | 931.54 | 326.73 | 933.42 | 326.71 | 933.77 | 326.74 | 935.81 | 326.69 |
| 936.41 | 326.67 | 939.2 | 326.56 | 941.33 | 326.49 | 942.86 | 326.41 | 943.39 | 326.39 |
| 946.51 | 326.32 | 947.31 | 326.31 | 947.88 | 326.29 | 949.78 | 326.26 | 952.1 | 326.33 |
| 952.62 | 326.41 | 954.43 | 326.53 | 955.84 | 326.59 | 959.71 | 327.06 | 960.26 | 327.13 |
| 960.65 | 327.16 | 963.28 | 327.61 | 965.45 | 327.99 | 968.27 | 328.14 | 969.74 | 328.32 |
| 971.12 | 328.5 | 972.08 | 328.55 | 973.53 | 328.57 | 974.39 | 328.63 | 974.43 | 328.6 |
| 975.76 | 328.81 | 976.59 | 328.98 | 977.11 | 329.16 | 979.4 | 330.01 | 980.01 | 330.27 |
| 980.87 | 330.61 | 981.97 | 331.03 | 983.27 | 331.61 | 985.1 | 332.38 | 985.8 | 332.65 |
| 986.69 | 333.28 | 986.73 | 333.33 | 987.32 | 333.73 | 988.15 | 334.24 | 988.93 | 334.7 |
| 989.56 | 335.31 | 989.6 | 335.48 | 989.76 | 335.89 | 989.79 | 336.14 | 989.94 | 336.47 |
| 990.04 | 336.83 | 990.14 | 337.05 | 990.22 | 338.14 | 990.45 | 338.77 | 990.81 | 338.78 |
| 991.72 | 338.89 | 992.36 | 338.93 | 993.28 | 338.94 | 996.36 | 338.9 | 996.86 | 338.91 |
| 998.96 | 339 | 999.3 | 339 | 999.58 | 338.97 | 1001.8 | 338.67 | 1004.49 | 338.34 |
| 1004.8 | 338.33 | 1005.87 | 338.18 | 1006.02 | 338.2 | 1006.93 | 338.41 | 1008 | 338.79 |
| 1008.11 | 338.84 | 1009.31 | 339.28 | 1009.77 | 339.27 | 1010.75 | 339.18 | 1011.24 | 339.17 |
| 1013.2 | 339.09 | 1014.16 | 339.1 | 1015.04 | 339.09 | 1015.48 | 339.1 | 1016.21 | 339.18 |
| 1016.67 | 339.25 | 1018.86 | 339.83 | 1019.41 | 339.97 | 1019.91 | 340.07 | 1021.41 | 340.28 |
| 1022.25 | 340.39 | 1022.98 | 340.46 | 1027.78 | 340.55 | 1028.39 | 340.57 | 1029.24 | 340.58 |
| 1030.23 | 340.56 | 1032.17 | 340.6 | 1033.47 | 340.51 | 1035.44 | 340.72 | 1036.84 | 340.74 |
| 1037.33 | 340.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 641.36 | .04 | 986.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 641.36 | 986.69 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4099.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.83 | 2.73 | 346.61 | 5.17 | 346.44 | 8.39 | 346.18 | 11.06 | 346.1 |
| 13.64 | 345.97 | 20.74 | 345.68 | 23.82 | 345.48 | 26.06 | 345.36 | 27.47 | 345.24 |
| 30.69 | 345.06 | 31.03 | 345.03 | 32.07 | 344.99 | 32.84 | 344.91 | 35.23 | 344.72 |
| 36.09 | 344.68 | 36.84 | 344.66 | 38.66 | 344.64 | 41.31 | 344.56 | 41.97 | 344.55 |
| 42.49 | 344.52 | 44.23 | 344.48 | 49.21 | 344.42 | 52.97 | 344.44 | 54.43 | 344.47 |
| 55.27 | 344.51 | 55.44 | 344.57 | 57.99 | 344.7 | 59.45 | 344.73 | 60.4 | 344.73 |
| 62.26 | 344.65 | 63.01 | 344.63 | 64.5 | 344.57 | 66.26 | 344.48 | 66.56 | 344.48 |
| 68.2 | 344.45 | 68.76 | 344.43 | 71.62 | 344.24 | 77.1 | 343.99 | 84.86 | 343.55 |
| 85.88 | 343.4 | 86.24 | 343.37 | 88.78 | 343.21 | 91.21 | 343.08 | 92.42 | 343.04 |
| 94.1 | 343.08 | 95.4 | 343 | 95.94 | 342.92 | 96.75 | 342.75 | 97.42 | 342.63 |
| 99.76 | 342.14 | 101.03 | 341.94 | 101.47 | 341.85 | 101.91 | 341.83 | 103.4 | 341.74 |
| 104.53 | 341.71 | 111.47 | 341.43 | 113.07 | 341.35 | 113.85 | 341.3 | 114.53 | 341.23 |
| 115.72 | 341.12 | 116.29 | 341.1 | 117.13 | 341.04 | 118.98 | 340.87 | 120.91 | 340.62 |
| 122.66 | 340.4 | 122.99 | 340.35 | 124.34 | 340.19 | 125.35 | 340.19 | 126.53 | 340.17 |
| 128.47 | 340.11 | 131.48 | 340.03 | 132.71 | 339.96 | 133.44 | 339.95 | 134.14 | 339.97 |
| 135.49 | 339.95 | 137.83 | 340 | 138.54 | 340.02 | 141.18 | 340.12 | 143.08 | 340.21 |
| 143.99 | 340.23 | 145.02 | 340.3 | 146 | 340.42 | 146.73 | 340.46 | 148.46 | 340.71 |
| 150.77 | 340.96 | 152.48 | 341.17 | 153.5 | 341.31 | 155.18 | 341.56 | 155.91 | 341.62 |
| 157.39 | 341.66 | 159.67 | 341.62 | 161.55 | 341.53 | 162.58 | 341.44 | 165.02 | 341.27 |
| 168.25 | 340.91 | 169.5 | 340.73 | 170.63 | 340.56 | 173.23 | 340.15 | 175.37 | 339.77 |
| 176.06 | 339.67 | 178.01 | 339.4 | 181.68 | 338.94 | 181.98 | 338.9 | 183.6 | 338.81 |
| 184.53 | 338.67 | 187.71 | 338.22 | 189.05 | 338.02 | 190.61 | 337.75 | 191.47 | 337.57 |
| 191.77 | 337.52 | 192.7 | 337.42 | 193.65 | 337.34 | 195.97 | 337.21 | 196.64 | 337.15 |
| 201.11 | 336.83 | 203.56 | 336.67 | 204.45 | 336.59 | 207.03 | 336.5 | 208.48 | 336.47 |
| 213.07 | 336.41 | 217.89 | 336.03 | 227.02 | 335.72 | 239.47 | 335.19 | 240 | 335.22 |
| 240.83 | 335.18 | 241.72 | 335.15 | 243.12 | 335.09 | 245.01 | 334.98 | 248.42 | 334.93 |
| 249.51 | 334.89 | 250.43 | 334.91 | 253.88 | 334.93 | 255.03 | 334.95 | 256.22 | 334.99 |
| 256.57 | 334.99 | 258.23 | 334.83 | 258.72 | 334.79 | 260.72 | 334.72 | 261.95 | 334.67 |
| 263.53 | 334.62 | 267.12 | 334.56 | 269.26 | 334.5 | 273.56 | 334.33 | 275.88 | 334.19 |
| 276.73 | 334.13 | 278.15 | 334.01 | 279.33 | 333.94 | 280.32 | 333.92 | 281.85 | 333.9 |
| 282.78 | 333.88 | 284.97 | 333.72 | 286.38 | 333.61 | 288 | 333.53 | 288.99 | 333.49 |
| 289.65 | 333.44 | 289.88 | 333.4 | 291.02 | 333.36 | 293.13 | 333.36 | 294.02 | 333.38 |
| 294.62 | 333.37 | 295.87 | 333.38 | 298.16 | 333.41 | 299.67 | 333.45 | 300.72 | 333.49 |
| 301.98 | 333.51 | 303.38 | 333.43 | 305.03 | 333.32 | 306.28 | 333.26 | 307.81 | 333.25 |
| 308.57 | 333.21 | 309.66 | 333.18 | 313.66 | 333.16 | 329.7 | 333.16 | 332.79 | 332.96 |
| 339.23 | 332.61 | 343.02 | 332.58 | 352.05 | 332.54 | 354.66 | 332.52 | 355.73 | 332.5 |
| 356.79 | 332.45 | 358.69 | 332.3 | 358.92 | 332.29 | 361.72 | 332.26 | 363.96 | 332.21 |
| 365.44 | 332.21 | 373.31 | 332.03 | 374.7 | 332 | 376.85 | 332 | 377.55 | 331.99 |
| 380.15 | 331.93 | 383.06 | 331.85 | 384.04 | 331.83 | 384.37 | 331.84 | 386.45 | 331.82 |
| 387.5 | 331.85 | 388.81 | 331.81 | 391.67 | 331.69 | 393.01 | 331.68 | 394.87 | 331.77 |
| 395.58 | 331.81 | 396.48 | 331.84 | 397.59 | 331.84 | 399.08 | 331.8 | 399.75 | 331.77 |
| 402.15 | 331.59 | 402.9 | 331.51 | 406.16 | 331.49 | 424.62 | 331.48 | 426.63 | 331.47 |
| 431.4 | 331.38 | 433.47 | 331.3 | 438.17 | 331.2 | 441.95 | 331.22 | 442.58 | 331.22 |
| 444.86 | 331.19 | 456.74 | 330.99 | 458.98 | 330.94 | 459.07 | 330.93 | 459.8 | 330.94 |
| 462.75 | 331.05 | 464.15 | 331.14 | 465.06 | 331.15 | 466.28 | 331.11 | 472.17 | 330.89 |
| 476.14 | 330.8 | 477.99 | 330.77 | 478.96 | 330.76 | 479.79 | 330.76 | 480.34 | 330.75 |
| 484.21 | 330.7 | 486.16 | 330.7 | 487.6 | 330.71 | 488.35 | 330.7 | 488.52 | 330.72 |
| 495.31 | 330.74 | 495.73 | 330.73 | 497.33 | 330.73 | 497.91 | 330.72 | 499.66 | 330.71 |
| 504.68 | 330.72 | 507.39 | 330.78 | 512.16 | 330.86 | 513.01 | 330.86 | 513.76 | 330.88 |
| 513.95 | 330.9 | 514.63 | 330.91 | 515.16 | 330.9 | 516.94 | 330.89 | 519.43 | 330.84 |
| 521.97 | 330.78 | 526.89 | 330.68 | 527.95 | 330.7 | 529.71 | 330.71 | 532.26 | 330.69 |
| 532.41 | 330.68 | 533.21 | 330.68 | 533.78 | 330.66 | 539.76 | 330.5 | 540.27 | 330.48 |
| 540.91 | 330.48 | 546.59 | 330.36 | 551.05 | 330.32 | 553.93 | 330.28 | 554.45 | 330.25 |
| 554.68 | 330.19 | 557.42 | 330.1 | 559.97 | 330.1 | 561.15 | 330.11 | 562.26 | 330.14 |
| 568.04 | 330.06 | 571.24 | 330 | 582.31 | 330 | 611.47 | 330.24 | 614.21 | 330.26 |
| 616.3 | 330.68 | 616.96 | 330.78 | 622.52 | 330.82 | 628.34 | 330.85 | 628.94 | 330.82 |
| 630.54 | 330.71 | 631.89 | 330.66 | 632.99 | 330.63 | 634.19 | 330.62 | 638.17 | 330.61 |
| 639.06 | 330.61 | 641.32 | 330.6 | 645.75 | 330.49 | 646.26 | 330.48 | 646.85 | 330.44 |
| 647.7 | 330.43 | 648.71 | 330.4 | 649.28 | 330.4 | 650.79 | 330.38 | 654.92 | 330.27 |
| 655.12 | 330.26 | 659.08 | 330.26 | 659.94 | 330.27 | 662.4 | 330.25 | 666.51 | 330.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 670.02 | 330.51 | 672.47 | 330.58 | 674.74 | 330.61 | 676.72 | 330.63 | 678.79 | 330.63 |
| 679.6 | 330.64 | 680.72 | 330.64 | 696.54 | 330.65 | 696.72 | 330.66 | 698.19 | 330.66 |
| 699.82 | 330.62 | 700.51 | 330.64 | 701.56 | 330.65 | 703.02 | 330.63 | 706.79 | 330.55 |
| 710.75 | 330.38 | 712.67 | 330.32 | 716.59 | 330.15 | 721.42 | 329.88 | 734.04 | 329.55 |
| 735.62 | 329.52 | 736.41 | 329.5 | 738.58 | 329.42 | 740.98 | 329.32 | 742.3 | 329.23 |
| 743.99 | 329.21 | 745.06 | 329.25 | 751.06 | 329.46 | 751.84 | 329.5 | 753.69 | 329.58 |
| 755.27 | 329.59 | 756.87 | 329.62 | 762.98 | 329.77 | 763.96 | 329.8 | 765.23 | 329.83 |
| 766.4 | 329.81 | 771.65 | 329.73 | 772.62 | 329.66 | 775.89 | 329.52 | 776.17 | 329.49 |
| 776.41 | 329.5 | 777.4 | 329.47 | 790.01 | 328.75 | 796.29 | 328.34 | 799.86 | 328.08 |
| 804.28 | 327.83 | 805.48 | 327.69 | 805.99 | 327.6 | 807.11 | 327.49 | 807.67 | 327.46 |
| 809.36 | 327.42 | 810.22 | 327.39 | 811.25 | 327.32 | 812.07 | 327.35 | 812.29 | 327.41 |
| 813.74 | 327.36 | 819.25 | 327.36 | 819.79 | 327.34 | 821.62 | 327.34 | 824.82 | 327.3 |
| 826.67 | 327.3 | 827.47 | 327.31 | 829.41 | 327.32 | 830.09 | 327.33 | 836.2 | 327.5 |
| 837.64 | 327.53 | 838.3 | 327.51 | 840.69 | 327.41 | 840.96 | 327.41 | 841.94 | 327.34 |
| 843.76 | 327.23 | 844.29 | 327.23 | 845.27 | 327.21 | 847.91 | 327.22 | 848.67 | 327.21 |
| 852.06 | 327.2 | 863.61 | 327.06 | 866.71 | 326.97 | 868.36 | 326.94 | 869.31 | 326.93 |
| 870.86 | 326.9 | 871.4 | 326.9 | 872.22 | 326.88 | 873.74 | 326.88 | 875.44 | 326.85 |
| 879.8 | 326.89 | 882.59 | 326.9 | 887.02 | 326.91 | 890.2 | 326.9 | 891.35 | 326.9 |
| 892.57 | 326.88 | 895.39 | 326.86 | 914.6 | 326.65 | 919.92 | 326.61 | 920.17 | 326.61 |
| 927.75 | 326.5 | 929.68 | 326.48 | 930.05 | 326.5 | 932.15 | 326.45 | 932.77 | 326.44 |
| 935.65 | 326.33 | 936.56 | 326.29 | 937.85 | 326.25 | 938.37 | 326.22 | 939.97 | 326.15 |
| 944.36 | 326.07 | 944.6 | 326.06 | 946.56 | 326.03 | 947.65 | 326.05 | 948.92 | 326.1 |
| 949.45 | 326.19 | 951.29 | 326.32 | 952.72 | 326.39 | 953.09 | 326.42 | 956.65 | 326.91 |
| 957.21 | 326.99 | 957.6 | 327.02 | 962.48 | 327.82 | 965.35 | 328 | 966.45 | 328.15 |
| 968.24 | 328.42 | 969.22 | 328.49 | 970.7 | 328.58 | 971.57 | 328.67 | 971.68 | 328.66 |
| 972.96 | 328.91 | 973.81 | 329.11 | 974.33 | 329.3 | 976.66 | 330.17 | 977.28 | 330.44 |
| 978.15 | 330.78 | 979.25 | 331.2 | 979.27 | 331.2 | 980.59 | 331.76 | 981.26 | 332.02 |
| 982.44 | 332.5 | 983.15 | 332.76 | 984.07 | 333.34 | 984.11 | 333.38 | 984.94 | 333.88 |
| 985.58 | 334.23 | 986.39 | 334.65 | 987.05 | 335.2 | 987.25 | 335.71 | 987.29 | 335.92 |
| 987.44 | 336.22 | 987.55 | 336.53 | 987.65 | 336.73 | 987.73 | 337.68 | 987.8 | 337.8 |
| 987.98 | 338.23 | 988.35 | 338.24 | 989.3 | 338.36 | 989.96 | 338.41 | 990.91 | 338.41 |
| 993.2 | 338.36 | 993.55 | 338.34 | 994.64 | 338.35 | 996.83 | 338.43 | 997.17 | 338.43 |
| 999.03 | 338.16 | 999.77 | 338.04 | 1002.07 | 337.73 | 1002.57 | 337.65 | 1002.89 | 337.64 |
| 1003.71 | 337.5 | 1004.01 | 337.47 | 1004.16 | 337.49 | 1005.12 | 337.73 | 1006.22 | 338.18 |
| 1007.58 | 338.75 | 1007.71 | 338.76 | 1009.09 | 338.63 | 1009.59 | 338.62 | 1011.63 | 338.53 |
| 1012.63 | 338.54 | 1013.54 | 338.53 | 1014 | 338.55 | 1014.76 | 338.64 | 1015.24 | 338.72 |
| 1016.85 | 339.2 | 1017.25 | 339.31 | 1018.09 | 339.57 | 1018.61 | 339.69 | 1021.05 | 340.07 |
| 1021.8 | 340.15 | 1026.8 | 340.29 | 1027.43 | 340.31 | 1028.31 | 340.32 | 1029.34 | 340.31 |
| 1031.36 | 340.37 | 1032.71 | 340.31 | 1034.31 | 340.46 | 1034.65 | 340.48 | 1034.76 | 340.51 |
| 1036.73 | 340.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 628.34 | .04 | 984.07 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 628.34 | 984.07 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4080.70*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.36 | 2.68 | 346.13 | 5.06 | 345.95 | 8.21 | 345.66 | 10.84 | 345.59 |
| 11.81 | 345.53 | 13.36 | 345.45 | 20.31 | 345.15 | 23.33 | 344.94 | 25.52 | 344.82 |
| 25.93 | 344.77 | 26.9 | 344.69 | 30.05 | 344.49 | 30.39 | 344.46 | 31.41 | 344.42 |
| 32.16 | 344.34 | 34.5 | 344.13 | 35.35 | 344.08 | 36.08 | 344.06 | 37.85 | 344.05 |
| 40.45 | 343.98 | 41.61 | 343.94 | 43.32 | 343.89 | 48.19 | 343.83 | 51.87 | 343.87 |
| 53.3 | 343.91 | 54.12 | 343.96 | 54.29 | 344.01 | 56.79 | 344.16 | 57.54 | 344.19 |
| 58.22 | 344.2 | 59.3 | 344.2 | 60.97 | 344.13 | 61.7 | 344.12 | 63.17 | 344.06 |
| 64.89 | 343.97 | 66.79 | 343.94 | 67.34 | 343.92 | 70.14 | 343.75 | 75.5 | 343.49 |
| 83.11 | 343.06 | 84.1 | 342.92 | 84.91 | 342.86 | 88.03 | 342.66 | 89.32 | 342.57 |
| 90.5 | 342.52 | 92.15 | 342.52 | 93.43 | 342.43 | 93.95 | 342.34 | 95.4 | 342.02 |
| 97.08 | 341.63 | 98.22 | 341.39 | 98.94 | 341.26 | 99.37 | 341.15 | 100.43 | 341.1 |
| 101.26 | 341.04 | 102.36 | 341.02 | 109.17 | 340.76 | 110.73 | 340.68 | 111.7 | 340.62 |
| 113.32 | 340.46 | 114.71 | 340.38 | 116.52 | 340.21 | 117.74 | 340.06 | 118.41 | 339.96 |
| 120.12 | 339.74 | 120.44 | 339.69 | 121.76 | 339.52 | 122.75 | 339.53 | 123.91 | 339.53 |
| 125.81 | 339.48 | 128.76 | 339.42 | 129.63 | 339.38 | 130.68 | 339.36 | 131.23 | 339.38 |
| 132.69 | 339.38 | 134.97 | 339.43 | 135.67 | 339.45 | 138.25 | 339.57 | 139.87 | 339.65 |
| 140.9 | 339.69 | 142.01 | 339.78 | 142.97 | 339.91 | 143.69 | 339.97 | 145.38 | 340.27 |
| 145.54 | 340.28 | 146.85 | 340.44 | 149.32 | 340.78 | 150.32 | 340.93 | 151.96 | 341.21 |
| 152.68 | 341.27 | 153.31 | 341.3 | 153.84 | 341.31 | 154.79 | 341.31 | 156.36 | 341.27 |
| 158.2 | 341.17 | 158.84 | 341.1 | 161.6 | 340.87 | 162.77 | 340.74 | 164.76 | 340.49 |
| 167.1 | 340.13 | 169.64 | 339.7 | 172.16 | 339.22 | 172.41 | 339.19 | 174.11 | 338.94 |
| 177.91 | 338.42 | 179.79 | 338.26 | 183.82 | 337.65 | 185.14 | 337.44 | 186.66 | 337.16 |
| 187.51 | 336.98 | 188.12 | 336.88 | 189.64 | 336.73 | 190.37 | 336.67 | 191.91 | 336.59 |
| 192.57 | 336.53 | 196.94 | 336.2 | 199.35 | 336.04 | 200.22 | 335.96 | 202.74 | 335.86 |
| 204.16 | 335.82 | 208.66 | 335.75 | 213.38 | 335.41 | 222.32 | 335.11 | 234.51 | 334.61 |
| 235.03 | 334.63 | 235.96 | 334.59 | 236.71 | 334.57 | 238.09 | 334.51 | 239.94 | 334.41 |
| 243.27 | 334.35 | 244.34 | 334.31 | 245.24 | 334.32 | 248.62 | 334.33 | 249.75 | 334.34 |
| 250.91 | 334.37 | 251.26 | 334.37 | 252.88 | 334.22 | 253.36 | 334.19 | 255.32 | 334.12 |
| 256.52 | 334.07 | 258.07 | 334.02 | 261.59 | 333.95 | 263.68 | 333.89 | 266.2 | 333.8 |
| 267.89 | 333.72 | 270.17 | 333.6 | 272.38 | 333.43 | 273.55 | 333.36 | 276.92 | 333.29 |
| 279.06 | 333.14 | 280.45 | 333.05 | 282.04 | 332.96 | 283.01 | 332.93 | 283.65 | 332.89 |
| 283.88 | 332.86 | 284.99 | 332.82 | 288.51 | 332.82 | 291.98 | 332.85 | 293.47 | 332.87 |
| 294.49 | 332.91 | 295.72 | 332.93 | 297.09 | 332.86 | 298.71 | 332.76 | 299.93 | 332.71 |
| 301.43 | 332.7 | 302.17 | 332.66 | 303.24 | 332.63 | 307.17 | 332.62 | 308.21 | 332.62 |
| 308.88 | 332.61 | 322.87 | 332.62 | 325.9 | 332.43 | 332.2 | 332.12 | 335.91 | 332.1 |
| 344.76 | 332.04 | 347.31 | 332.02 | 348.37 | 332 | 349.03 | 331.97 | 351.26 | 331.78 |
| 351.48 | 331.77 | 353.37 | 331.76 | 354.23 | 331.75 | 356.42 | 331.69 | 357.87 | 331.71 |
| 360.39 | 331.64 | 365.57 | 331.52 | 366.94 | 331.5 | 369.05 | 331.49 | 369.73 | 331.48 |
| 375.13 | 331.35 | 376.41 | 331.33 | 378.45 | 331.31 | 378.88 | 331.33 | 379.76 | 331.33 |
| 380.76 | 331.29 | 383.56 | 331.19 | 384.87 | 331.18 | 385.33 | 331.19 | 386.08 | 331.23 |
| 387.38 | 331.28 | 388.71 | 331.32 | 389.35 | 331.31 | 390.81 | 331.27 | 391.47 | 331.24 |
| 393.82 | 331.08 | 394.55 | 331.02 | 395.94 | 331 | 397.75 | 330.99 | 415.83 | 330.98 |
| 417.8 | 330.97 | 422.96 | 330.87 | 424.49 | 330.81 | 429.09 | 330.71 | 432.79 | 330.75 |
| 434.35 | 330.75 | 436.23 | 330.72 | 447.28 | 330.55 | 449.47 | 330.51 | 449.56 | 330.49 |
| 450.27 | 330.5 | 453.16 | 330.6 | 454.53 | 330.67 | 455.43 | 330.68 | 462.39 | 330.45 |
| 466.28 | 330.37 | 468.09 | 330.34 | 469.04 | 330.33 | 469.85 | 330.34 | 472.58 | 330.3 |
| 474.18 | 330.29 | 476.09 | 330.29 | 485.05 | 330.33 | 485.47 | 330.32 | 487.02 | 330.32 |
| 487.25 | 330.3 | 489.31 | 330.3 | 493.83 | 330.31 | 496.88 | 330.37 | 501.55 | 330.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 502.38 | 330.44 | 502.84 | 330.45 | 503.31 | 330.48 | 503.97 | 330.49 | 504.96 | 330.49 |
| 505.07 | 330.48 | 506.23 | 330.48 | 508.67 | 330.43 | 511.2 | 330.39 | 512.17 | 330.36 |
| 512.53 | 330.36 | 515.97 | 330.29 | 517.02 | 330.31 | 518.73 | 330.32 | 521.58 | 330.3 |
| 522.72 | 330.28 | 527.86 | 330.16 | 528.58 | 330.14 | 535.27 | 330.02 | 539.63 | 329.99 |
| 542.46 | 329.95 | 542.96 | 329.91 | 543.19 | 329.86 | 543.85 | 329.83 | 545.87 | 329.77 |
| 548.37 | 329.78 | 549.53 | 329.8 | 550.62 | 329.83 | 556.27 | 329.77 | 559.41 | 329.71 |
| 570.25 | 329.71 | 598.8 | 329.99 | 601.49 | 330.01 | 603.53 | 330.37 | 604.18 | 330.46 |
| 609.62 | 330.5 | 609.88 | 330.51 | 615.18 | 330.55 | 615.33 | 330.54 | 615.95 | 330.52 |
| 617.1 | 330.45 | 618.98 | 330.37 | 620.11 | 330.35 | 621.36 | 330.34 | 625.45 | 330.32 |
| 626.37 | 330.33 | 628.7 | 330.32 | 630.32 | 330.28 | 631.16 | 330.25 | 633.27 | 330.19 |
| 633.8 | 330.18 | 634.4 | 330.14 | 636.32 | 330.09 | 636.91 | 330.09 | 638.47 | 330.06 |
| 642.72 | 329.95 | 642.93 | 329.94 | 644.24 | 329.93 | 647.01 | 329.94 | 649.15 | 329.94 |
| 650.43 | 329.93 | 654.67 | 330.08 | 658.29 | 330.22 | 660.81 | 330.3 | 663.15 | 330.34 |
| 665.2 | 330.37 | 667.33 | 330.37 | 668.17 | 330.38 | 669.32 | 330.38 | 685.06 | 330.41 |
| 687.32 | 330.43 | 689.01 | 330.38 | 689.71 | 330.4 | 690.8 | 330.41 | 692.31 | 330.39 |
| 696.19 | 330.31 | 700.27 | 330.13 | 702.25 | 330.06 | 706.29 | 329.89 | 711.27 | 329.61 |
| 724.28 | 329.33 | 726.73 | 329.29 | 728.96 | 329.22 | 731.43 | 329.13 | 732.8 | 329.05 |
| 734.53 | 329.04 | 735.64 | 329.07 | 741.83 | 329.25 | 742.63 | 329.29 | 744.54 | 329.35 |
| 746.16 | 329.35 | 747.82 | 329.36 | 754.11 | 329.46 | 755.12 | 329.48 | 756.42 | 329.49 |
| 757.63 | 329.47 | 763.05 | 329.36 | 763.4 | 329.35 | 764.05 | 329.3 | 767.42 | 329.16 |
| 767.7 | 329.13 | 767.96 | 329.14 | 768.97 | 329.11 | 781.97 | 328.43 | 788.45 | 328.04 |
| 792.13 | 327.8 | 796.68 | 327.57 | 797.92 | 327.42 | 798.45 | 327.33 | 799.17 | 327.25 |
| 799.98 | 327.19 | 800.18 | 327.19 | 802.8 | 327.13 | 804.01 | 327.05 | 804.72 | 327.1 |
| 804.94 | 327.16 | 806.44 | 327.11 | 806.9 | 327.12 | 808.18 | 327.12 | 812.05 | 327.13 |
| 812.31 | 327.11 | 813.18 | 327.1 | 813.52 | 327.11 | 814.55 | 327.11 | 817.86 | 327.06 |
| 819.49 | 327.05 | 819.77 | 327.06 | 823.29 | 327.06 | 829.58 | 327.21 | 831.07 | 327.23 |
| 831.75 | 327.22 | 834.21 | 327.13 | 834.5 | 327.13 | 835.51 | 327.07 | 837.37 | 326.98 |
| 838.93 | 326.96 | 841.65 | 326.97 | 842.43 | 326.96 | 845.35 | 326.95 | 845.94 | 326.96 |
| 857.84 | 326.82 | 859.97 | 326.75 | 862.74 | 326.7 | 863.71 | 326.69 | 866.72 | 326.63 |
| 868.28 | 326.62 | 870.04 | 326.59 | 874.52 | 326.62 | 877.4 | 326.63 | 881.98 | 326.64 |
| 885.76 | 326.63 | 886.43 | 326.62 | 890.6 | 326.59 | 908.49 | 326.43 | 910.4 | 326.41 |
| 915.89 | 326.38 | 916.14 | 326.37 | 923.95 | 326.27 | 924.95 | 326.25 | 925.95 | 326.25 |
| 926.33 | 326.27 | 928.49 | 326.22 | 929.13 | 326.2 | 932.1 | 326.09 | 933.03 | 326.05 |
| 934.36 | 326.01 | 935.99 | 325.92 | 936.55 | 325.9 | 940.61 | 325.85 | 941.33 | 325.83 |
| 943.34 | 325.8 | 944.45 | 325.82 | 945.74 | 325.87 | 946.28 | 325.97 | 948.15 | 326.11 |
| 949.6 | 326.19 | 950.04 | 326.23 | 953.59 | 326.76 | 954.16 | 326.85 | 954.56 | 326.88 |
| 955.11 | 326.97 | 957.28 | 327.3 | 959.52 | 327.66 | 962.43 | 327.86 | 963.94 | 328.09 |
| 965.37 | 328.34 | 966.36 | 328.44 | 967.86 | 328.58 | 968.75 | 328.71 | 968.86 | 328.71 |
| 970.16 | 329.01 | 971.02 | 329.23 | 971.56 | 329.43 | 973.92 | 330.34 | 974.55 | 330.61 |
| 975.43 | 330.96 | 976.57 | 331.38 | 977.91 | 331.91 | 978.59 | 332.16 | 979.79 | 332.62 |
| 980.51 | 332.87 | 981.44 | 333.39 | 981.48 | 333.44 | 982.35 | 333.9 | 983.85 | 334.6 |
| 984.53 | 335.08 | 984.75 | 335.52 | 984.79 | 335.71 | 984.95 | 335.96 | 985.16 | 336.4 |
| 985.24 | 337.22 | 985.32 | 337.32 | 985.5 | 337.69 | 985.89 | 337.7 | 986.87 | 337.84 |
| 987.56 | 337.88 | 988.55 | 337.88 | 990.92 | 337.8 | 991.88 | 337.78 | 992.42 | 337.78 |
| 994.69 | 337.86 | 995.05 | 337.86 | 995.36 | 337.82 | 996.97 | 337.55 | 997.75 | 337.41 |
| 1000.66 | 336.97 | 1000.99 | 336.95 | 1001.83 | 336.79 | 1002.15 | 336.75 | 1002.31 | 336.78 |
| 1003.3 | 337.06 | 1004.44 | 337.57 | 1005.81 | 338.2 | 1005.99 | 338.24 | 1007.42 | 338.08 |
| 1007.95 | 338.07 | 1010.06 | 337.96 | 1011.1 | 337.97 | 1012.05 | 337.97 | 1012.74 | 338.01 |
| 1013.82 | 338.19 | 1015.49 | 338.75 | 1015.89 | 338.87 | 1016.77 | 339.17 | 1017.31 | 339.3 |
| 1018.93 | 339.59 | 1019.84 | 339.74 | 1020.62 | 339.84 | 1025.81 | 340.02 | 1027.11 | 340.07 |
| 1028.46 | 340.06 | 1030.54 | 340.13 | 1031.95 | 340.1 | 1034.08 | 340.29 | 1034.91 | 340.3 |
| 1036.13 | 340.33 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 615.33 | .04 | 981.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 615.33 | 981.44 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4061.79*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.89 | 2.62 | 345.66 | 4.17 | 345.52 | 4.96 | 345.46 | 8.04 | 345.15 |
| 9.97 | 345.1 | 11.56 | 345.02 | 13.07 | 344.93 | 19.88 | 344.63 | 22.84 | 344.4 |
| 24.98 | 344.27 | 25.38 | 344.22 | 26.34 | 344.13 | 29.42 | 343.93 | 29.74 | 343.89 |
| 30.74 | 343.85 | 31.48 | 343.76 | 33.77 | 343.54 | 34.6 | 343.49 | 35.32 | 343.47 |
| 37.05 | 343.47 | 39.6 | 343.39 | 40.23 | 343.38 | 40.73 | 343.35 | 42.4 | 343.3 |
| 47.17 | 343.25 | 50.78 | 343.3 | 52.38 | 343.36 | 52.98 | 343.4 | 53.14 | 343.45 |
| 55.43 | 343.61 | 56.33 | 343.66 | 57.57 | 343.68 | 59.02 | 343.65 | 59.68 | 343.62 |
| 61.38 | 343.57 | 61.83 | 343.55 | 63.51 | 343.45 | 64.29 | 343.45 | 65.37 | 343.43 |
| 65.91 | 343.41 | 68.66 | 343.25 | 73.91 | 342.99 | 81.35 | 342.57 | 82.32 | 342.45 |
| 82.66 | 342.42 | 85.1 | 342.24 | 86.17 | 342.17 | 87.43 | 342.07 | 88.59 | 342 |
| 90.2 | 341.97 | 91.45 | 341.86 | 91.96 | 341.75 | 93.38 | 341.42 | 95.03 | 341 |
| 96.14 | 340.73 | 96.84 | 340.58 | 97.27 | 340.46 | 98.31 | 340.4 | 99.12 | 340.34 |
| 99.63 | 340.34 | 106.86 | 340.09 | 108.39 | 340.02 | 109.13 | 339.98 | 109.78 | 339.91 |
| 110.93 | 339.8 | 112.28 | 339.71 | 114.05 | 339.55 | 115.25 | 339.4 | 115.9 | 339.3 |
| 118.79 | 338.9 | 119.19 | 338.85 | 120.15 | 338.87 | 121.29 | 338.88 | 123.15 | 338.85 |
| 126.04 | 338.81 | 127.21 | 338.77 | 127.91 | 338.77 | 128.58 | 338.8 | 129.88 | 338.8 |
| 132.12 | 338.85 | 132.8 | 338.88 | 135.33 | 339.01 | 136.11 | 339.06 | 137.92 | 339.15 |
| 139.01 | 339.25 | 139.95 | 339.39 | 140.65 | 339.47 | 142.31 | 339.82 | 144.17 | 340.08 |
| 147.14 | 340.56 | 148.75 | 340.86 | 149.45 | 340.93 | 150.87 | 340.97 | 152.57 | 340.94 |
| 153.53 | 340.89 | 154.85 | 340.81 | 155.48 | 340.73 | 158.18 | 340.48 | 158.64 | 340.43 |
| 159.33 | 340.33 | 161.28 | 340.08 | 162.48 | 339.88 | 166.05 | 339.25 | 168.1 | 338.83 |
| 170.43 | 338.45 | 174.44 | 337.87 | 175.7 | 337.75 | 176.19 | 337.69 | 176.89 | 337.57 |
| 179.93 | 337.08 | 181.33 | 336.83 | 182.71 | 336.57 | 183.83 | 336.34 | 184.14 | 336.29 |
| 185.63 | 336.11 | 186.35 | 336.05 | 187.14 | 336.01 | 188.13 | 335.94 | 188.5 | 335.9 |
| 192.78 | 335.58 | 195.13 | 335.41 | 195.98 | 335.33 | 196.28 | 335.32 | 198.45 | 335.21 |
| 199.84 | 335.18 | 204.24 | 335.1 | 208.87 | 334.79 | 217.61 | 334.5 | 229.55 | 334.03 |
| 230.05 | 334.04 | 230.97 | 334.01 | 233.05 | 333.93 | 234.86 | 333.83 | 238.13 | 333.77 |
| 239.17 | 333.73 | 240.05 | 333.74 | 243.36 | 333.73 | 244.46 | 333.73 | 245.94 | 333.75 |
| 247.54 | 333.62 | 248 | 333.59 | 249.91 | 333.52 | 251.09 | 333.47 | 252.61 | 333.42 |
| 256.06 | 333.35 | 258.1 | 333.28 | 260.57 | 333.19 | 262.23 | 333.12 | 264.45 | 333 |
| 265.27 | 332.95 | 267.35 | 332.8 | 268.71 | 332.76 | 270.17 | 332.73 | 271.06 | 332.7 |
| 273.16 | 332.57 | 274.52 | 332.48 | 276.07 | 332.4 | 277.02 | 332.37 | 277.65 | 332.34 |
| 277.87 | 332.31 | 278.96 | 332.28 | 280.99 | 332.27 | 283.62 | 332.27 | 285.8 | 332.28 |
| 287.26 | 332.3 | 288.26 | 332.33 | 289.47 | 332.34 | 290.81 | 332.28 | 292.39 | 332.2 |
| 293.59 | 332.15 | 295.05 | 332.14 | 295.78 | 332.11 | 296.83 | 332.09 | 300.67 | 332.07 |
| 301.69 | 332.07 | 302.35 | 332.06 | 316.04 | 332.07 | 319 | 331.91 | 325.17 | 331.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 328.81 | 331.61 | 337.46 | 331.55 | 339.96 | 331.53 | 341 | 331.5 | 342.01 | 331.43 |
| 343.83 | 331.26 | 344.05 | 331.25 | 345.9 | 331.24 | 346.74 | 331.23 | 348.88 | 331.18 |
| 350.3 | 331.2 | 357.84 | 331.02 | 359.71 | 330.99 | 361.24 | 330.99 | 361.91 | 330.97 |
| 364.4 | 330.92 | 367.19 | 330.84 | 368.45 | 330.83 | 370.44 | 330.8 | 370.87 | 330.82 |
| 371.45 | 330.82 | 375.45 | 330.69 | 376.73 | 330.67 | 377.18 | 330.68 | 379.45 | 330.77 |
| 380.49 | 330.79 | 381.11 | 330.78 | 382.55 | 330.74 | 384.06 | 330.67 | 386.2 | 330.52 |
| 387.57 | 330.5 | 389.85 | 330.49 | 407.03 | 330.47 | 408.96 | 330.46 | 414.02 | 330.37 |
| 415.51 | 330.31 | 420.01 | 330.22 | 424.24 | 330.29 | 426.43 | 330.27 | 427 | 330.26 |
| 437.82 | 330.11 | 439.96 | 330.07 | 440.75 | 330.07 | 443.58 | 330.14 | 444.92 | 330.2 |
| 445.79 | 330.2 | 446.97 | 330.18 | 452.61 | 330 | 456.42 | 329.93 | 459.12 | 329.9 |
| 460.44 | 329.91 | 462.59 | 329.89 | 464.15 | 329.88 | 466.02 | 329.88 | 467.4 | 329.89 |
| 468.28 | 329.89 | 474.79 | 329.91 | 476.72 | 329.91 | 476.95 | 329.89 | 478.95 | 329.89 |
| 483.77 | 329.91 | 486.37 | 329.96 | 490.94 | 330.03 | 492.35 | 330.04 | 492.66 | 330.06 |
| 493.31 | 330.07 | 494.38 | 330.07 | 495.52 | 330.06 | 499.22 | 330.01 | 501.69 | 329.96 |
| 505.06 | 329.91 | 506.08 | 329.93 | 507.76 | 329.93 | 510.21 | 329.91 | 511.12 | 329.91 |
| 516.69 | 329.8 | 517.4 | 329.79 | 517.88 | 329.77 | 518.5 | 329.77 | 523.94 | 329.68 |
| 528.22 | 329.66 | 530.98 | 329.62 | 531.48 | 329.58 | 531.7 | 329.52 | 532.34 | 329.5 |
| 534.86 | 329.44 | 537.9 | 329.49 | 538.97 | 329.53 | 544.51 | 329.47 | 547.58 | 329.43 |
| 558.18 | 329.43 | 586.13 | 329.74 | 588.77 | 329.77 | 590.77 | 330.07 | 591.4 | 330.15 |
| 596.73 | 330.19 | 596.98 | 330.2 | 602.31 | 330.24 | 602.95 | 330.22 | 604.64 | 330.14 |
| 606.07 | 330.09 | 607.24 | 330.07 | 608.52 | 330.06 | 612.74 | 330.04 | 613.68 | 330.05 |
| 616.08 | 330.04 | 616.58 | 330.03 | 618.62 | 329.96 | 620.79 | 329.9 | 622.68 | 329.81 |
| 623.94 | 329.78 | 624.54 | 329.78 | 626.14 | 329.74 | 630.52 | 329.62 | 632.09 | 329.61 |
| 634.94 | 329.61 | 635.85 | 329.62 | 636.73 | 329.61 | 638.47 | 329.61 | 642.83 | 329.78 |
| 646.55 | 329.94 | 649.16 | 330.03 | 651.56 | 330.07 | 653.67 | 330.11 | 655.86 | 330.12 |
| 656.73 | 330.13 | 657.92 | 330.12 | 674.12 | 330.16 | 674.9 | 330.18 | 676.46 | 330.19 |
| 678.19 | 330.13 | 678.92 | 330.16 | 680.04 | 330.17 | 681.59 | 330.16 | 685.59 | 330.08 |
| 689.79 | 329.88 | 691.83 | 329.81 | 695.99 | 329.62 | 701.12 | 329.34 | 714.52 | 329.11 |
| 717.04 | 329.07 | 719.34 | 329.02 | 721.88 | 328.94 | 723.29 | 328.88 | 725.08 | 328.87 |
| 726.21 | 328.89 | 732.59 | 329.04 | 733.41 | 329.07 | 735.38 | 329.13 | 737.05 | 329.11 |
| 738.76 | 329.1 | 745.24 | 329.14 | 746.28 | 329.15 | 747.62 | 329.15 | 748.87 | 329.12 |
| 754.45 | 329 | 754.81 | 328.99 | 755.47 | 328.94 | 758.95 | 328.8 | 759.24 | 328.77 |
| 759.5 | 328.78 | 760.55 | 328.75 | 773.93 | 328.11 | 780.61 | 327.75 | 784.4 | 327.53 |
| 789.08 | 327.31 | 790.36 | 327.15 | 790.9 | 327.05 | 791.65 | 326.97 | 792.49 | 326.91 |
| 794.48 | 326.89 | 795.56 | 326.86 | 796.63 | 326.79 | 797.36 | 326.84 | 797.59 | 326.91 |
| 799.13 | 326.86 | 799.61 | 326.87 | 800.92 | 326.87 | 804.67 | 326.89 | 804.86 | 326.9 |
| 805.55 | 326.87 | 807.49 | 326.87 | 810.89 | 326.82 | 812.86 | 326.81 | 813.71 | 326.82 |
| 815.76 | 326.8 | 816.48 | 326.8 | 822.97 | 326.92 | 824.5 | 326.94 | 825.2 | 326.93 |
| 827.73 | 326.85 | 828.03 | 326.86 | 829.07 | 326.8 | 830.99 | 326.72 | 831.56 | 326.72 |
| 832.6 | 326.7 | 835.4 | 326.72 | 836.2 | 326.71 | 836.8 | 326.72 | 839.21 | 326.71 |
| 839.81 | 326.72 | 852.07 | 326.58 | 854.26 | 326.51 | 855.36 | 326.49 | 857.11 | 326.45 |
| 858.12 | 326.44 | 860.33 | 326.4 | 861.21 | 326.38 | 862.82 | 326.36 | 864.63 | 326.32 |
| 869.25 | 326.35 | 871.54 | 326.36 | 880.82 | 326.36 | 882.81 | 326.34 | 884.44 | 326.34 |
| 904.24 | 326.19 | 906.2 | 326.17 | 912.11 | 326.14 | 919.39 | 326.04 | 921.18 | 326.02 |
| 922.6 | 326.03 | 924.84 | 325.98 | 925.49 | 325.96 | 928.54 | 325.85 | 929.51 | 325.81 |
| 930.88 | 325.77 | 932.56 | 325.68 | 933.13 | 325.66 | 936.56 | 325.62 | 937.21 | 325.62 |
| 938.05 | 325.59 | 940.13 | 325.56 | 941.25 | 325.59 | 942.56 | 325.64 | 943.11 | 325.75 |
| 945.01 | 325.9 | 946.48 | 325.98 | 946.87 | 326.02 | 950.54 | 326.61 | 951.11 | 326.71 |
| 952.08 | 326.82 | 956.55 | 327.49 | 959.51 | 327.71 | 961.05 | 327.98 | 962.49 | 328.25 |
| 963.5 | 328.39 | 965.02 | 328.58 | 965.93 | 328.75 | 966.04 | 328.76 | 967.36 | 329.11 |
| 968.23 | 329.36 | 968.78 | 329.57 | 971.18 | 330.51 | 971.82 | 330.78 | 972.71 | 331.13 |
| 973.68 | 331.48 | 975.23 | 332.06 | 975.92 | 332.3 | 977.14 | 332.74 | 977.87 | 332.98 |
| 978.81 | 333.45 | 978.86 | 333.49 | 979.52 | 333.81 | 980.14 | 334.08 | 981.32 | 334.55 |
| 982.02 | 334.97 | 982.24 | 335.34 | 982.29 | 335.49 | 982.45 | 335.71 | 982.67 | 336.08 |
| 982.76 | 336.76 | 983.02 | 337.15 | 983.43 | 337.16 | 984.45 | 337.31 | 985.16 | 337.36 |
| 986.19 | 337.35 | 988.65 | 337.25 | 989.03 | 337.23 | 990.2 | 337.22 | 992.55 | 337.3 |
| 993.09 | 337.27 | 995.73 | 336.78 | 998.2 | 336.38 | 998.74 | 336.28 | 999.09 | 336.26 |
| 999.73 | 336.14 | 999.96 | 336.08 | 1000.29 | 336.04 | 1000.45 | 336.07 | 1001.48 | 336.38 |
| 1002.8 | 337.02 | 1003.9 | 337.57 | 1004.21 | 337.71 | 1004.65 | 337.67 | 1005.76 | 337.53 |
| 1006.3 | 337.52 | 1008.49 | 337.4 | 1009.57 | 337.41 | 1010.55 | 337.41 | 1011.05 | 337.43 |
| 1011.87 | 337.55 | 1012.39 | 337.65 | 1014.12 | 338.29 | 1014.54 | 338.43 | 1015.45 | 338.77 |
| 1016.01 | 338.92 | 1018.63 | 339.42 | 1019.45 | 339.54 | 1024.83 | 339.76 | 1026.46 | 339.82 |
| 1027.57 | 339.8 | 1029.73 | 339.9 | 1031.19 | 339.89 | 1033.4 | 340.08 | 1034.27 | 340.09 |
| 1035.52 | 340.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 602.31 | .04 | 978.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 602.31 | 978.81 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4042.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.43 | 4.08 | 345.03 | 4.85 | 344.97 | 7.86 | 344.64 | 9.75 | 344.59 |
| 10.38 | 344.56 | 12.79 | 344.41 | 19.45 | 344.1 | 22.34 | 343.87 | 24.44 | 343.73 |
| 24.83 | 343.68 | 25.77 | 343.58 | 28.78 | 343.36 | 29.1 | 343.32 | 30.08 | 343.28 |
| 30.8 | 343.19 | 33.04 | 342.95 | 33.85 | 342.9 | 34.55 | 342.87 | 36.25 | 342.88 |
| 39.36 | 342.79 | 39.85 | 342.76 | 41.49 | 342.71 | 46.15 | 342.67 | 49.68 | 342.73 |
| 51.25 | 342.8 | 51.83 | 342.85 | 52 | 342.89 | 52.95 | 342.97 | 54.23 | 343.07 |
| 54.39 | 343.09 | 55.11 | 343.13 | 56.33 | 343.15 | 56.79 | 343.15 | 57.74 | 343.13 |
| 58.39 | 343.1 | 59.09 | 343.09 | 60.49 | 343.03 | 62.14 | 342.93 | 62.9 | 342.94 |
| 64.49 | 342.91 | 67.17 | 342.76 | 72.31 | 342.5 | 79.59 | 342.08 | 80.54 | 341.97 |
| 81.32 | 341.91 | 81.58 | 341.9 | 83.26 | 341.76 | 84.31 | 341.68 | 85.54 | 341.56 |
| 86.68 | 341.47 | 88.25 | 341.41 | 89.48 | 341.29 | 89.98 | 341.17 | 90.74 | 340.97 |
| 91.36 | 340.82 | 92.97 | 340.36 | 94.06 | 340.07 | 94.75 | 339.9 | 95.17 | 339.77 |
| 96.98 | 339.64 | 98.03 | 339.63 | 104.55 | 339.42 | 106.7 | 339.32 | 108.53 | 339.14 |
| 109.86 | 339.05 | 111.59 | 338.89 | 112.76 | 338.74 | 113.4 | 338.64 | 115.03 | 338.41 |
| 116.23 | 338.23 | 116.73 | 338.18 | 117.56 | 338.22 | 118.66 | 338.24 | 120.49 | 338.22 |
| 123.55 | 338.2 | 124.15 | 338.18 | 125.15 | 338.18 | 125.8 | 338.21 | 127.07 | 338.22 |
| 129.26 | 338.28 | 129.93 | 338.31 | 132.4 | 338.46 | 133.95 | 338.56 | 134.94 | 338.61 |
| 136.01 | 338.72 | 136.93 | 338.88 | 137.61 | 338.98 | 139.23 | 339.37 | 139.38 | 339.39 |
| 141.4 | 339.73 | 143.96 | 340.19 | 144.72 | 340.35 | 145.53 | 340.5 | 146.22 | 340.58 |
| 146.82 | 340.61 | 147.34 | 340.62 | 148.24 | 340.62 | 149.27 | 340.59 | 150.21 | 340.54 |
| 151.51 | 340.45 | 152.47 | 340.32 | 154.76 | 340.09 | 157.79 | 339.66 | 159.9 | 339.28 |
| 160.03 | 339.25 | 162.46 | 338.8 | 164.47 | 338.36 | 164.88 | 338.28 | 166.95 | 337.92 |
| 170.39 | 337.39 | 170.67 | 337.35 | 172.19 | 337.18 | 172.38 | 337.14 | 176.04 | 336.5 |
| 177.31 | 336.27 | 178.76 | 335.98 | 179.85 | 335.75 | 180.72 | 335.61 | 181.66 | 335.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 182.32 | 335.43 | 183.79 | 335.34 | 184.42 | 335.28 | 188.61 | 334.95 | 190.91 | 334.78 |
| 191.75 | 334.7 | 192.04 | 334.69 | 194.16 | 334.57 | 195.53 | 334.53 | 199.83 | 334.44 |
| 204.35 | 334.17 | 212.91 | 333.89 | 224.59 | 333.45 | 225.08 | 333.46 | 225.87 | 333.42 |
| 226.7 | 333.4 | 229.78 | 333.26 | 232.98 | 333.19 | 234 | 333.15 | 234.86 | 333.15 |
| 238.1 | 333.13 | 239.18 | 333.12 | 240.63 | 333.13 | 242.64 | 332.99 | 245.67 | 332.88 |
| 247.15 | 332.82 | 250.52 | 332.74 | 252.52 | 332.67 | 254.94 | 332.58 | 256.56 | 332.51 |
| 258.74 | 332.4 | 260.86 | 332.26 | 261.57 | 332.22 | 264.33 | 332.14 | 265.2 | 332.12 |
| 268.58 | 331.91 | 270.1 | 331.84 | 271.36 | 331.8 | 271.87 | 331.76 | 272.5 | 331.74 |
| 274.92 | 331.72 | 276.01 | 331.72 | 276.31 | 331.71 | 279.63 | 331.71 | 280.32 | 331.72 |
| 281.05 | 331.72 | 283.21 | 331.76 | 283.54 | 331.74 | 284.52 | 331.71 | 286.07 | 331.63 |
| 287.24 | 331.6 | 288.68 | 331.59 | 289.39 | 331.56 | 290.41 | 331.54 | 294.17 | 331.52 |
| 295.17 | 331.52 | 295.82 | 331.51 | 309.21 | 331.52 | 312.11 | 331.39 | 318.15 | 331.16 |
| 321.7 | 331.12 | 332.62 | 331.03 | 333.63 | 331 | 334.26 | 330.96 | 336.4 | 330.73 |
| 338.42 | 330.72 | 339.24 | 330.72 | 341.34 | 330.66 | 342.52 | 330.7 | 342.73 | 330.7 |
| 345.14 | 330.63 | 350.11 | 330.52 | 351.93 | 330.49 | 353.43 | 330.48 | 354.09 | 330.47 |
| 359.26 | 330.34 | 360.49 | 330.33 | 362.43 | 330.3 | 363.42 | 330.31 | 367.33 | 330.18 |
| 369.02 | 330.17 | 369.75 | 330.2 | 370.82 | 330.22 | 371.25 | 330.24 | 372.26 | 330.26 |
| 372.88 | 330.25 | 374.91 | 330.19 | 375.76 | 330.15 | 377.16 | 330.07 | 377.86 | 330.02 |
| 379.19 | 330 | 381.42 | 329.99 | 398.24 | 329.97 | 400.12 | 329.96 | 404.59 | 329.89 |
| 406.53 | 329.81 | 410.94 | 329.73 | 414.48 | 329.81 | 415.07 | 329.82 | 417.21 | 329.8 |
| 417.77 | 329.8 | 428.36 | 329.67 | 430.45 | 329.63 | 430.54 | 329.62 | 433.99 | 329.68 |
| 435.3 | 329.73 | 436.16 | 329.73 | 437.31 | 329.71 | 442.83 | 329.56 | 446.55 | 329.5 |
| 449.2 | 329.47 | 449.98 | 329.49 | 450.49 | 329.49 | 452.59 | 329.47 | 454.11 | 329.46 |
| 455.95 | 329.46 | 458 | 329.47 | 458.16 | 329.48 | 464.53 | 329.5 | 466.42 | 329.49 |
| 466.64 | 329.48 | 468.6 | 329.48 | 472.94 | 329.5 | 473.31 | 329.51 | 476.51 | 329.56 |
| 480.33 | 329.61 | 481.13 | 329.61 | 482.01 | 329.64 | 482.65 | 329.65 | 484.23 | 329.65 |
| 484.81 | 329.64 | 489.57 | 329.6 | 490.85 | 329.57 | 494.14 | 329.53 | 495.14 | 329.54 |
| 498.19 | 329.54 | 499.18 | 329.53 | 500.07 | 329.53 | 506.69 | 329.42 | 507.29 | 329.42 |
| 512.62 | 329.35 | 516.8 | 329.33 | 518.73 | 329.31 | 519.51 | 329.29 | 519.99 | 329.25 |
| 520.21 | 329.18 | 520.84 | 329.16 | 523.3 | 329.11 | 526.28 | 329.17 | 527.32 | 329.22 |
| 532.74 | 329.18 | 535.74 | 329.14 | 546.12 | 329.14 | 573.47 | 329.49 | 576.04 | 329.52 |
| 578 | 329.77 | 578.61 | 329.83 | 583.83 | 329.88 | 584.07 | 329.89 | 589.3 | 329.93 |
| 589.95 | 329.92 | 591.05 | 329.87 | 593.17 | 329.8 | 595.69 | 329.78 | 600.03 | 329.76 |
| 601 | 329.78 | 603.47 | 329.77 | 606.08 | 329.68 | 608.87 | 329.58 | 609.08 | 329.55 |
| 609.51 | 329.53 | 610.44 | 329.51 | 611.55 | 329.47 | 612.17 | 329.47 | 613.82 | 329.43 |
| 618.32 | 329.3 | 618.55 | 329.29 | 626.5 | 329.29 | 634.82 | 329.66 | 637.5 | 329.76 |
| 639.97 | 329.81 | 642.15 | 329.85 | 644.4 | 329.86 | 645.29 | 329.87 | 646.51 | 329.87 |
| 663.19 | 329.92 | 663.49 | 329.93 | 664.49 | 329.93 | 665.59 | 329.95 | 667.38 | 329.89 |
| 669.12 | 329.93 | 670.88 | 329.92 | 674.99 | 329.84 | 679.31 | 329.64 | 681.41 | 329.56 |
| 685.69 | 329.36 | 690.97 | 329.07 | 704.76 | 328.89 | 705.83 | 328.87 | 707.35 | 328.86 |
| 709.72 | 328.81 | 712.34 | 328.75 | 713.78 | 328.7 | 714.73 | 328.7 | 715.62 | 328.69 |
| 716.79 | 328.71 | 723.35 | 328.83 | 724.2 | 328.86 | 726.22 | 328.9 | 729.7 | 328.84 |
| 736.37 | 328.82 | 737.44 | 328.82 | 738.82 | 328.81 | 740.1 | 328.78 | 746.22 | 328.62 |
| 746.9 | 328.58 | 750.48 | 328.44 | 750.77 | 328.4 | 751.41 | 328.41 | 752.12 | 328.39 |
| 765.9 | 327.79 | 772.76 | 327.46 | 776.66 | 327.25 | 781.48 | 327.05 | 782.8 | 326.88 |
| 783.36 | 326.77 | 784.12 | 326.69 | 784.99 | 326.63 | 787.04 | 326.62 | 788.15 | 326.6 |
| 789.26 | 326.53 | 790 | 326.58 | 790.23 | 326.66 | 791.38 | 326.62 | 792.31 | 326.62 |
| 797.52 | 326.66 | 798.04 | 326.64 | 798.97 | 326.63 | 799.33 | 326.64 | 800.43 | 326.64 |
| 803.93 | 326.58 | 805.66 | 326.57 | 806.82 | 326.57 | 808.94 | 326.53 | 809.68 | 326.53 |
| 816.35 | 326.63 | 817.93 | 326.64 | 818.65 | 326.63 | 821.26 | 326.58 | 821.56 | 326.58 |
| 822.63 | 326.53 | 824.61 | 326.47 | 825.19 | 326.47 | 826.26 | 326.45 | 829.15 | 326.48 |
| 829.97 | 326.47 | 833.06 | 326.47 | 833.68 | 326.48 | 846.3 | 326.34 | 848.56 | 326.27 |
| 849.69 | 326.24 | 851.49 | 326.21 | 852.52 | 326.2 | 854.22 | 326.16 | 854.8 | 326.16 |
| 855.71 | 326.13 | 857.37 | 326.1 | 859.22 | 326.06 | 866.33 | 326.09 | 875.89 | 326.09 |
| 877.93 | 326.07 | 879.61 | 326.07 | 881.02 | 326.06 | 899.98 | 325.95 | 902 | 325.93 |
| 907.81 | 325.91 | 908.08 | 325.9 | 916.36 | 325.8 | 918.47 | 325.78 | 918.88 | 325.79 |
| 921.18 | 325.74 | 921.85 | 325.73 | 925.99 | 325.57 | 927.4 | 325.53 | 929.12 | 325.44 |
| 929.71 | 325.42 | 933.24 | 325.39 | 933.91 | 325.39 | 934.77 | 325.36 | 936.91 | 325.33 |
| 938.05 | 325.35 | 939.38 | 325.41 | 939.94 | 325.53 | 941.87 | 325.69 | 943.36 | 325.78 |
| 943.82 | 325.83 | 947.48 | 326.46 | 948.06 | 326.57 | 949.04 | 326.68 | 951.28 | 326.99 |
| 953.58 | 327.32 | 956.59 | 327.57 | 957.74 | 327.79 | 958.15 | 327.86 | 959.62 | 328.17 |
| 960.64 | 328.34 | 962.19 | 328.58 | 963.21 | 328.81 | 964.56 | 329.21 | 965.44 | 329.49 |
| 966 | 329.71 | 968.43 | 330.68 | 969.08 | 330.95 | 969.99 | 331.31 | 970.97 | 331.65 |
| 972.54 | 332.21 | 973.25 | 332.44 | 974.49 | 332.86 | 975.23 | 333.09 | 976.19 | 333.51 |
| 976.23 | 333.54 | 977.16 | 333.93 | 978.1 | 334.27 | 978.78 | 334.5 | 979.02 | 334.63 |
| 979.51 | 334.85 | 979.74 | 335.15 | 979.78 | 335.28 | 979.95 | 335.45 | 980.07 | 335.64 |
| 980.18 | 335.75 | 980.27 | 336.3 | 980.55 | 336.61 | 980.97 | 336.62 | 982.02 | 336.78 |
| 982.76 | 336.83 | 983.82 | 336.82 | 986.77 | 336.67 | 987.98 | 336.66 | 990.42 | 336.73 |
| 990.97 | 336.7 | 992.87 | 336.32 | 993.7 | 336.15 | 996.82 | 335.6 | 997.18 | 335.57 |
| 997.85 | 335.44 | 998.09 | 335.37 | 998.43 | 335.32 | 998.6 | 335.36 | 999.5 | 335.66 |
| 999.66 | 335.7 | 1000.89 | 336.35 | 1002.41 | 337.16 | 1002.55 | 337.18 | 1004.09 | 336.98 |
| 1004.65 | 336.97 | 1006.92 | 336.84 | 1008.49 | 336.84 | 1009.57 | 336.87 | 1009.81 | 336.9 |
| 1010.42 | 337.01 | 1010.96 | 337.12 | 1012.75 | 337.83 | 1013.5 | 338.11 | 1014.13 | 338.37 |
| 1014.71 | 338.54 | 1017.43 | 339.1 | 1018.27 | 339.23 | 1023.84 | 339.49 | 1025.23 | 339.56 |
| 1026.68 | 339.55 | 1028.92 | 339.67 | 1030.43 | 339.68 | 1032.22 | 339.83 | 1032.72 | 339.86 |
| 1034.92 | 339.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 589.3 | .04 | 976.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 589.3 | 976.19 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4023.96*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.96 | 2.51 | 344.7 | 3.99 | 344.54 | 4.74 | 344.48 | 7.69 | 344.12 |
| 9.54 | 344.08 | 10.15 | 344.05 | 12.51 | 343.9 | 19.02 | 343.58 | 21.85 | 343.33 |
| 23.9 | 343.18 | 25.2 | 343.02 | 28.15 | 342.8 | 28.46 | 342.76 | 29.41 | 342.71 |
| 30.12 | 342.61 | 32.31 | 342.36 | 33.1 | 342.3 | 33.79 | 342.28 | 35.45 | 342.29 |
| 37.89 | 342.22 | 38.49 | 342.21 | 38.97 | 342.17 | 40.57 | 342.12 | 45.13 | 342.08 |
| 48.58 | 342.16 | 50.12 | 342.24 | 50.69 | 342.29 | 50.85 | 342.33 | 53.03 | 342.54 |
| 54.52 | 342.62 | 55.53 | 342.62 | 56.47 | 342.61 | 58.73 | 342.54 | 59.16 | 342.52 |
| 60.77 | 342.42 | 61.51 | 342.43 | 62.55 | 342.42 | 63.06 | 342.4 | 65.69 | 342.26 |
| 70.71 | 342 | 77.83 | 341.58 | 78.76 | 341.49 | 79.78 | 341.42 | 81.42 | 341.27 |
| 82.45 | 341.19 | 82.77 | 341.15 | 84.76 | 340.95 | 86.3 | 340.85 | 87.5 | 340.71 |
| 87.99 | 340.59 | 89.34 | 340.21 | 91.5 | 339.55 | 92.66 | 339.22 | 93.07 | 339.08 |
| 94.84 | 338.95 | 95.87 | 338.94 | 102.24 | 338.75 | 103.7 | 338.69 | 104.61 | 338.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 106.13 | 338.48 | 107 | 338.42 | 109.12 | 338.24 | 109.55 | 338.17 | 110.27 | 338.08 |
| 110.89 | 337.98 | 112.49 | 337.75 | 113.66 | 337.57 | 114.16 | 337.51 | 114.96 | 337.56 |
| 116.04 | 337.59 | 117.83 | 337.59 | 120.59 | 337.6 | 121.71 | 337.58 | 122.38 | 337.59 |
| 123.02 | 337.62 | 124.27 | 337.64 | 126.41 | 337.71 | 129.48 | 337.9 | 130.22 | 337.96 |
| 131.22 | 338.02 | 132.06 | 338.08 | 133 | 338.19 | 133.9 | 338.37 | 134.57 | 338.48 |
| 136.16 | 338.92 | 137.53 | 339.17 | 140.78 | 339.82 | 142.32 | 340.15 | 142.99 | 340.24 |
| 144.08 | 340.28 | 144.96 | 340.27 | 145.97 | 340.24 | 146.89 | 340.18 | 148.16 | 340.08 |
| 149.1 | 339.95 | 151.35 | 339.7 | 151.78 | 339.63 | 154.31 | 339.25 | 155.45 | 339.03 |
| 156.49 | 338.82 | 158.88 | 338.35 | 160.84 | 337.89 | 163.26 | 337.43 | 166.62 | 336.88 |
| 166.9 | 336.83 | 168.58 | 336.6 | 169.24 | 336.47 | 172.16 | 335.93 | 173.49 | 335.67 |
| 174.82 | 335.39 | 175.88 | 335.16 | 176.73 | 335.01 | 177.65 | 334.86 | 178.69 | 334.78 |
| 180 | 334.69 | 180.35 | 334.65 | 184.44 | 334.32 | 186.69 | 334.15 | 187.8 | 334.05 |
| 189.88 | 333.93 | 191.21 | 333.88 | 195.42 | 333.79 | 199.84 | 333.55 | 208.21 | 333.28 |
| 219.63 | 332.86 | 220.11 | 332.87 | 220.98 | 332.83 | 221.69 | 332.81 | 222.98 | 332.76 |
| 224.71 | 332.68 | 227.83 | 332.61 | 228.83 | 332.57 | 229.68 | 332.57 | 232.84 | 332.52 |
| 233.9 | 332.51 | 235.15 | 332.51 | 236.84 | 332.41 | 239.11 | 332.32 | 241.69 | 332.23 |
| 244.99 | 332.13 | 246.94 | 332.06 | 250.89 | 331.91 | 253.8 | 331.76 | 255.8 | 331.64 |
| 258.5 | 331.56 | 259.34 | 331.53 | 262.65 | 331.35 | 264.14 | 331.28 | 265.05 | 331.26 |
| 265.86 | 331.22 | 266.91 | 331.19 | 267.58 | 331.19 | 268.84 | 331.17 | 269.66 | 331.17 |
| 271.36 | 331.15 | 274.12 | 331.14 | 275.68 | 331.16 | 276.96 | 331.17 | 278.24 | 331.13 |
| 279.75 | 331.07 | 280.9 | 331.04 | 282.3 | 331.03 | 284 | 330.99 | 287.67 | 330.97 |
| 302.38 | 330.97 | 305.22 | 330.86 | 311.12 | 330.67 | 314.6 | 330.64 | 322.88 | 330.56 |
| 325.27 | 330.53 | 326.26 | 330.5 | 326.88 | 330.45 | 328.97 | 330.21 | 329.18 | 330.2 |
| 330.95 | 330.21 | 331.75 | 330.2 | 333.8 | 330.15 | 334.96 | 330.19 | 335.16 | 330.19 |
| 337.52 | 330.13 | 342.37 | 330.02 | 344.16 | 329.99 | 346.27 | 329.96 | 348.65 | 329.91 |
| 351.32 | 329.84 | 354.43 | 329.79 | 355.17 | 329.8 | 355.66 | 329.79 | 359.22 | 329.68 |
| 360.44 | 329.66 | 362.63 | 329.7 | 363.05 | 329.72 | 364.04 | 329.73 | 364.64 | 329.72 |
| 366.63 | 329.66 | 367.46 | 329.63 | 369.51 | 329.52 | 370.82 | 329.5 | 372.51 | 329.5 |
| 373 | 329.49 | 389.44 | 329.47 | 391.28 | 329.45 | 395.65 | 329.39 | 396.12 | 329.38 |
| 397.55 | 329.31 | 401.86 | 329.24 | 405.33 | 329.34 | 405.9 | 329.35 | 406.78 | 329.35 |
| 408.54 | 329.34 | 418.89 | 329.23 | 419.26 | 329.22 | 421.7 | 329.19 | 424.4 | 329.23 |
| 425.69 | 329.26 | 426.53 | 329.26 | 427.65 | 329.24 | 433.05 | 329.11 | 436.69 | 329.06 |
| 438.39 | 329.04 | 440.54 | 329.07 | 442.59 | 329.05 | 445.88 | 329.05 | 447.2 | 329.06 |
| 447.88 | 329.05 | 448.04 | 329.06 | 454.26 | 329.09 | 454.66 | 329.08 | 456.12 | 329.08 |
| 456.33 | 329.07 | 458.25 | 329.07 | 462.49 | 329.1 | 462.86 | 329.1 | 465.98 | 329.15 |
| 469.72 | 329.2 | 470.5 | 329.2 | 471.99 | 329.23 | 474.11 | 329.23 | 476.39 | 329.22 |
| 477.65 | 329.22 | 479.66 | 329.18 | 480.01 | 329.18 | 483.23 | 329.14 | 484.21 | 329.15 |
| 487.19 | 329.15 | 488.48 | 329.14 | 489.03 | 329.15 | 489.55 | 329.14 | 494.36 | 329.08 |
| 496.09 | 329.07 | 501.3 | 329.02 | 505.39 | 329 | 507.27 | 328.98 | 508.03 | 328.96 |
| 508.51 | 328.92 | 508.72 | 328.84 | 511.65 | 328.78 | 511.74 | 328.79 | 513.57 | 328.83 |
| 514.65 | 328.86 | 515.67 | 328.92 | 520.97 | 328.88 | 523.91 | 328.86 | 534.06 | 328.86 |
| 560.8 | 329.24 | 563.32 | 329.27 | 565.23 | 329.46 | 565.83 | 329.51 | 570.94 | 329.57 |
| 571.17 | 329.57 | 576.14 | 329.63 | 576.28 | 329.63 | 578.74 | 329.56 | 580.26 | 329.52 |
| 581.49 | 329.5 | 582.85 | 329.49 | 587.31 | 329.48 | 588.31 | 329.5 | 590.85 | 329.49 |
| 592.62 | 329.42 | 595.83 | 329.31 | 596.4 | 329.28 | 596.63 | 329.25 | 597.83 | 329.2 |
| 598.02 | 329.2 | 599.16 | 329.16 | 599.79 | 329.15 | 601.49 | 329.11 | 606.12 | 328.98 |
| 606.36 | 328.97 | 614.53 | 328.97 | 619.15 | 329.19 | 623.09 | 329.38 | 625.84 | 329.49 |
| 628.39 | 329.54 | 630.62 | 329.58 | 633.85 | 329.61 | 635.11 | 329.61 | 652.26 | 329.68 |
| 652.56 | 329.69 | 653.59 | 329.69 | 654.73 | 329.71 | 656.56 | 329.64 | 657.33 | 329.67 |
| 658.36 | 329.69 | 660.16 | 329.68 | 664.39 | 329.6 | 668.84 | 329.39 | 670.99 | 329.31 |
| 675.4 | 329.1 | 680.82 | 328.8 | 695 | 328.66 | 696.1 | 328.66 | 700.1 | 328.61 |
| 702.79 | 328.57 | 704.28 | 328.53 | 705.25 | 328.52 | 706.64 | 328.52 | 707.37 | 328.54 |
| 714.11 | 328.63 | 714.99 | 328.64 | 717.07 | 328.68 | 718.84 | 328.63 | 720.64 | 328.59 |
| 727.5 | 328.5 | 727.93 | 328.5 | 730.02 | 328.47 | 731.34 | 328.44 | 737.63 | 328.26 |
| 738.33 | 328.22 | 742.01 | 328.08 | 742.31 | 328.04 | 742.97 | 328.05 | 743.7 | 328.03 |
| 757.86 | 327.47 | 764.92 | 327.16 | 768.93 | 326.98 | 773.88 | 326.79 | 775.24 | 326.61 |
| 775.81 | 326.5 | 776.6 | 326.41 | 777.7 | 326.35 | 779.59 | 326.36 | 780.74 | 326.34 |
| 781.27 | 326.31 | 781.88 | 326.26 | 782.64 | 326.33 | 782.88 | 326.41 | 784.06 | 326.37 |
| 785.02 | 326.37 | 786.41 | 326.38 | 790.38 | 326.42 | 790.58 | 326.43 | 791.31 | 326.4 |
| 793.36 | 326.4 | 796.96 | 326.35 | 799.94 | 326.32 | 802.11 | 326.27 | 802.88 | 326.27 |
| 809.74 | 326.34 | 811.36 | 326.35 | 814.78 | 326.3 | 815.09 | 326.31 | 816.19 | 326.26 |
| 818.23 | 326.22 | 818.83 | 326.22 | 819.93 | 326.2 | 822.89 | 326.23 | 823.74 | 326.22 |
| 824.37 | 326.23 | 826.92 | 326.23 | 827.56 | 326.24 | 840.53 | 326.1 | 842.85 | 326.03 |
| 844.01 | 326 | 845.86 | 325.96 | 846.93 | 325.95 | 849.27 | 325.91 | 850.2 | 325.88 |
| 851.91 | 325.84 | 853.82 | 325.79 | 858.71 | 325.81 | 861.84 | 325.81 | 866.83 | 325.82 |
| 870.39 | 325.81 | 871.68 | 325.81 | 873.06 | 325.8 | 876.22 | 325.8 | 895.72 | 325.71 |
| 896.38 | 325.7 | 897.8 | 325.7 | 903.78 | 325.67 | 904.06 | 325.67 | 911.76 | 325.57 |
| 913.65 | 325.55 | 914.74 | 325.55 | 915.15 | 325.56 | 917.52 | 325.51 | 918.21 | 325.49 |
| 922.46 | 325.33 | 923.91 | 325.29 | 925.69 | 325.2 | 926.3 | 325.18 | 929.92 | 325.16 |
| 930.84 | 325.15 | 931.5 | 325.13 | 933.7 | 325.1 | 934.86 | 325.12 | 936.21 | 325.18 |
| 936.77 | 325.31 | 938.72 | 325.48 | 940.24 | 325.58 | 940.71 | 325.62 | 945.02 | 326.42 |
| 946.01 | 326.54 | 950.62 | 327.15 | 953.67 | 327.43 | 955.25 | 327.75 | 956.74 | 328.09 |
| 957.78 | 328.29 | 959.35 | 328.58 | 960.39 | 328.86 | 961.76 | 329.31 | 962.66 | 329.62 |
| 963.22 | 329.84 | 965.69 | 330.84 | 966.35 | 331.13 | 967.27 | 331.48 | 968.27 | 331.83 |
| 969.24 | 332.15 | 969.86 | 332.37 | 970.58 | 332.58 | 971.84 | 332.98 | 972.59 | 333.19 |
| 973.56 | 333.57 | 973.61 | 333.6 | 974.57 | 333.95 | 975.3 | 334.18 | 976.24 | 334.45 |
| 976.5 | 334.56 | 977 | 334.74 | 977.24 | 334.97 | 977.28 | 335.06 | 977.46 | 335.2 |
| 977.69 | 335.43 | 977.79 | 335.84 | 978.07 | 336.08 | 978.51 | 336.08 | 979.6 | 336.25 |
| 980.36 | 336.31 | 981.46 | 336.28 | 984.1 | 336.14 | 984.51 | 336.11 | 985.16 | 336.09 |
| 985.76 | 336.09 | 988.28 | 336.17 | 988.85 | 336.13 | 990.82 | 335.71 | 991.68 | 335.52 |
| 994.33 | 335.03 | 994.91 | 334.91 | 995.28 | 334.89 | 995.97 | 334.74 | 996.22 | 334.67 |
| 996.57 | 334.61 | 996.74 | 334.65 | 997.67 | 334.98 | 997.84 | 335.03 | 999.25 | 335.81 |
| 1000.69 | 336.62 | 1000.84 | 336.65 | 1002.43 | 336.44 | 1002.84 | 336.4 | 1003.01 | 336.42 |
| 1005.35 | 336.27 | 1006.52 | 336.28 | 1007.56 | 336.28 | 1008.09 | 336.31 | 1008.97 | 336.47 |
| 1009.53 | 336.59 | 1011.38 | 337.37 | 1011.84 | 337.54 | 1012.81 | 337.97 | 1013.41 | 338.15 |
| 1015.21 | 338.55 | 1016.22 | 338.78 | 1017.09 | 338.92 | 1023.58 | 339.27 | 1024.6 | 339.31 |
| 1025.79 | 339.3 | 1028.11 | 339.43 | 1029.67 | 339.48 | 1031.52 | 339.62 | 1032.04 | 339.65 |
| 1034.31 | 339.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 576.28 | .04 | 973.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 576.28 | 973.56 | 33.31 | 18.91 | 17.36 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 4005.05*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.49 | 4.63 | 343.98 | 7.52 | 343.61 | 9.92 | 343.54 | 10.81 | 343.47 |
| 12.23 | 343.38 | 18.59 | 343.05 | 21.36 | 342.79 | 23.36 | 342.64 | 23.74 | 342.58 |
| 24.63 | 342.47 | 27.51 | 342.23 | 27.82 | 342.19 | 28.75 | 342.14 | 29.44 | 342.03 |
| 31.58 | 341.76 | 32.36 | 341.71 | 33.03 | 341.69 | 34.65 | 341.7 | 37.03 | 341.64 |
| 37.62 | 341.62 | 38.09 | 341.59 | 39.65 | 341.53 | 44.11 | 341.5 | 47.48 | 341.59 |
| 48.37 | 341.65 | 48.98 | 341.68 | 49.7 | 341.77 | 51.84 | 342 | 52.67 | 342.06 |
| 53.29 | 342.09 | 54.28 | 342.1 | 55.19 | 342.09 | 56.48 | 342.06 | 57.82 | 342.01 |
| 59.4 | 341.9 | 60.12 | 341.91 | 61.14 | 341.91 | 61.64 | 341.89 | 64.21 | 341.77 |
| 69.11 | 341.5 | 76.07 | 341.09 | 76.98 | 341.01 | 78.31 | 340.92 | 80.58 | 340.69 |
| 81.77 | 340.55 | 82.85 | 340.43 | 84.35 | 340.29 | 85.52 | 340.14 | 86 | 340.01 |
| 87.33 | 339.61 | 89.43 | 338.9 | 90.6 | 338.53 | 90.96 | 338.38 | 91.36 | 338.36 |
| 92.69 | 338.25 | 93.7 | 338.25 | 99.93 | 338.09 | 102.25 | 337.98 | 102.67 | 337.92 |
| 103.73 | 337.81 | 104.24 | 337.78 | 105.52 | 337.68 | 106.66 | 337.58 | 107.08 | 337.51 |
| 107.78 | 337.42 | 108.39 | 337.32 | 109.95 | 337.09 | 111.09 | 336.9 | 111.58 | 336.85 |
| 112.36 | 336.9 | 113.42 | 336.95 | 115.16 | 336.96 | 117.87 | 336.99 | 119.26 | 336.99 |
| 119.89 | 337.02 | 121.46 | 337.06 | 123.55 | 337.14 | 124.19 | 337.18 | 128.26 | 337.47 |
| 129.08 | 337.55 | 130 | 337.67 | 130.88 | 337.86 | 131.53 | 337.99 | 133.08 | 338.48 |
| 133.23 | 338.5 | 135.16 | 338.91 | 137.6 | 339.45 | 138.74 | 339.71 | 139.1 | 339.8 |
| 139.76 | 339.89 | 140.34 | 339.92 | 141.09 | 339.94 | 141.69 | 339.93 | 142.67 | 339.89 |
| 143.58 | 339.83 | 144.81 | 339.72 | 146.01 | 339.54 | 146.29 | 339.51 | 147.93 | 339.3 |
| 149.87 | 338.99 | 150.82 | 338.83 | 151.94 | 338.6 | 152.96 | 338.38 | 155.29 | 337.9 |
| 157.21 | 337.42 | 157.82 | 337.29 | 159.58 | 336.94 | 163.13 | 336.31 | 164.58 | 336.09 |
| 165.42 | 335.92 | 168.27 | 335.36 | 169.58 | 335.09 | 170.87 | 334.81 | 171.64 | 334.63 |
| 172.21 | 334.51 | 173.64 | 334.24 | 174.26 | 334.18 | 175.01 | 334.14 | 176.28 | 334.03 |
| 180.28 | 333.69 | 183.55 | 333.42 | 185.59 | 333.29 | 186.89 | 333.23 | 191 | 333.13 |
| 195.32 | 332.93 | 203.51 | 332.67 | 214.67 | 332.28 | 215.14 | 332.28 | 216.68 | 332.22 |
| 217.94 | 332.18 | 219.63 | 332.11 | 222.69 | 332.03 | 223.67 | 331.99 | 224.49 | 331.98 |
| 228.61 | 331.9 | 229.84 | 331.89 | 231.93 | 331.79 | 233.71 | 331.73 | 234.81 | 331.68 |
| 239.46 | 331.52 | 240.78 | 331.48 | 241.37 | 331.45 | 245.23 | 331.3 | 247.31 | 331.2 |
| 248.07 | 331.17 | 250.02 | 331.06 | 251.29 | 331.02 | 253.49 | 330.94 | 255.45 | 330.84 |
| 258.17 | 330.71 | 259.06 | 330.7 | 259.86 | 330.67 | 260.88 | 330.65 | 261.54 | 330.65 |
| 262.77 | 330.63 | 264.1 | 330.6 | 265.23 | 330.59 | 268.64 | 330.57 | 269.45 | 330.58 |
| 270.7 | 330.58 | 273.43 | 330.51 | 274.55 | 330.49 | 275.92 | 330.48 | 276.61 | 330.46 |
| 277.58 | 330.45 | 281.18 | 330.43 | 282.13 | 330.43 | 282.75 | 330.42 | 295.47 | 330.43 |
| 295.55 | 330.42 | 298.32 | 330.34 | 304.09 | 330.19 | 307.49 | 330.15 | 315.59 | 330.06 |
| 317.92 | 330.03 | 318.89 | 330 | 319.5 | 329.95 | 321.54 | 329.69 | 321.74 | 329.68 |
| 324.26 | 329.69 | 326.26 | 329.64 | 327.59 | 329.68 | 329.9 | 329.62 | 334.64 | 329.52 |
| 336.39 | 329.48 | 338.45 | 329.45 | 340.78 | 329.4 | 344.26 | 329.32 | 344.56 | 329.32 |
| 347.15 | 329.28 | 347.63 | 329.28 | 348.54 | 329.25 | 351.11 | 329.18 | 352.3 | 329.16 |
| 353.97 | 329.17 | 355.41 | 329.2 | 356.41 | 329.19 | 357.35 | 329.16 | 358.35 | 329.14 |
| 359.16 | 329.11 | 361.17 | 329.02 | 362.44 | 329 | 364.09 | 329 | 364.57 | 328.99 |
| 380.64 | 328.97 | 382.44 | 328.95 | 386.71 | 328.89 | 387.17 | 328.88 | 388.57 | 328.82 |
| 392.78 | 328.74 | 396.74 | 328.88 | 399.25 | 328.88 | 399.32 | 328.87 | 409.43 | 328.79 |
| 409.79 | 328.78 | 412.17 | 328.75 | 414.82 | 328.77 | 416.07 | 328.79 | 417.99 | 328.77 |
| 423.27 | 328.67 | 426.83 | 328.62 | 428.48 | 328.61 | 429.35 | 328.62 | 430.1 | 328.64 |
| 435.81 | 328.64 | 437.1 | 328.65 | 437.92 | 328.65 | 444 | 328.67 | 445.81 | 328.67 |
| 446.02 | 328.65 | 447.9 | 328.66 | 452.04 | 328.69 | 452.4 | 328.7 | 455.46 | 328.74 |
| 459.11 | 328.78 | 459.87 | 328.78 | 460.55 | 328.8 | 461.33 | 328.81 | 465.63 | 328.81 |
| 466.86 | 328.82 | 467.95 | 328.81 | 469.16 | 328.79 | 472.31 | 328.76 | 473.27 | 328.76 |
| 474.84 | 328.77 | 477.27 | 328.75 | 477.45 | 328.76 | 478.49 | 328.76 | 483.2 | 328.72 |
| 483.85 | 328.71 | 484.88 | 328.71 | 489.98 | 328.68 | 493.97 | 328.67 | 495.82 | 328.65 |
| 496.56 | 328.63 | 497.02 | 328.58 | 497.21 | 328.51 | 497.83 | 328.49 | 499.68 | 328.46 |
| 500.18 | 328.46 | 501.97 | 328.51 | 503.03 | 328.55 | 504.03 | 328.61 | 509.2 | 328.59 |
| 512.08 | 328.57 | 522 | 328.57 | 548.13 | 328.99 | 550.6 | 329.02 | 552.47 | 329.16 |
| 553.05 | 329.19 | 558.04 | 329.25 | 558.27 | 329.26 | 563.26 | 329.32 | 565.11 | 329.29 |
| 565.79 | 329.27 | 568.62 | 329.22 | 570.01 | 329.21 | 574.6 | 329.2 | 575.62 | 329.22 |
| 578.23 | 329.21 | 580.99 | 329.1 | 583.94 | 328.99 | 584.17 | 328.95 | 585.4 | 328.89 |
| 586.77 | 328.85 | 587.42 | 328.84 | 589.17 | 328.8 | 593.93 | 328.66 | 594.16 | 328.65 |
| 595.63 | 328.64 | 598.73 | 328.65 | 601.13 | 328.65 | 602.57 | 328.64 | 607.31 | 328.89 |
| 611.36 | 329.1 | 614.18 | 329.22 | 616.8 | 329.28 | 619.09 | 329.32 | 622.42 | 329.35 |
| 623.71 | 329.35 | 641.33 | 329.44 | 641.96 | 329.44 | 643.86 | 329.47 | 645.75 | 329.4 |
| 646.54 | 329.43 | 647.59 | 329.45 | 649.44 | 329.44 | 653.79 | 329.36 | 658.36 | 329.14 |
| 660.57 | 329.05 | 665.1 | 328.83 | 670.67 | 328.54 | 685.24 | 328.44 | 686.37 | 328.44 |
| 687.06 | 328.43 | 687.97 | 328.43 | 690.47 | 328.41 | 693.24 | 328.38 | 694.77 | 328.35 |
| 697.2 | 328.35 | 697.95 | 328.36 | 704.88 | 328.42 | 707.91 | 328.45 | 711.59 | 328.33 |
| 718.63 | 328.19 | 719.77 | 328.16 | 721.22 | 328.13 | 728.64 | 327.91 | 729.75 | 327.86 |
| 733.53 | 327.72 | 733.85 | 327.68 | 734.52 | 327.69 | 735.27 | 327.67 | 749.82 | 327.15 |
| 757.07 | 326.87 | 761.19 | 326.7 | 766.29 | 326.52 | 767.68 | 326.34 | 768.27 | 326.22 |
| 769.08 | 326.13 | 769.99 | 326.08 | 772.15 | 326.09 | 773.46 | 326.07 | 774.33 | 326 |
| 774.5 | 326 | 775.29 | 326.07 | 775.53 | 326.17 | 776.74 | 326.12 | 777.73 | 326.12 |
| 779.16 | 326.14 | 783.23 | 326.19 | 783.44 | 326.2 | 783.78 | 326.17 | 784.76 | 326.16 |
| 785.14 | 326.17 | 786.3 | 326.17 | 790 | 326.11 | 791.82 | 326.09 | 793.06 | 326.07 |
| 795.29 | 326.01 | 796.08 | 326 | 803.12 | 326.05 | 805.55 | 326.05 | 808.3 | 326.02 |
| 808.62 | 326.03 | 809.76 | 325.99 | 811.85 | 325.96 | 813.59 | 325.95 | 816.64 | 325.98 |
| 817.51 | 325.97 | 818.16 | 325.98 | 820.78 | 325.98 | 821.43 | 326 | 834.76 | 325.87 |
| 837.14 | 325.78 | 838.34 | 325.76 | 840.24 | 325.72 | 841.33 | 325.71 | 843.74 | 325.66 |
| 844.7 | 325.63 | 846.45 | 325.59 | 848.41 | 325.53 | 853.44 | 325.54 | 856.66 | 325.54 |
| 861.78 | 325.55 | 865.44 | 325.54 | 868.18 | 325.54 | 869.94 | 325.53 | 871.43 | 325.53 |
| 891.47 | 325.46 | 893.6 | 325.46 | 899.74 | 325.44 | 900.03 | 325.43 | 907.94 | 325.34 |
| 908.31 | 325.33 | 909.89 | 325.32 | 911.43 | 325.32 | 913.86 | 325.27 | 914.57 | 325.25 |
| 918.94 | 325.09 | 920.43 | 325.05 | 922.25 | 324.95 | 922.88 | 324.93 | 926.6 | 324.92 |
| 927.42 | 324.92 | 928.22 | 324.9 | 930.48 | 324.87 | 931.66 | 324.89 | 933.03 | 324.95 |
| 933.17 | 324.97 | 933.6 | 325.09 | 935.58 | 325.28 | 937.12 | 325.38 | 937.59 | 325.42 |
| 941.97 | 326.28 | 942.98 | 326.4 | 945.28 | 326.69 | 947.65 | 326.98 | 950.75 | 327.29 |
| 952.35 | 327.64 | 953.87 | 328.01 | 956.51 | 328.59 | 957.57 | 328.9 | 958.96 | 329.41 |
| 959.87 | 329.75 | 960.44 | 329.98 | 962.95 | 331.01 | 963.62 | 331.3 | 964.55 | 331.65 |
| 965.73 | 332.06 | 966.55 | 332.31 | 967.18 | 332.52 | 967.81 | 332.69 | 969.18 | 333.1 |
| 969.95 | 333.3 | 970.93 | 333.63 | 971.98 | 333.97 | 973.7 | 334.4 | 973.97 | 334.49 |
| 974.49 | 334.62 | 975.2 | 335.11 | 975.3 | 335.38 | 975.59 | 335.54 | 976.04 | 335.54 |
| 977.17 | 335.73 | 977.96 | 335.78 | 979.1 | 335.75 | 981.82 | 335.59 | 982.92 | 335.53 |
| 983.54 | 335.53 | 986.14 | 335.6 | 986.56 | 335.59 | 986.73 | 335.56 | 987.64 | 335.35 |
| 988.77 | 335.1 | 989.66 | 334.89 | 992.39 | 334.35 | 992.99 | 334.22 | 993.38 | 334.2 |
| 994.34 | 333.96 | 994.71 | 333.9 | 994.89 | 333.94 | 995.85 | 334.3 | 996.03 | 334.35 |
| 997.34 | 335.12 | 998.7 | 335.94 | 999.05 | 336.12 | 999.54 | 336.07 | 1000.76 | 335.89 |
| 1001.18 | 335.85 | 1001.36 | 335.87 | 1003.79 | 335.71 | 1004.99 | 335.72 | 1006.07 | 335.72 |
| 1006.87 | 335.79 | 1008.1 | 336.06 | 1010.02 | 336.92 | 1010.48 | 337.1 | 1010.81 | 337.26 |
| 1011.49 | 337.56 | 1012.11 | 337.77 | 1013.97 | 338.21 | 1015.01 | 338.45 | 1015.91 | 338.61 |
| 1021.87 | 338.96 | 1022.62 | 339.01 | 1023.67 | 339.06 | 1024.91 | 339.05 | 1027.3 | 339.2 |
| 1028.92 | 339.27 | 1030.82 | 339.42 | 1031.36 | 339.44 | 1032.32 | 339.45 | 1033.1 | 339.48 |
| 1033.71 | 339.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 563.26 | .04 | 970.93 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

563.26 970.93 33.31 18.91 17.36 .1 .3

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3986.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.03 | 3.81 | 343.57 | 4.53 | 343.49 | 7.34 | 343.09 | 9.11 | 343.05 |
| 9.69 | 343.02 | 11.94 | 342.86 | 18.16 | 342.53 | 20.86 | 342.25 | 22.82 | 342.09 |
| 23.19 | 342.03 | 24.06 | 341.91 | 26.88 | 341.67 | 27.17 | 341.62 | 28.08 | 341.57 |
| 28.76 | 341.46 | 30.85 | 341.17 | 31.61 | 341.11 | 32.26 | 341.09 | 33.85 | 341.12 |
| 36.18 | 341.05 | 36.75 | 341.04 | 37.21 | 341 | 38.74 | 340.94 | 43.09 | 340.91 |
| 46.39 | 341.02 | 47.85 | 341.12 | 48.4 | 341.18 | 48.55 | 341.21 | 50.78 | 341.48 |
| 51.46 | 341.53 | 52.06 | 341.56 | 52.89 | 341.58 | 53.02 | 341.57 | 53.92 | 341.57 |
| 54.52 | 341.56 | 56.08 | 341.51 | 56.49 | 341.49 | 58.02 | 341.39 | 58.73 | 341.4 |
| 59.72 | 341.4 | 60.21 | 341.39 | 62.72 | 341.27 | 67.52 | 341 | 74.32 | 340.6 |
| 75.2 | 340.53 | 75.93 | 340.49 | 76.5 | 340.44 | 77.74 | 340.31 | 78.72 | 340.2 |
| 80.93 | 339.91 | 82.4 | 339.73 | 83.55 | 339.57 | 85.31 | 339 | 88.5 | 337.85 |
| 88.86 | 337.69 | 90.55 | 337.55 | 91.54 | 337.55 | 97.62 | 337.42 | 99.88 | 337.32 |
| 100.29 | 337.26 | 101.34 | 337.15 | 102.58 | 337.06 | 103.08 | 337.01 | 104.19 | 336.92 |
| 104.6 | 336.85 | 105.29 | 336.76 | 105.88 | 336.66 | 107.41 | 336.42 | 108.53 | 336.23 |
| 109 | 336.18 | 109.77 | 336.25 | 110.8 | 336.3 | 115.14 | 336.38 | 116.51 | 336.4 |
| 118.65 | 336.49 | 120.7 | 336.57 | 121.32 | 336.61 | 123.63 | 336.79 | 125.08 | 336.91 |
| 126.09 | 337.01 | 126.99 | 337.14 | 127.85 | 337.35 | 128.49 | 337.49 | 130.01 | 338.03 |
| 131.71 | 338.42 | 133.53 | 338.86 | 135.89 | 339.45 | 136.53 | 339.55 | 137.57 | 339.59 |
| 138.41 | 339.58 | 139.38 | 339.54 | 139.82 | 339.51 | 141.47 | 339.36 | 142.04 | 339.26 |
| 142.91 | 339.13 | 144.51 | 338.91 | 145.55 | 338.72 | 146.41 | 338.58 | 147.34 | 338.42 |
| 148.43 | 338.18 | 149.42 | 337.95 | 151.7 | 337.45 | 153.57 | 336.95 | 155.69 | 336.49 |
| 155.89 | 336.45 | 159.09 | 335.85 | 160.96 | 335.51 | 161.6 | 335.37 | 165.56 | 334.53 |
| 166.92 | 334.22 | 167.94 | 333.98 | 168.75 | 333.81 | 169.62 | 333.62 | 170.24 | 333.56 |
| 170.62 | 333.54 | 172.2 | 333.41 | 176.11 | 333.07 | 179.04 | 332.81 | 181.3 | 332.64 |
| 182.57 | 332.59 | 186.59 | 332.47 | 190.81 | 332.31 | 198.8 | 332.06 | 209.71 | 331.7 |
| 210.9 | 331.67 | 212.91 | 331.59 | 213.92 | 331.56 | 214.56 | 331.53 | 217.54 | 331.45 |
| 218.5 | 331.42 | 222.32 | 331.32 | 223.33 | 331.3 | 224.68 | 331.26 | 226.14 | 331.2 |
| 226.57 | 331.19 | 228.31 | 331.13 | 229.39 | 331.08 | 233.92 | 330.92 | 235.22 | 330.87 |
| 235.79 | 330.84 | 238.05 | 330.76 | 239.56 | 330.69 | 241.59 | 330.61 | 243.58 | 330.51 |
| 244.5 | 330.47 | 245.48 | 330.44 | 247.63 | 330.36 | 250.79 | 330.21 | 252.21 | 330.15 |
| 253.65 | 330.13 | 254.44 | 330.11 | 255.24 | 330.11 | 255.49 | 330.1 | 256.7 | 330.08 |
| 257.48 | 330.06 | 259.1 | 330.03 | 261.1 | 330.01 | 261.74 | 330 | 264.45 | 330 |
| 264.67 | 329.99 | 265.67 | 329.98 | 268.21 | 329.93 | 269.55 | 329.92 | 271.17 | 329.9 |
| 274.68 | 329.88 | 275.61 | 329.88 | 276.21 | 329.87 | 288.72 | 329.88 | 291.43 | 329.82 |
| 297.07 | 329.7 | 300.38 | 329.66 | 308.29 | 329.57 | 310.58 | 329.54 | 311.52 | 329.5 |
| 312.45 | 329.4 | 314.11 | 329.17 | 314.31 | 329.16 | 316 | 329.18 | 316.76 | 329.17 |
| 318.72 | 329.12 | 320.02 | 329.18 | 322.27 | 329.12 | 326.91 | 329.02 | 328.61 | 328.98 |
| 330.01 | 328.96 | 330.62 | 328.94 | 332.9 | 328.89 | 335.45 | 328.84 | 335.66 | 328.83 |
| 336.6 | 328.82 | 338.42 | 328.78 | 339.13 | 328.77 | 340.48 | 328.74 | 344.16 | 328.65 |
| 346.25 | 328.65 | 346.65 | 328.67 | 347.6 | 328.67 | 348.17 | 328.66 | 349.1 | 328.63 |
| 349.48 | 328.63 | 350.53 | 328.59 | 350.86 | 328.59 | 352.82 | 328.53 | 354.07 | 328.5 |
| 355.68 | 328.5 | 356.15 | 328.49 | 371.85 | 328.46 | 373.61 | 328.45 | 377.78 | 328.4 |
| 378.23 | 328.39 | 379.59 | 328.32 | 383.71 | 328.25 | 387.02 | 328.39 | 387.57 | 328.41 |
| 388.41 | 328.42 | 399.97 | 328.35 | 400.32 | 328.34 | 401.93 | 328.32 | 402.65 | 328.32 |
| 405.23 | 328.31 | 406.46 | 328.32 | 408.33 | 328.3 | 413.48 | 328.23 | 416.96 | 328.19 |
| 418.58 | 328.18 | 419.43 | 328.19 | 420.64 | 328.22 | 424.02 | 328.22 | 425.74 | 328.23 |
| 427.65 | 328.23 | 427.8 | 328.24 | 433.74 | 328.26 | 435.51 | 328.26 | 435.72 | 328.24 |
| 437.55 | 328.25 | 441.6 | 328.29 | 441.95 | 328.29 | 444.93 | 328.33 | 449.65 | 328.37 |
| 450.67 | 328.39 | 451.65 | 328.39 | 452.69 | 328.4 | 454.87 | 328.41 | 456.07 | 328.42 |
| 458 | 328.4 | 458.32 | 328.39 | 461.4 | 328.38 | 463.87 | 328.38 | 465.18 | 328.37 |
| 466.41 | 328.37 | 467.43 | 328.38 | 472.03 | 328.36 | 473.68 | 328.36 | 478.65 | 328.35 |
| 482.56 | 328.34 | 484.36 | 328.32 | 485.08 | 328.3 | 485.54 | 328.25 | 485.74 | 328.17 |
| 488.14 | 328.13 | 488.63 | 328.13 | 490.37 | 328.19 | 491.4 | 328.23 | 492.38 | 328.31 |
| 497.44 | 328.29 | 509.93 | 328.29 | 535.47 | 328.74 | 537.87 | 328.77 | 539.7 | 328.85 |
| 540.27 | 328.88 | 545.15 | 328.94 | 545.37 | 328.95 | 550.12 | 329.01 | 550.25 | 329.02 |
| 550.96 | 329.01 | 552.29 | 329 | 554.45 | 328.95 | 557.18 | 328.93 | 561.88 | 328.92 |
| 562.94 | 328.94 | 565.62 | 328.93 | 566.17 | 328.91 | 568.45 | 328.81 | 570.87 | 328.72 |
| 571.47 | 328.69 | 571.71 | 328.65 | 572.17 | 328.62 | 572.98 | 328.59 | 573.18 | 328.59 |
| 574.38 | 328.54 | 575.05 | 328.53 | 576.84 | 328.48 | 581.73 | 328.33 | 581.97 | 328.32 |
| 590.6 | 328.32 | 599.62 | 328.82 | 602.53 | 328.95 | 605.21 | 329.01 | 607.57 | 329.06 |
| 610.01 | 329.08 | 610.98 | 329.1 | 612.3 | 329.1 | 630.39 | 329.19 | 631.26 | 329.21 |
| 631.8 | 329.21 | 633 | 329.23 | 634.93 | 329.15 | 635.74 | 329.19 | 636.83 | 329.21 |
| 638.73 | 329.21 | 643.19 | 329.13 | 647.88 | 328.89 | 650.15 | 328.8 | 654.8 | 328.57 |
| 660.52 | 328.27 | 675.48 | 328.22 | 677.35 | 328.22 | 678.29 | 328.21 | 683.69 | 328.19 |
| 686.29 | 328.17 | 687.76 | 328.17 | 688.53 | 328.18 | 695.64 | 328.21 | 696.56 | 328.21 |
| 698.76 | 328.23 | 702.53 | 328.07 | 709.76 | 327.87 | 710.22 | 327.85 | 710.93 | 327.84 |
| 712.42 | 327.79 | 713.81 | 327.75 | 720.03 | 327.54 | 725.06 | 327.36 | 725.38 | 327.31 |
| 725.68 | 327.33 | 726.08 | 327.33 | 726.85 | 327.31 | 741.78 | 326.82 | 749.23 | 326.58 |
| 753.46 | 326.43 | 758.69 | 326.26 | 760.12 | 326.07 | 760.72 | 325.95 | 761.55 | 325.85 |
| 762.49 | 325.8 | 762.71 | 325.8 | 764.71 | 325.83 | 765.73 | 325.82 | 766.06 | 325.81 |
| 767.12 | 325.73 | 767.93 | 325.82 | 768.18 | 325.92 | 768.56 | 325.91 | 769.42 | 325.87 |
| 771.9 | 325.89 | 776.09 | 325.95 | 776.3 | 325.96 | 777.07 | 325.93 | 779.23 | 325.93 |
| 784.91 | 325.84 | 786.17 | 325.83 | 788.46 | 325.75 | 789.27 | 325.74 | 796.51 | 325.76 |
| 798.21 | 325.76 | 799 | 325.75 | 801.83 | 325.74 | 802.16 | 325.76 | 803.32 | 325.72 |
| 805.46 | 325.71 | 806.1 | 325.71 | 807.26 | 325.69 | 810.38 | 325.74 | 811.28 | 325.73 |
| 811.94 | 325.74 | 814.63 | 325.74 | 815.31 | 325.76 | 828.99 | 325.63 | 831.44 | 325.54 |
| 832.66 | 325.51 | 834.61 | 325.47 | 835.74 | 325.46 | 838.21 | 325.42 | 839.19 | 325.38 |
| 840.99 | 325.33 | 843.01 | 325.26 | 848.16 | 325.27 | 866.64 | 325.27 | 887.21 | 325.22 |
| 889.4 | 325.22 | 896 | 325.2 | 904.98 | 325.09 | 906.12 | 325.09 | 907.71 | 325.08 |
| 910.2 | 325.03 | 910.93 | 325.02 | 915.41 | 324.85 | 916.94 | 324.81 | 917.57 | 324.78 |
| 918.82 | 324.71 | 919.46 | 324.69 | 924.12 | 324.69 | 924.95 | 324.66 | 927.27 | 324.63 |
| 928.46 | 324.65 | 929.85 | 324.72 | 930 | 324.74 | 930.43 | 324.87 | 932.44 | 325.07 |
| 934.41 | 325.2 | 934.48 | 325.22 | 938.31 | 326.01 | 938.92 | 326.14 | 942.28 | 326.53 |
| 944.69 | 326.82 | 947.83 | 327.14 | 949.03 | 327.43 | 949.46 | 327.52 | 950.99 | 327.92 |
| 952.06 | 328.19 | 953.68 | 328.59 | 954.63 | 328.92 | 954.75 | 328.95 | 956.16 | 329.51 |
| 957.08 | 329.88 | 960.2 | 331.18 | 960.88 | 331.47 | 961.83 | 331.83 | 962.86 | 332.17 |
| 963.86 | 332.48 | 964.5 | 332.67 | 965.13 | 332.83 | 966.53 | 333.22 | 967.24 | 333.39 |
| 968.31 | 333.69 | 968.36 | 333.71 | 969.38 | 333.98 | 969.82 | 334.08 | 971.17 | 334.35 |
| 971.44 | 334.42 | 971.97 | 334.51 | 972.71 | 334.78 | 972.82 | 334.92 | 973.12 | 335 |
| 973.58 | 335 | 974.75 | 335.2 | 975.56 | 335.26 | 976.73 | 335.22 | 979.98 | 335 |
| 980.68 | 334.97 | 981.32 | 334.96 | 984.01 | 335.04 | 984.43 | 335.02 | 984.8 | 334.94 |
| 987.63 | 334.26 | 990.46 | 333.68 | 991.08 | 333.54 | 991.47 | 333.51 | 992.21 | 333.33 |
| 992.47 | 333.25 | 992.85 | 333.18 | 993.03 | 333.23 | 994.02 | 333.62 | 994.21 | 333.68 |
| 995.57 | 334.51 | 997.24 | 335.56 | 997.4 | 335.59 | 999.1 | 335.34 | 999.53 | 335.3 |

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  999.72  335.32 1002.22  335.14 1003.46  335.15 1003.94  335.16 1004.57  335.16
 1005.14   335.2  1005.4  335.24 1006.08  335.38 1006.67  335.53 1008.65  336.46
 1009.13  336.66 1009.47  336.83 1010.17  337.16 1010.81  337.38 1013.81  338.13
 1014.74  338.31 1020.89   338.7 1021.66  338.75 1022.75   338.8 1024.02   338.8
 1026.49  338.97 1028.16  339.06 1030.13  339.21 1031.67  339.24 1032.47  339.27
  1033.1  339.28

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  550.25     .04  968.31     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        550.25  968.31            33.31   18.91   17.36              .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 3967.23

INPUT
Description:
Station Elevation Data    num=     393
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  343.563.719971  343.084.420044     3437.170044  342.588.890015  342.54
9.459961  342.5110.31006  342.4411.66003  342.3417.72998     342   20.37  341.71
22.28003  341.5522.64001  341.4823.48999  341.3626.23999   341.126.53003  341.05
27.42004     34128.07996  340.88   30.12  340.5830.85999  340.52    31.5   340.5
33.05005  340.53   35.88  340.4536.32996  340.4137.81995  340.3542.06995  340.33
45.29004  340.45   46.13  340.5246.71997  340.5649.43994  340.9249.57996  340.94
50.23999     34150.82996  341.0351.64001  341.0552.64001  341.05   53.87  341.03
   54.75     34155.15002  340.9856.65002  340.8756.91003  340.8757.33997  340.89
58.31006  340.8958.79004  340.8861.23999  340.78   74.37     34076.85999  339.71
81.56995     33983.29004   338.486.41003  337.1786.76001     33788.41003  336.85
   89.37  336.8695.31006  336.7597.52002  336.6697.92004   336.698.94995  336.49
  101.73  336.26  102.13  336.19   102.8   336.1  103.38     336  104.87  335.76
  106.03  335.55106.3101  335.51  106.42  335.51  107.17  335.59108.1801  335.66
  113.75  335.81  117.84     336  118.35  336.03   118.4  336.04  122.33  336.38
  123.11  336.47  123.99  336.61  125.45     337126.9301  337.58  128.59     338
  128.91  338.09  132.33    339132.6801   339.1   133.3   339.2  133.85  339.23
134.5699  339.25  135.14  339.24  136.08  339.19136.9399  339.12  138.12     339
138.6801  338.89  139.26  338.79  141.09  338.52  142.11  338.32  143.85     338
  144.92  337.75  145.89  337.51  148.11     337149.9399  336.48  152.01     336
   152.2  335.96  156.98     335  161.64  333.95  165.61     333  166.21  332.94
  166.52  332.92  166.92  332.89175.0699  332.16  177.01     332  178.25  331.94
  205.91  331.08  206.67  331.05  222.91  330.53  246.24  329.59  249.45  329.56
  252.97  329.47  255.55  329.43  268.18  329.33  269.09  329.33  269.68  329.32
  281.81  329.33  303.23  329.04  304.15     329  304.73  328.94  306.68  328.65
  306.87  328.64  308.52  328.66  309.27  328.66  311.18  328.61  311.97  328.65
  312.06  328.66  312.26  328.67  312.45  328.67  314.65  328.61  331.56  328.25
  336.42  328.14  337.08  328.14  337.61  328.13  338.06  328.13  338.45  328.14
  339.36  328.14  342.32  328.07  342.56  328.07  345.69     328  345.81     328
  363.05  327.96  368.84   327.9  369.28  327.89  370.61  327.82  374.63  327.76
  377.86  327.92   378.4  327.94  379.22  327.95  380.35  327.95  380.47  327.96
   380.8  327.96  380.86  327.95  390.51  327.91   390.7   327.9  390.85   327.9
   407.1  327.75  408.68  327.75  409.51  327.76  410.22  327.79  410.69   327.8
  425.21  327.85  425.41  327.83  425.71  327.83  439.15  327.96  439.26  327.96
  444.11     328  445.28  328.02  446.28  328.02  447.48     328  455.21  327.98
  455.38  327.99  455.89     328  461.96     328  462.47  328.01  471.14  328.01
   472.9  327.99  473.61  327.97  473.85  327.95  474.05  327.92  474.25  327.83
  476.98   327.8  478.77  327.87  479.78  327.92  480.73     328  497.87     328
   522.8  328.49  532.25  328.63  532.47  328.64  537.23  328.71  539.18  328.71
  541.54  328.67  544.34  328.65  549.17  328.64  550.25  328.66     553  328.65
  558.39  328.42  559.01  328.39  559.25  328.35  559.72  328.32  560.55  328.28
  560.76  328.28  561.99  328.23  562.68  328.22  569.53  328.01  569.59     328
  569.66  328.01  569.78     328  578.63     328  587.89  328.54  590.87  328.68
  596.04   328.8  598.55  328.82  599.54  328.84   600.9  328.84  619.46  328.95
  619.79  328.96  620.13  328.96  620.35  328.97   620.9  328.97  622.13  328.99
  624.12  328.91  624.95  328.95  626.06  328.97  628.01  328.97  632.59  328.89
   637.4  328.64  639.73  328.55  650.37     328   689.6     328  693.47  327.81
  716.59     327  716.92  326.95     717  326.96  717.07  326.96  717.22  326.97
  717.63  326.97   717.8  326.96  718.02  326.96  751.09     326  752.56   325.8
  753.18  325.67  754.03  325.57  754.53  325.54  754.99  325.52  755.22  325.52
  757.27  325.56  758.31  325.56  758.65  325.55  759.08  325.52  759.63  325.47
  759.74  325.47  760.57  325.56  760.83  325.67  760.91  325.67  761.22  325.66
   762.1  325.62   762.6  325.62  764.57  325.65  764.65  325.65  768.94  325.72
  769.16  325.73  769.22  325.72  769.29  325.72  769.52   325.7  769.72   325.7
  769.95  325.69  770.55  325.69  770.95   325.7  772.17   325.7  779.29  325.58
  781.64  325.49  782.47  325.47  795.35  325.46   795.4  325.47  795.69  325.48
  796.88  325.45  799.73  325.46  800.92  325.44  804.13  325.49  805.05  325.48
  805.73  325.49  808.49   325.5  809.18  325.52  823.22  325.39  825.73   325.3
  826.67  325.28  826.99  325.27  828.99  325.23  830.14  325.22  832.68  325.17
   837.6     325  861.85     325  891.67  324.97  891.75  324.96  891.97  324.96
  901.18  324.86  903.74  324.85  907.29  324.78  911.89  324.61  913.46  324.57
   914.1  324.54  915.38  324.47  915.79  324.46  916.04  324.45  920.71  324.46
  920.96  324.45  921.37  324.44  921.67  324.43  924.05   324.4  924.47  324.41
  925.26  324.42  926.67  324.49  926.82  324.51  927.26  324.65   929.3  324.86
   931.3     325  935.25  325.86  935.87     326  944.91     327  946.13  327.31
  946.56  327.41  950.84  328.59  951.93     329  958.15  331.64  959.11     332
  960.33   332.4  961.82  332.82  962.57     333  963.88  333.34  965.68  333.75
  966.79     334   967.6  334.14  967.86  334.18  968.91  334.35  970.27  334.46
  971.12  334.46  972.32  334.67  973.16  334.73  974.37  334.69  977.27  334.48
  977.72  334.44  978.44  334.41   979.1   334.4  981.87  334.47  982.01  334.47
  982.31  334.45   982.5  334.42  982.69  334.37  985.61  333.63  988.52     333
  989.16  332.85  989.44  332.82  989.57  332.82  990.33  332.63   990.6  332.54
  990.99  332.47  991.18  332.52   992.2  332.94  992.39     333  993.79   333.9
  993.94     334  995.24  334.85  995.46  334.99  995.52  335.03  995.61  335.06
  995.68  335.06  996.13     335  997.43  334.79  997.53  334.78  997.88  334.75
  998.07  334.77 1000.65  334.58 1003.08   334.6 1003.66  334.64 1003.93  334.68
 1004.63  334.84 1005.24     335 1007.28     336 1007.78  336.22 1008.13   336.4
 1008.85  336.76 1009.51     337  1012.6  337.81 1013.56     338  1019.9  338.43
  1020.7  338.49 1021.48  338.54 1021.82  338.55 1023.13  338.55 1029.43     339
 1031.02  339.03 1031.85  339.06  1032.5  339.07

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
```

0 .05 537.23 .04 965.68 .05

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 537.23 | 965.68 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3947.5*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 11.49 | 343.23 | 12.69 | 343.07 | 13.36 | 342.97 | 15.04 | 342.71 | 15.94 | 342.58 |
| 16.87 | 342.42 | 18.71 | 342.1 | 20.45 | 342.01 | 21.03 | 341.97 | 21.88 | 341.87 |
| 23.24 | 341.74 | 24.76 | 341.63 | 29.36 | 341.29 | 32.02 | 340.97 | 32.87 | 340.88 |
| 33.95 | 340.78 | 34.31 | 340.7 | 35.17 | 340.57 | 35.6 | 340.52 | 36.09 | 340.47 |
| 37.78 | 340.29 | 38.23 | 340.22 | 39.13 | 340.16 | 39.8 | 340.05 | 41.85 | 339.75 |
| 42.6 | 339.68 | 43.24 | 339.66 | 44.81 | 339.68 | 47.66 | 339.58 | 48.11 | 339.54 |
| 49.61 | 339.48 | 52.43 | 339.44 | 53.9 | 339.43 | 57.15 | 339.54 | 57.99 | 339.6 |
| 58.59 | 339.63 | 61.33 | 339.95 | 61.47 | 339.97 | 62.14 | 340.02 | 62.73 | 340.05 |
| 63.55 | 340.06 | 64.55 | 340.05 | 65.79 | 340.03 | 67.08 | 339.97 | 68.6 | 339.86 |
| 69.29 | 339.87 | 70.27 | 339.87 | 70.75 | 339.85 | 73.22 | 339.74 | 74.41 | 339.67 |
| 86.46 | 338.95 | 88.97 | 338.67 | 93.72 | 337.98 | 95.45 | 337.41 | 98.6 | 336.23 |
| 98.95 | 336.07 | 100.61 | 335.93 | 101.58 | 335.93 | 104.25 | 335.88 | 107.57 | 335.81 |
| 109.8 | 335.73 | 110.2 | 335.67 | 111.24 | 335.56 | 114.04 | 335.34 | 114.44 | 335.28 |
| 115.12 | 335.19 | 117.21 | 334.87 | 118.38 | 334.67 | 118.66 | 334.63 | 118.77 | 334.63 |
| 119.53 | 334.7 | 120.54 | 334.77 | 126.16 | 334.9 | 130.28 | 335.08 | 130.8 | 335.1 |
| 130.85 | 335.11 | 134.81 | 335.43 | 135.59 | 335.51 | 136.48 | 335.64 | 137.95 | 336.01 |
| 139.45 | 336.56 | 141.12 | 336.95 | 143.7 | 337.6 | 144.7 | 337.85 | 144.89 | 337.89 |
| 145.24 | 337.99 | 145.87 | 338.08 | 146.42 | 338.11 | 147.15 | 338.13 | 147.72 | 338.12 |
| 148.67 | 338.07 | 149.54 | 338 | 150.73 | 337.89 | 151.87 | 337.69 | 153.72 | 337.44 |
| 154.75 | 337.25 | 156.5 | 336.94 | 157.58 | 336.71 | 158.56 | 336.48 | 160.8 | 336 |
| 162.64 | 335.51 | 164.92 | 335.02 | 169.74 | 334.11 | 174.44 | 333.12 | 178.44 | 332.22 |
| 179.04 | 332.17 | 179.76 | 332.12 | 187.97 | 331.43 | 189.93 | 331.28 | 191.18 | 331.22 |
| 192.48 | 331.19 | 198.29 | 331.02 | 200.87 | 330.96 | 205.92 | 330.82 | 207.94 | 330.76 |
| 208.16 | 330.75 | 219.06 | 330.42 | 219.83 | 330.4 | 236.2 | 329.89 | 239.39 | 329.77 |
| 248.37 | 329.43 | 259.72 | 329.03 | 262.79 | 329.01 | 263.43 | 329 | 266.5 | 328.93 |
| 269.11 | 328.89 | 275.83 | 328.84 | 276.19 | 328.83 | 277.94 | 328.82 | 278.42 | 328.82 |
| 281.84 | 328.78 | 282.75 | 328.78 | 283.35 | 328.77 | 284.79 | 328.77 | 289.56 | 328.78 |
| 293.31 | 328.77 | 295.13 | 328.78 | 295.58 | 328.78 | 300.42 | 328.71 | 301.63 | 328.7 |
| 301.93 | 328.69 | 302.98 | 328.67 | 303.5 | 328.67 | 303.84 | 328.66 | 304.46 | 328.66 |
| 308.1 | 328.62 | 317.17 | 328.51 | 318.1 | 328.47 | 318.68 | 328.42 | 320.65 | 328.15 |
| 320.84 | 328.14 | 322.5 | 328.16 | 323.26 | 328.16 | 325.18 | 328.11 | 325.98 | 328.15 |
| 326.27 | 328.17 | 326.47 | 328.17 | 328.68 | 328.12 | 345.57 | 327.79 | 345.73 | 327.79 |
| 350.63 | 327.7 | 351.29 | 327.7 | 351.83 | 327.69 | 352.28 | 327.69 | 352.68 | 327.7 |
| 353.59 | 327.7 | 356.58 | 327.64 | 356.82 | 327.64 | 359.97 | 327.57 | 361.1 | 327.57 |
| 374.56 | 327.54 | 377.47 | 327.53 | 383.31 | 327.47 | 383.75 | 327.46 | 385.1 | 327.39 |
| 387.06 | 327.36 | 387.74 | 327.34 | 388.86 | 327.33 | 389.15 | 327.32 | 389.25 | 327.33 |
| 392.4 | 327.48 | 392.95 | 327.5 | 393.78 | 327.51 | 394.91 | 327.51 | 395.04 | 327.52 |
| 395.37 | 327.52 | 395.69 | 327.51 | 397.56 | 327.5 | 398.34 | 327.5 | 405.16 | 327.49 |
| 405.5 | 327.48 | 421.88 | 327.36 | 423.47 | 327.36 | 424.31 | 327.37 | 425.03 | 327.4 |
| 425.5 | 327.41 | 438.54 | 327.48 | 440.14 | 327.48 | 440.34 | 327.46 | 440.69 | 327.46 |
| 451.97 | 327.56 | 452.2 | 327.57 | 454.3 | 327.58 | 455.26 | 327.59 | 456.52 | 327.6 |
| 458.4 | 327.62 | 459.19 | 327.62 | 460.02 | 327.64 | 461.38 | 327.64 | 463.74 | 327.62 |
| 463.86 | 327.63 | 470.38 | 327.62 | 470.55 | 327.63 | 471.07 | 327.64 | 477.18 | 327.66 |
| 477.7 | 327.67 | 482.49 | 327.68 | 486.44 | 327.68 | 488.21 | 327.66 | 488.93 | 327.64 |
| 489.17 | 327.62 | 489.37 | 327.59 | 489.57 | 327.51 | 492.33 | 327.48 | 494.13 | 327.54 |
| 495.15 | 327.59 | 496.11 | 327.67 | 498.73 | 327.67 | 509.55 | 327.68 | 513.38 | 327.67 |
| 516.98 | 327.74 | 538.52 | 328.14 | 542.35 | 328.2 | 546.12 | 328.25 | 548.04 | 328.27 |
| 548.26 | 328.28 | 551.64 | 328.32 | 553.06 | 328.33 | 555.03 | 328.32 | 557.42 | 328.27 |
| 562.17 | 328.22 | 565.13 | 328.21 | 566.22 | 328.23 | 569 | 328.22 | 573.64 | 328.04 |
| 575.08 | 327.99 | 575.32 | 327.95 | 575.79 | 327.92 | 576.63 | 327.88 | 576.84 | 327.88 |
| 578.09 | 327.84 | 578.78 | 327.83 | 585.71 | 327.64 | 585.96 | 327.63 | 586.71 | 327.63 |
| 594.91 | 327.62 | 602.7 | 328.04 | 603.36 | 328.07 | 603.8 | 328.1 | 604.26 | 328.12 |
| 605.23 | 328.17 | 605.35 | 328.17 | 607.28 | 328.26 | 612.5 | 328.37 | 615.04 | 328.38 |
| 616.04 | 328.4 | 617.41 | 328.4 | 619.86 | 328.41 | 626.22 | 328.44 | 628.05 | 328.45 |
| 629.32 | 328.46 | 630.24 | 328.46 | 632.47 | 328.47 | 636.17 | 328.48 | 636.5 | 328.49 |
| 636.85 | 328.49 | 637.07 | 328.5 | 637.63 | 328.5 | 638.87 | 328.51 | 640.88 | 328.42 |
| 641.72 | 328.46 | 642.29 | 328.46 | 642.84 | 328.47 | 644.81 | 328.47 | 649.44 | 328.39 |
| 654.3 | 328.14 | 656.66 | 328.05 | 657.7 | 328 | 664.04 | 327.7 | 664.39 | 327.69 |
| 667.41 | 327.54 | 694.14 | 327.56 | 707.06 | 327.57 | 710.97 | 327.39 | 711.66 | 327.37 |
| 719.02 | 327.14 | 721.74 | 327.05 | 727.7 | 326.86 | 730.86 | 326.77 | 731.6 | 326.74 |
| 734.34 | 326.66 | 734.67 | 326.61 | 734.98 | 326.63 | 735.78 | 326.63 | 736.6 | 326.61 |
| 743.57 | 326.42 | 744.9 | 326.38 | 745.49 | 326.37 | 747.95 | 326.3 | 754.91 | 326.1 |
| 756.11 | 326.06 | 758.89 | 325.98 | 760.83 | 325.93 | 769.21 | 325.7 | 770.69 | 325.51 |
| 771.32 | 325.38 | 772.18 | 325.29 | 772.68 | 325.26 | 773.15 | 325.24 | 773.38 | 325.24 |
| 774.65 | 325.26 | 775.45 | 325.28 | 776.51 | 325.28 | 776.85 | 325.27 | 777.84 | 325.2 |
| 777.95 | 325.2 | 778.78 | 325.28 | 779.05 | 325.39 | 779.45 | 325.38 | 780.34 | 325.34 |
| 780.84 | 325.34 | 786.33 | 325.42 | 787.25 | 325.43 | 787.47 | 325.44 | 787.83 | 325.41 |
| 788.27 | 325.4 | 790.68 | 325.4 | 792.31 | 325.37 | 797.71 | 325.28 | 800.08 | 325.19 |
| 800.92 | 325.17 | 813.94 | 325.15 | 814.28 | 325.17 | 815.49 | 325.14 | 816.37 | 325.14 |
| 818.37 | 325.15 | 819.57 | 325.12 | 822.62 | 325.16 | 822.81 | 325.17 | 823.74 | 325.16 |
| 824.43 | 325.17 | 827.22 | 325.18 | 827.92 | 325.2 | 832.93 | 325.15 | 834.02 | 325.15 |
| 836.84 | 325.13 | 837.12 | 325.12 | 837.72 | 325.12 | 842.11 | 325.08 | 844.65 | 325 |
| 845.6 | 324.98 | 845.92 | 324.97 | 847.94 | 324.93 | 850.13 | 324.91 | 851.67 | 324.88 |
| 856.64 | 324.74 | 866.49 | 324.76 | 867.82 | 324.77 | 869.46 | 324.77 | 869.51 | 324.76 |
| 872.33 | 324.76 | 877 | 324.73 | 877.8 | 324.73 | 879.64 | 324.72 | 881.15 | 324.72 |
| 881.51 | 324.71 | 884.57 | 324.7 | 895.94 | 324.7 | 897.4 | 324.71 | 897.9 | 324.71 |
| 900.13 | 324.72 | 901.58 | 324.72 | 911.17 | 324.7 | 911.37 | 324.69 | 911.75 | 324.69 |
| 912.98 | 324.67 | 913.42 | 324.67 | 915.76 | 324.63 | 920.9 | 324.57 | 923.49 | 324.56 |
| 927.08 | 324.49 | 929.68 | 324.4 | 930.37 | 324.37 | 931.73 | 324.32 | 933.31 | 324.28 |
| 933.96 | 324.26 | 935.25 | 324.19 | 935.92 | 324.17 | 940.67 | 324.17 | 941.61 | 324.14 |
| 942.05 | 324.14 | 942.31 | 324.13 | 942.73 | 324.13 | 943.89 | 324.11 | 945.34 | 324.13 |
| 946.69 | 324.2 | 946.84 | 324.2 | 947 | 324.22 | 947.47 | 324.36 | 949.64 | 324.56 |
| 950.03 | 324.59 | 950.72 | 324.63 | 951.77 | 324.7 | 952.43 | 324.84 | 956.64 | 325.67 |
| 962.43 | 326.24 | 963.26 | 326.32 | 963.34 | 326.32 | 966.26 | 326.61 | 967.56 | 326.9 |
| 968.02 | 327 | 972.58 | 328.11 | 973.52 | 328.43 | 973.74 | 328.5 | 980.36 | 331.08 |
| 981.38 | 331.43 | 982.57 | 331.79 | 984.27 | 332.26 | 984.42 | 332.29 | 985.07 | 332.44 |
| 985.96 | 332.65 | 986.46 | 332.78 | 988.38 | 333.2 | 989.32 | 333.4 | 990.3 | 333.57 |
| 991.38 | 333.74 | 991.83 | 333.8 | 992.98 | 333.9 | 993.83 | 333.91 | 995.03 | 334.13 |
| 995.87 | 334.19 | 997.09 | 334.17 | 998.87 | 334.08 | 999.72 | 334.03 | 1000.44 | 333.98 |
| 1001.16 | 333.95 | 1001.82 | 333.95 | 1004.18 | 334.03 | 1004.74 | 334.04 | 1005.04 | 334.03 |
| 1005.34 | 333.98 | 1008.34 | 333.28 | 1011.26 | 332.7 | 1011.9 | 332.57 | 1012.18 | 332.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1012.31 | 332.54 | 1013.07 | 332.37 | 1013.34 | 332.28 | 1013.73 | 332.22 | 1013.92 | 332.27 |
| 1014.95 | 332.67 | 1015.14 | 332.73 | 1016.54 | 333.59 | 1016.69 | 333.68 | 1017.99 | 334.5 |
| 1018.27 | 334.67 | 1018.43 | 334.7 | 1018.88 | 334.64 | 1020.18 | 334.45 | 1020.63 | 334.42 |
| 1020.83 | 334.44 | 1023.41 | 334.28 | 1025.84 | 334.32 | 1026.42 | 334.36 | 1026.69 | 334.4 |
| 1027.4 | 334.56 | 1028.01 | 334.72 | 1030.05 | 335.68 | 1030.52 | 335.88 | 1030.55 | 335.9 |
| 1031.62 | 336.42 | 1032.28 | 336.65 | 1034.4 | 337.19 | 1035.38 | 337.45 | 1036.34 | 337.64 |
| 1041.17 | 338.01 | 1042.69 | 338.13 | 1043.49 | 338.19 | 1044.61 | 338.26 | 1045.93 | 338.27 |
| 1048.86 | 338.5 | 1049.46 | 338.54 | 1052.24 | 338.75 | 1053.83 | 338.79 | 1054.66 | 338.83 |
| 1055.31 | 338.84 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 11.49 | .05 | 553.06 | .04 | 988.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 553.06 | 988.38 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3927.76*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 22.98 | 342.91 | 24.18 | 342.73 | 24.87 | 342.62 | 26.56 | 342.32 | 26.76 | 342.28 |
| 27.47 | 342.17 | 28.41 | 341.99 | 29.91 | 341.69 | 30.26 | 341.63 | 32.01 | 341.49 |
| 32.36 | 341.45 | 33.89 | 341.25 | 34.83 | 341.15 | 36.35 | 341.01 | 40.99 | 340.59 |
| 43.68 | 340.22 | 44.53 | 340.12 | 45.62 | 340 | 45.98 | 339.92 | 46.85 | 339.78 |
| 48.34 | 339.6 | 49.64 | 339.45 | 49.94 | 339.4 | 50.84 | 339.33 | 51.51 | 339.21 |
| 53.58 | 338.91 | 54.34 | 338.85 | 54.99 | 338.82 | 56.56 | 338.83 | 59.44 | 338.72 |
| 59.9 | 338.67 | 61.41 | 338.6 | 64.24 | 338.55 | 65.46 | 338.53 | 66.05 | 338.54 |
| 66.62 | 338.57 | 69 | 338.62 | 69.85 | 338.67 | 70.45 | 338.7 | 73.22 | 338.98 |
| 73.36 | 339 | 74.03 | 339.04 | 74.63 | 339.06 | 75.45 | 339.07 | 76.47 | 339.05 |
| 77.72 | 339.02 | 79.02 | 338.96 | 80.54 | 338.84 | 81.25 | 338.85 | 82.23 | 338.84 |
| 82.72 | 338.83 | 85.21 | 338.71 | 86.4 | 338.63 | 98.55 | 337.9 | 101.08 | 337.62 |
| 105.87 | 336.96 | 107.61 | 336.41 | 110.79 | 335.3 | 111.14 | 335.15 | 112.82 | 335 |
| 113.79 | 335 | 116.48 | 334.94 | 119.83 | 334.88 | 122.07 | 334.79 | 122.48 | 334.74 |
| 123.53 | 334.64 | 126.35 | 334.43 | 126.76 | 334.36 | 127.44 | 334.28 | 128.03 | 334.19 |
| 129.54 | 333.97 | 130.72 | 333.78 | 131.12 | 333.75 | 131.88 | 333.82 | 132.91 | 333.88 |
| 138.57 | 333.99 | 142.72 | 334.15 | 143.29 | 334.19 | 147.29 | 334.48 | 148.08 | 334.56 |
| 148.97 | 334.68 | 150.46 | 335.02 | 151.96 | 335.53 | 153.65 | 335.9 | 153.97 | 335.98 |
| 156.25 | 336.5 | 157.8 | 336.87 | 158.43 | 336.96 | 158.99 | 336.99 | 159.72 | 337 |
| 160.3 | 336.99 | 161.26 | 336.95 | 162.13 | 336.89 | 162.81 | 336.82 | 163.33 | 336.78 |
| 163.9 | 336.68 | 164.49 | 336.59 | 166.35 | 336.35 | 167.39 | 336.17 | 169.15 | 335.89 |
| 170.24 | 335.67 | 171.23 | 335.45 | 173.48 | 335 | 175.34 | 334.54 | 177.45 | 334.11 |
| 177.64 | 334.08 | 182.5 | 333.23 | 187.23 | 332.29 | 191.27 | 331.45 | 191.88 | 331.4 |
| 192.6 | 331.35 | 200.88 | 330.7 | 202.85 | 330.56 | 204.11 | 330.51 | 205.42 | 330.47 |
| 211.28 | 330.32 | 212.57 | 330.29 | 213 | 330.29 | 213.08 | 330.3 | 216.43 | 330.22 |
| 218.97 | 330.15 | 221.01 | 330.09 | 221.23 | 330.08 | 232.22 | 329.77 | 232.99 | 329.74 |
| 249.49 | 329.25 | 252.71 | 329.14 | 261.76 | 328.82 | 273.2 | 328.47 | 276.3 | 328.46 |
| 276.94 | 328.45 | 280.04 | 328.38 | 282.66 | 328.35 | 289.44 | 328.3 | 289.8 | 328.29 |
| 291.56 | 328.28 | 292.05 | 328.27 | 295.49 | 328.24 | 296.42 | 328.24 | 297.02 | 328.23 |
| 298.47 | 328.22 | 303.28 | 328.23 | 307.06 | 328.22 | 309.35 | 328.22 | 312.12 | 328.19 |
| 314.23 | 328.16 | 315.44 | 328.14 | 315.74 | 328.14 | 316.81 | 328.12 | 316.94 | 328.11 |
| 318.3 | 328.11 | 321.96 | 328.08 | 331.11 | 327.98 | 332.05 | 327.95 | 332.64 | 327.9 |
| 334.62 | 327.64 | 334.81 | 327.63 | 336.49 | 327.66 | 337.25 | 327.66 | 339.19 | 327.62 |
| 340.48 | 327.67 | 342.72 | 327.62 | 359.73 | 327.34 | 359.9 | 327.33 | 364.84 | 327.26 |
| 366.5 | 327.26 | 366.9 | 327.27 | 367.83 | 327.27 | 370.83 | 327.21 | 371.08 | 327.21 |
| 374.26 | 327.15 | 375.39 | 327.15 | 388.96 | 327.11 | 391.9 | 327.1 | 397.78 | 327.03 |
| 398.23 | 327.02 | 399.58 | 326.96 | 401.56 | 326.93 | 402.25 | 326.91 | 403.38 | 326.89 |
| 403.77 | 326.89 | 404.41 | 326.91 | 406.95 | 327.03 | 407.5 | 327.05 | 408.33 | 327.06 |
| 409.48 | 327.06 | 409.6 | 327.07 | 412.14 | 327.07 | 412.93 | 327.06 | 419.8 | 327.06 |
| 420.15 | 327.05 | 436.66 | 326.97 | 438.27 | 326.98 | 439.11 | 326.99 | 439.83 | 327.02 |
| 440.31 | 327.03 | 453.45 | 327.11 | 455.06 | 327.11 | 455.62 | 327.1 | 466.99 | 327.19 |
| 467.22 | 327.19 | 469.23 | 327.21 | 470.01 | 327.21 | 470.31 | 327.22 | 471.58 | 327.23 |
| 472.37 | 327.24 | 473.47 | 327.24 | 475.11 | 327.26 | 475.58 | 327.26 | 476.47 | 327.27 |
| 477.69 | 327.25 | 478.97 | 327.25 | 485.55 | 327.27 | 486.24 | 327.29 | 492.41 | 327.31 |
| 492.93 | 327.32 | 497.75 | 327.34 | 501.74 | 327.34 | 504.25 | 327.31 | 504.69 | 327.26 |
| 504.9 | 327.18 | 507.67 | 327.16 | 509.49 | 327.22 | 510.52 | 327.26 | 511.48 | 327.33 |
| 514.13 | 327.33 | 525.03 | 327.35 | 528.9 | 327.35 | 532.53 | 327.41 | 554.23 | 327.8 |
| 558.1 | 327.85 | 563.84 | 327.91 | 564.06 | 327.92 | 567.46 | 327.95 | 568.9 | 327.95 |
| 570.89 | 327.93 | 573.3 | 327.87 | 576.16 | 327.82 | 578.1 | 327.8 | 580.79 | 327.78 |
| 581.09 | 327.78 | 582.19 | 327.8 | 585 | 327.8 | 589.69 | 327.63 | 590.03 | 327.63 |
| 591.14 | 327.58 | 591.39 | 327.55 | 591.87 | 327.52 | 592.71 | 327.49 | 592.93 | 327.49 |
| 594.18 | 327.45 | 594.89 | 327.44 | 601.89 | 327.26 | 602.9 | 327.26 | 611.18 | 327.24 |
| 619.06 | 327.63 | 620.17 | 327.68 | 620.87 | 327.72 | 621 | 327.72 | 623.68 | 327.83 |
| 628.96 | 327.93 | 631.53 | 327.95 | 632.54 | 327.97 | 633.93 | 327.97 | 636.11 | 327.98 |
| 636.4 | 327.97 | 642.83 | 327.99 | 644.88 | 328 | 645.96 | 328.01 | 652.88 | 328.01 |
| 653.57 | 328.02 | 653.79 | 328.03 | 654.35 | 328.03 | 655.61 | 328.04 | 657.64 | 327.94 |
| 658.49 | 327.96 | 659.06 | 327.96 | 659.62 | 327.97 | 661.62 | 327.97 | 666.29 | 327.88 |
| 671.21 | 327.64 | 673.59 | 327.56 | 674.64 | 327.51 | 681.04 | 327.23 | 681.4 | 327.22 |
| 684.45 | 327.09 | 711.46 | 327.12 | 724.52 | 327.14 | 728.47 | 326.97 | 736.6 | 326.74 |
| 739.35 | 326.67 | 745.37 | 326.49 | 748.57 | 326.41 | 752.09 | 326.32 | 752.43 | 326.28 |
| 752.73 | 326.3 | 753.32 | 326.29 | 753.92 | 326.29 | 754.37 | 326.28 | 761.42 | 326.1 |
| 762.76 | 326.06 | 763.36 | 326.05 | 765.85 | 325.99 | 772.87 | 325.79 | 774.09 | 325.75 |
| 775.13 | 325.71 | 776.9 | 325.66 | 778.86 | 325.61 | 787.33 | 325.39 | 788.83 | 325.22 |
| 789.46 | 325.1 | 790.33 | 325.01 | 791.31 | 324.96 | 791.54 | 324.96 | 792.82 | 324.99 |
| 793.64 | 325 | 794.7 | 325 | 795.49 | 324.97 | 796.05 | 324.92 | 796.16 | 324.92 |
| 797 | 325 | 797.27 | 325.1 | 798.57 | 325.06 | 799.08 | 325.06 | 801.18 | 325.08 |
| 804.63 | 325.13 | 805.78 | 325.14 | 806.15 | 325.11 | 806.59 | 325.1 | 807.2 | 325.1 |
| 807.61 | 325.11 | 808.27 | 325.1 | 808.86 | 325.11 | 809.02 | 325.1 | 810.67 | 325.07 |
| 816.13 | 324.98 | 818.53 | 324.9 | 819.38 | 324.88 | 832.53 | 324.85 | 832.88 | 324.86 |
| 834.09 | 324.83 | 837.01 | 324.83 | 838.22 | 324.81 | 841.31 | 324.84 | 842.44 | 324.83 |
| 843.13 | 324.84 | 845.95 | 324.85 | 846.66 | 324.87 | 851.72 | 324.83 | 852.82 | 324.83 |
| 855.67 | 324.81 | 856.56 | 324.81 | 861 | 324.77 | 863.56 | 324.69 | 864.52 | 324.67 |
| 864.85 | 324.67 | 866.89 | 324.63 | 868.07 | 324.63 | 869.1 | 324.62 | 870.66 | 324.6 |
| 874.24 | 324.51 | 875.68 | 324.47 | 885.64 | 324.53 | 888.75 | 324.53 | 891.54 | 324.52 |
| 896.26 | 324.47 | 897.06 | 324.47 | 898.92 | 324.44 | 900.82 | 324.43 | 903.91 | 324.41 |
| 904.6 | 324.4 | 905.9 | 324.4 | 910.61 | 324.41 | 913.42 | 324.42 | 915.4 | 324.42 |
| 916.88 | 324.43 | 917.37 | 324.43 | 919.64 | 324.46 | 921.1 | 324.47 | 930.79 | 324.43 |
| 935.43 | 324.35 | 935.61 | 324.34 | 936.32 | 324.33 | 940.62 | 324.28 | 943.24 | 324.27 |
| 946.86 | 324.2 | 949.5 | 324.11 | 950.19 | 324.08 | 951.56 | 324.04 | 953.17 | 324 |
| 953.82 | 323.97 | 955.13 | 323.9 | 955.8 | 323.88 | 960.6 | 323.88 | 961.55 | 323.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 961.99 | 323.85 | 962.68 | 323.84 | 963.85 | 323.82 | 964.76 | 323.83 | 965.6 | 323.85 |
| 966.92 | 323.91 | 967.18 | 323.94 | 967.67 | 324.07 | 968.6 | 324.15 | 970.39 | 324.29 |
| 971.12 | 324.33 | 972.24 | 324.41 | 972.94 | 324.54 | 975.84 | 325.06 | 976.7 | 325.21 |
| 977.4 | 325.34 | 983.55 | 325.88 | 983.97 | 325.92 | 984.51 | 325.95 | 987.62 | 326.22 |
| 988.99 | 326.5 | 989.48 | 326.59 | 994.32 | 327.64 | 995.31 | 327.93 | 995.55 | 328.01 |
| 1002.57 | 330.51 | 1003.66 | 330.86 | 1004.91 | 331.21 | 1005.04 | 331.25 | 1006.88 | 331.73 |
| 1007.57 | 331.87 | 1008.51 | 332.08 | 1009.05 | 332.22 | 1010.2 | 332.47 | 1011.08 | 332.64 |
| 1012.03 | 332.83 | 1012.2 | 332.87 | 1013.01 | 333 | 1014.54 | 333.23 | 1015.69 | 333.34 |
| 1016.54 | 333.36 | 1017.74 | 333.58 | 1018.59 | 333.66 | 1019.8 | 333.65 | 1021.58 | 333.59 |
| 1022.71 | 333.54 | 1023.16 | 333.51 | 1023.88 | 333.5 | 1024.55 | 333.5 | 1026.9 | 333.59 |
| 1027.11 | 333.61 | 1027.47 | 333.62 | 1027.77 | 333.61 | 1028.15 | 333.54 | 1029.41 | 333.29 |
| 1031.08 | 332.93 | 1034 | 332.41 | 1034.64 | 332.28 | 1035.05 | 332.26 | 1035.81 | 332.1 |
| 1036.09 | 332.03 | 1036.48 | 331.97 | 1036.67 | 332.02 | 1037.69 | 332.4 | 1037.88 | 332.46 |
| 1039.29 | 333.28 | 1040.96 | 334.27 | 1041.02 | 334.31 | 1041.18 | 334.33 | 1041.63 | 334.29 |
| 1042.94 | 334.12 | 1043.39 | 334.09 | 1043.58 | 334.11 | 1045.2 | 334.02 | 1046.17 | 333.98 |
| 1048.61 | 334.04 | 1049.19 | 334.08 | 1049.46 | 334.12 | 1050.16 | 334.28 | 1050.77 | 334.43 |
| 1051.46 | 334.74 | 1052.82 | 335.36 | 1053.32 | 335.57 | 1053.67 | 335.74 | 1054.4 | 336.07 |
| 1055.06 | 336.3 | 1057.18 | 336.83 | 1058.16 | 337.08 | 1059.12 | 337.28 | 1060.3 | 337.39 |
| 1063.96 | 337.7 | 1065.48 | 337.82 | 1065.77 | 337.85 | 1067.07 | 337.95 | 1068.72 | 337.99 |
| 1071.67 | 338.23 | 1072.26 | 338.28 | 1075.04 | 338.5 | 1076.64 | 338.56 | 1077.47 | 338.6 |
| 1078.12 | 338.62 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 22.98 | .05 | 568.9 | .04 | 1011.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 568.9 | 1011.08 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3908.03*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 34.47 | 342.58 | 35.68 | 342.39 | 36.37 | 342.27 | 38.28 | 341.88 | 38.99 | 341.75 |
| 39.94 | 341.55 | 41.46 | 341.23 | 41.81 | 341.15 | 43.57 | 340.96 | 44.16 | 340.88 |
| 45.46 | 340.67 | 46.41 | 340.55 | 47.95 | 340.38 | 52.63 | 339.88 | 55.33 | 339.48 |
| 56.84 | 339.29 | 57.29 | 339.23 | 57.66 | 339.15 | 58.53 | 338.99 | 58.97 | 338.93 |
| 60.03 | 338.8 | 61.18 | 338.64 | 61.64 | 338.57 | 62.55 | 338.49 | 63.23 | 338.38 |
| 65.32 | 338.08 | 66.08 | 338.01 | 66.73 | 337.98 | 68.32 | 337.98 | 71.22 | 337.85 |
| 71.68 | 337.81 | 72.72 | 337.75 | 73.2 | 337.73 | 77.29 | 337.63 | 77.89 | 337.64 |
| 78.46 | 337.67 | 79.35 | 337.68 | 80.86 | 337.71 | 81.72 | 337.75 | 82.32 | 337.77 |
| 85.11 | 338.01 | 85.25 | 338.03 | 86.53 | 338.08 | 87.36 | 338.08 | 88.38 | 338.06 |
| 89.09 | 338.03 | 89.64 | 338.02 | 90.95 | 337.95 | 92.49 | 337.83 | 93.2 | 337.83 |
| 94.19 | 337.82 | 94.68 | 337.8 | 97.19 | 337.67 | 98.4 | 337.59 | 110.64 | 336.85 |
| 111.73 | 336.73 | 113.19 | 336.58 | 118.02 | 335.94 | 119.78 | 335.42 | 122.97 | 334.36 |
| 123.33 | 334.22 | 125.02 | 334.08 | 126 | 334.08 | 128.72 | 334.01 | 132.09 | 333.94 |
| 134.35 | 333.86 | 134.76 | 333.81 | 135.82 | 333.71 | 138.66 | 333.51 | 139.07 | 333.45 |
| 139.76 | 333.37 | 141.88 | 333.08 | 143.07 | 332.9 | 143.47 | 332.87 | 144.24 | 332.93 |
| 145.27 | 332.98 | 150.98 | 333.09 | 155.17 | 333.23 | 155.74 | 333.26 | 159.76 | 333.53 |
| 160.56 | 333.6 | 161.46 | 333.71 | 162.96 | 334.03 | 164.48 | 334.51 | 166.18 | 334.85 |
| 168.8 | 335.41 | 170.28 | 335.73 | 170.37 | 335.76 | 171 | 335.84 | 171.56 | 335.87 |
| 172.3 | 335.88 | 172.88 | 335.87 | 173.85 | 335.83 | 174.73 | 335.77 | 175.41 | 335.71 |
| 175.94 | 335.67 | 177.1 | 335.49 | 178.98 | 335.27 | 180.02 | 335.1 | 181.81 | 334.83 |
| 182.9 | 334.63 | 183.9 | 334.43 | 186.17 | 334 | 188.04 | 333.57 | 190.16 | 333.17 |
| 190.36 | 333.14 | 195.25 | 332.34 | 200.03 | 331.46 | 204.09 | 330.67 | 204.71 | 330.62 |
| 205.03 | 330.61 | 213.78 | 329.98 | 215.77 | 329.84 | 217.04 | 329.79 | 218.36 | 329.76 |
| 224.26 | 329.62 | 225.57 | 329.6 | 226.08 | 329.61 | 226.88 | 329.6 | 229.46 | 329.55 |
| 232.01 | 329.48 | 234.07 | 329.42 | 234.29 | 329.42 | 245.37 | 329.11 | 246.15 | 329.09 |
| 262.78 | 328.62 | 266.03 | 328.5 | 275.15 | 328.2 | 286.68 | 327.91 | 289.97 | 327.91 |
| 293.57 | 327.84 | 296.22 | 327.8 | 303.05 | 327.76 | 303.41 | 327.75 | 305.19 | 327.74 |
| 305.68 | 327.73 | 309.15 | 327.69 | 310.08 | 327.69 | 310.69 | 327.68 | 312.15 | 327.67 |
| 317 | 327.68 | 320.81 | 327.67 | 323.11 | 327.67 | 325.91 | 327.64 | 328.03 | 327.61 |
| 329.26 | 327.59 | 329.56 | 327.58 | 330.64 | 327.56 | 330.77 | 327.55 | 332.14 | 327.55 |
| 335.83 | 327.53 | 345.05 | 327.46 | 345.99 | 327.42 | 346.59 | 327.38 | 348.59 | 327.14 |
| 348.78 | 327.13 | 351.24 | 327.16 | 353.2 | 327.12 | 354.5 | 327.17 | 356.75 | 327.13 |
| 373.9 | 326.88 | 374.07 | 326.88 | 379.05 | 326.82 | 380.73 | 326.82 | 381.13 | 326.83 |
| 382.06 | 326.83 | 385.09 | 326.78 | 385.34 | 326.78 | 388.54 | 326.72 | 389.68 | 326.72 |
| 403.36 | 326.68 | 406.32 | 326.66 | 412.25 | 326.6 | 412.7 | 326.59 | 414.07 | 326.52 |
| 416.06 | 326.49 | 416.76 | 326.47 | 417.89 | 326.45 | 418.29 | 326.45 | 418.93 | 326.47 |
| 421.49 | 326.59 | 422.05 | 326.61 | 422.89 | 326.62 | 424.04 | 326.62 | 424.5 | 326.63 |
| 424.83 | 326.62 | 426.73 | 326.63 | 427.52 | 326.63 | 434.45 | 326.64 | 434.8 | 326.63 |
| 451.44 | 326.58 | 453.06 | 326.59 | 453.91 | 326.6 | 454.64 | 326.63 | 455.12 | 326.64 |
| 468.37 | 326.74 | 469.99 | 326.75 | 470.2 | 326.73 | 470.55 | 326.73 | 482.01 | 326.82 |
| 484.38 | 326.83 | 485.36 | 326.84 | 486.63 | 326.86 | 488.55 | 326.86 | 490.19 | 326.88 |
| 490.67 | 326.88 | 491.57 | 326.89 | 492.8 | 326.88 | 494.09 | 326.88 | 500.72 | 326.91 |
| 501.42 | 326.93 | 507.63 | 326.97 | 508.15 | 326.98 | 513.02 | 327.01 | 517.04 | 327.01 |
| 519.57 | 326.98 | 520.02 | 326.93 | 520.22 | 326.86 | 523.02 | 326.83 | 524.85 | 326.89 |
| 525.88 | 326.93 | 526.86 | 327 | 529.53 | 327 | 540.51 | 327.03 | 544.41 | 327.02 |
| 548.07 | 327.08 | 569.95 | 327.45 | 573.85 | 327.5 | 577.67 | 327.53 | 579.85 | 327.55 |
| 583.28 | 327.57 | 584.73 | 327.57 | 586.74 | 327.54 | 589.18 | 327.47 | 594.02 | 327.37 |
| 596.75 | 327.35 | 597.05 | 327.35 | 598.17 | 327.37 | 601 | 327.37 | 605.74 | 327.21 |
| 606.08 | 327.22 | 607.21 | 327.18 | 607.45 | 327.15 | 607.94 | 327.12 | 608.8 | 327.09 |
| 609.01 | 327.09 | 610.28 | 327.05 | 610.99 | 327.05 | 618.06 | 326.89 | 618.32 | 326.88 |
| 619.09 | 326.89 | 627.46 | 326.87 | 635.42 | 327.22 | 636.54 | 327.27 | 636.91 | 327.28 |
| 638 | 327.33 | 638.12 | 327.33 | 640.09 | 327.41 | 645.42 | 327.5 | 648.01 | 327.51 |
| 649.04 | 327.53 | 650.44 | 327.53 | 652.64 | 327.54 | 661.31 | 327.54 | 661.5 | 327.55 |
| 662.6 | 327.56 | 663.54 | 327.56 | 665.82 | 327.55 | 670.29 | 327.55 | 670.51 | 327.56 |
| 671.08 | 327.55 | 672.35 | 327.56 | 674.4 | 327.45 | 675.26 | 327.47 | 676.41 | 327.47 |
| 678.42 | 327.46 | 683.15 | 327.38 | 688.11 | 327.15 | 690.51 | 327.06 | 691.57 | 327.01 |
| 698.05 | 326.76 | 698.41 | 326.75 | 701.5 | 326.63 | 728.79 | 326.68 | 741.98 | 326.7 |
| 745.98 | 326.55 | 746.68 | 326.53 | 754.19 | 326.35 | 756.97 | 326.29 | 763.05 | 326.12 |
| 766.28 | 326.06 | 767.04 | 326.04 | 769.46 | 325.99 | 769.84 | 325.98 | 770.18 | 325.94 |
| 770.49 | 325.96 | 771.31 | 325.96 | 771.68 | 325.95 | 772.14 | 325.95 | 779.27 | 325.78 |
| 780.63 | 325.75 | 781.22 | 325.73 | 783.74 | 325.68 | 790.84 | 325.48 | 792.07 | 325.44 |
| 792.8 | 325.41 | 794.91 | 325.35 | 796.89 | 325.3 | 805.44 | 325.09 | 806.96 | 324.92 |
| 807.6 | 324.81 | 808.48 | 324.73 | 808.99 | 324.7 | 809.71 | 324.69 | 811.82 | 324.72 |
| 812.9 | 324.72 | 813.69 | 324.69 | 814.37 | 324.65 | 815.22 | 324.72 | 815.5 | 324.82 |
| 815.9 | 324.81 | 816.81 | 324.77 | 817.32 | 324.77 | 819.44 | 324.8 | 822.93 | 324.84 |
| 823.87 | 324.84 | 824.09 | 324.85 | 824.46 | 324.82 | 824.91 | 324.81 | 827.37 | 324.81 |
| 829.04 | 324.77 | 834.55 | 324.68 | 836.97 | 324.6 | 837.83 | 324.58 | 851.12 | 324.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 851.47 | 324.55 | 852.7 | 324.53 | 853.45 | 324.53 | 853.6 | 324.52 | 855.64 | 324.52 |
| 856.87 | 324.49 | 859.99 | 324.52 | 861.13 | 324.51 | 861.84 | 324.52 | 864.68 | 324.53 |
| 865.4 | 324.55 | 870.51 | 324.51 | 871.62 | 324.51 | 874.79 | 324.5 | 875.41 | 324.49 |
| 879.89 | 324.46 | 881.82 | 324.4 | 882.48 | 324.39 | 883.78 | 324.36 | 888.08 | 324.32 |
| 889.65 | 324.31 | 894.32 | 324.22 | 894.73 | 324.21 | 904.78 | 324.29 | 906.14 | 324.3 |
| 907.81 | 324.3 | 907.92 | 324.29 | 910.75 | 324.28 | 915.52 | 324.2 | 916.33 | 324.2 |
| 918.21 | 324.17 | 919.75 | 324.15 | 920.12 | 324.14 | 923.25 | 324.11 | 925.25 | 324.11 |
| 930.01 | 324.12 | 932.85 | 324.14 | 934.85 | 324.14 | 936.35 | 324.15 | 936.85 | 324.15 |
| 939.14 | 324.2 | 940.62 | 324.21 | 950.41 | 324.17 | 950.84 | 324.15 | 952.25 | 324.13 |
| 955.1 | 324.07 | 956 | 324.04 | 960.35 | 323.99 | 962.99 | 323.98 | 966.65 | 323.91 |
| 969.31 | 323.82 | 970.01 | 323.8 | 971.4 | 323.75 | 973.02 | 323.71 | 973.68 | 323.69 |
| 975 | 323.62 | 975.68 | 323.6 | 978.63 | 323.59 | 978.9 | 323.6 | 980.53 | 323.6 |
| 982.21 | 323.55 | 982.63 | 323.55 | 983.82 | 323.53 | 984.8 | 323.54 | 985.49 | 323.56 |
| 986.57 | 323.6 | 987.18 | 323.63 | 987.35 | 323.65 | 987.88 | 323.78 | 988.86 | 323.85 |
| 990.32 | 323.97 | 990.76 | 323.99 | 991.53 | 324.04 | 992.71 | 324.11 | 993.45 | 324.24 |
| 996.52 | 324.75 | 997.43 | 324.89 | 998.17 | 325.01 | 1004.67 | 325.53 | 1005.12 | 325.56 |
| 1005.69 | 325.58 | 1008.97 | 325.83 | 1010.43 | 326.09 | 1010.94 | 326.17 | 1016.05 | 327.16 |
| 1017.11 | 327.43 | 1017.36 | 327.51 | 1024.79 | 329.95 | 1025.93 | 330.29 | 1027.26 | 330.64 |
| 1027.39 | 330.67 | 1029.17 | 331.13 | 1031.07 | 331.51 | 1031.63 | 331.65 | 1033.12 | 331.98 |
| 1033.78 | 332.09 | 1034.9 | 332.3 | 1035.71 | 332.43 | 1035.97 | 332.46 | 1036.79 | 332.58 |
| 1037.06 | 332.63 | 1038.4 | 332.78 | 1039.25 | 332.81 | 1040.46 | 333.04 | 1041.3 | 333.12 |
| 1042.52 | 333.14 | 1045.16 | 333.08 | 1045.88 | 333.05 | 1046.61 | 333.04 | 1047.27 | 333.05 |
| 1049.63 | 333.16 | 1050.05 | 333.19 | 1050.5 | 333.19 | 1050.88 | 333.13 | 1052.14 | 332.9 |
| 1053.81 | 332.58 | 1056.74 | 332.11 | 1057.38 | 332 | 1057.66 | 331.98 | 1057.79 | 331.99 |
| 1058.56 | 331.84 | 1058.83 | 331.77 | 1059.22 | 331.72 | 1059.41 | 331.77 | 1060.44 | 332.14 |
| 1060.63 | 332.19 | 1062.03 | 332.97 | 1062.18 | 333.05 | 1063.49 | 333.79 | 1063.77 | 333.94 |
| 1063.93 | 333.97 | 1064.39 | 333.93 | 1065.79 | 333.77 | 1066.14 | 333.76 | 1066.33 | 333.78 |
| 1068.93 | 333.67 | 1071.37 | 333.75 | 1071.95 | 333.8 | 1072.22 | 333.84 | 1072.93 | 334 |
| 1073.54 | 334.15 | 1074.23 | 334.45 | 1075.59 | 335.05 | 1076.09 | 335.25 | 1077.17 | 335.73 |
| 1077.83 | 335.94 | 1079.96 | 336.46 | 1080.94 | 336.72 | 1081.9 | 336.92 | 1083.08 | 337.04 |
| 1088.27 | 337.52 | 1089.08 | 337.59 | 1089.86 | 337.65 | 1090.2 | 337.67 | 1091.52 | 337.71 |
| 1094.47 | 337.97 | 1095.06 | 338.01 | 1097.85 | 338.25 | 1099.45 | 338.32 | 1100.28 | 338.37 |
| 1100.94 | 338.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 34.47 | .05 | 584.73 | .04 | 1033.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 584.73 | 1033.78 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3888.30*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 45.96 | 342.26 | 47.18 | 342.05 | 47.88 | 341.92 | 49.6 | 341.53 | 49.8 | 341.48 |
| 50.52 | 341.34 | 51.47 | 341.11 | 53 | 340.76 | 53.35 | 340.67 | 55.49 | 340.38 |
| 57.04 | 340.1 | 57.99 | 339.96 | 59.55 | 339.75 | 64.26 | 339.18 | 66.98 | 338.73 |
| 68.5 | 338.52 | 68.96 | 338.45 | 69.33 | 338.37 | 70.21 | 338.2 | 71.72 | 337.99 |
| 72.88 | 337.82 | 73.34 | 337.74 | 74.26 | 337.66 | 74.94 | 337.54 | 77.05 | 337.25 |
| 77.81 | 337.18 | 78.47 | 337.15 | 80.07 | 337.13 | 83 | 336.98 | 83.46 | 336.94 |
| 85 | 336.85 | 87.88 | 336.76 | 89.11 | 336.73 | 89.72 | 336.73 | 90.29 | 336.77 |
| 91.19 | 336.78 | 92.71 | 336.79 | 93.58 | 336.83 | 94.19 | 336.84 | 96.99 | 337.05 |
| 97.82 | 337.09 | 99.27 | 337.09 | 100.3 | 337.06 | 101.57 | 337.01 | 102.48 | 336.97 |
| 104.44 | 336.82 | 104.71 | 336.81 | 105.15 | 336.82 | 106.65 | 336.77 | 109.18 | 336.64 |
| 110.39 | 336.55 | 122.73 | 335.8 | 123.83 | 335.68 | 125.3 | 335.53 | 130.16 | 334.92 |
| 131.94 | 334.43 | 135.16 | 333.43 | 135.52 | 333.29 | 137.23 | 333.15 | 138.22 | 333.15 |
| 140.95 | 333.08 | 144.35 | 333.01 | 146.63 | 332.93 | 147.04 | 332.88 | 148.11 | 332.79 |
| 150.98 | 332.59 | 152.08 | 332.46 | 152.68 | 332.38 | 154.22 | 332.19 | 155.41 | 332.02 |
| 155.82 | 331.98 | 156.59 | 332.04 | 157.63 | 332.09 | 163.38 | 332.18 | 167.61 | 332.3 |
| 168.18 | 332.33 | 172.24 | 332.57 | 173.05 | 332.64 | 173.96 | 332.74 | 175.46 | 333.04 |
| 176.99 | 333.48 | 178.7 | 333.8 | 179.03 | 333.87 | 181.35 | 334.32 | 182.38 | 334.53 |
| 182.57 | 334.56 | 182.93 | 334.65 | 183.57 | 334.72 | 184.88 | 334.76 | 185.47 | 334.75 |
| 186.44 | 334.71 | 187.32 | 334.65 | 188.54 | 334.56 | 189.12 | 334.47 | 189.72 | 334.39 |
| 191.61 | 334.18 | 192.66 | 334.03 | 194.46 | 333.78 | 195.56 | 333.59 | 196.56 | 333.4 |
| 198.86 | 333 | 200.74 | 332.6 | 202.88 | 332.23 | 208.01 | 331.45 | 212.82 | 330.64 |
| 216.92 | 329.9 | 217.54 | 329.85 | 217.86 | 329.84 | 218.27 | 329.81 | 226.69 | 329.25 |
| 228.69 | 329.12 | 229.97 | 329.08 | 231.3 | 329.05 | 237.25 | 328.92 | 238.57 | 328.9 |
| 239 | 328.9 | 239.08 | 328.93 | 239.75 | 328.92 | 239.89 | 328.93 | 242.49 | 328.88 |
| 245.06 | 328.82 | 247.14 | 328.76 | 247.36 | 328.75 | 258.53 | 328.46 | 259.31 | 328.43 |
| 276.08 | 327.98 | 279.34 | 327.87 | 288.54 | 327.59 | 300.16 | 327.35 | 303.31 | 327.36 |
| 303.96 | 327.36 | 307.11 | 327.29 | 309.77 | 327.26 | 316.66 | 327.22 | 317.02 | 327.21 |
| 318.82 | 327.19 | 319.31 | 327.19 | 323.75 | 327.14 | 324.36 | 327.13 | 330.72 | 327.13 |
| 334.56 | 327.11 | 336.88 | 327.12 | 339.7 | 327.09 | 341.84 | 327.06 | 343.08 | 327.04 |
| 344.46 | 327 | 344.6 | 326.99 | 344.99 | 327 | 345.98 | 327 | 349.7 | 326.99 |
| 358.99 | 326.93 | 359.94 | 326.9 | 360.54 | 326.85 | 362.55 | 326.64 | 362.75 | 326.63 |
| 364.45 | 326.65 | 365.23 | 326.65 | 367.2 | 326.62 | 368.02 | 326.66 | 368.51 | 326.67 |
| 370.78 | 326.63 | 388.07 | 326.42 | 388.24 | 326.42 | 393.26 | 326.38 | 393.94 | 326.39 |
| 394.95 | 326.38 | 395.35 | 326.39 | 396.29 | 326.4 | 399.35 | 326.35 | 399.59 | 326.35 |
| 402.83 | 326.3 | 403.98 | 326.3 | 417.77 | 326.25 | 420.75 | 326.23 | 426.72 | 326.16 |
| 427.18 | 326.15 | 428.55 | 326.09 | 430.56 | 326.06 | 431.27 | 326.03 | 432.41 | 326.01 |
| 432.81 | 326.01 | 433.45 | 326.03 | 436.04 | 326.14 | 436.59 | 326.16 | 438.61 | 326.18 |
| 439.07 | 326.19 | 439.4 | 326.18 | 441.31 | 326.19 | 442.12 | 326.19 | 449.1 | 326.21 |
| 449.45 | 326.2 | 466.22 | 326.19 | 467.85 | 326.2 | 468.71 | 326.21 | 469.44 | 326.24 |
| 469.93 | 326.25 | 483.28 | 326.37 | 484.92 | 326.38 | 485.12 | 326.36 | 485.48 | 326.36 |
| 497.03 | 326.44 | 497.27 | 326.45 | 499.31 | 326.46 | 500.11 | 326.46 | 500.4 | 326.47 |
| 502.5 | 326.49 | 504.43 | 326.49 | 506.67 | 326.51 | 507.91 | 326.5 | 509.21 | 326.51 |
| 515.89 | 326.55 | 516.59 | 326.57 | 522.86 | 326.62 | 523.38 | 326.64 | 528.29 | 326.67 |
| 532.33 | 326.67 | 534.15 | 326.66 | 535.13 | 326.63 | 535.34 | 326.61 | 535.54 | 326.54 |
| 538.36 | 326.51 | 540.21 | 326.57 | 541.25 | 326.61 | 542.23 | 326.67 | 544.92 | 326.67 |
| 556 | 326.7 | 559.93 | 326.7 | 563.61 | 326.75 | 585.66 | 327.1 | 589.59 | 327.15 |
| 593.45 | 327.18 | 595.65 | 327.19 | 599.1 | 327.2 | 600.56 | 327.19 | 602.59 | 327.15 |
| 605.06 | 327.07 | 607.98 | 326.99 | 609.95 | 326.95 | 612.71 | 326.92 | 613.01 | 326.93 |
| 614.14 | 326.94 | 617.01 | 326.94 | 621.79 | 326.8 | 622.14 | 326.81 | 623.27 | 326.78 |
| 623.52 | 326.75 | 624.01 | 326.72 | 625.1 | 326.7 | 626.38 | 326.66 | 627.1 | 326.66 |
| 634.24 | 326.52 | 634.5 | 326.51 | 635.28 | 326.52 | 643.73 | 326.49 | 653.28 | 326.87 |
| 653.76 | 326.88 | 654.5 | 326.91 | 656.49 | 326.98 | 661.88 | 327.07 | 664.5 | 327.08 |
| 665.53 | 327.09 | 666.95 | 327.09 | 669.18 | 327.1 | 676.09 | 327.1 | 678.01 | 327.09 |
| 678.13 | 327.1 | 679.23 | 327.11 | 680.19 | 327.11 | 682.49 | 327.09 | 686.31 | 327.08 |
| 687 | 327.08 | 687.23 | 327.09 | 687.81 | 327.08 | 689.09 | 327.09 | 691.16 | 326.97 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 692.03 | 326.98 | 692.61 | 326.97 | 693.19 | 326.97 | 695.22 | 326.96 | 700 | 326.87 |
| 705.01 | 326.65 | 707.44 | 326.57 | 708.51 | 326.52 | 715.06 | 326.29 | 715.42 | 326.28 |
| 718.54 | 326.17 | 746.11 | 326.24 | 759.44 | 326.27 | 763.48 | 326.13 | 764.19 | 326.11 |
| 771.78 | 325.95 | 774.59 | 325.9 | 780.73 | 325.75 | 783.99 | 325.7 | 784.76 | 325.68 |
| 787.2 | 325.65 | 787.59 | 325.64 | 787.93 | 325.6 | 788.24 | 325.62 | 789.08 | 325.63 |
| 789.92 | 325.62 | 797.11 | 325.46 | 799.09 | 325.42 | 801.63 | 325.36 | 808.81 | 325.17 |
| 810.05 | 325.13 | 810.79 | 325.09 | 812.92 | 325.03 | 814.92 | 324.99 | 823.56 | 324.79 |
| 825.09 | 324.63 | 825.74 | 324.53 | 826.63 | 324.45 | 827.63 | 324.41 | 827.87 | 324.41 |
| 830.01 | 324.44 | 831.09 | 324.44 | 831.89 | 324.41 | 832.58 | 324.37 | 833.44 | 324.45 |
| 833.72 | 324.53 | 835.04 | 324.49 | 835.56 | 324.49 | 837.7 | 324.51 | 841.22 | 324.55 |
| 842.17 | 324.55 | 842.4 | 324.56 | 842.78 | 324.53 | 843.85 | 324.51 | 844.27 | 324.52 |
| 844.94 | 324.51 | 845.71 | 324.51 | 847.4 | 324.47 | 852.97 | 324.38 | 855.42 | 324.3 |
| 856.28 | 324.29 | 869.71 | 324.23 | 870.07 | 324.25 | 871.31 | 324.22 | 872.06 | 324.22 |
| 872.22 | 324.21 | 874.28 | 324.2 | 875.52 | 324.18 | 878.67 | 324.19 | 878.87 | 324.2 |
| 879.83 | 324.19 | 880.54 | 324.2 | 883.42 | 324.21 | 884.13 | 324.22 | 889.31 | 324.19 |
| 893.34 | 324.19 | 893.63 | 324.18 | 894.25 | 324.18 | 898.77 | 324.15 | 900.73 | 324.1 |
| 901.39 | 324.08 | 902.37 | 324.07 | 902.71 | 324.06 | 904.79 | 324.04 | 905.99 | 324.04 |
| 907.05 | 324.03 | 908.64 | 324.03 | 912.3 | 323.98 | 913.77 | 323.95 | 923.93 | 324.06 |
| 925.57 | 324.07 | 929.96 | 324.04 | 934.77 | 323.94 | 935.6 | 323.94 | 937.49 | 323.89 |
| 939.06 | 323.86 | 939.43 | 323.86 | 943.29 | 323.81 | 944.61 | 323.81 | 949.42 | 323.83 |
| 952.29 | 323.85 | 956.1 | 323.87 | 956.33 | 323.88 | 958.64 | 323.94 | 960.14 | 323.95 |
| 970.03 | 323.9 | 970.63 | 323.88 | 971.89 | 323.86 | 972.35 | 323.84 | 974.77 | 323.78 |
| 974.95 | 323.77 | 975.68 | 323.76 | 976.58 | 323.74 | 980.07 | 323.7 | 982.74 | 323.68 |
| 986.44 | 323.62 | 989.13 | 323.53 | 991.23 | 323.47 | 992.87 | 323.43 | 994.87 | 323.34 |
| 995.56 | 323.32 | 998.42 | 323.3 | 998.54 | 323.31 | 1000.46 | 323.31 | 1002.16 | 323.26 |
| 1002.59 | 323.26 | 1003.78 | 323.24 | 1004.84 | 323.25 | 1005.57 | 323.27 | 1006.94 | 323.33 |
| 1007.47 | 323.36 | 1008.09 | 323.48 | 1009.12 | 323.56 | 1010.66 | 323.67 | 1011.12 | 323.69 |
| 1013.18 | 323.82 | 1013.96 | 323.94 | 1017.19 | 324.43 | 1018.93 | 324.67 | 1025.79 | 325.17 |
| 1026.86 | 325.21 | 1030.32 | 325.44 | 1031.86 | 325.69 | 1032.4 | 325.76 | 1037.79 | 326.68 |
| 1038.9 | 326.94 | 1039.16 | 327.01 | 1047 | 329.39 | 1048.21 | 329.72 | 1049.61 | 330.06 |
| 1049.75 | 330.1 | 1051.62 | 330.56 | 1051.8 | 330.6 | 1052.57 | 330.74 | 1053.62 | 330.95 |
| 1054.22 | 331.09 | 1055.78 | 331.43 | 1056.48 | 331.54 | 1057.6 | 331.74 | 1058.42 | 331.86 |
| 1058.68 | 331.89 | 1059.95 | 332.08 | 1061.1 | 332.22 | 1061.96 | 332.26 | 1063.17 | 332.49 |
| 1064.01 | 332.59 | 1065.23 | 332.62 | 1067.02 | 332.62 | 1067.88 | 332.61 | 1068.6 | 332.59 |
| 1069.33 | 332.59 | 1069.99 | 332.6 | 1072.36 | 332.72 | 1072.56 | 332.75 | 1072.92 | 332.77 |
| 1073.42 | 332.75 | 1074.87 | 332.52 | 1076.55 | 332.23 | 1079.48 | 331.82 | 1080.12 | 331.72 |
| 1080.4 | 331.7 | 1080.53 | 331.71 | 1081.3 | 331.58 | 1081.57 | 331.52 | 1081.96 | 331.47 |
| 1082.15 | 331.52 | 1083.18 | 331.87 | 1083.37 | 331.92 | 1084.78 | 332.66 | 1086.52 | 333.58 |
| 1086.68 | 333.61 | 1087.14 | 333.57 | 1088.45 | 333.44 | 1088.9 | 333.43 | 1089.09 | 333.45 |
| 1091.69 | 333.37 | 1094.13 | 333.47 | 1094.72 | 333.52 | 1094.99 | 333.57 | 1096.31 | 333.86 |
| 1097 | 334.15 | 1098.36 | 334.73 | 1098.86 | 334.92 | 1099.22 | 335.08 | 1099.94 | 335.38 |
| 1100.61 | 335.59 | 1102.73 | 336.1 | 1103.72 | 336.36 | 1104.68 | 336.56 | 1105.86 | 336.7 |
| 1111.07 | 337.21 | 1111.87 | 337.29 | 1112.66 | 337.36 | 1113 | 337.38 | 1114.32 | 337.43 |
| 1117.27 | 337.7 | 1117.86 | 337.75 | 1120.66 | 338 | 1122.26 | 338.08 | 1123.09 | 338.14 |
| 1123.75 | 338.17 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 45.96 | .05 | 600.56 | .04 | 1056.48 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 600.56 | 1056.48 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3868.57*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 57.44 | 341.93 | 58.68 | 341.71 | 59.38 | 341.56 | 61.31 | 341.08 | 62.04 | 340.92 |
| 62.93 | 340.69 | 63 | 340.68 | 64.9 | 340.2 | 66.69 | 339.91 | 67.29 | 339.8 |
| 68.17 | 339.61 | 68.62 | 339.52 | 69.58 | 339.36 | 71.14 | 339.13 | 75.89 | 338.47 |
| 78.64 | 337.99 | 79.51 | 337.85 | 80.63 | 337.68 | 81 | 337.59 | 81.88 | 337.42 |
| 82.33 | 337.34 | 82.84 | 337.27 | 84.58 | 336.99 | 85.05 | 336.91 | 85.7 | 336.84 |
| 85.97 | 336.82 | 86.66 | 336.71 | 88.78 | 336.41 | 89.55 | 336.34 | 90.22 | 336.31 |
| 91.83 | 336.27 | 94.78 | 336.12 | 95.24 | 336.07 | 96.79 | 335.98 | 99.7 | 335.87 |
| 100.94 | 335.83 | 101.55 | 335.83 | 102.13 | 335.87 | 103.04 | 335.88 | 104.73 | 335.88 |
| 105.44 | 335.9 | 106.05 | 335.91 | 109.03 | 336.09 | 109.72 | 336.11 | 110.33 | 336.11 |
| 111.17 | 336.09 | 112.21 | 336.06 | 113.49 | 336.01 | 114.41 | 335.96 | 114.82 | 335.93 |
| 116.38 | 335.8 | 117.1 | 335.8 | 118.11 | 335.77 | 118.61 | 335.75 | 121.16 | 335.6 |
| 122.38 | 335.51 | 134.82 | 334.74 | 135.93 | 334.63 | 137.41 | 334.49 | 142.31 | 333.9 |
| 144.1 | 333.44 | 147.35 | 332.49 | 147.71 | 332.37 | 149.43 | 332.23 | 150.43 | 332.22 |
| 153.18 | 332.14 | 156.61 | 332.07 | 158.91 | 331.99 | 159.32 | 331.95 | 160.39 | 331.86 |
| 163.29 | 331.68 | 163.7 | 331.62 | 164.4 | 331.55 | 165 | 331.48 | 167.76 | 331.14 |
| 168.05 | 331.1 | 168.17 | 331.1 | 168.95 | 331.16 | 170 | 331.2 | 175.79 | 331.27 |
| 180.05 | 331.38 | 180.63 | 331.4 | 184.72 | 331.62 | 185.53 | 331.68 | 186.45 | 331.78 |
| 187.97 | 332.05 | 189.51 | 332.46 | 191.23 | 332.75 | 193.9 | 333.23 | 194.93 | 333.42 |
| 195.49 | 333.53 | 196.13 | 333.6 | 197.45 | 333.64 | 198.05 | 333.63 | 199.03 | 333.59 |
| 199.92 | 333.53 | 201.15 | 333.44 | 202.33 | 333.29 | 204.24 | 333.1 | 207.11 | 332.72 |
| 208.22 | 332.54 | 209.23 | 332.37 | 211.54 | 332 | 213.45 | 331.63 | 215.6 | 331.28 |
| 215.8 | 331.25 | 220.77 | 330.56 | 225.62 | 329.81 | 229.75 | 329.12 | 230.7 | 329.06 |
| 231.11 | 329.04 | 239.59 | 328.52 | 241.61 | 328.4 | 242.9 | 328.36 | 244.24 | 328.33 |
| 250.24 | 328.22 | 251.56 | 328.21 | 252 | 328.21 | 252.08 | 328.24 | 252.76 | 328.24 |
| 252.9 | 328.25 | 255.51 | 328.21 | 258.11 | 328.15 | 260.2 | 328.09 | 260.43 | 328.08 |
| 272.47 | 327.78 | 289.37 | 327.34 | 292.66 | 327.24 | 301.92 | 326.98 | 313.64 | 326.79 |
| 316.81 | 326.81 | 317.46 | 326.81 | 320.64 | 326.75 | 323.33 | 326.72 | 330.27 | 326.68 |
| 330.63 | 326.67 | 332.44 | 326.65 | 332.94 | 326.65 | 336.47 | 326.6 | 337.41 | 326.6 |
| 338.03 | 326.59 | 339.52 | 326.58 | 344.44 | 326.58 | 348.31 | 326.56 | 350.19 | 326.57 |
| 350.65 | 326.56 | 353.49 | 326.54 | 355.65 | 326.51 | 356.89 | 326.48 | 358.29 | 326.44 |
| 358.43 | 326.43 | 358.83 | 326.44 | 359.43 | 326.44 | 359.82 | 326.45 | 363.57 | 326.44 |
| 372.93 | 326.4 | 373.89 | 326.37 | 374.49 | 326.33 | 376.52 | 326.13 | 378.44 | 326.15 |
| 379.22 | 326.15 | 381.21 | 326.12 | 382.03 | 326.16 | 382.53 | 326.17 | 384.82 | 326.14 |
| 402.24 | 325.96 | 407.47 | 325.94 | 408.15 | 325.95 | 408.7 | 325.94 | 409.58 | 325.96 |
| 410.52 | 325.96 | 413.6 | 325.92 | 413.85 | 325.92 | 417.11 | 325.87 | 418.27 | 325.87 |
| 432.17 | 325.82 | 435.17 | 325.8 | 441.2 | 325.73 | 441.65 | 325.72 | 443.04 | 325.66 |
| 445.06 | 325.63 | 445.77 | 325.6 | 446.93 | 325.57 | 447.32 | 325.57 | 447.98 | 325.59 |
| 450.58 | 325.7 | 451.14 | 325.72 | 453.17 | 325.74 | 453.64 | 325.75 | 453.97 | 325.74 |
| 455.9 | 325.75 | 456.71 | 325.75 | 463.74 | 325.79 | 464.1 | 325.78 | 481 | 325.8 |
| 482.65 | 325.81 | 484.74 | 325.86 | 498.2 | 326 | 499.85 | 326.01 | 500.41 | 326 |
| 512.06 | 326.07 | 514.46 | 326.08 | 515.45 | 326.09 | 516.75 | 326.11 | 518.69 | 326.11 |
| 520.37 | 326.13 | 523.02 | 326.13 | 531.06 | 326.19 | 531.77 | 326.22 | 538.08 | 326.28 |
| 538.61 | 326.29 | 543.55 | 326.34 | 547.63 | 326.34 | 549.46 | 326.33 | 550.45 | 326.3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 550.66 | 326.28 | 550.87 | 326.21 | 553.71 | 326.19 | 555.57 | 326.24 | 556.62 | 326.28 |
| 557.61 | 326.34 | 560.32 | 326.34 | 571.48 | 326.38 | 575.44 | 326.37 | 579.16 | 326.42 |
| 601.38 | 326.76 | 605.34 | 326.8 | 609.23 | 326.82 | 611.21 | 326.82 | 611.44 | 326.83 |
| 614.92 | 326.83 | 616.39 | 326.81 | 618.45 | 326.76 | 620.93 | 326.66 | 623.88 | 326.58 |
| 625.88 | 326.52 | 628.67 | 326.5 | 630.11 | 326.51 | 633.01 | 326.51 | 637.84 | 326.38 |
| 638.19 | 326.4 | 639.34 | 326.37 | 639.59 | 326.35 | 640.96 | 326.3 | 641.18 | 326.3 |
| 642.48 | 326.27 | 643.2 | 326.27 | 650.42 | 326.15 | 650.68 | 326.14 | 651.47 | 326.14 |
| 660.01 | 326.11 | 668.13 | 326.4 | 668.82 | 326.42 | 669.28 | 326.44 | 670.37 | 326.47 |
| 670.89 | 326.5 | 672.9 | 326.56 | 678.35 | 326.63 | 680.99 | 326.64 | 682.03 | 326.66 |
| 683.47 | 326.65 | 686.01 | 326.66 | 692.65 | 326.65 | 694.64 | 326.64 | 694.76 | 326.65 |
| 695.87 | 326.66 | 696.84 | 326.66 | 699.16 | 326.63 | 703.02 | 326.61 | 705.83 | 326.61 |
| 707.93 | 326.48 | 708.8 | 326.48 | 709.39 | 326.47 | 709.97 | 326.47 | 712.02 | 326.46 |
| 716.85 | 326.37 | 721.92 | 326.15 | 724.37 | 326.07 | 725.45 | 326.02 | 732.06 | 325.82 |
| 732.43 | 325.82 | 735.58 | 325.72 | 763.43 | 325.81 | 776.9 | 325.84 | 780.98 | 325.71 |
| 781.7 | 325.7 | 789.36 | 325.56 | 792.2 | 325.52 | 798.41 | 325.38 | 801.71 | 325.35 |
| 802.48 | 325.33 | 804.95 | 325.31 | 805.34 | 325.3 | 805.68 | 325.27 | 806 | 325.29 |
| 807.69 | 325.29 | 814.96 | 325.14 | 816.35 | 325.11 | 816.96 | 325.1 | 819.53 | 325.05 |
| 826.77 | 324.86 | 828.03 | 324.82 | 828.78 | 324.78 | 830.92 | 324.72 | 832.54 | 324.68 |
| 832.95 | 324.68 | 841.68 | 324.49 | 843.23 | 324.34 | 843.88 | 324.24 | 844.78 | 324.17 |
| 845.79 | 324.13 | 846.03 | 324.13 | 848.19 | 324.16 | 849.64 | 324.16 | 850.1 | 324.14 |
| 850.79 | 324.1 | 851.66 | 324.17 | 851.94 | 324.25 | 853.28 | 324.21 | 853.8 | 324.21 |
| 855.96 | 324.23 | 859.52 | 324.26 | 860.78 | 324.26 | 860.85 | 324.25 | 861.55 | 324.22 |
| 862.6 | 324.22 | 863.28 | 324.21 | 864.06 | 324.21 | 865.76 | 324.17 | 871.39 | 324.08 |
| 873.86 | 324.01 | 874.74 | 323.99 | 888.3 | 323.92 | 888.66 | 323.94 | 889.92 | 323.91 |
| 890.68 | 323.91 | 890.83 | 323.9 | 892.92 | 323.89 | 894.17 | 323.86 | 897.35 | 323.87 |
| 898.52 | 323.87 | 899.24 | 323.88 | 902.15 | 323.89 | 902.87 | 323.9 | 908.1 | 323.87 |
| 913.09 | 323.87 | 917.66 | 323.84 | 919.64 | 323.79 | 921.3 | 323.77 | 921.63 | 323.76 |
| 923.74 | 323.74 | 927.63 | 323.74 | 931.33 | 323.71 | 932.39 | 323.69 | 932.81 | 323.69 |
| 943.08 | 323.82 | 944.46 | 323.83 | 946.17 | 323.83 | 946.28 | 323.82 | 949.16 | 323.79 |
| 954.03 | 323.67 | 954.86 | 323.67 | 956.78 | 323.61 | 958.36 | 323.58 | 958.73 | 323.57 |
| 962.64 | 323.51 | 963.97 | 323.51 | 968.83 | 323.53 | 971.73 | 323.57 | 973.77 | 323.58 |
| 975.3 | 323.59 | 975.81 | 323.6 | 978.14 | 323.68 | 979.65 | 323.7 | 989.65 | 323.63 |
| 990.25 | 323.61 | 992 | 323.57 | 994.43 | 323.5 | 995.35 | 323.47 | 996.26 | 323.46 |
| 999.79 | 323.41 | 1002.49 | 323.39 | 1006.23 | 323.33 | 1008.94 | 323.24 | 1011.07 | 323.18 |
| 1012.72 | 323.14 | 1013.4 | 323.12 | 1015.18 | 323.04 | 1015.44 | 323.04 | 1018.33 | 323.02 |
| 1020.39 | 323.02 | 1021.13 | 323 | 1021.23 | 322.99 | 1022.1 | 322.97 | 1022.54 | 322.97 |
| 1023.75 | 322.95 | 1024.88 | 322.96 | 1025.64 | 322.98 | 1027.09 | 323.04 | 1027.65 | 323.07 |
| 1028.29 | 323.19 | 1028.69 | 323.22 | 1029.38 | 323.26 | 1031 | 323.37 | 1031.48 | 323.39 |
| 1033.65 | 323.52 | 1034.47 | 323.64 | 1037.87 | 324.11 | 1038.88 | 324.24 | 1039.7 | 324.34 |
| 1046.9 | 324.81 | 1047.41 | 324.83 | 1048.03 | 324.84 | 1051.67 | 325.06 | 1053.29 | 325.28 |
| 1053.86 | 325.35 | 1059.53 | 326.2 | 1060.7 | 326.44 | 1060.97 | 326.51 | 1069.21 | 328.83 |
| 1070.48 | 329.15 | 1071.95 | 329.49 | 1072.1 | 329.52 | 1074.07 | 330 | 1074.26 | 330.04 |
| 1075.07 | 330.18 | 1076.17 | 330.38 | 1076.8 | 330.53 | 1078.15 | 330.82 | 1078.45 | 330.88 |
| 1079.19 | 330.99 | 1080.14 | 331.14 | 1080.3 | 331.17 | 1081.12 | 331.29 | 1082.2 | 331.43 |
| 1082.66 | 331.51 | 1083.81 | 331.66 | 1084.67 | 331.72 | 1085.88 | 331.95 | 1086.73 | 332.05 |
| 1087.95 | 332.1 | 1089.74 | 332.13 | 1090.6 | 332.14 | 1091.33 | 332.12 | 1092.05 | 332.13 |
| 1092.72 | 332.15 | 1095.08 | 332.29 | 1095.54 | 332.34 | 1095.95 | 332.34 | 1096.26 | 332.32 |
| 1096.34 | 332.3 | 1097.6 | 332.14 | 1099.28 | 331.88 | 1102.22 | 331.52 | 1102.86 | 331.44 |
| 1103.14 | 331.42 | 1103.27 | 331.43 | 1104.04 | 331.32 | 1104.31 | 331.26 | 1104.71 | 331.22 |
| 1104.9 | 331.26 | 1105.93 | 331.6 | 1106.12 | 331.65 | 1107.53 | 332.35 | 1107.68 | 332.42 |
| 1109.27 | 333.22 | 1109.44 | 333.25 | 1109.89 | 333.22 | 1111.3 | 333.1 | 1111.65 | 333.09 |
| 1111.84 | 333.11 | 1113.47 | 333.08 | 1114.45 | 333.07 | 1116.9 | 333.19 | 1117.48 | 333.24 |
| 1118.46 | 333.43 | 1119.07 | 333.58 | 1119.77 | 333.85 | 1121.13 | 334.41 | 1121.64 | 334.6 |
| 1122.71 | 335.04 | 1123.38 | 335.24 | 1125.51 | 335.73 | 1126.5 | 335.99 | 1127.46 | 336.2 |
| 1128.65 | 336.35 | 1132.33 | 336.75 | 1134.15 | 336.94 | 1134.66 | 336.99 | 1135.79 | 337.09 |
| 1137.11 | 337.15 | 1140.59 | 337.49 | 1140.67 | 337.49 | 1143.47 | 337.75 | 1145.07 | 337.85 |
| 1146.56 | 337.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 57.44 | .05 | 616.39 | .04 | 1079.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 616.39 | 1079.19 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3848.84*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 68.93 | 341.61 | 70.18 | 341.37 | 70.88 | 341.21 | 72.63 | 340.74 | 72.83 | 340.68 |
| 73.57 | 340.5 | 76.09 | 339.82 | 76.45 | 339.72 | 78.25 | 339.38 | 78.85 | 339.25 |
| 79.74 | 339.04 | 80.19 | 338.94 | 81.16 | 338.77 | 82.74 | 338.5 | 87.52 | 337.77 |
| 90.29 | 337.24 | 91.83 | 336.98 | 92.29 | 336.91 | 92.67 | 336.81 | 93.56 | 336.63 |
| 94.01 | 336.55 | 94.53 | 336.47 | 96.75 | 336.09 | 97.41 | 336.01 | 97.68 | 335.99 |
| 98.38 | 335.88 | 100.51 | 335.58 | 101.29 | 335.51 | 101.96 | 335.47 | 103.59 | 335.42 |
| 106.55 | 335.25 | 107.03 | 335.2 | 108.59 | 335.1 | 111.51 | 334.98 | 112.77 | 334.93 |
| 113.38 | 334.93 | 113.97 | 334.97 | 116.58 | 334.97 | 117.3 | 334.98 | 117.92 | 334.98 |
| 120.77 | 335.11 | 120.92 | 335.12 | 121.61 | 335.13 | 123.08 | 335.1 | 124.85 | 335.03 |
| 126.34 | 334.95 | 126.76 | 334.92 | 128.33 | 334.79 | 129.06 | 334.78 | 130.58 | 334.72 |
| 133.14 | 334.56 | 134.38 | 334.47 | 146.91 | 333.69 | 148.02 | 333.58 | 149.52 | 333.44 |
| 154.46 | 332.88 | 156.26 | 332.44 | 159.54 | 331.56 | 159.9 | 331.44 | 161.63 | 331.31 |
| 162.64 | 331.29 | 165.42 | 331.21 | 168.87 | 331.14 | 171.18 | 331.06 | 171.6 | 331.02 |
| 172.68 | 330.94 | 175.6 | 330.76 | 176.02 | 330.71 | 176.72 | 330.65 | 177.33 | 330.57 |
| 178.89 | 330.4 | 180.11 | 330.25 | 180.52 | 330.22 | 181.3 | 330.27 | 182.36 | 330.31 |
| 188.2 | 330.36 | 192.49 | 330.46 | 193.03 | 330.47 | 193.08 | 330.48 | 197.2 | 330.67 |
| 198.02 | 330.73 | 198.94 | 330.81 | 200.47 | 331.06 | 202.02 | 331.43 | 203.76 | 331.7 |
| 204.1 | 331.76 | 206.45 | 332.14 | 207.96 | 332.39 | 208.05 | 332.42 | 208.7 | 332.48 |
| 209.28 | 332.5 | 210.03 | 332.51 | 210.63 | 332.5 | 211.62 | 332.47 | 212.52 | 332.42 |
| 213.75 | 332.33 | 214.95 | 332.19 | 216.87 | 332.01 | 217.94 | 331.88 | 219.76 | 331.67 |
| 220.88 | 331.5 | 221.9 | 331.34 | 224.23 | 331.01 | 226.15 | 330.66 | 228.52 | 330.31 |
| 233.53 | 329.68 | 238.42 | 328.98 | 242.58 | 328.35 | 243.53 | 328.29 | 243.95 | 328.27 |
| 252.5 | 327.79 | 254.53 | 327.69 | 255.83 | 327.65 | 257.18 | 327.62 | 263.22 | 327.52 |
| 264.56 | 327.51 | 265 | 327.52 | 265.08 | 327.56 | 265.77 | 327.56 | 265.91 | 327.57 |
| 268.54 | 327.54 | 271.16 | 327.48 | 273.26 | 327.43 | 273.49 | 327.42 | 285.63 | 327.12 |
| 302.66 | 326.7 | 305.98 | 326.6 | 315.31 | 326.36 | 327.12 | 326.23 | 330.32 | 326.26 |
| 330.97 | 326.26 | 334.18 | 326.21 | 336.88 | 326.18 | 343.88 | 326.14 | 344.25 | 326.13 |
| 346.07 | 326.11 | 346.57 | 326.11 | 350.12 | 326.06 | 351.7 | 326.04 | 353.2 | 326.03 |
| 358.16 | 326.03 | 362.06 | 326 | 364.42 | 326.01 | 367.28 | 325.99 | 369.45 | 325.96 |
| 370.71 | 325.93 | 372.12 | 325.89 | 372.66 | 325.88 | 373.01 | 325.89 | 373.65 | 325.89 |
| 377.43 | 325.9 | 386.87 | 325.87 | 387.84 | 325.85 | 388.45 | 325.81 | 390.49 | 325.63 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 390.69 | 325.62 | 392.42 | 325.65 | 393.21 | 325.65 | 395.21 | 325.63 | 396.04 | 325.66 |
| 396.54 | 325.67 | 398.85 | 325.65 | 416.41 | 325.5 | 421.79 | 325.5 | 422.37 | 325.51 |
| 423.39 | 325.51 | 423.8 | 325.52 | 424.76 | 325.53 | 427.86 | 325.49 | 428.11 | 325.49 |
| 431.39 | 325.44 | 432.56 | 325.45 | 446.57 | 325.39 | 449.6 | 325.37 | 455.67 | 325.29 |
| 456.13 | 325.28 | 457.52 | 325.23 | 459.56 | 325.19 | 460.28 | 325.16 | 461.44 | 325.13 |
| 461.84 | 325.13 | 462.5 | 325.15 | 465.69 | 325.27 | 466.55 | 325.29 | 467.74 | 325.29 |
| 467.86 | 325.3 | 468.54 | 325.3 | 470.48 | 325.32 | 471.3 | 325.32 | 478.39 | 325.36 |
| 478.75 | 325.36 | 495.78 | 325.41 | 498.31 | 325.44 | 499.05 | 325.47 | 499.55 | 325.48 |
| 513.11 | 325.63 | 514.77 | 325.64 | 515.34 | 325.63 | 527.08 | 325.69 | 527.32 | 325.7 |
| 529.39 | 325.71 | 530.2 | 325.71 | 530.5 | 325.72 | 531.81 | 325.73 | 532.63 | 325.74 |
| 534.59 | 325.74 | 535.45 | 325.75 | 535.94 | 325.75 | 536.86 | 325.76 | 538.12 | 325.75 |
| 539.32 | 325.76 | 539.44 | 325.77 | 546.23 | 325.84 | 546.94 | 325.86 | 553.3 | 325.93 |
| 553.84 | 325.95 | 558.82 | 326.01 | 562.93 | 326.01 | 565.52 | 325.98 | 565.98 | 325.95 |
| 566.19 | 325.89 | 569.05 | 325.87 | 571.99 | 325.95 | 572.99 | 326 | 575.72 | 326 |
| 586.97 | 326.05 | 590.96 | 326.05 | 594.7 | 326.09 | 617.1 | 326.41 | 621.09 | 326.45 |
| 625.01 | 326.47 | 627.01 | 326.46 | 627.24 | 326.47 | 630.74 | 326.46 | 632.23 | 326.43 |
| 634.3 | 326.36 | 636.81 | 326.26 | 639.79 | 326.16 | 641.81 | 326.1 | 644.62 | 326.07 |
| 646.08 | 326.08 | 649.01 | 326.09 | 653.89 | 325.97 | 654.24 | 326 | 655.4 | 325.97 |
| 655.66 | 325.94 | 656.16 | 325.93 | 657.04 | 325.9 | 657.27 | 325.91 | 658.57 | 325.88 |
| 659.31 | 325.88 | 666.6 | 325.77 | 667.66 | 325.77 | 676.28 | 325.73 | 684.49 | 325.99 |
| 685.65 | 326.03 | 686.37 | 326.05 | 686.75 | 326.05 | 687.27 | 326.08 | 689.31 | 326.13 |
| 694.81 | 326.2 | 697.48 | 326.21 | 698.53 | 326.22 | 702.55 | 326.22 | 709.31 | 326.2 |
| 711.18 | 326.18 | 711.39 | 326.2 | 712.51 | 326.21 | 713.49 | 326.21 | 715.83 | 326.17 |
| 719.73 | 326.14 | 722.49 | 326.14 | 722.57 | 326.13 | 724.69 | 326 | 725.57 | 325.99 |
| 726.17 | 325.97 | 726.75 | 325.98 | 728.83 | 325.96 | 733.7 | 325.86 | 738.82 | 325.65 |
| 741.3 | 325.57 | 742.39 | 325.53 | 749.07 | 325.36 | 752.62 | 325.26 | 780.76 | 325.37 |
| 794.37 | 325.41 | 798.48 | 325.29 | 799.21 | 325.28 | 806.95 | 325.16 | 809.82 | 325.14 |
| 816.09 | 325.01 | 819.42 | 325 | 820.21 | 324.98 | 822.7 | 324.97 | 823.09 | 324.96 |
| 823.44 | 324.93 | 823.76 | 324.95 | 824.19 | 324.96 | 825.46 | 324.96 | 832.81 | 324.82 |
| 834.21 | 324.79 | 834.82 | 324.79 | 837.42 | 324.74 | 844.74 | 324.55 | 846.01 | 324.5 |
| 846.76 | 324.46 | 848.93 | 324.4 | 850.98 | 324.36 | 859.8 | 324.18 | 861.36 | 324.05 |
| 862.02 | 323.96 | 862.93 | 323.89 | 863.95 | 323.85 | 864.19 | 323.85 | 866.37 | 323.88 |
| 867.84 | 323.88 | 868.89 | 323.83 | 869 | 323.83 | 869.88 | 323.89 | 870.16 | 323.96 |
| 870.58 | 323.96 | 871.51 | 323.93 | 872.05 | 323.93 | 874.23 | 323.94 | 877.82 | 323.97 |
| 879.03 | 323.97 | 879.41 | 323.94 | 880.51 | 323.92 | 881.62 | 323.91 | 882.23 | 323.92 |
| 882.4 | 323.91 | 884.12 | 323.87 | 889.81 | 323.78 | 892.31 | 323.71 | 893.19 | 323.69 |
| 906.9 | 323.62 | 907.26 | 323.63 | 908.52 | 323.6 | 909.29 | 323.6 | 909.45 | 323.59 |
| 911.56 | 323.57 | 912.82 | 323.55 | 916.24 | 323.55 | 917.22 | 323.54 | 917.94 | 323.55 |
| 920.88 | 323.56 | 921.61 | 323.58 | 926.89 | 323.55 | 928.03 | 323.55 | 931 | 323.56 |
| 931.93 | 323.56 | 936.55 | 323.53 | 938.55 | 323.48 | 940.22 | 323.46 | 940.56 | 323.46 |
| 942.69 | 323.44 | 943.92 | 323.45 | 945 | 323.45 | 946.62 | 323.46 | 950.35 | 323.44 |
| 951.43 | 323.43 | 951.85 | 323.42 | 962.22 | 323.59 | 963.9 | 323.6 | 965.46 | 323.59 |
| 968.37 | 323.55 | 973.29 | 323.41 | 974.13 | 323.41 | 976.06 | 323.33 | 978.04 | 323.29 |
| 981.26 | 323.22 | 983.33 | 323.22 | 988.24 | 323.24 | 991.16 | 323.29 | 993.23 | 323.3 |
| 994.77 | 323.31 | 995.29 | 323.32 | 997.64 | 323.42 | 999.17 | 323.44 | 1009.26 | 323.36 |
| 1009.88 | 323.35 | 1011.55 | 323.3 | 1011.64 | 323.29 | 1014.1 | 323.22 | 1015.03 | 323.18 |
| 1015.95 | 323.17 | 1019.51 | 323.12 | 1022.23 | 323.1 | 1026.01 | 323.04 | 1028.76 | 322.96 |
| 1029.48 | 322.93 | 1030.91 | 322.89 | 1032.58 | 322.86 | 1034.62 | 322.77 | 1035.32 | 322.75 |
| 1038.24 | 322.73 | 1040.32 | 322.73 | 1040.56 | 322.72 | 1042.05 | 322.68 | 1042.49 | 322.68 |
| 1043.71 | 322.66 | 1044.62 | 322.67 | 1045.72 | 322.7 | 1046.98 | 322.74 | 1047.68 | 322.77 |
| 1048.5 | 322.9 | 1048.92 | 322.93 | 1051.34 | 323.07 | 1051.84 | 323.09 | 1052.74 | 323.14 |
| 1054.11 | 323.23 | 1054.98 | 323.35 | 1058.55 | 323.8 | 1059.6 | 323.91 | 1060.46 | 324.01 |
| 1068.02 | 324.45 | 1068.55 | 324.47 | 1069.11 | 324.47 | 1069.21 | 324.46 | 1073.03 | 324.67 |
| 1075.32 | 324.94 | 1081.27 | 325.73 | 1082.49 | 325.95 | 1082.78 | 326.02 | 1091.42 | 328.26 |
| 1092.76 | 328.58 | 1094.3 | 328.91 | 1094.45 | 328.95 | 1096.52 | 329.43 | 1096.72 | 329.48 |
| 1097.57 | 329.61 | 1098.73 | 329.81 | 1099.39 | 329.97 | 1100.8 | 330.27 | 1101.11 | 330.33 |
| 1101.89 | 330.43 | 1103.01 | 330.61 | 1103.83 | 330.72 | 1104.91 | 330.85 | 1105.37 | 330.94 |
| 1106.52 | 331.1 | 1107.38 | 331.17 | 1108.59 | 331.4 | 1109.44 | 331.51 | 1110.66 | 331.58 |
| 1112.46 | 331.64 | 1113.32 | 331.66 | 1114.05 | 331.66 | 1114.77 | 331.67 | 1115.44 | 331.7 |
| 1117.81 | 331.86 | 1118.38 | 331.92 | 1118.68 | 331.92 | 1119.07 | 331.89 | 1120.33 | 331.75 |
| 1122.02 | 331.54 | 1124.95 | 331.23 | 1125.6 | 331.15 | 1126.02 | 331.15 | 1126.78 | 331.05 |
| 1127.06 | 331 | 1127.45 | 330.97 | 1127.64 | 331.01 | 1128.67 | 331.33 | 1128.86 | 331.38 |
| 1130.43 | 332.11 | 1132.02 | 332.86 | 1132.19 | 332.88 | 1132.64 | 332.86 | 1133.95 | 332.77 |
| 1134.41 | 332.76 | 1134.6 | 332.78 | 1136.23 | 332.77 | 1137.21 | 332.77 | 1139.66 | 332.91 |
| 1140.25 | 332.97 | 1140.52 | 333.01 | 1141.23 | 333.15 | 1141.84 | 333.29 | 1143.9 | 334.09 |
| 1144.41 | 334.27 | 1145.49 | 334.69 | 1146.15 | 334.89 | 1148.29 | 335.37 | 1149.27 | 335.63 |
| 1150.24 | 335.84 | 1151.43 | 336 | 1155.11 | 336.43 | 1157.46 | 336.69 | 1158.24 | 336.77 |
| 1159.91 | 336.87 | 1162.87 | 337.17 | 1166.27 | 337.51 | 1167.88 | 337.61 | 1168.72 | 337.67 |
| 1169.37 | 337.71 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 68.93 | .05 | 632.23 | .04 | 1101.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 632.23 | 1101.89 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3829.11*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 80.42 | 341.29 | 81.68 | 341.04 | 82.39 | 340.86 | 84.15 | 340.34 | 85.09 | 340.09 |
| 86.07 | 339.8 | 87.64 | 339.35 | 87.99 | 339.24 | 89.82 | 338.85 | 90.18 | 338.77 |
| 91.32 | 338.48 | 91.77 | 338.36 | 92.74 | 338.17 | 94.33 | 337.88 | 99.16 | 337.06 |
| 101.95 | 336.5 | 103.5 | 336.22 | 103.96 | 336.13 | 104.34 | 336.04 | 105.24 | 335.84 |
| 105.69 | 335.75 | 106.79 | 335.56 | 108.15 | 335.32 | 108.45 | 335.26 | 109.39 | 335.15 |
| 110.09 | 335.04 | 112.25 | 334.75 | 113.03 | 334.67 | 113.71 | 334.63 | 115.34 | 334.57 |
| 118.33 | 334.38 | 119.88 | 334.26 | 120.38 | 334.23 | 123.33 | 334.08 | 124.59 | 334.03 |
| 125.21 | 334.03 | 125.8 | 334.07 | 126.72 | 334.07 | 128.28 | 334.05 | 129.79 | 334.05 |
| 132.66 | 334.14 | 133.51 | 334.15 | 134.13 | 334.14 | 134.99 | 334.11 | 136.04 | 334.06 |
| 136.77 | 334.02 | 137.34 | 334 | 138.69 | 333.91 | 140.28 | 333.78 | 141.01 | 333.76 |
| 142.03 | 333.72 | 145.13 | 333.53 | 146.37 | 333.43 | 159 | 332.64 | 160.12 | 332.54 |
| 161.63 | 332.4 | 166.61 | 331.86 | 168.43 | 331.45 | 171.72 | 330.62 | 172.09 | 330.51 |
| 173.84 | 330.38 | 174.85 | 330.37 | 177.65 | 330.27 | 181.13 | 330.2 | 183.46 | 330.13 |
| 183.88 | 330.09 | 184.97 | 330.01 | 187.91 | 329.84 | 189.04 | 329.74 | 189.65 | 329.67 |
| 191.23 | 329.51 | 192.45 | 329.37 | 192.87 | 329.34 | 193.66 | 329.38 | 194.73 | 329.42 |
| 200.61 | 329.45 | 205.47 | 329.54 | 205.52 | 329.55 | 209.68 | 329.72 | 210.5 | 329.77 |
| 211.43 | 329.85 | 212.97 | 330.07 | 214.54 | 330.41 | 216.29 | 330.65 | 219 | 331.05 |
| 220.52 | 331.28 | 220.61 | 331.31 | 221.27 | 331.36 | 221.85 | 331.38 | 222.61 | 331.39 |
| 223.21 | 331.38 | 224.2 | 331.35 | 225.11 | 331.3 | 225.81 | 331.25 | 226.36 | 331.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 226.95 | 331.16 | 227.56 | 331.09 | 229.5 | 330.93 | 232.41 | 330.61 | 234.57 | 330.32 |
| 236.92 | 330.01 | 238.85 | 329.69 | 241.04 | 329.4 | 241.24 | 329.37 | 246.29 | 328.79 |
| 251.21 | 328.15 | 255.41 | 327.57 | 256.04 | 327.53 | 256.79 | 327.5 | 265.4 | 327.06 |
| 267.45 | 326.97 | 268.76 | 326.93 | 276.21 | 326.82 | 277.56 | 326.82 | 278 | 326.83 |
| 278.08 | 326.88 | 278.78 | 326.88 | 278.91 | 326.89 | 281.57 | 326.86 | 284.21 | 326.82 |
| 286.33 | 326.76 | 286.56 | 326.75 | 297.99 | 326.49 | 298.79 | 326.47 | 315.95 | 326.06 |
| 319.29 | 325.97 | 328.7 | 325.75 | 340.6 | 325.67 | 343.82 | 325.71 | 344.48 | 325.71 |
| 347.71 | 325.66 | 350.44 | 325.64 | 357.49 | 325.61 | 357.86 | 325.59 | 359.69 | 325.57 |
| 360.2 | 325.57 | 363.78 | 325.51 | 364.74 | 325.51 | 365.37 | 325.49 | 366.88 | 325.48 |
| 371.88 | 325.48 | 375.81 | 325.45 | 378.18 | 325.46 | 381.06 | 325.44 | 383.26 | 325.41 |
| 384.52 | 325.38 | 384.84 | 325.36 | 385.94 | 325.33 | 386.08 | 325.32 | 387.49 | 325.34 |
| 391.3 | 325.36 | 400.82 | 325.34 | 401.79 | 325.32 | 402.4 | 325.29 | 404.46 | 325.13 |
| 404.66 | 325.12 | 407.2 | 325.15 | 409.22 | 325.13 | 410.56 | 325.18 | 412.88 | 325.15 |
| 430.58 | 325.04 | 435.88 | 325.06 | 436.58 | 325.07 | 437.62 | 325.07 | 438.03 | 325.08 |
| 438.99 | 325.09 | 442.12 | 325.05 | 442.37 | 325.06 | 445.68 | 325.02 | 446.86 | 325.02 |
| 460.97 | 324.96 | 464.02 | 324.94 | 470.14 | 324.86 | 470.6 | 324.85 | 472.01 | 324.79 |
| 474.07 | 324.76 | 474.79 | 324.72 | 475.96 | 324.69 | 476.36 | 324.69 | 477.03 | 324.71 |
| 480.24 | 324.83 | 482.3 | 324.85 | 482.43 | 324.86 | 483.11 | 324.86 | 485.07 | 324.88 |
| 485.89 | 324.88 | 493.04 | 324.94 | 493.39 | 324.93 | 510.56 | 325.02 | 513.11 | 325.05 |
| 513.86 | 325.08 | 514.36 | 325.09 | 528.02 | 325.26 | 529.7 | 325.27 | 530.27 | 325.26 |
| 542.1 | 325.32 | 544.54 | 325.33 | 545.55 | 325.34 | 546.87 | 325.36 | 549.67 | 325.36 |
| 550.54 | 325.37 | 551.03 | 325.37 | 551.96 | 325.38 | 553.23 | 325.38 | 554.44 | 325.39 |
| 554.56 | 325.4 | 561.4 | 325.48 | 562.12 | 325.5 | 568.53 | 325.59 | 569.07 | 325.6 |
| 574.09 | 325.67 | 578.23 | 325.67 | 580.09 | 325.66 | 580.84 | 325.65 | 581.3 | 325.62 |
| 581.51 | 325.56 | 584.4 | 325.55 | 586.29 | 325.59 | 587.36 | 325.62 | 588.36 | 325.67 |
| 591.11 | 325.67 | 602.45 | 325.73 | 606.47 | 325.72 | 610.24 | 325.76 | 632.81 | 326.06 |
| 636.83 | 326.11 | 640.78 | 326.11 | 642.8 | 326.1 | 643.03 | 326.11 | 646.57 | 326.09 |
| 648.06 | 326.05 | 650.16 | 325.97 | 652.69 | 325.86 | 655.7 | 325.75 | 657.74 | 325.67 |
| 660.58 | 325.64 | 662.05 | 325.65 | 665.01 | 325.66 | 669.94 | 325.56 | 670.3 | 325.59 |
| 671.47 | 325.57 | 671.73 | 325.54 | 673.12 | 325.51 | 673.35 | 325.51 | 674.67 | 325.49 |
| 675.41 | 325.49 | 682.78 | 325.4 | 683.85 | 325.4 | 692.56 | 325.35 | 700.85 | 325.58 |
| 701.55 | 325.6 | 702.89 | 325.63 | 703.61 | 325.65 | 703.66 | 325.66 | 705.71 | 325.71 |
| 711.27 | 325.77 | 713.97 | 325.77 | 715.03 | 325.78 | 719.09 | 325.78 | 725.86 | 325.75 |
| 727.81 | 325.73 | 728.02 | 325.75 | 729.15 | 325.76 | 730.13 | 325.76 | 732.5 | 325.71 |
| 736.44 | 325.67 | 737.4 | 325.67 | 737.99 | 325.66 | 739.31 | 325.66 | 741.45 | 325.51 |
| 742.34 | 325.5 | 742.94 | 325.48 | 743.53 | 325.48 | 745.63 | 325.46 | 750.55 | 325.36 |
| 755.72 | 325.16 | 758.23 | 325.08 | 759.33 | 325.03 | 766.07 | 324.89 | 769.66 | 324.8 |
| 798.08 | 324.93 | 811.83 | 324.97 | 815.99 | 324.87 | 816.72 | 324.86 | 824.54 | 324.77 |
| 827.43 | 324.75 | 833.77 | 324.64 | 837.13 | 324.64 | 837.93 | 324.63 | 840.44 | 324.63 |
| 841.22 | 324.6 | 842.37 | 324.63 | 843.24 | 324.63 | 850.65 | 324.51 | 852.07 | 324.47 |
| 852.69 | 324.47 | 855.31 | 324.43 | 862.71 | 324.24 | 863.99 | 324.19 | 864.75 | 324.15 |
| 866.94 | 324.09 | 868.59 | 324.05 | 869.01 | 324.05 | 877.92 | 323.88 | 879.5 | 323.75 |
| 880.16 | 323.67 | 881.08 | 323.61 | 881.61 | 323.59 | 882.35 | 323.58 | 883.7 | 323.59 |
| 884.56 | 323.6 | 886.04 | 323.6 | 887.09 | 323.55 | 887.21 | 323.55 | 888.1 | 323.61 |
| 888.38 | 323.68 | 890.29 | 323.64 | 892.49 | 323.66 | 896.12 | 323.68 | 897.1 | 323.67 |
| 897.34 | 323.68 | 897.72 | 323.65 | 898.83 | 323.63 | 899.95 | 323.62 | 900.75 | 323.62 |
| 902.49 | 323.57 | 908.22 | 323.49 | 910.75 | 323.42 | 911.64 | 323.4 | 925.49 | 323.31 |
| 925.85 | 323.32 | 927.13 | 323.29 | 927.91 | 323.29 | 928.07 | 323.28 | 930.19 | 323.26 |
| 931.47 | 323.23 | 934.72 | 323.22 | 934.92 | 323.23 | 935.91 | 323.22 | 936.64 | 323.23 |
| 939.61 | 323.24 | 940.35 | 323.25 | 945.68 | 323.23 | 945.92 | 323.24 | 946.84 | 323.23 |
| 949.84 | 323.25 | 950.13 | 323.24 | 950.77 | 323.24 | 955.44 | 323.22 | 957.45 | 323.18 |
| 959.15 | 323.16 | 959.49 | 323.16 | 961.79 | 323.14 | 963.97 | 323.16 | 965.61 | 323.17 |
| 969.38 | 323.17 | 970.9 | 323.16 | 981.37 | 323.35 | 982.78 | 323.37 | 984.3 | 323.36 |
| 984.64 | 323.35 | 987.58 | 323.31 | 992.55 | 323.14 | 993.39 | 323.14 | 995.35 | 323.06 |
| 997.34 | 323 | 1000.6 | 322.93 | 1001.33 | 322.92 | 1002.69 | 322.92 | 1007.65 | 322.95 |
| 1010.6 | 323 | 1012.68 | 323.02 | 1014.24 | 323.03 | 1014.77 | 323.05 | 1017.15 | 323.16 |
| 1018.69 | 323.18 | 1028.88 | 323.1 | 1030.8 | 323.04 | 1031.28 | 323.02 | 1033.77 | 322.93 |
| 1033.96 | 322.92 | 1035.63 | 322.88 | 1039.23 | 322.83 | 1041.98 | 322.81 | 1045.8 | 322.74 |
| 1048.57 | 322.67 | 1050.74 | 322.61 | 1052.43 | 322.57 | 1053.12 | 322.55 | 1054.49 | 322.49 |
| 1055.2 | 322.47 | 1058.15 | 322.44 | 1058.56 | 322.45 | 1060.22 | 322.45 | 1060.93 | 322.43 |
| 1061.25 | 322.41 | 1062 | 322.39 | 1062.44 | 322.39 | 1063.68 | 322.37 | 1064.65 | 322.38 |
| 1065.8 | 322.41 | 1067.12 | 322.45 | 1067.74 | 322.48 | 1068 | 322.5 | 1068.71 | 322.61 |
| 1069.14 | 322.64 | 1069.9 | 322.67 | 1072.21 | 322.8 | 1073.15 | 322.84 | 1074.58 | 322.93 |
| 1075.49 | 323.05 | 1079.22 | 323.48 | 1081.23 | 323.68 | 1089.14 | 324.09 | 1089.69 | 324.11 |
| 1090.38 | 324.09 | 1094.38 | 324.28 | 1096.15 | 324.47 | 1096.78 | 324.53 | 1103 | 325.25 |
| 1104.29 | 325.45 | 1104.59 | 325.52 | 1113.64 | 327.7 | 1115.03 | 328.01 | 1116.65 | 328.33 |
| 1116.81 | 328.37 | 1118.97 | 328.87 | 1119.18 | 328.91 | 1121.28 | 329.24 | 1121.97 | 329.4 |
| 1123.45 | 329.72 | 1123.78 | 329.78 | 1124.59 | 329.88 | 1125.54 | 330.01 | 1125.71 | 330.04 |
| 1126.53 | 330.15 | 1127.61 | 330.28 | 1128.07 | 330.37 | 1129.23 | 330.54 | 1130.09 | 330.62 |
| 1131.31 | 330.86 | 1132.15 | 330.98 | 1133.38 | 331.07 | 1135.18 | 331.16 | 1136.04 | 331.19 |
| 1136.31 | 331.19 | 1137.5 | 331.22 | 1138.16 | 331.25 | 1140.54 | 331.42 | 1140.75 | 331.46 |
| 1141.11 | 331.49 | 1141.6 | 331.5 | 1143.06 | 331.37 | 1144.75 | 331.19 | 1147.69 | 330.93 |
| 1148.34 | 330.87 | 1148.76 | 330.87 | 1149.52 | 330.79 | 1149.8 | 330.75 | 1150.19 | 330.72 |
| 1150.38 | 330.76 | 1151.42 | 331.07 | 1151.61 | 331.11 | 1153.03 | 331.73 | 1153.18 | 331.79 |
| 1154.71 | 332.47 | 1154.94 | 332.52 | 1156.71 | 332.44 | 1157.16 | 332.43 | 1157.35 | 332.45 |
| 1158.99 | 332.45 | 1159.96 | 332.47 | 1162.42 | 332.62 | 1163.01 | 332.69 | 1163.28 | 332.73 |
| 1163.99 | 332.87 | 1164.61 | 333.01 | 1165.3 | 333.26 | 1166.67 | 333.78 | 1167.18 | 333.95 |
| 1168.26 | 334.35 | 1168.93 | 334.54 | 1171.07 | 335.01 | 1172.05 | 335.27 | 1173.03 | 335.48 |
| 1174.21 | 335.66 | 1177.9 | 336.12 | 1179.44 | 336.3 | 1180.25 | 336.39 | 1181.38 | 336.5 |
| 1182.71 | 336.59 | 1185.67 | 336.91 | 1186.27 | 336.97 | 1189.08 | 337.26 | 1190.69 | 337.37 |
| 1192.19 | 337.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 80.42 | .05 | 648.06 | .04 | 1124.59 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 648.06 | 1124.59 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3809.38*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 91.91 | 340.96 | 93.18 | 340.7 | 93.89 | 340.51 | 95.67 | 339.95 | 96.62 | 339.67 |
| 97.6 | 339.37 | 99.54 | 338.77 | 101.38 | 338.33 | 101.98 | 338.17 | 103.34 | 337.78 |
| 104.33 | 337.58 | 105.93 | 337.25 | 110.79 | 336.35 | 113.6 | 335.76 | 114.5 | 335.58 |
| 115.63 | 335.36 | 116.02 | 335.26 | 116.92 | 335.05 | 117.9 | 334.86 | 119.68 | 334.52 |
| 119.85 | 334.5 | 120.16 | 334.43 | 120.83 | 334.34 | 121.1 | 334.32 | 121.81 | 334.21 |
| 123.98 | 333.91 | 124.77 | 333.84 | 125.45 | 333.79 | 127.1 | 333.72 | 130.11 | 333.52 |
| 130.59 | 333.47 | 132.18 | 333.35 | 135.15 | 333.19 | 136.7 | 333.13 | 137.04 | 333.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 137.64 | 333.17 | 138.57 | 333.17 | 140.13 | 333.14 | 141.65 | 333.12 | 144.55 | 333.17 |
| 145.4 | 333.17 | 146.89 | 333.12 | 147.96 | 333.07 | 148.69 | 333.02 | 149.27 | 332.99 |
| 150.63 | 332.9 | 152.5 | 332.75 | 152.96 | 332.74 | 153.99 | 332.7 | 154.5 | 332.67 |
| 157.11 | 332.49 | 158.36 | 332.39 | 171.09 | 331.59 | 172.22 | 331.49 | 173.74 | 331.36 |
| 178.76 | 330.84 | 180.59 | 330.46 | 183.91 | 329.69 | 184.28 | 329.59 | 186.04 | 329.46 |
| 187.06 | 329.44 | 189.88 | 329.34 | 193.39 | 329.27 | 195.74 | 329.2 | 196.17 | 329.16 |
| 197.26 | 329.09 | 200.22 | 328.93 | 200.65 | 328.88 | 201.36 | 328.83 | 203.56 | 328.62 |
| 205.1 | 328.46 | 206.01 | 328.5 | 207.09 | 328.52 | 213.02 | 328.55 | 217.37 | 328.61 |
| 217.97 | 328.62 | 222.15 | 328.77 | 222.98 | 328.81 | 223.92 | 328.88 | 225.48 | 329.08 |
| 227.05 | 329.39 | 228.82 | 329.6 | 229.16 | 329.65 | 231.55 | 329.95 | 232.84 | 330.13 |
| 233.17 | 330.19 | 233.83 | 330.25 | 235.19 | 330.27 | 235.79 | 330.26 | 237.71 | 330.18 |
| 238.97 | 330.11 | 239.56 | 330.05 | 242.13 | 329.85 | 243.21 | 329.74 | 245.07 | 329.56 |
| 247.24 | 329.29 | 249.6 | 329.01 | 251.55 | 328.72 | 253.75 | 328.45 | 253.96 | 328.43 |
| 259.05 | 327.9 | 264.01 | 327.32 | 268.23 | 326.8 | 268.87 | 326.76 | 269.63 | 326.74 |
| 278.31 | 326.33 | 280.37 | 326.25 | 281.69 | 326.21 | 283.06 | 326.19 | 289.2 | 326.12 |
| 290.56 | 326.13 | 291 | 326.14 | 291.08 | 326.19 | 291.78 | 326.2 | 291.92 | 326.21 |
| 294.6 | 326.19 | 297.26 | 326.15 | 299.39 | 326.09 | 299.63 | 326.08 | 311.14 | 325.83 |
| 311.95 | 325.81 | 329.24 | 325.42 | 332.61 | 325.33 | 342.09 | 325.14 | 354.08 | 325.11 |
| 357.32 | 325.16 | 357.99 | 325.16 | 361.24 | 325.12 | 363.99 | 325.1 | 371.1 | 325.07 |
| 371.29 | 325.05 | 373.32 | 325.03 | 373.83 | 325.02 | 377.44 | 324.97 | 378.41 | 324.96 |
| 380.56 | 324.93 | 385.6 | 324.94 | 389.56 | 324.89 | 391.48 | 324.91 | 391.68 | 324.9 |
| 394.85 | 324.89 | 397.07 | 324.85 | 398.34 | 324.82 | 399.77 | 324.77 | 399.91 | 324.76 |
| 400.68 | 324.77 | 401.33 | 324.79 | 405.17 | 324.81 | 414.76 | 324.81 | 415.74 | 324.8 |
| 416.35 | 324.77 | 418.43 | 324.62 | 418.63 | 324.62 | 421.19 | 324.65 | 423.22 | 324.63 |
| 424.57 | 324.68 | 426.91 | 324.66 | 444.75 | 324.59 | 444.92 | 324.59 | 450.09 | 324.62 |
| 450.8 | 324.63 | 451.36 | 324.63 | 452.25 | 324.65 | 453.22 | 324.66 | 456.37 | 324.62 |
| 456.63 | 324.62 | 459.96 | 324.59 | 461.15 | 324.59 | 475.37 | 324.53 | 478.45 | 324.5 |
| 484.61 | 324.42 | 485.08 | 324.41 | 486.49 | 324.36 | 488.57 | 324.33 | 489.29 | 324.29 |
| 490.88 | 324.25 | 491.55 | 324.27 | 494.21 | 324.37 | 495.66 | 324.4 | 496.86 | 324.41 |
| 496.99 | 324.42 | 497.68 | 324.42 | 499.66 | 324.44 | 500.48 | 324.44 | 507.68 | 324.51 |
| 508.04 | 324.51 | 525.34 | 324.63 | 527.03 | 324.65 | 529.17 | 324.7 | 542.94 | 324.89 |
| 544.63 | 324.9 | 544.84 | 324.89 | 545.21 | 324.9 | 557.12 | 324.94 | 557.36 | 324.95 |
| 559.47 | 324.96 | 560.29 | 324.96 | 560.6 | 324.97 | 561.93 | 324.98 | 562.76 | 324.99 |
| 563.91 | 324.98 | 564.75 | 324.99 | 566.12 | 324.99 | 567.06 | 325 | 569.68 | 325.02 |
| 576.57 | 325.12 | 577.29 | 325.15 | 583.75 | 325.25 | 584.3 | 325.26 | 589.35 | 325.34 |
| 593.53 | 325.34 | 595.4 | 325.33 | 596.16 | 325.32 | 596.63 | 325.29 | 596.84 | 325.24 |
| 599.74 | 325.22 | 601.65 | 325.26 | 602.73 | 325.29 | 603.74 | 325.34 | 606.51 | 325.34 |
| 617.93 | 325.4 | 621.99 | 325.4 | 625.79 | 325.43 | 648.53 | 325.72 | 652.58 | 325.76 |
| 656.56 | 325.76 | 658.59 | 325.74 | 658.82 | 325.74 | 662.39 | 325.72 | 663.89 | 325.67 |
| 666.01 | 325.58 | 668.57 | 325.46 | 671.61 | 325.33 | 673.67 | 325.25 | 676.54 | 325.21 |
| 676.85 | 325.21 | 678.03 | 325.23 | 681.01 | 325.23 | 685.99 | 325.14 | 686.35 | 325.18 |
| 687.53 | 325.16 | 687.79 | 325.14 | 689.21 | 325.11 | 690.77 | 325.1 | 691.52 | 325.1 |
| 698.95 | 325.03 | 700.03 | 325.03 | 708.83 | 324.97 | 717.2 | 325.17 | 717.91 | 325.18 |
| 718.39 | 325.2 | 719.27 | 325.21 | 720.04 | 325.24 | 722.12 | 325.28 | 727.73 | 325.34 |
| 730.45 | 325.34 | 731.53 | 325.35 | 733.01 | 325.34 | 735.63 | 325.34 | 742.47 | 325.3 |
| 744.52 | 325.28 | 744.64 | 325.3 | 745.79 | 325.31 | 746.78 | 325.31 | 749.18 | 325.25 |
| 753.15 | 325.2 | 754.12 | 325.2 | 754.71 | 325.19 | 756.05 | 325.18 | 758.21 | 325.03 |
| 759.72 | 324.98 | 760.32 | 324.98 | 762.43 | 324.95 | 767.4 | 324.85 | 772.63 | 324.66 |
| 775.15 | 324.58 | 776.27 | 324.54 | 783.08 | 324.42 | 783.46 | 324.41 | 786.7 | 324.35 |
| 815.41 | 324.49 | 829.29 | 324.54 | 833.49 | 324.45 | 834.22 | 324.44 | 842.13 | 324.38 |
| 845.05 | 324.37 | 851.45 | 324.27 | 854.84 | 324.29 | 855.65 | 324.27 | 858.19 | 324.29 |
| 859.03 | 324.26 | 859.27 | 324.28 | 860.53 | 324.3 | 861.01 | 324.3 | 868.5 | 324.19 |
| 869.93 | 324.16 | 870.56 | 324.16 | 873.21 | 324.12 | 880.67 | 323.93 | 881.97 | 323.88 |
| 882.74 | 323.83 | 884.95 | 323.77 | 886.62 | 323.74 | 887.04 | 323.74 | 896.03 | 323.58 |
| 897.63 | 323.46 | 898.3 | 323.39 | 899.23 | 323.33 | 899.77 | 323.31 | 900.52 | 323.3 |
| 901.88 | 323.31 | 902.74 | 323.32 | 904.24 | 323.32 | 904.71 | 323.3 | 905.42 | 323.28 |
| 906.32 | 323.33 | 906.61 | 323.39 | 907.03 | 323.39 | 907.98 | 323.36 | 908.53 | 323.36 |
| 910.75 | 323.37 | 914.42 | 323.4 | 914.72 | 323.39 | 915.79 | 323.38 | 917.16 | 323.33 |
| 918.29 | 323.32 | 919.09 | 323.32 | 920.85 | 323.27 | 926.64 | 323.19 | 929.2 | 323.12 |
| 930.1 | 323.1 | 944.08 | 323 | 944.45 | 323.01 | 946.52 | 322.98 | 946.68 | 322.97 |
| 950.12 | 322.92 | 953.4 | 322.9 | 954.61 | 322.9 | 955.34 | 322.91 | 958.34 | 322.92 |
| 959.09 | 322.93 | 964.47 | 322.91 | 964.71 | 322.92 | 965.64 | 322.92 | 968.67 | 322.93 |
| 969.62 | 322.93 | 974.33 | 322.91 | 976.36 | 322.87 | 977.05 | 322.86 | 978.07 | 322.86 |
| 978.42 | 322.85 | 980.74 | 322.85 | 982.95 | 322.87 | 984.6 | 322.89 | 988.41 | 322.9 |
| 989.94 | 322.9 | 1000.52 | 323.12 | 1002.23 | 323.13 | 1003.82 | 323.12 | 1006.79 | 323.07 |
| 1011.8 | 322.88 | 1012.66 | 322.88 | 1014.64 | 322.78 | 1016.26 | 322.73 | 1019.93 | 322.63 |
| 1020.67 | 322.62 | 1022.05 | 322.62 | 1027.05 | 322.66 | 1030.04 | 322.72 | 1032.14 | 322.74 |
| 1033.72 | 322.76 | 1034.24 | 322.77 | 1036.65 | 322.9 | 1038.21 | 322.93 | 1048.5 | 322.83 |
| 1050.44 | 322.77 | 1050.92 | 322.74 | 1053.44 | 322.65 | 1054.38 | 322.61 | 1055.32 | 322.59 |
| 1061.73 | 322.52 | 1065.59 | 322.45 | 1068.38 | 322.38 | 1070.58 | 322.32 | 1072.28 | 322.29 |
| 1072.98 | 322.26 | 1074.37 | 322.21 | 1075.08 | 322.19 | 1078.06 | 322.15 | 1078.19 | 322.16 |
| 1080.18 | 322.16 | 1080.95 | 322.14 | 1081.2 | 322.12 | 1082.4 | 322.1 | 1083.64 | 322.09 |
| 1084.04 | 322.08 | 1084.67 | 322.09 | 1085.88 | 322.12 | 1087.53 | 322.18 | 1087.9 | 322.19 |
| 1088.25 | 322.22 | 1088.91 | 322.32 | 1089.37 | 322.35 | 1090.16 | 322.38 | 1092.01 | 322.47 |
| 1092.57 | 322.5 | 1093.55 | 322.54 | 1095.05 | 322.64 | 1096 | 322.75 | 1099.9 | 323.16 |
| 1101.05 | 323.26 | 1102 | 323.35 | 1110.26 | 323.73 | 1110.84 | 323.74 | 1111.56 | 323.72 |
| 1115.73 | 323.89 | 1118.24 | 324.12 | 1124.74 | 324.77 | 1126.08 | 324.96 | 1126.4 | 325.02 |
| 1135.85 | 327.14 | 1137.31 | 327.44 | 1138.99 | 327.76 | 1141.42 | 328.31 | 1141.63 | 328.35 |
| 1142.56 | 328.48 | 1143.83 | 328.68 | 1146.1 | 329.18 | 1146.44 | 329.23 | 1147.29 | 329.33 |
| 1148.24 | 329.45 | 1148.41 | 329.48 | 1149.23 | 329.58 | 1150.32 | 329.7 | 1150.78 | 329.8 |
| 1151.94 | 329.98 | 1152.8 | 330.07 | 1154.02 | 330.32 | 1154.87 | 330.44 | 1156.09 | 330.55 |
| 1157.89 | 330.67 | 1158.76 | 330.72 | 1159.49 | 330.73 | 1160.22 | 330.76 | 1160.89 | 330.8 |
| 1163.27 | 330.99 | 1163.47 | 331.03 | 1163.84 | 331.07 | 1164.33 | 331.08 | 1164.53 | 331.07 |
| 1165.8 | 330.98 | 1167.48 | 330.84 | 1170.43 | 330.64 | 1171.08 | 330.59 | 1171.5 | 330.59 |
| 1172.27 | 330.53 | 1172.54 | 330.49 | 1172.94 | 330.47 | 1173.13 | 330.51 | 1174.16 | 330.8 |
| 1174.35 | 330.84 | 1175.77 | 331.41 | 1175.92 | 331.48 | 1177.24 | 332.02 | 1177.53 | 332.13 |
| 1177.69 | 332.16 | 1178.14 | 332.15 | 1179.46 | 332.1 | 1179.92 | 332.1 | 1180.11 | 332.12 |
| 1181.74 | 332.14 | 1182.72 | 332.17 | 1185.19 | 332.34 | 1186.05 | 332.45 | 1186.76 | 332.59 |
| 1187.38 | 332.73 | 1188.07 | 332.96 | 1189.44 | 333.46 | 1189.95 | 333.63 | 1191.03 | 334 |
| 1191.7 | 334.18 | 1193.84 | 334.64 | 1194.83 | 334.9 | 1195.81 | 335.12 | 1196.99 | 335.31 |
| 1200.69 | 335.8 | 1202.23 | 335.99 | 1202.52 | 336.03 | 1203.83 | 336.18 | 1204.18 | 336.21 |
| 1205.5 | 336.31 | 1209 | 336.7 | 1209.07 | 336.7 | 1211.89 | 337.01 | 1214.34 | 337.21 |
| 1215 | 337.26 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 91.91 | .05 | 663.89 | .04 | 1147.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 663.89 | 1147.29 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3789.65*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 103.4 | 340.64 | 104.67 | 340.36 | 105.39 | 340.16 | 107.18 | 339.55 | 107.39 | 339.49 |
| 109.13 | 338.93 | 111.09 | 338.29 | 112.94 | 337.8 | 113.55 | 337.63 | 114.46 | 337.34 |
| 114.92 | 337.2 | 115.91 | 336.98 | 117.52 | 336.63 | 122.42 | 335.65 | 125.25 | 335.01 |
| 127.3 | 334.58 | 127.69 | 334.48 | 128.6 | 334.26 | 129.06 | 334.16 | 130.17 | 333.95 |
| 131.38 | 333.7 | 131.86 | 333.61 | 132.53 | 333.51 | 132.82 | 333.48 | 133.52 | 333.37 |
| 135.71 | 333.08 | 136.51 | 333 | 137.19 | 332.95 | 138.86 | 332.87 | 141.89 | 332.65 |
| 142.37 | 332.6 | 143.46 | 332.51 | 146.96 | 332.3 | 148.25 | 332.24 | 148.88 | 332.23 |
| 149.47 | 332.28 | 151.99 | 332.23 | 152.15 | 332.22 | 152.89 | 332.21 | 153.52 | 332.19 |
| 156.59 | 332.2 | 157.3 | 332.19 | 157.93 | 332.17 | 158.8 | 332.13 | 159.87 | 332.07 |
| 160.61 | 332.02 | 161.19 | 331.99 | 162.56 | 331.89 | 164.17 | 331.75 | 164.91 | 331.72 |
| 165.95 | 331.67 | 166.47 | 331.64 | 170.36 | 331.36 | 183.18 | 330.54 | 185.85 | 330.31 |
| 190.91 | 329.81 | 192.75 | 329.46 | 196.1 | 328.75 | 196.47 | 328.66 | 198.24 | 328.53 |
| 199.27 | 328.51 | 202.11 | 328.41 | 205.65 | 328.33 | 208.02 | 328.26 | 209.55 | 328.16 |
| 212.53 | 328.01 | 212.96 | 327.97 | 213.68 | 327.92 | 214.3 | 327.86 | 215.9 | 327.72 |
| 217.15 | 327.6 | 217.56 | 327.58 | 218.37 | 327.61 | 219.45 | 327.63 | 225.43 | 327.64 |
| 229.82 | 327.68 | 230.42 | 327.7 | 234.63 | 327.82 | 235.47 | 327.85 | 236.41 | 327.91 |
| 237.98 | 328.09 | 239.57 | 328.36 | 241.35 | 328.55 | 244.1 | 328.86 | 245.16 | 329 |
| 245.64 | 329.05 | 245.74 | 329.08 | 246.4 | 329.13 | 246.99 | 329.14 | 247.76 | 329.14 |
| 248.37 | 329.13 | 249.38 | 329.1 | 251.02 | 329.03 | 251.57 | 329 | 252.79 | 328.9 |
| 254.76 | 328.76 | 255.85 | 328.66 | 257.72 | 328.5 | 258.87 | 328.38 | 259.91 | 328.26 |
| 262.29 | 328.01 | 264.25 | 327.75 | 266.47 | 327.51 | 271.8 | 327.01 | 276.8 | 326.49 |
| 281.06 | 326.02 | 281.71 | 325.99 | 282.47 | 325.97 | 291.21 | 325.61 | 293.29 | 325.53 |
| 294.62 | 325.5 | 296 | 325.48 | 302.19 | 325.43 | 303.55 | 325.43 | 304 | 325.45 |
| 304.09 | 325.51 | 304.79 | 325.52 | 304.93 | 325.53 | 307.63 | 325.52 | 310.3 | 325.48 |
| 312.46 | 325.43 | 312.69 | 325.42 | 324.29 | 325.18 | 325.11 | 325.16 | 342.53 | 324.79 |
| 345.93 | 324.7 | 355.48 | 324.52 | 367.56 | 324.55 | 370.83 | 324.61 | 371.5 | 324.61 |
| 374.78 | 324.58 | 377.55 | 324.55 | 384.71 | 324.53 | 385.08 | 324.51 | 386.95 | 324.49 |
| 387.46 | 324.48 | 391.1 | 324.42 | 392.07 | 324.41 | 394.24 | 324.38 | 399.32 | 324.39 |
| 403.31 | 324.34 | 405.72 | 324.35 | 408.64 | 324.34 | 410.87 | 324.3 | 412.16 | 324.27 |
| 412.47 | 324.25 | 413.6 | 324.22 | 413.74 | 324.2 | 415.17 | 324.24 | 419.04 | 324.27 |
| 428.7 | 324.29 | 429.68 | 324.27 | 430.31 | 324.25 | 432.4 | 324.12 | 432.6 | 324.12 |
| 435.18 | 324.15 | 437.23 | 324.14 | 438.07 | 324.16 | 438.38 | 324.18 | 440.95 | 324.17 |
| 458.91 | 324.13 | 459.09 | 324.13 | 464.3 | 324.18 | 465.01 | 324.19 | 465.58 | 324.19 |
| 466.48 | 324.21 | 467.46 | 324.22 | 470.63 | 324.19 | 470.89 | 324.19 | 474.25 | 324.17 |
| 475.44 | 324.17 | 489.77 | 324.1 | 492.87 | 324.07 | 499.08 | 323.99 | 499.55 | 323.98 |
| 500.98 | 323.93 | 503.07 | 323.9 | 503.8 | 323.85 | 505.4 | 323.81 | 506.07 | 323.83 |
| 509.34 | 323.94 | 510.22 | 323.95 | 511.91 | 323.98 | 512.26 | 323.97 | 514.24 | 324.01 |
| 515.07 | 324 | 522.33 | 324.09 | 522.69 | 324.09 | 540.13 | 324.24 | 541.82 | 324.26 |
| 542.71 | 324.28 | 543.47 | 324.31 | 543.98 | 324.32 | 557.85 | 324.52 | 559.55 | 324.54 |
| 560.14 | 324.53 | 572.14 | 324.57 | 572.39 | 324.58 | 574.63 | 324.58 | 575.65 | 324.59 |
| 576.98 | 324.61 | 579.83 | 324.61 | 580.71 | 324.62 | 581.21 | 324.61 | 583.44 | 324.63 |
| 584.79 | 324.65 | 591.74 | 324.77 | 592.47 | 324.79 | 598.98 | 324.9 | 599.52 | 324.92 |
| 604.62 | 325.01 | 608.83 | 325.01 | 610.71 | 325 | 611.48 | 324.99 | 611.95 | 324.96 |
| 612.16 | 324.92 | 615.09 | 324.9 | 617.01 | 324.94 | 618.09 | 324.96 | 619.11 | 325 |
| 621.91 | 325.01 | 633.42 | 325.08 | 637.5 | 325.07 | 641.33 | 325.1 | 664.24 | 325.37 |
| 668.33 | 325.41 | 672.34 | 325.4 | 674.62 | 325.38 | 678.21 | 325.34 | 679.72 | 325.28 |
| 681.86 | 325.19 | 684.45 | 325.06 | 687.52 | 324.92 | 689.6 | 324.82 | 692.49 | 324.78 |
| 692.81 | 324.78 | 694 | 324.8 | 697.01 | 324.8 | 702.04 | 324.73 | 702.41 | 324.78 |
| 703.6 | 324.76 | 703.86 | 324.74 | 704.38 | 324.73 | 705.52 | 324.72 | 706.87 | 324.7 |
| 707.62 | 324.7 | 715.13 | 324.66 | 715.41 | 324.65 | 716.22 | 324.66 | 725.11 | 324.6 |
| 733.56 | 324.76 | 734.28 | 324.77 | 735.5 | 324.8 | 735.65 | 324.79 | 736.38 | 324.81 |
| 736.43 | 324.82 | 738.52 | 324.86 | 744.19 | 324.9 | 746.94 | 324.9 | 748.03 | 324.91 |
| 751.86 | 324.91 | 752.17 | 324.9 | 759.07 | 324.85 | 761.14 | 324.83 | 761.27 | 324.85 |
| 762.43 | 324.86 | 763.43 | 324.86 | 765.85 | 324.79 | 769.86 | 324.74 | 770.22 | 324.73 |
| 770.84 | 324.73 | 771.44 | 324.72 | 772.79 | 324.71 | 774.97 | 324.54 | 775.88 | 324.51 |
| 776.5 | 324.48 | 777.1 | 324.48 | 779.24 | 324.45 | 784.26 | 324.35 | 789.53 | 324.16 |
| 792.08 | 324.08 | 793.21 | 324.04 | 800.09 | 323.95 | 800.47 | 323.95 | 803.75 | 323.89 |
| 832.73 | 324.05 | 846.75 | 324.11 | 850.99 | 324.03 | 851.73 | 324.02 | 859.71 | 323.98 |
| 862.67 | 323.99 | 869.13 | 323.91 | 872.56 | 323.94 | 873.37 | 323.92 | 875.93 | 323.95 |
| 876.7 | 323.92 | 877.02 | 323.94 | 877.9 | 323.96 | 878.78 | 323.97 | 886.35 | 323.87 |
| 887.79 | 323.84 | 888.43 | 323.84 | 891.1 | 323.81 | 898.64 | 323.62 | 899.94 | 323.57 |
| 901.07 | 323.5 | 902.96 | 323.45 | 904.64 | 323.43 | 905.07 | 323.43 | 914.15 | 323.27 |
| 915.76 | 323.17 | 916.44 | 323.1 | 917.37 | 323.05 | 917.92 | 323.03 | 918.68 | 323.02 |
| 920.05 | 323.03 | 920.93 | 323.04 | 922.44 | 323.04 | 923.63 | 323.01 | 924.54 | 323.05 |
| 924.83 | 323.11 | 926.22 | 323.08 | 926.77 | 323.08 | 929.02 | 323.09 | 932.72 | 323.11 |
| 933.02 | 323.1 | 933.96 | 323.09 | 934.83 | 323.05 | 936.63 | 323.02 | 937.44 | 323.02 |
| 939.21 | 322.98 | 945.06 | 322.89 | 947.64 | 322.82 | 948.55 | 322.81 | 962.67 | 322.7 |
| 963.04 | 322.7 | 964.35 | 322.68 | 964.86 | 322.68 | 965.3 | 322.66 | 967.47 | 322.63 |
| 968.77 | 322.6 | 972.09 | 322.58 | 974.05 | 322.58 | 977.07 | 322.59 | 977.83 | 322.61 |
| 983.26 | 322.59 | 983.5 | 322.6 | 984.44 | 322.6 | 987.5 | 322.62 | 988.46 | 322.62 |
| 993.22 | 322.6 | 995.27 | 322.56 | 995.97 | 322.56 | 997 | 322.55 | 999.69 | 322.55 |
| 1000.8 | 322.56 | 1001.92 | 322.58 | 1003.59 | 322.6 | 1007.43 | 322.63 | 1008.98 | 322.63 |
| 1019.66 | 322.88 | 1021.11 | 322.9 | 1023 | 322.89 | 1026 | 322.83 | 1031.06 | 322.61 |
| 1031.93 | 322.61 | 1033.92 | 322.5 | 1035.56 | 322.44 | 1039.27 | 322.34 | 1040.02 | 322.33 |
| 1041.4 | 322.33 | 1046.46 | 322.37 | 1049.48 | 322.44 | 1051.6 | 322.46 | 1053.19 | 322.48 |
| 1053.72 | 322.49 | 1056.15 | 322.64 | 1057.72 | 322.67 | 1068.12 | 322.56 | 1068.75 | 322.54 |
| 1070.08 | 322.49 | 1073.1 | 322.37 | 1073.3 | 322.35 | 1074.06 | 322.32 | 1075.01 | 322.3 |
| 1081.48 | 322.23 | 1085.37 | 322.16 | 1088.94 | 322.07 | 1090.42 | 322.04 | 1092.14 | 322 |
| 1092.84 | 321.98 | 1094.24 | 321.92 | 1094.96 | 321.9 | 1097.97 | 321.86 | 1098.1 | 321.87 |
| 1100.11 | 321.87 | 1100.89 | 321.85 | 1101.61 | 321.82 | 1102.35 | 321.81 | 1103.61 | 321.8 |
| 1104.04 | 321.79 | 1104.7 | 321.8 | 1105.95 | 321.83 | 1107.96 | 321.9 | 1108.35 | 321.93 |
| 1109.12 | 322.03 | 1109.59 | 322.06 | 1110.42 | 322.08 | 1112.35 | 322.18 | 1112.93 | 322.2 |
| 1113.96 | 322.25 | 1115.52 | 322.34 | 1116.51 | 322.45 | 1120.57 | 322.85 | 1121.78 | 322.94 |
| 1122.76 | 323.02 | 1131.38 | 323.38 | 1131.98 | 323.38 | 1132.73 | 323.35 | 1137.08 | 323.5 |
| 1139.02 | 323.65 | 1139.7 | 323.71 | 1146.48 | 324.29 | 1147.88 | 324.46 | 1148.21 | 324.52 |
| 1158.06 | 326.58 | 1159.58 | 326.87 | 1161.34 | 327.18 | 1161.51 | 327.22 | 1164.09 | 327.79 |
| 1165.06 | 327.92 | 1166.39 | 328.11 | 1167.14 | 328.28 | 1168.75 | 328.63 | 1169.11 | 328.68 |
| 1169.99 | 328.77 | 1171.94 | 329.01 | 1172.2 | 329.03 | 1173.03 | 329.13 | 1173.27 | 329.17 |
| 1173.49 | 329.23 | 1174.65 | 329.42 | 1175.51 | 329.52 | 1176.73 | 329.77 | 1177.58 | 329.9 |
| 1178.81 | 330.03 | 1180.61 | 330.19 | 1181.48 | 330.24 | 1182.21 | 330.27 | 1183.61 | 330.35 |
| 1185.99 | 330.55 | 1186.42 | 330.63 | 1186.87 | 330.66 | 1187.25 | 330.65 | 1188.53 | 330.6 |
| 1190.22 | 330.49 | 1193.17 | 330.34 | 1193.82 | 330.31 | 1194.24 | 330.32 | 1195.01 | 330.27 |
| 1195.28 | 330.24 | 1195.68 | 330.22 | 1195.87 | 330.26 | 1196.91 | 330.53 | 1197.1 | 330.57 |
| 1198.52 | 331.1 | 1200.22 | 331.75 | 1200.37 | 331.79 | 1200.9 | 331.79 | 1202.22 | 331.76 |
| 1202.67 | 331.77 | 1202.86 | 331.79 | 1204.5 | 331.83 | 1205.48 | 331.86 | 1207.95 | 332.06 |
| 1208.81 | 332.17 | 1209.52 | 332.31 | 1210.14 | 332.44 | 1210.84 | 332.67 | 1212.21 | 333.14 |
| 1212.69 | 333.29 | 1213.81 | 333.66 | 1214.48 | 333.83 | 1216.62 | 334.28 | 1217.61 | 334.54 |
| 1218.59 | 334.76 | 1219.78 | 334.96 | 1223.48 | 335.48 | 1225.31 | 335.73 | 1226.62 | 335.88 |
| 1228.3 | 336.03 | 1231.8 | 336.44 | 1231.88 | 336.44 | 1234.69 | 336.76 | 1236.31 | 336.9 |
| 1237.81 | 337.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 103.4 | .05 | 679.72 | .04 | 1169.99 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 679.72 | 1169.99 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3769.92*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 114.89 | 340.31 | 116.17 | 340.02 | 116.9 | 339.81 | 118.7 | 339.16 | 119.67 | 338.84 |
| 120.59 | 338.52 | 120.66 | 338.49 | 122.27 | 337.94 | 122.64 | 337.81 | 124.87 | 337.16 |
| 126.49 | 336.63 | 127.49 | 336.38 | 129.12 | 336 | 134.05 | 334.94 | 136.91 | 334.27 |
| 137.82 | 334.06 | 138.5 | 333.92 | 138.97 | 333.81 | 139.36 | 333.7 | 140.74 | 333.36 |
| 141.86 | 333.14 | 143.08 | 332.87 | 143.56 | 332.78 | 144.24 | 332.67 | 144.53 | 332.65 |
| 145.24 | 332.54 | 147.44 | 332.25 | 148.24 | 332.17 | 148.94 | 332.11 | 150.61 | 332.02 |
| 153.67 | 331.78 | 154.16 | 331.73 | 155.77 | 331.6 | 158.78 | 331.41 | 160.07 | 331.34 |
| 160.71 | 331.32 | 161.31 | 331.38 | 162.25 | 331.36 | 163.84 | 331.31 | 164.01 | 331.31 |
| 165.39 | 331.26 | 168.48 | 331.23 | 169.83 | 331.19 | 170.7 | 331.14 | 171.79 | 331.07 |
| 173.11 | 330.98 | 174.5 | 330.88 | 176.12 | 330.74 | 176.4 | 330.72 | 176.87 | 330.71 |
| 177.91 | 330.65 | 178.43 | 330.61 | 181.08 | 330.42 | 182.35 | 330.32 | 195.27 | 329.49 |
| 196.42 | 329.39 | 197.96 | 329.27 | 203.05 | 328.79 | 204.91 | 328.47 | 208.29 | 327.82 |
| 208.66 | 327.73 | 210.45 | 327.61 | 211.49 | 327.58 | 214.35 | 327.47 | 217.91 | 327.4 |
| 220.29 | 327.33 | 221.84 | 327.23 | 224.84 | 327.09 | 226 | 327.01 | 228.24 | 326.83 |
| 229.49 | 326.72 | 229.91 | 326.7 | 230.72 | 326.72 | 231.82 | 326.74 | 237.84 | 326.73 |
| 242.26 | 326.76 | 242.86 | 326.77 | 247.11 | 326.87 | 247.95 | 326.9 | 248.9 | 326.95 |
| 250.48 | 327.1 | 252.08 | 327.34 | 253.88 | 327.5 | 254.22 | 327.54 | 256.65 | 327.77 |
| 258.2 | 327.94 | 258.3 | 327.97 | 258.97 | 328.01 | 259.56 | 328.02 | 260.34 | 328.02 |
| 260.96 | 328.01 | 262.9 | 327.95 | 263.62 | 327.91 | 264.18 | 327.89 | 264.78 | 327.84 |
| 267.39 | 327.68 | 268.49 | 327.59 | 270.37 | 327.45 | 271.53 | 327.34 | 272.58 | 327.23 |
| 274.97 | 327.01 | 276.95 | 326.78 | 279.4 | 326.55 | 284.56 | 326.13 | 289.6 | 325.66 |
| 293.89 | 325.24 | 295.31 | 325.2 | 304.11 | 324.88 | 306.21 | 324.81 | 307.55 | 324.78 |
| 308.95 | 324.77 | 315.17 | 324.73 | 316.55 | 324.74 | 317 | 324.76 | 317.09 | 324.82 |
| 317.94 | 324.85 | 320.65 | 324.85 | 323.35 | 324.82 | 325.52 | 324.76 | 325.76 | 324.75 |
| 337.45 | 324.52 | 338.27 | 324.5 | 355.82 | 324.15 | 359.24 | 324.07 | 368.87 | 323.91 |
| 381.04 | 324 | 384.33 | 324.06 | 385.01 | 324.07 | 388.31 | 324.03 | 391.1 | 324.01 |
| 398.32 | 323.99 | 398.69 | 323.97 | 400.57 | 323.94 | 401.09 | 323.94 | 404.75 | 323.88 |
| 405.74 | 323.87 | 406.37 | 323.85 | 407.92 | 323.83 | 413.04 | 323.84 | 417.06 | 323.78 |
| 419.01 | 323.8 | 422.43 | 323.79 | 424.68 | 323.75 | 425.97 | 323.72 | 426.29 | 323.7 |
| 427.42 | 323.66 | 427.57 | 323.64 | 429.01 | 323.68 | 432.91 | 323.73 | 442.64 | 323.76 |
| 443.63 | 323.75 | 444.26 | 323.73 | 446.57 | 323.61 | 448.35 | 323.64 | 451.23 | 323.64 |
| 452.08 | 323.66 | 452.4 | 323.68 | 454.98 | 323.67 | 473.26 | 323.67 | 478.51 | 323.74 |
| 478.63 | 323.75 | 479.22 | 323.75 | 479.8 | 323.76 | 481.69 | 323.78 | 484.89 | 323.76 |
| 485.15 | 323.76 | 488.53 | 323.74 | 489.74 | 323.74 | 504.17 | 323.67 | 507.29 | 323.64 |
| 513.55 | 323.55 | 515.47 | 323.5 | 517.57 | 323.46 | 518.31 | 323.41 | 519.92 | 323.37 |
| 520.6 | 323.39 | 523.3 | 323.48 | 524.77 | 323.51 | 525.99 | 323.52 | 526.12 | 323.53 |
| 526.83 | 323.53 | 528.83 | 323.57 | 529.67 | 323.57 | 536.97 | 323.66 | 537.34 | 323.66 |
| 554.91 | 323.85 | 556.61 | 323.88 | 557.51 | 323.89 | 558.28 | 323.92 | 558.79 | 323.93 |
| 572.77 | 324.15 | 574.48 | 324.17 | 575.07 | 324.16 | 587.16 | 324.19 | 587.41 | 324.2 |
| 589.55 | 324.21 | 590.38 | 324.21 | 590.69 | 324.22 | 592.04 | 324.23 | 592.89 | 324.24 |
| 594.06 | 324.23 | 594.91 | 324.23 | 595.8 | 324.24 | 596.3 | 324.23 | 597.25 | 324.25 |
| 598.55 | 324.26 | 599.91 | 324.28 | 606.91 | 324.41 | 607.64 | 324.43 | 614.2 | 324.56 |
| 619.89 | 324.67 | 624.12 | 324.67 | 626.03 | 324.66 | 626.79 | 324.66 | 627.27 | 324.63 |
| 627.49 | 324.59 | 630.44 | 324.58 | 632.37 | 324.61 | 634.49 | 324.67 | 637.3 | 324.67 |
| 648.9 | 324.76 | 653.02 | 324.75 | 656.87 | 324.77 | 679.96 | 325.02 | 684.07 | 325.06 |
| 688.11 | 325.05 | 690.18 | 325.02 | 690.41 | 325.02 | 694.03 | 324.97 | 695.56 | 324.9 |
| 697.72 | 324.8 | 700.33 | 324.66 | 703.43 | 324.5 | 705.53 | 324.4 | 708.45 | 324.35 |
| 708.77 | 324.35 | 709.97 | 324.37 | 713.01 | 324.38 | 718.09 | 324.31 | 718.46 | 324.37 |
| 718.98 | 324.36 | 719.67 | 324.36 | 719.93 | 324.34 | 720.45 | 324.33 | 722.96 | 324.31 |
| 723.73 | 324.31 | 731.31 | 324.28 | 732.41 | 324.29 | 741.38 | 324.22 | 749.92 | 324.35 |
| 751.13 | 324.37 | 751.63 | 324.37 | 752.27 | 324.38 | 752.82 | 324.4 | 754.93 | 324.43 |
| 760.65 | 324.47 | 768.39 | 324.47 | 768.71 | 324.46 | 775.68 | 324.4 | 777.68 | 324.37 |
| 777.9 | 324.4 | 779.07 | 324.41 | 780.08 | 324.41 | 782.52 | 324.33 | 786.57 | 324.27 |
| 786.94 | 324.27 | 789.53 | 324.23 | 791.73 | 324.06 | 792.65 | 324.02 | 793.27 | 323.98 |
| 793.88 | 323.98 | 796.04 | 323.95 | 801.11 | 323.85 | 806.43 | 323.66 | 809.01 | 323.59 |
| 810.15 | 323.55 | 817.09 | 323.48 | 817.48 | 323.48 | 820.79 | 323.43 | 850.06 | 323.61 |
| 864.21 | 323.68 | 868.49 | 323.61 | 869.24 | 323.6 | 877.3 | 323.59 | 880.28 | 323.61 |
| 886.81 | 323.54 | 890.27 | 323.58 | 891.09 | 323.57 | 893.68 | 323.61 | 894.45 | 323.58 |
| 895.23 | 323.62 | 896.55 | 323.64 | 904.19 | 323.55 | 905.65 | 323.52 | 906.29 | 323.53 |
| 908.99 | 323.49 | 916.61 | 323.3 | 917.92 | 323.26 | 918.71 | 323.2 | 920.97 | 323.14 |
| 922.67 | 323.11 | 923.09 | 323.11 | 932.27 | 322.97 | 933.9 | 322.88 | 934.58 | 322.82 |
| 935.52 | 322.77 | 936.08 | 322.75 | 936.84 | 322.74 | 938.23 | 322.75 | 939.11 | 322.76 |
| 940.64 | 322.76 | 941.84 | 322.73 | 942.76 | 322.78 | 943.05 | 322.82 | 943.48 | 322.82 |
| 944.46 | 322.8 | 947.28 | 322.8 | 951.02 | 322.82 | 951.32 | 322.81 | 952.27 | 322.8 |
| 952.67 | 322.77 | 952.89 | 322.77 | 953.81 | 322.74 | 954.25 | 322.74 | 954.96 | 322.72 |
| 955.78 | 322.73 | 957.57 | 322.68 | 963.48 | 322.59 | 967 | 322.51 | 981.26 | 322.39 |
| 981.64 | 322.39 | 982.95 | 322.37 | 983.47 | 322.37 | 983.92 | 322.35 | 986.11 | 322.32 |
| 987.42 | 322.29 | 992 | 322.25 | 992.75 | 322.26 | 995.8 | 322.27 | 996.57 | 322.28 |
| 1002.06 | 322.27 | 1002.3 | 322.28 | 1003.24 | 322.28 | 1006.34 | 322.31 | 1006.64 | 322.3 |
| 1007.3 | 322.31 | 1012.11 | 322.29 | 1014.18 | 322.25 | 1018.65 | 322.25 | 1019.77 | 322.27 |
| 1020.89 | 322.28 | 1022.58 | 322.32 | 1026.46 | 322.37 | 1028.02 | 322.37 | 1038.81 | 322.64 |
| 1040.27 | 322.67 | 1042.06 | 322.66 | 1042.18 | 322.65 | 1045.2 | 322.59 | 1050.32 | 322.34 |
| 1050.55 | 322.35 | 1051.19 | 322.35 | 1053.21 | 322.22 | 1054.86 | 322.16 | 1055.26 | 322.14 |
| 1058.61 | 322.04 | 1059.36 | 322.03 | 1060.76 | 322.03 | 1065.87 | 322.08 | 1068.91 | 322.16 |
| 1071.06 | 322.18 | 1072.66 | 322.2 | 1073.2 | 322.21 | 1075.65 | 322.37 | 1077.24 | 322.41 |
| 1087.74 | 322.29 | 1088.38 | 322.27 | 1090.21 | 322.2 | 1092.97 | 322.07 | 1093.74 | 322.04 |
| 1094.69 | 322.02 | 1098.4 | 321.97 | 1101.23 | 321.94 | 1105.16 | 321.87 | 1108.77 | 321.78 |
| 1110.25 | 321.75 | 1111.99 | 321.72 | 1112.7 | 321.69 | 1114.11 | 321.64 | 1114.85 | 321.62 |
| 1117.88 | 321.57 | 1118.3 | 321.59 | 1120.01 | 321.58 | 1120.82 | 321.56 | 1121.56 | 321.53 |
| 1122.3 | 321.52 | 1123.57 | 321.51 | 1124.03 | 321.5 | 1124.73 | 321.51 | 1126.31 | 321.56 |
| 1127.52 | 321.59 | 1127.83 | 321.61 | 1128.12 | 321.61 | 1128.81 | 321.68 | 1129.33 | 321.74 |
| 1130.68 | 321.79 | 1132.69 | 321.88 | 1133.3 | 321.9 | 1134.36 | 321.95 | 1135.99 | 322.05 |
| 1137.02 | 322.15 | 1141.25 | 322.53 | 1142.5 | 322.61 | 1143.53 | 322.68 | 1152.5 | 323.02 |
| 1153.12 | 323.02 | 1153.78 | 322.98 | 1153.91 | 322.98 | 1158.44 | 323.11 | 1160.45 | 323.25 |
| 1161.16 | 323.29 | 1168.22 | 323.82 | 1169.67 | 323.97 | 1170.01 | 324.03 | 1180.27 | 326.01 |
| 1181.86 | 326.3 | 1183.69 | 326.61 | 1186.33 | 327.18 | 1186.55 | 327.22 | 1187.56 | 327.35 |
| 1188.94 | 327.54 | 1189.72 | 327.72 | 1191.4 | 328.08 | 1191.77 | 328.13 | 1192.69 | 328.22 |
| 1193.65 | 328.32 | 1194.64 | 328.44 | 1194.91 | 328.46 | 1195.73 | 328.55 | 1196.01 | 328.6 |
| 1196.2 | 328.66 | 1197.36 | 328.85 | 1198.22 | 328.97 | 1199.44 | 329.23 | 1200.3 | 329.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1201.53 | 329.51 | 1203.33 | 329.7 | 1204.47 | 329.79 | 1204.93 | 329.8 | 1206.33 | 329.9 |
| 1208.72 | 330.12 | 1208.93 | 330.17 | 1209.6 | 330.24 | 1209.98 | 330.24 | 1211.26 | 330.22 |
| 1212.95 | 330.14 | 1215.91 | 330.05 | 1216.56 | 330.02 | 1216.98 | 330.04 | 1218.03 | 329.98 |
| 1218.42 | 329.97 | 1218.62 | 330.01 | 1219.65 | 330.26 | 1219.85 | 330.3 | 1221.27 | 330.79 |
| 1221.42 | 330.85 | 1222.97 | 331.39 | 1223.12 | 331.43 | 1225.07 | 331.43 | 1225.43 | 331.44 |
| 1225.62 | 331.46 | 1227.26 | 331.51 | 1228.24 | 331.56 | 1230.71 | 331.78 | 1231.58 | 331.89 |
| 1232.29 | 332.03 | 1232.91 | 332.16 | 1233.61 | 332.37 | 1234.98 | 332.82 | 1235.49 | 332.98 |
| 1236.58 | 333.31 | 1237.25 | 333.48 | 1239.4 | 333.91 | 1240.39 | 334.17 | 1241.37 | 334.41 |
| 1242.56 | 334.62 | 1246.27 | 335.17 | 1248.63 | 335.49 | 1249.76 | 335.62 | 1251.1 | 335.74 |
| 1254.08 | 336.12 | 1254.68 | 336.18 | 1257.5 | 336.51 | 1259.12 | 336.66 | 1259.96 | 336.75 |
| 1260.62 | 336.81 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 114.89 | .05 | 695.56 | .04 | 1192.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 695.56 | 1192.69 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3750.19*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 126.38 | 339.98 | 127.67 | 339.68 | 128.4 | 339.46 | 130.22 | 338.76 | 131.19 | 338.42 |
| 132.12 | 338.08 | 132.2 | 338.06 | 133.81 | 337.47 | 134.18 | 337.34 | 136.06 | 336.75 |
| 136.68 | 336.54 | 137.6 | 336.21 | 138.07 | 336.05 | 139.07 | 335.79 | 140.71 | 335.38 |
| 145.68 | 334.24 | 148.56 | 333.52 | 149.48 | 333.3 | 150.16 | 333.15 | 150.64 | 333.03 |
| 151.03 | 332.92 | 151.96 | 332.68 | 152.42 | 332.57 | 153.56 | 332.33 | 154.78 | 332.05 |
| 155.27 | 331.95 | 155.95 | 331.84 | 156.24 | 331.81 | 156.96 | 331.71 | 159.18 | 331.41 |
| 159.98 | 331.33 | 160.68 | 331.28 | 162.37 | 331.17 | 165.45 | 330.91 | 165.94 | 330.86 |
| 167.56 | 330.73 | 170.6 | 330.51 | 171.9 | 330.44 | 172.54 | 330.42 | 173.15 | 330.48 |
| 174.1 | 330.46 | 175.7 | 330.4 | 177.25 | 330.33 | 180.22 | 330.26 | 180.37 | 330.26 |
| 181.73 | 330.2 | 182.61 | 330.15 | 183.7 | 330.07 | 185.04 | 329.98 | 186 | 329.9 |
| 186.43 | 329.87 | 188.07 | 329.73 | 188.82 | 329.69 | 189.87 | 329.62 | 190.4 | 329.59 |
| 193.06 | 329.38 | 194.35 | 329.28 | 207.36 | 328.44 | 208.52 | 328.34 | 210.07 | 328.22 |
| 215.2 | 327.77 | 217.08 | 327.48 | 220.47 | 326.88 | 220.85 | 326.8 | 222.65 | 326.69 |
| 226.58 | 326.54 | 230.16 | 326.46 | 232.57 | 326.4 | 233.01 | 326.37 | 234.13 | 326.31 |
| 237.16 | 326.18 | 237.59 | 326.14 | 238.32 | 326.1 | 238.95 | 326.05 | 240.58 | 325.94 |
| 241.84 | 325.84 | 242.26 | 325.82 | 243.08 | 325.84 | 244.18 | 325.85 | 250.25 | 325.82 |
| 254.7 | 325.84 | 255.31 | 325.84 | 259.59 | 325.92 | 260.44 | 325.94 | 261.4 | 325.98 |
| 262.99 | 326.11 | 264.6 | 326.31 | 266.4 | 326.45 | 269.19 | 326.68 | 270.52 | 326.8 |
| 270.86 | 326.85 | 271.53 | 326.89 | 272.13 | 326.9 | 272.92 | 326.9 | 273.54 | 326.89 |
| 275.5 | 326.83 | 276.78 | 326.78 | 278.02 | 326.7 | 280.02 | 326.59 | 281.13 | 326.52 |
| 283.02 | 326.39 | 284.19 | 326.3 | 285.24 | 326.21 | 287.66 | 326.01 | 289.65 | 325.81 |
| 291.91 | 325.62 | 292.11 | 325.61 | 297.32 | 325.24 | 302.39 | 324.83 | 306.72 | 324.47 |
| 308.14 | 324.43 | 317.02 | 324.15 | 319.13 | 324.09 | 321.89 | 324.05 | 328.16 | 324.03 |
| 329.55 | 324.04 | 330 | 324.07 | 330.09 | 324.14 | 330.94 | 324.17 | 333.68 | 324.18 |
| 336.4 | 324.15 | 338.59 | 324.09 | 338.83 | 324.09 | 350.6 | 323.86 | 351.43 | 323.85 |
| 369.11 | 323.51 | 372.56 | 323.43 | 382.26 | 323.29 | 394.52 | 323.44 | 397.84 | 323.51 |
| 398.52 | 323.52 | 401.85 | 323.49 | 404.66 | 323.47 | 411.93 | 323.45 | 412.31 | 323.43 |
| 414.2 | 323.4 | 414.72 | 323.4 | 418.41 | 323.33 | 420.04 | 323.31 | 421.6 | 323.28 |
| 426.76 | 323.29 | 430.8 | 323.23 | 432.77 | 323.25 | 432.98 | 323.24 | 436.22 | 323.24 |
| 438.49 | 323.2 | 439.79 | 323.16 | 440.11 | 323.14 | 441.25 | 323.1 | 441.39 | 323.08 |
| 441.81 | 323.1 | 442.85 | 323.13 | 446.77 | 323.18 | 456.58 | 323.23 | 457.58 | 323.22 |
| 458.21 | 323.2 | 460.33 | 323.11 | 460.54 | 323.11 | 463.16 | 323.14 | 465.23 | 323.14 |
| 466.41 | 323.18 | 469.01 | 323.18 | 487.25 | 323.21 | 487.43 | 323.21 | 492.72 | 323.3 |
| 492.84 | 323.31 | 493.44 | 323.31 | 494.93 | 323.34 | 495.92 | 323.35 | 499.14 | 323.33 |
| 502.81 | 323.32 | 504.03 | 323.32 | 518.57 | 323.24 | 521.72 | 323.21 | 528.02 | 323.12 |
| 528.5 | 323.11 | 529.95 | 323.06 | 532.07 | 323.03 | 532.81 | 322.98 | 534.33 | 322.93 |
| 534.44 | 322.93 | 537.85 | 323.03 | 538.43 | 323.05 | 539.33 | 323.06 | 540.56 | 323.08 |
| 540.69 | 323.09 | 541.4 | 323.09 | 543.41 | 323.13 | 544.26 | 323.13 | 551.62 | 323.24 |
| 551.99 | 323.24 | 569.69 | 323.46 | 571.41 | 323.49 | 573.6 | 323.54 | 587.68 | 323.78 |
| 589.41 | 323.8 | 589.62 | 323.79 | 590 | 323.8 | 602.19 | 323.82 | 602.43 | 323.83 |
| 604.71 | 323.83 | 605.74 | 323.84 | 607.1 | 323.86 | 607.96 | 323.86 | 609.14 | 323.85 |
| 609.99 | 323.86 | 611.26 | 323.86 | 611.39 | 323.85 | 612.35 | 323.87 | 613.66 | 323.88 |
| 614.91 | 323.9 | 615.03 | 323.91 | 622.08 | 324.05 | 622.82 | 324.07 | 629.43 | 324.21 |
| 629.98 | 324.23 | 635.15 | 324.34 | 639.42 | 324.34 | 641.34 | 324.33 | 642.37 | 324.32 |
| 642.81 | 324.27 | 645.78 | 324.26 | 647.73 | 324.29 | 648.83 | 324.31 | 649.87 | 324.34 |
| 652.7 | 324.34 | 664.38 | 324.43 | 668.53 | 324.42 | 672.42 | 324.44 | 695.68 | 324.68 |
| 699.82 | 324.71 | 703.89 | 324.69 | 705.97 | 324.66 | 706.21 | 324.66 | 709.85 | 324.6 |
| 711.39 | 324.52 | 713.57 | 324.41 | 716.21 | 324.26 | 719.34 | 324.09 | 721.46 | 323.97 |
| 724.41 | 323.92 | 724.73 | 323.92 | 725.94 | 323.94 | 729.01 | 323.95 | 734.14 | 323.9 |
| 734.51 | 323.96 | 735.04 | 323.96 | 735.73 | 323.95 | 736.52 | 323.93 | 737.69 | 323.93 |
| 739.06 | 323.92 | 739.83 | 323.92 | 747.77 | 323.91 | 748.6 | 323.92 | 757.66 | 323.84 |
| 766.28 | 323.94 | 767.01 | 323.94 | 768.01 | 323.96 | 768.65 | 323.96 | 769.2 | 323.98 |
| 771.34 | 324.01 | 777.11 | 324.04 | 779.92 | 324.03 | 781.02 | 324.04 | 782.54 | 324.03 |
| 784.93 | 324.03 | 785.25 | 324.02 | 792.29 | 323.95 | 794.31 | 323.92 | 794.53 | 323.95 |
| 795.71 | 323.96 | 796.73 | 323.96 | 799.19 | 323.87 | 803.29 | 323.8 | 803.65 | 323.8 |
| 806.19 | 323.76 | 806.27 | 323.75 | 808.49 | 323.57 | 809.42 | 323.52 | 810.05 | 323.48 |
| 810.66 | 323.48 | 812.84 | 323.45 | 817.96 | 323.34 | 823.33 | 323.16 | 825.94 | 323.09 |
| 827.09 | 323.05 | 834.1 | 323.01 | 834.49 | 323.01 | 837.83 | 322.97 | 867.38 | 323.17 |
| 881.67 | 323.24 | 885.99 | 323.19 | 894.89 | 323.19 | 897.9 | 323.22 | 904.49 | 323.17 |
| 907.98 | 323.23 | 908.81 | 323.22 | 911.42 | 323.27 | 912.2 | 323.25 | 912.99 | 323.28 |
| 914.33 | 323.31 | 922.04 | 323.23 | 923.51 | 323.2 | 924.16 | 323.21 | 926.89 | 323.18 |
| 934.57 | 322.99 | 935.9 | 322.94 | 937.05 | 322.87 | 938.98 | 322.82 | 940.69 | 322.8 |
| 941.12 | 322.8 | 950.39 | 322.67 | 952.03 | 322.58 | 952.72 | 322.53 | 954.23 | 322.47 |
| 955 | 322.46 | 956.4 | 322.47 | 957.29 | 322.48 | 958.84 | 322.48 | 960.05 | 322.46 |
| 960.98 | 322.5 | 961.27 | 322.54 | 961.71 | 322.54 | 962.69 | 322.52 | 965.54 | 322.52 |
| 969.32 | 322.53 | 969.63 | 322.52 | 970.73 | 322.5 | 972.13 | 322.45 | 973.3 | 322.42 |
| 974.13 | 322.43 | 975.93 | 322.38 | 981.9 | 322.29 | 985.46 | 322.21 | 999.85 | 322.08 |
| 1000.23 | 322.09 | 1001.56 | 322.06 | 1002.08 | 322.06 | 1002.53 | 322.04 | 1004.74 | 322 |
| 1006.07 | 321.97 | 1009.45 | 321.93 | 1010.69 | 321.93 | 1011.45 | 321.94 | 1014.53 | 321.95 |
| 1015.31 | 321.96 | 1020.85 | 321.95 | 1021.09 | 321.96 | 1022.05 | 321.96 | 1026.14 | 322 |
| 1031 | 321.98 | 1033.09 | 321.95 | 1037.6 | 321.95 | 1039.87 | 321.99 | 1041.57 | 322.03 |
| 1045.49 | 322.1 | 1046.62 | 322.1 | 1047.07 | 322.11 | 1057.95 | 322.41 | 1059.43 | 322.43 |
| 1061.36 | 322.42 | 1064.41 | 322.35 | 1069.58 | 322.08 | 1069.81 | 322.09 | 1070.46 | 322.09 |
| 1072.49 | 321.94 | 1074.17 | 321.88 | 1074.56 | 321.86 | 1077.95 | 321.75 | 1078.71 | 321.74 |
| 1080.12 | 321.73 | 1085.28 | 321.79 | 1088.35 | 321.87 | 1090.52 | 321.9 | 1092.14 | 321.92 |
| 1092.68 | 321.94 | 1095.15 | 322.11 | 1096.76 | 322.16 | 1107.36 | 322.02 | 1108 | 322 |
| 1109.35 | 321.95 | 1109.85 | 321.92 | 1112.44 | 321.8 | 1112.63 | 321.78 | 1113.41 | 321.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1114.38 | 321.73 | 1118.12 | 321.68 | 1120.98 | 321.65 | 1124.95 | 321.58 | 1127.83 | 321.52 |
| 1128.59 | 321.49 | 1130.09 | 321.47 | 1131.84 | 321.43 | 1132.56 | 321.41 | 1133.99 | 321.36 |
| 1134.73 | 321.34 | 1137.79 | 321.29 | 1138.21 | 321.3 | 1140.22 | 321.29 | 1141.5 | 321.24 |
| 1142.25 | 321.23 | 1143.54 | 321.22 | 1144.03 | 321.21 | 1144.75 | 321.22 | 1146.4 | 321.27 |
| 1147.66 | 321.3 | 1148.52 | 321.34 | 1149.53 | 321.45 | 1150.05 | 321.47 | 1150.94 | 321.49 |
| 1153.03 | 321.58 | 1153.66 | 321.6 | 1154.77 | 321.65 | 1156.46 | 321.75 | 1157.52 | 321.86 |
| 1161.93 | 322.21 | 1163.23 | 322.29 | 1164.29 | 322.35 | 1173.62 | 322.66 | 1174.27 | 322.66 |
| 1175.08 | 322.6 | 1179.79 | 322.72 | 1181.88 | 322.84 | 1182.62 | 322.88 | 1189.95 | 323.34 |
| 1191.47 | 323.47 | 1191.82 | 323.53 | 1202.48 | 325.45 | 1204.13 | 325.73 | 1206.03 | 326.03 |
| 1209.01 | 326.66 | 1211.5 | 326.97 | 1212.31 | 327.15 | 1214.05 | 327.53 | 1214.44 | 327.58 |
| 1215.39 | 327.67 | 1216.35 | 327.76 | 1217.35 | 327.87 | 1218.44 | 327.97 | 1218.68 | 328.02 |
| 1218.9 | 328.09 | 1220.07 | 328.29 | 1220.93 | 328.42 | 1222.15 | 328.68 | 1223.01 | 328.83 |
| 1224.24 | 329 | 1226.05 | 329.21 | 1226.92 | 329.3 | 1227.65 | 329.34 | 1228.39 | 329.39 |
| 1229.06 | 329.45 | 1231.45 | 329.69 | 1231.66 | 329.74 | 1232.02 | 329.79 | 1232.64 | 329.83 |
| 1233.99 | 329.83 | 1235.69 | 329.79 | 1239.3 | 329.74 | 1239.72 | 329.76 | 1240.49 | 329.74 |
| 1240.77 | 329.72 | 1241.17 | 329.73 | 1241.36 | 329.76 | 1242.59 | 330.03 | 1244.02 | 330.48 |
| 1245.49 | 330.96 | 1245.78 | 331.05 | 1245.94 | 331.07 | 1246.4 | 331.08 | 1247.82 | 331.09 |
| 1248.37 | 331.13 | 1250.02 | 331.2 | 1251 | 331.26 | 1253.48 | 331.5 | 1254.07 | 331.57 |
| 1254.34 | 331.61 | 1255.68 | 331.87 | 1256.37 | 332.08 | 1257.75 | 332.51 | 1259.35 | 332.97 |
| 1260.02 | 333.13 | 1262.18 | 333.55 | 1263.17 | 333.81 | 1264.15 | 334.05 | 1265.34 | 334.27 |
| 1269.06 | 334.85 | 1270.6 | 335.08 | 1271.42 | 335.19 | 1272.56 | 335.33 | 1273.89 | 335.46 |
| 1276.88 | 335.85 | 1277.48 | 335.92 | 1280.31 | 336.26 | 1281.93 | 336.42 | 1282.77 | 336.52 |
| 1283.43 | 336.58 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 126.38 | .05 | 711.39 | .04 | 1215.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 711.39 | 1215.39 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3730.46*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 137.87 | 339.66 | 139.17 | 339.34 | 139.91 | 339.11 | 141.74 | 338.37 | 142.72 | 338.01 |
| 143.65 | 337.65 | 145.73 | 336.86 | 148 | 336.09 | 149.18 | 335.65 | 149.65 | 335.47 |
| 150.66 | 335.19 | 152.31 | 334.75 | 157.32 | 333.53 | 160.21 | 332.78 | 162.31 | 332.26 |
| 163.64 | 331.89 | 164.11 | 331.77 | 164.64 | 331.66 | 165.25 | 331.52 | 166.48 | 331.22 |
| 167.66 | 331 | 167.95 | 330.98 | 168.67 | 330.87 | 170.91 | 330.58 | 171.72 | 330.5 |
| 172.42 | 330.44 | 174.12 | 330.32 | 177.23 | 330.05 | 177.72 | 330 | 179.36 | 329.85 |
| 182.42 | 329.62 | 183.73 | 329.54 | 184.37 | 329.52 | 184.98 | 329.58 | 185.94 | 329.55 |
| 188.47 | 329.44 | 189.12 | 329.4 | 192.1 | 329.3 | 192.98 | 329.26 | 194.52 | 329.16 |
| 196.37 | 329.01 | 197.93 | 328.9 | 200.01 | 328.71 | 200.77 | 328.67 | 201.83 | 328.6 |
| 202.36 | 328.56 | 205.05 | 328.35 | 206.34 | 328.24 | 219.45 | 327.39 | 220.62 | 327.29 |
| 222.18 | 327.18 | 227.35 | 326.75 | 229.24 | 326.48 | 232.66 | 325.95 | 233.04 | 325.88 |
| 234.85 | 325.76 | 235.91 | 325.73 | 238.81 | 325.6 | 242.42 | 325.53 | 244.85 | 325.46 |
| 245.29 | 325.44 | 246.42 | 325.38 | 249.47 | 325.26 | 249.91 | 325.23 | 250.64 | 325.19 |
| 251.28 | 325.15 | 252.91 | 325.04 | 254.18 | 324.95 | 254.61 | 324.93 | 255.44 | 324.95 |
| 256.54 | 324.96 | 262.65 | 324.91 | 267.7 | 324.91 | 267.75 | 324.92 | 272.07 | 324.96 |
| 272.92 | 324.98 | 273.89 | 325.01 | 275.49 | 325.12 | 277.11 | 325.29 | 278.93 | 325.4 |
| 279.28 | 325.43 | 281.74 | 325.59 | 282.84 | 325.68 | 283.32 | 325.71 | 283.42 | 325.74 |
| 284.1 | 325.77 | 286.12 | 325.77 | 288.09 | 325.71 | 288.82 | 325.68 | 289.39 | 325.67 |
| 290 | 325.63 | 292.65 | 325.51 | 293.77 | 325.44 | 295.67 | 325.34 | 296.85 | 325.26 |
| 297.91 | 325.18 | 300.35 | 325.01 | 302.36 | 324.84 | 304.63 | 324.68 | 304.83 | 324.67 |
| 310.08 | 324.35 | 315.19 | 324.01 | 319.55 | 323.69 | 320.2 | 323.67 | 320.98 | 323.66 |
| 329.92 | 323.42 | 332.05 | 323.37 | 333.41 | 323.35 | 334.83 | 323.34 | 341.15 | 323.33 |
| 342.55 | 323.35 | 343 | 323.38 | 343.09 | 323.46 | 343.81 | 323.48 | 343.95 | 323.49 |
| 346.71 | 323.51 | 349.45 | 323.48 | 351.65 | 323.43 | 351.89 | 323.42 | 363.76 | 323.21 |
| 364.59 | 323.19 | 382.41 | 322.87 | 385.88 | 322.8 | 395.65 | 322.68 | 408 | 322.88 |
| 411.34 | 322.96 | 412.03 | 322.97 | 415.38 | 322.94 | 418.21 | 322.93 | 425.54 | 322.91 |
| 425.92 | 322.88 | 427.82 | 322.86 | 428.35 | 322.86 | 435.28 | 322.73 | 440.47 | 322.74 |
| 444.55 | 322.68 | 446.54 | 322.7 | 446.75 | 322.69 | 450.01 | 322.69 | 452.29 | 322.65 |
| 453.6 | 322.61 | 453.93 | 322.59 | 455.08 | 322.54 | 455.22 | 322.52 | 456.02 | 322.55 |
| 456.28 | 322.57 | 456.69 | 322.58 | 460.64 | 322.64 | 470.52 | 322.7 | 471.53 | 322.7 |
| 474.3 | 322.61 | 474.51 | 322.61 | 477.14 | 322.64 | 479.24 | 322.65 | 480.42 | 322.68 |
| 483.05 | 322.68 | 501.42 | 322.75 | 501.6 | 322.75 | 506.93 | 322.86 | 507.05 | 322.87 |
| 507.65 | 322.88 | 508.23 | 322.88 | 509.16 | 322.9 | 510.15 | 322.91 | 513.4 | 322.9 |
| 517.1 | 322.89 | 518.32 | 322.89 | 532.97 | 322.82 | 536.14 | 322.78 | 542.49 | 322.68 |
| 542.98 | 322.67 | 544.44 | 322.63 | 546.57 | 322.6 | 547.32 | 322.54 | 548.54 | 322.5 |
| 548.96 | 322.49 | 552.39 | 322.59 | 553.88 | 322.62 | 555.62 | 322.65 | 555.97 | 322.65 |
| 558 | 322.69 | 558.85 | 322.69 | 566.27 | 322.81 | 566.64 | 322.81 | 584.47 | 323.07 |
| 586.2 | 323.1 | 587.89 | 323.14 | 588.41 | 323.16 | 602.59 | 323.41 | 604.33 | 323.43 |
| 604.93 | 323.43 | 617.21 | 323.45 | 619.63 | 323.46 | 620.47 | 323.46 | 620.79 | 323.47 |
| 622.16 | 323.49 | 623.02 | 323.49 | 624.21 | 323.48 | 626.35 | 323.48 | 626.48 | 323.47 |
| 627.45 | 323.49 | 630.02 | 323.53 | 630.15 | 323.54 | 637.25 | 323.69 | 637.99 | 323.72 |
| 644.65 | 323.87 | 645.21 | 323.89 | 650.42 | 324 | 656.65 | 324 | 657.91 | 323.98 |
| 658.13 | 323.95 | 661.13 | 323.94 | 663.09 | 323.96 | 664.2 | 323.98 | 665.24 | 324.01 |
| 668.1 | 324.01 | 679.87 | 324.11 | 684.04 | 324.1 | 687.96 | 324.11 | 711.39 | 324.33 |
| 715.57 | 324.36 | 719.67 | 324.33 | 721.76 | 324.3 | 722 | 324.29 | 725.67 | 324.23 |
| 727.22 | 324.14 | 729.42 | 324.02 | 735.25 | 323.67 | 737.39 | 323.55 | 740.37 | 323.49 |
| 740.69 | 323.5 | 741.91 | 323.51 | 745.02 | 323.52 | 750.19 | 323.48 | 750.57 | 323.55 |
| 751.8 | 323.55 | 752.6 | 323.53 | 755.94 | 323.53 | 763.67 | 323.54 | 764.79 | 323.55 |
| 773.93 | 323.46 | 782.63 | 323.53 | 783.37 | 323.53 | 783.86 | 323.54 | 785.03 | 323.54 |
| 785.59 | 323.56 | 787.74 | 323.59 | 793.57 | 323.6 | 799.06 | 323.6 | 801.46 | 323.59 |
| 801.79 | 323.58 | 808.89 | 323.5 | 810.94 | 323.47 | 811.15 | 323.49 | 812.35 | 323.51 |
| 813.38 | 323.51 | 815.87 | 323.41 | 820 | 323.33 | 820.37 | 323.33 | 821 | 323.32 |
| 821.62 | 323.3 | 823.01 | 323.28 | 825.25 | 323.09 | 826.82 | 322.99 | 829.64 | 322.95 |
| 834.81 | 322.84 | 840.24 | 322.67 | 842.87 | 322.6 | 844.03 | 322.56 | 851.1 | 322.54 |
| 851.5 | 322.54 | 854.87 | 322.52 | 884.7 | 322.73 | 899.13 | 322.81 | 903.5 | 322.77 |
| 904.26 | 322.77 | 912.48 | 322.8 | 915.51 | 322.84 | 922.17 | 322.8 | 925.69 | 322.87 |
| 926.53 | 322.86 | 929.17 | 322.92 | 929.58 | 322.92 | 929.99 | 322.91 | 930.04 | 322.92 |
| 930.76 | 322.95 | 932.1 | 322.98 | 939.89 | 322.91 | 941.37 | 322.89 | 942.03 | 322.89 |
| 944.78 | 322.87 | 952.54 | 322.68 | 953.88 | 322.63 | 954.69 | 322.57 | 956.99 | 322.51 |
| 958.72 | 322.48 | 959.15 | 322.49 | 968.51 | 322.37 | 970.16 | 322.29 | 970.86 | 322.25 |
| 971.82 | 322.21 | 972.91 | 322.19 | 974.58 | 322.19 | 976.65 | 322.21 | 977.03 | 322.2 |
| 977.52 | 322.2 | 978.26 | 322.18 | 979.19 | 322.22 | 979.49 | 322.26 | 980.93 | 322.23 |
| 981.49 | 322.23 | 983.71 | 322.24 | 987.62 | 322.24 | 989.04 | 322.2 | 989.78 | 322.17 |
| 990.46 | 322.16 | 991.64 | 322.13 | 992.47 | 322.13 | 994.3 | 322.08 | 1000.32 | 321.99 |
| 1002.97 | 321.93 | 1003.91 | 321.92 | 1018.44 | 321.77 | 1018.82 | 321.78 | 1020.17 | 321.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1020.7 | 321.75 | 1020.98 | 321.74 | 1021.15 | 321.72 | 1023.38 | 321.69 | 1024.72 | 321.66 |
| 1028.13 | 321.61 | 1030.15 | 321.61 | 1033.27 | 321.63 | 1039.64 | 321.63 | 1039.89 | 321.64 |
| 1040.85 | 321.64 | 1044 | 321.68 | 1044.99 | 321.68 | 1049.88 | 321.67 | 1052 | 321.64 |
| 1053.78 | 321.64 | 1054.14 | 321.65 | 1056.55 | 321.66 | 1058.84 | 321.7 | 1064.52 | 321.83 |
| 1065.66 | 321.84 | 1066.11 | 321.85 | 1077.1 | 322.17 | 1078.59 | 322.2 | 1080.41 | 322.19 |
| 1080.54 | 322.18 | 1083.62 | 322.11 | 1088.83 | 321.81 | 1089.07 | 321.82 | 1089.72 | 321.82 |
| 1091.78 | 321.67 | 1093.87 | 321.57 | 1097.28 | 321.45 | 1098.05 | 321.44 | 1099.48 | 321.44 |
| 1104.68 | 321.5 | 1107.79 | 321.59 | 1109.97 | 321.62 | 1111.61 | 321.64 | 1112.16 | 321.66 |
| 1114.66 | 321.85 | 1116.2 | 321.9 | 1116.28 | 321.9 | 1126.98 | 321.76 | 1127.63 | 321.73 |
| 1128.99 | 321.68 | 1129.49 | 321.65 | 1132.11 | 321.52 | 1132.3 | 321.5 | 1133.09 | 321.46 |
| 1134.06 | 321.44 | 1137.84 | 321.39 | 1140.73 | 321.35 | 1144.73 | 321.29 | 1147.64 | 321.23 |
| 1148.41 | 321.21 | 1149.92 | 321.18 | 1151.26 | 321.16 | 1152.42 | 321.13 | 1153.86 | 321.07 |
| 1154.61 | 321.05 | 1157.7 | 321 | 1157.83 | 321.01 | 1159.91 | 321.01 | 1160.7 | 320.99 |
| 1160.96 | 320.97 | 1161.45 | 320.95 | 1162.21 | 320.95 | 1163.5 | 320.93 | 1163.64 | 320.92 |
| 1164.03 | 320.92 | 1164.78 | 320.93 | 1166.18 | 320.97 | 1168.44 | 321.04 | 1168.96 | 321.08 |
| 1169.74 | 321.15 | 1170.27 | 321.18 | 1171.2 | 321.2 | 1173.37 | 321.28 | 1174.02 | 321.3 |
| 1175.17 | 321.35 | 1176.93 | 321.46 | 1178.03 | 321.56 | 1182.6 | 321.9 | 1183.96 | 321.96 |
| 1185.06 | 322.02 | 1194.74 | 322.3 | 1195.41 | 322.29 | 1196.25 | 322.23 | 1201.14 | 322.33 |
| 1203.31 | 322.44 | 1204.08 | 322.47 | 1211.69 | 322.86 | 1213.26 | 322.97 | 1213.63 | 323.03 |
| 1224.7 | 324.89 | 1226.4 | 325.16 | 1228.38 | 325.45 | 1228.58 | 325.5 | 1231.47 | 326.1 |
| 1234.05 | 326.41 | 1236.7 | 326.98 | 1237.1 | 327.03 | 1238.09 | 327.12 | 1239.05 | 327.19 |
| 1240.32 | 327.32 | 1241.14 | 327.4 | 1241.42 | 327.45 | 1241.61 | 327.52 | 1242.77 | 327.73 |
| 1243.64 | 327.87 | 1244.87 | 328.14 | 1245.72 | 328.3 | 1246.96 | 328.48 | 1248.77 | 328.73 |
| 1249.64 | 328.83 | 1250.37 | 328.88 | 1251.11 | 328.94 | 1251.78 | 329 | 1254.18 | 329.25 |
| 1254.38 | 329.31 | 1254.64 | 329.35 | 1255.25 | 329.41 | 1255.44 | 329.41 | 1256.72 | 329.45 |
| 1258.42 | 329.44 | 1261.39 | 329.46 | 1262.04 | 329.46 | 1262.46 | 329.48 | 1263.24 | 329.48 |
| 1263.51 | 329.47 | 1263.91 | 329.48 | 1264.1 | 329.51 | 1265.14 | 329.73 | 1265.34 | 329.76 |
| 1266.76 | 330.17 | 1266.92 | 330.22 | 1268.24 | 330.6 | 1268.47 | 330.67 | 1268.69 | 330.71 |
| 1270.48 | 330.75 | 1271.13 | 330.8 | 1272.77 | 330.88 | 1273.76 | 330.96 | 1276.24 | 331.21 |
| 1276.83 | 331.29 | 1277.82 | 331.47 | 1278.44 | 331.59 | 1279.14 | 331.78 | 1280.52 | 332.19 |
| 1281.39 | 332.43 | 1282.12 | 332.62 | 1282.8 | 332.77 | 1284.95 | 333.18 | 1285.95 | 333.45 |
| 1286.93 | 333.69 | 1288.12 | 333.93 | 1291.85 | 334.54 | 1293.4 | 334.77 | 1293.69 | 334.82 |
| 1294.21 | 334.89 | 1295.01 | 334.99 | 1295.35 | 335.04 | 1296.69 | 335.18 | 1299.68 | 335.59 |
| 1300.21 | 335.65 | 1300.28 | 335.65 | 1303.12 | 336.01 | 1304.74 | 336.19 | 1305.58 | 336.29 |
| 1306.25 | 336.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 137.87 | .05 | 727.22 | .04 | 1238.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 727.22 | 1238.09 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3710.73*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 149.36 | 339.33 | 150.67 | 339 | 151.41 | 338.76 | 153.25 | 337.97 | 154.24 | 337.59 |
| 155.18 | 337.21 | 156.9 | 336.54 | 157.28 | 336.38 | 159.56 | 335.55 | 160.75 | 335.08 |
| 161.22 | 334.89 | 163.9 | 334.13 | 168.95 | 332.83 | 171.87 | 332.04 | 172.8 | 331.79 |
| 173.49 | 331.62 | 173.98 | 331.49 | 174.38 | 331.37 | 175.79 | 330.98 | 176.33 | 330.86 |
| 178.18 | 330.4 | 178.67 | 330.3 | 179.37 | 330.17 | 179.66 | 330.14 | 180.39 | 330.04 |
| 182.64 | 329.75 | 183.46 | 329.66 | 185.88 | 329.46 | 189.01 | 329.18 | 190.63 | 329.02 |
| 191.15 | 328.98 | 194.23 | 328.73 | 195.56 | 328.64 | 196.2 | 328.62 | 196.82 | 328.68 |
| 197.78 | 328.65 | 199.41 | 328.57 | 200.99 | 328.47 | 203.99 | 328.33 | 204.88 | 328.28 |
| 205.53 | 328.23 | 206.42 | 328.17 | 207.53 | 328.08 | 208.29 | 328.01 | 208.89 | 327.97 |
| 209.86 | 327.89 | 211.96 | 327.7 | 212.72 | 327.65 | 214.33 | 327.53 | 217.03 | 327.31 |
| 218.33 | 327.2 | 231.54 | 326.34 | 232.72 | 326.24 | 234.29 | 326.14 | 239.5 | 325.73 |
| 241.4 | 325.49 | 244.85 | 325.01 | 245.24 | 324.95 | 247.06 | 324.84 | 248.12 | 324.8 |
| 251.05 | 324.67 | 254.68 | 324.59 | 257.13 | 324.53 | 258.71 | 324.46 | 261.78 | 324.34 |
| 262.96 | 324.28 | 263.6 | 324.24 | 265.25 | 324.15 | 266.53 | 324.07 | 266.96 | 324.05 |
| 267.79 | 324.06 | 268.91 | 324.06 | 275.06 | 324.01 | 279.58 | 323.99 | 280.2 | 323.99 |
| 284.54 | 324.01 | 285.41 | 324.02 | 286.38 | 324.05 | 287.99 | 324.13 | 289.63 | 324.26 |
| 291.46 | 324.35 | 294.29 | 324.5 | 295.89 | 324.6 | 295.98 | 324.63 | 296.67 | 324.65 |
| 298.07 | 324.65 | 299.74 | 324.62 | 301.42 | 324.57 | 301.99 | 324.56 | 303.25 | 324.5 |
| 305.28 | 324.43 | 306.4 | 324.37 | 308.33 | 324.28 | 309.51 | 324.22 | 310.58 | 324.15 |
| 313.03 | 324.01 | 315.06 | 323.87 | 317.34 | 323.74 | 322.84 | 323.46 | 327.99 | 323.18 |
| 332.37 | 322.92 | 333.04 | 322.9 | 333.38 | 322.9 | 342.83 | 322.69 | 344.97 | 322.65 |
| 347.77 | 322.63 | 354.13 | 322.63 | 355.54 | 322.65 | 356.01 | 322.69 | 356.09 | 322.77 |
| 356.82 | 322.79 | 356.96 | 322.81 | 359.74 | 322.84 | 362.5 | 322.81 | 364.72 | 322.76 |
| 364.96 | 322.75 | 376.91 | 322.55 | 377.75 | 322.54 | 395.7 | 322.23 | 399.2 | 322.17 |
| 409.04 | 322.07 | 421.48 | 322.32 | 424.85 | 322.41 | 425.54 | 322.42 | 428.92 | 322.4 |
| 431.77 | 322.39 | 439.14 | 322.37 | 439.53 | 322.34 | 441.45 | 322.32 | 441.98 | 322.32 |
| 445.73 | 322.24 | 446.73 | 322.23 | 447.38 | 322.21 | 448.96 | 322.18 | 454.19 | 322.19 |
| 458.3 | 322.12 | 460.3 | 322.14 | 463.8 | 322.14 | 466.1 | 322.1 | 467.42 | 322.06 |
| 467.75 | 322.03 | 468.91 | 321.99 | 469.05 | 321.96 | 469.85 | 322 | 470.53 | 322.02 |
| 474.51 | 322.1 | 484.46 | 322.17 | 485.48 | 322.17 | 486.12 | 322.16 | 488.27 | 322.11 |
| 488.48 | 322.1 | 490.31 | 322.13 | 491.13 | 322.14 | 493.24 | 322.15 | 494.65 | 322.18 |
| 497.08 | 322.19 | 515.59 | 322.29 | 515.77 | 322.3 | 521.14 | 322.42 | 521.26 | 322.43 |
| 521.87 | 322.44 | 522.45 | 322.44 | 524.27 | 322.48 | 531.52 | 322.46 | 532.61 | 322.47 |
| 547.37 | 322.39 | 550.57 | 322.34 | 556.97 | 322.25 | 558.92 | 322.2 | 561.07 | 322.16 |
| 561.83 | 322.1 | 563.05 | 322.06 | 564.17 | 322.06 | 566.93 | 322.14 | 567.53 | 322.16 |
| 568.44 | 322.18 | 570.18 | 322.21 | 570.54 | 322.21 | 572.58 | 322.26 | 573.44 | 322.26 |
| 580.91 | 322.39 | 581.29 | 322.39 | 599.25 | 322.68 | 600.99 | 322.71 | 601.91 | 322.73 |
| 602.7 | 322.76 | 617.51 | 323.05 | 619.26 | 323.06 | 619.86 | 323.06 | 632.23 | 323.07 |
| 632.48 | 323.08 | 634.79 | 323.08 | 635.84 | 323.09 | 637.22 | 323.11 | 638.09 | 323.11 |
| 639.28 | 323.1 | 640.15 | 323.1 | 641.06 | 323.11 | 641.57 | 323.09 | 643.87 | 323.14 |
| 645.14 | 323.16 | 645.26 | 323.17 | 652.41 | 323.34 | 653.17 | 323.36 | 659.87 | 323.52 |
| 660.44 | 323.54 | 665.69 | 323.67 | 671.96 | 323.67 | 673.01 | 323.66 | 673.46 | 323.62 |
| 676.47 | 323.62 | 679.57 | 323.65 | 680.62 | 323.67 | 683.49 | 323.67 | 695.35 | 323.78 |
| 699.56 | 323.77 | 703.5 | 323.78 | 727.11 | 323.98 | 731.32 | 324.01 | 735.44 | 323.98 |
| 737.55 | 323.94 | 737.8 | 323.93 | 741.49 | 323.86 | 743.06 | 323.76 | 745.28 | 323.63 |
| 747.96 | 323.45 | 751.15 | 323.26 | 753.31 | 323.12 | 756.32 | 323.06 | 756.65 | 323.07 |
| 757.88 | 323.08 | 761.02 | 323.09 | 766.24 | 323.07 | 766.62 | 323.15 | 767.86 | 323.15 |
| 768.67 | 323.13 | 769.62 | 323.13 | 769.85 | 323.14 | 772.04 | 323.14 | 779.84 | 323.17 |
| 780.98 | 323.18 | 790.21 | 323.08 | 798.99 | 323.12 | 800.75 | 323.12 | 801.01 | 323.13 |
| 801.41 | 323.12 | 801.84 | 323.14 | 804.15 | 323.16 | 810.04 | 323.17 | 812.89 | 323.16 |
| 814.02 | 323.17 | 815.57 | 323.16 | 818 | 323.15 | 818.33 | 323.14 | 825.5 | 323.05 |
| 827.56 | 323.01 | 827.78 | 323.04 | 828.99 | 323.06 | 830.03 | 323.06 | 832.54 | 322.95 |
| 836.71 | 322.86 | 837.72 | 322.85 | 838.35 | 322.83 | 839.66 | 322.81 | 839.75 | 322.8 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 842.02 | 322.6 | 842.96 | 322.54 | 843.6 | 322.49 | 846.45 | 322.44 | 851.66 | 322.33 |
| 857.14 | 322.17 | 859.79 | 322.1 | 860.96 | 322.06 | 868.11 | 322.07 | 868.51 | 322.08 |
| 871.91 | 322.06 | 902.03 | 322.29 | 916.59 | 322.38 | 921 | 322.35 | 921.77 | 322.35 |
| 930.06 | 322.4 | 933.13 | 322.46 | 939.84 | 322.43 | 943.41 | 322.52 | 944.25 | 322.51 |
| 946.91 | 322.58 | 947.74 | 322.57 | 948.52 | 322.61 | 948.71 | 322.61 | 949.37 | 322.64 |
| 949.87 | 322.65 | 957.74 | 322.59 | 959.24 | 322.57 | 959.89 | 322.58 | 962.67 | 322.56 |
| 970.51 | 322.37 | 971.86 | 322.32 | 972.67 | 322.26 | 973.03 | 322.24 | 975 | 322.19 |
| 976.74 | 322.17 | 977.18 | 322.17 | 986.62 | 322.06 | 988.3 | 322 | 989 | 321.96 |
| 989.97 | 321.93 | 991.07 | 321.91 | 992.75 | 321.91 | 994.85 | 321.93 | 995.23 | 321.93 |
| 996.48 | 321.91 | 997.41 | 321.94 | 997.72 | 321.97 | 998.16 | 321.97 | 999.16 | 321.95 |
| 1005.92 | 321.95 | 1007.35 | 321.91 | 1008.1 | 321.88 | 1009.97 | 321.83 | 1010.63 | 321.83 |
| 1010.82 | 321.84 | 1012.66 | 321.78 | 1018.74 | 321.69 | 1021.42 | 321.64 | 1022.36 | 321.62 |
| 1037.03 | 321.47 | 1037.42 | 321.47 | 1039.6 | 321.44 | 1039.77 | 321.41 | 1042.02 | 321.37 |
| 1043.38 | 321.34 | 1046.82 | 321.29 | 1048.85 | 321.29 | 1052 | 321.3 | 1052.78 | 321.31 |
| 1058.43 | 321.31 | 1058.68 | 321.32 | 1059.65 | 321.32 | 1062.84 | 321.37 | 1063.83 | 321.37 |
| 1068.77 | 321.35 | 1070.91 | 321.33 | 1071.63 | 321.34 | 1073.07 | 321.34 | 1075.5 | 321.36 |
| 1076.65 | 321.38 | 1077.81 | 321.41 | 1079.55 | 321.46 | 1083.54 | 321.56 | 1084.7 | 321.57 |
| 1085.15 | 321.58 | 1096.25 | 321.94 | 1097.75 | 321.97 | 1098.04 | 321.97 | 1099.35 | 321.95 |
| 1099.71 | 321.95 | 1102.83 | 321.87 | 1108.09 | 321.55 | 1108.33 | 321.56 | 1108.99 | 321.56 |
| 1111.06 | 321.39 | 1113.17 | 321.29 | 1116.62 | 321.16 | 1117.4 | 321.14 | 1118.84 | 321.14 |
| 1124.09 | 321.21 | 1127.22 | 321.31 | 1129.43 | 321.33 | 1131.08 | 321.36 | 1131.39 | 321.38 |
| 1131.64 | 321.38 | 1134.16 | 321.59 | 1135.79 | 321.64 | 1146.6 | 321.49 | 1148.63 | 321.4 |
| 1149.14 | 321.37 | 1151.77 | 321.24 | 1151.97 | 321.21 | 1152.77 | 321.17 | 1153.75 | 321.15 |
| 1157.56 | 321.1 | 1160.48 | 321.06 | 1164.52 | 321 | 1167.46 | 320.94 | 1168.23 | 320.92 |
| 1169.76 | 320.89 | 1171.11 | 320.87 | 1172.28 | 320.84 | 1173.74 | 320.79 | 1174.49 | 320.77 |
| 1177.61 | 320.71 | 1178.04 | 320.73 | 1179.84 | 320.72 | 1180.64 | 320.7 | 1180.9 | 320.68 |
| 1181.69 | 320.66 | 1182.16 | 320.66 | 1184.03 | 320.63 | 1184.8 | 320.64 | 1186.26 | 320.68 |
| 1186.57 | 320.7 | 1187.93 | 320.73 | 1188.59 | 320.75 | 1189.37 | 320.82 | 1189.95 | 320.86 |
| 1190.5 | 320.89 | 1191.46 | 320.9 | 1193.71 | 320.98 | 1194.39 | 321 | 1195.58 | 321.05 |
| 1197.4 | 321.16 | 1198.54 | 321.26 | 1203.28 | 321.58 | 1205.82 | 321.69 | 1215.86 | 321.94 |
| 1216.55 | 321.93 | 1217.43 | 321.86 | 1222.49 | 321.94 | 1224.74 | 322.03 | 1225.54 | 322.06 |
| 1233.43 | 322.39 | 1235.06 | 322.48 | 1235.44 | 322.54 | 1246.91 | 324.33 | 1248.68 | 324.59 |
| 1250.73 | 324.88 | 1253.93 | 325.53 | 1256.6 | 325.84 | 1259.35 | 326.43 | 1259.77 | 326.49 |
| 1260.79 | 326.56 | 1261.76 | 326.63 | 1261.93 | 326.65 | 1262.76 | 326.72 | 1263.02 | 326.75 |
| 1263.85 | 326.82 | 1264.13 | 326.88 | 1264.32 | 326.94 | 1265.48 | 327.17 | 1266.35 | 327.32 |
| 1267.58 | 327.59 | 1268.44 | 327.76 | 1269.67 | 327.96 | 1271.49 | 328.24 | 1272.36 | 328.35 |
| 1272.64 | 328.38 | 1273.09 | 328.41 | 1273.83 | 328.48 | 1274.5 | 328.55 | 1276.9 | 328.82 |
| 1277.11 | 328.88 | 1277.48 | 328.94 | 1278.09 | 329 | 1278.17 | 329 | 1279.45 | 329.07 |
| 1281.16 | 329.09 | 1284.13 | 329.16 | 1285.07 | 329.19 | 1285.2 | 329.2 | 1286.25 | 329.21 |
| 1286.65 | 329.23 | 1286.85 | 329.26 | 1287.89 | 329.46 | 1288.08 | 329.49 | 1289.67 | 329.9 |
| 1291.22 | 330.31 | 1291.44 | 330.34 | 1291.9 | 330.37 | 1293.69 | 330.44 | 1293.88 | 330.47 |
| 1295.53 | 330.57 | 1296.52 | 330.66 | 1299 | 330.93 | 1299.6 | 331.01 | 1300.59 | 331.19 |
| 1301.21 | 331.31 | 1301.91 | 331.48 | 1303.29 | 331.87 | 1303.8 | 332.01 | 1304.9 | 332.28 |
| 1305.57 | 332.42 | 1307.73 | 332.82 | 1308.73 | 333.08 | 1309.71 | 333.33 | 1310.91 | 333.58 |
| 1314.64 | 334.22 | 1316.19 | 334.47 | 1317 | 334.59 | 1317.8 | 334.7 | 1319.49 | 334.9 |
| 1322.48 | 335.32 | 1323.01 | 335.39 | 1323.09 | 335.39 | 1325.92 | 335.76 | 1327.55 | 335.95 |
| 1329.06 | 336.13 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 149.36 | .05 | 743.06 | .04 | 1260.79 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 743.06 | 1260.79 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3691.00*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 160.84 | 339.01 | 162.17 | 338.66 | 162.91 | 338.4 | 164.77 | 337.58 | 165.76 | 337.17 |
| 166.79 | 336.75 | 168.44 | 336.07 | 168.82 | 335.91 | 170.74 | 335.17 | 171.38 | 334.91 |
| 172.32 | 334.51 | 172.8 | 334.31 | 173.82 | 334 | 175.5 | 333.5 | 180.58 | 332.12 |
| 183.52 | 331.29 | 184.46 | 331.03 | 185.16 | 330.85 | 186.05 | 330.59 | 187.47 | 330.18 |
| 188.01 | 330.06 | 189.88 | 329.58 | 190.38 | 329.47 | 191.08 | 329.34 | 192.1 | 329.21 |
| 194.37 | 328.91 | 195.91 | 328.76 | 197.64 | 328.61 | 200.79 | 328.31 | 202.95 | 328.1 |
| 206.05 | 327.83 | 207.38 | 327.74 | 208.03 | 327.72 | 208.66 | 327.78 | 209.63 | 327.74 |
| 211.26 | 327.66 | 211.43 | 327.64 | 212.2 | 327.59 | 212.85 | 327.54 | 215.88 | 327.36 |
| 216.77 | 327.3 | 217.43 | 327.25 | 218.33 | 327.17 | 219.44 | 327.08 | 220.21 | 327.01 |
| 221.79 | 326.88 | 223.91 | 326.69 | 224.2 | 326.66 | 224.68 | 326.63 | 226.29 | 326.51 |
| 229.02 | 326.27 | 230.33 | 326.16 | 243.63 | 325.29 | 244.81 | 325.19 | 246.4 | 325.09 |
| 251.65 | 324.71 | 253.56 | 324.5 | 257.04 | 324.08 | 257.43 | 324.02 | 259.26 | 323.91 |
| 260.33 | 323.87 | 263.28 | 323.74 | 266.94 | 323.66 | 269.4 | 323.6 | 271 | 323.53 |
| 274.09 | 323.43 | 274.54 | 323.4 | 275.28 | 323.37 | 277.59 | 323.26 | 278.88 | 323.19 |
| 279.19 | 323.17 | 280.15 | 323.18 | 281.27 | 323.17 | 287.47 | 323.1 | 292.02 | 323.06 |
| 297.02 | 323.06 | 298.87 | 323.08 | 300.5 | 323.14 | 302.14 | 323.24 | 303.99 | 323.3 |
| 304.35 | 323.32 | 306.84 | 323.41 | 308.45 | 323.48 | 308.51 | 323.51 | 309.23 | 323.53 |
| 310.65 | 323.53 | 311.28 | 323.52 | 313.29 | 323.48 | 314.02 | 323.46 | 314.6 | 323.45 |
| 315.22 | 323.42 | 317.91 | 323.34 | 320.98 | 323.23 | 322.17 | 323.17 | 323.25 | 323.12 |
| 325.72 | 323.01 | 327.76 | 322.9 | 330.06 | 322.79 | 330.27 | 322.79 | 335.59 | 322.58 |
| 340.78 | 322.35 | 345.2 | 322.14 | 346.21 | 322.13 | 346.66 | 322.12 | 355.73 | 321.97 |
| 357.89 | 321.93 | 360.71 | 321.91 | 367.12 | 321.93 | 368.54 | 321.96 | 369.01 | 321.99 |
| 369.09 | 322.09 | 369.82 | 322.11 | 369.97 | 322.14 | 372.77 | 322.17 | 375.55 | 322.15 |
| 377.78 | 322.1 | 378.02 | 322.09 | 390.06 | 321.9 | 390.91 | 321.88 | 408.99 | 321.6 |
| 412.51 | 321.53 | 422.42 | 321.45 | 434.96 | 321.76 | 438.35 | 321.86 | 439.05 | 321.87 |
| 442.45 | 321.86 | 445.32 | 321.85 | 452.75 | 321.83 | 453.14 | 321.8 | 455.08 | 321.78 |
| 455.61 | 321.78 | 459.38 | 321.7 | 462.65 | 321.64 | 467.91 | 321.64 | 472.05 | 321.57 |
| 474.06 | 321.59 | 474.56 | 321.58 | 477.59 | 321.59 | 479.9 | 321.55 | 481.24 | 321.5 |
| 481.57 | 321.48 | 482.73 | 321.43 | 482.88 | 321.41 | 483.68 | 321.44 | 483.95 | 321.46 |
| 484.36 | 321.47 | 488.38 | 321.55 | 498.4 | 321.64 | 499.42 | 321.65 | 500.07 | 321.64 |
| 502.24 | 321.6 | 502.45 | 321.6 | 504.29 | 321.63 | 505.12 | 321.64 | 507.25 | 321.65 |
| 508.66 | 321.68 | 511.11 | 321.7 | 529.76 | 321.83 | 529.94 | 321.84 | 535.35 | 321.98 |
| 535.47 | 321.99 | 536.67 | 322.01 | 537.61 | 322.03 | 538.5 | 322.04 | 546.91 | 322.04 |
| 561.78 | 321.96 | 571.44 | 321.81 | 573.41 | 321.77 | 575.57 | 321.73 | 576.33 | 321.67 |
| 577.57 | 321.62 | 578.69 | 321.62 | 581.48 | 321.7 | 582.99 | 321.73 | 584.25 | 321.75 |
| 584.38 | 321.76 | 584.82 | 321.76 | 585.11 | 321.77 | 587.17 | 321.82 | 588.03 | 321.82 |
| 595.56 | 321.96 | 595.94 | 321.97 | 614.03 | 322.29 | 618.02 | 322.38 | 632.42 | 322.68 |
| 634.19 | 322.7 | 634.41 | 322.69 | 634.74 | 322.7 | 647.25 | 322.7 | 647.51 | 322.71 |
| 650.57 | 322.71 | 650.89 | 322.72 | 652.28 | 322.74 | 653.15 | 322.74 | 654.36 | 322.73 |
| 656.14 | 322.73 | 656.66 | 322.72 | 657.64 | 322.74 | 658.98 | 322.76 | 660.25 | 322.79 |
| 660.38 | 322.8 | 667.58 | 322.98 | 667.77 | 322.99 | 668.34 | 323 | 675.1 | 323.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 675.67 | 323.2 | 680.95 | 323.34 | 685.32 | 323.34 | 687.28 | 323.33 | 688.33 | 323.33 |
| 688.78 | 323.3 | 691.82 | 323.29 | 694.94 | 323.32 | 695.99 | 323.34 | 698.89 | 323.34 |
| 710.84 | 323.46 | 715.07 | 323.45 | 719.05 | 323.45 | 742.83 | 323.64 | 747.06 | 323.66 |
| 751.22 | 323.62 | 753.35 | 323.57 | 753.59 | 323.57 | 757.31 | 323.49 | 758.89 | 323.38 |
| 761.13 | 323.24 | 763.84 | 323.05 | 767.06 | 322.84 | 769.24 | 322.7 | 772.28 | 322.64 |
| 777.02 | 322.67 | 782.29 | 322.66 | 782.67 | 322.74 | 787.35 | 322.74 | 788.15 | 322.75 |
| 796.02 | 322.79 | 797.17 | 322.8 | 806.48 | 322.7 | 815.35 | 322.71 | 816.1 | 322.7 |
| 816.6 | 322.71 | 817.38 | 322.71 | 817.79 | 322.7 | 818.36 | 322.73 | 820.55 | 322.74 |
| 826.5 | 322.74 | 829.38 | 322.73 | 830.52 | 322.73 | 832.08 | 322.72 | 834.54 | 322.71 |
| 834.86 | 322.7 | 842.1 | 322.61 | 844.19 | 322.56 | 844.41 | 322.59 | 845.62 | 322.61 |
| 846.68 | 322.61 | 849.21 | 322.49 | 853.42 | 322.39 | 853.8 | 322.39 | 854.44 | 322.37 |
| 855.08 | 322.36 | 856.4 | 322.33 | 856.49 | 322.32 | 858.78 | 322.11 | 860.38 | 321.99 |
| 863.25 | 321.94 | 868.51 | 321.83 | 874.04 | 321.67 | 877.9 | 321.57 | 885.12 | 321.6 |
| 885.52 | 321.61 | 888.95 | 321.6 | 919.35 | 321.86 | 934.05 | 321.95 | 938.5 | 321.93 |
| 939.28 | 321.93 | 947.65 | 322.01 | 950.75 | 322.07 | 957.52 | 322.06 | 961.12 | 322.17 |
| 961.97 | 322.16 | 964.66 | 322.24 | 965.63 | 322.24 | 967.14 | 322.31 | 967.65 | 322.32 |
| 975.58 | 322.27 | 977.1 | 322.25 | 977.76 | 322.26 | 980.57 | 322.25 | 988.47 | 322.06 |
| 989.84 | 322.01 | 990.66 | 321.94 | 991.02 | 321.92 | 993 | 321.87 | 994.77 | 321.86 |
| 995.21 | 321.86 | 1004.74 | 321.76 | 1006.43 | 321.71 | 1007.14 | 321.68 | 1008.12 | 321.65 |
| 1009.22 | 321.63 | 1010.93 | 321.63 | 1013.04 | 321.65 | 1013.43 | 321.65 | 1013.93 | 321.64 |
| 1014.69 | 321.64 | 1015.63 | 321.66 | 1015.94 | 321.69 | 1016.39 | 321.68 | 1017.4 | 321.67 |
| 1020.33 | 321.67 | 1024.21 | 321.66 | 1025.66 | 321.62 | 1025.93 | 321.6 | 1026.16 | 321.6 |
| 1027.11 | 321.57 | 1027.57 | 321.55 | 1028.31 | 321.53 | 1029.16 | 321.54 | 1031.02 | 321.48 |
| 1037.16 | 321.39 | 1039.86 | 321.34 | 1040.82 | 321.33 | 1055.62 | 321.16 | 1056.01 | 321.16 |
| 1058.21 | 321.13 | 1058.38 | 321.1 | 1060.66 | 321.06 | 1062.03 | 321.02 | 1065.5 | 320.96 |
| 1066.77 | 320.96 | 1067.56 | 320.97 | 1070.73 | 320.98 | 1071.52 | 320.99 | 1077.22 | 320.99 |
| 1077.47 | 321 | 1078.46 | 321 | 1081.67 | 321.05 | 1082.67 | 321.06 | 1087.66 | 321.04 |
| 1089.82 | 321.03 | 1090.55 | 321.03 | 1092 | 321.04 | 1094.45 | 321.06 | 1096.79 | 321.12 |
| 1098.54 | 321.17 | 1102.57 | 321.29 | 1104.19 | 321.32 | 1115.39 | 321.7 | 1116.91 | 321.73 |
| 1118.77 | 321.72 | 1118.89 | 321.71 | 1122.04 | 321.62 | 1127.35 | 321.28 | 1127.59 | 321.29 |
| 1128.26 | 321.29 | 1130.35 | 321.11 | 1132.48 | 321 | 1135.96 | 320.86 | 1136.74 | 320.85 |
| 1138.2 | 320.85 | 1143.5 | 320.91 | 1146.66 | 321.02 | 1148.89 | 321.05 | 1150.56 | 321.08 |
| 1151.12 | 321.11 | 1153.66 | 321.33 | 1155.23 | 321.39 | 1155.31 | 321.39 | 1166.21 | 321.22 |
| 1166.88 | 321.2 | 1168.68 | 321.11 | 1168.78 | 321.1 | 1171.44 | 320.95 | 1171.64 | 320.93 |
| 1172.44 | 320.89 | 1173.44 | 320.86 | 1177.28 | 320.81 | 1180.23 | 320.77 | 1184.31 | 320.71 |
| 1187.27 | 320.65 | 1188.05 | 320.63 | 1189.6 | 320.61 | 1190.95 | 320.59 | 1192.14 | 320.56 |
| 1193.61 | 320.51 | 1194.37 | 320.49 | 1197.52 | 320.42 | 1197.95 | 320.44 | 1199.74 | 320.43 |
| 1200.58 | 320.41 | 1201.64 | 320.37 | 1202.11 | 320.37 | 1203.43 | 320.35 | 1203.58 | 320.34 |
| 1204.03 | 320.34 | 1204.83 | 320.35 | 1205.23 | 320.36 | 1206.66 | 320.41 | 1208.07 | 320.44 |
| 1208.75 | 320.47 | 1209.22 | 320.5 | 1209.55 | 320.53 | 1210.15 | 320.57 | 1210.73 | 320.6 |
| 1211.72 | 320.61 | 1214.75 | 320.7 | 1215.98 | 320.75 | 1217.87 | 320.87 | 1219.05 | 320.96 |
| 1223.96 | 321.27 | 1226.59 | 321.36 | 1236.97 | 321.58 | 1237.7 | 321.57 | 1238.6 | 321.49 |
| 1243.85 | 321.56 | 1246.18 | 321.62 | 1247 | 321.65 | 1255.17 | 321.91 | 1256.85 | 321.98 |
| 1257.25 | 322.04 | 1269.12 | 323.76 | 1270.95 | 324.02 | 1273.07 | 324.3 | 1273.28 | 324.35 |
| 1276.13 | 324.92 | 1276.39 | 324.97 | 1277.56 | 325.1 | 1279.16 | 325.27 | 1280.06 | 325.47 |
| 1282 | 325.88 | 1282.43 | 325.94 | 1283.5 | 326.01 | 1284.63 | 326.08 | 1285.46 | 326.15 |
| 1285.73 | 326.18 | 1286.56 | 326.24 | 1286.8 | 326.29 | 1287.02 | 326.37 | 1288.19 | 326.61 |
| 1289.06 | 326.77 | 1290.29 | 327.05 | 1291.15 | 327.22 | 1292.39 | 327.44 | 1294.21 | 327.75 |
| 1295.08 | 327.88 | 1295.82 | 327.95 | 1297.23 | 328.1 | 1299.63 | 328.39 | 1299.84 | 328.45 |
| 1300.1 | 328.5 | 1300.9 | 328.59 | 1302.18 | 328.68 | 1303.89 | 328.74 | 1306.87 | 328.87 |
| 1307.52 | 328.89 | 1307.94 | 328.92 | 1309 | 328.96 | 1309.39 | 328.98 | 1309.59 | 329 |
| 1310.63 | 329.19 | 1310.83 | 329.22 | 1312.26 | 329.55 | 1312.41 | 329.59 | 1313.74 | 329.89 |
| 1313.97 | 329.95 | 1314.19 | 329.98 | 1314.65 | 330.01 | 1315.98 | 330.08 | 1318.29 | 330.26 |
| 1319.28 | 330.36 | 1321.77 | 330.65 | 1322.36 | 330.73 | 1323.35 | 330.91 | 1323.98 | 331.02 |
| 1324.68 | 331.19 | 1326.06 | 331.55 | 1326.58 | 331.68 | 1327.67 | 331.93 | 1328.35 | 332.07 |
| 1330.51 | 332.46 | 1331.51 | 332.72 | 1332.49 | 332.97 | 1333.69 | 333.23 | 1337.42 | 333.9 |
| 1339.27 | 334.21 | 1339.8 | 334.29 | 1340.94 | 334.45 | 1342.28 | 334.62 | 1345.28 | 335.06 |
| 1345.81 | 335.13 | 1345.89 | 335.13 | 1348.73 | 335.51 | 1350.36 | 335.71 | 1351.21 | 335.82 |
| 1351.87 | 335.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 160.84 | .05 | 758.89 | .04 | 1283.5 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 758.89 | 1283.5 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3671.27*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 172.33 | 338.68 | 173.66 | 338.33 | 174.42 | 338.05 | 176.29 | 337.18 | 177.29 | 336.76 |
| 178.25 | 336.34 | 179.99 | 335.6 | 180.37 | 335.43 | 182.69 | 334.48 | 183.89 | 333.95 |
| 184.37 | 333.73 | 185.41 | 333.41 | 187.09 | 332.88 | 192.21 | 331.42 | 196.12 | 330.27 |
| 197.32 | 329.94 | 197.72 | 329.81 | 199.15 | 329.39 | 199.7 | 329.25 | 200.32 | 329.1 |
| 201.58 | 328.75 | 201.76 | 328.72 | 202.08 | 328.64 | 202.78 | 328.5 | 203.08 | 328.47 |
| 203.82 | 328.37 | 206.11 | 328.08 | 206.94 | 327.99 | 207.65 | 327.92 | 209.39 | 327.76 |
| 212.57 | 327.45 | 213.07 | 327.39 | 214.74 | 327.23 | 217.87 | 326.94 | 219.21 | 326.84 |
| 219.87 | 326.82 | 220.49 | 326.89 | 221.47 | 326.84 | 223.29 | 326.73 | 224.06 | 326.67 |
| 224.72 | 326.61 | 227.77 | 326.39 | 228.67 | 326.32 | 232.13 | 326.01 | 232.74 | 325.96 |
| 234.17 | 325.83 | 235.85 | 325.67 | 236.15 | 325.65 | 237.72 | 325.52 | 238.25 | 325.48 |
| 241 | 325.24 | 242.32 | 325.12 | 255.72 | 324.23 | 256.91 | 324.15 | 258.52 | 324.05 |
| 263.8 | 323.69 | 265.73 | 323.51 | 269.22 | 323.14 | 269.62 | 323.1 | 271.47 | 322.99 |
| 275.51 | 322.8 | 279.2 | 322.72 | 282.13 | 322.65 | 283.28 | 322.61 | 286.4 | 322.51 |
| 288.25 | 322.43 | 289.92 | 322.36 | 291.22 | 322.31 | 291.54 | 322.29 | 292.5 | 322.29 |
| 293.63 | 322.28 | 299.88 | 322.19 | 304.47 | 322.14 | 305.09 | 322.13 | 309.5 | 322.11 |
| 311.36 | 322.11 | 313 | 322.15 | 314.66 | 322.22 | 316.52 | 322.25 | 316.88 | 322.26 |
| 319.39 | 322.31 | 320.51 | 322.36 | 321.01 | 322.37 | 321.08 | 322.4 | 321.8 | 322.41 |
| 323.22 | 322.41 | 323.86 | 322.4 | 325.88 | 322.36 | 326.63 | 322.34 | 327.83 | 322.32 |
| 328.48 | 322.3 | 330.54 | 322.26 | 331.68 | 322.23 | 333.63 | 322.17 | 334.83 | 322.13 |
| 335.92 | 322.09 | 338.41 | 322.01 | 340.46 | 321.93 | 342.78 | 321.85 | 342.99 | 321.84 |
| 348.35 | 321.69 | 353.58 | 321.52 | 358.03 | 321.37 | 359.05 | 321.35 | 359.5 | 321.35 |
| 368.64 | 321.24 | 370.81 | 321.21 | 372.2 | 321.21 | 373.65 | 321.2 | 380.11 | 321.23 |
| 381.54 | 321.26 | 382.01 | 321.3 | 382.1 | 321.4 | 382.83 | 321.43 | 382.98 | 321.46 |
| 385.8 | 321.49 | 388.59 | 321.48 | 390.85 | 321.43 | 391.09 | 321.42 | 403.22 | 321.24 |
| 404.07 | 321.23 | 422.28 | 320.96 | 425.83 | 320.9 | 435.81 | 320.84 | 448.44 | 321.2 |
| 451.86 | 321.31 | 452.56 | 321.32 | 455.98 | 321.31 | 458.88 | 321.3 | 466.36 | 321.3 |
| 466.75 | 321.26 | 468.7 | 321.24 | 469.24 | 321.23 | 473.04 | 321.15 | 476.33 | 321.09 |
| 481.63 | 321.1 | 485.8 | 321.01 | 487.83 | 321.04 | 488.32 | 321.03 | 491.38 | 321.04 |
| 493.71 | 320.99 | 495.05 | 320.95 | 495.38 | 320.92 | 496.56 | 320.87 | 496.71 | 320.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 498.2 | 320.92 | 502.25 | 321.01 | 512.34 | 321.12 | 514.02 | 321.12 | 516.21 | 321.1 |
| 516.42 | 321.1 | 518.27 | 321.13 | 519.11 | 321.14 | 521.26 | 321.15 | 522.68 | 321.18 |
| 525.15 | 321.2 | 543.92 | 321.38 | 544.11 | 321.38 | 549.56 | 321.54 | 549.68 | 321.55 |
| 551.4 | 321.58 | 552.73 | 321.61 | 560.09 | 321.61 | 561.2 | 321.62 | 576.18 | 321.53 |
| 585.91 | 321.38 | 586.4 | 321.37 | 587.89 | 321.33 | 590.08 | 321.3 | 590.84 | 321.23 |
| 592.4 | 321.18 | 593.22 | 321.18 | 596.02 | 321.25 | 596.63 | 321.27 | 597.55 | 321.29 |
| 598.81 | 321.31 | 598.95 | 321.32 | 599.68 | 321.32 | 601.75 | 321.38 | 602.62 | 321.38 |
| 610.21 | 321.54 | 610.59 | 321.54 | 628.81 | 321.9 | 632.83 | 321.99 | 647.34 | 322.31 |
| 649.12 | 322.33 | 649.73 | 322.33 | 662.27 | 322.32 | 662.53 | 322.33 | 664.87 | 322.33 |
| 665.94 | 322.34 | 667.33 | 322.36 | 668.22 | 322.36 | 669.43 | 322.35 | 671.23 | 322.35 |
| 671.75 | 322.34 | 672.74 | 322.36 | 675.37 | 322.42 | 675.5 | 322.42 | 682.75 | 322.62 |
| 683.52 | 322.65 | 690.32 | 322.84 | 690.89 | 322.85 | 696.22 | 323 | 703.65 | 323 |
| 704.1 | 322.98 | 707.16 | 322.97 | 709.17 | 322.98 | 710.3 | 322.99 | 711.37 | 323.01 |
| 714.29 | 323.01 | 726.32 | 323.13 | 730.59 | 323.12 | 734.59 | 323.12 | 758.54 | 323.29 |
| 762.81 | 323.32 | 767 | 323.27 | 769.14 | 323.21 | 769.38 | 323.21 | 773.14 | 323.11 |
| 774.72 | 323 | 776.98 | 322.85 | 779.72 | 322.65 | 782.97 | 322.43 | 785.17 | 322.27 |
| 788.24 | 322.21 | 793.02 | 322.24 | 798.34 | 322.24 | 798.73 | 322.33 | 799.27 | 322.33 |
| 799.99 | 322.34 | 802.02 | 322.34 | 803.45 | 322.35 | 804.25 | 322.36 | 812.2 | 322.42 |
| 813.35 | 322.43 | 822.76 | 322.33 | 831.71 | 322.3 | 832.47 | 322.29 | 833.76 | 322.29 |
| 833.92 | 322.28 | 834.68 | 322.3 | 834.74 | 322.31 | 836.96 | 322.31 | 842.96 | 322.3 |
| 845.87 | 322.29 | 847.02 | 322.29 | 848.6 | 322.28 | 851.07 | 322.28 | 851.4 | 322.26 |
| 858.71 | 322.16 | 860.81 | 322.11 | 861.04 | 322.14 | 862.26 | 322.16 | 863.32 | 322.16 |
| 865.88 | 322.03 | 870.13 | 321.93 | 871.16 | 321.9 | 871.8 | 321.89 | 873.14 | 321.86 |
| 875.54 | 321.63 | 876.5 | 321.55 | 877.15 | 321.49 | 880.05 | 321.44 | 885.37 | 321.32 |
| 890.95 | 321.17 | 893.65 | 321.11 | 894.84 | 321.07 | 902.12 | 321.13 | 902.53 | 321.14 |
| 906 | 321.15 | 936.68 | 321.42 | 951.51 | 321.52 | 956 | 321.51 | 956.79 | 321.51 |
| 965.24 | 321.61 | 968.36 | 321.69 | 975.2 | 321.69 | 978.83 | 321.81 | 979.69 | 321.81 |
| 982.4 | 321.9 | 983.31 | 321.9 | 983.56 | 321.92 | 984.49 | 321.96 | 985.42 | 321.99 |
| 993.43 | 321.96 | 994.96 | 321.93 | 995.63 | 321.95 | 998.46 | 321.94 | 1006.44 | 321.75 |
| 1007.82 | 321.7 | 1008.65 | 321.63 | 1009.01 | 321.61 | 1011.01 | 321.56 | 1012.79 | 321.54 |
| 1013.24 | 321.55 | 1022.86 | 321.46 | 1024.57 | 321.42 | 1025.28 | 321.39 | 1027.38 | 321.35 |
| 1029.1 | 321.35 | 1031.24 | 321.37 | 1032.13 | 321.37 | 1032.9 | 321.36 | 1033.85 | 321.38 |
| 1034.16 | 321.4 | 1034.61 | 321.4 | 1035.63 | 321.39 | 1036.21 | 321.39 | 1038.5 | 321.38 |
| 1042.51 | 321.38 | 1042.83 | 321.36 | 1043.57 | 321.34 | 1044.74 | 321.29 | 1045.9 | 321.26 |
| 1046.65 | 321.23 | 1047.51 | 321.24 | 1049.38 | 321.18 | 1055.58 | 321.09 | 1058.31 | 321.04 |
| 1059.27 | 321.03 | 1074.21 | 320.85 | 1074.61 | 320.85 | 1075.99 | 320.83 | 1076.53 | 320.83 |
| 1076.83 | 320.82 | 1077 | 320.79 | 1080.68 | 320.71 | 1084.18 | 320.64 | 1085.47 | 320.64 |
| 1086.26 | 320.65 | 1089.46 | 320.66 | 1090.26 | 320.66 | 1096.02 | 320.67 | 1096.27 | 320.68 |
| 1097.26 | 320.69 | 1100.5 | 320.74 | 1101.51 | 320.75 | 1106.55 | 320.73 | 1108.72 | 320.72 |
| 1110.55 | 320.74 | 1110.92 | 320.74 | 1113.4 | 320.76 | 1114.58 | 320.79 | 1117.53 | 320.89 |
| 1121.6 | 321.02 | 1122.78 | 321.04 | 1123.24 | 321.06 | 1134.54 | 321.47 | 1136.07 | 321.5 |
| 1136.37 | 321.5 | 1137.7 | 321.48 | 1138.07 | 321.48 | 1141.25 | 321.38 | 1146.61 | 321.02 |
| 1146.85 | 321.03 | 1147.52 | 321.03 | 1149.63 | 320.83 | 1151.78 | 320.72 | 1155.3 | 320.57 |
| 1156.09 | 320.55 | 1157.55 | 320.55 | 1162.91 | 320.62 | 1166.1 | 320.74 | 1168.35 | 320.77 |
| 1170.03 | 320.81 | 1170.59 | 320.83 | 1173.16 | 321.07 | 1174.75 | 321.13 | 1174.83 | 321.13 |
| 1185.83 | 320.95 | 1186.5 | 320.93 | 1187.91 | 320.86 | 1188.42 | 320.82 | 1191.11 | 320.67 |
| 1191.31 | 320.64 | 1192.12 | 320.6 | 1193.12 | 320.57 | 1197.01 | 320.52 | 1199.98 | 320.48 |
| 1204.1 | 320.42 | 1207.09 | 320.36 | 1207.87 | 320.34 | 1209.43 | 320.32 | 1210.8 | 320.3 |
| 1211.25 | 320.29 | 1213.48 | 320.23 | 1213.96 | 320.21 | 1214.25 | 320.21 | 1217.43 | 320.13 |
| 1217.87 | 320.15 | 1219.96 | 320.14 | 1220.43 | 320.13 | 1220.78 | 320.11 | 1221.59 | 320.08 |
| 1222.06 | 320.08 | 1223.4 | 320.06 | 1223.54 | 320.05 | 1224.03 | 320.05 | 1224.85 | 320.06 |
| 1225.27 | 320.07 | 1226.75 | 320.12 | 1228.2 | 320.15 | 1228.91 | 320.18 | 1229.4 | 320.22 |
| 1230.36 | 320.28 | 1230.95 | 320.31 | 1231.98 | 320.31 | 1234.39 | 320.39 | 1235.11 | 320.41 |
| 1236.39 | 320.46 | 1238.34 | 320.57 | 1239.56 | 320.66 | 1244.63 | 320.95 | 1246.13 | 320.99 |
| 1247.36 | 321.03 | 1258.09 | 321.23 | 1258.84 | 321.21 | 1259.63 | 321.13 | 1259.78 | 321.12 |
| 1265.2 | 321.17 | 1267.61 | 321.22 | 1268.46 | 321.24 | 1276.9 | 321.43 | 1278.65 | 321.49 |
| 1279.06 | 321.54 | 1291.33 | 323.2 | 1293.23 | 323.45 | 1295.42 | 323.73 | 1295.64 | 323.77 |
| 1298.58 | 324.36 | 1298.85 | 324.41 | 1300.06 | 324.53 | 1301.71 | 324.7 | 1304.65 | 325.33 |
| 1305.1 | 325.39 | 1306.2 | 325.46 | 1307.16 | 325.5 | 1307.33 | 325.52 | 1308.43 | 325.6 |
| 1309.26 | 325.67 | 1309.51 | 325.72 | 1309.73 | 325.8 | 1310.9 | 326.05 | 1311.77 | 326.23 |
| 1313 | 326.51 | 1313.86 | 326.69 | 1315.1 | 326.93 | 1316.92 | 327.27 | 1317.8 | 327.41 |
| 1319.28 | 327.57 | 1319.95 | 327.65 | 1322.36 | 327.95 | 1322.57 | 328.02 | 1322.93 | 328.09 |
| 1323.24 | 328.13 | 1324.92 | 328.3 | 1326.62 | 328.39 | 1329.61 | 328.57 | 1330.55 | 328.63 |
| 1330.68 | 328.65 | 1331.74 | 328.7 | 1332.33 | 328.75 | 1333.57 | 328.95 | 1335.16 | 329.27 |
| 1336.49 | 329.54 | 1336.94 | 329.62 | 1338.74 | 329.74 | 1339.39 | 329.8 | 1341.05 | 329.94 |
| 1342.04 | 330.05 | 1344.53 | 330.37 | 1345.12 | 330.45 | 1346.12 | 330.62 | 1346.74 | 330.74 |
| 1347.45 | 330.89 | 1348.83 | 331.24 | 1349.32 | 331.35 | 1349.71 | 331.43 | 1350.44 | 331.59 |
| 1351.12 | 331.72 | 1353.29 | 332.09 | 1354.29 | 332.36 | 1355.27 | 332.61 | 1356.47 | 332.89 |
| 1360.21 | 333.59 | 1362.06 | 333.91 | 1363.74 | 334.16 | 1365.08 | 334.34 | 1368.09 | 334.79 |
| 1368.61 | 334.87 | 1368.69 | 334.87 | 1371.54 | 335.26 | 1373.17 | 335.48 | 1374.02 | 335.59 |
| 1374.68 | 335.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 172.33 | .05 | 774.72 | .04 | 1306.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 774.72 | 1306.2 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3651.54*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 183.82 | 338.36 | 185.16 | 337.99 | 185.92 | 337.7 | 188.02 | 336.69 | 189.78 | 335.91 |
| 189.86 | 335.87 | 191.53 | 335.13 | 191.92 | 334.95 | 194.51 | 333.83 | 195.47 | 333.38 |
| 195.95 | 333.16 | 196.99 | 332.81 | 198.69 | 332.25 | 203.85 | 330.71 | 206.83 | 329.8 |
| 208.49 | 329.31 | 209.39 | 329.04 | 210.84 | 328.59 | 212.01 | 328.29 | 213.28 | 327.93 |
| 214.49 | 327.67 | 217.84 | 327.25 | 219.4 | 327.08 | 221.15 | 326.91 | 224.34 | 326.58 |
| 224.85 | 326.53 | 226 | 326.41 | 226.53 | 326.35 | 229.69 | 326.05 | 231.04 | 325.94 |
| 231.7 | 325.91 | 232.33 | 325.99 | 233.31 | 325.94 | 234.97 | 325.83 | 235.15 | 325.81 |
| 236.59 | 325.68 | 239.66 | 325.42 | 239.82 | 325.41 | 241.23 | 325.28 | 243.27 | 325.08 |
| 244.05 | 325 | 244.66 | 324.95 | 246.11 | 324.82 | 247.8 | 324.66 | 248.58 | 324.6 |
| 250.22 | 324.45 | 254.31 | 324.08 | 269.01 | 323.1 | 275.94 | 322.67 | 277.89 | 322.51 |
| 281.41 | 322.21 | 281.81 | 322.17 | 283.67 | 322.07 | 284.75 | 322.02 | 287.74 | 321.87 |
| 291.46 | 321.79 | 294.41 | 321.72 | 295.57 | 321.68 | 298.71 | 321.59 | 299.16 | 321.58 |
| 299.92 | 321.55 | 300.58 | 321.53 | 302.26 | 321.47 | 303.57 | 321.42 | 304.01 | 321.41 |
| 306 | 321.39 | 312.29 | 321.28 | 316.91 | 321.21 | 317.54 | 321.21 | 322.86 | 321.15 |
| 323.85 | 321.15 | 325.5 | 321.16 | 327.17 | 321.19 | 329.05 | 321.2 | 329.41 | 321.21 |
| 331.94 | 321.22 | 333.07 | 321.25 | 333.57 | 321.26 | 333.64 | 321.29 | 334.99 | 321.29 |
| 335.8 | 321.28 | 336.45 | 321.28 | 338.48 | 321.24 | 339.23 | 321.23 | 341.1 | 321.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 343.17 | 321.17 | 344.32 | 321.15 | 346.28 | 321.12 | 347.49 | 321.09 | 348.59 | 321.07 |
| 353.16 | 320.96 | 355.5 | 320.91 | 355.71 | 320.9 | 361.11 | 320.8 | 366.37 | 320.69 |
| 370.86 | 320.59 | 371.54 | 320.59 | 371.89 | 320.58 | 372.34 | 320.58 | 381.54 | 320.51 |
| 383.73 | 320.49 | 386.59 | 320.49 | 393.1 | 320.53 | 394.54 | 320.57 | 395.01 | 320.61 |
| 395.1 | 320.72 | 395.84 | 320.75 | 395.98 | 320.78 | 398.82 | 320.82 | 401.64 | 320.81 |
| 403.91 | 320.76 | 404.16 | 320.75 | 416.37 | 320.59 | 417.23 | 320.57 | 435.57 | 320.32 |
| 439.15 | 320.27 | 449.2 | 320.23 | 461.92 | 320.64 | 465.36 | 320.76 | 466.07 | 320.78 |
| 469.52 | 320.77 | 472.43 | 320.76 | 479.97 | 320.76 | 480.37 | 320.72 | 482.33 | 320.69 |
| 482.87 | 320.69 | 486.7 | 320.61 | 487.72 | 320.59 | 488.39 | 320.57 | 490.01 | 320.54 |
| 495.35 | 320.55 | 499.55 | 320.46 | 501.59 | 320.49 | 502.09 | 320.48 | 505.17 | 320.49 |
| 507.52 | 320.44 | 508.87 | 320.4 | 509.2 | 320.37 | 510.39 | 320.31 | 510.53 | 320.29 |
| 511.35 | 320.33 | 512.04 | 320.37 | 516.11 | 320.47 | 526.28 | 320.59 | 527.32 | 320.6 |
| 527.98 | 320.6 | 530.18 | 320.59 | 530.39 | 320.6 | 533.1 | 320.63 | 535.26 | 320.66 |
| 536.15 | 320.67 | 536.25 | 320.68 | 536.69 | 320.68 | 539.18 | 320.71 | 558.09 | 320.92 |
| 558.28 | 320.92 | 563.77 | 321.1 | 563.89 | 321.11 | 565.11 | 321.13 | 566.97 | 321.17 |
| 574.23 | 321.19 | 575.49 | 321.19 | 590.58 | 321.1 | 593.84 | 321.05 | 600.38 | 320.94 |
| 602.38 | 320.9 | 604.58 | 320.87 | 605.35 | 320.79 | 606.92 | 320.74 | 607.74 | 320.74 |
| 610.57 | 320.81 | 611.18 | 320.82 | 613.89 | 320.88 | 614.25 | 320.88 | 616.34 | 320.94 |
| 617.22 | 320.94 | 624.85 | 321.11 | 625.24 | 321.12 | 643.59 | 321.51 | 646.31 | 321.57 |
| 647.11 | 321.59 | 647.64 | 321.61 | 662.25 | 321.94 | 664.04 | 321.96 | 664.66 | 321.96 |
| 677.3 | 321.95 | 677.55 | 321.96 | 680.66 | 321.96 | 680.98 | 321.97 | 682.39 | 321.99 |
| 683.28 | 321.99 | 684.5 | 321.97 | 686.32 | 321.97 | 686.84 | 321.96 | 687.84 | 321.98 |
| 690.49 | 322.04 | 690.62 | 322.05 | 697.92 | 322.27 | 698.12 | 322.27 | 698.69 | 322.29 |
| 705.55 | 322.49 | 706.12 | 322.51 | 711.49 | 322.67 | 718.7 | 322.67 | 719.43 | 322.65 |
| 722.51 | 322.65 | 724.53 | 322.66 | 725.67 | 322.66 | 726.74 | 322.67 | 729.69 | 322.68 |
| 741.8 | 322.81 | 750.13 | 322.79 | 774.26 | 322.94 | 778.56 | 322.97 | 782.78 | 322.91 |
| 784.93 | 322.85 | 785.18 | 322.85 | 788.96 | 322.74 | 790.55 | 322.62 | 792.84 | 322.46 |
| 795.6 | 322.25 | 798.88 | 322.01 | 801.1 | 321.85 | 804.2 | 321.78 | 809.02 | 321.81 |
| 814.39 | 321.83 | 814.78 | 321.92 | 816.06 | 321.94 | 816.34 | 321.93 | 816.89 | 321.94 |
| 817.86 | 321.95 | 819.55 | 321.96 | 820.36 | 321.97 | 828.38 | 322.05 | 829.54 | 322.06 |
| 839.03 | 321.95 | 848.06 | 321.89 | 848.83 | 321.88 | 849.34 | 321.88 | 849.75 | 321.87 |
| 850.55 | 321.87 | 851.07 | 321.88 | 851.13 | 321.89 | 853.36 | 321.89 | 862.36 | 321.86 |
| 863.52 | 321.86 | 865.11 | 321.85 | 867.61 | 321.84 | 867.94 | 321.82 | 875.32 | 321.71 |
| 877.44 | 321.66 | 877.66 | 321.69 | 878.9 | 321.71 | 879.97 | 321.71 | 882.56 | 321.57 |
| 887.63 | 321.44 | 888.53 | 321.41 | 889.88 | 321.38 | 892.3 | 321.14 | 893.27 | 321.06 |
| 893.93 | 321 | 894.57 | 320.98 | 896.85 | 320.94 | 902.22 | 320.82 | 907.85 | 320.68 |
| 911.78 | 320.58 | 919.13 | 320.66 | 919.54 | 320.67 | 923.04 | 320.69 | 954 | 320.98 |
| 968.97 | 321.08 | 973.51 | 321.09 | 974.3 | 321.1 | 982.83 | 321.22 | 985.98 | 321.31 |
| 992.88 | 321.32 | 996.54 | 321.46 | 997.41 | 321.45 | 1000.15 | 321.56 | 1001 | 321.56 |
| 1001.06 | 321.57 | 1003.19 | 321.66 | 1011.28 | 321.64 | 1012.82 | 321.62 | 1013.5 | 321.63 |
| 1016.35 | 321.62 | 1024.41 | 321.44 | 1025.8 | 321.38 | 1026.64 | 321.31 | 1027 | 321.29 |
| 1029.02 | 321.24 | 1030.82 | 321.23 | 1031.27 | 321.24 | 1040.98 | 321.15 | 1042.7 | 321.12 |
| 1043.42 | 321.1 | 1044.42 | 321.09 | 1045.01 | 321.08 | 1045.54 | 321.08 | 1045.81 | 321.07 |
| 1047.28 | 321.07 | 1049.43 | 321.09 | 1051.11 | 321.09 | 1052.48 | 321.12 | 1052.84 | 321.11 |
| 1053.87 | 321.11 | 1054.46 | 321.1 | 1056.86 | 321.1 | 1060.81 | 321.09 | 1061.14 | 321.07 |
| 1061.88 | 321.05 | 1063.06 | 321 | 1063.76 | 320.98 | 1064.23 | 320.96 | 1064.99 | 320.94 |
| 1065.85 | 320.94 | 1067.75 | 320.88 | 1076.75 | 320.75 | 1077.72 | 320.73 | 1092.8 | 320.55 |
| 1093.2 | 320.54 | 1094.6 | 320.52 | 1095.15 | 320.52 | 1095.44 | 320.51 | 1095.62 | 320.48 |
| 1097.93 | 320.43 | 1099.33 | 320.39 | 1102.86 | 320.32 | 1104.96 | 320.32 | 1108.19 | 320.33 |
| 1109 | 320.34 | 1114.81 | 320.35 | 1115.06 | 320.36 | 1116.06 | 320.37 | 1119.33 | 320.43 |
| 1120.36 | 320.43 | 1125.44 | 320.42 | 1127.63 | 320.41 | 1129.48 | 320.43 | 1129.85 | 320.44 |
| 1132.2 | 320.46 | 1132.36 | 320.47 | 1134.73 | 320.53 | 1140.63 | 320.76 | 1141.81 | 320.78 |
| 1142.28 | 320.8 | 1153.69 | 321.23 | 1155.23 | 321.27 | 1155.53 | 321.27 | 1156.88 | 321.25 |
| 1157.25 | 321.24 | 1160.45 | 321.14 | 1165.86 | 320.75 | 1166.11 | 320.76 | 1166.79 | 320.76 |
| 1168.92 | 320.56 | 1170.67 | 320.45 | 1174.63 | 320.27 | 1175.43 | 320.25 | 1176.91 | 320.25 |
| 1182.31 | 320.33 | 1185.54 | 320.46 | 1187.8 | 320.49 | 1189.5 | 320.53 | 1190.07 | 320.55 |
| 1192.67 | 320.81 | 1194.27 | 320.87 | 1194.34 | 320.87 | 1205.45 | 320.69 | 1206.13 | 320.66 |
| 1207.54 | 320.59 | 1208.06 | 320.55 | 1210.78 | 320.39 | 1210.98 | 320.36 | 1211.8 | 320.31 |
| 1212.81 | 320.29 | 1216.73 | 320.23 | 1219.73 | 320.19 | 1223.88 | 320.13 | 1226.9 | 320.08 |
| 1227.7 | 320.06 | 1229.27 | 320.04 | 1230.65 | 320.02 | 1231.86 | 319.99 | 1233.36 | 319.94 |
| 1234.13 | 319.92 | 1237.34 | 319.85 | 1237.48 | 319.86 | 1239.63 | 319.86 | 1240.45 | 319.84 |
| 1240.72 | 319.82 | 1241.53 | 319.79 | 1242.02 | 319.79 | 1243.36 | 319.77 | 1243.51 | 319.76 |
| 1244.02 | 319.76 | 1244.88 | 319.77 | 1245.31 | 319.78 | 1246.49 | 319.82 | 1248.34 | 319.87 |
| 1248.56 | 319.87 | 1249.07 | 319.89 | 1249.67 | 319.94 | 1249.93 | 319.95 | 1250.57 | 319.99 |
| 1251.18 | 320.01 | 1252.24 | 320.02 | 1255.47 | 320.11 | 1256.79 | 320.16 | 1258.8 | 320.28 |
| 1260.07 | 320.37 | 1265.31 | 320.63 | 1266.86 | 320.67 | 1268.12 | 320.69 | 1279.21 | 320.87 |
| 1279.98 | 320.84 | 1280.8 | 320.76 | 1280.95 | 320.74 | 1286.55 | 320.78 | 1289.92 | 320.82 |
| 1298.64 | 320.95 | 1300.44 | 320.99 | 1300.86 | 321.04 | 1313.55 | 322.64 | 1315.5 | 322.88 |
| 1317.77 | 323.15 | 1317.99 | 323.2 | 1321.03 | 323.79 | 1321.31 | 323.85 | 1322.56 | 323.97 |
| 1324.26 | 324.14 | 1325.23 | 324.34 | 1327.3 | 324.78 | 1327.76 | 324.84 | 1328.9 | 324.91 |
| 1329.86 | 324.94 | 1330.04 | 324.95 | 1331.97 | 325.09 | 1332.25 | 325.15 | 1332.44 | 325.23 |
| 1333.61 | 325.49 | 1334.48 | 325.68 | 1335.71 | 325.96 | 1336.58 | 326.15 | 1337.82 | 326.41 |
| 1339.64 | 326.78 | 1340.52 | 326.94 | 1341.26 | 327.02 | 1342 | 327.12 | 1342.67 | 327.2 |
| 1345.09 | 327.52 | 1345.29 | 327.59 | 1345.52 | 327.64 | 1345.97 | 327.71 | 1347.65 | 327.92 |
| 1349.36 | 328.04 | 1352.35 | 328.28 | 1353.29 | 328.35 | 1353.42 | 328.37 | 1354.2 | 328.43 |
| 1354.48 | 328.44 | 1355.08 | 328.5 | 1356.12 | 328.66 | 1356.32 | 328.68 | 1357.76 | 328.93 |
| 1357.91 | 328.96 | 1359.24 | 329.19 | 1359.7 | 329.26 | 1361.95 | 329.45 | 1363.8 | 329.63 |
| 1364.8 | 329.75 | 1367.29 | 330.08 | 1367.89 | 330.18 | 1368.17 | 330.22 | 1369.51 | 330.45 |
| 1370.21 | 330.59 | 1371.6 | 330.92 | 1372.09 | 331.03 | 1372.48 | 331.1 | 1373.22 | 331.25 |
| 1373.89 | 331.37 | 1376.06 | 331.73 | 1377.07 | 331.99 | 1378.05 | 332.25 | 1379.25 | 332.54 |
| 1383 | 333.27 | 1384.56 | 333.55 | 1384.86 | 333.61 | 1386.18 | 333.81 | 1387.88 | 334.06 |
| 1390.89 | 334.53 | 1391.42 | 334.6 | 1391.49 | 334.6 | 1394.34 | 335.01 | 1396.83 | 335.36 |
| 1397.5 | 335.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 183.82 | .05 | 790.55 | .04 | 1328.9 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 790.55 | 1328.9 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3631.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 195.31 | 338.04 | 196.66 | 337.65 | 197.43 | 337.35 | 199.32 | 336.39 | 200.34 | 335.92 |
| 201.39 | 335.44 | 203.08 | 334.66 | 203.46 | 334.48 | 205.82 | 333.41 | 206.07 | 333.28 |
| 207.52 | 332.58 | 208.57 | 332.22 | 210.28 | 331.63 | 218.48 | 329.06 | 219.44 | 328.76 |
| 220.15 | 328.55 | 222.03 | 327.95 | 222.52 | 327.8 | 223.7 | 327.48 | 224.98 | 327.1 |
| 226.2 | 326.83 | 226.5 | 326.8 | 227.25 | 326.7 | 229.57 | 326.42 | 229.59 | 326.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 231.14 | 326.24 | 232.9 | 326.06 | 236.12 | 325.71 | 236.63 | 325.66 | 237.79 | 325.53 |
| 238.33 | 325.48 | 241.5 | 325.15 | 242.86 | 325.04 | 243.53 | 325.01 | 244.16 | 325.09 |
| 245.16 | 325.03 | 246.83 | 324.92 | 248.45 | 324.75 | 251.55 | 324.45 | 251.71 | 324.44 |
| 252.46 | 324.36 | 253.13 | 324.3 | 254.05 | 324.2 | 255.97 | 324 | 256.59 | 323.95 |
| 257.59 | 323.85 | 259.75 | 323.65 | 261.64 | 323.48 | 264.97 | 323.17 | 266.31 | 323.04 |
| 279.9 | 322.13 | 281.11 | 322.05 | 282.74 | 321.96 | 288.09 | 321.65 | 290.05 | 321.52 |
| 293.6 | 321.27 | 294 | 321.24 | 295.87 | 321.14 | 296.97 | 321.09 | 299.98 | 320.93 |
| 303.72 | 320.85 | 306.69 | 320.79 | 311.02 | 320.68 | 311.48 | 320.67 | 312.24 | 320.64 |
| 312.9 | 320.63 | 316.23 | 320.53 | 317.21 | 320.52 | 318.36 | 320.5 | 324.7 | 320.37 |
| 329.93 | 320.28 | 329.99 | 320.28 | 334.46 | 320.21 | 335.34 | 320.19 | 336.34 | 320.18 |
| 338.01 | 320.17 | 339.69 | 320.17 | 341.58 | 320.15 | 341.94 | 320.15 | 344.49 | 320.13 |
| 345.62 | 320.15 | 346.13 | 320.14 | 346.2 | 320.17 | 347.56 | 320.17 | 349.03 | 320.15 |
| 351.07 | 320.13 | 351.83 | 320.11 | 353.05 | 320.11 | 353.71 | 320.1 | 355.79 | 320.09 |
| 356.96 | 320.08 | 358.93 | 320.06 | 361.25 | 320.04 | 363.78 | 320.01 | 365.86 | 319.99 |
| 368.22 | 319.96 | 368.43 | 319.96 | 373.87 | 319.92 | 379.17 | 319.86 | 383.69 | 319.82 |
| 384.37 | 319.81 | 385.18 | 319.81 | 394.45 | 319.78 | 396.65 | 319.78 | 398.06 | 319.77 |
| 399.53 | 319.77 | 406.08 | 319.83 | 407.53 | 319.87 | 408.01 | 319.92 | 408.1 | 320.03 |
| 408.84 | 320.07 | 408.99 | 320.1 | 411.85 | 320.15 | 414.69 | 320.15 | 416.98 | 320.1 |
| 417.22 | 320.09 | 429.52 | 319.93 | 430.39 | 319.92 | 448.86 | 319.68 | 452.46 | 319.63 |
| 462.59 | 319.61 | 475.4 | 320.08 | 478.87 | 320.21 | 479.58 | 320.23 | 483.05 | 320.22 |
| 493.58 | 320.22 | 493.98 | 320.18 | 495.95 | 320.15 | 496.5 | 320.15 | 500.35 | 320.06 |
| 502.06 | 320.03 | 503.69 | 319.99 | 509.07 | 320 | 513.3 | 319.9 | 515.36 | 319.93 |
| 515.86 | 319.92 | 518.96 | 319.94 | 521.32 | 319.89 | 522.68 | 319.84 | 523.02 | 319.81 |
| 524.21 | 319.76 | 524.36 | 319.73 | 524.8 | 319.76 | 525.88 | 319.81 | 529.98 | 319.92 |
| 540.22 | 320.06 | 541.27 | 320.07 | 541.93 | 320.08 | 544.36 | 320.09 | 546.24 | 320.12 |
| 547.09 | 320.13 | 549.26 | 320.16 | 550.16 | 320.17 | 550.27 | 320.18 | 550.71 | 320.18 |
| 553.21 | 320.21 | 572.26 | 320.46 | 572.45 | 320.47 | 577.97 | 320.66 | 578.1 | 320.67 |
| 578.73 | 320.68 | 579.33 | 320.7 | 581.2 | 320.74 | 588.52 | 320.76 | 589.79 | 320.77 |
| 604.98 | 320.67 | 608.26 | 320.62 | 614.85 | 320.51 | 616.86 | 320.47 | 619.08 | 320.43 |
| 619.85 | 320.36 | 621.11 | 320.31 | 621.44 | 320.3 | 622.27 | 320.3 | 625.11 | 320.37 |
| 625.72 | 320.38 | 628.45 | 320.44 | 628.82 | 320.44 | 630.92 | 320.51 | 631.81 | 320.51 |
| 639.5 | 320.69 | 639.89 | 320.7 | 658.37 | 321.12 | 660.17 | 321.16 | 661.11 | 321.19 |
| 662.45 | 321.22 | 677.17 | 321.57 | 678.97 | 321.59 | 679.59 | 321.6 | 692.32 | 321.57 |
| 692.58 | 321.58 | 694.95 | 321.58 | 696.03 | 321.59 | 697.45 | 321.61 | 698.35 | 321.61 |
| 699.58 | 321.6 | 701.4 | 321.6 | 701.93 | 321.58 | 702.94 | 321.6 | 704.3 | 321.64 |
| 705.6 | 321.67 | 705.73 | 321.68 | 713.09 | 321.91 | 713.29 | 321.92 | 713.87 | 321.93 |
| 720.77 | 322.15 | 721.35 | 322.17 | 726.75 | 322.33 | 731.21 | 322.34 | 734.02 | 322.34 |
| 734.3 | 322.33 | 739.89 | 322.33 | 741.04 | 322.34 | 745.08 | 322.34 | 757.29 | 322.48 |
| 765.68 | 322.46 | 789.97 | 322.6 | 794.3 | 322.62 | 798.55 | 322.56 | 800.72 | 322.49 |
| 800.97 | 322.48 | 804.78 | 322.37 | 806.39 | 322.24 | 808.69 | 322.06 | 814.79 | 321.6 |
| 817.03 | 321.42 | 820.15 | 321.35 | 821.77 | 321.36 | 825.02 | 321.39 | 830.44 | 321.41 |
| 830.84 | 321.52 | 831.39 | 321.52 | 832.41 | 321.53 | 832.96 | 321.54 | 834.19 | 321.55 |
| 835.64 | 321.57 | 844.55 | 321.68 | 845.73 | 321.69 | 855.31 | 321.57 | 864.42 | 321.48 |
| 865.2 | 321.46 | 866.51 | 321.46 | 866.93 | 321.45 | 867.45 | 321.46 | 867.51 | 321.47 |
| 869.77 | 321.46 | 875.88 | 321.44 | 878.85 | 321.42 | 880.02 | 321.42 | 881.62 | 321.41 |
| 884.14 | 321.4 | 884.48 | 321.38 | 891.92 | 321.26 | 894.06 | 321.2 | 894.29 | 321.24 |
| 895.54 | 321.26 | 896.62 | 321.26 | 899.23 | 321.11 | 903.55 | 320.99 | 904.35 | 320.97 |
| 905.26 | 320.94 | 906.62 | 320.91 | 910.04 | 320.56 | 910.7 | 320.5 | 911.35 | 320.48 |
| 913.66 | 320.43 | 919.07 | 320.31 | 924.75 | 320.18 | 928.72 | 320.08 | 936.13 | 320.19 |
| 936.55 | 320.21 | 940.08 | 320.23 | 971.33 | 320.54 | 986.44 | 320.65 | 991.01 | 320.67 |
| 991.81 | 320.68 | 1000.41 | 320.82 | 1003.59 | 320.92 | 1010.56 | 320.95 | 1014.26 | 321.1 |
| 1015.13 | 321.1 | 1017.89 | 321.22 | 1018.33 | 321.22 | 1018.9 | 321.23 | 1019.56 | 321.27 |
| 1020.97 | 321.33 | 1029.12 | 321.32 | 1030.68 | 321.3 | 1031.36 | 321.32 | 1034.25 | 321.31 |
| 1042.37 | 321.13 | 1043.78 | 321.07 | 1044.62 | 321 | 1044.99 | 320.98 | 1047.03 | 320.93 |
| 1048.84 | 320.91 | 1049.3 | 320.92 | 1059.1 | 320.85 | 1061.56 | 320.82 | 1062.57 | 320.81 |
| 1063.16 | 320.8 | 1063.98 | 320.8 | 1065.45 | 320.79 | 1067.63 | 320.81 | 1069.19 | 320.81 |
| 1069.32 | 320.82 | 1070.29 | 320.83 | 1071.07 | 320.83 | 1072.11 | 320.82 | 1072.7 | 320.82 |
| 1075.12 | 320.81 | 1079.11 | 320.8 | 1079.44 | 320.78 | 1080.45 | 320.74 | 1080.6 | 320.74 |
| 1082.09 | 320.68 | 1082.56 | 320.67 | 1083.32 | 320.64 | 1084.2 | 320.65 | 1086.11 | 320.58 |
| 1095.19 | 320.45 | 1096.18 | 320.44 | 1111.4 | 320.24 | 1111.8 | 320.23 | 1113.2 | 320.21 |
| 1113.76 | 320.21 | 1114.06 | 320.2 | 1114.23 | 320.17 | 1116.57 | 320.11 | 1117.98 | 320.08 |
| 1121.55 | 319.99 | 1122.86 | 320 | 1123.66 | 320 | 1126.92 | 320.01 | 1127.74 | 320.01 |
| 1133.6 | 320.03 | 1133.86 | 320.04 | 1134.87 | 320.05 | 1138.17 | 320.11 | 1139.2 | 320.12 |
| 1144.33 | 320.11 | 1146.54 | 320.11 | 1148.4 | 320.13 | 1148.78 | 320.13 | 1151.15 | 320.17 |
| 1151.31 | 320.17 | 1152.5 | 320.2 | 1153.71 | 320.24 | 1155.51 | 320.32 | 1159.65 | 320.49 |
| 1160.85 | 320.51 | 1161.32 | 320.53 | 1172.83 | 321 | 1174.39 | 321.03 | 1174.7 | 321.03 |
| 1176.05 | 321.01 | 1176.43 | 321.01 | 1179.66 | 320.9 | 1185.12 | 320.49 | 1185.37 | 320.5 |
| 1186.05 | 320.5 | 1188.2 | 320.28 | 1189.97 | 320.17 | 1193.97 | 319.98 | 1194.78 | 319.96 |
| 1196.27 | 319.96 | 1201.72 | 320.04 | 1204.97 | 320.17 | 1207.26 | 320.21 | 1208.98 | 320.25 |
| 1209.55 | 320.28 | 1212.17 | 320.55 | 1213.78 | 320.62 | 1213.86 | 320.62 | 1225.07 | 320.42 |
| 1225.57 | 320.4 | 1227.18 | 320.31 | 1227.71 | 320.27 | 1230.44 | 320.1 | 1230.65 | 320.07 |
| 1231.47 | 320.03 | 1232.49 | 320 | 1236.45 | 319.94 | 1239.47 | 319.9 | 1243.67 | 319.84 |
| 1246.72 | 319.79 | 1247.52 | 319.77 | 1249.1 | 319.75 | 1250.5 | 319.74 | 1250.96 | 319.72 |
| 1254.01 | 319.64 | 1257.25 | 319.56 | 1257.7 | 319.58 | 1259.56 | 319.57 | 1260.39 | 319.55 |
| 1260.66 | 319.53 | 1261.48 | 319.5 | 1261.97 | 319.5 | 1263.33 | 319.48 | 1263.47 | 319.47 |
| 1264.02 | 319.47 | 1264.91 | 319.48 | 1265.35 | 319.49 | 1266.57 | 319.53 | 1266.92 | 319.55 |
| 1268.47 | 319.58 | 1269.23 | 319.61 | 1269.74 | 319.65 | 1270.77 | 319.7 | 1271.4 | 319.72 |
| 1272.5 | 319.72 | 1275.84 | 319.81 | 1277.2 | 319.86 | 1279.27 | 319.98 | 1280.58 | 320.07 |
| 1285.98 | 320.32 | 1287.58 | 320.34 | 1288.89 | 320.36 | 1300.33 | 320.51 | 1301.13 | 320.48 |
| 1302.13 | 320.37 | 1307.9 | 320.39 | 1310.47 | 320.41 | 1311.38 | 320.41 | 1320.38 | 320.48 |
| 1322.24 | 320.5 | 1322.67 | 320.55 | 1335.76 | 322.08 | 1337.78 | 322.31 | 1340.11 | 322.58 |
| 1340.34 | 322.62 | 1343.48 | 323.23 | 1343.77 | 323.28 | 1345.06 | 323.4 | 1346.82 | 323.57 |
| 1347.81 | 323.78 | 1349.95 | 324.23 | 1350.43 | 324.29 | 1351.6 | 324.35 | 1352.57 | 324.37 |
| 1352.74 | 324.39 | 1353.57 | 324.44 | 1354.67 | 324.52 | 1354.92 | 324.57 | 1355.14 | 324.66 |
| 1357.19 | 325.13 | 1358.43 | 325.42 | 1359.29 | 325.61 | 1360.53 | 325.89 | 1362.36 | 326.3 |
| 1363.24 | 326.46 | 1365.4 | 326.75 | 1367.81 | 327.08 | 1368.02 | 327.16 | 1368.25 | 327.21 |
| 1368.7 | 327.29 | 1369.09 | 327.35 | 1370.38 | 327.53 | 1372.09 | 327.7 | 1375.08 | 327.98 |
| 1376.03 | 328.08 | 1376.95 | 328.16 | 1377.82 | 328.25 | 1378.87 | 328.39 | 1379.06 | 328.41 |
| 1380.5 | 328.62 | 1380.66 | 328.64 | 1381.99 | 328.83 | 1382.45 | 328.89 | 1382.91 | 328.94 |
| 1384.35 | 329.08 | 1384.9 | 329.14 | 1386.56 | 329.31 | 1390.06 | 329.8 | 1390.65 | 329.9 |
| 1390.93 | 329.94 | 1392.28 | 330.17 | 1392.98 | 330.3 | 1394.37 | 330.6 | 1394.86 | 330.7 |
| 1395.99 | 330.9 | 1398.84 | 331.36 | 1400.83 | 331.89 | 1402.04 | 332.2 | 1405.79 | 332.96 |
| 1407.35 | 333.25 | 1408.17 | 333.39 | 1408.98 | 333.52 | 1409.33 | 333.57 | 1410.67 | 333.78 |
| 1413.69 | 334.26 | 1414.22 | 334.34 | 1414.3 | 334.34 | 1417.15 | 334.77 | 1418.79 | 335 |
| 1420.31 | 335.23 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 195.31 | .05 | 806.39 | .04 | 1351.6 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 806.39 | 1351.6 | 36.8 | 19.73 | 17.8 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3612.08

INPUT
Description:
Station Elevation Data num= 284

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 206.8 | 337.71 | 208.16 | 337.31 | 208.9301 | 337 | 210.84 | 336 | 212.84 | 335.04 |
| 212.92 | 335 | 214.62 | 334.19 | 215.01 | 334 | 217.38 | 332.87 | 219.1 | 332 |
| 221.88 | 331 | 231.1 | 328 | 231.8199 | 327.78 | 234.2 | 327 | 234.76 | 326.85 |
| 235.39 | 326.67 | 236.6801 | 326.28 | 237.91 | 326 | 241.3199 | 325.58 | 249.58 | 324.66 |
| 253.3199 | 324.26 | 254.6901 | 324.14 | 255.36 | 324.11 | 256 | 324.19 | 257 | 324.13 |
| 258.7 | 324 | 258.86 | 323.98 | 267.89 | 323 | 278.3 | 322 | 293.21 | 321 |
| 312.21 | 320 | 357.04 | 319.04 | 358.1801 | 319.04 | 358.4301 | 319.03 | 358.6901 | 319.03 |
| 358.76 | 319.06 | 364.4301 | 319 | 412.47 | 319.06 | 419.0699 | 319.13 | 420.53 | 319.18 |
| 421.01 | 319.23 | 421.1 | 319.35 | 421.85 | 319.39 | 422 | 319.42 | 424.88 | 319.48 |
| 427.74 | 319.48 | 430.04 | 319.43 | 430.29 | 319.42 | 465.78 | 319 | 475.98 | 319 |
| 492.37 | 319.66 | 493.09 | 319.68 | 507.1901 | 319.68 | 507.3 | 319.66 | 507.4 | 319.65 |
| 507.59 | 319.64 | 509.58 | 319.61 | 510.13 | 319.61 | 517.37 | 319.44 | 522.79 | 319.45 |
| 527.05 | 319.35 | 529.12 | 319.38 | 529.34 | 319.37 | 532.75 | 319.39 | 535.13 | 319.34 |
| 536.5 | 319.29 | 536.84 | 319.26 | 538.04 | 319.25 | 38.1901 | 319.17 | 538.63 | 319.2 |
| 539.02 | 319.22 | 539.29 | 319.24 | 539.72 | 319.26 | 543.85 | 319.38 | 586.43 | 320 |
| 592.31 | 320.23 | 595.43 | 320.3 | 604.08 | 320.34 | 619.38 | 320.24 | 633.58 | 320 |
| 634.36 | 319.92 | 635.63 | 319.87 | 636.07 | 319.86 | 636.79 | 319.86 | 643.27 | 320 |
| 643.39 | 320 | 645.51 | 320.07 | 646.4 | 320.07 | 692.08 | 321.2 | 694.52 | 321.23 |
| 707.34 | 321.2 | 707.6 | 321.21 | 710.75 | 321.21 | 711.08 | 321.22 | 712.51 | 321.24 |
| 713.41 | 321.24 | 714.65 | 321.22 | 716.49 | 321.22 | 717.02 | 321.2 | 720.72 | 321.3 |
| 720.85 | 321.31 | 742.02 | 322 | 760.48 | 322.01 | 772.77 | 322.16 | 781.22 | 322.13 |
| 810.05 | 322.27 | 814.33 | 322.2 | 820.6 | 322 | 822.22 | 321.86 | 832.96 | 321 |
| 836.11 | 320.92 | 846.49 | 321 | 846.89 | 321.11 | 861.92 | 321.32 | 880.78 | 321.07 |
| 881.56 | 321.05 | 882.08 | 321.05 | 882.5 | 321.04 | 882.89 | 321.04 | 883.05 | 321.03 |
| 883.31 | 321.03 | 883.76 | 321.04 | 883.84 | 321.04 | 883.9 | 321.05 | 900.68 | 320.96 |
| 900.95 | 320.94 | 901.02 | 320.94 | 908.53 | 320.81 | 908.59 | 320.81 | 910.69 | 320.75 |
| 910.78 | 320.76 | 910.92 | 320.79 | 912.18 | 320.81 | 913.27 | 320.81 | 915.9 | 320.65 |
| 923.36 | 320.43 | 927.48 | 320 | 945.66 | 319.59 | 953.14 | 319.72 | 953.56 | 319.74 |
| 988.65 | 320.1 | 1009.32 | 320.26 | 1018 | 320.43 | 1021.21 | 320.54 | 1028.24 | 320.58 |
| 1031.97 | 320.75 | 1032.85 | 320.75 | 1035.64 | 320.88 | 1036.51 | 320.89 | 1038.21 | 320.98 |
| 1038.74 | 321 | 1046.97 | 321 | 1048.54 | 320.98 | 1049.23 | 321 | 1052.14 | 321 |
| 1060.34 | 320.82 | 1061.76 | 320.76 | 1062.61 | 320.68 | 1062.98 | 320.66 | 1065.04 | 320.61 |
| 1066.87 | 320.6 | 1067.33 | 320.61 | 1083.63 | 320.51 | 1088.51 | 320.55 | 1097.41 | 320.51 |
| 1097.74 | 320.49 | 1101.66 | 320.34 | 1102.54 | 320.35 | 1104.47 | 320.28 | 1132.29 | 319.9 |
| 1132.37 | 319.9 | 1132.67 | 319.89 | 1132.85 | 319.86 | 1140.23 | 319.67 | 1152.39 | 319.71 |
| 1152.65 | 319.72 | 1153.67 | 319.73 | 1157 | 319.8 | 1157.33 | 319.8 | 1158.04 | 319.81 |
| 1165.45 | 319.8 | 1170.26 | 319.87 | 1172.68 | 319.95 | 1178.68 | 320.22 | 1179.89 | 320.25 |
| 1191.98 | 320.76 | 1193.55 | 320.8 | 1193.86 | 320.8 | 1195.23 | 320.78 | 1195.48 | 320.78 |
| 1195.54 | 320.77 | 1195.61 | 320.77 | 1198.87 | 320.66 | 1204.38 | 320.22 | 1204.63 | 320.23 |
| 1205.32 | 320.23 | 1207.49 | 320 | 1209.7 | 319.86 | 1213.31 | 319.68 | 1214.12 | 319.66 |
| 1215.63 | 319.66 | 1221.13 | 319.75 | 1224.41 | 319.89 | 1226.72 | 319.93 | 1228.45 | 319.97 |
| 1228.77 | 319.99 | 1229.03 | 320 | 1231.67 | 320.29 | 1233.3 | 320.36 | 1233.38 | 320.36 |
| 1244.69 | 320.15 | 1245.38 | 320.12 | 1246.82 | 320.04 | 1247.25 | 320.01 | 1247.35 | 320 |
| 1250.11 | 319.82 | 1250.32 | 319.79 | 1251.15 | 319.74 | 1252.18 | 319.71 | 1266.53 | 319.5 |
| 1267.34 | 319.48 | 1270.35 | 319.45 | 1277.16 | 319.27 | 1277.3 | 319.28 | 1277.61 | 319.29 |
| 1279.49 | 319.28 | 1280.33 | 319.26 | 1280.44 | 319.25 | 1281.12 | 319.22 | 1281.43 | 319.21 |
| 1281.92 | 319.21 | 1283.29 | 319.19 | 1283.44 | 319.18 | 1284.02 | 319.18 | 1285.39 | 319.2 |
| 1287.01 | 319.26 | 1288.61 | 319.29 | 1288.85 | 319.3 | 1289.01 | 319.31 | 1289.39 | 319.32 |
| 1289.54 | 319.33 | 1289.92 | 319.36 | 1290.3 | 319.38 | 1291.63 | 319.43 | 1292.76 | 319.43 |
| 1296.2 | 319.51 | 1297.6 | 319.56 | 1301.09 | 319.77 | 1306.66 | 320 | 1321.45 | 320.15 |
| 1322.27 | 320.12 | 1323.14 | 320.02 | 1323.3 | 320 | 1344.03 | 320 | 1362.46 | 322 |
| 1366.23 | 322.72 | 1369.37 | 323 | 1372.6 | 323.68 | 1373.09 | 323.74 | 1374.3 | 323.8 |
| 1375.27 | 323.81 | 1377.38 | 323.94 | 1377.66 | 324 | 1377.85 | 324.09 | 1385.08 | 325.81 |
| 1385.96 | 325.99 | 1390.54 | 326.65 | 1390.75 | 326.73 | 1391.01 | 326.79 | 1391.74 | 326.92 |
| 1391.79 | 326.93 | 1393.11 | 327.15 | 1409.32 | 329 | 1412.82 | 329.52 | 1415.75 | 330 |
| 1417.63 | 330.38 | 1421.62 | 331 | 1424.82 | 331.85 | 1428.58 | 332.64 | 1430.44 | 333 |
| 1436.49 | 334 | 1437.02 | 334.08 | 1437.1 | 334.08 | 1443.12 | 335 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 206.8 | .05 | 822.22 | .04 | 1374.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 822.22 | 1374.3 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 809.24 Elevation= 322.55
Right Levee Station= 1321.47 Elevation= 320.18

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3592.34*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 198.18 | 337.59 | 199.51 | 337.21 | 200.27 | 336.91 | 200.38 | 336.85 | 202.14 | 335.95 |
| 202.7 | 335.69 | 204.1 | 335.03 | 204.17 | 334.99 | 204.79 | 334.7 | 205.84 | 334.22 |
| 206.22 | 334.03 | 208.54 | 332.95 | 210.22 | 332.12 | 212.95 | 331.16 | 221.97 | 328.28 |
| 222.68 | 328.07 | 225.01 | 327.32 | 225.55 | 327.18 | 227.43 | 326.63 | 228.64 | 326.36 |
| 231.98 | 325.95 | 240.06 | 325.07 | 243.72 | 324.68 | 245.06 | 324.57 | 245.72 | 324.54 |
| 246.35 | 324.61 | 247.33 | 324.56 | 248.99 | 324.43 | 249.15 | 324.41 | 257.99 | 323.47 |
| 268.18 | 322.5 | 271.71 | 322.27 | 282.77 | 321.52 | 298.29 | 320.7 | 299.5 | 320.63 |
| 301.37 | 320.53 | 309.47 | 320.34 | 312.28 | 320.27 | 318.54 | 320.11 | 321.35 | 320.04 |
| 321.9 | 320.02 | 323.21 | 319.99 | 325.9 | 319.91 | 328.33 | 319.84 | 330.79 | 319.76 |
| 333.62 | 319.67 | 334.31 | 319.64 | 337.5 | 319.54 | 337.99 | 319.52 | 342.31 | 319.41 |
| 343.63 | 319.37 | 344.09 | 319.37 | 345.26 | 319.34 | 346.38 | 319.34 | 346.88 | 319.33 |
| 346.94 | 319.36 | 349.21 | 319.33 | 351.33 | 319.29 | 352.49 | 319.28 | 355.43 | 319.27 |
| 359.66 | 319.28 | 363.15 | 319.27 | 374.05 | 319.27 | 379.04 | 319.26 | 381.91 | 319.24 |
| 384.09 | 319.24 | 388.16 | 319.22 | 388.96 | 319.21 | 391.49 | 319.2 | 395.78 | 319.18 |
| 399.52 | 319.16 | 405.98 | 319.2 | 407.41 | 319.24 | 407.88 | 319.28 | 407.97 | 319.4 |
| 408.7 | 319.43 | 408.85 | 319.46 | 411.67 | 319.51 | 413.06 | 319.5 | 414.47 | 319.5 |
| 416.72 | 319.44 | 416.97 | 319.43 | 423.41 | 319.34 | 427.23 | 319.28 | 441.21 | 319.08 |
| 441.32 | 319.08 | 444.91 | 319.02 | 450.96 | 318.93 | 451.71 | 318.91 | 461.7 | 318.87 |
| 477.74 | 319.44 | 478.44 | 319.45 | 481.23 | 319.44 | 492.25 | 319.41 | 492.45 | 319.38 |
| 492.64 | 319.37 | 494.59 | 319.34 | 495.13 | 319.34 | 502.21 | 319.16 | 507.52 | 319.15 |
| 511.69 | 319.04 | 511.9 | 319.05 | 513.72 | 319.07 | 513.93 | 319.06 | 517.27 | 319.07 |
| 519.6 | 319.02 | 520.94 | 318.97 | 521.27 | 318.94 | 522.45 | 318.88 | 522.6 | 318.85 |



BSE Document Control Number: 7323HYD101

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 523.67 | 318.92 | 524.09 | 318.94 | 528.14 | 319.04 | 534.74 | 319.12 | 569.82 | 319.58 |
| 570.74 | 319.62 | 571.99 | 319.66 | 574.9 | 319.77 | 575.58 | 319.8 | 578.05 | 319.86 |
| 578.9 | 319.87 | 587.1 | 319.91 | 592.91 | 319.88 | 602.08 | 319.82 | 615.98 | 319.59 |
| 616.74 | 319.51 | 617.98 | 319.46 | 618.41 | 319.45 | 619.12 | 319.45 | 622.06 | 319.52 |
| 622.38 | 319.52 | 625.46 | 319.59 | 625.58 | 319.59 | 627.66 | 319.66 | 628.53 | 319.66 |
| 657.31 | 320.36 | 658.56 | 320.39 | 663.27 | 320.5 | 666.73 | 320.59 | 670.53 | 320.68 |
| 673.24 | 320.74 | 675.63 | 320.77 | 679.2 | 320.76 | 688.18 | 320.74 | 691.52 | 320.74 |
| 691.84 | 320.75 | 693.24 | 320.77 | 694.24 | 320.77 | 695.34 | 320.75 | 697.14 | 320.75 |
| 697.49 | 320.73 | 698.32 | 320.74 | 701.28 | 320.82 | 701.41 | 320.83 | 703.96 | 320.91 |
| 705.94 | 320.98 | 707.52 | 321.03 | 722.13 | 321.52 | 740.2 | 321.55 | 752.24 | 321.71 |
| 760.51 | 321.69 | 774.66 | 321.77 | 777.11 | 321.78 | 777.88 | 321.79 | 781.51 | 321.81 |
| 788.73 | 321.84 | 792.92 | 321.78 | 799.06 | 321.58 | 800.64 | 321.45 | 811.06 | 320.62 |
| 814.12 | 320.54 | 819.32 | 320.57 | 824.18 | 320.6 | 824.57 | 320.71 | 839.15 | 320.89 |
| 850.54 | 320.73 | 851.94 | 320.72 | 852.81 | 320.71 | 855.9 | 320.66 | 857.44 | 320.63 |
| 858.2 | 320.61 | 858.7 | 320.61 | 859.11 | 320.6 | 859.49 | 320.6 | 859.89 | 320.59 |
| 860.47 | 320.61 | 868.2 | 320.56 | 871.24 | 320.55 | 875.24 | 320.53 | 876.74 | 320.52 |
| 877.07 | 320.5 | 884.35 | 320.38 | 884.41 | 320.38 | 886.45 | 320.32 | 886.67 | 320.36 |
| 887.89 | 320.38 | 888.95 | 320.38 | 891.5 | 320.23 | 898.74 | 320.02 | 899.48 | 319.94 |
| 902.73 | 319.61 | 913.6 | 319.38 | 916.34 | 319.32 | 917.56 | 319.3 | 920.36 | 319.24 |
| 927.62 | 319.37 | 928.03 | 319.38 | 941.35 | 319.52 | 943.6 | 319.54 | 962.06 | 319.73 |
| 982.11 | 319.88 | 990.52 | 320.05 | 993.64 | 320.15 | 1000.46 | 320.19 | 1004.07 | 320.35 |
| 1004.93 | 320.35 | 1007.63 | 320.48 | 1008.48 | 320.49 | 1010.13 | 320.57 | 1010.64 | 320.59 |
| 1018.62 | 320.59 | 1020.14 | 320.57 | 1020.81 | 320.59 | 1023.64 | 320.59 | 1031.59 | 320.42 |
| 1032.97 | 320.36 | 1033.79 | 320.28 | 1034.15 | 320.26 | 1036.15 | 320.21 | 1037.92 | 320.2 |
| 1038.37 | 320.21 | 1041.04 | 320.2 | 1044.68 | 320.17 | 1054.18 | 320.12 | 1054.98 | 320.12 |
| 1055.89 | 320.13 | 1056.31 | 320.13 | 1058.91 | 320.15 | 1067.54 | 320.11 | 1067.86 | 320.09 |
| 1071.66 | 319.95 | 1072.52 | 319.96 | 1074.39 | 319.89 | 1082.13 | 319.79 | 1091.03 | 319.67 |
| 1097.27 | 319.58 | 1097.83 | 319.57 | 1101.37 | 319.53 | 1101.74 | 319.52 | 1101.91 | 319.49 |
| 1109.07 | 319.3 | 1112.83 | 319.32 | 1113.35 | 319.32 | 1120.68 | 319.34 | 1121.12 | 319.35 |
| 1122.11 | 319.36 | 1125.34 | 319.43 | 1126.34 | 319.44 | 1133.53 | 319.43 | 1134.37 | 319.44 |
| 1138.2 | 319.49 | 1140.54 | 319.57 | 1146.36 | 319.83 | 1147.54 | 319.85 | 1159.26 | 320.34 |
| 1160.78 | 320.38 | 1161.09 | 320.38 | 1162.41 | 320.36 | 1162.78 | 320.35 | 1165.94 | 320.25 |
| 1171.29 | 319.82 | 1171.53 | 319.83 | 1172.2 | 319.83 | 1174.3 | 319.61 | 1176.45 | 319.48 |
| 1179.95 | 319.3 | 1180.74 | 319.29 | 1182.2 | 319.29 | 1187.53 | 319.37 | 1190.72 | 319.5 |
| 1192.96 | 319.54 | 1194.63 | 319.58 | 1195.2 | 319.61 | 1197.76 | 319.89 | 1199.34 | 319.95 |
| 1199.41 | 319.95 | 1210.38 | 319.75 | 1211.05 | 319.72 | 1212.45 | 319.65 | 1212.96 | 319.61 |
| 1215.64 | 319.43 | 1215.84 | 319.41 | 1216.65 | 319.36 | 1217.65 | 319.33 | 1220.01 | 319.29 |
| 1224.14 | 319.23 | 1226.42 | 319.2 | 1227.33 | 319.18 | 1231.25 | 319.12 | 1231.57 | 319.12 |
| 1232.35 | 319.1 | 1235.27 | 319.07 | 1239.63 | 318.96 | 1241.83 | 318.9 | 1242.31 | 318.92 |
| 1243.59 | 318.91 | 1244.14 | 318.91 | 1244.95 | 318.89 | 1245.06 | 318.88 | 1246.02 | 318.84 |
| 1246.49 | 318.84 | 1247.82 | 318.82 | 1247.97 | 318.81 | 1248.68 | 318.81 | 1248.87 | 318.83 |
| 1249.43 | 318.83 | 1250.43 | 318.85 | 1252.68 | 318.92 | 1254.9 | 318.96 | 1256.04 | 319 |
| 1256.87 | 319.05 | 1257.39 | 319.06 | 1258.37 | 319.09 | 1259.57 | 319.11 | 1260.9 | 319.11 |
| 1261.2 | 319.12 | 1261.92 | 319.12 | 1262.19 | 319.13 | 1263.27 | 319.14 | 1265.46 | 319.19 |
| 1267.21 | 319.25 | 1267.4 | 319.25 | 1269.31 | 319.32 | 1269.34 | 319.33 | 1270.66 | 319.38 |
| 1271.08 | 319.4 | 1271.99 | 319.41 | 1272.02 | 319.42 | 1272.46 | 319.42 | 1272.86 | 319.44 |
| 1274.16 | 319.48 | 1274.64 | 319.48 | 1275.68 | 319.52 | 1276.08 | 319.52 | 1276.16 | 319.53 |
| 1276.57 | 319.54 | 1276.9 | 319.56 | 1278.9 | 319.65 | 1280 | 319.68 | 1280.08 | 319.69 |
| 1282.13 | 319.69 | 1282.42 | 319.68 | 1283.56 | 319.67 | 1284.4 | 319.67 | 1287.51 | 319.72 |
| 1290.1 | 319.78 | 1292.68 | 319.8 | 1292.81 | 319.79 | 1293.26 | 319.79 | 1293.95 | 319.78 |
| 1294.68 | 319.78 | 1294.75 | 319.79 | 1295.6 | 319.8 | 1297.88 | 319.8 | 1298.8 | 319.84 |
| 1299.84 | 319.86 | 1300.56 | 319.87 | 1301.32 | 319.86 | 1301.74 | 319.85 | 1302.56 | 319.79 |
| 1303.14 | 319.73 | 1303.9 | 319.72 | 1304.16 | 319.71 | 1305.06 | 319.71 | 1305.08 | 319.72 |
| 1306.49 | 319.72 | 1307.09 | 319.71 | 1307.61 | 319.71 | 1309.69 | 319.7 | 1311.16 | 319.7 |
| 1312.08 | 319.69 | 1312.59 | 319.69 | 1312.74 | 319.68 | 1314.97 | 319.68 | 1319.91 | 319.69 |
| 1322.02 | 319.71 | 1322.45 | 319.75 | 1322.6 | 319.78 | 1322.98 | 319.8 | 1327.64 | 319.83 |
| 1328.55 | 319.83 | 1328.58 | 319.82 | 1330.29 | 319.8 | 1330.68 | 319.8 | 1331.35 | 319.81 |
| 1332 | 319.81 | 1332.12 | 319.82 | 1334.21 | 319.95 | 1336.75 | 320.14 | 1337.63 | 320.22 |
| 1340.3 | 320.38 | 1340.42 | 320.39 | 1341.72 | 320.44 | 1341.94 | 320.44 | 1342.87 | 320.48 |
| 1344.6 | 320.61 | 1345.57 | 320.69 | 1346.23 | 320.73 | 1346.68 | 320.75 | 1347.23 | 320.8 |
| 1348.26 | 320.87 | 1348.3 | 320.88 | 1350.38 | 321.02 | 1351.05 | 321.07 | 1352.07 | 321.14 |
| 1354.59 | 321.33 | 1354.96 | 321.36 | 1356.54 | 321.47 | 1357.63 | 321.56 | 1358.74 | 321.72 |
| 1358.86 | 321.73 | 1360 | 321.9 | 1362.71 | 322.26 | 1362.88 | 322.28 | 1365.28 | 322.42 |
| 1365.31 | 322.43 | 1365.7 | 322.45 | 1366.39 | 322.5 | 1367.19 | 322.55 | 1369.55 | 322.88 |
| 1369.92 | 322.94 | 1371.68 | 323.17 | 1372.36 | 323.23 | 1372.94 | 323.24 | 1373.27 | 323.26 |
| 1374.04 | 323.27 | 1374.23 | 323.28 | 1375.03 | 323.28 | 1375.39 | 323.3 | 1375.92 | 323.34 |
| 1377.08 | 323.41 | 1377.17 | 323.41 | 1377.46 | 323.47 | 1377.65 | 323.56 | 1378.42 | 323.73 |
| 1379.68 | 324.03 | 1384.99 | 325.26 | 1385.88 | 325.44 | 1387.44 | 325.66 | 1387.99 | 325.74 |
| 1388.18 | 325.76 | 1390.53 | 326.11 | 1390.74 | 326.18 | 1391.01 | 326.24 | 1391.8 | 326.39 |
| 1393.14 | 326.61 | 1394.6 | 326.79 | 1394.71 | 326.8 | 1395.31 | 326.89 | 1396.52 | 327.05 |
| 1398.05 | 327.26 | 1400.46 | 327.58 | 1401.2 | 327.68 | 1402.2 | 327.81 | 1402.76 | 327.89 |
| 1403.33 | 327.96 | 1404.38 | 328.11 | 1405.26 | 328.22 | 1406.02 | 328.32 | 1406.85 | 328.44 |
| 1408.91 | 328.72 | 1409.59 | 328.81 | 1410.31 | 328.93 | 1410.51 | 328.97 | 1411.66 | 329.17 |
| 1413.14 | 329.42 | 1414.76 | 329.7 | 1416.12 | 329.94 | 1418.03 | 330.35 | 1420.25 | 330.72 |
| 1420.56 | 330.78 | 1422.07 | 331.04 | 1422.36 | 331.11 | 1423.43 | 331.41 | 1423.98 | 331.56 |
| 1425.32 | 331.9 | 1429.14 | 332.66 | 1429.6 | 332.74 | 1431.03 | 333 | 1432.5 | 333.24 |
| 1434.24 | 333.51 | 1434.67 | 333.58 | 1437.17 | 333.97 | 1437.71 | 334.05 | 1437.79 | 334.05 |
| 1443.9 | 334.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 198.18 | .05 | 800.64 | .04 | 1374.04 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 800.64 | 1374.04 | | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 787.94 Elevation=322.1117
Right Levee Station=1321.279 Elevation=319.8667

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3572.60*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 189.57 | 337.47 | 190.87 | 337.11 | 191.61 | 336.82 | 191.72 | 336.77 | 193.44 | 335.9 |
| 195.35 | 335.02 | 197.06 | 334.24 | 199.7 | 333.03 | 201.35 | 332.23 | 204.01 | 331.31 |
| 212.84 | 328.56 | 213.53 | 328.36 | 214.47 | 328.06 | 215.81 | 327.64 | 216.95 | 327.34 |
| 218.19 | 326.98 | 219.37 | 326.72 | 222.63 | 326.33 | 230.54 | 325.48 | 234.13 | 325.11 |
| 235.44 | 324.99 | 236.08 | 324.97 | 236.69 | 325.04 | 237.65 | 324.98 | 239.28 | 324.86 |
| 239.43 | 324.84 | 248.08 | 323.93 | 258.06 | 323 | 261.51 | 322.78 | 272.34 | 322.05 |
| 287.52 | 321.24 | 288.7 | 321.16 | 290.54 | 321.06 | 298.46 | 320.86 | 299.64 | 320.82 |
| 301.21 | 320.78 | 307.33 | 320.6 | 310.08 | 320.52 | 311.9 | 320.45 | 314.54 | 320.36 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 315.58 | 320.32 | 316.92 | 320.26 | 319.32 | 320.16 | 322.09 | 320.04 | 325.88 | 319.87 |
| 326.37 | 319.85 | 330.59 | 319.71 | 331.89 | 319.67 | 332.33 | 319.67 | 333.48 | 319.65 |
| 334.57 | 319.64 | 335.06 | 319.63 | 335.13 | 319.65 | 337.35 | 319.62 | 339.42 | 319.58 |
| 340.56 | 319.56 | 343.43 | 319.55 | 347.57 | 319.55 | 350.98 | 319.53 | 355.79 | 319.53 |
| 359 | 319.51 | 361.65 | 319.5 | 366.53 | 319.48 | 369.34 | 319.45 | 370.93 | 319.43 |
| 371.47 | 319.43 | 375.46 | 319.39 | 378.71 | 319.35 | 382.92 | 319.3 | 386.56 | 319.27 |
| 392.9 | 319.27 | 394.36 | 319.3 | 394.76 | 319.34 | 394.84 | 319.45 | 395.56 | 319.48 |
| 395.7 | 319.51 | 398.46 | 319.54 | 399.82 | 319.52 | 401.2 | 319.52 | 403.4 | 319.46 |
| 403.64 | 319.45 | 409.95 | 319.34 | 413.69 | 319.27 | 427.36 | 319.03 | 427.48 | 319.03 |
| 430.98 | 318.97 | 436.91 | 318.84 | 437.64 | 318.83 | 447.41 | 318.74 | 463.11 | 319.22 |
| 463.8 | 319.23 | 466.52 | 319.21 | 477.31 | 319.15 | 477.69 | 319.11 | 479.6 | 319.07 |
| 480.12 | 319.07 | 487.06 | 318.87 | 492.25 | 318.85 | 496.33 | 318.74 | 496.54 | 318.74 |
| 498.31 | 318.76 | 498.52 | 318.75 | 501.79 | 318.75 | 504.07 | 318.7 | 505.38 | 318.65 |
| 505.71 | 318.62 | 506.86 | 318.56 | 507 | 318.53 | 507.42 | 318.56 | 508.47 | 318.61 |
| 512.42 | 318.71 | 518.89 | 318.77 | 553.21 | 319.17 | 555.33 | 319.24 | 558.18 | 319.34 |
| 561.26 | 319.43 | 562.09 | 319.44 | 570.12 | 319.49 | 575.8 | 319.45 | 584.77 | 319.4 |
| 598.37 | 319.18 | 599.12 | 319.1 | 600.34 | 319.06 | 600.76 | 319.05 | 601.45 | 319.05 |
| 604.33 | 319.11 | 604.64 | 319.12 | 607.65 | 319.18 | 607.77 | 319.18 | 609.8 | 319.24 |
| 610.65 | 319.24 | 638.82 | 319.92 | 640.04 | 319.95 | 644.65 | 320.06 | 648.04 | 320.14 |
| 651.76 | 320.23 | 654.41 | 320.29 | 656.75 | 320.31 | 660.24 | 320.3 | 669.03 | 320.27 |
| 669.28 | 320.28 | 672.29 | 320.28 | 672.61 | 320.29 | 673.98 | 320.3 | 674.96 | 320.3 |
| 676.03 | 320.28 | 676.49 | 320.28 | 677.79 | 320.27 | 678.3 | 320.25 | 678.95 | 320.26 |
| 681.84 | 320.33 | 681.97 | 320.34 | 684.47 | 320.42 | 686.4 | 320.49 | 687.95 | 320.55 |
| 702.25 | 321.04 | 719.93 | 321.09 | 731.7 | 321.26 | 739.8 | 321.24 | 753.64 | 321.34 |
| 756.04 | 321.35 | 756.8 | 321.36 | 760.34 | 321.38 | 767.41 | 321.41 | 771.51 | 321.35 |
| 777.52 | 321.17 | 779.07 | 321.04 | 789.16 | 320.23 | 792.12 | 320.15 | 797.16 | 320.18 |
| 801.88 | 320.2 | 802.25 | 320.3 | 816.38 | 320.46 | 827.41 | 320.3 | 828.77 | 320.29 |
| 829.62 | 320.28 | 832.61 | 320.22 | 834.1 | 320.2 | 835.72 | 320.16 | 836.48 | 320.15 |
| 836.97 | 320.16 | 837.03 | 320.17 | 841.5 | 320.13 | 844.52 | 320.11 | 847.48 | 320.1 |
| 851.65 | 320.09 | 852.8 | 320.08 | 853.12 | 320.06 | 860.18 | 319.95 | 862.21 | 319.89 |
| 862.42 | 319.93 | 863.61 | 319.95 | 864.63 | 319.95 | 867.1 | 319.81 | 874.11 | 319.61 |
| 874.84 | 319.54 | 877.98 | 319.22 | 882.1 | 319.13 | 891.17 | 318.96 | 892.36 | 318.95 |
| 895.07 | 318.89 | 902.1 | 319.01 | 902.49 | 319.03 | 915.41 | 319.16 | 917.58 | 319.18 |
| 935.47 | 319.36 | 954.89 | 319.51 | 963.05 | 319.66 | 966.07 | 319.76 | 972.67 | 319.8 |
| 976.18 | 319.96 | 977 | 319.96 | 979.63 | 320.07 | 980.44 | 320.08 | 982.04 | 320.17 |
| 982.54 | 320.18 | 990.27 | 320.18 | 991.75 | 320.16 | 992.4 | 320.18 | 995.13 | 320.18 |
| 1002.84 | 320.01 | 1004.17 | 319.96 | 1004.97 | 319.88 | 1005.32 | 319.86 | 1007.25 | 319.82 |
| 1008.97 | 319.81 | 1009.41 | 319.82 | 1011.99 | 319.8 | 1015.52 | 319.78 | 1024.72 | 319.72 |
| 1025.5 | 319.73 | 1026.39 | 319.73 | 1026.79 | 319.74 | 1029.31 | 319.76 | 1037.67 | 319.72 |
| 1037.98 | 319.7 | 1041.67 | 319.56 | 1042.49 | 319.57 | 1044.31 | 319.5 | 1051.81 | 319.4 |
| 1060.44 | 319.29 | 1066.48 | 319.2 | 1067.02 | 319.2 | 1070.45 | 319.15 | 1070.81 | 319.14 |
| 1070.98 | 319.11 | 1077.91 | 318.94 | 1081.55 | 318.95 | 1082.06 | 318.95 | 1089.16 | 318.98 |
| 1089.58 | 318.99 | 1090.54 | 318.99 | 1093.67 | 319.06 | 1094.65 | 319.06 | 1101.61 | 319.05 |
| 1102.43 | 319.06 | 1106.13 | 319.11 | 1108.41 | 319.19 | 1114.05 | 319.43 | 1115.18 | 319.46 |
| 1126.54 | 319.92 | 1128.02 | 319.96 | 1128.31 | 319.96 | 1129.6 | 319.94 | 1129.96 | 319.93 |
| 1133.02 | 319.83 | 1138.2 | 319.43 | 1138.43 | 319.44 | 1139.08 | 319.44 | 1141.12 | 319.22 |
| 1143.2 | 319.1 | 1146.59 | 318.93 | 1147.35 | 318.91 | 1148.77 | 318.91 | 1153.94 | 318.99 |
| 1157.02 | 319.12 | 1159.19 | 319.15 | 1160.82 | 319.19 | 1161.36 | 319.22 | 1163.84 | 319.48 |
| 1165.37 | 319.55 | 1165.45 | 319.55 | 1176.08 | 319.35 | 1176.73 | 319.32 | 1178.08 | 319.25 |
| 1178.58 | 319.21 | 1181.17 | 319.05 | 1181.37 | 319.02 | 1182.15 | 318.97 | 1183.12 | 318.95 |
| 1185.4 | 318.91 | 1189.41 | 318.85 | 1191.61 | 318.82 | 1192.5 | 318.8 | 1196.3 | 318.74 |
| 1196.6 | 318.74 | 1197.36 | 318.72 | 1200.19 | 318.69 | 1204.41 | 318.58 | 1206.55 | 318.53 |
| 1206.59 | 318.52 | 1207.01 | 318.54 | 1208.25 | 318.54 | 1209.57 | 318.51 | 1209.67 | 318.5 |
| 1210.6 | 318.47 | 1211.06 | 318.47 | 1212.35 | 318.45 | 1212.49 | 318.44 | 1213.14 | 318.44 |
| 1213.51 | 318.48 | 1214.19 | 318.48 | 1215.46 | 318.5 | 1218.35 | 318.58 | 1221.2 | 318.63 |
| 1221.91 | 318.66 | 1222.59 | 318.67 | 1222.89 | 318.68 | 1223.35 | 318.71 | 1223.97 | 318.74 |
| 1225.79 | 318.76 | 1226.58 | 318.78 | 1227.18 | 318.78 | 1227.39 | 318.79 | 1228.88 | 318.79 |
| 1229.27 | 318.8 | 1230.53 | 318.8 | 1231.91 | 318.82 | 1234.24 | 318.86 | 1234.71 | 318.87 |
| 1236.96 | 318.94 | 1237.21 | 318.94 | 1241.38 | 319.06 | 1241.91 | 319.08 | 1243.08 | 319.07 |
| 1243.69 | 319.07 | 1244.18 | 319.1 | 1245.53 | 319.12 | 1245.86 | 319.13 | 1246.89 | 319.13 |
| 1247.81 | 319.16 | 1248.26 | 319.16 | 1248.95 | 319.19 | 1249.37 | 319.2 | 1251.93 | 319.32 |
| 1253.34 | 319.37 | 1255.84 | 319.37 | 1256.44 | 319.35 | 1256.64 | 319.35 | 1257.9 | 319.31 |
| 1258.97 | 319.31 | 1262.96 | 319.38 | 1266.27 | 319.48 | 1266.47 | 319.49 | 1269.58 | 319.5 |
| 1269.75 | 319.49 | 1270.32 | 319.48 | 1271.6 | 319.45 | 1271.93 | 319.45 | 1272.23 | 319.47 |
| 1273.33 | 319.48 | 1274.8 | 319.48 | 1274.9 | 319.47 | 1276.24 | 319.47 | 1277.42 | 319.54 |
| 1278.76 | 319.58 | 1279.68 | 319.59 | 1280.86 | 319.59 | 1281.56 | 319.57 | 1281.7 | 319.55 |
| 1282.24 | 319.52 | 1283.09 | 319.45 | 1283.89 | 319.44 | 1283.95 | 319.43 | 1284.33 | 319.43 |
| 1284.34 | 319.42 | 1284.94 | 319.42 | 1285.47 | 319.43 | 1287.08 | 319.44 | 1287.26 | 319.45 |
| 1288.45 | 319.42 | 1288.7 | 319.42 | 1291.37 | 319.39 | 1293.26 | 319.39 | 1294.43 | 319.37 |
| 1295.27 | 319.37 | 1296.87 | 319.36 | 1297.58 | 319.37 | 1297.7 | 319.36 | 1298.13 | 319.36 |
| 1304.17 | 319.37 | 1304.46 | 319.38 | 1307.16 | 319.42 | 1307.7 | 319.5 | 1307.86 | 319.55 |
| 1308.08 | 319.58 | 1308.38 | 319.59 | 1314.36 | 319.67 | 1315.16 | 319.67 | 1315.56 | 319.65 |
| 1317.75 | 319.61 | 1319.22 | 319.61 | 1319.43 | 319.62 | 1319.94 | 319.62 | 1320.09 | 319.63 |
| 1322.15 | 319.71 | 1322.78 | 319.73 | 1326.03 | 319.91 | 1327.15 | 319.99 | 1330.58 | 320.1 |
| 1330.67 | 320.11 | 1333.87 | 320.11 | 1336.07 | 320.24 | 1336.33 | 320.26 | 1337.33 | 320.31 |
| 1337.78 | 320.34 | 1339.1 | 320.37 | 1339.21 | 320.39 | 1340.06 | 320.44 | 1340.82 | 320.48 |
| 1343.49 | 320.6 | 1344.34 | 320.65 | 1345.64 | 320.72 | 1348.88 | 320.9 | 1349.34 | 320.92 |
| 1351.16 | 321.02 | 1352.17 | 321.07 | 1352.48 | 321.1 | 1352.71 | 321.11 | 1353.85 | 321.23 |
| 1355.81 | 321.47 | 1359.28 | 321.81 | 1359.5 | 321.83 | 1362.56 | 321.97 | 1363.11 | 322.01 |
| 1363.98 | 322.05 | 1365.01 | 322.09 | 1368.52 | 322.46 | 1370.77 | 322.67 | 1371.02 | 322.68 |
| 1371.64 | 322.72 | 1372.34 | 322.73 | 1372.45 | 322.74 | 1373.02 | 322.74 | 1373.79 | 322.75 |
| 1374.35 | 322.75 | 1375.16 | 322.77 | 1375.69 | 322.81 | 1376.87 | 322.88 | 1376.96 | 322.88 |
| 1377.25 | 322.94 | 1377.45 | 323.02 | 1377.69 | 323.08 | 1378.23 | 323.19 | 1378.82 | 323.33 |
| 1379.51 | 323.5 | 1380.73 | 323.78 | 1384.9 | 324.71 | 1385.8 | 324.88 | 1387.39 | 325.1 |
| 1390.52 | 325.56 | 1390.74 | 325.64 | 1391 | 325.7 | 1391.81 | 325.84 | 1393.17 | 326.08 |
| 1395.1 | 326.33 | 1395.37 | 326.38 | 1400.6 | 327.19 | 1401.35 | 327.3 | 1402.93 | 327.55 |
| 1403.51 | 327.63 | 1404.58 | 327.8 | 1405.47 | 327.93 | 1407.08 | 328.18 | 1409.86 | 328.62 |
| 1410.59 | 328.76 | 1411.96 | 329.03 | 1412.87 | 329.22 | 1413.47 | 329.32 | 1415.11 | 329.63 |
| 1415.38 | 329.67 | 1416.48 | 329.88 | 1418.42 | 330.32 | 1420.68 | 330.73 | 1421.58 | 330.9 |
| 1422.53 | 331.07 | 1424.47 | 331.62 | 1425.83 | 331.95 | 1429.7 | 332.67 | 1431.61 | 333.01 |
| 1433.1 | 333.24 | 1434.88 | 333.5 | 1435.31 | 333.57 | 1438.39 | 334.02 | 1438.47 | 334.02 |
| 1444.67 | 334.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 189.57 | .05 | 779.07 | .04 | 1373.79 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 779.07 | 1373.79 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 766.64 Elevation=321.6733
Right Levee Station=1321.088 Elevation=319.5533

CROSS SECTION

RIVER: WASH0

REACH: WASH0 RS: 3552.86*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 180.95 | 337.35 | 182.22 | 337 | 182.95 | 336.73 | 184.98 | 335.74 | 187.28 | 334.71 |
| 188.28 | 334.27 | 188.64 | 334.1 | 190.86 | 333.11 | 192.47 | 332.35 | 195.08 | 331.47 |
| 203.71 | 328.84 | 204.39 | 328.64 | 206.62 | 327.96 | 207.14 | 327.83 | 207.73 | 327.67 |
| 208.94 | 327.32 | 210.09 | 327.08 | 213.29 | 326.7 | 221.03 | 325.88 | 224.53 | 325.53 |
| 225.81 | 325.42 | 226.44 | 325.39 | 227.04 | 325.46 | 227.98 | 325.41 | 229.57 | 325.29 |
| 229.72 | 325.27 | 238.18 | 324.4 | 247.93 | 323.51 | 251.31 | 323.29 | 261.9 | 322.57 |
| 276.75 | 321.77 | 279.7 | 321.59 | 287.45 | 321.38 | 296.13 | 321.09 | 299.35 | 320.97 |
| 300.6 | 320.92 | 303.17 | 320.8 | 304.19 | 320.76 | 305.5 | 320.69 | 311.66 | 320.35 |
| 311.87 | 320.33 | 314.27 | 320.19 | 314.74 | 320.17 | 318.87 | 320.02 | 320.14 | 319.97 |
| 320.58 | 319.97 | 323.24 | 319.92 | 323.31 | 319.95 | 325.48 | 319.91 | 327.51 | 319.86 |
| 328.62 | 319.84 | 331.43 | 319.82 | 335.48 | 319.82 | 338.82 | 319.79 | 343.51 | 319.78 |
| 345.12 | 319.77 | 346.66 | 319.75 | 349.25 | 319.74 | 354.03 | 319.7 | 356.77 | 319.66 |
| 358.33 | 319.63 | 358.86 | 319.63 | 362.76 | 319.56 | 363.52 | 319.54 | 365.94 | 319.49 |
| 370.05 | 319.42 | 373.61 | 319.37 | 379.81 | 319.34 | 381.24 | 319.36 | 381.63 | 319.39 |
| 381.71 | 319.5 | 382.41 | 319.52 | 382.56 | 319.55 | 385.25 | 319.56 | 386.58 | 319.55 |
| 387.93 | 319.53 | 390.09 | 319.47 | 390.32 | 319.46 | 396.49 | 319.34 | 400.15 | 319.26 |
| 413.52 | 318.99 | 413.63 | 318.98 | 417.06 | 318.91 | 422.86 | 318.76 | 423.57 | 318.74 |
| 433.13 | 318.62 | 448.48 | 319 | 449.15 | 319 | 451.82 | 318.97 | 462.36 | 318.88 |
| 462.74 | 318.84 | 464.6 | 318.8 | 465.12 | 318.8 | 471.9 | 318.59 | 476.98 | 318.55 |
| 480.97 | 318.43 | 482.91 | 318.45 | 483.11 | 318.44 | 486.31 | 318.44 | 488.54 | 318.38 |
| 489.82 | 318.33 | 490.14 | 318.3 | 491.26 | 318.24 | 491.41 | 318.22 | 492.18 | 318.25 |
| 492.84 | 318.29 | 496.71 | 318.37 | 503.03 | 318.42 | 536.6 | 318.75 | 538.68 | 318.82 |
| 541.46 | 318.9 | 542.11 | 318.93 | 544.47 | 318.99 | 545.03 | 319.01 | 545.29 | 319.01 |
| 553.13 | 319.06 | 558.7 | 319.03 | 567.47 | 318.98 | 580.77 | 318.77 | 581.5 | 318.7 |
| 582.69 | 318.65 | 583.1 | 318.64 | 583.78 | 318.64 | 586.59 | 318.7 | 586.9 | 318.71 |
| 589.85 | 318.77 | 589.96 | 318.77 | 591.95 | 318.83 | 592.78 | 318.83 | 620.33 | 319.48 |
| 626.03 | 319.62 | 629.34 | 319.69 | 632.98 | 319.77 | 635.57 | 319.83 | 637.86 | 319.85 |
| 641.27 | 319.83 | 649.87 | 319.81 | 653.06 | 319.81 | 653.37 | 319.82 | 654.71 | 319.84 |
| 655.56 | 319.84 | 655.67 | 319.83 | 656.72 | 319.81 | 658.44 | 319.8 | 658.94 | 319.78 |
| 659.57 | 319.78 | 662.4 | 319.85 | 662.53 | 319.86 | 664.97 | 319.93 | 666.86 | 320 |
| 668.38 | 320.07 | 682.36 | 320.56 | 699.65 | 320.63 | 711.17 | 320.8 | 719.08 | 320.8 |
| 732.62 | 320.91 | 734.97 | 320.92 | 735.71 | 320.93 | 746.09 | 320.99 | 750.1 | 320.93 |
| 755.97 | 320.75 | 757.49 | 320.63 | 767.26 | 319.85 | 770.13 | 319.77 | 775.01 | 319.79 |
| 779.57 | 319.81 | 779.93 | 319.9 | 793.6 | 320.04 | 794.95 | 320.01 | 804.29 | 319.87 |
| 806.42 | 319.85 | 810.76 | 319.76 | 811.47 | 319.74 | 811.94 | 319.74 | 812.32 | 319.72 |
| 813.06 | 319.71 | 813.6 | 319.73 | 817.92 | 319.69 | 820.85 | 319.67 | 823.71 | 319.66 |
| 827.45 | 319.64 | 828.86 | 319.64 | 829.17 | 319.62 | 836 | 319.52 | 837.96 | 319.47 |
| 838.17 | 319.5 | 839.32 | 319.52 | 840.31 | 319.52 | 842.7 | 319.38 | 849.49 | 319.2 |
| 853.24 | 318.83 | 857.22 | 318.75 | 860.31 | 318.69 | 866 | 318.6 | 867.15 | 318.59 |
| 869.77 | 318.54 | 876.58 | 318.66 | 876.96 | 318.67 | 889.46 | 318.8 | 891.56 | 318.82 |
| 908.88 | 318.99 | 927.68 | 319.13 | 935.57 | 319.28 | 938.49 | 319.37 | 944.89 | 319.41 |
| 948.28 | 319.56 | 949.08 | 319.56 | 951.62 | 319.67 | 952.41 | 319.68 | 953.96 | 319.76 |
| 954.44 | 319.78 | 961.93 | 319.78 | 963.35 | 319.76 | 963.98 | 319.77 | 966.63 | 319.77 |
| 974.09 | 319.61 | 975.38 | 319.56 | 976.15 | 319.48 | 978.36 | 319.42 | 980.03 | 319.41 |
| 980.44 | 319.42 | 982.95 | 319.4 | 986.36 | 319.38 | 995.27 | 319.33 | 996.02 | 319.33 |
| 999.71 | 319.36 | 1007.81 | 319.32 | 1008.11 | 319.3 | 1011.67 | 319.17 | 1012.47 | 319.18 |
| 1014.23 | 319.11 | 1021.49 | 319.01 | 1029.84 | 318.91 | 1035.69 | 318.83 | 1036.21 | 318.82 |
| 1039.53 | 318.78 | 1039.88 | 318.77 | 1040.04 | 318.74 | 1046.75 | 318.57 | 1050.28 | 318.58 |
| 1050.77 | 318.59 | 1057.64 | 318.61 | 1058.98 | 318.63 | 1062.01 | 318.68 | 1062.95 | 318.69 |
| 1069.69 | 318.68 | 1074.07 | 318.74 | 1076.27 | 318.81 | 1081.73 | 319.04 | 1082.83 | 319.06 |
| 1093.83 | 319.51 | 1095.25 | 319.54 | 1095.54 | 319.54 | 1096.78 | 319.52 | 1100.09 | 319.42 |
| 1105.11 | 319.03 | 1105.33 | 319.04 | 1105.96 | 319.04 | 1107.93 | 318.84 | 1109.94 | 318.71 |
| 1113.23 | 318.55 | 1113.97 | 318.54 | 1115.34 | 318.54 | 1116.62 | 318.56 | 1117.84 | 318.57 |
| 1120.34 | 318.61 | 1123.33 | 318.73 | 1127 | 318.8 | 1127.53 | 318.83 | 1129.93 | 319.08 |
| 1131.48 | 319.14 | 1141.77 | 318.95 | 1142.4 | 318.93 | 1143.71 | 318.86 | 1144.19 | 318.82 |
| 1146.7 | 318.66 | 1146.89 | 318.64 | 1147.65 | 318.59 | 1148.58 | 318.57 | 1150.8 | 318.53 |
| 1154.67 | 318.47 | 1156.81 | 318.44 | 1157.66 | 318.42 | 1161.34 | 318.36 | 1161.64 | 318.36 |
| 1162.37 | 318.34 | 1165.11 | 318.31 | 1169.2 | 318.21 | 1171.27 | 318.15 | 1171.72 | 318.17 |
| 1172.91 | 318.16 | 1173.43 | 318.16 | 1174.19 | 318.14 | 1174.29 | 318.13 | 1175.19 | 318.09 |
| 1176.88 | 318.08 | 1177.02 | 318.07 | 1177.67 | 318.07 | 1177.93 | 318.09 | 1178.07 | 318.12 |
| 1178.95 | 318.12 | 1180.5 | 318.15 | 1184.02 | 318.24 | 1188.01 | 318.32 | 1189.56 | 318.36 |
| 1190.12 | 318.39 | 1191.19 | 318.43 | 1191.79 | 318.42 | 1192.9 | 318.44 | 1194.78 | 318.46 |
| 1195.49 | 318.46 | 1196.85 | 318.47 | 1197.33 | 318.48 | 1198.04 | 318.48 | 1198.19 | 318.47 |
| 1198.88 | 318.47 | 1200.55 | 318.49 | 1203.39 | 318.54 | 1203.97 | 318.56 | 1206.71 | 318.63 |
| 1207.01 | 318.63 | 1209.98 | 318.69 | 1212.1 | 318.74 | 1212.25 | 318.75 | 1212.75 | 318.75 |
| 1214.17 | 318.72 | 1214.22 | 318.73 | 1214.91 | 318.72 | 1215.51 | 318.75 | 1215.54 | 318.76 |
| 1217.16 | 318.77 | 1218.82 | 318.77 | 1219.04 | 318.78 | 1220.33 | 318.81 | 1220.69 | 318.81 |
| 1221.83 | 318.85 | 1224.96 | 319 | 1226.68 | 319.05 | 1229.73 | 319.05 | 1230.01 | 319.03 |
| 1232.24 | 318.96 | 1233.55 | 318.95 | 1238.41 | 319.05 | 1242.45 | 319.18 | 1242.69 | 319.19 |
| 1246.48 | 319.21 | 1246.69 | 319.19 | 1248.47 | 319.14 | 1248.72 | 319.14 | 1248.98 | 319.12 |
| 1249.6 | 319.13 | 1249.76 | 319.15 | 1251.05 | 319.16 | 1252.43 | 319.16 | 1253.25 | 319.14 |
| 1254.6 | 319.14 | 1254.73 | 319.16 | 1255.06 | 319.17 | 1256.04 | 319.24 | 1257.67 | 319.3 |
| 1258.79 | 319.32 | 1259.97 | 319.31 | 1260.57 | 319.32 | 1261.91 | 319.26 | 1262.95 | 319.18 |
| 1263.93 | 319.15 | 1264.97 | 319.13 | 1265.18 | 319.14 | 1265.81 | 319.14 | 1265.85 | 319.15 |
| 1268.04 | 319.17 | 1269.49 | 319.12 | 1269.79 | 319.12 | 1273.05 | 319.09 | 1275.35 | 319.08 |
| 1276.77 | 319.06 | 1277.57 | 319.06 | 1277.81 | 319.05 | 1279.75 | 319.04 | 1280.76 | 319.05 |
| 1281.29 | 319.03 | 1288.66 | 319.06 | 1289 | 319.06 | 1292.3 | 319.12 | 1292.5 | 319.17 |
| 1292.96 | 319.25 | 1293.16 | 319.32 | 1293.47 | 319.38 | 1293.79 | 319.39 | 1301.07 | 319.5 |
| 1302.05 | 319.5 | 1302.54 | 319.47 | 1305.21 | 319.41 | 1305.82 | 319.41 | 1306.87 | 319.42 |
| 1307.26 | 319.43 | 1308.07 | 319.43 | 1310.57 | 319.5 | 1311.18 | 319.5 | 1311.34 | 319.51 |
| 1315.3 | 319.67 | 1316.58 | 319.76 | 1316.67 | 319.76 | 1320.85 | 319.83 | 1321.03 | 319.84 |
| 1323.06 | 319.79 | 1323.41 | 319.77 | 1324.76 | 319.74 | 1324.86 | 319.75 | 1327.55 | 319.86 |
| 1327.86 | 319.89 | 1329.08 | 319.93 | 1329.63 | 319.96 | 1330.1 | 319.97 | 1331.22 | 319.97 |
| 1331.38 | 319.99 | 1332.14 | 320.04 | 1333.34 | 320.08 | 1336.59 | 320.18 | 1337.63 | 320.23 |
| 1339.22 | 320.3 | 1343.16 | 320.47 | 1345.72 | 320.56 | 1347.18 | 320.63 | 1347.27 | 320.63 |
| 1348.08 | 320.69 | 1349.37 | 320.8 | 1351.61 | 321.04 | 1355.84 | 321.37 | 1359.85 | 321.52 |
| 1360.51 | 321.56 | 1361.58 | 321.6 | 1362.83 | 321.64 | 1366.52 | 321.94 | 1369.85 | 322.16 |
| 1370.91 | 322.2 | 1371.02 | 322.21 | 1371.82 | 322.21 | 1371.88 | 322.22 | 1372.6 | 322.22 |
| 1373.31 | 322.23 | 1373.53 | 322.22 | 1373.72 | 322.23 | 1374.55 | 322.23 | 1374.92 | 322.24 |
| 1375.31 | 322.27 | 1376.66 | 322.35 | 1377.05 | 322.41 | 1377.25 | 322.49 | 1377.5 | 322.54 |
| 1378.5 | 322.76 | 1378.64 | 322.8 | 1380.58 | 323.24 | 1384.8 | 324.16 | 1385.72 | 324.33 |
| 1387.33 | 324.55 | 1388.09 | 324.66 | 1390.51 | 325.02 | 1390.73 | 325.09 | 1391 | 325.15 |
| 1391.81 | 325.3 | 1393.19 | 325.54 | 1394.7 | 325.74 | 1396.68 | 326.09 | 1398.25 | 326.36 |
| 1400.74 | 326.8 | 1401.5 | 326.92 | 1402.53 | 327.11 | 1403.69 | 327.3 | 1404.77 | 327.49 |
| 1406.45 | 327.77 | 1407.31 | 327.93 | 1409.43 | 328.3 | 1410.13 | 328.43 | 1412.27 | 328.89 |
| 1413.1 | 329.09 | 1413.48 | 329.17 | 1413.79 | 329.22 | 1415.46 | 329.55 | 1416.85 | 329.82 |
| 1418.82 | 330.28 | 1421.11 | 330.73 | 1422.02 | 330.92 | 1422.98 | 331.11 | 1424.38 | 331.51 |
| 1424.95 | 331.69 | 1426.33 | 331.99 | 1430.26 | 332.69 | 1430.73 | 332.76 | 1432.2 | 333.01 |
| 1435.51 | 333.49 | 1435.95 | 333.55 | 1438.52 | 333.92 | 1439.08 | 333.99 | 1439.16 | 333.99 |
| 1445.45 | 334.82 | | | | | | | | |



BSE Document Control Number: 7323HYD101

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 180.95 | .05 | 757.49 | .04 | 1373.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 757.49 | 1373.53 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 745.34 Elevation= 321.235
Right Levee Station=1320.897 Elevation= 319.24

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3533.12*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 172.33 | 337.23 | 173.58 | 336.9 | 174.28 | 336.64 | 176.03 | 335.81 | 177.86 | 335 |
| 178.52 | 334.72 | 179.85 | 334.13 | 182.02 | 333.19 | 183.6 | 332.46 | 186.14 | 331.63 |
| 194.59 | 329.12 | 195.25 | 328.93 | 196.14 | 328.66 | 197.43 | 328.28 | 198.52 | 328 |
| 199.7 | 327.67 | 200.82 | 327.44 | 203.95 | 327.08 | 211.51 | 326.29 | 214.93 | 325.95 |
| 216.19 | 325.85 | 216.8 | 325.82 | 217.39 | 325.89 | 218.3 | 325.83 | 219.86 | 325.72 |
| 220.01 | 325.7 | 228.28 | 324.87 | 237.81 | 324.01 | 241.11 | 323.8 | 251.47 | 323.1 |
| 265.98 | 322.3 | 267.11 | 322.23 | 268.86 | 322.13 | 276.44 | 321.9 | 277.57 | 321.85 |
| 279.07 | 321.8 | 284.92 | 321.58 | 287.55 | 321.47 | 288.07 | 321.44 | 289.29 | 321.38 |
| 292.81 | 321.2 | 294.09 | 321.11 | 296.38 | 320.96 | 299.03 | 320.78 | 299.68 | 320.73 |
| 300.31 | 320.69 | 302.66 | 320.52 | 303.12 | 320.49 | 307.16 | 320.32 | 308.4 | 320.27 |
| 309.93 | 320.26 | 311.19 | 320.22 | 311.49 | 320.24 | 313.62 | 320.2 | 315.6 | 320.14 |
| 316.69 | 320.12 | 319.43 | 320.09 | 323.39 | 320.09 | 326.65 | 320.04 | 331.24 | 320.03 |
| 332.82 | 320.02 | 334.32 | 320 | 336.85 | 319.98 | 341.52 | 319.92 | 344.2 | 319.86 |
| 345.72 | 319.83 | 346.24 | 319.83 | 350.8 | 319.71 | 353.17 | 319.64 | 357.18 | 319.55 |
| 360.68 | 319.48 | 366.72 | 319.4 | 368.12 | 319.42 | 368.5 | 319.45 | 368.58 | 319.55 |
| 369.27 | 319.57 | 369.41 | 319.59 | 372.04 | 319.59 | 374.66 | 319.55 | 377 | 319.47 |
| 383.03 | 319.34 | 386.6 | 319.25 | 399.67 | 318.94 | 399.78 | 318.94 | 403.14 | 318.85 |
| 408.8 | 318.67 | 409.5 | 318.65 | 418.84 | 318.49 | 433.85 | 318.77 | 434.51 | 318.78 |
| 437.11 | 318.73 | 447.42 | 318.61 | 447.79 | 318.58 | 449.61 | 318.53 | 450.11 | 318.52 |
| 456.74 | 318.31 | 461.71 | 318.26 | 465.61 | 318.13 | 467.5 | 318.14 | 467.71 | 318.13 |
| 470.83 | 318.12 | 473.01 | 318.06 | 474.26 | 318.01 | 474.57 | 317.98 | 475.67 | 317.92 |
| 475.81 | 317.9 | 476.57 | 317.93 | 476.82 | 317.95 | 477.21 | 317.96 | 480.99 | 318.03 |
| 487.17 | 318.07 | 519.99 | 318.34 | 522.02 | 318.39 | 524.74 | 318.47 | 525.37 | 318.5 |
| 528.48 | 318.58 | 536.15 | 318.63 | 541.59 | 318.61 | 550.16 | 318.56 | 563.17 | 318.35 |
| 563.88 | 318.29 | 565.45 | 318.24 | 566.11 | 318.24 | 568.86 | 318.29 | 569.16 | 318.3 |
| 572.04 | 318.36 | 572.15 | 318.36 | 574.09 | 318.42 | 574.91 | 318.42 | 601.83 | 319.04 |
| 602.56 | 319.06 | 607.41 | 319.17 | 610.65 | 319.25 | 616.74 | 319.37 | 618.97 | 319.39 |
| 622.31 | 319.37 | 630.71 | 319.34 | 630.95 | 319.35 | 633.84 | 319.34 | 634.14 | 319.35 |
| 635.45 | 319.37 | 636.38 | 319.37 | 637.41 | 319.34 | 639.09 | 319.33 | 639.58 | 319.31 |
| 640.2 | 319.3 | 642.97 | 319.36 | 643.09 | 319.37 | 645.47 | 319.44 | 647.32 | 319.52 |
| 648.81 | 319.59 | 662.47 | 320.07 | 679.38 | 320.18 | 690.63 | 320.35 | 698.37 | 320.36 |
| 711.61 | 320.48 | 713.9 | 320.5 | 714.62 | 320.5 | 718.01 | 320.53 | 724.77 | 320.56 |
| 728.69 | 320.5 | 734.43 | 320.33 | 735.92 | 320.22 | 745.36 | 319.46 | 748.13 | 319.38 |
| 752.85 | 319.4 | 757.26 | 319.41 | 757.61 | 319.5 | 770.83 | 319.61 | 772.14 | 319.58 |
| 781.16 | 319.44 | 783.22 | 319.42 | 786.02 | 319.35 | 787.42 | 319.32 | 788.1 | 319.3 |
| 788.56 | 319.3 | 789.64 | 319.27 | 790.16 | 319.29 | 794.34 | 319.25 | 797.17 | 319.22 |
| 799.94 | 319.21 | 803.56 | 319.2 | 804.92 | 319.2 | 805.22 | 319.18 | 811.82 | 319.09 |
| 813.72 | 319.04 | 813.93 | 319.07 | 815.03 | 319.09 | 815.99 | 319.09 | 818.31 | 318.96 |
| 824.87 | 318.79 | 825.54 | 318.72 | 828.49 | 318.44 | 832.34 | 318.37 | 838.35 | 318.27 |
| 840.83 | 318.24 | 841.94 | 318.24 | 844.48 | 318.19 | 851.06 | 318.3 | 851.43 | 318.32 |
| 865.54 | 318.46 | 882.29 | 318.62 | 900.47 | 318.75 | 908.1 | 318.9 | 910.92 | 318.99 |
| 917.1 | 319.02 | 920.39 | 319.16 | 921.16 | 319.16 | 923.61 | 319.27 | 924.38 | 319.28 |
| 926.34 | 319.37 | 933.58 | 319.37 | 934.96 | 319.35 | 935.56 | 319.37 | 938.12 | 319.36 |
| 945.34 | 319.21 | 946.58 | 319.15 | 947.66 | 319.07 | 949.47 | 319.03 | 951.08 | 319.02 |
| 953.9 | 319.01 | 957.21 | 318.99 | 965.82 | 318.93 | 966.55 | 318.94 | 967.37 | 318.94 |
| 967.75 | 318.95 | 970.11 | 318.96 | 977.94 | 318.92 | 981.68 | 318.78 | 982.45 | 318.79 |
| 984.15 | 318.73 | 991.17 | 318.63 | 999.24 | 318.53 | 1004.9 | 318.45 | 1005.4 | 318.45 |
| 1008.61 | 318.4 | 1008.95 | 318.39 | 1009.11 | 318.37 | 1015.6 | 318.21 | 1019.48 | 318.22 |
| 1026.12 | 318.24 | 1027.42 | 318.26 | 1030.35 | 318.31 | 1031.26 | 318.32 | 1037.78 | 318.3 |
| 1042.01 | 318.36 | 1044.14 | 318.42 | 1049.41 | 318.65 | 1050.48 | 318.67 | 1061.11 | 319.09 |
| 1062.49 | 319.12 | 1062.76 | 319.12 | 1063.97 | 319.1 | 1064.3 | 319.1 | 1067.17 | 319 |
| 1072.01 | 318.63 | 1072.23 | 318.64 | 1072.84 | 318.64 | 1074.75 | 318.45 | 1076.69 | 318.33 |
| 1079.87 | 318.18 | 1080.58 | 318.16 | 1081.91 | 318.16 | 1084.32 | 318.2 | 1086.75 | 318.23 |
| 1089.63 | 318.35 | 1091.66 | 318.38 | 1093.18 | 318.41 | 1093.69 | 318.44 | 1096.02 | 318.68 |
| 1097.52 | 318.73 | 1107.47 | 318.55 | 1108.07 | 318.53 | 1109.72 | 318.44 | 1109.8 | 318.43 |
| 1112.23 | 318.28 | 1112.42 | 318.25 | 1113.15 | 318.21 | 1114.05 | 318.18 | 1116.19 | 318.15 |
| 1119.94 | 318.1 | 1122.01 | 318.06 | 1122.83 | 318.04 | 1126.39 | 317.98 | 1126.67 | 317.98 |
| 1127.39 | 317.96 | 1130.03 | 317.93 | 1135.98 | 317.78 | 1136.42 | 317.8 | 1137.57 | 317.79 |
| 1138.81 | 317.77 | 1139.78 | 317.72 | 1140.21 | 317.72 | 1142.03 | 317.69 | 1142.51 | 317.73 |
| 1142.73 | 317.77 | 1143.71 | 317.77 | 1145.54 | 317.8 | 1149.69 | 317.9 | 1153.79 | 317.98 |
| 1154.4 | 317.99 | 1156.22 | 318.03 | 1157.24 | 318.09 | 1157.57 | 318.09 | 1158.05 | 318.11 |
| 1158.7 | 318.11 | 1158.85 | 318.1 | 1160.39 | 318.11 | 1161.52 | 318.13 | 1162.38 | 318.13 |
| 1162.69 | 318.14 | 1163.22 | 318.14 | 1164.83 | 318.15 | 1165.39 | 318.16 | 1166.71 | 318.14 |
| 1167.22 | 318.15 | 1169.19 | 318.16 | 1172.54 | 318.22 | 1172.81 | 318.23 | 1176.46 | 318.32 |
| 1176.81 | 318.32 | 1180.39 | 318.37 | 1182.82 | 318.42 | 1182.89 | 318.43 | 1183.58 | 318.43 |
| 1185.26 | 318.38 | 1185.75 | 318.37 | 1186.38 | 318.37 | 1186.84 | 318.41 | 1188.78 | 318.43 |
| 1189.18 | 318.42 | 1190.34 | 318.42 | 1190.68 | 318.41 | 1192.06 | 318.45 | 1192.95 | 318.45 |
| 1194.3 | 318.5 | 1197.99 | 318.68 | 1198.08 | 318.68 | 1200.02 | 318.74 | 1203.62 | 318.74 |
| 1203.95 | 318.71 | 1204.48 | 318.68 | 1206.59 | 318.6 | 1208.12 | 318.59 | 1213.86 | 318.71 |
| 1218.91 | 318.9 | 1223.38 | 318.91 | 1223.63 | 318.89 | 1224.45 | 318.86 | 1226.03 | 318.81 |
| 1226.42 | 318.79 | 1227.06 | 318.81 | 1227.25 | 318.83 | 1228.77 | 318.84 | 1230.4 | 318.84 |
| 1231.78 | 318.81 | 1232.96 | 318.82 | 1234.66 | 318.95 | 1236.58 | 319.02 | 1237.91 | 319.04 |
| 1239.3 | 319.04 | 1240.08 | 319.05 | 1240.65 | 319.04 | 1240.81 | 319.02 | 1241.59 | 318.99 |
| 1242.24 | 318.95 | 1242.65 | 318.91 | 1242.82 | 318.91 | 1243.97 | 318.87 | 1244.53 | 318.86 |
| 1244.73 | 318.84 | 1248.56 | 318.89 | 1248.82 | 318.89 | 1249.92 | 318.86 | 1250.53 | 318.83 |
| 1250.88 | 318.83 | 1254.72 | 318.78 | 1257.44 | 318.78 | 1259.12 | 318.75 | 1262.64 | 318.72 |
| 1263.83 | 318.73 | 1264.45 | 318.71 | 1273.14 | 318.74 | 1273.55 | 318.75 | 1277.44 | 318.83 |
| 1277.68 | 318.89 | 1278.22 | 319 | 1278.45 | 319.1 | 1278.82 | 319.17 | 1279.2 | 319.18 |
| 1287.79 | 319.33 | 1288.95 | 319.33 | 1289.52 | 319.3 | 1292.67 | 319.21 | 1293.18 | 319.21 |
| 1293.38 | 319.22 | 1294.63 | 319.23 | 1295.09 | 319.24 | 1296.04 | 319.24 | 1299 | 319.28 |
| 1299.9 | 319.28 | 1304.58 | 319.44 | 1306.08 | 319.53 | 1311.12 | 319.55 | 1311.34 | 319.57 |
| 1313.73 | 319.47 | 1314.14 | 319.44 | 1315.73 | 319.38 | 1315.85 | 319.38 | 1319.03 | 319.49 |
| 1319.4 | 319.52 | 1321.48 | 319.58 | 1322.04 | 319.59 | 1322.72 | 319.57 | 1323.35 | 319.57 |
| 1323.42 | 319.59 | 1323.87 | 319.62 | 1324.44 | 319.64 | 1325.86 | 319.68 | 1329.69 | 319.77 |
| 1332.79 | 319.87 | 1337.45 | 320.04 | 1338.11 | 320.05 | 1340.83 | 320.13 | 1342.18 | 320.18 |
| 1342.29 | 320.18 | 1343.25 | 320.24 | 1344.6 | 320.34 | 1347.41 | 320.61 | 1352.4 | 320.92 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1357.13 | 321.06 | 1357.51 | 321.09 | 1358.18 | 321.12 | 1359.17 | 321.15 | 1360.66 | 321.19 |
| 1365.66 | 321.5 | 1365.7 | 321.5 | 1368.93 | 321.66 | 1370.19 | 321.69 | 1371.19 | 321.69 |
| 1371.36 | 321.71 | 1372.88 | 321.71 | 1373.28 | 321.7 | 1374.31 | 321.7 | 1374.69 | 321.71 |
| 1375.24 | 321.75 | 1376.45 | 321.82 | 1376.85 | 321.88 | 1377.05 | 321.96 | 1378.06 | 322.16 |
| 1379.17 | 322.43 | 1380.43 | 322.71 | 1384.71 | 323.61 | 1385.64 | 323.78 | 1387.85 | 324.08 |
| 1388.04 | 324.1 | 1390.5 | 324.47 | 1390.72 | 324.55 | 1391 | 324.61 | 1391.82 | 324.76 |
| 1392.34 | 324.84 | 1393.22 | 325 | 1394.75 | 325.22 | 1394.86 | 325.23 | 1395.49 | 325.36 |
| 1396.75 | 325.61 | 1398.35 | 325.92 | 1399.21 | 326.08 | 1401.64 | 326.55 | 1403.26 | 326.86 |
| 1403.87 | 326.97 | 1404.96 | 327.18 | 1406.67 | 327.5 | 1407.54 | 327.68 | 1409.69 | 328.09 |
| 1410.4 | 328.24 | 1411.36 | 328.47 | 1412.57 | 328.75 | 1413.42 | 328.98 | 1415.8 | 329.47 |
| 1416.08 | 329.52 | 1417.22 | 329.76 | 1419.21 | 330.25 | 1421.86 | 330.81 | 1422.46 | 330.94 |
| 1423.44 | 331.14 | 1425.43 | 331.75 | 1426.83 | 332.04 | 1430.82 | 332.7 | 1431.3 | 332.77 |
| 1432.79 | 333.02 | 1436.59 | 333.54 | 1439.2 | 333.89 | 1439.76 | 333.96 | 1439.85 | 333.96 |
| 1446.23 | 334.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 172.33 | .05 | 735.92 | .04 | 1373.28 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
735.92 1373.28 26.21 19.74 18.73 .1 .3
Left Levee Station= 724.04 Elevation=320.7967
Right Levee Station=1320.707 Elevation=318.9267

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3513.38*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 163.72 | 337.12 | 164.93 | 336.8 | 165.72 | 336.51 | 167.33 | 335.76 | 169.19 | 334.96 |
| 170.71 | 334.32 | 171.06 | 334.16 | 173.18 | 333.27 | 174.72 | 332.58 | 177.21 | 331.78 |
| 185.46 | 329.4 | 186.98 | 328.97 | 188.23 | 328.6 | 188.73 | 328.48 | 190.45 | 328.02 |
| 191.55 | 327.8 | 194.6 | 327.45 | 201.99 | 326.7 | 205.34 | 326.37 | 206.56 | 326.27 |
| 207.16 | 326.25 | 207.74 | 326.31 | 208.63 | 326.26 | 210.15 | 326.15 | 210.3 | 326.13 |
| 218.37 | 325.33 | 227.69 | 324.51 | 230.92 | 324.31 | 241.03 | 323.62 | 255.21 | 322.84 |
| 256.31 | 322.76 | 258.03 | 322.66 | 265.43 | 322.41 | 266.53 | 322.37 | 268 | 322.31 |
| 273.71 | 322.07 | 276.28 | 321.95 | 277.98 | 321.85 | 281.42 | 321.64 | 282.67 | 321.54 |
| 284.91 | 321.37 | 287.5 | 321.15 | 288.75 | 321.05 | 291.26 | 320.83 | 291.5 | 320.82 |
| 295.44 | 320.62 | 296.65 | 320.57 | 298.15 | 320.56 | 299.61 | 320.52 | 299.68 | 320.54 |
| 301.75 | 320.49 | 303.69 | 320.42 | 304.75 | 320.4 | 307.43 | 320.36 | 311.3 | 320.36 |
| 314.49 | 320.3 | 318.97 | 320.28 | 320.51 | 320.27 | 321.98 | 320.24 | 324.45 | 320.22 |
| 329.01 | 320.14 | 333.12 | 320.03 | 333.63 | 320.02 | 337.35 | 319.9 | 338.07 | 319.87 |
| 340.39 | 319.79 | 344.32 | 319.67 | 347.73 | 319.58 | 353.64 | 319.47 | 355.01 | 319.48 |
| 355.37 | 319.5 | 355.45 | 319.6 | 356.12 | 319.61 | 356.26 | 319.63 | 358.84 | 319.62 |
| 360.11 | 319.59 | 361.39 | 319.57 | 363.68 | 319.49 | 369.57 | 319.34 | 373.06 | 319.23 |
| 385.83 | 318.89 | 385.94 | 318.89 | 389.21 | 318.79 | 394.75 | 318.59 | 395.43 | 318.57 |
| 404.56 | 318.36 | 419.22 | 318.55 | 419.86 | 318.55 | 422.41 | 318.5 | 432.48 | 318.35 |
| 432.84 | 318.31 | 434.62 | 318.26 | 435.11 | 318.25 | 441.59 | 318.02 | 446.44 | 317.96 |
| 450.25 | 317.82 | 452.1 | 317.83 | 452.3 | 317.82 | 455.35 | 317.8 | 457.48 | 317.74 |
| 458.7 | 317.69 | 459.01 | 317.66 | 460.08 | 317.6 | 460.22 | 317.58 | 461.58 | 317.64 |
| 465.28 | 317.69 | 471.32 | 317.71 | 503.38 | 317.92 | 504.22 | 317.95 | 505.36 | 317.97 |
| 508.02 | 318.03 | 508.64 | 318.06 | 510.9 | 318.13 | 511.67 | 318.16 | 519.17 | 318.2 |
| 524.48 | 318.18 | 532.86 | 318.13 | 545.56 | 317.94 | 546.26 | 317.88 | 547.79 | 317.83 |
| 548.43 | 317.83 | 551.13 | 317.88 | 551.41 | 317.89 | 554.23 | 317.95 | 554.34 | 317.95 |
| 556.24 | 318 | 557.03 | 318 | 583.34 | 318.6 | 584.05 | 318.62 | 588.79 | 318.73 |
| 591.95 | 318.8 | 595.42 | 318.87 | 597.9 | 318.91 | 600.09 | 318.93 | 603.35 | 318.91 |
| 611.56 | 318.88 | 614.61 | 318.88 | 614.9 | 318.89 | 616.18 | 318.9 | 617.1 | 318.9 |
| 618.52 | 318.87 | 619.74 | 318.86 | 620.22 | 318.83 | 620.82 | 318.82 | 623.53 | 318.88 |
| 623.64 | 318.89 | 625.98 | 318.95 | 627.79 | 319.03 | 629.23 | 319.11 | 642.58 | 319.59 |
| 659.1 | 319.72 | 670.1 | 319.9 | 677.66 | 319.92 | 690.59 | 320.05 | 692.83 | 320.07 |
| 693.54 | 320.07 | 696.85 | 320.1 | 703.45 | 320.13 | 707.28 | 320.08 | 712.89 | 319.92 |
| 714.34 | 319.81 | 723.46 | 319.08 | 726.14 | 319 | 730.69 | 319.01 | 734.95 | 319.01 |
| 735.29 | 319.1 | 748.06 | 319.18 | 749.32 | 319.15 | 758.03 | 319.01 | 760.03 | 318.99 |
| 762.73 | 318.92 | 764.08 | 318.89 | 764.74 | 318.86 | 765.18 | 318.86 | 766.23 | 318.83 |
| 766.73 | 318.85 | 770.77 | 318.8 | 773.5 | 318.77 | 776.17 | 318.77 | 779.67 | 318.76 |
| 780.98 | 318.76 | 781.27 | 318.74 | 787.65 | 318.65 | 789.48 | 318.61 | 789.68 | 318.64 |
| 790.75 | 318.66 | 791.67 | 318.66 | 793.91 | 318.54 | 800.24 | 318.38 | 800.9 | 318.32 |
| 803.74 | 318.05 | 807.46 | 317.98 | 813.26 | 317.9 | 815.66 | 317.87 | 816.73 | 317.89 |
| 819.18 | 317.84 | 825.54 | 317.95 | 825.89 | 317.96 | 839.53 | 318.1 | 855.7 | 318.25 |
| 873.25 | 318.38 | 880.62 | 318.51 | 883.35 | 318.6 | 889.32 | 318.63 | 892.49 | 318.76 |
| 893.24 | 318.76 | 895.61 | 318.87 | 896.34 | 318.87 | 897.79 | 318.95 | 898.24 | 318.96 |
| 905.23 | 318.96 | 906.56 | 318.94 | 907.15 | 318.96 | 909.62 | 318.95 | 916.58 | 318.8 |
| 917.79 | 318.75 | 918.83 | 318.67 | 920.58 | 318.63 | 922.13 | 318.62 | 922.52 | 318.63 |
| 924.86 | 318.61 | 928.05 | 318.59 | 936.37 | 318.54 | 937.07 | 318.54 | 940.51 | 318.57 |
| 948.07 | 318.53 | 948.35 | 318.51 | 951.68 | 318.39 | 952.43 | 318.39 | 954.07 | 318.34 |
| 960.85 | 318.24 | 968.64 | 318.15 | 974.1 | 318.07 | 974.59 | 318.07 | 977.69 | 318.03 |
| 978.17 | 318 | 984.44 | 317.84 | 988.19 | 317.85 | 994.6 | 317.88 | 995.85 | 317.89 |
| 998.68 | 317.94 | 999.56 | 317.95 | 1005.86 | 317.93 | 1009.94 | 317.98 | 1012 | 318.04 |
| 1017.09 | 318.25 | 1018.12 | 318.27 | 1028.39 | 318.67 | 1029.72 | 318.7 | 1031.15 | 318.69 |
| 1034.24 | 318.59 | 1038.92 | 318.24 | 1039.72 | 318.24 | 1041.56 | 318.06 | 1043.44 | 317.95 |
| 1046.51 | 317.8 | 1047.2 | 317.79 | 1048.48 | 317.79 | 1049.68 | 317.8 | 1050.81 | 317.82 |
| 1053.15 | 317.85 | 1055.94 | 317.96 | 1057.9 | 317.99 | 1059.37 | 318.02 | 1059.86 | 318.05 |
| 1062.1 | 318.27 | 1063.55 | 318.33 | 1073.16 | 318.16 | 1074.97 | 318.07 | 1077.76 | 317.89 |
| 1077.94 | 317.87 | 1078.65 | 317.83 | 1079.52 | 317.8 | 1085.21 | 317.72 | 1087.2 | 317.68 |
| 1088 | 317.66 | 1091.44 | 317.6 | 1091.71 | 317.6 | 1092.4 | 317.58 | 1094.95 | 317.56 |
| 1100.7 | 317.41 | 1101.25 | 317.42 | 1102.72 | 317.41 | 1104.36 | 317.35 | 1104.78 | 317.35 |
| 1106.53 | 317.32 | 1107.08 | 317.37 | 1107.27 | 317.41 | 1108.46 | 317.41 | 1110.57 | 317.45 |
| 1115.36 | 317.56 | 1120.08 | 317.65 | 1120.79 | 317.67 | 1122.89 | 317.71 | 1124.06 | 317.77 |
| 1124.89 | 317.78 | 1125 | 317.79 | 1125.74 | 317.79 | 1125.92 | 317.78 | 1127.43 | 317.79 |
| 1127.69 | 317.78 | 1128.99 | 317.8 | 1129.99 | 317.81 | 1130.34 | 317.82 | 1130.95 | 317.82 |
| 1132.81 | 317.83 | 1133.46 | 317.84 | 1134.42 | 317.83 | 1134.71 | 317.81 | 1135.56 | 317.82 |
| 1137.84 | 317.83 | 1141.69 | 317.9 | 1146.62 | 318.02 | 1150.73 | 318.05 | 1153.53 | 318.1 |
| 1153.62 | 318.11 | 1154.42 | 318.11 | 1156.92 | 318.02 | 1157.36 | 318.01 | 1157.64 | 318.02 |
| 1158.17 | 318.07 | 1160.41 | 318.08 | 1161.97 | 318.06 | 1162.67 | 318.06 | 1162.98 | 318.07 |
| 1164.19 | 318.09 | 1165.22 | 318.09 | 1166.09 | 318.12 | 1166.77 | 318.15 | 1171.02 | 318.36 |
| 1171.12 | 318.36 | 1173.36 | 318.42 | 1177.51 | 318.42 | 1177.89 | 318.38 | 1180.93 | 318.25 |
| 1182.7 | 318.23 | 1189.3 | 318.38 | 1194.8 | 318.59 | 1195.13 | 318.6 | 1200.28 | 318.61 |
| 1200.56 | 318.59 | 1201.51 | 318.55 | 1203.33 | 318.49 | 1203.64 | 318.47 | 1204.17 | 318.47 |
| 1204.74 | 318.51 | 1206.49 | 318.52 | 1208.37 | 318.52 | 1208.93 | 318.51 | 1209.95 | 318.48 |
| 1211.32 | 318.49 | 1213.28 | 318.65 | 1215.49 | 318.74 | 1217.02 | 318.76 | 1218.63 | 318.77 |
| 1218.98 | 318.78 | 1219.71 | 318.78 | 1220.13 | 318.77 | 1221.48 | 318.72 | 1222.48 | 318.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1222.68 | 318.64 | 1224 | 318.59 | 1224.68 | 318.57 | 1224.89 | 318.55 | 1225.42 | 318.55 |
| 1226.61 | 318.58 | 1229.29 | 318.61 | 1229.59 | 318.61 | 1230.87 | 318.58 | 1231.57 | 318.54 |
| 1231.97 | 318.54 | 1236.4 | 318.48 | 1239.53 | 318.48 | 1241.47 | 318.44 | 1242.55 | 318.43 |
| 1242.87 | 318.42 | 1245.52 | 318.4 | 1246.7 | 318.42 | 1247.61 | 318.39 | 1257.63 | 318.43 |
| 1262.58 | 318.54 | 1262.85 | 318.61 | 1263.48 | 318.75 | 1263.74 | 318.87 | 1264.16 | 318.96 |
| 1264.6 | 318.98 | 1274.51 | 319.17 | 1275.7 | 319.17 | 1276.5 | 319.12 | 1280.13 | 319.01 |
| 1280.95 | 319.02 | 1282.39 | 319.03 | 1282.92 | 319.05 | 1284.01 | 319.05 | 1287.6 | 319.07 |
| 1288.25 | 319.05 | 1288.46 | 319.06 | 1293.86 | 319.2 | 1295.71 | 319.31 | 1301.39 | 319.28 |
| 1301.64 | 319.29 | 1304.39 | 319.14 | 1304.87 | 319.1 | 1306.71 | 319.01 | 1306.85 | 319.01 |
| 1310.51 | 319.11 | 1310.93 | 319.15 | 1311.29 | 319.16 | 1312.58 | 319.18 | 1313.33 | 319.21 |
| 1313.98 | 319.22 | 1314.76 | 319.18 | 1315.49 | 319.17 | 1315.6 | 319.2 | 1316.99 | 319.26 |
| 1317.11 | 319.26 | 1322.79 | 319.35 | 1331.73 | 319.6 | 1332.5 | 319.62 | 1335.21 | 319.68 |
| 1335.85 | 319.69 | 1337.44 | 319.74 | 1338.19 | 319.79 | 1338.42 | 319.79 | 1339.97 | 319.9 |
| 1340.8 | 319.97 | 1343.21 | 320.18 | 1348.97 | 320.47 | 1349.33 | 320.49 | 1354.41 | 320.61 |
| 1354.85 | 320.64 | 1355.62 | 320.67 | 1356.77 | 320.7 | 1358.48 | 320.73 | 1363.49 | 320.99 |
| 1364.29 | 321.02 | 1368.01 | 321.15 | 1369.46 | 321.18 | 1370.69 | 321.18 | 1370.81 | 321.2 |
| 1371.38 | 321.19 | 1372.46 | 321.19 | 1373.03 | 321.17 | 1373.62 | 321.18 | 1374.32 | 321.18 |
| 1376.24 | 321.29 | 1376.64 | 321.35 | 1376.85 | 321.43 | 1377.1 | 321.47 | 1377.87 | 321.62 |
| 1379 | 321.9 | 1380.27 | 322.17 | 1384.62 | 323.05 | 1385.56 | 323.22 | 1387.8 | 323.52 |
| 1390.49 | 323.93 | 1390.71 | 324 | 1390.99 | 324.06 | 1392.36 | 324.3 | 1393.25 | 324.47 |
| 1394.8 | 324.69 | 1394.91 | 324.71 | 1396.83 | 325.13 | 1399.32 | 325.65 | 1401.01 | 326.01 |
| 1401.79 | 326.17 | 1402.85 | 326.4 | 1405.16 | 326.87 | 1406.09 | 327.05 | 1406.89 | 327.22 |
| 1407.77 | 327.42 | 1409.95 | 327.89 | 1410.03 | 327.9 | 1410.67 | 328.05 | 1412.87 | 328.62 |
| 1413.73 | 328.87 | 1416.15 | 329.39 | 1416.43 | 329.44 | 1417.58 | 329.71 | 1419.61 | 330.22 |
| 1421.96 | 330.74 | 1422.9 | 330.96 | 1423.89 | 331.18 | 1425.33 | 331.62 | 1425.91 | 331.81 |
| 1427.33 | 332.09 | 1431.37 | 332.72 | 1431.86 | 332.79 | 1433.37 | 333.02 | 1434.93 | 333.23 |
| 1436.78 | 333.46 | 1437.23 | 333.52 | 1439.88 | 333.86 | 1440.45 | 333.93 | 1440.53 | 333.93 |
| 1447 | 334.69 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 163.72 | .05 | 714.34 | .04 | 1373.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 714.34 | 1373.03 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 702.74 Elevation=320.3583
Right Levee Station=1320.516 Elevation=318.6133

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3493.64*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 155.1 | 337 | 156.29 | 336.7 | 157.06 | 336.42 | 158.63 | 335.71 | 161 | 334.72 |
| 164.34 | 333.35 | 165.85 | 332.69 | 168.27 | 331.94 | 176.33 | 329.67 | 176.96 | 329.51 |
| 179.04 | 328.92 | 180.08 | 328.67 | 181.2 | 328.37 | 182.28 | 328.15 | 185.26 | 327.83 |
| 192.47 | 327.11 | 195.74 | 326.8 | 196.94 | 326.7 | 197.52 | 326.68 | 198.08 | 326.73 |
| 198.96 | 326.68 | 200.58 | 326.57 | 208.47 | 325.8 | 217.57 | 325.01 | 220.72 | 324.82 |
| 230.59 | 324.15 | 244.44 | 323.37 | 245.52 | 323.29 | 247.19 | 323.19 | 254.42 | 322.93 |
| 256.93 | 322.82 | 262.51 | 322.56 | 265.02 | 322.42 | 266.68 | 322.31 | 269.08 | 322.14 |
| 270.03 | 322.08 | 271.25 | 321.96 | 273.44 | 321.77 | 279.43 | 321.18 | 279.87 | 321.14 |
| 283.72 | 320.93 | 284.91 | 320.87 | 286.36 | 320.86 | 286.37 | 320.87 | 287.57 | 320.82 |
| 287.86 | 320.84 | 289.89 | 320.78 | 291.78 | 320.7 | 295.43 | 320.63 | 299.21 | 320.63 |
| 302.32 | 320.56 | 306.7 | 320.54 | 308.2 | 320.52 | 309.63 | 320.49 | 312.05 | 320.45 |
| 316.51 | 320.36 | 319.07 | 320.28 | 320.52 | 320.22 | 321.01 | 320.22 | 324.65 | 320.07 |
| 325.35 | 320.03 | 331.45 | 319.79 | 334.78 | 319.69 | 340.55 | 319.54 | 341.83 | 319.53 |
| 342.25 | 319.56 | 342.32 | 319.65 | 342.98 | 319.66 | 343.11 | 319.68 | 345.63 | 319.65 |
| 346.87 | 319.61 | 348.13 | 319.59 | 350.35 | 319.5 | 356.11 | 319.33 | 359.52 | 319.22 |
| 371.99 | 318.85 | 372.09 | 318.84 | 375.29 | 318.73 | 380.69 | 318.51 | 381.36 | 318.48 |
| 390.27 | 318.23 | 404.59 | 318.33 | 405.22 | 318.33 | 407.7 | 318.26 | 417.54 | 318.08 |
| 417.89 | 318.04 | 420.11 | 317.98 | 426.43 | 317.74 | 431.17 | 317.66 | 434.89 | 317.52 |
| 435.08 | 317.51 | 436.7 | 317.52 | 436.89 | 317.51 | 439.87 | 317.48 | 441.95 | 317.42 |
| 443.14 | 317.37 | 443.44 | 317.34 | 444.49 | 317.28 | 444.62 | 317.26 | 445.01 | 317.28 |
| 445.96 | 317.31 | 449.57 | 317.36 | 455.46 | 317.36 | 486.77 | 317.51 | 487.59 | 317.53 |
| 491.3 | 317.6 | 491.9 | 317.63 | 494.11 | 317.7 | 494.87 | 317.73 | 502.19 | 317.78 |
| 507.37 | 317.76 | 515.55 | 317.71 | 527.96 | 317.53 | 528.64 | 317.47 | 529.75 | 317.43 |
| 530.76 | 317.43 | 533.39 | 317.47 | 533.67 | 317.48 | 536.42 | 317.54 | 538.38 | 317.59 |
| 539.16 | 317.59 | 564.85 | 318.16 | 565.54 | 318.18 | 570.17 | 318.29 | 573.26 | 318.35 |
| 576.65 | 318.42 | 579.07 | 318.45 | 581.2 | 318.47 | 584.38 | 318.44 | 592.4 | 318.41 |
| 592.63 | 318.42 | 595.38 | 318.41 | 595.67 | 318.42 | 596.92 | 318.43 | 597.81 | 318.43 |
| 599.2 | 318.4 | 600.39 | 318.38 | 600.86 | 318.36 | 601.31 | 318.36 | 601.45 | 318.34 |
| 604.2 | 318.4 | 606.48 | 318.46 | 608.25 | 318.55 | 609.66 | 318.64 | 622.7 | 319.11 |
| 638.83 | 319.26 | 649.56 | 319.45 | 656.95 | 319.47 | 669.57 | 319.62 | 671.76 | 319.64 |
| 672.45 | 319.64 | 675.68 | 319.68 | 682.13 | 319.7 | 685.87 | 319.65 | 691.35 | 319.5 |
| 692.76 | 319.39 | 701.56 | 318.69 | 704.14 | 318.62 | 708.54 | 318.62 | 712.65 | 318.61 |
| 712.97 | 318.69 | 725.29 | 318.75 | 726.5 | 318.73 | 734.91 | 318.58 | 736.83 | 318.56 |
| 739.44 | 318.49 | 741.38 | 318.43 | 742.6 | 318.4 | 743.29 | 318.41 | 747.19 | 318.36 |
| 749.82 | 318.33 | 752.4 | 318.32 | 757.04 | 318.32 | 757.32 | 318.31 | 763.47 | 318.22 |
| 765.24 | 318.18 | 765.43 | 318.21 | 766.46 | 318.23 | 767.35 | 318.23 | 769.51 | 318.12 |
| 775.62 | 317.97 | 778.99 | 317.66 | 782.58 | 317.6 | 785.37 | 317.56 | 788.18 | 317.53 |
| 790.49 | 317.51 | 791.52 | 317.53 | 793.89 | 317.49 | 800.01 | 317.59 | 800.36 | 317.61 |
| 811.62 | 317.73 | 813.51 | 317.74 | 829.1 | 317.88 | 846.04 | 318 | 853.15 | 318.13 |
| 855.78 | 318.21 | 861.54 | 318.24 | 864.59 | 318.37 | 865.31 | 318.37 | 867.6 | 318.46 |
| 868.31 | 318.47 | 869.7 | 318.54 | 870.14 | 318.55 | 876.88 | 318.55 | 878.17 | 318.53 |
| 878.73 | 318.55 | 881.12 | 318.54 | 887.83 | 318.4 | 889 | 318.35 | 890 | 318.27 |
| 891.68 | 318.23 | 893.18 | 318.22 | 893.56 | 318.23 | 895.81 | 318.21 | 898.89 | 318.2 |
| 906.91 | 318.14 | 907.59 | 318.15 | 908.36 | 318.15 | 908.72 | 318.16 | 910.91 | 318.17 |
| 918.2 | 318.13 | 918.47 | 318.11 | 921.68 | 318 | 922.4 | 318 | 923.98 | 317.95 |
| 930.53 | 317.86 | 938.04 | 317.77 | 943.31 | 317.7 | 943.78 | 317.69 | 946.78 | 317.66 |
| 947.09 | 317.65 | 947.23 | 317.62 | 953.28 | 317.48 | 956.45 | 317.48 | 956.9 | 317.49 |
| 963.08 | 317.51 | 963.45 | 317.52 | 964.29 | 317.52 | 967.02 | 317.57 | 967.87 | 317.57 |
| 973.94 | 317.55 | 977.88 | 317.6 | 979.86 | 317.66 | 984.78 | 317.86 | 985.77 | 317.88 |
| 995.67 | 318.25 | 996.96 | 318.28 | 998.34 | 318.27 | 1001.32 | 318.17 | 1005.83 | 317.84 |
| 1006.6 | 317.85 | 1008.38 | 317.67 | 1010.19 | 317.57 | 1013.15 | 317.43 | 1013.81 | 317.41 |
| 1015.05 | 317.41 | 1016.2 | 317.43 | 1017.3 | 317.44 | 1019.55 | 317.47 | 1022.24 | 317.58 |
| 1024.13 | 317.6 | 1025.55 | 317.63 | 1026.02 | 317.66 | 1028.19 | 317.87 | 1029.59 | 317.92 |
| 1038.85 | 317.76 | 1040.6 | 317.67 | 1041.03 | 317.64 | 1043.29 | 317.51 | 1043.47 | 317.48 |
| 1044.15 | 317.44 | 1044.99 | 317.42 | 1050.47 | 317.34 | 1052.4 | 317.3 | 1053.17 | 317.28 |
| 1056.48 | 317.22 | 1057.41 | 317.2 | 1059.87 | 317.18 | 1063.55 | 317.09 | 1065.42 | 317.04 |
| 1065.95 | 317.05 | 1067.36 | 317.04 | 1068.95 | 316.98 | 1069.35 | 316.98 | 1071.03 | 316.95 |
| 1071.66 | 317 | 1071.87 | 317.06 | 1073.22 | 317.06 | 1075.61 | 317.1 | 1081.03 | 317.22 |

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|---|---|---|---|---|---|---|---|---|---|
| 1086.37 | 317.32 | 1087.18 | 317.34 | 1089.5 | 317.38 | 1089.55 | 317.39 | 1090.88 | 317.45 |
| 1091.82 | 317.47 | 1092.78 | 317.47 | 1092.88 | 317.46 | 1094.99 | 317.46 | 1096.47 | 317.48 |
| 1097.59 | 317.48 | 1097.99 | 317.5 | 1098.69 | 317.49 | 1100.24 | 317.51 | 1101.52 | 317.52 |
| 1102.87 | 317.49 | 1103.9 | 317.49 | 1106.48 | 317.5 | 1110.85 | 317.58 | 1111.74 | 317.6 |
| 1115.96 | 317.71 | 1116.42 | 317.71 | 1121.08 | 317.73 | 1124.25 | 317.78 | 1124.55 | 317.79 |
| 1125.25 | 317.79 | 1127.44 | 317.69 | 1128.09 | 317.68 | 1128.58 | 317.66 | 1128.91 | 317.67 |
| 1129.5 | 317.72 | 1132.04 | 317.73 | 1133.81 | 317.7 | 1134.6 | 317.7 | 1136.31 | 317.74 |
| 1137.48 | 317.73 | 1138.46 | 317.76 | 1144.05 | 318.04 | 1144.17 | 318.04 | 1146.7 | 318.1 |
| 1146.89 | 318.11 | 1151.4 | 318.1 | 1151.82 | 318.05 | 1152.52 | 318.01 | 1152.89 | 318 |
| 1155.27 | 317.89 | 1157.27 | 317.87 | 1164.75 | 318.04 | 1170.97 | 318.3 | 1171.35 | 318.31 |
| 1177.18 | 318.32 | 1178.57 | 318.24 | 1180.63 | 318.17 | 1181.06 | 318.14 | 1181.58 | 318.14 |
| 1181.99 | 318.16 | 1182.23 | 318.19 | 1184.21 | 318.2 | 1186.34 | 318.2 | 1187.6 | 318.16 |
| 1188.13 | 318.15 | 1189.68 | 318.16 | 1191.9 | 318.35 | 1194.4 | 318.45 | 1196.14 | 318.48 |
| 1197.95 | 318.5 | 1198.36 | 318.51 | 1199.71 | 318.51 | 1201.18 | 318.46 | 1202.32 | 318.37 |
| 1204.04 | 318.31 | 1205.04 | 318.26 | 1205.64 | 318.26 | 1207 | 318.29 | 1210.03 | 318.33 |
| 1210.37 | 318.34 | 1211.82 | 318.29 | 1212.61 | 318.25 | 1213.06 | 318.25 | 1218.08 | 318.17 |
| 1221.62 | 318.17 | 1223.81 | 318.12 | 1225.04 | 318.12 | 1225.41 | 318.11 | 1228.4 | 318.08 |
| 1229.95 | 318.1 | 1230.77 | 318.07 | 1242.11 | 318.12 | 1242.64 | 318.12 | 1247.72 | 318.25 |
| 1248.74 | 318.5 | 1249.12 | 318.67 | 1249.51 | 318.75 | 1250.01 | 318.77 | 1261.22 | 319 |
| 1262.57 | 319 | 1263.48 | 318.95 | 1267.59 | 318.82 | 1268.52 | 318.83 | 1270.15 | 318.84 |
| 1270.75 | 318.86 | 1271.61 | 318.85 | 1276.05 | 318.85 | 1277.03 | 318.83 | 1283.13 | 318.97 |
| 1285.23 | 319.08 | 1291.67 | 319.01 | 1291.95 | 319.02 | 1295.06 | 318.82 | 1295.6 | 318.77 |
| 1297.68 | 318.64 | 1297.84 | 318.64 | 1301.98 | 318.74 | 1302.46 | 318.77 | 1305.19 | 318.83 |
| 1305.91 | 318.84 | 1307 | 318.78 | 1307.63 | 318.77 | 1307.75 | 318.8 | 1308.31 | 318.83 |
| 1309.46 | 318.86 | 1310.89 | 318.88 | 1315.9 | 318.93 | 1317.5 | 318.97 | 1319.94 | 319.02 |
| 1326.02 | 319.17 | 1326.89 | 319.18 | 1329.96 | 319.23 | 1330.68 | 319.25 | 1332.2 | 319.28 |
| 1333.59 | 319.35 | 1335.35 | 319.45 | 1336.28 | 319.53 | 1339.02 | 319.75 | 1345.53 | 320.03 |
| 1345.94 | 320.04 | 1351.7 | 320.16 | 1352.19 | 320.19 | 1353.06 | 320.22 | 1354.37 | 320.25 |
| 1356.3 | 320.28 | 1361.98 | 320.52 | 1362.88 | 320.55 | 1367.1 | 320.65 | 1367.57 | 320.65 |
| 1368.73 | 320.67 | 1370.05 | 320.66 | 1370.27 | 320.68 | 1370.91 | 320.67 | 1372.13 | 320.67 |
| 1372.77 | 320.65 | 1373.83 | 320.65 | 1374.22 | 320.66 | 1376.03 | 320.76 | 1376.44 | 320.82 |
| 1376.65 | 320.89 | 1377.68 | 321.08 | 1378.1 | 321.19 | 1378.83 | 321.36 | 1380.12 | 321.64 |
| 1384.53 | 322.5 | 1385.48 | 322.67 | 1387.75 | 322.97 | 1390.48 | 323.38 | 1390.71 | 323.46 |
| 1390.99 | 323.52 | 1392.37 | 323.76 | 1393.28 | 323.93 | 1394.85 | 324.17 | 1394.96 | 324.18 |
| 1396.91 | 324.65 | 1398.55 | 325.03 | 1399.44 | 325.22 | 1401.14 | 325.62 | 1401.94 | 325.79 |
| 1403.01 | 326.04 | 1404.22 | 326.3 | 1405.35 | 326.56 | 1406.3 | 326.76 | 1407.11 | 326.95 |
| 1408 | 327.17 | 1410.21 | 327.68 | 1410.94 | 327.86 | 1411.93 | 328.14 | 1413.17 | 328.48 |
| 1414.04 | 328.76 | 1414.44 | 328.86 | 1416.78 | 329.37 | 1417.95 | 329.65 | 1420 | 330.19 |
| 1422.73 | 330.83 | 1423.34 | 330.98 | 1424.35 | 331.21 | 1424.65 | 331.31 | 1425.8 | 331.67 |
| 1426.4 | 331.87 | 1427.84 | 332.14 | 1431.93 | 332.73 | 1432.43 | 332.8 | 1433.96 | 333.03 |
| 1435.54 | 333.23 | 1437.41 | 333.45 | 1437.87 | 333.51 | 1441.13 | 333.9 | 1441.22 | 333.9 |
| 1447.78 | 334.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 155.1 | .05 | 692.76 | .04 | 1372.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 692.76 | 1372.77 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 681.44 Elevation= 319.92
Right Levee Station=1320.325 Elevation= 318.3

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3473.90*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 146.48 | 336.88 | 147.64 | 336.6 | 148.3 | 336.38 | 148.4 | 336.33 | 149.93 | 335.66 |
| 150.41 | 335.47 | 151.63 | 334.97 | 153.15 | 334.37 | 153.48 | 334.23 | 155.5 | 333.43 |
| 156.97 | 332.81 | 159.34 | 332.09 | 167.2 | 329.95 | 167.82 | 329.8 | 169.84 | 329.24 |
| 170.86 | 329 | 171.96 | 328.72 | 173.01 | 328.51 | 175.91 | 328.2 | 182.96 | 327.52 |
| 186.15 | 327.22 | 187.31 | 327.13 | 187.89 | 327.1 | 188.43 | 327.16 | 189.28 | 327.11 |
| 190.87 | 327 | 198.57 | 326.27 | 207.44 | 325.51 | 210.52 | 325.33 | 220.16 | 324.67 |
| 233.67 | 323.91 | 234.72 | 323.83 | 236.36 | 323.72 | 243.41 | 323.45 | 244.46 | 323.39 |
| 245.86 | 323.33 | 251.3 | 323.04 | 253.75 | 322.9 | 255.37 | 322.78 | 257.72 | 322.59 |
| 258.65 | 322.52 | 259.84 | 322.39 | 261.97 | 322.17 | 265.04 | 321.82 | 265.63 | 321.76 |
| 267.82 | 321.51 | 268.25 | 321.47 | 272.01 | 321.23 | 273.16 | 321.17 | 274.59 | 321.17 |
| 275.52 | 321.12 | 276.04 | 321.13 | 278.02 | 321.07 | 280.88 | 320.95 | 283.43 | 320.9 |
| 287.12 | 320.9 | 290.16 | 320.82 | 294.43 | 320.79 | 295.9 | 320.77 | 297.29 | 320.73 |
| 299.65 | 320.69 | 304 | 320.58 | 306.5 | 320.48 | 307.91 | 320.42 | 308.39 | 320.42 |
| 311.94 | 320.24 | 312.63 | 320.2 | 314.84 | 320.09 | 318.58 | 319.91 | 321.84 | 319.79 |
| 327.46 | 319.61 | 328.71 | 319.59 | 329.12 | 319.61 | 329.2 | 319.7 | 329.83 | 319.7 |
| 329.96 | 319.72 | 332.42 | 319.67 | 333.63 | 319.63 | 334.86 | 319.6 | 336.82 | 319.53 |
| 337.03 | 319.51 | 342.64 | 319.33 | 345.97 | 319.21 | 358.14 | 318.8 | 358.24 | 318.8 |
| 361.36 | 318.67 | 366.64 | 318.42 | 367.29 | 318.4 | 375.99 | 318.11 | 389.96 | 318.11 |
| 390.57 | 318.1 | 393 | 318.02 | 402.6 | 317.81 | 402.94 | 317.78 | 404.63 | 317.72 |
| 405.1 | 317.71 | 411.27 | 317.45 | 415.9 | 317.36 | 419.53 | 317.21 | 421.29 | 317.2 |
| 421.48 | 317.19 | 424.39 | 317.17 | 426.42 | 317.1 | 427.58 | 317.05 | 427.87 | 317.02 |
| 428.9 | 316.97 | 429.03 | 316.94 | 429.4 | 316.96 | 430.33 | 316.99 | 433.85 | 317.02 |
| 439.6 | 317.01 | 470.16 | 317.09 | 470.96 | 317.11 | 472.05 | 317.12 | 474.58 | 317.17 |
| 475.17 | 317.2 | 477.32 | 317.27 | 478.06 | 317.3 | 485.2 | 317.35 | 490.27 | 317.34 |
| 498.25 | 317.29 | 510.36 | 317.12 | 511.02 | 317.06 | 512.48 | 317.02 | 513.09 | 317.02 |
| 515.66 | 317.07 | 515.93 | 317.07 | 518.72 | 317.12 | 520.53 | 317.18 | 521.29 | 317.18 |
| 546.36 | 317.72 | 547.03 | 317.74 | 551.54 | 317.85 | 554.56 | 317.91 | 557.87 | 317.96 |
| 560.23 | 318 | 562.31 | 318.01 | 565.42 | 317.98 | 573.24 | 317.95 | 576.43 | 317.95 |
| 577.65 | 317.96 | 578.52 | 317.96 | 579.88 | 317.93 | 581.04 | 317.91 | 581.93 | 317.88 |
| 582.07 | 317.86 | 584.65 | 317.91 | 584.76 | 317.92 | 586.98 | 317.98 | 588.71 | 318.06 |
| 590.09 | 318.16 | 602.81 | 318.63 | 618.55 | 318.8 | 629.03 | 318.99 | 636.23 | 319.03 |
| 648.56 | 319.18 | 651.37 | 319.22 | 654.52 | 319.25 | 660.81 | 319.27 | 664.46 | 319.23 |
| 669.81 | 319.08 | 671.19 | 318.98 | 679.66 | 318.31 | 682.15 | 318.23 | 686.38 | 318.23 |
| 690.34 | 318.22 | 690.66 | 318.29 | 702.52 | 318.32 | 703.69 | 318.3 | 711.78 | 318.15 |
| 713.63 | 318.14 | 716.14 | 318.05 | 718.01 | 317.99 | 719.19 | 317.96 | 719.86 | 317.97 |
| 723.61 | 317.91 | 726.15 | 317.88 | 733.1 | 317.88 | 733.37 | 317.87 | 739.29 | 317.79 |
| 741 | 317.75 | 741.18 | 317.78 | 742.17 | 317.8 | 743.03 | 317.8 | 745.11 | 317.7 |
| 751 | 317.56 | 751.6 | 317.5 | 754.25 | 317.27 | 757.7 | 317.22 | 763.09 | 317.16 |
| 765.32 | 317.15 | 766.31 | 317.18 | 768.59 | 317.13 | 774.49 | 317.24 | 774.83 | 317.25 |
| 785.67 | 317.37 | 787.49 | 317.38 | 802.51 | 317.51 | 818.82 | 317.62 | 825.67 | 317.74 |
| 828.21 | 317.82 | 833.75 | 317.85 | 836.7 | 317.97 | 837.39 | 317.97 | 839.59 | 318.06 |
| 840.28 | 318.07 | 842.04 | 318.15 | 847.61 | 318.14 | 848.53 | 318.14 | 849.77 | 318.13 |
| 850.32 | 318.14 | 852.61 | 318.13 | 859.08 | 317.99 | 860.2 | 317.95 | 860.87 | 317.89 |
| 862.79 | 317.84 | 864.23 | 317.83 | 866.77 | 317.82 | 877.46 | 317.75 | 878.85 | 317.76 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 881.31 | 317.77 | 888.33 | 317.73 | 891.69 | 317.61 | 892.38 | 317.61 | 893.9 | 317.56 |
| 900.21 | 317.47 | 907.45 | 317.39 | 912.52 | 317.32 | 912.98 | 317.32 | 915.86 | 317.28 |
| 916.3 | 317.25 | 922.12 | 317.11 | 925.6 | 317.12 | 931.56 | 317.14 | 931.92 | 317.15 |
| 932.73 | 317.15 | 935.35 | 317.2 | 936.17 | 317.2 | 942.02 | 317.18 | 942.71 | 317.19 |
| 945.82 | 317.22 | 947.73 | 317.28 | 952.46 | 317.46 | 953.42 | 317.48 | 962.96 | 317.84 |
| 964.19 | 317.86 | 965.72 | 317.85 | 965.82 | 317.84 | 968.39 | 317.76 | 972.74 | 317.44 |
| 973.48 | 317.45 | 975.19 | 317.28 | 976.94 | 317.18 | 979.79 | 317.05 | 980.43 | 317.04 |
| 981.62 | 317.04 | 983.78 | 317.06 | 985.96 | 317.09 | 988.55 | 317.19 | 991.73 | 317.24 |
| 992.19 | 317.26 | 994.27 | 317.47 | 995.62 | 317.52 | 1004.55 | 317.36 | 1005.09 | 317.34 |
| 1006.23 | 317.28 | 1006.65 | 317.25 | 1008.82 | 317.12 | 1009.64 | 317.06 | 1010.46 | 317.04 |
| 1015.74 | 316.96 | 1017.59 | 316.92 | 1018.33 | 316.9 | 1021.53 | 316.84 | 1022.42 | 316.82 |
| 1024.79 | 316.8 | 1028.34 | 316.71 | 1030.14 | 316.66 | 1030.52 | 316.68 | 1031.56 | 316.67 |
| 1032.67 | 316.65 | 1033.54 | 316.61 | 1033.92 | 316.61 | 1035.53 | 316.58 | 1035.79 | 316.59 |
| 1036.23 | 316.64 | 1036.47 | 316.7 | 1036.68 | 316.71 | 1037.98 | 316.7 | 1040.65 | 316.75 |
| 1046.7 | 316.88 | 1053.23 | 317 | 1054.16 | 317.03 | 1056.22 | 317.06 | 1057.7 | 317.13 |
| 1058.75 | 317.15 | 1059.83 | 317.15 | 1060.05 | 317.13 | 1061.96 | 317.14 | 1062.3 | 317.13 |
| 1063.94 | 317.15 | 1065.2 | 317.16 | 1065.64 | 317.18 | 1066.42 | 317.17 | 1068.16 | 317.19 |
| 1069.58 | 317.2 | 1070.8 | 317.18 | 1071.17 | 317.16 | 1072.24 | 317.16 | 1075.12 | 317.17 |
| 1080 | 317.26 | 1081 | 317.29 | 1085.7 | 317.4 | 1086.22 | 317.4 | 1091.33 | 317.42 |
| 1091.43 | 317.41 | 1094.97 | 317.45 | 1095.3 | 317.48 | 1096.09 | 317.47 | 1098.53 | 317.35 |
| 1099.81 | 317.31 | 1100.17 | 317.32 | 1100.83 | 317.38 | 1103.67 | 317.38 | 1106.53 | 317.34 |
| 1108.44 | 317.38 | 1109.74 | 317.37 | 1110.84 | 317.41 | 1111.71 | 317.45 | 1117.08 | 317.71 |
| 1117.21 | 317.71 | 1120.04 | 317.79 | 1125.29 | 317.78 | 1125.76 | 317.73 | 1126.54 | 317.68 |
| 1129.61 | 317.54 | 1131.85 | 317.51 | 1140.2 | 317.71 | 1147.15 | 318 | 1147.57 | 318.01 |
| 1154.08 | 318.02 | 1155.64 | 317.93 | 1157.5 | 317.86 | 1157.94 | 317.85 | 1158.42 | 317.81 |
| 1158.82 | 317.81 | 1159.45 | 317.84 | 1159.72 | 317.87 | 1161.93 | 317.88 | 1164.31 | 317.88 |
| 1165.37 | 317.85 | 1165.71 | 317.83 | 1166.31 | 317.82 | 1168.04 | 317.83 | 1168.83 | 317.9 |
| 1170.52 | 318.06 | 1173.32 | 318.17 | 1175.25 | 318.21 | 1178.41 | 318.24 | 1179.18 | 318.25 |
| 1179.48 | 318.23 | 1180.89 | 318.19 | 1182.16 | 318.1 | 1185.43 | 317.98 | 1186.27 | 317.98 |
| 1187.38 | 318.01 | 1190.77 | 318.05 | 1191.15 | 318.06 | 1192.76 | 318.01 | 1193.64 | 317.96 |
| 1194.16 | 317.96 | 1199.76 | 317.87 | 1203.71 | 317.86 | 1206.16 | 317.81 | 1207.53 | 317.8 |
| 1207.94 | 317.79 | 1211.29 | 317.77 | 1213.02 | 317.78 | 1213.93 | 317.75 | 1226.6 | 317.8 |
| 1227.19 | 317.81 | 1232.86 | 317.96 | 1233.2 | 318.06 | 1233.99 | 318.25 | 1234.33 | 318.42 |
| 1234.86 | 318.54 | 1235.42 | 318.57 | 1247.94 | 318.83 | 1249.62 | 318.83 | 1250.46 | 318.77 |
| 1255.05 | 318.62 | 1258.13 | 318.65 | 1258.58 | 318.67 | 1259.96 | 318.66 | 1264.49 | 318.64 |
| 1264.95 | 318.62 | 1265.59 | 318.61 | 1272.41 | 318.74 | 1274.75 | 318.85 | 1281.94 | 318.73 |
| 1282.26 | 318.74 | 1285.73 | 318.5 | 1286.33 | 318.43 | 1288.66 | 318.27 | 1288.84 | 318.27 |
| 1293.46 | 318.37 | 1294 | 318.4 | 1296.09 | 318.43 | 1297.85 | 318.46 | 1298.84 | 318.4 |
| 1299.76 | 318.37 | 1299.91 | 318.4 | 1300.52 | 318.43 | 1301.67 | 318.47 | 1303.41 | 318.49 |
| 1309 | 318.51 | 1310.79 | 318.55 | 1313.52 | 318.6 | 1320.3 | 318.74 | 1325.51 | 318.8 |
| 1327.35 | 318.84 | 1328.46 | 318.9 | 1328.76 | 318.9 | 1330.96 | 319.02 | 1331.76 | 319.09 |
| 1334.82 | 319.32 | 1342.09 | 319.58 | 1342.56 | 319.59 | 1348.98 | 319.7 | 1349.54 | 319.74 |
| 1350.51 | 319.77 | 1351.96 | 319.8 | 1354.12 | 319.83 | 1360.46 | 320.04 | 1361.47 | 320.07 |
| 1366.18 | 320.14 | 1366.71 | 320.14 | 1368.19 | 320.16 | 1369.47 | 320.14 | 1369.72 | 320.17 |
| 1370.91 | 320.15 | 1372.14 | 320.14 | 1372.52 | 320.12 | 1373.13 | 320.13 | 1373.6 | 320.12 |
| 1373.99 | 320.13 | 1375.82 | 320.23 | 1376.24 | 320.29 | 1376.45 | 320.36 | 1377.5 | 320.54 |
| 1378.66 | 320.83 | 1379.97 | 321.1 | 1384.43 | 321.95 | 1385.41 | 322.12 | 1387.1 | 322.34 |
| 1387.71 | 322.41 | 1390.47 | 322.84 | 1390.99 | 322.97 | 1391.85 | 323.12 | 1393.31 | 323.39 |
| 1395.01 | 323.66 | 1396.99 | 324.17 | 1398.65 | 324.58 | 1399.55 | 324.79 | 1401.28 | 325.23 |
| 1402.08 | 325.42 | 1403.17 | 325.69 | 1404.4 | 325.97 | 1405.55 | 326.25 | 1407.33 | 326.67 |
| 1408.23 | 326.91 | 1410.55 | 327.49 | 1412.21 | 327.97 | 1413.47 | 328.34 | 1414.36 | 328.65 |
| 1415.08 | 328.83 | 1416.84 | 329.24 | 1417.14 | 329.29 | 1418.32 | 329.59 | 1420.4 | 330.16 |
| 1422.82 | 330.75 | 1423.78 | 331 | 1424.8 | 331.25 | 1425.11 | 331.34 | 1426.28 | 331.73 |
| 1426.88 | 331.94 | 1428.34 | 332.19 | 1432.49 | 332.75 | 1432.99 | 332.81 | 1434.55 | 333.03 |
| 1436.15 | 333.23 | 1438.05 | 333.44 | 1438.51 | 333.5 | 1441.23 | 333.8 | 1441.91 | 333.87 |
| 1448.56 | 334.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 146.48 | .05 | 671.19 | .04 | 1372.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 671.19 | 1372.52 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 660.14 Elevation=319.4817
Right Levee Station=1320.134 Elevation=317.9867

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3454.16*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 137.87 | 336.76 | 139 | 336.49 | 139.64 | 336.29 | 141.23 | 335.61 | 141.45 | 335.53 |
| 142.89 | 334.96 | 144.37 | 334.39 | 144.69 | 334.26 | 146.66 | 333.51 | 148.09 | 332.92 |
| 150.41 | 332.25 | 158.07 | 330.23 | 158.67 | 330.09 | 160.65 | 329.56 | 161.64 | 329.33 |
| 162.71 | 329.07 | 163.74 | 328.87 | 166.57 | 328.58 | 173.44 | 327.92 | 176.55 | 327.64 |
| 177.69 | 327.55 | 178.25 | 327.53 | 178.78 | 327.58 | 179.61 | 327.54 | 181.16 | 327.43 |
| 188.67 | 326.73 | 197.32 | 326.02 | 200.32 | 325.84 | 209.72 | 325.19 | 222.9 | 324.44 |
| 223.93 | 324.36 | 225.52 | 324.25 | 232.4 | 323.97 | 233.42 | 323.91 | 234.79 | 323.84 |
| 240.1 | 323.53 | 242.49 | 323.38 | 242.96 | 323.33 | 244.07 | 323.24 | 247.26 | 322.96 |
| 248.42 | 322.81 | 250.5 | 322.57 | 252.91 | 322.26 | 254.07 | 322.12 | 256.2 | 321.83 |
| 256.62 | 321.79 | 260.29 | 321.53 | 261.42 | 321.46 | 261.8 | 321.47 | 262.81 | 321.47 |
| 263.72 | 321.42 | 264.17 | 321.41 | 264.23 | 321.43 | 266.16 | 321.36 | 267.96 | 321.27 |
| 268.94 | 321.23 | 271.44 | 321.17 | 275.03 | 321.17 | 277.99 | 321.08 | 282.16 | 321.04 |
| 283.59 | 321.01 | 284.95 | 320.97 | 287.25 | 320.93 | 291.49 | 320.81 | 295.31 | 320.62 |
| 295.78 | 320.61 | 299.24 | 320.41 | 299.91 | 320.36 | 302.07 | 320.23 | 305.71 | 320.04 |
| 308.89 | 319.9 | 314.38 | 319.68 | 315.59 | 319.65 | 315.99 | 319.67 | 316.07 | 319.75 |
| 316.81 | 319.76 | 319.21 | 319.7 | 320.39 | 319.65 | 321.59 | 319.62 | 323.71 | 319.53 |
| 329.18 | 319.33 | 332.43 | 319.2 | 344.3 | 318.75 | 344.4 | 318.75 | 347.44 | 318.61 |
| 352.59 | 318.34 | 353.22 | 318.31 | 361.7 | 317.98 | 375.33 | 317.89 | 375.93 | 317.88 |
| 378.29 | 317.79 | 387.65 | 317.55 | 387.99 | 317.51 | 389.64 | 317.45 | 390.1 | 317.44 |
| 396.12 | 317.17 | 400.63 | 317.06 | 404.17 | 316.9 | 405.89 | 316.89 | 406.07 | 316.88 |
| 408.91 | 316.85 | 410.89 | 316.78 | 412.03 | 316.73 | 412.31 | 316.7 | 413.31 | 316.65 |
| 413.43 | 316.62 | 413.8 | 316.64 | 414.7 | 316.66 | 418.14 | 316.68 | 423.75 | 316.65 |
| 453.54 | 316.68 | 457.86 | 316.73 | 458.43 | 316.76 | 461.26 | 316.87 | 468.22 | 316.92 |
| 473.16 | 316.91 | 480.94 | 316.87 | 492.75 | 316.71 | 493.4 | 316.65 | 494.82 | 316.61 |
| 495.42 | 316.61 | 497.92 | 316.66 | 498.19 | 316.66 | 500.91 | 316.71 | 502.67 | 316.76 |
| 503.41 | 316.76 | 527.86 | 317.28 | 528.92 | 317.31 | 532.92 | 317.4 | 535.87 | 317.46 |
| 539.09 | 317.51 | 541.4 | 317.54 | 543.43 | 317.55 | 546.46 | 317.52 | 554.09 | 317.48 |
| 554.3 | 317.49 | 556.92 | 317.48 | 557.2 | 317.49 | 558.39 | 317.5 | 559.23 | 317.49 |
| 561.69 | 317.44 | 562.7 | 317.38 | 565.21 | 317.43 | 565.32 | 317.44 | 567.49 | 317.49 |
| 569.17 | 317.58 | 570.51 | 317.68 | 582.92 | 318.15 | 598.27 | 318.34 | 608.49 | 318.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 615.52 | 318.59 | 627.54 | 318.75 | 630.28 | 318.79 | 633.36 | 318.82 | 639.49 | 318.85 |
| 643.05 | 318.8 | 648.27 | 318.67 | 649.61 | 318.57 | 657.76 | 317.92 | 660.15 | 317.85 |
| 664.23 | 317.84 | 668.03 | 317.82 | 668.34 | 317.89 | 679.74 | 317.89 | 680.87 | 317.87 |
| 688.66 | 317.72 | 690.44 | 317.71 | 692.85 | 317.62 | 694.06 | 317.58 | 694.65 | 317.55 |
| 695.78 | 317.52 | 696.42 | 317.52 | 700.03 | 317.47 | 702.47 | 317.43 | 704.86 | 317.43 |
| 707.98 | 317.44 | 709.16 | 317.44 | 709.42 | 317.43 | 715.12 | 317.36 | 716.76 | 317.33 |
| 716.93 | 317.35 | 717.89 | 317.37 | 718.71 | 317.37 | 720.71 | 317.27 | 726.37 | 317.15 |
| 729.5 | 316.88 | 732.82 | 316.83 | 738.01 | 316.79 | 740.15 | 316.79 | 741.1 | 316.82 |
| 743.3 | 316.78 | 748.97 | 316.88 | 749.29 | 316.89 | 759.72 | 317.01 | 761.48 | 317.02 |
| 775.92 | 317.14 | 791.61 | 317.25 | 798.2 | 317.36 | 800.63 | 317.43 | 805.97 | 317.46 |
| 808.8 | 317.57 | 809.47 | 317.57 | 811.59 | 317.66 | 812.25 | 317.66 | 813.94 | 317.74 |
| 819.3 | 317.74 | 821.38 | 317.72 | 821.9 | 317.73 | 824.11 | 317.73 | 830.33 | 317.59 |
| 831.41 | 317.55 | 832.05 | 317.49 | 833.9 | 317.44 | 835.29 | 317.43 | 835.64 | 317.44 |
| 837.72 | 317.42 | 840.57 | 317.41 | 848.01 | 317.35 | 848.64 | 317.35 | 849.68 | 317.37 |
| 851.71 | 317.38 | 858.47 | 317.34 | 858.72 | 317.32 | 861.69 | 317.22 | 862.36 | 317.22 |
| 863.82 | 317.17 | 869.88 | 317.09 | 876.85 | 317.01 | 881.73 | 316.95 | 882.17 | 316.94 |
| 884.94 | 316.91 | 885.36 | 316.88 | 890.96 | 316.75 | 894.31 | 316.75 | 900.04 | 316.78 |
| 901.16 | 316.78 | 904.48 | 316.83 | 910.1 | 316.81 | 910.76 | 316.81 | 913.75 | 316.85 |
| 915.59 | 316.9 | 920.14 | 317.07 | 921.06 | 317.09 | 930.24 | 317.42 | 931.43 | 317.44 |
| 932.7 | 317.43 | 935.47 | 317.34 | 939.65 | 317.05 | 940.36 | 317.05 | 942.01 | 316.9 |
| 943.69 | 316.8 | 946.43 | 316.68 | 947.04 | 316.66 | 948.19 | 316.66 | 949.26 | 316.68 |
| 952.36 | 316.71 | 954.85 | 316.8 | 957.92 | 316.85 | 958.36 | 316.87 | 960.36 | 317.06 |
| 961.66 | 317.11 | 970.24 | 316.96 | 970.76 | 316.94 | 972.26 | 316.86 | 975.14 | 316.68 |
| 975.93 | 316.66 | 981.01 | 316.58 | 983.5 | 316.52 | 986.57 | 316.46 | 987.43 | 316.44 |
| 989.72 | 316.42 | 993.12 | 316.34 | 994.85 | 316.29 | 995.35 | 316.3 | 996.65 | 316.29 |
| 997.37 | 316.27 | 997.89 | 316.24 | 1000.04 | 316.21 | 1000.32 | 316.22 | 1000.81 | 316.28 |
| 1001.07 | 316.35 | 1002.74 | 316.35 | 1005.69 | 316.4 | 1012.36 | 316.54 | 1018.96 | 316.66 |
| 1020.61 | 316.7 | 1022.18 | 316.72 | 1022.88 | 316.74 | 1023.95 | 316.79 | 1025.38 | 316.83 |
| 1026.87 | 316.83 | 1027.07 | 316.81 | 1029.6 | 316.81 | 1031.41 | 316.83 | 1032.8 | 316.84 |
| 1033.29 | 316.86 | 1034.15 | 316.85 | 1036.07 | 316.87 | 1037.64 | 316.88 | 1038.99 | 316.86 |
| 1039.4 | 316.83 | 1040.58 | 316.84 | 1043.76 | 316.85 | 1049.15 | 316.94 | 1050.26 | 316.97 |
| 1055.45 | 317.09 | 1061.78 | 317.1 | 1065.69 | 317.13 | 1066.05 | 317.16 | 1066.92 | 317.15 |
| 1069.62 | 317 | 1070.42 | 316.98 | 1071.03 | 316.95 | 1071.43 | 316.97 | 1072.22 | 317.04 |
| 1075.3 | 317.03 | 1076.06 | 317.02 | 1077.48 | 316.99 | 1078.45 | 316.98 | 1080.57 | 317.02 |
| 1081.46 | 317.02 | 1082.01 | 317.01 | 1083.22 | 317.05 | 1084.18 | 317.1 | 1090.11 | 317.39 |
| 1090.26 | 317.39 | 1093.38 | 317.47 | 1093.61 | 317.48 | 1099.18 | 317.46 | 1099.7 | 317.4 |
| 1103.95 | 317.18 | 1106.19 | 317.15 | 1106.42 | 317.14 | 1115.65 | 317.37 | 1123.79 | 317.72 |
| 1130.98 | 317.73 | 1132.7 | 317.62 | 1134.76 | 317.53 | 1135.24 | 317.53 | 1135.77 | 317.48 |
| 1136.91 | 317.51 | 1137.21 | 317.55 | 1137.67 | 317.55 | 1139.65 | 317.57 | 1139.77 | 317.56 |
| 1142.28 | 317.56 | 1143.42 | 317.53 | 1143.45 | 317.52 | 1144.49 | 317.49 | 1146.4 | 317.5 |
| 1146.72 | 317.54 | 1147.27 | 317.58 | 1149.14 | 317.76 | 1152.23 | 317.89 | 1154.36 | 317.93 |
| 1156.61 | 317.95 | 1157.1 | 317.97 | 1158.77 | 317.98 | 1160.59 | 317.93 | 1161.99 | 317.83 |
| 1164.12 | 317.74 | 1165.6 | 317.69 | 1166.54 | 317.69 | 1167.76 | 317.72 | 1171.5 | 317.78 |
| 1171.92 | 317.78 | 1173.71 | 317.72 | 1174.68 | 317.67 | 1181.43 | 317.56 | 1185.8 | 317.56 |
| 1188.51 | 317.5 | 1190.02 | 317.49 | 1190.47 | 317.48 | 1194.17 | 317.45 | 1195.81 | 317.47 |
| 1197 | 317.43 | 1197.09 | 317.42 | 1211.08 | 317.49 | 1211.73 | 317.5 | 1218 | 317.67 |
| 1218.38 | 317.78 | 1219.25 | 318 | 1219.62 | 318.19 | 1220.21 | 318.33 | 1220.82 | 318.36 |
| 1234.66 | 318.67 | 1236.32 | 318.67 | 1237.44 | 318.6 | 1242.5 | 318.42 | 1243.66 | 318.44 |
| 1245.67 | 318.45 | 1246.41 | 318.48 | 1246.84 | 318.48 | 1247.94 | 318.46 | 1252.7 | 318.43 |
| 1253.45 | 318.39 | 1254.15 | 318.39 | 1261.68 | 318.5 | 1264.27 | 318.62 | 1272.21 | 318.46 |
| 1272.56 | 318.47 | 1276.4 | 318.17 | 1277.07 | 318.1 | 1279.64 | 317.9 | 1279.83 | 317.9 |
| 1284.94 | 317.99 | 1285.53 | 318.03 | 1287.84 | 318.06 | 1288.89 | 318.08 | 1289.79 | 318.08 |
| 1291.12 | 317.99 | 1291.9 | 317.97 | 1292.06 | 318.01 | 1293.66 | 318.07 | 1294.16 | 318.07 |
| 1295.79 | 318.09 | 1302.1 | 318.1 | 1304.08 | 318.13 | 1307.1 | 318.17 | 1314.59 | 318.3 |
| 1320.34 | 318.36 | 1322.56 | 318.4 | 1323.45 | 318.45 | 1323.93 | 318.46 | 1326.09 | 318.56 |
| 1327.25 | 318.64 | 1330.62 | 318.89 | 1338.66 | 319.13 | 1339.17 | 319.15 | 1346.27 | 319.25 |
| 1346.88 | 319.29 | 1347.95 | 319.32 | 1349.56 | 319.35 | 1351.94 | 319.37 | 1358.95 | 319.57 |
| 1360.06 | 319.59 | 1365.26 | 319.64 | 1365.84 | 319.63 | 1367.28 | 319.65 | 1367.49 | 319.64 |
| 1369 | 319.63 | 1369.17 | 319.66 | 1369.97 | 319.64 | 1370.48 | 319.64 | 1372.26 | 319.6 |
| 1373.75 | 319.6 | 1374.34 | 319.63 | 1375.61 | 319.71 | 1376.03 | 319.76 | 1376.25 | 319.83 |
| 1377.31 | 320 | 1377.74 | 320.12 | 1378.49 | 320.29 | 1379.82 | 320.57 | 1384.34 | 321.4 |
| 1385.33 | 321.56 | 1387.05 | 321.78 | 1387.86 | 321.89 | 1390.46 | 322.3 | 1390.98 | 322.43 |
| 1392.4 | 322.67 | 1393.33 | 322.85 | 1395.06 | 323.14 | 1397.07 | 323.69 | 1398.75 | 324.14 |
| 1399.66 | 324.36 | 1401.41 | 324.83 | 1402.23 | 325.04 | 1403.94 | 325.49 | 1404.58 | 325.64 |
| 1405.74 | 325.94 | 1406.71 | 326.18 | 1407.54 | 326.4 | 1408.46 | 326.66 | 1410.73 | 327.26 |
| 1413.77 | 328.2 | 1414.67 | 328.54 | 1415.07 | 328.65 | 1417.19 | 329.16 | 1417.49 | 329.22 |
| 1418.68 | 329.53 | 1420.79 | 330.13 | 1423.24 | 330.75 | 1424.22 | 331.02 | 1425.26 | 331.28 |
| 1426.75 | 331.78 | 1427.36 | 332 | 1428.84 | 332.23 | 1433.05 | 332.76 | 1433.56 | 332.82 |
| 1435.13 | 333.03 | 1436.75 | 333.23 | 1439.15 | 333.48 | 1441.91 | 333.78 | 1442.59 | 333.84 |
| 1449.33 | 334.51 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 137.87 | .05 | 649.61 | .04 | 1372.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 649.61 | 1372.26 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 638.84 Elevation=319.0433
Right Levee Station=1319.943 Elevation=317.6733

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3434.42*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 129.25 | 336.64 | 130.35 | 336.39 | 130.98 | 336.2 | 132.52 | 335.57 | 134.15 | 334.95 |
| 135.59 | 334.42 | 135.9 | 334.3 | 137.82 | 333.59 | 139.22 | 333.04 | 141.47 | 332.41 |
| 148.94 | 330.51 | 149.53 | 330.37 | 151.46 | 329.88 | 151.91 | 329.78 | 153.47 | 329.41 |
| 154.46 | 329.23 | 157.23 | 328.95 | 163.92 | 328.33 | 166.95 | 328.06 | 168.06 | 327.98 |
| 168.61 | 327.96 | 169.13 | 328.01 | 171.44 | 327.86 | 178.76 | 327.2 | 187.2 | 326.52 |
| 190.12 | 326.35 | 199.28 | 325.72 | 212.13 | 324.98 | 213.13 | 324.89 | 214.68 | 324.78 |
| 221.39 | 324.49 | 222.39 | 324.42 | 223.71 | 324.35 | 228.89 | 324.02 | 231.22 | 323.85 |
| 232.76 | 323.71 | 234.99 | 323.48 | 235.87 | 323.4 | 237 | 323.24 | 239.04 | 322.97 |
| 241.38 | 322.63 | 242.51 | 322.47 | 244.59 | 322.16 | 245 | 322.11 | 248.57 | 321.84 |
| 249.67 | 321.76 | 251.03 | 321.78 | 251.91 | 321.72 | 252.41 | 321.72 | 254.29 | 321.65 |
| 256.04 | 321.55 | 257.01 | 321.51 | 259.44 | 321.44 | 262.94 | 321.44 | 265.83 | 321.33 |
| 269.89 | 321.3 | 272.61 | 321.22 | 274.86 | 321.17 | 278.98 | 321.03 | 281.36 | 320.9 |
| 282.7 | 320.82 | 283.16 | 320.81 | 286.54 | 320.58 | 289.29 | 320.38 | 292.85 | 320.16 |
| 295.94 | 320 | 301.29 | 319.75 | 302.47 | 319.71 | 302.86 | 319.72 | 302.94 | 319.8 |
| 303.67 | 319.8 | 306 | 319.73 | 307.15 | 319.68 | 308.32 | 319.64 | 310.38 | 319.54 |
| 315.72 | 319.33 | 318.88 | 319.18 | 330.45 | 318.71 | 330.55 | 318.7 | 333.52 | 318.56 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 338.53 | 318.26 | 339.15 | 318.22 | 347.42 | 317.85 | 360.7 | 317.67 | 361.28 | 317.65 |
| 363.59 | 317.55 | 372.71 | 317.28 | 373.04 | 317.25 | 374.65 | 317.18 | 375.09 | 317.17 |
| 380.96 | 316.89 | 385.35 | 316.76 | 388.81 | 316.6 | 390.48 | 316.58 | 390.66 | 316.57 |
| 393.43 | 316.53 | 395.36 | 316.46 | 396.47 | 316.41 | 396.74 | 316.38 | 397.71 | 316.33 |
| 397.84 | 316.31 | 399.08 | 316.34 | 402.42 | 316.35 | 407.89 | 316.3 | 436.93 | 316.26 |
| 438.73 | 316.28 | 441.14 | 316.3 | 441.7 | 316.33 | 444.45 | 316.44 | 451.24 | 316.49 |
| 456.05 | 316.49 | 463.64 | 316.45 | 475.15 | 316.3 | 475.78 | 316.25 | 476.81 | 316.21 |
| 477.75 | 316.21 | 480.19 | 316.25 | 480.45 | 316.26 | 483.1 | 316.3 | 484.82 | 316.35 |
| 485.54 | 316.35 | 509.37 | 316.84 | 510.4 | 316.87 | 514.3 | 316.96 | 517.17 | 317.01 |
| 520.32 | 317.06 | 522.56 | 317.08 | 524.54 | 317.08 | 527.49 | 317.05 | 534.93 | 317.02 |
| 537.69 | 317.01 | 537.96 | 317.02 | 539.85 | 317.03 | 539.95 | 317.02 | 542.35 | 316.97 |
| 543.19 | 316.93 | 543.32 | 316.9 | 545.77 | 316.95 | 547.99 | 317 | 549.63 | 317.09 |
| 550.94 | 317.2 | 563.04 | 317.67 | 578 | 317.88 | 587.96 | 318.09 | 594.81 | 318.15 |
| 606.52 | 318.32 | 609.19 | 318.36 | 612.19 | 318.4 | 618.17 | 318.42 | 621.64 | 318.38 |
| 626.72 | 318.25 | 628.04 | 318.16 | 635.86 | 317.54 | 638.16 | 317.46 | 642.07 | 317.45 |
| 645.73 | 317.42 | 646.02 | 317.49 | 656.97 | 317.46 | 658.05 | 317.44 | 665.53 | 317.29 |
| 667.24 | 317.28 | 669.56 | 317.18 | 672.37 | 317.08 | 672.99 | 317.08 | 676.46 | 317.02 |
| 678.8 | 316.99 | 681.09 | 316.99 | 684.09 | 317 | 685.22 | 317 | 685.47 | 316.99 |
| 690.94 | 316.93 | 692.51 | 316.9 | 692.68 | 316.92 | 693.6 | 316.94 | 694.4 | 316.94 |
| 696.31 | 316.85 | 701.75 | 316.74 | 702.31 | 316.69 | 704.75 | 316.49 | 707.95 | 316.45 |
| 710.42 | 316.43 | 712.92 | 316.42 | 714.97 | 316.43 | 715.9 | 316.47 | 718 | 316.43 |
| 723.45 | 316.53 | 723.76 | 316.54 | 733.77 | 316.65 | 735.46 | 316.66 | 749.33 | 316.77 |
| 764.4 | 316.87 | 770.72 | 316.98 | 773.06 | 317.04 | 778.19 | 317.07 | 780.9 | 317.17 |
| 781.55 | 317.17 | 783.58 | 317.26 | 784.21 | 317.26 | 785.45 | 317.32 | 785.84 | 317.33 |
| 791.84 | 317.33 | 792.98 | 317.31 | 793.48 | 317.32 | 795.6 | 317.32 | 801.58 | 317.19 |
| 802.62 | 317.15 | 803.5 | 317.08 | 805.01 | 317.05 | 808.68 | 317.03 | 818.55 | 316.96 |
| 819.84 | 316.96 | 820.16 | 316.97 | 822.11 | 316.98 | 828.6 | 316.94 | 831.69 | 316.83 |
| 832.34 | 316.83 | 833.74 | 316.78 | 839.56 | 316.7 | 846.25 | 316.63 | 850.94 | 316.57 |
| 851.36 | 316.57 | 854.02 | 316.53 | 854.43 | 316.51 | 859.8 | 316.38 | 863.02 | 316.39 |
| 868.52 | 316.41 | 869.6 | 316.42 | 872.78 | 316.46 | 878.18 | 316.43 | 878.82 | 316.44 |
| 881.69 | 316.47 | 883.45 | 316.52 | 887.83 | 316.68 | 888.71 | 316.69 | 897.52 | 317 |
| 898.66 | 317.02 | 900.07 | 317.01 | 900.17 | 317 | 902.54 | 316.93 | 906.56 | 316.65 |
| 907.24 | 316.65 | 908.82 | 316.51 | 910.43 | 316.42 | 913.07 | 316.3 | 913.66 | 316.29 |
| 914.76 | 316.29 | 918.76 | 316.33 | 921.16 | 316.42 | 922.84 | 316.44 | 924.1 | 316.46 |
| 924.52 | 316.48 | 926.45 | 316.66 | 927.69 | 316.7 | 935.94 | 316.56 | 937.49 | 316.49 |
| 937.87 | 316.46 | 939.89 | 316.35 | 940.64 | 316.3 | 941.39 | 316.28 | 946.27 | 316.2 |
| 948.67 | 316.14 | 951.62 | 316.08 | 952.44 | 316.06 | 954.64 | 316.04 | 959.57 | 315.92 |
| 960.04 | 315.93 | 961.91 | 315.9 | 962.71 | 315.86 | 964.84 | 315.85 | 965.38 | 315.91 |
| 965.67 | 315.99 | 965.93 | 316 | 967.49 | 315.99 | 970.72 | 316.05 | 978.03 | 316.2 |
| 985.26 | 316.34 | 988.78 | 316.4 | 989.55 | 316.41 | 990.72 | 316.47 | 992.28 | 316.51 |
| 993.91 | 316.51 | 994.05 | 316.49 | 996.49 | 316.49 | 996.9 | 316.48 | 998.89 | 316.5 |
| 1000.41 | 316.51 | 1000.95 | 316.54 | 1001.88 | 316.53 | 1003.99 | 316.55 | 1005.71 | 316.56 |
| 1007.18 | 316.53 | 1008.04 | 316.5 | 1008.92 | 316.51 | 1012.41 | 316.52 | 1018.3 | 316.62 |
| 1018.77 | 316.64 | 1019.51 | 316.65 | 1025.2 | 316.78 | 1032.12 | 316.78 | 1036.41 | 316.81 |
| 1036.8 | 316.84 | 1037.76 | 316.82 | 1040.71 | 316.66 | 1042.26 | 316.6 | 1042.69 | 316.62 |
| 1043.5 | 316.69 | 1046.92 | 316.68 | 1047.76 | 316.67 | 1049.31 | 316.63 | 1050.38 | 316.62 |
| 1050.85 | 316.64 | 1052.69 | 316.67 | 1054.01 | 316.65 | 1055.6 | 316.7 | 1056.65 | 316.74 |
| 1063.15 | 317.07 | 1063.3 | 317.07 | 1066.72 | 317.16 | 1073.07 | 317.14 | 1073.64 | 317.07 |
| 1074.58 | 317.01 | 1075.08 | 316.99 | 1078.29 | 316.82 | 1080.74 | 316.79 | 1081 | 316.78 |
| 1091.1 | 317.03 | 1099.5 | 317.41 | 1100 | 317.42 | 1107.88 | 317.43 | 1109.76 | 317.31 |
| 1112.01 | 317.21 | 1112.42 | 317.21 | 1113.12 | 317.16 | 1113.83 | 317.16 | 1114.37 | 317.19 |
| 1114.6 | 317.22 | 1115.21 | 317.23 | 1117.38 | 317.25 | 1117.5 | 317.24 | 1120.24 | 317.24 |
| 1121.11 | 317.22 | 1121.95 | 317.18 | 1122.67 | 317.16 | 1124.76 | 317.17 | 1127.76 | 317.46 |
| 1131.14 | 317.61 | 1133.48 | 317.65 | 1135.93 | 317.68 | 1136.48 | 317.7 | 1138.3 | 317.72 |
| 1138.6 | 317.7 | 1139.96 | 317.68 | 1141.83 | 317.56 | 1145.14 | 317.42 | 1145.78 | 317.4 |
| 1146.81 | 317.4 | 1148.06 | 317.43 | 1148.15 | 317.44 | 1152.24 | 317.5 | 1152.7 | 317.51 |
| 1154.65 | 317.43 | 1155.72 | 317.38 | 1163.11 | 317.26 | 1167.89 | 317.26 | 1170.85 | 317.18 |
| 1172.51 | 317.18 | 1173 | 317.16 | 1177.05 | 317.13 | 1178.85 | 317.15 | 1180.15 | 317.11 |
| 1180.25 | 317.1 | 1195.56 | 317.18 | 1196.28 | 317.19 | 1203.13 | 317.38 | 1203.55 | 317.5 |
| 1204.51 | 317.75 | 1204.91 | 317.97 | 1205.56 | 318.12 | 1206.23 | 318.16 | 1221.37 | 318.5 |
| 1223.2 | 318.5 | 1223.82 | 318.47 | 1224.41 | 318.42 | 1229.96 | 318.22 | 1230.19 | 318.23 |
| 1233.43 | 318.26 | 1234.24 | 318.29 | 1234.71 | 318.29 | 1235.91 | 318.27 | 1241.12 | 318.21 |
| 1241.94 | 318.17 | 1242.71 | 318.16 | 1250.96 | 318.27 | 1253.05 | 318.36 | 1253.8 | 318.4 |
| 1262.48 | 318.18 | 1262.87 | 318.2 | 1267.07 | 317.85 | 1267.8 | 317.76 | 1270.61 | 317.54 |
| 1270.82 | 317.53 | 1276.42 | 317.62 | 1277.07 | 317.66 | 1277.61 | 317.67 | 1279.59 | 317.68 |
| 1280.74 | 317.7 | 1281.72 | 317.7 | 1282.92 | 317.61 | 1283.97 | 317.57 | 1284.21 | 317.61 |
| 1284.81 | 317.65 | 1286.51 | 317.68 | 1288.45 | 317.69 | 1295.2 | 317.68 | 1297.37 | 317.71 |
| 1300.67 | 317.75 | 1308.87 | 317.87 | 1309.88 | 317.88 | 1310.05 | 317.87 | 1314.19 | 317.9 |
| 1315.17 | 317.91 | 1317.22 | 317.94 | 1318.74 | 318.01 | 1319.1 | 318.01 | 1321.47 | 318.12 |
| 1322.73 | 318.2 | 1326.43 | 318.46 | 1335.22 | 318.69 | 1335.78 | 318.7 | 1343.55 | 318.8 |
| 1344.22 | 318.84 | 1345.39 | 318.87 | 1347.15 | 318.9 | 1349.76 | 318.92 | 1357.43 | 319.1 |
| 1358.65 | 319.11 | 1364.34 | 319.13 | 1366.78 | 319.13 | 1368.33 | 319.11 | 1368.63 | 319.15 |
| 1369.5 | 319.13 | 1371.31 | 319.1 | 1372.01 | 319.07 | 1373.52 | 319.07 | 1373.94 | 319.09 |
| 1375.41 | 319.18 | 1375.83 | 319.23 | 1376.04 | 319.29 | 1377.13 | 319.47 | 1378.32 | 319.76 |
| 1379.66 | 320.03 | 1384.25 | 320.85 | 1385.25 | 321.01 | 1386.99 | 321.23 | 1387.82 | 321.34 |
| 1390.44 | 321.75 | 1390.68 | 321.82 | 1391.86 | 322.04 | 1392.42 | 322.13 | 1393.36 | 322.32 |
| 1395.11 | 322.61 | 1397.14 | 323.21 | 1398.85 | 323.69 | 1399.77 | 323.93 | 1401.55 | 324.44 |
| 1402.38 | 324.66 | 1403.5 | 324.98 | 1404.76 | 325.31 | 1405.93 | 325.63 | 1406.92 | 325.89 |
| 1407.76 | 326.12 | 1408.69 | 326.41 | 1410.99 | 327.05 | 1412.56 | 327.57 | 1414.07 | 328.06 |
| 1414.98 | 328.42 | 1415.39 | 328.55 | 1417.54 | 329.08 | 1417.84 | 329.14 | 1419.05 | 329.47 |
| 1421.19 | 330.09 | 1423.67 | 330.76 | 1424.67 | 331.04 | 1425.71 | 331.32 | 1426.03 | 331.42 |
| 1427.23 | 331.83 | 1427.85 | 332.06 | 1429.34 | 332.28 | 1433.61 | 332.78 | 1434.12 | 332.83 |
| 1435.72 | 333.04 | 1437.36 | 333.22 | 1439.79 | 333.47 | 1442.59 | 333.75 | 1443.28 | 333.81 |
| 1450.11 | 334.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 129.25 | .05 | 628.04 | .04 | 1372.01 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 628.04 | 1372.01 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 617.54 Elevation= 318.605
Right Levee Station=1319.752 Elevation= 317.36

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3414.68*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 120.63 | 336.52 | 121.71 | 336.29 | 122.4 | 336.07 | 124.27 | 335.35 | 125.4 | 334.94 |
| 127.11 | 334.33 | 128.99 | 333.67 | 130.34 | 333.15 | 132.54 | 332.56 | 139.82 | 330.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 140.38 | 330.66 | 142.26 | 330.2 | 143.2 | 330 | 144.22 | 329.76 | 145.19 | 329.59 |
| 147.88 | 329.33 | 154.4 | 328.74 | 157.36 | 328.49 | 158.44 | 328.41 | 158.97 | 328.39 |
| 159.47 | 328.43 | 160.26 | 328.39 | 161.73 | 328.29 | 168.86 | 327.67 | 177.08 | 327.02 |
| 179.93 | 326.86 | 188.85 | 326.24 | 201.36 | 325.51 | 202.33 | 325.42 | 203.85 | 325.31 |
| 210.38 | 325.01 | 211.35 | 324.94 | 212.64 | 324.86 | 217.69 | 324.51 | 219.95 | 324.33 |
| 221.45 | 324.18 | 223.62 | 323.93 | 224.49 | 323.84 | 225.59 | 323.66 | 227.57 | 323.37 |
| 230.41 | 322.91 | 230.77 | 322.86 | 232.98 | 322.49 | 233.38 | 322.44 | 236.86 | 322.14 |
| 237.7 | 322.07 | 239.25 | 322.08 | 240.11 | 322.02 | 240.59 | 322.02 | 242.43 | 321.94 |
| 244.13 | 321.83 | 245.07 | 321.79 | 247.44 | 321.71 | 250.85 | 321.71 | 253.66 | 321.59 |
| 257.62 | 321.55 | 258.98 | 321.51 | 260.27 | 321.46 | 262.46 | 321.4 | 266.48 | 321.25 |
| 268.79 | 321.11 | 270.1 | 321.01 | 270.55 | 321.01 | 273.84 | 320.75 | 274.47 | 320.69 |
| 276.52 | 320.53 | 279.98 | 320.28 | 282.98 | 320.11 | 282.99 | 320.1 | 288.2 | 319.82 |
| 289.36 | 319.77 | 289.74 | 319.78 | 289.81 | 319.85 | 290.52 | 319.85 | 292.79 | 319.76 |
| 293.91 | 319.7 | 295.05 | 319.66 | 296.86 | 319.57 | 297.06 | 319.55 | 302.26 | 319.33 |
| 305.34 | 319.17 | 316.61 | 318.66 | 316.7 | 318.66 | 319.59 | 318.5 | 324.48 | 318.17 |
| 325.08 | 318.14 | 333.13 | 317.72 | 346.07 | 317.45 | 346.64 | 317.43 | 348.88 | 317.31 |
| 357.77 | 317.01 | 358.08 | 316.98 | 360.09 | 316.89 | 365.81 | 316.6 | 370.08 | 316.46 |
| 373.45 | 316.29 | 375.08 | 316.27 | 375.25 | 316.26 | 377.95 | 316.21 | 379.83 | 316.14 |
| 380.91 | 316.09 | 381.18 | 316.06 | 382.12 | 316.01 | 382.24 | 315.99 | 383.11 | 316.01 |
| 386.71 | 316.01 | 392.04 | 315.95 | 420.32 | 315.84 | 421.07 | 315.85 | 422.07 | 315.85 |
| 424.42 | 315.86 | 424.96 | 315.89 | 427.64 | 316.01 | 434.26 | 316.07 | 438.94 | 316.07 |
| 446.33 | 316.03 | 457.54 | 315.89 | 458.16 | 315.84 | 459.51 | 315.8 | 460.08 | 315.8 |
| 462.45 | 315.84 | 462.71 | 315.85 | 465.29 | 315.89 | 466.96 | 315.94 | 467.66 | 315.94 |
| 490.88 | 316.4 | 491.88 | 316.43 | 495.68 | 316.52 | 498.47 | 316.57 | 501.54 | 316.61 |
| 503.73 | 316.62 | 505.65 | 316.62 | 508.53 | 316.59 | 515.77 | 316.55 | 515.98 | 316.56 |
| 518.72 | 316.55 | 520.66 | 316.56 | 521.54 | 316.53 | 523 | 316.49 | 523.82 | 316.45 |
| 523.95 | 316.42 | 526.33 | 316.46 | 526.44 | 316.47 | 528.5 | 316.51 | 530.09 | 316.61 |
| 531.37 | 316.72 | 543.15 | 317.19 | 557.7 | 317.42 | 567.42 | 317.64 | 574.1 | 317.7 |
| 585.51 | 317.89 | 588.11 | 317.93 | 591.03 | 317.97 | 596.85 | 317.99 | 600.23 | 317.95 |
| 605.18 | 317.83 | 606.46 | 317.75 | 613.97 | 317.15 | 616.17 | 317.08 | 619.91 | 317.06 |
| 623.42 | 317.02 | 623.7 | 317.08 | 634.2 | 317.04 | 635.24 | 317.01 | 642.4 | 316.86 |
| 644.04 | 316.85 | 646.27 | 316.75 | 647.38 | 316.71 | 648.58 | 316.65 | 649.56 | 316.64 |
| 655.12 | 316.54 | 657.32 | 316.54 | 660.2 | 316.56 | 661.28 | 316.56 | 661.52 | 316.55 |
| 666.76 | 316.5 | 668.27 | 316.47 | 668.43 | 316.5 | 670.08 | 316.51 | 671.91 | 316.43 |
| 677.13 | 316.33 | 677.66 | 316.28 | 680 | 316.1 | 683.07 | 316.07 | 687.84 | 316.05 |
| 689.8 | 316.07 | 690.69 | 316.12 | 692.71 | 316.08 | 697.93 | 316.17 | 698.23 | 316.18 |
| 707.83 | 316.29 | 709.44 | 316.29 | 722.74 | 316.41 | 737.18 | 316.5 | 743.25 | 316.59 |
| 745.49 | 316.66 | 750.4 | 316.68 | 753.01 | 316.78 | 753.62 | 316.78 | 755.57 | 316.85 |
| 756.18 | 316.86 | 757.74 | 316.92 | 763.49 | 316.92 | 764.58 | 316.9 | 765.07 | 316.91 |
| 767.1 | 316.91 | 772.83 | 316.78 | 773.82 | 316.75 | 774.67 | 316.68 | 776.11 | 316.65 |
| 777.39 | 316.64 | 777.71 | 316.65 | 779.63 | 316.63 | 782.26 | 316.62 | 789.1 | 316.56 |
| 790.34 | 316.57 | 792.51 | 316.58 | 798.73 | 316.54 | 801.7 | 316.44 | 802.31 | 316.44 |
| 803.66 | 316.39 | 809.24 | 316.32 | 815.65 | 316.25 | 820.14 | 316.19 | 820.55 | 316.19 |
| 823.1 | 316.16 | 823.49 | 316.13 | 828.65 | 316.02 | 831.73 | 316.02 | 837 | 316.04 |
| 840.36 | 316.08 | 841.09 | 316.08 | 846.27 | 316.06 | 846.87 | 316.06 | 849.63 | 316.09 |
| 851.32 | 316.13 | 855.51 | 316.28 | 856.36 | 316.3 | 864.8 | 316.58 | 865.9 | 316.6 |
| 867.25 | 316.59 | 867.34 | 316.58 | 869.62 | 316.52 | 873.47 | 316.25 | 874.12 | 316.26 |
| 875.64 | 316.12 | 877.18 | 316.04 | 879.7 | 315.93 | 880.27 | 315.91 | 881.33 | 315.91 |
| 883.24 | 315.93 | 885.17 | 315.96 | 887.46 | 316.03 | 889.07 | 316.05 | 890.69 | 316.09 |
| 892.53 | 316.26 | 893.73 | 316.3 | 901.63 | 316.16 | 903.49 | 316.07 | 905.42 | 315.96 |
| 906.14 | 315.91 | 906.86 | 315.9 | 911.54 | 315.82 | 916.66 | 315.69 | 919.56 | 315.66 |
| 922.7 | 315.59 | 924.29 | 315.55 | 924.74 | 315.56 | 925.55 | 315.54 | 926.53 | 315.53 |
| 927.3 | 315.49 | 928.6 | 315.47 | 929.37 | 315.48 | 929.96 | 315.55 | 930.27 | 315.64 |
| 930.55 | 315.65 | 932.25 | 315.64 | 935.76 | 315.7 | 943.7 | 315.86 | 951.55 | 316.01 |
| 952.29 | 316.02 | 953.51 | 316.05 | 956.21 | 316.09 | 957.48 | 316.15 | 958.16 | 316.17 |
| 959.9 | 316.2 | 961.25 | 316.17 | 963.76 | 316.16 | 964.2 | 316.15 | 966.36 | 316.18 |
| 968.01 | 316.19 | 968.6 | 316.21 | 969.61 | 316.2 | 971.9 | 316.23 | 973.77 | 316.24 |
| 975.37 | 316.21 | 975.86 | 316.18 | 977.26 | 316.18 | 981.05 | 316.19 | 987.46 | 316.3 |
| 987.97 | 316.32 | 988.77 | 316.33 | 994.95 | 316.47 | 1002.47 | 316.46 | 1007.13 | 316.49 |
| 1007.56 | 316.52 | 1008.59 | 316.5 | 1011.8 | 316.31 | 1013.48 | 316.25 | 1013.95 | 316.26 |
| 1014.9 | 316.35 | 1018.55 | 316.34 | 1021.15 | 316.28 | 1022.31 | 316.26 | 1022.82 | 316.28 |
| 1024.82 | 316.31 | 1026.25 | 316.29 | 1027.98 | 316.34 | 1029.12 | 316.39 | 1036.18 | 316.75 |
| 1036.35 | 316.75 | 1040.06 | 316.84 | 1040.34 | 316.85 | 1046.95 | 316.82 | 1047.58 | 316.75 |
| 1049.14 | 316.65 | 1052.63 | 316.47 | 1055.29 | 316.44 | 1055.57 | 316.42 | 1066.55 | 316.7 |
| 1075.68 | 317.11 | 1076.22 | 317.13 | 1084.78 | 317.14 | 1085.25 | 317.1 | 1086.83 | 317 |
| 1089.27 | 316.89 | 1089.85 | 316.88 | 1090.48 | 316.83 | 1091.01 | 316.83 | 1091.83 | 316.87 |
| 1092.09 | 316.9 | 1092.74 | 316.91 | 1095.1 | 316.93 | 1095.23 | 316.92 | 1098.21 | 316.92 |
| 1099.43 | 316.88 | 1100.06 | 316.85 | 1100.85 | 316.84 | 1103.12 | 316.84 | 1103.5 | 316.89 |
| 1104.16 | 316.94 | 1106.38 | 317.16 | 1110.05 | 317.33 | 1115.26 | 317.41 | 1115.85 | 317.43 |
| 1117.06 | 317.45 | 1117.84 | 317.45 | 1120 | 317.4 | 1121.67 | 317.28 | 1125.27 | 317.14 |
| 1125.85 | 317.1 | 1128.53 | 317.15 | 1132.98 | 317.22 | 1133.48 | 317.23 | 1135.6 | 317.15 |
| 1136.76 | 317.08 | 1137.43 | 317.08 | 1144.79 | 316.95 | 1149.98 | 316.95 | 1153.2 | 316.87 |
| 1155 | 316.86 | 1155.54 | 316.85 | 1159.94 | 316.81 | 1162.21 | 316.83 | 1163.41 | 316.78 |
| 1180.05 | 316.86 | 1188.27 | 317.08 | 1188.73 | 317.23 | 1189.77 | 317.5 | 1190.21 | 317.74 |
| 1190.91 | 317.92 | 1191.58 | 317.96 | 1191.64 | 317.95 | 1208.09 | 318.33 | 1210.3 | 318.33 |
| 1211.39 | 318.25 | 1217.42 | 318.02 | 1218.4 | 318.03 | 1218.8 | 318.05 | 1221.19 | 318.07 |
| 1222.07 | 318.1 | 1222.58 | 318.1 | 1223.88 | 318.08 | 1229.55 | 318 | 1230.44 | 317.95 |
| 1231.28 | 317.94 | 1240.23 | 318.03 | 1243.11 | 318.17 | 1243.32 | 318.17 | 1252.76 | 317.91 |
| 1253.17 | 317.92 | 1257.74 | 317.53 | 1258.53 | 317.43 | 1261.59 | 317.17 | 1261.82 | 317.16 |
| 1267.89 | 317.24 | 1268.6 | 317.29 | 1269.19 | 317.3 | 1271.34 | 317.3 | 1272.59 | 317.32 |
| 1273.66 | 317.32 | 1275.25 | 317.2 | 1276.17 | 317.17 | 1276.36 | 317.22 | 1277.17 | 317.25 |
| 1278.67 | 317.29 | 1278.86 | 317.28 | 1280.97 | 317.29 | 1288.31 | 317.26 | 1290.66 | 317.29 |
| 1294.25 | 317.32 | 1303.16 | 317.44 | 1304.43 | 317.44 | 1308.93 | 317.46 | 1312.22 | 317.49 |
| 1313.88 | 317.57 | 1314.27 | 317.57 | 1316.84 | 317.67 | 1317.78 | 317.74 | 1318.21 | 317.76 |
| 1322.23 | 318.03 | 1331.79 | 318.24 | 1332.39 | 318.25 | 1340.83 | 318.35 | 1341.56 | 318.39 |
| 1342.84 | 318.42 | 1344.75 | 318.45 | 1347.59 | 318.47 | 1355.91 | 318.63 | 1363.43 | 318.63 |
| 1364.12 | 318.62 | 1366.07 | 318.62 | 1367.76 | 318.59 | 1368.08 | 318.63 | 1370.82 | 318.58 |
| 1371.75 | 318.55 | 1373.29 | 318.54 | 1373.72 | 318.56 | 1375.2 | 318.65 | 1375.63 | 318.7 |
| 1375.84 | 318.76 | 1376.94 | 318.93 | 1378.15 | 319.23 | 1379.51 | 319.49 | 1384.16 | 320.3 |
| 1385.17 | 320.46 | 1387.77 | 320.78 | 1390.43 | 321.21 | 1390.97 | 321.34 | 1392.43 | 321.59 |
| 1393.39 | 321.78 | 1395.17 | 322.09 | 1397.22 | 322.73 | 1398.95 | 323.24 | 1399.89 | 323.51 |
| 1401.69 | 324.05 | 1402.52 | 324.28 | 1403.66 | 324.62 | 1404.93 | 324.98 | 1406.13 | 325.33 |
| 1407.13 | 325.6 | 1407.98 | 325.85 | 1408.92 | 326.15 | 1411.25 | 326.85 | 1412.03 | 327.11 |
| 1414.37 | 327.93 | 1415.3 | 328.31 | 1415.71 | 328.44 | 1417.88 | 329 | 1418.19 | 329.06 |
| 1419.42 | 329.41 | 1421.58 | 330.06 | 1424.1 | 330.76 | 1425.11 | 331.06 | 1426.17 | 331.35 |
| 1427.7 | 331.89 | 1428.33 | 332.12 | 1429.85 | 332.33 | 1434.17 | 332.79 | 1436.31 | 333.04 |
| 1437.97 | 333.22 | 1439.95 | 333.41 | 1440.43 | 333.45 | 1443.26 | 333.72 | 1443.97 | 333.77 |
| 1450.89 | 334.38 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 120.63 | .05 | 606.46 | .04 | 1371.75 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

606.46 1371.75 26.21 19.74 18.73 .1 .3

Left Levee Station= 596.24 Elevation=318.1667

Right Levee Station=1319.562 Elevation=317.0467

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3394.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 112.02 | 336.4 | 113.06 | 336.19 | 113.74 | 335.99 | 115.12 | 335.47 | 116.66 | 334.93 |
| 118.03 | 334.47 | 118.32 | 334.36 | 120.15 | 333.74 | 121.47 | 333.27 | 123.6 | 332.72 |
| 130.69 | 331.07 | 131.24 | 330.95 | 133.07 | 330.52 | 134.98 | 330.11 | 135.92 | 329.95 |
| 138.54 | 329.7 | 144.89 | 329.15 | 147.76 | 328.91 | 148.81 | 328.83 | 149.33 | 328.81 |
| 149.82 | 328.85 | 150.59 | 328.81 | 152.02 | 328.72 | 158.96 | 328.13 | 166.95 | 327.52 |
| 169.73 | 327.37 | 178.41 | 326.77 | 190.59 | 326.05 | 191.54 | 325.95 | 193.01 | 325.85 |
| 199.37 | 325.52 | 200.31 | 325.45 | 201.57 | 325.37 | 206.48 | 325 | 208.69 | 324.8 |
| 210.15 | 324.64 | 213.1 | 324.28 | 214.17 | 324.09 | 216.1 | 323.78 | 218.32 | 323.37 |
| 219.39 | 323.19 | 221.36 | 322.82 | 221.75 | 322.76 | 225.14 | 322.44 | 226.18 | 322.36 |
| 227.47 | 322.39 | 228.31 | 322.31 | 228.78 | 322.32 | 230.56 | 322.23 | 232.22 | 322.11 |
| 233.13 | 322.07 | 235.44 | 321.98 | 238.76 | 321.97 | 241.5 | 321.85 | 245.35 | 321.8 |
| 246.67 | 321.76 | 247.93 | 321.7 | 250.06 | 321.64 | 253.97 | 321.47 | 256.22 | 321.31 |
| 257.5 | 321.21 | 257.93 | 321.2 | 261.13 | 320.92 | 263.74 | 320.68 | 267.11 | 320.4 |
| 275.12 | 319.88 | 276.24 | 319.83 | 276.61 | 319.83 | 276.68 | 319.89 | 277.37 | 319.89 |
| 279.58 | 319.79 | 280.67 | 319.72 | 281.78 | 319.68 | 283.74 | 319.57 | 288.8 | 319.33 |
| 291.8 | 319.16 | 302.76 | 318.62 | 302.86 | 318.61 | 305.67 | 318.44 | 310.42 | 318.09 |
| 311.01 | 318.05 | 318.85 | 317.6 | 331.44 | 317.22 | 331.99 | 317.2 | 334.18 | 317.08 |
| 342.83 | 316.75 | 343.13 | 316.71 | 345.09 | 316.62 | 350.65 | 316.32 | 354.81 | 316.17 |
| 358.25 | 315.98 | 359.68 | 315.96 | 359.85 | 315.95 | 362.47 | 315.9 | 365.35 | 315.77 |
| 365.61 | 315.74 | 366.53 | 315.69 | 366.65 | 315.67 | 367.82 | 315.69 | 371 | 315.67 |
| 376.18 | 315.59 | 403.71 | 315.43 | 404.44 | 315.44 | 405.42 | 315.43 | 407.7 | 315.43 |
| 408.23 | 315.46 | 410.84 | 315.58 | 417.27 | 315.64 | 421.84 | 315.64 | 429.03 | 315.61 |
| 439.94 | 315.47 | 440.54 | 315.43 | 441.52 | 315.4 | 442.41 | 315.4 | 444.72 | 315.43 |
| 444.97 | 315.44 | 447.39 | 315.48 | 449.11 | 315.52 | 449.79 | 315.52 | 472.39 | 315.96 |
| 473.36 | 315.99 | 477.06 | 316.07 | 479.78 | 316.12 | 484.89 | 316.17 | 486.77 | 316.16 |
| 489.57 | 316.13 | 496.62 | 316.09 | 499.24 | 316.08 | 499.49 | 316.09 | 501.37 | 316.09 |
| 503.92 | 316.01 | 504.45 | 315.97 | 504.57 | 315.94 | 509 | 316.02 | 510.55 | 316.12 |
| 511.8 | 316.24 | 523.26 | 316.71 | 537.43 | 316.96 | 546.89 | 317.18 | 553.38 | 317.26 |
| 564.49 | 317.46 | 567.02 | 317.5 | 569.86 | 317.54 | 575.53 | 317.56 | 578.82 | 317.52 |
| 583.64 | 317.42 | 584.89 | 317.34 | 592.07 | 316.77 | 594.17 | 316.7 | 597.76 | 316.67 |
| 601.11 | 316.63 | 601.38 | 316.68 | 611.43 | 316.61 | 612.42 | 316.58 | 619.28 | 316.43 |
| 620.85 | 316.42 | 622.97 | 316.31 | 624.04 | 316.27 | 625.19 | 316.21 | 626.12 | 316.2 |
| 629.3 | 316.13 | 631.45 | 316.1 | 633.55 | 316.1 | 636.3 | 316.12 | 637.57 | 316.11 |
| 642.59 | 316.07 | 644.03 | 316.04 | 644.19 | 316.07 | 645.76 | 316.09 | 647.51 | 316.01 |
| 652.5 | 315.92 | 655.26 | 315.71 | 658.19 | 315.68 | 662.75 | 315.68 | 664.63 | 315.7 |
| 665.48 | 315.76 | 667.41 | 315.73 | 672.41 | 315.82 | 672.69 | 315.83 | 681.88 | 315.93 |
| 683.42 | 315.93 | 696.15 | 316.04 | 709.97 | 316.12 | 715.77 | 316.21 | 717.92 | 316.27 |
| 722.62 | 316.29 | 725.11 | 316.38 | 725.7 | 316.38 | 727.57 | 316.45 | 728.15 | 316.46 |
| 729.64 | 316.51 | 735.14 | 316.51 | 736.19 | 316.5 | 738.6 | 316.5 | 744.08 | 316.38 |
| 745.03 | 316.34 | 745.84 | 316.29 | 747.22 | 316.25 | 748.44 | 316.24 | 748.75 | 316.25 |
| 750.59 | 316.23 | 753.1 | 316.22 | 759.65 | 316.17 | 760.83 | 316.17 | 761.12 | 316.18 |
| 762.91 | 316.19 | 768.86 | 316.15 | 769.08 | 316.13 | 771.7 | 316.04 | 772.29 | 316.05 |
| 773.58 | 316.01 | 778.92 | 315.93 | 785.05 | 315.87 | 789.35 | 315.82 | 789.74 | 315.82 |
| 792.18 | 315.78 | 792.55 | 315.76 | 797.49 | 315.65 | 800.44 | 315.65 | 805.49 | 315.68 |
| 806.47 | 315.68 | 808.7 | 315.71 | 809.39 | 315.71 | 814.35 | 315.68 | 814.93 | 315.69 |
| 817.56 | 315.71 | 819.18 | 315.75 | 823.19 | 315.89 | 824 | 315.9 | 832.08 | 316.16 |
| 833.13 | 316.18 | 834.51 | 316.17 | 836.69 | 316.1 | 840.37 | 315.86 | 841 | 315.86 |
| 842.45 | 315.73 | 843.93 | 315.65 | 846.34 | 315.55 | 847.9 | 315.54 | 849.73 | 315.55 |
| 851.57 | 315.58 | 853.77 | 315.65 | 855.31 | 315.67 | 856.85 | 315.7 | 858.62 | 315.85 |
| 859.76 | 315.89 | 867.32 | 315.76 | 867.78 | 315.75 | 870.95 | 315.58 | 871.64 | 315.53 |
| 872.33 | 315.51 | 873.96 | 315.49 | 876.81 | 315.44 | 881.71 | 315.31 | 884.48 | 315.28 |
| 887.48 | 315.21 | 889 | 315.17 | 889.44 | 315.18 | 890.59 | 315.17 | 891.89 | 315.12 |
| 893.13 | 315.1 | 893.9 | 315.11 | 894.53 | 315.18 | 894.87 | 315.28 | 895.17 | 315.29 |
| 897.01 | 315.28 | 900.8 | 315.35 | 909.37 | 315.52 | 917.84 | 315.68 | 918.64 | 315.7 |
| 921.97 | 315.75 | 922.88 | 315.77 | 924.25 | 315.83 | 926.09 | 315.87 | 927.32 | 315.88 |
| 928.32 | 315.84 | 931.02 | 315.84 | 931.5 | 315.83 | 933.83 | 315.85 | 935.61 | 315.86 |
| 936.25 | 315.89 | 937.34 | 315.88 | 939.81 | 315.91 | 941.83 | 315.92 | 943.56 | 315.89 |
| 944.09 | 315.85 | 945.6 | 315.86 | 949.69 | 315.86 | 956.61 | 315.98 | 957.16 | 316 |
| 964.7 | 316.17 | 965.44 | 316.16 | 972.82 | 316.14 | 977.84 | 316.17 | 978.31 | 316.2 |
| 979.43 | 316.18 | 982.89 | 315.97 | 984.71 | 315.9 | 985.22 | 315.91 | 986.16 | 316 |
| 990.18 | 315.99 | 991.16 | 315.97 | 992.98 | 315.92 | 994.23 | 315.9 | 994.78 | 315.92 |
| 996.95 | 315.96 | 997.92 | 315.95 | 998.3 | 315.93 | 1000.35 | 315.98 | 1001.58 | 316.04 |
| 1009.21 | 316.43 | 1009.39 | 316.43 | 1013.41 | 316.52 | 1013.7 | 316.53 | 1020.84 | 316.5 |
| 1021.52 | 316.42 | 1022.63 | 316.34 | 1023.21 | 316.32 | 1026.97 | 316.11 | 1029.84 | 316.08 |
| 1030.15 | 316.06 | 1042 | 316.36 | 1051.85 | 316.81 | 1052.44 | 316.83 | 1061.68 | 316.84 |
| 1062.19 | 316.8 | 1063.89 | 316.69 | 1066.53 | 316.57 | 1067.15 | 316.56 | 1067.83 | 316.5 |
| 1068.4 | 316.5 | 1069.3 | 316.54 | 1069.68 | 316.58 | 1070.28 | 316.58 | 1072.82 | 316.61 |
| 1076.18 | 316.6 | 1077.2 | 316.57 | 1078.18 | 316.52 | 1079.03 | 316.51 | 1081.48 | 316.51 |
| 1081.89 | 316.56 | 1082.6 | 316.62 | 1085 | 316.87 | 1088.96 | 317.04 | 1091.71 | 317.1 |
| 1094.59 | 317.14 | 1095.22 | 317.16 | 1097.37 | 317.19 | 1097.71 | 317.17 | 1099.31 | 317.15 |
| 1100.65 | 317.07 | 1101.5 | 317.01 | 1101.86 | 317 | 1104.23 | 316.9 | 1104.41 | 316.88 |
| 1105.45 | 316.85 | 1105.95 | 316.81 | 1108.81 | 316.86 | 1108.91 | 316.87 | 1113.72 | 316.94 |
| 1114.25 | 316.95 | 1116.54 | 316.86 | 1117.8 | 316.79 | 1118.52 | 316.79 | 1126.47 | 316.65 |
| 1132.07 | 316.64 | 1135.55 | 316.56 | 1137.49 | 316.55 | 1138.07 | 316.53 | 1142.82 | 316.49 |
| 1144.93 | 316.52 | 1146.57 | 316.46 | 1164.53 | 316.55 | 1165.37 | 316.56 | 1173.41 | 316.79 |
| 1173.9 | 316.95 | 1175.03 | 317.25 | 1175.5 | 317.52 | 1176.26 | 317.71 | 1177.04 | 317.75 |
| 1194.81 | 318.17 | 1196.94 | 318.17 | 1197.67 | 318.13 | 1198.37 | 318.07 | 1204.88 | 317.83 |
| 1206.37 | 317.85 | 1208.95 | 317.87 | 1209.9 | 317.91 | 1211.41 | 317.9 | 1211.86 | 317.88 |
| 1217.97 | 317.78 | 1218.93 | 317.73 | 1219.84 | 317.72 | 1229.51 | 317.8 | 1232.62 | 317.94 |
| 1232.84 | 317.94 | 1243.03 | 317.63 | 1243.48 | 317.65 | 1248.41 | 317.2 | 1249.26 | 317.09 |
| 1252.56 | 316.8 | 1252.81 | 316.79 | 1259.37 | 316.87 | 1260.13 | 316.92 | 1263.09 | 316.93 |
| 1264.44 | 316.95 | 1265.6 | 316.94 | 1267.31 | 316.81 | 1268.31 | 316.77 | 1268.51 | 316.82 |
| 1269.22 | 316.86 | 1270.56 | 316.89 | 1273.48 | 316.89 | 1281.41 | 316.84 | 1283.95 | 316.87 |
| 1287.82 | 316.9 | 1297.44 | 317.01 | 1298.62 | 317.01 | 1298.82 | 317 | 1303.68 | 317.02 |
| 1304.83 | 317.02 | 1307.23 | 317.05 | 1309.01 | 317.12 | 1309.44 | 317.12 | 1312.22 | 317.23 |
| 1313.23 | 317.3 | 1313.7 | 317.32 | 1318.03 | 317.6 | 1328.35 | 317.79 | 1329 | 317.8 |
| 1338.12 | 317.89 | 1338.9 | 317.94 | 1339.92 | 317.96 | 1340.28 | 317.98 | 1342.34 | 318 |
| 1345.41 | 318.01 | 1354.4 | 318.15 | 1355.83 | 318.16 | 1362.51 | 318.12 | 1363.26 | 318.11 |
| 1365.37 | 318.11 | 1367.18 | 318.08 | 1367.53 | 318.12 | 1368.55 | 318.09 | 1370.96 | 318.05 |
| 1371.51 | 318.02 | 1372.97 | 318.02 | 1374.99 | 318.12 | 1375.42 | 318.17 | 1376.75 | 318.39 |
| 1377.2 | 318.51 | 1377.98 | 318.69 | 1379.36 | 318.96 | 1384.06 | 319.75 | 1385.09 | 319.9 |
| 1387.73 | 320.23 | 1390.42 | 320.66 | 1390.97 | 320.79 | 1392.45 | 321.05 | 1393.42 | 321.24 |
| 1395.1 | 321.54 | 1395.91 | 321.79 | 1397.3 | 322.25 | 1399.06 | 322.8 | 1400 | 323.08 |
| 1401.82 | 323.65 | 1403.82 | 324.27 | 1404.45 | 324.46 | 1405.11 | 324.64 | 1406.32 | 325.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1407.33 | 325.3 | 1408.2 | 325.57 | 1409.15 | 325.9 | 1411.51 | 326.64 | 1413.35 | 327.3 |
| 1414.67 | 327.79 | 1415.7 | 328.24 | 1416.03 | 328.34 | 1418.23 | 328.92 | 1418.54 | 328.99 |
| 1419.79 | 329.35 | 1421.98 | 330.03 | 1424.53 | 330.77 | 1425.55 | 331.08 | 1426.62 | 331.39 |
| 1428.18 | 331.94 | 1428.81 | 332.19 | 1430.35 | 332.38 | 1435.26 | 332.86 | 1436.89 | 333.05 |
| 1438.58 | 333.22 | 1440.58 | 333.39 | 1441.07 | 333.44 | 1443.94 | 333.69 | 1444.65 | 333.74 |
| 1451.66 | 334.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 112.02 | .05 | 584.89 | .04 | 1371.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 584.89 | 1371.51 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 574.94 Elevation=317.7283
Right Levee Station=1319.371 Elevation=316.7333

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3375.21*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 103.4 | 336.28 | 104.42 | 336.08 | 104.99 | 335.93 | 106.42 | 335.42 | 107.97 | 334.9 |
| 109.54 | 334.4 | 111.31 | 333.82 | 112.59 | 333.38 | 114.67 | 332.88 | 121.56 | 331.35 |
| 122.1 | 331.24 | 123.88 | 330.84 | 125.73 | 330.46 | 126.65 | 330.31 | 129.2 | 330.08 |
| 135.37 | 329.56 | 138.16 | 329.33 | 139.19 | 329.26 | 139.69 | 329.24 | 140.17 | 329.28 |
| 140.91 | 329.24 | 142.3 | 329.15 | 149.05 | 328.6 | 156.83 | 328.03 | 159.53 | 327.88 |
| 167.98 | 327.29 | 179.82 | 326.58 | 180.74 | 326.49 | 182.17 | 326.38 | 188.36 | 326.04 |
| 189.28 | 325.96 | 190.5 | 325.88 | 195.28 | 325.49 | 197.42 | 325.28 | 198.84 | 325.11 |
| 200.9 | 324.82 | 201.71 | 324.72 | 202.76 | 324.52 | 204.63 | 324.18 | 206.79 | 323.74 |
| 207.83 | 323.54 | 209.75 | 323.14 | 210.13 | 323.08 | 214.22 | 322.67 | 214.43 | 322.66 |
| 215.69 | 322.69 | 216.5 | 322.61 | 216.96 | 322.61 | 218.69 | 322.52 | 220.31 | 322.4 |
| 221.2 | 322.35 | 223.44 | 322.25 | 226.67 | 322.24 | 229.33 | 322.11 | 233.08 | 322.05 |
| 234.36 | 322.01 | 235.59 | 321.95 | 237.66 | 321.88 | 241.46 | 321.69 | 243.65 | 321.52 |
| 244.89 | 321.41 | 245.32 | 321.4 | 248.43 | 321.09 | 249.03 | 321.02 | 250.97 | 320.82 |
| 254.25 | 320.53 | 257.09 | 320.32 | 257.1 | 320.31 | 262.03 | 319.95 | 263.12 | 319.89 |
| 263.48 | 319.89 | 263.55 | 319.94 | 264.22 | 319.93 | 266.37 | 319.81 | 267.44 | 319.74 |
| 268.51 | 319.69 | 270.23 | 319.59 | 275.34 | 319.33 | 278.25 | 319.15 | 288.92 | 318.57 |
| 289.01 | 318.56 | 291.75 | 318.38 | 296.37 | 318 | 296.94 | 317.96 | 304.56 | 317.47 |
| 317.35 | 316.98 | 319.47 | 316.84 | 327.88 | 316.48 | 328.18 | 316.45 | 330.08 | 316.35 |
| 335.49 | 316.04 | 339.54 | 315.87 | 342.73 | 315.68 | 346.99 | 315.58 | 349.79 | 315.45 |
| 350.04 | 315.42 | 350.94 | 315.37 | 355.28 | 315.33 | 360.32 | 315.24 | 387.1 | 315.01 |
| 387.81 | 315.02 | 388.76 | 315.01 | 390.98 | 315 | 391.5 | 315.03 | 394.03 | 315.15 |
| 400.29 | 315.21 | 404.73 | 315.22 | 411.73 | 315.19 | 422.34 | 315.06 | 422.92 | 315.02 |
| 424.2 | 314.99 | 424.74 | 314.99 | 426.98 | 315.02 | 427.23 | 315.03 | 429.58 | 315.07 |
| 431.25 | 315.11 | 431.92 | 315.11 | 453.89 | 315.52 | 454.84 | 315.55 | 458.44 | 315.63 |
| 461.08 | 315.67 | 463.99 | 315.7 | 466.05 | 315.71 | 467.88 | 315.7 | 470.6 | 315.67 |
| 477.46 | 315.62 | 477.65 | 315.63 | 480.01 | 315.61 | 480.25 | 315.62 | 482.09 | 315.62 |
| 484.3 | 315.55 | 485.08 | 315.5 | 485.2 | 315.46 | 487.46 | 315.49 | 487.56 | 315.5 |
| 489.5 | 315.53 | 491.01 | 315.64 | 492.22 | 315.76 | 503.38 | 316.22 | 517.15 | 316.51 |
| 526.36 | 316.73 | 532.67 | 316.82 | 543.47 | 317.03 | 545.35 | 317.06 | 548.7 | 317.12 |
| 554.22 | 317.13 | 557.41 | 317.1 | 562.1 | 317 | 563.31 | 316.93 | 570.17 | 316.39 |
| 572.18 | 316.31 | 575.6 | 316.28 | 578.8 | 316.23 | 579.06 | 316.28 | 588.65 | 316.18 |
| 589.6 | 316.15 | 596.15 | 316 | 597.07 | 315.99 | 597.65 | 316 | 599.68 | 315.88 |
| 601.19 | 315.8 | 602.14 | 315.76 | 602.69 | 315.76 | 605.72 | 315.69 | 607.78 | 315.65 |
| 612.41 | 315.67 | 613.4 | 315.68 | 613.62 | 315.67 | 618.41 | 315.64 | 619.85 | 315.62 |
| 619.94 | 315.64 | 621.44 | 315.66 | 623.12 | 315.59 | 627.88 | 315.51 | 628.37 | 315.47 |
| 630.51 | 315.32 | 633.31 | 315.3 | 635.47 | 315.3 | 637.66 | 315.31 | 639.46 | 315.34 |
| 640.27 | 315.41 | 642.11 | 315.38 | 646.89 | 315.46 | 647.16 | 315.47 | 655.93 | 315.57 |
| 657.41 | 315.57 | 669.56 | 315.67 | 682.76 | 315.74 | 688.3 | 315.83 | 690.35 | 315.88 |
| 694.83 | 315.9 | 697.22 | 315.98 | 697.78 | 315.98 | 699.56 | 316.05 | 700.11 | 316.05 |
| 701.54 | 316.11 | 706.79 | 316.1 | 707.79 | 316.09 | 708.23 | 316.1 | 710.09 | 316.09 |
| 715.33 | 315.98 | 716.23 | 315.94 | 717.01 | 315.89 | 718.33 | 315.86 | 721.54 | 315.84 |
| 723.94 | 315.83 | 730.2 | 315.77 | 733.31 | 315.79 | 738.99 | 315.75 | 741.71 | 315.65 |
| 742.27 | 315.66 | 743.5 | 315.62 | 748.6 | 315.55 | 754.46 | 315.49 | 758.56 | 315.44 |
| 758.93 | 315.44 | 761.26 | 315.41 | 761.62 | 315.39 | 766.33 | 315.29 | 769.15 | 315.29 |
| 773.97 | 315.31 | 774.91 | 315.31 | 777.04 | 315.34 | 777.7 | 315.34 | 782.43 | 315.31 |
| 782.98 | 315.31 | 785.5 | 315.33 | 787.05 | 315.37 | 790.88 | 315.5 | 791.65 | 315.51 |
| 799.37 | 315.75 | 800.57 | 315.76 | 801.68 | 315.75 | 803.77 | 315.69 | 807.28 | 315.46 |
| 807.88 | 315.46 | 809.27 | 315.34 | 810.68 | 315.27 | 813.5 | 315.16 | 814.46 | 315.16 |
| 817.98 | 315.2 | 820.07 | 315.26 | 821.54 | 315.28 | 823.02 | 315.31 | 824.7 | 315.45 |
| 825.8 | 315.48 | 833.02 | 315.36 | 834.38 | 315.31 | 837.14 | 315.15 | 837.8 | 315.13 |
| 839.35 | 315.11 | 842.07 | 315.06 | 846.75 | 314.93 | 849.4 | 314.9 | 852.27 | 314.84 |
| 853.72 | 314.8 | 854.13 | 314.81 | 855.77 | 314.78 | 858.05 | 314.72 | 858.43 | 314.74 |
| 859.11 | 314.82 | 859.47 | 314.93 | 859.79 | 314.94 | 861.77 | 314.93 | 865.83 | 315 |
| 875.04 | 315.19 | 884.14 | 315.35 | 885.5 | 315.38 | 886.41 | 315.39 | 888.57 | 315.43 |
| 889.42 | 315.43 | 891.01 | 315.51 | 892.19 | 315.53 | 892.74 | 315.55 | 894.31 | 315.56 |
| 895.38 | 315.52 | 898.29 | 315.51 | 898.8 | 315.5 | 901.31 | 315.53 | 903.22 | 315.54 |
| 903.9 | 315.57 | 905.08 | 315.56 | 907.73 | 315.59 | 909.9 | 315.6 | 912.14 | 315.55 |
| 912.32 | 315.52 | 913.94 | 315.53 | 918.33 | 315.53 | 925.76 | 315.66 | 926.35 | 315.68 |
| 934.45 | 315.86 | 935.24 | 315.85 | 943.02 | 315.83 | 943.17 | 315.82 | 948.56 | 315.85 |
| 949.06 | 315.88 | 950.26 | 315.86 | 953.98 | 315.62 | 955.93 | 315.54 | 956.48 | 315.56 |
| 957.57 | 315.66 | 961.81 | 315.64 | 962.86 | 315.62 | 966.02 | 315.54 | 966.16 | 315.55 |
| 969.08 | 315.6 | 970.3 | 315.59 | 970.73 | 315.57 | 972.73 | 315.63 | 974.05 | 315.69 |
| 982.24 | 316.1 | 982.44 | 316.1 | 987.06 | 316.22 | 994.73 | 316.18 | 995.46 | 316.09 |
| 996.65 | 316.01 | 997.27 | 315.98 | 1001.31 | 315.76 | 1004.4 | 315.72 | 1004.72 | 315.7 |
| 1017.45 | 316.03 | 1028.03 | 316.52 | 1028.66 | 316.54 | 1038.58 | 316.55 | 1039.13 | 316.5 |
| 1040.95 | 316.38 | 1043.79 | 316.25 | 1044.46 | 316.24 | 1045.19 | 316.17 | 1046.07 | 316.18 |
| 1046.76 | 316.22 | 1047.18 | 316.26 | 1047.81 | 316.26 | 1050.54 | 316.29 | 1054.15 | 316.28 |
| 1055.24 | 316.25 | 1056.3 | 316.2 | 1057.21 | 316.18 | 1059.84 | 316.19 | 1060.28 | 316.24 |
| 1061.05 | 316.3 | 1063.62 | 316.57 | 1067.88 | 316.76 | 1070.82 | 316.82 | 1073.91 | 316.87 |
| 1074.6 | 316.89 | 1075.63 | 316.9 | 1076.81 | 316.93 | 1077.27 | 316.91 | 1079.4 | 316.87 |
| 1081.34 | 316.74 | 1081.72 | 316.73 | 1084.47 | 316.6 | 1085.51 | 316.57 | 1086.11 | 316.52 |
| 1086.84 | 316.52 | 1089.29 | 316.58 | 1095.03 | 316.67 | 1097.49 | 316.58 | 1098.83 | 316.5 |
| 1099.61 | 316.49 | 1108.14 | 316.35 | 1114.16 | 316.34 | 1117.9 | 316.24 | 1119.98 | 316.23 |
| 1120.6 | 316.21 | 1125.7 | 316.17 | 1127.97 | 316.2 | 1129.73 | 316.13 | 1149.02 | 316.23 |
| 1149.92 | 316.25 | 1158.55 | 316.5 | 1159.08 | 316.67 | 1160.28 | 317 | 1160.79 | 317.29 |
| 1161.6 | 317.5 | 1162.38 | 317.55 | 1162.45 | 317.54 | 1181.52 | 318 | 1183.82 | 318 |
| 1184.6 | 317.96 | 1185.35 | 317.89 | 1192.34 | 317.63 | 1196.71 | 317.68 | 1197.89 | 317.73 |
| 1198.32 | 317.73 | 1199.83 | 317.69 | 1206.39 | 317.57 | 1207.43 | 317.51 | 1208.4 | 317.49 |
| 1218.78 | 317.57 | 1222.36 | 317.72 | 1233.3 | 317.36 | 1233.78 | 317.38 | 1239.08 | 316.88 |
| 1239.99 | 316.75 | 1243.54 | 316.43 | 1243.8 | 316.43 | 1250.85 | 316.49 | 1251.67 | 316.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1254.85 | 316.55 | 1256.29 | 316.57 | 1257.53 | 316.56 | 1259.37 | 316.41 | 1260.44 | 316.37 |
| 1260.66 | 316.43 | 1261.6 | 316.47 | 1263.34 | 316.5 | 1263.56 | 316.49 | 1265.82 | 316.5 |
| 1266 | 316.49 | 1274.51 | 316.42 | 1277.24 | 316.46 | 1281.4 | 316.47 | 1291.72 | 316.57 |
| 1298.42 | 316.57 | 1302.23 | 316.6 | 1304.15 | 316.68 | 1304.61 | 316.68 | 1307.59 | 316.78 |
| 1309.05 | 316.88 | 1309.18 | 316.88 | 1313.83 | 317.17 | 1324.91 | 317.35 | 1325.62 | 317.36 |
| 1335.4 | 317.44 | 1336.25 | 317.49 | 1337.73 | 317.53 | 1339.94 | 317.55 | 1343.23 | 317.56 |
| 1352.88 | 317.68 | 1353.99 | 317.67 | 1354.42 | 317.68 | 1361.59 | 317.62 | 1362.4 | 317.6 |
| 1364.66 | 317.6 | 1366.61 | 317.56 | 1366.98 | 317.61 | 1368.79 | 317.56 | 1370.16 | 317.54 |
| 1371.26 | 317.5 | 1371.9 | 317.5 | 1372.82 | 317.48 | 1373.43 | 317.52 | 1374.78 | 317.59 |
| 1375.22 | 317.64 | 1375.44 | 317.69 | 1376.57 | 317.85 | 1377.81 | 318.16 | 1379.2 | 318.42 |
| 1383.97 | 319.2 | 1385.01 | 319.35 | 1386.82 | 319.57 | 1387.47 | 319.64 | 1387.68 | 319.68 |
| 1390.41 | 320.12 | 1390.66 | 320.18 | 1392.46 | 320.51 | 1393.44 | 320.71 | 1395.27 | 321.04 |
| 1397.38 | 321.77 | 1399.16 | 322.35 | 1400.11 | 322.65 | 1401.96 | 323.26 | 1402.82 | 323.53 |
| 1404.62 | 324.12 | 1405.29 | 324.31 | 1406.51 | 324.71 | 1407.54 | 325.01 | 1408.42 | 325.3 |
| 1409.38 | 325.65 | 1411.77 | 326.43 | 1413.41 | 327.05 | 1414.98 | 327.65 | 1415.92 | 328.09 |
| 1416.35 | 328.24 | 1416.7 | 328.33 | 1418.58 | 328.85 | 1418.89 | 328.91 | 1420.15 | 329.29 |
| 1422.37 | 330 | 1424.96 | 330.77 | 1425.99 | 331.1 | 1427.08 | 331.42 | 1428.65 | 331.99 |
| 1429.3 | 332.25 | 1430.85 | 332.43 | 1435.29 | 332.82 | 1435.82 | 332.87 | 1437.48 | 333.05 |
| 1439.19 | 333.22 | 1441.22 | 333.38 | 1441.71 | 333.43 | 1444.62 | 333.67 | 1445.34 | 333.71 |
| 1452.44 | 334.26 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 103.4 | .05 | 563.31 | .04 | 1371.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 563.31 | 1371.26 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 553.64 Elevation= 317.29
Right Levee Station= 1319.18 Elevation= 316.42

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3355.47*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 94.78 | 336.17 | 95.77 | 335.98 | 96.33 | 335.84 | 97.72 | 335.37 | 99.17 | 334.92 |
| 99.69 | 334.75 | 100.46 | 334.52 | 102.47 | 333.9 | 103.72 | 333.5 | 105.74 | 333.03 |
| 112.43 | 331.63 | 113.67 | 331.38 | 114.68 | 331.15 | 115.09 | 331.08 | 116.48 | 330.81 |
| 117.38 | 330.67 | 119.85 | 330.45 | 125.85 | 329.97 | 128.57 | 329.75 | 130.05 | 329.67 |
| 130.51 | 329.7 | 131.24 | 329.67 | 132.59 | 329.58 | 139.15 | 329.07 | 146.71 | 328.53 |
| 149.33 | 328.39 | 157.54 | 327.82 | 169.05 | 327.12 | 169.95 | 327.02 | 171.34 | 326.91 |
| 177.35 | 326.56 | 178.24 | 326.48 | 179.43 | 326.39 | 184.07 | 325.98 | 186.16 | 325.76 |
| 187.54 | 325.57 | 189.53 | 325.27 | 190.33 | 325.16 | 191.34 | 324.94 | 193.16 | 324.58 |
| 195.26 | 324.11 | 196.27 | 323.9 | 198.14 | 323.47 | 198.5 | 323.41 | 201.71 | 323.05 |
| 202.69 | 322.96 | 203.91 | 322.99 | 204.7 | 322.91 | 205.14 | 322.91 | 206.83 | 322.81 |
| 208.4 | 322.68 | 209.26 | 322.63 | 211.44 | 322.52 | 214.58 | 322.51 | 217.17 | 322.36 |
| 220.81 | 322.31 | 222.06 | 322.26 | 223.24 | 322.19 | 225.26 | 322.12 | 228.96 | 321.91 |
| 231.09 | 321.73 | 232.29 | 321.61 | 232.7 | 321.6 | 235.73 | 321.26 | 238.19 | 320.97 |
| 241.38 | 320.65 | 248.95 | 320.02 | 250.01 | 319.95 | 250.35 | 319.94 | 250.42 | 319.99 |
| 251.07 | 319.98 | 253.16 | 319.84 | 254.2 | 319.76 | 255.24 | 319.71 | 256.91 | 319.61 |
| 257.09 | 319.59 | 261.88 | 319.32 | 264.71 | 319.14 | 275.08 | 318.52 | 275.16 | 318.52 |
| 277.82 | 318.32 | 282.31 | 317.92 | 290.28 | 317.34 | 302.18 | 316.78 | 302.7 | 316.75 |
| 304.77 | 316.6 | 312.94 | 316.21 | 313.23 | 316.18 | 315.08 | 316.08 | 320.34 | 315.75 |
| 324.27 | 315.57 | 327.52 | 315.37 | 331.51 | 315.26 | 334.23 | 315.13 | 335.35 | 315.05 |
| 336.57 | 315.04 | 339.57 | 315 | 344.47 | 314.89 | 370.49 | 314.6 | 371.18 | 314.6 |
| 374.26 | 314.56 | 376.59 | 314.69 | 377.23 | 314.72 | 383.31 | 314.78 | 387.62 | 314.8 |
| 394.42 | 314.77 | 404.73 | 314.65 | 405.3 | 314.61 | 406.22 | 314.59 | 407.06 | 314.59 |
| 409.25 | 314.61 | 409.48 | 314.62 | 411.86 | 314.66 | 413.4 | 314.7 | 414.04 | 314.7 |
| 435.4 | 315.08 | 436.32 | 315.11 | 439.82 | 315.19 | 442.39 | 315.23 | 445.21 | 315.25 |
| 447.22 | 315.25 | 448.99 | 315.24 | 451.64 | 315.2 | 458.3 | 315.16 | 461.02 | 315.15 |
| 462.06 | 315.16 | 462.8 | 315.15 | 463.96 | 315.12 | 464.95 | 315.08 | 465.71 | 315.02 |
| 465.82 | 314.98 | 468.11 | 315.01 | 470.01 | 315.04 | 471.48 | 315.15 | 472.65 | 315.28 |
| 483.49 | 315.74 | 496.88 | 316.05 | 505.82 | 316.28 | 511.96 | 316.38 | 522.46 | 316.6 |
| 524.85 | 316.64 | 527.54 | 316.69 | 532.9 | 316.71 | 536 | 316.68 | 540.56 | 316.58 |
| 541.73 | 316.52 | 548.27 | 316 | 550.18 | 315.93 | 553.45 | 315.89 | 556.5 | 315.83 |
| 556.74 | 315.87 | 565.88 | 315.75 | 566.78 | 315.72 | 573.03 | 315.57 | 573.9 | 315.56 |
| 574.45 | 315.57 | 576.39 | 315.45 | 578.74 | 315.32 | 579.25 | 315.32 | 582.15 | 315.24 |
| 584.1 | 315.2 | 586.01 | 315.21 | 589.46 | 315.24 | 589.67 | 315.23 | 594.23 | 315.21 |
| 595.6 | 315.19 | 595.69 | 315.21 | 597.12 | 315.23 | 598.72 | 315.16 | 603.25 | 315.1 |
| 603.72 | 315.06 | 605.76 | 314.93 | 608.43 | 314.92 | 612.58 | 314.94 | 614.29 | 314.98 |
| 615.06 | 315.05 | 616.82 | 315.03 | 621.37 | 315.11 | 621.62 | 315.12 | 629.98 | 315.21 |
| 631.39 | 315.21 | 642.97 | 315.3 | 655.54 | 315.37 | 660.82 | 315.44 | 662.77 | 315.49 |
| 667.05 | 315.51 | 669.32 | 315.59 | 669.85 | 315.59 | 672.08 | 315.65 | 673.44 | 315.7 |
| 677.73 | 315.7 | 679.4 | 315.68 | 679.82 | 315.69 | 681.59 | 315.68 | 686.58 | 315.57 |
| 687.44 | 315.54 | 688.18 | 315.49 | 689.43 | 315.46 | 690.55 | 315.45 | 690.83 | 315.46 |
| 692.5 | 315.44 | 694.79 | 315.43 | 700.74 | 315.38 | 701.82 | 315.38 | 702.08 | 315.39 |
| 703.71 | 315.39 | 709.12 | 315.35 | 711.71 | 315.26 | 712.24 | 315.27 | 713.42 | 315.23 |
| 718.28 | 315.16 | 723.86 | 315.11 | 727.77 | 315.06 | 730.34 | 315.04 | 730.68 | 315.02 |
| 735.17 | 314.92 | 737.86 | 314.92 | 742.45 | 314.94 | 743.35 | 314.94 | 745.37 | 314.96 |
| 746 | 314.96 | 750.51 | 314.93 | 751.04 | 314.94 | 753.44 | 314.96 | 754.91 | 314.99 |
| 758.56 | 315.1 | 759.29 | 315.11 | 766.65 | 315.33 | 767.6 | 315.35 | 768.86 | 315.33 |
| 770.84 | 315.27 | 774.19 | 315.06 | 774.76 | 315.07 | 776.08 | 314.96 | 777.43 | 314.89 |
| 779.62 | 314.8 | 781.03 | 314.79 | 782.71 | 314.8 | 784.38 | 314.82 | 786.38 | 314.88 |
| 787.78 | 314.89 | 789.19 | 314.92 | 790.79 | 315.05 | 791.83 | 315.08 | 798.71 | 314.96 |
| 799.13 | 314.95 | 802.01 | 314.81 | 802.14 | 314.79 | 803.27 | 314.75 | 804.75 | 314.73 |
| 807.34 | 314.68 | 811.8 | 314.55 | 814.32 | 314.52 | 817.05 | 314.47 | 818.44 | 314.43 |
| 818.83 | 314.44 | 820.39 | 314.41 | 820.87 | 314.38 | 822.55 | 314.35 | 822.96 | 314.37 |
| 823.68 | 314.46 | 824.07 | 314.57 | 824.42 | 314.58 | 826.53 | 314.57 | 830.87 | 314.65 |
| 840.71 | 314.85 | 850.43 | 315.02 | 852.86 | 315.07 | 856.11 | 315.11 | 857.78 | 315.19 |
| 859.03 | 315.21 | 859.4 | 315.23 | 861.3 | 315.24 | 862.37 | 315.2 | 865.56 | 315.19 |
| 866.1 | 315.18 | 868.78 | 315.2 | 870.82 | 315.22 | 871.55 | 315.25 | 872.81 | 315.24 |
| 875.64 | 315.27 | 877.96 | 315.28 | 879.94 | 315.24 | 880.55 | 315.2 | 881.09 | 315.19 |
| 882.28 | 315.2 | 886.97 | 315.2 | 894.91 | 315.34 | 896.54 | 315.38 | 904.2 | 315.55 |
| 905.05 | 315.54 | 913.36 | 315.51 | 913.51 | 315.5 | 919.28 | 315.53 | 919.81 | 315.56 |
| 921.1 | 315.54 | 925.07 | 315.28 | 925.21 | 315.28 | 927.15 | 315.19 | 927.74 | 315.21 |
| 928.82 | 315.31 | 933.43 | 315.29 | 934.56 | 315.27 | 936.65 | 315.21 | 938.09 | 315.19 |
| 941.2 | 315.24 | 942.52 | 315.23 | 942.97 | 315.21 | 945.11 | 315.27 | 955.27 | 315.78 |
| 955.48 | 315.78 | 960.43 | 315.9 | 968.62 | 315.86 | 969.39 | 315.77 | 970.67 | 315.67 |
| 971.33 | 315.64 | 975.65 | 315.4 | 978.95 | 315.36 | 979.3 | 315.34 | 992.89 | 315.69 |
| 1004.2 | 316.22 | 1004.88 | 316.24 | 1015.49 | 316.25 | 1016.07 | 316.2 | 1018.02 | 316.07 |
| 1021.04 | 315.93 | 1021.6 | 315.92 | 1022.39 | 315.87 | 1022.54 | 315.84 | 1023.2 | 315.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1024.22 | 315.89 | 1024.67 | 315.94 | 1025.35 | 315.94 | 1028.26 | 315.97 | 1032.12 | 315.96 |
| 1033.64 | 315.91 | 1034.41 | 315.87 | 1035.39 | 315.85 | 1038.2 | 315.86 | 1038.67 | 315.92 |
| 1039.49 | 315.98 | 1042.24 | 316.27 | 1046.79 | 316.48 | 1049.94 | 316.54 | 1053.24 | 316.59 |
| 1053.97 | 316.62 | 1054.92 | 316.63 | 1055.47 | 316.65 | 1056.43 | 316.66 | 1056.82 | 316.64 |
| 1059.11 | 316.61 | 1060.2 | 316.53 | 1061.17 | 316.47 | 1061.58 | 316.46 | 1064.52 | 316.32 |
| 1065.64 | 316.28 | 1066.13 | 316.24 | 1067.22 | 316.24 | 1067.87 | 316.25 | 1069.68 | 316.3 |
| 1075.81 | 316.4 | 1078.44 | 316.3 | 1079.87 | 316.21 | 1080.7 | 316.2 | 1089.82 | 316.04 |
| 1096.25 | 316.04 | 1100.24 | 315.93 | 1102.47 | 315.92 | 1103.14 | 315.9 | 1108.59 | 315.85 |
| 1111 | 315.88 | 1112.89 | 315.81 | 1133.5 | 315.92 | 1134.46 | 315.94 | 1143.69 | 316.21 |
| 1144.25 | 316.39 | 1145.54 | 316.75 | 1146.09 | 317.06 | 1146.95 | 317.29 | 1147.79 | 317.35 |
| 1147.86 | 317.34 | 1168.24 | 317.83 | 1170.69 | 317.83 | 1171.53 | 317.8 | 1172.33 | 317.72 |
| 1179.8 | 317.43 | 1181.02 | 317.44 | 1181.51 | 317.46 | 1184.47 | 317.49 | 1185.73 | 317.54 |
| 1186.19 | 317.54 | 1187.81 | 317.5 | 1194.82 | 317.35 | 1195.93 | 317.29 | 1196.96 | 317.27 |
| 1208.06 | 317.33 | 1211.88 | 317.49 | 1223.57 | 317.09 | 1224.09 | 317.1 | 1229.75 | 316.56 |
| 1230.73 | 316.42 | 1234.51 | 316.07 | 1234.8 | 316.06 | 1242.33 | 316.12 | 1243.2 | 316.17 |
| 1243.93 | 316.18 | 1246.6 | 316.18 | 1248.14 | 316.19 | 1249.47 | 316.18 | 1251.09 | 316.04 |
| 1252.49 | 315.97 | 1252.81 | 316.03 | 1253.63 | 316.07 | 1255.17 | 316.1 | 1258.32 | 316.1 |
| 1258.52 | 316.09 | 1267.61 | 316.01 | 1270.52 | 316.04 | 1274.97 | 316.05 | 1286.01 | 316.14 |
| 1287.37 | 316.14 | 1287.59 | 316.13 | 1294.49 | 316.13 | 1297.24 | 316.15 | 1299.07 | 316.23 |
| 1299.78 | 316.23 | 1302.96 | 316.34 | 1304.66 | 316.44 | 1309.64 | 316.74 | 1322.23 | 316.91 |
| 1332.69 | 316.99 | 1333.59 | 317.03 | 1335.17 | 317.08 | 1337.54 | 317.1 | 1341.05 | 317.11 |
| 1351.37 | 317.21 | 1353.01 | 317.2 | 1361.53 | 317.1 | 1363.65 | 317.09 | 1366.04 | 317.04 |
| 1366.44 | 317.09 | 1369.83 | 317.02 | 1370.99 | 316.97 | 1371 | 316.98 | 1372.58 | 316.95 |
| 1374.57 | 317.06 | 1375.02 | 317.11 | 1375.24 | 317.16 | 1376.15 | 317.27 | 1376.38 | 317.31 |
| 1377.64 | 317.62 | 1379.05 | 317.89 | 1383.88 | 318.64 | 1384.93 | 318.8 | 1386.77 | 319.02 |
| 1387.42 | 319.09 | 1387.64 | 319.13 | 1390.4 | 319.57 | 1390.96 | 319.7 | 1392.48 | 319.96 |
| 1393.47 | 320.17 | 1395.2 | 320.49 | 1396.03 | 320.77 | 1397.45 | 321.28 | 1399.26 | 321.91 |
| 1400.22 | 322.22 | 1402.09 | 322.87 | 1402.96 | 323.15 | 1404.14 | 323.56 | 1405.47 | 323.98 |
| 1406.71 | 324.4 | 1407.75 | 324.72 | 1408.63 | 325.02 | 1409.61 | 325.39 | 1412.03 | 326.22 |
| 1415.28 | 327.51 | 1416.24 | 327.98 | 1416.67 | 328.13 | 1418.92 | 328.77 | 1419.24 | 328.84 |
| 1420.52 | 329.23 | 1422.77 | 329.97 | 1425.38 | 330.77 | 1426.43 | 331.12 | 1427.53 | 331.46 |
| 1429.13 | 332.05 | 1429.78 | 332.31 | 1431.35 | 332.47 | 1435.85 | 332.84 | 1436.39 | 332.88 |
| 1438.07 | 333.06 | 1439.8 | 333.22 | 1441.85 | 333.37 | 1445.3 | 333.64 | 1446.02 | 333.68 |
| 1453.22 | 334.2 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 94.78 | .05 | 541.73 | .04 | 1371 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 541.73 | 1371 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 532.34 Elevation=316.8517
Right Levee Station=1318.989 Elevation=316.1067

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3335.73*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 86.17 | 336.05 | 87.13 | 335.88 | 87.75 | 335.73 | 89.02 | 335.32 | 91.68 | 334.54 |
| 93.63 | 333.98 | 94.84 | 333.61 | 96.8 | 333.19 | 103.3 | 331.91 | 104.5 | 331.68 |
| 105.49 | 331.47 | 106.33 | 331.33 | 107.24 | 331.15 | 108.11 | 331.03 | 110.51 | 330.82 |
| 116.33 | 330.37 | 119.94 | 330.11 | 120.41 | 330.1 | 120.86 | 330.12 | 121.57 | 330.09 |
| 122.88 | 330.01 | 129.25 | 329.53 | 136.59 | 329.03 | 139.13 | 328.9 | 147.1 | 328.34 |
| 158.28 | 327.65 | 159.15 | 327.55 | 160.5 | 327.44 | 166.34 | 327.08 | 167.21 | 326.99 |
| 168.36 | 326.9 | 172.87 | 326.46 | 174.89 | 326.23 | 176.23 | 326.04 | 178.17 | 325.71 |
| 178.94 | 325.6 | 179.92 | 325.37 | 181.69 | 324.98 | 183.73 | 324.48 | 184.56 | 324.3 |
| 186.52 | 323.8 | 186.88 | 323.73 | 189.99 | 323.35 | 190.94 | 323.25 | 192.13 | 323.3 |
| 192.9 | 323.2 | 193.33 | 323.21 | 194.96 | 323.1 | 196.49 | 322.96 | 199.44 | 322.79 |
| 202.49 | 322.78 | 205 | 322.62 | 208.54 | 322.56 | 209.75 | 322.51 | 210.9 | 322.43 |
| 212.86 | 322.35 | 216.45 | 322.13 | 218.52 | 321.93 | 219.69 | 321.8 | 220.09 | 321.79 |
| 223.02 | 321.43 | 223.59 | 321.35 | 225.42 | 321.12 | 228.51 | 320.77 | 235.86 | 320.09 |
| 236.89 | 320.01 | 237.23 | 320 | 237.29 | 320.04 | 237.92 | 320.02 | 239.96 | 319.87 |
| 240.96 | 319.78 | 241.97 | 319.73 | 243.77 | 319.61 | 248.41 | 319.32 | 251.17 | 319.12 |
| 261.23 | 318.48 | 263.9 | 318.26 | 268.8 | 317.79 | 275.99 | 317.21 | 287.55 | 316.56 |
| 288.06 | 316.53 | 290.06 | 316.37 | 298 | 315.95 | 298.28 | 315.92 | 300.07 | 315.81 |
| 305.18 | 315.47 | 309 | 315.27 | 312.16 | 315.06 | 313.62 | 315.02 | 316.03 | 314.94 |
| 318.67 | 314.81 | 319.76 | 314.73 | 319.86 | 314.71 | 320.64 | 314.72 | 320.94 | 314.71 |
| 323.85 | 314.66 | 328.61 | 314.53 | 353.88 | 314.18 | 354.55 | 314.18 | 355.44 | 314.16 |
| 357.54 | 314.13 | 359.81 | 314.26 | 360.42 | 314.29 | 366.33 | 314.36 | 370.51 | 314.37 |
| 377.12 | 314.34 | 387.13 | 314.24 | 387.68 | 314.21 | 388.58 | 314.18 | 389.39 | 314.18 |
| 391.74 | 314.21 | 395.54 | 314.28 | 396.17 | 314.28 | 416.91 | 314.64 | 417.81 | 314.67 |
| 421.2 | 314.74 | 423.69 | 314.78 | 426.43 | 314.8 | 430.1 | 314.78 | 432.68 | 314.74 |
| 439.15 | 314.69 | 439.33 | 314.7 | 441.55 | 314.68 | 441.78 | 314.69 | 442.79 | 314.69 |
| 443.51 | 314.68 | 444.3 | 314.65 | 444.64 | 314.65 | 445.85 | 314.59 | 446.45 | 314.51 |
| 448.67 | 314.53 | 450.51 | 314.56 | 451.94 | 314.66 | 453.08 | 314.8 | 463.6 | 315.26 |
| 476.6 | 315.59 | 485.29 | 315.83 | 491.25 | 315.93 | 501.44 | 316.17 | 503.21 | 316.2 |
| 503.76 | 316.22 | 506.37 | 316.26 | 511.58 | 316.28 | 514.59 | 316.25 | 519.02 | 316.17 |
| 520.16 | 316.11 | 526.37 | 315.62 | 528.19 | 315.54 | 531.29 | 315.49 | 534.19 | 315.43 |
| 534.42 | 315.47 | 543.11 | 315.32 | 543.97 | 315.29 | 549.9 | 315.14 | 550.74 | 315.13 |
| 551.26 | 315.14 | 553.1 | 315.01 | 554.77 | 314.91 | 555.48 | 314.88 | 555.82 | 314.88 |
| 558.57 | 314.8 | 560.43 | 314.76 | 562.24 | 314.77 | 565.52 | 314.8 | 565.72 | 314.79 |
| 570.06 | 314.77 | 571.36 | 314.76 | 571.44 | 314.78 | 572.8 | 314.8 | 574.32 | 314.74 |
| 578.63 | 314.69 | 581.01 | 314.54 | 583.55 | 314.53 | 587.49 | 314.57 | 589.12 | 314.62 |
| 589.85 | 314.7 | 591.52 | 314.68 | 595.85 | 314.75 | 596.09 | 314.76 | 604.04 | 314.85 |
| 605.37 | 314.85 | 616.38 | 314.93 | 628.33 | 314.99 | 633.35 | 315.06 | 635.2 | 315.1 |
| 639.27 | 315.12 | 641.42 | 315.19 | 641.93 | 315.19 | 645.34 | 315.29 | 650.1 | 315.29 |
| 651 | 315.27 | 651.4 | 315.28 | 653.08 | 315.27 | 657.82 | 315.17 | 658.65 | 315.14 |
| 659.35 | 315.09 | 660.54 | 315.07 | 661.87 | 315.06 | 663.46 | 315.04 | 665.63 | 315.03 |
| 671.29 | 314.98 | 674.11 | 315 | 679.26 | 314.96 | 681.71 | 314.87 | 682.22 | 314.88 |
| 683.34 | 314.84 | 687.95 | 314.77 | 693.26 | 314.73 | 696.98 | 314.69 | 697.31 | 314.69 |
| 699.42 | 314.66 | 699.75 | 314.64 | 704.01 | 314.55 | 706.56 | 314.55 | 710.93 | 314.58 |
| 714.31 | 314.59 | 718.59 | 314.56 | 719.1 | 314.56 | 721.37 | 314.58 | 722.77 | 314.61 |
| 726.24 | 314.71 | 726.94 | 314.72 | 733.93 | 314.91 | 734.84 | 314.93 | 736.03 | 314.91 |
| 737.91 | 314.86 | 741.1 | 314.67 | 741.64 | 314.67 | 742.9 | 314.57 | 746.26 | 314.42 |
| 747.6 | 314.41 | 749.19 | 314.42 | 750.78 | 314.44 | 752.68 | 314.49 | 754.02 | 314.5 |
| 755.35 | 314.53 | 756.88 | 314.65 | 757.87 | 314.67 | 764.4 | 314.57 | 765.64 | 314.52 |
| 767.54 | 314.42 | 768.14 | 314.38 | 770.14 | 314.35 | 772.6 | 314.3 | 776.84 | 314.17 |
| 779.24 | 314.14 | 781.84 | 314.09 | 783.15 | 314.06 | 784.2 | 314.05 | 785.47 | 314.01 |
| 787.05 | 313.98 | 787.49 | 314 | 788.26 | 314.09 | 788.67 | 314.22 | 789.04 | 314.23 |
| 791.28 | 314.22 | 795.91 | 314.3 | 806.38 | 314.51 | 816.73 | 314.69 | 819.31 | 314.74 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 821.77 | 314.78 | 822.87 | 314.79 | 824.55 | 314.87 | 825.2 | 314.89 | 825.88 | 314.89 |
| 826.27 | 314.91 | 827.26 | 314.92 | 828.29 | 314.92 | 829.52 | 314.88 | 832.82 | 314.86 |
| 833.4 | 314.85 | 836.25 | 314.88 | 838.43 | 314.89 | 839.2 | 314.93 | 840.54 | 314.92 |
| 843.56 | 314.95 | 844.18 | 314.96 | 844.61 | 314.95 | 846.02 | 314.96 | 848.14 | 314.92 |
| 848.78 | 314.87 | 855.62 | 314.87 | 864.07 | 315.02 | 865.8 | 315.06 | 873.95 | 315.24 |
| 874.85 | 315.24 | 883.7 | 315.19 | 883.86 | 315.18 | 890 | 315.21 | 890.57 | 315.25 |
| 891.93 | 315.22 | 896.16 | 314.94 | 898.38 | 314.84 | 899 | 314.86 | 900.24 | 314.97 |
| 905.06 | 314.94 | 906.26 | 314.92 | 908.49 | 314.85 | 910.01 | 314.83 | 910.69 | 314.85 |
| 913.33 | 314.89 | 915.21 | 314.85 | 917.49 | 314.92 | 918.99 | 314.99 | 928.3 | 315.46 |
| 928.52 | 315.46 | 933.43 | 315.58 | 933.79 | 315.58 | 942.51 | 315.54 | 943.33 | 315.44 |
| 944.69 | 315.34 | 945.4 | 315.31 | 949.99 | 315.05 | 953.5 | 315 | 953.87 | 314.98 |
| 968.34 | 315.36 | 980.38 | 315.92 | 981.1 | 315.95 | 992.39 | 315.96 | 993 | 315.9 |
| 995.08 | 315.76 | 998.3 | 315.61 | 998.89 | 315.6 | 999.89 | 315.52 | 1000.59 | 315.52 |
| 1001.68 | 315.57 | 1002.16 | 315.62 | 1002.88 | 315.62 | 1005.98 | 315.65 | 1010.09 | 315.64 |
| 1011.33 | 315.6 | 1012.53 | 315.54 | 1013.57 | 315.52 | 1016.56 | 315.53 | 1016.95 | 315.58 |
| 1017.93 | 315.66 | 1020.86 | 315.97 | 1025.7 | 316.2 | 1032.56 | 316.32 | 1033.34 | 316.35 |
| 1035.86 | 316.4 | 1036.38 | 316.38 | 1038.34 | 316.36 | 1039.98 | 316.27 | 1041.01 | 316.2 |
| 1044.34 | 316.05 | 1044.57 | 316.03 | 1045.76 | 315.99 | 1046.28 | 315.95 | 1047.44 | 315.95 |
| 1048.14 | 315.96 | 1049.94 | 316.01 | 1050.06 | 316.02 | 1056.58 | 316.12 | 1059.38 | 316.01 |
| 1060.91 | 315.92 | 1061.8 | 315.91 | 1071.5 | 315.74 | 1078.34 | 315.73 | 1082.59 | 315.62 |
| 1084.96 | 315.61 | 1085.67 | 315.58 | 1091.47 | 315.53 | 1094.04 | 315.57 | 1096.05 | 315.49 |
| 1117.99 | 315.61 | 1119.01 | 315.62 | 1128.83 | 315.92 | 1129.43 | 316.11 | 1130.8 | 316.5 |
| 1131.38 | 316.84 | 1132.3 | 317.08 | 1133.26 | 317.14 | 1154.95 | 317.67 | 1157.57 | 317.67 |
| 1158.46 | 317.63 | 1159.31 | 317.54 | 1167.26 | 317.24 | 1172.23 | 317.29 | 1173.57 | 317.35 |
| 1175.04 | 317.33 | 1175.78 | 317.3 | 1183.24 | 317.14 | 1183.63 | 317.13 | 1184.42 | 317.07 |
| 1185.53 | 317.05 | 1197.34 | 317.1 | 1200.33 | 317.22 | 1201.13 | 317.26 | 1201.4 | 317.26 |
| 1213.85 | 316.81 | 1214.39 | 316.83 | 1220.42 | 316.23 | 1221.46 | 316.08 | 1225.49 | 315.7 |
| 1225.79 | 315.69 | 1233.8 | 315.74 | 1233.87 | 315.76 | 1234.73 | 315.8 | 1235.51 | 315.81 |
| 1238.35 | 315.8 | 1240 | 315.82 | 1241.41 | 315.8 | 1243.13 | 315.65 | 1244.62 | 315.57 |
| 1244.97 | 315.64 | 1245.83 | 315.68 | 1247.47 | 315.71 | 1251.04 | 315.7 | 1260.72 | 315.59 |
| 1263.81 | 315.62 | 1268.55 | 315.63 | 1280.29 | 315.71 | 1281.98 | 315.7 | 1287.91 | 315.69 |
| 1289.32 | 315.69 | 1292.25 | 315.7 | 1293.16 | 315.75 | 1294.43 | 315.79 | 1294.95 | 315.79 |
| 1298.34 | 315.89 | 1299.58 | 315.97 | 1300.15 | 315.99 | 1305.44 | 316.31 | 1318.04 | 316.45 |
| 1318.84 | 316.46 | 1329.97 | 316.53 | 1330.93 | 316.58 | 1332.61 | 316.63 | 1335.13 | 316.66 |
| 1338.87 | 316.65 | 1349.85 | 316.73 | 1351.6 | 316.72 | 1359.76 | 316.61 | 1360.67 | 316.59 |
| 1362.92 | 316.58 | 1365.47 | 316.53 | 1365.89 | 316.58 | 1367.14 | 316.54 | 1367.41 | 316.54 |
| 1369.5 | 316.5 | 1370.75 | 316.45 | 1372.14 | 316.44 | 1372.35 | 316.42 | 1374.67 | 316.56 |
| 1375.04 | 316.63 | 1375.96 | 316.73 | 1376.19 | 316.77 | 1376.66 | 316.9 | 1377.47 | 317.09 |
| 1378.9 | 317.35 | 1383.79 | 318.09 | 1384.85 | 318.24 | 1386.71 | 318.46 | 1387.59 | 318.57 |
| 1390.39 | 319.03 | 1390.96 | 319.15 | 1392.5 | 319.42 | 1393.5 | 319.63 | 1395.25 | 319.97 |
| 1396.09 | 320.26 | 1397.53 | 320.8 | 1399.36 | 321.46 | 1400.34 | 321.79 | 1402.23 | 322.48 |
| 1403.11 | 322.77 | 1404.3 | 323.21 | 1405.65 | 323.65 | 1406.9 | 324.09 | 1407.95 | 324.43 |
| 1408.85 | 324.75 | 1409.84 | 325.14 | 1412.38 | 326.05 | 1414.2 | 326.8 | 1415.58 | 327.38 |
| 1416.65 | 327.92 | 1417.34 | 328.13 | 1419.27 | 328.69 | 1419.59 | 328.76 | 1420.89 | 329.18 |
| 1423.16 | 329.94 | 1426.19 | 330.9 | 1426.87 | 331.14 | 1427.99 | 331.49 | 1429.6 | 332.1 |
| 1430.26 | 332.37 | 1431.86 | 332.52 | 1436.41 | 332.86 | 1436.95 | 332.89 | 1438.66 | 333.06 |
| 1440.41 | 333.22 | 1442.49 | 333.36 | 1442.99 | 333.4 | 1445.97 | 333.61 | 1446.71 | 333.65 |
| 1453.99 | 334.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 86.17 | .05 | 520.16 | .04 | 1370.75 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
520.16 1370.75 26.21 19.74 18.73 .1 .3
Left Levee Station= 511.04 Elevation=316.4133
Right Levee Station=1318.798 Elevation=315.7933

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3315.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 77.55 | 335.93 | 78.48 | 335.78 | 79.09 | 335.64 | 80.31 | 335.28 | 82.17 | 334.76 |
| 84.79 | 334.06 | 85.96 | 333.73 | 87.87 | 333.35 | 94.17 | 332.19 | 95.34 | 331.98 |
| 96.3 | 331.79 | 97.11 | 331.66 | 97.99 | 331.5 | 98.83 | 331.39 | 101.17 | 331.2 |
| 106.82 | 330.78 | 109.38 | 330.6 | 110.77 | 330.52 | 111.21 | 330.55 | 111.89 | 330.52 |
| 113.17 | 330.44 | 119.34 | 330 | 126.47 | 329.53 | 128.93 | 329.41 | 136.67 | 328.86 |
| 147.51 | 328.19 | 148.35 | 328.08 | 149.67 | 327.97 | 155.32 | 327.6 | 156.17 | 327.5 |
| 157.29 | 327.41 | 161.66 | 326.95 | 163.62 | 326.71 | 164.92 | 326.5 | 166.81 | 326.16 |
| 167.55 | 326.04 | 168.51 | 325.79 | 170.22 | 325.38 | 172.2 | 324.85 | 173 | 324.66 |
| 173.15 | 324.61 | 174.91 | 324.13 | 175.26 | 324.06 | 178.27 | 323.66 | 179.2 | 323.55 |
| 180.35 | 323.6 | 181.09 | 323.5 | 181.51 | 323.5 | 183.1 | 323.39 | 184.58 | 323.24 |
| 187.44 | 323.06 | 190.4 | 323.05 | 192.84 | 322.88 | 196.27 | 322.81 | 197.44 | 322.76 |
| 198.56 | 322.68 | 200.46 | 322.59 | 203.94 | 322.36 | 205.95 | 322.14 | 207.08 | 322 |
| 207.47 | 321.99 | 210.32 | 321.6 | 212.64 | 321.27 | 215.64 | 320.9 | 218.26 | 320.63 |
| 222.77 | 320.16 | 224.1 | 320.05 | 224.16 | 320.09 | 224.78 | 320.06 | 226.75 | 319.9 |
| 227.72 | 319.8 | 228.7 | 319.75 | 230.45 | 319.62 | 234.95 | 319.32 | 237.62 | 319.11 |
| 247.39 | 318.43 | 249.97 | 318.21 | 254.21 | 317.75 | 254.73 | 317.7 | 261.71 | 317.09 |
| 272.92 | 316.34 | 275.36 | 316.13 | 283.06 | 315.68 | 283.33 | 315.65 | 285.07 | 315.54 |
| 290.02 | 315.18 | 293.73 | 314.97 | 296.65 | 314.76 | 298.21 | 314.71 | 300.54 | 314.62 |
| 303.11 | 314.49 | 304.27 | 314.4 | 305.31 | 314.39 | 308.14 | 314.32 | 312.76 | 314.18 |
| 337.27 | 313.77 | 337.92 | 313.76 | 340.82 | 313.69 | 341.29 | 313.73 | 343.61 | 313.86 |
| 349.34 | 313.93 | 353.41 | 313.95 | 359.81 | 313.92 | 369.53 | 313.83 | 370.06 | 313.8 |
| 371.23 | 313.77 | 371.72 | 313.77 | 373.78 | 313.8 | 374 | 313.81 | 376.24 | 313.84 |
| 377.69 | 313.87 | 378.3 | 313.87 | 398.41 | 314.21 | 402.58 | 314.3 | 405 | 314.33 |
| 407.65 | 314.34 | 409.55 | 314.34 | 411.22 | 314.32 | 413.71 | 314.28 | 419.99 | 314.23 |
| 422.32 | 314.22 | 424.14 | 314.22 | 425.32 | 314.18 | 426.25 | 314.13 | 426.96 | 314.07 |
| 427.07 | 314.03 | 429.14 | 314.04 | 429.23 | 314.05 | 431.02 | 314.07 | 432.4 | 314.18 |
| 433.51 | 314.32 | 443.71 | 314.78 | 456.33 | 315.13 | 464.75 | 315.37 | 470.53 | 315.49 |
| 480.42 | 315.74 | 482.14 | 315.77 | 482.68 | 315.79 | 485.21 | 315.84 | 490.26 | 315.85 |
| 493.18 | 315.83 | 497.47 | 315.75 | 498.58 | 315.7 | 504.47 | 315.23 | 506.19 | 315.16 |
| 509.13 | 315.1 | 511.88 | 315.03 | 512.1 | 315.07 | 520.34 | 314.89 | 521.15 | 314.86 |
| 526.77 | 314.71 | 527.57 | 314.7 | 528.06 | 314.71 | 529.8 | 314.58 | 531.1 | 314.49 |
| 532.06 | 314.44 | 532.38 | 314.44 | 534.99 | 314.35 | 536.75 | 314.31 | 538.47 | 314.32 |
| 541.58 | 314.36 | 541.77 | 314.35 | 545.91 | 314.34 | 547.06 | 314.33 | 547.19 | 314.35 |
| 548.48 | 314.37 | 549.92 | 314.32 | 554.01 | 314.28 | 554.43 | 314.25 | 556.27 | 314.15 |
| 558.67 | 314.15 | 560.53 | 314.17 | 562.41 | 314.21 | 563.95 | 314.26 | 564.65 | 314.35 |
| 566.23 | 314.33 | 570.33 | 314.4 | 570.56 | 314.4 | 578.09 | 314.49 | 579.36 | 314.49 |
| 589.79 | 314.56 | 601.11 | 314.61 | 605.87 | 314.67 | 607.63 | 314.71 | 611.48 | 314.73 |
| 613.53 | 314.79 | 614.01 | 314.79 | 615.54 | 314.84 | 616.01 | 314.84 | 616.95 | 314.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 621.75 | 314.88 | 622.61 | 314.86 | 622.99 | 314.87 | 624.58 | 314.86 | 629.07 | 314.77 |
| 629.85 | 314.74 | 630.32 | 314.7 | 631.65 | 314.67 | 634.41 | 314.65 | 636.47 | 314.64 |
| 641.84 | 314.59 | 643.04 | 314.6 | 644.51 | 314.6 | 649.39 | 314.56 | 651.72 | 314.48 |
| 652.2 | 314.48 | 653.26 | 314.45 | 657.63 | 314.39 | 662.66 | 314.35 | 666.19 | 314.31 |
| 668.5 | 314.29 | 668.81 | 314.27 | 672.85 | 314.19 | 675.27 | 314.19 | 679.41 | 314.21 |
| 682.61 | 314.22 | 686.67 | 314.18 | 687.15 | 314.19 | 689.31 | 314.2 | 690.64 | 314.23 |
| 693.92 | 314.32 | 694.59 | 314.32 | 701.21 | 314.49 | 702.07 | 314.51 | 703.2 | 314.49 |
| 704.99 | 314.44 | 708.01 | 314.27 | 708.52 | 314.27 | 709.71 | 314.18 | 710.92 | 314.12 |
| 712.9 | 314.05 | 713.35 | 314.04 | 714.95 | 314.04 | 717.19 | 314.06 | 718.99 | 314.1 |
| 721.37 | 314.13 | 722.96 | 314.24 | 723.9 | 314.27 | 730.1 | 314.17 | 731.56 | 314.11 |
| 733.64 | 314 | 735.54 | 313.97 | 739.16 | 313.89 | 739.67 | 313.86 | 741.89 | 313.79 |
| 744.16 | 313.77 | 746.62 | 313.72 | 747.87 | 313.68 | 748.23 | 313.69 | 749.63 | 313.66 |
| 750.23 | 313.63 | 751.55 | 313.61 | 752.01 | 313.63 | 752.83 | 313.73 | 753.27 | 313.86 |
| 753.66 | 313.88 | 756.04 | 313.86 | 760.94 | 313.95 | 772.05 | 314.17 | 784.66 | 314.4 |
| 785.76 | 314.41 | 789.54 | 314.47 | 792 | 314.57 | 792.73 | 314.57 | 793.69 | 314.6 |
| 794.7 | 314.61 | 796.17 | 314.58 | 796.58 | 314.55 | 800.09 | 314.54 | 800.7 | 314.52 |
| 806.03 | 314.57 | 806.85 | 314.6 | 808.27 | 314.59 | 812.13 | 314.64 | 812.58 | 314.63 |
| 814.08 | 314.64 | 816.33 | 314.59 | 817.01 | 314.54 | 818.96 | 314.55 | 824.26 | 314.55 |
| 833.22 | 314.7 | 843.7 | 314.93 | 844.65 | 314.93 | 854.04 | 314.87 | 860.72 | 314.89 |
| 861.32 | 314.93 | 862.77 | 314.89 | 867.26 | 314.59 | 867.41 | 314.59 | 869.6 | 314.48 |
| 870.26 | 314.51 | 871.58 | 314.63 | 876.69 | 314.59 | 877.96 | 314.57 | 880.32 | 314.5 |
| 881.77 | 314.47 | 882.65 | 314.49 | 885.46 | 314.53 | 886.71 | 314.52 | 887.45 | 314.49 |
| 889.87 | 314.56 | 891.46 | 314.63 | 901.33 | 315.14 | 901.57 | 315.14 | 907.15 | 315.27 |
| 916.4 | 315.22 | 917.27 | 315.11 | 918.71 | 315.01 | 919.46 | 314.97 | 924.33 | 314.69 |
| 928.06 | 314.64 | 928.45 | 314.62 | 943.79 | 315.02 | 956.55 | 315.63 | 957.32 | 315.65 |
| 969.29 | 315.66 | 969.94 | 315.6 | 972.14 | 315.45 | 975.56 | 315.29 | 976.37 | 315.27 |
| 977.25 | 315.19 | 978.32 | 315.2 | 979.14 | 315.25 | 979.65 | 315.3 | 980.41 | 315.3 |
| 983.71 | 315.34 | 983.89 | 315.33 | 988.06 | 315.32 | 989.37 | 315.28 | 990.65 | 315.22 |
| 991.75 | 315.19 | 994.92 | 315.2 | 995.34 | 315.26 | 996.37 | 315.34 | 999.48 | 315.68 |
| 1004.61 | 315.92 | 1008.16 | 315.99 | 1011.89 | 316.05 | 1012.72 | 316.08 | 1014.41 | 316.12 |
| 1015.49 | 316.13 | 1015.94 | 316.11 | 1018.52 | 316.08 | 1020.85 | 315.93 | 1024.38 | 315.77 |
| 1024.62 | 315.75 | 1025.88 | 315.71 | 1026.44 | 315.66 | 1027.67 | 315.66 | 1028.41 | 315.67 |
| 1030.44 | 315.73 | 1037.36 | 315.84 | 1040.33 | 315.73 | 1041.95 | 315.62 | 1042.89 | 315.62 |
| 1053.17 | 315.43 | 1060.43 | 315.42 | 1064.94 | 315.31 | 1067.45 | 315.29 | 1068.2 | 315.27 |
| 1074.35 | 315.21 | 1077.08 | 315.25 | 1077.53 | 315.24 | 1079.21 | 315.17 | 1102.47 | 315.29 |
| 1103.56 | 315.31 | 1113.97 | 315.62 | 1114.6 | 315.84 | 1116.06 | 316.25 | 1116.67 | 316.61 |
| 1117.23 | 316.75 | 1117.65 | 316.88 | 1118.59 | 316.94 | 1118.67 | 316.93 | 1141.67 | 317.5 |
| 1144.44 | 317.5 | 1145.39 | 317.46 | 1146.29 | 317.37 | 1154.72 | 317.04 | 1156.09 | 317.05 |
| 1156.65 | 317.07 | 1159.99 | 317.1 | 1161.41 | 317.16 | 1162.97 | 317.14 | 1163.75 | 317.11 |
| 1171.67 | 316.93 | 1172.92 | 316.85 | 1174.09 | 316.82 | 1186.61 | 316.87 | 1189.79 | 316.99 |
| 1190.92 | 317.03 | 1204.12 | 316.54 | 1204.7 | 316.55 | 1211.09 | 315.91 | 1212.19 | 315.75 |
| 1216.46 | 315.33 | 1216.79 | 315.32 | 1225.28 | 315.37 | 1226.27 | 315.43 | 1227.09 | 315.44 |
| 1230.1 | 315.42 | 1231.85 | 315.44 | 1233.34 | 315.42 | 1235.56 | 315.23 | 1236.75 | 315.17 |
| 1237.12 | 315.24 | 1238.25 | 315.28 | 1240.35 | 315.32 | 1240.61 | 315.31 | 1243.56 | 315.3 |
| 1253.82 | 315.17 | 1257.1 | 315.2 | 1262.12 | 315.2 | 1274.58 | 315.27 | 1276.11 | 315.27 |
| 1276.36 | 315.26 | 1282.66 | 315.24 | 1283.83 | 315.25 | 1284.15 | 315.24 | 1287.25 | 315.26 |
| 1289.57 | 315.35 | 1290.12 | 315.34 | 1293.71 | 315.45 | 1295.03 | 315.53 | 1295.63 | 315.55 |
| 1301.24 | 315.87 | 1314.61 | 316.01 | 1315.45 | 316.02 | 1327.25 | 316.08 | 1328.27 | 316.13 |
| 1330.06 | 316.18 | 1332.73 | 316.21 | 1336.69 | 316.2 | 1348.34 | 316.26 | 1350.19 | 316.24 |
| 1358.84 | 316.1 | 1359.81 | 316.08 | 1362.54 | 316.06 | 1364.89 | 316.01 | 1365.34 | 316.07 |
| 1366.67 | 316.03 | 1369.17 | 315.98 | 1370.48 | 315.92 | 1370.49 | 315.93 | 1371.9 | 315.91 |
| 1372.12 | 315.89 | 1374.47 | 316.03 | 1374.84 | 316.1 | 1375.13 | 316.12 | 1376.01 | 316.23 |
| 1376.48 | 316.36 | 1377.3 | 316.56 | 1378.75 | 316.82 | 1383.69 | 317.54 | 1384.77 | 317.69 |
| 1386.66 | 317.91 | 1387.32 | 317.98 | 1390.38 | 318.49 | 1390.64 | 318.55 | 1391.85 | 318.77 |
| 1392.51 | 318.88 | 1393.53 | 319.1 | 1395.42 | 319.47 | 1397.61 | 320.32 | 1399.46 | 321.01 |
| 1400.45 | 321.36 | 1402.37 | 322.08 | 1403.26 | 322.4 | 1405.13 | 323.09 | 1405.83 | 323.32 |
| 1407.1 | 323.78 | 1408.16 | 324.14 | 1409.07 | 324.47 | 1410.07 | 324.88 | 1412.56 | 325.81 |
| 1415.88 | 327.24 | 1416.86 | 327.76 | 1417.3 | 327.93 | 1417.66 | 328.03 | 1419.62 | 328.61 |
| 1419.94 | 328.68 | 1423.56 | 329.9 | 1426.24 | 330.78 | 1427.31 | 331.16 | 1428.78 | 331.65 |
| 1430.08 | 332.15 | 1430.74 | 332.44 | 1432.36 | 332.57 | 1436.96 | 332.87 | 1437.52 | 332.9 |
| 1439.24 | 333.06 | 1441.01 | 333.21 | 1443.64 | 333.38 | 1446.65 | 333.58 | 1447.4 | 333.62 |
| 1454.77 | 334.07 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 77.55 | .05 | 498.58 | .04 | 1370.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 498.58 | 1370.49 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 489.74 Elevation= 315.975
Right Levee Station=1318.608 Elevation= 315.48

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3296.25*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 68.93 | 335.81 | 69.84 | 335.68 | 70.35 | 335.57 | 71.79 | 335.18 | 74.12 | 334.59 |
| 75.95 | 334.14 | 77.09 | 333.85 | 78.93 | 333.5 | 86.17 | 332.28 | 87.1 | 332.11 |
| 87.47 | 332.06 | 88.75 | 331.85 | 89.56 | 331.75 | 91.82 | 331.57 | 99.78 | 331.02 |
| 101.13 | 330.95 | 101.56 | 330.97 | 103.45 | 330.88 | 109.44 | 330.46 | 116.34 | 330.03 |
| 118.74 | 329.92 | 126.23 | 329.39 | 136.74 | 328.72 | 137.56 | 328.61 | 138.83 | 328.5 |
| 144.31 | 328.11 | 145.13 | 328.02 | 146.22 | 327.92 | 150.45 | 327.44 | 152.36 | 327.19 |
| 153.62 | 326.97 | 155.44 | 326.61 | 156.17 | 326.48 | 157.09 | 326.22 | 158.75 | 325.79 |
| 160.67 | 325.22 | 161.59 | 324.97 | 163.3 | 324.46 | 163.63 | 324.38 | 166.55 | 323.96 |
| 167.45 | 323.85 | 167.76 | 323.88 | 168.57 | 323.91 | 169.29 | 323.8 | 169.7 | 323.8 |
| 171.23 | 323.68 | 172.67 | 323.52 | 175.44 | 323.33 | 178.31 | 323.32 | 180.67 | 323.14 |
| 184 | 323.07 | 185.14 | 323.01 | 186.22 | 322.92 | 188.06 | 322.83 | 191.44 | 322.58 |
| 193.38 | 322.35 | 194.48 | 322.2 | 194.85 | 322.19 | 197.62 | 321.78 | 198.15 | 321.68 |
| 199.87 | 321.42 | 202.78 | 321.02 | 209.69 | 320.23 | 210.65 | 320.13 | 211.03 | 320.14 |
| 211.63 | 320.1 | 214.48 | 319.83 | 216.96 | 319.65 | 217.13 | 319.63 | 221.49 | 319.32 |
| 224.08 | 319.1 | 233.54 | 318.38 | 233.62 | 318.38 | 236.05 | 318.15 | 240.15 | 317.67 |
| 247.42 | 316.96 | 258.29 | 316.12 | 258.77 | 316.08 | 260.65 | 315.89 | 268.12 | 315.41 |
| 268.38 | 315.38 | 270.07 | 315.27 | 274.87 | 314.9 | 278.46 | 314.67 | 281.43 | 314.45 |
| 285.06 | 314.31 | 287.55 | 314.17 | 288.67 | 314.08 | 288.96 | 314.08 | 292.42 | 313.99 |
| 296.9 | 313.83 | 320.66 | 313.35 | 321.28 | 313.35 | 324.1 | 313.26 | 326.23 | 313.4 |
| 326.81 | 313.43 | 332.36 | 313.5 | 336.3 | 313.53 | 342.51 | 313.5 | 351.92 | 313.42 |
| 352.44 | 313.39 | 353.28 | 313.37 | 354.05 | 313.37 | 356.05 | 313.39 | 356.26 | 313.4 |
| 358.43 | 313.43 | 359.83 | 313.46 | 360.42 | 313.46 | 379.92 | 313.77 | 383.96 | 313.86 |
| 386.3 | 313.89 | 388.88 | 313.89 | 390.71 | 313.88 | 392.33 | 313.86 | 394.75 | 313.81 |
| 400.83 | 313.76 | 403.09 | 313.75 | 404.94 | 313.75 | 406 | 313.71 | 406.9 | 313.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 407.59 | 313.59 | 407.7 | 313.55 | 409.79 | 313.56 | 411.52 | 313.58 | 412.86 | 313.69 |
| 413.93 | 313.84 | 423.83 | 314.3 | 436.05 | 314.67 | 444.22 | 314.92 | 449.82 | 315.05 |
| 459.4 | 315.31 | 461.07 | 315.34 | 461.59 | 315.36 | 464.04 | 315.41 | 468.94 | 315.42 |
| 471.77 | 315.4 | 475.93 | 315.33 | 477.01 | 315.29 | 482.57 | 314.85 | 484.2 | 314.78 |
| 486.98 | 314.71 | 489.58 | 314.64 | 489.78 | 314.67 | 497.57 | 314.47 | 498.33 | 314.43 |
| 503.65 | 314.28 | 504.86 | 314.28 | 506.51 | 314.14 | 507.33 | 314.09 | 507.74 | 314.05 |
| 508.64 | 314 | 508.95 | 314 | 511.41 | 313.91 | 513.08 | 313.86 | 516.84 | 313.91 |
| 517.82 | 313.92 | 521.74 | 313.91 | 522.82 | 313.9 | 522.94 | 313.92 | 524.16 | 313.94 |
| 525.52 | 313.9 | 529.38 | 313.87 | 529.78 | 313.84 | 531.52 | 313.76 | 533.79 | 313.77 |
| 535.55 | 313.79 | 537.32 | 313.84 | 538.78 | 313.89 | 539.44 | 313.99 | 540.93 | 313.98 |
| 544.81 | 314.04 | 545.02 | 314.05 | 552.14 | 314.13 | 553.34 | 314.13 | 563.2 | 314.19 |
| 573.9 | 314.24 | 578.4 | 314.29 | 580.06 | 314.33 | 583.7 | 314.34 | 585.63 | 314.39 |
| 586.09 | 314.39 | 587.53 | 314.44 | 587.98 | 314.44 | 589.14 | 314.48 | 593.4 | 314.47 |
| 596.08 | 314.45 | 600.32 | 314.36 | 601.06 | 314.34 | 601.69 | 314.3 | 602.76 | 314.27 |
| 603.7 | 314.26 | 603.94 | 314.27 | 605.37 | 314.25 | 607.31 | 314.24 | 612.38 | 314.19 |
| 613.52 | 314.2 | 614.91 | 314.2 | 619.52 | 314.16 | 621.72 | 314.09 | 622.18 | 314.09 |
| 623.18 | 314.06 | 627.31 | 314 | 632.06 | 313.98 | 635.39 | 313.93 | 635.69 | 313.94 |
| 637.87 | 313.9 | 641.7 | 313.82 | 643.98 | 313.82 | 647.89 | 313.84 | 650.92 | 313.85 |
| 654.76 | 313.81 | 657.25 | 313.82 | 658.5 | 313.84 | 661.61 | 313.92 | 662.23 | 313.93 |
| 668.5 | 314.08 | 669.47 | 314.09 | 672.06 | 314.03 | 674.92 | 313.87 | 675.4 | 313.87 |
| 676.53 | 313.79 | 677.67 | 313.74 | 679.54 | 313.67 | 680.74 | 313.66 | 681.47 | 313.67 |
| 683.59 | 313.68 | 685.29 | 313.72 | 687.55 | 313.74 | 689.05 | 313.84 | 689.94 | 313.86 |
| 695.79 | 313.77 | 699.14 | 313.62 | 700.93 | 313.59 | 704.35 | 313.51 | 704.84 | 313.47 |
| 706.94 | 313.41 | 709.08 | 313.39 | 712.59 | 313.31 | 712.92 | 313.32 | 714.25 | 313.29 |
| 714.82 | 313.26 | 716.05 | 313.24 | 716.54 | 313.26 | 717.41 | 313.37 | 717.87 | 313.51 |
| 718.28 | 313.52 | 720.8 | 313.51 | 725.98 | 313.6 | 737.72 | 313.83 | 750.41 | 314.06 |
| 754.97 | 314.13 | 756.2 | 314.14 | 758.81 | 314.25 | 760.6 | 314.28 | 761.66 | 314.29 |
| 763.21 | 314.26 | 763.65 | 314.23 | 767.35 | 314.21 | 768 | 314.2 | 771.2 | 314.23 |
| 773.64 | 314.24 | 774.5 | 314.28 | 776 | 314.27 | 780.09 | 314.32 | 780.56 | 314.31 |
| 782.15 | 314.32 | 784.52 | 314.27 | 785.24 | 314.22 | 785.89 | 314.21 | 787.3 | 314.22 |
| 792.9 | 314.22 | 802.37 | 314.37 | 803.13 | 314.4 | 804.31 | 314.43 | 813.45 | 314.62 |
| 814.46 | 314.62 | 824.38 | 314.55 | 831.43 | 314.57 | 832.07 | 314.61 | 833.6 | 314.57 |
| 838.35 | 314.25 | 838.51 | 314.25 | 840.83 | 314.13 | 841.53 | 314.15 | 842.82 | 314.28 |
| 848.32 | 314.25 | 849.66 | 314.22 | 852.15 | 314.14 | 853.69 | 314.11 | 854.62 | 314.13 |
| 857.58 | 314.18 | 858.91 | 314.16 | 859.69 | 314.13 | 862.24 | 314.21 | 863.93 | 314.28 |
| 874.36 | 314.82 | 874.61 | 314.82 | 880.51 | 314.95 | 890.29 | 314.9 | 891.21 | 314.79 |
| 892.73 | 314.67 | 893.52 | 314.63 | 898.67 | 314.34 | 902.61 | 314.28 | 903.02 | 314.26 |
| 919.24 | 314.68 | 932.73 | 315.33 | 933.54 | 315.36 | 946.19 | 315.36 | 946.88 | 315.3 |
| 949.21 | 315.14 | 952.82 | 314.97 | 953.67 | 314.95 | 954.43 | 314.89 | 954.6 | 314.86 |
| 955.73 | 314.88 | 956.61 | 314.92 | 957.14 | 314.98 | 957.95 | 314.98 | 961.43 | 315.02 |
| 961.62 | 315.01 | 966.03 | 315 | 967.42 | 314.95 | 968.77 | 314.89 | 969.93 | 314.86 |
| 973.28 | 314.87 | 973.72 | 314.93 | 974.82 | 315.02 | 978.1 | 315.38 | 983.52 | 315.63 |
| 987.28 | 315.71 | 991.22 | 315.78 | 992.09 | 315.81 | 993.41 | 315.83 | 993.88 | 315.85 |
| 995.03 | 315.87 | 995.49 | 315.85 | 997.69 | 315.83 | 998.22 | 315.81 | 1000.68 | 315.66 |
| 1004.42 | 315.49 | 1004.67 | 315.47 | 1006 | 315.42 | 1006.59 | 315.37 | 1007.89 | 315.37 |
| 1010.69 | 315.44 | 1010.83 | 315.45 | 1017.4 | 315.55 | 1018.14 | 315.57 | 1021.27 | 315.44 |
| 1022.99 | 315.33 | 1023.98 | 315.33 | 1034.85 | 315.13 | 1042.52 | 315.12 | 1047.28 | 314.99 |
| 1049.94 | 314.98 | 1050.74 | 314.95 | 1057.23 | 314.89 | 1060.12 | 314.93 | 1060.6 | 314.92 |
| 1062.37 | 314.85 | 1086.96 | 314.98 | 1088.1 | 315 | 1099.11 | 315.33 | 1099.78 | 315.56 |
| 1101.32 | 316 | 1101.97 | 316.39 | 1102.55 | 316.53 | 1103 | 316.67 | 1104.08 | 316.73 |
| 1128.39 | 317.33 | 1131.32 | 317.33 | 1132.32 | 317.29 | 1133.27 | 317.19 | 1142.18 | 316.84 |
| 1143.63 | 316.85 | 1144.22 | 316.87 | 1147.74 | 316.91 | 1149.25 | 316.97 | 1149.8 | 316.97 |
| 1151.73 | 316.92 | 1160.09 | 316.71 | 1161.41 | 316.63 | 1162.12 | 316.6 | 1162.65 | 316.6 |
| 1175.89 | 316.63 | 1179.25 | 316.76 | 1180.14 | 316.81 | 1180.44 | 316.81 | 1194.39 | 316.26 |
| 1195.01 | 316.28 | 1201.76 | 315.59 | 1202.92 | 315.41 | 1207.44 | 314.96 | 1207.78 | 314.95 |
| 1216.76 | 315 | 1217.8 | 315.06 | 1218.67 | 315.07 | 1221.85 | 315.05 | 1223.7 | 315.06 |
| 1225.28 | 315.04 | 1227.21 | 314.87 | 1228.88 | 314.77 | 1229.27 | 314.84 | 1230.24 | 314.89 |
| 1232.08 | 314.92 | 1232.96 | 314.92 | 1236.07 | 314.9 | 1246.92 | 314.75 | 1250.39 | 314.78 |
| 1255.7 | 314.78 | 1268.86 | 314.84 | 1270.48 | 314.83 | 1270.75 | 314.82 | 1277.4 | 314.8 |
| 1278.98 | 314.8 | 1282.26 | 314.81 | 1284.71 | 314.9 | 1285.29 | 314.89 | 1289.09 | 315 |
| 1289.56 | 315.02 | 1290.48 | 315.09 | 1291.11 | 315.11 | 1297.05 | 315.44 | 1311.17 | 315.56 |
| 1312.06 | 315.57 | 1324.54 | 315.63 | 1325.61 | 315.68 | 1327.5 | 315.73 | 1330.32 | 315.76 |
| 1334.52 | 315.75 | 1346.82 | 315.79 | 1348.78 | 315.76 | 1357.92 | 315.6 | 1358.95 | 315.57 |
| 1361.83 | 315.55 | 1364.32 | 315.49 | 1364.8 | 315.55 | 1366.19 | 315.51 | 1368.84 | 315.46 |
| 1369.11 | 315.44 | 1370.24 | 315.4 | 1370.91 | 315.4 | 1371.8 | 315.38 | 1371.88 | 315.36 |
| 1373.94 | 315.48 | 1375.82 | 315.69 | 1376.29 | 315.82 | 1377.12 | 316.02 | 1378.59 | 316.28 |
| 1383.6 | 316.99 | 1384.69 | 317.14 | 1386.6 | 317.36 | 1387.27 | 317.43 | 1390.37 | 317.94 |
| 1390.95 | 318.06 | 1392.53 | 318.34 | 1393.56 | 318.56 | 1395.47 | 318.95 | 1396.21 | 319.24 |
| 1397.69 | 319.84 | 1399.56 | 320.57 | 1400.56 | 320.93 | 1402.5 | 321.69 | 1403.41 | 322.02 |
| 1404.63 | 322.5 | 1406 | 322.99 | 1407.29 | 323.47 | 1408.37 | 323.84 | 1409.29 | 324.2 |
| 1410.3 | 324.63 | 1412.82 | 325.6 | 1414.53 | 326.37 | 1416.18 | 327.1 | 1417.17 | 327.65 |
| 1417.62 | 327.83 | 1417.99 | 327.93 | 1419.96 | 328.53 | 1420.29 | 328.61 | 1421.62 | 329.06 |
| 1423.95 | 329.87 | 1427.05 | 330.92 | 1427.75 | 331.18 | 1429.24 | 331.69 | 1430.55 | 332.2 |
| 1431.23 | 332.5 | 1432.86 | 332.62 | 1437.52 | 332.89 | 1438.08 | 332.92 | 1439.83 | 333.07 |
| 1441.62 | 333.21 | 1443.76 | 333.33 | 1444.28 | 333.37 | 1447.99 | 333.59 | 1448.08 | 333.59 |
| 1455.55 | 334.01 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 68.93 | .05 | 477.01 | .04 | 1370.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 477.01 | 1370.24 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 468.44 Elevation=315.5367
Right Levee Station=1318.417 Elevation=315.1667

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3276.51*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 60.32 | 335.69 | 61.19 | 335.57 | 61.76 | 335.47 | 63.28 | 335.09 | 64.25 | 334.86 |
| 67.11 | 334.22 | 68.21 | 333.96 | 70 | 333.66 | 75.92 | 332.75 | 77.01 | 332.58 |
| 77.91 | 332.43 | 78.67 | 332.33 | 79.5 | 332.2 | 80.29 | 332.1 | 82.48 | 331.95 |
| 90.18 | 331.44 | 91.49 | 331.38 | 91.9 | 331.4 | 93.74 | 331.31 | 99.54 | 330.93 |
| 106.22 | 330.54 | 108.54 | 330.43 | 115.79 | 329.91 | 125.97 | 329.26 | 126.76 | 329.15 |
| 127.99 | 329.03 | 133.3 | 328.63 | 134.1 | 328.53 | 135.15 | 328.43 | 139.25 | 327.93 |
| 141.09 | 327.66 | 142.31 | 327.43 | 144.08 | 327.05 | 144.78 | 326.92 | 145.67 | 326.64 |
| 147.28 | 326.19 | 150.04 | 325.32 | 151.68 | 324.78 | 152.01 | 324.7 | 154.84 | 324.27 |
| 155.71 | 324.15 | 156.01 | 324.18 | 156.78 | 324.21 | 157.49 | 324.1 | 157.88 | 324.09 |
| 159.37 | 323.97 | 160.76 | 323.81 | 163.44 | 323.61 | 166.22 | 323.59 | 168.51 | 323.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 171.72 | 323.32 | 172.83 | 323.26 | 173.88 | 323.16 | 175.66 | 323.07 | 178.93 | 322.8 |
| 180.81 | 322.55 | 181.88 | 322.4 | 182.24 | 322.38 | 184.91 | 321.95 | 185.43 | 321.85 |
| 187.09 | 321.56 | 189.91 | 321.14 | 192.36 | 320.84 | 196.6 | 320.29 | 197.54 | 320.18 |
| 197.9 | 320.19 | 198.48 | 320.15 | 201.24 | 319.85 | 208.03 | 319.32 | 210.54 | 319.09 |
| 219.7 | 318.34 | 222.13 | 318.09 | 226.59 | 317.53 | 233.14 | 316.83 | 243.66 | 315.9 |
| 245.95 | 315.66 | 253.17 | 315.15 | 253.31 | 315.13 | 259.71 | 314.62 | 263.19 | 314.38 |
| 266.06 | 314.14 | 267.39 | 314.09 | 269.58 | 313.99 | 271.99 | 313.85 | 273.08 | 313.76 |
| 273.78 | 313.75 | 276.71 | 313.65 | 281.04 | 313.47 | 304.05 | 312.93 | 304.65 | 312.93 |
| 305.47 | 312.89 | 307.38 | 312.83 | 310 | 313 | 315.38 | 313.07 | 319.19 | 313.1 |
| 325.2 | 313.08 | 334.32 | 313 | 334.82 | 312.98 | 336.38 | 312.96 | 338.31 | 312.98 |
| 338.52 | 312.99 | 341.98 | 313.04 | 342.55 | 313.04 | 361.43 | 313.33 | 362.25 | 313.35 |
| 365.34 | 313.41 | 367.61 | 313.44 | 370.1 | 313.44 | 373.44 | 313.4 | 375.78 | 313.35 |
| 383.86 | 313.28 | 385.65 | 313.28 | 386.68 | 313.24 | 387.55 | 313.19 | 388.22 | 313.11 |
| 388.32 | 313.07 | 392.02 | 313.09 | 393.32 | 313.21 | 394.36 | 313.36 | 403.94 | 313.82 |
| 423.68 | 314.47 | 429.11 | 314.61 | 438.39 | 314.88 | 440 | 314.91 | 440.5 | 314.93 |
| 442.88 | 314.98 | 447.62 | 315 | 450.37 | 314.98 | 454.39 | 314.92 | 455.43 | 314.88 |
| 460.67 | 314.46 | 462.21 | 314.39 | 464.82 | 314.32 | 467.27 | 314.24 | 467.46 | 314.26 |
| 474.79 | 314.04 | 475.52 | 314 | 480.52 | 313.85 | 481.67 | 313.86 | 483.22 | 313.71 |
| 485.23 | 313.56 | 485.51 | 313.56 | 487.83 | 313.46 | 489.4 | 313.42 | 490.94 | 313.43 |
| 492.94 | 313.47 | 493.7 | 313.48 | 498.63 | 313.48 | 498.69 | 313.49 | 499.84 | 313.51 |
| 501.12 | 313.48 | 504.76 | 313.46 | 506.77 | 313.37 | 508.91 | 313.38 | 510.56 | 313.42 |
| 512.24 | 313.47 | 513.61 | 313.53 | 514.23 | 313.64 | 515.64 | 313.63 | 519.29 | 313.69 |
| 519.49 | 313.69 | 526.19 | 313.77 | 527.32 | 313.77 | 536.61 | 313.82 | 546.69 | 313.86 |
| 550.92 | 313.91 | 552.49 | 313.94 | 555.92 | 313.95 | 557.73 | 314 | 558.16 | 314 |
| 560.78 | 314.06 | 561.04 | 314.07 | 564.48 | 314.07 | 565.82 | 314.05 | 567.57 | 314.04 |
| 571.57 | 313.96 | 572.86 | 313.9 | 573.86 | 313.88 | 576.32 | 313.85 | 578.15 | 313.85 |
| 582.93 | 313.8 | 584 | 313.81 | 585.31 | 313.81 | 589.65 | 313.77 | 591.72 | 313.7 |
| 596.99 | 313.62 | 601.47 | 313.6 | 604.6 | 313.56 | 606.66 | 313.54 | 606.94 | 313.53 |
| 610.54 | 313.46 | 612.43 | 313.45 | 612.69 | 313.46 | 616.37 | 313.48 | 617.09 | 313.47 |
| 618.72 | 313.48 | 619.22 | 313.47 | 622.84 | 313.44 | 625.18 | 313.44 | 626.36 | 313.46 |
| 629.29 | 313.53 | 629.88 | 313.53 | 635.78 | 313.66 | 636.69 | 313.67 | 639.14 | 313.61 |
| 641.83 | 313.47 | 642.28 | 313.48 | 643.34 | 313.4 | 646.18 | 313.3 | 646.58 | 313.29 |
| 648.65 | 313.29 | 650 | 313.3 | 651.6 | 313.33 | 653.57 | 313.35 | 655.14 | 313.44 |
| 655.97 | 313.45 | 661.49 | 313.37 | 662.78 | 313.32 | 664.23 | 313.25 | 666.33 | 313.21 |
| 669.55 | 313.13 | 670.01 | 313.09 | 671.98 | 313.03 | 674 | 313.01 | 676.19 | 312.97 |
| 677.3 | 312.94 | 678.18 | 312.93 | 680.56 | 312.87 | 681.07 | 312.89 | 681.98 | 313 |
| 682.47 | 313.15 | 682.9 | 313.17 | 685.56 | 313.15 | 691.02 | 313.25 | 703.39 | 313.49 |
| 715.61 | 313.71 | 721.56 | 313.81 | 722.75 | 313.81 | 722.87 | 313.82 | 725.61 | 313.93 |
| 727.5 | 313.96 | 728.62 | 313.97 | 730.25 | 313.94 | 730.62 | 313.91 | 734.62 | 313.89 |
| 735.3 | 313.87 | 741.24 | 313.92 | 742.15 | 313.96 | 743.74 | 313.95 | 748.04 | 314 |
| 748.54 | 313.99 | 750.21 | 314 | 752.71 | 313.95 | 753.47 | 313.89 | 754.15 | 313.88 |
| 755.65 | 313.89 | 761.54 | 313.89 | 771.52 | 314.05 | 772.32 | 314.08 | 773.57 | 314.11 |
| 783.2 | 314.32 | 784.26 | 314.31 | 794.71 | 314.24 | 794.91 | 314.23 | 802.15 | 314.25 |
| 802.7 | 314.3 | 802.82 | 314.29 | 804.44 | 314.25 | 809.44 | 313.9 | 809.61 | 313.9 |
| 812.05 | 313.78 | 812.79 | 313.8 | 814.25 | 313.94 | 819.95 | 313.9 | 823.99 | 313.78 |
| 824.57 | 313.78 | 825.61 | 313.75 | 826.59 | 313.77 | 829.71 | 313.82 | 831.11 | 313.8 |
| 831.66 | 313.78 | 832.38 | 313.78 | 834.62 | 313.85 | 836.4 | 313.93 | 847.39 | 314.49 |
| 847.66 | 314.49 | 853.87 | 314.64 | 864.18 | 314.58 | 865.15 | 314.46 | 866.75 | 314.34 |
| 867.59 | 314.3 | 873.01 | 313.98 | 877.16 | 313.92 | 877.6 | 313.9 | 894.69 | 314.35 |
| 908.9 | 315.03 | 909.76 | 315.06 | 923.09 | 315.07 | 923.82 | 315 | 926.27 | 314.83 |
| 930.08 | 314.65 | 930.97 | 314.63 | 931.87 | 314.55 | 931.95 | 314.53 | 933.15 | 314.55 |
| 934.07 | 314.6 | 934.63 | 314.66 | 935.48 | 314.66 | 939.15 | 314.7 | 939.36 | 314.69 |
| 944 | 314.68 | 945.46 | 314.63 | 946.88 | 314.56 | 948.11 | 314.53 | 951.64 | 314.54 |
| 952.1 | 314.61 | 953.26 | 314.7 | 956.72 | 315.08 | 962.44 | 315.35 | 966.39 | 315.43 |
| 970.54 | 315.5 | 971.47 | 315.54 | 972.86 | 315.56 | 974.56 | 315.61 | 975.05 | 315.58 |
| 977.36 | 315.57 | 977.92 | 315.55 | 980.52 | 315.38 | 981.03 | 315.37 | 984.46 | 315.2 |
| 984.72 | 315.18 | 986.13 | 315.13 | 986.75 | 315.08 | 988.12 | 315.08 | 991.06 | 315.15 |
| 991.21 | 315.16 | 998.71 | 315.29 | 998.91 | 315.29 | 1002.22 | 315.15 | 1004.02 | 315.04 |
| 1005.07 | 315.03 | 1016.53 | 314.82 | 1024.62 | 314.82 | 1029.63 | 314.68 | 1032.43 | 314.67 |
| 1033.27 | 314.64 | 1040.12 | 314.57 | 1043.16 | 314.62 | 1045.53 | 314.52 | 1071.44 | 314.67 |
| 1072.65 | 314.69 | 1084.25 | 315.04 | 1084.95 | 315.28 | 1086.57 | 315.75 | 1087.26 | 316.16 |
| 1087.44 | 316.22 | 1088.19 | 316.4 | 1088.35 | 316.46 | 1089.39 | 316.53 | 1089.48 | 316.52 |
| 1115.1 | 317.17 | 1118.19 | 317.17 | 1119.24 | 317.12 | 1120.25 | 317.02 | 1129.64 | 316.64 |
| 1131.17 | 316.66 | 1131.79 | 316.68 | 1135.5 | 316.71 | 1137.1 | 316.78 | 1137.67 | 316.78 |
| 1139.06 | 316.75 | 1139.7 | 316.72 | 1148.52 | 316.5 | 1148.97 | 316.48 | 1149.91 | 316.41 |
| 1150.65 | 316.38 | 1151.21 | 316.38 | 1165.16 | 316.4 | 1168.7 | 316.53 | 1169.65 | 316.58 |
| 1169.96 | 316.58 | 1184.66 | 315.99 | 1185.31 | 316.01 | 1192.43 | 315.26 | 1193.66 | 315.08 |
| 1198.41 | 314.59 | 1198.77 | 314.58 | 1208.24 | 314.62 | 1208.31 | 314.64 | 1209.33 | 314.69 |
| 1210.26 | 314.69 | 1213.61 | 314.67 | 1215.55 | 314.69 | 1217.21 | 314.66 | 1219.69 | 314.44 |
| 1221.01 | 314.37 | 1221.42 | 314.45 | 1222.44 | 314.5 | 1225.02 | 314.53 | 1225.31 | 314.52 |
| 1228.34 | 314.51 | 1228.59 | 314.5 | 1240.02 | 314.33 | 1243.68 | 314.36 | 1249.27 | 314.35 |
| 1263.15 | 314.41 | 1264.86 | 314.4 | 1265.14 | 314.39 | 1272.15 | 314.35 | 1273.45 | 314.36 |
| 1273.81 | 314.35 | 1277.27 | 314.36 | 1278.58 | 314.42 | 1279.84 | 314.46 | 1280.45 | 314.45 |
| 1284.46 | 314.56 | 1284.96 | 314.58 | 1286.43 | 314.67 | 1286.6 | 314.67 | 1292.85 | 315.01 |
| 1307.73 | 315.12 | 1308.68 | 315.12 | 1321.82 | 315.17 | 1321.98 | 315.19 | 1322.96 | 315.23 |
| 1324.94 | 315.28 | 1327.92 | 315.31 | 1332.34 | 315.29 | 1345.31 | 315.31 | 1346.79 | 315.29 |
| 1347.37 | 315.29 | 1357 | 315.09 | 1358.09 | 315.06 | 1361.13 | 315.04 | 1363.75 | 314.98 |
| 1364.25 | 315.04 | 1365.72 | 314.99 | 1366.05 | 315 | 1366.68 | 314.97 | 1368.51 | 314.94 |
| 1369.97 | 314.87 | 1369.99 | 314.88 | 1371.56 | 314.85 | 1371.65 | 314.83 | 1373.73 | 314.95 |
| 1374.2 | 314.99 | 1375.63 | 315.15 | 1376.11 | 315.29 | 1376.95 | 315.49 | 1378.44 | 315.75 |
| 1383.51 | 316.44 | 1384.61 | 316.58 | 1387.46 | 316.91 | 1390.36 | 317.4 | 1390.62 | 317.46 |
| 1392.54 | 317.8 | 1393.58 | 318.02 | 1395.39 | 318.39 | 1395.52 | 318.43 | 1397.77 | 319.36 |
| 1399.66 | 320.12 | 1400.67 | 320.5 | 1402.64 | 321.3 | 1403.55 | 321.64 | 1404.79 | 322.14 |
| 1405.47 | 322.4 | 1406.18 | 322.65 | 1407.48 | 323.16 | 1408.57 | 323.55 | 1409.5 | 323.92 |
| 1410.53 | 324.38 | 1413.08 | 325.39 | 1414.81 | 326.2 | 1415.05 | 326.3 | 1416.48 | 326.96 |
| 1417.49 | 327.54 | 1417.94 | 327.72 | 1418.31 | 327.84 | 1420.31 | 328.46 | 1420.64 | 328.53 |
| 1421.99 | 329 | 1424.35 | 329.84 | 1427.1 | 330.79 | 1428.19 | 331.2 | 1429.35 | 331.6 |
| 1429.7 | 331.73 | 1431.03 | 332.26 | 1431.71 | 332.56 | 1433.37 | 332.67 | 1438.65 | 332.93 |
| 1442.23 | 333.21 | 1444.39 | 333.32 | 1444.92 | 333.36 | 1448.01 | 333.53 | 1448.77 | 333.56 |
| 1456.32 | 333.95 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 60.32 | .05 | 455.43 | .04 | 1369.99 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 455.43 | 1369.99 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station= 447.14 Elevation=315.0983
Right Levee Station=1318.226 Elevation=314.8533

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3256.77*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 51.7 | 335.57 | 52.54 | 335.47 | 53.09 | 335.38 | 54.56 | 335.05 | 55.89 | 334.77 |
| 58.27 | 334.3 | 59.34 | 334.08 | 61.06 | 333.81 | 66.79 | 333.02 | 67.24 | 332.97 |
| 68.71 | 332.75 | 70.25 | 332.55 | 71.02 | 332.46 | 73.14 | 332.32 | 78.26 | 332.01 |
| 81.44 | 331.82 | 82.25 | 331.82 | 84.03 | 331.74 | 89.63 | 331.4 | 96.1 | 331.04 |
| 98.34 | 330.94 | 105.36 | 330.44 | 115.2 | 329.79 | 115.97 | 329.68 | 117.16 | 329.57 |
| 122.29 | 329.15 | 123.06 | 329.05 | 124.08 | 328.94 | 128.04 | 328.42 | 129.83 | 328.14 |
| 131.01 | 327.9 | 132.71 | 327.5 | 133.39 | 327.36 | 134.26 | 327.07 | 135.81 | 326.59 |
| 138.05 | 325.82 | 138.34 | 325.73 | 140.07 | 325.11 | 140.38 | 325.03 | 143.12 | 324.57 |
| 143.96 | 324.45 | 144.25 | 324.48 | 145 | 324.51 | 145.68 | 324.39 | 146.06 | 324.39 |
| 147.5 | 324.26 | 148.85 | 324.09 | 151.44 | 323.88 | 154.13 | 323.86 | 156.34 | 323.65 |
| 159.45 | 323.57 | 160.52 | 323.51 | 161.54 | 323.41 | 163.26 | 323.3 | 166.42 | 323.02 |
| 168.24 | 322.76 | 169.27 | 322.59 | 169.62 | 322.58 | 172.21 | 322.12 | 172.71 | 322.01 |
| 174.32 | 321.71 | 177.04 | 321.26 | 179.41 | 320.94 | 183.51 | 320.36 | 184.42 | 320.24 |
| 184.77 | 320.24 | 185.33 | 320.19 | 187.12 | 319.98 | 188 | 319.87 | 188.9 | 319.8 |
| 190.48 | 319.66 | 194.57 | 319.32 | 196.99 | 319.07 | 205.86 | 318.29 | 208.2 | 318.03 |
| 212.04 | 317.5 | 212.52 | 317.44 | 218.85 | 316.7 | 229.03 | 315.67 | 229.48 | 315.63 |
| 231.24 | 315.42 | 238.23 | 314.88 | 238.36 | 314.86 | 239.72 | 314.75 | 244.55 | 314.33 |
| 247.92 | 314.08 | 250.56 | 313.85 | 254.1 | 313.67 | 256.43 | 313.53 | 257.39 | 313.45 |
| 261 | 313.31 | 265.19 | 313.12 | 287.44 | 312.52 | 288.02 | 312.51 | 290.66 | 312.39 |
| 291.09 | 312.43 | 292.66 | 312.53 | 293.2 | 312.58 | 298.4 | 312.65 | 302.08 | 312.68 |
| 307.9 | 312.66 | 316.72 | 312.59 | 317.2 | 312.57 | 318.71 | 312.56 | 320.58 | 312.57 |
| 320.78 | 312.58 | 324.12 | 312.63 | 324.68 | 312.63 | 342.94 | 312.89 | 343.73 | 312.91 |
| 346.72 | 312.97 | 348.91 | 312.99 | 351.32 | 312.99 | 353.04 | 312.96 | 354.56 | 312.94 |
| 356.82 | 312.89 | 362.52 | 312.83 | 365.73 | 312.82 | 366.36 | 312.81 | 367.35 | 312.77 |
| 368.42 | 312.7 | 368.85 | 312.64 | 368.95 | 312.59 | 370.91 | 312.59 | 372.53 | 312.6 |
| 373.78 | 312.72 | 374.79 | 312.88 | 384.05 | 313.34 | 395.5 | 313.75 | 403.15 | 314.02 |
| 408.4 | 314.16 | 417.37 | 314.45 | 421.71 | 314.56 | 426.3 | 314.57 | 428.96 | 314.55 |
| 432.85 | 314.5 | 433.86 | 314.46 | 438.77 | 314.08 | 440.21 | 314.01 | 442.67 | 313.93 |
| 444.96 | 313.84 | 445.14 | 313.86 | 452.02 | 313.61 | 452.7 | 313.58 | 457.4 | 313.42 |
| 458.47 | 313.43 | 459.93 | 313.28 | 461.44 | 313.14 | 461.62 | 313.14 | 464.26 | 313.02 |
| 465.73 | 312.97 | 467.17 | 312.99 | 469.76 | 313.04 | 474.38 | 313.05 | 475.52 | 313.08 |
| 476.72 | 313.05 | 480.14 | 313.05 | 480.49 | 313.03 | 482.02 | 312.98 | 484.03 | 313 |
| 485.58 | 313.04 | 487.15 | 313.1 | 488.44 | 313.17 | 489.02 | 313.28 | 490.34 | 313.28 |
| 493.77 | 313.33 | 493.96 | 313.34 | 500.25 | 313.42 | 501.3 | 313.41 | 510.01 | 313.45 |
| 519.47 | 313.48 | 523.45 | 313.52 | 524.91 | 313.55 | 528.13 | 313.56 | 529.84 | 313.6 |
| 530.24 | 313.6 | 531.52 | 313.63 | 531.92 | 313.63 | 532.94 | 313.66 | 536.17 | 313.66 |
| 537.42 | 313.64 | 539.07 | 313.63 | 542.82 | 313.55 | 544.03 | 313.5 | 544.97 | 313.48 |
| 547.28 | 313.46 | 549 | 313.45 | 553.48 | 313.4 | 554.49 | 313.41 | 555.71 | 313.41 |
| 559.78 | 313.37 | 561.73 | 313.31 | 566.67 | 313.23 | 570.87 | 313.22 | 573.81 | 313.18 |
| 575.78 | 313.17 | 576 | 313.15 | 579.38 | 313.09 | 581.4 | 313.09 | 584.85 | 313.11 |
| 585.53 | 313.1 | 587.53 | 313.1 | 590.92 | 313.06 | 594.23 | 313.08 | 596.97 | 313.14 |
| 597.53 | 313.14 | 603.06 | 313.24 | 603.92 | 313.25 | 604.72 | 313.24 | 606.21 | 313.2 |
| 608.73 | 313.08 | 609.16 | 313.08 | 610.16 | 313.02 | 612.82 | 312.92 | 613.88 | 312.91 |
| 614.53 | 312.92 | 615.14 | 312.91 | 616.4 | 312.92 | 617.9 | 312.95 | 619.9 | 312.96 |
| 621.22 | 313.03 | 622 | 313.05 | 627.18 | 312.97 | 628.16 | 312.94 | 629.66 | 312.88 |
| 630.14 | 312.85 | 630.61 | 312.85 | 633.67 | 312.79 | 634.75 | 312.75 | 635.18 | 312.71 |
| 637.03 | 312.65 | 638.92 | 312.63 | 640.98 | 312.6 | 643.85 | 312.52 | 645.06 | 312.5 |
| 645.6 | 312.52 | 646.56 | 312.64 | 647.07 | 312.8 | 647.53 | 312.81 | 650.31 | 312.8 |
| 656.05 | 312.9 | 669.06 | 313.15 | 681.9 | 313.38 | 683.83 | 313.42 | 688.16 | 313.48 |
| 689.41 | 313.49 | 689.53 | 313.5 | 692.73 | 313.62 | 695.58 | 313.65 | 697.29 | 313.62 |
| 697.78 | 313.59 | 701.89 | 313.56 | 702.6 | 313.55 | 708.84 | 313.6 | 709.8 | 313.64 |
| 711.47 | 313.62 | 715.99 | 313.68 | 716.52 | 313.67 | 718.27 | 313.68 | 720.9 | 313.62 |
| 721.44 | 313.6 | 721.69 | 313.56 | 730.19 | 313.56 | 740.68 | 313.73 | 741.51 | 313.76 |
| 742.83 | 313.79 | 752.95 | 314.01 | 754.06 | 314 | 765.05 | 313.92 | 765.25 | 313.91 |
| 772.87 | 313.93 | 773.45 | 313.98 | 773.58 | 313.97 | 775.27 | 313.93 | 780.53 | 313.56 |
| 780.7 | 313.56 | 783.27 | 313.43 | 784.05 | 313.45 | 785.48 | 313.59 | 791.57 | 313.55 |
| 795.82 | 313.43 | 797.72 | 313.39 | 798.56 | 313.42 | 801.84 | 313.47 | 803.31 | 313.44 |
| 803.89 | 313.42 | 804.64 | 313.42 | 807 | 313.49 | 808.87 | 313.58 | 820.42 | 314.17 |
| 820.7 | 314.17 | 827.24 | 314.32 | 838.07 | 314.26 | 839.09 | 314.13 | 840.77 | 314 |
| 841.65 | 313.96 | 847.36 | 313.62 | 851.71 | 313.56 | 852.17 | 313.54 | 870.14 | 314.01 |
| 885.08 | 314.74 | 885.98 | 314.77 | 899.99 | 314.77 | 900.75 | 314.7 | 903.33 | 314.52 |
| 907.33 | 314.33 | 908.28 | 314.3 | 909.11 | 314.24 | 909.31 | 314.21 | 910.56 | 314.22 |
| 911.53 | 314.27 | 912.12 | 314.34 | 913.02 | 314.34 | 916.87 | 314.38 | 917.09 | 314.37 |
| 921.97 | 314.36 | 923.5 | 314.31 | 925 | 314.23 | 926.29 | 314.2 | 930 | 314.21 |
| 930.63 | 314.3 | 931.7 | 314.39 | 935.34 | 314.78 | 941.35 | 315.07 | 945.51 | 315.15 |
| 949.87 | 315.23 | 950.84 | 315.27 | 952.09 | 315.29 | 952.82 | 315.32 | 954.09 | 315.34 |
| 954.61 | 315.32 | 957.04 | 315.3 | 957.63 | 315.29 | 959.07 | 315.19 | 960.36 | 315.11 |
| 960.89 | 315.1 | 964.49 | 314.92 | 964.77 | 314.9 | 966.25 | 314.85 | 966.9 | 314.8 |
| 968.13 | 314.79 | 969.21 | 314.81 | 971.44 | 314.87 | 971.59 | 314.88 | 979.48 | 315.01 |
| 979.69 | 315.01 | 983.17 | 314.87 | 985.06 | 314.75 | 986.16 | 314.74 | 998.21 | 314.52 |
| 1006.71 | 314.51 | 1011.98 | 314.37 | 1014.92 | 314.35 | 1015.8 | 314.32 | 1023 | 314.26 |
| 1026.2 | 314.3 | 1026.72 | 314.29 | 1028.69 | 314.2 | 1055.92 | 314.35 | 1057.19 | 314.38 |
| 1069.39 | 314.75 | 1070.13 | 315.01 | 1071.83 | 315.5 | 1072.55 | 315.93 | 1072.75 | 316 |
| 1073.2 | 316.1 | 1073.7 | 316.25 | 1074.8 | 316.33 | 1074.89 | 316.32 | 1101.82 | 317 |
| 1105.06 | 317 | 1106.17 | 316.95 | 1107.08 | 316.87 | 1107.23 | 316.84 | 1117.1 | 316.45 |
| 1118.7 | 316.46 | 1119.35 | 316.48 | 1123.26 | 316.52 | 1124.94 | 316.59 | 1125.54 | 316.59 |
| 1127 | 316.56 | 1127.68 | 316.53 | 1136.94 | 316.28 | 1137.42 | 316.26 | 1138.41 | 316.19 |
| 1139.78 | 316.15 | 1154.44 | 316.16 | 1158.16 | 316.3 | 1159.15 | 316.35 | 1159.48 | 316.35 |
| 1174.94 | 315.72 | 1175.62 | 315.73 | 1183.09 | 314.94 | 1184.39 | 314.74 | 1189.39 | 314.23 |
| 1189.77 | 314.21 | 1199.71 | 314.25 | 1200.87 | 314.32 | 1201.84 | 314.32 | 1205.36 | 314.3 |
| 1207.4 | 314.31 | 1209.15 | 314.28 | 1211.29 | 314.08 | 1213.15 | 313.97 | 1213.57 | 314.05 |
| 1214.65 | 314.1 | 1216.68 | 314.13 | 1217.66 | 314.13 | 1220.85 | 314.11 | 1221.11 | 314.1 |
| 1233.13 | 313.92 | 1236.97 | 313.94 | 1242.85 | 313.93 | 1257.43 | 313.98 | 1259.23 | 313.96 |
| 1259.52 | 313.95 | 1266.89 | 313.91 | 1272.27 | 313.91 | 1273.65 | 313.97 | 1274.98 | 314.01 |
| 1275.62 | 314 | 1279.84 | 314.11 | 1281.9 | 314.23 | 1282.08 | 314.23 | 1288.65 | 314.58 |
| 1304.3 | 314.67 | 1305.29 | 314.67 | 1319.11 | 314.72 | 1320.3 | 314.78 | 1322.39 | 314.83 |
| 1325.52 | 314.86 | 1330.16 | 314.84 | 1343.79 | 314.84 | 1345.35 | 314.81 | 1345.96 | 314.81 |
| 1356.09 | 314.59 | 1357.22 | 314.56 | 1360.02 | 314.53 | 1363.18 | 314.46 | 1363.7 | 314.53 |
| 1365.25 | 314.48 | 1368.18 | 314.42 | 1369.73 | 314.35 | 1371.19 | 314.33 | 1371.41 | 314.31 |
| 1373.52 | 314.42 | 1374.24 | 314.5 | 1375.45 | 314.61 | 1375.93 | 314.75 | 1376.78 | 314.95 |
| 1378.29 | 315.21 | 1383.42 | 315.89 | 1384.53 | 316.03 | 1386.49 | 316.25 | 1387.18 | 316.32 |
| 1390.35 | 316.85 | 1390.62 | 316.91 | 1392.56 | 317.25 | 1395.57 | 317.9 | 1397.84 | 318.88 |
| 1399.76 | 319.68 | 1400.79 | 320.07 | 1402.77 | 320.91 | 1403.7 | 321.26 | 1404.95 | 321.79 |
| 1405.64 | 322.06 | 1406.36 | 322.32 | 1407.68 | 322.85 | 1408.78 | 323.26 | 1409.72 | 323.65 |
| 1410.76 | 324.12 | 1413.34 | 325.19 | 1414.19 | 325.59 | 1415.09 | 326.03 | 1415.34 | 326.14 |
| 1416.78 | 326.83 | 1417.8 | 327.43 | 1418.26 | 327.62 | 1420.66 | 328.38 | 1420.99 | 328.46 |
| 1422.35 | 328.94 | 1424.74 | 329.81 | 1427.92 | 330.94 | 1428.63 | 331.22 | 1430.16 | 331.77 |
| 1431.5 | 332.31 | 1432.19 | 332.62 | 1433.87 | 332.71 | 1438.64 | 332.92 | 1439.22 | 332.94 |
| 1441 | 333.08 | 1442.84 | 333.21 | 1445.02 | 333.31 | 1448.68 | 333.5 | 1449.46 | 333.53 |
| 1457.1 | 333.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 51.7 | .05 | 433.86 | .04 | 1369.73 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
433.86 1369.73 26.21 19.74 18.73 .1 .3
Left Levee Station=425.8401 Elevation= 314.66
Right Levee Station=1318.035 Elevation= 314.54

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3237.03*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 43.08 | 335.45 | 43.9 | 335.37 | 44.43 | 335.29 | 45.51 | 335.08 | 47.13 | 334.78 |
| 49.43 | 334.38 | 50.46 | 334.19 | 52.13 | 333.97 | 57.66 | 333.3 | 58.68 | 333.18 |
| 59.52 | 333.07 | 61.01 | 332.89 | 61.75 | 332.82 | 68.75 | 332.41 | 70.99 | 332.29 |
| 72.21 | 332.23 | 72.6 | 332.24 | 74.31 | 332.17 | 79.73 | 331.86 | 85.98 | 331.54 |
| 88.14 | 331.45 | 94.92 | 330.96 | 104.43 | 330.33 | 105.17 | 330.21 | 106.32 | 330.1 |
| 111.28 | 329.67 | 112.02 | 329.56 | 113.01 | 329.45 | 116.84 | 328.91 | 118.56 | 328.62 |
| 119.7 | 328.36 | 121.35 | 327.95 | 122 | 327.8 | 122.84 | 327.49 | 124.35 | 326.99 |
| 126.5 | 326.18 | 126.92 | 326.04 | 128.46 | 325.44 | 128.76 | 325.35 | 131.4 | 324.87 |
| 132.05 | 324.76 | 133.21 | 324.82 | 133.88 | 324.69 | 134.25 | 324.69 | 135.64 | 324.55 |
| 136.93 | 324.37 | 137.65 | 324.3 | 139.45 | 324.15 | 142.04 | 324.13 | 144.18 | 323.91 |
| 147.18 | 323.83 | 148.21 | 323.75 | 149.2 | 323.65 | 150.86 | 323.54 | 153.91 | 323.24 |
| 155.67 | 322.97 | 156.67 | 322.79 | 157.01 | 322.78 | 159.51 | 322.29 | 159.99 | 322.18 |
| 161.54 | 321.86 | 164.18 | 321.39 | 166.47 | 321.05 | 170.43 | 320.43 | 171.3 | 320.3 |
| 171.64 | 320.29 | 172.18 | 320.23 | 173.91 | 320.01 | 174.76 | 319.89 | 175.63 | 319.82 |
| 177.16 | 319.67 | 181.11 | 319.32 | 183.45 | 319.06 | 192.01 | 318.24 | 194.28 | 317.97 |
| 197.99 | 317.42 | 204.57 | 316.57 | 214.4 | 315.45 | 216.54 | 315.18 | 223.42 | 314.6 |
| 229.4 | 314.05 | 232.65 | 313.78 | 235.2 | 313.54 | 236.58 | 313.47 | 238.62 | 313.35 |
| 240.87 | 313.21 | 241.8 | 313.13 | 242.39 | 313.11 | 249.33 | 312.77 | 270.83 | 312.1 |
| 271.39 | 312.09 | 273.94 | 311.96 | 275.87 | 312.1 | 276.39 | 312.15 | 281.42 | 312.22 |
| 284.98 | 312.26 | 290.59 | 312.24 | 299.11 | 312.18 | 299.58 | 312.16 | 301.04 | 312.15 |
| 302.84 | 312.16 | 303.04 | 312.17 | 305 | 312.19 | 306.27 | 312.22 | 306.8 | 312.22 |
| 324.44 | 312.45 | 328.09 | 312.53 | 330.22 | 312.54 | 332.55 | 312.53 | 334.21 | 312.51 |
| 335.67 | 312.48 | 337.86 | 312.42 | 345.41 | 312.35 | 347.08 | 312.34 | 348.03 | 312.3 |
| 349.17 | 312.21 | 349.57 | 312.11 | 353.03 | 312.11 | 354.24 | 312.24 | 355.21 | 312.4 |
| 364.17 | 312.85 | 375.23 | 313.29 | 382.61 | 313.56 | 387.68 | 313.72 | 397.86 | 314.06 |
| 400.55 | 314.13 | 404.98 | 314.14 | 407.55 | 314.12 | 411.31 | 314.08 | 412.28 | 314.05 |
| 416.87 | 313.69 | 418.22 | 313.62 | 420.51 | 313.54 | 422.65 | 313.44 | 422.83 | 313.46 |
| 429.25 | 313.18 | 429.88 | 313.15 | 434.27 | 312.99 | 435.27 | 313 | 436.63 | 312.84 |
| 437.65 | 312.74 | 438.65 | 312.68 | 440.68 | 312.57 | 442.05 | 312.52 | 443.4 | 312.54 |
| 445.16 | 312.59 | 445.96 | 312.6 | 449.17 | 312.62 | 450.14 | 312.62 | 451.2 | 312.65 |
| 452.33 | 312.63 | 455.51 | 312.64 | 455.84 | 312.62 | 457.28 | 312.59 | 459.15 | 312.62 |
| 460.6 | 312.66 | 462.07 | 312.73 | 463.27 | 312.81 | 463.81 | 312.93 | 465.05 | 312.93 |
| 468.42 | 312.98 | 474.3 | 313.06 | 475.29 | 313.05 | 483.42 | 313.08 | 492.26 | 313.11 |
| 495.97 | 313.14 | 497.34 | 313.16 | 500.35 | 313.17 | 501.94 | 313.2 | 502.32 | 313.2 |
| 504.61 | 313.25 | 507.86 | 313.25 | 509.03 | 313.23 | 509.32 | 313.24 | 510.56 | 313.22 |
| 514.07 | 313.15 | 515.04 | 313.11 | 516.08 | 313.09 | 518.23 | 313.06 | 519.84 | 313.06 |
| 524.03 | 313.01 | 524.97 | 313.02 | 530.06 | 312.97 | 531.73 | 312.92 | 536.35 | 312.85 |
| 540.27 | 312.84 | 543.02 | 312.8 | 543.27 | 312.81 | 548.22 | 312.73 | 550.11 | 312.72 |
| 553.33 | 312.74 | 553.97 | 312.73 | 555.83 | 312.73 | 559 | 312.69 | 561.06 | 312.69 |
| 562.09 | 312.7 | 564.66 | 312.74 | 565.17 | 312.74 | 570.34 | 312.82 | 571.15 | 312.83 |
| 573.29 | 312.79 | 575.64 | 312.68 | 576.04 | 312.68 | 577.92 | 312.59 | 579.81 | 312.54 |
| 582.8 | 312.54 | 585.19 | 312.57 | 586.18 | 312.57 | 587.31 | 312.63 | 588.04 | 312.64 |
| 592.87 | 312.57 | 596.08 | 312.46 | 597.12 | 312.45 | 598.94 | 312.41 | 599.94 | 312.37 |
| 600.34 | 312.33 | 602.07 | 312.27 | 603.84 | 312.25 | 605.76 | 312.22 | 606.74 | 312.19 |
| 607.01 | 312.2 | 608.79 | 312.14 | 609.56 | 312.13 | 610.13 | 312.15 | 610.49 | 312.21 |
| 611.13 | 312.28 | 611.67 | 312.44 | 612.15 | 312.46 | 615.07 | 312.44 | 621.09 | 312.55 |
| 634.73 | 312.81 | 648.2 | 313.05 | 649.47 | 313.08 | 654.76 | 313.16 | 656.07 | 313.16 |
| 658.38 | 313.26 | 659.55 | 313.3 | 660.12 | 313.3 | 661.3 | 313.32 | 662.54 | 313.33 |
| 664.34 | 313.3 | 664.85 | 313.26 | 669.15 | 313.24 | 669.91 | 313.22 | 676.45 | 313.27 |
| 677.46 | 313.32 | 679.2 | 313.3 | 683.94 | 313.36 | 684.49 | 313.35 | 686.34 | 313.36 |
| 689.09 | 313.3 | 689.92 | 313.24 | 690.68 | 313.23 | 692.33 | 313.24 | 698.83 | 313.23 |
| 709.83 | 313.41 | 710.7 | 313.45 | 712.08 | 313.47 | 722.69 | 313.7 | 735.39 | 313.6 |
| 735.6 | 313.59 | 743.59 | 313.6 | 743.83 | 313.64 | 744.33 | 313.65 | 746.11 | 313.61 |
| 751.62 | 313.21 | 751.8 | 313.21 | 753.24 | 313.14 | 754.5 | 313.07 | 755.31 | 313.1 |
| 756.93 | 313.25 | 763.2 | 313.2 | 764.76 | 313.16 | 767.66 | 313.07 | 769.65 | 313.03 |
| 770.52 | 313.06 | 773.97 | 313.11 | 775.51 | 313.09 | 776.12 | 313.06 | 776.9 | 313.07 |
| 779.38 | 313.14 | 781.34 | 313.23 | 793.46 | 313.85 | 793.75 | 313.85 | 800.6 | 314.01 |
| 811.96 | 313.94 | 813.03 | 313.8 | 814.79 | 313.67 | 815.71 | 313.62 | 821.7 | 313.27 |
| 826.27 | 313.2 | 826.75 | 313.17 | 845.59 | 313.68 | 861.25 | 314.44 | 862.2 | 314.47 |
| 876.89 | 314.48 | 877.69 | 314.4 | 880.39 | 314.21 | 884.59 | 314 | 885.58 | 313.98 |
| 886.57 | 313.9 | 886.66 | 313.88 | 887.98 | 313.89 | 888.99 | 313.95 | 889.61 | 314.02 |
| 890.55 | 314.02 | 894.59 | 314.06 | 894.82 | 314.05 | 899.94 | 314.04 | 901.55 | 313.99 |
| 903.12 | 313.91 | 904.47 | 313.87 | 908.36 | 313.88 | 908.87 | 313.96 | 910.15 | 314.07 |
| 913.96 | 314.49 | 920.26 | 314.79 | 924.62 | 314.88 | 929.2 | 314.96 | 930.21 | 315 |
| 931.52 | 315.02 | 932.29 | 315.05 | 933.62 | 315.08 | 934.17 | 315.05 | 936.71 | 315.04 |
| 937.33 | 315.02 | 938.85 | 314.93 | 940.19 | 314.84 | 940.76 | 314.82 | 944.53 | 314.64 |
| 944.82 | 314.62 | 946.37 | 314.56 | 947.06 | 314.51 | 948.35 | 314.5 | 949.48 | 314.52 |
| 951.81 | 314.58 | 951.98 | 314.59 | 959.61 | 314.72 | 960.47 | 314.74 | 964.11 | 314.58 |
| 966.1 | 314.46 | 967.25 | 314.45 | 979.88 | 314.21 | 988.8 | 314.2 | 994.32 | 314.05 |
| 997.41 | 314.04 | 998.33 | 314.01 | 1005.88 | 313.94 | 1009.24 | 313.98 | 1009.79 | 313.97 |
| 1011.85 | 313.88 | 1040.41 | 314.04 | 1041.74 | 314.06 | 1054.52 | 314.46 | 1055.3 | 314.73 |
| 1057.09 | 315.25 | 1057.84 | 315.71 | 1058.05 | 315.78 | 1058.53 | 315.88 | 1059.05 | 316.04 |
| 1060.2 | 316.12 | 1060.3 | 316.11 | 1088.54 | 316.83 | 1091.94 | 316.83 | 1093.1 | 316.78 |
| 1094.21 | 316.67 | 1104.56 | 316.25 | 1104.98 | 316.26 | 1106.24 | 316.26 | 1106.92 | 316.29 |
| 1111.02 | 316.33 | 1111.53 | 316.34 | 1112.78 | 316.4 | 1113.41 | 316.4 | 1114.94 | 316.37 |
| 1115.65 | 316.34 | 1125.37 | 316.07 | 1125.87 | 316.05 | 1126.9 | 315.97 | 1127.72 | 315.93 |
| 1143.71 | 315.93 | 1147.62 | 316.07 | 1149.01 | 316.13 | 1165.21 | 315.44 | 1165.92 | 315.46 |
| 1173.76 | 314.62 | 1175.12 | 314.41 | 1180.36 | 313.86 | 1180.76 | 313.84 | 1191.19 | 313.87 |
| 1191.27 | 313.89 | 1192.4 | 313.95 | 1193.42 | 313.95 | 1197.11 | 313.92 | 1199.25 | 313.93 |
| 1201.09 | 313.9 | 1203.33 | 313.69 | 1203.82 | 313.65 | 1205.28 | 313.57 | 1205.72 | 313.66 |
| 1206.85 | 313.71 | 1208.99 | 313.74 | 1210.01 | 313.73 | 1213.35 | 313.71 | 1213.63 | 313.7 |
| 1226.23 | 313.5 | 1230.26 | 313.52 | 1236.42 | 313.5 | 1251.72 | 313.54 | 1253.6 | 313.53 |
| 1253.91 | 313.52 | 1261.64 | 313.47 | 1263.07 | 313.47 | 1263.47 | 313.46 | 1267.28 | 313.47 |
| 1267.99 | 313.49 | 1268.72 | 313.53 | 1270.12 | 313.57 | 1270.79 | 313.56 | 1275.21 | 313.67 |
| 1275.76 | 313.69 | 1276.82 | 313.76 | 1277.56 | 313.79 | 1284.46 | 314.15 | 1300.86 | 314.22 |
| 1301.9 | 314.23 | 1316.39 | 314.27 | 1317.64 | 314.33 | 1319.83 | 314.38 | 1323.11 | 314.41 |
| 1327.98 | 314.39 | 1342.28 | 314.37 | 1344.55 | 314.33 | 1355.17 | 314.08 | 1356.36 | 314.05 |
| 1359.29 | 314.02 | 1362.6 | 313.94 | 1363.03 | 313.98 | 1363.16 | 314.02 | 1364.78 | 313.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1365.14 | 313.96 | 1367.86 | 313.89 | 1369.46 | 313.82 | 1369.48 | 313.83 | 1370.18 | 313.82 |
| 1371.18 | 313.78 | 1373.32 | 313.89 | 1375.02 | 314.04 | 1375.26 | 314.08 | 1376.61 | 314.42 |
| 1378.13 | 314.68 | 1383.33 | 315.34 | 1384.46 | 315.48 | 1386.43 | 315.7 | 1387.13 | 315.77 |
| 1390.34 | 316.31 | 1390.94 | 316.43 | 1392.57 | 316.71 | 1393.64 | 316.95 | 1395.49 | 317.34 |
| 1395.62 | 317.38 | 1397.92 | 318.4 | 1399.86 | 319.23 | 1400.9 | 319.64 | 1402.91 | 320.51 |
| 1403.85 | 320.89 | 1405.11 | 321.43 | 1406.54 | 321.99 | 1407.87 | 322.54 | 1408.99 | 322.97 |
| 1409.94 | 323.37 | 1410.99 | 323.87 | 1413.6 | 324.98 | 1414.46 | 325.4 | 1415.37 | 325.86 |
| 1415.62 | 325.97 | 1417.08 | 326.69 | 1418.11 | 327.31 | 1418.58 | 327.52 | 1421.01 | 328.3 |
| 1421.35 | 328.38 | 1422.72 | 328.88 | 1425.14 | 329.78 | 1427.95 | 330.8 | 1429.08 | 331.24 |
| 1430.26 | 331.67 | 1431.98 | 332.36 | 1432.68 | 332.69 | 1434.37 | 332.76 | 1439.78 | 332.95 |
| 1443.45 | 333.21 | 1445.66 | 333.3 | 1446.2 | 333.33 | 1450.04 | 333.5 | 1450.14 | 333.5 |
| 1457.88 | 333.83 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 43.08 | .05 | 412.28 | .04 | 1369.48 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
412.28 1369.48 26.21 19.74 18.73 .1 .3
Left Levee Station=404.5401 Elevation=314.2217
Right Levee Station=1317.844 Elevation=314.2267

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3217.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 34.47 | 335.33 | 35.25 | 335.27 | 35.77 | 335.21 | 37.13 | 334.98 | 38.38 | 334.78 |
| 40.59 | 334.46 | 41.59 | 334.31 | 43.2 | 334.13 | 48.53 | 333.58 | 49.52 | 333.48 |
| 51.76 | 333.24 | 52.47 | 333.18 | 54.45 | 333.07 | 59.23 | 332.82 | 61.39 | 332.71 |
| 62.58 | 332.66 | 62.95 | 332.67 | 64.6 | 332.6 | 69.83 | 332.33 | 75.85 | 332.04 |
| 77.94 | 331.96 | 84.49 | 331.49 | 93.66 | 330.86 | 94.37 | 330.74 | 95.48 | 330.63 |
| 100.27 | 330.19 | 100.99 | 330.07 | 101.93 | 329.96 | 105.63 | 329.4 | 107.29 | 329.09 |
| 108.39 | 328.83 | 109.99 | 328.39 | 110.62 | 328.24 | 111.43 | 327.92 | 112.88 | 327.39 |
| 114.55 | 326.71 | 115.36 | 326.39 | 116.84 | 325.77 | 117.14 | 325.67 | 120.31 | 325.06 |
| 121.43 | 325.12 | 122.07 | 324.99 | 122.32 | 324.99 | 123.77 | 324.84 | 125.02 | 324.65 |
| 125.71 | 324.58 | 127.45 | 324.42 | 129.95 | 324.4 | 132.01 | 324.17 | 134.91 | 324.08 |
| 135.91 | 324 | 136.86 | 323.9 | 138.46 | 323.78 | 141.41 | 323.46 | 143.1 | 323.17 |
| 144.06 | 322.99 | 144.39 | 322.97 | 146.8 | 322.46 | 147.27 | 322.34 | 148.77 | 322.01 |
| 151.31 | 321.51 | 153.52 | 321.15 | 157.34 | 320.5 | 158.18 | 320.36 | 158.51 | 320.34 |
| 160.7 | 320.04 | 161.53 | 319.91 | 162.36 | 319.84 | 163.83 | 319.69 | 167.65 | 319.32 |
| 169.9 | 319.05 | 178.17 | 318.2 | 180.36 | 317.91 | 183.94 | 317.33 | 190.28 | 316.45 |
| 199.77 | 315.23 | 200.19 | 315.18 | 201.83 | 314.95 | 208.35 | 314.35 | 208.47 | 314.33 |
| 210.05 | 314.18 | 214.24 | 313.77 | 217.38 | 313.48 | 219.84 | 313.24 | 221.17 | 313.15 |
| 223.14 | 313.04 | 225.31 | 312.89 | 226.21 | 312.82 | 226.29 | 312.8 | 227.18 | 312.77 |
| 229.57 | 312.64 | 233.47 | 312.41 | 254.22 | 311.69 | 254.76 | 311.67 | 255.5 | 311.62 |
| 257.22 | 311.53 | 259.08 | 311.67 | 259.58 | 311.72 | 264.43 | 311.79 | 267.87 | 311.83 |
| 273.29 | 311.82 | 281.51 | 311.77 | 283.37 | 311.74 | 285.11 | 311.75 | 285.3 | 311.76 |
| 287.19 | 311.78 | 288.93 | 311.8 | 305.95 | 312.01 | 306.69 | 312.03 | 309.47 | 312.08 |
| 311.52 | 312.1 | 313.77 | 312.08 | 316.78 | 312.02 | 318.89 | 311.96 | 324.2 | 311.9 |
| 326.18 | 311.88 | 327.79 | 311.87 | 328.71 | 311.83 | 329.71 | 311.75 | 330.11 | 311.69 |
| 330.2 | 311.63 | 331.95 | 311.62 | 332.03 | 311.63 | 333.53 | 311.62 | 334.7 | 311.75 |
| 335.64 | 311.92 | 344.28 | 312.37 | 354.95 | 312.83 | 354.97 | 312.84 | 362.08 | 313.11 |
| 366.97 | 313.28 | 375.34 | 313.58 | 379.39 | 313.71 | 383.66 | 313.71 | 386.14 | 313.7 |
| 389.77 | 313.67 | 390.7 | 313.64 | 394.97 | 313.31 | 396.22 | 313.24 | 398.35 | 313.15 |
| 400.35 | 313.05 | 400.51 | 313.06 | 407.07 | 312.72 | 411.14 | 312.56 | 412.08 | 312.57 |
| 413.34 | 312.41 | 414.87 | 312.25 | 415.21 | 312.24 | 417.1 | 312.13 | 418.38 | 312.08 |
| 419.63 | 312.1 | 422.01 | 312.16 | 425 | 312.19 | 425.89 | 312.19 | 426.88 | 312.22 |
| 427.93 | 312.21 | 431.2 | 312.22 | 432.53 | 312.2 | 434.27 | 312.23 | 435.62 | 312.29 |
| 436.98 | 312.36 | 438.1 | 312.45 | 438.6 | 312.58 | 439.75 | 312.57 | 442.72 | 312.62 |
| 442.89 | 312.63 | 448.35 | 312.7 | 449.27 | 312.68 | 456.83 | 312.71 | 465.05 | 312.73 |
| 469.77 | 312.77 | 472.56 | 312.78 | 474.4 | 312.8 | 476.53 | 312.84 | 480.01 | 312.84 |
| 480.9 | 312.83 | 485.32 | 312.75 | 486.22 | 312.71 | 487.91 | 312.68 | 490.68 | 312.66 |
| 494.57 | 312.61 | 495.45 | 312.62 | 500.18 | 312.57 | 501.74 | 312.53 | 506.03 | 312.46 |
| 509.67 | 312.46 | 512.23 | 312.43 | 513.94 | 312.42 | 514.13 | 312.41 | 517.06 | 312.36 |
| 518.82 | 312.36 | 521.82 | 312.38 | 522.4 | 312.37 | 524.14 | 312.36 | 527.08 | 312.31 |
| 528.99 | 312.31 | 532.34 | 312.35 | 532.82 | 312.35 | 537.62 | 312.41 | 539.07 | 312.4 |
| 540.36 | 312.37 | 542.55 | 312.28 | 542.65 | 312.29 | 543.79 | 312.24 | 546.1 | 312.17 |
| 547.02 | 312.16 | 549.21 | 312.16 | 550.51 | 312.18 | 552.35 | 312.18 | 553.39 | 312.23 |
| 554.07 | 312.23 | 558.57 | 312.17 | 561.54 | 312.08 | 562.51 | 312.07 | 564.2 | 312.03 |
| 565.14 | 311.99 | 565.51 | 311.95 | 567.12 | 311.88 | 568.76 | 311.87 | 570.55 | 311.85 |
| 571.45 | 311.82 | 572.17 | 311.81 | 573.17 | 311.77 | 574.06 | 311.76 | 574.66 | 311.78 |
| 575.04 | 311.84 | 575.71 | 311.91 | 576.27 | 312.09 | 576.77 | 312.11 | 579.83 | 312.09 |
| 586.13 | 312.2 | 600.4 | 312.47 | 614.49 | 312.72 | 615.82 | 312.75 | 621.36 | 312.83 |
| 621.66 | 312.84 | 622.72 | 312.84 | 625.15 | 312.94 | 626.37 | 312.98 | 626.96 | 312.98 |
| 627.81 | 313 | 629.16 | 313.01 | 630.25 | 313.01 | 631.38 | 312.98 | 631.91 | 312.94 |
| 636.42 | 312.91 | 637.21 | 312.89 | 641.09 | 312.93 | 644.05 | 312.95 | 645.11 | 313 |
| 646.93 | 312.98 | 651.89 | 313.04 | 652.47 | 313.03 | 654.4 | 313.04 | 657.28 | 312.97 |
| 657.87 | 312.95 | 658.15 | 312.91 | 658.94 | 312.9 | 660.67 | 312.91 | 667.47 | 312.9 |
| 678.98 | 313.09 | 679.9 | 313.13 | 692.44 | 313.39 | 705.73 | 313.28 | 705.95 | 313.27 |
| 714.31 | 313.28 | 714.56 | 313.32 | 715.08 | 313.33 | 716.94 | 313.29 | 722.71 | 312.87 |
| 722.9 | 312.87 | 725.72 | 312.72 | 726.57 | 312.75 | 728.26 | 312.91 | 734.83 | 312.85 |
| 736.46 | 312.81 | 739.49 | 312.72 | 740.16 | 312.71 | 741.36 | 312.67 | 742.49 | 312.7 |
| 746.09 | 312.75 | 747.71 | 312.73 | 748.66 | 312.7 | 751.76 | 312.78 | 753.8 | 312.88 |
| 766.49 | 313.53 | 766.79 | 313.53 | 773.96 | 313.69 | 785.84 | 313.62 | 786.97 | 313.48 |
| 788.81 | 313.34 | 789.78 | 313.29 | 796.04 | 312.91 | 800.82 | 312.84 | 801.32 | 312.81 |
| 821.04 | 313.34 | 837.43 | 314.15 | 838.41 | 314.18 | 853.79 | 314.18 | 854.63 | 314.1 |
| 857.46 | 313.9 | 861.85 | 313.68 | 862.89 | 313.66 | 864.02 | 313.55 | 865.39 | 313.57 |
| 866.45 | 313.63 | 867.1 | 313.7 | 868.08 | 313.7 | 872.31 | 313.74 | 877.91 | 313.72 |
| 880.35 | 313.63 | 881.23 | 313.58 | 882.65 | 313.55 | 886.72 | 313.56 | 887.41 | 313.65 |
| 888.59 | 313.75 | 892.58 | 314.19 | 899.17 | 314.51 | 903.74 | 314.6 | 908.52 | 314.69 |
| 909.59 | 314.73 | 911.19 | 314.76 | 913.02 | 314.82 | 913.72 | 314.79 | 916.39 | 314.77 |
| 917.04 | 314.76 | 920.03 | 314.57 | 920.62 | 314.55 | 924.57 | 314.36 | 924.88 | 314.33 |
| 926.74 | 314.26 | 927.21 | 314.22 | 928.56 | 314.21 | 929.74 | 314.23 | 932.19 | 314.3 |
| 932.36 | 314.31 | 940.35 | 314.44 | 941.24 | 314.46 | 945.06 | 314.3 | 947.14 | 314.17 |
| 948.34 | 314.16 | 961.56 | 313.91 | 970.89 | 313.9 | 976.67 | 313.74 | 979.9 | 313.73 |
| 980.87 | 313.69 | 988.77 | 313.62 | 992.28 | 313.67 | 994.24 | 313.59 | 994.87 | 313.58 |
| 995.01 | 313.56 | 1024.89 | 313.73 | 1026.29 | 313.75 | 1039.66 | 314.17 | 1040.48 | 314.45 |
| 1042.35 | 315 | 1043.14 | 315.48 | 1043.35 | 315.56 | 1043.85 | 315.67 | 1044.4 | 315.83 |
| 1045.6 | 315.92 | 1045.7 | 315.91 | 1075.25 | 316.67 | 1078.81 | 316.67 | 1080.03 | 316.61 |
| 1081.03 | 316.52 | 1081.19 | 316.49 | 1092.02 | 316.05 | 1093.78 | 316.07 | 1094.49 | 316.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1098.78 | 316.13 | 1100.62 | 316.21 | 1101.28 | 316.21 | 1102.89 | 316.18 | 1103.62 | 316.14 |
| 1113.79 | 315.86 | 1115.4 | 315.75 | 1116.25 | 315.71 | 1116.9 | 315.7 | 1132.99 | 315.7 |
| 1137.07 | 315.85 | 1138.16 | 315.9 | 1138.53 | 315.9 | 1155.48 | 315.17 | 1156.23 | 315.19 |
| 1164.43 | 314.29 | 1165.85 | 314.07 | 1171.34 | 313.49 | 1171.76 | 313.48 | 1182.67 | 313.5 |
| 1183.94 | 313.58 | 1185 | 313.58 | 1188.86 | 313.54 | 1191.1 | 313.56 | 1193.02 | 313.52 |
| 1195.37 | 313.3 | 1195.88 | 313.26 | 1197.41 | 313.17 | 1197.87 | 313.26 | 1199.33 | 313.32 |
| 1202.03 | 313.35 | 1202.36 | 313.34 | 1205.86 | 313.31 | 1206.15 | 313.3 | 1219.33 | 313.08 |
| 1223.55 | 313.1 | 1230 | 313.08 | 1246 | 313.11 | 1247.97 | 313.09 | 1248.3 | 313.08 |
| 1256.38 | 313.02 | 1257.88 | 313.03 | 1258.3 | 313.02 | 1262.28 | 313.02 | 1262.64 | 313.04 |
| 1265.26 | 313.13 | 1265.96 | 313.11 | 1270.58 | 313.22 | 1272.27 | 313.32 | 1273.05 | 313.35 |
| 1280.26 | 313.72 | 1297.42 | 313.78 | 1297.87 | 313.79 | 1298.51 | 313.78 | 1313.67 | 313.81 |
| 1313.86 | 313.83 | 1314.98 | 313.88 | 1316.38 | 313.91 | 1317.06 | 313.94 | 1320.71 | 313.96 |
| 1325.8 | 313.93 | 1340.76 | 313.89 | 1343.14 | 313.85 | 1354.25 | 313.57 | 1355.5 | 313.54 |
| 1358.57 | 313.5 | 1359.01 | 313.5 | 1362.03 | 313.43 | 1362.61 | 313.5 | 1364.31 | 313.45 |
| 1364.68 | 313.45 | 1365.41 | 313.42 | 1367.53 | 313.37 | 1369.22 | 313.3 | 1370.49 | 313.28 |
| 1370.95 | 313.25 | 1371.62 | 313.29 | 1373.11 | 313.36 | 1373.84 | 313.43 | 1374.83 | 313.5 |
| 1375.08 | 313.54 | 1375.57 | 313.68 | 1376.44 | 313.89 | 1377.98 | 314.14 | 1383.23 | 314.79 |
| 1386.37 | 315.14 | 1387.08 | 315.21 | 1390.33 | 315.77 | 1392.59 | 316.17 | 1395.68 | 316.85 |
| 1396.45 | 317.21 | 1398 | 317.92 | 1399.96 | 318.78 | 1401.01 | 319.22 | 1403.05 | 320.12 |
| 1403.99 | 320.51 | 1405.27 | 321.08 | 1406.72 | 321.66 | 1408.06 | 322.24 | 1409.19 | 322.68 |
| 1410.16 | 323.1 | 1411.22 | 323.62 | 1413.86 | 324.77 | 1415.66 | 325.68 | 1415.9 | 325.81 |
| 1417.39 | 326.55 | 1418.43 | 327.2 | 1418.9 | 327.41 | 1419.28 | 327.54 | 1421.35 | 328.22 |
| 1421.7 | 328.3 | 1425.53 | 329.74 | 1428.38 | 330.8 | 1429.52 | 331.26 | 1430.72 | 331.71 |
| 1432.45 | 332.42 | 1433.16 | 332.75 | 1434.87 | 332.81 | 1439.76 | 332.95 | 1440.35 | 332.96 |
| 1442.18 | 333.09 | 1444.06 | 333.21 | 1446.29 | 333.29 | 1446.84 | 333.32 | 1450.83 | 333.47 |
| 1458.65 | 333.77 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 34.47 | .05 | 390.7 | .04 | 1369.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 390.7 | 1369.22 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station=383.2401 Elevation=313.7833
Right Levee Station=1317.653 Elevation=313.9133

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3197.55*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 25.85 | 335.22 | 26.61 | 335.17 | 27.1 | 335.12 | 29.26 | 334.83 | 31.75 | 334.54 |
| 32.71 | 334.42 | 34.26 | 334.28 | 39.4 | 333.86 | 40.35 | 333.79 | 41.13 | 333.71 |
| 41.8 | 333.66 | 42.52 | 333.59 | 43.2 | 333.54 | 51.8 | 333.13 | 52.56 | 333.1 |
| 53.29 | 333.09 | 54.8 | 333.04 | 54.89 | 333.03 | 59.93 | 332.8 | 65.73 | 332.54 |
| 67.74 | 332.47 | 74.05 | 332.01 | 82.89 | 331.4 | 83.58 | 331.27 | 84.65 | 331.16 |
| 89.26 | 330.71 | 89.95 | 330.59 | 90.86 | 330.47 | 94.43 | 329.88 | 96.03 | 329.57 |
| 97.09 | 329.29 | 98.62 | 328.84 | 99.23 | 328.68 | 100.01 | 328.34 | 101.41 | 327.79 |
| 103.41 | 326.91 | 103.67 | 326.81 | 105.23 | 326.1 | 105.51 | 326 | 107.97 | 325.48 |
| 108.73 | 325.34 | 108.99 | 325.38 | 109.65 | 325.43 | 110.27 | 325.29 | 110.51 | 325.29 |
| 111.91 | 325.13 | 113.11 | 324.93 | 115.45 | 324.69 | 117.86 | 324.67 | 119.85 | 324.43 |
| 122.64 | 324.33 | 123.6 | 324.25 | 124.51 | 324.14 | 126.06 | 324.02 | 128.9 | 323.69 |
| 130.54 | 323.38 | 131.46 | 323.19 | 131.78 | 323.17 | 134.1 | 322.63 | 134.55 | 322.51 |
| 135.99 | 322.16 | 138.44 | 321.63 | 140.56 | 321.26 | 144.25 | 320.57 | 145.07 | 320.42 |
| 145.89 | 320.32 | 148.29 | 319.93 | 150.37 | 319.72 | 150.51 | 319.7 | 154.18 | 319.31 |
| 156.36 | 319.04 | 164.32 | 318.15 | 166.43 | 317.86 | 169.88 | 317.25 | 170.31 | 317.19 |
| 176 | 316.32 | 185.14 | 315.01 | 187.13 | 314.71 | 193.41 | 314.08 | 193.63 | 314.05 |
| 195.05 | 313.91 | 199.08 | 313.48 | 202.11 | 313.18 | 204.48 | 312.93 | 205.76 | 312.84 |
| 207.66 | 312.72 | 209.75 | 312.57 | 210.94 | 312.47 | 211.55 | 312.44 | 213.85 | 312.3 |
| 217.62 | 312.06 | 237.61 | 311.27 | 238.13 | 311.25 | 240.5 | 311.09 | 240.89 | 311.13 |
| 242.29 | 311.24 | 242.78 | 311.29 | 250.76 | 311.41 | 255.98 | 311.4 | 263.91 | 311.36 |
| 265.05 | 311.34 | 267.37 | 311.35 | 267.55 | 311.36 | 269.38 | 311.37 | 270.56 | 311.39 |
| 271.06 | 311.39 | 287.46 | 311.57 | 288.17 | 311.59 | 290.85 | 311.64 | 292.83 | 311.65 |
| 294.99 | 311.63 | 297.9 | 311.56 | 299.93 | 311.5 | 305.05 | 311.44 | 307.93 | 311.41 |
| 308.5 | 311.4 | 309.39 | 311.36 | 310.35 | 311.28 | 310.73 | 311.21 | 310.82 | 311.15 |
| 312.51 | 311.14 | 314.04 | 311.14 | 315.17 | 311.27 | 316.07 | 311.44 | 324.39 | 311.89 |
| 334.68 | 312.38 | 341.54 | 312.66 | 346.26 | 312.83 | 354.32 | 313.15 | 356.16 | 313.22 |
| 358.22 | 313.28 | 362.34 | 313.28 | 364.73 | 313.27 | 368.22 | 313.25 | 369.13 | 313.23 |
| 373.07 | 312.92 | 376.2 | 312.76 | 378.04 | 312.65 | 378.19 | 312.65 | 383.71 | 312.32 |
| 384.25 | 312.29 | 388.02 | 312.13 | 388.88 | 312.14 | 390.05 | 311.97 | 391.26 | 311.83 |
| 391.78 | 311.8 | 393.52 | 311.68 | 394.7 | 311.63 | 395.86 | 311.65 | 398.06 | 311.72 |
| 400.82 | 311.76 | 401.61 | 311.76 | 402.56 | 311.79 | 403.53 | 311.79 | 406.27 | 311.81 |
| 407.78 | 311.81 | 409.39 | 311.85 | 410.64 | 311.91 | 411.9 | 311.99 | 412.93 | 312.09 |
| 413.4 | 312.22 | 414.46 | 312.22 | 417.36 | 312.27 | 422.4 | 312.34 | 423.25 | 312.32 |
| 430.24 | 312.34 | 437.83 | 312.35 | 442.2 | 312.38 | 444.78 | 312.39 | 448.44 | 312.43 |
| 448.64 | 312.44 | 451.23 | 312.43 | 452.49 | 312.42 | 457.09 | 312.33 | 458.29 | 312.29 |
| 460.14 | 312.27 | 461.52 | 312.27 | 465.12 | 312.22 | 465.93 | 312.23 | 470.18 | 312.18 |
| 470.3 | 312.17 | 472.77 | 312.12 | 475.7 | 312.08 | 479.07 | 312.08 | 481.44 | 312.05 |
| 481.65 | 312.06 | 485.9 | 312 | 487.52 | 311.99 | 490.3 | 312.01 | 495.16 | 311.94 |
| 496.93 | 311.93 | 497.82 | 311.94 | 500.47 | 311.95 | 504.91 | 311.99 | 505.6 | 311.99 |
| 507.44 | 311.96 | 509.46 | 311.89 | 509.81 | 311.89 | 510.6 | 311.85 | 513.04 | 311.79 |
| 514.11 | 311.79 | 514.6 | 311.78 | 515.61 | 311.78 | 516.82 | 311.79 | 518.51 | 311.79 |
| 520.11 | 311.83 | 525.04 | 311.76 | 527.01 | 311.7 | 527.91 | 311.69 | 529.47 | 311.65 |
| 530.33 | 311.61 | 530.68 | 311.57 | 532.16 | 311.5 | 533.68 | 311.49 | 535.33 | 311.47 |
| 536.41 | 311.45 | 537.75 | 311.4 | 538.56 | 311.38 | 539.18 | 311.41 | 540.28 | 311.55 |
| 540.87 | 311.73 | 541.39 | 311.75 | 544.59 | 311.73 | 551.17 | 311.85 | 566.07 | 312.13 |
| 580.78 | 312.4 | 582.99 | 312.43 | 584.46 | 312.46 | 587.96 | 312.51 | 589.38 | 312.51 |
| 591.91 | 312.62 | 593.19 | 312.66 | 593.81 | 312.66 | 595.1 | 312.69 | 596.11 | 312.69 |
| 596.45 | 312.7 | 597.24 | 312.69 | 598.42 | 312.66 | 598.98 | 312.62 | 603.68 | 312.58 |
| 604.51 | 312.57 | 608.56 | 312.6 | 611.66 | 312.62 | 612.76 | 312.67 | 614.66 | 312.66 |
| 619.84 | 312.72 | 620.45 | 312.71 | 622.46 | 312.72 | 625.47 | 312.65 | 626.09 | 312.62 |
| 626.38 | 312.58 | 627.21 | 312.57 | 629.01 | 312.58 | 636.11 | 312.58 | 648.13 | 312.77 |
| 649.09 | 312.81 | 650.6 | 312.84 | 662.19 | 313.08 | 663.47 | 313.07 | 676.07 | 312.96 |
| 685.03 | 312.96 | 685.29 | 313 | 685.83 | 313.02 | 687.78 | 312.96 | 693.8 | 312.52 |
| 694 | 312.52 | 696.95 | 312.37 | 697.83 | 312.4 | 699.6 | 312.56 | 706.46 | 312.5 |
| 707.89 | 312.46 | 708.16 | 312.46 | 711.33 | 312.36 | 713.28 | 312.32 | 718.22 | 312.4 |
| 719.9 | 312.37 | 720.9 | 312.34 | 721.43 | 312.35 | 724.14 | 312.43 | 726.27 | 312.52 |
| 739.52 | 313.21 | 739.84 | 313.21 | 746.81 | 313.36 | 747.32 | 313.38 | 759.73 | 313.3 |
| 760.9 | 313.15 | 762.83 | 313 | 763.84 | 312.95 | 770.38 | 312.56 | 775.37 | 312.48 |
| 775.9 | 312.45 | 796.48 | 313.01 | 813.6 | 313.85 | 814.63 | 313.88 | 830.69 | 313.89 |
| 831.57 | 313.8 | 834.52 | 313.59 | 839.11 | 313.36 | 840.19 | 313.34 | 841.27 | 313.25 |

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|---|---|---|---|---|---|---|---|---|---|
| 841.37 | 313.22 | 842.81 | 313.24 | 843.91 | 313.3 | 844.59 | 313.38 | 845.62 | 313.38 |
| 850.04 | 313.43 | 850.28 | 313.42 | 855.88 | 313.4 | 857.64 | 313.34 | 859.35 | 313.25 |
| 860.83 | 313.22 | 865.08 | 313.23 | 865.64 | 313.31 | 867.03 | 313.43 | 871.2 | 313.89 |
| 878.08 | 314.23 | 882.85 | 314.32 | 887.85 | 314.42 | 888.96 | 314.46 | 890.64 | 314.49 |
| 891.23 | 314.52 | 892.68 | 314.55 | 893.28 | 314.52 | 896.06 | 314.51 | 896.74 | 314.49 |
| 899.87 | 314.3 | 900.48 | 314.28 | 904.61 | 314.08 | 904.93 | 314.05 | 906.62 | 313.99 |
| 907.37 | 313.93 | 908.78 | 313.92 | 910.01 | 313.94 | 912.56 | 314.02 | 912.74 | 314.02 |
| 921.09 | 314.16 | 922.02 | 314.18 | 926 | 314.02 | 928.18 | 313.88 | 929.44 | 313.87 |
| 943.24 | 313.6 | 952.98 | 313.6 | 959.02 | 313.43 | 962.39 | 313.41 | 963.4 | 313.38 |
| 971.65 | 313.3 | 975.31 | 313.35 | 978.17 | 313.24 | 1009.38 | 313.41 | 1010.83 | 313.44 |
| 1024.8 | 313.88 | 1025.65 | 314.17 | 1027.61 | 314.75 | 1028.43 | 315.26 | 1028.65 | 315.34 |
| 1029.18 | 315.45 | 1029.74 | 315.62 | 1031 | 315.71 | 1031.11 | 315.7 | 1061.97 | 316.5 |
| 1065.69 | 316.5 | 1066.96 | 316.44 | 1068.17 | 316.32 | 1079.48 | 315.85 | 1081.32 | 315.87 |
| 1082.06 | 315.9 | 1086.54 | 315.94 | 1088.46 | 316.02 | 1089.15 | 316.02 | 1090.54 | 315.99 |
| 1091.6 | 315.95 | 1102.22 | 315.64 | 1102.77 | 315.62 | 1103.89 | 315.53 | 1104.79 | 315.49 |
| 1105.46 | 315.48 | 1122.26 | 315.46 | 1126.53 | 315.62 | 1127.67 | 315.67 | 1128.05 | 315.67 |
| 1145.75 | 314.89 | 1146.33 | 314.92 | 1146.53 | 314.91 | 1155.1 | 313.97 | 1156.58 | 313.74 |
| 1162.31 | 313.12 | 1162.75 | 313.11 | 1174.15 | 313.12 | 1174.24 | 313.14 | 1175.47 | 313.2 |
| 1176.58 | 313.21 | 1180.61 | 313.17 | 1182.96 | 313.18 | 1184.96 | 313.14 | 1187.94 | 312.86 |
| 1189.54 | 312.77 | 1190.03 | 312.87 | 1191.26 | 312.92 | 1193.59 | 312.95 | 1198.36 | 312.91 |
| 1198.67 | 312.91 | 1212.43 | 312.66 | 1216.84 | 312.68 | 1223.57 | 312.65 | 1240.29 | 312.68 |
| 1242.34 | 312.66 | 1242.68 | 312.65 | 1251.13 | 312.58 | 1252.7 | 312.58 | 1253.13 | 312.57 |
| 1257.29 | 312.57 | 1258.87 | 312.64 | 1260.4 | 312.68 | 1261.13 | 312.67 | 1265.96 | 312.78 |
| 1266.56 | 312.8 | 1267.72 | 312.88 | 1268.53 | 312.9 | 1276.06 | 313.29 | 1293.99 | 313.33 |
| 1294.74 | 313.34 | 1295.12 | 313.33 | 1310.96 | 313.36 | 1311.15 | 313.38 | 1312.32 | 313.43 |
| 1313.79 | 313.46 | 1314.5 | 313.49 | 1318.3 | 313.51 | 1323.62 | 313.48 | 1339.25 | 313.42 |
| 1341.03 | 313.38 | 1341.73 | 313.37 | 1353.33 | 313.07 | 1354.64 | 313.03 | 1357.84 | 312.99 |
| 1358.3 | 312.99 | 1361.46 | 312.91 | 1361.93 | 312.95 | 1362.06 | 312.99 | 1363.84 | 312.93 |
| 1364.23 | 312.93 | 1364.99 | 312.9 | 1367.2 | 312.85 | 1368.02 | 312.82 | 1368.67 | 312.78 |
| 1368.97 | 312.78 | 1369.69 | 312.77 | 1370.71 | 312.72 | 1373.39 | 312.87 | 1373.95 | 312.91 |
| 1374.89 | 313 | 1375.39 | 313.14 | 1376.27 | 313.35 | 1377.83 | 313.61 | 1383.14 | 314.24 |
| 1386.32 | 314.59 | 1387.03 | 314.66 | 1390.32 | 315.22 | 1390.94 | 315.34 | 1391.96 | 315.51 |
| 1392.6 | 315.63 | 1395.59 | 316.29 | 1395.73 | 316.33 | 1396.16 | 316.55 | 1396.51 | 316.7 |
| 1398.08 | 317.44 | 1400.06 | 318.34 | 1401.12 | 318.79 | 1403.18 | 319.73 | 1404.14 | 320.13 |
| 1405.44 | 320.72 | 1406.15 | 321.03 | 1406.9 | 321.33 | 1408.26 | 321.93 | 1409.4 | 322.39 |
| 1410.38 | 322.82 | 1411.45 | 323.36 | 1414.12 | 324.56 | 1415 | 325.03 | 1417.69 | 326.41 |
| 1418.85 | 327.16 | 1419.21 | 327.31 | 1421.7 | 328.14 | 1422.05 | 328.23 | 1423.45 | 328.76 |
| 1428.81 | 330.81 | 1429.96 | 331.28 | 1431.53 | 331.88 | 1432.93 | 332.47 | 1433.64 | 332.81 |
| 1435.38 | 332.86 | 1440.91 | 332.97 | 1442.76 | 333.09 | 1444.66 | 333.2 | 1451.52 | 333.44 |
| 1459.43 | 333.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 25.85 | .05 | 369.13 | .04 | 1368.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 369.13 | 1368.97 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station=361.9401 Elevation= 313.345
Right Levee Station=1317.463 Elevation= 313.6

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3177.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 17.23 | 335.1 | 18.38 | 335.04 | 19.4 | 334.94 | 20.52 | 334.82 | 21.64 | 334.73 |
| 23.84 | 334.54 | 25.33 | 334.44 | 30.28 | 334.14 | 31.19 | 334.09 | 31.94 | 334.03 |
| 33.93 | 333.9 | 35.76 | 333.82 | 42.94 | 333.53 | 43.64 | 333.52 | 45.09 | 333.47 |
| 45.18 | 333.46 | 50.02 | 333.26 | 55.61 | 333.05 | 57.55 | 332.98 | 63.61 | 332.54 |
| 72.12 | 331.93 | 72.78 | 331.81 | 73.81 | 331.69 | 78.25 | 331.22 | 78.91 | 331.1 |
| 79.79 | 330.98 | 83.22 | 330.37 | 84.76 | 330.05 | 85.07 | 329.95 | 85.78 | 329.76 |
| 87.26 | 329.29 | 87.84 | 329.12 | 88.59 | 328.77 | 89.94 | 328.2 | 91.87 | 327.27 |
| 92.12 | 327.17 | 93.62 | 326.42 | 93.89 | 326.32 | 96.25 | 325.78 | 96.98 | 325.64 |
| 97.23 | 325.68 | 97.87 | 325.73 | 98.47 | 325.58 | 98.8 | 325.57 | 100.04 | 325.42 |
| 101.2 | 325.22 | 101.84 | 325.14 | 103.45 | 324.96 | 105.77 | 324.94 | 107.68 | 324.68 |
| 110.37 | 324.58 | 111.29 | 324.5 | 112.17 | 324.38 | 113.66 | 324.25 | 116.39 | 323.91 |
| 117.97 | 323.59 | 118.86 | 323.38 | 119.16 | 323.37 | 121.4 | 322.8 | 121.83 | 322.67 |
| 123.22 | 322.3 | 125.57 | 321.75 | 127.61 | 321.36 | 131.95 | 320.48 | 132.74 | 320.36 |
| 135.05 | 319.96 | 137.19 | 319.71 | 140.72 | 319.31 | 142.82 | 319.02 | 150.48 | 318.1 |
| 152.51 | 317.8 | 155.83 | 317.17 | 156.24 | 317.1 | 161.71 | 316.19 | 170.51 | 314.79 |
| 170.9 | 314.73 | 172.42 | 314.47 | 178.46 | 313.81 | 180.04 | 313.64 | 183.93 | 313.2 |
| 189.12 | 312.63 | 189.24 | 312.61 | 192.18 | 312.4 | 195.34 | 312.15 | 195.92 | 312.12 |
| 198.14 | 311.96 | 201.76 | 311.71 | 220.99 | 310.86 | 221.5 | 310.84 | 222.18 | 310.78 |
| 223.78 | 310.66 | 225.51 | 310.81 | 225.97 | 310.86 | 230.47 | 310.94 | 233.65 | 310.99 |
| 238.68 | 310.98 | 246.3 | 310.95 | 248.02 | 310.93 | 249.64 | 310.94 | 249.81 | 310.95 |
| 252.71 | 310.97 | 253.18 | 310.98 | 268.97 | 311.13 | 269.65 | 311.15 | 272.23 | 311.2 |
| 274.13 | 311.2 | 276.21 | 311.18 | 277.7 | 311.13 | 279.01 | 311.1 | 280.97 | 311.04 |
| 285.89 | 310.97 | 288.67 | 310.94 | 289.21 | 310.94 | 290.07 | 310.89 | 290.99 | 310.81 |
| 291.36 | 310.73 | 291.45 | 310.67 | 294.54 | 310.65 | 295.63 | 310.78 | 296.5 | 310.96 |
| 304.51 | 311.41 | 314.4 | 311.92 | 321.01 | 312.21 | 325.55 | 312.39 | 333.3 | 312.72 |
| 335.07 | 312.79 | 337.06 | 312.85 | 341.02 | 312.86 | 343.32 | 312.85 | 346.68 | 312.83 |
| 347.55 | 312.82 | 351.17 | 312.54 | 352.23 | 312.47 | 354.04 | 312.37 | 355.73 | 312.25 |
| 355.87 | 312.25 | 360.93 | 311.9 | 361.43 | 311.86 | 364.89 | 311.7 | 365.68 | 311.72 |
| 366.76 | 311.54 | 368.06 | 311.37 | 368.34 | 311.36 | 369.95 | 311.24 | 371.03 | 311.18 |
| 372.09 | 311.21 | 373.59 | 311.27 | 378.24 | 311.36 | 381.64 | 311.4 | 383.03 | 311.42 |
| 384.51 | 311.47 | 385.65 | 311.53 | 386.81 | 311.62 | 387.76 | 311.72 | 388.19 | 311.87 |
| 389.16 | 311.87 | 391.68 | 311.91 | 391.82 | 311.92 | 396.46 | 311.98 | 397.23 | 311.96 |
| 410.62 | 311.98 | 413.54 | 311.99 | 414.63 | 312 | 417 | 312 | 419.78 | 312.02 |
| 420.36 | 312.03 | 422.92 | 312.03 | 428.29 | 311.93 | 428.71 | 311.91 | 430.17 | 311.89 |
| 431.1 | 311.87 | 432.37 | 311.87 | 435.67 | 311.82 | 436.41 | 311.83 | 440.31 | 311.78 |
| 442.69 | 311.73 | 445.38 | 311.69 | 448.48 | 311.7 | 450.64 | 311.67 | 450.84 | 311.68 |
| 452.2 | 311.67 | 452.26 | 311.66 | 454.75 | 311.63 | 456.23 | 311.62 | 458.78 | 311.64 |
| 460.4 | 311.62 | 463.25 | 311.56 | 465.68 | 311.55 | 468.11 | 311.56 | 472.82 | 311.57 |
| 474.51 | 311.54 | 477.42 | 311.46 | 478.16 | 311.45 | 479.38 | 311.42 | 481.09 | 311.4 |
| 484.68 | 311.4 | 485.57 | 311.42 | 486.14 | 311.42 | 489.96 | 311.38 | 490.85 | 311.36 |
| 492.13 | 311.32 | 493.3 | 311.31 | 494.74 | 311.27 | 495.53 | 311.23 | 495.85 | 311.19 |
| 497.21 | 311.12 | 500.12 | 311.1 | 501.11 | 311.08 | 502.24 | 311.03 | 503.07 | 311.01 |
| 503.71 | 311.04 | 504.86 | 311.19 | 505.47 | 311.38 | 506.02 | 311.4 | 509.34 | 311.38 |
| 516.2 | 311.5 | 531.74 | 311.79 | 547.08 | 312.07 | 548.52 | 312.09 | 549.38 | 312.11 |
| 554.56 | 312.18 | 554.89 | 312.19 | 556.04 | 312.19 | 556.19 | 312.2 | 558.68 | 312.3 |
| 560.01 | 312.34 | 560.66 | 312.34 | 561.23 | 312.36 | 563.41 | 312.38 | 564.24 | 312.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 565.46 | 312.34 | 566.05 | 312.3 | 570.95 | 312.26 | 571.81 | 312.24 | 576.03 | 312.27 |
| 579.26 | 312.3 | 580.41 | 312.35 | 582.4 | 312.33 | 586.87 | 312.39 | 587.8 | 312.4 |
| 588.43 | 312.39 | 590.52 | 312.4 | 593.66 | 312.33 | 594.31 | 312.3 | 594.61 | 312.25 |
| 604.76 | 312.25 | 617.29 | 312.45 | 618.28 | 312.49 | 619.85 | 312.52 | 631.94 | 312.78 |
| 633.28 | 312.76 | 646.4 | 312.65 | 646.64 | 312.64 | 655.74 | 312.64 | 656.44 | 312.71 |
| 656.59 | 312.7 | 658.61 | 312.64 | 664.89 | 312.18 | 665.1 | 312.18 | 666.74 | 312.09 |
| 668.17 | 312.02 | 669.1 | 312.04 | 670.94 | 312.22 | 678.08 | 312.16 | 679.58 | 312.11 |
| 679.86 | 312.11 | 683.16 | 312 | 685.43 | 311.96 | 686.43 | 311.99 | 690.35 | 312.04 |
| 692.42 | 312.01 | 693.14 | 311.98 | 693.69 | 311.99 | 696.51 | 312.07 | 698.74 | 312.17 |
| 712.55 | 312.88 | 712.88 | 312.88 | 720.15 | 313.05 | 720.69 | 313.06 | 733.62 | 312.98 |
| 734.84 | 312.82 | 736.85 | 312.67 | 737.9 | 312.61 | 744.72 | 312.2 | 749.92 | 312.12 |
| 750.47 | 312.09 | 771.93 | 312.67 | 789.78 | 313.55 | 790.85 | 313.59 | 807.59 | 313.59 |
| 808.5 | 313.5 | 811.58 | 313.28 | 816.36 | 313.04 | 817.49 | 313.01 | 818.62 | 312.92 |
| 818.72 | 312.9 | 819.76 | 312.9 | 820.22 | 312.91 | 821.38 | 312.98 | 822.08 | 313.06 |
| 823.15 | 313.06 | 827.76 | 313.11 | 828.02 | 313.1 | 833.85 | 313.08 | 835.68 | 313.02 |
| 837.47 | 312.92 | 839.01 | 312.89 | 843.44 | 312.9 | 844.19 | 313 | 845.47 | 313.11 |
| 849.82 | 313.59 | 857 | 313.94 | 861.96 | 314.04 | 867.18 | 314.14 | 868.33 | 314.19 |
| 869.83 | 314.22 | 872.07 | 314.29 | 872.84 | 314.26 | 875.74 | 314.25 | 876.44 | 314.23 |
| 878.17 | 314.12 | 879.7 | 314.03 | 880.34 | 314.01 | 884.64 | 313.79 | 884.98 | 313.77 |
| 886.74 | 313.7 | 887.52 | 313.64 | 888.99 | 313.63 | 890.28 | 313.66 | 892.94 | 313.73 |
| 893.12 | 313.74 | 901.83 | 313.89 | 902.8 | 313.9 | 906.95 | 313.73 | 909.21 | 313.58 |
| 910.53 | 313.57 | 924.92 | 313.3 | 935.07 | 313.29 | 941.37 | 313.12 | 944.88 | 313.1 |
| 945.93 | 313.06 | 954.53 | 312.98 | 958.35 | 313.03 | 958.98 | 313.02 | 961.33 | 312.91 |
| 993.86 | 313.1 | 995.38 | 313.12 | 1009.94 | 313.58 | 1010.83 | 313.89 | 1012.86 | 314.5 |
| 1013.72 | 315.03 | 1013.96 | 315.11 | 1014.5 | 315.23 | 1015.09 | 315.42 | 1016.41 | 315.51 |
| 1016.52 | 315.5 | 1048.69 | 316.33 | 1052.56 | 316.33 | 1053.01 | 316.32 | 1053.88 | 316.27 |
| 1054.98 | 316.17 | 1055.15 | 316.14 | 1066.94 | 315.65 | 1068.85 | 315.67 | 1069.63 | 315.7 |
| 1074.3 | 315.75 | 1076.3 | 315.83 | 1077.02 | 315.83 | 1078.47 | 315.8 | 1079.57 | 315.76 |
| 1090.64 | 315.43 | 1091.21 | 315.4 | 1092.39 | 315.31 | 1093.32 | 315.27 | 1094.03 | 315.26 |
| 1111.54 | 315.23 | 1115.99 | 315.39 | 1117.17 | 315.44 | 1117.57 | 315.44 | 1136.03 | 314.62 |
| 1136.63 | 314.65 | 1136.84 | 314.64 | 1145.77 | 313.65 | 1147.32 | 313.4 | 1153.29 | 312.76 |
| 1153.74 | 312.74 | 1165.62 | 312.75 | 1165.72 | 312.77 | 1167 | 312.83 | 1168.16 | 312.83 |
| 1172.37 | 312.79 | 1174.81 | 312.8 | 1176.9 | 312.76 | 1179.45 | 312.51 | 1180 | 312.47 |
| 1181.67 | 312.37 | 1182.18 | 312.47 | 1183.46 | 312.53 | 1185.89 | 312.56 | 1190.87 | 312.52 |
| 1191.18 | 312.51 | 1205.54 | 312.25 | 1210.13 | 312.26 | 1217.15 | 312.23 | 1234.57 | 312.25 |
| 1236.72 | 312.22 | 1237.07 | 312.21 | 1245.87 | 312.14 | 1247.51 | 312.14 | 1247.96 | 312.13 |
| 1252.3 | 312.12 | 1253.65 | 312.18 | 1255.53 | 312.24 | 1256.3 | 312.22 | 1261.33 | 312.33 |
| 1263.17 | 312.43 | 1264.01 | 312.46 | 1271.86 | 312.86 | 1290.55 | 312.88 | 1291.34 | 312.89 |
| 1291.74 | 312.88 | 1308.24 | 312.91 | 1309.67 | 312.98 | 1311.19 | 313.01 | 1311.93 | 313.04 |
| 1315.9 | 313.06 | 1321.45 | 313.03 | 1337.73 | 312.95 | 1339.59 | 312.9 | 1340.32 | 312.9 |
| 1352.42 | 312.56 | 1353.77 | 312.53 | 1357.11 | 312.48 | 1360.89 | 312.39 | 1361.38 | 312.44 |
| 1361.51 | 312.48 | 1363.36 | 312.41 | 1363.77 | 312.41 | 1366.87 | 312.33 | 1367.73 | 312.3 |
| 1368.72 | 312.25 | 1370.24 | 312.22 | 1370.48 | 312.19 | 1372.69 | 312.31 | 1374.45 | 312.43 |
| 1374.7 | 312.46 | 1375.21 | 312.6 | 1376.1 | 312.82 | 1377.68 | 313.07 | 1383.05 | 313.68 |
| 1384.22 | 313.82 | 1386.26 | 314.04 | 1386.99 | 314.11 | 1390.31 | 314.68 | 1391.9 | 314.96 |
| 1392.62 | 315.08 | 1393.72 | 315.34 | 1395.64 | 315.77 | 1395.78 | 315.81 | 1398.15 | 316.96 |
| 1400.16 | 317.89 | 1401.23 | 318.36 | 1403.32 | 319.34 | 1404.29 | 319.75 | 1405.6 | 320.37 |
| 1406.32 | 320.69 | 1407.07 | 320.99 | 1408.45 | 321.62 | 1409.61 | 322.09 | 1410.59 | 322.55 |
| 1411.68 | 323.11 | 1414.38 | 324.36 | 1415.27 | 324.84 | 1416.47 | 325.47 | 1417.99 | 326.28 |
| 1419.05 | 326.98 | 1419.53 | 327.21 | 1419.93 | 327.34 | 1422.05 | 328.07 | 1422.4 | 328.15 |
| 1423.82 | 328.7 | 1426.32 | 329.68 | 1429.23 | 330.81 | 1430.4 | 331.3 | 1431.99 | 331.92 |
| 1433.4 | 332.52 | 1434.12 | 332.87 | 1435.88 | 332.91 | 1441.48 | 332.99 | 1443.35 | 333.1 |
| 1445.27 | 333.2 | 1447.56 | 333.26 | 1448.12 | 333.29 | 1451.39 | 333.39 | 1452.2 | 333.41 |
| 1460.21 | 333.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 17.23 | .05 | 347.55 | .04 | 1368.72 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 347.55 | 1368.72 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station=340.6401 Elevation=312.9067
Right Levee Station=1317.272 Elevation=313.2867

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3158.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 8.62 | 334.98 | 9.77 | 334.95 | 11.73 | 334.82 | 14.07 | 334.7 | 14.96 | 334.65 |
| 16.39 | 334.6 | 21.15 | 334.42 | 22.02 | 334.39 | 22.75 | 334.35 | 24.66 | 334.26 |
| 30.68 | 334.05 | 32.61 | 333.98 | 33.99 | 333.94 | 40.12 | 333.73 | 45.49 | 333.55 |
| 47.35 | 333.49 | 53.18 | 333.06 | 61.35 | 332.47 | 61.99 | 332.34 | 62.97 | 332.22 |
| 67.24 | 331.74 | 67.88 | 331.62 | 68.72 | 331.49 | 72.02 | 330.86 | 73.5 | 330.52 |
| 74.48 | 330.22 | 75.89 | 329.73 | 76.46 | 329.56 | 77.18 | 329.19 | 78.47 | 328.6 |
| 79.96 | 327.82 | 80.68 | 327.46 | 82 | 326.75 | 82.26 | 326.65 | 84.54 | 326.09 |
| 85.24 | 325.94 | 85.48 | 325.98 | 86.09 | 326.04 | 86.66 | 325.88 | 86.98 | 325.87 |
| 88.18 | 325.71 | 89.29 | 325.5 | 91.45 | 325.23 | 93.68 | 325.21 | 95.52 | 324.94 |
| 98.1 | 324.84 | 98.99 | 324.75 | 99.83 | 324.63 | 101.26 | 324.49 | 103.89 | 324.13 |
| 105.4 | 323.79 | 106.25 | 323.58 | 106.55 | 323.56 | 108.69 | 322.97 | 109.11 | 322.84 |
| 110.44 | 322.45 | 112.71 | 321.88 | 114.67 | 321.47 | 118.08 | 320.71 | 118.83 | 320.54 |
| 121.81 | 319.98 | 123.74 | 319.74 | 123.87 | 319.73 | 127.26 | 319.31 | 129.27 | 319.01 |
| 136.63 | 318.06 | 138.58 | 317.74 | 141.77 | 317.08 | 142.17 | 317.01 | 147.43 | 316.06 |
| 155.88 | 314.57 | 157.72 | 314.24 | 165.04 | 313.37 | 171.57 | 312.58 | 173.76 | 312.32 |
| 174.94 | 312.22 | 176.7 | 312.08 | 178.64 | 311.92 | 180.3 | 311.79 | 182.43 | 311.63 |
| 185.91 | 311.35 | 204.38 | 310.44 | 204.87 | 310.42 | 205.53 | 310.35 | 207.06 | 310.22 |
| 207.42 | 310.26 | 209.03 | 310.41 | 209.17 | 310.43 | 213.49 | 310.51 | 216.55 | 310.56 |
| 221.38 | 310.55 | 228.7 | 310.54 | 229.1 | 310.53 | 231.9 | 310.53 | 232.07 | 310.54 |
| 235.31 | 310.56 | 250.47 | 310.69 | 251.13 | 310.71 | 253.61 | 310.75 | 255.44 | 310.76 |
| 257.44 | 310.72 | 260.12 | 310.64 | 262 | 310.57 | 266.73 | 310.51 | 269.4 | 310.48 |
| 269.93 | 310.47 | 270.75 | 310.42 | 271.64 | 310.33 | 271.99 | 310.26 | 272.07 | 310.19 |
| 273.63 | 310.17 | 275.05 | 310.16 | 276.09 | 310.3 | 276.92 | 310.48 | 284.62 | 310.93 |
| 294.13 | 311.46 | 304.83 | 311.95 | 312.29 | 312.29 | 313.99 | 312.36 | 315.89 | 312.43 |
| 319.7 | 312.43 | 321.91 | 312.42 | 325.14 | 312.42 | 325.98 | 312.41 | 329.27 | 312.16 |
| 330.24 | 312.09 | 331.89 | 311.98 | 333.43 | 311.85 | 333.55 | 311.85 | 338.16 | 311.47 |
| 338.62 | 311.43 | 341.77 | 311.27 | 342.49 | 311.29 | 343.46 | 311.1 | 344.48 | 310.95 |
| 344.91 | 310.92 | 346.37 | 310.79 | 347.35 | 310.74 | 348.32 | 310.76 | 349.68 | 310.83 |
| 352.47 | 310.89 | 354.73 | 310.95 | 357.02 | 310.99 | 358.28 | 311.03 | 359.63 | 311.08 |
| 361.73 | 311.25 | 362.59 | 311.36 | 362.98 | 311.51 | 363.86 | 311.52 | 366.29 | 311.56 |
| 370.51 | 311.62 | 371.22 | 311.6 | 386.07 | 311.6 | 387.05 | 311.61 | 390.63 | 311.61 |
| 391.48 | 311.62 | 394.6 | 311.62 | 395.44 | 311.6 | 396.55 | 311.59 | 399.07 | 311.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 400.51 | 311.5 | 402.05 | 311.48 | 403.21 | 311.48 | 406.21 | 311.43 | 406.89 | 311.44 |
| 407.71 | 311.42 | 411.75 | 311.36 | 412.61 | 311.34 | 415.06 | 311.31 | 417.88 | 311.32 |
| 419.85 | 311.3 | 420.03 | 311.31 | 421.32 | 311.29 | 424.78 | 311.26 | 427.26 | 311.28 |
| 427.32 | 311.27 | 428.73 | 311.24 | 429.05 | 311.24 | 431.33 | 311.19 | 433.55 | 311.17 |
| 435.39 | 311.17 | 435.76 | 311.16 | 440.05 | 311.15 | 441.59 | 311.13 | 443.28 | 311.09 |
| 444.23 | 311.08 | 444.91 | 311.06 | 446.27 | 311.04 | 447.16 | 311.04 | 448.42 | 311.02 |
| 449.43 | 311.02 | 450.84 | 311.01 | 452.15 | 311.02 | 452.18 | 311.01 | 455.65 | 310.98 |
| 456.44 | 310.96 | 458.7 | 310.93 | 460 | 310.89 | 460.72 | 310.85 | 461.01 | 310.81 |
| 462.25 | 310.74 | 464.9 | 310.72 | 465.8 | 310.7 | 466.16 | 310.68 | 467.57 | 310.64 |
| 468.24 | 310.67 | 468.67 | 310.74 | 469.44 | 310.82 | 470.07 | 311.02 | 470.64 | 311.04 |
| 474.1 | 311.02 | 481.24 | 311.15 | 497.41 | 311.45 | 513.37 | 311.74 | 514.88 | 311.77 |
| 517.36 | 311.8 | 521.15 | 311.86 | 522.7 | 311.86 | 525.44 | 311.98 | 526.83 | 312.02 |
| 527.5 | 312.02 | 528.1 | 312.04 | 530.37 | 312.06 | 531.23 | 312.05 | 532.51 | 312.02 |
| 533.11 | 311.97 | 538.21 | 311.93 | 539.11 | 311.92 | 543.51 | 311.95 | 546.87 | 311.97 |
| 548.06 | 312.03 | 550.13 | 312.01 | 554.78 | 312.07 | 555.75 | 312.08 | 556.4 | 312.07 |
| 558.59 | 312.08 | 561.85 | 312 | 562.52 | 311.97 | 562.84 | 311.93 | 563.74 | 311.92 |
| 565.69 | 311.93 | 573.4 | 311.92 | 586.44 | 312.13 | 587.48 | 312.17 | 589.11 | 312.2 |
| 601.69 | 312.47 | 603.08 | 312.46 | 616.74 | 312.33 | 616.99 | 312.32 | 626.46 | 312.32 |
| 627.18 | 312.39 | 627.34 | 312.38 | 629.45 | 312.32 | 635.98 | 311.83 | 636.2 | 311.83 |
| 639.4 | 311.66 | 640.36 | 311.69 | 642.27 | 311.87 | 649.71 | 311.81 | 651.27 | 311.76 |
| 651.56 | 311.76 | 655 | 311.65 | 655.76 | 311.64 | 657.11 | 311.6 | 658.39 | 311.63 |
| 662.47 | 311.69 | 664.3 | 311.66 | 665.38 | 311.62 | 665.96 | 311.63 | 668.89 | 311.72 |
| 671.21 | 311.82 | 685.58 | 312.56 | 685.93 | 312.56 | 693.49 | 312.73 | 694.05 | 312.75 |
| 707.51 | 312.66 | 708.78 | 312.5 | 710.87 | 312.33 | 711.97 | 312.28 | 719.06 | 311.85 |
| 724.48 | 311.76 | 725.05 | 311.73 | 747.38 | 312.34 | 765.95 | 313.26 | 767.07 | 313.29 |
| 784.49 | 313.3 | 785.44 | 313.2 | 788.65 | 312.97 | 793.62 | 312.72 | 794.8 | 312.69 |
| 795.97 | 312.6 | 796.08 | 312.57 | 797.64 | 312.59 | 798.84 | 312.65 | 799.57 | 312.74 |
| 800.69 | 312.74 | 805.48 | 312.79 | 805.75 | 312.78 | 811.82 | 312.76 | 813.73 | 312.69 |
| 814.67 | 312.65 | 815.58 | 312.6 | 817.19 | 312.56 | 821.8 | 312.57 | 822.41 | 312.66 |
| 823.92 | 312.79 | 828.44 | 313.3 | 835.91 | 313.66 | 841.08 | 313.76 | 846.5 | 313.87 |
| 847.71 | 313.92 | 849.26 | 313.95 | 850.17 | 313.99 | 851.75 | 314.02 | 852.39 | 313.99 |
| 855.41 | 313.98 | 856.15 | 313.96 | 859.54 | 313.75 | 860.21 | 313.73 | 864.68 | 313.51 |
| 865.03 | 313.48 | 866.87 | 313.42 | 867.68 | 313.35 | 869.21 | 313.34 | 870.54 | 313.37 |
| 873.31 | 313.45 | 873.51 | 313.45 | 882.56 | 313.61 | 883.57 | 313.63 | 887.89 | 313.45 |
| 890.25 | 313.29 | 891.62 | 313.28 | 906.59 | 312.99 | 917.16 | 312.98 | 923.71 | 312.8 |
| 927.37 | 312.78 | 928.47 | 312.75 | 937.42 | 312.66 | 941.39 | 312.72 | 942.05 | 312.7 |
| 944.49 | 312.59 | 978.35 | 312.78 | 979.92 | 312.81 | 995.08 | 313.29 | 996.01 | 313.62 |
| 998.12 | 314.25 | 999.02 | 314.81 | 999.26 | 314.89 | 999.83 | 315.02 | 1000.23 | 315.13 |
| 1000.44 | 315.21 | 1001.81 | 315.3 | 1001.92 | 315.29 | 1035.4 | 316.17 | 1039.44 | 316.17 |
| 1040.81 | 316.1 | 1042.13 | 315.97 | 1054.4 | 315.46 | 1054.9 | 315.47 | 1056.39 | 315.48 |
| 1057.2 | 315.51 | 1062.06 | 315.55 | 1062.66 | 315.57 | 1064.14 | 315.64 | 1064.89 | 315.64 |
| 1066.4 | 315.61 | 1067.55 | 315.56 | 1079.07 | 315.21 | 1079.66 | 315.19 | 1080.88 | 315.09 |
| 1081.86 | 315.04 | 1082.59 | 315.03 | 1100.81 | 314.99 | 1105.44 | 315.16 | 1106.68 | 315.22 |
| 1107.09 | 315.22 | 1126.3 | 314.34 | 1126.92 | 314.37 | 1127.14 | 314.36 | 1136.44 | 313.32 |
| 1138.05 | 313.07 | 1144.26 | 312.39 | 1144.74 | 312.37 | 1157.1 | 312.37 | 1157.2 | 312.39 |
| 1158.54 | 312.46 | 1159.74 | 312.46 | 1164.12 | 312.42 | 1166.66 | 312.43 | 1168.83 | 312.38 |
| 1171.49 | 312.12 | 1172.07 | 312.07 | 1173.8 | 311.97 | 1173.94 | 311.98 | 1174.33 | 312.08 |
| 1175.67 | 312.13 | 1175.97 | 312.13 | 1178.2 | 312.16 | 1183.37 | 312.12 | 1183.7 | 312.11 |
| 1198.64 | 311.83 | 1203.42 | 311.84 | 1210.72 | 311.8 | 1228.86 | 311.81 | 1231.09 | 311.79 |
| 1231.45 | 311.78 | 1240.62 | 311.69 | 1242.32 | 311.69 | 1242.79 | 311.68 | 1247.3 | 311.68 |
| 1249.02 | 311.75 | 1250.67 | 311.79 | 1251.47 | 311.78 | 1256.71 | 311.89 | 1257.36 | 311.91 |
| 1258.62 | 311.99 | 1259.5 | 312.02 | 1267.67 | 312.43 | 1287.12 | 312.44 | 1287.62 | 312.45 |
| 1288.35 | 312.44 | 1305.53 | 312.45 | 1305.74 | 312.47 | 1307.01 | 312.53 | 1308.6 | 312.56 |
| 1309.37 | 312.59 | 1313.49 | 312.61 | 1319.27 | 312.57 | 1336.22 | 312.47 | 1338.15 | 312.43 |
| 1338.91 | 312.42 | 1352.91 | 312.02 | 1356.39 | 311.97 | 1360.31 | 311.88 | 1360.82 | 311.92 |
| 1360.97 | 311.96 | 1362.89 | 311.9 | 1363.32 | 311.9 | 1364.14 | 311.87 | 1366.54 | 311.81 |
| 1368.14 | 311.73 | 1368.46 | 311.73 | 1369.2 | 311.72 | 1370.01 | 311.69 | 1370.24 | 311.66 |
| 1373.56 | 311.84 | 1374.52 | 311.92 | 1375.03 | 312.07 | 1375.93 | 312.28 | 1377.52 | 312.54 |
| 1382.96 | 313.13 | 1384.14 | 313.26 | 1386.21 | 313.48 | 1386.94 | 313.55 | 1387.19 | 313.59 |
| 1390.93 | 314.24 | 1391.91 | 314.42 | 1392.63 | 314.54 | 1393.75 | 314.8 | 1395.69 | 315.24 |
| 1395.83 | 315.28 | 1396.27 | 315.52 | 1396.63 | 315.68 | 1398.23 | 316.48 | 1400.26 | 317.45 |
| 1401.35 | 317.93 | 1403.45 | 318.94 | 1404.43 | 319.38 | 1405.76 | 320.01 | 1406.49 | 320.34 |
| 1407.25 | 320.66 | 1408.65 | 321.31 | 1409.81 | 321.8 | 1410.81 | 322.27 | 1411.91 | 322.85 |
| 1414.64 | 324.15 | 1415.54 | 324.65 | 1418.29 | 326.14 | 1419.37 | 326.87 | 1419.85 | 327.1 |
| 1422.39 | 327.99 | 1422.75 | 328.08 | 1426.72 | 329.65 | 1430.08 | 330.99 | 1430.84 | 331.32 |
| 1432.45 | 331.96 | 1433.88 | 332.58 | 1434.61 | 332.94 | 1436.38 | 332.95 | 1441.44 | 332.99 |
| 1442.04 | 333 | 1445.88 | 333.2 | 1448.2 | 333.25 | 1448.76 | 333.27 | 1452.07 | 333.36 |
| 1460.98 | 333.58 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 8.62 | .05 | 325.98 | .04 | 1368.46 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 325.98 | 1368.46 | 26.21 | 19.74 | 18.73 | .1 | .3 |

Left Levee Station=319.3401 Elevation=312.4683
Right Levee Station=1317.081 Elevation=312.9733

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3138.34

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.861.109985 | | 334.862.130005 | | 334.842.280029 | | 334.833.339966 | | 334.8 |
| 12.85999 | 334.6937.15002 | | 33450.57996 | | 33351.19006 | | 332.8756.22998 | | 332.26 |
| 56.83997 | 332.1357.65002 | | 33260.81006 | | 331.3562.22998 | | 33162.51001 | | 330.9 |
| 63.17004 | 330.6964.53003 | | 330.1865.07007 | | 33065.76001 | | 329.62 | 67 | 329 |
| 68.43005 | 328.1968.78003 | | 32869.01001 | | 327.89 | 69.12 | 327.8270.39001 | | 327.08 |
| 70.51001 | 327.0270.64001 | | 326.9772.82007 | | 326.3973.34998 | | 326.2673.48999 | | 326.24 |
| 73.71997 | 326.2874.32007 | | 326.3474.85999 | | 326.1875.07007 | | 326.1876.31006 | | 326 |
| 77.38 | 325.7879.44995 | | 325.581.58997 | | 325.4883.34998 | | 325.285.82996 | | 325.09 |
| 86.68005 | 32587.48999 | | 324.8788.85999 | | 324.73 | 91.38 | 324.3592.82996 | | 324 |
| 93.65002 | 323.7893.93005 | | 323.7695.98999 | | 323.1496.39001 | | 32397.67004 | | 322.6 |
| 99.83997 | 322 | 101.72 | 321.57 | 105.75 | 320.59108.5701 | | 320 | 113.8 | 319.31 |
| 115.73 | 319 | 122.79 | 318.01 | 122.85 | 318 | 124.66 | 317.68 | 127.72 | 317 |
| 143.01 | 314 | 158.51 | 312 | 170.05 | 311 | 188.24 | 310 | 188.87 | 309.93 |
| 190.34 | 309.79191.9301 | | 309.95 | 192.36 | 310199.4401 | | 310.14 | 214.17 | 310.12 |
| 214.33 | 310.13 | 231.98 | 310.25 | 232.37 | 310.26 | 232.61 | 310.27 | 234.99 | 310.31 |
| 236.74 | 310.31 | 238.66 | 310.27 | 243.04 | 310.11 | 250.64 | 310251.4301 | | 309.95 |
| 252.28 | 309.86 | 252.62 | 309.78 | 252.7 | 309.71 | 255.55 | 309.67 | 256.55 | 309.81 |
| 257.35 | 310 | 273.85 | 311 | 291.27 | 311.86 | 292.51 | 311.91 | 292.9 | 311.93 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 294.73 | 312 | 304.4 | 312 | 309.73 | 311.59 | 315.8 | 311 | 318.64 | 310.84 |
| 319.04 | 310.84 | 319.29 | 310.86 | 320.17 | 310.67 | 321.1 | 310.51 | 322.79 | 310.35 |
| 323.6801 | 310.29 | 324.55 | 310.32 | 325.6901 | 310.38 | 325.78 | 310.39 | 332.61 | 310.59 |
| 334.75 | 310.73 | 335.6901 | 310.78 | 336.64 | 310.88 | 337.42 | 311 | 337.77 | 311.16 |
| 344.5601 | 311.26 | 345.2 | 311.24 | 366.29 | 311.21 | 373.01 | 311.08 | 374.05 | 311.08 |
| 376.99 | 311.03 | 377.25 | 311.03 | 377.37 | 311.04 | 384.74 | 310.92 | 387.28 | 310.94 |
| 389.0601 | 310.92 | 389.22 | 310.93 | 393.5 | 310.89 | 393.65 | 310.89 | 395.74 | 310.91 |
| 395.9 | 310.9 | 399.65 | 310.81 | 413.6901 | 310.66 | 414.0601 | 310.65 | 424.09 | 310.55 |
| 425.27 | 310.51 | 425.92 | 310.47 | 426.1801 | 310.43 | 427.3 | 310.36 | 429.6901 | 310.35 |
| 430.3201 | 310.33 | 430.5 | 310.33 | 430.8201 | 310.31 | 432.0701 | 310.27 | 432.41 | 310.29 |
| 432.77 | 310.3 | 433.22 | 310.37 | 434.01 | 310.46 | 434.67 | 310.67 | 434.9 | 310.68 |
| 435.26 | 310.69 | 438.86 | 310.67 | 481.23 | 311.44 | 488.11 | 311.54 | 489.36 | 311.54 |
| 489.52 | 311.55 | 492.21 | 311.66 | 493.65 | 311.7 | 494.35 | 311.7 | 494.97 | 311.72 |
| 495.35 | 311.72 | 495.81 | 311.73 | 496.56 | 311.73 | 496.94 | 311.74 | 497.33 | 311.74 |
| 497.68 | 311.73 | 498.22 | 311.73 | 499.55 | 311.7 | 499.86 | 311.67 | 500.05 | 311.66 |
| 500.18 | 311.65 | 505.48 | 311.61 | 506.41 | 311.59 | 514.47 | 311.65 | 515.71 | 311.71 |
| 517.86 | 311.69 | 523.7 | 311.76 | 524.38 | 311.75 | 526.65 | 311.76 | 530.04 | 311.68 |
| 530.74 | 311.65 | 530.84 | 311.62 | 531.07 | 311.6 | 532 | 311.59 | 534.03 | 311.6 |
| 542.04 | 311.59 | 555.59 | 311.81 | 556.67 | 311.85 | 571.44 | 312.16 | 587.08 | 312.01 |
| 587.34 | 312 | 597.18 | 312 | 597.48 | 312.04 | 597.93 | 312.07 | 598.09 | 312.06 |
| 600.28 | 312 | 607.07 | 311.49 | 607.3 | 311.49 | 610.62 | 311.31 | 611.62 | 311.34 |
| 613.47 | 311.52 | 613.61 | 311.53 | 621.34 | 311.46 | 622.96 | 311.41 | 623.26 | 311.41 |
| 626.83 | 311.29 | 627.62 | 311.28 | 629.03 | 311.24 | 629.28 | 311.24 | 630.36 | 311.27 |
| 634.6 | 311.33 | 636.5 | 311.3 | 636.84 | 311.29 | 637.25 | 311.27 | 637.62 | 311.26 |
| 638.22 | 311.27 | 641.27 | 311.36 | 643.68 | 311.47 | 658.61 | 312.24 | 658.97 | 312.24 |
| 667.41 | 312.43 | 681.4 | 312.34 | 682.72 | 312.17 | 684.89 | 312 | 685.91 | 311.94 |
| 686.03 | 311.94 | 693.4 | 311.49 | 699.03 | 311.4 | 699.62 | 311.37 | 722.83 | 312 |
| 742.13 | 312.96 | 743.29 | 313 | 761.39 | 313 | 762.38 | 312.9 | 765.71 | 312.66 |
| 770.88 | 312.4 | 771.82 | 312.38 | 772.1 | 312.37 | 773.18 | 312.28 | 773.32 | 312.27 |
| 773.43 | 312.24 | 773.71 | 312.24 | 774.04 | 312.25 | 774.55 | 312.25 | 774.82 | 312.26 |
| 775.05 | 312.26 | 776.3 | 312.33 | 776.83 | 312.4 | 777.06 | 312.42 | 778.22 | 312.42 |
| 783.2 | 312.47 | 783.48 | 312.46 | 789.79 | 312.44 | 791.77 | 312.37 | 792.37 | 312.34 |
| 792.66 | 312.33 | 792.75 | 312.32 | 793.7 | 312.27 | 795.37 | 312.23 | 800.16 | 312.24 |
| 800.79 | 312.33 | 800.97 | 312.35 | 802.36 | 312.47 | 807.06 | 313 | 814.82 | 313.38 |
| 825.83 | 313.6 | 827.08 | 313.65 | 828.97 | 313.69 | 829.64 | 313.72 | 831.12 | 313.76 |
| 831.28 | 313.76 | 831.95 | 313.73 | 835.09 | 313.72 | 835.85 | 313.7 | 839.43 | 313.48 |
| 840.07 | 313.46 | 844.72 | 313.23 | 845.08 | 313.2 | 846.99 | 313.13 | 847.1 | 313.12 |
| 847.27 | 313.11 | 847.33 | 313.1 | 847.83 | 313.06 | 848.08 | 313.05 | 848.23 | 313.05 |
| 848.34 | 313.06 | 848.46 | 313.06 | 849.42 | 313.05 | 849.6 | 313.06 | 849.69 | 313.06 |
| 850.69 | 313.08 | 850.81 | 313.08 | 853.69 | 313.16 | 853.89 | 313.17 | 863.3 | 313.33 |
| 864.08 | 313.35 | 864.35 | 313.35 | 868.84 | 313.16 | 871.29 | 313 | 872.71 | 312.99 |
| 888.27 | 312.69 | 899.25 | 312.68 | 906.06 | 312.49 | 909.86 | 312.47 | 911 | 312.43 |
| 920.3 | 312.34 | 924.43 | 312.4 | 925.11 | 312.38 | 926.74 | 312.31 | 927.41 | 312.29 |
| 927.48 | 312.29 | 927.65 | 312.27 | 962.83 | 312.47 | 964.47 | 312.5 | 980.22 | 313 |
| 981.1801 | 313.34 | 983.38 | 314 | 984.31 | 314.58 | 984.56 | 314.67 | 985.15 | 314.8 |
| 985.57 | 314.92 | 985.79 | 315 | 987.21 | 315.1 | 987.33 | 315.09 | 1022.12 | 316 |
| 1026.31 | 316 | 1026.8 | 315.98 | 1027.61 | 315.93 | 1027.74 | 315.93 | 1028.92 | 315.82 |
| 1029.11 | 315.79 | 1041.86 | 315.26 | 1042.38 | 315.27 | 1043.93 | 315.28 | 1044.77 | 315.31 |
| 1049.82 | 315.36 | 1050.44 | 315.38 | 1051.68 | 315.44 | 1051.98 | 315.45 | 1052.76 | 315.45 |
| 1054.65 | 315.41 | 1055.52 | 315.37 | 1067.49 | 315 | 1068.11 | 314.97 | 1069.38 | 314.87 |
| 1070.39 | 314.82 | 1071.15 | 314.81 | 1090.09 | 314.76 | 1094.9 | 314.93 | 1096.18 | 314.99 |
| 1096.61 | 314.99 | 1116.57 | 314.07 | 1117.09 | 314.09 | 1117.22 | 314.1 | 1117.45 | 314.09 |
| 1127.11 | 313 | 1128.78 | 312.73 | 1135.24 | 312.02 | 1135.73 | 312 | 1148.58 | 312 |
| 1148.68 | 312.02 | 1150.07 | 312.09 | 1151.32 | 312.09 | 1155.87 | 312.04 | 1158.51 | 312.05 |
| 1160.77 | 312 | 1163.53 | 311.73 | 1164.13 | 311.68 | 1165.93 | 311.57 | 1166.08 | 311.58 |
| 1166.19 | 311.61 | 1166.35 | 311.65 | 1166.48 | 311.68 | 1166.86 | 311.7 | 1167.87 | 311.74 |
| 1168.19 | 311.74 | 1170.5 | 311.77 | 1171.37 | 311.77 | 1171.76 | 311.76 | 1175.88 | 311.72 |
| 1175.95 | 311.71 | 1176.22 | 311.71 | 1191.74 | 311.41 | 1196.71 | 311.42 | 1204.3 | 311.38 |
| 1223.14 | 311.38 | 1225.46 | 311.35 | 1225.84 | 311.34 | 1235.36 | 311.25 | 1236.45 | 311.25 |
| 1236.83 | 311.24 | 1237.13 | 311.25 | 1237.62 | 311.24 | 1242.31 | 311.23 | 1242.73 | 311.25 |
| 1243.19 | 311.26 | 1243.77 | 311.29 | 1243.86 | 311.29 | 1244.09 | 311.3 | 1245.81 | 311.35 |
| 1246.64 | 311.33 | 1252.08 | 311.44 | 1252.76 | 311.47 | 1254.07 | 311.55 | 1254.75 | 311.58 |
| 1254.98 | 311.58 | 1263.47 | 312 | 1283.68 | 311.99 | 1284.01 | 312 | 1284.2 | 312 |
| 1284.96 | 311.99 | 1302.81 | 312 | 1303.03 | 312.02 | 1304.35 | 312.08 | 1306 | 312.11 |
| 1306.35 | 312.12 | 1306.8 | 312.14 | 1307.05 | 312.14 | 1311.09 | 312.16 | 1334.7 | 312 |
| 1336.71 | 311.95 | 1337.33 | 311.95 | 1337.44 | 311.94 | 1337.5 | 311.94 | 1352.05 | 311.51 |
| 1356.18 | 311.45 | 1359.74 | 311.36 | 1359.98 | 311.38 | 1360.27 | 311.41 | 1360.42 | 311.45 |
| 1362.42 | 311.38 | 1362.86 | 311.38 | 1363.72 | 311.35 | 1366.21 | 311.29 | 1366.59 | 311.27 |
| 1367.14 | 311.25 | 1367.87 | 311.21 | 1368.19 | 311.2 | 1368.21 | 311.2 | 1368.45 | 311.19 |
| 1368.95 | 311.19 | 1369.77 | 311.16 | 1369.84 | 311.15 | 1369.92 | 311.15 | 1370.01 | 311.13 |
| 1370.52 | 311.15 | 1370.72 | 311.17 | 1372.27 | 311.25 | 1372.33 | 311.26 | 1372.5 | 311.27 |
| 1372.62 | 311.27 | 1373.04 | 311.3 | 1373.36 | 311.31 | 1374.07 | 311.35 | 1374.33 | 311.38 |
| 1374.67 | 311.47 | 1374.85 | 311.53 | 1375.76 | 311.75 | 1377.37 | 312 | 1386.15 | 312.93 |
| 1386.89 | 313 | 1387.14 | 313.04 | 1392.65 | 314 | 1395.74 | 314.72 | 1395.88 | 314.76 |
| 1396.33 | 315 | 1396.69 | 315.17 | 1398.31 | 316 | 1400.36 | 317 | 1401.46 | 317.5 |
| 1403.59 | 318.55 | 1404.58 | 319 | 1405.92 | 319.66 | 1406.66 | 320 | 1407.43 | 320.33 |
| 1408.84 | 321 | 1410.02 | 321.51 | 1411.03 | 322 | 1412.14 | 322.6 | 1414.9 | 323.94 |
| 1415 | 324 | 1416.78 | 325 | 1417.04 | 325.14 | 1418.59 | 326 | 1419.68 | 326.76 |
| 1419.79 | 326.83 | 1419.86 | 326.85 | 1420.17 | 327 | 1422.74 | 327.91 | 1423.1 | 328 |
| 1430.09 | 330.82 | 1430.51 | 331 | 1431.28 | 331.34 | 1432.91 | 332 | 1434.35 | 332.63 |
| 1435.09 | 333 | 1442.61 | 333.01 | 1446.49 | 333.2 | 1448.83 | 333.24 | 1449.4 | 333.26 |
| 1461.76 | 333.52 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 304.4 | .04 | 1368.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 304.4 | 1368.21 | 22.65 | 19.84 | 19.47 | .1 | .3 |

Left Levee Station= 298.04 Elevation= 312.03
Right Levee Station= 1316.89 Elevation= 312.66

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3118.5*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.62 | 1.09 | 334.62 | 3.29 | 334.56 | 12.65 | 334.46 | 36.55 | 333.8 |
| 39.41 | 333.59 | 44.33 | 333.24 | 49.76 | 332.84 | 50.36 | 332.72 | 55.32 | 332.13 |
| 55.92 | 332 | 56.72 | 331.88 | 59.62 | 331.3 | 61.22 | 330.91 | 62.15 | 330.61 |
| 63.49 | 330.12 | 64.02 | 329.94 | 65.07 | 329.39 | 65.92 | 328.98 | 67.32 | 328.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 68 | 327.84 | 69.25 | 327.13 | 69.5 | 327.02 | 71.64 | 326.46 | 72.3 | 326.31 |
| 73.12 | 326.4 | 73.65 | 326.25 | 73.86 | 326.25 | 75.08 | 326.06 | 76.13 | 325.84 |
| 78.16 | 325.56 | 80.27 | 325.52 | 82 | 325.28 | 84.44 | 325.19 | 85.28 | 325.11 |
| 86.07 | 324.99 | 87.42 | 324.86 | 89.9 | 324.49 | 91.33 | 324.16 | 92.14 | 323.94 |
| 92.41 | 323.92 | 94.44 | 323.32 | 96.09 | 322.8 | 98.22 | 322.22 | 100.07 | 321.8 |
| 104.04 | 320.84 | 105.46 | 320.55 | 106.81 | 320.26 | 111.96 | 319.59 | 113.86 | 319.28 |
| 116.33 | 318.94 | 120.8 | 318.31 | 122.64 | 317.98 | 125.65 | 317.32 | 128.22 | 316.82 |
| 130.34 | 316.4 | 135.48 | 315.36 | 136.98 | 315.06 | 140.7 | 314.3 | 148.24 | 313.26 |
| 149.58 | 313.07 | 151.26 | 312.85 | 155.62 | 312.23 | 155.95 | 312.19 | 159.36 | 311.86 |
| 162.18 | 311.6 | 165.28 | 311.34 | 167.3 | 311.16 | 169.17 | 311.06 | 175.18 | 310.71 |
| 177.36 | 310.58 | 178.78 | 310.51 | 185.19 | 310.15 | 187.26 | 309.93 | 188.83 | 310.07 |
| 189.25 | 310.12 | 189.77 | 310.13 | 196.36 | 310.21 | 203.08 | 310.16 | 209.6 | 310.13 |
| 213.08 | 310.13 | 221.2 | 310.16 | 228.23 | 310.17 | 228.85 | 310.19 | 230.83 | 310.22 |
| 232.91 | 310.21 | 234.8 | 310.17 | 239.11 | 310 | 246.59 | 309.87 | 247.36 | 309.82 |
| 248.2 | 309.73 | 248.61 | 309.58 | 251.42 | 309.53 | 252.4 | 309.66 | 253.19 | 309.84 |
| 255.4 | 309.97 | 262.88 | 310.38 | 269.42 | 310.75 | 274.89 | 310.99 | 286.56 | 311.52 |
| 288.16 | 311.59 | 289.96 | 311.65 | 299.48 | 311.62 | 300.68 | 311.53 | 304.91 | 311.25 |
| 307.02 | 311.06 | 311.6 | 310.67 | 314.63 | 310.52 | 315.4 | 310.53 | 316.25 | 310.36 |
| 317.24 | 310.21 | 317.9 | 310.15 | 319.99 | 309.99 | 322.22 | 310.08 | 325.81 | 310.17 |
| 329.49 | 310.25 | 331.77 | 310.35 | 333.78 | 310.52 | 334.61 | 310.64 | 334.98 | 310.79 |
| 336.08 | 310.81 | 338 | 310.82 | 338.5 | 310.84 | 342.2 | 310.89 | 342.88 | 310.87 |
| 344.57 | 310.86 | 346.38 | 310.86 | 347.79 | 310.85 | 352.73 | 310.85 | 353.56 | 310.86 |
| 357.08 | 310.86 | 359.65 | 310.85 | 362 | 310.85 | 366.26 | 310.82 | 370.18 | 310.75 |
| 372.47 | 310.7 | 373.58 | 310.71 | 376.49 | 310.67 | 377.11 | 310.68 | 380.49 | 310.64 |
| 384.95 | 310.58 | 387.15 | 310.58 | 387.66 | 310.59 | 389.55 | 310.56 | 390.82 | 310.58 |
| 394.43 | 310.55 | 396.66 | 310.58 | 397.92 | 310.54 | 399.53 | 310.51 | 400.98 | 310.47 |
| 407.81 | 310.4 | 415.75 | 310.33 | 416.15 | 310.32 | 426.82 | 310.22 | 428.7 | 310.15 |
| 429.04 | 310.1 | 430.23 | 310.03 | 432.78 | 310 | 433.64 | 309.98 | 433.98 | 309.95 |
| 435.31 | 309.91 | 436.01 | 309.94 | 436.46 | 310.01 | 437.25 | 310.09 | 437.91 | 310.29 |
| 438.49 | 310.31 | 442.09 | 310.3 | 449.7 | 310.43 | 471.65 | 310.84 | 482.61 | 311.05 |
| 484.39 | 311.08 | 491.26 | 311.17 | 492.5 | 311.17 | 495.35 | 311.29 | 496.79 | 311.33 |
| 498.1 | 311.35 | 500.46 | 311.37 | 502.68 | 311.33 | 503.3 | 311.28 | 508.6 | 311.24 |
| 509.52 | 311.22 | 515.63 | 311.27 | 517.57 | 311.28 | 518.81 | 311.34 | 520.95 | 311.33 |
| 526.78 | 311.39 | 528.63 | 311.38 | 529.73 | 311.39 | 533.11 | 311.31 | 533.81 | 311.28 |
| 534.14 | 311.23 | 535.07 | 311.22 | 537.1 | 311.23 | 542.51 | 311.23 | 545.09 | 311.22 |
| 558.62 | 311.43 | 559.7 | 311.47 | 568.2 | 311.64 | 574.44 | 311.75 | 577.46 | 311.72 |
| 586.65 | 311.64 | 590.06 | 311.62 | 600.14 | 311.62 | 600.89 | 311.69 | 603.24 | 311.62 |
| 603.99 | 311.56 | 610.01 | 311.12 | 611.01 | 311.09 | 613.56 | 310.96 | 614.56 | 310.99 |
| 616.54 | 311.17 | 624.26 | 311.11 | 626.18 | 311.07 | 628.14 | 311.01 | 629.74 | 310.95 |
| 632.19 | 310.9 | 633.26 | 310.93 | 634.92 | 310.96 | 637.5 | 310.99 | 639.39 | 310.96 |
| 640.14 | 310.93 | 641.11 | 310.93 | 644.16 | 311.02 | 646.56 | 311.12 | 651.93 | 311.39 |
| 654.1 | 311.49 | 659.66 | 311.78 | 661.47 | 311.87 | 661.83 | 311.87 | 666.85 | 311.99 |
| 670.25 | 312.06 | 672.06 | 312.06 | 684.22 | 311.98 | 685.54 | 311.82 | 687.7 | 311.65 |
| 688.84 | 311.6 | 692.54 | 311.38 | 695.63 | 311.18 | 696.2 | 311.15 | 697.45 | 311.12 |
| 699.45 | 311.09 | 700.14 | 311.07 | 701.82 | 311.05 | 702.53 | 311.02 | 705.21 | 311.1 |
| 707.26 | 311.15 | 711.04 | 311.26 | 718.72 | 311.47 | 721.8 | 311.54 | 725.58 | 311.64 |
| 738.79 | 312.26 | 742.52 | 312.44 | 744.85 | 312.56 | 746.59 | 312.6 | 753.7 | 312.6 |
| 761.08 | 312.61 | 764.07 | 312.61 | 765.06 | 312.52 | 768.39 | 312.29 | 773.55 | 312.04 |
| 774.92 | 312 | 775.98 | 311.91 | 776.09 | 311.88 | 777.71 | 311.9 | 778.96 | 311.97 |
| 779.72 | 312.06 | 781.16 | 312.06 | 785.85 | 312.11 | 786.13 | 312.1 | 792.43 | 312.08 |
| 795.29 | 311.98 | 796.33 | 311.92 | 798 | 311.88 | 802.78 | 311.89 | 803.59 | 312 |
| 804.97 | 312.11 | 809.67 | 312.62 | 817.41 | 312.98 | 828.41 | 313.19 | 829.65 | 313.24 |
| 831.54 | 313.27 | 832.21 | 313.3 | 833.69 | 313.34 | 834.51 | 313.31 | 837.65 | 313.3 |
| 838.41 | 313.28 | 839.56 | 313.22 | 841.98 | 313.07 | 844.17 | 312.98 | 847.26 | 312.83 |
| 847.62 | 312.8 | 849.53 | 312.73 | 850.37 | 312.66 | 851.96 | 312.65 | 857.13 | 312.77 |
| 862.29 | 312.86 | 864.68 | 312.89 | 866.86 | 312.93 | 870.96 | 312.76 | 873.79 | 312.59 |
| 876.14 | 312.57 | 880.72 | 312.48 | 890.74 | 312.31 | 901.7 | 312.3 | 905.11 | 312.21 |
| 908.5 | 312.11 | 912.29 | 312.09 | 913.43 | 312.05 | 922.72 | 311.95 | 926.84 | 312.01 |
| 930.05 | 311.88 | 933.28 | 311.9 | 935.86 | 311.91 | 943.71 | 311.97 | 944.93 | 311.97 |
| 948.24 | 311.99 | 949.49 | 311.99 | 952.63 | 312.01 | 954.19 | 312.03 | 959.38 | 312.07 |
| 960.43 | 312.07 | 962.07 | 312.09 | 965.17 | 312.1 | 966.81 | 312.13 | 973.4 | 312.32 |
| 982.53 | 312.6 | 983.49 | 312.92 | 985.69 | 313.56 | 986.62 | 314.12 | 987.46 | 314.33 |
| 988.1 | 314.52 | 989.51 | 314.61 | 989.63 | 314.6 | 996.71 | 314.76 | 1003.95 | 314.93 |
| 1007.47 | 315.02 | 1016.16 | 315.25 | 1017.19 | 315.28 | 1018.8 | 315.31 | 1024.36 | 315.45 |
| 1028.55 | 315.46 | 1029.97 | 315.39 | 1031.34 | 315.26 | 1035.02 | 315.11 | 1042.08 | 314.84 |
| 1044.07 | 314.77 | 1046.14 | 314.79 | 1046.98 | 314.82 | 1050.75 | 314.86 | 1052.02 | 314.88 |
| 1054.17 | 314.96 | 1054.95 | 314.96 | 1056.84 | 314.92 | 1057.71 | 314.88 | 1070.28 | 314.49 |
| 1071.66 | 314.39 | 1072.55 | 314.35 | 1073.4 | 314.34 | 1077.78 | 314.33 | 1080.95 | 314.33 |
| 1084.14 | 314.31 | 1089.26 | 314.29 | 1092.22 | 314.29 | 1097.02 | 314.45 | 1097.72 | 314.49 |
| 1098.89 | 314.51 | 1108.16 | 314.11 | 1112.21 | 313.94 | 1118.11 | 313.68 | 1118.7 | 313.66 |
| 1119.53 | 313.68 | 1121.54 | 313.46 | 1124.19 | 313.18 | 1129.18 | 312.64 | 1130.84 | 312.38 |
| 1137.29 | 311.69 | 1137.78 | 311.67 | 1142.98 | 311.67 | 1145.97 | 311.66 | 1146.9 | 311.67 |
| 1150.61 | 311.67 | 1150.71 | 311.69 | 1152.1 | 311.76 | 1154.87 | 311.74 | 1157.89 | 311.71 |
| 1160.52 | 311.72 | 1162.78 | 311.68 | 1166.13 | 311.37 | 1167.93 | 311.27 | 1168.48 | 311.37 |
| 1169.77 | 311.42 | 1170.94 | 311.44 | 1173.36 | 311.45 | 1173.75 | 311.44 | 1177.86 | 311.4 |
| 1178.2 | 311.39 | 1193.41 | 311.1 | 1198.73 | 311.1 | 1206.24 | 311.06 | 1218.64 | 311.06 |
| 1225.04 | 311.07 | 1227.74 | 311.03 | 1237.24 | 310.96 | 1239.01 | 310.96 | 1239.5 | 310.95 |
| 1244.18 | 310.95 | 1245.64 | 311.01 | 1247.68 | 311.07 | 1248.5 | 311.05 | 1253.05 | 311.13 |
| 1253.94 | 311.14 | 1255.92 | 311.25 | 1256.83 | 311.27 | 1262.89 | 311.56 | 1265.31 | 311.67 |
| 1268.72 | 311.66 | 1277.66 | 311.66 | 1285.48 | 311.65 | 1289.09 | 311.65 | 1289.85 | 311.64 |
| 1298.59 | 311.65 | 1300.79 | 311.65 | 1304.58 | 311.66 | 1306.12 | 311.74 | 1307.76 | 311.77 |
| 1308.56 | 311.8 | 1309.86 | 311.8 | 1311.78 | 311.82 | 1312.85 | 311.82 | 1325.98 | 311.73 |
| 1326.62 | 311.73 | 1335.34 | 311.67 | 1336.42 | 311.67 | 1338.42 | 311.62 | 1339.04 | 311.62 |
| 1343.82 | 311.48 | 1352.51 | 311.26 | 1354.27 | 311.25 | 1357.53 | 311.28 | 1357.86 | 311.29 |
| 1360.01 | 311.29 | 1361.41 | 311.31 | 1362.09 | 311.42 | 1364.09 | 311.43 | 1364.53 | 311.45 |
| 1365.42 | 311.45 | 1365.93 | 311.47 | 1367.87 | 311.45 | 1369.87 | 311.38 | 1370.62 | 311.38 |
| 1371.71 | 311.34 | 1374.01 | 311.48 | 1375.84 | 311.61 | 1376.11 | 311.64 | 1376.64 | 311.79 |
| 1377.57 | 312.01 | 1379.22 | 312.27 | 1383.46 | 312.73 | 1387.01 | 313.12 | 1388.17 | 313.26 |
| 1388.93 | 313.33 | 1394.81 | 314.36 | 1395.53 | 314.53 | 1397.96 | 315.07 | 1398.1 | 315.11 |
| 1400.58 | 316.31 | 1402.67 | 317.28 | 1403.8 | 317.76 | 1405.83 | 318.72 | 1406.98 | 319.21 |
| 1408.35 | 319.85 | 1409.1 | 320.18 | 1409.89 | 320.5 | 1411.33 | 321.15 | 1412.53 | 321.65 |
| 1413.56 | 322.12 | 1414.69 | 322.7 | 1417.51 | 324.01 | 1419.69 | 325.18 | 1421.27 | 326.01 |
| 1422.39 | 326.75 | 1422.89 | 326.98 | 1425.51 | 327.87 | 1425.88 | 327.95 | 1430.91 | 329.89 |
| 1433.44 | 330.87 | 1434.22 | 331.2 | 1435.89 | 331.83 | 1437.35 | 332.44 | 1438.11 | 332.8 |
| 1445.78 | 332.82 | 1449.74 | 333.01 | 1452.13 | 333.05 | 1454.11 | 333.11 | 1454.9 | 333.12 |
| 1465.32 | 333.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 299.48 | .04 | 1369.87 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 299.48 | 1369.87 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION



BSE Document Control Number: 7323HYD101

RIVER: WASH0
REACH: WASH0 RS: 3098.65*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.38 | 1.07 | 334.38 | 3.23 | 334.32 | 12.44 | 334.23 | 35.95 | 333.6 |
| 43.61 | 333.06 | 48.94 | 332.69 | 49.53 | 332.57 | 51.45 | 332.34 | 54.41 | 332 |
| 55 | 331.88 | 55.78 | 331.76 | 58.64 | 331.2 | 60.22 | 330.82 | 61.13 | 330.53 |
| 62.44 | 330.05 | 62.96 | 329.89 | 63.63 | 329.53 | 64.83 | 328.95 | 66.55 | 328.02 |
| 66.88 | 327.86 | 68.11 | 327.18 | 68.35 | 327.07 | 70.46 | 326.52 | 71.11 | 326.38 |
| 71.92 | 326.47 | 72.44 | 326.32 | 72.64 | 326.31 | 73.84 | 326.13 | 74.88 | 325.91 |
| 76.88 | 325.61 | 78.95 | 325.57 | 80.65 | 325.35 | 83.05 | 325.28 | 83.88 | 325.21 |
| 84.66 | 325.1 | 85.99 | 324.98 | 88.42 | 324.64 | 89.83 | 324.31 | 90.62 | 324.11 |
| 90.89 | 324.09 | 92.88 | 323.51 | 94.51 | 323 | 96.81 | 322.39 | 98.43 | 322.03 |
| 102.33 | 321.09 | 105.06 | 320.53 | 110.12 | 319.86 | 111.99 | 319.57 | 118.82 | 318.61 |
| 120.63 | 318.29 | 123.59 | 317.64 | 128.2 | 316.73 | 133.26 | 315.69 | 136.6 | 314.99 |
| 138.38 | 314.6 | 140.52 | 314.29 | 145.8 | 313.51 | 147.12 | 313.31 | 148.77 | 313.08 |
| 150.79 | 312.78 | 153.06 | 312.42 | 153.38 | 312.38 | 156.74 | 312.03 | 159.51 | 311.75 |
| 162.57 | 311.5 | 164.55 | 311.33 | 166.39 | 311.23 | 168.38 | 311.11 | 169.6 | 311.02 |
| 170.58 | 310.97 | 172.3 | 310.85 | 175.84 | 310.66 | 181.29 | 310.35 | 182.15 | 310.29 |
| 184.18 | 310.07 | 186.14 | 310.24 | 186.65 | 310.24 | 193.13 | 310.28 | 199.74 | 310.2 |
| 207.24 | 310.12 | 209.58 | 310.12 | 224.85 | 310.1 | 227.03 | 310.13 | 229.08 | 310.12 |
| 230.94 | 310.07 | 235.18 | 309.9 | 239.07 | 309.82 | 242.53 | 309.74 | 243.3 | 309.69 |
| 244.12 | 309.6 | 244.52 | 309.46 | 247.28 | 309.4 | 248.25 | 309.52 | 249.02 | 309.69 |
| 258.56 | 310.17 | 262.39 | 310.36 | 264.99 | 310.5 | 270.37 | 310.71 | 281.85 | 311.19 |
| 285.19 | 311.3 | 294.55 | 311.24 | 295.83 | 311.15 | 300.56 | 310.88 | 302.55 | 310.71 |
| 307.41 | 310.34 | 310.61 | 310.2 | 311.35 | 310.22 | 312.34 | 310.05 | 313.39 | 309.91 |
| 314.08 | 309.85 | 316.3 | 309.69 | 317.28 | 309.71 | 318.67 | 309.77 | 326.37 | 309.91 |
| 328.78 | 310.01 | 329.84 | 310.08 | 330.91 | 310.17 | 331.79 | 310.28 | 332.19 | 310.42 |
| 333.35 | 310.44 | 335.39 | 310.44 | 335.92 | 310.47 | 338 | 310.51 | 339.85 | 310.52 |
| 340.57 | 310.49 | 342.36 | 310.48 | 344.28 | 310.48 | 346.55 | 310.46 | 347.1 | 310.47 |
| 349.68 | 310.47 | 351.89 | 310.49 | 355.61 | 310.5 | 360.83 | 310.48 | 364.02 | 310.46 |
| 366.37 | 310.43 | 367.06 | 310.41 | 369.5 | 310.38 | 370.75 | 310.34 | 371.94 | 310.32 |
| 373.68 | 310.34 | 374.83 | 310.32 | 376.72 | 310.31 | 376.85 | 310.32 | 380.43 | 310.3 |
| 385.17 | 310.23 | 386.26 | 310.24 | 388.03 | 310.23 | 389.58 | 310.21 | 391.39 | 310.23 |
| 395.22 | 310.22 | 397.57 | 310.24 | 397.75 | 310.23 | 400.62 | 310.18 | 402.16 | 310.13 |
| 408.31 | 310.06 | 409.39 | 310.06 | 414.23 | 310.03 | 417.82 | 310 | 418.24 | 309.99 |
| 429.55 | 309.89 | 430.88 | 309.86 | 433.17 | 309.7 | 435.86 | 309.65 | 437.14 | 309.59 |
| 438.55 | 309.55 | 439.25 | 309.58 | 440.48 | 309.72 | 441.14 | 309.92 | 441.73 | 309.94 |
| 445.32 | 309.92 | 452.91 | 310.06 | 474.82 | 310.47 | 485.77 | 310.68 | 487.54 | 310.71 |
| 494.4 | 310.81 | 495.65 | 310.81 | 498.49 | 310.92 | 501.24 | 310.97 | 503.59 | 310.99 |
| 505.8 | 310.95 | 506.43 | 310.91 | 511.71 | 310.87 | 512.64 | 310.85 | 518.74 | 310.9 |
| 520.67 | 310.92 | 521.91 | 310.98 | 524.05 | 310.96 | 529.87 | 311.02 | 531.72 | 311.01 |
| 532.81 | 311.02 | 536.19 | 310.94 | 536.89 | 310.91 | 537.22 | 310.86 | 538.14 | 310.85 |
| 540.17 | 310.86 | 548.15 | 310.86 | 561.65 | 311.06 | 562.73 | 311.09 | 567.75 | 311.19 |
| 571.21 | 311.24 | 577.45 | 311.34 | 580.46 | 311.31 | 586.3 | 311.26 | 589.63 | 311.24 |
| 591.57 | 311.24 | 594 | 311.23 | 600.86 | 311.25 | 603.1 | 311.25 | 603.4 | 311.29 |
| 604.01 | 311.3 | 606.19 | 311.24 | 606.94 | 311.18 | 612.96 | 310.76 | 616.5 | 310.6 |
| 617.49 | 310.63 | 619.48 | 310.81 | 627.18 | 310.77 | 629.09 | 310.73 | 632.65 | 310.62 |
| 633.44 | 310.61 | 634.61 | 310.57 | 636.17 | 310.6 | 640.4 | 310.65 | 642.29 | 310.63 |
| 643.41 | 310.59 | 647.04 | 310.68 | 650.86 | 310.84 | 654.8 | 311.02 | 658.84 | 311.23 |
| 664.32 | 311.51 | 664.68 | 311.51 | 669.69 | 311.62 | 673.09 | 311.7 | 687.04 | 311.62 |
| 688.35 | 311.46 | 690.52 | 311.31 | 694.02 | 311.12 | 695.35 | 311.04 | 698.43 | 310.84 |
| 699 | 310.81 | 702.93 | 310.72 | 704.61 | 310.7 | 705.32 | 310.67 | 707.99 | 310.74 |
| 710.04 | 310.81 | 710.95 | 310.83 | 721.48 | 311.12 | 728.33 | 311.28 | 731.52 | 311.43 |
| 741.51 | 311.86 | 747.56 | 312.15 | 748.72 | 312.19 | 750.81 | 312.2 | 763.77 | 312.22 |
| 766.76 | 312.23 | 767.74 | 312.14 | 771.06 | 311.92 | 776.22 | 311.68 | 777.59 | 311.64 |
| 778.65 | 311.56 | 778.76 | 311.53 | 780.37 | 311.55 | 781.62 | 311.61 | 782.37 | 311.7 |
| 783.81 | 311.7 | 788.49 | 311.75 | 788.77 | 311.74 | 791.86 | 311.74 | 795.06 | 311.73 |
| 797.04 | 311.66 | 798.96 | 311.57 | 800.62 | 311.53 | 805.4 | 311.54 | 806.2 | 311.64 |
| 807.59 | 311.75 | 809.59 | 311.97 | 812.27 | 312.24 | 819.22 | 312.55 | 820.01 | 312.59 |
| 830.98 | 312.78 | 832.52 | 312.83 | 834.11 | 312.86 | 836.25 | 312.93 | 837.08 | 312.9 |
| 840.21 | 312.89 | 840.97 | 312.87 | 844.53 | 312.66 | 845.52 | 312.63 | 849.81 | 312.42 |
| 850.17 | 312.39 | 852.07 | 312.33 | 852.91 | 312.26 | 854.49 | 312.25 | 855.88 | 312.27 |
| 859.65 | 312.36 | 867.19 | 312.48 | 869.37 | 312.51 | 873.47 | 312.34 | 876.29 | 312.18 |
| 877.7 | 312.18 | 880.84 | 312.13 | 883.2 | 312.08 | 890.8 | 311.97 | 893.21 | 311.93 |
| 904.15 | 311.92 | 907.55 | 311.83 | 910.74 | 311.74 | 914.73 | 311.71 | 915.86 | 311.67 |
| 925.13 | 311.57 | 928.02 | 311.6 | 929.25 | 311.62 | 930.76 | 311.57 | 932.46 | 311.49 |
| 935.67 | 311.52 | 937.8 | 311.52 | 940.95 | 311.54 | 948.49 | 311.6 | 948.59 | 311.59 |
| 951.86 | 311.61 | 955 | 311.62 | 956.55 | 311.65 | 963.83 | 311.72 | 966.59 | 311.73 |
| 969.15 | 311.76 | 970.55 | 311.8 | 975.73 | 311.93 | 984.85 | 312.19 | 985.81 | 312.51 |
| 988 | 313.12 | 988.93 | 313.65 | 989.76 | 313.85 | 990.4 | 314.04 | 991.82 | 314.12 |
| 991.93 | 314.11 | 1002.47 | 314.32 | 1006.23 | 314.4 | 1009.74 | 314.49 | 1018.42 | 314.72 |
| 1021.05 | 314.77 | 1026.61 | 314.91 | 1030.78 | 314.91 | 1032.21 | 314.85 | 1033.57 | 314.72 |
| 1044.29 | 314.34 | 1046.28 | 314.28 | 1048.34 | 314.3 | 1049.18 | 314.33 | 1051.75 | 314.37 |
| 1053.27 | 314.38 | 1054.83 | 314.41 | 1056.37 | 314.47 | 1057.14 | 314.47 | 1059.03 | 314.43 |
| 1059.89 | 314.39 | 1062.03 | 314.32 | 1064.69 | 314.25 | 1068.93 | 314.1 | 1071.82 | 314.03 |
| 1073.71 | 313.92 | 1074.71 | 313.88 | 1075.47 | 313.87 | 1083.1 | 313.87 | 1089.56 | 313.83 |
| 1094.35 | 313.81 | 1099.14 | 313.98 | 1100.42 | 314.04 | 1101 | 314.03 | 1115.17 | 313.48 |
| 1120.19 | 313.27 | 1120.79 | 313.25 | 1121.62 | 313.27 | 1124.37 | 312.99 | 1126.26 | 312.79 |
| 1129.04 | 312.51 | 1131.24 | 312.27 | 1132.91 | 312.02 | 1139.35 | 311.36 | 1141.56 | 311.34 |
| 1145.02 | 311.33 | 1148.93 | 311.33 | 1152.64 | 311.34 | 1153.11 | 311.38 | 1154.13 | 311.42 |
| 1155.37 | 311.42 | 1156.9 | 311.4 | 1159.91 | 311.38 | 1162.54 | 311.39 | 1164.79 | 311.36 |
| 1168.14 | 311.06 | 1169.93 | 310.96 | 1170.73 | 311.08 | 1171.87 | 311.12 | 1175.35 | 311.13 |
| 1175.74 | 311.12 | 1179.85 | 311.08 | 1185.47 | 310.97 | 1190.29 | 310.89 | 1195.37 | 310.79 |
| 1196.79 | 310.78 | 1200.68 | 310.77 | 1208.17 | 310.74 | 1220.55 | 310.74 | 1226.95 | 310.75 |
| 1229.64 | 310.72 | 1232.36 | 310.71 | 1239.13 | 310.67 | 1246.05 | 310.67 | 1247.83 | 310.74 |
| 1249.54 | 310.78 | 1250.37 | 310.76 | 1256.47 | 310.87 | 1257.77 | 310.94 | 1259.55 | 311.01 |
| 1264.73 | 311.23 | 1267.14 | 311.34 | 1270.56 | 311.33 | 1287.8 | 311.31 | 1288.56 | 311.3 |
| 1300.37 | 311.3 | 1306.35 | 311.32 | 1307.88 | 311.39 | 1310.58 | 311.45 | 1313.54 | 311.48 |
| 1314.6 | 311.48 | 1321.71 | 311.44 | 1321.95 | 311.43 | 1327.72 | 311.39 | 1328.35 | 311.39 |
| 1335.57 | 311.34 | 1338.13 | 311.33 | 1342.78 | 311.24 | 1345.52 | 311.16 | 1348.61 | 311.09 |
| 1354.19 | 310.97 | 1355.96 | 311 | 1356.97 | 311.04 | 1358.27 | 311.07 | 1359.21 | 311.11 |
| 1361.69 | 311.19 | 1363.09 | 311.26 | 1363.77 | 311.39 | 1365.76 | 311.48 | 1366.2 | 311.52 |
| 1367.09 | 311.55 | 1367.94 | 311.61 | 1368.52 | 311.62 | 1370.46 | 311.59 | 1371.53 | 311.56 |
| 1373.15 | 311.57 | 1373.4 | 311.55 | 1377.62 | 311.86 | 1377.9 | 311.9 | 1378.44 | 312.05 |
| 1379.39 | 312.27 | 1381.06 | 312.54 | 1385.39 | 313.02 | 1390.97 | 313.67 | 1392.03 | 313.85 |
| 1395.85 | 314.53 | 1396.96 | 314.72 | 1400.32 | 315.46 | 1400.79 | 315.69 | 1401.61 | 316.05 |
| 1402.85 | 316.63 | 1404.99 | 317.56 | 1406.13 | 318.03 | 1408.21 | 318.95 | 1409.38 | 319.43 |
| 1410.77 | 320.05 | 1412.34 | 320.68 | 1413.81 | 321.3 | 1415.04 | 321.78 | 1416.09 | 322.24 |
| 1417.25 | 322.81 | 1420.12 | 324.08 | 1420.22 | 324.14 | 1423.96 | 326.02 | 1425.09 | 326.73 |
| 1425.6 | 326.96 | 1428.28 | 327.82 | 1428.65 | 327.91 | 1434.65 | 330.11 | 1435.93 | 330.57 |
| 1437.16 | 331.05 | 1438.86 | 331.67 | 1440.36 | 332.25 | 1441.13 | 332.6 | 1444.31 | 332.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1448.95 | 332.63 | 1452.99 | 332.82 | 1455.43 | 332.87 | 1456.72 | 332.91 | 1461.45 | 332.99 |
| 1468.88 | 333.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 294.55 | .04 | 1371.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 294.55 | 1371.53 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3078.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.14 | 1.06 | 334.14 | 3.18 | 334.09 | 12.24 | 334 | 35.35 | 333.4 |
| 38.11 | 333.21 | 42.88 | 332.89 | 48.13 | 332.53 | 48.71 | 332.41 | 53.5 | 331.87 |
| 54.08 | 331.75 | 54.85 | 331.64 | 57.86 | 331.06 | 59.21 | 330.73 | 60.1 | 330.45 |
| 61.4 | 329.99 | 61.91 | 329.83 | 62.57 | 329.49 | 63.75 | 328.93 | 65.11 | 328.2 |
| 65.66 | 327.94 | 67.21 | 327.12 | 69.29 | 326.59 | 69.92 | 326.45 | 70.71 | 326.53 |
| 71.23 | 326.38 | 71.43 | 326.38 | 72.61 | 326.19 | 73.62 | 325.97 | 75.59 | 325.67 |
| 77.2 | 325.61 | 77.63 | 325.61 | 78.5 | 325.53 | 79.3 | 325.43 | 81.66 | 325.38 |
| 82.47 | 325.32 | 83.24 | 325.22 | 84.55 | 325.11 | 86.95 | 324.78 | 88.32 | 324.47 |
| 89.11 | 324.27 | 89.37 | 324.25 | 91.33 | 323.69 | 91.71 | 323.56 | 92.93 | 323.2 |
| 94.99 | 322.66 | 96.78 | 322.26 | 100.62 | 321.35 | 103.3 | 320.79 | 108.28 | 320.14 |
| 110.11 | 319.85 | 112.5 | 319.52 | 116.83 | 318.91 | 118.61 | 318.59 | 121.21 | 318.02 |
| 125.02 | 317.27 | 126.05 | 317.06 | 128.68 | 316.5 | 131.03 | 316.01 | 132.47 | 315.69 |
| 134.31 | 315.3 | 136.07 | 314.91 | 141.82 | 314 | 143.36 | 313.75 | 146.28 | 313.31 |
| 148.27 | 313 | 150.82 | 312.57 | 156.84 | 311.9 | 159.85 | 311.66 | 161.8 | 311.49 |
| 163.61 | 311.39 | 165.56 | 311.27 | 166.76 | 311.18 | 169.42 | 311 | 172.9 | 310.8 |
| 177.01 | 310.57 | 179.1 | 310.44 | 181.1 | 310.22 | 183.02 | 310.36 | 189.9 | 310.35 |
| 196.4 | 310.23 | 202.71 | 310.14 | 203.78 | 310.12 | 206.07 | 310.1 | 213.92 | 310.06 |
| 221.09 | 310.02 | 223.59 | 310.04 | 225.25 | 310.02 | 227.08 | 309.97 | 231.25 | 309.79 |
| 235.07 | 309.7 | 238.48 | 309.61 | 239.23 | 309.56 | 240.04 | 309.47 | 240.44 | 309.33 |
| 243.15 | 309.26 | 244.1 | 309.37 | 244.86 | 309.53 | 247 | 309.63 | 254.24 | 309.95 |
| 260.56 | 310.25 | 265.85 | 310.44 | 277.13 | 310.85 | 278.69 | 310.9 | 280.43 | 310.94 |
| 289.63 | 310.86 | 290 | 310.82 | 295.72 | 310.54 | 298.08 | 310.35 | 299.03 | 310.29 |
| 303.21 | 310 | 306.6 | 309.88 | 307.37 | 309.9 | 308.42 | 309.74 | 309.53 | 309.6 |
| 312.61 | 309.39 | 313.64 | 309.41 | 315.11 | 309.46 | 319.13 | 309.52 | 323.25 | 309.57 |
| 325.8 | 309.66 | 328.05 | 309.81 | 328.98 | 309.92 | 329.4 | 310.06 | 332.19 | 310.07 |
| 332.78 | 310.06 | 333.34 | 310.1 | 335.54 | 310.14 | 337.49 | 310.15 | 338.25 | 310.12 |
| 340.14 | 310.1 | 342.17 | 310.1 | 344.58 | 310.07 | 347.89 | 310.1 | 349.29 | 310.1 |
| 350.22 | 310.12 | 351.58 | 310.12 | 353 | 310.14 | 354.15 | 310.13 | 359.66 | 310.11 |
| 363.03 | 310.08 | 365.52 | 310.05 | 368.83 | 310 | 371.21 | 309.94 | 371.79 | 309.96 |
| 373.24 | 309.97 | 375.9 | 309.95 | 376.6 | 309.96 | 380.37 | 309.95 | 385.38 | 309.89 |
| 386.54 | 309.9 | 388.41 | 309.88 | 390.04 | 309.85 | 391.95 | 309.89 | 396 | 309.88 |
| 398.49 | 309.91 | 402.81 | 309.82 | 403.33 | 309.79 | 409.83 | 309.72 | 410.98 | 309.72 |
| 416.1 | 309.69 | 419.88 | 309.66 | 420.32 | 309.65 | 432.28 | 309.56 | 434.38 | 309.5 |
| 434.77 | 309.45 | 436.1 | 309.36 | 438.95 | 309.3 | 440.3 | 309.24 | 441.79 | 309.19 |
| 442.49 | 309.21 | 443.72 | 309.36 | 444.38 | 309.54 | 444.96 | 309.56 | 448.54 | 309.55 |
| 453.9 | 309.64 | 456.13 | 309.69 | 478 | 310.1 | 488.93 | 310.32 | 490.7 | 310.35 |
| 497.55 | 310.44 | 498.79 | 310.44 | 501.62 | 310.55 | 504.37 | 310.6 | 506.72 | 310.62 |
| 508.93 | 310.58 | 509.55 | 310.54 | 511.86 | 310.51 | 514.83 | 310.5 | 515.75 | 310.48 |
| 521.84 | 310.53 | 523.77 | 310.55 | 525.01 | 310.61 | 527.14 | 310.6 | 532.95 | 310.66 |
| 534.8 | 310.64 | 535.89 | 310.64 | 539.26 | 310.57 | 539.96 | 310.54 | 540.29 | 310.49 |
| 541.21 | 310.48 | 543.23 | 310.49 | 551.2 | 310.49 | 564.68 | 310.68 | 565.76 | 310.72 |
| 570.77 | 310.81 | 574.23 | 310.85 | 580.45 | 310.94 | 589.29 | 310.85 | 592.61 | 310.84 |
| 594.55 | 310.85 | 596.97 | 310.85 | 603.82 | 310.87 | 606.06 | 310.87 | 606.97 | 310.93 |
| 608.31 | 310.9 | 609.9 | 310.8 | 615.9 | 310.39 | 616.89 | 310.36 | 619.43 | 310.25 |
| 620.43 | 310.28 | 622.41 | 310.45 | 630.1 | 310.42 | 632.01 | 310.38 | 635.56 | 310.28 |
| 638 | 310.23 | 639.07 | 310.26 | 643.29 | 310.32 | 645.18 | 310.29 | 645.93 | 310.26 |
| 646.9 | 310.26 | 649.93 | 310.35 | 653.87 | 310.49 | 657.67 | 310.66 | 661.71 | 310.87 |
| 667.18 | 311.14 | 667.54 | 311.14 | 672.54 | 311.25 | 675.94 | 311.33 | 677.73 | 311.33 |
| 689.86 | 311.26 | 691.17 | 311.11 | 693.33 | 310.96 | 694.46 | 310.91 | 698.15 | 310.7 |
| 701.8 | 310.46 | 705.04 | 310.38 | 708.11 | 310.32 | 710.77 | 310.39 | 713.73 | 310.49 |
| 716.59 | 310.56 | 721.36 | 310.7 | 726.8 | 310.83 | 728.07 | 310.85 | 731.08 | 310.92 |
| 734.26 | 311.07 | 744.24 | 311.47 | 750.28 | 311.75 | 752.01 | 311.79 | 753.52 | 311.79 |
| 759.1 | 311.81 | 769.44 | 311.84 | 770.43 | 311.76 | 773.74 | 311.55 | 778.88 | 311.32 |
| 780.25 | 311.28 | 781.31 | 311.2 | 781.42 | 311.17 | 783.03 | 311.19 | 784.28 | 311.25 |
| 785.03 | 311.33 | 786.47 | 311.34 | 791.14 | 311.39 | 791.42 | 311.38 | 794.5 | 311.38 |
| 797.7 | 311.37 | 800.55 | 311.27 | 801.59 | 311.21 | 803.25 | 311.18 | 808.02 | 311.19 |
| 808.82 | 311.29 | 810.2 | 311.4 | 814.88 | 311.87 | 822.6 | 312.19 | 833.56 | 312.36 |
| 834.8 | 312.41 | 836.68 | 312.44 | 838.82 | 312.51 | 839.64 | 312.48 | 842.77 | 312.47 |
| 843.52 | 312.45 | 847.09 | 312.25 | 848.07 | 312.22 | 852.35 | 312.02 | 852.71 | 311.99 |
| 854.61 | 311.92 | 855.44 | 311.86 | 857.29 | 311.85 | 862.18 | 311.95 | 867.32 | 312.03 |
| 870.84 | 312.07 | 871.88 | 312.09 | 874 | 312.01 | 875.97 | 311.92 | 878.78 | 311.77 |
| 880.2 | 311.77 | 883.33 | 311.73 | 885.69 | 311.68 | 895.68 | 311.55 | 906.6 | 311.53 |
| 910 | 311.45 | 913.38 | 311.36 | 917.16 | 311.33 | 918.29 | 311.29 | 927.55 | 311.18 |
| 931.66 | 311.22 | 932.33 | 311.21 | 934.86 | 311.11 | 938.07 | 311.13 | 940.19 | 311.13 |
| 940.64 | 311.14 | 948.47 | 311.2 | 950.86 | 311.21 | 952.98 | 311.21 | 957.36 | 311.23 |
| 958.92 | 311.27 | 964.09 | 311.33 | 971.49 | 311.39 | 972.89 | 311.42 | 978.06 | 311.55 |
| 982.25 | 311.65 | 987.16 | 311.79 | 988.12 | 312.09 | 990.31 | 312.67 | 991.23 | 313.19 |
| 992.07 | 313.38 | 992.71 | 313.55 | 994.12 | 313.63 | 994.24 | 313.62 | 1001.29 | 313.74 |
| 1004.75 | 313.79 | 1008.51 | 313.87 | 1012.02 | 313.96 | 1020.67 | 314.19 | 1023.31 | 314.23 |
| 1028.85 | 314.36 | 1033.02 | 314.37 | 1034.44 | 314.31 | 1035.81 | 314.19 | 1038.82 | 314.09 |
| 1039.47 | 314.06 | 1048.49 | 313.78 | 1050.55 | 313.81 | 1051.39 | 313.84 | 1057.03 | 313.93 |
| 1058.56 | 313.98 | 1061.22 | 313.94 | 1062.08 | 313.9 | 1064.21 | 313.83 | 1066.87 | 313.76 |
| 1070.54 | 313.62 | 1074.65 | 313.52 | 1075.98 | 313.44 | 1077.63 | 313.4 | 1082.09 | 313.4 |
| 1085.24 | 313.41 | 1086.87 | 313.39 | 1091.7 | 313.35 | 1093.53 | 313.34 | 1096.48 | 313.34 |
| 1101.26 | 313.5 | 1101.96 | 313.54 | 1103.12 | 313.56 | 1112.36 | 313.22 | 1117.26 | 313.05 |
| 1122.87 | 312.84 | 1123.47 | 312.87 | 1128.34 | 312.41 | 1133.31 | 311.91 | 1134.97 | 311.67 |
| 1141.4 | 311.04 | 1141.89 | 311.02 | 1149.18 | 310.99 | 1152.85 | 311.01 | 1154.67 | 311.01 |
| 1154.77 | 311.03 | 1156.15 | 311.09 | 1159.57 | 311.06 | 1161.92 | 311.05 | 1164.55 | 311.07 |
| 1166.8 | 311.03 | 1169.46 | 310.8 | 1170.14 | 310.75 | 1171.93 | 310.66 | 1172.73 | 310.77 |
| 1173.77 | 310.8 | 1174.93 | 310.81 | 1177.35 | 310.81 | 1177.73 | 310.8 | 1181.83 | 310.76 |
| 1185.84 | 310.69 | 1187.44 | 310.65 | 1192.26 | 310.57 | 1197.33 | 310.47 | 1198.74 | 310.46 |
| 1202.62 | 310.45 | 1210.11 | 310.41 | 1222.47 | 310.41 | 1228.69 | 310.44 | 1234.26 | 310.4 |
| 1241.01 | 310.38 | 1243.26 | 310.38 | 1247.93 | 310.39 | 1249.7 | 310.46 | 1251.41 | 310.5 |
| 1252.23 | 310.48 | 1257.65 | 310.55 | 1259.63 | 310.64 | 1261.4 | 310.7 | 1268.98 | 311.01 |
| 1272.39 | 311 | 1281.29 | 310.99 | 1289.09 | 310.96 | 1292.68 | 310.95 | 1302.15 | 310.95 |
| 1308.12 | 310.97 | 1309.65 | 311.05 | 1312.34 | 311.11 | 1315.3 | 311.14 | 1316.36 | 311.14 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1323.46 | 311.1 | 1323.7 | 311.09 | 1329.45 | 311.05 | 1330.09 | 311.05 | 1337.29 | 311 |
| 1339.85 | 311 | 1344.49 | 310.91 | 1347.23 | 310.84 | 1350.31 | 310.78 | 1355.88 | 310.68 |
| 1357.64 | 310.75 | 1361.22 | 310.96 | 1362.49 | 311.02 | 1364.76 | 311.21 | 1365.44 | 311.37 |
| 1368.72 | 311.65 | 1369.61 | 311.75 | 1371.2 | 311.77 | 1373.19 | 311.74 | 1375 | 311.77 |
| 1375.1 | 311.75 | 1377.5 | 311.95 | 1379.68 | 312.15 | 1381.2 | 312.53 | 1382.91 | 312.81 |
| 1385.19 | 313.08 | 1387.32 | 313.31 | 1391.01 | 313.75 | 1393.01 | 314 | 1399.12 | 315.08 |
| 1399.88 | 315.25 | 1402.4 | 315.78 | 1405.12 | 316.94 | 1407.3 | 317.84 | 1408.47 | 318.29 |
| 1410.73 | 319.24 | 1411.78 | 319.64 | 1413.2 | 320.24 | 1414.8 | 320.85 | 1416.3 | 321.45 |
| 1417.55 | 321.92 | 1418.62 | 322.36 | 1420.19 | 323.08 | 1422.73 | 324.15 | 1422.83 | 324.21 |
| 1424.72 | 325.12 | 1426.64 | 326.03 | 1427.8 | 326.72 | 1428.32 | 326.94 | 1431.04 | 327.78 |
| 1431.43 | 327.86 | 1436.66 | 329.7 | 1438.27 | 330.25 | 1440.11 | 330.91 | 1441.84 | 331.5 |
| 1443.36 | 332.07 | 1444.15 | 332.4 | 1447.39 | 332.42 | 1447.95 | 332.43 | 1452.13 | 332.45 |
| 1453.9 | 332.52 | 1456.24 | 332.63 | 1458.73 | 332.68 | 1460.78 | 332.74 | 1464.87 | 332.8 |
| 1472.44 | 332.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 289.63 | .04 | 1373.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 289.63 | 1373.19 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3058.97*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.9 | 1.04 | 333.9 | 3.12 | 333.85 | 12.03 | 333.76 | 34.75 | 333.2 |
| 37.47 | 333.02 | 42.15 | 332.72 | 47.31 | 332.37 | 47.88 | 332.26 | 52.59 | 331.74 |
| 53.92 | 331.52 | 56.88 | 330.96 | 58.2 | 330.63 | 59.08 | 330.37 | 60.86 | 329.77 |
| 61.5 | 329.45 | 62.66 | 328.91 | 64.33 | 328.04 | 64.54 | 327.95 | 65.84 | 327.27 |
| 66.52 | 327.06 | 68.6 | 326.54 | 68.73 | 326.52 | 69.51 | 326.6 | 70.02 | 326.45 |
| 70.21 | 326.45 | 71.37 | 326.26 | 72.37 | 326.04 | 74.31 | 325.73 | 75.89 | 325.65 |
| 76.31 | 325.65 | 77.96 | 325.51 | 80.28 | 325.48 | 81.07 | 325.42 | 81.83 | 325.33 |
| 83.11 | 325.24 | 85.47 | 324.92 | 86.82 | 324.62 | 87.59 | 324.43 | 87.85 | 324.41 |
| 89.78 | 323.87 | 91.35 | 323.4 | 93.58 | 322.83 | 95.14 | 322.49 | 98.91 | 321.6 |
| 100.76 | 321.21 | 101.54 | 321.06 | 106.44 | 320.42 | 108.24 | 320.14 | 114.84 | 319.21 |
| 116.59 | 318.9 | 119.46 | 318.27 | 122.89 | 317.61 | 123.91 | 317.4 | 126.49 | 316.83 |
| 128.8 | 316.33 | 132.03 | 315.61 | 133.76 | 315.21 | 135.82 | 314.87 | 142.2 | 313.78 |
| 143.8 | 313.54 | 145.75 | 313.22 | 148.25 | 312.76 | 151.5 | 312.36 | 154.18 | 312.05 |
| 157.13 | 311.82 | 159.05 | 311.65 | 160.83 | 311.56 | 162.75 | 311.43 | 163.93 | 311.33 |
| 164.88 | 311.28 | 166.54 | 311.15 | 168.61 | 311.02 | 169.96 | 310.95 | 174 | 310.72 |
| 176.06 | 310.59 | 178.02 | 310.36 | 179.91 | 310.48 | 180.41 | 310.47 | 186.67 | 310.42 |
| 193.06 | 310.26 | 200.31 | 310.12 | 202.57 | 310.09 | 210.29 | 310.02 | 215.63 | 309.95 |
| 219.78 | 309.95 | 221.42 | 309.93 | 223.22 | 309.87 | 227.31 | 309.68 | 231.08 | 309.58 |
| 234.42 | 309.48 | 235.16 | 309.43 | 235.96 | 309.34 | 236.35 | 309.21 | 239.01 | 309.13 |
| 239.95 | 309.23 | 240.7 | 309.38 | 249.92 | 309.74 | 253.61 | 309.89 | 256.13 | 310 |
| 261.33 | 310.16 | 272.42 | 310.51 | 275.66 | 310.59 | 284.7 | 310.48 | 286.12 | 310.39 |
| 291.12 | 310.18 | 293.61 | 310 | 299.02 | 309.67 | 301.69 | 309.58 | 302.9 | 309.56 |
| 303.4 | 309.59 | 305.67 | 309.3 | 308.07 | 309.14 | 308.91 | 309.1 | 310.01 | 309.11 |
| 311.55 | 309.15 | 315.35 | 309.18 | 315.79 | 309.19 | 320.13 | 309.23 | 322.82 | 309.31 |
| 325.19 | 309.46 | 326.17 | 309.56 | 326.61 | 309.69 | 329.17 | 309.7 | 329.69 | 309.67 |
| 330.41 | 309.71 | 333.07 | 309.78 | 335.14 | 309.77 | 337.93 | 309.72 | 340.07 | 309.72 |
| 342.6 | 309.69 | 346.09 | 309.72 | 347.05 | 309.72 | 348.54 | 309.75 | 349.98 | 309.75 |
| 351.48 | 309.77 | 352.69 | 309.77 | 357.51 | 309.74 | 358.5 | 309.74 | 362.05 | 309.71 |
| 364.67 | 309.68 | 365.43 | 309.66 | 368.54 | 309.63 | 370.25 | 309.56 | 372.06 | 309.6 |
| 376.19 | 309.59 | 376.34 | 309.6 | 380.32 | 309.61 | 385.59 | 309.55 | 386.81 | 309.55 |
| 388.78 | 309.53 | 390.51 | 309.49 | 392.52 | 309.55 | 396.78 | 309.54 | 399.41 | 309.57 |
| 403.5 | 309.5 | 404.51 | 309.45 | 411.36 | 309.37 | 412.57 | 309.38 | 417.96 | 309.36 |
| 421.95 | 309.33 | 422.41 | 309.32 | 435.01 | 309.23 | 437.22 | 309.17 | 437.63 | 309.12 |
| 439.04 | 309.03 | 442.04 | 308.95 | 443.46 | 308.88 | 445.03 | 308.83 | 445.72 | 308.85 |
| 446.96 | 308.99 | 447.61 | 309.17 | 448.2 | 309.19 | 451.77 | 309.18 | 459.34 | 309.31 |
| 481.18 | 309.73 | 492.09 | 309.96 | 493.86 | 309.99 | 500.69 | 310.07 | 501.93 | 310.07 |
| 504.76 | 310.17 | 506.19 | 310.21 | 509.85 | 310.24 | 512.05 | 310.21 | 512.68 | 310.17 |
| 514.98 | 310.14 | 517.94 | 310.13 | 518.87 | 310.11 | 526.87 | 310.19 | 528.69 | 310.25 |
| 530.24 | 310.23 | 536.04 | 310.29 | 538.97 | 310.27 | 542.34 | 310.2 | 543.13 | 310.14 |
| 544.28 | 310.11 | 551.69 | 310.13 | 554.26 | 310.12 | 567.71 | 310.3 | 568.79 | 310.34 |
| 573.79 | 310.42 | 583.46 | 310.53 | 586.46 | 310.5 | 592.28 | 310.45 | 595.6 | 310.44 |
| 597.53 | 310.46 | 599.95 | 310.46 | 609.02 | 310.5 | 609.77 | 310.56 | 612.1 | 310.49 |
| 612.85 | 310.41 | 618.85 | 310.03 | 622.37 | 309.89 | 623.37 | 309.92 | 625.34 | 310.09 |
| 633.02 | 310.07 | 636.88 | 310 | 638.47 | 309.95 | 640.91 | 309.9 | 643.62 | 309.95 |
| 646.19 | 309.98 | 648.42 | 309.95 | 649.19 | 309.92 | 652.82 | 310.01 | 656.75 | 310.14 |
| 660.55 | 310.3 | 662.71 | 310.4 | 668.24 | 310.69 | 670.04 | 310.77 | 670.4 | 310.77 |
| 678.78 | 310.97 | 680.57 | 310.97 | 692.68 | 310.9 | 693.99 | 310.76 | 696.14 | 310.62 |
| 699.64 | 310.44 | 700.96 | 310.36 | 704.59 | 310.12 | 707.83 | 310.03 | 710.9 | 309.97 |
| 713.34 | 310.03 | 716.51 | 310.14 | 727 | 310.43 | 729.56 | 310.48 | 730.06 | 310.48 |
| 732.01 | 310.53 | 733.83 | 310.56 | 737 | 310.7 | 746.97 | 311.07 | 750.69 | 311.23 |
| 753 | 311.34 | 754.73 | 311.38 | 761.25 | 311.42 | 769.15 | 311.44 | 772.13 | 311.46 |
| 773.11 | 311.38 | 776.42 | 311.17 | 781.55 | 310.96 | 782.54 | 310.94 | 784.08 | 310.82 |
| 785.69 | 310.84 | 786.93 | 310.89 | 787.69 | 310.97 | 789.12 | 310.97 | 793.79 | 311.03 |
| 794.07 | 311.02 | 797.14 | 311.02 | 800.33 | 311.01 | 802.3 | 310.95 | 804.22 | 310.86 |
| 805.88 | 310.83 | 810.63 | 310.84 | 811.26 | 310.92 | 812.82 | 311.04 | 814.81 | 311.24 |
| 817.49 | 311.49 | 823.29 | 311.72 | 825.19 | 311.79 | 836.13 | 311.95 | 837.67 | 312 |
| 839.25 | 312.03 | 839.91 | 312.06 | 841.38 | 312.09 | 842.21 | 312.07 | 845.33 | 312.06 |
| 846.08 | 312.04 | 848.76 | 311.9 | 849.64 | 311.84 | 850.62 | 311.81 | 855.25 | 311.59 |
| 857.15 | 311.52 | 857.98 | 311.46 | 859.56 | 311.44 | 863.8 | 311.52 | 864 | 311.53 |
| 869.84 | 311.61 | 873.35 | 311.65 | 874.39 | 311.67 | 876.51 | 311.59 | 878.85 | 311.49 |
| 881.28 | 311.36 | 882.69 | 311.37 | 885.82 | 311.33 | 888.17 | 311.28 | 895.75 | 311.19 |
| 898.48 | 311.17 | 909.05 | 311.15 | 910.09 | 311.13 | 914.89 | 311.01 | 915.82 | 310.98 |
| 919.59 | 310.95 | 920.73 | 310.91 | 929.96 | 310.8 | 931.1 | 310.8 | 934.06 | 310.83 |
| 934.74 | 310.82 | 937.02 | 310.74 | 937.26 | 310.72 | 939.23 | 310.73 | 940.47 | 310.75 |
| 942.59 | 310.74 | 950.85 | 310.82 | 953.24 | 310.83 | 958.13 | 310.83 | 959.73 | 310.84 |
| 961.28 | 310.89 | 966.44 | 310.96 | 969.84 | 311 | 972.21 | 311 | 973.83 | 311.02 |
| 980.39 | 311.16 | 984.57 | 311.26 | 989.48 | 311.39 | 990.43 | 311.68 | 992.62 | 312.23 |
| 993.54 | 312.72 | 995.01 | 313.07 | 996.54 | 313.13 | 1003.58 | 313.23 | 1007.04 | 313.26 |
| 1014.29 | 313.42 | 1023.96 | 313.68 | 1025.56 | 313.69 | 1031.09 | 313.81 | 1035.26 | 313.82 |
| 1036.68 | 313.77 | 1038.04 | 313.66 | 1041.69 | 313.54 | 1048.72 | 313.34 | 1050.7 | 313.29 |
| 1052.76 | 313.32 | 1053.59 | 313.36 | 1056.83 | 313.41 | 1057.35 | 313.4 | 1060.46 | 313.49 |
| 1061.13 | 313.49 | 1063.41 | 313.44 | 1066.4 | 313.34 | 1067.6 | 313.32 | 1073.27 | 313.11 |
| 1076.82 | 313.04 | 1078.04 | 312.97 | 1079.88 | 312.93 | 1085.93 | 312.94 | 1087.39 | 312.95 |
| 1090.57 | 312.91 | 1094.98 | 312.87 | 1098.61 | 312.87 | 1103.38 | 313.03 | 1104.66 | 313.09 |



BSE Document Control Number: 7323HYD101

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1105.24 | 313.09 | 1114.46 | 312.78 | 1117.06 | 312.7 | 1124.96 | 312.43 | 1125.78 | 312.45 |
| 1127.78 | 312.27 | 1135.38 | 311.55 | 1137.03 | 311.32 | 1143.45 | 310.71 | 1143.94 | 310.69 |
| 1145.66 | 310.69 | 1146.88 | 310.67 | 1152.08 | 310.66 | 1154.89 | 310.68 | 1156.7 | 310.68 |
| 1157.17 | 310.72 | 1158.18 | 310.75 | 1159.42 | 310.75 | 1160.94 | 310.73 | 1163.94 | 310.72 |
| 1166.56 | 310.74 | 1168.81 | 310.71 | 1172.15 | 310.44 | 1173.93 | 310.35 | 1174.48 | 310.45 |
| 1175.77 | 310.49 | 1178.55 | 310.5 | 1183.82 | 310.45 | 1189.42 | 310.34 | 1194.23 | 310.26 |
| 1199.29 | 310.16 | 1204.51 | 310.13 | 1204.57 | 310.12 | 1212.05 | 310.09 | 1224.38 | 310.09 |
| 1230.6 | 310.13 | 1233.06 | 310.11 | 1236.15 | 310.1 | 1245.14 | 310.09 | 1249.8 | 310.12 |
| 1251.57 | 310.18 | 1253.27 | 310.22 | 1254.1 | 310.2 | 1259.5 | 310.26 | 1261.48 | 310.34 |
| 1263.25 | 310.39 | 1268.41 | 310.58 | 1270.82 | 310.68 | 1274.22 | 310.66 | 1283.11 | 310.65 |
| 1290.89 | 310.62 | 1294.47 | 310.61 | 1295.23 | 310.6 | 1306.12 | 310.61 | 1309.89 | 310.63 |
| 1311.42 | 310.71 | 1314.1 | 310.77 | 1317.06 | 310.8 | 1318.11 | 310.8 | 1325.2 | 310.76 |
| 1325.44 | 310.75 | 1337.51 | 310.67 | 1341.56 | 310.67 | 1343.56 | 310.63 | 1344.35 | 310.63 |
| 1348.93 | 310.52 | 1352 | 310.47 | 1357.57 | 310.39 | 1358.8 | 310.46 | 1360.34 | 310.59 |
| 1361.63 | 310.68 | 1362.9 | 310.8 | 1364.17 | 310.89 | 1366.44 | 311.16 | 1367.11 | 311.34 |
| 1370.39 | 311.75 | 1371.27 | 311.89 | 1371.85 | 311.92 | 1373.79 | 311.93 | 1374.85 | 311.92 |
| 1376.54 | 311.97 | 1376.79 | 311.96 | 1381.17 | 312.37 | 1381.47 | 312.41 | 1383.01 | 312.79 |
| 1384.75 | 313.08 | 1387.08 | 313.36 | 1389.25 | 313.6 | 1395.05 | 314.33 | 1400.12 | 315.24 |
| 1401.28 | 315.44 | 1402.05 | 315.61 | 1404.62 | 316.13 | 1404.77 | 316.17 | 1407.4 | 317.25 |
| 1409.61 | 318.12 | 1410.8 | 318.55 | 1413.11 | 319.47 | 1414.18 | 319.86 | 1415.63 | 320.43 |
| 1417.26 | 321.02 | 1418.78 | 321.6 | 1420.06 | 322.05 | 1421.15 | 322.48 | 1422.35 | 323.02 |
| 1425.34 | 324.22 | 1425.44 | 324.28 | 1427.65 | 325.29 | 1429.33 | 326.04 | 1430.62 | 326.77 |
| 1431.03 | 326.92 | 1433.81 | 327.74 | 1434.2 | 327.82 | 1440.43 | 329.9 | 1441.76 | 330.32 |
| 1443.05 | 330.76 | 1444.81 | 331.33 | 1446.37 | 331.88 | 1447.17 | 332.2 | 1455.3 | 332.26 |
| 1457.1 | 332.33 | 1459.49 | 332.44 | 1462.02 | 332.49 | 1464.12 | 332.56 | 1468.28 | 332.61 |
| 1476.01 | 332.72 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 284.7 | .04 | 1374.85 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 284.7 | 1374.85 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3039.13*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.65 | 1.02 | 333.66 | 3.07 | 333.61 | 11.82 | 333.53 | 34.15 | 333.01 |
| 36.82 | 332.83 | 41.42 | 332.54 | 46.49 | 332.21 | 47.05 | 332.11 | 51.68 | 331.61 |
| 52.24 | 331.5 | 52.99 | 331.4 | 55.7 | 330.9 | 57.2 | 330.54 | 58.06 | 330.29 |
| 59.81 | 329.72 | 60.44 | 329.4 | 61.58 | 328.89 | 62.9 | 328.21 | 64.7 | 327.32 |
| 65.37 | 327.11 | 67.42 | 326.61 | 67.55 | 326.59 | 68.31 | 326.66 | 69 | 326.51 |
| 70.14 | 326.32 | 71.12 | 326.1 | 72.97 | 325.79 | 74.57 | 325.69 | 75.83 | 325.66 |
| 76.61 | 325.58 | 78.89 | 325.57 | 79.67 | 325.53 | 80.41 | 325.45 | 81.67 | 325.36 |
| 83.99 | 325.07 | 86.08 | 324.6 | 86.33 | 324.58 | 88.23 | 324.06 | 89.77 | 323.6 |
| 91.76 | 323.1 | 93.49 | 322.72 | 97.2 | 321.85 | 99.79 | 321.32 | 104.6 | 320.7 |
| 106.37 | 320.42 | 108.68 | 320.11 | 112.86 | 319.5 | 114.58 | 319.2 | 117.39 | 318.59 |
| 120.77 | 317.94 | 121.77 | 317.73 | 124.3 | 317.15 | 126.57 | 316.65 | 129.74 | 315.92 |
| 131.44 | 315.51 | 133.47 | 315.16 | 139.74 | 314.02 | 141.31 | 313.77 | 143.23 | 313.43 |
| 145.69 | 312.95 | 148.88 | 312.53 | 151.51 | 312.2 | 154.41 | 311.99 | 156.3 | 311.82 |
| 158.04 | 311.73 | 159.93 | 311.59 | 161.09 | 311.49 | 162.03 | 311.43 | 163.66 | 311.3 |
| 165.69 | 311.17 | 167.02 | 311.1 | 170.99 | 310.87 | 173.01 | 310.73 | 174.94 | 310.5 |
| 176.8 | 310.6 | 183.44 | 310.49 | 189.72 | 310.3 | 196.99 | 310.12 | 199.07 | 310.08 |
| 206.65 | 309.97 | 213.22 | 309.86 | 213.8 | 309.87 | 215.98 | 309.86 | 217.59 | 309.83 |
| 219.36 | 309.77 | 223.38 | 309.57 | 227.08 | 309.46 | 230.37 | 309.35 | 231.09 | 309.3 |
| 231.87 | 309.21 | 232.26 | 309.08 | 234.88 | 308.99 | 235.8 | 309.08 | 236.53 | 309.22 |
| 245.59 | 309.52 | 249.23 | 309.66 | 251.7 | 309.74 | 267.71 | 310.18 | 270.89 | 310.24 |
| 279.78 | 310.1 | 281.27 | 310.01 | 286.81 | 309.81 | 289.14 | 309.64 | 290.19 | 309.58 |
| 294.82 | 309.34 | 298.57 | 309.24 | 299.43 | 309.27 | 301.82 | 309 | 304.05 | 308.86 |
| 305.22 | 308.8 | 307.88 | 308.84 | 311.98 | 308.86 | 312.45 | 308.87 | 317.01 | 308.89 |
| 319.83 | 308.96 | 322.33 | 309.1 | 323.36 | 309.19 | 323.82 | 309.32 | 326.51 | 309.33 |
| 327.33 | 309.29 | 328.18 | 309.35 | 330.61 | 309.41 | 332.78 | 309.4 | 333.62 | 309.37 |
| 335.71 | 309.34 | 337.96 | 309.34 | 340.63 | 309.3 | 341.27 | 309.32 | 345.84 | 309.35 |
| 347.1 | 309.39 | 348.38 | 309.39 | 349.95 | 309.41 | 351.23 | 309.41 | 357.33 | 309.37 |
| 363.82 | 309.3 | 364.62 | 309.28 | 368.08 | 309.25 | 368.75 | 309.21 | 370.11 | 309.18 |
| 371.58 | 309.23 | 375.92 | 309.23 | 376.08 | 309.24 | 380.26 | 309.26 | 385.81 | 309.2 |
| 387.09 | 309.21 | 391.51 | 309.13 | 392.52 | 309.19 | 393.09 | 309.2 | 397.56 | 309.2 |
| 400.32 | 309.24 | 401.89 | 309.22 | 405.11 | 309.15 | 405.69 | 309.11 | 412.88 | 309.03 |
| 414.15 | 309.04 | 419.82 | 309.03 | 424.01 | 309 | 424.5 | 308.99 | 437.74 | 308.91 |
| 440.15 | 308.84 | 440.49 | 308.8 | 441.97 | 308.7 | 445.13 | 308.6 | 446.42 | 308.55 |
| 446.62 | 308.52 | 448.27 | 308.46 | 448.96 | 308.49 | 450.19 | 308.62 | 450.85 | 308.79 |
| 451.43 | 308.81 | 455 | 308.8 | 462.56 | 308.94 | 484.36 | 309.36 | 495.25 | 309.6 |
| 503.84 | 309.71 | 505.23 | 309.71 | 507.9 | 309.8 | 510.64 | 309.85 | 512.98 | 309.87 |
| 515.18 | 309.83 | 515.8 | 309.79 | 517.08 | 309.79 | 518.1 | 309.77 | 521.06 | 309.76 |
| 521.98 | 309.74 | 529.97 | 309.82 | 531.2 | 309.88 | 533.33 | 309.87 | 539.12 | 309.92 |
| 542.05 | 309.9 | 546.11 | 309.8 | 546.43 | 309.76 | 547.35 | 309.75 | 551.05 | 309.75 |
| 554.74 | 309.76 | 557.31 | 309.76 | 570.75 | 309.93 | 571.82 | 309.96 | 576.81 | 310.04 |
| 580.26 | 310.06 | 586.46 | 310.12 | 589.45 | 310.09 | 595.27 | 310.04 | 598.58 | 310.04 |
| 602.93 | 310.08 | 609.75 | 310.12 | 611.98 | 310.12 | 612.73 | 310.18 | 615.06 | 310.11 |
| 615.81 | 310.03 | 619.62 | 309.8 | 621.79 | 309.66 | 625.31 | 309.54 | 626.3 | 309.57 |
| 628.28 | 309.73 | 635.94 | 309.73 | 639.79 | 309.66 | 641.38 | 309.61 | 643.81 | 309.56 |
| 644.88 | 309.59 | 649.09 | 309.64 | 650.97 | 309.62 | 651.72 | 309.59 | 652.68 | 309.59 |
| 655.7 | 309.67 | 659.63 | 309.79 | 663.42 | 309.94 | 665.58 | 310.04 | 667.44 | 310.14 |
| 672.9 | 310.41 | 673.25 | 310.41 | 678.24 | 310.52 | 681.62 | 310.6 | 683.41 | 310.61 |
| 695.49 | 310.54 | 696.8 | 310.41 | 698.95 | 310.27 | 702.44 | 310.1 | 703.76 | 310.02 |
| 707.39 | 309.78 | 710.63 | 309.68 | 713.69 | 309.62 | 716.12 | 309.68 | 719.29 | 309.79 |
| 729.76 | 310.08 | 733.58 | 310.14 | 736.57 | 310.2 | 739.75 | 310.34 | 749.69 | 310.67 |
| 753.41 | 310.83 | 755.71 | 310.94 | 757.44 | 310.98 | 763.95 | 311.02 | 771.83 | 311.05 |
| 774.81 | 311.07 | 775.79 | 311 | 779.09 | 310.8 | 784.22 | 310.59 | 785.43 | 310.57 |
| 786.64 | 310.49 | 786.75 | 310.46 | 788.35 | 310.48 | 789.59 | 310.54 | 790.35 | 310.61 |
| 791.78 | 310.61 | 796.43 | 310.67 | 796.71 | 310.66 | 799.78 | 310.67 | 802.97 | 310.65 |
| 805.82 | 310.56 | 807.21 | 310.5 | 808.5 | 310.48 | 813.25 | 310.49 | 814.05 | 310.58 |
| 815.43 | 310.68 | 817.42 | 310.87 | 820.09 | 311.11 | 825.89 | 311.33 | 827.79 | 311.39 |
| 838.71 | 311.54 | 839.94 | 311.58 | 841.82 | 311.61 | 844.11 | 311.68 | 844.77 | 311.65 |
| 847.89 | 311.64 | 848.64 | 311.62 | 852.19 | 311.44 | 854.36 | 311.35 | 857.44 | 311.21 |
| 857.79 | 311.18 | 859.69 | 311.12 | 860.52 | 311.06 | 862.1 | 311.04 | 866.33 | 311.11 |
| 866.53 | 311.12 | 874.73 | 311.23 | 876.9 | 311.25 | 879.02 | 311.17 | 883.78 | 310.95 |
| 885.19 | 310.96 | 888.31 | 310.93 | 890.66 | 310.87 | 900.95 | 310.79 | 911.51 | 310.77 |
| 912.54 | 310.75 | 918.26 | 310.61 | 922.03 | 310.57 | 923.16 | 310.53 | 932.38 | 310.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 936.47 | 310.44 | 939.5 | 310.35 | 939.67 | 310.33 | 941.63 | 310.34 | 942.87 | 310.37 |
| 944.98 | 310.35 | 948.12 | 310.38 | 953.23 | 310.44 | 955.61 | 310.45 | 957.73 | 310.44 |
| 958.97 | 310.45 | 960.5 | 310.44 | 962.09 | 310.45 | 963.64 | 310.51 | 968.79 | 310.59 |
| 972.19 | 310.63 | 974.55 | 310.63 | 982.72 | 310.77 | 986.89 | 310.86 | 991.79 | 310.98 |
| 992.74 | 311.26 | 994.93 | 311.79 | 995.85 | 312.26 | 996.68 | 312.43 | 997.32 | 312.59 |
| 998.84 | 312.65 | 1005.87 | 312.72 | 1009.32 | 312.74 | 1013.07 | 312.8 | 1016.56 | 312.89 |
| 1025.19 | 313.12 | 1027.81 | 313.15 | 1033.34 | 313.27 | 1037.49 | 313.28 | 1038.91 | 313.23 |
| 1040.27 | 313.12 | 1043.92 | 313.01 | 1050.93 | 312.84 | 1052.91 | 312.8 | 1054.96 | 312.83 |
| 1055.8 | 312.87 | 1059.03 | 312.92 | 1062.65 | 313 | 1063.32 | 313 | 1065.59 | 312.95 |
| 1068.58 | 312.85 | 1069.78 | 312.83 | 1074.41 | 312.66 | 1074.89 | 312.63 | 1078.33 | 312.56 |
| 1078.98 | 312.56 | 1080.31 | 312.49 | 1082.04 | 312.47 | 1086.4 | 312.48 | 1089.54 | 312.48 |
| 1091.16 | 312.47 | 1092.71 | 312.44 | 1098.56 | 312.39 | 1100.74 | 312.4 | 1105.5 | 312.55 |
| 1106.77 | 312.61 | 1107.36 | 312.61 | 1116.57 | 312.33 | 1120.59 | 312.23 | 1126.45 | 312.03 |
| 1127.64 | 312.04 | 1129.86 | 311.87 | 1132.49 | 311.64 | 1137.44 | 311.19 | 1139.1 | 310.97 |
| 1145.5 | 310.38 | 1145.99 | 310.36 | 1147.71 | 310.36 | 1148.92 | 310.34 | 1154.12 | 310.32 |
| 1156.92 | 310.35 | 1158.73 | 310.35 | 1159.2 | 310.39 | 1160.21 | 310.42 | 1163.62 | 310.39 |
| 1165.96 | 310.39 | 1168.58 | 310.41 | 1170.82 | 310.39 | 1174.15 | 310.13 | 1175.94 | 310.05 |
| 1176.48 | 310.14 | 1177.76 | 310.18 | 1181.72 | 310.17 | 1185.8 | 310.13 | 1191.39 | 310.02 |
| 1196.19 | 309.94 | 1201.24 | 309.84 | 1206.52 | 309.8 | 1213.98 | 309.77 | 1226.3 | 309.77 |
| 1232.5 | 309.82 | 1235.34 | 309.8 | 1238.05 | 309.79 | 1244.78 | 309.8 | 1251.67 | 309.84 |
| 1253.44 | 309.9 | 1255.14 | 309.94 | 1255.96 | 309.92 | 1260.48 | 309.96 | 1261.36 | 309.96 |
| 1263.33 | 310.03 | 1264.23 | 310.05 | 1270.25 | 310.26 | 1272.65 | 310.35 | 1276.05 | 310.33 |
| 1284.92 | 310.32 | 1296.27 | 310.26 | 1305.71 | 310.26 | 1311.66 | 310.29 | 1313.19 | 310.36 |
| 1315.62 | 310.42 | 1318.82 | 310.46 | 1319.87 | 310.46 | 1327.19 | 310.42 | 1334.78 | 310.35 |
| 1339.24 | 310.33 | 1342.21 | 310.33 | 1343.12 | 310.34 | 1345.27 | 310.3 | 1346.06 | 310.3 |
| 1350.63 | 310.2 | 1353.7 | 310.15 | 1359.26 | 310.1 | 1359.66 | 310.15 | 1361.01 | 310.25 |
| 1363.32 | 310.48 | 1364.25 | 310.6 | 1365.59 | 310.74 | 1366.72 | 310.89 | 1368.11 | 311.11 |
| 1368.78 | 311.31 | 1372.06 | 311.85 | 1372.6 | 311.98 | 1373.51 | 312.07 | 1374.36 | 312.09 |
| 1376.51 | 312.1 | 1378.23 | 312.18 | 1378.49 | 312.17 | 1381.37 | 312.46 | 1383.25 | 312.67 |
| 1384.83 | 313.05 | 1386.6 | 313.35 | 1388.97 | 313.64 | 1391.18 | 313.89 | 1395.02 | 314.38 |
| 1397.09 | 314.66 | 1402.26 | 315.6 | 1403.43 | 315.8 | 1404.22 | 315.97 | 1406.84 | 316.48 |
| 1409.67 | 317.56 | 1411.93 | 318.4 | 1413.14 | 318.81 | 1415.48 | 319.7 | 1416.58 | 320.07 |
| 1418.05 | 320.63 | 1419.71 | 321.19 | 1421.27 | 321.76 | 1422.57 | 322.19 | 1423.68 | 322.61 |
| 1424.9 | 323.12 | 1427.94 | 324.29 | 1429.41 | 324.94 | 1432.01 | 326.05 | 1433.21 | 326.69 |
| 1433.75 | 326.9 | 1436.58 | 327.69 | 1436.98 | 327.77 | 1443.32 | 329.79 | 1445.14 | 330.34 |
| 1445.99 | 330.62 | 1447.79 | 331.17 | 1449.37 | 331.69 | 1450.19 | 332 | 1454.13 | 332.04 |
| 1458.47 | 332.07 | 1462.75 | 332.25 | 1465.32 | 332.3 | 1467.46 | 332.37 | 1471.7 | 332.42 |
| 1479.57 | 332.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 279.78 | .04 | 1376.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 279.78 | 1376.51 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 3019.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.41 | 1.92 | 333.4 | 3.02 | 333.37 | 11.61 | 333.3 | 33.54 | 332.81 |
| 36.17 | 332.64 | 40.69 | 332.37 | 45.67 | 332.06 | 46.22 | 331.96 | 50.77 | 331.48 |
| 52.05 | 331.28 | 54.72 | 330.8 | 56.19 | 330.45 | 57.04 | 330.21 | 58.75 | 329.66 |
| 60.5 | 328.86 | 61.79 | 328.21 | 63.78 | 327.28 | 65.75 | 326.79 | 66.36 | 326.67 |
| 67.11 | 326.73 | 67.78 | 326.58 | 68.9 | 326.38 | 69.87 | 326.16 | 71.74 | 325.84 |
| 73.26 | 325.74 | 74.49 | 325.72 | 75.26 | 325.66 | 77.5 | 325.67 | 79 | 325.56 |
| 80.24 | 325.49 | 82.51 | 325.21 | 84.56 | 324.76 | 84.81 | 324.74 | 86.67 | 324.24 |
| 88.19 | 323.8 | 90.15 | 323.32 | 91.85 | 322.95 | 95.49 | 322.1 | 98.03 | 321.58 |
| 102.75 | 320.97 | 104.5 | 320.71 | 106.77 | 320.4 | 110.87 | 319.8 | 112.56 | 319.51 |
| 115.32 | 318.91 | 118.64 | 318.27 | 119.62 | 318.06 | 122.12 | 317.48 | 124.34 | 316.98 |
| 127.46 | 316.23 | 129.13 | 315.81 | 131.12 | 315.45 | 134.58 | 314.79 | 136.05 | 314.49 |
| 137.28 | 314.26 | 138.82 | 314 | 140.71 | 313.65 | 142.83 | 313.19 | 143.12 | 313.14 |
| 146.26 | 312.69 | 148.84 | 312.35 | 151.69 | 312.15 | 153.54 | 311.98 | 155.26 | 311.89 |
| 157.12 | 311.76 | 158.26 | 311.64 | 159.17 | 311.59 | 160.78 | 311.44 | 162.77 | 311.32 |
| 167.98 | 311.03 | 169.97 | 310.88 | 171.87 | 310.64 | 173.69 | 310.72 | 174.17 | 310.7 |
| 180.21 | 310.56 | 186.38 | 310.33 | 192.37 | 310.15 | 193.38 | 310.11 | 195.56 | 310.06 |
| 203.01 | 309.92 | 208.17 | 309.81 | 212.18 | 309.77 | 213.76 | 309.74 | 215.5 | 309.67 |
| 219.45 | 309.47 | 223.08 | 309.35 | 226.31 | 309.22 | 227.03 | 309.17 | 227.79 | 309.08 |
| 228.17 | 308.95 | 230.75 | 308.86 | 231.65 | 308.94 | 232.37 | 309.07 | 234.4 | 309.13 |
| 241.27 | 309.31 | 247.27 | 309.49 | 252.29 | 309.6 | 263 | 309.84 | 266.12 | 309.89 |
| 274.85 | 309.72 | 275.29 | 309.67 | 276.42 | 309.63 | 281.93 | 309.47 | 284.67 | 309.29 |
| 285.77 | 309.23 | 290.63 | 309.01 | 294.56 | 308.92 | 295.46 | 308.95 | 297.96 | 308.7 |
| 301.53 | 308.5 | 302.74 | 308.5 | 304.31 | 308.53 | 308.62 | 308.54 | 309.11 | 308.55 |
| 313.89 | 308.55 | 316.85 | 308.62 | 318.15 | 308.67 | 320.54 | 308.83 | 321.03 | 308.95 |
| 323.24 | 308.96 | 324.71 | 308.91 | 325.6 | 308.98 | 326.78 | 309 | 328.15 | 309.05 |
| 330.42 | 309.03 | 331.31 | 309 | 333.5 | 308.97 | 334.96 | 308.97 | 337.69 | 308.94 |
| 338.65 | 308.91 | 339.32 | 308.93 | 342.49 | 308.97 | 343.55 | 308.97 | 345.44 | 309.02 |
| 346.78 | 309.02 | 348.43 | 309.05 | 356.16 | 309 | 360.08 | 308.95 | 362.97 | 308.93 |
| 363.81 | 308.91 | 367.23 | 308.88 | 368.14 | 308.83 | 369.57 | 308.8 | 371.11 | 308.86 |
| 373.33 | 308.86 | 380.21 | 308.91 | 386.02 | 308.86 | 387.36 | 308.87 | 391.43 | 308.77 |
| 393.65 | 308.86 | 398.35 | 308.87 | 401.24 | 308.9 | 404.98 | 308.85 | 406.26 | 308.82 |
| 406.86 | 308.78 | 414.41 | 308.68 | 415.24 | 308.7 | 421.68 | 308.69 | 426.08 | 308.67 |
| 426.59 | 308.66 | 440.47 | 308.58 | 442.91 | 308.52 | 443.36 | 308.47 | 444.91 | 308.37 |
| 448.21 | 308.25 | 449.57 | 308.19 | 449.78 | 308.16 | 451.51 | 308.1 | 452.2 | 308.13 |
| 453.43 | 308.25 | 454.08 | 308.42 | 454.67 | 308.44 | 458.23 | 308.43 | 463.56 | 308.52 |
| 465.77 | 308.57 | 487.54 | 308.99 | 498.41 | 309.24 | 506.98 | 309.34 | 508.38 | 309.35 |
| 511.04 | 309.43 | 513.77 | 309.48 | 516.11 | 309.49 | 518.3 | 309.46 | 518.93 | 309.42 |
| 521.23 | 309.4 | 525.09 | 309.38 | 531.15 | 309.43 | 533.07 | 309.46 | 534.88 | 309.52 |
| 536.43 | 309.5 | 542.21 | 309.55 | 545.13 | 309.53 | 549.18 | 309.43 | 549.51 | 309.39 |
| 550.43 | 309.38 | 554.12 | 309.38 | 560.36 | 309.39 | 573.78 | 309.55 | 574.85 | 309.58 |
| 579.83 | 309.66 | 583.27 | 309.67 | 589.47 | 309.71 | 598.26 | 309.63 | 601.56 | 309.64 |
| 603.49 | 309.67 | 612.72 | 309.74 | 614.95 | 309.74 | 615.85 | 309.79 | 617.18 | 309.77 |
| 618.01 | 309.73 | 618.76 | 309.65 | 622.57 | 309.42 | 624.74 | 309.3 | 628.25 | 309.18 |
| 629.24 | 309.21 | 631.07 | 309.37 | 638.86 | 309.38 | 640.76 | 309.36 | 643.43 | 309.31 |
| 646.24 | 309.23 | 651.99 | 309.3 | 653.87 | 309.28 | 654.98 | 309.25 | 658.59 | 309.33 |
| 659.33 | 309.36 | 662.51 | 309.44 | 666.29 | 309.58 | 668.45 | 309.67 | 670.31 | 309.78 |
| 673.96 | 309.96 | 675.75 | 310.04 | 676.11 | 310.04 | 681.09 | 310.15 | 684.46 | 310.24 |
| 686.25 | 310.24 | 698.31 | 310.18 | 699.62 | 310.05 | 701.77 | 309.92 | 702.9 | 309.88 |
| 705.25 | 309.77 | 710.19 | 309.44 | 711.43 | 309.39 | 714.1 | 309.31 | 716.47 | 309.27 |
| 718.91 | 309.33 | 721.16 | 309.42 | 724.91 | 309.52 | 731.35 | 309.71 | 734.21 | 309.76 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 735.57 | 309.77 | 737.51 | 309.82 | 739.32 | 309.84 | 742.49 | 309.97 | 752.42 | 310.27 |
| 758.43 | 310.53 | 759.58 | 310.57 | 766.65 | 310.63 | 774.52 | 310.66 | 777.49 | 310.69 |
| 778.47 | 310.62 | 781.77 | 310.43 | 786.89 | 310.23 | 787.87 | 310.22 | 789.41 | 310.11 |
| 791.01 | 310.12 | 792.25 | 310.18 | 793 | 310.25 | 794.43 | 310.25 | 799.08 | 310.31 |
| 799.36 | 310.3 | 802.42 | 310.31 | 805.61 | 310.3 | 807.57 | 310.24 | 809.48 | 310.16 |
| 811.13 | 310.12 | 811.67 | 310.13 | 815.87 | 310.14 | 816.67 | 310.23 | 818.05 | 310.32 |
| 820.03 | 310.51 | 822.7 | 310.73 | 828.48 | 310.94 | 830.38 | 311 | 841.28 | 311.13 |
| 844.39 | 311.2 | 846.52 | 311.26 | 847.34 | 311.24 | 850.45 | 311.23 | 851.2 | 311.21 |
| 854.74 | 311.03 | 856.91 | 310.94 | 860.34 | 310.78 | 862.23 | 310.72 | 863.06 | 310.66 |
| 864.63 | 310.64 | 869.76 | 310.72 | 877.25 | 310.81 | 879.41 | 310.83 | 881.52 | 310.75 |
| 885.24 | 310.58 | 886.28 | 310.54 | 888.61 | 310.55 | 890.15 | 310.54 | 893.15 | 310.47 |
| 900.7 | 310.42 | 903.42 | 310.41 | 913.96 | 310.39 | 920.7 | 310.23 | 924.46 | 310.19 |
| 925.59 | 310.15 | 934.79 | 310.02 | 938.88 | 310.05 | 940.39 | 310.01 | 942.07 | 309.94 |
| 944.03 | 309.95 | 945.27 | 309.98 | 947.38 | 309.96 | 950.5 | 310 | 956.82 | 310.06 |
| 960.1 | 310.05 | 961.34 | 310.06 | 962.87 | 310.05 | 964.46 | 310.06 | 966 | 310.13 |
| 971.15 | 310.22 | 973.23 | 310.25 | 978.52 | 310.28 | 979.91 | 310.31 | 985.05 | 310.38 |
| 989.21 | 310.46 | 994.11 | 310.58 | 995.06 | 310.84 | 997.23 | 311.35 | 998.16 | 311.79 |
| 999.62 | 312.11 | 1001.14 | 312.16 | 1008.16 | 312.21 | 1011.61 | 312.21 | 1015.35 | 312.27 |
| 1018.83 | 312.35 | 1027.45 | 312.59 | 1028.47 | 312.61 | 1030.07 | 312.61 | 1035.58 | 312.72 |
| 1039.73 | 312.73 | 1041.15 | 312.69 | 1042.5 | 312.59 | 1046.15 | 312.49 | 1053.14 | 312.34 |
| 1055.12 | 312.31 | 1057.17 | 312.35 | 1058 | 312.38 | 1061.23 | 312.44 | 1061.75 | 312.43 |
| 1062.93 | 312.48 | 1065.52 | 312.51 | 1067.78 | 312.46 | 1069.55 | 312.4 | 1071.97 | 312.34 |
| 1073.41 | 312.29 | 1077.06 | 312.14 | 1081.15 | 312.07 | 1083.36 | 312 | 1091.69 | 312.02 |
| 1094.86 | 311.97 | 1098.11 | 311.93 | 1099.93 | 311.92 | 1102.86 | 311.92 | 1107.63 | 312.08 |
| 1108.89 | 312.14 | 1109.47 | 312.14 | 1118.67 | 311.89 | 1122.69 | 311.8 | 1128.53 | 311.62 |
| 1129.95 | 311.62 | 1134.56 | 311.26 | 1137.32 | 311.02 | 1139.51 | 310.82 | 1141.16 | 310.61 |
| 1147.56 | 310.05 | 1150.97 | 310.01 | 1156.16 | 309.98 | 1158.95 | 310.02 | 1160.76 | 310.02 |
| 1162.24 | 310.08 | 1164.99 | 310.06 | 1167.3 | 310.07 | 1167.98 | 310.06 | 1170.59 | 310.08 |
| 1172.83 | 310.07 | 1175.56 | 309.86 | 1177.94 | 309.74 | 1178.48 | 309.83 | 1179.76 | 309.87 |
| 1181.57 | 309.85 | 1183.71 | 309.85 | 1187.79 | 309.81 | 1191.77 | 309.74 | 1193.37 | 309.7 |
| 1198.16 | 309.63 | 1203.2 | 309.53 | 1208.4 | 309.48 | 1215.92 | 309.45 | 1228.21 | 309.45 |
| 1234.41 | 309.5 | 1237.24 | 309.49 | 1239.94 | 309.49 | 1248.9 | 309.52 | 1253.54 | 309.56 |
| 1255.3 | 309.62 | 1257.01 | 309.65 | 1257.83 | 309.63 | 1263.61 | 309.67 | 1265.86 | 309.75 |
| 1266.94 | 309.77 | 1272.09 | 309.93 | 1274.49 | 310.02 | 1277.88 | 310 | 1286.74 | 309.98 |
| 1298.07 | 309.92 | 1298.82 | 309.91 | 1307.49 | 309.91 | 1309.67 | 309.92 | 1313.43 | 309.95 |
| 1314.95 | 310.02 | 1317.38 | 310.08 | 1320.57 | 310.12 | 1321.63 | 310.12 | 1328.93 | 310.08 |
| 1336.51 | 310.01 | 1340.96 | 309.99 | 1345 | 310 | 1346.99 | 309.97 | 1347.6 | 309.98 |
| 1352.34 | 309.88 | 1355.4 | 309.84 | 1360.95 | 309.8 | 1361.34 | 309.87 | 1362.7 | 310 |
| 1363.7 | 310.14 | 1365 | 310.29 | 1365.93 | 310.43 | 1367.52 | 310.63 | 1369.78 | 311.06 |
| 1370.46 | 311.28 | 1372.87 | 311.79 | 1373.72 | 311.95 | 1374.61 | 312.18 | 1376.02 | 312.25 |
| 1378.17 | 312.28 | 1379.92 | 312.38 | 1380.19 | 312.38 | 1384.73 | 312.88 | 1386.64 | 313.31 |
| 1388.45 | 313.62 | 1393.11 | 314.19 | 1397.02 | 314.7 | 1399.13 | 315 | 1404.39 | 315.95 |
| 1405.59 | 316.16 | 1406.39 | 316.33 | 1409.21 | 316.87 | 1409.85 | 317.12 | 1411.94 | 317.88 |
| 1414.24 | 318.68 | 1416.52 | 319.44 | 1417.86 | 319.93 | 1418.97 | 320.29 | 1420.48 | 320.82 |
| 1422.17 | 321.37 | 1423.75 | 321.91 | 1425.08 | 322.32 | 1426.21 | 322.73 | 1427.46 | 323.23 |
| 1430.55 | 324.36 | 1432.05 | 325 | 1434.69 | 326.06 | 1435.92 | 326.68 | 1436.47 | 326.88 |
| 1439.35 | 327.65 | 1439.75 | 327.73 | 1445.28 | 329.4 | 1446.99 | 329.91 | 1447.6 | 330.07 |
| 1448.93 | 330.48 | 1450.76 | 331 | 1452.38 | 331.5 | 1453.21 | 331.8 | 1457.23 | 331.85 |
| 1461.64 | 331.88 | 1466 | 332.06 | 1468.62 | 332.12 | 1470.8 | 332.19 | 1475.11 | 332.23 |
| 1483.13 | 332.33 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 274.85 | .04 | 1378.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 274.85 | 1378.17 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2999.45*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.17 | 1.89 | 333.16 | 2.96 | 333.13 | 11.4 | 333.07 | 32.94 | 332.61 |
| 39.96 | 332.2 | 44.85 | 331.9 | 45.39 | 331.8 | 47.15 | 331.63 | 49.86 | 331.35 |
| 51.12 | 331.16 | 53.74 | 330.71 | 56.02 | 330.13 | 57.7 | 329.6 | 59.41 | 328.84 |
| 60.87 | 328.13 | 62.64 | 327.33 | 65.04 | 326.75 | 65.9 | 326.79 | 67.67 | 326.45 |
| 68.62 | 326.23 | 70.45 | 325.9 | 71.95 | 325.78 | 73.16 | 325.78 | 73.91 | 325.73 |
| 76.11 | 325.77 | 78.8 | 325.62 | 80.9 | 325.37 | 82.32 | 325.09 | 83.05 | 324.92 |
| 83.29 | 324.91 | 85.12 | 324.42 | 86.61 | 324 | 88.53 | 323.53 | 90.2 | 323.17 |
| 93.78 | 322.35 | 96.28 | 321.85 | 100.91 | 321.25 | 102.62 | 320.99 | 104.85 | 320.69 |
| 108.89 | 320.1 | 110.54 | 319.81 | 112.96 | 319.29 | 116.52 | 318.6 | 117.48 | 318.4 |
| 119.93 | 317.81 | 122.12 | 317.3 | 125.18 | 316.55 | 126.82 | 316.11 | 128.77 | 315.74 |
| 132.17 | 315.05 | 133.61 | 314.74 | 134.82 | 314.5 | 136.33 | 314.23 | 138.19 | 313.87 |
| 140.27 | 313.38 | 143.64 | 312.86 | 146.18 | 312.5 | 148.98 | 312.31 | 150.79 | 312.15 |
| 152.48 | 312.06 | 154.3 | 311.92 | 155.42 | 311.8 | 156.32 | 311.74 | 157.9 | 311.59 |
| 159.86 | 311.46 | 161.14 | 311.4 | 164.97 | 311.18 | 166.92 | 311.03 | 168.79 | 310.78 |
| 170.58 | 310.84 | 171.05 | 310.82 | 176.86 | 310.63 | 176.98 | 310.62 | 183.05 | 310.36 |
| 188.92 | 310.16 | 189.92 | 310.11 | 192.06 | 310.05 | 199.38 | 309.88 | 204.44 | 309.74 |
| 208.38 | 309.68 | 209.93 | 309.64 | 211.63 | 309.57 | 215.52 | 309.36 | 219.09 | 309.23 |
| 222.26 | 309.09 | 222.96 | 309.04 | 223.71 | 308.95 | 224.08 | 308.83 | 226.61 | 308.72 |
| 227.5 | 308.79 | 228.21 | 308.91 | 230.2 | 308.96 | 236.95 | 309.09 | 242.84 | 309.24 |
| 247.77 | 309.32 | 258.29 | 309.5 | 261.36 | 309.54 | 269.93 | 309.34 | 270.39 | 309.29 |
| 271.57 | 309.24 | 277.33 | 309.11 | 280.2 | 308.93 | 286.43 | 308.67 | 289.51 | 308.61 |
| 290.54 | 308.6 | 291.49 | 308.63 | 294.11 | 308.39 | 297.84 | 308.2 | 300.75 | 308.22 |
| 305.25 | 308.21 | 305.77 | 308.22 | 310.77 | 308.21 | 313.87 | 308.27 | 315.23 | 308.32 |
| 316.6 | 308.39 | 317.73 | 308.47 | 318.24 | 308.59 | 320.55 | 308.59 | 322.09 | 308.53 |
| 323.02 | 308.61 | 324.25 | 308.63 | 325.69 | 308.68 | 328.07 | 308.66 | 328.99 | 308.63 |
| 331.29 | 308.59 | 333.75 | 308.58 | 336.67 | 308.53 | 337.38 | 308.55 | 342.39 | 308.61 |
| 343.77 | 308.65 | 345.18 | 308.65 | 346.91 | 308.69 | 351.8 | 308.66 | 353.86 | 308.63 |
| 355 | 308.63 | 362.99 | 308.53 | 366.58 | 308.51 | 367.53 | 308.45 | 369.02 | 308.42 |
| 370.63 | 308.49 | 374.72 | 308.51 | 380.15 | 308.57 | 386.23 | 308.52 | 387.64 | 308.52 |
| 391.09 | 308.44 | 391.9 | 308.41 | 394.22 | 308.52 | 399.13 | 308.53 | 402.16 | 308.57 |
| 406.07 | 308.52 | 407.41 | 308.48 | 408.04 | 308.44 | 415.93 | 308.34 | 417.33 | 308.35 |
| 423.54 | 308.36 | 443.2 | 308.25 | 445.84 | 308.19 | 446.22 | 308.14 | 447.84 | 308.03 |
| 452.72 | 307.84 | 452.94 | 307.8 | 454.75 | 307.74 | 455.44 | 307.77 | 456.66 | 307.89 |
| 457.32 | 308.04 | 457.9 | 308.06 | 461.46 | 308.06 | 468.99 | 308.19 | 490.71 | 308.62 |
| 501.57 | 308.87 | 503.33 | 308.9 | 510.13 | 308.97 | 511.52 | 308.98 | 514.18 | 309.06 |
| 515.6 | 309.09 | 519.24 | 309.12 | 521.43 | 309.09 | 522.05 | 309.05 | 524.35 | 309.02 |
| 527.29 | 309.02 | 528.21 | 309.01 | 534.26 | 309.06 | 536.17 | 309.09 | 537.4 | 309.15 |
| 539.52 | 309.14 | 545.29 | 309.19 | 548.21 | 309.15 | 552.25 | 309.06 | 552.58 | 309.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 553.5 | 309.01 | 557.18 | 309.01 | 560.86 | 309.03 | 563.42 | 309.02 | 576.81 | 309.17 |
| 577.88 | 309.2 | 582.85 | 309.28 | 586.29 | 309.27 | 592.47 | 309.31 | 595.45 | 309.27 |
| 601.25 | 309.23 | 603.79 | 309.23 | 606.47 | 309.28 | 608.88 | 309.31 | 615.68 | 309.36 |
| 617.91 | 309.37 | 618.65 | 309.42 | 620.13 | 309.39 | 620.97 | 309.35 | 621.72 | 309.27 |
| 627.68 | 308.93 | 631.19 | 308.83 | 632.18 | 308.86 | 634.14 | 309.02 | 641.78 | 309.04 |
| 645.62 | 308.99 | 649.15 | 308.89 | 654.88 | 308.96 | 658.46 | 308.92 | 661.48 | 308.99 |
| 662.22 | 309.02 | 665.39 | 309.08 | 669.17 | 309.21 | 671.32 | 309.31 | 673.18 | 309.42 |
| 676.82 | 309.6 | 678.97 | 309.67 | 683.93 | 309.78 | 687.31 | 309.87 | 689.09 | 309.88 |
| 701.13 | 309.83 | 702.44 | 309.7 | 704.58 | 309.58 | 708.06 | 309.43 | 712.43 | 309.14 |
| 712.99 | 309.09 | 714.23 | 309.04 | 716.89 | 308.96 | 718.55 | 308.94 | 719.26 | 308.91 |
| 721.69 | 308.98 | 723.94 | 309.07 | 727.68 | 309.18 | 734.11 | 309.36 | 736.97 | 309.41 |
| 739.08 | 309.43 | 740.26 | 309.46 | 742.07 | 309.48 | 745.23 | 309.61 | 755.15 | 309.88 |
| 758.85 | 310.02 | 761.14 | 310.13 | 762.29 | 310.16 | 764.36 | 310.19 | 780.18 | 310.3 |
| 781.15 | 310.23 | 784.45 | 310.06 | 789.55 | 309.87 | 790.76 | 309.85 | 792.07 | 309.75 |
| 793.68 | 309.77 | 794.91 | 309.82 | 795.66 | 309.88 | 797.09 | 309.89 | 801.73 | 309.95 |
| 802.01 | 309.94 | 805.07 | 309.95 | 808.24 | 309.94 | 811.17 | 309.85 | 812.1 | 309.81 |
| 813.76 | 309.77 | 814.3 | 309.78 | 818.49 | 309.79 | 819.11 | 309.86 | 820.66 | 309.97 |
| 825.31 | 310.36 | 831.08 | 310.55 | 832.98 | 310.6 | 843.86 | 310.72 | 846.96 | 310.78 |
| 849.08 | 310.84 | 849.9 | 310.82 | 853.01 | 310.81 | 853.76 | 310.79 | 856.42 | 310.67 |
| 857.29 | 310.62 | 862.52 | 310.4 | 865.04 | 310.3 | 865.84 | 310.25 | 867.17 | 310.24 |
| 868.54 | 310.25 | 872.29 | 310.31 | 877.39 | 310.37 | 881.92 | 310.41 | 884.03 | 310.34 |
| 886.7 | 310.21 | 888.78 | 310.13 | 890.18 | 310.15 | 892.64 | 310.14 | 895.63 | 310.07 |
| 905.89 | 310.03 | 916.41 | 310.01 | 919.78 | 309.93 | 922.22 | 309.88 | 923.14 | 309.85 |
| 926.89 | 309.81 | 928.02 | 309.77 | 937.21 | 309.64 | 941.29 | 309.66 | 944.47 | 309.56 |
| 946.43 | 309.57 | 947.66 | 309.6 | 950.78 | 309.58 | 952.89 | 309.61 | 957.99 | 309.67 |
| 960.37 | 309.68 | 962.47 | 309.66 | 963.71 | 309.67 | 965.23 | 309.66 | 966.82 | 309.67 |
| 968.36 | 309.75 | 973.5 | 309.85 | 976.88 | 309.9 | 980.86 | 309.91 | 987.38 | 310 |
| 991.54 | 310.07 | 996.42 | 310.18 | 997.37 | 310.43 | 999.54 | 310.91 | 1000.46 | 311.33 |
| 1000.71 | 311.4 | 1001.93 | 311.62 | 1003.45 | 311.67 | 1010.45 | 311.7 | 1013.89 | 311.69 |
| 1017.62 | 311.74 | 1021.11 | 311.82 | 1029.71 | 312.05 | 1030.73 | 312.07 | 1032.32 | 312.07 |
| 1037.83 | 312.17 | 1039.33 | 312.17 | 1041.97 | 312.19 | 1043.38 | 312.15 | 1044.73 | 312.05 |
| 1047.73 | 311.98 | 1055.36 | 311.84 | 1057.33 | 311.81 | 1060.21 | 311.89 | 1062.76 | 311.94 |
| 1063.95 | 311.95 | 1065.12 | 312 | 1067.04 | 312.02 | 1069.97 | 311.97 | 1071.74 | 311.91 |
| 1074.15 | 311.86 | 1075.58 | 311.81 | 1079.79 | 311.63 | 1082.66 | 311.59 | 1083.32 | 311.59 |
| 1085.53 | 311.52 | 1086.36 | 311.53 | 1092.38 | 311.56 | 1093.84 | 311.56 | 1100.24 | 311.46 |
| 1102.06 | 311.44 | 1104.99 | 311.45 | 1109.75 | 311.6 | 1111.59 | 311.67 | 1120.77 | 311.44 |
| 1123.35 | 311.4 | 1125.64 | 311.35 | 1130.62 | 311.21 | 1131.8 | 311.22 | 1134.02 | 311.07 |
| 1136.64 | 310.87 | 1139.39 | 310.65 | 1141.58 | 310.46 | 1143.23 | 310.26 | 1149.61 | 309.73 |
| 1150.09 | 309.71 | 1153.02 | 309.68 | 1158.2 | 309.65 | 1160.99 | 309.7 | 1162.79 | 309.7 |
| 1164.26 | 309.75 | 1167.01 | 309.72 | 1169.32 | 309.74 | 1170 | 309.73 | 1172.6 | 309.76 |
| 1174.84 | 309.75 | 1177.48 | 309.56 | 1179.94 | 309.44 | 1180.48 | 309.52 | 1181.76 | 309.56 |
| 1185.7 | 309.53 | 1189.77 | 309.49 | 1193.75 | 309.42 | 1195.34 | 309.38 | 1200.13 | 309.31 |
| 1205.16 | 309.21 | 1206.56 | 309.2 | 1210.35 | 309.15 | 1217.85 | 309.12 | 1230.13 | 309.12 |
| 1236.31 | 309.19 | 1239.14 | 309.18 | 1248.55 | 309.22 | 1250.3 | 309.24 | 1250.78 | 309.23 |
| 1255.41 | 309.28 | 1255.75 | 309.3 | 1258.87 | 309.37 | 1259.69 | 309.35 | 1265.74 | 309.38 |
| 1267.04 | 309.43 | 1268.79 | 309.46 | 1276.32 | 309.68 | 1279.71 | 309.66 | 1288.56 | 309.65 |
| 1297.56 | 309.58 | 1300.62 | 309.56 | 1309.27 | 309.56 | 1315.2 | 309.61 | 1316.72 | 309.67 |
| 1319.14 | 309.74 | 1322.33 | 309.78 | 1323.38 | 309.78 | 1330.67 | 309.74 | 1338.24 | 309.67 |
| 1342.68 | 309.65 | 1344.17 | 309.65 | 1346.71 | 309.67 | 1347.76 | 309.65 | 1351.32 | 309.62 |
| 1354.04 | 309.56 | 1357.1 | 309.53 | 1362.64 | 309.51 | 1366.68 | 310.09 | 1367.61 | 310.26 |
| 1369.2 | 310.5 | 1371.46 | 311.01 | 1372.13 | 311.26 | 1374.84 | 311.93 | 1375.39 | 312.05 |
| 1376.27 | 312.32 | 1376.84 | 312.37 | 1378.77 | 312.44 | 1379.83 | 312.46 | 1381.78 | 312.59 |
| 1381.88 | 312.58 | 1385.71 | 313.04 | 1386.82 | 313.18 | 1387.41 | 313.34 | 1388.45 | 313.57 |
| 1390.29 | 313.89 | 1395.04 | 314.48 | 1399.02 | 315.01 | 1401.17 | 315.33 | 1402.34 | 315.55 |
| 1406.53 | 316.31 | 1407.75 | 316.52 | 1408.56 | 316.69 | 1411.44 | 317.22 | 1411.95 | 317.42 |
| 1414.21 | 318.19 | 1416.55 | 318.95 | 1417.81 | 319.34 | 1420.24 | 320.15 | 1421.37 | 320.5 |
| 1422.9 | 321.02 | 1424.63 | 321.54 | 1426.24 | 322.06 | 1427.59 | 322.46 | 1428.74 | 322.85 |
| 1430.01 | 323.33 | 1433.16 | 324.43 | 1434.69 | 325.05 | 1437.38 | 326.07 | 1438.75 | 326.72 |
| 1439.18 | 326.85 | 1442.12 | 327.61 | 1442.53 | 327.68 | 1448.16 | 329.31 | 1451.87 | 330.33 |
| 1453.74 | 330.83 | 1455.38 | 331.31 | 1456.23 | 331.6 | 1460.32 | 331.66 | 1464.82 | 331.69 |
| 1469.25 | 331.87 | 1471.92 | 331.93 | 1473.34 | 331.99 | 1475.03 | 332.02 | 1478.53 | 332.03 |
| 1486.69 | 332.13 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 269.93 | .04 | 1379.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 269.93 | 1379.83 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2979.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.93 | .97 | 332.93 | 2.91 | 332.9 | 11.2 | 332.84 | 32.34 | 332.41 |
| 34.87 | 332.27 | 44.03 | 331.74 | 44.57 | 331.65 | 46.29 | 331.49 | 48.95 | 331.22 |
| 50.19 | 331.04 | 52.75 | 330.61 | 54.99 | 330.05 | 56.65 | 329.55 | 57.25 | 329.27 |
| 58.33 | 328.82 | 59.57 | 328.22 | 61.5 | 327.38 | 63.86 | 326.82 | 64.7 | 326.86 |
| 65.35 | 326.71 | 66.43 | 326.51 | 67.37 | 326.29 | 69.17 | 325.96 | 70.64 | 325.82 |
| 71.82 | 325.85 | 72.56 | 325.81 | 74.72 | 325.86 | 77.36 | 325.74 | 79.55 | 325.5 |
| 81.53 | 325.09 | 81.77 | 325.07 | 83.57 | 324.61 | 85.03 | 324.2 | 86.92 | 323.75 |
| 88.56 | 323.4 | 92.06 | 322.61 | 94.52 | 322.11 | 99.07 | 321.53 | 100.75 | 321.28 |
| 102.94 | 320.98 | 106.9 | 320.4 | 108.53 | 320.11 | 111.19 | 319.55 | 114.39 | 318.93 |
| 115.34 | 318.73 | 117.74 | 318.13 | 119.89 | 317.62 | 122.89 | 316.86 | 124.5 | 316.42 |
| 126.43 | 316.02 | 129.76 | 315.31 | 132.36 | 314.73 | 133.85 | 314.46 | 135.67 | 314.09 |
| 137.71 | 313.57 | 138 | 313.51 | 141.02 | 313.02 | 143.51 | 312.65 | 146.26 | 312.47 |
| 148.04 | 312.31 | 149.7 | 312.23 | 151.49 | 312.08 | 152.58 | 311.95 | 153.47 | 311.89 |
| 155.02 | 311.74 | 156.94 | 311.61 | 158.2 | 311.55 | 161.96 | 311.33 | 163.64 | 311.2 |
| 165.71 | 310.93 | 167.47 | 310.96 | 167.93 | 310.93 | 173.76 | 310.69 | 179.71 | 310.4 |
| 185.48 | 310.16 | 186.45 | 310.11 | 188.56 | 310.03 | 195.74 | 309.83 | 201.96 | 309.63 |
| 204.58 | 309.59 | 206.1 | 309.55 | 207.77 | 309.47 | 211.59 | 309.25 | 215.09 | 309.11 |
| 218.2 | 308.97 | 219.63 | 308.82 | 220 | 308.7 | 222.48 | 308.58 | 223.35 | 308.65 |
| 224.05 | 308.76 | 232.63 | 308.88 | 238.41 | 308.99 | 243.25 | 309.04 | 253.58 | 309.17 |
| 256.59 | 309.19 | 265.01 | 308.96 | 265.48 | 308.91 | 266.71 | 308.86 | 273.06 | 308.74 |
| 275.73 | 308.58 | 276.93 | 308.53 | 282.24 | 308.34 | 286.53 | 308.28 | 287.51 | 308.31 |
| 290.25 | 308.09 | 294.15 | 307.9 | 297.32 | 307.91 | 301.89 | 307.89 | 302.42 | 307.9 |
| 308.34 | 307.87 | 310.88 | 307.92 | 313.74 | 308.03 | 314.92 | 308.11 | 315.45 | 308.22 |
| 318.53 | 308.21 | 319.47 | 308.15 | 320.44 | 308.24 | 321.73 | 308.26 | 323.23 | 308.32 |
| 325.71 | 308.29 | 326.68 | 308.25 | 329.07 | 308.21 | 330.67 | 308.21 | 333.65 | 308.17 |
| 334.7 | 308.14 | 335.43 | 308.17 | 340.67 | 308.23 | 342.11 | 308.28 | 343.58 | 308.28 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 345.38 | 308.33 | 350.49 | 308.29 | 352.64 | 308.26 | 353.83 | 308.26 | 359.88 | 308.18 |
| 362.18 | 308.16 | 366.14 | 308.13 | 366.92 | 308.07 | 367.98 | 308.03 | 370.16 | 308.12 |
| 372.59 | 308.13 | 380.1 | 308.22 | 386.44 | 308.18 | 387.91 | 308.18 | 392.36 | 308.05 |
| 394.78 | 308.18 | 399.91 | 308.19 | 403.07 | 308.23 | 404.87 | 308.22 | 407.16 | 308.19 |
| 408.56 | 308.15 | 409.22 | 308.1 | 417.46 | 307.99 | 418.91 | 308.01 | 425.4 | 308.03 |
| 430.2 | 308 | 430.76 | 307.99 | 445.92 | 307.92 | 448.59 | 307.87 | 450.78 | 307.7 |
| 454.39 | 307.55 | 455.88 | 307.48 | 456.1 | 307.45 | 457.99 | 307.38 | 458.68 | 307.4 |
| 459.9 | 307.52 | 460.55 | 307.67 | 460.78 | 307.68 | 464.69 | 307.68 | 470 | 307.77 |
| 472.2 | 307.82 | 493.89 | 308.25 | 504.73 | 308.51 | 506.48 | 308.54 | 514.66 | 308.61 |
| 517.31 | 308.69 | 518.74 | 308.72 | 520.87 | 308.74 | 523.24 | 308.74 | 524.56 | 308.72 |
| 525.18 | 308.68 | 527.47 | 308.65 | 530.41 | 308.65 | 531.32 | 308.64 | 537.36 | 308.7 |
| 539.27 | 308.73 | 541.08 | 308.79 | 542.62 | 308.77 | 548.38 | 308.82 | 551.29 | 308.78 |
| 555.32 | 308.69 | 555.65 | 308.65 | 556.57 | 308.64 | 560.25 | 308.64 | 563.92 | 308.66 |
| 566.47 | 308.66 | 579.84 | 308.8 | 585.88 | 308.89 | 589.3 | 308.88 | 595.53 | 308.9 |
| 598.45 | 308.86 | 604.24 | 308.82 | 607.53 | 308.84 | 609.45 | 308.89 | 611.86 | 308.92 |
| 618.64 | 308.98 | 620.87 | 308.99 | 621.77 | 309.04 | 623.09 | 309.02 | 624.62 | 308.91 |
| 624.67 | 308.88 | 630.62 | 308.57 | 634.13 | 308.47 | 635.11 | 308.5 | 637.08 | 308.66 |
| 644.7 | 308.69 | 646.6 | 308.68 | 649.26 | 308.64 | 652.53 | 308.55 | 655.23 | 308.6 |
| 657.78 | 308.63 | 659.66 | 308.61 | 660.76 | 308.58 | 665.11 | 308.68 | 668.27 | 308.73 |
| 672.04 | 308.85 | 674.19 | 308.94 | 676.04 | 309.05 | 679.68 | 309.23 | 681.47 | 309.31 |
| 681.82 | 309.31 | 686.78 | 309.42 | 690.15 | 309.51 | 691.93 | 309.52 | 703.95 | 309.47 |
| 705.25 | 309.35 | 707.39 | 309.23 | 710.86 | 309.09 | 715.79 | 308.75 | 719.69 | 308.61 |
| 722.05 | 308.56 | 724.47 | 308.63 | 726.72 | 308.72 | 730.46 | 308.83 | 738.04 | 309.04 |
| 741.09 | 309.07 | 743.01 | 309.1 | 744.36 | 309.1 | 747.98 | 309.25 | 757.87 | 309.48 |
| 761.57 | 309.62 | 765 | 309.76 | 772.06 | 309.83 | 772.61 | 309.83 | 779.9 | 309.89 |
| 782.86 | 309.92 | 783.84 | 309.85 | 787.12 | 309.69 | 792.22 | 309.51 | 793.43 | 309.49 |
| 794.74 | 309.4 | 796.34 | 309.41 | 797.57 | 309.46 | 798.32 | 309.52 | 799.74 | 309.53 |
| 804.38 | 309.59 | 804.65 | 309.58 | 807.71 | 309.59 | 810.88 | 309.58 | 812.83 | 309.53 |
| 815.09 | 309.45 | 816.38 | 309.42 | 821.11 | 309.44 | 821.91 | 309.52 | 823.28 | 309.61 |
| 825.26 | 309.78 | 827.91 | 309.98 | 833.68 | 310.15 | 835.57 | 310.2 | 846.43 | 310.3 |
| 847.66 | 310.34 | 849.53 | 310.37 | 851.65 | 310.42 | 853.9 | 310.41 | 856.31 | 310.38 |
| 858.98 | 310.26 | 859.85 | 310.21 | 865.07 | 310 | 865.42 | 309.97 | 867.3 | 309.91 |
| 868.13 | 309.86 | 869.7 | 309.84 | 874.04 | 309.88 | 874.81 | 309.9 | 879.91 | 309.96 |
| 881.42 | 309.96 | 882.27 | 309.98 | 884.43 | 309.99 | 886.53 | 309.92 | 889.21 | 309.79 |
| 891.28 | 309.72 | 892.68 | 309.74 | 895.13 | 309.74 | 898.12 | 309.67 | 905.64 | 309.65 |
| 908.36 | 309.65 | 918.86 | 309.63 | 919.89 | 309.6 | 925.58 | 309.48 | 929.33 | 309.43 |
| 930.45 | 309.39 | 939.62 | 309.25 | 943.7 | 309.27 | 946.88 | 309.17 | 948.83 | 309.18 |
| 950.06 | 309.21 | 953.18 | 309.19 | 960.37 | 309.29 | 962.74 | 309.3 | 964.85 | 309.28 |
| 966.08 | 309.29 | 967.6 | 309.27 | 969.19 | 309.28 | 970.73 | 309.37 | 977.93 | 309.51 |
| 980.66 | 309.54 | 981.58 | 309.53 | 989.71 | 309.61 | 993.86 | 309.67 | 998.74 | 309.78 |
| 999.68 | 310.01 | 1001.85 | 310.47 | 1002.77 | 310.87 | 1004.23 | 311.14 | 1005.75 | 311.18 |
| 1012.74 | 311.19 | 1016.18 | 311.16 | 1019.9 | 311.21 | 1023.38 | 311.29 | 1031.96 | 311.52 |
| 1032.98 | 311.54 | 1034.57 | 311.53 | 1040.07 | 311.63 | 1041.57 | 311.62 | 1044.2 | 311.64 |
| 1045.61 | 311.61 | 1046.97 | 311.52 | 1050.6 | 311.44 | 1057.57 | 311.35 | 1059.54 | 311.32 |
| 1062.41 | 311.4 | 1064.96 | 311.46 | 1066.15 | 311.46 | 1067.32 | 311.52 | 1069.53 | 311.53 |
| 1072.16 | 311.48 | 1073.93 | 311.42 | 1076.33 | 311.37 | 1077.76 | 311.32 | 1080.93 | 311.18 |
| 1081.41 | 311.15 | 1084.83 | 311.1 | 1085.48 | 311.11 | 1087.69 | 311.05 | 1088.53 | 311.06 |
| 1095.98 | 311.1 | 1097.59 | 311.08 | 1099.14 | 311.04 | 1104.2 | 310.97 | 1107.12 | 310.98 |
| 1111.87 | 311.13 | 1113.13 | 311.19 | 1113.71 | 311.19 | 1122.87 | 311 | 1125.45 | 310.97 |
| 1132.71 | 310.8 | 1133.89 | 310.81 | 1136.1 | 310.67 | 1138.71 | 310.49 | 1143.64 | 310.1 |
| 1145.29 | 309.91 | 1151.66 | 309.4 | 1152.15 | 309.38 | 1159.38 | 309.31 | 1163.02 | 309.37 |
| 1164.82 | 309.37 | 1166.29 | 309.41 | 1169.68 | 309.39 | 1171.34 | 309.41 | 1172.01 | 309.4 |
| 1174.62 | 309.43 | 1176.85 | 309.43 | 1180.16 | 309.21 | 1181.94 | 309.13 | 1182.48 | 309.21 |
| 1183.76 | 309.25 | 1185.56 | 309.22 | 1187.69 | 309.21 | 1191.75 | 309.17 | 1197.32 | 309.07 |
| 1202.09 | 309 | 1207.12 | 308.9 | 1208.52 | 308.89 | 1212.3 | 308.83 | 1219.79 | 308.8 |
| 1232.04 | 308.8 | 1238.21 | 308.88 | 1243.73 | 308.88 | 1251.88 | 308.94 | 1257.29 | 309 |
| 1257.62 | 309.02 | 1260.74 | 309.09 | 1261.56 | 309.07 | 1267.6 | 309.08 | 1269.56 | 309.14 |
| 1270.64 | 309.15 | 1278.16 | 309.35 | 1281.54 | 309.33 | 1290.37 | 309.31 | 1301.66 | 309.22 |
| 1311.05 | 309.22 | 1316.97 | 309.26 | 1318.49 | 309.33 | 1320.91 | 309.39 | 1325.14 | 309.45 |
| 1332.18 | 309.41 | 1332.42 | 309.4 | 1339.97 | 309.33 | 1344.4 | 309.31 | 1348.43 | 309.34 |
| 1349.47 | 309.32 | 1353.03 | 309.29 | 1355.74 | 309.24 | 1358.8 | 309.22 | 1364.33 | 309.22 |
| 1364.72 | 309.31 | 1366.07 | 309.5 | 1367.07 | 309.69 | 1368.36 | 309.89 | 1369.62 | 310.15 |
| 1370.88 | 310.37 | 1372.38 | 310.75 | 1373.13 | 310.96 | 1373.8 | 311.23 | 1374.08 | 311.3 |
| 1376.5 | 312.01 | 1377.09 | 312.16 | 1377.94 | 312.46 | 1378.51 | 312.52 | 1379.51 | 312.57 |
| 1381.49 | 312.64 | 1383.3 | 312.79 | 1383.58 | 312.79 | 1388.6 | 313.44 | 1389.21 | 313.6 |
| 1390.26 | 313.83 | 1392.14 | 314.16 | 1394.64 | 314.49 | 1396.97 | 314.77 | 1401.02 | 315.33 |
| 1403.21 | 315.66 | 1404.4 | 315.89 | 1408.66 | 316.67 | 1409.9 | 316.88 | 1410.73 | 317.05 |
| 1413.49 | 317.54 | 1416.48 | 318.5 | 1418.87 | 319.23 | 1420.14 | 319.6 | 1422.47 | 320.34 |
| 1423.77 | 320.72 | 1425.33 | 321.21 | 1427.09 | 321.71 | 1428.73 | 322.21 | 1430.1 | 322.59 |
| 1431.27 | 322.97 | 1432.56 | 323.44 | 1435.77 | 324.5 | 1437.32 | 325.1 | 1440.06 | 326.08 |
| 1441.33 | 326.65 | 1441.9 | 326.83 | 1444.89 | 327.56 | 1445.3 | 327.64 | 1452 | 329.47 |
| 1455.65 | 330.39 | 1458.38 | 331.13 | 1459.24 | 331.4 | 1463.41 | 331.46 | 1467.99 | 331.51 |
| 1472.5 | 331.68 | 1475.22 | 331.74 | 1476.67 | 331.8 | 1478.38 | 331.83 | 1481.95 | 331.84 |
| 1490.25 | 331.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 265.01 | .04 | 1381.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 265.01 | 1381.49 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2959.77*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.69 | 1.95 | 332.68 | 2.85 | 332.66 | 10.99 | 332.61 | 31.74 | 332.21 |
| 38.5 | 331.85 | 43.22 | 331.58 | 43.74 | 331.5 | 48.04 | 331.09 | 49.26 | 330.92 |
| 51.77 | 330.51 | 53.17 | 330.18 | 55.6 | 329.49 | 57.25 | 328.8 | 58.47 | 328.23 |
| 60.36 | 327.43 | 62.22 | 326.99 | 62.79 | 326.88 | 63.5 | 326.92 | 65.2 | 326.58 |
| 66.11 | 326.36 | 67.88 | 326.01 | 69.32 | 325.86 | 69.82 | 325.85 | 70.49 | 325.91 |
| 71.21 | 325.89 | 73.33 | 325.96 | 74.06 | 325.95 | 75.92 | 325.87 | 78.08 | 325.64 |
| 80.02 | 325.25 | 80.25 | 325.23 | 82.01 | 324.79 | 83.45 | 324.4 | 85.3 | 323.97 |
| 86.91 | 323.63 | 90.35 | 322.86 | 92.76 | 322.38 | 97.23 | 321.81 | 98.88 | 321.56 |
| 101.03 | 321.27 | 104.91 | 320.7 | 106.51 | 320.42 | 109.13 | 319.87 | 112.26 | 319.26 |
| 113.19 | 319.06 | 115.55 | 318.46 | 117.66 | 317.94 | 120.61 | 317.17 | 122.19 | 316.72 |
| 124.08 | 316.31 | 127.35 | 315.57 | 128.74 | 315.23 | 129.9 | 314.97 | 131.36 | 314.69 |
| 133.15 | 314.3 | 135.15 | 313.76 | 135.43 | 313.7 | 138.39 | 313.19 | 140.84 | 312.8 |
| 143.54 | 312.63 | 145.29 | 312.47 | 146.92 | 312.39 | 148.67 | 312.24 | 149.75 | 312.11 |
| 150.62 | 312.05 | 152.14 | 311.89 | 154.03 | 311.75 | 155.26 | 311.7 | 158.95 | 311.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 160.6 | 311.35 | 162.63 | 311.07 | 164.35 | 311.07 | 170.53 | 310.76 | 176.37 | 310.43 |
| 182.03 | 310.17 | 185.05 | 310.02 | 192.1 | 309.79 | 196.98 | 309.6 | 198.54 | 309.55 |
| 200.46 | 309.51 | 202.27 | 309.45 | 203.91 | 309.37 | 207.66 | 309.15 | 211.09 | 309 |
| 214.15 | 308.84 | 215.55 | 308.69 | 215.91 | 308.57 | 218.34 | 308.45 | 219.2 | 308.5 |
| 219.88 | 308.6 | 221.8 | 308.62 | 228.3 | 308.66 | 233.98 | 308.74 | 238.73 | 308.76 |
| 250.26 | 308.84 | 251.82 | 308.83 | 260.08 | 308.58 | 260.58 | 308.52 | 261.86 | 308.48 |
| 268.14 | 308.4 | 271.26 | 308.22 | 278.04 | 308.01 | 282.52 | 307.96 | 283.54 | 307.99 |
| 286.39 | 307.79 | 290.46 | 307.6 | 293.77 | 307.6 | 299.08 | 307.57 | 305.25 | 307.53 |
| 307.9 | 307.57 | 310.88 | 307.68 | 312.11 | 307.75 | 312.66 | 307.85 | 315.87 | 307.84 |
| 316.53 | 307.77 | 317.12 | 307.79 | 317.86 | 307.87 | 319.2 | 307.89 | 320.77 | 307.95 |
| 323.35 | 307.92 | 324.36 | 307.88 | 326.86 | 307.83 | 328.52 | 307.83 | 331.63 | 307.79 |
| 332.72 | 307.75 | 333.49 | 307.78 | 337.09 | 307.84 | 338.3 | 307.84 | 340.45 | 307.91 |
| 341.98 | 307.92 | 343.86 | 307.96 | 345.38 | 307.96 | 349.18 | 307.93 | 351.43 | 307.89 |
| 352.66 | 307.89 | 357.12 | 307.82 | 360.41 | 307.81 | 361.37 | 307.78 | 365.27 | 307.76 |
| 367.41 | 307.65 | 368.69 | 307.71 | 370.61 | 307.77 | 372.21 | 307.76 | 380.04 | 307.88 |
| 386.66 | 307.83 | 388.19 | 307.84 | 389.91 | 307.77 | 391.94 | 307.73 | 392.82 | 307.69 |
| 393.46 | 307.71 | 395.35 | 307.83 | 400.46 | 307.85 | 403.99 | 307.9 | 405.86 | 307.89 |
| 408.25 | 307.86 | 409.71 | 307.82 | 410.39 | 307.76 | 418.98 | 307.65 | 420.5 | 307.67 |
| 427.26 | 307.69 | 432.27 | 307.67 | 432.85 | 307.66 | 448.65 | 307.59 | 451.43 | 307.54 |
| 453.71 | 307.37 | 457.48 | 307.2 | 459.26 | 307.09 | 461.23 | 307.02 | 461.92 | 307.04 |
| 463.14 | 307.15 | 463.79 | 307.29 | 464.37 | 307.31 | 467.91 | 307.31 | 475.42 | 307.44 |
| 497.07 | 307.88 | 507.89 | 308.15 | 516.42 | 308.24 | 517.8 | 308.24 | 520.45 | 308.32 |
| 522.56 | 308.34 | 523.17 | 308.36 | 525.5 | 308.37 | 527.68 | 308.34 | 528.3 | 308.31 |
| 530.59 | 308.28 | 533.52 | 308.28 | 534.44 | 308.27 | 540.47 | 308.33 | 542.37 | 308.36 |
| 544.17 | 308.42 | 545.71 | 308.41 | 551.46 | 308.45 | 554.37 | 308.41 | 558.4 | 308.32 |
| 558.72 | 308.28 | 559.64 | 308.27 | 562.74 | 308.27 | 563.31 | 308.28 | 569.53 | 308.29 |
| 582.87 | 308.42 | 583.93 | 308.45 | 588.9 | 308.51 | 592.32 | 308.49 | 598.54 | 308.49 |
| 601.45 | 308.45 | 607.23 | 308.41 | 610.52 | 308.44 | 612.43 | 308.5 | 614.83 | 308.54 |
| 621.61 | 308.61 | 623.83 | 308.62 | 624.57 | 308.67 | 626.05 | 308.64 | 627.57 | 308.53 |
| 627.62 | 308.5 | 633.57 | 308.2 | 637.06 | 308.12 | 638.05 | 308.15 | 640.01 | 308.3 |
| 647.62 | 308.34 | 649.51 | 308.33 | 652.17 | 308.3 | 654.96 | 308.22 | 660.68 | 308.29 |
| 664.25 | 308.25 | 667.99 | 308.34 | 671.15 | 308.38 | 674.91 | 308.49 | 677.05 | 308.58 |
| 678.91 | 308.69 | 682.54 | 308.87 | 684.68 | 308.94 | 689.63 | 309.05 | 692.99 | 309.14 |
| 694.77 | 309.16 | 706.77 | 309.11 | 708.07 | 309 | 710.21 | 308.88 | 711.33 | 308.85 |
| 713.67 | 308.75 | 714.98 | 308.67 | 718.59 | 308.41 | 719.82 | 308.35 | 722.48 | 308.26 |
| 724.84 | 308.21 | 727.26 | 308.28 | 729.5 | 308.37 | 739.64 | 308.67 | 743.34 | 308.72 |
| 743.84 | 308.71 | 745.77 | 308.75 | 747.11 | 308.74 | 750.72 | 308.88 | 760.6 | 309.08 |
| 764.29 | 309.22 | 766.58 | 309.32 | 767.72 | 309.35 | 774.76 | 309.44 | 775.31 | 309.44 |
| 782.59 | 309.5 | 785.54 | 309.53 | 786.52 | 309.47 | 789.8 | 309.32 | 794.89 | 309.15 |
| 795.87 | 309.14 | 797.4 | 309.04 | 799 | 309.05 | 800.23 | 309.1 | 800.98 | 309.16 |
| 802.4 | 309.16 | 807.02 | 309.23 | 807.3 | 309.22 | 810.35 | 309.24 | 813.51 | 309.22 |
| 816.43 | 309.14 | 817.36 | 309.1 | 819.01 | 309.07 | 823.73 | 309.09 | 824.35 | 309.15 |
| 825.89 | 309.25 | 827.87 | 309.41 | 830.52 | 309.6 | 836.27 | 309.76 | 838.16 | 309.8 |
| 849.01 | 309.89 | 850.53 | 309.93 | 852.1 | 309.95 | 854.21 | 310.01 | 855.03 | 309.99 |
| 858.12 | 309.98 | 858.87 | 309.96 | 867.61 | 309.59 | 869.84 | 309.51 | 870.67 | 309.46 |
| 872.5 | 309.44 | 875.24 | 309.47 | 884.79 | 309.56 | 886.94 | 309.57 | 889.04 | 309.5 |
| 892.74 | 309.34 | 893.77 | 309.32 | 896.1 | 309.34 | 898.27 | 309.32 | 900.61 | 309.27 |
| 910.83 | 309.27 | 921.31 | 309.24 | 928.02 | 309.1 | 931.76 | 309.05 | 932.88 | 309.01 |
| 942.04 | 308.87 | 944.9 | 308.86 | 946.11 | 308.87 | 947.61 | 308.84 | 949.28 | 308.78 |
| 951.91 | 308.8 | 952.46 | 308.83 | 954.56 | 308.8 | 962.75 | 308.91 | 965.22 | 308.91 |
| 967.22 | 308.89 | 968.45 | 308.9 | 969.97 | 308.88 | 971.55 | 308.89 | 973.09 | 308.99 |
| 981.58 | 309.17 | 985.54 | 309.17 | 986.92 | 309.19 | 992.04 | 309.22 | 996.18 | 309.27 |
| 1001.05 | 309.37 | 1002 | 309.59 | 1004.16 | 310.02 | 1005.08 | 310.4 | 1006.54 | 310.66 |
| 1008.05 | 310.69 | 1015.03 | 310.68 | 1018.46 | 310.64 | 1022.18 | 310.67 | 1025.65 | 310.75 |
| 1034.22 | 310.99 | 1035.24 | 311.01 | 1036.83 | 310.99 | 1042.31 | 311.08 | 1043.81 | 311.08 |
| 1046.44 | 311.1 | 1047.85 | 311.07 | 1049.2 | 310.99 | 1052.82 | 310.92 | 1061.75 | 310.83 |
| 1063.79 | 310.88 | 1067.16 | 310.98 | 1068.34 | 310.97 | 1069.52 | 311.04 | 1071.72 | 311.04 |
| 1074.35 | 310.99 | 1075.21 | 310.95 | 1078.51 | 310.88 | 1079.94 | 310.83 | 1083.58 | 310.66 |
| 1086.99 | 310.61 | 1087.65 | 310.63 | 1089.85 | 310.58 | 1090.69 | 310.59 | 1098.13 | 310.64 |
| 1101.28 | 310.57 | 1104.52 | 310.51 | 1107.09 | 310.49 | 1109.25 | 310.51 | 1113.99 | 310.65 |
| 1115.83 | 310.72 | 1124.97 | 310.55 | 1127.55 | 310.53 | 1129.83 | 310.5 | 1135.38 | 310.38 |
| 1135.97 | 310.4 | 1138.18 | 310.27 | 1140.79 | 310.1 | 1143.54 | 309.9 | 1145.71 | 309.73 |
| 1147.35 | 309.55 | 1153.72 | 309.07 | 1154.66 | 309.05 | 1162.27 | 308.97 | 1165.05 | 309.04 |
| 1166.85 | 309.04 | 1168.32 | 309.08 | 1171.06 | 309.05 | 1172.58 | 309.07 | 1175.63 | 309.08 |
| 1176.63 | 309.1 | 1178.86 | 309.1 | 1182.17 | 308.9 | 1183.94 | 308.83 | 1184.85 | 308.92 |
| 1186.91 | 308.93 | 1187.56 | 308.9 | 1189.68 | 308.89 | 1193.74 | 308.85 | 1199.29 | 308.75 |
| 1204.06 | 308.68 | 1209.07 | 308.59 | 1214.25 | 308.51 | 1221.73 | 308.48 | 1233.96 | 308.48 |
| 1240.12 | 308.57 | 1245.63 | 308.58 | 1252.31 | 308.63 | 1259.16 | 308.72 | 1259.49 | 308.74 |
| 1262.61 | 308.81 | 1263.42 | 308.78 | 1269.18 | 308.78 | 1270.74 | 308.82 | 1272.49 | 308.84 |
| 1280 | 309.02 | 1283.37 | 309 | 1292.19 | 308.98 | 1304.21 | 308.87 | 1312.83 | 308.87 |
| 1315 | 308.88 | 1318.74 | 308.92 | 1320.26 | 308.99 | 1322.67 | 309.05 | 1326.89 | 309.11 |
| 1333.92 | 309.07 | 1334.16 | 309.06 | 1341.7 | 308.99 | 1346.13 | 308.97 | 1349.08 | 309 |
| 1352.12 | 308.98 | 1352.74 | 308.99 | 1354.74 | 308.97 | 1357.45 | 308.92 | 1360.5 | 308.91 |
| 1366.02 | 308.93 | 1366.41 | 309.03 | 1367.76 | 309.25 | 1370.04 | 309.7 | 1372.3 | 310.19 |
| 1374.05 | 310.67 | 1374.81 | 310.91 | 1375.47 | 311.2 | 1378.17 | 312.09 | 1378.76 | 312.27 |
| 1379.6 | 312.6 | 1380.17 | 312.67 | 1381.55 | 312.75 | 1383.15 | 312.82 | 1384.02 | 312.91 |
| 1385.28 | 313 | 1387.95 | 313.36 | 1390.39 | 313.7 | 1392.08 | 314.09 | 1393.98 | 314.43 |
| 1396.53 | 314.77 | 1398.9 | 315.06 | 1403.02 | 315.64 | 1405.24 | 315.99 | 1406.46 | 316.23 |
| 1410.8 | 317.03 | 1412.06 | 317.24 | 1412.9 | 317.41 | 1415.88 | 317.93 | 1416.41 | 318.11 |
| 1418.75 | 318.81 | 1421.18 | 319.51 | 1422.48 | 319.86 | 1424.84 | 320.57 | 1426.17 | 320.93 |
| 1428.63 | 321.65 | 1429.54 | 321.88 | 1431.21 | 322.36 | 1432.61 | 322.73 | 1433.8 | 323.09 |
| 1435.11 | 323.54 | 1438.38 | 324.57 | 1439.96 | 325.15 | 1442.74 | 326.09 | 1444.03 | 326.63 |
| 1444.61 | 326.81 | 1447.65 | 327.52 | 1448.08 | 327.59 | 1453.91 | 329.11 | 1455.71 | 329.56 |
| 1459.69 | 330.5 | 1461.39 | 330.94 | 1462.26 | 331.2 | 1466.5 | 331.27 | 1471.16 | 331.32 |
| 1475.75 | 331.49 | 1478.52 | 331.56 | 1479.99 | 331.62 | 1481.73 | 331.65 | 1485.36 | 331.65 |
| 1493.81 | 331.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 260.08 | .04 | 1383.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 260.08 | 1383.15 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2939.93*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.45 | 2.8 | 332.42 | 10.78 | 332.38 | 31.14 | 332.01 | 37.77 | 331.68 |
| 42.4 | 331.43 | 42.91 | 331.35 | 47.13 | 330.96 | 48.32 | 330.8 | 50.79 | 330.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.95 | 329.88 | 54.54 | 329.43 | 56.16 | 328.77 | 57.54 | 328.15 | 57.85 | 328.05 |
| 59.21 | 327.48 | 61.04 | 327.06 | 61.6 | 326.95 | 62.3 | 326.99 | 63.97 | 326.64 |
| 64.86 | 326.42 | 66.6 | 326.07 | 68.01 | 325.91 | 68.5 | 325.89 | 69.15 | 325.98 |
| 69.87 | 325.96 | 71.95 | 326.06 | 73.99 | 326.03 | 76.47 | 325.8 | 78.5 | 325.41 |
| 78.74 | 325.4 | 81.87 | 324.61 | 83.69 | 324.19 | 85.26 | 323.86 | 88.64 | 323.11 |
| 91.01 | 322.64 | 95.39 | 322.08 | 97.01 | 321.84 | 99.11 | 321.56 | 102.93 | 321 |
| 104.49 | 320.72 | 107.06 | 320.19 | 110.14 | 319.59 | 111.05 | 319.39 | 113.36 | 318.78 |
| 115.43 | 318.27 | 118.33 | 317.48 | 119.88 | 317.02 | 121.73 | 316.6 | 124.94 | 315.83 |
| 126.3 | 315.48 | 127.44 | 315.21 | 128.87 | 314.92 | 130.62 | 314.52 | 132.59 | 313.95 |
| 135.77 | 313.35 | 138.18 | 312.95 | 138.49 | 312.92 | 140.82 | 312.79 | 141.75 | 312.69 |
| 144.14 | 312.56 | 145.86 | 312.4 | 146.91 | 312.26 | 147.77 | 312.2 | 149.26 | 312.03 |
| 151.11 | 311.9 | 152.32 | 311.84 | 155.94 | 311.63 | 157.79 | 311.47 | 159.55 | 311.21 |
| 161.24 | 311.19 | 165.75 | 310.93 | 173.03 | 310.46 | 178.58 | 310.17 | 181.55 | 310 |
| 188.46 | 309.74 | 193.25 | 309.52 | 198.44 | 309.36 | 200.05 | 309.27 | 203.72 | 309.04 |
| 207.1 | 308.88 | 210.09 | 308.71 | 211.47 | 308.56 | 211.82 | 308.45 | 214.21 | 308.31 |
| 215.05 | 308.36 | 215.72 | 308.45 | 223.98 | 308.44 | 227.29 | 308.48 | 229.55 | 308.49 |
| 234.21 | 308.48 | 244.15 | 308.5 | 247.05 | 308.48 | 255.16 | 308.2 | 255.67 | 308.14 |
| 257.01 | 308.1 | 263.54 | 308.04 | 266.79 | 307.87 | 268.09 | 307.83 | 273.85 | 307.68 |
| 277.34 | 307.64 | 278.5 | 307.64 | 279.69 | 307.67 | 282.54 | 307.49 | 284.89 | 307.4 |
| 286.77 | 307.31 | 288.19 | 307.29 | 290.21 | 307.29 | 295.16 | 307.24 | 295.74 | 307.25 |
| 301.41 | 307.19 | 302.16 | 307.19 | 304.91 | 307.23 | 308.01 | 307.32 | 309.29 | 307.39 |
| 309.87 | 307.48 | 312.49 | 307.48 | 314.52 | 307.41 | 315.28 | 307.5 | 316.68 | 307.52 |
| 318.31 | 307.59 | 321 | 307.54 | 324.64 | 307.45 | 326.37 | 307.45 | 329.61 | 307.41 |
| 330.75 | 307.37 | 331.54 | 307.4 | 335.3 | 307.46 | 337.22 | 307.48 | 338.79 | 307.55 |
| 340.38 | 307.55 | 342.33 | 307.6 | 347.88 | 307.56 | 350.21 | 307.52 | 351.5 | 307.52 |
| 356.13 | 307.45 | 358.06 | 307.43 | 359.56 | 307.43 | 360.55 | 307.4 | 364.61 | 307.39 |
| 366.84 | 307.27 | 368.18 | 307.34 | 370.17 | 307.4 | 371.84 | 307.4 | 373.83 | 307.42 |
| 379.99 | 307.53 | 386.87 | 307.49 | 388.47 | 307.49 | 390.25 | 307.42 | 391.04 | 307.41 |
| 393.59 | 307.33 | 395.92 | 307.49 | 401.48 | 307.52 | 404.9 | 307.56 | 406.86 | 307.56 |
| 409.34 | 307.52 | 410.85 | 307.48 | 411.57 | 307.42 | 420.51 | 307.3 | 422.08 | 307.33 |
| 429.12 | 307.36 | 434.33 | 307.34 | 434.94 | 307.33 | 451.38 | 307.26 | 453.32 | 307.24 |
| 454.38 | 307.21 | 454.81 | 307.16 | 456.65 | 307.04 | 462.18 | 306.77 | 462.42 | 306.73 |
| 464.47 | 306.66 | 465.15 | 306.68 | 466.37 | 306.78 | 467.02 | 306.92 | 467.6 | 306.93 |
| 471.14 | 306.94 | 476.43 | 307.02 | 478.64 | 307.07 | 500.25 | 307.51 | 511.05 | 307.79 |
| 512.8 | 307.81 | 520.95 | 307.88 | 525.01 | 307.97 | 527.13 | 307.99 | 529.5 | 307.99 |
| 530.81 | 307.97 | 531.3 | 307.94 | 532.69 | 307.93 | 533.71 | 307.9 | 536.64 | 307.91 |
| 537.55 | 307.9 | 543.57 | 307.96 | 545.48 | 307.99 | 546.69 | 308.05 | 548.81 | 308.05 |
| 555.45 | 308.08 | 561.47 | 307.95 | 561.8 | 307.91 | 562.71 | 307.9 | 565.81 | 307.9 |
| 570.04 | 307.93 | 572.58 | 307.92 | 585.9 | 308.04 | 586.96 | 308.07 | 591.92 | 308.13 |
| 595.33 | 308.09 | 601.54 | 308.08 | 604.45 | 308.05 | 610.22 | 308.01 | 613.5 | 308.04 |
| 615.41 | 308.1 | 617.81 | 308.15 | 624.57 | 308.23 | 626.79 | 308.24 | 627.68 | 308.28 |
| 629.01 | 308.26 | 630.53 | 308.15 | 630.58 | 308.12 | 636.51 | 307.84 | 640 | 307.76 |
| 640.99 | 307.79 | 642.94 | 307.94 | 650.54 | 308 | 654.36 | 307.98 | 658.35 | 307.88 |
| 659.41 | 307.9 | 663.58 | 307.95 | 666.55 | 307.91 | 670.88 | 308 | 674.03 | 308.03 |
| 677.79 | 308.13 | 679.92 | 308.21 | 681.78 | 308.33 | 685.4 | 308.5 | 687.54 | 308.58 |
| 692.48 | 308.68 | 695.83 | 308.78 | 697.61 | 308.8 | 709.59 | 308.75 | 710.89 | 308.64 |
| 713.02 | 308.54 | 716.48 | 308.41 | 717.78 | 308.33 | 721.39 | 308.07 | 722.62 | 308 |
| 725.27 | 307.9 | 727.62 | 307.86 | 730.04 | 307.92 | 732.28 | 308.02 | 736 | 308.14 |
| 742.4 | 308.32 | 746.09 | 308.37 | 747.35 | 308.36 | 748.52 | 308.39 | 749.86 | 308.38 |
| 753.46 | 308.52 | 763.33 | 308.69 | 767.01 | 308.82 | 770.43 | 308.95 | 777.46 | 309.04 |
| 778.01 | 309.04 | 785.28 | 309.11 | 788.23 | 309.15 | 789.2 | 309.09 | 792.48 | 308.95 |
| 797.56 | 308.79 | 798.53 | 308.78 | 800.06 | 308.69 | 801.17 | 308.69 | 802.89 | 308.74 |
| 803.63 | 308.8 | 805.05 | 308.8 | 809.67 | 308.87 | 809.95 | 308.86 | 812.99 | 308.88 |
| 816.15 | 308.87 | 818.1 | 308.82 | 819.99 | 308.75 | 821.63 | 308.72 | 826.34 | 308.74 |
| 826.96 | 308.8 | 828.51 | 308.89 | 830.48 | 309.05 | 833.13 | 309.22 | 838.87 | 309.37 |
| 840.76 | 309.41 | 851.58 | 309.48 | 856.78 | 309.59 | 857.6 | 309.57 | 859.02 | 309.58 |
| 861.43 | 309.55 | 865.92 | 309.36 | 870.15 | 309.19 | 872.38 | 309.11 | 873.45 | 309.05 |
| 876.14 | 309.04 | 879.1 | 309.06 | 879.87 | 309.08 | 884.95 | 309.13 | 886.45 | 309.13 |
| 889.45 | 309.15 | 891.55 | 309.08 | 894.21 | 308.96 | 896.27 | 308.91 | 898.59 | 308.94 |
| 900.76 | 308.92 | 903.09 | 308.86 | 913.29 | 308.89 | 923.76 | 308.86 | 930.46 | 308.72 |
| 934.19 | 308.67 | 935.31 | 308.63 | 944.46 | 308.48 | 947.31 | 308.47 | 948.52 | 308.48 |
| 950.01 | 308.45 | 951.68 | 308.39 | 953.63 | 308.4 | 954.86 | 308.44 | 956.95 | 308.41 |
| 960.06 | 308.45 | 965.13 | 308.53 | 969.59 | 308.5 | 970.82 | 308.51 | 972.34 | 308.49 |
| 973.92 | 308.5 | 975.45 | 308.61 | 982.63 | 308.78 | 985.35 | 308.81 | 987.88 | 308.8 |
| 994.37 | 308.83 | 998.51 | 308.88 | 1003.36 | 308.97 | 1004.31 | 309.18 | 1006.47 | 309.58 |
| 1007.39 | 309.94 | 1008.84 | 310.18 | 1010.35 | 310.2 | 1017.32 | 310.17 | 1020.75 | 310.11 |
| 1024.46 | 310.14 | 1027.92 | 310.22 | 1036.48 | 310.46 | 1037.5 | 310.47 | 1039.08 | 310.45 |
| 1044.56 | 310.53 | 1046.05 | 310.53 | 1048.68 | 310.56 | 1050.08 | 310.53 | 1051.43 | 310.45 |
| 1055.05 | 310.39 | 1063.96 | 310.34 | 1066 | 310.39 | 1069.36 | 310.49 | 1070.86 | 310.5 |
| 1071.79 | 310.55 | 1073.91 | 310.55 | 1077.39 | 310.46 | 1080.69 | 310.39 | 1082.12 | 310.34 |
| 1086.31 | 310.15 | 1089.16 | 310.13 | 1089.81 | 310.14 | 1092.01 | 310.11 | 1097.17 | 310.15 |
| 1100.28 | 310.18 | 1101.88 | 310.15 | 1103.43 | 310.1 | 1106.66 | 310.04 | 1108.47 | 310.02 |
| 1111.38 | 310.03 | 1117.95 | 310.24 | 1127.08 | 310.11 | 1129.65 | 310.1 | 1131.92 | 310.07 |
| 1136.88 | 309.97 | 1138.28 | 309.98 | 1142.86 | 309.72 | 1147.78 | 309.37 | 1149.42 | 309.2 |
| 1155.77 | 308.74 | 1157.95 | 308.72 | 1159.16 | 308.68 | 1161.37 | 308.67 | 1164.31 | 308.64 |
| 1167.09 | 308.71 | 1168.88 | 308.71 | 1170.57 | 308.74 | 1173.73 | 308.72 | 1178.65 | 308.77 |
| 1180.87 | 308.78 | 1182.06 | 308.72 | 1183.5 | 308.62 | 1185.94 | 308.53 | 1186.85 | 308.61 |
| 1188.16 | 308.62 | 1189.55 | 308.59 | 1196.06 | 308.53 | 1199.68 | 308.47 | 1201.26 | 308.43 |
| 1206.03 | 308.37 | 1211.03 | 308.27 | 1216.2 | 308.18 | 1223.66 | 308.16 | 1235.88 | 308.16 |
| 1242.02 | 308.25 | 1247.53 | 308.27 | 1254.2 | 308.34 | 1261.03 | 308.44 | 1261.37 | 308.46 |
| 1264.47 | 308.52 | 1265.29 | 308.5 | 1269.77 | 308.49 | 1270.64 | 308.48 | 1272.59 | 308.52 |
| 1274.34 | 308.53 | 1281.83 | 308.69 | 1285.2 | 308.66 | 1294 | 308.64 | 1301.7 | 308.57 |
| 1306 | 308.52 | 1314.61 | 308.52 | 1320.51 | 308.58 | 1322.02 | 308.64 | 1324.43 | 308.71 |
| 1325.71 | 308.72 | 1328.65 | 308.77 | 1335.67 | 308.73 | 1335.9 | 308.72 | 1343.43 | 308.65 |
| 1347.85 | 308.63 | 1351.86 | 308.67 | 1353.84 | 308.65 | 1355.45 | 308.65 | 1359.15 | 308.6 |
| 1362.2 | 308.6 | 1367.71 | 308.64 | 1368.1 | 308.76 | 1369.44 | 309 | 1370.44 | 309.24 |
| 1371.73 | 309.5 | 1372.65 | 309.74 | 1373.98 | 310.05 | 1375.73 | 310.59 | 1376.48 | 310.86 |
| 1377.15 | 311.17 | 1378.8 | 311.79 | 1380.43 | 312.37 | 1381.27 | 312.74 | 1381.83 | 312.82 |
| 1384.81 | 313 | 1386.97 | 313.21 | 1390.62 | 313.73 | 1392.17 | 313.96 | 1393.89 | 314.35 |
| 1395.83 | 314.7 | 1398.42 | 315.05 | 1400.83 | 315.35 | 1405.02 | 315.96 | 1407.58 | 316.38 |
| 1408.52 | 316.57 | 1415.07 | 317.77 | 1418.1 | 318.28 | 1418.64 | 318.45 | 1421.03 | 319.13 |
| 1423.49 | 319.79 | 1425.94 | 320.43 | 1427.22 | 320.8 | 1428.57 | 321.15 | 1430.18 | 321.6 |
| 1432 | 322.06 | 1433.7 | 322.51 | 1435.12 | 322.86 | 1436.33 | 323.21 | 1437.67 | 323.65 |
| 1440.99 | 324.65 | 1442.59 | 325.2 | 1445.43 | 326.1 | 1446.87 | 326.67 | 1447.33 | 326.79 |
| 1450.42 | 327.48 | 1450.86 | 327.55 | 1456.79 | 329.01 | 1458.62 | 329.44 | 1462.66 | 330.33 |
| 1464.39 | 330.75 | 1465.28 | 330.99 | 1468.97 | 331.06 | 1469.6 | 331.08 | 1474.33 | 331.13 |
| 1479 | 331.3 | 1481.82 | 331.37 | 1483.18 | 331.43 | 1485.09 | 331.46 | 1488.78 | 331.46 |
| 1497.38 | 331.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 255.16 | .04 | 1384.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 255.16 | 1384.81 | 22.65 | 19.84 | 19.47 | .1 | .3 |



BSE Document Control Number: 7323HYD101

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2920.09*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.21 | 2.75 | 332.18 | 10.57 | 332.14 | 30.54 | 331.81 | 37.04 | 331.5 |
| 41.58 | 331.27 | 42.08 | 331.19 | 43.71 | 331.06 | 46.22 | 330.83 | 47.39 | 330.67 |
| 49.81 | 330.31 | 51.93 | 329.8 | 53.49 | 329.38 | 55.08 | 328.75 | 56.43 | 328.16 |
| 56.82 | 328.03 | 58.07 | 327.53 | 60.41 | 327.02 | 61.1 | 327.05 | 62.73 | 326.71 |
| 63.61 | 326.49 | 65.31 | 326.13 | 66.7 | 325.95 | 67.18 | 325.94 | 67.82 | 326.04 |
| 68.52 | 326.04 | 70.56 | 326.15 | 72.56 | 326.15 | 75.12 | 325.93 | 76.99 | 325.58 |
| 77.22 | 325.56 | 80.29 | 324.81 | 82.07 | 324.41 | 83.62 | 324.09 | 86.93 | 323.36 |
| 89.25 | 322.9 | 93.55 | 322.36 | 95.14 | 322.13 | 97.2 | 321.86 | 100.94 | 321.3 |
| 102.48 | 321.03 | 104.99 | 320.5 | 108.01 | 319.93 | 108.91 | 319.73 | 111.18 | 319.11 |
| 113.21 | 318.59 | 116.04 | 317.79 | 117.56 | 317.32 | 119.38 | 316.89 | 122.53 | 316.09 |
| 124.98 | 315.44 | 126.39 | 315.16 | 128.1 | 314.74 | 130.03 | 314.14 | 133.15 | 313.52 |
| 135.51 | 313.1 | 138.11 | 312.96 | 139.01 | 312.85 | 141.35 | 312.73 | 143.04 | 312.57 |
| 144.08 | 312.42 | 144.92 | 312.36 | 146.38 | 312.18 | 148.19 | 312.05 | 149.39 | 311.99 |
| 152.93 | 311.78 | 154.52 | 311.64 | 156.47 | 311.35 | 158.13 | 311.31 | 162.55 | 311.01 |
| 169.69 | 310.5 | 175.14 | 310.18 | 178.05 | 309.99 | 184.83 | 309.69 | 189.52 | 309.45 |
| 193.17 | 309.32 | 194.61 | 309.26 | 196.19 | 309.17 | 199.79 | 308.93 | 203.1 | 308.76 |
| 206.04 | 308.58 | 207.39 | 308.43 | 207.73 | 308.32 | 210.08 | 308.18 | 210.9 | 308.21 |
| 211.56 | 308.29 | 219.66 | 308.23 | 225.12 | 308.24 | 229.69 | 308.2 | 239.44 | 308.16 |
| 242.28 | 308.13 | 250.23 | 307.82 | 250.77 | 307.76 | 252.16 | 307.72 | 258.94 | 307.68 |
| 262.32 | 307.51 | 263.67 | 307.47 | 269.65 | 307.35 | 273.28 | 307.32 | 274.49 | 307.32 |
| 275.72 | 307.35 | 278.68 | 307.19 | 279.73 | 307.16 | 283.08 | 307.01 | 286.65 | 306.98 |
| 291.8 | 306.92 | 292.4 | 306.93 | 298.29 | 306.85 | 301.93 | 306.88 | 305.15 | 306.97 |
| 306.48 | 307.03 | 307.08 | 307.12 | 308.84 | 307.12 | 310.55 | 307.09 | 311.26 | 307.01 |
| 311.91 | 307.03 | 312.71 | 307.13 | 314.15 | 307.15 | 315.85 | 307.22 | 318.64 | 307.17 |
| 322.43 | 307.07 | 325.33 | 307.07 | 327.59 | 307.02 | 328.77 | 306.98 | 329.6 | 307.02 |
| 333.5 | 307.08 | 334.8 | 307.09 | 337.13 | 307.18 | 338.78 | 307.18 | 340.81 | 307.24 |
| 346.57 | 307.2 | 348.99 | 307.15 | 350.33 | 307.15 | 355.15 | 307.07 | 357.15 | 307.05 |
| 358.7 | 307.06 | 359.74 | 307.03 | 364.21 | 307.01 | 365.08 | 306.94 | 366.27 | 306.89 |
| 366.83 | 306.9 | 368.73 | 307.01 | 369.73 | 307.03 | 371.47 | 307.03 | 373.53 | 307.06 |
| 379.93 | 307.19 | 387.08 | 307.15 | 388.74 | 307.15 | 390.6 | 307.07 | 394.07 | 306.97 |
| 396.48 | 307.15 | 402.26 | 307.18 | 405.82 | 307.23 | 407.85 | 307.23 | 410.43 | 307.19 |
| 412 | 307.15 | 412.74 | 307.08 | 422.03 | 306.96 | 423.67 | 306.99 | 430.98 | 307.02 |
| 437.03 | 307 | 454.11 | 306.93 | 457.12 | 306.89 | 459.58 | 306.7 | 463.65 | 306.5 |
| 465.58 | 306.37 | 467.71 | 306.3 | 468.39 | 306.32 | 469.61 | 306.42 | 470.26 | 306.54 |
| 470.84 | 306.56 | 474.37 | 306.56 | 479.65 | 306.65 | 481.85 | 306.7 | 503.43 | 307.14 |
| 514.21 | 307.43 | 515.95 | 307.45 | 524.09 | 307.51 | 528.14 | 307.6 | 532.1 | 307.61 |
| 533.93 | 307.6 | 534.42 | 307.57 | 535.81 | 307.56 | 536.83 | 307.53 | 539.75 | 307.54 |
| 540.67 | 307.53 | 546.67 | 307.59 | 548.58 | 307.63 | 550.37 | 307.69 | 551.9 | 307.68 |
| 557.63 | 307.72 | 559.45 | 307.67 | 560.91 | 307.66 | 564.54 | 307.58 | 564.87 | 307.54 |
| 568.07 | 307.53 | 573.09 | 307.56 | 575.63 | 307.56 | 588.93 | 307.67 | 589.99 | 307.69 |
| 594.94 | 307.74 | 598.35 | 307.7 | 604.55 | 307.68 | 607.45 | 307.64 | 613.21 | 307.6 |
| 615.73 | 307.62 | 618.39 | 307.71 | 620.78 | 307.77 | 627.54 | 307.85 | 629.75 | 307.86 |
| 630.64 | 307.9 | 631.96 | 307.89 | 632.79 | 307.84 | 633.53 | 307.74 | 638.18 | 307.53 |
| 640.43 | 307.45 | 642.94 | 307.41 | 643.92 | 307.44 | 645.88 | 307.58 | 653.46 | 307.65 |
| 655.35 | 307.65 | 657.99 | 307.63 | 660.78 | 307.55 | 663.94 | 307.59 | 666.48 | 307.61 |
| 670.03 | 307.58 | 673.76 | 307.66 | 676.78 | 307.68 | 676.91 | 307.67 | 680.66 | 307.77 |
| 682.79 | 307.85 | 684.64 | 307.96 | 688.27 | 308.14 | 690.39 | 308.21 | 695.33 | 308.32 |
| 698.68 | 308.41 | 700.45 | 308.43 | 712.41 | 308.39 | 713.7 | 308.29 | 715.83 | 308.19 |
| 719.29 | 308.07 | 720.59 | 307.99 | 724.18 | 307.72 | 728.06 | 307.55 | 730.41 | 307.51 |
| 732.82 | 307.57 | 735.06 | 307.68 | 745.16 | 307.98 | 748 | 308.01 | 750.1 | 308.01 |
| 751.27 | 308.04 | 752.6 | 308.02 | 756.21 | 308.15 | 766.05 | 308.29 | 769.73 | 308.41 |
| 772.01 | 308.51 | 775.21 | 308.58 | 780.17 | 308.65 | 780.71 | 308.65 | 787.97 | 308.72 |
| 790.91 | 308.76 | 795.15 | 308.57 | 800.23 | 308.43 | 801.15 | 308.42 | 802.73 | 308.33 |
| 804.32 | 308.34 | 806.29 | 308.43 | 807.71 | 308.44 | 812.32 | 308.51 | 812.59 | 308.5 |
| 815.63 | 308.52 | 818.78 | 308.51 | 822.98 | 308.39 | 824.8 | 308.37 | 828.96 | 308.39 |
| 833.09 | 308.68 | 835.73 | 308.84 | 841.47 | 308.98 | 843.35 | 309.01 | 854.16 | 309.07 |
| 857.24 | 309.12 | 859.35 | 309.17 | 863.24 | 309.15 | 866.64 | 309.03 | 872.69 | 308.78 |
| 874.92 | 308.71 | 875.99 | 308.65 | 878.67 | 308.64 | 881.62 | 308.65 | 882.39 | 308.67 |
| 888.96 | 308.72 | 891.96 | 308.73 | 894.05 | 308.67 | 895.99 | 308.57 | 897.74 | 308.51 |
| 898.77 | 308.5 | 901.09 | 308.53 | 903.25 | 308.52 | 905.58 | 308.46 | 913.06 | 308.49 |
| 915.76 | 308.51 | 926.21 | 308.48 | 929.56 | 308.41 | 936.63 | 308.29 | 937.74 | 308.25 |
| 946.87 | 308.09 | 949.72 | 308.08 | 950.92 | 308.09 | 954.09 | 308.01 | 956.71 | 308.03 |
| 957.25 | 308.06 | 959.35 | 308.02 | 962.45 | 308.06 | 967.51 | 308.14 | 969.87 | 308.15 |
| 971.96 | 308.12 | 974.7 | 308.1 | 976.28 | 308.11 | 977.81 | 308.23 | 986.27 | 308.44 |
| 990.22 | 308.43 | 991.6 | 308.44 | 996.7 | 308.45 | 1000.83 | 308.48 | 1005.68 | 308.57 |
| 1006.62 | 308.76 | 1008.78 | 309.14 | 1009.94 | 309.53 | 1011.15 | 309.7 | 1012.66 | 309.71 |
| 1019.61 | 309.65 | 1023.03 | 309.58 | 1026.74 | 309.61 | 1030.2 | 309.69 | 1038.74 | 309.92 |
| 1039.75 | 309.94 | 1041.33 | 309.91 | 1046.8 | 309.99 | 1048.29 | 309.98 | 1050.91 | 310.01 |
| 1052.32 | 309.99 | 1053.66 | 309.92 | 1057.27 | 309.87 | 1066.17 | 309.84 | 1068.21 | 309.9 |
| 1069.03 | 309.94 | 1071.56 | 310.01 | 1072.74 | 310 | 1073.99 | 310.07 | 1075.81 | 310.07 |
| 1081.68 | 309.92 | 1082.87 | 309.91 | 1084.3 | 309.86 | 1087.45 | 309.7 | 1088.48 | 309.66 |
| 1091.45 | 309.64 | 1091.94 | 309.66 | 1094.17 | 309.64 | 1102.43 | 309.72 | 1104.03 | 309.69 |
| 1105.57 | 309.64 | 1108.79 | 309.57 | 1111.36 | 309.54 | 1113.51 | 309.56 | 1118.23 | 309.7 |
| 1120.06 | 309.77 | 1129.18 | 309.67 | 1133.16 | 309.66 | 1138.96 | 309.56 | 1140.36 | 309.57 |
| 1144.94 | 309.33 | 1147.68 | 309.16 | 1149.84 | 309.01 | 1151.48 | 308.85 | 1157.82 | 308.41 |
| 1160 | 308.39 | 1161.21 | 308.35 | 1165.5 | 308.3 | 1166.35 | 308.3 | 1167.26 | 308.34 |
| 1169.12 | 308.38 | 1170.91 | 308.38 | 1172.6 | 308.4 | 1175.1 | 308.38 | 1176.62 | 308.41 |
| 1178.07 | 308.41 | 1180.66 | 308.45 | 1182.88 | 308.46 | 1185.5 | 308.31 | 1187.94 | 308.22 |
| 1188.48 | 308.29 | 1190.16 | 308.31 | 1191.55 | 308.27 | 1193.66 | 308.26 | 1198.04 | 308.21 |
| 1201.66 | 308.15 | 1203.24 | 308.11 | 1207.85 | 308.05 | 1207.99 | 308.06 | 1212.99 | 307.96 |
| 1214.39 | 307.94 | 1218.15 | 307.86 | 1225.6 | 307.83 | 1237.79 | 307.83 | 1243.93 | 307.94 |
| 1249.42 | 307.97 | 1256.08 | 308.05 | 1262.9 | 308.17 | 1264.34 | 308.21 | 1266.34 | 308.24 |
| 1267.15 | 308.22 | 1273.16 | 308.19 | 1275.11 | 308.22 | 1276.19 | 308.22 | 1281.29 | 308.31 |
| 1283.67 | 308.36 | 1287.03 | 308.33 | 1295.82 | 308.31 | 1303.51 | 308.22 | 1307.05 | 308.19 |
| 1307.8 | 308.17 | 1316.39 | 308.17 | 1318.55 | 308.19 | 1322.28 | 308.24 | 1323.79 | 308.3 |
| 1329.36 | 308.43 | 1330.41 | 308.43 | 1337.41 | 308.39 | 1337.65 | 308.38 | 1345.16 | 308.31 |
| 1349.57 | 308.29 | 1351.05 | 308.3 | 1353.58 | 308.34 | 1355.55 | 308.32 | 1358.16 | 308.32 |
| 1360.86 | 308.28 | 1363.89 | 308.28 | 1369.4 | 308.35 | 1369.79 | 308.48 | 1371.13 | 308.75 |
| 1372.13 | 309.01 | 1373.41 | 309.3 | 1374.66 | 309.66 | 1375.91 | 309.97 | 1376.78 | 310.28 |
| 1378.15 | 310.81 | 1378.82 | 311.14 | 1380.47 | 311.83 | 1382.09 | 312.47 | 1382.93 | 312.88 |
| 1383.5 | 312.97 | 1384.34 | 313.04 | 1386.47 | 313.18 | 1388.67 | 313.42 | 1393.62 | 314.16 |
| 1395.7 | 314.61 | 1397.67 | 314.97 | 1400.31 | 315.33 | 1402.76 | 315.64 | 1407.02 | 316.27 |
| 1409.32 | 316.66 | 1410.58 | 316.91 | 1415.07 | 317.74 | 1417.24 | 318.13 | 1420.32 | 318.63 |
| 1421.31 | 318.91 | 1423.3 | 319.44 | 1425.81 | 320.07 | 1427.15 | 320.39 | 1429.6 | 321.03 |
| 1430.97 | 321.36 | 1432.61 | 321.79 | 1434.46 | 322.23 | 1436.18 | 322.66 | 1438.16 | 323.13 |
| 1440.22 | 323.75 | 1443.6 | 324.72 | 1445.23 | 325.25 | 1448.11 | 326.11 | 1449.45 | 326.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1450.05 | 326.77 | 1453.19 | 327.43 | 1453.63 | 327.5 | 1460.68 | 329.15 | 1463.64 | 329.76 |
| 1465.64 | 330.16 | 1467.4 | 330.56 | 1468.3 | 330.79 | 1472.69 | 330.89 | 1477.5 | 330.94 |
| 1482.25 | 331.11 | 1485.12 | 331.18 | 1486.64 | 331.25 | 1488.44 | 331.28 | 1492.2 | 331.27 |
| 1500.94 | 331.33 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 250.23 | .04 | 1386.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 250.23 | 1386.47 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2900.25*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.97 | 2.69 | 331.94 | 10.36 | 331.91 | 29.94 | 331.61 | 36.32 | 331.33 |
| 40.76 | 331.11 | 41.25 | 331.04 | 45.31 | 330.7 | 48.83 | 330.22 | 51.31 | 329.62 |
| 52.44 | 329.32 | 53.99 | 328.73 | 55.43 | 328.13 | 56.46 | 327.78 | 56.82 | 327.62 |
| 59.22 | 327.09 | 59.89 | 327.12 | 61.5 | 326.77 | 62.36 | 326.55 | 64.03 | 326.19 |
| 65.39 | 325.99 | 65.86 | 325.98 | 66.48 | 326.1 | 67.17 | 326.12 | 69.17 | 326.25 |
| 71.13 | 326.27 | 71.61 | 326.25 | 73.64 | 326.07 | 76.25 | 325.61 | 78.71 | 325.01 |
| 81.97 | 324.32 | 85.22 | 323.61 | 87.49 | 323.17 | 91.71 | 322.64 | 93.26 | 322.41 |
| 95.29 | 322.15 | 98.95 | 321.6 | 100.46 | 321.33 | 102.93 | 320.82 | 105.89 | 320.26 |
| 106.76 | 320.06 | 108.99 | 319.44 | 110.98 | 318.91 | 113.76 | 318.1 | 115.25 | 317.62 |
| 117.03 | 317.18 | 120.12 | 316.35 | 121.42 | 315.97 | 122.52 | 315.68 | 123.9 | 315.39 |
| 125.58 | 314.96 | 127.47 | 314.34 | 127.74 | 314.27 | 130.53 | 313.68 | 132.84 | 313.26 |
| 133.15 | 313.22 | 135.39 | 313.12 | 136.28 | 313.01 | 138.57 | 312.89 | 140.23 | 312.73 |
| 141.24 | 312.57 | 142.06 | 312.51 | 143.5 | 312.33 | 145.28 | 312.19 | 146.45 | 312.14 |
| 149.92 | 311.93 | 151.48 | 311.79 | 153.39 | 311.49 | 155.02 | 311.43 | 159.35 | 311.09 |
| 166.35 | 310.53 | 171.69 | 310.18 | 174.54 | 309.98 | 181.19 | 309.65 | 185.79 | 309.38 |
| 190.78 | 309.17 | 192.33 | 309.07 | 195.86 | 308.82 | 199.1 | 308.64 | 201.99 | 308.45 |
| 203.31 | 308.3 | 203.65 | 308.2 | 205.94 | 308.04 | 206.75 | 308.07 | 207.39 | 308.14 |
| 209.2 | 308.12 | 215.34 | 308.01 | 220.69 | 307.99 | 225.17 | 307.92 | 235.73 | 307.81 |
| 237.52 | 307.78 | 245.31 | 307.44 | 245.87 | 307.37 | 247.31 | 307.34 | 254.34 | 307.33 |
| 257.85 | 307.16 | 259.25 | 307.12 | 265.46 | 307.01 | 269.22 | 306.99 | 270.48 | 307 |
| 271.62 | 307.04 | 272.35 | 307.02 | 274.82 | 306.88 | 275.92 | 306.86 | 279.38 | 306.71 |
| 282.94 | 306.67 | 283.09 | 306.68 | 288.43 | 306.6 | 289.06 | 306.6 | 295.98 | 306.5 |
| 298.95 | 306.53 | 302.29 | 306.61 | 303.67 | 306.67 | 304.29 | 306.75 | 306.11 | 306.75 |
| 307.89 | 306.72 | 308.63 | 306.62 | 309.3 | 306.65 | 310.13 | 306.76 | 311.63 | 306.78 |
| 313.39 | 306.86 | 316.29 | 306.8 | 317.42 | 306.76 | 320.22 | 306.69 | 323.23 | 306.69 |
| 325.57 | 306.64 | 326.79 | 306.59 | 327.65 | 306.63 | 331.7 | 306.71 | 333.05 | 306.71 |
| 335.46 | 306.81 | 337.18 | 306.81 | 339.29 | 306.88 | 345.26 | 306.83 | 347.78 | 306.78 |
| 349.16 | 306.78 | 354.69 | 306.69 | 357.85 | 306.68 | 358.93 | 306.65 | 362.75 | 306.64 |
| 363.3 | 306.65 | 364.46 | 306.56 | 365.7 | 306.51 | 368.25 | 306.64 | 373.24 | 306.7 |
| 379.88 | 306.84 | 387.3 | 306.8 | 389.02 | 306.81 | 390.94 | 306.72 | 394.21 | 306.62 |
| 395.21 | 306.67 | 397.05 | 306.8 | 402.78 | 306.84 | 406.74 | 306.89 | 408.84 | 306.89 |
| 411.52 | 306.86 | 413.15 | 306.82 | 413.92 | 306.74 | 423.56 | 306.61 | 425.26 | 306.65 |
| 432.84 | 306.69 | 438.46 | 306.67 | 439.12 | 306.66 | 456.84 | 306.6 | 459.96 | 306.56 |
| 462.51 | 306.37 | 468.48 | 306.06 | 468.74 | 306.01 | 470.95 | 305.94 | 471.63 | 305.96 |
| 472.85 | 306.05 | 473.49 | 306.17 | 477.6 | 306.19 | 482.87 | 306.27 | 485.07 | 306.32 |
| 506.61 | 306.77 | 517.36 | 307.07 | 519.11 | 307.08 | 525.85 | 307.14 | 527.23 | 307.14 |
| 529.87 | 307.2 | 533.39 | 307.24 | 535.76 | 307.24 | 539.95 | 307.16 | 542.87 | 307.17 |
| 543.78 | 307.16 | 549.78 | 307.23 | 551.68 | 307.26 | 553.47 | 307.33 | 555 | 307.32 |
| 560.72 | 307.35 | 562.53 | 307.3 | 566.93 | 307.23 | 568.85 | 307.16 | 571.14 | 307.16 |
| 576.15 | 307.19 | 578.69 | 307.19 | 591.96 | 307.29 | 593.02 | 307.31 | 597.96 | 307.36 |
| 601.36 | 307.31 | 607.49 | 307.27 | 610.45 | 307.23 | 616.2 | 307.19 | 618.72 | 307.22 |
| 621.37 | 307.32 | 623.76 | 307.38 | 630.5 | 307.48 | 632.71 | 307.49 | 633.45 | 307.53 |
| 634.92 | 307.51 | 636.44 | 307.39 | 636.49 | 307.35 | 640.26 | 307.19 | 642.4 | 307.11 |
| 645.88 | 307.05 | 646.86 | 307.09 | 648.81 | 307.22 | 656.38 | 307.3 | 658.26 | 307.31 |
| 660.91 | 307.3 | 663.68 | 307.21 | 666.84 | 307.25 | 669.37 | 307.27 | 671.57 | 307.26 |
| 672.33 | 307.24 | 676.65 | 307.32 | 679.79 | 307.32 | 683.53 | 307.41 | 685.66 | 307.48 |
| 687.51 | 307.6 | 691.13 | 307.77 | 693.25 | 307.84 | 698.18 | 307.95 | 701.52 | 308.05 |
| 703.29 | 308.07 | 715.23 | 308.03 | 716.52 | 307.94 | 718.64 | 307.85 | 722.09 | 307.74 |
| 728.21 | 307.31 | 730.85 | 307.2 | 733.2 | 307.16 | 735.61 | 307.22 | 737.84 | 307.33 |
| 747.93 | 307.63 | 750.75 | 307.66 | 752.85 | 307.65 | 754.02 | 307.68 | 755.82 | 307.67 |
| 758.95 | 307.79 | 768.78 | 307.89 | 772.45 | 308.01 | 775.86 | 308.14 | 777.92 | 308.18 |
| 782.87 | 308.25 | 783.41 | 308.25 | 790.66 | 308.33 | 793.6 | 308.38 | 794.57 | 308.33 |
| 797.83 | 308.2 | 802.89 | 308.07 | 803.81 | 308.06 | 805.39 | 307.98 | 806.49 | 307.98 |
| 808.2 | 308.02 | 808.95 | 308.07 | 810.36 | 308.08 | 814.96 | 308.15 | 815.24 | 308.14 |
| 818.27 | 308.17 | 821.42 | 308.15 | 823.36 | 308.11 | 825.61 | 308.04 | 827.42 | 308.02 |
| 831.58 | 308.04 | 835.7 | 308.32 | 838.34 | 308.47 | 844.06 | 308.59 | 845.94 | 308.61 |
| 856.73 | 308.66 | 859.81 | 308.71 | 861.91 | 308.76 | 862.73 | 308.74 | 864.15 | 308.75 |
| 865.8 | 308.73 | 869.19 | 308.62 | 870.05 | 308.57 | 877.74 | 308.29 | 878.53 | 308.25 |
| 880.02 | 308.24 | 884.15 | 308.24 | 884.92 | 308.26 | 889.98 | 308.3 | 894.47 | 308.31 |
| 896.56 | 308.25 | 899.21 | 308.12 | 901.27 | 308.09 | 903.58 | 308.13 | 905.1 | 308.13 |
| 908.07 | 308.06 | 918.23 | 308.13 | 928.66 | 308.1 | 932.01 | 308.03 | 939.06 | 307.91 |
| 940.18 | 307.87 | 949.29 | 307.71 | 952.13 | 307.69 | 953.33 | 307.7 | 956.49 | 307.62 |
| 959.11 | 307.64 | 959.65 | 307.67 | 961.74 | 307.63 | 969.89 | 307.76 | 972.25 | 307.76 |
| 974.34 | 307.73 | 975.57 | 307.74 | 977.07 | 307.71 | 978.65 | 307.72 | 980.18 | 307.85 |
| 987.33 | 308.05 | 988.62 | 308.07 | 992.56 | 308.06 | 993.94 | 308.07 | 999.03 | 308.06 |
| 1003.15 | 308.08 | 1007.99 | 308.16 | 1008.93 | 308.35 | 1011.09 | 308.7 | 1012 | 309.01 |
| 1013.45 | 309.21 | 1014.96 | 309.22 | 1021.9 | 309.14 | 1025.32 | 309.06 | 1029.01 | 309.08 |
| 1032.47 | 309.15 | 1040.99 | 309.39 | 1042.01 | 309.4 | 1043.59 | 309.37 | 1049.04 | 309.44 |
| 1050.53 | 309.44 | 1053.15 | 309.47 | 1054.55 | 309.45 | 1055.89 | 309.39 | 1059.5 | 309.34 |
| 1068.39 | 309.35 | 1071.24 | 309.45 | 1074.43 | 309.54 | 1074.94 | 309.51 | 1076.11 | 309.59 |
| 1078.01 | 309.58 | 1083.87 | 309.43 | 1085.06 | 309.42 | 1086.48 | 309.37 | 1089.63 | 309.2 |
| 1090.65 | 309.16 | 1093.61 | 309.15 | 1094.1 | 309.18 | 1096.34 | 309.17 | 1101.47 | 309.22 |
| 1104.58 | 309.26 | 1107.71 | 309.17 | 1110.93 | 309.09 | 1113.49 | 309.07 | 1115.64 | 309.09 |
| 1121.03 | 309.25 | 1122.18 | 309.3 | 1131.28 | 309.22 | 1135.26 | 309.23 | 1141.05 | 309.15 |
| 1142.44 | 309.16 | 1142.98 | 309.12 | 1145.16 | 309.04 | 1147.01 | 308.95 | 1149.75 | 308.79 |
| 1151.91 | 308.65 | 1153.54 | 308.5 | 1159.87 | 308.09 | 1162.05 | 308.06 | 1163.25 | 308.02 |
| 1167.54 | 307.97 | 1168.39 | 307.97 | 1171.15 | 308.05 | 1172.94 | 308.05 | 1174.63 | 308.07 |
| 1177.77 | 308.05 | 1182.67 | 308.12 | 1184.89 | 308.14 | 1188.18 | 307.97 | 1190.09 | 307.92 |
| 1190.48 | 307.98 | 1191.84 | 308 | 1193.54 | 307.95 | 1194.5 | 307.95 | 1199.69 | 307.9 |
| 1205.21 | 307.8 | 1209.96 | 307.74 | 1214.95 | 307.64 | 1216.34 | 307.62 | 1220.1 | 307.54 |
| 1220.16 | 307.53 | 1227.54 | 307.51 | 1239.71 | 307.51 | 1245.83 | 307.63 | 1248.64 | 307.64 |
| 1251.32 | 307.67 | 1257.97 | 307.76 | 1264.78 | 307.89 | 1266.21 | 307.93 | 1268.2 | 307.96 |
| 1269.02 | 307.94 | 1275.01 | 307.89 | 1277.19 | 307.91 | 1283.13 | 307.99 | 1285.51 | 308.03 |
| 1288.86 | 308 | 1297.63 | 307.97 | 1309.59 | 307.83 | 1318.17 | 307.83 | 1324.05 | 307.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1325.56 | 307.96 | 1327.18 | 307.99 | 1331.12 | 308.09 | 1332.16 | 308.09 | 1339.15 | 308.05 |
| 1339.39 | 308.04 | 1346.89 | 307.97 | 1351.3 | 307.95 | 1355.29 | 308 | 1358.87 | 307.99 |
| 1359.86 | 308 | 1362.56 | 307.96 | 1365.59 | 307.97 | 1371.08 | 308.06 | 1371.47 | 308.2 |
| 1372.82 | 308.5 | 1373.81 | 308.79 | 1375.09 | 309.11 | 1376.01 | 309.4 | 1377.59 | 309.84 |
| 1377.8 | 309.95 | 1379.08 | 310.43 | 1379.83 | 310.76 | 1380.77 | 311.24 | 1382.14 | 311.87 |
| 1383.76 | 312.57 | 1384.26 | 312.88 | 1384.6 | 313.02 | 1385.16 | 313.12 | 1386 | 313.2 |
| 1388.13 | 313.36 | 1390.36 | 313.62 | 1393.61 | 314.14 | 1395.74 | 314.47 | 1397.52 | 314.88 |
| 1399.52 | 315.24 | 1402.2 | 315.62 | 1404.69 | 315.93 | 1409.02 | 316.59 | 1411.36 | 316.99 |
| 1412.64 | 317.25 | 1417.2 | 318.1 | 1419.42 | 318.49 | 1422.55 | 318.98 | 1423.11 | 319.15 |
| 1425.57 | 319.75 | 1428.12 | 320.35 | 1429.49 | 320.65 | 1431.97 | 321.26 | 1433.37 | 321.58 |
| 1435.96 | 322.2 | 1436.91 | 322.4 | 1438.67 | 322.81 | 1440.14 | 323.13 | 1441.39 | 323.45 |
| 1442.77 | 323.85 | 1446.21 | 324.79 | 1447.87 | 325.3 | 1450.8 | 326.12 | 1452.29 | 326.64 |
| 1452.76 | 326.75 | 1455.96 | 327.39 | 1456.41 | 327.46 | 1462.54 | 328.82 | 1464.44 | 329.21 |
| 1467.47 | 329.77 | 1470.4 | 330.37 | 1471.32 | 330.59 | 1475.13 | 330.68 | 1480.68 | 330.75 |
| 1485.5 | 330.92 | 1488.41 | 330.99 | 1489.96 | 331.07 | 1491.8 | 331.1 | 1495.61 | 331.08 |
| 1504.5 | 331.13 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 245.31 | .04 | 1388.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 245.31 | 1388.13 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2880.41*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.73 | 2.64 | 331.71 | 10.16 | 331.68 | 29.34 | 331.42 | 35.59 | 331.16 |
| 39.94 | 330.95 | 40.42 | 330.89 | 44.4 | 330.57 | 47.85 | 330.12 | 48.85 | 329.86 |
| 49.89 | 329.64 | 51.39 | 329.26 | 52.91 | 328.71 | 54.04 | 328.24 | 56.17 | 327.55 |
| 58.04 | 327.16 | 58.69 | 327.18 | 60.26 | 326.83 | 61.11 | 326.61 | 62.74 | 326.24 |
| 64.07 | 326.03 | 64.54 | 326.02 | 65.15 | 326.17 | 65.82 | 326.19 | 67.78 | 326.35 |
| 69.7 | 326.4 | 72.05 | 326.23 | 74.72 | 325.78 | 77.13 | 325.21 | 80.33 | 324.55 |
| 83.51 | 323.86 | 85.74 | 323.43 | 89.87 | 322.92 | 91.39 | 322.7 | 93.38 | 322.44 |
| 96.97 | 321.89 | 98.44 | 321.64 | 100.86 | 321.14 | 103.76 | 320.59 | 104.62 | 320.39 |
| 106.8 | 319.76 | 108.75 | 319.23 | 111.48 | 318.42 | 112.53 | 318.05 | 114.68 | 317.47 |
| 117.71 | 316.61 | 118.99 | 316.22 | 120.06 | 315.92 | 121.41 | 315.62 | 123.06 | 315.17 |
| 124.92 | 314.53 | 125.18 | 314.46 | 127.91 | 313.85 | 130.18 | 313.41 | 130.48 | 313.37 |
| 132.67 | 313.28 | 133.54 | 313.18 | 135.79 | 313.06 | 137.41 | 312.89 | 138.41 | 312.73 |
| 139.21 | 312.67 | 140.62 | 312.47 | 142.36 | 312.34 | 143.51 | 312.29 | 146.91 | 312.08 |
| 148.44 | 311.94 | 150.31 | 311.64 | 151.91 | 311.55 | 157.61 | 311.04 | 163.01 | 310.57 |
| 168.24 | 310.19 | 171.04 | 309.96 | 177.55 | 309.6 | 182.06 | 309.31 | 186.95 | 309.07 |
| 188.47 | 308.97 | 191.93 | 308.72 | 195.11 | 308.53 | 197.93 | 308.32 | 199.23 | 308.17 |
| 199.56 | 308.07 | 201.81 | 307.91 | 202.6 | 307.92 | 203.23 | 307.98 | 205 | 307.95 |
| 211.01 | 307.8 | 216.26 | 307.74 | 220.65 | 307.64 | 230.02 | 307.49 | 232.75 | 307.43 |
| 240.38 | 307.07 | 240.96 | 306.99 | 242.46 | 306.96 | 249.75 | 306.97 | 253.38 | 306.8 |
| 254.83 | 306.77 | 261.26 | 306.68 | 265.16 | 306.67 | 266.46 | 306.68 | 267.65 | 306.72 |
| 268.41 | 306.71 | 270.97 | 306.58 | 272.1 | 306.56 | 275.69 | 306.41 | 279.37 | 306.36 |
| 279.54 | 306.37 | 285.07 | 306.27 | 285.72 | 306.28 | 292.88 | 306.16 | 295.96 | 306.19 |
| 299.43 | 306.25 | 300.85 | 306.31 | 301.49 | 306.38 | 303.39 | 306.38 | 305.23 | 306.35 |
| 305.99 | 306.24 | 306.69 | 306.27 | 307.55 | 306.38 | 309.43 | 306.42 | 310.92 | 306.49 |
| 313.93 | 306.43 | 318 | 306.31 | 321.12 | 306.31 | 323.55 | 306.26 | 324.82 | 306.21 |
| 325.71 | 306.25 | 329.9 | 306.33 | 332.05 | 306.36 | 333.8 | 306.44 | 335.57 | 306.45 |
| 337.76 | 306.52 | 339.53 | 306.51 | 343.95 | 306.46 | 346.56 | 306.41 | 348 | 306.41 |
| 353.18 | 306.32 | 355.33 | 306.3 | 357 | 306.31 | 358.11 | 306.28 | 362.91 | 306.26 |
| 363.85 | 306.18 | 365.14 | 306.12 | 367.78 | 306.27 | 368.86 | 306.3 | 370.72 | 306.3 |
| 374.01 | 306.36 | 379.82 | 306.49 | 387.51 | 306.46 | 389.29 | 306.46 | 391.29 | 306.37 |
| 394.68 | 306.26 | 395.42 | 306.28 | 397.61 | 306.46 | 403.55 | 306.51 | 407.65 | 306.56 |
| 409.84 | 306.56 | 412.61 | 306.53 | 414.3 | 306.48 | 415.1 | 306.4 | 425.08 | 306.27 |
| 426.84 | 306.31 | 434.71 | 306.36 | 440.53 | 306.34 | 441.2 | 306.33 | 459.57 | 306.28 |
| 462.8 | 306.24 | 463.4 | 306.18 | 465.45 | 306.04 | 469.83 | 305.8 | 471.63 | 305.71 |
| 471.9 | 305.65 | 474.18 | 305.58 | 474.87 | 305.59 | 476.08 | 305.68 | 476.73 | 305.79 |
| 480.83 | 305.82 | 486.09 | 305.9 | 488.28 | 305.95 | 509.78 | 306.4 | 520.52 | 306.7 |
| 522.27 | 306.72 | 529 | 306.77 | 530.37 | 306.77 | 533.01 | 306.83 | 536.53 | 306.87 |
| 538.88 | 306.87 | 543.07 | 306.79 | 545.98 | 306.8 | 546.89 | 306.79 | 552.88 | 306.86 |
| 554.78 | 306.9 | 556.56 | 306.96 | 558.09 | 306.95 | 564.7 | 306.98 | 565.62 | 306.93 |
| 566.69 | 306.92 | 570.01 | 306.85 | 571.01 | 306.81 | 575.01 | 306.78 | 575.57 | 306.8 |
| 579.21 | 306.83 | 581.74 | 306.82 | 594.99 | 306.91 | 596.05 | 306.93 | 600.98 | 306.98 |
| 604.38 | 306.91 | 610.5 | 306.86 | 613.45 | 306.82 | 619.19 | 306.79 | 622.45 | 306.84 |
| 624.35 | 306.93 | 626.74 | 307 | 633.47 | 307.1 | 635.67 | 307.11 | 636.41 | 307.15 |
| 637.88 | 307.14 | 639.39 | 307.01 | 639.44 | 306.97 | 645.35 | 306.74 | 648.82 | 306.7 |
| 649.8 | 306.73 | 651.74 | 306.86 | 659.3 | 306.96 | 663.1 | 306.97 | 666.59 | 306.88 |
| 668.12 | 306.89 | 672.27 | 306.94 | 675.81 | 306.91 | 679.53 | 306.98 | 682.67 | 306.97 |
| 686.41 | 307.04 | 688.53 | 307.12 | 690.37 | 307.24 | 693.99 | 307.41 | 696.11 | 307.48 |
| 701.02 | 307.58 | 704.36 | 307.68 | 706.13 | 307.71 | 718.04 | 307.67 | 719.34 | 307.59 |
| 721.46 | 307.5 | 724.9 | 307.4 | 731.01 | 306.96 | 732.97 | 306.87 | 735.99 | 306.81 |
| 738.39 | 306.87 | 740.62 | 306.98 | 744.33 | 307.1 | 749.01 | 307.23 | 750.69 | 307.29 |
| 753.51 | 307.31 | 755.61 | 307.3 | 756.77 | 307.33 | 758.1 | 307.3 | 761.69 | 307.42 |
| 771.5 | 307.49 | 775.17 | 307.61 | 777.44 | 307.7 | 778.58 | 307.73 | 785.57 | 307.86 |
| 786.11 | 307.86 | 793.34 | 307.94 | 796.28 | 307.99 | 800.5 | 307.83 | 805.56 | 307.7 |
| 806.75 | 307.69 | 808.06 | 307.62 | 809.15 | 307.62 | 811.61 | 307.71 | 813.02 | 307.72 |
| 817.61 | 307.79 | 817.88 | 307.78 | 820.91 | 307.81 | 824.06 | 307.79 | 826.95 | 307.72 |
| 829.51 | 307.67 | 834.2 | 307.68 | 834.99 | 307.75 | 836.35 | 307.82 | 838.31 | 307.95 |
| 840.95 | 308.09 | 846.66 | 308.2 | 848.54 | 308.21 | 859.31 | 308.24 | 862.38 | 308.29 |
| 864.48 | 308.34 | 868.36 | 308.32 | 871.74 | 308.21 | 873.57 | 308.13 | 880 | 307.9 |
| 881.07 | 307.85 | 882.38 | 307.83 | 885.36 | 307.84 | 886.68 | 307.83 | 887.45 | 307.85 |
| 894.84 | 307.89 | 896.98 | 307.89 | 899.07 | 307.83 | 901.72 | 307.7 | 903.77 | 307.68 |
| 906.07 | 307.73 | 907.59 | 307.73 | 910.55 | 307.66 | 918.01 | 307.72 | 919.54 | 307.75 |
| 920.7 | 307.75 | 931.11 | 307.72 | 934.45 | 307.65 | 941.49 | 307.53 | 942.61 | 307.49 |
| 951.7 | 307.32 | 954.54 | 307.3 | 955.74 | 307.31 | 958.89 | 307.23 | 960.83 | 307.24 |
| 962.05 | 307.29 | 964.14 | 307.24 | 972.27 | 307.38 | 974.72 | 307.37 | 976.71 | 307.34 |
| 977.94 | 307.35 | 979.44 | 307.32 | 981.01 | 307.33 | 982.54 | 307.47 | 989.68 | 307.68 |
| 990.97 | 307.71 | 992.39 | 307.71 | 1001.36 | 307.67 | 1005.47 | 307.69 | 1010.31 | 307.76 |
| 1011.25 | 307.93 | 1013.4 | 308.26 | 1014.31 | 308.55 | 1015.76 | 308.73 | 1017.26 | 308.73 |
| 1024.19 | 308.63 | 1027.6 | 308.53 | 1031.29 | 308.54 | 1034.74 | 308.62 | 1043.25 | 308.86 |
| 1044.26 | 308.87 | 1045.84 | 308.83 | 1051.29 | 308.89 | 1052.77 | 308.89 | 1055.39 | 308.92 |
| 1056.79 | 308.91 | 1058.13 | 308.85 | 1061.73 | 308.82 | 1070.6 | 308.86 | 1075.96 | 309.04 |
| 1077.14 | 309.03 | 1078.31 | 309.11 | 1080.2 | 309.09 | 1081.75 | 309.04 | 1083.1 | 309.02 |
| 1086.05 | 308.94 | 1087.24 | 308.93 | 1088.66 | 308.88 | 1091.8 | 308.71 | 1092.82 | 308.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1095.78 | 308.66 | 1096.27 | 308.7 | 1098.5 | 308.7 | 1105.28 | 308.78 | 1106.72 | 308.79 |
| 1108.32 | 308.76 | 1109.86 | 308.7 | 1113.07 | 308.62 | 1115.62 | 308.59 | 1117.77 | 308.61 |
| 1122.47 | 308.75 | 1124.3 | 308.82 | 1133.38 | 308.78 | 1137.35 | 308.8 | 1143.13 | 308.74 |
| 1144.3 | 308.75 | 1146.5 | 308.67 | 1149.09 | 308.56 | 1153.97 | 308.28 | 1155.61 | 308.14 |
| 1161.93 | 307.76 | 1164.1 | 307.73 | 1165.3 | 307.69 | 1167.5 | 307.67 | 1169.57 | 307.63 |
| 1170.42 | 307.63 | 1173.19 | 307.72 | 1174.97 | 307.72 | 1175.44 | 307.74 | 1179.15 | 307.71 |
| 1186.9 | 307.82 | 1190.18 | 307.66 | 1191.94 | 307.61 | 1192.48 | 307.67 | 1193.84 | 307.69 |
| 1195.54 | 307.63 | 1197.65 | 307.62 | 1201.67 | 307.58 | 1207.19 | 307.48 | 1211.78 | 307.42 |
| 1211.92 | 307.43 | 1216.91 | 307.33 | 1218.3 | 307.31 | 1222.05 | 307.21 | 1229.47 | 307.19 |
| 1241.62 | 307.19 | 1247.74 | 307.32 | 1253.21 | 307.36 | 1262.06 | 307.51 | 1266.65 | 307.61 |
| 1268.08 | 307.65 | 1270.07 | 307.68 | 1270.88 | 307.65 | 1276.87 | 307.59 | 1279.04 | 307.6 |
| 1287.34 | 307.7 | 1290.69 | 307.66 | 1299.45 | 307.64 | 1307.11 | 307.54 | 1310.64 | 307.5 |
| 1311.39 | 307.48 | 1319.95 | 307.48 | 1322.11 | 307.5 | 1325.82 | 307.55 | 1326.04 | 307.57 |
| 1332.88 | 307.75 | 1340.9 | 307.72 | 1341.13 | 307.71 | 1348.62 | 307.63 | 1353.02 | 307.61 |
| 1357.01 | 307.67 | 1358.98 | 307.66 | 1361.57 | 307.67 | 1364.26 | 307.64 | 1367.29 | 307.66 |
| 1372.77 | 307.77 | 1373.16 | 307.92 | 1374.5 | 308.25 | 1375.49 | 308.56 | 1376.77 | 308.91 |
| 1377.69 | 309.23 | 1379.27 | 309.71 | 1379.47 | 309.83 | 1380.75 | 310.35 | 1381.74 | 310.84 |
| 1382.17 | 311.09 | 1383.81 | 311.91 | 1385.43 | 312.67 | 1385.93 | 313.01 | 1386.27 | 313.16 |
| 1386.83 | 313.27 | 1387.67 | 313.36 | 1389.78 | 313.54 | 1392.06 | 313.83 | 1397.52 | 314.73 |
| 1399.33 | 315.14 | 1401.37 | 315.51 | 1404.09 | 315.9 | 1406.62 | 316.22 | 1411.02 | 316.9 |
| 1413.4 | 317.32 | 1414.7 | 317.59 | 1419.34 | 318.45 | 1421.59 | 318.85 | 1424.77 | 319.34 |
| 1425.48 | 319.53 | 1430.43 | 320.63 | 1433 | 321.17 | 1434.52 | 321.53 | 1435.77 | 321.79 |
| 1437.46 | 322.18 | 1439.37 | 322.57 | 1441.15 | 322.97 | 1442.65 | 323.27 | 1443.92 | 323.57 |
| 1445.33 | 323.96 | 1448.82 | 324.86 | 1450.5 | 325.35 | 1453.48 | 326.13 | 1454.86 | 326.58 |
| 1455.48 | 326.73 | 1458.73 | 327.35 | 1459.18 | 327.41 | 1465.41 | 328.72 | 1467.34 | 329.09 |
| 1471.59 | 329.83 | 1474.34 | 330.39 | 1478.87 | 330.5 | 1483.85 | 330.57 | 1485.96 | 330.63 |
| 1488.75 | 330.73 | 1491.71 | 330.81 | 1493.29 | 330.88 | 1495.15 | 330.91 | 1499.03 | 330.89 |
| 1508.06 | 330.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 240.38 | .04 | 1389.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 240.38 | 1389.78 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2860.57*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.48 | .86 | 331.49 | 2.58 | 331.47 | 9.95 | 331.45 | 28.74 | 331.22 |
| 34.86 | 330.98 | 39.12 | 330.8 | 39.6 | 330.74 | 43.5 | 330.44 | 46.87 | 330.02 |
| 47.85 | 329.77 | 49.25 | 329.47 | 50.33 | 329.2 | 51.83 | 328.68 | 53.09 | 328.19 |
| 54.19 | 327.86 | 54.64 | 327.69 | 56.85 | 327.23 | 57.49 | 327.25 | 59.03 | 326.9 |
| 61.41 | 326.31 | 62.76 | 326.07 | 63.21 | 326.07 | 63.81 | 326.23 | 66.39 | 326.44 |
| 68.27 | 326.52 | 70.68 | 326.36 | 73.19 | 325.95 | 75.55 | 325.41 | 78.68 | 324.78 |
| 81.8 | 324.12 | 83.98 | 323.7 | 88.03 | 323.19 | 89.52 | 322.98 | 91.46 | 322.73 |
| 94.98 | 322.19 | 96.43 | 321.94 | 98.79 | 321.46 | 101.64 | 320.92 | 102.48 | 320.73 |
| 104.61 | 320.09 | 106.52 | 319.56 | 109.19 | 318.73 | 110.22 | 318.35 | 112.33 | 317.76 |
| 115.29 | 316.87 | 117.6 | 316.15 | 118.93 | 315.85 | 120.54 | 315.39 | 122.36 | 314.72 |
| 125.29 | 314.02 | 127.51 | 313.56 | 129.95 | 313.44 | 130.81 | 313.34 | 133.01 | 313.22 |
| 134.6 | 313.05 | 135.57 | 312.88 | 136.36 | 312.82 | 137.74 | 312.62 | 139.44 | 312.49 |
| 140.57 | 312.44 | 143.9 | 312.23 | 145.4 | 312.09 | 147.23 | 311.78 | 148.8 | 311.67 |
| 149.2 | 311.62 | 152.96 | 311.26 | 154.38 | 311.11 | 159.67 | 310.6 | 164.8 | 310.19 |
| 167.53 | 309.95 | 173.92 | 309.55 | 178.33 | 309.24 | 183.12 | 308.97 | 184.61 | 308.87 |
| 188 | 308.61 | 191.11 | 308.41 | 193.88 | 308.19 | 195.14 | 308.04 | 195.47 | 307.94 |
| 197.67 | 307.77 | 199.07 | 307.83 | 200.8 | 307.78 | 206.69 | 307.58 | 209.75 | 307.53 |
| 211.83 | 307.48 | 216.13 | 307.36 | 226.57 | 307.12 | 227.98 | 307.08 | 235.46 | 306.69 |
| 236.06 | 306.6 | 237.6 | 306.58 | 245.15 | 306.61 | 248.91 | 306.45 | 250.41 | 306.42 |
| 257.07 | 306.35 | 261.1 | 306.35 | 262.45 | 306.36 | 263.68 | 306.4 | 264.46 | 306.39 |
| 267.11 | 306.28 | 268.28 | 306.26 | 272 | 306.11 | 273.65 | 306.08 | 275.98 | 306.06 |
| 281.71 | 305.95 | 282.38 | 305.96 | 288.93 | 305.83 | 289.79 | 305.82 | 294.76 | 305.86 |
| 298.04 | 305.94 | 298.7 | 306.01 | 301.74 | 306 | 303.14 | 305.93 | 303.36 | 305.86 |
| 304.08 | 305.89 | 304.97 | 306.01 | 306.91 | 306.05 | 308.46 | 306.13 | 311.57 | 306.06 |
| 315.79 | 305.94 | 319.02 | 305.93 | 321.53 | 305.87 | 322.84 | 305.82 | 323.76 | 305.87 |
| 328.1 | 305.95 | 330.33 | 305.98 | 332.14 | 306.07 | 333.97 | 306.08 | 336.24 | 306.15 |
| 342.64 | 306.1 | 345.34 | 306.04 | 346.83 | 306.04 | 352.19 | 305.94 | 356.15 | 305.93 |
| 357.3 | 305.9 | 361.99 | 305.9 | 363.24 | 305.8 | 364.57 | 305.74 | 367.3 | 305.9 |
| 368.42 | 305.93 | 370.35 | 305.94 | 373.76 | 306 | 379.77 | 306.15 | 387.72 | 306.12 |
| 389.57 | 306.12 | 391.63 | 306.02 | 395.14 | 305.9 | 395.91 | 305.92 | 398.18 | 306.12 |
| 404.33 | 306.17 | 408.57 | 306.22 | 410.83 | 306.23 | 413.7 | 306.2 | 415.45 | 306.15 |
| 416.27 | 306.07 | 426.61 | 305.93 | 428.43 | 305.97 | 436.57 | 306.02 | 442.59 | 306.01 |
| 443.29 | 306 | 462.3 | 305.95 | 465.64 | 305.91 | 468.38 | 305.71 | 472.91 | 305.45 |
| 474.11 | 305.37 | 474.78 | 305.36 | 475.06 | 305.3 | 477.42 | 305.21 | 479.32 | 305.31 |
| 479.96 | 305.42 | 484.05 | 305.44 | 489.31 | 305.52 | 491.5 | 305.58 | 512.96 | 306.03 |
| 523.68 | 306.34 | 525.42 | 306.36 | 533.52 | 306.41 | 536.14 | 306.46 | 538.84 | 306.49 |
| 543.31 | 306.48 | 543.93 | 306.45 | 545.18 | 306.45 | 546.19 | 306.41 | 549.1 | 306.43 |
| 550.01 | 306.42 | 555.98 | 306.49 | 557.88 | 306.53 | 559.66 | 306.6 | 561.19 | 306.59 |
| 567.78 | 306.61 | 568.7 | 306.56 | 569.77 | 306.55 | 573.08 | 306.48 | 574.09 | 306.44 |
| 578.07 | 306.41 | 578.63 | 306.43 | 582.27 | 306.46 | 584.8 | 306.45 | 598.03 | 306.54 |
| 604 | 306.59 | 607.39 | 306.52 | 616 | 306.42 | 616.45 | 306.41 | 622.18 | 306.38 |
| 625.43 | 306.44 | 627.33 | 306.53 | 629.71 | 306.62 | 636.43 | 306.72 | 638.63 | 306.74 |
| 639.52 | 306.77 | 640.83 | 306.76 | 642.35 | 306.63 | 642.4 | 306.59 | 646.15 | 306.45 |
| 649.26 | 306.36 | 651.76 | 306.34 | 652.73 | 306.38 | 654.67 | 306.5 | 662.22 | 306.61 |
| 666.02 | 306.63 | 668.35 | 306.58 | 669.5 | 306.54 | 671.03 | 306.55 | 675.17 | 306.6 |
| 678.12 | 306.57 | 682.42 | 306.64 | 685.55 | 306.62 | 689.28 | 306.68 | 691.4 | 306.76 |
| 693.24 | 306.88 | 696.85 | 307.04 | 698.96 | 307.11 | 703.87 | 307.21 | 707.2 | 307.32 |
| 708.97 | 307.35 | 720.86 | 307.31 | 722.15 | 307.23 | 724.27 | 307.15 | 727.71 | 307.06 |
| 733.8 | 306.62 | 735.76 | 306.52 | 738.78 | 306.46 | 741.18 | 306.52 | 744.29 | 306.67 |
| 753.45 | 306.94 | 757.12 | 306.96 | 758.36 | 306.94 | 759.53 | 306.97 | 760.85 | 306.94 |
| 764.44 | 307.06 | 774.23 | 307.1 | 777.89 | 307.2 | 781.29 | 307.33 | 788.27 | 307.46 |
| 788.81 | 307.46 | 796.03 | 307.55 | 798.96 | 307.61 | 803.18 | 307.46 | 808.23 | 307.34 |
| 809.57 | 307.32 | 810.72 | 307.26 | 812.3 | 307.27 | 814.26 | 307.35 | 815.67 | 307.35 |
| 820.26 | 307.43 | 820.53 | 307.42 | 823.55 | 307.45 | 826.69 | 307.44 | 828.63 | 307.4 |
| 830.51 | 307.34 | 832.14 | 307.32 | 836.82 | 307.33 | 840.92 | 307.59 | 843.55 | 307.71 |
| 849.26 | 307.81 | 851.13 | 307.82 | 861.88 | 307.83 | 867.05 | 307.92 | 869.27 | 307.92 |
| 870.92 | 307.9 | 874.3 | 307.8 | 876.13 | 307.72 | 880.32 | 307.57 | 882.54 | 307.5 |
| 883.6 | 307.45 | 884.91 | 307.43 | 889.21 | 307.42 | 889.97 | 307.44 | 895.02 | 307.47 |
| 899.49 | 307.47 | 901.57 | 307.41 | 903.5 | 307.31 | 905.24 | 307.27 | 906.27 | 307.27 |
| 908.57 | 307.32 | 910.72 | 307.32 | 913.04 | 307.25 | 920.49 | 307.34 | 922.01 | 307.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 923.17 | 307.37 | 933.57 | 307.34 | 936.9 | 307.27 | 939.31 | 307.24 | 943.92 | 307.15 |
| 945.04 | 307.11 | 954.12 | 306.93 | 956.95 | 306.91 | 958.15 | 306.92 | 961.29 | 306.84 |
| 963.23 | 306.85 | 964.45 | 306.9 | 966.53 | 306.85 | 969.61 | 306.9 | 974.65 | 307 |
| 977.1 | 306.99 | 979.08 | 306.95 | 980.31 | 306.96 | 981.81 | 306.93 | 983.38 | 306.94 |
| 984.9 | 307.09 | 989.98 | 307.25 | 993.32 | 307.34 | 998.62 | 307.32 | 1003.69 | 307.28 |
| 1007.8 | 307.29 | 1012.62 | 307.36 | 1013.56 | 307.51 | 1015.71 | 307.81 | 1016.62 | 308.08 |
| 1018.06 | 308.25 | 1019.56 | 308.25 | 1026.48 | 308.12 | 1029.88 | 308.01 | 1033.57 | 308.01 |
| 1037.01 | 308.08 | 1045.51 | 308.32 | 1046.52 | 308.34 | 1048.09 | 308.29 | 1053.53 | 308.35 |
| 1055.02 | 308.34 | 1057.62 | 308.38 | 1059.02 | 308.37 | 1060.36 | 308.32 | 1063.95 | 308.29 |
| 1072.81 | 308.37 | 1075.65 | 308.47 | 1078.83 | 308.57 | 1079.34 | 308.54 | 1080.5 | 308.63 |
| 1082.39 | 308.6 | 1083.95 | 308.55 | 1085.29 | 308.53 | 1088.23 | 308.45 | 1089.42 | 308.45 |
| 1090.84 | 308.39 | 1093.97 | 308.22 | 1094.44 | 308.18 | 1097.95 | 308.18 | 1098.48 | 308.22 |
| 1100.66 | 308.23 | 1101.49 | 308.25 | 1105.78 | 308.29 | 1108.87 | 308.33 | 1110.47 | 308.29 |
| 1112 | 308.23 | 1115.2 | 308.15 | 1117.76 | 308.12 | 1119.9 | 308.14 | 1125.27 | 308.3 |
| 1126.26 | 308.35 | 1135.49 | 308.33 | 1138.04 | 308.36 | 1140.29 | 308.37 | 1145.22 | 308.33 |
| 1146.39 | 308.34 | 1149.31 | 308.25 | 1151.16 | 308.18 | 1156.04 | 307.92 | 1157.67 | 307.79 |
| 1163.98 | 307.43 | 1166.15 | 307.4 | 1167.35 | 307.36 | 1171.61 | 307.29 | 1172.46 | 307.29 |
| 1173.37 | 307.34 | 1175.22 | 307.39 | 1177 | 307.39 | 1177.47 | 307.41 | 1179.56 | 307.38 |
| 1181.82 | 307.38 | 1182.68 | 307.41 | 1184.12 | 307.42 | 1187.71 | 307.47 | 1188.91 | 307.5 |
| 1192.19 | 307.35 | 1194.09 | 307.31 | 1194.72 | 307.37 | 1195.84 | 307.38 | 1197.53 | 307.32 |
| 1203.66 | 307.26 | 1207.59 | 307.2 | 1209.16 | 307.16 | 1213.89 | 307.11 | 1218.86 | 307.01 |
| 1220.25 | 306.99 | 1224 | 306.89 | 1231.41 | 306.87 | 1243.54 | 306.87 | 1249.64 | 307 |
| 1255.11 | 307.06 | 1261.73 | 307.18 | 1268.52 | 307.33 | 1268.93 | 307.35 | 1272.1 | 307.39 |
| 1272.75 | 307.37 | 1277.19 | 307.32 | 1278.06 | 307.3 | 1281.74 | 307.3 | 1286.81 | 307.34 |
| 1289.18 | 307.37 | 1292.52 | 307.33 | 1301.26 | 307.3 | 1312.44 | 307.15 | 1313.18 | 307.13 |
| 1321.73 | 307.13 | 1323.88 | 307.15 | 1327.59 | 307.21 | 1329.09 | 307.27 | 1334.64 | 307.41 |
| 1342.64 | 307.38 | 1342.88 | 307.37 | 1350.35 | 307.29 | 1354.74 | 307.27 | 1358.57 | 307.34 |
| 1360.69 | 307.33 | 1363.28 | 307.35 | 1365.97 | 307.32 | 1368.99 | 307.35 | 1374.46 | 307.48 |
| 1374.85 | 307.64 | 1376.19 | 308 | 1377.18 | 308.34 | 1378.46 | 308.71 | 1379.37 | 309.06 |
| 1380.95 | 309.58 | 1381.15 | 309.7 | 1382.43 | 310.28 | 1383.17 | 310.67 | 1385.48 | 311.95 |
| 1387.06 | 312.76 | 1387.59 | 313.14 | 1387.93 | 313.31 | 1388.49 | 313.42 | 1389.33 | 313.52 |
| 1391.44 | 313.72 | 1394.67 | 314.2 | 1399.31 | 314.99 | 1401.14 | 315.4 | 1403.21 | 315.78 |
| 1405.98 | 316.18 | 1408.56 | 316.51 | 1413.03 | 317.22 | 1415.76 | 317.72 | 1416.76 | 317.93 |
| 1421.47 | 318.81 | 1423.76 | 319.21 | 1426.81 | 319.66 | 1430.11 | 320.38 | 1432.75 | 320.91 |
| 1435.36 | 321.42 | 1436.89 | 321.76 | 1439.89 | 322.37 | 1443.64 | 323.12 | 1445.72 | 323.52 |
| 1451.55 | 324.96 | 1453.14 | 325.4 | 1456.16 | 326.14 | 1457.56 | 326.56 | 1458.19 | 326.71 |
| 1461.5 | 327.3 | 1461.96 | 327.37 | 1468.29 | 328.62 | 1470.25 | 328.98 | 1471.48 | 329.16 |
| 1474.56 | 329.66 | 1477.36 | 330.19 | 1481.96 | 330.31 | 1487.02 | 330.38 | 1489.17 | 330.44 |
| 1492.01 | 330.54 | 1495.01 | 330.62 | 1496.61 | 330.7 | 1498.5 | 330.73 | 1502.44 | 330.7 |
| 1511.62 | 330.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 235.46 | .04 | 1391.44 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 235.46 | 1391.44 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2840.73*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.24 | .84 | 331.25 | 2.53 | 331.23 | 9.74 | 331.22 | 28.14 | 331.02 |
| 34.13 | 330.81 | 38.31 | 330.64 | 38.77 | 330.58 | 42.59 | 330.31 | 45.89 | 329.92 |
| 46.85 | 329.67 | 47.84 | 329.48 | 49.28 | 329.15 | 50.74 | 328.66 | 51.98 | 328.19 |
| 53.06 | 327.9 | 53.5 | 327.74 | 55.66 | 327.3 | 56.29 | 327.31 | 57.79 | 326.96 |
| 58.6 | 326.74 | 60.17 | 326.36 | 61.45 | 326.12 | 61.89 | 326.11 | 62.48 | 326.3 |
| 65 | 326.54 | 66.85 | 326.64 | 67.3 | 326.63 | 69.21 | 326.5 | 71.66 | 326.12 |
| 73.97 | 325.61 | 77.04 | 325.01 | 80.09 | 324.37 | 82.23 | 323.96 | 86.19 | 323.47 |
| 89.55 | 323.02 | 92.99 | 322.49 | 94.41 | 322.24 | 96.73 | 321.78 | 99.51 | 321.25 |
| 100.33 | 321.06 | 102.43 | 320.41 | 104.3 | 319.88 | 106.91 | 319.04 | 108.31 | 318.53 |
| 109.98 | 318.04 | 112.88 | 317.13 | 114.11 | 316.71 | 115.14 | 316.39 | 116.44 | 316.08 |
| 118.02 | 315.61 | 119.8 | 314.91 | 122.67 | 314.18 | 124.84 | 313.71 | 125.13 | 313.67 |
| 127.23 | 313.6 | 128.07 | 313.5 | 130.23 | 313.39 | 131.78 | 313.22 | 132.74 | 313.04 |
| 133.51 | 312.98 | 134.86 | 312.77 | 136.53 | 312.63 | 137.63 | 312.59 | 140.89 | 312.38 |
| 142.36 | 312.23 | 144.15 | 311.92 | 145.68 | 311.79 | 151.16 | 311.18 | 156.33 | 310.63 |
| 161.35 | 310.2 | 164.03 | 309.93 | 170.28 | 309.51 | 174.6 | 309.17 | 177.69 | 308.97 |
| 179.29 | 308.88 | 184.07 | 308.5 | 187.11 | 308.29 | 189.82 | 308.06 | 191.06 | 307.91 |
| 191.38 | 307.82 | 193.54 | 307.63 | 194.9 | 307.67 | 196.6 | 307.61 | 202.37 | 307.37 |
| 205.36 | 307.3 | 211.61 | 307.08 | 220.59 | 306.81 | 223.21 | 306.72 | 230.54 | 306.31 |
| 231.15 | 306.22 | 232.75 | 306.19 | 240.55 | 306.25 | 244.44 | 306.09 | 245.99 | 306.07 |
| 252.87 | 306.02 | 257.04 | 306.02 | 259.71 | 306.08 | 260.51 | 306.08 | 263.25 | 305.98 |
| 266.07 | 305.91 | 268.31 | 305.81 | 272.42 | 305.75 | 278.34 | 305.63 | 279.03 | 305.63 |
| 285.8 | 305.49 | 286.7 | 305.48 | 290 | 305.49 | 293.7 | 305.54 | 295.23 | 305.58 |
| 295.91 | 305.65 | 299.05 | 305.63 | 300.5 | 305.55 | 300.73 | 305.48 | 301.47 | 305.51 |
| 302.39 | 305.64 | 304.4 | 305.68 | 306 | 305.76 | 309.22 | 305.69 | 310.47 | 305.64 |
| 313.57 | 305.56 | 316.91 | 305.55 | 319.5 | 305.49 | 320.87 | 305.43 | 321.82 | 305.48 |
| 326.3 | 305.58 | 328.61 | 305.61 | 330.48 | 305.71 | 332.37 | 305.71 | 334.71 | 305.79 |
| 336.61 | 305.78 | 341.34 | 305.73 | 344.13 | 305.67 | 345.66 | 305.67 | 351.79 | 305.56 |
| 353.51 | 305.55 | 355.3 | 305.56 | 356.49 | 305.52 | 361.62 | 305.52 | 362.62 | 305.42 |
| 364 | 305.36 | 364.64 | 305.38 | 365.6 | 305.47 | 366.99 | 305.54 | 369.97 | 305.57 |
| 373.5 | 305.64 | 379.71 | 305.8 | 387.94 | 305.77 | 389.84 | 305.78 | 391.98 | 305.67 |
| 394.51 | 305.59 | 395.6 | 305.54 | 396.4 | 305.56 | 397.91 | 305.71 | 398.75 | 305.77 |
| 405.39 | 305.83 | 409.49 | 305.89 | 411.82 | 305.9 | 414.79 | 305.87 | 416.6 | 305.82 |
| 417.45 | 305.73 | 428.13 | 305.58 | 429.31 | 305.63 | 430.02 | 305.63 | 438.43 | 305.69 |
| 445.38 | 305.67 | 465.03 | 305.62 | 468.49 | 305.59 | 471.32 | 305.37 | 476 | 305.1 |
| 477.93 | 305 | 478.22 | 304.94 | 480.66 | 304.85 | 482.56 | 304.95 | 483.2 | 305.04 |
| 487.28 | 305.07 | 492.53 | 305.15 | 494.71 | 305.2 | 516.14 | 305.66 | 526.84 | 305.98 |
| 535.29 | 306.04 | 536.66 | 306.04 | 539.28 | 306.09 | 542.79 | 306.12 | 545.14 | 306.12 |
| 548.3 | 306.08 | 549.31 | 306.04 | 552.22 | 306.06 | 553.12 | 306.05 | 559.09 | 306.12 |
| 562.76 | 306.23 | 564.28 | 306.22 | 569.97 | 306.25 | 570.86 | 306.24 | 571.78 | 306.19 |
| 572.85 | 306.18 | 576.15 | 306.11 | 577.16 | 306.07 | 581.14 | 306.04 | 581.7 | 306.06 |
| 585.33 | 306.09 | 587.85 | 306.09 | 601.06 | 306.16 | 602.11 | 306.18 | 607.02 | 306.21 |
| 610.41 | 306.13 | 619 | 306.02 | 619.45 | 306 | 625.17 | 305.97 | 628.42 | 306.04 |
| 630.31 | 306.14 | 632.69 | 306.23 | 639.4 | 306.35 | 641.59 | 306.36 | 642.48 | 306.39 |
| 643.79 | 306.38 | 645.3 | 306.25 | 645.35 | 306.21 | 651.23 | 306.01 | 654.69 | 305.99 |
| 655.67 | 306.02 | 657.61 | 306.14 | 665.14 | 306.27 | 669.64 | 306.29 | 672.88 | 306.2 |
| 675.55 | 306.24 | 678.07 | 306.26 | 681.6 | 306.24 | 685.3 | 306.3 | 688.43 | 306.27 |
| 692.15 | 306.32 | 694.27 | 306.39 | 696.11 | 306.51 | 699.71 | 306.68 | 701.82 | 306.74 |
| 706.72 | 306.85 | 710.05 | 306.95 | 711.81 | 306.98 | 723.68 | 306.95 | 724.97 | 306.88 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 727.08 | 306.81 | 730.51 | 306.72 | 731.81 | 306.63 | 736.6 | 306.27 | 739.23 | 306.14 |
| 741.56 | 306.1 | 743.96 | 306.17 | 746.18 | 306.29 | 756.21 | 306.59 | 759.87 | 306.61 |
| 761.12 | 306.59 | 762.28 | 306.61 | 763.6 | 306.58 | 767.18 | 306.7 | 776.96 | 306.7 |
| 780.61 | 306.8 | 782.87 | 306.89 | 786.05 | 306.97 | 790.98 | 307.06 | 791.52 | 307.06 |
| 798.72 | 307.16 | 801.65 | 307.22 | 805.86 | 307.09 | 810.9 | 306.98 | 812.09 | 306.97 |
| 813.38 | 306.91 | 814.47 | 306.91 | 816.18 | 306.95 | 816.92 | 306.99 | 818.33 | 306.99 |
| 822.9 | 307.07 | 823.18 | 307.06 | 826.2 | 307.1 | 829.33 | 307.08 | 831.84 | 307.03 |
| 833.14 | 306.99 | 834.77 | 306.97 | 839.44 | 306.98 | 840.22 | 307.04 | 841.58 | 307.1 |
| 843.54 | 307.22 | 846.16 | 307.33 | 851.85 | 307.42 | 852.12 | 307.4 | 853.72 | 307.42 |
| 864.9 | 307.42 | 869.61 | 307.5 | 871.84 | 307.5 | 874.22 | 307.47 | 876.85 | 307.39 |
| 878.68 | 307.31 | 885.08 | 307.1 | 886.14 | 307.05 | 891.81 | 307.01 | 892.5 | 307.03 |
| 897.53 | 307.06 | 902 | 307.05 | 904.08 | 306.99 | 906.72 | 306.87 | 908.76 | 306.86 |
| 911.06 | 306.92 | 913.21 | 306.92 | 915.53 | 306.85 | 922.96 | 306.95 | 924.48 | 306.99 |
| 925.64 | 306.99 | 936.02 | 306.95 | 939.34 | 306.89 | 941.75 | 306.86 | 946.36 | 306.77 |
| 947.47 | 306.73 | 956.53 | 306.55 | 959.36 | 306.52 | 961.57 | 306.51 | 963.7 | 306.45 |
| 966.3 | 306.48 | 966.84 | 306.52 | 968.92 | 306.46 | 977.03 | 306.61 | 979.37 | 306.61 |
| 981.45 | 306.57 | 982.68 | 306.58 | 984.18 | 306.54 | 985.74 | 306.56 | 987.26 | 306.71 |
| 994.38 | 306.95 | 995.66 | 306.98 | 997.99 | 306.96 | 1000.95 | 306.95 | 1006.02 | 306.89 |
| 1010.12 | 306.89 | 1014.94 | 306.95 | 1015.87 | 307.1 | 1018.02 | 307.37 | 1018.92 | 307.62 |
| 1020.37 | 307.77 | 1021.87 | 307.76 | 1028.77 | 307.61 | 1032.17 | 307.48 | 1035.85 | 307.48 |
| 1039.28 | 307.55 | 1047.77 | 307.79 | 1048.78 | 307.8 | 1050.35 | 307.75 | 1055.78 | 307.8 |
| 1057.26 | 307.8 | 1059.86 | 307.83 | 1062.59 | 307.79 | 1066.18 | 307.77 | 1073.07 | 307.85 |
| 1075.52 | 307.89 | 1080.37 | 308.07 | 1081.54 | 308.06 | 1082.7 | 308.15 | 1086.14 | 308.06 |
| 1087.48 | 308.04 | 1090.42 | 307.96 | 1091.6 | 307.96 | 1093.02 | 307.91 | 1096.62 | 307.69 |
| 1097.17 | 307.68 | 1100.11 | 307.69 | 1100.6 | 307.73 | 1103.65 | 307.78 | 1111.02 | 307.87 |
| 1112.61 | 307.83 | 1114.14 | 307.77 | 1117.34 | 307.67 | 1119.89 | 307.64 | 1122.03 | 307.67 |
| 1127.39 | 307.82 | 1128.53 | 307.87 | 1137.59 | 307.89 | 1140.14 | 307.93 | 1142.39 | 307.94 |
| 1147.3 | 307.91 | 1148.47 | 307.93 | 1153.24 | 307.79 | 1155.96 | 307.67 | 1158.11 | 307.56 |
| 1159.74 | 307.44 | 1166.03 | 307.1 | 1168.2 | 307.07 | 1169.39 | 307.03 | 1173.65 | 306.96 |
| 1174.5 | 306.96 | 1177.25 | 307.06 | 1179.03 | 307.06 | 1179.5 | 307.08 | 1183.2 | 307.04 |
| 1184.7 | 307.08 | 1187.72 | 307.11 | 1190.63 | 307.17 | 1192.1 | 307.13 | 1194.19 | 307.04 |
| 1195.95 | 307 | 1196.72 | 307.06 | 1197.74 | 307.07 | 1199.53 | 307 | 1205.64 | 306.94 |
| 1209.57 | 306.88 | 1211.14 | 306.84 | 1215.72 | 306.79 | 1215.86 | 306.8 | 1222.21 | 306.67 |
| 1225.95 | 306.56 | 1233.34 | 306.55 | 1245.45 | 306.55 | 1251.55 | 306.69 | 1257 | 306.75 |
| 1265.05 | 306.92 | 1270.39 | 307.05 | 1270.72 | 307.07 | 1273.96 | 307.11 | 1274.61 | 307.09 |
| 1279.91 | 307 | 1283.59 | 306.99 | 1291.02 | 307.04 | 1294.35 | 307 | 1303.08 | 306.97 |
| 1310.71 | 306.85 | 1314.98 | 306.79 | 1323.51 | 306.78 | 1329.36 | 306.87 | 1330.86 | 306.93 |
| 1334.52 | 307.01 | 1336.39 | 307.07 | 1344.39 | 307.04 | 1344.62 | 307.03 | 1352.08 | 306.95 |
| 1354.89 | 306.95 | 1356.47 | 306.93 | 1359.39 | 306.99 | 1362.4 | 307 | 1364.99 | 307.02 |
| 1367.67 | 307 | 1370.69 | 307.04 | 1376.15 | 307.19 | 1376.54 | 307.37 | 1377.87 | 307.75 |
| 1378.86 | 308.11 | 1380.14 | 308.52 | 1381.05 | 308.88 | 1382.62 | 309.45 | 1383.48 | 309.88 |
| 1384.85 | 310.62 | 1385.78 | 311.19 | 1387.89 | 312.4 | 1388.73 | 312.86 | 1389.26 | 313.27 |
| 1389.6 | 313.45 | 1390.16 | 313.57 | 1393.1 | 313.9 | 1396.38 | 314.41 | 1401.09 | 315.25 |
| 1402.96 | 315.66 | 1405.06 | 316.05 | 1407.86 | 316.46 | 1410.49 | 316.8 | 1415.03 | 317.53 |
| 1417.48 | 317.99 | 1418.82 | 318.27 | 1423.61 | 319.17 | 1425.93 | 319.57 | 1429.03 | 320.01 |
| 1432.38 | 320.69 | 1435.06 | 321.19 | 1437.71 | 321.67 | 1439.1 | 321.96 | 1440.57 | 322.22 |
| 1442.31 | 322.57 | 1444.28 | 322.92 | 1446.12 | 323.27 | 1448.24 | 323.65 | 1450.43 | 324.17 |
| 1450.92 | 324.27 | 1454.16 | 325.03 | 1455.77 | 325.45 | 1458.85 | 326.15 | 1460.41 | 326.59 |
| 1460.91 | 326.69 | 1464.26 | 327.26 | 1464.73 | 327.32 | 1472.25 | 328.72 | 1476.34 | 329.31 |
| 1479.41 | 329.81 | 1480.38 | 329.99 | 1484.37 | 330.09 | 1485.06 | 330.12 | 1490.19 | 330.19 |
| 1492.37 | 330.25 | 1495.26 | 330.36 | 1498.31 | 330.43 | 1500.84 | 330.54 | 1505.86 | 330.51 |
| 1515.18 | 330.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 230.54 | .04 | 1393.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 230.54 | 1393.1 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2820.89*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331 | .82 | 331.01 | 2.48 | 330.99 | 9.53 | 330.99 | 27.53 | 330.82 |
| 33.4 | 330.63 | 37.49 | 330.48 | 37.94 | 330.43 | 41.68 | 330.18 | 44.91 | 329.82 |
| 45.85 | 329.58 | 46.82 | 329.4 | 48.23 | 329.09 | 49.66 | 328.64 | 50.87 | 328.2 |
| 51.92 | 327.94 | 52.36 | 327.79 | 53.97 | 327.46 | 54.47 | 327.38 | 55.08 | 327.38 |
| 56.56 | 327.03 | 58.89 | 326.41 | 60.14 | 326.16 | 60.57 | 326.15 | 61.15 | 326.36 |
| 63.61 | 326.64 | 65.42 | 326.77 | 67.73 | 326.64 | 70.13 | 326.29 | 72.39 | 325.81 |
| 75.39 | 325.24 | 78.38 | 324.62 | 80.47 | 324.22 | 84.35 | 323.75 | 87.64 | 323.31 |
| 91.01 | 322.79 | 92.39 | 322.55 | 94.66 | 322.1 | 97.39 | 321.58 | 98.19 | 321.39 |
| 100.24 | 320.74 | 102.07 | 320.2 | 104.63 | 319.35 | 105.99 | 318.83 | 107.63 | 318.33 |
| 110.47 | 317.39 | 111.67 | 316.96 | 112.68 | 316.63 | 113.95 | 316.31 | 115.5 | 315.83 |
| 117.24 | 315.1 | 120.05 | 314.35 | 122.18 | 313.86 | 122.46 | 313.82 | 124.52 | 313.76 |
| 125.34 | 313.66 | 127.45 | 313.56 | 128.97 | 313.38 | 129.9 | 313.19 | 130.66 | 313.13 |
| 131.97 | 312.92 | 133.61 | 312.78 | 134.69 | 312.73 | 137.88 | 312.53 | 139.32 | 312.38 |
| 141.07 | 312.06 | 142.96 | 311.85 | 147.93 | 311.25 | 152.99 | 310.67 | 157.9 | 310.2 |
| 160.53 | 309.92 | 166.64 | 309.46 | 170.88 | 309.1 | 175.46 | 308.78 | 180.13 | 308.4 |
| 183.12 | 308.17 | 185.77 | 307.93 | 186.98 | 307.77 | 187.29 | 307.69 | 189.41 | 307.5 |
| 190.74 | 307.52 | 198.05 | 307.15 | 200.97 | 307.06 | 207.09 | 306.8 | 215.88 | 306.48 |
| 218.45 | 306.37 | 225.61 | 305.93 | 226.25 | 305.84 | 227.9 | 305.81 | 235.95 | 305.9 |
| 239.97 | 305.74 | 241.57 | 305.72 | 248.68 | 305.68 | 252.98 | 305.7 | 256.57 | 305.77 |
| 257.52 | 305.73 | 260.65 | 305.66 | 262.3 | 305.61 | 264.62 | 305.51 | 268.87 | 305.44 |
| 274.98 | 305.3 | 275.69 | 305.31 | 283.61 | 305.13 | 287.01 | 305.14 | 288.92 | 305.16 |
| 292.42 | 305.22 | 293.12 | 305.28 | 296.36 | 305.26 | 297.25 | 305.23 | 298.09 | 305.1 |
| 298.86 | 305.13 | 299.81 | 305.27 | 301.88 | 305.31 | 303.54 | 305.4 | 311.36 | 305.18 |
| 314.81 | 305.17 | 317.48 | 305.11 | 317.85 | 305.07 | 318.89 | 305.05 | 319.87 | 305.1 |
| 324.51 | 305.2 | 326.88 | 305.23 | 328.81 | 305.34 | 330.77 | 305.34 | 333.19 | 305.43 |
| 335.14 | 305.42 | 340.03 | 305.37 | 342.91 | 305.3 | 344.5 | 305.3 | 350.22 | 305.19 |
| 352.6 | 305.17 | 354.44 | 305.18 | 355.67 | 305.15 | 360.05 | 305.15 | 360.68 | 305.16 |
| 362.01 | 305.05 | 363.43 | 304.98 | 364.09 | 305 | 365.08 | 305.09 | 366.52 | 305.17 |
| 369.6 | 305.21 | 373.24 | 305.28 | 379.65 | 305.46 | 388.15 | 305.43 | 390.12 | 305.43 |
| 392.32 | 305.31 | 393.29 | 305.29 | 396.07 | 305.18 | 396.89 | 305.21 | 399.31 | 305.43 |
| 405.87 | 305.49 | 410.4 | 305.55 | 412.81 | 305.57 | 416.99 | 305.51 | 417.74 | 305.48 |
| 418.63 | 305.39 | 429.66 | 305.24 | 430.87 | 305.29 | 431.6 | 305.29 | 440.29 | 305.36 |
| 447.47 | 305.34 | 467.76 | 305.29 | 471.33 | 305.26 | 474.25 | 305.04 | 479.09 | 304.75 |
| 480.36 | 304.66 | 481.08 | 304.65 | 481.37 | 304.58 | 483.9 | 304.49 | 485.79 | 304.58 |
| 486.43 | 304.67 | 490.51 | 304.7 | 495.75 | 304.78 | 497.93 | 304.83 | 519.32 | 305.3 |
| 530 | 305.62 | 538.43 | 305.67 | 539.8 | 305.67 | 542.42 | 305.72 | 545.11 | 305.74 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 547.74 | 305.74 | 551.43 | 305.71 | 552.43 | 305.67 | 555.33 | 305.68 | 562.19 | 305.76 |
| 564.08 | 305.8 | 565.86 | 305.87 | 567.38 | 305.86 | 573.06 | 305.88 | 573.95 | 305.87 |
| 574.86 | 305.82 | 579.23 | 305.74 | 580.23 | 305.7 | 584.2 | 305.67 | 584.76 | 305.69 |
| 588.39 | 305.73 | 590.9 | 305.72 | 604.09 | 305.78 | 605.14 | 305.8 | 610.04 | 305.83 |
| 613.42 | 305.73 | 622.45 | 305.6 | 628.16 | 305.57 | 630.66 | 305.61 | 633.3 | 305.75 |
| 635.67 | 305.85 | 642.36 | 305.97 | 644.56 | 305.98 | 645.28 | 306.02 | 646.75 | 306.01 |
| 648.25 | 305.88 | 648.31 | 305.82 | 654.18 | 305.65 | 655.14 | 305.63 | 657.63 | 305.63 |
| 660.54 | 305.78 | 668.06 | 305.92 | 671.84 | 305.96 | 674.17 | 305.91 | 675.31 | 305.87 |
| 677.62 | 305.88 | 678.45 | 305.9 | 680.96 | 305.92 | 683.9 | 305.9 | 688.19 | 305.96 |
| 691.31 | 305.91 | 695.03 | 305.96 | 697.14 | 306.03 | 698.97 | 306.15 | 702.57 | 306.31 |
| 704.68 | 306.38 | 709.57 | 306.48 | 712.89 | 306.59 | 714.65 | 306.62 | 726.5 | 306.59 |
| 727.79 | 306.53 | 729.9 | 306.46 | 733.32 | 306.38 | 734.61 | 306.3 | 738.18 | 306.01 |
| 739.4 | 305.93 | 742.02 | 305.79 | 744.35 | 305.75 | 746.74 | 305.82 | 748.96 | 305.94 |
| 751.44 | 306.01 | 752.65 | 306.06 | 757.31 | 306.19 | 758.98 | 306.25 | 762.63 | 306.26 |
| 763.87 | 306.23 | 765.03 | 306.26 | 766.35 | 306.22 | 769.93 | 306.33 | 779.68 | 306.3 |
| 783.33 | 306.4 | 786.72 | 306.52 | 788.76 | 306.57 | 793.68 | 306.67 | 794.22 | 306.67 |
| 801.41 | 306.77 | 804.33 | 306.84 | 808.53 | 306.72 | 813.56 | 306.62 | 814.48 | 306.61 |
| 816.05 | 306.55 | 817.62 | 306.56 | 819.35 | 306.62 | 820.98 | 306.63 | 825.55 | 306.71 |
| 828.84 | 306.74 | 831.96 | 306.72 | 833.89 | 306.69 | 837.39 | 306.61 | 837.92 | 306.62 |
| 842.05 | 306.63 | 846.15 | 306.86 | 848.77 | 306.96 | 854.45 | 307.02 | 867.48 | 307.01 |
| 868.54 | 307.02 | 872.18 | 307.09 | 874.4 | 307.09 | 876.04 | 307.07 | 877.9 | 307.01 |
| 879.4 | 306.98 | 882.4 | 306.86 | 888.68 | 306.65 | 891.22 | 306.62 | 892.95 | 306.62 |
| 894.14 | 306.6 | 900.05 | 306.64 | 904.51 | 306.63 | 906.59 | 306.58 | 908.88 | 306.46 |
| 910.24 | 306.44 | 911.26 | 306.45 | 913.56 | 306.52 | 915.7 | 306.52 | 918.01 | 306.45 |
| 928.11 | 306.61 | 938.47 | 306.57 | 945.09 | 306.46 | 948.79 | 306.39 | 949.9 | 306.36 |
| 958.95 | 306.16 | 961.77 | 306.13 | 963.98 | 306.12 | 966.1 | 306.07 | 968.03 | 306.08 |
| 969.24 | 306.14 | 971.32 | 306.07 | 979.41 | 306.23 | 981.85 | 306.22 | 983.83 | 306.18 |
| 985.05 | 306.19 | 986.54 | 306.15 | 988.11 | 306.17 | 989.14 | 306.26 | 989.63 | 306.34 |
| 996.73 | 306.58 | 998.01 | 306.61 | 999.43 | 306.61 | 1008.35 | 306.51 | 1012.44 | 306.5 |
| 1017.25 | 306.55 | 1018.19 | 306.68 | 1020.33 | 306.93 | 1021.47 | 307.19 | 1022.67 | 307.28 |
| 1024.17 | 307.27 | 1031.07 | 307.1 | 1034.45 | 306.96 | 1038.13 | 306.95 | 1041.56 | 307.02 |
| 1050.02 | 307.26 | 1051.03 | 307.27 | 1052.6 | 307.21 | 1058.02 | 307.25 | 1059.5 | 307.25 |
| 1062.1 | 307.29 | 1064.82 | 307.25 | 1068.4 | 307.24 | 1077.23 | 307.38 | 1079.24 | 307.46 |
| 1083.23 | 307.6 | 1083.74 | 307.57 | 1084.9 | 307.67 | 1085.57 | 307.66 | 1088.33 | 307.57 |
| 1092.6 | 307.47 | 1093.78 | 307.47 | 1095.2 | 307.42 | 1098.79 | 307.2 | 1099.34 | 307.19 |
| 1102.28 | 307.2 | 1102.77 | 307.25 | 1105.81 | 307.31 | 1113.17 | 307.41 | 1114.76 | 307.37 |
| 1116.28 | 307.3 | 1119.48 | 307.2 | 1122.02 | 307.17 | 1124.15 | 307.2 | 1129.51 | 307.35 |
| 1130.5 | 307.4 | 1139.69 | 307.44 | 1142.23 | 307.5 | 1144.48 | 307.52 | 1149.97 | 307.5 |
| 1151.31 | 307.49 | 1153.47 | 307.46 | 1155.31 | 307.41 | 1158.03 | 307.3 | 1160.17 | 307.2 |
| 1161.8 | 307.08 | 1168.09 | 306.78 | 1170.25 | 306.74 | 1171.44 | 306.7 | 1175.69 | 306.62 |
| 1176.54 | 306.62 | 1177.44 | 306.67 | 1179.29 | 306.73 | 1181.06 | 306.73 | 1181.52 | 306.75 |
| 1183.61 | 306.71 | 1185.86 | 306.71 | 1186.73 | 306.75 | 1189.74 | 306.78 | 1192.93 | 306.85 |
| 1194.1 | 306.82 | 1195.53 | 306.75 | 1197.95 | 306.7 | 1198.72 | 306.75 | 1200.88 | 306.73 |
| 1201.52 | 306.68 | 1207.63 | 306.62 | 1213.11 | 306.53 | 1217.82 | 306.48 | 1222.78 | 306.38 |
| 1224.16 | 306.36 | 1227.9 | 306.24 | 1235.28 | 306.22 | 1247.37 | 306.22 | 1253.45 | 306.38 |
| 1258.9 | 306.45 | 1267.7 | 306.65 | 1272.26 | 306.77 | 1272.59 | 306.79 | 1275.83 | 306.83 |
| 1276.48 | 306.8 | 1280.91 | 306.73 | 1282.16 | 306.7 | 1285.44 | 306.68 | 1290.5 | 306.69 |
| 1292.85 | 306.71 | 1296.18 | 306.66 | 1304.9 | 306.63 | 1316.77 | 306.44 | 1325.29 | 306.44 |
| 1327.44 | 306.46 | 1331.13 | 306.53 | 1335.01 | 306.65 | 1336.28 | 306.67 | 1338.15 | 306.73 |
| 1346.13 | 306.7 | 1346.36 | 306.69 | 1353.81 | 306.61 | 1358.19 | 306.6 | 1361.11 | 306.66 |
| 1364.11 | 306.67 | 1366.7 | 306.7 | 1369.37 | 306.68 | 1372.39 | 306.73 | 1377.84 | 306.9 |
| 1378.23 | 307.09 | 1379.56 | 307.5 | 1380.55 | 307.89 | 1381.82 | 308.32 | 1383.06 | 308.84 |
| 1384.3 | 309.31 | 1384.51 | 309.46 | 1385.78 | 310.12 | 1386.52 | 310.57 | 1388.82 | 312.02 |
| 1390.43 | 312.98 | 1390.93 | 313.39 | 1391.26 | 313.59 | 1391.82 | 313.72 | 1393.19 | 313.9 |
| 1394.76 | 314.08 | 1397.03 | 314.44 | 1400.14 | 315 | 1402.51 | 315.44 | 1404.77 | 315.92 |
| 1406.9 | 316.32 | 1409.75 | 316.75 | 1412.42 | 317.09 | 1417.03 | 317.85 | 1419.52 | 318.32 |
| 1420.88 | 318.61 | 1425.74 | 319.52 | 1428.1 | 319.93 | 1431.25 | 320.36 | 1432.03 | 320.53 |
| 1434.66 | 321 | 1437.37 | 321.47 | 1438.83 | 321.7 | 1441.48 | 322.19 | 1442.96 | 322.44 |
| 1445.72 | 322.93 | 1446.74 | 323.09 | 1448.61 | 323.42 | 1450.17 | 323.67 | 1451.51 | 323.94 |
| 1456.64 | 325.07 | 1458.41 | 325.5 | 1461.53 | 326.16 | 1462.98 | 326.54 | 1463.63 | 326.67 |
| 1467.03 | 327.22 | 1467.51 | 327.28 | 1474.04 | 328.43 | 1476.06 | 328.74 | 1479.3 | 329.16 |
| 1482.42 | 329.62 | 1483.4 | 329.79 | 1488.15 | 329.92 | 1493.37 | 330 | 1495.58 | 330.06 |
| 1498.51 | 330.17 | 1501.78 | 330.25 | 1503.26 | 330.33 | 1505.21 | 330.36 | 1509.28 | 330.32 |
| 1518.74 | 330.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 225.61 | .04 | 1394.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 225.61 | 1394.76 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2801.05*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.76 | .8 | 330.77 | 2.42 | 330.75 | 9.32 | 330.76 | 26.93 | 330.62 |
| 32.67 | 330.46 | 36.67 | 330.32 | 40.77 | 330.05 | 43.93 | 329.72 | 44.85 | 329.48 |
| 45.8 | 329.32 | 47.18 | 329.03 | 47.95 | 328.81 | 49.76 | 328.21 | 50.79 | 327.98 |
| 51.21 | 327.84 | 53.18 | 327.46 | 53.88 | 327.44 | 55.32 | 327.09 | 57.6 | 326.47 |
| 58.82 | 326.2 | 59.25 | 326.2 | 59.81 | 326.42 | 62.23 | 326.73 | 63.99 | 326.89 |
| 66.25 | 326.79 | 68.6 | 326.46 | 70.81 | 326.01 | 73.75 | 325.47 | 76.67 | 324.87 |
| 78.71 | 324.49 | 82.5 | 324.03 | 85.73 | 323.61 | 89.02 | 323.09 | 90.38 | 322.85 |
| 94.48 | 322.05 | 95.26 | 321.92 | 96.05 | 321.72 | 98.05 | 321.07 | 99.84 | 320.53 |
| 102.34 | 319.66 | 103.68 | 319.13 | 105.28 | 318.62 | 108.06 | 317.65 | 109.24 | 317.21 |
| 110.23 | 316.87 | 111.46 | 316.54 | 112.98 | 316.04 | 114.68 | 315.29 | 117.43 | 314.51 |
| 119.51 | 314.01 | 121.8 | 313.93 | 122.6 | 313.82 | 124.66 | 313.72 | 126.15 | 313.54 |
| 127.07 | 313.35 | 127.81 | 313.29 | 129.09 | 313.06 | 130.7 | 312.92 | 131.75 | 312.88 |
| 134.88 | 312.68 | 136.47 | 312.5 | 138 | 312.2 | 139.84 | 311.97 | 144.7 | 311.32 |
| 149.65 | 310.7 | 154.46 | 310.21 | 155.27 | 310.1 | 157.02 | 309.91 | 163 | 309.42 |
| 167.15 | 309.02 | 171.63 | 308.69 | 176.2 | 308.29 | 179.12 | 308.06 | 181.71 | 307.8 |
| 182.9 | 307.64 | 183.21 | 307.56 | 185.27 | 307.36 | 186.58 | 307.36 | 188.2 | 307.27 |
| 193.72 | 306.94 | 198.54 | 306.73 | 202.57 | 306.52 | 212.07 | 306.1 | 213.68 | 306.02 |
| 220.69 | 305.55 | 221.35 | 305.45 | 223.05 | 305.43 | 231.36 | 305.54 | 235.5 | 305.38 |
| 237.15 | 305.36 | 244.48 | 305.35 | 248.92 | 305.37 | 251.24 | 305.43 | 252.62 | 305.45 |
| 255.54 | 305.37 | 256.83 | 305.36 | 258.54 | 305.31 | 260.93 | 305.22 | 265.31 | 305.13 |
| 271.62 | 304.98 | 272.35 | 304.98 | 280.52 | 304.79 | 285.99 | 304.81 | 289.6 | 304.86 |
| 290.33 | 304.91 | 292.49 | 304.9 | 294.59 | 304.85 | 295.22 | 304.8 | 295.46 | 304.72 |
| 296.25 | 304.75 | 296.66 | 304.85 | 297.23 | 304.9 | 299.37 | 304.94 | 301.08 | 305.03 |
| 304.5 | 304.94 | 309.15 | 304.8 | 312.7 | 304.79 | 315.46 | 304.73 | 316.91 | 304.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 317.93 | 304.72 | 322.71 | 304.82 | 324.31 | 304.83 | 325.16 | 304.86 | 327.15 | 304.97 |
| 329.17 | 304.98 | 331.67 | 305.07 | 338.72 | 305 | 341.69 | 304.93 | 343.33 | 304.93 |
| 349.86 | 304.81 | 351.69 | 304.8 | 353.59 | 304.81 | 354.86 | 304.77 | 360.03 | 304.78 |
| 361.4 | 304.67 | 362.86 | 304.6 | 363.55 | 304.62 | 364.56 | 304.72 | 366.05 | 304.8 |
| 367.1 | 304.83 | 369.23 | 304.84 | 372.98 | 304.92 | 379.6 | 305.11 | 388.36 | 305.09 |
| 390.39 | 305.09 | 392.67 | 304.96 | 395.36 | 304.88 | 396.53 | 304.82 | 397.38 | 304.85 |
| 398.98 | 305.02 | 399.88 | 305.09 | 406.65 | 305.16 | 411.32 | 305.22 | 413.81 | 305.24 |
| 418.12 | 305.18 | 418.89 | 305.15 | 419.8 | 305.05 | 431.18 | 304.89 | 432.44 | 304.95 |
| 433.19 | 304.95 | 442.15 | 305.02 | 448.78 | 305.01 | 449.56 | 305 | 470.49 | 304.96 |
| 472.95 | 304.95 | 474.17 | 304.93 | 477.19 | 304.71 | 482.18 | 304.4 | 483.49 | 304.31 |
| 484.23 | 304.29 | 484.53 | 304.22 | 487.14 | 304.13 | 489.03 | 304.21 | 489.67 | 304.29 |
| 493.74 | 304.32 | 498.97 | 304.4 | 522.5 | 304.93 | 533.16 | 305.26 | 541.58 | 305.3 |
| 546.96 | 305.36 | 551.4 | 305.37 | 553.17 | 305.34 | 554.55 | 305.34 | 555.55 | 305.3 |
| 558.45 | 305.31 | 565.3 | 305.39 | 568.95 | 305.5 | 577.03 | 305.51 | 577.94 | 305.45 |
| 582.3 | 305.37 | 583.3 | 305.33 | 587.27 | 305.3 | 587.83 | 305.32 | 591.44 | 305.36 |
| 593.96 | 305.35 | 607.12 | 305.41 | 613.06 | 305.45 | 616.44 | 305.34 | 622.51 | 305.23 |
| 625.45 | 305.19 | 631.15 | 305.16 | 633.64 | 305.21 | 634.39 | 305.24 | 636.28 | 305.36 |
| 638.64 | 305.46 | 645.33 | 305.59 | 647.52 | 305.61 | 648.24 | 305.64 | 649.71 | 305.63 |
| 651.21 | 305.5 | 651.26 | 305.44 | 655 | 305.34 | 658.09 | 305.27 | 660.57 | 305.28 |
| 661.54 | 305.31 | 663.47 | 305.42 | 670.98 | 305.57 | 672.85 | 305.6 | 675.47 | 305.62 |
| 678.22 | 305.53 | 683.86 | 305.58 | 687.38 | 305.57 | 691.07 | 305.62 | 694.19 | 305.56 |
| 697.9 | 305.6 | 700.01 | 305.66 | 701.84 | 305.79 | 705.43 | 305.95 | 707.53 | 306.01 |
| 712.42 | 306.11 | 715.73 | 306.22 | 717.49 | 306.26 | 729.32 | 306.23 | 730.6 | 306.17 |
| 736.13 | 306.04 | 737.02 | 305.96 | 737.42 | 305.96 | 742.19 | 305.58 | 744.81 | 305.44 |
| 747.14 | 305.4 | 749.53 | 305.46 | 749.74 | 305.49 | 751.74 | 305.59 | 755.42 | 305.71 |
| 761.74 | 305.9 | 764.54 | 305.91 | 765.88 | 305.88 | 767.78 | 305.9 | 769.1 | 305.86 |
| 772.67 | 305.97 | 782.41 | 305.91 | 786.05 | 306 | 788.31 | 306.08 | 791.47 | 306.17 |
| 796.38 | 306.27 | 796.92 | 306.27 | 804.1 | 306.38 | 807.01 | 306.45 | 811.21 | 306.35 |
| 816.23 | 306.26 | 817.42 | 306.25 | 818.71 | 306.2 | 819.8 | 306.2 | 822.23 | 306.26 |
| 823.64 | 306.27 | 828.2 | 306.35 | 831.48 | 306.38 | 834.6 | 306.36 | 837.11 | 306.32 |
| 840.02 | 306.26 | 840.55 | 306.27 | 844.67 | 306.28 | 845.46 | 306.33 | 848.76 | 306.49 |
| 851.37 | 306.58 | 857.05 | 306.63 | 858.91 | 306.62 | 869.61 | 306.6 | 872.66 | 306.63 |
| 874.74 | 306.67 | 876.96 | 306.67 | 879.34 | 306.64 | 881.96 | 306.57 | 882.82 | 306.53 |
| 891.22 | 306.25 | 892.52 | 306.23 | 895.48 | 306.21 | 896.67 | 306.19 | 902.57 | 306.23 |
| 907.02 | 306.21 | 909.09 | 306.16 | 911.72 | 306.03 | 913.76 | 306.04 | 915.14 | 306.09 |
| 917.55 | 306.13 | 920.5 | 306.05 | 930.58 | 306.23 | 940.92 | 306.19 | 944.23 | 306.13 |
| 947.53 | 306.09 | 952.33 | 305.98 | 961.36 | 305.78 | 964.18 | 305.74 | 966.39 | 305.73 |
| 968.5 | 305.68 | 970.43 | 305.69 | 971.64 | 305.75 | 973.71 | 305.68 | 975.34 | 305.71 |
| 981.79 | 305.85 | 984.23 | 305.84 | 986.2 | 305.79 | 987.42 | 305.8 | 988.91 | 305.76 |
| 990.47 | 305.78 | 991.5 | 305.88 | 991.99 | 305.96 | 997.04 | 306.14 | 1000.36 | 306.25 |
| 1005.63 | 306.2 | 1010.68 | 306.12 | 1014.76 | 306.1 | 1019.57 | 306.15 | 1022.64 | 306.49 |
| 1023.54 | 306.69 | 1024.98 | 306.8 | 1026.47 | 306.78 | 1033.36 | 306.59 | 1036.74 | 306.43 |
| 1040.41 | 306.41 | 1043.83 | 306.48 | 1052.28 | 306.73 | 1053.29 | 306.74 | 1054.85 | 306.67 |
| 1060.26 | 306.71 | 1061.74 | 306.7 | 1064.33 | 306.75 | 1067.05 | 306.72 | 1070.63 | 306.72 |
| 1079.44 | 306.89 | 1082.26 | 307.01 | 1085.43 | 307.12 | 1085.94 | 307.08 | 1087.1 | 307.19 |
| 1088.98 | 307.14 | 1090.52 | 307.08 | 1094.79 | 306.98 | 1095.96 | 306.98 | 1097.38 | 306.93 |
| 1100.5 | 306.74 | 1101.51 | 306.69 | 1104.45 | 306.71 | 1104.93 | 306.77 | 1107.97 | 306.84 |
| 1115.32 | 306.95 | 1116.9 | 306.9 | 1118.43 | 306.83 | 1121.62 | 306.73 | 1123.4 | 306.69 |
| 1126.28 | 306.72 | 1131.63 | 306.87 | 1132.77 | 306.93 | 1141.79 | 307 | 1145.73 | 307.09 |
| 1152.05 | 307.09 | 1155.55 | 307.06 | 1157.39 | 307.02 | 1160.1 | 306.93 | 1162.24 | 306.83 |
| 1163.86 | 306.73 | 1170.14 | 306.45 | 1172.3 | 306.42 | 1173.49 | 306.36 | 1177.73 | 306.29 |
| 1178.58 | 306.29 | 1179.48 | 306.34 | 1181.32 | 306.4 | 1183.1 | 306.4 | 1183.55 | 306.42 |
| 1184.76 | 306.39 | 1187.24 | 306.37 | 1188.75 | 306.42 | 1191.75 | 306.45 | 1194.94 | 306.53 |
| 1197.53 | 306.44 | 1199.95 | 306.39 | 1200.48 | 306.44 | 1201.83 | 306.44 | 1203.52 | 306.37 |
| 1205.61 | 306.34 | 1209.94 | 306.3 | 1213.52 | 306.25 | 1215.09 | 306.21 | 1219.65 | 306.16 |
| 1219.79 | 306.17 | 1226.12 | 306.04 | 1229.91 | 305.91 | 1237.22 | 305.9 | 1249.28 | 305.9 |
| 1255.36 | 306.06 | 1258.14 | 306.1 | 1260.79 | 306.15 | 1267.39 | 306.31 | 1274.14 | 306.49 |
| 1275.86 | 306.53 | 1277.7 | 306.54 | 1278.34 | 306.52 | 1282.77 | 306.44 | 1284.02 | 306.4 |
| 1286.22 | 306.39 | 1287.29 | 306.37 | 1292.34 | 306.37 | 1294.69 | 306.38 | 1298.01 | 306.33 |
| 1306.71 | 306.3 | 1317.82 | 306.11 | 1318.57 | 306.09 | 1327.07 | 306.09 | 1329.21 | 306.11 |
| 1332.9 | 306.18 | 1334.4 | 306.24 | 1338.04 | 306.33 | 1339.91 | 306.39 | 1347.87 | 306.36 |
| 1348.11 | 306.35 | 1355.54 | 306.27 | 1359.91 | 306.26 | 1361.38 | 306.28 | 1363.72 | 306.34 |
| 1365.83 | 306.34 | 1368.41 | 306.38 | 1371.08 | 306.36 | 1374.08 | 306.41 | 1379.53 | 306.61 |
| 1379.92 | 306.81 | 1381.25 | 307.25 | 1382.23 | 307.66 | 1383.5 | 308.12 | 1384.74 | 308.68 |
| 1385.98 | 309.18 | 1386.18 | 309.34 | 1387.45 | 310.04 | 1388.2 | 310.52 | 1390.49 | 312.06 |
| 1392.1 | 313.08 | 1392.59 | 313.52 | 1392.93 | 313.73 | 1393.49 | 313.87 | 1396.42 | 314.26 |
| 1398.52 | 314.62 | 1398.85 | 314.66 | 1404.29 | 315.7 | 1404.66 | 315.76 | 1406.58 | 316.18 |
| 1408.69 | 316.57 | 1411.64 | 317.03 | 1414.35 | 317.38 | 1419.03 | 318.16 | 1421.56 | 318.65 |
| 1422.94 | 318.95 | 1427.88 | 319.88 | 1430.27 | 320.29 | 1433.47 | 320.72 | 1434.75 | 320.96 |
| 1439.69 | 321.75 | 1442.42 | 322.16 | 1443.85 | 322.42 | 1445.36 | 322.65 | 1448.16 | 323.11 |
| 1449.2 | 323.26 | 1451.1 | 323.57 | 1453.27 | 323.9 | 1455.54 | 324.38 | 1456.04 | 324.47 |
| 1459.39 | 325.17 | 1461.05 | 325.55 | 1464.22 | 326.17 | 1465.68 | 326.52 | 1466.34 | 326.65 |
| 1469.8 | 327.17 | 1470.28 | 327.23 | 1476.92 | 328.33 | 1478.97 | 328.63 | 1482.25 | 329 |
| 1483.49 | 329.16 | 1486.42 | 329.59 | 1491.24 | 329.73 | 1496.54 | 329.81 | 1498.78 | 329.87 |
| 1501.76 | 329.98 | 1504.91 | 330.06 | 1506.58 | 330.15 | 1508.56 | 330.18 | 1512.69 | 330.13 |
| 1522.31 | 330.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 220.69 | .04 | 1396.42 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 220.69 | 1396.42 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2781.21*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.52 | 9.12 | 330.52 | 26.33 | 330.42 | 31.94 | 330.29 | 35.85 | 330.17 |
| 36.28 | 330.13 | 39.86 | 329.92 | 42.95 | 329.63 | 43.85 | 329.39 | 44.78 | 329.24 |
| 46.12 | 328.98 | 47.49 | 328.59 | 48.65 | 328.22 | 49.66 | 328.03 | 50.41 | 327.82 |
| 52.09 | 327.52 | 52.68 | 327.51 | 54.09 | 327.15 | 56.27 | 326.54 | 57.51 | 326.24 |
| 57.93 | 326.24 | 58.48 | 326.49 | 60.84 | 326.83 | 62.56 | 327.01 | 64.13 | 326.97 |
| 64.77 | 326.93 | 67.06 | 326.63 | 69.23 | 326.21 | 70.77 | 325.95 | 72.1 | 325.7 |
| 76.36 | 324.84 | 76.96 | 324.75 | 80.66 | 324.3 | 83.81 | 323.9 | 87.04 | 323.39 |
| 88.36 | 323.16 | 92.38 | 322.38 | 93.13 | 322.25 | 93.91 | 322.06 | 95.86 | 321.39 |
| 97.61 | 320.85 | 100.06 | 319.98 | 101 | 319.57 | 102.93 | 318.91 | 105.65 | 317.91 |
| 107.77 | 317.1 | 108.98 | 316.77 | 110.46 | 316.26 | 112.12 | 315.48 | 114.81 | 314.68 |
| 116.84 | 314.16 | 117.11 | 314.12 | 119.08 | 314.09 | 119.86 | 313.98 | 121.88 | 313.89 |
| 123.34 | 313.7 | 124.23 | 313.5 | 124.95 | 313.44 | 126.21 | 313.21 | 127.78 | 313.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 128.81 | 313.03 | 131.87 | 312.83 | 133.24 | 312.68 | 135.01 | 312.33 | 141.47 | 311.39 |
| 146.31 | 310.73 | 151.01 | 310.21 | 153.52 | 309.89 | 159.37 | 309.37 | 163.42 | 308.95 |
| 167.81 | 308.59 | 172.27 | 308.18 | 175.12 | 307.94 | 177.66 | 307.67 | 179.12 | 307.44 |
| 181.14 | 307.23 | 182.41 | 307.2 | 184.01 | 307.11 | 189.4 | 306.72 | 192.2 | 306.59 |
| 198.05 | 306.24 | 208.91 | 305.67 | 215.76 | 305.17 | 216.44 | 305.07 | 218.2 | 305.05 |
| 226.76 | 305.18 | 231.02 | 305.03 | 232.73 | 305.01 | 240.29 | 305.02 | 244.86 | 305.05 |
| 248.68 | 305.14 | 251.69 | 305.07 | 253.01 | 305.06 | 254.78 | 305.01 | 257.24 | 304.92 |
| 259.11 | 304.87 | 261.75 | 304.82 | 268.25 | 304.66 | 269.01 | 304.66 | 276.44 | 304.47 |
| 277.43 | 304.45 | 281.05 | 304.45 | 283.07 | 304.46 | 286.79 | 304.5 | 287.54 | 304.54 |
| 289.76 | 304.53 | 291.93 | 304.48 | 292.58 | 304.42 | 292.83 | 304.34 | 293.64 | 304.37 |
| 294.06 | 304.47 | 294.65 | 304.53 | 296.48 | 304.56 | 298.62 | 304.67 | 302.15 | 304.57 |
| 303.52 | 304.52 | 306.93 | 304.42 | 309.2 | 304.43 | 310.6 | 304.41 | 313.44 | 304.34 |
| 313.83 | 304.3 | 314.94 | 304.27 | 315.98 | 304.34 | 320.91 | 304.44 | 322.56 | 304.46 |
| 323.44 | 304.49 | 325.49 | 304.6 | 327.57 | 304.61 | 330.14 | 304.71 | 337.41 | 304.64 |
| 340.47 | 304.57 | 342.16 | 304.57 | 348.25 | 304.44 | 350.78 | 304.42 | 352.74 | 304.44 |
| 354.05 | 304.4 | 359.37 | 304.41 | 360.78 | 304.29 | 362.3 | 304.22 | 363 | 304.24 |
| 364.05 | 304.34 | 365.58 | 304.43 | 366.67 | 304.46 | 368.86 | 304.47 | 371.46 | 304.54 |
| 372.72 | 304.56 | 379.54 | 304.77 | 388.58 | 304.74 | 390.67 | 304.75 | 393.01 | 304.61 |
| 395.79 | 304.52 | 396.99 | 304.46 | 397.87 | 304.49 | 399.52 | 304.67 | 400.44 | 304.74 |
| 407.42 | 304.82 | 412.24 | 304.88 | 414.8 | 304.9 | 418.05 | 304.87 | 420.04 | 304.82 |
| 420.98 | 304.71 | 432.71 | 304.55 | 434 | 304.61 | 434.78 | 304.61 | 444.01 | 304.69 |
| 450.85 | 304.68 | 451.64 | 304.67 | 473.22 | 304.63 | 477.01 | 304.61 | 480.12 | 304.38 |
| 486.62 | 303.96 | 487.38 | 303.94 | 487.69 | 303.86 | 490.38 | 303.77 | 492.26 | 303.84 |
| 493.48 | 303.93 | 496.97 | 303.95 | 502.19 | 304.03 | 525.67 | 304.56 | 536.32 | 304.89 |
| 544.72 | 304.94 | 546.09 | 304.94 | 551.37 | 304.99 | 554 | 304.99 | 557.67 | 304.97 |
| 558.67 | 304.92 | 561.56 | 304.94 | 568.4 | 305.02 | 570.28 | 305.07 | 572.05 | 305.14 |
| 573.57 | 305.13 | 580.11 | 305.14 | 581.03 | 305.08 | 585.38 | 305 | 586.38 | 304.96 |
| 590.33 | 304.93 | 590.89 | 304.95 | 594.5 | 304.99 | 597.01 | 304.99 | 610.15 | 305.03 |
| 616.08 | 305.06 | 619.45 | 304.95 | 625.52 | 304.82 | 628.45 | 304.78 | 634.13 | 304.75 |
| 637.37 | 304.84 | 639.26 | 304.97 | 641.62 | 305.08 | 648.29 | 305.22 | 650.48 | 305.23 |
| 651.2 | 305.26 | 652.66 | 305.26 | 654.16 | 305.12 | 654.21 | 305.06 | 657.95 | 304.96 |
| 661.03 | 304.91 | 663.51 | 304.93 | 664.48 | 304.96 | 666.41 | 305.06 | 673.9 | 305.23 |
| 675.76 | 305.26 | 678.38 | 305.28 | 681.13 | 305.2 | 683.43 | 305.21 | 684.25 | 305.23 |
| 686.76 | 305.25 | 689.69 | 305.23 | 693.96 | 305.28 | 697.07 | 305.21 | 700.77 | 305.23 |
| 702.88 | 305.3 | 704.71 | 305.42 | 708.29 | 305.59 | 715.26 | 305.75 | 718.57 | 305.86 |
| 720.33 | 305.9 | 732.14 | 305.87 | 733.42 | 305.82 | 735.52 | 305.77 | 738.93 | 305.71 |
| 739.83 | 305.62 | 740.22 | 305.62 | 744.99 | 305.23 | 747.6 | 305.09 | 749.93 | 305.05 |
| 752.31 | 305.11 | 755.4 | 305.28 | 762.84 | 305.5 | 764.5 | 305.56 | 767.3 | 305.56 |
| 769.38 | 305.52 | 770.53 | 305.55 | 771.85 | 305.5 | 775.41 | 305.6 | 785.14 | 305.51 |
| 788.77 | 305.59 | 792.15 | 305.71 | 794.18 | 305.77 | 799.08 | 305.88 | 799.62 | 305.88 |
| 806.79 | 305.99 | 809.7 | 306.07 | 813.89 | 305.98 | 818.9 | 305.9 | 820.08 | 305.89 |
| 821.37 | 305.84 | 824.16 | 305.87 | 824.89 | 305.9 | 826.29 | 305.91 | 830.85 | 305.99 |
| 834.12 | 306.03 | 837.24 | 306.01 | 842.65 | 305.91 | 843.18 | 305.92 | 847.29 | 305.93 |
| 851.37 | 306.13 | 853.98 | 306.2 | 859.65 | 306.24 | 859.91 | 306.22 | 861.51 | 306.23 |
| 872.18 | 306.18 | 877.31 | 306.25 | 879.52 | 306.26 | 881.16 | 306.24 | 884.51 | 306.16 |
| 885.37 | 306.12 | 890.5 | 305.95 | 892.7 | 305.89 | 893.51 | 305.85 | 896.4 | 305.82 |
| 899.19 | 305.78 | 900.08 | 305.79 | 905.09 | 305.81 | 907.41 | 305.81 | 909.53 | 305.79 |
| 911.6 | 305.74 | 914.23 | 305.61 | 916.26 | 305.63 | 918.55 | 305.71 | 920.05 | 305.73 |
| 922.99 | 305.65 | 933.05 | 305.85 | 943.37 | 305.81 | 946.68 | 305.75 | 949.07 | 305.73 |
| 963.78 | 305.39 | 966.59 | 305.35 | 969.26 | 305.34 | 970.91 | 305.29 | 972.83 | 305.3 |
| 974.04 | 305.37 | 976.11 | 305.29 | 977.1 | 305.3 | 984.17 | 305.47 | 986.5 | 305.47 |
| 986.6 | 305.45 | 988.57 | 305.41 | 989.79 | 305.42 | 991.28 | 305.37 | 992.84 | 305.39 |
| 993.86 | 305.49 | 994.35 | 305.58 | 1001.43 | 305.85 | 1002.71 | 305.88 | 1007.97 | 305.83 |
| 1013.01 | 305.73 | 1017.09 | 305.7 | 1021.88 | 305.74 | 1022.81 | 305.85 | 1024.94 | 306.05 |
| 1025.85 | 306.22 | 1027.28 | 306.32 | 1028.77 | 306.29 | 1035.65 | 306.08 | 1039.02 | 305.91 |
| 1042.68 | 305.88 | 1046.1 | 305.95 | 1054.54 | 306.19 | 1055.54 | 306.2 | 1057.1 | 306.13 |
| 1062.51 | 306.16 | 1063.98 | 306.16 | 1066.57 | 306.2 | 1069.28 | 306.18 | 1072.85 | 306.2 |
| 1079.71 | 306.35 | 1081.65 | 306.4 | 1086.97 | 306.62 | 1088.14 | 306.6 | 1089.29 | 306.71 |
| 1091.46 | 306.64 | 1092.22 | 306.6 | 1096.97 | 306.49 | 1098.15 | 306.5 | 1099.56 | 306.44 |
| 1102.67 | 306.25 | 1103.68 | 306.2 | 1106.61 | 306.23 | 1107.14 | 306.29 | 1110.13 | 306.37 |
| 1117.47 | 306.49 | 1119.05 | 306.44 | 1120.57 | 306.36 | 1123.75 | 306.26 | 1125.54 | 306.22 |
| 1128.41 | 306.25 | 1133.75 | 306.4 | 1134.89 | 306.45 | 1143.89 | 306.56 | 1146.43 | 306.63 |
| 1148.67 | 306.67 | 1154.14 | 306.68 | 1157.62 | 306.67 | 1159.46 | 306.64 | 1162.17 | 306.56 |
| 1164.31 | 306.47 | 1165.93 | 306.38 | 1172.19 | 306.12 | 1174.35 | 306.09 | 1175.53 | 306.03 |
| 1177.71 | 306 | 1179.77 | 305.95 | 1180.61 | 305.95 | 1183.35 | 306.07 | 1185.13 | 306.07 |
| 1185.58 | 306.09 | 1186.79 | 306.05 | 1189.27 | 306.03 | 1191.53 | 306.1 | 1193.77 | 306.12 |
| 1195.76 | 306.17 | 1196.66 | 306.21 | 1199.54 | 306.13 | 1202.09 | 306.09 | 1202.48 | 306.13 |
| 1203.83 | 306.13 | 1204.87 | 306.1 | 1205.51 | 306.05 | 1211.93 | 305.98 | 1215.5 | 305.93 |
| 1217.06 | 305.89 | 1221.62 | 305.85 | 1221.76 | 305.86 | 1228.08 | 305.73 | 1231.79 | 305.59 |
| 1239.15 | 305.58 | 1251.2 | 305.58 | 1257.26 | 305.75 | 1262.69 | 305.84 | 1271.46 | 306.08 |
| 1276.01 | 306.21 | 1277.73 | 306.25 | 1279.56 | 306.26 | 1284.62 | 306.15 | 1286.14 | 306.1 |
| 1289.14 | 306.06 | 1294.18 | 306.04 | 1296.53 | 306.05 | 1299.85 | 306 | 1308.53 | 305.96 |
| 1319.62 | 305.77 | 1320.36 | 305.75 | 1328.85 | 305.74 | 1330.99 | 305.77 | 1334.67 | 305.84 |
| 1336.16 | 305.9 | 1339.8 | 305.99 | 1341.67 | 306.05 | 1349.62 | 306.03 | 1349.85 | 306.01 |
| 1357.27 | 305.93 | 1361.64 | 305.92 | 1363.1 | 305.94 | 1365.59 | 306.01 | 1366.61 | 306 |
| 1370.11 | 306.05 | 1372.78 | 306.04 | 1375.78 | 306.1 | 1381.22 | 306.32 | 1381.6 | 306.53 |
| 1382.93 | 307 | 1383.92 | 307.44 | 1385.18 | 307.92 | 1386.1 | 308.37 | 1387.66 | 309.05 |
| 1387.86 | 309.22 | 1389.13 | 309.96 | 1392.16 | 312.1 | 1393.76 | 313.18 | 1394.26 | 313.65 |
| 1394.59 | 313.87 | 1395.15 | 314.02 | 1395.98 | 314.15 | 1398.08 | 314.44 | 1400.54 | 314.87 |
| 1406.44 | 316.02 | 1408.4 | 316.44 | 1410.53 | 316.84 | 1413.53 | 317.31 | 1416.28 | 317.67 |
| 1421.03 | 318.48 | 1425 | 319.28 | 1430.01 | 320.24 | 1432.44 | 320.65 | 1435.69 | 321.07 |
| 1436.65 | 321.25 | 1439.2 | 321.63 | 1442 | 322.03 | 1444.77 | 322.41 | 1446.41 | 322.68 |
| 1449.59 | 323.15 | 1455.79 | 324.03 | 1458.6 | 324.57 | 1461.86 | 325.21 | 1463.68 | 325.6 |
| 1466.9 | 326.18 | 1468.39 | 326.51 | 1469.06 | 326.63 | 1472.57 | 327.13 | 1473.06 | 327.19 |
| 1479.79 | 328.23 | 1480.93 | 328.4 | 1485.21 | 328.85 | 1488.43 | 329.25 | 1489.44 | 329.39 |
| 1493.62 | 329.51 | 1494.33 | 329.54 | 1499.71 | 329.63 | 1501.99 | 329.68 | 1505.01 | 329.79 |
| 1508.21 | 329.87 | 1509.91 | 329.96 | 1510.86 | 329.99 | 1511.92 | 329.99 | 1516.11 | 329.94 |
| 1525.87 | 329.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.76 | .04 | 1398.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.76 | 1398.08 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2761.37*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.28 | 8.91 | 330.29 | 25.73 | 330.22 | 31.21 | 330.11 | 35.03 | 330.01 |
| 38.95 | 329.79 | 41.97 | 329.53 | 42.84 | 329.29 | 44.1 | 329.1 | 45.07 | 328.92 |
| 45.81 | 328.74 | 47.64 | 328.21 | 48.52 | 328.07 | 49.26 | 327.88 | 50.81 | 327.6 |
| 51.48 | 327.57 | 52.86 | 327.22 | 54.99 | 326.6 | 56.2 | 326.28 | 56.6 | 326.29 |
| 57.14 | 326.55 | 59.45 | 326.93 | 61.13 | 327.14 | 63.19 | 327.08 | 65.53 | 326.8 |
| 67.65 | 326.41 | 69.3 | 326.15 | 74.25 | 325.19 | 75.2 | 325.02 | 78.82 | 324.58 |
| 81.9 | 324.19 | 85.05 | 323.69 | 86.34 | 323.46 | 90.27 | 322.71 | 91.01 | 322.58 |
| 91.76 | 322.39 | 93.67 | 321.72 | 95.38 | 321.17 | 97.78 | 320.29 | 98.7 | 319.87 |
| 100.58 | 319.2 | 103.24 | 318.17 | 104.36 | 317.7 | 105.31 | 317.34 | 106.49 | 317 |
| 107.94 | 316.48 | 109.56 | 315.67 | 112.19 | 314.84 | 114.18 | 314.31 | 114.44 | 314.27 |
| 116.36 | 314.25 | 117.13 | 314.14 | 119.1 | 314.06 | 120.52 | 313.86 | 121.4 | 313.66 |
| 122.1 | 313.6 | 123.33 | 313.36 | 124.86 | 313.22 | 125.87 | 313.18 | 128.86 | 312.98 |
| 130.38 | 312.79 | 131.84 | 312.49 | 133.6 | 312.2 | 138.24 | 311.46 | 142.97 | 310.77 |
| 147.56 | 310.22 | 150.02 | 309.88 | 155.73 | 309.32 | 159.69 | 308.88 | 162.51 | 308.62 |
| 163.98 | 308.5 | 168.34 | 308.07 | 171.13 | 307.82 | 173.6 | 307.54 | 175.03 | 307.31 |
| 177 | 307.09 | 178.25 | 307.05 | 179.81 | 306.94 | 185.08 | 306.51 | 189.68 | 306.23 |
| 193.53 | 305.96 | 201.75 | 305.47 | 204.14 | 305.32 | 210.84 | 304.79 | 211.54 | 304.69 |
| 213.34 | 304.67 | 222.16 | 304.83 | 226.55 | 304.67 | 228.31 | 304.66 | 236.09 | 304.69 |
| 240.8 | 304.73 | 242.38 | 304.76 | 244.73 | 304.83 | 247.83 | 304.77 | 249.2 | 304.76 |
| 252.06 | 304.68 | 253.54 | 304.62 | 258.2 | 304.51 | 264.89 | 304.33 | 265.67 | 304.34 |
| 273.32 | 304.13 | 274.34 | 304.11 | 278.06 | 304.1 | 282.25 | 304.12 | 283.98 | 304.14 |
| 284.75 | 304.18 | 287.04 | 304.16 | 289.27 | 304.11 | 289.94 | 304.04 | 290.19 | 303.96 |
| 291.03 | 304 | 292.07 | 304.16 | 293.95 | 304.19 | 296.16 | 304.3 | 299.79 | 304.2 |
| 304.72 | 304.04 | 307.06 | 304.05 | 308.49 | 304.03 | 311.42 | 303.96 | 312.96 | 303.89 |
| 314.04 | 303.95 | 319.11 | 304.07 | 320.81 | 304.08 | 321.71 | 304.11 | 323.83 | 304.24 |
| 325.97 | 304.24 | 328.62 | 304.34 | 330.76 | 304.33 | 336.11 | 304.27 | 339.26 | 304.2 |
| 341 | 304.2 | 347.26 | 304.06 | 349.86 | 304.04 | 351.89 | 304.06 | 353.23 | 304.02 |
| 358.03 | 304.03 | 358.72 | 304.04 | 360.17 | 303.91 | 361.73 | 303.83 | 362.45 | 303.86 |
| 363.53 | 303.97 | 365.11 | 304.06 | 366.23 | 304.09 | 368.48 | 304.11 | 371.17 | 304.18 |
| 372.46 | 304.2 | 379.49 | 304.42 | 388.79 | 304.4 | 390.94 | 304.4 | 393.36 | 304.26 |
| 397.87 | 304.1 | 401.01 | 304.4 | 408.19 | 304.48 | 413.15 | 304.55 | 415.79 | 304.57 |
| 419.14 | 304.54 | 421.19 | 304.48 | 422.16 | 304.37 | 434.23 | 304.2 | 435.57 | 304.27 |
| 436.36 | 304.27 | 445.87 | 304.36 | 453.73 | 304.34 | 475.95 | 304.3 | 479.86 | 304.28 |
| 483.06 | 304.04 | 488.35 | 303.7 | 489.75 | 303.6 | 490.53 | 303.58 | 490.85 | 303.51 |
| 493.62 | 303.41 | 495.5 | 303.48 | 496.14 | 303.54 | 500.19 | 303.58 | 505.41 | 303.65 |
| 507.57 | 303.71 | 528.85 | 304.19 | 539.48 | 304.53 | 547.87 | 304.57 | 549.23 | 304.57 |
| 554.51 | 304.62 | 557.65 | 304.62 | 560.79 | 304.6 | 561.79 | 304.55 | 564.68 | 304.57 |
| 571.5 | 304.65 | 573.38 | 304.7 | 575.15 | 304.77 | 582.31 | 304.78 | 583.2 | 304.77 |
| 584.11 | 304.71 | 588.45 | 304.63 | 590.35 | 304.58 | 593.4 | 304.56 | 593.96 | 304.58 |
| 597.56 | 304.63 | 600.07 | 304.62 | 613.18 | 304.65 | 619.1 | 304.68 | 622.47 | 304.55 |
| 628.52 | 304.42 | 631 | 304.39 | 631.45 | 304.37 | 637.12 | 304.35 | 640.35 | 304.44 |
| 642.24 | 304.57 | 644.6 | 304.69 | 651.26 | 304.84 | 655.62 | 304.88 | 657.12 | 304.74 |
| 657.17 | 304.68 | 660.89 | 304.59 | 663.97 | 304.54 | 666.45 | 304.57 | 667.41 | 304.6 |
| 669.34 | 304.71 | 678.68 | 304.92 | 681.29 | 304.95 | 684.04 | 304.86 | 686.33 | 304.87 |
| 689.66 | 304.91 | 693.16 | 304.9 | 696.84 | 304.94 | 699.95 | 304.86 | 703.65 | 304.87 |
| 705.75 | 304.93 | 707.57 | 305.06 | 711.15 | 305.22 | 713.25 | 305.28 | 718.11 | 305.38 |
| 723.16 | 305.54 | 734.96 | 305.51 | 738.34 | 305.42 | 741.74 | 305.37 | 742.63 | 305.28 |
| 743.03 | 305.28 | 747.78 | 304.89 | 750.4 | 304.74 | 752.72 | 304.7 | 755.09 | 304.76 |
| 758.18 | 304.93 | 760.97 | 305.02 | 765.6 | 305.15 | 767.26 | 305.21 | 770.06 | 305.21 |
| 772.13 | 305.17 | 773.29 | 305.19 | 774.6 | 305.14 | 778.16 | 305.24 | 787.86 | 305.11 |
| 791.49 | 305.19 | 793.74 | 305.27 | 796.89 | 305.36 | 801.78 | 305.48 | 802.32 | 305.48 |
| 809.48 | 305.6 | 812.38 | 305.68 | 816.56 | 305.6 | 822.75 | 305.53 | 824.04 | 305.49 |
| 825.6 | 305.49 | 827.55 | 305.54 | 828.95 | 305.54 | 836.76 | 305.67 | 839.87 | 305.65 |
| 845.27 | 305.56 | 845.8 | 305.57 | 849.91 | 305.58 | 853.98 | 305.76 | 856.59 | 305.82 |
| 862.24 | 305.85 | 864.1 | 305.83 | 874.76 | 305.77 | 876.25 | 305.78 | 879.88 | 305.84 |
| 882.08 | 305.84 | 884.45 | 305.81 | 885.57 | 305.77 | 887.07 | 305.75 | 890.04 | 305.64 |
| 895.24 | 305.49 | 896.05 | 305.45 | 897.85 | 305.42 | 900.54 | 305.4 | 901.72 | 305.37 |
| 907.61 | 305.4 | 912.04 | 305.37 | 914.11 | 305.32 | 916.02 | 305.22 | 917.74 | 305.2 |
| 918.76 | 305.22 | 921.04 | 305.3 | 922.54 | 305.33 | 925.47 | 305.24 | 932.85 | 305.41 |
| 934.36 | 305.46 | 935.52 | 305.47 | 945.82 | 305.43 | 949.12 | 305.37 | 951.51 | 305.35 |
| 957.19 | 305.22 | 966.2 | 305 | 969.01 | 304.96 | 971.67 | 304.95 | 973.31 | 304.9 |
| 975.23 | 304.91 | 976.44 | 304.98 | 978.5 | 304.9 | 986.55 | 305.09 | 988.98 | 305.07 |
| 990.94 | 305.02 | 992.16 | 305.03 | 993.65 | 304.98 | 995.2 | 305 | 996.23 | 305.11 |
| 996.71 | 305.2 | 1003.78 | 305.48 | 1005.06 | 305.52 | 1010.31 | 305.45 | 1015.34 | 305.34 |
| 1019.41 | 305.31 | 1024.19 | 305.34 | 1027.25 | 305.61 | 1028.15 | 305.76 | 1029.59 | 305.84 |
| 1031.08 | 305.8 | 1037.94 | 305.57 | 1041.31 | 305.38 | 1044.96 | 305.35 | 1048.37 | 305.42 |
| 1056.8 | 305.66 | 1057.8 | 305.67 | 1059.36 | 305.59 | 1066.22 | 305.61 | 1068.81 | 305.66 |
| 1071.52 | 305.65 | 1075.08 | 305.67 | 1081.92 | 305.85 | 1083.86 | 305.91 | 1086.67 | 306.03 |
| 1089.83 | 306.15 | 1090.34 | 306.11 | 1091.49 | 306.23 | 1094.9 | 306.09 | 1096.24 | 306.07 |
| 1099.15 | 306 | 1100.33 | 306.01 | 1101.74 | 305.95 | 1105.31 | 305.71 | 1108.78 | 305.74 |
| 1109.31 | 305.81 | 1112.29 | 305.9 | 1116.55 | 305.97 | 1119.61 | 306.03 | 1121.19 | 305.98 |
| 1122.71 | 305.89 | 1125.89 | 305.78 | 1128.42 | 305.74 | 1130.54 | 305.78 | 1135.87 | 305.92 |
| 1137.01 | 305.98 | 1146 | 306.11 | 1148.53 | 306.2 | 1150.76 | 306.24 | 1155.64 | 306.26 |
| 1157.02 | 306.28 | 1157.56 | 306.26 | 1158.97 | 306.28 | 1161.54 | 306.25 | 1164.24 | 306.18 |
| 1166.37 | 306.11 | 1167.99 | 306.03 | 1174.24 | 305.79 | 1176.4 | 305.76 | 1177.58 | 305.7 |
| 1181.81 | 305.61 | 1182.65 | 305.61 | 1183.55 | 305.67 | 1185.39 | 305.74 | 1187.16 | 305.74 |
| 1187.61 | 305.76 | 1189.69 | 305.7 | 1191.93 | 305.71 | 1192.79 | 305.75 | 1195.78 | 305.79 |
| 1198.67 | 305.89 | 1200.13 | 305.87 | 1201.54 | 305.82 | 1204.09 | 305.79 | 1204.48 | 305.82 |
| 1205.83 | 305.82 | 1206.87 | 305.79 | 1207.51 | 305.73 | 1213.91 | 305.66 | 1217.48 | 305.61 |
| 1219.04 | 305.57 | 1223.58 | 305.53 | 1223.72 | 305.54 | 1230.03 | 305.41 | 1233.74 | 305.27 |
| 1241.09 | 305.26 | 1253.11 | 305.26 | 1259.17 | 305.44 | 1264.58 | 305.54 | 1272.58 | 305.77 |
| 1278.21 | 305.95 | 1281.43 | 305.98 | 1282.07 | 305.95 | 1286.48 | 305.85 | 1287.34 | 305.82 |
| 1290.99 | 305.75 | 1296.02 | 305.72 | 1298.36 | 305.72 | 1301.68 | 305.66 | 1310.34 | 305.63 |
| 1322.16 | 305.4 | 1330.63 | 305.39 | 1332.77 | 305.42 | 1336.44 | 305.5 | 1337.93 | 305.55 |
| 1341.56 | 305.64 | 1343.43 | 305.71 | 1351.36 | 305.69 | 1351.6 | 305.67 | 1357.19 | 305.61 |
| 1359.01 | 305.58 | 1361.79 | 305.59 | 1363.36 | 305.58 | 1364.82 | 305.6 | 1367.15 | 305.67 |
| 1369.25 | 305.68 | 1371.82 | 305.73 | 1374.48 | 305.72 | 1377.48 | 305.79 | 1382.91 | 306.03 |
| 1383.29 | 306.26 | 1383.83 | 306.43 | 1384.62 | 306.75 | 1385.6 | 307.21 | 1386.87 | 307.73 |
| 1387.78 | 308.2 | 1389.34 | 308.92 | 1389.54 | 309.09 | 1390.8 | 309.88 | 1393.83 | 312.14 |
| 1395.4 | 313.26 | 1395.93 | 313.78 | 1396.26 | 314.01 | 1396.82 | 314.17 | 1399.74 | 314.62 |
| 1402.24 | 315.08 | 1406.44 | 315.93 | 1408.23 | 316.28 | 1410.21 | 316.7 | 1412.38 | 317.11 |
| 1415.42 | 317.59 | 1418.21 | 317.96 | 1423.03 | 318.79 | 1425.99 | 319.39 | 1427.06 | 319.62 |
| 1432.15 | 320.59 | 1433.93 | 320.91 | 1434.61 | 321.01 | 1437.91 | 321.42 | 1438.88 | 321.59 |
| 1441.47 | 321.94 | 1447.13 | 322.66 | 1448.79 | 322.91 | 1450.16 | 323.08 | 1453.05 | 323.48 |
| 1454.11 | 323.61 | 1458.31 | 324.16 | 1460.64 | 324.59 | 1461.16 | 324.67 | 1464.47 | 325.28 |
| 1466.32 | 325.65 | 1469.14 | 326.11 | 1471.09 | 326.5 | 1471.77 | 326.61 | 1475.34 | 327.09 |
| 1475.84 | 327.14 | 1482.67 | 328.13 | 1483.82 | 328.29 | 1484.78 | 328.39 | 1488.17 | 328.69 |
| 1491.43 | 329.06 | 1492.46 | 329.19 | 1497.42 | 329.35 | 1502.88 | 329.44 | 1505.2 | 329.5 |
| 1508.26 | 329.6 | 1511.5 | 329.68 | 1513.23 | 329.78 | 1515.27 | 329.81 | 1519.53 | 329.75 |
| 1529.43 | 329.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 210.84 | .04 | 1399.74 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

210.84 1399.74 22.65 19.84 19.47 .1 .3

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2741.53*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.04 | 2.26 | 330.04 | 8.7 | 330.06 | 25.13 | 330.02 | 30.48 | 329.94 |
| 34.22 | 329.85 | 38.04 | 329.66 | 40.99 | 329.43 | 41.84 | 329.2 | 42.73 | 329.08 |
| 44.02 | 328.86 | 45.32 | 328.55 | 46.43 | 328.23 | 47.39 | 328.11 | 48.11 | 327.93 |
| 49.62 | 327.67 | 50.48 | 327.6 | 51.62 | 327.28 | 53.71 | 326.66 | 54.89 | 326.33 |
| 55.28 | 326.33 | 55.81 | 326.62 | 56.62 | 326.78 | 58.06 | 327.02 | 59.71 | 327.26 |
| 61.82 | 327.22 | 64 | 326.97 | 65.2 | 326.75 | 67.68 | 326.37 | 68.81 | 326.15 |
| 73.44 | 325.28 | 76.98 | 324.86 | 79.99 | 324.48 | 83.06 | 323.99 | 84.33 | 323.77 |
| 86.4 | 323.37 | 88.88 | 322.91 | 89.62 | 322.72 | 91.49 | 322.04 | 93.16 | 321.49 |
| 95.49 | 320.6 | 96.39 | 320.18 | 98.24 | 319.49 | 100.83 | 318.44 | 101.92 | 317.95 |
| 102.85 | 317.58 | 104 | 317.23 | 105.42 | 316.7 | 107 | 315.86 | 109.57 | 315.01 |
| 111.51 | 314.46 | 113.65 | 314.41 | 114.39 | 314.3 | 116.32 | 314.22 | 117.71 | 314.03 |
| 118.56 | 313.81 | 119.25 | 313.75 | 120.45 | 313.51 | 121.95 | 313.36 | 122.93 | 313.33 |
| 125.85 | 313.14 | 127.34 | 312.94 | 128.76 | 312.63 | 130.48 | 312.31 | 133.76 | 311.75 |
| 134.69 | 311.57 | 139.64 | 310.8 | 144.12 | 310.22 | 146.51 | 309.86 | 152.09 | 309.28 |
| 155.96 | 308.81 | 158.71 | 308.53 | 160.15 | 308.4 | 167.13 | 307.7 | 170.08 | 307.34 |
| 170.94 | 307.19 | 172.87 | 306.96 | 174.09 | 306.89 | 175.61 | 306.77 | 180.76 | 306.29 |
| 183.43 | 306.12 | 189.01 | 305.68 | 197.03 | 305.13 | 199.37 | 304.96 | 205.92 | 304.41 |
| 206.63 | 304.3 | 208.49 | 304.29 | 217.56 | 304.47 | 222.08 | 304.32 | 223.89 | 304.31 |
| 231.89 | 304.36 | 236.74 | 304.4 | 238.37 | 304.44 | 240.78 | 304.52 | 243.97 | 304.47 |
| 245.38 | 304.46 | 247.25 | 304.42 | 249.85 | 304.32 | 254.64 | 304.2 | 261.52 | 304.01 |
| 262.33 | 304.01 | 271.25 | 303.76 | 279.39 | 303.76 | 281.16 | 303.78 | 281.96 | 303.81 |
| 284.32 | 303.79 | 286.61 | 303.74 | 287.29 | 303.67 | 287.56 | 303.58 | 288.42 | 303.62 |
| 289.49 | 303.79 | 291.43 | 303.82 | 293.7 | 303.94 | 297.44 | 303.83 | 302.5 | 303.66 |
| 304.91 | 303.67 | 306.39 | 303.65 | 309.4 | 303.58 | 309.81 | 303.53 | 310.99 | 303.5 |
| 312.09 | 303.57 | 317.31 | 303.69 | 319.06 | 303.71 | 319.99 | 303.74 | 322.16 | 303.87 |
| 324.37 | 303.87 | 327.09 | 303.98 | 328.68 | 303.98 | 334.8 | 303.9 | 338.04 | 303.83 |
| 339.83 | 303.83 | 346.27 | 303.69 | 348.95 | 303.67 | 351.03 | 303.69 | 352.42 | 303.65 |
| 357.35 | 303.66 | 358.06 | 303.67 | 359.56 | 303.53 | 361.16 | 303.45 | 361.9 | 303.48 |
| 363.02 | 303.6 | 364.64 | 303.69 | 365.79 | 303.72 | 368.11 | 303.74 | 370.87 | 303.82 |
| 372.21 | 303.84 | 379.43 | 304.07 | 391.22 | 304.06 | 393.7 | 303.91 | 396.64 | 303.81 |
| 397.92 | 303.74 | 398.79 | 303.77 | 401.57 | 304.06 | 408.97 | 304.14 | 409.31 | 304.15 |
| 416.78 | 304.24 | 420.23 | 304.21 | 422.34 | 304.15 | 423.33 | 304.03 | 435.76 | 303.86 |
| 437.13 | 303.93 | 437.95 | 303.92 | 447.73 | 304.02 | 455.82 | 304.01 | 478.68 | 303.97 |
| 482.7 | 303.96 | 485.99 | 303.71 | 492.87 | 303.25 | 493.68 | 303.23 | 494.01 | 303.15 |
| 496.86 | 303.05 | 498.74 | 303.11 | 499.37 | 303.16 | 503.42 | 303.2 | 508.63 | 303.28 |
| 532.03 | 303.82 | 542.64 | 304.17 | 544.36 | 304.18 | 552.37 | 304.2 | 556.36 | 304.24 |
| 560.78 | 304.25 | 563.92 | 304.22 | 564.92 | 304.18 | 568.69 | 304.21 | 574.61 | 304.29 |
| 578.06 | 304.39 | 578.25 | 304.41 | 579.76 | 304.4 | 585.4 | 304.41 | 586.28 | 304.4 |
| 587.19 | 304.34 | 588.62 | 304.3 | 591.53 | 304.26 | 593.42 | 304.21 | 596.47 | 304.19 |
| 597.02 | 304.21 | 600.62 | 304.26 | 603.12 | 304.25 | 616.21 | 304.28 | 622.13 | 304.3 |
| 625.48 | 304.16 | 631.53 | 304.01 | 634 | 303.98 | 634.44 | 303.96 | 640.11 | 303.94 |
| 642.6 | 304 | 645.22 | 304.18 | 647.57 | 304.31 | 654.22 | 304.46 | 658.58 | 304.51 |
| 660.07 | 304.36 | 660.12 | 304.29 | 663.84 | 304.22 | 666.91 | 304.18 | 669.39 | 304.22 |
| 670.35 | 304.25 | 672.27 | 304.35 | 681.31 | 304.57 | 684.21 | 304.61 | 687.42 | 304.52 |
| 692.56 | 304.57 | 695.47 | 304.56 | 699.73 | 304.6 | 702.7 | 304.52 | 702.83 | 304.5 |
| 706.52 | 304.51 | 708.62 | 304.57 | 710.44 | 304.7 | 714.01 | 304.86 | 716.1 | 304.91 |
| 720.96 | 305.01 | 724.26 | 305.13 | 726 | 305.17 | 737.78 | 305.16 | 739.05 | 305.12 |
| 742.25 | 305.06 | 744.55 | 305.03 | 745.44 | 304.94 | 745.83 | 304.94 | 748.82 | 304.7 |
| 750.58 | 304.54 | 753.19 | 304.38 | 755.5 | 304.35 | 757.88 | 304.41 | 760.08 | 304.55 |
| 762.55 | 304.62 | 763.74 | 304.67 | 770.03 | 304.86 | 773.65 | 304.85 | 774.89 | 304.81 |
| 776.04 | 304.83 | 777.35 | 304.78 | 780.9 | 304.88 | 790.59 | 304.71 | 794.21 | 304.79 |
| 799.61 | 304.96 | 804.49 | 305.08 | 805.02 | 305.08 | 812.17 | 305.22 | 815.07 | 305.3 |
| 819.24 | 305.23 | 825.41 | 305.17 | 826.7 | 305.13 | 829.47 | 305.15 | 831.6 | 305.18 |
| 836.14 | 305.26 | 839.4 | 305.31 | 844.42 | 305.27 | 846.29 | 305.23 | 848.43 | 305.21 |
| 852.53 | 305.23 | 856.59 | 305.4 | 859.19 | 305.44 | 864.84 | 305.46 | 865.1 | 305.44 |
| 877.33 | 305.36 | 878.83 | 305.37 | 882.44 | 305.42 | 884.65 | 305.43 | 886.28 | 305.41 |
| 888.12 | 305.36 | 889.62 | 305.34 | 892.59 | 305.23 | 895.58 | 305.15 | 898.59 | 305.05 |
| 900.12 | 305.02 | 903.07 | 304.99 | 904.25 | 304.96 | 905.13 | 304.97 | 910.12 | 304.99 |
| 914.55 | 304.95 | 916.61 | 304.91 | 918.52 | 304.8 | 919.23 | 304.78 | 921.26 | 304.81 |
| 923.53 | 304.9 | 925.03 | 304.93 | 927.96 | 304.84 | 935.33 | 305.02 | 936.83 | 305.08 |
| 937.99 | 305.09 | 948.27 | 305.05 | 951.57 | 304.99 | 954.85 | 304.96 | 968.61 | 304.62 |
| 971.42 | 304.57 | 974.07 | 304.56 | 975.48 | 304.52 | 977.63 | 304.53 | 978.83 | 304.6 |
| 980.9 | 304.52 | 982.51 | 304.55 | 988.93 | 304.7 | 991.25 | 304.7 | 991.35 | 304.68 |
| 993.32 | 304.63 | 994.53 | 304.64 | 996.01 | 304.59 | 997.57 | 304.61 | 998.59 | 304.72 |
| 999.08 | 304.82 | 1004.1 | 305.03 | 1007.4 | 305.15 | 1008.81 | 305.15 | 1012.65 | 305.08 |
| 1017.67 | 304.96 | 1021.73 | 304.91 | 1026.51 | 304.94 | 1027.44 | 305.02 | 1029.56 | 305.16 |
| 1030.46 | 305.3 | 1031.89 | 305.36 | 1040.23 | 305.06 | 1043.59 | 304.85 | 1047.24 | 304.82 |
| 1050.65 | 304.88 | 1059.05 | 305.13 | 1060.05 | 305.13 | 1061.61 | 305.05 | 1066.99 | 305.07 |
| 1068.46 | 305.06 | 1071.52 | 305.12 | 1073.75 | 305.12 | 1077.31 | 305.15 | 1086.07 | 305.41 |
| 1091.37 | 305.65 | 1092.54 | 305.63 | 1093.69 | 305.75 | 1097.09 | 305.6 | 1098.43 | 305.58 |
| 1101.34 | 305.51 | 1102.51 | 305.52 | 1103.91 | 305.47 | 1107.02 | 305.26 | 1108.03 | 305.21 |
| 1110.95 | 305.25 | 1111.43 | 305.32 | 1112.66 | 305.38 | 1114.46 | 305.43 | 1121.76 | 305.57 |
| 1123.34 | 305.51 | 1124.85 | 305.43 | 1128.03 | 305.31 | 1129.81 | 305.27 | 1132.67 | 305.3 |
| 1137.99 | 305.45 | 1139.12 | 305.5 | 1148.1 | 305.67 | 1152.02 | 305.8 | 1157.73 | 305.85 |
| 1159.11 | 305.87 | 1159.64 | 305.85 | 1161.05 | 305.88 | 1163.61 | 305.87 | 1166.31 | 305.81 |
| 1168.44 | 305.74 | 1170.05 | 305.67 | 1176.3 | 305.46 | 1178.45 | 305.43 | 1179.63 | 305.37 |
| 1183.85 | 305.28 | 1184.69 | 305.28 | 1185.59 | 305.34 | 1187.42 | 305.42 | 1189.64 | 305.42 |
| 1190.85 | 305.38 | 1193.31 | 305.36 | 1194.81 | 305.42 | 1197.8 | 305.46 | 1200.68 | 305.56 |
| 1202.13 | 305.55 | 1203.55 | 305.51 | 1206.1 | 305.48 | 1206.48 | 305.51 | 1207.82 | 305.51 |
| 1208.86 | 305.47 | 1209.5 | 305.41 | 1215.56 | 305.35 | 1221.01 | 305.26 | 1225.55 | 305.22 |
| 1225.69 | 305.23 | 1231.99 | 305.1 | 1235.76 | 304.94 | 1243.03 | 304.93 | 1255.03 | 304.93 |
| 1261.07 | 305.13 | 1266.48 | 305.23 | 1275.22 | 305.51 | 1279.75 | 305.66 | 1283.29 | 305.7 |
| 1283.94 | 305.67 | 1288.34 | 305.56 | 1289.58 | 305.51 | 1292.83 | 305.44 | 1300.2 | 305.38 |
| 1303.51 | 305.33 | 1312.16 | 305.29 | 1319.73 | 305.14 | 1320.23 | 305.14 | 1323.95 | 305.05 |
| 1332.41 | 305.05 | 1334.54 | 305.08 | 1338.21 | 305.16 | 1339.7 | 305.21 | 1343.32 | 305.3 |
| 1345.18 | 305.37 | 1353.11 | 305.35 | 1353.34 | 305.33 | 1358.93 | 305.27 | 1360.74 | 305.24 |
| 1363.52 | 305.25 | 1365.08 | 305.24 | 1366.54 | 305.27 | 1368.87 | 305.34 | 1370.97 | 305.35 |
| 1373.53 | 305.4 | 1376.19 | 305.4 | 1379.18 | 305.48 | 1384.6 | 305.74 | 1384.98 | 305.98 |
| 1386.3 | 306.5 | 1387.28 | 306.99 | 1388.55 | 307.53 | 1389.46 | 308.03 | 1391.01 | 308.79 |
| 1391.22 | 308.97 | 1392.48 | 309.8 | 1394.15 | 311.1 | 1395.5 | 312.18 | 1397.1 | 313.39 |
| 1397.59 | 313.91 | 1397.93 | 314.15 | 1398.48 | 314.32 | 1399.31 | 314.47 | 1401.4 | 314.8 |
| 1404.65 | 315.43 | 1412.02 | 316.96 | 1414.22 | 317.38 | 1417.31 | 317.88 | 1420.14 | 318.26 |
| 1425.03 | 319.11 | 1427.68 | 319.65 | 1429.12 | 319.96 | 1434.28 | 320.95 | 1436.09 | 321.27 |
| 1436.78 | 321.37 | 1440.13 | 321.78 | 1441.12 | 321.94 | 1443.74 | 322.25 | 1448.17 | 322.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1451.17 | 323.14 | 1455.49 | 323.66 | 1456.57 | 323.78 | 1460.83 | 324.29 | 1463.72 | 324.77 |
| 1467.08 | 325.35 | 1468.95 | 325.7 | 1472.27 | 326.2 | 1473.96 | 326.51 | 1478.61 | 327.1 |
| 1485.55 | 328.04 | 1487.69 | 328.28 | 1491.12 | 328.54 | 1492.41 | 328.66 | 1495.48 | 328.99 |
| 1499.78 | 329.12 | 1500.52 | 329.15 | 1506.05 | 329.25 | 1508.4 | 329.31 | 1511.51 | 329.41 |
| 1514.98 | 329.5 | 1516.56 | 329.59 | 1517.53 | 329.62 | 1518.63 | 329.62 | 1522.94 | 329.55 |
| 1532.99 | 329.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 205.92 | .04 | 1401.4 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 205.92 | 1401.4 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2721.69*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.8 | 2.21 | 329.8 | 8.49 | 329.83 | 24.53 | 329.83 | 26.45 | 329.8 |
| 29.75 | 329.77 | 33.4 | 329.69 | 35.11 | 329.63 | 37.13 | 329.53 | 40.01 | 329.33 |
| 40.84 | 329.1 | 41.71 | 329 | 42.96 | 328.81 | 43.67 | 328.66 | 45.32 | 328.24 |
| 46.26 | 328.15 | 46.64 | 328.05 | 48.43 | 327.74 | 49.28 | 327.66 | 50.39 | 327.35 |
| 52.42 | 326.71 | 53.57 | 326.37 | 53.96 | 326.37 | 54.47 | 326.68 | 55.27 | 326.86 |
| 57.23 | 327.22 | 58.28 | 327.38 | 60.24 | 327.37 | 62.47 | 327.14 | 63.64 | 326.94 |
| 66.06 | 326.59 | 69.83 | 325.88 | 71.69 | 325.54 | 75.14 | 325.13 | 78.07 | 324.77 |
| 82.31 | 324.07 | 86.05 | 323.36 | 86.76 | 323.24 | 87.48 | 323.06 | 89.3 | 322.37 |
| 90.93 | 321.82 | 93.21 | 320.91 | 94.09 | 320.48 | 95.89 | 319.78 | 98.42 | 318.7 |
| 100.39 | 317.81 | 101.52 | 317.47 | 102.89 | 316.91 | 104.44 | 316.05 | 106.95 | 315.17 |
| 108.84 | 314.61 | 109.09 | 314.57 | 110.93 | 314.57 | 111.66 | 314.46 | 113.54 | 314.39 |
| 114.89 | 314.19 | 115.73 | 313.97 | 116.4 | 313.91 | 117.57 | 313.65 | 119.03 | 313.51 |
| 119.99 | 313.48 | 122.84 | 313.29 | 124.11 | 313.12 | 125.68 | 312.77 | 127.36 | 312.43 |
| 130.56 | 311.83 | 131.78 | 311.59 | 136.3 | 310.83 | 140.67 | 310.23 | 143.01 | 309.85 |
| 148.46 | 309.23 | 152.23 | 308.74 | 154.92 | 308.44 | 156.32 | 308.31 | 160.48 | 307.86 |
| 163.13 | 307.59 | 166.02 | 307.21 | 166.85 | 307.06 | 168.74 | 306.82 | 169.92 | 306.74 |
| 171.41 | 306.6 | 176.43 | 306.08 | 179.04 | 305.88 | 180.82 | 305.73 | 184.49 | 305.4 |
| 194.61 | 304.61 | 200.99 | 304.03 | 201.73 | 303.92 | 203.64 | 303.91 | 212.97 | 304.11 |
| 217.61 | 303.96 | 219.47 | 303.96 | 227.7 | 304.02 | 232.69 | 304.08 | 236.84 | 304.2 |
| 240.12 | 304.16 | 241.56 | 304.16 | 243.48 | 304.12 | 246.16 | 304.02 | 251.08 | 303.89 |
| 258.16 | 303.69 | 258.99 | 303.69 | 268.16 | 303.42 | 272.1 | 303.41 | 276.52 | 303.41 |
| 279.17 | 303.44 | 281.59 | 303.43 | 283.95 | 303.36 | 284.65 | 303.29 | 284.93 | 303.2 |
| 285.82 | 303.24 | 286.27 | 303.35 | 286.92 | 303.42 | 288.9 | 303.45 | 291.24 | 303.57 |
| 295.08 | 303.46 | 296.58 | 303.4 | 300.29 | 303.28 | 302.76 | 303.29 | 304.28 | 303.28 |
| 307.38 | 303.19 | 309.01 | 303.11 | 310.15 | 303.19 | 315.51 | 303.31 | 318.27 | 303.36 |
| 320.5 | 303.5 | 322.77 | 303.51 | 325.57 | 303.62 | 333.49 | 303.54 | 336.82 | 303.46 |
| 338.66 | 303.46 | 345.29 | 303.31 | 348.04 | 303.29 | 350.18 | 303.31 | 351.61 | 303.27 |
| 356.68 | 303.29 | 357.75 | 303.28 | 358.95 | 303.15 | 360.59 | 303.07 | 361.36 | 303.1 |
| 362.5 | 303.22 | 364.17 | 303.32 | 365.35 | 303.36 | 367.74 | 303.38 | 371.95 | 303.48 |
| 379.38 | 303.73 | 391.49 | 303.72 | 394.05 | 303.56 | 398.82 | 303.38 | 401.14 | 303.63 |
| 402.14 | 303.72 | 409.74 | 303.81 | 414.99 | 303.88 | 417.78 | 303.91 | 421.32 | 303.88 |
| 423.49 | 303.82 | 424.51 | 303.69 | 437.28 | 303.51 | 438.69 | 303.58 | 439.54 | 303.58 |
| 449.59 | 303.69 | 481.41 | 303.65 | 485.54 | 303.63 | 488.93 | 303.38 | 494.53 | 303 |
| 496 | 302.89 | 496.83 | 302.87 | 497.17 | 302.79 | 500.1 | 302.69 | 501.97 | 302.74 |
| 502.61 | 302.79 | 506.65 | 302.83 | 511.84 | 302.9 | 514 | 302.96 | 535.21 | 303.45 |
| 545.8 | 303.81 | 547.52 | 303.82 | 555.36 | 303.83 | 559.5 | 303.87 | 565.19 | 303.87 |
| 567.04 | 303.85 | 568.04 | 303.8 | 571.81 | 303.84 | 577.71 | 303.92 | 579.58 | 303.97 |
| 581.34 | 304.04 | 589.36 | 304.04 | 590.27 | 303.96 | 595.59 | 303.86 | 599.53 | 303.82 |
| 600.09 | 303.85 | 603.68 | 303.89 | 619.24 | 303.9 | 620.29 | 303.91 | 625.15 | 303.91 |
| 628.5 | 303.77 | 634.53 | 303.6 | 637 | 303.57 | 637.44 | 303.55 | 643.1 | 303.53 |
| 645.58 | 303.6 | 646.32 | 303.64 | 648.2 | 303.79 | 650.55 | 303.92 | 657.19 | 304.08 |
| 661.53 | 304.13 | 663.03 | 303.98 | 663.08 | 303.91 | 666.79 | 303.85 | 669.86 | 303.82 |
| 673.29 | 303.89 | 675.21 | 303.99 | 682.66 | 304.19 | 687.12 | 304.28 | 689.85 | 304.19 |
| 691.36 | 304.19 | 692.96 | 304.22 | 698.95 | 304.23 | 702.61 | 304.26 | 705.58 | 304.17 |
| 705.71 | 304.15 | 709.39 | 304.15 | 711.49 | 304.2 | 713.31 | 304.33 | 716.87 | 304.49 |
| 723.81 | 304.65 | 728.84 | 304.81 | 740.59 | 304.8 | 741.87 | 304.76 | 747.36 | 304.69 |
| 748.24 | 304.6 | 748.64 | 304.6 | 751.62 | 304.36 | 753.38 | 304.19 | 755.98 | 304.03 |
| 758.29 | 304 | 760.66 | 304.06 | 763.74 | 304.24 | 771.13 | 304.46 | 772.79 | 304.52 |
| 773.93 | 304.53 | 774.35 | 304.5 | 776.41 | 304.5 | 777.64 | 304.46 | 778.79 | 304.48 |
| 780.1 | 304.42 | 783.64 | 304.51 | 793.32 | 304.32 | 796.93 | 304.38 | 799.17 | 304.46 |
| 800.85 | 304.5 | 802.32 | 304.56 | 807.19 | 304.69 | 807.72 | 304.69 | 814.86 | 304.83 |
| 817.75 | 304.91 | 821.92 | 304.86 | 826.9 | 304.81 | 828.08 | 304.81 | 829.12 | 304.78 |
| 832.13 | 304.79 | 834.26 | 304.82 | 842.04 | 304.95 | 845.14 | 304.94 | 850.53 | 304.86 |
| 855.15 | 304.88 | 859.2 | 305.03 | 861.8 | 305.07 | 867.44 | 305.07 | 869.29 | 305.04 |
| 879.91 | 304.95 | 881.4 | 304.95 | 885.01 | 305 | 887.21 | 305.01 | 889.57 | 304.98 |
| 892.17 | 304.93 | 893.98 | 304.86 | 898.47 | 304.73 | 902.66 | 304.62 | 905.6 | 304.58 |
| 906.78 | 304.55 | 907.66 | 304.56 | 912.64 | 304.57 | 916.05 | 304.53 | 917.06 | 304.53 |
| 919.12 | 304.49 | 921.02 | 304.38 | 921.73 | 304.36 | 923.75 | 304.4 | 926.03 | 304.5 |
| 927.52 | 304.52 | 930.45 | 304.44 | 937.8 | 304.64 | 939.3 | 304.7 | 940.45 | 304.71 |
| 950.72 | 304.66 | 954.01 | 304.61 | 956.39 | 304.6 | 962.06 | 304.46 | 971.03 | 304.23 |
| 973.83 | 304.17 | 976.48 | 304.17 | 978.12 | 304.13 | 980.03 | 304.14 | 981.23 | 304.21 |
| 983.29 | 304.13 | 984.28 | 304.14 | 991.31 | 304.32 | 993.63 | 304.32 | 995.69 | 304.25 |
| 996.9 | 304.25 | 998.38 | 304.2 | 999.93 | 304.22 | 1000.95 | 304.34 | 1001.44 | 304.44 |
| 1006.45 | 304.66 | 1009.75 | 304.79 | 1011.15 | 304.78 | 1014.99 | 304.71 | 1020 | 304.57 |
| 1024.06 | 304.51 | 1028.82 | 304.54 | 1031.87 | 304.72 | 1033.01 | 304.85 | 1034.2 | 304.87 |
| 1035.68 | 304.82 | 1042.52 | 304.54 | 1045.88 | 304.33 | 1049.52 | 304.28 | 1052.92 | 304.35 |
| 1061.31 | 304.59 | 1062.31 | 304.6 | 1063.86 | 304.51 | 1069.24 | 304.52 | 1070.7 | 304.51 |
| 1073.28 | 304.57 | 1075.98 | 304.58 | 1079.53 | 304.62 | 1088.28 | 304.92 | 1093.57 | 305.16 |
| 1094.23 | 305.18 | 1094.73 | 305.14 | 1095.88 | 305.27 | 1099.28 | 305.11 | 1100.62 | 305.09 |
| 1103.52 | 305.02 | 1104.69 | 305.04 | 1106.09 | 304.98 | 1109.19 | 304.77 | 1109.65 | 304.72 |
| 1113 | 304.76 | 1113.6 | 304.84 | 1114.93 | 304.91 | 1116.62 | 304.96 | 1120.85 | 305.04 |
| 1123.91 | 305.11 | 1125.48 | 305.05 | 1127 | 304.96 | 1130.16 | 304.84 | 1131.94 | 304.79 |
| 1134.8 | 304.83 | 1140.11 | 304.97 | 1141.24 | 305.03 | 1150.2 | 305.22 | 1152.72 | 305.33 |
| 1154.95 | 305.39 | 1161.19 | 305.46 | 1161.72 | 305.44 | 1163.13 | 305.48 | 1165.69 | 305.48 |
| 1168.38 | 305.44 | 1172.12 | 305.32 | 1178.35 | 305.14 | 1180.49 | 305.1 | 1181.68 | 305.04 |
| 1183.84 | 305 | 1185.89 | 304.94 | 1186.73 | 304.94 | 1187.63 | 305.01 | 1189.45 | 305.09 |
| 1191.67 | 305.09 | 1193.74 | 305.03 | 1195.97 | 305.04 | 1196.83 | 305.09 | 1199.81 | 305.14 |
| 1202.69 | 305.24 | 1204.14 | 305.23 | 1206.22 | 305.19 | 1208.1 | 305.18 | 1209.73 | 305.2 |
| 1210.86 | 305.16 | 1211.5 | 305.1 | 1212.36 | 305.08 | 1217.55 | 305.03 | 1221.43 | 304.98 |
| 1222.99 | 304.94 | 1227.52 | 304.9 | 1227.66 | 304.91 | 1233.94 | 304.78 | 1237.64 | 304.62 |
| 1244.96 | 304.61 | 1256.94 | 304.61 | 1262.98 | 304.81 | 1268.37 | 304.93 | 1275.97 | 305.18 |
| 1281.62 | 305.38 | 1282.47 | 305.4 | 1285.16 | 305.41 | 1290.19 | 305.27 | 1291.7 | 305.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1294.68 | 305.13 | 1299.7 | 305.07 | 1302.03 | 305.05 | 1305.34 | 305 | 1313.97 | 304.96 |
| 1325.01 | 304.73 | 1325.75 | 304.7 | 1334.19 | 304.7 | 1336.32 | 304.73 | 1340.19 | 304.82 |
| 1344.07 | 304.94 | 1345.08 | 304.96 | 1346.94 | 305.04 | 1347.97 | 305.03 | 1354.85 | 305.01 |
| 1355.08 | 304.99 | 1360.66 | 304.93 | 1362.47 | 304.9 | 1365.24 | 304.91 | 1366.8 | 304.9 |
| 1368.26 | 304.93 | 1370.59 | 305.01 | 1372.68 | 305.02 | 1375.24 | 305.08 | 1377.89 | 305.08 |
| 1380.88 | 305.17 | 1386.29 | 305.45 | 1386.67 | 305.7 | 1387.99 | 306.25 | 1388.97 | 306.76 |
| 1390.23 | 307.33 | 1391.14 | 307.86 | 1392.69 | 308.66 | 1392.89 | 308.85 | 1393.54 | 309.27 |
| 1394.15 | 309.72 | 1395.82 | 311.08 | 1397.17 | 312.22 | 1398.73 | 313.46 | 1399.26 | 314.04 |
| 1399.59 | 314.29 | 1400.15 | 314.47 | 1400.97 | 314.63 | 1403.06 | 314.98 | 1406.64 | 315.71 |
| 1411.41 | 316.72 | 1413.84 | 317.22 | 1416.07 | 317.65 | 1419.2 | 318.16 | 1422.07 | 318.55 |
| 1427.03 | 319.42 | 1429.72 | 319.98 | 1431.18 | 320.3 | 1436.42 | 321.31 | 1438.25 | 321.63 |
| 1438.96 | 321.73 | 1442.35 | 322.13 | 1443.19 | 322.26 | 1446.01 | 322.56 | 1451.84 | 323.15 |
| 1453.36 | 323.34 | 1456.87 | 323.73 | 1459.03 | 323.95 | 1463.35 | 324.42 | 1466.28 | 324.87 |
| 1469.69 | 325.42 | 1471.59 | 325.75 | 1474.49 | 326.14 | 1476.51 | 326.47 | 1480.87 | 327 |
| 1481.39 | 327.05 | 1488.42 | 327.94 | 1489.61 | 328.08 | 1490.6 | 328.16 | 1494.08 | 328.38 |
| 1497.44 | 328.68 | 1498.5 | 328.79 | 1503.61 | 328.96 | 1509.23 | 329.06 | 1511.61 | 329.12 |
| 1514.76 | 329.22 | 1518.1 | 329.31 | 1520.87 | 329.44 | 1521.98 | 329.44 | 1526.36 | 329.36 |
| 1536.55 | 329.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 200.99 | .04 | 1403.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 200.99 | 1403.06 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2701.85*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.55 | 8.28 | 329.6 | 23.93 | 329.63 | 29.03 | 329.59 | 32.58 | 329.54 |
| 36.22 | 329.4 | 39.03 | 329.23 | 39.84 | 329.01 | 41.01 | 328.88 | 42.6 | 328.63 |
| 44.21 | 328.25 | 45.12 | 328.19 | 45.81 | 328.04 | 47.25 | 327.81 | 48.07 | 327.73 |
| 49.15 | 327.41 | 52.26 | 326.41 | 52.64 | 326.42 | 53.14 | 326.74 | 53.92 | 326.94 |
| 55.28 | 327.22 | 56.85 | 327.51 | 58.76 | 327.51 | 60.94 | 327.32 | 62.91 | 327.01 |
| 64.44 | 326.81 | 68.11 | 326.13 | 69.39 | 325.88 | 76.16 | 325.06 | 79.13 | 324.58 |
| 82.27 | 324.01 | 84.63 | 323.57 | 85.33 | 323.39 | 87.11 | 322.7 | 88.7 | 322.14 |
| 90.92 | 321.22 | 91.78 | 320.78 | 93.54 | 320.07 | 96 | 318.96 | 97.05 | 318.44 |
| 97.93 | 318.05 | 99.03 | 317.7 | 100.37 | 317.13 | 101.89 | 316.25 | 104.33 | 315.34 |
| 106.18 | 314.76 | 108.21 | 314.73 | 108.92 | 314.63 | 110.76 | 314.55 | 112.08 | 314.35 |
| 112.89 | 314.12 | 113.55 | 314.06 | 114.69 | 313.8 | 116.11 | 313.66 | 117.05 | 313.63 |
| 119.83 | 313.44 | 121.07 | 313.27 | 124.24 | 312.54 | 127.37 | 311.91 | 128.55 | 311.66 |
| 132.96 | 310.87 | 137.23 | 310.23 | 139.5 | 309.84 | 144.82 | 309.18 | 148.5 | 308.67 |
| 151.12 | 308.35 | 152.49 | 308.21 | 156.54 | 307.75 | 159.14 | 307.47 | 161.44 | 307.16 |
| 162.77 | 306.93 | 164.6 | 306.68 | 167.21 | 306.43 | 172.11 | 305.86 | 176.39 | 305.48 |
| 179.97 | 305.12 | 188.66 | 304.37 | 189.84 | 304.26 | 196.07 | 303.65 | 196.83 | 303.53 |
| 198.79 | 303.53 | 208.37 | 303.76 | 213.14 | 303.61 | 215.05 | 303.61 | 223.5 | 303.69 |
| 228.63 | 303.76 | 232.89 | 303.89 | 236.26 | 303.86 | 237.75 | 303.86 | 239.72 | 303.82 |
| 242.47 | 303.72 | 247.52 | 303.58 | 254.8 | 303.36 | 255.65 | 303.37 | 263.96 | 303.11 |
| 265.06 | 303.08 | 269.11 | 303.06 | 273.66 | 303.05 | 276.38 | 303.07 | 278.87 | 303.06 |
| 281.29 | 302.99 | 282.01 | 302.92 | 282.29 | 302.81 | 283.21 | 302.86 | 283.68 | 302.98 |
| 284.34 | 303.04 | 286.38 | 303.08 | 288.77 | 303.21 | 298.08 | 302.91 | 302.18 | 302.9 |
| 305.36 | 302.81 | 305.8 | 302.76 | 307.03 | 302.73 | 308.2 | 302.8 | 313.71 | 302.94 |
| 315.56 | 302.95 | 316.54 | 302.99 | 318.84 | 303.13 | 321.17 | 303.14 | 324.05 | 303.26 |
| 325.72 | 303.26 | 326.37 | 303.24 | 332.18 | 303.17 | 335.61 | 303.09 | 337.5 | 303.09 |
| 344.3 | 302.93 | 347.13 | 302.92 | 349.33 | 302.94 | 350.79 | 302.89 | 356 | 302.91 |
| 357.1 | 302.9 | 358.33 | 302.77 | 360.02 | 302.69 | 360.81 | 302.72 | 361.98 | 302.85 |
| 363.49 | 302.94 | 364.91 | 302.99 | 367.36 | 303.01 | 371.4 | 303.11 | 379.32 | 303.38 |
| 391.77 | 303.37 | 394.39 | 303.21 | 398.85 | 303.03 | 399.77 | 303.06 | 401.68 | 303.28 |
| 402.71 | 303.37 | 415.9 | 303.54 | 418.77 | 303.58 | 422.41 | 303.55 | 424.64 | 303.48 |
| 425.68 | 303.36 | 438.81 | 303.17 | 440.26 | 303.24 | 441.12 | 303.24 | 451.46 | 303.35 |
| 459.1 | 303.35 | 460 | 303.34 | 484.14 | 303.32 | 488.38 | 303.3 | 491.86 | 303.05 |
| 499.13 | 302.54 | 499.98 | 302.52 | 500.33 | 302.43 | 503.34 | 302.32 | 505.21 | 302.37 |
| 506.07 | 302.42 | 509.88 | 302.46 | 515.06 | 302.53 | 517.22 | 302.59 | 538.39 | 303.08 |
| 548.96 | 303.45 | 550.68 | 303.45 | 558.66 | 303.47 | 563.91 | 303.5 | 567.04 | 303.5 |
| 570.16 | 303.48 | 571.16 | 303.43 | 574.92 | 303.47 | 580.81 | 303.55 | 583.88 | 303.65 |
| 584.44 | 303.68 | 585.95 | 303.67 | 592.45 | 303.67 | 593.35 | 303.59 | 598.67 | 303.49 |
| 602.6 | 303.45 | 603.15 | 303.48 | 606.74 | 303.53 | 609.23 | 303.52 | 622.28 | 303.52 |
| 623.31 | 303.53 | 628.17 | 303.53 | 631.51 | 303.37 | 637.54 | 303.19 | 640 | 303.16 |
| 640.44 | 303.14 | 646.09 | 303.13 | 648.57 | 303.2 | 649.3 | 303.24 | 651.18 | 303.4 |
| 653.52 | 303.54 | 660.15 | 303.71 | 663.04 | 303.75 | 664.49 | 303.75 | 665.98 | 303.6 |
| 666.03 | 303.53 | 669.74 | 303.48 | 672.8 | 303.45 | 676.22 | 303.54 | 678.14 | 303.63 |
| 685.58 | 303.84 | 689.33 | 303.94 | 690.03 | 303.94 | 692.76 | 303.85 | 695.05 | 303.86 |
| 695.86 | 303.88 | 701.84 | 303.9 | 705.5 | 303.92 | 708.46 | 303.82 | 708.59 | 303.8 |
| 712.27 | 303.79 | 714.36 | 303.84 | 716.17 | 303.97 | 719.73 | 304.13 | 721.82 | 304.18 |
| 726.66 | 304.28 | 729.94 | 304.4 | 731.68 | 304.45 | 743.41 | 304.44 | 746.77 | 304.38 |
| 747.87 | 304.38 | 750.16 | 304.35 | 751.05 | 304.26 | 751.44 | 304.26 | 754.42 | 304.02 |
| 756.17 | 303.85 | 758.11 | 303.71 | 758.77 | 303.68 | 761.08 | 303.65 | 763.45 | 303.71 |
| 765.64 | 303.85 | 769.29 | 303.98 | 775.55 | 304.17 | 776.69 | 304.18 | 777.11 | 304.15 |
| 779.17 | 304.15 | 780.39 | 304.1 | 781.54 | 304.12 | 782.85 | 304.06 | 786.39 | 304.15 |
| 796.04 | 303.92 | 799.65 | 303.98 | 803.57 | 304.1 | 805.03 | 304.16 | 809.89 | 304.29 |
| 810.42 | 304.29 | 817.54 | 304.44 | 820.43 | 304.53 | 824.59 | 304.49 | 829.57 | 304.45 |
| 830.75 | 304.45 | 832.03 | 304.42 | 833.59 | 304.42 | 836.91 | 304.46 | 844.68 | 304.6 |
| 847.78 | 304.58 | 850.63 | 304.54 | 853.68 | 304.51 | 857.89 | 304.53 | 861.82 | 304.67 |
| 864.41 | 304.69 | 870.03 | 304.68 | 870.29 | 304.65 | 871.88 | 304.64 | 882.48 | 304.53 |
| 883.97 | 304.54 | 887.57 | 304.59 | 889.77 | 304.6 | 893.24 | 304.53 | 894.73 | 304.52 |
| 896.53 | 304.45 | 903.9 | 304.25 | 905.19 | 304.22 | 908.13 | 304.18 | 909.31 | 304.14 |
| 910.18 | 304.15 | 915.16 | 304.16 | 917.47 | 304.14 | 921.62 | 304.07 | 923.53 | 303.96 |
| 924.23 | 303.94 | 926.25 | 303.99 | 927.62 | 304.06 | 930.01 | 304.12 | 932.93 | 304.04 |
| 940.28 | 304.25 | 941.78 | 304.32 | 942.92 | 304.33 | 953.17 | 304.28 | 956.46 | 304.23 |
| 958.84 | 304.22 | 964.49 | 304.08 | 976.24 | 303.78 | 978.89 | 303.78 | 980.52 | 303.74 |
| 982.43 | 303.75 | 983.63 | 303.83 | 985.68 | 303.74 | 986.67 | 303.75 | 988.72 | 303.81 |
| 993.69 | 303.94 | 996.11 | 303.92 | 998.06 | 303.86 | 999.27 | 303.87 | 1000.75 | 303.81 |
| 1002.3 | 303.83 | 1003.32 | 303.96 | 1003.8 | 304.06 | 1010.83 | 304.38 | 1012.1 | 304.42 |
| 1013.5 | 304.41 | 1017.33 | 304.33 | 1022.33 | 304.18 | 1026.38 | 304.12 | 1031.14 | 304.13 |
| 1034.18 | 304.28 | 1035.08 | 304.37 | 1036.5 | 304.39 | 1037.98 | 304.33 | 1044.81 | 304.03 |
| 1048.16 | 303.8 | 1051.8 | 303.75 | 1055.19 | 303.81 | 1063.57 | 304.06 | 1064.57 | 304.07 |
| 1066.12 | 303.97 | 1072.95 | 303.97 | 1075.99 | 304.03 | 1078.21 | 304.05 | 1081.76 | 304.1 |
| 1088.56 | 304.35 | 1090.99 | 304.45 | 1095.78 | 304.68 | 1096.43 | 304.7 | 1096.93 | 304.65 |
| 1098.08 | 304.79 | 1100.6 | 304.65 | 1101.48 | 304.62 | 1105.7 | 304.53 | 1106.87 | 304.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1108.27 | 304.49 | 1111.83 | 304.23 | 1115.28 | 304.28 | 1115.81 | 304.36 | 1117.09 | 304.44 |
| 1118.78 | 304.5 | 1126.06 | 304.64 | 1127.63 | 304.58 | 1129.14 | 304.49 | 1132.3 | 304.36 |
| 1134.82 | 304.32 | 1136.93 | 304.36 | 1141.56 | 304.48 | 1142.23 | 304.49 | 1143.36 | 304.56 |
| 1152.3 | 304.78 | 1154.82 | 304.89 | 1157.05 | 304.96 | 1162.43 | 305.04 | 1163.8 | 305.04 |
| 1165.21 | 305.08 | 1167.76 | 305.1 | 1170.45 | 305.07 | 1180.4 | 304.81 | 1182.54 | 304.77 |
| 1183.72 | 304.71 | 1187.93 | 304.6 | 1188.77 | 304.6 | 1189.66 | 304.67 | 1191.49 | 304.76 |
| 1193.7 | 304.76 | 1195.77 | 304.69 | 1197.36 | 304.69 | 1198.85 | 304.76 | 1201.83 | 304.81 |
| 1203.8 | 304.87 | 1204.7 | 304.92 | 1206.15 | 304.92 | 1208.22 | 304.88 | 1209.95 | 304.87 |
| 1210.72 | 304.9 | 1212.86 | 304.85 | 1213.49 | 304.78 | 1215.57 | 304.75 | 1219.53 | 304.71 |
| 1223.41 | 304.66 | 1224.96 | 304.62 | 1229.48 | 304.59 | 1229.62 | 304.6 | 1234.53 | 304.5 |
| 1235.9 | 304.46 | 1239.59 | 304.3 | 1246.9 | 304.29 | 1258.86 | 304.29 | 1264.88 | 304.5 |
| 1267.64 | 304.56 | 1270.27 | 304.63 | 1283.5 | 305.1 | 1283.9 | 305.12 | 1287.03 | 305.13 |
| 1292.05 | 304.97 | 1292.9 | 304.93 | 1296.53 | 304.83 | 1301.54 | 304.75 | 1303.87 | 304.72 |
| 1307.17 | 304.66 | 1315.79 | 304.62 | 1323.33 | 304.46 | 1327.54 | 304.36 | 1335.97 | 304.35 |
| 1338.09 | 304.38 | 1341.75 | 304.47 | 1343.23 | 304.52 | 1346.85 | 304.62 | 1348.7 | 304.7 |
| 1349.72 | 304.69 | 1356.59 | 304.67 | 1356.83 | 304.66 | 1362.39 | 304.59 | 1364.2 | 304.56 |
| 1366.97 | 304.57 | 1368.53 | 304.56 | 1369.98 | 304.59 | 1372.3 | 304.67 | 1374.39 | 304.69 |
| 1376.95 | 304.76 | 1379.6 | 304.76 | 1382.58 | 304.86 | 1387.97 | 305.16 | 1388.36 | 305.42 |
| 1389.68 | 306 | 1390.65 | 306.54 | 1391.91 | 307.14 | 1392.82 | 307.69 | 1394.37 | 308.53 |
| 1394.57 | 308.73 | 1395.21 | 309.17 | 1395.83 | 309.65 | 1397.08 | 310.71 | 1398.84 | 312.26 |
| 1400.4 | 313.56 | 1400.92 | 314.17 | 1401.26 | 314.44 | 1401.81 | 314.62 | 1402.64 | 314.79 |
| 1404.72 | 315.16 | 1407.33 | 315.7 | 1413.19 | 316.98 | 1415.65 | 317.48 | 1417.91 | 317.92 |
| 1421.09 | 318.44 | 1424 | 318.84 | 1429.04 | 319.74 | 1433.24 | 320.64 | 1438.55 | 321.66 |
| 1440.42 | 321.99 | 1441.13 | 322.09 | 1444.56 | 322.48 | 1445.42 | 322.6 | 1448.28 | 322.88 |
| 1454.19 | 323.4 | 1455.93 | 323.59 | 1463.52 | 324.33 | 1465.23 | 324.48 | 1466.69 | 324.66 |
| 1468.84 | 324.97 | 1472.29 | 325.49 | 1474.23 | 325.8 | 1477.64 | 326.22 | 1479.92 | 326.54 |
| 1483.64 | 326.96 | 1484.16 | 327.01 | 1491.3 | 327.84 | 1492.5 | 327.97 | 1493.5 | 328.05 |
| 1497.03 | 328.23 | 1501.52 | 328.59 | 1506.7 | 328.77 | 1512.4 | 328.87 | 1514.82 | 328.93 |
| 1518.01 | 329.03 | 1521.4 | 329.12 | 1523.2 | 329.23 | 1525.33 | 329.26 | 1529.77 | 329.17 |
| 1540.11 | 329.15 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 196.07 | .04 | 1404.72 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 196.07 | 1404.72 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2682.01*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.31 | .7 | 329.32 | 8.08 | 329.37 | 23.33 | 329.43 | 25.15 | 329.42 |
| 28.3 | 329.42 | 31.76 | 329.38 | 33.39 | 329.34 | 36.2 | 329.23 | 38.05 | 329.13 |
| 38.84 | 328.91 | 39.67 | 328.84 | 41.53 | 328.59 | 42.97 | 328.28 | 43.99 | 328.23 |
| 44.66 | 328.1 | 46.15 | 327.87 | 46.86 | 327.8 | 48.36 | 327.34 | 50.95 | 326.45 |
| 51.32 | 326.46 | 51.8 | 326.81 | 52.56 | 327.02 | 54.43 | 327.43 | 55.42 | 327.63 |
| 56.81 | 327.66 | 57.38 | 327.65 | 59.41 | 327.49 | 60.28 | 327.35 | 62.83 | 327.03 |
| 66.4 | 326.38 | 68.17 | 326.07 | 74.25 | 325.36 | 78.28 | 324.68 | 81.83 | 324.02 |
| 82.51 | 323.91 | 83.19 | 323.72 | 84.92 | 323.02 | 86.47 | 322.46 | 88.64 | 321.53 |
| 89.48 | 321.09 | 91.19 | 320.35 | 93.59 | 319.22 | 94.61 | 318.69 | 95.47 | 318.29 |
| 96.54 | 317.93 | 97.85 | 317.35 | 99.33 | 316.44 | 101.71 | 315.5 | 103.51 | 314.91 |
| 103.75 | 314.87 | 105.49 | 314.9 | 106.19 | 314.79 | 107.97 | 314.72 | 109.26 | 314.51 |
| 110.06 | 314.28 | 110.7 | 314.22 | 111.81 | 313.95 | 113.2 | 313.8 | 114.11 | 313.77 |
| 116.82 | 313.59 | 118.03 | 313.42 | 120.52 | 312.82 | 121.12 | 312.66 | 125.33 | 311.73 |
| 129.62 | 310.9 | 133.78 | 310.24 | 136 | 309.82 | 141.18 | 309.14 | 144.77 | 308.59 |
| 147.56 | 308.24 | 148.66 | 308.12 | 152.61 | 307.64 | 155.14 | 307.35 | 157.39 | 307.03 |
| 158.68 | 306.81 | 160.47 | 306.55 | 163.01 | 306.26 | 167.79 | 305.65 | 170.27 | 305.41 |
| 175.45 | 304.84 | 185.07 | 303.91 | 191.14 | 303.27 | 191.92 | 303.15 | 193.94 | 303.14 |
| 203.77 | 303.4 | 208.67 | 303.25 | 210.63 | 303.25 | 224.57 | 303.43 | 226.95 | 303.51 |
| 228.11 | 303.53 | 228.95 | 303.58 | 233.93 | 303.56 | 235.95 | 303.52 | 240.93 | 303.36 |
| 251.43 | 303.04 | 252.3 | 303.04 | 260.84 | 302.77 | 261.97 | 302.74 | 266.13 | 302.71 |
| 272.73 | 302.69 | 273.59 | 302.71 | 276.14 | 302.69 | 278.63 | 302.62 | 279.37 | 302.54 |
| 279.66 | 302.43 | 280.6 | 302.48 | 281.08 | 302.6 | 281.76 | 302.67 | 283.85 | 302.71 |
| 286.31 | 302.84 | 295.86 | 302.53 | 300.07 | 302.52 | 303.34 | 302.43 | 303.79 | 302.38 |
| 305.06 | 302.34 | 306.26 | 302.42 | 311.92 | 302.56 | 313.81 | 302.58 | 314.82 | 302.61 |
| 317.18 | 302.76 | 319.57 | 302.77 | 322.52 | 302.9 | 324.24 | 302.9 | 324.91 | 302.88 |
| 330.87 | 302.81 | 334.39 | 302.72 | 336.33 | 302.72 | 343.32 | 302.56 | 346.22 | 302.54 |
| 348.48 | 302.56 | 349.98 | 302.52 | 355.33 | 302.54 | 356.46 | 302.53 | 357.72 | 302.4 |
| 359.45 | 302.31 | 360.26 | 302.34 | 361.47 | 302.47 | 363.02 | 302.57 | 364.47 | 302.62 |
| 366.99 | 302.65 | 371.43 | 302.76 | 379.27 | 303.04 | 392.04 | 303.03 | 394.74 | 302.85 |
| 397.93 | 302.74 | 399.31 | 302.67 | 400.26 | 302.7 | 402.21 | 302.93 | 403.27 | 303.03 |
| 411.28 | 303.13 | 411.66 | 303.14 | 419.76 | 303.25 | 424.87 | 303.19 | 425.78 | 303.15 |
| 426.86 | 303.02 | 440.33 | 302.82 | 441.82 | 302.9 | 442.71 | 302.9 | 453.32 | 303.02 |
| 462.08 | 303.01 | 486.86 | 302.99 | 491.22 | 302.98 | 494.8 | 302.71 | 500.7 | 302.3 |
| 502.26 | 302.18 | 503.13 | 302.16 | 503.49 | 302.07 | 506.58 | 301.96 | 509.08 | 302.04 |
| 513.11 | 302.08 | 518.28 | 302.15 | 520.43 | 302.21 | 541.57 | 302.71 | 552.12 | 303.09 |
| 561.8 | 303.1 | 565.77 | 303.12 | 571.74 | 303.12 | 573.28 | 303.11 | 574.28 | 303.06 |
| 578.04 | 303.1 | 583.92 | 303.18 | 587.54 | 303.31 | 594.65 | 303.31 | 595.53 | 303.3 |
| 596.43 | 303.22 | 601.74 | 303.12 | 604.58 | 303.08 | 605.66 | 303.08 | 606.22 | 303.11 |
| 609.79 | 303.16 | 612.28 | 303.15 | 631.19 | 303.15 | 634.53 | 302.98 | 640.54 | 302.79 |
| 643.44 | 302.74 | 649.08 | 302.72 | 651.55 | 302.8 | 652.29 | 302.84 | 654.16 | 303.01 |
| 656.5 | 303.15 | 663.12 | 303.33 | 667.45 | 303.38 | 668.94 | 303.22 | 668.99 | 303.15 |
| 672.69 | 303.11 | 675.74 | 303.09 | 678.2 | 303.15 | 681.07 | 303.27 | 688.5 | 303.5 |
| 692.24 | 303.6 | 692.94 | 303.61 | 695.67 | 303.52 | 697.95 | 303.52 | 698.76 | 303.54 |
| 701.25 | 303.56 | 704.73 | 303.56 | 708.38 | 303.58 | 711.47 | 303.45 | 715.14 | 303.43 |
| 717.23 | 303.47 | 719.04 | 303.61 | 722.59 | 303.76 | 724.67 | 303.81 | 729.51 | 303.91 |
| 734.52 | 304.09 | 746.23 | 304.08 | 747.5 | 304.06 | 752.97 | 304.01 | 753.85 | 303.92 |
| 754.25 | 303.93 | 757.77 | 303.62 | 758.97 | 303.5 | 760.9 | 303.36 | 761.56 | 303.33 |
| 763.87 | 303.29 | 766.23 | 303.35 | 766.44 | 303.38 | 769.3 | 303.54 | 770.87 | 303.58 |
| 772.06 | 303.63 | 776.66 | 303.77 | 778.31 | 303.83 | 781.09 | 303.81 | 783.15 | 303.75 |
| 784.29 | 303.77 | 785.6 | 303.7 | 789.13 | 303.78 | 798.77 | 303.52 | 802.37 | 303.58 |
| 806.28 | 303.69 | 807.74 | 303.76 | 812.59 | 303.9 | 813.13 | 303.9 | 820.23 | 304.05 |
| 823.53 | 304.15 | 824.07 | 304.14 | 832.24 | 304.09 | 834.45 | 304.07 | 836.25 | 304.07 |
| 839.57 | 304.1 | 847.33 | 304.24 | 850.41 | 304.22 | 856.3 | 304.16 | 860.51 | 304.18 |
| 864.43 | 304.3 | 867.01 | 304.31 | 872.63 | 304.28 | 872.89 | 304.26 | 885.06 | 304.12 |
| 886.54 | 304.12 | 890.14 | 304.17 | 892.33 | 304.18 | 894.69 | 304.15 | 895.79 | 304.12 |
| 897.28 | 304.11 | 900.23 | 304.01 | 903.56 | 303.92 | 907.73 | 303.82 | 910.66 | 303.77 |
| 911.83 | 303.73 | 912.71 | 303.74 | 917.68 | 303.74 | 919.98 | 303.72 | 924.13 | 303.65 |
| 926.73 | 303.52 | 928.75 | 303.58 | 931.02 | 303.69 | 932.5 | 303.72 | 935.42 | 303.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 942.75 | 303.87 | 944.25 | 303.93 | 945.39 | 303.95 | 955.63 | 303.9 | 958.9 | 303.85 |
| 961.28 | 303.84 | 965.82 | 303.73 | 976.96 | 303.43 | 978.65 | 303.39 | 981.29 | 303.39 |
| 982.92 | 303.35 | 984.83 | 303.36 | 986.03 | 303.44 | 988.08 | 303.35 | 989.06 | 303.36 |
| 996.07 | 303.56 | 998.48 | 303.53 | 1000.43 | 303.47 | 1001.64 | 303.48 | 1003.12 | 303.42 |
| 1004.66 | 303.44 | 1005.05 | 303.52 | 1005.68 | 303.57 | 1006.16 | 303.68 | 1011.16 | 303.92 |
| 1014.45 | 304.06 | 1015.84 | 304.05 | 1019.66 | 303.96 | 1024.66 | 303.79 | 1028.7 | 303.72 |
| 1033.45 | 303.73 | 1036.49 | 303.84 | 1037.98 | 303.92 | 1038.81 | 303.91 | 1040.29 | 303.85 |
| 1047.1 | 303.52 | 1050.45 | 303.28 | 1054.08 | 303.22 | 1057.46 | 303.28 | 1065.83 | 303.53 |
| 1066.82 | 303.53 | 1068.37 | 303.43 | 1073.73 | 303.43 | 1075.19 | 303.42 | 1078.22 | 303.49 |
| 1083.36 | 303.57 | 1083.98 | 303.57 | 1090.78 | 303.85 | 1093.2 | 303.96 | 1097.98 | 304.19 |
| 1098.63 | 304.21 | 1099.13 | 304.17 | 1100.28 | 304.31 | 1102.79 | 304.16 | 1103.67 | 304.13 |
| 1107.89 | 304.04 | 1109.05 | 304.06 | 1110.45 | 304 | 1113.54 | 303.78 | 1114.54 | 303.73 |
| 1117.45 | 303.79 | 1117.97 | 303.88 | 1119.26 | 303.96 | 1120.94 | 304.03 | 1125.16 | 304.11 |
| 1126.79 | 304.16 | 1128.21 | 304.18 | 1129.77 | 304.12 | 1131.28 | 304.02 | 1134.44 | 303.89 |
| 1136.21 | 303.84 | 1136.95 | 303.84 | 1143.68 | 304 | 1145.48 | 304.08 | 1154.4 | 304.33 |
| 1156.92 | 304.46 | 1159.14 | 304.54 | 1164.51 | 304.63 | 1165.88 | 304.63 | 1167.29 | 304.68 |
| 1169.84 | 304.71 | 1172.52 | 304.7 | 1174.64 | 304.66 | 1176.25 | 304.61 | 1182.45 | 304.48 |
| 1184.59 | 304.45 | 1185.77 | 304.37 | 1187.93 | 304.33 | 1189.97 | 304.27 | 1190.81 | 304.27 |
| 1191.7 | 304.34 | 1193.52 | 304.43 | 1195.73 | 304.43 | 1197.79 | 304.36 | 1200.01 | 304.37 |
| 1200.87 | 304.43 | 1203.84 | 304.48 | 1205.81 | 304.55 | 1206.71 | 304.6 | 1208.16 | 304.6 |
| 1209.56 | 304.57 | 1212.2 | 304.57 | 1212.85 | 304.59 | 1214.85 | 304.53 | 1215.49 | 304.46 |
| 1217.56 | 304.43 | 1221.52 | 304.39 | 1225.39 | 304.34 | 1226.94 | 304.3 | 1231.45 | 304.27 |
| 1231.59 | 304.28 | 1237.85 | 304.15 | 1241.54 | 303.97 | 1260.77 | 303.97 | 1266.79 | 304.19 |
| 1272.16 | 304.32 | 1279.74 | 304.61 | 1285.37 | 304.82 | 1285.7 | 304.84 | 1288.89 | 304.85 |
| 1289.53 | 304.82 | 1293.91 | 304.68 | 1295.41 | 304.61 | 1298.38 | 304.52 | 1303.38 | 304.42 |
| 1305.71 | 304.39 | 1309 | 304.33 | 1317.6 | 304.29 | 1328.6 | 304.04 | 1329.34 | 304.01 |
| 1337.75 | 304 | 1339.87 | 304.04 | 1343.52 | 304.13 | 1345 | 304.18 | 1348.61 | 304.28 |
| 1350.46 | 304.36 | 1358.34 | 304.33 | 1358.57 | 304.32 | 1364.13 | 304.25 | 1365.93 | 304.22 |
| 1368.69 | 304.23 | 1370.25 | 304.22 | 1371.7 | 304.25 | 1374.02 | 304.34 | 1376.86 | 304.38 |
| 1378.66 | 304.43 | 1381.3 | 304.44 | 1384.27 | 304.54 | 1389.66 | 304.87 | 1390.05 | 305.14 |
| 1390.58 | 305.36 | 1391.36 | 305.75 | 1392.34 | 306.31 | 1393.59 | 306.94 | 1394.5 | 307.51 |
| 1396.05 | 308.39 | 1396.25 | 308.61 | 1396.89 | 309.07 | 1397.5 | 309.57 | 1399.16 | 311.05 |
| 1400.51 | 312.3 | 1402.1 | 313.69 | 1402.59 | 314.29 | 1402.92 | 314.58 | 1403.48 | 314.77 |
| 1406.38 | 315.34 | 1410.06 | 316.14 | 1414.96 | 317.23 | 1417.46 | 317.74 | 1419.76 | 318.19 |
| 1422.98 | 318.72 | 1425.93 | 319.13 | 1431.04 | 320.05 | 1435.3 | 320.98 | 1440.69 | 322.02 |
| 1442.58 | 322.35 | 1443.3 | 322.45 | 1446.78 | 322.83 | 1447.82 | 322.97 | 1450.56 | 323.19 |
| 1456.55 | 323.65 | 1458.11 | 323.81 | 1459.76 | 323.94 | 1461.72 | 324.12 | 1466.01 | 324.48 |
| 1468.38 | 324.67 | 1470.85 | 325.01 | 1471.4 | 325.07 | 1475.05 | 325.58 | 1476.86 | 325.85 |
| 1479.85 | 326.17 | 1482.08 | 326.46 | 1486.94 | 326.96 | 1494.17 | 327.74 | 1495.39 | 327.86 |
| 1496.41 | 327.93 | 1499.99 | 328.07 | 1504.53 | 328.39 | 1509.03 | 328.54 | 1509.79 | 328.58 |
| 1518.02 | 328.74 | 1524.7 | 328.94 | 1527.55 | 329.07 | 1528.69 | 329.07 | 1533.19 | 328.98 |
| 1543.68 | 328.95 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 191.14 | .04 | 1406.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 191.14 | 1406.38 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2662.17*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.07 | 7.87 | 329.14 | 22.73 | 329.23 | 24.51 | 329.23 | 27.57 | 329.25 |
| 32.53 | 329.2 | 34.77 | 329.13 | 37.07 | 329.04 | 37.84 | 328.82 | 39.81 | 328.64 |
| 40.99 | 328.46 | 41.99 | 328.26 | 42.86 | 328.28 | 43.51 | 328.15 | 44.87 | 327.95 |
| 45.65 | 327.87 | 47.11 | 327.4 | 49.64 | 326.5 | 49.99 | 326.5 | 50.47 | 326.87 |
| 51.21 | 327.1 | 54 | 327.75 | 55.9 | 327.79 | 57.88 | 327.66 | 58.97 | 327.5 |
| 61.21 | 327.25 | 65.58 | 326.48 | 65.91 | 326.4 | 72.34 | 325.65 | 75.12 | 325.18 |
| 77.93 | 324.69 | 80.38 | 324.24 | 81.05 | 324.05 | 82.74 | 323.35 | 84.25 | 322.78 |
| 85.17 | 322.36 | 86.36 | 321.85 | 87.17 | 321.39 | 88.84 | 320.64 | 91.18 | 319.48 |
| 92.17 | 318.94 | 93.01 | 318.53 | 94.05 | 318.16 | 95.33 | 317.57 | 96.77 | 316.63 |
| 99.09 | 315.67 | 100.84 | 315.06 | 101.08 | 315.02 | 102.78 | 315.06 | 103.45 | 314.95 |
| 105.19 | 314.89 | 106.45 | 314.68 | 107.22 | 314.43 | 107.84 | 314.37 | 108.93 | 314.1 |
| 110.28 | 313.95 | 111.17 | 313.92 | 113.81 | 313.74 | 114.99 | 313.56 | 116.86 | 313.1 |
| 118 | 312.77 | 120.97 | 312.08 | 121.8 | 311.86 | 126.28 | 310.93 | 130.33 | 310.24 |
| 132.5 | 309.81 | 137.54 | 309.09 | 141.04 | 308.52 | 143.53 | 308.18 | 146 | 307.88 |
| 151.14 | 307.23 | 153.33 | 306.9 | 154.59 | 306.68 | 156.33 | 306.41 | 158.81 | 306.1 |
| 163.46 | 305.43 | 165.88 | 305.17 | 170.93 | 304.56 | 178.19 | 303.79 | 180.3 | 303.56 |
| 186.22 | 302.89 | 187.02 | 302.77 | 189.08 | 302.76 | 199.17 | 303.04 | 204.2 | 302.9 |
| 206.21 | 302.9 | 220.51 | 303.11 | 223.33 | 303.2 | 225 | 303.27 | 226.19 | 303.26 |
| 230.11 | 303.26 | 232.19 | 303.23 | 235.09 | 303.13 | 248.07 | 302.72 | 248.96 | 302.72 |
| 258.88 | 302.39 | 263.15 | 302.37 | 265.53 | 302.35 | 269.91 | 302.33 | 270.8 | 302.34 |
| 273.42 | 302.32 | 275.97 | 302.25 | 276.73 | 302.16 | 277.03 | 302.05 | 277.99 | 302.1 |
| 278.48 | 302.23 | 279.18 | 302.3 | 281.33 | 302.34 | 283.85 | 302.48 | 289.63 | 302.28 |
| 293.65 | 302.15 | 296.32 | 302.16 | 297.97 | 302.14 | 301.32 | 302.05 | 301.78 | 301.99 |
| 303.08 | 301.95 | 304.31 | 302.04 | 310.12 | 302.18 | 312.06 | 302.2 | 313.1 | 302.24 |
| 315.51 | 302.4 | 317.97 | 302.4 | 321 | 302.53 | 322.76 | 302.53 | 329.57 | 302.44 |
| 333.17 | 302.35 | 335.16 | 302.35 | 342.33 | 302.18 | 345.31 | 302.16 | 347.62 | 302.19 |
| 349.17 | 302.14 | 354.65 | 302.17 | 355.81 | 302.16 | 357.11 | 302.02 | 358.89 | 301.92 |
| 359.71 | 301.96 | 360.95 | 302.1 | 362.54 | 302.2 | 364.04 | 302.25 | 366.62 | 302.28 |
| 369.69 | 302.37 | 371.17 | 302.4 | 379.21 | 302.69 | 392.32 | 302.69 | 395.08 | 302.5 |
| 398.35 | 302.38 | 399.77 | 302.31 | 400.74 | 302.34 | 402.75 | 302.58 | 403.84 | 302.69 |
| 412.06 | 302.8 | 412.44 | 302.8 | 420.75 | 302.91 | 424.59 | 302.88 | 426.93 | 302.82 |
| 428.04 | 302.68 | 441.86 | 302.48 | 443.38 | 302.56 | 444.3 | 302.56 | 455.18 | 302.69 |
| 464.17 | 302.68 | 489.59 | 302.66 | 492.58 | 302.66 | 494.07 | 302.65 | 497.73 | 302.38 |
| 503.79 | 301.95 | 505.39 | 301.83 | 506.28 | 301.81 | 506.65 | 301.72 | 509.82 | 301.6 |
| 512.88 | 301.67 | 516.34 | 301.71 | 521.5 | 301.78 | 523.65 | 301.84 | 544.74 | 302.34 |
| 555.28 | 302.72 | 556.99 | 302.73 | 564.94 | 302.73 | 568.91 | 302.75 | 574.57 | 302.75 |
| 576.41 | 302.74 | 577.4 | 302.69 | 581.15 | 302.73 | 587.02 | 302.82 | 590.07 | 302.92 |
| 590.64 | 302.95 | 598.39 | 302.94 | 599.52 | 302.85 | 600.94 | 302.81 | 604.59 | 302.76 |
| 607.65 | 302.71 | 608.73 | 302.71 | 609.28 | 302.74 | 612.85 | 302.79 | 615.34 | 302.79 |
| 628.34 | 302.77 | 634.21 | 302.77 | 637.54 | 302.59 | 643.55 | 302.38 | 646 | 302.35 |
| 646.44 | 302.33 | 652.07 | 302.31 | 654.54 | 302.39 | 655.27 | 302.44 | 657.14 | 302.61 |
| 659.48 | 302.77 | 666.08 | 302.95 | 670.41 | 303 | 671.89 | 302.84 | 671.94 | 302.76 |
| 675.63 | 302.73 | 676.49 | 302.74 | 678.68 | 302.73 | 682.1 | 302.83 | 684.01 | 302.91 |
| 693.27 | 303.21 | 695.86 | 303.27 | 698.57 | 303.18 | 700.85 | 303.18 | 701.67 | 303.2 |
| 704.15 | 303.22 | 707.04 | 303.22 | 710.55 | 303.25 | 711.27 | 303.24 | 714.22 | 303.11 |
| 714.35 | 303.09 | 718.01 | 303.06 | 720.1 | 303.11 | 721.91 | 303.25 | 725.45 | 303.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 727.53 | 303.45 | 732.35 | 303.54 | 737.36 | 303.72 | 749.05 | 303.72 | 752.4 | 303.69 |
| 755.78 | 303.68 | 756.66 | 303.58 | 757.05 | 303.59 | 760.57 | 303.28 | 761.77 | 303.15 |
| 764.36 | 302.97 | 766.65 | 302.94 | 769.01 | 303 | 769.22 | 303.03 | 771.2 | 303.16 |
| 773.65 | 303.23 | 774.83 | 303.28 | 779.43 | 303.42 | 781.08 | 303.48 | 783.84 | 303.46 |
| 785.9 | 303.39 | 787.05 | 303.41 | 788.35 | 303.34 | 791.87 | 303.42 | 801.5 | 303.12 |
| 805.09 | 303.18 | 808.43 | 303.27 | 810.45 | 303.35 | 815.3 | 303.5 | 815.83 | 303.5 |
| 822.92 | 303.66 | 825.8 | 303.76 | 835.86 | 303.73 | 837.11 | 303.71 | 841.9 | 303.72 |
| 846.73 | 303.82 | 849.97 | 303.88 | 854.95 | 303.85 | 857.15 | 303.82 | 858.93 | 303.81 |
| 863.12 | 303.83 | 867.04 | 303.94 | 869.62 | 303.93 | 875.23 | 303.89 | 876.31 | 303.85 |
| 887.63 | 303.71 | 889.12 | 303.71 | 894.9 | 303.77 | 898.35 | 303.71 | 899.83 | 303.7 |
| 902.78 | 303.6 | 910.27 | 303.42 | 913.19 | 303.36 | 914.36 | 303.32 | 915.24 | 303.33 |
| 920.19 | 303.33 | 926.64 | 303.24 | 928.53 | 303.13 | 929.24 | 303.11 | 931.25 | 303.17 |
| 933.51 | 303.29 | 935 | 303.32 | 937.91 | 303.23 | 945.22 | 303.48 | 946.72 | 303.55 |
| 947.86 | 303.57 | 958.08 | 303.52 | 961.35 | 303.47 | 964.61 | 303.45 | 978.27 | 303.07 |
| 981.06 | 303 | 983.7 | 303 | 985.33 | 302.97 | 987.23 | 302.98 | 988.42 | 303.06 |
| 990.47 | 302.96 | 991.46 | 302.97 | 998.45 | 303.17 | 1000.76 | 303.17 | 1000.86 | 303.15 |
| 1002.81 | 303.08 | 1004.01 | 303.09 | 1005.48 | 303.03 | 1007.03 | 303.05 | 1008.04 | 303.19 |
| 1008.53 | 303.3 | 1013.51 | 303.55 | 1016.79 | 303.69 | 1018.19 | 303.68 | 1022 | 303.59 |
| 1026.99 | 303.41 | 1031.02 | 303.32 | 1035.77 | 303.33 | 1038.8 | 303.4 | 1039.93 | 303.45 |
| 1041.11 | 303.43 | 1042.59 | 303.36 | 1049.39 | 303.01 | 1052.73 | 302.75 | 1056.35 | 302.68 |
| 1059.74 | 302.75 | 1068.08 | 303 | 1069.08 | 303 | 1070.62 | 302.89 | 1075.97 | 302.88 |
| 1077.43 | 302.87 | 1081.24 | 302.96 | 1082.68 | 302.98 | 1086.21 | 303.05 | 1092.99 | 303.35 |
| 1096.9 | 303.54 | 1100.18 | 303.71 | 1100.83 | 303.73 | 1101.33 | 303.68 | 1102.48 | 303.83 |
| 1105.86 | 303.63 | 1108.02 | 303.6 | 1110.07 | 303.55 | 1111.24 | 303.57 | 1112.63 | 303.52 |
| 1115.71 | 303.29 | 1116.72 | 303.24 | 1119.62 | 303.3 | 1120.14 | 303.39 | 1121.42 | 303.49 |
| 1123.1 | 303.56 | 1130.35 | 303.72 | 1131.92 | 303.66 | 1133.42 | 303.56 | 1136.58 | 303.42 |
| 1138.34 | 303.37 | 1139.08 | 303.37 | 1141.19 | 303.41 | 1145.8 | 303.53 | 1146.47 | 303.54 |
| 1147.59 | 303.61 | 1156.51 | 303.89 | 1159.01 | 304.03 | 1161.23 | 304.11 | 1166.07 | 304.2 |
| 1167.97 | 304.22 | 1169.37 | 304.28 | 1171.91 | 304.33 | 1174.59 | 304.32 | 1176.71 | 304.29 |
| 1184.51 | 304.15 | 1186.64 | 304.12 | 1187.82 | 304.04 | 1189.97 | 304 | 1192.01 | 303.93 |
| 1192.84 | 303.93 | 1193.74 | 304.01 | 1195.55 | 304.1 | 1197.76 | 304.1 | 1199.82 | 304.02 |
| 1201.4 | 304.02 | 1203.64 | 304.12 | 1205.86 | 304.15 | 1207.83 | 304.22 | 1209 | 304.28 |
| 1211.57 | 304.26 | 1213.95 | 304.26 | 1214.85 | 304.28 | 1216.85 | 304.22 | 1217.48 | 304.14 |
| 1219.55 | 304.11 | 1223.83 | 304.07 | 1227.37 | 304.02 | 1228.91 | 303.99 | 1233.42 | 303.96 |
| 1233.56 | 303.97 | 1238.44 | 303.87 | 1239.81 | 303.83 | 1243.49 | 303.65 | 1250.77 | 303.64 |
| 1262.69 | 303.64 | 1268.69 | 303.88 | 1274.06 | 304.02 | 1280.57 | 304.28 | 1282.74 | 304.36 |
| 1287.24 | 304.54 | 1287.57 | 304.56 | 1290.76 | 304.57 | 1291.4 | 304.54 | 1295.77 | 304.39 |
| 1297.27 | 304.31 | 1300.23 | 304.21 | 1305.22 | 304.1 | 1310.83 | 304 | 1319.42 | 303.95 |
| 1328.16 | 303.74 | 1330.4 | 303.69 | 1331.13 | 303.66 | 1339.53 | 303.66 | 1341.65 | 303.69 |
| 1350.37 | 303.93 | 1352.21 | 304.02 | 1360.08 | 304 | 1360.31 | 303.98 | 1365.86 | 303.91 |
| 1367.66 | 303.88 | 1370.42 | 303.89 | 1371.97 | 303.88 | 1373.42 | 303.92 | 1375.74 | 304.01 |
| 1376.9 | 304.01 | 1379.39 | 304.07 | 1380.36 | 304.11 | 1383 | 304.12 | 1385.97 | 304.23 |
| 1391.35 | 304.58 | 1391.73 | 304.87 | 1392.27 | 305.1 | 1393.05 | 305.5 | 1394.02 | 306.09 |
| 1395.28 | 306.74 | 1396.18 | 307.34 | 1397.72 | 308.26 | 1397.93 | 308.48 | 1398.57 | 308.97 |
| 1399.18 | 309.49 | 1400.84 | 311.03 | 1402.18 | 312.34 | 1403.77 | 313.8 | 1404.26 | 314.42 |
| 1404.59 | 314.72 | 1405.14 | 314.92 | 1405.96 | 315.1 | 1408.04 | 315.52 | 1415.23 | 317.14 |
| 1416.74 | 317.49 | 1421.6 | 318.46 | 1424.87 | 319.01 | 1427.86 | 319.42 | 1433.04 | 320.37 |
| 1436.21 | 321.06 | 1437.36 | 321.32 | 1442.82 | 322.38 | 1444.74 | 322.71 | 1445.47 | 322.81 |
| 1450.05 | 323.31 | 1452.83 | 323.5 | 1457.51 | 323.8 | 1458.9 | 323.9 | 1460.68 | 324.05 |
| 1468.5 | 324.63 | 1470.9 | 324.8 | 1473.96 | 325.17 | 1477.51 | 325.63 | 1479.5 | 325.9 |
| 1483 | 326.24 | 1484.62 | 326.43 | 1489.71 | 326.92 | 1497.05 | 327.65 | 1498.28 | 327.75 |
| 1499.32 | 327.81 | 1502.95 | 327.92 | 1507.55 | 328.19 | 1512.89 | 328.38 | 1521.23 | 328.55 |
| 1528 | 328.75 | 1529.85 | 328.86 | 1530.88 | 328.89 | 1532.04 | 328.89 | 1536.61 | 328.79 |
| 1547.24 | 328.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 186.22 | .04 | 1408.04 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 186.22 | 1408.04 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2642.33*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.83 | 1.99 | 328.85 | 22.13 | 329.03 | 26.84 | 329.07 | 31.67 | 329.05 |
| 34.34 | 328.99 | 36.09 | 328.94 | 36.84 | 328.72 | 38.43 | 328.61 | 39.39 | 328.52 |
| 40.88 | 328.27 | 41.72 | 328.32 | 42.07 | 328.25 | 44.59 | 327.89 | 46.09 | 327.38 |
| 48.32 | 326.54 | 48.67 | 326.55 | 49.13 | 326.94 | 49.85 | 327.18 | 52.57 | 327.88 |
| 54.42 | 327.93 | 56.35 | 327.83 | 57.41 | 327.69 | 59.59 | 327.47 | 63.84 | 326.74 |
| 64.16 | 326.66 | 70.42 | 325.94 | 74.24 | 325.29 | 76.07 | 324.97 | 77.62 | 324.67 |
| 78.26 | 324.57 | 78.9 | 324.39 | 80.55 | 323.67 | 82.02 | 323.11 | 84.07 | 322.16 |
| 84.86 | 321.7 | 86.49 | 320.93 | 88.77 | 319.74 | 89.74 | 319.18 | 90.55 | 318.76 |
| 91.57 | 318.39 | 92.81 | 317.78 | 94.21 | 316.82 | 96.47 | 315.83 | 98.18 | 315.21 |
| 100.06 | 315.22 | 100.72 | 315.11 | 102.41 | 315.05 | 103.63 | 314.84 | 104.39 | 314.59 |
| 104.99 | 314.53 | 106.05 | 314.24 | 107.37 | 314.09 | 108.23 | 314.07 | 110.8 | 313.89 |
| 111.95 | 313.71 | 113.77 | 313.23 | 114.88 | 312.89 | 117.77 | 312.16 | 118.58 | 311.93 |
| 122.94 | 310.97 | 126.89 | 310.25 | 127.56 | 310.09 | 128.99 | 309.79 | 133.91 | 309.05 |
| 137.31 | 308.45 | 139.74 | 308.09 | 142.14 | 307.78 | 144.75 | 307.43 | 147.15 | 307.12 |
| 152.8 | 306.18 | 154.61 | 305.93 | 159.14 | 305.22 | 161.5 | 304.94 | 166.41 | 304.28 |
| 175.53 | 303.21 | 181.29 | 302.51 | 182.11 | 302.38 | 184.23 | 302.38 | 194.58 | 302.69 |
| 199.73 | 302.54 | 201.79 | 302.55 | 210.92 | 302.69 | 216.45 | 302.78 | 218.3 | 302.85 |
| 219.99 | 302.89 | 221.06 | 302.95 | 226.3 | 302.96 | 228.42 | 302.93 | 233.66 | 302.75 |
| 236.85 | 302.65 | 244.7 | 302.39 | 245.62 | 302.39 | 255.79 | 302.05 | 265.07 | 301.98 |
| 268.01 | 301.97 | 270.69 | 301.95 | 272.17 | 301.92 | 273.31 | 301.87 | 274.09 | 301.79 |
| 274.39 | 301.67 | 275.38 | 301.72 | 275.89 | 301.85 | 276.6 | 301.93 | 278.8 | 301.97 |
| 281.39 | 302.11 | 285.66 | 301.97 | 291.43 | 301.77 | 294.18 | 301.78 | 295.86 | 301.76 |
| 299.3 | 301.66 | 299.77 | 301.61 | 301.11 | 301.57 | 302.37 | 301.65 | 308.32 | 301.81 |
| 310.31 | 301.83 | 311.37 | 301.86 | 313.85 | 302.03 | 316.37 | 302.04 | 319.47 | 302.17 |
| 321.28 | 302.17 | 321.98 | 302.15 | 328.26 | 302.08 | 331.96 | 301.98 | 334 | 301.98 |
| 341.35 | 301.81 | 344.4 | 301.79 | 346.77 | 301.81 | 348.35 | 301.77 | 353.97 | 301.79 |
| 355.17 | 301.78 | 356.49 | 301.64 | 358.32 | 301.54 | 359.17 | 301.58 | 360.44 | 301.72 |
| 362.07 | 301.83 | 363.6 | 301.89 | 366.24 | 301.92 | 369.4 | 302.01 | 370.92 | 302.04 |
| 379.16 | 302.35 | 392.59 | 302.34 | 395.43 | 302.15 | 398.78 | 302.03 | 400.24 | 301.95 |
| 401.29 | 301.99 | 403.29 | 302.24 | 404.4 | 302.34 | 412.83 | 302.46 | 413.22 | 302.46 |
| 418.65 | 302.54 | 421.75 | 302.58 | 425.68 | 302.55 | 427.12 | 302.52 | 428.08 | 302.48 |
| 429.21 | 302.34 | 443.38 | 302.13 | 444.95 | 302.22 | 445.88 | 302.22 | 457.04 | 302.35 |
| 466.26 | 302.35 | 492.32 | 302.33 | 496.91 | 302.33 | 497.75 | 302.26 | 508.51 | 301.48 |
| 509.43 | 301.45 | 509.81 | 301.36 | 513.06 | 301.24 | 516.12 | 301.3 | 524.72 | 301.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 526.86 | 301.46 | 547.92 | 301.97 | 558.44 | 302.36 | 566.74 | 302.37 | 579.53 | 302.37 |
| 580.52 | 302.31 | 584.26 | 302.36 | 590.13 | 302.45 | 593.17 | 302.55 | 593.73 | 302.58 |
| 601.7 | 302.57 | 602.6 | 302.48 | 604.02 | 302.44 | 607.66 | 302.39 | 610.72 | 302.34 |
| 611.79 | 302.34 | 612.35 | 302.37 | 615.91 | 302.43 | 618.39 | 302.42 | 631.37 | 302.39 |
| 637.23 | 302.38 | 640.56 | 302.19 | 646.55 | 301.97 | 649 | 301.94 | 649.44 | 301.92 |
| 655.06 | 301.91 | 657.52 | 301.99 | 658.26 | 302.04 | 660.12 | 302.22 | 662.45 | 302.38 |
| 669.05 | 302.58 | 673.36 | 302.63 | 674.85 | 302.46 | 674.9 | 302.38 | 678.58 | 302.36 |
| 679.43 | 302.37 | 681.63 | 302.36 | 684.08 | 302.44 | 686.94 | 302.55 | 694.34 | 302.8 |
| 698.07 | 302.93 | 698.77 | 302.94 | 701.48 | 302.85 | 703.76 | 302.85 | 704.57 | 302.87 |
| 708.86 | 302.89 | 710.51 | 302.89 | 713.43 | 302.91 | 714.15 | 302.9 | 717.1 | 302.76 |
| 717.23 | 302.74 | 720.89 | 302.7 | 722.97 | 302.74 | 724.77 | 302.88 | 728.31 | 303.03 |
| 730.39 | 303.08 | 735.2 | 303.18 | 740.2 | 303.36 | 751.87 | 303.36 | 756.19 | 303.34 |
| 758.58 | 303.34 | 759.46 | 303.24 | 759.86 | 303.25 | 762.82 | 302.99 | 764.56 | 302.81 |
| 767.15 | 302.62 | 769.44 | 302.59 | 771.8 | 302.65 | 772.01 | 302.68 | 773.98 | 302.81 |
| 774.85 | 302.85 | 776.42 | 302.89 | 777.61 | 302.94 | 782.19 | 303.08 | 783.84 | 303.14 |
| 784.97 | 303.14 | 785.39 | 303.11 | 786.6 | 303.11 | 787.92 | 303.05 | 789.8 | 303.06 |
| 791.1 | 302.98 | 794.62 | 303.05 | 804.22 | 302.73 | 807.81 | 302.77 | 810.04 | 302.84 |
| 811.71 | 302.88 | 813.16 | 302.95 | 818 | 303.11 | 818.53 | 303.11 | 825.61 | 303.27 |
| 828.9 | 303.38 | 832.62 | 303.38 | 838.52 | 303.37 | 838.74 | 303.36 | 844.6 | 303.36 |
| 852.61 | 303.53 | 855.69 | 303.51 | 858.52 | 303.48 | 861.55 | 303.46 | 865.62 | 303.48 |
| 869.65 | 303.57 | 872.23 | 303.56 | 877.82 | 303.5 | 878.08 | 303.47 | 890.21 | 303.3 |
| 891.69 | 303.29 | 893.86 | 303.32 | 897.46 | 303.35 | 899.08 | 303.33 | 900.9 | 303.29 |
| 902.39 | 303.29 | 904.18 | 303.23 | 910.8 | 303.07 | 913.06 | 303.01 | 915.72 | 302.96 |
| 916.89 | 302.91 | 917.76 | 302.92 | 922.71 | 302.91 | 925.01 | 302.89 | 926.09 | 302.86 |
| 929.14 | 302.82 | 931.04 | 302.71 | 931.74 | 302.69 | 932.74 | 302.71 | 936.01 | 302.88 |
| 937.49 | 302.92 | 940.39 | 302.83 | 947.7 | 303.1 | 949.19 | 303.17 | 950.33 | 303.19 |
| 960.53 | 303.14 | 963.79 | 303.09 | 966.16 | 303.09 | 971.78 | 302.94 | 983.47 | 302.61 |
| 986.1 | 302.61 | 987.73 | 302.58 | 989.63 | 302.59 | 990.82 | 302.67 | 992.87 | 302.57 |
| 994.47 | 302.61 | 1000.83 | 302.79 | 1003.23 | 302.76 | 1005.18 | 302.7 | 1006.38 | 302.71 |
| 1007.85 | 302.64 | 1009.4 | 302.66 | 1009.78 | 302.75 | 1010.41 | 302.8 | 1010.89 | 302.92 |
| 1017.88 | 303.28 | 1019.14 | 303.33 | 1020.53 | 303.32 | 1024.34 | 303.21 | 1029.32 | 303.02 |
| 1033.35 | 302.93 | 1038.08 | 302.92 | 1042.59 | 302.98 | 1043.42 | 302.95 | 1051.68 | 302.5 |
| 1055.02 | 302.23 | 1058.63 | 302.15 | 1062.01 | 302.21 | 1070.34 | 302.46 | 1071.33 | 302.46 |
| 1072.88 | 302.35 | 1078.21 | 302.33 | 1079.67 | 302.33 | 1087.81 | 302.52 | 1088.43 | 302.52 |
| 1095.21 | 302.85 | 1095.43 | 302.87 | 1099.1 | 303.05 | 1102.38 | 303.22 | 1103.03 | 303.24 |
| 1103.53 | 303.2 | 1104.74 | 303.35 | 1107.18 | 303.18 | 1108.05 | 303.14 | 1110.2 | 303.11 |
| 1112.26 | 303.06 | 1113.42 | 303.09 | 1114.81 | 303.03 | 1117.89 | 302.79 | 1118.89 | 302.74 |
| 1121.67 | 302.81 | 1122.3 | 302.91 | 1123.48 | 303.01 | 1125.26 | 303.09 | 1129.47 | 303.18 |
| 1132.5 | 303.26 | 1134.06 | 303.19 | 1135.57 | 303.09 | 1138.71 | 302.94 | 1140.48 | 302.89 |
| 1141.22 | 302.89 | 1147.92 | 303.05 | 1149.71 | 303.13 | 1158.61 | 303.44 | 1161.11 | 303.59 |
| 1163.33 | 303.69 | 1168.15 | 303.79 | 1170.05 | 303.81 | 1171.45 | 303.88 | 1173.99 | 303.94 |
| 1176.66 | 303.95 | 1180.37 | 303.91 | 1187.48 | 303.82 | 1188.69 | 303.79 | 1189.86 | 303.71 |
| 1192.02 | 303.66 | 1194.05 | 303.6 | 1194.88 | 303.6 | 1195.77 | 303.67 | 1197.59 | 303.77 |
| 1199.79 | 303.77 | 1200.98 | 303.71 | 1201.84 | 303.69 | 1204.06 | 303.7 | 1205.66 | 303.79 |
| 1207.87 | 303.82 | 1211.01 | 303.96 | 1212.17 | 303.97 | 1213.57 | 303.95 | 1216.85 | 303.97 |
| 1218.84 | 303.9 | 1219.48 | 303.83 | 1225.49 | 303.75 | 1229.34 | 303.71 | 1230.89 | 303.67 |
| 1235.38 | 303.64 | 1235.52 | 303.65 | 1241.76 | 303.52 | 1245.5 | 303.32 | 1264.6 | 303.32 |
| 1270.75 | 303.57 | 1275.95 | 303.71 | 1282.46 | 303.99 | 1289.11 | 304.26 | 1289.44 | 304.28 |
| 1292.62 | 304.28 | 1297.62 | 304.09 | 1298.85 | 304.03 | 1302.08 | 303.9 | 1307.06 | 303.77 |
| 1309.38 | 303.73 | 1312.66 | 303.66 | 1321.23 | 303.62 | 1328.74 | 303.43 | 1332.19 | 303.35 |
| 1332.93 | 303.32 | 1341.31 | 303.31 | 1343.42 | 303.35 | 1350.12 | 303.54 | 1352.13 | 303.59 |
| 1353.97 | 303.68 | 1361.83 | 303.66 | 1362.06 | 303.64 | 1367.6 | 303.57 | 1369.39 | 303.54 |
| 1372.14 | 303.55 | 1373.7 | 303.54 | 1375.14 | 303.58 | 1377.45 | 303.67 | 1378.62 | 303.68 |
| 1382.07 | 303.78 | 1384.71 | 303.8 | 1387.67 | 303.92 | 1393.04 | 304.29 | 1393.42 | 304.59 |
| 1393.95 | 304.83 | 1394.73 | 305.25 | 1395.71 | 305.86 | 1396.96 | 306.55 | 1397.86 | 307.17 |
| 1399.4 | 308.13 | 1399.6 | 308.36 | 1400.24 | 308.87 | 1400.85 | 309.41 | 1402.51 | 311.02 |
| 1403.85 | 312.38 | 1405.43 | 313.9 | 1405.92 | 314.55 | 1406.25 | 314.86 | 1406.81 | 315.07 |
| 1407.63 | 315.26 | 1409.7 | 315.7 | 1412.42 | 316.32 | 1415.82 | 317.12 | 1418.52 | 317.74 |
| 1423.45 | 318.73 | 1426.76 | 319.29 | 1429.79 | 319.71 | 1435.04 | 320.68 | 1439.42 | 321.66 |
| 1444.96 | 322.73 | 1446.9 | 323.07 | 1447.64 | 323.17 | 1451.22 | 323.54 | 1452.29 | 323.66 |
| 1459.85 | 324.07 | 1461.26 | 324.14 | 1462.86 | 324.27 | 1464.56 | 324.37 | 1468.85 | 324.65 |
| 1473.42 | 324.93 | 1476.52 | 325.27 | 1480.12 | 325.7 | 1482.13 | 325.95 | 1485.2 | 326.2 |
| 1488.07 | 326.48 | 1491.95 | 326.83 | 1492.49 | 326.87 | 1499.92 | 327.55 | 1501.18 | 327.65 |
| 1502.22 | 327.7 | 1505.9 | 327.76 | 1510.57 | 327.99 | 1515.19 | 328.15 | 1515.98 | 328.19 |
| 1524.43 | 328.36 | 1531.3 | 328.56 | 1534.22 | 328.7 | 1535.4 | 328.7 | 1540.02 | 328.6 |
| 1550.8 | 328.55 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 181.29 | .04 | 1409.7 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 181.29 | 1409.7 | 22.65 | 19.84 | 19.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2622.49

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.5 | 923.20996 | 328.8 | 526.10999 | 328.9 | 30.80994 | 328.9 | 135.10999 | 328.84 |
| 35.83997 | 328.6 | 336.89001 | 328.5 | 838.31995 | 328.4 | 839.77002 | 328.2 | 840.58997 | 328.36 |
| 41.20996 | 328.2 | 643.23999 | 328 | 44.62 | 327.53 | 46 | 327 | 47.01001 | 326.58 |
| 47.34998 | 326.5 | 947.48999 | 326.7 | 647.79993 | 327 | 48.5 | 327.2 | 651.14001 | 328 |
| 52.42004 | 328.0 | 752.85999 | 328.0 | 854.81995 | 328 | 55.63 | 327.9 | 57.96997 | 327.69 |
| 62.10999 | 327 | 62.42004 | 326.9 | 268.51001 | 326.2 | 373.80994 | 325.3 | 275.51001 | 325 |
| 76.13 | 324.9 | 76.76001 | 324.7 | 278.35999 | 324 | 79.79004 | 323.4 | 381.79004 | 322.47 |
| 82.55994 | 322 | 84.14001 | 321.2 | 286.35999 | 320 | 87.29993 | 319.4 | 388.08997 | 319 |
| 89.07996 | 318.6 | 290.29004 | 318 | 91.65002 | 317.0 | 193.84998 | 316 | 95.51001 | 315.36 |
| 95.72998 | 315.3 | 296.14001 | 315.3 | 597.33997 | 315.3 | 897.97998 | 315.27 | 99.63 | 315.22 |
| 100.8199 | 315 | 101.5499 | 314.74 | 102.14 | 314.68 | 103.17 | 314.39 | 104.45 | 314.24 |
| 105.29 | 314.22 | 107.79 | 314.0 | 4108.5499 | 313.9 | 108.91 | 313.8 | 6110.6799 | 313.37 |
| 111.76 | 313 | 114.5699 | 312.24 | 115.36 | 312 | 115.64 | 311.94 | 119.6 | 311 |
| 123.4399 | 310.25 | 124.48 | 310 | 125.49 | 309.78 | 130.27 | 309 | 133.58 | 308.38 |
| 135.9399 | 308 | 143.15 | 307 | 148.87 | 306 | 150.41 | 305.76 | 154.8199 | 305 |
| 157.11 | 304.7 | 161.89 | 304 | 176.37 | 302.13 | 177.21 | 302 | 179.38 | 302 |
| 189.98 | 302.33 | 195.26 | 302.19 | 197.37 | 302.2 | 212.39 | 302.46 | 214.96 | 302.55 |
| 216.21 | 302.58 | 217.11 | 302.64 | 222.48 | 302.66 | 224.66 | 302.63 | 225.92 | 302.59 |
| 241.34 | 302.07 | 242.28 | 302.07 | 252.7 | 301.71 | 267.97 | 301.58 | 269.48 | 301.55 |
| 270.65 | 301.5 | 271.45 | 301.41 | 271.76 | 301.29 | 272.3099 | 301.29 | 272.77 | 301.34 |
| 273.29 | 301.48 | 274.02 | 301.56 | 276.28 | 301.6 | 276.75 | 301.62 | 278.9299 | 301.75 |
| 289.22 | 301.39 | 292.03 | 301.4 | 293.76 | 301.38 | 297.28 | 301.28 | 297.76 | 301.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 299.13 | 301.18 | 300.42 | 301.27 | 306.52 | 301.43 | 308.5599 | 301.45 | 309.65 | 301.49 |
| 311.73 | 301.62 | 312.1899 | 301.66 | 314.77 | 301.67 | 317.95 | 301.81 | 319.7999 | 301.81 |
| 320.52 | 301.79 | 326.95 | 301.71 | 330.74 | 301.61 | 332.83 | 301.61 | 340.36 | 301.43 |
| 343.49 | 301.41 | 345.92 | 301.44 | 347.54 | 301.39 | 353.2999 | 301.42 | 354.13 | 301.43 |
| 354.52 | 301.41 | 355.88 | 301.26 | 356.24 | 301.25 | 357.75 | 301.16 | 358.62 | 301.2 |
| 359.92 | 301.35 | 361.59 | 301.46 | 363.16 | 301.52 | 365.87 | 301.55 | 369.1 | 301.65 |
| 370.23 | 301.66 | 379.1 | 302 | 392.87 | 302 | 395.77 | 301.8 | 399.21 | 301.67 |
| 400.7 | 301.59 | 401.2 | 301.59 | 401.72 | 301.63 | 403.83 | 301.89 | 404.97 | 302 |
| 422.74 | 302.25 | 426.77 | 302.22 | 428.24 | 302.19 | 429.23 | 302.15 | 430.39 | 302 |
| 444.91 | 301.79 | 445.53 | 301.81 | 446.51 | 301.88 | 447.47 | 301.88 | 458.9 | 302.02 |
| 499.75 | 302 | 511.67 | 301.12 | 512.58 | 301.15 | 12.9399 | 301 | 516.2999 | 300.88 |
| 527.9399 | 301.03 | 530.08 | 301.09 | 551.1 | 301.6 | 561.6 | 302 | 582.65 | 302 |
| 583.64 | 301.94 | 593.23 | 302.08 | 596.65 | 302.2 | 596.83 | 302.22 | 604.78 | 302.2 |
| 605.68 | 302.11 | 607.1 | 302.07 | 614.08 | 301.97 | 614.86 | 301.97 | 615.41 | 302 |
| 618.97 | 302.06 | 640.25 | 302 | 643.57 | 301.8 | 649.61 | 301.56 | 652 | 301.53 |
| 652.44 | 301.51 | 658.05 | 301.5 | 660.51 | 301.59 | 661.24 | 301.64 | 663.1 | 301.83 |
| 665.43 | 302 | 672.01 | 302.2 | 676.32 | 302.25 | 677.8 | 302.08 | 677.85 | 302 |
| 681.53 | 301.99 | 682.38 | 302 | 684.57 | 302 | 700.98 | 302.59 | 701.68 | 302.6 |
| 704.39 | 302.51 | 706.66 | 302.51 | 707.47 | 302.53 | 716.48 | 302.57 | 717.04 | 302.56 |
| 719.98 | 302.41 | 720.11 | 302.39 | 723.76 | 302.34 | 725.84 | 302.38 | 727.64 | 302.52 |
| 731.17 | 302.67 | 738.05 | 302.81 | 743.04 | 303 | 761.39 | 303 | 762.27 | 302.9 |
| 762.66 | 302.91 | 765.62 | 302.65 | 767.36 | 302.46 | 769.28 | 302.31 | 769.94 | 302.27 |
| 772.23 | 302.24 | 774.58 | 302.3 | 774.79 | 302.33 | 776.76 | 302.46 | 777.63 | 302.5 |
| 779.2 | 302.54 | 780.38 | 302.59 | 784.96 | 302.73 | 785.58 | 302.74 | 786.6 | 302.79 |
| 787.73 | 302.79 | 788.15 | 302.76 | 789.36 | 302.76 | 790.19 | 302.74 | 790.68 | 302.7 |
| 791.41 | 302.68 | 792.55 | 302.7 | 793.85 | 302.62 | 797.36 | 302.69 | 806.95 | 302.33 |
| 810.53 | 302.37 | 814.42 | 302.48 | 815.87 | 302.55 | 820.7 | 302.71 | 821.23 | 302.71 |
| 828.3 | 302.88 | 831.58 | 303 | 841.19 | 303.01 | 841.56 | 303 | 847.21 | 303 |
| 847.53 | 303.01 | 855.25 | 303.17 | 862.41 | 303.12 | 864.01 | 303.1 | 864.18 | 303.11 |
| 868.36 | 303.13 | 872.26 | 303.21 | 880.42 | 303.11 | 880.68 | 303.08 | 881.5 | 303.06 |
| 893.22 | 302.88 | 894.26 | 302.88 | 900.02 | 302.94 | 903.46 | 302.88 | 904.94 | 302.88 |
| 906.73 | 302.82 | 907.88 | 302.79 | 918.25 | 302.55 | 919.54 | 302.5 | 920.29 | 302.51 |
| 925.23 | 302.5 | 926.69 | 302.47 | 927.52 | 302.47 | 928.61 | 302.44 | 931.65 | 302.4 |
| 933.54 | 302.29 | 934.24 | 302.27 | 935.24 | 302.3 | 938.5 | 302.48 | 939.98 | 302.52 |
| 940.61 | 302.51 | 942.88 | 302.43 | 950.17 | 302.71 | 951.66 | 302.79 | 952.8 | 302.81 |
| 963.98 | 302.75 | 966.24 | 302.71 | 968.6 | 302.71 | 969.3 | 302.7 | 984.2 | 302.27 |
| 985.88 | 302.22 | 988.05 | 302.21 | 988.51 | 302.22 | 990.14 | 302.19 | 992.03 | 302.2 |
| 992.69 | 302.23 | 993.22 | 302.29 | 995.26 | 302.18 | 995.69 | 302.21 | 996.24 | 302.19 |
| 996.86 | 302.22 | 998.28 | 302.26 | 1003.21 | 302.41 | 1004.38 | 302.39 | 1005.51 | 302.4 |
| 1005.61 | 302.38 | 1007.55 | 302.31 | 1008.75 | 302.32 | 1010.22 | 302.25 | 1011.76 | 302.27 |
| 1012.14 | 302.36 | 1012.77 | 302.42 | 1013.25 | 302.54 | 1018.22 | 302.81 | 1019.23 | 302.85 |
| 1020.23 | 302.91 | 1020.8 | 302.92 | 1021.49 | 302.96 | 1022.88 | 302.95 | 1026.68 | 302.84 |
| 1031.65 | 302.63 | 1035.67 | 302.53 | 1044.9 | 302.51 | 1053.97 | 301.99 | 1057.3 | 301.7 |
| 1060.91 | 301.62 | 1064.28 | 301.68 | 1072.6 | 301.93 | 1073.59 | 301.93 | 1075.13 | 301.81 |
| 1081.91 | 301.78 | 1090.04 | 301.99 | 1090.66 | 302 | 1097.42 | 302.35 | 1097.64 | 302.37 |
| 1104.58 | 302.74 | 1105.23 | 302.76 | 1105.73 | 302.71 | 1106.04 | 302.74 | 1106.87 | 302.87 |
| 1109.37 | 302.69 | 1110.24 | 302.65 | 1113.27 | 302.6 | 1114.44 | 302.57 | 1115.6 | 302.6 |
| 1116.99 | 302.54 | 1120.06 | 302.3 | 1120.52 | 302.25 | 1121.06 | 302.25 | 1123.95 | 302.33 |
| 1124.47 | 302.43 | 1125.75 | 302.54 | 1127.42 | 302.62 | 1131.62 | 302.72 | 1133.24 | 302.77 |
| 1134.65 | 302.8 | 1136.21 | 302.73 | 1137.71 | 302.62 | 1140.85 | 302.47 | 1141.95 | 302.45 |
| 1142.61 | 302.42 | 1143.35 | 302.42 | 1150.71 | 302.59 | 1151.83 | 302.66 | 1160.71 | 303 |
| 1163.21 | 303.16 | 1164.59 | 303.23 | 1165.42 | 303.26 | 1170.24 | 303.38 | 1170.81 | 303.4 |
| 1172.13 | 303.4 | 1173.53 | 303.48 | 1174.25 | 303.51 | 1176.06 | 303.56 | 1178.73 | 303.58 |
| 1181.97 | 303.56 | 1189.53 | 303.49 | 1190.74 | 303.46 | 1191.91 | 303.38 | 1194.06 | 303.33 |
| 1196.09 | 303.26 | 1196.92 | 303.26 | 1197.81 | 303.34 | 1199.62 | 303.44 | 1201.82 | 303.44 |
| 1203.01 | 303.37 | 1203.87 | 303.35 | 1205.45 | 303.35 | 1206.08 | 303.37 | 1206.93 | 303.43 |
| 1207.68 | 303.46 | 1208.3 | 303.46 | 1209.89 | 303.49 | 1211.85 | 303.57 | 1212.74 | 303.63 |
| 1214.18 | 303.65 | 1215.58 | 303.64 | 1218.72 | 303.66 | 1219.72 | 303.64 | 1220.84 | 303.59 |
| 1221.47 | 303.51 | 1222.4 | 303.49 | 1231.32 | 303.39 | 1232.86 | 303.35 | 1237.35 | 303.33 |
| 1237.49 | 303.34 | 1242.36 | 303.24 | 1243.72 | 303.2 | 1247.45 | 303 | 1266.52 | 303 |
| 1272.5 | 303.25 | 1277.85 | 303.41 | 1291.31 | 304 | 1294.49 | 304 | 1299.48 | 303.8 |
| 1300.71 | 303.73 | 1303.93 | 303.59 | 1308.9 | 303.45 | 1314.49 | 303.33 | 1323.05 | 303.28 |
| 1333.99 | 303 | 1334.72 | 302.97 | 1343.09 | 302.96 | 1345.2 | 303 | 1353.89 | 303.25 |
| 1355.73 | 303.34 | 1363.57 | 303.32 | 1363.8 | 303.3 | 1369.33 | 303.23 | 1369.94 | 303.23 |
| 1371.12 | 303.2 | 1373.87 | 303.21 | 1375.42 | 303.2 | 1376.86 | 303.24 | 1378.29 | 303.31 |
| 1379.17 | 303.34 | 1380.33 | 303.35 | 1382.81 | 303.42 | 1383.78 | 303.46 | 1386.41 | 303.48 |
| 1389.37 | 303.61 | 1394.73 | 304 | 1395.11 | 304.31 | 1395.64 | 304.56 | 1396.42 | 305 |
| 1397.39 | 305.64 | 1398.64 | 306.35 | 1399.54 | 307 | 1400.83 | 307.85 | 1401.08 | 308 |
| 1401.28 | 308.24 | 1401.92 | 308.77 | 1402.53 | 309.33 | 1404.18 | 311 | 1405.52 | 312.42 |
| 1406.11 | 313 | 1406.53 | 313.44 | 1407.1 | 314 | 1407.59 | 314.68 | 1407.92 | 315 |
| 1408.47 | 315.22 | 1409.29 | 315.42 | 1411.36 | 315.88 | 1420.3 | 318 | 1425.29 | 319 |
| 1428.65 | 319.57 | 1431.72 | 320 | 1437.04 | 321 | 1441.48 | 322 | 1447.09 | 323.09 |
| 1449.06 | 323.43 | 1449.81 | 323.53 | 1454.52 | 324 | 1455.54 | 324.05 | 1463.61 | 324.39 |
| 1465.24 | 324.5 | 1475.94 | 325.06 | 1478.92 | 325.36 | 1479.08 | 325.37 | 1484.77 | 326 |
| 1487.88 | 326.22 | 1502.8 | 327.45 | 1504.07 | 327.54 | 1505.13 | 327.58 | 1508.86 | 327.61 |
| 1518.27 | 327.96 | 1519.07 | 328 | 1527.48 | 328.17 | 1527.64 | 328.17 | 1534.79 | 328.38 |
| 1536.33 | 328.47 | 1536.5 | 328.49 | 1537.56 | 328.52 | 1538.75 | 328.52 | 1543.44 | 328.41 |
| 1554.36 | 328.35 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 176.37 | .04 | 1411.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 176.37 | 1411.36 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2603.18*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.08 | .62 | 328.07 | 5.94 | 328.07 | 8.39 | 328.06 | 20.45 | 328.06 |
| 22.67 | 328.07 | 25.5 | 328.1 | 28.32 | 328.12 | 30.41 | 328.12 | 34.29 | 328.05 |
| 35 | 327.85 | 36.03 | 327.8 | 37.42 | 327.7 | 38.84 | 327.51 | 39.64 | 327.58 |
| 40.8 | 327.41 | 42.23 | 327.23 | 43.58 | 326.78 | 44.92 | 326.27 | 45.91 | 325.87 |
| 46.24 | 325.88 | 46.68 | 326.27 | 47.37 | 326.51 | 49.94 | 327.21 | 51.62 | 327.28 |
| 53.54 | 327.19 | 54.33 | 327.09 | 56.61 | 326.88 | 60.66 | 326.2 | 60.96 | 326.13 |
| 66.91 | 325.44 | 72.08 | 324.55 | 74.35 | 324.14 | 74.96 | 323.96 | 76.53 | 323.27 |
| 77.92 | 322.72 | 79.88 | 321.8 | 80.63 | 321.34 | 82.17 | 320.59 | 84.02 | 319.59 |
| 85.26 | 318.87 | 86.03 | 318.46 | 87 | 318.1 | 88.18 | 317.5 | 89.51 | 316.56 |
| 91.65 | 315.6 | 93.27 | 314.99 | 93.49 | 314.95 | 95.06 | 315.02 | 95.69 | 314.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 97.3 | 314.87 | 98.46 | 314.66 | 99.17 | 314.42 | 99.75 | 314.36 | 100.76 | 314.09 |
| 102.01 | 313.95 | 102.83 | 313.93 | 105.27 | 313.75 | 106.36 | 313.57 | 108.09 | 313.09 |
| 109.14 | 312.73 | 109.98 | 312.51 | 112.93 | 311.7 | 116.8 | 310.78 | 120.55 | 310.04 |
| 121.57 | 309.79 | 122.55 | 309.58 | 127.22 | 308.8 | 130.45 | 308.19 | 132.76 | 307.82 |
| 133.64 | 307.7 | 139.8 | 306.83 | 142.59 | 306.33 | 145.39 | 305.84 | 146.89 | 305.6 |
| 151.2 | 304.85 | 153.43 | 304.54 | 154.91 | 304.32 | 158.21 | 303.8 | 158.7 | 303.74 |
| 162.42 | 303.21 | 169.06 | 302.31 | 172.24 | 301.89 | 173.06 | 301.77 | 175.18 | 301.76 |
| 184.31 | 302.01 | 185.51 | 302.05 | 187.01 | 302 | 190.66 | 301.9 | 192.72 | 301.9 |
| 207.36 | 302.11 | 211.08 | 302.21 | 211.96 | 302.26 | 213.24 | 302.27 | 217.2 | 302.27 |
| 219.32 | 302.24 | 220.55 | 302.2 | 235.58 | 301.69 | 236.5 | 301.69 | 246.66 | 301.34 |
| 261.55 | 301.21 | 263.02 | 301.18 | 264.16 | 301.13 | 264.94 | 301.05 | 265.24 | 300.93 |
| 265.78 | 300.93 | 266.23 | 300.98 | 266.73 | 301.11 | 267.44 | 301.19 | 269.65 | 301.23 |
| 272.23 | 301.37 | 282.26 | 301.02 | 285 | 301.03 | 286.69 | 301.01 | 290.12 | 300.91 |
| 290.59 | 300.85 | 291.92 | 300.81 | 293.18 | 300.9 | 299.13 | 301.05 | 301.12 | 301.07 |
| 302.18 | 301.1 | 304.65 | 301.26 | 307.17 | 301.27 | 310.27 | 301.41 | 312.08 | 301.41 |
| 312.78 | 301.39 | 319.05 | 301.31 | 322.74 | 301.22 | 324.78 | 301.22 | 332.12 | 301.04 |
| 335.17 | 301.03 | 337.54 | 301.05 | 339.12 | 301.01 | 344.74 | 301.04 | 345.92 | 301.03 |
| 347.25 | 300.89 | 349.07 | 300.79 | 349.92 | 300.83 | 351.19 | 300.97 | 352.82 | 301.08 |
| 354.35 | 301.14 | 356.99 | 301.17 | 360.14 | 301.27 | 361.24 | 301.28 | 369.89 | 301.61 |
| 383.31 | 301.61 | 386.14 | 301.42 | 389.49 | 301.3 | 390.95 | 301.22 | 391.94 | 301.26 |
| 394 | 301.51 | 395.11 | 301.62 | 400.82 | 301.7 | 403.71 | 301.73 | 412.43 | 301.86 |
| 416.36 | 301.83 | 417.8 | 301.8 | 418.76 | 301.76 | 419.89 | 301.62 | 430.59 | 301.46 |
| 434.05 | 301.4 | 435.61 | 301.48 | 437.1 | 301.48 | 447.69 | 301.6 | 462.5 | 301.59 |
| 463.74 | 301.58 | 472.7 | 301.58 | 487.51 | 301.56 | 499.13 | 300.72 | 500.02 | 300.7 |
| 500.37 | 300.6 | 503.65 | 300.49 | 515.27 | 300.65 | 520.29 | 300.79 | 538.38 | 301.24 |
| 548.8 | 301.64 | 569.86 | 301.64 | 570.84 | 301.59 | 580.41 | 301.72 | 583.82 | 301.83 |
| 584 | 301.85 | 586.35 | 301.84 | 588.41 | 301.82 | 591.94 | 301.81 | 592.83 | 301.73 |
| 594.25 | 301.69 | 601.22 | 301.6 | 602.54 | 301.63 | 606.09 | 301.68 | 623.22 | 301.63 |
| 627.33 | 301.63 | 630.64 | 301.44 | 636.67 | 301.21 | 639.05 | 301.18 | 639.49 | 301.15 |
| 642.07 | 301.15 | 645.09 | 301.13 | 647.54 | 301.21 | 648.27 | 301.25 | 650.13 | 301.43 |
| 652.45 | 301.59 | 659.02 | 301.78 | 663.32 | 301.83 | 664.79 | 301.66 | 664.84 | 301.59 |
| 668.51 | 301.58 | 671.55 | 301.59 | 675.65 | 301.73 | 676.32 | 301.76 | 682.52 | 301.97 |
| 688.35 | 302.16 | 691.32 | 302.08 | 693.59 | 302.08 | 694.4 | 302.1 | 703.39 | 302.16 |
| 703.95 | 302.15 | 706.88 | 302.01 | 708.32 | 301.96 | 710.65 | 301.94 | 712.73 | 301.98 |
| 714.52 | 302.11 | 718.04 | 302.27 | 724.91 | 302.41 | 727.36 | 302.5 | 729.89 | 302.58 |
| 736.96 | 302.54 | 744.45 | 302.56 | 748.2 | 302.55 | 749.07 | 302.46 | 749.46 | 302.47 |
| 752.56 | 302.2 | 754.15 | 302.03 | 756.73 | 301.84 | 758.2 | 301.82 | 759.66 | 301.83 |
| 761.36 | 301.87 | 761.57 | 301.9 | 763.53 | 302.03 | 764.4 | 302.07 | 765.97 | 302.11 |
| 768.38 | 302.19 | 771.71 | 302.28 | 773.35 | 302.34 | 774.48 | 302.34 | 774.9 | 302.31 |
| 776.93 | 302.29 | 778.15 | 302.23 | 779.29 | 302.25 | 780.58 | 302.17 | 784.09 | 302.24 |
| 793.65 | 301.9 | 797.23 | 301.94 | 800.84 | 302.03 | 802.55 | 302.11 | 807.37 | 302.27 |
| 808.85 | 302.3 | 814.96 | 302.45 | 818.23 | 302.57 | 827.82 | 302.59 | 828.19 | 302.58 |
| 832.77 | 302.59 | 833.77 | 302.6 | 837.79 | 302.7 | 841.85 | 302.78 | 847.22 | 302.75 |
| 850.59 | 302.71 | 850.76 | 302.72 | 854.93 | 302.73 | 858.82 | 302.8 | 866.74 | 302.7 |
| 868.1 | 302.65 | 879.73 | 302.49 | 880.77 | 302.49 | 886.52 | 302.55 | 889.95 | 302.49 |
| 891.42 | 302.5 | 893.21 | 302.44 | 904.7 | 302.19 | 905.99 | 302.15 | 906.74 | 302.16 |
| 911.67 | 302.15 | 918.13 | 302.06 | 919.09 | 302 | 920.66 | 301.94 | 921.66 | 301.97 |
| 924.91 | 302.13 | 926.39 | 302.16 | 929.28 | 302.05 | 931.18 | 302.11 | 936.55 | 302.31 |
| 938.04 | 302.39 | 939.18 | 302.41 | 947.21 | 302.36 | 950.33 | 302.33 | 952.59 | 302.29 |
| 954.94 | 302.29 | 956.94 | 302.24 | 967.2 | 301.97 | 969.73 | 301.91 | 972.18 | 301.83 |
| 974.81 | 301.84 | 976.43 | 301.81 | 978.32 | 301.82 | 979.51 | 301.91 | 981.54 | 301.81 |
| 982.52 | 301.82 | 983.14 | 301.86 | 984.56 | 301.9 | 989.47 | 302.06 | 991.77 | 302.06 |
| 991.87 | 302.04 | 993.8 | 301.98 | 995 | 301.99 | 996.47 | 301.92 | 998.01 | 301.94 |
| 998.38 | 302.03 | 999.01 | 302.08 | 999.49 | 302.2 | 1006.46 | 302.55 | 1007.71 | 302.6 |
| 1009.1 | 302.59 | 1013.05 | 302.48 | 1017.85 | 302.3 | 1021.86 | 302.2 | 1028.89 | 302.19 |
| 1031.07 | 302.17 | 1035.6 | 301.91 | 1040.12 | 301.66 | 1043.44 | 301.39 | 1047.05 | 301.31 |
| 1050.41 | 301.37 | 1058.71 | 301.62 | 1059.7 | 301.62 | 1061.23 | 301.51 | 1068 | 301.48 |
| 1075.8 | 301.67 | 1076.73 | 301.68 | 1083.47 | 302.02 | 1083.69 | 302.04 | 1090.62 | 302.39 |
| 1091.27 | 302.41 | 1091.77 | 302.36 | 1092.9 | 302.51 | 1095.4 | 302.34 | 1096.27 | 302.3 |
| 1098.93 | 302.26 | 1100.46 | 302.21 | 1101.61 | 302.23 | 1103 | 302.17 | 1104.29 | 302.06 |
| 1105.95 | 301.94 | 1106.52 | 301.88 | 1108.67 | 301.92 | 1109.94 | 301.96 | 1110.46 | 302.06 |
| 1111.74 | 302.17 | 1113.41 | 302.25 | 1117.6 | 302.35 | 1120.62 | 302.44 | 1122.18 | 302.37 |
| 1123.67 | 302.27 | 1126.81 | 302.13 | 1129.3 | 302.09 | 1134.07 | 302.2 | 1136.64 | 302.25 |
| 1137.76 | 302.31 | 1146.62 | 302.63 | 1149.12 | 302.79 | 1152.05 | 302.9 | 1156.7 | 303.01 |
| 1158.02 | 303.01 | 1159.41 | 303.08 | 1161.94 | 303.16 | 1164.6 | 303.19 | 1170.65 | 303.16 |
| 1174.96 | 303.11 | 1176.58 | 303.07 | 1177.75 | 303 | 1179.9 | 302.95 | 1181.45 | 302.89 |
| 1182.75 | 302.88 | 1183.64 | 302.96 | 1185.44 | 303.06 | 1187.64 | 303.06 | 1188.83 | 303 |
| 1189.69 | 302.98 | 1191.26 | 302.98 | 1193.49 | 303.09 | 1195.69 | 303.12 | 1197.65 | 303.2 |
| 1198.54 | 303.25 | 1199.97 | 303.27 | 1201.37 | 303.26 | 1204.5 | 303.27 | 1205.5 | 303.25 |
| 1206.62 | 303.2 | 1207.25 | 303.12 | 1209.51 | 303.08 | 1217.07 | 302.99 | 1218.61 | 302.95 |
| 1223.09 | 302.93 | 1223.23 | 302.94 | 1228.09 | 302.86 | 1229.45 | 302.82 | 1233.17 | 302.64 |
| 1252.2 | 302.64 | 1258.16 | 302.88 | 1263.5 | 303.03 | 1270.87 | 303.35 | 1276.93 | 303.6 |
| 1280.1 | 303.61 | 1285.08 | 303.42 | 1286.31 | 303.36 | 1289.52 | 303.23 | 1294.48 | 303.1 |
| 1300.06 | 302.99 | 1308.6 | 302.96 | 1311.37 | 302.89 | 1319.51 | 302.7 | 1320.24 | 302.67 |
| 1324.48 | 302.66 | 1328.59 | 302.64 | 1331.22 | 302.69 | 1339.37 | 302.92 | 1341.21 | 303.01 |
| 1343.73 | 303 | 1349.03 | 303 | 1349.26 | 302.99 | 1353.6 | 302.96 | 1355.38 | 302.98 |
| 1356.59 | 302.96 | 1357.24 | 302.98 | 1360.85 | 303.05 | 1362.29 | 303.12 | 1364.48 | 303.27 |
| 1366.51 | 303.35 | 1369.19 | 303.5 | 1371.82 | 303.59 | 1374.77 | 303.78 | 1375.77 | 303.88 |
| 1380.12 | 304.28 | 1380.5 | 304.59 | 1381.03 | 304.84 | 1381.8 | 305.28 | 1382.77 | 305.91 |
| 1384.02 | 306.62 | 1384.92 | 307.26 | 1386.45 | 308.24 | 1386.65 | 308.48 | 1387.29 | 309 |
| 1387.9 | 309.54 | 1389.55 | 311.17 | 1390.88 | 312.55 | 1392.46 | 314.08 | 1392.95 | 314.74 |
| 1393.28 | 315.06 | 1393.83 | 315.27 | 1394.55 | 315.44 | 1396.71 | 315.89 | 1397.18 | 315.99 |
| 1401.14 | 316.9 | 1404.28 | 317.61 | 1405.48 | 317.89 | 1408.2 | 318.42 | 1410.38 | 318.86 |
| 1413.67 | 319.41 | 1416.68 | 319.84 | 1421.9 | 320.81 | 1426.26 | 321.79 | 1431.76 | 322.85 |
| 1433.6 | 323.17 | 1434.43 | 323.28 | 1439.05 | 323.74 | 1440.05 | 323.79 | 1447.97 | 324.13 |
| 1449.57 | 324.24 | 1460.06 | 324.78 | 1463.14 | 325.07 | 1468.73 | 325.68 | 1472.45 | 325.94 |
| 1475.77 | 326.21 | 1486.41 | 327.09 | 1487.66 | 327.18 | 1488.93 | 327.22 | 1492.36 | 327.26 |
| 1493.01 | 327.29 | 1501.59 | 327.63 | 1502.37 | 327.67 | 1506.68 | 327.77 | 1510.78 | 327.85 |
| 1517.8 | 328.07 | 1519.47 | 328.18 | 1520.51 | 328.21 | 1521.68 | 328.21 | 1526.28 | 328.12 |
| 1536.99 | 328.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 172.24 | .04 | 1396.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 172.24 | 1396.71 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2583.87*

INPUT
Description:

Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.58 | .61 | 327.54 | 4.4 | 327.49 | 5.8 | 327.48 | 8.19 | 327.44 |
| 12.18 | 327.39 | 16.17 | 327.35 | 19.96 | 327.3 | 24.28 | 327.29 | 24.89 | 327.31 |
| 29.37 | 327.34 | 31 | 327.32 | 33.47 | 327.27 | 34.16 | 327.07 | 35.16 | 327.02 |
| 36.53 | 326.92 | 37.91 | 326.73 | 38.69 | 326.8 | 39.28 | 326.71 | 41.22 | 326.46 |
| 42.53 | 326.03 | 43.85 | 325.54 | 44.81 | 325.15 | 45.13 | 325.16 | 45.56 | 325.53 |
| 46.23 | 325.77 | 48.75 | 326.42 | 50.39 | 326.47 | 52.25 | 326.38 | 53.03 | 326.29 |
| 55.26 | 326.07 | 59.2 | 325.41 | 59.5 | 325.33 | 65.3 | 324.65 | 70.36 | 323.78 |
| 71.98 | 323.47 | 72.57 | 323.38 | 73.17 | 323.21 | 74.69 | 322.54 | 76.06 | 322.01 |
| 77.96 | 321.12 | 78.7 | 320.69 | 80.2 | 319.96 | 82.32 | 318.84 | 83.21 | 318.31 |
| 83.97 | 317.92 | 84.91 | 317.57 | 86.06 | 317.01 | 87.36 | 316.11 | 89.46 | 315.2 |
| 91.04 | 314.62 | 92.78 | 314.65 | 93.39 | 314.55 | 94.97 | 314.52 | 96.1 | 314.32 |
| 96.8 | 314.09 | 97.36 | 314.04 | 98.34 | 313.78 | 99.56 | 313.65 | 100.77 | 313.62 |
| 102.75 | 313.47 | 103.81 | 313.29 | 105.5 | 312.82 | 106.53 | 312.47 | 109.21 | 311.74 |
| 109.96 | 311.52 | 114 | 310.56 | 117.01 | 309.95 | 117.66 | 309.83 | 119.62 | 309.37 |
| 124.17 | 308.61 | 127.33 | 308.01 | 129.58 | 307.64 | 136.45 | 306.66 | 141.9 | 305.68 |
| 143.37 | 305.45 | 145.56 | 305.06 | 147.57 | 304.69 | 149.76 | 304.39 | 151.2 | 304.16 |
| 153.99 | 303.69 | 160.67 | 302.67 | 165.01 | 302.07 | 168.12 | 301.66 | 168.91 | 301.54 |
| 170.97 | 301.52 | 176.95 | 301.66 | 179.88 | 301.74 | 181.04 | 301.76 | 186.06 | 301.61 |
| 188.06 | 301.6 | 202.33 | 301.75 | 204.77 | 301.82 | 205.96 | 301.84 | 206.81 | 301.89 |
| 212.19 | 301.87 | 215.18 | 301.81 | 229.83 | 301.32 | 230.72 | 301.32 | 240.62 | 300.98 |
| 255.12 | 300.84 | 256.56 | 300.82 | 257.67 | 300.77 | 258.43 | 300.69 | 258.72 | 300.58 |
| 259.68 | 300.62 | 260.17 | 300.75 | 260.87 | 300.82 | 263.01 | 300.85 | 265.53 | 300.99 |
| 275.31 | 300.65 | 277.97 | 300.66 | 279.62 | 300.64 | 282.96 | 300.54 | 283.42 | 300.49 |
| 284.72 | 300.45 | 285.94 | 300.53 | 291.74 | 300.67 | 293.68 | 300.68 | 294.71 | 300.72 |
| 297.11 | 300.87 | 299.57 | 300.88 | 302.59 | 301.01 | 304.35 | 301.01 | 305.04 | 300.99 |
| 311.14 | 300.92 | 314.74 | 300.82 | 316.73 | 300.82 | 323.88 | 300.66 | 326.85 | 300.64 |
| 329.16 | 300.67 | 330.7 | 300.62 | 336.17 | 300.66 | 337.33 | 300.65 | 338.62 | 300.51 |
| 340.4 | 300.42 | 341.22 | 300.46 | 342.46 | 300.6 | 344.05 | 300.7 | 345.54 | 300.76 |
| 348.11 | 300.79 | 351.18 | 300.88 | 352.25 | 300.89 | 360.68 | 301.21 | 373.76 | 301.22 |
| 376.51 | 301.04 | 379.78 | 300.93 | 381.19 | 300.85 | 382.16 | 300.89 | 384.17 | 301.13 |
| 385.25 | 301.23 | 390.81 | 301.31 | 393.63 | 301.34 | 395.33 | 301.37 | 398.78 | 301.41 |
| 402.13 | 301.46 | 405.96 | 301.44 | 408.29 | 301.38 | 409.39 | 301.24 | 415.84 | 301.14 |
| 423.19 | 301.01 | 424.71 | 301.08 | 426.16 | 301.08 | 436.47 | 301.19 | 450.91 | 301.16 |
| 455.99 | 301.16 | 460.84 | 301.15 | 475.28 | 301.13 | 486.6 | 300.32 | 487.46 | 300.3 |
| 487.8 | 300.21 | 491 | 300.1 | 493.28 | 300.12 | 496.07 | 300.17 | 502.6 | 300.27 |
| 504.73 | 300.34 | 507.61 | 300.42 | 525.65 | 300.88 | 536.05 | 301.28 | 538.54 | 301.29 |
| 557.06 | 301.29 | 558.05 | 301.23 | 567.59 | 301.36 | 571 | 301.46 | 571.18 | 301.48 |
| 573.52 | 301.47 | 575.57 | 301.44 | 579.09 | 301.43 | 579.99 | 301.35 | 581.4 | 301.31 |
| 582.21 | 301.31 | 589.13 | 301.22 | 589.68 | 301.25 | 593.22 | 301.3 | 610.3 | 301.25 |
| 614.4 | 301.25 | 617.71 | 301.08 | 623.72 | 300.86 | 625.92 | 300.83 | 626.54 | 300.8 |
| 629.11 | 300.79 | 632.12 | 300.76 | 634.57 | 300.82 | 635.3 | 300.86 | 637.15 | 301.03 |
| 639.47 | 301.18 | 641.28 | 301.22 | 646.02 | 301.36 | 650.31 | 301.4 | 651.79 | 301.25 |
| 651.84 | 301.18 | 655.5 | 301.17 | 658.53 | 301.18 | 662.62 | 301.32 | 669.47 | 301.54 |
| 674.67 | 301.7 | 675.62 | 301.72 | 678.26 | 301.64 | 680.52 | 301.64 | 681.32 | 301.67 |
| 688.55 | 301.73 | 690.29 | 301.74 | 692.37 | 301.67 | 693.9 | 301.58 | 697.54 | 301.53 |
| 699.61 | 301.58 | 701.4 | 301.71 | 704.92 | 301.86 | 709.6 | 301.97 | 711.77 | 302.01 |
| 714.22 | 302.09 | 716.73 | 302.15 | 722.3 | 302.08 | 723.79 | 302.08 | 731.26 | 302.11 |
| 735 | 302.11 | 735.88 | 302.01 | 736.27 | 302.02 | 739.21 | 301.77 | 740.95 | 301.6 |
| 743.51 | 301.42 | 745.79 | 301.39 | 748.13 | 301.45 | 748.34 | 301.48 | 750.3 | 301.6 |
| 752.73 | 301.67 | 753.88 | 301.72 | 758.47 | 301.83 | 760.1 | 301.89 | 761.22 | 301.88 |
| 761.64 | 301.85 | 762.85 | 301.85 | 764.89 | 301.78 | 766.02 | 301.8 | 767.32 | 301.73 |
| 770.81 | 301.79 | 780.36 | 301.47 | 783.92 | 301.5 | 787.52 | 301.6 | 787.79 | 301.6 |
| 790.2 | 301.71 | 794.05 | 301.83 | 795.52 | 301.86 | 801.61 | 302.02 | 804.88 | 302.13 |
| 814.44 | 302.17 | 819.39 | 302.18 | 825.93 | 302.35 | 828.44 | 302.39 | 833.19 | 302.37 |
| 837.33 | 302.33 | 841.49 | 302.34 | 845.38 | 302.4 | 853.28 | 302.29 | 853.76 | 302.25 |
| 866.24 | 302.09 | 867.28 | 302.09 | 873.01 | 302.16 | 876.44 | 302.11 | 877.91 | 302.11 |
| 880.45 | 302.04 | 891.16 | 301.84 | 892.44 | 301.79 | 893.19 | 301.8 | 898.11 | 301.8 |
| 900.39 | 301.78 | 904.56 | 301.72 | 906.38 | 301.62 | 907.08 | 301.6 | 908.07 | 301.63 |
| 909.79 | 301.72 | 911.32 | 301.78 | 913.42 | 301.78 | 915.68 | 301.67 | 917.57 | 301.71 |
| 921.7 | 301.86 | 924.42 | 301.98 | 926.71 | 302 | 936.68 | 301.91 | 938.93 | 301.87 |
| 941.28 | 301.87 | 943.28 | 301.83 | 956.81 | 301.5 | 958.49 | 301.45 | 962.73 | 301.43 |
| 964.61 | 301.45 | 965.79 | 301.53 | 967.82 | 301.44 | 969.42 | 301.49 | 975.74 | 301.71 |
| 978.13 | 301.7 | 980.06 | 301.65 | 981.25 | 301.65 | 982.72 | 301.59 | 984.25 | 301.61 |
| 984.63 | 301.69 | 985.26 | 301.75 | 985.73 | 301.85 | 990.68 | 302.1 | 993.94 | 302.24 |
| 995.32 | 302.23 | 999.1 | 302.13 | 1002.26 | 302.03 | 1004.05 | 301.96 | 1008.05 | 301.87 |
| 1015.07 | 301.86 | 1017.24 | 301.84 | 1021.76 | 301.58 | 1022.87 | 301.51 | 1026.27 | 301.34 |
| 1029.59 | 301.08 | 1033.18 | 301.01 | 1036.54 | 301.06 | 1044.82 | 301.3 | 1045.8 | 301.31 |
| 1047.34 | 301.2 | 1054.09 | 301.18 | 1061.87 | 301.36 | 1062.8 | 301.36 | 1069.53 | 301.68 |
| 1069.75 | 301.7 | 1076.66 | 302.04 | 1077.3 | 302.05 | 1077.8 | 302.01 | 1078.94 | 302.15 |
| 1079.57 | 302.12 | 1081.42 | 301.99 | 1082.29 | 301.95 | 1084.95 | 301.91 | 1086.47 | 301.86 |
| 1087.63 | 301.87 | 1089.01 | 301.79 | 1092.52 | 301.52 | 1094.95 | 301.56 | 1095.95 | 301.6 |
| 1096.46 | 301.69 | 1097.73 | 301.79 | 1099.39 | 301.88 | 1106.59 | 302.07 | 1108.14 | 302.02 |
| 1109.64 | 301.92 | 1112.76 | 301.8 | 1114.52 | 301.76 | 1115.25 | 301.76 | 1120.35 | 301.87 |
| 1122.58 | 301.9 | 1123.69 | 301.96 | 1132.53 | 302.27 | 1136.4 | 302.48 | 1137.95 | 302.52 |
| 1141.98 | 302.6 | 1142.59 | 302.62 | 1143.9 | 302.62 | 1146.01 | 302.72 | 1147.82 | 302.76 |
| 1150.47 | 302.79 | 1154.21 | 302.79 | 1156.89 | 302.77 | 1160.81 | 302.72 | 1162.43 | 302.69 |
| 1163.59 | 302.61 | 1167.74 | 302.5 | 1168.58 | 302.5 | 1169.47 | 302.58 | 1171.27 | 302.68 |
| 1173.46 | 302.68 | 1175.5 | 302.61 | 1177.31 | 302.62 | 1179.29 | 302.72 | 1181.49 | 302.75 |
| 1183.45 | 302.82 | 1184.33 | 302.87 | 1185.76 | 302.89 | 1187.16 | 302.87 | 1190.28 | 302.88 |
| 1191.28 | 302.86 | 1192.39 | 302.81 | 1193.02 | 302.74 | 1195.28 | 302.68 | 1200.21 | 302.63 |
| 1202.83 | 302.59 | 1204.36 | 302.55 | 1208.83 | 302.54 | 1208.97 | 302.55 | 1213.82 | 302.47 |
| 1215.17 | 302.44 | 1218.89 | 302.27 | 1223.63 | 302.29 | 1229.28 | 302.28 | 1237.87 | 302.28 |
| 1240.86 | 302.4 | 1243.82 | 302.51 | 1246.67 | 302.58 | 1249.15 | 302.66 | 1253.47 | 302.83 |
| 1262.55 | 303.21 | 1265.72 | 303.22 | 1270.68 | 303.04 | 1271.91 | 302.98 | 1275.11 | 302.86 |
| 1280.06 | 302.75 | 1285.63 | 302.65 | 1290.81 | 302.64 | 1294.15 | 302.64 | 1296.91 | 302.58 |
| 1305.04 | 302.39 | 1305.76 | 302.36 | 1309.99 | 302.35 | 1314.1 | 302.33 | 1316.71 | 302.37 |
| 1324.85 | 302.59 | 1326.68 | 302.67 | 1332.85 | 302.67 | 1334.49 | 302.69 | 1334.71 | 302.67 |
| 1339.05 | 302.68 | 1342.68 | 302.75 | 1345.56 | 302.87 | 1346.28 | 302.89 | 1347.72 | 302.99 |
| 1350.02 | 303.21 | 1351.17 | 303.28 | 1353.64 | 303.46 | 1354.39 | 303.53 | 1357.22 | 303.69 |
| 1360.17 | 303.96 | 1365.51 | 304.56 | 1365.88 | 304.86 | 1367.19 | 305.55 | 1368.15 | 306.18 |
| 1369.4 | 306.88 | 1370.29 | 307.51 | 1371.83 | 308.49 | 1372.03 | 308.71 | 1372.66 | 309.22 |
| 1373.27 | 309.76 | 1374.91 | 311.34 | 1376.25 | 312.68 | 1377.82 | 314.17 | 1378.31 | 314.81 |
| 1378.64 | 315.11 | 1379.18 | 315.32 | 1381.15 | 315.72 | 1382.06 | 315.89 | 1386 | 316.75 |
| 1390.66 | 317.78 | 1392.51 | 318.13 | 1395.46 | 318.71 | 1398.69 | 319.26 | 1401.65 | 319.68 |
| 1406.77 | 320.63 | 1411.04 | 321.58 | 1416.43 | 322.61 | 1418.33 | 322.94 | 1419.05 | 323.03 |
| 1423.58 | 323.48 | 1427.33 | 323.66 | 1432.33 | 323.87 | 1433.89 | 323.97 | 1444.19 | 324.49 |
| 1447.21 | 324.78 | 1452.68 | 325.35 | 1455.67 | 325.56 | 1459.59 | 325.87 | 1470.03 | 326.73 |
| 1471.25 | 326.82 | 1472.5 | 326.87 | 1475.86 | 326.91 | 1484.91 | 327.3 | 1485.68 | 327.34 |
| 1493.92 | 327.54 | 1500.8 | 327.76 | 1502.45 | 327.87 | 1504.61 | 327.91 | 1509.12 | 327.83 |
| 1519.63 | 327.81 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 168.12 | .04 | 1382.06 | .05 |



BSE Document Control Number: 7323HYD101

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 168.12 | 1382.06 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2564.56*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.07 | .59 | 327.02 | 5.65 | 326.88 | 13.13 | 326.69 | 17.96 | 326.58 |
| 19.47 | 326.53 | 21.58 | 326.5 | 23.69 | 326.49 | 24.28 | 326.51 | 26.96 | 326.55 |
| 30.24 | 326.54 | 32.65 | 326.48 | 33.32 | 326.3 | 35.63 | 326.14 | 36.98 | 325.96 |
| 37.74 | 326.03 | 38.32 | 325.94 | 40.2 | 325.7 | 41.49 | 325.28 | 42.77 | 324.81 |
| 43.71 | 324.44 | 44.03 | 324.45 | 44.44 | 324.8 | 45.1 | 325.02 | 47.55 | 325.62 |
| 49.15 | 325.67 | 50.97 | 325.57 | 51.72 | 325.48 | 53.9 | 325.26 | 57.75 | 324.61 |
| 58.04 | 324.54 | 63.7 | 323.86 | 68.63 | 323.01 | 70.21 | 322.71 | 70.79 | 322.62 |
| 71.37 | 322.45 | 72.86 | 321.81 | 74.19 | 321.3 | 76.05 | 320.45 | 76.76 | 320.03 |
| 78.23 | 319.34 | 80.3 | 318.26 | 81.17 | 317.76 | 81.91 | 317.38 | 82.83 | 317.05 |
| 83.95 | 316.51 | 85.22 | 315.66 | 87.26 | 314.8 | 88.8 | 314.25 | 90.51 | 314.29 |
| 91.1 | 314.2 | 92.64 | 314.17 | 93.74 | 313.98 | 94.42 | 313.77 | 94.97 | 313.72 |
| 95.93 | 313.48 | 97.12 | 313.36 | 97.9 | 313.35 | 100.22 | 313.18 | 101.26 | 313 |
| 102.91 | 312.54 | 103.91 | 312.2 | 106.53 | 311.5 | 107.26 | 311.28 | 110.12 | 310.61 |
| 111.2 | 310.34 | 114.77 | 309.61 | 116.68 | 309.17 | 121.12 | 308.41 | 124.2 | 307.82 |
| 126.4 | 307.46 | 127.23 | 307.35 | 133.1 | 306.49 | 138.42 | 305.52 | 139.85 | 305.29 |
| 141.99 | 304.91 | 143.95 | 304.54 | 146.08 | 304.23 | 147.49 | 304 | 150.21 | 303.51 |
| 151.09 | 303.37 | 156.72 | 302.44 | 160.96 | 301.83 | 163.99 | 301.42 | 164.76 | 301.3 |
| 166.77 | 301.28 | 175.44 | 301.46 | 176.57 | 301.48 | 181.46 | 301.31 | 183.41 | 301.3 |
| 197.3 | 301.4 | 200.83 | 301.47 | 201.66 | 301.51 | 202.87 | 301.51 | 206.9 | 301.48 |
| 208.65 | 301.45 | 224.07 | 300.94 | 224.94 | 300.94 | 234.58 | 300.61 | 248.7 | 300.48 |
| 250.09 | 300.45 | 251.17 | 300.4 | 251.91 | 300.32 | 252.2 | 300.22 | 253.14 | 300.26 |
| 253.62 | 300.38 | 254.29 | 300.45 | 256.38 | 300.48 | 258.83 | 300.61 | 268.35 | 300.28 |
| 270.95 | 300.28 | 272.55 | 300.26 | 275.8 | 300.17 | 276.25 | 300.12 | 277.51 | 300.08 |
| 278.71 | 300.16 | 284.35 | 300.29 | 286.23 | 300.3 | 287.24 | 300.33 | 289.16 | 300.44 |
| 289.58 | 300.48 | 291.98 | 300.48 | 294.92 | 300.61 | 296.63 | 300.61 | 297.29 | 300.59 |
| 303.24 | 300.52 | 306.74 | 300.43 | 308.68 | 300.43 | 315.64 | 300.27 | 318.53 | 300.26 |
| 320.78 | 300.28 | 322.28 | 300.24 | 327.61 | 300.27 | 328.73 | 300.27 | 329.99 | 300.14 |
| 331.72 | 300.06 | 332.53 | 300.09 | 333.73 | 300.22 | 335.27 | 300.32 | 336.72 | 300.38 |
| 339.23 | 300.41 | 342.22 | 300.5 | 343.26 | 300.51 | 351.47 | 300.82 | 364.2 | 300.83 |
| 366.88 | 300.66 | 370.06 | 300.55 | 371.44 | 300.49 | 372.38 | 300.52 | 374.33 | 300.75 |
| 375.39 | 300.85 | 383.55 | 300.95 | 385.2 | 300.98 | 388.56 | 301.02 | 391.82 | 301.07 |
| 395.33 | 301.05 | 396.91 | 301.03 | 397.82 | 300.99 | 398.9 | 300.86 | 403.37 | 300.8 |
| 404.59 | 300.77 | 409.05 | 300.69 | 412.32 | 300.62 | 413.8 | 300.68 | 415.22 | 300.68 |
| 425.26 | 300.77 | 439.31 | 300.73 | 448.99 | 300.73 | 463.04 | 300.69 | 474.06 | 299.91 |
| 474.9 | 299.9 | 475.24 | 299.81 | 478.34 | 299.7 | 480.63 | 299.73 | 489.93 | 299.89 |
| 494.92 | 300.05 | 512.93 | 300.53 | 519.62 | 300.79 | 523.31 | 300.92 | 523.36 | 300.93 |
| 544.27 | 300.93 | 545.25 | 300.88 | 554.78 | 301 | 558.35 | 301.11 | 562.74 | 301.06 |
| 566.25 | 301.04 | 567.14 | 300.97 | 569.36 | 300.93 | 573.23 | 300.89 | 575.49 | 300.85 |
| 576.81 | 300.88 | 580.34 | 300.92 | 590.24 | 300.88 | 597.39 | 300.87 | 601.48 | 300.88 |
| 604.78 | 300.72 | 610.78 | 300.51 | 612.24 | 300.5 | 613.59 | 300.44 | 616.15 | 300.43 |
| 619.16 | 300.38 | 621.61 | 300.44 | 622.33 | 300.47 | 624.18 | 300.62 | 626.49 | 300.76 |
| 633.03 | 300.93 | 637.31 | 300.98 | 638.78 | 300.83 | 638.83 | 300.77 | 642.48 | 300.76 |
| 645.5 | 300.77 | 649.59 | 300.9 | 652.39 | 301 | 656.43 | 301.12 | 662.56 | 301.28 |
| 665.19 | 301.21 | 667.45 | 301.21 | 668.25 | 301.23 | 677.2 | 301.33 | 677.76 | 301.32 |
| 680.68 | 301.2 | 681.36 | 301.16 | 684.43 | 301.13 | 686.5 | 301.17 | 688.28 | 301.3 |
| 691.79 | 301.46 | 696.46 | 301.57 | 698.62 | 301.61 | 701.07 | 301.69 | 703.58 | 301.73 |
| 708.55 | 301.64 | 709.14 | 301.62 | 710.62 | 301.62 | 718.08 | 301.67 | 721.81 | 301.66 |
| 722.68 | 301.57 | 723.07 | 301.58 | 726.01 | 301.33 | 727.74 | 301.17 | 730.3 | 300.99 |
| 731.76 | 300.97 | 733.22 | 300.98 | 734.91 | 301.02 | 735.12 | 301.05 | 737.94 | 301.2 |
| 740.64 | 301.28 | 746.85 | 301.43 | 747.97 | 301.43 | 748.39 | 301.4 | 749.59 | 301.4 |
| 751.63 | 301.33 | 752.76 | 301.35 | 754.05 | 301.28 | 757.54 | 301.34 | 767.06 | 301.03 |
| 770.62 | 301.07 | 774.21 | 301.16 | 776.89 | 301.27 | 779.29 | 301.34 | 780.72 | 301.4 |
| 782.19 | 301.43 | 788.27 | 301.58 | 791.53 | 301.7 | 801.07 | 301.76 | 801.44 | 301.75 |
| 806 | 301.77 | 811.33 | 301.93 | 815.04 | 302.01 | 817.29 | 301.99 | 819.64 | 301.99 |
| 823.74 | 301.94 | 828.06 | 301.94 | 831.93 | 301.99 | 839.82 | 301.87 | 840.3 | 301.84 |
| 852.75 | 301.7 | 853.79 | 301.7 | 859.51 | 301.77 | 862.92 | 301.72 | 864.39 | 301.73 |
| 866.17 | 301.68 | 877.61 | 301.48 | 878.9 | 301.44 | 879.64 | 301.45 | 884.55 | 301.45 |
| 886.82 | 301.43 | 890.98 | 301.38 | 893.5 | 301.27 | 897.73 | 301.43 | 899.2 | 301.43 |
| 902.08 | 301.29 | 903.97 | 301.31 | 908.08 | 301.46 | 910.8 | 301.58 | 911.93 | 301.6 |
| 915.29 | 301.58 | 923.04 | 301.5 | 925.28 | 301.45 | 927.63 | 301.45 | 939.83 | 301.19 |
| 945.66 | 301.05 | 947.4 | 301.07 | 949.02 | 301.05 | 950.9 | 301.07 | 952.08 | 301.15 |
| 954.11 | 301.07 | 962 | 301.37 | 963.17 | 301.36 | 964.19 | 301.38 | 966.31 | 301.31 |
| 967.51 | 301.32 | 968.97 | 301.26 | 970.5 | 301.28 | 970.87 | 301.36 | 971.5 | 301.41 |
| 971.98 | 301.51 | 978.91 | 301.83 | 980.16 | 301.87 | 981.54 | 301.87 | 982.97 | 301.84 |
| 988.47 | 301.7 | 990.25 | 301.63 | 994.25 | 301.54 | 1001.24 | 301.53 | 1003.41 | 301.5 |
| 1009.93 | 301.13 | 1012.42 | 301.01 | 1015.73 | 300.76 | 1019.32 | 300.7 | 1022.66 | 300.76 |
| 1028.92 | 300.93 | 1030.93 | 300.99 | 1031.91 | 301 | 1033.44 | 300.9 | 1040.18 | 300.87 |
| 1047.94 | 301.05 | 1048.87 | 301.05 | 1055.8 | 301.36 | 1062.69 | 301.68 | 1063.34 | 301.7 |
| 1063.84 | 301.66 | 1064.97 | 301.8 | 1067.45 | 301.64 | 1068.31 | 301.61 | 1070.97 | 301.57 |
| 1072.49 | 301.5 | 1073.64 | 301.5 | 1075.02 | 301.42 | 1076.01 | 301.33 | 1078.53 | 301.15 |
| 1080.95 | 301.19 | 1081.95 | 301.23 | 1082.45 | 301.32 | 1083.72 | 301.42 | 1085.38 | 301.5 |
| 1092.56 | 301.71 | 1094.11 | 301.66 | 1095.6 | 301.58 | 1098.72 | 301.46 | 1100.47 | 301.42 |
| 1104.85 | 301.51 | 1108.51 | 301.56 | 1109.63 | 301.61 | 1118.45 | 301.9 | 1120.93 | 302.04 |
| 1123.12 | 302.13 | 1127.88 | 302.21 | 1129.79 | 302.23 | 1131.9 | 302.32 | 1133.14 | 302.35 |
| 1136.34 | 302.4 | 1140.08 | 302.41 | 1142.74 | 302.39 | 1146.66 | 302.34 | 1148.27 | 302.3 |
| 1149.44 | 302.23 | 1151.57 | 302.18 | 1153.58 | 302.11 | 1154.41 | 302.12 | 1155.3 | 302.2 |
| 1157.09 | 302.3 | 1159.28 | 302.31 | 1160.46 | 302.25 | 1161.32 | 302.24 | 1163.33 | 302.26 |
| 1165.1 | 302.35 | 1167.3 | 302.38 | 1169.24 | 302.45 | 1170.13 | 302.5 | 1171.56 | 302.51 |
| 1172.95 | 302.49 | 1176.07 | 302.49 | 1178.17 | 302.42 | 1178.8 | 302.35 | 1181.05 | 302.29 |
| 1186.74 | 302.22 | 1190.11 | 302.15 | 1194.57 | 302.14 | 1199.55 | 302.09 | 1200.9 | 302.06 |
| 1204.6 | 301.91 | 1209.33 | 301.93 | 1214.98 | 301.93 | 1215.47 | 301.92 | 1222.77 | 301.92 |
| 1223.55 | 301.93 | 1226.53 | 302.04 | 1229.49 | 302.13 | 1234.8 | 302.28 | 1238.46 | 302.43 |
| 1243.9 | 302.63 | 1248.17 | 302.81 | 1251.33 | 302.82 | 1256.28 | 302.67 | 1257.51 | 302.61 |
| 1260.7 | 302.5 | 1265.64 | 302.4 | 1271.19 | 302.31 | 1276.36 | 302.3 | 1276.45 | 302.31 |
| 1279.7 | 302.32 | 1280.86 | 302.31 | 1282.45 | 302.27 | 1290.56 | 302.09 | 1291.29 | 302.06 |
| 1292.43 | 302.06 | 1299.6 | 302.01 | 1302.21 | 302.05 | 1310.33 | 302.26 | 1312.16 | 302.34 |
| 1315.59 | 302.33 | 1324.49 | 302.39 | 1326.27 | 302.47 | 1327.47 | 302.49 | 1331.71 | 302.74 |
| 1333.25 | 302.88 | 1335.33 | 303.13 | 1339.05 | 303.48 | 1340.02 | 303.59 | 1342.63 | 303.8 |
| 1345.57 | 304.13 | 1350.89 | 304.85 | 1351.27 | 305.14 | 1351.8 | 305.39 | 1352.57 | 305.83 |
| 1353.54 | 306.45 | 1354.78 | 307.15 | 1355.67 | 307.77 | 1357.2 | 308.73 | 1357.4 | 308.95 |
| 1358.04 | 309.45 | 1358.64 | 309.97 | 1360.28 | 311.51 | 1361.61 | 312.81 | 1363.18 | 314.25 |
| 1363.67 | 314.87 | 1364 | 315.17 | 1364.54 | 315.36 | 1365.75 | 315.61 | 1367.41 | 315.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1367.87 | 315.99 | 1374.69 | 317.42 | 1375.84 | 317.67 | 1376.87 | 317.85 | 1380.55 | 318.57 |
| 1383.72 | 319.1 | 1386.61 | 319.51 | 1391.63 | 320.44 | 1395.82 | 321.37 | 1401.11 | 322.38 |
| 1402.88 | 322.68 | 1403.67 | 322.78 | 1408.11 | 323.23 | 1411.79 | 323.4 | 1416.69 | 323.61 |
| 1418.96 | 323.75 | 1424.19 | 324 | 1428.31 | 324.21 | 1431.27 | 324.48 | 1436.64 | 325.03 |
| 1439.57 | 325.22 | 1440.22 | 325.28 | 1445.55 | 325.7 | 1453.64 | 326.37 | 1454.84 | 326.46 |
| 1456.06 | 326.51 | 1459.98 | 326.59 | 1468.23 | 326.96 | 1468.98 | 327.01 | 1476.92 | 327.22 |
| 1477.07 | 327.22 | 1483.81 | 327.45 | 1485.42 | 327.56 | 1487.54 | 327.6 | 1491.97 | 327.54 |
| 1502.26 | 327.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 163.99 | .04 | 1367.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 163.99 | 1367.41 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2545.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.56 | .58 | 326.49 | 4.18 | 326.34 | 7.79 | 326.2 | 10.84 | 326.09 |
| 11.58 | 326.05 | 15.38 | 325.91 | 17.5 | 325.84 | 18.98 | 325.77 | 21.04 | 325.72 |
| 22.94 | 325.69 | 26.29 | 325.76 | 29.48 | 325.76 | 31.82 | 325.7 | 32.49 | 325.52 |
| 34.73 | 325.37 | 36.05 | 325.19 | 36.79 | 325.25 | 37.35 | 325.16 | 39.19 | 324.93 |
| 40.44 | 324.53 | 42.61 | 323.73 | 42.92 | 323.74 | 43.33 | 324.07 | 43.96 | 324.27 |
| 46.35 | 324.83 | 47.91 | 324.87 | 49.69 | 324.77 | 50.42 | 324.67 | 52.54 | 324.46 |
| 56.3 | 323.82 | 56.58 | 323.75 | 62.1 | 323.08 | 66.9 | 322.24 | 69 | 321.86 |
| 69.57 | 321.7 | 71.03 | 321.08 | 72.32 | 320.59 | 74.13 | 319.77 | 74.83 | 319.37 |
| 76.26 | 318.71 | 78.41 | 317.6 | 79.84 | 316.84 | 80.74 | 316.52 | 81.84 | 316.01 |
| 83.07 | 315.21 | 85.07 | 314.39 | 86.57 | 313.88 | 88.23 | 313.92 | 88.81 | 313.84 |
| 90.3 | 313.81 | 91.38 | 313.65 | 92.04 | 313.44 | 92.58 | 313.4 | 93.51 | 313.17 |
| 94.67 | 313.07 | 95.43 | 313.06 | 97.07 | 312.95 | 97.7 | 312.89 | 98.72 | 312.72 |
| 100.32 | 312.27 | 101.3 | 311.93 | 103.85 | 311.25 | 104.56 | 311.04 | 107.35 | 310.39 |
| 108.4 | 310.13 | 111.89 | 309.4 | 113.74 | 308.97 | 118.08 | 308.22 | 121.08 | 307.63 |
| 123.22 | 307.29 | 129.75 | 306.32 | 134.94 | 305.36 | 136.33 | 305.13 | 140.33 | 304.39 |
| 143.78 | 303.85 | 146.84 | 303.26 | 152.78 | 302.2 | 156.91 | 301.59 | 159.86 | 301.19 |
| 160.62 | 301.07 | 162.57 | 301.05 | 168.23 | 301.13 | 172.11 | 301.2 | 176.86 | 301.02 |
| 178.75 | 301.01 | 192.27 | 301.05 | 195.7 | 301.1 | 196.51 | 301.14 | 201.35 | 301.09 |
| 203.31 | 301.06 | 204.44 | 301.02 | 218.31 | 300.56 | 219.16 | 300.56 | 228.53 | 300.25 |
| 242.27 | 300.11 | 244.68 | 300.04 | 245.4 | 299.96 | 245.68 | 299.86 | 246.59 | 299.9 |
| 247.06 | 300.02 | 247.72 | 300.08 | 250.17 | 300.12 | 252.13 | 300.23 | 261.39 | 299.91 |
| 263.92 | 299.91 | 265.47 | 299.89 | 268.64 | 299.8 | 269.07 | 299.75 | 270.31 | 299.72 |
| 271.47 | 299.79 | 276.95 | 299.91 | 278.79 | 299.92 | 279.77 | 299.95 | 282.05 | 300.08 |
| 284.38 | 300.09 | 287.24 | 300.2 | 288.9 | 300.2 | 295.34 | 300.12 | 298.75 | 300.04 |
| 300.63 | 300.04 | 307.4 | 299.89 | 310.22 | 299.87 | 312.4 | 299.9 | 313.86 | 299.86 |
| 319.04 | 299.89 | 320.14 | 299.89 | 321.36 | 299.77 | 323.05 | 299.69 | 323.83 | 299.72 |
| 325 | 299.85 | 326.5 | 299.94 | 327.91 | 300 | 330.35 | 300.03 | 334.27 | 300.13 |
| 342.25 | 300.42 | 354.64 | 300.44 | 357.25 | 300.28 | 359 | 300.23 | 361.69 | 300.12 |
| 362.6 | 300.15 | 364.5 | 300.37 | 365.53 | 300.46 | 370.8 | 300.53 | 375.07 | 300.58 |
| 381.52 | 300.68 | 385.14 | 300.66 | 387.36 | 300.61 | 388.4 | 300.48 | 392.76 | 300.42 |
| 401.46 | 300.23 | 402.9 | 300.28 | 404.28 | 300.27 | 414.05 | 300.35 | 427.72 | 300.3 |
| 437.13 | 300.3 | 450.8 | 300.26 | 461.53 | 299.51 | 462.34 | 299.49 | 462.67 | 299.41 |
| 465.69 | 299.31 | 467.98 | 299.34 | 477.25 | 299.51 | 479.37 | 299.59 | 482.24 | 299.68 |
| 500.21 | 300.17 | 510.56 | 300.57 | 513.52 | 300.57 | 514.39 | 300.58 | 531.47 | 300.57 |
| 532.46 | 300.53 | 541.96 | 300.64 | 545.53 | 300.74 | 547.86 | 300.72 | 549.9 | 300.67 |
| 553.41 | 300.66 | 554.3 | 300.58 | 556.51 | 300.55 | 560.37 | 300.52 | 561.04 | 300.5 |
| 563.4 | 300.48 | 563.94 | 300.5 | 567.47 | 300.55 | 577.35 | 300.5 | 584.48 | 300.49 |
| 588.56 | 300.5 | 591.85 | 300.36 | 597.83 | 300.16 | 599.29 | 300.15 | 600.64 | 300.09 |
| 603.2 | 300.07 | 604.71 | 300.03 | 606.2 | 300.01 | 608.64 | 300.05 | 609.36 | 300.08 |
| 611.2 | 300.22 | 613.51 | 300.35 | 620.03 | 300.51 | 624.31 | 300.56 | 625.77 | 300.42 |
| 625.82 | 300.35 | 629.47 | 300.35 | 632.48 | 300.36 | 636.55 | 300.48 | 639.35 | 300.58 |
| 643.38 | 300.69 | 648.55 | 300.82 | 650.22 | 300.82 | 652.12 | 300.77 | 654.37 | 300.78 |
| 655.18 | 300.8 | 662.37 | 300.9 | 664.66 | 300.91 | 666.18 | 300.86 | 668.25 | 300.76 |
| 670.3 | 300.72 | 671.32 | 300.72 | 673.38 | 300.77 | 675.17 | 300.9 | 678.66 | 301.05 |
| 683.33 | 301.17 | 685.48 | 301.21 | 688.63 | 301.3 | 690.43 | 301.31 | 695.97 | 301.16 |
| 697.45 | 301.16 | 704.89 | 301.22 | 708.61 | 301.21 | 709.49 | 301.12 | 709.87 | 301.13 |
| 712.81 | 300.9 | 714.53 | 300.73 | 716.43 | 300.6 | 717.09 | 300.57 | 719.36 | 300.54 |
| 721.69 | 300.6 | 724.71 | 300.77 | 726.26 | 300.8 | 727.41 | 300.84 | 733.6 | 300.98 |
| 734.72 | 300.98 | 735.13 | 300.95 | 736.33 | 300.95 | 738.36 | 300.88 | 739.49 | 300.9 |
| 740.78 | 300.83 | 744.26 | 300.89 | 753.77 | 300.6 | 757.31 | 300.63 | 760.9 | 300.72 |
| 762.61 | 300.8 | 767.39 | 300.96 | 768.86 | 300.99 | 774.92 | 301.15 | 778.18 | 301.27 |
| 787.7 | 301.34 | 788.07 | 301.33 | 792.62 | 301.36 | 795.23 | 301.46 | 797.94 | 301.54 |
| 800.35 | 301.6 | 801.63 | 301.62 | 806.97 | 301.6 | 810.31 | 301.55 | 810.48 | 301.56 |
| 814.63 | 301.55 | 818.49 | 301.59 | 826.36 | 301.46 | 827.71 | 301.41 | 839.26 | 301.31 |
| 840.29 | 301.31 | 846 | 301.38 | 849.41 | 301.34 | 850.88 | 301.34 | 852.65 | 301.3 |
| 864.07 | 301.12 | 865.35 | 301.08 | 866.09 | 301.1 | 870.99 | 301.1 | 872.43 | 301.08 |
| 873.26 | 301.09 | 875.19 | 301.06 | 877.35 | 301.05 | 879.22 | 300.95 | 879.92 | 300.94 |
| 882.43 | 301.04 | 884.14 | 301.08 | 885.6 | 301.07 | 888.48 | 300.91 | 890.36 | 300.92 |
| 893.66 | 301.03 | 897.18 | 301.18 | 899.46 | 301.19 | 906.29 | 301.12 | 909.39 | 301.08 |
| 911.63 | 301.03 | 913.97 | 301.03 | 915.95 | 300.99 | 926.15 | 300.8 | 928.66 | 300.75 |
| 931.09 | 300.67 | 935.32 | 300.67 | 937.19 | 300.69 | 938.37 | 300.77 | 940.39 | 300.71 |
| 941.36 | 300.73 | 943.38 | 300.82 | 948.27 | 301.02 | 950.45 | 301.04 | 952.57 | 300.98 |
| 953.76 | 300.99 | 955.22 | 300.93 | 956.74 | 300.95 | 957.74 | 301.07 | 958.22 | 301.17 |
| 963.14 | 301.39 | 966.38 | 301.51 | 967.76 | 301.51 | 974.67 | 301.36 | 976.45 | 301.29 |
| 980.44 | 301.21 | 987.06 | 301.21 | 989.59 | 301.16 | 994.37 | 300.88 | 998.57 | 300.68 |
| 1001.87 | 300.45 | 1005.45 | 300.39 | 1008.79 | 300.45 | 1015.03 | 300.61 | 1017.04 | 300.68 |
| 1018.02 | 300.69 | 1019.54 | 300.6 | 1026.26 | 300.57 | 1034.01 | 300.74 | 1034.94 | 300.73 |
| 1041.63 | 301.01 | 1041.85 | 301.03 | 1048.73 | 301.33 | 1049.37 | 301.35 | 1049.87 | 301.31 |
| 1051 | 301.44 | 1053.48 | 301.29 | 1054.34 | 301.26 | 1056.99 | 301.22 | 1058.5 | 301.15 |
| 1059.65 | 301.14 | 1061.03 | 301.05 | 1061.64 | 300.99 | 1064.53 | 300.79 | 1066.54 | 300.81 |
| 1067.94 | 300.86 | 1068.44 | 300.95 | 1069.71 | 301.05 | 1071.37 | 301.13 | 1075.53 | 301.25 |
| 1078.53 | 301.35 | 1080.08 | 301.3 | 1081.56 | 301.23 | 1084.68 | 301.12 | 1086.42 | 301.09 |
| 1088.66 | 301.13 | 1091.89 | 301.2 | 1094.45 | 301.21 | 1095.56 | 301.26 | 1104.36 | 301.54 |
| 1106.84 | 301.67 | 1109.03 | 301.75 | 1113.77 | 301.82 | 1115.68 | 301.84 | 1117.06 | 301.9 |
| 1119.57 | 301.97 | 1125.43 | 302.03 | 1128.22 | 302.02 | 1132.51 | 301.95 | 1134.12 | 301.91 |
| 1135.28 | 301.84 | 1137.41 | 301.79 | 1139.42 | 301.73 | 1140.24 | 301.74 | 1141.13 | 301.82 |
| 1142.92 | 301.91 | 1145.1 | 301.93 | 1146.28 | 301.88 | 1148.7 | 301.88 | 1150.91 | 301.98 |
| 1153.1 | 302.01 | 1155.04 | 302.07 | 1155.92 | 302.12 | 1157.35 | 302.13 | 1158.74 | 302.11 |
| 1161.85 | 302.1 | 1163.95 | 302.03 | 1164.57 | 301.96 | 1166.82 | 301.89 | 1172.49 | 301.83 |
| 1175.86 | 301.75 | 1180.31 | 301.75 | 1184.04 | 301.72 | 1186.62 | 301.68 | 1188.4 | 301.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1190.32 | 301.55 | 1197.08 | 301.58 | 1202.73 | 301.56 | 1209.22 | 301.57 | 1215.84 | 301.78 |
| 1220.45 | 301.9 | 1223.98 | 302.04 | 1225.23 | 302.08 | 1227.58 | 302.18 | 1229.53 | 302.24 |
| 1233.79 | 302.42 | 1236.94 | 302.43 | 1241.89 | 302.29 | 1243.1 | 302.24 | 1246.3 | 302.14 |
| 1251.22 | 302.05 | 1256.76 | 301.97 | 1262 | 301.97 | 1265.24 | 302 | 1266.4 | 301.99 |
| 1268 | 301.95 | 1276.09 | 301.78 | 1283.23 | 301.71 | 1285.61 | 301.7 | 1287.71 | 301.73 |
| 1295.81 | 301.93 | 1297.63 | 302 | 1301.06 | 302 | 1303.77 | 302.02 | 1309.94 | 302.11 |
| 1311.8 | 302.22 | 1312.91 | 302.25 | 1313.56 | 302.31 | 1315.44 | 302.44 | 1317.15 | 302.58 |
| 1318.57 | 302.74 | 1319.99 | 302.96 | 1321.35 | 303.14 | 1324.47 | 303.5 | 1325.43 | 303.63 |
| 1328.04 | 303.91 | 1330.97 | 304.31 | 1336.28 | 305.13 | 1336.66 | 305.42 | 1337.18 | 305.67 |
| 1337.96 | 306.1 | 1338.92 | 306.72 | 1340.16 | 307.41 | 1341.05 | 308.02 | 1342.58 | 308.97 |
| 1342.77 | 309.19 | 1343.41 | 309.67 | 1344.01 | 310.18 | 1345.65 | 311.68 | 1346.98 | 312.94 |
| 1348.54 | 314.34 | 1349.03 | 314.93 | 1349.35 | 315.22 | 1349.9 | 315.41 | 1351.11 | 315.64 |
| 1352.76 | 315.91 | 1356.94 | 316.73 | 1361.02 | 317.56 | 1362.03 | 317.73 | 1363.59 | 318.02 |
| 1365.64 | 318.42 | 1368.74 | 318.95 | 1371.58 | 319.35 | 1376.49 | 320.26 | 1380.6 | 321.16 |
| 1381.99 | 321.43 | 1385.78 | 322.14 | 1387.51 | 322.43 | 1388.29 | 322.53 | 1392.64 | 322.97 |
| 1396.24 | 323.14 | 1401.04 | 323.35 | 1403.27 | 323.49 | 1412.44 | 323.92 | 1415.34 | 324.18 |
| 1420.6 | 324.71 | 1423.47 | 324.89 | 1427.23 | 325.19 | 1428.99 | 325.32 | 1430.64 | 325.47 |
| 1437.26 | 326.02 | 1439.41 | 326.15 | 1442.86 | 326.22 | 1451.55 | 326.63 | 1452.29 | 326.68 |
| 1460.21 | 326.91 | 1466.82 | 327.14 | 1468.4 | 327.25 | 1470.47 | 327.29 | 1474.81 | 327.25 |
| 1484.9 | 327.26 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 159.86 | .04 | 1352.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 159.86 | 1352.76 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2525.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.05 | .56 | 325.96 | 7.59 | 325.58 | 10.56 | 325.43 | 11.28 | 325.38 |
| 17.05 | 325.09 | 18.49 | 325 | 22.35 | 324.89 | 25.61 | 324.98 | 28.72 | 324.97 |
| 31 | 324.91 | 31.65 | 324.74 | 33.84 | 324.59 | 35.12 | 324.42 | 35.84 | 324.47 |
| 38.18 | 324.16 | 39.4 | 323.78 | 41.51 | 323.02 | 41.81 | 323.02 | 42.21 | 323.33 |
| 42.83 | 323.52 | 45.16 | 324.04 | 46.68 | 324.06 | 48.41 | 323.96 | 49.12 | 323.86 |
| 51.19 | 323.65 | 54.84 | 323.02 | 55.12 | 322.95 | 60.49 | 322.29 | 65.17 | 321.47 |
| 67.22 | 321.1 | 67.78 | 320.94 | 69.19 | 320.35 | 70.45 | 319.88 | 72.22 | 319.1 |
| 72.9 | 318.72 | 74.3 | 318.08 | 75.96 | 317.24 | 77.09 | 316.64 | 77.78 | 316.3 |
| 78.66 | 316 | 79.73 | 315.51 | 80.93 | 314.76 | 82.87 | 313.99 | 84.33 | 313.52 |
| 85.95 | 313.56 | 86.52 | 313.48 | 87.97 | 313.46 | 89.02 | 313.31 | 89.67 | 313.12 |
| 90.19 | 313.08 | 91.1 | 312.87 | 92.23 | 312.77 | 93.35 | 312.76 | 95.18 | 312.6 |
| 96.17 | 312.43 | 97.73 | 311.99 | 98.68 | 311.67 | 101.86 | 310.8 | 105.61 | 309.91 |
| 109 | 309.19 | 110.81 | 308.77 | 115.03 | 308.02 | 117.95 | 307.45 | 120.03 | 307.11 |
| 126.4 | 306.15 | 131.45 | 305.2 | 132.81 | 304.97 | 134.84 | 304.6 | 136.71 | 304.24 |
| 138.73 | 303.92 | 140.06 | 303.69 | 142.65 | 303.16 | 148.84 | 301.97 | 152.86 | 301.35 |
| 154.02 | 301.2 | 155.73 | 300.95 | 156.47 | 300.84 | 158.37 | 300.81 | 166.56 | 300.9 |
| 167.64 | 300.92 | 172.25 | 300.73 | 174.1 | 300.71 | 187.24 | 300.69 | 190.58 | 300.73 |
| 191.37 | 300.76 | 196.06 | 300.7 | 199.07 | 300.63 | 212.56 | 300.19 | 213.38 | 300.19 |
| 222.49 | 299.88 | 235.85 | 299.74 | 238.19 | 299.67 | 238.89 | 299.6 | 239.16 | 299.51 |
| 240.05 | 299.54 | 240.5 | 299.65 | 241.14 | 299.71 | 243.53 | 299.75 | 245.43 | 299.84 |
| 254.43 | 299.54 | 256.89 | 299.54 | 258.4 | 299.52 | 261.48 | 299.43 | 261.9 | 299.39 |
| 263.1 | 299.35 | 264.23 | 299.42 | 269.56 | 299.53 | 272.3 | 299.56 | 274.52 | 299.69 |
| 276.78 | 299.69 | 279.56 | 299.8 | 281.18 | 299.8 | 287.43 | 299.72 | 290.75 | 299.65 |
| 292.57 | 299.64 | 299.16 | 299.5 | 301.9 | 299.49 | 304.02 | 299.51 | 306.1 | 299.47 |
| 311.2 | 299.52 | 312.73 | 299.39 | 314.37 | 299.32 | 315.13 | 299.35 | 316.27 | 299.47 |
| 317.73 | 299.56 | 319.1 | 299.61 | 321.47 | 299.64 | 324.3 | 299.73 | 325.28 | 299.74 |
| 333.04 | 300.03 | 345.09 | 300.05 | 347.62 | 299.91 | 350.12 | 299.83 | 351.93 | 299.75 |
| 352.83 | 299.78 | 354.67 | 299.99 | 355.67 | 300.08 | 360.79 | 300.15 | 361.77 | 300.15 |
| 365.69 | 300.2 | 371.21 | 300.28 | 374.74 | 300.27 | 376.89 | 300.22 | 377.9 | 300.1 |
| 382.14 | 300.04 | 387.5 | 299.92 | 390.6 | 299.83 | 392 | 299.88 | 393.34 | 299.87 |
| 402.84 | 299.93 | 416.12 | 299.88 | 417.24 | 299.87 | 425.27 | 299.87 | 438.56 | 299.82 |
| 448.99 | 299.11 | 449.79 | 299.09 | 450.1 | 299.02 | 453.04 | 298.92 | 455.12 | 298.94 |
| 458.1 | 299 | 464.58 | 299.14 | 464.79 | 299.14 | 469.56 | 299.31 | 487.48 | 299.81 |
| 497.81 | 300.21 | 500.28 | 300.22 | 518.68 | 300.22 | 519.66 | 300.17 | 529.14 | 300.28 |
| 532.7 | 300.37 | 535.03 | 300.35 | 536.62 | 300.29 | 540.56 | 300.27 | 541.45 | 300.2 |
| 547.51 | 300.15 | 548.18 | 300.13 | 550.53 | 300.11 | 551.07 | 300.13 | 554.59 | 300.17 |
| 564.45 | 300.12 | 571.56 | 300.12 | 575.64 | 300.13 | 578.92 | 299.99 | 580.83 | 299.94 |
| 584.89 | 299.81 | 586.71 | 299.79 | 587.69 | 299.73 | 590.24 | 299.71 | 593.24 | 299.64 |
| 595.67 | 299.67 | 596.39 | 299.7 | 598.23 | 299.82 | 600.53 | 299.94 | 602.33 | 299.97 |
| 607.04 | 300.09 | 611.3 | 300.13 | 612.77 | 300 | 612.81 | 299.94 | 616.45 | 299.94 |
| 619.46 | 299.95 | 624.19 | 300.09 | 626.31 | 300.16 | 630.33 | 300.27 | 635.49 | 300.38 |
| 636.44 | 300.39 | 639.06 | 300.34 | 641.3 | 300.35 | 642.1 | 300.37 | 649.28 | 300.48 |
| 651.57 | 300.5 | 653.08 | 300.45 | 654.6 | 300.37 | 655.9 | 300.33 | 658.21 | 300.32 |
| 660.27 | 300.37 | 662.05 | 300.49 | 665.54 | 300.65 | 670.19 | 300.77 | 672.34 | 300.81 |
| 675.48 | 300.89 | 677.27 | 300.88 | 682.22 | 300.73 | 682.8 | 300.7 | 684.28 | 300.7 |
| 691.71 | 300.78 | 695.42 | 300.77 | 696.29 | 300.68 | 696.68 | 300.69 | 699.6 | 300.46 |
| 701.32 | 300.3 | 703.87 | 300.14 | 705.33 | 300.12 | 706.78 | 300.13 | 708.46 | 300.17 |
| 710.62 | 300.3 | 714.17 | 300.41 | 719.34 | 300.5 | 720.35 | 300.53 | 721.88 | 300.5 |
| 723.9 | 300.48 | 725.1 | 300.43 | 726.23 | 300.45 | 727.52 | 300.39 | 730.99 | 300.44 |
| 740.47 | 300.17 | 744.01 | 300.2 | 747.59 | 300.28 | 749.29 | 300.36 | 754.07 | 300.52 |
| 755.53 | 300.55 | 761.58 | 300.72 | 764.82 | 300.84 | 774.33 | 300.92 | 779.24 | 300.95 |
| 781.84 | 301.06 | 784.54 | 301.16 | 786.95 | 301.22 | 788.23 | 301.23 | 792.94 | 301.22 |
| 797.06 | 301.17 | 801.19 | 301.15 | 805.05 | 301.18 | 812.9 | 301.04 | 814.24 | 301 |
| 825.77 | 300.91 | 832.5 | 300.99 | 835.9 | 300.95 | 837.36 | 300.96 | 840.27 | 300.9 |
| 840.95 | 300.9 | 850.52 | 300.76 | 851.8 | 300.73 | 852.54 | 300.74 | 857.43 | 300.76 |
| 860.77 | 300.72 | 863.83 | 300.71 | 865 | 300.64 | 866.33 | 300.61 | 867.32 | 300.63 |
| 868.84 | 300.7 | 870.65 | 300.73 | 872.01 | 300.71 | 874.88 | 300.52 | 876.76 | 300.52 |
| 880.05 | 300.63 | 883.56 | 300.77 | 884.69 | 300.79 | 888.03 | 300.77 | 892.65 | 300.71 |
| 895.74 | 300.66 | 897.98 | 300.61 | 900.31 | 300.61 | 902.29 | 300.57 | 912.46 | 300.41 |
| 918.27 | 300.28 | 920 | 300.3 | 921.61 | 300.29 | 923.48 | 300.31 | 924.65 | 300.39 |
| 926.67 | 300.34 | 928.25 | 300.4 | 934.53 | 300.67 | 936.71 | 300.7 | 938.82 | 300.65 |
| 940.01 | 300.66 | 941.46 | 300.6 | 942.99 | 300.62 | 943.36 | 300.69 | 943.99 | 300.73 |
| 944.46 | 300.83 | 949.37 | 301.04 | 952.61 | 301.15 | 953.98 | 301.15 | 956.13 | 301.1 |
| 960.88 | 301.03 | 962.65 | 300.96 | 966.63 | 300.88 | 973.24 | 300.88 | 975.76 | 300.82 |
| 980.24 | 300.57 | 981.34 | 300.5 | 984.72 | 300.36 | 988.02 | 300.14 | 991.59 | 300.09 |
| 994.92 | 300.14 | 1001.15 | 300.3 | 1003.15 | 300.36 | 1004.13 | 300.37 | 1005.65 | 300.29 |
| 1012.35 | 300.27 | 1020.08 | 300.42 | 1021 | 300.41 | 1027.69 | 300.68 | 1027.91 | 300.7 |
| 1034.77 | 300.98 | 1035.41 | 301 | 1035.91 | 300.96 | 1037.03 | 301.08 | 1039.5 | 300.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1040.36 | 300.91 | 1043.01 | 300.88 | 1044.52 | 300.79 | 1045.66 | 300.77 | 1047.04 | 300.68 |
| 1048.03 | 300.58 | 1050.53 | 300.42 | 1052.53 | 300.44 | 1053.92 | 300.49 | 1054.44 | 300.58 |
| 1055.7 | 300.68 | 1057.35 | 300.76 | 1064.5 | 300.98 | 1066.04 | 300.95 | 1067.53 | 300.88 |
| 1070.63 | 300.79 | 1073.1 | 300.76 | 1075.04 | 300.81 | 1078.17 | 300.87 | 1080.38 | 300.87 |
| 1081.49 | 300.91 | 1090.27 | 301.17 | 1092.74 | 301.3 | 1095.65 | 301.39 | 1101.56 | 301.45 |
| 1103.66 | 301.53 | 1105.45 | 301.57 | 1108.09 | 301.61 | 1109.74 | 301.62 | 1111.8 | 301.65 |
| 1114.08 | 301.64 | 1119.96 | 301.53 | 1121.12 | 301.46 | 1123.25 | 301.41 | 1125.25 | 301.35 |
| 1126.07 | 301.36 | 1126.95 | 301.44 | 1128.74 | 301.53 | 1130.92 | 301.55 | 1132.95 | 301.5 |
| 1134.51 | 301.51 | 1136.71 | 301.61 | 1138.9 | 301.64 | 1141.72 | 301.74 | 1143.14 | 301.75 |
| 1144.53 | 301.73 | 1147.63 | 301.71 | 1148.62 | 301.69 | 1149.73 | 301.64 | 1150.35 | 301.57 |
| 1152.59 | 301.5 | 1158.25 | 301.43 | 1162.13 | 301.35 | 1166.05 | 301.35 | 1166.19 | 301.36 |
| 1171.01 | 301.32 | 1172.35 | 301.3 | 1176.04 | 301.18 | 1180.75 | 301.22 | 1182.79 | 301.22 |
| 1188.42 | 301.2 | 1194.9 | 301.21 | 1197.87 | 301.31 | 1200.81 | 301.39 | 1203.64 | 301.45 |
| 1210.39 | 301.68 | 1213.22 | 301.79 | 1215.16 | 301.85 | 1219.41 | 302.02 | 1222.55 | 302.04 |
| 1227.49 | 301.91 | 1228.7 | 301.86 | 1231.89 | 301.78 | 1236.8 | 301.7 | 1242.33 | 301.63 |
| 1247.56 | 301.64 | 1250.79 | 301.68 | 1251.95 | 301.68 | 1253.54 | 301.64 | 1261.61 | 301.48 |
| 1266.53 | 301.43 | 1270.61 | 301.38 | 1273.21 | 301.41 | 1281.29 | 301.6 | 1283.11 | 301.67 |
| 1286.53 | 301.67 | 1289.23 | 301.7 | 1295.39 | 301.83 | 1297.24 | 301.96 | 1298.35 | 302.02 |
| 1300.87 | 302.25 | 1301.86 | 302.37 | 1303.06 | 302.48 | 1304 | 302.62 | 1306.18 | 303 |
| 1307.96 | 303.26 | 1309.88 | 303.52 | 1310.84 | 303.67 | 1313.44 | 304.01 | 1316.37 | 304.48 |
| 1318.97 | 304.93 | 1321.67 | 305.41 | 1322.05 | 305.69 | 1323.34 | 306.38 | 1324.3 | 306.99 |
| 1325.54 | 307.68 | 1326.43 | 308.28 | 1327.95 | 309.21 | 1328.15 | 309.42 | 1329.33 | 310.35 |
| 1331.02 | 311.85 | 1332.34 | 313.06 | 1333.9 | 314.42 | 1334.39 | 314.99 | 1334.71 | 315.28 |
| 1335.26 | 315.46 | 1336.07 | 315.61 | 1338.11 | 315.92 | 1340.12 | 316.28 | 1345.1 | 317.23 |
| 1346.21 | 317.45 | 1347.68 | 317.69 | 1350.72 | 318.28 | 1353.76 | 318.79 | 1356.54 | 319.19 |
| 1361.36 | 320.07 | 1365.37 | 320.95 | 1370.45 | 321.9 | 1372.15 | 322.18 | 1372.91 | 322.28 |
| 1377.18 | 322.71 | 1378.1 | 322.76 | 1385.4 | 323.09 | 1386.88 | 323.19 | 1392.61 | 323.45 |
| 1396.56 | 323.64 | 1399.26 | 323.88 | 1399.4 | 323.88 | 1404.55 | 324.38 | 1407.37 | 324.56 |
| 1412.2 | 324.94 | 1413.1 | 325 | 1414.39 | 325.12 | 1420.87 | 325.66 | 1422.02 | 325.74 |
| 1423.19 | 325.79 | 1426.35 | 325.87 | 1434.87 | 326.3 | 1435.59 | 326.35 | 1439.56 | 326.48 |
| 1443.35 | 326.59 | 1449.82 | 326.83 | 1451.37 | 326.94 | 1453.41 | 326.99 | 1457.65 | 326.96 |
| 1467.53 | 326.99 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 155.73 | .04 | 1338.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 155.73 | 1338.11 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2506.64*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.55 | .55 | 325.43 | 5.23 | 325.11 | 7.39 | 324.95 | 10.28 | 324.77 |
| 12.14 | 324.64 | 16.6 | 324.35 | 18 | 324.24 | 21.76 | 324.1 | 24.93 | 324.19 |
| 27.96 | 324.19 | 30.18 | 324.13 | 30.81 | 323.96 | 32.94 | 323.81 | 34.19 | 323.64 |
| 34.89 | 323.69 | 37.17 | 323.39 | 38.36 | 323.03 | 40.41 | 322.31 | 40.7 | 322.31 |
| 41.09 | 322.6 | 41.69 | 322.78 | 43.96 | 323.25 | 45.44 | 323.26 | 47.12 | 323.15 |
| 49.83 | 322.84 | 53.39 | 322.23 | 53.66 | 322.16 | 58.89 | 321.5 | 63.45 | 320.7 |
| 65.44 | 320.33 | 65.98 | 320.19 | 67.36 | 319.62 | 68.59 | 319.17 | 70.31 | 318.42 |
| 70.97 | 318.06 | 72.33 | 317.45 | 74.36 | 316.45 | 75.04 | 316.08 | 75.72 | 315.76 |
| 76.57 | 315.47 | 77.61 | 315.02 | 78.78 | 314.31 | 80.67 | 313.59 | 82.1 | 313.15 |
| 83.67 | 313.19 | 84.22 | 313.12 | 85.64 | 313.11 | 86.66 | 312.97 | 87.29 | 312.79 |
| 87.8 | 312.76 | 88.68 | 312.57 | 89.78 | 312.48 | 90.87 | 312.47 | 92.66 | 312.32 |
| 93.62 | 312.14 | 95.14 | 311.71 | 96.07 | 311.4 | 96.81 | 311.19 | 99.4 | 310.5 |
| 101.8 | 309.94 | 102.81 | 309.69 | 106.11 | 308.98 | 107.87 | 308.56 | 111.98 | 307.83 |
| 114.82 | 307.26 | 117.62 | 306.82 | 123.05 | 305.98 | 127.97 | 305.04 | 129.29 | 304.82 |
| 131.27 | 304.45 | 133.08 | 304.08 | 135.05 | 303.76 | 136.35 | 303.53 | 138.87 | 302.98 |
| 142.96 | 302.13 | 144.89 | 301.74 | 148.81 | 301.11 | 151.61 | 300.72 | 152.32 | 300.61 |
| 154.16 | 300.57 | 159.51 | 300.6 | 162.12 | 300.63 | 163.17 | 300.63 | 167.65 | 300.44 |
| 169.45 | 300.41 | 182.21 | 300.34 | 185.45 | 300.36 | 186.22 | 300.39 | 193.7 | 300.24 |
| 206.8 | 299.81 | 207.6 | 299.81 | 216.45 | 299.51 | 229.42 | 299.37 | 230.71 | 299.35 |
| 231.7 | 299.31 | 232.38 | 299.24 | 232.64 | 299.15 | 233.5 | 299.18 | 233.94 | 299.28 |
| 234.56 | 299.34 | 236.48 | 299.36 | 238.73 | 299.46 | 247.48 | 299.17 | 249.86 | 299.17 |
| 251.33 | 299.15 | 254.32 | 299.06 | 254.73 | 299.02 | 255.89 | 298.99 | 256.99 | 299.05 |
| 262.17 | 299.15 | 263.91 | 299.15 | 264.83 | 299.18 | 266.98 | 299.29 | 269.18 | 299.3 |
| 271.88 | 299.4 | 274.07 | 299.39 | 279.53 | 299.33 | 282.75 | 299.25 | 284.52 | 299.25 |
| 290.92 | 299.12 | 293.58 | 299.1 | 295.64 | 299.13 | 297.66 | 299.09 | 302.62 | 299.14 |
| 304.11 | 299.02 | 305.69 | 298.95 | 306.43 | 298.98 | 307.54 | 299.1 | 308.96 | 299.18 |
| 310.29 | 299.23 | 312.59 | 299.26 | 315.34 | 299.35 | 316.3 | 299.36 | 323.83 | 299.64 |
| 335.53 | 299.67 | 337.99 | 299.53 | 340.92 | 299.44 | 342.18 | 299.38 | 343.05 | 299.41 |
| 344.84 | 299.61 | 345.81 | 299.69 | 350.78 | 299.76 | 351.73 | 299.76 | 357.91 | 299.84 |
| 360.9 | 299.89 | 364.33 | 299.88 | 366.42 | 299.83 | 367.4 | 299.72 | 371.52 | 299.66 |
| 378.24 | 299.49 | 379.74 | 299.44 | 381.1 | 299.48 | 382.4 | 299.46 | 391.62 | 299.52 |
| 404.53 | 299.45 | 407.87 | 299.44 | 409.08 | 299.45 | 413.42 | 299.44 | 426.33 | 299.39 |
| 436.45 | 298.71 | 437.23 | 298.69 | 437.53 | 298.62 | 440.39 | 298.53 | 442.68 | 298.55 |
| 451.91 | 298.76 | 452.12 | 298.76 | 456.87 | 298.93 | 474.76 | 299.45 | 485.07 | 299.85 |
| 487.53 | 299.86 | 505.89 | 299.86 | 506.86 | 299.82 | 516.32 | 299.92 | 519.88 | 300 |
| 522.2 | 299.97 | 524.23 | 299.9 | 527.72 | 299.88 | 528.61 | 299.82 | 534.65 | 299.77 |
| 537.66 | 299.73 | 538.21 | 299.75 | 541.72 | 299.79 | 551.55 | 299.74 | 558.65 | 299.74 |
| 562.34 | 299.75 | 562.71 | 299.76 | 565.99 | 299.63 | 571.95 | 299.46 | 573.39 | 299.45 |
| 574.74 | 299.38 | 577.29 | 299.35 | 580.27 | 299.27 | 582.7 | 299.29 | 583.42 | 299.31 |
| 585.26 | 299.42 | 587.55 | 299.53 | 589.34 | 299.56 | 594.05 | 299.67 | 598.3 | 299.71 |
| 599.76 | 299.59 | 599.81 | 299.53 | 603.44 | 299.53 | 606.44 | 299.54 | 610.49 | 299.65 |
| 613.27 | 299.74 | 617.29 | 299.84 | 622.43 | 299.94 | 623.38 | 299.95 | 625.99 | 299.9 |
| 628.23 | 299.91 | 629.03 | 299.94 | 637.92 | 300.09 | 639.98 | 300.05 | 641.5 | 299.97 |
| 643.88 | 299.91 | 645.1 | 299.91 | 647.15 | 299.97 | 648.93 | 300.09 | 652.41 | 300.24 |
| 656.66 | 300.36 | 657.05 | 300.38 | 659.2 | 300.41 | 661.63 | 300.48 | 664.12 | 300.46 |
| 669.64 | 300.25 | 671.11 | 300.24 | 673.82 | 300.28 | 679.24 | 300.34 | 682.23 | 300.32 |
| 683.09 | 300.24 | 683.48 | 300.24 | 686.54 | 300.01 | 688.12 | 299.87 | 690.66 | 299.72 |
| 692.92 | 299.69 | 695.24 | 299.75 | 697.39 | 299.87 | 700.93 | 299.97 | 706.09 | 300.05 |
| 707.1 | 300.08 | 708.63 | 300.04 | 709.82 | 300.04 | 711.84 | 299.98 | 712.97 | 300 |
| 714.25 | 299.94 | 717.71 | 299.99 | 727.17 | 299.74 | 730.71 | 299.77 | 734.28 | 299.84 |
| 735.97 | 299.92 | 740.74 | 300.08 | 748.24 | 300.29 | 751.47 | 300.4 | 765.85 | 300.55 |
| 768.45 | 300.67 | 770.81 | 300.76 | 773.55 | 300.83 | 774.82 | 300.84 | 777.06 | 300.83 |
| 777.43 | 300.85 | 779.39 | 300.84 | 783.47 | 300.77 | 783.63 | 300.78 | 787.76 | 300.75 |
| 791.61 | 300.78 | 799.44 | 300.63 | 800.78 | 300.59 | 812.28 | 300.52 | 813.31 | 300.52 |
| 818.99 | 300.6 | 822.39 | 300.57 | 823.85 | 300.58 | 825.61 | 300.54 | 836.98 | 300.41 |
| 838.25 | 300.38 | 838.99 | 300.39 | 843.86 | 300.41 | 847.2 | 300.38 | 849.72 | 300.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 851.01 | 300.34 | 852.75 | 300.27 | 855.26 | 300.36 | 857.06 | 300.38 | 859.04 | 300.31 |
| 861.28 | 300.14 | 863.15 | 300.13 | 866.43 | 300.23 | 869.94 | 300.37 | 872.21 | 300.38 |
| 874.4 | 300.36 | 879.01 | 300.3 | 884.32 | 300.19 | 886.65 | 300.19 | 888.63 | 300.16 |
| 899.58 | 300.01 | 903.7 | 299.9 | 904.57 | 299.89 | 906.29 | 299.91 | 907.9 | 299.91 |
| 909.77 | 299.94 | 910.94 | 300.02 | 912.95 | 299.97 | 913.92 | 300 | 915.93 | 300.1 |
| 920.8 | 300.32 | 922.97 | 300.36 | 925.08 | 300.32 | 926.26 | 300.32 | 927.71 | 300.27 |
| 929.23 | 300.29 | 930.7 | 300.48 | 935.61 | 300.68 | 938.83 | 300.79 | 940.2 | 300.79 |
| 943.95 | 300.72 | 947.08 | 300.69 | 948.86 | 300.62 | 952.82 | 300.55 | 959.42 | 300.55 |
| 961.93 | 300.49 | 966.4 | 300.23 | 968.39 | 300.13 | 970.88 | 300.03 | 974.16 | 299.83 |
| 977.72 | 299.78 | 981.05 | 299.83 | 987.26 | 299.98 | 989.26 | 300.05 | 990.23 | 300.06 |
| 991.75 | 299.99 | 998.44 | 299.97 | 1006.16 | 300.11 | 1007.07 | 300.09 | 1020.81 | 300.63 |
| 1021.94 | 300.61 | 1023.07 | 300.72 | 1025.53 | 300.59 | 1026.39 | 300.56 | 1029.03 | 300.53 |
| 1030.53 | 300.44 | 1031.68 | 300.41 | 1033.94 | 300.21 | 1036.53 | 300.05 | 1037.58 | 300.08 |
| 1038.53 | 300.07 | 1039.93 | 300.13 | 1040.43 | 300.21 | 1041.69 | 300.3 | 1043.34 | 300.39 |
| 1050.47 | 300.62 | 1052.01 | 300.59 | 1053.49 | 300.53 | 1056.59 | 300.45 | 1059.06 | 300.43 |
| 1060.99 | 300.48 | 1063.77 | 300.53 | 1066.58 | 300.53 | 1067.42 | 300.57 | 1076.18 | 300.81 |
| 1080.01 | 300.98 | 1081.55 | 301.01 | 1085.55 | 301.04 | 1086.15 | 301.06 | 1087.45 | 301.05 |
| 1088.83 | 301.11 | 1091.33 | 301.17 | 1095.6 | 301.23 | 1097.67 | 301.27 | 1099.94 | 301.26 |
| 1104.21 | 301.18 | 1105.81 | 301.14 | 1106.96 | 301.08 | 1111.07 | 300.97 | 1111.91 | 300.98 |
| 1112.78 | 301.06 | 1114.57 | 301.15 | 1116.74 | 301.17 | 1118.76 | 301.13 | 1120.56 | 301.15 |
| 1122.52 | 301.24 | 1124.7 | 301.26 | 1127.1 | 301.35 | 1128.93 | 301.37 | 1130.31 | 301.34 |
| 1133.41 | 301.33 | 1135.5 | 301.25 | 1136.13 | 301.19 | 1138.37 | 301.1 | 1144.01 | 301.04 |
| 1145.16 | 301 | 1147.88 | 300.95 | 1151.79 | 300.96 | 1154.2 | 300.94 | 1156.74 | 300.94 |
| 1158.08 | 300.92 | 1161.76 | 300.82 | 1166.46 | 300.86 | 1168.49 | 300.87 | 1174.11 | 300.83 |
| 1180.57 | 300.85 | 1183.72 | 300.95 | 1186.47 | 301.02 | 1189.29 | 301.08 | 1191.75 | 301.15 |
| 1194.75 | 301.27 | 1196.51 | 301.31 | 1198.85 | 301.4 | 1200.79 | 301.46 | 1205.03 | 301.62 |
| 1208.17 | 301.65 | 1213.09 | 301.53 | 1217.48 | 301.41 | 1222.38 | 301.34 | 1227.9 | 301.3 |
| 1233.12 | 301.31 | 1236.34 | 301.36 | 1237.49 | 301.36 | 1239.08 | 301.32 | 1247.13 | 301.17 |
| 1252.04 | 301.12 | 1254.24 | 301.08 | 1256.62 | 301.07 | 1258.7 | 301.09 | 1266.77 | 301.27 |
| 1268.58 | 301.34 | 1271.92 | 301.33 | 1274.69 | 301.37 | 1280.84 | 301.54 | 1282.68 | 301.71 |
| 1283.8 | 301.78 | 1286.31 | 302.06 | 1287.29 | 302.2 | 1288.01 | 302.27 | 1289.43 | 302.5 |
| 1291.6 | 302.93 | 1292.85 | 303.15 | 1295.3 | 303.54 | 1296.26 | 303.71 | 1298.85 | 304.12 |
| 1299.11 | 304.18 | 1301.77 | 304.66 | 1307.06 | 305.69 | 1307.43 | 305.97 | 1308.73 | 306.66 |
| 1309.68 | 307.26 | 1310.92 | 307.94 | 1311.8 | 308.53 | 1313.32 | 309.46 | 1313.52 | 309.66 |
| 1314.15 | 310.12 | 1314.75 | 310.61 | 1316.38 | 312.02 | 1317.7 | 313.19 | 1319.26 | 314.51 |
| 1319.75 | 315.06 | 1320.07 | 315.33 | 1320.61 | 315.51 | 1321.82 | 315.71 | 1323.47 | 315.92 |
| 1327.09 | 316.55 | 1331.39 | 317.34 | 1333.09 | 317.61 | 1335.81 | 318.13 | 1338.78 | 318.63 |
| 1341.5 | 319.03 | 1346.22 | 319.89 | 1350.15 | 320.74 | 1351.49 | 321 | 1355.12 | 321.66 |
| 1356.78 | 321.94 | 1357.53 | 322.04 | 1361.34 | 322.42 | 1362.61 | 322.5 | 1369.76 | 322.83 |
| 1371.9 | 322.96 | 1376.82 | 323.17 | 1380.68 | 323.35 | 1383.47 | 323.59 | 1388.51 | 324.06 |
| 1391.26 | 324.23 | 1396.56 | 324.63 | 1398.14 | 324.77 | 1404.48 | 325.3 | 1405.61 | 325.38 |
| 1408.2 | 325.48 | 1409.85 | 325.52 | 1418.19 | 325.97 | 1418.9 | 326.02 | 1422.78 | 326.16 |
| 1426.49 | 326.27 | 1432.83 | 326.53 | 1435.28 | 326.67 | 1436.34 | 326.68 | 1440.49 | 326.67 |
| 1450.17 | 326.72 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 151.61 | .04 | 1323.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 151.61 | 1323.47 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2487.33*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.04 | .53 | 324.91 | 7.19 | 324.33 | 10 | 324.11 | 11.81 | 323.95 |
| 16.15 | 323.61 | 17.51 | 323.47 | 21.16 | 323.3 | 24.25 | 323.41 | 27.2 | 323.41 |
| 29.36 | 323.34 | 29.97 | 323.18 | 32.04 | 323.03 | 33.26 | 322.87 | 33.94 | 322.91 |
| 36.16 | 322.62 | 37.71 | 322.15 | 39.31 | 321.59 | 39.59 | 321.59 | 39.97 | 321.87 |
| 40.56 | 322.03 | 42.76 | 322.45 | 44.2 | 322.46 | 45.84 | 322.34 | 48.47 | 322.03 |
| 51.94 | 321.43 | 52.2 | 321.37 | 57.29 | 320.71 | 61.72 | 319.93 | 63.66 | 319.57 |
| 64.19 | 319.43 | 65.52 | 318.89 | 66.72 | 318.46 | 68.39 | 317.75 | 69.04 | 317.4 |
| 70.36 | 316.82 | 73.66 | 315.22 | 74.49 | 314.95 | 75.5 | 314.52 | 76.64 | 313.86 |
| 78.48 | 313.19 | 79.86 | 312.78 | 80.05 | 312.75 | 81.39 | 312.83 | 81.93 | 312.76 |
| 83.31 | 312.76 | 84.3 | 312.63 | 84.92 | 312.47 | 85.41 | 312.44 | 86.27 | 312.26 |
| 87.34 | 312.19 | 88.4 | 312.18 | 90.13 | 312.03 | 91.07 | 311.86 | 92.55 | 311.44 |
| 93.45 | 311.13 | 94.17 | 310.93 | 96.7 | 310.27 | 99.03 | 309.72 | 100.01 | 309.47 |
| 103.22 | 308.76 | 104.93 | 308.36 | 108.93 | 307.63 | 111.7 | 307.07 | 119.7 | 305.81 |
| 124.48 | 304.88 | 125.77 | 304.66 | 128.56 | 304.12 | 129.46 | 303.93 | 132.64 | 303.37 |
| 135.09 | 302.8 | 139.07 | 301.91 | 140.95 | 301.5 | 144.76 | 300.87 | 147.48 | 300.48 |
| 148.17 | 300.38 | 149.96 | 300.33 | 158.7 | 300.35 | 163.05 | 300.15 | 164.79 | 300.11 |
| 177.18 | 299.98 | 180.33 | 299.99 | 181.07 | 300.01 | 188.33 | 299.85 | 201.04 | 299.44 |
| 201.82 | 299.43 | 210.41 | 299.15 | 223 | 299.01 | 225.21 | 298.94 | 225.87 | 298.88 |
| 226.12 | 298.79 | 226.96 | 298.82 | 227.38 | 298.92 | 227.99 | 298.97 | 230.24 | 299 |
| 232.03 | 299.08 | 240.52 | 298.8 | 242.83 | 298.8 | 244.26 | 298.78 | 247.16 | 298.7 |
| 247.56 | 298.65 | 248.69 | 298.62 | 249.75 | 298.68 | 254.78 | 298.76 | 257.36 | 298.79 |
| 259.45 | 298.9 | 261.58 | 298.9 | 264.2 | 299 | 271.62 | 298.93 | 274.75 | 298.86 |
| 276.47 | 298.86 | 282.68 | 298.73 | 285.26 | 298.72 | 287.26 | 298.74 | 288.6 | 298.7 |
| 293.35 | 298.74 | 294.35 | 298.74 | 295.48 | 298.65 | 297.02 | 298.58 | 298.81 | 298.72 |
| 300.18 | 298.8 | 301.48 | 298.85 | 303.71 | 298.88 | 306.38 | 298.96 | 307.31 | 298.97 |
| 314.62 | 299.24 | 325.97 | 299.28 | 328.36 | 299.15 | 331.2 | 299.07 | 332.43 | 299.02 |
| 333.27 | 299.05 | 335.95 | 299.31 | 338.63 | 299.35 | 342.43 | 299.38 | 347.69 | 299.45 |
| 350.6 | 299.5 | 353.92 | 299.49 | 355.95 | 299.45 | 356.91 | 299.35 | 361.98 | 299.26 |
| 365.96 | 299.15 | 368.88 | 299.05 | 370.2 | 299.08 | 371.46 | 299.06 | 380.41 | 299.1 |
| 392.94 | 299.02 | 401.56 | 299.02 | 414.09 | 298.95 | 423.92 | 298.31 | 424.67 | 298.29 |
| 424.96 | 298.22 | 427.73 | 298.13 | 430.03 | 298.16 | 432.78 | 298.22 | 439.24 | 298.38 |
| 444.19 | 298.56 | 462.04 | 299.1 | 468.67 | 299.36 | 472.32 | 299.49 | 476.12 | 299.51 |
| 493.09 | 299.5 | 494.07 | 299.46 | 503.51 | 299.56 | 507.05 | 299.63 | 509.36 | 299.6 |
| 511.39 | 299.52 | 514.88 | 299.5 | 515.76 | 299.44 | 517.96 | 299.42 | 521.79 | 299.4 |
| 524.03 | 299.36 | 528.84 | 299.41 | 538.65 | 299.36 | 545.74 | 299.36 | 549.79 | 299.38 |
| 551.34 | 299.34 | 553.06 | 299.27 | 554.96 | 299.23 | 559 | 299.11 | 560.81 | 299.09 |
| 561.79 | 299.02 | 563.34 | 298.98 | 564.33 | 298.99 | 565.83 | 298.93 | 567.31 | 298.9 |
| 569.73 | 298.9 | 571.59 | 298.97 | 572.28 | 299.02 | 574.58 | 299.12 | 576.36 | 299.14 |
| 581.05 | 299.25 | 585.29 | 299.29 | 586.75 | 299.17 | 586.8 | 299.12 | 590.42 | 299.12 |
| 593.42 | 299.13 | 597.46 | 299.24 | 600.23 | 299.33 | 604.24 | 299.42 | 609.38 | 299.51 |
| 610.32 | 299.51 | 612.92 | 299.47 | 615.16 | 299.48 | 623.1 | 299.65 | 625.38 | 299.67 |
| 626.88 | 299.64 | 628.94 | 299.54 | 630.97 | 299.5 | 634.04 | 299.56 | 635.81 | 299.68 |
| 639.28 | 299.84 | 643.52 | 299.96 | 643.91 | 299.98 | 646.06 | 300.01 | 648.48 | 300.07 |
| 650.97 | 300.04 | 656.47 | 299.79 | 657.94 | 299.78 | 665.34 | 299.89 | 668.04 | 299.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 669.03 | 299.87 | 669.9 | 299.79 | 670.28 | 299.8 | 673.34 | 299.57 | 674.91 | 299.44 |
| 677.45 | 299.29 | 678.9 | 299.27 | 680.34 | 299.28 | 682.01 | 299.32 | 684.16 | 299.44 |
| 687.72 | 299.54 | 688.94 | 299.55 | 693.85 | 299.62 | 694.96 | 299.62 | 695.37 | 299.59 |
| 697.38 | 299.57 | 698.58 | 299.53 | 699.7 | 299.55 | 700.98 | 299.49 | 704.44 | 299.54 |
| 713.88 | 299.3 | 717.4 | 299.33 | 720.96 | 299.4 | 722.66 | 299.48 | 727.41 | 299.64 |
| 734.89 | 299.85 | 738.12 | 299.97 | 747.58 | 300.09 | 747.95 | 300.08 | 752.47 | 300.14 |
| 755.06 | 300.28 | 757.42 | 300.37 | 759.78 | 300.44 | 761.42 | 300.46 | 763.21 | 300.44 |
| 764.02 | 300.46 | 766.11 | 300.45 | 770.21 | 300.39 | 774.33 | 300.36 | 778.16 | 300.37 |
| 785.98 | 300.22 | 787.32 | 300.18 | 798.8 | 300.12 | 805.49 | 300.21 | 808.88 | 300.18 |
| 810.33 | 300.19 | 812.85 | 300.15 | 823.43 | 300.05 | 824.7 | 300.02 | 830.3 | 300.06 |
| 833.63 | 300.04 | 836.14 | 300.04 | 837.84 | 299.97 | 839.17 | 299.94 | 840.16 | 299.96 |
| 841.67 | 300.03 | 843.47 | 300.03 | 844.82 | 299.98 | 847.68 | 299.76 | 849.55 | 299.73 |
| 852.82 | 299.83 | 856.32 | 299.97 | 858.59 | 299.98 | 860.77 | 299.96 | 865.37 | 299.89 |
| 865.78 | 299.87 | 870.67 | 299.77 | 872.99 | 299.77 | 874.97 | 299.74 | 885.09 | 299.63 |
| 887.59 | 299.59 | 890 | 299.51 | 890.87 | 299.5 | 892.59 | 299.53 | 894.2 | 299.53 |
| 896.06 | 299.56 | 897.23 | 299.64 | 899.24 | 299.6 | 900.2 | 299.63 | 902.21 | 299.74 |
| 907.06 | 299.97 | 909.23 | 300.03 | 911.33 | 299.98 | 912.52 | 299.99 | 913.96 | 299.94 |
| 915.48 | 299.96 | 916.47 | 300.06 | 916.94 | 300.14 | 921.84 | 300.33 | 922.83 | 300.35 |
| 925.06 | 300.43 | 926.42 | 300.43 | 930.97 | 300.36 | 933.29 | 300.35 | 934.4 | 300.3 |
| 939.01 | 300.22 | 945.27 | 300.23 | 948.1 | 300.15 | 954.55 | 299.79 | 957.03 | 299.7 |
| 960.3 | 299.52 | 963.86 | 299.47 | 967.18 | 299.52 | 973.37 | 299.67 | 975.36 | 299.74 |
| 976.34 | 299.75 | 977.86 | 299.68 | 984.53 | 299.66 | 992.23 | 299.8 | 993.14 | 299.77 |
| 999.8 | 300.01 | 1006.84 | 300.28 | 1007.98 | 300.26 | 1009.1 | 300.37 | 1011.56 | 300.24 |
| 1015.04 | 300.19 | 1016.55 | 300.08 | 1017.69 | 300.04 | 1020.59 | 299.79 | 1022.53 | 299.69 |
| 1024.53 | 299.7 | 1025.93 | 299.76 | 1026.42 | 299.84 | 1027.68 | 299.93 | 1029.33 | 300.01 |
| 1033.46 | 300.15 | 1036.44 | 300.26 | 1037.98 | 300.23 | 1039.45 | 300.18 | 1042.55 | 300.11 |
| 1045.01 | 300.1 | 1046.93 | 300.15 | 1050.05 | 300.2 | 1052.25 | 300.18 | 1053.35 | 300.22 |
| 1062.09 | 300.44 | 1065.91 | 300.6 | 1067.45 | 300.63 | 1071.44 | 300.66 | 1073.34 | 300.66 |
| 1074.71 | 300.71 | 1077.2 | 300.77 | 1081.47 | 300.84 | 1083.53 | 300.89 | 1085.8 | 300.88 |
| 1091.65 | 300.76 | 1092.81 | 300.69 | 1096.92 | 300.58 | 1097.74 | 300.6 | 1098.61 | 300.68 |
| 1100.39 | 300.77 | 1102.56 | 300.8 | 1103.73 | 300.76 | 1106.13 | 300.78 | 1108.33 | 300.87 |
| 1110.5 | 300.89 | 1113.31 | 300.99 | 1114.73 | 300.99 | 1116.1 | 300.96 | 1119.19 | 300.94 |
| 1121.28 | 300.86 | 1121.9 | 300.8 | 1124.14 | 300.71 | 1129.77 | 300.64 | 1130.92 | 300.6 |
| 1133.63 | 300.55 | 1137.53 | 300.56 | 1139.94 | 300.55 | 1141.24 | 300.56 | 1143.8 | 300.54 |
| 1147.47 | 300.46 | 1152.16 | 300.51 | 1154.19 | 300.51 | 1159.8 | 300.47 | 1165.48 | 300.49 |
| 1166.25 | 300.5 | 1169.2 | 300.58 | 1174.95 | 300.7 | 1177.4 | 300.77 | 1180.4 | 300.89 |
| 1181.67 | 300.91 | 1184.24 | 301.01 | 1184.67 | 301.01 | 1188.8 | 301.15 | 1190.65 | 301.23 |
| 1193.78 | 301.25 | 1198.69 | 301.16 | 1199.9 | 301.12 | 1203.07 | 301.05 | 1207.96 | 300.99 |
| 1213.46 | 300.96 | 1218.67 | 300.98 | 1221.89 | 301.04 | 1223.04 | 301.05 | 1224.62 | 301.01 |
| 1232.66 | 300.87 | 1237.56 | 300.81 | 1239.75 | 300.77 | 1242.12 | 300.75 | 1244.2 | 300.77 |
| 1252.25 | 300.94 | 1254.06 | 301 | 1257.46 | 301 | 1260.16 | 301.05 | 1266.29 | 301.26 |
| 1268.13 | 301.46 | 1269.21 | 301.54 | 1269.88 | 301.64 | 1271.74 | 301.87 | 1272.73 | 302.03 |
| 1273.92 | 302.19 | 1274.96 | 302.39 | 1277.02 | 302.86 | 1278.8 | 303.22 | 1280.71 | 303.56 |
| 1281.67 | 303.76 | 1284.26 | 304.23 | 1287.17 | 304.83 | 1288.16 | 305.06 | 1289.76 | 305.39 |
| 1292.45 | 305.97 | 1292.82 | 306.25 | 1293.34 | 306.5 | 1294.11 | 306.93 | 1295.07 | 307.53 |
| 1296.3 | 308.21 | 1297.18 | 308.79 | 1298.7 | 309.7 | 1298.89 | 309.89 | 1300.12 | 310.83 |
| 1301.75 | 312.19 | 1303.07 | 313.32 | 1304.62 | 314.59 | 1305.11 | 315.12 | 1305.43 | 315.39 |
| 1305.97 | 315.55 | 1306.78 | 315.69 | 1308.82 | 315.93 | 1312.36 | 316.5 | 1316.57 | 317.23 |
| 1318.23 | 317.48 | 1320.89 | 317.99 | 1323.81 | 318.48 | 1326.47 | 318.86 | 1331.08 | 319.7 |
| 1334.93 | 320.53 | 1336.24 | 320.78 | 1339.8 | 321.43 | 1342.15 | 321.79 | 1345.88 | 322.16 |
| 1347.12 | 322.24 | 1349.61 | 322.37 | 1352.21 | 322.47 | 1354.12 | 322.57 | 1356.21 | 322.7 |
| 1361.02 | 322.9 | 1364.81 | 323.07 | 1367.53 | 323.29 | 1372.47 | 323.74 | 1375.16 | 323.9 |
| 1375.75 | 323.95 | 1380.34 | 324.28 | 1381.89 | 324.42 | 1388.1 | 324.94 | 1389.2 | 325.02 |
| 1390.32 | 325.07 | 1393.35 | 325.17 | 1393.93 | 325.21 | 1401.51 | 325.64 | 1403.21 | 325.73 |
| 1409.5 | 325.95 | 1415.83 | 326.22 | 1418.24 | 326.36 | 1419.27 | 326.38 | 1423.33 | 326.38 |
| 1432.8 | 326.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 147.48 | .04 | 1308.82 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 147.48 | 1308.82 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2468.03*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.53 | .52 | 324.38 | 3.75 | 324.04 | 4.94 | 323.93 | 6.99 | 323.71 |
| 9.72 | 323.45 | 13.79 | 323.04 | 15.7 | 322.87 | 17.02 | 322.71 | 18.86 | 322.59 |
| 20.71 | 322.49 | 23.57 | 322.62 | 26.44 | 322.63 | 28.54 | 322.56 | 29.13 | 322.4 |
| 31.15 | 322.25 | 32.32 | 322.1 | 32.99 | 322.14 | 35.15 | 321.86 | 36.27 | 321.53 |
| 38.21 | 320.88 | 38.49 | 320.88 | 38.85 | 321.13 | 39.42 | 321.28 | 41.57 | 321.66 |
| 42.96 | 321.65 | 44.56 | 321.53 | 47.12 | 321.22 | 50.48 | 320.63 | 50.73 | 320.57 |
| 55.68 | 319.92 | 59.99 | 319.16 | 61.88 | 318.81 | 62.39 | 318.68 | 63.69 | 318.16 |
| 64.85 | 317.75 | 66.48 | 317.07 | 67.1 | 316.75 | 68.39 | 316.19 | 71.6 | 314.68 |
| 72.4 | 314.42 | 73.39 | 314.02 | 74.49 | 313.41 | 76.28 | 312.79 | 77.63 | 312.41 |
| 79.12 | 312.46 | 79.64 | 312.4 | 80.98 | 312.41 | 81.95 | 312.29 | 82.54 | 312.14 |
| 83.02 | 312.12 | 83.86 | 311.96 | 84.9 | 311.89 | 85.92 | 311.9 | 87.61 | 311.74 |
| 88.52 | 311.57 | 89.7 | 311.24 | 90.84 | 310.87 | 91.54 | 310.67 | 93.76 | 310.08 |
| 96.26 | 309.5 | 97.21 | 309.25 | 100.33 | 308.55 | 102 | 308.16 | 105.88 | 307.44 |
| 108.57 | 306.89 | 110.49 | 306.57 | 111.22 | 306.47 | 116.35 | 305.64 | 117.95 | 305.33 |
| 121 | 304.72 | 122.25 | 304.5 | 124.12 | 304.14 | 125.84 | 303.78 | 127.7 | 303.45 |
| 128.93 | 303.21 | 131.31 | 302.62 | 135.18 | 301.69 | 137 | 301.27 | 140.7 | 300.63 |
| 141.78 | 300.49 | 143.35 | 300.25 | 144.02 | 300.14 | 145.76 | 300.09 | 150.79 | 300.07 |
| 154.23 | 300.07 | 158.45 | 299.85 | 160.14 | 299.81 | 172.15 | 299.63 | 175.2 | 299.62 |
| 175.92 | 299.64 | 182.96 | 299.45 | 195.29 | 299.06 | 196.04 | 299.06 | 204.37 | 298.78 |
| 216.57 | 298.64 | 218.72 | 298.58 | 219.36 | 298.52 | 219.6 | 298.44 | 220.41 | 298.47 |
| 221.41 | 298.6 | 223.22 | 298.62 | 225.34 | 298.7 | 233.56 | 298.43 | 235.81 | 298.42 |
| 237.19 | 298.4 | 240 | 298.33 | 241.48 | 298.25 | 242.51 | 298.31 | 249.89 | 298.41 |
| 251.92 | 298.5 | 253.98 | 298.51 | 256.53 | 298.6 | 263.72 | 298.53 | 266.75 | 298.47 |
| 268.42 | 298.47 | 274.44 | 298.35 | 276.94 | 298.34 | 278.89 | 298.35 | 280.79 | 298.32 |
| 284.78 | 298.36 | 285.76 | 298.36 | 286.85 | 298.27 | 288.34 | 298.22 | 289.04 | 298.25 |
| 290.08 | 298.35 | 292.67 | 298.47 | 294.83 | 298.5 | 297.41 | 298.58 | 298.32 | 298.59 |
| 305.41 | 298.85 | 316.42 | 298.89 | 318.73 | 298.77 | 321.02 | 298.71 | 322.67 | 298.65 |
| 323.49 | 298.68 | 325.18 | 298.85 | 326.09 | 298.92 | 328.68 | 298.96 | 332.38 | 298.99 |
| 340.29 | 299.1 | 343.51 | 299.1 | 345.48 | 299.06 | 346.41 | 298.97 | 351.33 | 298.88 |
| 352.29 | 298.84 | 356.61 | 298.72 | 358.01 | 298.66 | 359.29 | 298.68 | 360.51 | 298.66 |
| 369.2 | 298.68 | 381.34 | 298.59 | 389.71 | 298.59 | 401.85 | 298.52 | 411.38 | 297.9 |
| 412.11 | 297.89 | 412.4 | 297.82 | 415.08 | 297.74 | 417.38 | 297.77 | 420.13 | 297.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 426.57 | 298 | 431.51 | 298.19 | 449.31 | 298.74 | 455.93 | 299 | 459.57 | 299.13 |
| 462.02 | 299.15 | 480.3 | 299.15 | 481.27 | 299.11 | 490.69 | 299.2 | 494.22 | 299.26 |
| 496.53 | 299.23 | 498.11 | 299.14 | 502.03 | 299.11 | 502.92 | 299.06 | 508.93 | 299.03 |
| 509.6 | 299.01 | 511.93 | 298.99 | 512.47 | 299.01 | 515.97 | 299.03 | 525.76 | 298.97 |
| 532.82 | 298.98 | 536.87 | 299.01 | 540.13 | 298.91 | 542.03 | 298.87 | 546.06 | 298.76 |
| 547.86 | 298.74 | 548.84 | 298.66 | 549.25 | 298.67 | 550.38 | 298.62 | 551.37 | 298.63 |
| 554.35 | 298.53 | 556.76 | 298.52 | 557.48 | 298.53 | 561.6 | 298.7 | 563.38 | 298.73 |
| 568.06 | 298.83 | 572.29 | 298.87 | 573.74 | 298.76 | 573.79 | 298.71 | 577.41 | 298.71 |
| 580.39 | 298.72 | 584.43 | 298.82 | 587.2 | 298.91 | 591.19 | 298.99 | 596.32 | 299.07 |
| 598.3 | 299.06 | 599.86 | 299.03 | 602.09 | 299.05 | 610.02 | 299.23 | 612.28 | 299.26 |
| 613.79 | 299.23 | 615.17 | 299.18 | 615.84 | 299.13 | 617.87 | 299.09 | 618.88 | 299.1 |
| 620.92 | 299.16 | 622.69 | 299.28 | 626.16 | 299.43 | 630.39 | 299.55 | 630.78 | 299.58 |
| 632.92 | 299.61 | 635.33 | 299.67 | 637.82 | 299.61 | 643.31 | 299.33 | 644.77 | 299.32 |
| 647.47 | 299.37 | 652.86 | 299.45 | 655.84 | 299.43 | 656.7 | 299.35 | 657.08 | 299.35 |
| 661.7 | 299.01 | 664.23 | 298.87 | 666.48 | 298.84 | 668.79 | 298.89 | 670.93 | 299.01 |
| 674.46 | 299.1 | 675.7 | 299.12 | 680.6 | 299.17 | 684.12 | 299.12 | 685.32 | 299.08 |
| 686.44 | 299.1 | 687.72 | 299.05 | 691.16 | 299.09 | 700.58 | 298.87 | 704.1 | 298.9 |
| 707.92 | 298.97 | 710.3 | 299.08 | 712.67 | 299.15 | 714.09 | 299.21 | 721.55 | 299.42 |
| 724.77 | 299.54 | 734.21 | 299.67 | 739.08 | 299.73 | 741.67 | 299.88 | 744.02 | 299.98 |
| 745.86 | 300.04 | 748.02 | 300.07 | 749.48 | 300.05 | 750.46 | 300.08 | 752.7 | 300.07 |
| 756.79 | 300 | 760.89 | 299.96 | 764.72 | 299.96 | 773.85 | 299.77 | 785.31 | 299.73 |
| 791.98 | 299.81 | 795.36 | 299.8 | 796.82 | 299.81 | 799.33 | 299.77 | 800.38 | 299.77 |
| 809.89 | 299.69 | 811.15 | 299.67 | 816.74 | 299.71 | 818.99 | 299.71 | 820.06 | 299.69 |
| 822.57 | 299.7 | 823.53 | 299.68 | 824.26 | 299.63 | 825.59 | 299.61 | 828.08 | 299.69 |
| 829.88 | 299.68 | 831.23 | 299.62 | 834.08 | 299.38 | 835.94 | 299.33 | 839.21 | 299.43 |
| 840.01 | 299.47 | 842.7 | 299.56 | 843.82 | 299.58 | 846.77 | 299.56 | 852.88 | 299.45 |
| 857.02 | 299.35 | 859.34 | 299.35 | 861.3 | 299.32 | 871.41 | 299.24 | 873.9 | 299.2 |
| 876.31 | 299.13 | 877.17 | 299.12 | 880.49 | 299.15 | 882.35 | 299.18 | 883.52 | 299.26 |
| 885.52 | 299.23 | 893.33 | 299.63 | 895.48 | 299.69 | 897.59 | 299.65 | 898.77 | 299.66 |
| 900.21 | 299.61 | 901.72 | 299.63 | 902.72 | 299.72 | 903.19 | 299.8 | 908.07 | 299.97 |
| 911.28 | 300.07 | 912.64 | 300.07 | 914.78 | 300.03 | 917.18 | 300.01 | 919.49 | 300.02 |
| 921.26 | 299.95 | 925.21 | 299.9 | 931.77 | 299.9 | 934.27 | 299.81 | 938.72 | 299.56 |
| 939.82 | 299.49 | 943.18 | 299.38 | 946.45 | 299.2 | 949.99 | 299.17 | 953.3 | 299.21 |
| 959.49 | 299.36 | 962.45 | 299.44 | 963.96 | 299.38 | 970.62 | 299.36 | 978.3 | 299.49 |
| 979.21 | 299.45 | 985.85 | 299.68 | 992.88 | 299.93 | 994.01 | 299.91 | 995.13 | 300.01 |
| 997.59 | 299.89 | 1001.06 | 299.84 | 1002.56 | 299.73 | 1003.7 | 299.68 | 1005.07 | 299.56 |
| 1005.84 | 299.47 | 1007.21 | 299.38 | 1008.54 | 299.32 | 1009.68 | 299.35 | 1010.65 | 299.34 |
| 1011.92 | 299.39 | 1012.41 | 299.46 | 1013.67 | 299.56 | 1015.31 | 299.64 | 1019.44 | 299.78 |
| 1021.03 | 299.85 | 1022.41 | 299.89 | 1023.94 | 299.88 | 1025.42 | 299.84 | 1028.5 | 299.78 |
| 1030.23 | 299.76 | 1034.56 | 299.85 | 1035.99 | 299.86 | 1038.45 | 299.84 | 1039.29 | 299.87 |
| 1048.01 | 300.08 | 1050.46 | 300.18 | 1053.35 | 300.25 | 1057.33 | 300.27 | 1059.22 | 300.27 |
| 1060.6 | 300.32 | 1065.7 | 300.43 | 1067.34 | 300.45 | 1069.39 | 300.51 | 1071.66 | 300.5 |
| 1077.5 | 300.37 | 1078.65 | 300.31 | 1082.75 | 300.2 | 1083.57 | 300.22 | 1084.44 | 300.3 |
| 1086.22 | 300.39 | 1088.38 | 300.42 | 1089.55 | 300.39 | 1091.94 | 300.41 | 1094.13 | 300.5 |
| 1096.31 | 300.52 | 1098.23 | 300.57 | 1099.1 | 300.61 | 1100.52 | 300.61 | 1101.89 | 300.58 |
| 1104.98 | 300.55 | 1107.06 | 300.47 | 1107.68 | 300.41 | 1109.91 | 300.31 | 1114.77 | 300.26 |
| 1116.67 | 300.2 | 1118.86 | 300.16 | 1124.53 | 300.17 | 1125.67 | 300.16 | 1128.19 | 300.17 |
| 1129.53 | 300.16 | 1133.19 | 300.09 | 1138.54 | 300.16 | 1139.89 | 300.16 | 1145.49 | 300.11 |
| 1151.15 | 300.13 | 1151.92 | 300.14 | 1154.87 | 300.22 | 1158.48 | 300.28 | 1163.05 | 300.39 |
| 1166.04 | 300.51 | 1167.78 | 300.54 | 1170.12 | 300.63 | 1172.05 | 300.67 | 1176.27 | 300.83 |
| 1179.39 | 300.86 | 1184.29 | 300.78 | 1188.66 | 300.69 | 1193.54 | 300.64 | 1199.03 | 300.62 |
| 1204.23 | 300.65 | 1207.44 | 300.72 | 1208.59 | 300.73 | 1210.17 | 300.7 | 1218.18 | 300.57 |
| 1220.03 | 300.55 | 1227.12 | 300.43 | 1229.7 | 300.45 | 1237.73 | 300.61 | 1239.53 | 300.67 |
| 1242.93 | 300.67 | 1245.62 | 300.72 | 1251.73 | 300.97 | 1253.57 | 301.2 | 1254.65 | 301.31 |
| 1257.18 | 301.68 | 1258.16 | 301.86 | 1259.35 | 302.04 | 1260.39 | 302.27 | 1262.45 | 302.79 |
| 1264.22 | 303.2 | 1266.37 | 303.64 | 1269.66 | 304.34 | 1271.9 | 304.85 | 1273.56 | 305.25 |
| 1275.15 | 305.61 | 1275.89 | 305.8 | 1277.84 | 306.25 | 1278.21 | 306.52 | 1279.49 | 307.21 |
| 1280.45 | 307.8 | 1281.68 | 308.47 | 1283.34 | 309.52 | 1284.07 | 309.94 | 1284.27 | 310.13 |
| 1285.44 | 310.99 | 1286.53 | 311.9 | 1287.12 | 312.36 | 1288.43 | 313.45 | 1289.98 | 314.68 |
| 1290.46 | 315.18 | 1290.79 | 315.44 | 1291.33 | 315.6 | 1292.52 | 315.77 | 1294.17 | 315.94 |
| 1297.63 | 316.45 | 1301.75 | 317.12 | 1303.37 | 317.35 | 1305.98 | 317.85 | 1308.83 | 318.32 |
| 1311.43 | 318.7 | 1315.94 | 319.52 | 1319.71 | 320.32 | 1324.47 | 321.19 | 1326.06 | 321.45 |
| 1326.77 | 321.54 | 1330.41 | 321.9 | 1331.63 | 321.98 | 1334.9 | 322.15 | 1336.61 | 322.21 |
| 1338.48 | 322.31 | 1339.86 | 322.4 | 1345.23 | 322.62 | 1348.93 | 322.78 | 1351.6 | 322.99 |
| 1356.42 | 323.41 | 1359.06 | 323.57 | 1364.13 | 323.93 | 1365.64 | 324.07 | 1371.71 | 324.58 |
| 1373.89 | 324.72 | 1377.41 | 324.86 | 1384.83 | 325.31 | 1386.49 | 325.4 | 1389.23 | 325.51 |
| 1392.78 | 325.64 | 1398.84 | 325.91 | 1401.19 | 326.05 | 1402.2 | 326.07 | 1406.18 | 326.09 |
| 1415.44 | 326.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 143.35 | .04 | 1294.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 143.35 | 1294.17 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2448.72*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.02 | .5 | 323.85 | 3.64 | 323.47 | 4.8 | 323.34 | 6.78 | 323.09 |
| 9.44 | 322.79 | 13.39 | 322.32 | 15.25 | 322.12 | 16.53 | 321.94 | 20.11 | 321.69 |
| 22.89 | 321.83 | 24.58 | 321.83 | 25.67 | 321.85 | 27.72 | 321.77 | 28.29 | 321.63 |
| 30.25 | 321.47 | 31.39 | 321.33 | 32.04 | 321.36 | 34.13 | 321.09 | 35.22 | 320.78 |
| 37.11 | 320.17 | 37.38 | 320.17 | 37.73 | 320.4 | 38.56 | 320.58 | 40.37 | 320.87 |
| 41.73 | 320.85 | 43.27 | 320.72 | 45.76 | 320.41 | 49.03 | 319.84 | 49.27 | 319.78 |
| 54.08 | 319.13 | 58.26 | 318.39 | 60.1 | 318.05 | 60.59 | 317.92 | 61.86 | 317.43 |
| 62.99 | 317.04 | 64.56 | 316.4 | 65.17 | 316.09 | 66.42 | 315.57 | 68.91 | 314.41 |
| 69.54 | 314.14 | 70.32 | 313.9 | 71.27 | 313.52 | 72.35 | 312.96 | 74.08 | 312.39 |
| 75.39 | 312.04 | 76.84 | 312.1 | 77.34 | 312.05 | 78.65 | 312.06 | 79.59 | 311.95 |
| 80.16 | 311.82 | 80.63 | 311.8 | 81.44 | 311.65 | 82.45 | 311.6 | 83.45 | 311.61 |
| 85.09 | 311.45 | 85.97 | 311.28 | 87.12 | 310.96 | 88.22 | 310.6 | 88.9 | 310.41 |
| 91.28 | 309.79 | 93.49 | 309.27 | 94.41 | 309.03 | 96.91 | 308.45 | 97.44 | 308.34 |
| 99.06 | 307.95 | 102.83 | 307.24 | 105.45 | 306.7 | 107.31 | 306.39 | 108.02 | 306.29 |
| 113 | 305.47 | 115.26 | 305.01 | 120.55 | 303.99 | 122.21 | 303.62 | 125.22 | 303.06 |
| 127.53 | 302.44 | 128.27 | 302.26 | 131.28 | 301.48 | 133.06 | 301.04 | 136.65 | 300.39 |
| 137.7 | 300.25 | 139.22 | 300.01 | 139.87 | 299.91 | 141.56 | 299.85 | 146.43 | 299.8 |
| 148.81 | 299.8 | 149.76 | 299.78 | 153.85 | 299.56 | 155.48 | 299.51 | 167.11 | 299.28 |
| 170.07 | 299.25 | 170.77 | 299.26 | 174.93 | 299.13 | 176.62 | 299.09 | 189.53 | 298.68 |
| 190.26 | 298.68 | 198.33 | 298.42 | 210.15 | 298.27 | 211.32 | 298.25 | 212.22 | 298.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 212.84 | 298.15 | 213.08 | 298.08 | 213.87 | 298.11 | 214.27 | 298.19 | 214.83 | 298.23 |
| 216.58 | 298.24 | 218.64 | 298.32 | 226.6 | 298.06 | 228.78 | 298.05 | 230.12 | 298.03 |
| 232.84 | 297.96 | 233.22 | 297.92 | 234.28 | 297.89 | 235.28 | 297.94 | 240 | 298 |
| 242.42 | 298.02 | 244.38 | 298.11 | 246.39 | 298.11 | 248.85 | 298.2 | 250.28 | 298.2 |
| 250.84 | 298.18 | 255.82 | 298.13 | 258.75 | 298.07 | 260.37 | 298.07 | 266.2 | 297.96 |
| 268.62 | 297.95 | 270.51 | 297.97 | 272.35 | 297.94 | 276.22 | 297.98 | 277.16 | 297.98 |
| 278.22 | 297.9 | 279.67 | 297.85 | 280.34 | 297.88 | 281.35 | 297.97 | 282.64 | 298.05 |
| 283.85 | 298.09 | 285.95 | 298.12 | 288.45 | 298.2 | 289.33 | 298.21 | 296.2 | 298.45 |
| 306.86 | 298.5 | 309.1 | 298.39 | 312.92 | 298.28 | 313.71 | 298.31 | 316.23 | 298.54 |
| 320.76 | 298.6 | 322.32 | 298.6 | 329.99 | 298.71 | 333.11 | 298.71 | 335.01 | 298.67 |
| 335.91 | 298.59 | 339.66 | 298.53 | 340.95 | 298.5 | 341.61 | 298.46 | 344.41 | 298.38 |
| 347.15 | 298.27 | 348.39 | 298.28 | 349.57 | 298.25 | 357.99 | 298.26 | 369.75 | 298.17 |
| 370.73 | 298.16 | 377.85 | 298.16 | 389.62 | 298.08 | 398.84 | 297.5 | 399.55 | 297.49 |
| 399.83 | 297.43 | 402.43 | 297.35 | 404.52 | 297.37 | 413.9 | 297.62 | 418.83 | 297.82 |
| 436.59 | 298.38 | 446.83 | 298.78 | 450.61 | 298.8 | 467.5 | 298.79 | 468.47 | 298.76 |
| 477.87 | 298.84 | 479.75 | 298.88 | 481.4 | 298.89 | 483.7 | 298.85 | 485.28 | 298.76 |
| 487.11 | 298.73 | 489.19 | 298.73 | 490.07 | 298.68 | 496.07 | 298.66 | 498.3 | 298.62 |
| 503.09 | 298.65 | 512.86 | 298.59 | 519.91 | 298.6 | 523.94 | 298.64 | 527.2 | 298.55 |
| 533.12 | 298.42 | 534.91 | 298.39 | 535.89 | 298.31 | 537.43 | 298.26 | 538.42 | 298.27 |
| 539.91 | 298.2 | 541.39 | 298.15 | 543.8 | 298.13 | 544.51 | 298.14 | 548.62 | 298.29 |
| 550.39 | 298.31 | 555.06 | 298.4 | 559.29 | 298.44 | 560.74 | 298.34 | 560.79 | 298.3 |
| 564.39 | 298.3 | 567.37 | 298.31 | 571.4 | 298.41 | 574.16 | 298.49 | 578.15 | 298.57 |
| 583.26 | 298.63 | 586.79 | 298.6 | 589.02 | 298.62 | 596.93 | 298.81 | 599.19 | 298.85 |
| 600.69 | 298.83 | 603.48 | 298.7 | 605.77 | 298.7 | 607.81 | 298.76 | 609.57 | 298.87 |
| 613.03 | 299.03 | 617.25 | 299.15 | 617.64 | 299.18 | 619.77 | 299.21 | 622.19 | 299.26 |
| 624.66 | 299.19 | 629.56 | 298.91 | 630.14 | 298.87 | 631.61 | 298.86 | 638.96 | 299 |
| 641.15 | 299 | 642.64 | 298.98 | 643.89 | 298.91 | 648.49 | 298.58 | 651.02 | 298.44 |
| 652.85 | 298.41 | 655.57 | 298.47 | 655.77 | 298.49 | 658.56 | 298.6 | 662.46 | 298.68 |
| 665.74 | 298.7 | 667.35 | 298.72 | 668.86 | 298.69 | 670.86 | 298.67 | 672.06 | 298.63 |
| 673.18 | 298.64 | 674.45 | 298.6 | 677.89 | 298.64 | 687.29 | 298.44 | 690.79 | 298.46 |
| 694.34 | 298.53 | 696.98 | 298.64 | 699.35 | 298.71 | 700.76 | 298.77 | 708.21 | 298.99 |
| 711.42 | 299.11 | 725.7 | 299.32 | 728.28 | 299.49 | 730.96 | 299.61 | 732.98 | 299.67 |
| 734.61 | 299.68 | 736.4 | 299.67 | 737.05 | 299.69 | 739.28 | 299.68 | 743.36 | 299.61 |
| 747.46 | 299.57 | 751.28 | 299.56 | 760.39 | 299.36 | 771.82 | 299.34 | 778.48 | 299.42 |
| 781.85 | 299.41 | 783.3 | 299.42 | 785.05 | 299.4 | 796.34 | 299.34 | 797.61 | 299.32 |
| 803.18 | 299.36 | 807.33 | 299.35 | 809.47 | 299.36 | 811.32 | 299.28 | 812.99 | 299.3 |
| 814.5 | 299.35 | 816.29 | 299.33 | 817.64 | 299.26 | 820.48 | 299 | 822.34 | 298.94 |
| 825.6 | 299.03 | 826.4 | 299.07 | 829.08 | 299.16 | 831.34 | 299.17 | 833.51 | 299.15 |
| 838.09 | 299.06 | 843.37 | 298.93 | 845.68 | 298.93 | 847.64 | 298.9 | 857.72 | 298.85 |
| 860.2 | 298.81 | 862.61 | 298.74 | 863.47 | 298.73 | 865.19 | 298.76 | 866.78 | 298.77 |
| 869.28 | 298.83 | 869.8 | 298.88 | 871.8 | 298.86 | 872.76 | 298.9 | 874.76 | 299.02 |
| 879.59 | 299.28 | 881.74 | 299.35 | 883.84 | 299.32 | 885.02 | 299.33 | 886.46 | 299.28 |
| 887.97 | 299.3 | 888.96 | 299.38 | 889.43 | 299.46 | 896.27 | 299.67 | 897.5 | 299.7 |
| 898.86 | 299.71 | 902.59 | 299.66 | 903.56 | 299.68 | 905.7 | 299.68 | 906.81 | 299.63 |
| 911.4 | 299.57 | 917.95 | 299.57 | 920.09 | 299.48 | 920.44 | 299.48 | 925.98 | 299.16 |
| 929.33 | 299.05 | 932.59 | 298.89 | 936.13 | 298.86 | 939.43 | 298.91 | 945.6 | 299.04 |
| 948.55 | 299.13 | 950.06 | 299.08 | 956.71 | 299.06 | 964.37 | 299.18 | 965.28 | 299.14 |
| 971.9 | 299.34 | 972.12 | 299.36 | 979.56 | 299.59 | 980.35 | 299.57 | 981.16 | 299.65 |
| 983.61 | 299.54 | 987.08 | 299.49 | 988.58 | 299.37 | 989.72 | 299.31 | 992.61 | 299.04 |
| 994.54 | 298.96 | 995.58 | 298.98 | 996.65 | 298.97 | 997.9 | 299.02 | 998.41 | 299.09 |
| 999.66 | 299.19 | 1001.3 | 299.27 | 1008.38 | 299.53 | 1009.91 | 299.52 | 1014.46 | 299.44 |
| 1016.18 | 299.43 | 1020.51 | 299.52 | 1021.93 | 299.53 | 1024.12 | 299.49 | 1025.22 | 299.52 |
| 1033.92 | 299.71 | 1036.37 | 299.81 | 1037.72 | 299.85 | 1039.25 | 299.87 | 1045.11 | 299.88 |
| 1047.19 | 299.94 | 1048.06 | 299.95 | 1053.21 | 300.06 | 1055.26 | 300.12 | 1057.51 | 300.12 |
| 1063.34 | 299.98 | 1064.49 | 299.92 | 1068.59 | 299.82 | 1069.4 | 299.84 | 1070.27 | 299.92 |
| 1072.04 | 300.01 | 1074.2 | 300.04 | 1076.21 | 300.02 | 1077.76 | 300.04 | 1079.94 | 300.13 |
| 1082.11 | 300.15 | 1084.9 | 300.23 | 1086.31 | 300.23 | 1087.68 | 300.2 | 1090.76 | 300.16 |
| 1092.84 | 300.08 | 1093.45 | 300.02 | 1095.68 | 299.92 | 1101.28 | 299.85 | 1102.43 | 299.8 |
| 1104.61 | 299.76 | 1111.41 | 299.77 | 1113.92 | 299.79 | 1115.26 | 299.78 | 1118.91 | 299.73 |
| 1123.58 | 299.79 | 1125.6 | 299.8 | 1129.14 | 299.78 | 1131.18 | 299.75 | 1136.83 | 299.77 |
| 1140.73 | 299.85 | 1146.26 | 299.95 | 1148.7 | 300.02 | 1151.68 | 300.13 | 1153.42 | 300.16 |
| 1155.75 | 300.24 | 1155.94 | 300.23 | 1160.05 | 300.36 | 1161.89 | 300.44 | 1165 | 300.47 |
| 1169.89 | 300.4 | 1171.1 | 300.37 | 1174.25 | 300.32 | 1179.12 | 300.29 | 1184.6 | 300.28 |
| 1189.7 | 300.31 | 1192.99 | 300.4 | 1194.13 | 300.42 | 1195.71 | 300.38 | 1203.71 | 300.26 |
| 1208.58 | 300.2 | 1209.66 | 300.16 | 1212.62 | 300.12 | 1215.2 | 300.13 | 1223.21 | 300.28 |
| 1225.01 | 300.33 | 1228.4 | 300.34 | 1231.08 | 300.4 | 1237.18 | 300.69 | 1238.93 | 300.94 |
| 1240.09 | 301.07 | 1242.78 | 301.52 | 1243.59 | 301.7 | 1244.78 | 301.9 | 1245.71 | 302.12 |
| 1248.46 | 302.88 | 1249.97 | 303.25 | 1255.07 | 304.44 | 1255.33 | 304.52 | 1257.97 | 305.18 |
| 1258.96 | 305.45 | 1260.54 | 305.84 | 1263.22 | 306.54 | 1263.6 | 306.8 | 1264.88 | 307.49 |
| 1265.83 | 308.07 | 1267.05 | 308.74 | 1267.94 | 309.3 | 1269.45 | 310.19 | 1269.64 | 310.37 |
| 1270.87 | 311.25 | 1271.9 | 312.09 | 1273.8 | 313.58 | 1275.34 | 314.76 | 1275.82 | 315.24 |
| 1276.15 | 315.5 | 1276.69 | 315.65 | 1277.4 | 315.75 | 1279.52 | 315.95 | 1282.91 | 316.4 |
| 1286.93 | 317.01 | 1288.52 | 317.22 | 1291.07 | 317.7 | 1293.85 | 318.17 | 1296.4 | 318.54 |
| 1300.81 | 319.33 | 1304.49 | 320.11 | 1305.74 | 320.35 | 1309.14 | 320.95 | 1310.69 | 321.2 |
| 1311.39 | 321.29 | 1314.95 | 321.64 | 1316.15 | 321.73 | 1319.34 | 321.89 | 1321.01 | 321.95 |
| 1324.84 | 322.17 | 1329.44 | 322.34 | 1333.06 | 322.5 | 1335.66 | 322.69 | 1340.38 | 323.09 |
| 1342.96 | 323.23 | 1343.52 | 323.28 | 1346.33 | 323.48 | 1347.38 | 323.57 | 1348.21 | 323.61 |
| 1349.39 | 323.72 | 1355.33 | 324.22 | 1357.45 | 324.36 | 1360.9 | 324.51 | 1369.77 | 325.07 |
| 1372.45 | 325.19 | 1375.92 | 325.32 | 1381.85 | 325.6 | 1384.14 | 325.74 | 1385.13 | 325.76 |
| 1398.07 | 325.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 139.22 | .04 | 1279.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 139.22 | 1279.52 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2429.41*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.52 | .49 | 323.33 | 4.66 | 322.75 | 6.58 | 322.47 | 9.16 | 322.13 |
| 10.81 | 321.89 | 14.79 | 321.38 | 16.04 | 321.18 | 19.51 | 320.89 | 20 | 320.93 |
| 22.21 | 321.05 | 23.86 | 321.04 | 24.91 | 321.07 | 26.89 | 320.99 | 27.45 | 320.85 |
| 29.35 | 320.69 | 30.46 | 320.55 | 31.09 | 320.58 | 33.12 | 320.32 | 34.18 | 320.03 |
| 36.01 | 319.46 | 36.27 | 319.45 | 36.61 | 319.67 | 37.15 | 319.79 | 39.17 | 320.08 |
| 40.49 | 320.05 | 41.99 | 319.92 | 44.4 | 319.61 | 47.81 | 318.99 | 52.48 | 318.35 |
| 56.54 | 317.62 | 58.31 | 317.29 | 58.8 | 317.17 | 60.02 | 316.7 | 61.12 | 316.33 |
| 62.65 | 315.72 | 63.24 | 315.43 | 64.45 | 314.94 | 66.87 | 313.85 | 67.48 | 313.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 68.23 | 313.37 | 69.16 | 313.03 | 70.2 | 312.51 | 71.89 | 311.99 | 73.16 | 311.67 |
| 74.56 | 311.73 | 75.05 | 311.69 | 76.32 | 311.7 | 77.23 | 311.62 | 77.79 | 311.49 |
| 78.24 | 311.48 | 79.03 | 311.35 | 80.01 | 311.31 | 80.98 | 311.32 | 82.57 | 311.17 |
| 83.42 | 311 | 84.78 | 310.61 | 85.61 | 310.33 | 88.58 | 309.55 | 90.72 | 309.05 |
| 91.61 | 308.81 | 96.12 | 307.75 | 99.79 | 307.05 | 102.32 | 306.51 | 104.82 | 306.11 |
| 109.65 | 305.3 | 114.03 | 304.41 | 115.21 | 304.19 | 116.97 | 303.83 | 118.59 | 303.47 |
| 121.5 | 302.9 | 123.75 | 302.26 | 124.47 | 302.08 | 127.39 | 301.26 | 129.11 | 300.8 |
| 132.6 | 300.15 | 133.61 | 300.01 | 134.51 | 299.85 | 135.1 | 299.78 | 135.73 | 299.68 |
| 137.35 | 299.62 | 142.07 | 299.54 | 145.29 | 299.5 | 149.25 | 299.27 | 150.83 | 299.21 |
| 162.08 | 298.92 | 164.95 | 298.88 | 165.62 | 298.89 | 169.86 | 298.72 | 171.28 | 298.7 |
| 183.77 | 298.31 | 184.48 | 298.3 | 192.28 | 298.05 | 203.73 | 297.9 | 204.86 | 297.88 |
| 206.33 | 297.79 | 206.98 | 297.72 | 208.26 | 297.86 | 209.95 | 297.87 | 211.94 | 297.94 |
| 219.65 | 297.69 | 223.05 | 297.66 | 225.68 | 297.59 | 226.04 | 297.55 | 227.07 | 297.52 |
| 228.04 | 297.57 | 232.61 | 297.62 | 234.14 | 297.62 | 236.85 | 297.71 | 238.79 | 297.72 |
| 241.17 | 297.79 | 247.91 | 297.74 | 250.75 | 297.68 | 252.32 | 297.68 | 257.96 | 297.58 |
| 260.31 | 297.57 | 262.13 | 297.58 | 263.34 | 297.55 | 267.66 | 297.6 | 268.57 | 297.6 |
| 269.59 | 297.53 | 270.99 | 297.48 | 272.62 | 297.6 | 273.87 | 297.67 | 275.04 | 297.71 |
| 277.07 | 297.74 | 279.49 | 297.81 | 280.34 | 297.82 | 286.99 | 298.06 | 297.3 | 298.11 |
| 299.47 | 298.01 | 303.54 | 297.91 | 305.51 | 298.09 | 306.37 | 298.15 | 308.8 | 298.19 |
| 310.76 | 298.21 | 312.26 | 298.21 | 314.95 | 298.25 | 317.04 | 298.27 | 319.68 | 298.32 |
| 322.7 | 298.32 | 324.54 | 298.29 | 325.41 | 298.21 | 329.04 | 298.15 | 330.29 | 298.12 |
| 330.93 | 298.08 | 333.64 | 297.99 | 336.29 | 297.88 | 337.49 | 297.88 | 338.63 | 297.85 |
| 346.77 | 297.85 | 359.11 | 297.73 | 362.17 | 297.74 | 365.99 | 297.74 | 377.38 | 297.65 |
| 386.31 | 297.1 | 386.99 | 297.09 | 387.26 | 297.03 | 389.78 | 296.96 | 392.08 | 296.98 |
| 401.22 | 297.24 | 406.14 | 297.45 | 423.87 | 298.02 | 430.45 | 298.29 | 434.08 | 298.42 |
| 437.85 | 298.44 | 454.71 | 298.44 | 455.68 | 298.4 | 465.05 | 298.48 | 467.57 | 298.52 |
| 468.57 | 298.52 | 470.87 | 298.48 | 472.44 | 298.38 | 474.28 | 298.35 | 476.34 | 298.34 |
| 477.22 | 298.3 | 483.21 | 298.29 | 486.2 | 298.24 | 486.74 | 298.26 | 490.22 | 298.27 |
| 499.96 | 298.21 | 506.99 | 298.22 | 510.65 | 298.26 | 511.8 | 298.25 | 514.27 | 298.19 |
| 516.16 | 298.16 | 520.17 | 298.07 | 521.97 | 298.04 | 522.94 | 297.95 | 523.34 | 297.96 |
| 524.47 | 297.9 | 525.46 | 297.91 | 526.95 | 297.83 | 528.42 | 297.78 | 531.54 | 297.75 |
| 535.64 | 297.88 | 537.41 | 297.89 | 542.07 | 297.98 | 546.28 | 298.02 | 547.73 | 297.93 |
| 547.78 | 297.89 | 551.38 | 297.89 | 554.35 | 297.9 | 558.37 | 297.99 | 559.02 | 298.02 |
| 561.12 | 298.07 | 565.1 | 298.14 | 570.2 | 298.19 | 573.72 | 298.16 | 575.94 | 298.18 |
| 576.74 | 298.21 | 583.84 | 298.4 | 585.54 | 298.43 | 587.59 | 298.42 | 588.97 | 298.37 |
| 590.38 | 298.29 | 592.66 | 298.29 | 594.69 | 298.36 | 596.45 | 298.47 | 599.91 | 298.62 |
| 604.11 | 298.75 | 604.5 | 298.78 | 606.63 | 298.81 | 609.04 | 298.86 | 611.51 | 298.77 |
| 616.98 | 298.41 | 618.44 | 298.4 | 621.12 | 298.46 | 626.49 | 298.56 | 628.46 | 298.55 |
| 629.45 | 298.53 | 630.69 | 298.46 | 633.58 | 298.27 | 635.29 | 298.14 | 637.16 | 298.04 |
| 639.25 | 297.99 | 640.05 | 297.99 | 642.34 | 298.04 | 642.55 | 298.06 | 645.33 | 298.17 |
| 647.99 | 298.23 | 653.1 | 298.25 | 654.09 | 298.27 | 655.61 | 298.23 | 657.6 | 298.21 |
| 658.8 | 298.18 | 659.91 | 298.19 | 661.18 | 298.15 | 664.61 | 298.19 | 673.99 | 298.01 |
| 677.49 | 298.03 | 681.03 | 298.09 | 683.66 | 298.2 | 686.02 | 298.27 | 688.88 | 298.38 |
| 694.86 | 298.56 | 698.07 | 298.67 | 712.32 | 298.91 | 714.89 | 299.09 | 718.74 | 299.26 |
| 719.95 | 299.29 | 722.99 | 299.28 | 723.64 | 299.31 | 725.87 | 299.3 | 729.94 | 299.22 |
| 734.02 | 299.17 | 737.84 | 299.15 | 745.6 | 298.98 | 746.07 | 298.95 | 758.33 | 298.94 |
| 764.98 | 299.03 | 768.34 | 299.03 | 769.79 | 299.04 | 771.54 | 299.02 | 773.33 | 299.02 |
| 782.8 | 298.98 | 784.06 | 298.96 | 789.62 | 299.01 | 793.76 | 299.01 | 795.95 | 299.02 |
| 797.11 | 298.96 | 798.43 | 298.94 | 800.91 | 299.01 | 802.7 | 298.98 | 804.66 | 298.84 |
| 807.12 | 298.6 | 808.74 | 298.54 | 811.98 | 298.63 | 812.79 | 298.67 | 815.46 | 298.76 |
| 817.71 | 298.77 | 819.88 | 298.75 | 824.45 | 298.65 | 826.48 | 298.59 | 829.71 | 298.51 |
| 832.02 | 298.51 | 833.98 | 298.48 | 844.04 | 298.45 | 846.51 | 298.43 | 848.91 | 298.35 |
| 849.77 | 298.34 | 853.08 | 298.39 | 854.93 | 298.43 | 856.09 | 298.5 | 858.08 | 298.49 |
| 861.04 | 298.65 | 865.86 | 298.93 | 868 | 299.01 | 871.27 | 298.99 | 872.71 | 298.95 |
| 874.21 | 298.97 | 875.67 | 299.11 | 880.53 | 299.26 | 883.73 | 299.34 | 885.09 | 299.35 |
| 887.21 | 299.32 | 889.6 | 299.31 | 889.77 | 299.33 | 891.9 | 299.34 | 893.66 | 299.28 |
| 897.59 | 299.24 | 903.81 | 299.25 | 906.61 | 299.14 | 911.05 | 298.89 | 911.33 | 298.86 |
| 913.02 | 298.79 | 915.48 | 298.72 | 918.73 | 298.58 | 922.26 | 298.55 | 925.56 | 298.6 |
| 931.71 | 298.73 | 934.66 | 298.82 | 936.17 | 298.77 | 942.79 | 298.76 | 950.44 | 298.87 |
| 951.35 | 298.82 | 957.96 | 299.01 | 964.96 | 299.22 | 966.38 | 299.22 | 967.2 | 299.29 |
| 969.64 | 299.19 | 970.49 | 299.17 | 973.1 | 299.15 | 974.6 | 299.02 | 975.73 | 298.95 |
| 977.85 | 298.72 | 978.61 | 298.66 | 980.54 | 298.59 | 981.68 | 298.62 | 982.64 | 298.6 |
| 983.91 | 298.66 | 984.4 | 298.72 | 985.65 | 298.81 | 987.29 | 298.9 | 991.39 | 299.05 |
| 994.35 | 299.17 | 1002.14 | 299.1 | 1004.34 | 299.15 | 1007.87 | 299.19 | 1010.05 | 299.15 |
| 1019.83 | 299.35 | 1023.62 | 299.47 | 1025.15 | 299.49 | 1030.99 | 299.49 | 1032.36 | 299.53 |
| 1034.39 | 299.56 | 1039.07 | 299.67 | 1041.12 | 299.74 | 1043.37 | 299.75 | 1043.74 | 299.73 |
| 1047.6 | 299.63 | 1049.19 | 299.6 | 1050.33 | 299.54 | 1054.42 | 299.44 | 1055.23 | 299.46 |
| 1056.65 | 299.57 | 1057.87 | 299.63 | 1060.02 | 299.66 | 1062.02 | 299.65 | 1064.01 | 299.69 |
| 1065.75 | 299.76 | 1067.91 | 299.78 | 1070.7 | 299.85 | 1076.54 | 299.77 | 1078.61 | 299.69 |
| 1079.2 | 299.64 | 1081.45 | 299.52 | 1086.29 | 299.47 | 1088.18 | 299.4 | 1090.36 | 299.36 |
| 1094.75 | 299.38 | 1097.14 | 299.38 | 1100.98 | 299.4 | 1104.63 | 299.37 | 1109.95 | 299.45 |
| 1111.3 | 299.45 | 1114.84 | 299.42 | 1116.87 | 299.39 | 1122.51 | 299.41 | 1126.21 | 299.49 |
| 1129.8 | 299.53 | 1131.92 | 299.57 | 1134.35 | 299.64 | 1137.32 | 299.75 | 1138.59 | 299.76 |
| 1141.14 | 299.84 | 1143.31 | 299.89 | 1146.07 | 299.98 | 1147.51 | 300.04 | 1150.62 | 300.08 |
| 1155.49 | 300.02 | 1159.84 | 299.96 | 1164.7 | 299.94 | 1170.17 | 299.94 | 1175.26 | 299.98 |
| 1178.54 | 300.08 | 1179.68 | 300.1 | 1181.25 | 300.07 | 1189.23 | 299.96 | 1191.07 | 299.94 |
| 1194.09 | 299.89 | 1195.17 | 299.85 | 1198.13 | 299.8 | 1200.7 | 299.81 | 1208.69 | 299.95 |
| 1210.48 | 300 | 1213.8 | 300 | 1216.54 | 300.07 | 1222.63 | 300.41 | 1224.38 | 300.68 |
| 1225.53 | 300.83 | 1228.05 | 301.3 | 1229.02 | 301.53 | 1230.21 | 301.75 | 1231.25 | 302.03 |
| 1233.29 | 302.66 | 1234.6 | 303.03 | 1237.2 | 303.69 | 1240.48 | 304.55 | 1244.36 | 305.65 |
| 1245.94 | 306.06 | 1248.61 | 306.82 | 1248.98 | 307.08 | 1250.26 | 307.76 | 1251.21 | 308.33 |
| 1252.43 | 309 | 1253.31 | 309.55 | 1254.57 | 310.3 | 1256.18 | 311.42 | 1259.16 | 313.71 |
| 1260.7 | 314.84 | 1261.18 | 315.31 | 1261.53 | 315.56 | 1262.04 | 315.7 | 1263.23 | 315.84 |
| 1264.87 | 315.95 | 1268.18 | 316.35 | 1268.53 | 316.41 | 1271.12 | 316.75 | 1272.11 | 316.9 |
| 1273.43 | 317.06 | 1274.36 | 317.22 | 1276.15 | 317.56 | 1278.87 | 318.01 | 1281.36 | 318.38 |
| 1285.67 | 319.15 | 1289.27 | 319.9 | 1290.49 | 320.13 | 1294.52 | 320.83 | 1296.02 | 321.04 |
| 1299.49 | 321.39 | 1300.66 | 321.47 | 1303.78 | 321.63 | 1305.41 | 321.69 | 1309.15 | 321.9 |
| 1317.18 | 322.21 | 1319.73 | 322.4 | 1324.33 | 322.77 | 1326.85 | 322.9 | 1327.41 | 322.95 |
| 1330.15 | 323.13 | 1331.18 | 323.22 | 1331.99 | 323.26 | 1333.14 | 323.37 | 1338.94 | 323.87 |
| 1339.97 | 323.95 | 1342.34 | 324.07 | 1344.38 | 324.16 | 1351.47 | 324.64 | 1352.12 | 324.69 |
| 1355.67 | 324.87 | 1359.06 | 325.01 | 1364.85 | 325.29 | 1367.1 | 325.43 | 1368.06 | 325.46 |
| 1380.71 | 325.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 135.1 | .04 | 1264.87 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 135.1 | 1264.87 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2410.11*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.01 | .47 | 322.8 | 4.52 | 322.15 | 6.38 | 321.84 | 8.88 | 321.47 |
| 10.48 | 321.21 | 12.6 | 320.89 | 14.34 | 320.64 | 15.55 | 320.41 | 18.92 | 320.09 |
| 21.53 | 320.26 | 23.13 | 320.26 | 24.15 | 320.29 | 26.07 | 320.2 | 26.61 | 320.07 |
| 28.46 | 319.92 | 29.53 | 319.78 | 30.14 | 319.8 | 32.11 | 319.55 | 33.13 | 319.28 |
| 34.91 | 318.74 | 35.16 | 318.74 | 35.5 | 318.93 | 36.02 | 319.04 | 37.98 | 319.28 |
| 38.93 | 319.26 | 40.71 | 319.11 | 43.05 | 318.8 | 46.12 | 318.25 | 46.35 | 318.19 |
| 50.87 | 317.56 | 54.81 | 316.85 | 56.53 | 316.53 | 57 | 316.41 | 58.19 | 315.97 |
| 59.25 | 315.62 | 60.74 | 315.05 | 61.31 | 314.77 | 62.48 | 314.31 | 65.41 | 313.06 |
| 66.15 | 312.85 | 67.05 | 312.53 | 68.06 | 312.05 | 69.69 | 311.58 | 70.92 | 311.3 |
| 72.28 | 311.37 | 72.76 | 311.33 | 73.98 | 311.35 | 74.87 | 311.28 | 75.41 | 311.17 |
| 75.85 | 311.16 | 76.61 | 311.05 | 77.56 | 311.01 | 78.5 | 311.03 | 80.04 | 310.88 |
| 80.88 | 310.71 | 82.19 | 310.33 | 83.63 | 309.88 | 85.87 | 309.31 | 87.95 | 308.83 |
| 88.81 | 308.59 | 92.44 | 307.72 | 93.19 | 307.55 | 96.74 | 306.85 | 99.21 | 306.32 |
| 101.61 | 305.94 | 106.3 | 305.13 | 108.42 | 304.68 | 111.69 | 304.03 | 113.4 | 303.68 |
| 114.97 | 303.32 | 116.67 | 302.98 | 117.79 | 302.74 | 119.97 | 302.08 | 120.67 | 301.89 |
| 123.5 | 301.04 | 125.17 | 300.57 | 128.55 | 299.92 | 129.53 | 299.78 | 130.4 | 299.61 |
| 130.97 | 299.54 | 131.58 | 299.45 | 133.15 | 299.38 | 137.71 | 299.27 | 140.83 | 299.22 |
| 141.94 | 299.14 | 144.65 | 298.98 | 146.18 | 298.92 | 157.05 | 298.57 | 159.82 | 298.51 |
| 160.47 | 298.51 | 164.57 | 298.33 | 166.85 | 298.28 | 178.02 | 297.93 | 178.7 | 297.92 |
| 186.24 | 297.69 | 197.3 | 297.53 | 199.24 | 297.48 | 200.44 | 297.36 | 201.68 | 297.49 |
| 203.66 | 297.5 | 205.24 | 297.56 | 212.69 | 297.32 | 214.72 | 297.31 | 215.98 | 297.29 |
| 218.53 | 297.22 | 219.86 | 297.16 | 220.8 | 297.2 | 225.22 | 297.24 | 227.48 | 297.25 |
| 229.32 | 297.32 | 231.19 | 297.32 | 233.49 | 297.39 | 235.35 | 297.38 | 240.01 | 297.34 |
| 242.75 | 297.29 | 244.27 | 297.29 | 249.72 | 297.19 | 251.99 | 297.18 | 253.75 | 297.2 |
| 255.47 | 297.17 | 259.69 | 297.23 | 260.96 | 297.15 | 262.31 | 297.11 | 265.09 | 297.29 |
| 266.23 | 297.33 | 268.19 | 297.36 | 270.53 | 297.43 | 271.35 | 297.44 | 277.77 | 297.66 |
| 287.75 | 297.72 | 289.85 | 297.63 | 292.34 | 297.58 | 293.42 | 297.54 | 294.15 | 297.57 |
| 296.51 | 297.77 | 300.75 | 297.82 | 302.2 | 297.82 | 304.19 | 297.84 | 309.37 | 297.92 |
| 312.29 | 297.93 | 314.07 | 297.9 | 314.91 | 297.83 | 319.37 | 297.75 | 320.25 | 297.7 |
| 322.86 | 297.61 | 325.43 | 297.49 | 326.59 | 297.49 | 327.69 | 297.44 | 335.56 | 297.43 |
| 346.56 | 297.31 | 354.14 | 297.31 | 365.14 | 297.21 | 373.77 | 296.7 | 374.43 | 296.68 |
| 374.69 | 296.63 | 377.12 | 296.57 | 379.43 | 296.59 | 388.55 | 296.86 | 393.46 | 297.08 |
| 411.14 | 297.66 | 417.71 | 297.93 | 421.33 | 298.06 | 425.1 | 298.08 | 441.92 | 298.08 |
| 442.88 | 298.05 | 452.24 | 298.12 | 454.1 | 298.15 | 455.75 | 298.16 | 458.04 | 298.11 |
| 460.05 | 297.98 | 461.44 | 297.96 | 463.5 | 297.96 | 464.38 | 297.91 | 466.56 | 297.92 |
| 470.35 | 297.92 | 473.33 | 297.87 | 473.87 | 297.88 | 477.34 | 297.89 | 487.06 | 297.83 |
| 494.08 | 297.84 | 498.1 | 297.89 | 499.63 | 297.87 | 507.23 | 297.72 | 508.66 | 297.71 |
| 510 | 297.59 | 510.39 | 297.6 | 511.52 | 297.54 | 512.51 | 297.55 | 513.99 | 297.47 |
| 515.46 | 297.41 | 517.86 | 297.36 | 519.7 | 297.38 | 520.39 | 297.41 | 522.66 | 297.47 |
| 524.43 | 297.48 | 529.08 | 297.56 | 533.28 | 297.6 | 534.72 | 297.51 | 534.77 | 297.47 |
| 541.33 | 297.49 | 545.33 | 297.57 | 545.99 | 297.6 | 548.08 | 297.65 | 552.05 | 297.72 |
| 557.14 | 297.75 | 560.66 | 297.73 | 562.87 | 297.75 | 563.66 | 297.78 | 570.75 | 297.98 |
| 573 | 298.02 | 574.49 | 298.02 | 575.86 | 297.97 | 577.27 | 297.89 | 578.54 | 297.87 |
| 581.58 | 297.95 | 583.34 | 298.06 | 586.78 | 298.22 | 590.98 | 298.35 | 591.37 | 298.38 |
| 593.49 | 298.4 | 595.89 | 298.45 | 596.59 | 298.44 | 598.36 | 298.34 | 603.24 | 298 |
| 603.81 | 297.95 | 605.27 | 297.94 | 607.95 | 298.01 | 612.59 | 298.11 | 614.77 | 298.11 |
| 616.25 | 298.09 | 617.11 | 298.02 | 617.49 | 298.02 | 622.08 | 297.71 | 624.59 | 297.59 |
| 626.41 | 297.56 | 629.12 | 297.62 | 632.1 | 297.74 | 634.75 | 297.79 | 640.84 | 297.82 |
| 642.36 | 297.78 | 644.35 | 297.76 | 645.54 | 297.73 | 646.65 | 297.74 | 647.92 | 297.7 |
| 651.34 | 297.74 | 660.69 | 297.57 | 664.18 | 297.6 | 667.71 | 297.65 | 669.39 | 297.73 |
| 672.7 | 297.83 | 675.55 | 297.94 | 681.52 | 298.12 | 684.72 | 298.24 | 694.09 | 298.42 |
| 694.45 | 298.42 | 698.93 | 298.5 | 701.5 | 298.7 | 704.16 | 298.83 | 706.18 | 298.9 |
| 707.8 | 298.91 | 709.25 | 298.89 | 710.38 | 298.93 | 713.06 | 298.91 | 716.51 | 298.83 |
| 720.59 | 298.77 | 724.39 | 298.75 | 733.46 | 298.53 | 744.84 | 298.55 | 751.47 | 298.64 |
| 754.83 | 298.64 | 756.27 | 298.66 | 758.02 | 298.64 | 759.81 | 298.64 | 769.25 | 298.62 |
| 770.51 | 298.61 | 776.06 | 298.66 | 782.38 | 298.68 | 783.53 | 298.62 | 784.85 | 298.61 |
| 787.32 | 298.68 | 789.11 | 298.63 | 790.45 | 298.53 | 793.52 | 298.22 | 795.13 | 298.15 |
| 798.37 | 298.23 | 799.17 | 298.27 | 801.84 | 298.35 | 804.09 | 298.36 | 806.25 | 298.34 |
| 810.81 | 298.24 | 815.41 | 298.1 | 816.35 | 298.08 | 818.36 | 298.09 | 820.32 | 298.07 |
| 831.14 | 298.06 | 832.82 | 298.04 | 836.07 | 297.95 | 837.78 | 297.99 | 839.37 | 298.01 |
| 841.22 | 298.05 | 842.38 | 298.12 | 844.37 | 298.12 | 845.32 | 298.17 | 852.12 | 298.58 |
| 854.26 | 298.67 | 855.26 | 298.68 | 856.35 | 298.65 | 857.52 | 298.66 | 858.96 | 298.62 |
| 860.46 | 298.63 | 861.91 | 298.77 | 866.76 | 298.9 | 869.95 | 298.98 | 871.31 | 298.99 |
| 873.43 | 298.96 | 875.81 | 298.96 | 875.98 | 298.98 | 878.11 | 299.01 | 879.21 | 298.96 |
| 883.78 | 298.91 | 889.99 | 298.92 | 892.78 | 298.8 | 897.21 | 298.55 | 898.3 | 298.48 |
| 901.63 | 298.4 | 904.88 | 298.27 | 908.4 | 298.24 | 911.69 | 298.29 | 917.83 | 298.41 |
| 920.77 | 298.51 | 922.27 | 298.47 | 928.88 | 298.45 | 936.51 | 298.56 | 937.42 | 298.5 |
| 944.01 | 298.67 | 950.99 | 298.87 | 952.12 | 298.85 | 953.23 | 298.93 | 956.51 | 298.82 |
| 959.12 | 298.8 | 960.61 | 298.66 | 961.74 | 298.58 | 964.36 | 298.3 | 966.54 | 298.22 |
| 967.68 | 298.25 | 968.64 | 298.23 | 969.9 | 298.29 | 970.39 | 298.35 | 971.64 | 298.44 |
| 973.27 | 298.52 | 980.32 | 298.8 | 981.85 | 298.81 | 986.37 | 298.77 | 988.09 | 298.77 |
| 990.29 | 298.82 | 993.81 | 298.86 | 995.99 | 298.8 | 1005.74 | 298.98 | 1009.53 | 299.1 |
| 1011.05 | 299.11 | 1016.88 | 299.1 | 1019.93 | 299.15 | 1024.94 | 299.28 | 1026.98 | 299.36 |
| 1029.23 | 299.37 | 1029.6 | 299.35 | 1035.03 | 299.21 | 1036.17 | 299.16 | 1039.35 | 299.07 |
| 1041.06 | 299.08 | 1042.48 | 299.19 | 1043.69 | 299.24 | 1045.84 | 299.29 | 1047 | 299.27 |
| 1049.38 | 299.31 | 1051.56 | 299.39 | 1053.71 | 299.41 | 1056.49 | 299.48 | 1062.32 | 299.38 |
| 1064.39 | 299.3 | 1064.97 | 299.25 | 1067.22 | 299.13 | 1072.8 | 299.06 | 1074.61 | 298.98 |
| 1076.63 | 298.96 | 1081.75 | 298.98 | 1085.38 | 299.02 | 1090.35 | 299.01 | 1095.66 | 299.09 |
| 1097 | 299.09 | 1100.53 | 299.06 | 1101.01 | 299.04 | 1102.56 | 299.03 | 1108.18 | 299.05 |
| 1111.88 | 299.13 | 1112.06 | 299.12 | 1114.78 | 299.16 | 1115.46 | 299.16 | 1117.57 | 299.2 |
| 1120 | 299.26 | 1122.97 | 299.37 | 1124.7 | 299.39 | 1126.77 | 299.46 | 1128.94 | 299.5 |
| 1131.01 | 299.56 | 1133.13 | 299.64 | 1136.23 | 299.68 | 1141.09 | 299.65 | 1142.29 | 299.63 |
| 1145.44 | 299.6 | 1150.28 | 299.59 | 1155.74 | 299.6 | 1160.89 | 299.65 | 1164.08 | 299.76 |
| 1165.22 | 299.79 | 1166.79 | 299.75 | 1175.47 | 299.64 | 1176.59 | 299.64 | 1179.61 | 299.58 |
| 1180.68 | 299.54 | 1184.13 | 299.48 | 1186.19 | 299.49 | 1194.17 | 299.62 | 1195.96 | 299.67 |
| 1199.26 | 299.67 | 1202 | 299.75 | 1208.08 | 300.12 | 1209.82 | 300.43 | 1210.97 | 300.6 |
| 1213.48 | 301.1 | 1214.46 | 301.36 | 1215.64 | 301.61 | 1216.67 | 301.91 | 1218.71 | 302.59 |
| 1219.95 | 302.98 | 1222.37 | 303.65 | 1225.88 | 304.66 | 1226.14 | 304.75 | 1228.77 | 305.53 |
| 1229.75 | 305.84 | 1231.33 | 306.29 | 1234 | 307.1 | 1234.37 | 307.35 | 1235.65 | 308.04 |
| 1236.59 | 308.6 | 1237.81 | 309.27 | 1238.69 | 309.81 | 1240.19 | 310.67 | 1241.01 | 311.25 |
| 1241.92 | 311.93 | 1243.22 | 312.87 | 1244.52 | 313.84 | 1246.06 | 314.93 | 1246.86 | 315.61 |
| 1247.4 | 315.74 | 1248.2 | 315.84 | 1250.22 | 315.96 | 1253.45 | 316.3 | 1257.29 | 316.79 |
| 1258.58 | 316.93 | 1261.24 | 317.41 | 1263.9 | 317.86 | 1266.33 | 318.21 | 1270.53 | 318.96 |
| 1274.05 | 319.69 | 1275.24 | 319.92 | 1278.48 | 320.48 | 1280.04 | 320.72 | 1280.64 | 320.79 |
| 1284.03 | 321.13 | 1285.17 | 321.21 | 1287.44 | 321.34 | 1289.81 | 321.43 | 1293.46 | 321.64 |
| 1297.85 | 321.79 | 1301.31 | 321.93 | 1303.66 | 322.09 | 1308.29 | 322.44 | 1310.75 | 322.57 |
| 1313.97 | 322.79 | 1314.97 | 322.88 | 1315.48 | 322.89 | 1316.89 | 323.02 | 1322.55 | 323.51 |
| 1323.56 | 323.59 | 1327.35 | 323.78 | 1327.87 | 323.82 | 1336.34 | 324.42 | 1342.08 | 324.69 |
| 1342.2 | 324.69 | 1347.86 | 324.98 | 1350.05 | 325.12 | 1350.99 | 325.15 | 1354.7 | 325.21 |
| 1363.34 | 325.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 130.97 | .04 | 1250.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 130.97 | 1250.22 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2390.80*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.5 | .46 | 322.27 | 4.37 | 321.56 | 6.18 | 321.22 | 8.6 | 320.81 |
| 10.15 | 320.52 | 12.2 | 320.17 | 13.89 | 319.9 | 15.06 | 319.65 | 18.2 | 319.3 |
| 20.86 | 319.48 | 22.4 | 319.47 | 23.39 | 319.5 | 24.56 | 319.46 | 25.25 | 319.41 |
| 25.78 | 319.29 | 27.56 | 319.14 | 28.6 | 319.01 | 29.19 | 319.02 | 31.1 | 318.79 |
| 32.09 | 318.53 | 33.81 | 318.03 | 34.05 | 318.03 | 34.38 | 318.2 | 34.88 | 318.29 |
| 36.78 | 318.49 | 38.02 | 318.44 | 39.43 | 318.3 | 41.69 | 317.99 | 44.67 | 317.45 |
| 44.89 | 317.4 | 49.27 | 316.77 | 54.75 | 315.77 | 55.2 | 315.66 | 56.36 | 315.24 |
| 57.38 | 314.91 | 58.82 | 314.37 | 59.38 | 314.12 | 60.51 | 313.68 | 61.87 | 313.11 |
| 63.35 | 312.52 | 64.06 | 312.32 | 64.94 | 312.03 | 65.91 | 311.6 | 67.5 | 311.18 |
| 68.69 | 310.93 | 70.01 | 311 | 70.47 | 310.97 | 71.65 | 311 | 72.51 | 310.94 |
| 73.03 | 310.85 | 73.46 | 310.84 | 74.2 | 310.74 | 75.12 | 310.72 | 76.03 | 310.75 |
| 77.02 | 310.66 | 78.33 | 310.43 | 79.6 | 310.06 | 80.99 | 309.62 | 83.17 | 309.07 |
| 85.17 | 308.61 | 86.01 | 308.38 | 88.29 | 307.81 | 90.25 | 307.35 | 93.69 | 306.65 |
| 96.07 | 306.14 | 98.41 | 305.76 | 102.95 | 304.96 | 105.01 | 304.51 | 109.83 | 303.53 |
| 111.34 | 303.17 | 114.08 | 302.58 | 116.43 | 301.83 | 116.87 | 301.71 | 119.61 | 300.83 |
| 121.22 | 300.34 | 124.5 | 299.68 | 125.45 | 299.54 | 126.84 | 299.3 | 127.43 | 299.22 |
| 128.95 | 299.14 | 133.35 | 299.01 | 136.36 | 298.93 | 140.05 | 298.68 | 141.52 | 298.62 |
| 152.02 | 298.22 | 154.69 | 298.14 | 155.32 | 298.14 | 159.08 | 297.95 | 159.28 | 297.93 |
| 161.48 | 297.89 | 172.26 | 297.55 | 172.92 | 297.55 | 180.2 | 297.32 | 190.88 | 297.17 |
| 192.75 | 297.11 | 193.53 | 297.01 | 194.23 | 297.03 | 195.11 | 297.12 | 196.69 | 297.12 |
| 198.54 | 297.18 | 205.73 | 296.95 | 208.9 | 296.92 | 211.37 | 296.85 | 212.66 | 296.79 |
| 213.56 | 296.83 | 220.01 | 296.87 | 221.78 | 296.93 | 223.59 | 296.93 | 225.82 | 296.99 |
| 232.11 | 296.94 | 234.76 | 296.89 | 236.22 | 296.89 | 241.48 | 296.81 | 243.67 | 296.8 |
| 245.37 | 296.81 | 247.03 | 296.79 | 251.38 | 296.84 | 252.33 | 296.78 | 253.64 | 296.75 |
| 254.25 | 296.77 | 255.15 | 296.85 | 257.42 | 296.95 | 259.31 | 296.98 | 262.36 | 297.06 |
| 268.56 | 297.27 | 278.19 | 297.33 | 280.22 | 297.25 | 282.62 | 297.21 | 283.66 | 297.18 |
| 284.37 | 297.2 | 285.85 | 297.33 | 286.65 | 297.38 | 288.92 | 297.42 | 292.14 | 297.43 |
| 294.06 | 297.45 | 299.07 | 297.53 | 301.89 | 297.54 | 303.61 | 297.52 | 304.42 | 297.45 |
| 308.72 | 297.37 | 309.56 | 297.32 | 313.34 | 297.17 | 314.57 | 297.1 | 315.69 | 297.09 |
| 316.75 | 297.04 | 324.35 | 297.01 | 334.97 | 296.88 | 342.28 | 296.88 | 352.9 | 296.78 |
| 361.24 | 296.3 | 362.12 | 296.24 | 364.47 | 296.17 | 366.78 | 296.2 | 369.5 | 296.28 |
| 375.88 | 296.48 | 380.78 | 296.71 | 398.42 | 297.31 | 404.97 | 297.57 | 408.59 | 297.7 |
| 412.34 | 297.73 | 429.12 | 297.72 | 430.09 | 297.7 | 439.42 | 297.76 | 441.28 | 297.79 |
| 442.92 | 297.79 | 445.21 | 297.73 | 446.78 | 297.61 | 448.6 | 297.58 | 450.66 | 297.57 |
| 451.53 | 297.53 | 453.71 | 297.54 | 457.8 | 297.54 | 459.71 | 297.5 | 464.47 | 297.52 |
| 474.17 | 297.44 | 481.17 | 297.46 | 484.81 | 297.51 | 485.95 | 297.51 | 490.29 | 297.45 |
| 494.28 | 297.37 | 495.71 | 297.36 | 497.04 | 297.24 | 497.44 | 297.25 | 498.57 | 297.18 |
| 499.55 | 297.19 | 501.03 | 297.1 | 502.5 | 297.04 | 504.89 | 296.98 | 506.72 | 296.98 |
| 507.41 | 297.01 | 509.68 | 297.06 | 511.44 | 297.06 | 516.08 | 297.14 | 520.28 | 297.17 |
| 521.72 | 297.1 | 521.76 | 297.06 | 528.3 | 297.08 | 532.3 | 297.16 | 535.05 | 297.24 |
| 539.01 | 297.29 | 544.08 | 297.31 | 547.59 | 297.3 | 550.59 | 297.34 | 557.66 | 297.56 |
| 559.9 | 297.61 | 561.39 | 297.61 | 562.76 | 297.56 | 564.17 | 297.48 | 565.44 | 297.46 |
| 568.47 | 297.55 | 570.22 | 297.66 | 573.65 | 297.81 | 577.84 | 297.95 | 578.23 | 297.98 |
| 580.35 | 298 | 582.74 | 298.05 | 583.44 | 298.03 | 585.2 | 297.92 | 590.07 | 297.55 |
| 590.65 | 297.49 | 592.1 | 297.48 | 599.41 | 297.67 | 601.58 | 297.67 | 603.06 | 297.64 |
| 604.3 | 297.57 | 608.87 | 297.28 | 610.74 | 297.19 | 612.82 | 297.14 | 613.61 | 297.14 |
| 615.9 | 297.19 | 618.02 | 297.28 | 620.33 | 297.33 | 622.74 | 297.36 | 627.59 | 297.36 |
| 631.09 | 297.31 | 632.27 | 297.28 | 633.38 | 297.29 | 634.65 | 297.26 | 638.06 | 297.29 |
| 647.4 | 297.14 | 650.88 | 297.16 | 654.4 | 297.21 | 656.08 | 297.29 | 659.38 | 297.39 |
| 662.22 | 297.51 | 668.17 | 297.69 | 671.37 | 297.81 | 680.72 | 298 | 681.08 | 298 |
| 685.55 | 298.09 | 688.11 | 298.3 | 690.77 | 298.44 | 693.14 | 298.52 | 695.85 | 298.5 |
| 696.82 | 298.54 | 698.91 | 298.54 | 702.92 | 298.44 | 703.09 | 298.45 | 707.16 | 298.38 |
| 710.95 | 298.34 | 720 | 298.12 | 731.35 | 298.16 | 737.97 | 298.25 | 742.75 | 298.27 |
| 745.62 | 298.26 | 746.29 | 298.27 | 755.71 | 298.26 | 756.96 | 298.25 | 757.69 | 298.27 |
| 762.5 | 298.31 | 765.9 | 298.32 | 768.8 | 298.34 | 769.95 | 298.29 | 771.27 | 298.28 |
| 773.74 | 298.34 | 775.52 | 298.28 | 777.47 | 298.11 | 779.68 | 297.86 | 781.53 | 297.75 |
| 784.76 | 297.82 | 785.56 | 297.87 | 788.22 | 297.95 | 790.46 | 297.96 | 792.62 | 297.94 |
| 797.17 | 297.83 | 797.58 | 297.81 | 801.76 | 297.68 | 802.69 | 297.66 | 804.7 | 297.67 |
| 806.65 | 297.65 | 817.45 | 297.67 | 819.13 | 297.65 | 821.52 | 297.58 | 822.38 | 297.57 |
| 824.08 | 297.61 | 827.51 | 297.67 | 828.66 | 297.74 | 830.65 | 297.76 | 833.59 | 297.93 |
| 838.38 | 298.23 | 840.52 | 298.33 | 841.52 | 298.34 | 842.61 | 298.32 | 843.78 | 298.33 |
| 845.21 | 298.3 | 846.71 | 298.3 | 848.16 | 298.43 | 854.95 | 298.6 | 856.17 | 298.62 |
| 858.93 | 298.63 | 859.64 | 298.61 | 862.02 | 298.61 | 862.19 | 298.64 | 864.31 | 298.67 |
| 865.42 | 298.62 | 869.97 | 298.58 | 876.48 | 298.59 | 878.95 | 298.46 | 883.37 | 298.21 |
| 883.66 | 298.18 | 885.33 | 298.12 | 887.78 | 298.07 | 891.02 | 297.96 | 894.53 | 297.94 |
| 897.81 | 297.98 | 903.94 | 298.1 | 906.87 | 298.2 | 908.37 | 298.17 | 914.97 | 298.15 |
| 922.58 | 298.24 | 923.49 | 298.18 | 930.06 | 298.34 | 930.28 | 298.35 | 937.03 | 298.52 |
| 938.15 | 298.5 | 939.26 | 298.58 | 942.54 | 298.48 | 945.14 | 298.46 | 946.63 | 298.31 |
| 947.76 | 298.22 | 949.7 | 297.99 | 950.63 | 297.91 | 952.54 | 297.86 | 953.68 | 297.89 |
| 954.64 | 297.86 | 955.9 | 297.92 | 956.39 | 297.98 | 957.63 | 298.07 | 959.26 | 298.15 |
| 966.29 | 298.44 | 969.96 | 298.45 | 972.33 | 298.43 | 974.76 | 298.45 | 976.24 | 298.49 |
| 979.41 | 298.53 | 981.92 | 298.46 | 983.01 | 298.47 | 991.65 | 298.62 | 994.09 | 298.69 |
| 996.95 | 298.74 | 1000.89 | 298.71 | 1002.77 | 298.71 | 1004.83 | 298.75 | 1005.81 | 298.75 |
| 1008.38 | 298.82 | 1010.81 | 298.9 | 1012.85 | 298.98 | 1015.09 | 298.99 | 1015.46 | 298.97 |
| 1020.88 | 298.82 | 1022.02 | 298.77 | 1026.08 | 298.67 | 1026.89 | 298.7 | 1027.76 | 298.77 |
| 1029.52 | 298.86 | 1031.66 | 298.91 | 1032.82 | 298.9 | 1035.19 | 298.94 | 1037.36 | 299.02 |
| 1039.51 | 299.04 | 1042.29 | 299.1 | 1042.9 | 299.1 | 1048.11 | 298.99 | 1050.17 | 298.91 |
| 1052.99 | 298.73 | 1058.56 | 298.66 | 1060.29 | 298.58 | 1062.38 | 298.56 | 1068.61 | 298.59 |
| 1069.9 | 298.62 | 1072.43 | 298.64 | 1074.18 | 298.63 | 1076.06 | 298.64 | 1081.18 | 298.73 |
| 1082.7 | 298.73 | 1086.23 | 298.7 | 1088.25 | 298.67 | 1093.86 | 298.7 | 1097.55 | 298.76 |
| 1100.44 | 298.78 | 1103.23 | 298.82 | 1105.65 | 298.89 | 1108.61 | 298.99 | 1110.34 | 299.01 |
| 1112.41 | 299.07 | 1114.57 | 299.1 | 1117.64 | 299.2 | 1118.75 | 299.25 | 1121.84 | 299.29 |
| 1126.7 | 299.27 | 1127.89 | 299.25 | 1131.03 | 299.23 | 1135.86 | 299.24 | 1141.3 | 299.26 |
| 1146.45 | 299.32 | 1150.77 | 299.48 | 1152.34 | 299.44 | 1160.28 | 299.35 | 1162.11 | 299.34 |
| 1165.12 | 299.27 | 1167.29 | 299.2 | 1169.13 | 299.17 | 1171.69 | 299.17 | 1179.64 | 299.29 |
| 1181.44 | 299.33 | 1184.8 | 299.34 | 1187.46 | 299.42 | 1193.52 | 299.84 | 1195.26 | 300.18 |
| 1196.41 | 300.36 | 1197.08 | 300.52 | 1198.92 | 300.91 | 1199.89 | 301.19 | 1201.07 | 301.46 |
| 1202 | 301.75 | 1204.72 | 302.73 | 1205.9 | 303.11 | 1208.03 | 303.74 | 1208.73 | 303.97 |
| 1211.29 | 304.76 | 1215.15 | 306.04 | 1216.73 | 306.52 | 1217.46 | 306.77 | 1219.39 | 307.38 |
| 1219.76 | 307.63 | 1221.03 | 308.31 | 1221.98 | 308.87 | 1223.19 | 309.53 | 1224.84 | 310.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1225.57 | 310.92 | 1225.76 | 311.08 | 1226.98 | 311.89 | 1228.01 | 312.65 | 1229.89 | 313.97 |
| 1231.43 | 315.01 | 1232.22 | 315.67 | 1232.56 | 315.76 | 1233.56 | 315.88 | 1235.57 | 315.97 |
| 1237.28 | 316.11 | 1241.53 | 316.56 | 1243.32 | 316.76 | 1244.62 | 316.95 | 1246.33 | 317.27 |
| 1248.92 | 317.7 | 1251.29 | 318.05 | 1255.4 | 318.78 | 1258.83 | 319.48 | 1259.99 | 319.7 |
| 1263.16 | 320.24 | 1264.6 | 320.46 | 1265.26 | 320.54 | 1268.89 | 320.9 | 1271.9 | 321.08 |
| 1274.21 | 321.17 | 1277.77 | 321.38 | 1282.06 | 321.51 | 1285.43 | 321.64 | 1287.85 | 321.8 |
| 1292.25 | 322.12 | 1294.65 | 322.24 | 1297.79 | 322.45 | 1298.77 | 322.54 | 1299.26 | 322.54 |
| 1300.64 | 322.68 | 1307.15 | 323.23 | 1310.85 | 323.43 | 1318.11 | 323.98 | 1319.62 | 324.09 |
| 1325.35 | 324.38 | 1330.87 | 324.67 | 1333 | 324.81 | 1337.06 | 324.92 | 1337.54 | 324.92 |
| 1345.97 | 325.09 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 126.84 | .04 | 1235.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 126.84 | 1235.57 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2371.49*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322 | .44 | 321.74 | 4.23 | 320.97 | 5.98 | 320.6 | 8.32 | 320.15 |
| 9.82 | 319.84 | 13.44 | 319.15 | 14.57 | 318.88 | 16.15 | 318.68 | 17.73 | 318.5 |
| 20.18 | 318.69 | 21.67 | 318.69 | 22.63 | 318.72 | 23.76 | 318.68 | 24.43 | 318.63 |
| 24.94 | 318.51 | 26.66 | 318.36 | 27.67 | 318.24 | 28.24 | 318.25 | 30.09 | 318.02 |
| 31.05 | 317.78 | 32.71 | 317.32 | 32.95 | 317.31 | 33.26 | 317.47 | 33.99 | 317.57 |
| 35.58 | 317.7 | 36.78 | 317.64 | 38.14 | 317.49 | 40.33 | 317.18 | 43.22 | 316.66 |
| 43.43 | 316.61 | 47.67 | 315.98 | 52.97 | 315.01 | 53.41 | 314.9 | 55.52 | 314.2 |
| 56.91 | 313.7 | 57.44 | 313.46 | 58.54 | 313.05 | 59.86 | 312.52 | 61.29 | 311.98 |
| 61.98 | 311.8 | 62.82 | 311.53 | 63.77 | 311.15 | 65.3 | 310.78 | 66.45 | 310.56 |
| 67.73 | 310.64 | 68.17 | 310.61 | 69.32 | 310.65 | 70.15 | 310.6 | 70.66 | 310.52 |
| 71.07 | 310.52 | 71.78 | 310.44 | 72.67 | 310.43 | 73.55 | 310.46 | 74.37 | 310.39 |
| 75 | 310.3 | 75.78 | 310.14 | 76.79 | 309.85 | 78.36 | 309.36 | 80.46 | 308.83 |
| 82.4 | 308.38 | 85.41 | 307.6 | 87.31 | 307.14 | 90.64 | 306.46 | 92.94 | 305.95 |
| 95.21 | 305.59 | 99.6 | 304.78 | 100.43 | 304.62 | 101.59 | 304.35 | 106.25 | 303.38 |
| 107.72 | 303.01 | 110.37 | 302.42 | 112.4 | 301.73 | 113.06 | 301.52 | 115.72 | 300.61 |
| 117.28 | 300.1 | 120.45 | 299.44 | 121.37 | 299.3 | 122.18 | 299.14 | 122.72 | 299.07 |
| 123.28 | 298.98 | 124.74 | 298.9 | 128.99 | 298.74 | 131.06 | 298.69 | 131.89 | 298.65 |
| 135.45 | 298.39 | 136.87 | 298.32 | 146.99 | 297.86 | 149.57 | 297.77 | 150.17 | 297.76 |
| 153.99 | 297.54 | 156.11 | 297.49 | 166.5 | 297.18 | 167.14 | 297.17 | 174.16 | 296.95 |
| 184.45 | 296.8 | 186.26 | 296.75 | 187.01 | 296.65 | 187.69 | 296.67 | 188.53 | 296.75 |
| 190.05 | 296.75 | 191.84 | 296.79 | 198.77 | 296.58 | 201.83 | 296.54 | 204.21 | 296.48 |
| 205.45 | 296.43 | 206.32 | 296.45 | 210.43 | 296.48 | 211.81 | 296.47 | 214.25 | 296.53 |
| 215.99 | 296.53 | 218.14 | 296.59 | 224.2 | 296.54 | 226.76 | 296.5 | 228.17 | 296.5 |
| 233.24 | 296.42 | 235.35 | 296.41 | 236.99 | 296.42 | 238.59 | 296.4 | 242.78 | 296.46 |
| 243.7 | 296.4 | 244.96 | 296.38 | 247.55 | 296.53 | 252.61 | 296.66 | 253.37 | 296.67 |
| 259.35 | 296.88 | 268.63 | 296.94 | 270.59 | 296.87 | 273.91 | 296.81 | 274.6 | 296.83 |
| 276.79 | 297 | 280.73 | 297.05 | 282.09 | 297.04 | 286.39 | 297.09 | 288.76 | 297.14 |
| 291.48 | 297.15 | 293.14 | 297.13 | 293.92 | 297.07 | 298.07 | 296.99 | 298.88 | 296.94 |
| 301.32 | 296.84 | 304.12 | 296.69 | 304.78 | 296.69 | 305.81 | 296.64 | 313.13 | 296.59 |
| 324.23 | 296.45 | 326.98 | 296.46 | 330.43 | 296.45 | 340.67 | 296.34 | 348.7 | 295.9 |
| 349.56 | 295.84 | 351.82 | 295.78 | 354.13 | 295.8 | 363.21 | 296.11 | 363.42 | 296.11 |
| 368.09 | 296.34 | 385.7 | 296.95 | 392.24 | 297.21 | 395.84 | 297.34 | 399.59 | 297.37 |
| 416.33 | 297.37 | 417.29 | 297.34 | 426.6 | 297.39 | 428.46 | 297.42 | 430.1 | 297.42 |
| 432.38 | 297.36 | 433.94 | 297.23 | 435.76 | 297.19 | 437.81 | 297.18 | 438.69 | 297.15 |
| 440.85 | 297.17 | 444.94 | 297.17 | 446.84 | 297.13 | 448.13 | 297.14 | 451.59 | 297.14 |
| 461.27 | 297.06 | 468.25 | 297.08 | 473.02 | 297.14 | 475.48 | 297.1 | 477.35 | 297.09 |
| 481.34 | 297.02 | 482.76 | 297.01 | 484.09 | 296.88 | 484.49 | 296.89 | 485.61 | 296.82 |
| 486.59 | 296.83 | 488.07 | 296.73 | 489.53 | 296.67 | 492.63 | 296.58 | 493.75 | 296.58 |
| 496.7 | 296.64 | 498.46 | 296.65 | 503.09 | 296.72 | 507.27 | 296.75 | 508.71 | 296.68 |
| 508.76 | 296.65 | 515.28 | 296.67 | 519.27 | 296.74 | 519.93 | 296.77 | 522.01 | 296.82 |
| 525.96 | 296.87 | 531.96 | 296.87 | 534.53 | 296.86 | 537.52 | 296.91 | 544.57 | 297.15 |
| 546.26 | 297.19 | 548.29 | 297.2 | 549.66 | 297.16 | 551.06 | 297.07 | 552.33 | 297.06 |
| 553.33 | 297.08 | 555.35 | 297.15 | 557.1 | 297.25 | 560.53 | 297.41 | 564.7 | 297.55 |
| 565.09 | 297.59 | 567.21 | 297.6 | 569.6 | 297.64 | 570.29 | 297.62 | 572.05 | 297.5 |
| 576.91 | 297.09 | 577.48 | 297.03 | 578.93 | 297.02 | 581.6 | 297.1 | 586.22 | 297.22 |
| 588.39 | 297.22 | 589.87 | 297.19 | 591.1 | 297.13 | 595.66 | 296.85 | 597.53 | 296.76 |
| 599.98 | 296.71 | 602.67 | 296.76 | 604.79 | 296.85 | 608.28 | 296.92 | 614.34 | 296.91 |
| 616.71 | 296.86 | 617.83 | 296.86 | 619.01 | 296.83 | 620.12 | 296.84 | 621.38 | 296.81 |
| 624.79 | 296.84 | 634.1 | 296.71 | 637.58 | 296.73 | 641.09 | 296.77 | 642.76 | 296.85 |
| 646.05 | 296.95 | 647.45 | 297.02 | 654.83 | 297.26 | 658.01 | 297.38 | 667.34 | 297.58 |
| 672.16 | 297.68 | 673.13 | 297.78 | 674.72 | 297.91 | 677.37 | 298.06 | 679.37 | 298.13 |
| 681 | 298.13 | 682.44 | 298.11 | 683.56 | 298.16 | 686.23 | 298.14 | 689.67 | 298.06 |
| 693.72 | 297.98 | 697.51 | 297.93 | 705.22 | 297.73 | 706.54 | 297.71 | 717.86 | 297.76 |
| 718.87 | 297.77 | 724.46 | 297.86 | 727.8 | 297.87 | 729.24 | 297.89 | 731.72 | 297.88 |
| 732.76 | 297.89 | 742.16 | 297.91 | 743.41 | 297.9 | 751.16 | 297.98 | 752.58 | 297.98 |
| 754.48 | 298 | 755.65 | 297.99 | 757.01 | 297.94 | 758.66 | 297.96 | 760.15 | 298 |
| 761.82 | 297.94 | 763.26 | 297.81 | 766.08 | 297.47 | 767.92 | 297.35 | 771.15 | 297.42 |
| 771.95 | 297.47 | 774.6 | 297.55 | 776.84 | 297.55 | 778.99 | 297.53 | 783.53 | 297.42 |
| 789.04 | 297.24 | 791.05 | 297.25 | 792.99 | 297.23 | 802.98 | 297.28 | 805.44 | 297.27 |
| 808.68 | 297.18 | 811.96 | 297.25 | 814.44 | 297.32 | 814.95 | 297.36 | 816.15 | 297.36 |
| 817.88 | 297.44 | 824.65 | 297.88 | 826.78 | 297.99 | 827.77 | 298.01 | 828.86 | 297.99 |
| 831.46 | 297.97 | 832.95 | 297.97 | 834.4 | 298.08 | 839.22 | 298.2 | 842.4 | 298.26 |
| 845.14 | 298.27 | 845.86 | 298.25 | 848.23 | 298.26 | 848.4 | 298.29 | 850.52 | 298.34 |
| 851.62 | 298.29 | 856.16 | 298.25 | 862.66 | 298.26 | 864.27 | 298.16 | 865.13 | 298.13 |
| 869.53 | 297.88 | 870.61 | 297.81 | 873.93 | 297.74 | 877.17 | 297.64 | 880.67 | 297.63 |
| 883.94 | 297.67 | 890.06 | 297.79 | 892.98 | 297.89 | 894.48 | 297.86 | 901.06 | 297.85 |
| 908.65 | 297.93 | 909.55 | 297.86 | 916.12 | 298.01 | 916.33 | 298.01 | 923.07 | 298.17 |
| 924.19 | 298.15 | 925.29 | 298.22 | 928.56 | 298.13 | 931.16 | 298.11 | 932.64 | 297.95 |
| 933.77 | 297.85 | 936.38 | 297.55 | 938.55 | 297.49 | 939.68 | 297.52 | 940.64 | 297.49 |
| 941.88 | 297.55 | 942.38 | 297.61 | 943.62 | 297.7 | 945.24 | 297.78 | 949.32 | 297.95 |
| 952.26 | 298.08 | 955.24 | 298.1 | 959.99 | 298.1 | 962.18 | 298.16 | 964.28 | 298.19 |
| 965.69 | 298.19 | 967.86 | 298.12 | 968.94 | 298.12 | 977.57 | 298.25 | 979.99 | 298.32 |
| 982.14 | 298.36 | 982.85 | 298.36 | 986.78 | 298.32 | 988.65 | 298.32 | 990.71 | 298.35 |
| 991.68 | 298.35 | 994.26 | 298.42 | 996.68 | 298.51 | 998.71 | 298.6 | 1000.95 | 298.61 |
| 1001.31 | 298.59 | 1005.14 | 298.47 | 1006.72 | 298.44 | 1007.86 | 298.39 | 1011.92 | 298.29 |
| 1012.72 | 298.32 | 1013.74 | 298.4 | 1015.34 | 298.48 | 1017.48 | 298.53 | 1019.47 | 298.54 |
| 1023.17 | 298.65 | 1025.31 | 298.67 | 1028.69 | 298.72 | 1033.89 | 298.6 | 1035.95 | 298.53 |
| 1036.56 | 298.47 | 1037.62 | 298.43 | 1038.76 | 298.34 | 1043.57 | 298.28 | 1046.04 | 298.18 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1048.13 | 298.16 | 1053.22 | 298.2 | 1054.35 | 298.2 | 1056.84 | 298.25 | 1059.9 | 298.26 |
| 1061.78 | 298.28 | 1067.07 | 298.38 | 1068.41 | 298.38 | 1073.94 | 298.31 | 1079.54 | 298.34 |
| 1083.21 | 298.4 | 1083.4 | 298.39 | 1086.78 | 298.41 | 1088.88 | 298.45 | 1091.3 | 298.51 |
| 1094.25 | 298.61 | 1095.51 | 298.61 | 1098.04 | 298.68 | 1100.2 | 298.71 | 1102.26 | 298.77 |
| 1104.37 | 298.85 | 1107.45 | 298.9 | 1112.3 | 298.89 | 1116.62 | 298.87 | 1121.44 | 298.89 |
| 1126.87 | 298.92 | 1132.01 | 298.99 | 1136.32 | 299.16 | 1137.88 | 299.13 | 1147.63 | 299.03 |
| 1150.63 | 298.97 | 1152.8 | 298.89 | 1155.14 | 298.85 | 1157.19 | 298.85 | 1165.12 | 298.96 |
| 1166.91 | 299 | 1170.27 | 299.01 | 1172.93 | 299.1 | 1174.75 | 299.23 | 1178.97 | 299.55 |
| 1180.79 | 299.94 | 1181.85 | 300.12 | 1182.51 | 300.29 | 1184.35 | 300.72 | 1185.32 | 301.03 |
| 1186.5 | 301.31 | 1187.53 | 301.66 | 1189.56 | 302.45 | 1190.79 | 302.91 | 1193.2 | 303.69 |
| 1196.7 | 304.87 | 1196.95 | 304.97 | 1200.55 | 306.23 | 1202.12 | 306.74 | 1202.86 | 307.01 |
| 1204.78 | 307.66 | 1205.14 | 307.91 | 1205.66 | 308.17 | 1206.95 | 308.91 | 1208.57 | 309.8 |
| 1209.45 | 310.32 | 1210.94 | 311.16 | 1211.76 | 311.7 | 1212.66 | 312.34 | 1215.25 | 314.1 |
| 1216.79 | 315.1 | 1217.6 | 315.73 | 1218.12 | 315.84 | 1218.82 | 315.91 | 1220.03 | 315.96 |
| 1220.92 | 315.97 | 1224 | 316.2 | 1229.1 | 316.71 | 1231.41 | 317.12 | 1233.94 | 317.54 |
| 1236.25 | 317.89 | 1240.26 | 318.59 | 1243.6 | 319.27 | 1244.74 | 319.48 | 1247.83 | 320 |
| 1249.88 | 320.29 | 1253.42 | 320.64 | 1256.36 | 320.82 | 1258.61 | 320.91 | 1259.55 | 320.98 |
| 1262.09 | 321.11 | 1266.27 | 321.24 | 1269.55 | 321.36 | 1271.92 | 321.5 | 1276.2 | 321.8 |
| 1278.55 | 321.91 | 1281.61 | 322.11 | 1282.57 | 322.19 | 1283.32 | 322.22 | 1284.39 | 322.33 |
| 1290.74 | 322.87 | 1294.84 | 323.12 | 1301.43 | 323.65 | 1302.9 | 323.76 | 1305.34 | 323.9 |
| 1308.49 | 324.06 | 1313.87 | 324.36 | 1315.16 | 324.46 | 1316.85 | 324.54 | 1320.39 | 324.63 |
| 1328.61 | 324.82 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 122.72 | .04 | 1220.92 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 122.72 | 1220.92 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2352.18*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 321.49 | .43 | 321.22 | 5.78 | 319.98 | 8.04 | 319.49 | 9.49 | 319.15 |
| 12.99 | 318.41 | 14.08 | 318.12 | 15.61 | 317.9 | 17.13 | 317.7 | 19.5 | 317.91 |
| 20.94 | 317.9 | 21.87 | 317.94 | 23.61 | 317.84 | 24.1 | 317.73 | 25.77 | 317.58 |
| 26.74 | 317.46 | 27.29 | 317.47 | 29.07 | 317.25 | 30 | 317.03 | 31.61 | 316.61 |
| 31.84 | 316.6 | 32.22 | 316.75 | 32.61 | 316.8 | 34.39 | 316.91 | 35.25 | 316.86 |
| 36.86 | 316.68 | 38.98 | 316.37 | 41.97 | 315.81 | 46.06 | 315.19 | 51.19 | 314.25 |
| 51.61 | 314.14 | 53.65 | 313.49 | 54.99 | 313.02 | 55.51 | 312.8 | 56.57 | 312.43 |
| 57.85 | 311.93 | 59.23 | 311.44 | 60.71 | 311.04 | 61.62 | 310.7 | 63.1 | 310.38 |
| 64.22 | 310.2 | 65.45 | 310.27 | 65.88 | 310.26 | 66.99 | 310.3 | 68.68 | 310.2 |
| 69.37 | 310.13 | 70.23 | 310.13 | 71.08 | 310.17 | 72.01 | 310.09 | 72.48 | 310.02 |
| 73.23 | 309.85 | 74.2 | 309.57 | 75.72 | 309.1 | 77.57 | 308.63 | 79.63 | 308.16 |
| 82.54 | 307.38 | 84.38 | 306.94 | 87.59 | 306.26 | 89.82 | 305.77 | 92.01 | 305.41 |
| 96.25 | 304.61 | 97.05 | 304.45 | 98.17 | 304.18 | 101.13 | 303.56 | 102.68 | 303.22 |
| 104.1 | 302.86 | 105.64 | 302.51 | 106.66 | 302.26 | 108.62 | 301.55 | 109.26 | 301.34 |
| 111.83 | 300.39 | 113.34 | 299.87 | 116.4 | 299.2 | 117.29 | 299.06 | 118.08 | 298.9 |
| 118.59 | 298.83 | 119.13 | 298.75 | 120.54 | 298.66 | 124.62 | 298.48 | 127.42 | 298.37 |
| 130.85 | 298.1 | 132.21 | 298.02 | 141.96 | 297.51 | 144.44 | 297.4 | 145.02 | 297.39 |
| 148.7 | 297.15 | 150.74 | 297.1 | 160.75 | 296.8 | 161.36 | 296.79 | 168.12 | 296.59 |
| 178.03 | 296.43 | 179.77 | 296.38 | 180.84 | 296.29 | 181.95 | 296.38 | 183.72 | 296.38 |
| 185.14 | 296.41 | 191.82 | 296.21 | 194.76 | 296.17 | 197.05 | 296.11 | 198.25 | 296.06 |
| 199.08 | 296.08 | 203.04 | 296.1 | 204.37 | 296.09 | 206.72 | 296.14 | 208.4 | 296.14 |
| 210.46 | 296.19 | 216.3 | 296.15 | 218.76 | 296.11 | 220.11 | 296.11 | 225 | 296.04 |
| 227.03 | 296.03 | 228.61 | 296.04 | 230.15 | 296.02 | 234.19 | 296.08 | 235.07 | 296.03 |
| 236.29 | 296.01 | 237.69 | 296.1 | 239.8 | 296.18 | 241.55 | 296.21 | 243.65 | 296.28 |
| 244.38 | 296.29 | 250.14 | 296.48 | 259.07 | 296.55 | 260.96 | 296.5 | 264.16 | 296.44 |
| 264.82 | 296.46 | 266.19 | 296.57 | 266.93 | 296.61 | 269.03 | 296.65 | 270.73 | 296.66 |
| 272.03 | 296.65 | 276.17 | 296.7 | 278.46 | 296.74 | 282.03 | 296.76 | 283.42 | 296.69 |
| 286.56 | 296.64 | 291.7 | 296.39 | 292.84 | 296.31 | 293.88 | 296.29 | 294.87 | 296.23 |
| 301.92 | 296.18 | 311.78 | 296.03 | 314.33 | 296.02 | 315.25 | 296.03 | 318.57 | 296.03 |
| 328.43 | 295.91 | 336.16 | 295.49 | 336.99 | 295.44 | 339.17 | 295.39 | 341.47 | 295.41 |
| 344.18 | 295.5 | 350.54 | 295.73 | 350.75 | 295.73 | 355.41 | 295.97 | 372.97 | 296.59 |
| 379.5 | 296.86 | 383.09 | 296.98 | 383.14 | 296.99 | 385.99 | 297 | 386.83 | 297.02 |
| 403.53 | 297.01 | 404.49 | 296.99 | 413.78 | 297.03 | 415.64 | 297.06 | 417.27 | 297.05 |
| 419.55 | 296.99 | 421.54 | 296.83 | 422.92 | 296.81 | 424.97 | 296.8 | 425.84 | 296.77 |
| 428 | 296.79 | 431.77 | 296.8 | 434.73 | 296.75 | 435.27 | 296.76 | 438.72 | 296.76 |
| 448.37 | 296.68 | 455.34 | 296.7 | 459.33 | 296.77 | 460.85 | 296.77 | 462.55 | 296.74 |
| 464.42 | 296.73 | 468.4 | 296.67 | 469.82 | 296.66 | 471.14 | 296.53 | 471.54 | 296.54 |
| 472.66 | 296.46 | 473.64 | 296.47 | 475.12 | 296.37 | 476.57 | 296.29 | 478.95 | 296.21 |
| 480.78 | 296.18 | 483.72 | 296.23 | 485.48 | 296.23 | 490.09 | 296.3 | 494.27 | 296.33 |
| 495.7 | 296.27 | 495.75 | 296.24 | 502.26 | 296.26 | 506.24 | 296.33 | 508.97 | 296.4 |
| 512.91 | 296.44 | 517.97 | 296.43 | 519.6 | 296.42 | 523.66 | 296.45 | 531.48 | 296.73 |
| 533.71 | 296.78 | 535.2 | 296.8 | 536.68 | 296.75 | 537.96 | 296.66 | 539.22 | 296.65 |
| 540.22 | 296.67 | 542.24 | 296.75 | 543.98 | 296.85 | 547.4 | 297 | 551.57 | 297.15 |
| 551.96 | 297.19 | 554.06 | 297.2 | 556.45 | 297.24 | 557.14 | 297.21 | 558.9 | 297.08 |
| 563.97 | 296.62 | 564.31 | 296.57 | 565.76 | 296.56 | 573.04 | 296.78 | 575.2 | 296.78 |
| 576.67 | 296.74 | 577.9 | 296.68 | 580.77 | 296.51 | 582.46 | 296.42 | 584.95 | 296.31 |
| 587.17 | 296.29 | 589.45 | 296.34 | 592.4 | 296.44 | 595.04 | 296.48 | 599.5 | 296.46 |
| 601.09 | 296.46 | 602.59 | 296.42 | 605.75 | 296.38 | 606.86 | 296.39 | 608.12 | 296.36 |
| 611.52 | 296.39 | 620.8 | 296.28 | 624.27 | 296.29 | 627.78 | 296.34 | 630.39 | 296.45 |
| 632.73 | 296.51 | 634.12 | 296.58 | 644.66 | 296.94 | 653.97 | 297.16 | 658.78 | 297.27 |
| 660.11 | 297.41 | 661.33 | 297.51 | 663.98 | 297.67 | 665.97 | 297.74 | 669.36 | 297.73 |
| 670 | 297.77 | 672.08 | 297.77 | 676.08 | 297.67 | 680.29 | 297.58 | 684.07 | 297.53 |
| 691.76 | 297.32 | 693.07 | 297.3 | 704.37 | 297.37 | 705.38 | 297.38 | 710.96 | 297.47 |
| 714.29 | 297.49 | 715.72 | 297.51 | 717.46 | 297.5 | 719.24 | 297.52 | 728.62 | 297.55 |
| 729.87 | 297.55 | 735.38 | 297.62 | 738.76 | 297.63 | 741.12 | 297.67 | 742.4 | 297.65 |
| 742.79 | 297.61 | 744.11 | 297.61 | 746.56 | 297.67 | 748.23 | 297.59 | 750.28 | 297.37 |
| 752.47 | 297.09 | 754.32 | 296.96 | 757.54 | 297.02 | 758.33 | 297.07 | 760.98 | 297.14 |
| 763.21 | 297.15 | 765.36 | 297.13 | 769.88 | 297 | 775.39 | 296.82 | 777.39 | 296.83 |
| 779.33 | 296.81 | 789.29 | 296.89 | 791.75 | 296.88 | 794.98 | 296.79 | 796.67 | 296.84 |
| 800.08 | 296.92 | 801.24 | 296.98 | 802.44 | 296.99 | 803.21 | 297.02 | 806.14 | 297.21 |
| 810.91 | 297.54 | 813.04 | 297.65 | 814.03 | 297.67 | 816.28 | 297.66 | 817.7 | 297.64 |
| 819.2 | 297.64 | 820.64 | 297.74 | 825.45 | 297.84 | 829.97 | 297.91 | 831.36 | 297.91 |
| 832.07 | 297.89 | 834.44 | 297.91 | 834.61 | 297.94 | 836.72 | 298 | 838.46 | 297.94 |
| 842.36 | 297.92 | 848.52 | 297.94 | 851.3 | 297.79 | 855.69 | 297.54 | 856.77 | 297.47 |
| 860.08 | 297.42 | 863.31 | 297.33 | 866.81 | 297.32 | 876.17 | 297.47 | 879.09 | 297.58 |
| 880.58 | 297.56 | 887.15 | 297.55 | 894.72 | 297.62 | 895.62 | 297.55 | 902.17 | 297.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 902.38 | 297.68 | 909.74 | 297.82 | 910.22 | 297.8 | 911.33 | 297.86 | 914.59 | 297.78 |
| 917.18 | 297.77 | 918.66 | 297.6 | 919.78 | 297.49 | 921.72 | 297.24 | 922.64 | 297.16 |
| 924.55 | 297.13 | 925.67 | 297.16 | 926.63 | 297.12 | 927.89 | 297.19 | 928.37 | 297.24 |
| 931.23 | 297.41 | 935.3 | 297.58 | 938.23 | 297.71 | 939.75 | 297.74 | 941.88 | 297.76 |
| 945.95 | 297.77 | 948.13 | 297.83 | 950.22 | 297.86 | 951.62 | 297.86 | 953.79 | 297.77 |
| 954.88 | 297.77 | 963.48 | 297.89 | 967.24 | 297.97 | 968.75 | 297.98 | 972.67 | 297.93 |
| 974.54 | 297.93 | 975.9 | 297.95 | 977.56 | 297.95 | 980.13 | 298.03 | 982.55 | 298.12 |
| 984.57 | 298.22 | 986.81 | 298.23 | 987.17 | 298.21 | 990.99 | 298.09 | 992.57 | 298.05 |
| 993.7 | 298 | 995.78 | 297.95 | 996.85 | 297.91 | 997.75 | 297.91 | 998.55 | 297.94 |
| 999.57 | 298.02 | 1001.17 | 298.1 | 1003.3 | 298.15 | 1005.29 | 298.17 | 1008.98 | 298.28 |
| 1011.12 | 298.3 | 1013.47 | 298.34 | 1014.49 | 298.34 | 1016.63 | 298.28 | 1019.67 | 298.21 |
| 1021.72 | 298.14 | 1023.39 | 298.04 | 1024.53 | 297.94 | 1030.08 | 297.87 | 1031.8 | 297.78 |
| 1033.88 | 297.76 | 1040.08 | 297.81 | 1042.57 | 297.87 | 1045.62 | 297.89 | 1047.5 | 297.92 |
| 1052.59 | 298.02 | 1054.11 | 298.02 | 1057.61 | 297.99 | 1058.44 | 297.96 | 1059.63 | 297.95 |
| 1065.21 | 297.98 | 1068.88 | 298.04 | 1069.07 | 298.03 | 1072.44 | 298.04 | 1074.54 | 298.07 |
| 1076.95 | 298.13 | 1079.9 | 298.23 | 1081.15 | 298.23 | 1083.68 | 298.3 | 1084.1 | 298.29 |
| 1085.83 | 298.32 | 1088.88 | 298.41 | 1089.99 | 298.46 | 1093.07 | 298.51 | 1102.21 | 298.51 |
| 1107.02 | 298.54 | 1112.44 | 298.58 | 1117.48 | 298.65 | 1121.43 | 298.82 | 1121.86 | 298.85 |
| 1123.42 | 298.81 | 1131.33 | 298.74 | 1133.15 | 298.73 | 1136.15 | 298.66 | 1137.22 | 298.61 |
| 1140.64 | 298.53 | 1142.69 | 298.53 | 1150.6 | 298.63 | 1152.39 | 298.67 | 1155.67 | 298.67 |
| 1158.39 | 298.77 | 1164.42 | 299.27 | 1166.23 | 299.68 | 1167.29 | 299.89 | 1167.95 | 300.07 |
| 1169.79 | 300.53 | 1170.76 | 300.86 | 1171.93 | 301.17 | 1172.96 | 301.54 | 1175.56 | 302.62 |
| 1176.74 | 303.07 | 1178.86 | 303.79 | 1182.1 | 304.98 | 1185.95 | 306.43 | 1187.52 | 306.97 |
| 1188.25 | 307.25 | 1190.16 | 307.94 | 1192.74 | 309.41 | 1193.95 | 310.06 | 1194.82 | 310.57 |
| 1196.31 | 311.4 | 1197.13 | 311.93 | 1198.03 | 312.55 | 1201.59 | 314.84 | 1202.15 | 315.18 |
| 1202.96 | 315.79 | 1203.47 | 315.89 | 1204.65 | 315.97 | 1206.27 | 315.98 | 1207.9 | 316.06 |
| 1209.27 | 316.15 | 1209.59 | 316.19 | 1211.93 | 316.37 | 1212.84 | 316.46 | 1214.24 | 316.58 |
| 1216.5 | 316.98 | 1218.96 | 317.39 | 1221.22 | 317.73 | 1225.72 | 318.52 | 1228.38 | 319.06 |
| 1229.49 | 319.27 | 1232.5 | 319.76 | 1233.95 | 319.98 | 1237.95 | 320.39 | 1241.53 | 320.6 |
| 1243.01 | 320.65 | 1243.93 | 320.72 | 1246.4 | 320.85 | 1250.47 | 320.96 | 1253.68 | 321.07 |
| 1260.16 | 321.47 | 1262.44 | 321.57 | 1265.43 | 321.77 | 1266.36 | 321.85 | 1266.83 | 321.85 |
| 1268.14 | 321.98 | 1274.33 | 322.51 | 1277.84 | 322.74 | 1285.34 | 323.37 | 1288.56 | 323.58 |
| 1291.63 | 323.74 | 1296.88 | 324.05 | 1298.13 | 324.15 | 1299.78 | 324.23 | 1302.08 | 324.31 |
| 1311.24 | 324.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 118.59 | .04 | 1206.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 118.59 | 1206.27 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2332.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 320.98 | .41 | 320.69 | 3 | 320.02 | 3.95 | 319.79 | 5.58 | 319.35 |
| 7.76 | 318.83 | 9.16 | 318.47 | 11.01 | 318.02 | 12.53 | 317.67 | 13.59 | 317.35 |
| 16.53 | 316.9 | 18.82 | 317.12 | 20.21 | 317.11 | 21.11 | 317.16 | 22.79 | 317.06 |
| 23.26 | 316.96 | 24.87 | 316.8 | 25.81 | 316.69 | 26.34 | 316.69 | 28.06 | 316.48 |
| 28.96 | 316.28 | 30.51 | 315.89 | 30.73 | 315.88 | 31.02 | 316 | 31.48 | 316.05 |
| 33.19 | 316.12 | 34.31 | 316.03 | 35.58 | 315.87 | 37.62 | 315.56 | 40.51 | 315.02 |
| 44.46 | 314.4 | 49.41 | 313.49 | 49.82 | 313.39 | 51.78 | 312.78 | 53.08 | 312.35 |
| 53.58 | 312.15 | 54.61 | 311.8 | 55.83 | 311.34 | 57.17 | 310.9 | 58.6 | 310.54 |
| 59.48 | 310.25 | 61.38 | 309.9 | 62.13 | 309.82 | 63.17 | 309.91 | 63.59 | 309.9 |
| 64.66 | 309.95 | 66.29 | 309.88 | 66.96 | 309.83 | 67.79 | 309.84 | 68.61 | 309.89 |
| 69.5 | 309.8 | 70.68 | 309.57 | 73.09 | 308.84 | 74.87 | 308.39 | 76.86 | 307.94 |
| 77.62 | 307.72 | 79.67 | 307.17 | 81.44 | 306.74 | 84.54 | 306.07 | 86.69 | 305.58 |
| 88.81 | 305.23 | 92.9 | 304.44 | 93.67 | 304.28 | 94.76 | 304.02 | 99.1 | 303.07 |
| 100.48 | 302.71 | 102.94 | 302.11 | 104.84 | 301.37 | 105.46 | 301.15 | 107.93 | 300.18 |
| 109.39 | 299.64 | 112.35 | 298.96 | 113.2 | 298.83 | 113.97 | 298.66 | 114.46 | 298.6 |
| 114.98 | 298.52 | 116.34 | 298.42 | 120.26 | 298.21 | 122.95 | 298.09 | 123.91 | 298 |
| 126.24 | 297.81 | 127.56 | 297.72 | 136.93 | 297.16 | 140.69 | 296.96 | 143.41 | 296.75 |
| 145.37 | 296.71 | 154.99 | 296.42 | 155.58 | 296.42 | 162.08 | 296.22 | 171.6 | 296.06 |
| 173.27 | 296.02 | 173.97 | 295.94 | 174.6 | 295.95 | 175.38 | 296.01 | 177.08 | 296.01 |
| 178.44 | 296.03 | 184.86 | 295.84 | 187.69 | 295.8 | 191.04 | 295.7 | 191.85 | 295.71 |
| 195.65 | 295.72 | 197.6 | 295.71 | 199.18 | 295.74 | 200.8 | 295.74 | 202.78 | 295.79 |
| 208.4 | 295.75 | 212.06 | 295.71 | 216.76 | 295.65 | 218.71 | 295.64 | 220.23 | 295.65 |
| 221.71 | 295.64 | 225.35 | 295.7 | 226.44 | 295.66 | 227.61 | 295.64 | 230 | 295.77 |
| 232.67 | 295.83 | 235.39 | 295.91 | 240.93 | 296.09 | 249.52 | 296.16 | 251.33 | 296.12 |
| 254.4 | 296.07 | 255.04 | 296.09 | 257.07 | 296.23 | 259.09 | 296.26 | 260.72 | 296.27 |
| 262.57 | 296.26 | 268.15 | 296.35 | 270.52 | 296.37 | 272.2 | 296.36 | 272.92 | 296.31 |
| 275.94 | 296.26 | 279.77 | 296.07 | 281.98 | 295.92 | 282.98 | 295.89 | 283.93 | 295.83 |
| 290.71 | 295.76 | 300.19 | 295.6 | 302.64 | 295.59 | 303.53 | 295.6 | 306.71 | 295.6 |
| 316.19 | 295.47 | 324.42 | 295.05 | 326.52 | 295 | 328.82 | 295.02 | 331.24 | 295.11 |
| 331.53 | 295.11 | 337.87 | 295.35 | 338.07 | 295.35 | 342.73 | 295.6 | 360.25 | 296.23 |
| 366.76 | 296.5 | 370.35 | 296.63 | 374.08 | 296.66 | 390.74 | 296.65 | 391.7 | 296.63 |
| 400.96 | 296.67 | 402.81 | 296.69 | 404.44 | 296.68 | 406.72 | 296.61 | 408.27 | 296.46 |
| 410.08 | 296.42 | 412.13 | 296.41 | 413.71 | 296.39 | 415.15 | 296.41 | 418.91 | 296.43 |
| 419.58 | 296.41 | 421.87 | 296.38 | 422.4 | 296.39 | 425.84 | 296.38 | 435.47 | 296.3 |
| 442.43 | 296.32 | 447.17 | 296.4 | 449.61 | 296.38 | 451.48 | 296.38 | 455.45 | 296.32 |
| 456.87 | 296.31 | 458.19 | 296.17 | 458.59 | 296.18 | 459.71 | 296.1 | 460.68 | 296.11 |
| 462.16 | 296 | 463.61 | 295.92 | 465.99 | 295.83 | 467.81 | 295.79 | 470.74 | 295.82 |
| 472.49 | 295.81 | 477.1 | 295.87 | 481.26 | 295.9 | 482.7 | 295.85 | 482.74 | 295.83 |
| 489.24 | 295.85 | 493.21 | 295.91 | 493.86 | 295.94 | 495.93 | 295.98 | 499.87 | 296.02 |
| 506.54 | 295.98 | 508.39 | 295.99 | 510.59 | 296.02 | 518.39 | 296.32 | 520.62 | 296.37 |
| 522.1 | 296.39 | 523.46 | 296.35 | 524.85 | 296.25 | 526.11 | 296.24 | 529.12 | 296.34 |
| 530.86 | 296.44 | 534.27 | 296.6 | 538.43 | 296.75 | 538.82 | 296.79 | 540.92 | 296.8 |
| 543.3 | 296.83 | 543.99 | 296.8 | 545.74 | 296.65 | 550.58 | 296.18 | 551.15 | 296.11 |
| 552.59 | 296.1 | 555.25 | 296.19 | 559.85 | 296.33 | 562 | 296.33 | 563.48 | 296.3 |
| 564.71 | 296.24 | 567.57 | 296.07 | 571.1 | 295.91 | 573.54 | 295.86 | 576.23 | 295.91 |
| 578.33 | 295.98 | 580.63 | 296.03 | 583.03 | 296.04 | 587.84 | 296.01 | 589.34 | 295.97 |
| 592.49 | 295.93 | 593.59 | 295.94 | 594.85 | 295.92 | 598.24 | 295.94 | 607.51 | 295.84 |
| 610.97 | 295.86 | 614.47 | 295.9 | 617.07 | 296.01 | 619.41 | 296.07 | 622.23 | 296.2 |
| 628.14 | 296.39 | 631.31 | 296.51 | 640.6 | 296.75 | 640.96 | 296.75 | 645.4 | 296.86 |
| 646.73 | 297.01 | 647.94 | 297.12 | 650.58 | 297.28 | 652.57 | 297.36 | 654.19 | 297.36 |
| 655.95 | 297.34 | 656.74 | 297.39 | 658.79 | 297.38 | 661.11 | 297.32 | 666.86 | 297.19 |
| 670.63 | 297.12 | 678.3 | 296.91 | 679.61 | 296.89 | 691.89 | 296.99 | 697.45 | 297.08 |
| 700.78 | 297.1 | 702.21 | 297.12 | 703.94 | 297.12 | 705.71 | 297.14 | 715.07 | 297.19 |
| 716.32 | 297.19 | 717.04 | 297.21 | 721.82 | 297.27 | 725.19 | 297.29 | 727.55 | 297.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 728.82 | 297.31 | 729.22 | 297.28 | 731.49 | 297.29 | 732.98 | 297.33 | 733.71 | 297.27 |
| 734.64 | 297.24 | 736.07 | 297.08 | 738.87 | 296.71 | 740.71 | 296.56 | 743.92 | 296.62 |
| 744.72 | 296.67 | 747.36 | 296.74 | 749.59 | 296.75 | 751.73 | 296.72 | 756.24 | 296.59 |
| 760.81 | 296.42 | 761.73 | 296.4 | 763.73 | 296.41 | 765.67 | 296.39 | 775.61 | 296.5 |
| 778.06 | 296.5 | 781.28 | 296.4 | 782.53 | 296.44 | 786.37 | 296.54 | 787.52 | 296.6 |
| 789.5 | 296.65 | 792.41 | 296.85 | 797.18 | 297.19 | 799.5 | 297.32 | 800.29 | 297.34 |
| 802.53 | 297.33 | 803.95 | 297.31 | 805.44 | 297.31 | 806.88 | 297.4 | 811.68 | 297.48 |
| 813.63 | 297.52 | 817.58 | 297.56 | 817.67 | 297.54 | 820.02 | 297.55 | 820.82 | 297.6 |
| 822.93 | 297.66 | 824.02 | 297.61 | 828.55 | 297.59 | 834.7 | 297.61 | 836.62 | 297.49 |
| 837.47 | 297.45 | 841.85 | 297.2 | 842.14 | 297.17 | 843.8 | 297.12 | 846.23 | 297.09 |
| 849.45 | 297.02 | 852.94 | 297.02 | 856.2 | 297.06 | 862.28 | 297.16 | 865.9 | 297.28 |
| 866.68 | 297.26 | 873.24 | 297.25 | 880.79 | 297.31 | 881.69 | 297.23 | 888.23 | 297.34 |
| 888.44 | 297.35 | 895.77 | 297.47 | 896.26 | 297.45 | 897.36 | 297.5 | 900.61 | 297.43 |
| 903.2 | 297.42 | 904.67 | 297.24 | 905.79 | 297.12 | 907.89 | 296.84 | 909.24 | 296.77 |
| 910.55 | 296.76 | 911.67 | 296.79 | 912.63 | 296.75 | 913.86 | 296.82 | 914.37 | 296.87 |
| 917.22 | 297.04 | 924.21 | 297.35 | 927.85 | 297.41 | 930.2 | 297.42 | 932.61 | 297.45 |
| 934.5 | 297.5 | 937.23 | 297.53 | 940.29 | 297.41 | 940.81 | 297.42 | 949.39 | 297.52 |
| 951.81 | 297.57 | 954.51 | 297.61 | 954.65 | 297.6 | 958.56 | 297.54 | 960.43 | 297.54 |
| 962.48 | 297.56 | 963.44 | 297.55 | 966.01 | 297.63 | 968.41 | 297.73 | 970.44 | 297.84 |
| 972.66 | 297.85 | 973.03 | 297.83 | 976.84 | 297.7 | 979.54 | 297.62 | 981.62 | 297.57 |
| 982.69 | 297.53 | 983.58 | 297.53 | 985.4 | 297.64 | 986.99 | 297.72 | 989.12 | 297.78 |
| 990.27 | 297.78 | 995.38 | 297.92 | 1000.28 | 297.96 | 1005.45 | 297.82 | 1007.5 | 297.75 |
| 1009.17 | 297.65 | 1010.3 | 297.55 | 1015.09 | 297.49 | 1015.83 | 297.47 | 1017.55 | 297.38 |
| 1019.62 | 297.36 | 1025.82 | 297.42 | 1027.1 | 297.46 | 1033.22 | 297.55 | 1038.3 | 297.66 |
| 1039.81 | 297.67 | 1043.31 | 297.63 | 1044.13 | 297.6 | 1045.32 | 297.59 | 1050.89 | 297.62 |
| 1054.55 | 297.67 | 1054.73 | 297.66 | 1058.1 | 297.67 | 1060.19 | 297.69 | 1065.54 | 297.85 |
| 1067.26 | 297.85 | 1069.31 | 297.91 | 1069.74 | 297.9 | 1071.46 | 297.93 | 1073.51 | 297.98 |
| 1075.6 | 298.06 | 1078.68 | 298.11 | 1083.5 | 298.14 | 1084.69 | 298.13 | 1087.8 | 298.15 |
| 1098.01 | 298.24 | 1103.04 | 298.32 | 1103.12 | 298.33 | 1106.98 | 298.5 | 1107.41 | 298.53 |
| 1108.96 | 298.5 | 1116.85 | 298.44 | 1118.67 | 298.43 | 1121.66 | 298.35 | 1123.81 | 298.26 |
| 1125.65 | 298.22 | 1128.19 | 298.21 | 1136.08 | 298.3 | 1137.86 | 298.33 | 1140.31 | 298.33 |
| 1141.21 | 298.35 | 1143.85 | 298.45 | 1149.87 | 298.99 | 1151.68 | 299.43 | 1152.73 | 299.65 |
| 1153.39 | 299.85 | 1155.22 | 300.34 | 1156.19 | 300.69 | 1157.36 | 301.02 | 1158.38 | 301.42 |
| 1160.41 | 302.32 | 1162.16 | 303.05 | 1164.03 | 303.73 | 1167.51 | 305.08 | 1167.77 | 305.2 |
| 1170.37 | 306.23 | 1171.34 | 306.63 | 1172.91 | 307.2 | 1175.2 | 308.08 | 1175.55 | 308.23 |
| 1175.92 | 308.46 | 1177.19 | 309.14 | 1178.12 | 309.68 | 1179.33 | 310.33 | 1180.97 | 311.26 |
| 1181.69 | 311.64 | 1182.8 | 312.34 | 1184.11 | 313.21 | 1187.51 | 315.27 | 1188.32 | 315.84 |
| 1188.64 | 315.91 | 1189.53 | 315.99 | 1191.62 | 315.99 | 1193.21 | 316.04 | 1194.85 | 316.13 |
| 1198.8 | 316.39 | 1199.39 | 316.45 | 1201.58 | 316.84 | 1203.99 | 317.23 | 1206.18 | 317.56 |
| 1209.99 | 318.22 | 1213.16 | 318.85 | 1214.24 | 319.05 | 1217.8 | 319.62 | 1219.12 | 319.79 |
| 1222.49 | 320.13 | 1225.97 | 320.34 | 1227.41 | 320.39 | 1228.3 | 320.46 | 1230.71 | 320.59 |
| 1234.68 | 320.68 | 1237.8 | 320.79 | 1240.05 | 320.91 | 1244.12 | 321.15 | 1246.34 | 321.24 |
| 1246.83 | 321.28 | 1249.25 | 321.42 | 1250.16 | 321.51 | 1250.61 | 321.5 | 1251.44 | 321.59 |
| 1257.92 | 322.15 | 1261.82 | 322.43 | 1268.07 | 322.98 | 1269.47 | 323.11 | 1271.78 | 323.26 |
| 1274.77 | 323.43 | 1279.88 | 323.74 | 1281.11 | 323.84 | 1282.72 | 323.93 | 1286.07 | 324.05 |
| 1293.88 | 324.27 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 114.46 | .04 | 1191.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 114.46 | 1191.62 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2313.57*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 320.47 | .4 | 320.16 | 3.8 | 319.2 | 5.38 | 318.73 | 7.48 | 318.17 |
| 8.83 | 317.78 | 10.61 | 317.3 | 12.08 | 316.93 | 13.1 | 316.59 | 15.83 | 316.11 |
| 15.94 | 316.1 | 18.14 | 316.33 | 19.48 | 316.33 | 20.35 | 316.38 | 21.37 | 316.33 |
| 21.96 | 316.27 | 22.42 | 316.18 | 24.88 | 315.92 | 25.39 | 315.91 | 27.05 | 315.71 |
| 27.91 | 315.53 | 29.41 | 315.18 | 29.62 | 315.17 | 29.9 | 315.27 | 30.56 | 315.31 |
| 31.99 | 315.32 | 33.07 | 315.23 | 34.29 | 315.07 | 36.26 | 314.76 | 38.85 | 314.27 |
| 39.05 | 314.22 | 42.86 | 313.62 | 47.24 | 312.8 | 48.02 | 312.63 | 49.92 | 312.07 |
| 51.17 | 311.67 | 51.65 | 311.49 | 52.64 | 311.17 | 53.82 | 310.75 | 55.11 | 310.36 |
| 56.48 | 310.04 | 57.33 | 309.8 | 58.71 | 309.58 | 59.75 | 309.46 | 60.89 | 309.54 |
| 61.29 | 309.54 | 62.33 | 309.6 | 63.07 | 309.59 | 63.53 | 309.55 | 64.54 | 309.53 |
| 65.34 | 309.55 | 66.13 | 309.6 | 67 | 309.52 | 68.13 | 309.28 | 70.45 | 308.57 |
| 72.34 | 308.11 | 74.09 | 307.72 | 74.82 | 307.5 | 76.8 | 306.96 | 78.5 | 306.53 |
| 81.49 | 305.87 | 83.57 | 305.39 | 85.6 | 305.06 | 89.55 | 304.27 | 90.79 | 304 |
| 91.34 | 303.85 | 95.53 | 302.92 | 96.85 | 302.56 | 99.23 | 301.95 | 101.06 | 301.19 |
| 101.66 | 300.97 | 104.04 | 299.96 | 105.45 | 299.4 | 108.3 | 298.72 | 109.12 | 298.59 |
| 110.33 | 298.36 | 110.84 | 298.29 | 112.14 | 298.19 | 115.9 | 297.94 | 117.75 | 297.85 |
| 118.48 | 297.8 | 121.64 | 297.52 | 122.91 | 297.42 | 131.9 | 296.8 | 135.51 | 296.58 |
| 138.12 | 296.36 | 140 | 296.32 | 149.23 | 296.05 | 149.8 | 296.04 | 156.04 | 295.86 |
| 165.18 | 295.7 | 166.78 | 295.65 | 167.45 | 295.58 | 168.8 | 295.64 | 170.44 | 295.63 |
| 171.74 | 295.65 | 177.9 | 295.47 | 180.62 | 295.43 | 183.84 | 295.33 | 184.61 | 295.34 |
| 188.26 | 295.34 | 190.13 | 295.33 | 191.65 | 295.35 | 193.2 | 295.35 | 195.1 | 295.38 |
| 196.64 | 295.38 | 200.49 | 295.35 | 202.76 | 295.32 | 204.01 | 295.32 | 208.52 | 295.27 |
| 210.4 | 295.26 | 211.85 | 295.27 | 213.27 | 295.25 | 217 | 295.31 | 217.81 | 295.28 |
| 218.93 | 295.27 | 220.23 | 295.35 | 222.17 | 295.42 | 223.79 | 295.45 | 226.41 | 295.52 |
| 231.72 | 295.69 | 239.96 | 295.78 | 241.7 | 295.74 | 244.65 | 295.7 | 245.26 | 295.72 |
| 246.52 | 295.81 | 247.21 | 295.84 | 249.15 | 295.87 | 250.71 | 295.88 | 252.49 | 295.87 |
| 257.85 | 295.96 | 260.12 | 295.98 | 261.73 | 295.97 | 262.43 | 295.93 | 265.33 | 295.88 |
| 270.07 | 295.62 | 271.12 | 295.53 | 272.08 | 295.49 | 272.99 | 295.42 | 279.5 | 295.34 |
| 288.59 | 295.17 | 294.86 | 295.17 | 303.95 | 295.04 | 311.85 | 294.65 | 313.86 | 294.6 |
| 316.17 | 294.63 | 318.59 | 294.72 | 318.87 | 294.72 | 325.2 | 294.97 | 330.05 | 295.23 |
| 347.53 | 295.88 | 354.02 | 296.14 | 357.6 | 296.27 | 361.32 | 296.31 | 377.95 | 296.3 |
| 378.9 | 296.28 | 388.15 | 296.31 | 389.99 | 296.33 | 391.62 | 296.31 | 393.89 | 296.24 |
| 395.87 | 296.06 | 397.24 | 296.03 | 399.28 | 296.03 | 400.86 | 296.01 | 402.3 | 296.04 |
| 406.06 | 296.06 | 406.71 | 296.03 | 409.53 | 296.01 | 412.97 | 296 | 422.58 | 295.91 |
| 429.51 | 295.95 | 434.25 | 296.03 | 438.55 | 296.02 | 442.51 | 295.97 | 443.92 | 295.96 |
| 445.24 | 295.82 | 445.64 | 295.83 | 446.75 | 295.74 | 447.73 | 295.75 | 449.2 | 295.63 |
| 450.65 | 295.55 | 453.02 | 295.44 | 454.83 | 295.39 | 457.76 | 295.41 | 459.51 | 295.4 |
| 464.11 | 295.45 | 468.26 | 295.48 | 469.69 | 295.44 | 469.74 | 295.42 | 476.22 | 295.44 |
| 480.18 | 295.49 | 480.83 | 295.52 | 482.9 | 295.57 | 486.82 | 295.59 | 492.77 | 295.54 |
| 495.33 | 295.56 | 498.3 | 295.61 | 505.3 | 295.9 | 509 | 295.99 | 510.36 | 295.95 |
| 511.75 | 295.85 | 513.01 | 295.83 | 516.01 | 295.94 | 517.74 | 296.04 | 521.15 | 296.19 |
| 525.3 | 296.35 | 525.68 | 296.39 | 527.78 | 296.4 | 530.15 | 296.43 | 530.84 | 296.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 532.59 | 296.23 | 537.42 | 295.73 | 537.98 | 295.65 | 539.42 | 295.64 | 541.77 | 295.73 |
| 542.07 | 295.73 | 546.66 | 295.89 | 548.81 | 295.89 | 550.28 | 295.85 | 554.36 | 295.64 |
| 557.89 | 295.48 | 560.32 | 295.43 | 565.94 | 295.57 | 568.57 | 295.61 | 574.59 | 295.56 |
| 576.95 | 295.5 | 579.23 | 295.48 | 580.33 | 295.49 | 581.58 | 295.47 | 584.97 | 295.49 |
| 594.21 | 295.41 | 597.66 | 295.43 | 601.15 | 295.46 | 603.75 | 295.57 | 606.08 | 295.64 |
| 608.9 | 295.76 | 614.8 | 295.96 | 617.96 | 296.08 | 627.58 | 296.34 | 632.01 | 296.45 |
| 633.03 | 296.58 | 634.55 | 296.73 | 637.18 | 296.89 | 639.17 | 296.97 | 640.78 | 296.97 |
| 642.22 | 296.95 | 643.18 | 297 | 645.98 | 296.99 | 649.39 | 296.89 | 653.42 | 296.79 |
| 657.18 | 296.72 | 664.84 | 296.49 | 666.15 | 296.48 | 677.39 | 296.58 | 683.95 | 296.69 |
| 688.69 | 296.74 | 690.42 | 296.74 | 692.19 | 296.76 | 701.53 | 296.84 | 702.77 | 296.84 |
| 708.26 | 296.92 | 712.34 | 296.96 | 713.51 | 296.99 | 715.24 | 296.98 | 715.64 | 296.94 |
| 717.91 | 296.96 | 719.39 | 296.99 | 720.12 | 296.93 | 721.05 | 296.89 | 723.09 | 296.64 |
| 725.52 | 296.3 | 727.11 | 296.17 | 730.31 | 296.22 | 731.1 | 296.28 | 732.3 | 296.31 |
| 734.84 | 296.34 | 738.1 | 296.32 | 742.6 | 296.18 | 747.16 | 296 | 748.08 | 295.98 |
| 750.07 | 295.99 | 752 | 295.98 | 762.7 | 296.12 | 764.37 | 296.11 | 767.58 | 296.02 |
| 770.84 | 296.11 | 773.3 | 296.19 | 773.81 | 296.22 | 775.01 | 296.24 | 776.72 | 296.34 |
| 777.32 | 296.39 | 783.44 | 296.84 | 785.56 | 296.97 | 786.55 | 297 | 788.78 | 297 |
| 790.2 | 296.98 | 791.69 | 296.98 | 793.12 | 297.06 | 799.85 | 297.16 | 803.8 | 297.2 |
| 804.51 | 297.18 | 806.23 | 297.19 | 807.03 | 297.25 | 809.13 | 297.33 | 810.86 | 297.27 |
| 814.74 | 297.26 | 821.19 | 297.28 | 822.79 | 297.16 | 828.01 | 296.87 | 829.09 | 296.8 |
| 832.39 | 296.76 | 835.6 | 296.71 | 839.08 | 296.71 | 842.33 | 296.75 | 848.4 | 296.84 |
| 850.35 | 296.92 | 852.01 | 296.97 | 852.79 | 296.95 | 859.32 | 296.94 | 866.86 | 297 |
| 867.76 | 296.91 | 874.28 | 297 | 874.49 | 297.01 | 881.81 | 297.12 | 882.29 | 297.1 |
| 883.39 | 297.15 | 885.8 | 297.1 | 889.22 | 297.07 | 890.69 | 296.88 | 891.81 | 296.76 |
| 893.74 | 296.49 | 894.65 | 296.41 | 896.55 | 296.39 | 897.67 | 296.43 | 898.63 | 296.38 |
| 899.86 | 296.45 | 901.59 | 296.58 | 903.2 | 296.66 | 910.18 | 296.99 | 913.81 | 297.07 |
| 917.21 | 297.1 | 918.56 | 297.12 | 920.45 | 297.17 | 922.1 | 297.19 | 923.5 | 297.19 |
| 925.92 | 297.07 | 926.74 | 297.07 | 935.3 | 297.16 | 939.04 | 297.22 | 940.55 | 297.22 |
| 944.46 | 297.15 | 945.04 | 297.16 | 946.31 | 297.14 | 947.66 | 297.16 | 949.32 | 297.15 |
| 952.68 | 297.27 | 954.28 | 297.34 | 956.3 | 297.46 | 958.52 | 297.47 | 958.89 | 297.45 |
| 962.69 | 297.32 | 968.52 | 297.15 | 969.41 | 297.14 | 971.07 | 297.25 | 972.82 | 297.34 |
| 974.94 | 297.4 | 976.09 | 297.41 | 978.44 | 297.47 | 980.59 | 297.54 | 985.47 | 297.59 |
| 986.08 | 297.58 | 991.23 | 297.44 | 993.28 | 297.36 | 994.94 | 297.26 | 996.07 | 297.15 |
| 1001.59 | 297.08 | 1003.31 | 296.98 | 1005.37 | 296.96 | 1010.43 | 297.01 | 1011.55 | 297.03 |
| 1014.03 | 297.1 | 1017.07 | 297.14 | 1018.94 | 297.19 | 1024 | 297.31 | 1025.51 | 297.31 |
| 1029 | 297.27 | 1029.82 | 297.24 | 1031.01 | 297.23 | 1036.57 | 297.26 | 1037.32 | 297.28 |
| 1040.22 | 297.31 | 1040.4 | 297.3 | 1043.09 | 297.3 | 1043.76 | 297.29 | 1045.85 | 297.32 |
| 1048.25 | 297.38 | 1051.18 | 297.47 | 1052.43 | 297.46 | 1054.94 | 297.52 | 1055.37 | 297.51 |
| 1057.08 | 297.53 | 1060.13 | 297.62 | 1061.22 | 297.66 | 1064.29 | 297.72 | 1069.1 | 297.76 |
| 1073.39 | 297.78 | 1078.18 | 297.83 | 1083.57 | 297.9 | 1088.59 | 297.99 | 1088.67 | 298 |
| 1092.53 | 298.18 | 1092.95 | 298.22 | 1094.51 | 298.18 | 1102.38 | 298.13 | 1104.19 | 298.13 |
| 1107.17 | 298.04 | 1109.32 | 297.95 | 1111.64 | 297.9 | 1113.68 | 297.89 | 1121.56 | 297.97 |
| 1123.34 | 298 | 1125.78 | 298 | 1126.67 | 298.01 | 1129.31 | 298.12 | 1131.12 | 298.3 |
| 1135.31 | 298.7 | 1137.12 | 299.18 | 1138.18 | 299.41 | 1138.83 | 299.62 | 1140.66 | 300.15 |
| 1141.62 | 300.52 | 1142.79 | 300.88 | 1143.81 | 301.3 | 1144.52 | 301.62 | 1146.41 | 302.52 |
| 1147.57 | 303.03 | 1149.68 | 303.84 | 1150.38 | 304.14 | 1152.92 | 305.19 | 1153.17 | 305.32 |
| 1155.77 | 306.4 | 1156.74 | 306.82 | 1158.3 | 307.42 | 1159.03 | 307.74 | 1160.94 | 308.51 |
| 1163.5 | 309.95 | 1164.71 | 310.59 | 1165.58 | 311.09 | 1167.06 | 311.89 | 1168.17 | 312.56 |
| 1169.48 | 313.4 | 1171.34 | 314.48 | 1172.87 | 315.35 | 1173.68 | 315.9 | 1174.19 | 315.98 |
| 1174.98 | 316.03 | 1176.97 | 316 | 1179.82 | 316.05 | 1180.12 | 316.08 | 1182.34 | 316.18 |
| 1183.96 | 316.27 | 1184.53 | 316.32 | 1186.67 | 316.69 | 1189.01 | 317.08 | 1191.15 | 317.4 |
| 1195.41 | 318.14 | 1198.99 | 318.84 | 1201.85 | 319.29 | 1203.15 | 319.48 | 1207.02 | 319.87 |
| 1209.73 | 320.05 | 1211.81 | 320.13 | 1212.68 | 320.2 | 1215.02 | 320.32 | 1218.89 | 320.41 |
| 1221.93 | 320.5 | 1224.11 | 320.61 | 1228.07 | 320.83 | 1230.24 | 320.91 | 1230.71 | 320.95 |
| 1233.07 | 321.08 | 1233.95 | 321.16 | 1234.4 | 321.15 | 1235.2 | 321.24 | 1240.62 | 321.72 |
| 1242.41 | 321.85 | 1243.54 | 321.95 | 1245.3 | 322.08 | 1252.75 | 322.78 | 1255 | 322.93 |
| 1257.91 | 323.11 | 1262.89 | 323.43 | 1264.08 | 323.53 | 1265.65 | 323.62 | 1268.91 | 323.76 |
| 1276.51 | 324 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 110.33 | .04 | 1176.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 110.33 | 1176.97 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2294.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 319.97 | .38 | 319.64 | 2.78 | 318.87 | 3.66 | 318.61 | 5.18 | 318.11 |
| 7.2 | 317.51 | 8.5 | 317.1 | 10.21 | 316.59 | 11.63 | 316.18 | 12.61 | 315.82 |
| 15.24 | 315.31 | 15.72 | 315.34 | 17.46 | 315.55 | 18.75 | 315.54 | 19.59 | 315.6 |
| 21.14 | 315.49 | 21.58 | 315.4 | 23.95 | 315.15 | 24.44 | 315.13 | 26.04 | 314.95 |
| 28.31 | 314.47 | 28.86 | 314.54 | 29.42 | 314.56 | 30.8 | 314.53 | 31.83 | 314.42 |
| 33.01 | 314.26 | 34.91 | 313.95 | 36.09 | 313.71 | 37.59 | 313.43 | 41.26 | 312.83 |
| 44.45 | 312.23 | 46.22 | 311.88 | 48.05 | 311.36 | 49.25 | 311 | 49.72 | 310.83 |
| 51.81 | 310.17 | 53.05 | 309.82 | 55.19 | 309.35 | 56.51 | 309.17 | 57.51 | 309.09 |
| 58.62 | 309.18 | 59 | 309.18 | 60 | 309.24 | 60.71 | 309.25 | 61.15 | 309.22 |
| 62.13 | 309.22 | 62.9 | 309.25 | 63.66 | 309.31 | 64.49 | 309.23 | 65.58 | 309 |
| 66.65 | 308.68 | 67.82 | 308.31 | 69.64 | 307.87 | 71.32 | 307.49 | 73.92 | 306.74 |
| 75.57 | 306.33 | 78.45 | 305.68 | 80.45 | 305.2 | 82.4 | 304.88 | 86.92 | 303.95 |
| 87.92 | 303.69 | 91.96 | 302.76 | 93.23 | 302.4 | 95.52 | 301.79 | 97.28 | 301.01 |
| 97.56 | 300.91 | 100.15 | 299.74 | 101.5 | 299.17 | 104.25 | 298.48 | 105.04 | 298.35 |
| 105.75 | 298.19 | 106.21 | 298.13 | 106.69 | 298.06 | 107.93 | 297.95 | 111.54 | 297.68 |
| 113.31 | 297.58 | 114.01 | 297.52 | 117.04 | 297.22 | 118.25 | 297.12 | 126.87 | 296.45 |
| 130.33 | 296.2 | 132.82 | 295.97 | 143.48 | 295.67 | 144.02 | 295.66 | 149.99 | 295.49 |
| 158.75 | 295.33 | 160.29 | 295.29 | 161.24 | 295.22 | 162.22 | 295.27 | 163.79 | 295.26 |
| 165.04 | 295.27 | 170.94 | 295.1 | 173.55 | 295.06 | 176.63 | 294.96 | 177.37 | 294.97 |
| 180.87 | 294.96 | 182.04 | 294.94 | 185.6 | 294.95 | 187.43 | 294.98 | 188.9 | 294.98 |
| 194.76 | 294.93 | 195.96 | 294.93 | 200.28 | 294.88 | 203.47 | 294.88 | 204.83 | 294.87 |
| 208.4 | 294.93 | 209.18 | 294.91 | 210.76 | 294.92 | 211.5 | 294.97 | 213.36 | 295.04 |
| 214.92 | 295.07 | 217.42 | 295.14 | 222.5 | 295.3 | 230.4 | 295.39 | 232.07 | 295.36 |
| 235.18 | 295.34 | 237.35 | 295.46 | 239.21 | 295.49 | 240.71 | 295.5 | 242.41 | 295.48 |
| 243.92 | 295.51 | 245.52 | 295.52 | 247.54 | 295.56 | 249.72 | 295.59 | 251.26 | 295.59 |
| 251.93 | 295.55 | 254.71 | 295.5 | 258.23 | 295.3 | 260.26 | 295.14 | 262.05 | 295.02 |
| 268.28 | 294.92 | 277 | 294.75 | 279.25 | 294.74 | 280.07 | 294.75 | 283 | 294.75 |
| 291.72 | 294.6 | 298.56 | 294.29 | 299.28 | 294.25 | 301.21 | 294.21 | 303.52 | 294.23 |
| 305.93 | 294.33 | 306.21 | 294.33 | 312.52 | 294.59 | 312.73 | 294.59 | 314.58 | 294.7 |
| 317.36 | 294.85 | 334.8 | 295.52 | 341.28 | 295.79 | 344.85 | 295.91 | 347.73 | 295.93 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 348.57 | 295.95 | 365.15 | 295.94 | 366.1 | 295.93 | 375.33 | 295.95 | 377.17 | 295.97 |
| 378.79 | 295.94 | 381.05 | 295.87 | 383.04 | 295.68 | 384.4 | 295.65 | 388.02 | 295.63 |
| 389.45 | 295.66 | 393.2 | 295.69 | 393.85 | 295.66 | 395.39 | 295.64 | 396.67 | 295.64 |
| 400.09 | 295.62 | 409.68 | 295.53 | 416.6 | 295.57 | 420.2 | 295.63 | 420.56 | 295.65 |
| 422.07 | 295.67 | 425.61 | 295.66 | 430.98 | 295.61 | 431.33 | 295.59 | 432.29 | 295.46 |
| 432.69 | 295.47 | 433.8 | 295.38 | 434.77 | 295.39 | 436.24 | 295.26 | 440.05 | 295.06 |
| 441.86 | 294.99 | 442.54 | 295 | 444.78 | 295 | 446.53 | 294.98 | 451.11 | 295.03 |
| 455.26 | 295.06 | 456.73 | 295.01 | 461.09 | 295.02 | 463.19 | 295.03 | 467.15 | 295.08 |
| 467.79 | 295.11 | 469.86 | 295.15 | 473.77 | 295.17 | 479.71 | 295.1 | 482.26 | 295.12 |
| 485.22 | 295.18 | 492.21 | 295.48 | 493.89 | 295.53 | 495.58 | 295.56 | 495.9 | 295.58 |
| 497.38 | 295.54 | 497.91 | 295.48 | 498.64 | 295.44 | 499.9 | 295.43 | 502.89 | 295.54 |
| 504.62 | 295.63 | 508.02 | 295.79 | 512.16 | 295.95 | 512.54 | 295.99 | 517.01 | 296.02 |
| 517.69 | 295.98 | 519.44 | 295.81 | 524.25 | 295.27 | 524.82 | 295.2 | 526.25 | 295.18 |
| 528.59 | 295.27 | 533.48 | 295.44 | 535.62 | 295.44 | 537.09 | 295.4 | 538.31 | 295.35 |
| 541.16 | 295.2 | 542.83 | 295.12 | 545.31 | 295.04 | 547.11 | 295.01 | 549.78 | 295.06 |
| 552.71 | 295.14 | 555.36 | 295.17 | 556.55 | 295.16 | 561.34 | 295.1 | 563.69 | 295.05 |
| 564.79 | 295.05 | 565.97 | 295.03 | 567.06 | 295.04 | 568.31 | 295.02 | 571.69 | 295.05 |
| 580.92 | 294.98 | 584.36 | 294.99 | 587.84 | 295.02 | 590.43 | 295.13 | 592.76 | 295.2 |
| 595.57 | 295.33 | 601.45 | 295.53 | 604.61 | 295.65 | 614.21 | 295.92 | 618.63 | 296.05 |
| 619.95 | 296.21 | 621.16 | 296.33 | 623.79 | 296.51 | 625.77 | 296.59 | 628.81 | 296.56 |
| 629.56 | 296.58 | 629.92 | 296.62 | 631.83 | 296.62 | 635.97 | 296.5 | 643.74 | 296.31 |
| 651.38 | 296.08 | 651.84 | 296.06 | 664.9 | 296.2 | 670.44 | 296.3 | 676.9 | 296.36 |
| 678.67 | 296.39 | 689.22 | 296.49 | 696.9 | 296.6 | 697.95 | 296.6 | 699.94 | 296.65 |
| 701.67 | 296.64 | 702.06 | 296.6 | 703.36 | 296.61 | 705.8 | 296.66 | 706.53 | 296.59 |
| 707.46 | 296.54 | 708.88 | 296.36 | 711.67 | 295.95 | 713.5 | 295.77 | 716.7 | 295.82 |
| 717.49 | 295.88 | 718.69 | 295.91 | 721.22 | 295.94 | 722.34 | 295.94 | 724.47 | 295.91 |
| 728.96 | 295.77 | 729.37 | 295.74 | 733.51 | 295.58 | 734.43 | 295.56 | 737.09 | 295.57 |
| 738.34 | 295.56 | 748.24 | 295.72 | 749.02 | 295.73 | 750.68 | 295.72 | 753.88 | 295.63 |
| 758.95 | 295.79 | 760.1 | 295.85 | 761.29 | 295.87 | 762.06 | 295.91 | 769.71 | 296.49 |
| 771.82 | 296.64 | 772.8 | 296.67 | 776.45 | 296.65 | 777.93 | 296.65 | 779.37 | 296.71 |
| 790.01 | 296.84 | 790.72 | 296.82 | 792.44 | 296.84 | 793.24 | 296.9 | 795.34 | 296.99 |
| 796.43 | 296.94 | 800.93 | 296.93 | 807.05 | 296.96 | 807.37 | 296.95 | 808.96 | 296.82 |
| 809.81 | 296.78 | 814.17 | 296.53 | 815.25 | 296.46 | 818.54 | 296.44 | 821.74 | 296.4 |
| 825.21 | 296.4 | 828.45 | 296.44 | 834.51 | 296.53 | 838.11 | 296.66 | 838.89 | 296.65 |
| 845.41 | 296.64 | 852.94 | 296.69 | 853.83 | 296.59 | 860.54 | 296.67 | 867.22 | 296.76 |
| 868.33 | 296.75 | 869.42 | 296.79 | 872.66 | 296.74 | 875.23 | 296.73 | 877.82 | 296.39 |
| 879.75 | 296.12 | 880.66 | 296.04 | 882.11 | 296.02 | 883.67 | 296.06 | 884.37 | 296.01 |
| 884.9 | 296.02 | 887.58 | 296.21 | 889.19 | 296.29 | 896.15 | 296.62 | 897.65 | 296.67 |
| 899.77 | 296.72 | 902.11 | 296.75 | 904.51 | 296.79 | 906.4 | 296.84 | 908.05 | 296.86 |
| 909.44 | 296.85 | 912.06 | 296.72 | 912.67 | 296.72 | 921.21 | 296.79 | 923.62 | 296.83 |
| 925.74 | 296.85 | 930.93 | 296.76 | 932.2 | 296.75 | 935.1 | 296.76 | 935.2 | 296.75 |
| 937.75 | 296.84 | 940.15 | 296.95 | 942.16 | 297.08 | 944.38 | 297.09 | 944.74 | 297.07 |
| 948.54 | 296.93 | 951.23 | 296.85 | 953.99 | 296.78 | 955.25 | 296.76 | 956.9 | 296.87 |
| 958.64 | 296.96 | 960.76 | 297.02 | 962.73 | 297.06 | 964.86 | 297.13 | 966.99 | 297.18 |
| 968.52 | 297.18 | 971.26 | 297.21 | 972.65 | 297.18 | 977.02 | 297.05 | 979.06 | 296.97 |
| 979.66 | 296.92 | 980.71 | 296.87 | 981.85 | 296.76 | 986.61 | 296.7 | 987.35 | 296.68 |
| 989.06 | 296.58 | 991.12 | 296.56 | 997.29 | 296.64 | 998.56 | 296.69 | 1002.79 | 296.77 |
| 1004.65 | 296.83 | 1009.89 | 296.96 | 1011.22 | 296.96 | 1014.7 | 296.91 | 1016.7 | 296.86 |
| 1022.25 | 296.9 | 1023 | 296.92 | 1025.89 | 296.95 | 1026.07 | 296.93 | 1029.42 | 296.92 |
| 1031.5 | 296.94 | 1033.9 | 297 | 1036.83 | 297.09 | 1038.54 | 297.08 | 1040.58 | 297.14 |
| 1041 | 297.12 | 1042.71 | 297.14 | 1044.76 | 297.19 | 1046.84 | 297.27 | 1049.9 | 297.33 |
| 1054.7 | 297.38 | 1058.98 | 297.42 | 1063.76 | 297.48 | 1069.14 | 297.56 | 1074.15 | 297.66 |
| 1077.38 | 297.83 | 1078.5 | 297.9 | 1080.05 | 297.87 | 1089.71 | 297.82 | 1092.69 | 297.74 |
| 1093.75 | 297.68 | 1094.83 | 297.64 | 1097.15 | 297.58 | 1099.18 | 297.57 | 1107.04 | 297.64 |
| 1108.81 | 297.66 | 1112.14 | 297.68 | 1114.77 | 297.8 | 1116.58 | 297.98 | 1120.76 | 298.42 |
| 1122.56 | 298.93 | 1123.62 | 299.17 | 1124.27 | 299.4 | 1126.09 | 299.96 | 1127.06 | 300.36 |
| 1128.22 | 300.73 | 1129.14 | 301.13 | 1129.95 | 301.52 | 1131.83 | 302.47 | 1132.99 | 303.01 |
| 1133.32 | 303.13 | 1135.1 | 303.87 | 1138.41 | 305.34 | 1138.58 | 305.43 | 1140.51 | 306.28 |
| 1142.14 | 307.02 | 1143.7 | 307.65 | 1144.43 | 307.98 | 1145.98 | 308.63 | 1147.95 | 309.69 |
| 1148.48 | 310 | 1150.09 | 310.86 | 1151.72 | 311.76 | 1152.44 | 312.13 | 1153.54 | 312.78 |
| 1154.14 | 313.17 | 1154.85 | 313.58 | 1156.71 | 314.61 | 1158.23 | 315.44 | 1159.04 | 315.95 |
| 1159.55 | 316.03 | 1160.72 | 316.07 | 1162.33 | 316 | 1163.83 | 315.99 | 1165.09 | 316 |
| 1165.38 | 316.02 | 1169.12 | 316.15 | 1169.68 | 316.19 | 1171.76 | 316.55 | 1174.03 | 316.92 |
| 1176.11 | 317.24 | 1179.71 | 317.85 | 1183.74 | 318.62 | 1187.11 | 319.14 | 1187.85 | 319.24 |
| 1191.26 | 319.59 | 1194.18 | 319.79 | 1196.21 | 319.87 | 1197.06 | 319.95 | 1197.7 | 319.97 |
| 1199.34 | 320.06 | 1203.09 | 320.13 | 1206.05 | 320.22 | 1208.18 | 320.31 | 1212.03 | 320.5 |
| 1214.14 | 320.58 | 1214.6 | 320.62 | 1216.89 | 320.74 | 1217.75 | 320.82 | 1218.18 | 320.81 |
| 1219.39 | 320.93 | 1224.24 | 321.36 | 1225.97 | 321.49 | 1228.79 | 321.74 | 1236.04 | 322.45 |
| 1238.22 | 322.61 | 1241.06 | 322.79 | 1245.9 | 323.12 | 1247.77 | 323.27 | 1251.75 | 323.47 |
| 1259.15 | 323.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 106.21 | .04 | 1162.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 106.21 | 1162.33 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2274.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 319.46 | .37 | 319.11 | 2.67 | 318.3 | 3.52 | 318.02 | 4.97 | 317.49 |
| 6.92 | 316.85 | 8.17 | 316.41 | 9.82 | 315.87 | 11.18 | 315.44 | 12.12 | 315.06 |
| 13.43 | 314.77 | 14.74 | 314.5 | 16.78 | 314.76 | 18.03 | 314.75 | 18.82 | 314.82 |
| 19.77 | 314.76 | 20.74 | 314.62 | 23.02 | 314.37 | 23.49 | 314.36 | 25.03 | 314.18 |
| 27.21 | 313.76 | 28.07 | 313.81 | 29.6 | 313.74 | 30.59 | 313.62 | 31.73 | 313.45 |
| 33.55 | 313.14 | 34.69 | 312.91 | 36.13 | 312.64 | 39.65 | 312.04 | 42.72 | 311.46 |
| 44.43 | 311.12 | 46.69 | 310.51 | 49.79 | 309.58 | 50.98 | 309.28 | 51.92 | 309.09 |
| 53.04 | 308.9 | 54.32 | 308.77 | 55.41 | 308.72 | 56.34 | 308.81 | 57.66 | 308.89 |
| 59.71 | 308.92 | 60.45 | 308.96 | 61.19 | 309.03 | 62.39 | 308.87 | 63.03 | 308.71 |
| 65.18 | 308.05 | 66.93 | 307.63 | 68.55 | 307.27 | 69.22 | 307.06 | 71.05 | 306.53 |
| 72.63 | 306.13 | 75.4 | 305.48 | 77.31 | 305.02 | 79.2 | 304.7 | 83.54 | 303.78 |
| 84.51 | 303.52 | 87.05 | 302.93 | 88.38 | 302.61 | 88.98 | 302.43 | 91.81 | 301.63 |
| 93.5 | 300.83 | 94.05 | 300.6 | 96.26 | 299.53 | 97.56 | 298.93 | 100.19 | 298.24 |
| 100.96 | 298.12 | 101.64 | 297.95 | 102.08 | 297.89 | 102.54 | 297.82 | 103.73 | 297.71 |
| 107.18 | 297.41 | 108.87 | 297.3 | 112.44 | 296.93 | 113.6 | 296.82 | 121.84 | 296.1 |
| 125.15 | 295.82 | 127.53 | 295.57 | 129.26 | 295.53 | 137.72 | 295.3 | 138.24 | 295.29 |
| 143.95 | 295.12 | 152.33 | 294.96 | 153.8 | 294.92 | 154.41 | 294.87 | 155.65 | 294.9 |
| 158.34 | 294.89 | 163.99 | 294.73 | 166.48 | 294.68 | 169.42 | 294.6 | 173.48 | 294.58 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 174.6 | 294.56 | 178 | 294.56 | 179.75 | 294.58 | 181.16 | 294.58 | 184.68 | 294.56 |
| 186.76 | 294.54 | 187.91 | 294.54 | 192.04 | 294.5 | 193.76 | 294.49 | 195.09 | 294.5 |
| 196.4 | 294.49 | 199.81 | 294.55 | 201.58 | 294.54 | 204.55 | 294.66 | 208.43 | 294.75 |
| 213.29 | 294.91 | 220.85 | 295 | 222.44 | 294.98 | 225.42 | 294.97 | 227.49 | 295.07 |
| 229.27 | 295.1 | 230.7 | 295.11 | 232.33 | 295.09 | 233.77 | 295.12 | 235.3 | 295.13 |
| 237.23 | 295.17 | 239.31 | 295.2 | 240.79 | 295.2 | 241.43 | 295.17 | 244.09 | 295.12 |
| 245 | 295.09 | 245.47 | 295.03 | 247.45 | 294.91 | 248.43 | 294.84 | 249.74 | 294.72 |
| 251.11 | 294.62 | 257.07 | 294.51 | 265.41 | 294.32 | 267.56 | 294.31 | 268.34 | 294.32 |
| 271.14 | 294.32 | 279.48 | 294.17 | 286.02 | 293.89 | 286.72 | 293.85 | 288.56 | 293.82 |
| 290.87 | 293.84 | 299.85 | 294.21 | 301.91 | 294.32 | 304.68 | 294.48 | 322.08 | 295.16 |
| 328.54 | 295.43 | 332.11 | 295.55 | 335.81 | 295.59 | 352.36 | 295.58 | 353.31 | 295.57 |
| 362.51 | 295.59 | 364.53 | 295.6 | 365.97 | 295.57 | 368.22 | 295.49 | 369.52 | 295.36 |
| 369.77 | 295.31 | 371.57 | 295.26 | 375.17 | 295.25 | 376.6 | 295.29 | 380.34 | 295.32 |
| 380.99 | 295.29 | 383.27 | 295.26 | 387.21 | 295.24 | 396.78 | 295.15 | 403.68 | 295.19 |
| 409.15 | 295.3 | 412.68 | 295.31 | 418.03 | 295.26 | 419.34 | 295.11 | 419.73 | 295.12 |
| 420.84 | 295.02 | 421.81 | 295.03 | 423.28 | 294.9 | 424.72 | 294.81 | 427.78 | 294.64 |
| 428.89 | 294.59 | 431.8 | 294.59 | 433.54 | 294.56 | 438.12 | 294.61 | 442.25 | 294.63 |
| 443.72 | 294.6 | 448.07 | 294.61 | 450.17 | 294.62 | 454.12 | 294.66 | 454.76 | 294.69 |
| 456.82 | 294.73 | 460.73 | 294.74 | 466.65 | 294.66 | 471.37 | 294.72 | 472.15 | 294.75 |
| 479.12 | 295.07 | 480.8 | 295.12 | 482.48 | 295.15 | 482.8 | 295.17 | 484.15 | 295.14 |
| 484.81 | 295.07 | 485.54 | 295.03 | 486.79 | 295.02 | 487.78 | 295.05 | 489.78 | 295.14 |
| 491.51 | 295.23 | 494.89 | 295.38 | 499.02 | 295.55 | 499.41 | 295.59 | 503.86 | 295.62 |
| 504.55 | 295.57 | 506.29 | 295.38 | 511.09 | 294.82 | 511.65 | 294.74 | 513.09 | 294.72 |
| 515.42 | 294.82 | 520.29 | 295 | 520.99 | 295.01 | 522.43 | 295 | 523.9 | 294.96 |
| 527.96 | 294.76 | 529.63 | 294.69 | 532.1 | 294.61 | 533.89 | 294.58 | 534.92 | 294.61 |
| 536.76 | 294.64 | 538.65 | 294.69 | 540.93 | 294.73 | 542.12 | 294.74 | 543.31 | 294.73 |
| 547.11 | 294.66 | 549.17 | 294.63 | 550.43 | 294.59 | 550.74 | 294.6 | 552.71 | 294.58 |
| 553.8 | 294.59 | 555.05 | 294.58 | 558.42 | 294.6 | 567.62 | 294.55 | 571.06 | 294.56 |
| 574.53 | 294.58 | 577.11 | 294.69 | 579.43 | 294.76 | 582.24 | 294.89 | 591.26 | 295.21 |
| 600.48 | 295.49 | 605.25 | 295.64 | 606.2 | 295.77 | 607.77 | 295.94 | 610.07 | 296.09 |
| 610.39 | 296.12 | 612.37 | 296.2 | 615.4 | 296.17 | 616.25 | 296.2 | 616.51 | 296.24 |
| 619.14 | 296.22 | 620.85 | 296.16 | 626.56 | 296 | 630.3 | 295.91 | 637.92 | 295.67 |
| 638.27 | 295.65 | 639.22 | 295.66 | 650.41 | 295.8 | 651.41 | 295.81 | 656.94 | 295.91 |
| 663.38 | 295.99 | 674.44 | 296.12 | 681.13 | 296.22 | 684.38 | 296.26 | 686.36 | 296.31 |
| 687.77 | 296.31 | 688.48 | 296.27 | 690.74 | 296.29 | 692.22 | 296.32 | 692.94 | 296.24 |
| 693.97 | 296.18 | 695.29 | 295.99 | 698.31 | 295.53 | 699.9 | 295.37 | 703.09 | 295.42 |
| 703.88 | 295.48 | 706.5 | 295.53 | 708.71 | 295.54 | 710.84 | 295.51 | 715.32 | 295.36 |
| 717.32 | 295.26 | 719.85 | 295.16 | 720.77 | 295.14 | 723.43 | 295.15 | 724.68 | 295.14 |
| 734.55 | 295.32 | 735.02 | 295.34 | 736.98 | 295.34 | 737.73 | 295.31 | 740.18 | 295.24 |
| 745.24 | 295.41 | 746.38 | 295.47 | 747.57 | 295.5 | 748.34 | 295.54 | 755.97 | 296.14 |
| 758.08 | 296.3 | 759.06 | 296.34 | 760.14 | 296.33 | 764.18 | 296.32 | 765.61 | 296.37 |
| 772.31 | 296.44 | 772.85 | 296.44 | 776.23 | 296.49 | 776.94 | 296.47 | 778.65 | 296.49 |
| 779.45 | 296.56 | 781.54 | 296.65 | 783.27 | 296.6 | 787.12 | 296.6 | 793.23 | 296.63 |
| 793.54 | 296.62 | 795.14 | 296.49 | 800.34 | 296.2 | 800.62 | 296.16 | 801.41 | 296.13 |
| 804.69 | 296.11 | 807.88 | 296.08 | 811.35 | 296.1 | 814.58 | 296.13 | 820.62 | 296.22 |
| 821.83 | 296.26 | 824.22 | 296.36 | 824.99 | 296.34 | 831.5 | 296.34 | 839.01 | 296.38 |
| 839.9 | 296.27 | 853.26 | 296.41 | 854.36 | 296.4 | 855.46 | 296.43 | 858.69 | 296.39 |
| 861.25 | 296.38 | 862.72 | 296.17 | 863.83 | 296.03 | 865.76 | 295.74 | 866.41 | 295.67 |
| 868.11 | 295.65 | 869.67 | 295.7 | 870.5 | 295.64 | 870.89 | 295.65 | 872.35 | 295.76 |
| 875.18 | 295.92 | 879.21 | 296.11 | 882.12 | 296.26 | 885.73 | 296.38 | 889.76 | 296.44 |
| 891.92 | 296.5 | 893.99 | 296.53 | 895.38 | 296.52 | 898.09 | 296.37 | 898.6 | 296.38 |
| 907.13 | 296.43 | 909.53 | 296.45 | 910.85 | 296.47 | 912.35 | 296.46 | 916.24 | 296.38 |
| 918.09 | 296.36 | 919.43 | 296.37 | 921.08 | 296.36 | 923.63 | 296.44 | 926.02 | 296.56 |
| 928.03 | 296.69 | 930.24 | 296.72 | 930.6 | 296.69 | 934.39 | 296.54 | 935.95 | 296.51 |
| 937.07 | 296.47 | 940.19 | 296.38 | 941.08 | 296.38 | 942.73 | 296.49 | 944.47 | 296.57 |
| 946.58 | 296.64 | 948.55 | 296.69 | 950.67 | 296.76 | 952.8 | 296.81 | 954.32 | 296.81 |
| 957.06 | 296.83 | 958.44 | 296.8 | 959.79 | 296.75 | 962.8 | 296.66 | 964.83 | 296.58 |
| 966.49 | 296.48 | 967.62 | 296.36 | 972.37 | 296.3 | 973.11 | 296.28 | 974.81 | 296.18 |
| 976.87 | 296.17 | 980.68 | 296.21 | 983.02 | 296.25 | 984.29 | 296.3 | 988.51 | 296.4 |
| 990.37 | 296.46 | 994.94 | 296.59 | 996.92 | 296.6 | 1000.39 | 296.55 | 1002.39 | 296.5 |
| 1007.92 | 296.54 | 1008.67 | 296.56 | 1011.56 | 296.58 | 1011.74 | 296.57 | 1015.08 | 296.54 |
| 1017.16 | 296.56 | 1022.47 | 296.71 | 1023.71 | 296.69 | 1026.21 | 296.75 | 1026.64 | 296.74 |
| 1028.34 | 296.75 | 1030.79 | 296.81 | 1032.46 | 296.87 | 1035.52 | 296.94 | 1040.3 | 297 |
| 1049.34 | 297.13 | 1054.71 | 297.23 | 1059.71 | 297.33 | 1059.79 | 297.34 | 1063.62 | 297.55 |
| 1064.05 | 297.59 | 1065.59 | 297.56 | 1073.42 | 297.52 | 1075.23 | 297.52 | 1078.2 | 297.43 |
| 1079.26 | 297.36 | 1080.34 | 297.32 | 1082.65 | 297.27 | 1084.68 | 297.25 | 1092.52 | 297.31 |
| 1094.29 | 297.33 | 1096.72 | 297.33 | 1097.61 | 297.35 | 1100.23 | 297.47 | 1106.21 | 298.14 |
| 1107.93 | 298.65 | 1109.06 | 298.94 | 1109.71 | 299.17 | 1111.53 | 299.77 | 1112.49 | 300.19 |
| 1113.65 | 300.58 | 1114.57 | 301.01 | 1115.37 | 301.41 | 1117.25 | 302.42 | 1118.41 | 302.98 |
| 1120.28 | 303.79 | 1121 | 304.12 | 1123.99 | 305.54 | 1126.57 | 306.75 | 1127.54 | 307.22 |
| 1129.09 | 307.87 | 1129.82 | 308.22 | 1131.72 | 309.07 | 1132.08 | 309.29 | 1133.34 | 309.97 |
| 1134.27 | 310.49 | 1135.47 | 311.12 | 1136.33 | 311.6 | 1137.81 | 312.37 | 1139.15 | 313.14 |
| 1140.22 | 313.77 | 1142.07 | 314.74 | 1143.59 | 315.52 | 1144.4 | 316.01 | 1144.9 | 316.08 |
| 1146.07 | 316.1 | 1147.68 | 316.01 | 1149.13 | 315.97 | 1150.37 | 315.95 | 1150.65 | 315.97 |
| 1152.75 | 315.99 | 1154.28 | 316.03 | 1154.82 | 316.07 | 1155.39 | 316.15 | 1156.84 | 316.4 |
| 1161.07 | 317.08 | 1165.11 | 317.76 | 1167.5 | 318.22 | 1168.49 | 318.4 | 1171.77 | 318.9 |
| 1172.98 | 319.05 | 1175.8 | 319.33 | 1178.64 | 319.53 | 1180.61 | 319.61 | 1181.43 | 319.69 |
| 1183.65 | 319.79 | 1187.3 | 319.86 | 1190.17 | 319.93 | 1195.99 | 320.18 | 1198.03 | 320.25 |
| 1200.71 | 320.4 | 1201.55 | 320.47 | 1201.96 | 320.46 | 1203.14 | 320.58 | 1207.85 | 321 |
| 1209.54 | 321.13 | 1210.61 | 321.24 | 1212.27 | 321.39 | 1218.03 | 321.99 | 1219.32 | 322.12 |
| 1221.44 | 322.29 | 1224.2 | 322.48 | 1228.9 | 322.82 | 1231.51 | 323.01 | 1234.6 | 323.18 |
| 1241.78 | 323.46 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 102.08 | .04 | 1147.68 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 102.08 | 1147.68 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2255.65*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 318.95 | .35 | 318.58 | 2.56 | 317.72 | 3.38 | 317.42 | 4.77 | 316.87 |
| 6.64 | 316.19 | 7.84 | 315.73 | 9.42 | 315.15 | 10.73 | 314.7 | 11.63 | 314.29 |
| 14.15 | 313.7 | 16.11 | 313.98 | 17.3 | 313.97 | 18.06 | 314.03 | 18.97 | 313.98 |
| 19.9 | 313.84 | 20.81 | 313.73 | 22.09 | 313.6 | 22.54 | 313.58 | 24.01 | 313.41 |
| 26.11 | 313.04 | 26.55 | 313.07 | 27.13 | 313.05 | 28.4 | 312.95 | 30.45 | 312.64 |
| 32.2 | 312.33 | 34.67 | 311.84 | 38.05 | 311.25 | 41.94 | 310.51 | 42.63 | 310.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 45.42 | 309.65 | 45.85 | 309.52 | 47.78 | 308.99 | 48.92 | 308.74 | 49.82 | 308.58 |
| 50.9 | 308.45 | 52.53 | 308.35 | 53.04 | 308.35 | 54.06 | 308.45 | 54.42 | 308.46 |
| 55.33 | 308.54 | 57.3 | 308.61 | 58.71 | 308.74 | 59.48 | 308.66 | 60.18 | 308.51 |
| 62.55 | 307.79 | 63.63 | 307.53 | 65.77 | 307.05 | 66.42 | 306.84 | 68.18 | 306.31 |
| 69.69 | 305.93 | 72.35 | 305.29 | 74.19 | 304.83 | 76 | 304.53 | 79.5 | 303.76 |
| 80.6 | 303.5 | 81.09 | 303.36 | 82.68 | 302.97 | 84.81 | 302.46 | 85.38 | 302.28 |
| 88.1 | 301.47 | 89.72 | 300.66 | 90.25 | 300.41 | 92.37 | 299.31 | 93.61 | 298.7 |
| 96.14 | 298 | 96.88 | 297.88 | 97.53 | 297.71 | 97.95 | 297.66 | 98.39 | 297.59 |
| 99.53 | 297.47 | 102.82 | 297.15 | 104.43 | 297.02 | 107.84 | 296.64 | 116.81 | 295.74 |
| 119.97 | 295.44 | 122.24 | 295.18 | 123.89 | 295.14 | 131.96 | 294.92 | 132.46 | 294.91 |
| 137.91 | 294.76 | 145.9 | 294.59 | 148.42 | 294.51 | 149.07 | 294.53 | 150.26 | 294.51 |
| 151.64 | 294.51 | 157.03 | 294.36 | 159.41 | 294.31 | 162.22 | 294.23 | 162.89 | 294.23 |
| 167.72 | 294.17 | 170.4 | 294.16 | 172.07 | 294.18 | 173.41 | 294.18 | 176.78 | 294.16 |
| 178.77 | 294.14 | 179.86 | 294.14 | 183.8 | 294.11 | 186.71 | 294.11 | 187.96 | 294.1 |
| 191.01 | 294.17 | 191.93 | 294.16 | 193.36 | 294.18 | 194.04 | 294.22 | 195.74 | 294.28 |
| 199.44 | 294.37 | 204.08 | 294.51 | 211.29 | 294.61 | 212.81 | 294.6 | 215.65 | 294.6 |
| 217.62 | 294.69 | 219.32 | 294.72 | 220.69 | 294.72 | 221.74 | 294.7 | 223.18 | 294.71 |
| 225.08 | 294.74 | 226.93 | 294.78 | 228.91 | 294.81 | 230.33 | 294.81 | 233.47 | 294.74 |
| 234.34 | 294.71 | 234.79 | 294.65 | 236.68 | 294.53 | 240.17 | 294.21 | 245.86 | 294.09 |
| 253.81 | 293.89 | 255.87 | 293.88 | 256.61 | 293.89 | 259.29 | 293.89 | 267.24 | 293.73 |
| 273.48 | 293.48 | 275.91 | 293.43 | 278.22 | 293.45 | 280.62 | 293.56 | 280.9 | 293.56 |
| 287.18 | 293.83 | 292 | 294.11 | 309.36 | 294.8 | 315.81 | 295.07 | 319.36 | 295.19 |
| 319.41 | 295.2 | 322.22 | 295.22 | 323.06 | 295.24 | 339.56 | 295.23 | 340.51 | 295.22 |
| 349.69 | 295.23 | 351.53 | 295.24 | 353.14 | 295.2 | 355.39 | 295.12 | 356.68 | 294.98 |
| 356.93 | 294.93 | 358.73 | 294.88 | 361.61 | 294.86 | 363.75 | 294.91 | 367.48 | 294.94 |
| 368.13 | 294.92 | 370.4 | 294.89 | 374.34 | 294.87 | 383.88 | 294.77 | 390.77 | 294.81 |
| 394.36 | 294.88 | 394.71 | 294.9 | 396.22 | 294.93 | 399.74 | 294.95 | 403.68 | 294.92 |
| 405.08 | 294.92 | 406.39 | 294.75 | 406.78 | 294.76 | 407.89 | 294.66 | 408.86 | 294.67 |
| 410.32 | 294.53 | 411.76 | 294.43 | 415.92 | 294.19 | 416.59 | 294.19 | 420.56 | 294.15 |
| 425.12 | 294.19 | 429.25 | 294.21 | 430.72 | 294.18 | 434.24 | 294.2 | 437.15 | 294.21 |
| 441.08 | 294.25 | 441.73 | 294.28 | 443.78 | 294.31 | 447.68 | 294.32 | 453.27 | 294.22 |
| 456.13 | 294.25 | 458.3 | 294.29 | 459.08 | 294.32 | 466.03 | 294.65 | 468.24 | 294.72 |
| 469.38 | 294.74 | 469.7 | 294.77 | 471.17 | 294.73 | 472.43 | 294.62 | 473.68 | 294.61 |
| 476.66 | 294.73 | 478.39 | 294.82 | 481.77 | 294.98 | 485.89 | 295.15 | 486.27 | 295.2 |
| 488.35 | 295.2 | 490.71 | 295.21 | 491.4 | 295.17 | 493.13 | 294.96 | 497.92 | 294.36 |
| 498.49 | 294.28 | 499.92 | 294.26 | 502.55 | 294.37 | 507.11 | 294.55 | 507.8 | 294.56 |
| 509.24 | 294.55 | 510.7 | 294.51 | 511.92 | 294.46 | 514.75 | 294.32 | 516.42 | 294.26 |
| 518.89 | 294.19 | 520.67 | 294.16 | 523.33 | 294.21 | 525.42 | 294.26 | 528.88 | 294.3 |
| 530.07 | 294.29 | 534.84 | 294.2 | 537.18 | 294.14 | 539.45 | 294.13 | 540.54 | 294.14 |
| 541.78 | 294.13 | 545.14 | 294.15 | 554.32 | 294.11 | 557.75 | 294.12 | 561.22 | 294.14 |
| 562.86 | 294.22 | 566.11 | 294.32 | 568.91 | 294.46 | 574.77 | 294.66 | 577.91 | 294.78 |
| 587.11 | 295.08 | 591.86 | 295.23 | 592.82 | 295.37 | 594.38 | 295.54 | 597 | 295.73 |
| 599.33 | 295.82 | 601.99 | 295.78 | 602.74 | 295.81 | 603.1 | 295.85 | 605 | 295.85 |
| 607.43 | 295.78 | 609.12 | 295.72 | 613.12 | 295.6 | 616.86 | 295.5 | 624.46 | 295.25 |
| 625.76 | 295.24 | 636.92 | 295.4 | 643.44 | 295.52 | 646.73 | 295.56 | 648.15 | 295.59 |
| 650.59 | 295.61 | 651.62 | 295.64 | 660.89 | 295.76 | 667.57 | 295.87 | 670.81 | 295.92 |
| 673.25 | 295.98 | 674.51 | 295.97 | 674.9 | 295.93 | 678.63 | 295.98 | 679.36 | 295.9 |
| 680.38 | 295.83 | 682.3 | 295.54 | 684.71 | 295.15 | 686.29 | 294.98 | 689.48 | 295.02 |
| 690.26 | 295.08 | 691.45 | 295.11 | 693.97 | 295.13 | 695.09 | 295.13 | 697.21 | 295.1 |
| 701.68 | 294.95 | 702.08 | 294.92 | 706.2 | 294.74 | 707.12 | 294.72 | 709.77 | 294.73 |
| 711.02 | 294.72 | 720.87 | 294.93 | 721.33 | 294.95 | 723.29 | 294.95 | 726.49 | 294.85 |
| 729.72 | 294.97 | 731.53 | 295.03 | 732.67 | 295.09 | 733.86 | 295.12 | 734.62 | 295.17 |
| 742.24 | 295.8 | 744.34 | 295.96 | 745.32 | 296 | 747.54 | 296 | 750.42 | 295.99 |
| 751.85 | 296.03 | 756.61 | 296.07 | 759.08 | 296.08 | 762.45 | 296.13 | 763.15 | 296.11 |
| 764.71 | 296.14 | 765.49 | 296.17 | 765.66 | 296.21 | 767.75 | 296.32 | 768.83 | 296.27 |
| 773.32 | 296.27 | 779.41 | 296.3 | 780.06 | 296.26 | 781.31 | 296.15 | 786.5 | 295.86 |
| 786.78 | 295.82 | 788.43 | 295.78 | 790.84 | 295.78 | 794.03 | 295.77 | 797.48 | 295.79 |
| 806.74 | 295.9 | 807.94 | 295.94 | 810.32 | 296.05 | 811.1 | 296.04 | 817.59 | 296.04 |
| 825.08 | 296.06 | 825.97 | 295.95 | 832.44 | 296 | 832.65 | 296.01 | 839.3 | 296.06 |
| 840.4 | 296.05 | 842.1 | 296.07 | 844.71 | 296.04 | 847.27 | 296.04 | 849.85 | 295.66 |
| 851.93 | 295.34 | 852.42 | 295.3 | 854.12 | 295.28 | 855.67 | 295.33 | 856.5 | 295.27 |
| 856.89 | 295.28 | 858.34 | 295.39 | 861.16 | 295.55 | 866.74 | 295.83 | 869.58 | 295.96 |
| 871.69 | 296.03 | 875.71 | 296.11 | 877.87 | 296.17 | 879.93 | 296.2 | 881.32 | 296.18 |
| 884.02 | 296.02 | 884.54 | 296.03 | 893.04 | 296.06 | 896.75 | 296.09 | 898.25 | 296.09 |
| 902.13 | 295.99 | 903.97 | 295.97 | 906 | 295.97 | 906.96 | 295.96 | 907.74 | 295.98 |
| 909.5 | 296.05 | 911.89 | 296.17 | 913.89 | 296.31 | 916.1 | 296.34 | 916.46 | 296.31 |
| 920.23 | 296.16 | 922.91 | 296.08 | 924.97 | 296.03 | 926.03 | 295.99 | 926.91 | 296 |
| 928.71 | 296.12 | 930.29 | 296.19 | 933.54 | 296.29 | 936.48 | 296.39 | 938.6 | 296.44 |
| 940.13 | 296.44 | 942.45 | 296.46 | 943.46 | 296.45 | 945.57 | 296.37 | 948.58 | 296.27 |
| 950.61 | 296.19 | 952.26 | 296.09 | 953.39 | 295.97 | 958.13 | 295.91 | 958.87 | 295.89 |
| 960.57 | 295.78 | 962.62 | 295.77 | 968.76 | 295.85 | 970.02 | 295.91 | 971.22 | 295.95 |
| 974.23 | 296.03 | 975.76 | 296.09 | 981.3 | 296.25 | 982.62 | 296.25 | 986.09 | 296.19 |
| 986.9 | 296.16 | 988.08 | 296.14 | 997.22 | 296.22 | 997.41 | 296.2 | 1000.74 | 296.17 |
| 1002.81 | 296.19 | 1008.11 | 296.33 | 1009.81 | 296.31 | 1011.85 | 296.36 | 1012.27 | 296.35 |
| 1013.97 | 296.36 | 1016.01 | 296.4 | 1018.08 | 296.48 | 1025.91 | 296.63 | 1027.08 | 296.64 |
| 1030.17 | 296.69 | 1034.93 | 296.78 | 1040.28 | 296.89 | 1045.34 | 297 | 1049.17 | 297.23 |
| 1049.59 | 297.27 | 1051.13 | 297.24 | 1058.95 | 297.22 | 1060.75 | 297.22 | 1063.71 | 297.12 |
| 1064.77 | 297.05 | 1067.66 | 296.96 | 1070.18 | 296.93 | 1078 | 296.98 | 1079.76 | 297 |
| 1082.19 | 297 | 1083.08 | 297.02 | 1085.7 | 297.15 | 1091.66 | 297.85 | 1093.45 | 298.42 |
| 1094.5 | 298.7 | 1095.15 | 298.95 | 1096.96 | 299.57 | 1097.92 | 300.02 | 1099.08 | 300.44 |
| 1100.1 | 300.93 | 1100.8 | 301.31 | 1102.67 | 302.36 | 1103.83 | 302.96 | 1105.93 | 303.92 |
| 1109.22 | 305.55 | 1109.39 | 305.66 | 1111.31 | 306.6 | 1112.94 | 307.41 | 1114.49 | 308.1 |
| 1115.21 | 308.46 | 1117.1 | 309.35 | 1119.65 | 310.76 | 1120.85 | 311.39 | 1124.29 | 313.22 |
| 1124.88 | 313.58 | 1125.58 | 313.96 | 1126.15 | 314.23 | 1128.4 | 315.34 | 1128.95 | 315.6 |
| 1129.75 | 316.06 | 1130.07 | 316.12 | 1130.95 | 316.14 | 1132.15 | 316.09 | 1133.03 | 316.02 |
| 1134.44 | 315.94 | 1135.64 | 315.9 | 1135.91 | 315.91 | 1138.74 | 315.9 | 1139.78 | 315.92 |
| 1140.51 | 316.02 | 1141.93 | 316.26 | 1144.08 | 316.61 | 1146.04 | 316.91 | 1149.96 | 317.57 |
| 1153.24 | 318.19 | 1157.06 | 318.74 | 1157.6 | 318.8 | 1160.34 | 319.07 | 1163.1 | 319.27 |
| 1165.01 | 319.35 | 1165.81 | 319.43 | 1167.96 | 319.53 | 1171.51 | 319.58 | 1174.3 | 319.65 |
| 1176.31 | 319.72 | 1179.94 | 319.86 | 1181.93 | 319.91 | 1182.37 | 319.95 | 1184.53 | 320.06 |
| 1185.34 | 320.13 | 1185.75 | 320.11 | 1186.89 | 320.24 | 1192.28 | 320.71 | 1193.1 | 320.77 |
| 1194.15 | 320.89 | 1195.76 | 321.04 | 1201.35 | 321.66 | 1202.6 | 321.79 | 1204.67 | 321.97 |
| 1207.24 | 322.16 | 1207.34 | 322.16 | 1211.91 | 322.51 | 1213.68 | 322.65 | 1217.44 | 322.89 |
| 1224.42 | 323.19 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 97.95 | .04 | 1133.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 97.95 | 1133.03 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0

REACH: WASH0 RS: 2236.34*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 318.44 | .34 | 318.05 | 2.46 | 317.15 | 3.23 | 316.83 | 4.57 | 316.24 |
| 6.36 | 315.53 | 7.51 | 315.04 | 9.02 | 314.43 | 10.27 | 313.96 | 11.14 | 313.53 |
| 13.55 | 312.9 | 15.43 | 313.19 | 16.57 | 313.18 | 17.3 | 313.25 | 18.17 | 313.2 |
| 19.07 | 313.06 | 19.93 | 312.95 | 21.16 | 312.83 | 22.23 | 312.74 | 23 | 312.64 |
| 25.01 | 312.33 | 25.99 | 312.3 | 27.21 | 312.15 | 27.89 | 312.05 | 30.36 | 311.62 |
| 33.21 | 311.05 | 36.45 | 310.46 | 40.17 | 309.75 | 40.83 | 309.61 | 42.91 | 309.12 |
| 43.92 | 308.86 | 44.76 | 308.66 | 45.77 | 308.4 | 46.86 | 308.2 | 47.72 | 308.06 |
| 48.76 | 308 | 49.93 | 307.97 | 50.81 | 307.98 | 51.78 | 308.08 | 53 | 308.19 |
| 54.21 | 308.26 | 55.56 | 308.37 | 56.24 | 308.45 | 56.97 | 308.37 | 57.94 | 308.14 |
| 59.91 | 307.52 | 63 | 306.83 | 65.31 | 306.1 | 66.76 | 305.72 | 71.06 | 304.65 |
| 72.79 | 304.35 | 76.15 | 303.59 | 76.79 | 303.44 | 77.67 | 303.19 | 81.24 | 302.31 |
| 82.36 | 301.94 | 84.38 | 301.32 | 85.94 | 300.48 | 86.45 | 300.23 | 88.47 | 299.09 |
| 89.67 | 298.47 | 92.09 | 297.76 | 92.79 | 297.64 | 93.42 | 297.48 | 93.82 | 297.42 |
| 95.32 | 297.23 | 98.46 | 296.88 | 100 | 296.74 | 101.37 | 296.57 | 104.29 | 296.23 |
| 111.78 | 295.39 | 114.78 | 295.06 | 116.95 | 294.79 | 118.52 | 294.75 | 126.21 | 294.54 |
| 131.87 | 294.39 | 139.48 | 294.22 | 140.23 | 294.21 | 141.37 | 294.16 | 142.5 | 294.16 |
| 143.62 | 294.14 | 144.94 | 294.13 | 150.07 | 293.99 | 154.09 | 293.9 | 154.33 | 293.88 |
| 161.29 | 293.77 | 162.81 | 293.77 | 165.31 | 293.78 | 165.67 | 293.77 | 171.81 | 293.75 |
| 177.12 | 293.72 | 179.52 | 293.72 | 182.42 | 293.79 | 184.23 | 293.8 | 186.93 | 293.9 |
| 189.89 | 293.97 | 190.45 | 293.99 | 194.87 | 294.12 | 201.73 | 294.22 | 203.18 | 294.22 |
| 204.15 | 294.23 | 205.64 | 294.23 | 207.76 | 294.3 | 209.38 | 294.33 | 210.68 | 294.33 |
| 212.16 | 294.31 | 213.84 | 294.33 | 216.62 | 294.39 | 218.51 | 294.42 | 219.86 | 294.43 |
| 222.85 | 294.37 | 223.68 | 294.33 | 224.1 | 294.27 | 226.8 | 294.07 | 227.67 | 293.97 |
| 229.23 | 293.81 | 234.64 | 293.67 | 242.22 | 293.46 | 247.43 | 293.46 | 255.01 | 293.29 |
| 261.58 | 293.06 | 263.39 | 293.03 | 265.57 | 293.06 | 267.96 | 293.17 | 268.24 | 293.17 |
| 274.51 | 293.45 | 279.32 | 293.74 | 296.63 | 294.44 | 303.07 | 294.71 | 306.61 | 294.84 |
| 309.47 | 294.86 | 310.3 | 294.88 | 326.77 | 294.87 | 336.88 | 294.87 | 338.7 | 294.88 |
| 340.32 | 294.83 | 342.56 | 294.75 | 343.85 | 294.6 | 344.1 | 294.55 | 345.89 | 294.49 |
| 348.77 | 294.48 | 350.9 | 294.53 | 354.62 | 294.57 | 355.27 | 294.54 | 358.06 | 294.52 |
| 361.46 | 294.49 | 370.99 | 294.38 | 377.86 | 294.43 | 381.43 | 294.51 | 382.55 | 294.55 |
| 384.96 | 294.58 | 386.81 | 294.59 | 390.73 | 294.57 | 392.13 | 294.57 | 392.49 | 294.54 |
| 393.44 | 294.39 | 393.83 | 294.41 | 394.94 | 294.3 | 395.9 | 294.31 | 397.36 | 294.16 |
| 398.79 | 294.06 | 401.84 | 293.86 | 402.94 | 293.8 | 405.84 | 293.76 | 407.58 | 293.73 |
| 412.13 | 293.77 | 416.25 | 293.79 | 417.71 | 293.77 | 421.22 | 293.79 | 424.13 | 293.8 |
| 428.05 | 293.83 | 428.7 | 293.86 | 430.75 | 293.9 | 434.63 | 293.89 | 439.62 | 293.79 |
| 440.53 | 293.78 | 443.06 | 293.82 | 446 | 293.88 | 452.94 | 294.23 | 454.61 | 294.29 |
| 455.14 | 294.3 | 456.61 | 294.36 | 458.07 | 294.33 | 458.61 | 294.26 | 459.33 | 294.22 |
| 460.57 | 294.2 | 463.55 | 294.33 | 465.27 | 294.42 | 472.75 | 294.75 | 473.13 | 294.8 |
| 475.21 | 294.8 | 477.56 | 294.81 | 478.25 | 294.76 | 479.98 | 294.54 | 484.76 | 293.91 |
| 485.32 | 293.82 | 486.75 | 293.8 | 489.37 | 293.92 | 493.92 | 294.11 | 494.61 | 294.12 |
| 496.54 | 294.1 | 498.72 | 294.01 | 501.55 | 293.88 | 505.68 | 293.76 | 507.45 | 293.73 |
| 508.48 | 293.76 | 514.46 | 293.86 | 516.83 | 293.85 | 521.59 | 293.75 | 523.92 | 293.69 |
| 526.18 | 293.68 | 527.27 | 293.69 | 528.51 | 293.68 | 531.87 | 293.7 | 541.03 | 293.68 |
| 544.45 | 293.69 | 547.9 | 293.71 | 550.48 | 293.82 | 552.79 | 293.88 | 555.58 | 294.02 |
| 561.42 | 294.23 | 564.56 | 294.35 | 578.48 | 294.82 | 579.79 | 295.01 | 580.99 | 295.15 |
| 583.6 | 295.34 | 585.57 | 295.43 | 587.17 | 295.42 | 588.59 | 295.4 | 589.33 | 295.42 |
| 589.69 | 295.47 | 591.59 | 295.47 | 592.31 | 295.45 | 595.53 | 295.34 | 595.7 | 295.34 |
| 603.41 | 295.09 | 611 | 294.84 | 612.11 | 294.82 | 612.3 | 294.83 | 623.44 | 295.01 |
| 629.93 | 295.13 | 634.63 | 295.2 | 638.1 | 295.26 | 647.35 | 295.41 | 648.58 | 295.42 |
| 649.29 | 295.44 | 656.2 | 295.56 | 657.24 | 295.57 | 659.22 | 295.63 | 660.2 | 295.64 |
| 660.93 | 295.63 | 661.33 | 295.59 | 662.48 | 295.62 | 665.04 | 295.64 | 665.77 | 295.56 |
| 666.79 | 295.48 | 668.1 | 295.27 | 671.11 | 294.77 | 672.69 | 294.58 | 675.86 | 294.62 |
| 676.65 | 294.68 | 677.84 | 294.71 | 680.35 | 294.73 | 681.46 | 294.73 | 683.58 | 294.7 |
| 688.04 | 294.53 | 690.03 | 294.43 | 692.55 | 294.32 | 693.47 | 294.3 | 695.44 | 294.31 |
| 697.35 | 294.31 | 707.18 | 294.54 | 707.64 | 294.56 | 709.6 | 294.56 | 712.79 | 294.47 |
| 714.46 | 294.53 | 720.14 | 294.75 | 721.84 | 294.88 | 723.79 | 295.05 | 728.5 | 295.45 |
| 730.6 | 295.62 | 731.58 | 295.67 | 732.65 | 295.66 | 733.79 | 295.67 | 735.2 | 295.66 |
| 736.67 | 295.66 | 737.63 | 295.67 | 738.09 | 295.69 | 744.76 | 295.72 | 746.05 | 295.72 |
| 747.29 | 295.75 | 748.67 | 295.77 | 749.37 | 295.75 | 751.08 | 295.78 | 751.7 | 295.82 |
| 751.87 | 295.86 | 753.95 | 295.98 | 755.04 | 295.93 | 759.51 | 295.94 | 765.9 | 295.97 |
| 766.24 | 295.93 | 767.99 | 295.78 | 768.32 | 295.77 | 772.66 | 295.52 | 772.94 | 295.48 |
| 773.72 | 295.45 | 776.99 | 295.46 | 780.17 | 295.46 | 783.62 | 295.48 | 786.84 | 295.52 |
| 792.85 | 295.59 | 794.78 | 295.66 | 796.43 | 295.74 | 803.68 | 295.73 | 811.15 | 295.75 |
| 812.02 | 295.64 | 825.33 | 295.7 | 826.73 | 295.7 | 827.52 | 295.72 | 828.13 | 295.71 |
| 833.29 | 295.69 | 834.75 | 295.46 | 835.86 | 295.3 | 837.93 | 294.96 | 838.68 | 294.91 |
| 840.12 | 294.91 | 841.67 | 294.97 | 842.5 | 294.9 | 842.89 | 294.91 | 844.33 | 295.02 |
| 847.15 | 295.17 | 854.06 | 295.53 | 857.66 | 295.69 | 861.66 | 295.78 | 863.82 | 295.84 |
| 865.87 | 295.86 | 867.26 | 295.85 | 869.86 | 295.68 | 878.95 | 295.7 | 882.66 | 295.71 |
| 884.01 | 295.72 | 884.15 | 295.71 | 888.02 | 295.6 | 888.6 | 295.59 | 891.2 | 295.57 |
| 892.74 | 295.57 | 892.84 | 295.56 | 895.37 | 295.65 | 897.75 | 295.78 | 899.75 | 295.93 |
| 901.95 | 295.96 | 902.32 | 295.93 | 906.08 | 295.77 | 910.81 | 295.65 | 911.86 | 295.61 |
| 912.75 | 295.62 | 914.54 | 295.74 | 916.12 | 295.81 | 918.22 | 295.89 | 919.36 | 295.92 |
| 922.29 | 296.03 | 924.41 | 296.07 | 925.93 | 296.07 | 928.65 | 296.08 | 929.25 | 296.07 |
| 934.36 | 295.88 | 936.85 | 295.78 | 938.03 | 295.7 | 939.16 | 295.57 | 943.89 | 295.51 |
| 944.62 | 295.49 | 946.32 | 295.38 | 948.37 | 295.37 | 952.16 | 295.42 | 954.49 | 295.46 |
| 955.76 | 295.52 | 956.94 | 295.56 | 959.96 | 295.65 | 961.48 | 295.73 | 967.01 | 295.89 |
| 968.32 | 295.89 | 971.78 | 295.84 | 972.25 | 295.81 | 973.77 | 295.78 | 979.28 | 295.83 |
| 979.96 | 295.85 | 982.89 | 295.86 | 983.07 | 295.84 | 986.4 | 295.8 | 988.47 | 295.81 |
| 990.85 | 295.87 | 993.75 | 295.95 | 995.45 | 295.93 | 997.48 | 295.97 | 997.9 | 295.96 |
| 999.6 | 295.96 | 1002.03 | 296.02 | 1003.7 | 296.08 | 1006.74 | 296.15 | 1011.51 | 296.25 |
| 1015.76 | 296.33 | 1020.51 | 296.43 | 1030.82 | 296.66 | 1030.9 | 296.67 | 1034.02 | 296.87 |
| 1034.72 | 296.91 | 1035.14 | 296.96 | 1036.68 | 296.93 | 1044.47 | 296.92 | 1045.17 | 296.91 |
| 1046.27 | 296.92 | 1049.22 | 296.82 | 1050.28 | 296.74 | 1051.35 | 296.7 | 1053.65 | 296.63 |
| 1055.67 | 296.61 | 1067.66 | 296.67 | 1068.54 | 296.68 | 1071.16 | 296.82 | 1072.95 | 297.05 |
| 1077.1 | 297.57 | 1078.23 | 297.94 | 1078.89 | 298.17 | 1079.94 | 298.46 | 1080.59 | 298.73 |
| 1082.4 | 299.38 | 1083.35 | 299.85 | 1084.51 | 300.29 | 1085.52 | 300.81 | 1086.23 | 301.21 |
| 1087.52 | 301.98 | 1087.81 | 302.12 | 1088.1 | 302.31 | 1089.25 | 302.94 | 1091.11 | 303.83 |
| 1094.55 | 305.62 | 1094.8 | 305.77 | 1097.37 | 307.1 | 1098.33 | 307.61 | 1099.88 | 308.33 |
| 1100.6 | 308.71 | 1102.14 | 309.45 | 1102.49 | 309.63 | 1103.36 | 310.12 | 1104.11 | 310.52 |
| 1105.03 | 311.03 | 1106.23 | 311.65 | 1107.09 | 312.11 | 1109.36 | 313.28 | 1110.25 | 313.79 |
| 1110.95 | 314.15 | 1114.64 | 315.85 | 1115.11 | 316.12 | 1115.42 | 316.17 | 1116.4 | 316.18 |
| 1117.5 | 316.11 | 1118.38 | 316.03 | 1119.75 | 315.92 | 1120.91 | 315.85 | 1121.18 | 315.86 |
| 1123.16 | 315.8 | 1124.6 | 315.78 | 1124.93 | 315.79 | 1125.64 | 315.89 | 1127.02 | 316.12 |
| 1131 | 316.75 | 1134.3 | 317.29 | 1137.99 | 317.97 | 1140.53 | 318.34 | 1142.22 | 318.55 |
| 1144.88 | 318.81 | 1147.56 | 319.02 | 1149.41 | 319.09 | 1150.19 | 319.17 | 1150.78 | 319.19 |
| 1152.27 | 319.27 | 1155.72 | 319.3 | 1158.42 | 319.36 | 1163.9 | 319.53 | 1165.83 | 319.58 |
| 1166.25 | 319.62 | 1168.35 | 319.71 | 1169.14 | 319.79 | 1169.53 | 319.76 | 1170.64 | 319.89 |
| 1176.67 | 320.42 | 1177.68 | 320.54 | 1179.25 | 320.69 | 1184.67 | 321.33 | 1185.88 | 321.47 |
| 1187.89 | 321.64 | 1190.48 | 321.85 | 1194.92 | 322.2 | 1195.98 | 322.29 | 1200.28 | 322.6 |
| 1207.05 | 322.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 93.82 | .04 | 1118.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 93.82 | 1118.38 | 25.95 | 19.31 | 19.21 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2217.03*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 317.94 | .32 | 317.53 | 2.35 | 316.57 | 3.09 | 316.24 | 4.37 | 315.62 |
| 6.08 | 314.87 | 7.18 | 314.36 | 8.63 | 313.72 | 9.82 | 313.21 | 10.65 | 312.76 |
| 12.96 | 312.1 | 14.75 | 312.41 | 15.84 | 312.4 | 16.54 | 312.47 | 17.37 | 312.41 |
| 17.86 | 312.35 | 19.06 | 312.17 | 21.25 | 311.96 | 24.08 | 311.6 | 24.37 | 311.6 |
| 24.84 | 311.54 | 26.66 | 311.25 | 29.03 | 310.81 | 30.48 | 310.5 | 34.84 | 309.67 |
| 39.04 | 308.86 | 41.6 | 308.3 | 43.75 | 307.81 | 45.62 | 307.55 | 46.61 | 307.55 |
| 48.1 | 307.58 | 48.69 | 307.62 | 49.5 | 307.72 | 50.67 | 307.84 | 51.65 | 307.92 |
| 53.55 | 308.13 | 53.76 | 308.17 | 54.47 | 308.09 | 55.11 | 307.94 | 57.28 | 307.26 |
| 60.23 | 306.6 | 60.83 | 306.41 | 62.43 | 305.88 | 63.31 | 305.65 | 66.25 | 304.9 |
| 67.94 | 304.46 | 69.59 | 304.18 | 72.8 | 303.42 | 73.41 | 303.28 | 74.26 | 303.03 |
| 75.71 | 302.65 | 77.66 | 302.15 | 78.19 | 301.97 | 80.67 | 301.16 | 82.16 | 300.3 |
| 82.64 | 300.04 | 84.58 | 298.88 | 85.72 | 298.23 | 88.04 | 297.52 | 88.71 | 297.41 |
| 89.31 | 297.24 | 89.7 | 297.19 | 91.12 | 296.99 | 94.1 | 296.62 | 95.56 | 296.47 |
| 96.87 | 296.29 | 99.64 | 295.93 | 106.75 | 295.03 | 109.6 | 294.68 | 111.66 | 294.39 |
| 113.15 | 294.36 | 125.83 | 294.03 | 133.06 | 293.86 | 135.33 | 293.79 | 135.92 | 293.79 |
| 137.21 | 293.76 | 138.24 | 293.75 | 143.11 | 293.62 | 146.93 | 293.53 | 148.42 | 293.49 |
| 152.78 | 293.4 | 153.98 | 293.37 | 157.59 | 293.38 | 157.93 | 293.37 | 160.97 | 293.37 |
| 163.76 | 293.36 | 167.32 | 293.34 | 169.95 | 293.34 | 171.08 | 293.33 | 173.84 | 293.4 |
| 175.55 | 293.43 | 176.58 | 293.47 | 179.4 | 293.55 | 181.46 | 293.6 | 185.66 | 293.72 |
| 192.18 | 293.83 | 193.55 | 293.84 | 196.12 | 293.87 | 197.9 | 293.92 | 199.44 | 293.95 |
| 200.68 | 293.95 | 202.08 | 293.92 | 204.65 | 293.95 | 208.11 | 294.03 | 209.94 | 294.04 |
| 212.23 | 293.99 | 213.02 | 293.95 | 213.42 | 293.89 | 215.13 | 293.76 | 215.98 | 293.68 |
| 218.29 | 293.4 | 230.62 | 293.04 | 232.48 | 293.03 | 233.16 | 293.04 | 235.58 | 293.04 |
| 242.77 | 292.86 | 249.01 | 292.66 | 250.75 | 292.64 | 252.92 | 292.66 | 255.31 | 292.78 |
| 255.59 | 292.78 | 261.84 | 293.08 | 262.04 | 293.08 | 263.88 | 293.2 | 266.63 | 293.37 |
| 283.91 | 294.09 | 290.33 | 294.36 | 293.87 | 294.48 | 297.55 | 294.53 | 313.98 | 294.51 |
| 325.88 | 294.51 | 326.51 | 294.5 | 329.73 | 294.37 | 331.01 | 294.22 | 331.26 | 294.16 |
| 331.7 | 294.14 | 333.05 | 294.11 | 335.07 | 294.1 | 335.35 | 294.09 | 336.63 | 294.11 |
| 338.05 | 294.16 | 341.76 | 294.2 | 342.41 | 294.17 | 343.93 | 294.15 | 348.59 | 294.11 |
| 358.09 | 294 | 364.94 | 294.05 | 368.51 | 294.13 | 369.62 | 294.18 | 370.37 | 294.2 |
| 372.03 | 294.21 | 373.87 | 294.24 | 377.79 | 294.22 | 379.19 | 294.22 | 379.54 | 294.19 |
| 379.89 | 294.11 | 380.49 | 294.04 | 380.88 | 294.05 | 381.98 | 293.94 | 382.95 | 293.95 |
| 384.4 | 293.8 | 385.83 | 293.69 | 388.87 | 293.47 | 389.97 | 293.4 | 394.59 | 293.32 |
| 399.14 | 293.34 | 403.24 | 293.37 | 404.7 | 293.36 | 408.21 | 293.38 | 411.11 | 293.39 |
| 415.02 | 293.42 | 415.66 | 293.45 | 417.71 | 293.48 | 421.59 | 293.47 | 426.56 | 293.35 |
| 427.47 | 293.34 | 429.99 | 293.38 | 432.56 | 293.43 | 439.85 | 293.82 | 441.52 | 293.87 |
| 443.19 | 293.93 | 443.51 | 293.96 | 444.85 | 293.93 | 445.5 | 293.86 | 446.22 | 293.81 |
| 447.47 | 293.8 | 450.44 | 293.93 | 455.51 | 294.17 | 459.62 | 294.35 | 460 | 294.4 |
| 464.42 | 294.4 | 465.1 | 294.35 | 471.59 | 293.45 | 471.81 | 293.44 | 472.16 | 293.36 |
| 473.58 | 293.34 | 476.19 | 293.46 | 480.74 | 293.66 | 481.43 | 293.67 | 482.86 | 293.66 |
| 484.31 | 293.62 | 485.52 | 293.57 | 488.35 | 293.44 | 491.83 | 293.35 | 493.87 | 293.31 |
| 494.24 | 293.31 | 496.88 | 293.36 | 501.22 | 293.42 | 502.41 | 293.43 | 503.59 | 293.41 |
| 508.34 | 293.29 | 509.82 | 293.26 | 510.67 | 293.23 | 512.92 | 293.23 | 518.59 | 293.25 |
| 527.73 | 293.25 | 534.59 | 293.27 | 537.16 | 293.38 | 539.46 | 293.44 | 542.25 | 293.59 |
| 548.08 | 293.8 | 551.2 | 293.92 | 560.36 | 294.24 | 560.72 | 294.25 | 565.09 | 294.41 |
| 566.4 | 294.61 | 567.6 | 294.75 | 570.21 | 294.96 | 572.53 | 295.05 | 575.18 | 295.01 |
| 575.92 | 295.04 | 576.28 | 295.08 | 578.17 | 295.08 | 580.58 | 295.01 | 586.26 | 294.81 |
| 589.97 | 294.69 | 597.54 | 294.42 | 598.83 | 294.42 | 609.95 | 294.61 | 616.43 | 294.74 |
| 619.71 | 294.79 | 621.12 | 294.82 | 623.55 | 294.86 | 624.57 | 294.89 | 633.8 | 295.05 |
| 635.74 | 295.08 | 642.63 | 295.21 | 644.49 | 295.25 | 645.64 | 295.29 | 647.36 | 295.3 |
| 647.75 | 295.26 | 648.9 | 295.28 | 651.46 | 295.31 | 652.18 | 295.21 | 653.2 | 295.13 |
| 654.51 | 294.91 | 657.51 | 294.38 | 659.08 | 294.19 | 662.25 | 294.22 | 663.03 | 294.28 |
| 664.22 | 294.31 | 665.64 | 294.32 | 667.84 | 294.32 | 669.95 | 294.29 | 674.4 | 294.12 |
| 674.8 | 294.09 | 676.39 | 294.02 | 678.9 | 293.9 | 679.81 | 293.88 | 681.78 | 293.89 |
| 683.69 | 293.89 | 693.5 | 294.15 | 693.96 | 294.17 | 695.91 | 294.18 | 696.65 | 294.15 |
| 699.09 | 294.08 | 700.76 | 294.15 | 706.43 | 294.37 | 708.12 | 294.52 | 714.77 | 295.1 |
| 716.86 | 295.28 | 717.83 | 295.33 | 723.28 | 295.33 | 724.33 | 295.34 | 729.07 | 295.36 |
| 732.28 | 295.36 | 734.88 | 295.42 | 735.58 | 295.4 | 737.29 | 295.43 | 737.91 | 295.47 |
| 738.08 | 295.52 | 740.15 | 295.65 | 741.24 | 295.6 | 745.7 | 295.61 | 751.76 | 295.65 |
| 752.41 | 295.6 | 753.66 | 295.48 | 754.5 | 295.43 | 758.82 | 295.19 | 759.1 | 295.15 |
| 759.88 | 295.12 | 760.74 | 295.11 | 763.14 | 295.13 | 766.31 | 295.15 | 772.97 | 295.21 |
| 778.97 | 295.27 | 780.16 | 295.31 | 782.53 | 295.44 | 783.31 | 295.43 | 789.77 | 295.43 |
| 797.22 | 295.44 | 798.09 | 295.32 | 804.76 | 295.33 | 811.37 | 295.35 | 812.76 | 295.35 |
| 814.16 | 295.36 | 815.94 | 295.35 | 819.31 | 295.35 | 823.94 | 294.59 | 824.43 | 294.55 |
| 825.27 | 294.53 | 826.12 | 294.54 | 827.08 | 294.59 | 827.67 | 294.6 | 828.36 | 294.54 |
| 828.88 | 294.54 | 829.83 | 294.62 | 831.55 | 294.72 | 833.14 | 294.8 | 837.14 | 295.01 |
| 838.68 | 295.1 | 840.03 | 295.17 | 843.62 | 295.34 | 845.94 | 295.4 | 849.76 | 295.51 |
| 851.82 | 295.53 | 853.2 | 295.51 | 855.33 | 295.36 | 855.89 | 295.33 | 864.86 | 295.33 |
| 867.24 | 295.34 | 869.91 | 295.34 | 870.05 | 295.33 | 873.91 | 295.21 | 874.49 | 295.2 |
| 878.62 | 295.17 | 878.72 | 295.16 | 881.25 | 295.26 | 883.62 | 295.39 | 885.62 | 295.55 |
| 887.81 | 295.58 | 888.17 | 295.55 | 891.93 | 295.39 | 894.6 | 295.32 | 897.33 | 295.24 |
| 897.69 | 295.22 | 898.58 | 295.23 | 900.37 | 295.36 | 901.94 | 295.43 | 905.99 | 295.58 |
| 907.5 | 295.64 | 908.91 | 295.68 | 910.21 | 295.7 | 913.6 | 295.7 | 914.04 | 295.71 |
| 915.05 | 295.69 | 917.15 | 295.61 | 922.62 | 295.39 | 923.81 | 295.31 | 924.93 | 295.18 |
| 929.65 | 295.12 | 930.38 | 295.1 | 931.49 | 295.01 | 932.08 | 294.98 | 934.12 | 294.97 |
| 937.9 | 295.03 | 939.12 | 295.04 | 940.22 | 295.07 | 941.49 | 295.14 | 945.68 | 295.28 |
| 947.2 | 295.36 | 952.71 | 295.54 | 954.03 | 295.54 | 957.48 | 295.48 | 957.95 | 295.45 |
| 959.46 | 295.42 | 964.95 | 295.47 | 965.63 | 295.49 | 968.56 | 295.49 | 968.74 | 295.47 |
| 972.06 | 295.42 | 974.12 | 295.44 | 979.4 | 295.57 | 979.89 | 295.57 | 980.63 | 295.54 |
| 981.09 | 295.54 | 983.12 | 295.59 | 983.54 | 295.57 | 985.23 | 295.57 | 987.26 | 295.61 |
| 988.66 | 295.67 | 989.32 | 295.68 | 992.35 | 295.76 | 997.11 | 295.87 | 998.28 | 295.9 |
| 1006.09 | 296.08 | 1016.37 | 296.33 | 1016.45 | 296.34 | 1019.57 | 296.55 | 1020.68 | 296.64 |
| 1022.22 | 296.61 | 1031.79 | 296.61 | 1034.74 | 296.51 | 1035.79 | 296.43 | 1036.86 | 296.38 |
| 1038.67 | 296.33 | 1041.17 | 296.29 | 1048.96 | 296.32 | 1050.71 | 296.33 | 1053.13 | 296.33 |
| 1054.01 | 296.35 | 1056.62 | 296.5 | 1058.4 | 296.73 | 1062.55 | 297.28 | 1064.34 | 297.91 |
| 1065.41 | 298.24 | 1066.03 | 298.5 | 1067.83 | 299.19 | 1068.79 | 299.69 | 1069.94 | 300.15 |
| 1070.95 | 300.69 | 1071.65 | 301.1 | 1072.95 | 301.91 | 1073.24 | 302.06 | 1073.52 | 302.26 |
| 1074.16 | 302.64 | 1074.99 | 303.07 | 1076.76 | 303.97 | 1079.95 | 305.73 | 1080.2 | 305.89 |

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 1083.73   307.8 1085.28  308.55    1086  308.95 1087.53  309.73 1088.75  310.39
 1090.02  311.09 1091.24  311.73 1093.22  312.75 1095.03  313.66 1095.62  313.99
 1096.32  314.33 1098.16  315.13 1099.67  315.77 1100.47  316.17 1100.78  316.22
 1101.76  316.22 1102.14   316.2 1103.73  316.03 1105.06  315.89 1106.19   315.8
 1106.44   315.8 1108.37  315.71 1109.76  315.66 1110.26  315.68 1110.77  315.75
 1114.12   316.3 1115.97  316.59 1119.65  317.19 1122.74  317.76 1126.33  318.25
 1129.42  318.56 1132.01  318.76 1133.81  318.83 1134.56  318.91 1136.59     319
 1139.92  319.03 1142.55  319.08 1144.34  319.12 1144.44  319.13 1149.72  319.25
 1150.14  319.28 1152.17  319.37 1152.93  319.44 1153.32  319.42 1154.39  319.54
 1158.69  319.92 1160.23  320.06 1162.73  320.35 1167.99  320.99 1169.17  321.14
 1171.11  321.32 1177.92  321.89 1178.95  321.98 1182.18  322.24 1183.12  322.31
 1189.69  322.64

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05    89.7     .04 1103.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
          89.7 1103.73            25.95   19.31   19.21             .1       .3

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 2197.73

INPUT
Description:
Station Elevation Data    num=     471
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  317.43.3099365     317 2.23999     3162.949951  315.654.169922     315
5.799927  314.216.199951     3146.849976  313.67 8.22998     3139.369995  312.47
10.15991     31212.27991  311.3212.35999   311.314.06995  311.6215.10999  311.61
15.77991  311.6916.56995  311.6318.17993  311.39 20.2699  311.19   21.88     311
   23.25  310.8623.69995  310.7927.68994     31029.07996   309.741.73999  307.22
41.96997   307.2 43.5199  307.0445.88989  307.1949.43994  307.6251.00989  307.83
51.28992  307.8851.85999  307.8151.95996   307.852.56995  307.6554.63989     307
57.45996  306.3859.55994  305.6764.81995  304.2766.38989     30470.02991  303.11
70.40991     30370.83997  302.8674.08997     30274.58997  301.8276.95996     301
   78.38  300.1278.59998     30078.83997  299.8680.68994  298.6681.77991     298
83.98999  297.28   84.63  297.1785.19995     29785.56995  296.9589.73999  296.35
   91.12  296.1992.35999     296104.4199   294.3  106.37     294  145.98     293
  146.45  292.98  162.64  292.95  176.47  293.33184.7899  293.48   185.2  293.48
189.4999  293.56190.6699  293.56191.1699  293.54  191.46  293.54191.5699  293.53
191.9999  293.53192.7999  293.54193.1799  293.55193.5099  293.55194.4299  293.56
  197.71  293.64  199.35  293.66201.6099  293.61   202.2  293.58202.3599  293.57
202.4799  293.55202.7399  293.51204.3599  293.37  205.16  293.29  207.35     293
  219.03  292.61   219.6   292.6220.7899   292.6221.4299  292.61  223.72  292.61
236.1799  292.27  237.95  292.25   238.1  292.25240.0699  292.27  240.27  292.27
  242.65  292.39242.9299  292.39  249.22   292.7249.3699   292.7  253.95     293
  277.59     294281.1199  294.12283.4899  294.15  283.96  294.15284.7899  294.17
313.0599  294.15313.2399  294.14313.6899  294.13   316.9     294318.1799  293.84
318.4299  293.78318.8599  293.76  320.21  293.72322.5099  293.71  323.78  293.73
   325.2  293.78   328.9  293.83   329.2  293.82329.5499   293.8345.1899  293.62
  352.03  293.67  355.59  293.76   356.7  293.81357.4399  293.83360.9399  293.88
366.2399  293.87  366.53  293.84  366.59  293.84366.9399  293.76367.5499  293.68
367.9299   293.7368.1099  293.67  369.03  293.58369.9899  293.59371.4399  293.43
376.9999     293381.6099   292.9401.9899     293402.6299  293.03404.6699  293.06
408.5399  293.04413.4999  292.91  414.09   292.9  414.41   292.9   415.1  292.91
415.4199  292.92419.4899     293426.7599   293.4  430.09  293.52  430.41  293.55
431.8699  293.52   432.4  293.45433.1199   293.4434.1699   293.4434.3599  293.39
446.4799  293.95446.6899  293.98446.8599     294  451.27     294  451.95  293.94
458.4299     293  458.65  292.98458.9899   292.9  460.41  292.88  462.72     293
  463.02  293.01467.5499  293.22468.2399  293.23469.6699  293.22  470.16  293.21
  475.28     293  480.65  292.88  481.02  292.88482.0399  292.91487.9899  292.99
  489.15  292.99  490.35  292.97  497.41  292.78  521.28  292.83  523.84  292.94
  526.14     293528.9199  293.15  551.71     294  552.66  294.16  554.21  294.36
556.4899  294.54556.8099  294.57  557.96  294.62  558.27  294.63  558.77  294.66
559.1299  294.66  561.77  294.62  562.09  294.63562.5099  294.65562.6099  294.66
  562.72  294.69562.8699   294.7564.7599   294.7  564.89  294.69565.4799  294.68
  584.08  294.01584.1699  294.01584.4299     294585.1799     294585.2599  294.01
585.3699  294.01  610.03  294.48611.0499  294.51  630.21  294.89  630.46   294.9
630.9199  294.91632.0699  294.95632.3199  294.95  632.53  294.96633.0499  294.96
633.2299  294.95   633.4  294.95  633.46  294.96  633.78  294.96  633.96  294.94
634.1699  294.92635.3199  294.95637.8699  294.97638.0499  294.95  638.34  294.91
638.4199   294.9  638.59  294.87639.6099  294.78  643.91     294645.4799  293.79
  648.64  293.82649.4199  293.88650.6099  293.91  654.21  293.92  655.96  293.89
656.3199  293.89660.7599  293.71661.1599  293.68661.8699  293.65  662.74   293.6
665.2499  293.48666.1599  293.46670.0299  293.47679.8099  293.76  680.27  293.78
  680.58  293.78  682.22  293.79  685.39  293.69  692.71     294703.1199  294.94
  704.09     295718.4999     295   721.1  295.06721.1899  295.04721.7999  295.04
723.4999  295.08724.1199  295.12724.2899  295.17  726.36  295.31727.4399  295.26
737.9399  295.32738.2499  295.31738.5099  295.29  738.59  295.27  739.83  295.15
  740.33  295.11  744.98  294.85745.2599  294.81746.0399  294.78746.8999  294.78
  765.08  294.96  766.27     295768.3999  295.11  768.64  295.13783.2899  295.13
  784.02  295.03784.1599     295  805.33     295809.7899  294.24  809.95  294.21
810.0699   294.2810.1599  294.19810.4399  294.17810.6899  294.16811.2799  294.16
811.4999  294.17  812.02  294.17813.2499  294.23813.5699  294.24813.6699  294.24
   814.2   294.2  814.36  294.17  814.49  294.16  814.61  294.16814.8799  294.17
  815.08  294.19  815.84  294.25  829.58     295  835.71  295.18836.1299  295.18
837.7599   295.2838.8099  295.19  839.14  295.18  841.52     295  841.73  294.99
841.8199  294.98855.8099  294.96  855.95  294.95859.7999  294.82  864.23  294.77
864.4999  294.77   864.6  294.76  864.84  294.77864.9299  294.77867.1199  294.86
  869.49     295  871.48  295.17873.6699   295.2874.0299  295.17877.7799     295
883.1699  294.86883.5299  294.84  883.96  294.85884.3999  294.85   886.2  294.98
  886.58     295893.5399  295.28  893.74  295.29896.1599  295.33  899.84  295.33
  900.84  295.31908.3999     295908.5099  294.99  909.58  294.92  910.52   294.8
   910.7  294.78915.4099  294.72  916.14   294.7917.2499  294.61  917.83  294.58
919.8699  294.57924.8599  294.65  925.96  294.68  927.22  294.75   931.4  294.91
932.9199     295  937.77  295.16938.2399  295.17938.4199  295.18  939.73  295.18
943.1699  295.12  943.64  295.09  943.98  295.08  945.15  295.06950.6299  295.11
951.3099  295.13  954.23  295.13954.4099  295.11  957.72  295.05  959.78  295.06
965.0399  295.19  965.53  295.19  965.65  295.18  966.27  295.16  966.73  295.16
968.7499   295.2968.9899   295.2969.1699  295.18970.8599  295.18972.8799  295.22
973.1599  295.23  973.28  295.23973.4899  295.24973.5499  295.24973.8599  295.25
  974.28  295.27 1001.93     296 1002.01  296.01 1005.81  296.28 1006.04  296.31
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1006.23 | 296.33 | 1007.76 | 296.3 | 1017.31 | 296.31 | 1020.25 | 296.2 | 1021.3 | 296.12 |
| 1022.37 | 296.07 | 1024.66 | 296 | 1026.67 | 295.97 | 1038.6 | 296 | 1039.41 | 296.01 |
| 1039.48 | 296.02 | 1042.08 | 296.17 | 1048 | 297 | 1049.78 | 297.66 | 1050.85 | 298 |
| 1051.47 | 298.28 | 1053.27 | 299 | 1054.22 | 299.52 | 1055.37 | 300 | 1056.38 | 300.57 |
| 1057.08 | 301 | 1058.37 | 301.84 | 1058.66 | 302 | 1058.94 | 302.21 | 1059.64 | 302.64 |
| 1060.09 | 302.9 | 1060.3 | 303 | 1060.41 | 303.06 | 1062.17 | 304 | 1062.65 | 304.27 |
| 1065.44 | 305.88 | 1065.61 | 306 | 1067.32 | 306.97 | 1067.37 | 307 | 1067.52 | 307.08 |
| 1069.13 | 308 | 1070.67 | 308.78 | 1071.39 | 309.19 | 1072.92 | 310 | 1073.36 | 310.25 |
| 1075.4 | 311.36 | 1076.62 | 312 | 1078.6 | 313 | 1080.4 | 313.88 | 1080.63 | 314 |
| 1080.99 | 314.2 | 1081.69 | 314.52 | 1085.36 | 315.99 | 1085.83 | 316.23 | 1086.14 | 316.27 |
| 1087.02 | 316.26 | 1087.49 | 316.23 | 1088.21 | 316.15 | 1089.08 | 316.04 | 1089.36 | 316 |
| 1090.37 | 315.87 | 1091.46 | 315.75 | 1091.71 | 315.75 | 1093.57 | 315.61 | 1094.92 | 315.54 |
| 1095.23 | 315.54 | 1095.4 | 315.55 | 1095.9 | 315.62 | 1104.5 | 317 | 1107.49 | 317.54 |
| 1110.39 | 317.93 | 1110.97 | 318 | 1113.96 | 318.3 | 1116.47 | 318.5 | 1117.04 | 318.53 |
| 1118.21 | 318.57 | 1118.94 | 318.65 | 1120.9 | 318.74 | 1124.13 | 318.75 | 1133.69 | 318.92 |
| 1134.02 | 318.95 | 1135.99 | 319.03 | 1136.73 | 319.1 | 1137.1 | 319.07 | 1137.19 | 319.08 |
| 1137.31 | 319.09 | 1137.77 | 319.15 | 1138.14 | 319.19 | 1143.8 | 319.7 | 1144.75 | 319.83 |
| 1146.22 | 320 | 1152.45 | 320.81 | 1154.33 | 321 | 1165.05 | 321.94 | 1165.6 | 322 |
| 1172.32 | 322.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 85.56995 | .04 | 1089.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 85.56995 | 1089.08 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2177.87*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 317.13 | .36 | 316.72 | 1.88 | 316.07 | 3.45 | 315.42 | 5.78 | 314.38 |
| 6.78 | 313.96 | 8.01 | 313.42 | 9.62 | 312.75 | 10.95 | 312.22 | 11.88 | 311.76 |
| 12.61 | 311.55 | 13.55 | 311.3 | 14.13 | 311.1 | 14.45 | 311.02 | 15.58 | 311.22 |
| 16.45 | 311.35 | 16.63 | 311.36 | 17.66 | 311.35 | 18.45 | 311.43 | 19.37 | 311.37 |
| 21.29 | 311.15 | 22.09 | 311.08 | 23.69 | 310.96 | 24.84 | 310.84 | 27.03 | 310.64 |
| 27.98 | 310.49 | 32.37 | 309.67 | 33.99 | 309.34 | 40.64 | 308.14 | 42.13 | 307.89 |
| 42.48 | 307.82 | 44.62 | 307.43 | 45.56 | 307.25 | 46.38 | 307.11 | 47.38 | 306.96 |
| 48.79 | 306.72 | 49.62 | 306.65 | 50.87 | 306.52 | 53.64 | 306.61 | 57.12 | 306.88 |
| 58.04 | 306.96 | 59.63 | 307.12 | 59.95 | 307.17 | 60.74 | 307.08 | 61.45 | 306.93 |
| 63.87 | 306.27 | 67.17 | 305.64 | 68.18 | 305.34 | 69.62 | 304.94 | 75.71 | 303.59 |
| 75.77 | 303.57 | 77.6 | 303.31 | 81.86 | 302.47 | 82.81 | 302.23 | 84.21 | 301.93 |
| 86.61 | 301.4 | 88.91 | 300.73 | 89.96 | 300.44 | 91.62 | 299.6 | 92.16 | 299.35 |
| 93.2 | 298.79 | 94.32 | 298.2 | 95.59 | 297.57 | 95.72 | 297.54 | 98.18 | 296.87 |
| 98.93 | 296.75 | 99.59 | 296.58 | 100.02 | 296.52 | 100.93 | 296.4 | 101.78 | 296.27 |
| 104.29 | 295.95 | 105.7 | 295.81 | 106.97 | 295.63 | 110.1 | 295.23 | 118.84 | 294 |
| 119.31 | 293.94 | 121.31 | 293.65 | 130.5 | 293.41 | 134.04 | 293.33 | 135.6 | 293.29 |
| 145.98 | 293.04 | 146.22 | 293.03 | 154.71 | 292.82 | 155.44 | 292.81 | 156.46 | 292.78 |
| 160.28 | 292.69 | 161.83 | 292.66 | 162.31 | 292.64 | 170.21 | 292.64 | 173.89 | 292.63 |
| 175.35 | 292.61 | 178.88 | 292.64 | 180.53 | 292.69 | 182.41 | 292.78 | 183.83 | 292.91 |
| 187.32 | 293.01 | 192.39 | 293.14 | 193.05 | 293.14 | 195.17 | 293.1 | 195.38 | 293.09 |
| 197.84 | 293.05 | 199.52 | 293.06 | 199.67 | 293.07 | 201.54 | 293.1 | 203.46 | 293.12 |
| 206.36 | 293.18 | 207.55 | 293.18 | 208.47 | 293.15 | 211.45 | 293.18 | 212.53 | 293.21 |
| 214.76 | 293.26 | 216.43 | 293.28 | 218.75 | 293.23 | 219.51 | 293.2 | 219.9 | 293.14 |
| 221.56 | 293.01 | 222.38 | 292.93 | 224.62 | 292.65 | 236.57 | 292.28 | 237.15 | 292.27 |
| 238.37 | 292.27 | 239.02 | 292.28 | 241.37 | 292.28 | 244.51 | 292.19 | 248.79 | 292.08 |
| 249.37 | 292.06 | 254.11 | 291.94 | 256.07 | 291.92 | 258.22 | 291.94 | 260.58 | 292.05 |
| 260.86 | 292.05 | 266.22 | 292.32 | 267.24 | 292.36 | 271.78 | 292.66 | 280.99 | 293.04 |
| 281.34 | 293.06 | 286.12 | 293.25 | 286.74 | 293.28 | 295.2 | 293.63 | 298.7 | 293.75 |
| 302.34 | 293.8 | 308.68 | 293.81 | 312.7 | 293.81 | 330.35 | 293.8 | 331.85 | 293.74 |
| 332.81 | 293.71 | 334.15 | 293.65 | 335.42 | 293.5 | 335.67 | 293.45 | 337.43 | 293.39 |
| 339.71 | 293.38 | 340.97 | 293.4 | 342.38 | 293.44 | 346.05 | 293.49 | 346.69 | 293.46 |
| 349.84 | 293.43 | 352.53 | 293.39 | 356.75 | 293.34 | 358.97 | 293.32 | 360.06 | 293.3 |
| 362.19 | 293.28 | 365.1 | 293.3 | 366.88 | 293.3 | 368.97 | 293.32 | 372.49 | 293.4 |
| 373.59 | 293.45 | 374.33 | 293.47 | 375.63 | 293.48 | 376.61 | 293.5 | 377.79 | 293.51 |
| 381.26 | 293.5 | 383.05 | 293.5 | 383.39 | 293.47 | 383.74 | 293.4 | 384.34 | 293.32 |
| 384.72 | 293.34 | 385.81 | 293.22 | 386.76 | 293.23 | 388.2 | 293.08 | 393.71 | 292.67 |
| 396.57 | 292.62 | 398.28 | 292.58 | 410.4 | 292.66 | 411.05 | 292.66 | 416.31 | 292.7 |
| 418.47 | 292.71 | 419.11 | 292.74 | 421.13 | 292.78 | 423.09 | 292.77 | 424.96 | 292.77 |
| 425.53 | 292.75 | 430.32 | 292.63 | 430.78 | 292.63 | 435.48 | 292.72 | 436.04 | 292.74 |
| 438.51 | 292.86 | 438.95 | 292.89 | 443.02 | 293.1 | 444.02 | 293.14 | 446.32 | 293.22 |
| 446.63 | 293.25 | 448.08 | 293.22 | 448.61 | 293.15 | 449.32 | 293.1 | 450.67 | 293.1 |
| 453.12 | 293.21 | 456.4 | 293.35 | 462.56 | 293.62 | 462.93 | 293.67 | 467.31 | 293.67 |
| 467.98 | 293.61 | 474.4 | 292.71 | 474.95 | 292.61 | 476.36 | 292.59 | 477.98 | 292.67 |
| 478.95 | 292.71 | 483.44 | 292.91 | 484.12 | 292.92 | 486.02 | 292.9 | 487.95 | 292.82 |
| 491.1 | 292.7 | 492.08 | 292.67 | 493.72 | 292.64 | 496.42 | 292.58 | 497.8 | 292.61 |
| 501.57 | 292.65 | 503.69 | 292.68 | 504.84 | 292.68 | 506.57 | 292.65 | 513.03 | 292.48 |
| 519.39 | 292.5 | 525.86 | 292.51 | 529.7 | 292.51 | 532.11 | 292.52 | 536.68 | 292.53 |
| 539.22 | 292.64 | 541.5 | 292.69 | 544.25 | 292.84 | 546.76 | 292.93 | 554.9 | 293.21 |
| 557.53 | 293.31 | 560.58 | 293.42 | 566.83 | 293.66 | 567.78 | 293.81 | 569.31 | 294 |
| 571.89 | 294.21 | 574.19 | 294.3 | 576.8 | 294.26 | 577.54 | 294.29 | 577.89 | 294.34 |
| 579.77 | 294.34 | 580.48 | 294.32 | 587.01 | 294.1 | 588.59 | 294.04 | 589.34 | 294.02 |
| 591.64 | 293.94 | 593.18 | 293.88 | 594.32 | 293.85 | 596.35 | 293.78 | 598.78 | 293.69 |
| 600 | 293.68 | 601.11 | 293.71 | 606.07 | 293.8 | 607.52 | 293.82 | 613.52 | 293.93 |
| 613.91 | 293.93 | 620.61 | 294.06 | 620.77 | 294.06 | 625.64 | 294.16 | 632.49 | 294.28 |
| 635.11 | 294.32 | 644.62 | 294.5 | 646.46 | 294.56 | 648.16 | 294.57 | 648.55 | 294.53 |
| 649.69 | 294.56 | 652.21 | 294.58 | 652.93 | 294.48 | 653.94 | 294.4 | 658.19 | 293.65 |
| 659.5 | 293.49 | 659.75 | 293.45 | 660.96 | 293.47 | 662.88 | 293.48 | 663.66 | 293.54 |
| 664.84 | 293.57 | 668.4 | 293.58 | 670.49 | 293.55 | 674.89 | 293.38 | 675.29 | 293.35 |
| 676.86 | 293.27 | 679.34 | 293.16 | 680.22 | 293.14 | 684.08 | 293.15 | 687.88 | 293.26 |
| 688.07 | 293.26 | 694.23 | 293.44 | 696.16 | 293.45 | 699.3 | 293.35 | 706.55 | 293.65 |
| 716.87 | 294.55 | 717.81 | 294.61 | 720.17 | 294.61 | 732.11 | 294.63 | 734.69 | 294.69 |
| 734.78 | 294.67 | 735.38 | 294.67 | 737.07 | 294.71 | 737.68 | 294.75 | 737.85 | 294.8 |
| 739.9 | 294.94 | 740.97 | 294.89 | 751.37 | 294.96 | 752.02 | 294.91 | 753.74 | 294.76 |
| 758.35 | 294.51 | 758.63 | 294.47 | 759.4 | 294.44 | 760.28 | 294.44 | 763.55 | 294.48 |
| 766.77 | 294.5 | 778.27 | 294.62 | 779.45 | 294.66 | 781.56 | 294.76 | 781.8 | 294.78 |
| 796.31 | 294.78 | 797.17 | 294.65 | 801.55 | 294.64 | 803.34 | 294.64 | 806.43 | 294.63 |
| 812.6 | 294.63 | 818.15 | 294.64 | 822.57 | 293.91 | 822.73 | 293.88 | 823.46 | 293.84 |
| 824.78 | 293.85 | 826 | 293.91 | 826.42 | 293.92 | 827.35 | 293.85 | 828.57 | 293.94 |
| 830.36 | 294.04 | 831.76 | 294.11 | 837.41 | 294.43 | 842.18 | 294.68 | 848.26 | 294.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 850.04 | 294.87 | 851.66 | 294.85 | 854.31 | 294.65 | 863.02 | 294.63 | 868.17 | 294.62 |
| 868.31 | 294.61 | 872.13 | 294.49 | 876.88 | 294.43 | 879.38 | 294.52 | 881.73 | 294.66 |
| 883.7 | 294.82 | 885.87 | 294.86 | 886.23 | 294.83 | 887 | 294.8 | 889.95 | 294.67 |
| 895.29 | 294.54 | 895.49 | 294.52 | 896.51 | 294.52 | 898.29 | 294.65 | 900.55 | 294.74 |
| 900.99 | 294.75 | 905.76 | 294.94 | 908.16 | 294.98 | 911.81 | 294.98 | 912.8 | 294.96 |
| 918.67 | 294.72 | 920.29 | 294.65 | 921.46 | 294.58 | 922.57 | 294.44 | 923.65 | 294.43 |
| 927.23 | 294.38 | 927.96 | 294.36 | 929.06 | 294.28 | 929.63 | 294.25 | 931.65 | 294.24 |
| 936.6 | 294.31 | 937.69 | 294.34 | 938.94 | 294.41 | 943.08 | 294.57 | 944.59 | 294.65 |
| 950.04 | 294.83 | 951.33 | 294.83 | 954.74 | 294.78 | 955.21 | 294.75 | 956.7 | 294.72 |
| 959.52 | 294.75 | 960.15 | 294.75 | 962.13 | 294.77 | 962.81 | 294.79 | 965.7 | 294.79 |
| 965.88 | 294.77 | 969.16 | 294.71 | 971.2 | 294.72 | 975.89 | 294.84 | 976.9 | 294.85 |
| 977.63 | 294.82 | 978.09 | 294.82 | 980.09 | 294.85 | 980.51 | 294.83 | 982.18 | 294.83 |
| 984.18 | 294.87 | 984.79 | 294.89 | 988.59 | 294.99 | 991.96 | 295.07 | 1012.97 | 295.63 |
| 1013.05 | 295.63 | 1016.81 | 295.9 | 1017.23 | 295.94 | 1018.75 | 295.92 | 1028.21 | 295.93 |
| 1031.12 | 295.83 | 1032.16 | 295.76 | 1033.22 | 295.71 | 1035.49 | 295.64 | 1037.48 | 295.62 |
| 1046.92 | 295.65 | 1049.31 | 295.66 | 1050.18 | 295.69 | 1052.75 | 295.84 | 1055.04 | 296.16 |
| 1058.62 | 296.67 | 1060.38 | 297.31 | 1061.45 | 297.64 | 1062.06 | 297.91 | 1063.84 | 298.61 |
| 1064.78 | 299.11 | 1065.92 | 299.58 | 1066.92 | 300.13 | 1067.62 | 300.55 | 1068.9 | 301.36 |
| 1069.18 | 301.51 | 1069.46 | 301.72 | 1070.6 | 302.38 | 1070.92 | 302.53 | 1073.14 | 303.71 |
| 1075.9 | 305.27 | 1076.07 | 305.39 | 1077.96 | 306.43 | 1079.56 | 307.33 | 1081.09 | 308.08 |
| 1081.8 | 308.48 | 1083.31 | 309.27 | 1085.77 | 310.6 | 1086.98 | 311.23 | 1088.94 | 312.21 |
| 1090.45 | 312.94 | 1091.31 | 313.39 | 1092.01 | 313.7 | 1092.87 | 314.05 | 1095.64 | 315.16 |
| 1096.11 | 315.4 | 1096.41 | 315.44 | 1097.29 | 315.44 | 1097.75 | 315.42 | 1099.33 | 315.26 |
| 1100.61 | 315.12 | 1101.7 | 315.02 | 1101.95 | 315.03 | 1102.69 | 314.98 | 1104.67 | 314.9 |
| 1105.62 | 314.9 | 1108.43 | 315.38 | 1114.6 | 316.47 | 1114.68 | 316.48 | 1117.65 | 317.05 |
| 1120.54 | 317.48 | 1121.12 | 317.56 | 1123.81 | 317.87 | 1126.15 | 318.1 | 1127.16 | 318.18 |
| 1128.33 | 318.24 | 1129.4 | 318.36 | 1131.1 | 318.46 | 1133.63 | 318.52 | 1136.19 | 318.61 |
| 1138.89 | 318.71 | 1141.17 | 318.78 | 1143.73 | 318.85 | 1144.06 | 318.88 | 1146.02 | 318.98 |
| 1146.76 | 319.05 | 1147.13 | 319.03 | 1148.16 | 319.15 | 1153.8 | 319.67 | 1154.54 | 319.77 |
| 1156.21 | 319.96 | 1162.41 | 320.73 | 1164.28 | 320.91 | 1174.95 | 321.81 | 1175.5 | 321.87 |
| 1182.19 | 322.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 100.02 | .04 | 1099.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 100.02 | 1099.33 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2158.00*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 316.83 | .41 | 316.44 | 1.36 | 316.11 | 3.95 | 315.18 | 5.36 | 314.64 |
| 6.62 | 314.13 | 7.76 | 313.71 | 8.86 | 313.28 | 11.01 | 312.5 | 11.9 | 312.2 |
| 12.54 | 311.97 | 13.59 | 311.51 | 14.43 | 311.3 | 15.5 | 311.06 | 16.32 | 310.78 |
| 16.54 | 310.74 | 17.83 | 310.95 | 18.82 | 311.09 | 20.21 | 311.09 | 21.11 | 311.17 |
| 22.17 | 311.12 | 24.37 | 310.91 | 27.12 | 310.72 | 30.93 | 310.4 | 31.71 | 310.3 |
| 32.02 | 310.24 | 35.32 | 309.64 | 37.04 | 309.34 | 38.9 | 308.98 | 44.61 | 308.01 |
| 46.51 | 307.69 | 48.22 | 307.44 | 49.31 | 307.25 | 51.06 | 306.93 | 52.14 | 306.74 |
| 53.09 | 306.6 | 53.87 | 306.51 | 55.84 | 306.22 | 57.07 | 306.12 | 58.17 | 306.01 |
| 60.27 | 306.03 | 61.39 | 306.03 | 63.27 | 306.11 | 66.01 | 306.25 | 67.31 | 306.35 |
| 68.24 | 306.41 | 68.62 | 306.45 | 69.51 | 306.36 | 70.25 | 306.22 | 73.1 | 305.54 |
| 76.87 | 304.89 | 79.02 | 304.36 | 79.68 | 304.21 | 80.81 | 303.99 | 86.65 | 302.89 |
| 88.82 | 302.63 | 91.37 | 302.19 | 93.69 | 301.82 | 94.77 | 301.6 | 96.37 | 301.31 |
| 99.12 | 300.8 | 100.3 | 300.5 | 101.76 | 300.16 | 102.96 | 299.87 | 104.86 | 299.07 |
| 105.48 | 298.84 | 107.95 | 297.74 | 108.63 | 297.47 | 109.41 | 297.14 | 111.71 | 296.62 |
| 112.37 | 296.45 | 113.22 | 296.33 | 113.98 | 296.15 | 114.48 | 296.1 | 116.58 | 295.8 |
| 118.84 | 295.55 | 120.29 | 295.42 | 122.4 | 295.18 | 124.57 | 294.91 | 128.34 | 294.39 |
| 133.72 | 293.64 | 136.24 | 293.3 | 145.65 | 293.05 | 149.26 | 292.97 | 150.86 | 292.93 |
| 161.47 | 292.69 | 161.72 | 292.68 | 170.4 | 292.47 | 176.1 | 292.34 | 178.17 | 292.3 |
| 189.24 | 292.3 | 190.97 | 292.27 | 191.51 | 292.27 | 195.11 | 292.32 | 196.81 | 292.39 |
| 198.73 | 292.52 | 200.17 | 292.73 | 202 | 292.79 | 203.75 | 292.84 | 208.93 | 292.96 |
| 209.61 | 292.95 | 214.5 | 292.68 | 216.37 | 292.68 | 218.28 | 292.72 | 220.25 | 292.74 |
| 223.21 | 292.8 | 224.44 | 292.8 | 225.38 | 292.77 | 227.41 | 292.79 | 229.53 | 292.83 |
| 231.05 | 292.85 | 233.52 | 292.9 | 235.88 | 292.86 | 236.79 | 292.81 | 237.06 | 292.77 |
| 239.6 | 292.57 | 241.89 | 292.31 | 254.11 | 291.95 | 255.95 | 291.94 | 256.62 | 291.95 |
| 259.01 | 291.94 | 262.23 | 291.85 | 266.61 | 291.74 | 267.2 | 291.73 | 272.05 | 291.61 |
| 274.04 | 291.58 | 276.17 | 291.6 | 278.51 | 291.72 | 278.78 | 291.72 | 282.35 | 291.88 |
| 282.92 | 291.93 | 285.25 | 292.04 | 289.6 | 292.31 | 298.73 | 292.69 | 299.35 | 292.71 |
| 303.82 | 292.89 | 304.42 | 292.92 | 312.81 | 293.26 | 316.28 | 293.37 | 319.88 | 293.43 |
| 326.16 | 293.45 | 330.15 | 293.45 | 347.64 | 293.44 | 350.07 | 293.36 | 351.41 | 293.31 |
| 352.67 | 293.17 | 352.91 | 293.11 | 353.33 | 293.09 | 354.66 | 293.06 | 356.92 | 293.05 |
| 358.16 | 293.06 | 359.56 | 293.11 | 363.19 | 293.15 | 363.83 | 293.12 | 366.95 | 293.09 |
| 369.62 | 293.05 | 373.8 | 293 | 375.99 | 292.98 | 377.07 | 292.96 | 379.18 | 292.94 |
| 380.65 | 292.95 | 383.83 | 292.95 | 385.9 | 292.96 | 389.4 | 293.04 | 390.49 | 293.09 |
| 392.51 | 293.12 | 394.29 | 293.13 | 394.65 | 293.14 | 398.08 | 293.13 | 399.85 | 293.13 |
| 400.2 | 293.1 | 400.54 | 293.03 | 401.14 | 292.96 | 401.51 | 292.98 | 401.69 | 292.95 |
| 402.59 | 292.87 | 403.53 | 292.88 | 404.96 | 292.74 | 410.42 | 292.35 | 414.94 | 292.27 |
| 426.95 | 292.35 | 427.6 | 292.36 | 434.95 | 292.43 | 435.58 | 292.46 | 437.59 | 292.5 |
| 439.53 | 292.5 | 441.39 | 292.49 | 443.91 | 292.44 | 446.26 | 292.37 | 447.15 | 292.36 |
| 448.14 | 292.38 | 451.8 | 292.44 | 452.36 | 292.46 | 455.24 | 292.6 | 457.56 | 292.72 |
| 457.95 | 292.73 | 459.27 | 292.81 | 462.54 | 292.92 | 462.86 | 292.95 | 464.29 | 292.92 |
| 464.81 | 292.85 | 465.52 | 292.81 | 466.85 | 292.8 | 469.14 | 292.9 | 469.29 | 292.9 |
| 478.64 | 293.3 | 479.01 | 293.34 | 483.34 | 293.34 | 484.01 | 293.28 | 490.37 | 292.41 |
| 490.92 | 292.32 | 492.31 | 292.3 | 499.32 | 292.6 | 500 | 292.61 | 501.89 | 292.59 |
| 503.79 | 292.52 | 506.91 | 292.39 | 509.51 | 292.33 | 512.19 | 292.28 | 517.29 | 292.35 |
| 519.39 | 292.37 | 520.53 | 292.37 | 522.24 | 292.34 | 528.64 | 292.18 | 541.36 | 292.22 |
| 545.16 | 292.21 | 547.55 | 292.22 | 552.08 | 292.23 | 554.59 | 292.33 | 556.85 | 292.39 |
| 559.58 | 292.53 | 563.3 | 292.65 | 564.69 | 292.69 | 567.83 | 292.79 | 570.14 | 292.87 |
| 572.74 | 292.97 | 575.76 | 293.08 | 581.96 | 293.31 | 582.89 | 293.46 | 584.41 | 293.65 |
| 586.65 | 293.82 | 586.96 | 293.85 | 588.89 | 293.93 | 591.84 | 293.9 | 592.56 | 293.93 |
| 592.91 | 293.98 | 594.9 | 293.98 | 595.48 | 293.97 | 601.95 | 293.76 | 603.51 | 293.7 |
| 604.26 | 293.68 | 608.07 | 293.55 | 609.2 | 293.52 | 613.61 | 293.37 | 614.82 | 293.36 |
| 615.92 | 293.39 | 620.84 | 293.47 | 622.27 | 293.49 | 628.22 | 293.59 | 628.6 | 293.6 |
| 635.24 | 293.71 | 635.4 | 293.72 | 638.84 | 293.79 | 647.02 | 293.91 | 649.61 | 293.94 |
| 659.03 | 294.12 | 661.31 | 294.18 | 662.17 | 294.17 | 662.54 | 294.18 | 662.92 | 294.14 |
| 664.05 | 294.17 | 666.55 | 294.19 | 667.26 | 294.1 | 668.26 | 294.02 | 672.48 | 293.31 |
| 674.03 | 293.12 | 677.13 | 293.15 | 677.89 | 293.2 | 679.06 | 293.23 | 682.6 | 293.24 |
| 684.67 | 293.21 | 689.03 | 293.05 | 689.42 | 293.02 | 693.44 | 292.84 | 694.3 | 292.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 698.13 | 292.83 | 701.89 | 292.93 | 702.08 | 292.94 | 707.73 | 293.08 | 708.18 | 293.1 |
| 710.1 | 293.11 | 713.21 | 293.02 | 720.4 | 293.29 | 721.64 | 293.4 | 730.85 | 294.18 |
| 731.55 | 294.22 | 733.89 | 294.23 | 745.72 | 294.26 | 748.27 | 294.32 | 748.36 | 294.3 |
| 748.96 | 294.3 | 750.63 | 294.34 | 751.24 | 294.38 | 751.41 | 294.43 | 753.44 | 294.56 |
| 754.5 | 294.52 | 763.34 | 294.59 | 764.81 | 294.6 | 767.15 | 294.4 | 771.72 | 294.17 |
| 772 | 294.13 | 772.76 | 294.1 | 773.64 | 294.1 | 776.87 | 294.14 | 781.86 | 294.17 |
| 791.46 | 294.27 | 792.62 | 294.31 | 794.72 | 294.41 | 794.95 | 294.43 | 796.12 | 294.44 |
| 800.51 | 294.44 | 809.34 | 294.43 | 810.19 | 294.31 | 810.86 | 294.3 | 814.52 | 294.29 |
| 816.29 | 294.28 | 819.36 | 294.27 | 820.09 | 294.26 | 821.57 | 294.26 | 824.45 | 294.27 |
| 830.98 | 294.27 | 835.35 | 293.59 | 835.51 | 293.56 | 836.24 | 293.51 | 837.54 | 293.53 |
| 839.16 | 293.61 | 839.97 | 293.54 | 840.35 | 293.55 | 841.29 | 293.63 | 843.07 | 293.73 |
| 844.46 | 293.8 | 850.06 | 294.11 | 854.79 | 294.36 | 860.8 | 294.52 | 862.58 | 294.54 |
| 864.17 | 294.52 | 866.8 | 294.33 | 875.43 | 294.3 | 880.54 | 294.28 | 880.68 | 294.27 |
| 884.46 | 294.15 | 889.17 | 294.09 | 892.12 | 294.21 | 893.92 | 294.31 | 895.93 | 294.48 |
| 898.08 | 294.51 | 899.19 | 294.46 | 902.11 | 294.34 | 907.4 | 294.21 | 907.76 | 294.19 |
| 908.61 | 294.2 | 910.38 | 294.31 | 911.23 | 294.35 | 913.05 | 294.42 | 917.58 | 294.58 |
| 917.78 | 294.59 | 920.16 | 294.63 | 923.05 | 294.63 | 924.75 | 294.6 | 930.57 | 294.37 |
| 932.17 | 294.3 | 933.33 | 294.23 | 934.43 | 294.1 | 935.51 | 294.09 | 939.06 | 294.04 |
| 939.77 | 294.02 | 940.86 | 293.94 | 941.43 | 293.91 | 943.44 | 293.9 | 948.34 | 293.98 |
| 949.42 | 294.01 | 950.65 | 294.07 | 955 | 294.23 | 956.25 | 294.31 | 961.65 | 294.48 |
| 962.94 | 294.48 | 966.31 | 294.43 | 967.11 | 294.4 | 968.26 | 294.38 | 969.53 | 294.4 |
| 971.68 | 294.42 | 973.64 | 294.43 | 974.31 | 294.45 | 977.17 | 294.45 | 977.35 | 294.43 |
| 980.6 | 294.38 | 982.62 | 294.39 | 987.27 | 294.5 | 988.05 | 294.51 | 989 | 294.47 |
| 989.45 | 294.47 | 991.43 | 294.5 | 991.84 | 294.49 | 993.5 | 294.48 | 995.48 | 294.51 |
| 996.86 | 294.56 | 999.85 | 294.62 | 1003.19 | 294.71 | 1024.01 | 295.25 | 1024.09 | 295.26 |
| 1027.82 | 295.51 | 1028.23 | 295.56 | 1029.73 | 295.53 | 1039.11 | 295.56 | 1042 | 295.46 |
| 1043.03 | 295.39 | 1044.08 | 295.35 | 1046.58 | 295.28 | 1048.3 | 295.26 | 1057.65 | 295.3 |
| 1060.81 | 295.34 | 1060.88 | 295.35 | 1063.43 | 295.52 | 1065.69 | 295.83 | 1069.24 | 296.34 |
| 1070.99 | 296.96 | 1072.04 | 297.28 | 1072.65 | 297.54 | 1074.42 | 298.22 | 1075.35 | 298.71 |
| 1076.48 | 299.16 | 1077.47 | 299.69 | 1078.16 | 300.1 | 1079.42 | 300.88 | 1079.71 | 301.03 |
| 1079.98 | 301.22 | 1081.11 | 301.86 | 1081.32 | 301.95 | 1083.15 | 302.89 | 1083.63 | 303.15 |
| 1086.37 | 304.66 | 1086.53 | 304.77 | 1089.99 | 306.65 | 1091.5 | 307.39 | 1093.17 | 308.27 |
| 1093.71 | 308.54 | 1094.14 | 308.78 | 1096.14 | 309.84 | 1097.34 | 310.46 | 1099.29 | 311.42 |
| 1101.05 | 312.27 | 1101.63 | 312.58 | 1102.32 | 312.89 | 1105.92 | 314.33 | 1106.39 | 314.57 |
| 1106.69 | 314.61 | 1107.55 | 314.63 | 1108.72 | 314.56 | 1109.58 | 314.48 | 1109.85 | 314.45 |
| 1111.93 | 314.29 | 1112.18 | 314.3 | 1114.03 | 314.24 | 1115.67 | 314.24 | 1116.33 | 314.34 |
| 1117.88 | 314.63 | 1118.63 | 314.78 | 1122.7 | 315.55 | 1124.78 | 315.94 | 1127.82 | 316.57 |
| 1131.27 | 317.12 | 1133.94 | 317.46 | 1134.44 | 317.53 | 1137.14 | 317.82 | 1138.44 | 317.91 |
| 1139.16 | 318.02 | 1141.21 | 318.18 | 1143.72 | 318.3 | 1144.31 | 318.32 | 1147.04 | 318.49 |
| 1148.96 | 318.59 | 1152.75 | 318.74 | 1153.78 | 318.77 | 1154.11 | 318.81 | 1156.06 | 318.92 |
| 1156.68 | 318.99 | 1157.16 | 318.98 | 1158.19 | 319.1 | 1163.8 | 319.63 | 1164.74 | 319.76 |
| 1166.19 | 319.91 | 1172.37 | 320.65 | 1174.23 | 320.83 | 1184.85 | 321.68 | 1185.4 | 321.74 |
| 1192.06 | 322.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 114.48 | .04 | 1109.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 114.48 | 1109.58 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2138.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 316.54 | .47 | 316.16 | 1.54 | 315.85 | 4.44 | 314.95 | 6.04 | 314.42 |
| 7.45 | 313.89 | 8.74 | 313.46 | 9.97 | 313.03 | 12.4 | 312.26 | 14.12 | 311.73 |
| 15.31 | 311.27 | 16.25 | 311.05 | 17.46 | 310.82 | 18.38 | 310.5 | 18.73 | 310.47 |
| 20.08 | 310.68 | 21.2 | 310.82 | 21.44 | 310.83 | 22.77 | 310.83 | 23.78 | 310.91 |
| 24.97 | 310.86 | 27.44 | 310.67 | 30.54 | 310.49 | 33.69 | 310.26 | 35.03 | 310.15 |
| 36.07 | 309.99 | 39.78 | 309.33 | 40.01 | 309.28 | 41.72 | 309.01 | 42.46 | 308.86 |
| 43.82 | 308.63 | 50.24 | 307.58 | 52.38 | 307.25 | 54.31 | 306.99 | 55.53 | 306.79 |
| 58.73 | 306.23 | 59.79 | 306.09 | 61.08 | 305.96 | 62.89 | 305.72 | 63.96 | 305.64 |
| 65.57 | 305.49 | 67.88 | 305.47 | 69.15 | 305.45 | 71.26 | 305.49 | 74.14 | 305.56 |
| 74.82 | 305.6 | 76.86 | 305.7 | 77.28 | 305.74 | 78.29 | 305.64 | 79.21 | 305.48 |
| 82.33 | 304.81 | 86.58 | 304.15 | 87.89 | 303.86 | 89.74 | 303.47 | 97.59 | 302.19 |
| 100.03 | 301.94 | 103.01 | 301.51 | 105.52 | 301.18 | 106.74 | 300.97 | 108.54 | 300.69 |
| 111.64 | 300.2 | 112.39 | 300.03 | 113.75 | 299.75 | 115.96 | 299.31 | 118.1 | 298.55 |
| 118.79 | 298.32 | 121.58 | 297.29 | 123.22 | 296.71 | 125.81 | 296.21 | 126.55 | 296.04 |
| 127.52 | 295.91 | 128.38 | 295.73 | 128.93 | 295.67 | 130.77 | 295.41 | 133.39 | 295.15 |
| 134.87 | 295.04 | 137.03 | 294.82 | 139.25 | 294.57 | 140.5 | 294.4 | 143.1 | 294.03 |
| 148.6 | 293.27 | 151.18 | 292.94 | 160.79 | 292.69 | 165.82 | 292.58 | 166.12 | 292.58 |
| 176.97 | 292.34 | 177.22 | 292.33 | 186.09 | 292.12 | 187.59 | 292.08 | 187.92 | 292.08 |
| 191.92 | 291.99 | 193.53 | 291.97 | 194.03 | 291.95 | 202.29 | 291.97 | 205.35 | 291.97 |
| 206.14 | 291.96 | 207.11 | 291.92 | 211.35 | 292.01 | 213.08 | 292.08 | 214.46 | 292.2 |
| 215.04 | 292.26 | 216.52 | 292.55 | 218.39 | 292.62 | 220.17 | 292.67 | 225.47 | 292.79 |
| 225.54 | 292.77 | 226.17 | 292.77 | 228.59 | 292.54 | 231.16 | 292.32 | 232.37 | 292.3 |
| 233.08 | 292.3 | 235.03 | 292.33 | 235.47 | 292.33 | 240.07 | 292.42 | 241.32 | 292.42 |
| 241.85 | 292.4 | 242.74 | 292.4 | 244 | 292.42 | 245.39 | 292.43 | 247.63 | 292.46 |
| 248.85 | 292.49 | 250.6 | 292.51 | 253.02 | 292.48 | 253.82 | 292.45 | 254.23 | 292.4 |
| 255.96 | 292.28 | 256.81 | 292.21 | 259.16 | 291.96 | 271.65 | 291.63 | 273.53 | 291.61 |
| 274.21 | 291.62 | 276.66 | 291.61 | 279.95 | 291.51 | 284.42 | 291.41 | 285.03 | 291.4 |
| 289.98 | 291.28 | 292.01 | 291.25 | 294.12 | 291.27 | 296.43 | 291.38 | 296.71 | 291.38 |
| 300.24 | 291.54 | 300.81 | 291.59 | 303.12 | 291.7 | 307.43 | 291.97 | 316.47 | 292.34 |
| 318.33 | 292.41 | 321.51 | 292.54 | 322.11 | 292.56 | 330.42 | 292.88 | 333.86 | 293 |
| 337.43 | 293.06 | 343.65 | 293.09 | 347.6 | 293.1 | 364.93 | 293.09 | 367.34 | 293.01 |
| 368.66 | 292.96 | 369.91 | 292.83 | 370.15 | 292.78 | 370.57 | 292.76 | 371.88 | 292.73 |
| 374.12 | 292.72 | 375.36 | 292.73 | 376.74 | 292.77 | 380.34 | 292.81 | 380.97 | 292.79 |
| 384.06 | 292.75 | 390.84 | 292.65 | 393.02 | 292.64 | 395.21 | 292.6 | 400.79 | 292.6 |
| 402.84 | 292.61 | 406.3 | 292.68 | 408.1 | 292.74 | 411.5 | 292.77 | 414.9 | 292.76 |
| 416.66 | 292.76 | 417 | 292.74 | 417.34 | 292.67 | 417.93 | 292.6 | 418.3 | 292.62 |
| 418.48 | 292.59 | 419.37 | 292.51 | 420.31 | 292.52 | 421.72 | 292.39 | 427.13 | 292.02 |
| 429.94 | 291.98 | 431.61 | 291.95 | 443.51 | 292.05 | 444.15 | 292.06 | 449.31 | 292.12 |
| 451.44 | 292.14 | 452.06 | 292.17 | 454.04 | 292.21 | 455.97 | 292.22 | 457.81 | 292.22 |
| 460.31 | 292.17 | 463.52 | 292.09 | 464.5 | 292.11 | 468.13 | 292.17 | 471.11 | 292.29 |
| 471.54 | 292.32 | 473.83 | 292.42 | 475.53 | 292.51 | 476.51 | 292.55 | 478.77 | 292.62 |
| 479.08 | 292.65 | 480.5 | 292.62 | 481.02 | 292.56 | 481.72 | 292.51 | 483.04 | 292.5 |
| 485.45 | 292.6 | 488.67 | 292.74 | 494.72 | 292.97 | 495.09 | 293.01 | 499.38 | 293 |
| 500.04 | 292.95 | 506.34 | 292.12 | 506.88 | 292.03 | 508.27 | 292.01 | 510.51 | 292.11 |
| 510.81 | 292.11 | 515.21 | 292.29 | 515.88 | 292.3 | 517.75 | 292.28 | 522.73 | 292.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 527.96 | 291.97 | 529.31 | 292 | 535.1 | 292.06 | 536.22 | 292.06 | 537.92 | 292.03 |
| 544.26 | 291.88 | 550.51 | 291.9 | 550.74 | 291.91 | 556.86 | 291.92 | 560.62 | 291.91 |
| 563 | 291.91 | 567.48 | 291.93 | 569.97 | 292.03 | 572.21 | 292.08 | 574.91 | 292.22 |
| 577.38 | 292.3 | 578.6 | 292.33 | 584.51 | 292.5 | 597.08 | 292.97 | 598.01 | 293.11 |
| 599.51 | 293.29 | 601.73 | 293.46 | 602.04 | 293.49 | 603.46 | 293.54 | 603.95 | 293.57 |
| 606.87 | 293.55 | 607.68 | 293.58 | 607.94 | 293.62 | 609.78 | 293.63 | 616.89 | 293.41 |
| 619.18 | 293.34 | 621.44 | 293.26 | 622.95 | 293.22 | 624.07 | 293.18 | 628.44 | 293.05 |
| 629.64 | 293.04 | 635.6 | 293.14 | 637.03 | 293.17 | 642.91 | 293.25 | 643.3 | 293.26 |
| 649.87 | 293.37 | 650.03 | 293.37 | 654.81 | 293.47 | 661.54 | 293.54 | 664.11 | 293.56 |
| 673.44 | 293.73 | 675.7 | 293.79 | 676.55 | 293.78 | 676.92 | 293.79 | 677.3 | 293.76 |
| 678.42 | 293.78 | 680.9 | 293.8 | 681.6 | 293.71 | 682.59 | 293.63 | 686.76 | 292.96 |
| 688.3 | 292.78 | 689.48 | 292.8 | 691.37 | 292.81 | 692.13 | 292.87 | 693.29 | 292.89 |
| 696.79 | 292.9 | 698.84 | 292.87 | 703.16 | 292.72 | 703.55 | 292.69 | 707.34 | 292.52 |
| 708.39 | 292.5 | 712.18 | 292.51 | 715.91 | 292.61 | 716.09 | 292.61 | 721.69 | 292.74 |
| 722.14 | 292.76 | 724.04 | 292.77 | 727.12 | 292.68 | 734.24 | 292.94 | 744.37 | 293.77 |
| 745.31 | 293.83 | 759.33 | 293.89 | 761.86 | 293.95 | 761.95 | 293.93 | 764.2 | 293.98 |
| 764.8 | 294.01 | 764.96 | 294.06 | 766.98 | 294.19 | 768.03 | 294.15 | 776.79 | 294.23 |
| 778.54 | 294.23 | 778.87 | 294.19 | 780.57 | 294.05 | 785.09 | 293.83 | 785.36 | 293.79 |
| 786.12 | 293.77 | 786.99 | 293.77 | 790.2 | 293.8 | 795.14 | 293.83 | 804.64 | 293.93 |
| 805.8 | 293.97 | 807.87 | 294.07 | 809.01 | 294.09 | 813.62 | 294.09 | 822.36 | 294.07 |
| 823.2 | 293.96 | 824.1 | 293.96 | 827.49 | 293.93 | 829.25 | 293.91 | 832.29 | 293.9 |
| 833.01 | 293.89 | 834.48 | 293.89 | 838.35 | 293.9 | 843.8 | 293.91 | 848.14 | 293.26 |
| 848.29 | 293.23 | 849.01 | 293.19 | 850.31 | 293.21 | 851.91 | 293.29 | 852.58 | 293.23 |
| 853.09 | 293.24 | 854.02 | 293.32 | 855.78 | 293.42 | 857.16 | 293.49 | 862.7 | 293.8 |
| 867.39 | 294.03 | 873.35 | 294.19 | 875.11 | 294.21 | 876.69 | 294.19 | 879.29 | 294 |
| 887.84 | 293.96 | 892.9 | 293.95 | 893.04 | 293.94 | 896.79 | 293.82 | 901.45 | 293.76 |
| 903.91 | 293.85 | 906.21 | 293.97 | 908.15 | 294.13 | 910.28 | 294.17 | 910.63 | 294.14 |
| 911.38 | 294.12 | 914.28 | 294.01 | 919.52 | 293.89 | 919.72 | 293.87 | 920.72 | 293.87 |
| 922.47 | 293.98 | 925.11 | 294.08 | 929.61 | 294.23 | 929.8 | 294.24 | 932.16 | 294.28 |
| 935.74 | 294.27 | 936.71 | 294.25 | 942.47 | 294.01 | 944.06 | 293.96 | 945.21 | 293.89 |
| 946.3 | 293.76 | 947.36 | 293.75 | 950.88 | 293.7 | 951.59 | 293.68 | 953.24 | 293.58 |
| 955.22 | 293.57 | 960.07 | 293.64 | 961.14 | 293.67 | 962.37 | 293.73 | 966.44 | 293.88 |
| 967.92 | 293.96 | 973.27 | 294.13 | 974.54 | 294.13 | 977.89 | 294.09 | 978.67 | 294.06 |
| 979.81 | 294.04 | 981.07 | 294.06 | 983.2 | 294.08 | 985.14 | 294.09 | 985.8 | 294.11 |
| 988.65 | 294.11 | 988.82 | 294.09 | 992.04 | 294.04 | 994.04 | 294.05 | 998.65 | 294.15 |
| 999.64 | 294.16 | 1000.36 | 294.13 | 1002.77 | 294.15 | 1004.82 | 294.13 | 1006.79 | 294.16 |
| 1008.15 | 294.2 | 1011.12 | 294.26 | 1014.42 | 294.34 | 1035.05 | 294.88 | 1035.12 | 294.88 |
| 1038.82 | 295.13 | 1039.23 | 295.17 | 1040.72 | 295.15 | 1050.01 | 295.18 | 1052.87 | 295.09 |
| 1054.93 | 294.98 | 1057.16 | 294.93 | 1059.11 | 294.91 | 1068.38 | 294.95 | 1070.72 | 294.99 |
| 1071.57 | 295.02 | 1074.1 | 295.19 | 1076.34 | 295.5 | 1079.86 | 296.01 | 1081.59 | 296.61 |
| 1082.64 | 296.92 | 1083.24 | 297.18 | 1084.99 | 297.83 | 1085.91 | 298.3 | 1087.03 | 298.74 |
| 1088.01 | 299.26 | 1088.7 | 299.65 | 1089.95 | 300.4 | 1090.23 | 300.54 | 1090.51 | 300.73 |
| 1091.62 | 301.34 | 1092.21 | 301.62 | 1093.65 | 302.34 | 1094.11 | 302.58 | 1096.83 | 304.05 |
| 1096.99 | 304.16 | 1098.85 | 305.14 | 1100.42 | 305.98 | 1101.92 | 306.69 | 1102.62 | 307.07 |
| 1103.57 | 307.54 | 1104.53 | 308.04 | 1106.52 | 309.09 | 1107.7 | 309.69 | 1109.63 | 310.63 |
| 1111.38 | 311.47 | 1111.95 | 311.77 | 1112.64 | 312.07 | 1113.48 | 312.41 | 1116.21 | 313.5 |
| 1116.66 | 313.73 | 1116.96 | 313.78 | 1117.82 | 313.81 | 1118.28 | 313.8 | 1119.48 | 313.73 |
| 1119.82 | 313.7 | 1122.17 | 313.56 | 1122.42 | 313.58 | 1123.15 | 313.56 | 1124.57 | 313.56 |
| 1125.89 | 313.59 | 1126.76 | 313.74 | 1132.88 | 315 | 1135.03 | 315.44 | 1137.98 | 316.08 |
| 1141.42 | 316.68 | 1144.58 | 317.13 | 1147.26 | 317.47 | 1148.56 | 317.58 | 1149.62 | 317.74 |
| 1151.31 | 317.9 | 1154.39 | 318.11 | 1156.35 | 318.26 | 1157.12 | 318.33 | 1159.02 | 318.46 |
| 1161.28 | 318.59 | 1162.8 | 318.65 | 1163.82 | 318.7 | 1164.15 | 318.74 | 1166.09 | 318.87 |
| 1166.82 | 318.95 | 1167.19 | 318.94 | 1168.21 | 319.06 | 1173.8 | 319.6 | 1174.53 | 319.7 |
| 1176.18 | 319.87 | 1182.33 | 320.57 | 1184.18 | 320.74 | 1194.75 | 321.56 | 1195.3 | 321.61 |
| 1201.92 | 321.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 128.93 | .04 | 1119.82 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 128.93 | 1119.82 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2118.28*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 316.24 | .52 | 315.88 | 1.71 | 315.59 | 2.69 | 315.31 | 3.4 | 315.14 |
| 4.94 | 314.71 | 6.72 | 314.2 | 8.29 | 313.65 | 9.72 | 313.22 | 11.09 | 312.78 |
| 13.79 | 312.01 | 15.7 | 311.48 | 17.02 | 311.02 | 18.56 | 310.71 | 19.42 | 310.58 |
| 20.26 | 310.27 | 20.71 | 310.18 | 22.33 | 310.42 | 23.84 | 310.57 | 25.26 | 310.57 |
| 25.89 | 310.63 | 26.44 | 310.65 | 27.07 | 310.62 | 27.77 | 310.61 | 30.28 | 310.45 |
| 33.97 | 310.26 | 35.82 | 310.13 | 37.47 | 310.03 | 38.96 | 309.91 | 39.71 | 309.81 |
| 44.5 | 308.97 | 46.4 | 308.68 | 47.22 | 308.52 | 48.73 | 308.27 | 55.88 | 307.15 |
| 58.25 | 306.8 | 60.4 | 306.54 | 61.76 | 306.32 | 65.31 | 305.72 | 66.81 | 305.55 |
| 67.75 | 305.48 | 69.94 | 305.22 | 71.48 | 305.11 | 72.93 | 304.97 | 75.49 | 304.92 |
| 76.9 | 304.87 | 79.25 | 304.86 | 82.68 | 304.89 | 84.31 | 304.96 | 84.54 | 304.96 |
| 85.95 | 305.02 | 87.07 | 304.92 | 87.99 | 304.77 | 91.56 | 304.09 | 96.29 | 303.4 |
| 97.74 | 303.11 | 99.8 | 302.74 | 101.22 | 302.53 | 108.54 | 301.5 | 111.25 | 301.25 |
| 113.56 | 300.96 | 116.9 | 300.59 | 117.99 | 300.45 | 118.71 | 300.33 | 119.82 | 300.2 |
| 120.71 | 300.08 | 124.15 | 299.59 | 125.63 | 299.32 | 127.69 | 298.96 | 128.96 | 298.75 |
| 131.34 | 298.02 | 131.71 | 297.93 | 133.61 | 297.34 | 135.21 | 296.83 | 137.04 | 296.28 |
| 139.92 | 295.8 | 140.74 | 295.63 | 141.81 | 295.49 | 142.77 | 295.31 | 143.39 | 295.24 |
| 145.27 | 294.98 | 147.94 | 294.75 | 149.07 | 294.68 | 151.66 | 294.47 | 153.34 | 294.3 |
| 155.2 | 294.06 | 157.86 | 293.68 | 163.48 | 292.91 | 166.11 | 292.59 | 175.93 | 292.33 |
| 181.07 | 292.22 | 181.37 | 292.22 | 192.46 | 291.99 | 192.72 | 291.98 | 201.78 | 291.77 |
| 203.64 | 291.73 | 207.73 | 291.65 | 209.38 | 291.63 | 209.9 | 291.61 | 218.33 | 291.64 |
| 221.46 | 291.64 | 222.26 | 291.63 | 223.25 | 291.58 | 223.82 | 291.59 | 227.58 | 291.69 |
| 229.35 | 291.78 | 231.36 | 291.99 | 232.87 | 292.37 | 234.77 | 292.45 | 236.6 | 292.51 |
| 242.01 | 292.62 | 242.08 | 292.59 | 242.72 | 292.58 | 244.98 | 292.3 | 245.2 | 292.26 |
| 247.83 | 291.95 | 249.06 | 291.92 | 249.78 | 291.92 | 251.78 | 291.95 | 252.23 | 291.95 |
| 256.92 | 292.04 | 258.2 | 292.04 | 259.66 | 292.02 | 260.94 | 292.04 | 262.37 | 292.05 |
| 264.65 | 292.08 | 265.89 | 292.11 | 267.69 | 292.13 | 270.15 | 292.11 | 270.97 | 292.08 |
| 271.39 | 292.03 | 273.16 | 291.92 | 274.03 | 291.85 | 276.42 | 291.61 | 289.18 | 291.3 |
| 291.11 | 291.28 | 291.81 | 291.29 | 294.31 | 291.27 | 297.67 | 291.18 | 302.23 | 291.08 |
| 302.85 | 291.07 | 307.92 | 290.95 | 309.98 | 290.92 | 312.07 | 290.94 | 314.36 | 291.04 |
| 314.63 | 291.04 | 318.14 | 291.2 | 318.25 | 291.22 | 319.85 | 291.32 | 320.99 | 291.37 |
| 325.25 | 291.63 | 334.21 | 291.99 | 336.05 | 292.05 | 339.2 | 292.18 | 339.8 | 292.2 |
| 348.03 | 292.51 | 351.44 | 292.63 | 354.97 | 292.69 | 361.14 | 292.73 | 365.05 | 292.74 |
| 382.22 | 292.73 | 382.82 | 292.72 | 385.92 | 292.62 | 387.15 | 292.49 | 387.39 | 292.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 389.11 | 292.4 | 391.32 | 292.39 | 392.55 | 292.4 | 393.92 | 292.44 | 397.48 | 292.47 |
| 398.11 | 292.45 | 401.17 | 292.41 | 407.89 | 292.31 | 411.11 | 292.28 | 413.18 | 292.25 |
| 414.16 | 292.26 | 416.01 | 292.26 | 417.74 | 292.25 | 419.77 | 292.26 | 423.2 | 292.32 |
| 424.99 | 292.38 | 426.26 | 292.39 | 428.01 | 292.39 | 428.36 | 292.4 | 431.72 | 292.39 |
| 433.47 | 292.39 | 433.8 | 292.37 | 434.14 | 292.3 | 434.73 | 292.24 | 435.09 | 292.26 |
| 435.27 | 292.23 | 436.15 | 292.16 | 437.08 | 292.17 | 438.48 | 292.04 | 443.84 | 291.7 |
| 446.62 | 291.65 | 448.28 | 291.63 | 460.06 | 291.75 | 465.81 | 291.83 | 466.35 | 291.83 |
| 467.92 | 291.86 | 468.54 | 291.89 | 470.5 | 291.93 | 474.23 | 291.95 | 476.71 | 291.9 |
| 479.44 | 291.83 | 480.86 | 291.84 | 484.46 | 291.89 | 487.4 | 292.01 | 490.11 | 292.13 |
| 490.49 | 292.14 | 491.79 | 292.21 | 492.76 | 292.25 | 495 | 292.32 | 495.31 | 292.35 |
| 496.71 | 292.32 | 497.23 | 292.26 | 497.92 | 292.21 | 499.23 | 292.21 | 501.62 | 292.3 |
| 504.81 | 292.43 | 510.79 | 292.64 | 511.16 | 292.68 | 515.41 | 292.67 | 516.07 | 292.62 |
| 522.31 | 291.82 | 522.85 | 291.74 | 524.22 | 291.72 | 526.44 | 291.81 | 530.64 | 291.96 |
| 531.1 | 291.98 | 533.14 | 291.98 | 533.61 | 291.97 | 538.55 | 291.79 | 539.5 | 291.76 |
| 541.1 | 291.73 | 543.72 | 291.67 | 545.06 | 291.69 | 550.8 | 291.75 | 551.92 | 291.75 |
| 553.59 | 291.72 | 559.88 | 291.59 | 566.06 | 291.61 | 572.36 | 291.62 | 576.09 | 291.61 |
| 578.44 | 291.61 | 582.88 | 291.63 | 585.35 | 291.72 | 587.56 | 291.78 | 590.24 | 291.9 |
| 592.69 | 291.98 | 594.6 | 292.03 | 595.26 | 292.04 | 599.75 | 292.16 | 612.21 | 292.63 |
| 613.12 | 292.77 | 614.61 | 292.94 | 617.12 | 293.12 | 618.53 | 293.18 | 619.01 | 293.21 |
| 621.9 | 293.19 | 622.61 | 293.22 | 622.96 | 293.26 | 624.78 | 293.27 | 631.83 | 293.07 |
| 634.09 | 292.99 | 636.33 | 292.93 | 637.83 | 292.88 | 640.91 | 292.8 | 643.28 | 292.73 |
| 643.74 | 292.71 | 650.36 | 292.82 | 651.78 | 292.84 | 657.61 | 292.91 | 657.99 | 292.92 |
| 664.5 | 293.02 | 664.66 | 293.03 | 668.03 | 293.1 | 669.39 | 293.12 | 678.61 | 293.19 |
| 687.86 | 293.34 | 690.09 | 293.4 | 691.3 | 293.4 | 691.67 | 293.37 | 692.78 | 293.39 |
| 695.24 | 293.41 | 695.93 | 293.33 | 696.91 | 293.25 | 701.05 | 292.61 | 702.57 | 292.45 |
| 705.62 | 292.48 | 706.37 | 292.53 | 707.52 | 292.55 | 710.99 | 292.56 | 713.02 | 292.53 |
| 717.3 | 292.39 | 719.21 | 292.29 | 721.62 | 292.19 | 722.5 | 292.17 | 726.23 | 292.19 |
| 729.93 | 292.28 | 730.11 | 292.29 | 736.1 | 292.42 | 737.98 | 292.43 | 741.03 | 292.34 |
| 748.09 | 292.59 | 749.3 | 292.68 | 758.12 | 293.38 | 759.05 | 293.44 | 761.33 | 293.46 |
| 772.94 | 293.52 | 775.45 | 293.58 | 775.53 | 293.56 | 777.76 | 293.61 | 778.36 | 293.65 |
| 778.52 | 293.69 | 780.52 | 293.81 | 781.56 | 293.78 | 790.23 | 293.86 | 791.68 | 293.87 |
| 792.3 | 293.83 | 793.98 | 293.7 | 798.46 | 293.48 | 798.73 | 293.45 | 799.48 | 293.43 |
| 800.34 | 293.43 | 803.52 | 293.46 | 808.42 | 293.49 | 817.83 | 293.59 | 818.98 | 293.62 |
| 821.51 | 293.74 | 822.87 | 293.75 | 826.72 | 293.75 | 835.38 | 293.72 | 836.22 | 293.61 |
| 837.11 | 293.61 | 842.21 | 293.55 | 845.22 | 293.54 | 847.39 | 293.52 | 850.53 | 293.53 |
| 851.22 | 293.54 | 856.62 | 293.55 | 860.92 | 292.93 | 861.55 | 292.87 | 862.35 | 292.87 |
| 863.07 | 292.89 | 864.25 | 292.96 | 864.66 | 292.97 | 865.45 | 292.91 | 866.75 | 293.01 |
| 868.49 | 293.11 | 869.86 | 293.18 | 875.35 | 293.49 | 879.99 | 293.71 | 885.9 | 293.86 |
| 887.64 | 293.88 | 889.2 | 293.86 | 891.79 | 293.68 | 900.25 | 293.63 | 905.27 | 293.61 |
| 905.4 | 293.6 | 909.11 | 293.48 | 913.74 | 293.42 | 914.88 | 293.47 | 916.17 | 293.51 |
| 918.45 | 293.63 | 920.37 | 293.78 | 922.48 | 293.82 | 926.44 | 293.67 | 930.82 | 293.58 |
| 931.98 | 293.54 | 932.82 | 293.55 | 934.56 | 293.65 | 936.75 | 293.72 | 937.18 | 293.74 |
| 941.63 | 293.89 | 944.15 | 293.93 | 947.7 | 293.92 | 948.66 | 293.9 | 954.37 | 293.66 |
| 955.95 | 293.61 | 957.09 | 293.54 | 957.99 | 293.44 | 959.22 | 293.41 | 963.41 | 293.35 |
| 964.48 | 293.27 | 965.04 | 293.25 | 967 | 293.24 | 971.81 | 293.31 | 972.87 | 293.33 |
| 974.09 | 293.39 | 978.12 | 293.53 | 979.58 | 293.61 | 984.88 | 293.78 | 986.14 | 293.78 |
| 989.46 | 293.75 | 989.91 | 293.72 | 991.37 | 293.7 | 992.61 | 293.72 | 994.72 | 293.74 |
| 996.65 | 293.75 | 997.3 | 293.77 | 1000.12 | 293.77 | 1000.29 | 293.75 | 1003.48 | 293.7 |
| 1005.47 | 293.71 | 1010.53 | 293.82 | 1012.16 | 293.78 | 1014.11 | 293.81 | 1014.51 | 293.79 |
| 1016.14 | 293.78 | 1018.74 | 293.82 | 1019.44 | 293.84 | 1025.66 | 293.97 | 1046.09 | 294.5 |
| 1046.16 | 294.51 | 1049.83 | 294.74 | 1050.23 | 294.79 | 1051.7 | 294.77 | 1060.91 | 294.8 |
| 1063.74 | 294.72 | 1064.75 | 294.66 | 1065.78 | 294.62 | 1067.99 | 294.57 | 1069.93 | 294.55 |
| 1079.11 | 294.6 | 1082.21 | 294.68 | 1082.27 | 294.69 | 1084.78 | 294.86 | 1087 | 295.17 |
| 1090.48 | 295.68 | 1091.98 | 296.19 | 1093.23 | 296.56 | 1093.83 | 296.81 | 1095.56 | 297.44 |
| 1096.48 | 297.9 | 1097.59 | 298.32 | 1098.56 | 298.82 | 1099.23 | 299.19 | 1101.03 | 300.24 |
| 1101.7 | 300.6 | 1104.14 | 301.78 | 1107.29 | 303.44 | 1107.45 | 303.54 | 1110.85 | 305.31 |
| 1112.33 | 306 | 1113.03 | 306.36 | 1114.5 | 307.08 | 1114.92 | 307.31 | 1116.89 | 308.33 |
| 1118.07 | 308.92 | 1119.97 | 309.84 | 1121.44 | 310.53 | 1122.28 | 310.96 | 1122.95 | 311.26 |
| 1123.79 | 311.59 | 1126.49 | 312.68 | 1126.94 | 312.9 | 1127.24 | 312.95 | 1128.09 | 312.99 |
| 1129.23 | 312.97 | 1130.07 | 312.92 | 1131.01 | 312.88 | 1132.41 | 312.84 | 1134.48 | 312.87 |
| 1135.81 | 312.92 | 1136.28 | 312.97 | 1136.97 | 313.1 | 1143.07 | 314.45 | 1145.21 | 314.92 |
| 1148.15 | 315.59 | 1150.99 | 316.13 | 1152.14 | 316.33 | 1154.71 | 316.74 | 1157.52 | 317.13 |
| 1158.67 | 317.25 | 1159.73 | 317.43 | 1161.41 | 317.62 | 1163.9 | 317.84 | 1167.19 | 318.17 |
| 1169.09 | 318.34 | 1171.34 | 318.49 | 1173.87 | 318.63 | 1174.19 | 318.67 | 1176.13 | 318.82 |
| 1176.75 | 318.89 | 1177.22 | 318.89 | 1178.24 | 319.01 | 1183.79 | 319.56 | 1184.73 | 319.69 |
| 1186.17 | 319.83 | 1192.29 | 320.5 | 1194.13 | 320.65 | 1204.66 | 321.43 | 1205.2 | 321.48 |
| 1211.79 | 321.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 143.39 | .04 | 1130.07 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 143.39 | 1130.07 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2098.42*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.94 | .57 | 315.6 | 1.88 | 315.33 | 2.96 | 315.06 | 3.37 | 314.98 |
| 5.44 | 314.48 | 7.39 | 313.98 | 9.13 | 313.4 | 10.7 | 312.97 | 12.21 | 312.53 |
| 15.18 | 311.76 | 17.28 | 311.23 | 18.74 | 310.78 | 19.9 | 310.56 | 20.44 | 310.47 |
| 21.38 | 310.34 | 22.3 | 309.99 | 22.93 | 309.9 | 24.58 | 310.15 | 26.25 | 310.31 |
| 27.8 | 310.31 | 28.5 | 310.37 | 29.11 | 310.4 | 30.57 | 310.35 | 33.33 | 310.21 |
| 37.39 | 310.02 | 41.56 | 309.78 | 42.65 | 309.7 | 43.72 | 309.56 | 44.15 | 309.49 |
| 48.69 | 308.71 | 48.98 | 308.65 | 51.08 | 308.34 | 51.98 | 308.18 | 53.64 | 307.91 |
| 61.51 | 306.72 | 64.13 | 306.36 | 66.49 | 306.09 | 67.99 | 305.86 | 70.41 | 305.45 |
| 71.89 | 305.22 | 72.41 | 305.15 | 73.55 | 305.04 | 74.58 | 304.98 | 76.99 | 304.72 |
| 78.69 | 304.6 | 80.2 | 304.46 | 83.1 | 304.37 | 84.65 | 304.29 | 87.23 | 304.24 |
| 90.13 | 304.21 | 91.2 | 304.22 | 94.09 | 304.29 | 94.61 | 304.31 | 95.85 | 304.2 |
| 96.97 | 304.03 | 100.79 | 303.36 | 105.99 | 302.66 | 107.59 | 302.37 | 109.87 | 302.01 |
| 111.43 | 301.8 | 119.48 | 300.8 | 122.46 | 300.56 | 126.11 | 300.17 | 126.76 | 300.12 |
| 128.68 | 299.94 | 129.88 | 299.81 | 130.67 | 299.7 | 132.88 | 299.46 | 136.67 | 298.99 |
| 139.26 | 298.58 | 141.96 | 298.18 | 144.58 | 297.5 | 145.43 | 297.3 | 148.84 | 296.37 |
| 149.77 | 296.14 | 150.85 | 295.85 | 154.02 | 295.39 | 154.93 | 295.22 | 156.11 | 295.07 |
| 157.16 | 294.89 | 157.84 | 294.81 | 158.83 | 294.69 | 159.76 | 294.55 | 160.09 | 294.52 |
| 162.5 | 294.35 | 164.04 | 294.27 | 166.29 | 294.11 | 167.23 | 294.03 | 168.6 | 293.88 |
| 169.91 | 293.71 | 172.62 | 293.33 | 178.36 | 292.55 | 181.05 | 292.24 | 191.07 | 291.97 |
| 194.93 | 291.89 | 196.63 | 291.86 | 207.95 | 291.63 | 208.21 | 291.63 | 217.47 | 291.42 |
| 219.37 | 291.38 | 223.55 | 291.3 | 225.76 | 291.27 | 234.37 | 291.31 | 237.56 | 291.3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 238.39 | 291.29 | 239.4 | 291.23 | 243.82 | 291.38 | 245.63 | 291.47 | 247.67 | 291.73 |
| 249.22 | 292.2 | 253.03 | 292.34 | 258.56 | 292.44 | 258.62 | 292.41 | 259.28 | 292.39 |
| 263.12 | 291.79 | 264.49 | 291.59 | 265.75 | 291.55 | 266.49 | 291.54 | 268.53 | 291.57 |
| 270.62 | 291.59 | 271.11 | 291.61 | 273.78 | 291.66 | 275.09 | 291.66 | 276.57 | 291.64 |
| 279.34 | 291.67 | 281.45 | 291.7 | 282.14 | 291.7 | 284.77 | 291.75 | 287.29 | 291.73 |
| 287.95 | 291.71 | 288.55 | 291.66 | 291.25 | 291.49 | 293.69 | 291.27 | 306.72 | 290.97 |
| 309.4 | 290.96 | 311.95 | 290.94 | 315.39 | 290.84 | 320.05 | 290.74 | 320.68 | 290.73 |
| 325.85 | 290.62 | 327.95 | 290.59 | 330.02 | 290.61 | 336.03 | 290.85 | 336.58 | 290.92 |
| 338.85 | 291.03 | 343.08 | 291.28 | 351.95 | 291.64 | 353.4 | 291.68 | 353.77 | 291.7 |
| 357.49 | 291.84 | 365.64 | 292.14 | 369.01 | 292.26 | 372.52 | 292.32 | 378.63 | 292.37 |
| 382.5 | 292.39 | 399.51 | 292.38 | 400.96 | 292.33 | 403.17 | 292.27 | 404.39 | 292.15 |
| 404.63 | 292.11 | 406.33 | 292.07 | 408.53 | 292.05 | 411.09 | 292.1 | 414.63 | 292.14 |
| 415.25 | 292.11 | 418.28 | 292.08 | 420.87 | 292.03 | 424.94 | 291.97 | 428.12 | 291.94 |
| 430.18 | 291.91 | 431.6 | 291.92 | 434 | 291.9 | 436.71 | 291.91 | 440.11 | 291.96 |
| 441.17 | 292 | 444.07 | 292.03 | 448.55 | 292.02 | 450.27 | 292.02 | 450.61 | 292 |
| 450.94 | 291.94 | 451.52 | 291.88 | 451.89 | 291.89 | 452.94 | 291.8 | 453.85 | 291.81 |
| 455.24 | 291.69 | 460.54 | 291.37 | 464.95 | 291.31 | 476.62 | 291.45 | 482.31 | 291.54 |
| 482.84 | 291.54 | 484.4 | 291.57 | 485.01 | 291.6 | 486.96 | 291.65 | 488.85 | 291.67 |
| 490.65 | 291.68 | 493.11 | 291.63 | 495.81 | 291.56 | 497.22 | 291.57 | 500.78 | 291.62 |
| 501.11 | 291.62 | 502.52 | 291.68 | 503.7 | 291.72 | 506.38 | 291.84 | 508.05 | 291.92 |
| 511.23 | 292.02 | 511.53 | 292.05 | 512.93 | 292.02 | 513.43 | 291.96 | 514.12 | 291.92 |
| 515.42 | 291.91 | 517.78 | 291.99 | 520.94 | 292.12 | 526.87 | 292.32 | 527.24 | 292.36 |
| 531.45 | 292.34 | 532.09 | 292.29 | 538.28 | 291.53 | 538.82 | 291.45 | 540.17 | 291.43 |
| 541.73 | 291.49 | 546.53 | 291.65 | 546.99 | 291.67 | 549.01 | 291.67 | 551.33 | 291.6 |
| 554.37 | 291.48 | 556.89 | 291.43 | 559.49 | 291.37 | 560.82 | 291.39 | 566.5 | 291.44 |
| 568.75 | 291.43 | 569.27 | 291.41 | 575.49 | 291.29 | 581.62 | 291.31 | 581.85 | 291.32 |
| 587.86 | 291.33 | 591.55 | 291.31 | 593.88 | 291.31 | 598.28 | 291.33 | 600.72 | 291.42 |
| 602.92 | 291.47 | 605.57 | 291.59 | 607.99 | 291.67 | 610.54 | 291.71 | 613.59 | 291.79 |
| 614.99 | 291.82 | 627.33 | 292.29 | 628.24 | 292.42 | 629.72 | 292.58 | 632.2 | 292.76 |
| 634.41 | 292.85 | 636.93 | 292.83 | 637.64 | 292.86 | 637.98 | 292.9 | 639.91 | 292.91 |
| 640.47 | 292.9 | 646.77 | 292.72 | 649.01 | 292.65 | 653.81 | 292.52 | 655.77 | 292.47 |
| 658.56 | 292.39 | 660.35 | 292.42 | 666.53 | 292.51 | 672.31 | 292.58 | 672.68 | 292.58 |
| 679.13 | 292.68 | 680.23 | 292.71 | 683.98 | 292.77 | 690.58 | 292.8 | 691.39 | 292.81 |
| 693.1 | 292.81 | 702.95 | 292.97 | 704.48 | 293.01 | 705.68 | 293.01 | 706.05 | 292.98 |
| 707.15 | 293 | 709.58 | 293.02 | 710.27 | 292.94 | 711.24 | 292.87 | 715.34 | 292.26 |
| 716.84 | 292.11 | 718 | 292.13 | 719.86 | 292.14 | 720.61 | 292.19 | 721.74 | 292.21 |
| 725.18 | 292.22 | 727.19 | 292.2 | 731.43 | 292.05 | 735.53 | 291.88 | 736.59 | 291.85 |
| 740.28 | 291.87 | 743.94 | 291.96 | 744.12 | 291.96 | 748.78 | 292.05 | 750.06 | 292.08 |
| 751.92 | 292.09 | 754.94 | 292 | 761.93 | 292.23 | 763.13 | 292.32 | 771.87 | 292.99 |
| 772.8 | 293.04 | 775.05 | 293.07 | 786.55 | 293.15 | 789.03 | 293.21 | 789.7 | 293.2 |
| 791.33 | 293.24 | 791.92 | 293.28 | 792.08 | 293.32 | 794.06 | 293.44 | 795.09 | 293.41 |
| 803.68 | 293.5 | 805.11 | 293.51 | 807.39 | 293.35 | 811.83 | 293.14 | 812.1 | 293.11 |
| 812.84 | 293.09 | 813.69 | 293.09 | 816.84 | 293.13 | 818.41 | 293.14 | 821.69 | 293.14 |
| 831.02 | 293.24 | 832.16 | 293.28 | 834.19 | 293.37 | 834.42 | 293.39 | 835.55 | 293.4 |
| 839.82 | 293.4 | 848.4 | 293.37 | 849.23 | 293.26 | 850.11 | 293.26 | 853.44 | 293.22 |
| 855.17 | 293.19 | 858.15 | 293.17 | 860.3 | 293.15 | 863.1 | 293.17 | 864.1 | 293.17 |
| 869.44 | 293.19 | 873.85 | 292.58 | 874.56 | 292.54 | 875.83 | 292.57 | 877 | 292.64 |
| 877.41 | 292.65 | 878.3 | 292.6 | 878.75 | 292.64 | 881.2 | 292.8 | 882.55 | 292.87 |
| 887.99 | 293.18 | 892.59 | 293.39 | 898.85 | 293.54 | 900.4 | 293.55 | 901.72 | 293.53 |
| 904.28 | 293.35 | 912.67 | 293.29 | 917.63 | 293.27 | 917.77 | 293.26 | 921.44 | 293.15 |
| 926.02 | 293.09 | 929.35 | 293.22 | 930.69 | 293.29 | 932.59 | 293.43 | 934.68 | 293.48 |
| 938.61 | 293.34 | 942.95 | 293.26 | 944.1 | 293.22 | 944.93 | 293.22 | 947.01 | 293.33 |
| 948.82 | 293.38 | 949.24 | 293.4 | 953.65 | 293.54 | 953.84 | 293.55 | 956.15 | 293.57 |
| 959.67 | 293.57 | 960.62 | 293.54 | 966.28 | 293.31 | 967.84 | 293.26 | 968.96 | 293.2 |
| 970.03 | 293.09 | 971.08 | 293.08 | 973.83 | 293.03 | 975.23 | 293.01 | 976.84 | 292.91 |
| 978.79 | 292.91 | 983.55 | 292.97 | 984.6 | 292.99 | 985.8 | 293.05 | 989.79 | 293.19 |
| 991.25 | 293.27 | 996.5 | 293.43 | 997.75 | 293.44 | 1001.03 | 293.4 | 1001.48 | 293.38 |
| 1002.92 | 293.37 | 1005.63 | 293.4 | 1008.15 | 293.41 | 1008.8 | 293.43 | 1011.59 | 293.43 |
| 1011.76 | 293.41 | 1014.92 | 293.37 | 1016.89 | 293.38 | 1021.91 | 293.48 | 1022.38 | 293.48 |
| 1023.08 | 293.44 | 1025.68 | 293.46 | 1025.85 | 293.44 | 1027.46 | 293.43 | 1030.33 | 293.47 |
| 1030.73 | 293.49 | 1035.37 | 293.57 | 1036.89 | 293.61 | 1057.12 | 294.13 | 1057.2 | 294.13 |
| 1060.83 | 294.36 | 1061.23 | 294.4 | 1062.69 | 294.38 | 1071.81 | 294.43 | 1074.61 | 294.35 |
| 1076.64 | 294.26 | 1078.82 | 294.21 | 1080.74 | 294.2 | 1089.83 | 294.26 | 1092.13 | 294.32 |
| 1092.97 | 294.36 | 1095.45 | 294.54 | 1097.65 | 294.84 | 1101.1 | 295.34 | 1102.8 | 295.91 |
| 1103.83 | 296.2 | 1104.42 | 296.44 | 1106.14 | 297.05 | 1107.04 | 297.49 | 1108.14 | 297.9 |
| 1109.1 | 298.38 | 1109.77 | 298.74 | 1111 | 299.44 | 1112.22 | 300.09 | 1112.85 | 300.38 |
| 1114.63 | 301.23 | 1115.09 | 301.46 | 1117.75 | 302.83 | 1117.92 | 302.93 | 1119.55 | 303.76 |
| 1121.28 | 304.63 | 1122.75 | 305.3 | 1123.43 | 305.65 | 1124.89 | 306.35 | 1127.26 | 307.57 |
| 1128.43 | 308.15 | 1130.89 | 309.32 | 1132.25 | 309.96 | 1132.6 | 310.14 | 1133.27 | 310.44 |
| 1134.1 | 310.77 | 1136.77 | 311.85 | 1137.22 | 312.07 | 1137.51 | 312.12 | 1138.35 | 312.18 |
| 1139.49 | 312.17 | 1140.32 | 312.14 | 1141.25 | 312.12 | 1142.67 | 312.11 | 1142.89 | 312.13 |
| 1145.03 | 312.2 | 1146.03 | 312.27 | 1146.5 | 312.32 | 1146.99 | 312.42 | 1149.25 | 312.95 |
| 1153.26 | 313.9 | 1155.31 | 314.38 | 1158.31 | 315.1 | 1161.14 | 315.68 | 1162.29 | 315.9 |
| 1164.35 | 316.26 | 1166.66 | 316.62 | 1167.64 | 316.78 | 1168.77 | 316.92 | 1169.5 | 317.07 |
| 1171.42 | 317.33 | 1173.99 | 317.62 | 1174.57 | 317.68 | 1176.5 | 317.92 | 1179.16 | 318.22 |
| 1181.4 | 318.4 | 1182.9 | 318.49 | 1183.91 | 318.56 | 1184.24 | 318.6 | 1186.16 | 318.76 |
| 1186.88 | 318.86 | 1187.25 | 318.85 | 1188.26 | 318.97 | 1193.79 | 319.53 | 1194.52 | 319.63 |
| 1196.16 | 319.78 | 1202.24 | 320.42 | 1204.08 | 320.57 | 1214.56 | 321.3 | 1215.09 | 321.35 |
| 1221.66 | 321.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 157.84 | .04 | 1140.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 157.84 | 1140.32 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2078.56*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.64 | .62 | 315.32 | 2.05 | 315.06 | 3.24 | 314.81 | 4.08 | 314.65 |
| 5.94 | 314.25 | 8.07 | 313.76 | 9.96 | 313.16 | 11.68 | 312.72 | 13.79 | 312.16 |
| 16.57 | 311.51 | 18.87 | 310.98 | 20.46 | 310.53 | 21.72 | 310.31 | 23.33 | 310.09 |
| 24.35 | 309.72 | 24.73 | 309.63 | 25.03 | 309.62 | 26.83 | 309.89 | 27.71 | 309.95 |
| 28.33 | 310.03 | 30.42 | 310.06 | 31.11 | 310.12 | 31.77 | 310.14 | 33.36 | 310.09 |
| 40.81 | 309.79 | 45.36 | 309.55 | 46.55 | 309.46 | 48.19 | 309.25 | 53.15 | 308.4 |
| 53.47 | 308.34 | 55.89 | 307.99 | 56.74 | 307.84 | 58.55 | 307.55 | 67.14 | 306.29 |
| 70 | 305.91 | 72.58 | 305.64 | 73.17 | 305.56 | 76.85 | 304.96 | 78.48 | 304.71 |
| 79.04 | 304.64 | 80.28 | 304.53 | 81.41 | 304.48 | 84.05 | 304.22 | 85.9 | 304.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 87.63 | 303.94 | 90.71 | 303.81 | 92.4 | 303.71 | 95.22 | 303.61 | 98.39 | 303.55 |
| 99.98 | 303.54 | 101.31 | 303.57 | 103.27 | 303.59 | 104.62 | 303.48 | 105.85 | 303.3 |
| 110.02 | 302.63 | 115.7 | 301.91 | 117.45 | 301.63 | 119.93 | 301.28 | 121.63 | 301.08 |
| 130.52 | 300.1 | 133.68 | 299.88 | 136.46 | 299.61 | 137.66 | 299.5 | 140.47 | 299.29 |
| 141.77 | 299.17 | 142.64 | 299.07 | 143.97 | 298.95 | 145.05 | 298.84 | 149.18 | 298.39 |
| 150.96 | 298.14 | 153.43 | 297.81 | 154.96 | 297.62 | 157.82 | 296.98 | 158.75 | 296.79 |
| 162.47 | 295.91 | 163.64 | 295.66 | 164.67 | 295.42 | 168.13 | 294.98 | 169.12 | 294.8 |
| 170.41 | 294.65 | 171.55 | 294.46 | 172.3 | 294.39 | 173.31 | 294.26 | 174.25 | 294.12 |
| 174.59 | 294.09 | 177.05 | 293.95 | 178.62 | 293.89 | 180.03 | 293.8 | 180.37 | 293.79 |
| 181.88 | 293.68 | 182.67 | 293.61 | 184.61 | 293.37 | 187.38 | 292.98 | 193.24 | 292.18 |
| 195.98 | 291.89 | 206.22 | 291.61 | 210.15 | 291.53 | 211.89 | 291.51 | 223.44 | 291.28 |
| 223.71 | 291.28 | 233.16 | 291.06 | 235.1 | 291.02 | 239.36 | 290.95 | 240.19 | 290.95 |
| 241.62 | 290.93 | 250.41 | 290.98 | 253.67 | 290.97 | 254.51 | 290.96 | 255.54 | 290.89 |
| 260.05 | 291.06 | 261.9 | 291.17 | 263.99 | 291.47 | 264.81 | 291.74 | 265.56 | 292.02 |
| 266.37 | 292.06 | 269.45 | 292.17 | 275.1 | 292.27 | 275.16 | 292.23 | 275.83 | 292.2 |
| 278.19 | 291.76 | 279.76 | 291.46 | 281.16 | 291.22 | 282.44 | 291.17 | 283.19 | 291.16 |
| 285.27 | 291.19 | 287.41 | 291.21 | 288.97 | 291.25 | 290.64 | 291.28 | 291.97 | 291.28 |
| 293.48 | 291.26 | 296.25 | 291.3 | 298.46 | 291.32 | 298.69 | 291.31 | 299.99 | 291.34 |
| 301.85 | 291.37 | 305.1 | 291.34 | 305.71 | 291.29 | 307.56 | 291.19 | 308.47 | 291.13 |
| 310.96 | 290.92 | 324.26 | 290.64 | 326.99 | 290.63 | 329.6 | 290.6 | 333.1 | 290.5 |
| 338.51 | 290.4 | 345.8 | 290.25 | 347.97 | 290.27 | 350.22 | 290.37 | 350.48 | 290.37 |
| 353.92 | 290.51 | 354.03 | 290.55 | 355.61 | 290.65 | 356.72 | 290.7 | 360.9 | 290.94 |
| 369.69 | 291.29 | 371.5 | 291.34 | 375.18 | 291.48 | 383.26 | 291.77 | 386.59 | 291.88 |
| 388.83 | 291.93 | 390.06 | 291.95 | 396.11 | 292.01 | 399.95 | 292.03 | 416.79 | 292.02 |
| 420.43 | 291.93 | 421.64 | 291.82 | 421.87 | 291.77 | 423.55 | 291.74 | 425.73 | 291.72 |
| 426.93 | 291.73 | 428.27 | 291.77 | 431.77 | 291.8 | 432.39 | 291.77 | 435.39 | 291.74 |
| 437.96 | 291.68 | 441.99 | 291.63 | 445.14 | 291.6 | 447.17 | 291.57 | 448.58 | 291.58 |
| 449.96 | 291.57 | 450.96 | 291.55 | 453.64 | 291.55 | 457.01 | 291.61 | 458.06 | 291.64 |
| 460.01 | 291.66 | 461.73 | 291.65 | 462.07 | 291.66 | 465.37 | 291.65 | 467.08 | 291.65 |
| 468.32 | 291.52 | 468.68 | 291.53 | 469.72 | 291.45 | 470.62 | 291.46 | 472 | 291.35 |
| 477.25 | 291.05 | 479.98 | 291.01 | 481.61 | 291 | 493.18 | 291.14 | 493.8 | 291.16 |
| 498.82 | 291.25 | 500.88 | 291.28 | 501.49 | 291.32 | 503.42 | 291.37 | 505.29 | 291.39 |
| 507.62 | 291.4 | 509.51 | 291.36 | 512.19 | 291.29 | 513.58 | 291.3 | 517.11 | 291.34 |
| 523.02 | 291.55 | 525.26 | 291.66 | 527.45 | 291.72 | 527.76 | 291.75 | 529.14 | 291.72 |
| 529.64 | 291.66 | 530.32 | 291.62 | 531.6 | 291.61 | 533.95 | 291.69 | 537.08 | 291.81 |
| 542.95 | 291.99 | 543.31 | 292.03 | 547.48 | 292.01 | 548.12 | 291.96 | 554.25 | 291.23 |
| 554.78 | 291.16 | 556.12 | 291.14 | 562.42 | 291.34 | 562.87 | 291.36 | 564.67 | 291.36 |
| 565.34 | 291.35 | 567.18 | 291.29 | 570.18 | 291.18 | 572.69 | 291.12 | 575.26 | 291.07 |
| 576.58 | 291.09 | 580.18 | 291.11 | 582.2 | 291.14 | 584.43 | 291.12 | 584.95 | 291.1 |
| 591.11 | 290.99 | 597.18 | 291.01 | 597.41 | 291.02 | 603.36 | 291.03 | 607.02 | 291.01 |
| 609.32 | 291.01 | 613.68 | 291.03 | 616.1 | 291.11 | 618.27 | 291.16 | 620.9 | 291.28 |
| 622.35 | 291.33 | 625.82 | 291.39 | 628.85 | 291.45 | 631.07 | 291.51 | 636.48 | 291.72 |
| 642.45 | 291.94 | 643.35 | 292.07 | 644.82 | 292.23 | 647.27 | 292.4 | 649.13 | 292.48 |
| 651.97 | 292.47 | 652.66 | 292.5 | 653.01 | 292.54 | 654.92 | 292.55 | 655.47 | 292.54 |
| 663.21 | 292.34 | 663.93 | 292.31 | 666.13 | 292.25 | 668.68 | 292.19 | 673.39 | 292.07 |
| 675.16 | 292.1 | 679.89 | 292.17 | 681.28 | 292.18 | 687 | 292.24 | 687.37 | 292.24 |
| 693.77 | 292.33 | 693.92 | 292.34 | 697.23 | 292.41 | 698.56 | 292.42 | 705.11 | 292.43 |
| 705.91 | 292.44 | 707.6 | 292.43 | 716.68 | 292.57 | 718.44 | 292.62 | 720.05 | 292.62 |
| 720.42 | 292.59 | 721.51 | 292.62 | 723.92 | 292.63 | 724.6 | 292.56 | 725.57 | 292.49 |
| 729.63 | 291.91 | 731.12 | 291.78 | 734.11 | 291.81 | 734.84 | 291.85 | 735.97 | 291.87 |
| 739.37 | 291.88 | 741.37 | 291.86 | 745.57 | 291.72 | 747.44 | 291.64 | 750.64 | 291.53 |
| 754.33 | 291.54 | 757.96 | 291.63 | 758.14 | 291.64 | 762.75 | 291.71 | 764.01 | 291.74 |
| 765.86 | 291.74 | 768.86 | 291.67 | 775.78 | 291.88 | 776.97 | 291.96 | 785.62 | 292.6 |
| 786.54 | 292.65 | 788.77 | 292.69 | 800.16 | 292.78 | 802.62 | 292.84 | 803.28 | 292.83 |
| 804.89 | 292.87 | 805.48 | 292.91 | 805.64 | 292.95 | 807.6 | 293.07 | 808.62 | 293.04 |
| 817.13 | 293.14 | 818.54 | 293.15 | 820.8 | 292.99 | 825.2 | 292.8 | 825.47 | 292.77 |
| 826.2 | 292.75 | 827.05 | 292.75 | 830.17 | 292.79 | 833.24 | 292.8 | 833.8 | 292.79 |
| 834.97 | 292.8 | 844.21 | 292.9 | 845.33 | 292.93 | 847.35 | 293.02 | 847.57 | 293.04 |
| 848.45 | 293.04 | 849.15 | 293.06 | 852.93 | 293.06 | 861.43 | 293.02 | 862.25 | 292.92 |
| 866.42 | 292.86 | 868.13 | 292.83 | 871.78 | 292.79 | 876.97 | 292.8 | 882.27 | 292.82 |
| 886.48 | 292.28 | 886.63 | 292.25 | 887.33 | 292.22 | 888.59 | 292.24 | 890.15 | 292.34 |
| 891.04 | 292.29 | 892.2 | 292.38 | 893.91 | 292.49 | 895.25 | 292.56 | 900.64 | 292.86 |
| 905.2 | 293.07 | 910.99 | 293.21 | 912.93 | 293.22 | 914.24 | 293.2 | 916.77 | 293.03 |
| 925.08 | 292.96 | 930 | 292.93 | 930.13 | 292.92 | 933.77 | 292.81 | 937.7 | 292.76 |
| 938.62 | 292.77 | 940.69 | 292.84 | 942.93 | 292.95 | 944.95 | 293.09 | 946.89 | 293.13 |
| 950.77 | 293.01 | 955.07 | 292.94 | 956.21 | 292.89 | 957.03 | 292.89 | 958.73 | 292.98 |
| 960.89 | 293.04 | 961.31 | 293.06 | 965.67 | 293.19 | 965.86 | 293.2 | 968.15 | 293.22 |
| 970.94 | 293.22 | 972.58 | 293.19 | 978.18 | 292.96 | 979.73 | 292.91 | 980.84 | 292.85 |
| 981.9 | 292.75 | 982.94 | 292.74 | 987.04 | 292.67 | 988.09 | 292.6 | 988.64 | 292.58 |
| 990.57 | 292.57 | 995.29 | 292.64 | 996.33 | 292.66 | 997.52 | 292.71 | 1001.47 | 292.84 |
| 1002.91 | 292.92 | 1008.11 | 293.08 | 1009.35 | 293.09 | 1012.6 | 293.06 | 1013.37 | 293.03 |
| 1014.47 | 293.03 | 1017.16 | 293.06 | 1019.66 | 293.07 | 1020.3 | 293.09 | 1023.06 | 293.09 |
| 1023.23 | 293.07 | 1026.36 | 293.03 | 1028.31 | 293.04 | 1033.28 | 293.14 | 1034.45 | 293.1 |
| 1037.02 | 293.11 | 1038.79 | 293.09 | 1040.7 | 293.1 | 1042.02 | 293.13 | 1044.9 | 293.17 |
| 1046.61 | 293.2 | 1048.12 | 293.24 | 1068.16 | 293.75 | 1068.24 | 293.76 | 1071.83 | 293.98 |
| 1072.23 | 294.02 | 1073.68 | 294 | 1082.71 | 294.05 | 1085.49 | 293.98 | 1086.48 | 293.93 |
| 1087.49 | 293.9 | 1089.66 | 293.86 | 1091.56 | 293.84 | 1100.56 | 293.91 | 1102.84 | 293.98 |
| 1103.67 | 294.02 | 1106.13 | 294.21 | 1108.31 | 294.51 | 1111.73 | 295.01 | 1113.41 | 295.56 |
| 1114.42 | 295.85 | 1115.01 | 296.07 | 1116.71 | 296.66 | 1117.61 | 297.08 | 1118.69 | 297.48 |
| 1119.65 | 297.94 | 1120.31 | 298.29 | 1122.07 | 299.25 | 1122.73 | 299.58 | 1123.36 | 299.86 |
| 1125.58 | 300.9 | 1128.22 | 302.22 | 1128.38 | 302.32 | 1130.18 | 303.2 | 1131.71 | 303.96 |
| 1133.16 | 304.61 | 1134.77 | 305.37 | 1137.63 | 306.81 | 1140.66 | 308.26 | 1142.36 | 309.05 |
| 1142.92 | 309.33 | 1143.58 | 309.62 | 1147.05 | 311.02 | 1147.5 | 311.24 | 1147.79 | 311.29 |
| 1148.62 | 311.36 | 1150.57 | 311.37 | 1150.84 | 311.36 | 1152.91 | 311.38 | 1154.94 | 311.5 |
| 1156.25 | 311.61 | 1156.72 | 311.67 | 1157.2 | 311.78 | 1159.46 | 312.34 | 1163.45 | 313.35 |
| 1165.57 | 313.88 | 1168.48 | 314.62 | 1172.2 | 315.42 | 1174.49 | 315.85 | 1177.76 | 316.43 |
| 1178.89 | 316.59 | 1179.95 | 316.81 | 1181.62 | 317.05 | 1186.58 | 317.74 | 1187.34 | 317.86 |
| 1189.22 | 318.09 | 1191.45 | 318.3 | 1193.96 | 318.48 | 1194.28 | 318.53 | 1196.19 | 318.71 |
| 1196.91 | 318.81 | 1197.27 | 318.8 | 1198.29 | 318.93 | 1203.49 | 319.47 | 1204.51 | 319.59 |
| 1206.14 | 319.74 | 1212.2 | 320.34 | 1214.03 | 320.48 | 1224.46 | 321.17 | 1224.99 | 321.22 |
| 1231.53 | 321.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 172.3 | .04 | 1150.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 172.3 | 1150.57 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2058.70*

INPUT

Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.34 | .68 | 315.04 | 2.22 | 314.8 | 3.51 | 314.55 | 4.43 | 314.41 |
| 4.89 | 314.31 | 6.44 | 314.01 | 8.75 | 313.54 | 9.69 | 313.26 | 10.8 | 312.91 |
| 12.66 | 312.47 | 13.53 | 312.25 | 14.95 | 311.91 | 17.96 | 311.26 | 19.41 | 310.96 |
| 20.45 | 310.73 | 22.17 | 310.29 | 23.54 | 310.06 | 24.18 | 309.97 | 25.29 | 309.85 |
| 26.39 | 309.44 | 26.98 | 309.33 | 29.08 | 309.62 | 30.04 | 309.68 | 31.05 | 309.78 |
| 32.98 | 309.8 | 33.72 | 309.86 | 34.44 | 309.88 | 35.26 | 309.85 | 36.16 | 309.84 |
| 39.43 | 309.73 | 39.75 | 309.71 | 41.25 | 309.67 | 46.38 | 309.46 | 46.65 | 309.44 |
| 49.17 | 309.32 | 50.46 | 309.23 | 52.24 | 309 | 57.96 | 308.03 | 60.57 | 307.66 |
| 61.5 | 307.49 | 63.47 | 307.2 | 72.78 | 305.86 | 75.87 | 305.46 | 78.86 | 305.17 |
| 80.44 | 304.93 | 83.3 | 304.47 | 85.06 | 304.2 | 85.67 | 304.13 | 86.6 | 304.05 |
| 88.24 | 303.98 | 91.1 | 303.72 | 92.64 | 303.63 | 94.98 | 303.42 | 98.32 | 303.26 |
| 100.15 | 303.14 | 103.21 | 302.99 | 107.39 | 302.86 | 111.33 | 302.87 | 111.94 | 302.88 |
| 113.4 | 302.76 | 114.73 | 302.58 | 119.25 | 301.9 | 125.4 | 301.17 | 127.3 | 300.89 |
| 129.99 | 300.54 | 131.83 | 300.35 | 141.47 | 299.4 | 144.89 | 299.19 | 149.21 | 298.83 |
| 149.98 | 298.79 | 152.84 | 298.6 | 154.61 | 298.44 | 157.22 | 298.23 | 161.7 | 297.79 |
| 164.76 | 297.41 | 167.96 | 297.06 | 171.06 | 296.45 | 172.07 | 296.27 | 174.02 | 295.88 |
| 176.1 | 295.45 | 177.37 | 295.22 | 178.48 | 294.99 | 178.72 | 294.97 | 182.23 | 294.57 |
| 183.31 | 294.39 | 184.7 | 294.23 | 185.95 | 294.04 | 186.75 | 293.96 | 187.79 | 293.83 |
| 188.75 | 293.69 | 189.96 | 293.62 | 191.6 | 293.55 | 192.8 | 293.52 | 195.55 | 293.4 |
| 196.52 | 293.33 | 197.96 | 293.2 | 199.32 | 293.02 | 202.15 | 292.63 | 208.12 | 291.82 |
| 210.92 | 291.53 | 221.36 | 291.26 | 225.37 | 291.17 | 227.15 | 291.15 | 238.94 | 290.93 |
| 239.21 | 290.92 | 248.85 | 290.71 | 250.83 | 290.67 | 255.18 | 290.6 | 256.02 | 290.6 |
| 257.48 | 290.58 | 266.45 | 290.65 | 269.77 | 290.64 | 270.63 | 290.63 | 271.69 | 290.54 |
| 276.29 | 290.75 | 278.17 | 290.87 | 279.67 | 291.1 | 280.3 | 291.21 | 281.14 | 291.52 |
| 281.91 | 291.84 | 283.94 | 291.93 | 285.88 | 292 | 291.64 | 292.09 | 291.71 | 292.05 |
| 292.39 | 292.01 | 296.39 | 291.14 | 297.82 | 290.85 | 299.13 | 290.79 | 299.9 | 290.78 |
| 302.02 | 290.8 | 304.2 | 290.83 | 305.79 | 290.87 | 307.49 | 290.9 | 310.4 | 290.89 |
| 314.51 | 290.93 | 316.2 | 290.93 | 318.94 | 290.99 | 321.56 | 290.98 | 322.43 | 290.96 |
| 322.87 | 290.92 | 324.76 | 290.83 | 325.69 | 290.77 | 328.23 | 290.57 | 341.8 | 290.32 |
| 344.59 | 290.3 | 347.25 | 290.27 | 350.82 | 290.17 | 355.68 | 290.07 | 356.34 | 290.07 |
| 363.78 | 289.92 | 365.92 | 289.94 | 368.14 | 290.03 | 368.41 | 290.03 | 371.81 | 290.17 |
| 371.92 | 290.21 | 373.48 | 290.31 | 374.58 | 290.36 | 378.73 | 290.6 | 387.43 | 290.94 |
| 388.85 | 290.97 | 389.22 | 290.99 | 392.87 | 291.12 | 400.87 | 291.4 | 401.75 | 291.42 |
| 404.17 | 291.51 | 407.61 | 291.59 | 413.6 | 291.65 | 417.4 | 291.68 | 434.08 | 291.67 |
| 437.68 | 291.58 | 438.88 | 291.48 | 439.11 | 291.44 | 440.78 | 291.41 | 442.93 | 291.39 |
| 444.12 | 291.4 | 445.45 | 291.43 | 448.92 | 291.46 | 449.53 | 291.43 | 452.5 | 291.4 |
| 455.04 | 291.34 | 459.03 | 291.28 | 462.16 | 291.26 | 464.17 | 291.23 | 465.57 | 291.24 |
| 467.92 | 291.2 | 470.58 | 291.2 | 473.91 | 291.25 | 475.64 | 291.29 | 478.92 | 291.29 |
| 482.19 | 291.28 | 483.89 | 291.28 | 485.11 | 291.16 | 485.47 | 291.17 | 486.5 | 291.09 |
| 487.4 | 291.1 | 488.76 | 291 | 493.96 | 290.72 | 497.55 | 290.68 | 498.28 | 290.68 |
| 509.73 | 290.84 | 510.35 | 290.86 | 515.32 | 290.96 | 515.84 | 290.96 | 517.37 | 291 |
| 517.96 | 291.03 | 519.87 | 291.09 | 523.5 | 291.13 | 524.04 | 291.13 | 527.47 | 291.06 |
| 528.56 | 291.02 | 529.94 | 291.03 | 533.75 | 291.07 | 539.65 | 291.27 | 541.51 | 291.36 |
| 543.68 | 291.42 | 543.98 | 291.45 | 545.35 | 291.42 | 545.84 | 291.36 | 546.52 | 291.32 |
| 547.79 | 291.31 | 553.21 | 291.5 | 559.03 | 291.66 | 559.39 | 291.7 | 563.52 | 291.67 |
| 564.15 | 291.63 | 570.22 | 290.94 | 570.74 | 290.87 | 572.07 | 290.85 | 574.24 | 290.92 |
| 574.52 | 290.92 | 578.31 | 291.03 | 578.76 | 291.05 | 580.54 | 291.05 | 581.21 | 291.04 |
| 586.93 | 290.85 | 591.03 | 290.77 | 595.9 | 290.81 | 597.9 | 290.83 | 598.99 | 290.83 |
| 606.73 | 290.69 | 612.74 | 290.72 | 612.96 | 290.73 | 618.86 | 290.74 | 622.48 | 290.71 |
| 624.76 | 290.71 | 629.08 | 290.72 | 631.48 | 290.81 | 633.63 | 290.86 | 636.23 | 290.97 |
| 638.61 | 291.04 | 641.11 | 291.06 | 644.1 | 291.12 | 646.3 | 291.17 | 648.07 | 291.23 |
| 648.79 | 291.27 | 651.66 | 291.38 | 657.58 | 291.6 | 658.47 | 291.72 | 659.92 | 291.87 |
| 662.35 | 292.04 | 663.72 | 292.09 | 664.19 | 292.12 | 667 | 292.12 | 667.69 | 292.14 |
| 668.03 | 292.18 | 669.8 | 292.2 | 670.47 | 292.19 | 676.65 | 292.04 | 677.11 | 292.02 |
| 681.02 | 291.91 | 685.47 | 291.82 | 688.22 | 291.75 | 689.97 | 291.78 | 694.66 | 291.84 |
| 701.7 | 291.9 | 702.07 | 291.9 | 708.4 | 291.99 | 709.47 | 292.02 | 711.83 | 292.07 |
| 720.42 | 292.06 | 722.1 | 292.05 | 731.09 | 292.18 | 732.83 | 292.23 | 734.43 | 292.23 |
| 734.8 | 292.21 | 735.88 | 292.23 | 738.26 | 292.24 | 738.94 | 292.17 | 739.89 | 292.11 |
| 743.91 | 291.57 | 745.39 | 291.44 | 746.53 | 291.46 | 748.35 | 291.47 | 749.08 | 291.51 |
| 750.2 | 291.53 | 753.57 | 291.54 | 755.54 | 291.52 | 759.7 | 291.39 | 761.55 | 291.31 |
| 764.73 | 291.21 | 768.38 | 291.22 | 771.97 | 291.31 | 776.72 | 291.37 | 777.97 | 291.4 |
| 779.8 | 291.4 | 782.77 | 291.33 | 789.62 | 291.53 | 790.8 | 291.6 | 799.37 | 292.22 |
| 800.26 | 292.26 | 802.49 | 292.3 | 813.77 | 292.41 | 816.21 | 292.47 | 816.86 | 292.46 |
| 818.46 | 292.51 | 819.04 | 292.54 | 819.2 | 292.58 | 821.13 | 292.69 | 822.15 | 292.67 |
| 830.58 | 292.78 | 831.98 | 292.79 | 834.22 | 292.64 | 838.57 | 292.46 | 838.83 | 292.43 |
| 839.56 | 292.41 | 840.4 | 292.41 | 843.49 | 292.45 | 846.53 | 292.46 | 848.25 | 292.45 |
| 857.4 | 292.56 | 858.51 | 292.59 | 860.5 | 292.67 | 860.73 | 292.69 | 862.29 | 292.71 |
| 866.03 | 292.71 | 874.45 | 292.66 | 875.26 | 292.57 | 876.13 | 292.56 | 881.09 | 292.47 |
| 884.01 | 292.44 | 884.71 | 292.42 | 889.17 | 292.43 | 889.84 | 292.44 | 895.09 | 292.46 |
| 899.27 | 291.95 | 899.87 | 291.9 | 901.35 | 291.92 | 902.81 | 292.02 | 903.78 | 291.98 |
| 904.93 | 292.07 | 906.62 | 292.18 | 907.95 | 292.25 | 913.29 | 292.55 | 917.8 | 292.74 |
| 923.54 | 292.88 | 925.46 | 292.89 | 926.75 | 292.87 | 929.26 | 292.7 | 937.49 | 292.62 |
| 942.36 | 292.59 | 942.49 | 292.58 | 946.1 | 292.48 | 950.59 | 292.42 | 951.22 | 292.45 |
| 952.95 | 292.5 | 955.17 | 292.61 | 957.04 | 292.74 | 959.09 | 292.79 | 960.15 | 292.77 |
| 962.94 | 292.68 | 967.19 | 292.61 | 968.32 | 292.57 | 969.14 | 292.57 | 970.82 | 292.65 |
| 972.96 | 292.7 | 973.37 | 292.72 | 977.7 | 292.84 | 977.88 | 292.85 | 980.15 | 292.87 |
| 982.91 | 292.87 | 984.53 | 292.84 | 990.08 | 292.61 | 991.72 | 292.56 | 992.72 | 292.51 |
| 993.77 | 292.41 | 994.79 | 292.4 | 998.86 | 292.33 | 1000.44 | 292.25 | 1002.35 | 292.24 |
| 1007.03 | 292.3 | 1008.06 | 292.32 | 1008.66 | 292.35 | 1013.15 | 292.5 | 1014.58 | 292.57 |
| 1019.73 | 292.73 | 1020.95 | 292.74 | 1024.17 | 292.72 | 1024.93 | 292.69 | 1026.03 | 292.69 |
| 1028.69 | 292.72 | 1031.16 | 292.73 | 1031.8 | 292.74 | 1034.53 | 292.75 | 1034.7 | 292.73 |
| 1037.8 | 292.7 | 1039.73 | 292.71 | 1044.66 | 292.8 | 1046.24 | 292.75 | 1048.35 | 292.76 |
| 1050.11 | 292.74 | 1052.37 | 292.75 | 1052.57 | 292.76 | 1056.17 | 292.81 | 1059.35 | 292.87 |
| 1079.2 | 293.38 | 1079.28 | 293.38 | 1082.84 | 293.59 | 1083.23 | 293.63 | 1084.66 | 293.62 |
| 1093.61 | 293.68 | 1096.36 | 293.62 | 1097.34 | 293.57 | 1098.34 | 293.54 | 1100.49 | 293.5 |
| 1102.37 | 293.49 | 1111.29 | 293.56 | 1114.3 | 293.68 | 1116.8 | 293.88 | 1122.35 | 294.68 |
| 1124.01 | 295.21 | 1125.02 | 295.49 | 1125.6 | 295.7 | 1127.28 | 296.27 | 1128.17 | 296.68 |
| 1129.25 | 297.06 | 1130.85 | 297.84 | 1132.06 | 298.48 | 1133.25 | 299.07 | 1133.97 | 299.38 |
| 1135.62 | 300.12 | 1138.68 | 301.61 | 1138.84 | 301.7 | 1140.63 | 302.56 | 1142.13 | 303.29 |
| 1143.58 | 303.91 | 1144.25 | 304.24 | 1145.17 | 304.65 | 1146.1 | 305.1 | 1148.01 | 306.05 |
| 1149.15 | 306.6 | 1151 | 307.47 | 1152.69 | 308.25 | 1153.24 | 308.52 | 1153.9 | 308.81 |
| 1154.71 | 309.13 | 1157.33 | 310.19 | 1157.77 | 310.4 | 1158.06 | 310.46 | 1158.89 | 310.54 |
| 1160 | 310.58 | 1160.82 | 310.59 | 1162.07 | 310.61 | 1163.12 | 310.65 | 1165.48 | 310.85 |
| 1166.47 | 310.96 | 1166.94 | 311.03 | 1167.62 | 311.19 | 1169.67 | 311.73 | 1173.63 | 312.8 |
| 1178.64 | 314.13 | 1181.45 | 314.79 | 1184.9 | 315.51 | 1186.91 | 315.89 | 1187.33 | 315.98 |
| 1189 | 316.27 | 1190.06 | 316.5 | 1194.17 | 317.17 | 1194.75 | 317.25 | 1197.42 | 317.7 |
| 1199.29 | 317.97 | 1201.51 | 318.2 | 1204 | 318.41 | 1204.32 | 318.46 | 1206.23 | 318.66 |
| 1206.95 | 318.76 | 1207.3 | 318.76 | 1208.31 | 318.88 | 1213.49 | 319.43 | 1214.51 | 319.56 |
| 1216.13 | 319.7 | 1222.16 | 320.26 | 1223.98 | 320.39 | 1234.36 | 321.05 | 1234.89 | 321.09 |
| 1241.4 | 321.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

0 .05 186.75 .04 1160.82 .05

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 186.75 | 1160.82 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2038.84*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.04 | .73 | 314.76 | 2.4 | 314.54 | 3.78 | 314.3 | 4.77 | 314.16 |
| 6.94 | 313.78 | 9.42 | 313.32 | 10.44 | 313.03 | 11.63 | 312.67 | 13.64 | 312.22 |
| 15.57 | 311.77 | 19.35 | 311.01 | 20.91 | 310.71 | 22.03 | 310.48 | 23.89 | 310.04 |
| 25.37 | 309.81 | 26.05 | 309.72 | 26.79 | 309.67 | 27.25 | 309.61 | 28.43 | 309.16 |
| 29.06 | 309.05 | 29.23 | 309.06 | 31.33 | 309.36 | 32.36 | 309.42 | 33.46 | 309.52 |
| 35.53 | 309.54 | 36.33 | 309.61 | 37.1 | 309.62 | 37.99 | 309.59 | 38.96 | 309.58 |
| 42.49 | 309.49 | 42.83 | 309.47 | 44.45 | 309.43 | 47.66 | 309.32 | 49.97 | 309.23 |
| 50.26 | 309.21 | 52.97 | 309.09 | 54.37 | 308.99 | 55.73 | 308.83 | 56.28 | 308.75 |
| 62.07 | 307.78 | 62.44 | 307.71 | 65.26 | 307.33 | 66.26 | 307.15 | 68.38 | 306.84 |
| 78.41 | 305.43 | 81.74 | 305.02 | 84.96 | 304.72 | 86.66 | 304.47 | 89.75 | 303.97 |
| 91.64 | 303.69 | 93.3 | 303.54 | 94.69 | 303.5 | 95.32 | 303.46 | 98.15 | 303.22 |
| 100.31 | 303.09 | 102.33 | 302.9 | 105.93 | 302.7 | 107.9 | 302.56 | 111.2 | 302.37 |
| 114.9 | 302.21 | 116.75 | 302.17 | 118.3 | 302.18 | 120.6 | 302.16 | 122.18 | 302.04 |
| 123.61 | 301.85 | 128.48 | 301.17 | 135.11 | 300.42 | 137.15 | 300.14 | 140.05 | 299.81 |
| 142.04 | 299.62 | 152.42 | 298.7 | 156.11 | 298.5 | 159.35 | 298.26 | 160.6 | 298.18 |
| 164.67 | 297.96 | 166.57 | 297.81 | 168.13 | 297.71 | 169.39 | 297.61 | 174.21 | 297.19 |
| 176.29 | 296.95 | 178.85 | 296.7 | 179.17 | 296.66 | 180.96 | 296.5 | 184.3 | 295.93 |
| 185.38 | 295.76 | 190.31 | 294.9 | 192.3 | 294.56 | 192.55 | 294.54 | 196.34 | 294.16 |
| 197.49 | 293.98 | 199 | 293.81 | 200.34 | 293.62 | 201.21 | 293.53 | 202.26 | 293.41 |
| 203.24 | 293.26 | 204.48 | 293.2 | 206.15 | 293.15 | 207.78 | 293.12 | 210.18 | 293.04 |
| 212 | 292.92 | 212.88 | 292.83 | 214.02 | 292.68 | 216.91 | 292.28 | 223 | 291.45 |
| 223.54 | 291.41 | 225.85 | 291.18 | 236.5 | 290.9 | 240.6 | 290.81 | 242.41 | 290.79 |
| 254.43 | 290.58 | 254.71 | 290.57 | 264.54 | 290.36 | 266.56 | 290.32 | 270.99 | 290.25 |
| 273.34 | 290.24 | 282.49 | 290.32 | 285.88 | 290.31 | 286.75 | 290.3 | 287.83 | 290.2 |
| 288.44 | 290.22 | 292.52 | 290.43 | 294.44 | 290.56 | 296.62 | 290.94 | 298.26 | 291.66 |
| 299.09 | 291.71 | 302 | 291.82 | 302.31 | 291.84 | 308.18 | 291.92 | 308.25 | 291.87 |
| 308.94 | 291.82 | 313.03 | 290.82 | 314.48 | 290.49 | 315.82 | 290.41 | 316.6 | 290.39 |
| 319.25 | 290.42 | 321.51 | 290.46 | 322.61 | 290.49 | 324.35 | 290.52 | 327.31 | 290.51 |
| 330.25 | 290.54 | 331.5 | 290.56 | 333.23 | 290.55 | 336.02 | 290.61 | 339.59 | 290.59 |
| 340.04 | 290.55 | 342.9 | 290.41 | 345.5 | 290.23 | 359.34 | 289.99 | 362.18 | 289.97 |
| 364.89 | 289.93 | 368.54 | 289.83 | 373.49 | 289.74 | 374.17 | 289.74 | 381.76 | 289.59 |
| 383.87 | 289.61 | 386.07 | 289.69 | 386.33 | 289.69 | 389.71 | 289.82 | 389.81 | 289.87 |
| 391.36 | 289.98 | 392.45 | 290.03 | 396.55 | 290.25 | 405.18 | 290.59 | 406.95 | 290.63 |
| 410.55 | 290.76 | 418.48 | 291.03 | 419.36 | 291.05 | 421.75 | 291.14 | 425.15 | 291.22 |
| 431.09 | 291.29 | 434.85 | 291.32 | 451.37 | 291.32 | 453.67 | 291.26 | 454.93 | 291.24 |
| 456.35 | 291.11 | 458 | 291.07 | 460.14 | 291.06 | 461.31 | 291.07 | 462.63 | 291.1 |
| 466.06 | 291.12 | 466.67 | 291.1 | 469.61 | 291.06 | 472.13 | 291 | 476.08 | 290.94 |
| 479.17 | 290.92 | 480.24 | 290.89 | 482.55 | 290.89 | 483.9 | 290.88 | 484.88 | 290.85 |
| 487.51 | 290.85 | 490.82 | 290.89 | 492.53 | 290.92 | 494.67 | 290.93 | 495.78 | 290.92 |
| 500.69 | 290.91 | 501.91 | 290.8 | 502.26 | 290.81 | 503.28 | 290.74 | 504.17 | 290.75 |
| 505.51 | 290.65 | 510.67 | 290.4 | 514.23 | 290.36 | 514.95 | 290.36 | 526.29 | 290.54 |
| 526.9 | 290.56 | 531.82 | 290.67 | 532.34 | 290.67 | 533.85 | 290.71 | 534.44 | 290.74 |
| 536.33 | 290.8 | 538.17 | 290.84 | 540.46 | 290.86 | 542.31 | 290.83 | 544.93 | 290.76 |
| 546.3 | 290.76 | 549.76 | 290.79 | 553.01 | 290.88 | 555.56 | 290.96 | 556.82 | 291.03 |
| 559.06 | 291.1 | 560.2 | 291.15 | 561.56 | 291.12 | 562.72 | 291.03 | 563.98 | 291.01 |
| 569.35 | 291.19 | 575.11 | 291.34 | 575.46 | 291.37 | 579.55 | 291.34 | 580.18 | 291.3 |
| 586.19 | 290.65 | 586.71 | 290.58 | 588.03 | 290.56 | 594.2 | 290.72 | 595.12 | 290.74 |
| 597.07 | 290.73 | 598.87 | 290.68 | 601.82 | 290.57 | 607.14 | 290.46 | 608.09 | 290.48 |
| 611.62 | 290.5 | 613.61 | 290.52 | 614.68 | 290.52 | 616.3 | 290.49 | 622.34 | 290.39 |
| 628.3 | 290.42 | 628.52 | 290.43 | 634.36 | 290.44 | 637.94 | 290.41 | 640.2 | 290.4 |
| 644.48 | 290.42 | 646.85 | 290.5 | 648.99 | 290.55 | 651.56 | 290.66 | 653.92 | 290.72 |
| 655.76 | 290.73 | 659.36 | 290.78 | 661.53 | 290.83 | 663.28 | 290.89 | 664 | 290.93 |
| 666.84 | 291.04 | 672.7 | 291.26 | 673.58 | 291.37 | 675.02 | 291.52 | 677.43 | 291.68 |
| 679.25 | 291.76 | 682.03 | 291.76 | 683.05 | 291.82 | 684.8 | 291.84 | 685.47 | 291.83 |
| 692.84 | 291.66 | 693.76 | 291.63 | 703.05 | 291.43 | 704.78 | 291.46 | 709.42 | 291.51 |
| 716.4 | 291.56 | 716.76 | 291.56 | 723.03 | 291.64 | 724.1 | 291.68 | 726.43 | 291.72 |
| 727.73 | 291.72 | 734.15 | 291.7 | 736.6 | 291.67 | 745.5 | 291.8 | 747.23 | 291.84 |
| 748.81 | 291.84 | 749.17 | 291.82 | 750.24 | 291.84 | 752.61 | 291.85 | 753.27 | 291.78 |
| 754.22 | 291.73 | 758.2 | 291.22 | 759.66 | 291.1 | 760.79 | 291.12 | 762.59 | 291.13 |
| 763.32 | 291.17 | 764.42 | 291.19 | 767.76 | 291.2 | 769.72 | 291.18 | 773.83 | 291.06 |
| 774.21 | 291.04 | 778.82 | 290.89 | 782.43 | 290.9 | 785.99 | 290.98 | 790.69 | 291.04 |
| 791.93 | 291.06 | 793.74 | 291.06 | 796.68 | 290.99 | 803.47 | 291.17 | 813.12 | 291.83 |
| 814.02 | 291.87 | 816.21 | 291.92 | 827.38 | 292.04 | 829.8 | 292.1 | 830.44 | 292.1 |
| 832.02 | 292.14 | 832.75 | 292.2 | 834.67 | 292.32 | 835.68 | 292.29 | 844.02 | 292.42 |
| 845.41 | 292.43 | 847.63 | 292.29 | 851.94 | 292.12 | 852.2 | 292.09 | 853.75 | 292.07 |
| 856.81 | 292.11 | 859.82 | 292.12 | 861.52 | 292.11 | 870.58 | 292.21 | 871.69 | 292.24 |
| 873.88 | 292.34 | 875.96 | 292.37 | 877.78 | 292.37 | 887.47 | 292.31 | 888.28 | 292.22 |
| 889.13 | 292.21 | 892.37 | 292.15 | 894.04 | 292.11 | 896.94 | 292.07 | 897.63 | 292.05 |
| 902.05 | 292.06 | 902.72 | 292.07 | 907.91 | 292.1 | 912.05 | 291.62 | 912.88 | 291.57 |
| 914.12 | 291.6 | 915.55 | 291.7 | 916.29 | 291.67 | 916.77 | 291.68 | 917.66 | 291.76 |
| 919.34 | 291.87 | 920.65 | 291.93 | 925.93 | 292.24 | 930.4 | 292.42 | 936.09 | 292.55 |
| 937.99 | 292.56 | 939.27 | 292.53 | 941.75 | 292.38 | 949.9 | 292.29 | 954.86 | 292.25 |
| 958.43 | 292.14 | 962.28 | 292.09 | 962.88 | 292.09 | 963.5 | 292.12 | 965.22 | 292.17 |
| 967.36 | 292.26 | 969.26 | 292.39 | 971.29 | 292.44 | 972.34 | 292.43 | 975.1 | 292.35 |
| 979.32 | 292.29 | 980.44 | 292.24 | 981.24 | 292.24 | 982.91 | 292.31 | 985.03 | 292.36 |
| 985.44 | 292.38 | 989.72 | 292.49 | 989.9 | 292.5 | 992.15 | 292.52 | 994.88 | 292.52 |
| 996.49 | 292.48 | 1001.98 | 292.26 | 1003.5 | 292.22 | 1004.59 | 292.16 | 1005.63 | 292.07 |
| 1006.65 | 292.06 | 1010.68 | 291.99 | 1012.25 | 291.91 | 1014.14 | 291.91 | 1018.77 | 291.96 |
| 1019.79 | 291.98 | 1020.95 | 292.03 | 1024.83 | 292.15 | 1026.24 | 292.22 | 1031.34 | 292.38 |
| 1032.56 | 292.39 | 1035.75 | 292.37 | 1036.5 | 292.35 | 1037.58 | 292.35 | 1040.81 | 292.39 |
| 1042.67 | 292.39 | 1043.3 | 292.4 | 1046 | 292.41 | 1046.17 | 292.39 | 1049.24 | 292.36 |
| 1051.15 | 292.37 | 1055.54 | 292.45 | 1056.48 | 292.45 | 1057.36 | 292.41 | 1059.69 | 292.41 |
| 1061.43 | 292.39 | 1063.92 | 292.4 | 1064.6 | 292.42 | 1069.1 | 292.47 | 1070.58 | 292.5 |
| 1090.24 | 293 | 1090.32 | 293.01 | 1093.84 | 293.21 | 1094.23 | 293.24 | 1095.65 | 293.23 |
| 1104.51 | 293.3 | 1107.23 | 293.25 | 1108.21 | 293.2 | 1109.2 | 293.17 | 1111.32 | 293.14 |
| 1113.19 | 293.14 | 1122.02 | 293.21 | 1124.25 | 293.31 | 1125.07 | 293.36 | 1127.48 | 293.56 |
| 1129.61 | 293.86 | 1132.97 | 294.35 | 1134.41 | 294.8 | 1135.61 | 295.13 | 1136.19 | 295.34 |
| 1137.86 | 295.88 | 1138.74 | 296.27 | 1139.8 | 296.64 | 1140.74 | 297.07 | 1143.11 | 298.26 |
| 1143.76 | 298.56 | 1144.38 | 298.81 | 1146.11 | 299.57 | 1149.14 | 301 | 1149.3 | 301.09 |
| 1152.56 | 302.61 | 1153.99 | 303.22 | 1155.57 | 303.93 | 1158.38 | 305.29 | 1159.51 | 305.83 |
| 1161.35 | 306.68 | 1162.76 | 307.32 | 1163.56 | 307.71 | 1164.21 | 307.99 | 1165.02 | 308.31 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1167.62 | 309.36 | 1168.05 | 309.57 | 1168.34 | 309.63 | 1169.59 | 309.76 | 1171.07 | 309.81 |
| 1172.31 | 309.86 | 1173.36 | 309.92 | 1175.39 | 310.13 | 1176.69 | 310.3 | 1177.16 | 310.38 |
| 1177.84 | 310.56 | 1179.87 | 311.13 | 1183.82 | 312.25 | 1185.92 | 312.84 | 1188.8 | 313.64 |
| 1191.6 | 314.34 | 1192.73 | 314.6 | 1194.76 | 315.05 | 1197.03 | 315.52 | 1197.87 | 315.71 |
| 1199.12 | 315.94 | 1200.17 | 316.19 | 1204.84 | 317.04 | 1207.5 | 317.54 | 1209.36 | 317.85 |
| 1211.56 | 318.11 | 1213.05 | 318.24 | 1214.05 | 318.34 | 1214.36 | 318.39 | 1216.26 | 318.6 |
| 1216.98 | 318.71 | 1217.33 | 318.71 | 1218.33 | 318.84 | 1223.49 | 319.4 | 1224.7 | 319.54 |
| 1226.12 | 319.65 | 1232.12 | 320.18 | 1233.93 | 320.3 | 1244.26 | 320.92 | 1244.79 | 320.96 |
| 1251.27 | 321.2 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 201.21 | .04 | 1171.07 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 201.21 | 1171.07 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 2018.98*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 314.75 | .78 | 314.48 | 2.57 | 314.28 | 4.05 | 314.05 | 4.61 | 313.99 |
| 7.43 | 313.55 | 10.1 | 313.1 | 11.19 | 312.8 | 12.47 | 312.42 | 14.62 | 311.97 |
| 16.68 | 311.52 | 17.26 | 311.41 | 23.62 | 310.24 | 25.1 | 309.9 | 25.61 | 309.8 |
| 27.19 | 309.56 | 27.92 | 309.48 | 29.21 | 309.37 | 30.47 | 308.88 | 31.15 | 308.77 |
| 31.33 | 308.78 | 33.59 | 309.09 | 34.69 | 309.15 | 35.86 | 309.26 | 38.08 | 309.28 |
| 38.94 | 309.35 | 39.77 | 309.36 | 40.72 | 309.33 | 41.76 | 309.33 | 45.54 | 309.26 |
| 45.91 | 309.24 | 47.64 | 309.2 | 51.09 | 309.09 | 56.35 | 308.88 | 58.6 | 308.72 |
| 60.32 | 308.5 | 66.53 | 307.47 | 66.93 | 307.4 | 69.95 | 307 | 71.02 | 306.81 |
| 73.29 | 306.48 | 84.04 | 305 | 87.62 | 304.57 | 90.85 | 304.29 | 91.59 | 304.2 |
| 96.2 | 303.48 | 98.23 | 303.18 | 98.93 | 303.11 | 100.01 | 303.03 | 101.49 | 303 |
| 102.16 | 302.97 | 105.2 | 302.72 | 106.98 | 302.62 | 109.68 | 302.39 | 113.54 | 302.15 |
| 115.66 | 301.98 | 119.19 | 301.74 | 123.15 | 301.54 | 124.35 | 301.5 | 127.15 | 301.48 |
| 128.56 | 301.45 | 129.27 | 301.45 | 130.96 | 301.32 | 132.49 | 301.13 | 137.71 | 300.44 |
| 144.82 | 299.68 | 147.01 | 299.4 | 150.11 | 299.08 | 152.24 | 298.89 | 163.37 | 298.01 |
| 167.32 | 297.82 | 170.8 | 297.58 | 172.31 | 297.5 | 173.2 | 297.47 | 175.82 | 297.35 |
| 180.21 | 297.08 | 181.56 | 296.99 | 186.73 | 296.59 | 188.95 | 296.36 | 190.27 | 296.24 |
| 193.96 | 295.93 | 197.54 | 295.41 | 198.7 | 295.25 | 200.76 | 294.93 | 200.95 | 294.91 |
| 203.36 | 294.54 | 204.64 | 294.36 | 206.11 | 294.13 | 210.44 | 293.75 | 211.68 | 293.57 |
| 213.29 | 293.39 | 214.73 | 293.2 | 215.66 | 293.1 | 216.74 | 292.98 | 217.74 | 292.83 |
| 219 | 292.78 | 220.7 | 292.75 | 222.37 | 292.74 | 224.81 | 292.68 | 225.82 | 292.63 |
| 227.31 | 292.51 | 228.73 | 292.34 | 231.67 | 291.92 | 237.88 | 291.09 | 240.79 | 290.83 |
| 251.65 | 290.54 | 255.82 | 290.46 | 257.67 | 290.44 | 269.92 | 290.23 | 270.21 | 290.22 |
| 280.23 | 290.01 | 282.29 | 289.97 | 286.81 | 289.9 | 288.64 | 289.91 | 289.2 | 289.9 |
| 298.53 | 289.99 | 301.99 | 289.98 | 302.88 | 289.96 | 303.97 | 289.86 | 304.6 | 289.88 |
| 308.76 | 290.12 | 310.72 | 290.26 | 312.93 | 290.68 | 314.61 | 291.49 | 316.71 | 291.59 |
| 318.73 | 291.67 | 324.72 | 291.74 | 324.79 | 291.69 | 325.5 | 291.64 | 328 | 290.95 |
| 329.66 | 290.5 | 331.15 | 290.12 | 332.51 | 290.04 | 333.31 | 290.01 | 335.52 | 290.04 |
| 337.78 | 290.06 | 339.44 | 290.11 | 341.21 | 290.14 | 344.23 | 290.13 | 347.22 | 290.16 |
| 348.5 | 290.18 | 349.75 | 290.16 | 351.12 | 290.19 | 353.1 | 290.22 | 355.83 | 290.23 |
| 356.55 | 290.22 | 357.2 | 290.18 | 359.16 | 290.1 | 360.12 | 290.05 | 362.77 | 289.88 |
| 376.88 | 289.66 | 377.8 | 289.66 | 379.78 | 289.64 | 382.54 | 289.6 | 386.26 | 289.49 |
| 391.99 | 289.4 | 399.73 | 289.26 | 401.82 | 289.28 | 404 | 289.36 | 404.26 | 289.36 |
| 407.6 | 289.48 | 407.7 | 289.53 | 409.23 | 289.64 | 410.31 | 289.69 | 414.38 | 289.91 |
| 422.92 | 290.24 | 424.67 | 290.28 | 428.24 | 290.4 | 436.09 | 290.65 | 439.33 | 290.77 |
| 442.7 | 290.85 | 448.58 | 290.93 | 452.3 | 290.97 | 468.66 | 290.96 | 472.19 | 290.89 |
| 473.36 | 290.81 | 473.59 | 290.77 | 475.23 | 290.74 | 477.34 | 290.73 | 479.81 | 290.76 |
| 483.21 | 290.78 | 483.8 | 290.76 | 486.72 | 290.73 | 489.22 | 290.66 | 493.13 | 290.6 |
| 496.19 | 290.58 | 497.25 | 290.55 | 499.53 | 290.55 | 500.87 | 290.53 | 501.84 | 290.5 |
| 504.45 | 290.5 | 507.72 | 290.53 | 509.42 | 290.56 | 511.53 | 290.56 | 512.63 | 290.55 |
| 515.84 | 290.54 | 517.63 | 290.54 | 518.7 | 290.43 | 519.05 | 290.45 | 520.06 | 290.38 |
| 520.94 | 290.39 | 522.27 | 290.3 | 527.38 | 290.07 | 530.03 | 290.05 | 531.61 | 290.05 |
| 543.45 | 290.25 | 548.32 | 290.38 | 550.33 | 290.43 | 550.92 | 290.46 | 552.79 | 290.52 |
| 556.34 | 290.59 | 558.71 | 290.56 | 561.31 | 290.49 | 562.66 | 290.49 | 566.09 | 290.52 |
| 568.9 | 290.58 | 569.3 | 290.6 | 572.18 | 290.68 | 574 | 290.77 | 575.29 | 290.8 |
| 576.43 | 290.85 | 577.77 | 290.81 | 578.92 | 290.73 | 580.17 | 290.72 | 582.44 | 290.78 |
| 585.48 | 290.88 | 591.19 | 291.01 | 591.54 | 291.04 | 595.59 | 291.01 | 596.21 | 290.97 |
| 602.16 | 290.35 | 602.68 | 290.29 | 603.98 | 290.27 | 605.48 | 290.31 | 606.38 | 290.32 |
| 611 | 290.43 | 612.48 | 290.42 | 614.72 | 290.37 | 617.63 | 290.27 | 620.07 | 290.21 |
| 622.57 | 290.16 | 623.84 | 290.18 | 627.34 | 290.19 | 629.31 | 290.21 | 630.37 | 290.21 |
| 631.97 | 290.18 | 637.96 | 290.09 | 643.86 | 290.12 | 644.08 | 290.14 | 649.86 | 290.14 |
| 653.41 | 290.11 | 655.65 | 290.1 | 659.88 | 290.12 | 662.23 | 290.2 | 664.34 | 290.24 |
| 666.89 | 290.35 | 669.22 | 290.41 | 671.67 | 290.41 | 675.96 | 290.47 | 678.5 | 290.55 |
| 679.21 | 290.59 | 682.03 | 290.7 | 687.82 | 290.91 | 688.7 | 291.02 | 690.12 | 291.16 |
| 692.51 | 291.32 | 694.64 | 291.4 | 697.06 | 291.4 | 698.07 | 291.46 | 699.81 | 291.48 |
| 700.47 | 291.47 | 706.52 | 291.35 | 706.98 | 291.33 | 712.24 | 291.21 | 713.3 | 291.2 |
| 717.43 | 291.11 | 718.56 | 291.11 | 719.59 | 291.14 | 724.19 | 291.19 | 725.53 | 291.2 |
| 731.45 | 291.22 | 737.66 | 291.29 | 738.72 | 291.33 | 741.03 | 291.38 | 742.32 | 291.38 |
| 748.67 | 291.33 | 751.1 | 291.3 | 759.91 | 291.41 | 761.62 | 291.45 | 763.19 | 291.45 |
| 763.55 | 291.43 | 764.61 | 291.45 | 766.95 | 291.46 | 768.55 | 291.34 | 772.49 | 290.87 |
| 773.94 | 290.77 | 775.05 | 290.79 | 776.84 | 290.8 | 777.56 | 290.84 | 778.65 | 290.85 |
| 781.95 | 290.86 | 783.89 | 290.84 | 787.97 | 290.73 | 788.34 | 290.71 | 791.91 | 290.59 |
| 792.9 | 290.57 | 796.48 | 290.58 | 800 | 290.66 | 804.66 | 290.7 | 805.89 | 290.72 |
| 807.68 | 290.72 | 810.59 | 290.65 | 817.31 | 290.82 | 818.47 | 290.89 | 826.87 | 291.44 |
| 827.76 | 291.48 | 829.93 | 291.53 | 840.99 | 291.67 | 843.38 | 291.73 | 844.03 | 291.73 |
| 845.59 | 291.77 | 846.31 | 291.83 | 848.21 | 291.94 | 849.2 | 291.92 | 857.47 | 292.06 |
| 859.13 | 292.06 | 859.44 | 292.03 | 861.04 | 291.94 | 865.31 | 291.78 | 865.57 | 291.75 |
| 867.1 | 291.74 | 870.13 | 291.78 | 873.12 | 291.78 | 873.66 | 291.76 | 874.8 | 291.76 |
| 883.77 | 291.87 | 884.86 | 291.9 | 887.04 | 291.99 | 888.57 | 292.02 | 892.24 | 292.02 |
| 900.49 | 291.96 | 901.29 | 291.87 | 902.14 | 291.87 | 905.34 | 291.79 | 907 | 291.74 |
| 909.87 | 291.71 | 910.55 | 291.68 | 911.94 | 291.68 | 915.59 | 291.71 | 920.73 | 291.73 |
| 924.83 | 291.29 | 925.66 | 291.25 | 926.88 | 291.28 | 928.3 | 291.38 | 929.26 | 291.36 |
| 930.39 | 291.45 | 932.05 | 291.56 | 933.35 | 291.62 | 938.58 | 291.93 | 943 | 292.1 |
| 948.63 | 292.22 | 950.52 | 292.23 | 951.78 | 292.2 | 954.24 | 292.05 | 962.31 | 291.95 |
| 967.09 | 291.92 | 967.22 | 291.91 | 970.76 | 291.81 | 973.83 | 291.76 | 975.16 | 291.75 |
| 975.78 | 291.78 | 977.48 | 291.83 | 979.66 | 291.92 | 981.48 | 292.04 | 983.49 | 292.1 |
| 984.54 | 292.09 | 987.27 | 292.02 | 991.44 | 291.96 | 992.55 | 291.92 | 993.35 | 291.92 |
| 995 | 291.98 | 997.09 | 292.02 | 997.5 | 292.04 | 1001.74 | 292.14 | 1001.93 | 292.15 |
| 1004.15 | 292.17 | 1007.53 | 292.16 | 1008.45 | 292.13 | 1013.89 | 291.91 | 1015.39 | 291.87 |
| 1016.47 | 291.82 | 1017.5 | 291.73 | 1018.51 | 291.72 | 1022.5 | 291.65 | 1024.05 | 291.58 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1025.92 | 291.58 | 1030.5 | 291.63 | 1031.51 | 291.65 | 1036.51 | 291.81 | 1037.91 | 291.88 |
| 1042.96 | 292.03 | 1044.16 | 292.04 | 1047.32 | 292.03 | 1048.06 | 292.01 | 1049.14 | 292.01 |
| 1052.33 | 292.05 | 1054.17 | 292.05 | 1054.79 | 292.06 | 1057.48 | 292.07 | 1057.64 | 292.05 |
| 1060.68 | 292.02 | 1062.57 | 292.03 | 1066.92 | 292.11 | 1067.85 | 292.11 | 1068.53 | 292.07 |
| 1071.03 | 292.06 | 1072.75 | 292.04 | 1074.6 | 292.04 | 1075.89 | 292.06 | 1078.69 | 292.08 |
| 1081.81 | 292.14 | 1101.28 | 292.63 | 1104.84 | 292.82 | 1105.23 | 292.86 | 1106.63 | 292.85 |
| 1115.4 | 292.92 | 1118.1 | 292.88 | 1120.05 | 292.81 | 1124 | 292.78 | 1132.75 | 292.87 |
| 1134.96 | 292.97 | 1135.76 | 293.02 | 1138.15 | 293.23 | 1140.27 | 293.53 | 1143.59 | 294.02 |
| 1145.01 | 294.45 | 1146.21 | 294.77 | 1146.78 | 294.97 | 1148.43 | 295.49 | 1149.3 | 295.86 |
| 1150.36 | 296.23 | 1151.28 | 296.63 | 1153.64 | 297.77 | 1154.69 | 298.22 | 1155.25 | 298.43 |
| 1157.04 | 299.21 | 1159.6 | 300.39 | 1162.99 | 301.94 | 1164.41 | 302.52 | 1165.97 | 303.21 |
| 1166.88 | 303.63 | 1168.75 | 304.54 | 1169.87 | 305.06 | 1173.09 | 306.52 | 1173.89 | 306.9 |
| 1174.53 | 307.17 | 1175.33 | 307.48 | 1177.9 | 308.53 | 1178.33 | 308.74 | 1178.61 | 308.8 |
| 1179.85 | 308.95 | 1181.31 | 309.03 | 1183.6 | 309.19 | 1185.93 | 309.49 | 1187.21 | 309.7 |
| 1187.85 | 309.86 | 1190.08 | 310.52 | 1194.01 | 311.7 | 1196.1 | 312.32 | 1198.97 | 313.16 |
| 1201.75 | 313.89 | 1202.87 | 314.17 | 1204.9 | 314.64 | 1205.38 | 314.76 | 1207.16 | 315.15 |
| 1207.99 | 315.36 | 1209.24 | 315.61 | 1210.29 | 315.88 | 1214.36 | 316.71 | 1216.82 | 317.22 |
| 1217.57 | 317.39 | 1219.42 | 317.72 | 1221.62 | 318.01 | 1224.09 | 318.27 | 1226.3 | 318.55 |
| 1227.08 | 318.67 | 1227.36 | 318.67 | 1228 | 318.75 | 1233.49 | 319.36 | 1234.7 | 319.51 |
| 1236.11 | 319.61 | 1242.08 | 320.1 | 1243.88 | 320.22 | 1254.16 | 320.79 | 1254.69 | 320.83 |
| 1261.13 | 321.05 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.66 | .04 | 1181.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.66 | 1181.31 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1999.12*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 314.45 | .83 | 314.2 | 2.74 | 314.02 | 4.32 | 313.79 | 5.46 | 313.67 |
| 7.93 | 313.31 | 10.78 | 312.87 | 11.94 | 312.57 | 13.31 | 312.18 | 17.8 | 311.27 |
| 22.13 | 310.52 | 23.91 | 310.22 | 25.2 | 309.99 | 27.32 | 309.55 | 29.01 | 309.32 |
| 29.79 | 309.23 | 31.16 | 309.13 | 32.52 | 308.61 | 32.81 | 308.53 | 33.43 | 308.49 |
| 34.13 | 308.6 | 35.84 | 308.82 | 37.01 | 308.88 | 37.84 | 308.97 | 38.26 | 308.99 |
| 40.63 | 309.02 | 41.55 | 309.09 | 42.44 | 309.1 | 43.45 | 309.07 | 44.56 | 309.07 |
| 48.59 | 309.02 | 48.98 | 309 | 50.83 | 308.96 | 54.51 | 308.85 | 57.49 | 308.75 |
| 60.13 | 308.65 | 62.18 | 308.52 | 63.73 | 308.34 | 64.37 | 308.25 | 70.99 | 307.16 |
| 71.41 | 307.08 | 74.64 | 306.67 | 75.78 | 306.46 | 78.2 | 306.12 | 89.67 | 304.58 |
| 93.49 | 304.13 | 97.17 | 303.82 | 99.11 | 303.54 | 102.64 | 302.99 | 105.13 | 302.63 |
| 106.71 | 302.52 | 107.22 | 302.5 | 108.29 | 302.5 | 109.01 | 302.47 | 112.25 | 302.22 |
| 114.15 | 302.12 | 114.72 | 302.08 | 117.04 | 301.87 | 121.15 | 301.59 | 123.41 | 301.4 |
| 127.18 | 301.12 | 132.32 | 300.83 | 135.3 | 300.79 | 137.93 | 300.73 | 139.73 | 300.6 |
| 146.94 | 299.72 | 154.52 | 298.93 | 156.86 | 298.66 | 158.94 | 298.46 | 162.45 | 298.16 |
| 174.32 | 297.31 | 178.54 | 297.13 | 182.25 | 296.91 | 183.86 | 296.83 | 188.33 | 296.67 |
| 189.35 | 296.61 | 192.29 | 296.46 | 193.73 | 296.38 | 199.25 | 295.98 | 202.34 | 295.71 |
| 204.55 | 295.55 | 204.92 | 295.51 | 206.96 | 295.37 | 210.78 | 294.88 | 212.02 | 294.74 |
| 214.21 | 294.44 | 214.42 | 294.42 | 216.99 | 294.08 | 218.35 | 293.92 | 219.93 | 293.7 |
| 224.55 | 293.34 | 225.87 | 293.15 | 227.59 | 292.97 | 229.12 | 292.77 | 230.12 | 292.68 |
| 231.21 | 292.55 | 232.23 | 292.4 | 233.52 | 292.36 | 234.02 | 292.37 | 235.25 | 292.35 |
| 236.95 | 292.35 | 239.44 | 292.33 | 241.33 | 292.23 | 241.99 | 292.17 | 243.43 | 291.99 |
| 246.43 | 291.57 | 252.76 | 290.73 | 255.72 | 290.48 | 266.79 | 290.18 | 271.04 | 290.1 |
| 272.92 | 290.08 | 285.42 | 289.88 | 285.7 | 289.87 | 295.92 | 289.66 | 297.64 | 289.61 |
| 298.02 | 289.62 | 302.63 | 289.56 | 305.06 | 289.56 | 314.57 | 289.66 | 318.09 | 289.65 |
| 319 | 289.63 | 320.12 | 289.51 | 320.75 | 289.54 | 325 | 289.8 | 326.99 | 289.95 |
| 329.25 | 290.42 | 330.25 | 290.93 | 330.95 | 291.31 | 333.1 | 291.42 | 335.16 | 291.5 |
| 341.26 | 291.57 | 341.33 | 291.51 | 342.06 | 291.45 | 344.6 | 290.69 | 344.85 | 290.6 |
| 346.3 | 290.18 | 347.81 | 289.76 | 349.2 | 289.66 | 350.01 | 289.63 | 352.26 | 289.66 |
| 354.57 | 289.68 | 356.26 | 289.73 | 358.06 | 289.76 | 361.14 | 289.75 | 364.13 | 289.79 |
| 365.5 | 289.8 | 367.29 | 289.78 | 370.19 | 289.84 | 372.97 | 289.85 | 373.89 | 289.84 |
| 374.36 | 289.81 | 377.34 | 289.69 | 380.04 | 289.53 | 394.41 | 289.33 | 395.35 | 289.33 |
| 400.19 | 289.26 | 403.98 | 289.15 | 409.12 | 289.07 | 409.82 | 289.07 | 415.53 | 288.97 |
| 416.4 | 288.96 | 417.71 | 288.92 | 419.76 | 288.94 | 421.93 | 289.02 | 422.18 | 289.02 |
| 425.49 | 289.13 | 425.59 | 289.19 | 427.11 | 289.31 | 428.18 | 289.36 | 432.2 | 289.57 |
| 440.66 | 289.89 | 442.39 | 289.92 | 445.93 | 290.04 | 453.7 | 290.28 | 456.91 | 290.39 |
| 460.25 | 290.48 | 466.06 | 290.57 | 469.75 | 290.61 | 485.95 | 290.61 | 487.33 | 290.57 |
| 489.44 | 290.55 | 490.83 | 290.44 | 492.45 | 290.41 | 495.7 | 290.4 | 496.99 | 290.43 |
| 500.35 | 290.44 | 500.94 | 290.42 | 503.83 | 290.39 | 506.3 | 290.32 | 510.18 | 290.26 |
| 512.21 | 290.25 | 515.17 | 290.2 | 516.52 | 290.21 | 518.8 | 290.15 | 521.38 | 290.14 |
| 524.62 | 290.17 | 526.3 | 290.2 | 527.5 | 290.2 | 529.16 | 290.17 | 529.49 | 290.18 |
| 534.43 | 290.17 | 535.5 | 290.07 | 535.84 | 290.09 | 536.84 | 290.03 | 537.71 | 290.04 |
| 539.03 | 289.96 | 544.09 | 289.75 | 546.71 | 289.73 | 548.28 | 289.73 | 559.4 | 289.93 |
| 564.82 | 290.09 | 566.81 | 290.14 | 569.25 | 290.24 | 572.77 | 290.31 | 575.11 | 290.29 |
| 576.62 | 290.26 | 578.1 | 290.21 | 582.42 | 290.24 | 582.93 | 290.26 | 585.2 | 290.3 |
| 588.45 | 290.39 | 590.25 | 290.47 | 591.53 | 290.5 | 592.65 | 290.55 | 593.98 | 290.51 |
| 595.12 | 290.43 | 596.35 | 290.42 | 598.61 | 290.48 | 601.62 | 290.57 | 607.27 | 290.69 |
| 607.61 | 290.71 | 611.62 | 290.68 | 612.24 | 290.64 | 618.33 | 290.04 | 618.64 | 290 |
| 619.93 | 289.98 | 626.88 | 290.12 | 628.8 | 290.1 | 630.56 | 290.07 | 633.45 | 289.96 |
| 638.33 | 289.86 | 639.6 | 289.87 | 643.06 | 289.88 | 645.01 | 289.9 | 646.06 | 289.9 |
| 647.65 | 289.87 | 653.57 | 289.8 | 659.41 | 289.83 | 659.63 | 289.84 | 665.35 | 289.85 |
| 668.87 | 289.8 | 671.09 | 289.8 | 675.28 | 289.82 | 677.61 | 289.9 | 679.7 | 289.94 |
| 682.23 | 290.04 | 684.53 | 290.09 | 686.96 | 290.09 | 689.86 | 290.11 | 692 | 290.15 |
| 693.71 | 290.21 | 694.41 | 290.25 | 697.21 | 290.36 | 702.95 | 290.57 | 703.81 | 290.67 |
| 705.22 | 290.81 | 707.29 | 290.93 | 707.58 | 290.96 | 709.37 | 291.03 | 712.1 | 291.04 |
| 713.1 | 291.1 | 715.47 | 291.12 | 721.46 | 291.01 | 721.91 | 290.99 | 725.71 | 290.9 |
| 730.03 | 290.84 | 732.26 | 290.79 | 733.38 | 290.79 | 734.4 | 290.82 | 740.28 | 290.87 |
| 745.79 | 290.89 | 746.14 | 290.88 | 752.29 | 290.95 | 753.34 | 290.99 | 755.62 | 291.04 |
| 756.9 | 291.03 | 763.2 | 290.96 | 765.6 | 290.92 | 774.33 | 291.02 | 776.02 | 291.06 |
| 777.57 | 291.06 | 777.93 | 291.04 | 778.97 | 291.06 | 781.29 | 291.07 | 781.95 | 291.01 |
| 782.87 | 290.96 | 786.77 | 290.52 | 788.21 | 290.43 | 789.31 | 290.45 | 791.08 | 290.46 |
| 791.79 | 290.5 | 792.87 | 290.51 | 796.15 | 290.52 | 798.07 | 290.5 | 802.1 | 290.4 |
| 806.01 | 290.27 | 806.99 | 290.25 | 810.53 | 290.26 | 814.02 | 290.33 | 818.63 | 290.36 |
| 819.84 | 290.38 | 821.62 | 290.38 | 824.5 | 290.32 | 831.15 | 290.47 | 832.3 | 290.53 |
| 840.62 | 291.05 | 841.5 | 291.09 | 843.65 | 291.15 | 854.6 | 291.3 | 856.97 | 291.36 |
| 857.61 | 291.36 | 859.15 | 291.4 | 859.87 | 291.46 | 861.75 | 291.57 | 862.73 | 291.55 |
| 870.92 | 291.69 | 872.56 | 291.7 | 872.87 | 291.67 | 874.45 | 291.58 | 878.68 | 291.44 |
| 878.94 | 291.41 | 880.46 | 291.4 | 883.46 | 291.44 | 884.95 | 291.44 | 886.95 | 291.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 888.08 | 291.42 | 896.96 | 291.53 | 898.04 | 291.56 | 900.2 | 291.64 | 902.23 | 291.68 |
| 904.01 | 291.68 | 913.52 | 291.61 | 914.31 | 291.53 | 915.15 | 291.52 | 919.96 | 291.38 |
| 922.8 | 291.34 | 923.48 | 291.31 | 924.84 | 291.31 | 928.46 | 291.34 | 933.56 | 291.37 |
| 937.61 | 290.97 | 938.2 | 290.93 | 938.97 | 290.93 | 939.64 | 290.96 | 941.14 | 291.07 |
| 942 | 291.05 | 943.11 | 291.14 | 944.76 | 291.25 | 946.04 | 291.31 | 951.23 | 291.62 |
| 955.61 | 291.78 | 961.18 | 291.89 | 963.04 | 291.9 | 964.3 | 291.87 | 966.74 | 291.73 |
| 974.73 | 291.62 | 979.46 | 291.58 | 979.58 | 291.57 | 983.08 | 291.47 | 986.86 | 291.42 |
| 989.74 | 291.49 | 991.9 | 291.58 | 993.83 | 291.7 | 995.7 | 291.76 | 996.73 | 291.75 |
| 999.43 | 291.69 | 1003.57 | 291.64 | 1004.66 | 291.59 | 1005.45 | 291.59 | 1007.09 | 291.65 |
| 1009.16 | 291.68 | 1009.56 | 291.7 | 1013.76 | 291.8 | 1016.15 | 291.82 | 1018.83 | 291.81 |
| 1020.4 | 291.78 | 1025.79 | 291.56 | 1027.28 | 291.52 | 1028.35 | 291.47 | 1029.37 | 291.39 |
| 1030.36 | 291.39 | 1032.98 | 291.33 | 1034.31 | 291.31 | 1035.32 | 291.26 | 1037.7 | 291.24 |
| 1042.24 | 291.29 | 1043.24 | 291.31 | 1048.19 | 291.47 | 1049.57 | 291.53 | 1054.57 | 291.68 |
| 1055.76 | 291.69 | 1058.89 | 291.69 | 1059.32 | 291.67 | 1060.69 | 291.67 | 1063.27 | 291.71 |
| 1065.67 | 291.71 | 1066.29 | 291.72 | 1068.95 | 291.73 | 1069.11 | 291.72 | 1072.12 | 291.69 |
| 1073.99 | 291.7 | 1078.3 | 291.77 | 1079.02 | 291.77 | 1080.31 | 291.72 | 1082.15 | 291.72 |
| 1084.07 | 291.69 | 1086.27 | 291.69 | 1087.18 | 291.71 | 1089.95 | 291.72 | 1091.6 | 291.74 |
| 1093.04 | 291.77 | 1112.32 | 292.25 | 1112.39 | 292.26 | 1115.85 | 292.44 | 1116.23 | 292.47 |
| 1117.62 | 292.47 | 1126.3 | 292.55 | 1128.98 | 292.51 | 1129.93 | 292.47 | 1130.91 | 292.45 |
| 1132.99 | 292.43 | 1134.82 | 292.43 | 1143.47 | 292.52 | 1146.4 | 292.68 | 1148.83 | 292.9 |
| 1150.92 | 293.2 | 1154.21 | 293.69 | 1155.83 | 294.16 | 1156.8 | 294.41 | 1157.36 | 294.6 |
| 1159 | 295.1 | 1159.87 | 295.46 | 1160.91 | 295.81 | 1161.83 | 296.19 | 1162.47 | 296.48 |
| 1163.64 | 297.04 | 1164.79 | 297.54 | 1165.75 | 297.9 | 1167.53 | 298.65 | 1170.07 | 299.78 |
| 1170.22 | 299.86 | 1173.42 | 301.26 | 1174.82 | 301.83 | 1176.37 | 302.48 | 1179.12 | 303.78 |
| 1180.23 | 304.29 | 1183.67 | 305.83 | 1184.84 | 306.36 | 1185.63 | 306.66 | 1188.18 | 307.71 |
| 1188.61 | 307.91 | 1189.31 | 308.04 | 1190.12 | 308.14 | 1191.56 | 308.25 | 1193.83 | 308.46 |
| 1196.16 | 308.81 | 1197.43 | 309.05 | 1198.27 | 309.28 | 1200.28 | 309.91 | 1206.2 | 311.78 |
| 1209.13 | 312.67 | 1212.45 | 313.59 | 1215.51 | 314.36 | 1217.28 | 314.78 | 1217.7 | 314.9 |
| 1219.35 | 315.28 | 1220.4 | 315.57 | 1222.03 | 315.93 | 1224.45 | 316.49 | 1225.01 | 316.61 |
| 1227.65 | 317.23 | 1229.49 | 317.6 | 1231.68 | 317.92 | 1233.15 | 318.07 | 1236.33 | 318.49 |
| 1237.12 | 318.62 | 1237.59 | 318.64 | 1238.38 | 318.75 | 1243.49 | 319.33 | 1244.69 | 319.47 |
| 1246.09 | 319.57 | 1252.04 | 320.02 | 1253.83 | 320.13 | 1264.06 | 320.66 | 1264.59 | 320.7 |
| 1271 | 320.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 230.12 | .04 | 1191.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 230.12 | 1191.56 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1979.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 314.15 | .89 | 313.92 | 2.91 | 313.76 | 4.59 | 313.54 | 5.8 | 313.43 |
| 8.43 | 313.08 | 11.46 | 312.65 | 12.69 | 312.34 | 14.14 | 311.93 | 16.58 | 311.47 |
| 18.92 | 311.02 | 23.52 | 310.27 | 25.42 | 309.97 | 26.78 | 309.74 | 28.47 | 309.41 |
| 29.04 | 309.31 | 30.83 | 309.07 | 31.66 | 308.98 | 32.56 | 308.94 | 33.12 | 308.89 |
| 34.56 | 308.33 | 34.87 | 308.25 | 35.52 | 308.21 | 36.27 | 308.32 | 38.09 | 308.56 |
| 39.34 | 308.61 | 40.67 | 308.73 | 43.19 | 308.76 | 44.16 | 308.84 | 45.1 | 308.84 |
| 46.18 | 308.81 | 47.36 | 308.82 | 51.64 | 308.78 | 52.06 | 308.76 | 54.02 | 308.72 |
| 57.93 | 308.62 | 61.1 | 308.52 | 62.54 | 308.46 | 63.91 | 308.42 | 66.45 | 308.25 |
| 68.41 | 308 | 75.45 | 306.85 | 75.9 | 306.77 | 79.14 | 306.36 | 80.54 | 306.12 |
| 83.12 | 305.77 | 95.31 | 304.15 | 99.36 | 303.68 | 103.27 | 303.37 | 105.34 | 303.08 |
| 109.09 | 302.49 | 111.4 | 302.16 | 112.19 | 302.08 | 113.96 | 301.99 | 115.09 | 301.99 |
| 115.86 | 301.97 | 119.3 | 301.72 | 119.96 | 301.69 | 121.93 | 301.57 | 124.27 | 301.37 |
| 124.39 | 301.35 | 128.76 | 301.04 | 131.16 | 300.82 | 135.17 | 300.49 | 139.66 | 300.21 |
| 141.02 | 300.14 | 143.8 | 300.09 | 145.79 | 300.03 | 146.59 | 300.02 | 148.51 | 299.88 |
| 156.17 | 298.99 | 164.23 | 298.19 | 166.71 | 297.91 | 170.23 | 297.61 | 172.65 | 297.44 |
| 185.12 | 296.62 | 185.27 | 296.62 | 189.75 | 296.44 | 193.7 | 296.23 | 195.4 | 296.16 |
| 196.42 | 296.14 | 199.39 | 296.05 | 201.24 | 295.98 | 202.47 | 295.91 | 204.37 | 295.84 |
| 205.89 | 295.76 | 211.76 | 295.38 | 214.28 | 295.18 | 215.77 | 295.07 | 217.79 | 294.94 |
| 219.96 | 294.81 | 224.02 | 294.36 | 225.34 | 294.23 | 227.67 | 293.95 | 230.62 | 293.62 |
| 232.29 | 293.45 | 234.05 | 293.25 | 238.65 | 292.93 | 240.06 | 292.74 | 241.89 | 292.55 |
| 243.52 | 292.35 | 244.57 | 292.25 | 245.69 | 292.12 | 246.73 | 291.97 | 247.09 | 291.95 |
| 249.8 | 291.95 | 251.53 | 291.97 | 254.07 | 291.97 | 255.12 | 291.93 | 256.67 | 291.83 |
| 258.13 | 291.65 | 261.19 | 291.22 | 267.64 | 290.36 | 270.66 | 290.12 | 281.93 | 289.82 |
| 286.27 | 289.74 | 288.18 | 289.72 | 300.91 | 289.53 | 301.2 | 289.52 | 311.61 | 289.3 |
| 312.91 | 289.28 | 318.44 | 289.21 | 320.93 | 289.22 | 330.61 | 289.33 | 334.2 | 289.32 |
| 335.12 | 289.3 | 336.26 | 289.17 | 336.91 | 289.2 | 341.23 | 289.49 | 343.26 | 289.65 |
| 345.57 | 290.15 | 347.3 | 291.13 | 349.49 | 291.25 | 351.58 | 291.33 | 357.8 | 291.39 |
| 357.87 | 291.33 | 358.61 | 291.26 | 361.21 | 290.42 | 361.46 | 290.32 | 364.47 | 289.39 |
| 365.89 | 289.28 | 366.72 | 289.25 | 371.91 | 289.31 | 373.08 | 289.35 | 374.92 | 289.38 |
| 378.05 | 289.38 | 382.49 | 289.42 | 384.32 | 289.4 | 387.27 | 289.46 | 391.05 | 289.47 |
| 391.52 | 289.44 | 394.56 | 289.33 | 397.3 | 289.18 | 411.95 | 289.01 | 417.84 | 288.93 |
| 421.69 | 288.82 | 426.94 | 288.74 | 427.65 | 288.74 | 433.46 | 288.64 | 434.35 | 288.63 |
| 435.68 | 288.59 | 437.71 | 288.61 | 440.11 | 288.68 | 443.38 | 288.79 | 443.48 | 288.86 |
| 444.99 | 288.97 | 450.03 | 289.22 | 458.4 | 289.54 | 460.12 | 289.57 | 463.06 | 289.67 |
| 463.62 | 289.68 | 471.31 | 289.91 | 472.16 | 289.93 | 474.49 | 290.02 | 477.79 | 290.11 |
| 483.55 | 290.21 | 487.2 | 290.26 | 503.4 | 290.25 | 504.61 | 290.22 | 506.7 | 290.2 |
| 507.85 | 290.13 | 508.07 | 290.1 | 509.68 | 290.08 | 512.89 | 290.07 | 514.17 | 290.09 |
| 517.77 | 290.1 | 518.08 | 290.08 | 520.94 | 290.05 | 523.39 | 289.98 | 527.22 | 289.91 |
| 529.24 | 289.91 | 532.16 | 289.86 | 533.5 | 289.87 | 534.81 | 289.84 | 535.77 | 289.8 |
| 538.32 | 289.79 | 541.52 | 289.81 | 542.52 | 289.83 | 545.26 | 289.83 | 546.34 | 289.81 |
| 549.48 | 289.8 | 550.27 | 289.81 | 551.43 | 289.79 | 552.29 | 289.71 | 552.63 | 289.73 |
| 553.62 | 289.67 | 554.49 | 289.68 | 555.79 | 289.61 | 560.8 | 289.42 | 564.95 | 289.41 |
| 575.96 | 289.63 | 581.33 | 289.8 | 583.29 | 289.85 | 583.87 | 289.89 | 585.71 | 289.96 |
| 587.49 | 290.01 | 589.19 | 290.04 | 591.51 | 290.02 | 593.01 | 289.99 | 594.06 | 289.95 |
| 595.38 | 289.95 | 598.74 | 289.97 | 601.5 | 290.01 | 601.89 | 290.03 | 604.71 | 290.09 |
| 605.59 | 290.14 | 607.76 | 290.2 | 608.88 | 290.24 | 610.19 | 290.21 | 611.32 | 290.14 |
| 612.54 | 290.12 | 617.75 | 290.26 | 623.34 | 290.36 | 623.69 | 290.38 | 627.66 | 290.35 |
| 628.27 | 290.31 | 634.61 | 289.71 | 635.88 | 289.68 | 637.35 | 289.72 | 638.23 | 289.73 |
| 642.93 | 289.81 | 644.66 | 289.79 | 645.78 | 289.76 | 646.41 | 289.76 | 649.27 | 289.66 |
| 654.1 | 289.56 | 655.35 | 289.57 | 658.78 | 289.57 | 660.71 | 289.59 | 661.76 | 289.59 |
| 663.32 | 289.56 | 669.19 | 289.5 | 674.97 | 289.53 | 675.19 | 289.54 | 680.85 | 289.55 |
| 684.33 | 289.5 | 686.53 | 289.5 | 690.68 | 289.52 | 692.98 | 289.59 | 695.05 | 289.63 |
| 697.56 | 289.72 | 699.84 | 289.78 | 702.24 | 289.76 | 705.12 | 289.77 | 707.23 | 289.81 |
| 708.93 | 289.87 | 709.62 | 289.91 | 712.39 | 290.02 | 718.07 | 290.23 | 720.32 | 290.45 |
| 722.66 | 290.59 | 724.43 | 290.67 | 727.13 | 290.69 | 728.12 | 290.74 | 729.82 | 290.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 736.4 | 290.66 | 736.85 | 290.64 | 740.61 | 290.57 | 743.05 | 290.54 | 747.09 | 290.47 |
| 755.04 | 290.54 | 760.48 | 290.55 | 760.84 | 290.54 | 766.92 | 290.6 | 767.07 | 290.62 |
| 770.22 | 290.69 | 771.49 | 290.68 | 778.48 | 290.58 | 780.1 | 290.54 | 788.74 | 290.64 |
| 790.41 | 290.67 | 791.95 | 290.67 | 792.3 | 290.65 | 793.34 | 290.67 | 795.63 | 290.68 |
| 797.2 | 290.58 | 801.06 | 290.17 | 802.48 | 290.1 | 803.58 | 290.12 | 805.33 | 290.13 |
| 806.03 | 290.16 | 807.1 | 290.17 | 810.34 | 290.18 | 812.24 | 290.16 | 816.24 | 290.07 |
| 818.02 | 290.01 | 821.1 | 289.93 | 824.58 | 289.94 | 828.03 | 290.01 | 835.56 | 290.04 |
| 838.41 | 289.98 | 845 | 290.11 | 846.13 | 290.17 | 854.37 | 290.66 | 855.24 | 290.7 |
| 857.37 | 290.76 | 868.22 | 290.93 | 870.56 | 290.99 | 871.19 | 290.99 | 873.27 | 291.06 |
| 873.43 | 291.09 | 875.29 | 291.19 | 876.26 | 291.18 | 884.37 | 291.33 | 885.99 | 291.34 |
| 886.3 | 291.31 | 887.87 | 291.23 | 892.05 | 291.1 | 892.3 | 291.07 | 893.81 | 291.06 |
| 896.78 | 291.1 | 898.26 | 291.1 | 901.35 | 291.07 | 910.15 | 291.18 | 911.22 | 291.21 |
| 913.35 | 291.29 | 914.18 | 291.3 | 914.85 | 291.33 | 918.45 | 291.33 | 926.54 | 291.25 |
| 927.32 | 291.18 | 928.15 | 291.17 | 931.29 | 291.08 | 932.92 | 291.02 | 935.73 | 290.97 |
| 936.4 | 290.94 | 937.75 | 290.94 | 946.38 | 291.01 | 950.39 | 290.64 | 951.2 | 290.6 |
| 952.4 | 290.64 | 953.89 | 290.75 | 954.63 | 290.73 | 955.84 | 290.83 | 957.47 | 290.94 |
| 958.74 | 291 | 963.87 | 291.3 | 968.21 | 291.45 | 973.73 | 291.56 | 975.57 | 291.57 |
| 976.82 | 291.54 | 979.23 | 291.4 | 987.14 | 291.28 | 991.82 | 291.24 | 991.95 | 291.23 |
| 995.41 | 291.14 | 998.42 | 291.09 | 999.73 | 291.08 | 1000.33 | 291.12 | 1000.8 | 291.12 |
| 1002.44 | 291.17 | 1004.14 | 291.24 | 1005.93 | 291.35 | 1007.9 | 291.41 | 1008.92 | 291.41 |
| 1011.6 | 291.35 | 1015.69 | 291.31 | 1016.78 | 291.27 | 1017.56 | 291.27 | 1019.52 | 291.32 |
| 1021.23 | 291.34 | 1021.63 | 291.36 | 1025.79 | 291.45 | 1028.14 | 291.47 | 1030.8 | 291.46 |
| 1032.36 | 291.42 | 1037.69 | 291.21 | 1039.26 | 291.17 | 1040.23 | 291.13 | 1041.23 | 291.06 |
| 1042.22 | 291.05 | 1044.81 | 290.99 | 1046.13 | 290.98 | 1047.65 | 290.91 | 1049.49 | 290.91 |
| 1054.97 | 290.97 | 1056.1 | 291.01 | 1059.87 | 291.12 | 1061.24 | 291.18 | 1066.19 | 291.33 |
| 1067.37 | 291.34 | 1070.46 | 291.34 | 1072.25 | 291.33 | 1074.8 | 291.37 | 1077.18 | 291.37 |
| 1077.79 | 291.38 | 1080.42 | 291.39 | 1080.58 | 291.38 | 1083.56 | 291.35 | 1085.42 | 291.36 |
| 1089.68 | 291.43 | 1090.4 | 291.43 | 1091.44 | 291.38 | 1093.49 | 291.37 | 1095.39 | 291.34 |
| 1098.09 | 291.34 | 1098.47 | 291.35 | 1101.21 | 291.36 | 1104.27 | 291.4 | 1123.36 | 291.88 |
| 1126.85 | 292.06 | 1127.23 | 292.09 | 1128.61 | 292.08 | 1137.2 | 292.17 | 1139.85 | 292.14 |
| 1141.76 | 292.09 | 1143.82 | 292.07 | 1145.63 | 292.07 | 1154.2 | 292.17 | 1156.37 | 292.3 |
| 1157.16 | 292.36 | 1159.5 | 292.58 | 1161.57 | 292.87 | 1164.83 | 293.36 | 1166.23 | 293.76 |
| 1167.4 | 294.05 | 1167.95 | 294.23 | 1169.57 | 294.71 | 1170.43 | 295.05 | 1171.47 | 295.39 |
| 1173 | 296.03 | 1174.17 | 296.56 | 1175.31 | 297.03 | 1176.26 | 297.37 | 1178.02 | 298.09 |
| 1180.53 | 299.17 | 1180.68 | 299.25 | 1182.4 | 299.97 | 1183.85 | 300.59 | 1185.24 | 301.13 |
| 1185.89 | 301.41 | 1186.77 | 301.76 | 1187.66 | 302.16 | 1190.59 | 303.52 | 1192.91 | 304.54 |
| 1194.53 | 305.28 | 1195.94 | 305.84 | 1198.46 | 306.88 | 1198.89 | 307.08 | 1199.16 | 307.14 |
| 1200.38 | 307.33 | 1201.81 | 307.47 | 1204.07 | 307.74 | 1205.02 | 307.89 | 1206.08 | 308.08 |
| 1207.65 | 308.4 | 1208.29 | 308.58 | 1210.49 | 309.3 | 1214.39 | 310.6 | 1216.46 | 311.28 |
| 1219.3 | 312.18 | 1222.6 | 313.15 | 1225.65 | 313.97 | 1227.41 | 314.42 | 1228.37 | 314.69 |
| 1229.47 | 314.95 | 1230.17 | 315.17 | 1231.54 | 315.5 | 1234.54 | 316.26 | 1236.98 | 316.87 |
| 1237.72 | 317.07 | 1239.56 | 317.48 | 1241.73 | 317.82 | 1243.2 | 317.99 | 1246.37 | 318.44 |
| 1247.15 | 318.57 | 1247.42 | 318.58 | 1248.41 | 318.7 | 1253.49 | 319.29 | 1254.49 | 319.42 |
| 1256.08 | 319.52 | 1262 | 319.94 | 1263.78 | 320.04 | 1273.97 | 320.53 | 1274.49 | 320.57 |
| 1280.87 | 320.76 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 244.57 | .04 | 1201.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 244.57 | 1201.81 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1959.40*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.85 | .94 | 313.64 | 3.09 | 313.5 | 4.86 | 313.29 | 6.14 | 313.19 |
| 8.93 | 312.84 | 12.13 | 312.43 | 13.44 | 312.11 | 14.98 | 311.69 | 17.56 | 311.23 |
| 20.04 | 310.77 | 24.91 | 310.02 | 26.92 | 309.72 | 28.36 | 309.49 | 30.75 | 309.06 |
| 32.65 | 308.82 | 33.53 | 308.73 | 34.49 | 308.7 | 35.08 | 308.65 | 36.6 | 308.05 |
| 36.93 | 307.97 | 37.62 | 307.93 | 40.34 | 308.29 | 41.66 | 308.34 | 43.07 | 308.47 |
| 45.62 | 308.5 | 46.77 | 308.58 | 47.77 | 308.58 | 48.91 | 308.55 | 50.16 | 308.56 |
| 54.7 | 308.54 | 55.14 | 308.52 | 57.22 | 308.49 | 61.36 | 308.39 | 64.33 | 308.3 |
| 66.23 | 308.23 | 67.68 | 308.19 | 69.99 | 308.05 | 70.89 | 307.95 | 72.45 | 307.75 |
| 80.39 | 306.46 | 83.82 | 306.03 | 85.3 | 305.78 | 88.03 | 305.41 | 100.94 | 303.72 |
| 105.23 | 303.24 | 109.37 | 302.92 | 110 | 302.84 | 111.57 | 302.61 | 115.54 | 302 |
| 117.98 | 301.65 | 118.82 | 301.57 | 120.69 | 301.48 | 121.9 | 301.49 | 122.71 | 301.47 |
| 126.35 | 301.22 | 127.05 | 301.19 | 129.13 | 301.07 | 131.61 | 300.85 | 136.37 | 300.49 |
| 138.91 | 300.24 | 143.16 | 299.87 | 147.91 | 299.54 | 149.36 | 299.46 | 152.3 | 299.4 |
| 155.26 | 299.3 | 157.29 | 299.16 | 159.13 | 298.95 | 165.4 | 298.26 | 173.94 | 297.44 |
| 176.57 | 297.17 | 180.29 | 296.88 | 182.86 | 296.71 | 196.22 | 295.92 | 200.97 | 295.75 |
| 205.79 | 295.53 | 206.95 | 295.49 | 208.02 | 295.48 | 211.99 | 295.38 | 214.44 | 295.28 |
| 216.45 | 295.22 | 218.06 | 295.14 | 224.28 | 294.78 | 226.94 | 294.59 | 230.66 | 294.36 |
| 232.96 | 294.24 | 237.26 | 293.83 | 237.93 | 293.78 | 241.36 | 293.45 | 244.26 | 293.16 |
| 246.01 | 293.01 | 247.88 | 292.82 | 252.76 | 292.51 | 254.24 | 292.33 | 256.18 | 292.13 |
| 257.91 | 291.93 | 259.03 | 291.82 | 260.16 | 291.7 | 261.22 | 291.54 | 262.56 | 291.53 |
| 265.72 | 291.57 | 267.7 | 291.61 | 268.7 | 291.62 | 270.66 | 291.54 | 271.35 | 291.48 |
| 272.84 | 291.3 | 275.95 | 290.87 | 282.52 | 290 | 285.59 | 289.77 | 297.08 | 289.46 |
| 301.49 | 289.38 | 303.08 | 289.36 | 303.44 | 289.37 | 316.4 | 289.17 | 316.7 | 289.17 |
| 327.3 | 288.95 | 329.09 | 288.91 | 329.48 | 288.92 | 334.26 | 288.86 | 336.19 | 288.88 |
| 336.79 | 288.87 | 346.65 | 289 | 350.3 | 288.98 | 351.25 | 288.96 | 352.41 | 288.82 |
| 353.06 | 288.86 | 357.47 | 289.17 | 359.54 | 289.35 | 361.88 | 289.89 | 363.65 | 290.95 |
| 364.55 | 291.01 | 368.01 | 291.16 | 374.34 | 291.22 | 374.42 | 291.15 | 375.17 | 291.07 |
| 377.81 | 290.15 | 378.07 | 290.05 | 379.57 | 289.54 | 381.14 | 289.02 | 382.58 | 288.9 |
| 383.24 | 288.87 | 385.76 | 288.89 | 388.71 | 288.93 | 389.9 | 288.97 | 391.77 | 289 |
| 394.97 | 289 | 399.49 | 289.04 | 401.35 | 289.01 | 402.26 | 289.04 | 404.36 | 289.08 |
| 407.24 | 289.1 | 408.35 | 289.09 | 408.69 | 289.07 | 410.75 | 289.01 | 411.78 | 288.97 |
| 414.57 | 288.84 | 429.49 | 288.68 | 430.46 | 288.68 | 435.48 | 288.59 | 439.41 | 288.48 |
| 444.75 | 288.4 | 445.48 | 288.41 | 451.4 | 288.31 | 452.3 | 288.3 | 453.66 | 288.26 |
| 455.66 | 288.28 | 457.78 | 288.35 | 458.03 | 288.35 | 461.27 | 288.45 | 461.38 | 288.52 |
| 462.86 | 288.64 | 467.85 | 288.88 | 476.14 | 289.19 | 477.84 | 289.21 | 480.76 | 289.31 |
| 481.31 | 289.32 | 488.92 | 289.54 | 489.77 | 289.56 | 492.07 | 289.65 | 495.34 | 289.74 |
| 501.04 | 289.85 | 504.65 | 289.9 | 520.53 | 289.9 | 521.88 | 289.87 | 523.95 | 289.86 |
| 525.09 | 289.8 | 525.31 | 289.77 | 526.9 | 289.75 | 530.08 | 289.74 | 531.35 | 289.76 |
| 534.91 | 289.76 | 538.05 | 289.71 | 540.47 | 289.64 | 544.27 | 289.57 | 546.26 | 289.57 |
| 548.27 | 289.52 | 550.07 | 289.53 | 551.78 | 289.49 | 552.73 | 289.45 | 555.26 | 289.44 |
| 558.43 | 289.45 | 559.42 | 289.47 | 561.25 | 289.47 | 562.13 | 289.46 | 562.87 | 289.43 |
| 566.31 | 289.43 | 568.04 | 289.43 | 569.09 | 289.35 | 570.4 | 289.32 | 571.26 | 289.33 |
| 572.55 | 289.26 | 577.51 | 289.1 | 581.61 | 289.09 | 592.51 | 289.33 | 597.83 | 289.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 599.78 | 289.57 | 602.16 | 289.68 | 605.61 | 289.77 | 607.91 | 289.75 | 609.39 | 289.72 |
| 610.43 | 289.68 | 615.07 | 289.69 | 617.79 | 289.73 | 620.29 | 289.78 | 620.64 | 289.78 |
| 621.85 | 289.84 | 624 | 289.9 | 625.1 | 289.94 | 626.4 | 289.91 | 627.52 | 289.84 |
| 628.73 | 289.82 | 630.94 | 289.87 | 633.89 | 289.95 | 639.42 | 290.03 | 639.76 | 290.05 |
| 643.69 | 290.01 | 644.3 | 289.98 | 650.07 | 289.47 | 650.57 | 289.42 | 651.84 | 289.39 |
| 653.29 | 289.42 | 657.77 | 289.48 | 658.2 | 289.49 | 660.09 | 289.49 | 662.25 | 289.45 |
| 665.09 | 289.36 | 667.44 | 289.3 | 669.87 | 289.26 | 671.11 | 289.26 | 677.45 | 289.28 |
| 679 | 289.25 | 684.81 | 289.2 | 690.53 | 289.23 | 690.74 | 289.25 | 696.35 | 289.26 |
| 699.8 | 289.2 | 701.97 | 289.19 | 706.08 | 289.22 | 708.36 | 289.29 | 710.41 | 289.33 |
| 714.25 | 289.45 | 715.15 | 289.46 | 717.52 | 289.43 | 721.68 | 289.45 | 724.14 | 289.53 |
| 724.83 | 289.57 | 727.57 | 289.68 | 733.2 | 289.89 | 734.04 | 289.98 | 735.42 | 290.09 |
| 737.74 | 290.23 | 739.81 | 290.31 | 742.16 | 290.33 | 743.14 | 290.38 | 744.82 | 290.41 |
| 751.34 | 290.32 | 751.78 | 290.3 | 755.51 | 290.23 | 756.89 | 290.21 | 757.92 | 290.21 |
| 762.35 | 290.14 | 764.02 | 290.17 | 768.48 | 290.21 | 775.18 | 290.21 | 775.53 | 290.2 |
| 781.55 | 290.26 | 782.58 | 290.3 | 784.82 | 290.35 | 792.24 | 290.22 | 793 | 290.21 |
| 794.6 | 290.16 | 803.15 | 290.25 | 805.22 | 290.29 | 806.68 | 290.27 | 809.97 | 290.29 |
| 810.62 | 290.24 | 811.53 | 290.2 | 815.35 | 289.83 | 816.76 | 289.76 | 817.84 | 289.78 |
| 819.57 | 289.79 | 820.27 | 289.82 | 821.33 | 289.83 | 824.54 | 289.84 | 826.42 | 289.82 |
| 830.37 | 289.74 | 832.14 | 289.68 | 835.18 | 289.6 | 838.63 | 289.62 | 842.05 | 289.68 |
| 847.35 | 289.69 | 847.76 | 289.7 | 849.5 | 289.7 | 852.32 | 289.64 | 858.84 | 289.76 |
| 859.97 | 289.81 | 868.12 | 290.27 | 868.98 | 290.31 | 871.09 | 290.38 | 881.83 | 290.56 |
| 884.14 | 290.62 | 884.77 | 290.62 | 886.28 | 290.67 | 886.99 | 290.72 | 888.83 | 290.82 |
| 889.79 | 290.81 | 897.82 | 290.97 | 899.15 | 290.98 | 901.28 | 290.88 | 906.37 | 290.72 |
| 907.16 | 290.72 | 910.1 | 290.76 | 911.57 | 290.77 | 913 | 290.75 | 913.52 | 290.73 |
| 914.63 | 290.73 | 923.33 | 290.84 | 926.29 | 290.93 | 926.73 | 290.95 | 928.5 | 290.99 |
| 930.25 | 290.99 | 931.55 | 290.98 | 939.56 | 290.9 | 940.34 | 290.83 | 941.16 | 290.82 |
| 944.27 | 290.72 | 945.88 | 290.66 | 948.66 | 290.61 | 949.32 | 290.58 | 950.66 | 290.57 |
| 954.21 | 290.61 | 959.2 | 290.65 | 963.18 | 290.31 | 963.76 | 290.28 | 964.7 | 290.29 |
| 966.55 | 290.43 | 967.37 | 290.42 | 968.57 | 290.52 | 970.18 | 290.63 | 971.44 | 290.69 |
| 976.52 | 290.99 | 980.81 | 291.13 | 986.27 | 291.23 | 988.1 | 291.24 | 989.33 | 291.21 |
| 991.72 | 291.08 | 999.55 | 290.95 | 1004.31 | 290.9 | 1007.74 | 290.8 | 1011.44 | 290.75 |
| 1012.02 | 290.75 | 1012.61 | 290.79 | 1014.26 | 290.82 | 1016.38 | 290.9 | 1018.15 | 291 |
| 1020.1 | 291.07 | 1021.11 | 291.07 | 1023.76 | 291.02 | 1027.81 | 290.99 | 1028.75 | 290.95 |
| 1029.66 | 290.94 | 1031.27 | 290.98 | 1033.3 | 291 | 1033.69 | 291.02 | 1037.81 | 291.1 |
| 1040.14 | 291.12 | 1042.77 | 291.11 | 1044.31 | 291.07 | 1049.59 | 290.86 | 1051.15 | 290.82 |
| 1053.1 | 290.72 | 1054.08 | 290.71 | 1056.64 | 290.65 | 1057.95 | 290.64 | 1059.45 | 290.58 |
| 1061.27 | 290.58 | 1065.72 | 290.62 | 1067.27 | 290.65 | 1071.55 | 290.78 | 1072.9 | 290.84 |
| 1077.8 | 290.98 | 1078.97 | 290.99 | 1082.04 | 291 | 1083.8 | 290.99 | 1086.33 | 291.03 |
| 1088.68 | 291.03 | 1089.01 | 291.04 | 1091.89 | 291.05 | 1092.05 | 291.04 | 1095 | 291.01 |
| 1096.84 | 291.02 | 1101.06 | 291.09 | 1101.52 | 291.09 | 1103.03 | 291.03 | 1104.83 | 291.02 |
| 1106.71 | 290.99 | 1112.48 | 290.99 | 1114.09 | 291.01 | 1115.51 | 291.04 | 1134.4 | 291.5 |
| 1134.47 | 291.51 | 1137.86 | 291.67 | 1138.23 | 291.7 | 1139.59 | 291.7 | 1148.1 | 291.79 |
| 1150.72 | 291.77 | 1151.66 | 291.74 | 1154.8 | 291.72 | 1156.44 | 291.72 | 1164.93 | 291.82 |
| 1167.8 | 292.02 | 1170.18 | 292.25 | 1172.23 | 292.54 | 1175.45 | 293.03 | 1176.83 | 293.41 |
| 1177.99 | 293.69 | 1178.54 | 293.86 | 1180.15 | 294.32 | 1180.99 | 294.65 | 1182.02 | 294.97 |
| 1182.92 | 295.32 | 1185.2 | 296.29 | 1186.23 | 296.67 | 1186.77 | 296.84 | 1188.08 | 297.35 |
| 1190.99 | 298.56 | 1191.14 | 298.63 | 1194.28 | 299.92 | 1195.65 | 300.43 | 1197.17 | 301.04 |
| 1198.05 | 301.43 | 1200.96 | 302.75 | 1203.25 | 303.75 | 1204.85 | 304.47 | 1205.47 | 304.73 |
| 1206.25 | 305.02 | 1208.74 | 306.05 | 1209.16 | 306.24 | 1209.44 | 306.32 | 1210.22 | 306.46 |
| 1212.06 | 306.69 | 1214.31 | 307.01 | 1215.25 | 307.18 | 1216.3 | 307.39 | 1218.03 | 307.8 |
| 1218.7 | 308.01 | 1220.7 | 308.69 | 1224.57 | 310.05 | 1226.63 | 310.76 | 1229.46 | 311.69 |
| 1232.2 | 312.54 | 1233.31 | 312.87 | 1235.78 | 313.57 | 1237.53 | 314.05 | 1238.49 | 314.34 |
| 1239.58 | 314.62 | 1240.62 | 314.95 | 1242.23 | 315.37 | 1244.63 | 316.04 | 1247.06 | 316.7 |
| 1247.8 | 316.92 | 1249.62 | 317.36 | 1251.79 | 317.72 | 1253.25 | 317.91 | 1254.23 | 318.05 |
| 1256.4 | 318.39 | 1257 | 318.5 | 1257.45 | 318.53 | 1258.43 | 318.66 | 1264.68 | 319.4 |
| 1266.07 | 319.48 | 1271.96 | 319.87 | 1273.73 | 319.96 | 1283.87 | 320.41 | 1284.39 | 320.43 |
| 1290.74 | 320.61 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 259.03 | .04 | 1212.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 259.03 | 1212.06 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1939.54*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.55 | .99 | 313.36 | 3.26 | 313.23 | 5.14 | 313.03 | 5.84 | 313 |
| 7.16 | 312.87 | 9.43 | 312.61 | 12.81 | 312.21 | 14.19 | 311.89 | 15.81 | 311.44 |
| 18.54 | 310.98 | 21.16 | 310.52 | 21.89 | 310.41 | 26.3 | 309.77 | 28.42 | 309.47 |
| 29.95 | 309.24 | 32.47 | 308.82 | 34.48 | 308.57 | 35.41 | 308.49 | 36.41 | 308.45 |
| 37.04 | 308.4 | 38.64 | 307.77 | 38.99 | 307.69 | 39.72 | 307.65 | 40.56 | 307.77 |
| 42.59 | 308.03 | 43.99 | 308.07 | 45.47 | 308.21 | 48.17 | 308.24 | 49.38 | 308.33 |
| 50.43 | 308.33 | 51.64 | 308.29 | 52.96 | 308.3 | 57.75 | 308.3 | 58.21 | 308.28 |
| 60.41 | 308.25 | 64.78 | 308.15 | 67.92 | 308.07 | 68.32 | 308.05 | 71.46 | 307.96 |
| 72.76 | 307.87 | 73.89 | 307.81 | 74.85 | 307.71 | 76.5 | 307.5 | 84.37 | 306.23 |
| 84.87 | 306.14 | 88.5 | 305.7 | 90.06 | 305.43 | 92.94 | 305.05 | 106.57 | 303.29 |
| 111.11 | 302.79 | 115.48 | 302.47 | 117.79 | 302.15 | 121.99 | 301.5 | 124.56 | 301.14 |
| 125.45 | 301.06 | 126.82 | 300.99 | 127.43 | 300.98 | 128.7 | 300.99 | 129.55 | 300.97 |
| 133.4 | 300.72 | 135.66 | 300.61 | 136.34 | 300.56 | 138.96 | 300.33 | 143.98 | 299.93 |
| 146.66 | 299.66 | 151.14 | 299.24 | 156.17 | 298.87 | 157.69 | 298.79 | 158.69 | 298.75 |
| 161.24 | 298.69 | 163.92 | 298.59 | 166.06 | 298.44 | 167.82 | 298.25 | 174.63 | 297.53 |
| 183.64 | 296.7 | 186.42 | 296.43 | 190.35 | 296.15 | 193.06 | 295.98 | 207.01 | 295.23 |
| 207.17 | 295.23 | 212.18 | 295.07 | 216.59 | 294.88 | 217.61 | 294.86 | 218.5 | 294.82 |
| 219.63 | 294.82 | 223.82 | 294.74 | 226.41 | 294.65 | 228.52 | 294.59 | 230.23 | 294.53 |
| 236.79 | 294.18 | 238.39 | 294.07 | 241.28 | 293.9 | 243.09 | 293.82 | 243.53 | 293.79 |
| 245.96 | 293.68 | 250.5 | 293.31 | 251.97 | 293.2 | 257.89 | 292.7 | 259.5 | 292.59 |
| 261.71 | 292.39 | 266.86 | 292.1 | 268.43 | 291.92 | 270.48 | 291.72 | 272.3 | 291.5 |
| 273.48 | 291.39 | 274.64 | 291.27 | 275.72 | 291.11 | 277.07 | 291.11 | 278.9 | 291.15 |
| 282.7 | 291.25 | 283.33 | 291.26 | 285.33 | 291.19 | 286.02 | 291.14 | 287.54 | 290.96 |
| 290.71 | 290.52 | 297.4 | 289.64 | 300.53 | 289.42 | 312.22 | 289.1 | 316.71 | 289.02 |
| 318.7 | 289.01 | 331.89 | 288.82 | 332.2 | 288.82 | 342.99 | 288.6 | 345.21 | 288.56 |
| 350.07 | 288.51 | 350.91 | 288.53 | 352.65 | 288.53 | 362.69 | 288.67 | 366.41 | 288.65 |
| 367.37 | 288.63 | 368.55 | 288.48 | 369.22 | 288.52 | 373.7 | 288.86 | 375.81 | 289.04 |
| 378.2 | 289.63 | 379.13 | 290.2 | 380 | 290.78 | 382.26 | 290.9 | 384.44 | 291 |
| 390.88 | 291.04 | 390.96 | 290.97 | 391.69 | 290.89 | 396.21 | 289.21 | 397.8 | 288.66 |
| 399.27 | 288.53 | 399.94 | 288.49 | 404.94 | 288.53 | 406.73 | 288.59 | 410.15 | 288.62 |
| 411.88 | 288.62 | 416.48 | 288.66 | 418.38 | 288.63 | 421.44 | 288.7 | 424.38 | 288.72 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 425.51 | 288.71 | 428.99 | 288.61 | 431.84 | 288.49 | 447.03 | 288.35 | 448.02 | 288.35 |
| 449.32 | 288.32 | 453.13 | 288.26 | 457.13 | 288.14 | 462.56 | 288.07 | 463.3 | 288.07 |
| 470.02 | 287.97 | 471.63 | 287.93 | 473.61 | 287.94 | 475.71 | 288.01 | 475.96 | 288.01 |
| 479.17 | 288.1 | 479.27 | 288.18 | 480.74 | 288.3 | 485.68 | 288.54 | 493.88 | 288.84 |
| 495.22 | 288.85 | 498.45 | 288.95 | 499 | 288.96 | 506.53 | 289.17 | 507.37 | 289.19 |
| 509.64 | 289.28 | 512.88 | 289.37 | 518.53 | 289.49 | 522.1 | 289.55 | 537.98 | 289.54 |
| 539.16 | 289.52 | 541.2 | 289.51 | 542.93 | 289.43 | 546.15 | 289.4 | 548.53 | 289.42 |
| 552.05 | 289.42 | 552.36 | 289.41 | 555.16 | 289.38 | 557.56 | 289.29 | 561.32 | 289.23 |
| 563.29 | 289.23 | 565.27 | 289.18 | 567.06 | 289.19 | 568.75 | 289.15 | 569.69 | 289.11 |
| 572.19 | 289.08 | 575.33 | 289.09 | 576.96 | 289.11 | 579 | 289.09 | 579.73 | 289.06 |
| 583.13 | 289.06 | 583.9 | 289.07 | 584.85 | 289.06 | 585.88 | 288.99 | 586.22 | 289 |
| 587.19 | 288.96 | 588.03 | 288.97 | 589.31 | 288.91 | 594.22 | 288.77 | 597.6 | 288.77 |
| 598.28 | 288.78 | 609.07 | 289.03 | 614.33 | 289.22 | 616.26 | 289.28 | 616.82 | 289.32 |
| 618.62 | 289.4 | 620.37 | 289.46 | 622.54 | 289.5 | 624.31 | 289.48 | 625.78 | 289.45 |
| 626.8 | 289.41 | 631.4 | 289.42 | 633 | 289.44 | 634.09 | 289.44 | 636.57 | 289.49 |
| 636.91 | 289.48 | 639 | 289.58 | 641.33 | 289.64 | 642.61 | 289.61 | 643.72 | 289.55 |
| 644.92 | 289.53 | 647.1 | 289.57 | 650.02 | 289.64 | 655.5 | 289.71 | 655.84 | 289.72 |
| 659.73 | 289.68 | 660.33 | 289.65 | 666.04 | 289.18 | 666.54 | 289.13 | 667.79 | 289.1 |
| 673.66 | 289.17 | 674.09 | 289.18 | 675.96 | 289.18 | 677.49 | 289.15 | 678.1 | 289.15 |
| 680.9 | 289.05 | 683.24 | 289 | 685.97 | 288.95 | 686.87 | 288.96 | 690.23 | 288.96 |
| 693.14 | 288.97 | 694.67 | 288.94 | 700.42 | 288.9 | 706.09 | 288.94 | 706.3 | 288.95 |
| 711.85 | 288.96 | 715.26 | 288.9 | 717.41 | 288.89 | 721.48 | 288.92 | 723.74 | 288.98 |
| 725.77 | 289.02 | 728.22 | 289.1 | 730.45 | 289.14 | 732.81 | 289.11 | 735.63 | 289.1 |
| 737.7 | 289.13 | 739.36 | 289.19 | 740.04 | 289.23 | 742.75 | 289.34 | 748.32 | 289.54 |
| 749.16 | 289.63 | 750.52 | 289.74 | 752.82 | 289.87 | 754.86 | 289.95 | 757.19 | 289.97 |
| 758.16 | 290.02 | 759.83 | 290.05 | 760.46 | 290.05 | 766.28 | 289.98 | 767.47 | 289.94 |
| 770.4 | 289.89 | 772.79 | 289.88 | 774.6 | 289.86 | 776.76 | 289.82 | 778.83 | 289.85 |
| 783.24 | 289.88 | 789.88 | 289.87 | 790.22 | 289.86 | 796.19 | 289.91 | 797.2 | 289.96 |
| 799.42 | 290.01 | 800.66 | 289.98 | 806.76 | 289.85 | 809.09 | 289.78 | 817.56 | 289.87 |
| 818.19 | 289.87 | 819.61 | 289.9 | 821.05 | 289.88 | 824.32 | 289.9 | 825.85 | 289.82 |
| 829.64 | 289.48 | 831.03 | 289.42 | 832.1 | 289.45 | 833.82 | 289.46 | 835.55 | 289.49 |
| 838.73 | 289.5 | 840.59 | 289.48 | 845.49 | 289.38 | 849.27 | 289.28 | 852.68 | 289.3 |
| 856.07 | 289.36 | 860.96 | 289.35 | 861.31 | 289.36 | 863.44 | 289.36 | 866.23 | 289.3 |
| 872.69 | 289.41 | 873.8 | 289.45 | 881.87 | 289.88 | 884.81 | 289.99 | 895.44 | 290.19 |
| 899.85 | 290.3 | 900.54 | 290.35 | 902.37 | 290.45 | 903.32 | 290.44 | 911.26 | 290.61 |
| 912.58 | 290.62 | 914.25 | 290.54 | 919.73 | 290.38 | 920.51 | 290.38 | 923.42 | 290.43 |
| 924.87 | 290.43 | 927.9 | 290.38 | 936.52 | 290.5 | 937.57 | 290.52 | 940.48 | 290.61 |
| 941.14 | 290.64 | 944.66 | 290.64 | 952.58 | 290.55 | 953.35 | 290.48 | 954.17 | 290.47 |
| 957.24 | 290.37 | 958.84 | 290.3 | 961.59 | 290.24 | 962.25 | 290.21 | 963.57 | 290.2 |
| 967.08 | 290.24 | 972.03 | 290.28 | 975.96 | 289.99 | 976.53 | 289.96 | 977.27 | 289.96 |
| 977.93 | 290 | 979.29 | 290.11 | 980.1 | 290.11 | 982.89 | 290.32 | 984.14 | 290.38 |
| 989.17 | 290.68 | 993.41 | 290.81 | 998.82 | 290.9 | 1000.63 | 290.91 | 1001.85 | 290.88 |
| 1004.21 | 290.75 | 1011.96 | 290.61 | 1016.67 | 290.56 | 1020.07 | 290.47 | 1023.73 | 290.41 |
| 1024.53 | 290.42 | 1024.89 | 290.45 | 1026.53 | 290.48 | 1028.62 | 290.56 | 1030.37 | 290.65 |
| 1031.56 | 290.7 | 1033.31 | 290.73 | 1035.93 | 290.69 | 1039.94 | 290.66 | 1041 | 290.62 |
| 1041.77 | 290.61 | 1043.36 | 290.65 | 1045.37 | 290.66 | 1045.76 | 290.68 | 1049.83 | 290.75 |
| 1052.14 | 290.77 | 1054.74 | 290.76 | 1056.27 | 290.72 | 1061.5 | 290.51 | 1062.94 | 290.48 |
| 1063.98 | 290.44 | 1064.97 | 290.38 | 1065.93 | 290.37 | 1068.47 | 290.31 | 1069.77 | 290.3 |
| 1071.26 | 290.25 | 1073.06 | 290.25 | 1077.46 | 290.28 | 1078.43 | 290.3 | 1083.23 | 290.43 |
| 1084.57 | 290.49 | 1089.42 | 290.63 | 1093.61 | 290.66 | 1095.35 | 290.65 | 1097.86 | 290.69 |
| 1100.51 | 290.69 | 1100.79 | 290.7 | 1103.36 | 290.71 | 1103.52 | 290.7 | 1106.44 | 290.68 |
| 1108.26 | 290.69 | 1112.44 | 290.75 | 1112.9 | 290.75 | 1114.16 | 290.69 | 1116.17 | 290.67 |
| 1118.03 | 290.64 | 1120.68 | 290.63 | 1121.05 | 290.64 | 1123.74 | 290.63 | 1126.74 | 290.67 |
| 1145.44 | 291.13 | 1149.23 | 291.31 | 1150.58 | 291.32 | 1159 | 291.42 | 1161.6 | 291.4 |
| 1163.47 | 291.37 | 1165.49 | 291.36 | 1167.26 | 291.36 | 1175.66 | 291.48 | 1178.5 | 291.68 |
| 1180.85 | 291.92 | 1182.88 | 292.21 | 1186.07 | 292.7 | 1187.44 | 293.06 | 1188.59 | 293.33 |
| 1189.13 | 293.5 | 1190.72 | 293.93 | 1191.56 | 294.24 | 1192.57 | 294.55 | 1193.46 | 294.88 |
| 1195.22 | 295.6 | 1196.74 | 296.15 | 1197.27 | 296.31 | 1198.57 | 296.8 | 1201.46 | 297.95 |
| 1201.61 | 298.02 | 1204.71 | 299.24 | 1206.07 | 299.74 | 1207.57 | 300.32 | 1208.24 | 300.6 |
| 1211.32 | 301.98 | 1213.59 | 302.95 | 1215.17 | 303.65 | 1215.79 | 303.91 | 1216.56 | 304.2 |
| 1219.03 | 305.22 | 1219.44 | 305.41 | 1219.71 | 305.49 | 1220.91 | 305.71 | 1222.31 | 305.91 |
| 1224.55 | 306.28 | 1225.48 | 306.47 | 1226.84 | 306.78 | 1227.35 | 306.93 | 1228.25 | 307.15 |
| 1228.92 | 307.37 | 1230.9 | 308.08 | 1234.76 | 309.5 | 1236.81 | 310.24 | 1239.62 | 311.21 |
| 1243.45 | 312.44 | 1245.71 | 313.11 | 1245.91 | 313.18 | 1247.66 | 313.68 | 1248.61 | 313.99 |
| 1249.7 | 314.29 | 1250.73 | 314.64 | 1252.33 | 315.09 | 1254.72 | 315.81 | 1257.14 | 316.53 |
| 1257.87 | 316.76 | 1259.69 | 317.23 | 1261.85 | 317.63 | 1264.27 | 317.97 | 1264.58 | 318.03 |
| 1266.43 | 318.33 | 1267.13 | 318.47 | 1267.68 | 318.51 | 1268.46 | 318.62 | 1273.49 | 319.22 |
| 1274.48 | 319.35 | 1276.06 | 319.43 | 1281.92 | 319.79 | 1283.69 | 319.87 | 1294.29 | 320.3 |
| 1300.61 | 320.47 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 273.48 | .04 | 1222.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 273.48 | 1222.31 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1919.68*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.25 | 1.04 | 313.08 | 3.43 | 312.97 | 5.41 | 312.78 | 6.83 | 312.7 |
| 9.93 | 312.38 | 13.49 | 311.99 | 14.94 | 311.66 | 16.65 | 311.2 | 19.52 | 310.73 |
| 22.28 | 310.26 | 23.05 | 310.16 | 29.92 | 309.23 | 31.53 | 308.99 | 34.19 | 308.57 |
| 36.3 | 308.32 | 37.28 | 308.24 | 38.34 | 308.21 | 38.99 | 308.16 | 40.69 | 307.5 |
| 41.05 | 307.41 | 41.82 | 307.37 | 44.84 | 307.76 | 46.31 | 307.81 | 47.88 | 307.94 |
| 50.72 | 307.98 | 51.99 | 308.07 | 53.1 | 308.07 | 54.37 | 308.03 | 55.76 | 308.05 |
| 60.8 | 308.06 | 61.29 | 308.04 | 63.6 | 308.02 | 68.21 | 307.92 | 71.51 | 307.84 |
| 73.62 | 307.77 | 75.24 | 307.73 | 76.6 | 307.64 | 77.8 | 307.58 | 78.81 | 307.47 |
| 80.54 | 307.25 | 88.83 | 305.92 | 89.36 | 305.83 | 93.17 | 305.36 | 93.39 | 305.34 |
| 94.82 | 305.09 | 97.85 | 304.69 | 112.2 | 302.86 | 116.98 | 302.34 | 121.58 | 302.02 |
| 122.28 | 301.93 | 124.02 | 301.68 | 128.43 | 301.01 | 131.15 | 300.63 | 132.08 | 300.55 |
| 133.52 | 300.48 | 134.16 | 300.47 | 135.5 | 300.49 | 136.4 | 300.47 | 140.45 | 300.22 |
| 143.54 | 300.06 | 146.3 | 299.82 | 146.44 | 299.8 | 151.59 | 299.38 | 154.42 | 299.08 |
| 159.13 | 298.62 | 164.42 | 298.21 | 165.57 | 298.13 | 167.08 | 298.07 | 169.3 | 298.01 |
| 172.59 | 297.87 | 173.54 | 297.8 | 174.39 | 297.76 | 176.69 | 297.52 | 183.86 | 296.8 |
| 193.35 | 295.95 | 193.61 | 295.92 | 196.27 | 295.69 | 198.74 | 295.52 | 203.26 | 295.25 |
| 217.95 | 294.54 | 218.11 | 294.53 | 223.4 | 294.38 | 228.04 | 294.21 | 230.05 | 294.15 |
| 231.24 | 294.15 | 234.74 | 294.11 | 238.37 | 294.02 | 240.6 | 293.97 | 242.4 | 293.91 |
| 249.31 | 293.58 | 252.27 | 293.4 | 255.94 | 293.24 | 256.4 | 293.21 | 258.96 | 293.12 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 263.74 | 292.79 | 265.29 | 292.69 | 268.3 | 292.47 | 271.52 | 292.25 | 273.22 | 292.14 |
| 275.18 | 291.99 | 280.97 | 291.69 | 282.62 | 291.5 | 284.77 | 291.3 | 286.69 | 291.08 |
| 287.94 | 290.97 | 289.11 | 290.84 | 290.21 | 290.68 | 291.59 | 290.69 | 292.13 | 290.72 |
| 293.46 | 290.75 | 295.28 | 290.82 | 297.96 | 290.9 | 299.99 | 290.85 | 300.7 | 290.8 |
| 302.25 | 290.62 | 305.47 | 290.17 | 312.28 | 289.27 | 312.88 | 289.24 | 315.47 | 289.07 |
| 327.36 | 288.74 | 331.93 | 288.66 | 333.96 | 288.65 | 347.39 | 288.47 | 347.7 | 288.46 |
| 358.68 | 288.25 | 360.53 | 288.2 | 360.94 | 288.21 | 365.89 | 288.16 | 366.74 | 288.18 |
| 368.51 | 288.19 | 378.73 | 288.34 | 382.52 | 288.32 | 383.49 | 288.3 | 384.69 | 288.13 |
| 385.38 | 288.17 | 389.94 | 288.54 | 392.08 | 288.74 | 394.51 | 289.37 | 395.59 | 290.08 |
| 396.34 | 290.6 | 398.65 | 290.73 | 400.86 | 290.83 | 407.42 | 290.87 | 407.5 | 290.79 |
| 408.28 | 290.69 | 411.02 | 289.61 | 411.29 | 289.49 | 412.84 | 288.89 | 414.47 | 288.29 |
| 415.96 | 288.15 | 416.83 | 288.1 | 419.25 | 288.13 | 421.73 | 288.15 | 423.55 | 288.21 |
| 427.03 | 288.24 | 428.8 | 288.24 | 432.01 | 288.28 | 433.48 | 288.28 | 435.41 | 288.25 |
| 438.52 | 288.31 | 441.51 | 288.35 | 442.51 | 288.35 | 443.01 | 288.33 | 446.21 | 288.25 |
| 449.11 | 288.14 | 464.57 | 288.02 | 465.58 | 288.02 | 470.78 | 287.92 | 474.85 | 287.8 |
| 480.38 | 287.74 | 481.13 | 287.74 | 487.97 | 287.64 | 489.61 | 287.59 | 491.56 | 287.61 |
| 497.06 | 287.76 | 497.16 | 287.84 | 497.57 | 287.89 | 498.61 | 287.97 | 503.5 | 288.2 |
| 511.62 | 288.49 | 512.95 | 288.49 | 516.14 | 288.59 | 516.68 | 288.6 | 524.14 | 288.8 |
| 524.97 | 288.81 | 527.22 | 288.9 | 530.43 | 289 | 536.01 | 289.13 | 539.55 | 289.19 |
| 555.26 | 289.19 | 556.43 | 289.17 | 558.46 | 289.17 | 559.79 | 289.1 | 560.86 | 289.1 |
| 563.36 | 289.07 | 564.46 | 289.07 | 565.7 | 289.09 | 568.93 | 289.08 | 572.27 | 289.04 |
| 574.65 | 288.95 | 578.36 | 288.88 | 580.32 | 288.89 | 582.28 | 288.84 | 584.45 | 288.84 |
| 586.65 | 288.76 | 589.13 | 288.73 | 592.23 | 288.73 | 593.2 | 288.74 | 595 | 288.74 |
| 596.59 | 288.69 | 599.95 | 288.69 | 600.71 | 288.7 | 601.84 | 288.69 | 602.67 | 288.63 |
| 603.97 | 288.61 | 604.8 | 288.62 | 606.07 | 288.57 | 610.92 | 288.45 | 614.27 | 288.45 |
| 614.95 | 288.46 | 625.62 | 288.72 | 626.2 | 288.75 | 630.83 | 288.93 | 632.74 | 289 |
| 635.08 | 289.11 | 636.81 | 289.18 | 638.96 | 289.23 | 640.71 | 289.22 | 642.16 | 289.19 |
| 643.3 | 289.14 | 647.72 | 289.14 | 653.51 | 289.2 | 654.36 | 289.25 | 657.55 | 289.34 |
| 658.83 | 289.31 | 659.92 | 289.25 | 661.1 | 289.23 | 666.16 | 289.33 | 671.58 | 289.38 |
| 671.91 | 289.4 | 675.76 | 289.35 | 676.35 | 289.32 | 682.5 | 288.84 | 683.74 | 288.81 |
| 686.02 | 288.83 | 689.55 | 288.87 | 691.82 | 288.87 | 693.34 | 288.84 | 693.95 | 288.84 |
| 696.72 | 288.75 | 699.03 | 288.7 | 701.73 | 288.65 | 702.62 | 288.66 | 705.95 | 288.65 |
| 708.83 | 288.66 | 710.35 | 288.64 | 716.04 | 288.6 | 721.65 | 288.64 | 721.86 | 288.66 |
| 727.35 | 288.66 | 730.73 | 288.6 | 732.85 | 288.59 | 736.88 | 288.62 | 739.11 | 288.68 |
| 741.12 | 288.71 | 743.55 | 288.79 | 745.76 | 288.83 | 748.09 | 288.78 | 750.88 | 288.77 |
| 752.93 | 288.79 | 754.58 | 288.85 | 755.25 | 288.89 | 757.93 | 289 | 763.44 | 289.2 |
| 764.27 | 289.28 | 765.63 | 289.38 | 767.89 | 289.51 | 769.61 | 289.58 | 772.23 | 289.61 |
| 773.19 | 289.66 | 774.84 | 289.69 | 775.46 | 289.69 | 781.22 | 289.63 | 781.65 | 289.61 |
| 783.27 | 289.59 | 785.3 | 289.55 | 786.66 | 289.54 | 787.66 | 289.55 | 791.59 | 289.5 |
| 793.64 | 289.53 | 798.01 | 289.56 | 799.29 | 289.55 | 804.57 | 289.53 | 804.92 | 289.52 |
| 810.82 | 289.57 | 811.82 | 289.61 | 814.02 | 289.66 | 822.03 | 289.46 | 823.59 | 289.4 |
| 831.97 | 289.48 | 834.45 | 289.51 | 835.43 | 289.49 | 838.66 | 289.51 | 840.18 | 289.44 |
| 843.92 | 289.13 | 845.3 | 289.09 | 846.36 | 289.11 | 848.06 | 289.12 | 849.78 | 289.15 |
| 852.92 | 289.16 | 854.77 | 289.15 | 862.39 | 288.99 | 863.36 | 288.96 | 866.73 | 288.98 |
| 870.08 | 289.03 | 874.5 | 289.01 | 875.27 | 289.02 | 877.38 | 289.02 | 880.14 | 288.97 |
| 886.53 | 289.06 | 887.63 | 289.1 | 895.83 | 289.5 | 898.53 | 289.61 | 909.05 | 289.81 |
| 911.32 | 289.88 | 913.41 | 289.93 | 914.1 | 289.98 | 915.91 | 290.07 | 916.85 | 290.07 |
| 924.71 | 290.25 | 926.02 | 290.26 | 928.1 | 290.17 | 932.16 | 290.07 | 933.09 | 290.04 |
| 933.87 | 290.04 | 936.75 | 290.09 | 938.18 | 290.09 | 941.18 | 290.04 | 949.71 | 290.15 |
| 952.61 | 290.24 | 953.63 | 290.26 | 954.77 | 290.3 | 957.76 | 290.29 | 965.61 | 290.2 |
| 966.37 | 290.14 | 967.17 | 290.12 | 970.22 | 290.01 | 971.79 | 289.94 | 974.52 | 289.87 |
| 975.17 | 289.84 | 976.48 | 289.83 | 979.96 | 289.87 | 984.85 | 289.92 | 989.06 | 289.64 |
| 990.04 | 289.64 | 990.69 | 289.68 | 992.13 | 289.8 | 992.95 | 289.8 | 993.36 | 289.84 |
| 995.6 | 290.01 | 996.84 | 290.06 | 1001.81 | 290.37 | 1006.02 | 290.49 | 1011.37 | 290.57 |
| 1013.16 | 290.58 | 1014.36 | 290.55 | 1016.7 | 290.43 | 1024.37 | 290.28 | 1028.92 | 290.23 |
| 1029.04 | 290.22 | 1032.4 | 290.13 | 1036.02 | 290.08 | 1036.88 | 290.09 | 1037.62 | 290.12 |
| 1039.21 | 290.16 | 1040.86 | 290.22 | 1044.51 | 290.38 | 1045.5 | 290.4 | 1048.1 | 290.36 |
| 1052.06 | 290.34 | 1052.98 | 290.3 | 1053.87 | 290.29 | 1055.45 | 290.31 | 1057.44 | 290.32 |
| 1057.82 | 290.34 | 1061.85 | 290.4 | 1062.03 | 290.41 | 1066.71 | 290.41 | 1068.23 | 290.36 |
| 1073.4 | 290.16 | 1075.86 | 290.1 | 1076.83 | 290.04 | 1077.79 | 290.03 | 1080.3 | 289.97 |
| 1081.58 | 289.96 | 1083.06 | 289.91 | 1084.84 | 289.91 | 1090.16 | 289.96 | 1094.9 | 290.09 |
| 1096.23 | 290.14 | 1100.47 | 290.26 | 1102.18 | 290.3 | 1106.91 | 290.31 | 1108.04 | 290.34 |
| 1109.95 | 290.36 | 1112.01 | 290.35 | 1112.29 | 290.36 | 1114.83 | 290.37 | 1114.99 | 290.36 |
| 1117.88 | 290.34 | 1119.68 | 290.35 | 1123.81 | 290.41 | 1124.8 | 290.39 | 1125.52 | 290.35 |
| 1127.91 | 290.32 | 1129.35 | 290.29 | 1135 | 290.27 | 1137.97 | 290.3 | 1156.48 | 290.75 |
| 1156.55 | 290.76 | 1159.86 | 290.9 | 1160.23 | 290.93 | 1161.57 | 290.93 | 1169.9 | 291.04 |
| 1172.47 | 291.03 | 1174.32 | 291 | 1176.55 | 291 | 1178.07 | 291.01 | 1186.39 | 291.13 |
| 1188.49 | 291.29 | 1189.26 | 291.36 | 1191.53 | 291.6 | 1193.54 | 291.88 | 1196.69 | 292.37 |
| 1198.25 | 292.76 | 1199.18 | 292.97 | 1199.72 | 293.13 | 1201.29 | 293.54 | 1202.12 | 293.83 |
| 1203.13 | 294.13 | 1204.01 | 294.44 | 1205.75 | 295.12 | 1206.24 | 295.3 | 1207.25 | 295.63 |
| 1207.78 | 295.78 | 1209.06 | 296.25 | 1211.92 | 297.34 | 1213.73 | 298.04 | 1215.14 | 298.57 |
| 1216.48 | 299.04 | 1217.97 | 299.59 | 1218.45 | 299.79 | 1220.61 | 300.75 | 1221.68 | 301.21 |
| 1223.93 | 302.16 | 1225.49 | 302.84 | 1226.86 | 303.38 | 1229.31 | 304.39 | 1229.72 | 304.58 |
| 1230.39 | 304.75 | 1231.17 | 304.9 | 1232.56 | 305.13 | 1234.78 | 305.55 | 1235.71 | 305.76 |
| 1237.06 | 306.1 | 1238.31 | 306.46 | 1239.13 | 306.73 | 1241.11 | 307.48 | 1244.95 | 308.95 |
| 1246.99 | 309.72 | 1249.79 | 310.72 | 1252.5 | 311.64 | 1253.6 | 312 | 1256.05 | 312.78 |
| 1257.78 | 313.31 | 1258.6 | 313.6 | 1259.81 | 313.96 | 1260.84 | 314.33 | 1262.44 | 314.81 |
| 1264.81 | 315.58 | 1267.22 | 316.35 | 1267.95 | 316.6 | 1269.76 | 317.11 | 1271.9 | 317.53 |
| 1273.35 | 317.74 | 1276.47 | 318.28 | 1277.16 | 318.42 | 1277.51 | 318.44 | 1278.48 | 318.57 |
| 1284.47 | 319.31 | 1286.04 | 319.39 | 1291.88 | 319.71 | 1293.64 | 319.78 | 1304.19 | 320.17 |
| 1310.48 | 320.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 287.94 | .04 | 1232.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 287.94 | 1232.56 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1899.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.96 | 1.23 | 312.79 | 3.6 | 312.71 | 5.68 | 312.53 | 7.17 | 312.46 |
| 7.92 | 312.38 | 10.42 | 312.14 | 14.16 | 311.77 | 15.69 | 311.43 | 17.48 | 310.96 |
| 20.5 | 310.48 | 23.39 | 310.01 | 24.21 | 309.91 | 31.42 | 308.98 | 33.11 | 308.75 |
| 35.9 | 308.33 | 38.12 | 308.08 | 39.15 | 307.99 | 40.26 | 307.97 | 40.95 | 307.92 |
| 42.73 | 307.22 | 43.11 | 307.13 | 43.92 | 307.08 | 44.85 | 307.21 | 47.09 | 307.5 |
| 48.64 | 307.54 | 50.28 | 307.68 | 53.26 | 307.72 | 54.6 | 307.82 | 55.76 | 307.81 |
| 57.1 | 307.77 | 58.56 | 307.79 | 63.85 | 307.82 | 64.37 | 307.8 | 66.8 | 307.78 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 75.1 | 307.61 | 75.54 | 307.59 | 79.01 | 307.5 | 81.71 | 307.34 | 82.16 | 307.3 |
| 84.58 | 307 | 93.29 | 305.61 | 93.84 | 305.51 | 97.85 | 305.03 | 98.08 | 305.01 |
| 99.58 | 304.75 | 102.76 | 304.34 | 117.84 | 302.43 | 122.85 | 301.9 | 127.68 | 301.57 |
| 128.42 | 301.48 | 130.24 | 301.22 | 134.88 | 300.52 | 137.73 | 300.12 | 138.71 | 300.04 |
| 140.23 | 299.96 | 140.9 | 299.96 | 142.87 | 299.99 | 147.5 | 299.72 | 150.01 | 299.6 |
| 150.75 | 299.55 | 153.79 | 299.29 | 159.2 | 298.82 | 162.17 | 298.5 | 167.12 | 297.99 |
| 172.68 | 297.54 | 174.36 | 297.43 | 175.47 | 297.38 | 177.8 | 297.31 | 181.25 | 297.16 |
| 183.62 | 297 | 185.56 | 296.8 | 193.09 | 296.07 | 203.06 | 295.21 | 203.33 | 295.18 |
| 206.13 | 294.94 | 208.72 | 294.78 | 210.48 | 294.68 | 213.47 | 294.52 | 228.89 | 293.84 |
| 229.06 | 293.83 | 234.61 | 293.69 | 239.49 | 293.53 | 241.6 | 293.48 | 242.85 | 293.49 |
| 247.48 | 293.45 | 250.34 | 293.39 | 252.68 | 293.35 | 254.57 | 293.29 | 261.82 | 292.98 |
| 264.94 | 292.81 | 266.78 | 292.73 | 269.28 | 292.64 | 271.97 | 292.56 | 276.98 | 292.26 |
| 278.61 | 292.18 | 281.49 | 292 | 281.77 | 291.99 | 286.01 | 291.74 | 286.93 | 291.7 |
| 289.38 | 291.54 | 295.07 | 291.28 | 296.81 | 291.09 | 299.07 | 290.88 | 301.08 | 290.66 |
| 302.39 | 290.54 | 303.59 | 290.42 | 304.7 | 290.24 | 306.11 | 290.27 | 306.66 | 290.3 |
| 309.45 | 290.41 | 311.93 | 290.53 | 312.59 | 290.55 | 314.66 | 290.51 | 315.38 | 290.45 |
| 316.95 | 290.27 | 320.23 | 289.81 | 327.16 | 288.91 | 330.4 | 288.71 | 342.51 | 288.38 |
| 347.16 | 288.3 | 349.21 | 288.29 | 362.88 | 288.12 | 363.2 | 288.11 | 374.37 | 287.9 |
| 376.25 | 287.85 | 376.67 | 287.86 | 381.7 | 287.82 | 382.57 | 287.84 | 383.74 | 287.84 |
| 394.77 | 288.01 | 398.62 | 287.99 | 399.62 | 287.96 | 400.84 | 287.79 | 401.53 | 287.83 |
| 406.17 | 288.23 | 408.36 | 288.43 | 410.83 | 289.1 | 411.93 | 289.87 | 412.69 | 290.42 |
| 413.64 | 290.49 | 415.04 | 290.56 | 417.29 | 290.66 | 423.96 | 290.7 | 424.04 | 290.61 |
| 424.83 | 290.51 | 427.62 | 289.35 | 427.89 | 289.22 | 429.48 | 288.57 | 431.13 | 287.93 |
| 432.65 | 287.77 | 433.54 | 287.72 | 436 | 287.75 | 438.52 | 287.77 | 440.37 | 287.83 |
| 443.92 | 287.86 | 445.13 | 287.86 | 448.98 | 287.9 | 450.47 | 287.9 | 452.44 | 287.86 |
| 453.4 | 287.89 | 455.61 | 287.93 | 458.65 | 287.97 | 460.17 | 287.96 | 462.35 | 287.92 |
| 466.38 | 287.8 | 482.11 | 287.7 | 483.13 | 287.7 | 485.34 | 287.65 | 488.42 | 287.59 |
| 492.57 | 287.47 | 498.19 | 287.4 | 498.96 | 287.41 | 505.91 | 287.31 | 507.58 | 287.26 |
| 509.51 | 287.28 | 514.95 | 287.42 | 515.05 | 287.5 | 515.45 | 287.55 | 516.49 | 287.63 |
| 517.51 | 287.68 | 521.33 | 287.85 | 529.36 | 288.13 | 530.67 | 288.14 | 534.37 | 288.24 |
| 542.57 | 288.44 | 544.8 | 288.53 | 547.97 | 288.63 | 553.5 | 288.77 | 557 | 288.84 |
| 572.4 | 288.83 | 573.71 | 288.82 | 575.71 | 288.82 | 577.03 | 288.77 | 578.09 | 288.77 |
| 580.56 | 288.74 | 582.88 | 288.75 | 586.08 | 288.75 | 586.64 | 288.73 | 589.39 | 288.7 |
| 591.73 | 288.61 | 595.41 | 288.54 | 597.34 | 288.55 | 599.29 | 288.5 | 601.44 | 288.5 |
| 602.69 | 288.46 | 603.61 | 288.41 | 606.06 | 288.38 | 609.14 | 288.37 | 610.74 | 288.38 |
| 612.73 | 288.36 | 613.45 | 288.32 | 616.78 | 288.32 | 617.53 | 288.33 | 618.64 | 288.32 |
| 619.47 | 288.27 | 620.75 | 288.25 | 621.58 | 288.26 | 622.83 | 288.22 | 627.63 | 288.12 |
| 630.95 | 288.13 | 631.62 | 288.14 | 642.18 | 288.42 | 642.75 | 288.45 | 647.33 | 288.64 |
| 649.22 | 288.71 | 649.78 | 288.75 | 653.25 | 288.9 | 655.38 | 288.96 | 657.1 | 288.95 |
| 658.55 | 288.92 | 659.68 | 288.87 | 664.34 | 288.87 | 665.62 | 288.88 | 666.69 | 288.87 |
| 669.11 | 288.9 | 669.45 | 288.89 | 670.62 | 288.95 | 673.77 | 289.04 | 675.04 | 289.01 |
| 676.12 | 288.95 | 677.29 | 288.93 | 679.43 | 288.96 | 682.29 | 289.02 | 687.66 | 289.05 |
| 687.99 | 289.07 | 691.8 | 289.02 | 692.38 | 288.99 | 697.98 | 288.59 | 698.47 | 288.55 |
| 699.69 | 288.52 | 701.95 | 288.53 | 705.45 | 288.56 | 707.69 | 288.56 | 709.19 | 288.53 |
| 709.79 | 288.53 | 714.82 | 288.39 | 717.18 | 288.35 | 721.67 | 288.34 | 724.52 | 288.35 |
| 726.03 | 288.33 | 731.66 | 288.3 | 737.2 | 288.34 | 737.41 | 288.36 | 742.85 | 288.37 |
| 746.19 | 288.3 | 748.3 | 288.29 | 752.28 | 288.32 | 756.48 | 288.41 | 758.88 | 288.48 |
| 760.2 | 288.51 | 761.07 | 288.51 | 763.37 | 288.46 | 766.14 | 288.43 | 768.17 | 288.45 |
| 769.79 | 288.51 | 770.46 | 288.55 | 773.11 | 288.66 | 778.57 | 288.86 | 780.73 | 289.03 |
| 784.23 | 289.2 | 784.98 | 289.22 | 787.26 | 289.25 | 788.21 | 289.3 | 789.84 | 289.34 |
| 790.46 | 289.34 | 796.16 | 289.29 | 796.58 | 289.27 | 800.2 | 289.22 | 801.54 | 289.21 |
| 802.53 | 289.22 | 806.42 | 289.18 | 808.45 | 289.21 | 812.77 | 289.23 | 814.04 | 289.23 |
| 819.27 | 289.19 | 819.61 | 289.18 | 825.45 | 289.22 | 826.44 | 289.27 | 828.61 | 289.32 |
| 829.83 | 289.29 | 836.54 | 289.09 | 838.09 | 289.03 | 846.38 | 289.09 | 846.6 | 289.1 |
| 849.47 | 289.12 | 849.8 | 289.1 | 853 | 289.12 | 854.5 | 289.05 | 858.21 | 288.78 |
| 859.58 | 288.75 | 860.62 | 288.78 | 862.31 | 288.78 | 862.98 | 288.81 | 864.01 | 288.82 |
| 867.12 | 288.82 | 868.94 | 288.81 | 872.78 | 288.74 | 877.44 | 288.64 | 880.78 | 288.66 |
| 884.1 | 288.71 | 884.26 | 288.7 | 888.47 | 288.68 | 891.32 | 288.68 | 894.05 | 288.63 |
| 900.38 | 288.7 | 901.47 | 288.74 | 909.37 | 289.1 | 912.25 | 289.22 | 922.66 | 289.44 |
| 924.9 | 289.51 | 926.98 | 289.56 | 927.66 | 289.61 | 929.45 | 289.7 | 930.38 | 289.7 |
| 938.56 | 289.89 | 939.72 | 289.89 | 941.08 | 289.83 | 946.45 | 289.71 | 947.22 | 289.71 |
| 950.07 | 289.75 | 951.49 | 289.75 | 952.87 | 289.73 | 953.39 | 289.7 | 954.46 | 289.7 |
| 962.9 | 289.81 | 963.93 | 289.83 | 965.77 | 289.89 | 966.77 | 289.91 | 967.42 | 289.95 |
| 970.87 | 289.95 | 978.63 | 289.85 | 979.38 | 289.79 | 980.18 | 289.78 | 983.19 | 289.65 |
| 984.75 | 289.57 | 987.45 | 289.51 | 988.09 | 289.47 | 989.39 | 289.46 | 991.93 | 289.5 |
| 997.67 | 289.56 | 1001.52 | 289.33 | 1002.09 | 289.31 | 1003 | 289.32 | 1004.88 | 289.48 |
| 1005.69 | 289.49 | 1006.09 | 289.53 | 1008.31 | 289.7 | 1009.54 | 289.75 | 1014.46 | 290.06 |
| 1018.62 | 290.16 | 1023.92 | 290.24 | 1025.47 | 290.26 | 1026.88 | 290.22 | 1029.19 | 290.1 |
| 1036.78 | 289.94 | 1041.28 | 289.89 | 1041.4 | 289.88 | 1044.73 | 289.8 | 1048.31 | 289.74 |
| 1049.1 | 289.75 | 1049.45 | 289.79 | 1051.47 | 289.82 | 1053.1 | 289.87 | 1054.82 | 289.96 |
| 1057.69 | 290.06 | 1060.26 | 290.03 | 1064.19 | 290.02 | 1065.23 | 289.97 | 1065.98 | 289.96 |
| 1069.89 | 290 | 1073.88 | 290.05 | 1074.05 | 290.06 | 1076.14 | 290.06 | 1078.69 | 290.05 |
| 1080.18 | 290.01 | 1085.3 | 289.81 | 1086.81 | 289.78 | 1088.7 | 289.7 | 1089.65 | 289.69 |
| 1092.14 | 289.63 | 1093.4 | 289.62 | 1094.86 | 289.58 | 1096.62 | 289.58 | 1101.88 | 289.62 |
| 1106.58 | 289.74 | 1107.9 | 289.8 | 1113.78 | 289.95 | 1118.46 | 289.98 | 1121.47 | 290.02 |
| 1123.51 | 290.01 | 1123.78 | 290.02 | 1126.46 | 290.02 | 1129.32 | 290.01 | 1131.1 | 290.01 |
| 1135.19 | 290.07 | 1135.88 | 290.06 | 1136.71 | 290.01 | 1140.67 | 289.94 | 1146.26 | 289.9 |
| 1147.82 | 289.91 | 1149.2 | 289.94 | 1167.51 | 290.38 | 1171.23 | 290.54 | 1172.55 | 290.55 |
| 1180.8 | 290.67 | 1183.34 | 290.66 | 1185.17 | 290.64 | 1187.38 | 290.64 | 1197.12 | 290.78 |
| 1199.89 | 291.02 | 1202.2 | 291.27 | 1204.19 | 291.55 | 1207.31 | 292.03 | 1208.65 | 292.37 |
| 1209.78 | 292.61 | 1210.31 | 292.76 | 1211.87 | 293.15 | 1212.69 | 293.43 | 1213.68 | 293.71 |
| 1215.16 | 294.23 | 1216.27 | 294.65 | 1217.76 | 295.11 | 1218.28 | 295.25 | 1219.56 | 295.69 |
| 1222.53 | 296.79 | 1225.57 | 297.9 | 1226.9 | 298.35 | 1228.37 | 298.87 | 1229.22 | 299.22 |
| 1232.04 | 300.44 | 1234.27 | 301.36 | 1235.06 | 301.71 | 1236.42 | 302.28 | 1237.17 | 302.56 |
| 1239.59 | 303.56 | 1240 | 303.75 | 1241.02 | 304.01 | 1242.8 | 304.35 | 1245.02 | 304.82 |
| 1245.95 | 305.05 | 1247.29 | 305.42 | 1247.8 | 305.6 | 1248.69 | 305.86 | 1249.35 | 306.1 |
| 1251.32 | 306.87 | 1255.14 | 308.4 | 1257.09 | 309.17 | 1259.95 | 310.23 | 1262.65 | 311.19 |
| 1263.74 | 311.57 | 1266.18 | 312.38 | 1267.91 | 312.94 | 1268.85 | 313.29 | 1269.93 | 313.63 |
| 1270.95 | 314.02 | 1272.54 | 314.53 | 1274.9 | 315.36 | 1277.3 | 316.18 | 1278.02 | 316.45 |
| 1279.83 | 316.99 | 1281.96 | 317.44 | 1283.4 | 317.66 | 1284.36 | 317.83 | 1286.5 | 318.23 |
| 1287.19 | 318.37 | 1287.73 | 318.42 | 1288.5 | 318.53 | 1293.49 | 319.16 | 1294.47 | 319.28 |
| 1296.03 | 319.35 | 1301.83 | 319.63 | 1303.59 | 319.7 | 1313.57 | 320.02 | 1314.08 | 320.04 |
| 1320.34 | 320.17 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 302.39 | .04 | 1242.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 302.39 | 1242.8 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1879.96*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.66 | 1.29 | 312.51 | 3.77 | 312.45 | 5.95 | 312.27 | 6.77 | 312.25 |
| 7.51 | 312.21 | 10.92 | 311.91 | 14.84 | 311.55 | 16.44 | 311.2 | 18.32 | 310.71 |
| 21.48 | 310.23 | 24.51 | 309.76 | 25.36 | 309.66 | 30.47 | 309.03 | 32.93 | 308.73 |
| 34.7 | 308.5 | 36.88 | 308.18 | 37.62 | 308.08 | 39.94 | 307.83 | 41.02 | 307.74 |
| 42.19 | 307.73 | 42.91 | 307.68 | 44.77 | 306.94 | 45.17 | 306.85 | 46.02 | 306.8 |
| 46.99 | 306.94 | 49.34 | 307.23 | 50.96 | 307.27 | 52.69 | 307.42 | 55.81 | 307.46 |
| 56.55 | 307.5 | 57.21 | 307.56 | 58.43 | 307.55 | 59.83 | 307.51 | 61.35 | 307.54 |
| 66.9 | 307.58 | 67.44 | 307.56 | 69.99 | 307.54 | 75.05 | 307.45 | 78.69 | 307.38 |
| 79.15 | 307.36 | 82.79 | 307.27 | 83.42 | 307.24 | 84.29 | 307.17 | 85.61 | 307.11 |
| 86.72 | 306.99 | 88.63 | 306.75 | 97.75 | 305.3 | 98.33 | 305.2 | 102.77 | 304.67 |
| 104.34 | 304.4 | 107.68 | 303.98 | 123.47 | 302 | 128.72 | 301.45 | 133.47 | 301.15 |
| 134.56 | 301.02 | 136.47 | 300.76 | 141.33 | 300.02 | 144.31 | 299.61 | 145.34 | 299.53 |
| 146.93 | 299.45 | 147.63 | 299.45 | 149.1 | 299.49 | 149.7 | 299.49 | 154.55 | 299.22 |
| 157.96 | 299.05 | 166.81 | 298.27 | 169.92 | 297.92 | 175.11 | 297.37 | 180.93 | 296.87 |
| 182.7 | 296.75 | 183.86 | 296.7 | 186.3 | 296.62 | 186.81 | 296.59 | 189.92 | 296.44 |
| 192.4 | 296.28 | 194.43 | 296.07 | 202.32 | 295.35 | 212.76 | 294.47 | 213.05 | 294.43 |
| 215.98 | 294.2 | 220.54 | 293.95 | 223.67 | 293.8 | 239.83 | 293.14 | 240.01 | 293.14 |
| 245.83 | 293 | 250.93 | 292.86 | 253.15 | 292.81 | 254.46 | 292.83 | 258.31 | 292.81 |
| 264.76 | 292.73 | 266.74 | 292.68 | 274.34 | 292.38 | 277.6 | 292.22 | 279.53 | 292.15 |
| 281.64 | 292.09 | 282.15 | 292.06 | 284.97 | 291.99 | 291.93 | 291.66 | 299.68 | 291.29 |
| 300.65 | 291.26 | 303.21 | 291.11 | 309.18 | 290.87 | 311 | 290.68 | 313.37 | 290.46 |
| 315.48 | 290.24 | 316.85 | 290.11 | 318.06 | 289.99 | 319.2 | 289.81 | 320.63 | 289.85 |
| 321.18 | 289.89 | 323.97 | 290.02 | 326.15 | 290.14 | 327.22 | 290.19 | 329.32 | 290.16 |
| 330.06 | 290.11 | 331.66 | 289.93 | 334.99 | 289.46 | 342.04 | 288.55 | 345.34 | 288.36 |
| 357.65 | 288.02 | 362.38 | 287.94 | 364.09 | 287.93 | 364.47 | 287.94 | 378.37 | 287.77 |
| 378.69 | 287.76 | 390.06 | 287.54 | 391.97 | 287.5 | 392.4 | 287.51 | 397.52 | 287.47 |
| 410.81 | 287.67 | 414.73 | 287.66 | 415.74 | 287.63 | 416.98 | 287.44 | 417.69 | 287.49 |
| 422.41 | 287.91 | 424.63 | 288.13 | 427.14 | 288.84 | 428.26 | 289.65 | 429.04 | 290.24 |
| 430 | 290.31 | 431.43 | 290.39 | 433.72 | 290.49 | 440.5 | 290.52 | 440.58 | 290.42 |
| 441.39 | 290.32 | 444.23 | 289.08 | 444.5 | 288.94 | 446.11 | 288.25 | 447.79 | 287.56 |
| 449.34 | 287.39 | 450.24 | 287.34 | 452.75 | 287.37 | 453.31 | 287.37 | 455.91 | 287.4 |
| 457.19 | 287.45 | 460.8 | 287.48 | 462.03 | 287.48 | 464.24 | 287.51 | 467.47 | 287.52 |
| 468.88 | 287.48 | 469.46 | 287.48 | 472.69 | 287.55 | 476.59 | 287.6 | 480.65 | 287.53 |
| 483.65 | 287.45 | 499.65 | 287.37 | 500.69 | 287.37 | 506.07 | 287.25 | 510.28 | 287.13 |
| 516.01 | 287.07 | 516.79 | 287.08 | 523.86 | 286.98 | 525.56 | 286.93 | 527.46 | 286.95 |
| 532.84 | 287.07 | 532.94 | 287.17 | 534.37 | 287.3 | 535.37 | 287.35 | 539.16 | 287.51 |
| 547.41 | 287.79 | 548.4 | 287.78 | 552.06 | 287.88 | 560.17 | 288.07 | 562.38 | 288.16 |
| 564.41 | 288.22 | 564.81 | 288.24 | 570.99 | 288.42 | 574.46 | 288.48 | 589.84 | 288.48 |
| 590.98 | 288.46 | 592.97 | 288.48 | 594.27 | 288.43 | 595.32 | 288.44 | 597.76 | 288.41 |
| 600.06 | 288.42 | 603.23 | 288.41 | 603.78 | 288.39 | 606.5 | 288.36 | 608.82 | 288.27 |
| 612.46 | 288.2 | 614.37 | 288.21 | 616.29 | 288.16 | 618.42 | 288.16 | 621.2 | 288.04 |
| 626.04 | 288.01 | 626.99 | 288.02 | 628.75 | 288.01 | 629.59 | 287.99 | 630.3 | 287.95 |
| 633.6 | 287.95 | 634.34 | 287.96 | 635.44 | 287.95 | 636.26 | 287.91 | 637.53 | 287.89 |
| 638.35 | 287.91 | 639.59 | 287.87 | 644.34 | 287.8 | 647.62 | 287.81 | 648.28 | 287.83 |
| 658.74 | 288.12 | 659.3 | 288.15 | 663.84 | 288.35 | 665.7 | 288.42 | 666.25 | 288.46 |
| 669.69 | 288.63 | 671.8 | 288.69 | 673.5 | 288.68 | 674.93 | 288.65 | 676.32 | 288.6 |
| 680.37 | 288.59 | 681.93 | 288.6 | 683.37 | 288.59 | 686.05 | 288.61 | 687.74 | 288.69 |
| 690 | 288.74 | 691.25 | 288.71 | 691.7 | 288.68 | 693.48 | 288.63 | 695.47 | 288.65 |
| 695.6 | 288.66 | 698.43 | 288.71 | 703.74 | 288.73 | 704.06 | 288.74 | 707.83 | 288.68 |
| 708.41 | 288.66 | 714.43 | 288.26 | 715.64 | 288.23 | 721.34 | 288.25 | 723.56 | 288.25 |
| 725.04 | 288.22 | 725.64 | 288.23 | 728.36 | 288.14 | 730.62 | 288.09 | 732.95 | 288.05 |
| 737.39 | 288.04 | 740.21 | 288.04 | 741.7 | 288.02 | 747.27 | 288 | 752.76 | 288.05 |
| 752.97 | 288.07 | 758.35 | 288.07 | 761.65 | 288 | 763.74 | 287.99 | 767.68 | 288.02 |
| 769.87 | 288.07 | 771.83 | 288.1 | 774.21 | 288.17 | 776.38 | 288.2 | 778.66 | 288.13 |
| 781.39 | 288.1 | 783.4 | 288.11 | 785.01 | 288.17 | 785.67 | 288.21 | 788.29 | 288.32 |
| 793.69 | 288.51 | 794.5 | 288.58 | 795.83 | 288.67 | 798.05 | 288.79 | 800.03 | 288.86 |
| 802.29 | 288.9 | 803.23 | 288.94 | 804.85 | 288.98 | 805.46 | 288.98 | 811.1 | 288.95 |
| 811.52 | 288.93 | 815.09 | 288.88 | 817.41 | 288.89 | 821.25 | 288.86 | 823.26 | 288.89 |
| 828.79 | 288.9 | 833.97 | 288.86 | 834.3 | 288.85 | 840.08 | 288.88 | 841.06 | 288.93 |
| 843.21 | 288.98 | 850.33 | 288.74 | 851.06 | 288.72 | 852.59 | 288.65 | 860.79 | 288.71 |
| 863.85 | 288.73 | 864.18 | 288.71 | 867.34 | 288.73 | 868.83 | 288.67 | 872.5 | 288.44 |
| 873.85 | 288.42 | 874.89 | 288.44 | 876.55 | 288.45 | 878.23 | 288.48 | 881.31 | 288.48 |
| 883.11 | 288.47 | 888.6 | 288.38 | 891.53 | 288.32 | 894.83 | 288.34 | 898.27 | 288.38 |
| 902.44 | 288.34 | 905.25 | 288.34 | 907.96 | 288.29 | 914.22 | 288.35 | 915.3 | 288.38 |
| 923.12 | 288.71 | 923.95 | 288.74 | 925.97 | 288.84 | 936.27 | 289.07 | 938.49 | 289.14 |
| 939.09 | 289.15 | 941.07 | 289.22 | 941.22 | 289.24 | 942.99 | 289.32 | 943.91 | 289.33 |
| 952.01 | 289.53 | 953.15 | 289.53 | 954.5 | 289.48 | 959.81 | 289.37 | 960.57 | 289.37 |
| 963.39 | 289.41 | 964.8 | 289.41 | 966.17 | 289.39 | 966.68 | 289.36 | 967.73 | 289.35 |
| 976.09 | 289.47 | 979.92 | 289.56 | 980.15 | 289.59 | 981.04 | 289.61 | 982.72 | 289.61 |
| 983.97 | 289.6 | 991.65 | 289.49 | 992.4 | 289.44 | 993.19 | 289.43 | 996.17 | 289.3 |
| 997.71 | 289.21 | 1000.38 | 289.14 | 1001.02 | 289.1 | 1002.3 | 289.09 | 1004.81 | 289.13 |
| 1010.49 | 289.19 | 1014.55 | 288.99 | 1015.76 | 289 | 1017.62 | 289.16 | 1018.43 | 289.18 |
| 1021.02 | 289.39 | 1022.23 | 289.44 | 1027.11 | 289.74 | 1031.22 | 289.84 | 1038.01 | 289.93 |
| 1039.4 | 289.89 | 1041.69 | 289.78 | 1049.2 | 289.61 | 1053.65 | 289.55 | 1053.77 | 289.54 |
| 1057.06 | 289.46 | 1060.6 | 289.41 | 1061.16 | 289.41 | 1061.73 | 289.45 | 1063.73 | 289.48 |
| 1065.34 | 289.53 | 1068.91 | 289.69 | 1069.88 | 289.72 | 1072.43 | 289.7 | 1076.31 | 289.69 |
| 1077.21 | 289.65 | 1078.08 | 289.64 | 1079.62 | 289.65 | 1080.36 | 289.64 | 1081.57 | 289.65 |
| 1081.95 | 289.67 | 1085.9 | 289.71 | 1088.14 | 289.71 | 1090.66 | 289.7 | 1092.14 | 289.66 |
| 1097.2 | 289.46 | 1099.61 | 289.41 | 1100.57 | 289.36 | 1101.5 | 289.36 | 1103.97 | 289.29 |
| 1104.59 | 289.29 | 1106.66 | 289.25 | 1108.41 | 289.25 | 1112.67 | 289.28 | 1114.16 | 289.3 |
| 1114.69 | 289.32 | 1118.26 | 289.4 | 1119.56 | 289.45 | 1125.38 | 289.6 | 1128.32 | 289.63 |
| 1130.02 | 289.64 | 1132.44 | 289.68 | 1135.01 | 289.67 | 1135.28 | 289.68 | 1137.93 | 289.68 |
| 1140.76 | 289.67 | 1142.52 | 289.68 | 1146.57 | 289.73 | 1147.25 | 289.72 | 1148.25 | 289.66 |
| 1150.19 | 289.63 | 1151.99 | 289.59 | 1153.72 | 289.57 | 1154.92 | 289.57 | 1157.52 | 289.54 |
| 1159.07 | 289.55 | 1160.43 | 289.57 | 1178.55 | 290 | 1178.62 | 290.01 | 1181.87 | 290.14 |
| 1182.23 | 290.16 | 1183.54 | 290.17 | 1191.7 | 290.29 | 1194.21 | 290.29 | 1196.03 | 290.28 |
| 1199.7 | 290.3 | 1207.84 | 290.43 | 1210.65 | 290.69 | 1212.88 | 290.94 | 1214.84 | 291.22 |
| 1217.94 | 291.7 | 1219.26 | 292.02 | 1220.37 | 292.26 | 1222.44 | 292.76 | 1223.25 | 293.02 |
| 1224.24 | 293.29 | 1225.7 | 293.77 | 1226.8 | 294.17 | 1228.27 | 294.59 | 1228.79 | 294.72 |
| 1230.46 | 295.28 | 1234.45 | 296.69 | 1236 | 297.22 | 1237.31 | 297.65 | 1238.77 | 298.15 |
| 1239.61 | 298.49 | 1242.4 | 299.67 | 1244.6 | 300.57 | 1245.39 | 300.91 | 1246.73 | 301.46 |
| 1247.48 | 301.74 | 1249.87 | 302.73 | 1250.54 | 303 | 1251.29 | 303.19 | 1253.05 | 303.57 |
| 1253.93 | 303.79 | 1255.26 | 304.09 | 1256.18 | 304.34 | 1257.21 | 304.65 | 1258.02 | 304.93 |
| 1258.75 | 305.16 | 1259.57 | 305.46 | 1261.52 | 306.26 | 1265.33 | 307.85 | 1267.27 | 308.65 |
| 1270.12 | 309.75 | 1273.89 | 311.14 | 1275.85 | 311.82 | 1276.31 | 311.99 | 1278.03 | 312.58 |
| 1278.97 | 312.94 | 1280.04 | 313.3 | 1281.06 | 313.71 | 1282.06 | 314.04 | 1282.64 | 314.25 |
| 1284.99 | 315.13 | 1287.38 | 316.01 | 1288.1 | 316.29 | 1289.89 | 316.86 | 1292.02 | 317.34 |
| 1293.44 | 317.58 | 1296.54 | 318.17 | 1297.12 | 318.3 | 1303.49 | 319.12 | 1304.46 | 319.24 |
| 1306.02 | 319.3 | 1311.79 | 319.55 | 1313.54 | 319.61 | 1323.47 | 319.89 | 1323.98 | 319.91 |
| 1330.21 | 320.03 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 316.85 | .04 | 1253.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 316.85 | 1253.05 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1860.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.36 | 1.35 | 312.23 | 3.95 | 312.19 | 6.22 | 312.02 | 7.08 | 312.01 |
| 7.85 | 311.97 | 11.42 | 311.68 | 15.52 | 311.33 | 17.19 | 310.97 | 19.16 | 310.47 |
| 25.63 | 309.51 | 26.52 | 309.4 | 34.43 | 308.48 | 36.28 | 308.25 | 39.34 | 307.84 |
| 41.77 | 307.58 | 42.89 | 307.5 | 44.11 | 307.48 | 44.87 | 307.44 | 46.81 | 306.66 |
| 47.23 | 306.57 | 48.12 | 306.52 | 49.14 | 306.66 | 51.59 | 306.96 | 53.29 | 307 |
| 55.09 | 307.16 | 58.35 | 307.2 | 59.82 | 307.3 | 61.1 | 307.29 | 62.55 | 307.26 |
| 64.15 | 307.28 | 69.96 | 307.34 | 70.52 | 307.32 | 73.18 | 307.31 | 78.48 | 307.22 |
| 82.28 | 307.15 | 84.71 | 307.08 | 86.57 | 307.04 | 87.23 | 307.01 | 88.14 | 306.94 |
| 89.52 | 306.87 | 90.67 | 306.75 | 92.67 | 306.5 | 102.2 | 304.99 | 102.81 | 304.88 |
| 107.46 | 304.34 | 109.1 | 304.06 | 112.59 | 303.62 | 129.1 | 301.57 | 134.6 | 301.01 |
| 139.56 | 300.7 | 140.7 | 300.57 | 142.7 | 300.29 | 147.78 | 299.53 | 150.9 | 299.11 |
| 151.98 | 299.02 | 153.63 | 298.94 | 154.37 | 298.94 | 155.91 | 298.99 | 156.53 | 298.99 |
| 161.6 | 298.72 | 164.35 | 298.59 | 165.16 | 298.54 | 168.33 | 298.27 | 168.5 | 298.25 |
| 174.42 | 297.72 | 177.67 | 297.34 | 183.1 | 296.75 | 189.18 | 296.2 | 190.51 | 296.1 |
| 191.42 | 296.05 | 195.33 | 295.9 | 197.5 | 295.78 | 198.58 | 295.73 | 199.68 | 295.65 |
| 200.65 | 295.6 | 203.54 | 295.33 | 211.55 | 294.62 | 222.47 | 293.72 | 222.76 | 293.69 |
| 225.83 | 293.46 | 228.68 | 293.31 | 233.88 | 293.07 | 250.77 | 292.45 | 250.96 | 292.44 |
| 257.04 | 292.32 | 262.38 | 292.18 | 264.44 | 292.16 | 264.7 | 292.14 | 266.07 | 292.17 |
| 270.09 | 292.17 | 274.27 | 292.12 | 276.84 | 292.1 | 278.91 | 292.06 | 286.85 | 291.77 |
| 290.26 | 291.63 | 292.29 | 291.56 | 294.49 | 291.51 | 295.02 | 291.49 | 297.97 | 291.43 |
| 303.46 | 291.21 | 304.32 | 291.19 | 308.41 | 291.02 | 308.71 | 291.02 | 312.41 | 290.87 |
| 314.66 | 290.8 | 317.04 | 290.68 | 323.28 | 290.46 | 325.18 | 290.27 | 327.66 | 290.04 |
| 329.87 | 289.81 | 331.3 | 289.68 | 332.54 | 289.56 | 333.69 | 289.38 | 335.15 | 289.43 |
| 335.71 | 289.48 | 337.11 | 289.55 | 340.76 | 289.78 | 341.85 | 289.84 | 343.02 | 289.84 |
| 343.99 | 289.82 | 344.73 | 289.77 | 346.36 | 289.58 | 349.75 | 289.11 | 356.92 | 288.18 |
| 360.27 | 288.01 | 372.79 | 287.66 | 377.6 | 287.58 | 379.73 | 287.58 | 393.86 | 287.42 |
| 394.19 | 287.41 | 405.75 | 287.19 | 407.7 | 287.15 | 408.12 | 287.16 | 413.34 | 287.12 |
| 415.44 | 287.16 | 416.1 | 287.16 | 426.85 | 287.34 | 430.83 | 287.33 | 431.86 | 287.3 |
| 433.13 | 287.1 | 433.84 | 287.15 | 438.64 | 287.6 | 440.9 | 287.82 | 443.46 | 288.58 |
| 444.59 | 289.44 | 445.39 | 290.07 | 446.37 | 290.14 | 447.81 | 290.22 | 449.79 | 290.3 |
| 450.14 | 290.33 | 457.05 | 290.35 | 457.13 | 290.24 | 457.95 | 290.13 | 460.83 | 288.81 |
| 461.11 | 288.66 | 462.75 | 287.93 | 464.46 | 287.2 | 466.03 | 287.02 | 466.95 | 286.96 |
| 470.07 | 286.99 | 472.11 | 287 | 474.02 | 287.07 | 477.68 | 287.11 | 478.38 | 287.1 |
| 482.92 | 287.14 | 484.47 | 287.14 | 486.49 | 287.09 | 487.49 | 287.12 | 489.77 | 287.17 |
| 492.92 | 287.22 | 494.13 | 287.23 | 497.87 | 287.17 | 500.92 | 287.1 | 517.18 | 287.04 |
| 518.24 | 287.04 | 523.72 | 286.92 | 528 | 286.79 | 533.82 | 286.73 | 534.61 | 286.74 |
| 542.05 | 286.65 | 543.54 | 286.6 | 545.41 | 286.61 | 550.74 | 286.73 | 550.83 | 286.83 |
| 551.23 | 286.88 | 552.24 | 286.96 | 553.24 | 287.01 | 556.98 | 287.17 | 565.14 | 287.44 |
| 566.13 | 287.43 | 569.75 | 287.52 | 577.78 | 287.7 | 579.96 | 287.79 | 588.48 | 288.06 |
| 591.91 | 288.13 | 606.97 | 288.13 | 608.26 | 288.11 | 610.22 | 288.13 | 611.88 | 288.1 |
| 612.54 | 288.11 | 614.97 | 288.08 | 617.24 | 288.08 | 620.37 | 288.07 | 623.61 | 288.03 |
| 625.9 | 287.93 | 629.51 | 287.86 | 631.4 | 287.86 | 632.33 | 287.85 | 633.3 | 287.81 |
| 635.01 | 287.82 | 636.64 | 287.76 | 638.15 | 287.69 | 639.93 | 287.67 | 642.94 | 287.65 |
| 644.51 | 287.65 | 646.46 | 287.62 | 647.16 | 287.58 | 650.42 | 287.58 | 651.16 | 287.59 |
| 652.25 | 287.58 | 652.54 | 287.56 | 654.31 | 287.54 | 655.12 | 287.55 | 656.35 | 287.53 |
| 661.05 | 287.47 | 664.3 | 287.49 | 675.29 | 287.82 | 680.34 | 288.06 | 680.81 | 288.07 |
| 682.19 | 288.14 | 684.45 | 288.27 | 686.13 | 288.35 | 688.22 | 288.42 | 689.9 | 288.41 |
| 691.31 | 288.38 | 692.95 | 288.33 | 698.24 | 288.32 | 699.29 | 288.3 | 699.66 | 288.31 |
| 701.66 | 288.31 | 701.99 | 288.3 | 703.99 | 288.39 | 706.22 | 288.44 | 707.46 | 288.41 |
| 707.91 | 288.38 | 709.4 | 288.34 | 711.63 | 288.35 | 711.76 | 288.36 | 714.56 | 288.41 |
| 719.81 | 288.4 | 720.14 | 288.41 | 723.87 | 288.35 | 724.44 | 288.33 | 730.4 | 287.97 |
| 731.6 | 287.94 | 739.24 | 287.94 | 740.9 | 287.91 | 741.48 | 287.92 | 744.17 | 287.84 |
| 746.41 | 287.79 | 748.71 | 287.75 | 749.89 | 287.75 | 753.11 | 287.73 | 755.9 | 287.73 |
| 757.38 | 287.71 | 762.89 | 287.71 | 768.32 | 287.75 | 768.52 | 287.77 | 773.85 | 287.78 |
| 777.12 | 287.7 | 779.18 | 287.68 | 783.08 | 287.72 | 785.24 | 287.76 | 790.83 | 287.88 |
| 791.68 | 287.88 | 793.94 | 287.8 | 796.64 | 287.76 | 798.63 | 287.77 | 800.22 | 287.83 |
| 800.88 | 287.87 | 803.47 | 287.98 | 808.81 | 288.17 | 810.93 | 288.32 | 812.86 | 288.41 |
| 815.09 | 288.5 | 817.32 | 288.54 | 818.25 | 288.58 | 819.85 | 288.62 | 826.04 | 288.6 |
| 826.45 | 288.58 | 827.38 | 288.58 | 828.02 | 288.56 | 829.99 | 288.54 | 832.28 | 288.55 |
| 834.01 | 288.55 | 836.08 | 288.53 | 838.07 | 288.57 | 842.3 | 288.58 | 848.66 | 288.52 |
| 848.99 | 288.51 | 854.71 | 288.53 | 855.68 | 288.58 | 857.81 | 288.63 | 859 | 288.59 |
| 864.85 | 288.37 | 865.57 | 288.35 | 867.09 | 288.27 | 875.21 | 288.32 | 877.61 | 288.34 |
| 879.53 | 288.33 | 881.68 | 288.34 | 883.16 | 288.29 | 886.79 | 288.09 | 888.12 | 288.08 |
| 889.15 | 288.11 | 890.79 | 288.11 | 892.46 | 288.14 | 895.5 | 288.14 | 897.29 | 288.13 |
| 901.04 | 288.08 | 905.61 | 288 | 908.88 | 288.02 | 912.13 | 288.06 | 912.29 | 288.05 |
| 916.41 | 288 | 919.19 | 288 | 921.88 | 287.95 | 928.07 | 288 | 929.13 | 288.02 |
| 937.69 | 288.35 | 939.69 | 288.45 | 949.88 | 288.7 | 952.08 | 288.77 | 952.67 | 288.78 |
| 954.63 | 288.85 | 954.78 | 288.87 | 956.53 | 288.95 | 957.44 | 288.96 | 965.45 | 289.17 |
| 966.58 | 289.17 | 968.34 | 289.12 | 972.27 | 289.05 | 973.92 | 289.03 | 976.71 | 289.08 |
| 979.46 | 289.05 | 979.96 | 289.02 | 981.01 | 289.01 | 989.27 | 289.12 | 990.28 | 289.14 |
| 993.07 | 289.22 | 994.18 | 289.26 | 997.07 | 289.25 | 1004.68 | 289.14 | 1005.99 | 289.09 |
| 1009.14 | 288.94 | 1010.67 | 288.85 | 1013.31 | 288.78 | 1013.94 | 288.73 | 1015.21 | 288.72 |
| 1018.58 | 288.78 | 1023.32 | 288.83 | 1027.09 | 288.68 | 1027.85 | 288.66 | 1028.97 | 288.71 |
| 1030.01 | 288.82 | 1031.16 | 288.87 | 1033.73 | 289.08 | 1034.93 | 289.13 | 1039.75 | 289.43 |
| 1043.83 | 289.52 | 1049.01 | 289.59 | 1050.54 | 289.6 | 1051.91 | 289.56 | 1054.18 | 289.45 |
| 1061.61 | 289.27 | 1066.13 | 289.21 | 1069.38 | 289.13 | 1072.9 | 289.07 | 1073.72 | 289.09 |
| 1074.01 | 289.12 | 1075.58 | 289.14 | 1077.58 | 289.19 | 1082.08 | 289.38 | 1084.59 | 289.37 |
| 1088.44 | 289.37 | 1089.45 | 289.32 | 1090.19 | 289.31 | 1093.64 | 289.31 | 1094.01 | 289.33 |
| 1097.92 | 289.36 | 1100.14 | 289.36 | 1102.63 | 289.35 | 1104.09 | 289.31 | 1109.11 | 289.1 |
| 1111.49 | 289.06 | 1112.43 | 289.02 | 1113.36 | 289.02 | 1115.8 | 288.95 | 1116.42 | 288.95 |
| 1118.46 | 288.91 | 1120.19 | 288.91 | 1124.41 | 288.94 | 1125.89 | 288.96 | 1126.41 | 288.98 |
| 1129.94 | 289.05 | 1131.23 | 289.1 | 1135.33 | 289.21 | 1136.99 | 289.25 | 1141.57 | 289.3 |
| 1143.97 | 289.34 | 1146.51 | 289.33 | 1146.78 | 289.34 | 1149.4 | 289.34 | 1152.2 | 289.33 |
| 1153.94 | 289.34 | 1157.95 | 289.38 | 1158.39 | 289.38 | 1159.82 | 289.31 | 1161.91 | 289.27 |
| 1165.59 | 289.21 | 1166.21 | 289.21 | 1168.79 | 289.18 | 1170.32 | 289.18 | 1171.66 | 289.2 |
| 1189.59 | 289.63 | 1192.87 | 289.75 | 1193.23 | 289.77 | 1194.52 | 289.78 | 1202.6 | 289.91 |
| 1205.09 | 289.92 | 1206.88 | 289.92 | 1209.04 | 289.93 | 1210.52 | 289.95 | 1218.57 | 290.09 |
| 1220.61 | 290.28 | 1223.55 | 290.61 | 1225.5 | 290.89 | 1228.56 | 291.37 | 1230.06 | 291.72 |
| 1230.97 | 291.9 | 1232.82 | 292.32 | 1233.82 | 292.62 | 1234.79 | 292.87 | 1236.24 | 293.32 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1237.33 | 293.69 | 1238.78 | 294.07 | 1239.3 | 294.19 | 1240.95 | 294.72 | 1243.45 | 295.56 |
| 1246.43 | 296.55 | 1247.73 | 296.96 | 1249.17 | 297.43 | 1250.01 | 297.75 | 1251.73 | 298.47 |
| 1254.94 | 299.77 | 1256.46 | 300.41 | 1257.79 | 300.92 | 1260.55 | 302.08 | 1261.21 | 302.28 |
| 1262.56 | 302.62 | 1263.3 | 302.79 | 1264.18 | 303.03 | 1265.5 | 303.36 | 1266.41 | 303.63 |
| 1267.74 | 304.07 | 1268.69 | 304.41 | 1269.78 | 304.82 | 1271.73 | 305.65 | 1275.51 | 307.3 |
| 1277.52 | 308.16 | 1280.28 | 309.26 | 1284.04 | 310.71 | 1288.16 | 312.21 | 1289.09 | 312.59 |
| 1290.16 | 312.97 | 1291.17 | 313.4 | 1292.17 | 313.75 | 1292.74 | 313.97 | 1295.08 | 314.91 |
| 1297.45 | 315.83 | 1298.18 | 316.13 | 1299.96 | 316.74 | 1302.07 | 317.25 | 1303.49 | 317.5 |
| 1306.57 | 318.12 | 1307.33 | 318.29 | 1307.79 | 318.33 | 1308.55 | 318.44 | 1313.49 | 319.09 |
| 1314.46 | 319.21 | 1316.01 | 319.26 | 1321.75 | 319.47 | 1323.49 | 319.52 | 1333.37 | 319.77 |
| 1340.08 | 319.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 331.3 | .04 | 1263.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 331.3 | 1263.3 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1840.24*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.06 | 1.25 | 311.96 | 4.12 | 311.93 | 6.49 | 311.77 | 7.39 | 311.76 |
| 8.2 | 311.73 | 9.05 | 311.66 | 16.19 | 311.11 | 17.94 | 310.74 | 19.99 | 310.22 |
| 26.75 | 309.26 | 27.68 | 309.15 | 33.25 | 308.53 | 35.93 | 308.24 | 37.86 | 308 |
| 41.05 | 307.59 | 43.59 | 307.33 | 44.76 | 307.25 | 46.04 | 307.24 | 46.82 | 307.2 |
| 48.86 | 306.39 | 49.3 | 306.29 | 50.22 | 306.24 | 51.28 | 306.38 | 53.84 | 306.7 |
| 55.61 | 306.73 | 57.49 | 306.89 | 60.9 | 306.95 | 61.71 | 306.99 | 62.43 | 307.05 |
| 65.28 | 307 | 73.01 | 307.1 | 73.6 | 307.08 | 76.38 | 307.07 | 81.9 | 306.98 |
| 85.87 | 306.92 | 88.41 | 306.85 | 90.35 | 306.81 | 91.03 | 306.78 | 91.98 | 306.71 |
| 93.42 | 306.64 | 94.63 | 306.51 | 96.71 | 306.25 | 106.66 | 304.68 | 107.3 | 304.57 |
| 112.15 | 304.01 | 113.86 | 303.72 | 117.5 | 303.26 | 134.74 | 301.14 | 140.47 | 300.56 |
| 145.65 | 300.25 | 146.84 | 300.12 | 148.92 | 299.83 | 154.22 | 299.04 | 157.48 | 298.6 |
| 158.61 | 298.51 | 160.33 | 298.43 | 161.1 | 298.43 | 162.71 | 298.49 | 163.36 | 298.49 |
| 168.66 | 298.22 | 171.52 | 298.09 | 172.37 | 298.04 | 175.68 | 297.75 | 175.85 | 297.73 |
| 182.03 | 297.16 | 185.42 | 296.76 | 191.09 | 296.12 | 197.44 | 295.54 | 199.37 | 295.39 |
| 200.63 | 295.33 | 203.29 | 295.23 | 207.24 | 295.01 | 209.41 | 294.88 | 212.42 | 294.6 |
| 220.78 | 293.89 | 232.17 | 292.98 | 232.48 | 292.94 | 235.68 | 292.71 | 238.65 | 292.57 |
| 238.8 | 292.57 | 244.08 | 292.34 | 261.71 | 291.75 | 261.91 | 291.75 | 268.26 | 291.63 |
| 273.83 | 291.51 | 275.97 | 291.49 | 276.25 | 291.47 | 277.68 | 291.5 | 281.88 | 291.52 |
| 284.5 | 291.51 | 286.24 | 291.49 | 288.92 | 291.48 | 291.08 | 291.44 | 299.37 | 291.17 |
| 302.93 | 291.04 | 305.04 | 290.98 | 307.34 | 290.93 | 307.89 | 290.91 | 310.97 | 290.87 |
| 316.7 | 290.69 | 318.56 | 290.64 | 321.86 | 290.53 | 322.18 | 290.53 | 326.04 | 290.41 |
| 328.39 | 290.36 | 330.88 | 290.25 | 337.39 | 290.05 | 339.37 | 289.85 | 341.96 | 289.62 |
| 344.26 | 289.39 | 345.76 | 289.26 | 347.01 | 289.14 | 347.66 | 289.02 | 348.19 | 288.95 |
| 349.67 | 289.01 | 350.24 | 289.06 | 353.61 | 289.28 | 355.79 | 289.44 | 356.48 | 289.48 |
| 357.66 | 289.49 | 358.65 | 289.47 | 359.7 | 289.4 | 361.07 | 289.24 | 364.52 | 288.76 |
| 371.8 | 287.82 | 375.21 | 287.66 | 387.93 | 287.3 | 392.83 | 287.22 | 394.99 | 287.22 |
| 409.36 | 287.07 | 409.69 | 287.06 | 421.44 | 286.84 | 423.42 | 286.79 | 423.85 | 286.81 |
| 429.15 | 286.77 | 430.06 | 286.8 | 431.96 | 286.82 | 442.89 | 287.01 | 446.94 | 287 |
| 447.98 | 286.96 | 449.27 | 286.75 | 450 | 286.81 | 454.88 | 287.29 | 457.18 | 287.52 |
| 459.77 | 288.31 | 460.93 | 289.23 | 461.73 | 289.89 | 464.2 | 290.05 | 466.21 | 290.13 |
| 466.57 | 290.16 | 473.59 | 290.17 | 473.67 | 290.06 | 474.5 | 289.94 | 477.43 | 288.54 |
| 477.72 | 288.39 | 479.38 | 287.61 | 481.12 | 286.83 | 482.72 | 286.64 | 483.65 | 286.58 |
| 488.9 | 286.62 | 490.84 | 286.69 | 494.57 | 286.73 | 496.45 | 286.73 | 498.59 | 286.75 |
| 499.89 | 286.77 | 501.46 | 286.77 | 503.52 | 286.71 | 506.86 | 286.79 | 510.06 | 286.84 |
| 511.66 | 286.85 | 513.95 | 286.83 | 518.19 | 286.76 | 534.72 | 286.71 | 535.8 | 286.71 |
| 538.12 | 286.66 | 541.36 | 286.58 | 545.72 | 286.46 | 551.64 | 286.4 | 552.44 | 286.41 |
| 560 | 286.32 | 561.51 | 286.26 | 563.36 | 286.28 | 565.59 | 286.32 | 568.63 | 286.39 |
| 568.72 | 286.49 | 570.12 | 286.63 | 571.1 | 286.68 | 574.81 | 286.82 | 582.88 | 287.09 |
| 583.85 | 287.07 | 586.92 | 287.15 | 594.59 | 287.31 | 595.38 | 287.32 | 597.54 | 287.41 |
| 600.61 | 287.52 | 605.96 | 287.7 | 609.36 | 287.77 | 624.79 | 287.77 | 625.53 | 287.76 |
| 627.48 | 287.79 | 628.76 | 287.76 | 629.77 | 287.78 | 633.23 | 287.74 | 637.52 | 287.73 |
| 640.72 | 287.69 | 642.99 | 287.59 | 646.55 | 287.51 | 648.42 | 287.52 | 649.34 | 287.51 |
| 650.31 | 287.47 | 652 | 287.48 | 653.61 | 287.42 | 654.49 | 287.36 | 655.11 | 287.34 |
| 656.87 | 287.32 | 662.5 | 287.28 | 663.32 | 287.26 | 664.02 | 287.21 | 667.25 | 287.21 |
| 667.97 | 287.22 | 669.85 | 287.19 | 671.09 | 287.18 | 671.9 | 287.2 | 673.11 | 287.18 |
| 677.76 | 287.15 | 680.97 | 287.17 | 691.85 | 287.51 | 692.4 | 287.55 | 696.84 | 287.77 |
| 697.31 | 287.78 | 698.67 | 287.85 | 700.91 | 287.99 | 702.57 | 288.07 | 704.63 | 288.15 |
| 706.3 | 288.14 | 707.7 | 288.12 | 708.67 | 288.07 | 713.03 | 288.04 | 713.5 | 288.05 |
| 715.59 | 288.02 | 717.93 | 288.02 | 718.26 | 288.01 | 720.24 | 288.09 | 722.45 | 288.14 |
| 723.67 | 288.11 | 724.72 | 288.06 | 725.59 | 288.04 | 727.8 | 288.05 | 727.93 | 288.06 |
| 730.7 | 288.1 | 735.89 | 288.07 | 736.21 | 288.08 | 739.9 | 288.02 | 740.47 | 288 |
| 745.89 | 287.7 | 746.36 | 287.67 | 747.55 | 287.65 | 749.73 | 287.64 | 754.1 | 287.63 |
| 755.71 | 287.62 | 756.75 | 287.6 | 757.33 | 287.61 | 759.99 | 287.54 | 762.2 | 287.49 |
| 764.48 | 287.45 | 768.83 | 287.42 | 771.43 | 287.43 | 773.05 | 287.4 | 778.51 | 287.41 |
| 783.88 | 287.45 | 784.08 | 287.48 | 789.35 | 287.48 | 792.58 | 287.4 | 794.62 | 287.38 |
| 798.48 | 287.42 | 802.54 | 287.49 | 806.15 | 287.57 | 806.99 | 287.57 | 808.04 | 287.52 |
| 809.22 | 287.48 | 811.9 | 287.43 | 813.12 | 287.42 | 813.87 | 287.43 | 815.44 | 287.48 |
| 816.09 | 287.53 | 818.65 | 287.64 | 823.94 | 287.83 | 826.03 | 287.96 | 827.94 | 288.05 |
| 829.85 | 288.13 | 832.36 | 288.18 | 833.28 | 288.22 | 835.46 | 288.27 | 840.97 | 288.26 |
| 841.39 | 288.24 | 842.31 | 288.24 | 842.94 | 288.22 | 846.19 | 288.21 | 847.15 | 288.22 |
| 848.86 | 288.22 | 851.1 | 288.21 | 852.88 | 288.25 | 857.07 | 288.25 | 858.29 | 288.24 |
| 863.36 | 288.18 | 863.69 | 288.17 | 869.34 | 288.19 | 870.31 | 288.24 | 872.41 | 288.29 |
| 873.59 | 288.24 | 880.09 | 287.98 | 881.59 | 287.89 | 889.62 | 287.93 | 891.17 | 287.95 |
| 896.18 | 287.95 | 897.48 | 287.91 | 901.07 | 287.74 | 903.41 | 287.77 | 906.69 | 287.8 |
| 909.7 | 287.8 | 911.46 | 287.79 | 915.18 | 287.75 | 916.84 | 287.72 | 918.77 | 287.7 |
| 919.7 | 287.68 | 922.93 | 287.69 | 926.3 | 287.73 | 930.38 | 287.67 | 933.13 | 287.65 |
| 935.79 | 287.62 | 941.91 | 287.64 | 942.96 | 287.66 | 951.43 | 287.96 | 953.41 | 288.07 |
| 963.49 | 288.33 | 966.25 | 288.42 | 967.67 | 288.46 | 968.33 | 288.5 | 970.07 | 288.58 |
| 970.97 | 288.59 | 978.89 | 288.81 | 980.01 | 288.81 | 981.75 | 288.76 | 987.28 | 288.69 |
| 990.04 | 288.74 | 992.75 | 288.71 | 993.25 | 288.68 | 994.29 | 288.66 | 1002.46 | 288.78 |
| 1005.65 | 288.85 | 1007.31 | 288.92 | 1008.95 | 288.92 | 1010.18 | 288.91 | 1017.7 | 288.79 |
| 1019 | 288.74 | 1022.12 | 288.58 | 1023.63 | 288.49 | 1026.24 | 288.41 | 1026.86 | 288.36 |
| 1028.12 | 288.36 | 1030.57 | 288.39 | 1031.45 | 288.41 | 1036.14 | 288.47 | 1039.87 | 288.35 |
| 1041.12 | 288.35 | 1041.74 | 288.39 | 1043.12 | 288.53 | 1043.8 | 288.55 | 1044.93 | 288.65 |
| 1046.45 | 288.77 | 1047.63 | 288.82 | 1052.4 | 289.12 | 1056.43 | 289.2 | 1061.56 | 289.26 |
| 1063.07 | 289.27 | 1064.43 | 289.23 | 1066.67 | 289.13 | 1074.02 | 288.94 | 1078.49 | 288.87 |
| 1081.71 | 288.79 | 1085.19 | 288.74 | 1085.95 | 288.75 | 1086.29 | 288.79 | 1086.72 | 288.78 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1087.84 | 288.8 | 1089.82 | 288.85 | 1092.04 | 288.93 | 1092.61 | 288.97 | 1094.27 | 289.04 |
| 1096.76 | 289.03 | 1100.56 | 289.04 | 1102.3 | 288.98 | 1104.12 | 288.98 | 1105.71 | 288.97 |
| 1106.08 | 288.99 | 1109.94 | 289.01 | 1112.13 | 289.01 | 1114.6 | 289 | 1116.05 | 288.95 |
| 1121.01 | 288.75 | 1122.38 | 288.74 | 1124.15 | 288.69 | 1125.22 | 288.68 | 1127.63 | 288.61 |
| 1128.85 | 288.61 | 1130.27 | 288.58 | 1131.97 | 288.58 | 1136.15 | 288.61 | 1137.07 | 288.61 |
| 1138.12 | 288.64 | 1141.62 | 288.71 | 1142.89 | 288.75 | 1147.34 | 288.87 | 1148.59 | 288.9 |
| 1151.47 | 288.94 | 1152.15 | 288.94 | 1155.5 | 289 | 1158.01 | 288.99 | 1158.28 | 289 |
| 1165.37 | 289 | 1169.33 | 289.04 | 1169.77 | 289.04 | 1171.18 | 288.97 | 1176.66 | 288.86 |
| 1180.05 | 288.82 | 1182.89 | 288.83 | 1200.63 | 289.25 | 1200.7 | 289.26 | 1203.88 | 289.37 |
| 1204.23 | 289.39 | 1205.51 | 289.4 | 1213.5 | 289.54 | 1216.84 | 289.55 | 1219.87 | 289.57 |
| 1221.33 | 289.59 | 1229.3 | 289.74 | 1231.99 | 290.02 | 1234.22 | 290.29 | 1236.15 | 290.56 |
| 1239.18 | 291.04 | 1240.67 | 291.37 | 1241.56 | 291.54 | 1243.59 | 291.98 | 1244.38 | 292.21 |
| 1245.34 | 292.45 | 1246.19 | 292.69 | 1247.85 | 293.21 | 1249.8 | 293.66 | 1251.03 | 294.03 |
| 1256.86 | 295.88 | 1258.15 | 296.26 | 1259.57 | 296.7 | 1260.03 | 296.87 | 1263.12 | 298.12 |
| 1265.28 | 298.98 | 1266.78 | 299.6 | 1268.09 | 300.1 | 1270.44 | 301.08 | 1271.09 | 301.34 |
| 1272.22 | 301.66 | 1273.55 | 302.02 | 1275.73 | 302.64 | 1276.65 | 302.92 | 1277.97 | 303.39 |
| 1278.47 | 303.6 | 1279.35 | 303.92 | 1280 | 304.19 | 1281.94 | 305.04 | 1285.7 | 306.75 |
| 1287.7 | 307.64 | 1290.45 | 308.77 | 1293.11 | 309.84 | 1293.64 | 310.06 | 1296.58 | 311.2 |
| 1298.28 | 311.84 | 1299.08 | 312.19 | 1300.27 | 312.65 | 1301.28 | 313.09 | 1302.85 | 313.68 |
| 1305.18 | 314.68 | 1307.53 | 315.66 | 1308.25 | 315.97 | 1310.03 | 316.62 | 1312.13 | 317.15 |
| 1313.54 | 317.41 | 1316.6 | 318.07 | 1317.36 | 318.24 | 1317.62 | 318.26 | 1318.58 | 318.4 |
| 1323.49 | 319.05 | 1324.64 | 319.18 | 1331.71 | 319.39 | 1333.44 | 319.43 | 1343.78 | 319.65 |
| 1349.95 | 319.73 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 345.76 | .04 | 1273.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 345.76 | 1273.55 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1820.38*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 311.76 | 1.3 | 311.68 | 4.29 | 311.67 | 6.76 | 311.51 | 7.69 | 311.51 |
| 8.54 | 311.48 | 12.42 | 311.21 | 16.87 | 310.88 | 18.69 | 310.51 | 20.83 | 309.98 |
| 24.42 | 309.49 | 26.1 | 309.25 | 27.87 | 309.01 | 28.84 | 308.9 | 34.64 | 308.28 |
| 37.43 | 307.99 | 39.44 | 307.75 | 41.93 | 307.44 | 45.41 | 307.08 | 46.63 | 307 |
| 47.96 | 307 | 48.78 | 306.96 | 50.9 | 306.11 | 51.36 | 306 | 52.32 | 305.96 |
| 53.42 | 306.11 | 56.1 | 306.43 | 57.94 | 306.46 | 59.23 | 306.58 | 59.9 | 306.63 |
| 63.45 | 306.69 | 64.29 | 306.73 | 65.04 | 306.79 | 68.01 | 306.74 | 69.75 | 306.77 |
| 76.06 | 306.87 | 76.67 | 306.85 | 79.57 | 306.83 | 85.33 | 306.75 | 89.99 | 306.67 |
| 92.1 | 306.62 | 94.12 | 306.58 | 95.83 | 306.47 | 97.33 | 306.4 | 97.87 | 306.35 |
| 99.77 | 306.13 | 100.76 | 306 | 111.12 | 304.37 | 111.79 | 304.26 | 116.84 | 303.68 |
| 118.62 | 303.37 | 122.41 | 302.91 | 140.37 | 300.72 | 146.34 | 300.11 | 151.73 | 299.8 |
| 152.98 | 299.66 | 155.15 | 299.37 | 160.67 | 298.54 | 164.07 | 298.09 | 165.24 | 297.99 |
| 167.04 | 297.92 | 167.84 | 297.92 | 169.51 | 297.98 | 170.64 | 297.98 | 175.71 | 297.72 |
| 176.67 | 297.68 | 179.58 | 297.53 | 183.02 | 297.24 | 183.2 | 297.22 | 189.64 | 296.61 |
| 193.18 | 296.19 | 199.08 | 295.5 | 205.69 | 294.87 | 207.7 | 294.71 | 211.79 | 294.53 |
| 214.73 | 294.37 | 217.1 | 294.22 | 218.31 | 294.15 | 221.3 | 293.88 | 230.01 | 293.16 |
| 241.88 | 292.23 | 242.2 | 292.2 | 245.54 | 291.97 | 248.63 | 291.84 | 250.72 | 291.75 |
| 254.28 | 291.61 | 272.65 | 291.05 | 272.86 | 291.05 | 279.47 | 290.94 | 285.28 | 290.83 |
| 286.62 | 290.83 | 287.79 | 290.81 | 289.29 | 290.84 | 293.66 | 290.87 | 296.39 | 290.87 |
| 298.2 | 290.86 | 301 | 290.86 | 303.24 | 290.83 | 311.89 | 290.57 | 315.59 | 290.45 |
| 317.79 | 290.39 | 320.19 | 290.36 | 320.76 | 290.34 | 323.97 | 290.3 | 331.88 | 290.13 |
| 335.32 | 290.04 | 335.64 | 290.04 | 340.69 | 289.94 | 342.12 | 289.92 | 344.71 | 289.82 |
| 351.49 | 289.64 | 353.56 | 289.44 | 356.25 | 289.2 | 358.65 | 288.97 | 360.21 | 288.83 |
| 361.49 | 288.71 | 362.15 | 288.59 | 362.68 | 288.52 | 363.11 | 288.53 | 367.7 | 288.86 |
| 369.98 | 289.04 | 371.11 | 289.12 | 372.31 | 289.14 | 373.32 | 289.13 | 374.09 | 289.08 |
| 375.77 | 288.9 | 379.28 | 288.41 | 386.68 | 287.45 | 387.34 | 287.43 | 390.14 | 287.3 |
| 403.08 | 286.94 | 408.05 | 286.87 | 409.84 | 286.86 | 410.25 | 286.87 | 424.85 | 286.72 |
| 425.19 | 286.71 | 437.13 | 286.49 | 439.14 | 286.44 | 439.58 | 286.46 | 444.97 | 286.42 |
| 446.01 | 286.45 | 447.82 | 286.48 | 458.93 | 286.68 | 463.05 | 286.67 | 464.11 | 286.63 |
| 465.41 | 286.41 | 466.16 | 286.47 | 471.12 | 286.97 | 473.45 | 287.22 | 476.09 | 288.05 |
| 477.26 | 289.01 | 478.08 | 289.71 | 479.1 | 289.79 | 480.59 | 289.88 | 482.63 | 289.96 |
| 482.99 | 289.99 | 490.13 | 290 | 490.21 | 289.88 | 491.06 | 289.75 | 494.04 | 288.27 |
| 494.33 | 288.11 | 496.02 | 287.29 | 497.78 | 286.46 | 499.41 | 286.26 | 500.15 | 286.2 |
| 503.58 | 286.22 | 505.69 | 286.24 | 507.66 | 286.31 | 511.45 | 286.35 | 512.75 | 286.35 |
| 516.86 | 286.39 | 518.46 | 286.39 | 520.55 | 286.33 | 527.19 | 286.47 | 528.82 | 286.48 |
| 532.3 | 286.45 | 535.45 | 286.41 | 552.26 | 286.39 | 553.36 | 286.39 | 554.79 | 286.35 |
| 559.01 | 286.25 | 563.44 | 286.12 | 569.45 | 286.07 | 570.27 | 286.08 | 576.94 | 286 |
| 577.96 | 285.99 | 579.49 | 285.93 | 581.31 | 285.95 | 586.52 | 286.04 | 586.61 | 286.15 |
| 587 | 286.21 | 588 | 286.29 | 588.72 | 286.33 | 592.63 | 286.48 | 600.33 | 286.73 |
| 601.58 | 286.72 | 604.61 | 286.8 | 605.13 | 286.8 | 612.2 | 286.94 | 612.98 | 286.95 |
| 615.12 | 287.04 | 623.45 | 287.34 | 626.81 | 287.42 | 641.7 | 287.42 | 642.81 | 287.41 |
| 643.6 | 287.43 | 645.79 | 287.44 | 646.35 | 287.43 | 647.47 | 287.44 | 650.42 | 287.41 |
| 651.6 | 287.41 | 654.66 | 287.39 | 657.83 | 287.35 | 660.08 | 287.25 | 663.6 | 287.17 |
| 665.45 | 287.18 | 667.31 | 287.13 | 668.99 | 287.14 | 670.58 | 287.07 | 671.46 | 287.01 |
| 672.06 | 286.99 | 679.37 | 286.91 | 680.19 | 286.89 | 680.88 | 286.84 | 684.07 | 286.84 |
| 685.85 | 286.85 | 686.65 | 286.83 | 688.67 | 286.84 | 689.87 | 286.83 | 694.47 | 286.82 |
| 696.86 | 286.84 | 698.28 | 286.87 | 708.41 | 287.21 | 713.34 | 287.48 | 713.8 | 287.49 |
| 719.01 | 287.8 | 721.05 | 287.87 | 722.7 | 287.87 | 724.08 | 287.85 | 725.05 | 287.8 |
| 730.86 | 287.76 | 731.89 | 287.73 | 732.25 | 287.74 | 734.84 | 287.72 | 736.49 | 287.8 |
| 737.65 | 287.81 | 738.67 | 287.84 | 739.88 | 287.81 | 741.94 | 287.74 | 743.96 | 287.74 |
| 744.09 | 287.75 | 746.83 | 287.79 | 752.29 | 287.75 | 755.94 | 287.69 | 756.5 | 287.67 |
| 761.86 | 287.41 | 762.33 | 287.38 | 763.5 | 287.36 | 765.66 | 287.34 | 769.01 | 287.32 |
| 771.57 | 287.31 | 772.6 | 287.29 | 773.18 | 287.31 | 775.81 | 287.23 | 778 | 287.18 |
| 780.25 | 287.15 | 784.55 | 287.11 | 787.13 | 287.12 | 788.73 | 287.09 | 794.12 | 287.11 |
| 799.44 | 287.16 | 799.64 | 287.18 | 804.84 | 287.18 | 808.04 | 287.09 | 810.06 | 287.08 |
| 813.88 | 287.12 | 816 | 287.16 | 817.9 | 287.18 | 820.2 | 287.23 | 821.46 | 287.25 |
| 822.3 | 287.25 | 824.51 | 287.15 | 827.15 | 287.09 | 828.37 | 287.08 | 829.1 | 287.09 |
| 830.66 | 287.14 | 831.29 | 287.19 | 833.84 | 287.3 | 839.06 | 287.49 | 841.13 | 287.61 |
| 844.49 | 287.75 | 847.39 | 287.82 | 848.3 | 287.86 | 849.86 | 287.91 | 855.91 | 287.91 |
| 856.32 | 287.89 | 857.23 | 287.9 | 857.86 | 287.88 | 859.78 | 287.87 | 863.72 | 287.9 |
| 865.93 | 287.89 | 867.69 | 287.92 | 871.83 | 287.92 | 873.05 | 287.91 | 878.05 | 287.84 |
| 878.38 | 287.83 | 883.97 | 287.84 | 884.93 | 287.89 | 887.01 | 287.94 | 894.6 | 287.61 |
| 896.09 | 287.51 | 904.03 | 287.55 | 905.57 | 287.56 | 910.52 | 287.56 | 911.81 | 287.53 |
| 915.36 | 287.39 | 916.67 | 287.41 | 917.67 | 287.44 | 919.28 | 287.44 | 920.91 | 287.46 |
| 923.89 | 287.46 | 925.64 | 287.45 | 929.31 | 287.42 | 932.87 | 287.38 | 933.78 | 287.36 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 936.99 | 287.37 | 940.16 | 287.41 | 940.32 | 287.4 | 944.35 | 287.33 | 947.07 | 287.31 |
| 949.7 | 287.28 | 955.76 | 287.29 | 956.8 | 287.3 | 964.37 | 287.54 | 965.17 | 287.57 |
| 967.13 | 287.68 | 977.1 | 287.96 | 979.83 | 288.05 | 981.24 | 288.09 | 981.89 | 288.13 |
| 983.6 | 288.2 | 984.5 | 288.22 | 991.95 | 288.44 | 993.44 | 288.45 | 995.17 | 288.41 |
| 999.01 | 288.37 | 999.89 | 288.35 | 1000.63 | 288.35 | 1003.36 | 288.4 | 1004.72 | 288.39 |
| 1006.05 | 288.36 | 1006.54 | 288.33 | 1007.56 | 288.32 | 1015.65 | 288.44 | 1019.36 | 288.52 |
| 1019.58 | 288.55 | 1020.45 | 288.57 | 1022.07 | 288.57 | 1023.28 | 288.56 | 1030.72 | 288.44 |
| 1031.44 | 288.4 | 1032.01 | 288.39 | 1035.09 | 288.23 | 1036.59 | 288.13 | 1039.17 | 288.04 |
| 1039.79 | 287.99 | 1041.03 | 287.99 | 1048.96 | 288.11 | 1052.65 | 288.02 | 1054.06 | 288.03 |
| 1055.86 | 288.21 | 1056.54 | 288.24 | 1057.66 | 288.34 | 1059.16 | 288.46 | 1060.33 | 288.51 |
| 1065.04 | 288.81 | 1069.03 | 288.87 | 1074.1 | 288.93 | 1075.6 | 288.94 | 1076.94 | 288.9 |
| 1079.16 | 288.8 | 1086.43 | 288.6 | 1090.86 | 288.53 | 1094.04 | 288.46 | 1097.48 | 288.4 |
| 1098.29 | 288.42 | 1098.56 | 288.45 | 1100.1 | 288.46 | 1102.06 | 288.51 | 1103.83 | 288.57 |
| 1105.52 | 288.66 | 1106.46 | 288.7 | 1108.92 | 288.7 | 1112.68 | 288.72 | 1113.68 | 288.67 |
| 1116.61 | 288.63 | 1117.78 | 288.63 | 1118.14 | 288.65 | 1121.97 | 288.66 | 1124.13 | 288.66 |
| 1126.57 | 288.65 | 1128.01 | 288.6 | 1132.91 | 288.4 | 1134.35 | 288.39 | 1136.02 | 288.35 |
| 1137.07 | 288.34 | 1139.46 | 288.27 | 1140.67 | 288.27 | 1141.59 | 288.25 | 1143.76 | 288.25 |
| 1149.33 | 288.28 | 1149.84 | 288.3 | 1153.3 | 288.36 | 1154.56 | 288.41 | 1158.57 | 288.52 |
| 1163.04 | 288.6 | 1163.71 | 288.6 | 1167.03 | 288.66 | 1169.78 | 288.65 | 1172.19 | 288.66 |
| 1175.08 | 288.66 | 1180.71 | 288.7 | 1181.37 | 288.69 | 1182.33 | 288.63 | 1184.21 | 288.58 |
| 1188.79 | 288.5 | 1191.31 | 288.45 | 1192.81 | 288.45 | 1194.12 | 288.47 | 1211.67 | 288.88 |
| 1214.88 | 288.99 | 1224.4 | 289.16 | 1227.7 | 289.19 | 1228.59 | 289.19 | 1232.15 | 289.24 |
| 1240.03 | 289.39 | 1242.02 | 289.61 | 1244.9 | 289.96 | 1246.8 | 290.23 | 1249.8 | 290.71 |
| 1251.27 | 291.02 | 1252.16 | 291.18 | 1254.16 | 291.59 | 1254.95 | 291.8 | 1255.9 | 292.03 |
| 1257.31 | 292.42 | 1258.38 | 292.73 | 1259.8 | 293.03 | 1260.31 | 293.12 | 1264.23 | 294.29 |
| 1265.95 | 294.81 | 1269.97 | 295.98 | 1270.79 | 296.28 | 1272.48 | 296.96 | 1275.62 | 298.18 |
| 1277.1 | 298.79 | 1278.4 | 299.28 | 1280.72 | 300.25 | 1281.36 | 300.51 | 1282.09 | 300.74 |
| 1283.08 | 301.02 | 1283.8 | 301.24 | 1285.97 | 301.91 | 1286.88 | 302.21 | 1288.19 | 302.71 |
| 1288.69 | 302.94 | 1289.13 | 303.1 | 1290.22 | 303.55 | 1292.14 | 304.43 | 1295.89 | 306.2 |
| 1297.81 | 307.08 | 1297.88 | 307.12 | 1300.61 | 308.28 | 1304.33 | 309.84 | 1306.72 | 310.8 |
| 1308.41 | 311.47 | 1309.2 | 311.84 | 1310.39 | 312.32 | 1311.39 | 312.78 | 1312.95 | 313.4 |
| 1315.27 | 314.45 | 1317.61 | 315.48 | 1318.33 | 315.82 | 1320.09 | 316.49 | 1322.18 | 317.05 |
| 1323.59 | 317.33 | 1326.64 | 318.01 | 1327.39 | 318.19 | 1328.6 | 318.35 | 1333.49 | 319.02 |
| 1334.45 | 319.14 | 1335.98 | 319.17 | 1343.39 | 319.35 | 1353.18 | 319.51 | 1353.68 | 319.52 |
| 1359.82 | 319.59 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 360.21 | .04 | 1283.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 360.21 | 1283.8 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1800.52*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 311.46 | 1.36 | 311.4 | 4.46 | 311.4 | 7.04 | 311.26 | 8 | 311.26 |
| 8.88 | 311.24 | 9.81 | 311.18 | 17.55 | 310.66 | 19.44 | 310.28 | 21.66 | 309.73 |
| 25.39 | 309.24 | 28.99 | 308.75 | 36.03 | 308.04 | 38.93 | 307.74 | 43.61 | 307.2 |
| 47.23 | 306.83 | 48.51 | 306.75 | 49.89 | 306.76 | 50.74 | 306.71 | 52.94 | 305.83 |
| 53.42 | 305.72 | 54.42 | 305.68 | 55.57 | 305.83 | 58.35 | 306.17 | 59.24 | 306.17 |
| 60.26 | 306.2 | 62.3 | 306.37 | 65.99 | 306.43 | 66.87 | 306.47 | 67.65 | 306.54 |
| 70.74 | 306.48 | 72.55 | 306.51 | 79.11 | 306.63 | 79.6 | 306.61 | 82.76 | 306.6 |
| 88.75 | 306.52 | 93.05 | 306.45 | 93.6 | 306.43 | 97.9 | 306.35 | 99.67 | 306.24 |
| 101.23 | 306.17 | 102.54 | 306.03 | 104.8 | 305.75 | 115.58 | 304.06 | 116.27 | 303.94 |
| 121.52 | 303.35 | 123.38 | 303.03 | 127.33 | 302.55 | 146 | 300.29 | 152.21 | 299.67 |
| 157.82 | 299.35 | 159.11 | 299.21 | 161.37 | 298.9 | 167.12 | 298.05 | 170.65 | 297.58 |
| 171.87 | 297.48 | 173.74 | 297.41 | 174.57 | 297.42 | 176.31 | 297.48 | 177.49 | 297.48 |
| 182.76 | 297.22 | 183.76 | 297.18 | 186.78 | 297.03 | 190.37 | 296.72 | 190.55 | 296.7 |
| 197.25 | 296.05 | 200.93 | 295.61 | 207.06 | 294.87 | 213.95 | 294.2 | 215.44 | 294.08 |
| 216.47 | 294.01 | 217.41 | 293.96 | 220.29 | 293.84 | 220.9 | 293.8 | 224.57 | 293.59 |
| 225.81 | 293.5 | 226.92 | 293.45 | 227.07 | 293.43 | 229.91 | 293.17 | 239.24 | 292.43 |
| 251.59 | 291.49 | 251.92 | 291.45 | 255.39 | 291.23 | 258.61 | 291.1 | 264.49 | 290.88 |
| 283.6 | 290.36 | 283.81 | 290.35 | 290.69 | 290.26 | 296.73 | 290.16 | 297.67 | 290.15 |
| 299.05 | 290.15 | 299.34 | 290.14 | 300.89 | 290.18 | 306.62 | 290.23 | 310.17 | 290.23 |
| 313.07 | 290.24 | 315.41 | 290.21 | 324.4 | 289.97 | 328.26 | 289.85 | 330.54 | 289.81 |
| 333.03 | 289.78 | 333.63 | 289.76 | 336.97 | 289.74 | 343.18 | 289.64 | 348.77 | 289.56 |
| 349.11 | 289.56 | 353.3 | 289.5 | 354.37 | 289.48 | 355.51 | 289.48 | 358.54 | 289.4 |
| 365.6 | 289.23 | 367.75 | 289.03 | 370.55 | 288.78 | 374.67 | 288.4 | 375.96 | 288.28 |
| 376.63 | 288.16 | 377.18 | 288.09 | 377.61 | 288.1 | 378.7 | 288.18 | 379.3 | 288.24 |
| 382.78 | 288.51 | 385.02 | 288.72 | 385.74 | 288.77 | 386.96 | 288.79 | 387.98 | 288.78 |
| 388.77 | 288.74 | 390.48 | 288.55 | 394.04 | 288.06 | 401.56 | 287.09 | 402.23 | 287.07 |
| 405.08 | 286.95 | 418.22 | 286.58 | 423.27 | 286.51 | 425.09 | 286.5 | 425.51 | 286.51 |
| 440.34 | 286.36 | 440.69 | 286.35 | 452.82 | 286.14 | 454.86 | 286.09 | 455.31 | 286.1 |
| 460.78 | 286.07 | 461.72 | 286.11 | 463.68 | 286.14 | 474.97 | 286.35 | 479.15 | 286.33 |
| 480.23 | 286.3 | 481.56 | 286.06 | 482.31 | 286.12 | 487.35 | 286.66 | 489.72 | 286.91 |
| 492.4 | 287.79 | 493.45 | 288.66 | 494.43 | 289.53 | 494.83 | 289.57 | 496.98 | 289.7 |
| 499.42 | 289.82 | 506.67 | 289.82 | 506.75 | 289.7 | 507.61 | 289.56 | 510.64 | 288 |
| 510.94 | 287.83 | 512.65 | 286.96 | 514.45 | 286.1 | 516.1 | 285.88 | 517.06 | 285.81 |
| 519.74 | 285.84 | 522.48 | 285.86 | 524.48 | 285.93 | 528.33 | 285.97 | 530.28 | 285.98 |
| 533.83 | 286.01 | 535.45 | 286.01 | 537.58 | 285.94 | 538.63 | 285.97 | 544.33 | 286.09 |
| 545.98 | 286.11 | 548.35 | 286.1 | 552.72 | 286.06 | 570.91 | 286.06 | 573.31 | 286 |
| 576.66 | 285.91 | 581.16 | 285.78 | 587.27 | 285.73 | 588.1 | 285.75 | 594.88 | 285.67 |
| 595.91 | 285.66 | 597.46 | 285.6 | 599.1 | 285.61 | 599.26 | 285.62 | 601.44 | 285.65 |
| 604.41 | 285.7 | 604.51 | 285.81 | 604.89 | 285.87 | 605.87 | 285.96 | 606.83 | 286.01 |
| 610.46 | 286.14 | 618.07 | 286.38 | 619.31 | 286.36 | 622.31 | 286.44 | 622.82 | 286.44 |
| 629.81 | 286.57 | 630.58 | 286.58 | 632.7 | 286.67 | 634.64 | 286.74 | 635.7 | 286.79 |
| 640.94 | 286.98 | 644.26 | 287.06 | 660.08 | 287.06 | 661.98 | 287.1 | 663.59 | 287.1 |
| 664.69 | 287.11 | 668.78 | 287.07 | 671.81 | 287.05 | 674.94 | 287.01 | 677.16 | 286.9 |
| 680.65 | 286.83 | 682.48 | 286.84 | 684.32 | 286.79 | 686.36 | 286.79 | 687.55 | 286.73 |
| 688.42 | 286.66 | 689.02 | 286.64 | 690.74 | 286.61 | 696.25 | 286.55 | 697.05 | 286.52 |
| 697.74 | 286.47 | 700.89 | 286.47 | 701.61 | 286.48 | 702.37 | 286.47 | 704.65 | 286.47 |
| 705.44 | 286.49 | 706.63 | 286.48 | 711.18 | 286.5 | 713.54 | 286.52 | 714.95 | 286.56 |
| 724.96 | 286.91 | 729.84 | 287.19 | 730.3 | 287.2 | 732.16 | 287.32 | 735.45 | 287.52 |
| 737.47 | 287.6 | 739.1 | 287.61 | 740.47 | 287.58 | 741.54 | 287.53 | 745.68 | 287.49 |
| 746.15 | 287.5 | 748.18 | 287.45 | 750.48 | 287.43 | 750.8 | 287.42 | 752.74 | 287.5 |
| 754.9 | 287.54 | 756.09 | 287.51 | 758.13 | 287.44 | 760.13 | 287.44 | 760.26 | 287.45 |
| 762.97 | 287.48 | 768.05 | 287.42 | 768.36 | 287.42 | 772.53 | 287.34 | 777.83 | 287.12 |
| 778.29 | 287.09 | 779.45 | 287.07 | 780.79 | 287.06 | 781.59 | 287.04 | 785.71 | 287 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 787.43 | 287 | 788.45 | 286.99 | 789.02 | 287 | 791.62 | 286.93 | 793.79 | 286.88 |
| 796.02 | 286.84 | 800.28 | 286.8 | 802.98 | 286.81 | 804.4 | 286.79 | 809.74 | 286.81 |
| 815 | 286.86 | 815.19 | 286.89 | 820.34 | 286.89 | 823.51 | 286.79 | 825.51 | 286.78 |
| 829.28 | 286.82 | 833.26 | 286.88 | 836.78 | 286.94 | 837.61 | 286.94 | 838.63 | 286.88 |
| 839.79 | 286.83 | 842.41 | 286.76 | 844.33 | 286.75 | 845.87 | 286.8 | 846.5 | 286.85 |
| 849.02 | 286.96 | 854.19 | 287.14 | 854.96 | 287.19 | 858.1 | 287.33 | 860.26 | 287.41 |
| 863.11 | 287.49 | 864.87 | 287.55 | 870.85 | 287.57 | 871.26 | 287.55 | 874.68 | 287.53 |
| 875.95 | 287.54 | 876.89 | 287.56 | 878.57 | 287.57 | 880.97 | 287.57 | 882.5 | 287.6 |
| 886.6 | 287.6 | 892.75 | 287.5 | 893.07 | 287.49 | 898.61 | 287.5 | 899.55 | 287.55 |
| 901.61 | 287.6 | 902.76 | 287.55 | 908.42 | 287.27 | 910.58 | 287.13 | 918.44 | 287.16 |
| 919.96 | 287.17 | 924.86 | 287.17 | 926.14 | 287.15 | 929.65 | 287.04 | 931.93 | 287.1 |
| 935.14 | 287.12 | 938.09 | 287.12 | 943.45 | 287.09 | 943.77 | 287.08 | 946.96 | 287.06 |
| 947.87 | 287.03 | 951.04 | 287.05 | 954.33 | 287.08 | 958.71 | 286.98 | 961.01 | 286.97 |
| 963.61 | 286.94 | 970.36 | 286.94 | 970.63 | 286.95 | 978.9 | 287.17 | 978.91 | 287.18 |
| 980.85 | 287.3 | 990.71 | 287.59 | 994.8 | 287.73 | 997.14 | 287.83 | 998.03 | 287.85 |
| 1005.4 | 288.08 | 1006.62 | 288.09 | 1008.58 | 288.06 | 1013.25 | 288.01 | 1013.98 | 288.01 |
| 1016.68 | 288.06 | 1018.03 | 288.06 | 1019.34 | 288.02 | 1019.83 | 287.99 | 1020.84 | 287.97 |
| 1028.84 | 288.09 | 1032.51 | 288.17 | 1032.73 | 288.2 | 1033.58 | 288.23 | 1035.19 | 288.23 |
| 1036.39 | 288.22 | 1043.74 | 288.08 | 1045.01 | 288.04 | 1048.07 | 287.87 | 1049.55 | 287.77 |
| 1052.1 | 287.68 | 1052.71 | 287.63 | 1053.94 | 287.62 | 1056.34 | 287.66 | 1057.2 | 287.68 |
| 1061.78 | 287.74 | 1065.43 | 287.7 | 1066.65 | 287.7 | 1067.26 | 287.75 | 1068.27 | 287.86 |
| 1069.18 | 287.92 | 1070.39 | 288.03 | 1071.87 | 288.15 | 1073.03 | 288.19 | 1077.69 | 288.5 |
| 1081.63 | 288.55 | 1086.65 | 288.6 | 1088.13 | 288.61 | 1089.19 | 288.58 | 1091.65 | 288.48 |
| 1098.84 | 288.27 | 1103.1 | 288.2 | 1103.22 | 288.19 | 1106.37 | 288.12 | 1109.77 | 288.07 |
| 1110.51 | 288.08 | 1110.84 | 288.12 | 1111.27 | 288.11 | 1114.3 | 288.17 | 1116.47 | 288.24 |
| 1117.03 | 288.28 | 1118.5 | 288.34 | 1118.65 | 288.37 | 1121.09 | 288.37 | 1124.81 | 288.39 |
| 1126.51 | 288.33 | 1129.85 | 288.29 | 1130.21 | 288.31 | 1136.13 | 288.31 | 1138.54 | 288.3 |
| 1139.96 | 288.25 | 1144.81 | 288.05 | 1147.12 | 288.03 | 1148.93 | 288 | 1151.29 | 287.93 |
| 1153.4 | 287.92 | 1155.54 | 287.92 | 1159.62 | 287.93 | 1160.52 | 287.94 | 1164.98 | 288.02 |
| 1166.22 | 288.06 | 1170.19 | 288.17 | 1176.23 | 288.28 | 1177.29 | 288.31 | 1179.08 | 288.33 |
| 1180.72 | 288.31 | 1183.67 | 288.32 | 1186.52 | 288.32 | 1192.08 | 288.36 | 1192.74 | 288.35 |
| 1193.9 | 288.28 | 1195.55 | 288.23 | 1195.92 | 288.23 | 1198.93 | 288.16 | 1202.57 | 288.09 |
| 1204.05 | 288.09 | 1205.36 | 288.1 | 1222.71 | 288.5 | 1222.77 | 288.51 | 1226.23 | 288.61 |
| 1227.48 | 288.63 | 1235.3 | 288.78 | 1237.71 | 288.82 | 1238.56 | 288.82 | 1241.53 | 288.86 |
| 1242.96 | 288.89 | 1250.76 | 289.04 | 1253.39 | 289.36 | 1253.45 | 289.36 | 1255.57 | 289.63 |
| 1257.46 | 289.9 | 1260.42 | 290.38 | 1261.88 | 290.67 | 1262.75 | 290.82 | 1264.54 | 291.16 |
| 1265.51 | 291.4 | 1266.45 | 291.61 | 1267.28 | 291.82 | 1268.91 | 292.25 | 1269.37 | 292.34 |
| 1270.81 | 292.59 | 1272.02 | 292.92 | 1274.83 | 293.72 | 1277.72 | 294.53 | 1278.98 | 294.87 |
| 1280.37 | 295.26 | 1280.82 | 295.41 | 1282.85 | 296.2 | 1285.96 | 297.39 | 1287.42 | 297.98 |
| 1288.71 | 298.46 | 1291 | 299.42 | 1291.39 | 299.59 | 1292.02 | 299.81 | 1294.05 | 300.46 |
| 1296.21 | 301.18 | 1297.11 | 301.5 | 1298.42 | 302.03 | 1298.92 | 302.27 | 1300.43 | 302.91 |
| 1302.35 | 303.83 | 1306.08 | 305.65 | 1308.06 | 306.6 | 1310.77 | 307.8 | 1314.47 | 309.41 |
| 1316.39 | 310.21 | 1316.85 | 310.41 | 1318.53 | 311.1 | 1319.33 | 311.49 | 1320.5 | 311.99 |
| 1321.5 | 312.47 | 1323.05 | 313.12 | 1325.36 | 314.23 | 1327.69 | 315.31 | 1328.4 | 315.66 |
| 1330.16 | 316.37 | 1332.24 | 316.96 | 1333.64 | 317.25 | 1337.42 | 318.14 | 1338.63 | 318.31 |
| 1343.49 | 318.98 | 1344.44 | 319.1 | 1351.63 | 319.24 | 1363.08 | 319.38 | 1363.58 | 319.39 |
| 1369.69 | 319.44 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 374.67 | .04 | 1294.05 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| Left | Right | Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 374.67 | 1294.05 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1780.66*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 311.17 | 1.41 | 311.12 | 4.64 | 311.14 | 7.31 | 311.01 | 8.31 | 311.02 |
| 9.22 | 311 | 18.23 | 310.44 | 20.19 | 310.05 | 22.5 | 309.49 | 26.37 | 308.99 |
| 30.1 | 308.5 | 31.15 | 308.4 | 37.42 | 307.79 | 40.44 | 307.49 | 42.61 | 307.26 |
| 45.29 | 306.95 | 49.06 | 306.59 | 50.38 | 306.51 | 51.81 | 306.51 | 52.7 | 306.47 |
| 54.98 | 305.55 | 55.48 | 305.44 | 56.52 | 305.39 | 57.71 | 305.55 | 60.6 | 305.9 |
| 61.53 | 305.9 | 62.59 | 305.93 | 64.7 | 306.11 | 68.54 | 306.17 | 69.45 | 306.22 |
| 70.26 | 306.28 | 73.47 | 306.22 | 75.35 | 306.26 | 82.17 | 306.39 | 82.67 | 306.37 |
| 85.95 | 306.36 | 92.18 | 306.28 | 96.64 | 306.22 | 97.21 | 306.2 | 101.68 | 306.12 |
| 103.52 | 306.01 | 105.14 | 305.93 | 106.5 | 305.79 | 108.84 | 305.5 | 120.04 | 303.75 |
| 120.76 | 303.63 | 125.92 | 303.05 | 126.21 | 303.01 | 128.14 | 302.69 | 132.24 | 302.19 |
| 151.63 | 299.86 | 158.09 | 299.22 | 163.91 | 298.9 | 165.25 | 298.76 | 167.6 | 298.44 |
| 173.57 | 297.56 | 177.23 | 297.07 | 178.5 | 296.97 | 180.44 | 296.9 | 181.31 | 296.91 |
| 183.12 | 296.98 | 184.33 | 296.98 | 190.85 | 296.67 | 193.03 | 296.58 | 193.99 | 296.52 |
| 197.71 | 296.2 | 204.86 | 295.5 | 208.68 | 295.03 | 215.05 | 294.25 | 222.2 | 293.53 |
| 223.76 | 293.4 | 224.82 | 293.33 | 225.79 | 293.28 | 229.43 | 293.11 | 233.24 | 292.87 |
| 234.53 | 292.78 | 235.67 | 292.73 | 235.83 | 292.71 | 238.78 | 292.45 | 239.06 | 292.43 |
| 248.47 | 291.7 | 261.29 | 290.74 | 261.64 | 290.71 | 265.24 | 290.49 | 268.59 | 290.36 |
| 268.75 | 290.36 | 274.69 | 290.16 | 294.54 | 289.66 | 294.76 | 289.66 | 301.9 | 289.57 |
| 308.17 | 289.48 | 310.59 | 289.48 | 310.89 | 289.47 | 312.5 | 289.52 | 317.23 | 289.58 |
| 318.45 | 289.58 | 322.14 | 289.6 | 325.15 | 289.61 | 327.58 | 289.59 | 336.92 | 289.37 |
| 340.92 | 289.26 | 342.14 | 289.25 | 343.3 | 289.22 | 345.88 | 289.2 | 346.51 | 289.19 |
| 349.97 | 289.18 | 358.52 | 289.1 | 368.04 | 289.03 | 369.23 | 289.04 | 372.37 | 288.97 |
| 379.7 | 288.82 | 384.85 | 288.36 | 387.44 | 288.12 | 389.12 | 287.97 | 390.44 | 287.85 |
| 391.12 | 287.73 | 391.67 | 287.66 | 393.22 | 287.76 | 393.82 | 287.83 | 395.31 | 287.95 |
| 397.36 | 288.13 | 399.64 | 288.35 | 400.37 | 288.41 | 401.61 | 288.44 | 402.65 | 288.44 |
| 403.44 | 288.4 | 405.18 | 288.21 | 408.8 | 287.7 | 416.44 | 286.73 | 417.12 | 286.7 |
| 420.01 | 286.6 | 433.36 | 286.22 | 438.49 | 286.15 | 440.76 | 286.15 | 455.83 | 286.01 |
| 456.18 | 286 | 468.51 | 285.78 | 470.59 | 285.74 | 471.04 | 285.75 | 476.6 | 285.73 |
| 477.68 | 285.76 | 479.54 | 285.79 | 491.01 | 286.02 | 495.26 | 286 | 496.35 | 285.97 |
| 497.7 | 285.72 | 498.47 | 285.78 | 503.59 | 286.34 | 505.99 | 286.61 | 507.91 | 287.25 |
| 508.72 | 287.53 | 509.93 | 288.59 | 510.78 | 289.36 | 511.82 | 289.44 | 513.36 | 289.53 |
| 515.47 | 289.63 | 515.85 | 289.66 | 523.21 | 289.65 | 523.3 | 289.52 | 524.17 | 289.38 |
| 527.24 | 287.74 | 527.54 | 287.55 | 529.29 | 286.64 | 531.11 | 285.73 | 532.79 | 285.51 |
| 533.77 | 285.43 | 536.48 | 285.45 | 537.09 | 285.46 | 539.27 | 285.47 | 541.31 | 285.55 |
| 545.22 | 285.59 | 547.19 | 285.6 | 550.8 | 285.63 | 552.45 | 285.63 | 553.98 | 285.57 |
| 554.61 | 285.56 | 555.67 | 285.58 | 558.11 | 285.64 | 561.47 | 285.71 | 562.58 | 285.74 |
| 565.55 | 285.74 | 566.74 | 285.73 | 569.99 | 285.72 | 588.47 | 285.73 | 590.9 | 285.67 |
| 594.3 | 285.58 | 598.87 | 285.44 | 605.08 | 285.4 | 605.92 | 285.41 | 613.86 | 285.33 |
| 615.44 | 285.27 | 617.21 | 285.28 | 619.36 | 285.31 | 622.31 | 285.36 | 622.4 | 285.48 |
| 622.78 | 285.53 | 623.75 | 285.62 | 624.7 | 285.67 | 628.28 | 285.79 | 635.81 | 286.03 |
| 637.04 | 286.01 | 640 | 286.08 | 640.5 | 286.08 | 647.42 | 286.19 | 648.19 | 286.21 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 650.28 | 286.3 | 652.19 | 286.37 | 653.25 | 286.42 | 658.43 | 286.62 | 661.71 | 286.71 |
| 676.64 | 286.71 | 677.36 | 286.7 | 678.14 | 286.73 | 681.46 | 286.78 | 688.95 | 286.71 |
| 689.48 | 286.7 | 692.05 | 286.68 | 694.25 | 286.56 | 697.7 | 286.49 | 699.51 | 286.5 |
| 700.4 | 286.48 | 701.33 | 286.44 | 702.96 | 286.45 | 704.52 | 286.38 | 705.38 | 286.31 |
| 705.97 | 286.29 | 707.67 | 286.26 | 711.45 | 286.21 | 713.12 | 286.18 | 713.92 | 286.15 |
| 714.59 | 286.1 | 717.71 | 286.1 | 718.42 | 286.11 | 720.69 | 286.11 | 723.39 | 286.14 |
| 727.89 | 286.17 | 730.22 | 286.2 | 731.62 | 286.24 | 741.52 | 286.61 | 746.35 | 286.9 |
| 746.8 | 286.91 | 750.28 | 287.14 | 751.89 | 287.24 | 753.89 | 287.33 | 755.5 | 287.34 |
| 756.85 | 287.31 | 757.91 | 287.26 | 762.01 | 287.22 | 763.48 | 287.2 | 764.48 | 287.16 |
| 766.75 | 287.14 | 767.07 | 287.12 | 768.98 | 287.2 | 771.12 | 287.24 | 772.3 | 287.21 |
| 773.31 | 287.17 | 774.16 | 287.15 | 776.3 | 287.14 | 776.42 | 287.15 | 779.1 | 287.17 |
| 784.13 | 287.09 | 784.44 | 287.09 | 788.56 | 287.01 | 793.8 | 286.82 | 794.26 | 286.8 |
| 797.27 | 286.75 | 797.52 | 286.74 | 801.59 | 286.69 | 803.3 | 286.69 | 804.31 | 286.68 |
| 804.87 | 286.69 | 809.58 | 286.58 | 811.79 | 286.54 | 816 | 286.5 | 818.67 | 286.5 |
| 820.08 | 286.48 | 825.36 | 286.51 | 830.55 | 286.56 | 830.75 | 286.59 | 835.84 | 286.59 |
| 838.97 | 286.49 | 840.95 | 286.47 | 844.68 | 286.51 | 846.75 | 286.55 | 848.61 | 286.57 |
| 852.1 | 286.63 | 852.92 | 286.62 | 855.07 | 286.5 | 857.66 | 286.42 | 859.56 | 286.41 |
| 861.09 | 286.46 | 861.71 | 286.51 | 864.2 | 286.62 | 869.31 | 286.8 | 871.33 | 286.9 |
| 875.32 | 287.05 | 877.45 | 287.11 | 879.87 | 287.19 | 880.46 | 287.2 | 885.79 | 287.23 |
| 886.19 | 287.21 | 889.58 | 287.19 | 891.77 | 287.23 | 893.42 | 287.24 | 895.41 | 287.24 |
| 896.4 | 287.27 | 897.31 | 287.28 | 901.36 | 287.27 | 902.55 | 287.26 | 907.45 | 287.17 |
| 907.76 | 287.15 | 913.24 | 287.15 | 914.17 | 287.21 | 916.2 | 287.26 | 922.94 | 286.9 |
| 925.08 | 286.76 | 933.43 | 286.77 | 934.36 | 286.78 | 939.2 | 286.78 | 943.94 | 286.7 |
| 945.01 | 286.74 | 946.2 | 286.77 | 947.77 | 286.77 | 948.4 | 286.78 | 952.28 | 286.78 |
| 961.22 | 286.73 | 961.95 | 286.71 | 965.09 | 286.73 | 968.19 | 286.76 | 968.34 | 286.75 |
| 972.29 | 286.65 | 974.95 | 286.63 | 977.52 | 286.6 | 983.44 | 286.58 | 984.46 | 286.59 |
| 991.87 | 286.77 | 992.66 | 286.78 | 994.57 | 286.91 | 1004.32 | 287.22 | 1008.37 | 287.36 |
| 1009.01 | 287.39 | 1011.56 | 287.48 | 1018.84 | 287.71 | 1019.22 | 287.72 | 1020.58 | 287.72 |
| 1025.76 | 287.68 | 1027.33 | 287.68 | 1030 | 287.73 | 1031.33 | 287.72 | 1032.63 | 287.68 |
| 1033.11 | 287.65 | 1034.12 | 287.63 | 1042.03 | 287.75 | 1044.71 | 287.8 | 1045.66 | 287.83 |
| 1046.72 | 287.88 | 1048.31 | 287.88 | 1049.49 | 287.87 | 1056.77 | 287.73 | 1058.22 | 287.69 |
| 1061.04 | 287.51 | 1062.5 | 287.4 | 1065.03 | 287.31 | 1065.63 | 287.26 | 1066.85 | 287.25 |
| 1069.22 | 287.29 | 1070.07 | 287.31 | 1074.61 | 287.38 | 1078.95 | 287.37 | 1079.6 | 287.39 |
| 1081.15 | 287.56 | 1081.92 | 287.61 | 1084.58 | 287.84 | 1085.72 | 287.88 | 1090.34 | 288.18 |
| 1094.24 | 288.23 | 1100.66 | 288.28 | 1101.71 | 288.25 | 1104.14 | 288.15 | 1111.26 | 287.93 |
| 1115.47 | 287.86 | 1115.58 | 287.85 | 1121.4 | 287.74 | 1122.06 | 287.73 | 1122.85 | 287.75 |
| 1123.12 | 287.79 | 1123.54 | 287.78 | 1124.62 | 287.79 | 1125.4 | 287.81 | 1126.54 | 287.82 |
| 1128.69 | 287.89 | 1129.93 | 287.97 | 1130.69 | 288 | 1130.85 | 288.03 | 1133.25 | 288.04 |
| 1136.93 | 288.07 | 1138.61 | 288.01 | 1140.77 | 287.96 | 1141.91 | 287.95 | 1142.27 | 287.97 |
| 1146.01 | 287.96 | 1148.13 | 287.96 | 1150.52 | 287.94 | 1151.92 | 287.89 | 1156.72 | 287.7 |
| 1159.75 | 287.67 | 1160.79 | 287.67 | 1163.12 | 287.59 | 1165.2 | 287.58 | 1167.32 | 287.58 |
| 1171.36 | 287.6 | 1172.25 | 287.6 | 1176.66 | 287.68 | 1177.89 | 287.71 | 1181.81 | 287.82 |
| 1186.18 | 287.91 | 1187.79 | 287.94 | 1188.84 | 287.97 | 1190.6 | 287.99 | 1192.77 | 287.97 |
| 1197.96 | 287.99 | 1203.46 | 288.02 | 1204.38 | 287.99 | 1205.26 | 287.94 | 1206.89 | 287.88 |
| 1207.26 | 287.88 | 1211.37 | 287.78 | 1213.84 | 287.73 | 1215.3 | 287.72 | 1216.59 | 287.73 |
| 1233.75 | 288.13 | 1237.23 | 288.23 | 1238.47 | 288.25 | 1246.2 | 288.41 | 1248.58 | 288.45 |
| 1252.36 | 288.5 | 1261.48 | 288.7 | 1264.09 | 289.02 | 1266.25 | 289.31 | 1268.11 | 289.57 |
| 1271.04 | 290.05 | 1272.48 | 290.32 | 1273.35 | 290.46 | 1275.12 | 290.77 | 1277.01 | 291.19 |
| 1279.43 | 291.77 | 1281.32 | 292.06 | 1282.9 | 292.47 | 1285.16 | 293.07 | 1286.84 | 293.51 |
| 1288.14 | 293.86 | 1290.77 | 294.54 | 1291.57 | 294.81 | 1293.22 | 295.44 | 1296.29 | 296.59 |
| 1297.74 | 297.17 | 1299.02 | 297.64 | 1301.91 | 298.85 | 1304.01 | 299.57 | 1304.29 | 299.68 |
| 1305.15 | 300 | 1306.45 | 300.45 | 1307.34 | 300.79 | 1308.65 | 301.36 | 1309.14 | 301.61 |
| 1310.65 | 302.27 | 1311.87 | 302.89 | 1312.56 | 303.22 | 1316.26 | 305.1 | 1318.16 | 306.04 |
| 1318.24 | 306.07 | 1320.94 | 307.31 | 1324.62 | 308.98 | 1328.66 | 310.74 | 1329.57 | 311.19 |
| 1330.63 | 311.66 | 1331.61 | 312.16 | 1332.59 | 312.58 | 1333.15 | 312.84 | 1335.45 | 314 |
| 1337.77 | 315.14 | 1338.48 | 315.5 | 1340.23 | 316.25 | 1342.3 | 316.86 | 1343.69 | 317.17 |
| 1344.93 | 317.47 | 1347.28 | 318.05 | 1347.45 | 318.1 | 1348.65 | 318.26 | 1353.49 | 318.95 |
| 1354.44 | 319.07 | 1361.59 | 319.16 | 1363.29 | 319.17 | 1372.98 | 319.26 | 1373.48 | 319.26 |
| 1379.55 | 319.29 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 389.12 | .04 | 1304.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 389.12 | 1304.29 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1760.8*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.87 | 1.64 | 310.84 | 4.81 | 310.88 | 7.58 | 310.75 | 8.62 | 310.77 |
| 9.57 | 310.75 | 10.56 | 310.7 | 13.91 | 310.51 | 18.9 | 310.22 | 20.94 | 309.82 |
| 23.33 | 309.24 | 27.35 | 308.74 | 31.22 | 308.25 | 32.31 | 308.15 | 38.82 | 307.54 |
| 41.94 | 307.25 | 46.98 | 306.71 | 50.88 | 306.34 | 52.25 | 306.26 | 53.74 | 306.27 |
| 54.65 | 306.23 | 57.03 | 305.28 | 57.54 | 305.16 | 58.62 | 305.11 | 59.86 | 305.28 |
| 62.85 | 305.64 | 63.81 | 305.64 | 64.91 | 305.66 | 67.11 | 305.84 | 71.08 | 305.91 |
| 72.03 | 305.96 | 72.87 | 306.03 | 76.2 | 305.96 | 85.22 | 306.15 | 85.74 | 306.13 |
| 89.15 | 306.13 | 95.6 | 306.05 | 100.23 | 305.99 | 100.82 | 305.97 | 105.45 | 305.89 |
| 106.25 | 305.85 | 107.36 | 305.77 | 109.04 | 305.7 | 110.45 | 305.55 | 112.89 | 305.25 |
| 124.5 | 303.44 | 125.24 | 303.31 | 130.59 | 302.72 | 130.9 | 302.68 | 132.9 | 302.34 |
| 137.15 | 301.83 | 157.27 | 299.43 | 163.96 | 298.78 | 170 | 298.45 | 171.39 | 298.3 |
| 173.82 | 297.97 | 180.01 | 297.06 | 183.82 | 296.56 | 185.13 | 296.46 | 187.15 | 296.39 |
| 188.04 | 296.4 | 189.92 | 296.48 | 191.18 | 296.48 | 197.94 | 296.17 | 200.2 | 296.07 |
| 201.19 | 296.02 | 205.06 | 295.69 | 212.47 | 294.94 | 216.43 | 294.45 | 223.04 | 293.62 |
| 230.46 | 292.87 | 232.07 | 292.73 | 233.17 | 292.65 | 234.18 | 292.59 | 237.29 | 292.45 |
| 243.24 | 292.07 | 244.43 | 292.01 | 247.65 | 291.72 | 247.94 | 291.7 | 271 | 290 |
| 271.36 | 289.96 | 275.1 | 289.74 | 278.56 | 289.63 | 278.74 | 289.63 | 284.9 | 289.43 |
| 305.48 | 288.97 | 305.71 | 288.96 | 319.62 | 288.81 | 320.64 | 288.8 | 322.12 | 288.81 |
| 322.44 | 288.8 | 324.11 | 288.85 | 329.02 | 288.93 | 332.08 | 288.95 | 334.1 | 288.97 |
| 337.23 | 288.99 | 339.75 | 288.98 | 349.43 | 288.77 | 351.79 | 288.71 | 353.59 | 288.67 |
| 354.85 | 288.66 | 356.05 | 288.64 | 358.73 | 288.63 | 359.38 | 288.61 | 362.97 | 288.61 |
| 369.67 | 288.6 | 371.83 | 288.59 | 375.68 | 288.58 | 376.05 | 288.59 | 381.71 | 288.58 |
| 383.3 | 288.59 | 393.81 | 288.41 | 396.12 | 288.2 | 399.14 | 287.94 | 401.83 | 287.7 |
| 403.58 | 287.55 | 404.91 | 287.43 | 405.6 | 287.3 | 406.17 | 287.23 | 406.61 | 287.25 |
| 407.74 | 287.34 | 408.35 | 287.41 | 409.87 | 287.55 | 411.95 | 287.75 | 415 | 288.06 |
| 416.26 | 288.09 | 417.31 | 288.09 | 418.12 | 288.05 | 419.89 | 287.86 | 423.56 | 287.35 |
| 431.32 | 286.36 | 434.95 | 286.25 | 448.51 | 285.86 | 453.72 | 285.79 | 455.6 | 285.79 |
| 456.02 | 285.8 | 471.33 | 285.66 | 471.68 | 285.65 | 484.2 | 285.43 | 486.31 | 285.38 |
| 486.77 | 285.4 | 492.41 | 285.38 | 493.38 | 285.42 | 495.4 | 285.45 | 507.05 | 285.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 511.36 | 285.67 | 512.48 | 285.63 | 513.85 | 285.37 | 514.62 | 285.44 | 519.82 | 286.03 |
| 522.27 | 286.3 | 525.03 | 287.26 | 525.83 | 287.98 | 526.12 | 288.22 | 527.12 | 289.18 |
| 527.54 | 289.22 | 529.75 | 289.36 | 531.89 | 289.46 | 532.27 | 289.49 | 539.75 | 289.47 |
| 539.84 | 289.34 | 540.72 | 289.19 | 543.85 | 287.47 | 544.15 | 287.28 | 545.92 | 286.32 |
| 547.78 | 285.37 | 549.48 | 285.13 | 550.47 | 285.05 | 553.23 | 285.07 | 553.85 | 285.08 |
| 556.06 | 285.09 | 558.13 | 285.17 | 563.29 | 285.22 | 564.11 | 285.22 | 566.38 | 285.24 |
| 567.77 | 285.26 | 569.44 | 285.25 | 571.64 | 285.17 | 575.19 | 285.26 | 579.91 | 285.37 |
| 587.26 | 285.37 | 604.88 | 285.4 | 606.02 | 285.41 | 607.53 | 285.36 | 608.5 | 285.34 |
| 611.95 | 285.24 | 616.59 | 285.11 | 622.9 | 285.06 | 623.75 | 285.08 | 631.81 | 285 |
| 633.41 | 284.93 | 637.06 | 284.97 | 637.29 | 284.98 | 640.2 | 285.01 | 640.29 | 285.14 |
| 640.66 | 285.2 | 641.62 | 285.29 | 642.56 | 285.34 | 653.55 | 285.68 | 654.76 | 285.65 |
| 657.7 | 285.72 | 658.19 | 285.72 | 665.79 | 285.83 | 669.75 | 286 | 670.79 | 286.05 |
| 675.91 | 286.26 | 679.16 | 286.35 | 694.63 | 286.35 | 696.49 | 286.41 | 697.52 | 286.42 |
| 698.06 | 286.44 | 699.14 | 286.45 | 700.98 | 286.42 | 706.1 | 286.37 | 706.62 | 286.37 |
| 709.16 | 286.34 | 711.33 | 286.22 | 714.74 | 286.14 | 716.53 | 286.16 | 717.41 | 286.14 |
| 718.33 | 286.1 | 719.95 | 286.11 | 721.49 | 286.04 | 722.34 | 285.96 | 722.93 | 285.94 |
| 727.46 | 285.86 | 728.94 | 285.83 | 730 | 285.82 | 730.78 | 285.79 | 731.45 | 285.73 |
| 734.54 | 285.73 | 735.24 | 285.74 | 735.85 | 285.73 | 738.22 | 285.76 | 738.99 | 285.78 |
| 740.15 | 285.79 | 744.6 | 285.84 | 746.91 | 285.88 | 748.29 | 285.92 | 758.07 | 286.3 |
| 758.6 | 286.34 | 762.85 | 286.61 | 763.29 | 286.62 | 765.11 | 286.75 | 768.33 | 286.97 |
| 770.3 | 287.06 | 771.9 | 287.07 | 773.24 | 287.05 | 774.17 | 287 | 778.33 | 286.94 |
| 778.79 | 286.95 | 780.78 | 286.88 | 781.14 | 286.88 | 783.34 | 286.83 | 785.23 | 286.91 |
| 787.09 | 286.93 | 787.35 | 286.94 | 789.51 | 286.88 | 790.35 | 286.85 | 792.46 | 286.83 |
| 792.59 | 286.84 | 795.24 | 286.86 | 800.21 | 286.77 | 800.51 | 286.76 | 804.59 | 286.68 |
| 809.77 | 286.53 | 810.22 | 286.51 | 812.66 | 286.47 | 813.45 | 286.45 | 816.69 | 286.39 |
| 817.48 | 286.38 | 819.16 | 286.38 | 820.16 | 286.37 | 820.71 | 286.39 | 823.26 | 286.32 |
| 825.38 | 286.27 | 831.72 | 286.19 | 834.36 | 286.19 | 835.75 | 286.17 | 840.97 | 286.21 |
| 846.11 | 286.27 | 846.3 | 286.3 | 851.34 | 286.3 | 854.44 | 286.19 | 856.39 | 286.17 |
| 860.08 | 286.21 | 863.97 | 286.27 | 866.19 | 286.3 | 868.22 | 286.31 | 869.22 | 286.24 |
| 870.36 | 286.18 | 872.92 | 286.09 | 874.09 | 286.07 | 874.8 | 286.07 | 876.3 | 286.12 |
| 876.92 | 286.17 | 879.38 | 286.28 | 884.43 | 286.46 | 888.52 | 286.62 | 894.88 | 286.83 |
| 895.45 | 286.84 | 900.73 | 286.88 | 901.13 | 286.86 | 902.01 | 286.87 | 902.61 | 286.86 |
| 904.47 | 286.86 | 905.72 | 286.87 | 906.64 | 286.9 | 908.28 | 286.92 | 910.34 | 286.92 |
| 911.22 | 286.95 | 912.12 | 286.96 | 916.13 | 286.95 | 917.3 | 286.93 | 922.14 | 286.83 |
| 922.46 | 286.81 | 927.87 | 286.81 | 928.79 | 286.86 | 930.8 | 286.91 | 931.93 | 286.85 |
| 938.15 | 286.49 | 939.58 | 286.38 | 947.26 | 286.39 | 953.97 | 286.39 | 958.22 | 286.35 |
| 959.28 | 286.4 | 960.46 | 286.43 | 962.02 | 286.43 | 962.64 | 286.44 | 966.47 | 286.44 |
| 967.87 | 286.43 | 971.72 | 286.42 | 973.3 | 286.42 | 975.31 | 286.41 | 976.04 | 286.39 |
| 982.36 | 286.43 | 986.64 | 286.31 | 991.43 | 286.27 | 997.29 | 286.23 | 998.3 | 286.23 |
| 1005.62 | 286.38 | 1006.4 | 286.39 | 1008.19 | 286.53 | 1008.29 | 286.53 | 1020.01 | 286.92 |
| 1022.57 | 287.02 | 1025.09 | 287.11 | 1032.29 | 287.35 | 1032.67 | 287.36 | 1034.01 | 287.36 |
| 1035.4 | 287.35 | 1039.13 | 287.34 | 1040.69 | 287.34 | 1043.33 | 287.39 | 1044.64 | 287.38 |
| 1045.93 | 287.34 | 1046.4 | 287.3 | 1047.39 | 287.28 | 1055.21 | 287.41 | 1057.87 | 287.45 |
| 1058.8 | 287.48 | 1059.02 | 287.51 | 1059.85 | 287.54 | 1061.42 | 287.54 | 1062.6 | 287.53 |
| 1069.79 | 287.38 | 1071.22 | 287.34 | 1074.02 | 287.16 | 1075.46 | 287.04 | 1077.96 | 286.95 |
| 1078.56 | 286.89 | 1079.76 | 286.88 | 1082.95 | 286.95 | 1087.43 | 287.02 | 1091 | 287.04 |
| 1092.36 | 287.06 | 1094.1 | 287.26 | 1095.07 | 287.33 | 1097.29 | 287.53 | 1098.42 | 287.57 |
| 1102.98 | 287.87 | 1106.84 | 287.91 | 1113.19 | 287.95 | 1114.23 | 287.92 | 1116.64 | 287.83 |
| 1123.67 | 287.6 | 1133.7 | 287.41 | 1134.57 | 287.4 | 1135.08 | 287.41 | 1135.4 | 287.45 |
| 1135.82 | 287.44 | 1136.89 | 287.45 | 1137.66 | 287.47 | 1138.78 | 287.48 | 1140.38 | 287.52 |
| 1141.45 | 287.59 | 1142.89 | 287.66 | 1143.04 | 287.69 | 1149.06 | 287.74 | 1150.02 | 287.7 |
| 1152.16 | 287.64 | 1153.98 | 287.61 | 1154.34 | 287.63 | 1158.19 | 287.62 | 1160.13 | 287.61 |
| 1162.49 | 287.59 | 1163.88 | 287.54 | 1168.62 | 287.35 | 1172.64 | 287.33 | 1174.95 | 287.25 |
| 1179.11 | 287.25 | 1183.1 | 287.26 | 1184.5 | 287.27 | 1188.34 | 287.33 | 1188.79 | 287.35 |
| 1193.81 | 287.48 | 1195 | 287.5 | 1198.13 | 287.58 | 1199.34 | 287.6 | 1200.38 | 287.63 |
| 1202.13 | 287.65 | 1204.27 | 287.63 | 1209.4 | 287.65 | 1214.84 | 287.68 | 1215.75 | 287.65 |
| 1216.61 | 287.6 | 1218.23 | 287.54 | 1218.59 | 287.54 | 1219.92 | 287.5 | 1222.32 | 287.44 |
| 1225.1 | 287.36 | 1226.54 | 287.36 | 1227.82 | 287.37 | 1244.79 | 287.75 | 1244.85 | 287.76 |
| 1249.45 | 287.87 | 1259.45 | 288.08 | 1262.98 | 288.14 | 1264.59 | 288.18 | 1272.21 | 288.35 |
| 1274.14 | 288.6 | 1276.92 | 288.98 | 1278.77 | 289.24 | 1281.66 | 289.72 | 1282.9 | 289.94 |
| 1284.44 | 290.18 | 1285.88 | 290.42 | 1286.64 | 290.59 | 1287.56 | 290.77 | 1288.93 | 291.06 |
| 1289.96 | 291.29 | 1291.82 | 291.53 | 1293.39 | 291.91 | 1297.29 | 292.87 | 1301.17 | 293.81 |
| 1301.96 | 294.08 | 1306.15 | 295.62 | 1307.59 | 296.18 | 1308.07 | 296.35 | 1309.32 | 296.82 |
| 1312.19 | 298.02 | 1312.89 | 298.29 | 1314.54 | 298.9 | 1315.4 | 299.24 | 1316.68 | 299.72 |
| 1317.58 | 300.08 | 1318.58 | 300.54 | 1319.37 | 300.94 | 1320.68 | 301.55 | 1322.08 | 302.27 |
| 1322.76 | 302.61 | 1326.45 | 304.55 | 1328.34 | 305.52 | 1334.54 | 308.44 | 1336.66 | 309.4 |
| 1337.12 | 309.62 | 1338.78 | 310.37 | 1339.69 | 310.84 | 1340.73 | 311.33 | 1341.72 | 311.85 |
| 1343.26 | 312.56 | 1345.54 | 313.78 | 1347.85 | 314.96 | 1348.55 | 315.35 | 1350.29 | 316.12 |
| 1352.35 | 316.77 | 1353.74 | 317.08 | 1354.97 | 317.4 | 1356.74 | 317.85 | 1357.48 | 318.05 |
| 1363.77 | 318.95 | 1364.62 | 319.04 | 1365.94 | 319.04 | 1373.24 | 319.09 | 1382.88 | 319.13 |
| 1389.42 | 319.15 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 403.58 | .04 | 1314.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 403.58 | 1314.54 | 20.65 | 19.86 | 20.35 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1740.94

INPUT
Description:
Station Elevation Data num= 433

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.57 | 1.699951 | 310.56 | 4.97998 | 310.62 | 7.849976 | 310.58 | .930054 | 310.52 |
| 9.910034 | 310.51 | 19.57996 | 310 | 21.69006 | 309.59 | 24.17004 | 309 | 32.33997 | 308 |
| 43.44006 | 30 | 748.66003 | 306.46 | 52.69995 | 306.09 | 54.12 | 306.01 | 55.66003 | 306.03 |
| 56.60999 | 305.99 | 59.06995 | 305 | 59.59998 | 304.88 | 60.12 | 304.85 | 60.71997 | 304.83 |
| 62 | 305 | 65.09998 | 305.37 | 66.09998 | 305.37 | 67.23999 | 305.39 | 69.51001 | 305.58 |
| 73.63 | 305.65 | 74.60999 | 305 | 75.47998 | 305.77 | 78.93005 | 305 | 78.27002 | 305.91 |
| 88.97998 | 305.89 | 92.33997 | 305.89 | 103.8199 | 305.76 | 104.4301 | 305.74 | 109.23 | 305.66 |
| 110.0601 | 305.62 | 111.21 | 305.54 | 112.95 | 305.46 | 114.41 | 305.31 | 116.88 | 305.01 |
| 116.9301 | 305 | 128.96 | 303.13 | 129.73 | 303 | 135.59 | 302.35 | 137.66 | 302 |
| 162.9 | 299 | 169.83 | 298.33 | 176.09 | 298 | 176.51 | 297.97 | 176.76 | 297.93 |
| 177.53 | 297.85 | 180.05 | 297.51 | 186.46 | 296.57 | 190.4 | 296.05 | 190.98 | 296 |
| 191.76 | 295.95 | 193.85 | 295.88 | 194.78 | 295.89 | 196.72 | 295.98 | 197.51 | 295.99 |
| 198.03 | 295.98 | 207.37 | 295.57 | 208.4 | 295.51 | 212.4 | 295.17 | 220.08 | 294.39 |
| 231.03 | 293 | 238.71 | 292.2 | 240.38 | 292.05 | 241.04 | 292 | 242.49 | 291.92 |
| 242.5699 | 291.91 | 245.79 | 291.75 | 246.47 | 291.71 | 251.95 | 291.35 | 253.1801 | 291.29 |
| 256.52 | 291 | 280.75 | 289.25 | 281.08 | 289.22 | 284.95 | 289 | 288.54 | 288.89 |
| 288.72 | 288.89 | 295.1 | 288.7 | 316.42 | 288.27 | 331.0699 | 288.13 | 332.12 | 288.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 332.63 | 288.14 | 333.66 | 288.14 | 333.99 | 288.13 | 335.72 | 288.19 | 340.8 | 288.28 |
| 349.3101 | 288.37 | 351.92 | 288.36 | 366.25 | 288.08 | 367.5601 | 288.07 | 368.8 | 288.05 |
| 371.58 | 288.05 | 372.25 | 288.04 | 389.14 | 288.09 | 389.52 | 288.1 | 395.38 | 288.13 |
| 396.66 | 288.15 | 397.03 | 288.15 | 399.64 | 288.12 | 400.04 | 288.11 | 407.91 | 288 |
| 418.03 | 287.12 | 419.39 | 287 | 419.88 | 286.92 | 420.09 | 286.87 | 420.66 | 286.8 |
| 421.11 | 286.82 | 422.26 | 286.92 | 422.88 | 287 | 426 | 287.31 | 426.0601 | 287.31 |
| 428.88 | 287.63 | 429.63 | 287.7 | 430.91 | 287.74 | 431.98 | 287.75 | 432.8 | 287.71 |
| 433.11 | 287.68 | 434.59 | 287.52 | 438.3199 | 287 | 446.2 | 286 | 463.65 | 285.5 |
| 468.9401 | 285.43 | 470.85 | 285.43 | 471.28 | 285.44 | 486.8199 | 285.31 | 487.1801 | 285.3 |
| 499.89 | 285.08 | 500.42 | 285.07 | 500.98 | 285.05 | 501.48 | 285.05 | 502.03 | 285.03 |
| 502.5 | 285.05 | 508.23 | 285.03 | 509.21 | 285.07 | 509.34 | 285.07 | 523.09 | 285.36 |
| 527.47 | 285.34 | 528.6 | 285.3 | 529.99 | 285.03 | 530.78 | 285.1 | 538.54 | 286 |
| 540.52 | 286.7 | 541.35 | 287 | 542.16 | 287.75 | 542.45 | 288 | 542.6 | 288.16 |
| 543.47 | 289 | 543.89 | 289.04 | 544.55 | 289.09 | 546.14 | 289.19 | 548.31 | 289.29 |
| 548.7 | 289.32 | 556.29 | 289.3 | 556.38 | 289.16 | 556.72 | 289.09 | 557.28 | 289 |
| 560.45 | 287.2 | 560.76 | 287 | 562.56 | 286 | 564.44 | 285 | 566.17 | 284.75 |
| 566.96 | 284.68 | 567.18 | 284.67 | 572.85 | 284.71 | 573.52 | 284.73 | 574.95 | 284.79 |
| 584.82 | 284.88 | 586.44 | 284.87 | 587.72 | 284.82 | 588.02 | 284.8 | 588.67 | 284.79 |
| 597.32 | 285 | 623.58 | 285.08 | 634.31 | 284.77 | 640.71 | 284.73 | 641.58 | 284.75 |
| 649.49 | 284.67 | 649.76 | 284.67 | 651.39 | 284.6 | 658.09 | 284.67 | 658.18 | 284.8 |
| 658.55 | 284.86 | 659.5 | 284.95 | 660.43 | 285 | 671.29 | 285.33 | 671.57 | 285.33 |
| 671.79 | 285.31 | 672.49 | 285.3 | 672.8 | 285.31 | 675.39 | 285.36 | 675.88 | 285.36 |
| 683.39 | 285.46 | 693.4 | 285.9 | 696.61 | 286 | 711.91 | 286 | 712.67 | 286.03 |
| 715.92 | 286.12 | 726.17 | 286 | 726.27 | 286 | 728.42 | 285.88 | 731.79 | 285.8 |
| 733.56 | 285.82 | 734.43 | 285.8 | 735.34 | 285.76 | 736.94 | 285.77 | 737.31 | 285.76 |
| 738.46 | 285.69 | 739.3 | 285.61 | 739.88 | 285.59 | 746.87 | 285.45 | 747.65 | 285.42 |
| 748.31 | 285.36 | 751.36 | 285.36 | 752.05 | 285.37 | 752.66 | 285.36 | 752.9 | 285.37 |
| 763.59 | 285.56 | 764.34 | 285.58 | 774.63 | 286 | 775.15 | 286.04 | 779.35 | 286.32 |
| 779.79 | 286.33 | 784.77 | 286.69 | 786.72 | 286.79 | 788.3 | 286.8 | 789.62 | 286.78 |
| 790.54 | 286.73 | 791.15 | 286.72 | 794.66 | 286.67 | 795.11 | 286.67 | 796.1 | 286.64 |
| 797.08 | 286.59 | 797.43 | 286.59 | 799.3 | 286.55 | 799.61 | 286.53 | 799.91 | 286.54 |
| 801.48 | 286.61 | 802.59 | 286.62 | 803.52 | 286.64 | 806.79 | 286.55 | 808.63 | 286.53 |
| 808.75 | 286.54 | 811.37 | 286.55 | 828.6 | 286.17 | 828.77 | 286.16 | 832.58 | 286.08 |
| 833.36 | 286.07 | 834.46 | 286.07 | 836.01 | 286.06 | 836.56 | 286.08 | 839.86 | 286 |
| 841.17 | 285.97 | 847.44 | 285.88 | 849.9 | 285.88 | 851.43 | 285.86 | 861.67 | 285.97 |
| 861.86 | 286 | 866.84 | 286 | 869.9 | 285.89 | 871.83 | 285.87 | 882.73 | 286 |
| 883.53 | 285.99 | 884.52 | 285.92 | 885.1 | 285.89 | 885.64 | 285.85 | 888.17 | 285.75 |
| 889.33 | 285.73 | 890.03 | 285.73 | 891.52 | 285.78 | 891.78 | 285.81 | 892.13 | 285.83 |
| 894.56 | 285.94 | 909.99 | 286.48 | 915.67 | 286.54 | 916.06 | 286.52 | 916.74 | 286.52 |
| 916.93 | 286.53 | 917.53 | 286.52 | 919.37 | 286.52 | 920.6 | 286.54 | 921.51 | 286.57 |
| 923.13 | 286.59 | 925.07 | 286.6 | 926.18 | 286.63 | 926.93 | 286.64 | 930.89 | 286.62 |
| 932.05 | 286.6 | 936.84 | 286.49 | 937.15 | 286.47 | 942.5 | 286.46 | 942.63 | 286.48 |
| 943.41 | 286.52 | 945.4 | 286.57 | 951.99 | 286.16 | 952.66 | 286.12 | 954.08 | 286 |
| 972.51 | 286 | 973.56 | 286.06 | 974.72 | 286.1 | 989.25 | 286.09 | 990.1 | 286.07 |
| 996.22 | 286.11 | 996.37 | 286.1 | 1000.23 | 285.98 | 1000.61 | 285.97 | 1011.87 | 285.87 |
| 1012.13 | 285.87 | 1019.56 | 285.99 | 1020.12 | 286 | 1021.91 | 286.14 | 1022.01 | 286.14 |
| 1045.74 | 286.99 | 1046.11 | 287 | 1054.04 | 287 | 1056.65 | 287.05 | 1057.95 | 287.04 |
| 1059.22 | 287 | 1059.69 | 286.96 | 1060.67 | 286.94 | 1071.42 | 287.11 | 1071.95 | 287.13 |
| 1072.16 | 287.16 | 1072.54 | 287.18 | 1072.99 | 287.19 | 1074.54 | 287.19 | 1075.7 | 287.18 |
| 1084.04 | 287 | 1084.23 | 286.99 | 1086.99 | 286.8 | 1088.42 | 286.68 | 1090.89 | 286.58 |
| 1091.48 | 286.52 | 1092.67 | 286.51 | 1094.99 | 286.56 | 1095.25 | 286.56 | 1095.82 | 286.58 |
| 1104.76 | 286.73 | 1105.13 | 286.74 | 1106.65 | 286.92 | 1110 | 287.22 | 1111.12 | 287.26 |
| 1115.63 | 287.56 | 1125.72 | 287.62 | 1136.08 | 287.26 | 1146 | 287.07 | 1146.64 | 287.06 |
| 1147.36 | 287.08 | 1147.68 | 287.12 | 1148.09 | 287.11 | 1149.53 | 287.12 | 1149.91 | 287.13 |
| 1150.98 | 287.14 | 1152.71 | 287.18 | 1153.12 | 287.2 | 1153.66 | 287.24 | 1155.08 | 287.32 |
| 1155.23 | 287.35 | 1161.18 | 287.42 | 1162.01 | 287.38 | 1164.93 | 287.29 | 1166.05 | 287.27 |
| 1166.4 | 287.29 | 1174.46 | 287.24 | 1180.52 | 287 | 1184.5 | 286.99 | 1186.78 | 286.91 |
| 1196.22 | 286.93 | 1200.21 | 286.99 | 1200.46 | 287 | 1211.92 | 287.29 | 1213.14 | 287.31 |
| 1213.65 | 287.31 | 1215.52 | 287.29 | 1226.22 | 287.34 | 1226.85 | 287.32 | 1227.77 | 287.26 |
| 1229.74 | 287.18 | 1229.93 | 287.19 | 1236.36 | 287 | 1237.79 | 286.99 | 1239.05 | 287 |
| 1273.94 | 287.79 | 1274.02 | 287.79 | 1282.94 | 288 | 1289.42 | 288.91 | 1293.51 | 289.59 |
| 1296.27 | 290 | 1300.5 | 290.81 | 1302.33 | 291 | 1311.57 | 293.09 | 1312.17 | 293.28 |
| 1316.97 | 295 | 1317.7 | 295.29 | 1319.63 | 296 | 1322 | 297 | 1322.83 | 297.34 |
| 1324.51 | 298 | 1324.79 | 298.12 | 1325.64 | 298.48 | 1326.94 | 299 | 1327.81 | 299.37 |
| 1329.1 | 300 | 1329.59 | 300.28 | 1331.08 | 301 | 1332.29 | 301.65 | 1332.97 | 302 |
| 1336.64 | 304 | 1338.52 | 305 | 1344.69 | 308 | 1344.91 | 308.11 | 1346.8 | 309 |
| 1347.25 | 309.22 | 1348.91 | 310 | 1349.69 | 310.43 | 1350.85 | 311 | 1351.83 | 311.54 |
| 1352.8 | 312 | 1353.36 | 312.28 | 1355.63 | 313.55 | 1357.93 | 314.79 | 1358.63 | 315.19 |
| 1360.36 | 316 | 1362.41 | 316.67 | 1363.79 | 317 | 1367.34 | 317.95 | 1367.51 | 318 |
| 1373.49 | 318.88 | 1374.43 | 319 | 1399.29 | 319 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 418.03 | .04 | 1324.79 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| Left | Right | Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 418.03 | 1324.79 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station= 1045.69 Elevation= 287.1

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1721.32*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.33 | 1.84 | 310.31 | 5.01 | 310.35 | 7.9 | 310.22 | 8.99 | 310.23 |
| 9.97 | 310.22 | 13.31 | 310.04 | 14.87 | 309.95 | 19.7 | 309.69 | 21.83 | 309.28 |
| 24.34 | 308.71 | 28.91 | 308.15 | 32.54 | 307.72 | 40.29 | 307.02 | 42.05 | 306.88 |
| 44.15 | 306.7 | 44.64 | 306.64 | 47.52 | 306.36 | 48.96 | 306.21 | 53.03 | 305.84 |
| 54.46 | 305.76 | 56.01 | 305.78 | 56.96 | 305.74 | 59.44 | 304.78 | 59.97 | 304.66 |
| 61.1 | 304.61 | 62.39 | 304.77 | 65.51 | 305.12 | 66.51 | 305.11 | 67.66 | 305.13 |
| 69.94 | 305.3 | 74.09 | 305.35 | 75.07 | 305.4 | 75.95 | 305.46 | 79.42 | 305.38 |
| 81.53 | 305.41 | 86.31 | 305.5 | 88.82 | 305.54 | 89.53 | 305.52 | 92.92 | 305.51 |
| 98.35 | 305.43 | 104.47 | 305.35 | 105.08 | 305.33 | 109.91 | 305.23 | 110.75 | 305.19 |
| 111.9 | 305.11 | 113.65 | 305.03 | 115.93 | 304.79 | 117.66 | 304.58 | 125.74 | 303.36 |
| 130.54 | 302.63 | 134.81 | 302.17 | 136.43 | 301.99 | 138.52 | 301.65 | 143.14 | 301.11 |
| 144.39 | 300.96 | 163.91 | 298.7 | 170.89 | 298.04 | 175.92 | 297.77 | 177.61 | 297.67 |
| 178.64 | 297.55 | 181.17 | 297.22 | 187.4 | 296.33 | 191.59 | 295.79 | 192.95 | 295.69 |
| 195.06 | 295.61 | 195.99 | 295.62 | 197.95 | 295.7 | 199.26 | 295.7 | 208.66 | 295.28 |
| 209.69 | 295.22 | 213.72 | 294.89 | 219.57 | 294.32 | 221.45 | 294.13 | 232.47 | 292.77 |
| 240.2 | 291.99 | 241.88 | 291.84 | 242.54 | 291.79 | 244.08 | 291.7 | 247.32 | 291.53 |
| 248 | 291.49 | 253.52 | 291.13 | 254.76 | 291.07 | 258.12 | 290.78 | 267.14 | 290.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 275.2 | 289.56 | 277.98 | 289.37 | 283.08 | 289.01 | 286.72 | 288.8 | 290.34 | 288.69 |
| 290.96 | 288.68 | 296.94 | 288.49 | 305.94 | 288.29 | 306.05 | 288.29 | 314.62 | 288.1 |
| 318.92 | 288.02 | 319.18 | 288.02 | 327.47 | 287.93 | 333.13 | 287.86 | 335.74 | 287.86 |
| 336.07 | 287.85 | 337.81 | 287.9 | 342.92 | 287.97 | 351.49 | 288.04 | 354.11 | 288.03 |
| 362.1 | 287.86 | 368.53 | 287.72 | 369.85 | 287.71 | 371.1 | 287.69 | 372.52 | 287.68 |
| 373.89 | 287.68 | 374.57 | 287.67 | 376.73 | 287.67 | 378.45 | 287.66 | 383.18 | 287.65 |
| 384.81 | 287.65 | 385.13 | 287.66 | 391.56 | 287.66 | 391.95 | 287.67 | 393.55 | 287.67 |
| 394.2 | 287.68 | 396.25 | 287.68 | 397.84 | 287.7 | 399.5 | 287.73 | 400.32 | 287.72 |
| 402.53 | 287.71 | 406.57 | 287.68 | 410.45 | 287.64 | 410.62 | 287.62 | 414.77 | 287.29 |
| 418.28 | 286.99 | 420.63 | 286.78 | 421.95 | 286.67 | 422.63 | 286.54 | 423.19 | 286.47 |
| 423.62 | 286.49 | 424.74 | 286.58 | 425.34 | 286.66 | 428.37 | 286.95 | 428.43 | 286.95 |
| 431.17 | 287.25 | 431.9 | 287.32 | 433.14 | 287.35 | 434.18 | 287.36 | 434.97 | 287.32 |
| 436.71 | 287.14 | 440.33 | 286.63 | 445.89 | 285.93 | 447.98 | 285.66 | 464.92 | 285.17 |
| 470.06 | 285.1 | 471.91 | 285.09 | 472.33 | 285.1 | 487.35 | 284.96 | 487.77 | 284.95 |
| 497.82 | 284.78 | 500.62 | 284.73 | 502.18 | 284.69 | 502.64 | 284.71 | 508.2 | 284.69 |
| 509.28 | 284.73 | 522.63 | 285 | 526.88 | 284.98 | 527.98 | 284.94 | 529.33 | 284.68 |
| 530.1 | 284.75 | 534.98 | 285.31 | 537.63 | 285.61 | 539.55 | 286.28 | 540.36 | 286.57 |
| 541.57 | 287.68 | 542.42 | 288.48 | 543.46 | 288.57 | 545.01 | 288.67 | 547.11 | 288.76 |
| 547.49 | 288.79 | 554.86 | 288.77 | 554.95 | 288.63 | 555.82 | 288.48 | 558.9 | 286.75 |
| 559.2 | 286.56 | 560.95 | 285.6 | 562.77 | 284.64 | 564.45 | 284.4 | 565.43 | 284.33 |
| 570.81 | 284.36 | 571.59 | 284.38 | 572.98 | 284.44 | 582.56 | 284.53 | 584.26 | 284.52 |
| 586.3 | 284.45 | 594.7 | 284.65 | 598.55 | 284.66 | 605.22 | 284.69 | 607.83 | 284.69 |
| 614.69 | 284.71 | 620.19 | 284.72 | 630.61 | 284.42 | 636.82 | 284.37 | 637.78 | 284.39 |
| 645.06 | 284.32 | 645.61 | 284.31 | 647.19 | 284.24 | 651.31 | 284.3 | 653.87 | 284.33 |
| 654.07 | 284.46 | 654.51 | 284.52 | 655.34 | 284.6 | 656.35 | 284.65 | 657.42 | 284.67 |
| 657.81 | 284.69 | 658.94 | 284.71 | 660.53 | 284.76 | 664.53 | 284.87 | 666.28 | 284.93 |
| 667.65 | 284.96 | 667.87 | 284.94 | 668.89 | 284.94 | 671.52 | 285 | 672.02 | 285 |
| 677.93 | 285.09 | 679.63 | 285.11 | 683.77 | 285.28 | 689.78 | 285.52 | 693.03 | 285.61 |
| 701.79 | 285.61 | 708.54 | 285.62 | 709.38 | 285.66 | 712.61 | 285.75 | 717.73 | 285.68 |
| 722.87 | 285.62 | 723.1 | 285.62 | 725.28 | 285.51 | 728.7 | 285.44 | 730.49 | 285.46 |
| 732.29 | 285.41 | 733.92 | 285.42 | 735.46 | 285.35 | 736.31 | 285.27 | 736.9 | 285.25 |
| 743.98 | 285.13 | 744.77 | 285.1 | 745.44 | 285.05 | 748.53 | 285.05 | 750.1 | 285.06 |
| 756.28 | 285.17 | 758.63 | 285.2 | 761.69 | 285.25 | 765.62 | 285.39 | 768.11 | 285.49 |
| 769.04 | 285.52 | 770.37 | 285.58 | 772.15 | 285.64 | 772.65 | 285.68 | 776.51 | 285.92 |
| 777.36 | 285.96 | 777.87 | 286 | 781.57 | 286.26 | 783.51 | 286.37 | 784.38 | 286.41 |
| 785.98 | 286.42 | 787.32 | 286.4 | 788.25 | 286.35 | 792.43 | 286.29 | 793.89 | 286.26 |
| 794.88 | 286.21 | 795.37 | 286.21 | 797.13 | 286.17 | 797.45 | 286.15 | 799.34 | 286.23 |
| 801.41 | 286.27 | 804.73 | 286.18 | 806.71 | 286.17 | 809.37 | 286.18 | 816.85 | 286.03 |
| 818.67 | 285.99 | 826.84 | 285.82 | 827.01 | 285.81 | 830.87 | 285.73 | 834.35 | 285.71 |
| 834.91 | 285.73 | 839.58 | 285.62 | 841.93 | 285.59 | 843.89 | 285.55 | 845.94 | 285.53 |
| 848.6 | 285.53 | 849.98 | 285.51 | 854.51 | 285.56 | 855.58 | 285.58 | 860.36 | 285.63 |
| 860.55 | 285.66 | 862.17 | 285.67 | 865.6 | 285.67 | 868.71 | 285.56 | 870.66 | 285.54 |
| 881.04 | 285.66 | 882.52 | 285.65 | 884.66 | 285.51 | 886.65 | 285.44 | 887.23 | 285.41 |
| 889.11 | 285.4 | 890.62 | 285.44 | 890.89 | 285.47 | 893.7 | 285.6 | 898.54 | 285.77 |
| 903.76 | 285.97 | 905.01 | 286 | 909.35 | 286.15 | 915.11 | 286.2 | 916.19 | 286.19 |
| 918.86 | 286.19 | 920.1 | 286.21 | 921.03 | 286.24 | 922.67 | 286.26 | 923.45 | 286.26 |
| 925.24 | 286.28 | 925.76 | 286.3 | 930.53 | 286.29 | 931.71 | 286.27 | 936.57 | 286.17 |
| 936.88 | 286.15 | 942.3 | 286.15 | 943.23 | 286.2 | 945.24 | 286.25 | 946.91 | 286.16 |
| 952.6 | 285.82 | 954.04 | 285.71 | 972.73 | 285.71 | 973.79 | 285.77 | 974.97 | 285.8 |
| 989.7 | 285.8 | 990.56 | 285.78 | 991.89 | 285.78 | 996.76 | 285.81 | 997.72 | 285.77 |
| 1001.21 | 285.67 | 1007.65 | 285.62 | 1008.77 | 285.62 | 1010.88 | 285.6 | 1012.89 | 285.6 |
| 1017.03 | 285.67 | 1019.6 | 285.72 | 1020.99 | 285.74 | 1022.65 | 285.85 | 1025.87 | 285.95 |
| 1031.94 | 286.12 | 1033.3 | 286.15 | 1046.96 | 286.62 | 1050.61 | 286.62 | 1050.69 | 286.63 |
| 1052.38 | 286.63 | 1055.38 | 286.64 | 1058.02 | 286.7 | 1059.34 | 286.69 | 1060.63 | 286.65 |
| 1061.11 | 286.61 | 1062.1 | 286.59 | 1063.75 | 286.62 | 1065.91 | 286.65 | 1070.05 | 286.7 |
| 1073 | 286.74 | 1073.54 | 286.76 | 1074.13 | 286.81 | 1076.16 | 286.81 | 1077.34 | 286.8 |
| 1080.35 | 286.74 | 1082.84 | 286.68 | 1085.05 | 286.64 | 1085.79 | 286.62 | 1087.1 | 286.55 |
| 1090.23 | 286.34 | 1092.74 | 286.25 | 1093.53 | 286.18 | 1094.54 | 286.17 | 1094.86 | 286.18 |
| 1098.83 | 286.26 | 1106.8 | 286.37 | 1107.17 | 286.38 | 1108.71 | 286.55 | 1112.11 | 286.84 |
| 1113.24 | 286.88 | 1117.82 | 287.17 | 1119.53 | 287.19 | 1123.24 | 287.21 | 1125 | 287.21 |
| 1128.04 | 287.23 | 1130.38 | 287.16 | 1131.67 | 287.13 | 1135.43 | 287.02 | 1138.15 | 286.93 |
| 1138.55 | 286.91 | 1143.94 | 286.81 | 1149.25 | 286.72 | 1149.98 | 286.74 | 1150.31 | 286.78 |
| 1150.72 | 286.77 | 1153.09 | 286.79 | 1155.41 | 286.83 | 1156.37 | 286.89 | 1157.81 | 286.96 |
| 1157.96 | 286.99 | 1160.38 | 287.01 | 1163.99 | 287.05 | 1164.83 | 287.01 | 1168.09 | 286.91 |
| 1168.93 | 286.9 | 1169.28 | 286.92 | 1171.69 | 286.9 | 1176.74 | 286.89 | 1177.46 | 286.88 |
| 1178.75 | 286.84 | 1181.8 | 286.73 | 1183.5 | 286.66 | 1184.2 | 286.65 | 1187.63 | 286.62 |
| 1189.95 | 286.54 | 1199.9 | 286.55 | 1201.02 | 286.57 | 1203.56 | 286.6 | 1204.92 | 286.64 |
| 1208.31 | 286.72 | 1213.21 | 286.83 | 1216.66 | 286.92 | 1219.42 | 286.91 | 1221.57 | 286.92 |
| 1222.11 | 286.93 | 1229.93 | 286.95 | 1230.57 | 286.93 | 1231.5 | 286.87 | 1233.5 | 286.78 |
| 1233.69 | 286.79 | 1235.47 | 286.74 | 1237.37 | 286.67 | 1239.71 | 286.6 | 1241.66 | 286.58 |
| 1243.1 | 286.6 | 1252.03 | 286.8 | 1256.13 | 286.88 | 1263.83 | 287.06 | 1278.3 | 287.39 |
| 1278.53 | 287.4 | 1287.42 | 287.59 | 1288.39 | 287.71 | 1294 | 288.46 | 1298.14 | 289.11 |
| 1300.94 | 289.51 | 1305.23 | 290.31 | 1307.08 | 290.5 | 1307.94 | 290.68 | 1312.55 | 291.71 |
| 1316.45 | 292.59 | 1317.06 | 292.78 | 1319.89 | 293.76 | 1320.17 | 293.87 | 1321.87 | 294.48 |
| 1323.58 | 295.14 | 1324.62 | 295.53 | 1327.03 | 296.56 | 1328.28 | 297.08 | 1329.57 | 297.59 |
| 1329.85 | 297.72 | 1332.34 | 298.76 | 1332.84 | 298.98 | 1334.12 | 299.62 | 1334.61 | 299.9 |
| 1336.08 | 300.62 | 1337.28 | 301.27 | 1338.29 | 301.8 | 1340.04 | 302.77 | 1341.59 | 303.62 |
| 1343.45 | 304.63 | 1347.59 | 306.67 | 1349.25 | 307.5 | 1351.65 | 308.66 | 1353.56 | 309.59 |
| 1353.74 | 309.67 | 1354.62 | 310.16 | 1355.66 | 310.68 | 1356.63 | 311.22 | 1358.15 | 311.96 |
| 1358.63 | 312.22 | 1360.4 | 313.21 | 1362.67 | 314.43 | 1363.37 | 314.83 | 1365.08 | 315.63 |
| 1367.11 | 316.31 | 1368.48 | 316.64 | 1369.95 | 317.05 | 1372.16 | 317.64 | 1378.08 | 318.53 |
| 1379.02 | 318.65 | 1382.52 | 318.67 | 1388.5 | 318.7 | 1389.14 | 318.71 | 1395.37 | 318.75 |
| 1403.64 | 318.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 420.63 | .04 | 1329.85 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 420.63 | 1329.85 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1045.454 Elevation=286.7988

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1701.71*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.09 | 1.72 | 310.06 | 5.04 | 310.08 | 7.95 | 309.94 | 9.04 | 309.95 |
| 10.03 | 309.93 | 13.39 | 309.74 | 19.82 | 309.37 | 21.96 | 308.98 | 24.49 | 308.41 |
| 29.09 | 307.85 | 31.67 | 307.57 | 33.14 | 307.4 | 35.64 | 307.18 | 40.54 | 306.74 |
| 43.5 | 306.52 | 44.42 | 306.44 | 44.91 | 306.38 | 47.82 | 306.11 | 49.27 | 305.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 53.36 | 305.6 | 54.79 | 305.52 | 56.35 | 305.52 | 57.32 | 305.48 | 59.81 | 304.56 |
| 60.34 | 304.45 | 61.48 | 304.39 | 62.77 | 304.54 | 65.91 | 304.86 | 66.92 | 304.85 |
| 67.95 | 304.86 | 70.38 | 305.02 | 74.55 | 305.06 | 75.54 | 305.09 | 76.42 | 305.15 |
| 79.91 | 305.06 | 82.04 | 305.08 | 86.85 | 305.14 | 89.37 | 305.18 | 90.09 | 305.15 |
| 93.49 | 305.13 | 98.96 | 305.04 | 105.11 | 304.93 | 105.73 | 304.91 | 110.59 | 304.81 |
| 111.43 | 304.77 | 112.6 | 304.68 | 114.36 | 304.6 | 116.65 | 304.36 | 118.39 | 304.15 |
| 124.45 | 303.26 | 130.57 | 302.38 | 131.35 | 302.26 | 133.77 | 302.01 | 137.28 | 301.63 |
| 139.37 | 301.29 | 140.77 | 301.14 | 145.28 | 300.61 | 164.93 | 298.4 | 171.95 | 297.75 |
| 177.01 | 297.48 | 178.71 | 297.38 | 179.74 | 297.26 | 182.29 | 296.93 | 188.78 | 296.02 |
| 192.77 | 295.52 | 194.15 | 295.42 | 196.26 | 295.35 | 197.21 | 295.35 | 199.17 | 295.42 |
| 199.97 | 295.43 | 200.5 | 295.41 | 209.95 | 294.99 | 210.99 | 294.94 | 215.05 | 294.61 |
| 222.82 | 293.87 | 224.78 | 293.63 | 233.91 | 292.54 | 241.68 | 291.77 | 244.04 | 291.58 |
| 245.59 | 291.48 | 249.54 | 291.27 | 255.54 | 290.88 | 256.33 | 290.85 | 259.71 | 290.57 |
| 268.8 | 289.94 | 276.91 | 289.35 | 279.7 | 289.16 | 284.25 | 288.86 | 284.84 | 288.81 |
| 288.5 | 288.61 | 292.13 | 288.49 | 292.76 | 288.48 | 298.78 | 288.28 | 307.83 | 288.06 |
| 307.95 | 288.06 | 316.57 | 287.86 | 320.9 | 287.78 | 321.16 | 287.78 | 329.5 | 287.68 |
| 335.19 | 287.59 | 336.26 | 287.58 | 336.77 | 287.59 | 338.15 | 287.57 | 339.9 | 287.61 |
| 345.04 | 287.67 | 353.66 | 287.72 | 356.3 | 287.7 | 364.35 | 287.52 | 370.81 | 287.37 |
| 373.39 | 287.32 | 376.21 | 287.31 | 376.89 | 287.29 | 379.06 | 287.29 | 380.79 | 287.27 |
| 385.55 | 287.23 | 387.19 | 287.24 | 389.53 | 287.24 | 393.99 | 287.23 | 394.37 | 287.24 |
| 398.71 | 287.24 | 400.3 | 287.26 | 401.49 | 287.3 | 402.8 | 287.31 | 404.62 | 287.31 |
| 405.02 | 287.3 | 409.09 | 287.3 | 412.99 | 287.28 | 413.16 | 287.26 | 417.18 | 286.97 |
| 417.34 | 286.95 | 420.87 | 286.65 | 423.24 | 286.44 | 424.52 | 286.33 | 425.18 | 286.21 |
| 425.71 | 286.14 | 426.14 | 286.16 | 427.22 | 286.25 | 427.8 | 286.32 | 430.74 | 286.59 |
| 430.8 | 286.59 | 433.45 | 286.88 | 434.16 | 286.94 | 435.37 | 286.97 | 436.37 | 286.98 |
| 437.15 | 286.94 | 438.83 | 286.76 | 442.34 | 286.27 | 447.73 | 285.58 | 449.76 | 285.33 |
| 466.2 | 284.84 | 471.18 | 284.76 | 472.98 | 284.76 | 473.38 | 284.77 | 487.95 | 284.62 |
| 488.35 | 284.61 | 498.11 | 284.43 | 500.32 | 284.4 | 502.34 | 284.35 | 502.78 | 284.37 |
| 508.18 | 284.35 | 509.22 | 284.38 | 522.17 | 284.64 | 526.29 | 284.62 | 527.36 | 284.58 |
| 528.67 | 284.34 | 529.41 | 284.4 | 536.72 | 285.22 | 538.58 | 285.86 | 539.37 | 286.14 |
| 540.13 | 286.82 | 541.36 | 287.97 | 541.76 | 288.01 | 543.88 | 288.14 | 545.92 | 288.23 |
| 546.29 | 288.26 | 553.43 | 288.24 | 553.52 | 288.11 | 554.37 | 287.96 | 557.35 | 286.31 |
| 557.64 | 286.13 | 559.34 | 285.21 | 561.11 | 284.29 | 562.74 | 284.06 | 563.48 | 283.99 |
| 569.03 | 284.02 | 571.01 | 284.1 | 580.3 | 284.19 | 581.95 | 284.18 | 583.31 | 284.12 |
| 583.93 | 284.11 | 592.07 | 284.3 | 595.81 | 284.32 | 600.33 | 284.33 | 604.82 | 284.35 |
| 608.23 | 284.36 | 611.47 | 284.36 | 616.8 | 284.37 | 626.9 | 284.07 | 632.93 | 284.02 |
| 633.86 | 284.03 | 640.92 | 283.96 | 641.45 | 283.95 | 642.99 | 283.89 | 644.74 | 283.91 |
| 646.87 | 283.96 | 649.87 | 284 | 649.97 | 284.12 | 650.41 | 284.18 | 651.25 | 284.25 |
| 652.28 | 284.29 | 654.54 | 284.35 | 654.9 | 284.35 | 658.66 | 284.45 | 660.56 | 284.49 |
| 663.44 | 284.59 | 664.41 | 284.57 | 667.65 | 284.64 | 668.15 | 284.64 | 674.15 | 284.73 |
| 675.87 | 284.76 | 680.07 | 284.92 | 686.15 | 285.14 | 689.45 | 285.22 | 698.33 | 285.22 |
| 705.17 | 285.25 | 708.08 | 285.35 | 709.29 | 285.37 | 712.29 | 285.33 | 714.49 | 285.31 |
| 714.6 | 285.3 | 719.69 | 285.24 | 722.14 | 285.14 | 725.6 | 285.08 | 727.42 | 285.1 |
| 728.31 | 285.09 | 729.25 | 285.05 | 730.89 | 285.07 | 732.45 | 285 | 733.32 | 284.93 |
| 733.91 | 284.91 | 741.1 | 284.81 | 741.9 | 284.79 | 742.58 | 284.73 | 747.29 | 284.76 |
| 753.56 | 284.86 | 757.1 | 284.89 | 759.05 | 284.92 | 763.03 | 285.04 | 765.55 | 285.14 |
| 766.5 | 285.17 | 769.64 | 285.29 | 774.07 | 285.56 | 774.92 | 285.59 | 775.44 | 285.63 |
| 779.2 | 285.88 | 780.04 | 285.94 | 782.04 | 286.03 | 783.67 | 286.03 | 785.02 | 286.01 |
| 785.97 | 285.96 | 790.2 | 285.9 | 791.74 | 285.87 | 792.69 | 285.83 | 793.19 | 285.83 |
| 794.97 | 285.8 | 795.29 | 285.78 | 797.21 | 285.86 | 799.3 | 285.89 | 802 | 285.83 |
| 804.08 | 285.8 | 804.68 | 285.81 | 807.37 | 285.82 | 810.06 | 285.76 | 810.42 | 285.76 |
| 814.95 | 285.67 | 816.79 | 285.63 | 825.07 | 285.46 | 825.25 | 285.45 | 829.16 | 285.38 |
| 832.69 | 285.36 | 833.25 | 285.37 | 837.99 | 285.27 | 838.37 | 285.27 | 840.87 | 285.22 |
| 844.43 | 285.17 | 845.5 | 285.18 | 847.13 | 285.18 | 848.53 | 285.16 | 853.12 | 285.22 |
| 854.21 | 285.24 | 859.05 | 285.3 | 859.25 | 285.33 | 864.37 | 285.33 | 867.51 | 285.23 |
| 869.49 | 285.21 | 880.02 | 285.33 | 881.52 | 285.32 | 883.68 | 285.18 | 886.28 | 285.08 |
| 888.19 | 285.06 | 889.73 | 285.11 | 890.66 | 285.16 | 892.85 | 285.26 | 897.03 | 285.41 |
| 901.72 | 285.61 | 904.31 | 285.67 | 908.7 | 285.81 | 914.54 | 285.87 | 914.94 | 285.85 |
| 915.86 | 285.86 | 916.45 | 285.85 | 918.34 | 285.86 | 919.61 | 285.88 | 920.54 | 285.91 |
| 923 | 285.94 | 924.2 | 285.94 | 926.11 | 285.97 | 926.88 | 285.96 | 930.18 | 285.96 |
| 936.29 | 285.85 | 936.61 | 285.83 | 942.11 | 285.83 | 943.04 | 285.89 | 945.09 | 285.94 |
| 946.77 | 285.85 | 951.86 | 285.56 | 952.55 | 285.53 | 954.01 | 285.42 | 972.94 | 285.42 |
| 974.02 | 285.47 | 975.21 | 285.51 | 982.63 | 285.5 | 990.14 | 285.5 | 991.02 | 285.48 |
| 992.37 | 285.49 | 995.76 | 285.5 | 997.46 | 285.5 | 998.28 | 285.47 | 1001.43 | 285.38 |
| 1002.42 | 285.36 | 1003.38 | 285.36 | 1008.35 | 285.33 | 1011.61 | 285.32 | 1013.65 | 285.32 |
| 1017.85 | 285.41 | 1020.46 | 285.46 | 1021.86 | 285.47 | 1023.7 | 285.59 | 1032.96 | 285.78 |
| 1034.34 | 285.8 | 1048.19 | 286.24 | 1048.57 | 286.25 | 1051.97 | 286.25 | 1053.68 | 286.27 |
| 1056.72 | 286.29 | 1059.2 | 286.34 | 1060.74 | 286.34 | 1062.04 | 286.3 | 1062.52 | 286.26 |
| 1063.53 | 286.25 | 1067.39 | 286.29 | 1070.61 | 286.33 | 1074.58 | 286.37 | 1075.73 | 286.43 |
| 1076.19 | 286.44 | 1077.78 | 286.44 | 1082.03 | 286.36 | 1084.55 | 286.3 | 1087.54 | 286.25 |
| 1090.41 | 286.1 | 1092.04 | 285.99 | 1093.26 | 285.96 | 1094.58 | 285.91 | 1095.19 | 285.85 |
| 1096.67 | 285.84 | 1096.73 | 285.85 | 1099.65 | 285.91 | 1105.08 | 285.96 | 1105.95 | 285.98 |
| 1108.83 | 286 | 1109.21 | 286.01 | 1110.78 | 286.18 | 1114.03 | 286.44 | 1115.37 | 286.49 |
| 1120 | 286.79 | 1125.5 | 286.83 | 1126 | 286.82 | 1128.41 | 286.83 | 1130.37 | 286.85 |
| 1134.5 | 286.75 | 1135.01 | 286.73 | 1138.32 | 286.66 | 1140.61 | 286.58 | 1146.48 | 286.46 |
| 1151.87 | 286.38 | 1152.61 | 286.4 | 1152.93 | 286.44 | 1153.36 | 286.43 | 1155.75 | 286.45 |
| 1158.52 | 286.5 | 1159.08 | 286.54 | 1160.54 | 286.6 | 1160.69 | 286.63 | 1163.15 | 286.64 |
| 1166.81 | 286.67 | 1167.66 | 286.63 | 1170.66 | 286.54 | 1171.81 | 286.53 | 1172.17 | 286.54 |
| 1174.61 | 286.53 | 1180.45 | 286.53 | 1181.76 | 286.48 | 1183.63 | 286.43 | 1186.57 | 286.31 |
| 1190.56 | 286.26 | 1191.6 | 286.21 | 1193.11 | 286.16 | 1202.81 | 286.16 | 1206.91 | 286.21 |
| 1208.29 | 286.24 | 1211.73 | 286.33 | 1218.94 | 286.49 | 1220.18 | 286.52 | 1222.99 | 286.52 |
| 1225.17 | 286.55 | 1233.64 | 286.56 | 1234.28 | 286.54 | 1235.23 | 286.48 | 1237.25 | 286.39 |
| 1237.45 | 286.4 | 1241.18 | 286.26 | 1244.05 | 286.18 | 1245.92 | 286.18 | 1246.99 | 286.19 |
| 1249.21 | 286.25 | 1252.37 | 286.32 | 1260.19 | 286.47 | 1268 | 286.66 | 1282.67 | 287 |
| 1282.9 | 287 | 1291.91 | 287.18 | 1292.89 | 287.29 | 1298.57 | 288 | 1302.78 | 288.62 |
| 1305.61 | 289.02 | 1309.96 | 289.8 | 1311.84 | 289.99 | 1312.7 | 290.17 | 1317.38 | 291.2 |
| 1321.33 | 292.08 | 1321.95 | 292.27 | 1325.11 | 293.35 | 1326.83 | 293.97 | 1327.63 | 294.3 |
| 1329.62 | 295.06 | 1332.05 | 296.12 | 1332.9 | 296.48 | 1334.38 | 297.08 | 1334.92 | 297.32 |
| 1335.75 | 297.69 | 1337.03 | 298.22 | 1337.88 | 298.6 | 1338.86 | 299.09 | 1339.62 | 299.51 |
| 1341.09 | 300.24 | 1342.27 | 300.89 | 1343.27 | 301.42 | 1346.54 | 303.24 | 1348.38 | 304.25 |
| 1350.04 | 305.09 | 1351.6 | 305.87 | 1354.12 | 307.15 | 1356.5 | 308.32 | 1356.95 | 308.55 |
| 1358.57 | 309.34 | 1359.34 | 309.78 | 1360.48 | 310.36 | 1361.44 | 310.9 | 1362.94 | 311.63 |
| 1365.16 | 312.87 | 1367.42 | 314.08 | 1368.11 | 314.47 | 1369.8 | 315.27 | 1371.94 | 315.98 |
| 1373.17 | 316.29 | 1374.62 | 316.7 | 1376.82 | 317.28 | 1379.96 | 317.77 | 1382.68 | 318.17 |
| 1383.6 | 318.29 | 1385.74 | 318.32 | 1387.07 | 318.33 | 1393.62 | 318.42 | 1399.8 | 318.5 |
| 1407.98 | 318.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 423.24 | .04 | 1334.92 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 423.24 | 1334.92 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1045.217 Elevation=286.4975

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1682.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.84 | 1.73 | 309.81 | 5.07 | 309.81 | 8 | 309.66 | 9.1 | 309.66 |
| 10.1 | 309.64 | 13.47 | 309.45 | 15.06 | 309.35 | 19.95 | 309.06 | 22.1 | 308.67 |
| 24.64 | 308.12 | 29.27 | 307.56 | 31.5 | 307.33 | 33.35 | 307.12 | 35.86 | 306.9 |
| 40.79 | 306.46 | 43.77 | 306.26 | 44.69 | 306.18 | 45.19 | 306.12 | 48.11 | 305.86 |
| 49.57 | 305.72 | 53.68 | 305.35 | 55.13 | 305.27 | 56.7 | 305.27 | 57.67 | 305.23 |
| 60.17 | 304.34 | 60.71 | 304.23 | 61.85 | 304.17 | 63.16 | 304.31 | 66.32 | 304.61 |
| 68.5 | 304.6 | 70.81 | 304.75 | 75.01 | 304.76 | 76 | 304.79 | 76.89 | 304.84 |
| 80.4 | 304.74 | 82.54 | 304.75 | 87.38 | 304.78 | 89.92 | 304.81 | 90.64 | 304.79 |
| 94.07 | 304.75 | 99.57 | 304.64 | 105.76 | 304.52 | 106.38 | 304.5 | 111.27 | 304.38 |
| 112.12 | 304.34 | 113.29 | 304.26 | 115.06 | 304.17 | 116.55 | 304.03 | 116.82 | 303.99 |
| 119.11 | 303.73 | 125.21 | 302.86 | 127.3 | 302.57 | 132.15 | 301.89 | 136.48 | 301.45 |
| 138.12 | 301.27 | 139.54 | 301.04 | 140.23 | 300.94 | 141.64 | 300.79 | 144.92 | 300.42 |
| 146.17 | 300.27 | 165.94 | 298.1 | 173 | 297.45 | 178.1 | 297.18 | 179.81 | 297.08 |
| 180.85 | 296.96 | 183.41 | 296.64 | 189.94 | 295.75 | 193.96 | 295.26 | 195.34 | 295.16 |
| 197.47 | 295.08 | 198.42 | 295.08 | 200.4 | 295.14 | 201.73 | 295.13 | 211.24 | 294.71 |
| 212.29 | 294.65 | 216.37 | 294.33 | 222.29 | 293.79 | 224.19 | 293.61 | 235.35 | 292.31 |
| 243.17 | 291.56 | 245.54 | 291.37 | 247.1 | 291.27 | 251.07 | 291.05 | 257.11 | 290.66 |
| 257.91 | 290.62 | 261.31 | 290.35 | 270.45 | 289.73 | 278.61 | 289.14 | 281.42 | 288.96 |
| 286.59 | 288.62 | 290.27 | 288.41 | 293.93 | 288.29 | 294.56 | 288.28 | 300.61 | 288.07 |
| 309.73 | 287.83 | 309.84 | 287.83 | 318.52 | 287.62 | 322.33 | 287.54 | 323.14 | 287.54 |
| 332.19 | 287.41 | 337.26 | 287.32 | 339.89 | 287.3 | 340.23 | 287.29 | 341.99 | 287.33 |
| 347.17 | 287.36 | 355.84 | 287.39 | 358.49 | 287.36 | 366.59 | 287.18 | 373.09 | 287.01 |
| 374.43 | 286.99 | 375.69 | 286.96 | 378.52 | 286.94 | 379.2 | 286.92 | 381.4 | 286.91 |
| 383.13 | 286.88 | 387.92 | 286.81 | 389.06 | 286.81 | 389.89 | 286.83 | 396.41 | 286.8 |
| 397.84 | 286.81 | 398.42 | 286.8 | 401.16 | 286.8 | 403.37 | 286.84 | 403.96 | 286.87 |
| 405.28 | 286.89 | 411.61 | 286.92 | 415.53 | 286.91 | 419.9 | 286.62 | 423.46 | 286.32 |
| 425.84 | 286.11 | 427.08 | 286 | 427.72 | 285.88 | 428.24 | 285.81 | 429.7 | 285.91 |
| 430.27 | 285.98 | 433.11 | 286.23 | 433.17 | 286.23 | 435.74 | 286.5 | 436.43 | 286.56 |
| 438.57 | 286.59 | 439.32 | 286.55 | 440.95 | 286.37 | 444.36 | 285.9 | 451.55 | 284.99 |
| 467.47 | 284.51 | 472.3 | 284.43 | 474.04 | 284.42 | 474.43 | 284.43 | 488.55 | 284.27 |
| 488.94 | 284.26 | 498.39 | 284.09 | 500.54 | 284.06 | 502.49 | 284.01 | 502.92 | 284.03 |
| 508.15 | 284.01 | 509.16 | 284.04 | 521.71 | 284.28 | 525.71 | 284.26 | 526.74 | 284.23 |
| 528.01 | 283.99 | 528.73 | 284.05 | 533.32 | 284.56 | 535.81 | 284.83 | 537.62 | 285.44 |
| 538.37 | 285.71 | 539.11 | 286.36 | 540.31 | 287.45 | 540.69 | 287.49 | 542.74 | 287.62 |
| 544.72 | 287.7 | 545.08 | 287.73 | 552.01 | 287.7 | 552.09 | 287.58 | 552.91 | 287.44 |
| 555.8 | 285.86 | 556.09 | 285.69 | 557.73 | 284.81 | 559.44 | 283.93 | 561.02 | 283.71 |
| 561.94 | 283.64 | 565.17 | 283.66 | 567.73 | 283.69 | 569.03 | 283.75 | 578.04 | 283.84 |
| 579.64 | 283.83 | 580.96 | 283.77 | 581.55 | 283.77 | 589.45 | 283.96 | 597.45 | 283.98 |
| 600.16 | 284 | 601.8 | 284 | 605.11 | 284.01 | 613.41 | 284.01 | 623.2 | 283.71 |
| 629.04 | 283.66 | 629.94 | 283.68 | 636.78 | 283.6 | 637.3 | 283.6 | 638.79 | 283.53 |
| 639.53 | 283.55 | 640.71 | 283.56 | 642.73 | 283.62 | 645.76 | 283.67 | 645.86 | 283.78 |
| 646.31 | 283.84 | 647.23 | 283.91 | 648.2 | 283.94 | 652.49 | 284.02 | 656.6 | 284.12 |
| 658.4 | 284.18 | 659.28 | 284.22 | 660.76 | 284.2 | 664.29 | 284.28 | 670.37 | 284.38 |
| 672.11 | 284.4 | 676.36 | 284.56 | 677.21 | 284.58 | 682.53 | 284.76 | 685.87 | 284.84 |
| 689.47 | 284.84 | 694.87 | 284.83 | 701.81 | 284.87 | 703.88 | 284.95 | 705.98 | 285 |
| 711.24 | 284.93 | 713.83 | 284.89 | 716.76 | 284.86 | 717.55 | 284.82 | 719 | 284.77 |
| 722.51 | 284.72 | 724.35 | 284.74 | 725.25 | 284.73 | 726.2 | 284.7 | 727.87 | 284.72 |
| 729.45 | 284.66 | 730.33 | 284.59 | 730.93 | 284.58 | 738.21 | 284.49 | 739.02 | 284.47 |
| 739.71 | 284.42 | 744.49 | 284.45 | 750.84 | 284.54 | 755.62 | 284.58 | 756.4 | 284.59 |
| 760.43 | 284.69 | 762.99 | 284.78 | 765.86 | 284.89 | 767.14 | 284.93 | 767.98 | 284.99 |
| 771.62 | 285.19 | 773.01 | 285.26 | 776.82 | 285.51 | 777.67 | 285.56 | 779.7 | 285.65 |
| 781.35 | 285.65 | 782.72 | 285.63 | 783.68 | 285.58 | 786.77 | 285.54 | 789.53 | 285.49 |
| 790.49 | 285.45 | 791 | 285.45 | 792.8 | 285.42 | 793.13 | 285.4 | 795.07 | 285.48 |
| 797.2 | 285.52 | 800.6 | 285.45 | 802.64 | 285.44 | 805.37 | 285.45 | 808.46 | 285.39 |
| 813.05 | 285.31 | 814.92 | 285.27 | 823.31 | 285.11 | 823.49 | 285.1 | 827.46 | 285.02 |
| 829.41 | 285.01 | 831.03 | 285.01 | 831.6 | 285.02 | 836.07 | 284.93 | 839.32 | 284.87 |
| 840.83 | 284.85 | 842.16 | 284.82 | 844.35 | 284.82 | 845.67 | 284.83 | 847.08 | 284.82 |
| 851.73 | 284.88 | 852.84 | 284.89 | 857.75 | 284.96 | 857.94 | 284.99 | 859.61 | 285 |
| 863.13 | 285 | 866.32 | 284.9 | 868.33 | 284.89 | 878.99 | 284.99 | 880.51 | 284.98 |
| 882.71 | 284.84 | 883.15 | 284.83 | 885.34 | 284.74 | 887.28 | 284.73 | 888.83 | 284.77 |
| 889.1 | 284.8 | 891.99 | 284.92 | 896.24 | 285.07 | 898.32 | 285.17 | 900.98 | 285.29 |
| 902.72 | 285.33 | 903.61 | 285.34 | 908.06 | 285.48 | 913.98 | 285.53 | 915.91 | 285.52 |
| 917.83 | 285.53 | 919.11 | 285.55 | 920.06 | 285.58 | 922.55 | 285.61 | 923.76 | 285.61 |
| 925.84 | 285.64 | 926.48 | 285.63 | 929.82 | 285.62 | 931.03 | 285.61 | 936.02 | 285.53 |
| 936.34 | 285.51 | 941.91 | 285.52 | 942.86 | 285.57 | 944.93 | 285.62 | 946.64 | 285.53 |
| 951.79 | 285.27 | 952.49 | 285.23 | 953.97 | 285.12 | 973.16 | 285.13 | 974.25 | 285.18 |
| 975.46 | 285.21 | 990.59 | 285.21 | 991.48 | 285.19 | 992.85 | 285.19 | 996.28 | 285.21 |
| 997.85 | 285.2 | 1002.42 | 285.07 | 1004 | 285.06 | 1009.04 | 285.05 | 1010.18 | 285.04 |
| 1012.79 | 285.04 | 1014.42 | 285.05 | 1019.51 | 285.17 | 1022.74 | 285.21 | 1024.6 | 285.32 |
| 1024.7 | 285.31 | 1033.98 | 285.43 | 1035.38 | 285.44 | 1049.41 | 285.87 | 1049.8 | 285.88 |
| 1053.24 | 285.88 | 1057.59 | 285.93 | 1058.06 | 285.93 | 1060.57 | 285.99 | 1062.13 | 285.99 |
| 1062.97 | 285.97 | 1063.94 | 285.92 | 1064.96 | 285.9 | 1066.65 | 285.92 | 1072.13 | 285.97 |
| 1073.12 | 285.97 | 1076.15 | 286 | 1077.32 | 286.06 | 1079.4 | 286.06 | 1083.71 | 285.98 |
| 1086.26 | 285.92 | 1086.85 | 285.9 | 1089.41 | 285.87 | 1089.49 | 285.86 | 1092.2 | 285.74 |
| 1093.86 | 285.65 | 1096.43 | 285.58 | 1097.04 | 285.52 | 1098.31 | 285.5 | 1101.56 | 285.57 |
| 1110.87 | 285.64 | 1111.26 | 285.65 | 1112.84 | 285.81 | 1116.13 | 286.05 | 1116.33 | 286.07 |
| 1117.49 | 286.11 | 1122.19 | 286.4 | 1123.94 | 286.42 | 1127.76 | 286.44 | 1129.56 | 286.44 |
| 1132.69 | 286.46 | 1134.57 | 286.42 | 1138.79 | 286.35 | 1140.75 | 286.31 | 1143.08 | 286.24 |
| 1143.48 | 286.22 | 1145.16 | 286.19 | 1147.93 | 286.13 | 1149.02 | 286.12 | 1153.81 | 286.05 |
| 1155.23 | 286.07 | 1155.56 | 286.1 | 1155.99 | 286.09 | 1157.88 | 286.11 | 1159 | 286.11 |
| 1161.23 | 286.15 | 1163.27 | 286.24 | 1163.42 | 286.27 | 1169.62 | 286.3 | 1170.48 | 286.26 |
| 1173.52 | 286.17 | 1174.69 | 286.15 | 1175.05 | 286.17 | 1177.53 | 286.16 | 1181.55 | 286.16 |
| 1181.76 | 286.17 | 1183.45 | 286.17 | 1183.96 | 286.15 | 1186.22 | 286.1 | 1189.4 | 285.98 |
| 1189.65 | 285.96 | 1193.9 | 285.89 | 1194.75 | 285.84 | 1196.28 | 285.79 | 1206.5 | 285.78 |
| 1210.52 | 285.82 | 1215.14 | 285.93 | 1223.34 | 286.11 | 1223.71 | 286.13 | 1225.65 | 286.13 |
| 1228.76 | 286.17 | 1237.34 | 286.17 | 1241.01 | 285.99 | 1241.21 | 286 | 1244.99 | 285.85 |
| 1247.9 | 285.77 | 1249.39 | 285.77 | 1250.88 | 285.79 | 1256.33 | 285.91 | 1264.25 | 286.06 |
| 1271.67 | 286.24 | 1272.17 | 286.25 | 1287.03 | 286.6 | 1287.27 | 286.61 | 1296.4 | 286.76 |
| 1297.39 | 286.87 | 1303.15 | 287.55 | 1307.41 | 288.14 | 1308.79 | 288.31 | 1310.28 | 288.52 |
| 1312.27 | 288.88 | 1314.69 | 289.3 | 1316.59 | 289.49 | 1317.47 | 289.67 | 1322.2 | 290.69 |
| 1326.22 | 291.58 | 1326.84 | 291.77 | 1330.04 | 292.83 | 1331.79 | 293.47 | 1334.18 | 294.43 |
| 1334.61 | 294.59 | 1335.69 | 295.07 | 1337.94 | 296.05 | 1338.37 | 296.22 | 1339.69 | 296.78 |
| 1339.98 | 296.92 | 1340.81 | 297.29 | 1342.07 | 297.83 | 1342.91 | 298.21 | 1344.17 | 298.85 |
| 1344.64 | 299.13 | 1346.09 | 299.86 | 1347.26 | 300.51 | 1347.93 | 300.85 | 1348.25 | 301.04 |
| 1349.97 | 302 | 1353.31 | 303.88 | 1354.96 | 304.72 | 1357.96 | 306.26 | 1359.52 | 307.07 |
| 1361.36 | 307.98 | 1361.79 | 308.21 | 1363.4 | 309.01 | 1364.16 | 309.45 | 1365.29 | 310.04 |
| 1366.24 | 310.58 | 1367.73 | 311.31 | 1369.93 | 312.53 | 1372.16 | 313.72 | 1372.84 | 314.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1374.52 | 314.9 | 1376.52 | 315.58 | 1377.86 | 315.93 | 1379.29 | 316.35 | 1381.47 | 316.93 |
| 1387.28 | 317.82 | 1388.19 | 317.94 | 1391.62 | 318 | 1398.11 | 318.12 | 1404.22 | 318.25 |
| 1412.33 | 318.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 425.84 | .04 | 1339.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 425.84 | 1339.98 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1044.981 Elevation=286.1963

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1662.49*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.6 | 1.74 | 309.56 | 5.1 | 309.54 | 8.05 | 309.38 | 10.16 | 309.35 |
| 13.55 | 309.15 | 15.15 | 309.04 | 20.07 | 308.75 | 22.23 | 308.37 | 23.57 | 308.08 |
| 24.79 | 307.83 | 29.45 | 307.26 | 31.69 | 307.04 | 33.55 | 306.84 | 36.08 | 306.62 |
| 41.04 | 306.18 | 42.83 | 306.08 | 44.04 | 306 | 44.97 | 305.92 | 45.46 | 305.86 |
| 48.41 | 305.61 | 49.87 | 305.47 | 54.01 | 305.11 | 55.47 | 305.02 | 57.05 | 305.01 |
| 58.02 | 304.97 | 60.54 | 304.12 | 61.08 | 304.01 | 62.23 | 303.96 | 63.54 | 304.08 |
| 66.72 | 304.35 | 68.91 | 304.34 | 71.24 | 304.47 | 75.46 | 304.46 | 77.36 | 304.53 |
| 80.9 | 304.42 | 84.61 | 304.42 | 90.47 | 304.44 | 91.2 | 304.42 | 94.64 | 304.37 |
| 100.18 | 304.24 | 106.41 | 304.11 | 107.03 | 304.08 | 111.95 | 303.96 | 113.98 | 303.83 |
| 115.76 | 303.74 | 117.26 | 303.6 | 118.08 | 303.5 | 119.84 | 303.31 | 128.08 | 302.17 |
| 132.17 | 301.63 | 132.96 | 301.52 | 137.31 | 301.09 | 138.97 | 300.91 | 141.09 | 300.58 |
| 142.5 | 300.44 | 145.8 | 300.07 | 147.07 | 299.92 | 166.96 | 297.79 | 174.06 | 297.16 |
| 179.18 | 296.89 | 180.91 | 296.78 | 181.95 | 296.67 | 184.54 | 296.35 | 191.1 | 295.47 |
| 195.14 | 294.99 | 196.54 | 294.89 | 198.68 | 294.81 | 199.63 | 294.81 | 201.62 | 294.86 |
| 202.96 | 294.85 | 212.54 | 294.42 | 213.58 | 294.36 | 217.69 | 294.05 | 223.65 | 293.53 |
| 225.56 | 293.35 | 226.56 | 293.23 | 236.79 | 292.09 | 244.66 | 291.35 | 247.04 | 291.16 |
| 248.61 | 291.06 | 252.61 | 290.83 | 258.23 | 290.46 | 259.49 | 290.4 | 262.91 | 290.13 |
| 272.1 | 289.52 | 280.31 | 288.93 | 281.22 | 288.87 | 288.34 | 288.42 | 292.05 | 288.22 |
| 295.73 | 288.09 | 296.36 | 288.08 | 302.45 | 287.86 | 311.62 | 287.6 | 311.74 | 287.6 |
| 320.47 | 287.38 | 324.3 | 287.3 | 325.11 | 287.3 | 334.22 | 287.16 | 339.32 | 287.05 |
| 340.92 | 287.04 | 342.31 | 287.01 | 344.08 | 287.04 | 347.73 | 287.04 | 349.29 | 287.05 |
| 358.01 | 287.06 | 360.69 | 287.03 | 368.83 | 286.84 | 375.37 | 286.65 | 377.99 | 286.6 |
| 381.52 | 286.55 | 383.18 | 286.54 | 390.29 | 286.39 | 391.44 | 286.39 | 391.96 | 286.41 |
| 394.32 | 286.4 | 398.83 | 286.37 | 399.22 | 286.38 | 401.52 | 286.37 | 402 | 286.36 |
| 403.61 | 286.36 | 405.23 | 286.39 | 406.54 | 286.45 | 409.6 | 286.5 | 410.01 | 286.5 |
| 414.12 | 286.54 | 418.07 | 286.55 | 422.47 | 286.28 | 426.04 | 285.98 | 428.44 | 285.77 |
| 429.64 | 285.66 | 430.77 | 285.48 | 432.18 | 285.57 | 432.73 | 285.64 | 435.54 | 285.87 |
| 438.69 | 286.18 | 439.82 | 286.2 | 440.77 | 286.2 | 441.76 | 286.14 | 443.07 | 285.99 |
| 446.37 | 285.53 | 451.42 | 284.89 | 453.33 | 284.66 | 468.74 | 284.17 | 473.42 | 284.09 |
| 475.48 | 284.09 | 489.14 | 283.93 | 489.53 | 283.92 | 498.68 | 283.74 | 500.12 | 283.73 |
| 502.65 | 283.67 | 503.06 | 283.69 | 508.12 | 283.67 | 509.1 | 283.7 | 521.25 | 283.92 |
| 525.12 | 283.9 | 526.12 | 283.87 | 527.35 | 283.64 | 528.04 | 283.7 | 534.9 | 284.44 |
| 537.38 | 285.27 | 538.1 | 285.9 | 539.25 | 286.94 | 540.21 | 287.01 | 541.61 | 287.09 |
| 543.53 | 287.17 | 543.87 | 287.2 | 550.58 | 287.17 | 550.66 | 287.06 | 551.45 | 286.92 |
| 554.25 | 285.42 | 554.53 | 285.25 | 556.12 | 284.41 | 557.78 | 283.58 | 559.31 | 283.37 |
| 560.2 | 283.3 | 565.21 | 283.33 | 567.06 | 283.4 | 575.78 | 283.5 | 577.33 | 283.49 |
| 578.61 | 283.43 | 579.18 | 283.43 | 586.82 | 283.61 | 594.57 | 283.63 | 597.19 | 283.65 |
| 598.78 | 283.65 | 601.99 | 283.66 | 610.02 | 283.66 | 619.5 | 283.36 | 625.15 | 283.31 |
| 626.02 | 283.32 | 632.64 | 283.24 | 633.15 | 283.24 | 634.59 | 283.17 | 635.65 | 283.2 |
| 636.54 | 283.21 | 638.88 | 283.28 | 641.66 | 283.33 | 641.75 | 283.44 | 642.21 | 283.5 |
| 643.14 | 283.56 | 644.12 | 283.59 | 646.82 | 283.62 | 648.47 | 283.65 | 650 | 283.69 |
| 652.63 | 283.74 | 655.35 | 283.85 | 656.11 | 283.84 | 657.17 | 283.85 | 660.42 | 283.92 |
| 666.58 | 284.03 | 668.35 | 284.05 | 672.66 | 284.2 | 675.53 | 284.27 | 678.91 | 284.38 |
| 682.3 | 284.45 | 685.93 | 284.45 | 690.3 | 284.43 | 691.41 | 284.45 | 698.44 | 284.49 |
| 699.31 | 284.53 | 702.09 | 284.62 | 702.67 | 284.62 | 708 | 284.55 | 710.63 | 284.51 |
| 713.59 | 284.48 | 715.86 | 284.4 | 719.41 | 284.35 | 721.28 | 284.38 | 723.16 | 284.35 |
| 724.84 | 284.37 | 726.45 | 284.31 | 727.33 | 284.25 | 727.95 | 284.24 | 735.32 | 284.17 |
| 736.14 | 284.15 | 736.84 | 284.11 | 741.68 | 284.14 | 748.12 | 284.23 | 751.76 | 284.24 |
| 753.75 | 284.26 | 756.59 | 284.31 | 757.84 | 284.34 | 761.4 | 284.46 | 763.81 | 284.55 |
| 764.63 | 284.57 | 765.49 | 284.63 | 769.18 | 284.82 | 770.59 | 284.9 | 775.31 | 285.18 |
| 777.36 | 285.27 | 779.03 | 285.27 | 780.42 | 285.24 | 781.39 | 285.2 | 786.22 | 285.13 |
| 788.29 | 285.07 | 788.81 | 285.07 | 790.96 | 285.03 | 791.7 | 285.05 | 792.94 | 285.11 |
| 795.55 | 285.14 | 798.77 | 285.08 | 800.48 | 285.07 | 800.61 | 285.08 | 803.37 | 285.08 |
| 806.14 | 285.03 | 806.5 | 285.03 | 811.16 | 284.94 | 813.04 | 284.9 | 821.55 | 284.75 |
| 821.73 | 284.74 | 825.75 | 284.67 | 829.37 | 284.65 | 829.95 | 284.67 | 834.47 | 284.58 |
| 837.26 | 284.53 | 837.77 | 284.51 | 841.43 | 284.46 | 844.02 | 284.48 | 845.64 | 284.47 |
| 850.35 | 284.53 | 856.44 | 284.63 | 856.64 | 284.66 | 858.32 | 284.67 | 861.89 | 284.67 |
| 865.12 | 284.58 | 867.16 | 284.56 | 877.96 | 284.66 | 878.76 | 284.66 | 879.5 | 284.64 |
| 881.73 | 284.51 | 882.85 | 284.46 | 884.4 | 284.41 | 886.36 | 284.39 | 887.93 | 284.43 |
| 888.21 | 284.46 | 891.14 | 284.58 | 893.52 | 284.66 | 896.17 | 284.77 | 900.24 | 284.97 |
| 902 | 285.01 | 902.91 | 285.01 | 907.42 | 285.14 | 913.41 | 285.2 | 913.82 | 285.18 |
| 914.74 | 285.19 | 917.31 | 285.19 | 919.57 | 285.25 | 922.09 | 285.28 | 923.33 | 285.28 |
| 924.5 | 285.3 | 925.81 | 285.29 | 929.47 | 285.29 | 930.69 | 285.28 | 935.75 | 285.2 |
| 936.07 | 285.19 | 941.72 | 285.2 | 942.68 | 285.25 | 944.78 | 285.3 | 951.73 | 284.97 |
| 953.45 | 284.87 | 953.93 | 284.83 | 973.38 | 284.83 | 974.49 | 284.88 | 975.71 | 284.92 |
| 984.36 | 284.91 | 984.52 | 284.92 | 991.04 | 284.91 | 991.94 | 284.89 | 993.33 | 284.9 |
| 997.13 | 284.91 | 998.39 | 284.9 | 999.39 | 284.86 | 1003.02 | 284.77 | 1003.64 | 284.76 |
| 1009.73 | 284.76 | 1010.89 | 284.75 | 1015.18 | 284.77 | 1019.48 | 284.88 | 1019.84 | 284.9 |
| 1023.61 | 284.95 | 1025.33 | 285.04 | 1027.04 | 285.04 | 1028.68 | 285.06 | 1029.47 | 285.06 |
| 1035.01 | 285.09 | 1036.42 | 285.09 | 1051.03 | 285.5 | 1054.52 | 285.5 | 1056.28 | 285.54 |
| 1058.93 | 285.58 | 1059.4 | 285.58 | 1062.15 | 285.64 | 1063.52 | 285.64 | 1064.86 | 285.6 |
| 1065.36 | 285.57 | 1066.39 | 285.55 | 1070.36 | 285.59 | 1073.66 | 285.61 | 1074.66 | 285.61 |
| 1077.73 | 285.63 | 1078.51 | 285.67 | 1079.39 | 285.69 | 1082.25 | 285.67 | 1085.39 | 285.6 |
| 1087.97 | 285.53 | 1091.25 | 285.49 | 1094.16 | 285.38 | 1095.67 | 285.31 | 1096.92 | 285.29 |
| 1098.47 | 285.23 | 1099.1 | 285.18 | 1100.48 | 285.18 | 1104.37 | 285.25 | 1109.05 | 285.26 |
| 1109.94 | 285.27 | 1113.3 | 285.28 | 1114.9 | 285.43 | 1118.24 | 285.67 | 1119.62 | 285.73 |
| 1124.37 | 286.01 | 1126.15 | 286.04 | 1130.02 | 286.06 | 1130.22 | 286.05 | 1131.85 | 286.05 |
| 1135.02 | 286.07 | 1136.6 | 286.04 | 1137.45 | 286.04 | 1142.71 | 285.97 | 1145.54 | 285.89 |
| 1151.57 | 285.77 | 1156.42 | 285.71 | 1157.85 | 285.73 | 1158.19 | 285.76 | 1158.62 | 285.75 |
| 1160.54 | 285.77 | 1161.67 | 285.77 | 1163.5 | 285.79 | 1166 | 285.89 | 1166.15 | 285.91 |
| 1168.67 | 285.91 | 1172.43 | 285.93 | 1173.31 | 285.89 | 1176.7 | 285.79 | 1177.57 | 285.78 |
| 1177.94 | 285.8 | 1180.44 | 285.79 | 1184.52 | 285.8 | 1184.73 | 285.81 | 1186.44 | 285.81 |
| 1189.71 | 285.74 | 1191.98 | 285.66 | 1192.73 | 285.61 | 1193.46 | 285.6 | 1196.82 | 285.53 |
| 1197.89 | 285.47 | 1199.44 | 285.42 | 1209.4 | 285.39 | 1213.61 | 285.42 | 1215.03 | 285.46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1218.87 | 285.55 | 1223.65 | 285.64 | 1225.96 | 285.69 | 1227.79 | 285.74 | 1229.76 | 285.75 |
| 1232.36 | 285.79 | 1241.05 | 285.79 | 1242.3 | 285.72 | 1244.76 | 285.6 | 1244.96 | 285.6 |
| 1248.06 | 285.48 | 1248.8 | 285.44 | 1251.75 | 285.36 | 1253.26 | 285.36 | 1254.76 | 285.38 |
| 1257.05 | 285.44 | 1260.29 | 285.51 | 1264.05 | 285.57 | 1268.32 | 285.65 | 1275.84 | 285.84 |
| 1276.34 | 285.85 | 1291.4 | 286.21 | 1291.63 | 286.21 | 1300.88 | 286.35 | 1301.89 | 286.44 |
| 1307.73 | 287.09 | 1312.04 | 287.66 | 1313.45 | 287.82 | 1314.96 | 288.03 | 1316.97 | 288.38 |
| 1319.42 | 288.79 | 1321.35 | 288.98 | 1322.23 | 289.16 | 1327.03 | 290.18 | 1331.1 | 291.08 |
| 1331.73 | 291.26 | 1334.97 | 292.32 | 1336.74 | 292.96 | 1338.52 | 293.69 | 1339.6 | 294.12 |
| 1342.41 | 295.37 | 1344.49 | 296.25 | 1345.05 | 296.51 | 1345.86 | 296.89 | 1347.77 | 297.74 |
| 1349.19 | 298.47 | 1349.66 | 298.75 | 1351.36 | 299.62 | 1352.91 | 300.47 | 1354.94 | 301.62 |
| 1356.44 | 302.49 | 1358.25 | 303.5 | 1359.57 | 304.2 | 1361.4 | 305.15 | 1364.39 | 306.72 |
| 1368.24 | 308.69 | 1369.09 | 309.18 | 1370.1 | 309.72 | 1371.04 | 310.26 | 1372.52 | 310.99 |
| 1374.7 | 312.19 | 1376.91 | 313.37 | 1377.58 | 313.75 | 1379.25 | 314.53 | 1381.22 | 315.22 |
| 1382.54 | 315.58 | 1383.97 | 316 | 1385.96 | 316.52 | 1386.12 | 316.57 | 1389.21 | 317.06 |
| 1392.77 | 317.59 | 1396.17 | 317.67 | 1401.99 | 317.82 | 1402.6 | 317.83 | 1408.65 | 318 |
| 1416.68 | 318 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 428.44 | .04 | 1345.05 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 428.44 | 1345.05 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1044.745 Elevation= 285.895

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1642.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.36 | 1.75 | 309.31 | 5.14 | 309.27 | 6.02 | 309.21 | 8.09 | 309.1 |
| 9.21 | 309.09 | 10.22 | 309.06 | 13.64 | 308.85 | 15.24 | 308.74 | 20.19 | 308.43 |
| 22.37 | 308.06 | 24.94 | 307.54 | 29.63 | 306.97 | 31.88 | 306.76 | 33.76 | 306.56 |
| 38.9 | 306.11 | 41.02 | 305.91 | 43.09 | 305.81 | 44.31 | 305.74 | 45.74 | 305.6 |
| 48.7 | 305.36 | 50.18 | 305.22 | 54.34 | 304.86 | 55.81 | 304.77 | 57.39 | 304.76 |
| 58.37 | 304.72 | 60.91 | 303.9 | 61.46 | 303.79 | 62.61 | 303.74 | 63.93 | 303.85 |
| 67.13 | 304.1 | 68.16 | 304.08 | 69.33 | 304.08 | 71.67 | 304.19 | 75.92 | 304.16 |
| 76.93 | 304.18 | 77.83 | 304.22 | 81.39 | 304.1 | 85.12 | 304.09 | 88.45 | 304.07 |
| 91.02 | 304.08 | 91.75 | 304.05 | 95.22 | 303.99 | 100.78 | 303.85 | 107.05 | 303.7 |
| 107.68 | 303.67 | 112.63 | 303.53 | 114.67 | 303.4 | 116.47 | 303.31 | 117.97 | 303.17 |
| 120.57 | 302.88 | 127.2 | 302 | 127.75 | 301.92 | 132.98 | 301.25 | 133.77 | 301.14 |
| 138.15 | 300.73 | 139.81 | 300.55 | 141.95 | 300.23 | 143.37 | 300.08 | 147.96 | 299.58 |
| 167.97 | 297.49 | 175.12 | 296.87 | 181.57 | 296.52 | 183.06 | 296.37 | 185.66 | 296.06 |
| 192.27 | 295.2 | 196.33 | 294.73 | 197.73 | 294.63 | 199.89 | 294.55 | 200.85 | 294.54 |
| 202.85 | 294.58 | 204.2 | 294.57 | 213.83 | 294.13 | 214.88 | 294.07 | 219.01 | 293.77 |
| 225.01 | 293.26 | 226.93 | 293.09 | 228.93 | 292.86 | 238.22 | 291.86 | 246.14 | 291.14 |
| 247.93 | 290.99 | 250.12 | 290.84 | 254.14 | 290.61 | 259.8 | 290.24 | 261.06 | 290.18 |
| 264.51 | 289.92 | 273.76 | 289.32 | 282.02 | 288.72 | 289.49 | 288.27 | 290.09 | 288.22 |
| 293.82 | 288.02 | 297.52 | 287.89 | 297.9 | 287.89 | 304.29 | 287.65 | 313.51 | 287.37 |
| 313.63 | 287.37 | 322.41 | 287.13 | 326.27 | 287.06 | 327.09 | 287.05 | 336.25 | 286.9 |
| 341.38 | 286.78 | 342.46 | 286.76 | 344.05 | 286.75 | 344.39 | 286.73 | 346.17 | 286.75 |
| 349.84 | 286.74 | 351.41 | 286.75 | 360.19 | 286.73 | 362.88 | 286.7 | 371.07 | 286.5 |
| 377.65 | 286.3 | 380.28 | 286.23 | 385.51 | 286.16 | 386.99 | 286.13 | 387.82 | 286.1 |
| 392.66 | 285.97 | 393.82 | 285.97 | 394.66 | 286 | 396.72 | 285.99 | 401.26 | 285.94 |
| 401.65 | 285.95 | 403.29 | 285.93 | 406.06 | 285.92 | 408.31 | 285.98 | 408.9 | 286.02 |
| 412.08 | 286.09 | 412.5 | 286.09 | 416.64 | 286.17 | 420.61 | 286.19 | 425.04 | 285.94 |
| 428.63 | 285.65 | 431.05 | 285.43 | 432.21 | 285.33 | 433.29 | 285.16 | 434.66 | 285.24 |
| 435.19 | 285.3 | 437.85 | 285.52 | 437.91 | 285.51 | 440.31 | 285.74 | 440.96 | 285.79 |
| 442.96 | 285.81 | 443.66 | 285.78 | 445.19 | 285.61 | 448.38 | 285.17 | 455.11 | 284.32 |
| 470.02 | 283.84 | 474.53 | 283.76 | 476.17 | 283.75 | 476.53 | 283.76 | 489.74 | 283.58 |
| 490.12 | 283.57 | 498.96 | 283.4 | 501.43 | 283.37 | 502.8 | 283.33 | 503.2 | 283.35 |
| 508.1 | 283.33 | 509.04 | 283.36 | 520.79 | 283.57 | 524.53 | 283.54 | 525.5 | 283.51 |
| 526.68 | 283.29 | 527.36 | 283.35 | 531.66 | 283.81 | 533.99 | 284.05 | 536.39 | 284.84 |
| 537.46 | 285.76 | 538.2 | 286.42 | 539.12 | 286.49 | 540.48 | 286.57 | 542.33 | 286.64 |
| 542.67 | 286.67 | 549.15 | 286.64 | 549.23 | 286.53 | 550 | 286.4 | 552.7 | 284.97 |
| 552.97 | 284.81 | 554.51 | 284.02 | 556.11 | 283.22 | 557.59 | 283.02 | 558.45 | 282.96 |
| 561.47 | 282.97 | 563.87 | 283 | 565.09 | 283.06 | 573.52 | 283.15 | 575.02 | 283.14 |
| 576.81 | 283.08 | 584.2 | 283.26 | 587.59 | 283.27 | 591.69 | 283.29 | 593.45 | 283.29 |
| 595.76 | 283.31 | 601.79 | 283.31 | 606.63 | 283.3 | 615.8 | 283.01 | 621.26 | 282.95 |
| 622.11 | 282.96 | 628.51 | 282.88 | 628.99 | 282.88 | 630.39 | 282.82 | 632.63 | 282.87 |
| 634.73 | 282.94 | 637.55 | 283 | 637.64 | 283.1 | 638.98 | 283.21 | 640.05 | 283.24 |
| 644.45 | 283.28 | 646 | 283.32 | 648.67 | 283.37 | 649.94 | 283.41 | 651.42 | 283.48 |
| 652.94 | 283.47 | 656.04 | 283.55 | 662.8 | 283.68 | 664.59 | 283.7 | 668.95 | 283.84 |
| 671.86 | 283.9 | 675.29 | 284 | 678.72 | 284.06 | 682.4 | 284.06 | 686.82 | 284.04 |
| 687.95 | 284.06 | 695.07 | 284.12 | 698.1 | 284.23 | 699.35 | 284.25 | 702.47 | 284.2 |
| 704.88 | 284.17 | 710.17 | 284.09 | 710.42 | 284.1 | 712.71 | 284.02 | 716.32 | 283.99 |
| 718.21 | 284.02 | 719.14 | 284.02 | 720.11 | 283.99 | 721.82 | 284.02 | 723.45 | 283.97 |
| 724.34 | 283.91 | 724.96 | 283.9 | 732.43 | 283.85 | 733.27 | 283.84 | 733.97 | 283.8 |
| 738.88 | 283.83 | 745.4 | 283.92 | 750.3 | 283.92 | 755.25 | 283.99 | 762.13 | 284.22 |
| 762.99 | 284.27 | 767.62 | 284.49 | 768.16 | 284.53 | 772.94 | 284.81 | 775.03 | 284.89 |
| 776.71 | 284.88 | 778.12 | 284.86 | 779.11 | 284.81 | 782.28 | 284.77 | 785.11 | 284.72 |
| 786.1 | 284.69 | 788.47 | 284.67 | 788.8 | 284.65 | 790.8 | 284.73 | 792.98 | 284.77 |
| 796.48 | 284.72 | 798.57 | 284.71 | 801.37 | 284.72 | 804.54 | 284.66 | 809.26 | 284.58 |
| 811.17 | 284.54 | 819.79 | 284.4 | 819.97 | 284.39 | 824.04 | 284.32 | 827.71 | 284.3 |
| 828.29 | 284.32 | 832.88 | 284.23 | 835.7 | 284.18 | 836.21 | 284.16 | 837.77 | 284.14 |
| 839.13 | 284.11 | 842.55 | 284.13 | 844.19 | 284.12 | 848.96 | 284.19 | 855.13 | 284.29 |
| 855.33 | 284.32 | 857.04 | 284.33 | 860.66 | 284.33 | 863.93 | 284.25 | 865.99 | 284.23 |
| 876.94 | 284.33 | 878.49 | 284.31 | 880.75 | 284.17 | 881.21 | 284.16 | 883.45 | 284.07 |
| 885.44 | 284.06 | 887.03 | 284.1 | 887.69 | 284.14 | 889.78 | 284.21 | 890.28 | 284.24 |
| 892.69 | 284.32 | 894.64 | 284.4 | 896.44 | 284.51 | 896.77 | 284.51 | 899.51 | 284.65 |
| 900.89 | 284.68 | 902.21 | 284.68 | 906.77 | 284.81 | 912.85 | 284.86 | 914.83 | 284.85 |
| 916.8 | 284.86 | 919.09 | 284.91 | 921.64 | 284.95 | 923.53 | 284.95 | 925.02 | 284.97 |
| 925.41 | 284.96 | 929.11 | 284.96 | 930.35 | 284.95 | 935.47 | 284.88 | 935.8 | 284.87 |
| 941.52 | 284.89 | 942.49 | 284.94 | 944.62 | 284.99 | 951.66 | 284.67 | 952.38 | 284.64 |
| 953.9 | 284.54 | 973.6 | 284.54 | 974.72 | 284.59 | 975.96 | 284.62 | 991.49 | 284.62 |
| 992.4 | 284.6 | 997.66 | 284.61 | 998.94 | 284.6 | 999.95 | 284.56 | 1003.63 | 284.47 |
| 1005.25 | 284.46 | 1011.59 | 284.47 | 1014.27 | 284.48 | 1015.94 | 284.5 | 1020.3 | 284.62 |
| 1020.66 | 284.64 | 1023.02 | 284.67 | 1024.48 | 284.68 | 1026.39 | 284.77 | 1027.22 | 284.75 |
| 1027.96 | 284.76 | 1030.42 | 284.76 | 1036.28 | 284.75 | 1037.46 | 284.73 | 1051.86 | 285.12 |
| 1055.71 | 285.12 | 1057.58 | 285.17 | 1060.26 | 285.22 | 1060.73 | 285.22 | 1063.31 | 285.28 |
| 1064.91 | 285.29 | 1066.27 | 285.25 | 1066.77 | 285.22 | 1067.82 | 285.2 | 1069.29 | 285.22 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1075.18 | 285.25 | 1076.2 | 285.24 | 1079.31 | 285.26 | 1080.1 | 285.3 | 1080.99 | 285.31 |
| 1083.88 | 285.29 | 1087.06 | 285.22 | 1089.68 | 285.15 | 1092.02 | 285.12 | 1092.8 | 285.12 |
| 1095.78 | 285.03 | 1097.48 | 284.96 | 1098.38 | 284.96 | 1100.12 | 284.91 | 1100.75 | 284.85 |
| 1102.05 | 284.83 | 1102.35 | 284.85 | 1106.3 | 284.91 | 1114.94 | 284.91 | 1115.34 | 284.92 |
| 1116.96 | 285.06 | 1120.34 | 285.29 | 1121.74 | 285.34 | 1126.56 | 285.63 | 1128.36 | 285.65 |
| 1132.28 | 285.68 | 1132.8 | 285.66 | 1134.13 | 285.66 | 1137.34 | 285.69 | 1138.94 | 285.66 |
| 1141.16 | 285.66 | 1142.17 | 285.64 | 1145.13 | 285.62 | 1148 | 285.55 | 1148.42 | 285.53 |
| 1150.14 | 285.5 | 1154.11 | 285.42 | 1159.02 | 285.37 | 1160.47 | 285.39 | 1160.82 | 285.42 |
| 1162.41 | 285.43 | 1164.34 | 285.43 | 1166.63 | 285.45 | 1168.88 | 285.55 | 1171.44 | 285.54 |
| 1175.24 | 285.55 | 1179.94 | 285.41 | 1180.82 | 285.43 | 1183.36 | 285.42 | 1187.49 | 285.44 |
| 1189.44 | 285.46 | 1194.02 | 285.36 | 1195.55 | 285.29 | 1195.91 | 285.26 | 1198.88 | 285.19 |
| 1200.17 | 285.15 | 1201.04 | 285.09 | 1202.61 | 285.05 | 1212.69 | 285.01 | 1217.05 | 285.03 |
| 1218.39 | 285.07 | 1223.39 | 285.18 | 1227.14 | 285.24 | 1229.47 | 285.29 | 1230.77 | 285.34 |
| 1233.68 | 285.37 | 1236.51 | 285.42 | 1244.06 | 285.4 | 1245.08 | 285.39 | 1246.41 | 285.31 |
| 1248.52 | 285.2 | 1248.72 | 285.21 | 1250.6 | 285.13 | 1252.48 | 285.04 | 1252.61 | 285.02 |
| 1255.07 | 284.96 | 1255.88 | 284.95 | 1258.65 | 284.98 | 1260.96 | 285.04 | 1264.25 | 285.11 |
| 1268.06 | 285.16 | 1272.38 | 285.24 | 1280 | 285.44 | 1280.5 | 285.45 | 1295.76 | 285.81 |
| 1296 | 285.81 | 1305.37 | 285.94 | 1306.39 | 286.02 | 1312.31 | 286.64 | 1316.68 | 287.18 |
| 1318.1 | 287.33 | 1319.63 | 287.54 | 1324.15 | 288.29 | 1326.1 | 288.48 | 1327 | 288.65 |
| 1331.86 | 289.67 | 1335.98 | 290.57 | 1336.62 | 290.76 | 1339.9 | 291.8 | 1341.7 | 292.46 |
| 1343.5 | 293.2 | 1344.59 | 293.66 | 1345.71 | 294.15 | 1347.44 | 294.93 | 1349.55 | 295.84 |
| 1350.11 | 296.11 | 1352.16 | 297.05 | 1352.98 | 297.44 | 1354.21 | 298.09 | 1354.68 | 298.36 |
| 1356.1 | 299.09 | 1357.25 | 299.74 | 1358.22 | 300.27 | 1361.39 | 302.11 | 1363.18 | 303.13 |
| 1364.79 | 303.98 | 1367.15 | 305.25 | 1369.05 | 306.26 | 1370.82 | 307.18 | 1371.49 | 307.54 |
| 1373.07 | 308.36 | 1373.81 | 308.8 | 1374.91 | 309.39 | 1376.04 | 310.05 | 1377.3 | 310.67 |
| 1379.46 | 311.85 | 1381.65 | 313.01 | 1382.32 | 313.39 | 1383.97 | 314.16 | 1386.04 | 314.89 |
| 1387.23 | 315.22 | 1388.64 | 315.65 | 1390.77 | 316.21 | 1393.83 | 316.71 | 1396.46 | 317.11 |
| 1397.36 | 317.23 | 1399.44 | 317.3 | 1400.72 | 317.33 | 1407.09 | 317.54 | 1413.08 | 317.75 |
| 1421.02 | 317.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 431.05 | .04 | 1350.11 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 431.05 | 1350.11 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1044.509 Elevation=285.5938

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1623.27*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.11 | 1.9 | 309.06 | 5.17 | 308.99 | 8.14 | 308.82 | 10.28 | 308.77 |
| 13.72 | 308.56 | 15.33 | 308.44 | 20.31 | 308.12 | 22.5 | 307.75 | 23.86 | 307.48 |
| 25.09 | 307.25 | 29.56 | 306.7 | 32.07 | 306.48 | 33.96 | 306.28 | 39.13 | 305.83 |
| 41.27 | 305.63 | 43.36 | 305.54 | 45.06 | 305.44 | 46.02 | 305.34 | 49.27 | 305.09 |
| 50.48 | 304.97 | 54.67 | 304.61 | 56.14 | 304.53 | 57.15 | 304.52 | 58.73 | 304.47 |
| 61.28 | 303.68 | 61.83 | 303.58 | 62.99 | 303.52 | 64.32 | 303.62 | 67.53 | 303.84 |
| 68.57 | 303.82 | 69.75 | 303.82 | 72.11 | 303.91 | 76.38 | 303.87 | 77.4 | 303.88 |
| 78.3 | 303.91 | 81.88 | 303.78 | 84.06 | 303.75 | 85.64 | 303.75 | 88.98 | 303.71 |
| 91.57 | 303.71 | 92.3 | 303.68 | 95.79 | 303.61 | 101.39 | 303.45 | 107.7 | 303.28 |
| 113.31 | 303.1 | 114.17 | 303.06 | 115.37 | 302.97 | 117.17 | 302.88 | 118.69 | 302.74 |
| 121.3 | 302.46 | 127.51 | 301.65 | 129.63 | 301.38 | 133.78 | 300.88 | 134.58 | 300.77 |
| 137.06 | 300.55 | 140.66 | 300.19 | 142.1 | 299.97 | 142.8 | 299.88 | 147.57 | 299.38 |
| 148.85 | 299.23 | 168.99 | 297.19 | 176.18 | 296.58 | 181.36 | 296.3 | 183.11 | 296.19 |
| 184.16 | 296.08 | 186.78 | 295.77 | 193.43 | 294.92 | 197.51 | 294.47 | 198.93 | 294.37 |
| 201.09 | 294.28 | 202.06 | 294.27 | 204.07 | 294.3 | 205.43 | 294.28 | 216.18 | 293.79 |
| 220.34 | 293.5 | 226.37 | 293 | 228.3 | 292.83 | 230.31 | 292.61 | 239.66 | 291.63 |
| 247.63 | 290.92 | 249.43 | 290.78 | 251.63 | 290.63 | 254.97 | 290.44 | 255.68 | 290.39 |
| 261.36 | 290.02 | 262.64 | 289.96 | 266.11 | 289.7 | 275.41 | 289.11 | 283.72 | 288.51 |
| 284.64 | 288.45 | 291.24 | 288.07 | 291.84 | 288.03 | 295.6 | 287.82 | 299.32 | 287.69 |
| 299.7 | 287.69 | 306.13 | 287.44 | 315.41 | 287.14 | 315.52 | 287.14 | 324.36 | 286.89 |
| 328.79 | 286.81 | 329.06 | 286.81 | 338.29 | 286.65 | 343.44 | 286.51 | 346.13 | 286.47 |
| 346.47 | 286.45 | 348.26 | 286.46 | 351.96 | 286.44 | 353.53 | 286.44 | 362.36 | 286.41 |
| 365.07 | 286.37 | 373.31 | 286.15 | 379.94 | 285.94 | 382.58 | 285.87 | 385.46 | 285.82 |
| 386.16 | 285.8 | 388.39 | 285.77 | 395.03 | 285.55 | 396.2 | 285.55 | 396.72 | 285.58 |
| 399.11 | 285.57 | 403.68 | 285.51 | 404.07 | 285.52 | 406.4 | 285.49 | 408.52 | 285.48 |
| 410.15 | 285.52 | 411.48 | 285.6 | 412.71 | 285.64 | 414.57 | 285.68 | 419.16 | 285.79 |
| 423.15 | 285.83 | 427.6 | 285.61 | 431.22 | 285.31 | 433.65 | 285.09 | 434.77 | 284.99 |
| 435.82 | 284.83 | 437.14 | 284.9 | 437.65 | 284.96 | 440.28 | 285.16 | 442.6 | 285.37 |
| 443.22 | 285.41 | 445.16 | 285.43 | 445.84 | 285.39 | 447.31 | 285.23 | 450.39 | 284.8 |
| 456.89 | 283.99 | 471.29 | 283.51 | 475.65 | 283.43 | 477.58 | 283.42 | 490.34 | 283.23 |
| 490.7 | 283.22 | 499.25 | 283.05 | 501.63 | 283.03 | 502.95 | 282.99 | 503.34 | 283.01 |
| 508.07 | 282.99 | 508.99 | 283.01 | 520.33 | 283.21 | 524.17 | 283.18 | 524.88 | 283.15 |
| 526.02 | 282.95 | 526.68 | 283 | 530.82 | 283.43 | 533.08 | 283.67 | 535.4 | 284.41 |
| 536.3 | 285.16 | 537.14 | 285.91 | 537.49 | 285.94 | 539.35 | 286.04 | 541.46 | 286.14 |
| 547.72 | 286.11 | 547.8 | 286 | 548.54 | 285.88 | 551.15 | 284.53 | 551.41 | 284.38 |
| 552.9 | 283.62 | 554.45 | 282.87 | 555.87 | 282.68 | 556.53 | 282.62 | 561.39 | 282.64 |
| 563.12 | 282.71 | 571.26 | 282.8 | 572.71 | 282.8 | 574.44 | 282.74 | 581.57 | 282.91 |
| 584.85 | 282.92 | 592.74 | 282.96 | 598.57 | 282.96 | 603.24 | 282.95 | 612.09 | 282.66 |
| 617.37 | 282.6 | 618.19 | 282.61 | 619.89 | 282.58 | 624.37 | 282.53 | 626.18 | 282.46 |
| 628.19 | 282.51 | 630.59 | 282.6 | 633.32 | 282.66 | 633.54 | 282.76 | 634.01 | 282.81 |
| 634.89 | 282.86 | 637.52 | 282.9 | 640.43 | 282.91 | 642.7 | 282.96 | 644.7 | 282.99 |
| 647.73 | 283.12 | 649.03 | 283.11 | 652.17 | 283.19 | 652.7 | 283.19 | 659.01 | 283.33 |
| 660.83 | 283.35 | 665.25 | 283.48 | 668.19 | 283.53 | 671.66 | 283.62 | 675.14 | 283.67 |
| 678.87 | 283.67 | 683.35 | 283.65 | 684.49 | 283.67 | 691.7 | 283.74 | 694.77 | 283.86 |
| 696.04 | 283.88 | 699.19 | 283.82 | 701.51 | 283.8 | 701.64 | 283.79 | 707 | 283.71 |
| 709.57 | 283.65 | 713.22 | 283.63 | 715.14 | 283.67 | 717.06 | 283.64 | 718.8 | 283.67 |
| 720.44 | 283.62 | 721.35 | 283.57 | 721.98 | 283.56 | 729.55 | 283.54 | 730.39 | 283.52 |
| 731.11 | 283.48 | 735.15 | 283.53 | 736.07 | 283.53 | 742.68 | 283.61 | 745.01 | 283.6 |
| 748.46 | 283.6 | 751.37 | 283.63 | 752.65 | 283.65 | 756.31 | 283.76 | 757.72 | 283.81 |
| 759.62 | 283.86 | 760.5 | 283.91 | 765.18 | 284.12 | 765.73 | 284.16 | 770.58 | 284.43 |
| 772.69 | 284.51 | 774.4 | 284.5 | 775.83 | 284.47 | 776.82 | 284.43 | 779.75 | 284.39 |
| 783.9 | 284.31 | 786.64 | 284.28 | 788.66 | 284.35 | 790.87 | 284.4 | 794.41 | 284.35 |
| 796.53 | 284.34 | 799.37 | 284.35 | 802.21 | 284.3 | 802.58 | 284.3 | 807.36 | 284.22 |
| 809.3 | 284.18 | 818.02 | 284.04 | 818.21 | 284.03 | 823.18 | 283.96 | 826.04 | 283.95 |
| 826.64 | 283.96 | 832.04 | 283.87 | 834.14 | 283.83 | 834.66 | 283.81 | 837.62 | 283.76 |
| 839.54 | 283.77 | 842.74 | 283.77 | 847.57 | 283.85 | 853.82 | 283.96 | 854.03 | 283.98 |
| 855.76 | 284 | 859.42 | 284 | 862.73 | 283.92 | 864.82 | 283.9 | 875.91 | 283.99 |
| 877.49 | 283.97 | 878.56 | 283.9 | 879.77 | 283.84 | 881.9 | 283.75 | 883.77 | 283.72 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 884.52 | 283.72 | 886.14 | 283.76 | 886.8 | 283.8 | 888.92 | 283.87 | 889.43 | 283.9 |
| 891.87 | 283.98 | 893.84 | 284.06 | 895.67 | 284.18 | 896 | 284.18 | 898.77 | 284.34 |
| 900.17 | 284.36 | 901.5 | 284.35 | 906.13 | 284.47 | 912.28 | 284.53 | 912.7 | 284.51 |
| 916.29 | 284.53 | 917.62 | 284.55 | 918.6 | 284.58 | 921.19 | 284.62 | 923.1 | 284.62 |
| 924.62 | 284.63 | 925.28 | 284.62 | 928.76 | 284.63 | 930.01 | 284.62 | 935.2 | 284.56 |
| 935.53 | 284.55 | 941.33 | 284.57 | 942.31 | 284.62 | 944.46 | 284.67 | 946.24 | 284.6 |
| 952.32 | 284.34 | 953.86 | 284.25 | 973.81 | 284.25 | 974.95 | 284.3 | 976.21 | 284.33 |
| 985.08 | 284.32 | 985.25 | 284.33 | 991.93 | 284.32 | 992.85 | 284.31 | 998.19 | 284.31 |
| 999.64 | 284.29 | 1000.51 | 284.26 | 1004.23 | 284.17 | 1005.88 | 284.15 | 1011.11 | 284.18 |
| 1012.3 | 284.18 | 1015.01 | 284.2 | 1016.7 | 284.23 | 1021.12 | 284.35 | 1021.49 | 284.38 |
| 1023.87 | 284.41 | 1025.35 | 284.42 | 1026.78 | 284.48 | 1027.4 | 284.49 | 1028.13 | 284.47 |
| 1037.05 | 284.41 | 1038.5 | 284.38 | 1053.49 | 284.75 | 1056.99 | 284.75 | 1057.07 | 284.76 |
| 1063.25 | 284.9 | 1065.8 | 284.94 | 1067.68 | 284.91 | 1068.19 | 284.87 | 1069.25 | 284.86 |
| 1073.32 | 284.88 | 1077.47 | 284.89 | 1077.74 | 284.88 | 1080.89 | 284.89 | 1082.59 | 284.94 |
| 1084.27 | 284.93 | 1085.52 | 284.91 | 1088.74 | 284.84 | 1091.39 | 284.77 | 1093.76 | 284.74 |
| 1094.75 | 284.74 | 1097.57 | 284.67 | 1099.29 | 284.62 | 1100.2 | 284.62 | 1102.17 | 284.56 |
| 1103.11 | 284.5 | 1104.23 | 284.51 | 1106.4 | 284.55 | 1108.48 | 284.57 | 1113.03 | 284.55 |
| 1113.94 | 284.56 | 1117.38 | 284.55 | 1119.03 | 284.69 | 1122.45 | 284.9 | 1123.86 | 284.96 |
| 1128.75 | 285.24 | 1130.57 | 285.27 | 1134.54 | 285.29 | 1134.75 | 285.28 | 1137.38 | 285.28 |
| 1138.62 | 285.3 | 1141.62 | 285.28 | 1142.16 | 285.29 | 1144.02 | 285.29 | 1147.56 | 285.27 |
| 1152.63 | 285.15 | 1155.51 | 285.09 | 1161.62 | 285.04 | 1162.32 | 285.03 | 1163.44 | 285.08 |
| 1165.05 | 285.09 | 1167.01 | 285.09 | 1168.89 | 285.1 | 1171.45 | 285.17 | 1171.62 | 285.19 |
| 1174.2 | 285.18 | 1178.06 | 285.18 | 1178.96 | 285.14 | 1182.12 | 285.05 | 1186.28 | 285.05 |
| 1190.46 | 285.08 | 1192.43 | 285.1 | 1193.81 | 285.07 | 1195.32 | 285.06 | 1197.07 | 285.01 |
| 1198.62 | 284.95 | 1198.99 | 284.91 | 1199.63 | 284.9 | 1203.3 | 284.78 | 1204.18 | 284.72 |
| 1205.77 | 284.67 | 1215.99 | 284.63 | 1220.31 | 284.64 | 1226.82 | 284.78 | 1230.62 | 284.84 |
| 1232.99 | 284.89 | 1234.29 | 284.94 | 1236.31 | 284.97 | 1239.54 | 285.04 | 1247.76 | 285.01 |
| 1248.79 | 285 | 1250.14 | 284.92 | 1252.28 | 284.81 | 1252.48 | 284.81 | 1255.66 | 284.67 |
| 1256.41 | 284.61 | 1258.91 | 284.55 | 1259.73 | 284.54 | 1260.99 | 284.55 | 1262.53 | 284.58 |
| 1264.88 | 284.64 | 1268.21 | 284.71 | 1272.06 | 284.75 | 1276.44 | 284.83 | 1284.16 | 285.03 |
| 1284.67 | 285.04 | 1300.12 | 285.41 | 1300.37 | 285.42 | 1309.86 | 285.53 | 1310.89 | 285.6 |
| 1316.88 | 286.18 | 1321.31 | 286.69 | 1322.75 | 286.84 | 1324.3 | 287.05 | 1326.36 | 287.39 |
| 1328.88 | 287.78 | 1330.86 | 287.98 | 1331.77 | 288.14 | 1336.69 | 289.16 | 1340.86 | 290.07 |
| 1341.51 | 290.25 | 1344.84 | 291.29 | 1346.65 | 291.95 | 1349.59 | 293.19 | 1350.71 | 293.69 |
| 1352.15 | 294.35 | 1354.6 | 295.43 | 1355.17 | 295.71 | 1355.97 | 296.1 | 1357.2 | 296.66 |
| 1358.02 | 297.05 | 1359.7 | 297.98 | 1361.1 | 298.71 | 1362.24 | 299.36 | 1363.2 | 299.89 |
| 1366.34 | 301.73 | 1368.11 | 302.75 | 1369.7 | 303.62 | 1374.53 | 306.23 | 1377.9 | 308.03 |
| 1378.63 | 308.47 | 1379.73 | 309.07 | 1380.65 | 309.63 | 1382.09 | 310.34 | 1384.23 | 311.51 |
| 1386.4 | 312.66 | 1387.06 | 313.03 | 1388.69 | 313.8 | 1390.74 | 314.53 | 1391.92 | 314.87 |
| 1393.32 | 315.3 | 1395.43 | 315.85 | 1398.45 | 316.35 | 1401.06 | 316.76 | 1401.95 | 316.88 |
| 1404 | 316.96 | 1405.28 | 317 | 1410.97 | 317.22 | 1411.57 | 317.25 | 1417.5 | 317.5 |
| 1425.37 | 317.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 433.65 | .04 | 1355.17 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| Left | Right | Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 433.65 | 1355.17 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1044.272 Elevation=285.2925

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1603.66*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.87 | 1.91 | 308.81 | 5.2 | 308.72 | 6.09 | 308.66 | 8.19 | 308.54 |
| 9.32 | 308.52 | 10.34 | 308.48 | 13.8 | 308.26 | 15.43 | 308.14 | 20.43 | 307.81 |
| 22.64 | 307.45 | 24 | 307.18 | 25.24 | 306.96 | 29.99 | 306.38 | 32.27 | 306.2 |
| 34.16 | 306 | 39.37 | 305.55 | 41.52 | 305.35 | 43.62 | 305.27 | 44.84 | 305.21 |
| 45.79 | 305.14 | 46.29 | 305.08 | 49.56 | 304.84 | 50.78 | 304.72 | 55 | 304.37 |
| 56.48 | 304.28 | 57.5 | 304.27 | 59.08 | 304.21 | 61.65 | 303.46 | 62.2 | 303.36 |
| 63.37 | 303.3 | 64.7 | 303.39 | 67.94 | 303.59 | 70.17 | 303.55 | 72.54 | 303.63 |
| 76.84 | 303.57 | 78.77 | 303.6 | 82.37 | 303.46 | 84.56 | 303.42 | 86.15 | 303.41 |
| 89.52 | 303.35 | 92.12 | 303.34 | 92.86 | 303.31 | 96.37 | 303.23 | 108.35 | 302.87 |
| 108.98 | 302.84 | 113.99 | 302.68 | 116.06 | 302.55 | 117.87 | 302.45 | 119.4 | 302.31 |
| 122.03 | 302.04 | 129.29 | 301.12 | 134.58 | 300.5 | 135.39 | 300.4 | 137.88 | 300.19 |
| 141.5 | 299.83 | 142.96 | 299.61 | 143.66 | 299.52 | 145.1 | 299.38 | 148.46 | 299.03 |
| 149.75 | 298.88 | 170 | 296.89 | 177.23 | 296.29 | 182.45 | 296.01 | 183.77 | 295.93 |
| 185.27 | 295.78 | 187.9 | 295.48 | 194.59 | 294.65 | 198.7 | 294.2 | 200.12 | 294.1 |
| 202.3 | 294.01 | 203.27 | 294 | 206.12 | 294.02 | 206.66 | 294 | 216.41 | 293.56 |
| 217.48 | 293.5 | 221.66 | 293.22 | 227.73 | 292.74 | 230.69 | 292.46 | 231.7 | 292.35 |
| 241.1 | 291.4 | 249.12 | 290.71 | 250.92 | 290.57 | 253.14 | 290.42 | 256.5 | 290.22 |
| 257.21 | 290.17 | 263.4 | 289.77 | 264.22 | 289.74 | 267.7 | 289.48 | 277.06 | 288.9 |
| 285.42 | 288.3 | 286.35 | 288.24 | 288.3 | 288.14 | 292.99 | 287.87 | 293.6 | 287.83 |
| 297.37 | 287.63 | 301.77 | 287.48 | 307.96 | 287.23 | 317.3 | 286.91 | 317.42 | 286.91 |
| 326.31 | 286.65 | 330.76 | 286.57 | 331.04 | 286.57 | 339.63 | 286.41 | 345.5 | 286.24 |
| 348.21 | 286.19 | 348.55 | 286.17 | 350.36 | 286.18 | 354.07 | 286.14 | 355.66 | 286.14 |
| 364.54 | 286.08 | 367.26 | 286.03 | 375.55 | 285.81 | 382.22 | 285.58 | 383.58 | 285.55 |
| 386.36 | 285.47 | 388.48 | 285.43 | 390.17 | 285.41 | 391.67 | 285.36 | 392.5 | 285.32 |
| 397.4 | 285.13 | 398.58 | 285.13 | 399.43 | 285.17 | 401.51 | 285.15 | 408.16 | 285.06 |
| 410.97 | 285.04 | 413.24 | 285.11 | 413.84 | 285.17 | 415.19 | 285.22 | 417.48 | 285.29 |
| 421.67 | 285.41 | 425.69 | 285.47 | 430.01 | 285.28 | 433.81 | 284.97 | 436.25 | 284.75 |
| 437.34 | 284.66 | 437.89 | 284.55 | 438.35 | 284.5 | 439.62 | 284.56 | 440.11 | 284.61 |
| 442.64 | 284.8 | 444.89 | 284.99 | 445.49 | 285.03 | 447.36 | 285.04 | 448.26 | 284.98 |
| 449.43 | 284.85 | 452.4 | 284.44 | 456.96 | 283.86 | 458.67 | 283.65 | 472.56 | 283.18 |
| 476.77 | 283.09 | 478.63 | 283.08 | 490.94 | 282.89 | 491.29 | 282.88 | 499.53 | 282.71 |
| 500.83 | 282.7 | 503.11 | 282.66 | 503.48 | 282.67 | 508.04 | 282.65 | 508.93 | 282.67 |
| 519.87 | 282.85 | 523.58 | 282.82 | 524.26 | 282.79 | 525.36 | 282.6 | 525.99 | 282.65 |
| 532.17 | 283.28 | 534.4 | 283.98 | 535.4 | 284.8 | 536.09 | 285.39 | 536.43 | 285.42 |
| 538.22 | 285.52 | 540.25 | 285.61 | 546.29 | 285.58 | 546.37 | 285.48 | 547.08 | 285.36 |
| 549.61 | 284.08 | 549.85 | 283.94 | 551.28 | 283.23 | 552.78 | 282.51 | 554.16 | 282.33 |
| 554.96 | 282.27 | 557.78 | 282.28 | 560.01 | 282.31 | 561.15 | 282.36 | 569 | 282.46 |
| 570.4 | 282.45 | 572.07 | 282.4 | 578.95 | 282.57 | 582.11 | 282.57 | 587.57 | 282.6 |
| 588.29 | 282.61 | 595.34 | 282.61 | 599.85 | 282.59 | 608.39 | 282.31 | 613.48 | 282.24 |
| 614.27 | 282.25 | 620.23 | 282.17 | 621.98 | 282.1 | 624.28 | 282.17 | 626.13 | 282.25 |
| 629.33 | 282.33 | 629.43 | 282.42 | 629.9 | 282.47 | 630.88 | 282.52 | 634.31 | 282.54 |
| 634.69 | 282.53 | 636.41 | 282.54 | 638.71 | 282.59 | 640.73 | 282.62 | 643.8 | 282.75 |
| 645.12 | 282.74 | 648.3 | 282.83 | 648.83 | 282.83 | 655.23 | 282.98 | 657.07 | 282.99 |
| 661.54 | 283.12 | 664.53 | 283.16 | 668.04 | 283.24 | 671.56 | 283.29 | 671.9 | 283.28 |
| 675.34 | 283.28 | 679.87 | 283.26 | 681.03 | 283.28 | 688.33 | 283.37 | 691.44 | 283.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 692.73 | 283.5 | 695.92 | 283.45 | 698.39 | 283.42 | 701 | 283.37 | 703.82 | 283.33 |
| 706.43 | 283.28 | 710.13 | 283.27 | 712.07 | 283.31 | 714.02 | 283.29 | 716.18 | 283.31 |
| 717.44 | 283.28 | 718.36 | 283.23 | 726.66 | 283.22 | 728.24 | 283.17 | 732.34 | 283.22 |
| 733.27 | 283.22 | 739.96 | 283.3 | 743.74 | 283.27 | 744.41 | 283.28 | 745.81 | 283.27 |
| 748.76 | 283.28 | 750.06 | 283.3 | 755.77 | 283.47 | 757.12 | 283.5 | 758.01 | 283.55 |
| 761.84 | 283.71 | 763.3 | 283.8 | 767.31 | 284.01 | 769.4 | 284.1 | 770.35 | 284.13 |
| 772.08 | 284.12 | 773.53 | 284.09 | 774.53 | 284.05 | 777.79 | 284 | 781.7 | 283.93 |
| 784.48 | 283.9 | 786.53 | 283.98 | 788.77 | 284.02 | 793.86 | 283.98 | 797.37 | 283.98 |
| 805.46 | 283.86 | 807.42 | 283.82 | 816.26 | 283.69 | 816.45 | 283.68 | 821.48 | 283.61 |
| 824.38 | 283.6 | 824.99 | 283.61 | 830.45 | 283.52 | 832.58 | 283.48 | 833.11 | 283.45 |
| 834.7 | 283.43 | 836.1 | 283.4 | 838.05 | 283.42 | 841.29 | 283.42 | 846.18 | 283.5 |
| 847.35 | 283.53 | 852.52 | 283.62 | 852.72 | 283.65 | 854.47 | 283.67 | 858.18 | 283.67 |
| 861.54 | 283.59 | 863.65 | 283.57 | 874.88 | 283.66 | 876.48 | 283.63 | 878.79 | 283.5 |
| 879.96 | 283.45 | 881.57 | 283.4 | 883.61 | 283.39 | 885.24 | 283.42 | 885.91 | 283.46 |
| 888.06 | 283.53 | 891.04 | 283.64 | 893.8 | 283.77 | 894.89 | 283.85 | 895.23 | 283.85 |
| 898.03 | 284.02 | 899.86 | 284.03 | 900.8 | 284.02 | 905.49 | 284.14 | 911.72 | 284.19 |
| 912.89 | 284.18 | 915.77 | 284.2 | 917.12 | 284.22 | 918.12 | 284.25 | 920.74 | 284.29 |
| 922.68 | 284.29 | 924.21 | 284.3 | 924.88 | 284.29 | 928.4 | 284.3 | 934.92 | 284.24 |
| 935.26 | 284.23 | 941.13 | 284.26 | 942.13 | 284.3 | 944.31 | 284.35 | 946.11 | 284.29 |
| 952.27 | 284.04 | 953.82 | 283.96 | 974.03 | 283.96 | 976.45 | 284.03 | 992.38 | 284.03 |
| 993.31 | 284.01 | 998.71 | 284.01 | 1000.19 | 283.98 | 1004.84 | 283.87 | 1006.5 | 283.85 |
| 1011.8 | 283.89 | 1013 | 283.89 | 1015.75 | 283.92 | 1017.47 | 283.95 | 1021.94 | 284.09 |
| 1022.31 | 284.12 | 1024.72 | 284.15 | 1026.22 | 284.16 | 1028.19 | 284.22 | 1029.03 | 284.19 |
| 1031.59 | 284.17 | 1032.31 | 284.15 | 1038.07 | 284.06 | 1039.53 | 284.03 | 1054.72 | 284.38 |
| 1058.34 | 284.38 | 1060.17 | 284.44 | 1062.92 | 284.51 | 1063.41 | 284.51 | 1064.61 | 284.55 |
| 1067.19 | 284.59 | 1069.09 | 284.56 | 1069.61 | 284.53 | 1070.68 | 284.51 | 1074.8 | 284.53 |
| 1078.23 | 284.54 | 1079.28 | 284.52 | 1082.47 | 284.52 | 1083.28 | 284.55 | 1084.19 | 284.56 |
| 1085.89 | 284.55 | 1087.16 | 284.53 | 1090.42 | 284.46 | 1093.11 | 284.38 | 1093.72 | 284.37 |
| 1097.71 | 284.35 | 1099.36 | 284.31 | 1101.1 | 284.28 | 1102.4 | 284.28 | 1103.81 | 284.24 |
| 1104.67 | 284.17 | 1105.79 | 284.16 | 1106.1 | 284.18 | 1110.15 | 284.24 | 1110.4 | 284.23 |
| 1115.01 | 284.2 | 1115.94 | 284.21 | 1119.42 | 284.19 | 1121.09 | 284.32 | 1124.56 | 284.52 |
| 1125.99 | 284.58 | 1130.93 | 284.86 | 1132.78 | 284.89 | 1136.8 | 284.91 | 1137.33 | 284.89 |
| 1138.7 | 284.89 | 1140.93 | 284.91 | 1143.97 | 284.9 | 1146.4 | 284.92 | 1146.95 | 284.91 |
| 1148.41 | 284.92 | 1150.48 | 284.92 | 1152.92 | 284.86 | 1153.35 | 284.84 | 1155.12 | 284.81 |
| 1158.03 | 284.74 | 1164.23 | 284.7 | 1164.93 | 284.69 | 1166.07 | 284.74 | 1167.7 | 284.75 |
| 1171.58 | 284.75 | 1174.35 | 284.83 | 1176.97 | 284.81 | 1180.87 | 284.81 | 1181.78 | 284.77 |
| 1185.31 | 284.67 | 1186.21 | 284.66 | 1186.59 | 284.68 | 1189.2 | 284.68 | 1195.43 | 284.74 |
| 1199.12 | 284.7 | 1201.18 | 284.63 | 1201.96 | 284.57 | 1202.72 | 284.55 | 1205.11 | 284.46 |
| 1206.21 | 284.43 | 1207.33 | 284.35 | 1208.94 | 284.3 | 1219.28 | 284.24 | 1223.75 | 284.25 |
| 1230.26 | 284.39 | 1234.1 | 284.44 | 1236.5 | 284.5 | 1237.82 | 284.55 | 1239.87 | 284.58 |
| 1240.81 | 284.61 | 1243.14 | 284.66 | 1251.46 | 284.63 | 1252.5 | 284.61 | 1256.03 | 284.41 |
| 1256.24 | 284.41 | 1259.46 | 284.26 | 1260.22 | 284.2 | 1262.75 | 284.13 | 1264.86 | 284.14 |
| 1266.42 | 284.17 | 1268.79 | 284.23 | 1272.17 | 284.3 | 1276.07 | 284.35 | 1280.51 | 284.42 |
| 1288.32 | 284.63 | 1288.84 | 284.64 | 1304.49 | 285.02 | 1304.74 | 285.02 | 1314.35 | 285.12 |
| 1315.39 | 285.18 | 1321.46 | 285.73 | 1325.94 | 286.21 | 1327.4 | 286.35 | 1328.97 | 286.56 |
| 1331.06 | 286.89 | 1333.61 | 287.28 | 1335.61 | 287.47 | 1336.53 | 287.63 | 1341.52 | 288.65 |
| 1345.74 | 289.57 | 1346.4 | 289.75 | 1349.46 | 290.67 | 1349.77 | 290.77 | 1351.61 | 291.45 |
| 1353.45 | 292.23 | 1355.72 | 293.23 | 1357.18 | 293.91 | 1359.66 | 295.01 | 1360.24 | 295.31 |
| 1361.03 | 295.7 | 1362.58 | 296.43 | 1364.26 | 297.32 | 1364.71 | 297.6 | 1366.1 | 298.33 |
| 1367.23 | 298.98 | 1368.18 | 299.51 | 1369.83 | 300.48 | 1371.29 | 301.35 | 1373.04 | 302.38 |
| 1374.62 | 303.25 | 1378.5 | 305.4 | 1382.73 | 307.7 | 1383.56 | 308.2 | 1384.54 | 308.75 |
| 1385.45 | 309.31 | 1386.88 | 310.02 | 1389 | 311.17 | 1391.14 | 312.3 | 1391.8 | 312.67 |
| 1393.41 | 313.43 | 1395.32 | 314.13 | 1396.61 | 314.51 | 1397.99 | 314.95 | 1400.08 | 315.49 |
| 1403.07 | 316 | 1406.53 | 316.53 | 1408.57 | 316.61 | 1415.47 | 316.93 | 1421.93 | 317.25 |
| 1429.72 | 317.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 436.25 | .04 | 1360.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 436.25 | 1360.24 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1044.036 Elevation=284.9912

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1584.05*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.63 | 1.92 | 308.56 | 5.23 | 308.45 | 8.24 | 308.26 | 10.4 | 308.19 |
| 13.88 | 307.97 | 15.52 | 307.84 | 20.56 | 307.49 | 22.77 | 307.14 | 25.39 | 306.67 |
| 29.91 | 306.11 | 32.84 | 305.88 | 34.37 | 305.72 | 36.81 | 305.51 | 36.95 | 305.49 |
| 39.6 | 305.27 | 42.04 | 305.05 | 43.88 | 305.01 | 45.11 | 304.95 | 46.06 | 304.88 |
| 46.57 | 304.82 | 49.86 | 304.59 | 51.08 | 304.48 | 55.33 | 304.12 | 56.82 | 304.03 |
| 57.84 | 304.02 | 59.43 | 303.96 | 62.01 | 303.24 | 62.57 | 303.14 | 63.75 | 303.08 |
| 65.09 | 303.16 | 68.34 | 303.33 | 70.59 | 303.29 | 72.97 | 303.35 | 77.3 | 303.27 |
| 79.24 | 303.29 | 82.86 | 303.14 | 85.07 | 303.09 | 86.66 | 303.07 | 90.05 | 303 |
| 92.67 | 302.98 | 93.41 | 302.95 | 96.94 | 302.85 | 102.61 | 302.66 | 108.99 | 302.46 |
| 109.63 | 302.43 | 114.67 | 302.25 | 116.75 | 302.12 | 118.58 | 302.02 | 120.95 | 301.8 |
| 122.76 | 301.61 | 131.19 | 300.59 | 135.38 | 300.13 | 136.19 | 300.03 | 138.71 | 299.82 |
| 140.65 | 299.64 | 142.35 | 299.47 | 144.52 | 299.17 | 145.97 | 299.03 | 149.35 | 298.69 |
| 150.64 | 298.54 | 171.02 | 296.59 | 178.29 | 295.99 | 183.54 | 295.71 | 185.3 | 295.6 |
| 186.37 | 295.49 | 189.02 | 295.19 | 195.52 | 294.4 | 199.89 | 293.94 | 201.31 | 293.84 |
| 203.51 | 293.74 | 204.48 | 293.73 | 207.35 | 293.74 | 207.9 | 293.72 | 217.7 | 293.27 |
| 218.78 | 293.21 | 222.98 | 292.94 | 229.09 | 292.48 | 231.04 | 292.3 | 242.54 | 291.17 |
| 250.6 | 290.5 | 253.05 | 290.31 | 258.04 | 290 | 258.75 | 289.95 | 264.97 | 289.55 |
| 265.79 | 289.51 | 269.3 | 289.27 | 278.72 | 288.69 | 287.13 | 288.09 | 288.06 | 288.03 |
| 290.02 | 287.93 | 294.74 | 287.67 | 295.35 | 287.63 | 299.15 | 287.43 | 303.57 | 287.28 |
| 309.8 | 287.02 | 319.19 | 286.68 | 319.31 | 286.68 | 328.25 | 286.41 | 332.74 | 286.33 |
| 333.01 | 286.33 | 341.66 | 286.15 | 347.56 | 285.97 | 349.2 | 285.94 | 350.63 | 285.89 |
| 352.45 | 285.89 | 356.18 | 285.84 | 357.78 | 285.83 | 366.71 | 285.75 | 369.45 | 285.7 |
| 377.79 | 285.47 | 384.5 | 285.23 | 387.17 | 285.14 | 392.5 | 285.03 | 394.84 | 284.93 |
| 399.78 | 284.71 | 400.95 | 284.71 | 401.81 | 284.75 | 403.9 | 284.73 | 408.53 | 284.66 |
| 408.93 | 284.66 | 411.77 | 284.61 | 413.42 | 284.6 | 415.7 | 284.68 | 416.42 | 284.75 |
| 419.97 | 284.88 | 424.19 | 285.04 | 428.23 | 285.11 | 432.57 | 284.94 | 436.4 | 284.64 |
| 438.86 | 284.42 | 439.9 | 284.32 | 440.87 | 284.17 | 442.1 | 284.23 | 447.75 | 284.65 |
| 449.55 | 284.65 | 450.42 | 284.59 | 451.55 | 284.46 | 454.41 | 284.07 | 458.8 | 283.52 |
| 460.46 | 283.32 | 473.84 | 282.85 | 477.89 | 282.76 | 479.36 | 282.74 | 479.69 | 282.75 |
| 491.54 | 282.54 | 491.88 | 282.53 | 499.82 | 282.36 | 501.07 | 282.36 | 503.26 | 282.32 |
| 503.62 | 282.33 | 506.23 | 282.32 | 508.02 | 282.3 | 508.87 | 282.33 | 519.41 | 282.49 |
| 522.77 | 282.46 | 523.64 | 282.44 | 524.7 | 282.25 | 525.31 | 282.3 | 531.26 | 282.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 533.41 | 283.55 | 534.25 | 284.21 | 535.04 | 284.88 | 537.08 | 285 | 539.05 | 285.08 |
| 544.87 | 285.04 | 544.94 | 284.95 | 545.63 | 284.84 | 548.06 | 283.63 | 548.29 | 283.5 |
| 549.67 | 282.83 | 551.12 | 282.16 | 552.44 | 281.99 | 553.22 | 281.93 | 557.56 | 281.95 |
| 559.17 | 282.01 | 566.74 | 282.11 | 568.08 | 282.11 | 569.69 | 282.06 | 576.33 | 282.22 |
| 579.37 | 282.22 | 584.63 | 282.25 | 585.32 | 282.26 | 592.12 | 282.26 | 596.46 | 282.24 |
| 604.69 | 281.96 | 609.59 | 281.89 | 610.35 | 281.89 | 616.1 | 281.81 | 616.53 | 281.81 |
| 617.78 | 281.75 | 620.11 | 281.82 | 621.98 | 281.91 | 625.22 | 282 | 625.32 | 282.09 |
| 626.71 | 282.17 | 627.82 | 282.18 | 628.98 | 282.17 | 632.39 | 282.17 | 634.72 | 282.22 |
| 636.77 | 282.24 | 638.1 | 282.29 | 639.87 | 282.38 | 641.21 | 282.37 | 641.55 | 282.39 |
| 644.97 | 282.47 | 651.45 | 282.63 | 653.31 | 282.64 | 657.84 | 282.76 | 658.74 | 282.76 |
| 660.86 | 282.79 | 664.42 | 282.86 | 667.98 | 282.9 | 671.81 | 282.9 | 676.05 | 282.87 |
| 684.96 | 282.99 | 685.88 | 283.02 | 688.11 | 283.12 | 689.42 | 283.13 | 692.65 | 283.07 |
| 695.15 | 283.04 | 697.79 | 282.99 | 701.74 | 282.94 | 703.29 | 282.91 | 707.03 | 282.91 |
| 709 | 282.95 | 710.97 | 282.93 | 713.16 | 282.96 | 714.44 | 282.93 | 715.37 | 282.89 |
| 723.77 | 282.9 | 725.37 | 282.86 | 728.76 | 282.9 | 730.47 | 282.91 | 737.24 | 282.99 |
| 739.63 | 282.96 | 739.81 | 282.97 | 742.33 | 282.94 | 746.15 | 282.94 | 747.47 | 282.95 |
| 750.2 | 283.03 | 751.21 | 283.05 | 752.67 | 283.1 | 754.61 | 283.15 | 755.51 | 283.19 |
| 759.39 | 283.34 | 760.88 | 283.43 | 764.93 | 283.63 | 765.84 | 283.68 | 768.01 | 283.75 |
| 769.76 | 283.73 | 771.23 | 283.7 | 772.25 | 283.66 | 777.32 | 283.59 | 779.51 | 283.55 |
| 782.65 | 283.53 | 784.39 | 283.6 | 786.66 | 283.65 | 788.67 | 283.63 | 788.98 | 283.64 |
| 791.81 | 283.61 | 795.37 | 283.61 | 798.66 | 283.57 | 803.56 | 283.5 | 805.55 | 283.46 |
| 814.5 | 283.33 | 814.69 | 283.32 | 819.78 | 283.26 | 822.72 | 283.25 | 823.33 | 283.26 |
| 828.45 | 283.18 | 831.03 | 283.12 | 831.56 | 283.1 | 834.59 | 283.05 | 835.41 | 283.05 |
| 839.84 | 283.08 | 844.8 | 283.16 | 845.97 | 283.19 | 851.21 | 283.29 | 851.42 | 283.31 |
| 853.19 | 283.33 | 856.95 | 283.33 | 860.34 | 283.26 | 862.49 | 283.25 | 873.85 | 283.33 |
| 875.47 | 283.3 | 876.57 | 283.23 | 880 | 283.08 | 881.91 | 283.05 | 882.69 | 283.05 |
| 884.34 | 283.09 | 884.63 | 283.11 | 887.2 | 283.19 | 890.22 | 283.3 | 892.24 | 283.39 |
| 894.12 | 283.52 | 894.46 | 283.53 | 897.3 | 283.7 | 899.15 | 283.71 | 900.1 | 283.69 |
| 904.85 | 283.8 | 911.15 | 283.86 | 911.58 | 283.84 | 915.26 | 283.87 | 916.62 | 283.89 |
| 917.63 | 283.92 | 920.29 | 283.96 | 923.8 | 283.96 | 924.48 | 283.95 | 929.33 | 283.96 |
| 934.65 | 283.92 | 934.99 | 283.91 | 940.93 | 283.94 | 941.94 | 283.99 | 944.15 | 284.03 |
| 945.97 | 283.98 | 951.47 | 283.77 | 952.21 | 283.75 | 953.79 | 283.66 | 974.25 | 283.67 |
| 975.41 | 283.71 | 976.7 | 283.73 | 985.8 | 283.73 | 985.97 | 283.74 | 992.83 | 283.73 |
| 998.9 | 283.71 | 1000.57 | 283.69 | 1001.62 | 283.65 | 1006.09 | 283.56 | 1007.13 | 283.55 |
| 1012.49 | 283.6 | 1013.71 | 283.6 | 1017.94 | 283.67 | 1022.76 | 283.83 | 1023.66 | 283.87 |
| 1025.81 | 283.9 | 1027.1 | 283.89 | 1028.91 | 283.95 | 1029.94 | 283.91 | 1032.44 | 283.87 |
| 1039.09 | 283.72 | 1040.57 | 283.67 | 1055.95 | 284 | 1059.53 | 284 | 1061.47 | 284.07 |
| 1064.26 | 284.15 | 1065.96 | 284.19 | 1068.57 | 284.24 | 1070.5 | 284.21 | 1071.02 | 284.18 |
| 1072.11 | 284.16 | 1076.28 | 284.18 | 1079.75 | 284.18 | 1080.81 | 284.15 | 1084.04 | 284.15 |
| 1084.86 | 284.18 | 1085.79 | 284.19 | 1088.79 | 284.15 | 1092.1 | 284.08 | 1094.82 | 284 |
| 1097.25 | 283.98 | 1098.26 | 283.99 | 1101.33 | 283.96 | 1102.91 | 283.93 | 1104.23 | 283.94 |
| 1105.66 | 283.91 | 1106.83 | 283.83 | 1107.98 | 283.84 | 1110.21 | 283.88 | 1112.33 | 283.9 |
| 1117 | 283.85 | 1117.93 | 283.85 | 1121.3 | 283.82 | 1123.15 | 283.95 | 1126.66 | 284.14 |
| 1128.11 | 284.19 | 1133.12 | 284.47 | 1134.99 | 284.5 | 1139.06 | 284.53 | 1139.27 | 284.51 |
| 1140.98 | 284.5 | 1144.32 | 284.53 | 1146.32 | 284.52 | 1148.28 | 284.55 | 1149.34 | 284.55 |
| 1152.91 | 284.57 | 1157.46 | 284.46 | 1161.73 | 284.38 | 1166.83 | 284.36 | 1167.54 | 284.35 |
| 1168.7 | 284.4 | 1170.35 | 284.41 | 1172.36 | 284.41 | 1174.28 | 284.4 | 1176.91 | 284.45 |
| 1177.08 | 284.47 | 1178.05 | 284.45 | 1178.53 | 284.46 | 1179.73 | 284.44 | 1183.68 | 284.43 |
| 1188.17 | 284.3 | 1189.09 | 284.29 | 1189.48 | 284.31 | 1192.11 | 284.31 | 1196.4 | 284.35 |
| 1198.42 | 284.39 | 1201.38 | 284.36 | 1203.18 | 284.33 | 1204.77 | 284.26 | 1205.04 | 284.22 |
| 1205.81 | 284.2 | 1209.57 | 284.05 | 1210.47 | 283.97 | 1212.1 | 283.93 | 1224.23 | 283.85 |
| 1227.29 | 283.86 | 1228.5 | 283.89 | 1233.69 | 283.99 | 1237.58 | 284.04 | 1240.22 | 284.1 |
| 1241.93 | 284.17 | 1244 | 284.21 | 1246.73 | 284.28 | 1247.32 | 284.28 | 1255.16 | 284.24 |
| 1256.21 | 284.22 | 1259.79 | 284.02 | 1260 | 284.02 | 1263.63 | 283.83 | 1264.03 | 283.79 |
| 1266.59 | 283.72 | 1267.43 | 283.72 | 1270.31 | 283.77 | 1272.71 | 283.83 | 1276.12 | 283.9 |
| 1280.08 | 283.94 | 1284.57 | 284.01 | 1292.48 | 284.22 | 1293.01 | 284.23 | 1308.85 | 284.62 |
| 1309.1 | 284.63 | 1318.83 | 284.71 | 1319.89 | 284.76 | 1326.04 | 285.27 | 1330.58 | 285.73 |
| 1332.05 | 285.86 | 1333.64 | 286.06 | 1335.76 | 286.39 | 1338.34 | 286.78 | 1340.37 | 286.97 |
| 1341.3 | 287.13 | 1346.35 | 288.14 | 1350.62 | 289.06 | 1351.29 | 289.24 | 1354.7 | 290.25 |
| 1356.56 | 290.94 | 1359.57 | 292.25 | 1360.73 | 292.78 | 1362.2 | 293.47 | 1364.72 | 294.6 |
| 1365.3 | 294.91 | 1366.08 | 295.3 | 1367.62 | 296.04 | 1368.09 | 296.28 | 1369.73 | 297.21 |
| 1371.11 | 297.95 | 1372.22 | 298.6 | 1373.16 | 299.12 | 1376.24 | 300.97 | 1377.97 | 302 |
| 1379.54 | 302.88 | 1383.87 | 305.33 | 1385.62 | 306.29 | 1386.03 | 306.53 | 1387.56 | 307.37 |
| 1388.38 | 307.88 | 1389.35 | 308.43 | 1390.26 | 308.99 | 1391.67 | 309.7 | 1393.77 | 310.83 |
| 1394.96 | 311.45 | 1396.53 | 312.31 | 1398.13 | 313.06 | 1398.75 | 313.3 | 1400.02 | 313.76 |
| 1401.3 | 314.15 | 1402.66 | 314.6 | 1404.73 | 315.14 | 1407.69 | 315.65 | 1410.25 | 316.05 |
| 1411.12 | 316.17 | 1414.38 | 316.33 | 1419.96 | 316.63 | 1420.55 | 316.67 | 1426.36 | 317 |
| 1434.06 | 317 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 438.86 | .04 | 1365.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 438.86 | 1365.3 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station= 1043.8 Elevation= 284.69

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1564.43*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.39 | 5.26 | 308.18 | 8.29 | 307.98 | 10.47 | 307.9 | 13.96 | 307.67 |
| 15.61 | 307.53 | 20.68 | 307.18 | 22.91 | 306.84 | 25.54 | 306.37 | 30.35 | 305.79 |
| 32.65 | 305.63 | 34.57 | 305.44 | 37.17 | 305.21 | 39.84 | 304.99 | 42.01 | 304.78 |
| 44.14 | 304.74 | 45.38 | 304.69 | 46.33 | 304.62 | 46.85 | 304.56 | 49.88 | 304.36 |
| 51.39 | 304.23 | 55.65 | 303.88 | 57.15 | 303.79 | 59.78 | 303.7 | 62.38 | 303.02 |
| 62.94 | 302.93 | 64.12 | 302.86 | 65.48 | 302.93 | 68.75 | 303.08 | 71.01 | 303.03 |
| 73.41 | 303.08 | 77.76 | 302.98 | 78.79 | 302.97 | 79.71 | 302.99 | 83.35 | 302.82 |
| 85.57 | 302.76 | 87.18 | 302.73 | 90.59 | 302.64 | 93.22 | 302.61 | 93.97 | 302.58 |
| 97.52 | 302.47 | 103.22 | 302.26 | 109.64 | 302.04 | 110.28 | 302.01 | 115.35 | 301.82 |
| 116.23 | 301.78 | 117.44 | 301.69 | 119.28 | 301.59 | 120.82 | 301.46 | 123.48 | 301.19 |
| 131.97 | 300.2 | 137 | 299.66 | 139.53 | 299.46 | 141.48 | 299.28 | 143.19 | 299.11 |
| 145.38 | 298.81 | 146.83 | 298.68 | 150.23 | 298.34 | 151.54 | 298.19 | 172.03 | 296.29 |
| 179.35 | 295.7 | 184.63 | 295.42 | 186.4 | 295.3 | 187.48 | 295.19 | 190.14 | 294.9 |
| 196.91 | 294.1 | 201.07 | 293.67 | 202.51 | 293.58 | 204.72 | 293.48 | 205.7 | 293.46 |
| 207.75 | 293.47 | 209.13 | 293.44 | 218.99 | 292.98 | 220.07 | 292.92 | 224.3 | 292.66 |
| 230.45 | 292.21 | 232.42 | 292.04 | 234.46 | 291.84 | 243.98 | 290.94 | 252.09 | 290.29 |
| 254.55 | 290.1 | 256.17 | 289.99 | 259.57 | 289.78 | 260.28 | 289.73 | 266.54 | 289.33 |
| 267.37 | 289.29 | 270.9 | 289.05 | 280.37 | 288.49 | 288.83 | 287.88 | 289.77 | 287.82 |
| 291.74 | 287.73 | 296.49 | 287.48 | 297.1 | 287.44 | 300.92 | 287.24 | 305.37 | 287.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 311.64 | 286.81 | 321.09 | 286.45 | 321.21 | 286.45 | 330.2 | 286.16 | 334.15 | 286.09 |
| 334.99 | 286.09 | 343.69 | 285.9 | 349.63 | 285.7 | 352.36 | 285.63 | 352.71 | 285.61 |
| 354.54 | 285.6 | 358.3 | 285.53 | 359.9 | 285.52 | 368.89 | 285.42 | 371.64 | 285.37 |
| 380.03 | 285.13 | 386.78 | 284.87 | 389.47 | 284.78 | 394.83 | 284.65 | 396.34 | 284.59 |
| 397.19 | 284.54 | 402.15 | 284.29 | 403.33 | 284.29 | 404.2 | 284.34 | 406.3 | 284.31 |
| 410.95 | 284.23 | 412.44 | 284.21 | 414.21 | 284.17 | 415.87 | 284.16 | 418.17 | 284.25 |
| 418.89 | 284.32 | 422.04 | 284.47 | 422.46 | 284.48 | 426.71 | 284.66 | 430.95 | 284.74 |
| 435.14 | 284.61 | 438.99 | 284.3 | 441.46 | 284.08 | 442.46 | 283.99 | 443.4 | 283.84 |
| 444.58 | 283.89 | 445.04 | 283.93 | 447.38 | 284.08 | 449.46 | 284.24 | 450.02 | 284.27 |
| 451.75 | 284.26 | 452.35 | 284.23 | 453.67 | 284.08 | 456.43 | 283.7 | 460.65 | 283.17 |
| 462.24 | 282.98 | 475.11 | 282.52 | 479.01 | 282.43 | 480.74 | 282.41 | 492.14 | 282.19 |
| 492.46 | 282.19 | 500.1 | 282.02 | 501.31 | 282.02 | 503.42 | 281.98 | 503.76 | 281.99 |
| 506.27 | 281.98 | 507.99 | 281.96 | 508.81 | 281.99 | 518.95 | 282.13 | 522.18 | 282.1 |
| 523.01 | 282.08 | 524.04 | 281.91 | 524.62 | 281.95 | 528.33 | 282.31 | 530.35 | 282.5 |
| 532.42 | 283.12 | 533.23 | 283.74 | 533.98 | 284.36 | 535.95 | 284.47 | 537.84 | 284.55 |
| 543.44 | 284.51 | 543.5 | 284.42 | 544.17 | 284.32 | 546.51 | 283.19 | 546.74 | 283.06 |
| 548.06 | 282.43 | 549.45 | 281.8 | 550.73 | 281.64 | 551.47 | 281.59 | 555.65 | 281.61 |
| 557.2 | 281.67 | 564.48 | 281.76 | 565.77 | 281.76 | 567.32 | 281.72 | 573.7 | 281.87 |
| 580.17 | 281.89 | 583.68 | 281.92 | 586.36 | 281.92 | 588.89 | 281.91 | 593.07 | 281.88 |
| 600.98 | 281.6 | 605.71 | 281.53 | 606.43 | 281.54 | 607.96 | 281.51 | 611.96 | 281.45 |
| 612.38 | 281.45 | 613.58 | 281.39 | 615.5 | 281.45 | 617.83 | 281.57 | 621.11 | 281.66 |
| 621.21 | 281.75 | 621.7 | 281.79 | 622.62 | 281.82 | 624.92 | 281.81 | 626.22 | 281.82 |
| 626.61 | 281.8 | 628.37 | 281.8 | 632.8 | 281.87 | 634.15 | 281.92 | 635.95 | 282.01 |
| 637.3 | 282.01 | 641.1 | 282.11 | 647.66 | 282.27 | 649.54 | 282.29 | 654.14 | 282.4 |
| 657.19 | 282.42 | 660.79 | 282.48 | 664.4 | 282.51 | 668.28 | 282.51 | 672.57 | 282.48 |
| 674.11 | 282.5 | 681.6 | 282.61 | 682.52 | 282.64 | 684.78 | 282.75 | 686.1 | 282.76 |
| 689.37 | 282.69 | 691.91 | 282.66 | 694.58 | 282.61 | 697.48 | 282.57 | 700.15 | 282.54 |
| 703.94 | 282.55 | 705.93 | 282.59 | 707.93 | 282.58 | 709.73 | 282.61 | 711.43 | 282.59 |
| 712.38 | 282.55 | 720.88 | 282.58 | 722.5 | 282.55 | 726.71 | 282.61 | 727.66 | 282.61 |
| 734.52 | 282.67 | 739.09 | 282.63 | 740.52 | 282.61 | 744.87 | 282.6 | 747.64 | 282.68 |
| 748.67 | 282.7 | 750.14 | 282.75 | 752.11 | 282.79 | 753.02 | 282.84 | 756.95 | 282.97 |
| 758.45 | 283.06 | 762.56 | 283.26 | 763.48 | 283.3 | 765.67 | 283.37 | 767.44 | 283.35 |
| 768.93 | 283.32 | 769.96 | 283.28 | 773 | 283.24 | 776.28 | 283.18 | 779.81 | 283.16 |
| 780.16 | 283.15 | 782.26 | 283.23 | 784.55 | 283.27 | 788.47 | 283.26 | 789.77 | 283.25 |
| 793.37 | 283.25 | 796.71 | 283.21 | 801.66 | 283.14 | 803.68 | 283.1 | 812.73 | 282.98 |
| 812.93 | 282.97 | 817.21 | 282.91 | 821.06 | 282.9 | 821.68 | 282.91 | 825.39 | 282.85 |
| 826.5 | 282.84 | 829.47 | 282.77 | 830.01 | 282.75 | 833.08 | 282.69 | 838.39 | 282.73 |
| 843.41 | 282.81 | 844.6 | 282.84 | 849.9 | 282.95 | 850.11 | 282.97 | 851.91 | 283 |
| 855.71 | 283 | 859.15 | 282.93 | 861.32 | 282.92 | 872.83 | 283 | 874.47 | 282.96 |
| 876.84 | 282.83 | 878.03 | 282.78 | 879.68 | 282.73 | 881.77 | 282.72 | 883.45 | 282.75 |
| 883.74 | 282.77 | 886.34 | 282.85 | 889.39 | 282.96 | 891.44 | 283.05 | 893.34 | 283.2 |
| 893.69 | 283.2 | 896.56 | 283.38 | 898.43 | 283.39 | 899.4 | 283.36 | 904.2 | 283.47 |
| 910.59 | 283.52 | 911.79 | 283.51 | 916.13 | 283.56 | 917.15 | 283.59 | 919.84 | 283.63 |
| 923.39 | 283.63 | 924.08 | 283.62 | 928.99 | 283.63 | 934.38 | 283.6 | 934.73 | 283.59 |
| 940.74 | 283.63 | 941.76 | 283.67 | 944 | 283.72 | 945.84 | 283.67 | 951.4 | 283.48 |
| 953.75 | 283.37 | 974.46 | 283.38 | 976.95 | 283.44 | 993.28 | 283.44 | 994.23 | 283.42 |
| 999.42 | 283.42 | 1001.11 | 283.39 | 1002.17 | 283.35 | 1006.7 | 283.26 | 1007.75 | 283.25 |
| 1013.18 | 283.31 | 1014.42 | 283.31 | 1018.99 | 283.4 | 1023.58 | 283.56 | 1024.73 | 283.61 |
| 1026.67 | 283.64 | 1027.97 | 283.63 | 1029.45 | 283.67 | 1029.98 | 283.67 | 1030.85 | 283.63 |
| 1033.38 | 283.57 | 1034.21 | 283.54 | 1040.11 | 283.38 | 1041.61 | 283.32 | 1056.76 | 283.62 |
| 1060.81 | 283.62 | 1062.77 | 283.71 | 1067.31 | 283.84 | 1069.02 | 283.87 | 1070.48 | 283.88 |
| 1071.91 | 283.86 | 1072.44 | 283.83 | 1073.54 | 283.81 | 1075.09 | 283.82 | 1081.28 | 283.82 |
| 1082.35 | 283.79 | 1085.62 | 283.78 | 1087.39 | 283.81 | 1090.43 | 283.77 | 1093.77 | 283.7 |
| 1096.53 | 283.62 | 1098.99 | 283.6 | 1101.25 | 283.61 | 1104.73 | 283.59 | 1105.67 | 283.61 |
| 1106.93 | 283.59 | 1107.71 | 283.56 | 1108.38 | 283.5 | 1109.53 | 283.49 | 1109.85 | 283.51 |
| 1114.26 | 283.56 | 1118.98 | 283.5 | 1119.93 | 283.5 | 1123.51 | 283.46 | 1125.21 | 283.58 |
| 1128.77 | 283.75 | 1130.24 | 283.81 | 1135.31 | 284.08 | 1137.2 | 284.12 | 1141.32 | 284.14 |
| 1141.86 | 284.12 | 1143.27 | 284.11 | 1145.56 | 284.14 | 1148.66 | 284.14 | 1149.23 | 284.16 |
| 1151.16 | 284.19 | 1151.72 | 284.18 | 1153.22 | 284.21 | 1155.34 | 284.22 | 1157.85 | 284.17 |
| 1158.29 | 284.15 | 1160.1 | 284.12 | 1163.09 | 284.05 | 1164.27 | 284.04 | 1170.15 | 284.02 |
| 1171.32 | 284.06 | 1174.41 | 284.07 | 1176.98 | 284.05 | 1179.64 | 284.09 | 1179.81 | 284.11 |
| 1182.49 | 284.08 | 1186.5 | 284.06 | 1187.43 | 284.02 | 1190.71 | 283.93 | 1195.03 | 283.94 |
| 1199.37 | 283.99 | 1200.63 | 284.03 | 1201.98 | 284.02 | 1204.42 | 284.02 | 1205.89 | 284 |
| 1207.85 | 283.91 | 1208.12 | 283.87 | 1208.89 | 283.85 | 1212.7 | 283.68 | 1213.62 | 283.6 |
| 1215.27 | 283.55 | 1227.54 | 283.47 | 1230.64 | 283.47 | 1231.87 | 283.5 | 1237.12 | 283.6 |
| 1241.06 | 283.64 | 1244.48 | 283.73 | 1245.46 | 283.78 | 1250.33 | 283.9 | 1250.92 | 283.9 |
| 1258.86 | 283.85 | 1259.92 | 283.83 | 1263.54 | 283.62 | 1263.76 | 283.62 | 1267.05 | 283.45 |
| 1267.84 | 283.38 | 1270.43 | 283.31 | 1271.28 | 283.31 | 1274.19 | 283.36 | 1276.63 | 283.43 |
| 1280.08 | 283.5 | 1284.09 | 283.53 | 1288.63 | 283.6 | 1296.64 | 283.82 | 1297.17 | 283.83 |
| 1313.22 | 284.22 | 1313.47 | 284.23 | 1323.32 | 284.29 | 1324.4 | 284.33 | 1330.61 | 284.82 |
| 1335.21 | 285.24 | 1336.7 | 285.37 | 1338.31 | 285.57 | 1340.46 | 285.9 | 1343.07 | 286.27 |
| 1345.12 | 286.47 | 1346.07 | 286.62 | 1351.18 | 287.63 | 1355.51 | 288.56 | 1356.18 | 288.74 |
| 1359.31 | 289.64 | 1359.63 | 289.74 | 1361.52 | 290.44 | 1363.41 | 291.26 | 1364.56 | 291.78 |
| 1367.23 | 293.02 | 1368.16 | 293.46 | 1369.77 | 294.19 | 1370.36 | 294.51 | 1372.66 | 295.65 |
| 1373.12 | 295.9 | 1374.75 | 296.83 | 1376.11 | 297.57 | 1377.21 | 298.22 | 1377.84 | 298.56 |
| 1379.76 | 299.72 | 1382.9 | 301.63 | 1384.45 | 302.51 | 1388.74 | 304.98 | 1389.13 | 305.19 |
| 1390.88 | 306.19 | 1392.39 | 307.04 | 1393.2 | 307.55 | 1394.17 | 308.11 | 1395.06 | 308.67 |
| 1396.46 | 309.38 | 1398.53 | 310.49 | 1400.63 | 311.59 | 1401.27 | 311.95 | 1402.85 | 312.7 |
| 1404.72 | 313.4 | 1405.99 | 313.8 | 1407.34 | 314.25 | 1409.38 | 314.78 | 1412.32 | 315.3 |
| 1415.7 | 315.82 | 1418.93 | 316 | 1424.45 | 316.33 | 1425.04 | 316.38 | 1430.78 | 316.75 |
| 1438.41 | 316.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 441.46 | .04 | 1370.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 441.46 | 1370.36 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1043.564 Elevation=284.3888

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1544.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.15 | 5.29 | 307.91 | 6.2 | 307.84 | 8.34 | 307.7 | 10.53 | 307.61 |
| 14.05 | 307.37 | 15.7 | 307.23 | 20.8 | 306.86 | 23.04 | 306.53 | 25.69 | 306.08 |
| 30.27 | 305.52 | 32.84 | 305.35 | 34.78 | 305.16 | 40.07 | 304.7 | 42.26 | 304.5 |
| 44.4 | 304.47 | 45.64 | 304.43 | 46.6 | 304.36 | 47.12 | 304.29 | 50.17 | 304.11 |
| 51.69 | 303.98 | 55.98 | 303.63 | 57.49 | 303.54 | 60.14 | 303.45 | 62.75 | 302.8 |
| 63.31 | 302.71 | 64.5 | 302.65 | 69.15 | 302.82 | 71.43 | 302.77 | 73.84 | 302.8 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 78.22 | 302.68 | 79.26 | 302.67 | 80.18 | 302.68 | 84.07 | 302.49 | 86.08 | 302.42 |
| 87.69 | 302.39 | 91.12 | 302.28 | 93.77 | 302.24 | 98.09 | 302.09 | 103.83 | 301.87 |
| 110.29 | 301.63 | 110.93 | 301.6 | 116.03 | 301.4 | 118.14 | 301.26 | 119.98 | 301.16 |
| 121.54 | 301.03 | 122.39 | 300.94 | 124.21 | 300.77 | 130.57 | 300.04 | 131.04 | 300 |
| 132.74 | 299.8 | 136.99 | 299.38 | 137.81 | 299.29 | 140.35 | 299.1 | 142.32 | 298.92 |
| 144.03 | 298.75 | 145.52 | 298.54 | 146.23 | 298.46 | 147.7 | 298.33 | 151.12 | 297.99 |
| 152.43 | 297.85 | 173.04 | 295.98 | 180.41 | 295.41 | 185.72 | 295.12 | 187.06 | 295.04 |
| 188.59 | 294.9 | 191.26 | 294.61 | 197.84 | 293.85 | 202.26 | 293.41 | 203.7 | 293.31 |
| 205.92 | 293.21 | 206.91 | 293.19 | 208.97 | 293.19 | 210.36 | 293.15 | 221.37 | 292.64 |
| 225.63 | 292.38 | 231.8 | 291.95 | 233.79 | 291.78 | 235.84 | 291.58 | 245.42 | 290.71 |
| 253.58 | 290.07 | 255.35 | 289.95 | 256.05 | 289.89 | 257.68 | 289.78 | 267.64 | 289.13 |
| 268.95 | 289.07 | 272.5 | 288.84 | 282.02 | 288.28 | 290.53 | 287.67 | 291.48 | 287.61 |
| 293.46 | 287.52 | 298.23 | 287.28 | 298.85 | 287.24 | 302.7 | 287.04 | 307.17 | 286.88 |
| 313.48 | 286.6 | 322.98 | 286.22 | 323.1 | 286.22 | 332.15 | 285.92 | 336.13 | 285.85 |
| 336.96 | 285.84 | 345.72 | 285.64 | 346.41 | 285.62 | 351.69 | 285.43 | 353.34 | 285.39 |
| 354.79 | 285.33 | 356.63 | 285.31 | 360.41 | 285.23 | 362.02 | 285.22 | 371.06 | 285.1 |
| 373.84 | 285.04 | 382.27 | 284.79 | 389.06 | 284.51 | 390.45 | 284.47 | 393.27 | 284.37 |
| 394.72 | 284.34 | 395.43 | 284.31 | 397.15 | 284.28 | 404.52 | 283.87 | 405.71 | 283.87 |
| 406.58 | 283.92 | 408.7 | 283.89 | 414.87 | 283.77 | 418.33 | 283.72 | 420.64 | 283.82 |
| 421.25 | 283.89 | 422.62 | 283.97 | 429.22 | 284.28 | 433.49 | 284.38 | 437.71 | 284.27 |
| 441.58 | 283.97 | 444.06 | 283.74 | 445.03 | 283.65 | 445.93 | 283.51 | 447.06 | 283.56 |
| 449.75 | 283.72 | 452.28 | 283.89 | 453.95 | 283.88 | 454.75 | 283.82 | 455.79 | 283.7 |
| 458.44 | 283.34 | 462.49 | 282.83 | 464.02 | 282.65 | 476.38 | 282.18 | 480.13 | 282.09 |
| 481.79 | 282.07 | 492.74 | 281.85 | 493.05 | 281.84 | 500.39 | 281.67 | 502.06 | 281.67 |
| 503.57 | 281.64 | 503.9 | 281.65 | 507.96 | 281.62 | 508.75 | 281.64 | 518.49 | 281.77 |
| 521.59 | 281.75 | 522.39 | 281.72 | 523.38 | 281.56 | 523.94 | 281.6 | 529.44 | 282.11 |
| 531.43 | 282.68 | 532.93 | 283.84 | 533.23 | 283.87 | 534.82 | 283.95 | 536.63 | 284.01 |
| 542.01 | 283.98 | 542.07 | 283.9 | 542.71 | 283.8 | 546.45 | 282.04 | 547.78 | 281.45 |
| 549.01 | 281.3 | 549.57 | 281.25 | 552.23 | 281.25 | 553.74 | 281.26 | 555.23 | 281.32 |
| 562.22 | 281.42 | 563.46 | 281.42 | 564.49 | 281.38 | 564.95 | 281.38 | 571.08 | 281.52 |
| 577.29 | 281.54 | 579.39 | 281.57 | 583.24 | 281.57 | 585.67 | 281.56 | 589.68 | 281.52 |
| 597.28 | 281.25 | 601.82 | 281.18 | 602.52 | 281.18 | 603.98 | 281.15 | 607.82 | 281.1 |
| 609.38 | 281.03 | 611.77 | 281.12 | 613.68 | 281.23 | 616.88 | 281.33 | 617.11 | 281.41 |
| 618.53 | 281.47 | 622.18 | 281.46 | 622.57 | 281.44 | 624.35 | 281.44 | 628.84 | 281.49 |
| 632.02 | 281.64 | 633.38 | 281.64 | 633.74 | 281.66 | 643.88 | 281.92 | 645.78 | 281.93 |
| 650.43 | 282.04 | 653.53 | 282.05 | 657.17 | 282.1 | 660.82 | 282.12 | 664.75 | 282.12 |
| 669.09 | 282.08 | 669.45 | 282.09 | 678.23 | 282.24 | 679.17 | 282.27 | 681.45 | 282.38 |
| 682.79 | 282.38 | 686.1 | 282.32 | 688.54 | 282.29 | 688.67 | 282.28 | 691.37 | 282.23 |
| 694.3 | 282.19 | 697.64 | 282.17 | 700.84 | 282.19 | 702.86 | 282.23 | 704.88 | 282.23 |
| 706.7 | 282.26 | 708.43 | 282.24 | 709.39 | 282.21 | 710.05 | 282.21 | 718 | 282.26 |
| 718.89 | 282.26 | 719.64 | 282.23 | 723.11 | 282.29 | 724.86 | 282.3 | 731.8 | 282.36 |
| 734.43 | 282.33 | 735.72 | 282.3 | 740.93 | 282.25 | 742.28 | 282.25 | 745.08 | 282.33 |
| 746.12 | 282.35 | 748.72 | 282.42 | 749.6 | 282.43 | 750.52 | 282.48 | 754.5 | 282.6 |
| 756.02 | 282.69 | 761.11 | 282.92 | 763.33 | 282.99 | 765.13 | 282.97 | 766.49 | 282.94 |
| 767.68 | 282.9 | 772.36 | 282.82 | 774 | 282.8 | 778.33 | 282.78 | 780.12 | 282.85 |
| 782.44 | 282.9 | 784.5 | 282.89 | 785.42 | 282.9 | 787.73 | 282.88 | 791.37 | 282.88 |
| 799.77 | 282.78 | 801.8 | 282.74 | 816.39 | 282.55 | 819.4 | 282.54 | 820.03 | 282.55 |
| 823.78 | 282.5 | 825.7 | 282.48 | 827.91 | 282.42 | 828.46 | 282.39 | 831.56 | 282.34 |
| 836.94 | 282.38 | 842.02 | 282.47 | 848.59 | 282.62 | 848.81 | 282.64 | 850.63 | 282.67 |
| 854.47 | 282.67 | 857.95 | 282.6 | 860.15 | 282.59 | 871.8 | 282.66 | 873.46 | 282.62 |
| 875.86 | 282.5 | 878.09 | 282.41 | 880.06 | 282.38 | 880.85 | 282.38 | 882.55 | 282.41 |
| 882.84 | 282.43 | 885.47 | 282.51 | 888.57 | 282.62 | 890.64 | 282.71 | 892.56 | 282.87 |
| 892.91 | 282.87 | 895.82 | 283.07 | 897.29 | 283.07 | 898.7 | 283.03 | 903.56 | 283.13 |
| 910.02 | 283.19 | 912.14 | 283.18 | 915.63 | 283.23 | 916.66 | 283.26 | 919.38 | 283.3 |
| 921.39 | 283.29 | 922.83 | 283.3 | 923.69 | 283.28 | 927.34 | 283.3 | 928.65 | 283.3 |
| 934.1 | 283.28 | 934.46 | 283.27 | 940.54 | 283.31 | 941.58 | 283.35 | 943.84 | 283.4 |
| 945.71 | 283.36 | 951.34 | 283.18 | 953.19 | 283.11 | 953.72 | 283.08 | 974.68 | 283.08 |
| 975.88 | 283.12 | 977.2 | 283.14 | 986.52 | 283.14 | 986.7 | 283.15 | 993.72 | 283.14 |
| 999.94 | 283.12 | 1001.82 | 283.08 | 1002.73 | 283.05 | 1007.32 | 282.96 | 1008.38 | 282.95 |
| 1013.87 | 283.02 | 1015.12 | 283.03 | 1019.46 | 283.12 | 1024.39 | 283.3 | 1025.32 | 283.35 |
| 1027.52 | 283.38 | 1028.84 | 283.37 | 1030.34 | 283.4 | 1030.99 | 283.39 | 1032.42 | 283.32 |
| 1032.54 | 283.33 | 1034.31 | 283.28 | 1035.16 | 283.24 | 1041.13 | 283.04 | 1042.65 | 282.96 |
| 1057.99 | 283.24 | 1058.41 | 283.25 | 1062.08 | 283.25 | 1064.07 | 283.34 | 1066.92 | 283.44 |
| 1068.67 | 283.49 | 1070.4 | 283.52 | 1071.88 | 283.53 | 1073.32 | 283.51 | 1073.86 | 283.48 |
| 1074.97 | 283.47 | 1079.25 | 283.47 | 1082.8 | 283.46 | 1083.89 | 283.42 | 1087.2 | 283.41 |
| 1088.98 | 283.44 | 1092.07 | 283.4 | 1095.45 | 283.32 | 1098.24 | 283.24 | 1098.88 | 283.23 |
| 1101.68 | 283.23 | 1103.02 | 283.25 | 1104.73 | 283.24 | 1106.54 | 283.25 | 1107.89 | 283.27 |
| 1109.35 | 283.24 | 1110.24 | 283.17 | 1111.66 | 283.16 | 1111.73 | 283.18 | 1114.01 | 283.2 |
| 1115.93 | 283.23 | 1116.19 | 283.22 | 1120.97 | 283.14 | 1121.3 | 283.15 | 1125.13 | 283.1 |
| 1125.55 | 283.1 | 1127.28 | 283.2 | 1131.09 | 283.38 | 1132.36 | 283.43 | 1137.49 | 283.7 |
| 1139.41 | 283.74 | 1143.58 | 283.76 | 1144.13 | 283.73 | 1146.56 | 283.73 | 1147.87 | 283.75 |
| 1151.01 | 283.76 | 1153.54 | 283.82 | 1155.62 | 283.85 | 1157.77 | 283.87 | 1160.31 | 283.82 |
| 1165.61 | 283.7 | 1166.81 | 283.69 | 1172.77 | 283.68 | 1173.95 | 283.72 | 1175.64 | 283.74 |
| 1177.7 | 283.72 | 1180.14 | 283.71 | 1181.26 | 283.73 | 1182.37 | 283.73 | 1182.54 | 283.75 |
| 1185.26 | 283.71 | 1189.31 | 283.69 | 1190.25 | 283.65 | 1193.91 | 283.55 | 1197.95 | 283.57 |
| 1202.34 | 283.63 | 1203.62 | 283.67 | 1205.87 | 283.66 | 1206.38 | 283.68 | 1207.94 | 283.66 |
| 1208.24 | 283.67 | 1209.29 | 283.64 | 1210.92 | 283.57 | 1211.31 | 283.52 | 1211.98 | 283.5 |
| 1215.07 | 283.35 | 1215.61 | 283.33 | 1216.76 | 283.23 | 1218.43 | 283.18 | 1229.17 | 283.09 |
| 1233.71 | 283.07 | 1240.55 | 283.21 | 1244.54 | 283.24 | 1247.25 | 283.3 | 1248.42 | 283.36 |
| 1250.53 | 283.42 | 1251.51 | 283.46 | 1253.92 | 283.53 | 1254.52 | 283.53 | 1262.56 | 283.46 |
| 1263.64 | 283.44 | 1267.3 | 283.23 | 1269.51 | 283.12 | 1270.85 | 283.04 | 1271.65 | 282.96 |
| 1274.27 | 282.9 | 1275.13 | 282.9 | 1278.08 | 282.96 | 1280.54 | 283.03 | 1284.04 | 283.1 |
| 1288.09 | 283.12 | 1292.7 | 283.19 | 1300.8 | 283.42 | 1301.34 | 283.43 | 1317.58 | 283.83 |
| 1327.81 | 283.88 | 1328.9 | 283.91 | 1335.19 | 284.36 | 1339.84 | 284.76 | 1341.36 | 284.88 |
| 1342.98 | 285.08 | 1345.15 | 285.4 | 1347.8 | 285.77 | 1349.88 | 285.96 | 1350.83 | 286.11 |
| 1356.01 | 287.12 | 1360.39 | 288.06 | 1361.07 | 288.24 | 1364.57 | 289.22 | 1366.47 | 289.93 |
| 1368.39 | 290.78 | 1369.56 | 291.31 | 1370.74 | 291.86 | 1372.25 | 292.58 | 1374.83 | 293.78 |
| 1375.43 | 294.11 | 1376.2 | 294.51 | 1377.7 | 295.26 | 1378.16 | 295.51 | 1379.77 | 296.44 |
| 1381.11 | 297.19 | 1382.24 | 297.86 | 1383.13 | 298.36 | 1387.84 | 301.26 | 1389.08 | 301.98 |
| 1391.61 | 303.47 | 1392.16 | 303.78 | 1397.06 | 306.62 | 1397.93 | 307.16 | 1398.56 | 307.53 |
| 1399.86 | 308.35 | 1401.25 | 309.05 | 1403.3 | 310.15 | 1405.38 | 311.24 | 1406.01 | 311.58 |
| 1407.57 | 312.33 | 1409.54 | 313.08 | 1410.67 | 313.44 | 1412.01 | 313.9 | 1414.04 | 314.42 |
| 1416.94 | 314.94 | 1420.29 | 315.47 | 1423.48 | 315.67 | 1429.52 | 316.08 | 1435.21 | 316.5 |
| 1442.76 | 316.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 444.06 | .04 | 1375.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 444.06 | 1375.43 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1043.328 Elevation=284.0875

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1525.21*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.9 | 1.95 | 307.81 | 5.32 | 307.64 | 8.39 | 307.41 | 10.59 | 307.32 |
| 14.13 | 307.08 | 15.79 | 306.93 | 20.92 | 306.55 | 23.18 | 306.22 | 25.84 | 305.79 |
| 30.7 | 305.2 | 33.04 | 305.06 | 34.98 | 304.88 | 37.46 | 304.67 | 37.61 | 304.65 |
| 40.31 | 304.42 | 42.51 | 304.22 | 44.66 | 304.2 | 45.91 | 304.17 | 46.88 | 304.1 |
| 47.4 | 304.03 | 50.47 | 303.86 | 51.99 | 303.73 | 56.31 | 303.39 | 57.83 | 303.29 |
| 60.49 | 303.2 | 63.12 | 302.58 | 63.68 | 302.49 | 64.88 | 302.43 | 69.56 | 302.57 |
| 71.85 | 302.5 | 73.18 | 302.52 | 74.27 | 302.52 | 78.67 | 302.38 | 80.65 | 302.37 |
| 84.34 | 302.18 | 86.58 | 302.09 | 88.21 | 302.05 | 91.66 | 301.92 | 94.32 | 301.88 |
| 95.08 | 301.84 | 98.67 | 301.71 | 104.44 | 301.47 | 110.93 | 301.22 | 116.71 | 300.97 |
| 120.69 | 300.73 | 122.25 | 300.6 | 123.1 | 300.51 | 124.94 | 300.34 | 131.34 | 299.64 |
| 133.52 | 299.41 | 138.62 | 298.92 | 141.17 | 298.73 | 143.15 | 298.56 | 144.88 | 298.39 |
| 146.37 | 298.18 | 148.56 | 297.98 | 152 | 297.65 | 153.32 | 297.5 | 174.06 | 295.68 |
| 181.46 | 295.12 | 186.81 | 294.83 | 188.6 | 294.71 | 192.38 | 294.32 | 199 | 293.58 |
| 199.23 | 293.55 | 203.44 | 293.15 | 204.9 | 293.05 | 207.13 | 292.94 | 208.12 | 292.92 |
| 210.2 | 292.91 | 211.6 | 292.87 | 221.58 | 292.41 | 226.95 | 292.1 | 233.16 | 291.69 |
| 235.16 | 291.52 | 237.23 | 291.33 | 246.86 | 290.48 | 255.06 | 289.86 | 256.85 | 289.74 |
| 257.55 | 289.68 | 263.35 | 289.29 | 269.21 | 288.91 | 270.52 | 288.85 | 274.09 | 288.62 |
| 283.68 | 288.07 | 292.24 | 287.46 | 293.19 | 287.4 | 295.18 | 287.32 | 299.98 | 287.08 |
| 300.6 | 287.04 | 304.47 | 286.85 | 308.31 | 286.7 | 308.97 | 286.68 | 315.32 | 286.39 |
| 324.87 | 285.99 | 325 | 285.99 | 334.1 | 285.68 | 338.66 | 285.6 | 338.94 | 285.6 |
| 347.74 | 285.39 | 348.44 | 285.37 | 353.75 | 285.16 | 356.87 | 285.06 | 362.52 | 284.93 |
| 364.15 | 284.91 | 373.24 | 284.77 | 376.03 | 284.71 | 384.52 | 284.44 | 394.06 | 284.05 |
| 395.58 | 284 | 397.03 | 283.97 | 397.75 | 283.94 | 399.48 | 283.9 | 401.02 | 283.82 |
| 401.87 | 283.76 | 406.89 | 283.45 | 408.09 | 283.45 | 408.96 | 283.51 | 411.09 | 283.48 |
| 417.91 | 283.32 | 420.78 | 283.28 | 422.47 | 283.35 | 424.23 | 283.5 | 431.74 | 283.9 |
| 435.85 | 284.02 | 440.27 | 283.93 | 444.17 | 283.63 | 446.67 | 283.4 | 447.59 | 283.32 |
| 448.45 | 283.18 | 452.12 | 283.36 | 454.55 | 283.51 | 456.14 | 283.49 | 456.91 | 283.43 |
| 457.92 | 283.32 | 460.45 | 282.97 | 464.34 | 282.48 | 465.8 | 282.31 | 477.65 | 281.85 |
| 481.25 | 281.76 | 482.84 | 281.74 | 493.34 | 281.5 | 493.64 | 281.49 | 500.67 | 281.33 |
| 502.27 | 281.33 | 503.73 | 281.3 | 504.04 | 281.31 | 507.94 | 281.28 | 508.69 | 281.3 |
| 518.03 | 281.41 | 521.01 | 281.39 | 521.77 | 281.36 | 522.72 | 281.21 | 523.25 | 281.25 |
| 526.67 | 281.56 | 528.53 | 281.72 | 530.43 | 282.25 | 531.87 | 283.33 | 533.69 | 283.42 |
| 535.43 | 283.48 | 540.58 | 283.45 | 540.64 | 283.37 | 541.25 | 283.28 | 543.41 | 282.3 |
| 543.62 | 282.19 | 544.84 | 281.64 | 546.12 | 281.09 | 547.29 | 280.95 | 547.98 | 280.9 |
| 550.38 | 280.91 | 552.29 | 280.93 | 553.26 | 280.97 | 559.96 | 281.07 | 561.15 | 281.07 |
| 562.58 | 281.04 | 568.45 | 281.18 | 571.15 | 281.18 | 575.81 | 281.21 | 576.42 | 281.22 |
| 580.11 | 281.22 | 582.44 | 281.21 | 586.29 | 281.17 | 593.58 | 280.9 | 597.93 | 280.82 |
| 598.6 | 280.82 | 603.69 | 280.74 | 605.18 | 280.68 | 607.6 | 280.77 | 609.53 | 280.89 |
| 612.77 | 280.99 | 613 | 281.07 | 613.42 | 281.1 | 614.52 | 281.13 | 616.8 | 281.1 |
| 618.13 | 281.1 | 618.53 | 281.08 | 620.33 | 281.07 | 624.87 | 281.12 | 626.25 | 281.17 |
| 627.84 | 281.26 | 628.41 | 281.28 | 629.47 | 281.28 | 632.81 | 281.38 | 633.38 | 281.39 |
| 640.1 | 281.57 | 642.02 | 281.58 | 646.73 | 281.68 | 647.66 | 281.67 | 649.86 | 281.68 |
| 653.55 | 281.72 | 657.24 | 281.74 | 657.6 | 281.73 | 661.22 | 281.73 | 665.61 | 281.69 |
| 674.86 | 281.86 | 675.81 | 281.89 | 678.12 | 282 | 679.48 | 282.01 | 682.83 | 281.94 |
| 685.43 | 281.91 | 688.16 | 281.85 | 692.26 | 281.8 | 694.51 | 281.8 | 697.75 | 281.82 |
| 699.79 | 281.87 | 700.79 | 281.88 | 701.84 | 281.87 | 703.68 | 281.91 | 705.43 | 281.9 |
| 706.39 | 281.87 | 707.06 | 281.87 | 715.11 | 281.94 | 716.01 | 281.94 | 716.77 | 281.92 |
| 720.28 | 281.98 | 722.05 | 281.99 | 729.07 | 282.05 | 734.36 | 281.96 | 738.32 | 281.91 |
| 739.69 | 281.9 | 742.52 | 281.98 | 745.08 | 282.04 | 747.1 | 282.08 | 748.03 | 282.12 |
| 752.05 | 282.24 | 753.01 | 282.28 | 753.6 | 282.33 | 757.8 | 282.51 | 760.99 | 282.61 |
| 764.33 | 282.55 | 765.39 | 282.51 | 768.8 | 282.47 | 770.53 | 282.43 | 772.92 | 282.41 |
| 775.48 | 282.41 | 775.83 | 282.4 | 777.98 | 282.47 | 780.33 | 282.53 | 782.42 | 282.52 |
| 783.35 | 282.53 | 785.91 | 282.51 | 789.37 | 282.51 | 792.79 | 282.48 | 797.87 | 282.42 |
| 799.93 | 282.38 | 809.21 | 282.27 | 809.4 | 282.26 | 814.69 | 282.2 | 817.74 | 282.19 |
| 818.37 | 282.2 | 822.17 | 282.15 | 824.11 | 282.13 | 826.35 | 282.07 | 826.91 | 282.04 |
| 830.05 | 281.98 | 832.09 | 282.01 | 835.49 | 282.03 | 840.63 | 282.13 | 847.28 | 282.28 |
| 847.5 | 282.3 | 849.34 | 282.33 | 853.24 | 282.33 | 856.76 | 282.27 | 858.98 | 282.26 |
| 870.77 | 282.33 | 872.45 | 282.28 | 874.88 | 282.16 | 877.14 | 282.07 | 879.94 | 282.05 |
| 881.65 | 282.08 | 884.61 | 282.17 | 887.75 | 282.28 | 889.84 | 282.38 | 891.79 | 282.54 |
| 892.14 | 282.54 | 895.09 | 282.75 | 896.57 | 282.75 | 897.99 | 282.7 | 902.92 | 282.8 |
| 909.46 | 282.85 | 910.69 | 282.84 | 913.72 | 282.87 | 916.18 | 282.93 | 918.93 | 282.97 |
| 922.58 | 282.96 | 923.29 | 282.94 | 926.98 | 282.97 | 933.83 | 282.96 | 934.19 | 282.95 |
| 940.35 | 283 | 941.39 | 283.04 | 943.69 | 283.08 | 945.57 | 283.05 | 952.04 | 282.86 |
| 953.68 | 282.79 | 974.9 | 282.79 | 976.11 | 282.83 | 977.44 | 282.85 | 994.17 | 282.85 |
| 995.15 | 282.83 | 1000.47 | 282.82 | 1003.29 | 282.75 | 1006.81 | 282.69 | 1007.93 | 282.66 |
| 1009 | 282.65 | 1014.57 | 282.73 | 1015.83 | 282.74 | 1020.51 | 282.86 | 1025.21 | 283.04 |
| 1025.6 | 283.07 | 1028.38 | 283.12 | 1029.71 | 283.1 | 1031.59 | 283.13 | 1032.66 | 283.06 |
| 1035.25 | 282.98 | 1036.11 | 282.94 | 1042.15 | 282.7 | 1043.69 | 282.61 | 1059.21 | 282.87 |
| 1059.64 | 282.88 | 1063.44 | 282.88 | 1065.36 | 282.98 | 1068.26 | 283.08 | 1070.02 | 283.13 |
| 1072.73 | 283.18 | 1074.73 | 283.16 | 1076.4 | 283.12 | 1080.73 | 283.12 | 1084.33 | 283.1 |
| 1085.43 | 283.06 | 1088.78 | 283.04 | 1089.63 | 283.06 | 1090.58 | 283.06 | 1093.7 | 283.02 |
| 1097.13 | 282.94 | 1099.95 | 282.85 | 1100.6 | 282.84 | 1103.53 | 282.86 | 1104.79 | 282.88 |
| 1108.35 | 282.9 | 1109.32 | 282.93 | 1110.61 | 282.92 | 1111.41 | 282.89 | 1112.09 | 282.83 |
| 1113.27 | 282.82 | 1113.6 | 282.84 | 1117.85 | 282.89 | 1118.12 | 282.88 | 1122.96 | 282.79 |
| 1123.93 | 282.79 | 1127.59 | 282.73 | 1129.34 | 282.83 | 1133.2 | 283 | 1134.48 | 283.05 |
| 1139.68 | 283.31 | 1141.62 | 283.35 | 1145.84 | 283.38 | 1146.4 | 283.35 | 1147.83 | 283.34 |
| 1149.62 | 283.35 | 1151.29 | 283.37 | 1151.71 | 283.36 | 1153.36 | 283.38 | 1153.94 | 283.41 |
| 1155.92 | 283.46 | 1156.5 | 283.46 | 1159.68 | 283.52 | 1160.2 | 283.52 | 1162.77 | 283.48 |
| 1163.22 | 283.46 | 1165.07 | 283.43 | 1168.14 | 283.35 | 1169.35 | 283.34 | 1175.38 | 283.34 |
| 1176.58 | 283.38 | 1178.29 | 283.4 | 1182.37 | 283.36 | 1185.1 | 283.38 | 1186.28 | 283.36 |
| 1186.77 | 283.37 | 1188.02 | 283.34 | 1192.12 | 283.31 | 1196.78 | 283.18 | 1200.87 | 283.2 |
| 1205.31 | 283.27 | 1206.6 | 283.31 | 1207.41 | 283.32 | 1208.88 | 283.31 | 1209.4 | 283.33 |
| 1211.29 | 283.32 | 1212.34 | 283.3 | 1214 | 283.22 | 1214.39 | 283.17 | 1215.07 | 283.15 |
| 1218.74 | 282.96 | 1219.91 | 282.85 | 1221.6 | 282.81 | 1232.46 | 282.71 | 1234.17 | 282.69 |
| 1237.16 | 282.68 | 1243.99 | 282.81 | 1248.02 | 282.84 | 1250.76 | 282.9 | 1251.93 | 282.97 |
| 1257.51 | 283.15 | 1258.12 | 283.15 | 1266.26 | 283.08 | 1267.35 | 283.05 | 1268.79 | 282.97 |
| 1271.06 | 282.83 | 1271.28 | 282.83 | 1273.29 | 282.72 | 1275.32 | 282.58 | 1275.46 | 282.55 |
| 1278.11 | 282.49 | 1278.98 | 282.49 | 1281.97 | 282.55 | 1284.46 | 282.62 | 1288 | 282.69 |
| 1292.1 | 282.71 | 1296.76 | 282.78 | 1304.96 | 283.01 | 1305.51 | 283.02 | 1321.95 | 283.43 |
| 1322.21 | 283.44 | 1332.3 | 283.47 | 1333.4 | 283.49 | 1339.77 | 283.91 | 1344.48 | 284.28 |
| 1346.01 | 284.38 | 1347.66 | 284.59 | 1349.85 | 284.9 | 1352.53 | 285.26 | 1354.63 | 285.46 |
| 1355.6 | 285.6 | 1360.83 | 286.61 | 1365.27 | 287.55 | 1365.96 | 287.73 | 1369.17 | 288.61 |
| 1369.5 | 288.71 | 1371.71 | 289.54 | 1374.55 | 290.84 | 1375.75 | 291.4 | 1378.71 | 292.82 |
| 1379.89 | 293.36 | 1380.49 | 293.71 | 1383.03 | 295.03 | 1384.78 | 296.06 | 1386.12 | 296.81 |
| 1387.23 | 297.48 | 1388.11 | 297.97 | 1391.09 | 299.84 | 1392.77 | 300.88 | 1396.5 | 303.11 |
| 1398.86 | 304.5 | 1400.57 | 305.52 | 1402.06 | 306.38 | 1402.75 | 306.84 | 1403.79 | 307.47 |
| 1404.85 | 308.14 | 1406.04 | 308.73 | 1406.47 | 308.97 | 1411.35 | 311.52 | 1412.3 | 311.96 |
| 1414.24 | 312.71 | 1416.69 | 313.55 | 1418.69 | 314.06 | 1421.56 | 314.59 | 1424.03 | 314.99 |
| 1424.88 | 315.11 | 1428.03 | 315.33 | 1433.44 | 315.74 | 1434.01 | 315.79 | 1439.64 | 316.25 |

1447.1 316.25

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 446.67 | .04 | 1380.49 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

446.67 1380.49 17.76 19.61 21.2 .1 .3

Right Levee Station=1043.091 Elevation=283.7863

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1505.60*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.66 | 1.96 | 307.56 | 5.35 | 307.37 | 6.27 | 307.29 | 8.44 | 307.13 |
| 10.65 | 307.03 | 14.21 | 306.78 | 15.89 | 306.63 | 21.04 | 306.24 | 23.31 | 305.92 |
| 24.72 | 305.69 | 25.99 | 305.5 | 30.62 | 304.93 | 33.23 | 304.78 | 35.18 | 304.6 |
| 40.54 | 304.14 | 42.76 | 303.93 | 44.92 | 303.93 | 46.18 | 303.91 | 47.15 | 303.84 |
| 47.67 | 303.77 | 50.76 | 303.61 | 52.3 | 303.48 | 56.64 | 303.14 | 58.16 | 303.04 |
| 59.21 | 303.01 | 60.04 | 302.96 | 60.84 | 302.94 | 63.48 | 302.35 | 64.05 | 302.27 |
| 65.26 | 302.21 | 66.63 | 302.25 | 69.97 | 302.31 | 72.12 | 302.24 | 73.6 | 302.25 |
| 74.7 | 302.24 | 79.13 | 302.08 | 81.12 | 302.06 | 84.83 | 301.86 | 87.08 | 301.76 |
| 88.72 | 301.71 | 92.19 | 301.57 | 94.87 | 301.51 | 95.63 | 301.47 | 99.24 | 301.33 |
| 105.05 | 301.07 | 111.58 | 300.8 | 117.39 | 300.55 | 119.52 | 300.41 | 121.39 | 300.3 |
| 123.25 | 300.14 | 125.67 | 299.92 | 134.3 | 299.01 | 139.42 | 298.55 | 142 | 298.37 |
| 143.99 | 298.2 | 145.72 | 298.03 | 147.22 | 297.83 | 147.95 | 297.75 | 149.43 | 297.63 |
| 152.89 | 297.3 | 154.22 | 297.15 | 175.07 | 295.38 | 182.52 | 294.82 | 187.89 | 294.53 |
| 189.7 | 294.41 | 190.8 | 294.31 | 193.51 | 294.03 | 200.16 | 293.3 | 204.63 | 292.88 |
| 206.09 | 292.78 | 208.34 | 292.68 | 209.34 | 292.65 | 211.48 | 292.63 | 212.83 | 292.59 |
| 222.87 | 292.12 | 228.27 | 291.82 | 234.52 | 291.42 | 236.53 | 291.26 | 238.61 | 291.07 |
| 248.3 | 290.26 | 256.55 | 289.65 | 258.34 | 289.53 | 260.7 | 289.35 | 264.89 | 289.07 |
| 271.26 | 288.66 | 272.1 | 288.63 | 275.69 | 288.4 | 285.33 | 287.87 | 293.94 | 287.25 |
| 294.89 | 287.19 | 296.9 | 287.11 | 301.73 | 286.89 | 302.36 | 286.85 | 306.24 | 286.65 |
| 310.1 | 286.5 | 310.77 | 286.48 | 317.15 | 286.18 | 326.77 | 285.76 | 326.89 | 285.76 |
| 336.04 | 285.44 | 340.63 | 285.36 | 340.91 | 285.36 | 349.77 | 285.14 | 355.81 | 284.89 |
| 358.59 | 284.79 | 360.81 | 284.74 | 364.64 | 284.63 | 375.41 | 284.44 | 378.22 | 284.37 |
| 386.76 | 284.1 | 393.62 | 283.8 | 396.36 | 283.69 | 399.35 | 283.59 | 401.81 | 283.52 |
| 403.35 | 283.43 | 409.26 | 283.03 | 410.47 | 283.03 | 411.35 | 283.09 | 413.49 | 283.06 |
| 418.63 | 282.93 | 421.03 | 282.88 | 421.54 | 282.86 | 423.23 | 282.84 | 425.57 | 282.95 |
| 426.3 | 283.04 | 427.58 | 283.13 | 434.25 | 283.53 | 438.39 | 283.66 | 442.84 | 283.6 |
| 446.75 | 283.3 | 449.27 | 283.07 | 450.15 | 282.98 | 450.98 | 282.85 | 454.49 | 283 |
| 456.81 | 283.13 | 458.34 | 283.1 | 458.87 | 283.07 | 460.04 | 282.94 | 462.46 | 282.6 |
| 467.58 | 281.97 | 478.93 | 281.52 | 482.37 | 281.42 | 483.89 | 281.4 | 493.94 | 281.16 |
| 494.23 | 281.15 | 500.96 | 280.99 | 502.02 | 280.99 | 503.88 | 280.96 | 504.18 | 280.97 |
| 507.91 | 280.94 | 508.63 | 280.96 | 517.57 | 281.05 | 520.42 | 281.03 | 521.15 | 281 |
| 522.06 | 280.87 | 522.57 | 280.9 | 527.61 | 281.33 | 529.44 | 281.82 | 530.16 | 282.32 |
| 530.82 | 282.81 | 532.56 | 282.9 | 534.22 | 282.95 | 539.15 | 282.92 | 539.21 | 282.85 |
| 539.8 | 282.76 | 543.23 | 281.24 | 544.45 | 280.74 | 545.58 | 280.61 | 546.23 | 280.56 |
| 548.53 | 280.56 | 549.83 | 280.57 | 551.29 | 280.63 | 557.7 | 280.73 | 558.84 | 280.73 |
| 560.2 | 280.7 | 565.83 | 280.83 | 568.41 | 280.83 | 572.87 | 280.86 | 574.63 | 280.88 |
| 579.22 | 280.86 | 582.9 | 280.81 | 589.88 | 280.55 | 594.04 | 280.46 | 594.68 | 280.46 |
| 599.55 | 280.38 | 600.98 | 280.32 | 603.42 | 280.42 | 605.72 | 280.56 | 608.66 | 280.66 |
| 608.89 | 280.73 | 609.32 | 280.76 | 610.35 | 280.78 | 611.51 | 280.77 | 612.73 | 280.74 |
| 614.08 | 280.74 | 614.49 | 280.71 | 616.31 | 280.7 | 618.63 | 280.73 | 620.91 | 280.74 |
| 622.3 | 280.8 | 623.91 | 280.89 | 624.49 | 280.91 | 625.56 | 280.91 | 625.92 | 280.93 |
| 628.94 | 281.02 | 629.51 | 281.03 | 636.31 | 281.22 | 638.26 | 281.23 | 643.02 | 281.32 |
| 646.19 | 281.3 | 649.93 | 281.34 | 653.67 | 281.35 | 657.68 | 281.35 | 662.13 | 281.3 |
| 663.73 | 281.34 | 671.49 | 281.48 | 674.79 | 281.63 | 675.53 | 281.64 | 679.56 | 281.56 |
| 682.18 | 281.53 | 684.95 | 281.47 | 689.1 | 281.42 | 691.37 | 281.43 | 694.65 | 281.46 |
| 696.72 | 281.51 | 698.79 | 281.52 | 700.65 | 281.56 | 702.42 | 281.55 | 703.4 | 281.53 |
| 704.08 | 281.54 | 712.22 | 281.62 | 713.9 | 281.61 | 717.45 | 281.67 | 719.25 | 281.68 |
| 726.35 | 281.74 | 728.87 | 281.69 | 730.37 | 281.65 | 731.09 | 281.65 | 735.71 | 281.56 |
| 737.09 | 281.55 | 742.55 | 281.68 | 744.59 | 281.72 | 745.17 | 281.75 | 749.61 | 281.87 |
| 751.17 | 281.96 | 755.43 | 282.14 | 756.38 | 282.17 | 758.65 | 282.22 | 760.49 | 282.2 |
| 761.89 | 282.17 | 763.1 | 282.13 | 766.25 | 282.09 | 767.9 | 282.05 | 769.58 | 282.03 |
| 773.31 | 282.03 | 773.67 | 282.02 | 775.85 | 282.1 | 778.23 | 282.15 | 782.29 | 282.16 |
| 783.64 | 282.15 | 787.37 | 282.15 | 790.83 | 282.11 | 795.97 | 282.06 | 798.05 | 282.02 |
| 807.45 | 281.91 | 812.99 | 281.85 | 816.08 | 281.84 | 816.72 | 281.85 | 820.57 | 281.8 |
| 822.53 | 281.78 | 824.8 | 281.72 | 825.36 | 281.68 | 828.54 | 281.63 | 829.4 | 281.63 |
| 832.18 | 281.67 | 834.05 | 281.68 | 839.25 | 281.78 | 840.48 | 281.82 | 845.98 | 281.95 |
| 846.2 | 281.97 | 848.06 | 282 | 852 | 282 | 855.56 | 281.95 | 857.81 | 281.93 |
| 869.75 | 282 | 871.45 | 281.95 | 875.14 | 281.77 | 876.19 | 281.74 | 879.02 | 281.72 |
| 880.75 | 281.74 | 883.75 | 281.83 | 886.92 | 281.94 | 889.04 | 282.04 | 891.01 | 282.22 |
| 891.37 | 282.21 | 894.35 | 282.43 | 896.29 | 282.42 | 897.29 | 282.38 | 902.27 | 282.47 |
| 908.89 | 282.52 | 910.39 | 282.51 | 913.2 | 282.54 | 915.7 | 282.6 | 917.58 | 282.63 |
| 920.06 | 282.65 | 920.54 | 282.63 | 922.01 | 282.63 | 922.89 | 282.61 | 927.98 | 282.64 |
| 933.92 | 282.63 | 940.15 | 282.68 | 941.21 | 282.72 | 943.53 | 282.77 | 945.44 | 282.73 |
| 951.99 | 282.56 | 953.99 | 282.49 | 975.12 | 282.5 | 977.69 | 282.55 | 987.24 | 282.55 |
| 987.42 | 282.56 | 994.62 | 282.55 | 1000.99 | 282.52 | 1002.74 | 282.48 | 1003.84 | 282.44 |
| 1007.41 | 282.39 | 1008.54 | 282.36 | 1009.62 | 282.35 | 1015.26 | 282.44 | 1016.54 | 282.45 |
| 1021.28 | 282.58 | 1026.03 | 282.77 | 1026.42 | 282.81 | 1029.24 | 282.86 | 1030.59 | 282.84 |
| 1032.12 | 282.86 | 1033.57 | 282.78 | 1036.19 | 282.68 | 1043.17 | 282.35 | 1044.73 | 282.25 |
| 1060.44 | 282.49 | 1060.87 | 282.5 | 1064.63 | 282.5 | 1066.66 | 282.61 | 1069.59 | 282.73 |
| 1071.37 | 282.78 | 1072.92 | 282.8 | 1074.12 | 282.83 | 1076.14 | 282.81 | 1077.83 | 282.77 |
| 1079.72 | 282.77 | 1085.85 | 282.74 | 1086.97 | 282.7 | 1090.35 | 282.67 | 1092.18 | 282.69 |
| 1095.34 | 282.64 | 1098.81 | 282.56 | 1101.66 | 282.47 | 1102.32 | 282.46 | 1105.28 | 282.48 |
| 1106.56 | 282.51 | 1108.5 | 282.53 | 1110.16 | 282.56 | 1111.54 | 282.6 | 1113.26 | 282.56 |
| 1113.95 | 282.5 | 1115.41 | 282.49 | 1115.48 | 282.51 | 1119.78 | 282.55 | 1120.05 | 282.54 |
| 1124.94 | 282.44 | 1125.92 | 282.44 | 1129.2 | 282.37 | 1129.63 | 282.37 | 1131.4 | 282.46 |
| 1136.61 | 282.66 | 1141.86 | 282.92 | 1143.83 | 282.97 | 1148.1 | 283 | 1148.66 | 282.96 |
| 1150.12 | 282.95 | 1152.49 | 282.98 | 1155.36 | 282.99 | 1157.78 | 283.08 | 1158.88 | 283.09 |
| 1160.43 | 283.14 | 1162.63 | 283.18 | 1167.56 | 283.08 | 1170.67 | 283 | 1171.89 | 282.99 |
| 1177.99 | 283 | 1179.21 | 283.04 | 1180.94 | 283.06 | 1182.4 | 283.05 | 1185.07 | 283.01 |
| 1187.83 | 283.02 | 1189.02 | 283 | 1189.52 | 283.01 | 1190.78 | 282.97 | 1194.93 | 282.94 |
| 1199.3 | 282.81 | 1200.61 | 282.8 | 1201.02 | 282.82 | 1203.78 | 282.83 | 1208.28 | 282.91 |
| 1209.59 | 282.95 | 1211.89 | 282.96 | 1212.42 | 282.98 | 1214.33 | 282.98 | 1215.4 | 282.96 |
| 1217.07 | 282.88 | 1217.35 | 282.83 | 1218.16 | 282.8 | 1221.87 | 282.6 | 1223.05 | 282.48 |
| 1224.76 | 282.44 | 1235.76 | 282.32 | 1240.41 | 282.29 | 1247.42 | 282.42 | 1251.5 | 282.44 |
| 1254.05 | 282.5 | 1255.05 | 282.54 | 1255.47 | 282.58 | 1258.25 | 282.67 | 1261.11 | 282.77 |
| 1261.72 | 282.77 | 1269.96 | 282.69 | 1271.06 | 282.67 | 1272.09 | 282.61 | 1274.81 | 282.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1275.03 | 282.43 | 1278.45 | 282.23 | 1279.27 | 282.14 | 1281.96 | 282.08 | 1282.83 | 282.08 |
| 1284.64 | 282.13 | 1285.85 | 282.15 | 1288.38 | 282.22 | 1291.96 | 282.29 | 1296.11 | 282.31 |
| 1300.82 | 282.37 | 1309.13 | 282.61 | 1309.68 | 282.62 | 1326.31 | 283.04 | 1336.79 | 283.06 |
| 1337.9 | 283.07 | 1344.35 | 283.46 | 1349.11 | 283.79 | 1350.66 | 283.89 | 1352.33 | 284.1 |
| 1354.55 | 284.41 | 1357.25 | 284.76 | 1359.39 | 284.95 | 1360.36 | 285.09 | 1365.66 | 286.1 |
| 1370.15 | 287.05 | 1370.85 | 287.23 | 1374.43 | 288.19 | 1376.38 | 288.92 | 1378.35 | 289.81 |
| 1379.06 | 290.16 | 1380.76 | 290.94 | 1382.3 | 291.7 | 1384.94 | 292.95 | 1385.55 | 293.3 |
| 1387.46 | 294.31 | 1388.23 | 294.74 | 1389.8 | 295.68 | 1391.12 | 296.43 | 1392.19 | 297.07 |
| 1393.09 | 297.59 | 1394.65 | 298.57 | 1397.7 | 300.51 | 1399.2 | 301.41 | 1401.39 | 302.76 |
| 1401.93 | 303.07 | 1404.8 | 304.81 | 1406.73 | 305.96 | 1407.67 | 306.57 | 1409.65 | 307.82 |
| 1410.33 | 308.15 | 1412.83 | 309.47 | 1413.98 | 310.06 | 1415.49 | 310.86 | 1417.02 | 311.6 |
| 1418.83 | 312.31 | 1420.05 | 312.73 | 1421.36 | 313.2 | 1423.19 | 313.66 | 1423.34 | 313.71 |
| 1426.18 | 314.24 | 1429.46 | 314.76 | 1432.59 | 315 | 1437.94 | 315.45 | 1444.07 | 316 |
| 1451.45 | 316 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 449.27 | .04 | 1385.55 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 449.27 | 1385.55 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1042.855 Elevation= 283.485

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1485.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.42 | 1.97 | 307.31 | 5.38 | 307.1 | 8.49 | 306.85 | 10.71 | 306.74 |
| 14.29 | 306.49 | 15.98 | 306.32 | 21.17 | 305.92 | 23.45 | 305.61 | 24.86 | 305.39 |
| 26.14 | 305.21 | 30.8 | 304.64 | 33.42 | 304.5 | 35.39 | 304.32 | 40.78 | 303.86 |
| 43 | 303.65 | 45.18 | 303.67 | 46.45 | 303.64 | 47.42 | 303.58 | 47.95 | 303.51 |
| 51.05 | 303.36 | 56.97 | 302.89 | 58.5 | 302.8 | 60.39 | 302.71 | 61.19 | 302.69 |
| 63.85 | 302.13 | 64.43 | 302.06 | 65.64 | 301.99 | 67.02 | 302.02 | 70.37 | 302.06 |
| 72.54 | 301.98 | 74.03 | 301.98 | 75.14 | 301.96 | 79.59 | 301.79 | 81.59 | 301.75 |
| 85.32 | 301.54 | 87.59 | 301.43 | 89.23 | 301.37 | 92.72 | 301.21 | 95.42 | 301.14 |
| 99.82 | 300.95 | 105.65 | 300.68 | 112.23 | 300.39 | 118.07 | 300.12 | 120.21 | 299.98 |
| 122.09 | 299.87 | 123.67 | 299.74 | 126.4 | 299.5 | 132.87 | 298.84 | 135.08 | 298.62 |
| 139.4 | 298.25 | 140.23 | 298.17 | 142.82 | 298 | 144.82 | 297.84 | 146.57 | 297.67 |
| 148.08 | 297.47 | 150.3 | 297.28 | 153.77 | 296.96 | 155.11 | 296.81 | 176.09 | 295.08 |
| 183.58 | 294.53 | 188.98 | 294.24 | 190.35 | 294.15 | 191.9 | 294.01 | 194.63 | 293.74 |
| 201.32 | 293.03 | 201.56 | 293 | 205.81 | 292.62 | 207.28 | 292.52 | 209.54 | 292.41 |
| 210.55 | 292.38 | 212.65 | 292.35 | 214.06 | 292.31 | 224.16 | 291.83 | 229.6 | 291.54 |
| 235.88 | 291.16 | 237.9 | 291 | 239.99 | 290.82 | 249.73 | 290.03 | 258.04 | 289.43 |
| 259.84 | 289.32 | 262.21 | 289.14 | 266.42 | 288.85 | 272.83 | 288.44 | 273.68 | 288.4 |
| 277.29 | 288.19 | 286.98 | 287.66 | 295.64 | 287.04 | 296.6 | 286.98 | 298.63 | 286.91 |
| 303.48 | 286.69 | 304.11 | 286.65 | 308.02 | 286.45 | 311.9 | 286.3 | 312.57 | 286.28 |
| 318.99 | 285.97 | 328.66 | 285.54 | 328.78 | 285.53 | 337.99 | 285.2 | 342.61 | 285.12 |
| 342.89 | 285.12 | 352.5 | 284.86 | 357.87 | 284.62 | 360.67 | 284.52 | 366.75 | 284.32 |
| 368.39 | 284.3 | 377.59 | 284.11 | 380.41 | 284.04 | 389 | 283.76 | 395.9 | 283.44 |
| 398.66 | 283.32 | 401.66 | 283.22 | 404.14 | 283.15 | 405.69 | 283.05 | 406.56 | 282.98 |
| 411.63 | 282.61 | 412.85 | 282.61 | 413.73 | 282.68 | 415.88 | 282.64 | 423.98 | 282.42 |
| 425.68 | 282.4 | 428.03 | 282.52 | 428.65 | 282.61 | 432.43 | 282.87 | 436.77 | 283.15 |
| 440.93 | 283.3 | 445.4 | 283.26 | 449.34 | 282.96 | 451.87 | 282.73 | 452.72 | 282.65 |
| 453.51 | 282.53 | 456.86 | 282.64 | 458.61 | 282.73 | 459.08 | 282.74 | 460.54 | 282.72 |
| 461.24 | 282.66 | 462.16 | 282.55 | 463.89 | 282.31 | 468.03 | 281.79 | 469.37 | 281.64 |
| 480.2 | 281.19 | 483.49 | 281.09 | 484.94 | 281.06 | 494.54 | 280.81 | 494.81 | 280.8 |
| 501.24 | 280.64 | 502.26 | 280.65 | 504.03 | 280.62 | 504.33 | 280.63 | 507.88 | 280.6 |
| 508.57 | 280.61 | 517.11 | 280.69 | 519.83 | 280.67 | 520.53 | 280.65 | 521.4 | 280.52 |
| 521.89 | 280.55 | 525.01 | 280.81 | 526.7 | 280.94 | 528.45 | 281.39 | 529.77 | 282.3 |
| 531.42 | 282.37 | 533.01 | 282.42 | 537.73 | 282.38 | 537.78 | 282.32 | 538.34 | 282.24 |
| 540.31 | 281.41 | 540.5 | 281.31 | 542.79 | 280.38 | 543.86 | 280.26 | 544.49 | 280.22 |
| 546.68 | 280.22 | 548.43 | 280.24 | 549.31 | 280.28 | 555.44 | 280.38 | 556.53 | 280.38 |
| 557.83 | 280.36 | 563.2 | 280.48 | 565.67 | 280.48 | 569.93 | 280.51 | 570.49 | 280.53 |
| 571.61 | 280.53 | 575.99 | 280.51 | 579.51 | 280.46 | 586.17 | 280.2 | 590.15 | 280.11 |
| 595.41 | 280.02 | 595.77 | 280.02 | 596.78 | 279.96 | 598.96 | 280.05 | 601.57 | 280.22 |
| 604.55 | 280.33 | 604.78 | 280.39 | 605.3 | 280.42 | 606.34 | 280.43 | 608.67 | 280.38 |
| 610.04 | 280.38 | 610.44 | 280.35 | 612.29 | 280.33 | 614.76 | 280.36 | 616.94 | 280.37 |
| 618.35 | 280.43 | 619.98 | 280.52 | 621.65 | 280.55 | 625.65 | 280.67 | 632.53 | 280.87 |
| 634.5 | 280.88 | 639.32 | 280.96 | 640.28 | 280.94 | 642.53 | 280.93 | 646.3 | 280.96 |
| 654.15 | 280.96 | 658.66 | 280.91 | 660.27 | 280.95 | 668.12 | 281.11 | 669.1 | 281.14 |
| 670.47 | 281.22 | 672.21 | 281.27 | 676.28 | 281.19 | 678.94 | 281.15 | 681.74 | 281.09 |
| 684.78 | 281.04 | 688.24 | 281.06 | 691.56 | 281.1 | 693.65 | 281.15 | 695.74 | 281.17 |
| 697.63 | 281.21 | 699.42 | 281.21 | 700.41 | 281.19 | 710.26 | 281.31 | 711.03 | 281.29 |
| 714.63 | 281.37 | 723.63 | 281.43 | 727.7 | 281.33 | 728.43 | 281.33 | 729.93 | 281.28 |
| 733.1 | 281.22 | 734.5 | 281.21 | 738.48 | 281.29 | 740.02 | 281.33 | 742.09 | 281.36 |
| 742.67 | 281.39 | 747.16 | 281.5 | 748.74 | 281.59 | 753.05 | 281.76 | 756.31 | 281.84 |
| 758.18 | 281.82 | 760.82 | 281.75 | 764.31 | 281.7 | 766.87 | 281.65 | 771.51 | 281.65 |
| 773.71 | 281.72 | 776.12 | 281.78 | 779.21 | 281.8 | 781.59 | 281.79 | 781.82 | 281.78 |
| 785.37 | 281.78 | 794.07 | 281.7 | 796.18 | 281.66 | 805.68 | 281.56 | 805.88 | 281.55 |
| 811.29 | 281.5 | 814.42 | 281.49 | 815.07 | 281.5 | 818.96 | 281.45 | 820.94 | 281.43 |
| 823.24 | 281.37 | 823.8 | 281.33 | 827.02 | 281.27 | 829.11 | 281.3 | 832.6 | 281.34 |
| 837.86 | 281.44 | 839.11 | 281.48 | 844.67 | 281.61 | 844.89 | 281.63 | 846.78 | 281.67 |
| 850.76 | 281.67 | 854.37 | 281.62 | 856.65 | 281.61 | 868.72 | 281.66 | 870.44 | 281.61 |
| 872.93 | 281.49 | 875.24 | 281.4 | 878.1 | 281.38 | 879.86 | 281.4 | 882.89 | 281.49 |
| 886.1 | 281.6 | 888.24 | 281.7 | 890.24 | 281.89 | 890.6 | 281.88 | 893.61 | 282.11 |
| 895.14 | 282.1 | 896.59 | 282.05 | 901.63 | 282.13 | 908.33 | 282.18 | 909.59 | 282.17 |
| 912.69 | 282.21 | 915.21 | 282.27 | 917.12 | 282.3 | 919.62 | 282.32 | 920.11 | 282.3 |
| 921.76 | 282.29 | 922.49 | 282.27 | 927.64 | 282.31 | 933.65 | 282.31 | 939.95 | 282.37 |
| 940.11 | 282.38 | 943.37 | 282.45 | 945.31 | 282.42 | 951.14 | 282.28 | 953.96 | 282.2 |
| 975.33 | 282.21 | 977.94 | 282.26 | 995.07 | 282.26 | 997.62 | 282.24 | 1001.51 | 282.22 |
| 1003.28 | 282.18 | 1004.4 | 282.14 | 1008.01 | 282.09 | 1009.15 | 282.06 | 1010.25 | 282.05 |
| 1015.95 | 282.15 | 1017.24 | 282.16 | 1022.04 | 282.31 | 1026.85 | 282.51 | 1027.81 | 282.57 |
| 1029.84 | 282.59 | 1031.46 | 282.58 | 1033.01 | 282.59 | 1034.48 | 282.5 | 1037.13 | 282.39 |
| 1038.01 | 282.33 | 1044.19 | 282.01 | 1045.77 | 281.9 | 1061.66 | 282.12 | 1065.9 | 282.12 |
| 1065.99 | 282.14 | 1067.96 | 282.24 | 1070.92 | 282.37 | 1072.73 | 282.43 | 1074.29 | 282.45 |
| 1075.5 | 282.48 | 1077.55 | 282.46 | 1079.26 | 282.42 | 1083.69 | 282.41 | 1087.38 | 282.38 |
| 1088.5 | 282.33 | 1091.93 | 282.3 | 1093.25 | 282.32 | 1096.98 | 282.26 | 1100.49 | 282.18 |
| 1103.37 | 282.09 | 1104.04 | 282.08 | 1105.95 | 282.09 | 1108.33 | 282.15 | 1110.1 | 282.17 |
| 1111.97 | 282.22 | 1112.96 | 282.26 | 1114.28 | 282.25 | 1115.62 | 282.19 | 1115.81 | 282.16 |
| 1117.01 | 282.15 | 1117.35 | 282.17 | 1121.7 | 282.22 | 1126.93 | 282.09 | 1127.92 | 282.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1131.24 | 282.01 | 1131.67 | 282.01 | 1133.46 | 282.09 | 1137.19 | 282.22 | 1138.73 | 282.28 |
| 1144.05 | 282.54 | 1146.04 | 282.59 | 1150.36 | 282.61 | 1150.93 | 282.58 | 1152.4 | 282.56 |
| 1154.8 | 282.59 | 1156.37 | 282.59 | 1157.71 | 282.61 | 1160.16 | 282.71 | 1161.27 | 282.73 |
| 1162.84 | 282.78 | 1165.06 | 282.83 | 1167.7 | 282.79 | 1168.16 | 282.77 | 1173.19 | 282.66 |
| 1174.43 | 282.65 | 1180.61 | 282.66 | 1181.83 | 282.7 | 1183.59 | 282.72 | 1185.07 | 282.71 |
| 1188.24 | 282.66 | 1190.73 | 282.67 | 1193.55 | 282.61 | 1197.75 | 282.57 | 1198.72 | 282.53 |
| 1202.52 | 282.43 | 1206.7 | 282.46 | 1211.26 | 282.54 | 1212.58 | 282.59 | 1214.91 | 282.61 |
| 1215.44 | 282.63 | 1217.37 | 282.63 | 1218.45 | 282.61 | 1220.14 | 282.53 | 1220.43 | 282.48 |
| 1221.24 | 282.45 | 1225 | 282.23 | 1226.2 | 282.11 | 1227.93 | 282.06 | 1240.8 | 281.92 |
| 1243.76 | 281.9 | 1245.28 | 281.91 | 1245.34 | 281.93 | 1249.28 | 282 | 1250.85 | 282.02 |
| 1254.98 | 282.04 | 1257.79 | 282.1 | 1258.99 | 282.18 | 1261.19 | 282.26 | 1262.2 | 282.31 |
| 1264.7 | 282.39 | 1265.32 | 282.39 | 1273.65 | 282.3 | 1274.77 | 282.28 | 1275.82 | 282.22 |
| 1278.57 | 282.04 | 1280.86 | 281.91 | 1282.25 | 281.82 | 1283.07 | 281.73 | 1285.8 | 281.67 |
| 1286.68 | 281.67 | 1288.06 | 281.71 | 1289.74 | 281.74 | 1292.29 | 281.82 | 1295.92 | 281.89 |
| 1300.12 | 281.9 | 1304.89 | 281.96 | 1313.29 | 282.2 | 1313.84 | 282.21 | 1330.67 | 282.64 |
| 1330.94 | 282.65 | 1342 | 282.65 | 1342.4 | 282.64 | 1348.92 | 283 | 1353.74 | 283.31 |
| 1355.31 | 283.4 | 1357 | 283.6 | 1359.25 | 283.91 | 1361.98 | 284.25 | 1364.14 | 284.45 |
| 1365.13 | 284.59 | 1370.49 | 285.59 | 1375.03 | 286.55 | 1375.74 | 286.72 | 1379.36 | 287.67 |
| 1381.34 | 288.42 | 1383.33 | 289.33 | 1384.05 | 289.69 | 1384.54 | 289.9 | 1387.33 | 291.26 |
| 1390 | 292.54 | 1390.62 | 292.9 | 1392.5 | 293.92 | 1393.26 | 294.35 | 1394.13 | 294.89 |
| 1396.36 | 296.19 | 1397.18 | 296.69 | 1397.78 | 297.03 | 1399.62 | 298.19 | 1400.99 | 299.08 |
| 1402.63 | 300.13 | 1404.11 | 301.04 | 1406.28 | 302.4 | 1406.82 | 302.72 | 1409.65 | 304.47 |
| 1411.72 | 305.73 | 1412.4 | 306.19 | 1413.01 | 306.56 | 1414.45 | 307.5 | 1415.12 | 307.83 |
| 1417.6 | 309.13 | 1419.61 | 310.17 | 1420.22 | 310.5 | 1421.74 | 311.23 | 1423.53 | 311.95 |
| 1424.74 | 312.37 | 1426.03 | 312.85 | 1427.99 | 313.35 | 1430.8 | 313.88 | 1433.22 | 314.28 |
| 1434.05 | 314.4 | 1437.14 | 314.67 | 1442.43 | 315.15 | 1442.99 | 315.21 | 1448.49 | 315.75 |
| 1455.8 | 315.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 451.87 | .04 | 1390.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 451.87 | 1390.62 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1042.619 Elevation=283.1837

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1466.38*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.18 | 1.99 | 307.06 | 5.41 | 306.83 | 6.35 | 306.74 | 8.53 | 306.57 |
| 10.77 | 306.45 | 14.38 | 306.19 | 16.07 | 306.02 | 21.29 | 305.61 | 23.58 | 305.3 |
| 25.01 | 305.09 | 26.29 | 304.92 | 30.98 | 304.34 | 31.24 | 304.32 | 33.61 | 304.22 |
| 35.59 | 304.04 | 41.01 | 303.58 | 43.25 | 303.37 | 43.54 | 303.36 | 45.44 | 303.4 |
| 46.71 | 303.38 | 47.7 | 303.32 | 48.23 | 303.25 | 51.35 | 303.11 | 57.29 | 302.65 |
| 58.84 | 302.55 | 59.9 | 302.51 | 60.74 | 302.45 | 61.55 | 302.43 | 64.22 | 301.91 |
| 64.8 | 301.84 | 66.01 | 301.77 | 67.41 | 301.79 | 70.78 | 301.81 | 72.96 | 301.72 |
| 75.57 | 301.69 | 80.05 | 301.49 | 82.06 | 301.44 | 88.09 | 301.09 | 89.75 | 301.03 |
| 93.26 | 300.85 | 95.97 | 300.78 | 100.39 | 300.57 | 106.26 | 300.28 | 112.87 | 299.98 |
| 113.54 | 299.94 | 118.75 | 299.69 | 120.91 | 299.55 | 122.8 | 299.44 | 124.39 | 299.31 |
| 127.12 | 299.07 | 133.64 | 298.43 | 135.86 | 298.22 | 141.04 | 297.8 | 143.64 | 297.64 |
| 145.66 | 297.48 | 147.41 | 297.31 | 148.93 | 297.11 | 149.66 | 297.04 | 151.16 | 296.93 |
| 154.66 | 296.61 | 156 | 296.46 | 177.1 | 294.78 | 184.64 | 294.24 | 190.07 | 293.94 |
| 191.9 | 293.82 | 193.01 | 293.72 | 195.75 | 293.45 | 202.48 | 292.75 | 207 | 292.35 |
| 208.48 | 292.26 | 210.75 | 292.14 | 211.76 | 292.11 | 214.73 | 292.05 | 215.3 | 292.02 |
| 225.45 | 291.54 | 226.56 | 291.49 | 230.92 | 291.26 | 237.24 | 290.9 | 239.27 | 290.74 |
| 241.37 | 290.56 | 251.17 | 289.8 | 259.52 | 289.22 | 261.34 | 289.11 | 262.06 | 289.05 |
| 267.91 | 288.63 | 274.4 | 288.22 | 275.25 | 288.18 | 278.89 | 287.97 | 288.64 | 287.45 |
| 297.35 | 286.83 | 298.31 | 286.77 | 300.35 | 286.7 | 305.23 | 286.49 | 305.86 | 286.45 |
| 309.79 | 286.26 | 313.7 | 286.1 | 314.37 | 286.08 | 320.83 | 285.76 | 330.56 | 285.31 |
| 330.68 | 285.3 | 339.94 | 284.95 | 344.87 | 284.88 | 353.82 | 284.63 | 359.93 | 284.35 |
| 363.11 | 284.22 | 364.99 | 284.16 | 368.86 | 284.02 | 370.51 | 283.99 | 379.77 | 283.79 |
| 382.6 | 283.71 | 391.24 | 283.42 | 400.95 | 282.96 | 404.71 | 282.82 | 406.47 | 282.77 |
| 408.03 | 282.67 | 408.9 | 282.58 | 414 | 282.19 | 415.23 | 282.2 | 416.11 | 282.26 |
| 418.28 | 282.22 | 425.91 | 282 | 428.14 | 281.95 | 430.5 | 282.09 | 431.12 | 282.18 |
| 432.53 | 282.3 | 434.92 | 282.46 | 439.29 | 282.77 | 443.66 | 282.94 | 448.14 | 282.92 |
| 451.93 | 282.63 | 454.48 | 282.39 | 455.28 | 282.31 | 456.03 | 282.2 | 456.3 | 282.19 |
| 457.35 | 282.23 | 459.23 | 282.28 | 461.34 | 282.36 | 462.73 | 282.33 | 464.28 | 282.17 |
| 465.93 | 281.94 | 469.87 | 281.45 | 471.15 | 281.3 | 481.47 | 280.86 | 484.61 | 280.76 |
| 485.99 | 280.73 | 495.4 | 280.45 | 501.53 | 280.3 | 502.49 | 280.31 | 504.19 | 280.28 |
| 504.47 | 280.29 | 507.86 | 280.26 | 508.51 | 280.27 | 516.65 | 280.33 | 519.24 | 280.31 |
| 519.91 | 280.29 | 520.73 | 280.17 | 521.2 | 280.2 | 525.79 | 280.55 | 527.46 | 280.96 |
| 528.71 | 281.78 | 530.29 | 281.85 | 531.81 | 281.89 | 536.3 | 281.85 | 536.35 | 281.79 |
| 536.88 | 281.72 | 540.01 | 280.45 | 541.12 | 280.03 | 542.61 | 279.88 | 544.84 | 279.87 |
| 546.5 | 279.9 | 547.34 | 279.93 | 553.18 | 280.03 | 554.22 | 280.04 | 555.46 | 280.01 |
| 560.58 | 280.13 | 562.93 | 280.13 | 565.77 | 280.15 | 567.52 | 280.18 | 568.59 | 280.18 |
| 572.77 | 280.16 | 576.12 | 280.1 | 582.47 | 279.85 | 586.26 | 279.75 | 591.28 | 279.67 |
| 592.58 | 279.61 | 594.61 | 279.7 | 595.08 | 279.71 | 597.43 | 279.88 | 600.44 | 279.99 |
| 600.68 | 280.05 | 602.25 | 280.08 | 604.61 | 280.03 | 605.99 | 280.02 | 606.4 | 279.99 |
| 608.27 | 279.96 | 610.64 | 279.99 | 612.98 | 279.99 | 614.4 | 280.05 | 615.04 | 280.1 |
| 616.65 | 280.17 | 618.11 | 280.19 | 621.79 | 280.31 | 628.75 | 280.52 | 630.74 | 280.52 |
| 635.61 | 280.6 | 636.58 | 280.58 | 638.86 | 280.56 | 642.68 | 280.58 | 646.51 | 280.57 |
| 650.62 | 280.57 | 655.18 | 280.52 | 656.81 | 280.56 | 664.76 | 280.73 | 665.74 | 280.76 |
| 667.13 | 280.85 | 668.13 | 280.89 | 669.54 | 280.89 | 673.01 | 280.81 | 675.57 | 280.78 |
| 678.53 | 280.7 | 681.61 | 280.66 | 681.76 | 280.67 | 684.45 | 280.68 | 688.46 | 280.74 |
| 691.61 | 280.81 | 692.7 | 280.81 | 694.61 | 280.86 | 696.42 | 280.87 | 697.42 | 280.85 |
| 706.45 | 280.98 | 708.17 | 280.98 | 712.11 | 281.07 | 713.64 | 281.07 | 720.91 | 281.12 |
| 725.03 | 281.01 | 725.76 | 281 | 727.28 | 280.95 | 730.49 | 280.88 | 731.91 | 280.86 |
| 735.93 | 280.94 | 737.49 | 280.98 | 738.12 | 280.98 | 740.55 | 281.04 | 744.72 | 281.13 |
| 746.31 | 281.22 | 750.67 | 281.39 | 753.97 | 281.46 | 757.29 | 281.4 | 758.53 | 281.36 |
| 762.07 | 281.32 | 763.85 | 281.27 | 766.91 | 281.27 | 768.98 | 281.28 | 769.35 | 281.27 |
| 771.58 | 281.35 | 774.53 | 281.41 | 777.14 | 281.43 | 783.37 | 281.41 | 792.17 | 281.34 |
| 794.31 | 281.3 | 808.67 | 281.15 | 810.91 | 281.15 | 813.41 | 281.14 | 819.36 | 281.08 |
| 821.68 | 281.02 | 821.9 | 280.99 | 823.98 | 280.95 | 825.51 | 280.91 | 827.62 | 280.95 |
| 831.15 | 280.99 | 836.47 | 281.1 | 837.74 | 281.14 | 845.49 | 281.33 | 849.53 | 281.33 |
| 853.18 | 281.29 | 855.48 | 281.28 | 867.69 | 281.33 | 869.43 | 281.27 | 871.3 | 281.19 |
| 871.95 | 281.15 | 874.29 | 281.06 | 874.96 | 281.05 | 877.18 | 281.05 | 880.05 | 281.09 |
| 882.03 | 281.15 | 885.27 | 281.26 | 887.44 | 281.37 | 889.46 | 281.56 | 889.83 | 281.55 |
| 892.88 | 281.8 | 894.87 | 281.77 | 895.89 | 281.72 | 900.99 | 281.8 | 907.76 | 281.84 |
| 909.04 | 281.84 | 912.17 | 281.88 | 914.73 | 281.94 | 916.66 | 281.97 | 919.19 | 281.99 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 919.68 | 281.96 | 921.35 | 281.96 | 922.09 | 281.94 | 927.3 | 281.98 | 933.38 | 281.99 |
| 939.76 | 282.05 | 940.84 | 282.09 | 943.22 | 282.13 | 945.17 | 282.11 | 951.08 | 281.98 |
| 951.88 | 281.97 | 953.57 | 281.91 | 975.55 | 281.92 | 978.19 | 281.96 | 987.96 | 281.96 |
| 988.15 | 281.97 | 995.51 | 281.96 | 998.1 | 281.95 | 1002.03 | 281.92 | 1004.96 | 281.84 |
| 1008.61 | 281.79 | 1009.76 | 281.76 | 1010.87 | 281.75 | 1016.64 | 281.86 | 1017.95 | 281.88 |
| 1022.8 | 282.03 | 1027.67 | 282.25 | 1028.07 | 282.29 | 1028.9 | 282.31 | 1030.95 | 282.33 |
| 1032.33 | 282.31 | 1033.9 | 282.32 | 1035.39 | 282.22 | 1038.07 | 282.09 | 1038.95 | 282.03 |
| 1045.21 | 281.67 | 1046.81 | 281.54 | 1062.88 | 281.75 | 1067.18 | 281.75 | 1069.26 | 281.88 |
| 1072.25 | 282.01 | 1074.08 | 282.07 | 1075.9 | 282.1 | 1076.89 | 282.13 | 1078.96 | 282.11 |
| 1080.69 | 282.08 | 1085.17 | 282.06 | 1088.9 | 282.02 | 1090.04 | 281.97 | 1093.51 | 281.93 |
| 1095.38 | 281.94 | 1097.23 | 281.91 | 1102.16 | 281.8 | 1105.09 | 281.71 | 1105.76 | 281.7 |
| 1107.69 | 281.71 | 1108.79 | 281.73 | 1110.1 | 281.78 | 1112.08 | 281.82 | 1113.79 | 281.87 |
| 1114.79 | 281.92 | 1116.12 | 281.92 | 1116.96 | 281.89 | 1117.66 | 281.83 | 1118.88 | 281.81 |
| 1119.22 | 281.84 | 1123.63 | 281.88 | 1128.92 | 281.73 | 1129.92 | 281.73 | 1133.71 | 281.64 |
| 1135.53 | 281.72 | 1139.3 | 281.83 | 1146.24 | 282.15 | 1148.25 | 282.2 | 1152.62 | 282.23 |
| 1153.2 | 282.19 | 1155.74 | 282.18 | 1158.7 | 282.21 | 1160.41 | 282.24 | 1161.01 | 282.28 |
| 1163.06 | 282.36 | 1163.66 | 282.36 | 1165.25 | 282.43 | 1167.5 | 282.48 | 1170.16 | 282.44 |
| 1172.54 | 282.39 | 1175.72 | 282.31 | 1176.97 | 282.3 | 1182.46 | 282.32 | 1184.08 | 282.34 |
| 1184.95 | 282.37 | 1186.67 | 282.38 | 1188.39 | 282.36 | 1190.95 | 282.31 | 1193.46 | 282.31 |
| 1194.51 | 282.27 | 1195.02 | 282.28 | 1196.31 | 282.24 | 1200.56 | 282.19 | 1205.39 | 282.06 |
| 1209.62 | 282.09 | 1214.23 | 282.18 | 1215.56 | 282.24 | 1217.92 | 282.25 | 1218.46 | 282.28 |
| 1220.41 | 282.29 | 1221.51 | 282.27 | 1223.22 | 282.19 | 1223.62 | 282.13 | 1224.33 | 282.11 |
| 1226.93 | 281.93 | 1228.13 | 281.86 | 1229.34 | 281.73 | 1231.09 | 281.69 | 1242.35 | 281.56 |
| 1244.12 | 281.53 | 1247.11 | 281.51 | 1248.71 | 281.53 | 1254.28 | 281.63 | 1258.46 | 281.64 |
| 1261.3 | 281.7 | 1262.51 | 281.79 | 1264.74 | 281.87 | 1265.77 | 281.92 | 1268.3 | 282.02 |
| 1268.93 | 282.02 | 1278.13 | 281.9 | 1279.54 | 281.83 | 1282.32 | 281.64 | 1282.55 | 281.64 |
| 1284.64 | 281.51 | 1286.45 | 281.38 | 1286.88 | 281.32 | 1289.64 | 281.25 | 1290.53 | 281.26 |
| 1292.39 | 281.32 | 1293.63 | 281.34 | 1296.21 | 281.42 | 1299.87 | 281.49 | 1304.12 | 281.49 |
| 1308.95 | 281.55 | 1317.45 | 281.8 | 1318.01 | 281.81 | 1335.04 | 282.24 | 1335.31 | 282.25 |
| 1345.76 | 282.24 | 1346.9 | 282.22 | 1353.5 | 282.55 | 1358.38 | 282.83 | 1359.96 | 282.91 |
| 1361.67 | 283.11 | 1363.94 | 283.41 | 1366.71 | 283.75 | 1368.9 | 283.95 | 1369.9 | 284.08 |
| 1375.32 | 285.08 | 1379.92 | 286.04 | 1384.3 | 287.16 | 1386.3 | 287.91 | 1386.59 | 288.03 |
| 1388.3 | 288.84 | 1389.04 | 289.21 | 1390.77 | 290.03 | 1392.35 | 290.82 | 1395.05 | 292.13 |
| 1395.68 | 292.5 | 1398.14 | 293.87 | 1399.84 | 294.91 | 1401.36 | 295.81 | 1403.05 | 296.83 |
| 1404.58 | 297.81 | 1407.56 | 299.76 | 1409.03 | 300.68 | 1411.7 | 302.37 | 1413.46 | 303.46 |
| 1414.51 | 304.13 | 1416.4 | 305.3 | 1417.32 | 305.92 | 1418.23 | 306.5 | 1419.25 | 307.18 |
| 1419.92 | 307.51 | 1420.82 | 307.99 | 1423.49 | 309.36 | 1424.96 | 310.14 | 1426.46 | 310.86 |
| 1428.35 | 311.63 | 1430.71 | 312.5 | 1432.65 | 312.99 | 1435.42 | 313.53 | 1438.63 | 314.05 |
| 1440.52 | 314.23 | 1441.69 | 314.33 | 1446.92 | 314.85 | 1447.47 | 314.92 | 1452.92 | 315.5 |
| 1460.14 | 315.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 454.48 | .04 | 1395.68 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 454.48 | 1395.68 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1042.382 Elevation=282.8825

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1446.77*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 306.93 | 1.86 | 306.81 | 5.45 | 306.56 | 6.38 | 306.47 | 8.58 | 306.29 |
| 10.84 | 306.16 | 14.46 | 305.89 | 16.16 | 305.72 | 21.41 | 305.3 | 23.72 | 305 |
| 25.15 | 304.79 | 26.44 | 304.62 | 31.15 | 304.05 | 31.42 | 304.03 | 33.81 | 303.93 |
| 41.25 | 303.3 | 43.5 | 303.09 | 43.79 | 303.08 | 45.7 | 303.13 | 46.98 | 303.12 |
| 47.97 | 303.06 | 48.5 | 302.99 | 51.64 | 302.86 | 57.62 | 302.4 | 59.18 | 302.3 |
| 60.24 | 302.26 | 61.09 | 302.2 | 61.9 | 302.18 | 64.59 | 301.69 | 65.17 | 301.62 |
| 66.39 | 301.55 | 67.79 | 301.56 | 71.18 | 301.55 | 73.52 | 301.45 | 74.88 | 301.44 |
| 76 | 301.41 | 80.51 | 301.19 | 82.53 | 301.13 | 88.6 | 300.76 | 90.26 | 300.69 |
| 93.79 | 300.5 | 96.52 | 300.41 | 100.97 | 300.19 | 106.87 | 299.89 | 113.52 | 299.57 |
| 114.19 | 299.53 | 119.43 | 299.27 | 123.5 | 299.01 | 125.1 | 298.89 | 125.97 | 298.8 |
| 127.85 | 298.65 | 135.47 | 297.93 | 136.64 | 297.83 | 141.01 | 297.5 | 141.85 | 297.43 |
| 144.46 | 297.28 | 146.49 | 297.12 | 148.26 | 296.95 | 149.78 | 296.76 | 150.52 | 296.69 |
| 152.03 | 296.58 | 155.55 | 296.26 | 156.9 | 296.12 | 178.12 | 294.48 | 185.69 | 293.95 |
| 191.16 | 293.65 | 192.54 | 293.56 | 194.11 | 293.42 | 196.87 | 293.16 | 203.64 | 292.48 |
| 203.88 | 292.45 | 208.19 | 292.09 | 209.67 | 291.99 | 212.98 | 291.84 | 215.16 | 291.79 |
| 216.53 | 291.74 | 226.74 | 291.26 | 232.24 | 290.98 | 238.6 | 290.64 | 240.64 | 290.48 |
| 242.76 | 290.3 | 252.61 | 289.57 | 261.01 | 289.01 | 262.9 | 288.89 | 265.23 | 288.71 |
| 269.49 | 288.41 | 275.97 | 288 | 276.83 | 287.96 | 280.48 | 287.75 | 290.29 | 287.24 |
| 299.05 | 286.62 | 300.02 | 286.56 | 302.07 | 286.5 | 306.98 | 286.3 | 307.61 | 286.26 |
| 311.57 | 286.06 | 315.49 | 285.9 | 316.17 | 285.88 | 322.67 | 285.55 | 332.45 | 285.08 |
| 332.57 | 285.07 | 341.88 | 284.71 | 345.98 | 284.64 | 346.84 | 284.64 | 355.85 | 284.38 |
| 356.56 | 284.35 | 362 | 284.08 | 365.19 | 283.94 | 370.97 | 283.72 | 381.94 | 283.46 |
| 384.79 | 283.38 | 393.48 | 283.08 | 401.9 | 282.66 | 404.8 | 282.53 | 408.8 | 282.39 |
| 410.36 | 282.28 | 411.24 | 282.19 | 416.38 | 281.77 | 417.6 | 281.78 | 418.5 | 281.85 |
| 420.68 | 281.8 | 425.49 | 281.65 | 427.03 | 281.61 | 427.65 | 281.58 | 430.59 | 281.51 |
| 432.97 | 281.66 | 433.59 | 281.76 | 435.01 | 281.88 | 437.41 | 282.06 | 441.8 | 282.4 |
| 446.2 | 282.58 | 450.71 | 282.58 | 454.52 | 282.29 | 457.08 | 282.05 | 457.85 | 281.98 |
| 458.81 | 281.86 | 461.56 | 281.93 | 461.6 | 281.92 | 463.61 | 281.98 | 464.93 | 281.94 |
| 465.39 | 281.91 | 466.4 | 281.79 | 468.5 | 281.5 | 471.72 | 281.1 | 472.93 | 280.97 |
| 482.75 | 280.53 | 485.72 | 280.42 | 487.04 | 280.39 | 495.74 | 280.12 | 501.81 | 279.95 |
| 502.73 | 279.97 | 504.34 | 279.94 | 504.61 | 279.95 | 507.83 | 279.92 | 508.45 | 279.93 |
| 516.19 | 279.98 | 518.66 | 279.95 | 519.29 | 279.93 | 520.07 | 279.82 | 523.35 | 280.06 |
| 524.88 | 280.16 | 526.46 | 280.53 | 527.17 | 280.95 | 527.66 | 281.27 | 529.16 | 281.33 |
| 530.6 | 281.36 | 534.87 | 281.32 | 534.92 | 281.27 | 535.43 | 281.2 | 537.39 | 280.44 |
| 539.46 | 279.67 | 540.87 | 279.54 | 542.99 | 279.53 | 544.56 | 279.55 | 545.37 | 279.59 |
| 550.92 | 279.69 | 553.09 | 279.67 | 557.96 | 279.79 | 560.19 | 279.79 | 562.89 | 279.8 |
| 564.56 | 279.83 | 567.61 | 279.83 | 569.54 | 279.81 | 572.73 | 279.75 | 578.77 | 279.49 |
| 582.37 | 279.4 | 587.14 | 279.31 | 588.38 | 279.25 | 590.91 | 279.36 | 593.28 | 279.54 |
| 596.33 | 279.66 | 596.57 | 279.71 | 598.08 | 279.74 | 600.55 | 279.67 | 601.95 | 279.66 |
| 602.36 | 279.62 | 604.25 | 279.59 | 606.65 | 279.62 | 606.78 | 279.61 | 609.01 | 279.62 |
| 610.45 | 279.68 | 612.12 | 279.78 | 613.73 | 279.81 | 617.92 | 279.95 | 624.96 | 280.16 |
| 626.98 | 280.17 | 631.91 | 280.24 | 635.19 | 280.19 | 639.06 | 280.2 | 642.93 | 280.19 |
| 643.3 | 280.18 | 647.09 | 280.18 | 651.7 | 280.12 | 653.35 | 280.17 | 661.39 | 280.35 |
| 662.38 | 280.39 | 664.8 | 280.52 | 666.22 | 280.51 | 669.74 | 280.43 | 672.46 | 280.4 |
| 675.32 | 280.32 | 678.43 | 280.28 | 681.3 | 280.31 | 681.97 | 280.33 | 685.37 | 280.38 |
| 688.55 | 280.45 | 689.65 | 280.46 | 692.03 | 280.52 | 694.43 | 280.51 | 703.56 | 280.66 |
| 705.3 | 280.67 | 709.29 | 280.76 | 710.84 | 280.76 | 718.19 | 280.8 | 720.8 | 280.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 722.36 | 280.68 | 723.1 | 280.68 | 724.64 | 280.62 | 727.88 | 280.53 | 729.31 | 280.51 |
| 732.28 | 280.57 | 733.38 | 280.58 | 734.96 | 280.62 | 737.08 | 280.65 | 738.05 | 280.69 |
| 742.27 | 280.76 | 743.89 | 280.86 | 748.29 | 281.01 | 750.6 | 281.07 | 751.64 | 281.08 |
| 753.54 | 281.05 | 756.24 | 280.98 | 759.5 | 280.93 | 761.63 | 280.89 | 763.02 | 280.88 |
| 764.72 | 280.9 | 767.19 | 280.9 | 769.44 | 280.97 | 772.43 | 281.04 | 774.42 | 281.06 |
| 777.51 | 281.06 | 777.74 | 281.05 | 781.37 | 281.05 | 790.27 | 280.98 | 792.43 | 280.94 |
| 802.16 | 280.85 | 802.36 | 280.84 | 806.96 | 280.8 | 809.23 | 280.79 | 811.76 | 280.79 |
| 817.77 | 280.73 | 820.12 | 280.66 | 820.7 | 280.62 | 823.99 | 280.56 | 826.53 | 280.6 |
| 829.7 | 280.64 | 835.09 | 280.75 | 836.36 | 280.79 | 842.05 | 280.94 | 842.28 | 280.96 |
| 844.21 | 281 | 848.29 | 281 | 851.98 | 280.96 | 854.31 | 280.95 | 866.66 | 281 |
| 868.42 | 280.94 | 870.97 | 280.82 | 873.34 | 280.73 | 876.27 | 280.71 | 879.16 | 280.75 |
| 881.17 | 280.81 | 884.45 | 280.92 | 886.64 | 281.03 | 888.68 | 281.23 | 889.06 | 281.23 |
| 892.14 | 281.48 | 893.7 | 281.46 | 895.19 | 281.39 | 900.34 | 281.46 | 907.2 | 281.51 |
| 907.67 | 281.5 | 911.66 | 281.55 | 916.2 | 281.64 | 918.76 | 281.66 | 919.26 | 281.63 |
| 920.94 | 281.62 | 921.69 | 281.6 | 926.96 | 281.65 | 933.11 | 281.67 | 939.56 | 281.74 |
| 939.72 | 281.75 | 943.06 | 281.82 | 945.04 | 281.8 | 951.01 | 281.68 | 951.82 | 281.67 |
| 953.53 | 281.62 | 975.77 | 281.63 | 978.43 | 281.67 | 995.96 | 281.67 | 998.58 | 281.65 |
| 1002.56 | 281.63 | 1003.15 | 281.6 | 1005.51 | 281.53 | 1010.07 | 281.48 | 1011.5 | 281.45 |
| 1017.33 | 281.57 | 1018.65 | 281.59 | 1023.56 | 281.76 | 1028.48 | 281.98 | 1028.89 | 282.03 |
| 1031.55 | 282.07 | 1033.2 | 282.05 | 1035.17 | 282.04 | 1036.29 | 281.94 | 1037.13 | 281.9 |
| 1039.9 | 281.73 | 1046.23 | 281.33 | 1047.85 | 281.19 | 1064.11 | 281.37 | 1064.56 | 281.38 |
| 1068.45 | 281.38 | 1070.56 | 281.51 | 1073.59 | 281.66 | 1075.44 | 281.72 | 1077.03 | 281.74 |
| 1078.27 | 281.78 | 1080.37 | 281.76 | 1082.12 | 281.73 | 1086.65 | 281.71 | 1090.43 | 281.66 |
| 1091.58 | 281.61 | 1095.09 | 281.56 | 1096.44 | 281.57 | 1098.85 | 281.53 | 1103.84 | 281.42 |
| 1106.8 | 281.32 | 1107.48 | 281.31 | 1109.44 | 281.33 | 1110.31 | 281.35 | 1111.87 | 281.41 |
| 1113.68 | 281.46 | 1117.03 | 281.59 | 1117.96 | 281.58 | 1119.33 | 281.52 | 1119.52 | 281.49 |
| 1120.75 | 281.48 | 1121.1 | 281.51 | 1125.55 | 281.54 | 1130.9 | 281.38 | 1131.92 | 281.37 |
| 1135.31 | 281.28 | 1135.76 | 281.28 | 1137.59 | 281.35 | 1141.4 | 281.45 | 1142.98 | 281.51 |
| 1148.42 | 281.76 | 1150.46 | 281.82 | 1154.88 | 281.85 | 1155.46 | 281.8 | 1156.97 | 281.79 |
| 1158.84 | 281.8 | 1159.43 | 281.82 | 1161.03 | 281.82 | 1162.4 | 281.85 | 1164.9 | 281.97 |
| 1166.05 | 282 | 1167.65 | 282.07 | 1169.38 | 282.13 | 1172.62 | 282.1 | 1178.24 | 281.96 |
| 1179.51 | 281.95 | 1185.06 | 281.98 | 1187.58 | 282.03 | 1189.32 | 282.04 | 1193.65 | 281.96 |
| 1196.19 | 281.95 | 1197.25 | 281.91 | 1197.77 | 281.92 | 1199.08 | 281.87 | 1203.37 | 281.82 |
| 1208.25 | 281.69 | 1212.53 | 281.72 | 1217.2 | 281.82 | 1218.55 | 281.88 | 1220.93 | 281.9 |
| 1221.48 | 281.93 | 1223.45 | 281.95 | 1224.56 | 281.93 | 1226.29 | 281.84 | 1226.7 | 281.78 |
| 1227.42 | 281.76 | 1230.69 | 281.52 | 1231.26 | 281.5 | 1232.49 | 281.36 | 1234.26 | 281.32 |
| 1245.64 | 281.17 | 1247.43 | 281.14 | 1250.46 | 281.12 | 1252.08 | 281.14 | 1257.72 | 281.24 |
| 1261.94 | 281.24 | 1264.82 | 281.3 | 1266.04 | 281.39 | 1269.33 | 281.54 | 1271.89 | 281.64 |
| 1272.53 | 281.64 | 1281.05 | 281.53 | 1282.19 | 281.5 | 1283.26 | 281.44 | 1286.08 | 281.25 |
| 1288.42 | 281.11 | 1289.85 | 281.01 | 1290.69 | 280.91 | 1293.48 | 280.84 | 1294.38 | 280.85 |
| 1296.26 | 280.91 | 1297.51 | 280.93 | 1300.12 | 281.01 | 1303.83 | 281.08 | 1308.13 | 281.08 |
| 1313.01 | 281.14 | 1321.61 | 281.4 | 1322.18 | 281.41 | 1339.4 | 281.85 | 1350.25 | 281.82 |
| 1351.4 | 281.8 | 1358.08 | 282.09 | 1363.01 | 282.35 | 1364.61 | 282.42 | 1366.34 | 282.62 |
| 1368.64 | 282.92 | 1371.44 | 283.24 | 1373.65 | 283.44 | 1374.66 | 283.57 | 1380.15 | 284.57 |
| 1384.8 | 285.54 | 1385.52 | 285.71 | 1389.23 | 286.64 | 1391.25 | 287.41 | 1391.75 | 287.63 |
| 1393.28 | 288.36 | 1394.03 | 288.74 | 1395.78 | 289.57 | 1398.38 | 290.87 | 1400.11 | 291.71 |
| 1400.75 | 292.1 | 1401.47 | 292.52 | 1402.59 | 293.14 | 1403.17 | 293.48 | 1404.85 | 294.53 |
| 1406.13 | 295.28 | 1407.16 | 295.93 | 1408.03 | 296.44 | 1409.55 | 297.43 | 1412.49 | 299.38 |
| 1413.68 | 300.14 | 1416.07 | 301.69 | 1418.33 | 303.12 | 1419.36 | 303.79 | 1421.23 | 304.97 |
| 1424.06 | 306.86 | 1427.13 | 308.45 | 1428.24 | 309.01 | 1429.7 | 309.78 | 1430.75 | 310.29 |
| 1431.76 | 310.74 | 1432.93 | 311.22 | 1434.12 | 311.66 | 1435.38 | 312.15 | 1437.3 | 312.63 |
| 1440.05 | 313.18 | 1443.22 | 313.7 | 1446.24 | 314 | 1451.96 | 314.62 | 1457.35 | 315.25 |
| 1464.49 | 315.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 457.08 | .04 | 1400.75 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 457.08 | 1400.75 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1042.146 Elevation=282.5812

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1427.16*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 306.69 | 2.01 | 306.55 | 5.48 | 306.29 | 6.42 | 306.19 | 8.63 | 306.01 |
| 10.9 | 305.87 | 14.54 | 305.6 | 16.25 | 305.42 | 21.53 | 304.98 | 23.85 | 304.69 |
| 25.29 | 304.49 | 31.33 | 303.75 | 31.6 | 303.73 | 34 | 303.65 | 38.55 | 303.26 |
| 41.48 | 303.02 | 43.4 | 302.83 | 44.03 | 302.8 | 45.96 | 302.86 | 47.25 | 302.86 |
| 48.24 | 302.81 | 48.78 | 302.73 | 51.94 | 302.61 | 57.95 | 302.16 | 59.51 | 302.05 |
| 60.59 | 302.01 | 61.44 | 301.94 | 62.25 | 301.93 | 64.96 | 301.47 | 65.54 | 301.41 |
| 66.77 | 301.33 | 68.18 | 301.33 | 71.59 | 301.3 | 73.94 | 301.19 | 76.44 | 301.13 |
| 80.97 | 300.89 | 83 | 300.82 | 89.1 | 300.43 | 90.78 | 300.35 | 94.33 | 300.14 |
| 97.07 | 300.04 | 101.54 | 299.81 | 107.48 | 299.49 | 114.16 | 299.15 | 114.84 | 299.12 |
| 120.11 | 298.84 | 124.2 | 298.58 | 125.81 | 298.46 | 128.58 | 298.22 | 137.41 | 297.43 |
| 142.66 | 297.06 | 145.29 | 296.91 | 147.33 | 296.76 | 149.1 | 296.59 | 150.64 | 296.4 |
| 152.89 | 296.23 | 156.43 | 295.92 | 157.79 | 295.77 | 179.13 | 294.17 | 186.75 | 293.66 |
| 192.25 | 293.36 | 194.1 | 293.23 | 197.99 | 292.87 | 204.8 | 292.2 | 209.37 | 291.82 |
| 210.87 | 291.73 | 213.17 | 291.61 | 214.19 | 291.57 | 217.76 | 291.46 | 228.03 | 290.97 |
| 229.16 | 290.91 | 233.56 | 290.7 | 239.96 | 290.37 | 242.01 | 290.22 | 244.14 | 290.05 |
| 254.05 | 289.34 | 264.4 | 288.68 | 266.74 | 288.5 | 270.28 | 288.24 | 277.05 | 287.8 |
| 278.41 | 287.74 | 282.08 | 287.54 | 291.94 | 287.04 | 300.75 | 286.41 | 301.73 | 286.35 |
| 303.79 | 286.29 | 308.72 | 286.1 | 309.36 | 286.06 | 313.34 | 285.87 | 317.29 | 285.7 |
| 317.97 | 285.68 | 324.5 | 285.34 | 334.34 | 284.85 | 334.47 | 284.84 | 343.83 | 284.47 |
| 348.53 | 284.39 | 348.82 | 284.39 | 357.88 | 284.12 | 358.59 | 284.09 | 364.06 | 283.81 |
| 367.27 | 283.66 | 369.17 | 283.59 | 373.09 | 283.42 | 374.76 | 283.38 | 384.12 | 283.13 |
| 386.99 | 283.04 | 395.72 | 282.73 | 402.74 | 282.37 | 405.55 | 282.23 | 407.11 | 282.16 |
| 408.6 | 282.11 | 411.71 | 281.98 | 412.7 | 281.9 | 413.58 | 281.8 | 418.75 | 281.36 |
| 419.98 | 281.36 | 420.88 | 281.43 | 423.07 | 281.39 | 427.91 | 281.22 | 429.46 | 281.18 |
| 431.31 | 281.11 | 433.04 | 281.07 | 435.43 | 281.23 | 436.06 | 281.33 | 437.49 | 281.46 |
| 444.32 | 282.02 | 448.74 | 282.22 | 453.1 | 282.25 | 457.11 | 281.95 | 459.68 | 281.71 |
| 460.41 | 281.64 | 461.09 | 281.54 | 463.97 | 281.57 | 465.47 | 281.6 | 466.55 | 281.58 |
| 467.56 | 281.52 | 468.52 | 281.41 | 470.01 | 281.2 | 473.56 | 280.76 | 474.71 | 280.63 |
| 484.02 | 280.19 | 496.34 | 279.77 | 496.57 | 279.76 | 502.1 | 279.61 | 503.64 | 279.62 |
| 507.8 | 279.58 | 508.4 | 279.59 | 515.73 | 279.62 | 518.07 | 279.59 | 518.67 | 279.57 |
| 519.41 | 279.48 | 519.83 | 279.5 | 523.97 | 279.77 | 525.47 | 280.09 | 526.6 | 280.75 |
| 528.03 | 280.8 | 529.39 | 280.83 | 533.44 | 280.79 | 533.49 | 280.74 | 533.97 | 280.68 |
| 536.79 | 279.66 | 537.79 | 279.32 | 539.25 | 279.19 | 541.14 | 279.18 | 542.63 | 279.21 |
| 543.4 | 279.24 | 548.66 | 279.34 | 549.6 | 279.35 | 550.72 | 279.33 | 555.33 | 279.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 557.45 | 279.44 | 561.11 | 279.47 | 561.59 | 279.49 | 564.49 | 279.48 | 566.32 | 279.46 |
| 569.34 | 279.39 | 575.06 | 279.14 | 578.48 | 279.04 | 583.16 | 278.95 | 584.18 | 278.89 |
| 585.05 | 278.94 | 586.74 | 279.01 | 589.14 | 279.2 | 592.22 | 279.32 | 592.91 | 279.39 |
| 594.07 | 279.39 | 596.49 | 279.31 | 597.9 | 279.3 | 598.32 | 279.26 | 600.23 | 279.22 |
| 602.66 | 279.25 | 602.79 | 279.24 | 605.04 | 279.24 | 606.5 | 279.31 | 608.19 | 279.41 |
| 610.3 | 279.46 | 614.06 | 279.59 | 621.18 | 279.81 | 623.22 | 279.82 | 628.21 | 279.88 |
| 629.2 | 279.85 | 631.53 | 279.82 | 635.43 | 279.82 | 639.35 | 279.8 | 639.73 | 279.79 |
| 643.56 | 279.79 | 648.22 | 279.73 | 649.89 | 279.78 | 658.02 | 279.98 | 659.02 | 280.01 |
| 660.45 | 280.1 | 661.47 | 280.15 | 662.91 | 280.14 | 666.46 | 280.06 | 669.22 | 280.02 |
| 672.11 | 279.94 | 675.26 | 279.9 | 676.46 | 279.91 | 678.84 | 279.96 | 682.27 | 280.02 |
| 684.43 | 280.08 | 686.61 | 280.11 | 689.01 | 280.17 | 692.15 | 280.18 | 700.67 | 280.34 |
| 702.43 | 280.36 | 706.15 | 280.45 | 715.47 | 280.49 | 719.68 | 280.36 | 720.44 | 280.35 |
| 721.99 | 280.29 | 725.27 | 280.19 | 726.72 | 280.16 | 729.72 | 280.22 | 730.84 | 280.23 |
| 732.43 | 280.27 | 734.57 | 280.29 | 735.56 | 280.33 | 739.83 | 280.39 | 741.46 | 280.49 |
| 745.92 | 280.64 | 748.25 | 280.69 | 749.3 | 280.7 | 751.22 | 280.67 | 753.96 | 280.6 |
| 757.25 | 280.55 | 759.4 | 280.5 | 760.81 | 280.5 | 762.53 | 280.52 | 764.65 | 280.53 |
| 765.88 | 280.55 | 769.79 | 280.66 | 772 | 280.68 | 772.99 | 280.7 | 779.37 | 280.68 |
| 782.99 | 280.65 | 788.38 | 280.62 | 790.56 | 280.58 | 800.4 | 280.49 | 805.25 | 280.45 |
| 809.44 | 280.43 | 810.11 | 280.44 | 814.13 | 280.4 | 815.73 | 280.39 | 818.56 | 280.31 |
| 818.79 | 280.28 | 820.92 | 280.24 | 822.48 | 280.2 | 824.64 | 280.25 | 828.25 | 280.29 |
| 833.7 | 280.41 | 834.99 | 280.45 | 842.93 | 280.67 | 847.05 | 280.67 | 850.79 | 280.63 |
| 853.14 | 280.62 | 865.64 | 280.66 | 867.42 | 280.6 | 869.99 | 280.48 | 872.39 | 280.39 |
| 873.08 | 280.38 | 875.35 | 280.38 | 877.17 | 280.39 | 878.28 | 280.41 | 880.3 | 280.47 |
| 883.62 | 280.58 | 885.84 | 280.69 | 887.91 | 280.91 | 888.28 | 280.9 | 891.4 | 281.16 |
| 892.98 | 281.14 | 894.48 | 281.06 | 899.7 | 281.13 | 906.63 | 281.17 | 908.9 | 281.18 |
| 915.73 | 281.31 | 918.32 | 281.33 | 918.83 | 281.3 | 920.54 | 281.29 | 921.29 | 281.27 |
| 926.62 | 281.32 | 932.84 | 281.35 | 939.37 | 281.42 | 939.53 | 281.43 | 942.91 | 281.5 |
| 944.91 | 281.49 | 950.95 | 281.39 | 953.5 | 281.33 | 975.98 | 281.34 | 978.68 | 281.37 |
| 987.49 | 281.37 | 988.68 | 281.36 | 988.87 | 281.38 | 996.41 | 281.37 | 999.05 | 281.36 |
| 1003.08 | 281.33 | 1003.68 | 281.29 | 1004.91 | 281.27 | 1006.07 | 281.23 | 1010.68 | 281.18 |
| 1010.99 | 281.15 | 1012.12 | 281.15 | 1018.02 | 281.28 | 1019.36 | 281.3 | 1021.9 | 281.4 |
| 1024.33 | 281.48 | 1029.3 | 281.72 | 1029.72 | 281.77 | 1032.4 | 281.81 | 1035.68 | 281.78 |
| 1036.26 | 281.75 | 1037.2 | 281.65 | 1038.04 | 281.61 | 1039.94 | 281.49 | 1040.85 | 281.42 |
| 1047.25 | 280.99 | 1048.89 | 280.84 | 1065.33 | 281 | 1069.73 | 281 | 1071.85 | 281.15 |
| 1074.92 | 281.3 | 1076.79 | 281.37 | 1078.4 | 281.39 | 1079.66 | 281.43 | 1081.78 | 281.42 |
| 1083.55 | 281.38 | 1088.14 | 281.35 | 1091.95 | 281.3 | 1093.12 | 281.24 | 1096.67 | 281.19 |
| 1098.58 | 281.19 | 1105.52 | 281.04 | 1108.51 | 280.94 | 1109.2 | 280.93 | 1111.18 | 280.95 |
| 1112.3 | 280.98 | 1113.64 | 281.04 | 1115.47 | 281.1 | 1118.43 | 281.24 | 1119.8 | 281.25 |
| 1121.19 | 281.19 | 1121.38 | 281.16 | 1122.63 | 281.14 | 1122.97 | 281.17 | 1126.44 | 281.2 |
| 1127.48 | 281.2 | 1132.89 | 281.03 | 1133.92 | 281.02 | 1137.8 | 280.91 | 1139.65 | 280.97 |
| 1143.51 | 281.07 | 1145.11 | 281.13 | 1150.61 | 281.38 | 1152.67 | 281.44 | 1157.14 | 281.46 |
| 1157.37 | 281.43 | 1159.25 | 281.4 | 1161.74 | 281.43 | 1162.72 | 281.43 | 1164.75 | 281.47 |
| 1165.73 | 281.53 | 1167.82 | 281.63 | 1168.43 | 281.63 | 1170.06 | 281.71 | 1171.81 | 281.78 |
| 1175.08 | 281.75 | 1177.52 | 281.7 | 1180.77 | 281.61 | 1182.05 | 281.61 | 1187.66 | 281.64 |
| 1191.53 | 281.71 | 1193.06 | 281.69 | 1195.85 | 281.62 | 1198.93 | 281.59 | 1200 | 281.55 |
| 1200.52 | 281.56 | 1201.84 | 281.51 | 1206.19 | 281.45 | 1207.2 | 281.41 | 1211.12 | 281.31 |
| 1212.55 | 281.33 | 1215.45 | 281.35 | 1220.17 | 281.46 | 1221.53 | 281.52 | 1222.99 | 281.53 |
| 1224.5 | 281.58 | 1226.5 | 281.6 | 1227.61 | 281.58 | 1229.37 | 281.5 | 1229.66 | 281.44 |
| 1230.5 | 281.41 | 1233.82 | 281.16 | 1234.39 | 281.13 | 1235.63 | 280.99 | 1237.42 | 280.94 |
| 1248.94 | 280.79 | 1253.81 | 280.72 | 1259.53 | 280.82 | 1261.15 | 280.84 | 1265.42 | 280.84 |
| 1268.09 | 280.9 | 1269.14 | 280.95 | 1269.57 | 281 | 1272.49 | 281.13 | 1272.9 | 281.16 |
| 1275.49 | 281.26 | 1276.13 | 281.26 | 1284.75 | 281.14 | 1285.91 | 281.11 | 1289.84 | 280.85 |
| 1292.21 | 280.71 | 1293.65 | 280.6 | 1294.5 | 280.49 | 1297.32 | 280.43 | 1298.23 | 280.44 |
| 1299.66 | 280.49 | 1301.4 | 280.53 | 1304.04 | 280.61 | 1307.79 | 280.68 | 1312.14 | 280.67 |
| 1317.07 | 280.73 | 1325.77 | 280.99 | 1326.35 | 281 | 1343.77 | 281.45 | 1344.04 | 281.46 |
| 1354.74 | 281.41 | 1355.9 | 281.38 | 1362.65 | 281.64 | 1369.27 | 281.93 | 1371.01 | 282.13 |
| 1373.34 | 282.42 | 1376.17 | 282.74 | 1378.41 | 282.94 | 1379.43 | 283.06 | 1384.98 | 284.06 |
| 1389.68 | 285.04 | 1390.41 | 285.21 | 1394.16 | 286.13 | 1396.21 | 286.9 | 1398.26 | 287.87 |
| 1399.01 | 288.26 | 1400.78 | 289.11 | 1403.92 | 290.69 | 1405.17 | 291.3 | 1405.81 | 291.7 |
| 1407.63 | 292.75 | 1408.36 | 293.19 | 1409.21 | 293.74 | 1411.13 | 294.9 | 1412.15 | 295.55 |
| 1413.02 | 296.06 | 1414.51 | 297.05 | 1417.43 | 299.01 | 1420.2 | 300.82 | 1420.96 | 301.33 |
| 1423.19 | 302.77 | 1424.43 | 303.59 | 1426.22 | 304.74 | 1426.88 | 305.21 | 1427.86 | 305.86 |
| 1428.86 | 306.55 | 1429.51 | 306.87 | 1430.39 | 307.34 | 1432.99 | 308.66 | 1434.44 | 309.42 |
| 1435.9 | 310.13 | 1437.64 | 310.86 | 1440.06 | 311.8 | 1441.81 | 312.24 | 1444.67 | 312.82 |
| 1447.01 | 313.22 | 1447.81 | 313.34 | 1450.79 | 313.67 | 1455.91 | 314.26 | 1461.77 | 315 |
| 1468.84 | 315 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 459.68 | .04 | 1405.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 459.68 | 1405.81 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station= 1041.91 Elevation= 282.28

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1407.54*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 306.45 | 2.02 | 306.3 | 5.51 | 306.01 | 8.68 | 305.73 | 10.96 | 305.58 |
| 14.62 | 305.3 | 16.35 | 305.12 | 21.65 | 304.67 | 23.99 | 304.39 | 25.44 | 304.19 |
| 26.75 | 304.04 | 31.51 | 303.46 | 31.78 | 303.44 | 34.19 | 303.37 | 34.6 | 303.34 |
| 38.77 | 302.98 | 41.72 | 302.74 | 43.65 | 302.55 | 44.28 | 302.52 | 46.22 | 302.59 |
| 47.52 | 302.6 | 48.52 | 302.55 | 49.06 | 302.47 | 52.23 | 302.36 | 58.28 | 301.91 |
| 59.85 | 301.81 | 60.93 | 301.76 | 61.78 | 301.69 | 62.6 | 301.67 | 65.32 | 301.25 |
| 65.91 | 301.19 | 67.15 | 301.12 | 71.99 | 301.04 | 73.61 | 300.97 | 74.21 | 300.93 |
| 76.87 | 300.85 | 81.43 | 300.6 | 83.47 | 300.51 | 87.29 | 300.26 | 89.61 | 300.1 |
| 91.29 | 300.01 | 94.86 | 299.78 | 97.62 | 299.68 | 98.4 | 299.63 | 102.12 | 299.43 |
| 108.09 | 299.09 | 114.81 | 298.74 | 121.71 | 298.36 | 122.98 | 298.27 | 124.91 | 298.15 |
| 126.52 | 298.03 | 129.31 | 297.8 | 135.93 | 297.23 | 137.01 | 297.13 | 138.19 | 297.04 |
| 143.46 | 296.69 | 146.11 | 296.55 | 148.16 | 296.4 | 149.94 | 296.23 | 151.49 | 296.04 |
| 153.76 | 295.88 | 157.32 | 295.57 | 158.68 | 295.42 | 180.15 | 293.87 | 187.81 | 293.36 |
| 193.34 | 293.06 | 195.2 | 292.93 | 196.33 | 292.83 | 205.96 | 291.93 | 210.56 | 291.56 |
| 212.06 | 291.46 | 214.37 | 291.34 | 219 | 291.18 | 229.32 | 290.68 | 230.46 | 290.62 |
| 234.89 | 290.43 | 241.32 | 290.11 | 243.38 | 289.96 | 245.52 | 289.79 | 255.49 | 289.11 |
| 263.98 | 288.58 | 265.9 | 288.47 | 271.81 | 288.02 | 278.62 | 287.58 | 279.98 | 287.52 |
| 283.68 | 287.32 | 293.6 | 286.83 | 302.46 | 286.2 | 303.44 | 286.14 | 305.51 | 286.09 |
| 310.47 | 285.9 | 315.12 | 285.67 | 319.09 | 285.5 | 319.77 | 285.48 | 326.34 | 285.13 |
| 336.24 | 284.62 | 336.36 | 284.61 | 345.78 | 284.23 | 350.5 | 284.15 | 350.79 | 284.15 |
| 359.9 | 283.87 | 360.62 | 283.84 | 366.12 | 283.54 | 369.35 | 283.38 | 371.26 | 283.3 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 375.2 | 283.12 | 386.29 | 282.8 | 389.18 | 282.71 | 397.96 | 282.39 | 407.84 | 281.87 |
| 409.41 | 281.8 | 413.45 | 281.64 | 415.04 | 281.51 | 415.92 | 281.41 | 421.12 | 280.94 |
| 422.36 | 280.94 | 423.26 | 281.02 | 425.47 | 280.97 | 430.34 | 280.79 | 433.75 | 280.67 |
| 435.49 | 280.63 | 437.9 | 280.79 | 438.65 | 280.92 | 441.95 | 281.22 | 442.39 | 281.25 |
| 446.84 | 281.64 | 451.1 | 281.85 | 455.84 | 281.91 | 459.7 | 281.62 | 462.29 | 281.38 |
| 462.97 | 281.31 | 463.61 | 281.21 | 466.34 | 281.21 | 468.14 | 281.22 | 469.32 | 281.17 |
| 470.64 | 281.03 | 472.05 | 280.83 | 475.41 | 280.41 | 476.49 | 280.3 | 485.29 | 279.86 |
| 487.96 | 279.75 | 489.14 | 279.72 | 496.94 | 279.42 | 497.16 | 279.42 | 502.38 | 279.26 |
| 503.84 | 279.28 | 506.6 | 279.25 | 508.34 | 279.24 | 515.27 | 279.26 | 517.48 | 279.23 |
| 518.05 | 279.21 | 518.75 | 279.13 | 521.69 | 279.31 | 523.06 | 279.38 | 524.48 | 279.66 |
| 525.55 | 280.23 | 526.09 | 280.26 | 528.19 | 280.3 | 532.01 | 280.26 | 532.51 | 280.16 |
| 535.18 | 279.26 | 536.12 | 278.96 | 537.51 | 278.85 | 539.29 | 278.84 | 540.3 | 278.85 |
| 541.43 | 278.89 | 546.4 | 278.99 | 548.34 | 278.99 | 552.71 | 279.09 | 554.71 | 279.09 |
| 558.17 | 279.12 | 558.63 | 279.14 | 561.36 | 279.13 | 563.09 | 279.11 | 565.95 | 279.03 |
| 571.36 | 278.79 | 574.59 | 278.69 | 578.87 | 278.59 | 579.98 | 278.54 | 580.86 | 278.59 |
| 582.56 | 278.66 | 584.64 | 278.84 | 588.11 | 278.99 | 588.45 | 279.04 | 589.98 | 279.04 |
| 592.42 | 278.95 | 592.9 | 278.96 | 594.28 | 278.9 | 596.21 | 278.85 | 598.67 | 278.88 |
| 598.8 | 278.87 | 601.08 | 278.87 | 602.55 | 278.93 | 604.26 | 279.05 | 606.01 | 279.08 |
| 606.39 | 279.1 | 610.19 | 279.23 | 617.4 | 279.46 | 619.46 | 279.47 | 624.5 | 279.52 |
| 625.5 | 279.49 | 627.86 | 279.45 | 631.81 | 279.44 | 635.77 | 279.41 | 640.03 | 279.41 |
| 644.74 | 279.34 | 646.43 | 279.39 | 654.65 | 279.6 | 655.67 | 279.63 | 657.11 | 279.73 |
| 658.14 | 279.78 | 659.6 | 279.77 | 663.19 | 279.68 | 665.97 | 279.64 | 668.9 | 279.56 |
| 672.09 | 279.52 | 673.3 | 279.53 | 675.7 | 279.59 | 679.18 | 279.65 | 681.36 | 279.72 |
| 683.56 | 279.75 | 685.99 | 279.82 | 688.45 | 279.83 | 689.16 | 279.85 | 698.75 | 280.04 |
| 699.56 | 280.04 | 703.64 | 280.15 | 705.23 | 280.15 | 712.75 | 280.18 | 717.01 | 280.04 |
| 717.77 | 280.03 | 719.34 | 279.96 | 722.66 | 279.85 | 724.12 | 279.81 | 727.16 | 279.87 |
| 728.29 | 279.88 | 729.9 | 279.92 | 732.07 | 279.94 | 733.07 | 279.97 | 737.38 | 280.02 |
| 739.03 | 280.12 | 743.54 | 280.26 | 745.9 | 280.31 | 746.96 | 280.32 | 748.91 | 280.28 |
| 751.67 | 280.21 | 755.33 | 280.17 | 756.75 | 280.13 | 758.01 | 280.11 | 759.74 | 280.12 |
| 760.34 | 280.14 | 763.23 | 280.15 | 765.17 | 280.22 | 768.22 | 280.29 | 770.92 | 280.33 |
| 773.42 | 280.33 | 774.14 | 280.32 | 777.37 | 280.31 | 786.48 | 280.26 | 788.69 | 280.22 |
| 798.63 | 280.14 | 798.84 | 280.13 | 803.54 | 280.1 | 807.78 | 280.08 | 808.45 | 280.09 |
| 812.53 | 280.05 | 814.14 | 280.04 | 817.01 | 279.96 | 817.24 | 279.93 | 820.97 | 279.85 |
| 824.83 | 279.92 | 826.8 | 279.94 | 832.31 | 280.07 | 833.62 | 280.11 | 841.64 | 280.33 |
| 845.82 | 280.33 | 849.59 | 280.3 | 851.97 | 280.3 | 864.61 | 280.33 | 866.41 | 280.26 |
| 871.44 | 280.05 | 874.43 | 280.04 | 877.02 | 280.07 | 879.44 | 280.13 | 882.8 | 280.24 |
| 885.05 | 280.36 | 885.91 | 280.44 | 887.13 | 280.58 | 887.51 | 280.57 | 890.67 | 280.84 |
| 892.73 | 280.8 | 893.78 | 280.73 | 899.06 | 280.79 | 906.07 | 280.84 | 906.55 | 280.83 |
| 908.36 | 280.85 | 913.27 | 280.94 | 916.22 | 281 | 917.89 | 281 | 918.4 | 280.97 |
| 920.89 | 280.93 | 924.85 | 280.97 | 926.28 | 280.99 | 932.57 | 281.03 | 939.17 | 281.11 |
| 940.29 | 281.14 | 942.75 | 281.18 | 944.77 | 281.18 | 951.71 | 281.08 | 953.83 | 281.03 |
| 976.2 | 281.04 | 978.93 | 281.07 | 987.83 | 281.08 | 996.86 | 281.08 | 1003.6 | 281.03 |
| 1004.21 | 280.99 | 1005.46 | 280.97 | 1006.63 | 280.93 | 1011.29 | 280.88 | 1011.6 | 280.85 |
| 1012.75 | 280.85 | 1018.71 | 281 | 1020.07 | 281.01 | 1025.09 | 281.21 | 1030.12 | 281.46 |
| 1030.54 | 281.51 | 1033.52 | 281.55 | 1034.95 | 281.52 | 1036.57 | 281.51 | 1036.96 | 281.49 |
| 1038.11 | 281.37 | 1040.88 | 281.2 | 1041.8 | 281.12 | 1048.56 | 280.62 | 1049.93 | 280.48 |
| 1066.56 | 280.62 | 1071 | 280.62 | 1071.09 | 280.64 | 1073.15 | 280.78 | 1076.25 | 280.94 |
| 1078.14 | 281.01 | 1080.02 | 281.04 | 1081.05 | 281.08 | 1082.62 | 281.08 | 1084.98 | 281.03 |
| 1089.62 | 281 | 1093.48 | 280.94 | 1094.65 | 280.88 | 1098.24 | 280.82 | 1099.63 | 280.82 |
| 1103.53 | 280.75 | 1107.2 | 280.66 | 1110.22 | 280.56 | 1110.92 | 280.55 | 1112.92 | 280.57 |
| 1114.05 | 280.61 | 1115.41 | 280.68 | 1117.26 | 280.75 | 1119.22 | 280.84 | 1120.26 | 280.9 |
| 1121.64 | 280.91 | 1123 | 280.86 | 1123.23 | 280.82 | 1124.5 | 280.81 | 1124.85 | 280.84 |
| 1127.33 | 280.85 | 1129.4 | 280.87 | 1129.69 | 280.85 | 1134.88 | 280.68 | 1135.91 | 280.67 |
| 1139.84 | 280.55 | 1141.71 | 280.6 | 1145.62 | 280.68 | 1152.79 | 280.99 | 1154.87 | 281.05 |
| 1159.4 | 281.08 | 1159.99 | 281.03 | 1161.53 | 281.01 | 1165.04 | 281.05 | 1165.69 | 281.05 |
| 1167.09 | 281.09 | 1169.65 | 281.24 | 1170.82 | 281.27 | 1172.46 | 281.36 | 1174.23 | 281.43 |
| 1174.79 | 281.44 | 1177.55 | 281.41 | 1180.01 | 281.35 | 1183.3 | 281.26 | 1184.59 | 281.26 |
| 1190.27 | 281.3 | 1191.95 | 281.33 | 1192.34 | 281.35 | 1194.18 | 281.37 | 1195.73 | 281.35 |
| 1198.55 | 281.28 | 1201.66 | 281.23 | 1202.74 | 281.18 | 1203.27 | 281.19 | 1204.6 | 281.14 |
| 1209 | 281.07 | 1213.99 | 280.94 | 1218.37 | 280.97 | 1223.14 | 281.09 | 1223.39 | 281.12 |
| 1224.52 | 281.16 | 1226.96 | 281.2 | 1227.52 | 281.23 | 1229.54 | 281.26 | 1230.67 | 281.24 |
| 1232.44 | 281.15 | 1232.74 | 281.09 | 1233.59 | 281.06 | 1237.77 | 280.74 | 1238.78 | 280.61 |
| 1240.59 | 280.57 | 1252.23 | 280.41 | 1254.06 | 280.37 | 1257.16 | 280.33 | 1258.75 | 280.34 |
| 1258.81 | 280.36 | 1262.94 | 280.42 | 1264.58 | 280.45 | 1268.9 | 280.44 | 1271.61 | 280.5 |
| 1273.1 | 280.6 | 1275.4 | 280.71 | 1276.46 | 280.77 | 1279.08 | 280.88 | 1279.73 | 280.88 |
| 1288.45 | 280.75 | 1289.62 | 280.72 | 1295.99 | 280.3 | 1297.86 | 280.16 | 1298.31 | 280.08 |
| 1301.16 | 280.02 | 1302.08 | 280.03 | 1304 | 280.1 | 1305.29 | 280.12 | 1307.96 | 280.21 |
| 1311.75 | 280.28 | 1316.15 | 280.27 | 1321.14 | 280.32 | 1329.93 | 280.59 | 1330.52 | 280.6 |
| 1348.13 | 281.06 | 1359.22 | 281 | 1360.4 | 280.96 | 1367.23 | 281.18 | 1372.28 | 281.38 |
| 1373.92 | 281.44 | 1375.68 | 281.64 | 1378.04 | 281.93 | 1380.9 | 282.24 | 1383.16 | 282.43 |
| 1384.2 | 282.56 | 1389.81 | 283.55 | 1394.56 | 284.54 | 1395.3 | 284.7 | 1398.74 | 285.52 |
| 1399.09 | 285.61 | 1401.47 | 286.52 | 1403.24 | 287.39 | 1404 | 287.79 | 1405.79 | 288.66 |
| 1410.22 | 290.89 | 1410.87 | 291.3 | 1412.67 | 292.36 | 1413.4 | 292.81 | 1414.23 | 293.36 |
| 1416.13 | 294.52 | 1417.18 | 295.19 | 1418 | 295.68 | 1419.48 | 296.67 | 1422.36 | 298.63 |
| 1427.25 | 301.9 | 1428.06 | 302.42 | 1429.07 | 303.11 | 1431.05 | 304.41 | 1431.7 | 304.88 |
| 1433.66 | 306.23 | 1435.17 | 307.01 | 1437.75 | 308.31 | 1439.18 | 309.06 | 1440.62 | 309.76 |
| 1442.34 | 310.5 | 1444.73 | 311.45 | 1446.6 | 311.92 | 1449.29 | 312.47 | 1452.39 | 312.99 |
| 1454.22 | 313.21 | 1455.35 | 313.33 | 1460.4 | 313.96 | 1460.94 | 314.04 | 1466.2 | 314.75 |
| 1473.18 | 314.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 462.29 | .04 | 1410.87 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 462.29 | 1410.87 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1041.674 Elevation=281.9788

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1387.93*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 306.21 | 2.03 | 306.05 | 5.54 | 305.74 | 8.73 | 305.45 | 11.02 | 305.29 |
| 14.71 | 305.01 | 16.44 | 304.81 | 21.77 | 304.36 | 24.12 | 304.08 | 25.58 | 303.89 |
| 26.9 | 303.75 | 31.69 | 303.16 | 34.38 | 303.09 | 35.97 | 302.97 | 36.41 | 302.92 |
| 38.99 | 302.7 | 41.95 | 302.46 | 44.24 | 302.24 | 44.53 | 302.24 | 46.48 | 302.33 |
| 47.78 | 302.34 | 48.79 | 302.29 | 49.33 | 302.21 | 52.82 | 302.1 | 58.61 | 301.66 |
| 60.19 | 301.56 | 61.27 | 301.51 | 62.13 | 301.43 | 62.96 | 301.42 | 65.69 | 301.03 |
| 66.28 | 300.97 | 67.53 | 300.9 | 72.4 | 300.79 | 74.78 | 300.67 | 77.3 | 300.57 |
| 81.88 | 300.3 | 83.94 | 300.2 | 87.78 | 299.94 | 90.11 | 299.76 | 91.81 | 299.68 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 95.39 | 299.42 | 98.16 | 299.31 | 98.95 | 299.27 | 108.7 | 298.7 | 115.46 | 298.33 |
| 121.47 | 297.99 | 123.68 | 297.84 | 125.61 | 297.72 | 127.53 | 297.58 | 128.12 | 297.52 |
| 130.04 | 297.38 | 137.78 | 296.73 | 138.97 | 296.64 | 144.27 | 296.32 | 146.93 | 296.18 |
| 148.99 | 296.03 | 150.79 | 295.87 | 152.34 | 295.68 | 154.62 | 295.53 | 158.2 | 295.23 |
| 159.58 | 295.08 | 181.16 | 293.57 | 188.87 | 293.07 | 194.43 | 292.77 | 195.83 | 292.67 |
| 197.43 | 292.54 | 200.23 | 292.28 | 207.12 | 291.65 | 212.39 | 291.25 | 215.58 | 291.07 |
| 220.23 | 290.89 | 230.62 | 290.39 | 236.21 | 290.15 | 242.68 | 289.85 | 244.75 | 289.7 |
| 245.83 | 289.61 | 256.93 | 288.88 | 265.47 | 288.37 | 267.33 | 288.27 | 269.76 | 288.08 |
| 274.1 | 287.75 | 280.19 | 287.36 | 285.28 | 287.1 | 295.25 | 286.62 | 304.16 | 285.99 |
| 305.15 | 285.93 | 307.23 | 285.88 | 312.22 | 285.7 | 316.89 | 285.47 | 320.88 | 285.3 |
| 321.58 | 285.28 | 328.18 | 284.91 | 338.13 | 284.39 | 338.25 | 284.38 | 347.73 | 283.98 |
| 352.77 | 283.91 | 361.93 | 283.61 | 362.66 | 283.58 | 368.18 | 283.27 | 371.43 | 283.1 |
| 373.35 | 283.01 | 377.31 | 282.81 | 388.47 | 282.48 | 391.37 | 282.38 | 400.2 | 282.05 |
| 408.76 | 281.58 | 411.72 | 281.43 | 413.98 | 281.33 | 415.78 | 281.26 | 417.38 | 281.13 |
| 418.27 | 281.02 | 423.49 | 280.52 | 424.74 | 280.52 | 425.65 | 280.6 | 427.86 | 280.55 |
| 432.76 | 280.36 | 434.96 | 280.28 | 437.95 | 280.19 | 440.36 | 280.36 | 441 | 280.48 |
| 442.44 | 280.63 | 449.35 | 281.26 | 453.64 | 281.49 | 458.41 | 281.57 | 462.29 | 281.28 |
| 464.89 | 281.04 | 466.14 | 280.88 | 468.68 | 280.85 | 470.4 | 280.84 | 471.91 | 280.75 |
| 474.53 | 280.4 | 477.25 | 280.07 | 478.28 | 279.96 | 486.57 | 279.53 | 489.08 | 279.42 |
| 490.19 | 279.38 | 497.75 | 279.07 | 502.67 | 278.92 | 503.44 | 278.94 | 506.2 | 278.92 |
| 507.75 | 278.9 | 514.81 | 278.9 | 517.43 | 278.86 | 518.09 | 278.78 | 522.15 | 279 |
| 523.49 | 279.23 | 524.49 | 279.72 | 525.01 | 279.74 | 526.98 | 279.77 | 530.59 | 279.73 |
| 531.06 | 279.64 | 533.57 | 278.87 | 534.46 | 278.61 | 535.66 | 278.51 | 537.44 | 278.5 |
| 538.39 | 278.51 | 539.45 | 278.55 | 544.14 | 278.65 | 545.97 | 278.65 | 550.08 | 278.74 |
| 551.97 | 278.74 | 554.25 | 278.76 | 555.66 | 278.79 | 558.24 | 278.78 | 559.87 | 278.76 |
| 562.56 | 278.68 | 567.66 | 278.44 | 570.7 | 278.33 | 572.15 | 278.29 | 574.73 | 278.24 |
| 575.77 | 278.18 | 578.39 | 278.31 | 580.49 | 278.5 | 584 | 278.65 | 584.35 | 278.7 |
| 585.89 | 278.69 | 588.36 | 278.6 | 589.81 | 278.57 | 590.24 | 278.53 | 592.19 | 278.48 |
| 594.81 | 278.5 | 597.11 | 278.49 | 598.6 | 278.56 | 600.33 | 278.68 | 602.49 | 278.73 |
| 605.72 | 278.85 | 606.33 | 278.86 | 613.61 | 279.11 | 615.7 | 279.11 | 620.8 | 279.16 |
| 621.81 | 279.12 | 624.19 | 279.08 | 628.19 | 279.06 | 632.19 | 279.02 | 636.5 | 279.02 |
| 641.26 | 278.95 | 642.97 | 279 | 651.28 | 279.22 | 652.31 | 279.26 | 653.76 | 279.36 |
| 654.82 | 279.41 | 656.29 | 279.39 | 659.92 | 279.3 | 662.59 | 279.27 | 665.7 | 279.18 |
| 669.2 | 279.14 | 672.57 | 279.22 | 676.09 | 279.29 | 678.29 | 279.36 | 680.51 | 279.4 |
| 682.51 | 279.46 | 684.41 | 279.49 | 685.46 | 279.49 | 686.18 | 279.51 | 694.9 | 279.71 |
| 696.7 | 279.73 | 700.82 | 279.84 | 702.42 | 279.84 | 710.03 | 279.87 | 714.34 | 279.71 |
| 715.11 | 279.7 | 716.7 | 279.63 | 720.05 | 279.5 | 721.53 | 279.46 | 724.6 | 279.52 |
| 727.37 | 279.56 | 729.56 | 279.58 | 730.57 | 279.61 | 734.93 | 279.65 | 736.6 | 279.75 |
| 741.16 | 279.89 | 744.62 | 279.94 | 746.59 | 279.9 | 749.38 | 279.83 | 753.08 | 279.78 |
| 754.95 | 279.73 | 757.54 | 279.74 | 758.15 | 279.76 | 760.7 | 279.77 | 761.57 | 279.79 |
| 764.42 | 279.88 | 766.12 | 279.92 | 768.85 | 279.96 | 771.37 | 279.96 | 771.62 | 279.95 |
| 775.37 | 279.95 | 778.64 | 279.92 | 779.07 | 279.93 | 784.58 | 279.89 | 786.81 | 279.85 |
| 802.81 | 279.74 | 806.8 | 279.73 | 812.55 | 279.69 | 815.45 | 279.61 | 816.05 | 279.56 |
| 817.86 | 279.53 | 819.45 | 279.49 | 823.35 | 279.57 | 823.65 | 279.56 | 830.92 | 279.72 |
| 832.25 | 279.77 | 838.13 | 279.93 | 838.37 | 279.95 | 840.36 | 280 | 844.58 | 280 |
| 848.4 | 279.97 | 850.81 | 279.97 | 863.58 | 280 | 864.53 | 279.95 | 865.4 | 279.93 |
| 868.04 | 279.81 | 870.49 | 279.72 | 871.19 | 279.71 | 873.51 | 279.71 | 875.37 | 279.72 |
| 878.58 | 279.78 | 879.16 | 279.81 | 881.98 | 279.9 | 884.25 | 280.02 | 886.36 | 280.25 |
| 886.74 | 280.24 | 889.93 | 280.53 | 891.54 | 280.49 | 893.08 | 280.4 | 898.42 | 280.46 |
| 907.07 | 280.51 | 910.12 | 280.55 | 915.77 | 280.67 | 917.46 | 280.67 | 917.97 | 280.63 |
| 919.72 | 280.62 | 920.49 | 280.59 | 925.94 | 280.66 | 932.3 | 280.71 | 938.98 | 280.79 |
| 939.14 | 280.8 | 942.59 | 280.87 | 944.64 | 280.87 | 951.65 | 280.78 | 953.79 | 280.74 |
| 976.42 | 280.75 | 979.18 | 280.78 | 988.18 | 280.78 | 989.4 | 280.77 | 989.6 | 280.79 |
| 997.3 | 280.78 | 999.48 | 280.78 | 1004.12 | 280.73 | 1004.74 | 280.69 | 1007.18 | 280.63 |
| 1011.9 | 280.58 | 1012.21 | 280.55 | 1013.37 | 280.55 | 1019.4 | 280.71 | 1020.77 | 280.73 |
| 1023.9 | 280.85 | 1025.85 | 280.94 | 1030.94 | 281.19 | 1031.36 | 281.25 | 1034.37 | 281.29 |
| 1037.46 | 281.24 | 1037.85 | 281.22 | 1039.02 | 281.09 | 1039.88 | 281.04 | 1041.82 | 280.9 |
| 1042.75 | 280.82 | 1049.3 | 280.3 | 1050.97 | 280.13 | 1067.78 | 280.25 | 1072.28 | 280.25 |
| 1074.45 | 280.42 | 1077.58 | 280.59 | 1079.5 | 280.66 | 1081.15 | 280.68 | 1082.43 | 280.73 |
| 1084.03 | 280.73 | 1085.19 | 280.7 | 1088.13 | 280.68 | 1091.1 | 280.65 | 1095 | 280.58 |
| 1096.19 | 280.51 | 1099.82 | 280.45 | 1101.78 | 280.44 | 1105.16 | 280.37 | 1108.87 | 280.28 |
| 1111.93 | 280.18 | 1112.63 | 280.17 | 1114.66 | 280.19 | 1115.8 | 280.23 | 1117.17 | 280.31 |
| 1119.05 | 280.39 | 1121.03 | 280.5 | 1122.08 | 280.57 | 1123.48 | 280.58 | 1124.89 | 280.52 |
| 1125.09 | 280.49 | 1126.37 | 280.47 | 1126.72 | 280.5 | 1130.26 | 280.53 | 1131.33 | 280.53 |
| 1136.86 | 280.32 | 1137.22 | 280.33 | 1141.7 | 280.18 | 1143.78 | 280.23 | 1147.72 | 280.3 |
| 1149.35 | 280.36 | 1154.98 | 280.61 | 1157.08 | 280.67 | 1161.66 | 280.7 | 1161.9 | 280.66 |
| 1163.82 | 280.63 | 1164.93 | 280.63 | 1166.36 | 280.66 | 1168.02 | 280.66 | 1169.44 | 280.71 |
| 1172.58 | 280.9 | 1173.21 | 280.91 | 1174.87 | 281 | 1176.66 | 281.08 | 1177.22 | 281.09 |
| 1180.01 | 281.06 | 1185.82 | 280.92 | 1187.14 | 280.91 | 1192.87 | 280.97 | 1193.67 | 280.97 |
| 1194.97 | 281.01 | 1196.82 | 281.03 | 1198.39 | 281.01 | 1201.24 | 280.93 | 1203.26 | 280.9 |
| 1204.39 | 280.87 | 1205.48 | 280.82 | 1206.02 | 280.83 | 1207.37 | 280.77 | 1211.81 | 280.7 |
| 1216.86 | 280.57 | 1221.29 | 280.6 | 1226.11 | 280.73 | 1226.36 | 280.76 | 1227.5 | 280.81 |
| 1229.97 | 280.84 | 1230.53 | 280.88 | 1232.58 | 280.91 | 1233.72 | 280.9 | 1235.51 | 280.81 |
| 1235.81 | 280.75 | 1236.68 | 280.71 | 1239.4 | 280.49 | 1240.65 | 280.4 | 1241.92 | 280.24 |
| 1243.75 | 280.2 | 1255.53 | 280.02 | 1257.38 | 279.98 | 1260.51 | 279.94 | 1262.18 | 279.96 |
| 1266.35 | 280.03 | 1268.01 | 280.05 | 1272.39 | 280.04 | 1275.12 | 280.1 | 1276.18 | 280.16 |
| 1276.64 | 280.21 | 1278.95 | 280.32 | 1280.03 | 280.39 | 1282.67 | 280.51 | 1283.33 | 280.51 |
| 1292.15 | 280.36 | 1293.33 | 280.33 | 1294.89 | 280.23 | 1299.77 | 279.9 | 1301.25 | 279.79 |
| 1302.12 | 279.67 | 1305 | 279.61 | 1305.61 | 279.61 | 1307.88 | 279.69 | 1309.17 | 279.72 |
| 1311.87 | 279.81 | 1315.71 | 279.88 | 1320.15 | 279.86 | 1325.2 | 279.91 | 1334.09 | 280.18 |
| 1334.68 | 280.19 | 1352.49 | 280.66 | 1352.78 | 280.67 | 1363.71 | 280.59 | 1364.9 | 280.53 |
| 1371.81 | 280.73 | 1376.91 | 280.9 | 1378.57 | 280.95 | 1380.35 | 281.14 | 1382.73 | 281.43 |
| 1385.63 | 281.73 | 1387.92 | 281.93 | 1388.96 | 282.05 | 1394.64 | 283.04 | 1399.44 | 284.03 |
| 1403.67 | 285.01 | 1404.03 | 285.1 | 1406.12 | 285.89 | 1406.43 | 286.02 | 1408.22 | 286.91 |
| 1408.99 | 287.31 | 1410.8 | 288.2 | 1414.01 | 289.84 | 1415.28 | 290.48 | 1415.94 | 290.9 |
| 1418.01 | 292.15 | 1419.26 | 292.97 | 1421.14 | 294.14 | 1422.17 | 294.81 | 1422.98 | 295.3 |
| 1424.44 | 296.29 | 1425.73 | 297.19 | 1427.29 | 298.26 | 1430 | 300.1 | 1430.74 | 300.62 |
| 1432.57 | 301.84 | 1433.92 | 302.77 | 1435.88 | 304.08 | 1436.61 | 304.62 | 1437.1 | 304.94 |
| 1438.46 | 305.91 | 1441.43 | 307.43 | 1442.5 | 307.96 | 1443.91 | 308.7 | 1445.34 | 309.39 |
| 1447.15 | 310.18 | 1449.41 | 311.1 | 1451.26 | 311.56 | 1453.91 | 312.12 | 1456.98 | 312.64 |
| 1458.78 | 312.87 | 1459.9 | 313 | 1464.9 | 313.67 | 1465.42 | 313.75 | 1470.63 | 314.5 |
| 1477.53 | 314.5 | | | | | | | | |

```
Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  464.89     .04 1415.94     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        464.89 1415.94            17.76   19.61    21.2             .1       .3
Right Levee     Station=1041.438      Elevation=281.6775

CROSS SECTION


RIVER: WASH0
REACH: WASH0              RS: 1368.32*
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INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 305.96 | 2.04 | 305.8 | 5.57 | 305.47 | 6.53 | 305.37 | 8.78 | 305.17 |
| 11.08 | 305 | 14.79 | 304.71 | 16.53 | 304.51 | 21.9 | 304.04 | 25.72 | 303.6 |
| 27.05 | 303.46 | 31.86 | 302.87 | 32.14 | 302.85 | 34.58 | 302.8 | 36.41 | 302.67 |
| 36.61 | 302.64 | 39.21 | 302.42 | 39.36 | 302.4 | 42.19 | 302.18 | 44.49 | 301.95 |
| 46.74 | 302.06 | 48.05 | 302.08 | 49.06 | 302.03 | 49.61 | 301.95 | 53.11 | 301.85 |
| 54.42 | 301.75 | 58.94 | 301.42 | 60.52 | 301.31 | 61.61 | 301.25 | 62.48 | 301.18 |
| 63.31 | 301.16 | 66.06 | 300.81 | 67.9 | 300.68 | 69.34 | 300.64 | 72.8 | 300.53 |
| 74.44 | 300.45 | 75.2 | 300.4 | 76.59 | 300.35 | 77.73 | 300.29 | 82.34 | 300 |
| 84.41 | 299.89 | 88.27 | 299.62 | 88.51 | 299.61 | 90.62 | 299.43 | 92.32 | 299.34 |
| 95.93 | 299.07 | 99.51 | 298.9 | 109.31 | 298.3 | 122.15 | 297.56 | 126.31 | 297.29 |
| 128.25 | 297.15 | 137.46 | 296.42 | 139.75 | 296.25 | 145.08 | 295.95 | 147.76 | 295.82 |
| 149.83 | 295.67 | 151.63 | 295.51 | 153.19 | 295.33 | 153.95 | 295.27 | 155.49 | 295.18 |
| 159.09 | 294.88 | 160.47 | 294.73 | 182.18 | 293.27 | 189.93 | 292.78 | 195.52 | 292.47 |
| 197.4 | 292.34 | 201.35 | 291.99 | 208.52 | 291.36 | 212.93 | 291.03 | 216.79 | 290.81 |
| 217.83 | 290.76 | 221.46 | 290.61 | 231.91 | 290.11 | 233.05 | 290.05 | 237.53 | 289.87 |
| 244.04 | 289.58 | 246.12 | 289.44 | 247.21 | 289.35 | 248.29 | 289.28 | 258.37 | 288.65 |
| 266.96 | 288.16 | 269.56 | 288 | 271.27 | 287.86 | 275.63 | 287.53 | 281.76 | 287.14 |
| 286.87 | 286.89 | 296.9 | 286.42 | 305.86 | 285.78 | 306.86 | 285.72 | 308.95 | 285.68 |
| 313.97 | 285.51 | 314.62 | 285.47 | 318.67 | 285.28 | 323.38 | 285.08 | 330.02 | 284.7 |
| 340.02 | 284.16 | 340.15 | 284.15 | 349.67 | 283.74 | 354.74 | 283.67 | 363.96 | 283.36 |
| 364.69 | 283.33 | 370.24 | 283 | 371.99 | 282.91 | 373.14 | 282.84 | 379.43 | 282.51 |
| 381.13 | 282.46 | 390.64 | 282.15 | 393.56 | 282.05 | 402.44 | 281.71 | 409.59 | 281.3 |
| 412.44 | 281.14 | 414.02 | 281.06 | 418.11 | 280.88 | 418.7 | 280.84 | 419.71 | 280.74 |
| 420.61 | 280.63 | 425.86 | 280.1 | 427.12 | 280.1 | 428.03 | 280.19 | 430.26 | 280.13 |
| 436.76 | 279.88 | 437.39 | 279.84 | 440.4 | 279.75 | 442.83 | 279.93 | 443.47 | 280.05 |
| 444.92 | 280.21 | 451.87 | 280.89 | 456.18 | 281.13 | 456.36 | 281.13 | 460.8 | 281.24 |
| 464.88 | 280.95 | 467.49 | 280.7 | 468.1 | 280.64 | 468.67 | 280.55 | 469.66 | 280.52 |
| 472.67 | 280.46 | 474.08 | 280.36 | 476.12 | 280.09 | 479.1 | 279.72 | 480.06 | 279.63 |
| 487.84 | 279.2 | 491.05 | 279.05 | 491.24 | 279.05 | 498.33 | 278.72 | 502.95 | 278.57 |
| 503.68 | 278.6 | 508.22 | 278.56 | 514.35 | 278.54 | 516.81 | 278.5 | 517.43 | 278.44 |
| 521.24 | 278.61 | 522.5 | 278.8 | 523.44 | 279.2 | 523.92 | 279.22 | 525.77 | 279.24 |
| 529.16 | 279.19 | 529.6 | 279.12 | 531.96 | 278.47 | 532.79 | 278.25 | 534.02 | 278.17 |
| 535.59 | 278.15 | 536.54 | 278.16 | 537.48 | 278.2 | 541.88 | 278.3 | 543.6 | 278.31 |
| 547.46 | 278.4 | 549.23 | 278.39 | 551.37 | 278.41 | 553.49 | 278.45 | 556.64 | 278.41 |
| 559.17 | 278.32 | 563.96 | 278.09 | 566.81 | 277.98 | 570.59 | 277.88 | 571.57 | 277.82 |
| 572.48 | 277.88 | 574.22 | 277.96 | 576.34 | 278.16 | 579.89 | 278.32 | 580.24 | 278.36 |
| 581.72 | 278.35 | 584.3 | 278.24 | 585.76 | 278.21 | 586.2 | 278.17 | 588.17 | 278.11 |
| 590.81 | 278.13 | 593.15 | 278.12 | 594.66 | 278.19 | 596.4 | 278.31 | 597.31 | 278.33 |
| 602.47 | 278.5 | 609.83 | 278.76 | 611.94 | 278.76 | 617.09 | 278.8 | 618.12 | 278.76 |
| 620.52 | 278.71 | 624.57 | 278.68 | 628.61 | 278.64 | 629 | 278.63 | 632.97 | 278.63 |
| 637.78 | 278.56 | 648.95 | 278.88 | 650.42 | 278.98 | 651.49 | 279.04 | 652.97 | 279.02 |
| 656.64 | 278.92 | 659.49 | 278.89 | 662.49 | 278.8 | 665.74 | 278.76 | 666.98 | 278.78 |
| 669.44 | 278.85 | 672.99 | 278.93 | 675.22 | 279 | 676.32 | 279.02 | 679.49 | 279.11 |
| 682.46 | 279.15 | 692.01 | 279.39 | 693.83 | 279.42 | 698.55 | 279.54 | 699.62 | 279.54 |
| 707.31 | 279.56 | 710.03 | 279.46 | 711.66 | 279.39 | 712.44 | 279.38 | 713.1 | 279.34 |
| 717.44 | 279.16 | 718.94 | 279.11 | 722.04 | 279.17 | 723.2 | 279.17 | 724.85 | 279.21 |
| 727.06 | 279.22 | 728.08 | 279.25 | 732.49 | 279.28 | 734.18 | 279.39 | 738.79 | 279.51 |
| 741.19 | 279.55 | 742.28 | 279.56 | 745.78 | 279.47 | 750.51 | 279.4 | 753.58 | 279.34 |
| 755.35 | 279.36 | 755.96 | 279.38 | 758.92 | 279.4 | 760.9 | 279.47 | 763.47 | 279.53 |
| 767.6 | 279.6 | 773.37 | 279.58 | 782.68 | 279.53 | 784.94 | 279.49 | 800.13 | 279.4 |
| 805.15 | 279.38 | 809.31 | 279.35 | 810.56 | 279.35 | 813.89 | 279.26 | 814.5 | 279.21 |
| 817.94 | 279.14 | 820.18 | 279.19 | 822.19 | 279.21 | 829.54 | 279.38 | 830.87 | 279.43 |
| 836.82 | 279.6 | 839.08 | 279.67 | 843.34 | 279.67 | 847.2 | 279.64 | 849.64 | 279.64 |
| 862.56 | 279.67 | 864.4 | 279.59 | 869.54 | 279.38 | 872.59 | 279.37 | 874.47 | 279.38 |
| 877.72 | 279.44 | 881.15 | 279.56 | 883.45 | 279.68 | 885.58 | 279.93 | 885.97 | 279.91 |
| 889.19 | 280.21 | 891.3 | 280.15 | 892.38 | 280.07 | 897.77 | 280.12 | 904.94 | 280.17 |
| 906.56 | 280.17 | 909.6 | 280.22 | 912.3 | 280.28 | 915.32 | 280.34 | 917.03 | 280.34 |
| 917.55 | 280.3 | 919.14 | 280.29 | 920.09 | 280.26 | 925.6 | 280.33 | 931.64 | 280.39 |
| 932.03 | 280.39 | 938.78 | 280.48 | 942.44 | 280.55 | 944.51 | 280.56 | 951.6 | 280.48 |
| 952.8 | 280.47 | 953.39 | 280.45 | 976.64 | 280.46 | 979.42 | 280.48 | 988.53 | 280.49 |
| 997.75 | 280.49 | 1000.48 | 280.47 | 1004.65 | 280.43 | 1005.27 | 280.39 | 1007.74 | 280.32 |
| 1012.51 | 280.28 | 1012.82 | 280.25 | 1014 | 280.25 | 1020.09 | 280.42 | 1021.48 | 280.44 |
| 1024.64 | 280.57 | 1026.61 | 280.66 | 1031.76 | 280.93 | 1032.19 | 280.98 | 1033.06 | 281 |
| 1034.96 | 281.02 | 1038.35 | 280.97 | 1039.07 | 280.91 | 1039.92 | 280.81 | 1042.76 | 280.6 |
| 1043.7 | 280.51 | 1050.32 | 279.96 | 1052 | 279.77 | 1069.01 | 279.87 | 1069.47 | 279.88 |
| 1073.55 | 279.88 | 1075.75 | 280.05 | 1078.92 | 280.23 | 1080.85 | 280.31 | 1082.52 | 280.33 |
| 1083.82 | 280.37 | 1085.43 | 280.38 | 1086.6 | 280.35 | 1089.58 | 280.33 | 1092.58 | 280.29 |
| 1096.53 | 280.23 | 1097.73 | 280.15 | 1101.4 | 280.08 | 1102.33 | 280.08 | 1106.8 | 279.99 |
| 1110.55 | 279.9 | 1113.64 | 279.79 | 1114.35 | 279.78 | 1116.4 | 279.81 | 1117.56 | 279.86 |
| 1118.94 | 279.94 | 1120.84 | 280.03 | 1121.04 | 280.05 | 1123.9 | 280.23 | 1125.32 | 280.24 |
| 1126.75 | 280.19 | 1126.95 | 280.15 | 1128.24 | 280.14 | 1128.6 | 280.17 | 1133.25 | 280.19 |
| 1138.85 | 279.97 | 1139.91 | 279.96 | 1143.74 | 279.82 | 1145.84 | 279.86 | 1149.83 | 279.92 |
| 1151.48 | 279.98 | 1157.17 | 280.22 | 1159.29 | 280.29 | 1163.92 | 280.31 | 1164.53 | 280.26 |
| 1166.1 | 280.24 | 1168.67 | 280.27 | 1170.35 | 280.28 | 1171.78 | 280.33 | 1172.8 | 280.4 |
| 1174.96 | 280.53 | 1175.59 | 280.54 | 1177.27 | 280.64 | 1179.08 | 280.73 | 1179.65 | 280.74 |
| 1182.47 | 280.72 | 1182.96 | 280.7 | 1184.99 | 280.66 | 1188.35 | 280.57 | 1189.68 | 280.57 |
| 1197.19 | 280.65 | 1197.59 | 280.67 | 1199.47 | 280.69 | 1201.06 | 280.67 | 1203.94 | 280.58 |
| 1207.12 | 280.51 | 1208.22 | 280.46 | 1208.77 | 280.47 | 1210.13 | 280.41 | 1215.67 | 280.3 |
| 1219.35 | 280.2 | 1220.16 | 280.19 | 1221.21 | 280.21 | 1224.2 | 280.23 | 1229.08 | 280.37 |
| 1230.49 | 280.45 | 1232.98 | 280.49 | 1233.55 | 280.53 | 1235.62 | 280.57 | 1236.39 | 280.57 |
| 1237.99 | 280.5 | 1238.59 | 280.46 | 1238.89 | 280.4 | 1239.76 | 280.36 | 1242.51 | 280.13 |
| 1243.19 | 280.06 | 1243.79 | 280.03 | 1245.07 | 279.87 | 1246.92 | 279.83 | 1258.82 | 279.64 |
| 1260.69 | 279.6 | 1263.86 | 279.55 | 1265.55 | 279.57 | 1269.77 | 279.64 | 1271.45 | 279.66 |
| 1275.87 | 279.64 | 1278.63 | 279.7 | 1279.71 | 279.76 | 1280.15 | 279.81 | 1282.5 | 279.94 |
| 1283.59 | 280.01 | 1286.27 | 280.13 | 1286.93 | 280.13 | 1295.85 | 279.98 | 1296.66 | 279.96 |
| 1298.16 | 279.88 | 1298.62 | 279.84 | 1303.56 | 279.5 | 1305.04 | 279.38 | 1305.93 | 279.26 |
| 1308.84 | 279.2 | 1309.79 | 279.21 | 1311.75 | 279.29 | 1313.06 | 279.31 | 1315.79 | 279.4 |
| 1319.67 | 279.47 | 1324.16 | 279.45 | 1329.26 | 279.5 | 1338.25 | 279.78 | 1338.85 | 279.79 |
| 1356.86 | 280.26 | 1357.14 | 280.27 | 1368.2 | 280.18 | 1369.41 | 280.11 | 1376.39 | 280.27 |
| 1381.54 | 280.41 | 1383.22 | 280.46 | 1385.03 | 280.65 | 1387.43 | 280.93 | 1390.36 | 281.23 |
| 1392.67 | 281.43 | 1393.73 | 281.54 | 1399.47 | 282.53 | 1404.33 | 283.53 | 1408.6 | 284.49 |
| 1408.96 | 284.58 | 1411.39 | 285.52 | 1413.2 | 286.42 | 1413.97 | 286.84 | 1415.8 | 287.74 |
| 1417.85 | 288.8 | 1420.34 | 290.06 | 1421 | 290.5 | 1423.05 | 291.76 | 1424.28 | 292.59 |
| 1426.14 | 293.76 | 1427.13 | 294.4 | 1427.96 | 294.91 | 1429.41 | 295.91 | 1432.22 | 297.89 |
| 1433.35 | 298.66 | 1435.63 | 300.26 | 1436.13 | 300.59 | 1437 | 301.2 | 1437.79 | 301.73 |
| 1438.78 | 302.43 | 1440.71 | 303.75 | 1441.43 | 304.29 | 1441.91 | 304.62 | 1443.26 | 305.59 |
| 1444.74 | 306.36 | 1445.37 | 306.66 | 1447.26 | 307.62 | 1448.65 | 308.34 | 1450.07 | 309.03 |
| 1451.85 | 309.81 | 1454.08 | 310.75 | 1455.77 | 311.17 | 1458.53 | 311.77 | 1460.79 | 312.16 |
| 1461.56 | 312.28 | 1464.45 | 312.67 | 1469.39 | 313.37 | 1469.91 | 313.46 | 1475.05 | 314.25 |
| 1481.88 | 314.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 467.49 | .04 | 1421 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 467.49 | 1421 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1041.201 Elevation=281.3763

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1348.71*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 305.72 | 2.05 | 305.55 | 5.6 | 305.2 | 6.56 | 305.1 | 9.88 | 304.8 |
| 11.14 | 304.71 | 14.87 | 304.41 | 16.62 | 304.21 | 22.02 | 303.73 | 25.87 | 303.3 |
| 27.2 | 303.17 | 32.04 | 302.57 | 34.77 | 302.52 | 36.61 | 302.39 | 36.81 | 302.36 |
| 39.43 | 302.14 | 39.58 | 302.12 | 42.42 | 301.89 | 44.74 | 301.67 | 47 | 301.79 |
| 48.32 | 301.82 | 49.34 | 301.77 | 49.88 | 301.68 | 53.41 | 301.6 | 54.72 | 301.5 |
| 59.26 | 301.17 | 61.96 | 301 | 62.83 | 300.92 | 63.66 | 300.91 | 66.43 | 300.59 |
| 68.28 | 300.46 | 73.21 | 300.28 | 75.61 | 300.14 | 78.17 | 300.02 | 82.8 | 299.71 |
| 84.88 | 299.58 | 88.76 | 299.3 | 91.12 | 299.1 | 92.83 | 299 | 96.46 | 298.71 |
| 99.26 | 298.58 | 103.84 | 298.29 | 109.92 | 297.9 | 117.44 | 297.46 | 122.83 | 297.14 |
| 127.02 | 296.86 | 131.49 | 296.53 | 138.23 | 296.02 | 140.53 | 295.85 | 145.02 | 295.62 |
| 148.58 | 295.46 | 150.66 | 295.31 | 152.48 | 295.15 | 154.05 | 294.97 | 156.36 | 294.83 |
| 159.98 | 294.53 | 161.37 | 294.38 | 183.19 | 292.97 | 190.98 | 292.49 | 196.6 | 292.18 |
| 199.64 | 291.94 | 202.48 | 291.7 | 209.68 | 291.08 | 214.11 | 290.77 | 215.64 | 290.67 |
| 217.99 | 290.54 | 221.22 | 290.39 | 222.7 | 290.33 | 233.2 | 289.82 | 234.35 | 289.76 |
| 238.85 | 289.59 | 245.39 | 289.32 | 248.58 | 289.09 | 249.67 | 289.02 | 259.81 | 288.43 |
| 268.44 | 287.95 | 271.06 | 287.79 | 272.78 | 287.65 | 277.17 | 287.31 | 283.33 | 286.92 |
| 288.47 | 286.67 | 298.56 | 286.21 | 307.57 | 285.57 | 308.56 | 285.51 | 310.67 | 285.47 |
| 315.72 | 285.31 | 320.44 | 285.08 | 325.18 | 284.88 | 331.86 | 284.49 | 341.92 | 283.93 |
| 342.04 | 283.92 | 351.62 | 283.5 | 356.72 | 283.43 | 365.98 | 283.11 | 366.72 | 283.07 |
| 372.31 | 282.73 | 375.22 | 282.56 | 381.54 | 282.21 | 392.82 | 281.82 | 404.69 | 281.37 |
| 411.87 | 280.95 | 413.34 | 280.86 | 416.33 | 280.69 | 420.44 | 280.51 | 422.05 | 280.36 |
| 422.95 | 280.24 | 428.23 | 279.68 | 429.5 | 279.68 | 430.42 | 279.77 | 432.66 | 279.71 |
| 437.61 | 279.51 | 441.08 | 279.36 | 442.85 | 279.31 | 445.3 | 279.5 | 446.06 | 279.64 |
| 447.4 | 279.79 | 449.87 | 280.04 | 454.38 | 280.51 | 458.9 | 280.77 | 463.37 | 280.9 |
| 463.54 | 280.9 | 467.46 | 280.61 | 470.1 | 280.36 | 471.19 | 280.22 | 473.42 | 280.13 |
| 474.93 | 280.08 | 476.38 | 279.96 | 478.55 | 279.67 | 480.94 | 279.38 | 481.84 | 279.29 |
| 489.11 | 278.87 | 491.32 | 278.75 | 492.29 | 278.71 | 498.92 | 278.38 | 503.24 | 278.23 |
| 503.92 | 278.26 | 506.72 | 278.23 | 513.89 | 278.18 | 516.19 | 278.14 | 516.77 | 278.09 |
| 520.33 | 278.22 | 521.5 | 278.37 | 522.39 | 278.69 | 524.57 | 278.71 | 527.73 | 278.66 |
| 528.14 | 278.61 | 530.34 | 278.07 | 531.13 | 277.9 | 532.27 | 277.82 | 533.74 | 277.81 |
| 535.51 | 277.85 | 539.62 | 277.96 | 541.23 | 277.97 | 544.83 | 278.05 | 546.49 | 278.04 |
| 548.49 | 278.06 | 549.73 | 278.1 | 550.48 | 278.1 | 553.42 | 278.06 | 555.78 | 277.97 |
| 560.25 | 277.74 | 562.92 | 277.62 | 566.46 | 277.52 | 567.37 | 277.47 | 568.28 | 277.53 |
| 570.05 | 277.61 | 572.56 | 277.84 | 575.78 | 277.99 | 576.14 | 278.02 | 577.71 | 278 |
| 580.24 | 277.88 | 581.71 | 277.85 | 582.16 | 277.8 | 584.15 | 277.75 | 586.82 | 277.76 |
| 589.18 | 277.74 | 590.71 | 277.81 | 592.47 | 277.94 | 594.67 | 278 | 598.6 | 278.14 |
| 606.04 | 278.41 | 608.18 | 278.41 | 613.39 | 278.44 | 614.42 | 278.4 | 616.86 | 278.33 |
| 625.04 | 278.25 | 625.43 | 278.24 | 629.43 | 278.24 | 634.3 | 278.17 | 634.71 | 278.17 |
| 636.05 | 278.23 | 644.55 | 278.47 | 645.5 | 278.5 | 647.08 | 278.61 | 648.16 | 278.66 |
| 648.96 | 278.66 | 653.37 | 278.55 | 656.25 | 278.51 | 659.28 | 278.42 | 662.57 | 278.38 |
| 663.82 | 278.4 | 666.3 | 278.48 | 669.9 | 278.57 | 673.26 | 278.67 | 674.42 | 278.69 |
| 676.93 | 278.77 | 680.21 | 278.83 | 689.13 | 279.07 | 690.96 | 279.1 | 695.18 | 279.23 |
| 696.81 | 279.23 | 704.59 | 279.25 | 707.34 | 279.14 | 708.99 | 279.06 | 709.78 | 279.05 |
| 714.83 | 278.81 | 716.34 | 278.76 | 722.32 | 278.85 | 722.99 | 278.85 | 725.59 | 278.89 |
| 730.04 | 278.92 | 731.1 | 278.97 | 731.75 | 279.02 | 736.41 | 279.14 | 739.94 | 279.18 |
| 744.81 | 279.06 | 748.26 | 279.02 | 750.5 | 278.96 | 751.98 | 278.96 | 753.77 | 279 |
| 757.12 | 279.03 | 758.76 | 279.09 | 761.36 | 279.16 | 763.67 | 279.2 | 764.71 | 279.23 |
| 767.29 | 279.23 | 768.03 | 279.22 | 771.37 | 279.21 | 774.72 | 279.19 | 775.16 | 279.2 |
| 780.78 | 279.17 | 783.06 | 279.13 | 798.42 | 279.04 | 800.82 | 279.04 | 803.49 | 279.03 |
| 807.7 | 279 | 809.85 | 278.99 | 812.33 | 278.91 | 812.95 | 278.85 | 814.8 | 278.82 |
| 816.43 | 278.78 | 818.69 | 278.84 | 820.72 | 278.86 | 828.15 | 279.03 | 829.5 | 279.09 |
| 835.51 | 279.26 | 835.76 | 279.28 | 837.79 | 279.33 | 842.11 | 279.33 | 848.47 | 279.31 |
| 861.53 | 279.33 | 866.63 | 279.12 | 867.43 | 279.08 | 869.31 | 279.04 | 871.68 | 279.04 |
| 873.91 | 279.05 | 876.86 | 279.1 | 880.33 | 279.22 | 882.65 | 279.35 | 883.54 | 279.44 |
| 884.8 | 279.6 | 885.2 | 279.58 | 888.46 | 279.89 | 890.58 | 279.83 | 891.68 | 279.74 |
| 897.13 | 279.79 | 904.37 | 279.83 | 906.74 | 279.85 | 910.66 | 279.92 | 911.82 | 279.95 |
| 914.87 | 280.01 | 916.59 | 280.01 | 917.12 | 279.97 | 918.9 | 279.95 | 919.69 | 279.92 |
| 925.26 | 280 | 931.37 | 280.06 | 931.76 | 280.07 | 938.58 | 280.16 | 939.74 | 280.19 |
| 942.28 | 280.23 | 944.37 | 280.24 | 950.69 | 280.19 | 951.54 | 280.19 | 953.35 | 280.16 |
| 976.85 | 280.17 | 979.67 | 280.19 | 988.87 | 280.19 | 990.12 | 280.18 | 990.32 | 280.2 |
| 998.2 | 280.19 | 1000.42 | 280.19 | 1005.17 | 280.13 | 1005.8 | 280.09 | 1008.29 | 280.02 |
| 1013.12 | 279.98 | 1013.43 | 279.95 | 1014.62 | 279.95 | 1020.79 | 280.13 | 1022.19 | 280.15 |
| 1025.38 | 280.29 | 1032.58 | 280.66 | 1033.01 | 280.72 | 1036.09 | 280.77 | 1037.56 | 280.73 |
| 1039.24 | 280.7 | 1039.64 | 280.67 | 1040.83 | 280.53 | 1043.7 | 280.31 | 1044.65 | 280.21 |
| 1051.34 | 279.62 | 1053.04 | 279.42 | 1070.23 | 279.5 | 1074.82 | 279.5 | 1074.92 | 279.52 |
| 1077.05 | 279.68 | 1080.25 | 279.88 | 1082.2 | 279.95 | 1083.89 | 279.97 | 1085.21 | 280.02 |
| 1086.83 | 280.03 | 1089.27 | 279.99 | 1094.06 | 279.94 | 1098.05 | 279.87 | 1099.27 | 279.79 |
| 1102.98 | 279.71 | 1104.98 | 279.69 | 1112.23 | 279.52 | 1115.35 | 279.41 | 1116.07 | 279.4 |
| 1118.14 | 279.44 | 1119.31 | 279.48 | 1120.71 | 279.58 | 1122.83 | 279.69 | 1126.17 | 279.91 |
| 1127.16 | 279.91 | 1128.05 | 279.89 | 1128.8 | 279.82 | 1130.11 | 279.8 | 1130.47 | 279.84 |
| 1135.18 | 279.86 | 1135.48 | 279.84 | 1140.83 | 279.62 | 1141.91 | 279.61 | 1145.49 | 279.47 |
| 1145.96 | 279.46 | 1147.9 | 279.49 | 1151.94 | 279.53 | 1153.6 | 279.6 | 1159.35 | 279.83 |
| 1161.5 | 279.9 | 1166.18 | 279.93 | 1166.79 | 279.87 | 1168.39 | 279.85 | 1170.36 | 279.87 |
| 1170.98 | 279.89 | 1172.68 | 279.89 | 1174.13 | 279.94 | 1176.77 | 280.13 | 1177.98 | 280.18 |
| 1179.68 | 280.29 | 1181.51 | 280.38 | 1182.08 | 280.39 | 1184.93 | 280.37 | 1187.48 | 280.31 |
| 1190.88 | 280.22 | 1192.22 | 280.22 | 1199.81 | 280.31 | 1202.12 | 280.35 | 1203.72 | 280.33 |
| 1206.64 | 280.23 | 1208.7 | 280.19 | 1209.85 | 280.15 | 1210.97 | 280.09 | 1211.51 | 280.1 |
| 1212.89 | 280.04 | 1217.44 | 279.95 | 1222.6 | 279.82 | 1227.12 | 279.86 | 1232.05 | 280.01 |
| 1233.48 | 280.09 | 1235 | 280.11 | 1236 | 280.14 | 1236.57 | 280.18 | 1238.66 | 280.23 |
| 1239.83 | 280.21 | 1241.06 | 280.16 | 1241.66 | 280.12 | 1241.97 | 280.05 | 1242.85 | 280.01 |
| 1245.63 | 279.77 | 1246.31 | 279.7 | 1246.92 | 279.67 | 1248.21 | 279.49 | 1250.08 | 279.45 |
| 1262.12 | 279.25 | 1262.6 | 279.25 | 1264.01 | 279.21 | 1267.21 | 279.16 | 1268.85 | 279.16 |
| 1268.92 | 279.18 | 1273.18 | 279.24 | 1274.88 | 279.27 | 1279.35 | 279.24 | 1282.14 | 279.3 |
| 1283.23 | 279.37 | 1283.68 | 279.42 | 1286.06 | 279.55 | 1287.16 | 279.62 | 1289.86 | 279.75 |
| 1290.53 | 279.75 | 1299.55 | 279.59 | 1300.75 | 279.56 | 1304.86 | 279.27 | 1307.34 | 279.1 |
| 1308.84 | 278.98 | 1309.74 | 278.85 | 1312.68 | 278.79 | 1313.64 | 278.8 | 1315.62 | 278.88 |
| 1316.94 | 278.91 | 1319.71 | 279 | 1323.63 | 279.07 | 1328.17 | 279.04 | 1333.33 | 279.09 |
| 1342.42 | 279.38 | 1343.02 | 279.39 | 1361.22 | 279.87 | 1361.51 | 279.87 | 1372.69 | 279.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1373.91 | 279.69 | 1380.96 | 279.82 | 1386.18 | 279.93 | 1387.87 | 279.96 | 1389.7 | 280.16 |
| 1392.13 | 280.44 | 1395.09 | 280.72 | 1397.42 | 280.92 | 1398.49 | 281.03 | 1404.29 | 282.02 |
| 1409.21 | 283.03 | 1409.97 | 283.19 | 1413.89 | 284.06 | 1416.03 | 284.88 | 1416.34 | 285.01 |
| 1418.18 | 285.94 | 1418.96 | 286.37 | 1419.49 | 286.62 | 1420.81 | 287.28 | 1422.51 | 288.17 |
| 1425.39 | 289.65 | 1426.06 | 290.1 | 1427.8 | 291.19 | 1428.5 | 291.65 | 1429.31 | 292.21 |
| 1431.14 | 293.38 | 1432.16 | 294.05 | 1432.94 | 294.53 | 1434.37 | 295.52 | 1435.63 | 296.43 |
| 1437.15 | 297.51 | 1439.8 | 299.38 | 1440.52 | 299.91 | 1441.02 | 300.24 | 1442.13 | 301.03 |
| 1442.66 | 301.39 | 1443.63 | 302.09 | 1445.4 | 303.32 | 1446.17 | 303.9 | 1448.06 | 305.27 |
| 1449.52 | 306.03 | 1450.97 | 306.74 | 1452.83 | 307.68 | 1453.39 | 307.98 | 1454.79 | 308.66 |
| 1456.44 | 309.41 | 1457.56 | 309.88 | 1458.75 | 310.4 | 1460.42 | 310.81 | 1463.15 | 311.41 |
| 1466.15 | 311.93 | 1469 | 312.33 | 1473.89 | 313.08 | 1474.4 | 313.17 | 1479.48 | 314 |
| 1486.22 | 314 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 470.1 | .04 | 1426.06 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
470.1 1426.06 17.76 19.61 21.2 .1 .3
Right Levee Station=1040.965 Elevation= 281.075

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1329.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 305.48 | 2.07 | 305.3 | 5.63 | 304.93 | 6.6 | 304.82 | 8.88 | 304.61 |
| 9.94 | 304.52 | 14.95 | 304.12 | 16.71 | 303.91 | 22.14 | 303.42 | 26.01 | 303 |
| 27.35 | 302.87 | 32.22 | 302.28 | 32.49 | 302.26 | 34.96 | 302.24 | 36.57 | 302.13 |
| 37.02 | 302.08 | 39.8 | 301.84 | 42.66 | 301.61 | 44.63 | 301.42 | 45.28 | 301.39 |
| 47.26 | 301.52 | 48.59 | 301.55 | 49.61 | 301.51 | 50.16 | 301.42 | 53.7 | 301.35 |
| 55.02 | 301.25 | 59.59 | 300.93 | 62.3 | 300.75 | 63.18 | 300.67 | 64.01 | 300.66 |
| 66.8 | 300.37 | 68.66 | 300.24 | 70.11 | 300.18 | 73.61 | 300.02 | 76.03 | 299.88 |
| 77.44 | 299.81 | 78.6 | 299.74 | 84.37 | 299.33 | 85.35 | 299.27 | 89.25 | 298.98 |
| 91.63 | 298.77 | 93.35 | 298.66 | 97 | 298.35 | 100.17 | 298.19 | 110.52 | 297.51 |
| 117.4 | 297.09 | 118.09 | 297.04 | 123.52 | 296.71 | 129.37 | 296.32 | 130.28 | 296.24 |
| 132.22 | 296.11 | 140.1 | 295.54 | 141.31 | 295.46 | 145.83 | 295.25 | 146.7 | 295.2 |
| 149.4 | 295.09 | 151.5 | 294.95 | 153.32 | 294.79 | 154.9 | 294.61 | 157.22 | 294.48 |
| 160.86 | 294.19 | 162.26 | 294.04 | 184.2 | 292.67 | 192.04 | 292.2 | 197.69 | 291.88 |
| 199.12 | 291.78 | 200.75 | 291.65 | 203.6 | 291.41 | 210.85 | 290.81 | 215.3 | 290.5 |
| 219.2 | 290.27 | 222.45 | 290.11 | 223.93 | 290.05 | 234.49 | 289.53 | 235.65 | 289.47 |
| 240.18 | 289.31 | 246.75 | 289.06 | 248.86 | 288.91 | 251.05 | 288.77 | 261.24 | 288.2 |
| 269.93 | 287.73 | 271.82 | 287.63 | 272.56 | 287.58 | 278.7 | 287.09 | 284.9 | 286.7 |
| 290.07 | 286.45 | 300.21 | 286 | 309.27 | 285.36 | 310.27 | 285.3 | 312.39 | 285.27 |
| 317.47 | 285.11 | 322.22 | 284.89 | 326.98 | 284.68 | 333.69 | 284.28 | 343.81 | 283.7 |
| 343.94 | 283.69 | 353.57 | 283.26 | 357.8 | 283.19 | 358.69 | 283.19 | 368.01 | 282.85 |
| 368.75 | 282.82 | 374.37 | 282.46 | 376.13 | 282.36 | 377.3 | 282.28 | 379.63 | 282.15 |
| 383.65 | 281.91 | 385.37 | 281.85 | 397.94 | 281.38 | 406.93 | 281.03 | 415.63 | 280.5 |
| 418.63 | 280.32 | 420.93 | 280.22 | 422.77 | 280.13 | 424.39 | 279.97 | 425.29 | 279.85 |
| 430.61 | 279.26 | 431.87 | 279.26 | 432.8 | 279.36 | 435.05 | 279.29 | 441.62 | 279.01 |
| 442.26 | 278.97 | 443.52 | 278.92 | 445.3 | 278.87 | 447.76 | 279.07 | 448.41 | 279.2 |
| 449.88 | 279.37 | 456.9 | 280.13 | 461.45 | 280.41 | 465.93 | 280.56 | 466.11 | 280.56 |
| 470.05 | 280.28 | 472.7 | 280.02 | 473.89 | 279.88 | 476.91 | 279.71 | 478.11 | 279.62 |
| 479.12 | 279.5 | 482.79 | 279.03 | 483.62 | 278.96 | 490.39 | 278.54 | 492.44 | 278.42 |
| 499.51 | 278.03 | 503.52 | 277.88 | 504.16 | 277.92 | 505.45 | 277.91 | 508.1 | 277.87 |
| 513.43 | 277.82 | 515.57 | 277.78 | 516.11 | 277.74 | 518.36 | 277.81 | 519.42 | 277.83 |
| 520.51 | 277.94 | 521.33 | 278.17 | 523.36 | 278.18 | 526.3 | 278.13 | 526.69 | 278.09 |
| 528.04 | 277.81 | 529.46 | 277.54 | 530.44 | 277.48 | 531.9 | 277.46 | 533.54 | 277.5 |
| 537.36 | 277.61 | 538.86 | 277.63 | 542.21 | 277.7 | 545.61 | 277.71 | 546.76 | 277.75 |
| 548.86 | 277.74 | 550.19 | 277.71 | 552.39 | 277.61 | 556.55 | 277.38 | 560.22 | 277.22 |
| 562.32 | 277.16 | 563.17 | 277.11 | 564.09 | 277.17 | 565.56 | 277.23 | 568.41 | 277.5 |
| 571.67 | 277.65 | 572.48 | 277.68 | 573.63 | 277.65 | 576.18 | 277.52 | 577.67 | 277.49 |
| 578.11 | 277.44 | 580.13 | 277.38 | 582.83 | 277.38 | 585.22 | 277.37 | 586.76 | 277.44 |
| 588.54 | 277.57 | 590.77 | 277.64 | 594.74 | 277.78 | 602.26 | 278.05 | 609.68 | 278.08 |
| 610.73 | 278.03 | 613.19 | 277.96 | 621.46 | 277.86 | 621.85 | 277.85 | 625.9 | 277.85 |
| 630.83 | 277.77 | 632.59 | 277.84 | 641.18 | 278.1 | 642.24 | 278.13 | 643.74 | 278.24 |
| 644.83 | 278.29 | 645.64 | 278.29 | 650.1 | 278.17 | 653.01 | 278.13 | 656.07 | 278.04 |
| 659.39 | 277.99 | 660.66 | 278.02 | 662.46 | 278.09 | 666.8 | 278.21 | 669.08 | 278.28 |
| 671.38 | 278.34 | 673.92 | 278.42 | 675.4 | 278.45 | 686.24 | 278.75 | 688.09 | 278.79 |
| 692.36 | 278.92 | 701.87 | 278.93 | 704.65 | 278.82 | 706.32 | 278.74 | 707.11 | 278.73 |
| 708.76 | 278.64 | 712.22 | 278.47 | 713.75 | 278.42 | 718.1 | 278.47 | 719.79 | 278.5 |
| 722.05 | 278.51 | 723.09 | 278.54 | 727.6 | 278.55 | 729.32 | 278.65 | 734.03 | 278.76 |
| 735.09 | 278.78 | 736 | 278.78 | 736.49 | 278.8 | 737.6 | 278.8 | 739.64 | 278.75 |
| 741.18 | 278.7 | 746.01 | 278.63 | 748.28 | 278.58 | 749.15 | 278.57 | 751.58 | 278.62 |
| 754.6 | 278.65 | 758.06 | 278.75 | 759.26 | 278.79 | 761.59 | 278.83 | 761.95 | 278.85 |
| 763.47 | 278.87 | 765.24 | 278.87 | 766 | 278.86 | 769.37 | 278.84 | 773.2 | 278.83 |
| 778.88 | 278.81 | 781.19 | 278.77 | 791.58 | 278.72 | 796.71 | 278.69 | 799.13 | 278.68 |
| 801.84 | 278.68 | 806.09 | 278.65 | 808.26 | 278.64 | 810.77 | 278.55 | 811.39 | 278.5 |
| 814.91 | 278.43 | 817.2 | 278.49 | 819.25 | 278.51 | 826.76 | 278.69 | 828.13 | 278.74 |
| 836.51 | 279 | 840.87 | 279 | 847.3 | 278.98 | 860.5 | 279 | 861.35 | 278.95 |
| 862.38 | 278.92 | 863.66 | 278.86 | 864.4 | 278.84 | 866.47 | 278.75 | 867.63 | 278.71 |
| 870.76 | 278.7 | 873.02 | 278.71 | 876 | 278.76 | 879.5 | 278.88 | 881.85 | 279.01 |
| 884.03 | 279.27 | 884.43 | 279.26 | 887.72 | 279.57 | 889.39 | 279.53 | 890.98 | 279.41 |
| 903.81 | 279.5 | 905.46 | 279.5 | 906.2 | 279.52 | 910.16 | 279.59 | 911.33 | 279.62 |
| 914.41 | 279.68 | 916.16 | 279.68 | 916.69 | 279.64 | 918.32 | 279.62 | 919.29 | 279.59 |
| 924.92 | 279.67 | 931.09 | 279.74 | 931.49 | 279.75 | 938.39 | 279.85 | 942.13 | 279.92 |
| 944.24 | 279.93 | 953.7 | 279.87 | 977.07 | 279.88 | 978.42 | 279.89 | 989.22 | 279.9 |
| 998.65 | 279.9 | 1001.44 | 279.88 | 1005.69 | 279.84 | 1006.33 | 279.79 | 1008.85 | 279.72 |
| 1013.72 | 279.68 | 1014.04 | 279.65 | 1015.25 | 279.65 | 1021.48 | 279.84 | 1022.89 | 279.86 |
| 1028.14 | 280.11 | 1033.4 | 280.4 | 1033.83 | 280.46 | 1034.72 | 280.48 | 1036.94 | 280.51 |
| 1040.13 | 280.43 | 1040.54 | 280.4 | 1041.74 | 280.25 | 1044.64 | 280.01 | 1045.59 | 279.91 |
| 1052.36 | 279.28 | 1054.08 | 279.06 | 1071.46 | 279.12 | 1076.1 | 279.12 | 1076.19 | 279.14 |
| 1078.35 | 279.32 | 1081.58 | 279.52 | 1083.56 | 279.6 | 1085.26 | 279.62 | 1086.59 | 279.67 |
| 1088.24 | 279.68 | 1090.7 | 279.64 | 1095.54 | 279.59 | 1099.58 | 279.51 | 1100.49 | 279.46 |
| 1100.81 | 279.42 | 1104.56 | 279.34 | 1105.51 | 279.33 | 1108.58 | 279.27 | 1110.07 | 279.23 |
| 1113.91 | 279.14 | 1117.07 | 279.03 | 1117.79 | 279.02 | 1119.89 | 279.06 | 1120.82 | 279.09 |
| 1122.48 | 279.21 | 1124.42 | 279.32 | 1127.55 | 279.55 | 1128 | 279.57 | 1129.65 | 279.56 |
| 1130.46 | 279.52 | 1130.66 | 279.48 | 1131.98 | 279.47 | 1132.35 | 279.5 | 1137.1 | 279.52 |
| 1137.4 | 279.5 | 1142.82 | 279.27 | 1143.91 | 279.25 | 1147.53 | 279.1 | 1148.01 | 279.09 |
| 1154.04 | 279.15 | 1155.73 | 279.21 | 1161.54 | 279.45 | 1163.71 | 279.52 | 1168.44 | 279.55 |
| 1169.06 | 279.49 | 1170.67 | 279.46 | 1172.67 | 279.48 | 1173.3 | 279.5 | 1174.54 | 279.5 |

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|---|---|---|---|---|---|---|---|---|---|
| 1176.47 | 279.56 | 1177.51 | 279.65 | 1179.72 | 279.8 | 1180.37 | 279.81 | 1182.08 | 279.93 |
| 1183.93 | 280.03 | 1184.52 | 280.04 | 1187.39 | 280.03 | 1187.9 | 280.01 | 1189.97 | 279.97 |
| 1193.4 | 279.87 | 1194.76 | 279.87 | 1201.51 | 279.96 | 1202.85 | 279.99 | 1204.77 | 280.01 |
| 1206.39 | 279.99 | 1207.1 | 279.96 | 1211.13 | 279.83 | 1211.41 | 279.83 | 1213.71 | 279.73 |
| 1214.26 | 279.74 | 1215.66 | 279.67 | 1220.25 | 279.58 | 1225.46 | 279.45 | 1230.04 | 279.49 |
| 1235.02 | 279.65 | 1236.46 | 279.73 | 1239.01 | 279.79 | 1239.59 | 279.83 | 1241.7 | 279.88 |
| 1242.89 | 279.87 | 1244.74 | 279.77 | 1245.05 | 279.7 | 1245.94 | 279.66 | 1249.44 | 279.33 |
| 1250.05 | 279.3 | 1251.36 | 279.12 | 1253.25 | 279.08 | 1265.41 | 278.87 | 1267.32 | 278.82 |
| 1270.56 | 278.77 | 1272.22 | 278.77 | 1272.29 | 278.79 | 1278.31 | 278.87 | 1282.83 | 278.84 |
| 1285.65 | 278.91 | 1285.9 | 278.91 | 1287.21 | 279.02 | 1289.61 | 279.16 | 1290.72 | 279.24 |
| 1293.46 | 279.37 | 1294.14 | 279.37 | 1303.24 | 279.2 | 1304.46 | 279.17 | 1306.08 | 279.06 |
| 1311.12 | 278.7 | 1312.64 | 278.57 | 1313.54 | 278.44 | 1316.52 | 278.37 | 1317.49 | 278.39 |
| 1319.49 | 278.48 | 1320.83 | 278.5 | 1323.62 | 278.6 | 1327.58 | 278.67 | 1332.18 | 278.63 |
| 1337.39 | 278.68 | 1346.58 | 278.97 | 1347.19 | 278.98 | 1365.59 | 279.47 | 1365.88 | 279.48 |
| 1377.18 | 279.35 | 1378.41 | 279.27 | 1385.54 | 279.36 | 1390.81 | 279.45 | 1392.52 | 279.47 |
| 1396.83 | 279.94 | 1399.82 | 280.22 | 1402.18 | 280.42 | 1403.26 | 280.52 | 1409.12 | 281.51 |
| 1414.09 | 282.52 | 1414.86 | 282.69 | 1418.45 | 283.46 | 1418.82 | 283.55 | 1421.3 | 284.51 |
| 1423.15 | 285.45 | 1423.95 | 285.89 | 1425.82 | 286.82 | 1429.13 | 288.56 | 1430.45 | 289.24 |
| 1431.13 | 289.69 | 1433.54 | 291.26 | 1434.33 | 291.83 | 1436.37 | 293.14 | 1437.11 | 293.64 |
| 1437.92 | 294.15 | 1439.34 | 295.14 | 1442.08 | 297.14 | 1443.43 | 298.1 | 1445.42 | 299.55 |
| 1447.52 | 301.04 | 1448.49 | 301.75 | 1450.23 | 302.99 | 1451.55 | 303.97 | 1452.21 | 304.48 |
| 1452.87 | 304.95 | 1454.31 | 305.71 | 1454.92 | 306 | 1456.77 | 306.92 | 1458.67 | 307.89 |
| 1460.05 | 308.55 | 1461.25 | 309.09 | 1463.43 | 310.05 | 1465.08 | 310.45 | 1467.78 | 311.06 |
| 1470.73 | 311.58 | 1473.55 | 312 | 1478.38 | 312.78 | 1478.89 | 312.88 | 1483.91 | 313.75 |
| 1490.57 | 313.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 472.7 | .04 | 1431.13 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 472.7 | 1431.13 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1040.729 Elevation=280.7737

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1309.49*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 305.24 | 2.08 | 305.05 | 6.64 | 304.55 | 9.99 | 304.23 | 11.27 | 304.13 |
| 15.04 | 303.82 | 16.81 | 303.6 | 22.26 | 303.1 | 24.66 | 302.86 | 26.15 | 302.7 |
| 27.5 | 302.58 | 32.4 | 301.98 | 32.67 | 301.97 | 35.15 | 301.96 | 36.77 | 301.85 |
| 37.22 | 301.8 | 39.86 | 301.58 | 40.02 | 301.56 | 42.89 | 301.33 | 45.23 | 301.11 |
| 45.53 | 301.11 | 47.52 | 301.26 | 48.85 | 301.29 | 49.88 | 301.25 | 50.44 | 301.16 |
| 53.7 | 301.11 | 55.33 | 301 | 59.92 | 300.68 | 62.64 | 300.5 | 63.52 | 300.41 |
| 64.11 | 300.42 | 67.77 | 300.1 | 69.04 | 300.02 | 74.02 | 299.77 | 76.45 | 299.62 |
| 77.87 | 299.54 | 79.03 | 299.46 | 83.72 | 299.11 | 85.82 | 298.96 | 89.98 | 298.64 |
| 92.13 | 298.43 | 93.86 | 298.32 | 97.53 | 297.99 | 100.73 | 297.82 | 111.13 | 297.11 |
| 118.04 | 296.68 | 118.74 | 296.63 | 125.14 | 296.22 | 130.39 | 295.87 | 130.99 | 295.81 |
| 132.95 | 295.68 | 139.76 | 295.21 | 140.26 | 295.19 | 142.08 | 295.06 | 147.5 | 294.83 |
| 150.22 | 294.73 | 152.33 | 294.59 | 154.17 | 294.43 | 155.75 | 294.25 | 158.09 | 294.13 |
| 161.75 | 293.84 | 163.15 | 293.69 | 185.22 | 292.36 | 193.1 | 291.9 | 198.78 | 291.59 |
| 200.98 | 291.42 | 204.72 | 291.12 | 212.01 | 290.53 | 216.49 | 290.24 | 220.41 | 290.01 |
| 223.74 | 289.83 | 235.78 | 289.24 | 236.94 | 289.19 | 248.11 | 288.8 | 250.23 | 288.65 |
| 252.43 | 288.51 | 262.68 | 287.97 | 271.42 | 287.52 | 273.31 | 287.42 | 280.24 | 286.87 |
| 286.47 | 286.48 | 286.98 | 286.44 | 287.87 | 286.41 | 291.67 | 286.24 | 301.86 | 285.79 |
| 310.97 | 285.15 | 311.98 | 285.09 | 314.11 | 285.06 | 319.21 | 284.92 | 319.88 | 284.88 |
| 323.99 | 284.69 | 328.78 | 284.48 | 335.53 | 284.07 | 345.7 | 283.47 | 345.83 | 283.46 |
| 355.52 | 283.01 | 360.67 | 282.94 | 370.04 | 282.6 | 370.78 | 282.56 | 376.43 | 282.19 |
| 379.37 | 282.01 | 385.76 | 281.6 | 387.49 | 281.54 | 397.17 | 281.17 | 409.17 | 280.68 |
| 419.33 | 280.05 | 420.94 | 279.96 | 425.09 | 279.75 | 426.73 | 279.59 | 427.64 | 279.46 |
| 432.98 | 278.84 | 434.25 | 278.84 | 435.18 | 278.94 | 437.45 | 278.88 | 442.89 | 278.63 |
| 444.7 | 278.54 | 447.76 | 278.43 | 450.23 | 278.63 | 450.88 | 278.77 | 452.35 | 278.96 |
| 459.42 | 279.75 | 463.99 | 280.05 | 468.5 | 280.22 | 468.68 | 280.22 | 472.64 | 279.94 |
| 475.3 | 279.69 | 476.41 | 279.55 | 479.46 | 279.31 | 480.6 | 279.2 | 482.24 | 278.98 |
| 484.63 | 278.69 | 485.4 | 278.62 | 491.66 | 278.2 | 494.24 | 278.04 | 494.4 | 278.04 |
| 499.94 | 277.69 | 500.1 | 277.69 | 503.81 | 277.54 | 504.39 | 277.57 | 505.59 | 277.57 |
| 508.04 | 277.53 | 512.97 | 277.46 | 515.73 | 277.4 | 518.51 | 277.44 | 519.52 | 277.5 |
| 520.28 | 277.66 | 522.15 | 277.65 | 524.87 | 277.6 | 525.23 | 277.57 | 526.37 | 277.39 |
| 527.8 | 277.19 | 528.42 | 277.15 | 530.05 | 277.12 | 535.1 | 277.26 | 539.59 | 277.35 |
| 541.01 | 277.35 | 542.73 | 277.37 | 543.79 | 277.4 | 545.74 | 277.39 | 546.97 | 277.36 |
| 549 | 277.26 | 552.85 | 277.03 | 555.5 | 276.89 | 556.24 | 276.86 | 558.18 | 276.81 |
| 558.97 | 276.75 | 559.9 | 276.82 | 561.38 | 276.88 | 563.9 | 277.13 | 564.27 | 277.16 |
| 567.56 | 277.32 | 567.82 | 277.34 | 569.54 | 277.3 | 572.11 | 277.17 | 572.61 | 277.17 |
| 573.62 | 277.13 | 574.07 | 277.08 | 576.11 | 277.01 | 578.84 | 277.01 | 581.25 | 276.99 |
| 582.81 | 277.07 | 584.61 | 277.2 | 586.86 | 277.27 | 590.87 | 277.42 | 598.48 | 277.7 |
| 600.66 | 277.7 | 605.98 | 277.72 | 607.04 | 277.67 | 609.52 | 277.59 | 617.88 | 277.47 |
| 622.37 | 277.47 | 627.35 | 277.38 | 629.13 | 277.45 | 637.81 | 277.72 | 638.88 | 277.75 |
| 640.4 | 277.87 | 641.5 | 277.92 | 643.03 | 277.9 | 646.83 | 277.79 | 649.62 | 277.76 |
| 649.76 | 277.75 | 652.86 | 277.66 | 656.22 | 277.61 | 660.04 | 277.74 | 668.33 | 277.99 |
| 670.9 | 278.07 | 674.25 | 278.16 | 684.37 | 278.46 | 685.23 | 278.48 | 689.53 | 278.61 |
| 691.21 | 278.61 | 699.15 | 278.62 | 701.96 | 278.5 | 702.17 | 278.5 | 703.65 | 278.42 |
| 704.45 | 278.4 | 705.13 | 278.36 | 709.61 | 278.13 | 711.16 | 278.07 | 715.55 | 278.12 |
| 717.26 | 278.15 | 717.94 | 278.14 | 719.54 | 278.15 | 720.6 | 278.18 | 725.15 | 278.18 |
| 726.89 | 278.28 | 731.65 | 278.39 | 735.26 | 278.42 | 738.88 | 278.32 | 743.76 | 278.25 |
| 744.1 | 278.25 | 746.05 | 278.19 | 746.93 | 278.19 | 748.76 | 278.22 | 749.39 | 278.24 |
| 752.82 | 278.28 | 754.49 | 278.34 | 757.71 | 278.43 | 759.51 | 278.46 | 759.87 | 278.48 |
| 761.41 | 278.5 | 763.2 | 278.5 | 763.45 | 278.49 | 767.37 | 278.48 | 770.79 | 278.46 |
| 771.24 | 278.47 | 776.99 | 278.45 | 779.32 | 278.41 | 789.82 | 278.36 | 795 | 278.34 |
| 796.02 | 278.34 | 806.68 | 278.29 | 809.22 | 278.2 | 809.84 | 278.15 | 813.4 | 278.07 |
| 815.71 | 278.13 | 816.14 | 278.13 | 819.56 | 278.2 | 825.37 | 278.35 | 826.76 | 278.4 |
| 832.9 | 278.59 | 835.23 | 278.67 | 839.63 | 278.67 | 843.62 | 278.66 | 846.13 | 278.66 |
| 859.47 | 278.67 | 860.46 | 278.61 | 861.37 | 278.58 | 866.68 | 278.37 | 871.78 | 278.37 |
| 872.97 | 278.38 | 875.13 | 278.42 | 878.68 | 278.54 | 881.05 | 278.67 | 883.25 | 278.94 |
| 883.65 | 278.93 | 886.98 | 279.26 | 889.16 | 279.18 | 890.27 | 279.08 | 895.84 | 279.12 |
| 903.24 | 279.16 | 905.67 | 279.18 | 909.66 | 279.26 | 910.85 | 279.29 | 913.96 | 279.35 |
| 915.73 | 279.35 | 916.26 | 279.3 | 918.09 | 279.28 | 918.89 | 279.25 | 923.07 | 279.31 |
| 924.58 | 279.34 | 930.82 | 279.42 | 931.22 | 279.43 | 938.19 | 279.53 | 941.97 | 279.6 |
| 944.11 | 279.62 | 950.56 | 279.6 | 952.68 | 279.59 | 953.66 | 279.57 | 977.29 | 279.59 |
| 980.17 | 279.6 | 989.57 | 279.6 | 990.84 | 279.59 | 991.05 | 279.61 | 999.09 | 279.6 |
| 1001.37 | 279.6 | 1006.21 | 279.54 | 1006.86 | 279.49 | 1009.41 | 279.42 | 1014.33 | 279.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1014.66 | 279.35 | 1015.87 | 279.35 | 1022.17 | 279.55 | 1023.6 | 279.58 | 1026.31 | 279.71 |
| 1026.86 | 279.73 | 1028.9 | 279.84 | 1034.21 | 280.14 | 1034.65 | 280.2 | 1035.55 | 280.22 |
| 1037.8 | 280.25 | 1041.02 | 280.16 | 1041.43 | 280.13 | 1042.65 | 279.96 | 1043.55 | 279.89 |
| 1045.57 | 279.71 | 1046.54 | 279.61 | 1053.68 | 278.9 | 1055.12 | 278.71 | 1072.68 | 278.75 |
| 1077.37 | 278.75 | 1077.47 | 278.77 | 1079.64 | 278.95 | 1083.02 | 279.17 | 1084.91 | 279.25 |
| 1086.64 | 279.27 | 1087.98 | 279.32 | 1089.64 | 279.33 | 1090.85 | 279.31 | 1093.92 | 279.28 |
| 1094.25 | 279.27 | 1097.03 | 279.24 | 1101.1 | 279.15 | 1102.34 | 279.06 | 1108.18 | 278.94 |
| 1111.71 | 278.85 | 1115.58 | 278.76 | 1118.78 | 278.65 | 1119.51 | 278.64 | 1121.63 | 278.68 |
| 1122.82 | 278.73 | 1124.25 | 278.84 | 1126.21 | 278.96 | 1129.37 | 279.22 | 1130.83 | 279.24 |
| 1132.31 | 279.19 | 1132.52 | 279.15 | 1133.85 | 279.13 | 1134.22 | 279.17 | 1136.84 | 279.18 |
| 1139.03 | 279.18 | 1139.33 | 279.17 | 1144.81 | 278.91 | 1145.9 | 278.9 | 1149.56 | 278.74 |
| 1150.05 | 278.73 | 1152.03 | 278.74 | 1156.15 | 278.77 | 1157.85 | 278.83 | 1163.72 | 279.06 |
| 1165.92 | 279.14 | 1170.7 | 279.17 | 1171.33 | 279.1 | 1172.95 | 279.08 | 1174.11 | 279.08 |
| 1175.61 | 279.11 | 1177.34 | 279.12 | 1178.82 | 279.18 | 1181.52 | 279.4 | 1182.76 | 279.45 |
| 1184.49 | 279.57 | 1186.36 | 279.68 | 1186.95 | 279.7 | 1189.86 | 279.68 | 1192.46 | 279.62 |
| 1195.93 | 279.53 | 1197.3 | 279.52 | 1203.29 | 279.61 | 1207.41 | 279.68 | 1209.05 | 279.65 |
| 1212.56 | 279.52 | 1214.13 | 279.48 | 1216.45 | 279.37 | 1217.01 | 279.38 | 1218.42 | 279.3 |
| 1224.14 | 279.18 | 1228.33 | 279.08 | 1232.96 | 279.12 | 1237.99 | 279.28 | 1238.25 | 279.31 |
| 1239.45 | 279.38 | 1241.01 | 279.4 | 1242.02 | 279.43 | 1242.61 | 279.48 | 1244.39 | 279.52 |
| 1244.75 | 279.54 | 1245.94 | 279.53 | 1247.81 | 279.43 | 1248.12 | 279.36 | 1249.03 | 279.31 |
| 1252.56 | 278.97 | 1253.18 | 278.93 | 1254.5 | 278.75 | 1256.41 | 278.71 | 1268.71 | 278.49 |
| 1270.64 | 278.43 | 1273.91 | 278.38 | 1274.23 | 278.37 | 1280.01 | 278.46 | 1281.74 | 278.48 |
| 1286.31 | 278.44 | 1289.16 | 278.51 | 1290.27 | 278.57 | 1290.73 | 278.63 | 1293.16 | 278.77 |
| 1294.29 | 278.86 | 1297.05 | 279 | 1297.74 | 279 | 1306.94 | 278.81 | 1308.18 | 278.78 |
| 1309.81 | 278.67 | 1314.9 | 278.29 | 1316.88 | 278.12 | 1317.35 | 278.02 | 1320.36 | 277.96 |
| 1321.34 | 277.98 | 1323.37 | 278.07 | 1324.5 | 278.09 | 1327.54 | 278.2 | 1331.54 | 278.27 |
| 1336.18 | 278.23 | 1341.45 | 278.27 | 1350.74 | 278.57 | 1351.35 | 278.58 | 1369.95 | 279.07 |
| 1370.25 | 279.08 | 1381.66 | 278.94 | 1382.47 | 278.89 | 1382.91 | 278.84 | 1390.12 | 278.91 |
| 1395.44 | 278.97 | 1397.18 | 278.98 | 1401.52 | 279.44 | 1408.03 | 280.02 | 1413.95 | 281 |
| 1419.75 | 282.18 | 1423.76 | 283.03 | 1425.94 | 283.87 | 1426.26 | 284.01 | 1428.13 | 284.97 |
| 1428.94 | 285.42 | 1430.83 | 286.37 | 1433.68 | 287.86 | 1435.51 | 288.83 | 1436.19 | 289.29 |
| 1438.43 | 290.77 | 1439.36 | 291.44 | 1441.37 | 292.76 | 1442.1 | 293.26 | 1442.91 | 293.77 |
| 1444.3 | 294.76 | 1449.6 | 298.66 | 1450.31 | 299.19 | 1451.63 | 300.15 | 1452.39 | 300.69 |
| 1453.34 | 301.41 | 1455.06 | 302.66 | 1455.82 | 303.25 | 1456.37 | 303.65 | 1457.02 | 304.16 |
| 1457.67 | 304.64 | 1459.09 | 305.38 | 1459.7 | 305.66 | 1461.52 | 306.57 | 1463.4 | 307.53 |
| 1464.23 | 307.93 | 1465.95 | 308.73 | 1468.1 | 309.7 | 1469.87 | 310.13 | 1472.4 | 310.71 |
| 1475.32 | 311.22 | 1478.11 | 311.67 | 1482.87 | 312.48 | 1483.37 | 312.58 | 1488.34 | 313.5 |
| 1494.92 | 313.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 475.3 | .04 | 1436.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 475.3 | 1436.19 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1040.493 Elevation=280.4725

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1289.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 304.99 | 2.09 | 304.8 | 5.69 | 304.39 | 6.67 | 304.27 | 10.21 | 303.93 |
| 15.12 | 303.53 | 16.9 | 303.3 | 22.38 | 302.79 | 26.3 | 302.4 | 27.65 | 302.29 |
| 32.57 | 301.69 | 32.85 | 301.67 | 35.35 | 301.67 | 36.97 | 301.57 | 37.43 | 301.52 |
| 40.08 | 301.3 | 40.24 | 301.28 | 43.13 | 301.05 | 45.48 | 300.82 | 45.78 | 300.83 |
| 47.78 | 300.99 | 49.12 | 301.03 | 50.16 | 300.99 | 50.71 | 300.9 | 54 | 300.86 |
| 55.63 | 300.76 | 60.25 | 300.43 | 62.99 | 300.25 | 63.87 | 300.16 | 64.72 | 300.15 |
| 67.53 | 299.93 | 69.42 | 299.8 | 70.88 | 299.72 | 76.1 | 299.41 | 76.87 | 299.35 |
| 78.29 | 299.27 | 84.18 | 298.81 | 85.3 | 298.73 | 90.48 | 298.32 | 92.64 | 298.1 |
| 94.38 | 297.98 | 98.07 | 297.64 | 101.73 | 297.43 | 105.57 | 297.15 | 111.74 | 296.72 |
| 118.69 | 296.26 | 119.39 | 296.22 | 124.88 | 295.86 | 125.82 | 295.79 | 127.14 | 295.71 |
| 129.13 | 295.57 | 131.11 | 295.44 | 131.71 | 295.39 | 140.52 | 294.81 | 142.86 | 294.67 |
| 147.43 | 294.49 | 151.05 | 294.36 | 153.17 | 294.23 | 154.72 | 294.1 | 156.61 | 293.9 |
| 158.95 | 293.78 | 162.63 | 293.5 | 164.05 | 293.35 | 186.23 | 292.06 | 194.16 | 291.61 |
| 199.87 | 291.29 | 201.31 | 291.19 | 205.84 | 290.83 | 213.17 | 290.26 | 219.23 | 289.88 |
| 224.9 | 289.55 | 224.96 | 289.55 | 237.07 | 288.96 | 238.24 | 288.9 | 249.47 | 288.53 |
| 252.71 | 288.32 | 253.82 | 288.26 | 264.12 | 287.74 | 272.9 | 287.31 | 274.81 | 287.21 |
| 281.77 | 286.65 | 288.04 | 286.25 | 289.44 | 286.18 | 303.52 | 285.59 | 312.68 | 284.94 |
| 313.69 | 284.88 | 315.83 | 284.86 | 320.96 | 284.72 | 325.76 | 284.49 | 330.58 | 284.28 |
| 337.37 | 283.86 | 347.6 | 283.24 | 347.73 | 283.23 | 357.46 | 282.77 | 362.64 | 282.7 |
| 372.81 | 282.31 | 378.49 | 281.92 | 380.27 | 281.81 | 381.83 | 281.7 | 387.88 | 281.3 |
| 402.33 | 280.72 | 411.41 | 280.34 | 418.71 | 279.88 | 420.21 | 279.78 | 423.24 | 279.59 |
| 427.42 | 279.38 | 429.06 | 279.2 | 429.98 | 279.07 | 435.35 | 278.42 | 436.63 | 278.42 |
| 437.21 | 278.51 | 437.57 | 278.53 | 439.84 | 278.46 | 444.88 | 278.22 | 447.13 | 278.1 |
| 450.21 | 277.99 | 452.69 | 278.2 | 453.35 | 278.35 | 454.83 | 278.54 | 457.34 | 278.83 |
| 461.93 | 279.38 | 466.34 | 279.68 | 471.06 | 279.89 | 471.24 | 279.89 | 475.23 | 279.61 |
| 477.91 | 279.35 | 478.92 | 279.22 | 481.48 | 278.96 | 482.87 | 278.8 | 484.59 | 278.57 |
| 486.48 | 278.34 | 487.19 | 278.28 | 492.93 | 277.87 | 495.45 | 277.7 | 500.68 | 277.34 |
| 504.09 | 277.19 | 504.63 | 277.23 | 506.54 | 277.22 | 512.51 | 277.1 | 514.78 | 277.05 |
| 516.7 | 277.06 | 517.6 | 277.05 | 518.53 | 277.07 | 519.22 | 277.14 | 520.95 | 277.12 |
| 523.45 | 277.07 | 523.77 | 277.05 | 525.51 | 276.88 | 526.13 | 276.83 | 528.2 | 276.77 |
| 529.59 | 276.81 | 532.84 | 276.92 | 534.11 | 276.94 | 536.96 | 277.01 | 538.27 | 277 |
| 539.85 | 277.02 | 540.83 | 277.06 | 542.61 | 277.04 | 543.74 | 277.01 | 545.61 | 276.9 |
| 549.14 | 276.68 | 551.58 | 276.54 | 554.05 | 276.45 | 554.77 | 276.4 | 556.1 | 276.47 |
| 557.53 | 276.56 | 559.75 | 276.79 | 560.12 | 276.82 | 563.45 | 276.98 | 563.71 | 277 |
| 565.36 | 276.96 | 566.67 | 276.88 | 568.05 | 276.81 | 568.56 | 276.81 | 569.58 | 276.77 |
| 570.03 | 276.71 | 572.09 | 276.64 | 574.85 | 276.64 | 577.29 | 276.62 | 578.86 | 276.69 |
| 580.68 | 276.83 | 581.63 | 276.86 | 586.37 | 277.04 | 587.01 | 277.06 | 594.69 | 277.35 |
| 596.9 | 277.35 | 602.27 | 277.36 | 603.34 | 277.3 | 605.86 | 277.22 | 614.3 | 277.08 |
| 618.84 | 277.08 | 623.87 | 276.99 | 625.67 | 277.06 | 634.44 | 277.34 | 635.53 | 277.38 |
| 637.06 | 277.49 | 638.17 | 277.55 | 639 | 277.54 | 643.55 | 277.42 | 646.52 | 277.38 |
| 649.65 | 277.28 | 653.04 | 277.23 | 654.34 | 277.27 | 656.9 | 277.37 | 664.09 | 277.6 |
| 665.29 | 277.63 | 667.88 | 277.72 | 669.39 | 277.76 | 682.36 | 278.17 | 686.71 | 278.31 |
| 696.43 | 278.31 | 699.27 | 278.18 | 699.48 | 278.18 | 700.97 | 278.09 | 701.78 | 278.08 |
| 703.46 | 277.98 | 707 | 277.78 | 708.56 | 277.72 | 711.8 | 277.76 | 713.01 | 277.76 |
| 714.73 | 277.79 | 717.04 | 277.8 | 718.1 | 277.82 | 722.71 | 277.81 | 723.22 | 277.83 |
| 724.47 | 277.92 | 729.28 | 278.01 | 732.92 | 278.04 | 736.58 | 277.93 | 741.51 | 277.86 |
| 744.72 | 277.8 | 747.2 | 277.86 | 749.48 | 277.89 | 753.82 | 278 | 755.04 | 278.04 |
| 757.42 | 278.09 | 758.49 | 278.13 | 761.15 | 278.14 | 761.77 | 278.12 | 768.82 | 278.1 |
| 775.09 | 278.09 | 777.44 | 278.05 | 793.3 | 277.99 | 805.09 | 277.94 | 807.66 | 277.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 808.29 | 277.79 | 811.88 | 277.72 | 814.22 | 277.78 | 816.32 | 277.81 | 818.11 | 277.85 |
| 823.99 | 278 | 825.38 | 278.06 | 831.59 | 278.26 | 833.94 | 278.33 | 858.45 | 278.33 |
| 859.31 | 278.28 | 862.43 | 278.16 | 863.71 | 278.12 | 865.73 | 278.04 | 868.92 | 278.03 |
| 872.08 | 278.04 | 874.27 | 278.08 | 877.85 | 278.2 | 880.25 | 278.34 | 881.17 | 278.44 |
| 882.48 | 278.62 | 882.88 | 278.6 | 886.25 | 278.94 | 887.95 | 278.88 | 889.57 | 278.75 |
| 895.2 | 278.79 | 902.68 | 278.83 | 904.37 | 278.83 | 905.13 | 278.85 | 909.17 | 278.93 |
| 910.37 | 278.96 | 913.51 | 279.02 | 915.29 | 279.02 | 915.84 | 278.97 | 917.5 | 278.95 |
| 918.49 | 278.92 | 922.71 | 278.98 | 924.24 | 279.01 | 930.55 | 279.1 | 930.95 | 279.11 |
| 941.82 | 279.28 | 943.97 | 279.31 | 950.49 | 279.3 | 953.24 | 279.29 | 953.63 | 279.28 |
| 977.5 | 279.29 | 980.41 | 279.3 | 989.91 | 279.31 | 1000.66 | 279.31 | 1006.74 | 279.24 |
| 1007.39 | 279.19 | 1008.91 | 279.15 | 1009.96 | 279.11 | 1013.99 | 279.09 | 1014.94 | 279.08 |
| 1015.27 | 279.05 | 1016.5 | 279.05 | 1022.86 | 279.26 | 1024.3 | 279.29 | 1027.05 | 279.43 |
| 1027.6 | 279.45 | 1029.66 | 279.57 | 1035.03 | 279.87 | 1035.48 | 279.94 | 1036.39 | 279.96 |
| 1038.65 | 279.99 | 1041.91 | 279.89 | 1042.67 | 279.81 | 1043.55 | 279.68 | 1044.46 | 279.61 |
| 1046.51 | 279.42 | 1047.49 | 279.3 | 1054.4 | 278.59 | 1056.16 | 278.35 | 1073.91 | 278.37 |
| 1074.39 | 278.38 | 1078.65 | 278.38 | 1080.94 | 278.59 | 1084.25 | 278.81 | 1086.27 | 278.89 |
| 1088.01 | 278.91 | 1089.36 | 278.97 | 1091.05 | 278.98 | 1092.27 | 278.96 | 1095.37 | 278.93 |
| 1098.51 | 278.88 | 1102.63 | 278.79 | 1103.56 | 278.73 | 1103.88 | 278.69 | 1107.71 | 278.61 |
| 1111.82 | 278.51 | 1113.35 | 278.48 | 1117.26 | 278.38 | 1120.49 | 278.26 | 1121.23 | 278.25 |
| 1123.37 | 278.3 | 1124.33 | 278.34 | 1126.02 | 278.48 | 1128.21 | 278.62 | 1131.2 | 278.88 |
| 1131.65 | 278.9 | 1133.34 | 278.89 | 1134.12 | 278.86 | 1134.37 | 278.81 | 1135.72 | 278.8 |
| 1136.1 | 278.83 | 1139.83 | 278.84 | 1140.95 | 278.85 | 1141.26 | 278.83 | 1146.79 | 278.56 |
| 1147.9 | 278.54 | 1151.6 | 278.38 | 1151.9 | 278.36 | 1154.09 | 278.37 | 1158.25 | 278.38 |
| 1159.97 | 278.45 | 1168.13 | 278.75 | 1172.96 | 278.78 | 1173.59 | 278.72 | 1175.24 | 278.69 |
| 1177.28 | 278.71 | 1177.92 | 278.73 | 1179.67 | 278.74 | 1181.16 | 278.8 | 1182.22 | 278.9 |
| 1184.48 | 279.07 | 1185.14 | 279.08 | 1186.89 | 279.22 | 1188.78 | 279.33 | 1189.38 | 279.35 |
| 1192.32 | 279.34 | 1192.83 | 279.32 | 1194.95 | 279.28 | 1198.45 | 279.18 | 1199.84 | 279.18 |
| 1205.89 | 279.27 | 1210.06 | 279.34 | 1211.72 | 279.31 | 1214.72 | 279.19 | 1216.85 | 279.12 |
| 1219.2 | 279 | 1219.76 | 279.01 | 1221.19 | 278.94 | 1225.87 | 278.83 | 1231.2 | 278.7 |
| 1235.87 | 278.75 | 1240.96 | 278.92 | 1241.23 | 278.95 | 1242.43 | 279.02 | 1243.36 | 279.03 |
| 1245.04 | 279.08 | 1245.63 | 279.13 | 1247.79 | 279.19 | 1249 | 279.18 | 1250.89 | 279.08 |
| 1251.2 | 279.01 | 1252.11 | 278.96 | 1254.98 | 278.68 | 1255.69 | 278.6 | 1256.31 | 278.57 |
| 1257.65 | 278.37 | 1259.58 | 278.34 | 1272.5 | 278.09 | 1273.95 | 278.05 | 1277.25 | 277.98 |
| 1278.95 | 277.98 | 1279.02 | 278 | 1285.18 | 278.08 | 1289.79 | 278.04 | 1292.67 | 278.11 |
| 1292.93 | 278.11 | 1293.8 | 278.18 | 1294.28 | 278.24 | 1296.72 | 278.39 | 1297.85 | 278.47 |
| 1300.65 | 278.62 | 1301.34 | 278.62 | 1310.64 | 278.43 | 1311.89 | 278.39 | 1313.54 | 278.28 |
| 1316.13 | 278.09 | 1318.69 | 277.89 | 1320.24 | 277.76 | 1321 | 277.66 | 1321.16 | 277.61 |
| 1324.2 | 277.55 | 1325.19 | 277.57 | 1327.24 | 277.67 | 1328.6 | 277.69 | 1331.45 | 277.79 |
| 1335.5 | 277.86 | 1340.19 | 277.82 | 1345.52 | 277.86 | 1354.9 | 278.16 | 1355.52 | 278.17 |
| 1374.32 | 278.68 | 1374.61 | 278.69 | 1386.15 | 278.53 | 1387.41 | 278.42 | 1394.69 | 278.45 |
| 1401.83 | 278.49 | 1403.71 | 278.68 | 1406.22 | 278.95 | 1411.69 | 279.41 | 1412.79 | 279.51 |
| 1418.78 | 280.49 | 1424.64 | 281.68 | 1428.31 | 282.43 | 1428.69 | 282.52 | 1431.22 | 283.5 |
| 1433.11 | 284.48 | 1433.92 | 284.94 | 1435.83 | 285.91 | 1437.97 | 287.05 | 1438.68 | 287.41 |
| 1439.22 | 287.71 | 1440.56 | 288.41 | 1441.26 | 288.89 | 1443.21 | 290.21 | 1444.38 | 291.06 |
| 1444.99 | 291.46 | 1447.1 | 292.88 | 1447.89 | 293.38 | 1449.27 | 294.38 | 1454.5 | 298.3 |
| 1455.2 | 298.84 | 1455.67 | 299.17 | 1456.92 | 300.1 | 1458.74 | 301.48 | 1459.9 | 302.33 |
| 1460.73 | 302.99 | 1461.18 | 303.32 | 1461.83 | 303.84 | 1462.47 | 304.32 | 1463.88 | 305.06 |
| 1464.47 | 305.33 | 1466.28 | 306.22 | 1467.6 | 306.9 | 1469.47 | 307.82 | 1470.65 | 308.36 |
| 1471.62 | 308.82 | 1472.78 | 309.35 | 1474.39 | 309.74 | 1477.02 | 310.35 | 1479.17 | 310.74 |
| 1481.61 | 311.16 | 1482.66 | 311.33 | 1487.37 | 312.19 | 1487.86 | 312.29 | 1492.76 | 313.25 |
| 1499.26 | 313.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 477.91 | .04 | 1441.26 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 477.91 | 1441.26 | 17.76 | 19.61 | 21.2 | .1 | .3 |

Right Levee Station=1040.256 Elevation=280.1712

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1270.27

INPUT
Description:
Station Elevation Data num= 486

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 304.752.099976 | 304.556.709961 | | 30410.09998 | 303.6615.19995 | 303.23 | | | |
| 16.98999 | 30326.43994 | 302.127.79993 | | 302 | 32.75 | 301.3933.03003 | 301.38 | | |
| 35.54004 | 301.3935.95996 | 301.3737.42004 | | 301.27 | 37.63 | 301.2440.29993 | 301.02 | | |
| 40.45996 | 30143.35999 | 300.77 | 45.37 | 300.5745.72998 | 300.5446.03003 | 300.55 | | | |
| 48.04004 | 300.7249.39001 | 300.7750.42993 | | 300.7350.98999 | 300.6454.29004 | 300.61 | | | |
| 54.58997 | 300.663.32996 | 30064.21997 | | 299.964.80994 | 299.9176.51001 | 299.15 | | | |
| 77.14001 | 299.178.71997 | 29990.96997 | | 29893.14001 | 297.7794.89001 | 297.64 | | | |
| 98.59998 | 297.28 | 101.83 | 297.09 | 112.35 | 296.32131.8199 | 295.01132.4299 | 294.96 | | |
| 141.29 | 294.41141.7999 | 294.39 | 142.41 | 294.34 | 143.64 | 294.27 | 151.87 | 294 | |
| 154 | 293.87 | 155.39 | 293.75155.5599 | 293.74 | 157.46 | 293.54159.8199 | 293.43 | | |
| 163.52 | 293.15164.9399 | 293 | 200.96 | 291 | 214.08 | 290226.1899 | 289.27 | | |
| 239.54 | 288.61 | 250.83 | 288.27 | 254.09 | 288.06 | 255.2 | 288 | 276.38 | 287 |
| 283.26 | 286.43 | 290.12 | 286 | 305.17 | 285.38 | 314.38 | 284.73 | 315.4 | 284.67 |
| 317.5499 | 284.65 | 322.84 | 284.52 | 323.38 | 284.49 | 332.08 | 284.09 | 332.38 | 284.08 |
| 349.49 | 283.01 | 349.62 | 283 | 359.41 | 282.53364.3199 | 282.46 | 364.62 | 282.46 | |
| 374.09 | 282.09 | 374.84 | 282.05 | 389.99 | 281 | 413.65 | 280425.5499 | 279.22 | |
| 429.75 | 279 | 430.36 | 278.94 | 431.4 | 278.82432.3199 | 278.68 | 437.72 | 278 | |
| 439.01 | 278 | 439.59 | 278.09 | 439.95 | 278.11 | 442.24 | 278.04 | 448.92 | 277.71 |
| 449.5699 | 277.67450.3099 | 277.64 | 450.85 | 277.61 | 452.66 | 277.55 | 455.16 | 277.77 | |
| 455.27 | 277.81455.8199 | 277.92457.3099 | | 278.12 | 464.45 | 279469.0699 | 279.33 | | |
| 473.63 | 279.55473.8099 | 279.55477.8199 | | 279.27 | 480.51 | 279.01 | 480.62 | 279 | |
| 486.3199 | 278.24488.3199 | 278 | 501.14 | 277 | 504.38 | 276.85 | 504.87 | 276.89 | |
| 505.72 | 276.89 | 506.61 | 276.88 | 506.89 | 276.87 | 513.45 | 276.71 | 515.87 | 276.68 |
| 526.35 | 276.43 | 526.95 | 276.44 | 531.11 | 276.59 | 534.34 | 276.66 | 535.53 | 276.65 |
| 536.97 | 276.67 | 537.59 | 276.69 | 537.86 | 276.71 | 538.4 | 276.71 | 539.49 | 276.69 |
| 540.52 | 276.66 | 547.66 | 276.18 | 548.28 | 276.15 | 549.91 | 276.09550.5699 | 276.04 | |
| 550.99 | 276.06 | 551.52 | 276.11 | 551.91 | 276.12 | 552.84 | 276.18 | 553.03 | 276.18 |
| 553.36 | 276.21 | 555.6 | 276.45 | 555.98 | 276.48 | 559.34 | 276.65 | 559.71 | 276.66 |
| 560.1799 | 276.65 | 561.27 | 276.61 | 563.99 | 276.45 | 564.5 | 276.45 | 565.53 | 276.41 |
| 565.99 | 276.35 | 568.07 | 276.27 | 570 | 276.27 | 570.72 | 276.28 | 570.86 | 276.27 |
| 573.32 | 276.24 | 574.91 | 276.32 | 575.62 | 276.38 | 576.75 | 276.46 | 578.3 | 276.52 |
| 578.53 | 276.52 | 590.91 | 277 | 598.57 | 277 | 599.65 | 276.94 | 602.19 | 276.85 |
| 611.13 | 276.69 | 615.31 | 276.69 | 620.39 | 276.6 | 620.81 | 276.61 | 622.21 | 276.67 |
| 632.07 | 277 | 632.17 | 277 | 633.72 | 277.12 | 634.84 | 277.18 | 635.68 | 277.17 |
| 640.28 | 277.04 | 643.13 | 277 | 643.28 | 277 | 646.44 | 276.9 | 649.87 | 276.85 |
| 651.18 | 276.89 | 653.64 | 277 | 653.77 | 277 | 683.89 | 278 | 693.71 | 278 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 696.58 | 277.86 | 696.79 | 277.86 | 698.3 | 277.77 | 699.12 | 277.75 | 704.39 | 277.44 |
| 705.97 | 277.37 | 709.24 | 277.41 | 710.46 | 277.41 | 712.2 | 277.44 | 712.9 | 277.43 |
| 713.5 | 277.44 | 714.53 | 277.44 | 715.61 | 277.46 | 720.26 | 277.44 | 720.91 | 277.47 |
| 722.04 | 277.55 | 726.9 | 277.64 | 728.93 | 277.65 | 729.44 | 277.66 | 729.93 | 277.65 |
| 730.59 | 277.66 | 734.28 | 277.55 | 739.26 | 277.48 | 739.61 | 277.48 | 741.6 | 277.42 |
| 742.5 | 277.42 | 743.14 | 277.43 | 745.01 | 277.48 | 748.51 | 277.53 | 748.66 | 277.54 |
| 753.51 | 277.68 | 755.34 | 277.72 | 755.71 | 277.74 | 756.42 | 277.76 | 757.57 | 277.77 |
| 759.11 | 277.77 | 759.37 | 277.76 | 766.86 | 277.73 | 767.32 | 277.74 | 773.19 | 277.73 |
| 775.57 | 277.69 | 802.59 | 277.6 | 803.51 | 277.59 | 806.1 | 277.5 | 806.35 | 277.46 |
| 806.74 | 277.44 | 808.67 | 277.4 | 810.37 | 277.36 | 812.73 | 277.43 | 813.17 | 277.43 |
| 814.53 | 277.46 | 814.85 | 277.46 | 822.6 | 277.66 | 824.01 | 277.72 | 832.66 | 278 |
| 857.42 | 278 | 858.43 | 277.94 | 862.74 | 277.78 | 863.58 | 277.74 | 864.78 | 277.7 |
| 871.2 | 277.7 | 873.41 | 277.74 | 877.03 | 277.86 | 879.45 | 278 | 880.38 | 278.11 |
| 881.7 | 278.29 | 882.11 | 278.27 | 885.51 | 278.62 | 887.23 | 278.56 | 887.73 | 278.53 |
| 888.87 | 278.42 | 903.82 | 278.5 | 913.06 | 278.69 | 914.86 | 278.69 | 915.41 | 278.64 |
| 917.27 | 278.61 | 917.75 | 278.58 | 918.09 | 278.58 | 943.84 | 279 | 952.59 | 279 |
| 953.6 | 278.99 | 990.26 | 279.01 | 990.75 | 279 | 991.56 | 279 | 991.77 | 279.02 |
| 1002.31 | 279.01 | 1002.87 | 279 | 1007.26 | 278.94 | 1007.67 | 278.92 | 1007.92 | 278.89 |
| 1010.52 | 278.81 | 1014.85 | 278.79 | 1015.55 | 278.78 | 1015.88 | 278.75 | 1017.12 | 278.75 |
| 1023.55 | 278.97 | 1025.01 | 279 | 1027.78 | 279.15 | 1028.34 | 279.17 | 1035.85 | 279.61 |
| 1036.3 | 279.68 | 1036.93 | 279.71 | 1037.22 | 279.7 | 1039.23 | 279.72 | 1039.51 | 279.73 |
| 1042.8 | 279.62 | 1043.22 | 279.58 | 1044.46 | 279.4 | 1045.23 | 279.32 | 1045.38 | 279.32 |
| 1047.45 | 279.12 | 1047.56 | 279.12 | 1048.44 | 279 | 1055.42 | 278.25 | 1055.73 | 278.21 |
| 1057.2 | 278 | 1079.92 | 278 | 1080.02 | 278.02 | 1082.24 | 278.22 | 1085.58 | 278.45 |
| 1085.69 | 278.46 | 1087.62 | 278.54 | 1089.38 | 278.56 | 1090.75 | 278.62 | 1092.23 | 278.62 |
| 1092.45 | 278.63 | 1096.82 | 278.58 | 1097.15 | 278.57 | 1099.99 | 278.53 | 1104.15 | 278.43 |
| 1105.09 | 278.37 | 1105.42 | 278.33 | 1118.94 | 278 | 1122.2 | 277.88 | 1122.95 | 277.87 |
| 1125.11 | 277.92 | 1126.22 | 277.97 | 1127.79 | 278.11 | 1129.79 | 278.25 | 1133.02 | 278.54 |
| 1133.48 | 278.56 | 1134.51 | 278.57 | 1135.44 | 278.55 | 1136.02 | 278.52 | 1136.23 | 278.48 |
| 1136.59 | 278.47 | 1137.59 | 278.46 | 1137.89 | 278.47 | 1137.97 | 278.5 | 1142.88 | 278.51 |
| 1143.19 | 278.49 | 1148.78 | 278.21 | 1149.16 | 278.21 | 1149.9 | 278.19 | 1153.94 | 278 |
| 1160.36 | 278 | 1170.34 | 278.37 | 1175.22 | 278.4 | 1175.47 | 278.35 | 1175.86 | 278.33 |
| 1177.52 | 278.3 | 1178.7 | 278.31 | 1178.98 | 278.32 | 1179.58 | 278.32 | 1180.23 | 278.34 |
| 1181.3 | 278.34 | 1182 | 278.35 | 1183.51 | 278.42 | 1183.91 | 278.45 | 1184.58 | 278.52 |
| 1186.27 | 278.66 | 1186.86 | 278.7 | 1187.53 | 278.72 | 1189.3 | 278.86 | 1191.21 | 278.98 |
| 1191.81 | 279 | 1194.78 | 278.99 | 1197.26 | 278.93 | 1197.44 | 278.93 | 1200.98 | 278.83 |
| 1202.38 | 278.83 | 1212.71 | 279 | 1213.93 | 278.97 | 1214.38 | 278.97 | 1219.28 | 278.77 |
| 1219.57 | 278.77 | 1221.94 | 278.64 | 1222.51 | 278.65 | 1223.95 | 278.57 | 1234.07 | 278.33 |
| 1234.53 | 278.33 | 1238.79 | 278.38 | 1243.93 | 278.56 | 1244.2 | 278.59 | 1245.42 | 278.66 |
| 1247.01 | 278.69 | 1248.05 | 278.73 | 1248.65 | 278.78 | 1249.9 | 278.82 | 1250.47 | 278.83 |
| 1250.83 | 278.85 | 1251.64 | 278.85 | 1252.05 | 278.84 | 1253.33 | 278.78 | 1253.96 | 278.74 |
| 1254.28 | 278.66 | 1255.2 | 278.61 | 1258.1 | 278.32 | 1258.81 | 278.24 | 1259.44 | 278.2 |
| 1260.79 | 278 | 1275.8 | 277.71 | 1277.27 | 277.66 | 1280.72 | 277.59 | 1282.32 | 277.59 |
| 1282.39 | 277.61 | 1286.84 | 277.67 | 1287.24 | 277.68 | 1288.61 | 277.69 | 1293.27 | 277.64 |
| 1296.3 | 277.71 | 1296.44 | 277.71 | 1297.32 | 277.78 | 1297.79 | 277.84 | 1300.27 | 278 |
| 1301.42 | 278.09 | 1304.24 | 278.24 | 1304.94 | 278.24 | 1314.34 | 278.04 | 1315.6 | 278 |
| 1316.39 | 277.94 | 1316.78 | 277.93 | 1322.47 | 277.49 | 1324.04 | 277.35 | 1324.49 | 277.3 |
| 1324.81 | 277.25 | 1324.97 | 277.2 | 1328.04 | 277.14 | 1329.04 | 277.16 | 1331.11 | 277.26 |
| 1332.49 | 277.29 | 1335.37 | 277.39 | 1339.46 | 277.46 | 1344.2 | 277.41 | 1349.58 | 277.45 |
| 1359.06 | 277.76 | 1359.69 | 277.77 | 1378.98 | 278.29 | 1390.64 | 278.12 | 1391.46 | 278.05 |
| 1391.91 | 278 | 1406.48 | 278 | 1410.92 | 278.45 | 1417.56 | 279 | 1423.61 | 279.98 |
| 1433.24 | 281.92 | 1433.62 | 282 | 1435.85 | 282.86 | 1436.18 | 283 | 1436.4 | 283.12 |
| 1438.09 | 284 | 1438.91 | 284.47 | 1440.84 | 285.45 | 1443 | 286.61 | 1443.75 | 287 |
| 1444.26 | 287.28 | 1445.62 | 288 | 1446.32 | 288.49 | 1448.25 | 289.82 | 1448.5 | 290 |
| 1449.41 | 290.68 | 1449.9 | 291 | 1451.37 | 292 | 1452.12 | 292.52 | 1452.87 | 293 |
| 1454.23 | 294 | 1457.94 | 296.82 | 1458.18 | 297 | 1459.4 | 297.94 | 1459.49 | 298 |
| 1460.09 | 298.48 | 1460.56 | 298.82 | 1461.38 | 299.45 | 1462.12 | 300 | 1463.05 | 300.73 |
| 1464.73 | 302 | 1465.55 | 302.66 | 1466 | 303 | 1466.64 | 303.52 | 1467.27 | 304 |
| 1468.66 | 304.73 | 1469.25 | 305 | 1471.03 | 305.87 | 1472.86 | 306.8 | 1473.29 | 307 |
| 1474.19 | 307.45 | 1475.35 | 308 | 1477.08 | 308.83 | 1477.45 | 309 | 1481.64 | 310 |
| 1486.17 | 310.82 | 1487.21 | 311 | 1491.86 | 311.89 | 1492.35 | 312 | 1497.19 | 313 |
| 1503.61 | 313 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 480.51 | .04 | 1446.32 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

480.51 1446.32 21.54 19.33 20.13 .1 .3

Right Levee Station= 1040.02 Elevation= 279.87

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1250.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 303.9 | 2.07 | 303.71 | 6.62 | 303.17 | 9.96 | 302.83 | 14.98 | 302.41 |
| 16.75 | 302.18 | 26.07 | 301.29 | 27.41 | 301.2 | 27.92 | 301.13 | 32.29 | 300.6 |
| 32.56 | 300.59 | 35.04 | 300.59 | 36.89 | 300.47 | 37.1 | 300.44 | 39.73 | 300.23 |
| 40.44 | 300.16 | 42.75 | 299.98 | 44.73 | 299.78 | 45.38 | 299.76 | 47.36 | 299.93 |
| 48.69 | 299.97 | 49.72 | 299.93 | 50.27 | 299.85 | 53.82 | 299.8 | 62.43 | 299.22 |
| 63.31 | 299.12 | 64.03 | 299.12 | 75.43 | 298.38 | 76.05 | 298.33 | 77.61 | 298.24 |
| 89.68 | 297.26 | 91.82 | 297.04 | 93.55 | 296.91 | 97.21 | 296.56 | 100.39 | 296.37 |
| 109.56 | 295.71 | 110.76 | 295.62 | 130.56 | 294.31 | 139.29 | 293.77 | 139.79 | 293.76 |
| 141.61 | 293.64 | 147.7 | 293.45 | 149.72 | 293.38 | 151.27 | 293.29 | 153.36 | 293.13 |
| 155.23 | 292.93 | 157.56 | 292.83 | 161.21 | 292.55 | 162.61 | 292.41 | 163.09 | 292.38 |
| 176.11 | 291.65 | 198.12 | 290.44 | 211.05 | 289.47 | 217.08 | 289.11 | 222.99 | 288.75 |
| 236.15 | 288.1 | 247.28 | 287.76 | 250.5 | 287.56 | 251.59 | 287.5 | 261.16 | 287.05 |
| 261.9 | 287.02 | 272.47 | 286.52 | 279.25 | 285.96 | 286.02 | 285.54 | 300.85 | 284.91 |
| 305.19 | 284.61 | 309.93 | 284.27 | 310.94 | 284.21 | 313.06 | 284.19 | 318.27 | 284.06 |
| 323.91 | 283.79 | 327.38 | 283.63 | 340.13 | 282.85 | 345.35 | 282.52 | 348.91 | 282.35 |
| 354.33 | 282.08 | 359.46 | 282.01 | 368.8 | 281.64 | 369.54 | 281.6 | 371.92 | 281.44 |
| 384.47 | 280.57 | 398.78 | 279.97 | 402.45 | 279.83 | 407.8 | 279.61 | 411.04 | 279.4 |
| 419.69 | 278.83 | 423.51 | 278.62 | 424.27 | 278.56 | 425.3 | 278.44 | 426.21 | 278.31 |
| 430.84 | 277.74 | 431.53 | 277.65 | 432.8 | 277.65 | 433.73 | 277.76 | 435.99 | 277.69 |
| 437.54 | 277.61 | 442.57 | 277.37 | 444.2 | 277.28 | 446.26 | 277.21 | 448.72 | 277.42 |
| 449.37 | 277.57 | 450.84 | 277.76 | 457.88 | 278.6 | 462.44 | 278.92 | 467.11 | 279.14 |
| 471.06 | 278.87 | 473.71 | 278.62 | 475.88 | 278.38 | 480.19 | 277.93 | 482.41 | 277.73 |
| 484.18 | 277.63 | 486.74 | 277.52 | 489.46 | 277.33 | 490.07 | 277.3 | 492.76 | 277.13 |
| 495.73 | 276.99 | 496.64 | 276.96 | 497.82 | 276.97 | 498.69 | 277 | 500.3 | 276.95 |
| 500.85 | 276.99 | 502.84 | 276.99 | 505.79 | 276.89 | 508.05 | 276.85 | 508.81 | 276.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 510.41 | 276.71 | 513.1 | 276.58 | 514.28 | 276.51 | 516.54 | 276.43 | 521 | 276.34 |
| 523.06 | 276.33 | 524.82 | 276.3 | 526.77 | 276.34 | 527.05 | 276.36 | 529.72 | 276.42 |
| 531.98 | 276.41 | 533.67 | 276.43 | 536.6 | 276.42 | 537.6 | 276.46 | 538.55 | 276.47 |
| 540.43 | 276.45 | 542.33 | 276.35 | 544.38 | 276.14 | 546.82 | 275.93 | 548.51 | 275.82 |
| 550.87 | 275.73 | 551.75 | 275.67 | 554.56 | 275.84 | 557.19 | 276.1 | 560.57 | 276.27 |
| 560.94 | 276.28 | 562.51 | 276.24 | 565.24 | 276.09 | 566.79 | 276.05 | 567.25 | 275.99 |
| 569.34 | 275.91 | 572.15 | 275.91 | 574.62 | 275.88 | 576.22 | 275.96 | 578.07 | 276.1 |
| 581 | 276.2 | 587.83 | 276.47 | 592.3 | 276.64 | 600 | 276.64 | 601.09 | 276.58 |
| 603.64 | 276.5 | 612.63 | 276.35 | 616.83 | 276.35 | 621.93 | 276.27 | 623.76 | 276.34 |
| 631.18 | 276.6 | 633.77 | 276.68 | 635.33 | 276.8 | 636.46 | 276.86 | 637.3 | 276.85 |
| 640.3 | 276.77 | 642.67 | 276.73 | 644.94 | 276.71 | 648.12 | 276.62 | 651.57 | 276.59 |
| 652.88 | 276.63 | 656.78 | 276.78 | 660.51 | 276.89 | 666.57 | 277.09 | 672.09 | 277.26 |
| 674.44 | 277.34 | 682.96 | 277.64 | 685.76 | 277.75 | 689.44 | 277.77 | 695.63 | 277.79 |
| 696.76 | 277.75 | 700.25 | 277.6 | 701.07 | 277.58 | 706.37 | 277.3 | 707.96 | 277.24 |
| 711.19 | 277.29 | 712.47 | 277.3 | 714.22 | 277.34 | 715.09 | 277.34 | 717.65 | 277.38 |
| 722.32 | 277.39 | 724.11 | 277.51 | 724.74 | 277.53 | 727.82 | 277.59 | 728.99 | 277.62 |
| 732.7 | 277.63 | 736.41 | 277.52 | 737.59 | 277.5 | 741.77 | 277.41 | 744.07 | 277.32 |
| 745.32 | 277.33 | 747.2 | 277.37 | 749.09 | 277.39 | 750.72 | 277.42 | 751.1 | 277.44 |
| 754.22 | 277.53 | 755.74 | 277.59 | 757.58 | 277.64 | 759.3 | 277.7 | 765.24 | 277.68 |
| 769.16 | 277.61 | 769.62 | 277.62 | 770.96 | 277.6 | 775.52 | 277.55 | 779.17 | 277.48 |
| 788.67 | 277.46 | 792.2 | 277.46 | 796.51 | 277.48 | 798.66 | 277.48 | 799.5 | 277.49 |
| 805.08 | 277.49 | 806 | 277.48 | 808.6 | 277.4 | 809.25 | 277.34 | 812.9 | 277.26 |
| 815.27 | 277.32 | 817.4 | 277.35 | 820.9 | 277.44 | 824.93 | 277.53 | 826.61 | 277.59 |
| 830.81 | 277.72 | 835.3 | 277.84 | 838.64 | 277.82 | 843.39 | 277.77 | 847.85 | 277.74 |
| 848.46 | 277.73 | 852.1 | 277.72 | 853.22 | 277.71 | 857.8 | 277.7 | 860.21 | 277.7 |
| 861.2 | 277.65 | 865.54 | 277.49 | 867.59 | 277.42 | 870.18 | 277.43 | 872.47 | 277.43 |
| 874.04 | 277.44 | 876.26 | 277.49 | 879.9 | 277.63 | 882.33 | 277.79 | 883.27 | 277.9 |
| 884.6 | 278.09 | 885.01 | 278.07 | 888.42 | 278.44 | 890.15 | 278.42 | 891.8 | 278.32 |
| 893.73 | 278.38 | 906.83 | 278.49 | 908.54 | 278.54 | 911.46 | 278.61 | 916.12 | 278.7 |
| 917.93 | 278.69 | 918.48 | 278.64 | 920.35 | 278.62 | 921.23 | 278.59 | 931.2 | 278.79 |
| 935.24 | 278.86 | 937.39 | 278.89 | 944.89 | 278.98 | 947.06 | 279.01 | 953.39 | 278.96 |
| 956.11 | 278.95 | 958.01 | 278.93 | 962.2 | 278.93 | 966.84 | 278.94 | 968.48 | 278.93 |
| 972.94 | 278.92 | 977.35 | 278.89 | 983.98 | 278.81 | 992.38 | 278.74 | 993.72 | 278.74 |
| 995.02 | 278.72 | 995.23 | 278.74 | 1005.83 | 278.72 | 1010.8 | 278.66 | 1011.47 | 278.61 |
| 1014.08 | 278.53 | 1019.14 | 278.51 | 1019.47 | 278.48 | 1020.72 | 278.48 | 1026.49 | 278.67 |
| 1028.65 | 278.72 | 1031.43 | 278.87 | 1031.99 | 278.88 | 1036.58 | 279.14 | 1039.54 | 279.3 |
| 1040 | 279.37 | 1043.22 | 279.42 | 1046.29 | 279.32 | 1046.95 | 279.27 | 1048.2 | 279.1 |
| 1051.2 | 278.83 | 1052.2 | 278.72 | 1059.21 | 278 | 1061 | 277.76 | 1061.55 | 277.77 |
| 1064.23 | 277.77 | 1065.39 | 277.79 | 1067.73 | 277.81 | 1070.89 | 277.85 | 1073.21 | 277.87 |
| 1075.68 | 277.87 | 1077.95 | 277.86 | 1080.81 | 277.87 | 1083.84 | 277.87 | 1086.17 | 278.07 |
| 1089.64 | 278.29 | 1091.58 | 278.36 | 1093.35 | 278.37 | 1094.73 | 278.43 | 1096.44 | 278.43 |
| 1098.6 | 278.4 | 1100.83 | 278.38 | 1104.01 | 278.32 | 1106.51 | 278.26 | 1108.2 | 278.21 |
| 1109.47 | 278.11 | 1111.96 | 278.05 | 1118.52 | 277.88 | 1123.06 | 277.77 | 1126.34 | 277.65 |
| 1127.09 | 277.64 | 1129.26 | 277.69 | 1130.38 | 277.74 | 1131.96 | 277.88 | 1133.97 | 278.01 |
| 1137.22 | 278.3 | 1137.68 | 278.33 | 1139.65 | 278.33 | 1140.44 | 278.26 | 1141.81 | 278.25 |
| 1142.19 | 278.29 | 1147.13 | 278.33 | 1152.94 | 278.05 | 1154.47 | 278.02 | 1158.24 | 277.82 |
| 1160.66 | 277.81 | 1163.25 | 277.79 | 1164.7 | 277.79 | 1168.72 | 277.92 | 1169.23 | 277.95 |
| 1174.73 | 278.14 | 1177.61 | 278.16 | 1179.63 | 278.16 | 1180.28 | 278.09 | 1181.86 | 278.06 |
| 1183.13 | 278.06 | 1184.67 | 278.09 | 1186.45 | 278.09 | 1187.97 | 278.15 | 1190.74 | 278.37 |
| 1192.01 | 278.42 | 1193.79 | 278.55 | 1195.71 | 278.66 | 1196.31 | 278.68 | 1199.29 | 278.66 |
| 1202.78 | 278.58 | 1205.53 | 278.5 | 1206.93 | 278.5 | 1212.31 | 278.58 | 1217.32 | 278.67 |
| 1219.42 | 278.63 | 1220.09 | 278.6 | 1223.92 | 278.46 | 1224.36 | 278.45 | 1226.3 | 278.35 |
| 1227.17 | 278.34 | 1228.62 | 278.27 | 1232.8 | 278.16 | 1237.7 | 278.05 | 1238.79 | 278.02 |
| 1243.53 | 278.08 | 1248.7 | 278.26 | 1250.2 | 278.36 | 1251.8 | 278.39 | 1252.84 | 278.43 |
| 1253.44 | 278.48 | 1255.27 | 278.53 | 1255.63 | 278.56 | 1256.86 | 278.55 | 1258.78 | 278.47 |
| 1259.1 | 278.4 | 1260.03 | 278.35 | 1261.37 | 278.24 | 1263.66 | 278.03 | 1264.29 | 277.99 |
| 1265.65 | 277.81 | 1270.23 | 277.76 | 1273.46 | 277.71 | 1276.11 | 277.68 | 1280.73 | 277.59 |
| 1282.21 | 277.54 | 1285.61 | 277.46 | 1287.29 | 277.45 | 1287.36 | 277.47 | 1291.83 | 277.52 |
| 1293.61 | 277.53 | 1298.29 | 277.47 | 1301.48 | 277.53 | 1302.37 | 277.59 | 1302.84 | 277.65 |
| 1305.33 | 277.79 | 1306.49 | 277.88 | 1309.32 | 278.01 | 1310.02 | 278.01 | 1314.37 | 277.91 |
| 1319.47 | 277.78 | 1320.74 | 277.73 | 1321.93 | 277.66 | 1327.65 | 277.21 | 1329.22 | 277.07 |
| 1330 | 276.98 | 1330.16 | 276.93 | 1333.24 | 276.86 | 1334.25 | 276.88 | 1336.33 | 276.97 |
| 1337.72 | 277 | 1340.61 | 277.09 | 1344.72 | 277.16 | 1348.86 | 277.11 | 1351.94 | 277.12 |
| 1354.9 | 277.15 | 1364.42 | 277.45 | 1365.06 | 277.46 | 1370.4 | 277.6 | 1371.43 | 277.62 |
| 1377.6 | 277.79 | 1384.45 | 277.97 | 1390.82 | 277.88 | 1396.17 | 277.82 | 1397.44 | 277.71 |
| 1400.36 | 277.72 | 1412.09 | 277.72 | 1416.55 | 278.15 | 1423.23 | 278.68 | 1423.27 | 278.69 |
| 1429.06 | 279.56 | 1429.83 | 279.7 | 1435.13 | 280.71 | 1438.99 | 281.43 | 1439.37 | 281.51 |
| 1441.61 | 282.33 | 1442.16 | 282.58 | 1443.86 | 283.42 | 1444.69 | 283.87 | 1446.63 | 284.82 |
| 1451.43 | 287.27 | 1452.14 | 287.74 | 1454.04 | 289.02 | 1455.18 | 289.85 | 1455.66 | 290.15 |
| 1457.85 | 291.61 | 1458.59 | 292.08 | 1459.93 | 293.04 | 1463.59 | 295.75 | 1463.83 | 295.92 |
| 1465.71 | 297.35 | 1466.17 | 297.67 | 1467.71 | 298.81 | 1468.63 | 299.51 | 1470.28 | 300.73 |
| 1472.16 | 302.19 | 1472.79 | 302.65 | 1474.16 | 303.36 | 1474.74 | 303.61 | 1476.49 | 304.45 |
| 1478.3 | 305.35 | 1479.61 | 305.97 | 1482.46 | 307.3 | 1482.82 | 307.46 | 1486.95 | 308.42 |
| 1487.93 | 308.6 | 1491.42 | 309.21 | 1492.44 | 309.38 | 1497.02 | 310.24 | 1502.28 | 311.31 |
| 1508.6 | 311.3 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 473.71 | .04 | 1452.14 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 473.71 | 1452.14 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1039.043 Elevation=279.8827

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1231.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 303.06 | 2.04 | 302.86 | 6.52 | 302.33 | 9.81 | 302 | 14.77 | 301.58 |
| 16.51 | 301.36 | 18.36 | 301.19 | 25.69 | 300.49 | 27.01 | 300.39 | 31.82 | 299.81 |
| 34.53 | 299.79 | 36.36 | 299.67 | 41.42 | 299.24 | 42.13 | 299.19 | 44.44 | 298.97 |
| 44.73 | 298.98 | 46.68 | 299.13 | 47.99 | 299.18 | 49 | 299.14 | 49.55 | 299.05 |
| 53.05 | 299.01 | 61.54 | 298.44 | 62.4 | 298.34 | 63.12 | 298.34 | 76.49 | 297.47 |
| 88.4 | 296.52 | 90.51 | 296.3 | 92.21 | 296.18 | 95.81 | 295.84 | 98.95 | 295.66 |
| 107.99 | 295.01 | 109.17 | 294.93 | 128.09 | 293.7 | 128.68 | 293.65 | 137.29 | 293.14 |
| 139.58 | 293.01 | 145.58 | 292.83 | 147.57 | 292.76 | 149.64 | 292.64 | 151.16 | 292.52 |
| 153.01 | 292.33 | 155.3 | 292.22 | 158.89 | 291.96 | 160.27 | 291.82 | 160.75 | 291.79 |
| 173.58 | 291.06 | 195.28 | 289.88 | 208.02 | 288.93 | 213.97 | 288.58 | 219.79 | 288.23 |
| 232.76 | 287.59 | 237.23 | 287.46 | 243.74 | 287.26 | 246.9 | 287.06 | 247.98 | 287 |
| 257.41 | 286.56 | 258.15 | 286.53 | 268.56 | 286.03 | 275.25 | 285.49 | 281.91 | 285.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 296.54 | 284.44 | 305.49 | 283.81 | 306.48 | 283.75 | 308.57 | 283.73 | 310.61 | 283.68 |
| 313.71 | 283.59 | 316.55 | 283.46 | 317.24 | 283.42 | 322.69 | 283.17 | 335.25 | 282.4 |
| 339.61 | 282.12 | 343.9 | 281.91 | 347.27 | 281.73 | 349.24 | 281.64 | 354.02 | 281.56 |
| 364.24 | 281.15 | 370.69 | 280.71 | 373.67 | 280.5 | 378.96 | 280.15 | 390.46 | 279.66 |
| 393.06 | 279.56 | 399.58 | 279.32 | 401.95 | 279.22 | 413.51 | 278.46 | 417.43 | 278.24 |
| 419.2 | 278.06 | 420.09 | 277.93 | 425.34 | 277.3 | 426.59 | 277.3 | 427.51 | 277.4 |
| 429.73 | 277.34 | 431.27 | 277.26 | 436.22 | 277.02 | 436.85 | 276.98 | 439.86 | 276.87 |
| 442.29 | 277.07 | 442.93 | 277.21 | 444.38 | 277.39 | 451.31 | 278.21 | 455.8 | 278.52 |
| 457.39 | 278.6 | 460.41 | 278.73 | 464.31 | 278.47 | 466.92 | 278.23 | 467.73 | 278.15 |
| 471.74 | 277.8 | 473.57 | 277.66 | 476.15 | 277.49 | 478.07 | 277.4 | 479.62 | 277.36 |
| 481.27 | 277.34 | 484.27 | 277.16 | 487.91 | 276.98 | 489.28 | 276.94 | 491.19 | 276.91 |
| 492.25 | 276.91 | 493.18 | 276.97 | 494.45 | 277.08 | 496.23 | 277.05 | 496.69 | 277.09 |
| 498.57 | 277.11 | 499.88 | 277.07 | 502.06 | 276.97 | 503.48 | 276.96 | 505.19 | 276.93 |
| 507.36 | 276.71 | 510.48 | 276.47 | 511.63 | 276.37 | 512.82 | 276.3 | 514.13 | 276.25 |
| 519.03 | 276.16 | 521.31 | 276.19 | 523.25 | 276.17 | 525.7 | 276.22 | 527.55 | 276.23 |
| 528.65 | 276.25 | 530.65 | 276.2 | 533.01 | 276.2 | 535.82 | 276.17 | 537.99 | 276.23 |
| 540.6 | 276.23 | 542.56 | 276.14 | 545.89 | 275.73 | 547.22 | 275.59 | 550.12 | 275.42 |
| 551.97 | 275.36 | 552.93 | 275.3 | 555.75 | 275.47 | 558.4 | 275.73 | 561.8 | 275.89 |
| 562.64 | 275.9 | 563.75 | 275.86 | 566.49 | 275.72 | 568.05 | 275.69 | 568.51 | 275.63 |
| 570.62 | 275.56 | 573.43 | 275.56 | 575.92 | 275.53 | 577.53 | 275.6 | 579.39 | 275.74 |
| 581.18 | 275.79 | 586.43 | 276 | 589.2 | 276.1 | 590.26 | 276.15 | 593.69 | 276.28 |
| 601.43 | 276.28 | 602.52 | 276.22 | 605.09 | 276.14 | 614.12 | 276.01 | 618.34 | 276.01 |
| 623.48 | 275.94 | 626.76 | 276.07 | 627.96 | 276.1 | 629.37 | 276.16 | 632.77 | 276.27 |
| 635.24 | 276.36 | 636.94 | 276.48 | 638.08 | 276.54 | 638.93 | 276.53 | 641.94 | 276.46 |
| 644.32 | 276.43 | 646.6 | 276.42 | 649.8 | 276.35 | 653.26 | 276.32 | 654.59 | 276.36 |
| 657.07 | 276.47 | 662.25 | 276.62 | 664.74 | 276.7 | 668.34 | 276.8 | 676.25 | 277.06 |
| 684.82 | 277.38 | 687.63 | 277.5 | 691.33 | 277.54 | 697.56 | 277.59 | 700.46 | 277.49 |
| 702.19 | 277.42 | 703.02 | 277.41 | 708.35 | 277.17 | 710.07 | 277.11 | 713.19 | 277.17 |
| 714.48 | 277.18 | 716.24 | 277.24 | 718.61 | 277.28 | 719.68 | 277.31 | 723.13 | 277.33 |
| 724.38 | 277.35 | 726.18 | 277.48 | 729.91 | 277.57 | 731.09 | 277.59 | 734.82 | 277.61 |
| 736.73 | 277.55 | 738.55 | 277.48 | 740.63 | 277.44 | 743.93 | 277.34 | 746.24 | 277.22 |
| 747.5 | 277.22 | 749.39 | 277.26 | 751.29 | 277.27 | 756.45 | 277.43 | 757.97 | 277.5 |
| 759.82 | 277.56 | 760.91 | 277.62 | 763.63 | 277.63 | 763.89 | 277.62 | 767.52 | 277.61 |
| 771.46 | 277.5 | 774.16 | 277.44 | 777.86 | 277.37 | 781.52 | 277.27 | 785.59 | 277.26 |
| 786.18 | 277.27 | 791.53 | 277.26 | 796.17 | 277.31 | 801.12 | 277.34 | 804.89 | 277.38 |
| 807.56 | 277.38 | 808.49 | 277.37 | 811.11 | 277.3 | 811.76 | 277.24 | 815.42 | 277.16 |
| 817.81 | 277.22 | 819.95 | 277.25 | 827.51 | 277.42 | 829.2 | 277.47 | 833.43 | 277.58 |
| 837.94 | 277.68 | 841.3 | 277.64 | 846.07 | 277.54 | 851.17 | 277.46 | 854.83 | 277.44 |
| 856.99 | 277.41 | 860.56 | 277.41 | 862.98 | 277.4 | 863.98 | 277.35 | 868.33 | 277.21 |
| 870.4 | 277.13 | 876.88 | 277.18 | 879.11 | 277.25 | 882.77 | 277.4 | 885.22 | 277.58 |
| 887.49 | 277.89 | 887.9 | 277.88 | 891.34 | 278.27 | 893.27 | 278.28 | 894.73 | 278.23 |
| 896.67 | 278.32 | 905.18 | 278.43 | 909.84 | 278.48 | 914.49 | 278.63 | 916 | 278.66 |
| 919.18 | 278.7 | 920.99 | 278.7 | 921.55 | 278.65 | 924.32 | 278.6 | 926.71 | 278.65 |
| 934.34 | 278.84 | 937.4 | 278.89 | 940.56 | 278.93 | 948.75 | 279.01 | 951.44 | 279 |
| 956.64 | 278.92 | 959.11 | 278.9 | 960.04 | 278.88 | 965.5 | 278.87 | 968.27 | 278.88 |
| 971.81 | 278.87 | 976.29 | 278.84 | 980.73 | 278.77 | 984.22 | 278.7 | 987.39 | 278.62 |
| 988.59 | 278.6 | 990.95 | 278.54 | 998.49 | 278.45 | 998.7 | 278.47 | 1000.13 | 278.45 |
| 1003.41 | 278.44 | 1009.35 | 278.43 | 1014.35 | 278.37 | 1015.02 | 278.33 | 1017.64 | 278.26 |
| 1021.22 | 278.24 | 1022.73 | 278.24 | 1023.06 | 278.21 | 1024.31 | 278.21 | 1030.12 | 278.4 |
| 1032.28 | 278.44 | 1035.65 | 278.6 | 1041.91 | 278.93 | 1043.24 | 278.99 | 1043.69 | 279.06 |
| 1046.93 | 279.1 | 1050.02 | 279.01 | 1050.68 | 278.97 | 1051.93 | 278.8 | 1052.86 | 278.73 |
| 1054.96 | 278.54 | 1057.61 | 278.27 | 1063.01 | 277.76 | 1064.81 | 277.53 | 1068.05 | 277.54 |
| 1069.21 | 277.57 | 1074.74 | 277.69 | 1075.41 | 277.71 | 1077.74 | 277.74 | 1081.84 | 277.73 |
| 1084.72 | 277.74 | 1087.76 | 277.74 | 1087.86 | 277.76 | 1090.11 | 277.92 | 1093.59 | 278.12 |
| 1095.54 | 278.18 | 1097.32 | 278.19 | 1098.7 | 278.24 | 1100.42 | 278.24 | 1102.6 | 278.2 |
| 1104.84 | 278.17 | 1108.04 | 278.11 | 1112.24 | 278 | 1113.53 | 277.9 | 1116.03 | 277.82 |
| 1122.62 | 277.64 | 1127.19 | 277.54 | 1130.48 | 277.43 | 1131.24 | 277.42 | 1133.42 | 277.46 |
| 1134.54 | 277.51 | 1136.13 | 277.64 | 1138.15 | 277.77 | 1141.41 | 278.07 | 1142.78 | 278.11 |
| 1143.86 | 278.1 | 1145.02 | 278.04 | 1146.03 | 278.04 | 1146.41 | 278.08 | 1151.37 | 278.14 |
| 1151.69 | 278.12 | 1157.22 | 277.89 | 1158.76 | 277.86 | 1162.55 | 277.64 | 1169.03 | 277.58 |
| 1173.08 | 277.7 | 1175.04 | 277.78 | 1176.19 | 277.81 | 1179.12 | 277.91 | 1182.01 | 277.93 |
| 1184.05 | 277.92 | 1184.69 | 277.85 | 1186.98 | 277.81 | 1189.11 | 277.83 | 1190.9 | 277.83 |
| 1192.42 | 277.88 | 1193.61 | 277.97 | 1195.81 | 278.11 | 1196.48 | 278.12 | 1198.27 | 278.24 |
| 1200.2 | 278.35 | 1200.81 | 278.36 | 1203.81 | 278.34 | 1206.5 | 278.28 | 1210.07 | 278.17 |
| 1211.49 | 278.17 | 1218.03 | 278.27 | 1220.32 | 278.3 | 1221.93 | 278.34 | 1223.61 | 278.31 |
| 1225.57 | 278.26 | 1228.56 | 278.15 | 1229.01 | 278.15 | 1231.25 | 278.03 | 1231.83 | 278.04 |
| 1233.28 | 277.96 | 1237.48 | 277.85 | 1240.63 | 277.79 | 1243.51 | 277.72 | 1244.51 | 277.72 |
| 1248.28 | 277.77 | 1253.47 | 277.96 | 1254.97 | 278.06 | 1256.58 | 278.09 | 1257.63 | 278.13 |
| 1258.24 | 278.18 | 1260.44 | 278.26 | 1261.67 | 278.27 | 1263.6 | 278.2 | 1263.93 | 278.13 |
| 1264.85 | 278.1 | 1267.78 | 277.88 | 1268.5 | 277.81 | 1269.14 | 277.79 | 1270.5 | 277.62 |
| 1271.55 | 277.63 | 1276.49 | 277.59 | 1279.16 | 277.56 | 1281.02 | 277.56 | 1283.04 | 277.53 |
| 1285.67 | 277.47 | 1287.15 | 277.42 | 1290.57 | 277.33 | 1292.26 | 277.32 | 1292.33 | 277.34 |
| 1294.24 | 277.34 | 1298.61 | 277.37 | 1303.32 | 277.3 | 1306.52 | 277.34 | 1307.41 | 277.4 |
| 1307.89 | 277.46 | 1310.39 | 277.59 | 1311.55 | 277.66 | 1314.4 | 277.79 | 1315.11 | 277.78 |
| 1319.48 | 277.67 | 1324.61 | 277.52 | 1325.88 | 277.47 | 1327.07 | 277.39 | 1332.82 | 276.94 |
| 1334.41 | 276.8 | 1335.35 | 276.65 | 1338.45 | 276.58 | 1339.46 | 276.6 | 1341.55 | 276.68 |
| 1342.94 | 276.71 | 1345.85 | 276.8 | 1349.99 | 276.86 | 1354.15 | 276.81 | 1357.24 | 276.82 |
| 1360.21 | 276.85 | 1365.37 | 277.01 | 1369.79 | 277.14 | 1373.81 | 277.23 | 1389.92 | 277.65 |
| 1396.32 | 277.56 | 1398.01 | 277.54 | 1401.7 | 277.52 | 1402.98 | 277.42 | 1406.78 | 277.44 |
| 1414.86 | 277.45 | 1417.7 | 277.44 | 1418.94 | 277.56 | 1422.19 | 277.85 | 1425.51 | 278.09 |
| 1427.65 | 278.27 | 1428.94 | 278.36 | 1434.75 | 279.19 | 1435.53 | 279.31 | 1440.86 | 280.27 |
| 1445.12 | 281.02 | 1447.37 | 281.79 | 1447.71 | 281.92 | 1449.64 | 282.85 | 1450.47 | 283.28 |
| 1452.42 | 284.18 | 1457.25 | 286.54 | 1457.95 | 286.99 | 1460.07 | 288.38 | 1460.95 | 289.01 |
| 1462.86 | 290.23 | 1463.59 | 290.71 | 1464.31 | 291.15 | 1465.64 | 292.08 | 1470.66 | 295.71 |
| 1472.58 | 297.11 | 1473.3 | 297.61 | 1474.2 | 298.29 | 1475.83 | 299.46 | 1478.3 | 301.31 |
| 1479.65 | 301.98 | 1481.95 | 303.03 | 1483.73 | 303.89 | 1485.02 | 304.49 | 1488.19 | 305.92 |
| 1492.26 | 306.84 | 1497.67 | 307.77 | 1502.19 | 308.59 | 1507.08 | 309.56 | 1507.36 | 309.61 |
| 1513.6 | 309.59 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 466.92 | .04 | 1457.95 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
466.92 1457.95 21.54 19.33 20.13 .1 .3
Right Levee Station=1038.065 Elevation=279.8954

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1212.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 302.21 | 2.01 | 302.02 | 6.43 | 301.5 | 10.04 | 301.13 | 14.56 | 300.76 |
| 16.27 | 300.54 | 18.1 | 300.37 | 25.32 | 299.68 | 26.62 | 299.59 | 27.12 | 299.52 |
| 31.36 | 299.01 | 34.03 | 299 | 35.83 | 298.88 | 36.03 | 298.85 | 40.81 | 298.45 |
| 41.52 | 298.4 | 43.45 | 298.21 | 44.08 | 298.19 | 46 | 298.34 | 47.29 | 298.38 |
| 48.29 | 298.34 | 48.83 | 298.26 | 52.27 | 298.21 | 60.64 | 297.66 | 61.5 | 297.57 |
| 62.2 | 297.56 | 71.9 | 296.93 | 75.38 | 296.71 | 87.11 | 295.78 | 89.19 | 295.57 |
| 90.86 | 295.45 | 94.42 | 295.12 | 97.51 | 294.94 | 107.58 | 294.23 | 126.23 | 293.04 |
| 130.77 | 292.76 | 136.37 | 292.44 | 137.55 | 292.38 | 143.46 | 292.21 | 145.9 | 292.12 |
| 147.47 | 292.02 | 148.96 | 291.9 | 150.78 | 291.72 | 153.04 | 291.62 | 156.58 | 291.36 |
| 158.41 | 291.2 | 169.14 | 290.58 | 171.05 | 290.48 | 192.43 | 289.32 | 205 | 288.4 |
| 210.85 | 288.06 | 216.59 | 287.72 | 229.38 | 287.09 | 240.19 | 286.75 | 244.37 | 286.5 |
| 253.66 | 286.07 | 254.39 | 286.04 | 264.65 | 285.55 | 271.24 | 285.02 | 277.81 | 284.61 |
| 292.22 | 283.98 | 296.43 | 283.68 | 301.04 | 283.36 | 302.02 | 283.3 | 304.08 | 283.27 |
| 306.73 | 283.19 | 309.14 | 283.13 | 311.94 | 282.99 | 314.62 | 282.87 | 318.28 | 282.69 |
| 330.37 | 281.96 | 334.66 | 281.68 | 338.9 | 281.47 | 344.16 | 281.19 | 349.15 | 281.1 |
| 358.94 | 280.7 | 361.25 | 280.55 | 368.23 | 280.06 | 373.44 | 279.72 | 384.78 | 279.25 |
| 387.34 | 279.15 | 393.76 | 278.93 | 396.1 | 278.83 | 398.05 | 278.71 | 399.24 | 278.62 |
| 407.65 | 278.06 | 411.36 | 277.85 | 411.52 | 277.85 | 413.1 | 277.68 | 413.98 | 277.56 |
| 419.15 | 276.95 | 420.38 | 276.95 | 421.28 | 277.05 | 424.99 | 276.92 | 429.87 | 276.68 |
| 430.5 | 276.64 | 432.61 | 276.55 | 433.46 | 276.53 | 435.85 | 276.72 | 436.48 | 276.86 |
| 437.91 | 277.03 | 444.75 | 277.81 | 449.17 | 278.11 | 450.73 | 278.19 | 453.71 | 278.32 |
| 457.55 | 278.07 | 460.12 | 277.84 | 462.73 | 277.63 | 464.94 | 277.48 | 467.39 | 277.34 |
| 470.6 | 277.2 | 472.73 | 277.14 | 474.01 | 277.13 | 475.81 | 277.16 | 479.09 | 276.99 |
| 483.06 | 276.84 | 484.56 | 276.82 | 486.64 | 276.83 | 487.74 | 276.86 | 488.81 | 276.97 |
| 490.21 | 277.16 | 492.15 | 277.15 | 492.81 | 277.2 | 494.71 | 277.22 | 496.14 | 277.17 |
| 497.55 | 277.08 | 498.52 | 277.05 | 500.08 | 277.04 | 501.94 | 277.01 | 505.11 | 276.62 |
| 507.72 | 276.37 | 508.99 | 276.23 | 510.28 | 276.14 | 511.71 | 276.07 | 517.07 | 275.99 |
| 519.56 | 276.05 | 521.68 | 276.04 | 524.36 | 276.08 | 527.58 | 276.09 | 529.76 | 275.99 |
| 532.34 | 275.98 | 535.87 | 275.93 | 537.79 | 275.99 | 540.03 | 276.02 | 542.77 | 275.95 |
| 543.14 | 275.88 | 546.42 | 275.4 | 548.17 | 275.21 | 551.04 | 275.06 | 554.12 | 274.94 |
| 556.62 | 275.07 | 559.61 | 275.35 | 563.02 | 275.52 | 563.4 | 275.53 | 564.98 | 275.49 |
| 567.75 | 275.36 | 569.31 | 275.32 | 569.78 | 275.27 | 571.89 | 275.2 | 574.72 | 275.2 |
| 577.22 | 275.17 | 578.83 | 275.25 | 580.7 | 275.37 | 583.66 | 275.47 | 587.78 | 275.64 |
| 590.57 | 275.74 | 591.63 | 275.79 | 595.08 | 275.91 | 598.82 | 275.92 | 602.86 | 275.92 |
| 603.96 | 275.87 | 606.54 | 275.79 | 615.62 | 275.67 | 619.86 | 275.67 | 625.45 | 275.61 |
| 628.32 | 275.74 | 631.64 | 275.86 | 634.36 | 275.95 | 636.98 | 276.05 | 638.56 | 276.16 |
| 639.69 | 276.22 | 643.58 | 276.15 | 645.22 | 276.13 | 648.27 | 276.13 | 651.47 | 276.07 |
| 654.96 | 276.06 | 656.29 | 276.1 | 658.79 | 276.2 | 663.99 | 276.35 | 666.5 | 276.43 |
| 670.12 | 276.52 | 675.69 | 276.69 | 686.68 | 277.11 | 689.51 | 277.25 | 693.22 | 277.31 |
| 699.48 | 277.38 | 704.14 | 277.25 | 705.95 | 277.21 | 710.32 | 277.03 | 712.06 | 276.98 |
| 715.19 | 277.05 | 716.49 | 277.07 | 718.26 | 277.14 | 721.72 | 277.23 | 726.44 | 277.3 |
| 728.25 | 277.44 | 732 | 277.55 | 733.18 | 277.57 | 736.93 | 277.58 | 740.68 | 277.45 |
| 742.77 | 277.4 | 746.09 | 277.28 | 748.41 | 277.12 | 749.68 | 277.12 | 751.57 | 277.15 |
| 753.49 | 277.16 | 755.52 | 277.22 | 758.67 | 277.33 | 760.21 | 277.41 | 762.06 | 277.48 |
| 763.16 | 277.54 | 764.33 | 277.57 | 769.81 | 277.54 | 773.76 | 277.38 | 776.47 | 277.29 |
| 780.19 | 277.19 | 783.88 | 277.07 | 787.97 | 277.05 | 788.56 | 277.07 | 793.93 | 277.07 |
| 797.04 | 277.11 | 801.39 | 277.18 | 803.57 | 277.2 | 806.25 | 277.25 | 810.05 | 277.27 |
| 810.98 | 277.26 | 813.61 | 277.2 | 813.87 | 277.16 | 817.95 | 277.06 | 820.35 | 277.11 |
| 822.5 | 277.14 | 826.04 | 277.22 | 830.1 | 277.3 | 836.05 | 277.44 | 840.58 | 277.52 |
| 842.19 | 277.5 | 843.96 | 277.46 | 848.76 | 277.31 | 853.26 | 277.21 | 853.88 | 277.19 |
| 856.69 | 277.17 | 859.73 | 277.12 | 865.75 | 277.11 | 866.75 | 277.06 | 873.2 | 276.85 |
| 875.15 | 276.85 | 875.82 | 276.88 | 878.13 | 276.9 | 880.19 | 276.93 | 881.97 | 277 |
| 885.98 | 277.2 | 888.1 | 277.37 | 889.05 | 277.49 | 890.39 | 277.69 | 890.8 | 277.68 |
| 894.26 | 278.09 | 896 | 278.14 | 897.67 | 278.13 | 899.62 | 278.27 | 908.17 | 278.41 |
| 910.21 | 278.43 | 912.85 | 278.47 | 914.57 | 278.54 | 918.15 | 278.66 | 919.04 | 278.68 |
| 922.23 | 278.71 | 924.06 | 278.7 | 924.62 | 278.65 | 926.02 | 278.64 | 927.4 | 278.61 |
| 929.81 | 278.67 | 937.47 | 278.89 | 940.55 | 278.94 | 943.73 | 278.98 | 950.05 | 279.02 |
| 953.49 | 279.02 | 954.66 | 279 | 959.89 | 278.88 | 964.56 | 278.82 | 968.79 | 278.81 |
| 971.58 | 278.82 | 975.14 | 278.81 | 979.64 | 278.77 | 984.1 | 278.66 | 994.37 | 278.31 |
| 999.28 | 278.21 | 1001.95 | 278.17 | 1002.16 | 278.19 | 1003.6 | 278.17 | 1006.9 | 278.15 |
| 1012.87 | 278.14 | 1017.89 | 278.09 | 1018.56 | 278.05 | 1021.21 | 277.98 | 1025.6 | 277.97 |
| 1026.65 | 277.94 | 1027.91 | 277.94 | 1030.29 | 278.02 | 1034.44 | 278.14 | 1035.92 | 278.17 |
| 1038.73 | 278.3 | 1039.3 | 278.31 | 1043.94 | 278.55 | 1046.93 | 278.69 | 1047.39 | 278.75 |
| 1050.65 | 278.79 | 1053.75 | 278.7 | 1054.41 | 278.66 | 1055.67 | 278.5 | 1058.71 | 278.25 |
| 1059.71 | 278.15 | 1066.8 | 277.51 | 1068.61 | 277.29 | 1071.87 | 277.31 | 1073.04 | 277.36 |
| 1075.4 | 277.42 | 1078.6 | 277.54 | 1080.94 | 277.6 | 1082.64 | 277.62 | 1085.73 | 277.59 |
| 1088.62 | 277.61 | 1091.68 | 277.61 | 1091.78 | 277.63 | 1094.04 | 277.78 | 1097.27 | 277.93 |
| 1099.5 | 278 | 1101.29 | 278 | 1102.68 | 278.04 | 1104.41 | 278.04 | 1108.84 | 277.97 |
| 1112.06 | 277.91 | 1114.58 | 277.84 | 1116.29 | 277.78 | 1117.58 | 277.68 | 1120.09 | 277.6 |
| 1126.72 | 277.41 | 1131.31 | 277.31 | 1134.62 | 277.2 | 1135.38 | 277.19 | 1137.57 | 277.24 |
| 1138.7 | 277.28 | 1140.3 | 277.4 | 1142.33 | 277.53 | 1145.61 | 277.83 | 1146.98 | 277.88 |
| 1148.06 | 277.88 | 1148.87 | 277.83 | 1150.25 | 277.83 | 1150.63 | 277.88 | 1155.62 | 277.96 |
| 1161.49 | 277.73 | 1162.75 | 277.71 | 1166.85 | 277.47 | 1172.09 | 277.37 | 1173.37 | 277.36 |
| 1177.44 | 277.47 | 1177.96 | 277.5 | 1183.51 | 277.69 | 1186.41 | 277.69 | 1188.46 | 277.68 |
| 1189.11 | 277.62 | 1190.71 | 277.57 | 1193.55 | 277.58 | 1195.35 | 277.57 | 1196.88 | 277.61 |
| 1198.07 | 277.69 | 1200.28 | 277.81 | 1200.96 | 277.82 | 1202.76 | 277.93 | 1204.7 | 278.03 |
| 1205.31 | 278.04 | 1208.32 | 278.01 | 1211.03 | 277.95 | 1214.28 | 277.85 | 1216.04 | 277.85 |
| 1220.59 | 277.9 | 1226.53 | 278 | 1228.23 | 277.98 | 1230.19 | 277.94 | 1232.1 | 277.87 |
| 1233.65 | 277.84 | 1235.61 | 277.75 | 1236.49 | 277.73 | 1237.95 | 277.66 | 1242.17 | 277.55 |
| 1247.12 | 277.44 | 1248.22 | 277.41 | 1253.02 | 277.47 | 1257.09 | 277.61 | 1259.75 | 277.75 |
| 1262.42 | 277.83 | 1263.03 | 277.88 | 1264.15 | 277.91 | 1265.24 | 277.97 | 1266.48 | 277.98 |
| 1268.42 | 277.93 | 1268.75 | 277.87 | 1269.68 | 277.84 | 1273.99 | 277.58 | 1275.36 | 277.44 |
| 1276.41 | 277.45 | 1279.99 | 277.45 | 1283.26 | 277.43 | 1285.93 | 277.43 | 1287.96 | 277.41 |
| 1290.6 | 277.35 | 1292.09 | 277.29 | 1295.53 | 277.2 | 1297.22 | 277.18 | 1297.29 | 277.2 |
| 1300.14 | 277.2 | 1303.61 | 277.21 | 1308.34 | 277.13 | 1311.56 | 277.16 | 1312.93 | 277.26 |
| 1315.45 | 277.38 | 1316.62 | 277.45 | 1319.48 | 277.56 | 1320.19 | 277.55 | 1324.12 | 277.45 |
| 1329.74 | 277.26 | 1332.22 | 277.13 | 1338 | 276.66 | 1339.59 | 276.52 | 1340.54 | 276.38 |
| 1343.65 | 276.3 | 1344.67 | 276.32 | 1346.31 | 276.38 | 1348.17 | 276.42 | 1351.1 | 276.5 |
| 1354.63 | 276.55 | 1360.06 | 276.5 | 1365.53 | 276.54 | 1370.71 | 276.71 | 1375.15 | 276.83 |
| 1381.19 | 276.96 | 1388.46 | 277.15 | 1395.38 | 277.32 | 1403.52 | 277.23 | 1407.22 | 277.22 |
| 1408.51 | 277.13 | 1412.33 | 277.16 | 1418.31 | 277.17 | 1423.31 | 277.17 | 1427.4 | 277.5 |
| 1429.04 | 277.64 | 1431.16 | 277.78 | 1433.31 | 277.95 | 1434.61 | 278.04 | 1440.45 | 278.81 |
| 1441.23 | 278.92 | 1446.59 | 279.83 | 1450.49 | 280.46 | 1450.87 | 280.53 | 1453.14 | 281.26 |
| 1453.69 | 281.49 | 1455.41 | 282.27 | 1456.24 | 282.68 | 1458.2 | 283.55 | 1460.4 | 284.58 |
| 1461.16 | 284.92 | 1463.06 | 285.81 | 1463.77 | 286.24 | 1465.62 | 287.42 | 1466.73 | 288.18 |
| 1470.04 | 290.23 | 1471.34 | 291.11 | 1476.29 | 294.6 | 1478.89 | 296.42 | 1479.78 | 297.07 |
| 1481.39 | 298.19 | 1483.21 | 299.54 | 1483.82 | 299.96 | 1485.15 | 300.61 | 1485.71 | 300.84 |
| 1487.42 | 301.61 | 1489.17 | 302.44 | 1490.44 | 303.01 | 1493.56 | 304.38 | 1497.57 | 305.27 |
| 1501.9 | 305.99 | 1502.9 | 306.15 | 1507.35 | 306.94 | 1507.82 | 307.04 | 1512.45 | 307.92 |
| 1518.59 | 307.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 460.12 | .04 | 1463.77 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
460.12 1463.77 21.54 19.33 20.13 .1 .3
Right Levee Station=1037.088 Elevation=279.9081

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1192.96*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 301.37 | 1.98 | 301.18 | 6.33 | 300.66 | 9.89 | 300.3 | 14.34 | 299.93 |
| 16.03 | 299.72 | 17.83 | 299.56 | 24.94 | 298.88 | 26.23 | 298.78 | 30.9 | 298.22 |
| 33.53 | 298.2 | 35.3 | 298.08 | 35.5 | 298.05 | 40.21 | 297.66 | 43.14 | 297.4 |
| 45.32 | 297.54 | 46.6 | 297.58 | 47.58 | 297.54 | 48.11 | 297.46 | 51.5 | 297.42 |
| 59.75 | 296.88 | 60.59 | 296.79 | 61.28 | 296.79 | 70.84 | 296.16 | 74.27 | 295.94 |
| 85.82 | 295.04 | 87.87 | 294.84 | 89.52 | 294.72 | 93.02 | 294.4 | 96.07 | 294.23 |
| 105.99 | 293.53 | 124.36 | 292.38 | 124.94 | 292.34 | 133.3 | 291.87 | 135.51 | 291.75 |
| 141.34 | 291.59 | 143.28 | 291.53 | 145.29 | 291.41 | 146.76 | 291.29 | 148.55 | 291.12 |
| 150.78 | 291.01 | 154.27 | 290.77 | 155.61 | 290.63 | 156.07 | 290.61 | 166.65 | 289.99 |
| 189.59 | 288.76 | 201.97 | 287.87 | 213.39 | 287.2 | 225.99 | 286.58 | 236.64 | 286.24 |
| 240.76 | 286 | 250.63 | 285.55 | 260.75 | 285.07 | 267.24 | 284.55 | 268.61 | 284.47 |
| 273.71 | 284.15 | 287.91 | 283.51 | 292.05 | 283.21 | 297.56 | 282.84 | 299.59 | 282.81 |
| 302.2 | 282.73 | 304.58 | 282.67 | 307.33 | 282.53 | 309.97 | 282.41 | 313.58 | 282.23 |
| 325.49 | 281.51 | 330.49 | 281.19 | 333.89 | 281.03 | 337.16 | 280.84 | 339.08 | 280.74 |
| 343.99 | 280.65 | 351.72 | 280.32 | 352.7 | 280.29 | 355.91 | 280.1 | 359.9 | 279.82 |
| 367.93 | 279.29 | 379.1 | 278.83 | 381.62 | 278.73 | 385.13 | 278.63 | 388.29 | 278.52 |
| 390.25 | 278.44 | 392.17 | 278.32 | 393.35 | 278.23 | 401.63 | 277.68 | 405.28 | 277.47 |
| 407 | 277.31 | 407.86 | 277.19 | 412.96 | 276.6 | 414.18 | 276.6 | 415.06 | 276.69 |
| 417.22 | 276.63 | 418.71 | 276.57 | 423.53 | 276.34 | 425.35 | 276.24 | 427.05 | 276.19 |
| 429.41 | 276.37 | 430.04 | 276.5 | 431.44 | 276.67 | 438.18 | 277.41 | 440.21 | 277.54 |
| 442.54 | 277.71 | 446.12 | 277.87 | 446.84 | 277.91 | 450.79 | 277.67 | 453.33 | 277.45 |
| 454.29 | 277.37 | 456.15 | 277.25 | 458.55 | 277.13 | 461.78 | 277.01 | 464.7 | 276.94 |
| 467.42 | 276.9 | 468.39 | 276.91 | 470.34 | 276.97 | 473.9 | 276.81 | 478.21 | 276.69 |
| 479.84 | 276.7 | 482.1 | 276.75 | 483.54 | 276.84 | 484.45 | 276.97 | 485.97 | 277.24 |
| 488.07 | 277.25 | 488.78 | 277.3 | 490.85 | 277.33 | 491.72 | 277.31 | 493.94 | 277.17 |
| 495.24 | 277.12 | 496.67 | 277.13 | 498.7 | 277.1 | 498.93 | 277.08 | 502.13 | 276.59 |
| 504.96 | 276.27 | 506.34 | 276.09 | 507.75 | 275.97 | 509.29 | 275.9 | 511.72 | 275.86 |
| 515.11 | 275.82 | 517.81 | 275.91 | 520.1 | 275.91 | 523.02 | 275.95 | 525.2 | 275.92 |
| 526.51 | 275.93 | 527.02 | 275.88 | 528.88 | 275.78 | 531.68 | 275.75 | 535.5 | 275.68 |
| 536.8 | 275.73 | 540.02 | 275.8 | 542.98 | 275.75 | 543.39 | 275.67 | 546.95 | 275.08 |
| 548.85 | 274.85 | 551.97 | 274.7 | 555.3 | 274.57 | 558.15 | 274.73 | 560.43 | 274.95 |
| 564.25 | 275.14 | 564.63 | 275.15 | 566.22 | 275.12 | 569 | 275 | 570.57 | 274.96 |
| 571.04 | 274.91 | 573.16 | 274.84 | 576.01 | 274.84 | 578.52 | 274.82 | 579.77 | 274.87 |
| 582.02 | 275.01 | 585 | 275.11 | 588.4 | 275.25 | 589.14 | 275.29 | 591.93 | 275.38 |
| 593 | 275.43 | 596.47 | 275.55 | 600.23 | 275.56 | 603.78 | 275.55 | 604.29 | 275.56 |
| 605.39 | 275.51 | 607.99 | 275.44 | 617.11 | 275.33 | 621.38 | 275.34 | 626.56 | 275.27 |
| 631.09 | 275.45 | 638.59 | 275.73 | 640.17 | 275.84 | 641.31 | 275.9 | 642.17 | 275.9 |
| 645.21 | 275.84 | 647.62 | 275.83 | 649.93 | 275.84 | 653.15 | 275.8 | 656.65 | 275.8 |
| 657.99 | 275.83 | 660.5 | 275.94 | 668.25 | 276.15 | 671.89 | 276.24 | 677.49 | 276.41 |
| 679.88 | 276.49 | 688.53 | 276.84 | 691.38 | 277 | 695.11 | 277.08 | 701.4 | 277.18 |
| 706.09 | 277.07 | 707.15 | 277.07 | 712.3 | 276.89 | 714.05 | 276.85 | 718.93 | 276.97 |
| 720.27 | 277.04 | 723.75 | 277.16 | 727.24 | 277.22 | 728.5 | 277.26 | 730.32 | 277.4 |
| 734.08 | 277.52 | 735.28 | 277.54 | 739.04 | 277.55 | 740.98 | 277.49 | 742.81 | 277.41 |
| 744.92 | 277.35 | 748.25 | 277.21 | 750.58 | 277.03 | 751.85 | 277.02 | 753.76 | 277.04 |
| 755.69 | 277.04 | 760.89 | 277.23 | 764.31 | 277.4 | 765.41 | 277.47 | 766.58 | 277.5 |
| 772.09 | 277.48 | 772.82 | 277.43 | 776.06 | 277.26 | 776.53 | 277.25 | 778.79 | 277.14 |
| 782.87 | 277 | 785.73 | 276.89 | 786.23 | 276.86 | 790.34 | 276.85 | 790.94 | 276.86 |
| 796.33 | 276.87 | 799.46 | 276.93 | 801.02 | 276.98 | 806.02 | 277.06 | 808.71 | 277.14 |
| 812.53 | 277.16 | 816.12 | 277.1 | 816.5 | 277.06 | 820.48 | 276.95 | 822.88 | 277.01 |
| 825.05 | 277.03 | 830.07 | 277.14 | 832.96 | 277.18 | 834.4 | 277.22 | 838.66 | 277.3 |
| 843.23 | 277.36 | 844.84 | 277.33 | 846.62 | 277.28 | 851.44 | 277.08 | 856.59 | 276.92 |
| 859.41 | 276.89 | 861.43 | 276.85 | 861.63 | 276.83 | 866.08 | 276.81 | 868.52 | 276.81 |
| 869.53 | 276.77 | 873.93 | 276.63 | 876.01 | 276.57 | 877.97 | 276.57 | 879.56 | 276.62 |
| 882.56 | 276.66 | 884.82 | 276.75 | 888.86 | 276.97 | 890.98 | 277.16 | 893.28 | 277.49 |
| 893.7 | 277.49 | 897.17 | 277.92 | 899.44 | 278.02 | 900.6 | 278.03 | 902.56 | 278.21 |
| 911.15 | 278.38 | 913.21 | 278.41 | 915.7 | 278.46 | 921.19 | 278.68 | 925.29 | 278.72 |
| 927.13 | 278.7 | 927.69 | 278.66 | 930.49 | 278.62 | 932.91 | 278.69 | 940.61 | 278.94 |
| 943.7 | 278.99 | 946.9 | 279.02 | 951.99 | 279.04 | 955.16 | 279.04 | 956.71 | 279.03 |
| 963.13 | 278.85 | 967.83 | 278.76 | 972.09 | 278.75 | 974.88 | 278.76 | 978.47 | 278.74 |
| 982.99 | 278.69 | 987.47 | 278.54 | 991 | 278.39 | 994.2 | 278.23 | 995.42 | 278.19 |
| 997.8 | 278.08 | 1002.73 | 277.95 | 1004.59 | 277.91 | 1010.39 | 277.86 | 1016.39 | 277.85 |
| 1017.79 | 277.83 | 1021.44 | 277.81 | 1022.11 | 277.77 | 1024.77 | 277.71 | 1029.19 | 277.7 |
| 1030.24 | 277.67 | 1031.5 | 277.67 | 1033.89 | 277.75 | 1038.07 | 277.87 | 1039.56 | 277.89 |
| 1042.96 | 278.03 | 1047.61 | 278.25 | 1050.62 | 278.38 | 1051.08 | 278.43 | 1052.02 | 278.45 |
| 1054.36 | 278.47 | 1057.96 | 278.37 | 1059.41 | 278.2 | 1062.46 | 277.96 | 1065.14 | 277.72 |
| 1070.6 | 277.26 | 1072.41 | 277.06 | 1075.69 | 277.08 | 1076.86 | 277.14 | 1079.24 | 277.23 |
| 1082.45 | 277.38 | 1084.39 | 277.46 | 1086.52 | 277.49 | 1089.62 | 277.46 | 1092.53 | 277.48 |
| 1095.6 | 277.48 | 1096 | 277.52 | 1097.97 | 277.63 | 1101.49 | 277.77 | 1103.46 | 277.82 |
| 1105.26 | 277.82 | 1106.66 | 277.85 | 1108.39 | 277.84 | 1116.09 | 277.7 | 1118.62 | 277.63 |
| 1120.33 | 277.57 | 1121.63 | 277.47 | 1124.16 | 277.38 | 1130.82 | 277.17 | 1135.43 | 277.08 |
| 1138.76 | 276.97 | 1139.52 | 276.97 | 1141.73 | 277.01 | 1142.86 | 277.05 | 1144.46 | 277.17 |
| 1147.12 | 277.33 | 1149.8 | 277.6 | 1151.32 | 277.66 | 1152.27 | 277.66 | 1153.45 | 277.61 |
| 1154.77 | 277.64 | 1154.85 | 277.67 | 1158.94 | 277.76 | 1159.87 | 277.77 | 1162.4 | 277.69 |
| 1165.77 | 277.57 | 1167.03 | 277.55 | 1171.15 | 277.29 | 1175.14 | 277.2 | 1176.42 | 277.16 |
| 1177.71 | 277.15 | 1181.79 | 277.25 | 1182.32 | 277.28 | 1187.89 | 277.46 | 1190.82 | 277.46 |
| 1192.87 | 277.45 | 1193.13 | 277.4 | 1195.14 | 277.33 | 1196.71 | 277.33 | 1199.8 | 277.31 |
| 1201.34 | 277.34 | 1204.15 | 277.49 | 1205.44 | 277.52 | 1207.25 | 277.63 | 1209.2 | 277.71 |
| 1209.81 | 277.72 | 1212.84 | 277.69 | 1216.38 | 277.6 | 1219.17 | 277.52 | 1220.6 | 277.52 |
| 1227.21 | 277.59 | 1229.52 | 277.63 | 1231.14 | 277.67 | 1234.82 | 277.62 | 1237.85 | 277.53 |
| 1238.29 | 277.53 | 1240.26 | 277.45 | 1241.14 | 277.43 | 1242.61 | 277.35 | 1246.86 | 277.24 |
| 1252.94 | 277.11 | 1253.96 | 277.11 | 1257.76 | 277.16 | 1263.01 | 277.36 | 1264.53 | 277.45 |
| 1267.21 | 277.53 | 1267.82 | 277.58 | 1268.95 | 277.61 | 1270.05 | 277.67 | 1271.29 | 277.7 |
| 1273.24 | 277.66 | 1273.57 | 277.6 | 1274.79 | 277.57 | 1278.84 | 277.37 | 1280.22 | 277.25 |
| 1281.27 | 277.27 | 1284.87 | 277.29 | 1289.66 | 277.29 | 1292.02 | 277.31 | 1295.54 | 277.23 |
| 1297.04 | 277.17 | 1300.49 | 277.08 | 1302.19 | 277.05 | 1308.61 | 277.05 | 1313.37 | 276.96 |
| 1316.6 | 276.98 | 1317.98 | 277.07 | 1321.69 | 277.24 | 1324.56 | 277.33 | 1325.28 | 277.32 |
| 1329.22 | 277.21 | 1334.87 | 277 | 1336.16 | 276.94 | 1337.36 | 276.86 | 1343.17 | 276.39 |
| 1345.23 | 276.2 | 1345.72 | 276.11 | 1348.86 | 276.02 | 1349.88 | 276.03 | 1351.99 | 276.11 |
| 1353.4 | 276.13 | 1356.34 | 276.2 | 1360.51 | 276.25 | 1365.35 | 276.2 | 1367.84 | 276.21 |
| 1370.84 | 276.24 | 1376.05 | 276.41 | 1380.52 | 276.52 | 1386.59 | 276.64 | 1393.89 | 276.84 |
| 1400.85 | 277 | 1407.32 | 276.93 | 1409.03 | 276.92 | 1412.75 | 276.93 | 1414.05 | 276.84 |
| 1415.03 | 276.86 | 1417.89 | 276.88 | 1420.16 | 276.88 | 1426.05 | 276.9 | 1428.92 | 276.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1434.68 | 277.33 | 1436.81 | 277.47 | 1440.27 | 277.72 | 1446.4 | 278.46 | 1446.93 | 278.53 |
| 1452.32 | 279.39 | 1456.62 | 280.04 | 1458.9 | 280.73 | 1459.23 | 280.85 | 1461.18 | 281.69 |
| 1462.02 | 282.09 | 1463.99 | 282.92 | 1468.87 | 285.08 | 1469.58 | 285.49 | 1471.64 | 286.77 |
| 1472.5 | 287.34 | 1475.76 | 289.31 | 1477.04 | 290.15 | 1480.76 | 292.69 | 1481.91 | 293.49 |
| 1484.48 | 295.23 | 1485.36 | 295.85 | 1486.94 | 296.92 | 1488.74 | 298.21 | 1489.33 | 298.61 |
| 1490.64 | 299.23 | 1491.2 | 299.46 | 1492.88 | 300.2 | 1494.6 | 300.98 | 1498.58 | 302.7 |
| 1498.93 | 302.84 | 1502.88 | 303.69 | 1508.13 | 304.53 | 1512.51 | 305.29 | 1517.54 | 306.22 |
| 1523.59 | 306.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 453.33 | .04 | 1469.58 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
453.33 1469.58 21.54 19.33 20.13 .1 .3
Right Levee Station=1036.111 Elevation=279.9208

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1173.64*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 300.52 | 1.95 | 300.33 | 6.24 | 299.83 | 9.39 | 299.5 | 14.13 | 299.11 |
| 15.79 | 298.91 | 24.57 | 298.07 | 25.83 | 297.98 | 30.43 | 297.43 | 33.03 | 297.4 |
| 34.97 | 297.26 | 42.16 | 296.64 | 42.78 | 296.62 | 44.64 | 296.75 | 45.9 | 296.78 |
| 46.86 | 296.75 | 47.38 | 296.67 | 50.73 | 296.62 | 58.85 | 296.09 | 59.68 | 296.01 |
| 60.36 | 296.01 | 69.78 | 295.39 | 71.69 | 295.26 | 73.15 | 295.18 | 84.54 | 294.3 |
| 86.55 | 294.11 | 88.18 | 293.99 | 91.63 | 293.68 | 94.63 | 293.51 | 103.27 | 292.91 |
| 122.5 | 291.73 | 126.91 | 291.47 | 132.34 | 291.17 | 133.48 | 291.12 | 139.22 | 290.97 |
| 141.13 | 290.91 | 143.11 | 290.79 | 144.56 | 290.68 | 146.33 | 290.51 | 148.52 | 290.41 |
| 151.96 | 290.17 | 153.28 | 290.04 | 153.73 | 290.02 | 164.15 | 289.4 | 166 | 289.3 |
| 186.75 | 288.2 | 198.94 | 287.33 | 204.62 | 287.01 | 210.2 | 286.68 | 222.6 | 286.07 |
| 226.87 | 285.93 | 233.09 | 285.74 | 236.12 | 285.55 | 237.15 | 285.5 | 246.88 | 285.06 |
| 256.84 | 284.58 | 263.23 | 284.08 | 269.61 | 283.69 | 283.59 | 283.04 | 287.68 | 282.75 |
| 293.1 | 282.38 | 295.1 | 282.35 | 300.01 | 282.2 | 303.39 | 282.03 | 305.33 | 281.95 |
| 308.6 | 281.78 | 309.85 | 281.7 | 320.61 | 281.07 | 324.78 | 280.79 | 328.89 | 280.58 |
| 332.1 | 280.39 | 334 | 280.3 | 338.84 | 280.2 | 348.34 | 279.79 | 350.58 | 279.66 |
| 354.5 | 279.38 | 362.41 | 278.86 | 373.42 | 278.41 | 375.9 | 278.32 | 379.35 | 278.23 |
| 382.13 | 278.14 | 384.4 | 278.05 | 387.45 | 277.85 | 395.61 | 277.3 | 399.93 | 277.03 |
| 400.9 | 276.93 | 401.75 | 276.81 | 406.12 | 276.33 | 406.77 | 276.25 | 407.97 | 276.25 |
| 408.84 | 276.34 | 410.97 | 276.28 | 412.44 | 276.22 | 418.97 | 275.9 | 420.65 | 275.85 |
| 422.98 | 276.02 | 423.59 | 276.15 | 424.97 | 276.31 | 431.61 | 277.02 | 433.61 | 277.14 |
| 435.9 | 277.3 | 437.42 | 277.38 | 440.31 | 277.49 | 444.03 | 277.27 | 446.53 | 277.05 |
| 449.58 | 276.88 | 452.16 | 276.78 | 455.65 | 276.7 | 461.28 | 276.65 | 462.77 | 276.69 |
| 464.88 | 276.79 | 468.71 | 276.64 | 469.58 | 276.63 | 473.36 | 276.55 | 475.73 | 276.59 |
| 477.55 | 276.67 | 479.11 | 276.8 | 480.09 | 276.97 | 481.72 | 277.32 | 483.99 | 277.35 |
| 484.76 | 277.4 | 486.99 | 277.44 | 488.67 | 277.38 | 490.32 | 277.25 | 491.45 | 277.2 |
| 493.27 | 277.21 | 495.45 | 277.19 | 495.7 | 277.16 | 499.15 | 276.57 | 502.03 | 276.19 |
| 503.69 | 275.95 | 505.21 | 275.81 | 506.88 | 275.72 | 513.15 | 275.64 | 516.06 | 275.77 |
| 519.31 | 275.79 | 521.28 | 275.79 | 521.67 | 275.81 | 524.03 | 275.76 | 525.44 | 275.76 |
| 526.8 | 275.65 | 528 | 275.58 | 528.97 | 275.55 | 532.19 | 275.5 | 535.03 | 275.43 |
| 540.01 | 275.58 | 543.2 | 275.55 | 543.64 | 275.45 | 546.1 | 275 | 547.48 | 274.76 |
| 549.53 | 274.5 | 551.91 | 274.38 | 556.48 | 274.2 | 559.01 | 274.33 | 562.03 | 274.6 |
| 565.48 | 274.76 | 566.34 | 274.77 | 569.5 | 274.67 | 570.25 | 274.63 | 571.65 | 274.61 |
| 572.3 | 274.55 | 574.43 | 274.49 | 577.3 | 274.49 | 579.82 | 274.46 | 581.08 | 274.51 |
| 583.34 | 274.65 | 586.33 | 274.75 | 589.75 | 274.89 | 590.49 | 274.93 | 593.3 | 275.02 |
| 594.38 | 275.08 | 597.86 | 275.19 | 601.64 | 275.2 | 605.72 | 275.19 | 609.44 | 275.08 |
| 618.61 | 274.98 | 622.9 | 275 | 628.11 | 274.94 | 629.97 | 275.01 | 631.44 | 275.09 |
| 632.65 | 275.12 | 634.8 | 275.21 | 640.19 | 275.41 | 641.78 | 275.52 | 642.93 | 275.58 |
| 643.79 | 275.58 | 646.85 | 275.53 | 649.28 | 275.53 | 651.59 | 275.55 | 654.83 | 275.52 |
| 658.35 | 275.53 | 659.69 | 275.57 | 662.22 | 275.67 | 670.01 | 275.88 | 673.66 | 275.96 |
| 679.3 | 276.12 | 681.69 | 276.21 | 690.39 | 276.58 | 693.25 | 276.74 | 697 | 276.85 |
| 703.32 | 276.97 | 706.48 | 276.93 | 708.03 | 276.9 | 709.1 | 276.9 | 712.94 | 276.8 |
| 714.28 | 276.75 | 716.04 | 276.72 | 720.95 | 276.86 | 722.29 | 276.94 | 723.18 | 276.96 |
| 725.79 | 277.08 | 730.56 | 277.21 | 732.39 | 277.37 | 736.17 | 277.5 | 737.37 | 277.52 |
| 740.2 | 277.53 | 742 | 277.5 | 744.94 | 277.38 | 747.06 | 277.31 | 749.36 | 277.2 |
| 750.92 | 277.1 | 752.76 | 276.93 | 754.03 | 276.91 | 757.88 | 276.92 | 763.12 | 277.13 |
| 766.55 | 277.32 | 768.3 | 277.43 | 774.37 | 277.41 | 778.37 | 277.15 | 781.1 | 276.99 |
| 787.3 | 276.73 | 788.58 | 276.66 | 792.72 | 276.64 | 793.31 | 276.66 | 798.74 | 276.68 |
| 801.88 | 276.75 | 803.45 | 276.81 | 806.28 | 276.88 | 808.48 | 276.92 | 811.18 | 277.02 |
| 815.02 | 277.05 | 818.62 | 277 | 819 | 276.96 | 821.26 | 276.91 | 823 | 276.85 |
| 825.42 | 276.9 | 827.6 | 276.93 | 831.17 | 277.01 | 835.55 | 277.06 | 841.28 | 277.16 |
| 845.87 | 277.2 | 849.28 | 277.1 | 854.12 | 276.85 | 858.67 | 276.68 | 859.29 | 276.65 |
| 862.13 | 276.61 | 865.21 | 276.53 | 868.83 | 276.51 | 871.29 | 276.51 | 872.3 | 276.47 |
| 876.73 | 276.35 | 878.82 | 276.28 | 880.79 | 276.29 | 881.47 | 276.33 | 885.4 | 276.4 |
| 887.67 | 276.5 | 891.39 | 276.72 | 893.87 | 276.95 | 896.18 | 277.29 | 896.6 | 277.29 |
| 899.31 | 277.64 | 900.34 | 277.76 | 902.36 | 277.89 | 903.53 | 277.93 | 905.5 | 278.16 |
| 914.14 | 278.36 | 916.21 | 278.39 | 918.71 | 278.45 | 923.6 | 278.67 | 925.12 | 278.71 |
| 928.35 | 278.72 | 930.19 | 278.7 | 930.76 | 278.66 | 933.57 | 278.63 | 936 | 278.7 |
| 943.74 | 278.98 | 946.85 | 279.04 | 950.06 | 279.06 | 956.45 | 279.07 | 958.37 | 279.06 |
| 961.1 | 279 | 966.38 | 278.81 | 969.84 | 278.72 | 975.38 | 278.68 | 978.19 | 278.7 |
| 981.79 | 278.68 | 986.34 | 278.61 | 990.84 | 278.43 | 995.23 | 278.19 | 997.61 | 278.04 |
| 1001.22 | 277.85 | 1006.18 | 277.68 | 1008.05 | 277.63 | 1009.09 | 277.63 | 1013.87 | 277.57 |
| 1019.91 | 277.56 | 1021.32 | 277.54 | 1024.98 | 277.53 | 1025.66 | 277.49 | 1028.33 | 277.43 |
| 1033.49 | 277.42 | 1035.1 | 277.4 | 1037.5 | 277.48 | 1040.99 | 277.58 | 1043.19 | 277.61 |
| 1046.03 | 277.73 | 1046.61 | 277.74 | 1051.29 | 277.95 | 1054.31 | 278.07 | 1055.42 | 278.14 |
| 1058.07 | 278.16 | 1061.2 | 278.08 | 1061.87 | 278.05 | 1063.15 | 277.9 | 1066.21 | 277.68 |
| 1068.91 | 277.44 | 1074.39 | 277.01 | 1076.22 | 276.82 | 1079.51 | 276.85 | 1080.69 | 276.93 |
| 1083.08 | 277.04 | 1086.98 | 277.27 | 1088.26 | 277.32 | 1090.39 | 277.36 | 1091.2 | 277.36 |
| 1093.51 | 277.32 | 1096.43 | 277.35 | 1097.25 | 277.34 | 1099.52 | 277.35 | 1101.9 | 277.48 |
| 1105.44 | 277.6 | 1107.42 | 277.64 | 1109.23 | 277.63 | 1110.63 | 277.66 | 1112.38 | 277.65 |
| 1120.11 | 277.49 | 1122.66 | 277.42 | 1124.38 | 277.35 | 1125.68 | 277.25 | 1128.23 | 277.15 |
| 1134.92 | 276.94 | 1139.55 | 276.85 | 1142.9 | 276.75 | 1143.67 | 276.74 | 1145.88 | 276.78 |
| 1147.02 | 276.82 | 1148.63 | 276.93 | 1151.3 | 277.09 | 1154 | 277.36 | 1155.53 | 277.43 |
| 1156.48 | 277.44 | 1157.66 | 277.4 | 1158.99 | 277.43 | 1159.08 | 277.46 | 1164.11 | 277.59 |
| 1170.05 | 277.41 | 1171.61 | 277.37 | 1175.46 | 277.11 | 1180.56 | 276.97 | 1182.04 | 276.94 |
| 1186.15 | 277.02 | 1186.68 | 277.06 | 1192.28 | 277.23 | 1193.27 | 277.24 | 1197.29 | 277.21 |
| 1197.55 | 277.16 | 1199.56 | 277.09 | 1204.24 | 277.05 | 1206.2 | 277.09 | 1209.23 | 277.22 |
| 1209.92 | 277.22 | 1211.73 | 277.32 | 1214.31 | 277.4 | 1217.35 | 277.36 | 1220.91 | 277.27 |
| 1223.71 | 277.19 | 1225.15 | 277.19 | 1229.74 | 277.23 | 1234.12 | 277.3 | 1235.75 | 277.34 |
| 1237 | 277.32 | 1238.58 | 277.32 | 1244.04 | 277.18 | 1245.22 | 277.12 | 1245.8 | 277.12 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1247.28 | 277.05 | 1251.55 | 276.93 | 1254.74 | 276.87 | 1257.66 | 276.8 | 1262.5 | 276.86 |
| 1266.62 | 277.01 | 1269.3 | 277.15 | 1270.94 | 277.19 | 1273.75 | 277.31 | 1274.85 | 277.38 |
| 1276.11 | 277.41 | 1278.07 | 277.39 | 1278.39 | 277.34 | 1279.34 | 277.33 | 1283.04 | 277.18 |
| 1283.69 | 277.17 | 1285.07 | 277.06 | 1286.13 | 277.1 | 1288.05 | 277.12 | 1294.56 | 277.16 |
| 1295.75 | 277.19 | 1297.8 | 277.18 | 1300.47 | 277.11 | 1301.98 | 277.05 | 1305.45 | 276.95 |
| 1307.16 | 276.91 | 1307.23 | 276.93 | 1309.17 | 276.9 | 1312.21 | 276.9 | 1313.61 | 276.89 |
| 1318.39 | 276.79 | 1321.64 | 276.8 | 1323.03 | 276.88 | 1325.57 | 276.97 | 1326.75 | 277.03 |
| 1329.65 | 277.11 | 1330.36 | 277.1 | 1334.33 | 276.97 | 1340.01 | 276.74 | 1342.51 | 276.59 |
| 1348.35 | 276.11 | 1349.96 | 275.97 | 1350.91 | 275.83 | 1354.06 | 275.74 | 1355.09 | 275.75 |
| 1357.21 | 275.82 | 1358.63 | 275.84 | 1361.58 | 275.91 | 1365.78 | 275.95 | 1370 | 275.9 |
| 1375.36 | 275.92 | 1381.4 | 276.1 | 1385.88 | 276.21 | 1391.98 | 276.33 | 1399.33 | 276.52 |
| 1406.32 | 276.68 | 1412.82 | 276.61 | 1414.54 | 276.6 | 1418.28 | 276.63 | 1419.58 | 276.55 |
| 1423.44 | 276.6 | 1425.73 | 276.6 | 1429.47 | 276.62 | 1434.53 | 276.61 | 1438.66 | 276.9 |
| 1440.32 | 277.03 | 1442.46 | 277.15 | 1444.63 | 277.32 | 1445.94 | 277.4 | 1452.63 | 278.14 |
| 1457.08 | 278.81 | 1462.37 | 279.55 | 1464.66 | 280.2 | 1465 | 280.31 | 1466.96 | 281.11 |
| 1467.8 | 281.49 | 1469.78 | 282.29 | 1474.68 | 284.34 | 1475.4 | 284.74 | 1477.19 | 285.81 |
| 1478.27 | 286.51 | 1481.48 | 288.38 | 1482.74 | 289.19 | 1486.19 | 291.47 | 1488.18 | 292.81 |
| 1488.62 | 293.08 | 1490.93 | 294.63 | 1492.49 | 295.65 | 1494.85 | 297.27 | 1496.14 | 297.86 |
| 1496.69 | 298.07 | 1498.34 | 298.78 | 1500.04 | 299.53 | 1503.96 | 301.17 | 1504.3 | 301.3 |
| 1508.19 | 302.11 | 1509.11 | 302.26 | 1513.36 | 302.92 | 1517.68 | 303.64 | 1522.62 | 304.53 |
| 1528.58 | 304.48 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 446.53 | .04 | 1475.4 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 446.53 | 1475.4 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1035.133 Elevation=279.9335

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1154.31*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 299.68 | 1.92 | 299.49 | 6.14 | 298.99 | 9.24 | 298.67 | 13.91 | 298.28 |
| 15.55 | 298.09 | 17.3 | 297.93 | 24.2 | 297.27 | 25.44 | 297.17 | 29.97 | 296.64 |
| 32.52 | 296.6 | 34.44 | 296.46 | 41.85 | 295.83 | 43.96 | 295.96 | 45.2 | 295.99 |
| 46.15 | 295.95 | 46.66 | 295.88 | 49.96 | 295.83 | 57.96 | 295.31 | 58.77 | 295.23 |
| 59.44 | 295.23 | 68.72 | 294.62 | 72.04 | 294.41 | 83.25 | 293.56 | 85.24 | 293.37 |
| 86.84 | 293.26 | 90.23 | 292.96 | 93.19 | 292.8 | 101.7 | 292.21 | 102.82 | 292.14 |
| 120.63 | 291.07 | 121.19 | 291.03 | 124.98 | 290.82 | 131.45 | 290.49 | 137.1 | 290.35 |
| 138.98 | 290.29 | 142.36 | 290.07 | 144.1 | 289.9 | 146.26 | 289.81 | 149.64 | 289.57 |
| 151.39 | 289.43 | 161.65 | 288.81 | 163.47 | 288.71 | 183.91 | 287.64 | 195.91 | 286.8 |
| 201.51 | 286.49 | 207 | 286.16 | 219.21 | 285.56 | 223.42 | 285.42 | 229.55 | 285.23 |
| 232.53 | 285.05 | 233.55 | 285 | 243.12 | 284.57 | 252.93 | 284.1 | 259.22 | 283.61 |
| 265.5 | 283.22 | 279.28 | 282.57 | 283.3 | 282.28 | 288.64 | 281.92 | 290.61 | 281.89 |
| 295.45 | 281.74 | 298.77 | 281.57 | 300.68 | 281.49 | 303.9 | 281.32 | 305.14 | 281.24 |
| 315.73 | 280.62 | 320.58 | 280.3 | 323.88 | 280.14 | 327.05 | 279.94 | 328.91 | 279.85 |
| 333.41 | 279.75 | 343.03 | 279.34 | 345.24 | 279.21 | 351.91 | 278.75 | 356.9 | 278.44 |
| 370.18 | 277.9 | 373.58 | 277.83 | 376.32 | 277.75 | 378.55 | 277.66 | 380.41 | 277.55 |
| 381.56 | 277.46 | 389.59 | 276.92 | 393.13 | 276.7 | 394.79 | 276.55 | 395.64 | 276.44 |
| 400.58 | 275.9 | 401.76 | 275.9 | 402.62 | 275.99 | 404.71 | 275.93 | 406.16 | 275.87 |
| 410.83 | 275.65 | 411.42 | 275.61 | 414.25 | 275.51 | 416.54 | 275.68 | 417.14 | 275.79 |
| 418.51 | 275.94 | 425.04 | 276.62 | 427.02 | 276.74 | 429.27 | 276.9 | 430.76 | 276.97 |
| 433.61 | 277.08 | 437.28 | 276.86 | 439.74 | 276.66 | 443.01 | 276.5 | 446.35 | 276.42 |
| 448.86 | 276.4 | 455.56 | 276.41 | 457.15 | 276.46 | 459.41 | 276.61 | 463.53 | 276.47 |
| 468.51 | 276.4 | 470.39 | 276.45 | 473.01 | 276.59 | 474.38 | 276.72 | 475.73 | 276.97 |
| 477.48 | 277.4 | 479.92 | 277.45 | 480.74 | 277.5 | 482.17 | 277.54 | 483.67 | 277.55 |
| 484.93 | 277.48 | 486.7 | 277.33 | 487.91 | 277.28 | 489.87 | 277.3 | 492.21 | 277.27 |
| 492.47 | 277.24 | 496.18 | 276.54 | 499.26 | 276.09 | 501.04 | 275.81 | 502.67 | 275.64 |
| 504.46 | 275.54 | 511.19 | 275.47 | 513.11 | 275.59 | 514.31 | 275.63 | 516.96 | 275.66 |
| 519.91 | 275.65 | 520.33 | 275.67 | 522.86 | 275.61 | 524.37 | 275.6 | 524.97 | 275.53 |
| 527.11 | 275.37 | 528.16 | 275.33 | 531.61 | 275.27 | 534.2 | 275.19 | 535.82 | 275.21 |
| 539.99 | 275.36 | 543.42 | 275.35 | 543.89 | 275.23 | 548.01 | 274.44 | 550.21 | 274.14 |
| 553.81 | 273.97 | 556.34 | 273.89 | 557.66 | 273.83 | 560.2 | 273.96 | 563.24 | 274.22 |
| 566.71 | 274.38 | 568.7 | 274.37 | 571.5 | 274.27 | 573.09 | 274.24 | 573.56 | 274.19 |
| 575.71 | 274.13 | 578.58 | 274.13 | 581.12 | 274.11 | 582.76 | 274.17 | 584.66 | 274.29 |
| 587.66 | 274.38 | 588.55 | 274.43 | 591.84 | 274.57 | 594.67 | 274.66 | 595.75 | 274.72 |
| 599.26 | 274.83 | 603.05 | 274.84 | 607.15 | 274.83 | 608.27 | 274.79 | 610.89 | 274.73 |
| 620.1 | 274.64 | 624.41 | 274.66 | 629.65 | 274.61 | 631.07 | 274.65 | 633 | 274.76 |
| 634.22 | 274.79 | 639.14 | 274.99 | 641.66 | 275.1 | 644.55 | 275.26 | 645.42 | 275.26 |
| 648.49 | 275.22 | 650.93 | 275.23 | 653.25 | 275.26 | 656.51 | 275.25 | 660.05 | 275.27 |
| 661.4 | 275.31 | 663.93 | 275.41 | 669.22 | 275.54 | 675.44 | 275.68 | 681.1 | 275.84 |
| 683.51 | 275.93 | 692.25 | 276.31 | 695.12 | 276.49 | 698.89 | 276.62 | 705.25 | 276.77 |
| 706.41 | 276.75 | 708.42 | 276.75 | 709.98 | 276.72 | 711.82 | 276.72 | 716.26 | 276.62 |
| 718.02 | 276.59 | 722.52 | 276.73 | 727.83 | 277.01 | 731.35 | 277.11 | 732.62 | 277.17 |
| 734.18 | 277.31 | 735.1 | 277.36 | 738.26 | 277.48 | 741.56 | 277.5 | 743.27 | 277.5 |
| 745.22 | 277.43 | 749.2 | 277.27 | 751.51 | 277.15 | 753.08 | 277.03 | 754.93 | 276.83 |
| 756.21 | 276.81 | 760.08 | 276.81 | 761.75 | 276.87 | 765.34 | 277.03 | 770.55 | 277.36 |
| 776.65 | 277.34 | 780.67 | 277.03 | 783.42 | 276.84 | 787.19 | 276.66 | 787.54 | 276.63 |
| 790.43 | 276.49 | 790.94 | 276.45 | 795.09 | 276.44 | 795.69 | 276.46 | 801.14 | 276.48 |
| 804.3 | 276.58 | 805.88 | 276.65 | 810.93 | 276.79 | 813.65 | 276.9 | 814.78 | 276.92 |
| 818.45 | 276.93 | 821.13 | 276.9 | 821.51 | 276.86 | 823.77 | 276.81 | 825.53 | 276.75 |
| 830.15 | 276.82 | 833.74 | 276.9 | 838.14 | 276.94 | 839.59 | 276.97 | 843.9 | 277.02 |
| 848.51 | 277.04 | 851.93 | 276.92 | 856.81 | 276.62 | 861.38 | 276.42 | 862 | 276.38 |
| 864.86 | 276.33 | 867.95 | 276.24 | 874.06 | 276.21 | 881.63 | 276 | 883.61 | 276.01 |
| 885.21 | 276.08 | 888.25 | 276.14 | 890.52 | 276.26 | 894.26 | 276.49 | 896.75 | 276.74 |
| 899.07 | 277.09 | 899.49 | 277.1 | 903.25 | 277.59 | 904.77 | 277.72 | 906.46 | 277.84 |
| 908.44 | 278.1 | 917.12 | 278.34 | 919.2 | 278.37 | 921.72 | 278.44 | 926.63 | 278.69 |
| 928.16 | 278.73 | 931.41 | 278.73 | 933.26 | 278.71 | 933.83 | 278.67 | 936.65 | 278.64 |
| 939.1 | 278.72 | 946.88 | 279.03 | 951.02 | 279.1 | 953.23 | 279.11 | 958.37 | 279.1 |
| 961.58 | 279.07 | 964.33 | 279 | 969.63 | 278.77 | 973.1 | 278.67 | 974.38 | 278.65 |
| 978.68 | 278.62 | 981.5 | 278.64 | 985.12 | 278.61 | 989.69 | 278.54 | 994.22 | 278.31 |
| 997.78 | 278.08 | 1001.01 | 277.85 | 1004.65 | 277.62 | 1009.63 | 277.42 | 1012.34 | 277.34 |
| 1012.56 | 277.36 | 1017.36 | 277.28 | 1023.43 | 277.27 | 1028.79 | 277.24 | 1029.21 | 277.21 |
| 1031.89 | 277.15 | 1037.08 | 277.15 | 1037.42 | 277.12 | 1038.7 | 277.13 | 1041.11 | 277.21 |
| 1045.32 | 277.32 | 1046.83 | 277.33 | 1050.26 | 277.46 | 1056.65 | 277.72 | 1058.01 | 277.76 |
| 1058.47 | 277.81 | 1061.78 | 277.85 | 1064.93 | 277.77 | 1065.61 | 277.74 | 1066.88 | 277.6 |
| 1069.97 | 277.39 | 1072.67 | 277.17 | 1078.18 | 276.77 | 1080.02 | 276.59 | 1083.33 | 276.62 |
| 1084.52 | 276.71 | 1086.91 | 276.85 | 1090.16 | 277.08 | 1092.12 | 277.19 | 1095.08 | 277.23 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1097.4 | 277.18 | 1100.34 | 277.22 | 1103.44 | 277.22 | 1105.84 | 277.33 | 1111.38 | 277.46 |
| 1113.2 | 277.45 | 1114.61 | 277.47 | 1116.36 | 277.45 | 1124.14 | 277.28 | 1126.69 | 277.21 |
| 1128.43 | 277.14 | 1129.74 | 277.03 | 1132.29 | 276.93 | 1139.02 | 276.7 | 1143.68 | 276.61 |
| 1147.04 | 276.52 | 1150.04 | 276.55 | 1151.18 | 276.59 | 1152.8 | 276.7 | 1155.48 | 276.85 |
| 1158.67 | 277.16 | 1159.73 | 277.2 | 1161.29 | 277.21 | 1161.5 | 277.18 | 1162.9 | 277.21 |
| 1163.3 | 277.25 | 1167.43 | 277.38 | 1168.36 | 277.4 | 1169.5 | 277.38 | 1174.32 | 277.24 |
| 1175.9 | 277.21 | 1179.76 | 276.93 | 1183.78 | 276.8 | 1185.08 | 276.74 | 1186.38 | 276.73 |
| 1190.51 | 276.8 | 1192.51 | 276.89 | 1193.68 | 276.91 | 1196.67 | 277 | 1199.62 | 277 |
| 1201.7 | 276.97 | 1202.36 | 276.9 | 1204.7 | 276.83 | 1206.87 | 276.82 | 1207.97 | 276.79 |
| 1209.84 | 276.8 | 1211.46 | 276.86 | 1213.7 | 276.92 | 1214.39 | 276.92 | 1216.22 | 277.01 |
| 1218.19 | 277.08 | 1221.87 | 277.04 | 1224.61 | 276.97 | 1228.26 | 276.86 | 1236.39 | 276.92 |
| 1238.72 | 276.96 | 1240.36 | 277.01 | 1241.61 | 276.99 | 1244.07 | 276.99 | 1246.01 | 276.93 |
| 1247.58 | 276.92 | 1249.87 | 276.82 | 1250.46 | 276.82 | 1251.94 | 276.74 | 1256.23 | 276.62 |
| 1260.62 | 276.54 | 1262.38 | 276.5 | 1263.4 | 276.5 | 1267.25 | 276.55 | 1272.55 | 276.76 |
| 1274.08 | 276.85 | 1275.72 | 276.89 | 1278.54 | 277.01 | 1279.66 | 277.08 | 1280.92 | 277.12 |
| 1282.89 | 277.12 | 1283.22 | 277.07 | 1285.54 | 277.04 | 1287.89 | 276.96 | 1288.54 | 276.96 |
| 1289.93 | 276.87 | 1291 | 276.92 | 1292.92 | 276.96 | 1299.47 | 277.03 | 1300.66 | 277.07 |
| 1302.72 | 277.06 | 1305.4 | 276.99 | 1306.92 | 276.92 | 1310.41 | 276.82 | 1315.09 | 276.75 |
| 1318.61 | 276.73 | 1323.42 | 276.62 | 1326.54 | 276.62 | 1328.08 | 276.69 | 1330.63 | 276.76 |
| 1331.82 | 276.81 | 1334.73 | 276.88 | 1335.45 | 276.87 | 1339.91 | 276.72 | 1345.14 | 276.48 |
| 1347.66 | 276.32 | 1353.52 | 275.84 | 1355.61 | 275.65 | 1356.1 | 275.56 | 1359.27 | 275.46 |
| 1360.3 | 275.47 | 1362.43 | 275.53 | 1366.82 | 275.61 | 1371.04 | 275.65 | 1372.51 | 275.62 |
| 1375.29 | 275.6 | 1378.44 | 275.6 | 1380.68 | 275.62 | 1386.74 | 275.8 | 1391.25 | 275.9 |
| 1395.35 | 275.97 | 1398.43 | 276.04 | 1404.76 | 276.2 | 1411.79 | 276.36 | 1418.32 | 276.3 |
| 1420.05 | 276.29 | 1423.81 | 276.33 | 1425.12 | 276.27 | 1429 | 276.32 | 1431.3 | 276.32 |
| 1435.06 | 276.34 | 1440.14 | 276.33 | 1441.4 | 276.42 | 1444.29 | 276.6 | 1445.96 | 276.73 |
| 1448.11 | 276.84 | 1450.29 | 277 | 1451.61 | 277.08 | 1458.33 | 277.76 | 1462.8 | 278.38 |
| 1468.12 | 279.06 | 1470.42 | 279.66 | 1470.76 | 279.77 | 1472.73 | 280.54 | 1473.58 | 280.9 |
| 1475.57 | 281.65 | 1479.09 | 283.06 | 1480.5 | 283.61 | 1481.22 | 283.99 | 1482.98 | 285.01 |
| 1484.04 | 285.67 | 1486.52 | 287.09 | 1487.2 | 287.46 | 1488.45 | 288.23 | 1492.06 | 290.54 |
| 1493.8 | 291.67 | 1495.66 | 292.84 | 1498.04 | 294.38 | 1500.37 | 295.92 | 1501.64 | 296.48 |
| 1503.8 | 297.36 | 1505.47 | 298.07 | 1507.75 | 299 | 1509.67 | 299.76 | 1513.5 | 300.53 |
| 1515.69 | 300.87 | 1518.59 | 301.3 | 1522.84 | 301.99 | 1524.3 | 302.25 | 1527.71 | 302.83 |
| 1533.58 | 302.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 439.74 | .04 | 1481.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 439.74 | 1481.22 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1034.156 Elevation=279.9462

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1134.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 298.83 | 1.89 | 298.65 | 6.05 | 298.16 | 9.1 | 297.84 | 13.7 | 297.46 |
| 15.31 | 297.27 | 23.82 | 296.46 | 25.05 | 296.37 | 29.51 | 295.84 | 32.02 | 295.8 |
| 33.9 | 295.66 | 36.45 | 295.44 | 39.07 | 295.23 | 40.88 | 295.07 | 41.47 | 295.05 |
| 43.28 | 295.16 | 44.5 | 295.19 | 45.44 | 295.15 | 45.94 | 295.08 | 49.19 | 295.03 |
| 57.06 | 294.53 | 57.86 | 294.45 | 58.52 | 294.45 | 69.5 | 293.73 | 70.93 | 293.65 |
| 81.96 | 292.82 | 83.92 | 292.64 | 85.5 | 292.53 | 88.84 | 292.24 | 91.75 | 292.08 |
| 100.13 | 291.51 | 101.23 | 291.45 | 118.77 | 290.42 | 119.32 | 290.38 | 123.04 | 290.17 |
| 129.42 | 289.86 | 134.99 | 289.73 | 136.84 | 289.67 | 138.75 | 289.56 | 141.87 | 289.3 |
| 144 | 289.2 | 147.33 | 288.98 | 149.05 | 288.84 | 159.15 | 288.22 | 160.95 | 288.13 |
| 181.07 | 287.08 | 192.89 | 286.27 | 198.4 | 285.96 | 203.8 | 285.65 | 215.83 | 285.05 |
| 219.97 | 284.91 | 226 | 284.73 | 228.94 | 284.55 | 229.94 | 284.5 | 239.36 | 284.08 |
| 249.02 | 283.62 | 255.22 | 283.14 | 261.4 | 282.76 | 274.96 | 282.11 | 278.92 | 281.82 |
| 284.18 | 281.47 | 286.11 | 281.43 | 290.88 | 281.27 | 296.03 | 281.03 | 299.21 | 280.86 |
| 300.42 | 280.78 | 310.85 | 280.18 | 315.63 | 279.86 | 318.88 | 279.7 | 322 | 279.5 |
| 323.83 | 279.4 | 328.52 | 279.29 | 335.9 | 278.96 | 337.73 | 278.89 | 339.91 | 278.77 |
| 346.48 | 278.31 | 351.38 | 278.01 | 362.05 | 277.58 | 364.46 | 277.49 | 367.81 | 277.43 |
| 370.5 | 277.36 | 372.7 | 277.27 | 374.53 | 277.16 | 375.66 | 277.07 | 383.42 | 276.54 |
| 383.57 | 276.54 | 387.06 | 276.31 | 388.69 | 276.17 | 389.52 | 276.07 | 394.39 | 275.55 |
| 395.55 | 275.55 | 396.4 | 275.63 | 398.46 | 275.58 | 399.88 | 275.52 | 405.97 | 275.23 |
| 407.85 | 275.17 | 410.1 | 275.33 | 410.7 | 275.44 | 412.04 | 275.58 | 418.47 | 276.22 |
| 420.42 | 276.33 | 422.63 | 276.49 | 426.06 | 276.65 | 426.91 | 276.67 | 430.52 | 276.46 |
| 432.94 | 276.27 | 434.14 | 276.21 | 436.43 | 276.13 | 439.39 | 276.08 | 442.68 | 276.08 |
| 446.46 | 276.14 | 449.83 | 276.16 | 451.54 | 276.24 | 453.95 | 276.43 | 458.34 | 276.29 |
| 463.67 | 276.25 | 465.67 | 276.33 | 468.46 | 276.51 | 469.93 | 276.67 | 471.37 | 276.97 |
| 473.24 | 277.48 | 475.84 | 277.55 | 476.52 | 277.6 | 477.47 | 277.6 | 478.01 | 277.64 |
| 479.85 | 277.66 | 481.19 | 277.58 | 483.08 | 277.42 | 484.37 | 277.36 | 486.46 | 277.38 |
| 488.96 | 277.36 | 489.57 | 277.26 | 493.2 | 276.51 | 496.7 | 275.96 | 498.39 | 275.67 |
| 500.13 | 275.48 | 502.04 | 275.37 | 505.04 | 275.33 | 509.23 | 275.3 | 511.28 | 275.44 |
| 513.76 | 275.51 | 515.39 | 275.53 | 517.31 | 275.53 | 518.54 | 275.51 | 518.99 | 275.54 |
| 521.68 | 275.45 | 523.3 | 275.44 | 523.94 | 275.35 | 526.23 | 275.16 | 529.24 | 275.07 |
| 531.03 | 275.04 | 534.41 | 274.94 | 538.93 | 275.09 | 539.98 | 275.15 | 540.79 | 275.14 |
| 543.64 | 275.15 | 544.14 | 275.01 | 546.96 | 274.43 | 548.54 | 274.12 | 550.88 | 273.78 |
| 553.62 | 273.65 | 557.43 | 273.52 | 558.85 | 273.46 | 559.83 | 273.53 | 561.4 | 273.59 |
| 564.06 | 273.82 | 567.93 | 274.01 | 569.93 | 274 | 572.75 | 273.9 | 574.35 | 273.88 |
| 574.82 | 273.83 | 576.98 | 273.77 | 579.87 | 273.77 | 582.42 | 273.75 | 584.07 | 273.81 |
| 585.97 | 273.93 | 589 | 274.02 | 589.89 | 274.07 | 593.2 | 274.21 | 596.04 | 274.29 |
| 597.13 | 274.36 | 600.65 | 274.46 | 604.46 | 274.47 | 608.58 | 274.47 | 609.7 | 274.43 |
| 612.34 | 274.38 | 621.6 | 274.3 | 625.93 | 274.32 | 631.19 | 274.28 | 632.62 | 274.32 |
| 634.56 | 274.44 | 635.79 | 274.47 | 637.24 | 274.54 | 640.73 | 274.66 | 643.26 | 274.78 |
| 646.17 | 274.94 | 650.13 | 274.91 | 651.8 | 274.92 | 654.91 | 274.97 | 658.19 | 274.97 |
| 661.74 | 275.01 | 663.1 | 275.04 | 665.65 | 275.14 | 667.12 | 275.18 | 673.52 | 275.33 |
| 677.21 | 275.4 | 682.9 | 275.55 | 685.32 | 275.64 | 694.11 | 276.05 | 696.99 | 276.24 |
| 698.87 | 276.32 | 700.78 | 276.38 | 707.17 | 276.56 | 708.34 | 276.55 | 711.93 | 276.55 |
| 712.78 | 276.57 | 715.95 | 276.51 | 716.89 | 276.51 | 720.01 | 276.46 | 724.97 | 276.64 |
| 726.33 | 276.73 | 729.86 | 276.93 | 733.4 | 277.06 | 734.68 | 277.12 | 736.25 | 277.27 |
| 737.17 | 277.32 | 740.35 | 277.45 | 741.56 | 277.47 | 744.41 | 277.48 | 745.39 | 277.47 |
| 747.35 | 277.4 | 749.21 | 277.31 | 751.35 | 277.23 | 753.67 | 277.09 | 756.23 | 276.85 |
| 757.1 | 276.73 | 758.39 | 276.71 | 762.28 | 276.69 | 767.57 | 276.93 | 772.8 | 277.29 |
| 778.93 | 277.28 | 779.67 | 277.2 | 782.97 | 276.91 | 785.73 | 276.7 | 791.99 | 276.34 |
| 793.29 | 276.24 | 797.46 | 276.23 | 798.07 | 276.26 | 803.55 | 276.29 | 806.72 | 276.4 |
| 808.3 | 276.48 | 813.38 | 276.65 | 816.11 | 276.78 | 817.25 | 276.8 | 820.95 | 276.83 |
| 823.63 | 276.79 | 828.05 | 276.65 | 830.5 | 276.69 | 832.7 | 276.71 | 836.31 | 276.79 |
| 840.45 | 276.82 | 846.52 | 276.88 | 849.5 | 276.89 | 851.15 | 276.87 | 852.78 | 276.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 854.59 | 276.74 | 859.49 | 276.38 | 864.71 | 276.12 | 868.47 | 276.03 | 869.84 | 275.96 |
| 875.83 | 275.91 | 876.83 | 275.92 | 882.32 | 275.77 | 884.43 | 275.72 | 886.42 | 275.72 |
| 887.11 | 275.78 | 891.09 | 275.88 | 893.38 | 276.01 | 897.13 | 276.27 | 899.64 | 276.53 |
| 901.97 | 276.89 | 902.39 | 276.9 | 906.17 | 277.42 | 909.4 | 277.74 | 911.39 | 278.05 |
| 920.11 | 278.31 | 924.73 | 278.43 | 926.65 | 278.54 | 930.3 | 278.73 | 931.21 | 278.75 |
| 936.33 | 278.71 | 936.9 | 278.67 | 939.74 | 278.65 | 942.19 | 278.74 | 950.01 | 279.08 |
| 954.18 | 279.15 | 956.4 | 279.15 | 961.57 | 279.13 | 964.79 | 279.09 | 967.55 | 279 |
| 972.88 | 278.73 | 976.37 | 278.61 | 977.65 | 278.59 | 981.97 | 278.56 | 984.81 | 278.58 |
| 988.45 | 278.55 | 993.04 | 278.46 | 997.59 | 278.2 | 1001.17 | 277.93 | 1004.42 | 277.66 |
| 1008.07 | 277.39 | 1014 | 277.11 | 1016.02 | 277.08 | 1020.85 | 276.99 | 1026.94 | 276.98 |
| 1032.07 | 276.96 | 1032.76 | 276.93 | 1035.45 | 276.88 | 1039.12 | 276.87 | 1039.94 | 276.88 |
| 1041.01 | 276.85 | 1042.29 | 276.86 | 1044.72 | 276.94 | 1048.24 | 277.03 | 1050.47 | 277.06 |
| 1053.92 | 277.17 | 1058.65 | 277.36 | 1061.7 | 277.45 | 1062.17 | 277.5 | 1065.49 | 277.53 |
| 1068.66 | 277.46 | 1069.34 | 277.43 | 1070.62 | 277.3 | 1073.83 | 277.1 | 1074.74 | 277.01 |
| 1076.44 | 276.89 | 1081.98 | 276.52 | 1083.82 | 276.35 | 1087.15 | 276.38 | 1088.34 | 276.5 |
| 1090.75 | 276.65 | 1094.01 | 276.92 | 1096.41 | 277.07 | 1098.14 | 277.11 | 1101.29 | 277.05 |
| 1104.24 | 277.1 | 1105.06 | 277.08 | 1107.37 | 277.09 | 1107.77 | 277.12 | 1109.77 | 277.18 |
| 1115.34 | 277.28 | 1117.17 | 277.26 | 1118.59 | 277.28 | 1120.35 | 277.25 | 1124.88 | 277.15 |
| 1130.73 | 277 | 1132.47 | 276.92 | 1133.79 | 276.82 | 1136.36 | 276.71 | 1143.12 | 276.47 |
| 1147.8 | 276.38 | 1151.18 | 276.29 | 1151.95 | 276.29 | 1155.34 | 276.36 | 1159.67 | 276.61 |
| 1162.39 | 276.89 | 1163.93 | 276.97 | 1165.5 | 276.99 | 1166.09 | 276.97 | 1167.52 | 277.04 |
| 1172.6 | 277.22 | 1178.6 | 277.08 | 1180.18 | 277.05 | 1184.07 | 276.75 | 1188.11 | 276.6 |
| 1189.41 | 276.53 | 1190.72 | 276.51 | 1194.87 | 276.57 | 1196.88 | 276.66 | 1201.06 | 276.77 |
| 1204.03 | 276.77 | 1206.12 | 276.73 | 1206.78 | 276.66 | 1208.41 | 276.6 | 1210.63 | 276.56 |
| 1213.14 | 276.53 | 1214.71 | 276.54 | 1215.92 | 276.58 | 1218.87 | 276.63 | 1222.69 | 276.76 |
| 1226.38 | 276.71 | 1229.14 | 276.64 | 1232.81 | 276.53 | 1240.97 | 276.59 | 1243.32 | 276.63 |
| 1244.25 | 276.67 | 1247.13 | 276.66 | 1248.7 | 276.67 | 1250.65 | 276.62 | 1252.23 | 276.61 |
| 1253.34 | 276.58 | 1254.53 | 276.51 | 1255.12 | 276.51 | 1256.61 | 276.44 | 1260.92 | 276.31 |
| 1264.15 | 276.26 | 1267.1 | 276.19 | 1268.13 | 276.19 | 1271.99 | 276.25 | 1276.15 | 276.4 |
| 1278.86 | 276.55 | 1280.51 | 276.59 | 1283.34 | 276.71 | 1284.46 | 276.79 | 1285.73 | 276.84 |
| 1287.71 | 276.85 | 1288.04 | 276.81 | 1288.99 | 276.82 | 1293.39 | 276.75 | 1294.78 | 276.69 |
| 1295.86 | 276.74 | 1297.79 | 276.79 | 1303.67 | 276.88 | 1305.58 | 276.95 | 1306.77 | 276.96 |
| 1309.1 | 276.91 | 1311.86 | 276.8 | 1317.09 | 276.64 | 1319.13 | 276.61 | 1322.19 | 276.59 |
| 1323.61 | 276.57 | 1328.44 | 276.45 | 1331.58 | 276.44 | 1336.89 | 276.6 | 1339.81 | 276.65 |
| 1340.53 | 276.64 | 1345.01 | 276.48 | 1350.27 | 276.22 | 1352.8 | 276.05 | 1360.33 | 275.42 |
| 1361.29 | 275.28 | 1364.47 | 275.18 | 1372.07 | 275.32 | 1376.3 | 275.34 | 1380.57 | 275.3 |
| 1383.74 | 275.3 | 1386.79 | 275.33 | 1392.08 | 275.5 | 1396.61 | 275.59 | 1402.78 | 275.69 |
| 1410.19 | 275.89 | 1417.25 | 276.03 | 1425.55 | 275.97 | 1429.34 | 276.03 | 1430.65 | 275.98 |
| 1434.55 | 276.04 | 1436.86 | 276.03 | 1442.84 | 276.07 | 1445.75 | 276.05 | 1447.02 | 276.14 |
| 1449.92 | 276.3 | 1451.59 | 276.42 | 1453.76 | 276.52 | 1455.95 | 276.69 | 1457.28 | 276.76 |
| 1464.03 | 277.37 | 1469.51 | 278.07 | 1473.87 | 278.57 | 1476.18 | 279.13 | 1478.51 | 279.96 |
| 1479.35 | 280.3 | 1481.35 | 281.02 | 1483.59 | 281.87 | 1486.31 | 282.88 | 1487.03 | 283.24 |
| 1488.77 | 284.21 | 1489.81 | 284.84 | 1492.93 | 286.54 | 1494.15 | 287.27 | 1498.88 | 290.19 |
| 1499.42 | 290.54 | 1501.25 | 291.65 | 1502.08 | 292.18 | 1503.6 | 293.11 | 1505.31 | 294.22 |
| 1505.88 | 294.57 | 1507.13 | 295.11 | 1507.66 | 295.3 | 1510.91 | 296.62 | 1515.04 | 298.23 |
| 1518.81 | 298.96 | 1523.82 | 299.68 | 1528 | 300.33 | 1529.44 | 300.58 | 1532.8 | 301.14 |
| 1538.57 | 301.07 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 432.94 | .04 | 1487.03 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
432.94 1487.03 21.54 19.33 20.13 .1 .3
Right Levee Station=1033.179 Elevation=279.9588

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1115.66*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 297.99 | 1.86 | 297.8 | 5.95 | 297.32 | 8.96 | 297.01 | 13.48 | 296.63 |
| 15.07 | 296.45 | 16.76 | 296.3 | 23.45 | 295.66 | 25.12 | 295.51 | 29.04 | 295.05 |
| 31.52 | 295 | 35.74 | 294.67 | 37.8 | 294.48 | 40.56 | 294.26 | 42.6 | 294.37 |
| 43.8 | 294.39 | 44.72 | 294.36 | 45.22 | 294.29 | 48.41 | 294.23 | 56.17 | 293.75 |
| 56.95 | 293.67 | 57.6 | 293.67 | 68.41 | 292.96 | 69.81 | 292.88 | 80.68 | 292.09 |
| 82.6 | 291.91 | 84.15 | 291.8 | 87.44 | 291.52 | 90.31 | 291.36 | 99.64 | 290.75 |
| 116.91 | 289.76 | 117.45 | 289.72 | 121.11 | 289.53 | 126.3 | 289.27 | 127.39 | 289.23 |
| 132.87 | 289.11 | 134.69 | 289.05 | 136.58 | 288.94 | 137.96 | 288.84 | 139.65 | 288.69 |
| 141.74 | 288.6 | 145.02 | 288.38 | 146.71 | 288.25 | 156.65 | 287.63 | 178.22 | 286.52 |
| 189.86 | 285.74 | 195.28 | 285.44 | 200.6 | 285.13 | 212.44 | 284.55 | 216.52 | 284.41 |
| 222.45 | 284.22 | 226.33 | 284 | 235.61 | 283.59 | 245.11 | 283.13 | 251.21 | 282.67 |
| 257.3 | 282.3 | 270.64 | 281.64 | 274.54 | 281.36 | 279.72 | 281.01 | 281.62 | 280.97 |
| 286.32 | 280.81 | 291.39 | 280.57 | 295.71 | 280.32 | 305.97 | 279.74 | 310.07 | 279.45 |
| 313.87 | 279.26 | 316.94 | 279.05 | 318.75 | 278.96 | 323.37 | 278.84 | 330.63 | 278.51 |
| 332.43 | 278.44 | 334.57 | 278.32 | 341.04 | 277.88 | 345.87 | 277.58 | 356.37 | 277.16 |
| 358.74 | 277.08 | 362.03 | 277.03 | 364.69 | 276.96 | 366.85 | 276.88 | 368.66 | 276.78 |
| 369.76 | 276.68 | 377.4 | 276.16 | 380.98 | 275.93 | 382.59 | 275.79 | 383.41 | 275.69 |
| 388.2 | 275.2 | 389.34 | 275.2 | 390.18 | 275.28 | 392.21 | 275.23 | 399.84 | 274.88 |
| 401.45 | 274.83 | 403.66 | 274.98 | 404.25 | 275.08 | 405.57 | 275.22 | 411.9 | 275.83 |
| 413.82 | 275.93 | 416 | 276.09 | 419.37 | 276.24 | 420.2 | 276.26 | 423.76 | 276.06 |
| 426.15 | 275.88 | 427.42 | 275.82 | 429.86 | 275.75 | 433.65 | 275.73 | 437.25 | 275.78 |
| 440.52 | 275.87 | 444.11 | 275.92 | 445.92 | 276.02 | 448.49 | 276.25 | 453.16 | 276.12 |
| 458.82 | 276.11 | 460.95 | 276.21 | 463.92 | 276.43 | 465.82 | 276.69 | 467.01 | 276.98 |
| 469 | 277.56 | 471.76 | 277.65 | 472.49 | 277.7 | 473.5 | 277.7 | 474.07 | 277.75 |
| 476.02 | 277.77 | 477.45 | 277.69 | 479.46 | 277.5 | 480.84 | 277.44 | 483.06 | 277.47 |
| 485.72 | 277.44 | 486.36 | 277.33 | 488.75 | 276.8 | 490.22 | 276.49 | 493.72 | 275.89 |
| 495.75 | 275.53 | 497.59 | 275.31 | 499.63 | 275.19 | 507.26 | 275.12 | 509.45 | 275.29 |
| 512.08 | 275.37 | 514.76 | 275.41 | 516.68 | 275.37 | 517.64 | 275.4 | 520.51 | 275.29 |
| 522.23 | 275.27 | 522.91 | 275.18 | 525.34 | 274.95 | 526.1 | 274.91 | 528.55 | 274.84 |
| 530.45 | 274.81 | 533.39 | 274.7 | 535.22 | 274.72 | 538 | 274.82 | 539.97 | 274.93 |
| 543.86 | 274.95 | 544.4 | 274.8 | 549.07 | 273.79 | 551.56 | 273.43 | 554.47 | 273.29 |
| 560.03 | 273.1 | 560.47 | 273.11 | 562.93 | 273.25 | 565.66 | 273.47 | 569.16 | 273.63 |
| 570.04 | 273.64 | 575.42 | 273.52 | 576.09 | 273.47 | 578.25 | 273.42 | 581.16 | 273.42 |
| 583.72 | 273.4 | 585.38 | 273.45 | 587.29 | 273.57 | 590.33 | 273.66 | 591.23 | 273.71 |
| 594.55 | 273.85 | 597.41 | 273.93 | 598.5 | 274 | 602.04 | 274.1 | 605.87 | 274.11 |
| 610.01 | 274.11 | 611.14 | 274.07 | 613.78 | 274.03 | 623.09 | 273.96 | 627.45 | 273.98 |
| 632.74 | 273.95 | 634.17 | 273.99 | 636.12 | 274.11 | 637.35 | 274.14 | 638.81 | 274.22 |
| 642.32 | 274.34 | 644.86 | 274.46 | 647.79 | 274.62 | 651.77 | 274.6 | 653.45 | 274.62 |
| 656.58 | 274.68 | 659.87 | 274.69 | 662.59 | 274.74 | 663.44 | 274.74 | 664.8 | 274.78 |
| 667.36 | 274.88 | 672.7 | 275 | 678.98 | 275.12 | 684.7 | 275.27 | 687.13 | 275.36 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 695.96 | 275.78 | 698.87 | 275.99 | 700.76 | 276.08 | 702.67 | 276.15 | 709.09 | 276.35 |
| 710.26 | 276.35 | 712.3 | 276.38 | 714.96 | 276.4 | 717.92 | 276.36 | 722 | 276.33 |
| 726.98 | 276.53 | 728.35 | 276.63 | 731.9 | 276.86 | 735.45 | 277 | 736.74 | 277.08 |
| 738.59 | 277.26 | 742.44 | 277.43 | 746.3 | 277.46 | 748.35 | 277.42 | 753.49 | 277.19 |
| 755.82 | 277.03 | 757.41 | 276.88 | 759.18 | 276.66 | 759.27 | 276.63 | 762.52 | 276.59 |
| 764.48 | 276.58 | 769.79 | 276.83 | 775.05 | 277.22 | 781.21 | 277.21 | 781.95 | 277.13 |
| 787.13 | 276.62 | 788.05 | 276.55 | 791.86 | 276.3 | 794.34 | 276.15 | 795.64 | 276.04 |
| 799.84 | 276.03 | 800.44 | 276.06 | 805.48 | 276.09 | 809.14 | 276.22 | 810.73 | 276.32 |
| 815.84 | 276.51 | 818.58 | 276.66 | 819.73 | 276.69 | 823.44 | 276.72 | 826.13 | 276.69 |
| 830.58 | 276.55 | 832.22 | 276.56 | 838.88 | 276.68 | 843.32 | 276.7 | 844.78 | 276.72 |
| 849.14 | 276.74 | 852.13 | 276.73 | 853.79 | 276.71 | 855.43 | 276.66 | 857.25 | 276.56 |
| 862.17 | 276.15 | 867.42 | 275.85 | 870.3 | 275.78 | 872.57 | 275.67 | 877.11 | 275.62 |
| 879.6 | 275.62 | 885.12 | 275.49 | 887.24 | 275.43 | 889.24 | 275.44 | 890.87 | 275.54 |
| 892.3 | 275.57 | 894.41 | 275.64 | 896.23 | 275.76 | 900.35 | 276.07 | 902.52 | 276.32 |
| 904.86 | 276.69 | 905.29 | 276.71 | 909.09 | 277.25 | 912.33 | 277.64 | 914.33 | 277.99 |
| 923.09 | 278.29 | 925.2 | 278.34 | 927.74 | 278.42 | 929.67 | 278.55 | 933.34 | 278.75 |
| 934.25 | 278.76 | 937.52 | 278.74 | 939.39 | 278.71 | 939.97 | 278.68 | 942.82 | 278.66 |
| 945.29 | 278.76 | 953.15 | 279.13 | 956.3 | 279.18 | 959.56 | 279.2 | 964.76 | 279.16 |
| 968 | 279.1 | 970.77 | 279 | 976.13 | 278.69 | 979.64 | 278.56 | 980.92 | 278.54 |
| 985.27 | 278.5 | 988.12 | 278.53 | 991.77 | 278.49 | 996.39 | 278.38 | 1000.96 | 278.08 |
| 1004.56 | 277.77 | 1007.83 | 277.46 | 1009.07 | 277.37 | 1011.5 | 277.16 | 1017.46 | 276.84 |
| 1019.27 | 276.79 | 1023.48 | 276.73 | 1024.34 | 276.7 | 1030.46 | 276.69 | 1031.9 | 276.67 |
| 1035.62 | 276.68 | 1036.31 | 276.65 | 1039.01 | 276.6 | 1044.25 | 276.6 | 1045.89 | 276.59 |
| 1048.33 | 276.67 | 1051.87 | 276.75 | 1054.1 | 276.78 | 1056.99 | 276.87 | 1062.33 | 277.06 |
| 1065.39 | 277.15 | 1065.86 | 277.19 | 1069.2 | 277.22 | 1073.07 | 277.13 | 1074.36 | 277 |
| 1077.47 | 276.81 | 1078.5 | 276.73 | 1086.09 | 276.25 | 1087.63 | 276.11 | 1090.97 | 276.15 |
| 1092.17 | 276.29 | 1094.59 | 276.46 | 1098.56 | 276.83 | 1100.27 | 276.94 | 1102.02 | 276.98 |
| 1105.18 | 276.91 | 1108.15 | 276.97 | 1108.97 | 276.95 | 1111.29 | 276.96 | 1111.69 | 276.99 |
| 1113.7 | 277.04 | 1119.3 | 277.1 | 1121.14 | 277.07 | 1122.56 | 277.09 | 1124.33 | 277.06 |
| 1126.58 | 276.99 | 1132.19 | 276.86 | 1134.77 | 276.79 | 1136.52 | 276.71 | 1137.84 | 276.6 |
| 1140.42 | 276.48 | 1147.21 | 276.23 | 1151.92 | 276.15 | 1156.1 | 276.06 | 1159.5 | 276.13 |
| 1161.14 | 276.23 | 1163.85 | 276.36 | 1166.58 | 276.65 | 1168 | 276.74 | 1169.1 | 276.77 |
| 1169.93 | 276.75 | 1171.34 | 276.79 | 1171.74 | 276.84 | 1175.91 | 277.01 | 1177.17 | 277.03 |
| 1184.46 | 276.89 | 1188.37 | 276.58 | 1190.87 | 276.46 | 1192.43 | 276.4 | 1193.74 | 276.32 |
| 1195.05 | 276.3 | 1199.22 | 276.35 | 1199.76 | 276.39 | 1205.45 | 276.55 | 1208.43 | 276.54 |
| 1210.53 | 276.49 | 1210.79 | 276.45 | 1212.84 | 276.36 | 1215.07 | 276.31 | 1217.59 | 276.27 |
| 1219.58 | 276.27 | 1220.28 | 276.3 | 1222.28 | 276.31 | 1227.18 | 276.44 | 1227.81 | 276.44 |
| 1231.49 | 276.37 | 1234.51 | 276.29 | 1237.01 | 276.21 | 1243.48 | 276.23 | 1245.56 | 276.25 |
| 1247.92 | 276.29 | 1249.48 | 276.34 | 1251.75 | 276.33 | 1252.45 | 276.36 | 1255.28 | 276.31 |
| 1256.87 | 276.3 | 1259.78 | 276.21 | 1261.28 | 276.13 | 1265.61 | 276 | 1270.04 | 275.93 |
| 1270.68 | 275.9 | 1272.29 | 275.88 | 1276.73 | 275.95 | 1278.77 | 276.02 | 1282.08 | 276.15 |
| 1283.64 | 276.24 | 1286.37 | 276.33 | 1288.14 | 276.41 | 1290.11 | 276.54 | 1291.87 | 276.58 |
| 1292.86 | 276.55 | 1295.21 | 276.56 | 1297.58 | 276.54 | 1298.24 | 276.55 | 1299.64 | 276.5 |
| 1300.72 | 276.56 | 1302.66 | 276.63 | 1305.81 | 276.69 | 1309.27 | 276.77 | 1310.49 | 276.83 |
| 1311.69 | 276.84 | 1314.03 | 276.79 | 1316.8 | 276.68 | 1320.33 | 276.56 | 1324.11 | 276.46 |
| 1328.61 | 276.41 | 1333.47 | 276.28 | 1336.41 | 276.26 | 1337.68 | 276.27 | 1338.17 | 276.3 |
| 1340.76 | 276.35 | 1341.95 | 276.39 | 1344.89 | 276.42 | 1345.62 | 276.41 | 1350.12 | 276.24 |
| 1355.41 | 275.96 | 1356.72 | 275.88 | 1365.51 | 275.14 | 1366.48 | 275.01 | 1369.37 | 274.91 |
| 1370.72 | 274.91 | 1377.31 | 275.02 | 1381.57 | 275.04 | 1386.5 | 274.99 | 1389.04 | 274.99 |
| 1391.3 | 275.01 | 1397.42 | 275.19 | 1401.98 | 275.28 | 1406.12 | 275.35 | 1408.17 | 275.37 |
| 1409.24 | 275.41 | 1415.62 | 275.57 | 1422.72 | 275.71 | 1429.32 | 275.66 | 1431.06 | 275.66 |
| 1434.86 | 275.73 | 1436.19 | 275.69 | 1437.19 | 275.72 | 1440.11 | 275.76 | 1442.43 | 275.75 |
| 1446.23 | 275.79 | 1448.43 | 275.79 | 1451.36 | 275.77 | 1452.64 | 275.85 | 1455.55 | 276 |
| 1457.23 | 276.12 | 1459.41 | 276.21 | 1461.61 | 276.37 | 1462.94 | 276.44 | 1469.74 | 276.98 |
| 1475.23 | 277.63 | 1479.62 | 278.08 | 1481.95 | 278.6 | 1484.28 | 279.38 | 1485.13 | 279.71 |
| 1487.14 | 280.39 | 1492.12 | 282.15 | 1492.85 | 282.49 | 1494.56 | 283.41 | 1495.58 | 284.01 |
| 1497.98 | 285.28 | 1498.65 | 285.61 | 1499.85 | 286.3 | 1506.18 | 290.08 | 1509.15 | 291.84 |
| 1511.4 | 293.23 | 1512.63 | 293.73 | 1514.73 | 294.52 | 1517.52 | 295.61 | 1520.41 | 296.69 |
| 1524.12 | 297.38 | 1529.05 | 298.07 | 1533.17 | 298.68 | 1534.58 | 298.92 | 1537.89 | 299.45 |
| 1543.57 | 299.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 426.15 | .04 | 1492.85 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

426.15 1492.85 21.54 19.33 20.13 .1 .3

Right Levee Station=1032.202 Elevation=279.9715

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1096.34*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 297.14 | 1.83 | 296.96 | 5.86 | 296.49 | 8.81 | 296.18 | 13.27 | 295.81 |
| 14.83 | 295.63 | 16.49 | 295.48 | 23.07 | 294.85 | 24.26 | 294.76 | 28.58 | 294.26 |
| 31.02 | 294.21 | 32.84 | 294.07 | 37.2 | 293.69 | 39.6 | 293.5 | 40.17 | 293.48 |
| 41.93 | 293.57 | 43.1 | 293.59 | 44.01 | 293.56 | 44.5 | 293.5 | 47.64 | 293.44 |
| 55.27 | 292.97 | 56.05 | 292.9 | 56.69 | 292.89 | 66.77 | 292.23 | 68.7 | 292.12 |
| 79.39 | 291.35 | 81.29 | 291.18 | 82.81 | 291.07 | 86.05 | 290.8 | 88.87 | 290.65 |
| 98.05 | 290.05 | 115.57 | 289.07 | 119.18 | 288.88 | 123.31 | 288.69 | 124.62 | 288.62 |
| 130.75 | 288.48 | 132.54 | 288.43 | 134.4 | 288.33 | 137.42 | 288.09 | 139.48 | 288 |
| 142.71 | 287.79 | 144.37 | 287.66 | 154.16 | 287.04 | 175.38 | 285.96 | 186.83 | 285.2 |
| 192.17 | 284.91 | 197.4 | 284.61 | 209.05 | 284.04 | 213.06 | 283.9 | 218.9 | 283.71 |
| 222.72 | 283.5 | 231.19 | 283.12 | 231.85 | 283.1 | 241.2 | 282.65 | 247.21 | 282.2 |
| 248.48 | 282.13 | 253.19 | 281.83 | 266.33 | 281.17 | 270.16 | 280.89 | 275.26 | 280.55 |
| 278.97 | 280.45 | 281.75 | 280.35 | 284.92 | 280.18 | 286.74 | 280.11 | 290.99 | 279.86 |
| 301.09 | 279.29 | 305.72 | 278.97 | 308.87 | 278.82 | 311.89 | 278.6 | 313.66 | 278.51 |
| 318.21 | 278.39 | 325.36 | 278.06 | 327.13 | 277.99 | 329.24 | 277.88 | 335.6 | 277.44 |
| 340.35 | 277.15 | 350.69 | 276.74 | 353.02 | 276.66 | 356.26 | 276.63 | 358.87 | 276.57 |
| 361 | 276.49 | 362.78 | 276.39 | 363.87 | 276.29 | 374.91 | 275.54 | 375.58 | 275.5 |
| 377.29 | 275.32 | 382.01 | 274.85 | 383.13 | 274.85 | 383.95 | 274.92 | 387.33 | 274.82 |
| 393.22 | 274.55 | 395.05 | 274.49 | 397.23 | 274.63 | 397.8 | 274.73 | 399.1 | 274.86 |
| 405.34 | 275.43 | 407.22 | 275.53 | 408.37 | 275.62 | 410.79 | 275.75 | 413.5 | 275.85 |
| 417 | 275.66 | 419.35 | 275.49 | 420.7 | 275.43 | 423.28 | 275.38 | 426.62 | 275.38 |
| 431.12 | 275.47 | 434.58 | 275.6 | 438.38 | 275.68 | 440.3 | 275.79 | 443.02 | 276.07 |
| 447.97 | 275.95 | 449.09 | 275.96 | 453.97 | 275.96 | 456.23 | 276.08 | 459.37 | 276.35 |
| 461.03 | 276.58 | 462.65 | 276.98 | 464.75 | 277.64 | 467.53 | 277.75 | 468.68 | 277.81 |
| 469.52 | 277.8 | 469.84 | 277.84 | 471.55 | 277.89 | 472.76 | 277.86 | 473.71 | 277.79 |
| 475.84 | 277.58 | 477.65 | 277.51 | 479.65 | 277.55 | 482.47 | 277.53 | 483.15 | 277.4 |
| 487.24 | 276.46 | 491.19 | 275.75 | 493.1 | 275.39 | 495.06 | 275.15 | 497.21 | 275.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 500.58 | 274.98 | 505.3 | 274.95 | 507.62 | 275.14 | 508.35 | 275.18 | 510.41 | 275.24 |
| 513.25 | 275.28 | 515.79 | 275.23 | 516.3 | 275.26 | 519.34 | 275.14 | 521.15 | 275.11 |
| 521.88 | 275 | 524.46 | 274.74 | 525.72 | 274.68 | 527.85 | 274.62 | 529.87 | 274.58 |
| 532.99 | 274.46 | 533.67 | 274.45 | 535.48 | 274.49 | 537.21 | 274.56 | 539.95 | 274.71 |
| 540.86 | 274.71 | 544.08 | 274.75 | 544.65 | 274.58 | 547.82 | 273.86 | 549.6 | 273.47 |
| 552.24 | 273.07 | 555.32 | 272.93 | 561.21 | 272.73 | 563.79 | 272.85 | 566.47 | 273.07 |
| 570.39 | 273.25 | 572.41 | 273.25 | 575.26 | 273.18 | 576.68 | 273.16 | 577.35 | 273.11 |
| 579.53 | 273.06 | 582.45 | 273.06 | 585.02 | 273.04 | 586.3 | 273.08 | 588.61 | 273.2 |
| 590.23 | 273.26 | 591.66 | 273.29 | 595.91 | 273.49 | 598.77 | 273.57 | 599.87 | 273.64 |
| 603.43 | 273.74 | 607.28 | 273.75 | 611.45 | 273.75 | 615.23 | 273.67 | 624.59 | 273.62 |
| 628.96 | 273.64 | 634.72 | 273.62 | 635.72 | 273.66 | 637.68 | 273.78 | 638.92 | 273.81 |
| 640.39 | 273.89 | 643.91 | 274.02 | 646.47 | 274.14 | 649.4 | 274.3 | 653.4 | 274.29 |
| 658.08 | 274.38 | 661.54 | 274.42 | 666.51 | 274.52 | 670.39 | 274.65 | 670.56 | 274.64 |
| 674.45 | 274.73 | 680.76 | 274.84 | 686.5 | 274.98 | 688.95 | 275.08 | 697.82 | 275.52 |
| 700.74 | 275.74 | 702.64 | 275.84 | 704.56 | 275.92 | 711.02 | 276.15 | 712.19 | 276.15 |
| 714.24 | 276.19 | 715.82 | 276.2 | 716.68 | 276.23 | 722.19 | 276.2 | 723.98 | 276.2 |
| 728.99 | 276.42 | 732.8 | 276.71 | 733.93 | 276.78 | 737.51 | 276.95 | 738.8 | 277.03 |
| 740.66 | 277.22 | 744.53 | 277.4 | 745.75 | 277.42 | 749.61 | 277.42 | 751.99 | 277.32 |
| 755.63 | 277.14 | 757.98 | 276.97 | 759.05 | 276.87 | 761.35 | 276.57 | 761.44 | 276.53 |
| 762.75 | 276.5 | 766.68 | 276.46 | 768.77 | 276.57 | 772.02 | 276.72 | 776.64 | 277.11 |
| 777.85 | 277.16 | 783.49 | 277.14 | 787.57 | 276.68 | 790.36 | 276.4 | 794.2 | 276.12 |
| 796.69 | 275.95 | 797.99 | 275.83 | 802.21 | 275.82 | 802.82 | 275.86 | 807.88 | 275.89 |
| 811.56 | 276.04 | 813.16 | 276.15 | 818.29 | 276.37 | 821.05 | 276.54 | 822.2 | 276.57 |
| 825.93 | 276.61 | 828.64 | 276.59 | 833.11 | 276.45 | 837.8 | 276.5 | 841.44 | 276.57 |
| 851.76 | 276.6 | 854.76 | 276.58 | 856.43 | 276.55 | 858.08 | 276.49 | 859.91 | 276.38 |
| 864.86 | 275.92 | 869.5 | 275.63 | 870.13 | 275.58 | 873.03 | 275.5 | 876.16 | 275.36 |
| 879.86 | 275.32 | 882.37 | 275.32 | 890.05 | 275.15 | 892.06 | 275.16 | 892.75 | 275.23 |
| 893.69 | 275.27 | 896.77 | 275.36 | 899.08 | 275.51 | 903.22 | 275.84 | 905.4 | 276.1 |
| 907.76 | 276.49 | 908.19 | 276.51 | 912 | 277.08 | 915.26 | 277.54 | 917.27 | 277.94 |
| 926.08 | 278.27 | 928.19 | 278.32 | 930.75 | 278.41 | 932.69 | 278.55 | 935.73 | 278.74 |
| 937.29 | 278.78 | 940.58 | 278.75 | 942.46 | 278.72 | 943.04 | 278.68 | 945.9 | 278.67 |
| 948.39 | 278.77 | 956.28 | 279.18 | 960.49 | 279.24 | 962.73 | 279.24 | 967.95 | 279.19 |
| 971.21 | 279.12 | 973.99 | 279 | 979.38 | 278.65 | 983.01 | 278.5 | 987.4 | 278.44 |
| 991.43 | 278.47 | 995.1 | 278.42 | 999.74 | 278.31 | 1004.33 | 277.97 | 1007.95 | 277.62 |
| 1011.23 | 277.27 | 1014.92 | 276.93 | 1019.98 | 276.62 | 1020.91 | 276.57 | 1024.44 | 276.48 |
| 1026.96 | 276.44 | 1027.83 | 276.41 | 1033.98 | 276.4 | 1035.42 | 276.38 | 1036.31 | 276.4 |
| 1039.16 | 276.4 | 1039.85 | 276.37 | 1042.58 | 276.32 | 1049.48 | 276.32 | 1051.93 | 276.4 |
| 1055.5 | 276.48 | 1057.74 | 276.5 | 1061.22 | 276.6 | 1066 | 276.76 | 1069.08 | 276.84 |
| 1069.56 | 276.88 | 1072.92 | 276.91 | 1076.8 | 276.82 | 1078.1 | 276.7 | 1081.22 | 276.52 |
| 1083.97 | 276.34 | 1089.57 | 276.02 | 1091.43 | 275.88 | 1094.79 | 275.92 | 1095.99 | 276.07 |
| 1098.43 | 276.27 | 1101.72 | 276.62 | 1103.71 | 276.78 | 1105.89 | 276.85 | 1109.07 | 276.77 |
| 1112.05 | 276.84 | 1112.88 | 276.82 | 1115.21 | 276.83 | 1117.63 | 276.89 | 1120.96 | 276.9 |
| 1123.26 | 276.92 | 1125.11 | 276.89 | 1126.54 | 276.89 | 1128.32 | 276.86 | 1130.58 | 276.79 |
| 1136.21 | 276.66 | 1138.8 | 276.58 | 1140.56 | 276.49 | 1141.89 | 276.38 | 1144.49 | 276.26 |
| 1151.31 | 276 | 1156.04 | 275.92 | 1159.45 | 275.84 | 1162.5 | 275.87 | 1163.66 | 275.9 |
| 1168.03 | 276.12 | 1170.78 | 276.42 | 1172.2 | 276.51 | 1173.92 | 276.55 | 1174.14 | 276.53 |
| 1175.56 | 276.58 | 1175.96 | 276.63 | 1180.15 | 276.82 | 1181.1 | 276.85 | 1183.69 | 276.82 |
| 1188.75 | 276.73 | 1192.67 | 276.4 | 1197.88 | 276.14 | 1198.07 | 276.11 | 1199.39 | 276.09 |
| 1203.58 | 276.12 | 1204.12 | 276.17 | 1209.84 | 276.32 | 1212.83 | 276.31 | 1214.94 | 276.25 |
| 1215.21 | 276.21 | 1217.26 | 276.12 | 1221.31 | 276.02 | 1224.04 | 276 | 1224.74 | 276.02 |
| 1227.83 | 276.03 | 1229.68 | 276.08 | 1232.31 | 276.12 | 1235.41 | 276.06 | 1239.04 | 275.96 |
| 1241.55 | 275.88 | 1248.05 | 275.9 | 1252.52 | 275.95 | 1254.09 | 276.01 | 1256.37 | 276.01 |
| 1257.07 | 276.04 | 1262.64 | 275.97 | 1263.91 | 275.9 | 1264.44 | 275.9 | 1265.94 | 275.83 |
| 1270.3 | 275.69 | 1273.55 | 275.65 | 1276.53 | 275.58 | 1277.57 | 275.58 | 1281.47 | 275.64 |
| 1286.85 | 275.85 | 1288.41 | 275.94 | 1291.16 | 276.03 | 1292.94 | 276.11 | 1294.92 | 276.25 |
| 1297.35 | 276.31 | 1297.68 | 276.28 | 1300.05 | 276.32 | 1303.08 | 276.34 | 1304.5 | 276.31 |
| 1305.58 | 276.39 | 1309.27 | 276.51 | 1313.47 | 276.61 | 1315.4 | 276.71 | 1317.48 | 276.71 |
| 1320.21 | 276.63 | 1321.74 | 276.56 | 1327.03 | 276.37 | 1327.73 | 276.37 | 1330.04 | 276.3 |
| 1333.61 | 276.25 | 1338.49 | 276.1 | 1342.23 | 276.07 | 1343.22 | 276.11 | 1347.02 | 276.18 |
| 1349.97 | 276.2 | 1350.7 | 276.18 | 1355.23 | 276 | 1360.54 | 275.7 | 1363.09 | 275.52 |
| 1369.05 | 275.01 | 1371.16 | 274.82 | 1371.67 | 274.74 | 1374.57 | 274.63 | 1375.93 | 274.62 |
| 1378.09 | 274.66 | 1382.55 | 274.72 | 1386.83 | 274.74 | 1388.33 | 274.71 | 1391.14 | 274.69 |
| 1394.34 | 274.69 | 1396.61 | 274.71 | 1402.76 | 274.89 | 1407.34 | 274.97 | 1413.57 | 275.06 |
| 1421.06 | 275.25 | 1428.19 | 275.39 | 1436.57 | 275.34 | 1440.39 | 275.43 | 1441.72 | 275.4 |
| 1442.73 | 275.43 | 1445.66 | 275.48 | 1447.99 | 275.47 | 1451.81 | 275.51 | 1456.97 | 275.5 |
| 1458.25 | 275.57 | 1461.18 | 275.69 | 1462.87 | 275.82 | 1465.06 | 275.9 | 1467.27 | 276.05 |
| 1468.61 | 276.12 | 1474.63 | 276.55 | 1475.44 | 276.59 | 1479.98 | 277.09 | 1480.96 | 277.19 |
| 1485.37 | 277.59 | 1487.71 | 278.06 | 1490.05 | 278.81 | 1490.91 | 279.11 | 1492.93 | 279.75 |
| 1497.93 | 281.42 | 1498.67 | 281.74 | 1500.35 | 282.61 | 1501.36 | 283.17 | 1504.37 | 284.69 |
| 1505.56 | 285.34 | 1510.66 | 288.27 | 1512.43 | 289.26 | 1514.7 | 290.57 | 1516.36 | 291.57 |
| 1516.91 | 291.88 | 1518.12 | 292.36 | 1520.19 | 293.1 | 1521.78 | 293.71 | 1525.78 | 295.15 |
| 1529.43 | 295.8 | 1534.28 | 296.45 | 1538.33 | 297.03 | 1542.72 | 297.72 | 1542.97 | 297.75 |
| 1548.56 | 297.67 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 419.35 | .04 | 1498.67 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 419.35 | 1498.67 | | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1031.224 Elevation=279.9842

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1077.01*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 296.3 | 1.8 | 296.12 | 5.76 | 295.65 | 9 | 295.32 | 13.05 | 294.99 |
| 14.59 | 294.81 | 16.23 | 294.67 | 22.7 | 294.04 | 23.87 | 293.95 | 28.12 | 293.47 |
| 30.87 | 293.39 | 34.6 | 293.08 | 36.59 | 292.9 | 38.95 | 292.71 | 39.52 | 292.69 |
| 41.25 | 292.78 | 42.41 | 292.8 | 43.78 | 292.7 | 46.87 | 292.64 | 55.77 | 292.11 |
| 64.47 | 291.54 | 67.59 | 291.35 | 78.1 | 290.61 | 79.97 | 290.44 | 81.47 | 290.34 |
| 84.66 | 290.08 | 87.43 | 289.93 | 95.42 | 289.42 | 96.46 | 289.36 | 113.18 | 288.45 |
| 113.7 | 288.41 | 117.25 | 288.23 | 122.6 | 287.99 | 128.63 | 287.86 | 130.39 | 287.81 |
| 133.56 | 287.62 | 135.19 | 287.48 | 137.22 | 287.39 | 140.39 | 287.19 | 142.03 | 287.06 |
| 151.66 | 286.45 | 153.37 | 286.36 | 172.54 | 285.4 | 183.8 | 284.67 | 189.05 | 284.39 |
| 194.2 | 284.09 | 205.66 | 283.53 | 209.61 | 283.39 | 215.36 | 283.21 | 219.11 | 283 |
| 227.44 | 282.63 | 228.09 | 282.61 | 237.29 | 282.17 | 243.2 | 281.73 | 244.45 | 281.66 |
| 249.09 | 281.37 | 262.01 | 280.7 | 265.79 | 280.43 | 270.8 | 280.09 | 274.45 | 279.98 |
| 277.18 | 279.88 | 280.3 | 279.72 | 282.09 | 279.65 | 286.28 | 279.39 | 296.22 | 278.85 |
| 300.07 | 278.57 | 303.86 | 278.37 | 306.83 | 278.16 | 308.58 | 278.06 | 313.06 | 277.93 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 320.09 | 277.6 | 323.9 | 277.43 | 327.53 | 277.17 | 330.16 | 277 | 334.84 | 276.73 |
| 345 | 276.33 | 347.3 | 276.25 | 350.49 | 276.23 | 353.06 | 276.18 | 355.15 | 276.1 |
| 356.9 | 276 | 357.97 | 275.91 | 368.83 | 275.16 | 370.39 | 275.04 | 371.18 | 274.95 |
| 375.82 | 274.5 | 376.93 | 274.5 | 377.73 | 274.57 | 381.05 | 274.47 | 387.88 | 274.16 |
| 388.64 | 274.15 | 390.79 | 274.28 | 391.36 | 274.37 | 392.64 | 274.49 | 398.77 | 275.03 |
| 400.62 | 275.13 | 402.73 | 275.28 | 406 | 275.42 | 406.8 | 275.44 | 410.25 | 275.26 |
| 412.56 | 275.1 | 413.98 | 275.05 | 416.71 | 275 | 420.95 | 275.04 | 424.14 | 275.13 |
| 428.64 | 275.33 | 432.65 | 275.43 | 434.68 | 275.57 | 437.56 | 275.89 | 442.78 | 275.77 |
| 443.97 | 275.8 | 445.12 | 275.79 | 449.12 | 275.82 | 451.51 | 275.96 | 454.83 | 276.27 |
| 456.58 | 276.53 | 458.29 | 276.98 | 460.51 | 277.72 | 464.65 | 277.91 | 465.55 | 277.91 |
| 466.19 | 277.96 | 467.69 | 278 | 468.97 | 277.97 | 469.97 | 277.89 | 472.23 | 277.67 |
| 473.76 | 277.59 | 476.25 | 277.64 | 479.22 | 277.62 | 479.95 | 277.48 | 482.62 | 276.82 |
| 484.27 | 276.43 | 488.18 | 275.7 | 490.45 | 275.25 | 492.52 | 274.98 | 494.79 | 274.83 |
| 503.34 | 274.78 | 505.79 | 274.99 | 507.3 | 275.06 | 509.54 | 275.12 | 511.73 | 275.15 |
| 514.42 | 275.09 | 514.95 | 275.13 | 518.17 | 274.98 | 520.08 | 274.95 | 520.77 | 274.84 |
| 523.57 | 274.53 | 527.16 | 274.39 | 529.29 | 274.35 | 532.59 | 274.21 | 534.63 | 274.23 |
| 537.74 | 274.35 | 539.94 | 274.49 | 544.3 | 274.55 | 544.9 | 274.36 | 550.13 | 273.15 |
| 552.92 | 272.71 | 556.17 | 272.57 | 561.01 | 272.4 | 562.39 | 272.36 | 565.33 | 272.51 |
| 568.08 | 272.72 | 571.62 | 272.87 | 572.5 | 272.89 | 577.94 | 272.8 | 578.61 | 272.75 |
| 580.8 | 272.7 | 586.32 | 272.69 | 587.61 | 272.72 | 589.93 | 272.84 | 592.99 | 272.93 |
| 597.26 | 273.13 | 600.14 | 273.21 | 601.25 | 273.28 | 604.82 | 273.38 | 608.69 | 273.39 |
| 612.35 | 273.38 | 616.68 | 273.32 | 626.09 | 273.28 | 630.48 | 273.31 | 635.83 | 273.28 |
| 637.27 | 273.32 | 639.24 | 273.46 | 640.49 | 273.49 | 641.96 | 273.57 | 645.5 | 273.7 |
| 649.84 | 273.93 | 651.02 | 273.98 | 655.04 | 273.98 | 659.74 | 274.09 | 663.22 | 274.14 |
| 665.97 | 274.21 | 666.83 | 274.21 | 670.93 | 274.35 | 678.78 | 274.51 | 682.53 | 274.56 |
| 688.3 | 274.7 | 690.76 | 274.79 | 699.68 | 275.25 | 702.61 | 275.49 | 704.52 | 275.6 |
| 706.46 | 275.69 | 712.94 | 275.94 | 714.12 | 275.95 | 719.64 | 276.07 | 721.85 | 276.06 |
| 722.8 | 276.08 | 725.97 | 276.07 | 730.55 | 276.28 | 734.84 | 276.63 | 739.56 | 276.89 |
| 741.19 | 277.02 | 742.45 | 277.16 | 743.39 | 277.22 | 746.61 | 277.38 | 750.74 | 277.4 |
| 751.73 | 277.39 | 753.72 | 277.31 | 757.78 | 277.1 | 760.13 | 276.92 | 761.21 | 276.8 |
| 762.74 | 276.59 | 763.62 | 276.44 | 764.93 | 276.4 | 768.87 | 276.34 | 770.98 | 276.46 |
| 774.24 | 276.62 | 779.55 | 277.09 | 785.77 | 277.07 | 789.87 | 276.56 | 792.68 | 276.25 |
| 796.88 | 275.91 | 799.03 | 275.76 | 800.35 | 275.63 | 804.58 | 275.61 | 805.19 | 275.65 |
| 810.76 | 275.71 | 813.98 | 275.86 | 815.59 | 275.98 | 818.49 | 276.13 | 820.74 | 276.23 |
| 823.51 | 276.42 | 824.67 | 276.46 | 828.42 | 276.5 | 831.14 | 276.49 | 832.42 | 276.46 |
| 835.63 | 276.34 | 837.29 | 276.35 | 844.01 | 276.46 | 845.52 | 276.47 | 848.5 | 276.46 |
| 849.98 | 276.47 | 854.37 | 276.46 | 857.4 | 276.43 | 859.08 | 276.39 | 860.73 | 276.32 |
| 862.57 | 276.2 | 867.54 | 275.69 | 872.84 | 275.31 | 875.75 | 275.22 | 877.83 | 275.12 |
| 878.04 | 275.08 | 882.62 | 275.03 | 886.18 | 275.01 | 891.6 | 274.89 | 892.86 | 274.87 |
| 894.88 | 274.88 | 896.52 | 275 | 899.61 | 275.1 | 901.93 | 275.27 | 905.74 | 275.58 |
| 908.29 | 275.89 | 910.65 | 276.29 | 911.08 | 276.32 | 913.86 | 276.74 | 916.67 | 277.18 |
| 918.19 | 277.45 | 920.21 | 277.88 | 929.07 | 278.24 | 931.19 | 278.3 | 933.76 | 278.4 |
| 935.7 | 278.55 | 938.76 | 278.75 | 940.33 | 278.8 | 945.53 | 278.72 | 946.11 | 278.69 |
| 948.57 | 278.67 | 951.48 | 278.79 | 959.42 | 279.23 | 963.64 | 279.29 | 965.9 | 279.28 |
| 971.14 | 279.22 | 974.42 | 279.13 | 977.22 | 279 | 982.63 | 278.62 | 986.27 | 278.45 |
| 987.47 | 278.42 | 990.69 | 278.38 | 994.74 | 278.41 | 998.43 | 278.36 | 1003.09 | 278.23 |
| 1007.71 | 277.85 | 1012.2 | 277.37 | 1014.64 | 277.08 | 1018.35 | 276.7 | 1024.37 | 276.3 |
| 1026.2 | 276.24 | 1030.45 | 276.15 | 1031.32 | 276.12 | 1037.5 | 276.11 | 1038.95 | 276.09 |
| 1039.84 | 276.11 | 1043.14 | 276.11 | 1043.4 | 276.09 | 1046.14 | 276.05 | 1053.08 | 276.05 |
| 1055.54 | 276.13 | 1059.12 | 276.21 | 1061.38 | 276.22 | 1064.88 | 276.31 | 1069.68 | 276.47 |
| 1072.78 | 276.53 | 1073.47 | 276.57 | 1076.63 | 276.59 | 1080.53 | 276.51 | 1082.09 | 276.38 |
| 1084.98 | 276.23 | 1087.74 | 276.06 | 1093.36 | 275.78 | 1095.23 | 275.64 | 1098.61 | 275.69 |
| 1099.82 | 275.86 | 1102.27 | 276.08 | 1105.58 | 276.46 | 1108 | 276.67 | 1109.77 | 276.72 |
| 1112.96 | 276.64 | 1115.96 | 276.71 | 1116.79 | 276.69 | 1119.13 | 276.7 | 1121.57 | 276.74 |
| 1125.08 | 276.73 | 1127.23 | 276.74 | 1129.08 | 276.7 | 1130.52 | 276.7 | 1134.57 | 276.59 |
| 1140.24 | 276.45 | 1142.84 | 276.37 | 1144.61 | 276.28 | 1145.95 | 276.17 | 1148.55 | 276.04 |
| 1155.41 | 275.76 | 1160.17 | 275.69 | 1163.59 | 275.61 | 1166.65 | 275.64 | 1167.82 | 275.67 |
| 1169.47 | 275.76 | 1172.21 | 275.88 | 1174.97 | 276.18 | 1176.4 | 276.28 | 1177.52 | 276.32 |
| 1178.73 | 276.33 | 1180.18 | 276.42 | 1184.39 | 276.63 | 1185.34 | 276.66 | 1187.3 | 276.66 |
| 1187.95 | 276.64 | 1193.03 | 276.57 | 1196.98 | 276.22 | 1201.08 | 276 | 1202.4 | 275.9 |
| 1203.73 | 275.88 | 1205.99 | 275.88 | 1207.94 | 275.9 | 1208.48 | 275.95 | 1209.98 | 276 |
| 1214.22 | 276.09 | 1215.23 | 276.1 | 1217.24 | 276.08 | 1219.36 | 276.01 | 1220.03 | 275.95 |
| 1222.41 | 275.85 | 1225.75 | 275.76 | 1228.5 | 275.73 | 1229.31 | 275.74 | 1232.3 | 275.73 |
| 1236.17 | 275.81 | 1236.81 | 275.81 | 1242.73 | 275.66 | 1244.57 | 275.59 | 1246.45 | 275.55 |
| 1252.63 | 275.56 | 1257.12 | 275.62 | 1258.69 | 275.68 | 1260.98 | 275.68 | 1262.58 | 275.72 |
| 1264.55 | 275.68 | 1266.16 | 275.68 | 1269.09 | 275.6 | 1270.61 | 275.52 | 1274.98 | 275.39 |
| 1279.46 | 275.32 | 1281.25 | 275.27 | 1286.22 | 275.34 | 1287.72 | 275.38 | 1288.28 | 275.42 |
| 1291.62 | 275.55 | 1293.19 | 275.64 | 1295.95 | 275.73 | 1297.74 | 275.81 | 1299.73 | 275.96 |
| 1302.17 | 276.05 | 1302.51 | 276.02 | 1304.88 | 276.09 | 1307.27 | 276.11 | 1307.93 | 276.14 |
| 1309.35 | 276.12 | 1310.44 | 276.21 | 1312.41 | 276.3 | 1315.59 | 276.39 | 1319.08 | 276.51 |
| 1320.31 | 276.58 | 1322.4 | 276.59 | 1325.14 | 276.51 | 1326.69 | 276.43 | 1334.06 | 276.17 |
| 1338.61 | 276.09 | 1343.51 | 275.93 | 1347.77 | 275.89 | 1348.27 | 275.92 | 1352.09 | 275.96 |
| 1355.05 | 275.97 | 1355.79 | 275.95 | 1359.85 | 275.79 | 1365.67 | 275.44 | 1368.24 | 275.25 |
| 1375.88 | 274.59 | 1376.85 | 274.46 | 1380.08 | 274.35 | 1381.13 | 274.34 | 1383.31 | 274.38 |
| 1384.76 | 274.38 | 1387.79 | 274.43 | 1392.09 | 274.44 | 1393.6 | 274.41 | 1396.43 | 274.39 |
| 1401.92 | 274.4 | 1408.11 | 274.59 | 1412.71 | 274.67 | 1418.96 | 274.74 | 1426.49 | 274.93 |
| 1433.66 | 275.07 | 1440.32 | 275.03 | 1442.08 | 275.03 | 1445.92 | 275.14 | 1447.26 | 275.11 |
| 1448.27 | 275.15 | 1450.31 | 275.17 | 1451.21 | 275.2 | 1453.56 | 275.19 | 1457.4 | 275.23 |
| 1459.62 | 275.24 | 1462.58 | 275.22 | 1466.82 | 275.39 | 1468.51 | 275.51 | 1470.71 | 275.58 |
| 1472.93 | 275.74 | 1474.28 | 275.8 | 1480.33 | 276.17 | 1481.14 | 276.21 | 1486.69 | 276.75 |
| 1491.12 | 277.1 | 1493.47 | 277.53 | 1495.83 | 278.23 | 1496.69 | 278.52 | 1498.72 | 279.12 |
| 1503.75 | 280.69 | 1504.48 | 280.99 | 1507.55 | 282.53 | 1509.45 | 283.47 | 1510.09 | 283.76 |
| 1511.26 | 284.38 | 1514.44 | 286.11 | 1516.28 | 287.14 | 1518.02 | 288.07 | 1520.25 | 289.3 |
| 1522.43 | 290.53 | 1523.62 | 290.98 | 1525.65 | 291.68 | 1527.22 | 292.25 | 1531.15 | 293.61 |
| 1534.74 | 294.22 | 1536.79 | 294.49 | 1539.51 | 294.83 | 1543.49 | 295.38 | 1548.06 | 296.06 |
| 1553.56 | 295.96 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 412.56 | .04 | 1504.48 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

412.56 1504.48 21.54 19.33 20.13 .1 .3

Right Levee Station=1030.247 Elevation=279.9969

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1057.69*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 295.45 | 1.77 | 295.27 | 5.67 | 294.82 | 8.85 | 294.49 | 12.84 | 294.16 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.35 | 293.99 | 15.96 | 293.85 | 22.33 | 293.24 | 23.48 | 293.15 | 27.89 | 292.66 |
| 30.01 | 292.61 | 31.78 | 292.47 | 35.99 | 292.11 | 38.31 | 291.93 | 38.87 | 291.91 |
| 40.57 | 291.99 | 41.71 | 292 | 42.58 | 291.97 | 43.06 | 291.91 | 46.1 | 291.85 |
| 54.85 | 291.33 | 63.41 | 290.77 | 66.47 | 290.59 | 76.82 | 289.87 | 78.65 | 289.71 |
| 80.13 | 289.61 | 83.26 | 289.36 | 85.99 | 289.22 | 93.84 | 288.72 | 94.87 | 288.66 |
| 111.31 | 287.79 | 115.32 | 287.59 | 121.3 | 287.34 | 128.24 | 287.2 | 131.36 | 287.01 |
| 132.97 | 286.87 | 134.96 | 286.79 | 138.08 | 286.59 | 139.69 | 286.47 | 149.16 | 285.86 |
| 150.84 | 285.78 | 169.7 | 284.84 | 180.78 | 284.14 | 191 | 283.58 | 202.28 | 283.02 |
| 206.16 | 282.88 | 211.81 | 282.7 | 215.5 | 282.5 | 223.69 | 282.14 | 224.33 | 282.12 |
| 233.39 | 281.68 | 239.2 | 281.26 | 244.99 | 280.91 | 257.7 | 280.23 | 261.41 | 279.96 |
| 266.34 | 279.64 | 272.62 | 279.42 | 275.68 | 279.26 | 277.45 | 279.19 | 281.56 | 278.93 |
| 291.34 | 278.4 | 295.23 | 278.12 | 298.86 | 277.93 | 301.78 | 277.71 | 303.5 | 277.62 |
| 307.9 | 277.48 | 314.81 | 277.15 | 318.57 | 276.99 | 322.13 | 276.73 | 324.72 | 276.56 |
| 329.32 | 276.3 | 339.32 | 275.91 | 341.58 | 275.84 | 344.72 | 275.83 | 347.24 | 275.79 |
| 348.6 | 275.74 | 351.02 | 275.62 | 352.07 | 275.52 | 359.35 | 275.01 | 359.49 | 275.01 |
| 364.29 | 274.66 | 365.07 | 274.57 | 369.63 | 274.15 | 370.72 | 274.15 | 371.51 | 274.21 |
| 373.44 | 274.17 | 374.78 | 274.12 | 380.48 | 273.87 | 382.24 | 273.81 | 384.35 | 273.93 |
| 384.91 | 274.02 | 392.2 | 274.64 | 394.02 | 274.72 | 395.13 | 274.81 | 397.48 | 274.94 |
| 400.1 | 275.03 | 403.49 | 274.86 | 405.76 | 274.71 | 407.26 | 274.66 | 410.13 | 274.63 |
| 413.84 | 274.68 | 417.97 | 274.82 | 422.7 | 275.06 | 423.35 | 275.07 | 426.93 | 275.19 |
| 429.07 | 275.35 | 432.09 | 275.71 | 437.6 | 275.6 | 444.27 | 275.67 | 446.78 | 275.84 |
| 450.28 | 276.19 | 452.52 | 276.57 | 453.93 | 276.98 | 456.27 | 277.8 | 460.39 | 278.01 |
| 461.58 | 278.01 | 462.25 | 278.07 | 463.83 | 278.11 | 465.18 | 278.08 | 466.24 | 278 |
| 468.61 | 277.75 | 470.23 | 277.67 | 472.84 | 277.72 | 475.98 | 277.7 | 476.34 | 277.65 |
| 481.29 | 276.41 | 485.41 | 275.6 | 487.8 | 275.11 | 489.98 | 274.82 | 492.37 | 274.66 |
| 496.13 | 274.63 | 501.38 | 274.6 | 503.95 | 274.84 | 504.77 | 274.89 | 507.06 | 274.97 |
| 510.22 | 275.02 | 513.05 | 274.95 | 513.61 | 274.99 | 517 | 274.82 | 519.01 | 274.79 |
| 519.74 | 274.66 | 522.69 | 274.33 | 523.58 | 274.27 | 526.46 | 274.17 | 528.71 | 274.12 |
| 532.18 | 273.97 | 534.34 | 273.98 | 536.88 | 274.08 | 539.93 | 274.27 | 544.52 | 274.35 |
| 545.15 | 274.15 | 548.67 | 273.29 | 550.66 | 272.83 | 553.09 | 272.42 | 553.59 | 272.36 |
| 557.02 | 272.21 | 561.8 | 272.04 | 563.58 | 271.99 | 566.52 | 272.14 | 569.29 | 272.34 |
| 572.84 | 272.5 | 574.88 | 272.51 | 579.39 | 272.43 | 579.87 | 272.39 | 582.07 | 272.35 |
| 585.02 | 272.35 | 587.62 | 272.33 | 589.3 | 272.38 | 591.25 | 272.48 | 594.33 | 272.57 |
| 598.61 | 272.77 | 601.51 | 272.85 | 602.62 | 272.93 | 606.21 | 273.02 | 610.1 | 273.03 |
| 613.78 | 273.02 | 618.13 | 272.97 | 627.58 | 272.94 | 632 | 272.97 | 637.37 | 272.95 |
| 638.82 | 272.99 | 640.81 | 273.13 | 642.05 | 273.16 | 643.53 | 273.24 | 647.09 | 273.38 |
| 651.46 | 273.61 | 653.53 | 273.67 | 656.68 | 273.66 | 661.56 | 273.81 | 664.9 | 273.87 |
| 668.53 | 273.95 | 672.51 | 274.08 | 680.54 | 274.23 | 684.3 | 274.28 | 690.11 | 274.41 |
| 692.57 | 274.51 | 701.54 | 274.99 | 704.48 | 275.24 | 706.4 | 275.36 | 708.35 | 275.46 |
| 714.86 | 275.74 | 719.71 | 275.85 | 721.59 | 275.91 | 723.82 | 275.91 | 724.77 | 275.93 |
| 727.82 | 275.94 | 731.22 | 276.1 | 733.02 | 276.2 | 736.87 | 276.55 | 738.01 | 276.63 |
| 741.61 | 276.83 | 742.92 | 276.94 | 744.8 | 277.15 | 748.7 | 277.36 | 752.85 | 277.38 |
| 754.7 | 277.33 | 756.24 | 277.26 | 759.92 | 277.06 | 762.29 | 276.86 | 763.9 | 276.66 |
| 765.7 | 276.38 | 766.43 | 276.31 | 771.07 | 276.23 | 776.47 | 276.52 | 781.8 | 277.02 |
| 788.05 | 277.01 | 788.81 | 276.9 | 794.06 | 276.2 | 794.99 | 276.1 | 799.21 | 275.73 |
| 801.38 | 275.57 | 802.7 | 275.42 | 806.96 | 275.41 | 807.57 | 275.45 | 813.16 | 275.51 |
| 816.4 | 275.69 | 818.01 | 275.82 | 820.93 | 275.98 | 823.19 | 276.09 | 825.98 | 276.3 |
| 827.14 | 276.34 | 830.91 | 276.39 | 833.65 | 276.39 | 834.93 | 276.36 | 838.16 | 276.24 |
| 842.89 | 276.29 | 846.58 | 276.35 | 852.58 | 276.34 | 856.99 | 276.32 | 860.03 | 276.28 |
| 863.38 | 276.16 | 865.23 | 276.02 | 870.22 | 275.46 | 874.91 | 275.1 | 875.55 | 275.04 |
| 878.48 | 274.94 | 880.56 | 274.83 | 880.78 | 274.79 | 885.38 | 274.73 | 888.95 | 274.71 |
| 895.67 | 274.59 | 897.69 | 274.59 | 898.39 | 274.68 | 899.34 | 274.73 | 902.94 | 274.87 |
| 904.79 | 275.02 | 908.97 | 275.39 | 911.17 | 275.68 | 913.55 | 276.09 | 913.98 | 276.12 |
| 916.77 | 276.56 | 919.39 | 277.01 | 921.13 | 277.35 | 923.16 | 277.83 | 932.05 | 278.22 |
| 934.19 | 278.28 | 936.77 | 278.39 | 938.72 | 278.55 | 941.8 | 278.77 | 943.37 | 278.81 |
| 946.69 | 278.76 | 949.18 | 278.69 | 952.07 | 278.69 | 954.58 | 278.81 | 962.55 | 279.27 |
| 966.8 | 279.34 | 969.06 | 279.33 | 974.34 | 279.25 | 977.63 | 279.15 | 980.44 | 279 |
| 985.88 | 278.58 | 988.74 | 278.43 | 990.74 | 278.36 | 995.15 | 278.31 | 998.05 | 278.35 |
| 1001.75 | 278.3 | 1006.44 | 278.15 | 1011.08 | 277.74 | 1014.73 | 277.31 | 1018.05 | 276.89 |
| 1021.77 | 276.47 | 1026.88 | 276.09 | 1027.82 | 276.03 | 1029.66 | 275.96 | 1033.93 | 275.87 |
| 1034.81 | 275.83 | 1041.02 | 275.82 | 1042.47 | 275.8 | 1043.37 | 275.82 | 1046.52 | 275.83 |
| 1046.95 | 275.81 | 1049.7 | 275.77 | 1056.67 | 275.78 | 1059.15 | 275.86 | 1063.47 | 275.94 |
| 1065.01 | 275.94 | 1068.53 | 276.03 | 1073.36 | 276.17 | 1076.47 | 276.22 | 1077.92 | 276.26 |
| 1080.34 | 276.28 | 1084.26 | 276.2 | 1085.83 | 276.08 | 1088.85 | 275.94 | 1091.51 | 275.79 |
| 1097.15 | 275.53 | 1099.03 | 275.41 | 1102.43 | 275.46 | 1103.64 | 275.64 | 1106.1 | 275.88 |
| 1109.43 | 276.31 | 1111.87 | 276.54 | 1112.57 | 276.54 | 1113.64 | 276.6 | 1116.85 | 276.5 |
| 1119.86 | 276.58 | 1120.7 | 276.56 | 1123.05 | 276.57 | 1123.46 | 276.59 | 1125.5 | 276.59 |
| 1128.86 | 276.56 | 1131.19 | 276.56 | 1133.05 | 276.52 | 1134.49 | 276.51 | 1136.29 | 276.47 |
| 1138.57 | 276.39 | 1144.26 | 276.24 | 1146.88 | 276.16 | 1148.66 | 276.06 | 1150 | 275.95 |
| 1152.62 | 275.81 | 1159.51 | 275.53 | 1164.29 | 275.46 | 1167.73 | 275.39 | 1168.53 | 275.39 |
| 1171.98 | 275.44 | 1176.39 | 275.64 | 1179.17 | 275.94 | 1180.74 | 276.06 | 1182.56 | 276.1 |
| 1184.4 | 276.21 | 1188.63 | 276.44 | 1189.59 | 276.48 | 1191.56 | 276.48 | 1197.32 | 276.41 |
| 1201.28 | 276.04 | 1203.82 | 275.88 | 1205.4 | 275.8 | 1206.73 | 275.69 | 1210.34 | 275.66 |
| 1212.3 | 275.67 | 1212.84 | 275.72 | 1214.35 | 275.77 | 1218.61 | 275.86 | 1219.63 | 275.87 |
| 1221.64 | 275.85 | 1223.77 | 275.78 | 1224.45 | 275.71 | 1226.2 | 275.63 | 1230.94 | 275.49 |
| 1233.77 | 275.46 | 1235.45 | 275.43 | 1236.78 | 275.43 | 1238.65 | 275.47 | 1241.31 | 275.49 |
| 1244.44 | 275.41 | 1249.1 | 275.26 | 1251 | 275.22 | 1259.32 | 275.24 | 1261.72 | 275.28 |
| 1262.67 | 275.34 | 1265.6 | 275.35 | 1266.31 | 275.4 | 1269.19 | 275.37 | 1270.8 | 275.38 |
| 1272.84 | 275.33 | 1275.27 | 275.22 | 1279.67 | 275.08 | 1282.96 | 275.04 | 1285.97 | 274.97 |
| 1287.02 | 274.97 | 1290.96 | 275.03 | 1293.03 | 275.12 | 1295.2 | 275.19 | 1297.97 | 275.34 |
| 1300.75 | 275.43 | 1302.54 | 275.51 | 1304.54 | 275.67 | 1306.99 | 275.78 | 1307.33 | 275.75 |
| 1309.71 | 275.85 | 1314.21 | 275.94 | 1315.3 | 276.03 | 1317.28 | 276.13 | 1323.99 | 276.37 |
| 1325.22 | 276.46 | 1326.44 | 276.49 | 1328.81 | 276.43 | 1331.63 | 276.31 | 1336.97 | 276.1 |
| 1337.67 | 276.09 | 1340 | 276 | 1343.61 | 275.93 | 1348.54 | 275.76 | 1352.82 | 275.7 |
| 1353.32 | 275.72 | 1357.15 | 275.75 | 1360.13 | 275.74 | 1360.87 | 275.72 | 1364.96 | 275.55 |
| 1370.81 | 275.18 | 1373.39 | 274.98 | 1381.54 | 274.27 | 1382.04 | 274.19 | 1383.03 | 274.14 |
| 1385.29 | 274.07 | 1386.34 | 274.06 | 1388.53 | 274.09 | 1389.99 | 274.09 | 1393.03 | 274.13 |
| 1396.71 | 274.14 | 1398.87 | 274.1 | 1404.13 | 274.09 | 1404.94 | 274.08 | 1407.23 | 274.1 |
| 1413.45 | 274.28 | 1418.07 | 274.36 | 1418.74 | 274.36 | 1424.36 | 274.42 | 1431.92 | 274.62 |
| 1439.13 | 274.75 | 1445.82 | 274.71 | 1447.59 | 274.72 | 1451.45 | 274.84 | 1452.79 | 274.82 |
| 1453.81 | 274.86 | 1456.77 | 274.92 | 1459.12 | 274.91 | 1462.98 | 274.96 | 1465.22 | 274.96 |
| 1468.19 | 274.94 | 1469.48 | 275 | 1472.45 | 275.09 | 1474.15 | 275.21 | 1476.36 | 275.27 |
| 1478.6 | 275.42 | 1479.95 | 275.48 | 1486.03 | 275.79 | 1486.84 | 275.82 | 1491.42 | 276.23 |
| 1492.42 | 276.31 | 1496.88 | 276.61 | 1499.29 | 277.01 | 1501.6 | 277.65 | 1502.47 | 277.92 |
| 1504.51 | 278.49 | 1509.56 | 279.96 | 1510.3 | 280.24 | 1512.13 | 281.11 | 1512.9 | 281.5 |
| 1515.81 | 282.84 | 1516.96 | 283.42 | 1520.09 | 285.04 | 1521.9 | 286 | 1525.81 | 288.03 |
| 1527.94 | 289.19 | 1529.12 | 289.61 | 1531.11 | 290.26 | 1533.77 | 291.18 | 1536.52 | 292.07 |
| 1540.05 | 292.65 | 1544.74 | 293.22 | 1548.66 | 293.73 | 1549.07 | 293.8 | 1553.15 | 294.36 |
| 1558.55 | 294.26 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 405.76 | .04 | 1510.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 405.76 | 1510.3 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station= 1029.27 Elevation=280.0096

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1038.36*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 294.61 | 1.74 | 294.43 | 5.57 | 293.98 | 8.71 | 293.65 | 12.62 | 293.34 |
| 14.11 | 293.17 | 15.69 | 293.03 | 21.95 | 292.43 | 23.08 | 292.34 | 27.19 | 291.88 |
| 29.51 | 291.81 | 31.24 | 291.68 | 34.06 | 291.44 | 35.39 | 291.31 | 37.67 | 291.14 |
| 38.22 | 291.12 | 39.89 | 291.19 | 41.01 | 291.2 | 42.34 | 291.11 | 45.33 | 291.05 |
| 53.93 | 290.55 | 64.05 | 289.89 | 65.36 | 289.82 | 75.53 | 289.13 | 77.33 | 288.98 |
| 78.79 | 288.89 | 81.87 | 288.64 | 84.55 | 288.5 | 93.28 | 287.96 | 109.45 | 287.13 |
| 113.39 | 286.94 | 119.26 | 286.7 | 124.39 | 286.62 | 126.1 | 286.58 | 127.87 | 286.48 |
| 130.74 | 286.27 | 132.7 | 286.18 | 135.77 | 286 | 137.35 | 285.88 | 146.66 | 285.27 |
| 166.86 | 284.28 | 177.75 | 283.6 | 182.83 | 283.34 | 187.8 | 283.06 | 198.89 | 282.51 |
| 202.71 | 282.37 | 208.26 | 282.19 | 211.89 | 282 | 219.95 | 281.65 | 220.58 | 281.63 |
| 229.48 | 281.2 | 235.19 | 280.79 | 240.34 | 280.48 | 253.38 | 279.77 | 257.03 | 279.5 |
| 261.88 | 279.18 | 268.05 | 278.96 | 271.07 | 278.8 | 272.8 | 278.73 | 276.85 | 278.47 |
| 286.46 | 277.96 | 290.86 | 277.64 | 293.85 | 277.49 | 296.73 | 277.26 | 298.42 | 277.17 |
| 302.74 | 277.03 | 309.54 | 276.69 | 313.23 | 276.54 | 316.74 | 276.29 | 319.29 | 276.13 |
| 323.81 | 275.87 | 333.64 | 275.49 | 335.86 | 275.42 | 338.94 | 275.43 | 341.42 | 275.39 |
| 342.76 | 275.35 | 345.14 | 275.23 | 346.18 | 275.13 | 353.33 | 274.63 | 358.19 | 274.28 |
| 358.95 | 274.2 | 363.44 | 273.8 | 364.51 | 273.8 | 365.29 | 273.86 | 367.19 | 273.82 |
| 368.5 | 273.77 | 375.84 | 273.46 | 377.92 | 273.58 | 379.7 | 273.77 | 385.63 | 274.24 |
| 387.42 | 274.32 | 389.47 | 274.47 | 392.62 | 274.6 | 393.4 | 274.62 | 396.73 | 274.46 |
| 398.97 | 274.32 | 400.54 | 274.27 | 403.56 | 274.25 | 408.26 | 274.35 | 411.79 | 274.5 |
| 416.76 | 274.79 | 421.2 | 274.94 | 423.45 | 275.12 | 426.63 | 275.53 | 432.41 | 275.43 |
| 433.72 | 275.46 | 439.42 | 275.52 | 442.06 | 275.72 | 445.74 | 276.11 | 447.78 | 276.46 |
| 449.57 | 276.98 | 452.03 | 277.88 | 454.25 | 278.01 | 456.35 | 278.11 | 457.6 | 278.11 |
| 458.31 | 278.17 | 459.97 | 278.22 | 461.39 | 278.19 | 462.5 | 278.1 | 464.99 | 277.83 |
| 466.69 | 277.75 | 469.44 | 277.81 | 472.73 | 277.79 | 473.11 | 277.73 | 478.31 | 276.38 |
| 482.64 | 275.5 | 485.15 | 274.97 | 487.44 | 274.65 | 489.96 | 274.48 | 493.9 | 274.45 |
| 499.42 | 274.43 | 502.12 | 274.69 | 503.8 | 274.78 | 507.44 | 274.88 | 508.7 | 274.89 |
| 511.07 | 274.82 | 512.27 | 274.85 | 515.82 | 274.66 | 517.94 | 274.62 | 518.79 | 274.47 |
| 521.8 | 274.12 | 523.28 | 274.03 | 525.77 | 273.94 | 528.13 | 273.89 | 531.78 | 273.72 |
| 534.04 | 273.74 | 537.48 | 273.88 | 539.91 | 274.05 | 540.98 | 274.06 | 544.74 | 274.15 |
| 545.4 | 273.93 | 549.1 | 273 | 551.19 | 272.51 | 553.75 | 272.07 | 554.27 | 272 |
| 557.87 | 271.85 | 564.76 | 271.62 | 567.72 | 271.77 | 570.1 | 271.94 | 574.07 | 272.12 |
| 576.12 | 272.13 | 580.65 | 272.07 | 581.13 | 272.03 | 583.34 | 271.99 | 588.92 | 271.98 |
| 590.61 | 272.02 | 592.56 | 272.12 | 595.66 | 272.21 | 599.97 | 272.41 | 602.88 | 272.49 |
| 603.99 | 272.57 | 607.6 | 272.65 | 611.51 | 272.67 | 615.21 | 272.66 | 619.58 | 272.61 |
| 629.08 | 272.6 | 633.52 | 272.63 | 638.91 | 272.62 | 640.37 | 272.66 | 642.37 | 272.81 |
| 643.62 | 272.83 | 645.11 | 272.92 | 648.68 | 273.06 | 653.07 | 273.29 | 654.26 | 273.34 |
| 658.32 | 273.35 | 659.23 | 273.39 | 663.22 | 273.52 | 666.58 | 273.59 | 669.36 | 273.68 |
| 671.61 | 273.72 | 675.55 | 273.85 | 675.73 | 273.84 | 682.29 | 273.96 | 686.07 | 274 |
| 691.91 | 274.12 | 694.39 | 274.23 | 703.39 | 274.72 | 704.63 | 274.82 | 706.35 | 274.99 |
| 708.28 | 275.12 | 710.24 | 275.23 | 716.78 | 275.53 | 721.66 | 275.68 | 722.76 | 275.73 |
| 725.79 | 275.76 | 726.74 | 275.79 | 729.8 | 275.81 | 733.22 | 275.98 | 735.03 | 276.09 |
| 738.9 | 276.47 | 743.67 | 276.78 | 745.67 | 276.97 | 746.87 | 277.11 | 750.79 | 277.33 |
| 754.19 | 277.35 | 755.95 | 277.34 | 757.96 | 277.26 | 762.06 | 277.02 | 764.44 | 276.8 |
| 766.06 | 276.59 | 767.87 | 276.28 | 767.96 | 276.24 | 769.28 | 276.19 | 773.27 | 276.11 |
| 775.39 | 276.24 | 778.69 | 276.42 | 784.05 | 276.95 | 790.34 | 276.94 | 791.09 | 276.82 |
| 796.37 | 276.06 | 797.31 | 275.95 | 801.55 | 275.54 | 803.73 | 275.38 | 805.05 | 275.21 |
| 809.33 | 275.2 | 809.95 | 275.25 | 815.56 | 275.32 | 818.82 | 275.51 | 820.44 | 275.65 |
| 823.37 | 275.83 | 825.65 | 275.95 | 828.45 | 276.18 | 829.62 | 276.22 | 832.42 | 276.27 |
| 836.15 | 276.29 | 837.44 | 276.26 | 840.69 | 276.14 | 842.36 | 276.14 | 849.15 | 276.24 |
| 855.17 | 276.22 | 859.61 | 276.18 | 862.66 | 276.13 | 866.03 | 275.99 | 867.89 | 275.84 |
| 872.9 | 275.23 | 878.26 | 274.77 | 882.11 | 274.62 | 884.38 | 274.48 | 888.14 | 274.43 |
| 891.73 | 274.42 | 898.47 | 274.3 | 900.51 | 274.31 | 901.21 | 274.4 | 902.17 | 274.46 |
| 903.63 | 274.51 | 905.78 | 274.61 | 907.64 | 274.77 | 911.48 | 275.13 | 914.05 | 275.47 |
| 916.44 | 275.89 | 916.88 | 275.93 | 919.68 | 276.38 | 922.32 | 276.87 | 924.06 | 277.25 |
| 926.1 | 277.77 | 935.04 | 278.2 | 937.18 | 278.26 | 939.77 | 278.38 | 941.74 | 278.55 |
| 945.49 | 278.82 | 946.41 | 278.83 | 951.66 | 278.73 | 952.25 | 278.7 | 955.16 | 278.7 |
| 957.67 | 278.82 | 965.69 | 279.32 | 969.96 | 279.39 | 972.23 | 279.37 | 977.53 | 279.28 |
| 980.15 | 279.18 | 980.83 | 279.17 | 983.66 | 279 | 989.13 | 278.54 | 992.71 | 278.34 |
| 994.02 | 278.31 | 998.44 | 278.25 | 1001.36 | 278.29 | 1003.34 | 278.27 | 1005.08 | 278.23 |
| 1009.79 | 278.08 | 1014.45 | 277.62 | 1018.12 | 277.16 | 1021.46 | 276.69 | 1022.72 | 276.55 |
| 1025.2 | 276.23 | 1031.28 | 275.76 | 1033.12 | 275.69 | 1037.42 | 275.58 | 1038.3 | 275.54 |
| 1044.54 | 275.53 | 1046 | 275.51 | 1046.9 | 275.54 | 1050.06 | 275.55 | 1050.5 | 275.53 |
| 1053.26 | 275.5 | 1060.27 | 275.51 | 1062.76 | 275.59 | 1066.37 | 275.66 | 1069.9 | 275.69 |
| 1072.19 | 275.74 | 1077.04 | 275.87 | 1080.16 | 275.91 | 1081.31 | 275.95 | 1084.05 | 275.96 |
| 1087.8 | 275.91 | 1089.57 | 275.78 | 1092.6 | 275.65 | 1095.27 | 275.51 | 1100.95 | 275.28 |
| 1102.84 | 275.17 | 1106.25 | 275.23 | 1107.47 | 275.43 | 1109.94 | 275.69 | 1113.99 | 276.24 |
| 1115.74 | 276.4 | 1117.51 | 276.47 | 1120.74 | 276.37 | 1123.77 | 276.45 | 1124.61 | 276.43 |
| 1126.97 | 276.44 | 1127.38 | 276.46 | 1132.81 | 276.39 | 1135.15 | 276.38 | 1137.02 | 276.33 |
| 1138.47 | 276.32 | 1142.57 | 276.19 | 1150.92 | 275.95 | 1152.7 | 275.85 | 1154.05 | 275.74 |
| 1156.68 | 275.59 | 1163.61 | 275.29 | 1168.41 | 275.23 | 1171.87 | 275.16 | 1172.67 | 275.16 |
| 1176.14 | 275.21 | 1177.81 | 275.29 | 1180.57 | 275.39 | 1183.36 | 275.71 | 1184.95 | 275.83 |
| 1187.16 | 275.9 | 1188.62 | 276 | 1192.88 | 276.26 | 1193.84 | 276.29 | 1195.82 | 276.31 |
| 1196.47 | 276.29 | 1201.6 | 276.25 | 1205.58 | 275.87 | 1208.14 | 275.69 | 1210.87 | 275.52 |
| 1211.07 | 275.48 | 1212.4 | 275.45 | 1214.69 | 275.44 | 1216.65 | 275.45 | 1217.2 | 275.5 |
| 1218.71 | 275.55 | 1223 | 275.63 | 1224.02 | 275.64 | 1226.04 | 275.61 | 1228.18 | 275.54 |
| 1228.86 | 275.47 | 1230.54 | 275.39 | 1234.64 | 275.25 | 1239.92 | 275.14 | 1241.26 | 275.13 |
| 1243.14 | 275.16 | 1245.8 | 275.17 | 1251.59 | 275 | 1253.64 | 274.93 | 1255.54 | 274.89 |
| 1261.79 | 274.9 | 1263.91 | 274.91 | 1266.32 | 274.95 | 1267.27 | 275.01 | 1270.22 | 275.02 |
| 1270.93 | 275.08 | 1273.83 | 275.06 | 1275.45 | 275.07 | 1277.5 | 275.03 | 1279.94 | 274.91 |
| 1284.36 | 274.77 | 1288.88 | 274.71 | 1289.53 | 274.68 | 1291.74 | 274.66 | 1295.7 | 274.73 |
| 1297.78 | 274.81 | 1299.96 | 274.89 | 1302.74 | 275.04 | 1305.54 | 275.13 | 1307.34 | 275.21 |
| 1309.78 | 275.41 | 1311.81 | 275.51 | 1312.15 | 275.49 | 1314.55 | 275.61 | 1317.63 | 275.72 |
| 1319.07 | 275.75 | 1320.17 | 275.86 | 1323.91 | 276.05 | 1325.36 | 276.09 | 1328.17 | 276.2 |
| 1330.13 | 276.34 | 1331.35 | 276.37 | 1333.74 | 276.31 | 1341.93 | 275.96 | 1344.02 | 275.88 |
| 1348.61 | 275.77 | 1353.56 | 275.59 | 1356.56 | 275.54 | 1357.36 | 275.51 | 1358.36 | 275.53 |
| 1362.22 | 275.54 | 1365.21 | 275.52 | 1370.06 | 275.31 | 1375.94 | 274.92 | 1377.28 | 274.82 |
| 1384.58 | 274.18 | 1386.24 | 274.04 | 1387.23 | 273.92 | 1390.49 | 273.79 | 1391.55 | 273.78 |
| 1395.22 | 273.8 | 1398.28 | 273.83 | 1401.97 | 273.84 | 1404.14 | 273.8 | 1409.43 | 273.79 |
| 1410.24 | 273.78 | 1412.55 | 273.8 | 1418.79 | 273.98 | 1423.44 | 274.05 | 1427.67 | 274.09 |
| 1429.75 | 274.1 | 1430.84 | 274.14 | 1437.35 | 274.3 | 1444.59 | 274.42 | 1453.1 | 274.4 |
| 1456.98 | 274.54 | 1458.33 | 274.53 | 1459.34 | 274.58 | 1462.32 | 274.64 | 1464.69 | 274.63 |
| 1468.57 | 274.68 | 1470.81 | 274.69 | 1473.8 | 274.66 | 1475.1 | 274.72 | 1478.08 | 274.79 |
| 1479.79 | 274.9 | 1482.01 | 274.96 | 1484.26 | 275.1 | 1485.61 | 275.15 | 1491.73 | 275.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1492.54 | 275.43 | 1497.15 | 275.8 | 1498.15 | 275.87 | 1502.63 | 276.12 | 1504.99 | 276.47 |
| 1505.58 | 276.6 | 1508.24 | 277.33 | 1510.29 | 277.86 | 1515.37 | 279.23 | 1516.11 | 279.49 |
| 1517.92 | 280.3 | 1518.67 | 280.67 | 1521.54 | 281.92 | 1525.74 | 283.97 | 1526.94 | 284.58 |
| 1531.36 | 286.76 | 1533.46 | 287.84 | 1534.61 | 288.23 | 1536.57 | 288.85 | 1539.19 | 289.7 |
| 1541.89 | 290.53 | 1545.36 | 291.07 | 1549.97 | 291.6 | 1553.82 | 292.08 | 1558.23 | 292.67 |
| 1563.55 | 292.55 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 398.97 | .04 | 1516.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 398.97 | 1516.11 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1028.292 Elevation=280.0223

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 1019.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 293.76 | 1.71 | 293.59 | 5.48 | 293.15 | 8.56 | 292.82 | 12.41 | 292.51 |
| 21.58 | 291.63 | 22.69 | 291.54 | 26.73 | 291.09 | 29.01 | 291.01 | 32.89 | 290.7 |
| 34.79 | 290.52 | 37.32 | 290.34 | 39.21 | 290.4 | 40.31 | 290.41 | 41.62 | 290.32 |
| 44.55 | 290.25 | 51.69 | 289.85 | 53.01 | 289.78 | 61.29 | 289.23 | 64.25 | 289.06 |
| 74.25 | 288.39 | 76.02 | 288.24 | 77.44 | 288.16 | 80.47 | 287.93 | 83.11 | 287.79 |
| 90.7 | 287.32 | 111.46 | 286.29 | 117.23 | 286.07 | 122.27 | 286 | 123.95 | 285.96 |
| 126.82 | 285.79 | 128.51 | 285.66 | 130.44 | 285.58 | 133.46 | 285.4 | 135.01 | 285.29 |
| 144.16 | 284.68 | 164.01 | 283.72 | 174.72 | 283.07 | 179.71 | 282.82 | 184.61 | 282.54 |
| 195.5 | 282.01 | 199.25 | 281.87 | 204.72 | 281.69 | 207.38 | 281.54 | 216.2 | 281.16 |
| 216.82 | 281.14 | 225.57 | 280.72 | 231.18 | 280.32 | 236.25 | 280.02 | 236.78 | 279.98 |
| 249.07 | 279.3 | 252.65 | 279.03 | 257.41 | 278.72 | 260.89 | 278.6 | 265.87 | 278.38 |
| 266.45 | 278.33 | 268.15 | 278.27 | 272.13 | 278.01 | 281.58 | 277.52 | 285.24 | 277.24 |
| 288.85 | 277.05 | 291.67 | 276.81 | 293.33 | 276.72 | 297.59 | 276.58 | 304.27 | 276.24 |
| 307.9 | 276.1 | 311.34 | 275.85 | 313.85 | 275.69 | 318.29 | 275.44 | 327.95 | 275.07 |
| 330.14 | 275.01 | 333.17 | 275.02 | 335.61 | 275 | 336.93 | 274.96 | 339.26 | 274.84 |
| 340.28 | 274.74 | 347.45 | 274.24 | 350.61 | 274 | 351.24 | 273.97 | 357.25 | 273.45 |
| 358.3 | 273.45 | 359.07 | 273.51 | 362.22 | 273.43 | 366.39 | 273.24 | 369.44 | 273.12 |
| 371.48 | 273.23 | 372.02 | 273.31 | 373.24 | 273.41 | 379.06 | 273.84 | 380.82 | 273.92 |
| 382.83 | 274.06 | 385.94 | 274.19 | 386.7 | 274.2 | 389.97 | 274.06 | 392.17 | 273.93 |
| 393.82 | 273.88 | 396.99 | 273.88 | 401.91 | 274.01 | 405.61 | 274.19 | 410.83 | 274.52 |
| 414.69 | 274.68 | 415.48 | 274.7 | 417.83 | 274.9 | 421.17 | 275.35 | 427.23 | 275.25 |
| 428.6 | 275.3 | 429.93 | 275.31 | 434.57 | 275.38 | 437.34 | 275.59 | 438.32 | 275.69 |
| 441.19 | 276.03 | 443.22 | 276.39 | 445.21 | 276.98 | 447.79 | 277.96 | 450.12 | 278.1 |
| 452.32 | 278.21 | 453.63 | 278.21 | 454.37 | 278.28 | 456.11 | 278.33 | 457.59 | 278.3 |
| 458.76 | 278.2 | 461.37 | 277.92 | 463.15 | 277.83 | 466.04 | 277.89 | 469.49 | 277.88 |
| 470.33 | 277.7 | 475.34 | 276.35 | 480.16 | 275.34 | 482.51 | 274.83 | 484.9 | 274.49 |
| 487.54 | 274.3 | 497.45 | 274.26 | 500.29 | 274.54 | 501.19 | 274.6 | 503.71 | 274.7 |
| 505.87 | 274.75 | 507.36 | 274.76 | 510.3 | 274.68 | 510.92 | 274.72 | 514.65 | 274.51 |
| 516.87 | 274.46 | 517.67 | 274.31 | 520.92 | 273.91 | 521.9 | 273.84 | 525.08 | 273.71 |
| 527.54 | 273.66 | 529.3 | 273.59 | 531.37 | 273.48 | 532.21 | 273.46 | 534.43 | 273.51 |
| 537.35 | 273.65 | 539.9 | 273.84 | 541.01 | 273.85 | 544.95 | 273.95 | 545.65 | 273.71 |
| 549.53 | 272.72 | 551.72 | 272.18 | 554.95 | 271.64 | 560.26 | 271.43 | 563.99 | 271.31 |
| 565.94 | 271.26 | 568.92 | 271.4 | 571.71 | 271.59 | 575.3 | 271.74 | 577.36 | 271.76 |
| 581.91 | 271.71 | 582.4 | 271.68 | 584.62 | 271.64 | 587.59 | 271.64 | 590.22 | 271.62 |
| 591.92 | 271.66 | 593.88 | 271.76 | 596.99 | 271.84 | 597.92 | 271.9 | 600.55 | 272.01 |
| 601.32 | 272.06 | 604.25 | 272.12 | 605.37 | 272.21 | 608.99 | 272.29 | 612.92 | 272.31 |
| 617.17 | 272.3 | 621.03 | 272.26 | 630.57 | 272.26 | 635.03 | 272.29 | 640.46 | 272.29 |
| 641.92 | 272.33 | 643.93 | 272.48 | 645.19 | 272.5 | 646.68 | 272.6 | 650.28 | 272.73 |
| 654.68 | 272.97 | 655.88 | 273.02 | 659.96 | 273.04 | 664.72 | 273.22 | 668.26 | 273.31 |
| 671.05 | 273.41 | 673.32 | 273.46 | 675.94 | 273.55 | 677.45 | 273.58 | 684.05 | 273.68 |
| 687.85 | 273.72 | 693.71 | 273.84 | 696.2 | 273.94 | 705.25 | 274.45 | 708.23 | 274.73 |
| 710.16 | 274.89 | 712.13 | 275 | 718.71 | 275.33 | 719.91 | 275.36 | 725.51 | 275.58 |
| 728.71 | 275.64 | 731.79 | 275.68 | 735.22 | 275.86 | 737.04 | 275.98 | 740.93 | 276.39 |
| 742.08 | 276.48 | 745.72 | 276.72 | 747.04 | 276.85 | 748.66 | 277.05 | 749.61 | 277.12 |
| 752.88 | 277.31 | 757.07 | 277.33 | 760.09 | 277.23 | 764.21 | 276.98 | 766.6 | 276.74 |
| 768.22 | 276.51 | 770.04 | 276.19 | 770.13 | 276.14 | 773.46 | 276.03 | 775.47 | 275.99 |
| 777.6 | 276.13 | 780.91 | 276.32 | 786.3 | 276.88 | 792.62 | 276.87 | 793.38 | 276.74 |
| 798.68 | 275.92 | 799.62 | 275.8 | 803.89 | 275.36 | 806.07 | 275.18 | 807.4 | 275.01 |
| 811.7 | 275 | 812.32 | 275.05 | 817.97 | 275.12 | 821.24 | 275.33 | 822.87 | 275.49 |
| 825.81 | 275.68 | 828.1 | 275.81 | 830.91 | 276.06 | 832.09 | 276.11 | 834.91 | 276.16 |
| 838.65 | 276.19 | 841.4 | 276.12 | 843.85 | 276.03 | 846.2 | 276.05 | 851.71 | 276.13 |
| 855.98 | 276.11 | 862.23 | 276.04 | 865.3 | 275.97 | 867 | 275.91 | 868.68 | 275.82 |
| 870.55 | 275.65 | 875.59 | 275 | 880.32 | 274.57 | 880.97 | 274.5 | 883.92 | 274.39 |
| 887.12 | 274.19 | 892.42 | 274.12 | 894.5 | 274.13 | 901.28 | 274.02 | 903.33 | 274.03 |
| 904.04 | 274.13 | 904.99 | 274.19 | 908.63 | 274.35 | 910.49 | 274.52 | 914.71 | 274.94 |
| 916.94 | 275.26 | 919.34 | 275.69 | 919.78 | 275.73 | 923.32 | 276.31 | 925.24 | 276.73 |
| 926.99 | 277.15 | 929.04 | 277.72 | 938.02 | 278.17 | 940.18 | 278.24 | 942.78 | 278.37 |
| 944.76 | 278.55 | 946.55 | 278.68 | 947.86 | 278.8 | 949.45 | 278.85 | 955.32 | 278.7 |
| 956.79 | 278.69 | 958.24 | 278.71 | 960.77 | 278.84 | 968.82 | 279.37 | 972.06 | 279.43 |
| 975.4 | 279.42 | 980.72 | 279.31 | 984.04 | 279.18 | 986.88 | 279 | 992.38 | 278.5 |
| 995.97 | 278.29 | 997.29 | 278.25 | 1001.74 | 278.19 | 1004.66 | 278.23 | 1006.66 | 278.21 |
| 1008.41 | 278.17 | 1013.14 | 278 | 1017.83 | 277.51 | 1022.39 | 276.88 | 1024.86 | 276.5 |
| 1028.62 | 276 | 1033.78 | 275.56 | 1034.73 | 275.49 | 1038.32 | 275.35 | 1040.9 | 275.29 |
| 1041.79 | 275.25 | 1048.06 | 275.24 | 1049.53 | 275.22 | 1050.43 | 275.25 | 1053.34 | 275.27 |
| 1056.82 | 275.22 | 1062.54 | 275.23 | 1063.87 | 275.25 | 1066.37 | 275.32 | 1070.73 | 275.39 |
| 1073.54 | 275.41 | 1080.71 | 275.57 | 1083.86 | 275.61 | 1085.01 | 275.64 | 1087.76 | 275.65 |
| 1091.53 | 275.6 | 1093.31 | 275.48 | 1094.03 | 275.46 | 1097.29 | 275.31 | 1104.74 | 275.03 |
| 1106.64 | 274.94 | 1110.07 | 275 | 1111.3 | 275.21 | 1113.78 | 275.5 | 1117.84 | 276.1 |
| 1119.17 | 276.24 | 1121.39 | 276.34 | 1122.23 | 276.33 | 1124.63 | 276.23 | 1127.67 | 276.32 |
| 1128.52 | 276.3 | 1131.3 | 276.32 | 1133.37 | 276.3 | 1136.76 | 276.22 | 1139.11 | 276.19 |
| 1140.99 | 276.14 | 1142.45 | 276.13 | 1146.56 | 275.99 | 1154.95 | 275.74 | 1156.75 | 275.63 |
| 1158.1 | 275.52 | 1160.75 | 275.36 | 1167.71 | 275.06 | 1172.53 | 275 | 1176.01 | 274.93 |
| 1179.12 | 274.96 | 1180.3 | 274.99 | 1184.76 | 275.15 | 1187.56 | 275.47 | 1189.15 | 275.6 |
| 1192.44 | 275.75 | 1192.84 | 275.8 | 1197.12 | 276.07 | 1199.26 | 276.13 | 1204.79 | 276.11 |
| 1205.88 | 276.09 | 1209.89 | 275.69 | 1212.45 | 275.5 | 1214.05 | 275.4 | 1215.4 | 275.27 |
| 1216.74 | 275.24 | 1221.01 | 275.22 | 1221.56 | 275.28 | 1223.08 | 275.33 | 1224.29 | 275.34 |
| 1227.39 | 275.41 | 1230.45 | 275.38 | 1232.6 | 275.3 | 1232.87 | 275.26 | 1234.96 | 275.15 |
| 1239.09 | 274.99 | 1241.87 | 274.91 | 1245.74 | 274.83 | 1247.63 | 274.85 | 1250.3 | 274.85 |
| 1254.08 | 274.73 | 1257.17 | 274.65 | 1259.73 | 274.57 | 1266.36 | 274.56 | 1268.5 | 274.57 |
| 1270.92 | 274.61 | 1271.88 | 274.67 | 1274.84 | 274.7 | 1275.55 | 274.76 | 1276.46 | 274.77 |
| 1278.46 | 274.74 | 1280.09 | 274.76 | 1282.15 | 274.72 | 1284.61 | 274.61 | 1289.04 | 274.46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1293.59 | 274.4 | 1294.25 | 274.37 | 1296.47 | 274.36 | 1300.44 | 274.42 | 1304.73 | 274.59 |
| 1307.52 | 274.74 | 1309.22 | 274.78 | 1312.14 | 274.91 | 1314.6 | 275.12 | 1316.63 | 275.24 |
| 1316.98 | 275.22 | 1319.38 | 275.37 | 1321.81 | 275.47 | 1322.48 | 275.52 | 1323.92 | 275.56 |
| 1325.03 | 275.68 | 1328.79 | 275.89 | 1330.25 | 275.94 | 1333.79 | 276.11 | 1335.04 | 276.22 |
| 1336.27 | 276.25 | 1338.67 | 276.2 | 1341.51 | 276.07 | 1346.98 | 275.84 | 1349 | 275.73 |
| 1353.61 | 275.61 | 1358.59 | 275.42 | 1361.6 | 275.36 | 1367.29 | 275.32 | 1370.3 | 275.29 |
| 1375.17 | 275.07 | 1381.07 | 274.66 | 1382.42 | 274.55 | 1389.75 | 273.91 | 1392.25 | 273.68 |
| 1393.42 | 273.59 | 1395.7 | 273.51 | 1398.49 | 273.5 | 1403.52 | 273.54 | 1407.88 | 273.53 |
| 1409.41 | 273.5 | 1412.28 | 273.48 | 1414.73 | 273.49 | 1415.54 | 273.47 | 1417.86 | 273.49 |
| 1424.13 | 273.68 | 1428.8 | 273.74 | 1435.15 | 273.79 | 1442.79 | 273.98 | 1450.06 | 274.1 |
| 1456.82 | 274.08 | 1458.61 | 274.09 | 1462.51 | 274.24 | 1463.86 | 274.24 | 1464.88 | 274.29 |
| 1468.94 | 274.37 | 1470.26 | 274.35 | 1474.15 | 274.4 | 1476.41 | 274.41 | 1479.41 | 274.38 |
| 1480.72 | 274.43 | 1483.71 | 274.49 | 1485.43 | 274.6 | 1487.66 | 274.64 | 1489.92 | 274.79 |
| 1497.42 | 275.04 | 1498.24 | 275.04 | 1502.87 | 275.37 | 1503.88 | 275.43 | 1508.38 | 275.63 |
| 1510.76 | 275.93 | 1513.15 | 276.5 | 1514.02 | 276.73 | 1516.08 | 277.22 | 1521.18 | 278.5 |
| 1521.93 | 278.74 | 1523.5 | 279.4 | 1524.44 | 279.83 | 1527.26 | 280.99 | 1528.37 | 281.49 |
| 1535.54 | 284.86 | 1536.91 | 285.49 | 1538.98 | 286.49 | 1544.61 | 288.22 | 1547.26 | 288.99 |
| 1550.67 | 289.49 | 1555.2 | 289.99 | 1558.98 | 290.43 | 1559.38 | 290.49 | 1563.32 | 290.97 |
| 1568.54 | 290.85 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 392.17 | .04 | 1521.93 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.
392.17 1521.93 21.54 19.33 20.13 .1 .3
Right Levee Station=1027.315 Elevation= 280.035

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 999.714*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 292.91 | 1.68 | 292.75 | 5.38 | 292.31 | 8.41 | 291.99 | 12.19 | 291.69 |
| 15.16 | 291.4 | 22.72 | 290.68 | 26.27 | 290.3 | 28.5 | 290.22 | 32.9 | 289.85 |
| 34.18 | 289.73 | 36.68 | 289.55 | 39.61 | 289.61 | 40.89 | 289.53 | 43.78 | 289.46 |
| 50.79 | 289.06 | 52.09 | 289 | 60.22 | 288.46 | 63.13 | 288.29 | 72.96 | 287.65 |
| 74.7 | 287.51 | 76.1 | 287.43 | 79.08 | 287.21 | 81.67 | 287.07 | 89.13 | 286.62 |
| 90.11 | 286.57 | 105.72 | 285.82 | 109.53 | 285.64 | 115.2 | 285.44 | 120.15 | 285.38 |
| 121.8 | 285.34 | 123.51 | 285.25 | 126.28 | 285.06 | 128.18 | 284.98 | 132.67 | 284.7 |
| 141.67 | 284.08 | 143.26 | 284.01 | 161.17 | 283.16 | 171.69 | 282.54 | 176.6 | 282.29 |
| 181.41 | 282.02 | 192.11 | 281.5 | 195.8 | 281.36 | 201.17 | 281.18 | 203.78 | 281.04 |
| 212.46 | 280.67 | 213.06 | 280.65 | 221.66 | 280.23 | 227.18 | 279.85 | 228.35 | 279.79 |
| 232.68 | 279.52 | 244.75 | 278.83 | 248.27 | 278.57 | 252.95 | 278.26 | 256.37 | 278.14 |
| 256.9 | 278.1 | 258.92 | 278.03 | 261.83 | 277.87 | 263.51 | 277.81 | 267.41 | 277.55 |
| 276.7 | 277.07 | 280.95 | 276.75 | 283.84 | 276.6 | 286.62 | 276.37 | 288.25 | 276.27 |
| 292.43 | 276.12 | 299.83 | 275.75 | 302.56 | 275.65 | 305.95 | 275.41 | 308.41 | 275.25 |
| 312.78 | 275.02 | 322.27 | 274.66 | 324.42 | 274.59 | 327.4 | 274.62 | 329.79 | 274.61 |
| 331.09 | 274.57 | 333.38 | 274.46 | 334.39 | 274.35 | 341.3 | 273.87 | 346.73 | 273.45 |
| 351.06 | 273.1 | 352.09 | 273.1 | 352.85 | 273.15 | 355.95 | 273.08 | 360.04 | 272.9 |
| 363.04 | 272.78 | 365.04 | 272.88 | 365.57 | 272.95 | 372.49 | 273.44 | 374.23 | 273.51 |
| 376.2 | 273.66 | 379.25 | 273.78 | 380 | 273.79 | 383.22 | 273.66 | 385.37 | 273.53 |
| 387.1 | 273.5 | 390.41 | 273.5 | 395.56 | 273.66 | 399.43 | 273.87 | 404.89 | 274.25 |
| 408.93 | 274.43 | 409.75 | 274.45 | 412.22 | 274.68 | 415.7 | 275.17 | 422.04 | 275.08 |
| 423.48 | 275.13 | 424.87 | 275.14 | 429.72 | 275.23 | 432.62 | 275.47 | 433.64 | 275.58 |
| 436.65 | 275.95 | 438.77 | 276.34 | 440.85 | 276.98 | 443.54 | 278.04 | 445.98 | 278.2 |
| 448.57 | 278.32 | 449.66 | 278.31 | 450.44 | 278.39 | 452.25 | 278.44 | 453.21 | 278.43 |
| 455.02 | 278.31 | 457.75 | 278 | 460.07 | 277.9 | 462.63 | 277.98 | 466.24 | 277.96 |
| 467.12 | 277.77 | 472.36 | 276.32 | 477.41 | 275.24 | 479.86 | 274.69 | 482.37 | 274.32 |
| 485.12 | 274.13 | 489.45 | 274.1 | 495.49 | 274.08 | 498.46 | 274.39 | 500.3 | 274.5 |
| 504.29 | 274.62 | 505.85 | 274.63 | 508.93 | 274.54 | 509.58 | 274.58 | 513.48 | 274.35 |
| 515.8 | 274.3 | 516.73 | 274.12 | 520.03 | 273.7 | 521.65 | 273.6 | 524.38 | 273.49 |
| 526.96 | 273.43 | 528.8 | 273.35 | 530.97 | 273.23 | 531.84 | 273.22 | 534.16 | 273.26 |
| 537.22 | 273.41 | 539.89 | 273.62 | 540.76 | 273.62 | 545.17 | 273.75 | 545.9 | 273.5 |
| 549.96 | 272.43 | 552.25 | 271.86 | 555.63 | 271.28 | 561.18 | 271.07 | 565.08 | 270.94 |
| 567.12 | 270.89 | 570.11 | 271.03 | 572.52 | 271.19 | 576.53 | 271.36 | 578.6 | 271.39 |
| 580.73 | 271.38 | 582.97 | 271.35 | 583.66 | 271.32 | 585.89 | 271.28 | 588.88 | 271.28 |
| 591.52 | 271.26 | 592.83 | 271.29 | 595.2 | 271.39 | 598.33 | 271.48 | 599.25 | 271.54 |
| 601.9 | 271.65 | 602.67 | 271.7 | 605.61 | 271.76 | 606.74 | 271.85 | 610.38 | 271.93 |
| 614.33 | 271.95 | 618.6 | 271.94 | 622.48 | 271.91 | 632.07 | 271.91 | 636.55 | 271.95 |
| 642 | 271.96 | 643.47 | 271.99 | 645.49 | 272.15 | 646.75 | 272.18 | 648.26 | 272.27 |
| 651.87 | 272.41 | 654.49 | 272.56 | 657.5 | 272.7 | 661.59 | 272.73 | 666.39 | 272.93 |
| 669.94 | 273.04 | 672.74 | 273.15 | 673.61 | 273.16 | 679 | 273.32 | 679.18 | 273.31 |
| 685.8 | 273.41 | 689.62 | 273.44 | 695.51 | 273.55 | 698.02 | 273.66 | 707.11 | 274.19 |
| 710.1 | 274.48 | 712.04 | 274.65 | 714.02 | 274.77 | 720.63 | 275.12 | 721.84 | 275.16 |
| 727.46 | 275.42 | 729.72 | 275.46 | 730.68 | 275.5 | 733.78 | 275.55 | 737.23 | 275.74 |
| 739.05 | 275.87 | 741.21 | 276.1 | 742.96 | 276.31 | 747.78 | 276.67 | 749.8 | 276.89 |
| 750.72 | 277.01 | 754.97 | 277.29 | 759.18 | 277.3 | 760.18 | 277.28 | 762.21 | 277.2 |
| 766.35 | 276.93 | 768.75 | 276.69 | 770.39 | 276.44 | 772.21 | 276.1 | 772.31 | 276.04 |
| 775.64 | 275.92 | 777.66 | 275.88 | 783.14 | 276.22 | 788.55 | 276.81 | 794.9 | 276.81 |
| 795.66 | 276.66 | 800.99 | 275.78 | 801.94 | 275.65 | 806.22 | 275.18 | 808.42 | 274.99 |
| 809.76 | 274.8 | 814.08 | 274.79 | 814.7 | 274.85 | 820.37 | 274.93 | 823.66 | 275.15 |
| 825.3 | 275.32 | 828.26 | 275.53 | 830.55 | 275.67 | 833.38 | 275.94 | 834.56 | 275.99 |
| 837.39 | 276.05 | 841.16 | 276.09 | 842.46 | 276.07 | 845.74 | 275.94 | 847.43 | 275.93 |
| 854.28 | 276.03 | 860.37 | 275.97 | 864.85 | 275.9 | 867.93 | 275.82 | 869.64 | 275.75 |
| 871.33 | 275.65 | 873.2 | 275.47 | 878.27 | 274.77 | 883.03 | 274.31 | 883.68 | 274.23 |
| 886.65 | 274.11 | 888.76 | 273.96 | 888.98 | 273.92 | 893.65 | 273.84 | 897.28 | 273.83 |
| 904.63 | 273.74 | 906.15 | 273.75 | 906.86 | 273.86 | 911.47 | 274.1 | 917.59 | 274.71 |
| 919.82 | 275.05 | 922.23 | 275.49 | 922.67 | 275.54 | 926.23 | 276.13 | 928.37 | 276.64 |
| 929.92 | 277.06 | 931.98 | 277.66 | 941.01 | 278.15 | 943.17 | 278.22 | 945.79 | 278.36 |
| 947.78 | 278.55 | 951.56 | 278.85 | 952.49 | 278.86 | 958.39 | 278.71 | 959.87 | 278.7 |
| 961.32 | 278.72 | 963.87 | 278.86 | 971.96 | 279.42 | 976.27 | 279.48 | 978.57 | 279.46 |
| 983.92 | 279.34 | 987.25 | 279.2 | 990.11 | 279 | 995.63 | 278.46 | 999.34 | 278.23 |
| 1000.56 | 278.19 | 1005.03 | 278.13 | 1007.97 | 278.17 | 1009.98 | 278.15 | 1011.74 | 278.1 |
| 1016.49 | 277.92 | 1021.2 | 277.39 | 1024.9 | 276.85 | 1028.27 | 276.31 | 1029.54 | 276.14 |
| 1032.05 | 275.77 | 1038.18 | 275.22 | 1041.8 | 275.07 | 1044.39 | 275.01 | 1045.27 | 274.96 |
| 1051.58 | 274.95 | 1053.05 | 274.93 | 1053.96 | 274.96 | 1056.89 | 274.98 | 1060.38 | 274.94 |
| 1064.18 | 274.95 | 1067.46 | 274.98 | 1069.97 | 275.05 | 1073.62 | 275.11 | 1075.92 | 275.11 |
| 1079.49 | 275.17 | 1084.39 | 275.28 | 1087.55 | 275.3 | 1091.47 | 275.34 | 1095.26 | 275.29 |
| 1097.05 | 275.18 | 1100.11 | 275.08 | 1102.8 | 274.96 | 1108.54 | 274.79 | 1110.44 | 274.7 |
| 1113.89 | 274.77 | 1115.12 | 275 | 1117.62 | 275.31 | 1120.99 | 275.85 | 1121.7 | 275.95 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1123.47 | 276.14 | 1125.26 | 276.21 | 1126.11 | 276.2 | 1128.53 | 276.09 | 1131.58 | 276.19 |
| 1132.43 | 276.16 | 1135.23 | 276.19 | 1137.3 | 276.15 | 1140.71 | 276.05 | 1146.42 | 275.94 |
| 1150.56 | 275.79 | 1156.33 | 275.62 | 1158.99 | 275.52 | 1160.79 | 275.42 | 1162.16 | 275.3 |
| 1164.81 | 275.14 | 1171.81 | 274.82 | 1176.66 | 274.77 | 1180.15 | 274.71 | 1183.27 | 274.73 |
| 1188.29 | 274.88 | 1188.94 | 274.91 | 1191.76 | 275.24 | 1193.21 | 275.36 | 1196.66 | 275.54 |
| 1197.06 | 275.59 | 1201.36 | 275.88 | 1202.33 | 275.92 | 1204.33 | 275.96 | 1208.53 | 275.95 |
| 1210.17 | 275.93 | 1214.19 | 275.51 | 1219.53 | 275.1 | 1221.08 | 275.03 | 1225.37 | 275 |
| 1225.92 | 275.06 | 1227.45 | 275.11 | 1228.67 | 275.12 | 1232.81 | 275.19 | 1234.85 | 275.15 |
| 1237.01 | 275.06 | 1237.7 | 275 | 1240.13 | 274.87 | 1242.38 | 274.79 | 1244.28 | 274.7 |
| 1247.16 | 274.63 | 1249.11 | 274.54 | 1250.21 | 274.53 | 1254.16 | 274.54 | 1260.84 | 274.35 |
| 1264.28 | 274.24 | 1267.34 | 274.25 | 1270.94 | 274.23 | 1273.09 | 274.24 | 1275.52 | 274.28 |
| 1276.48 | 274.34 | 1279.46 | 274.37 | 1280.18 | 274.44 | 1283.1 | 274.43 | 1285.89 | 274.45 |
| 1289.27 | 274.3 | 1293.73 | 274.15 | 1297.07 | 274.12 | 1300.12 | 274.05 | 1301.19 | 274.05 |
| 1305.19 | 274.12 | 1306.72 | 274.16 | 1307.29 | 274.21 | 1309.49 | 274.29 | 1312.3 | 274.43 |
| 1314 | 274.48 | 1316.94 | 274.61 | 1318.97 | 274.8 | 1321.45 | 274.97 | 1321.8 | 274.96 |
| 1324.22 | 275.13 | 1328.78 | 275.37 | 1329.89 | 275.5 | 1331.89 | 275.64 | 1333.67 | 275.74 |
| 1335.14 | 275.79 | 1338.7 | 275.98 | 1339.95 | 276.1 | 1341.19 | 276.14 | 1343.6 | 276.08 |
| 1346.45 | 275.94 | 1350.08 | 275.79 | 1354.95 | 275.55 | 1358.61 | 275.45 | 1363.61 | 275.25 |
| 1366.64 | 275.18 | 1367.01 | 275.15 | 1368.46 | 275.15 | 1372.35 | 275.11 | 1375.38 | 275.06 |
| 1380.27 | 274.84 | 1386.21 | 274.4 | 1388.82 | 274.18 | 1397.09 | 273.44 | 1398.61 | 273.31 |
| 1400.9 | 273.23 | 1405.67 | 273.22 | 1408.76 | 273.24 | 1413.15 | 273.23 | 1414.68 | 273.19 |
| 1420.84 | 273.17 | 1423.17 | 273.19 | 1429.47 | 273.38 | 1434.17 | 273.43 | 1440.54 | 273.47 |
| 1448.22 | 273.67 | 1455.53 | 273.78 | 1462.32 | 273.76 | 1464.12 | 273.77 | 1468.03 | 273.94 |
| 1469.4 | 273.95 | 1470.42 | 274 | 1474.5 | 274.09 | 1475.82 | 274.07 | 1479.74 | 274.13 |
| 1482 | 274.13 | 1485.02 | 274.1 | 1486.33 | 274.15 | 1489.34 | 274.19 | 1491.07 | 274.3 |
| 1493.31 | 274.33 | 1495.58 | 274.47 | 1496.95 | 274.51 | 1503.12 | 274.66 | 1503.94 | 274.65 |
| 1508.59 | 274.94 | 1509.61 | 274.99 | 1514.13 | 275.14 | 1516.52 | 275.4 | 1518.92 | 275.92 |
| 1519.8 | 276.14 | 1521.87 | 276.59 | 1527 | 277.76 | 1527.75 | 277.99 | 1529.29 | 278.6 |
| 1530.22 | 279 | 1532.98 | 280.07 | 1534.07 | 280.53 | 1537.03 | 281.83 | 1538.75 | 282.6 |
| 1540.38 | 283.3 | 1542.46 | 284.22 | 1544.49 | 285.15 | 1550.02 | 286.74 | 1552.63 | 287.45 |
| 1555.98 | 287.91 | 1560.43 | 288.37 | 1564.15 | 288.78 | 1565.42 | 288.94 | 1568.41 | 289.28 |
| 1573.54 | 289.15 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 385.37 | .04 | 1527.75 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 385.37 | 1527.75 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1026.338 Elevation=280.0477

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 980.389*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 292.07 | 1.65 | 291.9 | 5.29 | 291.48 | 8.26 | 291.16 | 11.98 | 290.86 |
| 14.89 | 290.59 | 22.32 | 289.88 | 26.02 | 289.49 | 28 | 289.42 | 32.32 | 289.06 |
| 33.58 | 288.93 | 35.75 | 288.78 | 38.91 | 288.81 | 40.17 | 288.73 | 43.01 | 288.66 |
| 49.9 | 288.28 | 51.17 | 288.22 | 59.16 | 287.69 | 62.02 | 287.53 | 71.67 | 286.91 |
| 73.38 | 286.78 | 74.76 | 286.7 | 77.68 | 286.49 | 80.23 | 286.36 | 87.56 | 285.92 |
| 88.52 | 285.87 | 103.86 | 285.16 | 107.59 | 285 | 113.17 | 284.81 | 118.04 | 284.76 |
| 119.65 | 284.72 | 122.56 | 284.56 | 124.06 | 284.45 | 125.92 | 284.37 | 128.83 | 284.21 |
| 130.33 | 284.11 | 139.17 | 283.49 | 140.74 | 283.42 | 158.33 | 282.6 | 168.67 | 282 |
| 173.48 | 281.77 | 178.21 | 281.51 | 188.73 | 280.99 | 192.35 | 280.85 | 197.62 | 280.67 |
| 201.06 | 280.5 | 209.31 | 280.16 | 217.75 | 279.75 | 223.17 | 279.38 | 224.32 | 279.32 |
| 228.58 | 279.06 | 240.43 | 278.36 | 243.9 | 278.11 | 248.98 | 277.78 | 251.85 | 277.68 |
| 252.37 | 277.64 | 254.36 | 277.57 | 257.22 | 277.41 | 258.86 | 277.35 | 262.7 | 277.08 |
| 271.82 | 276.63 | 275.99 | 276.31 | 278.84 | 276.16 | 281.56 | 275.92 | 283.17 | 275.83 |
| 287.27 | 275.67 | 293.73 | 275.33 | 297.23 | 275.21 | 300.55 | 274.97 | 302.97 | 274.81 |
| 307.26 | 274.59 | 316.59 | 274.24 | 318.7 | 274.18 | 321.62 | 274.22 | 323.98 | 274.22 |
| 325.25 | 274.18 | 327.5 | 274.07 | 328.49 | 273.97 | 335.28 | 273.48 | 338.46 | 273.23 |
| 339.07 | 273.2 | 344.87 | 272.76 | 345.88 | 272.75 | 346.62 | 272.8 | 349.67 | 272.73 |
| 356.64 | 272.44 | 358.61 | 272.53 | 359.13 | 272.6 | 365.93 | 273.05 | 367.63 | 273.11 |
| 368.66 | 273.2 | 370.85 | 273.31 | 373.3 | 273.38 | 376.46 | 273.26 | 378.58 | 273.14 |
| 380.38 | 273.11 | 383.84 | 273.13 | 389.21 | 273.32 | 393.25 | 273.55 | 398.95 | 273.98 |
| 403.17 | 274.18 | 404.8 | 274.27 | 406.6 | 274.45 | 410.24 | 274.99 | 416.86 | 274.91 |
| 418.35 | 274.96 | 419.81 | 274.98 | 424.88 | 275.09 | 427.9 | 275.35 | 428.96 | 275.47 |
| 432.1 | 275.87 | 434.32 | 276.3 | 434.8 | 276.42 | 436.49 | 276.99 | 439.3 | 278.12 |
| 441.85 | 278.29 | 444.25 | 278.42 | 445.68 | 278.41 | 446.11 | 278.47 | 448.39 | 278.55 |
| 450.01 | 278.51 | 451.28 | 278.41 | 454.13 | 278.08 | 456.08 | 277.98 | 459.23 | 278.06 |
| 462.99 | 278.05 | 463.91 | 277.84 | 469.38 | 276.3 | 474.34 | 275.2 | 477.21 | 274.55 |
| 479.83 | 274.16 | 482.71 | 273.95 | 486.52 | 273.93 | 493.53 | 273.91 | 496.63 | 274.24 |
| 498.55 | 274.36 | 500.36 | 274.43 | 502.72 | 274.49 | 504.34 | 274.5 | 506.87 | 274.41 |
| 508.24 | 274.44 | 512.31 | 274.19 | 514.73 | 274.13 | 515.7 | 273.94 | 519.15 | 273.49 |
| 520.84 | 273.38 | 523.69 | 273.26 | 526.38 | 273.2 | 528.3 | 273.12 | 530.56 | 272.99 |
| 531.48 | 272.97 | 533.9 | 273.02 | 537.08 | 273.18 | 539.87 | 273.4 | 540.78 | 273.4 |
| 545.39 | 273.55 | 546.15 | 273.28 | 550.39 | 272.15 | 552.78 | 271.54 | 555.7 | 271.01 |
| 556.3 | 270.93 | 560.42 | 270.77 | 566.17 | 270.57 | 568.3 | 270.52 | 571.31 | 270.66 |
| 573.72 | 270.81 | 578.15 | 271 | 581.98 | 271.01 | 583.32 | 271 | 587.16 | 270.92 |
| 592.82 | 270.91 | 594.53 | 270.95 | 596.52 | 271.03 | 599.66 | 271.12 | 600.59 | 271.18 |
| 603.25 | 271.29 | 604.03 | 271.34 | 606.98 | 271.4 | 608.11 | 271.49 | 611.77 | 271.57 |
| 615.74 | 271.59 | 620.03 | 271.58 | 623.93 | 271.55 | 633.56 | 271.57 | 638.07 | 271.61 |
| 644 | 271.63 | 645.02 | 271.66 | 647.05 | 271.83 | 648.32 | 271.85 | 649.83 | 271.95 |
| 653.46 | 272.09 | 656.09 | 272.24 | 659.11 | 272.38 | 663.23 | 272.42 | 668.05 | 272.64 |
| 671.61 | 272.76 | 674.43 | 272.88 | 676.72 | 272.93 | 679.37 | 273.02 | 687.56 | 273.14 |
| 691.39 | 273.16 | 697.31 | 273.27 | 699.83 | 273.38 | 708.97 | 273.92 | 711.97 | 274.23 |
| 713.92 | 274.41 | 715.91 | 274.54 | 722.55 | 274.91 | 729.42 | 275.26 | 731.69 | 275.31 |
| 732.66 | 275.36 | 735.76 | 275.42 | 739.23 | 275.62 | 741.06 | 275.76 | 743.41 | 276.03 |
| 744.99 | 276.23 | 746.15 | 276.33 | 749.83 | 276.61 | 752.79 | 276.97 | 753.75 | 277.05 |
| 757.06 | 277.26 | 761.28 | 277.28 | 764.33 | 277.17 | 767.53 | 276.97 | 768.49 | 276.89 |
| 770.91 | 276.63 | 772.55 | 276.37 | 774.38 | 276 | 774.48 | 275.94 | 777.83 | 275.81 |
| 779.86 | 275.76 | 782.02 | 275.92 | 785.36 | 276.12 | 790.81 | 276.75 | 797.18 | 276.74 |
| 797.95 | 276.59 | 803.3 | 275.64 | 804.25 | 275.51 | 808.56 | 275 | 810.87 | 274.79 |
| 812.11 | 274.6 | 816.45 | 274.58 | 817.08 | 274.65 | 822.78 | 274.73 | 826.08 | 274.98 |
| 827.73 | 275.16 | 830.7 | 275.39 | 833.01 | 275.53 | 835.85 | 275.82 | 837.03 | 275.88 |
| 839.88 | 275.94 | 843.66 | 275.99 | 844.97 | 275.97 | 848.26 | 275.84 | 849.96 | 275.83 |
| 853.09 | 275.86 | 856.85 | 275.92 | 861.16 | 275.87 | 867.47 | 275.76 | 870.56 | 275.67 |
| 872.28 | 275.59 | 873.98 | 275.48 | 875.86 | 275.29 | 880.95 | 274.54 | 885.73 | 274.04 |
| 886.39 | 273.96 | 889.37 | 273.83 | 892.6 | 273.6 | 896.41 | 273.54 | 900.05 | 273.54 |
| 906.9 | 273.45 | 908.97 | 273.47 | 909.68 | 273.58 | 914.31 | 273.84 | 916.2 | 274.03 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 920.46 | 274.49 | 922.7 | 274.84 | 925.13 | 275.29 | 925.57 | 275.34 | 928.42 | 275.84 |
| 929.15 | 275.95 | 931.3 | 276.5 | 932.86 | 276.96 | 934.92 | 277.61 | 944 | 278.13 |
| 946.17 | 278.21 | 948.97 | 278.37 | 950.8 | 278.56 | 952.6 | 278.7 | 953.93 | 278.83 |
| 955.54 | 278.88 | 958.02 | 278.8 | 961.46 | 278.71 | 964.41 | 278.73 | 966.96 | 278.87 |
| 975.09 | 279.47 | 979.42 | 279.53 | 981.73 | 279.5 | 987.11 | 279.37 | 988.44 | 279.32 |
| 990.46 | 279.21 | 993.33 | 279 | 998.88 | 278.42 | 1002.51 | 278.18 | 1003.84 | 278.14 |
| 1008.33 | 278.07 | 1011.28 | 278.11 | 1013.3 | 278.09 | 1015.06 | 278.04 | 1019.84 | 277.85 |
| 1024.57 | 277.28 | 1029.18 | 276.55 | 1031.68 | 276.12 | 1035.47 | 275.54 | 1040.68 | 275.03 |
| 1041.64 | 274.95 | 1045.27 | 274.79 | 1047.87 | 274.72 | 1048.76 | 274.67 | 1055.1 | 274.66 |
| 1056.58 | 274.65 | 1057.49 | 274.68 | 1060.43 | 274.7 | 1063.95 | 274.67 | 1069.72 | 274.69 |
| 1071.06 | 274.71 | 1073.58 | 274.78 | 1077.25 | 274.84 | 1079.56 | 274.83 | 1088.07 | 274.98 |
| 1091.24 | 274.99 | 1091.73 | 275.01 | 1095.19 | 275.02 | 1099.18 | 274.98 | 1100.79 | 274.88 |
| 1106.57 | 274.69 | 1112.33 | 274.54 | 1114.25 | 274.47 | 1117.71 | 274.54 | 1118.95 | 274.79 |
| 1121.45 | 275.12 | 1125.56 | 275.8 | 1127.33 | 276 | 1129.14 | 276.08 | 1129.98 | 276.07 |
| 1132.42 | 275.96 | 1135.48 | 276.06 | 1136.34 | 276.03 | 1139.15 | 276.06 | 1141.23 | 276 |
| 1144.66 | 275.88 | 1147.03 | 275.83 | 1152 | 275.69 | 1154.56 | 275.58 | 1160.36 | 275.41 |
| 1163.03 | 275.31 | 1164.84 | 275.2 | 1166.21 | 275.09 | 1168.88 | 274.92 | 1175.91 | 274.59 |
| 1180.78 | 274.54 | 1184.29 | 274.48 | 1187.43 | 274.5 | 1192.47 | 274.64 | 1193.12 | 274.67 |
| 1195.95 | 275 | 1198.56 | 275.21 | 1199.8 | 275.26 | 1201.29 | 275.38 | 1205.6 | 275.69 |
| 1206.58 | 275.74 | 1208.58 | 275.78 | 1209.25 | 275.77 | 1213.34 | 275.78 | 1214.45 | 275.77 |
| 1218.49 | 275.33 | 1223.86 | 274.9 | 1224.06 | 274.86 | 1225.41 | 274.82 | 1229.73 | 274.77 |
| 1230.28 | 274.83 | 1231.82 | 274.89 | 1233.04 | 274.89 | 1237.2 | 274.96 | 1239.25 | 274.92 |
| 1241.43 | 274.82 | 1242.12 | 274.76 | 1245.18 | 274.6 | 1248.73 | 274.44 | 1251.62 | 274.35 |
| 1253.33 | 274.26 | 1254.69 | 274.23 | 1259.3 | 274.21 | 1268.82 | 273.91 | 1271.9 | 273.92 |
| 1275.52 | 273.89 | 1277.67 | 273.9 | 1280.12 | 273.94 | 1281.08 | 274.01 | 1284.08 | 274.04 |
| 1284.8 | 274.12 | 1287.73 | 274.12 | 1289.38 | 274.15 | 1291.46 | 274.12 | 1293.94 | 274 |
| 1298.42 | 273.84 | 1301.77 | 273.81 | 1303.67 | 273.76 | 1305.34 | 273.74 | 1309.93 | 273.81 |
| 1314.25 | 273.99 | 1317.07 | 274.13 | 1318.79 | 274.18 | 1321.74 | 274.31 | 1324.22 | 274.55 |
| 1326.28 | 274.7 | 1327.91 | 274.78 | 1329.05 | 274.89 | 1333.64 | 275.19 | 1334.75 | 275.33 |
| 1338.55 | 275.58 | 1340.02 | 275.64 | 1343.6 | 275.85 | 1344.86 | 275.98 | 1346.1 | 276.02 |
| 1348.52 | 275.96 | 1351.39 | 275.82 | 1355.04 | 275.66 | 1359.93 | 275.4 | 1363.61 | 275.29 |
| 1368.64 | 275.08 | 1371.68 | 275 | 1372.49 | 274.95 | 1373.51 | 274.95 | 1377.42 | 274.9 |
| 1380.46 | 274.84 | 1385.87 | 274.57 | 1392.7 | 274.02 | 1400.1 | 273.35 | 1401.79 | 273.21 |
| 1402.8 | 273.1 | 1403.8 | 273.04 | 1406.1 | 272.95 | 1408.92 | 272.93 | 1414 | 272.94 |
| 1417.75 | 272.93 | 1419.95 | 272.89 | 1428.48 | 272.88 | 1434.82 | 273.07 | 1439.53 | 273.12 |
| 1443.82 | 273.15 | 1445.94 | 273.15 | 1447.04 | 273.19 | 1453.65 | 273.35 | 1461 | 273.46 |
| 1467.82 | 273.45 | 1469.63 | 273.46 | 1473.56 | 273.64 | 1474.93 | 273.66 | 1475.96 | 273.72 |
| 1480.06 | 273.81 | 1481.39 | 273.79 | 1485.32 | 273.85 | 1487.6 | 273.86 | 1490.63 | 273.83 |
| 1491.95 | 273.86 | 1494.97 | 273.89 | 1496.71 | 273.99 | 1498.96 | 274.01 | 1501.24 | 274.16 |
| 1502.62 | 274.19 | 1508.82 | 274.29 | 1509.65 | 274.27 | 1514.32 | 274.51 | 1515.33 | 274.55 |
| 1519.88 | 274.65 | 1522.64 | 274.92 | 1525.58 | 275.54 | 1527.66 | 275.96 | 1532.81 | 277.03 |
| 1533.56 | 277.24 | 1535.08 | 277.8 | 1535.99 | 278.17 | 1538.7 | 279.15 | 1539.77 | 279.57 |
| 1548.01 | 282.95 | 1550.01 | 283.8 | 1551.1 | 284.11 | 1552.96 | 284.59 | 1555.44 | 285.26 |
| 1558 | 285.91 | 1561.29 | 286.33 | 1565.66 | 286.75 | 1569.7 | 287.17 | 1573.5 | 287.59 |
| 1578.54 | 287.44 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 378.58 | .04 | 1533.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 378.58 | 1533.56 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station= 1025.36 Elevation=280.0604

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 961.063*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 291.22 | 1.62 | 291.06 | 5.19 | 290.64 | 8.11 | 290.33 | 11.76 | 290.04 |
| 20.46 | 289.21 | 21.92 | 289.08 | 25.34 | 288.71 | 27.5 | 288.62 | 29.12 | 288.49 |
| 32.98 | 288.14 | 35.38 | 287.98 | 38.21 | 288.01 | 39.45 | 287.94 | 42.24 | 287.87 |
| 49 | 287.5 | 50.26 | 287.44 | 58.1 | 286.91 | 60.91 | 286.76 | 70.39 | 286.17 |
| 76.29 | 285.77 | 78.79 | 285.64 | 85.99 | 285.22 | 101.99 | 284.51 | 105.66 | 284.35 |
| 111.14 | 284.18 | 115.92 | 284.14 | 117.89 | 284.09 | 120.36 | 283.95 | 121.83 | 283.84 |
| 123.66 | 283.77 | 127.99 | 283.52 | 136.67 | 282.9 | 138.21 | 282.84 | 155.49 | 282.04 |
| 165.64 | 281.47 | 170.37 | 281.24 | 175.01 | 280.99 | 185.34 | 280.48 | 188.9 | 280.34 |
| 194.07 | 280.17 | 197.46 | 280 | 205.55 | 279.67 | 213.84 | 279.27 | 219.17 | 278.91 |
| 220.3 | 278.85 | 236.12 | 277.9 | 239.52 | 277.64 | 243.24 | 277.41 | 244.51 | 277.32 |
| 245.7 | 277.28 | 249.79 | 277.1 | 254.21 | 276.88 | 257.98 | 276.62 | 266.94 | 276.18 |
| 270.41 | 275.91 | 273.83 | 275.72 | 276.51 | 275.47 | 278.09 | 275.38 | 282.12 | 275.22 |
| 289.26 | 274.84 | 291.89 | 274.76 | 295.16 | 274.53 | 297.53 | 274.38 | 301.75 | 274.16 |
| 310.91 | 273.82 | 312.97 | 273.77 | 315.85 | 273.82 | 318.16 | 273.82 | 319.41 | 273.79 |
| 321.63 | 273.68 | 322.59 | 273.58 | 329.26 | 273.1 | 332.38 | 272.85 | 338.68 | 272.41 |
| 339.67 | 272.4 | 340.12 | 272.44 | 343.4 | 272.38 | 347.34 | 272.21 | 350.24 | 272.1 |
| 352.17 | 272.19 | 353.83 | 272.32 | 359.36 | 272.65 | 361.03 | 272.71 | 362.93 | 272.85 |
| 365.87 | 272.96 | 366.6 | 272.97 | 369.7 | 272.86 | 371.78 | 272.75 | 373.66 | 272.72 |
| 377.26 | 272.75 | 382.86 | 272.97 | 388.18 | 273.32 | 393.01 | 273.71 | 393.82 | 273.74 |
| 397.41 | 273.93 | 398.3 | 273.96 | 400.98 | 274.23 | 402.37 | 274.43 | 404.77 | 274.81 |
| 411.67 | 274.73 | 413.23 | 274.8 | 414.75 | 274.82 | 420.03 | 274.94 | 423.18 | 275.23 |
| 424.29 | 275.36 | 427.56 | 275.8 | 429.87 | 276.25 | 432.13 | 276.99 | 435.06 | 278.2 |
| 437.71 | 278.39 | 440.22 | 278.52 | 441.71 | 278.51 | 442.15 | 278.58 | 444.53 | 278.67 |
| 446.22 | 278.62 | 447.54 | 278.51 | 450.51 | 278.17 | 452.55 | 278.06 | 453.04 | 278.06 |
| 455.82 | 278.15 | 459.75 | 278.14 | 460.7 | 277.92 | 464.23 | 276.89 | 466.4 | 276.27 |
| 471.9 | 275.03 | 474.56 | 274.41 | 477.29 | 273.99 | 478.88 | 273.89 | 480.29 | 273.77 |
| 491.57 | 273.73 | 494.8 | 274.09 | 496.8 | 274.22 | 501.14 | 274.36 | 502.83 | 274.37 |
| 506.19 | 274.26 | 506.89 | 274.31 | 511.13 | 274.04 | 513.66 | 273.97 | 514.67 | 273.77 |
| 516.12 | 273.56 | 518.27 | 273.28 | 519.38 | 273.2 | 523 | 273.03 | 525.8 | 272.97 |
| 527.8 | 272.88 | 530.16 | 272.74 | 531.11 | 272.72 | 533.63 | 272.77 | 536.04 | 272.89 |
| 538.22 | 273.04 | 539.86 | 273.18 | 541.13 | 273.2 | 545.61 | 273.35 | 546.4 | 273.06 |
| 550.82 | 271.86 | 553.31 | 271.22 | 556.36 | 270.66 | 556.98 | 270.57 | 561.28 | 270.41 |
| 567.26 | 270.2 | 569.49 | 270.15 | 572.51 | 270.29 | 574.93 | 270.44 | 578.98 | 270.61 |
| 581.07 | 270.64 | 583.23 | 270.64 | 585.69 | 270.62 | 588.44 | 270.57 | 591.46 | 270.57 |
| 594.12 | 270.55 | 595.84 | 270.59 | 597.83 | 270.67 | 600.99 | 270.75 | 601.93 | 270.81 |
| 605.38 | 270.98 | 608.35 | 271.04 | 609.49 | 271.13 | 613.17 | 271.21 | 617.15 | 271.23 |
| 621.46 | 271.22 | 625.38 | 271.2 | 635.06 | 271.23 | 639.59 | 271.28 | 645.09 | 271.29 |
| 646.57 | 271.33 | 648.61 | 271.5 | 649.89 | 271.52 | 651.4 | 271.63 | 655.05 | 271.77 |
| 657.84 | 271.93 | 660.73 | 272.06 | 664.87 | 272.11 | 669.87 | 272.35 | 676.12 | 272.61 |
| 682.44 | 272.79 | 682.62 | 272.78 | 689.31 | 272.86 | 693.17 | 272.88 | 699.11 | 272.98 |
| 701.64 | 273.09 | 710.82 | 273.66 | 712.29 | 273.82 | 715.81 | 274.17 | 717.8 | 274.31 |
| 724.47 | 274.71 | 725.69 | 274.76 | 729.44 | 274.98 | 730.57 | 275.06 | 733.65 | 275.16 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 734.63 | 275.21 | 737.75 | 275.29 | 741.23 | 275.5 | 743.07 | 275.65 | 745.25 | 275.91 |
| 747.02 | 276.15 | 751.88 | 276.56 | 754.86 | 276.93 | 755.82 | 277.01 | 759.15 | 277.24 |
| 763.39 | 277.25 | 765.29 | 277.2 | 769.67 | 276.93 | 770.64 | 276.85 | 773.06 | 276.57 |
| 774.71 | 276.29 | 776.55 | 275.91 | 776.65 | 275.84 | 780.02 | 275.7 | 782.06 | 275.64 |
| 784.23 | 275.81 | 787.59 | 276.01 | 789.22 | 276.22 | 793.06 | 276.68 | 799.46 | 276.67 |
| 800.23 | 276.51 | 803.68 | 275.86 | 806.57 | 275.36 | 810.53 | 274.86 | 813.21 | 274.59 |
| 814.46 | 274.39 | 818.82 | 274.38 | 819.45 | 274.45 | 825.18 | 274.54 | 828.5 | 274.8 |
| 830.15 | 274.99 | 833.14 | 275.24 | 835.46 | 275.39 | 838.31 | 275.7 | 839.51 | 275.76 |
| 846.17 | 275.89 | 848.95 | 275.82 | 850.79 | 275.73 | 852.5 | 275.72 | 859.42 | 275.81 |
| 865.56 | 275.72 | 870.09 | 275.62 | 873.2 | 275.52 | 876.63 | 275.32 | 878.52 | 275.11 |
| 883.64 | 274.31 | 888.44 | 273.78 | 889.1 | 273.69 | 892.09 | 273.55 | 893.02 | 273.49 |
| 894.45 | 273.34 | 895.34 | 273.31 | 899.17 | 273.24 | 902.83 | 273.24 | 908.4 | 273.18 |
| 911.78 | 273.18 | 912.5 | 273.31 | 917.16 | 273.58 | 919.05 | 273.78 | 923.33 | 274.26 |
| 925.59 | 274.63 | 928.02 | 275.09 | 928.47 | 275.15 | 931.33 | 275.66 | 932.06 | 275.77 |
| 934.01 | 276.31 | 935.79 | 276.86 | 937.87 | 277.55 | 946.98 | 278.1 | 949.17 | 278.19 |
| 951.98 | 278.36 | 953.81 | 278.56 | 957.63 | 278.89 | 958.58 | 278.9 | 961.08 | 278.81 |
| 964.52 | 278.72 | 966.02 | 278.71 | 967.49 | 278.74 | 970.06 | 278.89 | 978.23 | 279.52 |
| 982.58 | 279.58 | 984.9 | 279.55 | 990.3 | 279.4 | 993.67 | 279.23 | 996.55 | 279 |
| 1002.13 | 278.38 | 1005.88 | 278.12 | 1007.11 | 278.08 | 1011.62 | 278.01 | 1014.59 | 278.06 |
| 1016.61 | 278.03 | 1018.39 | 277.98 | 1023.19 | 277.77 | 1027.94 | 277.16 | 1032.57 | 276.39 |
| 1035.08 | 275.92 | 1036.37 | 275.73 | 1038.9 | 275.31 | 1044.13 | 274.77 | 1045.09 | 274.68 |
| 1046.98 | 274.58 | 1051.35 | 274.43 | 1052.25 | 274.38 | 1058.62 | 274.37 | 1060.11 | 274.36 |
| 1061.02 | 274.39 | 1063.98 | 274.42 | 1067.51 | 274.39 | 1071.34 | 274.4 | 1074.65 | 274.44 |
| 1077.19 | 274.51 | 1080.87 | 274.56 | 1083.2 | 274.55 | 1091.74 | 274.68 | 1094.93 | 274.68 |
| 1095.42 | 274.7 | 1098.9 | 274.71 | 1102.21 | 274.67 | 1102.72 | 274.68 | 1104.52 | 274.58 |
| 1107.61 | 274.5 | 1110.34 | 274.41 | 1116.12 | 274.29 | 1118.05 | 274.23 | 1121.53 | 274.31 |
| 1122.77 | 274.57 | 1125.29 | 274.92 | 1129.42 | 275.66 | 1131.2 | 275.87 | 1131.92 | 275.88 |
| 1133.01 | 275.96 | 1133.86 | 275.94 | 1136.31 | 275.82 | 1139.39 | 275.93 | 1140.25 | 275.9 |
| 1143.07 | 275.93 | 1148.9 | 275.7 | 1154.38 | 275.55 | 1158.55 | 275.38 | 1164.38 | 275.2 |
| 1167.07 | 275.1 | 1168.89 | 274.99 | 1170.26 | 274.87 | 1172.95 | 274.69 | 1180.01 | 274.35 |
| 1188.43 | 274.26 | 1192.78 | 274.3 | 1197.3 | 274.42 | 1200.15 | 274.76 | 1201.62 | 274.9 |
| 1203.62 | 275.02 | 1209.84 | 275.51 | 1212.02 | 275.59 | 1217.09 | 275.62 | 1218.74 | 275.61 |
| 1220.89 | 275.35 | 1222.8 | 275.15 | 1225.4 | 274.92 | 1228.19 | 274.69 | 1228.39 | 274.65 |
| 1229.75 | 274.61 | 1234.08 | 274.55 | 1234.64 | 274.61 | 1236.18 | 274.66 | 1241.6 | 274.73 |
| 1243.66 | 274.69 | 1245.84 | 274.58 | 1246.53 | 274.52 | 1248.98 | 274.38 | 1253.18 | 274.18 |
| 1256.08 | 274.07 | 1257.8 | 273.97 | 1259.17 | 273.93 | 1263.8 | 273.89 | 1267.63 | 273.75 |
| 1270.77 | 273.67 | 1273.37 | 273.58 | 1276.46 | 273.59 | 1280.1 | 273.56 | 1282.26 | 273.57 |
| 1284.72 | 273.61 | 1285.69 | 273.68 | 1288.7 | 273.71 | 1289.42 | 273.8 | 1292.37 | 273.8 |
| 1293.86 | 273.84 | 1296.11 | 273.82 | 1296.5 | 273.77 | 1298.6 | 273.69 | 1303.11 | 273.54 |
| 1306.48 | 273.51 | 1308.38 | 273.45 | 1310.64 | 273.44 | 1314.67 | 273.51 | 1316.22 | 273.55 |
| 1316.79 | 273.6 | 1319.02 | 273.68 | 1321.85 | 273.83 | 1323.57 | 273.88 | 1326.7 | 274.02 |
| 1328.58 | 274.22 | 1330.41 | 274.38 | 1332.74 | 274.53 | 1333.89 | 274.65 | 1337.03 | 274.9 |
| 1338.49 | 275 | 1339.61 | 275.15 | 1341.64 | 275.31 | 1347.77 | 275.66 | 1349.77 | 275.85 |
| 1351.02 | 275.9 | 1353.45 | 275.84 | 1360 | 275.53 | 1361.88 | 275.43 | 1363.93 | 275.29 |
| 1368.61 | 275.13 | 1373.66 | 274.91 | 1376.72 | 274.82 | 1377.53 | 274.77 | 1382.49 | 274.69 |
| 1386.3 | 274.58 | 1390.98 | 274.33 | 1397.84 | 273.76 | 1405.28 | 273.08 | 1407.46 | 272.89 |
| 1407.98 | 272.82 | 1410.99 | 272.68 | 1412.39 | 272.65 | 1416.13 | 272.64 | 1419.25 | 272.65 |
| 1423.01 | 272.63 | 1425.22 | 272.59 | 1430.61 | 272.58 | 1431.45 | 272.56 | 1433.79 | 272.58 |
| 1440.16 | 272.77 | 1444.9 | 272.81 | 1449.21 | 272.83 | 1451.33 | 272.83 | 1452.44 | 272.87 |
| 1459.08 | 273.03 | 1466.46 | 273.13 | 1473.32 | 273.13 | 1475.14 | 273.14 | 1479.09 | 273.34 |
| 1481.5 | 273.43 | 1485.62 | 273.53 | 1486.95 | 273.51 | 1490.9 | 273.58 | 1493.19 | 273.58 |
| 1496.24 | 273.55 | 1497.57 | 273.58 | 1500.6 | 273.58 | 1502.35 | 273.69 | 1504.61 | 273.7 |
| 1506.9 | 273.84 | 1508.28 | 273.87 | 1514.52 | 273.91 | 1515.35 | 273.88 | 1521.06 | 274.12 |
| 1525.63 | 274.16 | 1528.04 | 274.33 | 1530.47 | 274.77 | 1531.36 | 274.95 | 1533.44 | 275.32 |
| 1537.15 | 276.03 | 1538.62 | 276.3 | 1539.38 | 276.49 | 1543.85 | 278.04 | 1544.43 | 278.22 |
| 1551.56 | 280.91 | 1553.57 | 281.68 | 1555.52 | 282.45 | 1559.83 | 283.53 | 1563.37 | 284.37 |
| 1566.6 | 284.76 | 1570.89 | 285.14 | 1574.47 | 285.48 | 1578.36 | 285.88 | 1578.58 | 285.89 |
| 1583.53 | 285.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 371.78 | .04 | 1539.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 371.78 | 1539.38 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1024.383 Elevation=280.0731

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 941.738*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 290.38 | 1.6 | 290.22 | 5.1 | 289.81 | 7.96 | 289.5 | 11.55 | 289.22 |
| 14.36 | 288.96 | 21.52 | 288.27 | 24.88 | 287.92 | 27 | 287.82 | 30.73 | 287.51 |
| 32.37 | 287.35 | 34.96 | 287.19 | 37.52 | 287.22 | 38.73 | 287.14 | 41.47 | 287.07 |
| 49.34 | 286.66 | 57.04 | 286.14 | 59.79 | 286 | 69.1 | 285.43 | 70.75 | 285.31 |
| 72.08 | 285.24 | 74.9 | 285.05 | 77.35 | 284.92 | 84.41 | 284.52 | 100.13 | 283.85 |
| 103.73 | 283.7 | 109.11 | 283.55 | 113.8 | 283.52 | 115.73 | 283.47 | 119.6 | 283.24 |
| 121.4 | 283.17 | 125.66 | 282.93 | 134.17 | 282.31 | 135.69 | 282.25 | 152.65 | 281.48 |
| 162.61 | 280.94 | 167.26 | 280.72 | 171.81 | 280.47 | 181.95 | 279.97 | 185.44 | 279.83 |
| 190.53 | 279.66 | 193.85 | 279.5 | 201.79 | 279.18 | 209.93 | 278.78 | 215.16 | 278.44 |
| 219.87 | 278.17 | 220.37 | 278.13 | 231.8 | 277.43 | 235.14 | 277.18 | 238.8 | 276.95 |
| 240.04 | 276.86 | 242.81 | 276.75 | 247.44 | 276.53 | 247.98 | 276.48 | 249.57 | 276.42 |
| 253.27 | 276.16 | 262.06 | 275.74 | 266.09 | 275.42 | 268.83 | 275.28 | 271.46 | 275.02 |
| 273 | 274.93 | 276.96 | 274.76 | 283.18 | 274.42 | 286.56 | 274.32 | 289.76 | 274.08 |
| 292.09 | 273.94 | 296.23 | 273.74 | 305.22 | 273.41 | 307.25 | 273.35 | 310.08 | 273.42 |
| 312.35 | 273.43 | 313.57 | 273.4 | 315.75 | 273.3 | 316.7 | 273.19 | 323.24 | 272.72 |
| 326.31 | 272.46 | 332.49 | 272.06 | 333.47 | 272.05 | 334.18 | 272.09 | 337.12 | 272.03 |
| 343.83 | 271.76 | 345.73 | 271.84 | 347.37 | 271.96 | 352.79 | 272.25 | 354.43 | 272.31 |
| 355.43 | 272.39 | 357.54 | 272.5 | 359.9 | 272.56 | 362.95 | 272.45 | 364.99 | 272.36 |
| 366.94 | 272.33 | 370.69 | 272.38 | 375.52 | 272.58 | 376.51 | 272.63 | 380.9 | 272.92 |
| 387.07 | 273.44 | 391.64 | 273.68 | 392.58 | 273.72 | 395.36 | 274.01 | 396.81 | 274.22 |
| 399.31 | 274.63 | 406.48 | 274.56 | 408.11 | 274.63 | 409.69 | 274.65 | 415.18 | 274.79 |
| 418.45 | 275.1 | 419.61 | 275.24 | 423.01 | 275.72 | 425.41 | 276.2 | 427.77 | 276.99 |
| 430.82 | 278.28 | 433.58 | 278.48 | 436.19 | 278.62 | 437.73 | 278.62 | 438.62 | 278.71 |
| 440.67 | 278.78 | 442.43 | 278.73 | 443.81 | 278.62 | 446.9 | 278.25 | 449.01 | 278.14 |
| 449.52 | 278.14 | 452.42 | 278.23 | 456.5 | 278.22 | 456.97 | 278.14 | 463.43 | 276.24 |
| 466.49 | 275.53 | 468.8 | 275.01 | 471.91 | 274.27 | 474.75 | 273.83 | 476.41 | 273.72 |
| 477.87 | 273.59 | 482.76 | 273.57 | 489.61 | 273.56 | 492.96 | 273.94 | 495.05 | 274.08 |
| 497.01 | 274.16 | 499.56 | 274.23 | 501.33 | 274.24 | 504.82 | 274.12 | 505.55 | 274.17 |
| 509.96 | 273.88 | 512.59 | 273.81 | 513.64 | 273.59 | 515.15 | 273.37 | 517.38 | 273.08 |



BSE Document Control Number: 7323HYD101

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 519.21 | 272.95 | 522.3 | 272.81 | 526.52 | 272.68 | 529.75 | 272.5 | 530.74 | 272.48 |
| 533.37 | 272.53 | 535.88 | 272.65 | 538.77 | 272.86 | 539.85 | 272.96 | 541.16 | 272.98 |
| 545.83 | 273.15 | 546.65 | 272.84 | 551.25 | 271.58 | 553.84 | 270.9 | 557.01 | 270.31 |
| 557.66 | 270.21 | 563.95 | 269.98 | 568.36 | 269.83 | 570.67 | 269.78 | 573.35 | 269.9 |
| 576.55 | 270.08 | 580.21 | 270.23 | 582.31 | 270.27 | 584.48 | 270.28 | 586.94 | 270.26 |
| 589.71 | 270.21 | 595.42 | 270.2 | 597.15 | 270.23 | 599.15 | 270.31 | 602.32 | 270.39 |
| 603.26 | 270.45 | 605.95 | 270.56 | 606.74 | 270.62 | 609.72 | 270.68 | 610.86 | 270.78 |
| 614.56 | 270.84 | 618.56 | 270.87 | 622.35 | 270.85 | 626.83 | 270.85 | 636.56 | 270.89 |
| 641.1 | 270.94 | 646.63 | 270.96 | 648.12 | 270.99 | 650.17 | 271.17 | 651.45 | 271.19 |
| 652.98 | 271.3 | 656.64 | 271.45 | 659.3 | 271.61 | 662.35 | 271.74 | 666.51 | 271.8 |
| 667.44 | 271.86 | 671.53 | 272.06 | 674.97 | 272.21 | 677.81 | 272.35 | 682.8 | 272.49 |
| 691.07 | 272.59 | 694.94 | 272.6 | 700.92 | 272.7 | 703.46 | 272.81 | 712.68 | 273.39 |
| 715.71 | 273.73 | 717.69 | 273.93 | 719.69 | 274.08 | 726.4 | 274.5 | 727.62 | 274.56 |
| 732.28 | 274.87 | 733.33 | 274.93 | 735.62 | 275.01 | 736.6 | 275.07 | 739.74 | 275.16 |
| 743.23 | 275.38 | 745.09 | 275.54 | 749.05 | 276.06 | 750.22 | 276.18 | 753.94 | 276.5 |
| 756.93 | 276.9 | 757.9 | 276.98 | 761.23 | 277.21 | 765.5 | 277.23 | 767.41 | 277.17 |
| 771.81 | 276.89 | 772.78 | 276.81 | 775.22 | 276.52 | 776.87 | 276.22 | 778.73 | 275.81 |
| 778.82 | 275.75 | 782.21 | 275.59 | 784.26 | 275.53 | 786.44 | 275.7 | 789.81 | 275.91 |
| 795.31 | 276.61 | 801.74 | 276.6 | 802.52 | 276.43 | 807.93 | 275.37 | 808.88 | 275.21 |
| 812.87 | 274.68 | 815.56 | 274.4 | 816.82 | 274.18 | 821.2 | 274.17 | 821.83 | 274.24 |
| 827.58 | 274.34 | 830.92 | 274.62 | 832.58 | 274.83 | 835.58 | 275.09 | 837.91 | 275.25 |
| 840.78 | 275.58 | 841.98 | 275.65 | 848.67 | 275.79 | 850 | 275.78 | 853.32 | 275.63 |
| 855.03 | 275.62 | 858.19 | 275.65 | 861.98 | 275.7 | 866.34 | 275.63 | 872.7 | 275.48 |
| 875.83 | 275.37 | 879.28 | 275.15 | 881.18 | 274.93 | 886.32 | 274.08 | 891.14 | 273.51 |
| 891.81 | 273.42 | 894.82 | 273.27 | 896.97 | 273.1 | 897.19 | 273.04 | 901.92 | 272.95 |
| 903.48 | 272.93 | 905.6 | 272.95 | 912.51 | 272.89 | 914.6 | 272.9 | 915.32 | 273.03 |
| 920 | 273.32 | 921.9 | 273.53 | 925.84 | 273.99 | 928.47 | 274.42 | 930.92 | 274.89 |
| 931.37 | 274.95 | 934.24 | 275.48 | 934.98 | 275.6 | 937.15 | 276.23 | 938.72 | 276.76 |
| 940.81 | 277.5 | 949.97 | 278.08 | 952.16 | 278.17 | 954.99 | 278.35 | 956.83 | 278.56 |
| 960 | 278.86 | 961.62 | 278.92 | 964.13 | 278.82 | 967.59 | 278.72 | 969.1 | 278.72 |
| 970.58 | 278.75 | 973.15 | 278.91 | 981.36 | 279.56 | 985.74 | 279.63 | 988.07 | 279.59 |
| 993.49 | 279.43 | 996.88 | 279.25 | 999.78 | 279 | 1005.38 | 278.35 | 1009.04 | 278.07 |
| 1010.38 | 278.02 | 1014.92 | 277.94 | 1017.9 | 278 | 1019.93 | 277.97 | 1021.72 | 277.91 |
| 1026.54 | 277.69 | 1031.32 | 277.05 | 1035.08 | 276.39 | 1038.49 | 275.73 | 1042.32 | 275.08 |
| 1047.58 | 274.5 | 1049.56 | 274.35 | 1052.21 | 274.23 | 1054.84 | 274.15 | 1055.74 | 274.1 |
| 1063.63 | 274.07 | 1064.55 | 274.1 | 1067.52 | 274.14 | 1071.07 | 274.11 | 1074.92 | 274.13 |
| 1078.25 | 274.17 | 1080.8 | 274.24 | 1084.5 | 274.29 | 1086.83 | 274.28 | 1090.46 | 274.31 |
| 1095.42 | 274.38 | 1097.2 | 274.39 | 1098.63 | 274.37 | 1102.61 | 274.39 | 1105.93 | 274.36 |
| 1106.45 | 274.37 | 1108.26 | 274.28 | 1111.37 | 274.21 | 1114.1 | 274.13 | 1119.92 | 274.04 |
| 1121.85 | 273.99 | 1125.35 | 274.08 | 1126.6 | 274.36 | 1129.13 | 274.73 | 1133.27 | 275.51 |
| 1135.07 | 275.74 | 1135.79 | 275.75 | 1136.89 | 275.83 | 1137.74 | 275.81 | 1140.2 | 275.69 |
| 1143.29 | 275.8 | 1144.16 | 275.77 | 1146.24 | 275.8 | 1147 | 275.79 | 1152.56 | 275.54 |
| 1158.35 | 275.36 | 1162.55 | 275.18 | 1168.41 | 274.99 | 1171.74 | 274.86 | 1174.31 | 274.66 |
| 1177.01 | 274.47 | 1184.11 | 274.12 | 1192.57 | 274.03 | 1196.94 | 274.07 | 1201.48 | 274.18 |
| 1204.34 | 274.53 | 1206.97 | 274.76 | 1207.83 | 274.8 | 1214.08 | 275.32 | 1217.1 | 275.43 |
| 1221.36 | 275.46 | 1223.02 | 275.45 | 1225.19 | 275.18 | 1227.1 | 274.98 | 1229.72 | 274.73 |
| 1232.52 | 274.48 | 1232.72 | 274.44 | 1234.09 | 274.39 | 1238.44 | 274.32 | 1239 | 274.39 |
| 1240.55 | 274.44 | 1241.79 | 274.44 | 1245.99 | 274.5 | 1248.06 | 274.46 | 1250.25 | 274.35 |
| 1250.95 | 274.28 | 1254.04 | 274.1 | 1257.63 | 273.92 | 1260.55 | 273.79 | 1262.53 | 273.66 |
| 1263.65 | 273.63 | 1265.57 | 273.62 | 1268.3 | 273.57 | 1271.53 | 273.45 | 1275.3 | 273.34 |
| 1276.33 | 273.29 | 1278.28 | 273.25 | 1281.02 | 273.26 | 1284.67 | 273.23 | 1286.85 | 273.23 |
| 1289.31 | 273.27 | 1290.29 | 273.35 | 1293.31 | 273.39 | 1294.04 | 273.48 | 1294.96 | 273.5 |
| 1297.01 | 273.49 | 1299.83 | 273.54 | 1303.27 | 273.39 | 1307.79 | 273.23 | 1311.18 | 273.2 |
| 1313.1 | 273.15 | 1315.36 | 273.13 | 1320.97 | 273.25 | 1321.55 | 273.3 | 1323.78 | 273.38 |
| 1326.63 | 273.53 | 1328.36 | 273.58 | 1331.5 | 273.72 | 1333.39 | 273.93 | 1335.92 | 274.16 |
| 1337.57 | 274.28 | 1338.72 | 274.41 | 1343.35 | 274.81 | 1344.47 | 274.97 | 1348.31 | 275.27 |
| 1349.8 | 275.34 | 1353.41 | 275.58 | 1354.68 | 275.73 | 1355.93 | 275.78 | 1358.38 | 275.72 |
| 1364.96 | 275.4 | 1368.91 | 275.15 | 1373.62 | 274.97 | 1378.68 | 274.74 | 1381.76 | 274.64 |
| 1382.57 | 274.58 | 1383.6 | 274.57 | 1387.55 | 274.47 | 1391.38 | 274.35 | 1396.09 | 274.09 |
| 1402.98 | 273.49 | 1410.45 | 272.8 | 1412.16 | 272.66 | 1413.17 | 272.55 | 1416.2 | 272.4 |
| 1417.6 | 272.37 | 1421.35 | 272.35 | 1424.49 | 272.35 | 1428.27 | 272.33 | 1430.49 | 272.28 |
| 1433.42 | 272.27 | 1435.91 | 272.28 | 1436.75 | 272.26 | 1439.1 | 272.28 | 1445.5 | 272.47 |
| 1454.59 | 272.52 | 1456.73 | 272.52 | 1464.52 | 272.71 | 1471.93 | 272.81 | 1478.82 | 272.81 |
| 1480.65 | 272.83 | 1484.62 | 273.05 | 1487.04 | 273.15 | 1489.15 | 273.19 | 1491.18 | 273.25 |
| 1492.52 | 273.23 | 1496.49 | 273.3 | 1498.79 | 273.31 | 1501.85 | 273.27 | 1503.18 | 273.3 |
| 1506.23 | 273.28 | 1507.99 | 273.38 | 1510.26 | 273.39 | 1512.56 | 273.52 | 1513.91 | 273.55 |
| 1520.21 | 273.53 | 1521.05 | 273.49 | 1526.79 | 273.68 | 1531.38 | 273.67 | 1533.8 | 273.8 |
| 1536.24 | 274.19 | 1544.43 | 275.57 | 1545.19 | 275.74 | 1547.53 | 276.5 | 1550.15 | 277.3 |
| 1553.98 | 278.62 | 1555.61 | 279.2 | 1559.12 | 280.41 | 1561.04 | 281.11 | 1566.27 | 282.3 |
| 1568.74 | 282.83 | 1571.91 | 283.18 | 1576.12 | 283.52 | 1579.64 | 283.83 | 1583.67 | 284.2 |
| 1588.53 | 284.03 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 364.99 | .04 | 1545.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 364.99 | 1545.19 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1023.406 Elevation=280.0858

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 922.413*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 289.53 | 1.57 | 289.37 | 5 | 288.97 | 7.82 | 288.67 | 11.33 | 288.39 |
| 14.09 | 288.14 | 20.72 | 287.51 | 24.41 | 287.13 | 26.81 | 287 | 30.58 | 286.68 |
| 31.77 | 286.55 | 34.31 | 286.41 | 36.82 | 286.42 | 38.01 | 286.35 | 40.69 | 286.28 |
| 48.42 | 285.88 | 55.98 | 285.37 | 58.68 | 285.23 | 67.81 | 284.69 | 73.5 | 284.33 |
| 75.91 | 284.21 | 82.84 | 283.82 | 83.75 | 283.78 | 101.8 | 283.06 | 107.08 | 282.92 |
| 111.68 | 282.9 | 113.58 | 282.85 | 117.38 | 282.63 | 119.14 | 282.56 | 123.32 | 282.34 |
| 131.67 | 281.72 | 133.16 | 281.66 | 149.8 | 280.92 | 159.58 | 280.41 | 164.14 | 280.19 |
| 168.61 | 279.95 | 178.56 | 279.47 | 181.99 | 279.33 | 186.98 | 279.16 | 190.24 | 279 |
| 198.04 | 278.69 | 206.03 | 278.3 | 211.15 | 277.97 | 216.27 | 277.67 | 227.49 | 276.96 |
| 230.76 | 276.71 | 234.35 | 276.49 | 235.57 | 276.4 | 238.28 | 276.29 | 242.84 | 276.07 |
| 243.37 | 276.02 | 244.92 | 275.96 | 248.55 | 275.7 | 257.18 | 275.29 | 261.13 | 274.98 |
| 263.82 | 274.84 | 266.4 | 274.58 | 267.92 | 274.49 | 271.8 | 274.31 | 277.91 | 273.97 |
| 281.22 | 273.87 | 284.37 | 273.64 | 286.66 | 273.5 | 290.72 | 273.31 | 299.54 | 272.99 |
| 301.53 | 272.94 | 304.3 | 273.02 | 306.53 | 273.04 | 309.87 | 272.91 | 310.8 | 272.8 |
| 317.22 | 272.34 | 320.23 | 272.08 | 326.3 | 271.71 | 327.26 | 271.7 | 327.96 | 271.74 |
| 330.84 | 271.68 | 334.64 | 271.53 | 336.77 | 271.43 | 337.43 | 271.42 | 339.3 | 271.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 340.9 | 271.59 | 346.22 | 271.86 | 347.83 | 271.9 | 348.81 | 271.99 | 350.88 | 272.09 |
| 353.2 | 272.15 | 358.19 | 271.97 | 360.22 | 271.94 | 364.11 | 272 | 370.17 | 272.28 |
| 374.72 | 272.61 | 381.13 | 273.16 | 386.85 | 273.48 | 389.75 | 273.79 | 391.25 | 274.02 |
| 393.84 | 274.45 | 401.3 | 274.39 | 402.98 | 274.46 | 404.62 | 274.49 | 410.33 | 274.65 |
| 413.73 | 274.98 | 414.93 | 275.13 | 418.47 | 275.64 | 420.96 | 276.16 | 421.5 | 276.31 |
| 423.41 | 276.99 | 426.58 | 278.36 | 429.44 | 278.57 | 432.15 | 278.72 | 433.76 | 278.72 |
| 434.24 | 278.79 | 436.81 | 278.89 | 438.63 | 278.84 | 440.07 | 278.72 | 443.28 | 278.33 |
| 445.47 | 278.22 | 446 | 278.22 | 449.01 | 278.32 | 453.26 | 278.31 | 453.74 | 278.22 |
| 458.1 | 276.91 | 460.45 | 276.22 | 463.64 | 275.46 | 466.03 | 274.91 | 469.26 | 274.12 |
| 472.21 | 273.66 | 473.93 | 273.55 | 475.46 | 273.42 | 480.54 | 273.4 | 487.64 | 273.39 |
| 491.13 | 273.79 | 493.3 | 273.94 | 496.48 | 274.06 | 497.99 | 274.1 | 499.82 | 274.11 |
| 503.45 | 273.98 | 504.21 | 274.03 | 508.79 | 273.72 | 511.52 | 273.64 | 512.61 | 273.41 |
| 514.18 | 273.18 | 516.5 | 272.87 | 518.4 | 272.73 | 521.61 | 272.58 | 524.64 | 272.5 |
| 526.8 | 272.41 | 529.35 | 272.25 | 530.38 | 272.23 | 533.11 | 272.28 | 536.69 | 272.48 |
| 538.72 | 272.64 | 539.84 | 272.75 | 541.2 | 272.76 | 546.05 | 272.95 | 546.09 | 272.88 |
| 546.9 | 272.63 | 551.68 | 271.29 | 554.36 | 270.58 | 557.66 | 269.96 | 558.34 | 269.86 |
| 564.87 | 269.62 | 569.45 | 269.47 | 569.87 | 269.44 | 571.85 | 269.41 | 574.33 | 269.52 |
| 577.77 | 269.7 | 581.44 | 269.85 | 583.55 | 269.89 | 585.73 | 269.91 | 588.2 | 269.9 |
| 590.98 | 269.85 | 596.72 | 269.84 | 598.46 | 269.87 | 600.47 | 269.95 | 603.66 | 270.03 |
| 604.6 | 270.09 | 607.3 | 270.2 | 608.09 | 270.26 | 611.09 | 270.31 | 612.23 | 270.42 |
| 615.95 | 270.48 | 619.97 | 270.51 | 623.78 | 270.49 | 628.28 | 270.49 | 638.05 | 270.55 |
| 642.62 | 270.6 | 648.17 | 270.63 | 649.68 | 270.66 | 651.73 | 270.85 | 653.02 | 270.87 |
| 654.55 | 270.98 | 658.23 | 271.12 | 660.9 | 271.29 | 663.97 | 271.42 | 668.15 | 271.49 |
| 669.92 | 271.6 | 673.19 | 271.77 | 679.51 | 272.08 | 685.88 | 272.26 | 686.07 | 272.24 |
| 690.12 | 272.29 | 692.82 | 272.31 | 696.71 | 272.31 | 702.72 | 272.41 | 705.27 | 272.53 |
| 714.54 | 273.13 | 717.59 | 273.48 | 719.57 | 273.69 | 721.58 | 273.85 | 728.32 | 274.3 |
| 729.55 | 274.36 | 735.28 | 274.77 | 737.59 | 274.86 | 738.57 | 274.92 | 741.72 | 275.03 |
| 745.24 | 275.26 | 747.1 | 275.43 | 749.3 | 275.72 | 751.1 | 275.99 | 755.99 | 276.44 |
| 759.29 | 276.89 | 763.32 | 277.19 | 767.61 | 277.2 | 769.53 | 277.14 | 773.95 | 276.85 |
| 774.92 | 276.77 | 777.37 | 276.46 | 779.04 | 276.15 | 780.9 | 275.72 | 780.99 | 275.65 |
| 784.4 | 275.48 | 786.46 | 275.41 | 788.64 | 275.59 | 792.04 | 275.81 | 796.87 | 276.46 |
| 797.56 | 276.54 | 804.02 | 276.54 | 804.8 | 276.36 | 810.24 | 275.23 | 811.2 | 275.06 |
| 815.2 | 274.51 | 815.56 | 274.45 | 817.91 | 274.21 | 819.17 | 273.98 | 823.57 | 273.97 |
| 824.21 | 274.04 | 829.5 | 274.13 | 829.99 | 274.15 | 833.34 | 274.44 | 835.01 | 274.66 |
| 838.02 | 274.94 | 840.37 | 275.11 | 843.25 | 275.46 | 844.45 | 275.53 | 849.42 | 275.64 |
| 851.18 | 275.69 | 852.51 | 275.68 | 855.84 | 275.53 | 857.56 | 275.51 | 860.74 | 275.54 |
| 864.55 | 275.59 | 866.12 | 275.57 | 870.75 | 275.47 | 875.32 | 275.34 | 878.46 | 275.21 |
| 880.21 | 275.11 | 881.93 | 274.98 | 883.84 | 274.75 | 889 | 273.85 | 893.85 | 273.25 |
| 894.52 | 273.15 | 898.48 | 272.93 | 899.7 | 272.81 | 899.92 | 272.75 | 900.82 | 272.72 |
| 906.24 | 272.63 | 908.38 | 272.66 | 915.32 | 272.6 | 917.42 | 272.62 | 918.14 | 272.76 |
| 922.84 | 273.06 | 928.71 | 273.76 | 931.36 | 274.21 | 933.82 | 274.69 | 937.15 | 275.3 |
| 937.89 | 275.42 | 940.07 | 276.09 | 942.32 | 276.93 | 943.75 | 277.44 | 952.95 | 278.06 |
| 955.16 | 278.15 | 957.83 | 278.33 | 959.85 | 278.56 | 961.68 | 278.73 | 963.03 | 278.88 |
| 964.66 | 278.93 | 967.18 | 278.83 | 970.66 | 278.72 | 972.18 | 278.72 | 973.66 | 278.76 |
| 976.25 | 278.92 | 984.5 | 279.61 | 987.81 | 279.67 | 991.23 | 279.64 | 996.69 | 279.45 |
| 998.04 | 279.39 | 1000.09 | 279.26 | 1003 | 279 | 1008.63 | 278.31 | 1012.31 | 278.02 |
| 1013.65 | 277.97 | 1018.21 | 277.88 | 1021.21 | 277.94 | 1023.25 | 277.91 | 1025.04 | 277.85 |
| 1029.89 | 277.61 | 1034.69 | 276.93 | 1039.36 | 276.06 | 1041.9 | 275.54 | 1043.2 | 275.32 |
| 1045.75 | 274.85 | 1051.03 | 274.24 | 1052 | 274.14 | 1055.68 | 273.94 | 1058.32 | 273.86 |
| 1059.23 | 273.81 | 1067.16 | 273.78 | 1068.08 | 273.81 | 1071.07 | 273.85 | 1074.63 | 273.84 |
| 1078.5 | 273.85 | 1080.49 | 273.87 | 1084.41 | 273.97 | 1088.13 | 274.01 | 1090.47 | 274 |
| 1094.11 | 274.03 | 1099.1 | 274.09 | 1102.32 | 274.06 | 1106.32 | 274.08 | 1109.66 | 274.05 |
| 1110.38 | 274.06 | 1113.63 | 273.94 | 1117.87 | 273.86 | 1123.71 | 273.8 | 1125.66 | 273.76 |
| 1129.17 | 273.85 | 1130.42 | 274.14 | 1132.97 | 274.54 | 1136.41 | 275.23 | 1138.49 | 275.56 |
| 1140.76 | 275.7 | 1141.62 | 275.68 | 1144.09 | 275.55 | 1147.2 | 275.67 | 1148.07 | 275.64 |
| 1150.16 | 275.67 | 1150.92 | 275.66 | 1153.03 | 275.56 | 1156.51 | 275.37 | 1162.33 | 275.17 |
| 1166.55 | 274.98 | 1169.33 | 274.89 | 1175.14 | 274.68 | 1176.98 | 274.56 | 1178.37 | 274.44 |
| 1181.08 | 274.25 | 1188.21 | 273.88 | 1193.15 | 273.84 | 1196.71 | 273.8 | 1199.89 | 273.82 |
| 1205.67 | 273.94 | 1209.04 | 274.35 | 1210.17 | 274.46 | 1212.05 | 274.59 | 1218.33 | 275.13 |
| 1219.65 | 275.2 | 1222.03 | 275.25 | 1225.64 | 275.3 | 1227.31 | 275.29 | 1229.48 | 275.01 |
| 1231.41 | 274.8 | 1234.03 | 274.54 | 1236.84 | 274.28 | 1237.05 | 274.23 | 1238.42 | 274.18 |
| 1242.8 | 274.1 | 1243.36 | 274.17 | 1244.92 | 274.22 | 1246.16 | 274.22 | 1249.33 | 274.27 |
| 1252.46 | 274.23 | 1254.67 | 274.11 | 1257.84 | 273.89 | 1262.08 | 273.66 | 1264.9 | 273.52 |
| 1267 | 273.36 | 1272.15 | 273.27 | 1276.67 | 273.1 | 1279.84 | 273.01 | 1280.87 | 272.96 |
| 1282.83 | 272.92 | 1285.58 | 272.93 | 1289.25 | 272.89 | 1293.91 | 272.93 | 1294.9 | 273.01 |
| 1297.93 | 273.06 | 1298.66 | 273.15 | 1299.59 | 273.18 | 1301.64 | 273.18 | 1304.48 | 273.23 |
| 1305.81 | 273.16 | 1312.48 | 272.92 | 1315.88 | 272.9 | 1317.81 | 272.84 | 1320.08 | 272.83 |
| 1324.16 | 272.9 | 1325.72 | 272.94 | 1326.3 | 272.99 | 1328.54 | 273.08 | 1331.4 | 273.23 |
| 1333.14 | 273.28 | 1336.14 | 273.4 | 1338.65 | 273.69 | 1342.4 | 274.03 | 1343.55 | 274.17 |
| 1348.2 | 274.62 | 1349.34 | 274.8 | 1351.38 | 274.98 | 1358.32 | 275.45 | 1359.59 | 275.61 |
| 1360.85 | 275.67 | 1363.31 | 275.61 | 1366.22 | 275.45 | 1369.92 | 275.27 | 1372.47 | 275.11 |
| 1373.89 | 275 | 1378.62 | 274.81 | 1383.71 | 274.57 | 1388.65 | 274.38 | 1395.7 | 274.16 |
| 1400.69 | 273.89 | 1406.74 | 273.35 | 1415.63 | 272.53 | 1417.84 | 272.34 | 1418.36 | 272.27 |
| 1421.4 | 272.12 | 1424.58 | 272.07 | 1433.53 | 272.03 | 1435.76 | 271.98 | 1441.21 | 271.97 |
| 1442.05 | 271.95 | 1444.42 | 271.97 | 1445.26 | 272.01 | 1450.84 | 272.16 | 1455.63 | 272.19 |
| 1462.13 | 272.2 | 1463.24 | 272.24 | 1469.95 | 272.4 | 1477.4 | 272.49 | 1484.33 | 272.49 |
| 1486.16 | 272.51 | 1490.15 | 272.75 | 1492.58 | 272.86 | 1496.74 | 272.97 | 1498.08 | 272.95 |
| 1502.07 | 273.02 | 1504.39 | 273.03 | 1507.46 | 272.99 | 1508.8 | 273.01 | 1511.86 | 272.98 |
| 1513.63 | 273.08 | 1515.91 | 273.07 | 1518.22 | 273.21 | 1519.62 | 273.23 | 1525.91 | 273.16 |
| 1526.75 | 273.1 | 1532.52 | 273.24 | 1537.13 | 273.18 | 1539.57 | 273.27 | 1540.17 | 273.34 |
| 1542.91 | 273.76 | 1545.02 | 274.06 | 1550.25 | 274.84 | 1551.01 | 274.99 | 1553.3 | 275.66 |
| 1556.88 | 276.68 | 1560.72 | 277.9 | 1564.67 | 279.14 | 1566.56 | 279.76 | 1571.69 | 280.82 |
| 1574.11 | 281.29 | 1577.22 | 281.6 | 1581.35 | 281.9 | 1588.54 | 282.49 | 1588.76 | 282.5 |
| 1593.52 | 282.33 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 358.19 | .04 | 1551.01 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 358.19 | 1551.01 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1022.428 Elevation=280.0985

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 903.087*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 288.69 | 1.54 | 288.53 | 4.91 | 288.14 | 7.67 | 287.84 | 11.12 | 287.57 |
| 13.82 | 287.33 | 19.34 | 286.79 | 20.33 | 286.71 | 24.15 | 286.32 | 26.3 | 286.2 |
| 29.47 | 285.93 | 31.17 | 285.76 | 33.66 | 285.62 | 36.12 | 285.62 | 37.29 | 285.56 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 39.7 | 285.49 | 47.5 | 285.1 | 54.91 | 284.6 | 57.57 | 284.47 | 66.53 | 283.95 |
| 72.11 | 283.61 | 74.47 | 283.49 | 81.27 | 283.12 | 82.16 | 283.09 | 96.4 | 282.54 |
| 99.87 | 282.41 | 105.04 | 282.29 | 109.56 | 282.28 | 111.06 | 282.25 | 115.15 | 282.03 |
| 116.88 | 281.96 | 120.98 | 281.75 | 129.18 | 281.13 | 130.63 | 281.07 | 146.96 | 280.36 |
| 156.56 | 279.87 | 161.03 | 279.67 | 165.41 | 279.44 | 175.18 | 278.96 | 178.54 | 278.82 |
| 183.43 | 278.65 | 186.63 | 278.5 | 194.28 | 278.2 | 202.12 | 277.82 | 207.15 | 277.5 |
| 208.22 | 277.45 | 212.17 | 277.21 | 223.17 | 276.49 | 226.39 | 276.25 | 229.91 | 276.04 |
| 231.1 | 275.94 | 233.76 | 275.83 | 238.75 | 275.56 | 240.28 | 275.5 | 243.84 | 275.23 |
| 252.3 | 274.85 | 255.58 | 274.58 | 258.82 | 274.39 | 261.35 | 274.13 | 262.84 | 274.04 |
| 266.65 | 273.86 | 273.4 | 273.48 | 275.89 | 273.43 | 278.97 | 273.2 | 281.22 | 273.06 |
| 285.2 | 272.88 | 293.86 | 272.57 | 295.81 | 272.53 | 298.53 | 272.62 | 300.72 | 272.65 |
| 303.99 | 272.52 | 304.9 | 272.42 | 311.21 | 271.95 | 314.16 | 271.69 | 320.11 | 271.36 |
| 321.47 | 271.38 | 324.57 | 271.33 | 329.31 | 271.14 | 331.03 | 271.08 | 332.86 | 271.14 |
| 333.34 | 271.18 | 339.65 | 271.46 | 341.23 | 271.5 | 342.19 | 271.58 | 344.23 | 271.69 |
| 346.5 | 271.74 | 351.4 | 271.58 | 353.5 | 271.56 | 357.54 | 271.63 | 362.75 | 271.87 |
| 363.82 | 271.94 | 368.54 | 272.29 | 375.19 | 272.89 | 380.12 | 273.19 | 381.13 | 273.23 |
| 384.13 | 273.56 | 388.38 | 274.26 | 396.11 | 274.21 | 397.86 | 274.3 | 399.56 | 274.33 |
| 405.48 | 274.5 | 409.01 | 274.86 | 410.26 | 275.02 | 413.92 | 275.56 | 416.51 | 276.11 |
| 417.07 | 276.27 | 417.72 | 276.53 | 419.05 | 276.99 | 422.33 | 278.44 | 425.31 | 278.67 |
| 428.46 | 278.83 | 429.79 | 278.82 | 430.74 | 278.92 | 432.95 | 279 | 434.84 | 278.95 |
| 436.33 | 278.83 | 439.66 | 278.42 | 441.94 | 278.29 | 442.49 | 278.29 | 445.61 | 278.4 |
| 450.01 | 278.4 | 451.08 | 278.14 | 455.04 | 276.92 | 457.47 | 276.19 | 463.26 | 274.81 |
| 466.62 | 273.98 | 469.68 | 273.5 | 473.04 | 273.24 | 478.31 | 273.22 | 485.68 | 273.21 |
| 489.3 | 273.64 | 491.55 | 273.8 | 493.66 | 273.89 | 496.41 | 273.97 | 498.31 | 273.98 |
| 502.07 | 273.84 | 502.86 | 273.9 | 507.62 | 273.57 | 510.45 | 273.48 | 511.58 | 273.24 |
| 513.21 | 272.99 | 515.61 | 272.66 | 516.87 | 272.56 | 520.92 | 272.35 | 524.06 | 272.27 |
| 526.3 | 272.17 | 528.94 | 272.01 | 530.01 | 271.98 | 532.84 | 272.03 | 536.56 | 272.24 |
| 538.66 | 272.41 | 539.82 | 272.53 | 541.24 | 272.55 | 546.27 | 272.75 | 546.31 | 272.68 |
| 547.15 | 272.41 | 552.11 | 271.01 | 554.89 | 270.25 | 558.31 | 269.61 | 559.02 | 269.5 |
| 565.79 | 269.26 | 570.54 | 269.1 | 570.98 | 269.07 | 573.03 | 269.05 | 575.53 | 269.15 |
| 578.98 | 269.33 | 583.07 | 269.49 | 586.97 | 269.55 | 589.27 | 269.54 | 592.25 | 269.5 |
| 598.02 | 269.49 | 599.37 | 269.5 | 603.49 | 269.63 | 604.99 | 269.66 | 605.94 | 269.73 |
| 608.65 | 269.84 | 609.44 | 269.9 | 612.45 | 269.95 | 613.61 | 270.06 | 617.34 | 270.12 |
| 621.38 | 270.15 | 625.2 | 270.13 | 629.73 | 270.14 | 639.55 | 270.21 | 644.14 | 270.26 |
| 649.72 | 270.3 | 651.23 | 270.33 | 653.29 | 270.52 | 654.58 | 270.54 | 656.12 | 270.66 |
| 659.82 | 270.8 | 662.5 | 270.97 | 665.59 | 271.1 | 669.78 | 271.18 | 674.86 | 271.48 |
| 681.2 | 271.82 | 686.23 | 271.96 | 691.87 | 272.02 | 694.58 | 272.04 | 698.49 | 272.03 |
| 704.52 | 272.13 | 707.08 | 272.24 | 716.4 | 272.86 | 719.46 | 273.23 | 721.45 | 273.45 |
| 723.47 | 273.62 | 730.24 | 274.09 | 731.48 | 274.16 | 737.24 | 274.61 | 739.55 | 274.71 |
| 740.54 | 274.78 | 743.71 | 274.9 | 747.24 | 275.14 | 749.11 | 275.31 | 753.11 | 275.9 |
| 754.3 | 276.03 | 758.04 | 276.39 | 761.06 | 276.82 | 762.04 | 276.91 | 765.41 | 277.17 |
| 768.92 | 277.17 | 770.75 | 277.15 | 772.83 | 277.05 | 776.09 | 276.81 | 777.07 | 276.72 |
| 779.53 | 276.4 | 781.2 | 276.07 | 783.07 | 275.62 | 783.17 | 275.55 | 786.69 | 275.36 |
| 788.65 | 275.29 | 790.85 | 275.48 | 794.26 | 275.71 | 799.81 | 276.48 | 806.3 | 276.47 |
| 807.09 | 276.28 | 810.58 | 275.51 | 812.55 | 275.09 | 813.51 | 274.91 | 817.9 | 274.27 |
| 820.15 | 274.03 | 821.52 | 273.77 | 825.95 | 273.76 | 826.58 | 273.84 | 832.39 | 273.95 |
| 835.76 | 274.26 | 837.44 | 274.5 | 840.47 | 274.79 | 842.82 | 274.97 | 845.71 | 275.35 |
| 846.92 | 275.42 | 850.84 | 275.52 | 851.92 | 275.53 | 854.09 | 275.59 | 855.02 | 275.58 |
| 857.23 | 275.47 | 859.02 | 275.41 | 861.44 | 275.42 | 867.12 | 275.48 | 868.7 | 275.46 |
| 873.35 | 275.34 | 877.94 | 275.2 | 881.1 | 275.06 | 884.58 | 274.81 | 886.5 | 274.57 |
| 891.69 | 273.62 | 896.56 | 272.99 | 897.22 | 272.88 | 900.26 | 272.72 | 902.43 | 272.52 |
| 902.66 | 272.46 | 903.56 | 272.43 | 907.44 | 272.35 | 910.07 | 272.34 | 911.15 | 272.36 |
| 918.68 | 272.32 | 920.24 | 272.34 | 920.96 | 272.48 | 925.69 | 272.81 | 931.95 | 273.58 |
| 934.24 | 274 | 936.71 | 274.49 | 937.16 | 274.56 | 940.06 | 275.12 | 940.81 | 275.24 |
| 943 | 275.96 | 946.69 | 277.39 | 955.94 | 278.03 | 958.16 | 278.13 | 960.84 | 278.32 |
| 962.87 | 278.56 | 966.07 | 278.89 | 966.74 | 278.94 | 967.7 | 278.95 | 972.39 | 278.76 |
| 973.73 | 278.73 | 975.25 | 278.73 | 976.74 | 278.77 | 979.35 | 278.94 | 987.63 | 279.66 |
| 990.96 | 279.72 | 992.05 | 279.72 | 994.4 | 279.68 | 999.88 | 279.48 | 1001.24 | 279.42 |
| 1003.3 | 279.28 | 1006.22 | 279 | 1011.87 | 278.27 | 1015.68 | 277.96 | 1016.93 | 277.91 |
| 1021.51 | 277.82 | 1024.52 | 277.88 | 1026.57 | 277.85 | 1028.37 | 277.79 | 1033.24 | 277.54 |
| 1038.06 | 276.82 | 1042.76 | 275.9 | 1045.3 | 275.35 | 1049.17 | 274.62 | 1054.48 | 273.97 |
| 1055.46 | 273.87 | 1059.16 | 273.66 | 1061.81 | 273.57 | 1062.72 | 273.52 | 1070.69 | 273.49 |
| 1071.61 | 273.53 | 1074.61 | 273.57 | 1078.19 | 273.56 | 1084.08 | 273.6 | 1088.01 | 273.7 |
| 1091.75 | 273.74 | 1094.11 | 273.72 | 1097.76 | 273.74 | 1102.78 | 273.79 | 1106.01 | 273.76 |
| 1110.03 | 273.77 | 1113.39 | 273.74 | 1114.11 | 273.75 | 1116.31 | 273.67 | 1121.64 | 273.58 |
| 1127.85 | 273.55 | 1129.46 | 273.52 | 1132.99 | 273.62 | 1134.25 | 273.93 | 1136.81 | 274.35 |
| 1140.26 | 275.08 | 1140.99 | 275.22 | 1142.8 | 275.47 | 1144.64 | 275.57 | 1145.5 | 275.55 |
| 1147.98 | 275.41 | 1151.1 | 275.54 | 1151.98 | 275.51 | 1154.08 | 275.54 | 1154.84 | 275.53 |
| 1160.63 | 275.19 | 1166.31 | 274.98 | 1170.54 | 274.78 | 1179.18 | 274.47 | 1182.06 | 274.26 |
| 1185.14 | 274.02 | 1192.31 | 273.65 | 1200.85 | 273.58 | 1204.05 | 273.59 | 1209.19 | 273.68 |
| 1209.85 | 273.7 | 1213.24 | 274.11 | 1214.37 | 274.23 | 1216.65 | 274.4 | 1218.17 | 274.55 |
| 1222.57 | 274.94 | 1223.56 | 275 | 1225.61 | 275.08 | 1226.29 | 275.08 | 1229.92 | 275.14 |
| 1231.59 | 275.12 | 1233.78 | 274.84 | 1235.71 | 274.62 | 1241.17 | 274.07 | 1241.38 | 274.02 |
| 1242.76 | 273.97 | 1247.16 | 273.87 | 1247.72 | 273.95 | 1249.29 | 274 | 1250.54 | 273.99 |
| 1254.78 | 274.05 | 1256.87 | 274 | 1259.08 | 273.87 | 1259.78 | 273.81 | 1263.87 | 273.55 |
| 1269.36 | 273.24 | 1271.48 | 273.07 | 1277.3 | 272.93 | 1281.19 | 272.77 | 1284.37 | 272.68 |
| 1285.41 | 272.63 | 1287 | 272.6 | 1290.14 | 272.6 | 1293.83 | 272.56 | 1296.03 | 272.56 |
| 1298.51 | 272.6 | 1299.5 | 272.68 | 1302.55 | 272.73 | 1303.29 | 272.83 | 1304.22 | 272.86 |
| 1306.28 | 272.86 | 1309.13 | 272.93 | 1310.47 | 272.86 | 1317.17 | 272.61 | 1320.59 | 272.59 |
| 1322.52 | 272.53 | 1324.81 | 272.52 | 1330.47 | 272.64 | 1331.05 | 272.69 | 1333.31 | 272.78 |
| 1334.84 | 272.87 | 1337.93 | 272.98 | 1340.94 | 273.1 | 1342.12 | 273.25 | 1345.56 | 273.62 |
| 1347.23 | 273.77 | 1348.39 | 273.93 | 1353.06 | 274.44 | 1354.2 | 274.62 | 1358.07 | 274.96 |
| 1359.57 | 275.05 | 1363.22 | 275.32 | 1364.5 | 275.49 | 1365.77 | 275.55 | 1368.23 | 275.49 |
| 1374.88 | 275.14 | 1377.44 | 274.97 | 1378.86 | 274.85 | 1383.62 | 274.65 | 1388.73 | 274.4 |
| 1392.06 | 274.26 | 1392.66 | 274.21 | 1397.68 | 274.05 | 1400.78 | 273.93 | 1405.8 | 273.65 |
| 1406.3 | 273.61 | 1413.26 | 272.96 | 1414.55 | 272.83 | 1420.8 | 272.25 | 1424.58 | 271.93 |
| 1426.92 | 271.83 | 1429.8 | 271.78 | 1434.97 | 271.76 | 1438.79 | 271.73 | 1441.03 | 271.68 |
| 1446.5 | 271.67 | 1447.35 | 271.65 | 1449.73 | 271.67 | 1456.19 | 271.86 | 1465.36 | 271.89 |
| 1467.52 | 271.88 | 1468.64 | 271.92 | 1475.38 | 272.08 | 1482.87 | 272.17 | 1489.83 | 272.18 |
| 1491.67 | 272.2 | 1495.67 | 272.45 | 1498.12 | 272.58 | 1502.29 | 272.69 | 1503.65 | 272.67 |
| 1507.66 | 272.75 | 1509.98 | 272.75 | 1513.07 | 272.71 | 1514.42 | 272.73 | 1517.49 | 272.68 |
| 1519.27 | 272.78 | 1521.56 | 272.76 | 1523.88 | 272.89 | 1525.29 | 272.91 | 1531.61 | 272.78 |
| 1532.45 | 272.71 | 1538.25 | 272.8 | 1542.88 | 272.68 | 1545.33 | 272.74 | 1545.69 | 272.77 |
| 1556.06 | 274.11 | 1556.83 | 274.24 | 1559.43 | 274.92 | 1561.59 | 275.45 | 1562.58 | 275.72 |
| 1570.22 | 277.87 | 1572.07 | 278.41 | 1573.08 | 278.61 | 1574.81 | 278.91 | 1576.45 | 279.22 |
| 1579.48 | 279.76 | 1582.53 | 280.02 | 1584.27 | 280.13 | 1589.96 | 280.53 | 1593.84 | 280.81 |
| 1598.52 | 280.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 351.4 | .04 | 1556.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 351.4 | 1556.83 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1021.451 Elevation=280.1112

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 883.762*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 287.84 | 1.51 | 287.69 | 4.81 | 287.3 | 7.52 | 287.01 | 10.9 | 286.74 |
| 13.55 | 286.51 | 23.69 | 285.53 | 25.49 | 285.43 | 28.9 | 285.14 | 30.57 | 284.97 |
| 32.8 | 284.84 | 35.42 | 284.82 | 36.57 | 284.76 | 38.93 | 284.69 | 46.58 | 284.32 |
| 53.85 | 283.83 | 56.45 | 283.7 | 65.24 | 283.21 | 70.71 | 282.89 | 73.03 | 282.78 |
| 80.57 | 282.39 | 94.54 | 281.88 | 97.94 | 281.76 | 103.01 | 281.66 | 107.44 | 281.66 |
| 109.27 | 281.62 | 112.92 | 281.42 | 117.27 | 281.23 | 118.64 | 281.16 | 126.68 | 280.54 |
| 128.11 | 280.49 | 144.12 | 279.8 | 153.53 | 279.34 | 157.91 | 279.15 | 162.21 | 278.92 |
| 171.79 | 278.45 | 175.09 | 278.31 | 179.89 | 278.14 | 183.02 | 278 | 190.52 | 277.71 |
| 198.21 | 277.33 | 203.14 | 277.03 | 207.59 | 276.78 | 208.06 | 276.74 | 218.86 | 276.03 |
| 222.01 | 275.79 | 225.46 | 275.58 | 226.63 | 275.48 | 229.24 | 275.37 | 234.13 | 275.1 |
| 235.63 | 275.04 | 239.12 | 274.77 | 247.42 | 274.41 | 251.22 | 274.09 | 253.81 | 273.95 |
| 256.29 | 273.68 | 257.75 | 273.59 | 261.49 | 273.41 | 267.36 | 273.06 | 270.55 | 272.98 |
| 273.58 | 272.76 | 275.78 | 272.63 | 279.69 | 272.45 | 288.18 | 272.15 | 290.09 | 272.11 |
| 292.76 | 272.22 | 294.9 | 272.25 | 298.11 | 272.14 | 299.01 | 272.03 | 305.19 | 271.57 |
| 308.08 | 271.31 | 313.92 | 271.01 | 315.51 | 271.03 | 318.29 | 270.98 | 324.63 | 270.74 |
| 326.42 | 270.79 | 327.96 | 270.87 | 333.08 | 271.06 | 334.63 | 271.1 | 335.57 | 271.18 |
| 337.57 | 271.28 | 339.8 | 271.33 | 344.6 | 271.19 | 346.78 | 271.17 | 350.97 | 271.25 |
| 356.36 | 271.52 | 357.47 | 271.59 | 363.64 | 272.09 | 369.25 | 272.62 | 374.36 | 272.94 |
| 375.4 | 272.99 | 376.34 | 273.08 | 378.51 | 273.34 | 380.13 | 273.6 | 382.92 | 274.08 |
| 390.93 | 274.04 | 392.74 | 274.13 | 394.5 | 274.17 | 400.63 | 274.36 | 404.29 | 274.74 |
| 405.58 | 274.91 | 409.38 | 275.48 | 412.06 | 276.06 | 412.64 | 276.23 | 413.31 | 276.5 |
| 414.69 | 276.99 | 418.09 | 278.52 | 421.17 | 278.76 | 424.08 | 278.93 | 425.81 | 278.92 |
| 426.8 | 279.03 | 429.09 | 279.11 | 431.05 | 279.06 | 432.59 | 278.93 | 436.04 | 278.5 |
| 438.4 | 278.37 | 438.97 | 278.37 | 442.21 | 278.49 | 446.77 | 278.48 | 447.87 | 278.21 |
| 451.97 | 276.93 | 453.83 | 276.38 | 454.49 | 276.16 | 460.87 | 274.62 | 463.97 | 273.84 |
| 467.14 | 273.33 | 468.98 | 273.2 | 470.62 | 273.06 | 475.24 | 273.06 | 476.08 | 273.05 |
| 483.72 | 273.04 | 487.47 | 273.49 | 489.79 | 273.66 | 491.99 | 273.75 | 494.97 | 273.85 |
| 496.58 | 273.86 | 498.46 | 273.8 | 500.7 | 273.7 | 501.52 | 273.76 | 506.44 | 273.41 |
| 509.38 | 273.32 | 510.44 | 273.08 | 512.24 | 272.8 | 514.73 | 272.45 | 516.03 | 272.34 |
| 520.22 | 272.13 | 523.48 | 272.04 | 525.8 | 271.94 | 528.54 | 271.76 | 529.64 | 271.73 |
| 532.58 | 271.79 | 536.43 | 272.01 | 538.61 | 272.19 | 539.81 | 272.31 | 541.28 | 272.33 |
| 546.49 | 272.55 | 546.53 | 272.47 | 547.41 | 272.19 | 552.54 | 270.72 | 555.42 | 269.93 |
| 558.97 | 269.25 | 559.69 | 269.14 | 566.71 | 268.89 | 572.09 | 268.71 | 574.22 | 268.68 |
| 576.72 | 268.78 | 580.19 | 268.95 | 583.89 | 269.1 | 586.02 | 269.15 | 588.22 | 269.18 |
| 589.59 | 269.18 | 593.53 | 269.14 | 599.32 | 269.13 | 600.67 | 269.15 | 606.32 | 269.3 |
| 607.28 | 269.37 | 610 | 269.48 | 610.8 | 269.54 | 613.82 | 269.59 | 614.98 | 269.7 |
| 618.73 | 269.76 | 622.79 | 269.78 | 626.63 | 269.77 | 631.18 | 269.79 | 641.04 | 269.87 |
| 645.65 | 269.92 | 651.26 | 269.97 | 652.78 | 270 | 654.85 | 270.2 | 656.15 | 270.21 |
| 657.7 | 270.33 | 661.41 | 270.48 | 664.26 | 270.66 | 667.21 | 270.78 | 671.42 | 270.87 |
| 674.03 | 271.05 | 680.01 | 271.38 | 682.89 | 271.55 | 687.95 | 271.69 | 693.61 | 271.75 |
| 696.33 | 271.76 | 700.26 | 271.75 | 706.32 | 271.84 | 708.9 | 271.96 | 718.25 | 272.59 |
| 721.33 | 272.98 | 723.33 | 273.21 | 725.36 | 273.38 | 732.17 | 273.89 | 733.41 | 273.96 |
| 738.38 | 274.39 | 741.52 | 274.55 | 742.51 | 274.63 | 745.69 | 274.77 | 749.24 | 275.03 |
| 751.12 | 275.2 | 753.34 | 275.53 | 755.14 | 275.82 | 760.1 | 276.33 | 763.13 | 276.78 |
| 764.11 | 276.88 | 767.5 | 277.14 | 771.83 | 277.15 | 773.76 | 277.09 | 778.23 | 276.78 |
| 779.21 | 276.68 | 781.68 | 276.34 | 783.36 | 276 | 785.24 | 275.53 | 785.34 | 275.45 |
| 788.88 | 275.25 | 790.85 | 275.18 | 793.06 | 275.37 | 796.48 | 275.61 | 802.06 | 276.41 |
| 808.58 | 276.4 | 809.37 | 276.2 | 814.86 | 274.95 | 815.83 | 274.76 | 820.24 | 274.09 |
| 822.6 | 273.82 | 823.87 | 273.57 | 828.32 | 273.56 | 828.96 | 273.64 | 834.3 | 273.74 |
| 834.8 | 273.76 | 838.18 | 274.09 | 839.86 | 274.33 | 842.91 | 274.64 | 845.27 | 274.84 |
| 848.18 | 275.23 | 849.4 | 275.3 | 856.46 | 275.49 | 857.53 | 275.48 | 859.75 | 275.37 |
| 861.55 | 275.31 | 863.99 | 275.31 | 869.69 | 275.37 | 874.1 | 275.27 | 880.56 | 275.06 |
| 883.73 | 274.91 | 887.23 | 274.65 | 889.16 | 274.39 | 894.37 | 273.38 | 899.26 | 272.72 |
| 899.93 | 272.62 | 902.99 | 272.44 | 905.17 | 272.23 | 905.39 | 272.17 | 910.2 | 272.05 |
| 911.77 | 272.04 | 913.93 | 272.07 | 921.49 | 272.04 | 923.05 | 272.05 | 923.78 | 272.21 |
| 926.29 | 272.38 | 928.53 | 272.55 | 930.46 | 272.79 | 934.82 | 273.36 | 938.15 | 273.99 |
| 942.97 | 274.94 | 943.72 | 275.06 | 945.92 | 275.82 | 948.19 | 276.76 | 949.64 | 277.33 |
| 958.92 | 278.01 | 961.15 | 278.11 | 963.85 | 278.31 | 965.89 | 278.56 | 969.1 | 278.91 |
| 969.78 | 278.96 | 970.74 | 278.97 | 973.29 | 278.85 | 976.8 | 278.73 | 978.33 | 278.73 |
| 979.83 | 278.78 | 982.44 | 278.96 | 990.77 | 279.71 | 994.11 | 279.77 | 995.2 | 279.77 |
| 997.57 | 279.73 | 1003.07 | 279.51 | 1004.43 | 279.44 | 1006.51 | 279.29 | 1009.44 | 279 |
| 1015.12 | 278.23 | 1018.84 | 277.91 | 1020.2 | 277.85 | 1024.8 | 277.76 | 1027.83 | 277.82 |
| 1029.89 | 277.79 | 1031.7 | 277.72 | 1036.59 | 277.46 | 1041.43 | 276.7 | 1046.15 | 275.73 |
| 1048.71 | 275.15 | 1050.02 | 274.91 | 1052.6 | 274.39 | 1058.91 | 273.59 | 1062.63 | 273.38 |
| 1065.29 | 273.29 | 1066.21 | 273.23 | 1074.21 | 273.2 | 1075.15 | 273.24 | 1078.16 | 273.29 |
| 1081.75 | 273.29 | 1087.67 | 273.33 | 1091.62 | 273.43 | 1095.38 | 273.46 | 1097.74 | 273.44 |
| 1106.45 | 273.49 | 1108.25 | 273.48 | 1110.43 | 273.44 | 1113.74 | 273.45 | 1117.12 | 273.43 |
| 1117.64 | 273.45 | 1120.06 | 273.37 | 1125.4 | 273.31 | 1133.26 | 273.29 | 1136.81 | 273.38 |
| 1138.08 | 273.72 | 1140.64 | 274.15 | 1144.85 | 275.07 | 1146.66 | 275.34 | 1147.39 | 275.35 |
| 1148.51 | 275.45 | 1149.38 | 275.42 | 1151.87 | 275.28 | 1155.01 | 275.42 | 1155.88 | 275.38 |
| 1158 | 275.41 | 1158.76 | 275.4 | 1164.4 | 275.02 | 1164.7 | 275.02 | 1168.77 | 274.84 |
| 1170.28 | 274.79 | 1174.54 | 274.58 | 1180.48 | 274.37 | 1183.22 | 274.26 | 1185.07 | 274.13 |
| 1189.21 | 273.8 | 1196.4 | 273.41 | 1205.82 | 273.35 | 1209.42 | 273.38 | 1214.03 | 273.45 |
| 1216.93 | 273.82 | 1218.43 | 273.99 | 1220.87 | 274.19 | 1226.81 | 274.76 | 1227.81 | 274.82 |
| 1229.86 | 274.9 | 1230.54 | 274.9 | 1234.19 | 274.97 | 1235.87 | 274.96 | 1238.07 | 274.67 |
| 1240.01 | 274.44 | 1242.66 | 274.15 | 1245.5 | 273.86 | 1245.71 | 273.81 | 1249.47 | 273.69 |
| 1251.51 | 273.65 | 1252.08 | 273.72 | 1253.65 | 273.77 | 1254.91 | 273.77 | 1259.17 | 273.82 |
| 1261.27 | 273.77 | 1267.33 | 273.36 | 1270.98 | 273.14 | 1272.2 | 273.08 | 1273.82 | 272.96 |
| 1275.95 | 272.77 | 1281.8 | 272.61 | 1285.7 | 272.45 | 1288.9 | 272.36 | 1289.94 | 272.3 |
| 1291.55 | 272.27 | 1294.7 | 272.27 | 1298.41 | 272.22 | 1300.61 | 272.22 | 1303.11 | 272.26 |
| 1304.11 | 272.35 | 1307.17 | 272.4 | 1307.91 | 272.51 | 1308.84 | 272.54 | 1310.91 | 272.55 |
| 1312.6 | 272.61 | 1314.73 | 272.61 | 1315.05 | 272.56 | 1321.86 | 272.3 | 1325.29 | 272.28 |
| 1327.23 | 272.23 | 1329.53 | 272.22 | 1333.64 | 272.29 | 1335.22 | 272.33 | 1335.8 | 272.39 |
| 1338.07 | 272.47 | 1339.31 | 272.55 | 1345.73 | 272.8 | 1348.27 | 273.12 | 1352.06 | 273.52 |
| 1353.22 | 273.69 | 1354.95 | 273.9 | 1357.37 | 274.17 | 1359.06 | 274.44 | 1361.12 | 274.65 |
| 1362.95 | 274.8 | 1364.46 | 274.9 | 1368.12 | 275.19 | 1369.41 | 275.37 | 1370.68 | 275.43 |
| 1373.16 | 275.37 | 1379.84 | 275.01 | 1382.41 | 274.83 | 1383.84 | 274.71 | 1388.62 | 274.49 |
| 1393.76 | 274.23 | 1396.88 | 274.09 | 1397.7 | 274.03 | 1402.75 | 273.83 | 1406.64 | 273.66 |
| 1410.9 | 273.41 | 1411.41 | 273.37 | 1419.7 | 272.57 | 1425.98 | 271.97 | 1428.74 | 271.73 |
| 1431.8 | 271.56 | 1435.01 | 271.49 | 1444.05 | 271.43 | 1446.31 | 271.37 | 1451.8 | 271.37 |
| 1452.65 | 271.34 | 1455.04 | 271.36 | 1455.89 | 271.4 | 1461.53 | 271.56 | 1470.75 | 271.58 |
| 1472.92 | 271.56 | 1474.05 | 271.6 | 1480.81 | 271.76 | 1488.34 | 271.85 | 1495.33 | 271.86 |
| 1497.17 | 271.89 | 1501.2 | 272.15 | 1503.66 | 272.29 | 1507.85 | 272.41 | 1509.22 | 272.38 |
| 1513.24 | 272.47 | 1515.58 | 272.48 | 1518.68 | 272.43 | 1520.03 | 272.44 | 1523.12 | 272.38 |
| 1524.9 | 272.47 | 1527.21 | 272.44 | 1529.54 | 272.58 | 1530.95 | 272.59 | 1537.31 | 272.4 |
| 1538.15 | 272.33 | 1543.98 | 272.36 | 1548.63 | 272.19 | 1551.15 | 272.2 | 1554.47 | 272.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1556.6 | 272.79 | 1561.87 | 273.38 | 1562.64 | 273.49 | 1565.2 | 274.07 | 1567.32 | 274.53 |
| 1568.29 | 274.76 | 1575.78 | 276.6 | 1577.59 | 277.06 | 1579 | 277.3 | 1581.88 | 277.76 |
| 1584.85 | 278.22 | 1587.84 | 278.45 | 1591.81 | 278.67 | 1595.13 | 278.87 | 1598.72 | 279.11 |
| 1603.51 | 278.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 344.6 | .04 | 1562.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 344.6 | 1562.64 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1020.474 Elevation=280.1238

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 864.437*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 287 | 1.48 | 286.84 | 7.1 | 286.2 | 10.69 | 285.92 | 13.29 | 285.7 |
| 23.02 | 284.75 | 24.99 | 284.63 | 28.84 | 284.3 | 29.96 | 284.18 | 32.36 | 284.05 |
| 34.72 | 284.03 | 35.85 | 283.97 | 38.17 | 283.9 | 44.52 | 283.6 | 45.66 | 283.54 |
| 52.79 | 283.06 | 55.34 | 282.94 | 66.71 | 282.32 | 69.32 | 282.17 | 78.13 | 281.73 |
| 92.67 | 281.23 | 96.01 | 281.12 | 100.39 | 281.03 | 105.32 | 281.04 | 107.11 | 281 |
| 110.7 | 280.81 | 112.36 | 280.75 | 116.3 | 280.56 | 124.18 | 279.95 | 125.58 | 279.9 |
| 141.28 | 279.24 | 150.5 | 278.81 | 154.8 | 278.62 | 159.02 | 278.4 | 168.4 | 277.94 |
| 171.63 | 277.8 | 176.34 | 277.64 | 179.41 | 277.5 | 186.23 | 277.23 | 186.76 | 277.22 |
| 194.3 | 276.85 | 199.14 | 276.56 | 203.5 | 276.32 | 203.96 | 276.28 | 214.54 | 275.56 |
| 217.63 | 275.32 | 221.01 | 275.12 | 222.17 | 275.03 | 224.72 | 274.91 | 225.19 | 274.86 |
| 229.01 | 274.68 | 229.51 | 274.63 | 230.98 | 274.58 | 234.41 | 274.31 | 242.55 | 273.96 |
| 246.27 | 273.65 | 248.81 | 273.51 | 251.24 | 273.24 | 252.67 | 273.15 | 256.33 | 272.95 |
| 262.09 | 272.61 | 265.22 | 272.54 | 268.18 | 272.32 | 270.34 | 272.19 | 274.17 | 272.03 |
| 282.49 | 271.74 | 284.37 | 271.7 | 286.99 | 271.82 | 289.09 | 271.86 | 292.23 | 271.75 |
| 293.11 | 271.64 | 299.17 | 271.19 | 302.01 | 270.92 | 303.93 | 270.84 | 307.44 | 270.67 |
| 309.29 | 270.67 | 312.01 | 270.63 | 317.61 | 270.41 | 318.23 | 270.4 | 319.99 | 270.44 |
| 321.5 | 270.51 | 326.52 | 270.67 | 328.03 | 270.69 | 328.96 | 270.78 | 330.91 | 270.87 |
| 333.1 | 270.91 | 337.81 | 270.8 | 340.06 | 270.78 | 344.39 | 270.88 | 349.97 | 271.17 |
| 351.12 | 271.25 | 356.18 | 271.66 | 363.31 | 272.35 | 368.6 | 272.69 | 369.68 | 272.74 |
| 370.64 | 272.84 | 372.9 | 273.12 | 374.57 | 273.39 | 377.45 | 273.9 | 385.74 | 273.87 |
| 387.61 | 273.96 | 389.44 | 274 | 395.78 | 274.21 | 399.57 | 274.61 | 400.9 | 274.79 |
| 404.83 | 275.4 | 407.61 | 276.02 | 408.21 | 276.19 | 408.9 | 276.48 | 410.33 | 276.99 |
| 413.85 | 278.6 | 417.04 | 278.86 | 420.05 | 279.03 | 421.84 | 279.02 | 422.86 | 279.14 |
| 425.23 | 279.22 | 426.49 | 279.21 | 427.26 | 279.17 | 428.85 | 279.03 | 432.42 | 278.58 |
| 434.86 | 278.45 | 435.45 | 278.45 | 438.8 | 278.57 | 442.34 | 278.58 | 443.52 | 278.57 |
| 444.67 | 278.28 | 451.52 | 276.14 | 455.06 | 275.26 | 457.72 | 274.61 | 461.32 | 273.7 |
| 464.6 | 273.17 | 468.2 | 272.89 | 472.98 | 272.88 | 473.86 | 272.87 | 481.76 | 272.87 |
| 485.64 | 273.34 | 488.04 | 273.52 | 490.31 | 273.62 | 493.4 | 273.72 | 495.07 | 273.73 |
| 497.01 | 273.67 | 499.33 | 273.56 | 500.18 | 273.62 | 505.27 | 273.25 | 508.31 | 273.16 |
| 509.52 | 272.88 | 511.27 | 272.61 | 513.84 | 272.24 | 515.96 | 272.08 | 519.53 | 271.9 |
| 522.9 | 271.81 | 525.3 | 271.7 | 528.13 | 271.52 | 529.05 | 271.48 | 532.31 | 271.54 |
| 536.3 | 271.77 | 538.55 | 271.96 | 539.8 | 272.09 | 541.32 | 272.11 | 546.71 | 272.35 |
| 546.75 | 272.27 | 547.66 | 271.98 | 552.96 | 270.44 | 555.95 | 269.61 | 559.62 | 268.9 |
| 560.37 | 268.79 | 565.53 | 268.6 | 572.73 | 268.36 | 575.4 | 268.31 | 577.92 | 268.41 |
| 580.97 | 268.56 | 586.05 | 268.75 | 589.47 | 268.82 | 591.98 | 268.81 | 594.8 | 268.78 |
| 600.62 | 268.78 | 601.98 | 268.79 | 607.66 | 268.94 | 608.61 | 269.01 | 611.35 | 269.12 |
| 612.15 | 269.18 | 615.19 | 269.23 | 616.35 | 269.34 | 620.12 | 269.39 | 624.2 | 269.42 |
| 628.61 | 269.41 | 632.63 | 269.44 | 642.54 | 269.53 | 654.33 | 269.66 | 656.41 | 269.87 |
| 657.72 | 269.89 | 659.27 | 270.01 | 660.03 | 270.03 | 663 | 270.16 | 665.71 | 270.34 |
| 668.82 | 270.46 | 673.06 | 270.55 | 675.68 | 270.75 | 684.58 | 271.29 | 691.05 | 271.46 |
| 691.24 | 271.44 | 698.09 | 271.49 | 702.03 | 271.47 | 708.12 | 271.56 | 710.71 | 271.68 |
| 720.11 | 272.33 | 725.21 | 272.97 | 727.26 | 273.15 | 734.09 | 273.68 | 735.34 | 273.77 |
| 741.15 | 274.28 | 743.49 | 274.4 | 744.48 | 274.49 | 747.68 | 274.64 | 751.25 | 274.91 |
| 753.13 | 275.09 | 757.17 | 275.74 | 762.15 | 276.28 | 765.2 | 276.75 | 769.59 | 277.12 |
| 773.94 | 277.13 | 775.88 | 277.06 | 777.07 | 276.99 | 780.37 | 276.74 | 781.35 | 276.64 |
| 783.84 | 276.29 | 785.53 | 275.93 | 787.41 | 275.43 | 787.51 | 275.35 | 790.96 | 275.14 |
| 793.05 | 275.06 | 795.27 | 275.26 | 798.71 | 275.51 | 804.31 | 276.34 | 810.86 | 276.34 |
| 811.66 | 276.13 | 817.17 | 274.81 | 818.14 | 274.61 | 822.57 | 273.91 | 824.95 | 273.63 |
| 826.23 | 273.36 | 830.69 | 273.35 | 831.34 | 273.44 | 837.2 | 273.56 | 840.6 | 273.91 |
| 842.29 | 274.17 | 845.35 | 274.49 | 847.72 | 274.7 | 850.65 | 275.11 | 851.87 | 275.19 |
| 858.97 | 275.39 | 860.04 | 275.39 | 862.28 | 275.27 | 864.08 | 275.21 | 865.17 | 275.2 |
| 868.39 | 275.22 | 872.25 | 275.26 | 873.85 | 275.23 | 878.54 | 275.09 | 883.18 | 274.92 |
| 886.36 | 274.76 | 889.88 | 274.48 | 891.02 | 274.3 | 891.82 | 274.21 | 897.05 | 273.15 |
| 901.97 | 272.46 | 902.64 | 272.35 | 905.71 | 272.16 | 907.9 | 271.94 | 908.13 | 271.88 |
| 912.95 | 271.76 | 914.54 | 271.74 | 916.67 | 271.78 | 923.74 | 271.75 | 925.87 | 271.77 |
| 926.6 | 271.93 | 927.6 | 272.02 | 931.37 | 272.29 | 933.31 | 272.54 | 937.7 | 273.13 |
| 940.01 | 273.58 | 945.88 | 274.76 | 946.64 | 274.89 | 948.85 | 275.68 | 951.12 | 276.68 |
| 952.58 | 277.28 | 961.91 | 277.99 | 964.15 | 278.09 | 966.86 | 278.3 | 968.91 | 278.56 |
| 972.13 | 278.92 | 972.82 | 278.97 | 973.78 | 278.98 | 976.34 | 278.86 | 979.48 | 278.74 |
| 981.41 | 278.74 | 982.91 | 278.79 | 985.54 | 278.98 | 993.9 | 279.76 | 997.27 | 279.82 |
| 998.36 | 279.82 | 1000.73 | 279.77 | 1006.27 | 279.54 | 1007.63 | 279.47 | 1009.72 | 279.31 |
| 1012.67 | 279 | 1018.37 | 278.19 | 1022.21 | 277.85 | 1023.47 | 277.79 | 1026.87 | 277.71 |
| 1028.1 | 277.7 | 1031.14 | 277.76 | 1033.21 | 277.73 | 1035.02 | 277.66 | 1039.94 | 277.38 |
| 1044.81 | 276.59 | 1049.55 | 275.57 | 1052.12 | 274.96 | 1053.44 | 274.7 | 1056.02 | 274.16 |
| 1061.38 | 273.44 | 1062.37 | 273.32 | 1066.1 | 273.1 | 1068.78 | 273 | 1069.7 | 272.94 |
| 1077.74 | 272.91 | 1078.68 | 272.95 | 1081.7 | 273.01 | 1082.43 | 273 | 1089.24 | 273.03 |
| 1091.26 | 273.06 | 1095.23 | 273.16 | 1099 | 273.19 | 1102.69 | 273.16 | 1110.13 | 273.2 |
| 1114.13 | 273.13 | 1117.46 | 273.14 | 1120.84 | 273.12 | 1121.57 | 273.14 | 1124.87 | 273.06 |
| 1129.17 | 273.03 | 1135.09 | 273.05 | 1137.07 | 273.05 | 1140.63 | 273.15 | 1141.9 | 273.5 |
| 1144.48 | 273.96 | 1147.97 | 274.77 | 1148.7 | 274.92 | 1150.53 | 275.21 | 1151.26 | 275.22 |
| 1152.39 | 275.32 | 1153.26 | 275.29 | 1155.76 | 275.14 | 1158.91 | 275.29 | 1159.79 | 275.25 |
| 1161.91 | 275.28 | 1162.69 | 275.26 | 1168.35 | 274.85 | 1170.79 | 274.75 | 1176.15 | 274.5 |
| 1178.54 | 274.38 | 1184.51 | 274.16 | 1187.25 | 274.05 | 1193.27 | 273.58 | 1200.5 | 273.18 |
| 1205.51 | 273.15 | 1209.13 | 273.12 | 1212.35 | 273.14 | 1218.21 | 273.21 | 1222.63 | 273.76 |
| 1226.19 | 274.08 | 1231.05 | 274.57 | 1234.12 | 274.73 | 1234.8 | 274.73 | 1238.47 | 274.81 |
| 1240.16 | 274.8 | 1241.32 | 274.66 | 1242.37 | 274.5 | 1244.32 | 274.26 | 1246.98 | 273.96 |
| 1248.64 | 273.79 | 1250.04 | 273.6 | 1251.43 | 273.54 | 1255.87 | 273.42 | 1256.44 | 273.5 |
| 1258.02 | 273.55 | 1259.28 | 273.54 | 1263.56 | 273.59 | 1265.67 | 273.54 | 1271.77 | 273.11 |
| 1276.66 | 272.81 | 1278.4 | 272.67 | 1280.16 | 272.5 | 1280.81 | 272.46 | 1285.64 | 272.32 |
| 1290.22 | 272.12 | 1293.44 | 272.03 | 1294.48 | 271.97 | 1296.09 | 271.94 | 1299.26 | 271.94 |
| 1302.98 | 271.89 | 1305.2 | 271.89 | 1307.71 | 271.93 | 1308.71 | 272.02 | 1309.47 | 272.02 |
| 1311.79 | 272.08 | 1312.53 | 272.19 | 1313.47 | 272.23 | 1315.55 | 272.24 | 1318.43 | 272.32 |
| 1319.38 | 272.3 | 1319.78 | 272.25 | 1326.54 | 271.99 | 1329.99 | 271.98 | 1331.95 | 271.92 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1334.25 | 271.91 | 1339.97 | 272.03 | 1340.56 | 272.09 | 1342.83 | 272.17 | 1344.08 | 272.25 |
| 1350.53 | 272.5 | 1353.08 | 272.83 | 1356.89 | 273.27 | 1358.06 | 273.46 | 1362.22 | 273.98 |
| 1363.92 | 274.26 | 1365.99 | 274.48 | 1367.83 | 274.65 | 1369.34 | 274.75 | 1373.03 | 275.06 |
| 1374.32 | 275.25 | 1375.6 | 275.32 | 1378.09 | 275.25 | 1384.79 | 274.88 | 1387.38 | 274.7 |
| 1388.82 | 274.56 | 1393.62 | 274.33 | 1398.78 | 274.06 | 1401.91 | 273.91 | 1402.75 | 273.84 |
| 1406.54 | 273.68 | 1410.94 | 273.48 | 1416.01 | 273.18 | 1424.85 | 272.3 | 1431.46 | 271.67 |
| 1434.96 | 271.38 | 1437.33 | 271.27 | 1440.73 | 271.2 | 1445.46 | 271.17 | 1449.31 | 271.13 |
| 1451.58 | 271.07 | 1457.1 | 271.06 | 1457.95 | 271.04 | 1460.35 | 271.06 | 1461.21 | 271.1 |
| 1466.87 | 271.25 | 1471.72 | 271.26 | 1476.13 | 271.26 | 1478.31 | 271.25 | 1486.25 | 271.45 |
| 1493.8 | 271.52 | 1500.83 | 271.54 | 1502.68 | 271.57 | 1506.73 | 271.85 | 1509.2 | 272.01 |
| 1511.35 | 272.06 | 1513.41 | 272.13 | 1514.78 | 272.1 | 1518.83 | 272.19 | 1521.17 | 272.2 |
| 1524.29 | 272.16 | 1525.65 | 272.16 | 1528.76 | 272.08 | 1530.54 | 272.17 | 1532.86 | 272.13 |
| 1535.21 | 272.26 | 1536.62 | 272.27 | 1543 | 272.02 | 1543.85 | 271.94 | 1549.71 | 271.92 |
| 1554.38 | 271.7 | 1556.85 | 271.67 | 1557.46 | 271.71 | 1567.68 | 272.65 | 1568.46 | 272.74 |
| 1573.99 | 273.8 | 1581.33 | 275.33 | 1583.1 | 275.72 | 1587.01 | 276.26 | 1590.22 | 276.68 |
| 1593.15 | 276.87 | 1594.82 | 276.94 | 1600.29 | 277.22 | 1603.81 | 277.42 | 1604.02 | 277.42 |
| 1608.51 | 277.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 337.81 | .04 | 1568.46 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 337.81 | 1568.46 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1019.497 Elevation=280.1365

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 845.111*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 286.15 | 1.45 | 286 | 7.22 | 285.34 | 10.47 | 285.09 | 13.02 | 284.88 |
| 22.56 | 283.96 | 24.77 | 283.81 | 27.76 | 283.55 | 29.36 | 283.38 | 31.25 | 283.28 |
| 34.02 | 283.23 | 37.4 | 283.1 | 44.74 | 282.77 | 51.73 | 282.29 | 54.23 | 282.17 |
| 62.67 | 281.74 | 67.92 | 281.45 | 70.15 | 281.35 | 76.56 | 281.03 | 90.81 | 280.57 |
| 94.08 | 280.47 | 98.95 | 280.4 | 103.2 | 280.42 | 104.96 | 280.38 | 108.47 | 280.21 |
| 112.64 | 280.04 | 113.96 | 279.97 | 121.68 | 279.36 | 123.05 | 279.31 | 138.44 | 278.68 |
| 147.47 | 278.27 | 151.69 | 278.1 | 155.82 | 277.88 | 165.01 | 277.43 | 168.18 | 277.29 |
| 172.79 | 277.13 | 175.04 | 277.03 | 182.49 | 276.74 | 183.01 | 276.73 | 190.39 | 276.37 |
| 195.13 | 276.1 | 199.86 | 275.82 | 210.22 | 275.09 | 213.25 | 274.86 | 216.57 | 274.66 |
| 217.7 | 274.57 | 220.2 | 274.45 | 220.66 | 274.4 | 224.41 | 274.22 | 224.9 | 274.17 |
| 226.34 | 274.12 | 229.69 | 273.85 | 237.67 | 273.52 | 241.32 | 273.2 | 243.8 | 273.07 |
| 246.19 | 272.79 | 251.18 | 272.5 | 257.54 | 272.12 | 259.88 | 272.09 | 262.79 | 271.88 |
| 264.9 | 271.75 | 268.65 | 271.6 | 276.81 | 271.32 | 278.65 | 271.28 | 281.21 | 271.42 |
| 283.27 | 271.47 | 286.35 | 271.37 | 287.22 | 271.25 | 293.15 | 270.81 | 295.93 | 270.54 |
| 301.53 | 270.31 | 303.07 | 270.32 | 305.74 | 270.29 | 311.22 | 270.07 | 313.55 | 270.09 |
| 315.03 | 270.14 | 319.95 | 270.27 | 321.44 | 270.29 | 322.34 | 270.37 | 324.26 | 270.47 |
| 326.4 | 270.5 | 329.16 | 270.45 | 331.01 | 270.4 | 332.22 | 270.42 | 333.34 | 270.39 |
| 337.82 | 270.5 | 343.59 | 270.82 | 344.77 | 270.9 | 350 | 271.34 | 357.38 | 272.08 |
| 362.84 | 272.44 | 363.95 | 272.5 | 364.95 | 272.6 | 367.28 | 272.89 | 369 | 273.18 |
| 371.99 | 273.72 | 380.55 | 273.69 | 382.49 | 273.8 | 384.38 | 273.84 | 390.93 | 274.06 |
| 391.55 | 274.14 | 394.85 | 274.49 | 396.23 | 274.68 | 400.29 | 275.32 | 403.16 | 275.97 |
| 403.78 | 276.15 | 404.49 | 276.46 | 405.97 | 276.99 | 406.86 | 277.42 | 409.61 | 278.68 |
| 412.9 | 278.95 | 416.02 | 279.13 | 417.87 | 279.12 | 418.41 | 279.21 | 421.37 | 279.33 |
| 422.67 | 279.32 | 423.47 | 279.28 | 425.11 | 279.14 | 428.8 | 278.67 | 429.93 | 278.59 |
| 431.94 | 278.53 | 435.4 | 278.66 | 440.27 | 278.65 | 441.46 | 278.36 | 446.47 | 276.76 |
| 448.54 | 276.11 | 452.2 | 275.19 | 455.36 | 274.41 | 458.67 | 273.56 | 462.06 | 273 |
| 464.04 | 272.86 | 465.79 | 272.71 | 471.63 | 272.69 | 479.8 | 272.69 | 483.81 | 273.19 |
| 486.29 | 273.38 | 488.64 | 273.48 | 491.82 | 273.59 | 493.55 | 273.6 | 497.96 | 273.43 |
| 498.83 | 273.49 | 504.1 | 273.1 | 507.24 | 272.99 | 508.37 | 272.73 | 510.29 | 272.42 |
| 512.96 | 272.03 | 515.14 | 271.87 | 518.83 | 271.68 | 522.32 | 271.58 | 524.8 | 271.46 |
| 527.73 | 271.27 | 528.91 | 271.24 | 532.05 | 271.29 | 535.04 | 271.46 | 537.74 | 271.67 |
| 539.78 | 271.87 | 540.96 | 271.88 | 546.92 | 272.15 | 546.97 | 272.07 | 547.91 | 271.76 |
| 553.39 | 270.15 | 556.48 | 269.29 | 560.27 | 268.55 | 561.05 | 268.43 | 566.38 | 268.24 |
| 574.31 | 267.97 | 576.58 | 267.94 | 579.11 | 268.04 | 582.61 | 268.2 | 587.28 | 268.37 |
| 590.72 | 268.45 | 593.24 | 268.45 | 596.07 | 268.43 | 601.92 | 268.42 | 603.28 | 268.43 |
| 605.74 | 268.5 | 608.99 | 268.57 | 609.95 | 268.65 | 612.7 | 268.76 | 613.5 | 268.83 |
| 616.56 | 268.87 | 617.73 | 268.98 | 621.51 | 269.03 | 625.61 | 269.06 | 630.04 | 269.05 |
| 634.08 | 269.08 | 644.03 | 269.18 | 648.69 | 269.24 | 654.35 | 269.3 | 655.88 | 269.33 |
| 657.97 | 269.54 | 659.28 | 269.56 | 660.85 | 269.68 | 661.61 | 269.7 | 664.6 | 269.84 |
| 667.32 | 270.02 | 670.44 | 270.14 | 674.7 | 270.24 | 677.33 | 270.45 | 686.27 | 271.02 |
| 691.38 | 271.16 | 692.96 | 271.18 | 699.84 | 271.22 | 703.81 | 271.19 | 709.92 | 271.27 |
| 712.53 | 271.39 | 721.97 | 272.06 | 727.09 | 272.73 | 729.15 | 272.92 | 737.27 | 273.57 |
| 742.04 | 274.03 | 743.11 | 274.12 | 745.45 | 274.25 | 746.45 | 274.35 | 749.67 | 274.51 |
| 753.25 | 274.79 | 755.14 | 274.98 | 757.39 | 275.34 | 759.2 | 275.66 | 764.21 | 276.22 |
| 767.27 | 276.71 | 768.26 | 276.81 | 771.68 | 277.1 | 776.05 | 277.1 | 779.2 | 276.97 |
| 779.62 | 276.92 | 782.51 | 276.7 | 783.5 | 276.6 | 785.99 | 276.23 | 787.14 | 275.98 |
| 788.75 | 275.58 | 789.58 | 275.34 | 789.68 | 275.25 | 793.15 | 275.03 | 795.25 | 274.95 |
| 797.22 | 275.13 | 800.93 | 275.41 | 806.56 | 276.27 | 813.15 | 276.27 | 813.94 | 276.05 |
| 819.48 | 274.67 | 820.46 | 274.46 | 824.91 | 273.73 | 827.19 | 273.45 | 828.58 | 273.15 |
| 833.07 | 273.14 | 833.71 | 273.24 | 839.1 | 273.35 | 839.6 | 273.37 | 843.02 | 273.73 |
| 844.72 | 274 | 847.79 | 274.34 | 850.18 | 274.56 | 853.11 | 274.99 | 854.34 | 275.07 |
| 859.41 | 275.22 | 861.47 | 275.29 | 862.55 | 275.29 | 864.05 | 275.23 | 864.8 | 275.17 |
| 866.61 | 275.1 | 869.07 | 275.1 | 874.82 | 275.16 | 879.28 | 275.04 | 879.57 | 275.02 |
| 885.8 | 274.78 | 889 | 274.61 | 892.53 | 274.31 | 893.68 | 274.12 | 894.47 | 274.03 |
| 899.74 | 272.92 | 904.68 | 272.2 | 905.35 | 272.08 | 908.44 | 271.88 | 909.39 | 271.8 |
| 910.86 | 271.59 | 911.77 | 271.55 | 915.71 | 271.46 | 917.3 | 271.44 | 919.44 | 271.48 |
| 924.28 | 271.48 | 927.11 | 271.47 | 928.69 | 271.49 | 929.43 | 271.66 | 934.22 | 272.03 |
| 940.57 | 272.9 | 943.93 | 273.58 | 948.8 | 274.58 | 949.55 | 274.71 | 951.77 | 275.55 |
| 954.06 | 276.59 | 955.52 | 277.22 | 964.9 | 277.96 | 967.14 | 278.07 | 969.86 | 278.29 |
| 971.93 | 278.56 | 973.79 | 278.76 | 975.17 | 278.94 | 976.82 | 279 | 981.58 | 278.77 |
| 982.94 | 278.74 | 984.48 | 278.75 | 985.99 | 278.8 | 988.64 | 278.99 | 997.04 | 279.81 |
| 1001.52 | 279.87 | 1003.9 | 279.81 | 1009.46 | 279.57 | 1010.83 | 279.49 | 1012.92 | 279.33 |
| 1015.89 | 279 | 1021.62 | 278.15 | 1024.35 | 277.89 | 1025.48 | 277.8 | 1026.75 | 277.74 |
| 1030.15 | 277.65 | 1031.39 | 277.64 | 1034.44 | 277.7 | 1036.53 | 277.67 | 1038.35 | 277.59 |
| 1043.29 | 277.31 | 1048.18 | 276.47 | 1052.03 | 275.62 | 1055.52 | 274.77 | 1056.85 | 274.5 |
| 1059.45 | 273.92 | 1065.82 | 273.05 | 1069.57 | 272.82 | 1072.26 | 272.72 | 1073.18 | 272.65 |
| 1081.26 | 272.62 | 1082.21 | 272.67 | 1085.25 | 272.72 | 1088.88 | 272.73 | 1092.82 | 272.76 |
| 1094.85 | 272.79 | 1098.84 | 272.89 | 1102.63 | 272.92 | 1103.39 | 272.9 | 1106.33 | 272.88 |
| 1113.81 | 272.9 | 1117.83 | 272.82 | 1121.17 | 272.83 | 1124.57 | 272.81 | 1126.35 | 272.82 |
| 1126.96 | 272.79 | 1130.01 | 272.76 | 1132.93 | 272.75 | 1141.48 | 272.83 | 1144.45 | 272.92 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1145.73 | 273.29 | 1148.32 | 273.77 | 1151.82 | 274.62 | 1152.56 | 274.78 | 1154.4 | 275.07 |
| 1155.13 | 275.09 | 1156.26 | 275.19 | 1157.14 | 275.17 | 1159.65 | 275 | 1162.82 | 275.16 |
| 1163.7 | 275.11 | 1165.83 | 275.15 | 1166.61 | 275.13 | 1168.76 | 274.97 | 1172.3 | 274.68 |
| 1174.75 | 274.57 | 1179.89 | 274.32 | 1182.53 | 274.18 | 1191.29 | 273.84 | 1191.94 | 273.8 |
| 1197.34 | 273.35 | 1204.6 | 272.94 | 1213.27 | 272.9 | 1216.51 | 272.91 | 1222.39 | 272.97 |
| 1225.32 | 273.35 | 1226.83 | 273.53 | 1228.89 | 273.72 | 1235.29 | 274.38 | 1237.53 | 274.52 |
| 1242.74 | 274.65 | 1244.44 | 274.64 | 1246.66 | 274.33 | 1251.3 | 273.77 | 1254.16 | 273.45 |
| 1254.37 | 273.39 | 1258.17 | 273.25 | 1260.23 | 273.2 | 1260.8 | 273.28 | 1262.39 | 273.33 |
| 1263.66 | 273.32 | 1267.96 | 273.36 | 1270.08 | 273.3 | 1277.18 | 272.8 | 1281.11 | 272.54 |
| 1282.86 | 272.4 | 1284.89 | 272.18 | 1290.13 | 272 | 1294.74 | 271.8 | 1300.64 | 271.61 |
| 1303.82 | 271.62 | 1307.56 | 271.56 | 1309.79 | 271.55 | 1312.31 | 271.59 | 1313.31 | 271.69 |
| 1314.08 | 271.69 | 1316.41 | 271.75 | 1317.15 | 271.87 | 1318.09 | 271.91 | 1320.19 | 271.92 |
| 1323.08 | 272.02 | 1324.44 | 271.95 | 1331.23 | 271.68 | 1334.7 | 271.67 | 1336.66 | 271.62 |
| 1338.98 | 271.6 | 1344.72 | 271.72 | 1345.31 | 271.78 | 1347.6 | 271.87 | 1349.15 | 271.96 |
| 1355.33 | 272.2 | 1360.02 | 272.81 | 1361.71 | 273.01 | 1362.89 | 273.22 | 1367.07 | 273.78 |
| 1368.78 | 274.09 | 1370.86 | 274.32 | 1372.71 | 274.49 | 1377.18 | 274.84 | 1379.23 | 275.13 |
| 1380.52 | 275.2 | 1383.02 | 275.13 | 1385.99 | 274.96 | 1389.75 | 274.76 | 1392.36 | 274.56 |
| 1393.8 | 274.42 | 1398.62 | 274.17 | 1403.81 | 273.89 | 1406.95 | 273.73 | 1407.79 | 273.65 |
| 1408.84 | 273.61 | 1416.03 | 273.25 | 1421.11 | 272.94 | 1421.62 | 272.9 | 1429.99 | 272.03 |
| 1436.63 | 271.39 | 1440.16 | 271.1 | 1443.65 | 270.96 | 1445.45 | 270.92 | 1450.7 | 270.87 |
| 1455.25 | 270.81 | 1456.85 | 270.76 | 1462.39 | 270.76 | 1463.25 | 270.74 | 1465.66 | 270.76 |
| 1466.53 | 270.8 | 1472.21 | 270.95 | 1481.52 | 270.95 | 1483.71 | 270.93 | 1484.85 | 270.97 |
| 1491.68 | 271.13 | 1499.27 | 271.2 | 1506.33 | 271.23 | 1508.19 | 271.26 | 1514.74 | 271.72 |
| 1518.97 | 271.85 | 1520.35 | 271.82 | 1524.41 | 271.92 | 1526.77 | 271.92 | 1529.9 | 271.88 |
| 1531.26 | 271.88 | 1534.39 | 271.78 | 1536.18 | 271.87 | 1538.51 | 271.82 | 1540.87 | 271.94 |
| 1542.29 | 271.94 | 1548.7 | 271.65 | 1549.55 | 271.55 | 1555.44 | 271.48 | 1560.13 | 271.21 |
| 1562.61 | 271.14 | 1562.98 | 271.15 | 1566.02 | 271.38 | 1571.41 | 271.76 | 1574.28 | 271.99 |
| 1576.39 | 272.33 | 1578.76 | 272.68 | 1586.88 | 274.06 | 1588.62 | 274.37 | 1593.36 | 274.9 |
| 1595.59 | 275.14 | 1598.46 | 275.29 | 1605.46 | 275.57 | 1606.55 | 275.63 | 1609.1 | 275.73 |
| 1613.5 | 275.52 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 331.01 | .04 | 1574.28 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 331.01 | 1574.28 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1018.519 Elevation=280.1492

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 825.786*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 285.31 | 1.42 | 285.16 | 7.07 | 284.51 | 10.26 | 284.27 | 12.75 | 284.07 |
| 17.84 | 283.57 | 22.29 | 283.15 | 24.26 | 283.01 | 27.68 | 282.71 | 28.76 | 282.59 |
| 31.06 | 282.48 | 32.41 | 282.46 | 36.83 | 282.3 | 42.73 | 282.03 | 43.83 | 281.99 |
| 50.67 | 281.52 | 53.11 | 281.41 | 61.38 | 281 | 66.53 | 280.73 | 74.98 | 280.33 |
| 75.81 | 280.3 | 88.94 | 279.91 | 92.14 | 279.82 | 96.92 | 279.77 | 101.09 | 279.8 |
| 102.8 | 279.76 | 106.24 | 279.6 | 111.62 | 279.38 | 119.18 | 278.77 | 120.53 | 278.72 |
| 135.59 | 278.12 | 144.45 | 277.74 | 148.57 | 277.57 | 164.73 | 276.78 | 169.24 | 276.62 |
| 172.19 | 276.5 | 178.74 | 276.25 | 179.25 | 276.24 | 186.48 | 275.88 | 191.12 | 275.63 |
| 195.75 | 275.36 | 205.91 | 274.62 | 208.87 | 274.39 | 212.12 | 274.21 | 213.23 | 274.11 |
| 216.13 | 273.94 | 219.8 | 273.76 | 220.28 | 273.71 | 221.69 | 273.66 | 224.98 | 273.39 |
| 232.79 | 273.07 | 236.36 | 272.76 | 238.8 | 272.63 | 241.13 | 272.34 | 242.51 | 272.25 |
| 246.02 | 272.05 | 251.55 | 271.7 | 252.25 | 271.67 | 254.55 | 271.65 | 257.39 | 271.43 |
| 259.46 | 271.31 | 263.14 | 271.17 | 271.13 | 270.9 | 272.93 | 270.87 | 275.44 | 271.02 |
| 277.46 | 271.08 | 280.48 | 270.98 | 281.32 | 270.86 | 287.13 | 270.43 | 289.86 | 270.15 |
| 294.87 | 269.98 | 295.07 | 269.96 | 299.46 | 269.94 | 304.02 | 269.77 | 304.83 | 269.72 |
| 307.11 | 269.74 | 308.56 | 269.78 | 314.84 | 269.89 | 315.72 | 269.97 | 317.6 | 270.06 |
| 319.7 | 270.09 | 324.22 | 270.01 | 325.46 | 270.03 | 326.62 | 270 | 331.24 | 270.13 |
| 337.2 | 270.47 | 338.42 | 270.56 | 343.83 | 271.03 | 351.44 | 271.81 | 357.07 | 272.19 |
| 358.23 | 272.25 | 361.66 | 272.67 | 363.44 | 272.97 | 366.52 | 273.54 | 375.37 | 273.52 |
| 377.37 | 273.63 | 379.32 | 273.68 | 386.09 | 273.92 | 390.12 | 274.37 | 391.55 | 274.57 |
| 395.74 | 275.24 | 398.7 | 275.92 | 399.34 | 276.11 | 400.08 | 276.43 | 401.61 | 277 |
| 402.52 | 277.44 | 405.37 | 278.76 | 408.77 | 279.05 | 410.32 | 279.15 | 411.98 | 279.23 |
| 413.89 | 279.23 | 414.98 | 279.35 | 417.51 | 279.45 | 419.69 | 279.39 | 421.38 | 279.24 |
| 425.19 | 278.75 | 426.35 | 278.67 | 428.42 | 278.61 | 431.99 | 278.74 | 435.77 | 278.75 |
| 437.03 | 278.74 | 437.6 | 278.63 | 438.25 | 278.43 | 442.77 | 276.97 | 444.83 | 276.33 |
| 445.56 | 276.08 | 449.34 | 275.12 | 452.61 | 274.31 | 456.02 | 273.42 | 459.52 | 272.84 |
| 461.56 | 272.69 | 463.37 | 272.53 | 468.47 | 272.53 | 469.4 | 272.52 | 477.84 | 272.52 |
| 481.97 | 273.04 | 484.54 | 273.24 | 486.96 | 273.35 | 490.25 | 273.46 | 492.04 | 273.47 |
| 494.11 | 273.4 | 495.66 | 273.31 | 496.59 | 273.29 | 497.49 | 273.35 | 502.93 | 272.94 |
| 506.17 | 272.83 | 507.46 | 272.53 | 509.32 | 272.23 | 512.07 | 271.83 | 513.51 | 271.7 |
| 518.14 | 271.45 | 521.74 | 271.35 | 524.3 | 271.23 | 527.32 | 271.03 | 528.54 | 270.99 |
| 531.78 | 271.05 | 534.87 | 271.22 | 536.04 | 271.3 | 538.44 | 271.51 | 539.77 | 271.65 |
| 540.98 | 271.66 | 547.14 | 271.95 | 547.19 | 271.86 | 548.16 | 271.54 | 553.82 | 269.87 |
| 557.01 | 268.97 | 560.92 | 268.2 | 561.73 | 268.07 | 567.23 | 267.88 | 569.48 | 267.81 |
| 575.41 | 267.6 | 577.76 | 267.57 | 580.89 | 267.69 | 583.82 | 267.82 | 587.58 | 267.96 |
| 591.97 | 268.09 | 594.5 | 268.09 | 597.35 | 268.07 | 604.59 | 268.07 | 607.06 | 268.14 |
| 610.32 | 268.21 | 611.29 | 268.28 | 614.05 | 268.4 | 614.86 | 268.47 | 617.93 | 268.51 |
| 619.1 | 268.63 | 622.9 | 268.67 | 627.02 | 268.7 | 630.92 | 268.68 | 645.53 | 268.84 |
| 650.21 | 268.91 | 655.89 | 268.97 | 657.43 | 269 | 659.53 | 269.22 | 660.85 | 269.23 |
| 662.42 | 269.36 | 663.19 | 269.38 | 666.19 | 269.52 | 669.07 | 269.71 | 672.06 | 269.82 |
| 676.34 | 269.93 | 678.98 | 270.15 | 687.96 | 270.76 | 694.49 | 270.93 | 694.68 | 270.91 |
| 701.6 | 270.94 | 705.58 | 270.91 | 711.73 | 270.99 | 714.34 | 271.11 | 723.83 | 271.8 |
| 728.98 | 272.49 | 731.04 | 272.69 | 737.93 | 273.27 | 739.19 | 273.37 | 745.06 | 273.96 |
| 747.42 | 274.1 | 748.43 | 274.2 | 751.8 | 274.39 | 755.25 | 274.67 | 757.16 | 274.87 |
| 759.59 | 275.28 | 761.25 | 275.58 | 766.26 | 276.17 | 769.34 | 276.67 | 770.33 | 276.77 |
| 773.76 | 277.07 | 778.15 | 277.08 | 781.32 | 276.94 | 781.74 | 276.89 | 784.64 | 276.66 |
| 785.64 | 276.56 | 788.15 | 276.17 | 789.85 | 275.78 | 791.76 | 275.24 | 791.85 | 275.16 |
| 795.44 | 274.91 | 797.45 | 274.83 | 799.69 | 275.05 | 803.16 | 275.3 | 808.81 | 276.2 |
| 815.43 | 276.2 | 816.23 | 275.97 | 821.79 | 274.53 | 822.77 | 274.32 | 827.24 | 273.55 |
| 829.64 | 273.24 | 830.93 | 272.95 | 835.44 | 272.94 | 836.09 | 273.03 | 842.01 | 273.17 |
| 845.44 | 273.55 | 847.15 | 273.84 | 850.23 | 274.19 | 852.63 | 274.42 | 855.58 | 274.87 |
| 856.81 | 274.96 | 861.9 | 275.11 | 863.98 | 275.19 | 865.06 | 275.19 | 866.57 | 275.13 |
| 867.32 | 275.07 | 869.14 | 275 | 871.12 | 274.99 | 877.39 | 275.05 | 881.87 | 274.92 |
| 888.41 | 274.64 | 891.63 | 274.46 | 895.18 | 274.14 | 897.13 | 273.85 | 902.42 | 272.69 |
| 907.38 | 271.93 | 908.06 | 271.81 | 911.16 | 271.6 | 912.12 | 271.52 | 913.37 | 271.37 |
| 913.6 | 271.29 | 918.47 | 271.16 | 920.07 | 271.14 | 922.22 | 271.19 | 929.92 | 271.19 |
| 931.51 | 271.21 | 932.25 | 271.38 | 933.25 | 271.48 | 937.06 | 271.77 | 943.07 | 272.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 945.77 | 273.16 | 951.71 | 274.4 | 952.47 | 274.53 | 952.83 | 274.69 | 954.7 | 275.41 |
| 956.99 | 276.51 | 958.46 | 277.17 | 967.88 | 277.94 | 970.14 | 278.06 | 972.87 | 278.28 |
| 974.94 | 278.57 | 976.82 | 278.77 | 978.2 | 278.95 | 978.89 | 279.01 | 979.87 | 279.02 |
| 982.45 | 278.87 | 985.62 | 278.75 | 987.56 | 278.75 | 989.08 | 278.81 | 991.73 | 279.01 |
| 1000.17 | 279.85 | 1004.67 | 279.92 | 1007.07 | 279.86 | 1012.65 | 279.6 | 1014.03 | 279.52 |
| 1016.13 | 279.34 | 1019.11 | 279 | 1024.87 | 278.12 | 1027.9 | 277.81 | 1030.02 | 277.68 |
| 1033.44 | 277.59 | 1034.69 | 277.57 | 1037.75 | 277.65 | 1039.84 | 277.61 | 1041.68 | 277.53 |
| 1046.64 | 277.23 | 1051.55 | 276.36 | 1056.34 | 275.24 | 1058.93 | 274.58 | 1062.88 | 273.69 |
| 1068.28 | 272.91 | 1069.28 | 272.78 | 1073.04 | 272.54 | 1075.75 | 272.43 | 1076.67 | 272.36 |
| 1084.79 | 272.33 | 1085.74 | 272.38 | 1089.25 | 272.45 | 1089.53 | 272.44 | 1096.4 | 272.48 |
| 1102.34 | 272.61 | 1106.25 | 272.64 | 1109.97 | 272.6 | 1117.49 | 272.6 | 1119.31 | 272.57 |
| 1121.29 | 272.51 | 1128.3 | 272.5 | 1128.83 | 272.52 | 1132.36 | 272.47 | 1136.7 | 272.48 |
| 1144.67 | 272.58 | 1148.27 | 272.69 | 1149.55 | 273.07 | 1152.16 | 273.58 | 1155.68 | 274.46 |
| 1156.42 | 274.63 | 1158.26 | 274.94 | 1159 | 274.96 | 1160.14 | 275.06 | 1161.01 | 275.04 |
| 1163.54 | 274.87 | 1166.72 | 275.03 | 1167.61 | 274.98 | 1169.75 | 275.02 | 1170.53 | 275 |
| 1176.25 | 274.51 | 1176.55 | 274.5 | 1184.12 | 274.11 | 1186.53 | 273.97 | 1195.33 | 273.63 |
| 1201.4 | 273.13 | 1208.7 | 272.71 | 1217.41 | 272.67 | 1220.66 | 272.68 | 1226.57 | 272.73 |
| 1231.03 | 273.3 | 1239.53 | 274.19 | 1241.78 | 274.34 | 1247.02 | 274.49 | 1248.73 | 274.48 |
| 1249.9 | 274.33 | 1250.96 | 274.16 | 1255.61 | 273.58 | 1258.49 | 273.24 | 1258.7 | 273.18 |
| 1262.52 | 273.03 | 1264.59 | 272.97 | 1265.16 | 273.06 | 1266.76 | 273.11 | 1268.03 | 273.09 |
| 1271.27 | 273.13 | 1272.35 | 273.13 | 1274.48 | 273.07 | 1277.45 | 272.86 | 1280.63 | 272.62 |
| 1285.57 | 272.28 | 1287.32 | 272.12 | 1289.36 | 271.89 | 1294.63 | 271.68 | 1299.26 | 271.47 |
| 1301.4 | 271.41 | 1303.56 | 271.32 | 1305.56 | 271.28 | 1308.38 | 271.29 | 1312.14 | 271.22 |
| 1314.38 | 271.22 | 1316.91 | 271.26 | 1317.92 | 271.36 | 1318.69 | 271.36 | 1321.02 | 271.42 |
| 1321.77 | 271.55 | 1322.72 | 271.59 | 1324.82 | 271.61 | 1327.73 | 271.71 | 1328.69 | 271.7 |
| 1329.09 | 271.64 | 1335.92 | 271.38 | 1339.4 | 271.37 | 1341.37 | 271.31 | 1343.7 | 271.3 |
| 1349.47 | 271.42 | 1350.06 | 271.48 | 1352.36 | 271.57 | 1353.92 | 271.66 | 1360.13 | 271.9 |
| 1362.71 | 272.26 | 1366.54 | 272.76 | 1367.73 | 272.98 | 1371.93 | 273.59 | 1373.64 | 273.91 |
| 1375.74 | 274.15 | 1377.59 | 274.34 | 1379.12 | 274.45 | 1382.84 | 274.79 | 1384.14 | 275 |
| 1385.43 | 275.08 | 1386.37 | 275.07 | 1387.95 | 275.01 | 1394.71 | 274.63 | 1397.33 | 274.42 |
| 1398.78 | 274.27 | 1403.62 | 274.01 | 1411.99 | 273.55 | 1412.83 | 273.47 | 1416.66 | 273.26 |
| 1417.95 | 273.2 | 1421.11 | 273.02 | 1426.22 | 272.7 | 1426.73 | 272.66 | 1435.14 | 271.76 |
| 1441.81 | 271.12 | 1445.35 | 270.83 | 1447.41 | 270.73 | 1450.67 | 270.63 | 1451.17 | 270.63 |
| 1460.52 | 270.51 | 1462.12 | 270.46 | 1467.69 | 270.46 | 1468.55 | 270.43 | 1470.97 | 270.45 |
| 1471.84 | 270.49 | 1477.55 | 270.65 | 1486.9 | 270.63 | 1489.1 | 270.61 | 1490.25 | 270.65 |
| 1497.11 | 270.81 | 1504.74 | 270.88 | 1511.83 | 270.91 | 1513.7 | 270.94 | 1517.79 | 271.26 |
| 1520.28 | 271.44 | 1524.53 | 271.57 | 1525.91 | 271.54 | 1530 | 271.64 | 1532.36 | 271.65 |
| 1536.88 | 271.59 | 1540.02 | 271.47 | 1541.82 | 271.56 | 1544.16 | 271.5 | 1546.53 | 271.63 |
| 1547.96 | 271.62 | 1554.4 | 271.27 | 1555.26 | 271.16 | 1560.11 | 271.07 | 1561.16 | 271.04 |
| 1565.88 | 270.72 | 1568.38 | 270.6 | 1573.96 | 270.89 | 1576.38 | 271.03 | 1579.31 | 271.18 |
| 1580.09 | 271.24 | 1585.39 | 271.87 | 1589.32 | 272.39 | 1592.43 | 272.79 | 1593.71 | 272.97 |
| 1595.07 | 273.11 | 1600.96 | 273.6 | 1603.77 | 273.71 | 1605.37 | 273.75 | 1614.19 | 274.03 |
| 1618.49 | 273.81 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 324.22 | .04 | 1580.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 324.22 | 1580.09 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1017.542 Elevation=280.1619

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 806.460*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 284.46 | .63 | 284.4 | 6.93 | 283.68 | 12.48 | 283.25 | 18.71 | 282.65 |
| 21.82 | 282.36 | 23.75 | 282.21 | 27.1 | 281.92 | 28.16 | 281.8 | 30.21 | 281.7 |
| 33.31 | 281.61 | 36.06 | 281.5 | 42.91 | 281.21 | 49.6 | 280.75 | 60.09 | 280.26 |
| 67.27 | 279.91 | 73.41 | 279.63 | 87.08 | 279.26 | 90.21 | 279.17 | 94.89 | 279.14 |
| 98.97 | 279.18 | 100.65 | 279.15 | 101.36 | 279.1 | 104.02 | 278.99 | 105.58 | 278.94 |
| 109.28 | 278.79 | 116.69 | 278.18 | 118 | 278.14 | 132.75 | 277.56 | 145.46 | 277.05 |
| 149.42 | 276.85 | 158.24 | 276.42 | 161.28 | 276.28 | 165.7 | 276.12 | 168.58 | 276 |
| 174.99 | 275.76 | 175.49 | 275.75 | 182.57 | 275.4 | 188.08 | 275.11 | 191.22 | 274.93 |
| 191.65 | 274.89 | 204.5 | 273.93 | 207.68 | 273.75 | 208.76 | 273.65 | 211.16 | 273.52 |
| 211.6 | 273.48 | 217.04 | 273.2 | 220.26 | 272.92 | 227.91 | 272.63 | 230.87 | 272.36 |
| 233.79 | 272.18 | 236.08 | 271.89 | 240.86 | 271.6 | 246.27 | 271.25 | 246.96 | 271.22 |
| 249.21 | 271.2 | 252 | 270.99 | 254.03 | 270.88 | 257.62 | 270.74 | 265.45 | 270.48 |
| 267.21 | 270.46 | 269.67 | 270.62 | 271.64 | 270.68 | 274.6 | 270.59 | 275.42 | 270.48 |
| 281.11 | 270.04 | 283.78 | 269.77 | 288.69 | 269.63 | 288.89 | 269.61 | 293.18 | 269.59 |
| 298.44 | 269.38 | 300.67 | 269.39 | 302.1 | 269.42 | 306.81 | 269.48 | 308.24 | 269.49 |
| 309.1 | 269.57 | 310.94 | 269.65 | 312.99 | 269.68 | 317.42 | 269.62 | 318.7 | 269.64 |
| 319.9 | 269.62 | 324.67 | 269.75 | 330.81 | 270.12 | 332.08 | 270.21 | 337.65 | 270.71 |
| 339.11 | 270.87 | 345.5 | 271.54 | 351.31 | 271.95 | 352.5 | 272.01 | 353.57 | 272.13 |
| 356.04 | 272.45 | 357.88 | 272.77 | 361.06 | 273.36 | 370.18 | 273.35 | 372.25 | 273.46 |
| 374.25 | 273.52 | 381.24 | 273.77 | 385.4 | 274.25 | 386.87 | 274.46 | 391.2 | 275.16 |
| 394.25 | 275.87 | 394.91 | 276.08 | 395.68 | 276.41 | 397.25 | 277 | 398.19 | 277.46 |
| 401.12 | 278.84 | 404.63 | 279.14 | 406.23 | 279.25 | 407.95 | 279.34 | 409.92 | 279.33 |
| 411.04 | 279.46 | 412.22 | 279.49 | 413.65 | 279.56 | 415.04 | 279.54 | 415.89 | 279.5 |
| 417.64 | 279.34 | 421.57 | 278.83 | 424.25 | 278.68 | 424.9 | 278.68 | 428.59 | 278.83 |
| 432.48 | 278.84 | 433.78 | 278.83 | 434.38 | 278.71 | 439.71 | 276.98 | 441.83 | 276.31 |
| 442.58 | 276.05 | 449.85 | 274.21 | 453.38 | 273.28 | 456.99 | 272.67 | 459.09 | 272.52 |
| 460.95 | 272.35 | 466.21 | 272.35 | 467.17 | 272.34 | 475.87 | 272.35 | 480.14 | 272.89 |
| 482.79 | 273.1 | 485.29 | 273.21 | 488.68 | 273.33 | 490.52 | 273.34 | 492.66 | 273.27 |
| 494.26 | 273.17 | 495.21 | 273.15 | 496.15 | 273.21 | 501.75 | 272.78 | 505.1 | 272.67 |
| 506.43 | 272.35 | 508.35 | 272.04 | 511.19 | 271.62 | 513.52 | 271.43 | 517.45 | 271.22 |
| 521.16 | 271.12 | 523.8 | 270.99 | 526.92 | 270.78 | 528.18 | 270.75 | 531.52 | 270.8 |
| 535.91 | 271.07 | 538.39 | 271.29 | 539.76 | 271.44 | 541.43 | 271.47 | 547.36 | 271.75 |
| 547.41 | 271.66 | 548.41 | 271.32 | 554.25 | 269.58 | 557.54 | 268.64 | 561.58 | 267.84 |
| 562.4 | 267.71 | 570.4 | 267.44 | 576 | 267.26 | 576.48 | 267.23 | 578.95 | 267.21 |
| 582.08 | 267.32 | 589.75 | 267.62 | 593.21 | 267.72 | 598.62 | 267.71 | 604.52 | 267.71 |
| 606.31 | 267.72 | 608.38 | 267.78 | 611.65 | 267.85 | 612.63 | 267.92 | 615.4 | 268.04 |
| 616.21 | 268.11 | 619.29 | 268.14 | 620.47 | 268.27 | 624.29 | 268.31 | 628.43 | 268.34 |
| 632.34 | 268.32 | 636.97 | 268.38 | 647.02 | 268.5 | 651.72 | 268.57 | 657.43 | 268.64 |
| 658.98 | 268.67 | 661.09 | 268.89 | 662.42 | 268.9 | 663.99 | 269.04 | 664.77 | 269.06 |
| 667.78 | 269.19 | 670.68 | 269.39 | 673.68 | 269.5 | 677.97 | 269.62 | 680.63 | 269.85 |
| 689.66 | 270.49 | 694.81 | 270.63 | 703.35 | 270.67 | 707.35 | 270.63 | 713.53 | 270.7 |
| 716.15 | 270.83 | 725.68 | 271.53 | 727.21 | 271.75 | 730.86 | 272.25 | 732.93 | 272.46 |
| 741.12 | 273.17 | 746.19 | 273.72 | 749.39 | 273.95 | 750.4 | 274.06 | 753.79 | 274.26 |
| 757.25 | 274.55 | 759.17 | 274.76 | 761.61 | 275.19 | 763.26 | 275.5 | 768.31 | 276.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 770.06 | 276.42 | 771.4 | 276.63 | 772.4 | 276.74 | 775.85 | 277.05 | 780.26 | 277.05 |
| 782.23 | 276.98 | 786.78 | 276.63 | 787.78 | 276.51 | 790.3 | 276.11 | 792.01 | 275.71 |
| 793.93 | 275.15 | 794.03 | 275.06 | 797.63 | 274.8 | 799.64 | 274.71 | 801.89 | 274.94 |
| 805.38 | 275.2 | 811.06 | 276.14 | 817.71 | 276.13 | 818.51 | 275.89 | 824.1 | 274.39 |
| 825.09 | 274.17 | 829.58 | 273.36 | 831.99 | 273.05 | 833.28 | 272.74 | 837.81 | 272.73 |
| 838.47 | 272.83 | 843.91 | 272.96 | 844.41 | 272.98 | 847.86 | 273.38 | 849.57 | 273.67 |
| 852.68 | 274.04 | 855.08 | 274.28 | 858.05 | 274.75 | 859.29 | 274.84 | 864.4 | 275 |
| 866.62 | 275.1 | 867.57 | 275.09 | 869.09 | 275.03 | 871 | 274.92 | 872.77 | 274.88 |
| 879.96 | 274.94 | 884.45 | 274.8 | 884.75 | 274.78 | 891.03 | 274.5 | 894.26 | 274.3 |
| 897.83 | 273.98 | 898.99 | 273.77 | 899.79 | 273.67 | 905.1 | 272.46 | 910.09 | 271.67 |
| 910.77 | 271.54 | 913.88 | 271.33 | 916.1 | 271.08 | 916.33 | 271 | 921.23 | 270.86 |
| 923.92 | 270.86 | 924.99 | 270.9 | 932.17 | 270.9 | 934.32 | 270.92 | 935.07 | 271.11 |
| 936.08 | 271.21 | 937.62 | 271.32 | 939.9 | 271.52 | 946.31 | 272.45 | 954.62 | 274.22 |
| 955.38 | 274.35 | 955.75 | 274.52 | 957.62 | 275.27 | 959.93 | 276.43 | 961.41 | 277.11 |
| 970.87 | 277.92 | 973.14 | 278.04 | 975.88 | 278.27 | 977.96 | 278.57 | 979.85 | 278.78 |
| 981.23 | 278.97 | 981.93 | 279.03 | 982.91 | 279.04 | 985.5 | 278.88 | 988.68 | 278.75 |
| 990.64 | 278.76 | 992.16 | 278.82 | 994.83 | 279.03 | 1003.31 | 279.9 | 1006.72 | 279.96 |
| 1007.83 | 279.96 | 1010.24 | 279.9 | 1015.84 | 279.63 | 1017.23 | 279.54 | 1018.62 | 279.4 |
| 1019.34 | 279.36 | 1022.33 | 279 | 1028.12 | 278.08 | 1031.16 | 277.76 | 1033.29 | 277.62 |
| 1036.73 | 277.53 | 1037.98 | 277.51 | 1041.06 | 277.59 | 1043.16 | 277.55 | 1045.01 | 277.47 |
| 1049.99 | 277.15 | 1054.92 | 276.24 | 1058.81 | 275.31 | 1059.73 | 275.08 | 1062.34 | 274.38 |
| 1063.67 | 274.09 | 1066.3 | 273.46 | 1071.73 | 272.65 | 1072.73 | 272.51 | 1076.52 | 272.25 |
| 1079.23 | 272.14 | 1080.16 | 272.07 | 1088.32 | 272.04 | 1089.27 | 272.09 | 1092.34 | 272.16 |
| 1099.98 | 272.21 | 1101.66 | 272.24 | 1106.05 | 272.35 | 1109.88 | 272.37 | 1111.13 | 272.34 |
| 1113.61 | 272.32 | 1116.03 | 272.32 | 1121.17 | 272.3 | 1123 | 272.27 | 1125.22 | 272.19 |
| 1128.59 | 272.2 | 1132.03 | 272.19 | 1132.56 | 272.22 | 1135.02 | 272.18 | 1140.47 | 272.2 |
| 1146.48 | 272.31 | 1148.48 | 272.34 | 1152.09 | 272.46 | 1153.38 | 272.86 | 1155.99 | 273.38 |
| 1159.53 | 274.31 | 1160.28 | 274.48 | 1162.13 | 274.81 | 1162.87 | 274.82 | 1164.01 | 274.94 |
| 1164.89 | 274.91 | 1167.43 | 274.73 | 1170.63 | 274.9 | 1171.52 | 274.85 | 1173.67 | 274.89 |
| 1174.45 | 274.87 | 1180.2 | 274.34 | 1186.19 | 274.02 | 1190.53 | 273.77 | 1199.37 | 273.42 |
| 1205.47 | 272.91 | 1212.8 | 272.47 | 1217.88 | 272.46 | 1221.55 | 272.44 | 1222.28 | 272.45 |
| 1230.76 | 272.48 | 1235.24 | 273.07 | 1237.72 | 273.33 | 1243.78 | 274.01 | 1246.04 | 274.16 |
| 1251.3 | 274.32 | 1253.01 | 274.32 | 1255.25 | 273.99 | 1259.93 | 273.38 | 1261.61 | 273.19 |
| 1262.82 | 273.03 | 1263.03 | 272.97 | 1266.86 | 272.81 | 1268.94 | 272.75 | 1269.52 | 272.83 |
| 1271.12 | 272.88 | 1272.4 | 272.87 | 1276.74 | 272.91 | 1278.88 | 272.84 | 1281.15 | 272.68 |
| 1285.06 | 272.37 | 1290.02 | 272.01 | 1291.78 | 271.84 | 1293.84 | 271.59 | 1296.98 | 271.46 |
| 1303.77 | 271.14 | 1307.03 | 271.05 | 1308.09 | 270.99 | 1309.73 | 270.96 | 1312.94 | 270.96 |
| 1316.72 | 270.89 | 1318.96 | 270.88 | 1321.51 | 270.92 | 1322.52 | 271.02 | 1325.64 | 271.09 |
| 1326.4 | 271.23 | 1327.35 | 271.27 | 1329.46 | 271.3 | 1331.17 | 271.38 | 1332.38 | 271.41 |
| 1333.34 | 271.4 | 1333.75 | 271.34 | 1340.61 | 271.07 | 1344.1 | 271.06 | 1346.08 | 271 |
| 1348.42 | 270.99 | 1354.22 | 271.11 | 1354.81 | 271.18 | 1357.12 | 271.26 | 1358.69 | 271.36 |
| 1364.93 | 271.6 | 1371.37 | 272.51 | 1372.56 | 272.74 | 1376.78 | 273.39 | 1378.51 | 273.73 |
| 1380.61 | 273.99 | 1382.47 | 274.18 | 1384.01 | 274.3 | 1387.74 | 274.66 | 1389.05 | 274.88 |
| 1390.35 | 274.96 | 1392.87 | 274.9 | 1399.67 | 274.5 | 1402.3 | 274.28 | 1403.75 | 274.12 |
| 1408.62 | 273.85 | 1417.03 | 273.37 | 1417.87 | 273.28 | 1421.72 | 273.06 | 1426.97 | 272.75 |
| 1431.84 | 272.42 | 1439.85 | 271.53 | 1446.99 | 270.84 | 1450.54 | 270.55 | 1452.61 | 270.45 |
| 1455.88 | 270.34 | 1461.18 | 270.28 | 1465.09 | 270.22 | 1467.39 | 270.16 | 1472.99 | 270.16 |
| 1473.85 | 270.13 | 1476.29 | 270.15 | 1477.16 | 270.19 | 1482.9 | 270.35 | 1487.81 | 270.33 |
| 1492.29 | 270.32 | 1494.5 | 270.29 | 1495.65 | 270.33 | 1502.54 | 270.49 | 1510.21 | 270.56 |
| 1517.33 | 270.59 | 1519.21 | 270.63 | 1523.31 | 270.96 | 1525.82 | 271.15 | 1530.09 | 271.29 |
| 1531.48 | 271.26 | 1535.58 | 271.36 | 1537.96 | 271.37 | 1542.5 | 271.31 | 1545.65 | 271.17 |
| 1547.46 | 271.26 | 1549.81 | 271.19 | 1552.19 | 271.31 | 1553.62 | 271.3 | 1560.1 | 270.89 |
| 1560.96 | 270.78 | 1565.83 | 270.64 | 1566.89 | 270.6 | 1571.63 | 270.23 | 1574.14 | 270.07 |
| 1579.75 | 270.26 | 1585.91 | 270.49 | 1591.1 | 270.91 | 1597.98 | 271.52 | 1599.65 | 271.68 |
| 1606.33 | 272.06 | 1609.08 | 272.14 | 1612.73 | 272.2 | 1616.83 | 272.3 | 1619.28 | 272.34 |
| 1623.49 | 272.11 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 317.42 | .04 | 1585.91 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 317.42 | 1585.91 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1016.565 Elevation=280.1746

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 787.135*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 283.62 | 6.78 | 282.85 | 12.22 | 282.44 | 18.31 | 281.84 | 21.17 | 281.58 |
| 26.16 | 281.16 | 27.55 | 281 | 29.76 | 280.91 | 31.93 | 280.84 | 35.29 | 280.71 |
| 41.99 | 280.43 | 48.54 | 279.98 | 50.89 | 279.88 | 58.81 | 279.52 | 60.21 | 279.45 |
| 71.84 | 278.93 | 85.61 | 278.59 | 88.28 | 278.53 | 91.67 | 278.52 | 92.31 | 278.5 |
| 96.85 | 278.56 | 98.49 | 278.53 | 99.55 | 278.47 | 103.32 | 278.34 | 106.94 | 278.2 |
| 114.19 | 277.59 | 115.48 | 277.55 | 129.91 | 277 | 142.34 | 276.52 | 154.85 | 275.91 |
| 157.82 | 275.77 | 164.97 | 275.5 | 171.25 | 275.27 | 171.74 | 275.26 | 178.67 | 274.92 |
| 184.06 | 274.64 | 187.55 | 274.43 | 197.28 | 273.69 | 200.12 | 273.46 | 203.47 | 273.28 |
| 204.29 | 273.19 | 206.64 | 273.06 | 207.07 | 273.01 | 210.59 | 272.83 | 211.05 | 272.78 |
| 212.4 | 272.74 | 215.55 | 272.46 | 223.03 | 272.18 | 226.45 | 271.87 | 228.79 | 271.74 |
| 231.02 | 271.45 | 241 | 270.79 | 241.68 | 270.76 | 243.88 | 270.76 | 246.6 | 270.55 |
| 248.59 | 270.44 | 252.11 | 270.32 | 259.76 | 270.07 | 261.49 | 270.04 | 263.89 | 270.22 |
| 265.83 | 270.29 | 268.72 | 270.21 | 269.53 | 270.09 | 275.1 | 269.66 | 277.71 | 269.38 |
| 282.96 | 269.26 | 286.91 | 269.24 | 291.1 | 269.09 | 292.05 | 269.04 | 294.24 | 269.04 |
| 295.63 | 269.06 | 301.64 | 269.08 | 302.49 | 269.16 | 304.29 | 269.25 | 306.29 | 269.27 |
| 310.63 | 269.23 | 311.95 | 269.25 | 313.18 | 269.23 | 318.09 | 269.38 | 324.43 | 269.77 |
| 325.73 | 269.87 | 331.47 | 270.4 | 339.56 | 271.27 | 345.55 | 271.7 | 346.78 | 271.76 |
| 350.43 | 272.22 | 352.32 | 272.56 | 355.59 | 273.18 | 365 | 273.17 | 367.12 | 273.3 |
| 369.19 | 273.35 | 376.39 | 273.63 | 380.68 | 274.12 | 382.2 | 274.34 | 386.65 | 275.08 |
| 389.8 | 275.83 | 390.48 | 276.04 | 391.27 | 276.38 | 392.89 | 277 | 393.86 | 277.48 |
| 396.88 | 278.92 | 400.5 | 279.24 | 402.15 | 279.35 | 403.91 | 279.44 | 405.94 | 279.43 |
| 407.1 | 279.56 | 409.79 | 279.67 | 411.22 | 279.65 | 412.1 | 279.61 | 413.9 | 279.45 |
| 417.95 | 278.92 | 419.18 | 278.83 | 420.72 | 278.76 | 421.39 | 278.76 | 425.18 | 278.91 |
| 429.2 | 278.92 | 430.54 | 278.91 | 431.15 | 278.79 | 431.84 | 278.58 | 436.64 | 276.99 |
| 438.83 | 276.3 | 439.61 | 276.03 | 443.63 | 274.99 | 446.65 | 274.22 | 450.73 | 273.14 |
| 454.45 | 272.51 | 456.61 | 272.35 | 458.54 | 272.18 | 463.96 | 272.18 | 464.95 | 272.17 |
| 473.91 | 272.17 | 478.31 | 272.74 | 481.04 | 272.96 | 483.61 | 273.08 | 484.13 | 273.07 |
| 485.06 | 273.13 | 487.11 | 273.2 | 489.01 | 273.21 | 491.21 | 273.13 | 492.86 | 273.04 |
| 493.84 | 273.01 | 494.8 | 273.08 | 500.58 | 272.63 | 504.03 | 272.5 | 505.4 | 272.18 |
| 507.38 | 271.85 | 510.3 | 271.41 | 511.83 | 271.27 | 516.75 | 271 | 520.58 | 270.89 |
| 523.3 | 270.76 | 526.51 | 270.54 | 527.81 | 270.5 | 531.25 | 270.56 | 535.78 | 270.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 538.33 | 271.06 | 539.74 | 271.22 | 541.03 | 271.23 | 547.58 | 271.55 | 547.63 | 271.45 |
| 548.66 | 271.11 | 554.68 | 269.3 | 558.07 | 268.32 | 562.23 | 267.49 | 563.08 | 267.36 |
| 568.93 | 267.16 | 577.1 | 266.89 | 577.59 | 266.86 | 580.13 | 266.84 | 583.28 | 266.95 |
| 586.24 | 267.07 | 590.03 | 267.21 | 594.46 | 267.36 | 607.2 | 267.36 | 612.99 | 267.48 |
| 613.96 | 267.56 | 616.75 | 267.68 | 617.57 | 267.75 | 620.66 | 267.78 | 621.85 | 267.91 |
| 625.68 | 267.95 | 629.84 | 267.98 | 633.77 | 267.96 | 635.56 | 267.98 | 648.52 | 268.16 |
| 653.24 | 268.23 | 660.53 | 268.33 | 662.65 | 268.57 | 663.98 | 268.58 | 665.57 | 268.71 |
| 666.34 | 268.73 | 669.37 | 268.87 | 672.13 | 269.07 | 675.3 | 269.18 | 679.61 | 269.31 |
| 682.28 | 269.55 | 688.4 | 270 | 691.35 | 270.23 | 693.75 | 270.3 | 697.94 | 270.4 |
| 698.13 | 270.38 | 705.11 | 270.39 | 709.13 | 270.35 | 715.33 | 270.42 | 717.97 | 270.54 |
| 727.54 | 271.27 | 732.74 | 272.01 | 734.82 | 272.23 | 743.05 | 272.97 | 748.97 | 273.63 |
| 751.35 | 273.8 | 752.37 | 273.91 | 755.77 | 274.13 | 759.26 | 274.43 | 761.18 | 274.65 |
| 763.64 | 275.09 | 765.29 | 275.42 | 770.37 | 276.06 | 773.47 | 276.6 | 777.94 | 277.02 |
| 782.37 | 277.03 | 784.35 | 276.95 | 785.99 | 276.83 | 788.92 | 276.59 | 789.93 | 276.47 |
| 792.46 | 276.06 | 794.18 | 275.63 | 796.1 | 275.05 | 796.2 | 274.96 | 799.82 | 274.69 |
| 801.84 | 274.6 | 804.1 | 274.83 | 807.61 | 275.1 | 813.31 | 276.07 | 819.99 | 276.07 |
| 820.8 | 275.82 | 826.41 | 274.25 | 827.4 | 274.02 | 831.91 | 273.18 | 834.23 | 272.87 |
| 835.64 | 272.54 | 840.19 | 272.53 | 840.84 | 272.63 | 846.82 | 272.78 | 850.28 | 273.2 |
| 852 | 273.51 | 855.12 | 273.89 | 857.54 | 274.14 | 860.51 | 274.63 | 861.76 | 274.73 |
| 866.89 | 274.9 | 869.12 | 275 | 870.08 | 275 | 871.61 | 274.93 | 872.36 | 274.87 |
| 874.2 | 274.79 | 876.19 | 274.78 | 882.52 | 274.83 | 887.04 | 274.68 | 893.65 | 274.36 |
| 896.9 | 274.15 | 900.48 | 273.81 | 901.64 | 273.6 | 902.45 | 273.49 | 907.79 | 272.23 |
| 912.79 | 271.4 | 913.48 | 271.27 | 916.61 | 271.05 | 918.84 | 270.79 | 919.07 | 270.71 |
| 919.99 | 270.67 | 923.98 | 270.57 | 925.6 | 270.55 | 927.77 | 270.6 | 932.67 | 270.62 |
| 935.54 | 270.62 | 937.14 | 270.64 | 937.89 | 270.83 | 938.9 | 270.94 | 940.46 | 271.06 |
| 942.75 | 271.26 | 944.72 | 271.55 | 949.19 | 272.23 | 952.59 | 272.96 | 957.53 | 274.04 |
| 958.3 | 274.18 | 960.55 | 275.14 | 962.86 | 276.34 | 964.35 | 277.06 | 973.85 | 277.89 |
| 976.13 | 278.02 | 978.89 | 278.26 | 980.98 | 278.57 | 982.87 | 278.79 | 984.27 | 278.98 |
| 984.96 | 279.04 | 985.95 | 279.05 | 988.56 | 278.89 | 991.53 | 278.76 | 993.71 | 278.76 |
| 995.25 | 278.83 | 997.92 | 279.04 | 1006.44 | 279.95 | 1009.87 | 280.01 | 1010.98 | 280.01 |
| 1013.4 | 279.95 | 1019.04 | 279.66 | 1020.43 | 279.57 | 1021.82 | 279.42 | 1022.55 | 279.37 |
| 1025.56 | 279 | 1031.37 | 278.04 | 1035.17 | 277.64 | 1036.57 | 277.57 | 1040.02 | 277.47 |
| 1041.28 | 277.45 | 1044.37 | 277.53 | 1046.48 | 277.49 | 1048.33 | 277.4 | 1053.34 | 277.08 |
| 1058.3 | 276.13 | 1063.13 | 274.91 | 1065.74 | 274.19 | 1067.09 | 273.88 | 1069.72 | 273.23 |
| 1075.18 | 272.38 | 1076.19 | 272.24 | 1079.99 | 271.97 | 1082.72 | 271.86 | 1083.65 | 271.78 |
| 1091.84 | 271.75 | 1092.8 | 271.81 | 1095.88 | 271.88 | 1096.63 | 271.88 | 1103.56 | 271.93 |
| 1109.55 | 272.07 | 1113.5 | 272.09 | 1115.93 | 272.05 | 1124.84 | 272.01 | 1128.91 | 271.88 |
| 1135.75 | 271.88 | 1136.29 | 271.91 | 1139.85 | 271.88 | 1144.23 | 271.93 | 1152.89 | 272.12 |
| 1155.91 | 272.23 | 1157.2 | 272.64 | 1159.83 | 273.19 | 1164.13 | 274.34 | 1165.54 | 274.61 |
| 1166.74 | 274.69 | 1167.89 | 274.81 | 1168.77 | 274.78 | 1171.32 | 274.6 | 1174.53 | 274.77 |
| 1175.43 | 274.72 | 1177.59 | 274.76 | 1178.38 | 274.73 | 1184.15 | 274.17 | 1188.62 | 273.91 |
| 1190.17 | 273.83 | 1194.52 | 273.57 | 1203.4 | 273.21 | 1206.74 | 272.93 | 1209.53 | 272.68 |
| 1216.9 | 272.24 | 1225.69 | 272.22 | 1226.43 | 272.23 | 1232 | 272.23 | 1234.94 | 272.24 |
| 1239.59 | 272.86 | 1241.94 | 273.12 | 1248.02 | 273.82 | 1251.14 | 274.03 | 1251.84 | 274.03 |
| 1255.57 | 274.16 | 1257.3 | 274.16 | 1258.48 | 274 | 1259.55 | 273.82 | 1264.24 | 273.19 |
| 1267.15 | 272.83 | 1267.36 | 272.76 | 1271.21 | 272.59 | 1273.3 | 272.52 | 1273.88 | 272.61 |
| 1275.49 | 272.66 | 1276.78 | 272.64 | 1281.14 | 272.68 | 1283.29 | 272.61 | 1285.56 | 272.44 |
| 1291.22 | 271.99 | 1294.48 | 271.75 | 1296.25 | 271.56 | 1298.31 | 271.3 | 1303.62 | 271.05 |
| 1308.29 | 270.82 | 1311.57 | 270.72 | 1312.63 | 270.66 | 1314.27 | 270.63 | 1317.5 | 270.63 |
| 1321.29 | 270.55 | 1323.55 | 270.55 | 1326.11 | 270.59 | 1327.13 | 270.69 | 1330.26 | 270.77 |
| 1331.02 | 270.91 | 1331.97 | 270.96 | 1334.09 | 270.98 | 1335.82 | 271.07 | 1337.03 | 271.1 |
| 1338 | 271.09 | 1338.4 | 271.03 | 1340.6 | 270.95 | 1345.29 | 270.76 | 1348.81 | 270.76 |
| 1350.1 | 270.74 | 1350.8 | 270.7 | 1353.15 | 270.69 | 1358.97 | 270.8 | 1359.57 | 270.87 |
| 1361.89 | 270.96 | 1363.46 | 271.06 | 1369.73 | 271.3 | 1373.77 | 271.9 | 1376.2 | 272.25 |
| 1377.4 | 272.5 | 1381.64 | 273.2 | 1383.37 | 273.56 | 1385.48 | 273.82 | 1387.35 | 274.03 |
| 1388.89 | 274.15 | 1392.65 | 274.53 | 1393.96 | 274.76 | 1395.26 | 274.85 | 1396.21 | 274.84 |
| 1397.8 | 274.78 | 1404.63 | 274.37 | 1407.27 | 274.14 | 1408.73 | 273.98 | 1409.76 | 273.91 |
| 1413.62 | 273.69 | 1418.88 | 273.37 | 1422.07 | 273.19 | 1422.92 | 273.1 | 1426.79 | 272.85 |
| 1432.06 | 272.52 | 1436.43 | 272.23 | 1436.94 | 272.18 | 1444.99 | 271.27 | 1452.16 | 270.57 |
| 1455.74 | 270.28 | 1457.82 | 270.17 | 1461.1 | 270.06 | 1470.35 | 269.92 | 1472.66 | 269.85 |
| 1478.28 | 269.85 | 1479.15 | 269.82 | 1481.6 | 269.84 | 1482.47 | 269.89 | 1488.24 | 270.04 |
| 1497.67 | 270 | 1499.89 | 269.98 | 1501.05 | 270.02 | 1507.98 | 270.18 | 1522.83 | 270.28 |
| 1524.72 | 270.31 | 1531.36 | 270.87 | 1533.55 | 270.93 | 1534.53 | 270.99 | 1535.65 | 271.01 |
| 1537.04 | 270.98 | 1541.17 | 271.09 | 1543.55 | 271.1 | 1548.11 | 271.02 | 1551.28 | 270.87 |
| 1553.1 | 270.95 | 1555.46 | 270.87 | 1557.85 | 271 | 1559.29 | 270.98 | 1565.79 | 270.52 |
| 1566.66 | 270.39 | 1571.56 | 270.21 | 1572.62 | 270.16 | 1577.38 | 269.74 | 1579.96 | 269.53 |
| 1591.72 | 269.74 | 1595.93 | 269.91 | 1599.33 | 270.06 | 1605.17 | 270.33 | 1608.75 | 270.44 |
| 1611.7 | 270.52 | 1614.39 | 270.56 | 1615.92 | 270.56 | 1617.96 | 270.59 | 1624.18 | 270.65 |
| 1628.48 | 270.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 310.63 | .04 | 1591.72 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 310.63 | 1591.72 | 21.54 | 19.33 | 20.13 | .1 | .3 |

Right Levee Station=1015.587 Elevation=280.1873

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 767.81

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 282.77.5999756 | | 282.716.630005 | | 282.0211.94995 | | 281.6217.91003 | | 281.04 |
| 25.93994 | 280.3326.94995 | | 280.2141.06995 | | 279.6547.47998 | | 279.2170.27002 | | 278.23 |
| 86.34998 | 277.8889.78003 | | 277.8890.29004 | | 277.8794.72998 | | 277.9496.33997 | | 277.91 |
| 97.02002 | 277.87 | 104.6 | 277.61111.6899 | | 277 | 112.95 | 276.96 | 139.23 | 276 |
| 154.37 | 275.26 | 167.5 | 274.78 | 167.98 | 274.77 | 180.03 | 274.17 | 183.03 | 274 |
| 195.74 | 273 | 199.02 | 272.82199.8199 | | 272.73 | 202.12 | 272.6 | 202.54 | 272.55 |
| 205.98 | 272.37206.4299 | | 272.32 | 207.75 | 272.28 | 210.83 | 272 | 218.15 | 271.74 |
| 221.5 | 271.43 | 223.78 | 271.3 | 225.97 | 271 | 235.73 | 270.34 | 236.39 | 270.31 |
| 238.54 | 270.31 | 241.21 | 270.11 | 243.15 | 270 | 254.08 | 269.65 | 255.77 | 269.63 |
| 258.12 | 269.82 | 260.01 | 269.9 | 262.84 | 269.82 | 263.63 | 269.7269.1799 | | 269.27 |
| 271.63 | 269 | 276.33 | 268.92 | 276.52 | 268.91 | 280.63 | 268.89 | 284.9 | 268.74 |
| 285.66 | 268.7 | 295.04 | 268.68 | 295.87 | 268.76 | 297.63 | 268.84 | 299 | 268.86 |
| 303.83 | 268.84305.1899 | | 268.86 | 306.46 | 268.84 | 311.52 | 269 | 318.04 | 269.42 |
| 319.38 | 269.52 | 325.29 | 270.08 | 333.62 | 271 | 339.79 | 271.45341.0499 | | 271.52 |
| 342.1799 | 271.65344.8099 | | 272 | 346.76 | 272.35 | 350.13 | 273359.8099 | | 273 |
| 362 | 273.13 | 364.13 | 273.19 | 371.54 | 273.48 | 372.24 | 273.57 | 375.96 | 274 |
| 377.52 | 274.23 | 382.11 | 275 | 385.35 | 275.78386.0499 | | 276 | 386.86 | 276.36 |
| 388.53 | 277 | 389.53 | 277.5 | 392.64 | 279 | 396.36 | 279.33398.0599 | | 279.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 399.88 | 279.54 | 401.97 | 279.53 | 402.59 | 279.63 | 403.16 | 279.67 | 404.41 | 279.71 |
| 405.9299 | 279.78 | 407.4 | 279.76 | 408.2999 | 279.72 | 410.16 | 279.55 | 414.33 | 279 |
| 415.6 | 278.91 | 417.1799 | 278.84 | 417.87 | 278.84 | 421.78 | 279 | 425.91 | 279.01 |
| 427.29 | 279 | 427.9199 | 278.87 | 428.63 | 278.65 | 433.58 | 277 | 435.83 | 276.28 |
| 436.63 | 276 | 440.77 | 274.92 | 444.34 | 274 | 448.08 | 273 | 451.91 | 272.34 |
| 454.14 | 272.18 | 456.12 | 272 | 461.7 | 272 | 462.72 | 271.99 | 471.95 | 272 |
| 476.48 | 272.59 | 477.91 | 272.72 | 479.29 | 272.82 | 481.9399 | 272.94 | 482.47 | 272.94 |
| 483.4299 | 273 | 485.54 | 273.07 | 487.49 | 273.08 | 489.76 | 273 | 491.46 | 272.9 |
| 492.47 | 272.87 | 493.46 | 272.94 | 499.41 | 272.47 | 502.96 | 272.34 | 504.37 | 272 |
| 506.41 | 271.66 | 508.12 | 271.41 | 509.4199 | 271.2 | 510.99 | 271.06 | 511.89 | 271 |
| 516.0599 | 270.77 | 520 | 270.66 | 522.7999 | 270.52 | 526.11 | 270.29 | 527.1799 | 270.25 |
| 530.99 | 270.31 | 534.37 | 270.51 | 535.65 | 270.6 | 538.28 | 270.84 | 539.73 | 271 |
| 541.0599 | 271.01 | 547.7999 | 271.35 | 547.85 | 271.25 | 548.91 | 270.89 | 555.11 | 269.01 |
| 558.6 | 268 | 562.88 | 267.14 | 563.76 | 267 | 578.1899 | 266.52 | 578.74 | 266.49 |
| 581.3099 | 266.47 | 595.71 | 266.99 | 598.08 | 267 | 608.51 | 267 | 614.32 | 267.12 |
| 615.3 | 267.2 | 618.1 | 267.32 | 618.92 | 267.39 | 622.03 | 267.42 | 623.22 | 267.55 |
| 631.25 | 267.62 | 635.2 | 267.6 | 662.08 | 268 | 664.21 | 268.24 | 665.55 | 268.25 |
| 667.14 | 268.39 | 667.92 | 268.41 | 670.96 | 268.55 | 673.73 | 268.75 | 681.25 | 269 |
| 683.93 | 269.25 | 693.04 | 269.96 | 693.66 | 269.99 | 699.66 | 270.13 | 699.85 | 270.11 |
| 704.06 | 270.12 | 704.75 | 270.11 | 706.86 | 270.12 | 710.9 | 270.07 | 717.13 | 270.13 |
| 719.78 | 270.26 | 729.4 | 271 | 730.72 | 271.18 | 730.94 | 271.23 | 734.62 | 271.77 |
| 736.71 | 272 | 744.98 | 272.77 | 750.09 | 273.38 | 750.93 | 273.47 | 753.32 | 273.65 |
| 754.34 | 273.77 | 757.76 | 274 | 761.26 | 274.31 | 763.19 | 274.54 | 765.66 | 275 |
| 767.34 | 275.34 | 772.42 | 276 | 774.18 | 276.33 | 775.54 | 276.56 | 776.55 | 276.67 |
| 780.03 | 277 | 784.48 | 277 | 786.47 | 276.92 | 787.69 | 276.85 | 788.12 | 276.8 |
| 791.06 | 276.55 | 792.07 | 276.43 | 794.61 | 276 | 796.34 | 275.56 | 797.42 | 275.24 |
| 798.27 | 274.96 | 798.37 | 274.86 | 802.01 | 274.58 | 804.04 | 274.48 | 806.31 | 274.72 |
| 809.83 | 275 | 815.56 | 276 | 822.27 | 276 | 823.08 | 275.74 | 828.72 | 274.11 |
| 829.72 | 273.87 | 834.25 | 273 | 836.68 | 272.66 | 837.43 | 272.48 | 837.58 | 272.39 |
| 837.99 | 272.33 | 842.56 | 272.32 | 843.22 | 272.43 | 848.71 | 272.57 | 849.22 | 272.59 |
| 852.7 | 273.02 | 854.43 | 273.34 | 857.56 | 273.74 | 859.99 | 274 | 860.93 | 274.17 |
| 862.98 | 274.51 | 864.23 | 274.61 | 869.39 | 274.79 | 871.63 | 274.9 | 872.59 | 274.9 |
| 874.13 | 274.83 | 874.88 | 274.77 | 876.73 | 274.69 | 877.84 | 274.67 | 885.09 | 274.72 |
| 886.72 | 274.67 | 889.63 | 274.56 | 896.27 | 274.22 | 899.53 | 274 | 903.13 | 273.64 |
| 904.3 | 273.42 | 905.11 | 273.31 | 910.47 | 272 | 915.5 | 271.14 | 916.19 | 271 |
| 919.33 | 270.77 | 920.3 | 270.67 | 921.57 | 270.5 | 921.8 | 270.42 | 922.73 | 270.38 |
| 926.74 | 270.27 | 928.36 | 270.25 | 929.46 | 270.26 | 930.54 | 270.31 | 938.35 | 270.34 |
| 939.96 | 270.36 | 940.71 | 270.56 | 941.73 | 270.67 | 943.29 | 270.79 | 945.59 | 271 |
| 952.06 | 272 | 960.44 | 273.86 | 961.21 | 274 | 961.58 | 274.18 | 963.47 | 275 |
| 965.8 | 276.26 | 967.29 | 277 | 976.84 | 277.87 | 979.13 | 278 | 981.9 | 278.25 |
| 984 | 278.57 | 985.9 | 278.8 | 987.3 | 279 | 988 | 279.06 | 988.99 | 279.07 |
| 991.61 | 278.9 | 993.83 | 278.79 | 994.82 | 278.76 | 996.79 | 278.77 | 998.33 | 278.84 |
| 1001.02 | 279.06 | 1009.58 | 280 | 1013.02 | 280.06 | 1014.14 | 280.06 | 1016.57 | 279.99 |
| 1022.23 | 279.69 | 1023.63 | 279.59 | 1025.03 | 279.44 | 1025.76 | 279.39 | 1028.78 | 279 |
| 1034.62 | 278 | 1037.69 | 277.66 | 1038.44 | 277.59 | 1039.84 | 277.51 | 1043.31 | 277.41 |
| 1044.57 | 277.39 | 1047.68 | 277.47 | 1049.8 | 277.43 | 1051.66 | 277.34 | 1056.69 | 277 |
| 1061.67 | 276.01 | 1065.59 | 275 | 1066.52 | 274.75 | 1069.15 | 274 | 1070.5 | 273.68 |
| 1073.15 | 273 | 1078.63 | 272.12 | 1079.64 | 271.97 | 1083.46 | 271.69 | 1086.2 | 271.57 |
| 1087.14 | 271.49 | 1095.37 | 271.46 | 1096.33 | 271.52 | 1099.71 | 271.6 | 1107.14 | 271.66 |
| 1113.16 | 271.8 | 1113.27 | 271.81 | 1117.13 | 271.82 | 1118.39 | 271.79 | 1120.9 | 271.76 |
| 1128.52 | 271.71 | 1130.37 | 271.66 | 1132.61 | 271.57 | 1139.48 | 271.57 | 1140.02 | 271.6 |
| 1141.29 | 271.61 | 1141.91 | 271.59 | 1143.6 | 271.59 | 1148 | 271.65 | 1156.7 | 271.89 |
| 1159.73 | 272 | 1161.03 | 272.43 | 1163.67 | 273 | 1167.24 | 274 | 1167.99 | 274.19 |
| 1169.4 | 274.47 | 1169.86 | 274.54 | 1170.61 | 274.56 | 1171.76 | 274.68 | 1172.65 | 274.65 |
| 1175.21 | 274.46 | 1178.44 | 274.64 | 1179.34 | 274.59 | 1181.51 | 274.63 | 1182.3 | 274.6 |
| 1188.1 | 274 | 1198.52 | 273.37 | 1207.44 | 273 | 1208.1 | 272.95 | 1213.6 | 272.46 |
| 1221 | 272 | 1229.83 | 271.99 | 1230.57 | 272 | 1239.12 | 272 | 1243.64 | 272.61 |
| 1252.26 | 273.63 | 1254.54 | 273.8 | 1255.4 | 273.85 | 1256.1 | 273.86 | 1259.85 | 274 |
| 1261.58 | 274 | 1262.77 | 273.83 | 1263.84 | 273.65 | 1268.56 | 273 | 1270.26 | 272.79 |
| 1271.48 | 272.62 | 1271.69 | 272.55 | 1275.56 | 272.37 | 1277.66 | 272.3 | 1278.24 | 272.39 |
| 1279.86 | 272.44 | 1281.15 | 272.42 | 1285.53 | 272.45 | 1287.69 | 272.38 | 1292.49 | 272 |
| 1293.27 | 271.93 | 1298.93 | 271.48 | 1300.71 | 271.28 | 1302.78 | 271 | 1312.81 | 270.49 |
| 1316.1 | 270.39 | 1317.17 | 270.33 | 1318.82 | 270.3 | 1322.06 | 270.3 | 1325.87 | 270.22 |
| 1326.86 | 270.23 | 1328.14 | 270.21 | 1330.71 | 270.25 | 1331.73 | 270.36 | 1332.41 | 270.36 |
| 1334.88 | 270.44 | 1335.64 | 270.59 | 1336.6 | 270.64 | 1338.73 | 270.67 | 1340.46 | 270.76 |
| 1341.68 | 270.8 | 1342.65 | 270.79 | 1343.06 | 270.73 | 1349.98 | 270.45 | 1353.51 | 270.45 |
| 1354.81 | 270.43 | 1355.51 | 270.39 | 1357.87 | 270.38 | 1363.72 | 270.5 | 1364.32 | 270.57 |
| 1366.65 | 270.66 | 1368.06 | 270.75 | 1374.53 | 271 | 1375.08 | 271.08 | 1381.03 | 272 |
| 1382.23 | 272.26 | 1386.49 | 273 | 1388.23 | 273.38 | 1390.35 | 273.66 | 1392.23 | 273.87 |
| 1393.78 | 274 | 1395.88 | 274.22 | 1396.78 | 274.3 | 1397.55 | 274.4 | 1398.87 | 274.64 |
| 1400.18 | 274.73 | 1401.13 | 274.72 | 1402.73 | 274.66 | 1409.59 | 274.24 | 1412.24 | 274 |
| 1413.71 | 273.83 | 1414.74 | 273.76 | 1427.11 | 273.01 | 1427.96 | 272.91 | 1441.53 | 271.99 |
| 1442.05 | 271.94 | 1450.14 | 271 | 1457.34 | 270.29 | 1460.93 | 270 | 1463.02 | 269.89 |
| 1466.32 | 269.77 | 1475.61 | 269.62 | 1477.93 | 269.55 | 1480.98 | 269.55 | 1481.15 | 269.56 |
| 1483.58 | 269.55 | 1484.45 | 269.52 | 1486.91 | 269.54 | 1487.56 | 269.58 | 1493.58 | 269.74 |
| 1503.06 | 269.69 | 1505.29 | 269.66 | 1506.45 | 269.7 | 1513.41 | 269.86 | 1528.33 | 269.96 |
| 1530.23 | 270 | 1536.9 | 270.58 | 1539.1 | 270.65 | 1540.08 | 270.71 | 1541.21 | 270.73 |
| 1542.61 | 270.7 | 1546.75 | 270.81 | 1548.05 | 270.8 | 1549.15 | 270.82 | 1553.73 | 270.74 |
| 1556.91 | 270.57 | 1558.74 | 270.65 | 1561.11 | 270.56 | 1563.51 | 270.68 | 1564.96 | 270.66 |
| 1571.49 | 270.14 | 1572.36 | 270 | 1577.28 | 269.78 | 1578.35 | 269.72 | 1585.72 | 269 |
| 1597.54 | 268.99 | 1620.32 | 268.98 | 1621.2 | 268.97 | 1627.11 | 268.97 | 1629.27 | 268.96 |
| 1633.48 | 268.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 303.83 | .04 | 1597.54 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 303.83 | 1597.54 | 34.67 | 19.83 | 18.51 | .1 | .3 |

Right Levee Station= 1014.61 Elevation= 280.2

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 747.982*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 282.28 | 6.51 | 281.55 | 11.74 | 281.16 | 17.59 | 280.6 | 25.48 | 279.89 |
| 26.47 | 279.78 | 33.9 | 279.48 | 40.34 | 279.2 | 46.63 | 278.76 | 61.63 | 278.11 |
| 69.02 | 277.8 | 84.81 | 277.45 | 88.68 | 277.43 | 93.04 | 277.5 | 95.29 | 277.43 |
| 102.74 | 277.17 | 109.7 | 276.56 | 116.64 | 276.32 | 129.4 | 275.85 | 137.04 | 275.56 |
| 141.2 | 275.35 | 148.43 | 275.01 | 151.62 | 274.85 | 156.38 | 274.67 | 164.99 | 274.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 176.82 | 273.78 | 179.77 | 273.61 | 192.26 | 272.63 | 195.48 | 272.46 | 196.26 | 272.37 |
| 198.52 | 272.24 | 198.93 | 272.19 | 202.31 | 272.02 | 202.75 | 271.97 | 204.05 | 271.93 |
| 207.08 | 271.66 | 213.49 | 271.43 | 214.27 | 271.41 | 217.56 | 271.11 | 219.8 | 270.98 |
| 221.95 | 270.69 | 231.53 | 270.05 | 232.18 | 270.02 | 234.29 | 270.02 | 236.92 | 269.83 |
| 238.82 | 269.72 | 249.56 | 269.38 | 251.22 | 269.36 | 253.52 | 269.55 | 255.38 | 269.62 |
| 258.16 | 269.55 | 258.94 | 269.43 | 264.39 | 269.01 | 266.79 | 268.75 | 271.6 | 268.66 |
| 275.63 | 268.64 | 279.83 | 268.5 | 280.57 | 268.46 | 289.79 | 268.43 | 290.6 | 268.51 |
| 292.33 | 268.58 | 293.68 | 268.6 | 298.42 | 268.58 | 301.45 | 268.57 | 306.33 | 268.72 |
| 314.42 | 269.22 | 320.5 | 269.76 | 329.07 | 270.65 | 335.42 | 271.09 | 336.72 | 271.15 |
| 340.59 | 271.61 | 342.6 | 271.95 | 346.06 | 272.58 | 349.29 | 272.57 | 354.12 | 272.57 |
| 356.02 | 272.58 | 358.33 | 272.71 | 360.47 | 272.76 | 368.09 | 273.04 | 372.64 | 273.53 |
| 375.12 | 273.88 | 378.97 | 274.5 | 382.31 | 275.26 | 383.03 | 275.48 | 383.86 | 275.83 |
| 385.58 | 276.46 | 386.61 | 276.95 | 389.81 | 278.41 | 393.63 | 278.73 | 395.38 | 278.84 |
| 397.26 | 278.93 | 399.41 | 278.91 | 400.63 | 279.05 | 403.48 | 279.15 | 405.92 | 279.08 |
| 407.83 | 278.92 | 412.13 | 278.38 | 415.06 | 278.23 | 415.77 | 278.23 | 419.79 | 278.38 |
| 425.46 | 278.38 | 426.84 | 278.04 | 431.93 | 276.44 | 434.25 | 275.74 | 435.07 | 275.47 |
| 439.33 | 274.42 | 443.01 | 273.53 | 446.85 | 272.56 | 450.8 | 271.92 | 453.09 | 271.77 |
| 455.13 | 271.59 | 460.87 | 271.58 | 461.92 | 271.56 | 471.42 | 271.55 | 476.08 | 272.11 |
| 477.55 | 272.24 | 478.97 | 272.33 | 483.34 | 272.51 | 485.4 | 272.57 | 487.41 | 272.58 |
| 489.74 | 272.5 | 492.53 | 272.38 | 493.55 | 272.45 | 493.93 | 272.43 | 499.67 | 271.99 |
| 503.33 | 271.87 | 504.78 | 271.53 | 506.88 | 271.2 | 508.64 | 270.96 | 509.97 | 270.75 |
| 512.51 | 270.55 | 516.81 | 270.33 | 520.86 | 270.21 | 523.74 | 270.08 | 527.15 | 269.85 |
| 528.25 | 269.81 | 532.17 | 269.86 | 536.96 | 270.12 | 539.67 | 270.35 | 541.16 | 270.5 |
| 542.53 | 270.5 | 547.8 | 270.75 | 549.47 | 270.82 | 549.52 | 270.73 | 550.84 | 270.32 |
| 556.99 | 268.55 | 560.58 | 267.56 | 564.39 | 266.84 | 565.89 | 266.58 | 574.16 | 266.3 |
| 579.98 | 266.12 | 581.3 | 266.06 | 583.95 | 266.04 | 590.44 | 266.27 | 598.83 | 266.55 |
| 601.28 | 266.56 | 607.73 | 266.56 | 612.06 | 266.57 | 618.06 | 266.7 | 619.08 | 266.78 |
| 621.97 | 266.9 | 622.82 | 266.97 | 626.03 | 267 | 627.19 | 267.12 | 628.91 | 267.14 |
| 635.56 | 267.19 | 639.64 | 267.17 | 663.03 | 267.5 | 667.42 | 267.57 | 669.62 | 267.81 |
| 671.01 | 267.82 | 672.62 | 267.96 | 673.46 | 267.98 | 676.6 | 268.12 | 679.46 | 268.31 |
| 686.82 | 268.55 | 689.24 | 268.76 | 691.86 | 268.96 | 699.42 | 269.51 | 700.06 | 269.54 |
| 706.26 | 269.68 | 706.46 | 269.66 | 710.81 | 269.68 | 711.52 | 269.67 | 715.76 | 269.69 |
| 717.88 | 269.67 | 721.05 | 269.72 | 722.72 | 269.77 | 724.32 | 269.79 | 727.06 | 269.93 |
| 732.16 | 270.34 | 737 | 270.7 | 742.39 | 271.46 | 744.55 | 271.69 | 750 | 272.16 |
| 752.42 | 272.31 | 754.38 | 272.48 | 759.1 | 272.97 | 761.72 | 273.14 | 762.77 | 273.26 |
| 766.31 | 273.47 | 769.92 | 273.76 | 771.92 | 273.98 | 774.47 | 274.43 | 776.21 | 274.76 |
| 781.46 | 275.39 | 783.28 | 275.71 | 784.68 | 275.93 | 789.32 | 276.35 | 793.92 | 276.34 |
| 795.98 | 276.27 | 797.24 | 276.2 | 800.72 | 275.92 | 801.77 | 275.81 | 804.39 | 275.4 |
| 806.18 | 274.98 | 808.17 | 274.4 | 808.28 | 274.3 | 812.04 | 274.02 | 814.14 | 273.92 |
| 816.48 | 274.15 | 820.12 | 274.41 | 826.04 | 275.37 | 832.98 | 275.37 | 833.81 | 275.12 |
| 839.64 | 273.53 | 840.68 | 273.3 | 845.36 | 272.45 | 847.87 | 272.13 | 849.22 | 271.81 |
| 851.71 | 271.81 | 853.95 | 271.84 | 854.63 | 271.95 | 860.83 | 272.13 | 864.43 | 272.54 |
| 866.21 | 272.84 | 869.45 | 273.2 | 871.96 | 273.43 | 872.93 | 273.59 | 875.05 | 273.89 |
| 876.34 | 273.98 | 878.14 | 274.02 | 881.68 | 274.14 | 883.99 | 274.25 | 884.98 | 274.25 |
| 887.35 | 274.12 | 889.26 | 274.04 | 890.41 | 274.02 | 897.9 | 274.08 | 899.59 | 274.04 |
| 905.47 | 273.83 | 909.46 | 273.66 | 912.82 | 273.46 | 916.55 | 273.1 | 918.59 | 272.76 |
| 924.13 | 271.47 | 928.83 | 270.73 | 930.04 | 270.53 | 933.46 | 270.3 | 935.6 | 270.06 |
| 935.84 | 269.98 | 937.13 | 269.93 | 940.95 | 269.84 | 943.79 | 269.84 | 944.87 | 269.89 |
| 952.94 | 269.95 | 954.61 | 269.98 | 955.38 | 270.18 | 956.44 | 270.29 | 958.05 | 270.41 |
| 960.43 | 270.62 | 962.85 | 270.96 | 967.11 | 271.54 | 975.77 | 273.29 | 976.57 | 273.42 |
| 978.91 | 274.38 | 981.31 | 275.61 | 982.85 | 276.33 | 986.79 | 276.69 | 992.72 | 277.21 |
| 995.09 | 277.34 | 997.95 | 277.59 | 1000.12 | 277.9 | 1002.09 | 278.12 | 1003.53 | 278.31 |
| 1004.26 | 278.37 | 1005.28 | 278.38 | 1007.99 | 278.22 | 1010.28 | 278.11 | 1011.31 | 278.09 |
| 1013.34 | 278.1 | 1014.93 | 278.16 | 1017.71 | 278.38 | 1026.56 | 279.3 | 1030.12 | 279.36 |
| 1031.27 | 279.36 | 1033.81 | 279.29 | 1039.63 | 279.01 | 1041.08 | 278.91 | 1043.28 | 278.72 |
| 1046.4 | 278.34 | 1052.44 | 277.38 | 1056.39 | 276.98 | 1057.83 | 276.9 | 1061.18 | 276.81 |
| 1062.72 | 276.79 | 1065.94 | 276.88 | 1068.13 | 276.85 | 1070.05 | 276.77 | 1075.26 | 276.47 |
| 1080.39 | 275.51 | 1085.41 | 274.29 | 1088.13 | 273.55 | 1089.52 | 273.23 | 1092.26 | 272.56 |
| 1097.92 | 271.7 | 1098.97 | 271.55 | 1102.91 | 271.27 | 1105.75 | 271.15 | 1106.72 | 271.08 |
| 1108.11 | 271.09 | 1115.22 | 271.1 | 1116.22 | 271.16 | 1119.71 | 271.25 | 1127.39 | 271.33 |
| 1133.94 | 271.46 | 1137.71 | 271.44 | 1139.01 | 271.41 | 1141.61 | 271.39 | 1149.48 | 271.35 |
| 1151.4 | 271.3 | 1153.71 | 271.21 | 1160.81 | 271.2 | 1162.68 | 271.23 | 1165.64 | 271.2 |
| 1169.62 | 271.25 | 1178.61 | 271.49 | 1181.74 | 271.6 | 1183.08 | 272.02 | 1185.81 | 272.57 |
| 1189.5 | 273.55 | 1190.28 | 273.73 | 1192.21 | 274.08 | 1192.98 | 274.1 | 1194.17 | 274.21 |
| 1195.09 | 274.19 | 1197.74 | 274 | 1201.08 | 274.18 | 1202.01 | 274.13 | 1204.25 | 274.16 |
| 1205.05 | 274.13 | 1211.06 | 273.56 | 1216.39 | 273.23 | 1221.83 | 272.92 | 1229.3 | 272.63 |
| 1231.05 | 272.57 | 1237.41 | 272.07 | 1245.06 | 271.67 | 1253.93 | 271.68 | 1256.7 | 271.72 |
| 1263.79 | 271.72 | 1268.46 | 272.27 | 1271.63 | 272.61 | 1277.37 | 273.24 | 1279.72 | 273.4 |
| 1283.53 | 273.51 | 1285.21 | 273.58 | 1287 | 273.57 | 1288.23 | 273.4 | 1289.38 | 273.2 |
| 1294.21 | 272.6 | 1295.97 | 272.41 | 1297.45 | 272.18 | 1301.45 | 272.01 | 1303.62 | 271.95 |
| 1304.22 | 272.04 | 1305.89 | 272.1 | 1307.22 | 272.08 | 1309.26 | 272.11 | 1311.75 | 272.12 |
| 1313.98 | 272.06 | 1318.94 | 271.69 | 1319.75 | 271.62 | 1325.6 | 271.18 | 1327.44 | 270.99 |
| 1329.58 | 270.71 | 1334.25 | 270.48 | 1339.95 | 270.17 | 1343.35 | 270.06 | 1344.45 | 270 |
| 1346.16 | 269.97 | 1349.5 | 269.97 | 1353.44 | 269.89 | 1355.79 | 269.88 | 1358.44 | 269.91 |
| 1359.5 | 270.02 | 1360.2 | 270.02 | 1362.75 | 270.1 | 1363.54 | 270.24 | 1364.53 | 270.29 |
| 1366.73 | 270.32 | 1369.78 | 270.45 | 1370.78 | 270.44 | 1371.21 | 270.38 | 1378.36 | 270.11 |
| 1382.01 | 270.11 | 1384.07 | 270.05 | 1386.51 | 270.04 | 1392.56 | 270.15 | 1393.18 | 270.21 |
| 1395.59 | 270.3 | 1397.05 | 270.39 | 1403.73 | 270.63 | 1410.45 | 271.61 | 1411.69 | 271.87 |
| 1416.09 | 272.59 | 1417.89 | 272.97 | 1420.08 | 273.27 | 1422.02 | 273.47 | 1423.63 | 273.58 |
| 1426.73 | 273.85 | 1428.94 | 274.18 | 1430.24 | 274.26 | 1431.22 | 274.25 | 1432.88 | 274.18 |
| 1437.2 | 273.94 | 1439.97 | 273.8 | 1442.7 | 273.59 | 1444.22 | 273.44 | 1451.64 | 273.03 |
| 1457.01 | 272.76 | 1458.95 | 272.59 | 1465.99 | 272.09 | 1472.98 | 271.65 | 1473.51 | 271.6 |
| 1481.87 | 270.68 | 1489.32 | 269.98 | 1493.03 | 269.7 | 1495.4 | 269.59 | 1498.6 | 269.47 |
| 1508.2 | 269.33 | 1510.59 | 269.25 | 1516.05 | 269.27 | 1517.33 | 269.23 | 1519.88 | 269.25 |
| 1520.58 | 269.29 | 1526.77 | 269.46 | 1535.56 | 269.41 | 1538.87 | 269.38 | 1540.07 | 269.42 |
| 1547.24 | 269.56 | 1555.94 | 269.61 | 1559.74 | 269.64 | 1562.68 | 269.65 | 1564.65 | 269.69 |
| 1571.54 | 270.25 | 1573.81 | 270.33 | 1574.83 | 270.4 | 1575.99 | 270.42 | 1577.46 | 270.4 |
| 1581.72 | 270.5 | 1584.2 | 270.51 | 1588.93 | 270.43 | 1592.22 | 270.27 | 1594.11 | 270.35 |
| 1596.56 | 270.26 | 1599.04 | 270.38 | 1600.54 | 270.36 | 1607.29 | 269.87 | 1608.19 | 269.73 |
| 1613.27 | 269.53 | 1614.38 | 269.47 | 1621.99 | 268.76 | 1634.21 | 268.76 | 1635.28 | 268.74 |
| 1639.43 | 268.72 | 1640.52 | 268.74 | 1641.48 | 268.71 | 1643.9 | 268.72 | 1646.33 | 268.69 |
| 1647.59 | 268.71 | 1652.05 | 268.68 | 1659.69 | 268.66 | 1660.95 | 268.64 | 1664.74 | 268.63 |
| 1666.35 | 268.64 | 1674.45 | 268.58 | 1677.1 | 268.59 | 1678.36 | 268.63 | 1681.87 | 268.66 |
| 1684.68 | 268.63 | 1686.39 | 268.71 | 1687.99 | 268.7 | 1689.15 | 268.65 | 1693.55 | 268.51 |
| 1695.92 | 268.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 298.42 | .04 | 1634.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 298.42 | 1634.21 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION



BSE Document Control Number: 7323HYD101

RIVER: WASH0
REACH: WASH0 RS: 728.155*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 281.78 | .58 | 281.73 | 6.39 | 281.08 | 11.52 | 280.71 | 17.27 | 280.15 |
| 25.02 | 279.46 | 25.99 | 279.34 | 33.28 | 279.04 | 39.61 | 278.75 | 42.78 | 278.52 |
| 45.79 | 278.32 | 60.51 | 277.67 | 67.77 | 277.36 | 74.81 | 277.21 | 83.28 | 277.01 |
| 87.08 | 277 | 91.36 | 277.06 | 93.57 | 276.99 | 100.88 | 276.73 | 107.71 | 276.13 |
| 114.52 | 275.89 | 118.36 | 275.74 | 123.35 | 275.58 | 134.27 | 275.15 | 138.64 | 274.93 |
| 142.61 | 274.75 | 148.87 | 274.44 | 161.54 | 273.97 | 162 | 273.96 | 173.62 | 273.38 |
| 176.51 | 273.22 | 188.77 | 272.26 | 191.93 | 272.09 | 192.71 | 272.01 | 194.92 | 271.89 |
| 195.33 | 271.84 | 200.35 | 271.58 | 203.32 | 271.32 | 210.38 | 271.07 | 213.61 | 270.78 |
| 215.81 | 270.66 | 217.92 | 270.38 | 227.34 | 269.76 | 230.05 | 269.74 | 232.62 | 269.55 |
| 234.49 | 269.45 | 245.03 | 269.12 | 246.66 | 269.1 | 248.93 | 269.27 | 250.75 | 269.35 |
| 253.48 | 269.27 | 254.24 | 269.16 | 259.6 | 268.76 | 261.96 | 268.5 | 266.67 | 268.42 |
| 270.64 | 268.39 | 274.76 | 268.25 | 275.49 | 268.21 | 282.48 | 268.2 | 284.53 | 268.18 |
| 287.03 | 268.33 | 288.35 | 268.35 | 293.01 | 268.32 | 295.79 | 268.29 | 301.15 | 268.44 |
| 308.05 | 268.83 | 309.46 | 268.92 | 315.72 | 269.45 | 324.53 | 270.31 | 331.06 | 270.72 |
| 332.39 | 270.79 | 336.37 | 271.22 | 342 | 272.15 | 345.31 | 272.14 | 352.24 | 272.16 |
| 354.56 | 272.28 | 356.95 | 272.34 | 364.65 | 272.59 | 365.39 | 272.68 | 369.33 | 273.07 |
| 370.98 | 273.27 | 375.83 | 274 | 379.26 | 274.75 | 380 | 274.96 | 380.86 | 275.3 |
| 382.62 | 275.91 | 383.68 | 276.39 | 386.97 | 277.81 | 390.91 | 278.12 | 392.71 | 278.23 |
| 394.63 | 278.31 | 396.84 | 278.29 | 397.5 | 278.39 | 401.03 | 278.51 | 403.54 | 278.45 |
| 405.51 | 278.28 | 409.92 | 277.77 | 412.94 | 277.62 | 413.67 | 277.62 | 417.8 | 277.76 |
| 423.63 | 277.75 | 425.05 | 277.42 | 430.29 | 275.87 | 433.51 | 274.94 | 441.67 | 273.06 |
| 445.63 | 272.12 | 449.68 | 271.51 | 452.04 | 271.36 | 454.13 | 271.19 | 457.9 | 271.16 |
| 460.04 | 271.16 | 463.5 | 271.12 | 470.88 | 271.1 | 475.68 | 271.64 | 478.65 | 271.85 |
| 483.14 | 272.02 | 485.26 | 272.07 | 487.32 | 272.07 | 492.59 | 271.9 | 493.64 | 271.97 |
| 499.94 | 271.52 | 503.69 | 271.39 | 505.18 | 271.07 | 507.34 | 270.74 | 509.15 | 270.51 |
| 510.53 | 270.3 | 513.14 | 270.11 | 517.55 | 269.88 | 521.72 | 269.77 | 524.68 | 269.63 |
| 528.18 | 269.41 | 529.32 | 269.37 | 533.35 | 269.41 | 536.92 | 269.57 | 538.28 | 269.65 |
| 541.06 | 269.86 | 542.59 | 270 | 544 | 270 | 545.93 | 270.07 | 551.13 | 270.3 |
| 551.18 | 270.2 | 555.19 | 269.09 | 558.87 | 268.09 | 562.56 | 267.13 | 567.09 | 266.31 |
| 568.02 | 266.17 | 576.53 | 265.87 | 583.87 | 265.64 | 586.59 | 265.62 | 593.29 | 265.84 |
| 601.95 | 266.11 | 604.48 | 266.12 | 611.14 | 266.12 | 615.61 | 266.14 | 621.81 | 266.28 |
| 622.85 | 266.36 | 625.84 | 266.48 | 626.63 | 266.54 | 630.03 | 266.58 | 631.3 | 266.7 |
| 639.87 | 266.76 | 644.09 | 266.75 | 668.23 | 267.07 | 672.77 | 267.14 | 675.04 | 267.38 |
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| 695.29 | 268.33 | 698 | 268.53 | 705.8 | 269.06 | 706.46 | 269.09 | 712.86 | 269.23 |
| 713.07 | 269.21 | 720.64 | 269.24 | 722.67 | 269.28 | 724.86 | 269.28 | 728.13 | 269.34 |
| 729.86 | 269.42 | 731.5 | 269.45 | 734.33 | 269.6 | 739.6 | 270.04 | 744.59 | 270.39 |
| 750.16 | 271.14 | 752.39 | 271.38 | 758.02 | 271.84 | 760.52 | 271.91 | 762.54 | 272.05 |
| 767.42 | 272.48 | 770.12 | 272.64 | 771.2 | 272.74 | 774.85 | 272.93 | 778.59 | 273.22 |
| 780.65 | 273.43 | 785.08 | 274.17 | 790.5 | 274.78 | 793.82 | 275.3 | 798.62 | 275.7 |
| 803.36 | 275.69 | 806.79 | 275.55 | 810.38 | 275.29 | 811.46 | 275.18 | 814.17 | 274.8 |
| 816.02 | 274.4 | 818.08 | 273.83 | 818.18 | 273.74 | 822.07 | 273.46 | 824.23 | 273.36 |
| 826.66 | 273.58 | 830.41 | 273.83 | 832.48 | 274.13 | 836.53 | 274.75 | 843.68 | 274.74 |
| 844.55 | 274.49 | 850.57 | 272.95 | 851.63 | 272.72 | 856.47 | 271.91 | 859.06 | 271.59 |
| 860.46 | 271.28 | 863.02 | 271.3 | 865.33 | 271.37 | 866.04 | 271.48 | 872.44 | 271.68 |
| 876.15 | 272.05 | 878 | 272.33 | 881.34 | 272.66 | 883.93 | 272.86 | 887.12 | 273.28 |
| 888.46 | 273.35 | 890.31 | 273.38 | 893.96 | 273.49 | 896.35 | 273.59 | 897.38 | 273.59 |
| 899.82 | 273.47 | 902.98 | 273.38 | 908.83 | 273.41 | 911.19 | 273.44 | 915.56 | 273.33 |
| 922.64 | 273.1 | 926.12 | 272.91 | 929.96 | 272.55 | 932.07 | 272.22 | 933.45 | 271.9 |
| 937.79 | 270.94 | 943.9 | 270.05 | 947.25 | 269.86 | 949.64 | 269.61 | 949.88 | 269.54 |
| 951.21 | 269.49 | 955.15 | 269.42 | 958.09 | 269.42 | 959.21 | 269.48 | 965.99 | 269.54 |
| 969.26 | 269.6 | 970.06 | 269.79 | 971.15 | 269.91 | 975.26 | 270.24 | 977.76 | 270.55 |
| 982.17 | 271.07 | 989.55 | 272.43 | 991.93 | 272.83 | 994.34 | 273.76 | 996.83 | 274.95 |
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| 1016.25 | 277.22 | 1019.77 | 277.62 | 1021.57 | 277.69 | 1024.37 | 277.54 | 1027.79 | 277.41 |
| 1029.89 | 277.42 | 1031.54 | 277.49 | 1034.41 | 277.7 | 1043.54 | 278.6 | 1047.21 | 278.66 |
| 1048.41 | 278.66 | 1051.03 | 278.6 | 1057.04 | 278.33 | 1058.53 | 278.24 | 1060.8 | 278.05 |
| 1064.03 | 277.69 | 1070.26 | 276.75 | 1073.53 | 276.43 | 1075.83 | 276.29 | 1079.28 | 276.2 |
| 1080.87 | 276.19 | 1084.19 | 276.29 | 1086.45 | 276.27 | 1088.44 | 276.2 | 1093.82 | 275.94 |
| 1099.12 | 275.01 | 1104.29 | 273.83 | 1107.1 | 273.09 | 1111.23 | 272.15 | 1111.98 | 272.03 |
| 1115.53 | 271.54 | 1118.29 | 271.14 | 1122.37 | 270.84 | 1126.3 | 270.66 | 1127.74 | 270.7 |
| 1135.08 | 270.73 | 1136.03 | 270.79 | 1139.71 | 270.9 | 1147.63 | 270.99 | 1151.3 | 271.07 |
| 1154.4 | 271.11 | 1159.64 | 271.03 | 1170.45 | 270.98 | 1172.53 | 270.94 | 1174.81 | 270.85 |
| 1178.64 | 270.85 | 1182.14 | 270.82 | 1184.07 | 270.84 | 1187.13 | 270.81 | 1191.23 | 270.86 |
| 1200.51 | 271.09 | 1203.75 | 271.2 | 1205.13 | 271.6 | 1207.95 | 272.15 | 1211.76 | 273.1 |
| 1214.06 | 273.55 | 1215.36 | 273.63 | 1216.58 | 273.75 | 1217.53 | 273.72 | 1220.26 | 273.55 |
| 1223.71 | 273.71 | 1224.67 | 273.66 | 1226.99 | 273.69 | 1227.83 | 273.66 | 1231.73 | 273.33 |
| 1234.02 | 273.11 | 1237.58 | 272.91 | 1239.52 | 272.77 | 1245.14 | 272.47 | 1255.36 | 272.1 |
| 1261.23 | 271.68 | 1266.07 | 271.48 | 1269.12 | 271.34 | 1272.25 | 271.34 | 1278.54 | 271.38 |
| 1281.14 | 271.44 | 1288.45 | 271.44 | 1294.17 | 272.01 | 1299.33 | 272.54 | 1302.47 | 272.85 |
| 1305.82 | 273.03 | 1308.84 | 273.09 | 1310.57 | 273.15 | 1312.42 | 273.14 | 1313.69 | 272.97 |
| 1314.88 | 272.76 | 1316.38 | 272.57 | 1319.87 | 272.2 | 1320.93 | 272.11 | 1322.98 | 271.87 |
| 1323.21 | 271.8 | 1327.34 | 271.65 | 1329.58 | 271.6 | 1330.19 | 271.69 | 1331.92 | 271.76 |
| 1333.3 | 271.75 | 1337.97 | 271.8 | 1340.28 | 271.73 | 1345.4 | 271.38 | 1346.23 | 271.31 |
| 1352.27 | 270.88 | 1354.17 | 270.69 | 1356.38 | 270.42 | 1361.2 | 270.19 | 1368.17 | 269.81 |
| 1370.59 | 269.74 | 1371.73 | 269.68 | 1373.49 | 269.65 | 1376.95 | 269.64 | 1379.69 | 269.58 |
| 1383.44 | 269.54 | 1386.18 | 269.58 | 1387.27 | 269.68 | 1390.63 | 269.75 | 1391.44 | 269.89 |
| 1392.46 | 269.94 | 1394.74 | 269.97 | 1397.88 | 270.09 | 1399.36 | 270.03 | 1406.74 | 269.77 |
| 1410.51 | 269.76 | 1412.64 | 269.71 | 1415.16 | 269.7 | 1421.4 | 269.79 | 1422.04 | 269.86 |
| 1424.53 | 269.94 | 1426.48 | 270.04 | 1432.93 | 270.27 | 1439.87 | 271.23 | 1441.15 | 271.48 |
| 1445.69 | 272.19 | 1447.55 | 272.57 | 1449.81 | 272.87 | 1451.61 | 273.05 | 1453.34 | 273.16 |
| 1457.5 | 273.49 | 1458.9 | 273.71 | 1460.3 | 273.79 | 1463.02 | 273.71 | 1467.49 | 273.48 |
| 1470.34 | 273.36 | 1473.17 | 273.18 | 1474.74 | 273.05 | 1478.93 | 272.86 | 1482.39 | 272.68 |
| 1487.94 | 272.44 | 1489.04 | 272.38 | 1489.94 | 272.27 | 1493.66 | 272.01 | 1497.2 | 271.73 |
| 1504.98 | 271.26 | 1513.61 | 270.36 | 1521.29 | 269.67 | 1525.12 | 269.41 | 1530.87 | 269.17 |
| 1535.93 | 269.11 | 1540.78 | 269.03 | 1543.26 | 268.96 | 1549.29 | 268.98 | 1550.22 | 268.95 |
| 1552.84 | 268.96 | 1555.42 | 269.06 | 1559.96 | 269.17 | 1563.29 | 269.17 | 1572.45 | 269.1 |
| 1573.69 | 269.13 | 1581.09 | 269.26 | 1588.11 | 269.29 | 1590.08 | 269.31 | 1597.04 | 269.35 |
| 1599.06 | 269.38 | 1604.95 | 269.82 | 1606.18 | 269.93 | 1610.78 | 270.11 | 1612.3 | 270.09 |
| 1616.69 | 270.19 | 1619.25 | 270.2 | 1624.14 | 270.13 | 1627.53 | 269.97 | 1629.48 | 270.04 |
| 1632.01 | 269.96 | 1634.57 | 270.07 | 1636.12 | 270.06 | 1643.09 | 269.6 | 1644.01 | 269.47 |
| 1649.53 | 269.26 | 1650.41 | 269.21 | 1658.27 | 268.53 | 1669.67 | 268.53 | 1670.88 | 268.52 |
| 1672.39 | 268.49 | 1675.15 | 268.49 | 1678.28 | 268.44 | 1679.64 | 268.49 | 1681.19 | 268.44 |
| 1684.61 | 268.45 | 1686.89 | 268.43 | 1688.07 | 268.39 | 1689.52 | 268.42 | 1694.03 | 268.42 |
| 1696.39 | 268.37 | 1699.77 | 268.35 | 1703.05 | 268.35 | 1703.61 | 268.33 | 1707 | 268.33 |
| 1708.78 | 268.3 | 1713.18 | 268.28 | 1715.6 | 268.3 | 1719.19 | 268.29 | 1721.54 | 268.23 |
| 1726.36 | 268.23 | 1728.16 | 268.19 | 1731.88 | 268.22 | 1733.47 | 268.29 | 1736.08 | 268.31 |
| 1736.62 | 268.29 | 1738.12 | 268.35 | 1742.43 | 268.29 | 1744.86 | 268.46 | 1745.61 | 268.41 |
| 1747.12 | 268.43 | 1748.77 | 268.36 | 1755 | 268.24 | 1755.59 | 268.3 | 1757.67 | 268.36 |



BSE Document Control Number: 7323HYD101

1758.37 268.42

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 293.01 | .04 | 1670.88 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 293.01 | 1670.88 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 708.327*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 281.29 | 6.28 | 280.61 | 11.31 | 280.25 | 16.95 | 279.71 | 24.55 | 279.02 |
| 25.51 | 278.91 | 32.67 | 278.61 | 38.88 | 278.31 | 41.99 | 278.07 | 44.94 | 277.87 |
| 59.39 | 277.23 | 66.52 | 276.93 | 81.74 | 276.58 | 85.47 | 276.56 | 89.67 | 276.62 |
| 91.19 | 276.59 | 97.67 | 276.35 | 99.01 | 276.29 | 105.72 | 275.69 | 117.43 | 275.29 |
| 124.71 | 275.02 | 131.79 | 274.72 | 136.08 | 274.5 | 143.05 | 274.19 | 146.13 | 274.03 |
| 155.15 | 273.69 | 159.01 | 273.56 | 170.41 | 272.99 | 173.25 | 272.83 | 185.29 | 271.9 |
| 188.39 | 271.73 | 189.15 | 271.65 | 191.72 | 271.48 | 196.65 | 271.24 | 199.57 | 270.98 |
| 206.5 | 270.74 | 209.67 | 270.46 | 211.83 | 270.34 | 213.9 | 270.07 | 223.14 | 269.48 |
| 225.8 | 269.45 | 228.33 | 269.27 | 230.16 | 269.17 | 240.51 | 268.85 | 242.11 | 268.83 |
| 244.33 | 269 | 246.12 | 269.07 | 248.8 | 269 | 249.55 | 268.89 | 254.8 | 268.5 |
| 257.12 | 268.26 | 261.75 | 268.17 | 265.64 | 268.15 | 270.4 | 267.97 | 277.26 | 267.95 |
| 279.28 | 267.93 | 280.07 | 268 | 283.03 | 268.09 | 287.6 | 268.06 | 290.81 | 268.02 |
| 295.96 | 268.16 | 303.05 | 268.54 | 304.51 | 268.63 | 310.93 | 269.13 | 319.98 | 269.96 |
| 326.69 | 270.36 | 328.06 | 270.42 | 332.15 | 270.83 | 337.93 | 271.73 | 346.44 | 271.72 |
| 348.45 | 271.74 | 350.83 | 271.85 | 361.2 | 272.15 | 366.01 | 272.6 | 368.62 | 272.91 |
| 372.69 | 273.5 | 376.22 | 274.23 | 379.67 | 275.37 | 380.76 | 275.84 | 384.14 | 277.22 |
| 388.18 | 277.52 | 390.03 | 277.63 | 392.01 | 277.7 | 394.28 | 277.68 | 395.57 | 277.8 |
| 398.59 | 277.88 | 401.16 | 277.81 | 403.18 | 277.65 | 407.72 | 277.15 | 409.29 | 277.07 |
| 411.56 | 277.01 | 415.81 | 277.14 | 421.8 | 277.13 | 423.26 | 276.81 | 428.64 | 275.31 |
| 431.96 | 274.41 | 440.34 | 272.59 | 444.4 | 271.69 | 448.57 | 271.09 | 453.14 | 270.78 |
| 459.21 | 270.74 | 462.77 | 270.68 | 470.35 | 270.65 | 475.27 | 271.16 | 478.33 | 271.36 |
| 481.78 | 271.46 | 482.83 | 271.52 | 485.12 | 271.57 | 487.24 | 271.57 | 489.71 | 271.51 |
| 492.65 | 271.41 | 493.73 | 271.48 | 500.2 | 271.04 | 504.06 | 270.92 | 505.59 | 270.6 |
| 511.08 | 269.86 | 513.76 | 269.66 | 518.3 | 269.44 | 522.58 | 269.32 | 525.62 | 269.19 |
| 529.22 | 268.97 | 530.38 | 268.92 | 534.53 | 268.95 | 539.59 | 269.17 | 542.45 | 269.36 |
| 544.03 | 269.5 | 545.47 | 269.49 | 552.8 | 269.77 | 552.85 | 269.68 | 556.97 | 268.6 |
| 560.74 | 267.63 | 564.54 | 266.69 | 569.19 | 265.89 | 570.15 | 265.75 | 578.89 | 265.45 |
| 586.43 | 265.21 | 589.22 | 265.19 | 596.13 | 265.41 | 605.07 | 265.68 | 607.68 | 265.69 |
| 614.55 | 265.69 | 619.16 | 265.71 | 625.55 | 265.86 | 626.63 | 265.94 | 629.71 | 266.06 |
| 630.61 | 266.12 | 634.03 | 266.16 | 635.27 | 266.27 | 644.18 | 266.34 | 648.53 | 266.32 |
| 673.43 | 266.63 | 678.11 | 266.71 | 680.45 | 266.94 | 681.93 | 266.96 | 683.64 | 267.1 |
| 687.88 | 267.25 | 690.93 | 267.44 | 698.76 | 267.68 | 702.15 | 267.97 | 704.13 | 268.11 |
| 712.18 | 268.61 | 712.86 | 268.64 | 719.46 | 268.78 | 719.67 | 268.76 | 727.49 | 268.8 |
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| 741.61 | 269.27 | 748.65 | 269.86 | 752.19 | 270.09 | 757.94 | 270.83 | 760.24 | 271.06 |
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| 793.94 | 273.59 | 799.53 | 274.17 | 802.97 | 274.66 | 807.91 | 275.05 | 812.81 | 275.03 |
| 816.34 | 274.91 | 820.05 | 274.66 | 821.16 | 274.56 | 823.95 | 274.19 | 825.86 | 273.81 |
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| 900.57 | 272.72 | 902.48 | 272.73 | 906.25 | 272.84 | 908.71 | 272.94 | 909.77 | 272.94 |
| 912.29 | 272.82 | 915.54 | 272.73 | 921.58 | 272.77 | 923.52 | 272.81 | 925.32 | 272.78 |
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| 951.45 | 270.41 | 953.54 | 270.12 | 957.75 | 269.58 | 961.39 | 269.39 | 963.67 | 269.17 |
| 963.92 | 269.1 | 969.36 | 268.99 | 972.39 | 269 | 973.54 | 269.06 | 980.54 | 269.15 |
| 983.91 | 269.22 | 984.73 | 269.41 | 985.85 | 269.52 | 990.1 | 269.86 | 992.68 | 270.15 |
| 997.22 | 270.61 | 1006.44 | 272.14 | 1007.29 | 272.25 | 1009.78 | 273.13 | 1012.34 | 274.3 |
| 1013.98 | 275 | 1018.18 | 275.37 | 1024.49 | 275.9 | 1027.01 | 276.03 | 1030.06 | 276.26 |
| 1032.37 | 276.55 | 1036 | 276.94 | 1037.86 | 277 | 1040.74 | 276.85 | 1044.28 | 276.74 |
| 1046.45 | 276.75 | 1048.14 | 276.81 | 1051.1 | 277.02 | 1060.52 | 277.89 | 1064.31 | 277.96 |
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| 1088.08 | 276.12 | 1092.28 | 275.75 | 1093.82 | 275.68 | 1099.03 | 275.58 | 1102.45 | 275.69 |
| 1104.78 | 275.69 | 1106.83 | 275.63 | 1112.37 | 275.4 | 1117.84 | 274.51 | 1123.18 | 273.37 |
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| 1159.71 | 270.54 | 1164.44 | 270.63 | 1167.88 | 270.66 | 1173 | 270.75 | 1174.85 | 270.75 |
| 1178.39 | 270.68 | 1183.02 | 270.64 | 1191.41 | 270.62 | 1193.45 | 270.58 | 1195.91 | 270.49 |
| 1199.47 | 270.49 | 1203.47 | 270.44 | 1204.07 | 270.47 | 1208.61 | 270.42 | 1212.85 | 270.46 |
| 1222.42 | 270.69 | 1225.76 | 270.8 | 1227.19 | 271.19 | 1230.09 | 271.72 | 1234.02 | 272.65 |
| 1236.4 | 273.09 | 1238.99 | 273.28 | 1239.97 | 273.26 | 1242.79 | 273.09 | 1246.35 | 273.25 |
| 1247.34 | 273.2 | 1249.72 | 273.22 | 1250.59 | 273.19 | 1254.62 | 272.88 | 1256.98 | 272.67 |
| 1260.65 | 272.46 | 1262.65 | 272.31 | 1268.44 | 272.02 | 1276.4 | 271.75 | 1278.26 | 271.71 |
| 1285.04 | 271.28 | 1290.03 | 271.14 | 1293.18 | 271.01 | 1297.28 | 271.02 | 1302.63 | 271.07 |
| 1305.58 | 271.16 | 1313.12 | 271.16 | 1313.95 | 271.25 | 1317.5 | 271.53 | 1321.48 | 271.89 |
| 1327.58 | 272.46 | 1330.09 | 272.59 | 1334.15 | 272.66 | 1335.93 | 272.73 | 1337.84 | 272.71 |
| 1339.4 | 272.5 | 1340.38 | 272.32 | 1341.92 | 272.13 | 1346.61 | 271.72 | 1348.73 | 271.49 |
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| 1359.37 | 271.41 | 1361.54 | 271.46 | 1364.19 | 271.47 | 1366.57 | 271.41 | 1378.94 | 270.58 |
| 1380.9 | 270.4 | 1383.18 | 270.13 | 1386.85 | 269.97 | 1391.96 | 269.69 | 1395.34 | 269.48 |
| 1397.84 | 269.41 | 1399.01 | 269.35 | 1400.83 | 269.32 | 1404.39 | 269.31 | 1408.59 | 269.22 |
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| 1420.4 | 269.59 | 1422.74 | 269.61 | 1425.99 | 269.74 | 1427.5 | 269.68 | 1435.12 | 269.43 |
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| 1453.46 | 269.58 | 1455.48 | 269.68 | 1462.14 | 269.9 | 1469.29 | 270.84 | 1470.61 | 271.09 |
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| 1487.47 | 273.04 | 1488.98 | 273.25 | 1490.36 | 273.31 | 1491.41 | 273.3 | 1497.77 | 273.02 |
| 1500.72 | 272.92 | 1503.63 | 272.77 | 1505.25 | 272.65 | 1509.57 | 272.49 | 1513.15 | 272.32 |
| 1518.87 | 272.13 | 1520.93 | 271.95 | 1524.76 | 271.67 | 1528.42 | 271.38 | 1535.87 | 270.96 |
| 1540.53 | 270.52 | 1545.34 | 270.04 | 1548.4 | 269.77 | 1553.27 | 269.37 | 1557.22 | 269.11 |
| 1563.15 | 268.87 | 1568.36 | 268.82 | 1573.37 | 268.74 | 1575.92 | 268.66 | 1579.47 | 268.69 |
| 1582.14 | 268.69 | 1583.1 | 268.66 | 1585.81 | 268.67 | 1588.47 | 268.78 | 1593.15 | 268.89 |
| 1596.58 | 268.89 | 1603.89 | 268.85 | 1606.03 | 268.81 | 1607.31 | 268.85 | 1614.94 | 268.96 |
| 1622.18 | 268.98 | 1628.25 | 269.03 | 1631.39 | 269.04 | 1633.48 | 269.07 | 1636.02 | 269.24 |

| | | | | | | | | | |
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| 1640.82 | 269.6 | 1645.56 | 269.8 | 1647.13 | 269.79 | 1651.66 | 269.89 | 1654.3 | 269.9 |
| 1659.34 | 269.82 | 1662.84 | 269.67 | 1664.85 | 269.74 | 1667.46 | 269.66 | 1670.1 | 269.77 |
| 1671.7 | 269.76 | 1675.28 | 269.55 | 1678.88 | 269.32 | 1679.84 | 269.2 | 1685.26 | 269.02 |
| 1686.43 | 268.96 | 1694.54 | 268.29 | 1706.3 | 268.3 | 1707.55 | 268.29 | 1709.51 | 268.24 |
| 1713.08 | 268.24 | 1715.25 | 268.18 | 1717.14 | 268.17 | 1718.9 | 268.24 | 1720.9 | 268.16 |
| 1722.87 | 268.18 | 1727.61 | 268.16 | 1729.8 | 268.1 | 1731.68 | 268.14 | 1735.38 | 268.12 |
| 1737.52 | 268.13 | 1740.3 | 268.07 | 1744.95 | 268.03 | 1748.37 | 268.04 | 1749.92 | 268.01 |
| 1754.31 | 268.01 | 1756.62 | 267.96 | 1762.31 | 267.93 | 1765.44 | 267.95 | 1768.05 | 267.92 |
| 1770.1 | 267.94 | 1773.48 | 267.85 | 1776.64 | 267.84 | 1779.37 | 267.86 | 1782.01 | 267.79 |
| 1783.85 | 267.79 | 1786.27 | 267.84 | 1788.89 | 267.95 | 1791.96 | 267.98 | 1792.65 | 267.95 |
| 1794.6 | 268.04 | 1800.17 | 267.95 | 1803.32 | 268.2 | 1804.3 | 268.13 | 1805.63 | 268.17 |
| 1807.55 | 268.13 | 1808.39 | 268.07 | 1816.46 | 267.96 | 1817.22 | 268.06 | 1819.91 | 268.18 |
| 1820.81 | 268.28 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 287.6 | .04 | 1707.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 287.6 | 1707.55 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 688.5*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 280.79 | 6.16 | 280.14 | 10.62 | 279.83 | 16.63 | 279.26 | 24.09 | 278.58 |
| 25.03 | 278.47 | 32.05 | 278.17 | 38.15 | 277.86 | 41.2 | 277.62 | 44.1 | 277.42 |
| 58.28 | 276.79 | 65.27 | 276.49 | 80.2 | 276.15 | 83.86 | 276.12 | 87.98 | 276.18 |
| 89.48 | 276.15 | 97.15 | 275.86 | 103.74 | 275.25 | 110.3 | 275.03 | 113.99 | 274.89 |
| 118.8 | 274.74 | 122.36 | 274.6 | 129.32 | 274.29 | 133.52 | 274.08 | 140.36 | 273.78 |
| 143.38 | 273.62 | 156.02 | 273.15 | 167.21 | 272.6 | 170 | 272.44 | 181.8 | 271.53 |
| 184.85 | 271.37 | 185.59 | 271.29 | 188.12 | 271.13 | 192.96 | 270.89 | 195.82 | 270.64 |
| 202.62 | 270.41 | 205.73 | 270.14 | 207.84 | 270.02 | 209.88 | 269.76 | 218.94 | 269.19 |
| 221.55 | 269.16 | 225.83 | 268.89 | 235.99 | 268.58 | 237.56 | 268.56 | 239.74 | 268.73 |
| 241.49 | 268.8 | 244.12 | 268.73 | 244.86 | 268.62 | 250.01 | 268.25 | 252.29 | 268.01 |
| 256.83 | 267.92 | 260.65 | 267.9 | 265.32 | 267.73 | 272.05 | 267.71 | 274.03 | 267.68 |
| 276.44 | 267.82 | 277.71 | 267.83 | 282.19 | 267.8 | 285.48 | 267.74 | 290.78 | 267.88 |
| 298.05 | 268.24 | 299.55 | 268.33 | 306.14 | 268.82 | 315.44 | 269.61 | 324.99 | 270.16 |
| 327.93 | 270.45 | 333.86 | 271.3 | 337.36 | 271.29 | 344.67 | 271.31 | 347.11 | 271.43 |
| 357.76 | 271.71 | 362.69 | 272.13 | 365.37 | 272.42 | 369.55 | 273 | 373.17 | 273.72 |
| 373.95 | 273.92 | 376.72 | 274.83 | 380.02 | 276.14 | 381.31 | 276.62 | 385.46 | 276.91 |
| 387.35 | 277.02 | 389.39 | 277.08 | 391.72 | 277.06 | 393.05 | 277.17 | 396.14 | 277.25 |
| 398.78 | 277.18 | 400.86 | 277.02 | 405.51 | 276.54 | 407.12 | 276.46 | 409.46 | 276.4 |
| 413.83 | 276.52 | 419.98 | 276.5 | 420.68 | 276.39 | 425.16 | 275.22 | 430.4 | 273.88 |
| 439 | 272.12 | 443.18 | 271.25 | 447.45 | 270.67 | 452.15 | 270.38 | 453.28 | 270.38 |
| 458.38 | 270.31 | 462.03 | 270.24 | 469.82 | 270.2 | 474.87 | 270.69 | 478.01 | 270.87 |
| 482.74 | 271.03 | 484.98 | 271.07 | 487.16 | 271.07 | 492.72 | 270.93 | 493.82 | 270.99 |
| 500.46 | 270.57 | 504.42 | 270.44 | 506 | 270.14 | 508.27 | 269.83 | 511.63 | 269.41 |
| 514.39 | 269.22 | 519.04 | 268.99 | 523.44 | 268.87 | 526.56 | 268.74 | 530.26 | 268.52 |
| 531.45 | 268.48 | 535.7 | 268.5 | 539.48 | 268.63 | 543.84 | 268.87 | 545.46 | 268.99 |
| 546.94 | 268.99 | 548.97 | 269.04 | 552.66 | 269.19 | 554.46 | 269.24 | 554.9 | 269.07 |
| 562.62 | 267.17 | 566.52 | 266.26 | 571.29 | 265.47 | 572.28 | 265.34 | 581.25 | 265.02 |
| 588.99 | 264.78 | 591.86 | 264.76 | 598.98 | 264.98 | 608.19 | 265.24 | 617.96 | 265.25 |
| 622.7 | 265.29 | 629.29 | 265.44 | 630.4 | 265.52 | 633.58 | 265.64 | 634.51 | 265.7 |
| 638.04 | 265.73 | 639.39 | 265.85 | 648.49 | 265.91 | 652.97 | 265.89 | 678.63 | 266.2 |
| 683.45 | 266.29 | 685.87 | 266.51 | 687.39 | 266.53 | 689.15 | 266.67 | 693.52 | 266.82 |
| 696.66 | 267.01 | 705.19 | 267.26 | 708.23 | 267.54 | 710.27 | 267.68 | 718.56 | 268.17 |
| 726.06 | 268.33 | 726.28 | 268.31 | 734.34 | 268.35 | 736.49 | 268.46 | 738.81 | 268.48 |
| 742.29 | 268.59 | 744.13 | 268.73 | 745.88 | 268.77 | 749.25 | 268.97 | 754.48 | 269.44 |
| 759.79 | 269.78 | 765.71 | 270.52 | 768.08 | 270.75 | 774.06 | 271.18 | 776.71 | 271.12 |
| 778.86 | 271.18 | 782.49 | 271.39 | 784.2 | 271.51 | 786.91 | 271.63 | 788.07 | 271.71 |
| 791.95 | 271.87 | 795.92 | 272.13 | 798.11 | 272.32 | 802.81 | 273 | 808.57 | 273.56 |
| 812.11 | 274.03 | 817.2 | 274.4 | 822.25 | 274.38 | 825.89 | 274.26 | 829.71 | 274.03 |
| 830.85 | 273.93 | 833.73 | 273.59 | 835.7 | 273.23 | 837.88 | 272.7 | 838 | 272.61 |
| 842.13 | 272.34 | 844.43 | 272.24 | 847 | 272.44 | 850.99 | 272.65 | 853.19 | 272.92 |
| 857.49 | 273.49 | 865.1 | 273.47 | 866.02 | 273.24 | 872.41 | 271.79 | 874.15 | 271.49 |
| 878.68 | 270.82 | 881.44 | 270.52 | 882.93 | 270.23 | 885.65 | 270.28 | 887.81 | 270.41 |
| 888.86 | 270.53 | 894 | 270.73 | 895.66 | 270.77 | 897.55 | 270.95 | 899.61 | 271.09 |
| 901.57 | 271.32 | 905.12 | 271.58 | 907.87 | 271.73 | 911.26 | 272.04 | 912.68 | 272.09 |
| 914.66 | 272.09 | 918.53 | 272.19 | 921.07 | 272.29 | 922.16 | 272.29 | 924.76 | 272.17 |
| 928.11 | 272.09 | 934.33 | 272.12 | 936.33 | 272.17 | 949.01 | 271.99 | 952.71 | 271.82 |
| 956.79 | 271.46 | 959.04 | 271.12 | 960.5 | 270.8 | 965.11 | 269.88 | 967.27 | 269.6 |
| 971.6 | 269.1 | 975.16 | 268.95 | 977.7 | 268.72 | 977.96 | 268.65 | 983.56 | 268.57 |
| 986.68 | 268.58 | 987.87 | 268.64 | 995.09 | 268.75 | 998.55 | 268.84 | 999.41 | 269.03 |
| 1000.56 | 269.14 | 1004.94 | 269.48 | 1007.59 | 269.75 | 1012.28 | 270.15 | 1012.99 | 270.24 |
| 1021.78 | 271.57 | 1022.65 | 271.67 | 1025.21 | 272.51 | 1027.86 | 273.65 | 1029.55 | 274.33 |
| 1033.29 | 274.68 | 1033.87 | 274.71 | 1040.37 | 275.24 | 1042.97 | 275.37 | 1046.11 | 275.59 |
| 1048.49 | 275.87 | 1052.24 | 276.25 | 1054.15 | 276.31 | 1057.12 | 276.17 | 1060.76 | 276.06 |
| 1063 | 276.07 | 1064.74 | 276.14 | 1067.79 | 276.34 | 1077.5 | 277.19 | 1081.4 | 277.26 |
| 1085.46 | 277.21 | 1091.85 | 276.97 | 1093.43 | 276.89 | 1095.85 | 276.72 | 1099.27 | 276.38 |
| 1105.89 | 275.5 | 1109.38 | 275.2 | 1111.81 | 275.07 | 1115.49 | 274.99 | 1117.18 | 274.98 |
| 1120.7 | 275.1 | 1123.11 | 275.11 | 1125.22 | 275.06 | 1130.93 | 274.87 | 1136.57 | 274.01 |
| 1142.07 | 272.91 | 1145.05 | 272.19 | 1147.45 | 271.67 | 1150.24 | 271.15 | 1154.01 | 270.7 |
| 1156.95 | 270.3 | 1161.28 | 269.99 | 1165.45 | 269.83 | 1166.98 | 269.92 | 1173.79 | 270 |
| 1179.7 | 270.19 | 1182.82 | 270.26 | 1188.13 | 270.33 | 1192.02 | 270.4 | 1195.31 | 270.4 |
| 1198.95 | 270.3 | 1200.89 | 270.28 | 1206.57 | 270.27 | 1209.59 | 270.25 | 1212.37 | 270.26 |
| 1214.47 | 270.23 | 1217.01 | 270.13 | 1221.08 | 270.12 | 1224.8 | 270.07 | 1226.85 | 270.08 |
| 1230.1 | 270.02 | 1234.46 | 270.07 | 1242.67 | 270.24 | 1247.76 | 270.4 | 1249.24 | 270.78 |
| 1252.23 | 271.29 | 1256.28 | 272.2 | 1257.13 | 272.37 | 1259.25 | 272.69 | 1261.41 | 272.82 |
| 1265.32 | 272.64 | 1268.98 | 272.79 | 1270 | 272.74 | 1272.46 | 272.75 | 1273.36 | 272.72 |
| 1277.51 | 272.44 | 1279.93 | 272.23 | 1282.49 | 272.09 | 1285.78 | 271.85 | 1291.75 | 271.57 |
| 1299.95 | 271.31 | 1302.61 | 271.24 | 1308.85 | 270.89 | 1313.99 | 270.79 | 1317.24 | 270.68 |
| 1320.57 | 270.69 | 1326.98 | 270.77 | 1330.02 | 270.88 | 1337.79 | 270.88 | 1338.64 | 270.96 |
| 1341.41 | 271.13 | 1346.4 | 271.53 | 1352.69 | 272.07 | 1355.27 | 272.19 | 1359.45 | 272.24 |
| 1361.3 | 272.3 | 1363.26 | 272.29 | 1364.87 | 272.07 | 1365.87 | 271.88 | 1367.47 | 271.69 |
| 1372.3 | 271.34 | 1374.48 | 271.11 | 1374.72 | 271.05 | 1379.11 | 270.93 | 1381.49 | 270.91 |
| 1382.15 | 271 | 1383.99 | 271.07 | 1387.68 | 271.13 | 1390.42 | 271.14 | 1392.86 | 271.08 |
| 1398.31 | 270.75 | 1405.61 | 270.29 | 1409.98 | 269.85 | 1413.76 | 269.68 | 1419.02 | 269.4 |
| 1422.51 | 269.15 | 1426.29 | 269.03 | 1428.17 | 268.99 | 1431.84 | 268.98 | 1436.16 | 268.89 |
| 1438.73 | 268.87 | 1441.65 | 268.9 | 1442.8 | 268.99 | 1446.38 | 269.06 | 1447.24 | 269.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1448.33 | 269.24 | 1450.74 | 269.26 | 1452.7 | 269.35 | 1455.19 | 269.38 | 1455.65 | 269.33 |
| 1463.5 | 269.09 | 1467.5 | 269.08 | 1469.77 | 269.02 | 1472.45 | 269.01 | 1475.53 | 269.06 |
| 1479.08 | 269.09 | 1479.76 | 269.14 | 1482.4 | 269.22 | 1484 | 269.3 | 1486.51 | 269.37 |
| 1491.34 | 269.54 | 1498.71 | 270.46 | 1500.07 | 270.69 | 1504.9 | 271.37 | 1506.87 | 271.76 |
| 1510.34 | 272.2 | 1516.57 | 272.51 | 1518.94 | 272.78 | 1520.42 | 272.84 | 1523.32 | 272.76 |
| 1525.32 | 272.66 | 1528.06 | 272.56 | 1531.09 | 272.48 | 1534.1 | 272.36 | 1535.77 | 272.26 |
| 1540.22 | 272.13 | 1543.9 | 271.96 | 1549.8 | 271.81 | 1555.87 | 271.34 | 1559.64 | 271.02 |
| 1567.31 | 270.62 | 1572.12 | 270.19 | 1577.08 | 269.71 | 1585.24 | 269.06 | 1587.96 | 268.88 |
| 1595.42 | 268.57 | 1600.79 | 268.52 | 1605.96 | 268.44 | 1608.59 | 268.37 | 1615 | 268.41 |
| 1615.98 | 268.38 | 1618.77 | 268.39 | 1621.51 | 268.49 | 1626.34 | 268.61 | 1629.88 | 268.61 |
| 1637.41 | 268.57 | 1639.61 | 268.53 | 1640.93 | 268.56 | 1648.79 | 268.66 | 1656.25 | 268.67 |
| 1658.34 | 268.7 | 1665.74 | 268.73 | 1667.89 | 268.76 | 1674.15 | 269.17 | 1675.46 | 269.28 |
| 1680.35 | 269.49 | 1681.96 | 269.48 | 1686.63 | 269.58 | 1689.35 | 269.59 | 1694.54 | 269.52 |
| 1698.15 | 269.37 | 1700.22 | 269.44 | 1702.91 | 269.36 | 1705.63 | 269.47 | 1707.28 | 269.46 |
| 1714.25 | 269.08 | 1715.67 | 268.93 | 1721.53 | 268.75 | 1722.46 | 268.7 | 1730.82 | 268.06 |
| 1733.03 | 268.05 | 1740.08 | 268.08 | 1744.22 | 268.06 | 1746.62 | 267.99 | 1751.01 | 267.99 |
| 1753.67 | 267.91 | 1755.99 | 267.9 | 1758.43 | 267.98 | 1760.79 | 267.88 | 1763.02 | 267.91 |
| 1768.84 | 267.88 | 1771.53 | 267.8 | 1773.84 | 267.86 | 1778.39 | 267.83 | 1780.32 | 267.86 |
| 1784.76 | 267.76 | 1787 | 267.76 | 1790.14 | 267.71 | 1794.32 | 267.72 | 1796.24 | 267.68 |
| 1800.6 | 267.67 | 1805.14 | 267.61 | 1813.01 | 267.59 | 1816.63 | 267.6 | 1818.49 | 267.57 |
| 1821 | 267.59 | 1824.74 | 267.48 | 1829.03 | 267.46 | 1832.39 | 267.48 | 1835.63 | 267.4 |
| 1841.16 | 267.47 | 1843.69 | 267.6 | 1846.86 | 267.65 | 1849.01 | 267.62 | 1851.59 | 267.72 |
| 1857.92 | 267.61 | 1859.57 | 267.77 | 1861.79 | 267.94 | 1862.98 | 267.86 | 1865.39 | 267.9 |
| 1868 | 267.78 | 1877.91 | 267.69 | 1878.85 | 267.83 | 1879.96 | 267.91 | 1881.76 | 267.97 |
| 1883.26 | 268.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 282.19 | .04 | 1744.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 282.19 | 1744.22 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 668.672*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 280.3 | 6.04 | 279.67 | 10.42 | 279.37 | 21.47 | 278.34 | 24.55 | 278.04 |
| 31.44 | 277.74 | 37.41 | 277.41 | 40.41 | 277.17 | 43.25 | 276.98 | 57.16 | 276.35 |
| 64.01 | 276.06 | 70.67 | 275.91 | 78.66 | 275.71 | 83.62 | 275.7 | 86.3 | 275.74 |
| 88.38 | 275.68 | 95.29 | 275.42 | 101.75 | 274.82 | 108.18 | 274.6 | 111.8 | 274.46 |
| 113.01 | 274.44 | 120.02 | 274.18 | 126.84 | 273.86 | 130.96 | 273.65 | 137.67 | 273.37 |
| 140.63 | 273.22 | 145.04 | 273.04 | 153.03 | 272.75 | 164 | 272.2 | 166.74 | 272.05 |
| 178.32 | 271.16 | 181.3 | 271 | 184.51 | 270.77 | 189.26 | 270.54 | 192.06 | 270.3 |
| 198.73 | 270.07 | 201.78 | 269.81 | 203.86 | 269.71 | 205.86 | 269.45 | 214.75 | 268.9 |
| 217.31 | 268.88 | 221.51 | 268.61 | 231.46 | 268.32 | 233 | 268.3 | 235.14 | 268.46 |
| 236.87 | 268.52 | 239.44 | 268.46 | 240.16 | 268.35 | 245.22 | 267.99 | 247.45 | 267.76 |
| 251.73 | 267.68 | 255.65 | 267.65 | 260.23 | 267.48 | 266.83 | 267.47 | 268.78 | 267.44 |
| 271.14 | 267.56 | 276.78 | 267.54 | 280.16 | 267.47 | 285.59 | 267.59 | 294.59 | 268.03 |
| 301.36 | 268.5 | 310.89 | 269.27 | 317.96 | 269.64 | 319.4 | 269.69 | 323.04 | 269.99 |
| 325.73 | 270.32 | 329.8 | 270.88 | 333.39 | 270.86 | 338.76 | 270.87 | 340.88 | 270.89 |
| 343.39 | 271 | 350.85 | 271.19 | 354.31 | 271.26 | 359.37 | 271.66 | 362.13 | 271.93 |
| 366.42 | 272.5 | 370.13 | 273.2 | 373.77 | 274.28 | 374.91 | 274.73 | 378.47 | 276.03 |
| 382.73 | 276.31 | 384.68 | 276.41 | 386.76 | 276.47 | 389.15 | 276.44 | 389.86 | 276.52 |
| 393.69 | 276.62 | 396.4 | 276.54 | 398.53 | 276.39 | 403.31 | 275.92 | 406.57 | 275.8 |
| 411.84 | 275.9 | 418.15 | 275.88 | 419.68 | 275.58 | 425.35 | 274.18 | 428.84 | 273.34 |
| 437.67 | 271.66 | 441.95 | 270.81 | 446.34 | 270.26 | 451.16 | 269.97 | 457.55 | 269.89 |
| 461.3 | 269.81 | 469.28 | 269.75 | 474.47 | 270.21 | 477.69 | 270.39 | 482.43 | 270.53 |
| 484.84 | 270.57 | 487.08 | 270.57 | 491.62 | 270.45 | 493.91 | 270.5 | 500.72 | 270.09 |
| 504.79 | 269.97 | 506.4 | 269.67 | 512.18 | 268.96 | 515.01 | 268.77 | 519.79 | 268.55 |
| 524.3 | 268.43 | 527.51 | 268.3 | 531.3 | 268.08 | 532.52 | 268.04 | 536.88 | 268.05 |
| 542.22 | 268.22 | 546.89 | 268.49 | 548.41 | 268.48 | 550.5 | 268.53 | 556.13 | 268.72 |
| 556.19 | 268.63 | 557.65 | 268.31 | 564.5 | 266.71 | 568.5 | 265.82 | 572.73 | 265.16 |
| 574.4 | 264.92 | 583.61 | 264.59 | 591.56 | 264.35 | 594.5 | 264.34 | 601.83 | 264.55 |
| 611.31 | 264.8 | 621.37 | 264.81 | 626.25 | 264.86 | 633.04 | 265.02 | 634.18 | 265.1 |
| 638.32 | 265.27 | 642.04 | 265.31 | 643.35 | 265.42 | 652.8 | 265.48 | 657.41 | 265.47 |
| 683.83 | 265.76 | 688.79 | 265.86 | 691.28 | 266.08 | 692.84 | 266.1 | 694.66 | 266.24 |
| 699.16 | 266.39 | 702.39 | 266.57 | 710.7 | 266.8 | 713.44 | 267.05 | 716.4 | 267.25 |
| 724.94 | 267.72 | 732.67 | 267.88 | 732.89 | 267.86 | 737.8 | 267.9 | 741.18 | 267.91 |
| 743.4 | 268.05 | 745.79 | 268.08 | 749.38 | 268.21 | 751.26 | 268.38 | 753.06 | 268.43 |
| 757.28 | 268.7 | 761.93 | 269.13 | 763.63 | 269.26 | 767.39 | 269.48 | 773.48 | 270.2 |
| 775.92 | 270.44 | 782.08 | 270.85 | 784.81 | 270.72 | 787.02 | 270.74 | 790.76 | 270.91 |
| 792.52 | 271.02 | 795.31 | 271.12 | 796.5 | 271.2 | 798.84 | 271.26 | 804.58 | 271.58 |
| 806.83 | 271.76 | 811.68 | 272.42 | 817.61 | 272.95 | 821.25 | 273.4 | 826.49 | 273.75 |
| 831.69 | 273.72 | 836.36 | 273.57 | 840.55 | 273.31 | 843.52 | 272.99 | 846.19 | 272.52 |
| 847.79 | 272.14 | 847.9 | 272.05 | 852.15 | 271.78 | 854.52 | 271.68 | 857.17 | 271.86 |
| 861.28 | 272.06 | 863.55 | 272.32 | 867.97 | 272.87 | 875.81 | 272.84 | 876.75 | 272.62 |
| 883.34 | 271.21 | 884.5 | 271 | 889.79 | 270.27 | 892.63 | 269.99 | 894.16 | 269.71 |
| 896.96 | 269.77 | 901.33 | 270.11 | 905.56 | 270.27 | 907.27 | 270.31 | 909.21 | 270.48 |
| 911.33 | 270.6 | 913.35 | 270.82 | 917.01 | 271.04 | 919.84 | 271.16 | 923.33 | 271.43 |
| 924.79 | 271.46 | 926.83 | 271.44 | 930.82 | 271.54 | 933.43 | 271.63 | 936.35 | 271.58 |
| 937.23 | 271.52 | 940.68 | 271.44 | 947.09 | 271.47 | 949.15 | 271.53 | 955.34 | 271.47 |
| 962.2 | 271.43 | 966 | 271.28 | 970.21 | 270.92 | 972.52 | 270.58 | 974.03 | 270.26 |
| 978.78 | 269.35 | 982.72 | 268.9 | 985.45 | 268.63 | 989.12 | 268.49 | 993.09 | 268.18 |
| 997.77 | 268.14 | 1000.98 | 268.16 | 1002.21 | 268.22 | 1009.63 | 268.36 | 1013.2 | 268.46 |
| 1014.08 | 268.65 | 1015.27 | 268.76 | 1020.05 | 269.13 | 1022.51 | 269.34 | 1027.33 | 269.68 |
| 1028.07 | 269.77 | 1037.11 | 270.99 | 1038.01 | 271.09 | 1040.65 | 271.89 | 1043.37 | 272.99 |
| 1045.11 | 273.66 | 1048.96 | 274.02 | 1049.56 | 274.05 | 1056.26 | 274.58 | 1058.93 | 274.72 |
| 1062.17 | 274.93 | 1064.62 | 275.2 | 1068.47 | 275.56 | 1070.44 | 275.62 | 1073.5 | 275.49 |
| 1077.25 | 275.39 | 1079.55 | 275.4 | 1081.35 | 275.46 | 1084.49 | 275.66 | 1094.48 | 276.49 |
| 1098.5 | 276.56 | 1102.67 | 276.51 | 1109.25 | 276.29 | 1113.37 | 276.05 | 1116.9 | 275.72 |
| 1123.71 | 274.88 | 1128.17 | 274.53 | 1129.81 | 274.46 | 1133.59 | 274.38 | 1135.33 | 274.38 |
| 1138.96 | 274.51 | 1141.44 | 274.53 | 1143.61 | 274.49 | 1149.49 | 274.34 | 1155.29 | 273.51 |
| 1159.87 | 272.66 | 1161.42 | 272.35 | 1164.03 | 271.73 | 1166.5 | 271.22 | 1168.7 | 270.81 |
| 1173.25 | 270.28 | 1176.27 | 269.88 | 1180.73 | 269.57 | 1185.03 | 269.42 | 1186.6 | 269.53 |
| 1194.64 | 269.64 | 1199.7 | 269.84 | 1202.91 | 269.92 | 1206.91 | 269.99 | 1208.38 | 269.99 |
| 1212.39 | 270.06 | 1215.77 | 270.05 | 1219.52 | 269.93 | 1221.51 | 269.9 | 1233.34 | 269.89 |
| 1235.5 | 269.87 | 1238.11 | 269.77 | 1242.3 | 269.76 | 1246.13 | 269.69 | 1246.76 | 269.71 |
| 1250.94 | 269.63 | 1256.08 | 269.67 | 1266.24 | 269.88 | 1269.77 | 270 | 1271.29 | 270.37 |
| 1274.37 | 270.87 | 1278.54 | 271.75 | 1281.06 | 272.17 | 1283.82 | 272.35 | 1284.86 | 272.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1287.84 | 272.18 | 1291.62 | 272.32 | 1292.67 | 272.27 | 1295.2 | 272.29 | 1300.39 | 271.99 |
| 1302.89 | 271.78 | 1306.79 | 271.57 | 1308.91 | 271.39 | 1315.06 | 271.12 | 1323.5 | 270.87 |
| 1326.24 | 270.81 | 1332.66 | 270.5 | 1336.18 | 270.47 | 1341.3 | 270.35 | 1344.73 | 270.36 |
| 1351.33 | 270.46 | 1354.45 | 270.59 | 1362.46 | 270.59 | 1363.33 | 270.68 | 1366.18 | 270.81 |
| 1368.71 | 270.97 | 1377.8 | 271.68 | 1381.46 | 271.81 | 1384.76 | 271.81 | 1386.66 | 271.88 |
| 1388.68 | 271.86 | 1390.33 | 271.64 | 1391.37 | 271.44 | 1393.01 | 271.25 | 1397.99 | 270.95 |
| 1400.48 | 270.68 | 1405 | 270.57 | 1407.45 | 270.56 | 1408.13 | 270.65 | 1410.02 | 270.73 |
| 1413.82 | 270.8 | 1416.64 | 270.82 | 1419.16 | 270.76 | 1424.76 | 270.44 | 1432.28 | 269.99 |
| 1434.36 | 269.81 | 1436.78 | 269.56 | 1440.67 | 269.39 | 1446.09 | 269.1 | 1449.68 | 268.83 |
| 1453.58 | 268.7 | 1459.28 | 268.65 | 1463.73 | 268.56 | 1466.38 | 268.54 | 1469.38 | 268.56 |
| 1470.57 | 268.65 | 1474.25 | 268.72 | 1475.14 | 268.84 | 1476.26 | 268.89 | 1478.75 | 268.91 |
| 1482.19 | 269.03 | 1491.88 | 268.75 | 1496 | 268.73 | 1498.33 | 268.68 | 1501.09 | 268.67 |
| 1507.92 | 268.73 | 1508.62 | 268.79 | 1511.34 | 268.85 | 1512.99 | 268.94 | 1520.54 | 269.17 |
| 1528.13 | 270.07 | 1529.53 | 270.3 | 1534.5 | 270.96 | 1536.81 | 271.4 | 1540.1 | 271.81 |
| 1546.52 | 272.07 | 1548.96 | 272.31 | 1550.48 | 272.37 | 1551.59 | 272.35 | 1555.52 | 272.19 |
| 1558.35 | 272.1 | 1561.47 | 272.04 | 1564.56 | 271.95 | 1566.28 | 271.87 | 1570.86 | 271.77 |
| 1574.65 | 271.61 | 1580.72 | 271.5 | 1586.98 | 271.01 | 1590.86 | 270.66 | 1598.76 | 270.27 |
| 1603.71 | 269.87 | 1608.81 | 269.39 | 1617.22 | 268.75 | 1620.02 | 268.58 | 1627.7 | 268.27 |
| 1633.23 | 268.23 | 1638.55 | 268.15 | 1641.25 | 268.07 | 1647.85 | 268.12 | 1648.87 | 268.09 |
| 1651.74 | 268.1 | 1654.56 | 268.21 | 1659.52 | 268.32 | 1663.17 | 268.33 | 1670.92 | 268.29 |
| 1673.19 | 268.25 | 1674.55 | 268.28 | 1684.26 | 268.37 | 1690.33 | 268.36 | 1696.77 | 268.42 |
| 1700.09 | 268.42 | 1702.31 | 268.45 | 1708.75 | 268.84 | 1710.1 | 268.95 | 1715.13 | 269.18 |
| 1716.79 | 269.18 | 1721.6 | 269.27 | 1724.4 | 269.28 | 1729.75 | 269.21 | 1733.46 | 269.07 |
| 1735.59 | 269.14 | 1738.36 | 269.06 | 1741.16 | 269.16 | 1742.86 | 269.16 | 1750.48 | 268.78 |
| 1751.5 | 268.67 | 1757.24 | 268.51 | 1758.49 | 268.45 | 1761.22 | 268.24 | 1767.09 | 267.82 |
| 1773.17 | 267.83 | 1776.63 | 267.85 | 1780.89 | 267.82 | 1783.74 | 267.75 | 1788.94 | 267.74 |
| 1789.61 | 267.69 | 1792.1 | 267.63 | 1794.84 | 267.63 | 1797.4 | 267.73 | 1800.31 | 267.61 |
| 1803.18 | 267.65 | 1810.07 | 267.6 | 1813.27 | 267.5 | 1816.62 | 267.58 | 1821.39 | 267.55 |
| 1824.5 | 267.56 | 1828.55 | 267.46 | 1831.61 | 267.45 | 1835.32 | 267.39 | 1840.28 | 267.41 |
| 1842.55 | 267.36 | 1848.94 | 267.36 | 1852.29 | 267.27 | 1854.41 | 267.28 | 1858.15 | 267.25 |
| 1862.43 | 267.24 | 1863.37 | 267.27 | 1866.28 | 267.26 | 1868.92 | 267.22 | 1871.9 | 267.24 |
| 1876.82 | 267.1 | 1881.42 | 267.08 | 1885.4 | 267.11 | 1887.39 | 267.03 | 1889.24 | 267.01 |
| 1891.16 | 267.05 | 1891.92 | 267 | 1895.8 | 267.1 | 1898.8 | 267.26 | 1903.72 | 267.32 |
| 1905.11 | 267.29 | 1908.17 | 267.41 | 1915.67 | 267.27 | 1917.63 | 267.47 | 1920.25 | 267.69 |
| 1921.67 | 267.58 | 1923.6 | 267.64 | 1926.58 | 267.57 | 1927.62 | 267.49 | 1935.93 | 267.44 |
| 1937.36 | 267.47 | 1939.36 | 267.41 | 1940.47 | 267.59 | 1942.32 | 267.73 | 1943.92 | 267.78 |
| 1945.7 | 268 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 276.78 | .04 | 1780.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 276.78 | 1780.89 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 648.845*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 279.81 | 5.92 | 279.2 | 10.67 | 278.88 | 16 | 278.37 | 23.17 | 277.71 |
| 24.07 | 277.61 | 30.82 | 277.3 | 36.68 | 276.96 | 39.62 | 276.72 | 42.41 | 276.53 |
| 56.04 | 275.91 | 62.76 | 275.63 | 69.29 | 275.48 | 77.13 | 275.28 | 81.99 | 275.26 |
| 84.61 | 275.3 | 86.05 | 275.27 | 93.43 | 274.98 | 99.76 | 274.38 | 106.07 | 274.17 |
| 109.62 | 274.03 | 110.8 | 274.02 | 117.67 | 273.76 | 124.36 | 273.44 | 128.4 | 273.22 |
| 132.08 | 273.09 | 137.88 | 272.81 | 142.21 | 272.63 | 150.04 | 272.35 | 160.8 | 271.81 |
| 163.48 | 271.66 | 174.83 | 270.79 | 177.76 | 270.64 | 180.91 | 270.42 | 185.56 | 270.19 |
| 188.31 | 269.96 | 194.85 | 269.74 | 197.84 | 269.49 | 199.88 | 269.39 | 201.83 | 269.14 |
| 210.55 | 268.61 | 213.06 | 268.59 | 217.18 | 268.34 | 226.94 | 268.05 | 228.45 | 268.03 |
| 230.55 | 268.18 | 232.24 | 268.25 | 234.76 | 268.18 | 235.47 | 268.09 | 240.43 | 267.73 |
| 242.62 | 267.51 | 246.98 | 267.43 | 250.65 | 267.4 | 255.15 | 267.24 | 261.62 | 267.22 |
| 263.52 | 267.19 | 267.06 | 267.32 | 271.38 | 267.28 | 274.83 | 267.19 | 280.4 | 267.31 |
| 289.63 | 267.73 | 296.57 | 268.19 | 306.35 | 268.92 | 313.59 | 269.27 | 315.07 | 269.32 |
| 319.49 | 269.67 | 325.73 | 270.45 | 329.41 | 270.43 | 337.1 | 270.47 | 339.67 | 270.58 |
| 347.31 | 270.76 | 350.87 | 270.82 | 356.06 | 271.2 | 358.88 | 271.45 | 363.28 | 272 |
| 367.08 | 272.69 | 370.81 | 273.74 | 374.29 | 274.99 | 375.64 | 275.44 | 380.01 | 275.71 |
| 382 | 275.8 | 384.14 | 275.85 | 386.59 | 275.82 | 387.32 | 275.9 | 391.24 | 275.98 |
| 394.02 | 275.91 | 396.21 | 275.75 | 401.1 | 275.3 | 404.45 | 275.19 | 409.85 | 275.28 |
| 416.32 | 275.25 | 417.89 | 274.96 | 427.28 | 272.81 | 436.33 | 271.19 | 440.73 | 270.38 |
| 445.22 | 269.84 | 447.84 | 269.71 | 450.16 | 269.56 | 456.71 | 269.47 | 460.56 | 269.37 |
| 468.75 | 269.31 | 474.07 | 269.74 | 477.37 | 269.9 | 481.1 | 269.98 | 482.23 | 270.04 |
| 486.99 | 270.07 | 492.84 | 269.95 | 494 | 270.02 | 500.99 | 269.62 | 505.15 | 269.5 |
| 506.81 | 269.21 | 509.2 | 268.91 | 512.74 | 268.51 | 515.64 | 268.33 | 520.53 | 268.11 |
| 525.16 | 267.98 | 528.45 | 267.86 | 532.33 | 267.64 | 533.59 | 267.6 | 538.06 | 267.6 |
| 543.53 | 267.74 | 548.32 | 267.99 | 549.88 | 267.97 | 552.02 | 268.01 | 555.89 | 268.15 |
| 557.8 | 268.19 | 557.85 | 268.11 | 559.36 | 267.8 | 566.38 | 266.25 | 570.48 | 265.39 |
| 575.5 | 264.64 | 576.53 | 264.51 | 585.98 | 264.16 | 594.12 | 263.93 | 597.14 | 263.91 |
| 604.68 | 264.12 | 614.43 | 264.36 | 624.78 | 264.38 | 629.8 | 264.43 | 636.78 | 264.6 |
| 637.96 | 264.68 | 641.32 | 264.79 | 642.21 | 264.85 | 646.04 | 264.89 | 647.47 | 265 |
| 657.11 | 265.05 | 661.86 | 265.04 | 689.03 | 265.33 | 694.14 | 265.43 | 696.69 | 265.65 |
| 698.3 | 265.67 | 700.17 | 265.81 | 704.8 | 265.96 | 708.13 | 266.13 | 716.67 | 266.36 |
| 719.49 | 266.62 | 722.54 | 266.82 | 731.32 | 267.27 | 739.5 | 267.42 | 748.03 | 267.47 |
| 750.31 | 267.64 | 752.77 | 267.69 | 756.46 | 267.83 | 758.4 | 268.03 | 760.25 | 268.09 |
| 763.43 | 268.29 | 771.12 | 268.96 | 774.98 | 269.18 | 776.88 | 269.38 | 782.55 | 270.03 |
| 790.1 | 270.52 | 792.91 | 270.33 | 795.19 | 270.31 | 799.02 | 270.43 | 800.67 | 270.53 |
| 803.71 | 270.61 | 804.93 | 270.68 | 809.04 | 270.8 | 813.24 | 271.03 | 815.56 | 271.21 |
| 820.55 | 271.83 | 826.65 | 272.33 | 830.39 | 272.77 | 835.79 | 273.1 | 841.13 | 273.07 |
| 845.93 | 272.93 | 850.25 | 272.69 | 853.3 | 272.39 | 855.37 | 272.07 | 857.69 | 271.57 |
| 857.81 | 271.49 | 862.18 | 271.22 | 864.62 | 271.12 | 867.35 | 271.29 | 871.57 | 271.48 |
| 873.9 | 271.71 | 878.46 | 272.24 | 886.51 | 272.21 | 894.26 | 270.63 | 895.46 | 270.43 |
| 900.9 | 269.73 | 903.82 | 269.45 | 905.39 | 269.19 | 908.28 | 269.26 | 911.67 | 269.58 |
| 917.13 | 269.82 | 918.88 | 269.85 | 920.88 | 270.02 | 923.06 | 270.12 | 925.14 | 270.31 |
| 928.89 | 270.5 | 931.81 | 270.59 | 935.4 | 270.81 | 939 | 270.8 | 943.1 | 270.89 |
| 945.79 | 270.98 | 946.94 | 270.98 | 951.92 | 270.81 | 953.25 | 270.79 | 959.84 | 270.83 |
| 962.49 | 270.9 | 966.09 | 270.87 | 970.75 | 270.86 | 975.38 | 270.87 | 979.3 | 270.73 |
| 983.62 | 270.37 | 986 | 270.03 | 987.55 | 269.71 | 992.44 | 268.83 | 994.72 | 268.57 |
| 999.31 | 268.16 | 1003.08 | 268.04 | 1005.77 | 267.83 | 1007.54 | 267.74 | 1011.98 | 267.71 |
| 1015.28 | 267.74 | 1016.54 | 267.81 | 1024.18 | 267.96 | 1027.85 | 268.08 | 1028.75 | 268.26 |
| 1029.98 | 268.38 | 1037.42 | 268.94 | 1042.38 | 269.22 | 1043.14 | 269.3 | 1052.45 | 270.42 |
| 1053.37 | 270.5 | 1056.09 | 271.27 | 1058.88 | 272.34 | 1060.67 | 272.99 | 1064.64 | 273.36 |
| 1065.25 | 273.39 | 1072.14 | 273.93 | 1074.89 | 274.06 | 1078.22 | 274.26 | 1080.74 | 274.52 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1084.7 | 274.87 | 1086.73 | 274.93 | 1092.55 | 274.73 | 1096.1 | 274.73 | 1097.95 | 274.79 |
| 1101.18 | 274.98 | 1111.46 | 275.79 | 1116.94 | 275.86 | 1119.89 | 275.82 | 1126.65 | 275.61 |
| 1130.89 | 275.38 | 1134.52 | 275.06 | 1141.53 | 274.25 | 1145.22 | 273.97 | 1147.8 | 273.85 |
| 1151.69 | 273.78 | 1153.48 | 273.78 | 1157.22 | 273.92 | 1159.76 | 273.94 | 1162 | 273.92 |
| 1165.47 | 273.84 | 1168.05 | 273.81 | 1174.02 | 273.01 | 1178.73 | 272.19 | 1180.32 | 271.89 |
| 1183 | 271.28 | 1185.54 | 270.77 | 1188.49 | 270.28 | 1192.49 | 269.86 | 1195.6 | 269.47 |
| 1201.22 | 269.09 | 1204.61 | 269.01 | 1206.23 | 269.14 | 1213.43 | 269.27 | 1214.49 | 269.27 |
| 1219.7 | 269.49 | 1224.86 | 269.62 | 1228.62 | 269.66 | 1232.75 | 269.73 | 1236.23 | 269.7 |
| 1240.09 | 269.55 | 1242.13 | 269.52 | 1254.3 | 269.53 | 1256.65 | 269.51 | 1259.21 | 269.4 |
| 1263.52 | 269.4 | 1267.46 | 269.32 | 1269.64 | 269.31 | 1273.07 | 269.24 | 1277.69 | 269.28 |
| 1286.39 | 269.44 | 1291.78 | 269.59 | 1293.34 | 269.95 | 1296.51 | 270.44 | 1301.7 | 271.46 |
| 1303.95 | 271.76 | 1306.23 | 271.89 | 1310.37 | 271.73 | 1314.25 | 271.86 | 1315.33 | 271.81 |
| 1317.94 | 271.82 | 1323.28 | 271.54 | 1325.85 | 271.34 | 1329.86 | 271.12 | 1332.05 | 270.93 |
| 1338.37 | 270.68 | 1347.05 | 270.43 | 1349.87 | 270.39 | 1357.44 | 270.08 | 1360.1 | 270.11 |
| 1365.36 | 270.02 | 1369.83 | 270.05 | 1375.67 | 270.16 | 1378.89 | 270.31 | 1387.12 | 270.31 |
| 1388.03 | 270.4 | 1390.95 | 270.49 | 1393.56 | 270.63 | 1399.37 | 271.05 | 1402.9 | 271.28 |
| 1406.67 | 271.4 | 1410.07 | 271.39 | 1412.02 | 271.46 | 1414.1 | 271.43 | 1415.8 | 271.21 |
| 1416.87 | 271 | 1418.55 | 270.81 | 1423.67 | 270.57 | 1426.24 | 270.3 | 1430.89 | 270.21 |
| 1433.41 | 270.21 | 1434.1 | 270.3 | 1436.05 | 270.39 | 1439.96 | 270.48 | 1442.86 | 270.49 |
| 1445.45 | 270.43 | 1452.15 | 270.07 | 1458.95 | 269.69 | 1463.57 | 269.27 | 1467.58 | 269.1 |
| 1473.16 | 268.8 | 1476.85 | 268.5 | 1480.86 | 268.37 | 1486.73 | 268.32 | 1491.3 | 268.23 |
| 1494.03 | 268.2 | 1497.12 | 268.23 | 1498.34 | 268.31 | 1502.12 | 268.37 | 1503.04 | 268.5 |
| 1506.75 | 268.56 | 1510.29 | 268.68 | 1520.26 | 268.41 | 1524.5 | 268.39 | 1526.9 | 268.34 |
| 1529.73 | 268.33 | 1533 | 268.37 | 1536.76 | 268.38 | 1537.48 | 268.43 | 1540.28 | 268.49 |
| 1542.48 | 268.59 | 1544.63 | 268.64 | 1549.74 | 268.81 | 1557.55 | 269.69 | 1558.99 | 269.91 |
| 1564.1 | 270.56 | 1566.19 | 270.95 | 1569.87 | 271.42 | 1572.86 | 271.5 | 1577.39 | 271.68 |
| 1578.97 | 271.85 | 1580.55 | 271.9 | 1583.61 | 271.81 | 1585.73 | 271.71 | 1595.03 | 271.54 |
| 1601.51 | 271.4 | 1605.41 | 271.25 | 1611.65 | 271.18 | 1618.09 | 270.67 | 1622.08 | 270.3 |
| 1630.2 | 269.93 | 1635.29 | 269.54 | 1640.54 | 269.07 | 1649.19 | 268.44 | 1652.07 | 268.28 |
| 1659.98 | 267.97 | 1665.66 | 267.94 | 1671.13 | 267.85 | 1673.92 | 267.78 | 1675.74 | 267.78 |
| 1680.26 | 267.84 | 1681.75 | 267.8 | 1684.7 | 267.81 | 1687.6 | 267.92 | 1692.71 | 268.04 |
| 1696.46 | 268.05 | 1704.44 | 268.01 | 1706.78 | 267.97 | 1716.5 | 268.07 | 1724.4 | 268.05 |
| 1726.61 | 268.09 | 1734.45 | 268.12 | 1736.73 | 268.15 | 1743.35 | 268.51 | 1744.74 | 268.63 |
| 1749.91 | 268.87 | 1756.57 | 268.96 | 1759.45 | 268.97 | 1764.95 | 268.91 | 1768.77 | 268.77 |
| 1770.97 | 268.83 | 1773.81 | 268.76 | 1776.69 | 268.86 | 1779.62 | 268.82 | 1786.28 | 268.51 |
| 1787.32 | 268.4 | 1790 | 268.34 | 1794.52 | 268.2 | 1797.33 | 267.99 | 1803.37 | 267.59 |
| 1805.71 | 267.58 | 1813.18 | 267.62 | 1817.56 | 267.59 | 1820.85 | 267.5 | 1826.87 | 267.49 |
| 1827.64 | 267.43 | 1830.52 | 267.36 | 1833.69 | 267.36 | 1836.65 | 267.48 | 1840.28 | 267.33 |
| 1843.34 | 267.38 | 1847.48 | 267.36 | 1852.43 | 267.3 | 1855 | 267.21 | 1858.88 | 267.3 |
| 1861.17 | 267.3 | 1864.39 | 267.26 | 1867.04 | 267.29 | 1873.13 | 267.15 | 1876.21 | 267.14 |
| 1880.5 | 267.08 | 1886.24 | 267.09 | 1888.86 | 267.03 | 1896.25 | 267.03 | 1900.13 | 266.93 |
| 1902.58 | 266.94 | 1906.9 | 266.9 | 1911.86 | 266.89 | 1912.94 | 266.92 | 1916.31 | 266.92 |
| 1919.36 | 266.87 | 1922.8 | 266.9 | 1927.93 | 266.73 | 1933.81 | 266.7 | 1938.42 | 266.73 |
| 1940.72 | 266.65 | 1942.86 | 266.62 | 1945.07 | 266.66 | 1945.96 | 266.6 | 1946.97 | 266.66 |
| 1950.01 | 266.71 | 1953.91 | 266.92 | 1958.25 | 266.99 | 1961.2 | 266.95 | 1964.04 | 267.1 |
| 1967.38 | 267.05 | 1973.42 | 266.92 | 1975.68 | 267.17 | 1978.71 | 267.43 | 1980.35 | 267.3 |
| 1982.59 | 267.38 | 1986.04 | 267.29 | 1987.23 | 267.2 | 1996.85 | 267.16 | 1998.5 | 267.2 |
| 2000.06 | 267.12 | 2000.82 | 267.14 | 2002.1 | 267.35 | 2003.62 | 267.49 | 2006.62 | 267.65 |
| 2008.15 | 267.86 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 271.38 | .04 | 1817.56 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 271.38 | 1817.56 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 629.017*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 279.31 | 5.8 | 278.73 | 10.46 | 278.42 | 22.71 | 277.27 | 23.59 | 277.17 |
| 30.21 | 276.87 | 35.95 | 276.51 | 38.83 | 276.27 | 41.56 | 276.08 | 54.93 | 275.47 |
| 61.51 | 275.19 | 67.91 | 275.05 | 75.59 | 274.84 | 80.36 | 274.82 | 82.92 | 274.86 |
| 84.33 | 274.83 | 91.56 | 274.54 | 97.77 | 273.95 | 103.95 | 273.74 | 107.43 | 273.6 |
| 111.97 | 273.48 | 115.33 | 273.34 | 125.84 | 272.8 | 132.29 | 272.55 | 135.13 | 272.4 |
| 139.37 | 272.22 | 147.05 | 271.94 | 157.59 | 271.42 | 160.22 | 271.27 | 171.35 | 270.43 |
| 174.22 | 270.28 | 177.3 | 270.06 | 181.86 | 269.84 | 184.56 | 269.62 | 190.96 | 269.41 |
| 193.9 | 269.17 | 195.89 | 269.07 | 197.81 | 268.83 | 206.35 | 268.32 | 208.81 | 268.3 |
| 212.85 | 268.06 | 222.42 | 267.78 | 223.9 | 267.77 | 225.95 | 267.91 | 227.61 | 267.97 |
| 230.08 | 267.91 | 230.78 | 267.82 | 235.63 | 267.48 | 237.78 | 267.26 | 242.06 | 267.18 |
| 245.66 | 267.16 | 250.06 | 267 | 256.41 | 266.98 | 258.27 | 266.94 | 260.54 | 267.05 |
| 265.97 | 267.02 | 269.51 | 266.91 | 275.22 | 267.03 | 284.67 | 267.44 | 291.78 | 267.88 |
| 301.8 | 268.57 | 309.23 | 268.91 | 310.74 | 268.96 | 314.57 | 269.22 | 317.61 | 269.54 |
| 321.67 | 270.03 | 325.44 | 270 | 331.08 | 270.02 | 333.31 | 270.05 | 338.67 | 270.22 |
| 347.42 | 270.38 | 352.74 | 270.73 | 355.63 | 270.96 | 358.37 | 271.31 | 360.14 | 271.5 |
| 364.04 | 272.17 | 367.86 | 273.2 | 371.42 | 274.41 | 372.8 | 274.84 | 379.15 | 275.19 |
| 381.51 | 275.24 | 384.03 | 275.21 | 384.77 | 275.28 | 388.79 | 275.35 | 391.64 | 275.27 |
| 393.88 | 275.12 | 398.9 | 274.69 | 403.16 | 274.58 | 407.86 | 274.66 | 411.09 | 274.63 |
| 414.49 | 274.63 | 416.1 | 274.35 | 420.08 | 273.48 | 425.72 | 272.28 | 435 | 270.72 |
| 439.5 | 269.94 | 444.11 | 269.42 | 449.17 | 269.16 | 450.39 | 269.16 | 453.46 | 269.08 |
| 455.88 | 269.05 | 459.83 | 268.93 | 468.21 | 268.86 | 473.66 | 269.26 | 477.04 | 269.41 |
| 480.87 | 269.49 | 482.15 | 269.55 | 486.91 | 269.56 | 490.79 | 269.48 | 492.9 | 269.47 |
| 494.09 | 269.53 | 501.25 | 269.14 | 505.52 | 269.02 | 507.22 | 268.74 | 513.29 | 268.07 |
| 516.26 | 267.88 | 521.28 | 267.66 | 526.02 | 267.53 | 529.39 | 267.41 | 533.37 | 267.2 |
| 534.66 | 267.16 | 539.24 | 267.15 | 544.85 | 267.27 | 549.75 | 267.49 | 553.55 | 267.5 |
| 557.51 | 267.63 | 559.46 | 267.66 | 559.52 | 267.58 | 561.06 | 267.3 | 564.08 | 266.65 |
| 572.45 | 264.95 | 577.6 | 264.22 | 578.66 | 264.09 | 588.34 | 263.73 | 596.68 | 263.5 |
| 599.77 | 263.48 | 607.53 | 263.69 | 617.55 | 263.93 | 628.19 | 263.94 | 633.35 | 264 |
| 640.52 | 264.18 | 646.2 | 264.43 | 650.04 | 264.47 | 651.43 | 264.57 | 661.42 | 264.63 |
| 666.3 | 264.61 | 694.23 | 264.89 | 699.48 | 265 | 702.11 | 265.22 | 703.76 | 265.25 |
| 705.68 | 265.38 | 710.44 | 265.53 | 713.86 | 265.7 | 722.64 | 265.93 | 725.54 | 266.19 |
| 728.67 | 266.4 | 737.7 | 266.82 | 746.1 | 266.97 | 754.87 | 267.03 | 757.22 | 267.23 |
| 759.74 | 267.29 | 763.54 | 267.45 | 765.53 | 267.68 | 767.43 | 267.75 | 771.9 | 268.05 |
| 776.81 | 268.53 | 778.61 | 268.66 | 782.58 | 268.87 | 784.53 | 269.07 | 790.36 | 269.73 |
| 798.11 | 270.2 | 801 | 269.93 | 803.35 | 269.87 | 807.29 | 269.95 | 809.16 | 270.04 |
| 813.37 | 270.17 | 817.59 | 270.27 | 821.91 | 270.49 | 824.29 | 270.65 | 829.41 | 271.25 |
| 835.69 | 271.72 | 839.54 | 272.14 | 845.08 | 272.45 | 850.57 | 272.41 | 855.51 | 272.29 |
| 859.94 | 272.06 | 863.08 | 271.79 | 865.91 | 271.37 | 867.72 | 270.93 | 872.49 | 270.64 |
| 874.72 | 270.56 | 877.52 | 270.72 | 881.87 | 270.89 | 884.26 | 271.11 | 888.94 | 271.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 897.22 | 271.58 | 898.22 | 271.37 | 905.18 | 270.05 | 906.42 | 269.86 | 912.01 | 269.18 |
| 915.01 | 268.92 | 916.63 | 268.66 | 919.59 | 268.75 | 923.08 | 269.1 | 924.21 | 269.17 |
| 928.69 | 269.36 | 930.49 | 269.4 | 932.54 | 269.56 | 934.78 | 269.64 | 936.92 | 269.81 |
| 940.78 | 269.96 | 943.78 | 270.02 | 947.47 | 270.19 | 949.02 | 270.2 | 951.17 | 270.15 |
| 955.39 | 270.24 | 958.15 | 270.33 | 959.34 | 270.33 | 964.45 | 270.16 | 965.82 | 270.15 |
| 972.59 | 270.18 | 974.77 | 270.26 | 981.31 | 270.25 | 986.26 | 270.31 | 988.8 | 270.31 |
| 992.07 | 270.22 | 994.4 | 270.06 | 997.04 | 269.83 | 999.48 | 269.48 | 1001.08 | 269.16 |
| 1006.1 | 268.3 | 1008.44 | 268.05 | 1013.16 | 267.68 | 1017.03 | 267.58 | 1021.62 | 267.3 |
| 1026.18 | 267.29 | 1029.58 | 267.32 | 1030.87 | 267.39 | 1038.72 | 267.57 | 1042.5 | 267.7 |
| 1043.43 | 267.88 | 1048.47 | 268.29 | 1052.34 | 268.54 | 1057.44 | 268.76 | 1058.22 | 268.82 |
| 1067.78 | 269.84 | 1068.73 | 269.92 | 1071.52 | 270.64 | 1076.24 | 272.32 | 1080.31 | 272.71 |
| 1080.94 | 272.73 | 1088.03 | 273.27 | 1090.85 | 273.4 | 1094.27 | 273.6 | 1096.86 | 273.85 |
| 1100.94 | 274.19 | 1103.02 | 274.24 | 1104.67 | 274.17 | 1110.22 | 274.04 | 1112.65 | 274.05 |
| 1114.55 | 274.11 | 1117.87 | 274.3 | 1128.44 | 275.09 | 1134.07 | 275.16 | 1137.1 | 275.12 |
| 1144.06 | 274.93 | 1148.41 | 274.71 | 1152.14 | 274.41 | 1159.35 | 273.62 | 1164.07 | 273.3 |
| 1165.79 | 273.24 | 1169.79 | 273.17 | 1171.63 | 273.18 | 1175.47 | 273.33 | 1180.39 | 273.35 |
| 1183.96 | 273.29 | 1186.61 | 273.28 | 1192.74 | 272.51 | 1197.58 | 271.72 | 1199.22 | 271.43 |
| 1201.98 | 270.83 | 1204.59 | 270.31 | 1207.62 | 269.84 | 1211.73 | 269.44 | 1214.92 | 269.05 |
| 1219.64 | 268.72 | 1223.02 | 268.6 | 1224.18 | 268.59 | 1225.85 | 268.75 | 1234.34 | 268.91 |
| 1239.7 | 269.14 | 1243.09 | 269.24 | 1247.32 | 269.32 | 1253.11 | 269.39 | 1256.69 | 269.34 |
| 1260.65 | 269.17 | 1262.76 | 269.14 | 1275.26 | 269.17 | 1277.68 | 269.15 | 1280.31 | 269.04 |
| 1284.3 | 269.04 | 1288.79 | 268.94 | 1291.03 | 268.93 | 1294.56 | 268.84 | 1299.31 | 268.88 |
| 1308.25 | 269.04 | 1313.79 | 269.19 | 1315.39 | 269.54 | 1318.65 | 270.02 | 1323.06 | 270.85 |
| 1326.29 | 271.3 | 1328.64 | 271.42 | 1332.9 | 271.27 | 1336.89 | 271.4 | 1338 | 271.34 |
| 1340.68 | 271.35 | 1346.17 | 271.1 | 1348.81 | 270.89 | 1351.59 | 270.76 | 1355.18 | 270.48 |
| 1361.67 | 270.23 | 1370.6 | 269.99 | 1373.5 | 269.96 | 1380.29 | 269.71 | 1385.89 | 269.75 |
| 1389.42 | 269.69 | 1394.02 | 269.72 | 1397.41 | 269.81 | 1400.02 | 269.85 | 1403.33 | 270.03 |
| 1411.79 | 270.03 | 1412.72 | 270.11 | 1415.73 | 270.16 | 1418.4 | 270.28 | 1424.38 | 270.67 |
| 1428.01 | 270.89 | 1431.5 | 270.99 | 1435.37 | 270.96 | 1436.9 | 271.03 | 1439.52 | 271 |
| 1441.27 | 270.77 | 1442.36 | 270.55 | 1444.1 | 270.37 | 1449.36 | 270.18 | 1452 | 269.93 |
| 1457.34 | 269.85 | 1459.36 | 269.86 | 1460.08 | 269.95 | 1462.08 | 270.05 | 1466.1 | 270.15 |
| 1469.08 | 270.16 | 1471.75 | 270.11 | 1483.69 | 269.5 | 1487.82 | 269.22 | 1490.37 | 268.98 |
| 1494.49 | 268.82 | 1500.22 | 268.5 | 1504.02 | 268.17 | 1510.17 | 268.01 | 1514.17 | 267.99 |
| 1518.88 | 267.9 | 1521.68 | 267.87 | 1524.85 | 267.89 | 1526.11 | 267.97 | 1530 | 268.03 |
| 1530.94 | 268.15 | 1534.75 | 268.21 | 1538.39 | 268.32 | 1548.64 | 268.07 | 1552.94 | 268.05 |
| 1555.46 | 268 | 1558.38 | 267.99 | 1561.73 | 268.03 | 1565.6 | 268.03 | 1569.22 | 268.13 |
| 1571.48 | 268.23 | 1573.69 | 268.27 | 1578.94 | 268.44 | 1586.97 | 269.3 | 1588.45 | 269.52 |
| 1593.71 | 270.15 | 1596.15 | 270.59 | 1599.63 | 271.03 | 1606.62 | 271.18 | 1608.99 | 271.38 |
| 1610.61 | 271.43 | 1615.93 | 271.24 | 1619.31 | 271.19 | 1629.15 | 271.09 | 1632.15 | 271.04 |
| 1636.16 | 270.9 | 1642.58 | 270.87 | 1649.19 | 270.34 | 1653.3 | 269.94 | 1661.65 | 269.59 |
| 1666.88 | 269.21 | 1672.28 | 268.75 | 1675.71 | 268.5 | 1681.17 | 268.14 | 1684.13 | 267.97 |
| 1690.01 | 267.77 | 1692.25 | 267.67 | 1698.1 | 267.65 | 1703.72 | 267.56 | 1706.58 | 267.48 |
| 1713.56 | 267.55 | 1717.67 | 267.52 | 1720.65 | 267.64 | 1725.9 | 267.76 | 1730.6 | 267.76 |
| 1737.96 | 267.73 | 1740.36 | 267.69 | 1750.35 | 267.77 | 1758.47 | 267.75 | 1765.28 | 267.81 |
| 1767.27 | 267.8 | 1771.14 | 267.84 | 1774 | 267.97 | 1777.96 | 268.19 | 1779.38 | 268.3 |
| 1784.7 | 268.56 | 1786.45 | 268.57 | 1791.54 | 268.66 | 1794.5 | 268.66 | 1800.15 | 268.6 |
| 1804.08 | 268.47 | 1806.34 | 268.53 | 1809.26 | 268.46 | 1812.22 | 268.56 | 1814.01 | 268.56 |
| 1822.08 | 268.24 | 1823.15 | 268.14 | 1829.22 | 268 | 1830.54 | 267.94 | 1839.64 | 267.35 |
| 1842.05 | 267.34 | 1849.73 | 267.39 | 1854.23 | 267.36 | 1857.97 | 267.25 | 1864.8 | 267.24 |
| 1865.68 | 267.17 | 1868.94 | 267.09 | 1872.54 | 267.09 | 1875.91 | 267.23 | 1880.02 | 267.05 |
| 1883.49 | 267.11 | 1888.19 | 267.09 | 1892.54 | 267.05 | 1896.73 | 266.91 | 1901.13 | 267.02 |
| 1903.73 | 267.02 | 1907.4 | 266.97 | 1910.4 | 267.01 | 1917.32 | 266.84 | 1920.81 | 266.83 |
| 1925.68 | 266.76 | 1932.2 | 266.78 | 1935.18 | 266.7 | 1941.96 | 266.69 | 1943.56 | 266.71 |
| 1945.28 | 266.63 | 1947.96 | 266.59 | 1958.84 | 266.54 | 1962.51 | 266.58 | 1966.33 | 266.57 |
| 1969.8 | 266.52 | 1973.71 | 266.55 | 1979.52 | 266.36 | 1986.2 | 266.32 | 1991.43 | 266.36 |
| 1994.04 | 266.26 | 1996.66 | 266.23 | 1998.98 | 266.28 | 1999.99 | 266.21 | 2001.14 | 266.27 |
| 2004.6 | 266.33 | 2009.61 | 266.59 | 2015.48 | 266.66 | 2017.3 | 266.61 | 2020.51 | 266.79 |
| 2024.31 | 266.73 | 2031.16 | 266.58 | 2033.74 | 266.86 | 2037.18 | 267.18 | 2039.04 | 267.02 |
| 2041.58 | 267.11 | 2045.49 | 267.01 | 2046.85 | 266.91 | 2057.77 | 266.88 | 2059.64 | 266.93 |
| 2061.41 | 266.84 | 2062.27 | 266.86 | 2063.73 | 267.12 | 2065.46 | 267.28 | 2068.26 | 267.41 |
| 2070.59 | 267.72 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 265.97 | .04 | 1854.23 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 265.97 | 1854.23 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 609.19*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 278.82 | 5.69 | 278.26 | 10.25 | 277.96 | 23.11 | 276.74 | 29.59 | 276.43 |
| 35.22 | 276.06 | 40.72 | 275.63 | 53.81 | 275.03 | 60.26 | 274.76 | 66.52 | 274.61 |
| 74.05 | 274.41 | 77.43 | 274.38 | 81.24 | 274.41 | 82.62 | 274.39 | 89.7 | 274.1 |
| 95.78 | 273.51 | 101.84 | 273.31 | 105.25 | 273.17 | 106.38 | 273.17 | 112.98 | 272.92 |
| 123.28 | 272.37 | 126.81 | 272.26 | 132.38 | 271.99 | 136.54 | 271.81 | 144.06 | 271.54 |
| 154.39 | 271.02 | 156.96 | 270.88 | 167.86 | 270.06 | 170.67 | 269.92 | 173.69 | 269.71 |
| 178.16 | 269.5 | 180.8 | 269.28 | 187.08 | 269.08 | 189.95 | 268.85 | 191.91 | 268.75 |
| 193.79 | 268.53 | 202.72 | 268.01 | 204.57 | 268.02 | 208.52 | 267.78 | 217.89 | 267.51 |
| 219.34 | 267.5 | 222.98 | 267.7 | 225.41 | 267.64 | 226.08 | 267.55 | 230.84 | 267.22 |
| 232.94 | 267.02 | 237.14 | 266.93 | 240.66 | 266.91 | 244.98 | 266.75 | 251.19 | 266.74 |
| 253.02 | 266.69 | 255.24 | 266.79 | 260.56 | 266.77 | 264.19 | 266.64 | 270.03 | 266.75 |
| 279.72 | 267.14 | 287 | 267.56 | 297.26 | 268.23 | 304.86 | 268.55 | 306.41 | 268.59 |
| 311.04 | 268.89 | 317.6 | 269.6 | 321.46 | 269.58 | 327.24 | 269.6 | 329.52 | 269.63 |
| 332.22 | 269.73 | 340.25 | 269.89 | 343.98 | 269.93 | 349.42 | 270.26 | 352.38 | 270.47 |
| 357 | 271.01 | 360.99 | 271.66 | 364.91 | 272.65 | 368.56 | 273.83 | 369.97 | 274.25 |
| 374.55 | 274.5 | 376.65 | 274.59 | 378.89 | 274.63 | 381.47 | 274.59 | 382.93 | 274.67 |
| 386.34 | 274.72 | 389.26 | 274.64 | 391.56 | 274.49 | 396.69 | 274.07 | 401.05 | 273.97 |
| 405.87 | 274.04 | 409.18 | 274 | 412.66 | 274 | 413.44 | 273.9 | 424.17 | 271.75 |
| 433.67 | 270.25 | 438.27 | 269.5 | 442.99 | 269.01 | 448.18 | 268.75 | 449.42 | 268.75 |
| 452.57 | 268.66 | 455.05 | 268.63 | 459.09 | 268.49 | 467.68 | 268.41 | 473.26 | 268.79 |
| 476.72 | 268.92 | 480.64 | 268.99 | 481.82 | 269.05 | 486.83 | 269.06 | 490.8 | 268.99 |
| 492.96 | 268.98 | 494.18 | 269.04 | 501.51 | 268.66 | 505.89 | 268.55 | 507.62 | 268.28 |
| 513.84 | 267.62 | 516.89 | 267.44 | 522.02 | 267.22 | 526.88 | 267.09 | 530.33 | 266.97 |
| 534.41 | 266.76 | 535.72 | 266.72 | 540.42 | 266.69 | 546.16 | 266.79 | 551.19 | 266.99 |
| 555.07 | 266.98 | 559.13 | 267.11 | 561.13 | 267.14 | 561.19 | 267.06 | 562.77 | 266.79 |
| 570.13 | 265.32 | 574.43 | 264.51 | 579.71 | 263.8 | 580.79 | 263.68 | 590.7 | 263.3 |
| 599.25 | 263.07 | 602.41 | 263.05 | 610.37 | 263.27 | 620.67 | 263.49 | 631.59 | 263.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 636.9 | 263.57 | 644.27 | 263.76 | 650.1 | 264.01 | 654.04 | 264.05 | 655.55 | 264.15 |
| 665.73 | 264.2 | 670.74 | 264.19 | 699.43 | 264.46 | 704.82 | 264.57 | 707.52 | 264.79 |
| 709.22 | 264.82 | 711.19 | 264.95 | 716.08 | 265.09 | 719.59 | 265.26 | 728.61 | 265.49 |
| 732.53 | 265.83 | 734.81 | 265.97 | 744.08 | 266.37 | 752.71 | 266.52 | 761.72 | 266.59 |
| 764.13 | 266.82 | 766.72 | 266.89 | 770.62 | 267.07 | 772.67 | 267.34 | 774.62 | 267.42 |
| 779.2 | 267.72 | 783.07 | 268.08 | 784.25 | 268.23 | 786.1 | 268.36 | 790.18 | 268.57 |
| 797.53 | 269.32 | 798.16 | 269.42 | 806.13 | 269.87 | 809.1 | 269.53 | 811.51 | 269.44 |
| 815.56 | 269.47 | 817.3 | 269.55 | 824.33 | 269.68 | 830.57 | 269.94 | 833.02 | 270.1 |
| 838.28 | 270.66 | 844.72 | 271.11 | 848.68 | 271.51 | 854.37 | 271.8 | 860.01 | 271.76 |
| 863.44 | 271.66 | 865.08 | 271.65 | 869.64 | 271.44 | 872.86 | 271.18 | 875.05 | 270.9 |
| 876.42 | 270.67 | 877.63 | 270.37 | 882.53 | 270.08 | 884.81 | 270 | 887.69 | 270.15 |
| 892.16 | 270.3 | 894.61 | 270.51 | 899.42 | 270.99 | 907.93 | 270.95 | 908.96 | 270.75 |
| 916.11 | 269.47 | 918.05 | 269.22 | 923.12 | 268.64 | 926.2 | 268.38 | 927.86 | 268.14 |
| 930.91 | 268.24 | 934.49 | 268.63 | 940.25 | 268.91 | 942.1 | 268.94 | 944.21 | 269.1 |
| 946.51 | 269.15 | 948.7 | 269.3 | 952.67 | 269.42 | 955.75 | 269.45 | 959.55 | 269.58 |
| 963.34 | 269.5 | 970.51 | 269.67 | 971.73 | 269.67 | 978.39 | 269.5 | 985.34 | 269.53 |
| 987.58 | 269.62 | 991.94 | 269.62 | 996.87 | 269.68 | 999.39 | 269.74 | 1001.99 | 269.75 |
| 1005.36 | 269.67 | 1010.45 | 269.29 | 1012.96 | 268.93 | 1014.6 | 268.61 | 1019.76 | 267.77 |
| 1022.17 | 267.53 | 1027.01 | 267.21 | 1030.99 | 267.12 | 1035.71 | 266.86 | 1042.44 | 266.87 |
| 1045.21 | 266.97 | 1053.27 | 267.17 | 1057.15 | 267.32 | 1058.1 | 267.5 | 1063.28 | 267.91 |
| 1067.26 | 268.13 | 1072.49 | 268.29 | 1073.29 | 268.35 | 1083.12 | 269.27 | 1084.09 | 269.34 |
| 1086.96 | 270.02 | 1091.8 | 271.66 | 1095.98 | 272.05 | 1096.63 | 272.07 | 1103.91 | 272.61 |
| 1110.33 | 272.94 | 1112.99 | 273.18 | 1117.17 | 273.5 | 1119.31 | 273.55 | 1122.64 | 273.44 |
| 1125.45 | 273.38 | 1129.2 | 273.38 | 1131.16 | 273.44 | 1134.57 | 273.62 | 1145.42 | 274.38 |
| 1151.2 | 274.46 | 1154.32 | 274.42 | 1161.46 | 274.25 | 1165.94 | 274.04 | 1169.77 | 273.75 |
| 1177.17 | 273 | 1181.06 | 272.74 | 1183.79 | 272.63 | 1187.89 | 272.56 | 1189.79 | 272.58 |
| 1193.73 | 272.73 | 1196.42 | 272.78 | 1202.45 | 272.74 | 1205.16 | 272.75 | 1211.47 | 272.01 |
| 1218.12 | 270.98 | 1220.95 | 270.37 | 1223.64 | 269.86 | 1226.75 | 269.4 | 1230.97 | 269.02 |
| 1234.25 | 268.63 | 1240.19 | 268.24 | 1242.57 | 268.18 | 1244.72 | 268.23 | 1245.47 | 268.36 |
| 1253.08 | 268.53 | 1254.2 | 268.54 | 1259.7 | 268.78 | 1263.19 | 268.9 | 1267.52 | 268.99 |
| 1273.47 | 269.05 | 1277.15 | 268.99 | 1282.53 | 268.77 | 1289.74 | 268.8 | 1293.12 | 268.78 |
| 1298.71 | 268.79 | 1301.41 | 268.68 | 1305.51 | 268.68 | 1310.12 | 268.57 | 1310.81 | 268.58 |
| 1316.05 | 268.45 | 1320.93 | 268.49 | 1330.1 | 268.64 | 1335.8 | 268.79 | 1337.45 | 269.13 |
| 1340.79 | 269.59 | 1345.32 | 270.4 | 1348.64 | 270.84 | 1351.05 | 270.96 | 1355.43 | 270.82 |
| 1359.52 | 270.93 | 1360.66 | 270.88 | 1363.41 | 270.88 | 1369.05 | 270.65 | 1371.77 | 270.45 |
| 1376 | 270.23 | 1378.31 | 270.02 | 1384.98 | 269.78 | 1394.15 | 269.55 | 1396.29 | 269.55 |
| 1404.1 | 269.32 | 1405.12 | 269.31 | 1407.92 | 269.39 | 1409.85 | 269.4 | 1413.48 | 269.36 |
| 1417.2 | 269.38 | 1424.68 | 269.56 | 1427.77 | 269.75 | 1436.46 | 269.75 | 1437.41 | 269.83 |
| 1440.5 | 269.84 | 1443.25 | 269.93 | 1449.38 | 270.3 | 1453.12 | 270.5 | 1457.1 | 270.58 |
| 1460.68 | 270.54 | 1462.74 | 270.61 | 1464.93 | 270.57 | 1466.73 | 270.34 | 1467.86 | 270.11 |
| 1469.64 | 269.93 | 1475.05 | 269.8 | 1477.75 | 269.55 | 1483.24 | 269.49 | 1485.32 | 269.52 |
| 1486.06 | 269.61 | 1492.24 | 269.83 | 1495.3 | 269.84 | 1498.04 | 269.79 | 1510.31 | 269.2 |
| 1512.29 | 269.09 | 1517.17 | 268.69 | 1521.4 | 268.53 | 1527.29 | 268.2 | 1531.19 | 267.85 |
| 1535.42 | 267.72 | 1541.62 | 267.66 | 1546.45 | 267.56 | 1552.59 | 267.55 | 1553.88 | 267.63 |
| 1557.87 | 267.69 | 1558.84 | 267.8 | 1562.75 | 267.86 | 1566.49 | 267.97 | 1577.02 | 267.73 |
| 1583.14 | 267.69 | 1584.03 | 267.65 | 1587.02 | 267.64 | 1590.47 | 267.68 | 1594.44 | 267.67 |
| 1595.2 | 267.72 | 1598.15 | 267.77 | 1599.94 | 267.85 | 1602.75 | 267.91 | 1608.15 | 268.08 |
| 1616.39 | 268.92 | 1617.91 | 269.13 | 1623.31 | 269.74 | 1625.81 | 270.19 | 1629.39 | 270.64 |
| 1630.59 | 270.64 | 1636.36 | 270.73 | 1639.07 | 270.92 | 1641.87 | 270.93 | 1646.14 | 270.77 |
| 1649.21 | 270.71 | 1655.96 | 270.73 | 1662.8 | 270.68 | 1666.92 | 270.54 | 1673.51 | 270.55 |
| 1680.3 | 270.01 | 1684.52 | 269.59 | 1693.75 | 269.21 | 1698.47 | 268.88 | 1704.01 | 268.43 |
| 1707.54 | 268.18 | 1713.14 | 267.83 | 1716.19 | 267.67 | 1717.69 | 267.64 | 1724.53 | 267.37 |
| 1730.53 | 267.36 | 1736.31 | 267.27 | 1739.25 | 267.19 | 1746.41 | 267.26 | 1750.63 | 267.23 |
| 1753.7 | 267.36 | 1759.09 | 267.48 | 1763.92 | 267.48 | 1771.47 | 267.45 | 1773.94 | 267.4 |
| 1784.2 | 267.47 | 1792.54 | 267.44 | 1799.54 | 267.51 | 1803.15 | 267.5 | 1805.56 | 267.53 |
| 1808.49 | 267.65 | 1812.56 | 267.86 | 1814.02 | 267.98 | 1819.48 | 268.25 | 1826.51 | 268.35 |
| 1829.55 | 268.36 | 1835.36 | 268.3 | 1839.39 | 268.17 | 1841.71 | 268.23 | 1844.71 | 268.16 |
| 1847.76 | 268.26 | 1849.59 | 268.27 | 1855.5 | 268.04 | 1857.87 | 267.97 | 1858.98 | 267.87 |
| 1865.21 | 267.74 | 1866.57 | 267.69 | 1875.92 | 267.11 | 1878.39 | 267.11 | 1886.28 | 267.16 |
| 1890.9 | 267.12 | 1895.09 | 267 | 1902.73 | 266.99 | 1903.71 | 266.91 | 1907.37 | 266.82 |
| 1908.48 | 266.89 | 1909.1 | 266.83 | 1911.39 | 266.81 | 1915.16 | 266.98 | 1919.76 | 266.78 |
| 1923.65 | 266.84 | 1928.91 | 266.82 | 1935.2 | 266.74 | 1938.46 | 266.61 | 1943.39 | 266.74 |
| 1946.3 | 266.74 | 1950.4 | 266.68 | 1952.66 | 266.72 | 1954.97 | 266.7 | 1961.5 | 266.54 |
| 1965.41 | 266.53 | 1970.86 | 266.44 | 1978.16 | 266.46 | 1981.49 | 266.38 | 1989.08 | 266.37 |
| 1990.87 | 266.39 | 1992.8 | 266.3 | 1996.99 | 266.24 | 2000.02 | 266.24 | 2007.97 | 266.19 |
| 2012.07 | 266.24 | 2014.67 | 266.24 | 2020.24 | 266.16 | 2024.61 | 266.2 | 2026.78 | 266.15 |
| 2031.12 | 265.99 | 2038.6 | 265.94 | 2044.37 | 265.99 | 2047.37 | 265.87 | 2050.09 | 265.83 |
| 2052.9 | 265.9 | 2054.02 | 265.81 | 2055.31 | 265.89 | 2059.72 | 265.98 | 2064.78 | 266.25 |
| 2071.36 | 266.33 | 2072.83 | 266.26 | 2076.99 | 266.48 | 2079.25 | 266.42 | 2081.24 | 266.42 |
| 2088.91 | 266.24 | 2091.79 | 266.56 | 2095.64 | 266.92 | 2097.72 | 266.75 | 2100.57 | 266.85 |
| 2101.91 | 266.84 | 2104.95 | 266.73 | 2106.47 | 266.62 | 2118.69 | 266.6 | 2120.78 | 266.66 |
| 2122.76 | 266.56 | 2123.72 | 266.59 | 2125.35 | 266.88 | 2128.07 | 267.12 | 2130.42 | 267.22 |
| 2133.03 | 267.58 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 260.56 | .04 | 1890.9 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 260.56 | 1890.9 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 589.362*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 278.32 | 5.57 | 277.79 | 10.04 | 277.5 | 13.5 | 277.19 | 22.63 | 276.3 |
| 28.98 | 276 | 34.49 | 275.62 | 37.26 | 275.37 | 39.87 | 275.19 | 52.69 | 274.59 |
| 59.01 | 274.33 | 65.14 | 274.18 | 72.51 | 273.98 | 75.82 | 273.94 | 80.9 | 273.95 |
| 86.65 | 273.73 | 87.84 | 273.66 | 93.79 | 273.07 | 99.72 | 272.88 | 103.06 | 272.74 |
| 104.17 | 272.75 | 110.63 | 272.5 | 120.72 | 271.95 | 126.91 | 271.73 | 129.64 | 271.58 |
| 133.7 | 271.4 | 141.07 | 271.13 | 151.18 | 270.63 | 153.7 | 270.49 | 164.38 | 269.69 |
| 167.13 | 269.55 | 170.09 | 269.35 | 174.46 | 269.15 | 177.05 | 268.94 | 183.2 | 268.74 |
| 186.01 | 268.52 | 187.92 | 268.43 | 189.76 | 268.22 | 197.96 | 267.75 | 200.32 | 267.73 |
| 204.19 | 267.51 | 213.37 | 267.25 | 214.79 | 267.23 | 216.76 | 267.37 | 218.35 | 267.42 |
| 220.73 | 267.36 | 221.39 | 267.28 | 226.05 | 266.96 | 228.11 | 266.77 | 232.21 | 266.69 |
| 235.67 | 266.66 | 239.89 | 266.51 | 245.98 | 266.5 | 247.77 | 266.44 | 251.09 | 266.54 |
| 255.15 | 266.51 | 258.86 | 266.36 | 264.85 | 266.47 | 274.76 | 266.84 | 282.21 | 267.24 |
| 292.71 | 267.88 | 300.49 | 268.19 | 302.08 | 268.23 | 306.82 | 268.5 | 313.53 | 269.18 |
| 317.49 | 269.15 | 323.4 | 269.17 | 325.74 | 269.21 | 331.36 | 269.37 | 340.53 | 269.49 |
| 346.1 | 269.79 | 349.13 | 269.98 | 353.86 | 270.51 | 357.95 | 271.14 | 361.96 | 272.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 365.69 | 273.26 | 367.14 | 273.66 | 373.97 | 273.98 | 376.27 | 274.01 | 378.9 | 273.97 |
| 380.4 | 274.05 | 383.9 | 274.08 | 386.88 | 274 | 389.23 | 273.85 | 394.49 | 273.46 |
| 398.95 | 273.36 | 403.88 | 273.42 | 407.27 | 273.38 | 410.83 | 273.38 | 412.52 | 273.12 |
| 418.76 | 271.93 | 422.61 | 271.22 | 432.33 | 269.78 | 437.05 | 269.06 | 441.88 | 268.59 |
| 447.19 | 268.34 | 448.46 | 268.34 | 451.68 | 268.24 | 454.22 | 268.21 | 458.35 | 268.06 |
| 467.15 | 267.96 | 472.86 | 268.31 | 476.4 | 268.44 | 480.41 | 268.5 | 481.76 | 268.56 |
| 486.74 | 268.56 | 491.75 | 268.49 | 494.73 | 268.54 | 501.77 | 268.19 | 506.25 | 268.07 |
| 508.03 | 267.81 | 514.4 | 267.17 | 517.51 | 266.99 | 522.77 | 266.78 | 531.27 | 266.53 |
| 536.79 | 266.27 | 541.6 | 266.24 | 545.86 | 266.29 | 550.79 | 266.41 | 552.62 | 266.49 |
| 556.59 | 266.47 | 560.75 | 266.59 | 562.79 | 266.61 | 572.01 | 264.86 | 576.41 | 264.08 |
| 582.92 | 263.26 | 593.06 | 262.87 | 601.81 | 262.65 | 605.05 | 262.63 | 613.22 | 262.84 |
| 623.79 | 263.05 | 635 | 263.06 | 640.45 | 263.14 | 648.01 | 263.34 | 653.9 | 263.58 |
| 658.04 | 263.63 | 659.51 | 263.72 | 670.04 | 263.77 | 675.18 | 263.76 | 704.63 | 264.02 |
| 710.16 | 264.14 | 712.94 | 264.35 | 714.68 | 264.39 | 716.71 | 264.52 | 721.72 | 264.66 |
| 725.33 | 264.83 | 734.58 | 265.05 | 737.64 | 265.34 | 740.94 | 265.54 | 750.46 | 265.92 |
| 759.32 | 266.07 | 768.56 | 266.15 | 771.04 | 266.41 | 773.7 | 266.49 | 777.7 | 266.7 |
| 779.8 | 266.99 | 781.81 | 267.08 | 786.51 | 267.4 | 790.48 | 267.77 | 791.69 | 267.93 |
| 793.59 | 268.06 | 797.77 | 268.26 | 799.49 | 268.4 | 802.78 | 268.77 | 807.29 | 269.19 |
| 814.15 | 269.54 | 817.2 | 269.13 | 819.67 | 269 | 823.83 | 269 | 825.79 | 269.07 |
| 828.9 | 269.09 | 830.23 | 269.14 | 832.83 | 269.15 | 839.24 | 269.39 | 841.75 | 269.54 |
| 847.15 | 270.08 | 853.76 | 270.5 | 857.82 | 270.87 | 863.66 | 271.15 | 869.46 | 271.1 |
| 872.97 | 271.01 | 874.66 | 271.01 | 879.33 | 270.81 | 882.64 | 270.58 | 885.62 | 270.22 |
| 887.53 | 269.81 | 892.56 | 269.52 | 894.91 | 269.44 | 897.87 | 269.58 | 902.45 | 269.72 |
| 904.97 | 269.9 | 909.9 | 270.36 | 918.64 | 270.32 | 919.69 | 270.12 | 927.03 | 268.89 |
| 929.02 | 268.65 | 934.23 | 268.09 | 937.39 | 267.85 | 939.09 | 267.62 | 942.22 | 267.73 |
| 945.9 | 268.15 | 951.81 | 268.45 | 953.71 | 268.49 | 955.87 | 268.63 | 958.24 | 268.67 |
| 960.49 | 268.8 | 964.56 | 268.88 | 967.72 | 268.88 | 971.62 | 268.96 | 975.51 | 268.86 |
| 984.12 | 269.02 | 989.51 | 268.87 | 998.09 | 268.88 | 1000.97 | 269 | 1004.87 | 269 |
| 1007.29 | 269.03 | 1012.51 | 269.16 | 1014.94 | 269.19 | 1018.64 | 269.13 | 1021.09 | 268.97 |
| 1023.87 | 268.74 | 1026.44 | 268.39 | 1028.13 | 268.07 | 1031.83 | 267.46 | 1033.77 | 267.2 |
| 1037.82 | 266.88 | 1040.86 | 266.74 | 1044.95 | 266.67 | 1049.79 | 266.42 | 1056.7 | 266.45 |
| 1059.54 | 266.55 | 1067.82 | 266.78 | 1071.8 | 266.94 | 1072.77 | 267.11 | 1078.09 | 267.53 |
| 1082.17 | 267.73 | 1087.54 | 267.83 | 1088.37 | 267.87 | 1098.45 | 268.7 | 1099.45 | 268.76 |
| 1102.39 | 269.4 | 1107.36 | 270.99 | 1111.66 | 271.4 | 1112.32 | 271.41 | 1119.79 | 271.95 |
| 1126.38 | 272.27 | 1129.11 | 272.5 | 1133.41 | 272.81 | 1135.61 | 272.86 | 1137.34 | 272.8 |
| 1141.9 | 272.71 | 1145.76 | 272.7 | 1147.76 | 272.76 | 1151.26 | 272.94 | 1162.4 | 273.68 |
| 1168.34 | 273.76 | 1171.53 | 273.73 | 1178.86 | 273.57 | 1183.46 | 273.37 | 1187.39 | 273.09 |
| 1194.99 | 272.38 | 1198.98 | 272.13 | 1201.78 | 272.02 | 1206 | 271.96 | 1207.94 | 271.97 |
| 1211.98 | 272.14 | 1214.74 | 272.2 | 1220.93 | 272.19 | 1223.72 | 272.22 | 1230.19 | 271.51 |
| 1237.02 | 270.52 | 1239.93 | 269.92 | 1242.68 | 269.41 | 1245.88 | 268.96 | 1250.21 | 268.6 |
| 1253.58 | 268.22 | 1258.55 | 267.87 | 1262.11 | 267.75 | 1264.32 | 267.82 | 1265.1 | 267.97 |
| 1272.9 | 268.17 | 1274.05 | 268.18 | 1279.7 | 268.43 | 1285.29 | 268.61 | 1293.84 | 268.72 |
| 1297.61 | 268.64 | 1303.13 | 268.39 | 1310.53 | 268.43 | 1314 | 268.41 | 1319.74 | 268.43 |
| 1322.51 | 268.32 | 1326.72 | 268.32 | 1331.45 | 268.19 | 1332.16 | 268.2 | 1337.53 | 268.05 |
| 1342.54 | 268.09 | 1351.96 | 268.24 | 1357.81 | 268.39 | 1359.5 | 268.72 | 1362.93 | 269.16 |
| 1367.58 | 269.95 | 1370.99 | 270.38 | 1373.46 | 270.49 | 1377.95 | 270.36 | 1382.16 | 270.47 |
| 1383.33 | 270.42 | 1386.15 | 270.41 | 1391.94 | 270.2 | 1394.73 | 270.01 | 1399.07 | 269.78 |
| 1401.44 | 269.56 | 1408.29 | 269.33 | 1417.7 | 269.11 | 1419.9 | 269.12 | 1427.91 | 268.93 |
| 1428.95 | 268.92 | 1431.84 | 269.03 | 1437.54 | 269.03 | 1442.39 | 269.07 | 1448.72 | 269.24 |
| 1452.2 | 269.47 | 1461.12 | 269.47 | 1462.1 | 269.54 | 1465.28 | 269.51 | 1468.1 | 269.58 |
| 1469.78 | 269.71 | 1471.01 | 269.73 | 1474.39 | 269.93 | 1478.23 | 270.11 | 1482.31 | 270.17 |
| 1485.99 | 270.11 | 1487.6 | 270.18 | 1490.35 | 270.14 | 1492.2 | 269.91 | 1493.36 | 269.67 |
| 1495.19 | 269.49 | 1500.73 | 269.41 | 1503.51 | 269.18 | 1508.55 | 269.14 | 1511.28 | 269.17 |
| 1514.14 | 269.36 | 1518.38 | 269.5 | 1521.52 | 269.51 | 1524.33 | 269.46 | 1536.92 | 268.9 |
| 1541.28 | 268.63 | 1543.97 | 268.4 | 1548.31 | 268.24 | 1554.36 | 267.9 | 1558.36 | 267.52 |
| 1564.85 | 267.36 | 1569.06 | 267.33 | 1574.02 | 267.23 | 1576.98 | 267.2 | 1580.32 | 267.21 |
| 1581.65 | 267.29 | 1585.75 | 267.34 | 1586.74 | 267.45 | 1590.76 | 267.5 | 1593.01 | 267.58 |
| 1595.86 | 267.61 | 1605.4 | 267.39 | 1609.93 | 267.36 | 1612.59 | 267.31 | 1615.67 | 267.3 |
| 1619.2 | 267.34 | 1623.28 | 267.32 | 1631.81 | 267.54 | 1637.35 | 267.71 | 1645.81 | 268.53 |
| 1647.37 | 268.74 | 1652.91 | 269.33 | 1655.48 | 269.78 | 1659.16 | 270.25 | 1666.3 | 270.28 |
| 1669.02 | 270.45 | 1670.73 | 270.48 | 1676.34 | 270.29 | 1679.49 | 270.25 | 1682.14 | 270.26 |
| 1686.42 | 270.32 | 1690.28 | 270.34 | 1693.44 | 270.31 | 1697.67 | 270.18 | 1704.44 | 270.24 |
| 1711.41 | 269.67 | 1715.74 | 269.23 | 1724.54 | 268.9 | 1730.06 | 268.55 | 1735.75 | 268.11 |
| 1739.37 | 267.86 | 1745.12 | 267.52 | 1748.24 | 267.37 | 1754.44 | 267.18 | 1756.8 | 267.07 |
| 1762.97 | 267.06 | 1768.89 | 266.97 | 1771.91 | 266.89 | 1773.88 | 266.89 | 1778.78 | 266.98 |
| 1783.6 | 266.94 | 1786.74 | 267.07 | 1792.28 | 267.19 | 1797.23 | 267.2 | 1804.99 | 267.17 |
| 1807.52 | 267.12 | 1809.03 | 267.14 | 1819.85 | 267.17 | 1826.62 | 267.13 | 1829.02 | 267.17 |
| 1833.8 | 267.2 | 1837.5 | 267.19 | 1839.98 | 267.22 | 1842.99 | 267.33 | 1847.16 | 267.53 |
| 1848.66 | 267.65 | 1854.26 | 267.94 | 1861.47 | 268.04 | 1864.6 | 268.05 | 1870.56 | 267.99 |
| 1874.7 | 267.87 | 1877.08 | 267.93 | 1880.16 | 267.86 | 1885.17 | 267.97 | 1893.67 | 267.69 |
| 1894.8 | 267.6 | 1901.21 | 267.49 | 1912.19 | 266.88 | 1914.73 | 266.87 | 1922.82 | 266.93 |
| 1927.57 | 266.89 | 1932.2 | 266.75 | 1940.06 | 266.75 | 1941.74 | 266.65 | 1945.79 | 266.55 |
| 1947.02 | 266.62 | 1947.7 | 266.56 | 1950.25 | 266.54 | 1954.41 | 266.73 | 1959.14 | 266.51 |
| 1962.03 | 266.52 | 1963.8 | 266.57 | 1969.62 | 266.55 | 1976.59 | 266.46 | 1980.2 | 266.32 |
| 1985.65 | 266.46 | 1988.87 | 266.46 | 1993.4 | 266.39 | 1997.13 | 266.44 | 2005.04 | 266.24 |
| 2010.01 | 266.22 | 2016.05 | 266.12 | 2024.11 | 266.15 | 2027.8 | 266.05 | 2036.2 | 266.04 |
| 2038.18 | 266.06 | 2040.31 | 265.96 | 2044.95 | 265.9 | 2057.1 | 265.84 | 2061.64 | 265.89 |
| 2064.51 | 265.89 | 2070.67 | 265.81 | 2075.51 | 265.85 | 2077.92 | 265.79 | 2082.72 | 265.61 |
| 2090.99 | 265.56 | 2097.46 | 265.61 | 2100.69 | 265.48 | 2103.7 | 265.44 | 2106.81 | 265.51 |
| 2108.06 | 265.42 | 2109.48 | 265.5 | 2114.36 | 265.6 | 2119.24 | 265.89 | 2127.24 | 266 |
| 2127.7 | 265.93 | 2129.49 | 265.94 | 2133.47 | 266.17 | 2135.97 | 266.1 | 2138.17 | 266.1 |
| 2146.66 | 265.9 | 2149.85 | 266.26 | 2154.11 | 266.67 | 2156.41 | 266.47 | 2159.56 | 266.58 |
| 2161.04 | 266.57 | 2164.4 | 266.45 | 2166.08 | 266.33 | 2179.6 | 266.33 | 2181.92 | 266.39 |
| 2184.11 | 266.28 | 2185.18 | 266.31 | 2186.98 | 266.64 | 2189.99 | 266.92 | 2192.59 | 267.03 |
| 2195.48 | 267.44 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 255.15 | .04 | 1927.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 255.15 | 1927.57 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 569.535*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 277.83 | 5.45 | 277.32 | 9.82 | 277.05 | 22.15 | 275.87 | 28.37 | 275.56 |
| 33.76 | 275.17 | 36.47 | 274.92 | 39.03 | 274.74 | 51.58 | 274.15 | 57.76 | 273.89 |
| 63.76 | 273.75 | 70.98 | 273.54 | 74.22 | 273.5 | 79.19 | 273.51 | 84.81 | 273.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 85.98 | 273.22 | 91.81 | 272.64 | 97.61 | 272.45 | 100.88 | 272.31 | 101.97 | 272.32 |
| 105.14 | 272.22 | 108.29 | 272.08 | 118.16 | 271.52 | 121.55 | 271.43 | 130.87 | 270.99 |
| 138.07 | 270.73 | 147.98 | 270.24 | 150.45 | 270.1 | 160.89 | 269.32 | 163.59 | 269.19 |
| 166.48 | 269 | 170.76 | 268.8 | 173.3 | 268.6 | 179.31 | 268.41 | 182.07 | 268.2 |
| 183.94 | 268.11 | 185.74 | 267.91 | 193.76 | 267.46 | 196.07 | 267.44 | 199.86 | 267.23 |
| 208.85 | 266.98 | 210.24 | 266.97 | 213.72 | 267.15 | 216.05 | 267.09 | 216.7 | 267.01 |
| 221.26 | 266.71 | 223.27 | 266.52 | 227.29 | 266.44 | 230.67 | 266.41 | 234.8 | 266.27 |
| 240.76 | 266.25 | 242.51 | 266.19 | 245.77 | 266.29 | 249.74 | 266.25 | 253.54 | 266.08 |
| 259.66 | 266.19 | 269.8 | 266.54 | 277.42 | 266.93 | 288.17 | 267.53 | 296.66 | 267.84 |
| 297.75 | 267.86 | 302.6 | 268.11 | 309.47 | 268.75 | 313.51 | 268.72 | 321.95 | 268.78 |
| 327.53 | 268.94 | 333.18 | 269.02 | 337.09 | 269.05 | 345.89 | 269.5 | 350.72 | 270.01 |
| 354.9 | 270.63 | 355.8 | 270.8 | 359 | 271.57 | 362.82 | 272.68 | 364.3 | 273.06 |
| 369.1 | 273.29 | 371.3 | 273.37 | 373.64 | 273.4 | 376.34 | 273.35 | 377.87 | 273.43 |
| 381.45 | 273.45 | 384.51 | 273.37 | 392.28 | 272.84 | 396.85 | 272.75 | 401.89 | 272.8 |
| 405.36 | 272.75 | 409 | 272.75 | 410.73 | 272.51 | 415 | 271.74 | 421.05 | 270.69 |
| 431 | 269.31 | 435.82 | 268.62 | 440.76 | 268.17 | 446.19 | 267.94 | 447.49 | 267.94 |
| 450.79 | 267.82 | 453.39 | 267.79 | 457.62 | 267.62 | 466.61 | 267.51 | 472.46 | 267.84 |
| 476.08 | 267.95 | 479.14 | 267.98 | 481.42 | 268.06 | 486.66 | 268.05 | 490.82 | 268 |
| 493.08 | 268.01 | 494.36 | 268.07 | 502.04 | 267.71 | 506.62 | 267.6 | 508.44 | 267.35 |
| 514.95 | 266.72 | 516.98 | 266.6 | 523.52 | 266.33 | 532.21 | 266.08 | 537.86 | 265.83 |
| 542.78 | 265.79 | 548.79 | 265.84 | 554.05 | 265.99 | 558.12 | 265.95 | 562.37 | 266.07 |
| 564.46 | 266.08 | 573.89 | 264.4 | 578.39 | 263.64 | 585.05 | 262.85 | 595.42 | 262.44 |
| 604.37 | 262.22 | 607.69 | 262.2 | 616.07 | 262.41 | 626.91 | 262.61 | 638.41 | 262.62 |
| 644 | 262.71 | 651.75 | 262.92 | 655.31 | 263.08 | 657.89 | 263.16 | 662.04 | 263.21 |
| 663.55 | 263.3 | 674.35 | 263.34 | 679.63 | 263.33 | 709.83 | 263.58 | 715.51 | 263.71 |
| 718.35 | 263.92 | 720.14 | 263.96 | 722.22 | 264.08 | 727.36 | 264.23 | 731.06 | 264.39 |
| 740.56 | 264.62 | 743.69 | 264.91 | 747.08 | 265.11 | 756.84 | 265.48 | 765.93 | 265.62 |
| 775.41 | 265.71 | 777.95 | 266 | 782.4 | 266.18 | 784.78 | 266.32 | 786.94 | 266.64 |
| 788.99 | 266.74 | 793.82 | 267.07 | 797.89 | 267.46 | 799.13 | 267.63 | 801.08 | 267.76 |
| 805.37 | 267.96 | 807.13 | 268.1 | 810.51 | 268.46 | 815.13 | 268.88 | 822.17 | 269.21 |
| 825.3 | 268.74 | 827.83 | 268.57 | 832.09 | 268.52 | 834.11 | 268.58 | 841.33 | 268.62 |
| 847.9 | 268.85 | 850.48 | 268.99 | 856.02 | 269.49 | 862.8 | 269.89 | 866.96 | 270.24 |
| 872.96 | 270.5 | 878.9 | 270.45 | 882.5 | 270.35 | 884.24 | 270.37 | 889.03 | 270.19 |
| 892.42 | 269.98 | 894.73 | 269.74 | 897.31 | 269.32 | 897.44 | 269.24 | 902.6 | 268.96 |
| 905.01 | 268.88 | 908.04 | 269.01 | 912.74 | 269.13 | 915.33 | 269.3 | 920.39 | 269.73 |
| 929.34 | 269.69 | 930.42 | 269.5 | 937.95 | 268.31 | 940 | 268.08 | 945.34 | 267.55 |
| 948.58 | 267.31 | 950.33 | 267.09 | 953.54 | 267.22 | 957.31 | 267.68 | 963.37 | 268 |
| 965.32 | 268.03 | 967.54 | 268.17 | 969.96 | 268.19 | 972.27 | 268.3 | 976.45 | 268.34 |
| 985.36 | 268.31 | 987.68 | 268.21 | 996.51 | 268.37 | 1002.04 | 268.22 | 1010.85 | 268.24 |
| 1013.8 | 268.36 | 1020.28 | 268.42 | 1025.63 | 268.59 | 1028.37 | 268.64 | 1032.48 | 268.56 |
| 1037.28 | 268.2 | 1039.93 | 267.84 | 1041.65 | 267.52 | 1045.45 | 266.93 | 1047.44 | 266.67 |
| 1051.6 | 266.38 | 1054.72 | 266.26 | 1058.91 | 266.21 | 1061.9 | 266.06 | 1062.2 | 266 |
| 1068.8 | 266.01 | 1072.47 | 266.06 | 1073.87 | 266.14 | 1082.36 | 266.38 | 1086.45 | 266.56 |
| 1087.45 | 266.73 | 1092.9 | 267.16 | 1097.09 | 267.33 | 1102.6 | 267.36 | 1103.44 | 267.4 |
| 1111.83 | 267.99 | 1114.81 | 268.17 | 1117.46 | 268.69 | 1119.79 | 269.35 | 1122.93 | 270.32 |
| 1127.33 | 270.74 | 1128.02 | 270.75 | 1135.68 | 271.3 | 1142.43 | 271.61 | 1145.23 | 271.83 |
| 1150.57 | 272.17 | 1158.36 | 272.03 | 1162.31 | 272.03 | 1164.36 | 272.09 | 1167.95 | 272.26 |
| 1179.38 | 272.98 | 1185.47 | 273.06 | 1188.75 | 273.03 | 1196.27 | 272.89 | 1200.98 | 272.71 |
| 1205.01 | 272.44 | 1212.81 | 271.75 | 1217.91 | 271.47 | 1219.78 | 271.41 | 1224.1 | 271.35 |
| 1226.09 | 271.37 | 1230.24 | 271.55 | 1233.07 | 271.62 | 1239.42 | 271.64 | 1242.28 | 271.69 |
| 1248.92 | 271.01 | 1255.92 | 270.06 | 1258.9 | 269.46 | 1261.73 | 268.96 | 1265.01 | 268.52 |
| 1269.45 | 268.18 | 1272.9 | 267.8 | 1278 | 267.45 | 1281.66 | 267.33 | 1283.93 | 267.42 |
| 1284.72 | 267.58 | 1292.73 | 267.8 | 1293.9 | 267.81 | 1299.69 | 268.08 | 1303.37 | 268.22 |
| 1307.94 | 268.32 | 1314.2 | 268.38 | 1318.07 | 268.29 | 1322.36 | 268.03 | 1324.63 | 268.01 |
| 1331.32 | 268.06 | 1334.88 | 268.05 | 1340.77 | 268.07 | 1343.61 | 267.96 | 1348.4 | 267.95 |
| 1352.78 | 267.82 | 1355.2 | 267.78 | 1359.02 | 267.66 | 1364.16 | 267.7 | 1373.82 | 267.83 |
| 1379.82 | 267.99 | 1381.55 | 268.3 | 1385.07 | 268.74 | 1390.84 | 269.64 | 1392.72 | 269.86 |
| 1395.87 | 270.03 | 1400.48 | 269.9 | 1404.79 | 270 | 1405.99 | 269.95 | 1408.89 | 269.94 |
| 1414.83 | 269.76 | 1417.69 | 269.56 | 1420.69 | 269.43 | 1424.57 | 269.1 | 1431.6 | 268.88 |
| 1441.25 | 268.67 | 1444.38 | 268.68 | 1452.79 | 268.53 | 1455.75 | 268.67 | 1461.6 | 268.7 |
| 1466.57 | 268.75 | 1470.24 | 268.87 | 1473.07 | 268.93 | 1476.64 | 269.19 | 1485.79 | 269.19 |
| 1486.8 | 269.26 | 1490.05 | 269.19 | 1492.94 | 269.24 | 1494.67 | 269.36 | 1495.93 | 269.37 |
| 1499.4 | 269.56 | 1503.33 | 269.72 | 1507.11 | 269.77 | 1511.3 | 269.69 | 1512.95 | 269.76 |
| 1515.77 | 269.71 | 1517.67 | 269.48 | 1518.85 | 269.23 | 1520.73 | 269.05 | 1526.42 | 269.03 |
| 1529.27 | 268.8 | 1535.05 | 268.78 | 1537.24 | 268.82 | 1540.18 | 269.02 | 1544.53 | 269.17 |
| 1547.74 | 269.18 | 1550.63 | 269.14 | 1557.03 | 268.88 | 1565.63 | 268.5 | 1570.77 | 268.11 |
| 1575.22 | 267.95 | 1581.42 | 267.6 | 1585.53 | 267.19 | 1592.18 | 267.03 | 1596.51 | 267 |
| 1601.59 | 266.9 | 1604.62 | 266.87 | 1608.05 | 266.88 | 1613.62 | 267 | 1614.64 | 267.1 |
| 1618.76 | 267.15 | 1622.7 | 267.26 | 1628.98 | 267.13 | 1633.78 | 267.05 | 1638.43 | 267.02 |
| 1641.16 | 266.97 | 1644.31 | 266.96 | 1647.94 | 266.99 | 1652.12 | 266.97 | 1656.03 | 267.05 |
| 1660.86 | 267.18 | 1666.85 | 267.37 | 1675.23 | 268.15 | 1676.83 | 268.34 | 1683.4 | 269.04 |
| 1685.15 | 269.38 | 1688.92 | 269.86 | 1690.18 | 269.84 | 1696.48 | 269.84 | 1699.04 | 269.98 |
| 1700.79 | 270.01 | 1706.55 | 269.82 | 1709.78 | 269.79 | 1720.84 | 269.96 | 1724.09 | 269.95 |
| 1728.43 | 269.83 | 1735.37 | 269.92 | 1742.52 | 269.34 | 1746.96 | 268.87 | 1755.99 | 268.56 |
| 1761.64 | 268.22 | 1767.48 | 267.79 | 1771.19 | 267.55 | 1777.09 | 267.21 | 1780.3 | 267.06 |
| 1781.5 | 267.07 | 1784.96 | 266.95 | 1789.08 | 266.77 | 1790.94 | 266.75 | 1795.4 | 266.77 |
| 1801.48 | 266.68 | 1804.58 | 266.6 | 1806.6 | 266.6 | 1811.63 | 266.69 | 1816.56 | 266.65 |
| 1819.79 | 266.79 | 1825.47 | 266.91 | 1829.64 | 266.94 | 1841.1 | 266.84 | 1853.75 | 266.87 |
| 1860.69 | 266.82 | 1868.05 | 266.9 | 1870.2 | 266.88 | 1874.39 | 266.91 | 1877.48 | 267.01 |
| 1881.76 | 267.2 | 1883.3 | 267.33 | 1889.05 | 267.63 | 1896.44 | 267.73 | 1899.65 | 267.74 |
| 1905.76 | 267.69 | 1910.01 | 267.57 | 1912.45 | 267.62 | 1915.61 | 267.56 | 1920.75 | 267.67 |
| 1928.96 | 267.44 | 1930.63 | 267.34 | 1937.2 | 267.23 | 1938.63 | 267.18 | 1948.46 | 266.64 |
| 1955.42 | 266.66 | 1959.37 | 266.7 | 1964.24 | 266.66 | 1969.32 | 266.5 | 1977.93 | 266.5 |
| 1979.78 | 266.39 | 1984.21 | 266.28 | 1985.56 | 266.36 | 1986.31 | 266.3 | 1989.1 | 266.27 |
| 1993.66 | 266.48 | 1998.85 | 266.24 | 2002.01 | 266.25 | 2003.96 | 266.3 | 2010.34 | 266.28 |
| 2016.24 | 266.22 | 2021.93 | 266.02 | 2027.91 | 266.18 | 2031.43 | 266.18 | 2036.41 | 266.11 |
| 2040.49 | 266.16 | 2049.16 | 265.94 | 2054.61 | 265.91 | 2061.23 | 265.81 | 2070.07 | 265.83 |
| 2074.12 | 265.73 | 2076.53 | 265.74 | 2083.32 | 265.71 | 2085.49 | 265.74 | 2087.83 | 265.63 |
| 2091.47 | 265.56 | 2095.25 | 265.58 | 2096.59 | 265.55 | 2106.23 | 265.49 | 2109.55 | 265.5 |
| 2111.21 | 265.55 | 2116.4 | 265.54 | 2121.11 | 265.46 | 2126.42 | 265.51 | 2135.19 | 265.22 |
| 2143.38 | 265.18 | 2150.48 | 265.24 | 2154.02 | 265.09 | 2158.53 | 265.05 | 2160.73 | 265.13 |
| 2162.09 | 265.02 | 2163.65 | 265.11 | 2168.34 | 265.2 | 2174.35 | 265.55 | 2183.12 | 265.67 |
| 2183.62 | 265.59 | 2185.58 | 265.6 | 2189.95 | 265.85 | 2192.69 | 265.78 | 2195.1 | 265.78 |
| 2204.41 | 265.56 | 2207.9 | 265.96 | 2212.57 | 266.41 | 2215.1 | 266.19 | 2218.55 | 266.32 |
| 2220.17 | 266.31 | 2223.52 | 266.19 | 2225.7 | 266.04 | 2240.52 | 266.05 | 2243.06 | 266.12 |
| 2245.46 | 266.01 | 2246.63 | 266.04 | 2248.61 | 266.41 | 2251.9 | 266.71 | 2254.76 | 266.84 |
| 2257.92 | 267.3 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 249.74 | .04 | 1964.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 249.74 | 1964.24 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 549.707*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 277.34 | 5.33 | 276.85 | 9.61 | 276.59 | 12.93 | 276.3 | 21.67 | 275.43 |
| 27.75 | 275.13 | 33.03 | 274.72 | 35.68 | 274.47 | 38.18 | 274.29 | 50.46 | 273.71 |
| 56.51 | 273.46 | 62.38 | 273.32 | 69.44 | 273.11 | 73.82 | 273.07 | 77.47 | 273.07 |
| 82.98 | 272.85 | 84.12 | 272.78 | 89.82 | 272.2 | 95.5 | 272.02 | 98.69 | 271.88 |
| 99.76 | 271.9 | 102.86 | 271.81 | 105.94 | 271.66 | 115.61 | 271.09 | 121.53 | 270.91 |
| 124.14 | 270.76 | 128.03 | 270.59 | 135.08 | 270.33 | 147.19 | 269.71 | 157.41 | 268.96 |
| 162.88 | 268.64 | 167.07 | 268.45 | 169.54 | 268.26 | 175.43 | 268.08 | 179.96 | 267.79 |
| 181.72 | 267.6 | 189.57 | 267.17 | 191.83 | 267.16 | 195.53 | 266.95 | 204.32 | 266.71 |
| 205.68 | 266.7 | 209.09 | 266.87 | 211.37 | 266.82 | 212 | 266.74 | 216.47 | 266.45 |
| 218.44 | 266.27 | 222.37 | 266.19 | 225.67 | 266.17 | 229.72 | 266.02 | 235.55 | 266.01 |
| 237.26 | 265.94 | 240.45 | 266.03 | 244.33 | 265.99 | 248.22 | 265.81 | 254.47 | 265.91 |
| 263.07 | 266.18 | 272.64 | 266.61 | 283.62 | 267.18 | 291.76 | 267.46 | 297.62 | 267.68 |
| 300.95 | 267.94 | 305.4 | 268.33 | 309.53 | 268.29 | 315.73 | 268.32 | 318.17 | 268.36 |
| 324.05 | 268.52 | 333.64 | 268.6 | 342.64 | 269.01 | 347.58 | 269.51 | 351.86 | 270.11 |
| 356.05 | 271.02 | 359.96 | 272.11 | 361.47 | 272.47 | 368.42 | 272.76 | 371.02 | 272.78 |
| 373.78 | 272.73 | 374.59 | 272.79 | 379 | 272.82 | 382.13 | 272.73 | 384.58 | 272.59 |
| 390.08 | 272.22 | 394.75 | 272.14 | 399.91 | 272.18 | 403.45 | 272.13 | 407.17 | 272.13 |
| 408.94 | 271.89 | 413.3 | 271.15 | 419.49 | 270.16 | 434.6 | 268.19 | 439.65 | 267.75 |
| 445.2 | 267.53 | 446.53 | 267.53 | 449.9 | 267.4 | 452.52 | 267.37 | 456.88 | 267.18 |
| 466.08 | 267.06 | 472.06 | 267.36 | 475.76 | 267.46 | 479.96 | 267.51 | 481.22 | 267.57 |
| 488.24 | 267.52 | 493.15 | 267.52 | 494.93 | 267.57 | 502.3 | 267.24 | 506.98 | 267.13 |
| 508.84 | 266.88 | 515.5 | 266.28 | 518.76 | 266.1 | 524.26 | 265.89 | 533.15 | 265.64 |
| 538.93 | 265.39 | 543.95 | 265.34 | 548.41 | 265.35 | 555.48 | 265.48 | 559.64 | 265.44 |
| 563.99 | 265.55 | 566.13 | 265.56 | 567.88 | 265.28 | 575.77 | 263.94 | 580.37 | 263.21 |
| 587.18 | 262.43 | 597.79 | 262.02 | 606.94 | 261.79 | 610.33 | 261.77 | 618.92 | 261.98 |
| 630.03 | 262.18 | 641.82 | 262.19 | 647.55 | 262.28 | 655.5 | 262.5 | 661.79 | 262.74 |
| 666.05 | 262.78 | 667.59 | 262.87 | 678.66 | 262.92 | 684.07 | 262.91 | 715.03 | 263.15 |
| 720.85 | 263.29 | 723.76 | 263.49 | 725.6 | 263.53 | 727.73 | 263.65 | 733 | 263.8 |
| 736.79 | 263.96 | 746.53 | 264.18 | 749.74 | 264.48 | 753.21 | 264.68 | 763.21 | 265.03 |
| 767.11 | 265.07 | 772.53 | 265.17 | 782.25 | 265.27 | 784.86 | 265.59 | 789.42 | 265.78 |
| 791.86 | 265.94 | 794.07 | 266.29 | 796.18 | 266.4 | 801.13 | 266.74 | 805.3 | 267.15 |
| 806.57 | 267.33 | 808.57 | 267.46 | 812.97 | 267.66 | 814.78 | 267.79 | 818.23 | 268.15 |
| 820.9 | 268.38 | 821.59 | 268.49 | 830.19 | 268.88 | 833.39 | 268.34 | 835.99 | 268.13 |
| 840.36 | 268.04 | 842.43 | 268.09 | 849.83 | 268.09 | 856.57 | 268.3 | 859.21 | 268.43 |
| 864.89 | 268.91 | 871.84 | 269.28 | 876.11 | 269.61 | 882.25 | 269.85 | 888.34 | 269.79 |
| 892.03 | 269.7 | 893.81 | 269.73 | 898.73 | 269.57 | 902.2 | 269.38 | 905.34 | 269.07 |
| 907.35 | 268.68 | 912.33 | 268.41 | 915.1 | 268.32 | 918.21 | 268.44 | 923.03 | 268.54 |
| 925.68 | 268.69 | 930.87 | 269.11 | 940.05 | 269.06 | 948.88 | 267.73 | 950.97 | 267.51 |
| 956.44 | 267 | 959.77 | 266.78 | 961.56 | 266.57 | 964.85 | 266.71 | 968.72 | 267.2 |
| 974.93 | 267.55 | 976.93 | 267.57 | 979.2 | 267.71 | 981.69 | 267.71 | 984.06 | 267.79 |
| 990.99 | 267.78 | 994.57 | 267.71 | 995.76 | 267.73 | 999.85 | 267.57 | 1008.91 | 267.72 |
| 1012.04 | 267.63 | 1016.09 | 267.56 | 1023.6 | 267.59 | 1026.62 | 267.73 | 1033.27 | 267.81 |
| 1038.76 | 268.02 | 1041.31 | 268.08 | 1045.2 | 268.04 | 1047.78 | 267.89 | 1050.7 | 267.65 |
| 1053.41 | 267.29 | 1055.18 | 266.97 | 1060.74 | 266.18 | 1063.34 | 265.98 | 1066.97 | 265.82 |
| 1072.87 | 265.76 | 1077.95 | 265.55 | 1083.01 | 265.58 | 1086.77 | 265.64 | 1088.2 | 265.72 |
| 1096.91 | 265.98 | 1101.1 | 266.18 | 1102.12 | 266.35 | 1107.71 | 266.78 | 1112 | 266.92 |
| 1117.65 | 266.9 | 1118.52 | 266.93 | 1127.12 | 267.43 | 1130.17 | 267.59 | 1132.89 | 268.07 |
| 1135.27 | 268.71 | 1138.49 | 269.65 | 1143.01 | 270.09 | 1143.71 | 270.09 | 1151.56 | 270.64 |
| 1158.48 | 270.94 | 1165.87 | 271.44 | 1168.19 | 271.48 | 1174.81 | 271.35 | 1178.86 | 271.36 |
| 1180.97 | 271.41 | 1184.65 | 271.58 | 1196.36 | 272.28 | 1202.6 | 272.36 | 1205.96 | 272.34 |
| 1213.67 | 272.21 | 1218.5 | 272.04 | 1222.63 | 271.78 | 1230.63 | 271.12 | 1234.83 | 270.9 |
| 1237.77 | 270.8 | 1242.2 | 270.74 | 1244.24 | 270.77 | 1248.5 | 270.96 | 1251.4 | 271.04 |
| 1257.91 | 271.09 | 1260.84 | 271.15 | 1267.64 | 270.51 | 1274.82 | 269.61 | 1277.88 | 269.01 |
| 1280.77 | 268.5 | 1284.14 | 268.09 | 1288.69 | 267.76 | 1292.23 | 267.38 | 1298.63 | 266.96 |
| 1301.21 | 266.91 | 1303.53 | 267.01 | 1304.34 | 267.19 | 1313.75 | 267.45 | 1319.69 | 267.73 |
| 1325.58 | 267.94 | 1328.14 | 267.99 | 1334.56 | 268.05 | 1338.53 | 267.93 | 1341.87 | 267.75 |
| 1342.92 | 267.65 | 1345.25 | 267.63 | 1352.11 | 267.69 | 1355.76 | 267.68 | 1361.65 | 267.72 |
| 1364.71 | 267.6 | 1369.13 | 267.59 | 1374.11 | 267.44 | 1376.59 | 267.4 | 1380.51 | 267.27 |
| 1385.77 | 267.3 | 1395.68 | 267.43 | 1401.82 | 267.59 | 1403.6 | 267.89 | 1407.22 | 268.31 |
| 1412.1 | 269.04 | 1415.06 | 269.4 | 1418.29 | 269.56 | 1423.01 | 269.45 | 1427.43 | 269.54 |
| 1431.63 | 269.47 | 1437.72 | 269.31 | 1440.64 | 269.12 | 1445.21 | 268.89 | 1447.7 | 268.64 |
| 1454.9 | 268.43 | 1464.8 | 268.23 | 1468.01 | 268.25 | 1476.63 | 268.14 | 1479.67 | 268.31 |
| 1481.75 | 268.36 | 1485.66 | 268.37 | 1490.76 | 268.42 | 1494.51 | 268.56 | 1497.41 | 268.63 |
| 1501.08 | 268.91 | 1510.46 | 268.91 | 1511.49 | 268.97 | 1514.83 | 268.87 | 1517.79 | 268.89 |
| 1519.56 | 269.01 | 1520.85 | 269.01 | 1524.41 | 269.18 | 1528.44 | 269.33 | 1532.31 | 269.36 |
| 1536.6 | 269.26 | 1538.29 | 269.34 | 1541.19 | 269.29 | 1543.14 | 269.05 | 1544.35 | 268.79 |
| 1546.27 | 268.61 | 1552.11 | 268.64 | 1555.03 | 268.43 | 1560.95 | 268.42 | 1563.2 | 268.47 |
| 1566.21 | 268.68 | 1570.67 | 268.85 | 1573.97 | 268.86 | 1576.92 | 268.81 | 1590.16 | 268.3 |
| 1592.3 | 268.2 | 1597.57 | 267.83 | 1602.13 | 267.66 | 1608.49 | 267.3 | 1612.7 | 266.87 |
| 1617.26 | 266.75 | 1623.95 | 266.67 | 1632.27 | 266.53 | 1635.79 | 266.54 | 1637.18 | 266.6 |
| 1641.5 | 266.65 | 1642.54 | 266.75 | 1646.76 | 266.8 | 1650.8 | 266.91 | 1662.16 | 266.71 |
| 1672.95 | 266.62 | 1676.67 | 266.65 | 1680.96 | 266.61 | 1686.9 | 266.76 | 1689.92 | 266.81 |
| 1695.75 | 266.98 | 1704.65 | 267.76 | 1706.29 | 267.95 | 1712.12 | 268.52 | 1714.82 | 268.98 |
| 1718.68 | 269.47 | 1719.71 | 269.43 | 1726.43 | 269.39 | 1729.06 | 269.52 | 1730.85 | 269.54 |
| 1736.76 | 269.35 | 1740.06 | 269.33 | 1742.85 | 269.37 | 1747.35 | 269.5 | 1751.41 | 269.58 |
| 1754.74 | 269.59 | 1759.18 | 269.47 | 1766.29 | 269.61 | 1773.63 | 269 | 1778.18 | 268.51 |
| 1787.43 | 268.21 | 1793.23 | 267.9 | 1799.21 | 267.46 | 1803.02 | 267.23 | 1809.07 | 266.91 |
| 1812.35 | 266.76 | 1813.98 | 266.75 | 1818.87 | 266.59 | 1821.35 | 266.47 | 1823.26 | 266.45 |
| 1827.84 | 266.48 | 1834.07 | 266.38 | 1837.24 | 266.3 | 1839.32 | 266.3 | 1844.47 | 266.41 |
| 1846.16 | 266.37 | 1849.53 | 266.37 | 1852.84 | 266.5 | 1858.66 | 266.63 | 1862.93 | 266.66 |
| 1870.3 | 266.6 | 1876.27 | 266.57 | 1887.65 | 266.57 | 1894.76 | 266.51 | 1897.28 | 266.56 |
| 1902.31 | 266.59 | 1908.81 | 266.6 | 1911.97 | 266.69 | 1916.36 | 266.88 | 1917.93 | 267 |
| 1923.83 | 267.32 | 1931.41 | 267.43 | 1934.7 | 267.43 | 1940.96 | 267.38 | 1945.32 | 267.27 |
| 1947.82 | 267.32 | 1951.06 | 267.26 | 1956.33 | 267.37 | 1964.75 | 267.17 | 1966.46 | 267.07 |
| 1973.19 | 266.98 | 1984.74 | 266.41 | 1987.41 | 266.4 | 1995.92 | 266.47 | 2000.91 | 266.42 |
| 2006.43 | 266.25 | 2015.8 | 266.25 | 2017.81 | 266.13 | 2022.63 | 266.01 | 2024.1 | 266.1 |
| 2024.92 | 266.03 | 2027.95 | 266 | 2032.91 | 266.23 | 2038.56 | 265.96 | 2042 | 265.97 |
| 2044.12 | 266.04 | 2051.06 | 266 | 2057.48 | 265.94 | 2059.36 | 265.9 | 2063.66 | 265.72 |
| 2070.16 | 265.9 | 2074 | 265.9 | 2079.41 | 265.82 | 2083.85 | 265.88 | 2093.28 | 265.63 |
| 2099.21 | 265.6 | 2106.41 | 265.49 | 2116.03 | 265.52 | 2120.43 | 265.4 | 2123.05 | 265.41 |
| 2130.44 | 265.38 | 2132.81 | 265.41 | 2135.34 | 265.29 | 2139.31 | 265.22 | 2143.41 | 265.24 |
| 2144.87 | 265.21 | 2155.36 | 265.14 | 2158.97 | 265.16 | 2160.78 | 265.21 | 2164.2 | 265.21 |
| 2171.55 | 265.11 | 2177.32 | 265.16 | 2180.19 | 265.08 | 2185.91 | 264.86 | 2195.77 | 264.8 |
| 2203.49 | 264.86 | 2207.34 | 264.7 | 2212.26 | 264.66 | 2214.64 | 264.74 | 2216.13 | 264.63 |
| 2217.82 | 264.73 | 2222.93 | 264.83 | 2229.46 | 265.21 | 2239 | 265.34 | 2239.55 | 265.25 |
| 2241.68 | 265.27 | 2246.43 | 265.54 | 2249.41 | 265.46 | 2252.03 | 265.46 | 2260.74 | 265.24 |
| 2262.15 | 265.22 | 2265.95 | 265.66 | 2271.03 | 266.16 | 2273.78 | 265.91 | 2277.54 | 266.05 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2279.3 | 266.04 | 2283.31 | 265.9 | 2285.32 | 265.75 | 2301.44 | 265.77 | 2304.2 | 265.85 |
| 2306.81 | 265.73 | 2308.08 | 265.77 | 2310.23 | 266.17 | 2313.82 | 266.51 | 2316.92 | 266.66 |
| 2320.37 | 267.16 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 244.33 | .04 | 2000.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 244.33 | 2000.91 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 529.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 276.84 | 5.21 | 276.38 | 8.99 | 276.16 | 12.65 | 275.85 | 21.19 | 275 |
| 27.14 | 274.69 | 32.3 | 274.27 | 34.89 | 274.01 | 37.34 | 273.85 | 49.34 | 273.27 |
| 55.26 | 273.02 | 61 | 272.88 | 67.9 | 272.68 | 71 | 272.63 | 75.76 | 272.63 |
| 81.14 | 272.42 | 82.25 | 272.35 | 87.83 | 271.76 | 93.38 | 271.59 | 96.51 | 271.45 |
| 97.55 | 271.48 | 100.58 | 271.39 | 103.6 | 271.24 | 109.49 | 270.87 | 113.05 | 270.67 |
| 118.84 | 270.5 | 125.2 | 270.18 | 132.09 | 269.92 | 143.93 | 269.32 | 153.92 | 268.59 |
| 159.27 | 268.29 | 163.37 | 268.1 | 165.79 | 267.92 | 171.55 | 267.74 | 175.97 | 267.47 |
| 177.69 | 267.29 | 185.37 | 266.89 | 187.58 | 266.87 | 191.2 | 266.68 | 201.13 | 266.43 |
| 204.46 | 266.6 | 206.69 | 266.55 | 207.31 | 266.47 | 211.67 | 266.2 | 213.6 | 266.02 |
| 220.68 | 265.92 | 224.63 | 265.78 | 230.33 | 265.77 | 232.01 | 265.69 | 234.05 | 265.77 |
| 238.92 | 265.73 | 242.89 | 265.53 | 249.29 | 265.62 | 259.88 | 265.95 | 270.72 | 266.43 |
| 279.08 | 266.84 | 287.4 | 267.1 | 289.09 | 267.13 | 293.38 | 267.29 | 301.33 | 267.9 |
| 303.49 | 267.92 | 305.56 | 267.86 | 311.89 | 267.9 | 314.38 | 267.94 | 320.21 | 268.09 |
| 326.11 | 268.15 | 330.19 | 268.16 | 339.39 | 268.52 | 344.44 | 269.01 | 348.81 | 269.6 |
| 349.75 | 269.76 | 353.1 | 270.48 | 357.09 | 271.53 | 358.64 | 271.88 | 365.74 | 272.15 |
| 368.4 | 272.17 | 371.21 | 272.12 | 372.05 | 272.17 | 376.55 | 272.18 | 378.53 | 272.14 |
| 382.25 | 271.96 | 387.88 | 271.61 | 392.65 | 271.54 | 397.92 | 271.56 | 401.54 | 271.5 |
| 404.79 | 271.51 | 406.19 | 271.42 | 411.61 | 270.57 | 417.94 | 269.62 | 428.33 | 268.38 |
| 433.37 | 267.75 | 438.53 | 267.34 | 444.21 | 267.12 | 445.57 | 267.12 | 449.01 | 266.99 |
| 451.73 | 266.94 | 456.15 | 266.75 | 465.55 | 266.61 | 471.65 | 266.89 | 475.44 | 266.98 |
| 478.63 | 267 | 481.16 | 267.08 | 490.84 | 267.01 | 495.03 | 267.08 | 502.56 | 266.76 |
| 507.35 | 266.65 | 509.25 | 266.41 | 516.06 | 265.83 | 518.17 | 265.71 | 525.01 | 265.44 |
| 534.06 | 265.2 | 538.55 | 264.99 | 545.13 | 264.89 | 551.41 | 264.89 | 556.91 | 264.98 |
| 561.16 | 264.92 | 565.61 | 265.03 | 567.79 | 265.03 | 569.59 | 264.78 | 577.65 | 263.48 |
| 582.35 | 262.77 | 589.31 | 262.01 | 600.15 | 261.59 | 609.5 | 261.36 | 612.96 | 261.35 |
| 621.77 | 261.55 | 633.15 | 261.74 | 645.23 | 261.75 | 651.09 | 261.86 | 659.24 | 262.08 |
| 662.97 | 262.24 | 665.58 | 262.31 | 670.05 | 262.36 | 671.63 | 262.45 | 682.97 | 262.49 |
| 688.51 | 262.48 | 720.23 | 262.71 | 726.19 | 262.86 | 729.18 | 263.06 | 733.24 | 263.22 |
| 738.64 | 263.37 | 742.52 | 263.52 | 752.5 | 263.74 | 755.79 | 264.05 | 759.35 | 264.26 |
| 769.59 | 264.58 | 773.58 | 264.62 | 779.14 | 264.72 | 789.1 | 264.82 | 791.77 | 265.18 |
| 796.44 | 265.39 | 798.94 | 265.56 | 801.21 | 265.95 | 803.37 | 266.06 | 808.43 | 266.42 |
| 812.71 | 266.84 | 814.01 | 267.03 | 816.06 | 267.16 | 820.57 | 267.35 | 822.42 | 267.48 |
| 829.4 | 268.18 | 838.21 | 268.56 | 841.49 | 267.94 | 844.15 | 267.7 | 848.63 | 267.56 |
| 850.55 | 267.6 | 858.33 | 267.57 | 865.23 | 267.76 | 867.94 | 267.87 | 873.75 | 268.32 |
| 880.87 | 268.67 | 885.25 | 268.98 | 891.54 | 269.2 | 897.78 | 269.14 | 901.57 | 269.05 |
| 903.39 | 269.09 | 908.42 | 268.94 | 911.98 | 268.78 | 915.19 | 268.49 | 917.25 | 268.12 |
| 922.36 | 267.85 | 925.2 | 267.76 | 928.38 | 267.87 | 933.32 | 267.95 | 936.04 | 268.09 |
| 941.35 | 268.48 | 948.42 | 268.45 | 950.76 | 268.42 | 959.8 | 267.16 | 961.95 | 266.94 |
| 967.55 | 266.46 | 970.96 | 266.24 | 972.8 | 266.04 | 976.16 | 266.2 | 978.84 | 266.58 |
| 981.41 | 266.82 | 986.49 | 267.09 | 988.54 | 267.12 | 990.87 | 267.25 | 993.42 | 267.22 |
| 995.84 | 267.29 | 1002.95 | 267.22 | 1006.61 | 267.1 | 1007.83 | 267.11 | 1012.02 | 266.92 |
| 1021.3 | 267.06 | 1027.1 | 266.93 | 1036.35 | 266.94 | 1039.45 | 267.09 | 1043.64 | 267.13 |
| 1046.26 | 267.2 | 1051.88 | 267.45 | 1056.84 | 267.53 | 1059.07 | 267.47 | 1064.11 | 267.11 |
| 1066.89 | 266.75 | 1068.7 | 266.42 | 1074.4 | 265.65 | 1077.07 | 265.46 | 1079.14 | 265.37 |
| 1082.42 | 265.31 | 1083.6 | 265.34 | 1086.82 | 265.3 | 1092.03 | 265.11 | 1101.07 | 265.22 |
| 1102.54 | 265.3 | 1111.46 | 265.59 | 1115.74 | 265.8 | 1118.22 | 266.09 | 1122.52 | 266.4 |
| 1126.92 | 266.52 | 1133.59 | 266.45 | 1144.45 | 266.98 | 1145.53 | 267.01 | 1148.32 | 267.45 |
| 1150.76 | 268.06 | 1154.06 | 268.98 | 1158.68 | 269.43 | 1159.4 | 269.43 | 1167.44 | 269.98 |
| 1174.54 | 270.28 | 1177.48 | 270.48 | 1183.09 | 270.79 | 1192.65 | 270.67 | 1195.41 | 270.68 |
| 1201.34 | 270.9 | 1213.34 | 271.58 | 1219.73 | 271.66 | 1223.18 | 271.64 | 1233.04 | 271.49 |
| 1236.02 | 271.37 | 1240.26 | 271.12 | 1248.44 | 270.5 | 1253.8 | 270.24 | 1260.3 | 270.14 |
| 1264.13 | 270.23 | 1266.75 | 270.37 | 1269.72 | 270.46 | 1276.39 | 270.54 | 1279.4 | 270.62 |
| 1286.36 | 270.01 | 1293.72 | 269.15 | 1296.85 | 268.56 | 1299.82 | 268.05 | 1303.26 | 267.65 |
| 1307.93 | 267.34 | 1311.56 | 266.96 | 1316.91 | 266.6 | 1320.75 | 266.48 | 1323.13 | 266.6 |
| 1323.96 | 266.8 | 1332.38 | 267.07 | 1333.61 | 267.08 | 1339.69 | 267.38 | 1343.55 | 267.53 |
| 1348.35 | 267.66 | 1354.92 | 267.71 | 1358.99 | 267.58 | 1362.41 | 267.39 | 1363.49 | 267.27 |
| 1365.88 | 267.25 | 1372.9 | 267.32 | 1376.64 | 267.31 | 1382.82 | 267.36 | 1385.81 | 267.24 |
| 1390.34 | 267.23 | 1397.98 | 267.01 | 1401.99 | 266.87 | 1407.39 | 266.91 | 1417.54 | 267.03 |
| 1423.83 | 267.19 | 1425.65 | 267.48 | 1429.36 | 267.88 | 1435.41 | 268.73 | 1438.03 | 268.99 |
| 1440.7 | 269.1 | 1445.53 | 268.99 | 1450.06 | 269.08 | 1460.6 | 268.86 | 1468.28 | 268.44 |
| 1470.83 | 268.18 | 1478.21 | 267.98 | 1488.35 | 267.79 | 1491.64 | 267.82 | 1499.35 | 267.75 |
| 1500.47 | 267.76 | 1503.58 | 267.95 | 1505.71 | 268.01 | 1509.72 | 268.03 | 1514.94 | 268.1 |
| 1518.79 | 268.25 | 1521.76 | 268.32 | 1525.52 | 268.62 | 1535.13 | 268.62 | 1536.18 | 268.69 |
| 1539.6 | 268.54 | 1542.64 | 268.54 | 1544.45 | 268.66 | 1545.77 | 268.65 | 1549.42 | 268.81 |
| 1553.55 | 268.94 | 1556.74 | 268.96 | 1561.91 | 268.84 | 1563.64 | 268.91 | 1566.61 | 268.86 |
| 1568.6 | 268.62 | 1569.85 | 268.35 | 1571.82 | 268.17 | 1577.79 | 268.26 | 1580.79 | 268.05 |
| 1586.85 | 268.06 | 1589.15 | 268.12 | 1592.24 | 268.34 | 1596.81 | 268.52 | 1600.19 | 268.53 |
| 1603.21 | 268.49 | 1616.78 | 268 | 1621.47 | 267.75 | 1624.37 | 267.54 | 1629.04 | 267.38 |
| 1635.55 | 267 | 1639.86 | 266.54 | 1644.54 | 266.42 | 1651.4 | 266.34 | 1656.74 | 266.23 |
| 1663.52 | 266.2 | 1664.95 | 266.26 | 1669.37 | 266.31 | 1670.43 | 266.4 | 1674.77 | 266.45 |
| 1680.26 | 266.56 | 1680.84 | 266.52 | 1690.54 | 266.37 | 1698.29 | 266.29 | 1705.41 | 266.3 |
| 1709.8 | 266.26 | 1712.22 | 266.28 | 1715.88 | 266.4 | 1718.98 | 266.45 | 1724.95 | 266.62 |
| 1734.07 | 267.37 | 1735.75 | 267.56 | 1741.72 | 268.11 | 1744.16 | 268.52 | 1748.45 | 269.08 |
| 1749.5 | 269.03 | 1756.14 | 268.94 | 1759.07 | 269.05 | 1760.91 | 269.07 | 1766.96 | 268.87 |
| 1770.35 | 268.87 | 1773.2 | 268.92 | 1777.82 | 269.09 | 1781.97 | 269.2 | 1785.38 | 269.22 |
| 1789.93 | 269.12 | 1797.22 | 269.3 | 1804.73 | 268.67 | 1809.4 | 268.16 | 1818.88 | 267.87 |
| 1824.82 | 267.57 | 1830.95 | 267.14 | 1834.85 | 266.91 | 1841.04 | 266.6 | 1844.41 | 266.46 |
| 1845.67 | 266.47 | 1849.3 | 266.36 | 1853.63 | 266.17 | 1855.59 | 266.15 | 1860.27 | 266.19 |
| 1866.65 | 266.09 | 1869.91 | 266.01 | 1872.03 | 266.01 | 1877.31 | 266.12 | 1882.5 | 266.08 |
| 1885.88 | 266.22 | 1891.85 | 266.34 | 1896.22 | 266.38 | 1908.26 | 266.28 | 1921.54 | 266.27 |
| 1928.83 | 266.2 | 1931.42 | 266.25 | 1936.57 | 266.29 | 1943.22 | 266.29 | 1946.47 | 266.38 |
| 1950.96 | 266.55 | 1952.57 | 266.68 | 1958.62 | 267.01 | 1966.38 | 267.12 | 1969.75 | 267.13 |
| 1976.17 | 267.07 | 1980.63 | 266.97 | 1983.19 | 267.02 | 1986.51 | 266.96 | 1991.91 | 267.07 |
| 2001.07 | 266.88 | 2002.28 | 266.8 | 2009.53 | 266.72 | 2021.01 | 266.17 | 2023.75 | 266.16 |
| 2032.47 | 266.24 | 2037.58 | 266.19 | 2043.55 | 266 | 2053.68 | 266 | 2055.85 | 265.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2061.06 | 265.74 | 2062.64 | 265.84 | 2063.52 | 265.76 | 2066.8 | 265.73 | 2072.17 | 265.98 |
| 2078.73 | 265.67 | 2081.99 | 265.7 | 2084.27 | 265.77 | 2091.77 | 265.73 | 2100.74 | 265.62 |
| 2105.4 | 265.43 | 2112.42 | 265.62 | 2116.57 | 265.62 | 2122.42 | 265.53 | 2127.21 | 265.59 |
| 2128.93 | 265.56 | 2137.41 | 265.33 | 2143.81 | 265.3 | 2151.59 | 265.17 | 2161.99 | 265.2 |
| 2166.74 | 265.08 | 2169.58 | 265.09 | 2177.56 | 265.06 | 2180.12 | 265.09 | 2182.86 | 264.95 |
| 2187.14 | 264.88 | 2191.58 | 264.9 | 2193.16 | 264.86 | 2198.92 | 264.84 | 2204.5 | 264.79 |
| 2208.39 | 264.81 | 2210.35 | 264.86 | 2214.05 | 264.86 | 2221.98 | 264.75 | 2225.68 | 264.81 |
| 2228.22 | 264.81 | 2238.53 | 264.47 | 2248.16 | 264.42 | 2256.51 | 264.49 | 2260.67 | 264.32 |
| 2264.55 | 264.26 | 2268.56 | 264.36 | 2270.16 | 264.23 | 2271.99 | 264.34 | 2278.28 | 264.48 |
| 2284.57 | 264.86 | 2285.5 | 264.89 | 2294.88 | 265.01 | 2295.47 | 264.92 | 2297.78 | 264.93 |
| 2302.91 | 265.23 | 2306.13 | 265.14 | 2308.96 | 265.14 | 2318.37 | 264.9 | 2319.9 | 264.88 |
| 2324.01 | 265.36 | 2329.5 | 265.9 | 2332.47 | 265.64 | 2336.53 | 265.79 | 2338.44 | 265.77 |
| 2342.77 | 265.62 | 2344.93 | 265.46 | 2362.35 | 265.49 | 2365.34 | 265.58 | 2368.16 | 265.45 |
| 2369.54 | 265.49 | 2371.86 | 265.94 | 2375.73 | 266.31 | 2377.45 | 266.37 | 2380.05 | 266.57 |
| 2382.81 | 267.02 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 238.92 | .04 | 2037.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 238.92 | 2037.58 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 510.052*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 276.35 | 5.1 | 275.91 | 8.79 | 275.7 | 12.36 | 275.41 | 20.71 | 274.57 |
| 26.52 | 274.26 | 31.56 | 273.82 | 34.1 | 273.56 | 36.49 | 273.4 | 48.22 | 272.83 |
| 54.01 | 272.59 | 59.62 | 272.45 | 66.37 | 272.24 | 70.55 | 272.19 | 72.81 | 272.21 |
| 76.18 | 272.12 | 80.39 | 271.91 | 85.84 | 271.33 | 91.27 | 271.16 | 94.32 | 271.02 |
| 95.34 | 271.06 | 98.31 | 270.97 | 101.25 | 270.82 | 107.01 | 270.44 | 110.49 | 270.24 |
| 116.15 | 270.09 | 122.36 | 269.77 | 129.1 | 269.52 | 140.67 | 268.93 | 150.44 | 268.22 |
| 155.66 | 267.93 | 159.67 | 267.76 | 162.04 | 267.58 | 167.66 | 267.41 | 171.99 | 267.15 |
| 173.67 | 266.98 | 181.17 | 266.6 | 183.33 | 266.58 | 186.88 | 266.4 | 195.28 | 266.18 |
| 196.58 | 266.17 | 199.83 | 266.32 | 202.62 | 266.2 | 206.88 | 265.94 | 208.76 | 265.78 |
| 215.68 | 265.67 | 219.55 | 265.53 | 225.12 | 265.52 | 226.76 | 265.44 | 228.75 | 265.51 |
| 233.51 | 265.47 | 237.57 | 265.25 | 244.1 | 265.34 | 254.92 | 265.65 | 263.06 | 265.98 |
| 274.53 | 266.49 | 283.03 | 266.74 | 284.76 | 266.76 | 289.94 | 266.95 | 297.27 | 267.48 |
| 299.47 | 267.49 | 301.58 | 267.43 | 308.05 | 267.47 | 316.73 | 267.67 | 326.75 | 267.72 |
| 336.14 | 268.03 | 339.28 | 268.35 | 341.3 | 268.51 | 345.77 | 269.08 | 350.14 | 269.94 |
| 354.22 | 270.95 | 355.8 | 271.28 | 363.06 | 271.54 | 365.77 | 271.55 | 368.65 | 271.5 |
| 370.29 | 271.55 | 374.1 | 271.55 | 377.37 | 271.46 | 385.67 | 270.99 | 390.55 | 270.93 |
| 395.93 | 270.93 | 399.63 | 270.88 | 403.52 | 270.88 | 404.38 | 270.8 | 409.92 | 269.99 |
| 416.38 | 269.09 | 426.99 | 267.91 | 432.14 | 267.31 | 437.42 | 266.92 | 443.22 | 266.72 |
| 444.6 | 266.72 | 448.12 | 266.57 | 450.9 | 266.52 | 455.41 | 266.31 | 465.01 | 266.16 |
| 471.25 | 266.41 | 475.12 | 266.49 | 478.38 | 266.5 | 480.82 | 266.58 | 484.46 | 266.54 |
| 490.85 | 266.52 | 494.63 | 266.61 | 502.83 | 266.29 | 507.71 | 266.18 | 509.66 | 265.95 |
| 516.61 | 265.38 | 520.01 | 265.21 | 525.75 | 265 | 535.03 | 264.75 | 539.59 | 264.55 |
| 546.31 | 264.44 | 552.73 | 264.41 | 558.35 | 264.48 | 562.69 | 264.41 | 567.23 | 264.51 |
| 569.46 | 264.5 | 571.29 | 264.28 | 574.74 | 263.73 | 579.52 | 263.02 | 584.33 | 262.34 |
| 591.44 | 261.6 | 602.51 | 261.16 | 610.29 | 260.97 | 615.6 | 260.92 | 624.62 | 261.12 |
| 636.27 | 261.3 | 648.64 | 261.31 | 654.64 | 261.43 | 662.98 | 261.66 | 666.8 | 261.82 |
| 669.48 | 261.89 | 674.05 | 261.94 | 675.67 | 262.02 | 687.28 | 262.06 | 692.95 | 262.05 |
| 725.43 | 262.28 | 731.54 | 262.43 | 734.59 | 262.63 | 738.75 | 262.79 | 744.28 | 262.93 |
| 748.26 | 263.08 | 758.47 | 263.3 | 761.84 | 263.63 | 765.48 | 263.83 | 776.86 | 264.15 |
| 780.06 | 264.17 | 785.75 | 264.27 | 795.95 | 264.38 | 798.68 | 264.78 | 803.46 | 265 |
| 806.02 | 265.18 | 808.34 | 265.6 | 810.55 | 265.72 | 815.74 | 266.09 | 820.12 | 266.53 |
| 821.45 | 266.72 | 823.55 | 266.86 | 828.16 | 267.05 | 830.06 | 267.17 | 833.69 | 267.53 |
| 836.48 | 267.75 | 837.21 | 267.87 | 846.23 | 268.23 | 849.59 | 267.55 | 852.31 | 267.26 |
| 856.9 | 267.08 | 859.07 | 267.11 | 866.83 | 267.04 | 873.89 | 267.21 | 876.66 | 267.32 |
| 882.62 | 267.74 | 889.91 | 268.06 | 894.39 | 268.35 | 900.84 | 268.54 | 907.22 | 268.48 |
| 911.1 | 268.4 | 912.96 | 268.45 | 918.12 | 268.32 | 921.76 | 268.18 | 925.05 | 267.92 |
| 927.16 | 267.56 | 932.38 | 267.29 | 935.3 | 267.2 | 938.56 | 267.29 | 943.61 | 267.37 |
| 946.39 | 267.49 | 951.83 | 267.85 | 959.07 | 267.82 | 961.47 | 267.79 | 970.72 | 266.58 |
| 972.92 | 266.37 | 978.66 | 265.91 | 982.15 | 265.71 | 984.03 | 265.52 | 987.48 | 265.69 |
| 990.22 | 266.1 | 992.85 | 266.35 | 998.05 | 266.64 | 1000.15 | 266.66 | 1002.53 | 266.78 |
| 1005.14 | 266.74 | 1007.63 | 266.78 | 1014.9 | 266.66 | 1018.65 | 266.5 | 1021.69 | 266.42 |
| 1024.19 | 266.27 | 1033.69 | 266.41 | 1039.63 | 266.28 | 1049.1 | 266.3 | 1052.28 | 266.46 |
| 1056.57 | 266.51 | 1059.25 | 266.59 | 1065 | 266.87 | 1067.95 | 266.97 | 1071.76 | 266.95 |
| 1074.47 | 266.8 | 1077.53 | 266.57 | 1080.37 | 266.2 | 1082.23 | 265.87 | 1088.06 | 265.12 |
| 1092.92 | 264.87 | 1096.27 | 264.84 | 1100.78 | 264.85 | 1106.12 | 264.67 | 1115.37 | 264.8 |
| 1116.87 | 264.88 | 1126 | 265.19 | 1130.39 | 265.42 | 1132.93 | 265.71 | 1137.33 | 266.02 |
| 1141.83 | 266.12 | 1147.76 | 265.97 | 1148.67 | 265.98 | 1157.69 | 266.32 | 1160.89 | 266.42 |
| 1163.74 | 266.83 | 1166.24 | 267.42 | 1169.62 | 268.32 | 1174.36 | 268.77 | 1175.09 | 268.77 |
| 1183.33 | 269.32 | 1185.46 | 269.44 | 1190.59 | 269.61 | 1193.61 | 269.81 | 1199.35 | 270.1 |
| 1207.71 | 270 | 1212.94 | 270.02 | 1218.04 | 270.22 | 1230.32 | 270.87 | 1235.26 | 270.95 |
| 1240.39 | 270.95 | 1248.48 | 270.85 | 1253.55 | 270.7 | 1257.88 | 270.47 | 1266.26 | 269.88 |
| 1270.67 | 269.67 | 1273.76 | 269.58 | 1278.4 | 269.53 | 1282.32 | 269.63 | 1285.01 | 269.77 |
| 1290.72 | 269.94 | 1294.88 | 269.99 | 1297.96 | 270.09 | 1305.09 | 269.51 | 1312.62 | 268.69 |
| 1315.83 | 268.1 | 1318.87 | 267.6 | 1322.39 | 267.21 | 1327.17 | 266.92 | 1330.88 | 266.55 |
| 1337.6 | 266.11 | 1340.3 | 266.06 | 1342.73 | 266.19 | 1343.59 | 266.41 | 1352.2 | 266.7 |
| 1353.46 | 266.72 | 1359.69 | 267.02 | 1365.86 | 267.27 | 1368.55 | 267.32 | 1375.29 | 267.38 |
| 1379.45 | 267.23 | 1385.53 | 266.87 | 1393.69 | 266.95 | 1397.53 | 266.94 | 1403.85 | 267 |
| 1406.91 | 266.88 | 1411.55 | 266.87 | 1417.55 | 266.69 | 1423.48 | 266.48 | 1429 | 266.51 |
| 1439.4 | 266.63 | 1445.84 | 266.79 | 1447.71 | 267.06 | 1451.5 | 267.46 | 1456.62 | 268.14 |
| 1459.72 | 268.48 | 1463.11 | 268.63 | 1468.06 | 268.54 | 1472.7 | 268.61 | 1478.98 | 268.47 |
| 1483.49 | 268.42 | 1486.56 | 268.23 | 1489.79 | 268.1 | 1493.96 | 267.72 | 1501.52 | 267.53 |
| 1511.9 | 267.35 | 1514.32 | 267.39 | 1524.31 | 267.37 | 1527.49 | 267.59 | 1529.67 | 267.66 |
| 1539.13 | 267.77 | 1546.11 | 268.02 | 1549.95 | 268.34 | 1559.79 | 268.34 | 1560.87 | 268.4 |
| 1564.37 | 268.22 | 1567.48 | 268.2 | 1569.34 | 268.31 | 1570.69 | 268.29 | 1574.43 | 268.44 |
| 1578.65 | 268.55 | 1583.16 | 268.54 | 1587.22 | 268.41 | 1588.99 | 268.49 | 1592.03 | 268.43 |
| 1594.07 | 268.19 | 1595.34 | 267.91 | 1597.36 | 267.73 | 1603.48 | 267.87 | 1606.54 | 267.68 |
| 1612.1 | 267.7 | 1615.11 | 267.78 | 1618.27 | 268 | 1622.95 | 268.19 | 1626.41 | 268.2 |
| 1629.51 | 268.16 | 1643.39 | 267.7 | 1645.64 | 267.6 | 1651.17 | 267.25 | 1655.96 | 267.09 |
| 1662.62 | 266.7 | 1667.03 | 266.21 | 1671.82 | 266.09 | 1678.84 | 266.01 | 1687.57 | 265.86 |
| 1691.26 | 265.87 | 1692.72 | 265.92 | 1697.24 | 265.96 | 1698.33 | 266.05 | 1702.77 | 266.1 |
| 1707 | 266.2 | 1718.92 | 266.03 | 1730.24 | 265.93 | 1734.14 | 265.96 | 1738.64 | 265.91 |
| 1741.12 | 265.92 | 1745.47 | 266.05 | 1748.04 | 266.08 | 1754.16 | 266.25 | 1763.49 | 266.99 |
| 1765.21 | 267.17 | 1772.27 | 267.8 | 1774.16 | 268.17 | 1778.21 | 268.69 | 1779.28 | 268.63 |

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|---|---|---|---|---|---|---|---|---|---|
| 1786.09 | 268.5 | 1789.09 | 268.59 | 1790.97 | 268.59 | 1797.17 | 268.4 | 1800.64 | 268.41 |
| 1803.55 | 268.48 | 1812.53 | 268.83 | 1816.03 | 268.86 | 1820.69 | 268.76 | 1828.15 | 268.98 |
| 1835.84 | 268.34 | 1840.62 | 267.8 | 1850.32 | 267.53 | 1856.41 | 267.24 | 1862.68 | 266.82 |
| 1866.67 | 266.59 | 1876.46 | 266.15 | 1877.75 | 266.18 | 1881.47 | 266.07 | 1885.32 | 265.89 |
| 1887.91 | 265.85 | 1892.7 | 265.89 | 1899.24 | 265.79 | 1902.57 | 265.71 | 1904.75 | 265.71 |
| 1910.15 | 265.83 | 1915.46 | 265.79 | 1918.93 | 265.94 | 1925.03 | 266.06 | 1929.52 | 266.11 |
| 1930.5 | 266.08 | 1943.51 | 266 | 1955.44 | 265.97 | 1962.91 | 265.9 | 1965.55 | 265.95 |
| 1970.82 | 265.98 | 1977.64 | 265.98 | 1980.96 | 266.06 | 1985.56 | 266.22 | 1987.21 | 266.35 |
| 1993.4 | 266.7 | 1995.44 | 266.75 | 2001.35 | 266.81 | 2004.8 | 266.82 | 2011.37 | 266.77 |
| 2015.94 | 266.67 | 2018.56 | 266.71 | 2021.96 | 266.66 | 2027.49 | 266.77 | 2036.86 | 266.61 |
| 2038.11 | 266.54 | 2045.17 | 266.47 | 2057.29 | 265.94 | 2060.09 | 265.93 | 2069.02 | 266.01 |
| 2074.25 | 265.96 | 2080.66 | 265.76 | 2091.55 | 265.75 | 2093.88 | 265.61 | 2099.48 | 265.47 |
| 2101.19 | 265.57 | 2102.13 | 265.49 | 2105.65 | 265.45 | 2111.42 | 265.73 | 2117.97 | 265.41 |
| 2121.97 | 265.43 | 2124.43 | 265.5 | 2132.49 | 265.46 | 2142.13 | 265.34 | 2147.13 | 265.13 |
| 2154.68 | 265.34 | 2159.14 | 265.34 | 2165.42 | 265.24 | 2170.57 | 265.31 | 2172.42 | 265.28 |
| 2181.53 | 265.02 | 2188.42 | 264.99 | 2196.77 | 264.85 | 2207.95 | 264.89 | 2213.05 | 264.75 |
| 2216.1 | 264.77 | 2224.68 | 264.73 | 2227.43 | 264.76 | 2230.38 | 264.62 | 2234.98 | 264.54 |
| 2239.75 | 264.56 | 2241.44 | 264.52 | 2253.63 | 264.44 | 2257.81 | 264.46 | 2259.92 | 264.52 |
| 2266.48 | 264.5 | 2272.42 | 264.4 | 2276.39 | 264.46 | 2279.12 | 264.46 | 2282.46 | 264.37 |
| 2289.1 | 264.11 | 2300.56 | 264.04 | 2309.52 | 264.11 | 2314 | 263.93 | 2317.17 | 263.92 |
| 2318.16 | 263.87 | 2322.47 | 263.97 | 2324.19 | 263.84 | 2326.16 | 263.96 | 2332.09 | 264.07 |
| 2339.68 | 264.52 | 2350.76 | 264.68 | 2351.39 | 264.58 | 2353.87 | 264.59 | 2354.35 | 264.68 |
| 2356.24 | 264.72 | 2359.39 | 264.92 | 2362.85 | 264.82 | 2365.89 | 264.82 | 2377.65 | 264.54 |
| 2382.06 | 265.06 | 2387.96 | 265.64 | 2391.15 | 265.36 | 2395.51 | 265.52 | 2397.57 | 265.51 |
| 2402.22 | 265.34 | 2404.55 | 265.17 | 2423.27 | 265.21 | 2426.48 | 265.31 | 2429.51 | 265.17 |
| 2430.99 | 265.22 | 2433.49 | 265.7 | 2437.65 | 266.1 | 2441.26 | 266.28 | 2442.29 | 266.39 |
| 2445.26 | 266.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 233.51 | .04 | 2074.25 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 233.51 | 2074.25 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 490.225*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 275.85 | 4.98 | 275.44 | 8.97 | 275.22 | 12.07 | 274.96 | 20.23 | 274.13 |
| 25.91 | 273.82 | 30.83 | 273.37 | 33.31 | 273.11 | 35.65 | 272.95 | 47.11 | 272.39 |
| 52.76 | 272.16 | 58.24 | 272.02 | 64.83 | 271.81 | 68.92 | 271.75 | 71.12 | 271.77 |
| 74.41 | 271.68 | 78.53 | 271.47 | 83.85 | 270.89 | 89.15 | 270.73 | 92.14 | 270.59 |
| 93.13 | 270.63 | 96.03 | 270.55 | 98.91 | 270.4 | 104.53 | 270.02 | 107.93 | 269.82 |
| 113.46 | 269.67 | 119.53 | 269.36 | 126.11 | 269.11 | 137.41 | 268.54 | 146.95 | 267.85 |
| 150.02 | 267.68 | 155.97 | 267.41 | 158.28 | 267.24 | 163.78 | 267.08 | 168 | 266.84 |
| 169.65 | 266.67 | 177.47 | 266.29 | 179.09 | 266.3 | 182.55 | 266.12 | 190.75 | 265.91 |
| 192.02 | 265.9 | 195.2 | 266.05 | 197.92 | 265.93 | 202.09 | 265.68 | 203.93 | 265.53 |
| 210.69 | 265.42 | 214.46 | 265.29 | 219.9 | 265.28 | 221.5 | 265.2 | 224.48 | 265.26 |
| 228.1 | 265.21 | 232.25 | 264.98 | 238.92 | 265.06 | 249.97 | 265.35 | 261.27 | 265.78 |
| 269.99 | 266.14 | 284.9 | 266.52 | 293.2 | 267.05 | 295.45 | 267.07 | 297.61 | 267.01 |
| 304.21 | 267.05 | 312.88 | 267.24 | 319.05 | 267.28 | 323.3 | 267.27 | 332.9 | 267.55 |
| 338.16 | 268.01 | 342.72 | 268.57 | 347.19 | 269.39 | 351.35 | 270.38 | 352.97 | 270.69 |
| 360.59 | 270.94 | 366.09 | 270.88 | 367.76 | 270.93 | 371.66 | 270.92 | 373.72 | 270.87 |
| 383.92 | 270.36 | 388.44 | 270.32 | 393.94 | 270.31 | 397.72 | 270.25 | 401.1 | 270.26 |
| 402.57 | 270.18 | 408.22 | 269.41 | 414.82 | 268.56 | 425.66 | 267.44 | 430.92 | 266.88 |
| 436.3 | 266.5 | 442.22 | 266.31 | 443.64 | 266.31 | 447.23 | 266.15 | 450.07 | 266.1 |
| 454.67 | 265.87 | 464.48 | 265.71 | 470.85 | 265.94 | 474.8 | 266 | 478.13 | 266.01 |
| 480.62 | 266.09 | 488.1 | 266.02 | 491.91 | 266.04 | 495.24 | 266.11 | 503.09 | 265.81 |
| 508.08 | 265.7 | 510.06 | 265.48 | 517.16 | 264.93 | 519.37 | 264.82 | 526.5 | 264.56 |
| 531.53 | 264.41 | 535.97 | 264.31 | 542.13 | 264.06 | 547.49 | 263.98 | 552.24 | 263.94 |
| 559.78 | 263.98 | 564.21 | 263.9 | 568.85 | 263.99 | 571.12 | 263.97 | 573 | 263.77 |
| 581.4 | 262.56 | 586.31 | 261.9 | 593.56 | 261.18 | 604.87 | 260.73 | 612.82 | 260.54 |
| 618.24 | 260.49 | 627.46 | 260.69 | 639.39 | 260.86 | 652.05 | 260.88 | 658.19 | 261 |
| 666.73 | 261.24 | 670.64 | 261.4 | 673.48 | 261.47 | 678.05 | 261.52 | 679.7 | 261.6 |
| 682.14 | 261.59 | 691.59 | 261.63 | 697.4 | 261.63 | 730.63 | 261.84 | 736.88 | 262 |
| 740.01 | 262.2 | 744.26 | 262.36 | 749.92 | 262.5 | 753.99 | 262.65 | 764.44 | 262.87 |
| 767.89 | 263.2 | 771.62 | 263.4 | 783.26 | 263.7 | 786.53 | 263.72 | 792.08 | 263.83 |
| 802.79 | 263.94 | 805.58 | 264.37 | 810.48 | 264.61 | 813.1 | 264.81 | 815.48 | 265.25 |
| 817.74 | 265.38 | 823.05 | 265.76 | 828.89 | 266.42 | 831.04 | 266.56 | 835.76 | 266.74 |
| 837.7 | 266.86 | 841.41 | 267.22 | 844.28 | 267.44 | 845.01 | 267.56 | 854.24 | 267.9 |
| 857.68 | 267.15 | 860.47 | 266.83 | 865.16 | 266.61 | 867.39 | 266.62 | 875.33 | 266.51 |
| 882.56 | 266.66 | 885.39 | 266.76 | 891.49 | 267.15 | 898.95 | 267.45 | 901.54 | 267.61 |
| 905.02 | 267.76 | 910.13 | 267.89 | 916.66 | 267.83 | 920.63 | 267.74 | 922.54 | 267.81 |
| 927.81 | 267.69 | 931.54 | 267.57 | 934.91 | 267.34 | 937.07 | 267 | 942.41 | 266.73 |
| 945.4 | 266.64 | 948.73 | 266.72 | 953.9 | 266.78 | 956.75 | 266.88 | 962.32 | 267.23 |
| 972.17 | 267.16 | 981.65 | 266 | 983.9 | 265.8 | 989.77 | 265.37 | 993.34 | 265.17 |
| 995.26 | 265 | 998.79 | 265.18 | 1001.59 | 265.62 | 1004.29 | 265.88 | 1009.61 | 266.18 |
| 1011.76 | 266.21 | 1014.2 | 266.32 | 1016.87 | 266.26 | 1020.79 | 266.26 | 1026.86 | 266.1 |
| 1030.69 | 265.89 | 1031.97 | 265.88 | 1036.36 | 265.63 | 1046.08 | 265.76 | 1049.45 | 265.68 |
| 1053.8 | 265.63 | 1061.85 | 265.65 | 1065.1 | 265.82 | 1069.5 | 265.89 | 1072.23 | 265.98 |
| 1078.13 | 266.3 | 1081.14 | 266.41 | 1085.66 | 266.38 | 1090.94 | 266.02 | 1093.85 | 265.65 |
| 1095.75 | 265.33 | 1101.72 | 264.59 | 1104.52 | 264.43 | 1108.41 | 264.35 | 1111.36 | 264.4 |
| 1114.99 | 264.39 | 1120.2 | 264.23 | 1129.62 | 264.38 | 1131.2 | 264.47 | 1140.55 | 264.8 |
| 1145.04 | 265.04 | 1146.14 | 265.2 | 1152.14 | 265.65 | 1156.75 | 265.71 | 1163.74 | 265.5 |
| 1176.25 | 265.84 | 1179.17 | 266.21 | 1181.73 | 266.77 | 1185.18 | 267.65 | 1190.03 | 268.12 |
| 1190.78 | 268.11 | 1199.21 | 268.67 | 1201.4 | 268.78 | 1206.64 | 268.95 | 1209.73 | 269.13 |
| 1215.6 | 269.41 | 1224.17 | 269.33 | 1228.52 | 269.34 | 1234.73 | 269.54 | 1247.3 | 270.17 |
| 1252.35 | 270.25 | 1257.61 | 270.25 | 1265.88 | 270.17 | 1271.07 | 270.03 | 1275.5 | 269.81 |
| 1284.08 | 269.25 | 1288.59 | 269.06 | 1291.75 | 268.97 | 1296.51 | 268.92 | 1300.52 | 269.03 |
| 1306.38 | 269.3 | 1313.37 | 269.44 | 1316.51 | 269.56 | 1323.81 | 269.01 | 1331.52 | 268.23 |
| 1334.8 | 267.65 | 1337.91 | 267.15 | 1341.52 | 266.77 | 1346.41 | 266.51 | 1350.21 | 266.13 |
| 1357.08 | 265.68 | 1359.94 | 265.63 | 1362.34 | 265.79 | 1363.21 | 266.02 | 1372.02 | 266.33 |
| 1374.63 | 266.4 | 1379.69 | 266.67 | 1383.73 | 266.85 | 1388.76 | 266.99 | 1395.65 | 267.04 |
| 1399.91 | 266.88 | 1403.49 | 266.65 | 1404.62 | 266.52 | 1406.13 | 266.49 | 1414.49 | 266.58 |
| 1418.41 | 266.57 | 1424.88 | 266.64 | 1425.97 | 266.55 | 1432.76 | 266.51 | 1444.97 | 266.09 |
| 1450.62 | 266.12 | 1461.25 | 266.23 | 1467.85 | 266.39 | 1469.76 | 266.65 | 1473.64 | 267.03 |
| 1479.98 | 267.82 | 1482.05 | 268.02 | 1485.52 | 268.16 | 1490.59 | 268.08 | 1492.25 | 268.14 |
| 1495.33 | 268.15 | 1501.76 | 268.01 | 1506.38 | 267.97 | 1514.42 | 267.55 | 1517.1 | 267.26 |
| 1524.83 | 267.08 | 1535.45 | 266.91 | 1538.9 | 266.97 | 1548.15 | 266.98 | 1551.41 | 267.23 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1553.64 | 267.31 | 1563.31 | 267.45 | 1567.34 | 267.62 | 1570.46 | 267.71 | 1574.39 | 268.06 |
| 1584.46 | 268.06 | 1585.57 | 268.12 | 1589.15 | 267.89 | 1592.33 | 267.85 | 1594.23 | 267.96 |
| 1595.61 | 267.93 | 1599.44 | 268.07 | 1603.76 | 268.16 | 1608.37 | 268.13 | 1612.52 | 267.99 |
| 1614.34 | 268.07 | 1617.45 | 268 | 1619.54 | 267.76 | 1620.84 | 267.46 | 1622.9 | 267.29 |
| 1629.16 | 267.49 | 1632.3 | 267.31 | 1637.99 | 267.34 | 1641.07 | 267.43 | 1641.92 | 267.52 |
| 1649.09 | 267.87 | 1652.63 | 267.88 | 1655.8 | 267.84 | 1670.01 | 267.4 | 1674.93 | 267.16 |
| 1677.97 | 266.96 | 1682.87 | 266.8 | 1689.69 | 266.4 | 1694.2 | 265.89 | 1699.1 | 265.77 |
| 1706.29 | 265.68 | 1715.22 | 265.53 | 1718.99 | 265.53 | 1720.49 | 265.58 | 1725.12 | 265.62 |
| 1727.64 | 265.73 | 1730.77 | 265.74 | 1735.11 | 265.85 | 1747.3 | 265.69 | 1758.89 | 265.59 |
| 1762.88 | 265.62 | 1767.48 | 265.55 | 1770.02 | 265.56 | 1773.85 | 265.67 | 1777.1 | 265.71 |
| 1783.36 | 265.89 | 1792.9 | 266.6 | 1794.67 | 266.78 | 1801.9 | 267.39 | 1803.83 | 267.77 |
| 1807.97 | 268.3 | 1809.36 | 268.22 | 1816.04 | 268.05 | 1821.03 | 268.12 | 1827.37 | 267.93 |
| 1830.92 | 267.94 | 1833.91 | 268.03 | 1838.75 | 268.27 | 1843.1 | 268.45 | 1846.67 | 268.49 |
| 1851.44 | 268.41 | 1859.08 | 268.67 | 1866.95 | 268 | 1871.83 | 267.44 | 1881.77 | 267.18 |
| 1887.99 | 266.91 | 1894.42 | 266.5 | 1898.5 | 266.27 | 1904.99 | 265.98 | 1908.52 | 265.85 |
| 1909.84 | 265.88 | 1913.65 | 265.77 | 1917.58 | 265.59 | 1920.23 | 265.55 | 1925.14 | 265.6 |
| 1931.83 | 265.5 | 1935.24 | 265.42 | 1937.46 | 265.42 | 1942.99 | 265.55 | 1948.43 | 265.5 |
| 1951.98 | 265.65 | 1958.22 | 265.78 | 1962.81 | 265.83 | 1963.82 | 265.8 | 1975.42 | 265.71 |
| 1989.34 | 265.67 | 1996.98 | 265.59 | 1999.69 | 265.64 | 2005.08 | 265.68 | 2007.44 | 265.65 |
| 2012.06 | 265.67 | 2015.45 | 265.74 | 2020.16 | 265.89 | 2021.85 | 266.03 | 2028.18 | 266.39 |
| 2030.27 | 266.44 | 2039.85 | 266.51 | 2046.57 | 266.46 | 2051.25 | 266.37 | 2053.93 | 266.41 |
| 2057.41 | 266.36 | 2063.07 | 266.47 | 2072.66 | 266.34 | 2073.94 | 266.27 | 2081.17 | 266.21 |
| 2093.56 | 265.7 | 2096.43 | 265.69 | 2105.56 | 265.78 | 2110.92 | 265.72 | 2117.78 | 265.51 |
| 2130.31 | 265.49 | 2131.91 | 265.35 | 2137.9 | 265.2 | 2139.73 | 265.31 | 2140.74 | 265.22 |
| 2144.5 | 265.18 | 2150.67 | 265.48 | 2158.22 | 265.12 | 2161.96 | 265.15 | 2164.58 | 265.23 |
| 2173.2 | 265.19 | 2181.18 | 265.11 | 2183.52 | 265.06 | 2188.86 | 264.83 | 2196.94 | 265.05 |
| 2201.7 | 265.05 | 2208.42 | 264.95 | 2213.94 | 265.03 | 2226.62 | 264.7 | 2233.02 | 264.68 |
| 2241.96 | 264.53 | 2253.9 | 264.57 | 2259.37 | 264.42 | 2262.63 | 264.44 | 2271.8 | 264.4 |
| 2274.74 | 264.44 | 2277.89 | 264.28 | 2282.81 | 264.2 | 2287.92 | 264.22 | 2289.73 | 264.18 |
| 2296.35 | 264.15 | 2302.76 | 264.09 | 2307.24 | 264.11 | 2309.49 | 264.18 | 2313.74 | 264.18 |
| 2322.86 | 264.05 | 2327.1 | 264.12 | 2330.03 | 264.12 | 2333.59 | 264.02 | 2340.69 | 263.74 |
| 2352.95 | 263.66 | 2362.54 | 263.74 | 2367.32 | 263.54 | 2370.72 | 263.53 | 2371.78 | 263.48 |
| 2376.38 | 263.59 | 2378.23 | 263.44 | 2380.33 | 263.57 | 2387.56 | 263.73 | 2394.79 | 264.18 |
| 2406.64 | 264.35 | 2407.32 | 264.24 | 2409.97 | 264.26 | 2410.48 | 264.35 | 2412.5 | 264.39 |
| 2415.87 | 264.61 | 2417.34 | 264.61 | 2419.56 | 264.5 | 2422.82 | 264.5 | 2435.4 | 264.2 |
| 2440.12 | 264.76 | 2446.43 | 265.39 | 2449.84 | 265.08 | 2454.5 | 265.26 | 2456.7 | 265.24 |
| 2461.68 | 265.06 | 2464.17 | 264.88 | 2484.19 | 264.93 | 2487.62 | 265.04 | 2490.86 | 264.89 |
| 2492.44 | 264.94 | 2495.11 | 265.46 | 2499.56 | 265.9 | 2503.42 | 266.09 | 2504.53 | 266.22 |
| 2507.7 | 266.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 228.1 | .04 | 2110.92 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 228.1 | 2110.92 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 470.397*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 275.36 | 4.86 | 274.97 | 8.76 | 274.76 | 11.79 | 274.51 | 19.75 | 273.7 |
| 25.29 | 273.39 | 30.1 | 272.93 | 32.52 | 272.66 | 34.8 | 272.51 | 45.99 | 271.95 |
| 51.5 | 271.72 | 56.86 | 271.59 | 63.29 | 271.38 | 66.18 | 271.32 | 69.43 | 271.33 |
| 72.65 | 271.24 | 76.67 | 271.03 | 81.86 | 270.45 | 87.04 | 270.3 | 89.95 | 270.17 |
| 90.92 | 270.21 | 93.75 | 270.13 | 96.56 | 269.98 | 102.05 | 269.59 | 105.37 | 269.39 |
| 108.38 | 269.35 | 110.77 | 269.26 | 116.7 | 268.95 | 123.12 | 268.71 | 134.15 | 268.15 |
| 143.47 | 267.49 | 148.45 | 267.22 | 152.27 | 267.06 | 154.53 | 266.9 | 159.89 | 266.74 |
| 164.02 | 266.52 | 165.63 | 266.36 | 172.78 | 266.02 | 174.84 | 266.01 | 178.22 | 265.84 |
| 187.47 | 265.63 | 190.58 | 265.77 | 193.23 | 265.66 | 197.3 | 265.43 | 199.09 | 265.28 |
| 205.69 | 265.17 | 209.38 | 265.05 | 214.69 | 265.04 | 216.25 | 264.95 | 219.15 | 265 |
| 222.69 | 264.95 | 226.92 | 264.7 | 233.73 | 264.78 | 243.09 | 265 | 253.49 | 265.35 |
| 265.44 | 265.8 | 281.5 | 266.17 | 289.13 | 266.63 | 291.43 | 266.64 | 293.63 | 266.58 |
| 300.37 | 266.62 | 309.42 | 266.82 | 315.52 | 266.85 | 319.86 | 266.83 | 329.65 | 267.06 |
| 335.03 | 267.51 | 339.68 | 268.05 | 344.24 | 268.85 | 348.49 | 269.8 | 350.14 | 270.09 |
| 357.7 | 270.33 | 360.53 | 270.33 | 363.52 | 270.26 | 364.41 | 270.3 | 369.21 | 270.29 |
| 372.61 | 270.19 | 381.26 | 269.76 | 386.34 | 269.71 | 391.95 | 269.69 | 395.81 | 269.63 |
| 399.86 | 269.63 | 401.78 | 269.43 | 406.53 | 268.83 | 413.26 | 268.03 | 424.33 | 266.97 |
| 429.69 | 266.44 | 435.19 | 266.09 | 441.23 | 265.91 | 442.68 | 265.91 | 446.34 | 265.73 |
| 449.24 | 265.68 | 453.94 | 265.43 | 463.95 | 265.26 | 470.45 | 265.46 | 474.48 | 265.52 |
| 477.88 | 265.51 | 480.57 | 265.6 | 484.22 | 265.54 | 490.87 | 265.53 | 495.34 | 265.62 |
| 503.35 | 265.33 | 508.45 | 265.23 | 510.47 | 265.02 | 517.72 | 264.48 | 521.26 | 264.32 |
| 527.24 | 264.11 | 536.92 | 263.86 | 543.2 | 263.62 | 548.67 | 263.53 | 555.36 | 263.46 |
| 561.21 | 263.48 | 565.73 | 263.38 | 570.47 | 263.47 | 572.79 | 263.45 | 574.7 | 263.27 |
| 578.3 | 262.76 | 588.29 | 261.46 | 595.69 | 260.77 | 607.23 | 260.3 | 617.19 | 260.08 |
| 620.88 | 260.07 | 630.31 | 260.26 | 642.51 | 260.42 | 655.45 | 260.44 | 661.74 | 260.57 |
| 670.47 | 260.82 | 674.47 | 260.98 | 682.05 | 261.1 | 683.74 | 261.17 | 695.9 | 261.21 |
| 701.84 | 261.2 | 735.83 | 261.41 | 742.22 | 261.57 | 745.42 | 261.76 | 749.77 | 261.93 |
| 755.56 | 262.07 | 759.72 | 262.21 | 770.41 | 262.43 | 773.94 | 262.77 | 777.75 | 262.97 |
| 789.66 | 263.25 | 793.01 | 263.27 | 798.96 | 263.37 | 809.64 | 263.5 | 812.49 | 263.96 |
| 817.5 | 264.22 | 820.18 | 264.43 | 822.61 | 264.9 | 824.92 | 265.04 | 830.35 | 265.44 |
| 834.94 | 265.91 | 836.33 | 266.12 | 838.53 | 266.27 | 843.36 | 266.44 | 845.34 | 266.55 |
| 849.14 | 266.91 | 852.07 | 267.13 | 852.82 | 267.25 | 862.26 | 267.57 | 865.78 | 266.75 |
| 868.63 | 266.39 | 873.43 | 266.13 | 875.7 | 266.13 | 883.83 | 265.98 | 891.22 | 266.12 |
| 894.12 | 266.21 | 900.36 | 266.57 | 907.99 | 266.84 | 912.68 | 267.08 | 919.42 | 267.24 |
| 926.11 | 267.17 | 930.16 | 267.09 | 932.11 | 267.17 | 941.33 | 266.97 | 944.77 | 266.77 |
| 946.97 | 266.44 | 952.44 | 266.17 | 955.49 | 266.08 | 958.9 | 266.15 | 964.19 | 266.19 |
| 967.1 | 266.28 | 972.8 | 266.6 | 982.88 | 266.53 | 992.57 | 265.42 | 994.87 | 265.23 |
| 1000.88 | 264.82 | 1004.53 | 264.64 | 1006.5 | 264.47 | 1010.11 | 264.67 | 1012.97 | 265.14 |
| 1015.73 | 265.41 | 1021.17 | 265.73 | 1023.37 | 265.75 | 1025.87 | 265.86 | 1028.6 | 265.77 |
| 1031.19 | 265.77 | 1038.81 | 265.53 | 1042.73 | 265.29 | 1045.92 | 265.16 | 1048.54 | 264.98 |
| 1057.04 | 265.1 | 1066.36 | 264.98 | 1074.61 | 265 | 1077.93 | 265.19 | 1082.42 | 265.27 |
| 1085.22 | 265.37 | 1091.25 | 265.73 | 1094.33 | 265.85 | 1098.32 | 265.86 | 1101.16 | 265.72 |
| 1104.36 | 265.48 | 1107.33 | 265.11 | 1109.28 | 264.78 | 1112.13 | 264.46 | 1113.56 | 264.24 |
| 1115.79 | 264.03 | 1118.24 | 263.91 | 1122.22 | 263.86 | 1125.25 | 263.94 | 1128.95 | 263.93 |
| 1134.28 | 263.79 | 1142.26 | 263.92 | 1155.09 | 264.4 | 1159.69 | 264.66 | 1160.82 | 264.82 |
| 1166.95 | 265.27 | 1171.67 | 265.31 | 1178.82 | 265.03 | 1191.61 | 265.26 | 1194.6 | 265.59 |
| 1197.21 | 266.13 | 1200.75 | 266.98 | 1205.71 | 267.46 | 1206.47 | 267.45 | 1215.1 | 268.01 |
| 1217.33 | 268.13 | 1222.7 | 268.29 | 1230.81 | 268.69 | 1233.35 | 268.72 | 1240.62 | 268.65 |
| 1246.09 | 268.67 | 1251.42 | 268.86 | 1264.28 | 269.47 | 1269.45 | 269.55 | 1274.82 | 269.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1283.29 | 269.49 | 1288.59 | 269.36 | 1293.13 | 269.16 | 1301.9 | 268.62 | 1306.51 | 268.44 |
| 1309.74 | 268.36 | 1314.96 | 268.32 | 1316.85 | 268.36 | 1324.71 | 268.72 | 1331.85 | 268.89 |
| 1335.07 | 269.03 | 1342.54 | 268.51 | 1350.42 | 267.78 | 1356.96 | 266.69 | 1360.65 | 266.33 |
| 1365.65 | 266.09 | 1369.54 | 265.71 | 1376.57 | 265.26 | 1379.49 | 265.21 | 1381.94 | 265.38 |
| 1382.83 | 265.63 | 1391.85 | 265.97 | 1394.51 | 266.04 | 1399.69 | 266.32 | 1403.82 | 266.51 |
| 1408.96 | 266.66 | 1416.01 | 266.71 | 1419.89 | 266.55 | 1424.03 | 266.28 | 1425.19 | 266.14 |
| 1426.74 | 266.11 | 1435.28 | 266.22 | 1439.29 | 266.21 | 1445.91 | 266.28 | 1447.02 | 266.19 |
| 1453.97 | 266.15 | 1466.45 | 265.69 | 1472.24 | 265.72 | 1483.11 | 265.83 | 1489.86 | 265.99 |
| 1491.81 | 266.24 | 1495.78 | 266.61 | 1501.14 | 267.24 | 1504.39 | 267.56 | 1507.93 | 267.7 |
| 1513.11 | 267.63 | 1517.97 | 267.69 | 1524.54 | 267.54 | 1529.26 | 267.52 | 1535.86 | 267.21 |
| 1537.49 | 267.1 | 1540.23 | 266.8 | 1548.13 | 266.63 | 1559 | 266.47 | 1562.53 | 266.54 |
| 1571.99 | 266.59 | 1575.32 | 266.87 | 1577.6 | 266.97 | 1587.5 | 267.12 | 1591.62 | 267.31 |
| 1594.81 | 267.41 | 1598.83 | 267.78 | 1609.13 | 267.78 | 1610.26 | 267.84 | 1613.92 | 267.57 |
| 1617.18 | 267.5 | 1619.12 | 267.61 | 1620.54 | 267.57 | 1624.44 | 267.69 | 1628.87 | 267.77 |
| 1632.29 | 267.75 | 1637.83 | 267.56 | 1639.69 | 267.65 | 1642.87 | 267.57 | 1645 | 267.33 |
| 1646.34 | 267.02 | 1648.45 | 266.85 | 1654.85 | 267.1 | 1658.06 | 266.93 | 1664.56 | 266.99 |
| 1667.03 | 267.08 | 1670.33 | 267.31 | 1675.23 | 267.54 | 1678.85 | 267.55 | 1682.1 | 267.51 |
| 1696.63 | 267.1 | 1701.66 | 266.86 | 1704.77 | 266.67 | 1709.78 | 266.51 | 1716.75 | 266.1 |
| 1721.37 | 265.56 | 1726.39 | 265.44 | 1733.73 | 265.35 | 1739.46 | 265.24 | 1746.73 | 265.19 |
| 1748.26 | 265.24 | 1752.99 | 265.28 | 1755.58 | 265.38 | 1758.78 | 265.39 | 1764.66 | 265.5 |
| 1770.27 | 265.4 | 1782.93 | 265.28 | 1787.53 | 265.25 | 1791.61 | 265.27 | 1796.32 | 265.2 |
| 1798.92 | 265.2 | 1802.84 | 265.31 | 1806.16 | 265.35 | 1812.56 | 265.52 | 1822.32 | 266.22 |
| 1824.13 | 266.39 | 1831.52 | 266.98 | 1833.49 | 267.36 | 1837.74 | 267.91 | 1838.86 | 267.83 |
| 1846.24 | 267.6 | 1851.09 | 267.65 | 1857.58 | 267.45 | 1861.21 | 267.48 | 1864.26 | 267.59 |
| 1869.21 | 267.86 | 1873.66 | 268.07 | 1877.32 | 268.13 | 1882.2 | 268.05 | 1890.01 | 268.35 |
| 1890.8 | 268.33 | 1898.06 | 267.67 | 1903.05 | 267.08 | 1913.22 | 266.84 | 1919.58 | 266.58 |
| 1926.15 | 266.18 | 1930.33 | 265.96 | 1940.58 | 265.55 | 1941.92 | 265.59 | 1945.82 | 265.48 |
| 1949.84 | 265.29 | 1952.56 | 265.25 | 1957.57 | 265.31 | 1964.42 | 265.21 | 1967.9 | 265.12 |
| 1970.18 | 265.12 | 1975.83 | 265.26 | 1981.39 | 265.21 | 1985.02 | 265.37 | 1991.41 | 265.49 |
| 1996.1 | 265.55 | 1997.13 | 265.52 | 2006.08 | 265.49 | 2010.75 | 265.43 | 2023.24 | 265.37 |
| 2031.05 | 265.28 | 2033.82 | 265.34 | 2039.34 | 265.37 | 2046.47 | 265.36 | 2049.95 | 265.42 |
| 2054.76 | 265.57 | 2056.49 | 265.7 | 2062.97 | 266.08 | 2065.07 | 266.14 | 2071.29 | 266.2 |
| 2081.78 | 266.16 | 2086.55 | 266.07 | 2089.3 | 266.11 | 2092.86 | 266.06 | 2098.65 | 266.17 |
| 2108.46 | 266.06 | 2109.77 | 266 | 2117.16 | 265.96 | 2129.84 | 265.47 | 2132.77 | 265.46 |
| 2142.11 | 265.55 | 2147.59 | 265.49 | 2154.9 | 265.26 | 2168.24 | 265.24 | 2169.95 | 265.09 |
| 2176.32 | 264.93 | 2178.27 | 265.05 | 2179.34 | 264.95 | 2183.35 | 264.91 | 2189.92 | 265.23 |
| 2197.39 | 264.86 | 2201.94 | 264.88 | 2204.74 | 264.96 | 2213.92 | 264.92 | 2222.41 | 264.83 |
| 2224.9 | 264.77 | 2230.6 | 264.54 | 2239.19 | 264.77 | 2244.27 | 264.77 | 2251.43 | 264.67 |
| 2257.3 | 264.75 | 2259.4 | 264.71 | 2269.77 | 264.41 | 2277.62 | 264.37 | 2287.14 | 264.22 |
| 2299.86 | 264.26 | 2305.68 | 264.1 | 2309.15 | 264.12 | 2318.93 | 264.07 | 2322.05 | 264.11 |
| 2325.41 | 263.95 | 2330.65 | 263.85 | 2336.08 | 263.88 | 2338.01 | 263.83 | 2351.89 | 263.75 |
| 2356.66 | 263.76 | 2359.05 | 263.83 | 2363.58 | 263.83 | 2373.3 | 263.7 | 2377.82 | 263.77 |
| 2380.93 | 263.77 | 2384.73 | 263.66 | 2392.29 | 263.36 | 2405.34 | 263.28 | 2415.55 | 263.36 |
| 2420.65 | 263.15 | 2424.27 | 263.14 | 2425.39 | 263.09 | 2430.3 | 263.2 | 2432.26 | 263.05 |
| 2434.51 | 263.19 | 2441.26 | 263.32 | 2449.9 | 263.84 | 2462.52 | 264.02 | 2463.24 | 263.9 |
| 2466.06 | 263.92 | 2466.61 | 264.02 | 2468.76 | 264.06 | 2472.35 | 264.3 | 2473.92 | 264.3 |
| 2476.28 | 264.18 | 2479.76 | 264.18 | 2491.27 | 263.89 | 2493.14 | 263.86 | 2498.17 | 264.46 |
| 2504.89 | 265.13 | 2505.65 | 265.11 | 2508.52 | 264.8 | 2513.49 | 265 | 2515.83 | 264.98 |
| 2521.13 | 264.78 | 2523.78 | 264.59 | 2545.1 | 264.65 | 2548.76 | 264.77 | 2552.21 | 264.61 |
| 2553.9 | 264.67 | 2556.74 | 265.23 | 2561.48 | 265.7 | 2565.59 | 265.9 | 2566.76 | 266.04 |
| 2570.15 | 266.6 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 222.69 | .04 | 2147.59 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 222.69 | 2147.59 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 450.569*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 274.86 | 4.74 | 274.5 | 8.55 | 274.3 | 11.5 | 274.06 | 19.27 | 273.26 |
| 24.68 | 272.96 | 31.73 | 272.21 | 33.96 | 272.06 | 44.87 | 271.51 | 50.25 | 271.29 |
| 55.48 | 271.16 | 61.75 | 270.94 | 65.65 | 270.88 | 67.75 | 270.89 | 70.88 | 270.8 |
| 74.81 | 270.59 | 79.88 | 270.02 | 84.93 | 269.87 | 87.77 | 269.74 | 88.72 | 269.79 |
| 91.47 | 269.71 | 94.22 | 269.56 | 99.57 | 269.16 | 102.81 | 268.96 | 105.75 | 268.93 |
| 108.08 | 268.85 | 113.86 | 268.54 | 120.13 | 268.31 | 130.89 | 267.76 | 139.98 | 267.12 |
| 144.85 | 266.86 | 148.57 | 266.71 | 150.78 | 266.56 | 156.01 | 266.41 | 160.04 | 266.2 |
| 161.6 | 266.05 | 168.58 | 265.73 | 170.59 | 265.72 | 173.89 | 265.57 | 182.91 | 265.37 |
| 185.95 | 265.5 | 192.5 | 265.17 | 194.26 | 265.03 | 200.69 | 264.93 | 204.29 | 264.8 |
| 209.47 | 264.79 | 211 | 264.7 | 213.83 | 264.74 | 217.28 | 264.69 | 221.6 | 264.42 |
| 228.54 | 264.5 | 240.05 | 264.76 | 251.82 | 265.14 | 260.9 | 265.45 | 269.93 | 265.65 |
| 277.28 | 265.78 | 285.07 | 266.2 | 287.41 | 266.22 | 289.66 | 266.15 | 296.53 | 266.2 |
| 305.56 | 266.39 | 311.98 | 266.41 | 316.41 | 266.39 | 326.4 | 266.57 | 329.74 | 266.87 |
| 331.89 | 267.01 | 337.59 | 267.67 | 341.29 | 268.31 | 345.62 | 269.22 | 347.3 | 269.5 |
| 355.02 | 269.72 | 360.96 | 269.65 | 361.87 | 269.68 | 366.76 | 269.65 | 368.91 | 269.6 |
| 379.53 | 269.13 | 389.96 | 269.07 | 393.9 | 269 | 398.03 | 269 | 399.99 | 268.82 |
| 404.83 | 268.25 | 411.7 | 267.5 | 422.99 | 266.5 | 428.47 | 266 | 434.07 | 265.67 |
| 440.24 | 265.5 | 441.71 | 265.5 | 445.45 | 265.32 | 448.41 | 265.26 | 453.2 | 265 |
| 463.41 | 264.81 | 470.04 | 264.99 | 474.16 | 265.03 | 477.62 | 265.02 | 480.22 | 265.1 |
| 484.09 | 265.04 | 490.88 | 265.04 | 495.44 | 265.14 | 503.61 | 264.86 | 508.81 | 264.76 |
| 510.88 | 264.55 | 518.27 | 264.04 | 521.88 | 263.88 | 527.99 | 263.67 | 533.23 | 263.52 |
| 537.86 | 263.42 | 544.27 | 263.18 | 549.85 | 263.08 | 556.67 | 262.99 | 562.64 | 262.98 |
| 567.26 | 262.87 | 572.09 | 262.95 | 574.46 | 262.92 | 576.41 | 262.77 | 580.07 | 262.27 |
| 590.27 | 261.03 | 597.82 | 260.35 | 609.6 | 259.87 | 617.87 | 259.69 | 623.51 | 259.64 |
| 633.16 | 259.83 | 645.63 | 259.99 | 658.86 | 260 | 665.29 | 260.14 | 674.21 | 260.4 |
| 678.3 | 260.56 | 686.05 | 260.68 | 687.78 | 260.75 | 690.33 | 260.74 | 700.21 | 260.78 |
| 706.28 | 260.77 | 741.03 | 260.97 | 747.56 | 261.14 | 750.83 | 261.33 | 755.28 | 261.5 |
| 761.2 | 261.64 | 765.46 | 261.78 | 776.38 | 261.99 | 779.99 | 262.34 | 783.88 | 262.55 |
| 787.83 | 262.62 | 795.11 | 262.79 | 799.48 | 262.82 | 805.57 | 262.92 | 816.48 | 263.06 |
| 819.4 | 263.55 | 824.53 | 263.83 | 827.26 | 264.05 | 829.74 | 264.56 | 832.11 | 264.7 |
| 837.66 | 265.11 | 842.35 | 265.6 | 843.77 | 265.82 | 846.02 | 265.97 | 850.96 | 266.14 |
| 853.39 | 266.28 | 856.86 | 266.59 | 859.86 | 266.81 | 860.63 | 266.94 | 870.28 | 267.25 |
| 873.88 | 266.35 | 876.79 | 265.96 | 881.7 | 265.65 | 884.02 | 265.64 | 892.33 | 265.45 |
| 899.89 | 265.57 | 902.85 | 265.65 | 909.22 | 265.98 | 917.03 | 266.22 | 921.82 | 266.45 |
| 928.71 | 266.59 | 935.55 | 266.52 | 939.69 | 266.44 | 941.69 | 266.53 | 951.11 | 266.37 |
| 954.63 | 266.19 | 956.88 | 265.88 | 962.47 | 265.61 | 965.59 | 265.52 | 969.08 | 265.58 |
| 974.48 | 265.61 | 977.46 | 265.67 | 983.28 | 265.97 | 993.59 | 265.9 | 994.83 | 265.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1003.49 | 264.84 | 1005.85 | 264.66 | 1011.99 | 264.27 | 1015.72 | 264.1 | 1017.73 | 263.95 |
| 1019.02 | 263.97 | 1021.42 | 264.16 | 1024.35 | 264.66 | 1027.17 | 264.94 | 1032.73 | 265.27 |
| 1034.98 | 265.29 | 1037.53 | 265.4 | 1040.32 | 265.29 | 1044.42 | 265.23 | 1050.76 | 264.97 |
| 1054.78 | 264.68 | 1058.03 | 264.53 | 1060.71 | 264.34 | 1070.87 | 264.45 | 1078.93 | 264.33 |
| 1087.36 | 264.35 | 1090.75 | 264.55 | 1095.35 | 264.65 | 1098.21 | 264.76 | 1104.37 | 265.16 |
| 1109.81 | 265.34 | 1114.5 | 265.18 | 1118.91 | 264.82 | 1122.8 | 264.23 | 1125.72 | 263.92 |
| 1127.18 | 263.7 | 1129.05 | 263.53 | 1131.97 | 263.39 | 1136.04 | 263.37 | 1139.13 | 263.47 |
| 1142.91 | 263.48 | 1147.88 | 263.35 | 1158.21 | 263.54 | 1159.87 | 263.63 | 1169.64 | 264.01 |
| 1174.34 | 264.28 | 1177.06 | 264.56 | 1181.76 | 264.89 | 1186.58 | 264.91 | 1193.89 | 264.55 |
| 1206.97 | 264.68 | 1210.45 | 265.04 | 1212.7 | 265.49 | 1216.31 | 266.31 | 1221.38 | 266.81 |
| 1222.17 | 266.79 | 1230.98 | 267.35 | 1233.26 | 267.47 | 1238.75 | 267.62 | 1247.04 | 268 |
| 1249.64 | 268.03 | 1257.07 | 267.97 | 1262.67 | 268 | 1268.12 | 268.18 | 1281.26 | 268.77 |
| 1286.55 | 268.85 | 1292.04 | 268.86 | 1300.69 | 268.81 | 1306.11 | 268.7 | 1310.75 | 268.5 |
| 1319.72 | 268 | 1325.59 | 267.79 | 1332.71 | 267.71 | 1335 | 267.76 | 1339.78 | 268 |
| 1345.89 | 268.23 | 1350.34 | 268.34 | 1353.63 | 268.5 | 1361.26 | 268.01 | 1369.32 | 267.32 |
| 1372.75 | 266.74 | 1376 | 266.24 | 1379.78 | 265.89 | 1384.89 | 265.67 | 1388.86 | 265.3 |
| 1396.05 | 264.83 | 1398.94 | 264.79 | 1401.54 | 264.97 | 1402.46 | 265.24 | 1411.67 | 265.6 |
| 1414.39 | 265.67 | 1419.69 | 265.97 | 1426.29 | 266.26 | 1429.17 | 266.32 | 1436.37 | 266.37 |
| 1440.83 | 266.17 | 1444.57 | 265.91 | 1445.76 | 265.76 | 1447.34 | 265.73 | 1456.07 | 265.85 |
| 1460.17 | 265.84 | 1466.94 | 265.92 | 1468.07 | 265.83 | 1475.17 | 265.79 | 1487.94 | 265.3 |
| 1493.85 | 265.32 | 1504.97 | 265.42 | 1511.87 | 265.59 | 1513.86 | 265.83 | 1517.92 | 266.18 |
| 1524.55 | 266.91 | 1527.42 | 267.14 | 1530.15 | 267.23 | 1535.64 | 267.17 | 1537.38 | 267.23 |
| 1540.6 | 267.22 | 1547.32 | 267.07 | 1552.15 | 267.08 | 1555.44 | 266.9 | 1558.9 | 266.77 |
| 1560.56 | 266.65 | 1563.36 | 266.34 | 1571.44 | 266.18 | 1582.55 | 266.04 | 1585.14 | 266.1 |
| 1594.6 | 266.18 | 1595.83 | 266.21 | 1599.23 | 266.51 | 1601.57 | 266.62 | 1611.68 | 266.8 |
| 1615.9 | 267 | 1619.15 | 267.1 | 1623.27 | 267.5 | 1633.8 | 267.5 | 1634.95 | 267.55 |
| 1638.7 | 267.25 | 1642.02 | 267.15 | 1644.01 | 267.26 | 1645.46 | 267.21 | 1649.45 | 267.32 |
| 1653.98 | 267.38 | 1658.32 | 267.33 | 1663.14 | 267.14 | 1665.04 | 267.22 | 1668.29 | 267.14 |
| 1670.47 | 266.9 | 1671.83 | 266.58 | 1673.99 | 266.42 | 1680.54 | 266.72 | 1683.82 | 266.56 |
| 1690.46 | 266.63 | 1692.99 | 266.73 | 1696.36 | 266.97 | 1701.37 | 267.22 | 1705.07 | 267.23 |
| 1708.39 | 267.19 | 1723.25 | 266.8 | 1725.65 | 266.71 | 1731.57 | 266.38 | 1736.69 | 266.23 |
| 1743.82 | 265.8 | 1748.54 | 265.23 | 1756.2 | 265.07 | 1761.18 | 265.02 | 1768.53 | 264.88 |
| 1774.46 | 264.85 | 1780.87 | 264.93 | 1783.51 | 265.03 | 1786.78 | 265.04 | 1791.31 | 265.14 |
| 1795.3 | 265.11 | 1812.55 | 264.92 | 1820.35 | 264.93 | 1825.16 | 264.85 | 1827.81 | 264.84 |
| 1832.47 | 264.96 | 1835.22 | 264.98 | 1841.76 | 265.16 | 1851.74 | 265.83 | 1861.15 | 266.57 |
| 1863.16 | 266.96 | 1867.5 | 267.52 | 1868.65 | 267.42 | 1871.33 | 267.35 | 1876.2 | 267.15 |
| 1881.16 | 267.18 | 1887.78 | 266.98 | 1891.5 | 267.02 | 1894.62 | 267.14 | 1904.23 | 267.7 |
| 1907.96 | 267.77 | 1912.95 | 267.69 | 1920.94 | 268.04 | 1921.74 | 268.02 | 1929.17 | 267.34 |
| 1934.27 | 266.72 | 1945.46 | 266.47 | 1951.17 | 266.25 | 1957.88 | 265.86 | 1962.16 | 265.64 |
| 1972.63 | 265.24 | 1974.01 | 265.29 | 1979.94 | 265.11 | 1982.11 | 264.99 | 1984.88 | 264.95 |
| 1990.01 | 265.02 | 2002.89 | 264.83 | 2008.68 | 264.98 | 2014.36 | 264.92 | 2018.07 | 265.08 |
| 2024.6 | 265.21 | 2029.4 | 265.27 | 2030.45 | 265.24 | 2055.02 | 265.07 | 2057.14 | 265.07 |
| 2065.12 | 264.97 | 2067.95 | 265.03 | 2073.6 | 265.07 | 2076.06 | 265.04 | 2084.44 | 265.1 |
| 2089.36 | 265.24 | 2096.02 | 265.68 | 2099.94 | 265.84 | 2106.26 | 265.89 | 2116.98 | 265.85 |
| 2121.86 | 265.77 | 2124.68 | 265.81 | 2128.31 | 265.76 | 2135.74 | 265.88 | 2145.59 | 265.74 |
| 2153.53 | 265.7 | 2158.39 | 265.5 | 2166.11 | 265.23 | 2169.11 | 265.22 | 2178.66 | 265.32 |
| 2184.27 | 265.25 | 2192.01 | 265.01 | 2206.17 | 264.99 | 2207.98 | 264.83 | 2214.75 | 264.65 |
| 2216.81 | 264.78 | 2217.95 | 264.68 | 2222.21 | 264.64 | 2229.18 | 264.97 | 2237.7 | 264.57 |
| 2241.93 | 264.6 | 2244.9 | 264.69 | 2254.64 | 264.65 | 2263.65 | 264.55 | 2266.29 | 264.49 |
| 2272.33 | 264.24 | 2281.45 | 264.49 | 2286.84 | 264.49 | 2294.43 | 264.38 | 2300.66 | 264.46 |
| 2302.9 | 264.42 | 2314.99 | 264.09 | 2322.22 | 264.07 | 2332.32 | 263.9 | 2345.82 | 263.94 |
| 2351.99 | 263.77 | 2355.68 | 263.79 | 2366.05 | 263.75 | 2369.36 | 263.79 | 2372.93 | 263.61 |
| 2378.49 | 263.51 | 2384.25 | 263.54 | 2386.3 | 263.49 | 2393.78 | 263.46 | 2401.02 | 263.4 |
| 2406.08 | 263.42 | 2408.62 | 263.49 | 2413.43 | 263.49 | 2423.73 | 263.35 | 2428.53 | 263.42 |
| 2431.83 | 263.42 | 2435.86 | 263.31 | 2443.89 | 262.99 | 2457.73 | 262.9 | 2468.57 | 262.99 |
| 2473.97 | 262.76 | 2476.59 | 262.77 | 2480.86 | 262.7 | 2484.21 | 262.82 | 2486.3 | 262.65 |
| 2488.68 | 262.8 | 2496.84 | 262.98 | 2505.01 | 263.49 | 2506.22 | 263.54 | 2518.4 | 263.68 |
| 2519.16 | 263.57 | 2522.16 | 263.58 | 2522.74 | 263.68 | 2525.02 | 263.73 | 2528.83 | 263.98 |
| 2530.49 | 263.98 | 2533 | 263.86 | 2536.69 | 263.86 | 2550.89 | 263.51 | 2556.22 | 264.16 |
| 2563.35 | 264.88 | 2564.16 | 264.85 | 2567.21 | 264.53 | 2572.48 | 264.73 | 2574.96 | 264.71 |
| 2580.59 | 264.5 | 2583.4 | 264.3 | 2606.02 | 264.38 | 2609.9 | 264.5 | 2613.56 | 264.33 |
| 2615.35 | 264.39 | 2618.36 | 264.99 | 2621.95 | 265.38 | 2627.76 | 265.72 | 2629 | 265.86 |
| 2632.59 | 266.46 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 217.28 | .04 | 2184.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 217.28 | 2184.27 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 430.742*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 274.37 | 4.62 | 274.03 | 7.97 | 273.87 | 11.21 | 273.62 | 18.79 | 272.83 |
| 24.07 | 272.52 | 30.94 | 271.76 | 33.11 | 271.61 | 43.76 | 271.07 | 49 | 270.86 |
| 54.1 | 270.72 | 60.22 | 270.51 | 62.96 | 270.45 | 66.06 | 270.45 | 69.12 | 270.37 |
| 72.94 | 270.15 | 77.89 | 269.58 | 82.81 | 269.44 | 85.58 | 269.31 | 86.51 | 269.36 |
| 89.2 | 269.29 | 91.87 | 269.14 | 97.09 | 268.73 | 100.25 | 268.54 | 103.12 | 268.52 |
| 105.39 | 268.44 | 111.03 | 268.13 | 117.14 | 267.9 | 127.64 | 267.37 | 136.5 | 266.75 |
| 144.87 | 266.36 | 147.02 | 266.22 | 152.13 | 266.08 | 156.05 | 265.88 | 157.58 | 265.74 |
| 164.85 | 265.43 | 166.35 | 265.44 | 169.56 | 265.29 | 178.36 | 265.1 | 181.32 | 265.22 |
| 187.71 | 264.92 | 189.42 | 264.78 | 195.7 | 264.68 | 199.21 | 264.56 | 204.26 | 264.55 |
| 205.75 | 264.45 | 207.55 | 264.49 | 211.88 | 264.43 | 216.27 | 264.15 | 223.36 | 264.22 |
| 235.09 | 264.46 | 246.13 | 264.8 | 247.09 | 264.81 | 256.35 | 265.1 | 268.9 | 265.34 |
| 273.06 | 265.4 | 281 | 265.78 | 283.39 | 265.8 | 285.68 | 265.72 | 292.69 | 265.77 |
| 302.11 | 265.97 | 308.45 | 265.98 | 312.97 | 265.94 | 319.57 | 266.05 | 323.15 | 266.08 |
| 326.55 | 266.38 | 328.75 | 266.51 | 333.59 | 267.02 | 338.33 | 267.76 | 342.75 | 268.65 |
| 344.47 | 268.91 | 352.34 | 269.11 | 358.4 | 269.03 | 360.18 | 269.06 | 364.31 | 269.02 |
| 367.85 | 268.92 | 376.85 | 268.53 | 387.98 | 268.45 | 391.99 | 268.38 | 396.2 | 268.38 |
| 398.2 | 268.21 | 403.14 | 267.67 | 410.15 | 266.97 | 427.24 | 265.56 | 432.96 | 265.25 |
| 439.24 | 265.09 | 440.75 | 265.09 | 444.56 | 264.9 | 447.58 | 264.84 | 452.47 | 264.56 |
| 462.88 | 264.36 | 469.64 | 264.51 | 473.84 | 264.54 | 477.37 | 264.52 | 480.17 | 264.61 |
| 483.97 | 264.53 | 490.89 | 264.54 | 494.99 | 264.66 | 503.88 | 264.38 | 509.18 | 264.28 |
| 511.28 | 264.09 | 518.82 | 263.59 | 521.17 | 263.48 | 528.73 | 263.22 | 538.8 | 262.98 |
| 543.74 | 262.78 | 548.84 | 262.7 | 551.03 | 262.63 | 557.98 | 262.51 | 564.07 | 262.48 |
| 568.78 | 262.35 | 573.7 | 262.43 | 576.12 | 262.39 | 578.11 | 262.26 | 581.85 | 261.78 |
| 592.25 | 260.59 | 599.95 | 259.94 | 611.96 | 259.44 | 620.4 | 259.26 | 626.15 | 259.21 |
| 636.01 | 259.4 | 648.75 | 259.55 | 662.27 | 259.56 | 668.84 | 259.71 | 677.96 | 259.98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 682.13 | 260.14 | 691.82 | 260.32 | 704.52 | 260.35 | 710.72 | 260.35 | 746.23 | 260.54 |
| 752.91 | 260.71 | 756.25 | 260.9 | 760.79 | 261.07 | 766.84 | 261.21 | 771.19 | 261.34 |
| 782.35 | 261.56 | 786.03 | 261.91 | 790.02 | 262.12 | 794.05 | 262.18 | 801.49 | 262.34 |
| 805.96 | 262.36 | 812.18 | 262.47 | 823.33 | 262.62 | 826.31 | 263.14 | 831.55 | 263.44 |
| 834.34 | 263.67 | 836.88 | 264.21 | 839.3 | 264.36 | 844.97 | 264.79 | 849.76 | 265.29 |
| 851.21 | 265.52 | 853.51 | 265.67 | 858.55 | 265.83 | 861.04 | 265.97 | 867.65 | 266.5 |
| 868.44 | 266.64 | 878.3 | 266.92 | 881.97 | 265.96 | 884.95 | 265.52 | 889.97 | 265.17 |
| 892.34 | 265.15 | 900.83 | 264.92 | 908.55 | 265.02 | 911.58 | 265.1 | 918.09 | 265.4 |
| 926.06 | 265.61 | 930.96 | 265.82 | 938.01 | 265.94 | 949.23 | 265.79 | 951.26 | 265.89 |
| 960.89 | 265.77 | 964.48 | 265.62 | 966.79 | 265.31 | 972.5 | 265.05 | 975.69 | 264.96 |
| 979.25 | 265.01 | 984.77 | 265.02 | 987.82 | 265.07 | 993.76 | 265.35 | 1004.29 | 265.27 |
| 1014.42 | 264.26 | 1016.82 | 264.09 | 1023.09 | 263.73 | 1026.91 | 263.57 | 1028.96 | 263.42 |
| 1030.28 | 263.45 | 1032.74 | 263.65 | 1035.73 | 264.18 | 1038.61 | 264.47 | 1044.3 | 264.82 |
| 1046.59 | 264.84 | 1049.2 | 264.94 | 1050.92 | 264.84 | 1056.23 | 264.72 | 1062.72 | 264.41 |
| 1066.82 | 264.08 | 1068.18 | 264.03 | 1072.88 | 263.69 | 1083.26 | 263.8 | 1091.5 | 263.69 |
| 1100.11 | 263.71 | 1103.58 | 263.92 | 1108.28 | 264.02 | 1111.2 | 264.15 | 1117.49 | 264.59 |
| 1120.71 | 264.74 | 1124.88 | 264.77 | 1127.84 | 264.63 | 1131.19 | 264.39 | 1134.3 | 264.01 |
| 1136.33 | 263.68 | 1140.8 | 263.17 | 1143.13 | 262.98 | 1145.69 | 262.87 | 1149.85 | 262.88 |
| 1153.01 | 263 | 1156.88 | 263.02 | 1161.95 | 262.91 | 1172.51 | 263.12 | 1174.2 | 263.21 |
| 1184.19 | 263.61 | 1188.99 | 263.9 | 1190.16 | 264.05 | 1196.57 | 264.52 | 1198.19 | 264.55 |
| 1201.5 | 264.5 | 1208.97 | 264.08 | 1222.33 | 264.09 | 1225.88 | 264.42 | 1228.18 | 264.84 |
| 1231.88 | 265.64 | 1237.05 | 266.15 | 1237.86 | 266.13 | 1246.86 | 266.7 | 1249.2 | 266.82 |
| 1254.8 | 266.96 | 1263.28 | 267.31 | 1268.02 | 267.3 | 1279.24 | 267.32 | 1284.81 | 267.5 |
| 1298.24 | 268.07 | 1303.64 | 268.15 | 1309.25 | 268.16 | 1318.09 | 268.13 | 1323.63 | 268.03 |
| 1328.37 | 267.84 | 1337.54 | 267.38 | 1343.53 | 267.18 | 1350.81 | 267.1 | 1355.1 | 267.24 |
| 1358.03 | 267.41 | 1364.28 | 267.66 | 1368.82 | 267.79 | 1372.19 | 267.97 | 1379.99 | 267.5 |
| 1388.22 | 266.86 | 1395.05 | 265.79 | 1398.91 | 265.46 | 1404.13 | 265.25 | 1408.19 | 264.88 |
| 1415.53 | 264.4 | 1418.59 | 264.36 | 1421.15 | 264.57 | 1422.08 | 264.85 | 1431.49 | 265.24 |
| 1434.27 | 265.31 | 1439.68 | 265.62 | 1444 | 265.83 | 1449.37 | 265.99 | 1456.73 | 266.03 |
| 1461.29 | 265.82 | 1465.11 | 265.54 | 1466.33 | 265.38 | 1469 | 265.36 | 1476.86 | 265.48 |
| 1481.05 | 265.47 | 1487.97 | 265.56 | 1491.31 | 265.43 | 1496.94 | 265.41 | 1509.43 | 264.91 |
| 1515.47 | 264.93 | 1526.83 | 265.02 | 1533.87 | 265.19 | 1535.91 | 265.41 | 1540.06 | 265.75 |
| 1545.66 | 266.34 | 1549.05 | 266.63 | 1552.75 | 266.77 | 1558.17 | 266.72 | 1559.95 | 266.77 |
| 1563.24 | 266.76 | 1570.11 | 266.61 | 1575.04 | 266.63 | 1581.93 | 266.32 | 1583.63 | 266.21 |
| 1586.49 | 265.89 | 1594.75 | 265.74 | 1606.09 | 265.6 | 1608.75 | 265.67 | 1619.67 | 265.82 |
| 1623.15 | 266.15 | 1629.35 | 266.39 | 1635.87 | 266.47 | 1640.18 | 266.68 | 1643.5 | 266.79 |
| 1647.71 | 267.22 | 1658.46 | 267.22 | 1659.64 | 267.27 | 1663.47 | 266.92 | 1666.87 | 266.81 |
| 1668.9 | 266.91 | 1670.38 | 266.85 | 1674.46 | 266.95 | 1680.63 | 266.98 | 1683.52 | 266.92 |
| 1688.44 | 266.71 | 1690.38 | 266.8 | 1693.71 | 266.71 | 1695.94 | 266.46 | 1697.33 | 266.14 |
| 1699.53 | 265.98 | 1706.22 | 266.33 | 1709.57 | 266.18 | 1716.37 | 266.27 | 1718.94 | 266.38 |
| 1722.4 | 266.63 | 1727.51 | 266.89 | 1734.68 | 266.87 | 1749.86 | 266.5 | 1752.32 | 266.41 |
| 1758.36 | 266.09 | 1763.6 | 265.94 | 1770.89 | 265.5 | 1775.71 | 264.91 | 1780.95 | 264.79 |
| 1788.62 | 264.69 | 1794.6 | 264.57 | 1802.2 | 264.52 | 1808.74 | 264.59 | 1809.93 | 264.66 |
| 1814.78 | 264.69 | 1820.93 | 264.79 | 1826.79 | 264.71 | 1829.9 | 264.7 | 1841.11 | 264.58 |
| 1849.08 | 264.58 | 1854 | 264.49 | 1856.71 | 264.48 | 1861.47 | 264.6 | 1864.28 | 264.62 |
| 1870.96 | 264.79 | 1881.16 | 265.45 | 1890.77 | 266.16 | 1892.83 | 266.56 | 1897.26 | 267.13 |
| 1898.44 | 267.02 | 1900.98 | 266.94 | 1906.15 | 266.7 | 1911.22 | 266.71 | 1917.99 | 266.51 |
| 1921.78 | 266.56 | 1924.97 | 266.69 | 1930.14 | 267.04 | 1934.79 | 267.32 | 1938.61 | 267.4 |
| 1943.71 | 267.34 | 1951.86 | 267.72 | 1952.69 | 267.71 | 1960.27 | 267 | 1965.49 | 266.37 |
| 1976.92 | 266.13 | 1982.76 | 265.93 | 1989.62 | 265.53 | 1993.98 | 265.32 | 2004.69 | 264.94 |
| 2006.1 | 265 | 2010.16 | 264.89 | 2014.37 | 264.69 | 2017.2 | 264.65 | 2022.44 | 264.72 |
| 2029.59 | 264.62 | 2033.23 | 264.53 | 2035.61 | 264.53 | 2041.52 | 264.69 | 2048.39 | 264.65 |
| 2051.11 | 264.8 | 2057.79 | 264.93 | 2062.69 | 264.99 | 2071.14 | 264.92 | 2073.11 | 264.93 |
| 2077.99 | 264.86 | 2091.04 | 264.77 | 2099.19 | 264.66 | 2102.09 | 264.73 | 2107.85 | 264.77 |
| 2112.32 | 264.73 | 2118.94 | 264.78 | 2123.97 | 264.91 | 2131.76 | 265.42 | 2134.73 | 265.53 |
| 2145 | 265.59 | 2152.18 | 265.55 | 2157.17 | 265.47 | 2160.05 | 265.5 | 2163.77 | 265.46 |
| 2171.36 | 265.58 | 2181.42 | 265.47 | 2189.14 | 265.45 | 2194.5 | 265.25 | 2202.39 | 264.99 |
| 2205.45 | 264.98 | 2215.21 | 265.09 | 2220.94 | 265.02 | 2229.13 | 264.76 | 2244.1 | 264.74 |
| 2246.01 | 264.57 | 2253.17 | 264.38 | 2255.35 | 264.52 | 2256.56 | 264.41 | 2261.06 | 264.37 |
| 2268.43 | 264.72 | 2277.44 | 264.29 | 2281.91 | 264.33 | 2285.05 | 264.43 | 2295.35 | 264.38 |
| 2304.88 | 264.28 | 2307.67 | 264.21 | 2314.06 | 263.94 | 2316.56 | 264.03 | 2323.71 | 264.21 |
| 2329.4 | 264.21 | 2337.43 | 264.09 | 2344.02 | 264.18 | 2346.39 | 264.14 | 2358.02 | 263.8 |
| 2366.82 | 263.76 | 2377.5 | 263.58 | 2391.78 | 263.63 | 2398.31 | 263.45 | 2402.2 | 263.47 |
| 2413.17 | 263.42 | 2416.68 | 263.46 | 2420.44 | 263.28 | 2426.32 | 263.17 | 2432.42 | 263.2 |
| 2434.58 | 263.15 | 2450.16 | 263.05 | 2455.5 | 263.07 | 2458.19 | 263.15 | 2463.27 | 263.15 |
| 2474.17 | 262.99 | 2479.24 | 263.07 | 2482.74 | 263.07 | 2486.99 | 262.96 | 2487.97 | 262.88 |
| 2496.9 | 262.59 | 2510.12 | 262.52 | 2521.58 | 262.62 | 2527.3 | 262.37 | 2530.06 | 262.38 |
| 2532.62 | 262.3 | 2536.24 | 262.35 | 2538.13 | 262.44 | 2540.33 | 262.26 | 2542.85 | 262.41 |
| 2551.48 | 262.61 | 2560.12 | 263.15 | 2561.4 | 263.2 | 2574.28 | 263.35 | 2575.09 | 263.23 |
| 2578.25 | 263.25 | 2578.87 | 263.35 | 2581.28 | 263.41 | 2585.31 | 263.67 | 2587.07 | 263.67 |
| 2589.72 | 263.55 | 2593.62 | 263.54 | 2608.64 | 263.17 | 2614.28 | 263.86 | 2621.82 | 264.62 |
| 2622.67 | 264.6 | 2625.9 | 264.25 | 2631.47 | 264.47 | 2634.09 | 264.45 | 2640.04 | 264.23 |
| 2643.01 | 264.01 | 2666.94 | 264.1 | 2671.04 | 264.23 | 2674.91 | 264.05 | 2676.8 | 264.12 |
| 2679.99 | 264.75 | 2683.79 | 265.17 | 2685.31 | 265.29 | 2689.92 | 265.53 | 2691.24 | 265.68 |
| 2695.03 | 266.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 211.88 | .04 | 2220.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 211.88 | 2220.94 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 410.914*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 273.88 | 4.51 | 273.56 | 8.12 | 273.39 | 10.93 | 273.17 | 18.31 | 272.4 |
| 23.45 | 272.09 | 30.15 | 271.31 | 32.26 | 271.17 | 42.64 | 270.63 | 47.75 | 270.42 |
| 52.71 | 270.29 | 61.36 | 270.01 | 64.37 | 270.01 | 70.12 | 269.8 | 75.9 | 269.15 |
| 80.7 | 269.01 | 83.4 | 268.88 | 84.3 | 268.94 | 86.92 | 268.87 | 89.53 | 268.72 |
| 94.82 | 268.29 | 97.69 | 268.11 | 100.49 | 268.1 | 102.7 | 268.03 | 108.19 | 267.72 |
| 114.15 | 267.5 | 124.38 | 266.98 | 133.01 | 266.38 | 137.64 | 266.15 | 141.18 | 266.02 |
| 143.27 | 265.88 | 148.24 | 265.74 | 152.07 | 265.56 | 153.56 | 265.43 | 160.19 | 265.16 |
| 162.1 | 265.15 | 165.23 | 265.01 | 173.81 | 264.83 | 176.69 | 264.95 | 179.15 | 264.86 |
| 184.59 | 264.54 | 190.7 | 264.43 | 194.12 | 264.32 | 199.04 | 264.31 | 200.49 | 264.2 |
| 203.18 | 264.23 | 206.47 | 264.17 | 210.95 | 263.87 | 218.17 | 263.94 | 228.09 | 264.12 |
| 242.37 | 264.49 | 251.81 | 264.76 | 264.6 | 264.97 | 267.95 | 264.98 | 276.94 | 265.35 |
| 279.37 | 265.37 | 281.71 | 265.29 | 288.85 | 265.34 | 298.24 | 265.54 | 304.92 | 265.54 |
| 309.52 | 265.5 | 317.47 | 265.61 | 319.91 | 265.6 | 323.37 | 265.89 | 325.61 | 266.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 331.61 | 266.64 | 335.38 | 267.22 | 339.89 | 268.07 | 341.64 | 268.31 | 349.66 | 268.5 |
| 355.84 | 268.41 | 361.86 | 268.39 | 364.1 | 268.33 | 374.65 | 267.91 | 376.85 | 267.93 |
| 385.99 | 267.83 | 390.08 | 267.75 | 393.74 | 267.76 | 395.33 | 267.69 | 401.45 | 267.09 |
| 408.59 | 266.44 | 426.02 | 265.12 | 431.84 | 264.84 | 438.25 | 264.69 | 439.79 | 264.69 |
| 443.67 | 264.48 | 446.74 | 264.42 | 451.73 | 264.12 | 462.35 | 263.92 | 469.24 | 264.04 |
| 477.12 | 264.03 | 479.98 | 264.11 | 483.85 | 264.03 | 490.9 | 264.05 | 495.64 | 264.16 |
| 504.14 | 263.91 | 509.54 | 263.81 | 511.69 | 263.62 | 519.37 | 263.14 | 529.48 | 262.78 |
| 534.93 | 262.63 | 539.74 | 262.53 | 544.78 | 262.34 | 549.97 | 262.25 | 559.3 | 262.03 |
| 565.51 | 261.97 | 570.3 | 261.84 | 575.32 | 261.91 | 577.79 | 261.87 | 579.81 | 261.76 |
| 583.63 | 261.3 | 594.23 | 260.16 | 602.08 | 259.52 | 614.32 | 259.01 | 624.88 | 258.8 |
| 628.79 | 258.79 | 638.86 | 258.98 | 651.87 | 259.11 | 665.68 | 259.12 | 672.39 | 259.28 |
| 681.7 | 259.56 | 685.97 | 259.72 | 694.06 | 259.83 | 695.86 | 259.9 | 698.52 | 259.89 |
| 708.83 | 259.92 | 715.17 | 259.92 | 751.44 | 260.1 | 758.25 | 260.28 | 761.66 | 260.47 |
| 766.31 | 260.64 | 772.48 | 260.77 | 776.92 | 260.9 | 788.32 | 261.12 | 792.08 | 261.49 |
| 796.15 | 261.69 | 807.87 | 261.89 | 812.43 | 261.91 | 818.79 | 262.03 | 830.17 | 262.18 |
| 833.22 | 262.73 | 838.57 | 263.05 | 841.42 | 263.29 | 844.01 | 263.86 | 852.28 | 264.46 |
| 857.17 | 264.98 | 858.65 | 265.22 | 861 | 265.37 | 866.15 | 265.53 | 868.27 | 265.63 |
| 872.32 | 265.97 | 875.44 | 266.18 | 876.25 | 266.33 | 886.32 | 266.59 | 890.07 | 265.56 |
| 893.11 | 265.09 | 898.23 | 264.69 | 900.43 | 264.67 | 909.33 | 264.4 | 917.21 | 264.48 |
| 920.31 | 264.54 | 926.96 | 264.81 | 935.1 | 265 | 940.1 | 265.19 | 947.3 | 265.29 |
| 954.43 | 265.21 | 958.76 | 265.13 | 960.84 | 265.25 | 965.53 | 265.19 | 970.67 | 265.17 |
| 974.34 | 265.04 | 976.69 | 264.75 | 982.53 | 264.49 | 985.78 | 264.4 | 989.42 | 264.44 |
| 995.06 | 264.43 | 998.17 | 264.47 | 1004.25 | 264.72 | 1015 | 264.64 | 1025.34 | 263.68 |
| 1034.2 | 263.18 | 1038.1 | 263.03 | 1040.2 | 262.9 | 1041.54 | 262.93 | 1044.05 | 263.14 |
| 1047.11 | 263.7 | 1050.05 | 264 | 1055.86 | 264.36 | 1060.86 | 264.47 | 1063.78 | 264.32 |
| 1066.55 | 264.26 | 1071.56 | 264.03 | 1074.67 | 263.85 | 1078.86 | 263.47 | 1080.25 | 263.41 |
| 1085.05 | 263.04 | 1095.65 | 263.14 | 1104.07 | 263.04 | 1112.86 | 263.06 | 1116.41 | 263.28 |
| 1121.2 | 263.4 | 1124.19 | 263.54 | 1130.62 | 264.01 | 1133.61 | 264.17 | 1136.29 | 264.24 |
| 1138.83 | 264.2 | 1141.19 | 264.09 | 1145.79 | 263.73 | 1149.85 | 263.14 | 1152.89 | 262.84 |
| 1154.42 | 262.63 | 1156.8 | 262.45 | 1159.41 | 262.36 | 1163.66 | 262.39 | 1166.89 | 262.54 |
| 1170.57 | 262.57 | 1176.53 | 262.48 | 1186.81 | 262.7 | 1188.54 | 262.8 | 1198.73 | 263.22 |
| 1203.64 | 263.52 | 1204.84 | 263.67 | 1211.38 | 264.14 | 1216.41 | 264.1 | 1224.04 | 263.61 |
| 1237.7 | 263.51 | 1240.88 | 263.74 | 1243.67 | 264.2 | 1247.44 | 264.98 | 1252.73 | 265.49 |
| 1253.55 | 265.47 | 1262.75 | 266.04 | 1265.13 | 266.16 | 1270.86 | 266.29 | 1279.51 | 266.62 |
| 1295.82 | 266.64 | 1301.5 | 266.82 | 1315.22 | 267.37 | 1322.53 | 267.46 | 1335.5 | 267.45 |
| 1341.16 | 267.36 | 1346 | 267.19 | 1355.36 | 266.75 | 1360.28 | 266.6 | 1368.91 | 266.49 |
| 1373.29 | 266.64 | 1376.29 | 266.81 | 1382.67 | 267.09 | 1387.31 | 267.24 | 1390.75 | 267.44 |
| 1398.71 | 267 | 1407.13 | 266.4 | 1414.1 | 265.34 | 1418.03 | 265.02 | 1423.36 | 264.83 |
| 1427.51 | 264.46 | 1435.02 | 263.98 | 1438.03 | 263.94 | 1440.75 | 264.16 | 1441.7 | 264.46 |
| 1451.32 | 264.87 | 1454.16 | 264.94 | 1455.95 | 265.06 | 1464.09 | 265.49 | 1469.58 | 265.66 |
| 1477.1 | 265.7 | 1481.75 | 265.47 | 1485.65 | 265.17 | 1486.89 | 265 | 1488.54 | 264.97 |
| 1497.65 | 265.11 | 1501.93 | 265.1 | 1509 | 265.21 | 1510.18 | 265.1 | 1518.16 | 265.05 |
| 1530.91 | 264.51 | 1537.08 | 264.53 | 1548.69 | 264.62 | 1555.88 | 264.78 | 1557.97 | 265 |
| 1562.2 | 265.33 | 1569.12 | 266 | 1571.38 | 266.17 | 1574.96 | 266.3 | 1580.69 | 266.26 |
| 1582.51 | 266.31 | 1585.87 | 266.3 | 1587.31 | 266.24 | 1592.89 | 266.14 | 1597.92 | 266.18 |
| 1604.96 | 265.88 | 1606.7 | 265.76 | 1609.62 | 265.43 | 1618.06 | 265.29 | 1629.64 | 265.16 |
| 1633.41 | 265.26 | 1643.51 | 265.43 | 1647.06 | 265.79 | 1649.5 | 265.92 | 1653.4 | 266.05 |
| 1658.79 | 266.11 | 1664.45 | 266.37 | 1667.85 | 266.49 | 1672.14 | 266.94 | 1683.13 | 266.94 |
| 1684.34 | 266.98 | 1688.24 | 266.6 | 1691.72 | 266.46 | 1693.79 | 266.56 | 1695.3 | 266.49 |
| 1699.47 | 266.58 | 1704.19 | 266.59 | 1707.84 | 266.54 | 1713.75 | 266.29 | 1715.73 | 266.38 |
| 1719.13 | 266.28 | 1721.4 | 266.03 | 1722.83 | 265.7 | 1725.08 | 265.54 | 1731.91 | 265.95 |
| 1735.33 | 265.81 | 1741.54 | 265.9 | 1744.9 | 266.03 | 1748.43 | 266.29 | 1753.65 | 266.56 |
| 1760.98 | 266.54 | 1776.48 | 266.2 | 1778.99 | 266.11 | 1785.16 | 265.81 | 1790.51 | 265.65 |
| 1792.4 | 265.56 | 1797.95 | 265.2 | 1802.88 | 264.58 | 1808.23 | 264.46 | 1816.07 | 264.36 |
| 1825.81 | 264.19 | 1829.93 | 264.18 | 1836.61 | 264.24 | 1837.83 | 264.31 | 1843.34 | 264.34 |
| 1849.07 | 264.44 | 1869.68 | 264.24 | 1877.82 | 264.24 | 1882.84 | 264.14 | 1885.61 | 264.12 |
| 1889.8 | 264.22 | 1893.34 | 264.25 | 1900.17 | 264.42 | 1910.58 | 265.06 | 1920.4 | 265.75 |
| 1922.5 | 266.15 | 1927.03 | 266.74 | 1928.22 | 266.62 | 1936.1 | 266.25 | 1939.18 | 266.26 |
| 1942.8 | 266.19 | 1948.19 | 266.03 | 1952.07 | 266.1 | 1955.33 | 266.25 | 1965.35 | 266.94 |
| 1969.25 | 267.04 | 1974.46 | 266.98 | 1982.79 | 267.41 | 1983.64 | 267.39 | 1991.38 | 266.67 |
| 1996.71 | 266.01 | 2007.55 | 265.81 | 2014.34 | 265.6 | 2021.35 | 265.21 | 2025.81 | 265 |
| 2032.89 | 264.75 | 2036.74 | 264.64 | 2038.18 | 264.7 | 2042 | 264.61 | 2046.63 | 264.39 |
| 2049.52 | 264.35 | 2054.88 | 264.43 | 2068.32 | 264.24 | 2074.36 | 264.4 | 2081.38 | 264.35 |
| 2084.16 | 264.52 | 2090.98 | 264.65 | 2095.98 | 264.72 | 2109.75 | 264.58 | 2124.93 | 264.47 |
| 2133.27 | 264.36 | 2136.22 | 264.42 | 2142.11 | 264.46 | 2144.69 | 264.43 | 2153.43 | 264.46 |
| 2158.57 | 264.58 | 2160.41 | 264.73 | 2166.53 | 265.11 | 2169.56 | 265.23 | 2180.05 | 265.28 |
| 2187.39 | 265.24 | 2192.48 | 265.17 | 2195.42 | 265.2 | 2199.22 | 265.16 | 2206.97 | 265.29 |
| 2217.25 | 265.21 | 2225.53 | 265.19 | 2230.6 | 265 | 2238.66 | 264.76 | 2241.79 | 264.75 |
| 2251.76 | 264.86 | 2257.61 | 264.79 | 2266.24 | 264.51 | 2282.03 | 264.5 | 2284.05 | 264.31 |
| 2291.59 | 264.11 | 2293.89 | 264.26 | 2295.16 | 264.14 | 2299.91 | 264.1 | 2307.68 | 264.47 |
| 2317.19 | 264.02 | 2321.9 | 264.06 | 2325.21 | 264.16 | 2336.07 | 264.11 | 2346.11 | 264 |
| 2349.06 | 263.93 | 2355.8 | 263.64 | 2365.97 | 263.93 | 2371.97 | 263.93 | 2380.44 | 263.8 |
| 2387.38 | 263.9 | 2389.88 | 263.85 | 2402.14 | 263.5 | 2411.42 | 263.45 | 2422.68 | 263.26 |
| 2433.32 | 263.31 | 2437.74 | 263.31 | 2444.62 | 263.12 | 2448.73 | 263.14 | 2460.29 | 263.09 |
| 2463.99 | 263.14 | 2467.96 | 262.94 | 2474.16 | 262.83 | 2480.59 | 262.86 | 2482.87 | 262.81 |
| 2491.21 | 262.77 | 2491.93 | 262.74 | 2499.29 | 262.7 | 2504.93 | 262.72 | 2507.76 | 262.8 |
| 2513.11 | 262.8 | 2524.61 | 262.64 | 2527.93 | 262.66 | 2529.96 | 262.73 | 2533.64 | 262.73 |
| 2538.13 | 262.6 | 2547.08 | 262.24 | 2562.52 | 262.14 | 2574.59 | 262.24 | 2577.37 | 262.09 |
| 2580.62 | 261.99 | 2583.54 | 261.99 | 2586.24 | 261.91 | 2590.05 | 261.96 | 2592.04 | 262.05 |
| 2594.36 | 261.87 | 2597.02 | 262.03 | 2605 | 262.19 | 2606.12 | 262.24 | 2615.23 | 262.81 |
| 2620.45 | 262.89 | 2626.6 | 263.02 | 2630.16 | 263.02 | 2631.01 | 262.89 | 2634.35 | 262.91 |
| 2634.99 | 263.02 | 2637.54 | 263.08 | 2641.78 | 263.36 | 2643.64 | 263.36 | 2646.44 | 263.23 |
| 2647.36 | 263.27 | 2650.55 | 263.22 | 2664.17 | 262.87 | 2666.39 | 262.83 | 2672.33 | 263.56 |
| 2680.28 | 264.37 | 2681.18 | 264.34 | 2684.58 | 263.97 | 2690.46 | 264.2 | 2693.22 | 264.18 |
| 2699.5 | 263.95 | 2702.63 | 263.72 | 2727.85 | 263.82 | 2732.18 | 263.96 | 2736.26 | 263.77 |
| 2738.26 | 263.84 | 2741.62 | 264.52 | 2747.23 | 265.09 | 2752.09 | 265.34 | 2753.48 | 265.5 |
| 2757.48 | 266.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 206.47 | .04 | 2257.61 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 206.47 | 2257.61 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 391.087*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 273.38 | 4.39 | 273.09 | 7.91 | 272.93 | 10.64 | 272.72 | 17.83 | 271.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 22.84 | 271.65 | 29.36 | 270.86 | 31.42 | 270.72 | 41.52 | 270.19 | 46.5 | 269.99 |
| 51.33 | 269.86 | 57.14 | 269.64 | 60.74 | 269.56 | 62.69 | 269.57 | 65.59 | 269.49 |
| 69.22 | 269.28 | 74.23 | 268.68 | 78.58 | 268.58 | 81.21 | 268.45 | 82.09 | 268.52 |
| 84.64 | 268.46 | 87.18 | 268.3 | 92.33 | 267.86 | 95.13 | 267.69 | 97.85 | 267.69 |
| 100.01 | 267.62 | 105.36 | 267.31 | 111.16 | 267.09 | 121.12 | 266.59 | 129.53 | 266.02 |
| 137.48 | 265.67 | 139.52 | 265.54 | 144.36 | 265.41 | 148.09 | 265.24 | 149.53 | 265.12 |
| 155.99 | 264.87 | 157.85 | 264.86 | 160.9 | 264.74 | 169.25 | 264.57 | 172.06 | 264.67 |
| 174.46 | 264.59 | 179.75 | 264.29 | 185.71 | 264.18 | 189.03 | 264.07 | 193.83 | 264.06 |
| 195.24 | 263.95 | 197.86 | 263.97 | 201.06 | 263.91 | 205.63 | 263.6 | 212.98 | 263.66 |
| 225.18 | 263.87 | 236.65 | 264.16 | 247.26 | 264.41 | 257.47 | 264.57 | 263.72 | 264.59 |
| 272.87 | 264.93 | 275.35 | 264.95 | 277.73 | 264.87 | 285.01 | 264.92 | 286.54 | 264.99 |
| 291.35 | 265.04 | 294.79 | 265.12 | 301.38 | 265.11 | 306.08 | 265.06 | 314.17 | 265.14 |
| 316.66 | 265.11 | 320.19 | 265.39 | 322.47 | 265.51 | 327.5 | 265.99 | 332.43 | 266.67 |
| 337.02 | 267.49 | 338.8 | 267.72 | 346.98 | 267.9 | 353.27 | 267.79 | 355.12 | 267.81 |
| 359.41 | 267.75 | 363.09 | 267.65 | 372.44 | 267.3 | 374.68 | 267.32 | 384 | 267.21 |
| 388.17 | 267.13 | 392.54 | 267.13 | 394.62 | 266.98 | 399.75 | 266.51 | 407.03 | 265.91 |
| 424.79 | 264.69 | 430.73 | 264.42 | 437.26 | 264.28 | 438.82 | 264.28 | 442.78 | 264.06 |
| 445.87 | 264 | 451 | 263.68 | 461.81 | 263.47 | 468.84 | 263.56 | 476.87 | 263.54 |
| 479.78 | 263.62 | 483.72 | 263.53 | 487.86 | 263.51 | 490.91 | 263.55 | 495.74 | 263.68 |
| 504.4 | 263.43 | 509.63 | 263.34 | 512.09 | 263.16 | 519.93 | 262.69 | 523.76 | 262.54 |
| 535.78 | 262.18 | 540.68 | 262.09 | 545.81 | 261.9 | 551.11 | 261.8 | 553.38 | 261.72 |
| 560.61 | 261.56 | 566.94 | 261.47 | 571.83 | 261.32 | 576.94 | 261.39 | 581.52 | 261.26 |
| 585.41 | 260.81 | 596.21 | 259.72 | 604.21 | 259.11 | 616.68 | 258.58 | 625.45 | 258.4 |
| 631.43 | 258.36 | 641.7 | 258.55 | 654.99 | 258.67 | 669.09 | 258.69 | 675.94 | 258.85 |
| 685.44 | 259.13 | 689.8 | 259.3 | 702.62 | 259.46 | 713.14 | 259.5 | 719.61 | 259.49 |
| 756.64 | 259.67 | 763.59 | 259.86 | 767.08 | 260.04 | 771.82 | 260.21 | 778.12 | 260.34 |
| 782.65 | 260.47 | 794.3 | 260.68 | 798.13 | 261.06 | 802.29 | 261.26 | 814.25 | 261.44 |
| 818.91 | 261.46 | 825.39 | 261.58 | 836.86 | 261.73 | 840.13 | 262.32 | 845.59 | 262.66 |
| 848.5 | 262.92 | 851.15 | 263.52 | 853.67 | 263.68 | 859.58 | 264.13 | 862.93 | 264.53 |
| 864.58 | 264.67 | 866.09 | 264.92 | 868.49 | 265.07 | 875.91 | 265.32 | 880.04 | 265.66 |
| 883.23 | 265.87 | 884.05 | 266.02 | 894.34 | 266.26 | 898.17 | 265.16 | 901.27 | 264.65 |
| 906.5 | 264.22 | 908.74 | 264.18 | 917.83 | 263.87 | 925.88 | 263.93 | 929.04 | 263.99 |
| 935.83 | 264.23 | 944.14 | 264.39 | 949.25 | 264.56 | 956.59 | 264.64 | 968.29 | 264.48 |
| 970.42 | 264.61 | 974.64 | 264.57 | 980.45 | 264.56 | 984.2 | 264.47 | 986.6 | 264.19 |
| 992.56 | 263.93 | 995.88 | 263.84 | 999.59 | 263.87 | 1005.35 | 263.84 | 1008.53 | 263.86 |
| 1014.73 | 264.09 | 1025.71 | 264.01 | 1036.26 | 263.1 | 1045.31 | 262.64 | 1051.43 | 262.38 |
| 1052.81 | 262.41 | 1055.36 | 262.63 | 1058.48 | 263.22 | 1061.49 | 263.53 | 1067.42 | 263.91 |
| 1072.53 | 264.01 | 1074.32 | 263.89 | 1079.87 | 263.69 | 1086.63 | 263.29 | 1090.9 | 262.87 |
| 1097.22 | 262.4 | 1106.48 | 262.49 | 1116.64 | 262.4 | 1125.61 | 262.41 | 1129.23 | 262.65 |
| 1134.13 | 262.78 | 1137.18 | 262.93 | 1143.74 | 263.44 | 1146.79 | 263.61 | 1151.44 | 263.68 |
| 1154.53 | 263.55 | 1159.23 | 263.19 | 1163.38 | 262.59 | 1166.48 | 262.31 | 1168.04 | 262.09 |
| 1170.47 | 261.92 | 1173.14 | 261.84 | 1175.56 | 261.84 | 1180.77 | 262.07 | 1184.53 | 262.11 |
| 1190.61 | 262.04 | 1201.1 | 262.28 | 1202.87 | 262.38 | 1213.28 | 262.82 | 1218.28 | 263.14 |
| 1219.51 | 263.28 | 1226.19 | 263.76 | 1227.88 | 263.78 | 1231.33 | 263.7 | 1239.12 | 263.13 |
| 1253.06 | 262.93 | 1256.3 | 263.12 | 1259.15 | 263.55 | 1263 | 264.31 | 1268.4 | 264.84 |
| 1269.24 | 264.81 | 1281.06 | 265.51 | 1286.91 | 265.63 | 1295.75 | 265.94 | 1300.69 | 265.93 |
| 1309.51 | 265.98 | 1312.39 | 265.97 | 1318.2 | 266.14 | 1332.2 | 266.66 | 1339.66 | 266.76 |
| 1352.9 | 266.77 | 1358.68 | 266.69 | 1363.62 | 266.53 | 1373.18 | 266.12 | 1379.43 | 265.96 |
| 1387.01 | 265.89 | 1391.49 | 266.04 | 1394.55 | 266.22 | 1401.06 | 266.52 | 1405.8 | 266.69 |
| 1409.3 | 266.91 | 1417.44 | 266.5 | 1426.03 | 265.95 | 1433.14 | 264.88 | 1437.16 | 264.58 |
| 1442.6 | 264.41 | 1446.84 | 264.04 | 1454.5 | 263.55 | 1457.68 | 263.51 | 1460.35 | 263.75 |
| 1461.32 | 264.07 | 1471.14 | 264.5 | 1474.04 | 264.58 | 1484.18 | 265.15 | 1489.78 | 265.33 |
| 1497.46 | 265.36 | 1501.69 | 265.15 | 1506.2 | 264.8 | 1507.46 | 264.62 | 1509.14 | 264.59 |
| 1518.45 | 264.74 | 1522.81 | 264.73 | 1530.03 | 264.85 | 1531.23 | 264.74 | 1538.8 | 264.7 |
| 1552.4 | 264.12 | 1558.7 | 264.14 | 1570.54 | 264.22 | 1577.89 | 264.38 | 1580.02 | 264.59 |
| 1584.34 | 264.9 | 1590.18 | 265.44 | 1593.71 | 265.71 | 1597.58 | 265.84 | 1603.22 | 265.8 |
| 1605.08 | 265.86 | 1608.51 | 265.83 | 1615.67 | 265.67 | 1620.81 | 265.74 | 1628 | 265.44 |
| 1629.78 | 265.31 | 1632.75 | 264.97 | 1641.36 | 264.84 | 1653.19 | 264.72 | 1657.04 | 264.83 |
| 1667.35 | 265.04 | 1670.97 | 265.43 | 1673.46 | 265.58 | 1677.44 | 265.72 | 1684.24 | 265.82 |
| 1688.73 | 266.06 | 1692.2 | 266.18 | 1696.58 | 266.66 | 1707.8 | 266.66 | 1709.03 | 266.7 |
| 1713.02 | 266.27 | 1716.56 | 266.11 | 1718.68 | 266.2 | 1720.22 | 266.13 | 1724.48 | 266.2 |
| 1729.3 | 266.2 | 1733.92 | 266.11 | 1739.06 | 265.86 | 1741.08 | 265.95 | 1744.55 | 265.86 |
| 1746.87 | 265.6 | 1748.32 | 265.26 | 1750.62 | 265.1 | 1757.6 | 265.56 | 1761.09 | 265.43 |
| 1767.42 | 265.54 | 1779.79 | 266.24 | 1787.27 | 266.22 | 1803.1 | 265.9 | 1811.96 | 265.52 |
| 1817.42 | 265.36 | 1819.35 | 265.27 | 1825.02 | 264.9 | 1830.05 | 264.25 | 1838.21 | 264.09 |
| 1843.51 | 264.03 | 1851.34 | 263.88 | 1857.66 | 263.84 | 1864.49 | 263.9 | 1867.3 | 263.98 |
| 1870.79 | 263.98 | 1875.61 | 264.08 | 1889.2 | 263.99 | 1898.24 | 263.89 | 1906.55 | 263.9 |
| 1914.51 | 263.76 | 1918.78 | 263.86 | 1922.4 | 263.89 | 1929.37 | 264.06 | 1940 | 264.68 |
| 1950.02 | 265.34 | 1952.17 | 265.75 | 1956.79 | 266.35 | 1958.01 | 266.22 | 1960.87 | 266.1 |
| 1965.77 | 265.82 | 1971.34 | 265.76 | 1978.4 | 265.56 | 1982.36 | 265.64 | 1985.68 | 265.8 |
| 1991.07 | 266.22 | 1995.92 | 266.56 | 1999.9 | 266.68 | 2005.21 | 266.63 | 2013.72 | 267.09 |
| 2014.58 | 267.08 | 2022.49 | 266.34 | 2027.93 | 265.65 | 2039 | 265.46 | 2045.93 | 265.27 |
| 2053.09 | 264.89 | 2057.64 | 264.68 | 2068.8 | 264.33 | 2070.27 | 264.4 | 2074.51 | 264.31 |
| 2078.89 | 264.09 | 2081.85 | 264.05 | 2087.31 | 264.14 | 2101.04 | 263.94 | 2107.2 | 264.12 |
| 2114.36 | 264.06 | 2117.21 | 264.23 | 2129.28 | 264.44 | 2138.09 | 264.35 | 2140.14 | 264.37 |
| 2143.33 | 264.3 | 2158.83 | 264.17 | 2167.34 | 264.05 | 2170.36 | 264.12 | 2176.37 | 264.16 |
| 2179 | 264.12 | 2187.92 | 264.14 | 2193.17 | 264.26 | 2202.1 | 264.83 | 2204.39 | 264.92 |
| 2211.17 | 264.97 | 2222.59 | 264.94 | 2227.79 | 264.87 | 2230.79 | 264.9 | 2234.67 | 264.86 |
| 2242.58 | 264.99 | 2253.07 | 264.94 | 2261.53 | 264.94 | 2266.71 | 264.75 | 2274.94 | 264.52 |
| 2278.13 | 264.51 | 2288.3 | 264.63 | 2294.28 | 264.55 | 2303.36 | 264.26 | 2319.96 | 264.25 |
| 2322.08 | 264.05 | 2330.02 | 263.84 | 2332.43 | 264 | 2333.77 | 263.87 | 2338.76 | 263.82 |
| 2342.97 | 264.06 | 2346.93 | 264.22 | 2347.98 | 264.19 | 2356.21 | 263.76 | 2361.88 | 263.78 |
| 2365.36 | 263.89 | 2376.78 | 263.84 | 2387.35 | 263.72 | 2390.45 | 263.65 | 2397.53 | 263.35 |
| 2400.3 | 263.45 | 2405.19 | 263.55 | 2408.22 | 263.65 | 2414.54 | 263.65 | 2423.44 | 263.51 |
| 2430.75 | 263.61 | 2433.37 | 263.57 | 2446.26 | 263.19 | 2456.02 | 263.15 | 2467.87 | 262.94 |
| 2483.7 | 263 | 2490.93 | 262.79 | 2495.25 | 262.82 | 2507.41 | 262.76 | 2511.3 | 262.81 |
| 2514 | 262.72 | 2515.48 | 262.6 | 2521.99 | 262.49 | 2528.75 | 262.52 | 2531.15 | 262.46 |
| 2539.92 | 262.42 | 2548.42 | 262.35 | 2554.35 | 262.37 | 2557.33 | 262.46 | 2562.96 | 262.46 |
| 2575.05 | 262.29 | 2578.54 | 262.31 | 2580.67 | 262.38 | 2584.54 | 262.38 | 2589.26 | 262.25 |
| 2590.34 | 262.16 | 2600.24 | 261.84 | 2614.91 | 261.76 | 2627.61 | 261.87 | 2630.52 | 261.71 |
| 2633.95 | 261.6 | 2637.01 | 261.6 | 2639.85 | 261.52 | 2643.87 | 261.57 | 2645.96 | 261.67 |
| 2648.4 | 261.47 | 2651.19 | 261.64 | 2660.76 | 261.86 | 2670.34 | 262.47 | 2680.91 | 262.63 |
| 2682.3 | 262.69 | 2686.04 | 262.69 | 2686.93 | 262.55 | 2690.45 | 262.58 | 2691.12 | 262.69 |
| 2693.8 | 262.75 | 2698.26 | 263.05 | 2700.22 | 263.05 | 2703.16 | 262.91 | 2704.13 | 262.96 |
| 2707.48 | 262.9 | 2721.81 | 262.53 | 2724.13 | 262.49 | 2730.39 | 263.26 | 2738.75 | 264.11 |
| 2739.69 | 264.08 | 2743.27 | 263.7 | 2749.45 | 263.94 | 2752.35 | 263.91 | 2758.95 | 263.67 |
| 2762.25 | 263.43 | 2788.77 | 263.54 | 2793.32 | 263.69 | 2797.61 | 263.5 | 2799.71 | 263.57 |
| 2803.24 | 264.28 | 2807.45 | 264.74 | 2809.14 | 264.88 | 2814.26 | 265.15 | 2815.72 | 265.32 |
| 2819.92 | 266.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 201.06 | .04 | 2294.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 201.06 | 2294.28 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 371.259*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 272.89 | 4.27 | 272.62 | 7.36 | 272.49 | 10.36 | 272.28 | 17.35 | 271.53 |
| 22.22 | 271.22 | 24.26 | 270.93 | 28.57 | 270.41 | 30.57 | 270.27 | 40.4 | 269.75 |
| 45.25 | 269.55 | 49.95 | 269.43 | 55.6 | 269.21 | 59.11 | 269.12 | 63.82 | 269.06 |
| 67.36 | 268.84 | 72.23 | 268.24 | 76.47 | 268.15 | 79.03 | 268.02 | 79.88 | 268.1 |
| 82.37 | 268.04 | 84.83 | 267.88 | 89.85 | 267.43 | 92.57 | 267.26 | 97.32 | 267.21 |
| 102.52 | 266.91 | 108.17 | 266.69 | 117.86 | 266.2 | 126.05 | 265.65 | 135.76 | 265.2 |
| 140.48 | 265.08 | 145.51 | 264.81 | 151.8 | 264.58 | 153.61 | 264.58 | 156.57 | 264.46 |
| 164.7 | 264.3 | 167.43 | 264.4 | 173.34 | 264.15 | 174.91 | 264.04 | 180.71 | 263.94 |
| 183.95 | 263.83 | 188.62 | 263.82 | 189.99 | 263.7 | 191.66 | 263.72 | 195.65 | 263.65 |
| 200.3 | 263.32 | 207.8 | 263.38 | 218.1 | 263.53 | 242.72 | 264.06 | 252.47 | 264.2 |
| 260.4 | 264.23 | 268.8 | 264.5 | 271.33 | 264.52 | 273.76 | 264.44 | 281.17 | 264.49 |
| 282.73 | 264.57 | 290.92 | 264.69 | 297.85 | 264.67 | 302.63 | 264.61 | 310.88 | 264.67 |
| 313.41 | 264.62 | 317.01 | 264.9 | 319.33 | 265.01 | 325.56 | 265.6 | 329.47 | 266.13 |
| 334.15 | 266.92 | 335.97 | 267.12 | 344.53 | 267.29 | 350.71 | 267.17 | 356.97 | 267.12 |
| 370.24 | 266.68 | 372.25 | 266.71 | 382.01 | 266.59 | 386.26 | 266.5 | 390.06 | 266.51 |
| 391.71 | 266.45 | 398.06 | 265.92 | 405.47 | 265.38 | 423.56 | 264.25 | 429.61 | 264 |
| 436.27 | 263.88 | 437.86 | 263.88 | 441.89 | 263.64 | 445.08 | 263.57 | 450.26 | 263.25 |
| 461.28 | 263.02 | 468.44 | 263.09 | 476.62 | 263.04 | 479.58 | 263.13 | 483.6 | 263.03 |
| 487.82 | 263.01 | 495.84 | 263.19 | 504.66 | 262.96 | 509.99 | 262.87 | 512.5 | 262.69 |
| 520.48 | 262.25 | 530.97 | 261.89 | 541.62 | 261.64 | 548.54 | 261.41 | 552.25 | 261.36 |
| 554.56 | 261.27 | 561.92 | 261.08 | 568.37 | 260.97 | 573.35 | 260.81 | 578.56 | 260.87 |
| 583.22 | 260.75 | 587.18 | 260.32 | 598.18 | 259.28 | 606.34 | 258.69 | 619.04 | 258.16 |
| 627.98 | 257.97 | 634.07 | 257.93 | 644.55 | 258.12 | 658.11 | 258.24 | 672.5 | 258.25 |
| 679.48 | 258.43 | 689.19 | 258.71 | 693.63 | 258.88 | 702.06 | 258.99 | 703.94 | 259.05 |
| 706.71 | 259.04 | 717.46 | 259.07 | 724.05 | 259.07 | 761.84 | 259.23 | 768.93 | 259.43 |
| 772.49 | 259.61 | 777.33 | 259.78 | 788.39 | 260.03 | 800.27 | 260.24 | 804.18 | 260.63 |
| 808.42 | 260.83 | 820.63 | 260.99 | 825.38 | 261.01 | 831.68 | 261.13 | 843.86 | 261.29 |
| 847.04 | 261.91 | 852.61 | 262.27 | 855.58 | 262.54 | 858.28 | 263.17 | 860.86 | 263.34 |
| 866.89 | 263.81 | 870.31 | 264.22 | 871.99 | 264.36 | 873.53 | 264.62 | 875.98 | 264.77 |
| 883.55 | 265.01 | 887.77 | 265.35 | 891.02 | 265.56 | 891.86 | 265.71 | 902.36 | 265.93 |
| 906.27 | 264.77 | 909.43 | 264.22 | 914.77 | 263.74 | 917.29 | 263.68 | 926.33 | 263.34 |
| 928.7 | 263.34 | 937.77 | 263.43 | 944.7 | 263.64 | 953.18 | 263.78 | 958.39 | 263.92 |
| 965.89 | 263.99 | 977.82 | 263.83 | 979.99 | 263.97 | 984.3 | 263.94 | 990.23 | 263.96 |
| 994.06 | 263.89 | 996.51 | 263.63 | 1002.59 | 263.37 | 1005.98 | 263.29 | 1009.77 | 263.3 |
| 1018.88 | 263.26 | 1025.21 | 263.47 | 1036.42 | 263.37 | 1047.19 | 262.52 | 1056.42 | 262.09 |
| 1062.67 | 261.85 | 1064.07 | 261.89 | 1066.68 | 262.12 | 1069.86 | 262.75 | 1072.93 | 263.06 |
| 1078.98 | 263.45 | 1084.19 | 263.55 | 1086.02 | 263.42 | 1090.12 | 263.25 | 1098.58 | 262.73 |
| 1102.94 | 262.26 | 1104.39 | 262.18 | 1109.39 | 261.75 | 1118.84 | 261.84 | 1129.21 | 261.75 |
| 1138.37 | 261.77 | 1142.06 | 262.01 | 1147.05 | 262.16 | 1150.17 | 262.32 | 1156.86 | 262.87 |
| 1160.29 | 263.07 | 1164.72 | 263.14 | 1167.87 | 263.01 | 1171.43 | 262.76 | 1174.74 | 262.37 |
| 1176.9 | 262.04 | 1180.07 | 261.77 | 1181.66 | 261.56 | 1183.69 | 261.42 | 1186.86 | 261.32 |
| 1191.29 | 261.41 | 1194.65 | 261.6 | 1198.49 | 261.66 | 1202.61 | 261.59 | 1204.69 | 261.6 |
| 1215.4 | 261.86 | 1217.2 | 261.96 | 1227.83 | 262.43 | 1232.93 | 262.76 | 1234.19 | 262.9 |
| 1241 | 263.39 | 1242.72 | 263.4 | 1246.24 | 263.29 | 1254.19 | 262.66 | 1268.42 | 262.35 |
| 1271.73 | 262.5 | 1274.64 | 262.91 | 1278.57 | 263.64 | 1284.08 | 264.18 | 1284.93 | 264.16 |
| 1297 | 264.85 | 1302.96 | 264.96 | 1311.98 | 265.25 | 1314.8 | 265.28 | 1322.88 | 265.27 |
| 1328.96 | 265.29 | 1334.89 | 265.46 | 1349.18 | 265.96 | 1356.8 | 266.06 | 1370.31 | 266.09 |
| 1373.74 | 266.07 | 1381.24 | 265.88 | 1390.99 | 265.5 | 1396.12 | 265.37 | 1405.12 | 265.28 |
| 1409.68 | 265.44 | 1412.8 | 265.63 | 1419.45 | 265.95 | 1424.28 | 266.14 | 1427.86 | 266.37 |
| 1436.16 | 266 | 1444.93 | 265.49 | 1452.19 | 264.43 | 1456.29 | 264.14 | 1461.84 | 263.99 |
| 1466.17 | 263.63 | 1473.98 | 263.13 | 1477.23 | 263.09 | 1479.96 | 263.35 | 1480.95 | 263.68 |
| 1490.97 | 264.14 | 1493.92 | 264.21 | 1495.79 | 264.34 | 1504.27 | 264.81 | 1509.99 | 264.99 |
| 1517.82 | 265.03 | 1519.85 | 264.95 | 1526.74 | 264.43 | 1528.03 | 264.24 | 1529.74 | 264.21 |
| 1539.24 | 264.37 | 1543.7 | 264.37 | 1551.05 | 264.49 | 1552.29 | 264.38 | 1560.01 | 264.34 |
| 1569.11 | 263.95 | 1573.89 | 263.72 | 1580.31 | 263.74 | 1592.4 | 263.82 | 1599.9 | 263.98 |
| 1602.07 | 264.18 | 1606.48 | 264.47 | 1613.69 | 265.09 | 1616.82 | 265.29 | 1619.77 | 265.37 |
| 1625.75 | 265.35 | 1627.64 | 265.4 | 1631.14 | 265.37 | 1638.45 | 265.2 | 1643.7 | 265.29 |
| 1651.03 | 264.99 | 1652.85 | 264.87 | 1655.88 | 264.51 | 1664.67 | 264.39 | 1676.74 | 264.28 |
| 1680.67 | 264.4 | 1691.19 | 264.65 | 1694.89 | 265.07 | 1697.43 | 265.23 | 1701.49 | 265.39 |
| 1708.42 | 265.5 | 1713.01 | 265.75 | 1716.55 | 265.88 | 1721.02 | 266.38 | 1732.46 | 266.38 |
| 1733.72 | 266.41 | 1737.79 | 265.95 | 1741.41 | 265.77 | 1743.57 | 265.85 | 1745.14 | 265.77 |
| 1749.49 | 265.83 | 1756.06 | 265.79 | 1759.65 | 265.68 | 1764.37 | 265.44 | 1766.43 | 265.53 |
| 1769.97 | 265.43 | 1772.34 | 265.17 | 1773.74 | 264.83 | 1776.17 | 264.66 | 1783.28 | 265.18 |
| 1786.85 | 265.06 | 1794.08 | 265.2 | 1796.82 | 265.34 | 1800.49 | 265.6 | 1805.93 | 265.91 |
| 1813.57 | 265.89 | 1829.72 | 265.6 | 1838.76 | 265.23 | 1844.33 | 265.07 | 1846.31 | 264.98 |
| 1852.08 | 264.6 | 1857.22 | 263.93 | 1862.79 | 263.81 | 1870.96 | 263.7 | 1881.11 | 263.52 |
| 1885.4 | 263.5 | 1892.36 | 263.55 | 1895.23 | 263.63 | 1898.79 | 263.63 | 1905.34 | 263.73 |
| 1911.57 | 263.67 | 1917.58 | 263.65 | 1926.81 | 263.55 | 1935.29 | 263.55 | 1940.52 | 263.43 |
| 1943.41 | 263.4 | 1948.47 | 263.51 | 1951.46 | 263.52 | 1958.57 | 263.69 | 1969.42 | 264.29 |
| 1979.64 | 264.93 | 1981.84 | 265.35 | 1986.55 | 265.96 | 1987.8 | 265.82 | 1990.51 | 265.7 |
| 1995.72 | 265.37 | 2001.4 | 265.29 | 2004.98 | 265.16 | 2008.6 | 265.09 | 2012.64 | 265.18 |
| 2016.04 | 265.35 | 2021.54 | 265.81 | 2026.48 | 266.19 | 2030.54 | 266.31 | 2035.97 | 266.27 |
| 2044.65 | 266.78 | 2045.53 | 266.77 | 2053.6 | 266 | 2059.15 | 265.29 | 2070.44 | 265.12 |
| 2077.52 | 264.94 | 2084.82 | 264.57 | 2089.46 | 264.37 | 2100.85 | 264.03 | 2102.35 | 264.11 |
| 2106.33 | 264.02 | 2111.15 | 263.79 | 2114.17 | 263.76 | 2119.75 | 263.85 | 2129.23 | 263.7 |
| 2133.75 | 263.65 | 2140.04 | 263.83 | 2147.35 | 263.77 | 2150.25 | 263.95 | 2162.57 | 264.16 |
| 2171.56 | 264.07 | 2173.66 | 264.09 | 2176.91 | 264.02 | 2190.43 | 263.88 | 2192.73 | 263.87 |
| 2201.41 | 263.74 | 2204.49 | 263.81 | 2210.62 | 263.85 | 2213.31 | 263.81 | 2222.42 | 263.83 |
| 2227.77 | 263.93 | 2235 | 264.42 | 2239.23 | 264.62 | 2246.14 | 264.66 | 2257.79 | 264.63 |
| 2263.1 | 264.57 | 2270.12 | 264.56 | 2278.19 | 264.7 | 2288.9 | 264.67 | 2297.53 | 264.68 |
| 2302.82 | 264.5 | 2311.21 | 264.29 | 2314.47 | 264.27 | 2324.85 | 264.4 | 2330.95 | 264.32 |
| 2340.47 | 264.01 | 2357.89 | 264 | 2360.12 | 263.79 | 2368.44 | 263.57 | 2368.66 | 263.66 |
| 2370.97 | 263.73 | 2372.38 | 263.6 | 2377.61 | 263.55 | 2382.03 | 263.8 | 2386.18 | 263.97 |
| 2396.67 | 263.46 | 2401.87 | 263.51 | 2405.52 | 263.62 | 2417.5 | 263.56 | 2428.58 | 263.45 |
| 2431.83 | 263.37 | 2439.26 | 263.05 | 2450.48 | 263.37 | 2457.1 | 263.37 | 2466.45 | 263.23 |
| 2474.11 | 263.33 | 2476.86 | 263.28 | 2490.39 | 262.89 | 2500.62 | 262.84 | 2513.05 | 262.63 |
| 2524.78 | 262.68 | 2529.65 | 262.68 | 2537.25 | 262.47 | 2541.77 | 262.49 | 2554.53 | 262.44 |
| 2558.61 | 262.49 | 2561.44 | 262.39 | 2562.99 | 262.27 | 2569.83 | 262.14 | 2574.83 | 262.18 |
| 2579.44 | 262.12 | 2588.64 | 262.07 | 2597.55 | 262 | 2603.77 | 262.02 | 2606.9 | 262.12 |
| 2612.8 | 262.12 | 2625.48 | 261.94 | 2629.15 | 261.96 | 2631.38 | 262.03 | 2635.45 | 262.03 |
| 2640.4 | 261.89 | 2650.27 | 261.49 | 2667.3 | 261.38 | 2680.62 | 261.49 | 2683.68 | 261.33 |
| 2687.27 | 261.21 | 2692 | 261.2 | 2693.47 | 261.13 | 2697.68 | 261.18 | 2699.87 | 261.28 |
| 2702.43 | 261.08 | 2705.36 | 261.26 | 2714.17 | 261.44 | 2715.4 | 261.49 | 2725.45 | 262.13 |
| 2736.53 | 262.3 | 2738 | 262.36 | 2741.92 | 262.36 | 2742.86 | 262.21 | 2746.54 | 262.24 |
| 2747.25 | 262.36 | 2750.06 | 262.43 | 2754.74 | 262.74 | 2756.79 | 262.74 | 2759.88 | 262.59 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2760.89 | 262.64 | 2764.41 | 262.58 | 2781.88 | 262.15 | 2788.44 | 262.96 | 2797.21 | 263.86 |
| 2798.2 | 263.82 | 2801.95 | 263.42 | 2808.44 | 263.67 | 2811.49 | 263.65 | 2818.4 | 263.39 |
| 2821.86 | 263.14 | 2849.69 | 263.26 | 2854.46 | 263.42 | 2858.96 | 263.22 | 2861.16 | 263.29 |
| 2864.87 | 264.05 | 2869.29 | 264.53 | 2871.06 | 264.68 | 2873.81 | 264.79 | 2877.95 | 265.14 |
| 2882.37 | 265.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 195.65 | .04 | 2330.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 195.65 | 2330.95 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 351.432*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 272.39 | 4.15 | 272.15 | 7.16 | 272.03 | 10.07 | 271.83 | 16.87 | 271.09 |
| 21.61 | 270.78 | 27.78 | 269.96 | 29.73 | 269.82 | 39.29 | 269.3 | 44 | 269.12 |
| 48.57 | 268.99 | 54.07 | 268.77 | 57.48 | 268.68 | 62.06 | 268.62 | 64.61 | 268.49 |
| 70.24 | 267.81 | 74.36 | 267.72 | 76.84 | 267.59 | 77.67 | 267.67 | 80.09 | 267.62 |
| 82.49 | 267.46 | 87.36 | 267 | 90.01 | 266.83 | 92.59 | 266.86 | 94.63 | 266.8 |
| 99.69 | 266.5 | 105.18 | 266.29 | 114.6 | 265.81 | 122.56 | 265.28 | 130.08 | 264.97 |
| 132.01 | 264.86 | 136.59 | 264.75 | 141.49 | 264.5 | 147.6 | 264.29 | 149.36 | 264.29 |
| 152.25 | 264.18 | 160.15 | 264.04 | 162.8 | 264.12 | 165.07 | 264.05 | 170.08 | 263.79 |
| 175.71 | 263.69 | 178.86 | 263.59 | 183.4 | 263.58 | 184.74 | 263.45 | 190.24 | 263.39 |
| 194.98 | 263.04 | 202.61 | 263.09 | 215.26 | 263.27 | 238.17 | 263.72 | 248.1 | 263.83 |
| 255.24 | 263.82 | 264.74 | 264.08 | 267.31 | 264.1 | 269.78 | 264.01 | 277.33 | 264.07 |
| 278.92 | 264.15 | 283.91 | 264.19 | 287.48 | 264.27 | 294.32 | 264.24 | 299.18 | 264.17 |
| 307.58 | 264.2 | 310.16 | 264.13 | 313.83 | 264.41 | 316.19 | 264.51 | 321.41 | 264.96 |
| 326.52 | 265.59 | 331.29 | 266.34 | 333.13 | 266.53 | 341.86 | 266.68 | 348.15 | 266.56 |
| 354.52 | 266.49 | 361.32 | 266.26 | 368.56 | 266.06 | 370.08 | 266.1 | 380.02 | 265.97 |
| 384.35 | 265.88 | 388.89 | 265.88 | 396.36 | 265.34 | 403.91 | 264.84 | 416.32 | 264.16 |
| 422.34 | 263.81 | 428.5 | 263.59 | 435.27 | 263.47 | 436.9 | 263.47 | 441 | 263.23 |
| 444.25 | 263.15 | 449.52 | 262.81 | 460.74 | 262.57 | 470.33 | 262.61 | 476.36 | 262.55 |
| 479.38 | 262.63 | 483.47 | 262.52 | 487.77 | 262.51 | 495.94 | 262.71 | 504.93 | 262.48 |
| 510.64 | 262.39 | 512.91 | 262.23 | 521.03 | 261.8 | 525.01 | 261.65 | 537.48 | 261.29 |
| 542.56 | 261.2 | 549.61 | 260.97 | 553.38 | 260.91 | 561.18 | 260.66 | 569.8 | 260.47 |
| 574.87 | 260.29 | 580.18 | 260.35 | 584.93 | 260.25 | 588.96 | 259.84 | 600.16 | 258.85 |
| 608.47 | 258.27 | 621.41 | 257.73 | 630.5 | 257.54 | 636.7 | 257.51 | 647.4 | 257.69 |
| 661.23 | 257.8 | 675.91 | 257.81 | 692.93 | 258.29 | 697.46 | 258.46 | 707.98 | 258.62 |
| 710.81 | 258.61 | 721.77 | 258.64 | 728.49 | 258.64 | 767.04 | 258.8 | 774.28 | 259 |
| 782.84 | 259.35 | 794.12 | 259.6 | 806.24 | 259.81 | 810.23 | 260.2 | 814.56 | 260.41 |
| 818.93 | 260.44 | 828.07 | 260.55 | 831.86 | 260.56 | 838.61 | 260.68 | 850.71 | 260.85 |
| 853.95 | 261.5 | 859.63 | 261.88 | 862.66 | 262.16 | 865.42 | 262.82 | 874.2 | 263.48 |
| 877.69 | 263.9 | 879.4 | 264.05 | 880.97 | 264.31 | 883.47 | 264.47 | 891.19 | 264.7 |
| 895.49 | 265.04 | 898.82 | 265.24 | 899.67 | 265.4 | 910.38 | 265.61 | 914.36 | 264.37 |
| 917.59 | 263.78 | 923.04 | 263.26 | 925.37 | 263.2 | 934.83 | 262.81 | 943.21 | 262.84 |
| 946.49 | 262.88 | 953.56 | 263.06 | 962.22 | 263.17 | 967.53 | 263.29 | 975.18 | 263.34 |
| 987.36 | 263.18 | 989.57 | 263.33 | 994.55 | 263.31 | 1000.01 | 263.36 | 1003.91 | 263.32 |
| 1006.42 | 263.07 | 1012.62 | 262.81 | 1017.47 | 262.74 | 1029.24 | 262.65 | 1035.69 | 262.84 |
| 1047.12 | 262.74 | 1058.11 | 261.94 | 1067.53 | 261.55 | 1071.67 | 261.43 | 1073.2 | 261.33 |
| 1075.33 | 261.36 | 1077.99 | 261.61 | 1081.24 | 262.27 | 1084.37 | 262.59 | 1090.54 | 263 |
| 1095.86 | 263.09 | 1098.95 | 262.87 | 1101.9 | 262.75 | 1110.54 | 262.17 | 1114.98 | 261.66 |
| 1121.56 | 261.11 | 1131.2 | 261.18 | 1139.88 | 261.11 | 1151.12 | 261.12 | 1154.88 | 261.38 |
| 1159.98 | 261.53 | 1163.15 | 261.71 | 1169.99 | 262.3 | 1173.48 | 262.51 | 1176.01 | 262.6 |
| 1178 | 262.59 | 1181.22 | 262.47 | 1186.11 | 262.1 | 1190.43 | 261.49 | 1193.66 | 261.23 |
| 1195.28 | 261.02 | 1197.81 | 260.87 | 1200.59 | 260.8 | 1205.1 | 260.92 | 1208.53 | 261.14 |
| 1212.44 | 261.2 | 1218.78 | 261.16 | 1227.82 | 261.39 | 1231.54 | 261.54 | 1242.37 | 262.03 |
| 1247.58 | 262.38 | 1248.86 | 262.52 | 1255.81 | 263.01 | 1257.57 | 263.02 | 1261.16 | 262.89 |
| 1269.27 | 262.18 | 1283.78 | 261.76 | 1287.16 | 261.88 | 1290.12 | 262.27 | 1294.13 | 262.97 |
| 1299.75 | 263.53 | 1300.62 | 263.5 | 1312.93 | 264.2 | 1319.02 | 264.3 | 1328.21 | 264.56 |
| 1333.36 | 264.56 | 1342.55 | 264.63 | 1345.54 | 264.62 | 1351.58 | 264.78 | 1366.16 | 265.26 |
| 1373.93 | 265.36 | 1387.71 | 265.41 | 1391.21 | 265.4 | 1398.87 | 265.22 | 1408.81 | 264.88 |
| 1415.32 | 264.73 | 1423.22 | 264.67 | 1427.87 | 264.84 | 1431.06 | 265.04 | 1437.84 | 265.38 |
| 1442.77 | 265.59 | 1446.42 | 265.84 | 1454.89 | 265.5 | 1463.83 | 265.03 | 1471.23 | 263.98 |
| 1475.42 | 263.7 | 1481.08 | 263.57 | 1485.49 | 263.21 | 1493.47 | 262.7 | 1496.78 | 262.66 |
| 1499.56 | 262.94 | 1500.57 | 263.29 | 1510.79 | 263.77 | 1513.81 | 263.85 | 1524.36 | 264.47 |
| 1530.19 | 264.66 | 1538.18 | 264.69 | 1540.26 | 264.61 | 1547.28 | 264.06 | 1548.59 | 263.87 |
| 1551.5 | 263.85 | 1560.03 | 264 | 1564.58 | 264 | 1572.08 | 264.13 | 1573.34 | 264.02 |
| 1581.22 | 263.98 | 1595.38 | 263.33 | 1601.93 | 263.35 | 1614.26 | 263.42 | 1621.91 | 263.58 |
| 1628.62 | 264.05 | 1634.7 | 264.54 | 1638.38 | 264.79 | 1642.4 | 264.91 | 1648.28 | 264.89 |
| 1650.21 | 264.95 | 1661.23 | 264.74 | 1666.58 | 264.84 | 1674.07 | 264.55 | 1675.92 | 264.42 |
| 1679.02 | 264.05 | 1687.98 | 263.94 | 1700.29 | 263.84 | 1703.17 | 263.94 | 1715.03 | 264.27 |
| 1718.8 | 264.71 | 1721.39 | 264.88 | 1725.53 | 265.06 | 1732.61 | 265.17 | 1737.28 | 265.43 |
| 1740.89 | 265.57 | 1745.46 | 266.09 | 1757.13 | 266.09 | 1758.41 | 266.13 | 1762.57 | 265.62 |
| 1766.26 | 265.42 | 1768.46 | 265.5 | 1770.06 | 265.41 | 1774.5 | 265.46 | 1781.2 | 265.39 |
| 1784.86 | 265.27 | 1789.67 | 265.01 | 1791.78 | 265.11 | 1795.39 | 265 | 1797.8 | 264.74 |
| 1799.32 | 264.37 | 1801.71 | 264.22 | 1808.97 | 264.79 | 1812.61 | 264.68 | 1819.98 | 264.84 |
| 1822.78 | 264.99 | 1826.52 | 265.26 | 1832.07 | 265.59 | 1839.86 | 265.57 | 1856.34 | 265.3 |
| 1865.56 | 264.94 | 1871.24 | 264.79 | 1873.26 | 264.69 | 1879.15 | 264.3 | 1884.39 | 263.6 |
| 1892.88 | 263.44 | 1902.77 | 263.3 | 1906.55 | 263.21 | 1913.13 | 263.17 | 1920.24 | 263.21 |
| 1921.53 | 263.26 | 1926.79 | 263.28 | 1931.82 | 263.37 | 1936.24 | 263.37 | 1945.96 | 263.31 |
| 1955.37 | 263.21 | 1964.02 | 263.21 | 1972.3 | 263.04 | 1977.47 | 263.14 | 1980.52 | 263.15 |
| 1987.77 | 263.33 | 1998.84 | 263.9 | 2009.27 | 264.52 | 2011.51 | 264.94 | 2016.32 | 265.57 |
| 2017.59 | 265.42 | 2020.56 | 265.27 | 2025.96 | 264.91 | 2031.46 | 264.82 | 2035.11 | 264.68 |
| 2038.81 | 264.62 | 2042.93 | 264.72 | 2046.39 | 264.91 | 2053.72 | 265.55 | 2057.05 | 265.81 |
| 2061.19 | 265.95 | 2066.48 | 265.95 | 2066.72 | 265.91 | 2075.58 | 266.46 | 2076.47 | 266.45 |
| 2084.7 | 265.67 | 2087.8 | 265.23 | 2090.37 | 264.94 | 2101.89 | 264.78 | 2109.11 | 264.61 |
| 2110.82 | 264.51 | 2121.29 | 264.05 | 2132.91 | 263.73 | 2134.44 | 263.81 | 2138.49 | 263.73 |
| 2143.42 | 263.49 | 2146.49 | 263.46 | 2152.18 | 263.56 | 2166.47 | 263.35 | 2172.88 | 263.55 |
| 2180.34 | 263.48 | 2183.3 | 263.66 | 2195.86 | 263.88 | 2205.04 | 263.79 | 2207.18 | 263.81 |
| 2210.49 | 263.74 | 2224.28 | 263.58 | 2226.63 | 263.57 | 2235.48 | 263.43 | 2238.62 | 263.51 |
| 2244.88 | 263.55 | 2249.73 | 263.5 | 2256.91 | 263.51 | 2262.37 | 263.6 | 2269.75 | 264.11 |
| 2274.06 | 264.31 | 2281.11 | 264.35 | 2293 | 264.32 | 2298.41 | 264.27 | 2305.57 | 264.26 |
| 2313.81 | 264.41 | 2320.06 | 264.4 | 2333.53 | 264.43 | 2338.92 | 264.25 | 2347.48 | 264.05 |
| 2350.81 | 264.04 | 2361.4 | 264.17 | 2367.62 | 264.09 | 2377.59 | 263.77 | 2395.82 | 263.75 |
| 2398.15 | 263.53 | 2406.86 | 263.3 | 2407.09 | 263.39 | 2409.52 | 263.47 | 2410.98 | 263.33 |
| 2416.46 | 263.28 | 2421.08 | 263.54 | 2425.44 | 263.72 | 2435.63 | 263.21 | 2441.85 | 263.23 |
| 2445.68 | 263.35 | 2458.22 | 263.29 | 2469.82 | 263.17 | 2473.22 | 263.09 | 2481 | 262.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2484.03 | 262.87 | 2486.17 | 262.89 | 2492.74 | 263.09 | 2499.67 | 263.09 | 2509.45 | 262.94 |
| 2517.47 | 263.05 | 2520.35 | 263 | 2534.51 | 262.58 | 2545.23 | 262.53 | 2558.23 | 262.31 |
| 2575.61 | 262.37 | 2583.56 | 262.14 | 2588.3 | 262.17 | 2601.65 | 262.11 | 2605.92 | 262.16 |
| 2608.89 | 262.06 | 2610.51 | 261.93 | 2617.67 | 261.8 | 2622.9 | 261.84 | 2627.72 | 261.78 |
| 2637.35 | 261.73 | 2638.19 | 261.7 | 2646.68 | 261.65 | 2653.19 | 261.68 | 2656.47 | 261.78 |
| 2662.65 | 261.78 | 2675.92 | 261.58 | 2679.76 | 261.61 | 2682.1 | 261.68 | 2686.35 | 261.68 |
| 2691.53 | 261.54 | 2692.72 | 261.45 | 2701.87 | 261.12 | 2703.59 | 261.09 | 2719.69 | 261 |
| 2729.67 | 261.07 | 2733.64 | 261.12 | 2736.84 | 260.95 | 2740.6 | 260.82 | 2745.54 | 260.81 |
| 2747.08 | 260.73 | 2751.49 | 260.79 | 2753.78 | 260.9 | 2756.47 | 260.68 | 2759.53 | 260.87 |
| 2768.75 | 261.06 | 2770.04 | 261.11 | 2780.56 | 261.78 | 2782.12 | 261.84 | 2792.16 | 261.97 |
| 2793.69 | 262.03 | 2797.8 | 262.03 | 2798.78 | 261.88 | 2802.64 | 261.9 | 2803.38 | 262.03 |
| 2806.32 | 262.1 | 2811.22 | 262.43 | 2813.37 | 262.43 | 2816.6 | 262.27 | 2817.66 | 262.32 |
| 2821.34 | 262.26 | 2837.07 | 261.86 | 2839.63 | 261.81 | 2846.5 | 262.66 | 2855.68 | 263.6 |
| 2856.72 | 263.57 | 2860.64 | 263.14 | 2867.42 | 263.41 | 2870.62 | 263.38 | 2877.86 | 263.11 |
| 2881.48 | 262.85 | 2910.6 | 262.98 | 2915.6 | 263.15 | 2920.32 | 262.94 | 2922.62 | 263.02 |
| 2926.5 | 263.81 | 2931.12 | 264.32 | 2932.98 | 264.48 | 2938.59 | 264.78 | 2940.19 | 264.97 |
| 2944.81 | 265.76 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 190.24 | .04 | 2367.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 190.24 | 2367.62 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 331.604*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 271.9 | 4.03 | 271.68 | 7.27 | 271.56 | 9.78 | 271.38 | 16.39 | 270.66 |
| 20.99 | 270.35 | 26.99 | 269.51 | 28.88 | 269.38 | 38.17 | 268.86 | 47.19 | 268.56 |
| 52.53 | 268.34 | 60.3 | 268.18 | 62.77 | 268.05 | 68.24 | 267.37 | 72.24 | 267.29 |
| 74.66 | 267.16 | 75.46 | 267.25 | 77.81 | 267.2 | 80.14 | 267.04 | 84.88 | 266.58 |
| 87.45 | 266.41 | 91.93 | 266.39 | 96.85 | 266.09 | 102.19 | 265.88 | 111.34 | 265.42 |
| 119.08 | 264.91 | 128.26 | 264.52 | 132.71 | 264.41 | 137.47 | 264.2 | 143.4 | 264.01 |
| 147.92 | 263.9 | 155.59 | 263.77 | 158.17 | 263.85 | 163.75 | 263.64 | 165.24 | 263.54 |
| 170.72 | 263.44 | 173.78 | 263.34 | 178.19 | 263.33 | 179.48 | 263.2 | 184.83 | 263.13 |
| 189.66 | 262.77 | 197.43 | 262.81 | 208.11 | 262.94 | 219.98 | 263.15 | 233.63 | 263.37 |
| 243.73 | 263.47 | 251 | 263.44 | 260.67 | 263.65 | 263.29 | 263.68 | 265.8 | 263.58 |
| 273.49 | 263.64 | 275.11 | 263.73 | 280.19 | 263.77 | 283.6 | 263.84 | 290.78 | 263.8 |
| 295.74 | 263.73 | 304.29 | 263.72 | 306.92 | 263.65 | 310.65 | 263.92 | 312.63 | 263.99 |
| 319.43 | 264.55 | 323.57 | 265.04 | 328.42 | 265.76 | 330.3 | 265.94 | 339.18 | 266.07 |
| 345.58 | 265.94 | 352.07 | 265.86 | 359 | 265.63 | 366.36 | 265.44 | 370.73 | 265.47 |
| 378.03 | 265.35 | 382.44 | 265.25 | 386.38 | 265.26 | 388.09 | 265.21 | 394.67 | 264.76 |
| 402.36 | 264.31 | 421.11 | 263.38 | 427.39 | 263.17 | 435.93 | 263.06 | 440.11 | 262.81 |
| 443.42 | 262.73 | 448.79 | 262.37 | 460.21 | 262.12 | 467.63 | 262.14 | 476.11 | 262.05 |
| 479.19 | 262.14 | 483.35 | 262.02 | 487.72 | 262.01 | 496.04 | 262.22 | 505.19 | 262 |
| 510.71 | 261.92 | 513.31 | 261.76 | 521.59 | 261.35 | 532.46 | 261 | 538.33 | 260.84 |
| 543.5 | 260.76 | 550.68 | 260.53 | 554.52 | 260.46 | 562.45 | 260.19 | 571.23 | 259.97 |
| 576.4 | 259.78 | 581.8 | 259.83 | 586.63 | 259.75 | 590.74 | 259.35 | 602.14 | 258.41 |
| 610.6 | 257.86 | 623.77 | 257.3 | 635.13 | 257.09 | 639.34 | 257.08 | 650.25 | 257.26 |
| 664.35 | 257.36 | 679.31 | 257.38 | 686.58 | 257.57 | 696.67 | 257.87 | 701.3 | 258.04 |
| 712.02 | 258.2 | 714.9 | 258.18 | 726.08 | 258.21 | 732.94 | 258.21 | 772.24 | 258.36 |
| 779.62 | 258.57 | 788.35 | 258.92 | 799.85 | 259.16 | 812.21 | 259.37 | 816.28 | 259.78 |
| 820.69 | 259.98 | 833.39 | 260.1 | 838.33 | 260.11 | 844.89 | 260.23 | 857.56 | 260.41 |
| 860.86 | 261.09 | 866.65 | 261.49 | 869.74 | 261.78 | 872.55 | 262.47 | 881.51 | 263.15 |
| 885.06 | 263.59 | 886.8 | 263.74 | 888.41 | 264.01 | 890.95 | 264.17 | 896.54 | 264.31 |
| 899.29 | 264.42 | 903.22 | 264.73 | 906.61 | 264.93 | 907.48 | 265.09 | 918.39 | 265.28 |
| 922.46 | 263.97 | 925.75 | 263.35 | 931.3 | 262.78 | 933.93 | 262.7 | 943.33 | 262.28 |
| 951.87 | 262.29 | 955.22 | 262.32 | 962.43 | 262.47 | 971.25 | 262.56 | 976.67 | 262.66 |
| 984.47 | 262.69 | 996.89 | 262.52 | 999.14 | 262.69 | 1004.22 | 262.68 | 1009.79 | 262.76 |
| 1013.77 | 262.74 | 1016.32 | 262.51 | 1022.64 | 262.25 | 1026.17 | 262.17 | 1030.11 | 262.15 |
| 1039.59 | 262.05 | 1046.18 | 262.21 | 1057.83 | 262.11 | 1069.03 | 261.36 | 1078.64 | 261 |
| 1085.13 | 260.8 | 1086.59 | 260.84 | 1089.31 | 261.1 | 1092.62 | 261.79 | 1095.8 | 262.12 |
| 1102.1 | 262.55 | 1107.52 | 262.62 | 1110.68 | 262.39 | 1113.69 | 262.24 | 1122.49 | 261.61 |
| 1127.02 | 261.05 | 1133.73 | 260.46 | 1143.56 | 260.53 | 1154.34 | 260.46 | 1163.87 | 260.47 |
| 1167.71 | 260.75 | 1172.91 | 260.91 | 1176.14 | 261.1 | 1183.11 | 261.72 | 1186.67 | 261.95 |
| 1189.26 | 262.05 | 1191.28 | 262.05 | 1194.56 | 261.92 | 1199.55 | 261.56 | 1203.95 | 260.95 |
| 1207.25 | 260.69 | 1208.9 | 260.48 | 1211.48 | 260.34 | 1214.31 | 260.29 | 1216.89 | 260.33 |
| 1222.41 | 260.67 | 1226.7 | 260.75 | 1232.86 | 260.72 | 1244.05 | 261.03 | 1256.92 | 261.63 |
| 1262.23 | 262 | 1265.3 | 262.27 | 1270.62 | 262.63 | 1272.41 | 262.64 | 1276.07 | 262.48 |
| 1284.34 | 261.71 | 1299.14 | 261.18 | 1302.58 | 261.26 | 1305.61 | 261.62 | 1309.7 | 262.3 |
| 1315.43 | 262.87 | 1316.31 | 262.84 | 1328.86 | 263.54 | 1335.07 | 263.64 | 1344.45 | 263.87 |
| 1349.7 | 263.87 | 1362.11 | 263.94 | 1368.28 | 264.1 | 1383.14 | 264.56 | 1389.12 | 264.64 |
| 1395.33 | 264.69 | 1407.54 | 264.73 | 1416.49 | 264.56 | 1426.63 | 264.25 | 1431.96 | 264.14 |
| 1441.32 | 264.07 | 1446.07 | 264.24 | 1449.31 | 264.45 | 1456.23 | 264.81 | 1461.26 | 265.04 |
| 1464.98 | 265.31 | 1473.61 | 265 | 1482.73 | 264.57 | 1490.28 | 263.53 | 1494.55 | 263.26 |
| 1500.32 | 263.15 | 1504.82 | 262.79 | 1512.95 | 262.27 | 1516.33 | 262.24 | 1519.16 | 262.53 |
| 1520.19 | 262.9 | 1530.61 | 263.4 | 1533.69 | 263.48 | 1544.45 | 264.13 | 1550.4 | 264.33 |
| 1558.55 | 264.36 | 1563.59 | 264.06 | 1567.82 | 263.69 | 1569.16 | 263.49 | 1572.12 | 263.47 |
| 1580.82 | 263.64 | 1585.46 | 263.63 | 1593.11 | 263.77 | 1594.39 | 263.65 | 1602.43 | 263.62 |
| 1616.86 | 262.94 | 1623.55 | 262.95 | 1636.12 | 263.02 | 1643.92 | 263.18 | 1650.76 | 263.62 |
| 1656.96 | 264.09 | 1660.71 | 264.33 | 1664.59 | 264.44 | 1670.8 | 264.44 | 1672.77 | 264.49 |
| 1684.01 | 264.27 | 1689.47 | 264.4 | 1697.1 | 264.11 | 1698.99 | 263.98 | 1702.15 | 263.59 |
| 1711.29 | 263.49 | 1723.84 | 263.4 | 1727.92 | 263.55 | 1738.87 | 263.88 | 1742.71 | 264.35 |
| 1745.36 | 264.53 | 1749.58 | 264.73 | 1756.79 | 264.85 | 1761.56 | 265.12 | 1765.24 | 265.27 |
| 1769.89 | 265.81 | 1781.8 | 265.81 | 1783.11 | 265.84 | 1787.34 | 265.3 | 1791.1 | 265.07 |
| 1793.35 | 265.15 | 1794.99 | 265.05 | 1799.5 | 265.09 | 1806.34 | 265 | 1809.53 | 264.89 |
| 1814.98 | 264.59 | 1817.13 | 264.69 | 1821.95 | 264.5 | 1823.27 | 264.31 | 1824.81 | 263.93 |
| 1827.25 | 263.78 | 1834.66 | 264.41 | 1838.36 | 264.31 | 1845.88 | 264.49 | 1848.73 | 264.64 |
| 1852.55 | 264.92 | 1858.21 | 265.26 | 1866.15 | 265.24 | 1882.95 | 265 | 1885.67 | 264.92 |
| 1892.36 | 264.65 | 1898.15 | 264.5 | 1900.21 | 264.4 | 1906.22 | 264 | 1911.56 | 263.28 |
| 1920.22 | 263.11 | 1930.3 | 262.97 | 1934.16 | 262.88 | 1940.87 | 262.83 | 1948.11 | 262.86 |
| 1949.43 | 262.91 | 1955.39 | 262.93 | 1961.61 | 263.03 | 1968.09 | 262.98 | 1971.84 | 263.02 |
| 1980.39 | 262.89 | 1992.76 | 262.86 | 2001.2 | 262.68 | 2006.47 | 262.78 | 2009.58 | 262.79 |
| 2016.97 | 262.96 | 2028.26 | 263.52 | 2038.89 | 264.11 | 2041.17 | 264.54 | 2046.08 | 265.18 |
| 2047.38 | 265.02 | 2050.19 | 264.87 | 2055.91 | 264.46 | 2061.52 | 264.35 | 2065.24 | 264.21 |
| 2069.02 | 264.14 | 2073.22 | 264.25 | 2073.77 | 264.34 | 2076.75 | 264.46 | 2082.47 | 265 |
| 2087.61 | 265.43 | 2091.84 | 265.59 | 2097.23 | 265.6 | 2097.48 | 265.56 | 2106.51 | 266.15 |
| 2107.42 | 266.14 | 2115.81 | 265.34 | 2118.96 | 264.88 | 2121.59 | 264.58 | 2134.24 | 264.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2140.69 | 264.28 | 2153.12 | 263.73 | 2164.96 | 263.42 | 2166.52 | 263.52 | 2171.03 | 263.43 |
| 2175.68 | 263.19 | 2178.81 | 263.16 | 2184.62 | 263.26 | 2192.52 | 263.15 | 2195.92 | 263.06 |
| 2199.19 | 263.06 | 2205.72 | 263.26 | 2213.33 | 263.19 | 2216.35 | 263.38 | 2219.22 | 263.41 |
| 2229.16 | 263.6 | 2238.51 | 263.51 | 2240.69 | 263.53 | 2244.07 | 263.45 | 2258.13 | 263.28 |
| 2260.53 | 263.27 | 2269.56 | 263.12 | 2272.76 | 263.2 | 2279.14 | 263.24 | 2281.93 | 263.2 |
| 2291.4 | 263.19 | 2296.97 | 263.27 | 2305.6 | 263.86 | 2308.89 | 264.01 | 2320.25 | 264.05 |
| 2328.2 | 264.02 | 2333.72 | 263.97 | 2341.02 | 263.96 | 2346.1 | 264.02 | 2349.42 | 264.11 |
| 2355.8 | 264.12 | 2364.42 | 264.17 | 2369.53 | 264.17 | 2375.03 | 264 | 2383.76 | 263.82 |
| 2387.15 | 263.8 | 2397.95 | 263.94 | 2404.29 | 263.85 | 2414.7 | 263.52 | 2433.75 | 263.5 |
| 2436.18 | 263.27 | 2445.28 | 263.03 | 2445.52 | 263.13 | 2448.06 | 263.21 | 2449.59 | 263.06 |
| 2455.32 | 263.01 | 2460.14 | 263.28 | 2464.69 | 263.47 | 2465.89 | 263.43 | 2476.16 | 262.91 |
| 2481.84 | 262.96 | 2485.83 | 263.08 | 2498.93 | 263.02 | 2511.05 | 262.89 | 2514.6 | 262.81 |
| 2522.73 | 262.46 | 2525.9 | 262.57 | 2531.51 | 262.69 | 2535 | 262.81 | 2542.24 | 262.81 |
| 2552.45 | 262.65 | 2560.83 | 262.77 | 2563.84 | 262.71 | 2578.63 | 262.28 | 2589.83 | 262.22 |
| 2603.41 | 261.99 | 2621.57 | 262.05 | 2625.98 | 261.96 | 2629.87 | 261.82 | 2634.82 | 261.85 |
| 2648.77 | 261.78 | 2653.23 | 261.84 | 2656.33 | 261.73 | 2658.03 | 261.6 | 2665.5 | 261.46 |
| 2670.97 | 261.5 | 2676.01 | 261.43 | 2686.07 | 261.38 | 2695.81 | 261.3 | 2702.62 | 261.33 |
| 2706.03 | 261.43 | 2716.7 | 261.4 | 2726.36 | 261.23 | 2730.36 | 261.26 | 2732.81 | 261.34 |
| 2737.25 | 261.34 | 2742.67 | 261.18 | 2753.46 | 260.74 | 2772.08 | 260.62 | 2786.65 | 260.74 |
| 2790 | 260.56 | 2793.93 | 260.43 | 2799.09 | 260.42 | 2800.7 | 260.34 | 2805.3 | 260.4 |
| 2807.7 | 260.51 | 2810.5 | 260.29 | 2813.7 | 260.49 | 2823.33 | 260.69 | 2824.68 | 260.74 |
| 2835.67 | 261.44 | 2837.3 | 261.5 | 2847.79 | 261.63 | 2849.39 | 261.7 | 2853.68 | 261.7 |
| 2854.71 | 261.54 | 2857.34 | 261.52 | 2859.51 | 261.7 | 2862.58 | 261.77 | 2864.02 | 261.91 |
| 2867.7 | 262.12 | 2869.94 | 262.12 | 2873.32 | 261.95 | 2874.43 | 262.01 | 2878.27 | 261.94 |
| 2894.71 | 261.52 | 2897.38 | 261.47 | 2904.55 | 262.36 | 2914.14 | 263.35 | 2915.23 | 263.31 |
| 2919.32 | 262.86 | 2926.41 | 263.14 | 2929.75 | 263.12 | 2937.31 | 262.83 | 2941.1 | 262.56 |
| 2971.52 | 262.7 | 2976.74 | 262.88 | 2981.67 | 262.66 | 2984.07 | 262.75 | 2988.12 | 263.57 |
| 2992.95 | 264.11 | 2994.89 | 264.27 | 2997.9 | 264.4 | 3000.76 | 264.59 | 3002.43 | 264.79 |
| 3007.26 | 265.62 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 184.83 | .04 | 2404.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 184.83 | 2404.29 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 311.777*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 271.41 | 3.92 | 271.21 | 6.75 | 271.12 | 9.5 | 270.93 | 15.91 | 270.22 |
| 20.38 | 269.91 | 22.25 | 269.6 | 26.2 | 269.06 | 28.04 | 268.93 | 37.05 | 268.42 |
| 45.81 | 268.13 | 54.21 | 267.81 | 58.53 | 267.74 | 60.93 | 267.61 | 65.96 | 266.96 |
| 70.13 | 266.86 | 72.47 | 266.73 | 73.26 | 266.83 | 75.53 | 266.78 | 77.8 | 266.63 |
| 82.4 | 266.15 | 84.89 | 265.98 | 87.32 | 266.03 | 89.24 | 265.98 | 94.02 | 265.68 |
| 99.2 | 265.48 | 108.09 | 265.03 | 116.09 | 264.52 | 122.68 | 264.28 | 124.5 | 264.18 |
| 128.82 | 264.08 | 133.44 | 263.89 | 139.6 | 263.71 | 151.04 | 263.5 | 153.54 | 263.57 |
| 160.41 | 263.3 | 170.73 | 263.07 | 172.97 | 263.09 | 174.23 | 262.95 | 179.42 | 262.87 |
| 184.33 | 262.49 | 192.24 | 262.53 | 203.11 | 262.65 | 229.08 | 263.02 | 239.37 | 263.11 |
| 243.35 | 263.11 | 246.77 | 263.05 | 256.6 | 263.23 | 259.27 | 263.25 | 261.83 | 263.15 |
| 269.65 | 263.22 | 271.3 | 263.3 | 276.47 | 263.34 | 280.17 | 263.42 | 287.25 | 263.37 |
| 292.29 | 263.28 | 301 | 263.25 | 303.67 | 263.16 | 307.46 | 263.42 | 309.48 | 263.49 |
| 315.32 | 263.93 | 320.62 | 264.5 | 325.55 | 265.19 | 327.47 | 265.34 | 336.26 | 265.47 |
| 343.02 | 265.32 | 349.62 | 265.22 | 356.67 | 264.99 | 363.62 | 264.83 | 366.03 | 264.88 |
| 376.04 | 264.73 | 380.52 | 264.63 | 385.23 | 264.63 | 392.98 | 264.18 | 400.8 | 263.78 |
| 419.89 | 262.94 | 426.27 | 262.75 | 434.97 | 262.66 | 439.22 | 262.39 | 442.59 | 262.31 |
| 448.05 | 261.94 | 459.68 | 261.67 | 467.23 | 261.66 | 475.86 | 261.56 | 478.99 | 261.64 |
| 483.23 | 261.52 | 487.68 | 261.51 | 493.17 | 261.68 | 496.14 | 261.73 | 505.45 | 261.53 |
| 511.08 | 261.45 | 517.12 | 261.13 | 522.14 | 260.9 | 526.26 | 260.76 | 539.18 | 260.39 |
| 544.44 | 260.31 | 551.75 | 260.09 | 555.66 | 260.02 | 565.86 | 259.65 | 572.67 | 259.47 |
| 577.92 | 259.26 | 583.42 | 259.31 | 588.34 | 259.24 | 592.51 | 258.86 | 604.12 | 257.98 |
| 612.72 | 257.44 | 626.13 | 256.87 | 635.56 | 256.69 | 641.98 | 256.65 | 653.1 | 256.83 |
| 667.47 | 256.92 | 682.72 | 256.94 | 690.13 | 257.14 | 700.42 | 257.45 | 705.13 | 257.62 |
| 716.06 | 257.77 | 737.38 | 257.79 | 777.44 | 257.93 | 784.96 | 258.14 | 793.86 | 258.49 |
| 800.68 | 258.61 | 805.59 | 258.73 | 818.18 | 258.93 | 822.33 | 259.35 | 826.83 | 259.55 |
| 839.77 | 259.65 | 844.81 | 259.65 | 851.82 | 259.78 | 864.4 | 259.97 | 867.77 | 260.68 |
| 873.67 | 261.1 | 876.83 | 261.4 | 879.69 | 262.13 | 888.81 | 262.83 | 894.21 | 263.43 |
| 895.86 | 263.71 | 898.44 | 263.87 | 906.94 | 264.11 | 910.95 | 264.42 | 914.4 | 264.61 |
| 915.29 | 264.78 | 926.41 | 264.95 | 930.56 | 263.57 | 933.92 | 262.91 | 939.57 | 262.3 |
| 942.25 | 262.21 | 951.83 | 261.75 | 963.95 | 261.76 | 971.3 | 261.89 | 980.29 | 261.95 |
| 985.81 | 262.03 | 993.76 | 262.04 | 1006.42 | 261.87 | 1008.72 | 262.05 | 1013.9 | 262.05 |
| 1019.57 | 262.16 | 1023.63 | 262.17 | 1026.23 | 261.94 | 1032.67 | 261.69 | 1049.95 | 261.45 |
| 1056.66 | 261.59 | 1068.54 | 261.48 | 1079.96 | 260.78 | 1095.64 | 260.28 | 1097.85 | 260.32 |
| 1100.62 | 260.59 | 1104 | 261.31 | 1107.24 | 261.66 | 1113.66 | 262.09 | 1119.19 | 262.16 |
| 1121.13 | 261.99 | 1127.13 | 261.63 | 1134.44 | 261.05 | 1139.07 | 260.45 | 1145.9 | 259.81 |
| 1155.92 | 259.88 | 1166.91 | 259.81 | 1176.62 | 259.82 | 1180.54 | 260.11 | 1185.83 | 260.29 |
| 1189.13 | 260.49 | 1196.23 | 261.15 | 1199.86 | 261.39 | 1202.5 | 261.5 | 1204.56 | 261.5 |
| 1207.91 | 261.38 | 1212.99 | 261.02 | 1217.48 | 260.4 | 1220.83 | 260.15 | 1222.52 | 259.94 |
| 1225.15 | 259.81 | 1228.04 | 259.77 | 1230.66 | 259.83 | 1236.29 | 260.2 | 1240.36 | 260.29 |
| 1246.94 | 260.29 | 1258.35 | 260.61 | 1271.46 | 261.24 | 1276.88 | 261.62 | 1280.01 | 261.89 |
| 1285.44 | 262.25 | 1287.26 | 262.26 | 1290.99 | 262.08 | 1299.42 | 261.24 | 1314.5 | 260.6 |
| 1318.01 | 260.64 | 1321.09 | 260.98 | 1325.26 | 261.64 | 1331.1 | 262.21 | 1332.01 | 262.18 |
| 1344.8 | 262.89 | 1351.12 | 262.97 | 1360.68 | 263.19 | 1366.74 | 263.2 | 1375.58 | 263.29 |
| 1378.69 | 263.27 | 1384.97 | 263.42 | 1400.12 | 263.86 | 1406.21 | 263.94 | 1425 | 264.06 |
| 1434.11 | 263.91 | 1444.45 | 263.62 | 1451.21 | 263.51 | 1459.42 | 263.46 | 1464.26 | 263.64 |
| 1471.32 | 264.07 | 1479.74 | 264.49 | 1483.52 | 264.78 | 1492.34 | 264.5 | 1501.63 | 264.12 |
| 1509.33 | 263.07 | 1513.68 | 262.83 | 1519.56 | 262.73 | 1524.15 | 262.38 | 1532.43 | 261.85 |
| 1535.88 | 261.82 | 1538.76 | 262.12 | 1539.82 | 262.51 | 1550.44 | 263.04 | 1553.57 | 263.12 |
| 1564.54 | 263.79 | 1570.6 | 264 | 1578.91 | 264.02 | 1581.06 | 263.93 | 1588.36 | 263.32 |
| 1589.73 | 263.11 | 1591.55 | 263.08 | 1601.61 | 263.27 | 1606.34 | 263.26 | 1614.14 | 263.41 |
| 1615.45 | 263.29 | 1623.63 | 263.25 | 1631.03 | 262.91 | 1638.35 | 262.54 | 1657.98 | 262.61 |
| 1665.93 | 262.78 | 1672.9 | 263.2 | 1679.22 | 263.64 | 1683.04 | 263.87 | 1687.22 | 263.98 |
| 1693.33 | 263.98 | 1695.34 | 264.03 | 1699.05 | 263.98 | 1706.8 | 263.8 | 1712.36 | 263.95 |
| 1720.13 | 263.66 | 1722.06 | 263.53 | 1725.28 | 263.13 | 1734.59 | 263.04 | 1747.39 | 262.96 |
| 1750.38 | 263.08 | 1762.71 | 263.49 | 1766.63 | 263.99 | 1769.32 | 264.19 | 1773.63 | 264.4 |
| 1780.98 | 264.52 | 1785.84 | 264.81 | 1789.59 | 264.96 | 1794.33 | 265.53 | 1806.47 | 265.53 |
| 1807.8 | 265.56 | 1812.11 | 264.98 | 1815.95 | 264.72 | 1818.24 | 264.8 | 1819.91 | 264.69 |
| 1824.51 | 264.71 | 1829.73 | 264.64 | 1834.73 | 264.48 | 1840.29 | 264.16 | 1842.47 | 264.26 |
| 1847.39 | 264.08 | 1848.74 | 263.88 | 1850.31 | 263.49 | 1852.8 | 263.34 | 1860.34 | 264.02 |

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|---|---|---|---|---|---|---|---|---|---|
| 1864.12 | 263.93 | 1871.78 | 264.13 | 1874.69 | 264.29 | 1878.59 | 264.58 | 1884.35 | 264.93 |
| 1892.45 | 264.92 | 1909.57 | 264.7 | 1919.16 | 264.36 | 1925.06 | 264.21 | 1927.16 | 264.11 |
| 1933.28 | 263.7 | 1938.73 | 262.95 | 1944.63 | 262.83 | 1957.83 | 262.64 | 1964.05 | 262.52 |
| 1968.6 | 262.49 | 1975.98 | 262.52 | 1977.33 | 262.56 | 1983.41 | 262.58 | 1988.02 | 262.66 |
| 1992.62 | 262.67 | 1999.86 | 262.64 | 2000.17 | 262.68 | 2008.88 | 262.55 | 2016.68 | 262.51 |
| 2021.49 | 262.52 | 2030.1 | 262.32 | 2035.47 | 262.42 | 2038.64 | 262.42 | 2046.57 | 262.61 |
| 2057.68 | 263.13 | 2068.52 | 263.7 | 2070.84 | 264.14 | 2075.84 | 264.79 | 2077.17 | 264.61 |
| 2080.25 | 264.44 | 2085.87 | 264.01 | 2093.26 | 263.82 | 2095.38 | 263.73 | 2099.22 | 263.67 |
| 2103.5 | 263.79 | 2104.07 | 263.89 | 2107.1 | 264.02 | 2112.93 | 264.59 | 2118.17 | 265.06 |
| 2122.48 | 265.22 | 2127.98 | 265.24 | 2128.23 | 265.2 | 2137.44 | 265.83 | 2138.37 | 265.82 |
| 2146.92 | 265 | 2152.81 | 264.22 | 2165.7 | 264.08 | 2172.28 | 263.96 | 2174.06 | 263.86 |
| 2184.95 | 263.41 | 2197.02 | 263.12 | 2198.61 | 263.22 | 2202.82 | 263.14 | 2207.94 | 262.89 |
| 2211.14 | 262.86 | 2217.05 | 262.97 | 2231.9 | 262.76 | 2238.57 | 262.97 | 2246.32 | 262.9 |
| 2249.39 | 263.1 | 2252.32 | 263.13 | 2262.45 | 263.32 | 2271.99 | 263.23 | 2274.21 | 263.25 |
| 2279.71 | 263.15 | 2291.98 | 262.98 | 2294.43 | 262.97 | 2303.63 | 262.81 | 2306.89 | 262.9 |
| 2313.4 | 262.94 | 2316.24 | 262.89 | 2325.9 | 262.87 | 2331.57 | 262.95 | 2340.36 | 263.55 |
| 2343.76 | 263.71 | 2355.3 | 263.74 | 2363.4 | 263.71 | 2369.03 | 263.66 | 2372.27 | 263.69 |
| 2376.47 | 263.66 | 2381.65 | 263.72 | 2385.03 | 263.82 | 2391.53 | 263.84 | 2400.33 | 263.91 |
| 2405.53 | 263.92 | 2411.14 | 263.75 | 2420.03 | 263.58 | 2423.49 | 263.57 | 2434.5 | 263.72 |
| 2440.96 | 263.62 | 2451.82 | 263.27 | 2471.67 | 263.25 | 2474.22 | 263.01 | 2483.71 | 262.76 |
| 2483.95 | 262.86 | 2486.6 | 262.94 | 2488.2 | 262.79 | 2494.17 | 262.74 | 2499.2 | 263.02 |
| 2503.94 | 263.22 | 2515.04 | 262.66 | 2521.82 | 262.69 | 2525.99 | 262.82 | 2539.65 | 262.75 |
| 2552.28 | 262.61 | 2555.99 | 262.53 | 2564.46 | 262.16 | 2567.77 | 262.28 | 2570.09 | 262.3 |
| 2577.25 | 262.53 | 2584.81 | 262.53 | 2595.46 | 262.36 | 2604.19 | 262.48 | 2607.33 | 262.43 |
| 2622.76 | 261.97 | 2634.43 | 261.92 | 2648.59 | 261.67 | 2667.53 | 261.74 | 2672.12 | 261.64 |
| 2676.18 | 261.49 | 2681.35 | 261.52 | 2695.89 | 261.46 | 2700.55 | 261.51 | 2703.77 | 261.4 |
| 2705.54 | 261.26 | 2713.34 | 261.12 | 2719.04 | 261.16 | 2724.29 | 261.09 | 2734.78 | 261.04 |
| 2735.69 | 261.01 | 2744.95 | 260.95 | 2752.04 | 260.98 | 2755.6 | 261.09 | 2762.34 | 261.09 |
| 2764.98 | 261.02 | 2768.39 | 261.01 | 2776.79 | 260.88 | 2780.97 | 260.91 | 2783.52 | 260.99 |
| 2788.15 | 260.99 | 2793.8 | 260.83 | 2795.09 | 260.73 | 2798.6 | 260.63 | 2805.06 | 260.37 |
| 2806.94 | 260.34 | 2824.47 | 260.24 | 2839.67 | 260.37 | 2843.15 | 260.18 | 2847.25 | 260.04 |
| 2852.63 | 260.03 | 2854.31 | 259.95 | 2859.11 | 260.01 | 2861.61 | 260.13 | 2864.53 | 259.89 |
| 2867.87 | 260.1 | 2877.92 | 260.31 | 2879.32 | 260.37 | 2890.78 | 261.1 | 2892.48 | 261.16 |
| 2897.35 | 261.2 | 2903.42 | 261.3 | 2905.08 | 261.37 | 2909.55 | 261.37 | 2910.63 | 261.2 |
| 2914.83 | 261.23 | 2915.64 | 261.37 | 2918.84 | 261.44 | 2920.34 | 261.59 | 2924.18 | 261.8 |
| 2926.52 | 261.8 | 2930.04 | 261.63 | 2931.19 | 261.69 | 2935.2 | 261.62 | 2952.34 | 261.18 |
| 2955.12 | 261.13 | 2962.6 | 262.06 | 2972.6 | 263.09 | 2973.74 | 263.05 | 2978.01 | 262.59 |
| 2985.4 | 262.88 | 2988.88 | 262.85 | 2996.77 | 262.56 | 3000.71 | 262.27 | 3032.44 | 262.43 |
| 3037.88 | 262.62 | 3040.8 | 262.44 | 3043.02 | 262.38 | 3045.52 | 262.47 | 3049.75 | 263.34 |
| 3054.78 | 263.9 | 3056.81 | 264.07 | 3059.94 | 264.2 | 3062.92 | 264.4 | 3064.67 | 264.61 |
| 3069.7 | 265.48 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 179.42 | .04 | 2440.96 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | |
|---|---|---|---|---|---|---|
| 179.42 | 2440.96 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 291.949*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 270.91 | 6.55 | 270.66 | 9.21 | 270.49 | 15.44 | 269.79 | 19.76 | 269.48 |
| 21.58 | 269.16 | 25.41 | 268.61 | 27.19 | 268.48 | 35.94 | 267.98 | 44.43 | 267.7 |
| 49.46 | 267.47 | 52.57 | 267.37 | 56.77 | 267.31 | 59.1 | 267.17 | 64.25 | 266.5 |
| 68.01 | 266.43 | 70.29 | 266.3 | 71.05 | 266.4 | 73.26 | 266.36 | 75.45 | 266.21 |
| 79.91 | 265.72 | 82.33 | 265.56 | 86.55 | 265.57 | 91.19 | 265.27 | 93.87 | 265.18 |
| 104.83 | 264.64 | 112.59 | 264.15 | 120.75 | 263.84 | 128.17 | 263.65 | 129.42 | 263.58 |
| 135.39 | 263.42 | 145.52 | 263.24 | 148.92 | 263.3 | 155.57 | 263.05 | 165.59 | 262.83 |
| 167.76 | 262.85 | 169.21 | 262.69 | 174.01 | 262.61 | 179.01 | 262.21 | 187.05 | 262.25 |
| 200.39 | 262.38 | 212.93 | 262.56 | 214.02 | 262.55 | 224.54 | 262.68 | 235 | 262.75 |
| 239.05 | 262.74 | 242.53 | 262.67 | 255.25 | 262.83 | 257.85 | 262.72 | 265.81 | 262.79 |
| 267.49 | 262.88 | 272.75 | 262.92 | 276.28 | 262.99 | 283.72 | 262.94 | 288.85 | 262.84 |
| 297.7 | 262.78 | 300.42 | 262.67 | 304.28 | 262.93 | 306.33 | 262.99 | 313.46 | 263.52 |
| 317.66 | 263.96 | 322.69 | 264.61 | 324.63 | 264.75 | 333.83 | 264.86 | 340.46 | 264.7 |
| 347.17 | 264.59 | 353.66 | 264.37 | 361.97 | 264.21 | 363.87 | 264.28 | 374.06 | 264.11 |
| 378.61 | 264 | 384.47 | 263.97 | 391.28 | 263.6 | 399.24 | 263.25 | 418.66 | 262.5 |
| 425.16 | 262.33 | 434.01 | 262.25 | 438.34 | 261.97 | 441.76 | 261.89 | 447.32 | 261.5 |
| 459.14 | 261.22 | 466.83 | 261.19 | 475.61 | 261.06 | 478.79 | 261.15 | 483.1 | 261.02 |
| 487.63 | 261.01 | 490.97 | 261.08 | 493.22 | 261.2 | 496.24 | 261.25 | 505.72 | 261.05 |
| 511.44 | 260.97 | 522.69 | 260.45 | 540.03 | 259.95 | 545.38 | 259.87 | 551 | 259.69 |
| 556.79 | 259.57 | 565.01 | 259.25 | 574.1 | 258.96 | 579.44 | 258.75 | 585.04 | 258.79 |
| 587.78 | 258.71 | 590.04 | 258.74 | 594.29 | 258.38 | 606.1 | 257.54 | 614.85 | 257.03 |
| 628.49 | 256.44 | 638.08 | 256.26 | 644.62 | 256.23 | 655.95 | 256.4 | 670.59 | 256.49 |
| 686.13 | 256.5 | 693.68 | 256.71 | 704.16 | 257.03 | 708.96 | 257.21 | 723.09 | 257.33 |
| 734.7 | 257.36 | 741.82 | 257.36 | 782.64 | 257.49 | 790.31 | 257.71 | 799.37 | 258.06 |
| 811.32 | 258.29 | 824.15 | 258.5 | 828.38 | 258.92 | 832.96 | 259.12 | 846.15 | 259.2 |
| 851.28 | 259.2 | 858.43 | 259.33 | 871.25 | 259.53 | 874.68 | 260.27 | 880.69 | 260.71 |
| 883.91 | 261.02 | 886.82 | 261.78 | 896.12 | 262.5 | 899.81 | 262.96 | 901.62 | 263.11 |
| 903.3 | 263.41 | 905.93 | 263.57 | 914.59 | 263.8 | 918.67 | 264.11 | 922.19 | 264.3 |
| 923.09 | 264.47 | 934.43 | 264.62 | 938.65 | 263.18 | 942.08 | 262.48 | 947.84 | 261.82 |
| 950.57 | 261.72 | 960.32 | 261.23 | 972.68 | 261.21 | 980.17 | 261.3 | 989.33 | 261.34 |
| 994.96 | 261.4 | 1003.06 | 261.39 | 1015.95 | 261.22 | 1018.29 | 261.41 | 1023.57 | 261.42 |
| 1029.35 | 261.55 | 1033.49 | 261.59 | 1036.14 | 261.38 | 1043.11 | 261.11 | 1056.81 | 260.91 |
| 1060.3 | 260.84 | 1067.14 | 260.96 | 1079.25 | 260.85 | 1090.88 | 260.2 | 1106.86 | 259.75 |
| 1109.11 | 259.8 | 1111.94 | 260.08 | 1115.38 | 260.83 | 1118.68 | 261.19 | 1125.22 | 261.64 |
| 1130.86 | 261.7 | 1134.13 | 261.42 | 1138.94 | 261.11 | 1146.4 | 260.49 | 1151.11 | 259.84 |
| 1158.07 | 259.17 | 1170.01 | 259.23 | 1177.48 | 259.17 | 1189.37 | 259.18 | 1193.36 | 259.48 |
| 1198.76 | 259.67 | 1202.12 | 259.88 | 1209.36 | 260.58 | 1213.06 | 260.84 | 1215.74 | 260.95 |
| 1217.85 | 260.96 | 1221.25 | 260.84 | 1226.43 | 260.47 | 1231 | 259.85 | 1234.42 | 259.62 |
| 1236.14 | 259.41 | 1238.82 | 259.28 | 1241.76 | 259.25 | 1244.44 | 259.32 | 1250.17 | 259.73 |
| 1254.62 | 259.84 | 1261.02 | 259.85 | 1270.6 | 260.12 | 1274.54 | 260.29 | 1286.01 | 260.84 |
| 1288.98 | 261.09 | 1300.25 | 261.88 | 1302.1 | 261.87 | 1305.91 | 261.68 | 1314.49 | 260.76 |
| 1325.83 | 260.22 | 1329.86 | 260.01 | 1333.44 | 260.02 | 1336.58 | 260.33 | 1340.82 | 260.97 |
| 1346.78 | 261.56 | 1347.7 | 261.52 | 1360.73 | 262.23 | 1367.18 | 262.31 | 1376.92 | 262.5 |
| 1382.37 | 262.5 | 1392.09 | 262.61 | 1395.26 | 262.59 | 1401.66 | 262.74 | 1417.1 | 263.15 |
| 1423.31 | 263.24 | 1439.92 | 263.37 | 1443.63 | 263.38 | 1451.74 | 263.25 | 1462.27 | 263 |
| 1469.16 | 262.9 | 1477.52 | 262.85 | 1482.45 | 263.04 | 1489.65 | 263.49 | 1498.23 | 263.94 |
| 1502.08 | 264.25 | 1511.06 | 264 | 1520.53 | 263.66 | 1528.37 | 262.62 | 1532.8 | 262.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1538.8 | 262.31 | 1543.47 | 261.96 | 1551.92 | 261.42 | 1555.42 | 261.39 | 1558.37 | 261.72 |
| 1559.44 | 262.12 | 1570.26 | 262.67 | 1573.46 | 262.75 | 1584.64 | 263.45 | 1590.81 | 263.66 |
| 1599.27 | 263.68 | 1601.47 | 263.59 | 1608.9 | 262.95 | 1610.29 | 262.73 | 1612.15 | 262.7 |
| 1622.41 | 262.9 | 1627.22 | 262.89 | 1635.17 | 263.06 | 1636.5 | 262.93 | 1645.49 | 262.87 |
| 1659.84 | 262.15 | 1666.78 | 262.16 | 1679.84 | 262.21 | 1687.93 | 262.38 | 1695.04 | 262.77 |
| 1701.48 | 263.19 | 1705.38 | 263.41 | 1709.4 | 263.51 | 1711.24 | 263.49 | 1717.9 | 263.58 |
| 1729.58 | 263.34 | 1735.24 | 263.5 | 1743.17 | 263.22 | 1745.13 | 263.08 | 1748.41 | 262.67 |
| 1757.9 | 262.59 | 1770.94 | 262.52 | 1786.55 | 263.1 | 1790.54 | 263.63 | 1793.28 | 263.84 |
| 1797.67 | 264.06 | 1805.16 | 264.2 | 1810.11 | 264.5 | 1813.94 | 264.66 | 1818.77 | 265.25 |
| 1831.13 | 265.25 | 1832.49 | 265.28 | 1836.89 | 264.65 | 1840.8 | 264.38 | 1843.13 | 264.45 |
| 1844.83 | 264.33 | 1849.52 | 264.34 | 1856.62 | 264.21 | 1859.93 | 264.07 | 1865.59 | 263.74 |
| 1867.82 | 263.84 | 1872.83 | 263.65 | 1874.21 | 263.45 | 1875.81 | 263.05 | 1878.34 | 262.9 |
| 1886.03 | 263.64 | 1889.88 | 263.56 | 1897.69 | 263.77 | 1910.49 | 264.61 | 1918.74 | 264.6 |
| 1936.19 | 264.4 | 1945.96 | 264.07 | 1951.97 | 263.92 | 1954.11 | 263.82 | 1960.35 | 263.4 |
| 1965.9 | 262.62 | 1974.89 | 262.46 | 1985.36 | 262.31 | 1989.39 | 262.21 | 1996.34 | 262.15 |
| 2011.42 | 262.23 | 2016.12 | 262.31 | 2020.81 | 262.33 | 2024.61 | 262.29 | 2028.51 | 262.34 |
| 2037.38 | 262.21 | 2041.07 | 262.18 | 2050.23 | 262.17 | 2059 | 261.96 | 2064.47 | 262.05 |
| 2067.7 | 262.06 | 2075.38 | 262.23 | 2087.1 | 262.75 | 2098.14 | 263.29 | 2100.51 | 263.74 |
| 2105.6 | 264.4 | 2106.95 | 264.21 | 2109.88 | 264.04 | 2115.51 | 263.59 | 2125.51 | 263.26 |
| 2129.43 | 263.2 | 2133.79 | 263.33 | 2134.36 | 263.43 | 2137.45 | 263.57 | 2145.22 | 264.36 |
| 2148.74 | 264.68 | 2153.13 | 264.86 | 2158.73 | 264.89 | 2158.99 | 264.85 | 2168.36 | 265.52 |
| 2169.31 | 265.51 | 2178.03 | 264.67 | 2181.3 | 264.19 | 2184.03 | 263.86 | 2196.23 | 263.75 |
| 2203.87 | 263.63 | 2205.68 | 263.53 | 2216.77 | 263.09 | 2229.08 | 262.82 | 2230.7 | 262.93 |
| 2235.37 | 262.84 | 2240.2 | 262.59 | 2243.46 | 262.56 | 2249.48 | 262.68 | 2257.7 | 262.56 |
| 2261.23 | 262.47 | 2264.62 | 262.47 | 2271.41 | 262.69 | 2279.3 | 262.61 | 2282.44 | 262.81 |
| 2295.74 | 263.05 | 2296.98 | 263.01 | 2305.46 | 262.95 | 2307.72 | 262.97 | 2311.23 | 262.89 |
| 2325.83 | 262.68 | 2328.32 | 262.67 | 2337.7 | 262.51 | 2341.03 | 262.59 | 2347.65 | 262.64 |
| 2350.55 | 262.59 | 2360.39 | 262.55 | 2366.17 | 262.62 | 2375.13 | 263.24 | 2378.55 | 263.4 |
| 2386.02 | 263.43 | 2398.61 | 263.41 | 2404.34 | 263.36 | 2411.92 | 263.36 | 2417.19 | 263.42 |
| 2420.64 | 263.52 | 2427.27 | 263.55 | 2429.96 | 263.62 | 2441.53 | 263.66 | 2447.24 | 263.51 |
| 2456.31 | 263.34 | 2459.83 | 263.33 | 2471.05 | 263.49 | 2477.63 | 263.39 | 2488.94 | 263.02 |
| 2509.6 | 263 | 2512.25 | 262.75 | 2522.13 | 262.49 | 2522.39 | 262.59 | 2525.14 | 262.68 |
| 2526.81 | 262.52 | 2533.02 | 262.46 | 2538.26 | 262.76 | 2543.19 | 262.97 | 2555.64 | 262.36 |
| 2561.81 | 262.41 | 2566.14 | 262.55 | 2580.36 | 262.48 | 2593.52 | 262.34 | 2597.37 | 262.25 |
| 2606.2 | 261.86 | 2609.64 | 261.99 | 2612.06 | 262.01 | 2619.51 | 262.25 | 2627.37 | 262.25 |
| 2638.46 | 262.07 | 2647.56 | 262.2 | 2650.82 | 262.14 | 2666.88 | 261.67 | 2679.03 | 261.61 |
| 2693.78 | 261.35 | 2707.71 | 261.41 | 2713.49 | 261.42 | 2718.27 | 261.32 | 2722.5 | 261.17 |
| 2727.87 | 261.2 | 2743.01 | 261.13 | 2747.86 | 261.19 | 2751.22 | 261.07 | 2753.06 | 260.93 |
| 2761.17 | 260.78 | 2767.11 | 260.82 | 2772.58 | 260.75 | 2783.5 | 260.69 | 2784.44 | 260.66 |
| 2794.08 | 260.6 | 2801.46 | 260.63 | 2805.17 | 260.75 | 2812.18 | 260.75 | 2827.23 | 260.53 |
| 2831.58 | 260.56 | 2834.24 | 260.64 | 2839.06 | 260.64 | 2844.94 | 260.48 | 2846.28 | 260.37 |
| 2849.93 | 260.27 | 2856.65 | 260 | 2858.61 | 259.97 | 2876.87 | 259.86 | 2888.18 | 259.94 |
| 2892.68 | 259.99 | 2896.31 | 259.8 | 2900.58 | 259.66 | 2906.18 | 259.64 | 2907.93 | 259.56 |
| 2912.93 | 259.62 | 2915.53 | 259.74 | 2918.57 | 259.5 | 2922.04 | 259.71 | 2932.5 | 259.93 |
| 2933.96 | 259.99 | 2945.89 | 260.76 | 2947.66 | 260.82 | 2952.73 | 260.86 | 2959.05 | 260.97 |
| 2960.78 | 261.04 | 2965.43 | 261.04 | 2966.55 | 260.86 | 2970.92 | 260.89 | 2971.77 | 261.04 |
| 2975.1 | 261.12 | 2976.67 | 261.27 | 2980.66 | 261.49 | 2983.09 | 261.49 | 2986.76 | 261.31 |
| 2987.96 | 261.37 | 2992.13 | 261.3 | 3009.97 | 260.84 | 3012.87 | 260.79 | 3020.66 | 261.75 |
| 3031.07 | 262.83 | 3032.25 | 262.8 | 3036.7 | 262.31 | 3044.39 | 262.62 | 3048.01 | 262.59 |
| 3051.55 | 262.43 | 3056.22 | 262.28 | 3060.33 | 261.98 | 3075.56 | 262.05 | 3093.36 | 262.15 |
| 3099.02 | 262.35 | 3102.06 | 262.16 | 3104.37 | 262.1 | 3106.98 | 262.2 | 3111.38 | 263.1 |
| 3116.62 | 263.69 | 3118.72 | 263.87 | 3121.99 | 264.01 | 3125.09 | 264.21 | 3126.91 | 264.43 |
| 3132.15 | 265.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 174.01 | .04 | 2477.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 174.01 | 2477.63 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 272.122*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 270.42 | 6.34 | 270.2 | 8.92 | 270.04 | 13.08 | 269.54 | 19.15 | 269.04 |
| 20.9 | 268.72 | 24.62 | 268.16 | 34.82 | 267.54 | 43.05 | 267.27 | 50.94 | 266.93 |
| 55 | 266.87 | 57.26 | 266.74 | 61.98 | 266.09 | 65.9 | 266 | 68.1 | 265.87 |
| 68.84 | 265.98 | 70.98 | 265.94 | 73.11 | 265.79 | 77.43 | 265.29 | 79.77 | 265.13 |
| 82.06 | 265.2 | 83.86 | 265.16 | 88.35 | 264.86 | 93.22 | 264.67 | 101.57 | 264.25 |
| 108.62 | 263.81 | 117 | 263.5 | 124.18 | 263.33 | 130.81 | 263.14 | 141.93 | 262.97 |
| 144.85 | 263.02 | 150.73 | 262.8 | 160.44 | 262.58 | 162.54 | 262.6 | 163.95 | 262.44 |
| 168.6 | 262.36 | 173.69 | 261.94 | 181.87 | 261.97 | 195.43 | 262.08 | 205.62 | 262.2 |
| 219.99 | 262.33 | 230.63 | 262.38 | 234.76 | 262.37 | 238.29 | 262.28 | 251.23 | 262.41 |
| 253.88 | 262.3 | 261.98 | 262.37 | 263.68 | 262.46 | 269.03 | 262.49 | 272.85 | 262.57 |
| 280.18 | 262.5 | 285.4 | 262.39 | 294.41 | 262.31 | 297.17 | 262.18 | 301.1 | 262.44 |
| 303.19 | 262.49 | 309.23 | 262.9 | 314.71 | 263.41 | 319.82 | 264.04 | 321.8 | 264.16 |
| 331.15 | 264.25 | 337.89 | 264.08 | 344.73 | 263.96 | 351.32 | 263.74 | 359.22 | 263.6 |
| 361.71 | 263.67 | 364.13 | 263.65 | 376.7 | 263.38 | 381.57 | 263.38 | 389.59 | 263.02 |
| 397.68 | 262.72 | 417.43 | 262.06 | 424.04 | 261.92 | 433.04 | 261.84 | 437.45 | 261.55 |
| 440.93 | 261.47 | 446.58 | 261.06 | 458.61 | 260.77 | 466.42 | 260.71 | 475.35 | 260.57 |
| 478.59 | 260.66 | 482.98 | 260.52 | 487.59 | 260.51 | 490.98 | 260.59 | 493.27 | 260.71 |
| 496.34 | 260.76 | 505.98 | 260.58 | 511.8 | 260.5 | 514.53 | 260.36 | 523.25 | 260.01 |
| 527.51 | 259.87 | 540.87 | 259.5 | 546.33 | 259.43 | 553.88 | 259.2 | 557.93 | 259.13 |
| 568.49 | 258.7 | 575.53 | 258.46 | 580.97 | 258.23 | 586.66 | 258.27 | 589.45 | 258.18 |
| 591.75 | 258.23 | 596.07 | 257.89 | 608.08 | 257.11 | 616.98 | 256.61 | 630.86 | 256.01 |
| 640.61 | 255.83 | 647.26 | 255.8 | 658.79 | 255.97 | 673.71 | 256.05 | 689.54 | 256.06 |
| 707.9 | 256.61 | 712.79 | 256.79 | 716.35 | 256.81 | 724.14 | 256.92 | 727.19 | 256.9 |
| 739.01 | 256.93 | 746.26 | 256.93 | 787.84 | 257.06 | 795.65 | 257.28 | 804.88 | 257.63 |
| 817.05 | 257.85 | 830.12 | 258.06 | 834.43 | 258.49 | 839.1 | 258.69 | 852.53 | 258.75 |
| 857.76 | 258.75 | 878.09 | 259.09 | 881.59 | 259.86 | 887.71 | 260.31 | 890.99 | 260.65 |
| 893.96 | 261.43 | 903.43 | 262.17 | 907.19 | 262.65 | 909.03 | 262.8 | 910.74 | 263.11 |
| 913.42 | 263.27 | 922.24 | 263.49 | 926.4 | 263.8 | 929.98 | 263.99 | 930.9 | 264.16 |
| 942.45 | 264.29 | 943.19 | 264.08 | 946.75 | 262.78 | 950.24 | 262.04 | 956.11 | 261.35 |
| 958.89 | 261.23 | 968.82 | 260.7 | 981.41 | 260.65 | 989.03 | 260.72 | 998.37 | 260.73 |
| 1004.1 | 260.76 | 1012.35 | 260.74 | 1022.36 | 260.58 | 1025.48 | 260.57 | 1027.87 | 260.77 |
| 1033.24 | 260.79 | 1039.14 | 260.95 | 1043.35 | 261.02 | 1046.04 | 260.82 | 1053.15 | 260.55 |
| 1067.1 | 260.32 | 1070.66 | 260.24 | 1077.63 | 260.33 | 1086.89 | 260.27 | 1089.95 | 260.22 |
| 1101.8 | 259.62 | 1111.96 | 259.37 | 1118.83 | 259.23 | 1120.38 | 259.27 | 1123.25 | 259.57 |
| 1126.75 | 260.35 | 1130.12 | 260.72 | 1136.78 | 261.18 | 1142.52 | 261.24 | 1144.53 | 261.04 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1150.76 | 260.6 | 1158.35 | 259.93 | 1163.15 | 259.24 | 1170.24 | 258.52 | 1180.64 | 258.57 |
| 1192.05 | 258.52 | 1202.13 | 258.53 | 1206.19 | 258.84 | 1211.69 | 259.05 | 1215.11 | 259.27 |
| 1218.83 | 259.61 | 1222.48 | 260.01 | 1225.91 | 260.26 | 1228.98 | 260.41 | 1231.13 | 260.41 |
| 1234.59 | 260.3 | 1239.87 | 259.93 | 1244.53 | 259.3 | 1248.01 | 259.08 | 1249.76 | 258.87 |
| 1252 | 258.77 | 1255.49 | 258.73 | 1260.36 | 258.95 | 1264.05 | 259.27 | 1268.27 | 259.38 |
| 1275.1 | 259.41 | 1286.94 | 259.77 | 1300.56 | 260.45 | 1307.55 | 260.99 | 1315.06 | 261.5 |
| 1316.95 | 261.49 | 1320.82 | 261.27 | 1329.57 | 260.29 | 1345.22 | 259.43 | 1348.86 | 259.4 |
| 1352.06 | 259.69 | 1356.39 | 260.3 | 1362.45 | 260.9 | 1363.39 | 260.86 | 1376.67 | 261.58 |
| 1383.23 | 261.64 | 1393.15 | 261.81 | 1398.7 | 261.81 | 1408.61 | 261.94 | 1411.84 | 261.92 |
| 1418.36 | 262.06 | 1434.08 | 262.45 | 1440.4 | 262.54 | 1457.32 | 262.69 | 1461.1 | 262.71 |
| 1469.36 | 262.59 | 1480.09 | 262.38 | 1485.73 | 262.3 | 1495.63 | 262.25 | 1500.65 | 262.44 |
| 1507.98 | 262.91 | 1516.72 | 263.39 | 1520.64 | 263.72 | 1529.78 | 263.5 | 1539.43 | 263.2 |
| 1547.42 | 262.17 | 1550.65 | 262.06 | 1551.93 | 261.95 | 1558.04 | 261.89 | 1562.8 | 261.54 |
| 1571.4 | 260.99 | 1574.97 | 260.97 | 1577.97 | 261.31 | 1579.06 | 261.73 | 1590.08 | 262.3 |
| 1593.34 | 262.39 | 1604.73 | 263.1 | 1611.01 | 263.33 | 1619.63 | 263.35 | 1621.87 | 263.25 |
| 1629.44 | 262.58 | 1630.86 | 262.35 | 1632.75 | 262.32 | 1643.2 | 262.53 | 1648.1 | 262.53 |
| 1656.2 | 262.7 | 1657.56 | 262.57 | 1666.71 | 262.51 | 1681.32 | 261.76 | 1701.69 | 261.81 |
| 1709.94 | 261.98 | 1717.18 | 262.34 | 1723.74 | 262.74 | 1727.71 | 262.95 | 1732.04 | 263.05 |
| 1733.68 | 263.03 | 1740.47 | 263.12 | 1752.36 | 262.87 | 1758.13 | 263.06 | 1766.2 | 262.77 |
| 1768.2 | 262.64 | 1771.54 | 262.21 | 1781.21 | 262.14 | 1794.49 | 262.08 | 1810.38 | 262.71 |
| 1814.46 | 263.27 | 1817.25 | 263.49 | 1821.72 | 263.73 | 1829.35 | 263.87 | 1834.39 | 264.19 |
| 1838.28 | 264.35 | 1843.21 | 264.97 | 1855.8 | 264.97 | 1857.18 | 264.99 | 1861.66 | 264.33 |
| 1865.64 | 264.03 | 1868.02 | 264.1 | 1869.75 | 263.97 | 1874.53 | 263.97 | 1881.76 | 263.81 |
| 1885.14 | 263.67 | 1890.9 | 263.31 | 1893.17 | 263.42 | 1898.27 | 263.22 | 1899.67 | 263.02 |
| 1901.3 | 262.61 | 1903.88 | 262.46 | 1911.72 | 263.25 | 1915.64 | 263.18 | 1923.59 | 263.41 |
| 1936.64 | 264.28 | 1945.03 | 264.27 | 1962.81 | 264.1 | 1972.76 | 263.79 | 1978.88 | 263.63 |
| 1981.06 | 263.53 | 1987.42 | 263.1 | 1993.07 | 262.3 | 2002.23 | 262.13 | 2012.9 | 261.98 |
| 2016.97 | 261.88 | 2024.07 | 261.82 | 2031.73 | 261.83 | 2038.81 | 261.87 | 2046.01 | 261.97 |
| 2052.87 | 261.94 | 2056.84 | 262 | 2065.88 | 261.86 | 2078.97 | 261.83 | 2087.9 | 261.6 |
| 2093.46 | 261.69 | 2096.75 | 261.69 | 2104.99 | 261.88 | 2116.52 | 262.36 | 2127.77 | 262.88 |
| 2130.18 | 263.33 | 2135.37 | 264.01 | 2136.74 | 263.81 | 2139.72 | 263.62 | 2145.46 | 263.14 |
| 2155.64 | 262.78 | 2159.63 | 262.72 | 2164.08 | 262.87 | 2164.66 | 262.97 | 2167.81 | 263.12 |
| 2173.86 | 263.77 | 2179.3 | 264.3 | 2183.77 | 264.5 | 2189.48 | 264.53 | 2189.74 | 264.49 |
| 2199.29 | 265.2 | 2200.26 | 265.2 | 2209.14 | 264.33 | 2212.47 | 263.84 | 2215.25 | 263.5 |
| 2227.67 | 263.4 | 2235.46 | 263.3 | 2237.3 | 263.2 | 2248.6 | 262.78 | 2261.13 | 262.51 |
| 2262.78 | 262.63 | 2267.15 | 262.55 | 2272.47 | 262.29 | 2275.78 | 262.26 | 2281.92 | 262.39 |
| 2297.33 | 262.17 | 2304.25 | 262.4 | 2312.29 | 262.32 | 2315.49 | 262.53 | 2318.53 | 262.56 |
| 2329.04 | 262.77 | 2330.3 | 262.73 | 2343.69 | 262.63 | 2359.69 | 262.38 | 2362.22 | 262.37 |
| 2371.77 | 262.2 | 2375.16 | 262.29 | 2381.91 | 262.33 | 2384.86 | 262.28 | 2391.17 | 262.28 |
| 2394.89 | 262.23 | 2400.77 | 262.29 | 2408.73 | 262.85 | 2413.38 | 263.1 | 2425.39 | 263.12 |
| 2433.81 | 263.1 | 2439.65 | 263.06 | 2447.37 | 263.06 | 2452.74 | 263.12 | 2456.25 | 263.23 |
| 2463 | 263.27 | 2468.04 | 263.34 | 2477.53 | 263.41 | 2483.35 | 263.26 | 2492.58 | 263.11 |
| 2496.17 | 263.09 | 2502.15 | 263.16 | 2507.59 | 263.26 | 2514.3 | 263.15 | 2526.05 | 262.77 |
| 2547.53 | 262.75 | 2550.28 | 262.49 | 2560.55 | 262.22 | 2560.82 | 262.33 | 2563.68 | 262.42 |
| 2565.41 | 262.26 | 2571.87 | 262.19 | 2577.32 | 262.5 | 2582.45 | 262.72 | 2583.8 | 262.67 |
| 2595.38 | 262.08 | 2601.79 | 262.14 | 2606.3 | 262.28 | 2621.08 | 262.21 | 2634.75 | 262.06 |
| 2638.76 | 261.97 | 2647.93 | 261.57 | 2651.51 | 261.7 | 2654.02 | 261.72 | 2661.77 | 261.97 |
| 2669.94 | 261.97 | 2681.46 | 261.79 | 2690.92 | 261.92 | 2694.31 | 261.86 | 2711 | 261.36 |
| 2723.63 | 261.3 | 2738.96 | 261.04 | 2753.44 | 261.1 | 2759.44 | 261.11 | 2764.42 | 261 |
| 2768.81 | 260.84 | 2774.4 | 260.87 | 2790.13 | 260.8 | 2795.17 | 260.86 | 2798.66 | 260.74 |
| 2800.58 | 260.59 | 2809.01 | 260.43 | 2815.18 | 260.48 | 2820.86 | 260.4 | 2832.21 | 260.35 |
| 2833.19 | 260.32 | 2843.21 | 260.25 | 2850.88 | 260.29 | 2854.74 | 260.4 | 2862.03 | 260.4 |
| 2864.89 | 260.33 | 2868.58 | 260.32 | 2877.67 | 260.18 | 2882.19 | 260.21 | 2884.95 | 260.29 |
| 2889.96 | 260.29 | 2896.07 | 260.12 | 2897.47 | 260.01 | 2901.26 | 259.9 | 2908.25 | 259.62 |
| 2910.28 | 259.59 | 2929.26 | 259.48 | 2945.7 | 259.62 | 2949.47 | 259.42 | 2953.9 | 259.27 |
| 2957.87 | 259.28 | 2961.55 | 259.17 | 2964.36 | 259.18 | 2969.44 | 259.36 | 2972.6 | 259.1 |
| 2976.21 | 259.33 | 2987.08 | 259.56 | 2988.6 | 259.62 | 3001 | 260.42 | 3002.83 | 260.48 |
| 3008.11 | 260.52 | 3014.67 | 260.63 | 3016.48 | 260.71 | 3021.31 | 260.71 | 3022.48 | 260.52 |
| 3027.02 | 260.56 | 3027.9 | 260.71 | 3031.36 | 260.79 | 3032.99 | 260.95 | 3037.14 | 261.18 |
| 3039.67 | 261.18 | 3043.48 | 260.99 | 3044.73 | 261.06 | 3049.06 | 260.99 | 3067.61 | 260.5 |
| 3070.62 | 260.45 | 3078.71 | 261.45 | 3089.53 | 262.58 | 3090.76 | 262.54 | 3095.38 | 262.03 |
| 3103.38 | 262.35 | 3107.14 | 262.32 | 3115.68 | 262 | 3119.95 | 261.69 | 3154.27 | 261.87 |
| 3160.16 | 262.08 | 3163.32 | 261.89 | 3165.72 | 261.82 | 3168.43 | 261.92 | 3173 | 262.86 |
| 3178.45 | 263.48 | 3180.64 | 263.66 | 3184.03 | 263.81 | 3187.26 | 264.03 | 3189.14 | 264.25 |
| 3194.59 | 265.2 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 168.6 | .04 | 2514.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 168.6 | 2514.3 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 252.294*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 269.92 | 6.42 | 269.73 | 8.64 | 269.59 | 12.66 | 269.1 | 18.54 | 268.61 |
| 23.83 | 267.7 | 33.7 | 267.1 | 41.67 | 266.83 | 49.31 | 266.49 | 53.24 | 266.43 |
| 55.42 | 266.3 | 59.99 | 265.65 | 63.78 | 265.57 | 65.92 | 265.44 | 66.63 | 265.56 |
| 68.7 | 265.52 | 70.76 | 265.37 | 74.94 | 264.87 | 77.22 | 264.71 | 81.17 | 264.75 |
| 85.52 | 264.45 | 90.23 | 264.27 | 98.31 | 263.86 | 105.14 | 263.44 | 113.24 | 263.16 |
| 126.62 | 262.85 | 137.38 | 262.7 | 139.66 | 262.75 | 145.9 | 262.55 | 155.29 | 262.34 |
| 157.33 | 262.36 | 158.47 | 262.21 | 163.19 | 262.1 | 168.36 | 261.66 | 176.68 | 261.69 |
| 188.12 | 261.77 | 203.44 | 261.92 | 204.57 | 261.9 | 215.45 | 261.98 | 226.27 | 262.02 |
| 230.19 | 262 | 234.05 | 261.89 | 247.21 | 261.98 | 249.9 | 261.87 | 258.14 | 261.94 |
| 259.86 | 262.04 | 265.3 | 262.06 | 268.96 | 262.14 | 276.65 | 262.07 | 281.96 | 261.95 |
| 291.11 | 261.83 | 293.93 | 261.7 | 297.92 | 261.95 | 300.04 | 261.99 | 307.33 | 262.47 |
| 311.76 | 262.87 | 316.95 | 263.46 | 318.97 | 263.56 | 328.47 | 263.64 | 342.28 | 263.32 |
| 349.7 | 263.1 | 357.58 | 262.98 | 359.55 | 263.06 | 363.22 | 263.01 | 374.79 | 262.75 |
| 379.01 | 262.76 | 382.09 | 262.68 | 387.89 | 262.44 | 396.13 | 262.19 | 416.21 | 261.62 |
| 422.93 | 261.5 | 432.08 | 261.44 | 436.56 | 261.14 | 440.1 | 261.04 | 445.84 | 260.62 |
| 458.08 | 260.32 | 466.02 | 260.24 | 475.1 | 260.08 | 478.4 | 260.16 | 482.85 | 260.01 |
| 487.54 | 260.01 | 493.32 | 260.22 | 496.45 | 260.28 | 506.24 | 260.1 | 512.47 | 260.02 |
| 514.94 | 259.9 | 526.55 | 259.47 | 539.46 | 259.13 | 541.72 | 259.05 | 547.27 | 258.98 |
| 554.95 | 258.76 | 559.06 | 258.68 | 569.81 | 258.23 | 576.96 | 257.96 | 582.49 | 257.72 |
| 588.28 | 257.75 | 591.12 | 257.65 | 593.45 | 257.73 | 597.85 | 257.4 | 610.06 | 256.67 |
| 619.11 | 256.2 | 633.22 | 255.58 | 643.13 | 255.4 | 649.89 | 255.37 | 661.64 | 255.54 |
| 676.83 | 255.61 | 692.95 | 255.62 | 711.65 | 256.19 | 716.63 | 256.37 | 720.25 | 256.39 |
| 728.17 | 256.5 | 731.28 | 256.48 | 750.71 | 256.51 | 793.04 | 256.62 | 800.99 | 256.86 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 810.39 | 257.2 | 822.78 | 257.42 | 836.09 | 257.62 | 840.48 | 258.07 | 845.23 | 258.27 |
| 850.04 | 258.26 | 864.23 | 258.3 | 884.94 | 258.65 | 888.49 | 259.46 | 894.73 | 259.92 |
| 898.07 | 260.27 | 901.09 | 261.08 | 910.74 | 261.85 | 914.56 | 262.33 | 916.44 | 262.49 |
| 918.18 | 262.81 | 920.91 | 262.97 | 929.89 | 263.18 | 934.12 | 263.49 | 937.77 | 263.67 |
| 938.71 | 263.85 | 950.47 | 263.97 | 954.85 | 262.38 | 958.4 | 261.61 | 964.37 | 260.87 |
| 967.2 | 260.75 | 977.32 | 260.17 | 990.14 | 260.1 | 997.9 | 260.13 | 1007.41 | 260.11 |
| 1013.24 | 260.13 | 1021.64 | 260.09 | 1035.02 | 259.91 | 1037.45 | 260.13 | 1042.92 | 260.16 |
| 1048.92 | 260.35 | 1053.2 | 260.44 | 1055.95 | 260.26 | 1063.18 | 259.99 | 1076.5 | 259.77 |
| 1081.02 | 259.63 | 1088.11 | 259.71 | 1097.54 | 259.64 | 1100.66 | 259.59 | 1114.96 | 258.95 |
| 1115.59 | 258.97 | 1129.3 | 258.7 | 1131.64 | 258.75 | 1134.56 | 259.06 | 1138.13 | 259.87 |
| 1141.56 | 260.25 | 1148.34 | 260.73 | 1154.19 | 260.77 | 1156.24 | 260.56 | 1162.58 | 260.09 |
| 1170.31 | 259.37 | 1175.19 | 258.63 | 1182.41 | 257.88 | 1193 | 257.92 | 1202.54 | 257.88 |
| 1214.88 | 257.88 | 1219.01 | 258.21 | 1224.61 | 258.42 | 1228.1 | 258.66 | 1235.6 | 259.43 |
| 1239.09 | 259.7 | 1242.22 | 259.86 | 1244.41 | 259.87 | 1247.94 | 259.75 | 1253.31 | 259.39 |
| 1258.05 | 258.76 | 1261.6 | 258.54 | 1263.38 | 258.33 | 1266.16 | 258.23 | 1269.21 | 258.22 |
| 1271.98 | 258.31 | 1277.94 | 258.8 | 1282.55 | 258.93 | 1289.19 | 258.97 | 1293.05 | 259.11 |
| 1301.24 | 259.35 | 1315.1 | 260.05 | 1318.18 | 260.31 | 1328.26 | 261.03 | 1331.79 | 261.11 |
| 1335.74 | 260.87 | 1344.64 | 259.81 | 1360.58 | 258.85 | 1364.29 | 258.78 | 1367.55 | 259.04 |
| 1371.95 | 259.63 | 1378.12 | 260.25 | 1379.08 | 260.2 | 1392.6 | 260.92 | 1399.28 | 260.98 |
| 1409.38 | 261.12 | 1415.79 | 261.15 | 1425.13 | 261.27 | 1428.41 | 261.24 | 1435.05 | 261.38 |
| 1451.06 | 261.75 | 1457.5 | 261.84 | 1474.73 | 262.01 | 1478.57 | 262.03 | 1486.98 | 261.94 |
| 1497.91 | 261.75 | 1505.05 | 261.67 | 1513.73 | 261.64 | 1518.84 | 261.84 | 1522.34 | 262.08 |
| 1535.2 | 262.84 | 1539.19 | 263.19 | 1548.51 | 263 | 1558.33 | 262.74 | 1566.46 | 261.72 |
| 1569.75 | 261.62 | 1571.06 | 261.51 | 1577.28 | 261.48 | 1582.13 | 261.12 | 1590.88 | 260.57 |
| 1594.52 | 260.54 | 1597.57 | 260.9 | 1598.68 | 261.34 | 1609.91 | 261.94 | 1613.22 | 262.02 |
| 1619.67 | 262.45 | 1627.72 | 262.9 | 1631.22 | 263 | 1640 | 263.01 | 1642.27 | 262.91 |
| 1649.98 | 262.22 | 1651.43 | 261.97 | 1653.35 | 261.94 | 1663.99 | 262.16 | 1668.98 | 262.16 |
| 1677.23 | 262.34 | 1678.61 | 262.2 | 1687.26 | 262.17 | 1702.81 | 261.36 | 1723.55 | 261.41 |
| 1731.95 | 261.58 | 1739.32 | 261.92 | 1746 | 262.29 | 1750.04 | 262.48 | 1754.22 | 262.58 |
| 1756.12 | 262.56 | 1763.03 | 262.67 | 1774.16 | 262.4 | 1781.02 | 262.61 | 1789.24 | 262.33 |
| 1791.27 | 262.19 | 1794.67 | 261.75 | 1804.52 | 261.69 | 1818.04 | 261.64 | 1834.22 | 262.33 |
| 1838.37 | 262.91 | 1841.21 | 263.14 | 1845.76 | 263.4 | 1853.53 | 263.55 | 1858.67 | 263.87 |
| 1862.63 | 264.04 | 1867.64 | 264.69 | 1880.47 | 264.69 | 1881.88 | 264.71 | 1886.44 | 264 |
| 1890.49 | 263.68 | 1892.91 | 263.75 | 1894.67 | 263.61 | 1899.54 | 263.6 | 1905.05 | 263.47 |
| 1910.34 | 263.26 | 1916.21 | 262.89 | 1918.52 | 263 | 1923.71 | 262.79 | 1925.14 | 262.59 |
| 1926.8 | 262.17 | 1929.43 | 262.02 | 1937.4 | 262.87 | 1941.4 | 262.81 | 1949.49 | 263.06 |
| 1962.78 | 263.96 | 1971.33 | 263.95 | 1989.42 | 263.8 | 1999.56 | 263.5 | 2005.8 | 263.35 |
| 2008.01 | 263.24 | 2014.48 | 262.8 | 2020.23 | 261.97 | 2040.43 | 261.64 | 2044.6 | 261.54 |
| 2051.81 | 261.48 | 2067.45 | 261.52 | 2074.14 | 261.62 | 2084.84 | 261.61 | 2085.17 | 261.66 |
| 2094.37 | 261.52 | 2107.7 | 261.49 | 2116.79 | 261.23 | 2122.46 | 261.33 | 2125.81 | 261.32 |
| 2133.78 | 261.5 | 2145.94 | 261.98 | 2157.39 | 262.46 | 2159.85 | 262.93 | 2165.13 | 263.62 |
| 2166.53 | 263.41 | 2169.57 | 263.21 | 2175.72 | 262.67 | 2185.77 | 262.3 | 2189.84 | 262.25 |
| 2194.36 | 262.41 | 2194.96 | 262.52 | 2198.16 | 262.68 | 2204.33 | 263.36 | 2209.87 | 263.92 |
| 2214.42 | 264.13 | 2220.23 | 264.18 | 2220.49 | 264.14 | 2230.22 | 264.89 | 2231.2 | 264.88 |
| 2240.24 | 264 | 2243.64 | 263.49 | 2246.47 | 263.15 | 2259.12 | 263.06 | 2267.04 | 262.97 |
| 2268.92 | 262.88 | 2280.43 | 262.46 | 2293.19 | 262.21 | 2294.87 | 262.33 | 2299.32 | 262.26 |
| 2304.73 | 261.99 | 2308.1 | 261.96 | 2314.35 | 262.09 | 2330.05 | 261.88 | 2337.09 | 262.12 |
| 2345.28 | 262.03 | 2348.53 | 262.24 | 2351.63 | 262.28 | 2362.33 | 262.49 | 2363.61 | 262.45 |
| 2372.41 | 262.39 | 2374.76 | 262.41 | 2380.56 | 262.29 | 2393.54 | 262.08 | 2396.12 | 262.07 |
| 2405.85 | 261.89 | 2409.3 | 261.98 | 2416.17 | 262.03 | 2419.17 | 261.97 | 2425.59 | 261.97 |
| 2429.38 | 261.91 | 2435.37 | 261.96 | 2444.67 | 262.61 | 2448.21 | 262.79 | 2455.95 | 262.81 |
| 2469.01 | 262.8 | 2474.96 | 262.76 | 2482.82 | 262.76 | 2488.29 | 262.81 | 2491.87 | 262.93 |
| 2498.74 | 262.99 | 2503.86 | 263.07 | 2513.53 | 263.16 | 2519.45 | 263.01 | 2528.86 | 262.87 |
| 2532.51 | 262.86 | 2538.6 | 262.93 | 2544.14 | 263.03 | 2550.97 | 262.92 | 2563.17 | 262.52 |
| 2585.46 | 262.5 | 2588.32 | 262.23 | 2598.97 | 261.95 | 2599.25 | 262.06 | 2602.22 | 262.16 |
| 2604.02 | 261.99 | 2610.72 | 261.92 | 2616.37 | 262.24 | 2621.7 | 262.47 | 2623.11 | 262.42 |
| 2634.17 | 261.84 | 2635.13 | 261.81 | 2641.78 | 261.86 | 2646.45 | 262.01 | 2661.8 | 261.94 |
| 2675.99 | 261.78 | 2680.15 | 261.69 | 2689.66 | 261.27 | 2693.38 | 261.41 | 2695.99 | 261.43 |
| 2704.03 | 261.68 | 2712.51 | 261.68 | 2724.47 | 261.5 | 2734.28 | 261.64 | 2737.8 | 261.57 |
| 2755.12 | 261.06 | 2756.85 | 261.03 | 2768.23 | 260.99 | 2784.14 | 260.72 | 2799.17 | 260.78 |
| 2805.4 | 260.79 | 2810.56 | 260.68 | 2815.12 | 260.51 | 2820.92 | 260.55 | 2837.26 | 260.47 |
| 2842.48 | 260.54 | 2846.11 | 260.41 | 2848.09 | 260.25 | 2856.84 | 260.09 | 2860.31 | 260.08 |
| 2863.25 | 260.14 | 2869.15 | 260.06 | 2880.93 | 260 | 2881.95 | 259.97 | 2892.34 | 259.9 |
| 2900.31 | 259.94 | 2904.31 | 260.06 | 2911.87 | 260.06 | 2928.11 | 259.82 | 2932.8 | 259.86 |
| 2935.66 | 259.95 | 2940.86 | 259.95 | 2947.2 | 259.77 | 2948.66 | 259.65 | 2952.59 | 259.54 |
| 2959.85 | 259.25 | 2961.95 | 259.21 | 2981.65 | 259.1 | 2993.86 | 259.19 | 2998.71 | 259.25 |
| 3002.63 | 259.03 | 3007.23 | 258.88 | 3011.35 | 258.89 | 3015.16 | 258.77 | 3020.55 | 258.85 |
| 3023.36 | 258.98 | 3026.64 | 258.71 | 3030.39 | 258.94 | 3041.67 | 259.18 | 3043.24 | 259.24 |
| 3056.11 | 260.07 | 3058.01 | 260.14 | 3063.49 | 260.19 | 3070.3 | 260.3 | 3072.17 | 260.38 |
| 3077.19 | 260.38 | 3078.4 | 260.19 | 3083.12 | 260.22 | 3084.03 | 260.38 | 3087.62 | 260.46 |
| 3089.31 | 260.63 | 3093.62 | 260.87 | 3096.24 | 260.87 | 3100.2 | 260.67 | 3101.49 | 260.74 |
| 3106 | 260.67 | 3125.24 | 260.16 | 3128.37 | 260.11 | 3136.77 | 261.15 | 3148 | 262.32 |
| 3149.27 | 262.28 | 3154.07 | 261.75 | 3162.37 | 262.09 | 3166.27 | 262.05 | 3170.1 | 261.88 |
| 3175.13 | 261.72 | 3179.56 | 261.4 | 3191.15 | 261.47 | 3195.99 | 261.48 | 3215.19 | 261.59 |
| 3221.3 | 261.81 | 3224.58 | 261.61 | 3227.07 | 261.54 | 3229.88 | 261.65 | 3234.63 | 262.63 |
| 3240.28 | 263.27 | 3242.56 | 263.46 | 3246.07 | 263.61 | 3249.42 | 263.84 | 3251.38 | 264.07 |
| 3257.03 | 265.06 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 163.19 | .04 | 2550.97 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 163.19 | 2550.97 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 232.467*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 269.43 | 5.94 | 269.28 | 8.35 | 269.15 | 12.24 | 268.66 | 17.92 | 268.17 |
| 19.56 | 267.83 | 23.04 | 267.25 | 32.59 | 266.66 | 40.28 | 266.4 | 47.67 | 266.05 |
| 51.47 | 266 | 53.58 | 265.86 | 58 | 265.22 | 61.67 | 265.14 | 63.73 | 265.02 |
| 64.42 | 265.13 | 66.43 | 265.1 | 68.42 | 264.95 | 72.46 | 264.44 | 74.66 | 264.28 |
| 76.79 | 264.37 | 78.48 | 264.34 | 82.68 | 264.04 | 85.12 | 263.96 | 95.05 | 263.47 |
| 102.09 | 263.05 | 109.49 | 262.82 | 117.35 | 262.65 | 131.95 | 262.44 | 135.56 | 262.47 |
| 141.06 | 262.3 | 150.15 | 262.09 | 152.11 | 262.12 | 153.22 | 261.96 | 157.79 | 261.84 |
| 163.04 | 261.38 | 183.12 | 261.47 | 196.05 | 261.57 | 210.9 | 261.64 | 222.63 | 261.66 |
| 225.89 | 261.63 | 229.82 | 261.51 | 240.34 | 261.53 | 243.19 | 261.56 | 245.93 | 261.44 |
| 254.3 | 261.52 | 256.05 | 261.62 | 261.58 | 261.64 | 265.54 | 261.72 | 273.12 | 261.63 |
| 278.51 | 261.51 | 287.82 | 261.36 | 290.68 | 261.21 | 294.74 | 261.45 | 296.89 | 261.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 303.14 | 261.87 | 307.99 | 262.25 | 314.08 | 262.88 | 316.13 | 262.97 | 325.53 | 263.04 |
| 339.83 | 262.69 | 346.65 | 262.47 | 354.81 | 262.37 | 357.38 | 262.45 | 360.14 | 262.43 |
| 372.88 | 262.13 | 377.91 | 262.13 | 386.2 | 261.86 | 414.98 | 261.19 | 421.81 | 261.08 |
| 431.12 | 261.03 | 435.67 | 260.72 | 439.22 | 260.63 | 445.11 | 260.19 | 457.54 | 259.87 |
| 468.17 | 259.72 | 474.85 | 259.58 | 478.2 | 259.67 | 482.73 | 259.51 | 487.49 | 259.51 |
| 491 | 259.6 | 493.36 | 259.73 | 496.55 | 259.79 | 512.52 | 259.55 | 524.35 | 259.11 |
| 528.76 | 258.98 | 540.27 | 258.69 | 542.57 | 258.6 | 548.21 | 258.54 | 556.02 | 258.32 |
| 560.2 | 258.23 | 571.12 | 257.75 | 578.39 | 257.46 | 584.01 | 257.2 | 589.89 | 257.23 |
| 592.78 | 257.13 | 595.16 | 257.23 | 599.62 | 256.91 | 612.04 | 256.23 | 621.24 | 255.78 |
| 635.58 | 255.15 | 645.66 | 254.97 | 652.53 | 254.94 | 664.49 | 255.11 | 679.95 | 255.17 |
| 696.36 | 255.19 | 704.33 | 255.42 | 715.39 | 255.77 | 720.46 | 255.95 | 722.59 | 255.95 |
| 732.21 | 256.07 | 735.38 | 256.05 | 747.63 | 256.08 | 755.15 | 256.08 | 798.24 | 256.19 |
| 806.33 | 256.43 | 815.9 | 256.77 | 842.06 | 257.19 | 846.53 | 257.64 | 851.37 | 257.84 |
| 856.26 | 257.83 | 870.71 | 257.85 | 891.78 | 258.21 | 895.4 | 259.05 | 901.76 | 259.53 |
| 905.15 | 259.89 | 908.23 | 260.74 | 918.04 | 261.52 | 921.94 | 262.02 | 923.85 | 262.18 |
| 925.62 | 262.51 | 928.4 | 262.68 | 937.54 | 262.87 | 941.85 | 263.17 | 945.56 | 263.36 |
| 946.52 | 263.55 | 958.49 | 263.64 | 962.94 | 261.99 | 966.56 | 261.17 | 972.64 | 260.39 |
| 975.52 | 260.26 | 985.82 | 259.64 | 998.87 | 259.54 | 1006.77 | 259.55 | 1016.44 | 259.5 |
| 1022.38 | 259.5 | 1030.93 | 259.44 | 1041.31 | 259.27 | 1044.55 | 259.26 | 1047.02 | 259.49 |
| 1052.59 | 259.53 | 1058.7 | 259.75 | 1063.06 | 259.87 | 1065.86 | 259.7 | 1073.22 | 259.43 |
| 1078.22 | 259.36 | 1086.78 | 259.18 | 1091.37 | 259.03 | 1098.59 | 259.08 | 1108.19 | 259.01 |
| 1111.37 | 258.96 | 1123.65 | 258.46 | 1138.81 | 258.22 | 1140.52 | 258.17 | 1142.9 | 258.23 |
| 1145.88 | 258.55 | 1149.51 | 259.39 | 1153 | 259.78 | 1159.91 | 260.27 | 1165.85 | 260.31 |
| 1169.31 | 259.97 | 1174.39 | 259.57 | 1182.26 | 258.8 | 1187.23 | 258.03 | 1194.59 | 257.23 |
| 1207.19 | 257.27 | 1215.07 | 257.23 | 1227.63 | 257.24 | 1231.84 | 257.57 | 1237.54 | 257.8 |
| 1241.09 | 258.05 | 1244.94 | 258.43 | 1248.73 | 258.86 | 1252.63 | 259.17 | 1255.46 | 259.31 |
| 1257.69 | 259.32 | 1261.28 | 259.21 | 1266.75 | 258.84 | 1271.58 | 258.21 | 1275.19 | 258 |
| 1277 | 257.8 | 1279.83 | 257.7 | 1282.94 | 257.7 | 1285.76 | 257.81 | 1291.82 | 258.33 |
| 1296.51 | 258.47 | 1303.27 | 258.53 | 1307.2 | 258.68 | 1315.54 | 258.93 | 1329.65 | 259.66 |
| 1332.78 | 259.93 | 1344.68 | 260.75 | 1346.64 | 260.73 | 1350.65 | 260.47 | 1359.72 | 259.34 |
| 1371.68 | 258.55 | 1377.57 | 258.19 | 1379.72 | 258.17 | 1383.03 | 258.4 | 1387.52 | 258.96 |
| 1393.8 | 259.59 | 1394.77 | 259.54 | 1408.53 | 260.27 | 1415.34 | 260.31 | 1425.62 | 260.44 |
| 1432.14 | 260.46 | 1441.64 | 260.59 | 1444.99 | 260.57 | 1451.74 | 260.7 | 1468.04 | 261.05 |
| 1474.59 | 261.14 | 1492.13 | 261.33 | 1496.05 | 261.36 | 1504.6 | 261.28 | 1515.73 | 261.12 |
| 1523 | 261.06 | 1531.83 | 261.03 | 1537.03 | 261.25 | 1540.59 | 261.49 | 1553.69 | 262.29 |
| 1557.77 | 262.66 | 1567.23 | 262.5 | 1577.23 | 262.29 | 1585.51 | 261.26 | 1588.86 | 261.18 |
| 1590.19 | 261.07 | 1596.52 | 261.06 | 1601.45 | 260.71 | 1610.36 | 260.14 | 1614.07 | 260.12 |
| 1617.18 | 260.5 | 1618.31 | 260.95 | 1629.73 | 261.57 | 1633.1 | 261.66 | 1644.91 | 262.42 |
| 1651.42 | 262.66 | 1660.36 | 262.68 | 1662.67 | 262.56 | 1670.52 | 261.85 | 1672 | 261.59 |
| 1675.24 | 261.58 | 1684.78 | 261.79 | 1689.86 | 261.79 | 1698.05 | 261.98 | 1699.66 | 261.84 |
| 1708.47 | 261.81 | 1724.3 | 260.97 | 1745.41 | 261.01 | 1753.96 | 261.18 | 1761.46 | 261.49 |
| 1768.26 | 261.84 | 1773.25 | 262.05 | 1778.56 | 262.1 | 1785.6 | 262.21 | 1796.92 | 261.93 |
| 1803.91 | 262.16 | 1812.27 | 261.89 | 1814.34 | 261.74 | 1817.8 | 261.3 | 1841.59 | 261.2 |
| 1858.06 | 261.94 | 1862.28 | 262.55 | 1865.18 | 262.8 | 1869.81 | 263.07 | 1877.72 | 263.22 |
| 1882.95 | 263.56 | 1886.98 | 263.74 | 1892.08 | 264.41 | 1906.57 | 264.42 | 1911.21 | 263.68 |
| 1915.34 | 263.34 | 1917.8 | 263.4 | 1919.59 | 263.25 | 1924.55 | 263.22 | 1932.04 | 263.02 |
| 1936.14 | 262.82 | 1941.52 | 262.46 | 1943.87 | 262.57 | 1949.15 | 262.37 | 1950.61 | 262.15 |
| 1952.3 | 261.73 | 1954.97 | 261.58 | 1963.09 | 262.48 | 1966.4 | 262.42 | 1975.4 | 262.7 |
| 1988.92 | 263.63 | 1997.62 | 263.62 | 2016.04 | 263.5 | 2026.36 | 263.21 | 2032.71 | 263.06 |
| 2034.96 | 262.95 | 2041.55 | 262.5 | 2047.4 | 261.64 | 2067.96 | 261.31 | 2072.18 | 261.21 |
| 2079.54 | 261.14 | 2087.48 | 261.14 | 2095.47 | 261.17 | 2105.38 | 261.28 | 2109.38 | 261.25 |
| 2113.5 | 261.32 | 2122.87 | 261.18 | 2136.44 | 261.14 | 2145.69 | 260.87 | 2151.46 | 260.97 |
| 2154.87 | 260.96 | 2164.03 | 261.17 | 2175.36 | 261.59 | 2187.02 | 262.05 | 2189.52 | 262.53 |
| 2194.89 | 263.23 | 2196.32 | 263.01 | 2199.41 | 262.79 | 2205.68 | 262.22 | 2215.91 | 261.83 |
| 2220.04 | 261.78 | 2224.65 | 261.95 | 2225.25 | 262.06 | 2228.52 | 262.23 | 2234.79 | 262.95 |
| 2240.43 | 263.55 | 2245.06 | 263.77 | 2250.98 | 263.82 | 2251.25 | 263.78 | 2261.15 | 264.57 |
| 2262.15 | 264.57 | 2271.35 | 263.67 | 2274.81 | 263.14 | 2277.68 | 262.79 | 2290.56 | 262.72 |
| 2298.63 | 262.64 | 2300.54 | 262.55 | 2312.25 | 262.14 | 2325.24 | 261.91 | 2326.95 | 262.04 |
| 2331.89 | 261.96 | 2336.99 | 261.69 | 2340.43 | 261.66 | 2346.79 | 261.8 | 2355.46 | 261.68 |
| 2359.88 | 261.58 | 2362.76 | 261.58 | 2369.93 | 261.83 | 2378.27 | 261.74 | 2381.58 | 261.96 |
| 2384.73 | 261.99 | 2395.62 | 262.21 | 2396.93 | 262.17 | 2405.88 | 262.11 | 2408.27 | 262.13 |
| 2414.18 | 262.01 | 2427.39 | 261.79 | 2430.02 | 261.77 | 2439.92 | 261.58 | 2443.43 | 261.68 |
| 2450.42 | 261.72 | 2453.49 | 261.66 | 2460.02 | 261.66 | 2463.87 | 261.59 | 2469.98 | 261.64 |
| 2479.43 | 262.3 | 2483.04 | 262.49 | 2495.49 | 262.51 | 2510.27 | 262.46 | 2518.27 | 262.46 |
| 2523.84 | 262.51 | 2527.48 | 262.64 | 2534.47 | 262.71 | 2537.31 | 262.8 | 2549.06 | 262.9 |
| 2555.56 | 262.76 | 2565.13 | 262.64 | 2568.85 | 262.62 | 2580.69 | 262.8 | 2587.64 | 262.69 |
| 2600.28 | 262.27 | 2623.39 | 262.25 | 2626.35 | 261.97 | 2637.4 | 261.67 | 2637.69 | 261.79 |
| 2640.76 | 261.89 | 2642.63 | 261.72 | 2649.57 | 261.65 | 2655.43 | 261.98 | 2660.95 | 262.21 |
| 2662.41 | 262.16 | 2673.87 | 261.56 | 2674.87 | 261.53 | 2681.76 | 261.59 | 2686.61 | 261.74 |
| 2702.51 | 261.67 | 2717.22 | 261.51 | 2721.53 | 261.4 | 2731.39 | 260.97 | 2735.25 | 261.12 |
| 2737.95 | 261.14 | 2746.28 | 261.4 | 2755.07 | 261.4 | 2767.47 | 261.21 | 2777.64 | 261.35 |
| 2781.29 | 261.29 | 2799.25 | 260.75 | 2812.83 | 260.69 | 2829.32 | 260.4 | 2844.9 | 260.47 |
| 2851.36 | 260.48 | 2856.71 | 260.36 | 2861.44 | 260.19 | 2867.45 | 260.22 | 2884.38 | 260.15 |
| 2889.79 | 260.21 | 2893.55 | 260.08 | 2895.61 | 259.92 | 2904.68 | 259.75 | 2908.28 | 259.74 |
| 2911.32 | 259.8 | 2917.44 | 259.72 | 2929.64 | 259.66 | 2930.7 | 259.62 | 2941.47 | 259.56 |
| 2949.73 | 259.59 | 2953.88 | 259.72 | 2961.72 | 259.72 | 2964.8 | 259.64 | 2968.77 | 259.62 |
| 2978.54 | 259.47 | 2983.41 | 259.5 | 2986.38 | 259.6 | 2991.77 | 259.6 | 2998.34 | 259.41 |
| 2999.84 | 259.29 | 3003.93 | 259.18 | 3011.44 | 258.87 | 3013.63 | 258.84 | 3034.04 | 258.72 |
| 3046.69 | 258.81 | 3051.73 | 258.87 | 3055.78 | 258.65 | 3060.55 | 258.49 | 3064.82 | 258.5 |
| 3068.78 | 258.38 | 3074.36 | 258.46 | 3077.27 | 258.59 | 3080.67 | 258.31 | 3084.56 | 258.56 |
| 3096.25 | 258.8 | 3097.88 | 258.87 | 3111.22 | 259.73 | 3113.19 | 259.8 | 3118.86 | 259.85 |
| 3125.93 | 259.97 | 3127.87 | 260.05 | 3133.07 | 260.05 | 3134.32 | 259.85 | 3139.21 | 259.88 |
| 3140.16 | 260.05 | 3143.88 | 260.14 | 3145.63 | 260.3 | 3150.1 | 260.56 | 3152.82 | 260.56 |
| 3156.91 | 260.36 | 3158.26 | 260.42 | 3162.93 | 260.35 | 3182.87 | 259.82 | 3186.11 | 259.76 |
| 3194.82 | 260.85 | 3206.46 | 262.07 | 3207.78 | 262.03 | 3212.75 | 261.48 | 3221.36 | 261.82 |
| 3225.4 | 261.79 | 3229.37 | 261.61 | 3234.59 | 261.44 | 3239.18 | 261.11 | 3276.11 | 261.31 |
| 3282.44 | 261.54 | 3285.84 | 261.33 | 3288.42 | 261.26 | 3291.33 | 261.37 | 3296.26 | 262.39 |
| 3302.12 | 263.06 | 3304.47 | 263.26 | 3308.12 | 263.42 | 3311.59 | 263.65 | 3313.62 | 263.89 |
| 3319.48 | 264.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 157.79 | .04 | 2587.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 157.79 | 2587.64 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 212.639*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 268.94 | 5.73 | 268.82 | 8.07 | 268.7 | 11.82 | 268.22 | 17.31 | 267.74 |
| 18.89 | 267.39 | 22.25 | 266.8 | 31.47 | 266.22 | 38.9 | 265.97 | 46.04 | 265.61 |
| 49.71 | 265.56 | 51.75 | 265.43 | 56.01 | 264.78 | 59.56 | 264.71 | 61.55 | 264.59 |
| 62.21 | 264.71 | 64.15 | 264.69 | 66.07 | 264.53 | 69.98 | 264.01 | 72.1 | 263.85 |
| 75.79 | 263.93 | 79.85 | 263.64 | 84.24 | 263.46 | 91.79 | 263.08 | 98.17 | 262.71 |
| 105.74 | 262.48 | 113.33 | 262.34 | 128.27 | 262.17 | 130.4 | 262.2 | 143.26 | 261.88 |
| 146.9 | 261.87 | 148.17 | 261.68 | 152.38 | 261.58 | 157.71 | 261.11 | 166.31 | 261.12 |
| 180.55 | 261.19 | 193.95 | 261.28 | 195.12 | 261.25 | 206.36 | 261.29 | 218.28 | 261.29 |
| 221.59 | 261.26 | 225.58 | 261.12 | 236.5 | 261.1 | 239.17 | 261.14 | 241.95 | 261.01 |
| 250.46 | 261.09 | 252.24 | 261.2 | 257.86 | 261.21 | 261.89 | 261.29 | 265.95 | 261.21 |
| 269.58 | 261.2 | 275.07 | 261.06 | 284.53 | 260.89 | 287.43 | 260.72 | 291.56 | 260.96 |
| 293.75 | 260.99 | 301.27 | 261.43 | 305.85 | 261.78 | 311.22 | 262.31 | 313.3 | 262.38 |
| 322.85 | 262.43 | 337.38 | 262.06 | 344.31 | 261.84 | 353.19 | 261.75 | 355.22 | 261.84 |
| 358.02 | 261.82 | 370.97 | 261.5 | 375.33 | 261.51 | 378.51 | 261.45 | 384.51 | 261.27 |
| 413.76 | 260.75 | 420.7 | 260.67 | 430.15 | 260.62 | 434.78 | 260.3 | 438.44 | 260.2 |
| 444.37 | 259.75 | 457.01 | 259.42 | 465.22 | 259.29 | 474.6 | 259.09 | 478 | 259.18 |
| 482.61 | 259.01 | 487.45 | 259 | 491.01 | 259.11 | 493.41 | 259.25 | 496.65 | 259.3 |
| 512.88 | 259.08 | 524.9 | 258.66 | 543.42 | 258.16 | 549.15 | 258.09 | 561.34 | 257.79 |
| 570.11 | 257.38 | 579.83 | 256.96 | 585.54 | 256.69 | 591.51 | 256.71 | 594.45 | 256.6 |
| 596.86 | 256.72 | 601.4 | 256.43 | 614.02 | 255.8 | 623.37 | 255.37 | 637.94 | 254.73 |
| 648.19 | 254.54 | 655.17 | 254.52 | 667.34 | 254.69 | 683.07 | 254.74 | 699.77 | 254.75 |
| 719.13 | 255.35 | 724.29 | 255.53 | 728.05 | 255.54 | 736.25 | 255.65 | 739.47 | 255.63 |
| 759.59 | 255.65 | 803.44 | 255.75 | 811.68 | 256 | 821.42 | 256.34 | 834.25 | 256.55 |
| 848.04 | 256.75 | 852.58 | 257.21 | 857.5 | 257.41 | 862.48 | 257.39 | 877.18 | 257.4 |
| 898.63 | 257.76 | 902.31 | 258.64 | 908.78 | 259.14 | 912.23 | 259.51 | 915.36 | 260.39 |
| 925.35 | 261.2 | 929.32 | 261.71 | 931.26 | 261.87 | 933.06 | 262.21 | 935.89 | 262.38 |
| 945.19 | 262.56 | 949.58 | 262.86 | 953.35 | 263.05 | 954.33 | 263.24 | 966.51 | 263.31 |
| 971.04 | 261.59 | 974.72 | 260.74 | 980.91 | 259.91 | 983.84 | 259.77 | 994.32 | 259.11 |
| 1007.6 | 258.99 | 1015.64 | 258.96 | 1025.48 | 258.89 | 1031.53 | 258.87 | 1040.23 | 258.79 |
| 1050.79 | 258.62 | 1054.08 | 258.61 | 1056.6 | 258.85 | 1062.27 | 258.9 | 1068.48 | 259.15 |
| 1072.92 | 259.29 | 1075.76 | 259.14 | 1083.25 | 258.87 | 1088.34 | 258.79 | 1097.05 | 258.6 |
| 1101.73 | 258.43 | 1109.07 | 258.45 | 1118.84 | 258.38 | 1122.08 | 258.32 | 1134.57 | 257.88 |
| 1151.74 | 257.65 | 1154.16 | 257.71 | 1157.19 | 258.04 | 1160.89 | 258.92 | 1164.44 | 259.31 |
| 1171.47 | 259.82 | 1177.52 | 259.85 | 1179.64 | 259.61 | 1186.21 | 259.06 | 1194.21 | 258.24 |
| 1199.27 | 257.42 | 1206.76 | 256.58 | 1219.58 | 256.61 | 1229.75 | 256.58 | 1240.38 | 256.59 |
| 1244.67 | 256.94 | 1250.47 | 257.18 | 1254.08 | 257.44 | 1257.99 | 257.84 | 1261.85 | 258.29 |
| 1265.82 | 258.61 | 1268.7 | 258.76 | 1270.97 | 258.78 | 1274.62 | 258.67 | 1280.19 | 258.3 |
| 1285.1 | 257.66 | 1288.78 | 257.46 | 1290.62 | 257.26 | 1293.5 | 257.17 | 1296.66 | 257.18 |
| 1301.8 | 257.48 | 1305.7 | 257.87 | 1310.48 | 258.02 | 1317.35 | 258.09 | 1329.84 | 258.51 |
| 1344.2 | 259.26 | 1347.38 | 259.54 | 1359.49 | 260.37 | 1361.48 | 260.35 | 1365.57 | 260.06 |
| 1374.79 | 258.87 | 1391.3 | 257.68 | 1395.14 | 257.55 | 1398.52 | 257.76 | 1403.08 | 258.3 |
| 1409.47 | 258.93 | 1410.46 | 258.88 | 1424.47 | 259.61 | 1431.39 | 259.65 | 1443.21 | 259.76 |
| 1448.49 | 259.78 | 1458.16 | 259.92 | 1461.56 | 259.89 | 1485.02 | 260.35 | 1513.52 | 260.69 |
| 1522.23 | 260.62 | 1533.54 | 260.5 | 1540.95 | 260.45 | 1549.93 | 260.43 | 1555.23 | 260.65 |
| 1562.96 | 261.16 | 1572.17 | 261.74 | 1576.31 | 262.12 | 1585.96 | 262 | 1596.13 | 261.83 |
| 1604.56 | 260.81 | 1607.96 | 260.75 | 1609.32 | 260.63 | 1615.76 | 260.64 | 1620.78 | 260.29 |
| 1629.85 | 259.72 | 1633.62 | 259.7 | 1636.78 | 260.09 | 1637.93 | 260.56 | 1649.56 | 261.21 |
| 1652.99 | 261.29 | 1665 | 262.08 | 1671.63 | 262.33 | 1680.72 | 262.34 | 1683.08 | 262.22 |
| 1691.07 | 261.48 | 1692.56 | 261.21 | 1694.55 | 261.18 | 1705.57 | 261.42 | 1710.75 | 261.42 |
| 1719.28 | 261.62 | 1720.72 | 261.48 | 1729.68 | 261.45 | 1745.78 | 260.57 | 1767.27 | 260.61 |
| 1775.97 | 260.78 | 1783.6 | 261.06 | 1794.71 | 261.56 | 1799.03 | 261.65 | 1801 | 261.63 |
| 1808.16 | 261.75 | 1819.68 | 261.46 | 1826.79 | 261.72 | 1835.3 | 261.44 | 1837.41 | 261.3 |
| 1840.93 | 260.84 | 1865.14 | 260.76 | 1881.9 | 261.55 | 1886.2 | 262.19 | 1889.14 | 262.45 |
| 1893.86 | 262.74 | 1901.9 | 262.9 | 1907.22 | 263.25 | 1911.33 | 263.43 | 1916.52 | 264.12 |
| 1929.8 | 264.12 | 1931.26 | 264.14 | 1935.98 | 263.36 | 1940.18 | 262.99 | 1942.69 | 263.05 |
| 1944.51 | 262.89 | 1949.56 | 262.85 | 1957.18 | 262.62 | 1960.74 | 262.45 | 1966.82 | 262.04 |
| 1969.22 | 262.15 | 1974.59 | 261.94 | 1976.07 | 261.72 | 1977.79 | 261.29 | 1980.52 | 261.14 |
| 1985.04 | 261.64 | 1988.77 | 262.1 | 1992.14 | 262.04 | 2001.3 | 262.34 | 2015.06 | 263.3 |
| 2023.92 | 263.3 | 2042.66 | 263.2 | 2053.16 | 262.92 | 2059.62 | 262.77 | 2061.91 | 262.66 |
| 2068.61 | 262.2 | 2074.57 | 261.32 | 2084.24 | 261.15 | 2095.49 | 260.98 | 2099.79 | 260.88 |
| 2109.25 | 260.8 | 2123.48 | 260.82 | 2133.57 | 260.93 | 2137.64 | 260.9 | 2141.83 | 260.98 |
| 2151.36 | 260.83 | 2165.17 | 260.8 | 2174.59 | 260.51 | 2180.46 | 260.6 | 2183.93 | 260.59 |
| 2192.62 | 260.78 | 2216.64 | 261.64 | 2219.19 | 262.12 | 2224.66 | 262.84 | 2226.11 | 262.61 |
| 2229.49 | 262.36 | 2235.63 | 261.77 | 2246.04 | 261.35 | 2250.25 | 261.3 | 2254.93 | 261.49 |
| 2255.55 | 261.61 | 2258.87 | 261.78 | 2267.22 | 262.77 | 2270.99 | 263.17 | 2275.71 | 263.4 |
| 2281.73 | 263.47 | 2282 | 263.42 | 2292.08 | 264.26 | 2293.1 | 264.26 | 2302.46 | 263.33 |
| 2305.98 | 262.79 | 2308.9 | 262.43 | 2323.02 | 262.37 | 2330.22 | 262.31 | 2332.17 | 262.22 |
| 2344.08 | 261.82 | 2357.3 | 261.6 | 2359.04 | 261.74 | 2363.65 | 261.67 | 2369.25 | 261.39 |
| 2372.75 | 261.36 | 2379.22 | 261.51 | 2390.23 | 261.35 | 2391.84 | 261.29 | 2395.48 | 261.29 |
| 2397.83 | 261.4 | 2402.77 | 261.54 | 2411.26 | 261.45 | 2414.62 | 261.68 | 2417.83 | 261.71 |
| 2428.92 | 261.93 | 2430.25 | 261.89 | 2439.36 | 261.82 | 2441.79 | 261.85 | 2445.56 | 261.76 |
| 2461.24 | 261.49 | 2463.92 | 261.47 | 2473.99 | 261.27 | 2477.56 | 261.37 | 2484.68 | 261.42 |
| 2487.8 | 261.36 | 2494.45 | 261.35 | 2498.37 | 261.28 | 2504.58 | 261.31 | 2514.2 | 261.99 |
| 2517.91 | 262.19 | 2530.54 | 262.2 | 2545.58 | 262.16 | 2556.9 | 262.17 | 2563.09 | 262.35 |
| 2570.21 | 262.43 | 2573.1 | 262.52 | 2585.53 | 262.65 | 2591.67 | 262.51 | 2601.41 | 262.4 |
| 2605.19 | 262.38 | 2611.5 | 262.46 | 2617.24 | 262.57 | 2622.1 | 262.52 | 2624.31 | 262.45 |
| 2637.4 | 262.02 | 2661.32 | 262 | 2664.39 | 261.71 | 2675.82 | 261.4 | 2676.12 | 261.53 |
| 2679.31 | 261.63 | 2681.23 | 261.45 | 2688.42 | 261.38 | 2694.49 | 261.72 | 2700.2 | 261.96 |
| 2701.72 | 261.91 | 2714.61 | 261.25 | 2721.75 | 261.32 | 2726.77 | 261.47 | 2743.23 | 261.39 |
| 2758.45 | 261.23 | 2762.92 | 261.12 | 2773.13 | 260.68 | 2777.12 | 260.83 | 2779.91 | 260.85 |
| 2788.54 | 261.12 | 2797.64 | 261.12 | 2810.48 | 260.92 | 2815.45 | 260.97 | 2821 | 261.07 |
| 2824.78 | 261 | 2843.37 | 260.45 | 2845.22 | 260.42 | 2857.44 | 260.38 | 2874.5 | 260.08 |
| 2890.63 | 260.15 | 2897.32 | 260.16 | 2902.85 | 260.04 | 2907.75 | 259.86 | 2913.97 | 259.9 |
| 2931.5 | 259.82 | 2937.1 | 259.89 | 2940.99 | 259.75 | 2943.12 | 259.58 | 2952.52 | 259.41 |
| 2956.24 | 259.4 | 2959.39 | 259.46 | 2965.72 | 259.37 | 2978.36 | 259.31 | 2979.45 | 259.28 |
| 2990.6 | 259.21 | 2999.15 | 259.24 | 3003.45 | 259.37 | 3011.56 | 259.37 | 3014.75 | 259.29 |
| 3016.84 | 259.34 | 3018.86 | 259.28 | 3028.98 | 259.12 | 3034.02 | 259.15 | 3037.09 | 259.25 |
| 3042.67 | 259.25 | 3049.47 | 259.06 | 3051.03 | 258.94 | 3055.26 | 258.81 | 3063.04 | 258.5 |
| 3065.3 | 258.46 | 3086.43 | 258.34 | 3099.53 | 258.44 | 3101.13 | 258.5 | 3104.74 | 258.5 |
| 3108.94 | 258.27 | 3113.88 | 258.1 | 3120.37 | 258.09 | 3122.39 | 257.99 | 3128.17 | 258.07 |
| 3131.18 | 258.21 | 3134.7 | 257.92 | 3138.73 | 258.17 | 3150.83 | 258.43 | 3152.52 | 258.5 |
| 3166.33 | 259.39 | 3168.37 | 259.46 | 3174.24 | 259.51 | 3181.56 | 259.63 | 3183.57 | 259.72 |
| 3188.95 | 259.72 | 3190.25 | 259.51 | 3193.56 | 259.49 | 3195.31 | 259.55 | 3196.28 | 259.72 |
| 3200.14 | 259.81 | 3201.95 | 259.98 | 3206.57 | 260.25 | 3209.39 | 260.25 | 3213.63 | 260.04 |
| 3215.02 | 260.11 | 3219.86 | 260.03 | 3240.51 | 259.48 | 3243.86 | 259.42 | 3252.87 | 260.55 |
| 3264.92 | 261.81 | 3266.29 | 261.77 | 3271.44 | 261.2 | 3280.35 | 261.56 | 3284.54 | 261.52 |
| 3288.64 | 261.34 | 3294.04 | 261.16 | 3298.8 | 260.82 | 3316.43 | 260.91 | 3337.02 | 261.03 |
| 3343.58 | 261.27 | 3347.1 | 261.06 | 3349.77 | 260.99 | 3352.79 | 261.1 | 3357.88 | 262.16 |
| 3363.95 | 262.84 | 3366.39 | 263.05 | 3370.16 | 263.22 | 3373.75 | 263.46 | 3375.86 | 263.71 |
| 3381.92 | 264.78 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 152.38 | .04 | 2624.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 152.38 | 2624.31 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 192.812*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 268.44 | 5.53 | 268.37 | 7.78 | 268.25 | 11.4 | 267.78 | 16.69 | 267.3 |
| 18.22 | 266.95 | 21.46 | 266.35 | 30.35 | 265.78 | 37.52 | 265.54 | 44.4 | 265.18 |
| 47.94 | 265.12 | 49.91 | 264.99 | 54.26 | 264.31 | 57.44 | 264.28 | 59.36 | 264.16 |
| 60.01 | 264.29 | 61.87 | 264.27 | 63.73 | 264.11 | 67.49 | 263.58 | 69.54 | 263.43 |
| 71.53 | 263.54 | 73.1 | 263.52 | 77.01 | 263.23 | 79.28 | 263.15 | 87.08 | 262.76 |
| 95.09 | 262.32 | 105.14 | 262.08 | 123.72 | 261.9 | 126.26 | 261.92 | 139.85 | 261.6 |
| 141.68 | 261.63 | 142.91 | 261.43 | 146.97 | 261.32 | 152.39 | 260.83 | 161.12 | 260.84 |
| 175.59 | 260.89 | 189.21 | 260.96 | 190.39 | 260.93 | 201.81 | 260.94 | 213.92 | 260.93 |
| 217.28 | 260.89 | 221.34 | 260.74 | 232.21 | 260.68 | 235.15 | 260.71 | 237.98 | 260.58 |
| 246.62 | 260.67 | 248.43 | 260.77 | 254.14 | 260.79 | 258.23 | 260.87 | 262.36 | 260.78 |
| 266.05 | 260.76 | 272.91 | 260.59 | 281.23 | 260.42 | 284.18 | 260.23 | 288.37 | 260.47 |
| 291.08 | 260.52 | 297.05 | 260.84 | 302.06 | 261.17 | 308.35 | 261.73 | 310.47 | 261.78 |
| 320.44 | 261.82 | 332.13 | 261.5 | 341.97 | 261.2 | 351 | 261.14 | 353.06 | 261.23 |
| 356.91 | 261.19 | 369.06 | 260.88 | 374.26 | 260.88 | 382.81 | 260.69 | 387.59 | 260.66 |
| 391.45 | 260.59 | 412.53 | 260.31 | 419.58 | 260.25 | 429.19 | 260.22 | 433.89 | 259.88 |
| 437.61 | 259.78 | 443.64 | 259.31 | 456.48 | 258.98 | 469.99 | 258.7 | 474.35 | 258.59 |
| 477.8 | 258.68 | 482.48 | 258.51 | 487.4 | 258.5 | 491.02 | 258.61 | 493.46 | 258.76 |
| 496.75 | 258.82 | 507.03 | 258.67 | 513.24 | 258.6 | 530 | 258.09 | 541.89 | 257.8 |
| 544.27 | 257.71 | 550.09 | 257.65 | 562.47 | 257.34 | 571.39 | 256.91 | 581.26 | 256.46 |
| 587.06 | 256.17 | 593.13 | 256.19 | 596.61 | 256.04 | 598.57 | 256.22 | 603.18 | 255.94 |
| 616 | 255.36 | 622.81 | 255.09 | 625.5 | 254.95 | 640.3 | 254.3 | 650.71 | 254.12 |
| 657.81 | 254.09 | 670.19 | 254.26 | 686.19 | 254.3 | 703.17 | 254.31 | 722.88 | 254.93 |
| 728.12 | 255.11 | 731.94 | 255.12 | 740.42 | 255.22 | 743.57 | 255.2 | 764.03 | 255.23 |
| 808.64 | 255.32 | 817.02 | 255.57 | 826.93 | 255.91 | 854.01 | 256.31 | 858.63 | 256.78 |
| 863.64 | 256.98 | 868.7 | 256.96 | 879.27 | 256.96 | 883.66 | 256.94 | 905.47 | 257.32 |
| 907.99 | 257.87 | 909.22 | 258.23 | 915.8 | 258.75 | 919.31 | 259.13 | 922.5 | 260.04 |
| 932.66 | 260.87 | 936.69 | 261.39 | 938.67 | 261.56 | 940.5 | 261.9 | 943.38 | 262.08 |
| 952.84 | 262.25 | 957.3 | 262.55 | 961.15 | 262.73 | 962.14 | 262.93 | 974.52 | 262.98 |
| 975.32 | 262.72 | 979.14 | 261.19 | 982.88 | 260.3 | 989.18 | 259.43 | 992.16 | 259.28 |
| 1002.82 | 258.58 | 1016.33 | 258.43 | 1024.51 | 258.38 | 1034.52 | 258.28 | 1042.66 | 258.22 |
| 1049.52 | 258.14 | 1060.26 | 257.96 | 1063.61 | 257.96 | 1066.17 | 258.21 | 1071.94 | 258.28 |
| 1082.78 | 258.72 | 1085.67 | 258.58 | 1093.29 | 258.31 | 1098.47 | 258.23 | 1107.33 | 258.01 |
| 1112.08 | 257.82 | 1119.56 | 257.83 | 1129.5 | 257.75 | 1132.78 | 257.69 | 1145.5 | 257.3 |
| 1161.19 | 257.15 | 1165.42 | 257.19 | 1168.51 | 257.53 | 1172.27 | 258.44 | 1175.88 | 258.84 |
| 1183.03 | 259.36 | 1189.18 | 259.39 | 1191.34 | 259.14 | 1198.02 | 258.54 | 1206.17 | 257.68 |
| 1211.32 | 256.82 | 1218.93 | 255.94 | 1231.97 | 255.96 | 1240.13 | 255.94 | 1253.13 | 255.94 |
| 1257.49 | 256.3 | 1263.39 | 256.56 | 1267.06 | 256.83 | 1271.05 | 257.25 | 1274.97 | 257.72 |
| 1279.02 | 258.05 | 1281.95 | 258.21 | 1284.25 | 258.23 | 1287.97 | 258.13 | 1293.63 | 257.76 |
| 1298.63 | 257.11 | 1302.36 | 256.92 | 1304.24 | 256.72 | 1307.17 | 256.64 | 1310.39 | 256.66 |
| 1313.31 | 256.8 | 1319.58 | 257.4 | 1324.44 | 257.56 | 1330.81 | 257.64 | 1344.14 | 258.09 |
| 1358.74 | 258.87 | 1361.99 | 259.16 | 1371.33 | 259.81 | 1374.3 | 259.99 | 1376.33 | 259.97 |
| 1380.48 | 259.66 | 1389.87 | 258.39 | 1399.86 | 257.62 | 1408.34 | 256.99 | 1410.57 | 256.93 |
| 1414 | 257.11 | 1418.64 | 257.63 | 1425.15 | 258.28 | 1426.16 | 258.22 | 1440.4 | 258.96 |
| 1464.83 | 259.09 | 1474.67 | 259.25 | 1478.14 | 259.22 | 1502 | 259.64 | 1530.99 | 260.02 |
| 1539.85 | 259.97 | 1557.41 | 259.84 | 1568.03 | 259.82 | 1573.42 | 260.05 | 1590.66 | 261.19 |
| 1594.87 | 261.59 | 1604.68 | 261.5 | 1615.03 | 261.37 | 1623.6 | 260.36 | 1627.07 | 260.31 |
| 1628.45 | 260.2 | 1635 | 260.22 | 1640.11 | 259.87 | 1649.33 | 259.29 | 1653.17 | 259.27 |
| 1656.38 | 259.68 | 1657.55 | 260.17 | 1669.38 | 260.84 | 1672.87 | 260.93 | 1685.09 | 261.74 |
| 1688.14 | 261.89 | 1691.83 | 262 | 1701.08 | 262.01 | 1703.48 | 261.88 | 1711.61 | 261.11 |
| 1713.13 | 260.84 | 1715.16 | 260.8 | 1726.36 | 261.06 | 1731.63 | 261.05 | 1740.1 | 261.26 |
| 1741.77 | 261.12 | 1751.59 | 261.06 | 1767.27 | 260.18 | 1789.13 | 260.2 | 1797.98 | 260.38 |
| 1802.96 | 260.53 | 1817.04 | 261.1 | 1823.44 | 261.17 | 1830.73 | 261.3 | 1842.45 | 260.99 |
| 1843.49 | 261 | 1849.68 | 261.27 | 1858.34 | 261 | 1860.48 | 260.85 | 1864.07 | 260.38 |
| 1888.69 | 260.32 | 1905.74 | 261.16 | 1910.11 | 261.83 | 1913.11 | 262.1 | 1917.9 | 262.41 |
| 1926.09 | 262.57 | 1931.5 | 262.94 | 1935.68 | 263.13 | 1940.96 | 263.84 | 1955.95 | 263.85 |
| 1960.76 | 263.03 | 1965.03 | 262.64 | 1967.58 | 262.7 | 1969.44 | 262.53 | 1974.56 | 262.48 |
| 1982.32 | 262.23 | 1986.56 | 262 | 1992.13 | 261.61 | 1994.57 | 261.73 | 2000.04 | 261.51 |
| 2001.54 | 261.29 | 2003.29 | 260.84 | 2006.06 | 260.7 | 2007.2 | 260.88 | 2010.66 | 261.23 |
| 2014.46 | 261.71 | 2017.89 | 261.67 | 2027.2 | 261.98 | 2041.2 | 262.98 | 2045.95 | 262.98 |
| 2069.28 | 262.9 | 2086.53 | 262.48 | 2088.86 | 262.37 | 2095.68 | 261.9 | 2101.74 | 260.99 |
| 2123.02 | 260.65 | 2127.4 | 260.54 | 2137.4 | 260.45 | 2151.5 | 260.47 | 2158.55 | 260.56 |
| 2165.9 | 260.56 | 2170.17 | 260.64 | 2179.86 | 260.49 | 2193.91 | 260.45 | 2203.49 | 260.15 |
| 2209.46 | 260.24 | 2212.99 | 260.23 | 2222.47 | 260.44 | 2234.2 | 260.82 | 2246.27 | 261.23 |
| 2248.85 | 261.72 | 2254.42 | 262.45 | 2255.9 | 262.2 | 2259.33 | 261.94 | 2265.58 | 261.32 |
| 2269.36 | 261.13 | 2276.17 | 260.88 | 2280.45 | 260.83 | 2285.22 | 261.02 | 2285.85 | 261.15 |
| 2289.23 | 261.34 | 2297.71 | 262.37 | 2301.56 | 262.79 | 2306.35 | 263.04 | 2312.48 | 263.11 |
| 2312.76 | 263.07 | 2323.01 | 263.94 | 2324.04 | 263.94 | 2333.57 | 263 | 2337.14 | 262.45 |
| 2340.12 | 262.07 | 2354.48 | 262.03 | 2361.81 | 261.99 | 2363.79 | 261.89 | 2375.91 | 261.5 |
| 2389.35 | 261.3 | 2391.12 | 261.45 | 2395.82 | 261.38 | 2398.74 | 261.27 | 2401.51 | 261.09 |
| 2405.07 | 261.06 | 2411.66 | 261.22 | 2420.63 | 261.09 | 2425.21 | 260.99 | 2428.19 | 260.99 |
| 2435.62 | 261.26 | 2444.25 | 261.16 | 2447.67 | 261.39 | 2450.94 | 261.42 | 2462.21 | 261.65 |
| 2463.56 | 261.61 | 2472.83 | 261.54 | 2475.3 | 261.57 | 2477.93 | 261.5 | 2495.09 | 261.19 |
| 2497.82 | 261.17 | 2508.06 | 260.96 | 2511.7 | 261.07 | 2518.94 | 261.11 | 2522.11 | 261.05 |
| 2528.87 | 261.04 | 2532.86 | 260.96 | 2539.18 | 260.98 | 2548.97 | 261.68 | 2552.7 | 261.88 |
| 2565.59 | 261.89 | 2580.89 | 261.86 | 2592.4 | 261.87 | 2598.7 | 262.05 | 2605.94 | 262.15 |
| 2608.88 | 262.25 | 2621.04 | 262.39 | 2627.77 | 262.26 | 2641.53 | 262.15 | 2647.94 | 262.23 |
| 2653.79 | 262.34 | 2660.98 | 262.22 | 2674.51 | 261.78 | 2699.25 | 261.75 | 2702.42 | 261.45 |
| 2714.24 | 261.13 | 2714.55 | 261.26 | 2717.85 | 261.37 | 2719.84 | 261.18 | 2727.28 | 261.11 |
| 2733.55 | 261.46 | 2739.45 | 261.71 | 2741.02 | 261.66 | 2753.29 | 261.01 | 2754.35 | 260.98 |
| 2761.73 | 261.04 | 2766.92 | 261.21 | 2783.94 | 261.12 | 2799.69 | 260.95 | 2804.3 | 260.84 |
| 2814.86 | 260.38 | 2818.98 | 260.53 | 2821.88 | 260.56 | 2830.8 | 260.84 | 2840.21 | 260.84 |
| 2853.48 | 260.63 | 2864.36 | 260.79 | 2868.27 | 260.72 | 2887.49 | 260.14 | 2902.04 | 260.07 |
| 2919.68 | 259.76 | 2936.36 | 259.84 | 2943.28 | 259.85 | 2949 | 259.72 | 2954.06 | 259.54 |
| 2960.5 | 259.57 | 2978.62 | 259.49 | 2984.42 | 259.56 | 2988.44 | 259.42 | 2990.64 | 259.25 |
| 3000.35 | 259.07 | 3004.2 | 259.06 | 3007.46 | 259.12 | 3014.01 | 259.03 | 3027.08 | 258.97 |
| 3028.2 | 258.93 | 3039.74 | 258.86 | 3048.57 | 258.89 | 3053.01 | 259.03 | 3061.41 | 259.03 |
| 3064.7 | 258.95 | 3066.87 | 258.99 | 3068.95 | 258.93 | 3079.42 | 258.77 | 3084.62 | 258.8 |
| 3087.8 | 258.9 | 3093.57 | 258.9 | 3100.61 | 258.7 | 3102.22 | 258.58 | 3106.59 | 258.45 |
| 3114.63 | 258.12 | 3116.97 | 258.09 | 3138.83 | 257.96 | 3152.37 | 258.06 | 3154.02 | 258.12 |
| 3157.76 | 258.12 | 3162.1 | 257.89 | 3167.2 | 257.71 | 3173.91 | 257.7 | 3176.01 | 257.6 |
| 3179.25 | 257.61 | 3185.1 | 257.82 | 3188.74 | 257.52 | 3192.9 | 257.79 | 3205.41 | 258.05 |
| 3207.16 | 258.12 | 3221.44 | 259.05 | 3223.55 | 259.12 | 3229.62 | 259.17 | 3237.19 | 259.3 |
| 3239.26 | 259.39 | 3244.83 | 259.39 | 3246.17 | 259.17 | 3251.4 | 259.21 | 3252.41 | 259.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 3256.4 | 259.48 | 3258.28 | 259.66 | 3263.05 | 259.93 | 3265.97 | 259.93 | 3270.35 | 259.72 |
| 3271.79 | 259.79 | 3276.79 | 259.71 | 3298.14 | 259.15 | 3301.61 | 259.08 | 3310.93 | 260.25 |
| 3323.39 | 261.56 | 3324.8 | 261.51 | 3330.12 | 260.92 | 3339.33 | 261.29 | 3343.67 | 261.26 |
| 3347.91 | 261.07 | 3353.5 | 260.89 | 3358.41 | 260.53 | 3376.64 | 260.63 | 3397.94 | 260.76 |
| 3404.72 | 261 | 3408.36 | 260.78 | 3411.12 | 260.71 | 3414.24 | 260.82 | 3419.51 | 261.92 |
| 3425.78 | 262.63 | 3428.3 | 262.85 | 3432.21 | 263.02 | 3435.92 | 263.27 | 3438.1 | 263.54 |
| 3444.37 | 264.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 146.97 | .04 | 2660.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 146.97 | 2660.98 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 172.984*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 267.95 | 5.33 | 267.91 | 7.49 | 267.8 | 10.98 | 267.34 | 16.08 | 266.87 |
| 17.55 | 266.51 | 20.67 | 265.9 | 29.23 | 265.34 | 36.14 | 265.1 | 42.77 | 264.74 |
| 46.18 | 264.68 | 48.07 | 264.55 | 52.26 | 263.87 | 55.33 | 263.85 | 57.18 | 263.73 |
| 57.8 | 263.87 | 59.59 | 263.85 | 61.38 | 263.69 | 65.01 | 263.16 | 66.98 | 263 |
| 70.41 | 263.11 | 74.18 | 262.82 | 83.88 | 262.37 | 91.59 | 261.95 | 101.27 | 261.75 |
| 111.14 | 261.71 | 125.41 | 261.59 | 134.7 | 261.36 | 136.47 | 261.39 | 137.65 | 261.18 |
| 141.56 | 261.06 | 147.07 | 260.55 | 155.94 | 260.56 | 184.47 | 260.64 | 185.67 | 260.61 |
| 197.27 | 260.6 | 209.57 | 260.57 | 212.98 | 260.52 | 217.1 | 260.35 | 221.84 | 260.33 |
| 228.14 | 260.25 | 231.13 | 260.29 | 234 | 260.16 | 242.78 | 260.24 | 244.62 | 260.35 |
| 250.42 | 260.36 | 254.57 | 260.44 | 258.77 | 260.35 | 262.52 | 260.33 | 277.94 | 259.94 |
| 280.94 | 259.75 | 285.19 | 259.98 | 287.45 | 260 | 295.31 | 260.39 | 299.09 | 260.63 |
| 305.48 | 261.15 | 307.63 | 261.19 | 317.77 | 261.21 | 340.39 | 260.56 | 348.8 | 260.52 |
| 350.9 | 260.62 | 353.79 | 260.61 | 367.15 | 260.25 | 371.65 | 260.26 | 381.12 | 260.11 |
| 385.97 | 260.11 | 397.64 | 259.99 | 418.47 | 259.83 | 428.23 | 259.81 | 433 | 259.47 |
| 436.77 | 259.36 | 442.9 | 258.87 | 455.94 | 258.53 | 474.09 | 258.1 | 477.61 | 258.19 |
| 482.36 | 258 | 487.35 | 258 | 491.03 | 258.12 | 493.51 | 258.27 | 496.85 | 258.33 |
| 513.6 | 258.13 | 526.01 | 257.77 | 542.71 | 257.35 | 545.12 | 257.26 | 551.03 | 257.21 |
| 563.61 | 256.89 | 588.58 | 255.66 | 594.75 | 255.67 | 598.28 | 255.51 | 600.27 | 255.72 |
| 604.96 | 255.45 | 624.9 | 254.67 | 642.67 | 253.87 | 653.24 | 253.69 | 660.44 | 253.66 |
| 673.03 | 253.83 | 706.58 | 253.88 | 726.62 | 254.51 | 731.96 | 254.69 | 735.84 | 254.7 |
| 744.46 | 254.8 | 747.66 | 254.77 | 768.48 | 254.8 | 813.84 | 254.88 | 822.36 | 255.14 |
| 832.44 | 255.48 | 859.98 | 255.87 | 864.68 | 256.36 | 869.77 | 256.56 | 874.92 | 256.52 |
| 890.13 | 256.49 | 898.08 | 256.64 | 912.32 | 256.88 | 914.88 | 257.45 | 916.13 | 257.82 |
| 922.82 | 258.36 | 926.39 | 258.76 | 929.63 | 259.69 | 939.97 | 260.54 | 944.07 | 261.08 |
| 946.08 | 261.25 | 947.94 | 261.6 | 950.87 | 261.78 | 960.49 | 261.94 | 965.03 | 262.24 |
| 968.94 | 262.42 | 969.94 | 262.62 | 982.54 | 262.66 | 983.36 | 262.39 | 987.24 | 260.79 |
| 991.04 | 259.87 | 997.44 | 258.96 | 1000.19 | 258.81 | 1011.32 | 258.06 | 1021.18 | 257.92 |
| 1030.01 | 257.83 | 1051.84 | 257.58 | 1058.81 | 257.49 | 1069.74 | 257.31 | 1073.15 | 257.3 |
| 1075.75 | 257.57 | 1081.61 | 257.65 | 1092.63 | 258.14 | 1095.58 | 258.01 | 1103.33 | 257.75 |
| 1108.59 | 257.67 | 1117.6 | 257.43 | 1122.44 | 257.22 | 1130.04 | 257.2 | 1140.15 | 257.12 |
| 1143.49 | 257.06 | 1158.81 | 256.66 | 1159.49 | 256.7 | 1173.88 | 256.6 | 1176.69 | 256.66 |
| 1179.82 | 257.02 | 1183.64 | 257.96 | 1187.32 | 258.37 | 1194.59 | 258.91 | 1200.85 | 258.92 |
| 1203.05 | 258.66 | 1209.84 | 258.03 | 1218.12 | 257.12 | 1223.36 | 256.21 | 1231.1 | 255.29 |
| 1244.36 | 255.31 | 1252.66 | 255.29 | 1265.89 | 255.29 | 1270.32 | 255.67 | 1276.32 | 255.93 |
| 1280.05 | 256.22 | 1284.11 | 256.65 | 1288.09 | 257.14 | 1292.21 | 257.49 | 1295.19 | 257.67 |
| 1297.53 | 257.69 | 1301.31 | 257.58 | 1307.07 | 257.22 | 1312.15 | 256.57 | 1315.95 | 256.39 |
| 1317.86 | 256.18 | 1320.84 | 256.12 | 1324.11 | 256.15 | 1327.08 | 256.3 | 1329.42 | 256.5 |
| 1331.15 | 256.74 | 1333.46 | 256.93 | 1338.06 | 257.1 | 1345.52 | 257.22 | 1358.43 | 257.67 |
| 1373.29 | 258.47 | 1376.19 | 258.74 | 1387.39 | 259.52 | 1389.11 | 259.61 | 1391.17 | 259.58 |
| 1395.4 | 259.26 | 1404.94 | 257.92 | 1415.1 | 257.08 | 1423.73 | 256.39 | 1426 | 256.31 |
| 1429.49 | 256.47 | 1434.21 | 256.96 | 1438.2 | 257.32 | 1440.82 | 257.62 | 1441.85 | 257.56 |
| 1456.33 | 258.3 | 1481.18 | 258.41 | 1491.19 | 258.58 | 1494.71 | 258.54 | 1518.98 | 258.94 |
| 1533.05 | 259.12 | 1548.46 | 259.34 | 1551.42 | 259.34 | 1569.18 | 259.25 | 1586.14 | 259.21 |
| 1591.61 | 259.45 | 1609.15 | 260.64 | 1613.42 | 261.06 | 1623.41 | 261 | 1633.93 | 260.91 |
| 1642.65 | 259.91 | 1646.17 | 259.87 | 1647.57 | 259.76 | 1654.24 | 259.8 | 1668.81 | 258.86 |
| 1672.71 | 258.85 | 1675.98 | 259.27 | 1677.17 | 259.78 | 1689.2 | 260.47 | 1692.75 | 260.56 |
| 1695 | 260.73 | 1705.18 | 261.4 | 1712.04 | 261.67 | 1721.45 | 261.67 | 1723.88 | 261.54 |
| 1727.26 | 261.24 | 1732.15 | 260.74 | 1733.7 | 260.46 | 1735.76 | 260.42 | 1747.16 | 260.69 |
| 1752.51 | 260.69 | 1761.34 | 260.91 | 1762.82 | 260.75 | 1772.81 | 260.7 | 1788.76 | 259.79 |
| 1810.98 | 259.8 | 1819.99 | 259.97 | 1825.05 | 260.11 | 1839.37 | 260.64 | 1843.85 | 260.72 |
| 1845.89 | 260.7 | 1853.29 | 260.84 | 1865.21 | 260.52 | 1866.27 | 260.53 | 1872.57 | 260.82 |
| 1881.37 | 260.56 | 1883.55 | 260.4 | 1887.2 | 259.92 | 1912.24 | 259.88 | 1929.58 | 260.78 |
| 1934.02 | 261.47 | 1937.07 | 261.75 | 1941.95 | 262.07 | 1948.69 | 262.19 | 1950.27 | 262.25 |
| 1955.78 | 262.62 | 1960.02 | 262.82 | 1965.4 | 263.56 | 1980.65 | 263.57 | 1985.53 | 262.71 |
| 1989.88 | 262.29 | 1992.47 | 262.35 | 1994.36 | 262.17 | 1999.57 | 262.11 | 2007.46 | 261.83 |
| 2011.15 | 261.63 | 2017.44 | 261.19 | 2019.91 | 261.31 | 2025.48 | 261.08 | 2027.01 | 260.86 |
| 2028.79 | 260.4 | 2031.6 | 260.26 | 2032.76 | 260.45 | 2036.29 | 260.82 | 2040.15 | 261.33 |
| 2043.63 | 261.29 | 2053.1 | 261.63 | 2067.34 | 262.65 | 2076.5 | 262.65 | 2095.89 | 262.6 |
| 2106.75 | 262.34 | 2113.44 | 262.2 | 2115.81 | 262.08 | 2122.75 | 261.6 | 2128.91 | 260.66 |
| 2150.55 | 260.32 | 2155 | 260.21 | 2165.17 | 260.11 | 2179.51 | 260.11 | 2189.94 | 260.24 |
| 2194.16 | 260.21 | 2198.14 | 260.24 | 2198.5 | 260.3 | 2208.36 | 260.15 | 2222.64 | 260.11 |
| 2232.38 | 259.79 | 2238.46 | 259.88 | 2242.05 | 259.86 | 2251.04 | 260.05 | 2275.89 | 260.82 |
| 2278.52 | 261.32 | 2284.18 | 262.06 | 2285.68 | 261.8 | 2288.94 | 261.55 | 2295.53 | 260.88 |
| 2299.48 | 260.66 | 2306.31 | 260.4 | 2310.66 | 260.36 | 2315.51 | 260.56 | 2316.15 | 260.69 |
| 2319.58 | 260.89 | 2329.13 | 262.08 | 2332.12 | 262.41 | 2337 | 262.68 | 2343.23 | 262.76 |
| 2343.51 | 262.71 | 2353.93 | 263.63 | 2354.99 | 263.63 | 2364.67 | 262.67 | 2368.31 | 262.1 |
| 2371.34 | 261.72 | 2393.4 | 261.66 | 2395.41 | 261.57 | 2407.74 | 261.19 | 2421.41 | 261 |
| 2423.21 | 261.15 | 2428.41 | 261.08 | 2433.78 | 260.79 | 2437.4 | 260.76 | 2444.09 | 260.92 |
| 2455.48 | 260.76 | 2457.15 | 260.7 | 2460.91 | 260.7 | 2468.46 | 260.97 | 2477.23 | 260.87 |
| 2480.72 | 261.11 | 2484.04 | 261.14 | 2495.5 | 261.38 | 2496.88 | 261.33 | 2506.3 | 261.26 |
| 2508.82 | 261.29 | 2511.49 | 261.22 | 2528.95 | 260.89 | 2531.71 | 260.87 | 2542.14 | 260.66 |
| 2545.83 | 260.76 | 2553.2 | 260.81 | 2556.42 | 260.74 | 2563.3 | 260.73 | 2567.35 | 260.64 |
| 2573.78 | 260.65 | 2583.74 | 261.36 | 2587.53 | 261.58 | 2609.83 | 261.58 | 2624.62 | 261.56 |
| 2630.48 | 261.6 | 2634.32 | 261.76 | 2641.68 | 261.87 | 2644.67 | 261.98 | 2657.53 | 262.14 |
| 2663.88 | 262.01 | 2677.87 | 261.91 | 2690.33 | 262.11 | 2697.65 | 261.99 | 2711.63 | 261.53 |
| 2737.18 | 261.5 | 2740.45 | 261.19 | 2752.67 | 260.86 | 2752.98 | 260.99 | 2756.39 | 261.11 |
| 2758.45 | 260.91 | 2766.13 | 260.83 | 2772.6 | 261.2 | 2778.71 | 261.46 | 2780.32 | 261.41 |
| 2793 | 260.74 | 2794.1 | 260.7 | 2801.72 | 260.77 | 2807.08 | 260.94 | 2824.66 | 260.85 |
| 2840.92 | 260.67 | 2845.69 | 260.56 | 2856.59 | 260.08 | 2860.85 | 260.24 | 2863.84 | 260.27 |
| 2868.38 | 260.4 | 2870.05 | 260.51 | 2873.06 | 260.56 | 2882.78 | 260.56 | 2896.48 | 260.35 |
| 2901.79 | 260.4 | 2904.04 | 260.48 | 2907.73 | 260.51 | 2911.76 | 260.43 | 2931.62 | 259.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2933.59 | 259.81 | 2946.64 | 259.76 | 2964.87 | 259.45 | 2982.09 | 259.52 | 2989.23 | 259.53 |
| 2995.15 | 259.4 | 3000.37 | 259.21 | 3007.02 | 259.25 | 3025.74 | 259.16 | 3031.73 | 259.24 |
| 3035.88 | 259.09 | 3038.16 | 258.91 | 3048.19 | 258.72 | 3052.17 | 258.71 | 3055.53 | 258.78 |
| 3062.29 | 258.69 | 3075.79 | 258.62 | 3076.96 | 258.58 | 3088.87 | 258.51 | 3098 | 258.55 |
| 3102.58 | 258.69 | 3111.25 | 258.69 | 3114.65 | 258.6 | 3116.89 | 258.65 | 3119.04 | 258.58 |
| 3129.86 | 258.41 | 3135.23 | 258.45 | 3138.51 | 258.56 | 3144.47 | 258.56 | 3145.84 | 258.49 |
| 3151.74 | 258.35 | 3153.41 | 258.22 | 3157.92 | 258.09 | 3166.23 | 257.75 | 3168.65 | 257.71 |
| 3191.22 | 257.58 | 3205.21 | 257.68 | 3206.92 | 257.75 | 3210.77 | 257.75 | 3215.26 | 257.5 |
| 3220.53 | 257.33 | 3227.46 | 257.31 | 3229.62 | 257.2 | 3235.8 | 257.29 | 3239.01 | 257.44 |
| 3242.77 | 257.13 | 3247.07 | 257.4 | 3260 | 257.67 | 3261.8 | 257.75 | 3276.55 | 258.7 |
| 3278.73 | 258.78 | 3285 | 258.84 | 3292.81 | 258.97 | 3294.96 | 259.06 | 3300.71 | 259.06 |
| 3302.09 | 258.84 | 3307.5 | 258.87 | 3308.54 | 259.06 | 3312.66 | 259.15 | 3314.6 | 259.34 |
| 3319.53 | 259.62 | 3322.54 | 259.62 | 3327.07 | 259.4 | 3328.56 | 259.47 | 3333.72 | 259.39 |
| 3355.77 | 258.81 | 3359.36 | 258.74 | 3368.98 | 259.95 | 3381.85 | 261.3 | 3383.31 | 261.25 |
| 3388.81 | 260.64 | 3398.32 | 261.03 | 3402.8 | 260.99 | 3407.18 | 260.79 | 3412.95 | 260.61 |
| 3418.03 | 260.24 | 3431.31 | 260.32 | 3434.41 | 260.37 | 3436.86 | 260.34 | 3458.86 | 260.48 |
| 3465.86 | 260.73 | 3469.62 | 260.5 | 3472.47 | 260.43 | 3475.69 | 260.55 | 3481.14 | 261.68 |
| 3487.61 | 262.42 | 3490.22 | 262.65 | 3494.25 | 262.82 | 3498.09 | 263.09 | 3500.33 | 263.36 |
| 3506.81 | 264.5 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 141.56 | .04 | 2697.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 141.56 | 2697.65 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 153.157*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 267.45 | 5.12 | 267.45 | 7.21 | 267.36 | 10.56 | 266.9 | 15.46 | 266.43 |
| 16.88 | 266.06 | 19.88 | 265.45 | 28.12 | 264.9 | 34.76 | 264.67 | 41.13 | 264.3 |
| 44.41 | 264.25 | 46.24 | 264.12 | 50.27 | 263.44 | 53.21 | 263.42 | 54.99 | 263.3 |
| 55.59 | 263.44 | 57.32 | 263.43 | 59.04 | 263.27 | 62.52 | 262.73 | 64.42 | 262.58 |
| 66.26 | 262.71 | 67.72 | 262.7 | 71.34 | 262.41 | 73.45 | 262.34 | 88.09 | 261.59 |
| 97.4 | 261.41 | 108.09 | 261.42 | 116.97 | 261.37 | 121.49 | 261.32 | 129.56 | 261.11 |
| 131.25 | 261.14 | 132.39 | 260.93 | 136.15 | 260.8 | 141.74 | 260.28 | 163.13 | 260.29 |
| 179.72 | 260.32 | 180.94 | 260.28 | 204.44 | 260.21 | 208.98 | 260.14 | 212.87 | 259.97 |
| 224.07 | 259.83 | 227.11 | 259.86 | 230.03 | 259.73 | 238.94 | 259.82 | 240.81 | 259.93 |
| 246.7 | 259.94 | 250.92 | 260.02 | 255.18 | 259.92 | 258.98 | 259.89 | 274.64 | 259.47 |
| 277.69 | 259.26 | 282.01 | 259.48 | 284.31 | 259.5 | 292.28 | 259.87 | 296.13 | 260.09 |
| 302.62 | 260.58 | 314.81 | 260.61 | 330.04 | 260.16 | 337.3 | 259.93 | 346.61 | 259.91 |
| 348.73 | 260.01 | 351.67 | 260 | 365.24 | 259.63 | 370.6 | 259.63 | 379.42 | 259.53 |
| 384.35 | 259.55 | 410.08 | 259.44 | 427.26 | 259.41 | 432.11 | 259.05 | 435.94 | 258.94 |
| 442.17 | 258.44 | 455.41 | 258.08 | 473.84 | 257.6 | 477.41 | 257.69 | 482.23 | 257.5 |
| 487.31 | 257.5 | 491.04 | 257.62 | 493.56 | 257.79 | 496.95 | 257.85 | 514.3 | 257.65 |
| 531.25 | 257.2 | 543.52 | 256.91 | 545.97 | 256.82 | 551.97 | 256.76 | 564.74 | 256.45 |
| 590.11 | 255.14 | 596.37 | 255.15 | 599.96 | 254.99 | 600.19 | 255.12 | 601.98 | 255.21 |
| 606.73 | 254.97 | 626.98 | 254.25 | 645.03 | 253.44 | 655.76 | 253.26 | 663.08 | 253.24 |
| 675.88 | 253.4 | 709.99 | 253.44 | 735.79 | 254.27 | 739.59 | 254.27 | 748.5 | 254.37 |
| 751.76 | 254.35 | 772.92 | 254.37 | 819.04 | 254.45 | 827.7 | 254.71 | 837.95 | 255.05 |
| 865.95 | 255.44 | 870.73 | 255.93 | 875.91 | 256.13 | 881.14 | 256.09 | 896.61 | 256.04 |
| 919.16 | 256.44 | 921.77 | 257.03 | 923.04 | 257.41 | 929.84 | 257.97 | 933.47 | 258.38 |
| 936.77 | 259.35 | 947.27 | 260.22 | 951.44 | 260.76 | 953.49 | 260.94 | 955.38 | 261.3 |
| 958.36 | 261.48 | 968.14 | 261.63 | 972.75 | 261.93 | 976.73 | 262.1 | 977.75 | 262.31 |
| 990.56 | 262.33 | 991.39 | 262.05 | 995.33 | 260.4 | 999.2 | 259.43 | 1005.71 | 258.48 |
| 1008.51 | 258.32 | 1019.82 | 257.53 | 1038.82 | 257.25 | 1042.24 | 257.21 | 1068.11 | 256.84 |
| 1079.21 | 256.65 | 1082.68 | 256.65 | 1085.32 | 256.93 | 1091.29 | 257.02 | 1102.49 | 257.57 |
| 1113.36 | 257.19 | 1118.72 | 257.1 | 1127.88 | 256.84 | 1132.79 | 256.61 | 1140.52 | 256.57 |
| 1150.8 | 256.49 | 1169.78 | 256.09 | 1170.47 | 256.13 | 1185.4 | 256.07 | 1187.95 | 256.14 |
| 1191.14 | 256.51 | 1195.02 | 257.48 | 1198.76 | 257.9 | 1206.15 | 258.45 | 1212.51 | 258.46 |
| 1214.75 | 258.19 | 1221.65 | 257.51 | 1230.08 | 256.56 | 1235.4 | 255.61 | 1243.27 | 254.65 |
| 1278.64 | 254.65 | 1283.14 | 255.03 | 1289.24 | 255.31 | 1293.04 | 255.61 | 1297.16 | 256.06 |
| 1301.22 | 256.57 | 1305.4 | 256.94 | 1308.43 | 257.12 | 1310.81 | 257.14 | 1314.66 | 257.04 |
| 1320.51 | 256.67 | 1325.68 | 256.02 | 1329.54 | 255.85 | 1331.48 | 255.65 | 1334.51 | 255.59 |
| 1337.84 | 255.63 | 1340.86 | 255.79 | 1343.24 | 256.01 | 1344.99 | 256.26 | 1347.34 | 256.47 |
| 1352.37 | 256.65 | 1359.6 | 256.78 | 1363.81 | 256.95 | 1372.73 | 257.25 | 1387.83 | 258.08 |
| 1391.19 | 258.39 | 1402.17 | 259.14 | 1403.92 | 259.24 | 1406.02 | 259.2 | 1410.31 | 258.85 |
| 1420.02 | 257.44 | 1439.12 | 255.79 | 1441.42 | 255.69 | 1444.98 | 255.82 | 1453.83 | 256.66 |
| 1456.5 | 256.97 | 1457.54 | 256.9 | 1472.27 | 257.65 | 1490.55 | 257.69 | 1496.72 | 257.69 |
| 1499.34 | 257.76 | 1507.7 | 257.9 | 1511.29 | 257.87 | 1535.96 | 258.24 | 1550.27 | 258.43 |
| 1565.94 | 258.67 | 1575.1 | 258.66 | 1587 | 258.62 | 1604.24 | 258.61 | 1609.81 | 258.85 |
| 1627.63 | 260.09 | 1631.98 | 260.53 | 1652.83 | 260.46 | 1661.69 | 259.45 | 1665.28 | 259.43 |
| 1666.7 | 259.32 | 1673.48 | 259.38 | 1688.3 | 258.44 | 1692.26 | 258.42 | 1695.59 | 258.87 |
| 1696.8 | 259.39 | 1709.03 | 260.11 | 1712.64 | 260.2 | 1725.27 | 261.06 | 1728.43 | 261.22 |
| 1732.24 | 261.33 | 1741.81 | 261.34 | 1744.29 | 261.2 | 1752.69 | 260.37 | 1754.26 | 260.08 |
| 1756.36 | 260.04 | 1767.95 | 260.32 | 1773.39 | 260.32 | 1782.37 | 260.55 | 1783.88 | 260.39 |
| 1793.3 | 260.36 | 1794.03 | 260.33 | 1810.24 | 259.39 | 1832.84 | 259.4 | 1841.99 | 259.57 |
| 1847.15 | 259.69 | 1861.7 | 260.18 | 1868.33 | 260.24 | 1875.86 | 260.39 | 1887.98 | 260.05 |
| 1889.05 | 260.07 | 1895.45 | 260.38 | 1904.41 | 260.11 | 1906.62 | 259.96 | 1910.33 | 259.46 |
| 1935.79 | 259.44 | 1953.42 | 260.39 | 1957.94 | 261.11 | 1961.04 | 261.41 | 1965.99 | 261.74 |
| 1974.46 | 261.92 | 1980.05 | 262.31 | 1984.37 | 262.52 | 1989.83 | 263.28 | 2005.34 | 263.28 |
| 2010.31 | 262.38 | 2011.92 | 262.17 | 2014.72 | 261.95 | 2017.36 | 262 | 2019.28 | 261.81 |
| 2024.58 | 261.73 | 2032.6 | 261.44 | 2036.35 | 261.23 | 2042.74 | 260.76 | 2045.26 | 260.88 |
| 2050.92 | 260.66 | 2052.47 | 260.43 | 2054.28 | 259.96 | 2057.15 | 259.82 | 2058.33 | 260.02 |
| 2061.91 | 260.41 | 2065.83 | 260.94 | 2069.38 | 260.91 | 2079.01 | 261.27 | 2093.48 | 262.33 |
| 2122.51 | 262.3 | 2140.35 | 261.91 | 2142.76 | 261.79 | 2149.81 | 261.3 | 2156.08 | 260.34 |
| 2178.08 | 259.99 | 2182.61 | 259.87 | 2192.95 | 259.77 | 2207.53 | 259.76 | 2218.13 | 259.89 |
| 2222.42 | 259.87 | 2226.46 | 259.9 | 2226.83 | 259.96 | 2236.85 | 259.8 | 2251.38 | 259.76 |
| 2261.28 | 259.43 | 2267.46 | 259.51 | 2271.11 | 259.5 | 2280.91 | 259.7 | 2305.52 | 260.41 |
| 2308.19 | 260.91 | 2313.95 | 261.67 | 2315.47 | 261.4 | 2319.02 | 261.11 | 2325.49 | 260.43 |
| 2329.4 | 260.2 | 2336.44 | 259.93 | 2340.86 | 259.88 | 2345.79 | 260.1 | 2346.44 | 260.24 |
| 2349.94 | 260.45 | 2358.71 | 261.58 | 2362.69 | 262.04 | 2367.65 | 262.31 | 2373.98 | 262.4 |
| 2374.27 | 262.36 | 2384.86 | 263.31 | 2385.93 | 263.31 | 2395.78 | 262.33 | 2399.48 | 261.75 |
| 2402.56 | 261.36 | 2424.98 | 261.33 | 2427.03 | 261.24 | 2439.56 | 260.87 | 2453.46 | 260.69 |
| 2455.29 | 260.86 | 2460.15 | 260.79 | 2463.17 | 260.68 | 2466.04 | 260.49 | 2469.72 | 260.46 |
| 2476.53 | 260.63 | 2485.81 | 260.5 | 2490.54 | 260.4 | 2493.62 | 260.4 | 2496.09 | 260.52 |
| 2501.3 | 260.69 | 2510.22 | 260.58 | 2513.76 | 260.82 | 2517.14 | 260.85 | 2528.8 | 261.1 |
| 2530.19 | 261.05 | 2539.78 | 260.98 | 2542.33 | 261.01 | 2545.05 | 260.94 | 2562.8 | 260.59 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2565.61 | 260.57 | 2576.21 | 260.35 | 2579.97 | 260.46 | 2587.45 | 260.5 | 2590.73 | 260.44 |
| 2597.72 | 260.42 | 2601.85 | 260.32 | 2608.38 | 260.33 | 2618.5 | 261.05 | 2622.36 | 261.27 |
| 2645.03 | 261.27 | 2663.42 | 261.26 | 2666.03 | 261.3 | 2669.93 | 261.46 | 2674.55 | 261.57 |
| 2677.42 | 261.59 | 2680.46 | 261.7 | 2687.54 | 261.82 | 2693.53 | 261.88 | 2699.98 | 261.76 |
| 2714.21 | 261.68 | 2720.84 | 261.76 | 2726.88 | 261.88 | 2732 | 261.82 | 2734.32 | 261.75 |
| 2748.75 | 261.28 | 2773.24 | 261.26 | 2775.11 | 261.25 | 2778.49 | 260.93 | 2791.09 | 260.59 |
| 2791.42 | 260.73 | 2794.93 | 260.84 | 2797.05 | 260.64 | 2804.98 | 260.56 | 2811.66 | 260.94 |
| 2817.96 | 261.21 | 2819.63 | 261.15 | 2832.7 | 260.46 | 2833.84 | 260.43 | 2841.71 | 260.49 |
| 2843.51 | 260.59 | 2847.23 | 260.67 | 2865.37 | 260.58 | 2882.16 | 260.4 | 2887.07 | 260.28 |
| 2898.33 | 259.79 | 2901.38 | 259.85 | 2902.72 | 259.95 | 2905.81 | 259.98 | 2910.49 | 260.12 |
| 2912.21 | 260.22 | 2915.31 | 260.28 | 2925.34 | 260.28 | 2939.49 | 260.06 | 2944.97 | 260.12 |
| 2947.29 | 260.19 | 2951.09 | 260.22 | 2955.25 | 260.15 | 2975.74 | 259.53 | 2991.24 | 259.46 |
| 3010.05 | 259.13 | 3027.82 | 259.21 | 3035.19 | 259.22 | 3041.29 | 259.08 | 3046.69 | 258.89 |
| 3053.55 | 258.92 | 3072.86 | 258.84 | 3079.04 | 258.91 | 3083.33 | 258.76 | 3085.67 | 258.58 |
| 3096.02 | 258.38 | 3100.13 | 258.37 | 3103.6 | 258.44 | 3106.76 | 258.43 | 3110.58 | 258.34 |
| 3124.51 | 258.28 | 3125.71 | 258.24 | 3138 | 258.16 | 3147.42 | 258.2 | 3152.15 | 258.34 |
| 3161.1 | 258.34 | 3164.61 | 258.26 | 3166.92 | 258.3 | 3169.14 | 258.24 | 3180.29 | 258.06 |
| 3185.84 | 258.1 | 3189.23 | 258.21 | 3195.38 | 258.21 | 3196.78 | 258.14 | 3202.88 | 257.99 |
| 3204.59 | 257.86 | 3209.25 | 257.72 | 3217.82 | 257.37 | 3220.32 | 257.34 | 3243.61 | 257.2 |
| 3258.04 | 257.31 | 3259.81 | 257.37 | 3263.79 | 257.37 | 3268.41 | 257.12 | 3273.86 | 256.94 |
| 3281 | 256.92 | 3283.24 | 256.81 | 3289.61 | 256.9 | 3291.04 | 257.03 | 3292.93 | 257.05 |
| 3296.81 | 256.73 | 3301.24 | 257.02 | 3314.58 | 257.3 | 3316.44 | 257.37 | 3331.66 | 258.36 |
| 3333.91 | 258.44 | 3340.38 | 258.5 | 3348.44 | 258.63 | 3350.65 | 258.73 | 3356.59 | 258.73 |
| 3358.02 | 258.5 | 3361.66 | 258.48 | 3363.59 | 258.54 | 3364.67 | 258.73 | 3368.92 | 258.83 |
| 3370.92 | 259.02 | 3376.01 | 259.31 | 3379.12 | 259.31 | 3383.79 | 259.08 | 3385.32 | 259.16 |
| 3390.65 | 259.07 | 3413.41 | 258.47 | 3417.1 | 258.4 | 3427.04 | 259.65 | 3440.32 | 261.05 |
| 3441.82 | 261 | 3447.5 | 260.37 | 3457.31 | 260.76 | 3461.93 | 260.73 | 3466.45 | 260.52 |
| 3472.41 | 260.33 | 3477.64 | 259.95 | 3491.35 | 260.04 | 3497.07 | 260.06 | 3519.77 | 260.2 |
| 3527 | 260.46 | 3530.88 | 260.23 | 3533.82 | 260.15 | 3537.15 | 260.27 | 3542.76 | 261.45 |
| 3549.45 | 262.21 | 3552.14 | 262.44 | 3556.3 | 262.63 | 3560.25 | 262.9 | 3562.57 | 263.18 |
| 3569.26 | 264.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 136.15 | .04 | 2734.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136.15 | 2734.32 | 34.67 | 19.83 | 18.51 | .1 | .3 |

CROSS SECTION

RIVER: WASH0
REACH: WASH0 RS: 133.33

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 266.964.919922 | | 266.996.919922 | | 266.9110.13989 | | 266.4614.84985 | | 266 |
| 16.20996 | 265.6219.08984 | | 265 | 27 | 264.4633.37988 | | 264.24 | 39.5 | 263.86 |
| 42.6499 | 263.81 44.3999 | | 263.6848.27002 | | 26351.09985 | | 262.9952.81006 | | 262.87 |
| 53.37988 | 263.0255.04004 | | 263.0156.68994 | | 262.8560.04004 | | 262.361.85986 | | 262.15 |
| 63.62988 | 262.2965.03003 | | 262.2968.51001 | | 26270.53003 | | 261.9384.58984 | | 261.22 |
| 93.53003 | 261.08103.5601 | | 261.14116.6599 | | 261.07124.4099 | | 260.87 | 126.04 | 260.9 |
| 127.1299 | 260.68 | 130.74 | 260.54136.4199 | | 260 | 174.98 | 260 | 176.22 | 259.96 |
| 200.8599 | 259.84204.3799 | | 259.78208.6299 | | 259.58213.1499 | | 259.53 | 220.25 | 259.4 |
| 223.0898 | 259.44 | 226.05 | 259.3235.0999 | | 259.39 | 237 | 259.51 | 242.98 | 259.51 |
| 247.26 | 259.59251.5898 | | 259.49 | 255.45 | 259.46271.3499 | | 259274.4399 | | 258.77 |
| 278.8298 | 258.99281.1599 | | 259289.1699 | | 259.35293.1599 | | 259.55 | 299.75 | 260 |
| 312.1299 | 260 | 334.96 | 259.3344.4099 | | 259.29346.5701 | | 259.4 | 349.55 | 259.39 |
| 363.3298 | 259 | 367.97 | 259.01 | 377.73 | 258.95 | 382.73 | 259 | 426.3 | 259 |
| 431.22 | 258.63435.0601 | | 258.52441.4299 | | 258473.5898 | | 257.11 | 477.21 | 257.2 |
| 482.1099 | 257 | 487.26 | 257 | 491.05 | 257.13493.6099 | | 257.3 | 497.05 | 257.36 |
| 514.3201 | 257.18544.3298 | | 256.46546.8201 | | 256.37552.8699 | | 256.32565.8799 | | 256 |
| 591.6299 | 254.63 | 597.99 | 254.63601.6299 | | 254.47601.8699 | | 254.6603.6799 | | 254.71 |
| 608.51 | 254.48629.0701 | | 253.83647.3899 | | 253.01 | 658.29 | 252.83 | 665.72 | 252.81 |
| 678.73 | 252.97713.3999 | | 253739.6199 | | 253.85 | 743.48 | 253.85746.9399 | | 253.91 |
| 752.4099 | 253.95755.8499 | | 253.92 | 824.24 | 254.01824.8799 | | 254.02 | 843.46 | 254.62 |
| 871.9199 | 255 | 876.78 | 255.5 | 882.04 | 255.7 | 884.55 | 255.71887.3599 | | 255.65 |
| 903.0798 | 255.59 | 926.01 | 256928.6599 | | 256.61 | 929.95 | 257936.8599 | | 257.58 |
| 940.55 | 258943.8999 | | 259 | 953.26 | 259.8954.5798 | | 259.89958.8201 | | 260.45 |
| 960.8999 | 260.63962.8201 | | 261965.8499 | | 261.18 | 975.79 | 261.32 | 980.48 | 261.62 |
| 984.52 | 261.79985.5601 | | 262998.5798 | | 262999.4199 | | 261.71 | 1003.43 | 260 |
| 1007.36 | 259 | 1013.98 | 258 | 1016.82 | 257.83 | 1028.32 | 257 | 1088.69 | 256 |
| 1092.21 | 256 | 1094.9 | 256.29 | 1100.96 | 256.39 | 1112.35 | 256.99 | 1123.4 | 256.63 |
| 1128.84 | 256.54 | 1136.15 | 256.3 | 1138.15 | 256.26 | 1143.15 | 256.01 | 1161.45 | 255.86 |
| 1180.74 | 255.52 | 1181.44 | 255.56 | 1196.62 | 255.54 | 1199.21 | 255.62 | 1202.45 | 256 |
| 1206.4 | 257 | 1210.2 | 257.43 | 1217.71 | 258 | 1224.18 | 258 | 1226.45 | 257.71 |
| 1233.47 | 257 | 1242.03 | 256 | 1247.44 | 255 | 1255.44 | 254 | 1291.39 | 254 |
| 1295.97 | 254.4 | 1302.17 | 254.69 | 1306.03 | 255 | 1310.22 | 255.47 | 1314.34 | 256 |
| 1318.59 | 256.38 | 1321.67 | 256.57 | 1324.09 | 256.6 | 1328 | 256.5 | 1333.95 | 256.13 |
| 1339.2 | 255.47 | 1343.13 | 255.31 | 1345.1 | 255.11 | 1348.18 | 255.06 | 1351.56 | 255.11 |
| 1354.63 | 255.29 | 1357.05 | 255.52 | 1358.83 | 255.78 | 1361.22 | 256 | 1366.33 | 256.2 |
| 1373.68 | 256.34 | 1377.96 | 256.52 | 1387.03 | 256.83 | 1402.38 | 257.68 | 1405.79 | 258 |
| 1416.95 | 258.76 | 1418.73 | 258.86 | 1420.86 | 258.82 | 1425.23 | 258.45 | 1435.09 | 256.97 |
| 1454.51 | 255.19 | 1456.85 | 255.07 | 1460.46 | 255.18 | 1469.46 | 256 | 1472.17 | 256.31 |
| 1473.23 | 256.24 | 1488.2 | 256.99 | 1513.05 | 257 | 1513.88 | 257.04 | 1524.22 | 257.23 |
| 1527.86 | 257.19 | 1529.55 | 257.23 | 1567.48 | 257.73 | 1583.41 | 258 | 1622.34 | 258 |
| 1628 | 258.25 | 1646.12 | 259.54 | 1650.56 | 260 | 1671.73 | 260 | 1680.74 | 259 |
| 1684.38 | 258.99 | 1685.83 | 258.88 | 1690.64 | 258.91 | 1692.72 | 258.96 | 1707.78 | 258.01 |
| 1711.81 | 258 | 1715.19 | 258.46 | 1716.42 | 259 | 1728.85 | 259.74 | 1732.52 | 259.83 |
| 1734.84 | 260.01 | 1745.36 | 260.72 | 1748.57 | 260.88 | 1752.45 | 261 | 1762.17 | 261 |
| 1764.69 | 260.86 | 1768.18 | 260.53 | 1773.23 | 260 | 1774.83 | 259.7 | 1776.96 | 259.66 |
| 1788.74 | 259.95 | 1794.27 | 259.95 | 1803.4 | 260.19 | 1804.93 | 260.03 | 1814.51 | 260 |
| 1815.25 | 259.97 | 1831.73 | 259 | 1854.7 | 259 | 1869.24 | 259.27 | 1884.09 | 259.72 |
| 1888.66 | 259.79 | 1890.59 | 259.77 | 1898.42 | 259.93 | 1910.74 | 259.58 | 1911.83 | 259.6 |
| 1918.34 | 259.93 | 1927.44 | 259.67 | 1929.69 | 259.51 | 1933.46 | 259 | 1959.34 | 259 |
| 1977.26 | 260 | 1978.79 | 260.29 | 1981.85 | 260.75 | 1985 | 261.06 | 1990.04 | 261.41 |
| 1997.01 | 261.54 | 1998.64 | 261.6 | 2004.33 | 262 | 2008.72 | 262.21 | 2014.27 | 263 |
| 2030.03 | 263 | 2035.08 | 262.06 | 2036.72 | 261.84 | 2039.57 | 261.6 | 2042.25 | 261.65 |
| 2044.2 | 261.45 | 2049.59 | 261.36 | 2057.74 | 261.04 | 2061.55 | 260.82 | 2068.05 | 260.34 |
| 2070.61 | 260.46 | 2076.36 | 260.23 | 2077.94 | 260 | 2079.78 | 259.52 | 2082.69 | 259.38 |
| 2083.89 | 259.59 | 2087.53 | 260 | 2091.52 | 260.56 | 2095.12 | 260.53 | 2104.91 | 260.91 |
| 2119.62 | 262 | 2149.13 | 262 | 2167.26 | 261.62 | 2169.71 | 261.5 | 2176.88 | 261 |
| 2183.25 | 260.01 | 2205.61 | 259.66 | 2210.21 | 259.54 | 2220.72 | 259.43 | 2235.54 | 259.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 2246.32 | 259.54 | 2250.68 | 259.52 | 2254.79 | 259.56 | 2255.16 | 259.62 | 2265.35 | 259.46 |
| 2280.11 | 259.42 | 2290.18 | 259.07 | 2296.46 | 259.15 | 2300.17 | 259.13 | 2309.46 | 259.32 |
| 2335.14 | 260 | 2337.86 | 260.51 | 2343.71 | 261.28 | 2345.26 | 261 | 2348.62 | 260.72 |
| 2355.44 | 259.98 | 2359.52 | 259.73 | 2366.57 | 259.45 | 2371.07 | 259.41 | 2376.08 | 259.64 |
| 2376.74 | 259.78 | 2380.29 | 260 | 2389.21 | 261.18 | 2393.25 | 261.66 | 2398.29 | 261.95 |
| 2404.73 | 262.05 | 2405.02 | 262 | 2415.79 | 263 | 2416.88 | 263 | 2426.89 | 262 |
| 2430.65 | 261.4 | 2433.78 | 261 | 2456.57 | 261 | 2458.65 | 260.91 | 2471.39 | 260.55 |
| 2485.52 | 260.39 | 2487.38 | 260.56 | 2492.75 | 260.49 | 2495.38 | 260.38 | 2498.3 | 260.19 |
| 2502.04 | 260.16 | 2508.96 | 260.34 | 2520.73 | 260.17 | 2522.45 | 260.11 | 2526.34 | 260.11 |
| 2528.85 | 260.23 | 2534.14 | 260.4 | 2543.21 | 260.29 | 2546.81 | 260.54 | 2550.24 | 260.57 |
| 2562.09 | 260.82 | 2563.51 | 260.77 | 2573.25 | 260.7 | 2575.85 | 260.73 | 2578.61 | 260.66 |
| 2596.65 | 260.29 | 2599.51 | 260.27 | 2610.28 | 260.04 | 2614.1 | 260.15 | 2621.71 | 260.2 |
| 2625.04 | 260.13 | 2632.15 | 260.11 | 2636.34 | 260 | 2642.98 | 260 | 2653.27 | 260.74 |
| 2657.24 | 260.97 | 2698.92 | 260.96 | 2701.58 | 261 | 2705.54 | 261.17 | 2710.24 | 261.28 |
| 2713.15 | 261.31 | 2716.24 | 261.43 | 2723.44 | 261.56 | 2729.53 | 261.63 | 2736.09 | 261.51 |
| 2750.55 | 261.44 | 2757.29 | 261.53 | 2763.43 | 261.65 | 2768.63 | 261.59 | 2770.99 | 261.52 |
| 2785.86 | 261.03 | 2811.11 | 261.01 | 2813.04 | 261 | 2816.52 | 260.67 | 2829.51 | 260.32 |
| 2829.85 | 260.46 | 2833.47 | 260.58 | 2835.66 | 260.37 | 2843.83 | 260.29 | 2850.72 | 260.68 |
| 2857.21 | 260.96 | 2858.93 | 260.9 | 2872.41 | 260.19 | 2873.58 | 260.15 | 2881.69 | 260.22 |
| 2883.55 | 260.32 | 2887.39 | 260.4 | 2906.09 | 260.31 | 2923.39 | 260.12 | 2928.46 | 260 |
| 2940.06 | 259.49 | 2943.21 | 259.56 | 2944.59 | 259.66 | 2947.77 | 259.69 | 2952.6 | 259.83 |
| 2954.37 | 259.94 | 2957.57 | 260 | 2967.91 | 260 | 2982.49 | 259.77 | 2988.14 | 259.83 |
| 2990.53 | 259.91 | 2994.45 | 259.94 | 2998.74 | 259.86 | 3019.86 | 259.23 | 3021.96 | 259.2 |
| 3035.84 | 259.15 | 3055.23 | 258.81 | 3073.55 | 258.89 | 3081.15 | 258.9 | 3087.44 | 258.76 |
| 3093 | 258.56 | 3100.07 | 258.6 | 3119.98 | 258.51 | 3126.35 | 258.59 | 3130.77 | 258.43 |
| 3133.19 | 258.24 | 3143.86 | 258.04 | 3148.09 | 258.03 | 3151.67 | 258.1 | 3154.93 | 258.09 |
| 3158.86 | 258 | 3173.22 | 257.93 | 3174.46 | 257.89 | 3187.13 | 257.81 | 3196.84 | 257.85 |
| 3201.72 | 258 | 3210.94 | 258 | 3214.56 | 257.91 | 3216.94 | 257.96 | 3219.23 | 257.89 |
| 3230.73 | 257.71 | 3236.45 | 257.75 | 3239.94 | 257.86 | 3246.28 | 257.86 | 3247.73 | 257.79 |
| 3254.01 | 257.64 | 3255.78 | 257.5 | 3260.58 | 257.36 | 3269.42 | 257 | 3271.99 | 256.96 |
| 3296 | 256.82 | 3310.88 | 256.93 | 3312.7 | 257 | 3316.8 | 257 | 3321.57 | 256.74 |
| 3327.18 | 256.55 | 3332.2 | 256.56 | 3334.55 | 256.53 | 3336.85 | 256.42 | 3340.41 | 256.44 |
| 3343.42 | 256.51 | 3344.9 | 256.64 | 3346.84 | 256.67 | 3350.84 | 256.34 | 3355.41 | 256.63 |
| 3369.16 | 256.92 | 3371.08 | 257 | 3386.77 | 258.02 | 3389.09 | 258.1 | 3395.76 | 258.16 |
| 3404.07 | 258.3 | 3406.35 | 258.4 | 3412.47 | 258.4 | 3413.94 | 258.16 | 3417.7 | 258.14 |
| 3419.69 | 258.2 | 3420.8 | 258.4 | 3422.72 | 258.4 | 3425.18 | 258.5 | 3427.24 | 258.7 |
| 3432.49 | 259 | 3435.69 | 259 | 3440.51 | 258.76 | 3442.09 | 258.84 | 3447.58 | 258.75 |
| 3471.04 | 258.13 | 3474.85 | 258.06 | 3485.09 | 259.35 | 3498.78 | 260.79 | 3500.33 | 260.74 |
| 3506.18 | 260.09 | 3516.3 | 260.5 | 3521.06 | 260.46 | 3525.72 | 260.25 | 3531.86 | 260.05 |
| 3537.26 | 259.66 | 3551.39 | 259.75 | 3554.69 | 259.8 | 3557.29 | 259.77 | 3580.69 | 259.92 |
| 3588.14 | 260.19 | 3592.14 | 259.95 | 3595.17 | 259.87 | 3598.6 | 260 | 3604.39 | 261.21 |
| 3611.28 | 262 | 3614.05 | 262.24 | 3618.34 | 262.43 | 3622.42 | 262.71 | 3624.81 | 263 |
| 3631.7 | 264.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 130.74 | .04 | 2770.99 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 130.74 | 2770.99 | .1 | .3 |

CROSS SECTION

RIVER: WASH60
REACH: WASH60 RS: 5477.11

INPUT
Description:
Station Elevation Data num= 274

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 480.552.040009 | | 4805.529999 | | 479.08 | 5.76001 | 4797.660004 | | 478.48 |
| 9.339996 | 47811.57001 | | 477.4212.89001 | | 47713.70999 | | 476.7616.58002 | | 476 |
| 17.70001 | 475.6819.98001 | | 475 | 21.56 | 474.56 | 22.09 | 474.4 | 22.59 | 474.27 |
| 23.34 | 47425.33002 | | 473.4226.67999 | | 473 | 28.88 | 472.77 | 30.41 | 472.58 |
| 31.76999 | 472.3933.10001 | | 472.2234.86002 | | 472 | 35.41 | 471.89 | 36.09 | 471.78 |
| 37.16 | 471.6238.32001 | | 471.4138.95001 | | 471.2439.04001 | | 471.2339.20999 | | 471.21 |
| 39.48001 | 471.19 | 39.62 | 471.1740.17001 | | 471.1140.20999 | | 471.11 | 40.22 | 471.11 |
| 40.26001 | 471.140.29999 | | 471.1 | 40.37 | 471.1240.58002 | | 471.18 | 40.59 | 471.18 |
| 40.66 | 471.1940.76001 | | 471.240.85001 | | 471.2 | 41.12 | 471.1941.26001 | | 471.19 |
| 41.36002 | 471.1941.54001 | | 471.1841.58002 | | 471.1841.60001 | | 471.1741.67001 | | 471.15 |
| 41.67999 | 471.15 | 41.91 | 471.1442.11002 | | 471.1342.45001 | | 471.1442.51999 | | 471.14 |
| 42.70999 | 471.16 | 43.12 | 471.1844.83002 | | 471.21 | 45.34 | 471.21 | 45.86 | 471.22 |
| 46.5 | 471.24 | 46.97 | 471.26 | 48.22 | 471.3 | 55.55 | 471.5167.54001 | | 471.98 |
| 67.58 | 471.98 | 67.63 | 471.98 | 67.81 | 471.9968.07001 | | 47269.04001 | | 472.14 |
| 70.02 | 472.2871.21001 | | 472.46 | 71.7 | 472.53 | 74.61 | 473 | 74.73 | 473 |
| 74.89 | 473 | 75.72 | 473 | 76.08 | 473 | 77.09 | 47377.79001 | | 473 |
| 77.95 | 47378.07001 | | 473 | 78.73 | 473 | 78.88 | 473 | 81.14 | 473 |
| 93 | 472.296.10001 | | 472 | 96.17 | 472 | 96.42 | 472 | 96.5 | 472 |
| 96.56 | 472 | 103.28 | 472.76 | 106.78 | 472.96 | 107.64 | 473 | 108.78 | 473 |
| 109.28 | 473 | 109.53 | 473 | 109.67 | 473 | 109.99 | 473 | 110.02 | 473 |
| 110.22 | 473 | 110.25 | 473 | 110.52 | 473 | 110.86 | 473 | 110.96 | 473 |
| 110.97 | 473 | 111.83 | 473 | 111.84 | 473 | 111.85 | 473 | 116.15 | 472.99 |
| 116.98 | 472.99 | 120 | 473 | 123.01 | 473 | 124.17 | 473.52 | 125.5 | 474 |
| 125.63 | 474 | 125.73 | 474 | 125.95 | 474 | 129.82 | 473.14 | 130.48 | 473 |
| 130.85 | 472.9 | 134.9 | 472 | 135.68 | 471.85 | 136.59 | 471.65 | 136.88 | 471.58 |
| 136.97 | 471.57 | 137.04 | 471.58 | 137.25 | 471.59 | 137.46 | 471.6 | 139.81 | 471.69 |
| 144.47 | 471.85 | 147.25 | 471.92 | 151 | 472 | 155.05 | 472.33 | 157.11 | 473 |
| 157.3 | 473.11 | 157.6 | 473.36 | 157.72 | 473.39 | 157.86 | 473.38 | 158.2 | 473.36 |
| 158.29 | 473.35 | 159.81 | 473.05 | 160.2 | 473 | 162.68 | 472.73 | 169.33 | 472 |
| 170.14 | 471.9 | 172.79 | 471.67 | 173.44 | 471.65 | 174.68 | 471.63 | 175.24 | 471.62 |
| 176.19 | 471.6 | 176.59 | 471.59 | 177.22 | 471.58 | 177.4 | 471.58 | 177.6 | 471.59 |
| 177.68 | 471.59 | 178.98 | 471.66 | 179.49 | 471.68 | 180.53 | 471.7 | 181.95 | 471.73 |
| 184.25 | 471.76 | 184.89 | 471.78 | 186 | 471.83 | 186.69 | 471.86 | 189.29 | 472 |
| 190.43 | 472.27 | 191.46 | 472.5 | 191.56 | 472.51 | 191.66 | 472.52 | 191.92 | 472.53 |
| 192.05 | 472.53 | 192.26 | 472.5 | 192.86 | 472.24 | 193.64 | 472 | 202.24 | 471.59 |
| 203.08 | 471.55 | 203.56 | 471.53 | 204.43 | 471.51 | 204.72 | 471.5 | 205.23 | 471.49 |
| 205.58 | 471.49 | 206.38 | 471.47 | 206.77 | 471.47 | 207.66 | 471.44 | 210.86 | 471.37 |
| 211.11 | 471.37 | 211.47 | 471.36 | 211.57 | 471.36 | 211.71 | 471.36 | 212.02 | 471.37 |
| 212.1 | 471.37 | 212.24 | 471.37 | 216.29 | 471.23 | 216.44 | 471.22 | 216.6 | 471.21 |
| 216.65 | 471.21 | 216.71 | 471.21 | 216.95 | 471.2 | 217.06 | 471.2 | 224.09 | 471 |
| 225.77 | 470.96 | 225.83 | 470.96 | 225.87 | 470.95 | 225.97 | 470.95 | 226.04 | 470.95 |
| 226.13 | 470.95 | 226.2 | 470.95 | 226.22 | 470.94 | 226.27 | 470.94 | 226.35 | 470.94 |
| 226.38 | 470.94 | 226.44 | 470.93 | 226.58 | 470.93 | 226.64 | 470.92 | 226.69 | 470.92 |
| 226.91 | 470.91 | 227.02 | 470.9 | 227.56 | 470.88 | 227.85 | 470.87 | 241.84 | 470.35 |
| 242.56 | 470.32 | 242.85 | 470.31 | 243.41 | 470.29 | 243.67 | 470.28 | 244.11 | 470.25 |

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  246.28  470.13  246.62  470.11  247.89  470.03  248.32     470  248.71  469.75
  250.01     469  251.07  468.44  251.14   468.4  251.32  468.33  251.91     468
     252  467.97  252.34  467.84   254.1     467  261.49     467  265.26     467
  268.31     467  272.91     467  276.32     467  276.93  467.15  280.77     468
  281.98  468.57   282.7     469  283.63   469.5  284.63     470  286.12   470.8
  286.55     471  286.85   471.2  287.88  471.78  288.26     472  289.57  472.89
  289.73     473  289.87   473.1  291.24     474  291.85  474.37  292.72     475
  293.69   475.7  294.12     476  294.57  476.33   295.5     477  296.18  477.45
  296.92     478  297.64  478.46   298.3     479  299.32  479.83  299.54     480
  299.74  480.17  300.68     481  301.26  481.49  301.44  481.63

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  251.07     .04   282.7     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        251.07   282.7           180.06  177.83  178.58             .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 5299.28

INPUT
Description:
Station Elevation Data    num=     184
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  491.26 .269989  491.12.5100098     491.9599915  490.71 2.01001     490
2.269989  489.853.459991  489.113.600006  489.013.619995     4894.940002  488.09
5.049988     4885.169983  487.926.440002     4878.100006  486.068.190002     486
8.419983  485.889.869995     48510.98999  484.39   11.59     48411.79001  483.89
13.13998     48313.76001  482.63   14.88     48215.54001  481.6416.54999     481
   17.37  480.5618.29001     48019.39999  479.3219.97998     47921.10001   478.3
   21.59     47822.26001   477.623.23999     477   24.53  476.1824.85001     476
25.44998   475.626.41998     47526.79999  474.78   28.22     47429.09999  473.65
30.54999     47331.59999  472.52   32.78     472   34.23  471.3435.04999     471
38.79999  470.19   39.53     470   42.83  469.7748.09999  469.42   49.11  469.35
   54.09     46955.25999     46957.48999  468.9960.48999     46960.64999     469
    61.2     46962.90999   469.1    65.7  469.29   68.59  469.2471.95999  469.18
   71.97  469.1872.01999  469.17   76.08     46976.29999     46976.59999     469
   76.92     46977.59999     46978.01999     46980.03999   469.3   82.37  469.64
85.03999     470   91.47  470.71   91.84  470.7593.31999     471   93.62  471.05
   94.19  471.22    94.2  471.39   94.87  471.4894.89999  471.47   95.36  471.33
   96.42  471.12   96.53     471  101.53   470.3  103.54     470  104.14  469.75
  105.93  469.18  106.68     469   107.5  468.97  110.65  468.93  117.88  468.87
  119.45  468.86  119.83  468.86  121.41     469  122.83  469.91  122.99     470
  123.59  470.13     127     471  128.97     471  130.85     471  133.99  470.68
  144.23  470.02  144.35  470.01  144.53     470  145.22  469.93  149.34     469
  150.45  468.03  150.48     468  150.52  467.98   150.6  467.92  151.86     467
  153.84  466.36  154.95     466  155.12  465.99  157.72  465.83  157.78  465.83
  157.91  465.82  159.69  465.71  160.33  465.62  168.08  465.63  173.66  465.64
  176.24  465.65  176.93  465.74   178.7  465.84  180.71   465.9  183.65     466
  185.81  466.66  186.95     467  188.97  467.54  189.34  467.62  189.85  467.72
  190.09  467.75  190.54  467.75  190.55  467.76  190.85  467.75  193.05  467.84
  193.09  467.84   195.8     468  196.28     468  196.45     468  200.39     468
  200.49     468   200.8  467.99  214.35  467.53  227.64     467   231.4     467
  231.47     467  231.59     467  234.58     467  237.12     467  241.41     467
  242.43  467.72  243.13     468  243.93  468.49  245.05     469  245.79  469.45
  247.01     470  248.51  470.66  249.13     471  249.99  471.29  251.66     472
  253.54  472.71  254.39     473  254.91   473.2  257.16     474  258.31  474.43
  259.85     475  261.94  475.82  262.43     476  264.42  476.89   264.7     477
   265.1  477.17  265.84  477.62  266.46     478  266.68  478.13   268.1     479
  268.24  479.07  270.86     480  271.01  480.04  273.99     481  275.42  481.42
  277.78     482  279.52  482.45  281.74     483  283.62  483.49

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  151.86     .04  185.81     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        151.86  185.81           199.46     195  192.68             .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 5104.28

INPUT
Description:
Station Elevation Data    num=     409
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  477.84.4500122  477.521.220001     4771.779999  476.622.649994     476
     3.5  475.433.529999  475.423.640015   475.43.720001  475.383.920013  475.33
4.320007     4755.380005  474.12 5.51001     474    6.25  473.346.679993     473
7.670013  472.498.559998     472 8.98999  471.8110.76001     471   12.06  470.07
   12.13  470.0312.17001     470   12.37  469.8914.01001     46914.73999  468.58
15.85001     46817.07999  467.75   19.12     46719.76999  466.9721.48001   466.9
23.79001  466.8224.35001   466.825.67999  466.7626.82001  466.7227.20001  466.72
27.67999  466.7227.98999  466.7330.26999  466.68   31.16  466.67   33.38  466.59
   38.66  466.3939.01001  466.3739.54999  466.3439.60999  466.34   39.66  466.32
   39.78  466.3139.89999   466.340.17999   466.340.26001   466.340.32001  466.29
   40.34  466.29   41.25  466.2643.14001  466.2645.04999  466.2745.07001  466.27
45.17999  466.27   45.19  466.2745.20999  466.2845.23999  466.28   45.34  466.28
   45.41  466.2845.57999  466.2845.67999  466.2846.01001  466.28   46.13  466.28
47.82001  466.3149.95001  466.3550.07001  466.3650.14001  466.3750.39999  466.38
50.51999  466.3851.10999  466.39   51.22  466.39   51.81   466.4   58.06  466.42
   70.38  466.78      72  466.8573.70999  466.9374.14999  466.9575.32999     467
76.85001     46777.20999     467   78.03     467   78.62     467      79  466.83
79.32999  466.63   79.78  466.4279.82999  466.4179.85001   466.4   80.19     466
80.64999  465.5681.23999     465   82.16  464.67   82.87  464.4183.92999     464
84.17001  463.94   84.59   463.984.85001   463.985.57999  463.9387.92999     464
88.01999     464   90.94  464.0891.29001  464.0791.64999  464.0594.42999  464.16
   94.94  464.18  103.06  464.52  107.94  464.71  108.71  464.74     115     465
  115.09     465  115.16     465  116.13     465   119.1  464.99  119.38  464.99
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.53 | 465 | 125.67 | 465 | 126.38 | 465 | 132.91 | 465 | 143.38 | 465 |
| 159.38 | 464.13 | 159.8 | 464.1 | 160.23 | 464.08 | 160.55 | 464.07 | 160.88 | 464.05 |
| 161.28 | 464.03 | 161.29 | 464.03 | 161.3 | 464.03 | 161.41 | 464.03 | 161.51 | 464.02 |
| 161.57 | 464.02 | 161.67 | 464.02 | 161.77 | 464.02 | 161.78 | 464.02 | 161.79 | 464.02 |
| 161.86 | 464.02 | 161.88 | 464.03 | 162 | 464.03 | 162.03 | 464.03 | 162.05 | 464.04 |
| 162.1 | 464.04 | 162.13 | 464.04 | 162.19 | 464.04 | 162.22 | 464.04 | 162.28 | 464.04 |
| 162.3 | 464.04 | 162.32 | 464.04 | 162.33 | 464.04 | 162.53 | 464.06 | 163.34 | 464.12 |
| 163.86 | 464.13 | 165.35 | 464.2 | 165.95 | 464.23 | 174.11 | 465 | 176.54 | 465.32 |
| 176.97 | 465.35 | 177.2 | 465.35 | 177.62 | 465.34 | 180.46 | 465.59 | 180.74 | 465.61 |
| 181.11 | 465.62 | 181.35 | 465.62 | 181.75 | 465.61 | 182.49 | 465.59 | 182.83 | 465.58 |
| 183.3 | 465.6 | 183.36 | 465.62 | 184.77 | 465.68 | 185.83 | 465.72 | 186.57 | 465.71 |
| 188.23 | 465.72 | 188.52 | 465.71 | 189.03 | 465.7 | 189.24 | 465.69 | 189.69 | 465.68 |
| 191.83 | 465.64 | 192.06 | 465.64 | 192.65 | 465.62 | 194.81 | 465.56 | 195.47 | 465.54 |
| 196.5 | 465.51 | 196.77 | 465.5 | 198.08 | 465.47 | 201.68 | 465.36 | 202.31 | 465.34 |
| 207.18 | 465.21 | 208.04 | 465.18 | 209.09 | 465.15 | 209.32 | 465.14 | 212.46 | 465.08 |
| 212.51 | 465.08 | 212.6 | 465.08 | 212.8 | 465.07 | 212.82 | 465.07 | 212.86 | 465.07 |
| 212.87 | 465.06 | 212.89 | 465.06 | 212.93 | 465.06 | 212.94 | 465.06 | 213.4 | 465.05 |
| 213.75 | 465.04 | 213.84 | 465.04 | 213.85 | 465.04 | 213.87 | 465.04 | 213.9 | 465.04 |
| 213.93 | 465.04 | 214 | 465.04 | 214.04 | 465.04 | 214.11 | 465.04 | 214.13 | 465.04 |
| 214.18 | 465.04 | 214.21 | 465.04 | 214.73 | 465.03 | 215.23 | 465.04 | 215.24 | 465.04 |
| 216.12 | 465.04 | 216.13 | 465.04 | 216.45 | 465.04 | 216.76 | 465.04 | 217.21 | 465.05 |
| 217.44 | 465.06 | 217.46 | 465.06 | 217.61 | 465.06 | 217.65 | 465.06 | 217.72 | 465.06 |
| 217.74 | 465.07 | 218.06 | 465.08 | 218.47 | 465.09 | 218.53 | 465.09 | 218.69 | 465.1 |
| 218.72 | 465.1 | 218.75 | 465.1 | 218.8 | 465.1 | 230.07 | 465.34 | 232.55 | 465.4 |
| 233.96 | 465.43 | 237.27 | 465.52 | 239.27 | 465.51 | 241.43 | 465.49 | 241.47 | 465.47 |
| 241.52 | 465.46 | 241.86 | 465.44 | 242.15 | 465.43 | 242.19 | 465.43 | 242.27 | 465.43 |
| 242.36 | 465.43 | 242.48 | 465.42 | 243.38 | 465.44 | 244.38 | 465.47 | 253.55 | 466 |
| 253.7 | 466.02 | 253.84 | 466.07 | 254.09 | 466.1 | 254.13 | 466.11 | 260.22 | 466.27 |
| 264.58 | 466.36 | 266.21 | 466.35 | 270.43 | 466.33 | 271.72 | 466.32 | 274.04 | 466.32 |
| 283.44 | 466.32 | 284.9 | 466.32 | 289.79 | 466.31 | 290.88 | 466.31 | 291.51 | 466.3 |
| 292.75 | 466.29 | 293.19 | 466.28 | 293.78 | 466.27 | 294.04 | 466.27 | 295.09 | 466.24 |
| 299.13 | 466.16 | 299.81 | 466.15 | 300.1 | 466.14 | 300.24 | 466.13 | 302.58 | 466 |
| 309.86 | 465.48 | 310.28 | 465.46 | 312.15 | 465.42 | 312.38 | 465.41 | 312.55 | 465.4 |
| 312.98 | 465.39 | 313.16 | 465.39 | 313.47 | 465.4 | 313.63 | 465.4 | 314 | 465.39 |
| 314.16 | 465.38 | 314.38 | 465.38 | 314.8 | 465.36 | 315.06 | 465.36 | 318.34 | 465.22 |
| 318.52 | 465.2 | 319.49 | 465.17 | 321.39 | 465.14 | 322.96 | 465.08 | 324.46 | 465 |
| 324.94 | 464.99 | 325.08 | 464.99 | 325.45 | 465 | 325.76 | 465 | 326.79 | 465 |
| 327.03 | 465 | 327.31 | 465 | 329.31 | 465 | 329.84 | 465 | 330.95 | 465 |
| 331.16 | 465 | 331.27 | 465 | 331.36 | 465 | 331.38 | 465 | 331.54 | 464.98 |
| 332.29 | 464.88 | 333.5 | 464.73 | 337.13 | 464.3 | 337.16 | 464.29 | 337.17 | 464.29 |
| 339.43 | 464 | 339.44 | 464 | 339.45 | 464 | 339.46 | 464 | 340.13 | 464 |
| 340.36 | 464 | 340.8 | 464 | 343.42 | 464.15 | 343.65 | 464.16 | 346.07 | 464.32 |
| 347.46 | 464.38 | 347.87 | 464.38 | 350.99 | 464.47 | 351.49 | 464.47 | 352.03 | 464.46 |
| 352.13 | 464.46 | 352.31 | 464.45 | 353.37 | 464.44 | 353.69 | 464.43 | 353.94 | 464.41 |
| 353.99 | 464.4 | 354.06 | 464.4 | 354.07 | 464.39 | 354.08 | 464.38 | 355.29 | 464.5 |
| 355.39 | 464.51 | 356.22 | 464.64 | 357.19 | 464.77 | 357.64 | 464.84 | 358.51 | 464.92 |
| 358.53 | 464.92 | 359.89 | 465 | 362.26 | 465.03 | 362.6 | 465.03 | 363.31 | 465.03 |
| 363.64 | 465.02 | 364.51 | 465.01 | 364.74 | 465 | 366.17 | 464.86 | 367.13 | 464.78 |
| 367.23 | 464.78 | 367.29 | 464.78 | 367.44 | 464.78 | 372.18 | 464.88 | 372.71 | 464.89 |
| 373.38 | 464.92 | 373.73 | 464.95 | 374.52 | 464.99 | 374.61 | 464.99 | 374.63 | 464.99 |
| 374.64 | 464.99 | 374.65 | 464.99 | 374.67 | 464.99 | 374.68 | 464.99 | 374.7 | 464.99 |
| 374.75 | 464.98 | 374.79 | 464.97 | 375.32 | 464.96 | 376.7 | 464.87 | 377.08 | 464.83 |
| 377.14 | 464.83 | 377.45 | 464.8 | 377.54 | 464.78 | 378.83 | 464.44 | 378.88 | 464.42 |
| 378.91 | 464.39 | 378.92 | 464.38 | 379.03 | 464.37 | 379.38 | 464.33 | 379.42 | 464.32 |
| 379.85 | 464.29 | 380.19 | 464.26 | 380.28 | 464.26 | 380.44 | 464.25 | 381.44 | 464.28 |
| 382.71 | 464.32 | 382.74 | 464.34 | 382.76 | 464.34 | 382.84 | 464.36 | 382.9 | 464.36 |
| 383.61 | 464.43 | 384.71 | 464.56 | 388.14 | 465 | 389.42 | 465.24 | 391.43 | 465.64 |
| 392.06 | 465.78 | 393.07 | 466 | 394.93 | 466.26 | 400.17 | 467 | 403.51 | 467.39 |
| 408.64 | 468 | 412.69 | 468.39 | 419.48 | 469 | 423.5 | 469 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 80.19 | .04 | 177.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 80.19 | 177.62 | 252.12 | 235.24 | 234.46 | .1 | .3 |

Right Levee Station= 188.42 Elevation= 465.76

CROSS SECTION

RIVER: WASH60
REACH: WASH60 RS: 4869.04

INPUT
Description:
Station Elevation Data num= 261

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 462.7310.54999 | | 46311.04999 | | 463 | 11.12 | 463 | 11.94 | 463 |
| 12.00998 | | 46312.73999 | | 46312.85999 | | 463 | 12.91 | 46316.14999 | 463 |
| 26.88998 | | 462.727.39999 | | 462.6927.57999 | | 462.6829.54999 | | 462.6332.14999 | 462.54 |
| 32.64999 | | 462.5332.98999 | | 462.5233.01999 | | 462.52 | 34.87 | 462.436.04999 | 462.33 |
| 38.98999 | 462.28 | 39.63 | 462.27 | 40.25 | 462.27 | 40.41 | 462.2741.95999 | | 462.24 |
| 42.16998 | | 462.2442.78998 | | 462.23 | 43.28 | 462.2244.75998 | | 462.245.47998 | 462.2 |
| 45.84 | | 462.247.45999 | | 462.1947.64999 | | 462.19 | 48.62 | 462.22 | 49.88 | 462.25 |
| 49.91998 | | 462.2549.94998 | | 462.2550.01999 | | 462.2650.10001 | | 462.27 | 50.16 | 462.27 |
| 50.45999 | | 462.2852.51999 | | 462.2753.29999 | | 462.2755.26999 | | 462.2555.47998 | | 462.25 |
| 55.78998 | | 462.2556.29999 | | 462.2557.35001 | | 462.24 | 58.53 | 462.2259.16998 | | 462.21 |
| 61.24998 | 462.15 | 61.53 | 462.1561.65999 | | 462.16 | 62.06 | 462.1667.23999 | | 462 |
| 72.35999 | | 46172.64999 | | 460.99 | 73.23 | | 46173.42999 | | 461.0373.45999 | 461.02 |
| 73.46999 | | 461.0273.73999 | | 461.1573.92999 | | 461.4276.78999 | | 461.5378.82999 | 461.58 |
| 81.90999 | | 461.5182.98999 | | 461.4886.56999 | | 461.3397.43999 | | 461.0297.46999 | 461.02 |
| 97.50999 | 461.02 | 97.53 | 461.02 | 97.56 | 461.0297.56999 | | 461.0297.57999 | | 461.02 |
| 97.59 | | 461.0297.68999 | | 461.0197.70999 | | 461.0198.17999 | | 46198.34999 | 460.91 |
| 102.99 | 460.94 | 107.92 | 460.97 | 108.88 | 461 | 109.02 | 461 | 118.72 | 461.72 |
| 119.03 | 461.74 | 120.48 | 461.84 | 120.53 | 461.84 | 120.54 | 461.84 | 120.56 | 461.84 |
| 120.57 | 461.84 | 120.58 | 461.84 | 120.75 | 461.85 | 120.93 | 461.86 | 123.69 | 462 |
| 127.28 | 462.07 | 134.17 | 462.19 | 137.02 | 462.22 | 141.71 | 462.27 | 141.96 | 462.27 |
| 142.13 | 462.26 | 142.74 | 462.24 | 142.8 | 462.24 | 142.86 | 462.24 | 142.99 | 462.24 |
| 143.04 | 462.24 | 143.14 | 462.25 | 143.56 | 462.27 | 143.73 | 462.28 | 143.9 | 462.29 |
| 144.44 | 462.31 | 144.78 | 462.32 | 147.4 | 462.38 | 148.12 | 462.4 | 149.25 | 462.44 |
| 149.62 | 462.45 | 150.42 | 462.47 | 150.89 | 462.48 | 151.49 | 462.5 | 152.56 | 462.55 |
| 154.07 | 462.66 | 155.02 | 462.69 | 156.01 | 462.71 | 157.99 | 462.75 | 158.7 | 462.76 |
| 159.65 | 462.76 | 161.87 | 462.76 | 163.3 | 462.76 | 164.34 | 462.76 | 167.36 | 462.74 |
| 167.71 | 462.75 | 168.87 | 462.76 | 170.58 | 462.74 | 172.98 | 462.76 | 175.14 | 462.73 |
| 175.46 | 462.73 | 178.79 | 462.68 | 179.01 | 462.67 | 179.04 | 462.67 | 183.04 | 462.41 |

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   184.7  462.31   186.4  462.22  186.44  462.22  191.25     462  191.55  461.99
  195.14  461.93  195.99   461.9  197.08  461.83  197.35   461.8  197.51  461.75
  201.15   461.7  204.36  461.67  204.72  461.69  207.09  461.82  207.85  461.87
   209.1     462  212.23  462.12  215.26  462.26  216.72  462.33  217.94  462.38
  218.07  462.38  218.29  462.39   220.1  462.46  220.71  462.48  220.92  462.49
  221.67   462.5  224.61  462.51  229.82  462.54  230.31  462.55  230.41  462.56
  230.51  462.59  230.79  462.58  231.07  462.57  231.08  462.56  231.23  462.53
  232.45  462.38  234.76   462.1   234.8  462.09  234.87  462.08   234.9  462.07
   235.1  462.07  235.31  462.07  235.32  462.08  235.35  462.08   235.8  462.09
  236.39   462.1   236.4  462.11  236.41  462.11  236.45  462.11   236.5  462.11
  237.28  462.13  237.44  462.14  238.07  462.17  240.76  462.33  241.51  462.36
  243.98  462.41  244.37  462.42  244.45  462.43  244.93  462.45  245.53  462.48
  245.92  462.51  245.96  462.52  246.64  462.57   247.2  462.61   250.4  462.47
  250.88  462.45  251.08  462.44  252.81  462.34  252.98  462.34  253.02  462.33
  257.03     462  257.61     462  258.43     462  259.31     462  260.04     462
  263.06     462  264.55  462.05  265.09   462.1  274.83     463  274.88  463.17
  275.11  463.82  275.23     464  277.84  464.08  278.27  464.09  278.69  464.12
  279.95  464.16  280.01  464.17  280.06  464.17  280.14  464.19  280.21   464.2
  281.15  464.24  281.25  464.25  281.35  464.25  281.39  464.25  281.53  464.26
  281.64  464.26  281.94  464.27   282.6  464.28  285.53  464.33  285.93  464.34
  285.97  464.34   286.5  464.36     287  464.37   287.9  464.38  290.25   464.4
  291.54  464.41  293.87  464.41  294.71  464.41  296.76   464.4  298.49  464.39
  299.53  464.39  301.94  464.39  306.68   464.4  308.04  464.41   308.7  464.41
  310.24  464.43  313.68  464.48  313.79  464.48  313.94  464.48  314.03  464.48
  315.21  464.48

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0555.78998     .04   158.7     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      55.78998   158.7           271.83  277.93  280.54              .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 4591.11

INPUT
Description:
Station Elevation Data    num=     293
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  458.433.820007   458.35.700012  458.247.690002  458.198.350006  458.17
8.869995  458.169.389984  458.159.540009  458.169.799988  458.17   10.12  458.14
   11.13  458.05   11.22  458.0511.79001     45811.95999     458   12.66     458
   12.87     45812.98001     45813.85999     458   13.94     45815.85999  458.02
17.16998  458.0118.17999     45827.04001  457.3927.91998  457.4328.45001  457.45
      29  457.4829.01001  457.5429.95999  457.6130.32999  457.6230.60999  457.63
30.70001  457.62   30.75  457.6231.76999  457.5332.95999  457.5534.41998  457.56
35.04999  457.5537.14999  457.4749.60001     45749.70001     45749.76999     457
50.01001     457   51.47     45752.26001     45753.20001     45756.23999  457.31
62.04999     45865.79999     45866.04999     458   68.94  457.8672.98999  457.66
76.95001  457.4877.82001  457.4379.29999  457.3880.48001  457.34   83.25  457.27
83.79001  457.26   84.47  457.2584.73999  457.2585.14999  457.2385.60999  457.21
   85.88   457.2   86.44  457.1886.63998  457.18   86.94  457.1887.10999  457.18
   87.69  457.2187.82001  457.2189.51001  457.2589.89999  457.25   90.69  457.32
92.20001  457.4992.32999  457.51   93.09  457.5493.54999  457.5494.51999  457.54
   94.69  457.55   95.19  457.5395.85999   457.595.89999  457.48   98.03  457.45
99.89999  457.42  109.23  457.77  112.14  457.87  116.47     458  122.83  458.41
  129.23  458.82  129.61  458.84  130.97   458.9  133.26     459  134.52  459.02
   135.5  459.05  135.71  459.05  136.28  459.02  136.86     459  144.65  458.55
  145.59  458.55  146.55  458.49  147.67   458.4  149.55  458.45  150.04  458.41
  150.74  458.43  150.78  458.43  152.52  458.31   153.9  458.23  154.52  458.18
  154.68  458.16  154.69  458.16  155.23  458.15  155.71  458.14  156.42  458.17
  156.52  458.17  156.78  458.17  156.95  458.17  157.24  458.17  157.49  458.17
  157.63  458.17  157.94  458.17  158.06  458.17  158.34  458.16  158.46  458.15
   158.5  458.15  158.61  458.14  158.91  458.14  159.05  458.14  159.22  458.13
  159.25  458.13  159.33  458.12  159.39  458.11  159.76  458.11  160.14  458.11
  160.24  458.11  160.39   458.1  160.55  458.11  160.92  458.11  161.05  458.11
  161.16  458.12  161.22  458.13  161.32  458.13  161.67  458.16  161.87  458.16
  162.07  458.17  162.57  458.17  162.79  458.18  163.38  458.19  163.71  458.19
  163.81  458.19  163.96  458.19  164.61   458.2  165.35  458.21  165.42  458.22
     166  458.23  167.89  458.28  168.44  458.29  169.72  458.33  172.25   458.4
  173.32  458.43   180.2  458.63  180.26  458.63  181.83  458.68  181.86  458.68
   184.2  458.73  184.29  458.73  189.35  458.85  190.43  458.87  190.64  458.88
     191  458.89  191.38  458.89  191.76   458.9  192.24   458.9  192.37   458.9
  192.57  458.91  192.64  458.91  192.75  458.91   192.8  458.91  192.97  458.89
  193.39  458.85  193.49  458.85   193.9  458.83  194.51  458.78  195.39   458.7
  195.79   458.7  202.81     458  203.34     458  203.81     458   205.3  457.99
  207.69  457.99  210.99     458  212.25     458  214.08  458.13  218.23  458.43
  227.62     459  228.52  459.07   229.8  459.15  230.72  459.18   232.7  459.22
  233.56  459.23  235.08  459.22  237.31  459.19  238.22  459.18  240.48  459.17
  246.24  459.15  249.41  459.12  251.48  459.08   254.7     459  256.33  458.88
  256.38  458.88  256.43  458.89  256.64   458.9  256.82  458.91  264.19  458.54
   266.3  458.41  267.05  458.34  267.28  458.34  267.47  458.33  269.04  458.28
  270.06  458.26  270.37  458.26  271.29  458.22  271.36  458.23  271.55  458.24
  271.68  458.25  271.82  458.26  272.04  458.27  274.21  458.39  278.44   458.6
  279.45  458.65  285.88     459  286.98  459.02  287.88  459.03  288.26  459.02
  290.27     459  292.58  458.86  299.36  458.83  305.86  458.83  306.58     459
  314.28  459.58  316.38  459.61  317.14  459.63  318.98  459.69  323.34  459.87
   326.2     460  327.59  460.21  327.94  460.22  328.54  460.21     329  460.25
  333.65  460.69  334.85  460.81  334.98  460.83  335.11  460.87  335.89  460.88
  336.61  460.88  336.91  460.84  337.58  460.75  337.85  460.74  338.07  460.74
  338.89  460.71  339.71  460.63  341.34  460.43  342.17  460.37  342.41  460.34
  343.17   460.3  343.87   460.3  345.51  460.32   346.7  460.34  348.01  460.35
  348.36  460.35  348.96  460.38  349.32   460.4  352.91  460.59  360.71     461
  360.86  461.04  361.79  461.21  362.57  461.34  362.93  461.43  363.26   461.5
  363.44  461.53  363.65  461.53  363.86  461.53  365.03  461.47  366.31   461.4
  367.73  461.34     371  461.21  371.08  461.21  371.52  461.21     372   461.2
  373.45   461.2  376.02  461.19  376.56  461.18  377.72  461.17  384.34  461.04
  385.44  461.02  387.49     461  389.81  460.87

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0518.17999     .04  135.71     .05
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Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      18.17999  135.71             219.5  253.28  261.51             .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60              RS: 4337.83

INPUT
Description:
Station Elevation Data    num=     290
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  456.49.3399963   456.513.00998  456.8813.57999  456.8914.07999  456.91
   14.22  456.92   14.62  456.9314.91998  456.9415.38998  456.95   15.53  456.95
   15.69  456.9515.73999  456.95   15.75  456.9515.75998  456.95   15.81  456.96
15.88998  456.96   16.09  456.96   16.13  456.97   16.19  456.97   16.22  456.97
16.29999  456.9716.35999  456.9716.47998  456.9716.53998  456.97   16.56  456.97
   16.59  456.9716.60001  456.9716.60999  456.97   16.62  456.9716.67999  456.97
   16.91  456.9716.95999  456.9717.03998  456.9717.07001  456.9717.07999  456.97
17.10001  456.9717.10999  456.97   17.13  456.9717.13998  456.9717.17999  456.96
   17.19  456.9617.22998  456.9517.26999  456.93   17.47  456.8817.91998   456.9
22.23999     45622.54999  455.9223.78998  455.63   26.38     45533.42999  454.93
      34  454.92   38.69  454.9741.01999  454.9941.78998     45542.85001  455.01
43.78998     45545.01999  454.8250.32999     45452.62999     45454.42999     454
56.45999     45458.68999     45464.96999  454.57   68.37  454.6968.48999  454.69
69.98999  454.7672.12999  454.8772.79999  454.9172.93999  454.9273.04999  454.93
   73.06  454.9473.06999  454.94   73.09  454.9473.12999  454.94   73.17  454.94
73.17999  454.9373.29999  454.9273.42999  454.9273.54999  454.9273.85999  454.91
   74.37   454.9   74.53  454.89   74.84  454.8975.26999  454.8877.20999  454.85
   77.28  454.8577.42999  454.85   77.62  454.8578.20999  454.84    78.5  454.84
   82.73  454.7383.43999  454.7384.48999   454.7   85.53  454.6687.56999  454.57
90.46999  454.45   91.62  454.4292.35999   454.494.15999  454.3995.20999  454.39
97.15999  454.4197.76999  454.4198.95999  454.43  100.21  454.44  101.05  454.44
  102.76  454.44  104.32  454.42  104.54  454.42  105.16  454.44  105.88  454.46
  108.98  454.51  109.25  454.51  109.59  454.51  110.08  454.51  110.24  454.51
   110.5  454.51  111.44  454.48  112.24  454.46  112.65  454.46  113.52  454.45
  114.02  454.44  114.91  454.42  117.83  454.46  121.31  454.51   121.5  454.52
  122.65  454.57  129.28  454.82  133.56  454.96  133.64  454.96  133.71  454.96
  134.09  454.97  134.15  454.98   134.2  454.98  134.21  454.98  134.28  454.97
  134.29  454.97  134.32  454.97  134.36  454.97   134.4  454.97  135.42  454.96
  137.49  454.87  138.58  454.85  140.84  454.85  141.93  454.86  144.16   454.9
  145.44  454.93  147.73     455  148.01  455.01  148.55  455.04  150.72   455.1
  153.06  455.12  159.83  455.17   161.6  455.18  162.28  455.19  165.01  455.23
  167.44  455.26  168.63  455.27  170.71  455.27   171.5  455.27  172.75  455.26
  173.31  455.25   174.3  455.23  174.69  455.22  175.96  455.18  177.32  455.15
  178.18  455.14  179.83  455.12  180.47  455.11  181.47  455.09  182.77  455.05
  182.98  455.04  183.68     455   194.1  454.33  195.04   454.3  196.33  454.21
   197.5  454.15  198.52  454.09  198.87  454.07  199.01  454.07  199.53  454.11
  199.73  454.12  201.92  454.18     206  454.38   207.7   454.4  208.74  454.36
  212.88  454.12   214.7  454.07  214.76  454.07  214.89  454.06  214.99  454.05
  215.17  454.03  215.21  454.03   215.3  454.03  215.32  454.03  215.34  454.03
   215.4  454.03  215.43  454.03   215.5  454.03  215.52  454.03  215.55  454.03
  215.57  454.03  215.76  454.05  215.83  454.05  216.03  454.06  216.11  454.06
  216.17  454.06  216.18  454.06  216.21  454.06  216.23  454.06  216.34  454.06
   216.4  454.07  216.44  454.07  216.57  454.08  216.68  454.08  216.98  454.09
  217.15   454.1  218.34  454.14  219.54  454.19  222.43   454.3  223.08  454.32
  224.11  454.36  225.05  454.41   225.3  454.41  227.52  454.51  228.55  454.55
  231.55  454.63  231.81  454.63  232.46  454.62  232.86  454.61  233.02   454.6
  233.25  454.56  233.32  454.54  233.88  454.48  238.53     454  239.33     454
  239.89     454  240.99     454  241.08     454  241.85     454  241.92     454
  242.54  454.01  244.42  454.01  244.85     454  247.61     454  248.32     454
  251.01     454  251.35     454  254.73     454   256.4     454  260.15  454.19
  260.83  454.18  262.97  454.28  264.82  454.47   265.7  454.53  270.03  454.94
  270.18  454.96  270.77     455  273.59  455.67  274.81     456     277  456.71
  277.92     457  280.91  457.96  281.03     458  281.13     458  281.17     458
  281.32     458  282.43     458  282.95     458  284.44  457.67  286.04  457.31
  287.32     457  289.36  456.52  291.52     456  292.82  455.71   295.7     455
  296.05  454.95  296.08     455  296.15     455  296.23     455  296.29     455
  296.78   455.2  297.49  455.49  298.52  455.76  298.54  455.77  298.61  455.78
  298.66   455.8  298.76  455.84  298.78  455.85  299.88     456  300.68  456.14

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   26.38     .04  162.28     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         26.38  162.28           251.09  269.13  271.53             .1       .3
Right Levee     Station=  171.72      Elevation=  455.37

CROSS SECTION


RIVER: WASH60
REACH: WASH60              RS: 4068.7

INPUT
Description:
Station Elevation Data    num=     174
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  452.54 3.72998  452.445.440002  452.3911.72998  452.22   19.09     452
   26.97  451.5827.53998  451.55   28.62  451.4929.78998  451.4730.63998  451.41
31.39999  451.41   31.78  451.3932.69998  451.33   33.19   451.334.00998  451.26
34.32999  451.2436.10999  451.2536.57999  451.2636.88998  451.2736.94998  451.28
   41.56  451.33   45.72  451.3547.75998   451.358.39999     45159.44998     451
   60.38     451   62.13     451   62.31  450.9962.44998     45166.82999  451.15
   68.84   451.272.95999   451.373.57999  451.3274.48999  451.4374.84999  451.45
75.78999  451.4776.25999  451.4877.14999  451.5177.29999  451.51   77.34  451.52
77.38998  451.5277.42999  451.5279.14999  451.5185.28999  451.48   86.17  451.48
87.84999  451.49   88.31  451.49   88.48  451.4891.65999  451.4492.39999  451.42
   95.73  451.27   96.87  451.24   98.37  451.19  102.63  451.03  103.62     451
  105.21  450.95  108.59     451  110.39     451  111.45     451  116.46     451
  121.29  451.24   122.1  451.28  125.54   451.4   130.8  451.36  137.37  451.25
  137.62  451.23  139.53  451.21   140.1  451.21  140.18  451.21  140.22  451.19
  140.29  451.19  140.55  451.17  140.97  451.15  141.11  451.15   141.4  451.14
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  141.65  451.13  141.82  451.13  142.17  451.14  142.33  451.14  142.71  451.15
     143  451.15  144.15  451.18  144.89  451.22  146.04  451.28  146.09  451.29
  146.58  451.34  149.87  451.59  155.42     452  158.96  452.01  161.05  452.01
  163.75  452.01  164.45  452.01  164.87  452.01  167.33  452.01  170.64     452
  172.03     452  182.55  451.13  183.16  451.08  183.97     451  185.45  450.87
   186.4  450.83  187.56   450.8  188.59   450.8  190.68  450.78  191.23  450.76
   191.8  450.77  192.39  450.78  192.48   450.8  193.66  450.85   194.9  450.95
   195.6     451  199.62  451.19  202.14  451.32  203.52  451.38  203.87   451.4
   204.4  451.42  205.87  451.46  206.24  451.46  206.77  451.45  207.23  451.44
  208.49  451.43  209.12  451.43  210.63  451.46  211.28  451.47  211.49  451.48
   211.9  451.52  211.94  451.55  213.08  451.56  214.18  451.57  215.27  451.54
  216.09  451.53  217.47  451.51  217.59  451.52   218.8  451.52  219.98  451.53
  222.27  451.47  226.73  451.34  233.64  451.14  239.05     451  239.73  450.95
  241.11   450.8  241.63  450.71  241.83   450.7  242.55  450.68  242.73  450.67
  242.92  450.65  244.74  450.65  245.76  450.65  246.55  450.64  247.64   450.7
   249.9  450.81  250.16  450.86  251.03  450.99  251.07     451  251.86  451.19
  255.06     452  260.06   452.8  261.41     453   266.4     453   269.3     453
  272.82     453   275.1     453  278.35     453  278.82     453     283  452.99
  286.42  452.98  287.41  452.99  294.53     453  317.58   453.6  318.03  453.61
  319.41  453.64  320.79  453.65  322.69  453.66  322.71  453.66

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0527.53998     .04  158.96     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      27.53998  158.96          313.38  322.05  319.56             .1       .3
Right Levee     Station=  171.72      Elevation=  452.06

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 3746.65

INPUT
Description:
Station Elevation Data    num=     158
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  448.172.359985     44822.98999  447.5123.50998   447.537.62997  447.15
39.10999  447.1239.84998   447.140.47998   447.142.54999  447.0744.22998  447.04
44.94998  447.0145.19998     44747.25998  446.7949.45999  446.55   50.56  446.39
50.88998  446.3151.51999  446.26   53.28  446.1454.35999     44654.41998     446
54.58998     44654.66998     44654.74998     44660.18999  446.5465.01999     447
65.49998  447.0469.47998  447.3569.94998  447.3770.20999  447.3770.90999  447.36
72.16998  447.3375.92999  447.2176.69998  447.1879.60999     44780.89998     447
82.55998     44783.50998     44783.70999     44783.97998     44786.45999     447
97.14998  447.73   102.7     448   103.5     448  104.14     448  105.09     448
   105.3     448  105.82     448  107.38  447.98  121.69  447.79  125.21  447.91
  127.43     448  127.83     448     128     448  128.95     448  131.11     448
  131.54     448  132.18     448  132.65     448  132.79     448     135  447.93
  140.57  447.78  154.93     447  155.01  446.99  157.07  446.74  157.77  446.62
  158.18  446.53  158.69   446.5  159.13  446.47  159.43  446.46  159.93  446.44
  161.82  446.36  162.23  446.35  162.76  446.33  163.82  446.33  164.87  446.33
  165.11  446.34  165.27  446.37  165.45  446.45  165.87  446.48  166.99  446.59
  167.42  446.65  167.97  446.69  168.45  446.71  171.18  446.82  172.33  446.86
   173.6   446.9  176.82     447  181.24  447.14  181.47  447.14   181.7  447.14
  181.88  447.14  181.95  447.14  182.39  447.13  182.83  447.13  183.73  447.16
  185.26  447.19  199.37  447.51  203.64   447.6   204.9  447.63  205.38  447.64
  205.65  447.65  206.13  447.67  206.86  447.69  206.97   447.7  208.62  447.71
  210.12  447.73  210.77   447.7  211.52  447.66  212.49  447.57  213.28  447.48
   216.9  447.15  216.98  447.16  217.08  447.15  217.19  447.14  217.31  447.13
  217.48  447.08  217.56  447.08  217.59  447.07  217.85  447.07  218.09  447.07
   218.4   447.1  219.21  447.21  219.62  447.26  224.87     448  225.73     448
  227.09     448  228.19     448  228.88     448  233.87  447.77  242.94  447.38
  244.61  447.29  244.79  447.29  246.62  447.19  248.01  447.12   248.3  447.11
  248.57   447.1  248.64  447.09  249.08   447.1  249.56  447.11  249.65  447.13
  250.04  447.15  250.22  447.15  250.69  447.16  251.24  447.17  251.56  447.18
  254.46  447.34  255.22  447.39  256.12  447.44  264.93     448  276.06  448.36
  278.17  448.42  280.67  448.49  286.12  448.65  291.23  448.78  300.53     449
   305.5  449.13  305.61  449.13  309.36  449.22

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0523.50998     .04  224.87     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      23.50998  224.87          365.52  319.04  300.31             .1       .3
Right Levee     Station=  210.12      Elevation=  447.73

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 3427.61

INPUT
Description:
Station Elevation Data    num=     248
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     443 1.51001     4431.660004     443 2.76001     4433.369995     443
3.679993     443    4.75     443 5.26001     4439.070007     44314.35001  443.04
22.10001  443.0822.55002  443.0723.20999  443.05   24.22  443.0425.64001  443.03
29.45999  443.0230.27002  443.0231.33002     44336.24002  442.1736.42001  442.14
37.45001     442   37.62     442   37.88     44237.92001  442.01   38.06  442.36
   38.28   442.4   38.75  442.4443.17999  442.4647.45001  442.46   47.59  442.41
   47.72   442.447.99002  442.41   48.84  442.4549.39001  442.4949.48001  442.52
50.32001  442.5551.08002  442.5752.11002  442.51   54.78  442.3660.92001     442
60.98001     44261.24002     44261.36002     44261.55002     44261.61002     442
63.26001  442.3763.39001  442.35   63.91  442.18   64.06  442.14   64.34  442.13
64.61002  442.1366.42001  442.2472.11002  442.6278.20001     443   79.09     443
   79.56     443   82.37  443.0193.73001  443.0296.73001  443.03   98.94  443.02
  101.56  443.02  104.37  443.02  112.33     443  112.38     443  112.39     443
  112.77  442.97  113.35  442.94  115.17   442.9  115.96  442.87  117.12  442.86
  119.24  442.75  120.19  442.88  120.96  442.99  121.86     443  122.26     443
  122.95     443   123.4     443  123.83     443  124.46     443  125.54  442.84
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 126.19 | 442.6 | 126.74 | 442.49 | 129.24 | 442.55 | 132.43 | 442.63 | 132.53 | 442.65 |
| 132.8 | 442.67 | 133.17 | 442.68 | 133.55 | 442.69 | 134.44 | 442.68 | 135.01 | 442.69 |
| 135.65 | 442.69 | 136.33 | 442.71 | 138.32 | 442.76 | 139.31 | 442.78 | 140.04 | 442.88 |
| 141.32 | 443 | 144.07 | 443 | 146.86 | 443 | 147.73 | 443 | 149.56 | 443 |
| 150.71 | 443 | 151.56 | 443 | 152.56 | 442.71 | 153.33 | 442.57 | 153.46 | 442.55 |
| 153.64 | 442.54 | 153.91 | 442.54 | 154.31 | 442.54 | 154.77 | 442.54 | 155.21 | 442.54 |
| 155.58 | 442.56 | 157.16 | 442.64 | 157.67 | 442.67 | 158.71 | 442.79 | 160.17 | 443 |
| 161.26 | 443.01 | 162.43 | 443.01 | 163.49 | 443 | 163.92 | 443 | 165.02 | 443 |
| 165.83 | 443 | 167.91 | 442.99 | 169.1 | 443 | 169.8 | 443 | 170.4 | 443 |
| 170.72 | 443 | 170.83 | 443 | 170.93 | 443 | 171.04 | 443 | 171.15 | 443 |
| 171.53 | 443.04 | 172.01 | 443.05 | 177.68 | 443.37 | 186.86 | 443.51 | 190.59 | 443.63 |
| 191.94 | 443.67 | 194.34 | 443.75 | 197.5 | 443.84 | 197.79 | 443.86 | 198.07 | 443.87 |
| 198.19 | 443.87 | 198.34 | 443.88 | 198.85 | 443.88 | 198.98 | 443.88 | 199.11 | 443.89 |
| 199.37 | 443.89 | 199.55 | 443.9 | 199.63 | 443.9 | 200.55 | 443.91 | 201.42 | 443.91 |
| 201.52 | 443.91 | 201.78 | 443.9 | 202.16 | 443.9 | 202.76 | 443.89 | 202.93 | 443.89 |
| 203.31 | 443.88 | 203.86 | 443.86 | 203.98 | 443.86 | 204.92 | 443.86 | 206.15 | 443.84 |
| 216.8 | 443.79 | 217.47 | 443.78 | 218.21 | 443.75 | 218.85 | 443.71 | 218.97 | 443.68 |
| 222.35 | 443.7 | 225.89 | 443.72 | 234.54 | 444 | 235.24 | 444.02 | 236.41 | 444.06 |
| 238.43 | 444.11 | 240.2 | 444.16 | 241.7 | 444.22 | 243.55 | 444.31 | 244.39 | 444.34 |
| 244.99 | 444.36 | 245.82 | 444.37 | 249.76 | 444.41 | 251.46 | 444.47 | 252.12 | 444.49 |
| 252.77 | 444.5 | 253.58 | 444.51 | 254.77 | 444.52 | 258.16 | 444.53 | 260.39 | 444.54 |
| 260.75 | 444.55 | 260.98 | 444.54 | 261.27 | 444.54 | 261.87 | 444.51 | 263.43 | 444.44 |
| 264.8 | 444.37 | 267.24 | 444.29 | 268.48 | 444.24 | 273.15 | 444 | 274.24 | 443.88 |
| 281.97 | 443 | 293.65 | 442.32 | 299.39 | 442.05 | 300.64 | 442 | 301.77 | 441.98 |
| 302.69 | 442 | 303.73 | 442.08 | 305.75 | 442.29 | 307.02 | 442.42 | 311.64 | 443 |
| 313.78 | 443.52 | 316.1 | 444 | 319.47 | 444.9 | 319.86 | 444.92 | 322.18 | 445 |
| 328.94 | 445.05 | 330.34 | 445.06 | 330.92 | 445.06 | 331.68 | 445.04 | 332.93 | 445.03 |
| 335.51 | 445.02 | 338.59 | 445.03 | 344.39 | 445.03 | 348.45 | 445.04 | 350.93 | 445.05 |
| 352.82 | 445.06 | 354.16 | 445.07 | 355.26 | 445.08 | 357.03 | 445.06 | 358.92 | 445.03 |
| 359.08 | 445.01 | 360.23 | 445 | 369.81 | 445 | 373.93 | 445 | 374.08 | 445 |
| 377.15 | 445 | 379.29 | 445 | 380.76 | 445 | 381.78 | 445 | 382.46 | 445 |
| 382.89 | 445 | 383.73 | 445 | 384.25 | 445 | 385.23 | 445 | 386.78 | 445 |
| 388.65 | 445 | 390.48 | 445 | 391.9 | 445 | 392.93 | 445 | 393.7 | 445 |
| 394.28 | 445 | 394.69 | 445 | 402.6 | 444.81 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 112.33 | .04 | 338.59 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 112.33 | 338.59 | 186.86 | 265.36 | 269.91 | .1 | .3 |

CROSS SECTION

RIVER: WASH60
REACH: WASH60 RS: 3162.25

INPUT
Description:
Station Elevation Data num= 316

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 440.76 | 5.959991 | 440.67 | 12.53 | 440.49 | 16.79999 | 440.41 | 22.23999 | 440.23 |
| 28.91998 | 440 | 31.04999 | 440 | 31.60999 | 440 | 32.69 | 440 | 32.79999 | 440 |
| 33.72 | 440 | 37.12 | 440.14 | 42.10001 | 440.34 | 3.67999 | 440.44 | 4.14999 | 440.4 |
| 45.13998 | 440.41 | 47.41 | 440.43 | 52.81 | 440.47 | 55.37 | 440.49 | 55.98999 | 440.49 |
| 56.23999 | 440.49 | 56.54999 | 440.49 | 56.82999 | 440.48 | 58.20001 | 440.46 | 59.20999 | 440.44 |
| 59.32999 | 440.44 | 60.75 | 440.42 | 61.47 | 440.41 | 61.56 | 440.41 | 61.73001 | 440.4 |
| 62.20999 | 440.39 | 63.57999 | 440.29 | 63.63998 | 440.26 | 65.01001 | 440.09 | 66.29001 | 440 |
| 67.56 | 440 | 67.66 | 440 | 67.85001 | 440 | 68.31 | 440 | 68.63 | 440 |
| 69.26001 | 440 | 70.63998 | 440 | 70.95001 | 440 | 71.47 | 440 | 74.70999 | 440.14 |
| 77.38998 | 440.24 | 79.56 | 440.15 | 81.85999 | 440.01 | 82.73001 | 440 | 82.81 | 440 |
| 83.25 | 440 | 83.34 | 440 | 83.57999 | 440 | 85.14999 | 440.08 | 92.63998 | 440.5 |
| 94.41998 | 440.55 | 99.17999 | 440.81 | 100.97 | 440.84 | 102.33 | 440.84 | 103.75 | 440.91 |
| 103.87 | 440.92 | 104.06 | 440.92 | 104.58 | 440.93 | 104.7 | 440.94 | 104.8 | 440.94 |
| 104.94 | 440.94 | 104.99 | 440.94 | 105.06 | 440.94 | 105.14 | 440.94 | 105.31 | 440.93 |
| 105.38 | 440.93 | 105.39 | 440.93 | 107.05 | 440.92 | 107.83 | 440.92 | 110.67 | 440.89 |
| 111.01 | 440.9 | 112.02 | 440.88 | 112.3 | 440.88 | 112.41 | 440.89 | 112.88 | 440.9 |
| 113.27 | 440.91 | 114.36 | 440.91 | 114.64 | 440.91 | 115.02 | 440.91 | 115.17 | 440.91 |
| 115.36 | 440.91 | 115.55 | 440.91 | 115.74 | 440.9 | 115.91 | 440.9 | 116.04 | 440.9 |
| 116.14 | 440.89 | 116.27 | 440.89 | 116.3 | 440.88 | 116.35 | 440.88 | 116.5 | 440.88 |
| 116.78 | 440.88 | 117.11 | 440.88 | 117.4 | 440.88 | 117.57 | 440.88 | 117.69 | 440.88 |
| 117.86 | 440.88 | 118.09 | 440.87 | 118.47 | 440.87 | 118.89 | 440.86 | 119.19 | 440.86 |
| 119.22 | 440.86 | 119.36 | 440.86 | 119.5 | 440.86 | 120.43 | 440.84 | 120.76 | 440.84 |
| 120.94 | 440.84 | 121 | 440.84 | 122.72 | 440.82 | 124.86 | 440.79 | 125.67 | 440.77 |
| 126.09 | 440.76 | 126.43 | 440.74 | 126.46 | 440.73 | 126.93 | 440.71 | 127.32 | 440.71 |
| 127.78 | 440.7 | 128.24 | 440.69 | 128.61 | 440.69 | 128.82 | 440.69 | 129.16 | 440.7 |
| 129.63 | 440.7 | 129.93 | 440.7 | 130.63 | 440.69 | 137.24 | 440.53 | 144.36 | 440.37 |
| 162.04 | 440 | 168.42 | 439.59 | 170.35 | 439.45 | 172.42 | 439.35 | 174.34 | 439.34 |
| 176.22 | 439.34 | 176.47 | 439.35 | 177.01 | 439.36 | 177.27 | 439.37 | 177.43 | 439.4 |
| 177.61 | 439.45 | 177.92 | 439.46 | 179.19 | 439.47 | 179.7 | 439.48 | 179.78 | 439.48 |
| 179.8 | 439.47 | 179.91 | 439.47 | 180.67 | 439.48 | 181.03 | 439.52 | 181.82 | 439.54 |
| 183.88 | 439.6 | 184.14 | 439.59 | 185.12 | 439.61 | 185.51 | 439.61 | 187.8 | 439.63 |
| 188.09 | 439.64 | 189.4 | 439.74 | 190.29 | 439.78 | 190.36 | 439.78 | 190.59 | 439.76 |
| 191.09 | 439.69 | 191.36 | 439.66 | 191.84 | 439.59 | 194.68 | 439 | 195.13 | 439 |
| 197.08 | 439 | 198.71 | 438.99 | 198.92 | 438.99 | 202.68 | 439 | 204.22 | 439.24 |
| 205.27 | 439.43 | 207.39 | 439.85 | 207.89 | 439.94 | 208.17 | 440 | 208.31 | 440 |
| 209.13 | 440 | 209.41 | 440 | 210.19 | 440 | 212.91 | 439.96 | 214.31 | 439.94 |
| 216.1 | 439.97 | 217.46 | 439.98 | 217.87 | 439.94 | 218.09 | 439.94 | 218.71 | 439.93 |
| 219.3 | 439.9 | 220.88 | 439.75 | 221.61 | 439.73 | 222.54 | 439.76 | 223.74 | 439.83 |
| 226.2 | 440 | 226.87 | 440.05 | 227.43 | 440.06 | 228.18 | 440.05 | 230.03 | 440 |
| 230.18 | 440 | 242.78 | 439 | 242.86 | 439 | 243.06 | 439 | 243.58 | 439 |
| 243.95 | 439 | 244.32 | 439 | 250.57 | 439.7 | 253.25 | 440 | 253.31 | 440 |
| 253.41 | 440 | 254.87 | 440 | 256.77 | 440 | 257.47 | 440 | 263.65 | 440 |
| 267.28 | 440 | 269.2 | 439.67 | 273.27 | 439 | 274.71 | 439 | 276.76 | 439 |
| 277.22 | 439 | 278.14 | 439 | 279.96 | 439 | 280.39 | 439 | 280.5 | 439 |
| 280.68 | 439 | 280.79 | 439 | 280.91 | 439 | 281.18 | 439 | 281.38 | 439 |
| 281.98 | 439 | 283.83 | 439.21 | 290.57 | 440 | 290.58 | 440 | 290.68 | 440 |
| 291.88 | 440 | 293.15 | 440 | 293.29 | 440 | 293.51 | 440 | 293.63 | 440 |
| 295.04 | 440 | 296.09 | 440 | 298.91 | 440 | 299.69 | 440 | 301.22 | 440 |
| 302.5 | 440 | 302.68 | 440 | 302.87 | 440 | 303.03 | 440 | 303.43 | 440 |
| 303.6 | 440 | 304.34 | 440 | 305.07 | 440 | 305.13 | 440 | 305.16 | 440 |
| 305.3 | 440 | 305.35 | 440 | 305.37 | 440 | 305.64 | 440 | 305.67 | 440 |
| 305.89 | 440 | 306.03 | 440 | 306.97 | 440 | 307.11 | 440 | 310.25 | 440 |
| 311.39 | 440 | 332.99 | 440 | 335.43 | 439.46 | 335.95 | 439.39 | 337.71 | 439.31 |
| 338.4 | 439.23 | 340.14 | 439 | 341.24 | 438.85 | 341.62 | 438.72 | 341.91 | 438.69 |

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  342.96  438.68  343.74   438.7  344.79  438.74  345.46  438.77  347.35  438.88
  350.58     439   352.1  439.21  356.87     440  362.07  440.46  362.18  440.45
  369.63  440.47   373.3   440.5  378.71  440.55  379.82  440.57  388.35  440.78
  389.19  440.81  389.39  440.81  389.86  440.82  390.44  440.83  390.95  440.84
  391.04  440.84  392.57  440.87  392.65  440.87  393.05  440.87  393.36  440.87
  394.76  440.89  395.16  440.89  395.41  440.89  395.91  440.89  396.11  440.89
  396.46  440.89  397.04  440.88  397.16  440.88  398.15  440.89  398.77  440.89
  398.98  440.89  399.66  440.89  408.57  440.89  411.04     441  411.09     441
  412.96     441  421.27     441  424.23  440.99  424.48  440.99  426.51  440.99
  431.56  440.99

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  162.04     .04  362.18     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        162.04  362.18            403.08  335.99  286.95              .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60              RS: 2826.26

INPUT
Description:
Station Elevation Data    num=     199
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  436.18.1400146  436.1812.17001  436.14   12.63   436.1   13.97  436.06
16.61002     43659.95001  435.06   62.44     43562.70999     43562.74002     435
67.23001  435.2170.51001  435.3471.23001  435.36   71.81  435.37   72.25  435.38
72.58002  435.3772.80002  435.3674.20001  435.2274.73001  435.19   75.59  435.16
   77.59  435.1178.32001  435.0979.57001  435.0179.89001     435   80.62     435
81.33002     435   82.38     435   82.91     43589.17999   435.289.24002  435.21
98.35001  435.46  102.06  435.55  105.25  435.62  105.42  435.62  105.51  435.62
  105.77  435.61  106.23   435.6  106.52   435.6  107.51  435.58  108.57  435.57
  108.98  435.57  110.04  435.47  111.83  435.26  113.16  435.29  114.29  435.31
  115.49  435.32  116.35   435.2   116.9  435.16  116.99  435.16  117.14  435.15
  117.33  435.14  117.49  435.13  117.55  435.12  117.86  435.12  118.21  435.13
  118.67  435.16  121.03  435.26  127.36  435.61  127.59  435.62  135.09  435.95
  136.29     436  137.79  436.04  138.85  436.07  139.05  436.09  144.19  436.19
  148.43  436.25  154.13  436.07  156.65     436  162.49  435.72  164.47  435.65
  166.66  435.59  169.13  435.55   171.5  435.52     172  435.53  175.96   435.5
  176.56  435.51  178.17  435.58  178.65   435.6   180.5  435.62  181.58  435.63
  182.54  435.64   183.2  435.66  183.74  435.67  184.33  435.69  185.11   435.7
  185.94   435.7  186.65   435.7  187.15   435.7  187.96  435.69  188.51  435.68
  189.14  435.68  190.75  435.68     191  435.68  191.04  435.68  192.06  435.69
  193.03   435.7   193.3  435.69  193.69  435.69  193.98  435.68   194.1  435.67
  194.34  435.65  194.62  435.63  194.97  435.62  199.23  435.53  202.31  435.47
  204.73  435.44  205.57  435.43   207.4  435.38  208.77  435.34  210.15  435.29
  211.54  435.22  213.21  435.13  214.25  435.09   215.4  435.07  218.68  435.06
  220.19  435.04  222.63     435  223.73  434.71  225.72     434  226.54  433.87
  228.06  433.66  228.23  433.53  228.35  433.52   228.8   433.5  229.38  433.46
  230.49  433.39  231.59  433.39  232.66  433.38  232.92  433.45  233.74  433.58
  233.96   433.6  234.76  433.68  237.67  433.89  238.94  433.96  239.58  433.98
  239.98  433.97  240.18  433.95  240.25  433.89  242.13  433.83  243.77  433.78
  244.72  433.81   251.8  433.93  252.68  433.96  253.85     434   254.8  434.21
  254.96  434.22  256.45  434.55  262.99  434.65  263.67   434.7  265.33  434.75
   266.7  434.81  268.09  434.89  269.57     435  270.66  435.17  280.16     436
  283.25     436  285.76     436   288.1     436  290.14     436  295.19  435.86
  303.01  435.65  307.93  435.53  308.03  435.53  313.76  435.39  316.32  435.33
  317.16  435.31  317.95   435.3  319.48  435.27  320.18  435.26  324.85  435.32
  326.78  435.28  328.93  435.24  329.13  435.22  329.59  435.21   330.8   435.2
  331.68  435.19  332.09  435.19  333.18  435.16  335.41  435.09  338.83  435.01
  339.08     435  340.81     435  340.84     435  341.87     435  342.54     435
  342.61     435   347.5  435.76  349.48     436  350.96  436.05  352.39  436.07
  352.63  436.07  352.96  436.08  353.75   436.1  359.32  436.24  369.04  436.49
  372.14  436.57  374.73  436.64  379.84  436.76   381.1  436.79

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  222.63     .04  265.33     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        222.63  265.33            284.23  328.82  338.59              .1       .3

CROSS SECTION


RIVER: WASH60
REACH: WASH60              RS: 2497.44

INPUT
Description:
Station Elevation Data    num=     246
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  432.381.650024  432.366.360016  432.39   18.13   432.919.21002  432.91
19.35001  432.9219.45001  432.9219.58002  432.9119.68002   432.919.83002   432.9
20.64001  432.9122.14001  432.9122.48001  432.9222.65002  432.9222.95001  432.92
   23.63   432.9   23.81  432.8923.84003  432.89   23.88   432.923.90002  432.91
24.48001  432.9324.60001  432.93   24.88  432.9324.95001  432.9325.04001  432.92
25.18002  432.9225.30002  432.92      26  432.8933.85001   432.544.14001     432
   44.91     43246.21002     43247.04001     432   48.69     432   51.03  432.08
52.29001  432.1253.67001  432.1455.15002  432.15   56.75  432.1660.15001  432.15
61.67001  432.1663.78001  432.18   64.63  432.1865.62001  432.1568.01001  432.06
69.15001  432.0270.06001     43270.87001     43271.04001     43275.48001  431.46
78.79001     43179.26001  430.8479.42001  430.8379.44002     43180.57001  431.03
81.46001  431.0383.41002     43183.43001     43183.48001     43183.70001     431
83.87001     43185.17001     43185.73001  430.9986.18001     43187.68001     431
87.99001     43188.19002     43189.03001     43191.53001     43192.60001     431
92.83002     43192.94002     43193.71001     43195.69002     43196.61002     431
98.26001     43199.46001  431.11  100.23  431.23  103.63  431.23  107.09  431.22
  109.29  431.09   110.5     431  111.93     431     112     431  113.28  430.94
  113.76     431  119.13  431.69  120.17  431.71  121.45  431.69  122.07  431.74
  123.17  431.82  123.24  431.82  123.31  431.83  123.51  431.86  123.72  431.87
  123.74  431.87  123.79  431.87  123.96  431.86  124.23  431.86  124.47  431.85
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  124.63  431.84  125.09  431.84  125.34  431.83  125.57  431.82  127.33  431.65
  129.83  431.59  130.47  431.57  130.94  431.57  131.99  431.59  134.68     431
  135.76   430.3   136.3     430  138.96     430  144.22  429.99  147.08  429.99
  147.84  429.99  151.68     430  152.55     430  153.32     430  154.98     430
  155.97     430  157.38     430  157.91  429.91   162.4   429.9  166.81  429.89
  168.86     430  172.82  430.93  173.15     431  173.94  431.07   174.8  431.13
  177.27  431.27  179.16  431.39  179.46   431.4  183.03  431.49  184.12  431.52
   184.9  431.52  185.49  431.52     187  431.52     188  431.51  188.13  431.52
  192.52  431.45   198.5  431.34  199.99  431.22   200.9  431.15   201.3  431.03
  201.37  431.01  201.68  431.01  202.32     431  202.72     431  202.89     431
  203.05     431  205.04  430.75  210.54     430  212.37     430  212.62     430
  214.49     430   214.7     430  214.76  430.02  217.99     431  219.46  431.09
  222.11  431.21  224.88  431.32  226.28  431.36  227.51  431.39  228.39  431.35
  229.39   431.3  229.52  431.15  229.71  431.14  230.03  431.14  232.89   431.3
  234.09  431.35   234.5  431.37  235.27  431.39  236.38   431.4  237.11   431.4
  239.09  431.37  240.23  431.34  242.67  431.27  243.43  431.25  244.35   431.2
  246.96     431  247.01     431  247.06     431  249.32  430.84     251  430.73
   254.1     431  254.77  431.04  259.26  431.36  260.43  431.45  261.59  431.57
  261.79  431.58     262  431.58  262.22  431.57  262.41  431.56  262.55  431.54
  262.63  431.49  262.77  431.48   263.1  431.49  263.87  431.54  264.28  431.59
  264.45  431.63   264.5  431.67   264.6  431.68  264.91  431.68  265.36  431.68
  265.94  431.68   266.3  431.68  267.73  431.69   268.1  431.69  268.63  431.69
  268.98  431.68  269.39  431.67  269.85  431.66     270  431.66  270.16  431.66
  270.29  431.66  270.38  431.65  270.49  431.63   271.5  431.53  273.14  431.41
  276.15  431.23  280.22     431  280.42     431  280.43     431  281.07     431
  281.43     431  289.34  431.88  290.14   431.9  291.56  431.91  292.76  431.93
   295.2     432  296.84     432  297.21     432  299.19     432  300.84     432
  301.68     432  303.67     432   304.1     432  304.78     432  306.62     432
   306.7     432  306.74     432  306.88     432  308.29  431.96   311.5  431.74
  312.95  431.65

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  123.72     .04  227.51     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        123.72  227.51           265.43  261.68  258.79             .1       .3
Right Levee     Station=  186.42      Elevation=  431.58

CROSS SECTION


RIVER: WASH60
REACH: WASH60             RS: 2235.76

INPUT
Description:
Station Elevation Data    num=     229
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  427.571.919983  427.626.109985  427.747.619995  427.777.959991  427.78
8.220001  427.799.009979  427.79 9.73999   427.810.73999  427.8111.88998  427.83
13.75998  427.86   19.34  427.9621.76999     42823.20999  428.0226.41998  428.07
   29.22  428.1231.54001  428.17   33.34  428.2134.54999  428.24   35.12  428.25
36.88998  428.28   38.56   428.338.88998  428.29   40.19  428.29      44   428.3
45.50998   428.346.57001  428.3147.25998  428.3247.63998  428.3247.85001  428.34
51.56999  428.38   54.92  428.41   56.28   428.457.51999  428.39   59.28  428.36
59.81999  428.35   60.28  428.3461.54999  428.3162.03999  428.2762.23999  428.26
   62.89  428.1963.26999  428.17   63.72  428.1764.98999  428.16   65.39  428.16
   65.72  428.1665.92999  428.16   66.06  428.17   66.11  428.18   66.14  428.19
66.18999   428.266.31999   428.2   66.67   428.266.82999   428.2   67.09  428.21
67.48999  428.2167.59999  428.2167.75999  428.22      68  428.2468.28999  428.26
   68.36  428.2668.79999  428.2969.00999   428.369.78999  428.3170.54999  428.33
   71.14  428.3471.37999  428.34   74.09  428.41   75.62  428.43   77.14  428.45
82.53999   428.5   82.81   428.5   82.92  428.5182.95999   428.6   84.28  428.63
85.45999  428.6586.87999  428.6187.90999  428.58   88.67  428.55   92.92  428.35
   100.2  428.01  100.21  428.01  100.48     428  102.07  427.58  104.18     427
  104.29  426.99  105.99  426.89   106.6  426.82  106.93  426.74  107.41  426.69
  107.61  426.68     108  426.68  108.65  426.69  109.43   426.7  110.18  426.72
  110.73  426.74   111.1  426.77  111.56  426.84  112.39  426.93  113.39     427
  113.48     427  113.71  427.03  113.81  427.04  113.91  427.04  113.96  427.04
  114.03  427.05  114.97  427.14  123.96     428  124.24     428  124.28     428
  124.34     428  124.71  427.89  128.39     427  129.16     427  130.16     427
  131.53     427  131.67     427  132.03     427  132.41  427.05  134.86   427.4
  139.15     428  139.42     428  139.59     428  143.72     428  145.71     428
  146.02     428  151.25     428   153.9     428  160.39     428  163.72     428
   164.3     428  165.38  427.44  166.46     427  166.92     427  167.49     427
  168.29     427   168.5     427  168.68     427  174.94  427.58  179.31     428
  179.87  428.02  182.15  428.11  182.97  428.16  184.18  428.19  184.94   428.2
  185.79  428.21  188.39  428.22  190.31  428.23  191.93  428.25  192.51  428.27
  195.03   428.3  197.38  428.32  198.31  428.32  198.97  428.31  200.33  428.32
  201.09  428.32  203.43  428.31  205.83  428.31  213.42   428.3  213.64  428.29
  215.89  428.23  218.98  428.12  219.32  428.01  219.44     428  221.39  427.99
  221.99  427.99  224.02     428  224.54     428  225.27     428  227.51  428.09
  227.81  428.13  228.66  428.13  229.02  428.14  229.41  428.13  230.25  428.11
  232.76     428   241.9  427.21   243.8     427  244.34  426.98  247.15  426.89
  247.56  426.87  247.96  426.82  248.69  426.78  251.26   426.8  254.02  426.83
  254.61  426.86  255.45  426.92  256.06     427  256.17  427.01   258.9   427.3
  260.78  427.47  263.04  427.39  266.16  427.26  266.35  427.24  266.94  427.21
  267.26   427.2  269.97  427.19  270.78  427.18  271.14  427.19  271.56  427.21
  272.11  427.23  272.42  427.24  273.87  427.28  278.11  427.34  279.76  427.39
  280.75  427.41  281.03  427.41  285.85  427.56  286.36  427.56  289.02  427.64
  290.01  427.62  292.41   427.7  294.02  427.75  294.59  427.76  295.15  427.77
  295.26  427.77  296.85  427.76  297.69  427.76  298.03  427.75  302.24  427.69
  302.66  427.68  303.03  427.68  303.97  427.66  305.05  427.63  305.26   427.6
  305.48  427.58  305.82  427.57  306.65  427.53   307.4   427.5

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  100.21     .04  182.97     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        100.21  182.97           325.83  333.28  345.19             .1       .3
Left Levee      Station=    85.7      Elevation=  428.67
Right Levee     Station=  205.81      Elevation=  428.34

CROSS SECTION
```

RIVER: WASH60
REACH: WASH60 RS: 1902.48

INPUT
Description:
Station Elevation Data num= 291

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 423.19.1999817 | | 423.16.7399902 | | 423.031.389984 | | 4232.769989 | | 422.98 |
| 3.619995 | | 4234.589996 | | 4236.440002 | | 4236.639984 | | 4237.549988 | 423.09 |
| 8.22998 | 423.139.149994 | | 423.1612.72998 | | 423.24 | 13.94 | 423.23 | 14.56 | 423.23 |
| 17.98999 | 423.17 | 19.28 | 423.1620.69998 | | 423.13 | 25.22 | | 42326.39999 | 423 |
| 28.06998 | | 42329.75998 | 423.0831.44998 | | 423.13 | 33.34 | 423.14 | 35.62 | 423.1 |
| 38.44 | 423.0138.64999 | | | 42342.69998 | 423 | 43 | 423 | 46.44 | 423 |
| 47.41 | 423 | 54.19 | 423.02 | 55.78 | 423.03 | 60.19 | 423.0164.01999 | | 423 |
| 64.13998 | | 42364.35999 | 422.97 | 66 | 422.6666.35999 | | 422.6267.35999 | | 422.55 |
| 67.72998 | 422.5568.10999 | | 422.56 | 68.13 | 422.59 | 68.78 | 422.6871.85001 | | 422.97 |
| 72.67999 | | 42372.72998 | | 42374.76999 | 423.03 | 75.59 | 423.0576.60999 | | 423.07 |
| 77.51999 | 423.0778.48999 | | 423.0780.35001 | | 423.03 | 81.16 | | 42382.73999 | 422.89 |
| 83.95999 | 422.7884.45999 | | 422.7 | 88.38 | 422.85 | 91.62 | 423 | 91.88 | 423 |
| 92.69 | | 42392.81998 | 423 | 93.62 | | 42395.13998 | 423.0896.89999 | | 423.16 |
| 98.97 | 423.23 | 109.66 | 423.32 | 118.58 | 423.36 | 119.53 | 423.38 | 120.53 | 423.42 |
| 123.55 | 423.35 | 127.6 | 423.22 | 127.7 | 423.2 | 128.16 | 423.19 | 129.31 | 423.16 |
| 132.87 | 423 | 136.37 | 422.85 | 136.57 | 422.83 | 137.35 | 422.78 | 138.77 | 422.65 |
| 141.56 | 422.31 | 141.85 | 422.29 | 142.63 | 422.25 | 142.94 | 422.25 | 143.26 | 422.25 |
| 143.34 | 422.31 | 144.13 | 422.53 | 144.32 | 422.54 | 145.23 | 422.55 | 145.63 | 422.53 |
| 146.73 | 422.52 | 147.24 | 422.52 | 147.82 | 422.5 | 148.28 | 422.47 | 148.75 | 422.48 |
| 149.06 | 422.45 | 149.23 | 422.42 | 149.65 | 422.27 | 149.95 | 422.24 | 150.21 | 422.23 |
| 150.94 | 422.28 | 152.08 | 422.38 | 152.36 | 422.39 | 152.47 | 422.38 | 153.14 | 422.35 |
| 153.74 | 422.33 | 154.67 | 422.37 | 155.73 | 422.43 | 158.36 | 422.58 | 163.74 | 422.86 |
| 164.01 | 422.87 | 166.62 | 423 | 166.87 | 423.02 | 167.3 | 423.03 | 167.84 | 423.03 |
| 168.54 | 423.01 | 168.86 | 423 | 169.25 | 422.94 | 169.47 | 422.97 | 169.54 | 422.98 |
| 169.57 | 422.98 | 169.63 | 422.98 | 169.86 | 422.96 | 169.98 | 422.96 | 170.04 | 422.96 |
| 174.05 | 422.79 | 174.18 | 422.79 | 175.04 | 422.82 | 175.29 | 422.83 | 175.57 | 422.83 |
| 175.86 | 422.82 | 176.49 | 422.8 | 178.25 | 422.73 | 180.65 | 422.62 | 185.86 | 422.37 |
| 187.61 | 422.27 | 188.99 | 422.18 | 192.98 | 422 | 193.03 | 422 | 194.45 | 422 |
| 194.5 | 422 | 194.58 | 422 | 195.45 | 422 | 196.73 | 422 | 196.88 | 422.04 |
| 197.31 | 422.1 | 198.68 | 422.11 | 199.18 | 422.13 | 199.26 | 422.18 | 199.63 | 422.22 |
| 199.98 | 422.25 | 203.98 | 422.11 | 206.56 | 422 | 206.69 | 421.97 | 207.24 | 421.8 |
| 207.5 | 421.67 | 208.41 | 421.57 | 209.1 | 421.51 | 209.22 | 421.51 | 210.04 | 421.49 |
| 210.82 | 421.48 | 211.15 | 421.52 | 211.56 | 421.56 | 213.39 | 422 | 215.76 | 422.32 |
| 220.15 | 423 | 220.45 | 423 | 223.29 | 423 | 223.32 | 423 | 223.34 | 423 |
| 224.3 | 423 | 224.55 | 423 | 225.45 | 423 | 226.19 | 423 | 227.76 | 423 |
| 230.16 | 423 | 230.28 | 423 | 230.31 | 423 | 230.9 | 423 | 231.07 | 423 |
| 231.34 | 422.98 | 231.36 | 422.98 | 233.75 | 422.77 | 234.84 | 422.68 | 236 | 422.62 |
| 237.87 | 422.53 | 238.75 | 422.47 | 239.16 | 422.45 | 240.29 | 422.42 | 241.27 | 422.41 |
| 244.65 | 422.46 | 247.64 | 422.48 | 250.49 | 422.21 | 253.17 | 422 | 253.31 | 421.99 |
| 253.53 | 421.94 | 253.85 | 421.93 | 256.21 | 421.86 | 258.48 | 421.8 | 261.3 | 422 |
| 265.31 | 422.37 | 265.94 | 422.42 | 267.88 | 422.54 | 269.85 | 422.71 | 274.32 | 423 |
| 274.44 | 423 | 280.93 | 423.19 | 281.55 | 423.19 | 289.44 | 423.22 | 289.72 | 423.22 |
| 291.16 | 423.19 | 293.6 | 423.15 | 295.74 | 423.09 | 298.47 | 423 | 299.85 | 422.83 |
| 300.01 | 422.81 | 301.52 | 422.61 | 303.79 | 422.25 | 304.05 | 422.27 | 304.44 | 422.23 |
| 304.97 | 422.15 | 305.46 | 422.12 | 305.78 | 422.1 | 305.88 | 422.09 | 305.91 | 422.08 |
| 306.66 | 422.08 | 307.33 | 422.07 | 307.65 | 422.08 | 308.71 | 422.1 | 309.6 | 422.12 |
| 310.6 | 422.15 | 313.97 | 422.24 | 318.52 | 422.33 | 319.19 | 422.35 | 321.39 | 422.39 |
| 324.22 | 422.44 | 337.49 | 422.84 | 337.8 | 422.85 | 338.2 | 422.86 | 340.08 | 422.88 |
| 341.65 | 422.88 | 341.66 | 422.88 | 341.76 | 422.88 | 342.68 | 423 | 343.71 | 423 |
| 344.07 | 423 | 348.95 | 423 | 350.32 | 423 | 351.68 | 423 | 356.6 | 423 |
| 357.36 | 423 | 360.55 | 422.91 | 362.89 | 422.84 | 364.35 | 422.78 | 367.58 | 422.64 |
| 371.39 | 422.47 | 371.68 | 422.46 | 371.89 | 422.47 | 373.43 | 422.58 | 374.25 | 422.6 |
| 375.4 | 422.6 | 377.51 | 422.67 | 380.22 | 422.77 | 380.39 | 422.8 | 380.96 | 422.81 |
| 382.7 | 422.71 | 383.15 | 422.67 | 383.55 | 422.66 | 384.35 | 422.6 | 385.41 | 422.49 |
| 386.17 | 422.38 | 386.44 | 422.36 | 386.83 | 422.33 | 387.26 | 422.32 | 387.66 | 422.3 |
| 387.99 | 422.3 | 388.51 | 422.3 | 388.89 | 422.3 | 389.05 | 422.31 | 389.36 | 422.33 |
| 390.08 | 422.41 | 390.32 | 422.41 | 390.7 | 422.42 | 391.35 | 422.43 | 392.78 | 422.44 |
| 395.07 | 422.43 | 399.57 | 422.41 | 400.55 | 422.45 | 401.28 | 422.48 | 402.54 | 422.47 |
| 404.21 | 422.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 136.37 | .04 | 274.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136.37 | 274.32 | | 352.26 | 366.25 | 360.76 | .1 | .3 |

Right Levee Station= 288.2 Elevation= 423.24

CROSS SECTION

RIVER: WASH60
REACH: WASH60 RS: 1536.23

INPUT
Description:
Station Elevation Data num= 458

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 417.756.340027 | | 417.877.210022 | | 417.897.670013 | | 417.898.850006 | | 417.91 |
| 8.940002 | 417.91 | 9.01001 | 417.91 | 10.47 | 417.9410.54001 | | 417.9410.68002 | | 417.94 |
| 10.76001 | 417.9410.84003 | | 417.9411.01001 | | 417.94 | 11.16 | 417.95 | 11.19 | 417.95 |
| 11.26001 | 417.9511.34003 | | 417.9511.46002 | | 417.95 | 11.63 | 417.9611.67001 | | 417.96 |
| 11.98001 | 417.9711.99002 | | 417.9712.10001 | | 417.96 | 12.22 | 417.96 | 12.25 | 417.96 |
| 12.28 | 417.9612.33002 | | 417.9612.33002 | | 417.9512.39001 | | 417.9412.46002 | | 417.93 |
| 12.5 | 417.93 | 12.56 | 417.9212.65002 | | 417.9213.12003 | | 417.92 | 13.22 | 417.92 |
| 13.42001 | 417.92 | 13.56 | 417.92 | 21.5 | 417.721.62003 | | 417.721.98001 | | 417.71 |
| 22.80002 | 417.7423.21002 | | 417.7623.49002 | | 417.7623.73001 | | 417.77 | 23.94 | 417.77 |
| 24.26001 | 417.7726.80002 | | 417.7227.49002 | | 417.71 | 28.22 | 417.7 | 28.88 | 417.68 |
| 30.17001 | 417.6333.12003 | | 417.5434.92001 | | 417.4937.11002 | | 417.4339.08002 | | 417.38 |
| 47.60001 | 417.1748.30002 | | 417.1648.45001 | | 417.1649.33002 | | 417.1649.42001 | | 417.15 |
| 49.53 | 417.1549.79001 | | 417.1450.02002 | | 417.1450.20001 | | 417.1450.64001 | | 417.13 |
| 51.28 | 417.1651.84003 | | 417.24 | 51.94 | 417.29 | 52.13 | 417.2952.54001 | | 417.3 |
| 56.65002 | 417.3457.32001 | | 417.34 | 57.88 | 417.3458.71002 | | 417.3259.51001 | | 417.3 |
| 60.58002 | 417.24 | 60.69 | 417.21 | 61.25 | 417.1762.24002 | | 417.1262.49002 | | 417.11 |
| 62.59003 | 417.1162.68002 | | 417.162.71002 | | 417.1 | 62.75 | 417.162.80002 | | 417.09 |
| 62.95001 | 417.09 | 63.25 | 417.07 | 63.44 | 417.0763.65002 | | 417.0763.67001 | | 417.08 |
| 63.99002 | 417.0864.12003 | | 417.0864.74002 | | 417.09 | 65.03 | 417.0965.58002 | | 417.1 |

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 66.51001 | 417.12 | 67.91 | 417.1468.84003 | | 417.1569.73001 | | 417.1872.09003 | | 417.28 | | |
| 72.11002 | 417.3272.30002 | | 417.3372.79001 | | 417.34 | 73.66 | 417.3474.79001 | | 417.34 | | |
| 76.02002 | 417.33 | 77.22 | 417.3278.34003 | | 417.3179.34003 | | 417.2981.86002 | | 417.21 | | |
| 83.62003 | 417.1786.39001 | | 417.186.96002 | | 417.0992.65002 | | 417.0695.77002 | | 417.04 | | |
| 98.83002 | 417.0199.42001 | | 417 | 101.62 | 416.83 | 105.04 | 416.52 | 107.11 | 416.34 | | |
| 108.1 | 416.24 | 108.56 | 416.23 | 109.01 | 416.23 | 109.06 | 416.24 | 109.23 | 416.25 | | |
| 109.29 | 416.3 | 109.47 | 416.33 | 109.75 | 416.33 | 110.98 | 416.23 | 111.28 | 416.21 | | |
| 115.01 | 416.19 | 119.13 | 416.13 | 120.39 | 416 | 121.77 | 416 | 121.95 | 416 | | |
| 123.62 | 415.99 | 124.94 | 415.99 | 125.49 | 415.92 | 125.81 | 415.92 | 126.11 | 415.91 | | |
| 127.55 | 415.8 | 128.67 | 415.75 | 131.07 | 415.63 | 131.36 | 415.62 | 131.51 | 415.62 | | |
| 131.81 | 415.62 | 132.94 | 415.66 | 135.57 | 415.76 | 136.56 | 415.81 | 136.65 | 415.82 | | |
| 138.87 | 415.98 | 139.24 | 416 | 140.8 | 416.19 | 142.05 | 416.28 | 143.46 | 416.39 | | |
| 151.8 | 417 | 156.23 | 417 | 157.38 | 417 | 158.12 | 416.88 | 158.17 | 416.85 | | |
| 158.75 | 416.83 | 159.3 | 416.81 | 159.5 | 416.84 | 160.75 | 416.94 | 160.93 | 416.98 | | |
| 161.15 | 417 | 166.02 | 417.13 | 166.79 | 417.15 | 167.38 | 417.15 | 170.01 | 417.08 | | |
| 171.11 | 417.07 | 172.1 | 417.09 | 172.16 | 417.09 | 172.26 | 417.09 | 173.02 | 417.14 | | |
| 174.04 | 417.29 | 175.64 | 417.38 | 176.88 | 417.44 | 177.67 | 417.49 | 178.02 | 417.52 | | |
| 178.25 | 417.56 | 178.65 | 417.6 | 178.78 | 417.62 | 178.88 | 417.62 | 179.18 | 417.62 | | |
| 182.37 | 417.61 | 183.03 | 417.61 | 183.48 | 417.6 | 184.46 | 417.59 | 185.31 | 417.6 | | |
| 188.72 | 417.58 | 189.8 | 417.58 | 191.95 | 417.62 | 193 | 417.63 | 194.16 | 417.61 | | |
| 196.94 | 417.56 | 198.28 | 417.55 | 199.37 | 417.54 | 201.11 | 417.53 | 201.67 | 417.52 | | |
| 202.3 | 417.51 | 210.42 | 417.27 | 213.38 | 417.18 | 215.94 | 417.15 | 218.79 | 417 | | |
| 220.89 | 417 | 223.41 | 416.99 | 225.23 | 417 | 227.71 | 417 | 227.83 | 417 | | |
| 227.91 | 417.02 | 231.72 | 417.06 | 235.26 | 417.09 | 237.5 | 417 | 238.79 | 416.9 | | |
| 241.54 | 416.66 | 244.14 | 416.46 | 245.42 | 416.46 | 246.23 | 416.44 | 246.84 | 416.43 | | |
| 247.06 | 416.4 | 247.65 | 416.42 | 248.3 | 416.44 | 248.76 | 416.47 | 248.89 | 416.49 | | |
| 249.02 | 416.49 | 249.36 | 416.53 | 249.74 | 416.56 | 252.19 | 416.84 | 253.19 | 416.96 | | |
| 253.64 | 416.97 | 255.65 | 417 | 255.71 | 417 | 255.89 | 417 | 255.93 | 417 | | |
| 256.71 | 417 | 260.57 | 417.01 | 263.7 | 417.01 | 264.93 | 417.01 | 269.73 | 417.01 | | |
| 275.55 | 417.01 | 275.57 | 417 | 275.58 | 417 | 276.23 | 417 | 276.41 | 417 | | |
| 276.76 | 417 | 277.62 | 417 | 278.55 | 416.89 | 279.48 | 416.73 | 280.54 | 416.68 | | |
| 280.77 | 416.63 | 281.87 | 416.62 | 282.96 | 416.62 | 284 | 416.68 | 284.57 | 416.74 | | |
| 285.4 | 416.8 | 285.79 | 416.86 | 287.17 | 417 | 288.1 | 417 | 289.86 | 417 | | |
| 292.54 | 417 | 296.04 | 417 | 298 | 417 | 298.62 | 416.94 | 310.37 | 416 | | |
| 310.45 | 416 | 310.84 | 416 | 310.9 | 416 | 311.39 | 416 | 312.03 | 416.07 | | |
| 312.13 | 416.07 | 312.62 | 416.08 | 312.78 | 416.09 | 312.96 | 416.1 | 313.19 | 416.11 | | |
| 313.9 | 416.16 | 314.59 | 416.21 | 315.34 | 416.27 | 324.69 | 417 | 325.65 | 417.11 | | |
| 326.32 | 417.17 | 327 | 417.2 | 327.7 | 417.23 | 328.41 | 417.24 | 329.72 | 417.24 | | |
| 330.49 | 417.23 | 330.68 | 417.21 | 330.9 | 417.05 | 331.04 | 417 | 332.93 | 416.99 | | |
| 333.17 | 416.99 | 334.59 | 417 | 335.17 | 417 | 335.48 | 417 | 336.79 | 417.09 | | |
| 338.55 | 417.22 | 339.91 | 417.44 | 339.94 | 417.47 | 340.33 | 417.53 | 340.45 | 417.53 | | |
| 340.64 | 417.53 | 341.55 | 417.52 | 342.11 | 417.51 | 342.77 | 417.51 | 343.12 | 417.51 | | |
| 343.51 | 417.52 | 344.09 | 417.52 | 347.43 | 417.5 | 348.33 | 417.5 | 348.91 | 417.48 | | |
| 349.59 | 417.46 | 350.16 | 417.39 | 350.9 | 417.3 | 350.95 | 417.27 | 351.37 | 417.2 | | |
| 351.87 | 417.16 | 353.34 | 417.1 | 353.97 | 417.07 | 354.84 | 417 | 365.08 | 416.58 | | |
| 370.31 | 416.38 | 372.98 | 416.28 | 374.39 | 416.22 | 375.09 | 416.19 | 377.12 | 416.13 | | |
| 377.26 | 416.13 | 377.64 | 416.12 | 378.31 | 416.12 | 379.4 | 416.05 | 379.58 | 416.04 | | |
| 379.73 | 416.04 | 379.79 | 416.03 | 379.82 | 416.03 | 379.84 | 416.03 | 379.87 | 416.03 | | |
| 379.89 | 416.03 | 379.94 | 416.03 | 379.95 | 416.04 | 380.08 | 416.06 | 380.12 | 416.07 | | |
| 380.17 | 416.07 | 380.23 | 416.07 | 380.3 | 416.07 | 380.57 | 416.09 | 382.04 | 416.33 | | |
| 383.03 | 416.44 | 383.66 | 416.49 | 384.41 | 416.53 | 385.37 | 416.57 | 386.38 | 416.6 | | |
| 387.07 | 416.62 | 387.61 | 416.62 | 388.29 | 416.62 | 388.96 | 416.64 | 389.44 | 416.64 | | |
| 389.61 | 416.64 | 389.73 | 416.63 | 394.09 | 416.21 | 396.63 | 416 | 398.65 | 415.72 | | |
| 399.56 | 415.65 | 400.16 | 415.63 | 400.73 | 415.61 | 401.23 | 415.62 | 401.67 | 415.63 | | |
| 402.03 | 415.64 | 402.47 | 415.67 | 403.61 | 416 | 404.53 | 416.14 | 405.09 | 416.18 | | |
| 405.45 | 416.18 | 405.94 | 416.17 | 407.6 | 416.07 | 407.83 | 416.07 | 407.85 | 416.07 | | |
| 410.19 | 416.27 | 410.25 | 416.3 | 411.14 | 416.33 | 411.97 | 416.35 | 413.6 | 416.31 | | |
| 419.94 | 416.21 | 422.01 | 416.17 | 423.08 | 416.14 | 424.3 | 416.09 | 426.19 | 416 | | |
| 426.77 | 415.92 | 427.22 | 415.89 | 427.39 | 415.87 | 428.22 | 415.5 | 428.74 | 415.42 | | |
| 429.12 | 415.36 | 430.13 | 415.44 | 432.1 | 415.65 | 433.52 | 415.66 | 433.6 | 415.66 | | |
| 433.77 | 415.7 | 433.82 | 415.75 | 436.07 | 415.76 | 438.18 | 415.76 | 439.01 | 415.66 | | |
| 441.4 | 415.37 | 444.18 | 415 | 446.56 | 414.39 | 447.86 | 414.07 | 447.89 | 414.07 | | |
| 447.91 | 414.05 | 447.94 | 414.03 | 447.98 | 414.02 | 447.99 | 414.02 | 448.01 | 414.02 | | |
| 448.02 | 414.02 | 448.03 | 414.02 | 448.03 | 414.03 | 448.06 | 414.03 | 448.17 | 414.04 | | |
| 448.33 | 414.05 | 448.44 | 414.06 | 448.61 | 414.08 | 449.44 | 414.22 | 453.51 | 415 | | |
| 456.61 | 415.25 | 461.45 | 415.12 | 463.91 | 415.02 | 465.71 | 415.01 | 466.46 | 415.01 | | |
| 467.36 | 415.01 | 469.23 | 415 | 469.34 | 415 | 469.69 | 415 | 470.06 | 415 | | |
| 470.17 | 415 | 470.3 | 415 | 474.1 | 415.26 | 474.94 | 415.29 | 475.91 | 415.29 | | |
| 476.39 | 415.28 | 476.81 | 415.26 | 477.62 | 415.19 | 478.25 | 415.07 | 478.32 | 415.07 | | |
| 478.4 | 415.05 | 478.51 | 415.03 | 478.55 | 415.03 | 478.58 | 415.03 | 478.61 | 415.02 | | |
| 478.62 | 415.03 | 478.66 | 415.04 | 478.77 | 415.06 | 479.02 | 415.07 | 479.14 | 415.08 | | |
| 479.49 | 415.1 | 479.82 | 415.12 | 480.34 | 415.14 | 486.52 | 415.58 | 491.33 | 415.65 | | |
| 494.28 | 415.7 | 495.04 | 415.74 | 496.2 | 415.76 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 95.77002 | .04 | 167.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 95.77002 | 167.38 | 374.718 | 380.39 | 365.52 | .1 | .3 |

Right Levee Station= 180.07 Elevation= 417.7

CROSS SECTION

RIVER: WASH60
REACH: WASH60 RS: 1155.84

INPUT
Description:
Station Elevation Data num= 419

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 411.62 | 5.02 | 411.61 | 6.22 | 411.61 | 19.53 | 411.65 | 23.66 | 411.66 |
| 26.95 | 411.71 | 27.32 | 411.71 | 27.91 | 411.71 | 28.91 | 411.7 | 33.05 | 411.66 |
| 34.26 | 411.64 | 36.22 | 411.61 | 37.77 | 411.57 | 38.84 | 411.54 | 39.68 | 411.54 |
| 40.58 | 411.52 | 42.14 | 411.49 | 42.84 | 411.48 | 46.55 | 411.35 | 47.93 | 411.3 |
| 55.09 | 411 | 57.69 | 410.61 | 59.83 | 410.31 | 61.18 | 410.37 | 63.2 | 410.46 |
| 63.28 | 410.5 | 63.69 | 410.61 | 63.74 | 410.61 | 63.85 | 410.61 | 64.47 | 410.57 |
| 64.97 | 410.52 | 65.13 | 410.48 | 65.25 | 410.43 | 65.34 | 410.39 | 65.47 | 410.38 |
| 65.82 | 410.28 | 65.98 | 410.25 | 66.12 | 410.24 | 66.26 | 410.23 | 66.34 | 410.22 |
| 66.45 | 410.18 | 66.55 | 410.17 | 66.79 | 410.17 | 67.03 | 410.17 | 67.42 | 410.18 |
| 67.75 | 410.2 | 67.88 | 410.2 | 68.41 | 410.24 | 68.53 | 410.25 | 68.79 | 410.3 |
| 68.91 | 410.31 | 70.58 | 410.4 | 71.54 | 410.46 | 72.46 | 410.53 | 74.39 | 410.72 |
| 74.98 | 410.76 | 77.75 | 410.86 | 82.65 | 411 | 83.45 | 411.01 | 89.58 | 411.05 |
| 91.42 | 411.05 | 93.25 | 411.06 | 93.92 | 411.06 | 94.39 | 411.07 | 95.01 | 411.12 |
| 96.18 | 411.26 | 96.73 | 411.28 | 97.93 | 411.32 | 98.24 | 411.33 | 98.85 | 411.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 101.15 | 411.31 | 103.19 | 411.3 | 104.23 | 411.28 | 104.48 | 411.26 | 104.65 | 411.2 |
| 104.87 | 411.02 | 104.97 | 411 | 105.44 | 411 | 106.03 | 411 | 106.96 | 411 |
| 108.59 | 411 | 109.98 | 411 | 117.72 | 411.26 | 131.94 | 411.74 | 133.93 | 411.81 |
| 134.13 | 411.81 | 134.19 | 411.81 | 134.25 | 411.81 | 136.19 | 411.82 | 136.76 | 411.82 |
| 137.26 | 411.82 | 137.51 | 411.82 | 137.68 | 411.83 | 137.84 | 411.83 | 137.91 | 411.83 |
| 138.11 | 411.84 | 138.31 | 411.84 | 138.4 | 411.84 | 138.49 | 411.84 | 138.58 | 411.84 |
| 138.67 | 411.83 | 138.69 | 411.81 | 138.73 | 411.8 | 139.09 | 411.76 | 139.68 | 411.67 |
| 139.8 | 411.65 | 140.05 | 411.67 | 140.84 | 411.64 | 142.97 | 411.45 | 143.94 | 411.5 |
| 144.98 | 411.55 | 145.23 | 411.54 | 145.48 | 411.54 | 145.92 | 411.53 | 146.54 | 411.48 |
| 146.78 | 411.51 | 146.94 | 411.56 | 147.05 | 411.69 | 147.24 | 411.71 | 147.6 | 411.72 |
| 148.07 | 411.71 | 148.81 | 411.69 | 149.03 | 411.68 | 149.84 | 411.61 | 151.29 | 411.49 |
| 151.94 | 411.45 | 152.41 | 411.4 | 152.81 | 411.32 | 153.09 | 411.3 | 153.58 | 411.28 |
| 154.74 | 411.26 | 154.87 | 411.26 | 156.2 | 411.46 | 157.02 | 411.55 | 158.51 | 411.58 |
| 159.37 | 411.58 | 160.33 | 411.57 | 161.42 | 411.54 | 162.57 | 411.5 | 163.66 | 411.45 |
| 164.69 | 411.4 | 166.68 | 411.27 | 169.36 | 411.06 | 170.27 | 411 | 172.41 | 410.76 |
| 173.77 | 410.58 | 173.93 | 410.58 | 175.02 | 410.62 | 175.88 | 410.67 | 177.4 | 410.81 |
| 178.3 | 410.86 | 178.99 | 410.88 | 180.14 | 410.88 | 181.36 | 410.97 | 182.74 | 410.97 |
| 183.29 | 410.97 | 184.19 | 410.97 | 184.9 | 410.96 | 185.64 | 410.97 | 186.75 | 410.98 |
| 188.91 | 411 | 194.05 | 411 | 194.65 | 411 | 194.78 | 411 | 195.11 | 411 |
| 195.11 | 410.97 | 195.82 | 410.72 | 196.64 | 410.58 | 197.23 | 410.52 | 197.6 | 410.49 |
| 198.23 | 410.4 | 198.48 | 410.34 | 199.45 | 410.3 | 200.25 | 410.28 | 202.13 | 410.32 |
| 202.68 | 410.32 | 202.91 | 410.32 | 203.06 | 410.31 | 203.14 | 410.3 | 203.2 | 410.27 |
| 203.5 | 410.25 | 203.75 | 410.22 | 205.69 | 410.3 | 206.9 | 410.34 | 207.05 | 410.34 |
| 210.76 | 410.27 | 215.52 | 410.15 | 215.7 | 410.14 | 216.31 | 410.16 | 218.69 | 410.27 |
| 218.97 | 410.29 | 219.25 | 410.37 | 221.39 | 410.41 | 223.3 | 410.43 | 227.33 | 410.32 |
| 238.08 | 410 | 239.02 | 409.98 | 239.44 | 409.97 | 239.82 | 409.98 | 241.54 | 409.98 |
| 243.58 | 410 | 246.41 | 410.24 | 247.04 | 410.27 | 247.56 | 410.26 | 250.39 | 410.08 |
| 252.03 | 410 | 252.51 | 410 | 252.68 | 409.99 | 256.15 | 409.96 | 257.61 | 409.97 |
| 260.11 | 410 | 265.22 | 410.21 | 265.92 | 410.21 | 267.49 | 410.28 | 269.77 | 410.28 |
| 270.75 | 410.28 | 273.61 | 410.31 | 283.59 | 410.56 | 284.89 | 410.6 | 285.61 | 410.61 |
| 287.1 | 410.63 | 288.23 | 410.65 | 290.23 | 410.68 | 292.9 | 410.73 | 293.12 | 410.73 |
| 295.5 | 410.74 | 298.15 | 410.77 | 298.31 | 410.77 | 299.18 | 410.77 | 300.19 | 410.77 |
| 300.77 | 410.77 | 301.41 | 410.78 | 303.77 | 410.79 | 304.56 | 410.79 | 305.28 | 410.79 |
| 305.93 | 410.78 | 306.51 | 410.78 | 307.47 | 410.77 | 308.06 | 410.76 | 308.86 | 410.76 |
| 309.74 | 410.75 | 312.64 | 410.76 | 313.39 | 410.76 | 316.37 | 410.76 | 316.9 | 410.76 |
| 318.63 | 410.76 | 319.49 | 410.76 | 320.29 | 410.76 | 320.89 | 410.75 | 321.3 | 410.75 |
| 322.01 | 410.74 | 322.49 | 410.73 | 324.87 | 410.69 | 325.38 | 410.68 | 326.26 | 410.65 |
| 328.18 | 410.61 | 329.73 | 410.57 | 330.06 | 410.56 | 330.85 | 410.52 | 331.45 | 410.49 |
| 333.53 | 410.4 | 333.87 | 410.37 | 335.09 | 410.37 | 336.08 | 410.36 | 336.82 | 410.35 |
| 337.37 | 410.34 | 338.03 | 410.36 | 338.83 | 410.41 | 338.84 | 410.41 | 339.5 | 410.41 |
| 341.09 | 410.41 | 342 | 410.4 | 342.79 | 410.38 | 343.38 | 410.37 | 344.01 | 410.34 |
| 344.13 | 410.33 | 344.19 | 410.32 | 344.41 | 410.25 | 344.53 | 410.23 | 344.62 | 410.23 |
| 344.74 | 410.23 | 344.88 | 410.23 | 345.17 | 410.24 | 345.49 | 410.27 | 345.74 | 410.29 |
| 345.87 | 410.3 | 347.26 | 410.32 | 347.64 | 410.32 | 350.38 | 410.38 | 351.37 | 410.41 |
| 352.52 | 410.45 | 352.67 | 410.45 | 353.23 | 410.5 | 353.23 | 410.52 | 353.32 | 410.54 |
| 353.63 | 410.57 | 354.01 | 410.58 | 356.86 | 410.55 | 360.29 | 410.5 | 360.98 | 410.45 |
| 362.75 | 410.35 | 363.64 | 410.3 | 363.99 | 410.29 | 364.43 | 410.29 | 365.49 | 410.28 |
| 365.59 | 410.27 | 366.03 | 410.24 | 366.27 | 410.23 | 366.36 | 410.22 | 366.53 | 410.22 |
| 366.8 | 410.22 | 369.31 | 410.26 | 369.66 | 410.26 | 369.89 | 410.27 | 370.24 | 410.29 |
| 370.7 | 410.3 | 370.96 | 410.3 | 373.8 | 410.35 | 374.64 | 410.37 | 375.49 | 410.4 |
| 377.65 | 410.49 | 378.58 | 410.54 | 379.18 | 410.56 | 379.61 | 410.57 | 380.32 | 410.58 |
| 380.63 | 410.58 | 381.22 | 410.57 | 381.69 | 410.56 | 387.31 | 410.35 | 391.87 | 410.18 |
| 393.92 | 410.09 | 395.61 | 410 | 396.18 | 409.94 | 397.69 | 409.73 | 398.06 | 409.72 |
| 398.96 | 409.59 | 399.41 | 409.47 | 399.62 | 409.41 | 399.79 | 409.37 | 400.34 | 409.29 |
| 401.04 | 409.21 | 401.54 | 409.17 | 401.74 | 409.15 | 401.76 | 409.14 | 401.81 | 409.14 |
| 401.85 | 409.13 | 402.14 | 409.14 | 402.52 | 409.19 | 403.15 | 409.24 | 403.41 | 409.27 |
| 403.61 | 409.32 | 403.75 | 409.33 | 404.02 | 409.32 | 409.37 | 409 | 410.3 | 409 |
| 410.73 | 409 | 411.62 | 409 | 411.97 | 409 | 418.2 | 409.41 | 419.93 | 409.47 |
| 423.05 | 409.63 | 424.89 | 409.75 | 425.39 | 409.78 | 426.61 | 409.82 | 428.92 | 409.79 |
| 429.21 | 409.79 | 432.48 | 409.78 | 435.79 | 409.8 | 438.29 | 410 | 440.92 | 410.05 |
| 448.24 | 410.27 | 448.88 | 410.29 | 449.6 | 410.3 | 453.99 | 410.33 | 454.91 | 410.34 |
| 455.8 | 410.36 | 456.45 | 410.36 | 457.62 | 410.36 | 460.37 | 410.35 | 461.24 | 410.34 |
| 462.63 | 410.33 | 464.36 | 410.31 | 464.5 | 410.31 | 464.76 | 410.32 | 465.45 | 410.34 |
| 468 | 410.36 | 470.47 | 410.37 | 471.13 | 410.34 | 471.19 | 410.31 | 471.35 | 410.3 |
| 471.69 | 410.29 | 473.51 | 410.27 | 474.63 | 410.26 | 475.31 | 410.24 | 475.57 | 410.22 |
| 475.62 | 410.19 | 475.88 | 410.18 | 476.7 | 410.17 | 480.25 | 410.16 | 482.05 | 410.15 |
| 483.31 | 410.13 | 484.21 | 410.11 | 487.28 | 410 | 489.19 | 409.92 | 489.3 | 409.91 |
| 489.45 | 409.91 | 489.46 | 409.91 | 490.04 | 409.89 | 491.01 | 409.85 | 508.39 | 409 |
| 509.53 | 409 | 509.97 | 409 | 510.26 | 409 | 511.06 | 409 | 511.36 | 409 |
| 511.52 | 409 | 521.31 | 409.29 | 523.25 | 409.3 | 524.42 | 409.33 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 28.91 | .04 | 131.94 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

28.91 131.94 450.159 438.1 341.728 .1 .3

Right Levee Station= 138.87 Elevation= 411.89

CROSS SECTION

RIVER: WASH60

REACH: WASH60 RS: 717.74

INPUT

Description:

Station Elevation Data num= 428

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 404.09.4400024 | | 404.08.5299988 | | 404.08.6100159 | | 404.07.7399902 | | 404.06 |
| .7700195 | 404.07.8000183 | | 404.07.8399963 | | 404.08.8600159 | | 404.08.8900146 | | 404.08 |
| 2.529999 | 404.082.910004 | | 404.093.390015 | | 404.13.670013 | | 404.14.559998 | | 404.1 |
| 4.77002 | 404.116.440002 | | 404.218.350006 | | 404.3113.11002 | | 404.3417.48001 | | 404.36 |
| 17.79001 | 404.3819.73001 | | 404.5321.48001 | | 404.5123.42001 | | 404.4923.48001 | | 404.46 |
| 23.92001 | 404.4224.35001 | | 404.4 | 25.12 | 404.3925.58002 | | 404.3925.80002 | | 404.39 |
| 26.08002 | 404.3826.23001 | | 404.3626.29001 | | 404.35 | 26.63 | 404.33 | 26.94 | 404.31 |
| 27.51001 | 404.3528.39999 | | 404.3928.82001 | | 404.4129.73001 | | 404.4430.02002 | | 404.44 |
| 34.28 | 404.5537.17999 | | 404.6237.92999 | | 404.61 | 38.12 | 404.6138.33002 | | 404.61 |
| 40.04001 | 404.65 | 40.47 | 404.6540.76001 | | 404.6440.95999 | | 404.6341.92001 | | 404.54 |
| 43.02002 | 404.41 | 43.88 | 404.35 | 44.31 | 404.3246.20999 | | 404.1347.60001 | | 404.03 |
| 48.11002 | 404 | 48.94 | 404 | 49.37 | 40449.42999 | | 40449.95001 | | 404 |
| 51.17001 | 404.2154.11002 | | 404.5655.85001 | | 404.756.61002 | | 404.7356.86002 | | 404.74 |
| 56.87 | 404.74 | 56.97 | 404.74 | 57.06 | 404.75 | 57.16 | 404.7557.60001 | | 404.71 |
| 57.70001 | 404.7157.83002 | | 404.7357.89001 | | 404.7557.95001 | | 404.7658.02002 | | 404.76 |
| 58.98001 | 404.7459.42999 | | 404.73 | 61.38 | 404.6661.85001 | | 404.6363.76001 | | 404.49 |
| 69.04001 | 404.0569.70001 | | 404 | 72.75 | 404 | 78.66 | 403.9983.02002 | | 403.99 |

```
   85.41     404   87.59     40496.92001   404.6   97.78  404.6399.30002  404.72
   99.97  404.77  100.63  404.82  100.87  404.84  101.93  404.89  102.53  404.89
  103.16  404.89  103.18  404.89  103.23  404.89  103.45  404.89  103.69  404.89
  103.71  404.89  103.74  404.89  103.94  404.89  105.44  404.91  105.89  404.91
  106.16  404.92  106.19  404.92  106.91  404.91  107.75   404.9  107.81   404.9
  107.95   404.9  109.91  404.85  110.05  404.85  110.36  404.84  120.01  404.57
  121.03  404.54     123   404.5  123.51  404.48  125.32  404.45  126.91  404.43
  129.35  404.44  129.54  404.45  129.73  404.46  129.78  404.46  130.04  404.49
  130.22  404.54  130.45  404.55  130.82  404.56  131.34  404.57  131.97  404.57
  132.61  404.57  133.14  404.56  133.52  404.55  134.68  404.51  137.92  404.43
  139.81  404.37  140.52  404.34  141.32  404.29  141.57  404.27  141.88  404.25
  142.07  404.24  142.21  404.24   142.3  404.24  142.37  404.26  142.48  404.28
  143.47  404.33  144.32  404.41  146.82  404.49  148.25  404.53  149.73  404.55
  152.54  404.64  155.65  404.71  156.06  404.72  156.39  404.72  156.65  404.72
  157.36   404.7  157.66   404.7  158.07  404.69  159.87  404.68  160.47  404.67
  160.98  404.67  161.63  404.65  161.81  404.65  162.38  404.57   163.8   404.4
  166.01  404.12  167.08     404  167.76  403.92  168.23  403.89  168.63  403.88
  169.44  403.98  169.48     404  172.36  404.02  173.96  404.03  174.19  404.03
   174.3  404.03  177.48     404  177.79  403.88  178.59  403.71  178.88  403.68
  179.05  403.71  179.24  403.75  179.45  403.83  180.62     404  183.33  404.14
  186.55   404.3  188.98   404.4  189.61  404.42  191.02  404.49  191.82  404.52
  192.35  404.54  192.61  404.55  192.94  404.54  193.19  404.55  193.56  404.56
  194.68   404.6  194.93   404.6  195.22  404.61  195.51   404.6  195.67   404.6
  195.72  404.59  195.85  404.58  196.65  404.56  197.25  404.54  198.01   404.5
  198.49  404.47  198.94  404.42  199.31  404.34  199.63  404.32  200.49  404.28
  201.23  404.24  201.93  404.17  202.47  404.08  202.78     404  204.43  403.54
  206.41     403  206.77     403  206.82     403     207     403  207.17     403
   207.6     403  208.39   403.1  209.71   403.2  210.67   403.2  210.86  403.21
  211.19  403.21  211.76  403.18  212.14  403.15   212.8  403.13  212.86  403.12
  212.93  403.12  213.37  403.15  213.84  403.19  214.07  403.21  216.04  403.48
  218.28  403.74  220.91  403.99  221.03     404  224.25  404.13  230.57  404.45
  235.98  404.71   236.5  404.75  236.78  404.76  237.13  404.77  237.53  404.78
  237.75  404.79  238.21  404.79  238.74   404.8  239.36   404.8  240.09   404.8
  240.42   404.8  240.71  404.79  241.52  404.77  243.03  404.78  244.01  404.77
  245.59  404.69  245.89  404.67  246.04  404.63  247.16  404.59  247.44   404.6
  248.17   404.6  250.15  404.61  250.65  404.62  253.59  404.67  255.44   404.7
   257.2  404.72  258.39  404.73  259.56  404.72  260.62  404.73  261.85  404.74
  262.84  404.71  263.54  404.71  264.64  404.72  267.64  404.75  269.22  404.77
  270.69  404.79  271.96  404.82  272.97  404.85  275.61  404.95  277.44     405
  282.03  405.25  284.52  405.27  286.43  405.29  290.52  405.31   290.7   405.3
  291.51  405.32   292.1  405.33  292.81  405.36  295.07   405.5  295.55  405.52
  295.76  405.52  296.85  405.52  298.49  405.51  300.42   405.5  300.47  405.49
  301.18  405.47  301.66  405.45  302.11  405.43   302.9  405.36   303.6  405.33
  304.69  405.31  305.93   405.3  307.73   405.3  308.22   405.3   308.7  405.28
   310.3  405.18  313.09     405  313.75  404.97  314.38  404.95  314.77  404.95
  314.98     405  315.58  405.01  315.63  405.14  315.68  405.27  318.78  405.24
  320.08  405.22   322.7  405.16  323.18  405.16   324.7  405.15  326.24  405.14
   330.1  405.01  330.63     405  332.49   404.9  332.58  404.88  333.57  404.84
   334.5  404.81  335.26  404.84  335.54  404.86  335.77  404.92  336.49  404.98
  336.64     405  339.84     405  342.08     405  343.18     405  347.38     405
  347.72  404.98  350.41  404.89  350.61  404.87  350.89  404.78  355.82  404.63
  359.26  404.54   359.5  404.55  359.66  404.54  359.88  404.53  360.41  404.44
  361.44  404.35  361.63  404.36  361.83  404.37  361.96  404.39  362.48  404.41
   362.8  404.44  362.91  404.48  363.15  404.65  363.84  404.73  364.33  404.77
  367.67  404.96  368.09     405   370.9  405.07  373.31  405.12  377.49   405.2
  379.07  405.23  379.64  405.24  380.09  405.25  380.66  405.25  383.33  405.19
   384.1  405.19  391.54  405.19  392.37   405.2   402.3  405.21  403.01  405.21
  403.52  405.21  403.83  405.21   404.3   405.2   404.4   405.2  404.46   405.2
  404.67  405.19  404.87   405.2  404.96   405.2  405.13  405.21  405.53  405.22
  407.59  405.29  407.73  405.29  413.06  405.27  414.24  405.28  414.41  405.28
  421.79  405.35  422.87   405.3  424.17  405.25  425.96  405.21   435.1     405
  436.45  404.95  438.02  404.87  438.79  404.94   439.3     405  439.92     405
  440.23     405  440.59     405  440.86     405  441.45     405  442.29     405
  444.16  404.89  447.26  404.68  447.68  404.63  448.46   404.5  448.81  404.42
  449.39  404.42  449.98  404.43  450.64   404.6  451.08  404.66  451.65   404.7
  452.15  404.72  452.45  404.71  452.51  404.64  453.32  404.58  454.01  404.55
  456.62  404.96  456.78     405  457.08  405.28  457.15  405.34  457.32  405.36
  457.96  405.39  459.16  405.42  459.64  405.45  459.88  405.45  460.28  405.46
  460.87  405.47  461.66  405.48  461.88  405.48

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0541.92001     .04   99.97     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      41.92001   99.97           441.46  466.32  465.52             .1       .3
Left Levee      Station=   40.66      Elevation=  404.69
Right Levee     Station=   105.9      Elevation=  404.96

CROSS SECTION


RIVER: WASH60
REACH: WASH60              RS: 251.42

INPUT
Description:
Station Elevation Data    num=     456
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  398.372.339966  398.355.469971  398.348.469971  398.3510.95001  398.36
   14.12  398.3814.33997  398.3815.78998  398.36   18.37  398.3319.34998   398.3
22.59998  398.2123.35999  398.1924.82001  398.1525.65997  398.1226.70001  398.06
27.52002     39829.66998  397.99   30.19  397.9930.72998  397.9931.32001  397.99
31.57001  397.9931.67999  397.9934.34998  397.9936.95001  397.9937.20001  397.99
37.72998  397.9938.60999  397.9839.59998  397.9944.98999     39856.20001  398.26
64.83997  398.4467.39996  398.4968.89001  398.5169.51001  398.52   71.56  398.54
72.96997  398.55   74.37  398.5775.54999  398.5977.16998  398.6378.02002  398.65
79.27002  398.6779.79999  398.6880.17999  398.6880.67999  398.6881.45001  398.69
   86.38   398.788.27002  398.7189.72998  398.7290.77997  398.7492.17999  398.76
   92.75  398.7793.32001  398.7793.95001  398.78   94.63  398.7795.35999  398.77
97.92999  398.7699.33002  398.71  101.48  398.63  101.62   398.6  102.71  398.47
  103.07  398.39  104.47     398   104.5  397.97  104.76  397.95   105.5  397.96
  106.26  397.96  106.46     398  109.14  398.39  110.06  398.37  110.61  398.37
  113.77   398.4  114.16  398.41  118.82  398.64  123.01   398.7  126.46  398.71
   127.6  398.63  129.71  398.47  130.48  398.42  130.85  398.42  134.67  398.22
  135.25   398.2  138.65     398  143.17     398  144.93     398  148.89     398
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 151.05 | 398 | 152.8 | 398.01 | 161.47 | 398.02 | 164.21 | 398.02 | 167.2 | 398.02 |
| 174.69 | 398.01 | 176.72 | 398.01 | 177.44 | 398.01 | 181.02 | 398 | 181.53 | 398 |
| 182.8 | 397.99 | 183.03 | 397.99 | 184.58 | 398 | 184.79 | 398.02 | 188.65 | 398.24 |
| 189.31 | 398.31 | 189.67 | 398.33 | 189.87 | 398.33 | 190.12 | 398.32 | 192.89 | 398.23 |
| 193.31 | 398.21 | 193.68 | 398.2 | 199.75 | 398.13 | 213.78 | 398 | 217.1 | 397.95 |
| 217.2 | 397.95 | 218.64 | 397.96 | 221.74 | 397.9 | 227.15 | 397.82 | 233.19 | 397.72 |
| 234.54 | 397.7 | 244.5 | 397.55 | 246.04 | 397.53 | 246.84 | 397.51 | 248.2 | 397.47 |
| 250.35 | 397.43 | 251.28 | 397.41 | 252.12 | 397.43 | 253.04 | 397.45 | 253.19 | 397.51 |
| 253.36 | 397.53 | 253.68 | 397.53 | 254.96 | 397.52 | 255.27 | 397.53 | 256.87 | 397.61 |
| 258.25 | 397.67 | 258.4 | 397.67 | 258.51 | 397.67 | 258.81 | 397.66 | 261.04 | 397.59 |
| 267.29 | 397.37 | 269.2 | 397.35 | 279.37 | 397 | 279.72 | 397 | 280.33 | 397 |
| 280.69 | 397 | 281.18 | 397 | 282.44 | 397.1 | 284.55 | 397.15 | 293.7 | 397.56 |
| 297.81 | 397.63 | 300.8 | 397.68 | 300.92 | 397.66 | 300.94 | 397.67 | 301.05 | 397.67 |
| 301.54 | 397.71 | 303.26 | 397.8 | 303.45 | 397.81 | 303.62 | 397.82 | 303.66 | 397.83 |
| 303.78 | 397.84 | 304.17 | 397.86 | 304.28 | 397.87 | 304.61 | 397.88 | 304.67 | 397.88 |
| 305.05 | 397.88 | 305.36 | 397.89 | 305.68 | 397.89 | 305.95 | 397.89 | 306.17 | 397.89 |
| 306.38 | 397.9 | 306.58 | 397.9 | 306.8 | 397.89 | 307.23 | 397.89 | 307.6 | 397.88 |
| 307.89 | 397.88 | 308.89 | 397.85 | 309.69 | 397.81 | 310.14 | 397.79 | 311.32 | 397.71 |
| 311.65 | 397.7 | 312.41 | 397.66 | 313.91 | 397.59 | 314.86 | 397.54 | 317.61 | 397.36 |
| 321.06 | 397.12 | 321.13 | 397.11 | 322.54 | 397 | 322.78 | 397 | 322.83 | 397 |
| 323.01 | 397 | 323.03 | 397 | 324.73 | 397.11 | 325.01 | 397.12 | 325.34 | 397.13 |
| 329.21 | 397.38 | 329.94 | 397.44 | 332.35 | 397.67 | 332.63 | 397.69 | 333.11 | 397.71 |
| 333.29 | 397.72 | 333.54 | 397.74 | 333.84 | 397.76 | 334.01 | 397.76 | 335.37 | 397.8 |
| 336.4 | 397.82 | 336.73 | 397.82 | 337.48 | 397.82 | 337.89 | 397.82 | 337.99 | 397.82 |
| 338.32 | 397.8 | 338.75 | 397.77 | 338.81 | 397.73 | 339.64 | 397.61 | 340.51 | 397.5 |
| 342.25 | 397.23 | 342.6 | 397.23 | 343.87 | 397 | 344.57 | 397 | 344.71 | 397 |
| 345.43 | 397 | 345.49 | 397 | 345.99 | 397.05 | 346.2 | 397.05 | 348.29 | 397.19 |
| 350.21 | 397.28 | 351.3 | 397.29 | 351.97 | 397.33 | 358.26 | 398 | 359.92 | 398 |
| 361.18 | 398 | 361.61 | 398 | 363.12 | 398 | 366.17 | 398 | 366.57 | 398 |
| 367.8 | 398 | 368.95 | 398 | 371.95 | 398 | 373.66 | 398 | 374.77 | 398 |
| 376.12 | 398 | 376.85 | 398 | 387.09 | 397.73 | 396.74 | 397.85 | 400.37 | 397.9 |
| 401.42 | 397.91 | 402.15 | 397.92 | 402.67 | 397.93 | 402.74 | 397.94 | 402.83 | 397.94 |
| 402.95 | 397.95 | 402.98 | 397.95 | 403.01 | 397.95 | 403.06 | 397.95 | 403.55 | 397.95 |
| 403.7 | 397.95 | 403.81 | 397.95 | 404.22 | 397.94 | 404.83 | 397.93 | 404.85 | 397.92 |
| 404.87 | 397.92 | 404.92 | 397.91 | 405.85 | 397.87 | 406 | 397.86 | 406.15 | 397.85 |
| 407.06 | 397.85 | 407.91 | 397.83 | 407.98 | 397.83 | 408.58 | 397.81 | 408.95 | 397.79 |
| 411.69 | 397.51 | 418.03 | 397.42 | 422.77 | 397.38 | 424.23 | 397.4 | 425.18 | 397.41 |
| 425.61 | 397.42 | 429.27 | 397.52 | 432.12 | 397.49 | 435.42 | 397.45 | 435.53 | 397.43 |
| 436.18 | 397.4 | 437.57 | 397.34 | 439.74 | 397.27 | 441.21 | 397.2 | 442.49 | 397.16 |
| 443.85 | 397.11 | 445.18 | 397.04 | 445.62 | 397 | 446.9 | 397 | 448.27 | 397 |
| 449.79 | 397 | 451.02 | 397 | 453.2 | 397.17 | 453.32 | 397.18 | 454.9 | 397.24 |
| 457.39 | 397.35 | 458.09 | 397.38 | 459.19 | 397.43 | 459.69 | 397.45 | 460.27 | 397.46 |
| 460.86 | 397.46 | 461.39 | 397.45 | 461.79 | 397.44 | 462.08 | 397.41 | 462.72 | 397.28 |
| 464.51 | 397.05 | 465.29 | 397 | 465.36 | 397 | 466.23 | 397 | 466.67 | 397 |
| 466.7 | 397 | 468.04 | 397 | 468.12 | 397 | 469.26 | 397.06 | 474.76 | 397.03 |
| 477.72 | 397.01 | 480.85 | 397 | 481 | 397 | 481.3 | 397 | 481.35 | 397 |
| 481.79 | 397 | 481.83 | 397 | 481.84 | 397 | 482.42 | 397 | 482.69 | 397 |
| 484.8 | 397.1 | 489.64 | 397.27 | 490.93 | 397.32 | 498.91 | 397.55 | 502.07 | 397.66 |
| 502.67 | 397.67 | 502.83 | 397.68 | 503.09 | 397.68 | 503.48 | 397.68 | 505.16 | 397.69 |
| 505.47 | 397.69 | 505.56 | 397.7 | 506.46 | 397.69 | 507.4 | 397.69 | 507.45 | 397.68 |
| 507.9 | 397.67 | 510 | 397.62 | 510.39 | 397.61 | 511.25 | 397.58 | 512.44 | 397.56 |
| 519.6 | 397.64 | 519.7 | 397.65 | 524.43 | 397.71 | 525.49 | 397.72 | 525.69 | 397.73 |
| 525.86 | 397.72 | 526.68 | 397.68 | 527.42 | 397.65 | 528.7 | 397.68 | 530.03 | 397.71 |
| 531.27 | 397.73 | 532.35 | 397.75 | 533.26 | 397.75 | 534 | 397.75 | 535.03 | 397.75 |
| 535.26 | 397.78 | 535.5 | 397.81 | 535.93 | 397.84 | 538.64 | 398 | 540.06 | 398 |
| 540.71 | 398 | 541.67 | 398 | 542.42 | 398 | 544.44 | 398 | 544.62 | 398 |
| 544.98 | 398 | 545.19 | 398.01 | 548.67 | 398 | 551.75 | 398 | 551.93 | 398 |
| 554.4 | 398.01 | 557.53 | 398.02 | 561.19 | 398.02 | 564.63 | 398.01 | 565.67 | 398.01 |
| 566.34 | 398 | 566.59 | 398 | 571.77 | 397.85 | 572.46 | 397.84 | 573.31 | 397.82 |
| 576.89 | 397.7 | 577.44 | 397.69 | 582.36 | 397.59 | 589.23 | 397.42 | 590.68 | 397.38 |
| 591.8 | 397.35 | 593.82 | 397.29 | 596.68 | 397.19 | 601.57 | 397 | 603.85 | 396.98 |
| 606.28 | 396.96 | 608.9 | 396.98 | 610.35 | 396.99 | 611.37 | 396.99 | 611.9 | 396.99 |
| 612.02 | 396.99 | 613.68 | 396.98 | 614.47 | 396.98 | 615.18 | 396.98 | 615.46 | 396.98 |
| 617.1 | 397 | 620.72 | 397.25 | 627.11 | 397.32 | 632.79 | 397.34 | 633.23 | 397.35 |
| 633.87 | 397.36 | 634.7 | 397.36 | 637.76 | 397.36 | 638.87 | 397.36 | 639.88 | 397.37 |
| 640.75 | 397.39 | 642.18 | 397.41 | 646.47 | 397.51 | 666.8 | 398 | 667.26 | 398.01 |
| 668.46 | 398.04 | 668.76 | 398.05 | 669.79 | 398.21 | 669.93 | 398.21 | 670.09 | 398.21 |
| 670.52 | 398.16 | 671.04 | 398.13 | 672.14 | 398.11 | 673.9 | 398.11 | 675.86 | 398.12 |
| 678.55 | 398.14 | 679.34 | 398.15 | 679.73 | 398.16 | 680.29 | 398.16 | 681.2 | 398.14 |
| 689.23 | 398.02 | 690.19 | 398 | 690.34 | 398 | 691.97 | 397.92 | 694.23 | 397.79 |
| 694.34 | 397.68 | 695.54 | 397.61 | 695.81 | 397.58 | 697.23 | 397.58 | 698.69 | 397.59 |
| 698.86 | 397.6 | 699.39 | 397.6 | 699.56 | 397.61 | 699.84 | 397.63 | 700.79 | 397.67 |
| 701.5 | 397.72 | 703.25 | 397.82 | 703.77 | 397.86 | 703.99 | 397.9 | 704 | 398 |
| 704.25 | 398 | 705.22 | 398 | 705.98 | 398 | 706.38 | 398 | 706.64 | 398 |
| 717.49 | 397.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 402.74 | .04 | 538.64 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 402.74 | 538.64 | .1 | .3 |

Left Levee Station= 375.34 Elevation= 398.03
Right Levee Station= 540.48 Elevation= 398.04

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3521.27

INPUT
Description:
Station Elevation Data num= 492

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.572.439941 | 331.492.640015 | 331.483.829956 | 331.346.060059 | 331.02 | | | | |
| 6.099976 | 331.036.170044 | 331.03 6.26001 | 331.026.339966 | 331.027.579956 | 331 | | | | |
| 7.689941 | 330.948.319946 | 330.94 9.48999 | 33118.27002 | 33119.39001 | 331 | | | | |
| 21.25 | 33123.29004 | 33123.58997 | 33124.65002 | 33124.79004 | 331 | | | | |
| 29.33997 | 330.5830.82996 | 330.631.43005 | 330.632.05005 | 330.5832.68994 | 330.55 | | | | |
| 34.69995 | 330.4236.03003 | 330.3637.45996 | 330.3137.93994 | 330.2640.06006 | 330 | | | | |
| 44.73999 | 329.3345.44995 | 329.2445.58997 | 329.2245.68994 | 329.1945.76001 | 329.18 | | | | |
| 45.87 | 329.1846.52002 | 329.1947.53003 | 329.17 47.75 | 329.1748.15002 | 329.19 | | | | |
| 48.70996 | 329.2249.19995 | 329.2452.59998 | 329.4853.02002 | 329.4953.18005 | 329.49 | | | | |
| 53.33997 | 329.4854.83997 | 329.2955.96997 | 329.1856.52002 | 329.1957.21997 | 329.13 | | | | |
| 58.31995 | 329.07 58.5 | 329.0759.95996 | 329.0260.03003 | 329.0260.92004 | 329 | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 63.07996 | 328.9763.22998 | | 328.9767.07996 | | 328.9567.21997 | | 328.9569.41998 | | 329 |
| 73.02002 | 329.0876.39001 | | 329 | 78.25 | 328.9580.32001 | | 328.9181.26001 | | 328.92 |
| 81.37 | 328.9382.21997 | | 328.9285.02002 | | 328.83 | 86.12 | 328.8786.14001 | | 328.87 |
| 86.39001 | 328.8686.78003 | | 328.8687.77002 | | 328.8388.20001 | | 328.8289.59998 | | 328.78 |
| 91.25 | 328.7192.21997 | | 328.6993.26001 | | 328.66 | 94.87 | 328.61 | 101.78 | 328.34 |
| 109.7 | 328 | 109.98 | 327.95 | 114.6 | 327 | 118.04 | 326.45 | 120.74 | 326 |
| 126.31 | 325.56 | 133.88 | 325 | 139.78 | 324.53 | 141.64 | 324.4 | 147.94 | 324 |
| 153.08 | 323.54 | 157.91 | 323 | 162.29 | 322.33 | 164.66 | 322 | 167 | 321.76 |
| 174.09 | 321 | 178.19 | 320.54 | 178.65 | 320.49 | 179.19 | 320.45 | 180.73 | 320.38 |
| 181.42 | 320.35 | 182.2 | 320.33 | 183.14 | 320.32 | 184.37 | 320.26 | 184.84 | 320.23 |
| 186.17 | 320.23 | 186.98 | 320.26 | 188.48 | 320.42 | 188.81 | 320.41 | 189.96 | 320.24 |
| 192.22 | 320.04 | 192.95 | 320 | 208.77 | 319.11 | 210.39 | 319 | 211.58 | 318.91 |
| 212.7 | 318.86 | 213.21 | 318.82 | 213.66 | 318.8 | 214.22 | 318.78 | 214.82 | 318.76 |
| 215.35 | 318.76 | 215.74 | 318.76 | 216.53 | 318.79 | 216.81 | 318.78 | 217.12 | 318.77 |
| 217.74 | 318.75 | 219.93 | 318.65 | 233.54 | 318 | 238.84 | 317.8 | 239.32 | 317.77 |
| 239.61 | 317.75 | 240.43 | 317.68 | 245.63 | 317.3 | 247.09 | 317.21 | 249.52 | 317 |
| 252.06 | 316.68 | 254.65 | 316.39 | 258.1 | 316 | 258.89 | 315.88 | 263.24 | 315.21 |
| 264.58 | 315 | 268 | 314.78 | 279.47 | 314 | 285.74 | 313.62 | 286.62 | 313.58 |
| 287.66 | 313.53 | 288.64 | 313.5 | 289.42 | 313.49 | 291.72 | 313.54 | 291.89 | 313.53 |
| 292.34 | 313.51 | 292.51 | 313.51 | 292.93 | 313.52 | 293.93 | 313.57 | 294.25 | 313.57 |
| 294.64 | 313.57 | 295.2 | 313.53 | 303.82 | 313 | 314.88 | 312.7 | 321.19 | 312.57 |
| 321.24 | 312.56 | 323.01 | 312.5 | 324.46 | 312.46 | 324.94 | 312.46 | 325.87 | 312.49 |
| 331.97 | 312.55 | 334 | 312.58 | 335.15 | 312.61 | 335.67 | 312.64 | 335.93 | 312.62 |
| 336.29 | 312.62 | 336.73 | 312.58 | 339.42 | 312.52 | 341.63 | 312.48 | 344.44 | 312.6 |
| 347.35 | 312.74 | 352.08 | 313 | 352.64 | 313 | 354.04 | 313 | 355.31 | 313 |
| 356.57 | 313 | 358.08 | 313 | 371.15 | 312.64 | 374.25 | 312.55 | 392.54 | 312 |
| 393.84 | 311.95 | 394.5 | 311.94 | 395.32 | 311.93 | 399.95 | 311.93 | 400.89 | 311.93 |
| 403.86 | 312 | 405.49 | 312.04 | 406.21 | 312.07 | 407.5 | 312.06 | 410.49 | 312 |
| 410.7 | 312 | 414.03 | 311.87 | 415.34 | 311.83 | 416.78 | 311.79 | 418.7 | 311.76 |
| 419.29 | 311.75 | 420.96 | 311.74 | 421.64 | 311.74 | 423.38 | 311.76 | 424.56 | 311.77 |
| 424.73 | 311.77 | 426.42 | 311.79 | 427.06 | 311.8 | 427.35 | 311.8 | 427.54 | 311.8 |
| 427.74 | 311.8 | 428.07 | 311.79 | 428.67 | 311.77 | 429.23 | 311.75 | 430.05 | 311.72 |
| 434.02 | 311.61 | 436.24 | 311.54 | 437.36 | 311.52 | 439.23 | 311.46 | 440.38 | 311.43 |
| 454.66 | 311 | 456.81 | 310.96 | 457 | 310.96 | 464.43 | 310.81 | 466.83 | 310.77 |
| 474.99 | 310.62 | 476.48 | 310.59 | 477.7 | 310.58 | 479.54 | 310.56 | 480.85 | 310.54 |
| 481.96 | 310.52 | 482.13 | 310.52 | 482.43 | 310.52 | 482.86 | 310.53 | 483.67 | 310.53 |
| 484.9 | 310.54 | 486.54 | 310.54 | 490.5 | 310.54 | 492.19 | 310.54 | 493.35 | 310.54 |
| 497.34 | 310.51 | 500.9 | 310.49 | 504.56 | 310.47 | 504.82 | 310.47 | 505.32 | 310.47 |
| 506.05 | 310.47 | 507.15 | 310.47 | 507.95 | 310.48 | 508.5 | 310.49 | 510.8 | 310.59 |
| 514.86 | 310.76 | 519.63 | 310.99 | 519.81 | 311 | 520.12 | 311.05 | 525.11 | 312 |
| 527.14 | 312 | 527.32 | 312 | 527.75 | 312 | 528.97 | 312 | 530 | 312 |
| 530.83 | 311.86 | 531.03 | 311.85 | 531.4 | 311.86 | 532 | 311.88 | 532.73 | 311.92 |
| 533.68 | 311.99 | 533.97 | 312 | 542.61 | 312.29 | 549.86 | 312.51 | 554.72 | 312.73 |
| 557.12 | 312.81 | 559.22 | 312.91 | 559.91 | 312.93 | 561.65 | 312.99 | 561.69 | 312.99 |
| 561.71 | 312.99 | 563.21 | 313 | 569.13 | 313.01 | 572.67 | 313.01 | 574.63 | 313 |
| 578.13 | 312.98 | 578.26 | 312.97 | 578.41 | 312.97 | 578.52 | 312.97 | 578.59 | 312.97 |
| 578.83 | 312.96 | 585.66 | 312.88 | 592.93 | 312.78 | 595.37 | 312.75 | 609.57 | 312.22 |
| 610.81 | 312.19 | 614.46 | 312.13 | 615.39 | 312 | 633.33 | 311.65 | 638.69 | 311.54 |
| 639.83 | 311.52 | 642.6 | 311.47 | 644.5 | 311.44 | 645.24 | 311.44 | 646.06 | 311.43 |
| 649.2 | 311.44 | 650.83 | 311.44 | 654.58 | 311.59 | 663.05 | 311.99 | 663.08 | 312 |
| 663.37 | 312 | 663.57 | 312 | 664.48 | 312 | 666.77 | 312 | 666.88 | 311.96 |
| 673.69 | 311.83 | 678.96 | 311.74 | 679.91 | 311.79 | 680.64 | 311.81 | 681.43 | 311.82 |
| 682.17 | 311.81 | 682.81 | 311.78 | 683.54 | 311.67 | 683.59 | 311.51 | 683.64 | 311.51 |
| 683.7 | 311.51 | 684.76 | 311.6 | 685.28 | 311.63 | 685.55 | 311.67 | 687.58 | 311.8 |
| 689.87 | 312 | 692.04 | 312.1 | 692.65 | 312.14 | 693.86 | 312.27 | 694.69 | 312.33 |
| 695.31 | 312.36 | 696.26 | 312.39 | 697.42 | 312.42 | 701.64 | 312.5 | 701.97 | 312.51 |
| 702.23 | 312.52 | 702.59 | 312.53 | 703.21 | 312.54 | 706.74 | 312.52 | 709.41 | 312.52 |
| 711.78 | 312.52 | 713.78 | 312.52 | 718.04 | 312.48 | 720.96 | 312.46 | 724.61 | 312.43 |
| 729.45 | 312.37 | 738.87 | 312.24 | 740.55 | 312.22 | 742.02 | 312.2 | 743.02 | 312.18 |
| 743.79 | 312.18 | 744.67 | 312.18 | 746.5 | 312.21 | 755.12 | 312.05 | 755.26 | 312.05 |
| 757.96 | 312 | 760.24 | 311.97 | 766.54 | 311.89 | 767.53 | 311.88 | 768.66 | 311.89 |
| 771.13 | 311.89 | 783.8 | 311.93 | 783.84 | 311.93 | 787.82 | 311.95 | 790.35 | 311.96 |
| 792.8 | 311.94 | 794.74 | 311.93 | 796.16 | 311.92 | 796.69 | 311.92 | 799 | 312 |
| 799.48 | 312.04 | 802.14 | 312.15 | 806.28 | 312.21 | 806.39 | 312.21 | 806.62 | 312.18 |
| 806.87 | 312.17 | 807.23 | 312.16 | 807.73 | 312.16 | 808.39 | 312.18 | 810.16 | 312.24 |
| 815.14 | 312.29 | 815.59 | 312.31 | 817.4 | 312.37 | 821.08 | 312.44 | 823.41 | 312.48 |
| 833.05 | 313 | 835.1 | 313.13 | 835.58 | 313.16 | 836.35 | 313.21 | 836.96 | 313.25 |
| 841.52 | 313.55 | 841.95 | 313.57 | 842.54 | 313.58 | 843.86 | 313.62 | 844.8 | 313.61 |
| 845.38 | 313.62 | 846.66 | 313.6 | 847.56 | 313.59 | 848.43 | 313.56 | 850 | 313.51 |
| 851.23 | 313.49 | 857.18 | 313.25 | 858.21 | 313.25 | 858.69 | 313.24 | 860.01 | 313.19 |
| 862.26 | 313.14 | 867.46 | 313 | 871.29 | 312.91 | 878.43 | 312.75 | 879.04 | 312.9 |
| 879.32 | 312.99 | 880.52 | 313 | 884.64 | 313.01 | 885.7 | 313.01 | 890.47 | 313.02 |
| 893.5 | 313.02 | 894.37 | 313.02 | 895.33 | 313.03 | 898.85 | 313.02 | 901.12 | 313.02 |
| 905.85 | 313 | 906.58 | 313 | 906.69 | 312.95 | 907.59 | 313 | 907.89 | 313 |
| 908.12 | 313 | 909.61 | 313 | 910.65 | 313 | 911.2 | 313 | 912.59 | 313 |
| 912.67 | 313 | 912.81 | 313 | 912.92 | 313 | 915.57 | 312.99 | 916.94 | 312.99 |
| 916.98 | 312.99 | 917.01 | 312.99 | 918.14 | 313 | 932.17 | 313.5 | 933.5 | 313.55 |
| 942.07 | 314 | 955.87 | 314.94 | 956.73 | 315 | 957.85 | 315.03 | 964.05 | 315.2 |
| 970.17 | 315.33 | 975.85 | 315.44 | 979.08 | 315.53 | 985.04 | 315.63 | 989.48 | 315.77 |
| 990.15 | 315.78 | 998.17 | 316 | 1003.64 | 316.2 | 1004.36 | 316.23 | 1012.52 | 316.54 |
| 1022.15 | 317 | 1028.7 | 317.61 | 1030.91 | 317.8 | 1033.37 | 318 | 1035.34 | 318.14 |
| 1041.44 | 318.53 | 1049.73 | 319 | 1050.69 | 319.08 | 1051.35 | 319.16 | 1051.64 | 319.19 |
| 1053.51 | 319.4 | 1055 | 319.59 | 1055.56 | 319.65 | 1056.21 | 319.68 | 1062.64 | 319.73 |
| 1064.09 | 319.78 | 1064.53 | 319.78 | 1064.72 | 319.77 | 1064.84 | 319.72 | 1065.02 | 319.67 |
| 1065.58 | 319.59 | 1065.66 | 319.58 | 1066.54 | 319.57 | 1067.01 | 319.54 | 1067.74 | 319.4 |
| 1067.88 | 319.4 | 1071.57 | 320 | 1075.39 | 320.74 | 1077.23 | 321 | 1080.44 | 321.54 |
| 1082.93 | 321.8 | 1083.43 | 321.86 | 1085.04 | 322 | 1090.33 | 322.28 | 1091 | 322.29 |
| 1091.73 | 322.28 | 1092.25 | 322.31 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 303.82 | .04 | 711.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 303.82 | 711.78 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3474.19*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.07 | 2.46 | 330.99 | 3.56 | 330.87 | 5.64 | 330.59 | 7.05 | 330.57 |
| 7.16 | 330.52 | 7.74 | 330.52 | 8.83 | 330.57 | 23.07 | 330.57 | 27.3 | 330.21 |
| 28.69 | 330.23 | 29.24 | 330.23 | 30.42 | 330.19 | 32.29 | 330.07 | 33.52 | 330.02 |
| 34.86 | 329.98 | 35.3 | 329.94 | 37.27 | 329.71 | 41.63 | 329.14 | 42.68 | 329.01 |
| 43.29 | 329.02 | 44.43 | 329 | 45.32 | 329.05 | 45.78 | 329.06 | 48.94 | 329.27 |
| 49.63 | 329.27 | 51.03 | 329.11 | 52.08 | 329.01 | 52.59 | 329.02 | 53.24 | 328.97 |
| 55.79 | 328.87 | 56.68 | 328.86 | 58.69 | 328.81 | 62.42 | 328.77 | 62.55 | 328.76 |
| 65.84 | 328.81 | 67.94 | 328.83 | 71.08 | 328.72 | 72.04 | 328.69 | 72.81 | 328.65 |
| 74.74 | 328.58 | 75.61 | 328.57 | 75.71 | 328.58 | 76.5 | 328.55 | 79.11 | 328.41 |
| 80.15 | 328.42 | 80.75 | 328.4 | 82.07 | 328.33 | 83.37 | 328.28 | 84.91 | 328.25 |
| 86.67 | 328.27 | 88.27 | 328.26 | 89.64 | 328.24 | 90.41 | 328.21 | 92.87 | 328.16 |
| 99.4 | 327.84 | 102.07 | 327.72 | 102.61 | 327.62 | 106.63 | 326.81 | 107.27 | 326.71 |
| 109.83 | 326.28 | 111.42 | 326 | 112.34 | 325.83 | 114.79 | 325.61 | 116.09 | 325.52 |
| 118.47 | 325.42 | 120.32 | 325.33 | 124.03 | 325.09 | 125.23 | 325.02 | 126.5 | 324.93 |
| 130.06 | 324.72 | 131.79 | 324.63 | 136.13 | 324.44 | 137.65 | 324.33 | 140.53 | 324.05 |
| 142.44 | 323.85 | 143.34 | 323.74 | 146.93 | 323.29 | 149.96 | 322.79 | 151.01 | 322.62 |
| 153.21 | 322.3 | 154.36 | 322.15 | 155.39 | 322.03 | 158.37 | 321.64 | 161.89 | 321.15 |
| 165.29 | 320.73 | 166.23 | 320.61 | 168.07 | 320.48 | 168.81 | 320.46 | 170.44 | 320.46 |
| 171.55 | 320.44 | 171.99 | 320.42 | 173.22 | 320.45 | 173.98 | 320.49 | 175.17 | 320.6 |
| 175.37 | 320.63 | 175.72 | 320.61 | 176.75 | 320.46 | 178.85 | 320.22 | 179.53 | 320.17 |
| 180.27 | 320.1 | 184.89 | 319.73 | 185.04 | 319.71 | 189.55 | 319.35 | 191.04 | 319.22 |
| 194.1 | 318.96 | 195.76 | 318.79 | 196.87 | 318.66 | 197.91 | 318.57 | 198.38 | 318.52 |
| 199.88 | 318.42 | 200.74 | 318.4 | 201.47 | 318.41 | 202.02 | 318.37 | 202.6 | 318.35 |
| 204.64 | 318.22 | 207.01 | 318.06 | 208.78 | 317.95 | 210.78 | 317.82 | 217.3 | 317.38 |
| 219.77 | 317.23 | 221.06 | 317.16 | 222.68 | 317.06 | 223.71 | 316.96 | 228.4 | 316.55 |
| 229.91 | 316.45 | 232.17 | 316.24 | 233.8 | 316.03 | 234.53 | 315.93 | 240.15 | 315.3 |
| 241.18 | 315.14 | 244.94 | 314.58 | 246.18 | 314.39 | 246.55 | 314.37 | 249.36 | 314.18 |
| 249.72 | 314.16 | 260.04 | 313.44 | 262.59 | 313.29 | 265 | 313.14 | 265.87 | 313.08 |
| 266.69 | 313.05 | 267.66 | 313 | 268.57 | 312.97 | 269.3 | 312.96 | 271.44 | 312.99 |
| 272.01 | 312.96 | 272.56 | 312.97 | 273.49 | 313.01 | 274.15 | 313.01 | 275.42 | 312.92 |
| 282.69 | 312.48 | 284.91 | 312.39 | 286.43 | 312.3 | 288.17 | 312.23 | 289.69 | 312.23 |
| 296.2 | 312.04 | 302.7 | 311.95 | 303.96 | 311.9 | 304.5 | 311.89 | 308.09 | 311.7 |
| 308.89 | 311.68 | 309.74 | 311.68 | 310.93 | 311.73 | 316.15 | 311.88 | 318.74 | 311.9 |
| 322.81 | 311.95 | 323.47 | 311.98 | 324.27 | 311.93 | 324.83 | 311.88 | 327.5 | 311.74 |
| 328.28 | 311.73 | 331.11 | 311.73 | 334.71 | 311.87 | 338.43 | 312.04 | 340.8 | 312.16 |
| 341.8 | 312.2 | 344.49 | 312.32 | 347 | 312.34 | 348.31 | 312.34 | 348.62 | 312.35 |
| 349.7 | 312.35 | 350.15 | 312.34 | 352.17 | 312.34 | 352.88 | 312.32 | 353.59 | 312.28 |
| 354.38 | 312.25 | 355.51 | 312.22 | 360.08 | 312.09 | 362.91 | 311.94 | 368.91 | 311.83 |
| 372.87 | 311.76 | 382.54 | 311.56 | 390.15 | 311.44 | 391.75 | 311.4 | 393.8 | 311.36 |
| 396.29 | 311.33 | 396.96 | 311.31 | 398.8 | 311.3 | 399.85 | 311.31 | 405.78 | 311.38 |
| 407.77 | 311.42 | 410.79 | 311.46 | 410.93 | 311.47 | 412.88 | 311.49 | 413.8 | 311.52 |
| 414.81 | 311.51 | 417.7 | 311.46 | 419.28 | 311.42 | 419.55 | 311.42 | 421.07 | 311.38 |
| 423.81 | 311.29 | 426.95 | 311.16 | 427.33 | 311.14 | 428.83 | 311.09 | 430.32 | 311.06 |
| 431.26 | 311.05 | 431.67 | 311.06 | 433.55 | 311.06 | 435.53 | 311.09 | 439.67 | 311.13 |
| 440.87 | 311.15 | 441.43 | 311.15 | 444.32 | 311.09 | 447.84 | 311.04 | 449.98 | 311 |
| 450.29 | 311 | 452.22 | 310.96 | 453.68 | 310.94 | 456.08 | 310.89 | 457.53 | 310.87 |
| 457.89 | 310.85 | 458.85 | 310.84 | 461.73 | 310.77 | 465.18 | 310.71 | 465.77 | 310.69 |
| 472.41 | 310.53 | 475.52 | 310.45 | 475.83 | 310.45 | 478.59 | 310.4 | 478.83 | 310.4 |
| 481.91 | 310.34 | 482.7 | 310.32 | 486.34 | 310.25 | 486.79 | 310.25 | 488.34 | 310.21 |
| 493.01 | 310.12 | 493.7 | 310.1 | 495.07 | 310.12 | 496.08 | 310.12 | 496.88 | 310.11 |
| 498.87 | 310.1 | 499.8 | 310.08 | 501.09 | 310.09 | 502.02 | 310.08 | 503.45 | 310.05 |
| 504.59 | 310.04 | 505.33 | 310.02 | 510.22 | 309.96 | 510.79 | 309.94 | 511.94 | 309.94 |
| 512.87 | 309.93 | 513.85 | 309.93 | 516.65 | 309.89 | 517.26 | 309.89 | 518.1 | 309.92 |
| 519.28 | 309.93 | 520.29 | 309.89 | 520.57 | 309.89 | 521.41 | 309.95 | 523.27 | 309.96 |
| 524.48 | 309.96 | 525.37 | 309.97 | 527.79 | 309.95 | 528.35 | 309.95 | 529.45 | 309.93 |
| 535.04 | 309.87 | 537.46 | 309.84 | 538.88 | 309.76 | 539.73 | 309.7 | 541.97 | 309.7 |
| 543.26 | 309.73 | 545.45 | 309.85 | 549.33 | 310.05 | 551.39 | 310.17 | 553.24 | 310.27 |
| 554.05 | 310.3 | 555.83 | 310.6 | 559.1 | 311.16 | 561.04 | 311.17 | 563.76 | 311.17 |
| 564.56 | 311.05 | 564.75 | 311.04 | 566.33 | 311.1 | 567.27 | 311.17 | 572.04 | 311.3 |
| 575.79 | 311.41 | 582.7 | 311.6 | 587.34 | 311.78 | 589.63 | 311.85 | 591.63 | 311.93 |
| 593.81 | 311.99 | 593.95 | 312 | 595.44 | 312 | 597.72 | 311.95 | 598.72 | 311.92 |
| 600.04 | 311.89 | 601.22 | 311.89 | 601.94 | 311.91 | 603.75 | 311.91 | 604.46 | 311.92 |
| 609.66 | 311.92 | 610.33 | 311.91 | 616.85 | 311.87 | 620.83 | 311.85 | 623.15 | 311.82 |
| 623.78 | 311.82 | 626.11 | 311.8 | 629.56 | 311.68 | 630.66 | 311.65 | 635.84 | 311.47 |
| 639.65 | 311.34 | 644.31 | 311.26 | 645.2 | 311.15 | 652.62 | 311.02 | 653.01 | 311.01 |
| 657.47 | 310.94 | 662.31 | 310.85 | 667.42 | 310.76 | 668.51 | 310.75 | 671.15 | 310.69 |
| 672.16 | 310.65 | 673.39 | 310.62 | 674.59 | 310.61 | 676.24 | 310.64 | 678.68 | 310.66 |
| 679.16 | 310.67 | 680.34 | 310.72 | 682.57 | 310.8 | 685.03 | 310.9 | 686.72 | 310.98 |
| 690.65 | 311.14 | 692.01 | 311.14 | 693.46 | 311.13 | 694.2 | 311.11 | 694.3 | 311.08 |
| 695.26 | 311.06 | 697.07 | 311.06 | 700.8 | 311.01 | 705.82 | 310.96 | 706.73 | 311 |
| 707.43 | 311.02 | 708.88 | 311.03 | 709.49 | 311.01 | 710.19 | 310.91 | 710.24 | 310.78 |
| 710.34 | 310.78 | 712.11 | 310.92 | 714.04 | 311.04 | 716.23 | 311.22 | 718.88 | 311.35 |
| 720.03 | 311.47 | 721.42 | 311.55 | 723.43 | 311.61 | 727.45 | 311.7 | 728.95 | 311.74 |
| 732.32 | 311.73 | 734.86 | 311.75 | 737.12 | 311.76 | 738.95 | 311.77 | 742.84 | 311.75 |
| 748.84 | 311.73 | 753.27 | 311.69 | 761.87 | 311.61 | 763.41 | 311.6 | 765.66 | 311.57 |
| 767.17 | 311.57 | 768.84 | 311.61 | 769.75 | 311.59 | 776.72 | 311.49 | 779.31 | 311.45 |
| 781.4 | 311.43 | 787.15 | 311.38 | 788.06 | 311.37 | 789.09 | 311.38 | 799.98 | 311.43 |
| 804.04 | 311.46 | 808.91 | 311.48 | 814.7 | 311.45 | 816.81 | 311.52 | 817.25 | 311.56 |
| 819.68 | 311.66 | 823.56 | 311.72 | 824.31 | 311.68 | 824.79 | 311.68 | 827.01 | 311.74 |
| 831.56 | 311.78 | 831.97 | 311.8 | 833.62 | 311.84 | 836.98 | 311.9 | 839.11 | 311.93 |
| 840.85 | 312.02 | 844.99 | 312.24 | 847.92 | 312.39 | 851.49 | 312.62 | 854.37 | 312.81 |
| 856.05 | 312.91 | 857.79 | 312.96 | 858.65 | 312.95 | 859.29 | 312.96 | 861.17 | 312.95 |
| 863.4 | 312.9 | 864.53 | 312.89 | 867.1 | 312.82 | 868.54 | 312.77 | 869.96 | 312.71 |
| 871.34 | 312.71 | 872.55 | 312.66 | 874.61 | 312.62 | 876.65 | 312.57 | 884.04 | 312.38 |
| 889.38 | 312.26 | 889.94 | 312.39 | 890.19 | 312.47 | 891.29 | 312.47 | 895.05 | 312.49 |
| 896.38 | 312.49 | 900.93 | 312.5 | 903.15 | 312.52 | 904.82 | 312.54 | 908.03 | 312.56 |
| 912.69 | 312.58 | 915.1 | 312.58 | 915.2 | 312.53 | 916.02 | 312.58 | 917.87 | 312.58 |
| 918.82 | 312.59 | 924.63 | 312.59 | 925.66 | 312.6 | 926.65 | 312.64 | 933.1 | 312.87 |
| 934.76 | 312.92 | 939.69 | 313.09 | 947.52 | 313.49 | 953.57 | 313.88 | 957.66 | 314.14 |
| 960.13 | 314.31 | 960.92 | 314.36 | 967.6 | 314.55 | 978.38 | 314.8 | 981.69 | 314.89 |
| 986.78 | 314.98 | 988.97 | 315.05 | 990.84 | 315.1 | 991.45 | 315.11 | 996.07 | 315.22 |
| 997.43 | 315.24 | 1000.3 | 315.33 | 1003.77 | 315.47 | 1004.43 | 315.49 | 1009.28 | 315.68 |
| 1011.89 | 315.78 | 1020.68 | 316.21 | 1024.86 | 316.59 | 1028.69 | 316.93 | 1032.04 | 317.18 |
| 1034.08 | 317.3 | 1038.31 | 317.57 | 1044.82 | 317.92 | 1045.88 | 317.98 | 1046.76 | 318.05 |
| 1047.63 | 318.14 | 1049.34 | 318.33 | 1051.21 | 318.55 | 1051.8 | 318.57 | 1056.42 | 318.62 |
| 1057.68 | 318.63 | 1059 | 318.67 | 1059.58 | 318.66 | 1059.85 | 318.58 | 1060.44 | 318.5 |
| 1061.24 | 318.5 | 1061.67 | 318.47 | 1062.34 | 318.35 | 1062.46 | 318.35 | 1065.84 | 318.87 |
| 1069.33 | 319.51 | 1071.01 | 319.74 | 1073.94 | 320.2 | 1076.22 | 320.43 | 1076.67 | 320.48 |
| 1078.14 | 320.6 | 1082.98 | 320.85 | 1083.59 | 320.86 | 1084.25 | 320.85 | 1084.73 | 320.88 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 282.69 | .04 | 737.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 282.69 | 737.12 | | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3427.11*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.56 | 2.1 | 330.5 | 3.3 | 330.39 | 5.22 | 330.16 | 6.53 | 330.15 |
| 6.62 | 330.11 | 7.16 | 330.1 | 8.17 | 330.15 | 12.08 | 330.14 | 21.34 | 330.14 |
| 25.26 | 329.84 | 26.54 | 329.86 | 27.06 | 329.86 | 28.14 | 329.82 | 29.87 | 329.73 |
| 32.25 | 329.65 | 34.49 | 329.43 | 38.52 | 328.95 | 39.13 | 328.89 | 39.4 | 328.84 |
| 40.05 | 328.85 | 41.11 | 328.84 | 42.36 | 328.89 | 45.29 | 329.06 | 45.92 | 329.06 |
| 47.21 | 328.92 | 48.19 | 328.84 | 48.66 | 328.85 | 50.21 | 328.76 | 52.45 | 328.71 |
| 54.31 | 328.66 | 54.44 | 328.65 | 57.75 | 328.58 | 60.92 | 328.58 | 62.87 | 328.57 |
| 64.18 | 328.51 | 65.77 | 328.45 | 66.66 | 328.41 | 67.37 | 328.36 | 69.15 | 328.25 |
| 70.05 | 328.22 | 70.79 | 328.18 | 73.25 | 327.99 | 74.16 | 327.97 | 74.71 | 327.94 |
| 76.2 | 327.82 | 76.87 | 327.79 | 78.25 | 327.79 | 78.56 | 327.78 | 80.55 | 327.89 |
| 82.95 | 327.93 | 83.65 | 327.91 | 85.93 | 327.9 | 87.63 | 327.81 | 88.77 | 327.74 |
| 94.44 | 327.44 | 94.94 | 327.35 | 98.66 | 326.62 | 100.89 | 326.24 | 101.62 | 326.11 |
| 103.95 | 325.67 | 105.36 | 325.5 | 106.21 | 325.42 | 106.83 | 325.38 | 107.42 | 325.36 |
| 109.62 | 325.35 | 111.33 | 325.32 | 114.77 | 325.14 | 117.05 | 325.03 | 118.81 | 324.96 |
| 120.34 | 324.91 | 123.86 | 324.82 | 125.95 | 324.77 | 127.37 | 324.66 | 130.03 | 324.37 |
| 131.79 | 324.17 | 135.95 | 323.58 | 138.75 | 323.08 | 141.76 | 322.59 | 142.21 | 322.53 |
| 142.83 | 322.42 | 143.65 | 322.31 | 146.53 | 321.87 | 147.52 | 321.69 | 149.79 | 321.29 |
| 149.88 | 321.28 | 153.81 | 320.73 | 154.27 | 320.68 | 155.71 | 320.56 | 157.67 | 320.61 |
| 159.13 | 320.62 | 160.98 | 320.72 | 162.27 | 320.83 | 162.59 | 320.83 | 163.54 | 320.68 |
| 163.79 | 320.66 | 165.49 | 320.41 | 166.8 | 320.25 | 171.07 | 319.78 | 171.21 | 319.76 |
| 174.92 | 319.35 | 176.76 | 319.13 | 179.6 | 318.8 | 182.16 | 318.41 | 183.56 | 318.21 |
| 184.95 | 318.09 | 185.74 | 318.04 | 186.42 | 318.02 | 187.46 | 317.94 | 189.34 | 317.78 |
| 191.54 | 317.6 | 195.03 | 317.3 | 199 | 316.94 | 201.06 | 316.75 | 203.35 | 316.57 |
| 204.54 | 316.46 | 205.63 | 316.38 | 206.29 | 316.32 | 206.99 | 316.24 | 209.84 | 315.94 |
| 211.33 | 315.79 | 212.73 | 315.68 | 214.82 | 315.47 | 216.33 | 315.27 | 219.24 | 314.93 |
| 222.21 | 314.59 | 223.16 | 314.45 | 226.63 | 313.95 | 227.79 | 313.78 | 231.06 | 313.56 |
| 240.6 | 312.89 | 242.97 | 312.74 | 245.2 | 312.59 | 246.76 | 312.51 | 248.5 | 312.44 |
| 249.17 | 312.43 | 251.3 | 312.44 | 251.69 | 312.42 | 252.19 | 312.42 | 253.05 | 312.45 |
| 253.67 | 312.44 | 261.57 | 311.96 | 263.45 | 311.87 | 264.27 | 311.82 | 266.36 | 311.65 |
| 266.95 | 311.64 | 268.25 | 311.58 | 269.66 | 311.6 | 270.48 | 311.6 | 270.98 | 311.58 |
| 278.04 | 311.37 | 278.83 | 311.36 | 285.95 | 311.29 | 287.49 | 311.22 | 288.15 | 311.2 |
| 290.01 | 311.08 | 290.73 | 311.05 | 292.52 | 310.92 | 293.5 | 310.9 | 294.53 | 310.9 |
| 295.99 | 310.98 | 302.35 | 311.24 | 305.51 | 311.25 | 308.68 | 311.27 | 310.47 | 311.29 |
| 311.38 | 311.31 | 311.69 | 311.27 | 312.25 | 311.24 | 312.94 | 311.17 | 316.19 | 310.95 |
| 317.35 | 310.94 | 320.58 | 310.98 | 324.97 | 311.15 | 329.51 | 311.34 | 332.4 | 311.47 |
| 333.62 | 311.52 | 336.9 | 311.64 | 338.19 | 311.66 | 339.95 | 311.67 | 341.56 | 311.69 |
| 343.08 | 311.7 | 343.79 | 311.68 | 346.63 | 311.67 | 346.94 | 311.66 | 348.38 | 311.58 |
| 355.44 | 311.36 | 355.9 | 311.34 | 359.35 | 311.12 | 366.66 | 311.03 | 371.5 | 310.96 |
| 383.28 | 310.8 | 393.59 | 310.72 | 397 | 310.66 | 398.91 | 310.67 | 400.86 | 310.64 |
| 402.08 | 310.64 | 404.39 | 310.68 | 411.61 | 310.84 | 413.08 | 310.87 | 414.04 | 310.9 |
| 417.89 | 310.93 | 421.38 | 310.96 | 422.2 | 310.96 | 425.33 | 310.91 | 427.25 | 310.86 |
| 428.39 | 310.85 | 433.46 | 310.71 | 433.59 | 310.71 | 435.63 | 310.6 | 437.41 | 310.51 |
| 438.77 | 310.46 | 439.71 | 310.41 | 441.22 | 310.36 | 442.67 | 310.36 | 443.7 | 310.38 |
| 445.47 | 310.39 | 447.88 | 310.42 | 450.29 | 310.44 | 452.93 | 310.47 | 453.93 | 310.49 |
| 455.73 | 310.49 | 457.32 | 310.47 | 461.21 | 310.44 | 462.88 | 310.44 | 465.87 | 310.41 |
| 468.23 | 310.38 | 470 | 310.37 | 472.92 | 310.32 | 474.7 | 310.3 | 476.3 | 310.27 |
| 478.69 | 310.24 | 479.81 | 310.21 | 483.38 | 310.17 | 484.74 | 310.15 | 490.26 | 310.03 |
| 490.75 | 310.01 | 492.83 | 309.98 | 497.01 | 309.89 | 500.36 | 309.84 | 500.66 | 309.83 |
| 504.42 | 309.77 | 505.38 | 309.75 | 510.37 | 309.66 | 517.94 | 309.5 | 518.54 | 309.47 |
| 519.82 | 309.5 | 520.45 | 309.53 | 522.66 | 309.54 | 525.15 | 309.53 | 526.22 | 309.52 |
| 527.08 | 309.53 | 527.79 | 309.55 | 528.74 | 309.53 | 529.7 | 309.53 | 531.16 | 309.5 |
| 532.06 | 309.49 | 533.87 | 309.45 | 535.84 | 309.43 | 537.89 | 309.4 | 539.88 | 309.36 |
| 542.29 | 309.34 | 544.44 | 309.3 | 547.33 | 309.24 | 548.82 | 309.31 | 549.97 | 309.32 |
| 551.51 | 309.24 | 551.74 | 309.29 | 552.57 | 309.36 | 556.31 | 309.39 | 559.04 | 309.39 |
| 560.34 | 309.38 | 563.62 | 309.33 | 569.18 | 309.25 | 572.13 | 309.2 | 574.39 | 308.99 |
| 574.82 | 308.94 | 577.06 | 308.94 | 578.02 | 308.98 | 580.11 | 309.11 | 580.68 | 309.14 |
| 583.79 | 309.34 | 587.07 | 309.56 | 588.28 | 309.61 | 588.56 | 309.64 | 589.98 | 309.86 |
| 593.09 | 310.33 | 596.29 | 310.33 | 597.53 | 310.34 | 598.28 | 310.24 | 598.46 | 310.23 |
| 600.01 | 310.29 | 600.87 | 310.34 | 601.57 | 310.36 | 605.4 | 310.45 | 608.97 | 310.54 |
| 615.55 | 310.68 | 619.96 | 310.83 | 622.14 | 310.89 | 624.67 | 310.97 | 626.12 | 311 |
| 627.55 | 311 | 627.66 | 310.99 | 629.84 | 310.89 | 630.79 | 310.83 | 632.04 | 310.77 |
| 632.63 | 310.76 | 633.53 | 310.8 | 634.2 | 310.81 | 638.02 | 310.84 | 641.2 | 310.86 |
| 641.83 | 310.85 | 648.03 | 310.87 | 651.82 | 310.87 | 654.63 | 310.86 | 656.84 | 310.84 |
| 657.35 | 310.83 | 661.18 | 310.72 | 666.11 | 310.57 | 670.85 | 310.44 | 674.16 | 310.4 |
| 675.01 | 310.31 | 682.07 | 310.19 | 682.43 | 310.19 | 686.68 | 310.12 | 691.28 | 310.06 |
| 696.15 | 309.98 | 696.9 | 309.98 | 699.7 | 309.91 | 700.66 | 309.85 | 702.09 | 309.8 |
| 702.97 | 309.8 | 704.54 | 309.85 | 705.68 | 309.87 | 707.16 | 309.88 | 707.32 | 309.89 |
| 710.57 | 310.01 | 714.51 | 310.16 | 717.08 | 310.25 | 718.25 | 310.28 | 719.03 | 310.29 |
| 720.92 | 310.26 | 721.63 | 310.22 | 721.73 | 310.19 | 723.69 | 310.2 | 724.36 | 310.22 |
| 727.9 | 310.2 | 732.69 | 310.17 | 733.55 | 310.22 | 734.21 | 310.24 | 735.6 | 310.25 |
| 736.18 | 310.23 | 736.84 | 310.16 | 736.89 | 310.05 | 737.95 | 310.12 | 738.42 | 310.14 |
| 738.67 | 310.18 | 740.51 | 310.28 | 742.59 | 310.45 | 744.55 | 310.53 | 745.11 | 310.57 |
| 746.21 | 310.67 | 747.52 | 310.75 | 749.44 | 310.8 | 753.27 | 310.89 | 754.69 | 310.93 |
| 757.5 | 310.94 | 757.89 | 310.95 | 760.46 | 310.98 | 762.47 | 311.01 | 764.12 | 311.02 |
| 773.08 | 311.02 | 777.08 | 311.01 | 784.88 | 310.97 | 787.48 | 310.97 | 788.95 | 310.96 |
| 791.19 | 311 | 792.01 | 310.99 | 798.32 | 310.93 | 800.67 | 310.9 | 807.77 | 310.86 |
| 811.56 | 310.88 | 819.38 | 310.95 | 823.06 | 310.98 | 825.37 | 310.99 | 827.46 | 311.01 |
| 829.49 | 310.99 | 831.09 | 310.98 | 832.71 | 310.98 | 834.62 | 311.04 | 835.84 | 311.11 |
| 837.22 | 311.17 | 840.73 | 311.23 | 840.92 | 311.21 | 841.84 | 311.2 | 843.85 | 311.25 |
| 847.02 | 311.26 | 847.97 | 311.27 | 849.84 | 311.32 | 853.82 | 311.36 | 854.81 | 311.38 |
| 860.13 | 311.65 | 862.79 | 311.79 | 864.48 | 311.89 | 868.63 | 312.16 | 870.15 | 312.25 |
| 871.73 | 312.29 | 872.99 | 312.3 | 874.05 | 312.3 | 874.79 | 312.31 | 876.81 | 312.29 |
| 877.83 | 312.3 | 880.16 | 312.26 | 882.75 | 312.18 | 883.6 | 312.18 | 885.09 | 312.14 |
| 888.8 | 312.06 | 890.85 | 312 | 894.42 | 311.91 | 895.49 | 311.88 | 900.33 | 311.77 |
| 901.06 | 311.94 | 903.86 | 311.96 | 906.67 | 311.96 | 910.29 | 311.99 | 910.79 | 311.99 |
| 913.51 | 312.03 | 914.31 | 312.05 | 917.22 | 312.09 | 919.1 | 312.12 | 921.44 | 312.15 |
| 923.61 | 312.15 | 923.71 | 312.12 | 924.45 | 312.16 | 926.12 | 312.17 | 927.44 | 312.17 |
| 931.05 | 312.19 | 932.24 | 312.19 | 933.18 | 312.2 | 934.08 | 312.24 | 939.91 | 312.44 |
| 944.78 | 312.6 | 945.88 | 312.64 | 952.97 | 312.97 | 953.87 | 313.02 | 954.66 | 313.08 |
| 958.45 | 313.31 | 962.15 | 313.53 | 964.39 | 313.68 | 965.1 | 313.72 | 971.16 | 313.91 |
| 976.22 | 314.04 | 980.92 | 314.15 | 983.91 | 314.24 | 988.52 | 314.33 | 990.51 | 314.39 |
| 992.19 | 314.43 | 992.75 | 314.43 | 996.93 | 314.51 | 998.16 | 314.53 | 999.38 | 314.56 |
| 1001.7 | 314.64 | 1003.91 | 314.73 | 1004.5 | 314.76 | 1008.9 | 314.93 | 1011.25 | 315.03 |
| 1019.22 | 315.42 | 1023 | 315.75 | 1025.51 | 315.98 | 1026.47 | 316.06 | 1028.5 | 316.21 |
| 1030.13 | 316.31 | 1035.18 | 316.6 | 1042.04 | 316.96 | 1042.83 | 317.02 | 1045.16 | 317.26 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1046.39 | 317.4 | 1047.4 | 317.47 | 1051.58 | 317.51 | 1052.72 | 317.53 | 1054.28 | 317.57 |
| 1054.68 | 317.49 | 1055.15 | 317.43 | 1055.94 | 317.42 | 1056.33 | 317.4 | 1056.93 | 317.3 |
| 1057.05 | 317.3 | 1060.1 | 317.74 | 1063.26 | 318.28 | 1064.78 | 318.47 | 1067.44 | 318.87 |
| 1069.91 | 319.1 | 1071.25 | 319.21 | 1075.62 | 319.42 | 1076.78 | 319.43 | 1077.21 | 319.45 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 261.57 | .04 | 762.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 261.57 | 762.47 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3380.03*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.06 | 1.93 | 330.01 | 3.03 | 329.92 | 4.8 | 329.74 | 6 | 329.72 |
| 6.09 | 329.69 | 6.58 | 329.69 | 7.51 | 329.72 | 11.1 | 329.71 | 19.62 | 329.71 |
| 23.22 | 329.47 | 24.87 | 329.49 | 25.87 | 329.46 | 27.46 | 329.38 | 29.65 | 329.32 |
| 31.7 | 329.14 | 35.41 | 328.76 | 36.08 | 328.7 | 36.21 | 328.67 | 36.82 | 328.68 |
| 37.79 | 328.67 | 38.94 | 328.71 | 41.63 | 328.85 | 42.21 | 328.85 | 43.4 | 328.74 |
| 44.29 | 328.67 | 44.73 | 328.68 | 46.15 | 328.61 | 48.21 | 328.57 | 50.04 | 328.5 |
| 53.09 | 328.4 | 53.2 | 328.39 | 56 | 328.36 | 57.79 | 328.32 | 60.45 | 328.17 |
| 61.27 | 328.13 | 61.93 | 328.06 | 63.57 | 327.92 | 64.4 | 327.87 | 65.07 | 327.81 |
| 66.66 | 327.65 | 67.07 | 327.6 | 68.16 | 327.52 | 70.42 | 327.29 | 70.91 | 327.29 |
| 71.93 | 327.33 | 72.22 | 327.32 | 73.72 | 327.47 | 74.04 | 327.51 | 75.08 | 327.57 |
| 76.25 | 327.62 | 76.89 | 327.6 | 79.24 | 327.64 | 80.55 | 327.54 | 81.6 | 327.47 |
| 84.54 | 327.29 | 86.82 | 327.16 | 87.27 | 327.08 | 90.69 | 326.42 | 91.23 | 326.34 |
| 92.74 | 326.07 | 94.76 | 325.67 | 95.55 | 325.5 | 96.85 | 325.32 | 97.63 | 325.23 |
| 98.2 | 325.2 | 98.74 | 325.2 | 100.76 | 325.28 | 101.98 | 325.32 | 103.78 | 325.26 |
| 105.5 | 325.18 | 107.59 | 325.13 | 109.21 | 325.11 | 110.62 | 325.1 | 111.68 | 325.11 |
| 112.09 | 325.1 | 115.78 | 325.1 | 116.12 | 325.08 | 117.08 | 324.98 | 119.53 | 324.7 |
| 121.15 | 324.48 | 121.92 | 324.36 | 124.97 | 323.87 | 128.44 | 323.21 | 130.31 | 322.89 |
| 130.72 | 322.83 | 131.29 | 322.69 | 132.05 | 322.58 | 134.7 | 322.1 | 135.61 | 321.89 |
| 137.77 | 321.42 | 140.59 | 320.98 | 141.38 | 320.85 | 142.95 | 320.67 | 143.13 | 320.66 |
| 145.91 | 320.8 | 146.28 | 320.81 | 147.33 | 320.9 | 147.76 | 320.95 | 149.46 | 321.04 |
| 150.33 | 320.9 | 150.57 | 320.88 | 152.12 | 320.59 | 153.33 | 320.4 | 157.26 | 319.83 |
| 160.79 | 319.31 | 161.22 | 319.25 | 165.09 | 318.64 | 166.5 | 318.36 | 168.48 | 317.95 |
| 169.53 | 317.8 | 170.74 | 317.68 | 171.36 | 317.64 | 172.32 | 317.54 | 176.07 | 317.13 |
| 177.58 | 316.96 | 179.28 | 316.79 | 182.93 | 316.35 | 184.82 | 316.13 | 186.92 | 315.9 |
| 188.02 | 315.77 | 189.4 | 315.63 | 192.89 | 315.19 | 194.39 | 315.02 | 195.55 | 314.92 |
| 197.47 | 314.71 | 199.48 | 314.44 | 201.53 | 314.2 | 204.26 | 313.89 | 205.13 | 313.76 |
| 208.33 | 313.32 | 209.39 | 313.17 | 212.4 | 312.96 | 221.17 | 312.33 | 223.34 | 312.19 |
| 225.39 | 312.05 | 227.65 | 311.94 | 229.05 | 311.89 | 230.87 | 311.9 | 231.36 | 311.87 |
| 232.62 | 311.89 | 233.18 | 311.88 | 234.26 | 311.81 | 240.44 | 311.44 | 242.66 | 311.33 |
| 243.62 | 311.26 | 245.81 | 311.04 | 246.09 | 311.02 | 246.79 | 311.01 | 248.32 | 310.93 |
| 249.99 | 310.97 | 251.55 | 310.96 | 259.87 | 310.69 | 260.81 | 310.69 | 269.21 | 310.63 |
| 271.02 | 310.54 | 271.8 | 310.52 | 272.52 | 310.46 | 273.99 | 310.36 | 274.85 | 310.32 |
| 275.78 | 310.23 | 276.96 | 310.13 | 278.11 | 310.12 | 279.33 | 310.12 | 281.04 | 310.22 |
| 288.55 | 310.59 | 292.27 | 310.6 | 298.13 | 310.63 | 299.07 | 310.65 | 299.42 | 310.61 |
| 300.23 | 310.55 | 301.04 | 310.47 | 304.87 | 310.16 | 306.25 | 310.15 | 310.06 | 310.23 |
| 315.24 | 310.42 | 320.59 | 310.64 | 321.4 | 310.67 | 324 | 310.79 | 329.3 | 310.97 |
| 330.83 | 310.99 | 336.6 | 311.05 | 337.44 | 311.02 | 340.35 | 311.01 | 341.38 | 310.99 |
| 342.85 | 310.88 | 345.15 | 310.82 | 351.73 | 310.6 | 355.79 | 310.3 | 364.42 | 310.22 |
| 370.12 | 310.17 | 384.02 | 310.04 | 393.05 | 310.03 | 396.78 | 310.01 | 400.21 | 309.96 |
| 402.46 | 309.99 | 404.75 | 309.97 | 406.19 | 309.99 | 408.92 | 310.06 | 417.45 | 310.29 |
| 419.18 | 310.33 | 420.3 | 310.37 | 424.64 | 310.39 | 427.65 | 310.4 | 428.97 | 310.41 |
| 431.35 | 310.39 | 434.59 | 310.33 | 434.98 | 310.31 | 436.85 | 310.27 | 437.24 | 310.27 |
| 439.44 | 310.23 | 443.22 | 310.13 | 445.78 | 309.99 | 447.88 | 309.87 | 449.48 | 309.8 |
| 450.59 | 309.73 | 452.73 | 309.66 | 454.08 | 309.67 | 456.69 | 309.71 | 457.38 | 309.71 |
| 460.23 | 309.75 | 460.59 | 309.75 | 467.9 | 309.84 | 471.36 | 309.84 | 472.87 | 309.83 |
| 477.92 | 309.83 | 480.18 | 309.82 | 481.45 | 309.82 | 484.23 | 309.8 | 486.33 | 309.79 |
| 491.87 | 309.74 | 492.38 | 309.72 | 495.43 | 309.7 | 497.31 | 309.66 | 497.89 | 309.66 |
| 502.1 | 309.62 | 502.86 | 309.62 | 503.71 | 309.6 | 510.22 | 309.48 | 510.79 | 309.46 |
| 513.26 | 309.43 | 522.14 | 309.27 | 522.49 | 309.27 | 528.06 | 309.17 | 531.9 | 309.11 |
| 533.94 | 309.07 | 540.59 | 308.92 | 542.88 | 308.88 | 543.59 | 308.84 | 545.09 | 308.89 |
| 546.09 | 308.94 | 548.45 | 308.96 | 551.38 | 308.96 | 552.64 | 308.95 | 554.5 | 309 |
| 556.75 | 308.98 | 557.89 | 308.96 | 558.46 | 308.96 | 559.53 | 308.94 | 560.96 | 308.9 |
| 566.4 | 308.83 | 570.11 | 308.77 | 571.45 | 308.74 | 572.86 | 308.72 | 577.22 | 308.59 |
| 577.76 | 308.6 | 578.96 | 308.68 | 580.66 | 308.71 | 581.2 | 308.68 | 582.11 | 308.6 |
| 582.47 | 308.59 | 582.75 | 308.66 | 583.73 | 308.77 | 584.17 | 308.77 | 586.4 | 308.8 |
| 587.28 | 308.8 | 588.81 | 308.82 | 591.36 | 308.82 | 595.28 | 308.77 | 596.77 | 308.74 |
| 603.32 | 308.62 | 606.81 | 308.56 | 608.85 | 308.33 | 610.06 | 308.17 | 611.62 | 308.17 |
| 612.78 | 308.22 | 615.3 | 308.4 | 618.26 | 308.63 | 620.12 | 308.78 | 621.37 | 308.87 |
| 622.52 | 308.91 | 624.13 | 309.11 | 627.08 | 309.49 | 628.83 | 309.5 | 630.41 | 309.5 |
| 631.29 | 309.51 | 632.01 | 309.43 | 632.5 | 309.43 | 634.16 | 309.5 | 634.68 | 309.53 |
| 635.13 | 309.53 | 638.76 | 309.59 | 642.15 | 309.66 | 648.39 | 309.77 | 652.58 | 309.88 |
| 654.64 | 309.92 | 656.45 | 309.98 | 658.42 | 310.01 | 659.79 | 310 | 661.95 | 309.83 |
| 662.86 | 309.74 | 664.04 | 309.66 | 664.6 | 309.64 | 665.46 | 309.69 | 666.09 | 309.71 |
| 668.53 | 309.73 | 672.73 | 309.8 | 673.34 | 309.8 | 679.22 | 309.86 | 682.81 | 309.9 |
| 684.91 | 309.9 | 685.48 | 309.89 | 687.58 | 309.89 | 690.7 | 309.81 | 691.69 | 309.79 |
| 696.37 | 309.68 | 699.8 | 309.59 | 700.87 | 309.57 | 704.01 | 309.53 | 704.82 | 309.46 |
| 711.52 | 309.36 | 711.86 | 309.36 | 715.89 | 309.31 | 720.26 | 309.26 | 725.86 | 309.2 |
| 726.71 | 309.17 | 728.24 | 309.13 | 729.16 | 309.05 | 730.26 | 308.99 | 731.35 | 308.98 |
| 732.84 | 309.05 | 733.93 | 309.08 | 735.48 | 309.11 | 738.56 | 309.22 | 742.31 | 309.34 |
| 744.74 | 309.41 | 745.85 | 309.43 | 746.59 | 309.43 | 748.38 | 309.39 | 749.15 | 309.31 |
| 750.01 | 309.31 | 751.01 | 309.34 | 751.65 | 309.37 | 755.01 | 309.38 | 759.55 | 309.39 |
| 761 | 309.45 | 762.31 | 309.47 | 762.86 | 309.46 | 763.49 | 309.4 | 763.54 | 309.31 |
| 765.22 | 309.43 | 766.97 | 309.53 | 768.94 | 309.67 | 770.81 | 309.75 | 771.34 | 309.78 |
| 772.38 | 309.87 | 773.63 | 309.94 | 775.44 | 310 | 779.08 | 310.09 | 780.43 | 310.13 |
| 783.09 | 310.16 | 783.47 | 310.16 | 787.81 | 310.25 | 789.29 | 310.27 | 792.45 | 310.28 |
| 794.61 | 310.3 | 797.31 | 310.32 | 800.9 | 310.33 | 807.88 | 310.34 | 809.12 | 310.35 |
| 811.52 | 310.35 | 812.18 | 310.36 | 813.53 | 310.4 | 814.27 | 310.4 | 823.71 | 310.35 |
| 829.11 | 310.35 | 838.78 | 310.46 | 842.07 | 310.5 | 843.76 | 310.51 | 844.14 | 310.52 |
| 846.02 | 310.53 | 849.27 | 310.51 | 850.72 | 310.51 | 852.43 | 310.56 | 852.78 | 310.59 |
| 854.75 | 310.68 | 857.38 | 310.74 | 858.26 | 310.72 | 858.9 | 310.72 | 860.7 | 310.75 |
| 864.39 | 310.76 | 866.06 | 310.79 | 870.51 | 310.82 | 870.95 | 310.84 | 877.65 | 311.18 |
| 879.17 | 311.28 | 882.89 | 311.5 | 883.93 | 311.57 | 884.69 | 311.59 | 885.66 | 311.63 |
| 886.36 | 311.63 | 888.4 | 311.67 | 890.21 | 311.68 | 891.12 | 311.7 | 893.21 | 311.7 |
| 895.53 | 311.64 | 896.65 | 311.64 | 897.63 | 311.61 | 900.95 | 311.55 | 905.99 | 311.41 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 906.95 | 311.38 | 911.28 | 311.28 | 911.94 | 311.42 | 912.82 | 311.42 | 915.88 | 311.44 |
| 916.95 | 311.44 | 920.2 | 311.47 | 920.64 | 311.47 | 923.8 | 311.56 | 926.4 | 311.63 |
| 930.18 | 311.72 | 932.13 | 311.73 | 932.21 | 311.7 | 932.88 | 311.74 | 935.15 | 311.76 |
| 938.79 | 311.78 | 939.86 | 311.79 | 941.5 | 311.83 | 946.73 | 312.02 | 952.08 | 312.18 |
| 958.43 | 312.46 | 959.23 | 312.5 | 959.94 | 312.55 | 963.33 | 312.74 | 966.65 | 312.91 |
| 968.65 | 313.04 | 969.29 | 313.09 | 970.12 | 313.11 | 974.71 | 313.26 | 983.45 | 313.51 |
| 985.84 | 313.59 | 986.14 | 313.59 | 989.85 | 313.67 | 990.26 | 313.67 | 992.04 | 313.73 |
| 993.55 | 313.76 | 994.05 | 313.76 | 997.79 | 313.81 | 998.9 | 313.81 | 1001.22 | 313.88 |
| 1002.06 | 313.92 | 1008.51 | 314.18 | 1010.62 | 314.27 | 1017.75 | 314.63 | 1021.14 | 314.92 |
| 1022.61 | 315.04 | 1023.8 | 315.16 | 1025.22 | 315.26 | 1026.07 | 315.31 | 1032.05 | 315.64 |
| 1037.33 | 315.9 | 1038.19 | 315.94 | 1039.17 | 316.01 | 1040.99 | 316.18 | 1042.51 | 316.34 |
| 1042.99 | 316.36 | 1046.74 | 316.41 | 1047.75 | 316.42 | 1048.83 | 316.46 | 1049.29 | 316.45 |
| 1049.52 | 316.4 | 1049.99 | 316.35 | 1050.64 | 316.35 | 1050.99 | 316.33 | 1051.63 | 316.26 |
| 1054.37 | 316.61 | 1057.2 | 317.05 | 1058.56 | 317.21 | 1060.94 | 317.53 | 1062.79 | 317.69 |
| 1063.16 | 317.73 | 1064.35 | 317.81 | 1068.27 | 317.99 | 1069.3 | 318 | 1069.69 | 318.02 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 240.44 | .04 | 787.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 240.44 | 787.81 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3332.95*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.55 | 1.91 | 329.51 | 2.76 | 329.45 | 4.37 | 329.31 | 5.47 | 329.3 |
| 5.55 | 329.27 | 6.85 | 329.29 | 17.9 | 329.29 | 21.18 | 329.11 | 23.14 | 329.11 |
| 23.6 | 329.09 | 26.01 | 329.01 | 27.04 | 328.99 | 28.92 | 328.86 | 32.98 | 328.51 |
| 34.47 | 328.5 | 35.52 | 328.53 | 37.97 | 328.63 | 38.39 | 328.64 | 39.59 | 328.55 |
| 40.4 | 328.51 | 40.8 | 328.51 | 41.31 | 328.48 | 43.84 | 328.43 | 45.64 | 328.34 |
| 48.42 | 328.21 | 51.08 | 328.13 | 52.71 | 328.06 | 53.81 | 327.98 | 55.89 | 327.85 |
| 56.49 | 327.77 | 57.98 | 327.59 | 59.35 | 327.44 | 61.02 | 327.22 | 61.42 | 327.16 |
| 62.17 | 327.08 | 63.36 | 326.9 | 64.23 | 326.79 | 64.46 | 326.78 | 65.61 | 326.86 |
| 65.87 | 326.85 | 66.57 | 326.97 | 67.24 | 327.07 | 67.54 | 327.14 | 69.55 | 327.31 |
| 70.14 | 327.29 | 72.05 | 327.38 | 72.28 | 327.38 | 74.43 | 327.2 | 77.11 | 327.01 |
| 79.19 | 326.88 | 79.6 | 326.81 | 82.73 | 326.23 | 83.22 | 326.15 | 84.6 | 325.9 |
| 87.16 | 325.34 | 88.34 | 325.14 | 89.05 | 325.05 | 89.57 | 325.02 | 90.07 | 325.04 |
| 91.91 | 325.21 | 93.02 | 325.3 | 94.67 | 325.28 | 96.23 | 325.23 | 98.14 | 325.23 |
| 99.62 | 325.25 | 100.9 | 325.29 | 101.87 | 325.33 | 103.85 | 325.37 | 105.37 | 325.43 |
| 105.92 | 325.41 | 106.79 | 325.31 | 109.03 | 325.02 | 111.21 | 324.68 | 113.99 | 324.16 |
| 116.34 | 323.67 | 118.86 | 323.18 | 119.24 | 323.12 | 119.76 | 322.97 | 120.55 | 322.82 |
| 122.86 | 322.32 | 123.69 | 322.09 | 125.67 | 321.56 | 128.96 | 320.97 | 130.56 | 320.75 |
| 131.22 | 320.82 | 132.23 | 320.9 | 133.43 | 321.01 | 134.39 | 321.12 | 134.78 | 321.18 |
| 136.32 | 321.25 | 137.13 | 321.12 | 137.34 | 321.1 | 138.76 | 320.78 | 139.85 | 320.55 |
| 143.55 | 319.86 | 146.66 | 319.27 | 150.59 | 318.48 | 151.87 | 318.15 | 153.68 | 317.65 |
| 153.91 | 317.6 | 155.07 | 317.41 | 155.74 | 317.32 | 156.31 | 317.26 | 156.51 | 317.22 |
| 158.76 | 316.92 | 160.6 | 316.67 | 161.98 | 316.47 | 163.52 | 316.27 | 166.86 | 315.76 |
| 170.5 | 315.23 | 171.5 | 315.08 | 172.41 | 314.96 | 173.56 | 314.79 | 175.94 | 314.45 |
| 177.31 | 314.26 | 178.37 | 314.15 | 180.12 | 313.95 | 181.39 | 313.77 | 186.31 | 313.18 |
| 186.73 | 313.12 | 190.02 | 312.69 | 191.27 | 312.54 | 193.73 | 312.36 | 201.74 | 311.78 |
| 205.59 | 311.51 | 206.9 | 311.44 | 208.92 | 311.36 | 210.58 | 311.35 | 211.15 | 311.32 |
| 212.18 | 311.33 | 212.69 | 311.32 | 219.32 | 310.91 | 221.87 | 310.78 | 222.98 | 310.69 |
| 225.5 | 310.42 | 225.83 | 310.39 | 226.41 | 310.37 | 226.64 | 310.38 | 228.4 | 310.28 |
| 230.9 | 310.35 | 231.43 | 310.35 | 232.11 | 310.33 | 241.7 | 310.02 | 242.78 | 310.01 |
| 252.46 | 309.97 | 254.55 | 309.86 | 255.45 | 309.83 | 256.28 | 309.76 | 257.98 | 309.63 |
| 258.96 | 309.58 | 261.39 | 309.35 | 262.73 | 309.34 | 264.13 | 309.34 | 266.1 | 309.46 |
| 274.75 | 309.94 | 283.35 | 309.96 | 286.89 | 309.99 | 287.28 | 309.94 | 288.21 | 309.86 |
| 289.14 | 309.76 | 289.65 | 309.73 | 290.7 | 309.62 | 293.56 | 309.37 | 294.85 | 309.37 |
| 295.15 | 309.36 | 299.54 | 309.48 | 305.5 | 309.7 | 311.68 | 309.94 | 312.61 | 309.97 |
| 315.6 | 310.1 | 317.26 | 310.16 | 321.71 | 310.29 | 323.47 | 310.32 | 328.05 | 310.38 |
| 329.24 | 310.39 | 330.34 | 310.39 | 331.4 | 310.35 | 334.94 | 310.34 | 335.62 | 310.32 |
| 336.8 | 310.22 | 338.11 | 310.16 | 339.35 | 310.13 | 347.55 | 309.86 | 352.23 | 309.47 |
| 362.17 | 309.42 | 368.75 | 309.38 | 384.76 | 309.28 | 395.16 | 309.31 | 399.47 | 309.31 |
| 401.17 | 309.28 | 403.42 | 309.27 | 406.01 | 309.31 | 407.55 | 309.31 | 408.65 | 309.3 |
| 410.31 | 309.34 | 413.45 | 309.43 | 423.28 | 309.74 | 425.27 | 309.8 | 426.57 | 309.85 |
| 431.57 | 309.86 | 436.56 | 309.86 | 439.3 | 309.83 | 441.92 | 309.79 | 443.48 | 309.74 |
| 446.09 | 309.69 | 448.62 | 309.65 | 452.98 | 309.55 | 455.93 | 309.37 | 458.35 | 309.23 |
| 460.19 | 309.14 | 461.47 | 309.05 | 463.94 | 308.96 | 465.49 | 308.97 | 466.89 | 309.01 |
| 472.58 | 309.08 | 472.99 | 309.08 | 475.49 | 309.11 | 475.85 | 309.11 | 480.8 | 309.18 |
| 482.35 | 309.19 | 482.86 | 309.17 | 483.24 | 309.19 | 485.4 | 309.2 | 487.14 | 309.2 |
| 489.38 | 309.22 | 490.7 | 309.21 | 492.96 | 309.23 | 497.03 | 309.23 | 500.23 | 309.22 |
| 502.65 | 309.22 | 509.03 | 309.17 | 509.63 | 309.15 | 511.21 | 309.14 | 513.14 | 309.14 |
| 515.3 | 309.1 | 515.98 | 309.1 | 520.83 | 309.08 | 522.68 | 309.06 | 530.18 | 308.93 |
| 530.84 | 308.91 | 533.68 | 308.88 | 538.84 | 308.79 | 539.36 | 308.79 | 543.92 | 308.71 |
| 544.32 | 308.71 | 549.43 | 308.62 | 549.69 | 308.62 | 556.77 | 308.49 | 557.52 | 308.48 |
| 560.08 | 308.42 | 565.18 | 308.31 | 567.81 | 308.25 | 568.82 | 308.2 | 570.36 | 308.28 |
| 571.22 | 308.34 | 572.03 | 308.36 | 574.23 | 308.38 | 577.61 | 308.39 | 578.88 | 308.38 |
| 581.2 | 308.46 | 583.8 | 308.44 | 587 | 308.39 | 588.24 | 308.36 | 588.65 | 308.34 |
| 592.14 | 308.3 | 596.34 | 308.24 | 597.28 | 308.21 | 599.19 | 308.18 | 600.73 | 308.15 |
| 603.83 | 308.07 | 607.67 | 307.94 | 609.78 | 308.08 | 611.35 | 308.11 | 611.97 | 308.06 |
| 613.02 | 307.95 | 613.48 | 307.95 | 613.76 | 308.03 | 614.88 | 308.17 | 617.96 | 308.21 |
| 618.98 | 308.23 | 620.75 | 308.25 | 623.68 | 308.25 | 626.37 | 308.22 | 628.19 | 308.19 |
| 629.91 | 308.15 | 641.48 | 307.92 | 643.83 | 307.61 | 644.54 | 307.51 | 645.13 | 307.41 |
| 646.68 | 307.41 | 647.54 | 307.47 | 649.93 | 307.66 | 652.72 | 307.92 | 654.48 | 308.08 |
| 655.66 | 308.18 | 656.61 | 308.21 | 657.01 | 308.24 | 661.07 | 308.66 | 663.22 | 308.66 |
| 665.06 | 308.68 | 665.73 | 308.62 | 666.69 | 308.64 | 668.06 | 308.7 | 668.69 | 308.7 |
| 681.24 | 308.85 | 685.2 | 308.93 | 687.15 | 308.96 | 689.42 | 309.01 | 690.89 | 309.02 |
| 692.02 | 309 | 694.07 | 308.77 | 694.92 | 308.65 | 696.04 | 308.54 | 696.57 | 308.51 |
| 697.38 | 308.59 | 697.98 | 308.61 | 699.82 | 308.64 | 700.29 | 308.64 | 704.27 | 308.74 |
| 704.84 | 308.74 | 710.4 | 308.86 | 713.8 | 308.92 | 715.79 | 308.93 | 718.31 | 308.93 |
| 721.27 | 308.88 | 722.21 | 308.87 | 726.63 | 308.78 | 729.88 | 308.71 | 733.87 | 308.67 |
| 734.62 | 308.61 | 740.97 | 308.53 | 749.24 | 308.47 | 753.61 | 308.43 | 754.28 | 308.43 |
| 755.34 | 308.4 | 756.79 | 308.34 | 757.65 | 308.25 | 758.34 | 308.2 | 759.22 | 308.16 |
| 759.61 | 308.16 | 761.14 | 308.26 | 762.17 | 308.3 | 763.22 | 308.33 | 763.63 | 308.33 |
| 764.65 | 308.37 | 766.55 | 308.43 | 768.65 | 308.48 | 771.35 | 308.55 | 772.4 | 308.56 |
| 773.45 | 308.58 | 774.62 | 308.56 | 775.85 | 308.51 | 776.28 | 308.44 | 776.94 | 308.42 |
| 778.33 | 308.48 | 778.93 | 308.53 | 782.12 | 308.56 | 786.41 | 308.61 | 788.43 | 308.68 |
| 789.03 | 308.69 | 790.14 | 308.65 | 790.27 | 308.58 | 791.78 | 308.68 | 793.44 | 308.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 795.3 | 308.89 | 797.07 | 308.97 | 799.23 | 309.11 | 801.45 | 309.19 | 806.17 | 309.33 |
| 808.69 | 309.37 | 811.22 | 309.44 | 811.35 | 309.45 | 813.15 | 309.49 | 814.46 | 309.52 |
| 817.25 | 309.55 | 819.16 | 309.58 | 824.72 | 309.65 | 832.94 | 309.73 | 834.68 | 309.76 |
| 836.53 | 309.8 | 841.52 | 309.8 | 841.61 | 309.81 | 843.38 | 309.81 | 844.87 | 309.82 |
| 848.99 | 309.84 | 849.64 | 309.84 | 850.38 | 309.86 | 852 | 309.88 | 860.29 | 310 |
| 860.31 | 310.01 | 862.58 | 310.03 | 862.92 | 310.04 | 864.58 | 310.05 | 866.18 | 310.04 |
| 867.45 | 310.04 | 868.52 | 310.03 | 870.24 | 310.09 | 872.29 | 310.19 | 874.62 | 310.25 |
| 875.22 | 310.24 | 876.38 | 310.24 | 877.54 | 310.26 | 880.05 | 310.25 | 881.1 | 310.25 |
| 882.28 | 310.26 | 885.43 | 310.26 | 886.21 | 310.27 | 890.42 | 310.47 | 892.52 | 310.58 |
| 894.68 | 310.71 | 897.15 | 310.85 | 898.07 | 310.91 | 899.6 | 310.96 | 900.67 | 310.98 |
| 902.02 | 311.03 | 903.62 | 311.07 | 904.42 | 311.1 | 906.27 | 311.14 | 908.32 | 311.11 |
| 908.99 | 311.11 | 910.17 | 311.08 | 911.64 | 311.06 | 914.73 | 310.99 | 917.55 | 310.91 |
| 918.4 | 310.88 | 922.22 | 310.8 | 922.81 | 310.89 | 925.02 | 310.91 | 926.29 | 310.91 |
| 930.1 | 310.95 | 930.5 | 310.96 | 932.66 | 311.04 | 933.29 | 311.07 | 937.07 | 311.22 |
| 938.93 | 311.29 | 940.65 | 311.31 | 940.72 | 311.29 | 941.31 | 311.32 | 943.31 | 311.34 |
| 943.67 | 311.35 | 947.47 | 311.39 | 948.93 | 311.43 | 954.74 | 311.63 | 957.4 | 311.7 |
| 958.27 | 311.73 | 963.88 | 311.94 | 965.21 | 312.01 | 968.21 | 312.16 | 971.14 | 312.3 |
| 973.47 | 312.45 | 974.2 | 312.47 | 978.26 | 312.62 | 982.27 | 312.75 | 985.99 | 312.86 |
| 988.1 | 312.94 | 988.36 | 312.94 | 991.63 | 313.01 | 993.57 | 313.07 | 995.35 | 313.09 |
| 998.65 | 313.11 | 999.63 | 313.1 | 1001.68 | 313.15 | 1002.43 | 313.19 | 1004.65 | 313.28 |
| 1009.99 | 313.51 | 1016.29 | 313.84 | 1019.28 | 314.08 | 1020.7 | 314.2 | 1021.27 | 314.27 |
| 1022.02 | 314.32 | 1023.63 | 314.41 | 1028.91 | 314.67 | 1033.58 | 314.89 | 1034.97 | 314.95 |
| 1035.59 | 315.01 | 1036.81 | 315.11 | 1038.16 | 315.23 | 1038.58 | 315.25 | 1041.89 | 315.31 |
| 1042.79 | 315.32 | 1043.74 | 315.35 | 1044.15 | 315.35 | 1044.77 | 315.27 | 1045.65 | 315.26 |
| 1046.22 | 315.21 | 1048.63 | 315.49 | 1051.14 | 315.82 | 1052.34 | 315.95 | 1054.44 | 316.19 |
| 1056.4 | 316.35 | 1057.45 | 316.42 | 1060.91 | 316.57 | 1061.83 | 316.57 | 1062.17 | 316.59 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 219.32 | .04 | 813.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 219.32 | 813.15 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3285.87*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.05 | 1.72 | 329.02 | 2.5 | 328.98 | 3.95 | 328.88 | 4.94 | 328.87 |
| 5.43 | 328.85 | 6.19 | 328.87 | 9.15 | 328.86 | 16.17 | 328.86 | 19.14 | 328.74 |
| 20.91 | 328.74 | 22.64 | 328.69 | 24.75 | 328.65 | 26.13 | 328.57 | 29.8 | 328.34 |
| 31.15 | 328.33 | 32.09 | 328.35 | 34.69 | 328.43 | 35.77 | 328.37 | 37.33 | 328.32 |
| 39.11 | 328.29 | 39.62 | 328.29 | 41.25 | 328.18 | 43.76 | 328.03 | 43.85 | 328.02 |
| 46.16 | 327.91 | 47.63 | 327.81 | 50.51 | 327.56 | 51.04 | 327.47 | 53.08 | 327.16 |
| 54.94 | 326.85 | 55.5 | 326.74 | 56.18 | 326.63 | 57.74 | 326.33 | 58.25 | 326.28 |
| 59.29 | 326.39 | 59.49 | 326.38 | 60.76 | 326.68 | 61.03 | 326.76 | 62.85 | 326.99 |
| 63.38 | 326.98 | 65.11 | 327.13 | 65.31 | 327.12 | 67.26 | 326.92 | 69.69 | 326.73 |
| 71.56 | 326.6 | 71.94 | 326.54 | 74.76 | 326.04 | 75.2 | 325.97 | 76.45 | 325.72 |
| 77 | 325.6 | 78.76 | 325.17 | 79.83 | 324.96 | 80.48 | 324.86 | 80.95 | 324.85 |
| 81.39 | 324.88 | 83.06 | 325.14 | 84.06 | 325.28 | 85.55 | 325.3 | 86.96 | 325.28 |
| 87.8 | 325.31 | 88.69 | 325.32 | 90.02 | 325.4 | 92.05 | 325.55 | 93.85 | 325.65 |
| 95.22 | 325.76 | 95.44 | 325.77 | 96.51 | 325.64 | 98.52 | 325.35 | 100.49 | 324.99 |
| 103.01 | 324.45 | 105.13 | 323.96 | 105.87 | 323.8 | 107.75 | 323.41 | 108.22 | 323.24 |
| 108.94 | 323.09 | 111.03 | 322.55 | 111.78 | 322.28 | 113.56 | 321.7 | 115.88 | 321.23 |
| 116.89 | 321.03 | 117.98 | 320.85 | 118.58 | 320.94 | 119.49 | 321.04 | 120.58 | 321.2 |
| 121.79 | 321.41 | 122.81 | 321.43 | 123.19 | 321.46 | 124.11 | 321.32 | 125.39 | 320.96 |
| 126.38 | 320.7 | 129.62 | 319.94 | 129.73 | 319.9 | 132.53 | 319.23 | 132.89 | 319.15 |
| 133.93 | 318.87 | 136.08 | 318.32 | 137.47 | 317.86 | 138.88 | 317.35 | 140.13 | 317.07 |
| 143.47 | 316.48 | 145.13 | 316.2 | 146.37 | 315.98 | 147.77 | 315.76 | 152.35 | 314.88 |
| 154.98 | 314.39 | 156.31 | 314.17 | 156.84 | 314.07 | 159 | 313.7 | 160.23 | 313.5 |
| 161.18 | 313.39 | 162.77 | 313.18 | 164.43 | 312.95 | 168.37 | 312.48 | 169.09 | 312.38 |
| 171.72 | 312.06 | 172.59 | 311.96 | 174.82 | 311.78 | 175.07 | 311.77 | 182.31 | 311.22 |
| 184.1 | 311.1 | 185.79 | 310.97 | 186.97 | 310.91 | 188.8 | 310.83 | 190.3 | 310.8 |
| 191.09 | 310.77 | 191.74 | 310.77 | 193.09 | 310.7 | 198.19 | 310.39 | 201.09 | 310.23 |
| 202.34 | 310.13 | 205.2 | 309.79 | 205.56 | 309.76 | 206.48 | 309.74 | 208.47 | 309.62 |
| 210.64 | 309.7 | 211.31 | 309.72 | 211.9 | 309.72 | 212.68 | 309.7 | 223.53 | 309.35 |
| 224.76 | 309.34 | 235.72 | 309.32 | 238.08 | 309.17 | 239.1 | 309.14 | 239.92 | 309.08 |
| 241.96 | 308.91 | 243.07 | 308.85 | 244.29 | 308.72 | 245.83 | 308.57 | 247.34 | 308.55 |
| 248.82 | 308.56 | 249.25 | 308.58 | 251.16 | 308.7 | 260.95 | 309.29 | 270.69 | 309.31 |
| 273.45 | 309.32 | 274.68 | 309.33 | 275.32 | 309.25 | 276.19 | 309.17 | 276.82 | 309.1 |
| 277.82 | 309.01 | 279 | 308.89 | 282.25 | 308.58 | 284.05 | 308.58 | 289.02 | 308.72 |
| 295.77 | 308.97 | 303.81 | 309.28 | 307.2 | 309.42 | 309.08 | 309.48 | 314.12 | 309.61 |
| 315.46 | 309.64 | 318.83 | 309.69 | 322.64 | 309.74 | 323.89 | 309.74 | 325.09 | 309.69 |
| 329.1 | 309.68 | 329.87 | 309.66 | 331.2 | 309.53 | 332.68 | 309.46 | 334.09 | 309.42 |
| 334.8 | 309.41 | 342.66 | 309.15 | 343.37 | 309.12 | 348.68 | 308.65 | 359.93 | 308.61 |
| 367.37 | 308.59 | 385.5 | 308.52 | 397.28 | 308.59 | 399.78 | 308.61 | 401.37 | 308.61 |
| 402.78 | 308.59 | 404.08 | 308.58 | 406.63 | 308.57 | 409.56 | 308.63 | 412.55 | 308.63 |
| 416.02 | 308.74 | 417.99 | 308.81 | 429.11 | 309.19 | 431.37 | 309.27 | 432.84 | 309.33 |
| 438.76 | 309.32 | 442.42 | 309.31 | 444.15 | 309.31 | 445.39 | 309.3 | 451.47 | 309.2 |
| 451.99 | 309.17 | 453.18 | 309.15 | 454.82 | 309.11 | 457.8 | 309.08 | 462.74 | 308.97 |
| 468.82 | 308.59 | 470.9 | 308.48 | 472.35 | 308.36 | 474.68 | 308.27 | 475.68 | 308.26 |
| 476.9 | 308.28 | 478.49 | 308.33 | 481.21 | 308.36 | 484.92 | 308.41 | 485.39 | 308.41 |
| 488.23 | 308.45 | 488.63 | 308.45 | 495.99 | 308.54 | 496.66 | 308.52 | 497 | 308.54 |
| 499.44 | 308.56 | 501.41 | 308.57 | 503.94 | 308.6 | 505.44 | 308.6 | 508.01 | 308.63 |
| 512.03 | 308.63 | 512.61 | 308.64 | 516.28 | 308.64 | 516.88 | 308.65 | 523.46 | 308.62 |
| 526.23 | 308.61 | 526.87 | 308.58 | 530.84 | 308.58 | 532.34 | 308.56 | 533.3 | 308.54 |
| 540.54 | 308.53 | 541.65 | 308.51 | 550.15 | 308.38 | 550.89 | 308.36 | 554.1 | 308.33 |
| 559.95 | 308.24 | 560.53 | 308.24 | 565.69 | 308.15 | 566.15 | 308.14 | 571.93 | 308.05 |
| 573.41 | 308.02 | 578.42 | 307.94 | 580.25 | 307.9 | 581.09 | 307.89 | 584 | 307.82 |
| 589.76 | 307.69 | 592.75 | 307.63 | 593.88 | 307.57 | 595.64 | 307.67 | 596.61 | 307.74 |
| 597.52 | 307.77 | 598.51 | 307.79 | 603.75 | 307.83 | 603.84 | 307.82 | 605.28 | 307.81 |
| 606.81 | 307.88 | 607.91 | 307.92 | 608.48 | 307.91 | 609.65 | 307.91 | 610.84 | 307.9 |
| 613.08 | 307.87 | 614.48 | 307.84 | 615.87 | 307.8 | 617.26 | 307.77 | 625.05 | 307.67 |
| 627.24 | 307.61 | 630.02 | 307.55 | 630.22 | 307.55 | 633.52 | 307.45 | 637.11 | 307.31 |
| 637.87 | 307.29 | 638.25 | 307.31 | 640.27 | 307.46 | 641.72 | 307.5 | 642.04 | 307.5 |
| 642.74 | 307.44 | 643.93 | 307.3 | 644.45 | 307.3 | 644.76 | 307.4 | 645.51 | 307.52 |
| 646.04 | 307.58 | 649.52 | 307.63 | 650.68 | 307.65 | 651.79 | 307.66 | 652.68 | 307.68 |
| 653.47 | 307.68 | 658 | 307.66 | 661.11 | 307.6 | 671.6 | 307.38 | 676.15 | 307.28 |
| 678.81 | 306.9 | 680.13 | 306.66 | 680.4 | 306.64 | 681.26 | 306.64 | 682.3 | 306.71 |
| 684.07 | 306.88 | 687.19 | 307.21 | 688.85 | 307.39 | 689.96 | 307.49 | 691.23 | 307.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 692.43 | 307.62 | 695.06 | 307.82 | 697.09 | 307.83 | 698.82 | 307.85 | 699.46 | 307.81 |
| 700.36 | 307.83 | 701.85 | 307.88 | 705.49 | 307.88 | 714.08 | 307.94 | 717.82 | 307.99 |
| 719.66 | 308 | 722.14 | 308.03 | 723.93 | 308.01 | 724.34 | 307.99 | 726.18 | 307.72 |
| 726.99 | 307.56 | 728.05 | 307.42 | 728.55 | 307.39 | 729 | 307.43 | 729.31 | 307.48 |
| 729.88 | 307.51 | 732.05 | 307.55 | 733.11 | 307.59 | 735.8 | 307.68 | 736.34 | 307.69 |
| 741.59 | 307.85 | 744.8 | 307.95 | 746.67 | 307.97 | 749.05 | 307.98 | 749.48 | 307.97 |
| 752.72 | 307.94 | 756.89 | 307.88 | 759.96 | 307.83 | 763.72 | 307.8 | 764.43 | 307.76 |
| 770.41 | 307.71 | 770.72 | 307.7 | 774.32 | 307.69 | 782.33 | 307.65 | 783.21 | 307.65 |
| 785.34 | 307.56 | 786.15 | 307.45 | 787.14 | 307.36 | 787.63 | 307.34 | 788.11 | 307.35 |
| 789.44 | 307.46 | 790.16 | 307.5 | 791.41 | 307.55 | 794.04 | 307.63 | 794.54 | 307.63 |
| 796.52 | 307.67 | 797.89 | 307.71 | 799.07 | 307.72 | 801.45 | 307.72 | 803.31 | 307.64 |
| 803.68 | 307.59 | 803.72 | 307.55 | 804.35 | 307.54 | 805.65 | 307.62 | 806.22 | 307.69 |
| 809.23 | 307.74 | 813.28 | 307.82 | 814.01 | 307.86 | 815.74 | 307.91 | 816.8 | 307.89 |
| 816.92 | 307.85 | 817.73 | 307.9 | 819.9 | 308.01 | 821.66 | 308.11 | 823.8 | 308.21 |
| 824.73 | 308.27 | 826.57 | 308.35 | 830.7 | 308.48 | 831.43 | 308.51 | 834.62 | 308.59 |
| 836.67 | 308.67 | 836.8 | 308.68 | 838.49 | 308.73 | 839.63 | 308.77 | 842.05 | 308.82 |
| 845.78 | 308.91 | 848.53 | 308.97 | 854.84 | 309.1 | 856.24 | 309.12 | 858.22 | 309.19 |
| 858.78 | 309.2 | 863.12 | 309.24 | 866.03 | 309.28 | 869.6 | 309.32 | 872.21 | 309.38 |
| 877.58 | 309.48 | 880.11 | 309.54 | 881.4 | 309.56 | 882.56 | 309.57 | 885.63 | 309.57 |
| 886.56 | 309.56 | 888.05 | 309.61 | 889.83 | 309.69 | 891.85 | 309.76 | 894.39 | 309.76 |
| 896.56 | 309.74 | 900.59 | 309.72 | 901.23 | 309.71 | 902.25 | 309.73 | 903 | 309.77 |
| 905.57 | 309.88 | 907.39 | 309.97 | 908.56 | 310.04 | 911.4 | 310.2 | 912.2 | 310.25 |
| 913.53 | 310.3 | 914.46 | 310.32 | 916.13 | 310.42 | 919.32 | 310.58 | 921.96 | 310.57 |
| 922.71 | 310.55 | 923.99 | 310.54 | 925.26 | 310.52 | 926.66 | 310.49 | 929.12 | 310.41 |
| 929.85 | 310.38 | 933.17 | 310.31 | 933.68 | 310.37 | 934.36 | 310.37 | 937.53 | 310.4 |
| 940.01 | 310.44 | 940.36 | 310.44 | 944.77 | 310.7 | 947.67 | 310.86 | 949.17 | 310.89 |
| 949.23 | 310.87 | 950.04 | 310.9 | 951.79 | 310.94 | 952.77 | 310.95 | 955.09 | 310.99 |
| 956.35 | 311.03 | 960.36 | 311.17 | 961.39 | 311.2 | 964.46 | 311.27 | 969.94 | 311.45 |
| 970.49 | 311.48 | 973.09 | 311.59 | 975.63 | 311.69 | 977.66 | 311.81 | 978.29 | 311.83 |
| 981.82 | 311.97 | 988.52 | 312.22 | 990.58 | 312.3 | 993.42 | 312.36 | 995.1 | 312.41 |
| 996.26 | 312.42 | 996.64 | 312.41 | 999.52 | 312.41 | 1000.36 | 312.38 | 1002.15 | 312.42 |
| 1002.79 | 312.46 | 1004.31 | 312.53 | 1004.72 | 312.54 | 1007.73 | 312.68 | 1009.35 | 312.76 |
| 1014.82 | 313.05 | 1017.42 | 313.24 | 1018.66 | 313.34 | 1019.14 | 313.41 | 1020.55 | 313.49 |
| 1021.2 | 313.51 | 1023.15 | 313.59 | 1025.78 | 313.71 | 1029.83 | 313.88 | 1031.04 | 313.92 |
| 1033.81 | 314.13 | 1037.05 | 314.21 | 1037.83 | 314.22 | 1038.9 | 314.25 | 1039.5 | 314.2 |
| 1040.04 | 314.2 | 1040.8 | 314.16 | 1042.9 | 314.36 | 1045.07 | 314.59 | 1046.12 | 314.68 |
| 1047.94 | 314.86 | 1049.64 | 314.97 | 1050.55 | 315.02 | 1053.56 | 315.14 | 1054.65 | 315.16 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 198.19 | .04 | 838.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 198.19 | 838.49 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3238.79*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.54 | 1.42 | 328.53 | 3.53 | 328.45 | 4.85 | 328.43 | 5.53 | 328.44 |
| 8.18 | 328.43 | 14.45 | 328.43 | 17.1 | 328.37 | 18.68 | 328.37 | 19.05 | 328.36 |
| 21.83 | 328.33 | 23.35 | 328.29 | 26.57 | 328.17 | 28.39 | 328.17 | 28.67 | 328.18 |
| 30.66 | 328.21 | 31.09 | 328.21 | 31.96 | 328.18 | 32.94 | 328.17 | 33.99 | 328.15 |
| 34.99 | 328.15 | 35.39 | 328.14 | 39.09 | 327.84 | 39.18 | 327.84 | 41.24 | 327.68 |
| 42.56 | 327.55 | 43.44 | 327.45 | 45.12 | 327.28 | 47.36 | 326.82 | 49.27 | 326.41 |
| 49.59 | 326.32 | 50.58 | 326.09 | 51.58 | 325.84 | 52.04 | 325.78 | 52.97 | 325.93 |
| 53.15 | 325.92 | 54.29 | 326.28 | 54.53 | 326.38 | 56.15 | 326.68 | 56.63 | 326.68 |
| 58.17 | 326.87 | 58.35 | 326.87 | 60.09 | 326.65 | 62.26 | 326.45 | 63.56 | 326.35 |
| 64.27 | 326.27 | 66.79 | 325.85 | 67.19 | 325.78 | 68.3 | 325.55 | 69.79 | 325.17 |
| 70.37 | 325.01 | 71.32 | 324.77 | 71.9 | 324.68 | 72.32 | 324.67 | 72.72 | 324.72 |
| 74.2 | 325.07 | 75.1 | 325.26 | 75.36 | 325.28 | 76.43 | 325.32 | 77.69 | 325.32 |
| 78.44 | 325.38 | 79.23 | 325.42 | 80.43 | 325.54 | 82.24 | 325.78 | 83.84 | 325.93 |
| 85.26 | 326.1 | 85.51 | 326.08 | 86.22 | 325.97 | 88.02 | 325.67 | 89.78 | 325.3 |
| 92.03 | 324.74 | 93.93 | 324.25 | 94.58 | 324.09 | 95.96 | 323.77 | 96.27 | 323.71 |
| 96.69 | 323.52 | 97.33 | 323.36 | 99.19 | 322.77 | 99.86 | 322.48 | 101.46 | 321.84 |
| 103.53 | 321.35 | 105.27 | 320.96 | 105.41 | 320.94 | 105.94 | 321.06 | 106.73 | 321.18 |
| 107.72 | 321.39 | 108.81 | 321.65 | 109.72 | 321.64 | 110.06 | 321.67 | 110.88 | 321.54 |
| 112.91 | 320.85 | 115.81 | 319.99 | 115.9 | 319.95 | 118.41 | 319.19 | 118.86 | 319.05 |
| 121.58 | 318.16 | 122.61 | 317.72 | 123.31 | 317.41 | 124.07 | 317.05 | 124.79 | 316.84 |
| 125.73 | 316.6 | 126.9 | 316.32 | 128.17 | 316.05 | 129.66 | 315.74 | 130.77 | 315.49 |
| 132.02 | 315.24 | 134.71 | 314.59 | 137.65 | 313.9 | 138.46 | 313.69 | 139.2 | 313.55 |
| 139.64 | 313.45 | 142.05 | 312.95 | 143.06 | 312.76 | 144 | 312.63 | 145.42 | 312.42 |
| 146.44 | 312.26 | 148.41 | 312.02 | 151.06 | 311.69 | 153.42 | 311.43 | 154.42 | 311.33 |
| 156.41 | 311.17 | 162.87 | 310.67 | 164.47 | 310.55 | 165.98 | 310.43 | 167.04 | 310.38 |
| 167.65 | 310.34 | 170.01 | 310.25 | 170.38 | 310.23 | 171.3 | 310.21 | 172.51 | 310.15 |
| 177.07 | 309.87 | 180.3 | 309.69 | 181.7 | 309.56 | 184.89 | 309.17 | 185.3 | 309.13 |
| 186.04 | 309.1 | 186.32 | 309.11 | 188.55 | 308.97 | 191.71 | 309.1 | 192.38 | 309.1 |
| 193.24 | 309.08 | 205.37 | 308.67 | 206.73 | 308.67 | 218.97 | 308.66 | 221.61 | 308.49 |
| 222.75 | 308.46 | 225.95 | 308.18 | 227.19 | 308.11 | 228.54 | 307.97 | 230.26 | 307.78 |
| 232.43 | 307.77 | 233.61 | 307.78 | 236.22 | 307.95 | 247.15 | 308.65 | 258.03 | 308.65 |
| 261.11 | 308.66 | 262.51 | 308.66 | 262.99 | 308.6 | 264.17 | 308.48 | 264.88 | 308.4 |
| 265.99 | 308.3 | 267.31 | 308.15 | 270.93 | 307.79 | 272.94 | 307.79 | 278.49 | 307.97 |
| 286.03 | 308.25 | 293.84 | 308.53 | 297.64 | 308.69 | 300.9 | 308.8 | 306.53 | 308.93 |
| 308.03 | 308.97 | 311.78 | 309.02 | 314.54 | 309.07 | 315.19 | 309.07 | 317.15 | 309.09 |
| 318.78 | 309.03 | 322.62 | 309.02 | 324.11 | 308.99 | 325.6 | 308.85 | 326.27 | 308.8 |
| 328.83 | 308.72 | 329.62 | 308.7 | 338.4 | 308.41 | 339.2 | 308.37 | 345.12 | 307.82 |
| 357.68 | 307.81 | 366 | 307.79 | 386.24 | 307.76 | 399.39 | 307.88 | 402.19 | 307.9 |
| 404.84 | 307.9 | 406.99 | 307.88 | 409.83 | 307.87 | 413.11 | 307.96 | 416.45 | 307.96 |
| 418.55 | 308.03 | 420.32 | 308.1 | 422.52 | 308.18 | 434.94 | 308.65 | 439.1 | 308.8 |
| 445.72 | 308.79 | 449.8 | 308.76 | 453.13 | 308.74 | 458.51 | 308.66 | 460.3 | 308.62 |
| 460.49 | 308.6 | 461.82 | 308.57 | 463.78 | 308.54 | 466.98 | 308.5 | 472.49 | 308.39 |
| 472.71 | 308.38 | 476.22 | 308.14 | 479.28 | 307.94 | 481.61 | 307.82 | 483.23 | 307.68 |
| 485.24 | 307.6 | 486.35 | 307.57 | 488.31 | 307.58 | 489.19 | 307.62 | 491.3 | 307.66 |
| 492.11 | 307.68 | 493.12 | 307.69 | 497.27 | 307.74 | 497.79 | 307.74 | 500.96 | 307.78 |
| 501.41 | 307.79 | 505.95 | 307.84 | 508.44 | 307.87 | 509.63 | 307.88 | 510.27 | 307.86 |
| 510.75 | 307.89 | 511.98 | 307.9 | 515.69 | 307.95 | 518.51 | 307.98 | 520.19 | 307.98 |
| 523.05 | 308.02 | 526.34 | 308.04 | 527.54 | 308.04 | 528.19 | 308.05 | 532.29 | 308.06 |
| 532.96 | 308.07 | 535.29 | 308.06 | 540.31 | 308.05 | 543.4 | 308.04 | 544.12 | 308.02 |
| 546.12 | 308.01 | 548.55 | 308.02 | 550.22 | 308 | 551.29 | 307.98 | 552.15 | 307.98 |
| 558.28 | 307.99 | 560.62 | 307.97 | 570.11 | 307.83 | 570.68 | 307.8 | 573.34 | 307.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 574.53 | 307.78 | 581.05 | 307.68 | 581.7 | 307.68 | 587.47 | 307.59 | 587.98 | 307.58 |
| 594.44 | 307.47 | 596.09 | 307.45 | 601.69 | 307.35 | 603.72 | 307.32 | 607.91 | 307.23 |
| 614.35 | 307.08 | 618.05 | 306.99 | 618.95 | 306.93 | 619.31 | 306.96 | 620.91 | 307.06 |
| 621.99 | 307.15 | 623.02 | 307.18 | 625.8 | 307.23 | 629.97 | 307.26 | 631.68 | 307.25 |
| 634.61 | 307.37 | 636.24 | 307.36 | 637.89 | 307.36 | 640.39 | 307.32 | 641.95 | 307.29 |
| 643.51 | 307.24 | 645.05 | 307.21 | 648.45 | 307.17 | 651.96 | 307.12 | 653.75 | 307.09 |
| 657.35 | 307 | 659.3 | 306.96 | 661.36 | 306.9 | 662.82 | 306.84 | 663.22 | 306.83 |
| 667.71 | 306.65 | 668.08 | 306.64 | 670.75 | 306.85 | 672.38 | 306.89 | 672.73 | 306.89 |
| 673.51 | 306.82 | 674.94 | 306.65 | 675.37 | 306.65 | 675.62 | 306.7 | 675.77 | 306.78 |
| 677.19 | 306.99 | 683.62 | 307.09 | 684.61 | 307.1 | 688.32 | 307.1 | 691.72 | 307.07 |
| 692.9 | 307.04 | 694.02 | 307.02 | 696.19 | 306.97 | 705.74 | 306.76 | 710.82 | 306.64 |
| 713.8 | 306.18 | 714.69 | 306.02 | 715.26 | 305.9 | 715.44 | 305.88 | 716.3 | 305.88 |
| 719.18 | 306.19 | 721.65 | 306.5 | 723.21 | 306.69 | 724.26 | 306.8 | 725.45 | 306.83 |
| 726.58 | 306.88 | 729.05 | 306.98 | 729.61 | 306.99 | 730.65 | 306.99 | 731.84 | 307.01 |
| 733.6 | 307.01 | 734.99 | 307.04 | 735.8 | 307.05 | 738.85 | 307.03 | 746.93 | 307.03 |
| 750.43 | 307.04 | 754.5 | 307.04 | 755.48 | 307.03 | 756.48 | 307 | 756.56 | 306.98 |
| 758.3 | 306.66 | 759.05 | 306.47 | 760.05 | 306.31 | 760.52 | 306.26 | 760.84 | 306.3 |
| 761.23 | 306.38 | 761.77 | 306.41 | 763.81 | 306.46 | 764.81 | 306.51 | 772.77 | 306.85 |
| 775.79 | 306.97 | 778.02 | 307.01 | 780.19 | 307.02 | 782.4 | 307.01 | 783.24 | 307.02 |
| 787.16 | 306.99 | 790.93 | 306.95 | 793.57 | 306.94 | 794.24 | 306.92 | 799.86 | 306.88 |
| 803.53 | 306.87 | 811.06 | 306.87 | 811.66 | 306.88 | 812.6 | 306.85 | 813.89 | 306.78 |
| 814.65 | 306.65 | 815.79 | 306.53 | 816.38 | 306.53 | 817.74 | 306.67 | 818.41 | 306.72 |
| 819.59 | 306.77 | 820.85 | 306.81 | 822.07 | 306.84 | 822.54 | 306.84 | 825.68 | 306.89 |
| 826.79 | 306.89 | 829.27 | 306.86 | 829.68 | 306.83 | 830.78 | 306.77 | 831.12 | 306.7 |
| 831.16 | 306.66 | 831.75 | 306.66 | 832.98 | 306.76 | 833.51 | 306.84 | 836.33 | 306.93 |
| 840.14 | 307.04 | 842.46 | 307.13 | 843.45 | 307.14 | 843.56 | 307.12 | 844.9 | 307.19 |
| 846.36 | 307.25 | 848.02 | 307.34 | 850.02 | 307.42 | 850.64 | 307.46 | 851.95 | 307.52 |
| 852.63 | 307.54 | 857.65 | 307.72 | 860.2 | 307.8 | 862.13 | 307.9 | 863.84 | 307.98 |
| 864.8 | 308.01 | 866.85 | 308.09 | 870.02 | 308.2 | 872.35 | 308.29 | 876.89 | 308.44 |
| 878.41 | 308.5 | 879.68 | 308.54 | 881.04 | 308.6 | 886.08 | 308.71 | 887.18 | 308.74 |
| 890.69 | 308.82 | 899.12 | 309.06 | 900.47 | 309.08 | 901.21 | 309.1 | 902.87 | 309.09 |
| 904.74 | 309.09 | 906.09 | 309.14 | 906.57 | 309.17 | 909.36 | 309.28 | 910.38 | 309.27 |
| 911.23 | 309.27 | 913.08 | 309.24 | 913.63 | 309.22 | 914.72 | 309.21 | 917.04 | 309.16 |
| 918.53 | 309.2 | 920.71 | 309.29 | 923.85 | 309.45 | 924.14 | 309.47 | 926.34 | 309.59 |
| 928.26 | 309.66 | 929.67 | 309.79 | 930.43 | 309.85 | 931.02 | 309.91 | 932.38 | 310.02 |
| 933.13 | 310.04 | 933.88 | 310.03 | 934.38 | 310.04 | 937.41 | 310.01 | 938.84 | 309.98 |
| 940.68 | 309.9 | 941.31 | 309.88 | 944.12 | 309.82 | 944.55 | 309.85 | 945.13 | 309.85 |
| 947.11 | 309.87 | 947.81 | 309.87 | 950.21 | 309.93 | 952.26 | 310.09 | 956.42 | 310.43 |
| 957.74 | 310.46 | 959.64 | 310.52 | 960.74 | 310.54 | 962.01 | 310.58 | 962.67 | 310.59 |
| 963.78 | 310.63 | 968.05 | 310.77 | 970.65 | 310.82 | 975.3 | 310.92 | 975.76 | 310.95 |
| 977.97 | 311.02 | 980.13 | 311.07 | 981.43 | 311.15 | 982.38 | 311.2 | 985.37 | 311.33 |
| 988.32 | 311.45 | 992.8 | 311.65 | 995.21 | 311.71 | 996.64 | 311.75 | 997.62 | 311.75 |
| 997.94 | 311.74 | 1000.38 | 311.7 | 1001.1 | 311.67 | 1002.61 | 311.7 | 1004.79 | 311.81 |
| 1007.35 | 311.93 | 1008.72 | 312 | 1013.36 | 312.26 | 1015.56 | 312.41 | 1016.51 | 312.48 |
| 1017.02 | 312.55 | 1017.58 | 312.58 | 1018.76 | 312.62 | 1020.42 | 312.66 | 1022.65 | 312.75 |
| 1026.09 | 312.87 | 1027.11 | 312.89 | 1027.57 | 312.91 | 1029.45 | 313.03 | 1033.87 | 313.14 |
| 1034.32 | 313.12 | 1034.74 | 313.13 | 1035.39 | 313.11 | 1037.17 | 313.23 | 1039.01 | 313.37 |
| 1039.89 | 313.42 | 1041.44 | 313.52 | 1043.66 | 313.63 | 1046.53 | 313.72 | 1047.13 | 313.73 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 177.07 | .04 | 863.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 177.07 | 863.84 | 50.42 | 47.09 | 38.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3191.72

INPUT
Description:
Station Elevation Data num= 424

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.047.199951 | | 32831.16998 | | 32836.32001 | | 327.4638.26001 | | 327.19 |
| 39.73999 | 32743.22998 | | 326.0543.39001 | | 326 | 43.5 | 325.9643.66998 | | 325.9 |
| 45.42999 | 325.3445.66998 | | 325.2945.82996 | | 325.2846.64996 | | 325.46 | 46.81 | 325.45 |
| 47.81 | 325.8847.90997 | | 325.9448.01996 | | 32649.45001 | | 326.37 | 49.87 | 326.37 |
| 51.22998 | 326.6151.39001 | | 326.6152.91998 | | 326.3854.82996 | | 326.1755.97998 | | 326.07 |
| 56.59998 | 32659.16998 | | 325.660.14996 | | 325.3861.45996 | | 325 | 62.81 | 324.59 |
| 63.32001 | 324.49 | 63.69 | 324.4964.03998 | | 324.5665.34998 | | 32566.14001 | | 325.24 |
| 66.37 | 325.27 | 67.31 | 325.3468.41998 | | 325.3769.07996 | | 325.4569.77997 | | 325.52 |
| 70.82996 | 325.6972.42999 | | 32673.83997 | | 326.2174.91998 | | 326.4175.08997 | | 326.43 |
| 75.31 | 326.4177.51996 | | 32679.07001 | | 325.6182.71997 | | 324.5484.77997 | | 324 |
| 85.14996 | 323.7985.64001 | | 323.6587.35999 | | 32387.95001 | | 322.6889.29999 | | 322 |
| 91.17999 | 321.4892.70996 | | 321.0692.82996 | | 321.0492.95996 | | 321.0893.29999 | | 321.18 |
| 94.01996 | 321.3395.82996 | | 321.8895.90997 | | 321.89 | 96.63 | 321.8596.92999 | | 321.88 |
| 97.64996 | 321.76 | 99.44 | 321 | 101.99 | 320.04 | 102.07 | 320 | 104.28 | 319.15 |
| 104.56 | 319.05 | 104.68 | 319 | 105.38 | 318.7 | 107.07 | 318 | 108.16 | 317.41 |
| 108.86 | 317 | 109.27 | 316.75 | 109.9 | 316.52 | 111.45 | 316 | 114.19 | 315.27 |
| 115.17 | 315 | 116.27 | 314.73 | 118.64 | 314 | 121.23 | 313.23 | 121.94 | 313 |
| 125.1 | 312.2 | 125.99 | 312 | 128.97 | 311.51 | 132.77 | 311.03 | 132.89 | 311.02 |
| 132.95 | 311.01 | 133.04 | 311 | 136 | 310.72 | 137.75 | 310.57 | 144.85 | 310 |
| 146.18 | 309.89 | 151.93 | 309.59 | 155.94 | 309.35 | 159.51 | 309.14 | 161.06 | 309 |
| 164.58 | 308.54 | 165.03 | 308.5 | 165.61 | 308.48 | 165.85 | 308.47 | 166.16 | 308.48 |
| 168.62 | 308.32 | 171.3 | 308.44 | 172.12 | 308.47 | 172.85 | 308.47 | 173.81 | 308.45 |
| 187.2 | 308 | 202.23 | 308 | 205.14 | 307.81 | 206.4 | 307.77 | 209.93 | 307.46 |
| 211.3 | 307.38 | 214.7 | 307 | 215.11 | 307 | 216.56 | 306.99 | 218.39 | 307 |
| 218.92 | 307.03 | 233.35 | 308 | 250.29 | 308 | 250.49 | 307.98 | 250.85 | 307.93 |
| 252.93 | 307.7 | 254.16 | 307.59 | 255.62 | 307.42 | 259.62 | 307 | 261.84 | 307 |
| 286.22 | 307.88 | 289.12 | 308 | 290.4 | 308.05 | 292.72 | 308.12 | 301.39 | 308.31 |
| 307.78 | 308.41 | 309.45 | 308.43 | 310.67 | 308.44 | 310.99 | 308.43 | 312.03 | 308.38 |
| 312.47 | 308.37 | 317.41 | 308.35 | 318 | 308.34 | 318.36 | 308.33 | 320 | 308.16 |
| 320.74 | 308.11 | 321.83 | 308.07 | 323.57 | 308.02 | 324.44 | 308 | 334.14 | 307.67 |
| 335.02 | 307.63 | 341.56 | 307 | 386.98 | 307 | 401.51 | 307.16 | 404.6 | 307.19 |
| 406.56 | 307.2 | 407.52 | 307.2 | 408.3 | 307.19 | 409.9 | 307.18 | 413.04 | 307.17 |
| 416.66 | 307.28 | 420.35 | 307.29 | 445.37 | 308.28 | 452.68 | 308.25 | 460.86 | 308.19 |
| 461.66 | 308.18 | 466.81 | 308.1 | 468.36 | 308.07 | 468.78 | 308.05 | 468.99 | 308.03 |
| 469.9 | 308.01 | 470.46 | 308 | 472.49 | 307.96 | 476.16 | 307.93 | 482.25 | 307.81 |
| 489.75 | 307.3 | 490.41 | 307.27 | 492.32 | 307.16 | 494.11 | 307 | 496.98 | 306.88 |
| 497.56 | 306.87 | 498.22 | 306.87 | 499.72 | 306.89 | 500.69 | 306.93 | 501.68 | 306.96 |
| 503.92 | 307 | 503.99 | 307 | 509.62 | 307.07 | 509.87 | 307.07 | 523 | 307.23 |
| 523.27 | 307.23 | 523.37 | 307.22 | 523.68 | 307.22 | 523.98 | 307.21 | 524.43 | 307.23 |
| 524.51 | 307.24 | 533.08 | 307.36 | 534.93 | 307.37 | 538.09 | 307.42 | 543.05 | 307.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 543.77 | 307.46 | 548.24 | 307.48 | 549.04 | 307.49 | 560.53 | 307.48 | 561.04 | 307.46 |
| 561.36 | 307.45 | 563.5699 | 307.45 | 566.26 | 307.46 | 568.1 | 307.44 | 568.77 | 307.43 |
| 569.29 | 307.42 | 570.23 | 307.42 | 577 | 307.44 | 578.22 | 307.44 | 579.59 | 307.42 |
| 590.0699 | 307.28 | 590.3199 | 307.28 | 590.48 | 307.27 | 590.7 | 307.25 | 590.99 | 307.25 |
| 593.64 | 307.24 | 594.95 | 307.23 | 602.16 | 307.13 | 602.88 | 307.13 | 616.9399 | 306.9 |
| 617.31 | 306.9 | 618.77 | 306.87 | 624.95 | 306.77 | 627.2 | 306.73 | 628.24 | 306.71 |
| 642.62 | 306.38 | 643.02 | 306.36 | 643.39 | 306.34 | 643.76 | 306.31 | 643.89 | 306.31 |
| 644.02 | 306.3 | 644.13 | 306.31 | 644.22 | 306.31 | 644.42 | 306.33 | 646.18 | 306.45 |
| 647.38 | 306.55 | 647.79 | 306.57 | 648.51 | 306.59 | 649.72 | 306.62 | 651.58 | 306.65 |
| 656.1899 | 306.69 | 656.3 | 306.69 | 658.08 | 306.68 | 658.33 | 306.69 | 659.96 | 306.77 |
| 661.3199 | 306.83 | 662.02 | 306.83 | 663.47 | 306.82 | 664.9399 | 306.82 | 666.78 | 306.79 |
| 667.7 | 306.78 | 669.42 | 306.74 | 671.72 | 306.67 | 672.85 | 306.65 | 682.46 | 306.52 |
| 688.59 | 306.36 | 690.86 | 306.29 | 692.91 | 306.21 | 697.88 | 306 | 697.95 | 306 |
| 698.28 | 305.99 | 698.4 | 306 | 698.75 | 306.02 | 700.68 | 306.19 | 701.23 | 306.23 |
| 703.03 | 306.28 | 703.42 | 306.28 | 704.28 | 306.2 | 705.75 | 306.01 | 705.86 | 306 |
| 706.33 | 306 | 706.39 | 306.01 | 706.61 | 306.06 | 706.78 | 306.15 | 707.7 | 306.31 |
| 708.35 | 306.4 | 712.65 | 306.47 | 715.45 | 306.51 | 716.54 | 306.53 | 720.64 | 306.53 |
| 723.1 | 306.51 | 724.4 | 306.49 | 725.7 | 306.46 | 726.9399 | 306.44 | 745.49 | 306 |
| 748.78 | 305.47 | 749.77 | 305.28 | 750.4 | 305.14 | 750.59 | 305.12 | 750.73 | 305.11 |
| 750.91 | 305.11 | 751.11 | 305.12 | 751.34 | 305.14 | 753.8 | 305.45 | 757.58 | 306 |
| 758.56 | 306.11 | 758.89 | 306.12 | 759.3 | 306.13 | 760.73 | 306.13 | 763.5699 | 306.15 |
| 765.43 | 306.17 | 766.77 | 306.19 | 768.17 | 306.22 | 768.6 | 306.22 | 769.01 | 306.23 |
| 769.36 | 306.22 | 772.21 | 306.17 | 786.86 | 306.06 | 787.64 | 306.04 | 788.43 | 306.01 |
| 788.71 | 306 | 790.41 | 305.6 | 791.12 | 305.38 | 792.05 | 305.19 | 792.49 | 305.14 |
| 792.66 | 305.17 | 792.89 | 305.2 | 793.16 | 305.27 | 793.4 | 305.29 | 793.66 | 305.31 |
| 794.68 | 305.34 | 795.57 | 305.37 | 806.78 | 306 | 808.43 | 306.04 | 810.9 | 306.07 |
| 812.97 | 306.08 | 813.75 | 306.09 | 817.42 | 306.09 | 829.31 | 306.05 | 829.58 | 306.05 |
| 832.74 | 306.06 | 840.35 | 306.1 | 840.82 | 306.09 | 841.23 | 306.07 | 842.44 | 306 |
| 843.15 | 305.85 | 844.02 | 305.73 | 844.45 | 305.7 | 844.87 | 305.72 | 846.04 | 305.87 |
| 846.67 | 305.93 | 847.77 | 305.99 | 848.11 | 306 | 848.95 | 306.03 | 850.09 | 306.05 |
| 852.27 | 306.06 | 853.47 | 306.07 | 854.51 | 306.06 | 855.38 | 306.04 | 856.83 | 306 |
| 858.24 | 305.9 | 858.56 | 305.82 | 858.6 | 305.77 | 858.81 | 305.77 | 859.15 | 305.78 |
| 859.52 | 305.81 | 860.3 | 305.9 | 860.8 | 306 | 876.83 | 306.66 | 885.48 | 307 |
| 887.69 | 307.14 | 889.18 | 307.22 | 903.3 | 308 | 912.65 | 308.37 | 916.38 | 308.51 |
| 918.14 | 308.58 | 919.04 | 308.6 | 919.85 | 308.62 | 922.63 | 308.62 | 923.69 | 308.65 |
| 924.25 | 308.68 | 926.31 | 308.78 | 926.91 | 308.8 | 929.59 | 308.73 | 932.84 | 308.61 |
| 933.55 | 308.62 | 934.07 | 308.64 | 935.86 | 308.7 | 939.92 | 308.9 | 942.05 | 309 |
| 945.43 | 309.46 | 946.05 | 309.49 | 946.93 | 309.5 | 949.56 | 309.5 | 950.54 | 309.48 |
| 952.76 | 309.38 | 955.56 | 309.32 | 956.76 | 309.33 | 958.1 | 309.35 | 960.07 | 309.41 |
| 965.16 | 310 | 971.2 | 310.23 | 973.99 | 310.32 | 974.71 | 310.34 | 980.66 | 310.4 |
| 981.04 | 310.42 | 982.85 | 310.45 | 984.62 | 310.46 | 995.02 | 311 | 997 | 311.06 |
| 998.17 | 311.09 | 998.54 | 311.09 | 1001.24 | 311 | 1001.83 | 310.95 | 1003.07 | 310.97 |
| 1003.52 | 311 | 1006.96 | 311.18 | 1013.7 | 311.57 | 1014.56 | 311.63 | 1014.9 | 311.69 |
| 1015.12 | 311.7 | 1015.33 | 311.71 | 1015.88 | 311.72 | 1016.81 | 311.72 | 1017.69 | 311.73 |
| 1022.34 | 311.86 | 1023.32 | 311.86 | 1027.36 | 312 | 1039.61 | 312.3 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 155.94 | .04 | 889.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 155.94 | 889.18 | 50.7 | 44.53 | 34.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3147.19*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.63 | 4.38 | 327.6 | 6.96 | 327.59 | 15.11 | 327.57 | 23.75 | 327.53 |
| 27.92 | 327.52 | 29.05 | 327.52 | 30.14 | 327.51 | 35.12 | 327.03 | 36.99 | 326.79 |
| 38.42 | 326.63 | 41.31 | 325.92 | 41.8 | 325.81 | 42.22 | 325.68 | 43.93 | 325.21 |
| 44.31 | 325.16 | 45.1 | 325.32 | 45.26 | 325.31 | 46.23 | 325.68 | 46.43 | 325.79 |
| 47.81 | 326.1 | 48.22 | 326.11 | 49.23 | 326.27 | 49.69 | 326.31 | 51.17 | 326.12 |
| 53.01 | 325.93 | 54.13 | 325.85 | 54.73 | 325.79 | 57.21 | 325.44 | 58.16 | 325.25 |
| 59.42 | 324.93 | 60.73 | 324.58 | 61.22 | 324.49 | 61.58 | 324.49 | 61.92 | 324.55 |
| 63.19 | 324.93 | 63.95 | 325.13 | 64.17 | 325.16 | 65.08 | 325.22 | 66.15 | 325.24 |
| 67.47 | 325.37 | 68.48 | 325.51 | 70.03 | 325.78 | 71.39 | 325.96 | 72.44 | 326.13 |
| 72.82 | 326.13 | 74.95 | 325.77 | 76.45 | 325.44 | 79.98 | 324.52 | 81.97 | 324.06 |
| 82.33 | 323.88 | 82.8 | 323.75 | 84.47 | 323.2 | 84.84 | 323.01 | 86.34 | 322.33 |
| 88.16 | 321.89 | 89.64 | 321.52 | 89.75 | 321.51 | 90.21 | 321.63 | 90.91 | 321.75 |
| 92.66 | 322.22 | 93.43 | 322.2 | 93.72 | 322.22 | 94.42 | 322.12 | 96.15 | 321.46 |
| 98.61 | 320.64 | 98.69 | 320.6 | 101.21 | 319.74 | 101.89 | 319.48 | 103.52 | 318.88 |
| 104.58 | 318.37 | 105.65 | 317.8 | 106.26 | 317.61 | 107.76 | 317.16 | 110.41 | 316.53 |
| 111.35 | 316.29 | 112.42 | 316.06 | 115.3 | 315.27 | 115.74 | 315.16 | 116.35 | 314.84 |
| 116.93 | 314.56 | 117.69 | 314.14 | 118.07 | 313.96 | 119.08 | 313.59 | 119.83 | 313.37 |
| 120.9 | 313.04 | 121.82 | 312.8 | 123.71 | 312.39 | 124.78 | 312.14 | 126.28 | 311.88 |
| 126.9 | 311.76 | 128.37 | 311.5 | 129.04 | 311.39 | 131.09 | 311.09 | 133.23 | 310.77 |
| 135.49 | 310.45 | 139.6 | 309.89 | 141.34 | 309.63 | 143.79 | 309.36 | 146.9 | 309 |
| 149.96 | 308.67 | 150.77 | 308.59 | 153.02 | 308.33 | 154.41 | 308.26 | 155.06 | 308.21 |
| 155.95 | 308.17 | 156.11 | 308.14 | 157.6 | 307.97 | 159.57 | 307.76 | 160.03 | 307.73 |
| 160.94 | 307.7 | 161.18 | 307.71 | 163.68 | 307.58 | 167.24 | 307.72 | 168.3 | 307.72 |
| 168.96 | 307.71 | 171.09 | 307.66 | 179.85 | 307.43 | 182.56 | 307.36 | 197.89 | 307.36 |
| 199.25 | 307.29 | 200.86 | 307.2 | 202.14 | 307.17 | 205.73 | 306.91 | 207.13 | 306.85 |
| 210.59 | 306.53 | 212.48 | 306.52 | 214.34 | 306.53 | 215.28 | 306.58 | 217.47 | 306.71 |
| 219.18 | 306.8 | 220.39 | 306.87 | 229.57 | 307.41 | 236.35 | 307.43 | 246.82 | 307.43 |
| 247.39 | 307.37 | 249.5 | 307.17 | 250.76 | 307.08 | 252.24 | 306.93 | 256.31 | 306.57 |
| 258.57 | 306.57 | 260.31 | 306.63 | 272.78 | 307 | 272.89 | 307.01 | 283.39 | 307.33 |
| 286.34 | 307.43 | 287.5 | 307.46 | 288.75 | 307.48 | 290.01 | 307.51 | 293.91 | 307.56 |
| 296.43 | 307.61 | 298.83 | 307.65 | 305.34 | 307.74 | 308.28 | 307.77 | 309.57 | 307.72 |
| 310.11 | 307.71 | 311.21 | 307.71 | 313.15 | 307.7 | 315.14 | 307.7 | 316.11 | 307.68 |
| 317.78 | 307.54 | 318.53 | 307.49 | 321.41 | 307.41 | 322.3 | 307.4 | 324.72 | 307.32 |
| 325.91 | 307.29 | 330.48 | 307.16 | 333.07 | 307.07 | 339.72 | 306.5 | 358.32 | 306.43 |
| 360.6 | 306.4 | 361.54 | 306.38 | 362.54 | 306.38 | 364.2 | 306.36 | 366.41 | 306.36 |
| 368.23 | 306.35 | 374.51 | 306.35 | 376.67 | 306.36 | 385.96 | 306.41 | 388.7 | 306.45 |
| 389.82 | 306.47 | 393.69 | 306.53 | 394.59 | 306.55 | 400.52 | 306.64 | 401.02 | 306.65 |
| 401.98 | 306.65 | 403.81 | 306.67 | 405.89 | 306.67 | 409.29 | 306.63 | 412.49 | 306.61 |
| 415.13 | 306.64 | 416.17 | 306.68 | 419.93 | 306.72 | 420.43 | 306.74 | 427.22 | 306.96 |
| 428.27 | 306.99 | 429.49 | 307.01 | 431.91 | 307.08 | 436.79 | 307.25 | 439.4 | 307.35 |
| 440.45 | 307.38 | 445.4 | 307.55 | 449.5 | 307.53 | 451.03 | 307.51 | 452.84 | 307.51 |
| 461.16 | 307.46 | 463.93 | 307.42 | 467.18 | 307.38 | 468.8 | 307.35 | 469.44 | 307.31 |
| 470.94 | 307.29 | 471.09 | 307.28 | 473.62 | 307.24 | 477.02 | 307.21 | 480.74 | 307.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 482.62 | 307.11 | 482.94 | 307.11 | 485.46 | 306.95 | 485.53 | 306.95 | 490.57 | 306.65 |
| 491.24 | 306.63 | 493.19 | 306.53 | 494.88 | 306.4 | 495.01 | 306.4 | 497.93 | 306.28 |
| 499.19 | 306.26 | 500.72 | 306.27 | 502.53 | 306.32 | 504.16 | 306.32 | 505.07 | 306.33 |
| 510.8 | 306.35 | 511.61 | 306.35 | 514.33 | 306.37 | 523.05 | 306.43 | 524.69 | 306.44 |
| 525.42 | 306.42 | 525.96 | 306.44 | 532.65 | 306.5 | 534.17 | 306.51 | 534.68 | 306.52 |
| 536.56 | 306.52 | 539.78 | 306.56 | 542.04 | 306.57 | 543.12 | 306.58 | 544.83 | 306.58 |
| 545.56 | 306.59 | 549.18 | 306.6 | 549.5 | 306.59 | 550.93 | 306.61 | 562.62 | 306.61 |
| 563.47 | 306.59 | 567.13 | 306.59 | 568.45 | 306.6 | 570.33 | 306.59 | 571.54 | 306.57 |
| 573 | 306.57 | 579.39 | 306.61 | 580.63 | 306.62 | 584.77 | 306.59 | 585.71 | 306.58 |
| 592.69 | 306.53 | 593.33 | 306.51 | 596.21 | 306.52 | 597.66 | 306.52 | 599.86 | 306.51 |
| 602.32 | 306.49 | 604.62 | 306.45 | 605.73 | 306.44 | 607.65 | 306.39 | 608.96 | 306.37 |
| 609.03 | 306.36 | 610.94 | 306.34 | 612.22 | 306.32 | 620.04 | 306.24 | 620.42 | 306.24 |
| 621.91 | 306.21 | 624.79 | 306.18 | 626.6 | 306.15 | 628.2 | 306.13 | 630.49 | 306.09 |
| 631.55 | 306.08 | 638.77 | 305.93 | 639.06 | 305.92 | 646.18 | 305.78 | 646.59 | 305.77 |
| 647.34 | 305.72 | 648.02 | 305.74 | 649.81 | 305.84 | 651.03 | 305.93 | 651.45 | 305.95 |
| 652.18 | 305.96 | 653.41 | 305.99 | 656.05 | 306.02 | 657.41 | 306.03 | 660.11 | 306.03 |
| 661.92 | 306.01 | 665.22 | 306.13 | 665.93 | 306.12 | 668.9 | 306.1 | 671.71 | 306.06 |
| 675.81 | 305.94 | 676.96 | 305.92 | 683.71 | 305.82 | 686.91 | 305.77 | 688.9 | 305.71 |
| 692.98 | 305.61 | 695.05 | 305.55 | 697.24 | 305.47 | 697.38 | 305.47 | 701.75 | 305.3 |
| 702.84 | 305.27 | 703.32 | 305.29 | 705.29 | 305.44 | 705.84 | 305.47 | 707.68 | 305.51 |
| 708.07 | 305.51 | 709.47 | 305.39 | 710.56 | 305.27 | 711.1 | 305.28 | 711.49 | 305.41 |
| 712.42 | 305.54 | 713.09 | 305.62 | 713.84 | 305.64 | 717.47 | 305.71 | 720.32 | 305.75 |
| 721.43 | 305.78 | 724.91 | 305.79 | 725.6 | 305.8 | 727.42 | 305.8 | 729.43 | 305.77 |
| 730.75 | 305.74 | 732.02 | 305.72 | 739.51 | 305.56 | 741.19 | 305.52 | 750.9 | 305.28 |
| 753.31 | 304.93 | 754.25 | 304.8 | 755.26 | 304.62 | 755.9 | 304.49 | 756.39 | 304.46 |
| 756.78 | 304.49 | 759.06 | 304.75 | 760.32 | 304.93 | 762.55 | 305.23 | 763.45 | 305.32 |
| 764.49 | 305.34 | 764.63 | 305.36 | 766.2 | 305.39 | 768.08 | 305.41 | 769.8 | 305.42 |
| 773.1 | 305.47 | 773.43 | 305.46 | 776.06 | 305.42 | 781.64 | 305.38 | 786.11 | 305.35 |
| 787.34 | 305.33 | 789.59 | 305.31 | 791.3 | 305.25 | 792.97 | 304.88 | 793.52 | 304.71 |
| 794.38 | 304.55 | 794.79 | 304.51 | 795.63 | 304.64 | 796.74 | 304.68 | 797.63 | 304.7 |
| 799.7 | 304.81 | 804.85 | 305.09 | 807.89 | 305.25 | 807.99 | 305.26 | 809.51 | 305.29 |
| 812.58 | 305.33 | 815.36 | 305.36 | 816.75 | 305.36 | 817.81 | 305.37 | 829.04 | 305.37 |
| 831.96 | 305.39 | 838.47 | 305.44 | 838.99 | 305.44 | 839.8 | 305.42 | 840.92 | 305.36 |
| 841.57 | 305.23 | 842.38 | 305.13 | 842.78 | 305.11 | 843.16 | 305.13 | 844.24 | 305.26 |
| 844.83 | 305.31 | 845.84 | 305.37 | 846.93 | 305.4 | 847.98 | 305.42 | 851.11 | 305.45 |
| 852.87 | 305.43 | 854.21 | 305.4 | 855.51 | 305.32 | 855.81 | 305.25 | 855.84 | 305.21 |
| 856.35 | 305.22 | 857.41 | 305.33 | 857.88 | 305.42 | 872.68 | 306.04 | 879.85 | 306.32 |
| 880.65 | 306.36 | 882.71 | 306.48 | 884.09 | 306.54 | 885.07 | 306.58 | 888.53 | 306.77 |
| 890.15 | 306.88 | 891.96 | 306.96 | 893.64 | 307.05 | 898.99 | 307.35 | 903.19 | 307.54 |
| 904.07 | 307.59 | 906.45 | 307.71 | 907.71 | 307.76 | 908.72 | 307.81 | 909.78 | 307.85 |
| 912.79 | 307.92 | 913.9 | 307.94 | 914.26 | 307.96 | 916.95 | 308.02 | 919.06 | 308.1 |
| 920.51 | 308.15 | 920.54 | 308.16 | 921.76 | 308.23 | 923.27 | 308.34 | 923.91 | 308.37 |
| 925.42 | 308.38 | 926.1 | 308.36 | 926.91 | 308.35 | 930.17 | 308.26 | 931.46 | 308.28 |
| 932.31 | 308.31 | 933.35 | 308.33 | 934.05 | 308.36 | 937.64 | 308.48 | 937.99 | 308.5 |
| 939.57 | 308.56 | 939.89 | 308.58 | 942.39 | 308.87 | 943.45 | 309 | 944.11 | 309.03 |
| 945.54 | 309.05 | 946.28 | 309.05 | 947.81 | 309.07 | 948.85 | 309.06 | 951.19 | 308.98 |
| 954.14 | 308.94 | 955.41 | 308.96 | 956.82 | 308.97 | 958.9 | 309.03 | 959.32 | 309.06 |
| 960.5 | 309.18 | 963.68 | 309.47 | 964.28 | 309.53 | 970.65 | 309.74 | 973.73 | 309.83 |
| 976.64 | 309.87 | 979.78 | 309.9 | 980.63 | 309.9 | 981.04 | 309.92 | 981.64 | 309.92 |
| 982.95 | 309.94 | 984.32 | 309.94 | 985 | 309.9 | 985.32 | 309.93 | 986.78 | 310.01 |
| 989.61 | 310.13 | 995.79 | 310.42 | 997.88 | 310.48 | 999.51 | 310.51 | 1002.36 | 310.44 |
| 1002.98 | 310.4 | 1004.29 | 310.42 | 1008.39 | 310.61 | 1010.25 | 310.69 | 1012.7 | 310.79 |
| 1014.62 | 310.88 | 1016.41 | 310.99 | 1016.77 | 311.05 | 1017.49 | 311.08 | 1018.03 | 311.08 |
| 1019.72 | 311.1 | 1020.33 | 311.12 | 1024.62 | 311.22 | 1025.93 | 311.23 | 1026.71 | 311.26 |
| 1027.34 | 311.25 | 1028.14 | 311.27 | 1028.67 | 311.3 | 1030.33 | 311.37 | 1030.59 | 311.37 |
| 1034.78 | 311.46 | 1035.44 | 311.47 | 1038.72 | 311.54 | 1039.88 | 311.55 | 1042.85 | 311.6 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 150.77 | .04 | 884.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 150.77 | 884.09 | 50.7 | 44.53 | 34.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3102.66*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.22 | .29 | 327.22 | 6.72 | 327.17 | 10.97 | 327.16 | 14.59 | 327.14 |
| 22.94 | 327.06 | 26.96 | 327.04 | 28.06 | 327.04 | 29.1 | 327.03 | 33.91 | 326.61 |
| 35.73 | 326.4 | 37.11 | 326.25 | 39.19 | 325.81 | 39.9 | 325.65 | 40.52 | 325.53 |
| 40.78 | 325.46 | 42.42 | 325.09 | 42.79 | 325.05 | 43.56 | 325.18 | 43.71 | 325.18 |
| 44.42 | 325.41 | 44.84 | 325.57 | 46.17 | 325.84 | 46.57 | 325.84 | 47.84 | 326.02 |
| 47.99 | 326.02 | 49.41 | 325.85 | 51.2 | 325.7 | 52.27 | 325.63 | 52.85 | 325.58 |
| 55.25 | 325.29 | 56.16 | 325.13 | 57.39 | 324.86 | 58.65 | 324.56 | 59.12 | 324.49 |
| 59.47 | 324.49 | 59.8 | 324.54 | 61.02 | 324.85 | 61.76 | 325.02 | 62.85 | 325.09 |
| 63.89 | 325.11 | 65.16 | 325.22 | 66.14 | 325.34 | 67.63 | 325.56 | 68.95 | 325.7 |
| 70.12 | 325.86 | 70.32 | 325.84 | 72.38 | 325.55 | 73.83 | 325.27 | 77.24 | 324.5 |
| 79.16 | 324.11 | 79.51 | 323.96 | 79.97 | 323.86 | 81.57 | 323.39 | 82.12 | 323.16 |
| 83.38 | 322.67 | 85.14 | 322.29 | 86.68 | 321.97 | 87.12 | 322.07 | 87.79 | 322.18 |
| 89.48 | 322.57 | 90.23 | 322.54 | 90.51 | 322.56 | 91.18 | 322.48 | 92.85 | 321.93 |
| 95.23 | 321.23 | 95.31 | 321.2 | 97.37 | 320.59 | 97.63 | 320.52 | 98.4 | 320.26 |
| 99.98 | 319.76 | 100.99 | 319.33 | 102.03 | 318.86 | 102.62 | 318.69 | 104.07 | 318.31 |
| 107.54 | 317.59 | 108.57 | 317.39 | 110.78 | 316.86 | 111.78 | 316.63 | 112.31 | 316.22 |
| 112.92 | 315.8 | 113.66 | 315.22 | 114.03 | 314.97 | 115 | 314.49 | 115.73 | 314.25 |
| 116.81 | 313.85 | 117.64 | 313.6 | 117.75 | 313.58 | 118.74 | 313.29 | 119.47 | 313.1 |
| 120.43 | 312.81 | 121.95 | 312.45 | 122.55 | 312.3 | 124.09 | 311.94 | 126.6 | 311.42 |
| 126.99 | 311.33 | 128.66 | 310.98 | 130.66 | 310.57 | 130.85 | 310.52 | 132.75 | 310.15 |
| 134.81 | 309.74 | 135.97 | 309.48 | 136.72 | 309.34 | 138.86 | 308.97 | 139.79 | 308.78 |
| 140.77 | 308.61 | 141.86 | 308.4 | 144.82 | 307.93 | 145.61 | 307.82 | 147.36 | 307.54 |
| 147.89 | 307.44 | 149.31 | 307.39 | 149.97 | 307.34 | 150.87 | 307.34 | 151.04 | 307.3 |
| 152.56 | 307.15 | 153.89 | 307.05 | 154.56 | 306.98 | 155.02 | 306.95 | 156.39 | 306.94 |
| 158.74 | 306.84 | 159.05 | 306.86 | 161.52 | 306.95 | 163.13 | 306.98 | 164.12 | 306.97 |
| 166.28 | 306.93 | 177.96 | 306.72 | 181.37 | 306.72 | 188.9 | 306.73 | 193.56 | 306.73 |
| 194.94 | 306.67 | 196.57 | 306.59 | 197.88 | 306.57 | 199.27 | 306.49 | 201.54 | 306.37 |
| 202.95 | 306.32 | 205.8 | 306.12 | 206.48 | 306.06 | 208.4 | 306.06 | 210.53 | 306.07 |
| 211.26 | 306.11 | 213.48 | 306.21 | 215.22 | 306.3 | 216.45 | 306.34 | 225.8 | 306.82 |
| 228.99 | 306.83 | 232.69 | 306.85 | 243.34 | 306.85 | 243.92 | 306.8 | 246.08 | 306.64 |
| 247.8 | 306.53 | 248.86 | 306.44 | 253.01 | 306.14 | 254.2 | 306.14 | 255.31 | 306.15 |
| 256.22 | 306.17 | 257.08 | 306.2 | 269.77 | 306.51 | 269.88 | 306.51 | 280.56 | 306.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 283.57 | 306.86 | 286.01 | 306.88 | 287.3 | 306.9 | 291.27 | 306.92 | 296.28 | 307 |
| 302.9 | 307.08 | 305.89 | 307.1 | 307.75 | 307.05 | 312.87 | 307.05 | 313.86 | 307.03 |
| 315.55 | 306.91 | 317.67 | 306.84 | 320.15 | 306.79 | 325.93 | 306.65 | 327.81 | 306.61 |
| 330.2 | 306.54 | 331.11 | 306.5 | 337.89 | 306 | 356.81 | 305.86 | 356.88 | 305.85 |
| 359.13 | 305.8 | 359.53 | 305.78 | 361.1 | 305.75 | 361.61 | 305.75 | 362.27 | 305.73 |
| 365.04 | 305.71 | 366.9 | 305.71 | 367.99 | 305.7 | 371.39 | 305.69 | 373.29 | 305.69 |
| 375.49 | 305.72 | 384.94 | 305.83 | 386.92 | 305.86 | 388.87 | 305.9 | 393.72 | 306.01 |
| 395.78 | 306.05 | 399.76 | 306.12 | 401.24 | 306.14 | 403.19 | 306.15 | 407.02 | 306.11 |
| 408.68 | 306.08 | 411.93 | 306.04 | 412.38 | 306.05 | 413.1 | 306.03 | 414.53 | 306.03 |
| 415.68 | 306.08 | 418.7 | 306.13 | 419.5 | 306.14 | 422.24 | 306.23 | 426.92 | 306.35 |
| 427.99 | 306.36 | 429.23 | 306.36 | 431.7 | 306.41 | 433.47 | 306.45 | 435.18 | 306.5 |
| 436.66 | 306.55 | 438.6 | 306.63 | 440.39 | 306.68 | 445.42 | 306.81 | 449.6 | 306.79 |
| 451.16 | 306.77 | 452.99 | 306.76 | 461.47 | 306.72 | 464.28 | 306.69 | 469.24 | 306.63 |
| 469.89 | 306.6 | 473.51 | 306.53 | 474.14 | 306.53 | 477.32 | 306.5 | 477.61 | 306.49 |
| 483.62 | 306.41 | 485.09 | 306.33 | 486.27 | 306.25 | 491.39 | 306.01 | 494.06 | 305.9 |
| 495.78 | 305.79 | 495.91 | 305.79 | 499.48 | 305.66 | 501.72 | 305.65 | 503.57 | 305.68 |
| 503.86 | 305.67 | 506.14 | 305.66 | 509.07 | 305.64 | 511.98 | 305.63 | 515.57 | 305.63 |
| 524.44 | 305.64 | 526.12 | 305.65 | 526.85 | 305.63 | 527.4 | 305.64 | 534.21 | 305.67 |
| 535.76 | 305.67 | 536.28 | 305.68 | 538.19 | 305.68 | 541.47 | 305.71 | 544.87 | 305.71 |
| 547.35 | 305.72 | 551.98 | 305.71 | 553.97 | 305.73 | 555.13 | 305.73 | 560.08 | 305.74 |
| 564.71 | 305.74 | 565.57 | 305.72 | 567.86 | 305.73 | 569.31 | 305.73 | 570.65 | 305.74 |
| 572.55 | 305.73 | 573.25 | 305.72 | 574.79 | 305.72 | 575.28 | 305.73 | 581.77 | 305.79 |
| 583.04 | 305.8 | 587.25 | 305.8 | 588.21 | 305.79 | 593.95 | 305.78 | 595.31 | 305.78 |
| 595.57 | 305.79 | 596.27 | 305.77 | 598.89 | 305.79 | 599.01 | 305.8 | 600.37 | 305.81 |
| 602.61 | 305.81 | 603.81 | 305.82 | 605.12 | 305.82 | 605.74 | 305.81 | 607.86 | 305.76 |
| 608.58 | 305.75 | 611.08 | 305.66 | 613.05 | 305.64 | 613.89 | 305.62 | 615.18 | 305.62 |
| 617.22 | 305.61 | 623.15 | 305.57 | 624.09 | 305.57 | 631.82 | 305.49 | 633.77 | 305.46 |
| 642.2 | 305.31 | 642.5 | 305.3 | 649.75 | 305.19 | 651.2 | 305.13 | 653.44 | 305.24 |
| 654.68 | 305.31 | 655.85 | 305.34 | 657.1 | 305.36 | 659.03 | 305.38 | 662.53 | 305.38 |
| 666.02 | 305.35 | 669.12 | 305.42 | 669.84 | 305.42 | 671.35 | 305.4 | 672.87 | 305.39 |
| 677.51 | 305.29 | 679.89 | 305.22 | 681.06 | 305.2 | 687.94 | 305.07 | 691.19 | 305.02 |
| 693.22 | 304.96 | 697.37 | 304.86 | 699.48 | 304.8 | 701.7 | 304.73 | 701.84 | 304.72 |
| 706.3 | 304.57 | 707.4 | 304.54 | 710.46 | 304.71 | 712.32 | 304.75 | 712.73 | 304.75 |
| 713.62 | 304.69 | 715.26 | 304.55 | 715.74 | 304.55 | 716.21 | 304.66 | 717.15 | 304.78 |
| 717.84 | 304.85 | 718.59 | 304.87 | 722.29 | 304.94 | 725.19 | 305 | 726.32 | 305.02 |
| 731.51 | 305.08 | 732.41 | 305.08 | 734.46 | 305.05 | 735.81 | 305.02 | 737.09 | 305.01 |
| 744.72 | 304.86 | 745.24 | 304.84 | 746.43 | 304.82 | 755.06 | 304.59 | 756.31 | 304.55 |
| 759.72 | 304.12 | 760.74 | 303.96 | 761.39 | 303.84 | 761.74 | 303.81 | 762.23 | 303.83 |
| 764.31 | 304.06 | 767.51 | 304.45 | 768.34 | 304.53 | 769.3 | 304.55 | 769.43 | 304.59 |
| 770.87 | 304.65 | 772.59 | 304.66 | 775.3 | 304.69 | 777.2 | 304.72 | 777.49 | 304.71 |
| 779.91 | 304.67 | 790.26 | 304.59 | 792.01 | 304.56 | 793.88 | 304.5 | 795.32 | 304.21 |
| 795.93 | 304.05 | 796.71 | 303.91 | 797.09 | 303.87 | 797.65 | 303.97 | 799.7 | 304.04 |
| 801.59 | 304.13 | 802.76 | 304.18 | 806.31 | 304.36 | 809.1 | 304.51 | 810.59 | 304.55 |
| 813.4 | 304.59 | 814.43 | 304.6 | 815.1 | 304.62 | 817.23 | 304.64 | 818.2 | 304.64 |
| 828.5 | 304.69 | 831.18 | 304.71 | 837.15 | 304.78 | 838.03 | 304.78 | 839.4 | 304.72 |
| 840 | 304.62 | 840.74 | 304.54 | 841.1 | 304.52 | 841.46 | 304.54 | 842.98 | 304.7 |
| 844.91 | 304.78 | 845.88 | 304.8 | 848.74 | 304.83 | 849.62 | 304.83 | 851.59 | 304.8 |
| 852.78 | 304.74 | 853.09 | 304.65 | 853.55 | 304.66 | 854.53 | 304.76 | 854.95 | 304.83 |
| 868.53 | 305.41 | 875.11 | 305.68 | 877.06 | 305.8 | 878.99 | 305.86 | 880.02 | 305.89 |
| 883.67 | 306.09 | 884.79 | 306.18 | 885.38 | 306.21 | 887.28 | 306.29 | 888.24 | 306.34 |
| 889.05 | 306.37 | 894.68 | 306.7 | 899.1 | 306.92 | 900.88 | 307.05 | 902.53 | 307.14 |
| 903.85 | 307.19 | 905.06 | 307.26 | 906.04 | 307.3 | 910.37 | 307.33 | 910.75 | 307.35 |
| 911.31 | 307.35 | 912.16 | 307.37 | 914.42 | 307.47 | 915.8 | 307.59 | 916.96 | 307.63 |
| 917.95 | 307.71 | 918.64 | 307.75 | 920.24 | 307.9 | 920.9 | 307.95 | 921.76 | 307.99 |
| 924.06 | 307.98 | 927.49 | 307.91 | 929.74 | 307.94 | 934.39 | 308.04 | 936.63 | 308.11 |
| 937.72 | 308.15 | 940.36 | 308.42 | 941.48 | 308.53 | 942.16 | 308.57 | 943.67 | 308.6 |
| 946.06 | 308.64 | 947.15 | 308.64 | 949.62 | 308.59 | 952.73 | 308.56 | 955.55 | 308.6 |
| 957.74 | 308.64 | 959.41 | 308.77 | 959.9 | 308.8 | 963.39 | 309.05 | 970.1 | 309.25 |
| 972.55 | 309.31 | 973.2 | 309.33 | 976.4 | 309.37 | 979.71 | 309.4 | 980.61 | 309.4 |
| 981.66 | 309.42 | 983.04 | 309.43 | 984.49 | 309.42 | 984.82 | 309.4 | 984.9 | 309.35 |
| 985.37 | 309.34 | 985.54 | 309.37 | 987.07 | 309.46 | 990.05 | 309.57 | 996.56 | 309.83 |
| 998.76 | 309.89 | 1000.06 | 309.92 | 1000.47 | 309.92 | 1003.47 | 309.87 | 1004.13 | 309.84 |
| 1005.5 | 309.86 | 1006.39 | 309.9 | 1009.82 | 310.03 | 1011.54 | 310.1 | 1011.78 | 310.1 |
| 1014.36 | 310.15 | 1016.38 | 310.23 | 1018.27 | 310.35 | 1018.89 | 310.42 | 1019.73 | 310.45 |
| 1020.77 | 310.45 | 1022.39 | 310.48 | 1024.22 | 310.53 | 1026.91 | 310.59 | 1028 | 310.59 |
| 1029.26 | 310.62 | 1029.77 | 310.59 | 1030.61 | 310.6 | 1032.19 | 310.69 | 1033.19 | 310.73 |
| 1037.6 | 310.81 | 1041.75 | 310.87 | 1042.96 | 310.87 | 1044.36 | 310.89 | 1046.09 | 310.9 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 145.61 | .04 | 878.99 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 145.61 | 878.99 | 50.7 | 44.53 | 34.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3058.13*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.81 | .28 | 326.81 | 6.48 | 326.76 | 10.58 | 326.74 | 14.07 | 326.71 |
| 22.13 | 326.59 | 26.01 | 326.56 | 27.06 | 326.56 | 28.07 | 326.54 | 32.71 | 326.18 |
| 34.46 | 326 | 35.79 | 325.88 | 37.8 | 325.51 | 38.93 | 325.32 | 39.33 | 325.24 |
| 40.62 | 325.02 | 40.92 | 324.96 | 41.28 | 324.93 | 42.01 | 325.04 | 42.16 | 325.04 |
| 43.06 | 325.29 | 43.25 | 325.36 | 44.54 | 325.57 | 45.25 | 325.61 | 46.08 | 325.72 |
| 46.28 | 325.72 | 47.66 | 325.59 | 49.38 | 325.46 | 50.98 | 325.36 | 53.29 | 325.13 |
| 54.17 | 325 | 56.57 | 324.55 | 57.03 | 324.49 | 57.36 | 324.49 | 57.68 | 324.53 |
| 58.86 | 324.78 | 59.57 | 324.91 | 60.62 | 324.97 | 61.62 | 324.98 | 62.85 | 325.06 |
| 63.79 | 325.16 | 65.23 | 325.33 | 66.5 | 325.45 | 67.47 | 325.56 | 67.83 | 325.56 |
| 69.82 | 325.32 | 71.21 | 325.1 | 74.5 | 324.48 | 76.35 | 324.17 | 76.69 | 324.05 |
| 77.13 | 323.96 | 78.68 | 323.59 | 79.21 | 323.4 | 80.43 | 323.01 | 83.5 | 322.45 |
| 83.6 | 322.44 | 84.03 | 322.52 | 84.68 | 322.6 | 86.31 | 322.91 | 87.03 | 322.89 |
| 87.3 | 322.9 | 87.95 | 322.83 | 89.56 | 322.39 | 91.85 | 321.83 | 94.17 | 321.25 |
| 96.43 | 320.64 | 98.04 | 320.06 | 98.41 | 319.91 | 100.37 | 319.47 | 102.84 | 319.04 |
| 103.72 | 318.88 | 104.72 | 318.72 | 107.81 | 318.1 | 108.37 | 317.54 | 108.91 | 317.04 |
| 109.63 | 316.29 | 109.98 | 315.97 | 110.92 | 315.4 | 111.62 | 315.13 | 112.62 | 314.69 |
| 113.57 | 314.37 | 114.53 | 314.03 | 115.23 | 313.82 | 116.23 | 313.43 | 117.63 | 313.03 |
| 118.2 | 312.84 | 120.19 | 312.26 | 122.1 | 311.75 | 124.06 | 311.19 | 126.02 | 310.65 |
| 128.04 | 310.12 | 128.41 | 310.01 | 130.03 | 309.59 | 131.14 | 309.25 | 131.65 | 309.12 |
| 133.94 | 308.58 | 134.83 | 308.32 | 135.78 | 308.09 | 136.83 | 307.81 | 137.86 | 307.58 |
| 139.68 | 307.2 | 140.44 | 307.06 | 142.22 | 306.68 | 142.76 | 306.55 | 144.2 | 306.51 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 144.88 | 306.48 | 145.8 | 306.5 | 145.97 | 306.46 | 147.73 | 306.32 | 148.87 | 306.26 |
| 149.23 | 306.22 | 150.02 | 306.18 | 151.42 | 306.17 | 153.81 | 306.11 | 156.63 | 306.2 |
| 158.26 | 306.23 | 159.27 | 306.23 | 161.47 | 306.21 | 170.54 | 306.11 | 172.09 | 306.1 |
| 173.35 | 306.08 | 176.83 | 306.08 | 184.48 | 306.09 | 189.22 | 306.09 | 190.63 | 306.04 |
| 192.29 | 305.99 | 193.62 | 305.97 | 197.34 | 305.82 | 198.78 | 305.79 | 201.67 | 305.64 |
| 202.36 | 305.59 | 202.8 | 305.6 | 204.32 | 305.59 | 206.25 | 305.6 | 207.23 | 305.64 |
| 210.87 | 305.77 | 212.52 | 305.82 | 222.02 | 306.23 | 225.27 | 306.25 | 229.03 | 306.28 |
| 239.87 | 306.28 | 242.65 | 306.11 | 243.95 | 306.05 | 245.49 | 305.95 | 249.7 | 305.71 |
| 250.91 | 305.71 | 252.04 | 305.72 | 253.84 | 305.77 | 266.75 | 306.01 | 266.87 | 306.01 |
| 277.73 | 306.22 | 280.79 | 306.29 | 281.99 | 306.28 | 288.62 | 306.28 | 291.24 | 306.3 |
| 293.72 | 306.34 | 300.45 | 306.41 | 303.5 | 306.43 | 305.4 | 306.39 | 306.53 | 306.4 |
| 308.54 | 306.39 | 309.86 | 306.39 | 310.6 | 306.4 | 311.6 | 306.38 | 313.33 | 306.29 |
| 314.11 | 306.26 | 317.09 | 306.2 | 318.01 | 306.19 | 320.52 | 306.14 | 321.23 | 306.12 |
| 323.88 | 306.07 | 326.33 | 306.03 | 326.48 | 306.02 | 329.16 | 305.94 | 336.05 | 305.5 |
| 355.3 | 305.29 | 355.78 | 305.26 | 357.94 | 305.19 | 358.64 | 305.15 | 360.86 | 305.1 |
| 362.14 | 305.08 | 365.57 | 305.06 | 366.67 | 305.05 | 370.13 | 305.04 | 372.06 | 305.04 |
| 374.3 | 305.08 | 383.92 | 305.24 | 386.75 | 305.3 | 387.91 | 305.34 | 391.92 | 305.44 |
| 392.46 | 305.46 | 394.95 | 305.52 | 399.51 | 305.61 | 402.4 | 305.63 | 402.48 | 305.62 |
| 404.55 | 305.6 | 406.38 | 305.57 | 411.38 | 305.48 | 411.84 | 305.48 | 412.57 | 305.45 |
| 414.12 | 305.43 | 415.19 | 305.48 | 418.26 | 305.56 | 419.08 | 305.57 | 419.61 | 305.59 |
| 421.86 | 305.65 | 426.63 | 305.74 | 427.71 | 305.74 | 428.98 | 305.72 | 431.49 | 305.73 |
| 435.03 | 305.81 | 438.51 | 305.93 | 440.33 | 305.98 | 445.45 | 306.08 | 449.7 | 306.06 |
| 450.32 | 306.04 | 453.15 | 306.02 | 461.77 | 305.99 | 464.63 | 305.96 | 468 | 305.93 |
| 469.67 | 305.91 | 470.34 | 305.88 | 472.05 | 305.86 | 474.67 | 305.81 | 478.19 | 305.78 |
| 482.04 | 305.73 | 483.98 | 305.71 | 485.8 | 305.64 | 487 | 305.56 | 492.22 | 305.36 |
| 494.92 | 305.28 | 496.68 | 305.18 | 496.81 | 305.19 | 499.11 | 305.1 | 500.45 | 305.06 |
| 502.72 | 305.03 | 504.6 | 305.04 | 504.9 | 305.02 | 510.2 | 304.95 | 510.36 | 304.94 |
| 513.99 | 304.9 | 525.83 | 304.86 | 527.25 | 304.86 | 528.29 | 304.83 | 528.85 | 304.85 |
| 535.78 | 304.84 | 537.88 | 304.84 | 538.72 | 304.83 | 539.83 | 304.83 | 543.16 | 304.85 |
| 549.14 | 304.85 | 552.89 | 304.83 | 554.18 | 304.83 | 555.88 | 304.85 | 557.06 | 304.85 |
| 562.09 | 304.87 | 564.09 | 304.87 | 566.8 | 304.88 | 567.68 | 304.86 | 570.01 | 304.87 |
| 571.48 | 304.87 | 572.84 | 304.88 | 574.78 | 304.88 | 575.49 | 304.87 | 577.06 | 304.87 |
| 577.55 | 304.88 | 584.16 | 304.96 | 585.45 | 304.98 | 586.89 | 304.99 | 590.71 | 305 |
| 598.37 | 305.04 | 598.9 | 305.03 | 601.58 | 305.07 | 605.36 | 305.12 | 606.58 | 305.14 |
| 607.91 | 305.14 | 608.54 | 305.13 | 611.43 | 305.06 | 613.97 | 304.95 | 615.98 | 304.93 |
| 616.83 | 304.91 | 617.59 | 304.92 | 618.15 | 304.91 | 627.21 | 304.91 | 628.18 | 304.9 |
| 629.28 | 304.9 | 631.16 | 304.89 | 634.69 | 304.85 | 635.08 | 304.85 | 637.06 | 304.82 |
| 638.16 | 304.81 | 645.64 | 304.69 | 645.94 | 304.68 | 653.31 | 304.59 | 654.51 | 304.55 |
| 655 | 304.55 | 657.06 | 304.63 | 658.33 | 304.69 | 660.79 | 304.73 | 662.75 | 304.74 |
| 663.52 | 304.75 | 667.61 | 304.72 | 667.73 | 304.71 | 669.87 | 304.68 | 673.02 | 304.72 |
| 676.83 | 304.67 | 679.74 | 304.61 | 683.98 | 304.49 | 685.17 | 304.47 | 692.16 | 304.33 |
| 695.47 | 304.27 | 697.53 | 304.21 | 701.75 | 304.11 | 703.9 | 304.05 | 711.54 | 303.83 |
| 711.97 | 303.82 | 715.08 | 303.95 | 717.38 | 303.98 | 718.82 | 303.9 | 719.95 | 303.82 |
| 720.51 | 303.83 | 720.92 | 303.92 | 722.58 | 304.07 | 727.11 | 304.18 | 730.06 | 304.24 |
| 731.21 | 304.27 | 734.82 | 304.32 | 735.53 | 304.34 | 736.18 | 304.34 | 736.49 | 304.37 |
| 737.32 | 304.37 | 738.49 | 304.34 | 739.49 | 304.33 | 742.17 | 304.29 | 750.46 | 304.14 |
| 751.67 | 304.11 | 760.45 | 303.87 | 761.72 | 303.83 | 764.21 | 303.56 | 765.18 | 303.45 |
| 766.89 | 303.2 | 767.24 | 303.16 | 767.67 | 303.18 | 769.57 | 303.36 | 770.62 | 303.48 |
| 772.48 | 303.68 | 773.24 | 303.75 | 774.11 | 303.76 | 774.22 | 303.82 | 775.53 | 303.9 |
| 777.1 | 303.92 | 780.64 | 303.95 | 781.56 | 303.95 | 783.76 | 303.92 | 784.92 | 303.91 |
| 788.41 | 303.89 | 792.14 | 303.86 | 794.76 | 303.8 | 795.05 | 303.8 | 796.47 | 303.75 |
| 797.78 | 303.51 | 798.33 | 303.38 | 799.05 | 303.27 | 799.38 | 303.24 | 799.9 | 303.31 |
| 800.29 | 303.34 | 801.76 | 303.37 | 803.48 | 303.44 | 810.32 | 303.76 | 811.67 | 303.8 |
| 814.23 | 303.84 | 816.55 | 303.9 | 826.03 | 303.99 | 827.76 | 304 | 827.97 | 304.01 |
| 830.4 | 304.04 | 835.83 | 304.12 | 836.27 | 304.13 | 836.95 | 304.12 | 837.88 | 304.09 |
| 838.42 | 304 | 839.1 | 303.94 | 839.75 | 303.94 | 840.65 | 304.04 | 841.14 | 304.08 |
| 842.89 | 304.15 | 845.45 | 304.2 | 846.38 | 304.21 | 847.85 | 304.21 | 848.97 | 304.2 |
| 850.05 | 304.16 | 850.33 | 304.09 | 850.76 | 304.1 | 851.64 | 304.18 | 852.03 | 304.25 |
| 864.38 | 304.79 | 870.37 | 305.04 | 871.44 | 305.11 | 872.6 | 305.17 | 873.15 | 305.16 |
| 873.9 | 305.18 | 874.98 | 305.19 | 879.17 | 305.44 | 879.98 | 305.51 | 880.6 | 305.55 |
| 882.6 | 305.61 | 883.61 | 305.67 | 884.46 | 305.7 | 890.36 | 306.06 | 894.76 | 306.29 |
| 895.01 | 306.29 | 895.98 | 306.39 | 896.88 | 306.46 | 899.15 | 306.6 | 900 | 306.62 |
| 901.12 | 306.7 | 902.29 | 306.76 | 905.62 | 306.73 | 907.83 | 306.73 | 908.72 | 306.76 |
| 910.21 | 306.83 | 911.1 | 306.9 | 912.54 | 307.07 | 912.91 | 307.08 | 913.67 | 307.13 |
| 915.53 | 307.27 | 917.9 | 307.52 | 918.8 | 307.59 | 919.57 | 307.6 | 921.21 | 307.6 |
| 923.31 | 307.58 | 924.82 | 307.56 | 926.25 | 307.57 | 932.05 | 307.63 | 932.74 | 307.64 |
| 935.21 | 307.71 | 935.56 | 307.73 | 939.5 | 308.07 | 940.22 | 308.1 | 941.8 | 308.15 |
| 942.63 | 308.16 | 944.31 | 308.21 | 945.46 | 308.22 | 948.05 | 308.19 | 951.31 | 308.19 |
| 952.71 | 308.21 | 954.27 | 308.22 | 956.57 | 308.26 | 958.33 | 308.36 | 960.02 | 308.44 |
| 962.51 | 308.58 | 969.55 | 308.76 | 972.12 | 308.82 | 976.17 | 308.87 | 976.42 | 308.88 |
| 978.65 | 308.9 | 980.58 | 308.9 | 982.63 | 308.92 | 984.16 | 308.91 | 984.92 | 308.89 |
| 985.09 | 308.79 | 985.41 | 308.77 | 985.77 | 308.81 | 987.37 | 308.91 | 990.5 | 309.01 |
| 997.33 | 309.25 | 999.64 | 309.31 | 1001.44 | 309.34 | 1004.59 | 309.31 | 1005.27 | 309.29 |
| 1006.72 | 309.31 | 1011.26 | 309.46 | 1013.31 | 309.52 | 1014.47 | 309.51 | 1016.02 | 309.52 |
| 1018.14 | 309.58 | 1020.12 | 309.71 | 1020.77 | 309.78 | 1021.66 | 309.81 | 1022.74 | 309.82 |
| 1024.44 | 309.85 | 1026.37 | 309.9 | 1028.23 | 309.94 | 1030.64 | 309.96 | 1031.66 | 309.98 |
| 1032.19 | 309.92 | 1032.65 | 309.94 | 1033.08 | 309.93 | 1035.05 | 310.06 | 1035.79 | 310.09 |
| 1041.14 | 310.17 | 1044.77 | 310.2 | 1047.08 | 310.19 | 1047.52 | 310.2 | 1049.33 | 310.2 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 140.44 | .04 | 873.9 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 140.44 | 873.9 | 50.7 | 44.53 | 34.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 3013.6*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.4 | 3.93 | 326.37 | 6.25 | 326.34 | 10.19 | 326.31 | 13.55 | 326.29 |
| 21.31 | 326.12 | 25.05 | 326.09 | 27.04 | 326.06 | 31.51 | 325.75 | 33.19 | 325.61 |
| 34.47 | 325.51 | 35.53 | 325.36 | 37.07 | 325.12 | 37.88 | 325.02 | 39.62 | 324.82 |
| 39.76 | 324.82 | 40.47 | 324.9 | 40.61 | 324.9 | 41.66 | 325.14 | 42.9 | 325.31 |
| 43.26 | 325.31 | 44.58 | 325.43 | 45.91 | 325.32 | 49.1 | 325.15 | 51.33 | 324.97 |
| 52.18 | 324.88 | 54.49 | 324.53 | 54.93 | 324.49 | 55.55 | 324.52 | 57.38 | 324.8 |
| 58.39 | 324.84 | 59.35 | 324.85 | 60.53 | 324.91 | 61.44 | 324.98 | 62.83 | 325.11 |
| 64.06 | 325.2 | 65.14 | 325.29 | 65.33 | 325.28 | 67.25 | 325.1 | 68.59 | 324.93 |
| 71.76 | 324.46 | 73.55 | 324.22 | 73.87 | 324.13 | 74.29 | 324.07 | 75.78 | 323.78 |
| 77.47 | 323.34 | 80.43 | 322.92 | 81.56 | 323.03 | 83.2 | 323.26 | 83.83 | 323.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 84.09 | 323.25 | 84.71 | 323.19 | 86.26 | 322.85 | 88.48 | 322.43 | 88.55 | 322.41 |
| 90.81 | 321.96 | 92.88 | 321.52 | 93.83 | 321.26 | 94.79 | 320.97 | 95.34 | 320.86 |
| 96.68 | 320.63 | 100.86 | 320.05 | 102.92 | 319.72 | 103.85 | 319.58 | 103.94 | 319.44 |
| 104.39 | 318.89 | 104.91 | 318.28 | 105.39 | 317.63 | 105.94 | 316.98 | 106.84 | 316.3 |
| 107.52 | 316.01 | 108.52 | 315.5 | 109.39 | 315.17 | 110.32 | 314.77 | 111 | 314.53 |
| 111.96 | 314.07 | 113.3 | 313.6 | 113.85 | 313.38 | 115.18 | 312.9 | 117.61 | 312.08 |
| 117.73 | 312.03 | 119.43 | 311.42 | 121.39 | 310.74 | 121.57 | 310.67 | 123.33 | 310.09 |
| 123.69 | 309.96 | 125.25 | 309.44 | 126.32 | 309.02 | 129.01 | 308.18 | 129.87 | 307.86 |
| 130.78 | 307.56 | 131.8 | 307.21 | 134.54 | 306.47 | 135.28 | 306.29 | 137.09 | 305.83 |
| 137.64 | 305.67 | 139.79 | 305.61 | 140.72 | 305.67 | 140.9 | 305.62 | 142.47 | 305.52 |
| 143.85 | 305.47 | 144.54 | 305.42 | 145.64 | 305.4 | 146.44 | 305.41 | 148.87 | 305.37 |
| 151.74 | 305.45 | 152.62 | 305.47 | 154.43 | 305.49 | 156.66 | 305.48 | 165.89 | 305.46 |
| 167.46 | 305.45 | 168.78 | 305.43 | 169.31 | 305.44 | 172.28 | 305.44 | 180.07 | 305.46 |
| 184.89 | 305.46 | 186.31 | 305.42 | 188.6 | 305.37 | 189.36 | 305.37 | 193.14 | 305.27 |
| 194.61 | 305.26 | 197.55 | 305.16 | 198.25 | 305.13 | 200.25 | 305.12 | 202.21 | 305.13 |
| 202.44 | 305.14 | 205.5 | 305.22 | 206.9 | 305.27 | 208.58 | 305.29 | 218.24 | 305.64 |
| 221.55 | 305.67 | 225.37 | 305.71 | 236.4 | 305.71 | 239.69 | 305.56 | 240.54 | 305.54 |
| 242.11 | 305.47 | 246.4 | 305.29 | 247.63 | 305.29 | 248.78 | 305.3 | 250.61 | 305.34 |
| 263.74 | 305.51 | 263.85 | 305.51 | 274.9 | 305.66 | 278.01 | 305.71 | 278.18 | 305.72 |
| 279.23 | 305.69 | 284.32 | 305.65 | 285.98 | 305.64 | 288.64 | 305.65 | 291.16 | 305.68 |
| 298.01 | 305.74 | 299.76 | 305.76 | 301.45 | 305.76 | 303.04 | 305.73 | 304.2 | 305.74 |
| 309.35 | 305.74 | 311.11 | 305.66 | 311.9 | 305.64 | 315.87 | 305.59 | 318.42 | 305.54 |
| 319.67 | 305.52 | 321.84 | 305.5 | 324.33 | 305.46 | 324.48 | 305.45 | 327 | 305.38 |
| 327.21 | 305.38 | 334.21 | 305 | 353.8 | 304.71 | 354.28 | 304.68 | 356.2 | 304.61 |
| 356.6 | 304.56 | 357.19 | 304.53 | 358.23 | 304.5 | 359.99 | 304.46 | 362.31 | 304.43 |
| 364.23 | 304.41 | 365.36 | 304.41 | 368.88 | 304.38 | 370.27 | 304.38 | 373.12 | 304.44 |
| 382.89 | 304.65 | 385.78 | 304.73 | 386.96 | 304.77 | 391.04 | 304.89 | 391.98 | 304.93 |
| 394.11 | 304.99 | 399.03 | 305.1 | 401.78 | 305.1 | 403.88 | 305.07 | 404.91 | 305.05 |
| 405.74 | 305.02 | 407.46 | 304.99 | 411.29 | 304.91 | 412.03 | 304.86 | 413.61 | 304.82 |
| 414.7 | 304.87 | 417.82 | 304.98 | 419.19 | 305.01 | 421.49 | 305.07 | 426.33 | 305.13 |
| 427.44 | 305.11 | 428.72 | 305.07 | 429.75 | 305.06 | 431.28 | 305.06 | 433.1 | 305.08 |
| 436.41 | 305.16 | 438.42 | 305.23 | 440.26 | 305.27 | 445.47 | 305.34 | 449.8 | 305.32 |
| 450.52 | 305.31 | 450.66 | 305.29 | 451.4 | 305.28 | 453.31 | 305.28 | 464.98 | 305.24 |
| 468.41 | 305.21 | 470.11 | 305.19 | 471.72 | 305.15 | 475.19 | 305.1 | 478.47 | 305.07 |
| 478.77 | 305.06 | 482.68 | 305.02 | 484.67 | 305.01 | 486.51 | 304.95 | 487.73 | 304.87 |
| 493.04 | 304.71 | 493.74 | 304.7 | 495.79 | 304.65 | 497.58 | 304.57 | 497.71 | 304.59 |
| 500.79 | 304.47 | 503.72 | 304.41 | 505.63 | 304.4 | 505.94 | 304.38 | 507.35 | 304.34 |
| 511.33 | 304.25 | 511.49 | 304.24 | 514.33 | 304.19 | 518.05 | 304.15 | 527.23 | 304.07 |
| 529.07 | 304.06 | 529.72 | 304.04 | 530.29 | 304.05 | 537.34 | 304.01 | 539.48 | 304 |
| 540.33 | 303.99 | 547.22 | 303.99 | 548.37 | 303.98 | 550.93 | 303.99 | 554.75 | 303.95 |
| 556.06 | 303.95 | 557.78 | 303.97 | 558.98 | 303.97 | 564.1 | 304 | 566.13 | 304 |
| 568.9 | 304.01 | 569.78 | 304 | 572.15 | 304.01 | 573.65 | 304.01 | 575.04 | 304.02 |
| 578.96 | 304.02 | 579.83 | 304.03 | 586.55 | 304.14 | 589.32 | 304.18 | 592.22 | 304.21 |
| 593.21 | 304.21 | 599.15 | 304.27 | 601.54 | 304.3 | 605.78 | 304.38 | 608.11 | 304.42 |
| 609.35 | 304.46 | 610.7 | 304.47 | 611.34 | 304.46 | 613.53 | 304.4 | 616.31 | 304.26 |
| 617.69 | 304.23 | 618.82 | 304.23 | 619.77 | 304.2 | 623.22 | 304.22 | 629.35 | 304.24 |
| 629.75 | 304.25 | 632.44 | 304.25 | 636.25 | 304.23 | 637.94 | 304.21 | 640.35 | 304.19 |
| 641.46 | 304.17 | 649.07 | 304.07 | 649.38 | 304.07 | 656.87 | 304 | 658.38 | 303.96 |
| 658.8 | 303.98 | 660.69 | 304.03 | 661.98 | 304.07 | 663.19 | 304.09 | 665.52 | 304.11 |
| 667.26 | 304.11 | 668.7 | 304.1 | 671.42 | 304.06 | 671.54 | 304.05 | 673.44 | 304.01 |
| 675.46 | 304.02 | 676.92 | 304.02 | 677.67 | 304.01 | 683.75 | 303.89 | 688.06 | 303.77 |
| 689.27 | 303.74 | 696.39 | 303.59 | 699.57 | 303.52 | 699.76 | 303.52 | 701.85 | 303.46 |
| 706.14 | 303.36 | 708.92 | 303.28 | 710.63 | 303.24 | 710.77 | 303.23 | 715.38 | 303.12 |
| 716.66 | 303.1 | 719.1 | 303.18 | 721.62 | 303.21 | 722.04 | 303.21 | 722.96 | 303.18 |
| 724.53 | 303.1 | 725.16 | 303.1 | 725.64 | 303.17 | 727.32 | 303.3 | 731.93 | 303.42 |
| 736.1 | 303.52 | 739.77 | 303.59 | 741.16 | 303.61 | 741.47 | 303.65 | 742.31 | 303.65 |
| 743.5 | 303.62 | 745.92 | 303.59 | 755.14 | 303.45 | 755.68 | 303.43 | 756.91 | 303.41 |
| 765.84 | 303.16 | 767.13 | 303.11 | 769.67 | 302.87 | 770.86 | 302.75 | 772.39 | 302.55 |
| 772.74 | 302.52 | 773.12 | 302.53 | 775.78 | 302.75 | 777.45 | 302.91 | 778.13 | 302.96 |
| 778.91 | 302.97 | 779.02 | 303.05 | 780.2 | 303.16 | 782.9 | 303.18 | 784.8 | 303.2 |
| 785.63 | 303.2 | 787.6 | 303.17 | 788.65 | 303.16 | 795.16 | 303.12 | 796.09 | 303.1 |
| 797.52 | 303.05 | 797.77 | 303.05 | 799.06 | 303 | 800.24 | 302.82 | 800.73 | 302.72 |
| 801.38 | 302.63 | 801.68 | 302.61 | 802.49 | 302.68 | 803.82 | 302.7 | 806.33 | 302.79 |
| 811.53 | 303.02 | 812.75 | 303.05 | 813.99 | 303.07 | 815.05 | 303.1 | 816.44 | 303.15 |
| 818.99 | 303.2 | 825.69 | 303.3 | 827.43 | 303.32 | 829.62 | 303.36 | 834.51 | 303.46 |
| 835.23 | 303.47 | 836.36 | 303.45 | 836.85 | 303.39 | 837.45 | 303.35 | 838.04 | 303.35 |
| 838.86 | 303.43 | 840.06 | 303.5 | 841.67 | 303.55 | 843.18 | 303.57 | 844.74 | 303.6 |
| 846.35 | 303.61 | 847.32 | 303.58 | 847.57 | 303.53 | 847.96 | 303.54 | 848.75 | 303.61 |
| 849.1 | 303.66 | 860.23 | 304.16 | 865.62 | 304.4 | 866.23 | 304.43 | 866.59 | 304.47 |
| 867.77 | 304.51 | 868.13 | 304.49 | 868.8 | 304.49 | 869.94 | 304.5 | 873.94 | 304.74 |
| 875.18 | 304.85 | 875.83 | 304.89 | 877.92 | 304.94 | 878.98 | 305.01 | 879.87 | 305.02 |
| 886.05 | 305.41 | 890.66 | 305.67 | 890.91 | 305.67 | 891.94 | 305.8 | 894.69 | 306 |
| 895.25 | 306.03 | 896.14 | 306.05 | 897.32 | 306.14 | 898.55 | 306.21 | 902.03 | 306.14 |
| 903.31 | 306.12 | 904.35 | 306.12 | 905.82 | 306.16 | 906.85 | 306.23 | 907.77 | 306.33 |
| 909.28 | 306.55 | 910.46 | 306.62 | 912.41 | 306.8 | 914.9 | 307.1 | 915.84 | 307.19 |
| 916.64 | 307.21 | 918.17 | 307.23 | 922.14 | 307.21 | 923.17 | 307.22 | 925.83 | 307.22 |
| 926.64 | 307.23 | 929.72 | 307.22 | 931.19 | 307.24 | 933.02 | 307.29 | 933.39 | 307.31 |
| 937.52 | 307.61 | 943.16 | 307.8 | 946.48 | 307.79 | 949.9 | 307.81 | 951.36 | 307.83 |
| 953 | 307.84 | 955.41 | 307.87 | 957.25 | 307.95 | 959.02 | 308 | 959.91 | 308.04 |
| 960.94 | 308.07 | 961.62 | 308.11 | 969 | 308.27 | 973.29 | 308.35 | 976.2 | 308.38 |
| 979.57 | 308.41 | 980.56 | 308.39 | 981.72 | 308.41 | 982.7 | 308.41 | 984.83 | 308.38 |
| 985.19 | 308.35 | 985.27 | 308.24 | 985.79 | 308.21 | 985.99 | 308.25 | 986.78 | 308.31 |
| 987.67 | 308.36 | 990.94 | 308.45 | 998.1 | 308.67 | 1001.95 | 308.75 | 1005.7 | 308.75 |
| 1006.42 | 308.73 | 1007.94 | 308.75 | 1008.92 | 308.79 | 1012.69 | 308.88 | 1014.02 | 308.92 |
| 1014.84 | 308.93 | 1016.06 | 308.89 | 1017.67 | 308.89 | 1019.9 | 308.94 | 1021.97 | 309.07 |
| 1022.39 | 309.12 | 1022.91 | 309.15 | 1023.85 | 309.18 | 1026.5 | 309.22 | 1028.52 | 309.27 |
| 1031.48 | 309.32 | 1032.68 | 309.32 | 1033.89 | 309.34 | 1034.62 | 309.26 | 1035.24 | 309.27 |
| 1035.49 | 309.25 | 1035.8 | 309.29 | 1037.29 | 309.39 | 1038.39 | 309.45 | 1043.24 | 309.51 |
| 1043.99 | 309.51 | 1045.61 | 309.53 | 1047.8 | 309.53 | 1050.67 | 309.51 | 1052.58 | 309.49 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 135.28 | .04 | 868.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 135.28 | 868.8 | 50.7 | 44.53 | 34.1 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2969.07*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.99 | .26 | 325.99 | 3.78 | 325.95 | 6.01 | 325.93 | 9.8 | 325.89 |
| 13.04 | 325.86 | 20.5 | 325.65 | 24.09 | 325.61 | 26.01 | 325.57 | 30.3 | 325.33 |
| 31.92 | 325.21 | 33.16 | 325.13 | 34.17 | 325.03 | 35.65 | 324.85 | 38.11 | 324.7 |
| 39.06 | 324.76 | 40.07 | 324.93 | 41.26 | 325.04 | 41.61 | 325.05 | 42.88 | 325.13 |
| 44.15 | 325.06 | 45.75 | 324.99 | 47.23 | 324.94 | 49.37 | 324.82 | 50.19 | 324.75 |
| 52.41 | 324.52 | 53.14 | 324.48 | 53.43 | 324.5 | 54.53 | 324.63 | 55.19 | 324.69 |
| 56.16 | 324.72 | 57.09 | 324.72 | 58.22 | 324.76 | 59.1 | 324.8 | 60.43 | 324.89 |
| 61.61 | 324.94 | 62.51 | 325 | 62.84 | 325 | 64.68 | 324.87 | 65.97 | 324.75 |
| 69.02 | 324.44 | 70.74 | 324.28 | 71.05 | 324.21 | 71.96 | 324.11 | 72.89 | 323.98 |
| 73.21 | 323.91 | 74.51 | 323.68 | 76.08 | 323.51 | 77.35 | 323.38 | 78.45 | 323.45 |
| 79.96 | 323.6 | 80.63 | 323.58 | 80.88 | 323.59 | 81.48 | 323.55 | 82.97 | 323.32 |
| 87.01 | 322.75 | 89.34 | 322.4 | 90.83 | 322.1 | 91.17 | 322.02 | 92.99 | 321.79 |
| 95.28 | 321.56 | 96.09 | 321.47 | 97.01 | 321.38 | 98.99 | 321.16 | 99.88 | 321.05 |
| 100.4 | 320.23 | 100.9 | 319.52 | 101.56 | 318.44 | 101.89 | 317.99 | 102.41 | 317.5 |
| 102.76 | 317.2 | 103.41 | 316.88 | 104.33 | 316.35 | 105.21 | 315.97 | 106.11 | 315.52 |
| 106.76 | 315.24 | 107.68 | 314.71 | 108.97 | 314.18 | 109.51 | 313.92 | 111.35 | 313.13 |
| 113.12 | 312.41 | 114.97 | 311.59 | 116.75 | 310.83 | 116.92 | 310.74 | 118.62 | 310.06 |
| 118.97 | 309.9 | 120.47 | 309.3 | 121.5 | 308.79 | 122.17 | 308.54 | 122.76 | 308.3 |
| 124.08 | 307.79 | 124.91 | 307.4 | 125.79 | 307.04 | 126.77 | 306.62 | 127.72 | 306.29 |
| 129.41 | 305.74 | 130.11 | 305.53 | 131.95 | 304.97 | 132.51 | 304.78 | 134.7 | 304.74 |
| 135.65 | 304.84 | 135.82 | 304.77 | 137.42 | 304.7 | 138.89 | 304.68 | 139.2 | 304.65 |
| 140.91 | 304.63 | 143.93 | 304.63 | 146.85 | 304.7 | 147.74 | 304.73 | 149.58 | 304.75 |
| 161.24 | 304.8 | 163.53 | 304.8 | 164.17 | 304.79 | 164.71 | 304.8 | 167.73 | 304.8 |
| 175.65 | 304.82 | 180.55 | 304.82 | 183.72 | 304.77 | 185.1 | 304.77 | 186.56 | 304.75 |
| 188.94 | 304.73 | 190.44 | 304.73 | 193.43 | 304.68 | 194.14 | 304.66 | 198.16 | 304.66 |
| 199.17 | 304.69 | 201.51 | 304.73 | 203.34 | 304.77 | 204.64 | 304.76 | 214.46 | 305.05 |
| 217.82 | 305.09 | 221.72 | 305.14 | 232.92 | 305.14 | 235.8 | 305.05 | 237.61 | 305.01 |
| 243.09 | 304.86 | 244.34 | 304.86 | 245.51 | 304.87 | 247.37 | 304.9 | 260.72 | 305.01 |
| 260.84 | 305.01 | 272.08 | 305.11 | 275.24 | 305.14 | 276.63 | 305.1 | 281.65 | 305.02 |
| 283.34 | 305 | 286.04 | 305 | 288.61 | 305.03 | 295.57 | 305.08 | 297.35 | 305.09 |
| 299.07 | 305.09 | 300.1 | 305.07 | 301.86 | 305.08 | 303.93 | 305.08 | 305.29 | 305.09 |
| 307.1 | 305.09 | 309.69 | 305.02 | 311.11 | 305.01 | 316.32 | 304.95 | 317.06 | 304.93 |
| 319.8 | 304.92 | 322.48 | 304.89 | 323.64 | 304.85 | 325.25 | 304.81 | 332.38 | 304.5 |
| 352.29 | 304.14 | 352.78 | 304.1 | 354.73 | 304.01 | 355.14 | 303.95 | 355.73 | 303.91 |
| 356.8 | 303.88 | 358.58 | 303.82 | 360.94 | 303.79 | 362.9 | 303.76 | 364.04 | 303.76 |
| 367.62 | 303.73 | 369.04 | 303.73 | 369.62 | 303.74 | 371.93 | 303.8 | 381.87 | 304.07 |
| 383.95 | 304.13 | 384.81 | 304.15 | 386.01 | 304.2 | 390.15 | 304.34 | 391.11 | 304.39 |
| 393.28 | 304.46 | 397.46 | 304.57 | 397.99 | 304.58 | 401.07 | 304.58 | 404.25 | 304.51 |
| 405.1 | 304.48 | 406.85 | 304.44 | 410.27 | 304.35 | 410.74 | 304.35 | 411.5 | 304.28 |
| 413 | 304.21 | 416.15 | 304.36 | 418.78 | 304.44 | 421.11 | 304.49 | 426.04 | 304.52 |
| 427.16 | 304.48 | 428.47 | 304.42 | 429.51 | 304.4 | 431.06 | 304.39 | 432.92 | 304.4 |
| 436.28 | 304.46 | 439.08 | 304.56 | 445.5 | 304.61 | 449.89 | 304.59 | 450.63 | 304.57 |
| 450.77 | 304.55 | 451.53 | 304.54 | 453.46 | 304.54 | 462.38 | 304.52 | 463.25 | 304.52 |
| 468.82 | 304.49 | 470.55 | 304.47 | 471.24 | 304.45 | 473 | 304.43 | 475.71 | 304.39 |
| 479.05 | 304.35 | 483.33 | 304.32 | 486.15 | 304.29 | 487.48 | 304.24 | 488.46 | 304.18 |
| 493.86 | 304.07 | 496.66 | 304.02 | 498.47 | 303.96 | 498.61 | 303.99 | 501.74 | 303.87 |
| 503.09 | 303.83 | 504.72 | 303.79 | 505.78 | 303.78 | 506.66 | 303.76 | 506.97 | 303.73 |
| 508.41 | 303.67 | 509.38 | 303.65 | 512.45 | 303.55 | 512.62 | 303.55 | 515.51 | 303.47 |
| 516.38 | 303.45 | 519.29 | 303.41 | 528.62 | 303.29 | 530.83 | 303.26 | 538.9 | 303.17 |
| 540.53 | 303.16 | 541.07 | 303.15 | 543.09 | 303.14 | 546.53 | 303.14 | 546.95 | 303.13 |
| 548.95 | 303.13 | 550.11 | 303.12 | 552.72 | 303.12 | 556.6 | 303.07 | 556.94 | 303.06 |
| 558.47 | 303.08 | 560.91 | 303.1 | 566.11 | 303.13 | 568.18 | 303.13 | 570.99 | 303.14 |
| 574.3 | 303.14 | 577.23 | 303.16 | 579.24 | 303.17 | 581.22 | 303.17 | 582.1 | 303.18 |
| 588.93 | 303.31 | 590.26 | 303.34 | 591.76 | 303.36 | 594.7 | 303.42 | 595.7 | 303.42 |
| 601.74 | 303.51 | 604.18 | 303.56 | 610.85 | 303.73 | 612.11 | 303.77 | 613.49 | 303.79 |
| 614.15 | 303.78 | 616.37 | 303.72 | 617.13 | 303.67 | 619.19 | 303.55 | 620.66 | 303.51 |
| 621.75 | 303.52 | 622.31 | 303.49 | 626.22 | 303.53 | 632.46 | 303.58 | 632.86 | 303.59 |
| 637.54 | 303.59 | 641.58 | 303.57 | 644.77 | 303.54 | 652.5 | 303.46 | 652.81 | 303.45 |
| 660.44 | 303.4 | 661.68 | 303.38 | 664.32 | 303.42 | 666.07 | 303.46 | 668.18 | 303.47 |
| 671 | 303.47 | 672.46 | 303.46 | 675.35 | 303.4 | 677.29 | 303.34 | 679.33 | 303.33 |
| 681.58 | 303.3 | 683.16 | 303.27 | 684.76 | 303.23 | 686.77 | 303.19 | 687.77 | 303.16 |
| 692.15 | 303.04 | 693.38 | 303.01 | 700.61 | 302.85 | 703.85 | 302.77 | 704.04 | 302.77 |
| 706.17 | 302.71 | 710.53 | 302.61 | 712.75 | 302.55 | 713.35 | 302.54 | 715.24 | 302.49 |
| 719.92 | 302.39 | 721.6 | 302.38 | 722.85 | 302.41 | 725.31 | 302.44 | 726.69 | 302.44 |
| 728.18 | 302.4 | 729.23 | 302.38 | 729.93 | 302.38 | 730.35 | 302.43 | 732.06 | 302.52 |
| 732.86 | 302.55 | 739.8 | 302.73 | 740.99 | 302.77 | 744.72 | 302.85 | 746.13 | 302.89 |
| 746.45 | 302.93 | 747.4 | 302.93 | 748.51 | 302.9 | 749.55 | 302.89 | 752.32 | 302.85 |
| 760.34 | 302.74 | 762.14 | 302.7 | 771.23 | 302.44 | 772.53 | 302.38 | 775.12 | 302.18 |
| 776.33 | 302.08 | 777.88 | 301.9 | 778.24 | 301.87 | 778.56 | 301.88 | 780.08 | 301.97 |
| 782.42 | 302.14 | 783.02 | 302.17 | 783.72 | 302.18 | 783.81 | 302.28 | 784.86 | 302.41 |
| 785.76 | 302.43 | 787.27 | 302.43 | 788 | 302.44 | 789.69 | 302.44 | 792.38 | 302.41 |
| 795.19 | 302.4 | 798.18 | 302.38 | 800.5 | 302.29 | 801.65 | 302.25 | 802.7 | 302.12 |
| 803.13 | 302.05 | 803.71 | 301.99 | 804.09 | 301.98 | 804.54 | 302.02 | 805.88 | 302.03 |
| 808.12 | 302.1 | 812.74 | 302.28 | 814.94 | 302.32 | 817.11 | 302.41 | 819.38 | 302.47 |
| 825.34 | 302.61 | 826.89 | 302.64 | 833.2 | 302.8 | 833.41 | 302.81 | 834.84 | 302.81 |
| 835.27 | 302.77 | 835.81 | 302.75 | 836.34 | 302.76 | 837.06 | 302.82 | 838.34 | 302.88 |
| 839.56 | 302.92 | 841.95 | 302.98 | 842.29 | 302.98 | 843.73 | 303.01 | 844.6 | 303 |
| 844.82 | 302.97 | 845.16 | 302.98 | 846.18 | 303.08 | 856.08 | 303.54 | 860.88 | 303.76 |
| 861.42 | 303.79 | 861.99 | 303.84 | 862.67 | 303.86 | 863.71 | 303.81 | 864.57 | 303.8 |
| 864.9 | 303.81 | 869.08 | 304.06 | 869.49 | 304.09 | 870.37 | 304.18 | 871.05 | 304.23 |
| 873.24 | 304.27 | 874.35 | 304.34 | 875.27 | 304.35 | 881.74 | 304.76 | 886.56 | 305.05 |
| 886.82 | 305.05 | 887.89 | 305.2 | 890.77 | 305.43 | 891.36 | 305.46 | 892.29 | 305.48 |
| 893.52 | 305.58 | 894.8 | 305.66 | 899.78 | 305.51 | 900.22 | 305.52 | 900.86 | 305.5 |
| 902.4 | 305.55 | 903.48 | 305.63 | 904.44 | 305.76 | 906.03 | 306.03 | 907.26 | 306.12 |
| 909.29 | 306.32 | 911.89 | 306.67 | 912.88 | 306.79 | 913.72 | 306.83 | 915.31 | 306.85 |
| 915.52 | 306.86 | 917.81 | 306.87 | 919.47 | 306.86 | 922.06 | 306.86 | 924.17 | 306.85 |
| 927.39 | 306.82 | 928.51 | 306.82 | 929.98 | 306.84 | 931.23 | 306.88 | 934.26 | 307.06 |
| 935.54 | 307.14 | 936.34 | 307.18 | 938.97 | 307.27 | 941.43 | 307.38 | 942.07 | 307.38 |
| 944.9 | 307.4 | 948.48 | 307.43 | 950.01 | 307.46 | 951.72 | 307.46 | 954.24 | 307.49 |
| 956.17 | 307.54 | 958.01 | 307.57 | 960.02 | 307.61 | 960.74 | 307.64 | 971.26 | 307.83 |
| 978.41 | 307.91 | 979.88 | 307.91 | 980.41 | 307.89 | 981.02 | 307.9 | 982.78 | 307.9 |
| 984.99 | 307.86 | 985.38 | 307.82 | 985.46 | 307.68 | 986.01 | 307.64 | 986.21 | 307.7 |
| 987.04 | 307.76 | 987.97 | 307.81 | 991.39 | 307.89 | 998.87 | 308.08 | 1001.4 | 308.14 |
| 1003.37 | 308.17 | 1007.57 | 308.18 | 1009.15 | 308.2 | 1010.18 | 308.23 | 1014.12 | 308.31 |
| 1014.47 | 308.31 | 1016.37 | 308.34 | 1017.64 | 308.28 | 1019.33 | 308.26 | 1021.66 | 308.29 |
| 1022.73 | 308.36 | 1024.81 | 308.51 | 1026.7 | 308.56 | 1028.56 | 308.59 | 1032.71 | 308.67 |
| 1036.28 | 308.7 | 1036.47 | 308.69 | 1037.05 | 308.59 | 1037.55 | 308.61 | 1037.96 | 308.58 |
| 1038.66 | 308.65 | 1039.83 | 308.74 | 1040.98 | 308.8 | 1046.05 | 308.86 | 1048.54 | 308.87 |
| 1049.83 | 308.87 | 1050.82 | 308.86 | 1053.35 | 308.82 | 1053.83 | 308.82 | 1055.82 | 308.79 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 130.11 | .04 | 863.71 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

130.11 863.71 50.7 44.53 34.1 .1 .3

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2924.54*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.58 | .25 | 325.58 | 3.63 | 325.54 | 5.77 | 325.51 | 9.41 | 325.47 |
| 12.52 | 325.43 | 19.68 | 325.18 | 23.14 | 325.13 | 24.97 | 325.09 | 29.1 | 324.9 |
| 31.84 | 324.76 | 32.82 | 324.7 | 33.63 | 324.63 | 34.24 | 324.59 | 34.99 | 324.58 |
| 36.4 | 324.59 | 36.59 | 324.58 | 37.51 | 324.63 | 38.48 | 324.72 | 39.62 | 324.78 |
| 40.25 | 324.79 | 41.18 | 324.83 | 43.93 | 324.76 | 45.35 | 324.73 | 47.41 | 324.66 |
| 49.24 | 324.57 | 50.33 | 324.5 | 51.03 | 324.48 | 52.99 | 324.58 | 54.82 | 324.59 |
| 56.75 | 324.63 | 58.03 | 324.67 | 60.03 | 324.71 | 60.34 | 324.71 | 62.11 | 324.65 |
| 63.35 | 324.58 | 67.93 | 324.33 | 70 | 324.17 | 71.55 | 324.01 | 74.28 | 323.85 |
| 75.33 | 323.88 | 76.78 | 323.94 | 77.66 | 323.93 | 78.24 | 323.91 | 79.68 | 323.78 |
| 81.72 | 323.62 | 81.78 | 323.61 | 83.55 | 323.47 | 84.43 | 323.39 | 85.79 | 323.28 |
| 87.55 | 323.07 | 89.3 | 322.94 | 93.16 | 322.71 | 95.06 | 322.59 | 95.92 | 322.53 |
| 96 | 322.34 | 96.37 | 321.64 | 96.42 | 321.58 | 96.9 | 320.76 | 97.13 | 320.29 |
| 97.53 | 319.52 | 97.85 | 318.99 | 98.35 | 318.44 | 98.68 | 318.1 | 99.31 | 317.76 |
| 100.19 | 317.17 | 100.95 | 316.81 | 101.89 | 316.26 | 102.52 | 315.96 | 103.41 | 315.36 |
| 104.65 | 314.75 | 105.16 | 314.46 | 106.38 | 313.84 | 108.63 | 312.74 | 108.97 | 312.55 |
| 110.4 | 311.8 | 112.12 | 310.91 | 112.28 | 310.82 | 113.91 | 310.03 | 114.24 | 309.85 |
| 115.68 | 309.15 | 116.67 | 308.56 | 117.13 | 308.36 | 119.16 | 307.39 | 119.95 | 306.94 |
| 120.79 | 306.52 | 121.73 | 306.02 | 124.27 | 305 | 124.95 | 304.76 | 126.82 | 304.12 |
| 127.39 | 303.89 | 129.61 | 303.87 | 130.57 | 304 | 130.75 | 303.93 | 132.38 | 303.88 |
| 133.87 | 303.89 | 134.52 | 303.86 | 136.91 | 303.87 | 138.99 | 303.89 | 139.31 | 303.9 |
| 142.87 | 303.98 | 144.02 | 303.99 | 144.74 | 304.01 | 147.05 | 304.03 | 156.58 | 304.14 |
| 158.21 | 304.15 | 159.57 | 304.15 | 160.12 | 304.16 | 163.19 | 304.16 | 171.24 | 304.19 |
| 176.22 | 304.19 | 177.69 | 304.17 | 180.05 | 304.16 | 180.84 | 304.17 | 182.33 | 304.17 |
| 184.75 | 304.18 | 186.26 | 304.19 | 189.3 | 304.2 | 190.03 | 304.19 | 192.09 | 304.19 |
| 194.12 | 304.2 | 197.52 | 304.23 | 198.97 | 304.26 | 200.7 | 304.24 | 210.69 | 304.46 |
| 214.1 | 304.5 | 218.06 | 304.56 | 229.67 | 304.56 | 230.07 | 304.55 | 232.85 | 304.51 |
| 234.22 | 304.51 | 235.35 | 304.49 | 239.78 | 304.43 | 241.06 | 304.43 | 242.24 | 304.44 |
| 244.14 | 304.47 | 257.82 | 304.51 | 269.25 | 304.56 | 272.63 | 304.57 | 273.88 | 304.51 |
| 278.98 | 304.39 | 280.69 | 304.36 | 283.44 | 304.35 | 286.05 | 304.37 | 294.93 | 304.42 |
| 296.68 | 304.42 | 297.83 | 304.41 | 299.52 | 304.43 | 303.01 | 304.43 | 303.58 | 304.44 |
| 304.85 | 304.44 | 306.66 | 304.41 | 307.48 | 304.41 | 310.62 | 304.39 | 314.97 | 304.34 |
| 317.75 | 304.34 | 319.77 | 304.33 | 320.48 | 304.32 | 323.09 | 304.25 | 323.3 | 304.25 |
| 330.54 | 304 | 350.78 | 303.57 | 351.28 | 303.52 | 353.26 | 303.41 | 353.68 | 303.34 |
| 354.28 | 303.3 | 355.36 | 303.25 | 355.91 | 303.24 | 356.61 | 303.2 | 359.58 | 303.14 |
| 362.73 | 303.11 | 366.37 | 303.07 | 367.8 | 303.07 | 368.39 | 303.08 | 370.75 | 303.16 |
| 380.85 | 303.48 | 383.83 | 303.58 | 385.05 | 303.63 | 389.27 | 303.79 | 390.24 | 303.85 |
| 392.44 | 303.93 | 396.7 | 304.05 | 397.53 | 304.07 | 400.37 | 304.06 | 403.6 | 303.97 |
| 404.46 | 303.94 | 409.71 | 303.79 | 410.2 | 303.78 | 410.96 | 303.69 | 412.49 | 303.61 |
| 416.95 | 303.83 | 420.74 | 303.91 | 425.74 | 303.91 | 426.89 | 303.86 | 428.21 | 303.77 |
| 429.28 | 303.74 | 430.85 | 303.71 | 432.74 | 303.71 | 434.57 | 303.73 | 436.16 | 303.77 |
| 438.23 | 303.84 | 439 | 303.86 | 440.14 | 303.86 | 445.52 | 303.87 | 450.23 | 303.85 |
| 450.89 | 303.81 | 451.65 | 303.79 | 453.62 | 303.79 | 462.68 | 303.78 | 465.69 | 303.78 |
| 470.99 | 303.75 | 471.69 | 303.73 | 473.31 | 303.72 | 473.48 | 303.71 | 476.24 | 303.67 |
| 479.63 | 303.64 | 479.94 | 303.63 | 486.03 | 303.6 | 486.85 | 303.59 | 487.94 | 303.56 |
| 488.27 | 303.53 | 489.2 | 303.49 | 495.41 | 303.41 | 497.53 | 303.39 | 499.37 | 303.35 |
| 499.51 | 303.38 | 501.93 | 303.3 | 502.69 | 303.27 | 504.06 | 303.23 | 505.72 | 303.17 |
| 506.8 | 303.15 | 507.7 | 303.12 | 508.01 | 303.09 | 509.47 | 303.01 | 510.45 | 302.98 |
| 513.58 | 302.86 | 513.75 | 302.85 | 516.97 | 302.74 | 520.53 | 302.67 | 530.02 | 302.5 |
| 532.26 | 302.47 | 533.18 | 302.45 | 540.47 | 302.34 | 543.56 | 302.3 | 544.72 | 302.3 |
| 548.22 | 302.28 | 550.68 | 302.27 | 551.86 | 302.25 | 553.94 | 302.26 | 558.46 | 302.19 |
| 558.8 | 302.18 | 559.81 | 302.18 | 561.59 | 302.21 | 568.12 | 302.26 | 570.22 | 302.26 |
| 573.08 | 302.27 | 574 | 302.27 | 576.44 | 302.28 | 579.42 | 302.3 | 582.2 | 302.31 |
| 583.48 | 302.32 | 584.38 | 302.34 | 591.32 | 302.48 | 591.36 | 302.49 | 594.19 | 302.55 |
| 597.18 | 302.62 | 598.2 | 302.63 | 605.8 | 302.79 | 609.63 | 302.9 | 611.2 | 302.96 |
| 613.6 | 303.03 | 614.88 | 303.09 | 616.28 | 303.12 | 616.95 | 303.11 | 618.78 | 303.05 |
| 619.21 | 303.03 | 622.08 | 302.84 | 622.66 | 302.81 | 623.57 | 302.8 | 624.67 | 302.81 |
| 625.24 | 302.78 | 626.45 | 302.8 | 627.04 | 302.8 | 635.56 | 302.92 | 637.59 | 302.94 |
| 638.75 | 302.94 | 640.72 | 302.95 | 644.84 | 302.93 | 648.07 | 302.9 | 655.94 | 302.84 |
| 656.25 | 302.83 | 664 | 302.81 | 664.45 | 302.8 | 666 | 302.8 | 667.95 | 302.82 |
| 669.73 | 302.83 | 670.53 | 302.84 | 674.73 | 302.84 | 677.67 | 302.78 | 679.15 | 302.74 |
| 681.4 | 302.67 | 683.21 | 302.64 | 684.71 | 302.61 | 687.1 | 302.55 | 688.72 | 302.52 |
| 690.76 | 302.46 | 691.78 | 302.44 | 696.23 | 302.32 | 697.49 | 302.29 | 704.84 | 302.1 |
| 708.13 | 302.02 | 708.32 | 302.02 | 710.48 | 301.96 | 714.92 | 301.85 | 719.56 | 301.75 |
| 719.7 | 301.74 | 724.47 | 301.67 | 725.65 | 301.65 | 725.79 | 301.66 | 727.44 | 301.66 |
| 728.31 | 301.67 | 729.94 | 301.67 | 731.35 | 301.68 | 734.05 | 301.65 | 734.64 | 301.66 |
| 736.81 | 301.75 | 737.61 | 301.77 | 741.57 | 301.89 | 744.67 | 301.98 | 745.88 | 302.01 |
| 751.11 | 302.16 | 751.43 | 302.21 | 752.3 | 302.22 | 753.53 | 302.18 | 756.02 | 302.15 |
| 757.4 | 302.14 | 765.55 | 302.04 | 766.11 | 302.02 | 767.38 | 302 | 776.61 | 301.72 |
| 777.94 | 301.66 | 780.57 | 301.5 | 781.59 | 301.43 | 783.59 | 301.23 | 784.01 | 301.22 |
| 786.08 | 301.3 | 788.09 | 301.39 | 788.52 | 301.39 | 788.61 | 301.51 | 789.53 | 301.67 |
| 791.63 | 301.69 | 793.57 | 301.69 | 793.76 | 301.68 | 796.12 | 301.66 | 798.57 | 301.65 |
| 801.19 | 301.63 | 801.92 | 301.61 | 803.03 | 301.54 | 804.08 | 301.51 | 805.15 | 301.43 |
| 805.54 | 301.39 | 806.28 | 301.34 | 806.64 | 301.36 | 807.46 | 301.36 | 809.9 | 301.4 |
| 812.17 | 301.47 | 813.96 | 301.53 | 814.01 | 301.54 | 815.88 | 301.58 | 816.7 | 301.61 |
| 818.33 | 301.7 | 819.15 | 301.73 | 828.07 | 302.02 | 831.88 | 302.14 | 832.44 | 302.16 |
| 833.32 | 302.17 | 834.4 | 302.16 | 835.6 | 302.23 | 836.84 | 302.28 | 838.64 | 302.33 |
| 841.1 | 302.41 | 842.36 | 302.42 | 843.25 | 302.49 | 851.93 | 302.92 | 856.13 | 303.12 |
| 857.38 | 303.21 | 857.71 | 303.2 | 858.09 | 303.16 | 858.61 | 303.13 | 859.85 | 303.11 |
| 864.22 | 303.38 | 865.57 | 303.52 | 866.28 | 303.56 | 868.56 | 303.59 | 869.71 | 303.67 |
| 870.68 | 303.67 | 877.43 | 304.11 | 882.45 | 304.43 | 882.73 | 304.43 | 883.85 | 304.6 |
| 884.87 | 304.7 | 886.85 | 304.86 | 887.46 | 304.9 | 888.43 | 304.91 | 889.72 | 305.03 |
| 891.06 | 305.11 | 894.86 | 304.95 | 896.25 | 304.9 | 896.71 | 304.91 | 897.38 | 304.89 |
| 898.99 | 304.94 | 900.11 | 305.04 | 901.12 | 305.18 | 902.77 | 305.52 | 904.16 | 305.62 |
| 905.34 | 305.76 | 906.18 | 305.84 | 908.89 | 306.25 | 909.92 | 306.4 | 910.79 | 306.44 |
| 912.46 | 306.48 | 915.07 | 306.51 | 918.43 | 306.51 | 921.7 | 306.48 | 925.06 | 306.41 |
| 925.85 | 306.4 | 927.94 | 306.42 | 928.66 | 306.44 | 932.22 | 306.61 | 934.39 | 306.72 |
| 937.14 | 306.83 | 939.71 | 306.95 | 947.06 | 307.05 | 948.66 | 307.08 | 953.07 | 307.1 |
| 955.08 | 307.13 | 957.01 | 307.13 | 957.99 | 307.14 | 959.11 | 307.14 | 959.86 | 307.16 |
| 967.9 | 307.29 | 970.84 | 307.33 | 972.58 | 307.35 | 975.46 | 307.39 | 979.43 | 307.42 |
| 980.38 | 307.39 | 981.77 | 307.4 | 982.85 | 307.39 | 984.6 | 307.36 | 985.16 | 307.34 |
| 985.57 | 307.29 | 985.65 | 307.13 | 985.86 | 307.09 | 986.22 | 307.08 | 986.43 | 307.14 |
| 988.26 | 307.26 | 991.83 | 307.33 | 999.64 | 307.5 | 1003.84 | 307.58 | 1004.33 | 307.58 |
| 1007.93 | 307.62 | 1008.72 | 307.62 | 1011.44 | 307.67 | 1015.55 | 307.73 | 1015.91 | 307.74 |
| 1017.61 | 307.76 | 1017.9 | 307.75 | 1019.23 | 307.67 | 1020.99 | 307.63 | 1023.42 | 307.65 |



BSE Document Control Number: 7323HYD101

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 1024.53  307.72 1026.43  307.85 1027.72  307.91 1029.85  307.94 1030.62  307.96
 1032.82     308 1034.95  308.03 1037.35  308.05  1037.7  308.06 1038.68  308.06
 1038.87  308.05 1039.47  307.93 1040.15  307.94 1040.42  307.91 1040.76  307.96
 1041.15  307.98 1042.38  308.09 1043.58  308.16 1048.87  308.21  1049.7   308.2
 1051.46  308.21 1053.85  308.19 1056.49  308.14 1056.98  308.14 1059.06  308.09

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  124.95     .04  858.61     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        124.95  858.61             50.7   44.53    34.1             .1       .3

CROSS SECTION


RIVER: WASH70
REACH: WASH70              RS: 2880.01

INPUT
Description:
Station Elevation Data     num=     465
      Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
        0  325.17.2399902  325.173.480103  325.13 9.02002  325.05      12     325
    18.87  324.7122.18005  324.6523.08008  324.6331.04004  324.3731.46008  324.37
 32.23999  324.3432.82007  324.3233.28003  324.3434.64001  324.4535.46008  324.48
 36.54004   324.538.59003  324.5239.11005  324.5339.30005  324.5466.25006  324.38
 67.40002  324.3675.38007  324.2691.60004  324.0191.95007     32492.03003  323.79
 92.39008     32392.43005  322.9392.89008     32293.04004  321.6593.32007     321
 93.50006  320.5993.80005     32094.28003  319.3894.60004     31995.20007  318.64
 96.05005     31896.86005  317.5697.68005     31798.28003  316.6799.13007     316
100.3201  315.33100.8101     315  101.17  314.79102.5101     314104.1401  313.07
104.2401     313105.7501  312.06  105.84     312  107.48     311107.6401  310.89
109.2001     310  109.52  309.79   110.9     309  111.85  308.33  112.47     308
113.0101  307.69  114.23     307114.9901  306.48   115.8     306116.7001  305.43
117.5801     305119.1301  304.27  119.78     304121.6801  303.26122.2601     303
  124.52     303125.5001  303.17125.5701  303.15125.6801  303.09  126.65  303.07
127.3301  303.06127.4301  303.07127.5601  303.07  128.78   303.1  128.85   303.1
  129.17  303.08  131.02   303.1131.1801   303.1131.5001  303.11131.9401  303.11
134.3801  303.16  139.16  303.25142.2401  303.31151.9301  303.48153.5801   303.5
   154.3  303.51154.9301  303.51  155.52  303.52158.6401  303.52166.8201  303.55
173.3801  303.55  175.78  303.56  178.09  303.59185.1801  303.72190.3201  303.73
  191.11  303.74  193.53  303.74195.0001  303.75  195.42  303.75  195.79  303.73
196.7601  303.71210.3801  303.92   214.4  303.99229.4301  303.99230.8201     304
  237.77     304  239.97  304.03   240.9  304.04254.6901  304.01254.8101  304.01
  269.86     304  270.16  303.98  270.96  303.93  272.34  303.88276.3101  303.76
  278.05  303.72  280.84   303.7  292.52  303.75  295.36  303.75297.1801  303.77
299.3201  303.77  300.73  303.78301.3101  303.79306.7401  303.79312.1201  303.76
312.8801  303.75313.4301  303.75  315.71  303.76317.7601  303.76318.3201  303.75
  318.48  303.75319.6801  303.72321.1301  303.69  349.27     303  349.34  302.99
  349.78  302.94  351.79  302.81  352.09  302.77  352.22  302.73352.8301  302.68
353.9301  302.63  354.48  302.61355.2001  302.57  355.77  302.55356.5701  302.53
  358.21   302.5  360.23  302.47  361.41  302.46  365.11  302.42366.5701  302.42
  366.77  302.43  367.17  302.43369.5601  302.52  381.98  302.97  382.86     303
   384.1  303.06388.3801  303.24  388.96  303.28389.3701  303.31  391.61   303.4
395.9301  303.53  396.48  303.54  396.78  303.55  397.54  303.55399.5701  303.54
  409.65  303.21410.4301  303.11  411.98     303  412.09     303415.2401  303.19
416.5101  303.25417.9501  303.29  420.36  303.33425.4501   303.3  426.61  303.23
  427.96  303.12  429.04  303.08430.6401  303.04  432.48  303.03432.5601  303.03
  434.42  303.04  436.03  303.07438.1401  303.14  438.92  303.16440.0801  303.16
  450.09  303.12450.3301  303.11450.7501  303.09  450.85  303.09450.9401  303.08
451.0001  303.07451.1901  303.07  451.78  303.05  466.04  303.05469.6401  303.04
  473.11  303.01  473.96     303476.7601  302.96  480.52  302.92484.6301   302.9
  486.71   302.9  487.54  302.89  488.65  302.87  488.91  302.85488.9901  302.84
  489.85   302.8489.9301   302.8498.9401  302.76  500.27  302.74  500.41  302.78
502.8701   302.7  508.73  302.48  509.05  302.44  510.53  302.35  514.71  302.16
514.8801  302.15518.7601     302  521.77  301.93  531.41  301.72  542.03  301.51
  543.71  301.48  545.17  301.46550.3401  301.42  552.41  301.41  553.61  301.39
555.7201  301.39560.3101  301.31  560.66   301.3561.6901   301.3563.5001  301.33
  564.76  301.34  570.13  301.39  572.27  301.39  580.16  301.43585.7401  301.47
586.1201  301.48  586.65  301.49593.7501  301.66  599.66  301.83  600.26  301.84
600.7001  301.84606.9401     302  609.16  302.07612.3101  302.18  616.35  302.34
  617.65  302.41619.0701  302.44619.4501  302.43619.7501  302.43  621.61  302.37
  622.05  302.35624.9601  302.13  625.55   302.1  626.41  302.09  626.48  302.09
   627.6   302.1627.6901  302.09628.1801  302.07   628.6  302.07  629.41  302.09
  630.01   302.1632.1201  302.14632.2201  302.14639.6901  302.27   641.9  302.29
  643.91   302.3  645.91   302.3648.0901  302.29659.3701  302.22659.6901  302.21
  676.64  302.21678.4701   302.2  679.98  302.17681.4501  302.13685.2101     302
709.0601  301.36   712.6  301.27   714.8  301.21   721.6  301.05  721.86  301.04
722.2201  301.04  724.02     301  729.01  300.94  732.03  300.92734.5701  300.91
  737.54  300.91   740.8  300.95  741.89  300.98742.3701     301754.6201  301.38
  755.88  301.43756.0801  301.43  756.41  301.49  756.85  301.49  757.29   301.5
  757.39  301.49757.7501  301.48  758.54  301.46  770.76  301.33771.3301  301.32
772.6201  301.29782.0001     301  786.02  300.81  787.27  300.74789.2501  300.57
  791.23  300.58793.3301   300.6   793.4  300.74794.1901  300.92  794.41  300.93
794.8701  300.94  796.55  300.94  799.85  300.91801.9601  300.91804.2101  300.89
804.8301  300.86  805.79  300.79  806.64  300.76  807.66  300.73  808.67  300.71
809.5601   300.7  811.05   300.7811.6901  300.71  813.64  300.75  815.17  300.79
816.8201  300.83  817.53  300.87818.9301  300.97819.6301     301  824.65  301.23
830.5601  301.48  830.72  301.49  837.15  301.74  851.39  302.48  851.79  302.51
  852.04  302.54  852.23  302.55852.4601  302.56852.7401  302.55853.0701  302.49
  853.52  302.45854.4601  302.42854.8101  302.42  859.36   302.7   859.8  302.74
860.3101   302.8860.7601  302.85861.5001   302.9863.8801  302.92865.0801     303
  866.09     303  878.35  303.81  878.64  303.81   879.8     304880.8701  304.11
882.9301  304.29883.5701  304.33884.5801  304.34  885.92  304.47887.3101  304.56
  892.72  304.29893.2001   304.3   893.9  304.27895.5701  304.33896.7401  304.44
  897.79  304.61899.5101     305  900.67   305.1  900.85  305.11900.9601  305.12
901.4601  305.19903.0601  305.36906.9601     306907.8701  306.05  908.77  306.08
909.8301  306.11912.3201  306.15914.4601  306.16  915.29  306.16916.9301  306.14
  919.23   306.1  922.73     306  923.55  305.99   924.4  305.99  925.54     306
  925.73     306  926.48  306.02930.1901  306.16  933.77  306.31934.3301  306.34
935.3101  306.38937.9901  306.53  947.48  306.71  949.14  306.71952.4501  306.72
954.0001  306.72  954.61  306.71956.0101  306.69  957.03  306.69958.1901  306.68
  970.41  306.84   971.4  306.84  975.23  306.89  975.53  306.89978.1801  306.92
  979.36  306.92  979.77  306.91  980.35  306.89   981.8  306.89  982.92  306.88
984.7401  306.84985.3301  306.82  985.64  306.79985.7501  306.76  985.84  306.57
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 986.0601 | 306.53 | 986.23 | 306.51 | 986.4301 | 306.51 | 986.65 | 306.58 | 987.55 | 306.65 |
| 988.5601 | 306.71 | 988.97 | 306.72 | 992.28 | 306.77 | 1003.33 | 306.97 | 1003.41 | 306.97 |
| 1012.7 | 307.11 | 1017.36 | 307.16 | 1018.5 | 307.17 | 1019.13 | 307.17 | 1019.43 | 307.16 |
| 1020.81 | 307.06 | 1022.65 | 307 | 1025.18 | 307 | 1028.32 | 307.21 | 1028.95 | 307.24 |
| 1029.66 | 307.27 | 1032.68 | 307.33 | 1034.97 | 307.37 | 1037.19 | 307.4 | 1040.05 | 307.42 |
| 1041.07 | 307.42 | 1041.27 | 307.41 | 1041.9 | 307.26 | 1042.21 | 307.27 | 1042.45 | 307.28 |
| 1042.6 | 307.27 | 1042.83 | 307.25 | 1042.89 | 307.24 | 1042.96 | 307.25 | 1043.14 | 307.27 |
| 1043.24 | 307.29 | 1043.39 | 307.31 | 1043.65 | 307.32 | 1044.93 | 307.44 | 1045.83 | 307.5 |
| 1046.18 | 307.52 | 1051.69 | 307.56 | 1052.55 | 307.55 | 1054.39 | 307.55 | 1055.79 | 307.54 |
| 1056.87 | 307.52 | 1058.39 | 307.48 | 1059.62 | 307.45 | 1060.14 | 307.45 | 1062.3 | 307.39 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 119.78 | .04 | 853.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 119.78 | 853.52 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2831.89*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.84 | .52 | 324.84 | 3.7 | 324.76 | 6.14 | 324.69 | 7.26 | 324.67 |
| 9.59 | 324.65 | 12.75 | 324.61 | 16.81 | 324.48 | 16.98 | 324.47 | 19.61 | 324.38 |
| 20.06 | 324.36 | 21.58 | 324.33 | 23.08 | 324.29 | 24.53 | 324.22 | 25.65 | 324.14 |
| 26.48 | 324.07 | 27.77 | 323.98 | 28.67 | 323.89 | 29.44 | 323.83 | 30.74 | 323.7 |
| 32.99 | 323.51 | 33.48 | 323.49 | 34.88 | 323.39 | 35.37 | 323.39 | 36.82 | 323.42 |
| 37.86 | 323.41 | 39.71 | 323.36 | 41.02 | 323.31 | 41.77 | 323.3 | 43.64 | 323.22 |
| 44.87 | 323.19 | 46.24 | 323.14 | 49.3 | 323.05 | 51.29 | 322.97 | 51.98 | 322.96 |
| 53.44 | 322.9 | 55.67 | 322.85 | 57.12 | 322.81 | 58.18 | 322.74 | 59.76 | 322.7 |
| 62.49 | 322.62 | 63.31 | 322.59 | 64.91 | 322.55 | 67.86 | 322.55 | 70.41 | 322.57 |
| 74.21 | 322.55 | 76.04 | 322.56 | 77.63 | 322.55 | 78.92 | 322.55 | 80.12 | 322.54 |
| 81.29 | 322.51 | 84.18 | 322.37 | 87.5 | 322.24 | 91.78 | 322.08 | 94.45 | 321.99 |
| 96.1 | 321.97 | 97.36 | 321.93 | 97.74 | 321.91 | 97.82 | 321.72 | 98.2 | 321 |
| 98.25 | 320.94 | 98.73 | 320.08 | 99.38 | 318.79 | 99.7 | 318.26 | 100.21 | 317.7 |
| 100.55 | 317.36 | 101.19 | 317.03 | 102.09 | 316.46 | 102.95 | 316.06 | 103.83 | 315.54 |
| 104.46 | 315.23 | 105.37 | 314.62 | 106.63 | 313.99 | 107.15 | 313.68 | 108.64 | 312.91 |
| 110.54 | 311.95 | 111.57 | 311.4 | 112.13 | 311.08 | 113.56 | 310.31 | 114.41 | 309.84 |
| 116.09 | 308.99 | 116.41 | 308.77 | 116.97 | 308.44 | 117.88 | 307.94 | 118.48 | 307.54 |
| 118.89 | 307.29 | 119.55 | 306.97 | 121.42 | 306.03 | 122.22 | 305.54 | 123.09 | 305.09 |
| 124.04 | 304.54 | 124.98 | 304.13 | 126.06 | 303.67 | 126.63 | 303.44 | 127.32 | 303.2 |
| 129.12 | 302.53 | 129.67 | 302.29 | 131.81 | 302.29 | 132.74 | 302.44 | 132.91 | 302.37 |
| 134.48 | 302.34 | 135.86 | 302.38 | 136.23 | 302.36 | 137.98 | 302.38 | 138.85 | 302.38 |
| 141.17 | 302.43 | 145.7 | 302.5 | 148.63 | 302.56 | 157.82 | 302.7 | 160.07 | 302.73 |
| 164.3 | 302.73 | 171.95 | 302.75 | 178.17 | 302.75 | 180.45 | 302.76 | 182.64 | 302.78 |
| 189.37 | 302.9 | 194.25 | 302.91 | 197.29 | 302.91 | 199.09 | 302.92 | 199.44 | 302.9 |
| 200.36 | 302.89 | 201.67 | 302.9 | 202.62 | 302.92 | 209.85 | 303.04 | 214.44 | 303.12 |
| 217.09 | 303.17 | 223.49 | 303.17 | 224.93 | 303.18 | 230.41 | 303.18 | 232.67 | 303.2 |
| 239.27 | 303.2 | 242.24 | 303.24 | 243.2 | 303.23 | 263.29 | 303.18 | 269.72 | 303.17 |
| 270.76 | 303.11 | 272.07 | 303.06 | 275.84 | 302.95 | 277.49 | 302.91 | 279.48 | 302.89 |
| 280.96 | 302.89 | 286.38 | 302.9 | 291.22 | 302.92 | 292.02 | 302.91 | 293.91 | 302.91 |
| 295.64 | 302.93 | 299.01 | 302.93 | 299.56 | 302.94 | 304.71 | 302.94 | 308.81 | 302.91 |
| 309.86 | 302.91 | 311.12 | 302.9 | 312.48 | 302.91 | 315.16 | 302.91 | 315.85 | 302.9 |
| 317.42 | 302.86 | 319.77 | 302.81 | 324.72 | 302.7 | 325.01 | 302.69 | 342.35 | 302.29 |
| 345.06 | 302.22 | 345.55 | 302.17 | 347.45 | 302.05 | 347.86 | 301.98 | 348.44 | 301.93 |
| 350 | 301.87 | 350.69 | 301.83 | 353.54 | 301.77 | 355.39 | 301.74 | 358.09 | 301.72 |
| 360.09 | 301.7 | 361.48 | 301.7 | 362.05 | 301.71 | 367.11 | 301.89 | 372.36 | 302.07 |
| 376.93 | 302.23 | 378.11 | 302.28 | 382.17 | 302.44 | 383.11 | 302.51 | 385.23 | 302.59 |
| 389.2 | 302.7 | 390.14 | 302.72 | 392.79 | 302.71 | 402.35 | 302.39 | 403.09 | 302.3 |
| 404.56 | 302.2 | 404.67 | 302.2 | 407.66 | 302.37 | 408.86 | 302.42 | 410.23 | 302.46 |
| 412.51 | 302.5 | 417.34 | 302.47 | 418.44 | 302.41 | 419.72 | 302.31 | 420.75 | 302.27 |
| 422.27 | 302.24 | 424.09 | 302.23 | 425.85 | 302.24 | 427.38 | 302.26 | 429.38 | 302.33 |
| 430.12 | 302.34 | 431.22 | 302.34 | 436.21 | 302.32 | 440.72 | 302.31 | 442.33 | 302.24 |
| 446.32 | 302.24 | 455.86 | 302.26 | 459.27 | 302.26 | 462.56 | 302.23 | 463.37 | 302.23 |
| 466.03 | 302.19 | 469.59 | 302.16 | 473.49 | 302.15 | 476.26 | 302.15 | 477.31 | 302.13 |
| 477.63 | 302.1 | 478.45 | 302.07 | 480.17 | 302.06 | 485.75 | 302.05 | 488.33 | 302.03 |
| 488.47 | 302.06 | 490.8 | 301.99 | 496.36 | 301.8 | 496.66 | 301.77 | 497.8 | 301.7 |
| 500.77 | 301.57 | 505.88 | 301.37 | 508.73 | 301.31 | 509.4 | 301.3 | 513.39 | 301.21 |
| 515.04 | 301.18 | 517.16 | 301.13 | 517.88 | 301.12 | 525.65 | 300.96 | 526.6 | 300.95 |
| 529.55 | 300.89 | 530.94 | 300.87 | 533.56 | 300.85 | 537.81 | 300.83 | 538.94 | 300.82 |
| 541 | 300.82 | 543.88 | 300.78 | 545.63 | 300.74 | 546.61 | 300.74 | 547.53 | 300.76 |
| 549.52 | 300.78 | 552.93 | 300.8 | 554.62 | 300.82 | 556.65 | 300.82 | 564.14 | 300.85 |
| 569.43 | 300.88 | 576.91 | 301.05 | 577.03 | 301.05 | 582.64 | 301.2 | 583.62 | 301.21 |
| 589.55 | 301.35 | 591.65 | 301.42 | 594.64 | 301.51 | 598.47 | 301.66 | 599.71 | 301.72 |
| 601.05 | 301.75 | 601.7 | 301.74 | 603.88 | 301.67 | 606.64 | 301.47 | 607.2 | 301.44 |
| 608.08 | 301.43 | 609.15 | 301.44 | 610.1 | 301.42 | 611.43 | 301.44 | 613.44 | 301.48 |
| 614.34 | 301.49 | 620.62 | 301.6 | 622.72 | 301.62 | 624.62 | 301.63 | 626.52 | 301.63 |
| 626.78 | 301.62 | 628.59 | 301.62 | 631.7 | 301.6 | 637.64 | 301.57 | 639.29 | 301.56 |
| 639.6 | 301.55 | 640.91 | 301.55 | 655.68 | 301.57 | 657.41 | 301.56 | 658.85 | 301.54 |
| 660.24 | 301.5 | 663.81 | 301.38 | 664.44 | 301.37 | 667.9 | 301.29 | 668.99 | 301.26 |
| 673.54 | 301.15 | 676.49 | 301.07 | 677.62 | 301.03 | 680.34 | 300.96 | 683.68 | 300.87 |
| 684.13 | 300.85 | 685.47 | 300.82 | 686.79 | 300.78 | 689.84 | 300.71 | 691.89 | 300.65 |
| 693.59 | 300.61 | 697.91 | 300.5 | 701.62 | 300.42 | 704.83 | 300.38 | 705.37 | 300.37 |
| 708.23 | 300.35 | 713.46 | 300.33 | 716.55 | 300.36 | 718.04 | 300.41 | 720.94 | 300.49 |
| 729.47 | 300.73 | 731.05 | 300.77 | 731.37 | 300.83 | 732.2 | 300.84 | 733.43 | 300.8 |
| 744.98 | 300.67 | 745.52 | 300.67 | 746.75 | 300.64 | 755.65 | 300.37 | 759.3 | 300.2 |
| 760.65 | 300.13 | 762.53 | 299.98 | 763.64 | 299.99 | 764.1 | 300.02 | 765.69 | 300.1 |
| 766.61 | 300.13 | 767.85 | 300.14 | 767.94 | 300.27 | 768.97 | 300.43 | 769.26 | 300.44 |
| 771.22 | 300.4 | 772.05 | 300.39 | 775.1 | 300.34 | 775.87 | 300.32 | 777.2 | 300.32 |
| 779.11 | 300.35 | 780.75 | 300.36 | 782.04 | 300.38 | 782.85 | 300.37 | 784.11 | 300.31 |
| 785.47 | 300.28 | 786.9 | 300.26 | 789.02 | 300.24 | 789.27 | 300.25 | 790.97 | 300.25 |
| 794.35 | 300.29 | 795.32 | 300.31 | 795.8 | 300.3 | 798.5 | 300.35 | 799.42 | 300.38 |
| 801.25 | 300.47 | 803.59 | 300.52 | 804.62 | 300.56 | 806.79 | 300.62 | 813.53 | 300.82 |
| 815.06 | 300.85 | 815.58 | 300.85 | 816.42 | 300.87 | 818.22 | 300.95 | 819.03 | 300.97 |
| 819.37 | 300.96 | 822.77 | 300.98 | 823.48 | 301 | 825.08 | 301.03 | 827.62 | 301.14 |
| 830.65 | 301.26 | 831.43 | 301.28 | 833.86 | 301.36 | 836.6 | 301.46 | 837.61 | 301.49 |
| 840.58 | 301.61 | 843.6 | 301.72 | 844.45 | 301.78 | 845 | 301.8 | 845.46 | 301.78 |
| 846.12 | 301.79 | 846.38 | 301.81 | 846.99 | 301.81 | 847.66 | 301.83 | 848.75 | 301.94 |
| 850.59 | 302.14 | 851 | 302.21 | 851.23 | 302.28 | 852.19 | 302.37 | 853.33 | 302.54 |
| 854.31 | 302.64 | 856.68 | 302.72 | 857.87 | 302.83 | 858.88 | 302.86 | 860.3 | 302.99 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 861.71 | 303.07 | 864.33 | 303.24 | 866.12 | 303.36 | 868.31 | 303.49 | 869.71 | 303.56 |
| 871.07 | 303.64 | 871.35 | 303.64 | 872.51 | 303.8 | 873.57 | 303.9 | 874.9 | 304 |
| 876.26 | 304.09 | 877.26 | 304.09 | 878.59 | 304.21 | 879.82 | 304.28 | 881.16 | 304.23 |
| 885.35 | 304.03 | 886.52 | 304.01 | 888.18 | 304.05 | 889.35 | 304.15 | 890.39 | 304.3 |
| 892.1 | 304.65 | 893.54 | 304.76 | 894.04 | 304.82 | 895.8 | 304.99 | 899.51 | 305.54 |
| 900.41 | 305.59 | 901.44 | 305.61 | 902.36 | 305.64 | 904.84 | 305.67 | 906.73 | 305.68 |
| 907.79 | 305.68 | 909.42 | 305.66 | 912.27 | 305.61 | 915.19 | 305.52 | 916 | 305.51 |
| 917.39 | 305.51 | 918.17 | 305.52 | 919.34 | 305.55 | 922.41 | 305.66 | 924.43 | 305.75 |
| 926.16 | 305.82 | 927.69 | 305.89 | 930.36 | 306.04 | 937.85 | 306.21 | 939.57 | 306.24 |
| 939.79 | 306.25 | 941.77 | 306.25 | 944.73 | 306.26 | 946.27 | 306.26 | 948.27 | 306.24 |
| 949.29 | 306.24 | 950.44 | 306.23 | 954.35 | 306.28 | 962.59 | 306.38 | 963.57 | 306.38 |
| 967.14 | 306.43 | 967.68 | 306.43 | 969.62 | 306.45 | 971.48 | 306.45 | 972.47 | 306.42 |
| 973.91 | 306.42 | 975.43 | 306.39 | 976.83 | 306.35 | 977.73 | 306.31 | 977.84 | 306.28 |
| 977.93 | 306.11 | 978.31 | 306.05 | 978.51 | 306.05 | 978.73 | 306.12 | 979.63 | 306.18 |
| 980.63 | 306.23 | 981.04 | 306.24 | 986.1 | 306.3 | 991.73 | 306.39 | 996.73 | 306.46 |
| 999.23 | 306.49 | 1004.63 | 306.57 | 1010.4 | 306.62 | 1011.32 | 306.61 | 1012.69 | 306.52 |
| 1014.52 | 306.47 | 1017.04 | 306.47 | 1020.16 | 306.66 | 1021.49 | 306.72 | 1026.77 | 306.81 |
| 1028.98 | 306.84 | 1030 | 306.84 | 1031.82 | 306.86 | 1032.83 | 306.86 | 1033.03 | 306.85 |
| 1033.66 | 306.71 | 1034.21 | 306.73 | 1034.64 | 306.69 | 1035.14 | 306.76 | 1035.4 | 306.77 |
| 1036.67 | 306.87 | 1037.91 | 306.95 | 1038.63 | 306.95 | 1043.39 | 306.98 | 1043.91 | 306.97 |
| 1046.08 | 306.97 | 1048.54 | 306.93 | 1051.27 | 306.86 | 1052.33 | 306.85 | 1053.94 | 306.81 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 127.32 | .04 | 846.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 127.32 | 846.38 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2783.77*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.52 | .55 | 324.52 | 6.5 | 324.29 | 7.33 | 324.27 | 10.16 | 324.25 |
| 11.69 | 324.23 | 13.51 | 324.22 | 17.81 | 324.12 | 17.98 | 324.11 | 20.12 | 324.05 |
| 21.24 | 324.01 | 22.85 | 323.98 | 24.45 | 323.93 | 24.97 | 323.9 | 25.98 | 323.81 |
| 27.17 | 323.68 | 28.05 | 323.57 | 29.42 | 323.42 | 31.18 | 323.18 | 33.19 | 322.88 |
| 34.95 | 322.65 | 36.95 | 322.46 | 39 | 322.4 | 39.95 | 322.35 | 40.81 | 322.28 |
| 42.06 | 322.21 | 43.45 | 322.1 | 46.22 | 321.92 | 47.41 | 321.86 | 48.47 | 321.79 |
| 48.97 | 321.77 | 51.4 | 321.63 | 52.22 | 321.6 | 53.05 | 321.55 | 54.32 | 321.46 |
| 55.63 | 321.41 | 56.6 | 321.32 | 57.65 | 321.3 | 58.96 | 321.24 | 60.5 | 321.16 |
| 61.63 | 321.04 | 63.3 | 320.95 | 67.05 | 320.77 | 67.6 | 320.73 | 68.75 | 320.69 |
| 69.35 | 320.69 | 71.54 | 320.71 | 74.58 | 320.77 | 75.88 | 320.76 | 76.62 | 320.78 |
| 78.6 | 320.78 | 80.11 | 320.81 | 82.4 | 320.82 | 82.64 | 320.81 | 83.59 | 320.83 |
| 85.21 | 320.81 | 86.53 | 320.74 | 89.17 | 320.54 | 90.56 | 320.46 | 92.68 | 320.32 |
| 97.4 | 320.06 | 100.04 | 319.93 | 100.66 | 319.93 | 101.79 | 319.91 | 103.13 | 319.85 |
| 103.52 | 319.82 | 103.61 | 319.65 | 104.58 | 318.16 | 105.06 | 317.33 | 105.27 | 316.99 |
| 105.6 | 316.52 | 106.5 | 315.72 | 107.18 | 315.42 | 108.14 | 314.92 | 109.05 | 314.56 |
| 109.97 | 314.08 | 110.65 | 313.8 | 111.6 | 313.23 | 112.94 | 312.64 | 113.5 | 312.36 |
| 115.41 | 311.49 | 117.09 | 310.76 | 118.49 | 310.08 | 120.28 | 309.23 | 121.18 | 308.79 |
| 122.94 | 308 | 123.22 | 307.8 | 123.89 | 307.39 | 124.85 | 306.88 | 125.49 | 306.48 |
| 125.92 | 306.24 | 126.62 | 305.95 | 127.23 | 305.67 | 128.6 | 305.06 | 129.46 | 304.6 |
| 130.37 | 304.17 | 131.38 | 303.66 | 132.38 | 303.25 | 133.53 | 302.82 | 134.12 | 302.61 |
| 134.85 | 302.39 | 136.56 | 301.79 | 137.08 | 301.59 | 139.11 | 301.58 | 139.99 | 301.72 |
| 140.15 | 301.65 | 141.02 | 301.63 | 141.84 | 301.63 | 142.93 | 301.66 | 143.28 | 301.64 |
| 145.09 | 301.65 | 147.96 | 301.69 | 152.25 | 301.76 | 155.01 | 301.8 | 163.71 | 301.92 |
| 166.4 | 301.94 | 166.93 | 301.95 | 169.84 | 301.94 | 177.08 | 301.95 | 185.12 | 301.95 |
| 187.19 | 301.98 | 193.56 | 302.08 | 198.17 | 302.08 | 198.88 | 302.09 | 202.75 | 302.09 |
| 203.95 | 302.06 | 206.1 | 302.09 | 207.84 | 302.13 | 212.94 | 302.21 | 216.65 | 302.29 |
| 219.79 | 302.35 | 224.59 | 302.35 | 227.2 | 302.37 | 233.28 | 302.38 | 234.53 | 302.39 |
| 237.19 | 302.4 | 240.77 | 302.4 | 243.58 | 302.43 | 244.48 | 302.43 | 255.95 | 302.38 |
| 263.5 | 302.36 | 264.23 | 302.36 | 269.57 | 302.34 | 270.56 | 302.28 | 275.36 | 302.13 |
| 276.92 | 302.1 | 279.43 | 302.07 | 284.95 | 302.08 | 291.81 | 302.08 | 292.46 | 302.07 |
| 294.09 | 302.09 | 296.02 | 302.08 | 297.8 | 302.09 | 302.49 | 302.08 | 305.87 | 302.07 |
| 308.74 | 302.05 | 310.03 | 302.06 | 312.57 | 302.06 | 313.21 | 302.05 | 314.7 | 302.01 |
| 316.92 | 301.96 | 321.61 | 301.87 | 321.89 | 301.87 | 338.29 | 301.5 | 338.67 | 301.5 |
| 340.85 | 301.45 | 341.31 | 301.4 | 343.12 | 301.29 | 343.5 | 301.23 | 344.58 | 301.16 |
| 345.04 | 301.15 | 346.69 | 301.08 | 350.62 | 301.01 | 351.75 | 301.01 | 355.07 | 300.98 |
| 356.92 | 300.98 | 359.03 | 301.05 | 359.07 | 301.06 | 361.71 | 301.14 | 370.22 | 301.43 |
| 371.01 | 301.45 | 372.12 | 301.5 | 375.96 | 301.65 | 376.85 | 301.7 | 378.86 | 301.78 |
| 382.61 | 301.88 | 384.18 | 301.89 | 386 | 301.88 | 388 | 301.81 | 395.05 | 301.57 |
| 395.75 | 301.49 | 397.24 | 301.4 | 400.07 | 301.55 | 401.21 | 301.6 | 402.5 | 301.63 |
| 404.67 | 301.66 | 409.24 | 301.64 | 410.28 | 301.58 | 411.49 | 301.49 | 412.46 | 301.46 |
| 413.89 | 301.43 | 415.62 | 301.42 | 417.29 | 301.43 | 418.73 | 301.45 | 421.33 | 301.53 |
| 422.37 | 301.53 | 431.57 | 301.49 | 432.12 | 301.46 | 432.87 | 301.44 | 436.65 | 301.44 |
| 445.67 | 301.47 | 448.9 | 301.47 | 452.02 | 301.46 | 455.29 | 301.43 | 458.67 | 301.41 |
| 462.36 | 301.4 | 463.18 | 301.41 | 464.23 | 301.41 | 465.97 | 301.39 | 467.04 | 301.34 |
| 468.68 | 301.34 | 473.95 | 301.33 | 475.2 | 301.33 | 476.4 | 301.31 | 476.52 | 301.35 |
| 478.73 | 301.29 | 483.15 | 301.15 | 483.99 | 301.12 | 484.28 | 301.09 | 485.61 | 301.02 |
| 487.04 | 300.97 | 489.36 | 300.87 | 493 | 300.75 | 495.7 | 300.69 | 498.44 | 300.63 |
| 502.8 | 300.55 | 504.35 | 300.51 | 515.39 | 300.3 | 519.18 | 300.27 | 521.34 | 300.26 |
| 523.2 | 300.26 | 524.28 | 300.24 | 526.22 | 300.25 | 528.94 | 300.21 | 530.29 | 300.2 |
| 530.43 | 300.19 | 531.53 | 300.19 | 534.29 | 300.22 | 539.11 | 300.24 | 541.03 | 300.24 |
| 548.11 | 300.27 | 553.46 | 300.3 | 560.2 | 300.44 | 560.31 | 300.44 | 565.61 | 300.57 |
| 567.76 | 300.6 | 571.76 | 300.7 | 572.15 | 300.7 | 576.97 | 300.85 | 580.6 | 300.98 |
| 581.42 | 301.02 | 583.04 | 301.06 | 583.65 | 301.05 | 585.32 | 301 | 585.71 | 300.98 |
| 588.33 | 300.81 | 588.86 | 300.78 | 590.78 | 300.78 | 591.59 | 300.76 | 592.32 | 300.78 |
| 592.86 | 300.78 | 594.75 | 300.82 | 595.61 | 300.83 | 601.55 | 300.92 | 603.53 | 300.94 |
| 605.34 | 300.95 | 609.09 | 300.95 | 612.03 | 300.93 | 617.65 | 300.9 | 619.21 | 300.9 |
| 619.5 | 300.89 | 620.74 | 300.89 | 634.72 | 300.93 | 637.36 | 300.91 | 639.03 | 300.87 |
| 642.41 | 300.77 | 646.28 | 300.69 | 647.31 | 300.66 | 651.61 | 300.57 | 654.41 | 300.49 |
| 654.63 | 300.49 | 656.91 | 300.41 | 658.34 | 300.37 | 661.21 | 300.3 | 661.63 | 300.28 |
| 662.9 | 300.25 | 664.15 | 300.21 | 665.82 | 300.18 | 667 | 300.15 | 667.04 | 300.14 |
| 670.59 | 300.05 | 674.67 | 299.94 | 675.63 | 299.92 | 677.25 | 299.87 | 681.21 | 299.82 |
| 681.73 | 299.81 | 684.44 | 299.78 | 686.72 | 299.77 | 689.38 | 299.75 | 692.31 | 299.78 |
| 693.72 | 299.81 | 696.46 | 299.88 | 704.53 | 300.08 | 706.03 | 300.12 | 706.32 | 300.17 |
| 707.11 | 300.17 | 708.28 | 300.14 | 719.2 | 300.02 | 720.87 | 299.98 | 727.4 | 299.8 |
| 729.29 | 299.74 | 732.75 | 299.59 | 733.89 | 299.53 | 735.8 | 299.38 | 737.18 | 299.4 |
| 737.28 | 299.44 | 737.74 | 299.46 | 739.7 | 299.61 | 740.84 | 299.67 | 742.37 | 299.68 |
| 742.48 | 299.79 | 743.75 | 299.94 | 744.85 | 299.92 | 746.53 | 299.86 | 747.55 | 299.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 752.26 | 299.73 | 753.9 | 299.73 | 756.26 | 299.79 | 759.88 | 299.86 | 761.43 | 299.87 |
| 762.42 | 299.83 | 764.11 | 299.81 | 767.06 | 299.79 | 770.89 | 299.79 | 775.06 | 299.84 |
| 776.4 | 299.85 | 776.85 | 299.82 | 780.17 | 299.86 | 783 | 299.96 | 783.57 | 299.97 |
| 784.7 | 299.97 | 786.46 | 299.99 | 788.09 | 300.04 | 788.66 | 300.04 | 790.76 | 300.09 |
| 792.86 | 300.13 | 798.71 | 300.26 | 801.98 | 300.26 | 803.52 | 300.31 | 804.51 | 300.36 |
| 805.39 | 300.38 | 805.92 | 300.35 | 808.33 | 300.3 | 810.12 | 300.29 | 812.89 | 300.32 |
| 815.48 | 300.41 | 815.7 | 300.43 | 817.61 | 300.49 | 819.84 | 300.55 | 824.8 | 300.65 |
| 828.43 | 300.74 | 829.63 | 300.78 | 835.81 | 300.96 | 837.17 | 301.03 | 837.99 | 301.04 |
| 838.52 | 301.06 | 839.24 | 301.16 | 840.17 | 301.21 | 840.52 | 301.24 | 841.59 | 301.39 |
| 842.91 | 301.59 | 843.43 | 301.68 | 843.83 | 301.79 | 844.06 | 301.91 | 845.45 | 302.12 |
| 846.15 | 302.26 | 847.13 | 302.38 | 849.48 | 302.52 | 850.67 | 302.66 | 851.66 | 302.72 |
| 853.08 | 302.88 | 854.48 | 302.96 | 858.86 | 303.23 | 860.57 | 303.32 | 863.78 | 303.46 |
| 864.07 | 303.46 | 865.21 | 303.61 | 866.27 | 303.69 | 868.31 | 303.82 | 868.94 | 303.85 |
| 869.94 | 303.85 | 871.26 | 303.94 | 872.64 | 304.01 | 873.82 | 303.96 | 877.98 | 303.76 |
| 878.46 | 303.77 | 879.15 | 303.74 | 880.8 | 303.78 | 881.96 | 303.86 | 882.99 | 303.99 |
| 884.69 | 304.3 | 885.84 | 304.38 | 886.02 | 304.38 | 886.62 | 304.45 | 888.2 | 304.58 |
| 892.06 | 305.08 | 892.96 | 305.12 | 893.98 | 305.14 | 894.89 | 305.17 | 897.35 | 305.19 |
| 899.23 | 305.2 | 900.29 | 305.2 | 901.91 | 305.18 | 904.75 | 305.13 | 906.91 | 305.06 |
| 909.22 | 305.03 | 909.84 | 305.03 | 911.35 | 305.05 | 912.56 | 305.09 | 913.2 | 305.12 |
| 915.01 | 305.18 | 918.55 | 305.33 | 920.07 | 305.4 | 922.72 | 305.55 | 930.17 | 305.74 |
| 931.88 | 305.78 | 933.74 | 305.79 | 937.01 | 305.8 | 938.55 | 305.81 | 940.53 | 305.79 |
| 942.69 | 305.78 | 946.58 | 305.83 | 954.76 | 305.92 | 955.74 | 305.92 | 959.29 | 305.96 |
| 959.53 | 305.97 | 960.75 | 305.97 | 962.44 | 305.99 | 963.61 | 305.98 | 964.59 | 305.95 |
| 965.56 | 305.95 | 967.06 | 305.93 | 967.53 | 305.9 | 968.93 | 305.87 | 969.51 | 305.85 |
| 969.92 | 305.8 | 970.01 | 305.65 | 970.23 | 305.61 | 970.6 | 305.6 | 970.81 | 305.65 |
| 972.7 | 305.75 | 973.11 | 305.75 | 976.38 | 305.78 | 978.14 | 305.8 | 981.95 | 305.85 |
| 983.74 | 305.87 | 987.3 | 305.92 | 988.7 | 305.93 | 991.19 | 305.96 | 996.56 | 306.02 |
| 1001.16 | 306.06 | 1001.35 | 306.07 | 1003.21 | 306.07 | 1004.57 | 305.99 | 1006.39 | 305.94 |
| 1008.89 | 305.94 | 1012 | 306.11 | 1013.32 | 306.16 | 1018.57 | 306.25 | 1020.14 | 306.27 |
| 1023.59 | 306.29 | 1024.79 | 306.28 | 1025.42 | 306.16 | 1025.96 | 306.18 | 1026.34 | 306.16 |
| 1027.15 | 306.21 | 1028.41 | 306.31 | 1029.65 | 306.37 | 1030.36 | 306.37 | 1035.09 | 306.4 |
| 1039.14 | 306.37 | 1040.21 | 306.35 | 1042.85 | 306.28 | 1043.98 | 306.26 | 1045.58 | 306.22 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 134.85 | .04 | 839.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 134.85 | 839.24 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2735.65*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.19 | .58 | 324.2 | 4.14 | 324.02 | 6.87 | 323.89 | 7.73 | 323.86 |
| 8.12 | 323.86 | 12.34 | 323.83 | 14.26 | 323.83 | 18.8 | 323.76 | 18.99 | 323.75 |
| 21.24 | 323.7 | 23.08 | 323.65 | 24.13 | 323.63 | 26.06 | 323.56 | 27.22 | 323.42 |
| 28.68 | 323.22 | 29.62 | 323.07 | 31.06 | 322.87 | 32.07 | 322.68 | 32.92 | 322.54 |
| 34.67 | 322.17 | 36.45 | 321.87 | 37.44 | 321.72 | 39.01 | 321.54 | 39.56 | 321.49 |
| 40.57 | 321.42 | 42.18 | 321.28 | 43.09 | 321.17 | 44.41 | 321.06 | 46.34 | 320.84 |
| 48.81 | 320.61 | 50.06 | 320.52 | 51.04 | 320.44 | 54.27 | 320.2 | 56.02 | 320.09 |
| 57.36 | 319.94 | 58.74 | 319.88 | 59.77 | 319.75 | 60.87 | 319.71 | 62.26 | 319.63 |
| 63.88 | 319.52 | 65.07 | 319.34 | 66.84 | 319.21 | 70.8 | 318.94 | 71.38 | 318.89 |
| 72.2 | 318.84 | 73.23 | 318.83 | 75.54 | 318.86 | 75.89 | 318.88 | 77.27 | 318.91 |
| 78.75 | 318.96 | 80.05 | 318.95 | 80.91 | 318.99 | 82.99 | 319 | 84.58 | 319.06 |
| 86.82 | 319.08 | 87.26 | 319.07 | 87.79 | 319.1 | 89.6 | 319.1 | 90.22 | 319.08 |
| 91.37 | 318.99 | 93.75 | 318.74 | 97.58 | 318.43 | 102.65 | 318.06 | 103.06 | 318.04 |
| 105.63 | 317.87 | 106.28 | 317.87 | 107.47 | 317.85 | 109.31 | 317.74 | 109.4 | 317.58 |
| 109.88 | 316.96 | 110.42 | 316.24 | 110.93 | 315.49 | 111.5 | 314.78 | 112.08 | 314.35 |
| 112.46 | 314.09 | 112.95 | 313.88 | 113.17 | 313.81 | 114.18 | 313.37 | 114.99 | 313.11 |
| 115.34 | 312.97 | 116.12 | 312.62 | 116.83 | 312.36 | 117.84 | 311.85 | 119.26 | 311.3 |
| 119.84 | 311.04 | 121.5 | 310.38 | 123.63 | 309.56 | 124.77 | 309.09 | 125.82 | 308.64 |
| 127.96 | 307.74 | 129.81 | 307 | 130.19 | 306.73 | 130.82 | 306.34 | 131.83 | 305.82 |
| 132.5 | 305.42 | 132.96 | 305.2 | 133.7 | 304.92 | 134.34 | 304.66 | 135.79 | 304.09 |
| 136.69 | 303.67 | 137.66 | 303.26 | 138.73 | 302.77 | 139.77 | 302.38 | 140.99 | 301.96 |
| 141.69 | 301.76 | 142.39 | 301.58 | 144 | 301.06 | 144.49 | 300.88 | 146.4 | 300.87 |
| 147.23 | 300.99 | 147.38 | 300.93 | 148.97 | 300.91 | 150.01 | 300.93 | 150.34 | 300.92 |
| 152.68 | 300.93 | 154.75 | 300.96 | 158.79 | 301.01 | 161.4 | 301.05 | 169.6 | 301.14 |
| 171.61 | 301.16 | 175.38 | 301.15 | 182.21 | 301.16 | 183.56 | 301.15 | 189.79 | 301.15 |
| 191.75 | 301.17 | 197.75 | 301.25 | 202.1 | 301.26 | 204.82 | 301.26 | 206.42 | 301.27 |
| 206.73 | 301.25 | 207.55 | 301.24 | 209.05 | 301.25 | 209.57 | 301.27 | 216.02 | 301.39 |
| 219.52 | 301.47 | 222.09 | 301.52 | 227.01 | 301.53 | 229.47 | 301.55 | 229.73 | 301.56 |
| 234.36 | 301.57 | 236.38 | 301.59 | 238.89 | 301.6 | 242.26 | 301.6 | 244.91 | 301.63 |
| 245.77 | 301.63 | 256.59 | 301.57 | 263.7 | 301.54 | 264.39 | 301.53 | 269.43 | 301.51 |
| 270.36 | 301.46 | 271.53 | 301.42 | 274.89 | 301.32 | 276.36 | 301.28 | 278.14 | 301.26 |
| 283.93 | 301.26 | 284.29 | 301.25 | 288.61 | 301.25 | 289.32 | 301.24 | 296.05 | 301.24 |
| 300.64 | 301.23 | 303.05 | 301.21 | 305.24 | 301.21 | 305.84 | 301.2 | 307.58 | 301.2 |
| 308.74 | 301.21 | 309.97 | 301.2 | 311.34 | 301.18 | 314.08 | 301.12 | 318.5 | 301.05 |
| 318.76 | 301.04 | 336.64 | 300.67 | 337.08 | 300.62 | 338.78 | 300.53 | 339.14 | 300.48 |
| 339.66 | 300.44 | 341.66 | 300.36 | 342.82 | 300.33 | 343.31 | 300.33 | 345.48 | 300.29 |
| 350.05 | 300.26 | 351.8 | 300.26 | 353.82 | 300.32 | 360.99 | 300.55 | 364.33 | 300.65 |
| 366.13 | 300.72 | 369.75 | 300.85 | 370.59 | 300.9 | 372.48 | 300.96 | 376.03 | 301.06 |
| 376.86 | 301.07 | 379.22 | 301.04 | 381.11 | 300.98 | 387.75 | 300.75 | 388.41 | 300.68 |
| 389.82 | 300.6 | 392.49 | 300.73 | 393.56 | 300.77 | 394.78 | 300.8 | 396.82 | 300.83 |
| 401.13 | 300.81 | 402.11 | 300.76 | 403.25 | 300.68 | 404.17 | 300.65 | 405.52 | 300.63 |
| 407.15 | 300.62 | 408.72 | 300.63 | 410.08 | 300.65 | 411.87 | 300.7 | 413.51 | 300.71 |
| 417.96 | 300.69 | 422.19 | 300.68 | 422.71 | 300.65 | 423.42 | 300.63 | 426.98 | 300.63 |
| 435.49 | 300.68 | 438.53 | 300.69 | 442.19 | 300.68 | 444.56 | 300.66 | 447.74 | 300.65 |
| 451.22 | 300.65 | 452 | 300.66 | 453.69 | 300.66 | 454.63 | 300.65 | 455.64 | 300.61 |
| 463.34 | 300.61 | 464.46 | 300.6 | 464.58 | 300.63 | 466.66 | 300.58 | 471.62 | 300.45 |
| 471.89 | 300.42 | 473.15 | 300.36 | 473.89 | 300.34 | 476.24 | 300.24 | 477.62 | 300.2 |
| 480.11 | 300.12 | 483.26 | 300.06 | 490.82 | 299.91 | 497.75 | 299.78 | 498.6 | 299.76 |
| 501.23 | 299.72 | 501.43 | 299.71 | 504.81 | 299.68 | 508.6 | 299.68 | 509.61 | 299.67 |
| 511.45 | 299.68 | 514.81 | 299.65 | 515.58 | 299.63 | 516.45 | 299.63 | 517.27 | 299.65 |
| 519.05 | 299.65 | 522.09 | 299.66 | 523.6 | 299.67 | 525.41 | 299.67 | 532.09 | 299.69 |
| 536.81 | 299.71 | 537.58 | 299.72 | 543.49 | 299.83 | 543.59 | 299.84 | 549.1 | 299.95 |
| 550.61 | 299.97 | 555.28 | 300.07 | 556.63 | 300.11 | 559.3 | 300.18 | 562.72 | 300.29 |
| 563.49 | 300.33 | 565.02 | 300.36 | 565.6 | 300.36 | 567.17 | 300.32 | 570.01 | 300.15 |
| 571.29 | 300.12 | 572.24 | 300.13 | 573.09 | 300.11 | 574.28 | 300.13 | 576.88 | 300.16 |
| 582.48 | 300.25 | 584.35 | 300.27 | 586.05 | 300.28 | 587.97 | 300.28 | 589.59 | 300.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 597.67 | 300.24 | 599.14 | 300.24 | 599.41 | 300.23 | 600.58 | 300.23 | 613.75 | 300.28 |
| 615.3 | 300.28 | 616.58 | 300.27 | 617.83 | 300.24 | 621.01 | 300.15 | 624.66 | 300.09 |
| 630.64 | 299.97 | 632.32 | 299.92 | 634.68 | 299.83 | 636.03 | 299.8 | 638.74 | 299.73 |
| 639.14 | 299.71 | 640.33 | 299.68 | 641.51 | 299.64 | 643.09 | 299.61 | 647.58 | 299.49 |
| 653.86 | 299.31 | 654.74 | 299.3 | 658.08 | 299.24 | 660.64 | 299.21 | 662.79 | 299.19 |
| 665.3 | 299.18 | 668.06 | 299.19 | 668.99 | 299.2 | 669.39 | 299.22 | 671.97 | 299.27 |
| 681 | 299.46 | 681.28 | 299.5 | 682.02 | 299.51 | 683.12 | 299.48 | 693.42 | 299.36 |
| 693.91 | 299.36 | 703.32 | 299.1 | 707.27 | 298.92 | 709.08 | 298.79 | 710.71 | 298.82 |
| 710.83 | 298.87 | 711.38 | 298.9 | 713.71 | 299.12 | 715.07 | 299.21 | 716.89 | 299.22 |
| 717.02 | 299.32 | 718.53 | 299.44 | 718.95 | 299.45 | 721.84 | 299.32 | 726.53 | 299.2 |
| 728.66 | 299.14 | 730.6 | 299.14 | 735.81 | 299.29 | 736.73 | 299.31 | 737.71 | 299.35 |
| 738.9 | 299.38 | 740.19 | 299.37 | 740.74 | 299.35 | 742.36 | 299.34 | 742.74 | 299.33 |
| 744.52 | 299.34 | 744.84 | 299.33 | 748.31 | 299.33 | 750.81 | 299.34 | 755.76 | 299.38 |
| 757.19 | 299.4 | 757.59 | 299.36 | 758.69 | 299.35 | 761.85 | 299.38 | 765.21 | 299.46 |
| 765.89 | 299.47 | 769.33 | 299.45 | 771.26 | 299.51 | 772.95 | 299.52 | 775.76 | 299.57 |
| 776.94 | 299.58 | 784.53 | 299.7 | 786.82 | 299.65 | 788.15 | 299.66 | 789.62 | 299.71 |
| 790.97 | 299.78 | 791.84 | 299.79 | 792.47 | 299.74 | 795.34 | 299.64 | 797.28 | 299.6 |
| 798.5 | 299.6 | 800.85 | 299.62 | 803.84 | 299.7 | 804.58 | 299.75 | 805.4 | 299.76 |
| 806.37 | 299.79 | 809.02 | 299.84 | 813.73 | 299.89 | 817.75 | 299.96 | 819.24 | 299.99 |
| 820.67 | 300.03 | 823.59 | 300.1 | 828.03 | 300.2 | 830.07 | 300.28 | 830.76 | 300.28 |
| 831.72 | 300.43 | 832.1 | 300.52 | 833.03 | 300.61 | 834.44 | 300.84 | 835.74 | 301.1 |
| 836.27 | 301.22 | 836.66 | 301.38 | 836.89 | 301.55 | 837.84 | 301.72 | 838.77 | 301.93 |
| 839.22 | 302.02 | 839.94 | 302.11 | 842.48 | 302.35 | 843.46 | 302.49 | 844.45 | 302.58 |
| 845.86 | 302.77 | 849.84 | 303 | 851.61 | 303.11 | 853.31 | 303.19 | 855.15 | 303.24 |
| 856.5 | 303.29 | 856.78 | 303.29 | 857.92 | 303.41 | 861.19 | 303.59 | 861.63 | 303.61 |
| 862.62 | 303.6 | 863.93 | 303.68 | 865.15 | 303.73 | 866.48 | 303.69 | 870.61 | 303.5 |
| 871.77 | 303.48 | 873.41 | 303.5 | 874.56 | 303.57 | 875.62 | 303.69 | 877.29 | 303.95 |
| 878.43 | 304.02 | 880.77 | 304.19 | 883.6 | 304.51 | 884.6 | 304.63 | 885.5 | 304.66 |
| 886.51 | 304.68 | 889.87 | 304.72 | 894.4 | 304.7 | 897.22 | 304.65 | 900 | 304.57 |
| 901.74 | 304.56 | 902.28 | 304.55 | 904.2 | 304.58 | 906.39 | 304.66 | 907.43 | 304.69 |
| 909.23 | 304.76 | 909.95 | 304.8 | 910.94 | 304.84 | 913.86 | 305 | 915.09 | 305.05 |
| 922.49 | 305.27 | 924.41 | 305.32 | 926.04 | 305.32 | 926.36 | 305.33 | 929.3 | 305.34 |
| 930.82 | 305.35 | 932.79 | 305.33 | 933.8 | 305.34 | 934.94 | 305.33 | 938.8 | 305.38 |
| 946.94 | 305.46 | 947.91 | 305.46 | 951.44 | 305.5 | 953.89 | 305.52 | 955.73 | 305.51 |
| 956.71 | 305.48 | 958.13 | 305.47 | 959.23 | 305.45 | 960.14 | 305.4 | 961.6 | 305.36 |
| 962.01 | 305.32 | 962.1 | 305.19 | 962.68 | 305.14 | 962.9 | 305.19 | 964.77 | 305.27 |
| 965.17 | 305.27 | 970.18 | 305.3 | 973.97 | 305.33 | 979.28 | 305.39 | 983.15 | 305.42 |
| 988.49 | 305.48 | 993.07 | 305.52 | 994.19 | 305.52 | 994.81 | 305.53 | 996.46 | 305.45 |
| 998.26 | 305.41 | 1000.75 | 305.41 | 1003.83 | 305.57 | 1005.15 | 305.61 | 1008.12 | 305.66 |
| 1009.25 | 305.67 | 1010.37 | 305.69 | 1011.93 | 305.7 | 1013.56 | 305.72 | 1016.36 | 305.73 |
| 1016.56 | 305.72 | 1017.18 | 305.61 | 1017.72 | 305.63 | 1018.15 | 305.6 | 1018.49 | 305.64 |
| 1019.29 | 305.68 | 1020.15 | 305.74 | 1021.38 | 305.8 | 1026.84 | 305.82 | 1029.45 | 305.8 |
| 1031.88 | 305.76 | 1034.5 | 305.69 | 1035.09 | 305.69 | 1035.63 | 305.67 | 1037.22 | 305.64 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 142.39 | .04 | 832.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 142.39 | 832.1 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2687.53*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.87 | .61 | 323.87 | 7.23 | 323.48 | 8.14 | 323.45 | 11.29 | 323.44 |
| 12.99 | 323.44 | 13.23 | 323.43 | 15.02 | 323.44 | 19.8 | 323.4 | 19.99 | 323.39 |
| 22.36 | 323.36 | 25.41 | 323.27 | 27.44 | 323.19 | 28.66 | 323.02 | 30.2 | 322.76 |
| 31.18 | 322.57 | 32.71 | 322.32 | 33.77 | 322.07 | 34.67 | 321.89 | 36.51 | 321.42 |
| 38.38 | 321.03 | 39.42 | 320.84 | 41.21 | 320.59 | 42.72 | 320.43 | 43.85 | 320.28 |
| 44.38 | 320.22 | 45.37 | 320.06 | 46.76 | 319.9 | 48.3 | 319.68 | 49.19 | 319.57 |
| 49.72 | 319.49 | 51.39 | 319.3 | 52.7 | 319.19 | 53.41 | 319.11 | 54.45 | 319.02 |
| 57.15 | 318.77 | 58.98 | 318.62 | 60.4 | 318.42 | 61.85 | 318.34 | 62.93 | 318.17 |
| 63.53 | 318.16 | 65.55 | 318.01 | 67.26 | 317.87 | 68.52 | 317.63 | 70.38 | 317.46 |
| 74.39 | 317.12 | 74.55 | 317.12 | 75.15 | 317.05 | 76.44 | 316.97 | 77.11 | 316.97 |
| 79.54 | 317.02 | 79.91 | 317.04 | 81.36 | 317.08 | 82.91 | 317.16 | 84.29 | 317.15 |
| 85.19 | 317.2 | 87.11 | 317.22 | 89.06 | 317.3 | 89.54 | 317.3 | 91.42 | 317.35 |
| 91.88 | 317.33 | 92.43 | 317.37 | 92.93 | 317.38 | 94.35 | 317.38 | 94.99 | 317.35 |
| 96.21 | 317.24 | 98.71 | 316.92 | 100.68 | 316.73 | 103.04 | 316.49 | 108.08 | 316.05 |
| 111.23 | 315.81 | 111.91 | 315.81 | 113.38 | 315.78 | 115.09 | 315.65 | 115.19 | 315.51 |
| 116.27 | 314.33 | 116.45 | 314.09 | 117.03 | 313.4 | 117.39 | 313.05 | 118.01 | 312.67 |
| 118.41 | 312.45 | 118.93 | 312.26 | 119.77 | 312 | 120.22 | 311.83 | 121.24 | 311.55 |
| 122.26 | 311.16 | 123.01 | 310.93 | 124.08 | 310.46 | 125.57 | 309.96 | 126.18 | 309.72 |
| 128.31 | 308.98 | 130.35 | 308.31 | 131.74 | 307.8 | 132.48 | 307.52 | 134.53 | 306.77 |
| 134.73 | 306.69 | 136.68 | 306 | 136.99 | 305.77 | 137.74 | 305.29 | 138.55 | 304.9 |
| 139.51 | 304.36 | 140 | 304.16 | 141.33 | 303.7 | 141.45 | 303.65 | 142.98 | 303.12 |
| 143.93 | 302.73 | 144.42 | 302.55 | 146.07 | 301.88 | 147.17 | 301.51 | 148.45 | 301.11 |
| 149.19 | 300.93 | 149.92 | 300.78 | 151.44 | 300.33 | 151.9 | 300.17 | 153.69 | 300.16 |
| 154.47 | 300.26 | 154.62 | 300.21 | 155.93 | 300.19 | 157.14 | 300.21 | 157.39 | 300.2 |
| 158.99 | 300.2 | 159.59 | 300.21 | 165.34 | 300.27 | 167.79 | 300.29 | 175.49 | 300.36 |
| 176.81 | 300.37 | 178.35 | 300.37 | 180.83 | 300.36 | 187.33 | 300.36 | 188.61 | 300.35 |
| 191.38 | 300.35 | 192.55 | 300.34 | 196.3 | 300.36 | 201.94 | 300.43 | 206.02 | 300.43 |
| 206.65 | 300.44 | 208.58 | 300.43 | 210.08 | 300.44 | 211.15 | 300.41 | 212.25 | 300.42 |
| 214.59 | 300.48 | 219.1 | 300.56 | 221.98 | 300.64 | 224.81 | 300.7 | 229.43 | 300.71 |
| 231.99 | 300.75 | 236.34 | 300.77 | 237.13 | 300.77 | 240.59 | 300.8 | 243.76 | 300.8 |
| 245.51 | 300.82 | 247.06 | 300.82 | 257.22 | 300.75 | 263.9 | 300.71 | 264.55 | 300.71 |
| 269.28 | 300.68 | 270.16 | 300.63 | 271.25 | 300.6 | 274.41 | 300.5 | 275.8 | 300.47 |
| 277.47 | 300.45 | 278.71 | 300.45 | 287.3 | 300.41 | 288.98 | 300.4 | 291.01 | 300.4 |
| 292.36 | 300.39 | 293.83 | 300.39 | 294.29 | 300.4 | 298.45 | 300.37 | 300.88 | 300.36 |
| 302.93 | 300.36 | 303.5 | 300.35 | 305.13 | 300.35 | 306.22 | 300.36 | 307.38 | 300.35 |
| 308.66 | 300.32 | 313.06 | 300.25 | 315.63 | 300.22 | 330.16 | 299.93 | 330.51 | 299.93 |
| 332.44 | 299.89 | 332.84 | 299.85 | 334.44 | 299.77 | 334.78 | 299.72 | 337.61 | 299.61 |
| 338.7 | 299.6 | 340.73 | 299.56 | 342.09 | 299.56 | 345.03 | 299.53 | 346.19 | 299.53 |
| 348.57 | 299.59 | 355.31 | 299.79 | 359.15 | 299.9 | 360.14 | 299.94 | 363.54 | 300.05 |
| 364 | 300.08 | 366.11 | 300.15 | 369.44 | 300.23 | 370.22 | 300.24 | 372.44 | 300.21 |
| 374.21 | 300.15 | 380.46 | 299.93 | 381.08 | 299.87 | 382.4 | 299.8 | 384.9 | 299.91 |
| 385.91 | 299.95 | 388.97 | 300 | 393.02 | 299.98 | 393.94 | 299.94 | 395.02 | 299.87 |
| 397.15 | 299.82 | 400.16 | 299.82 | 401.44 | 299.84 | 403.73 | 299.89 | 404.66 | 299.89 |
| 412.62 | 299.87 | 413.34 | 299.84 | 413.96 | 299.83 | 417.31 | 299.83 | 425.3 | 299.89 |
| 430.93 | 299.91 | 431.6 | 299.9 | 433.83 | 299.9 | 436.82 | 299.89 | 440.09 | 299.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 442.4 | 299.92 | 443.28 | 299.91 | 444.24 | 299.87 | 445.69 | 299.88 | 450.36 | 299.89 |
| 452.53 | 299.89 | 452.64 | 299.91 | 458.51 | 299.79 | 461.96 | 299.65 | 463.59 | 299.59 |
| 464.89 | 299.56 | 467.23 | 299.49 | 470.18 | 299.44 | 472.06 | 299.4 | 474.91 | 299.36 |
| 475.92 | 299.33 | 477.29 | 299.31 | 483.8 | 299.18 | 487.26 | 299.13 | 488.23 | 299.11 |
| 490.43 | 299.1 | 494.95 | 299.1 | 496.67 | 299.11 | 498.45 | 299.09 | 500.28 | 299.09 |
| 501.37 | 299.08 | 502.14 | 299.09 | 506.67 | 299.09 | 508.08 | 299.1 | 509.79 | 299.1 |
| 516.06 | 299.11 | 520.5 | 299.12 | 521.22 | 299.13 | 526.77 | 299.23 | 531.57 | 299.31 |
| 533.47 | 299.33 | 537.02 | 299.4 | 539.13 | 299.45 | 544.84 | 299.61 | 545.88 | 299.65 |
| 547.01 | 299.67 | 547.55 | 299.67 | 549.38 | 299.62 | 551.69 | 299.49 | 552.9 | 299.46 |
| 553.79 | 299.47 | 554.59 | 299.45 | 555.71 | 299.47 | 558.15 | 299.5 | 563.41 | 299.58 |
| 566.76 | 299.6 | 570.09 | 299.6 | 577.68 | 299.57 | 580.41 | 299.57 | 592.79 | 299.64 |
| 594.25 | 299.64 | 595.45 | 299.63 | 596.62 | 299.61 | 600.14 | 299.53 | 603.04 | 299.49 |
| 603.95 | 299.47 | 607.76 | 299.41 | 608.66 | 299.39 | 611.52 | 299.3 | 612.45 | 299.25 |
| 613.72 | 299.22 | 617.76 | 299.11 | 619.26 | 299.06 | 620.35 | 299.05 | 624.57 | 298.93 |
| 628.19 | 298.82 | 628.55 | 298.8 | 631.3 | 298.73 | 633.99 | 298.68 | 634.44 | 298.68 |
| 636.84 | 298.64 | 641.23 | 298.6 | 643.82 | 298.6 | 647.49 | 298.66 | 654.64 | 298.79 |
| 655.97 | 298.81 | 656.23 | 298.84 | 657.01 | 298.84 | 657.97 | 298.82 | 667.65 | 298.71 |
| 669.12 | 298.68 | 674.91 | 298.53 | 676.94 | 298.47 | 679.65 | 298.35 | 680.66 | 298.31 |
| 682.35 | 298.2 | 684.25 | 298.23 | 684.39 | 298.3 | 685.02 | 298.35 | 686.74 | 298.53 |
| 687.73 | 298.64 | 689.3 | 298.75 | 691.4 | 298.76 | 691.56 | 298.84 | 693.31 | 298.95 |
| 693.8 | 298.95 | 694.82 | 298.91 | 697.14 | 298.78 | 702.59 | 298.62 | 705.05 | 298.55 |
| 707.31 | 298.55 | 710.55 | 298.66 | 713.34 | 298.75 | 714.41 | 298.78 | 715.55 | 298.83 |
| 716.92 | 298.88 | 717.69 | 298.9 | 720.77 | 298.86 | 723.2 | 298.87 | 725.44 | 298.87 |
| 736.47 | 298.92 | 738.12 | 298.94 | 738.95 | 298.87 | 739.87 | 298.87 | 743.53 | 298.9 |
| 745.1 | 298.92 | 747.43 | 298.97 | 749.76 | 298.95 | 752.2 | 298.92 | 752.83 | 298.93 |
| 753.94 | 298.97 | 754.95 | 298.98 | 755.23 | 298.97 | 756.39 | 298.98 | 759.65 | 299.02 |
| 761.02 | 299.02 | 769.09 | 299.13 | 769.82 | 299.13 | 772.22 | 299.07 | 772.48 | 299.05 |
| 774.02 | 299.06 | 775.72 | 299.1 | 776.46 | 299.16 | 777.6 | 299.2 | 778.29 | 299.2 |
| 779.02 | 299.13 | 782.34 | 298.98 | 782.48 | 298.97 | 784.81 | 298.9 | 786.01 | 298.9 |
| 788.73 | 298.91 | 792.21 | 299 | 793.06 | 299.05 | 794.01 | 299.06 | 795.14 | 299.09 |
| 798.21 | 299.13 | 799.53 | 299.14 | 803.67 | 299.16 | 805.05 | 299.17 | 808.33 | 299.22 |
| 810.05 | 299.24 | 811.71 | 299.28 | 815.1 | 299.35 | 820.24 | 299.44 | 821.94 | 299.5 |
| 823.23 | 299.53 | 823.4 | 299.52 | 823.97 | 299.63 | 824.96 | 299.87 | 826.22 | 300.07 |
| 827.29 | 300.29 | 828.58 | 300.61 | 829.1 | 300.76 | 829.5 | 300.96 | 829.73 | 301.18 |
| 830.67 | 301.4 | 831.79 | 301.69 | 832.76 | 301.85 | 835.08 | 302.13 | 836.25 | 302.32 |
| 837.24 | 302.44 | 838.64 | 302.66 | 840.03 | 302.73 | 844.89 | 303.01 | 846.04 | 303.05 |
| 847.88 | 303.08 | 849.21 | 303.12 | 849.5 | 303.11 | 850.63 | 303.21 | 851.67 | 303.26 |
| 852.98 | 303.31 | 853.69 | 303.35 | 855.3 | 303.36 | 856.61 | 303.42 | 857.96 | 303.46 |
| 859.13 | 303.42 | 863.25 | 303.24 | 863.72 | 303.24 | 864.4 | 303.21 | 866.03 | 303.23 |
| 867.17 | 303.28 | 868.22 | 303.38 | 869.88 | 303.6 | 871.19 | 303.66 | 873.51 | 303.81 |
| 876.15 | 304.08 | 877.15 | 304.17 | 879.05 | 304.21 | 882.39 | 304.24 | 885.29 | 304.23 |
| 887.9 | 304.21 | 889.69 | 304.17 | 892.46 | 304.09 | 894.72 | 304.07 | 896.22 | 304.09 |
| 898.04 | 304.14 | 899.65 | 304.2 | 899.84 | 304.2 | 901.63 | 304.27 | 903.88 | 304.39 |
| 904.84 | 304.43 | 906.24 | 304.51 | 907.46 | 304.56 | 914.82 | 304.8 | 916.51 | 304.85 |
| 918.35 | 304.86 | 918.66 | 304.87 | 923.69 | 304.89 | 925.05 | 304.88 | 926.05 | 304.89 |
| 927.18 | 304.88 | 931.03 | 304.93 | 943.59 | 305.04 | 945.03 | 305.04 | 946.71 | 305.05 |
| 947.86 | 305.04 | 948.82 | 305.01 | 950.24 | 305 | 951.33 | 304.97 | 952.24 | 304.92 |
| 953.69 | 304.88 | 954.1 | 304.84 | 954.19 | 304.73 | 954.76 | 304.68 | 954.98 | 304.72 |
| 955.86 | 304.76 | 956.84 | 304.79 | 960.48 | 304.79 | 967.75 | 304.83 | 975.11 | 304.89 |
| 980.42 | 304.94 | 986.7 | 304.98 | 988.34 | 304.91 | 990.13 | 304.88 | 992.61 | 304.89 |
| 995.67 | 305.02 | 996.98 | 305.06 | 999.93 | 305.1 | 1002.17 | 305.12 | 1004.33 | 305.15 |
| 1008.12 | 305.16 | 1008.93 | 305.07 | 1009.47 | 305.08 | 1009.9 | 305.05 | 1010.39 | 305.1 |
| 1012.77 | 305.21 | 1015.59 | 305.23 | 1018.55 | 305.24 | 1019.84 | 305.23 | 1022.5 | 305.19 |
| 1023.55 | 305.17 | 1025.04 | 305.13 | 1026.75 | 305.1 | 1027.28 | 305.08 | 1028.86 | 305.05 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 149.92 | .04 | 824.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 149.92 | 824.96 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2639.41*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.54 | .64 | 323.55 | 4.57 | 323.28 | 7.59 | 323.08 | 8.55 | 323.04 |
| 13.89 | 323.04 | 15.77 | 323.05 | 21 | 323.03 | 23.49 | 323.01 | 24.81 | 322.97 |
| 25.52 | 322.96 | 26.68 | 322.92 | 28.82 | 322.83 | 30.1 | 322.62 | 31.72 | 322.3 |
| 32.75 | 322.07 | 34.35 | 321.77 | 35.46 | 321.46 | 36.41 | 321.24 | 38.34 | 320.67 |
| 40.31 | 320.19 | 41.4 | 319.95 | 43.14 | 319.68 | 44.86 | 319.43 | 46.05 | 319.23 |
| 46.61 | 319.15 | 47.65 | 318.96 | 49.11 | 318.75 | 52.22 | 318.23 | 53.97 | 317.99 |
| 55.35 | 317.86 | 56.1 | 317.76 | 57.19 | 317.65 | 60.02 | 317.33 | 60.97 | 317.25 |
| 61.95 | 317.15 | 63.43 | 316.91 | 64.29 | 316.86 | 64.96 | 316.8 | 65.36 | 316.74 |
| 66.09 | 316.6 | 66.72 | 316.58 | 68.85 | 316.4 | 70.64 | 316.23 | 71.96 | 315.93 |
| 73.91 | 315.72 | 78.29 | 315.29 | 78.93 | 315.21 | 79.84 | 315.13 | 80.98 | 315.11 |
| 83.54 | 315.17 | 83.93 | 315.2 | 85.45 | 315.26 | 87.08 | 315.35 | 88.53 | 315.35 |
| 89.47 | 315.41 | 91.49 | 315.44 | 93.54 | 315.55 | 94.05 | 315.55 | 96.01 | 315.61 |
| 96.5 | 315.59 | 97.08 | 315.64 | 99.09 | 315.66 | 99.77 | 315.63 | 100.54 | 315.56 |
| 103.67 | 315.1 | 105.75 | 314.87 | 107.91 | 314.61 | 113.52 | 314.05 | 113.97 | 314 |
| 116.82 | 313.75 | 117.53 | 313.75 | 119.08 | 313.71 | 120.88 | 313.56 | 121.45 | 313.01 |
| 121.63 | 312.87 | 122.11 | 312.41 | 122.78 | 311.72 | 123.29 | 311.31 | 123.94 | 310.99 |
| 124.36 | 310.81 | 124.57 | 310.77 | 124.91 | 310.64 | 125.79 | 310.43 | 126.27 | 310.29 |
| 127.33 | 310.05 | 128.41 | 309.7 | 129.2 | 309.49 | 130.31 | 309.08 | 131.88 | 308.62 |
| 132.52 | 308.4 | 134.36 | 307.84 | 136.71 | 307.17 | 138.36 | 306.66 | 139.13 | 306.4 |
| 141.29 | 305.71 | 141.5 | 305.63 | 143.55 | 305 | 143.88 | 304.75 | 144.66 | 304.24 |
| 145.79 | 303.7 | 146.53 | 303.3 | 147.04 | 303.11 | 147.85 | 302.87 | 148.43 | 302.68 |
| 150.16 | 302.14 | 151.16 | 301.79 | 152.23 | 301.43 | 153.41 | 301 | 154.57 | 300.64 |
| 155.91 | 300.26 | 156.61 | 300.12 | 157.46 | 299.98 | 158.87 | 299.6 | 159.31 | 299.46 |
| 160.99 | 299.46 | 161.72 | 299.54 | 161.85 | 299.5 | 163.08 | 299.47 | 164.21 | 299.49 |
| 164.45 | 299.48 | 166.51 | 299.48 | 168.32 | 299.5 | 171.88 | 299.52 | 174.17 | 299.54 |
| 181.38 | 299.58 | 182.61 | 299.59 | 184.05 | 299.59 | 192.46 | 299.56 | 193.66 | 299.55 |
| 196.25 | 299.54 | 199.13 | 299.54 | 200.85 | 299.56 | 206.13 | 299.61 | 213.75 | 299.61 |
| 214.74 | 299.59 | 216.52 | 299.61 | 217.97 | 299.65 | 222.19 | 299.74 | 225.79 | 299.85 |
| 227.52 | 299.88 | 231.85 | 299.89 | 234.02 | 299.93 | 238.31 | 299.96 | 242.29 | 300 |
| 245.26 | 300 | 246.9 | 300.02 | 248.34 | 300.02 | 257.85 | 299.94 | 264.1 | 299.89 |
| 264.71 | 299.89 | 269.14 | 299.85 | 269.96 | 299.81 | 273.94 | 299.69 | 275.23 | 299.66 |
| 277.31 | 299.63 | 277.95 | 299.63 | 281.89 | 299.61 | 282.21 | 299.6 | 287.57 | 299.57 |
| 288.11 | 299.56 | 289.47 | 299.56 | 290.73 | 299.55 | 292.54 | 299.55 | 298.7 | 299.5 |
| 298.88 | 299.51 | 301.61 | 299.51 | 302.68 | 299.5 | 303.7 | 299.51 | 304.78 | 299.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 305.98 | 299.47 | 306.55 | 299.47 | 308.39 | 299.43 | 310.1 | 299.41 | 312.28 | 299.4 |
| 312.51 | 299.39 | 326.1 | 299.15 | 326.42 | 299.15 | 328.23 | 299.11 | 328.97 | 299.06 |
| 330.1 | 299.01 | 330.42 | 298.97 | 331.31 | 298.93 | 332.64 | 298.89 | 334.09 | 298.86 |
| 335.99 | 298.83 | 338.45 | 298.83 | 340.01 | 298.81 | 341.1 | 298.81 | 343.33 | 298.86 |
| 352.57 | 299.11 | 354.15 | 299.16 | 357.33 | 299.25 | 357.76 | 299.28 | 359.73 | 299.34 |
| 362.85 | 299.41 | 363.58 | 299.41 | 365.66 | 299.38 | 373.16 | 299.11 | 373.74 | 299.05 |
| 374.97 | 299 | 377.32 | 299.09 | 378.26 | 299.12 | 379.33 | 299.14 | 381.13 | 299.16 |
| 384.91 | 299.15 | 386.78 | 299.06 | 388.78 | 299.02 | 390.21 | 299.01 | 392.79 | 299.03 |
| 394.94 | 299.08 | 395.8 | 299.08 | 399.71 | 299.06 | 403.25 | 299.06 | 404.51 | 299.02 |
| 407.64 | 299.02 | 415.12 | 299.1 | 417.8 | 299.12 | 420.38 | 299.13 | 423.1 | 299.13 |
| 425.89 | 299.14 | 430.5 | 299.17 | 431.94 | 299.17 | 432.84 | 299.14 | 434.19 | 299.15 |
| 438.56 | 299.17 | 439.6 | 299.18 | 440.59 | 299.17 | 440.69 | 299.2 | 442.52 | 299.17 |
| 446.18 | 299.1 | 448.88 | 299.02 | 449.96 | 298.98 | 454.35 | 298.86 | 456.59 | 298.83 |
| 458.86 | 298.79 | 461.53 | 298.75 | 463.19 | 298.71 | 469.85 | 298.59 | 472.91 | 298.54 |
| 476.06 | 298.51 | 479.39 | 298.53 | 482.53 | 298.54 | 483.55 | 298.53 | 485.38 | 298.53 |
| 486.29 | 298.52 | 487.01 | 298.53 | 488.58 | 298.53 | 491.25 | 298.52 | 492.57 | 298.53 |
| 494.17 | 298.52 | 504.87 | 298.54 | 510.06 | 298.62 | 514.55 | 298.68 | 515.32 | 298.68 |
| 516.32 | 298.7 | 519.65 | 298.75 | 521.62 | 298.8 | 523.96 | 298.85 | 526.97 | 298.93 |
| 527.93 | 298.96 | 528.99 | 298.98 | 530.88 | 298.95 | 531.21 | 298.93 | 533.81 | 298.81 |
| 534.5 | 298.8 | 535.34 | 298.81 | 536.08 | 298.79 | 538.7 | 298.83 | 544.33 | 298.91 |
| 547.47 | 298.93 | 550.59 | 298.93 | 553.02 | 298.92 | 557.69 | 298.91 | 560.25 | 298.91 |
| 571.83 | 299 | 574.32 | 299 | 578.21 | 298.92 | 578.7 | 298.92 | 582.27 | 298.88 |
| 586.68 | 298.82 | 588.15 | 298.77 | 589.36 | 298.72 | 590.23 | 298.67 | 591.42 | 298.65 |
| 595.19 | 298.54 | 596.6 | 298.49 | 597.62 | 298.49 | 601.57 | 298.37 | 604.95 | 298.26 |
| 606.47 | 298.2 | 610.8 | 298.11 | 613.05 | 298.07 | 614.94 | 298.05 | 617.15 | 298.02 |
| 619.57 | 298.01 | 620.74 | 298.03 | 623.01 | 298.05 | 629.7 | 298.14 | 630.94 | 298.15 |
| 631.19 | 298.18 | 631.84 | 298.18 | 632.81 | 298.15 | 641.87 | 298.05 | 643.25 | 298.03 |
| 650.57 | 297.84 | 653.1 | 297.74 | 655.63 | 297.61 | 657.78 | 297.64 | 657.94 | 297.74 |
| 658.66 | 297.79 | 661.74 | 298.15 | 663.53 | 298.3 | 665.92 | 298.3 | 666.1 | 298.37 |
| 668.09 | 298.46 | 668.65 | 298.46 | 669.81 | 298.4 | 672.45 | 298.24 | 674.05 | 298.2 |
| 678.64 | 298.05 | 678.9 | 298.03 | 681.44 | 297.96 | 684.01 | 297.96 | 687.7 | 298.1 |
| 690.87 | 298.21 | 692.09 | 298.26 | 694.94 | 298.39 | 695.82 | 298.42 | 697.37 | 298.4 |
| 699.51 | 298.39 | 700.01 | 298.38 | 702.09 | 298.41 | 702.78 | 298.4 | 706.88 | 298.42 |
| 709.67 | 298.43 | 710.64 | 298.44 | 711.95 | 298.44 | 712.26 | 298.45 | 719.06 | 298.48 |
| 719.99 | 298.39 | 721.04 | 298.4 | 725.2 | 298.41 | 727 | 298.43 | 729.64 | 298.47 |
| 735.06 | 298.39 | 735.78 | 298.4 | 736.74 | 298.44 | 738.2 | 298.45 | 738.51 | 298.44 |
| 739.83 | 298.44 | 743.54 | 298.48 | 745.1 | 298.47 | 754.27 | 298.56 | 755.11 | 298.56 |
| 758.13 | 298.46 | 758.96 | 298.44 | 759.88 | 298.45 | 761.82 | 298.5 | 762.11 | 298.53 |
| 763 | 298.58 | 763.95 | 298.61 | 764.74 | 298.61 | 765.57 | 298.53 | 769.35 | 298.31 |
| 769.5 | 298.31 | 772.16 | 298.21 | 773.52 | 298.21 | 776.62 | 298.2 | 780.57 | 298.29 |
| 780.91 | 298.33 | 781.54 | 298.35 | 782.62 | 298.36 | 783.9 | 298.39 | 787.4 | 298.42 |
| 788.65 | 298.42 | 788.9 | 298.43 | 795.17 | 298.43 | 798.91 | 298.47 | 812.45 | 298.68 |
| 813.46 | 298.7 | 814.09 | 298.73 | 816.05 | 298.77 | 816.69 | 298.92 | 817.66 | 299.17 |
| 817.83 | 299.23 | 818.74 | 299.4 | 820.13 | 299.74 | 821.42 | 300.12 | 821.94 | 300.3 |
| 822.33 | 300.54 | 822.56 | 300.82 | 823.49 | 301.07 | 824.61 | 301.41 | 825.57 | 301.59 |
| 827.88 | 301.93 | 829.05 | 302.15 | 830.03 | 302.3 | 831.41 | 302.55 | 832.8 | 302.62 |
| 837.1 | 302.86 | 838.22 | 302.9 | 839.24 | 302.92 | 840.6 | 302.92 | 842.21 | 302.94 |
| 843.34 | 303.01 | 844.01 | 303.04 | 845.67 | 303.08 | 846.56 | 303.12 | 847.98 | 303.11 |
| 849.28 | 303.15 | 850.63 | 303.18 | 851.79 | 303.15 | 855.88 | 302.98 | 857.02 | 302.95 |
| 858.64 | 302.95 | 859.78 | 302.99 | 860.8 | 303.07 | 862.47 | 303.25 | 863.88 | 303.3 |
| 866.08 | 303.42 | 868.71 | 303.64 | 869.7 | 303.71 | 870.58 | 303.73 | 872.49 | 303.75 |
| 874.9 | 303.76 | 877.79 | 303.75 | 880.38 | 303.73 | 882.16 | 303.69 | 883.78 | 303.64 |
| 885.81 | 303.6 | 887.17 | 303.59 | 888.65 | 303.6 | 889.84 | 303.64 | 892.25 | 303.71 |
| 894.03 | 303.78 | 896.27 | 303.9 | 897.22 | 303.94 | 898.61 | 304.02 | 899.82 | 304.07 |
| 907.14 | 304.34 | 909.04 | 304.39 | 910.65 | 304.4 | 910.96 | 304.41 | 913.86 | 304.43 |
| 917.32 | 304.43 | 918.31 | 304.44 | 920.13 | 304.44 | 923.25 | 304.48 | 931.29 | 304.55 |
| 932.26 | 304.55 | 935.74 | 304.58 | 937.17 | 304.58 | 938.16 | 304.59 | 939.98 | 304.57 |
| 940.94 | 304.54 | 941.9 | 304.53 | 943.37 | 304.5 | 944.34 | 304.43 | 946.08 | 304.38 |
| 946.27 | 304.26 | 946.85 | 304.23 | 947.06 | 304.26 | 947.93 | 304.29 | 948.91 | 304.31 |
| 952.52 | 304.3 | 954.26 | 304.3 | 958 | 304.31 | 959.75 | 304.31 | 964.63 | 304.34 |
| 967.07 | 304.35 | 972.35 | 304.39 | 978.59 | 304.43 | 980.22 | 304.38 | 982.01 | 304.35 |
| 984.46 | 304.36 | 988.12 | 304.49 | 991.74 | 304.54 | 993.96 | 304.56 | 995.51 | 304.58 |
| 998.9 | 304.6 | 999.89 | 304.6 | 1000.69 | 304.52 | 1001.23 | 304.53 | 1001.72 | 304.51 |
| 1002.14 | 304.54 | 1003.63 | 304.61 | 1004.85 | 304.65 | 1007.31 | 304.65 | 1010.2 | 304.66 |
| 1010.25 | 304.65 | 1012.82 | 304.63 | 1015.22 | 304.59 | 1017.81 | 304.52 | 1020.49 | 304.47 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 157.46 | .04 | 817.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 157.46 | 817.83 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2591.29*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.21 | .67 | 323.22 | 7.96 | 322.67 | 8.96 | 322.63 | 12.43 | 322.64 |
| 14.56 | 322.64 | 16.53 | 322.66 | 21.79 | 322.67 | 22 | 322.66 | 24.61 | 322.66 |
| 25.99 | 322.62 | 26.74 | 322.61 | 27.96 | 322.57 | 29.91 | 322.48 | 30.2 | 322.46 |
| 31.79 | 322.16 | 33.24 | 321.84 | 34.32 | 321.57 | 35.99 | 321.21 | 37.16 | 320.85 |
| 38.15 | 320.59 | 40.02 | 319.97 | 40.61 | 319.79 | 42.24 | 319.35 | 43.38 | 319.07 |
| 45.84 | 318.64 | 47.01 | 318.44 | 48.25 | 318.19 | 49.07 | 318.04 | 49.93 | 317.85 |
| 51.46 | 317.6 | 53.7 | 317.16 | 54.5 | 317.02 | 54.71 | 316.97 | 56.56 | 316.69 |
| 58 | 316.52 | 59.14 | 316.36 | 59.92 | 316.27 | 62.89 | 315.9 | 63.89 | 315.8 |
| 64.91 | 315.68 | 66.47 | 315.39 | 67.36 | 315.33 | 68.06 | 315.27 | 68.49 | 315.19 |
| 69.26 | 315.02 | 69.92 | 315 | 70.53 | 314.95 | 72.14 | 314.79 | 74.03 | 314.58 |
| 75.4 | 314.23 | 77.45 | 313.98 | 80.98 | 313.58 | 81.72 | 313.49 | 82.04 | 313.47 |
| 82.71 | 313.37 | 83.66 | 313.28 | 84.86 | 313.25 | 87.54 | 313.33 | 87.94 | 313.36 |
| 89.54 | 313.43 | 91.25 | 313.54 | 92.84 | 313.55 | 93.75 | 313.62 | 95.87 | 313.66 |
| 98.01 | 313.8 | 98.55 | 313.8 | 100.77 | 313.89 | 101.12 | 313.85 | 101.73 | 313.91 |
| 102.27 | 313.93 | 103.83 | 313.93 | 104.54 | 313.9 | 105.35 | 313.82 | 105.88 | 313.74 |
| 108.63 | 313.28 | 109.1 | 313.21 | 110.81 | 313 | 113.39 | 312.66 | 118.95 | 312.04 |
| 119.17 | 311.99 | 119.42 | 311.99 | 122.41 | 311.68 | 123.16 | 311.69 | 124.77 | 311.65 |
| 126.66 | 311.47 | 127.45 | 310.89 | 127.96 | 310.49 | 128.66 | 309.9 | 129.21 | 309.55 |
| 130.31 | 309.17 | 130.53 | 309.14 | 130.89 | 309.02 | 131.81 | 308.86 | 132.31 | 308.75 |
| 133.25 | 308.59 | 134.55 | 308.25 | 135.38 | 308.05 | 136.55 | 307.69 | 138.19 | 307.27 |
| 139.36 | 306.95 | 141.21 | 306.47 | 143.59 | 305.89 | 145.32 | 305.42 | 145.79 | 305.28 |
| 147.17 | 304.9 | 148.27 | 304.58 | 150.42 | 304 | 150.86 | 303.67 | 151.59 | 303.2 |
| 152.76 | 302.64 | 153.54 | 302.24 | 154.07 | 302.07 | 157.35 | 301.17 | 158.4 | 300.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 158.94 | 300.7 | 159.51 | 300.52 | 160.75 | 300.11 | 161.97 | 299.76 | 163.37 | 299.41 |
| 164.1 | 299.29 | 165 | 299.17 | 166.71 | 298.76 | 168.28 | 298.75 | 168.96 | 298.81 |
| 169.08 | 298.78 | 169.76 | 298.76 | 171.28 | 298.77 | 171.5 | 298.76 | 173.42 | 298.75 |
| 175.11 | 298.76 | 178.43 | 298.77 | 180.56 | 298.78 | 187.27 | 298.8 | 189.76 | 298.8 |
| 192 | 298.79 | 197.59 | 298.76 | 198.7 | 298.76 | 201.12 | 298.74 | 203.8 | 298.74 |
| 205.4 | 298.75 | 210.31 | 298.79 | 213.88 | 298.78 | 214.42 | 298.79 | 216.1 | 298.78 |
| 217.58 | 298.78 | 218.34 | 298.76 | 219.57 | 298.77 | 221.34 | 298.83 | 225.27 | 298.91 |
| 228.62 | 299.03 | 230.56 | 299.06 | 234.27 | 299.08 | 235.24 | 299.09 | 236.5 | 299.12 |
| 240.29 | 299.15 | 241.94 | 299.18 | 243.99 | 299.2 | 246.76 | 299.2 | 249.63 | 299.22 |
| 258.48 | 299.12 | 264.3 | 299.07 | 264.87 | 299.06 | 268.99 | 299.02 | 270.71 | 298.96 |
| 273.46 | 298.88 | 276.13 | 298.82 | 277.2 | 298.82 | 280.87 | 298.78 | 281.16 | 298.78 |
| 286.66 | 298.72 | 287.92 | 298.72 | 289.41 | 298.7 | 290.79 | 298.7 | 296.52 | 298.65 |
| 297.02 | 298.66 | 299.23 | 298.66 | 300.22 | 298.65 | 302.18 | 298.65 | 303.3 | 298.62 |
| 303.83 | 298.62 | 304.34 | 298.6 | 307.14 | 298.58 | 309.38 | 298.57 | 322.04 | 298.37 |
| 324.02 | 298.34 | 325.97 | 298.24 | 326.49 | 298.2 | 328.13 | 298.15 | 331.25 | 298.11 |
| 331.61 | 298.1 | 332.43 | 298.11 | 335 | 298.09 | 336.42 | 298.09 | 340.12 | 298.18 |
| 343.95 | 298.27 | 346.69 | 298.34 | 351.52 | 298.47 | 351.81 | 298.49 | 353.36 | 298.53 |
| 356.26 | 298.58 | 356.94 | 298.58 | 358.87 | 298.55 | 360.42 | 298.49 | 365.86 | 298.29 |
| 366.4 | 298.24 | 367.55 | 298.2 | 369.73 | 298.28 | 370.61 | 298.3 | 373.28 | 298.33 |
| 376.81 | 298.32 | 377.61 | 298.29 | 378.55 | 298.24 | 380.4 | 298.21 | 383.02 | 298.21 |
| 384.14 | 298.22 | 386.14 | 298.26 | 386.95 | 298.26 | 393.88 | 298.24 | 395.05 | 298.22 |
| 397.97 | 298.22 | 404.93 | 298.31 | 407.43 | 298.34 | 409.83 | 298.35 | 410.42 | 298.36 |
| 414.97 | 298.38 | 417.82 | 298.41 | 419.26 | 298.43 | 420.6 | 298.43 | 421.49 | 298.41 |
| 426.77 | 298.45 | 428.65 | 298.46 | 428.75 | 298.48 | 433.86 | 298.42 | 436.05 | 298.37 |
| 437.74 | 298.31 | 439.43 | 298.28 | 443.55 | 298.2 | 444.04 | 298.2 | 445.67 | 298.17 |
| 446.95 | 298.16 | 449.04 | 298.12 | 458.75 | 297.95 | 461.68 | 297.93 | 464.78 | 297.95 |
| 465.62 | 297.95 | 467.08 | 297.97 | 469 | 297.96 | 469.22 | 297.97 | 471.21 | 297.97 |
| 471.89 | 297.98 | 475.55 | 297.96 | 475.83 | 297.95 | 488.14 | 297.95 | 488.51 | 297.96 |
| 493.35 | 298.01 | 497.53 | 298.05 | 499.18 | 298.06 | 502.27 | 298.11 | 503 | 298.13 |
| 506.29 | 298.19 | 509.09 | 298.25 | 509.99 | 298.28 | 510.98 | 298.29 | 512.74 | 298.26 |
| 515.06 | 298.16 | 515.47 | 298.15 | 516.95 | 298.15 | 517.58 | 298.14 | 520.02 | 298.17 |
| 520.68 | 298.17 | 525.26 | 298.23 | 529.57 | 298.26 | 533.35 | 298.26 | 537.7 | 298.25 |
| 539.12 | 298.25 | 540.08 | 298.26 | 550.87 | 298.36 | 553.18 | 298.36 | 554.2 | 298.35 |
| 557.27 | 298.3 | 559.8 | 298.29 | 564.69 | 298.24 | 566.07 | 298.2 | 567.19 | 298.15 |
| 568 | 298.09 | 569.11 | 298.07 | 572.63 | 297.97 | 573.59 | 297.93 | 574.64 | 297.93 |
| 575.82 | 297.9 | 577.31 | 297.85 | 578.56 | 297.82 | 582.2 | 297.67 | 582.45 | 297.67 |
| 583.7 | 297.62 | 584.42 | 297.61 | 587.16 | 297.54 | 589.25 | 297.51 | 593.07 | 297.44 |
| 595.33 | 297.43 | 596.41 | 297.43 | 598.53 | 297.44 | 604.76 | 297.5 | 605.92 | 297.49 |
| 606.14 | 297.52 | 606.75 | 297.52 | 607.65 | 297.49 | 616.09 | 297.4 | 622.41 | 297.26 |
| 624.19 | 297.21 | 626.54 | 297.12 | 627.53 | 297.09 | 628.9 | 297.01 | 631.32 | 297.06 |
| 631.5 | 297.17 | 632.3 | 297.23 | 635.76 | 297.67 | 637.75 | 297.84 | 640.44 | 297.84 |
| 640.64 | 297.9 | 642.87 | 297.97 | 643.36 | 297.97 | 644.8 | 297.89 | 647.75 | 297.71 |
| 649.55 | 297.65 | 654.69 | 297.47 | 654.99 | 297.45 | 657.83 | 297.37 | 658.88 | 297.36 |
| 660.71 | 297.36 | 664.85 | 297.54 | 668.4 | 297.68 | 669.77 | 297.73 | 671.21 | 297.81 |
| 673.95 | 297.93 | 675.68 | 297.92 | 678.65 | 297.91 | 680.97 | 297.94 | 683.83 | 297.95 |
| 686.35 | 297.97 | 689.47 | 297.98 | 690.56 | 297.98 | 692.37 | 297.99 | 697.89 | 298.01 |
| 699.99 | 298.02 | 701.04 | 297.91 | 702.21 | 297.92 | 706.88 | 297.93 | 711.85 | 297.98 |
| 717.93 | 297.86 | 718.73 | 297.87 | 719.81 | 297.91 | 721.45 | 297.92 | 721.8 | 297.9 |
| 722.56 | 297.91 | 723.28 | 297.9 | 724.86 | 297.92 | 727.43 | 297.93 | 729.17 | 297.92 |
| 739.46 | 298 | 740.4 | 297.99 | 742.38 | 297.91 | 743.46 | 297.88 | 743.91 | 297.85 |
| 744.71 | 297.84 | 745.74 | 297.85 | 747.92 | 297.9 | 749.24 | 297.99 | 750.31 | 298.02 |
| 751.19 | 298.02 | 752.12 | 297.92 | 756.53 | 297.64 | 759.5 | 297.52 | 764.5 | 297.49 |
| 766.55 | 297.53 | 768.93 | 297.59 | 770.02 | 297.65 | 772.67 | 297.68 | 776.58 | 297.71 |
| 778.27 | 297.71 | 783.54 | 297.69 | 785.3 | 297.69 | 789.48 | 297.72 | 791.68 | 297.75 |
| 793.8 | 297.77 | 798.11 | 297.84 | 804.66 | 297.93 | 805.79 | 297.94 | 807.04 | 297.98 |
| 808.69 | 298.01 | 810.12 | 298.4 | 810.69 | 298.58 | 811.93 | 298.89 | 812.98 | 299.19 |
| 814.26 | 299.63 | 814.78 | 299.84 | 815.16 | 300.13 | 815.39 | 300.46 | 816.75 | 300.89 |
| 817.43 | 301.13 | 818.39 | 301.33 | 820.68 | 301.73 | 821.84 | 301.98 | 822.81 | 302.15 |
| 824.19 | 302.44 | 829.84 | 302.73 | 830.96 | 302.77 | 831.97 | 302.78 | 833.33 | 302.77 |
| 834.92 | 302.77 | 836.04 | 302.82 | 837.08 | 302.84 | 838.37 | 302.85 | 839.06 | 302.88 |
| 840.66 | 302.87 | 841.95 | 302.89 | 843.29 | 302.9 | 844.45 | 302.87 | 848.51 | 302.71 |
| 849.65 | 302.69 | 851.26 | 302.68 | 852.39 | 302.7 | 853.42 | 302.76 | 855.06 | 302.9 |
| 856.18 | 302.93 | 858.49 | 303.02 | 861.26 | 303.2 | 862.25 | 303.25 | 865.02 | 303.28 |
| 867.42 | 303.28 | 870.29 | 303.27 | 872.86 | 303.25 | 874.09 | 303.23 | 876.25 | 303.16 |
| 879.61 | 303.11 | 881.08 | 303.12 | 882.26 | 303.15 | 884.66 | 303.22 | 886.43 | 303.29 |
| 888.66 | 303.41 | 889.6 | 303.45 | 890.98 | 303.53 | 892.19 | 303.58 | 899.46 | 303.87 |
| 901.13 | 303.92 | 906.14 | 303.97 | 907.64 | 303.98 | 910.56 | 303.98 | 912.37 | 304 |
| 915.48 | 304.02 | 923.47 | 304.09 | 924.43 | 304.09 | 927.89 | 304.12 | 930.97 | 304.12 |
| 932.11 | 304.1 | 933.06 | 304.07 | 935.01 | 304.04 | 935.47 | 304.02 | 935.94 | 303.97 |
| 936.44 | 303.94 | 937.87 | 303.91 | 938.27 | 303.88 | 938.36 | 303.8 | 938.93 | 303.77 |
| 939.14 | 303.8 | 940.98 | 303.83 | 941.38 | 303.82 | 946.3 | 303.79 | 951.76 | 303.79 |
| 955.23 | 303.81 | 956.61 | 303.81 | 959.04 | 303.82 | 964.28 | 303.85 | 970.77 | 303.88 |
| 972.1 | 303.84 | 973.88 | 303.82 | 976.32 | 303.83 | 979.96 | 303.94 | 980.64 | 303.95 |
| 987.91 | 304.02 | 990.67 | 304.03 | 991.84 | 304.03 | 992.45 | 303.97 | 992.98 | 303.98 |
| 993.65 | 303.97 | 993.89 | 303.99 | 995.37 | 304.04 | 996.58 | 304.07 | 999.03 | 304.08 |
| 1002.73 | 304.07 | 1004.5 | 304.05 | 1006.89 | 304 | 1009.47 | 303.93 | 1012.13 | 303.89 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 165 | .04 | 810.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 165 | 810.69 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2543.17*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.89 | .7 | 322.9 | 5.01 | 322.55 | 8.32 | 322.27 | 9.84 | 322.22 |
| 12.99 | 322.24 | 15.22 | 322.24 | 17.28 | 322.27 | 22.78 | 322.31 | 23.01 | 322.3 |
| 25.74 | 322.31 | 27.97 | 322.26 | 29.24 | 322.22 | 31.28 | 322.11 | 31.58 | 322.1 |
| 32.98 | 321.81 | 34.76 | 321.38 | 35.89 | 321.07 | 37.64 | 320.66 | 38.86 | 320.24 |
| 39.89 | 319.94 | 41.66 | 319.29 | 42.47 | 319.02 | 44.17 | 318.51 | 45.32 | 318.2 |
| 47.27 | 317.82 | 47.43 | 317.8 | 49.16 | 317.44 | 50.46 | 317.14 | 51.08 | 317.02 |
| 52.21 | 316.74 | 53.81 | 316.45 | 57.21 | 315.71 | 59.14 | 315.38 | 60.65 | 315.19 |
| 61.85 | 315 | 62.01 | 314.99 | 65.76 | 314.46 | 66.81 | 314.35 | 67.88 | 314.21 |
| 68.86 | 314 | 69.5 | 313.88 | 70.44 | 313.81 | 71.17 | 313.73 | 71.62 | 313.64 |
| 72.42 | 313.45 | 73.11 | 313.42 | 73.76 | 313.36 | 75.44 | 313.18 | 77.41 | 312.94 |
| 78.85 | 312.52 | 80.99 | 312.23 | 84.68 | 311.77 | 85.6 | 311.65 | 85.79 | 311.64 |
| 86.49 | 311.53 | 87.49 | 311.42 | 88.73 | 311.39 | 91.54 | 311.48 | 91.96 | 311.52 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 93.63 | 311.61 | 95.42 | 311.74 | 97.08 | 311.75 | 98.03 | 311.83 | 100.24 | 311.88 |
| 102.49 | 312.05 | 103.05 | 312.05 | 105.37 | 312.15 | 105.73 | 312.12 | 106.37 | 312.18 |
| 106.95 | 312.2 | 108.57 | 312.21 | 109.32 | 312.18 | 110.04 | 312.1 | 110.71 | 312 |
| 113.59 | 311.46 | 114.08 | 311.38 | 115.87 | 311.14 | 118.24 | 310.79 | 124.88 | 309.97 |
| 128 | 309.62 | 128.78 | 309.63 | 130.47 | 309.59 | 132.45 | 309.38 | 133.28 | 308.92 |
| 134.02 | 308.41 | 134.53 | 308.08 | 135.11 | 307.81 | 136.26 | 307.54 | 136.49 | 307.51 |
| 136.87 | 307.4 | 137.83 | 307.29 | 139.33 | 307.08 | 139.76 | 307 | 140.7 | 306.79 |
| 141.56 | 306.62 | 142.79 | 306.31 | 144.5 | 305.93 | 145.73 | 305.64 | 147.22 | 305.31 |
| 149.8 | 304.78 | 151.19 | 304.47 | 152.32 | 304.19 | 153.89 | 303.82 | 155.05 | 303.53 |
| 157.29 | 303 | 157.65 | 302.72 | 158.51 | 302.15 | 159.74 | 301.59 | 160.55 | 301.18 |
| 161.11 | 301.03 | 162 | 300.82 | 162.78 | 300.62 | 164.54 | 300.2 | 165.63 | 299.91 |
| 166.2 | 299.77 | 168.1 | 299.22 | 169.36 | 298.89 | 170.83 | 298.56 | 171.6 | 298.46 |
| 172.53 | 298.37 | 174.12 | 298.05 | 175.57 | 298.04 | 176.2 | 298.08 | 176.32 | 298.06 |
| 177.38 | 298.04 | 179.75 | 298.03 | 186.95 | 298.03 | 193.16 | 298.02 | 195.47 | 298.02 |
| 197.55 | 298 | 202.72 | 297.97 | 205.98 | 297.94 | 209.95 | 297.94 | 214.5 | 297.97 |
| 217.8 | 297.96 | 220.81 | 297.96 | 221.94 | 297.94 | 223.07 | 297.94 | 224.72 | 298 |
| 228.36 | 298.09 | 231.46 | 298.21 | 233.26 | 298.24 | 236.69 | 298.26 | 238.75 | 298.31 |
| 242.26 | 298.35 | 245.69 | 298.4 | 248.25 | 298.4 | 249.67 | 298.41 | 250.91 | 298.41 |
| 259.11 | 298.31 | 264.5 | 298.25 | 268.85 | 298.19 | 269.55 | 298.16 | 270.44 | 298.14 |
| 272.99 | 298.06 | 274.1 | 298.03 | 275.45 | 298.01 | 279.84 | 297.96 | 280.12 | 297.95 |
| 284.75 | 297.89 | 286.38 | 297.88 | 287.47 | 297.86 | 289.03 | 297.85 | 294.34 | 297.79 |
| 294.8 | 297.81 | 295.29 | 297.8 | 296.85 | 297.81 | 297.77 | 297.8 | 299.43 | 297.8 |
| 300.63 | 297.77 | 302.7 | 297.74 | 304.17 | 297.74 | 306.05 | 297.75 | 306.25 | 297.74 |
| 317.98 | 297.58 | 318.25 | 297.59 | 319.81 | 297.56 | 319.86 | 297.55 | 321.43 | 297.49 |
| 322.1 | 297.45 | 323.98 | 297.41 | 326.51 | 297.38 | 328.62 | 297.38 | 329.98 | 297.37 |
| 331.3 | 297.37 | 334.72 | 297.43 | 338.27 | 297.52 | 341.37 | 297.58 | 344.91 | 297.66 |
| 345.55 | 297.68 | 349.67 | 297.76 | 350.3 | 297.76 | 352.09 | 297.72 | 353.52 | 297.67 |
| 358.56 | 297.47 | 359.06 | 297.43 | 360.13 | 297.4 | 362.15 | 297.46 | 363.89 | 297.49 |
| 365.43 | 297.5 | 368.7 | 297.49 | 369.45 | 297.47 | 370.31 | 297.43 | 373.26 | 297.4 |
| 375.49 | 297.42 | 376.84 | 297.44 | 378.09 | 297.44 | 381.46 | 297.43 | 384.67 | 297.43 |
| 385.6 | 297.41 | 388.3 | 297.42 | 394.75 | 297.52 | 399.29 | 297.58 | 399.83 | 297.58 |
| 406.68 | 297.66 | 408.55 | 297.69 | 410.08 | 297.68 | 411.2 | 297.69 | 414.97 | 297.74 |
| 415.86 | 297.74 | 416.81 | 297.76 | 418.39 | 297.76 | 421.54 | 297.74 | 422.15 | 297.74 |
| 423.12 | 297.71 | 423.57 | 297.71 | 425.64 | 297.65 | 426.7 | 297.65 | 428.58 | 297.61 |
| 430.52 | 297.58 | 430.97 | 297.58 | 433.66 | 297.55 | 435.59 | 297.52 | 436.7 | 297.49 |
| 441.96 | 297.4 | 442.6 | 297.4 | 444.6 | 297.36 | 445.53 | 297.36 | 447.31 | 297.34 |
| 450.18 | 297.38 | 450.95 | 297.38 | 452.3 | 297.4 | 454.09 | 297.4 | 455.25 | 297.42 |
| 457.3 | 297.42 | 460.15 | 297.39 | 460.41 | 297.38 | 462.92 | 297.38 | 467.99 | 297.37 |
| 471.57 | 297.36 | 472.15 | 297.37 | 476.63 | 297.4 | 480.5 | 297.42 | 481.17 | 297.42 |
| 484.9 | 297.46 | 485.57 | 297.48 | 488.62 | 297.52 | 492.05 | 297.59 | 492.96 | 297.6 |
| 494.87 | 297.57 | 497.12 | 297.49 | 498.49 | 297.49 | 499.08 | 297.48 | 501.33 | 297.51 |
| 501.95 | 297.51 | 506.19 | 297.56 | 508.9 | 297.58 | 511.58 | 297.58 | 513.69 | 297.59 |
| 517.71 | 297.58 | 519.03 | 297.59 | 529.91 | 297.71 | 531.08 | 297.73 | 532.05 | 297.73 |
| 535.41 | 297.69 | 538.17 | 297.7 | 538.91 | 297.69 | 541.99 | 297.68 | 542.71 | 297.67 |
| 545.02 | 297.57 | 545.77 | 297.52 | 546.8 | 297.5 | 549.15 | 297.43 | 550.06 | 297.41 |
| 550.95 | 297.36 | 552.15 | 297.36 | 553.01 | 297.34 | 554.4 | 297.29 | 555.55 | 297.26 |
| 558.93 | 297.11 | 560.98 | 297.04 | 563.52 | 296.98 | 565.45 | 296.94 | 567.08 | 296.9 |
| 571.08 | 296.84 | 574.05 | 296.83 | 579.82 | 296.85 | 580.89 | 296.84 | 581.73 | 296.85 |
| 582.5 | 296.83 | 590.31 | 296.74 | 591.5 | 296.72 | 597.52 | 296.59 | 600.9 | 296.48 |
| 602.18 | 296.42 | 604.85 | 296.47 | 605.05 | 296.6 | 605.95 | 296.67 | 608.38 | 296.99 |
| 609.77 | 297.18 | 611.98 | 297.38 | 614.96 | 297.38 | 615.18 | 297.42 | 617.65 | 297.48 |
| 618.19 | 297.48 | 623.06 | 297.17 | 630.75 | 296.9 | 631.07 | 296.87 | 632.37 | 296.84 |
| 634.22 | 296.77 | 637.41 | 296.77 | 645.94 | 297.14 | 647.45 | 297.2 | 650.99 | 297.4 |
| 652.07 | 297.45 | 653.1 | 297.44 | 656.43 | 297.44 | 657.28 | 297.43 | 659.86 | 297.48 |
| 660.71 | 297.47 | 665.81 | 297.51 | 666.39 | 297.52 | 669.28 | 297.53 | 670.48 | 297.53 |
| 672.48 | 297.54 | 678.59 | 297.56 | 680.93 | 297.56 | 682.09 | 297.43 | 683.39 | 297.44 |
| 688.56 | 297.45 | 694.06 | 297.48 | 695.17 | 297.46 | 700.8 | 297.33 | 701.69 | 297.34 |
| 703.27 | 297.39 | 704.69 | 297.39 | 705.08 | 297.37 | 706.72 | 297.37 | 707.38 | 297.38 |
| 709.16 | 297.38 | 711.32 | 297.39 | 713.25 | 297.37 | 724.65 | 297.43 | 725.69 | 297.42 |
| 727.88 | 297.33 | 728.34 | 297.32 | 729.57 | 297.25 | 730.46 | 297.23 | 731.61 | 297.24 |
| 734.02 | 297.3 | 735.05 | 297.38 | 735.93 | 297.42 | 737.64 | 297.43 | 738.68 | 297.31 |
| 743.37 | 296.99 | 746.55 | 296.84 | 748.55 | 296.81 | 752.26 | 296.79 | 752.39 | 296.78 |
| 754.65 | 296.82 | 757.29 | 296.88 | 757.72 | 296.92 | 758.5 | 296.95 | 761.43 | 296.98 |
| 765.77 | 297.01 | 767.64 | 297 | 773.48 | 296.96 | 775.42 | 296.96 | 780.06 | 296.98 |
| 784.84 | 297.02 | 789.62 | 297.09 | 796.87 | 297.17 | 798.24 | 297.18 | 799.51 | 297.21 |
| 801.1 | 297.26 | 801.34 | 297.26 | 802.92 | 297.72 | 803.55 | 297.93 | 804.78 | 298.3 |
| 805.83 | 298.65 | 807.1 | 299.14 | 807.61 | 299.38 | 808 | 299.71 | 808.22 | 300.09 |
| 809.15 | 300.42 | 810.25 | 300.85 | 811.2 | 301.07 | 813.67 | 301.58 | 814.63 | 301.81 |
| 815.6 | 302.01 | 816.97 | 302.33 | 818.34 | 302.39 | 820.86 | 302.51 | 822.59 | 302.61 |
| 823.7 | 302.64 | 824.7 | 302.64 | 826.05 | 302.61 | 827.64 | 302.59 | 828.75 | 302.62 |
| 829.78 | 302.62 | 831.75 | 302.64 | 832.37 | 302.64 | 833.33 | 302.62 | 834.62 | 302.63 |
| 835.95 | 302.63 | 837.1 | 302.6 | 841.14 | 302.45 | 842.27 | 302.42 | 843.87 | 302.4 |
| 845 | 302.41 | 846.78 | 302.49 | 847.65 | 302.55 | 849.04 | 302.57 | 849.52 | 302.59 |
| 851.06 | 302.62 | 853.82 | 302.76 | 854.8 | 302.8 | 857.55 | 302.8 | 859.09 | 302.81 |
| 859.94 | 302.8 | 861.99 | 302.79 | 864.36 | 302.77 | 865.35 | 302.77 | 867.11 | 302.74 |
| 869.21 | 302.67 | 872.05 | 302.63 | 873.93 | 302.64 | 874.69 | 302.67 | 877.08 | 302.73 |
| 878.84 | 302.8 | 879.54 | 302.84 | 883.36 | 303.04 | 891.78 | 303.4 | 893.44 | 303.45 |
| 895.56 | 303.48 | 898.42 | 303.51 | 901.84 | 303.53 | 902.82 | 303.53 | 904.62 | 303.55 |
| 907.7 | 303.57 | 915.65 | 303.63 | 916.6 | 303.63 | 920.04 | 303.66 | 921.46 | 303.65 |
| 922.43 | 303.66 | 924.23 | 303.63 | 925.18 | 303.6 | 926.57 | 303.58 | 927.58 | 303.54 |
| 928.54 | 303.46 | 929.39 | 303.44 | 930.36 | 303.4 | 930.45 | 303.34 | 930.82 | 303.32 |
| 933.05 | 303.35 | 933.45 | 303.34 | 936.62 | 303.31 | 938.33 | 303.29 | 942.03 | 303.28 |
| 951 | 303.28 | 956.21 | 303.31 | 960.67 | 303.32 | 962.66 | 303.33 | 963.98 | 303.3 |
| 965.75 | 303.29 | 968.17 | 303.3 | 972.47 | 303.4 | 975.37 | 303.42 | 977.56 | 303.44 |
| 980.68 | 303.46 | 983.36 | 303.46 | 984.21 | 303.42 | 984.74 | 303.43 | 985.4 | 303.42 |
| 987.11 | 303.48 | 988.31 | 303.5 | 990.74 | 303.5 | 993.6 | 303.49 | 994.92 | 303.48 |
| 997.53 | 303.44 | 998.57 | 303.41 | 1001.7 | 303.34 | 1002.22 | 303.32 | 1003.77 | 303.3 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 172.53 | .04 | 803.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 172.53 | 803.55 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2495.05*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.56 | .73 | 322.58 | 5.23 | 322.18 | 8.68 | 321.87 | 9.92 | 321.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 10.27 | 321.82 | 13.56 | 321.83 | 15.6 | 321.85 | 15.89 | 321.84 | 18.04 | 321.88 |
| 23.78 | 321.95 | 24.01 | 321.94 | 26.86 | 321.96 | 27.73 | 321.95 | 29.19 | 321.91 |
| 30.52 | 321.86 | 32.96 | 321.73 | 34.42 | 321.41 | 36.27 | 320.92 | 37.45 | 320.57 |
| 39.28 | 320.11 | 40.56 | 319.64 | 41.64 | 319.3 | 43.85 | 318.41 | 44.32 | 318.25 |
| 46.1 | 317.68 | 47.29 | 317.32 | 48.47 | 317.07 | 49.34 | 316.9 | 51.31 | 316.45 |
| 52.66 | 316.09 | 53.55 | 315.89 | 54.49 | 315.63 | 54.93 | 315.55 | 56.16 | 315.3 |
| 58.8 | 314.66 | 59.71 | 314.45 | 61.72 | 314.07 | 63.3 | 313.86 | 63.46 | 313.82 |
| 64.55 | 313.64 | 65.4 | 313.53 | 68.64 | 313.03 | 69.72 | 312.9 | 70.84 | 312.74 |
| 72.54 | 312.36 | 73.52 | 312.28 | 74.28 | 312.2 | 74.74 | 312.1 | 75.58 | 311.87 |
| 76.3 | 311.84 | 76.98 | 311.77 | 78.73 | 311.56 | 80.79 | 311.29 | 82.29 | 310.82 |
| 84.53 | 310.49 | 88.38 | 309.96 | 89.19 | 309.84 | 89.54 | 309.82 | 90.26 | 309.68 |
| 91.31 | 309.56 | 91.81 | 309.54 | 92.61 | 309.53 | 95.53 | 309.64 | 95.98 | 309.68 |
| 97.72 | 309.78 | 99.58 | 309.93 | 101.24 | 309.94 | 102.32 | 310.05 | 104.62 | 310.11 |
| 104.96 | 310.13 | 106.97 | 310.29 | 107.55 | 310.3 | 109.97 | 310.42 | 110.35 | 310.38 |
| 111.02 | 310.46 | 111.62 | 310.48 | 113.32 | 310.49 | 114.09 | 310.45 | 114.85 | 310.36 |
| 115.55 | 310.25 | 118.56 | 309.64 | 119.06 | 309.55 | 120.93 | 309.28 | 123.4 | 308.88 |
| 123.75 | 308.83 | 129.81 | 308.02 | 130.05 | 307.96 | 130.33 | 307.95 | 133.59 | 307.56 |
| 134.41 | 307.57 | 136.17 | 307.53 | 138.23 | 307.29 | 139.1 | 306.95 | 139.87 | 306.52 |
| 140.41 | 306.26 | 141.01 | 306.07 | 141.73 | 305.96 | 142.46 | 305.88 | 142.84 | 305.77 |
| 143.85 | 305.72 | 144.39 | 305.66 | 144.87 | 305.63 | 145.61 | 305.55 | 146.84 | 305.33 |
| 147.75 | 305.18 | 148.92 | 304.95 | 149.02 | 304.92 | 150.81 | 304.59 | 151.55 | 304.44 |
| 153.65 | 304.04 | 156.34 | 303.58 | 158.23 | 303.23 | 159.11 | 303.04 | 164.16 | 302 |
| 164.54 | 301.7 | 165.43 | 301.1 | 166.72 | 300.53 | 167.56 | 300.12 | 168.15 | 299.98 |
| 169.74 | 299.65 | 169.89 | 299.61 | 171.72 | 299.23 | 173.46 | 298.85 | 175.44 | 298.34 |
| 176.76 | 298.02 | 178.3 | 297.7 | 179.19 | 297.62 | 180.07 | 297.56 | 181.19 | 297.4 |
| 181.53 | 297.34 | 182.87 | 297.33 | 183.45 | 297.36 | 183.55 | 297.34 | 184.53 | 297.32 |
| 185.61 | 297.31 | 186.99 | 297.31 | 187.25 | 297.3 | 188.69 | 297.3 | 191.51 | 297.28 |
| 199.06 | 297.24 | 200.46 | 297.24 | 203.09 | 297.21 | 207.85 | 297.17 | 210.85 | 297.14 |
| 213.14 | 297.13 | 214.51 | 297.14 | 218.69 | 297.14 | 221.73 | 297.13 | 224.74 | 297.13 |
| 225.53 | 297.11 | 226.35 | 297.11 | 228.09 | 297.18 | 231.44 | 297.26 | 234.3 | 297.39 |
| 235.95 | 297.42 | 239.11 | 297.44 | 239.93 | 297.46 | 241.01 | 297.5 | 244.24 | 297.54 |
| 247.4 | 297.6 | 249.75 | 297.6 | 251.05 | 297.61 | 252.2 | 297.61 | 259.74 | 297.5 |
| 259.82 | 297.49 | 264.71 | 297.42 | 265.19 | 297.42 | 268.7 | 297.36 | 270.17 | 297.32 |
| 273.54 | 297.22 | 275.19 | 297.19 | 275.7 | 297.19 | 278.82 | 297.14 | 279.08 | 297.13 |
| 282.58 | 297.06 | 283.76 | 297.05 | 286.1 | 297.01 | 287.28 | 297 | 292.17 | 296.94 |
| 292.31 | 296.95 | 294.48 | 296.96 | 297.32 | 296.94 | 299.86 | 296.9 | 301.21 | 296.9 |
| 303.12 | 296.92 | 313.91 | 296.8 | 315.6 | 296.78 | 318.35 | 296.69 | 321.76 | 296.65 |
| 323.71 | 296.66 | 324.96 | 296.65 | 326.17 | 296.65 | 327.59 | 296.66 | 329.33 | 296.69 |
| 332.59 | 296.76 | 334.92 | 296.79 | 336.17 | 296.82 | 338.7 | 296.86 | 339.29 | 296.88 |
| 343.08 | 296.94 | 344.11 | 296.92 | 346.62 | 296.84 | 351.26 | 296.65 | 351.72 | 296.62 |
| 352.7 | 296.6 | 354.56 | 296.64 | 356.16 | 296.66 | 360.59 | 296.66 | 362.08 | 296.62 |
| 363.66 | 296.6 | 365.89 | 296.6 | 369.23 | 296.63 | 372.34 | 296.62 | 375.29 | 296.62 |
| 375.54 | 296.61 | 378.63 | 296.61 | 384.57 | 296.73 | 386.69 | 296.77 | 389.24 | 296.81 |
| 390.9 | 296.83 | 396.09 | 296.92 | 396.77 | 296.94 | 398.67 | 296.95 | 399.7 | 296.97 |
| 403.17 | 297.02 | 404.78 | 297.04 | 406.32 | 297.05 | 409.78 | 297.06 | 409.97 | 297.05 |
| 411.36 | 297.05 | 411.79 | 297.03 | 413 | 297 | 413.96 | 297.01 | 415.7 | 296.98 |
| 419.29 | 296.94 | 421.4 | 296.93 | 423.17 | 296.89 | 428.6 | 296.8 | 431.3 | 296.77 |
| 432.93 | 296.76 | 437.53 | 296.83 | 438.88 | 296.83 | 439.91 | 296.86 | 442.12 | 296.86 |
| 444.75 | 296.82 | 447.3 | 296.8 | 455.8 | 296.78 | 459.92 | 296.8 | 463.48 | 296.8 |
| 464.89 | 296.79 | 467.53 | 296.81 | 468.14 | 296.83 | 470.95 | 296.86 | 473.34 | 296.88 |
| 474.1 | 296.9 | 475.35 | 296.9 | 476.7 | 296.89 | 478.42 | 296.84 | 479.32 | 296.83 |
| 481.05 | 296.83 | 481.4 | 296.84 | 482.71 | 296.84 | 483.22 | 296.85 | 487.12 | 296.89 |
| 488.43 | 296.9 | 489.61 | 296.9 | 490.79 | 296.91 | 492.08 | 296.91 | 494.02 | 296.92 |
| 498.31 | 296.92 | 508.94 | 297.07 | 510.02 | 297.09 | 511.78 | 297.09 | 514.4 | 297.08 |
| 516.55 | 297.1 | 517.23 | 297.09 | 520.06 | 297.1 | 520.73 | 297.09 | 521.9 | 297.05 |
| 522.85 | 297 | 523.54 | 296.94 | 524.49 | 296.92 | 527.49 | 296.84 | 528.31 | 296.79 |
| 529.41 | 296.8 | 530.21 | 296.77 | 532.54 | 296.7 | 535.86 | 296.54 | 537.54 | 296.48 |
| 539.87 | 296.41 | 541.66 | 296.37 | 543.16 | 296.33 | 546.84 | 296.25 | 549.56 | 296.22 |
| 555 | 296.2 | 555.72 | 296.18 | 556.57 | 296.19 | 557.34 | 296.17 | 564.53 | 296.09 |
| 571.43 | 295.96 | 573.44 | 295.89 | 575.45 | 295.83 | 578.39 | 295.88 | 578.61 | 296.03 |
| 579.59 | 296.12 | 582.26 | 296.48 | 583.78 | 296.69 | 586.21 | 296.92 | 589.48 | 296.92 |
| 589.72 | 296.95 | 593.02 | 296.99 | 593.19 | 296.97 | 594.77 | 296.87 | 598.37 | 296.63 |
| 606.8 | 296.32 | 607.16 | 296.3 | 608.59 | 296.26 | 610.62 | 296.18 | 614.12 | 296.18 |
| 619.15 | 296.41 | 623.47 | 296.6 | 625.12 | 296.67 | 626.88 | 296.78 | 630.2 | 296.97 |
| 631.33 | 296.96 | 635.92 | 296.96 | 638.74 | 297.01 | 639.68 | 297.01 | 645.28 | 297.05 |
| 645.91 | 297.06 | 649.08 | 297.08 | 650.4 | 297.08 | 652.6 | 297.09 | 659.3 | 297.1 |
| 661.86 | 297.11 | 662.58 | 297.01 | 663.14 | 296.96 | 664.56 | 296.96 | 670.23 | 296.97 |
| 672.68 | 296.97 | 676.28 | 296.99 | 677.49 | 296.96 | 679.9 | 296.89 | 683.67 | 296.79 |
| 684.64 | 296.8 | 685.95 | 296.85 | 687.14 | 296.86 | 687.94 | 296.85 | 688.36 | 296.83 |
| 690.16 | 296.83 | 690.89 | 296.84 | 692.08 | 296.84 | 692.84 | 296.83 | 695.21 | 296.84 |
| 697.15 | 296.82 | 697.33 | 296.81 | 709.84 | 296.87 | 710.97 | 296.86 | 713.38 | 296.74 |
| 713.89 | 296.73 | 715.24 | 296.65 | 716.21 | 296.63 | 716.82 | 296.64 | 717.47 | 296.63 |
| 718.02 | 296.65 | 720.11 | 296.69 | 720.51 | 296.74 | 721.25 | 296.79 | 722.21 | 296.83 |
| 723.02 | 296.85 | 724.09 | 296.84 | 725.23 | 296.7 | 730.37 | 296.33 | 730.58 | 296.31 |
| 733.87 | 296.15 | 734.2 | 296.13 | 736.06 | 296.11 | 740.27 | 296.08 | 745.66 | 296.17 |
| 745.76 | 296.2 | 746.98 | 296.25 | 748.45 | 296.26 | 750.2 | 296.28 | 754.96 | 296.3 |
| 757 | 296.29 | 763.42 | 296.23 | 765.55 | 296.22 | 770.64 | 296.23 | 775.88 | 296.27 |
| 781.13 | 296.34 | 789.09 | 296.41 | 790.58 | 296.42 | 792.76 | 296.47 | 793.99 | 296.51 |
| 796.19 | 297.2 | 796.41 | 297.29 | 797.64 | 297.71 | 798.68 | 298.1 | 799.94 | 298.65 |
| 800.45 | 298.92 | 800.83 | 299.29 | 801.06 | 299.73 | 801.42 | 299.87 | 803.07 | 300.56 |
| 804.01 | 300.8 | 806.28 | 301.34 | 807.43 | 301.64 | 808.39 | 301.87 | 809.75 | 302.22 |
| 813.62 | 302.39 | 815.33 | 302.48 | 815.86 | 302.5 | 816.98 | 302.5 | 818.77 | 302.45 |
| 820.35 | 302.42 | 821.46 | 302.42 | 823.75 | 302.4 | 825.05 | 302.4 | 826.01 | 302.37 |
| 827.29 | 302.37 | 829.76 | 302.33 | 833.77 | 302.19 | 834.9 | 302.16 | 836.49 | 302.13 |
| 837.74 | 302.12 | 839.38 | 302.16 | 840.24 | 302.2 | 840.93 | 302.2 | 842.1 | 302.22 |
| 843.63 | 302.23 | 843.79 | 302.24 | 846.37 | 302.32 | 847.35 | 302.34 | 849.07 | 302.33 |
| 851.62 | 302.33 | 854.27 | 302.3 | 857.83 | 302.29 | 859.58 | 302.26 | 862.29 | 302.18 |
| 863.9 | 302.17 | 864.49 | 302.15 | 866.36 | 302.16 | 867.73 | 302.19 | 871.24 | 302.31 |
| 874.37 | 302.48 | 875.73 | 302.56 | 876.37 | 302.56 | 876.92 | 302.59 | 884.11 | 302.93 |
| 885.76 | 302.99 | 887.86 | 303.02 | 892.76 | 303.07 | 894.1 | 303.07 | 896.86 | 303.1 |
| 907.82 | 303.17 | 908.77 | 303.17 | 912.19 | 303.19 | 914.57 | 303.19 | 916.36 | 303.16 |
| 917.3 | 303.13 | 919.23 | 303.09 | 919.75 | 303.06 | 920.63 | 302.97 | 922.05 | 302.94 |
| 922.45 | 302.92 | 922.53 | 302.88 | 922.9 | 302.86 | 924.16 | 302.87 | 925.52 | 302.86 |
| 928.67 | 302.82 | 930.37 | 302.79 | 935.77 | 302.76 | 939.2 | 302.75 | 942.96 | 302.75 |
| 948.13 | 302.77 | 952.58 | 302.78 | 954.55 | 302.78 | 957.62 | 302.76 | 960.03 | 302.77 |
| 963.02 | 302.83 | 967.18 | 302.87 | 968.28 | 302.87 | 972.46 | 302.9 | 975.37 | 302.9 |
| 975.97 | 302.87 | 976.98 | 302.87 | 978.02 | 302.9 | 979.71 | 302.92 | 982.46 | 302.92 |
| 985.79 | 302.91 | 987.87 | 302.88 | 990.24 | 302.83 | 993.87 | 302.73 | 995.41 | 302.72 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 180.07 | .04 | 796.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 180.07 | 796.41 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2446.93*

INPUT
Description:
Station Elevation Data num= 495

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.24 | .76 | 322.25 | 5.45 | 321.81 | 9.05 | 321.46 | 9.53 | 321.45 |
| 10.33 | 321.4 | 10.7 | 321.41 | 14.13 | 321.43 | 16.56 | 321.45 | 18.79 | 321.49 |
| 24.77 | 321.59 | 25.02 | 321.58 | 27.99 | 321.61 | 28.89 | 321.6 | 30.41 | 321.56 |
| 31.79 | 321.51 | 34.01 | 321.38 | 34.34 | 321.37 | 35.86 | 321 | 37.79 | 320.46 |
| 39.02 | 320.07 | 40.93 | 319.55 | 42.25 | 319.03 | 43.38 | 318.65 | 45.68 | 317.66 |
| 46.18 | 317.48 | 48.03 | 316.84 | 49.33 | 316.42 | 50.5 | 316.17 | 51.57 | 315.93 |
| 53.45 | 315.45 | 54.87 | 315.05 | 55.58 | 314.88 | 55.79 | 314.81 | 56.77 | 314.53 |
| 58.51 | 314.15 | 60.44 | 313.64 | 62.21 | 313.19 | 64.31 | 312.77 | 65.95 | 312.52 |
| 66.84 | 312.35 | 68.13 | 312.15 | 71.51 | 311.59 | 72.64 | 311.45 | 73.81 | 311.27 |
| 74.87 | 311.01 | 75.57 | 310.85 | 76.59 | 310.76 | 77.39 | 310.67 | 77.87 | 310.55 |
| 78.75 | 310.3 | 79.5 | 310.26 | 80.2 | 310.19 | 82.03 | 309.95 | 84.17 | 309.65 |
| 85.74 | 309.11 | 88.06 | 308.74 | 92.08 | 308.16 | 92.92 | 308.02 | 93.28 | 307.99 |
| 94.04 | 307.84 | 95.13 | 307.71 | 95.65 | 307.68 | 96.48 | 307.67 | 99.53 | 307.79 |
| 99.99 | 307.84 | 101.81 | 307.96 | 103.75 | 308.13 | 105.47 | 308.14 | 106.6 | 308.26 |
| 109 | 308.33 | 109.35 | 308.35 | 111.44 | 308.54 | 112.05 | 308.55 | 114.58 | 308.68 |
| 114.97 | 308.64 | 115.66 | 308.73 | 116.29 | 308.75 | 118.06 | 308.77 | 118.87 | 308.73 |
| 119.79 | 308.61 | 120.38 | 308.5 | 123.52 | 307.82 | 124.05 | 307.72 | 125.99 | 307.41 |
| 128.57 | 306.97 | 128.93 | 306.92 | 135.25 | 306.01 | 135.5 | 305.95 | 135.79 | 305.94 |
| 139.18 | 305.5 | 140.03 | 305.51 | 141.6 | 305.48 | 141.87 | 305.46 | 144.02 | 305.21 |
| 144.92 | 304.97 | 145.72 | 304.63 | 146.28 | 304.44 | 146.89 | 304.33 | 147.66 | 304.28 |
| 148.42 | 304.26 | 148.82 | 304.15 | 149.87 | 304.15 | 151.5 | 304.07 | 151.97 | 304.01 |
| 154.84 | 303.61 | 157.13 | 303.24 | 158.46 | 303.03 | 160.56 | 302.71 | 162.89 | 302.39 |
| 164.4 | 302.16 | 165.23 | 302.01 | 167.34 | 301.65 | 171.03 | 301 | 171.42 | 300.69 |
| 172.36 | 300.05 | 173.37 | 299.62 | 174.58 | 299.06 | 175.18 | 298.94 | 177 | 298.6 |
| 178.91 | 298.26 | 180.72 | 297.92 | 181.37 | 297.78 | 182.78 | 297.45 | 184.16 | 297.14 |
| 185.76 | 296.85 | 186.59 | 296.8 | 187.6 | 296.76 | 188.94 | 296.64 | 190.16 | 296.62 |
| 190.79 | 296.62 | 191.8 | 296.6 | 194.16 | 296.58 | 195.48 | 296.56 | 198.06 | 296.54 |
| 199.72 | 296.52 | 204.95 | 296.47 | 206.56 | 296.45 | 206.88 | 296.44 | 213.84 | 296.36 |
| 215.72 | 296.34 | 217.81 | 296.33 | 219.06 | 296.33 | 226.08 | 296.31 | 227.39 | 296.3 |
| 228.6 | 296.3 | 229.13 | 296.29 | 230.08 | 296.29 | 231.47 | 296.35 | 234.53 | 296.44 |
| 237.13 | 296.57 | 238.64 | 296.59 | 241.53 | 296.62 | 243.26 | 296.69 | 246.75 | 296.75 |
| 247.5 | 296.77 | 249.1 | 296.8 | 253.48 | 296.8 | 264.91 | 296.6 | 265.35 | 296.59 |
| 268.56 | 296.54 | 269.9 | 296.49 | 272.04 | 296.44 | 274.11 | 296.38 | 274.48 | 296.38 |
| 277.8 | 296.31 | 278.03 | 296.3 | 281.24 | 296.23 | 284.21 | 296.17 | 288.34 | 296.1 |
| 289.99 | 296.08 | 290.37 | 296.1 | 292.1 | 296.11 | 293.61 | 296.1 | 295.27 | 296.07 |
| 297.01 | 296.05 | 299.83 | 296.1 | 300 | 296.09 | 309.85 | 296.01 | 310.08 | 296.02 |
| 312.99 | 295.97 | 313.63 | 295.95 | 314.59 | 295.95 | 317.02 | 295.92 | 317.65 | 295.93 |
| 322.34 | 295.93 | 323.93 | 295.95 | 326.91 | 296 | 329.04 | 296.02 | 330.18 | 296.04 |
| 333.02 | 296.08 | 336.49 | 296.11 | 337.43 | 296.09 | 339.73 | 296.01 | 344.38 | 295.81 |
| 345.28 | 295.8 | 346.98 | 295.82 | 348.44 | 295.83 | 352.49 | 295.83 | 354.42 | 295.8 |
| 358.19 | 295.8 | 359.33 | 295.81 | 360.38 | 295.81 | 363.21 | 295.8 | 365.91 | 295.81 |
| 366.13 | 295.8 | 368.96 | 295.8 | 374.38 | 295.94 | 376.32 | 295.98 | 378.19 | 296.03 |
| 382.19 | 296.11 | 384.41 | 296.17 | 391.38 | 296.3 | 392.85 | 296.32 | 392.92 | 296.33 |
| 394.25 | 296.34 | 398.86 | 296.39 | 399.92 | 296.36 | 401.23 | 296.37 | 402.82 | 296.35 |
| 406.09 | 296.33 | 407.09 | 296.33 | 408.71 | 296.31 | 409.64 | 296.29 | 414.06 | 296.21 |
| 414.6 | 296.21 | 417.06 | 296.18 | 418.56 | 296.17 | 420.97 | 296.22 | 421.62 | 296.24 |
| 423.25 | 296.27 | 424.26 | 296.27 | 424.93 | 296.3 | 425.98 | 296.3 | 426.5 | 296.31 |
| 427.63 | 296.28 | 429.35 | 296.25 | 429.57 | 296.24 | 430.53 | 296.24 | 431.68 | 296.23 |
| 435.94 | 296.21 | 438.95 | 296.19 | 443.27 | 296.19 | 446.46 | 296.17 | 446.78 | 296.16 |
| 447.74 | 296.16 | 450.15 | 296.17 | 451.58 | 296.18 | 455.46 | 296.2 | 455.95 | 296.21 |
| 457.29 | 296.21 | 458.54 | 296.2 | 460.1 | 296.18 | 464.48 | 296.18 | 470.33 | 296.23 |
| 471.55 | 296.23 | 474.35 | 296.25 | 477.73 | 296.25 | 479.59 | 296.28 | 487.98 | 296.43 |
| 489.57 | 296.46 | 492.96 | 296.46 | 494.93 | 296.5 | 495.55 | 296.5 | 498.14 | 296.52 |
| 498.74 | 296.52 | 499.81 | 296.47 | 500.69 | 296.42 | 501.32 | 296.36 | 502.18 | 296.35 |
| 504.92 | 296.27 | 505.67 | 296.22 | 506.68 | 296.23 | 509.54 | 296.14 | 513.09 | 295.95 |
| 514.1 | 295.91 | 515.92 | 295.86 | 520.83 | 295.71 | 525.08 | 295.61 | 529.93 | 295.56 |
| 530.83 | 295.52 | 531.25 | 295.53 | 532.19 | 295.51 | 538.75 | 295.43 | 539.75 | 295.42 |
| 544.81 | 295.33 | 545.06 | 295.33 | 548.73 | 295.23 | 550.24 | 295.26 | 551.92 | 295.3 |
| 552.16 | 295.47 | 553.23 | 295.56 | 556.14 | 295.97 | 557.8 | 296.21 | 560.44 | 296.46 |
| 564 | 296.46 | 564.26 | 296.47 | 567.21 | 296.49 | 567.86 | 296.49 | 573.67 | 296.09 |
| 576.05 | 296 | 582.86 | 295.75 | 583.24 | 295.72 | 584.8 | 295.67 | 587.01 | 295.59 |
| 590.82 | 295.59 | 596.29 | 295.85 | 601 | 296.07 | 602.8 | 296.15 | 604.72 | 296.27 |
| 607.04 | 296.41 | 608.33 | 296.48 | 610.63 | 296.48 | 613.81 | 296.49 | 614.55 | 296.48 |
| 617.63 | 296.55 | 618.65 | 296.54 | 621.41 | 296.57 | 624.74 | 296.6 | 625.43 | 296.6 |
| 630.32 | 296.63 | 632.71 | 296.63 | 640.01 | 296.64 | 642.8 | 296.65 | 643.14 | 296.62 |
| 643.58 | 296.54 | 644.18 | 296.48 | 651.91 | 296.48 | 654.57 | 296.49 | 658.49 | 296.49 |
| 659.81 | 296.46 | 662.43 | 296.38 | 666.53 | 296.26 | 667.6 | 296.27 | 669.02 | 296.32 |
| 670.31 | 296.33 | 671.18 | 296.32 | 671.65 | 296.3 | 672.65 | 296.3 | 673.61 | 296.29 |
| 674.39 | 296.3 | 675.7 | 296.3 | 676.52 | 296.29 | 679.1 | 296.3 | 681.22 | 296.27 |
| 681.41 | 296.26 | 695.02 | 296.3 | 696.17 | 296.3 | 696.26 | 296.29 | 698.02 | 296.2 |
| 699.43 | 296.14 | 700.9 | 296.05 | 701.97 | 296.02 | 703.34 | 296.03 | 706.21 | 296.09 |
| 706.65 | 296.14 | 707.96 | 296.22 | 708.85 | 296.25 | 709.97 | 296.26 | 710.54 | 296.25 |
| 711.78 | 296.09 | 717.38 | 295.66 | 721.54 | 295.44 | 723.57 | 295.42 | 728 | 295.37 |
| 730.86 | 295.41 | 734.02 | 295.47 | 734.53 | 295.52 | 735.46 | 295.55 | 737.06 | 295.56 |
| 738.96 | 295.58 | 744.14 | 295.59 | 746.37 | 295.57 | 753.35 | 295.49 | 755.67 | 295.48 |
| 761.21 | 295.49 | 764.12 | 295.5 | 766.92 | 295.52 | 772.63 | 295.58 | 781.3 | 295.65 |
| 782.93 | 295.66 | 783.73 | 295.68 | 785.2 | 295.7 | 786.63 | 295.75 | 788.52 | 296.37 |
| 789.27 | 296.64 | 790.16 | 296.99 | 791.52 | 297.55 | 792.78 | 298.16 | 793.28 | 298.46 |
| 793.67 | 298.88 | 793.89 | 299.36 | 794.8 | 299.77 | 795.89 | 300.28 | 796.83 | 300.54 |
| 799.27 | 301.19 | 800.22 | 301.47 | 801.18 | 301.73 | 802.53 | 302.11 | 803.88 | 302.16 |
| 806.37 | 302.27 | 808.08 | 302.36 | 808.6 | 302.37 | 809.72 | 302.37 | 811.5 | 302.29 |
| 813.07 | 302.24 | 814.83 | 302.21 | 816.45 | 302.17 | 817.31 | 302.17 | 818.69 | 302.13 |
| 821.28 | 302.07 | 822.41 | 302.06 | 826.4 | 301.93 | 827.52 | 301.89 | 829.1 | 301.85 |
| 830.21 | 301.83 | 831.97 | 301.83 | 832.84 | 301.85 | 834.68 | 301.85 | 836.36 | 301.84 |
| 838.93 | 301.88 | 839.89 | 301.88 | 841.61 | 301.86 | 844.14 | 301.86 | 846.77 | 301.82 |
| 847.79 | 301.82 | 849.34 | 301.81 | 850.32 | 301.81 | 852.06 | 301.78 | 853.64 | 301.73 |
| 856.34 | 301.69 | 856.94 | 301.67 | 858.79 | 301.67 | 859.54 | 301.7 | 861.72 | 301.75 |
| 863.64 | 301.82 | 866.75 | 301.99 | 868.11 | 302.07 | 868.74 | 302.07 | 869.29 | 302.1 |
| 876.43 | 302.47 | 878.07 | 302.52 | 880.16 | 302.56 | 882.99 | 302.59 | 884.46 | 302.61 |
| 886.36 | 302.62 | 889.11 | 302.65 | 892.15 | 302.67 | 900 | 302.71 | 900.94 | 302.71 |
| 904.34 | 302.73 | 905.74 | 302.72 | 906.7 | 302.73 | 907.36 | 302.72 | 909.42 | 302.66 |
| 910.79 | 302.63 | 911.79 | 302.59 | 912.24 | 302.52 | 912.73 | 302.49 | 914.43 | 302.45 |
| 914.62 | 302.42 | 915.18 | 302.4 | 915.39 | 302.41 | 917.2 | 302.38 | 917.58 | 302.38 |
| 922.41 | 302.29 | 926.06 | 302.25 | 927.77 | 302.24 | 931.26 | 302.23 | 932.53 | 302.22 |
| 934.92 | 302.21 | 944.48 | 302.23 | 945.56 | 302.23 | 946.44 | 302.24 | 947.75 | 302.23 |
| 949.49 | 302.23 | 951.89 | 302.24 | 954.86 | 302.28 | 958.99 | 302.31 | 960.08 | 302.31 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 961.16 | 302.32 | 962.67 | 302.32 | 963.26 | 302.33 | 967.13 | 302.33 | 968.73 | 302.32 |
| 969.76 | 302.34 | 971.45 | 302.35 | 974.18 | 302.35 | 978.31 | 302.32 | 980.88 | 302.26 |
| 981.91 | 302.24 | 983.35 | 302.2 | 984.43 | 302.18 | 985.52 | 302.15 | 987.05 | 302.13 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 187.6 | .04 | 789.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 187.6 | 789.27 | 54.45 | 48.12 | 32.3 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2398.82

INPUT
Description:
Station Elevation Data num= 479

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 321.91 | .789978 | 321.939 | .409973 | 321.069 | .830017 | 321.049 | .909973 | 321.04 |
| 10.59998 | 32110.66998 | | 320.99 | 10.75 | 320.99 | 11.13 | 32116.90997 | | 321.05 |
| 17.22003 | 321.0525 | 77.02002 | 321.2326 | .02002 | 321.2229 | .10999 | 321.2630 | .04999 | 321.25 |
| 31.63 | 321.2133 | .07001 | 321.16 | 35.38 | 321.0235 | .72003 | 32137.29999 | | 320.6 |
| 39.31 | 32040.59003 | | 319.5742 | .57001 | 31943.95001 | | 318.42 | 45.12 | 318 |
| 47.12 | 317.0947 | .33002 | 31747.52002 | | 316.9148 | .03003 | 316.7149 | .96002 | 316 |
| 51.31 | 315.5453 | .64001 | 31555.59998 | | 314.4657 | .07001 | 314 | 57.81 | 313.81 |
| 58.03003 | 313.7459 | .04999 | 313.4260 | .85999 | 31363.51001 | | 312.2564 | .46002 | 312 |
| 64.71002 | 311.9366 | .89001 | 311.4668 | .59998 | 311.1968 | .77002 | 311.1569 | .52002 | 311 |
| 69.95001 | 310.9270 | .14001 | 310.9 | 70.87 | 310.78 | 74.38 | 310.16 | 75.56 | 310 |
| 76.77002 | 309.8 | 77.88 | 309.5178 | .60999 | 309.3379 | .66998 | 309.23 | 80.5 | 309.13 |
| 81 | 30981.90997 | | 308.72 | 82.69 | 308.6883 | .41998 | 308.685 | .32001 | 308.34 |
| 87.54999 | 30889.17999 | | 307.4191 | .59998 | 30795.78003 | | 306.3596 | .65002 | 306.2 |
| 96.82001 | 306.1897 | .03003 | 306.1797 | .82001 | 30698.95001 | | 305.8599 | .48999 | 305.82 |
| 100.36 | 305.81 | 103.53 | 305.95 | 104.01 | 306 | 105.9 | 306.13 | 107.92 | 306.32 |
| 109.71 | 306.34 | 110.88 | 306.47 | 113.38 | 306.55 | 113.74 | 306.58 | 115.92 | 306.79 |
| 116.55 | 306.8 | 118.99 | 306.94 | 119.09 | 306.95 | 119.18 | 306.95 | 119.24 | 306.94 |
| 119.59 | 306.9 | 120.31 | 307 | 120.96 | 307.03 | 122.8 | 307.05 | 123.31 | 307.02 |
| 123.64 | 307 | 124.46 | 306.89 | 124.6 | 306.87 | 125.22 | 306.75 | 128.48 | 306 |
| 129.03 | 305.89 | 131.05 | 305.55 | 133.73 | 305.06 | 134.11 | 305 | 140.68 | 304 |
| 140.94 | 303.93 | 141.06 | 303.92 | 141.24 | 303.92 | 144.77 | 303.44 | 145.66 | 303.45 |
| 147.29 | 303.42 | 147.57 | 303.4 | 150.74 | 303 | 151.54 | 302.75 | 152.16 | 302.62 |
| 152.79 | 302.59 | 153.7 | 302.61 | 154.38 | 302.63 | 154.8 | 302.53 | 155.89 | 302.58 |
| 157 | 302.58 | 157.59 | 302.56 | 158.07 | 302.52 | 161.06 | 302.21 | 161.38 | 302.17 |
| 162.66 | 302 | 166.51 | 301.51 | 169.43 | 301.19 | 171 | 301 | 171.47 | 300.94 |
| 171.87 | 300.88 | 174.06 | 300.57 | 177.93 | 300 | 178.31 | 299.67 | 179.28 | 299 |
| 180.33 | 298.56 | 181.59 | 298 | 183.95 | 297.62 | 187.98 | 297 | 191.56 | 296.27 |
| 193.22 | 296 | 194.19 | 295.97 | 195.14 | 295.95 | 214.17 | 295.63 | 218.89 | 295.56 |
| 220.59 | 295.54 | 232.19 | 295.47 | 233.4 | 295.46 | 233.59 | 295.46 | 233.75 | 295.47 |
| 233.89 | 295.48 | 234.84 | 295.53 | 237.61 | 295.61 | 239.63 | 295.74 | 239.97 | 295.75 |
| 241.11 | 295.77 | 243.95 | 295.8 | 244.63 | 295.83 | 245.37 | 295.87 | 245.52 | 295.88 |
| 248.19 | 295.93 | 250.8 | 296 | 254.77 | 296 | 265.11 | 295.78 | 265.51 | 295.77 |
| 268.67 | 295.7 | 273.44 | 295.57 | 274.2 | 295.56 | 276.78 | 295.49 | 276.99 | 295.48 |
| 279.89 | 295.39 | 280.51 | 295.38 | 282.58 | 295.33 | 286.32 | 295.25 | 287.81 | 295.23 |
| 287.93 | 295.24 | 288.16 | 295.25 | 288.53 | 295.25 | 289.07 | 295.26 | 289.72 | 295.26 |
| 290.42 | 295.25 | 291.09 | 295.25 | 291.68 | 295.24 | 292.59 | 295.22 | 292.96 | 295.22 |
| 293.32 | 295.21 | 294.17 | 295.21 | 295.29 | 295.23 | 296.72 | 295.27 | 296.87 | 295.27 |
| 305.79 | 295.23 | 306 | 295.24 | 307.67 | 295.22 | 309.21 | 295.21 | 311.03 | 295.21 |
| 312.28 | 295.19 | 312.5 | 295.19 | 312.85 | 295.2 | 313.89 | 295.21 | 317.07 | 295.2 |
| 318.53 | 295.21 | 321.23 | 295.24 | 329.9 | 295.29 | 332.83 | 295.18 | 336.81 | 295 |
| 354.09 | 294.99 | 359.2 | 295 | 359.29 | 295 | 373.72 | 295.43 | 376.71 | 295.51 |
| 379.58 | 295.58 | 384.58 | 295.69 | 385.78 | 295.72 | 386.12 | 295.73 | 386.35 | 295.73 |
| 386.7 | 295.72 | 387.06 | 295.72 | 387.31 | 295.71 | 387.7 | 295.71 | 388.5 | 295.73 |
| 391.75 | 295.72 | 392.9 | 295.71 | 393.8 | 295.72 | 394.65 | 295.71 | 395.27 | 295.7 |
| 395.74 | 295.69 | 400.11 | 295.62 | 400.6 | 295.62 | 402.23 | 295.6 | 404.18 | 295.59 |
| 408.01 | 295.69 | 408.43 | 295.7 | 409.1 | 295.7 | 409.34 | 295.71 | 409.49 | 295.73 |
| 409.68 | 295.73 | 409.95 | 295.74 | 410.3 | 295.75 | 411.37 | 295.75 | 411.69 | 295.74 |
| 413.95 | 295.68 | 414.15 | 295.67 | 423.06 | 295.6 | 426.49 | 295.58 | 430.6 | 295.52 |
| 432.78 | 295.52 | 433.29 | 295.53 | 438.03 | 295.52 | 445.75 | 295.52 | 452.15 | 295.56 |
| 454.68 | 295.58 | 457.74 | 295.59 | 458.23 | 295.6 | 459.42 | 295.62 | 468.46 | 295.82 |
| 471.53 | 295.85 | 473.31 | 295.9 | 473.87 | 295.9 | 476.21 | 295.94 | 476.76 | 295.94 |
| 476.92 | 295.93 | 477.73 | 295.9 | 477.85 | 295.89 | 478.31 | 295.86 | 478.52 | 295.85 |
| 479.09 | 295.78 | 479.71 | 295.78 | 479.87 | 295.77 | 481.43 | 295.73 | 481.66 | 295.72 |
| 482.35 | 295.7 | 483.03 | 295.65 | 483.27 | 295.65 | 483.77 | 295.67 | 483.94 | 295.67 |
| 484.6 | 295.65 | 486.53 | 295.58 | 488.75 | 295.45 | 489.75 | 295.39 | 490.66 | 295.35 |
| 492.31 | 295.29 | 500.6 | 295 | 504.99 | 294.91 | 505.35 | 294.89 | 505.69 | 294.87 |
| 507.03 | 294.85 | 517.43 | 294.72 | 518.68 | 294.7 | 520.34 | 294.66 | 520.96 | 294.65 |
| 522 | 294.64 | 523.64 | 294.67 | 525.46 | 294.71 | 525.72 | 294.9 | 526.87 | 295 |
| 531.81 | 295.72 | 534.67 | 296 | 542.69 | 296 | 548.98 | 295.55 | 558.91 | 295.17 |
| 559.33 | 295.14 | 561.01 | 295.09 | 563.4 | 295 | 567.52 | 295 | 578.53 | 295.53 |
| 580.48 | 295.62 | 586.46 | 296 | 587.79 | 296 | 592.08 | 296.01 | 593.19 | 296.01 |
| 596.95 | 296.09 | 597.62 | 296.08 | 604.95 | 296.15 | 608.68 | 296.17 | 612.33 | 296.18 |
| 623.73 | 296.19 | 624.1 | 296.16 | 624.58 | 296.07 | 625.23 | 296 | 640.7 | 296 |
| 649.4 | 295.73 | 649.58 | 295.73 | 650.55 | 295.74 | 652.09 | 295.79 | 652.59 | 295.8 |
| 653.49 | 295.8 | 654.43 | 295.79 | 654.93 | 295.76 | 656.02 | 295.76 | 656.87 | 295.75 |
| 657.05 | 295.75 | 657.9 | 295.76 | 659.31 | 295.76 | 660.2 | 295.75 | 662.99 | 295.75 |
| 665.49 | 295.71 | 680.21 | 295.74 | 681.35 | 295.73 | 681.45 | 295.73 | 681.55 | 295.72 |
| 683.45 | 295.62 | 683.63 | 295.62 | 684.38 | 295.57 | 684.98 | 295.55 | 685.93 | 295.5 |
| 686.39 | 295.46 | 686.57 | 295.45 | 687.44 | 295.43 | 687.72 | 295.42 | 688.43 | 295.43 |
| 689.12 | 295.42 | 692.31 | 295.49 | 692.78 | 295.54 | 693.65 | 295.6 | 694.2 | 295.63 |
| 694.78 | 295.65 | 695.16 | 295.66 | 695.73 | 295.67 | 696.37 | 295.67 | 696.79 | 295.66 |
| 696.99 | 295.66 | 697.28 | 295.61 | 698.33 | 295.48 | 704.39 | 295 | 704.63 | 294.98 |
| 708.5 | 294.77 | 708.89 | 294.75 | 711.08 | 294.72 | 716.04 | 294.66 | 718.97 | 294.7 |
| 722.38 | 294.76 | 722.5 | 294.79 | 722.93 | 294.82 | 723.94 | 294.85 | 725.67 | 294.86 |
| 727.73 | 294.88 | 733.33 | 294.88 | 735.34 | 294.86 | 735.74 | 294.86 | 743.29 | 294.76 |
| 745.8 | 294.74 | 751.79 | 294.74 | 754.93 | 294.75 | 757.96 | 294.77 | 764.14 | 294.83 |
| 775.27 | 294.9 | 776.61 | 294.92 | 777.73 | 294.94 | 779.28 | 295 | 781.32 | 295.69 |
| 781.87 | 295.89 | 782.13 | 296 | 782.24 | 296.07 | 782.36 | 296.1 | 782.71 | 296.25 |
| 784.37 | 297 | 785.62 | 297.67 | 786.12 | 298 | 786.5 | 298.46 | 786.72 | 299 |
| 787.08 | 299.17 | 788.71 | 300 | 788.87 | 300.05 | 792.07 | 301 | 794.44 | 301.74 |
| 795.31 | 302 | 796.65 | 302.05 | 799.13 | 302.15 | 800.82 | 302.23 | 801.34 | 302.24 |
| 801.91 | 302.24 | 802.45 | 302.23 | 802.9 | 302.21 | 804.22 | 302.13 | 807.53 | 302 |
| 809.14 | 301.94 | 810 | 301.93 | 813.8 | 301.8 | 815.07 | 301.79 | 822.95 | 301.54 |
| 823.83 | 301.52 | 824.57 | 301.5 | 825.17 | 301.5 | 826.11 | 301.49 | 828.93 | 301.45 |
| 831.48 | 301.44 | 834.27 | 301.39 | 836.66 | 301.38 | 839.28 | 301.34 | 842.8 | 301.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 844.53 | 301.3 | 846.1 | 301.25 | 846.59 | 301.24 | 847.2 | 301.23 | 848.79 | 301.21 |
| 849.03 | 301.2 | 849.38 | 301.19 | 851.22 | 301.19 | 851.45 | 301.2 | 851.97 | 301.21 |
| 852.58 | 301.22 | 853.32 | 301.24 | 854.13 | 301.26 | 856.04 | 301.33 | 856.73 | 301.37 |
| 860.48 | 301.58 | 861.11 | 301.58 | 868.75 | 302 | 870.38 | 302.06 | 871.12 | 302.07 |
| 872.46 | 302.1 | 881.35 | 302.2 | 884.38 | 302.22 | 896.49 | 302.27 | 896.95 | 302.27 |
| 897.88 | 302.26 | 898.84 | 302.26 | 899.41 | 302.25 | 902.46 | 302.17 | 903.44 | 302.14 |
| 903.89 | 302.11 | 904.34 | 302.04 | 904.83 | 302 | 914.45 | 301.79 | 918.08 | 301.74 |
| 919.78 | 301.72 | 924.51 | 301.69 | 926.88 | 301.68 | 936.56 | 301.68 | 950.84 | 301.75 |
| 951.89 | 301.75 | 954.46 | 301.76 | 956.02 | 301.77 | 958.65 | 301.77 | 961.51 | 301.78 |
| 964.19 | 301.77 | 965.9 | 301.77 | 968.75 | 301.75 | 969.19 | 301.75 | 969.59 | 301.74 |
| 970 | 301.74 | 976.09 | 301.59 | 977.17 | 301.56 | 978.69 | 301.55 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 195.14 | .04 | 782.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 195.14 | 782.13 | 339.35 | 361.99 | 326.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH70
REACH: WASH70 RS: 2036.83

INPUT
Description:
Station Elevation Data num= 469

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.25 | 1.609985 | 313 | 3.26001 | 312.68 | 6.309998 | 312 | 7.380005 | 311.79 |
| 8.76001 | 311.77 | 11.32996 | 311.56 | 11.94 | 311.56 | 13.26996 | 311.45 | 13.81 | 311.39 |
| 14.21997 | 311.38 | 14.90997 | 311.43 | 19.63 | 311.83 | 20.87 | 311.98 | 20.95996 | 312 |
| 21.20001 | 312.06 | 21.92999 | 312.21 | 24.45001 | 312.77 | 25.91998 | 313 | 26.78998 | 313.08 |
| 26.95001 | 313.12 | 8.90997 | 313.24 | 29.97998 | 313.33 | 0.85999 | 313.36 | 31.03998 | 313.38 |
| 31.81 | 313.55 | 34.39996 | 314 | 36.14001 | 314.51 | 36.83997 | 314.67 | 38.59998 | 315 |
| 40.37 | 315.27 | 44.78998 | 316 | 45.20996 | 316.04 | 49.58997 | 316.35 | 1.96997 | 316.43 |
| 52.64001 | 316.48 | 53.95001 | 316.59 | 54.37 | 316.61 | 55.45001 | 316.71 | 58.14996 | 316.89 |
| 59.14996 | 316.81 | 62.73999 | 316 | 63.37 | 315.78 | 65.33997 | 315 | 67.21997 | 314.25 |
| 67.94 | 314 | 69.76001 | 313.28 | 70.57001 | 313 | 71.31 | 312.58 | 72.79999 | 312 |
| 73.90997 | 311.25 | 74.31 | 311 | 74.45996 | 310.91 | 75.92999 | 310.02 | 77.23999 | 309.36 |
| 77.94 | 308 | 78.71997 | 308.64 | 79.95996 | 308 | 81.07996 | 307.43 | 81.96997 | 307 |
| 83.45996 | 306.26 | 84 | 306 | 86.14996 | 305.12 | 86.45996 | 305 | 88.02997 | 304.37 |
| 89.21997 | 304 | 89.81 | 303.75 | 90.32001 | 303.69 | 0.84998 | 303.47 | 92.08997 | 303 |
| 93.17999 | 302.54 | 94.45001 | 302 | 96.39001 | 301.24 | 97.02997 | 301 | 98.29999 | 300.43 |
| 100.04 | 300 | 100.35 | 299.92 | 100.48 | 299.88 | 101.55 | 299.48 | 102.75 | 299.16 |
| 103.26 | 299 | 106.35 | 298.15 | 106.91 | 298 | 109.41 | 297 | 113.58 | 296.06 |
| 113.86 | 296 | 117.85 | 295.13 | 118.45 | 295 | 123.14 | 294 | 123.33 | 293.97 |
| 128.64 | 293 | 131.11 | 292.69 | 136.68 | 292 | 139.02 | 291.69 | 145.35 | 291 |
| 147.38 | 290.85 | 147.97 | 290.79 | 148.49 | 290.65 | 149.14 | 290.6 | 151.46 | 290.54 |
| 153.98 | 290.46 | 154.09 | 290.47 | 154.21 | 290.48 | 154.51 | 290.57 | 154.89 | 290.6 |
| 158.86 | 290.74 | 162.26 | 290.89 | 163.2 | 290.93 | 166.65 | 291 | 170.02 | 291 |
| 175.64 | 291.01 | 176.88 | 291.01 | 181.94 | 291 | 184.32 | 291 | 193.14 | 290.77 |
| 198.1 | 290.67 | 204.42 | 290.5 | 205.83 | 290.45 | 206.63 | 290.4 | 207.02 | 290.37 |
| 207.84 | 290.24 | 208.06 | 290.22 | 208.37 | 290.21 | 208.65 | 290.2 | 208.73 | 290.21 |
| 208.9 | 290.22 | 209.9 | 290.27 | 210.18 | 290.28 | 210.61 | 290.28 | 211.14 | 290.27 |
| 211.92 | 290.25 | 212.02 | 290.26 | 212.15 | 290.28 | 212.5 | 290.29 | 213.03 | 290.3 |
| 216.05 | 290.35 | 217.57 | 290.39 | 218.83 | 290.41 | 219.92 | 290.44 | 223.97 | 290.59 |
| 224.27 | 290.59 | 224.43 | 290.58 | 225.56 | 290.58 | 226.59 | 290.56 | 227.02 | 290.54 |
| 227.53 | 290.52 | 228 | 290.48 | 228.31 | 290.47 | 230.36 | 290.47 | 230.71 | 290.46 |
| 232.61 | 290.48 | 233.21 | 290.45 | 233.97 | 290.38 | 234.37 | 290.34 | 234.53 | 290.31 |
| 234.76 | 290.28 | 234.99 | 290.27 | 235.36 | 290.27 | 235.9 | 290.26 | 236.55 | 290.26 |
| 238.36 | 290.27 | 238.79 | 290.28 | 239.18 | 290.28 | 239.65 | 290.29 | 240.38 | 290.31 |
| 241.51 | 290.32 | 244.17 | 290.36 | 244.99 | 290.36 | 248.38 | 290.41 | 250.17 | 290.42 |
| 252.42 | 290.44 | 259.48 | 290.49 | 260.09 | 290.49 | 261.35 | 290.5 | 262.53 | 290.49 |
| 263.33 | 290.5 | 263.95 | 290.51 | 266.5 | 290.59 | 267.56 | 290.62 | 270 | 290.62 |
| 272.32 | 290.63 | 275.56 | 290.53 | 276.73 | 290.48 | 277.1 | 290.47 | 277.8 | 290.47 |
| 280.5 | 290.43 | 283.53 | 290.37 | 287.48 | 290.35 | 289.16 | 290.32 | 290.08 | 290.31 |
| 292.26 | 290.29 | 292.92 | 290.28 | 295.74 | 290.26 | 296.71 | 290.25 | 297.17 | 290.24 |
| 298.93 | 290.22 | 299.37 | 290.22 | 301.17 | 290.21 | 305.28 | 290.21 | 306.02 | 290.22 |
| 306.24 | 290.22 | 306.5 | 290.23 | 308.77 | 290.29 | 311.29 | 290.29 | 316.25 | 290.46 |
| 318.06 | 290.46 | 319.47 | 290.47 | 330.04 | 291 | 330.31 | 291.02 | 330.48 | 291.02 |
| 332.5 | 291 | 332.86 | 290.99 | 337.07 | 290.77 | 338 | 290.74 | 339.09 | 290.74 |
| 340.47 | 290.75 | 342.1 | 290.79 | 345.46 | 290.89 | 348.92 | 291 | 354.86 | 291.07 |
| 360.13 | 291.11 | 366.61 | 291.08 | 368.2 | 291.09 | 368.93 | 291.1 | 369.43 | 291.12 |
| 370.5 | 291.14 | 375.76 | 291.16 | 379.29 | 291.15 | 383.1 | 291.11 | 392.19 | 291 |
| 398.73 | 290.76 | 406.51 | 290.51 | 408.88 | 290.42 | 409.39 | 290.41 | 409.93 | 290.39 |
| 410.93 | 290.38 | 411.29 | 290.39 | 411.49 | 290.44 | 411.82 | 290.44 | 413.8 | 290.39 |
| 425.45 | 290 | 426.63 | 289.97 | 426.88 | 289.96 | 445.8 | 289.42 | 447.06 | 289.4 |
| 450.33 | 289.31 | 450.55 | 289.3 | 451.35 | 289.27 | 452.51 | 289.24 | 452.68 | 289.23 |
| 452.77 | 289.22 | 452.88 | 289.21 | 453.14 | 289.2 | 453.66 | 289.19 | 453.82 | 289.18 |
| 453.96 | 289.17 | 454.11 | 289.16 | 454.33 | 289.13 | 455.59 | 289.13 | 456.73 | 289.12 |
| 456.89 | 289.13 | 457.49 | 289.13 | 458.36 | 289.14 | 459.49 | 289.15 | 460.1 | 289.15 |
| 461.75 | 289.17 | 462.24 | 289.18 | 463.34 | 289.18 | 465.77 | 289.23 | 467.92 | 289.25 |
| 478.29 | 289.28 | 484.36 | 289.32 | 486.87 | 289.32 | 489.39 | 289.31 | 491.87 | 289.28 |
| 495.25 | 289.22 | 496.83 | 289.22 | 497.77 | 289.21 | 498.49 | 289.21 | 499.16 | 289.22 |
| 499.8 | 289.22 | 501.82 | 289.23 | 504.42 | 289.25 | 514.0699 | 289.23 | 517.37 | 289.25 |
| 523.91 | 289.25 | 527.4 | 289.29 | 528.18 | 289.31 | 528.76 | 289.32 | 529.53 | 289.35 |
| 529.89 | 289.36 | 538.49 | 289.32 | 538.95 | 289.33 | 539.48 | 289.35 | 541.2 | 289.35 |
| 543.53 | 289.41 | 543.9 | 289.42 | 546 | 289.51 | 547.4399 | 289.53 | 548.37 | 289.56 |
| 550.85 | 289.63 | 551.98 | 289.65 | 554.37 | 289.73 | 555.54 | 289.74 | 556.45 | 289.76 |
| 560.67 | 289.73 | 561.38 | 289.75 | 561.56 | 289.76 | 561.64 | 289.76 | 561.75 | 289.77 |
| 561.95 | 289.78 | 562.8 | 289.81 | 563.03 | 289.82 | 563.72 | 289.83 | 563.8 | 289.83 |
| 563.93 | 289.82 | 564.22 | 289.82 | 564.6 | 289.83 | 564.71 | 289.83 | 566 | 289.84 |
| 567.64 | 289.84 | 569.93 | 289.79 | 570.9399 | 289.77 | 571.54 | 289.76 | 573.31 | 289.71 |
| 579.45 | 289.51 | 583.46 | 289.43 | 584.81 | 289.41 | 585.97 | 289.39 | 587.28 | 289.34 |
| 591.31 | 289.3 | 592.38 | 289.26 | 593 | 289.25 | 599.85 | 289.07 | 599.96 | 289.06 |
| 602.25 | 289.01 | 603.1899 | 289 | 607.01 | 289 | 607.77 | 289.01 | 608.27 | 289.03 |
| 608.4399 | 289.06 | 611.72 | 289.09 | 614.81 | 289.11 | 620.37 | 289 | 621.4 | 288.97 |
| 625.63 | 288.8 | 626.64 | 288.78 | 627.37 | 288.77 | 628.3 | 288.77 | 629.4399 | 288.78 |
| 630.73 | 288.8 | 636.33 | 288.91 | 638.03 | 288.94 | 640.86 | 288.98 | 642.88 | 289 |
| 646.46 | 289.08 | 653.76 | 289.34 | 666.88 | 289.75 | 667.12 | 289.76 | 671.58 | 290 |
| 678.73 | 290.86 | 680.1 | 291 | 688.09 | 291.97 | 688.36 | 292 | 688.76 | 292.06 |
| 695.38 | 293 | 698.71 | 293.69 | 699.41 | 293.83 | 700.22 | 294 | 701.58 | 294.32 |
| 703.95 | 294.85 | 704.4 | 294.95 | 704.64 | 295 | 706.33 | 295.41 | 706.79 | 295.49 |
| 707.45 | 295.61 | 708.2 | 295.7 | 708.31 | 295.72 | 710.88 | 295.88 | 711.64 | 295.97 |
| 711.8 | 296 | 712.94 | 296.19 | 716.91 | 297 | 730.6 | 297.94 | 730.97 | 297.96 |

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  731.02  297.96  731.27  297.97  731.64     298  731.94  298.01  732.41  298.02
   733.5  298.03  734.69  298.03   735.4  298.01  735.72     298  738.84  297.86
  741.76  297.75  742.98  297.71  743.71  297.68  746.26  297.59  762.42     297
   763.5  296.94  764.22  296.89  771.13  296.46  781.98  295.73  790.02  295.48
  791.41  295.49  792.87  295.51  796.54  295.51  799.02   295.5  799.72   295.5
  810.06  295.58  812.98  295.65  814.49  295.68  816.45  295.71  817.96  295.73
  818.31  295.73  820.09  295.74  820.31  295.74  820.48  295.73  820.71  295.73
  821.45   295.7  821.59  295.69  821.67  295.64  822.52  295.64  838.68  296.01
  838.77  296.01  838.86  296.02  844.51   296.2  845.96  296.26  858.31  296.86
  859.04   296.9  859.66  296.94  859.79  296.94  859.91  296.95  860.01  296.95
  860.24  296.96  860.37  296.96  861.22     297  863.81  297.06  866.37  297.13
  868.07  297.19  870.11  297.32  870.85  297.34  872.06  297.37  872.38  297.38
  873.94  297.39  878.03   297.4  881.03   297.4   883.4   297.3  884.01  297.26
  884.86  297.19  885.48  297.04  886.04     297  886.92  296.93  889.63  296.83
  892.46  296.74  893.04  296.79  893.73  296.87  894.01  296.91  894.35  296.94
  896.16     297  896.26     297  899.64   297.1  905.06  297.22  908.11  297.24
  910.88  297.31  912.01  297.32  914.67  297.39  919.36  297.49

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  207.02     .04  678.73     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        207.02  678.73           360.76  388.68   399.2              .1       .3

CROSS SECTION


RIVER: WASH70
REACH: WASH70             RS: 1648.15

INPUT
Description:
Station Elevation Data    num=     433
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  293.69.6400146  293.741.090027   293.82.300049     294 5.77002  294.59
7.970032     29512.03003   295.9    12.5     29612.68005  296.0414.82001  296.55
16.14001  296.8816.61005     29717.89001  297.2421.62006     29822.16003  298.15
22.27002  298.1322.54004     29823.73004  297.4825.10004     29726.43005  296.37
   27.25     29627.70001  295.6729.09003     29529.97003  294.4930.87006     294
   32.25  293.2632.78003     293   33.25  292.7934.96002     29236.30005  291.34
37.07001     29138.60004  290.2839.23004     29040.96002   289.241.41003     289
41.60004   288.942.74005  288.41   43.69     28845.79004  287.1946.37006     287
46.72003  286.8949.41003     286   58.19     28558.27002     28579.60004     284
85.72003     28486.83002  283.9886.92004     28492.49005  284.1792.98004  284.19
93.54004  284.19  103.59  284.16  105.28  284.16  111.25  284.18  111.73  284.18
  114.23  284.19  117.97  284.19  123.73  284.17  124.94  284.17  125.36  284.18
  135.36  284.17  136.72  284.08  138.04     284  139.13  283.88  140.26  283.72
  140.85  283.72  149.14  283.77149.8101  283.77  150.26  283.79  153.02  283.96
  153.71     284  156.72     284160.8101  284.01  169.97  284.01  172.48     284
  176.46     284  177.19  283.95   177.2  283.78  178.39  283.68  179.32  283.61
  186.72  283.42   188.3  283.4190.3701  283.38191.1801  283.37191.8101  283.37
191.8701  283.38  192.57  283.39  196.92  283.44  197.16  283.44  197.97  283.43
  198.71  283.43  201.75  283.42  201.98  283.44202.2401  283.45  202.33  283.48
  202.58  283.51   203.2  283.55  204.42  283.62  210.48  283.86     211  283.85
212.9301  283.85  213.59  283.86  220.95  283.76   223.5  283.73225.3101  283.73
  226.91  283.74  237.52  283.79  241.39  283.88  242.98  283.92  243.54  283.92
  244.51  283.91244.9301  283.92  245.08  283.92  245.38  283.91  246.22  283.91
252.0601  283.86252.1201  283.86  257.77  283.76260.0601  283.73262.2401  283.71
  268.01   283.7268.3101  283.71  268.85  283.74  269.42  283.77  269.83  283.81
  270.33  283.81272.3101   283.8  272.52   283.8  274.94  283.82  275.71  283.82
   276.2  283.83  276.51  283.84278.3101  283.84  278.91  283.83  279.42  283.83
279.8701  283.82280.1201  283.81   280.4  283.8280.8701  283.79  280.94  283.78
  281.17  283.77  281.77  283.75  281.96  283.75   284.1  283.74  284.32  283.74
  291.46  283.68  296.54  283.95  322.75   283.2  322.89   283.2  322.95  283.21
  325.61  283.05326.2401     283  327.04  282.96  329.44  282.81  330.98  282.74
  333.53  282.65  334.22  282.62335.4901  282.55   335.9  282.54  336.35  282.52
  336.85  282.52  337.96  282.51  339.98  282.51  340.25  282.5342.4901   282.5
  342.71  282.49349.3701  282.48  355.05  282.29355.4901  282.28  356.17  282.27
  356.61  282.26  357.63  282.26  358.14  282.27358.5601  282.28358.8101  282.28
358.9301  282.29  359.04  282.31  359.38  282.32  359.88  282.33  360.95  282.33
  361.52  282.32  361.82  282.32  362.04  282.33  362.15  282.33  362.28  282.35
  362.58  282.36   363.7  282.38  366.34  282.45   369.7  282.43  370.22  282.44
  370.84  282.45371.1201  282.44  372.97   282.4  373.16  282.48  373.47  282.52
  374.36   282.6  374.67  282.62376.4901  282.57  379.85  282.83380.8701  282.77
  381.23  282.76381.5601  282.77  382.32     283  383.57  283.36  384.36  283.49
  387.54     284  389.19  284.04  390.55  284.07  394.57  284.13  399.55  284.22
   412.3  284.34  424.84  284.23  425.57  284.21  426.62  284.19  427.91  284.16
  434.32  284.12  435.59   284.1  437.12  284.07  439.71     284  440.22  283.92
  440.91  283.87  441.49  283.88   442.1   283.9  442.14     284  458.49     284
  462.58  284.01  466.04     284  472.54     284  477.65  283.82  487.61  283.58
  493.23  283.46  493.49  283.46  495.07   283.4  495.37   283.4  495.76  283.41
  495.98   283.4  496.32  283.38  496.58  283.37  497.76  283.28  498.21  283.25
  499.04  283.19  499.12  283.18  499.56  283.12  499.62  283.11  499.79  283.13
  500.48  283.17  501.33  283.16  502.88  283.22   503.4  283.22  503.79  283.23
  506.08  283.34  508.18  283.49  508.36  283.53  508.45  283.62  509.09  283.67
  509.58  283.71  513.34  283.69  515.14  283.67  515.85  283.65  516.83  283.62
  520.98  283.44524.6801  283.26   525.4  283.23  526.35  283.21   526.6   283.2
  535.14     283545.3201  282.82547.9501  282.78551.9401  282.74  558.37  282.71
  575.39  282.71  576.15  282.72  578.55  282.76  579.33  282.77  579.98  282.77
  580.59  282.78  583.65  282.78  584.47  282.77  584.99  282.77  587.73  282.75
  589.97  282.74   602.5  282.56604.0601  282.54  606.12  282.52  608.72  282.52
  611.91  282.53  615.23  282.53  616.65  282.52617.8101  282.52  620.25  282.49
  621.12  282.49  622.35  282.48  628.62  282.48  629.37  282.49   633.3  282.55
  634.37  282.57  646.98  282.91  647.48  282.91  649.92     283  650.89  283.69
  651.39     284651.6801  284.17652.9301     285  653.45  285.54  653.55  285.58
  653.67  285.63  654.35     286  654.61  286.47  654.98     287  655.16  287.15
  655.59  287.79  655.73     288  657.67  288.85  658.02     289  659.34  289.42
  660.62  289.75  661.34     290665.4301  290.83     667     291   678.9  291.25
  680.85  291.27  683.76  291.34   689.6  291.44  690.54  291.46  691.79  291.49
  692.82  291.51   694.4  291.51  696.38  291.48  698.77  291.42  700.25  291.39
  704.61  291.31  705.28  291.29  709.28  291.14  712.22  291.04  713.04     291
  714.55   290.8  716.05  290.64  716.64   290.6   717.6  290.58718.4301  290.59
  718.63  290.58  719.78  290.61720.5601  290.58  724.08   290.4   728.8  290.18
  731.12  290.02  731.26     290  732.02   289.9  732.47  289.81732.9301  289.67
  733.13  289.68734.0601  289.84  734.75     290  734.96  290.03735.6801  290.08
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  736.25  290.09739.9401  290.06  741.63  290.03  742.29     290742.6901  289.95
  746.63  289.25748.0601     289  752.36  288.23  753.79     288  756.83  287.57
  760.62     287762.6901  286.73  762.75  286.78  762.97  286.81  763.35  286.84
  763.47  286.87  763.63  286.88  763.78  286.88  764.95  286.87  765.32  286.86
  765.63  286.85  767.59   286.8  768.28  286.78  770.46  286.71  778.53  286.44
  782.15  286.33  783.09   286.3  788.39  286.15789.5601  286.15  789.63  286.16
   789.8  286.16  790.08  286.17790.4401  286.18  791.42  286.18  791.59  286.17
792.1901   286.1792.3101  286.09  792.42   286.1  792.77  286.16  792.83  286.16
   793.5  286.14  794.03  286.14   794.2  286.15794.5601  286.17  794.89   286.2
795.1901  286.22  797.14  286.31  798.22  286.35  802.07  286.54  805.35  286.72
805.9901  286.76  806.67   286.8  806.89  286.78  807.78  286.75  808.04  286.73
808.1801  286.72815.1801     287  832.21  287.49  834.13  287.57   843.8     288
  844.58  288.07  856.52     289866.2401     290  872.83  290.71  875.45     291
  877.61  291.28  883.78     292  891.14  292.83   892.6     293  897.51  293.59
  899.58  293.82  900.41  293.92  900.97     294901.3101  294.05   906.5  294.94
  906.88     295  907.08  295.03  909.28  295.38

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  139.13     .04  651.39     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        139.13  651.39           280.14  327.11   415.1              .1       .3

CROSS SECTION


RIVER: WASH70
REACH: WASH70             RS: 1321.01

INPUT
Description:
Station Elevation Data    num=     489
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  310.91.5300293  310.812.790039  310.27 3.48999  310.093.849976     310
4.160034   309.96.699951     3097.690063  308.72 8.97998  308.329.800049     308
10.89001  307.5912.27002     30712.93005   306.714.51001     306   15.25  305.68
16.69006     30518.07007  304.4218.97998     30419.77002  303.4921.05005     303
23.08997   302.423.70996  302.2524.42004     302   25.37  301.7427.89001     301
   31.12  300.3431.83997  300.2233.83997     30035.22998  299.6336.19006  299.69
36.46997  299.6737.60999   299.537.76001  299.4545.83997  298.4547.51001  298.23
48.82007     29849.69006  297.83   51.13  297.5153.60999     29756.72998  296.09
57.10999     29659.16003  295.4359.69006  295.3159.98999  295.2560.58997  295.23
      61  295.2261.76001  295.2265.72998  295.3566.07007  295.3366.40002  295.28
67.52002     295    69.5   294.471.47998     29474.89001  293.4883.70996     292
85.26001  291.7786.52002  291.64   87.38  291.5388.41003  291.4290.94995     291
   92.25  290.86   93.12  290.7795.96997  290.4696.27002  290.4297.02002  290.28
97.18005  290.2697.32996  290.24    97.5  290.2398.19006  290.2398.55005  290.25
99.51001  290.32   100.4  290.41  100.76  290.48  101.17  290.51  101.49  290.53
  101.88  290.54  102.86   290.5  103.74  290.45  104.96  290.34  106.61  290.22
  107.14   290.2  107.26  290.21  112.64  290.22  128.35   289.3  133.87     289
  134.66  288.92136.3101   288.8  136.84  288.77   137.4  288.76  138.05  288.76
  141.71  288.86   143.3  288.87   145.3  288.86  152.09  288.79  153.28  288.77
  155.01  288.79  159.65  288.67  160.61  288.65  161.14  288.65  162.86  288.69
165.0701  288.73  169.24  288.65  170.83  288.68  171.27  288.67  171.83  288.64
  172.21  288.61  173.37   288.5  175.45  288.28  175.73  288.29  176.03  288.27
  176.85   288.2   177.1  288.18  177.56  288.13  179.94     288  191.77  287.61
  200.06     287  202.55  286.88  219.66     286  220.49  285.96  220.99  285.93
  221.78  285.89  237.78     285  242.26  284.83  262.57  284.13  264.28     284
  287.39  283.22  288.55  283.19  290.65  283.15  294.38  283.05  308.11  282.63
   311.1  282.56  318.43  282.45  319.53  282.44  319.76  282.44  320.22  282.43
  321.01  282.42  322.63  282.39  323.26  282.39  324.54  282.38  325.72  282.39
  326.12  282.38  329.01  282.42  330.12  282.43   331.3  282.43  334.55  282.42
  335.22  282.43  335.62  282.44  336.34  282.45  336.91  282.45  341.04  282.41
  346.35  282.32  347.92  282.28  351.82  282.19  355.94  282.07   360.7  281.91
  361.42  281.89  366.64  281.72   369.6  281.65  372.77  281.54  399.23     281
  401.09  280.93   402.7   280.9   406.5  280.76  407.04  280.75  428.91     280
  435.26  279.68  435.96  279.66  440.12  279.53  451.39  279.08  459.74  278.78
   461.2  278.67   461.8  278.64  463.26  278.62  468.28  278.63  469.25  278.64
   471.1   278.7  471.49  278.72   472.5  278.73  478.71  278.95  480.45     279
  487.56  279.34  488.26  279.32  489.59  279.35  490.58  279.34  492.04   279.3
  493.13  279.25  494.91  279.18  497.29  279.05  497.94     279  503.03  278.82
  506.09  278.74   506.7  278.73  507.13  278.72  508.82  278.67  509.12  278.66
  516.79     278  520.62   277.9  522.38  277.87  524.73  277.84  542.43  277.68
  545.29  277.64  546.81  277.64  556.07  277.69   560.3  277.63  560.68  277.64
  564.99  277.57  565.37  277.56  571.22  277.45  578.17  277.38  578.34  277.38
  579.73  277.37  580.65  277.35  581.76  277.33  585.01  277.35  585.99  277.36
  586.23  277.36  591.34  277.46  591.95  277.47   592.3  277.47  592.57  277.46
  592.68  277.45  592.89  277.44  596.83  277.34  598.62   277.3  601.64  277.26
  604.16   277.2   606.2  277.14  606.62  277.14  606.76  277.13  634.63     277
   642.3     277  645.12  276.95  651.59  276.96  654.86  276.98  656.41     277
  656.59     277  661.35  277.14  662.97   277.2  663.44  277.22   665.4  277.31
  665.57  277.31  671.91  277.62  674.43  277.62  677.54  277.76  677.81  277.76
  679.81  277.81  680.29  277.81  681.63  277.76  681.94  277.75  683.85  277.71
  684.65  277.69  686.81  277.63692.4301  277.44699.4301  277.43  705.23     277
  705.45     277707.1801  277.24  712.85     278  713.16  278.11  713.36  278.13
  714.37  278.13  715.03  278.12  715.54  278.09  715.94  278.07  716.75  278.06
  720.79  278.03  721.49     278  722.42  277.97  723.95  277.95  726.08  277.97
  728.25     278  731.24  278.02  732.84  278.02  733.73  278.01  733.89     278
  737.23     278  737.81  278.03  738.59  278.06  739.51  278.09740.9301  278.11
  745.37  278.14  747.38  278.16  748.72  278.19  749.74  278.22  750.96  278.24
  752.71  278.25  754.67  278.25  756.36  278.24757.4301  278.23  757.98  278.22
   758.4  278.19   758.7  278.13  758.98     278  759.89  277.85   760.1  277.83
  760.36  277.82  760.69  277.83761.6801  277.88  763.42     278  764.21  278.07
  767.92  278.44  768.35  278.51  769.15  278.54  769.87  278.56  770.09  278.56
  771.17  278.55  774.05   278.5  777.47  278.43  779.73  278.43  786.04  278.37
  794.28  278.26  799.69     278   816.4  277.98826.9301     278  827.55  277.98
  827.65     278  838.48     278  844.09  277.46  848.33     277849.1801  276.93
  852.58  276.87  863.27  276.91  863.57     277  864.61  277.15  866.37  277.32
  867.55  277.41  870.12  277.57  871.21  277.65   871.5  277.66  871.71  277.66
  872.02  277.67  873.44  277.67  874.38  277.66  875.04  277.66  875.57  277.65
875.6801  277.64  876.05  277.63   878.8  277.52   880.1  277.48  880.98  277.46
  882.01  277.43  883.06  277.41  883.96   277.4  885.82  277.36  887.27  277.34
  888.09  277.34  889.88  277.33  891.88  277.31  895.15   277.3  895.31   277.3
   898.9  277.35  902.27  277.37     905  277.24  907.36  277.15  909.73  277.13
  910.36  277.13  910.51  277.14  910.57  277.16  910.72   277.2   910.9   277.2
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  911.13  277.19  911.44  277.21  913.23  277.45  913.69  277.57  913.96   277.6
  914.98  277.64  915.29  277.64  915.75  277.65  916.39  277.66  917.69  277.66
   918.1  277.65  918.38  277.64  918.86   277.6  919.29  277.58  920.08  277.56
  923.08  277.54  923.99  277.53  925.24   277.5  927.36  277.51  929.42  277.53
  932.88  277.59  933.34   277.6933.9301   277.6  937.92  277.62  938.54  277.62
  939.04  277.61  939.45  277.61  939.83   277.6  940.48  277.59  945.64  277.46
   946.5  277.45  946.64  277.46  947.96  277.47  949.24  277.47  957.36  277.36
   962.1  277.25   963.6  277.21  965.34  277.14  966.05  277.12   971.5     277
  971.81     277  975.23  276.99  976.56  276.99  977.26  276.98  977.41  276.98
  981.08  276.78   992.9  276.63  994.24  276.62  995.18  276.59   995.8  276.56
  996.67  276.48   997.2  276.45  998.03  276.44   999.3  276.44 1002.45  276.48
 1007.41  276.56 1011.62  276.61 1018.54  276.72 1020.17  276.74  1020.8  276.75
 1021.83  276.76 1022.55  276.77 1022.88  276.78 1026.33   276.8  1028.4  276.74
 1032.55   276.6 1035.26  276.75 1039.39     277 1039.47     277 1040.64  277.03
 1041.66  277.03 1042.65     277 1043.66  276.68 1043.97  276.51 1045.19  276.65
 1048.13     277 1051.09  277.24 1059.57  277.85 1061.58     278 1061.86  278.02
 1068.78  278.43 1075.23   278.8 1078.33  278.99 1078.58     279 1083.55  279.47
 1088.44     280 1090.56  280.63 1093.16     281 1094.22  281.29  1096.4     282
  1099.5  282.87 1100.77   283.2 1103.67     284 1106.86  284.51 1107.84  284.64
 1108.46  284.69 1111.21     285  1114.3  285.12 1121.53  285.33 1122.76  285.38
 1124.46  285.43 1130.69  285.45 1131.01  285.42 1133.54  285.34 1134.95  285.32
 1140.58  285.28 1148.99  285.08 1151.76  284.97 1152.55  284.95  1153.3  284.98
 1153.56     285 1164.03  285.62 1165.15  285.67 1166.15  285.71 1166.78  285.71
 1167.16  285.68 1167.53  285.66 1168.59  285.73    1169  285.72 1171.58  285.82
 1172.89  285.93 1173.36     286 1178.21  286.46 1180.38  286.51 1181.33  286.54
 1182.92  286.57 1183.38  286.58  1183.9  286.62 1191.51  287.34

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  516.79     .04 1061.58     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        516.79 1061.58           204.66  291.79  455.04             .1       .3

CROSS SECTION


RIVER: WASH70
REACH: WASH70              RS: 1029.2

INPUT
Description:
Station Elevation Data    num=     418
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  291.91    1.25     2922.789917  292.083.659912  292.097.339966  292.03
7.459961  292.038.529907     29210.38989  291.9310.88989  291.9210.96997  291.91
11.48999  291.8513.45996  291.7114.85999  291.5918.53992     29119.90991  290.45
21.65991     29023.08997   289.423.85999  289.1224.08997  289.0424.15991  289.04
24.22998  289.0624.30994  289.0824.41992   289.124.69995  289.1326.00989  289.35
31.05994     29034.09998  290.5536.07996     291 38.2699  291.2138.71997  291.24
39.32996  291.2640.22998  291.2741.46997  291.2742.30994  291.2650.22998     291
50.71997  290.9750.94995  290.9651.08997  290.9551.27991  290.9451.43994  290.93
51.91992  290.8952.90991   290.856.59998  290.4459.92993  290.1561.25989     290
 61.6499  289.94   61.75  289.93 63.3999  289.7365.56995  289.4468.59998     289
68.85992  288.9270.78992  288.2771.58997     28874.15997  287.1274.59998     287
75.74994  286.6979.87994  285.6181.66992     28583.72992  284.4385.41992     284
87.86993  283.3188.71997     28389.87994  282.6792.54993     28294.78992  281.57
95.23993  281.4996.87994  281.2397.66992  281.0898.09998     28198.62994  280.93
98.90997   280.999.79993  280.83101.7599   280.6102.5099  280.52102.8599   280.5
  104.41  280.43  105.33  280.38106.4799  280.29  109.14     280112.7299  279.68
120.2299     279124.1299  278.63  125.96  278.44  129.58     278  143.83  276.55
149.5399     276  156.78  275.34160.3199     275165.9299  274.58  172.46     274
  178.03  273.22   178.4  273.12  178.47  273.11  178.53  273.11178.7899  273.13
   179.1  273.21179.2299  273.21  181.47  273.18  183.91  273.33  184.78  273.36
185.9199  273.39186.1699  273.38  191.41     273   192.2     273195.3699   273.5
  198.14     274204.7299     274  205.85  274.01207.2399  274.01209.2599  274.05
215.6699  274.19  217.02  274.19  221.28   274.2222.5599   274.2225.6099  274.17
234.6799  274.14236.3099  274.36  239.84  274.76   240.6  274.82  240.96   274.8
241.6799  274.73  243.02   274.9  243.27  274.87  243.97  274.93245.4999  274.84
245.6299  274.83  246.28  274.82246.7499   274.8251.8599  274.44255.6299  274.25
  257.02  274.08257.6299     274  262.53  273.31   264.1  273.08  264.33  273.05
  264.72     273264.8699  272.98  265.59  272.92268.7399  272.45269.1899  272.35
  269.35  272.33  272.02  272.33272.5599  272.32  278.28  272.24280.6099  272.26
281.2399  272.27285.2999  272.25  285.77  272.24286.0599  272.23  288.27  272.21
290.1799   272.2  290.46   272.2  290.77  272.21  291.91  272.25292.4199  272.27
  292.71  272.28  293.08  272.29  294.78  272.31295.2999  272.32296.9199  272.36
297.2399  272.36298.4899   272.4298.9999  272.43  300.64  272.46   302.1  272.49
  302.21  272.48303.0699  272.48303.9299  272.49304.3599  272.49  312.65  272.61
   313.7  272.62  315.96  272.62316.3699  272.61319.1199  272.51329.3599  272.06
  330.91     272  331.39  271.98332.3799  271.96333.2499  271.95334.5399  271.94
335.1699  271.94345.6299     272346.0599  272.01  346.15     272346.3799     272
346.4399  272.01356.1099  272.08  356.21  272.08  367.53  272.18370.5699   272.2
  375.16  272.22  379.83  272.22383.5399  272.28  384.03  272.29   387.4  272.34
389.4299  272.36389.9799  272.38  391.71  272.39397.0499  272.59398.4899  272.64
   399.2  272.66  400.91   272.7  401.85  272.72402.1099  272.73  404.28  272.73
404.8099  272.74406.0699  272.77406.6799  272.78  407.28  272.78   407.9  272.77
  410.34  272.74410.8199  272.74411.8099  272.73  412.46  272.73413.2999  272.72
   414.4   272.7415.8599  272.68420.9399   272.6421.2899  272.59  422.03  272.55
422.8599  272.49  423.64  272.45  425.34  272.39  426.27  272.33  429.95  272.03
430.3199  272.03430.4999  272.02430.6799  272.02435.6699  272.19  438.16  272.25
  441.71  272.39  442.84  272.44443.1099  272.44  481.02  271.86485.7899  271.73
503.1099  271.42513.9799     271515.2999   270.9518.7299   270.7  520.41  270.66
521.6299  270.82523.4799  270.95524.4799  270.98  525.85     271  528.77  271.23
529.6299  271.43  530.58  271.59532.4999     272554.6899  272.31559.2399  272.35
  559.64  272.35561.0699  272.34  561.91  272.35  562.95  272.35564.7999  272.37
  565.27  272.37  565.77  272.36  572.66  272.37575.4999  272.37   578.1  272.36
578.6699  272.37585.1599   272.3  590.33   272.2  590.77  272.21  591.09  272.22
  596.98     272598.7599  271.94600.1799  271.87600.6599  271.83600.7499  271.81
602.0599  271.81606.5499  271.83607.1799  271.83617.2799  271.92625.3999  271.38
629.1899  271.16  630.24  271.17  632.39     271634.1599  270.98639.2999  270.98
644.1699  270.96  651.22  270.96662.0099     271  662.95     271  663.08  271.02
  663.61  271.05664.5399  271.08  668.35  271.16  669.59  271.18676.4099  271.27
677.8099   271.3  679.33  271.32  681.59  271.32682.9299  271.29  685.74  271.19
687.6799   271.1  689.47     271742.0399     271  743.64  271.05745.0499  271.08
  746.72  271.11  748.85  271.13  751.49  271.16758.7599  271.21762.2599  271.18
766.0699  271.14  767.33   271.1  772.64     271  784.83  270.72785.8999   270.7
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790.5399  270.58793.1499  270.52  794.45  270.48795.2899  270.45795.5099  270.44
795.8999   270.4796.2999  270.38796.9099  270.36  797.61  270.34798.2799  270.33
  802.45  270.26  803.39  270.24  804.47  270.22  804.73  270.23805.1299  270.23
805.2499  270.24805.3699  270.24  805.52  270.27  805.72  270.29806.1699  270.31
  806.34  270.33  806.47  270.33  806.71  270.32807.8699   270.3  809.22  270.26
  809.49  270.25  809.71  270.24809.9099  270.24  810.02  270.23810.5099  270.21
810.6499  270.21  810.97  270.22  811.24  270.23811.5599  270.24  811.64  270.24
811.9999  270.27  812.14  270.27  812.39  270.28  813.71  270.29816.4299  270.29
  819.14  270.32822.5099  270.37  828.52  270.47829.4999  270.48  830.58  270.48
849.5099  270.28  851.34  270.27854.6599  270.24   856.6  270.21858.0499   270.2
862.6699  270.15868.8199  270.06  869.22  270.06869.8599  270.05870.5699  270.05
870.6799  270.06  870.97  270.06  872.96     270  894.73  269.64899.9099  269.56
  902.46  269.54904.6899  269.54  908.21  269.55  910.23  269.54  917.59  269.56
919.1699  269.57   920.2  269.57  923.53  269.61935.3699  269.77937.7399  269.81
   940.1  269.87  940.83  269.88944.7899     270  948.58  270.32958.0699  270.91
959.4399     271960.6099   271.1  970.97     272977.0399  272.66979.6599     273
982.1799  273.27989.1899     274993.2399  274.44   995.6  274.65996.8799  274.77
997.5099  274.82 1014.96  275.91 1019.82  276.15 1023.69  276.32 1025.21  276.36
 1027.96  276.47 1029.45  276.49 1031.26  276.55 1032.36  276.57 1033.17  276.58
 1035.29  276.53 1036.61  276.52 1043.21  276.28 1046.37  276.17 1047.12  276.15
 1068.77  275.26 1074.43     275 1077.56  274.87  1079.7  274.76 1081.21  274.69
 1082.03  274.67 1083.38  274.61 1089.07  274.61

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05316.3699     .04  970.97     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      316.3699  970.97           399.36   362.8   198.8              .1       .3

CROSS SECTION


RIVER: WASH70
REACH: WASH70             RS: 666.38

INPUT
Description:
Station Elevation Data    num=     487
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  261.662.280029  261.546.150024  261.447.790039  261.3511.84998  261.26
12.76001  261.2119.46997  261.0420.70996     26130.43005  260.5639.79004     260
42.56006  259.7845.53003  259.5746.64001  259.4753.20007  259.2453.70996  259.23
54.58997  259.2357.16003  259.1657.52002  259.1659.66003  259.1460.93005   259.1
74.01001  258.6476.72998  258.5281.43005  258.2985.69006     25889.07007  257.71
89.85999  257.7392.19006  257.4293.09998  257.5293.56006  257.4394.34998  257.34
94.89001   257.398.54004  257.33   98.88  257.33  127.91     258  145.03  258.49
  147.09  258.53  149.88  258.59  155.75  258.75  157.99   258.8170.3301     259
  175.96  259.08  177.01   259.1192.8201  259.35196.5701  259.42240.5801     260
  242.42  260.05  245.23  260.11247.8301  260.16  250.09  260.18251.9301  260.19
  255.84  260.18256.6901  260.24   259.4  260.46  260.21  260.51  266.73   260.4
  267.09  260.42  267.62  260.43  280.62  260.61  281.36  260.65  293.89     261
297.6801  261.04  297.88  261.05  298.14  261.06   309.3  261.13309.5801  261.16
309.8201  261.17311.4301  261.16  312.28  261.17  312.49  261.17  313.25  261.18
  313.49  261.18314.6801  261.14  314.84  261.14315.0601  261.15  315.36  261.18
  315.71  261.21  320.97  261.83  322.51     262  323.59  262.04  325.25  262.13
337.9401  262.74  341.13     263352.0801  263.28  368.75  263.69  373.05  263.78
  381.15     264384.1801  264.12  385.71  264.15398.3201  264.54404.1801  264.57
  410.42  264.71  415.78  264.73  418.03  264.75  423.48  264.82  428.04  264.89
  429.04  264.91  429.64  264.92  430.53  264.92  434.89     265  447.63  265.44
  453.39  265.48  458.37  265.62   469.9   265.7  472.16  265.72  473.64  265.74
  480.35  265.88  485.62     266492.0601  266.49492.9501   266.5  494.92  266.63
   495.6  266.62   502.8  266.63  514.09   266.4  520.35     266  528.22  265.55
  530.54  265.44531.5701  265.41  532.46  265.39533.3301   265.4  536.26  265.48
  537.48   265.5538.9301  265.52545.4301   265.6549.9301  265.64551.8101  265.67
  554.24  265.72557.5601  265.83  562.11  265.99  562.28     266  562.89  266.02
587.0701     267  606.02  267.54  620.69     268  624.43  268.83  625.17     269
  649.78     269  653.52   268.6  653.77  268.54  653.95  268.44  659.22  268.36
  663.03  268.32  680.05     269  702.93  269.66  706.37  269.62  712.42  269.39
  712.63  269.29  713.75  269.02  713.86     269  724.65  268.66  728.41  268.55
  731.84   268.4  735.18   268.3  738.13  268.24   741.6     268  750.62     268
  751.95  268.05  753.16  268.09  754.42  268.12  758.14  268.17  759.64  268.16
  769.04   268.3  769.51  268.31  771.73  268.33  772.34  268.33  774.51  268.31
  777.65   268.3  781.49  268.27  783.89  268.27  784.31  268.28  785.09  268.34
  785.72  268.37  787.54  268.44  788.21  268.46     792  268.56  800.43  268.51
  803.67  268.67  805.29  268.66  809.22   268.8  810.15  268.82  812.92  268.69
  820.29  268.68  822.79  268.74  824.09  268.71   825.3  268.66  826.79  268.68
  828.05  268.62  829.02  268.56  830.85  268.58   832.9  268.46  833.24  268.45
  833.59  268.45  834.86  268.48  835.84  268.51  836.98  268.56  838.24  268.63
  840.92   268.8  841.25  268.81  842.16  268.86  842.62  268.88  843.55  268.88
  845.52  268.98  845.78     269  851.42  268.98  852.56  268.98  853.39  268.97
  853.55  268.97  854.44  268.91  860.09  268.55  864.11  268.47  866.56   268.3
  869.75  268.05  869.87  268.04  870.45     268  872.47  267.97  882.66  267.84
  883.43  267.84  884.22  267.85  891.23  267.75  894.27   267.7  894.95  267.69
   899.2  267.67  899.96  267.66  901.88  267.67  902.55  267.64  903.17  267.62
  903.96   267.6  904.06  267.58  905.66  267.56  907.17  267.55   908.8  267.55
  911.03  267.53  912.67   267.5  912.92  267.51  913.28  267.51  914.88  267.54
   917.9  267.59  923.13  267.61  925.76  267.63  937.67  267.66  941.72  267.69
  962.96  267.69  963.64   267.7  963.82   267.7     964  267.69   964.3  267.69
   964.5  267.68  965.12  267.62  966.46   267.5  969.64  267.28   974.1     267
   976.5     267  978.91  267.13  979.36  267.15  980.19  267.18  981.16  267.21
  992.87  267.76  995.69   267.8  998.79  267.83 1000.89  267.83 1001.66  267.86
 1002.21  267.87 1004.23  267.86 1005.21  267.88 1005.76  267.88 1009.64  267.86
 1011.18  267.84 1013.92  267.87 1015.39  267.84 1016.71  267.81  1017.9  267.78
 1020.87  267.64 1021.36  267.62 1022.48   267.6 1026.23  267.57 1026.58  267.56
  1027.1  267.54 1027.68  267.52 1028.21  267.47 1028.29  267.46 1028.58  267.44
 1028.86  267.43 1030.66  267.43 1031.29  267.45 1031.77  267.46 1036.16   267.5
 1040.32  267.55 1041.57  267.57 1043.15  267.61 1043.72  267.62 1046.44  267.71
  1049.3  267.83 1050.91  267.88 1053.31  267.95 1055.68     268 1057.86   268.3
 1063.02     269 1067.91     269 1079.22     268 1081.21  267.89 1081.28  267.89
 1085.84   267.6 1087.44  267.48 1087.69  267.49 1088.97  267.38 1091.73  267.31
 1092.71  267.29 1092.96  267.28 1096.77  267.38 1098.24  267.41 1099.95  267.43
 1101.77  267.44 1105.15  267.44 1109.65  267.42    1111  267.42 1112.99   267.4
 1118.07  267.36 1120.58  267.33 1133.38  267.14  1133.9  267.13  1135.6   267.1
 1136.07   267.1 1137.66  267.09 1138.14  267.08 1138.59  267.08 1138.97  267.07
 1139.39  267.07 1139.54  267.08 1139.95   267.1 1140.12  267.11  1142.7  267.03
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  1142.9  267.03 1143.11  267.04 1144.15     267 1145.04  266.98  1146.8  266.99
 1147.22     267 1148.57  267.06 1148.74  267.05 1148.95  267.05 1153.47  267.21
 1157.99  267.38 1159.16  267.41 1159.84  267.43 1160.53  267.43 1160.85  267.42
 1162.32   267.4 1163.43  267.39 1164.91  267.38 1166.69  267.38 1170.72  267.39
  1171.4  267.39 1171.82   267.4  1172.2  267.43 1172.44  267.46 1172.73  267.43
 1173.05  267.41  1173.6  267.37 1174.69  267.31 1176.55  267.24 1179.45  267.15
 1183.48  267.06 1186.51     267 1190.76  266.93 1192.51  266.89 1193.59  266.84
 1198.87  266.61 1199.21  266.61 1199.48   266.6  1199.7   266.6 1200.32  266.62
 1210.72     267 1213.85   267.1 1214.44  267.12  1215.5  267.13 1226.83   267.2
 1233.06  267.25 1235.44  267.28 1236.69  267.29 1240.09  267.29 1240.68  267.28
 1241.54  267.25  1247.9     267 1250.29  266.92 1261.77  266.55 1267.86  266.34
 1269.85  266.31 1273.07  266.31 1273.74  266.32 1274.79  266.34 1277.39  266.46
 1278.68  266.51 1279.91  266.54 1282.68   266.5 1283.89  266.49 1284.69  266.49
 1286.39  266.45 1286.76  266.46 1290.78  266.34  1292.3  266.39 1296.89  266.55
 1298.81  266.62 1299.56  266.63 1300.55  266.65 1301.41  266.65 1304.82  266.58
  1312.3  266.46 1318.38  266.38 1356.17  265.98 1356.62  265.97 1361.45  265.93
 1364.53  265.92 1368.09  265.94 1370.15  265.94 1374.51   265.9 1378.65   265.9
 1381.38  265.91 1383.22  265.93 1383.46  265.92 1383.69  265.92  1384.3  265.89
 1385.32  265.89 1387.28  265.82  1388.6  265.79 1389.65  265.75 1392.58  265.66
 1393.41  265.64 1394.02  265.61 1394.91  265.56 1409.71     265 1430.83  264.54
 1472.65     264  1473.8  263.92 1476.54  263.64 1477.48  263.56 1478.44  263.51
 1479.46  263.48 1480.51  263.47 1483.42  263.47 1484.13  263.48 1485.07  263.51
 1486.19  263.55 1497.48  263.88 1500.19  263.94 1503.78  263.98 1503.84  263.98
 1514.28  264.02 1514.53  264.02 1523.97  264.04  1524.2  264.04 1524.49  264.05
 1526.21  264.07 1528.61  264.13 1530.25  264.15 1532.14  264.21 1533.35  264.23
 1535.71  264.32 1537.84  264.43 1539.61  264.51 1541.25  264.55 1543.11  264.55
 1545.42  264.52 1554.54  264.33 1557.88  264.31 1562.88  264.17 1564.98  264.16
 1575.46  263.91 1578.19   263.8 1589.39  263.43 1591.34  263.34 1592.64  263.31
 1593.91  263.25 1594.83  263.26 1595.32  263.23 1596.71  263.27 1599.88   263.3
 1601.07   263.3 1601.63  263.28 1602.09  263.26 1603.04  263.18 1604.59  263.09
 1606.75     263 1607.97  262.91 1608.23  262.89 1608.45  262.88  1609.1  262.88
 1609.81  262.86 1615.02  262.52

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  713.86     .04 1063.02     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        713.86 1063.02           385.26  308.34  329.64             .1       .3
Left Levee      Station=  643.82      Elevation=  269.22
Right Levee     Station= 1066.32      Elevation=  269.28

CROSS SECTION


RIVER: WASH70
REACH: WASH70             RS: 358.04

INPUT
Description:
Station Elevation Data    num=     454
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  250.731.200073  250.7440.71008     25193.79004     252  157.24  252.78
167.4701  252.92  168.78  252.94173.5901     253   202.3  253.43  221.26  253.78
  225.49  253.85  293.24  255.16296.9401  255.24334.4401     256336.9501  256.06
  337.11  256.07338.0901  256.09  352.23  256.43  367.74  256.75  369.98  256.79
377.3101   256.9  378.77  256.92  383.88     257388.3401  257.06  388.67  257.06
  389.92  257.07   410.8  257.32  419.23  257.45  430.62   257.6   443.6   257.8
   444.5  257.81   445.5  257.83  454.38  257.95455.0801  257.97  469.87  258.11
472.4601  258.15  478.86  258.22  488.65  258.37  492.99  258.43  497.65  258.51
  524.67  258.91525.2001  258.92526.5701  258.93  543.63  259.19   553.9  259.42
  570.39  259.73  580.04     260  604.37  260.62604.9301  260.63  605.77  260.64
610.4401  260.68613.6801   260.7627.3401  260.98  627.51  260.99  628.14     261
634.7001  261.08636.3401  261.08637.5901  261.05  638.62  261.01  638.76     261
641.9701  260.89645.0901  260.76660.5601  260.81  666.92  260.84668.7001  260.85
  670.53  260.87679.9401     261  681.04  261.04  682.04  261.06  691.27  261.33
692.9601  261.36  696.13  261.45     712     262713.0801  262.11714.4601  262.14
  714.88  262.15720.1901  262.44  726.02  262.51727.3201  262.56733.7501  262.61
  734.84   262.6735.7401  262.59  738.14   262.6  740.11   262.6  741.79  262.61
  744.61  262.64768.0601     263  782.07  263.32  784.96  263.39  785.96  263.43
  805.38  263.75805.6201  263.74  807.58  263.72807.8701  263.72  808.01   263.7
  808.57  263.69  809.71  263.68  814.95  263.68  821.45  263.91  821.77   263.9
822.1901   263.9  823.46  263.95  825.11  263.99  825.36     264827.3701  264.06
827.5001  264.06  831.09  264.15  838.29  264.28  838.91  264.29  839.29   264.3
  846.47  264.42  847.71  264.46848.1901  264.46  848.48  264.43  848.96  264.36
  851.96     264  854.83   263.4  856.78     263  858.52  262.73859.0601  262.68
859.5601  262.67860.1201  262.65  862.78  262.72   866.2  262.84866.3101  262.92
  866.84  262.99   866.9     263869.2401  263.66  870.54     264   872.7     264
  874.61  264.06  883.13  264.17   893.2  264.27  895.51   264.3897.6801  264.34
900.4901   264.4  901.32  264.41  904.84  264.44  907.66  264.44  913.57  264.46
918.0601  264.51  922.92  264.51  925.28  264.49926.3701  264.47935.0001  264.15
  936.64   264.2  939.65     264  949.76     263966.4401  262.92968.6901  262.92
973.1201  262.93  979.23  262.92 1005.94     263 1006.85  263.01 1006.95  263.01
 1007.04  263.02 1009.88  263.11 1010.08  263.11 1014.96   263.3 1015.62   263.3
 1018.15   263.4 1018.82  263.44 1019.85  263.51  1020.9  263.55 1021.95  263.58
 1022.73   263.6 1024.87   263.6 1025.84  263.59 1028.14  263.53 1029.56  263.48
 1031.84  263.39 1040.56     263 1063.59     263 1063.91  263.08 1064.18  263.33
 1067.85  263.51 1070.14  263.58 1072.57  263.48 1078.42   263.2 1081.07  263.06
  1082.1  263.01  1082.5     263 1082.96     263 1085.43  262.99 1089.02  262.99
 1090.09  262.98 1091.07  262.98 1092.68  262.99 1093.54  262.99 1097.19     263
 1098.63     263 1102.83  263.89 1103.85     264 1106.16  264.15 1109.07  264.36
 1114.54  264.72 1117.63     265 1119.99  265.24 1123.64  265.46 1128.27  265.75
 1131.92     266 1132.97   266.1 1134.48  266.28 1135.93  266.51 1136.44  266.56
 1136.83  266.58 1137.06  266.58 1137.67  266.57 1142.68  266.38 1151.01  266.05
 1151.27  266.04    1152     266 1152.82  265.96 1152.97  265.95 1153.14  265.94
 1155.97  265.73 1157.41  265.65 1159.28  265.48 1162.09  265.35 1163.55  265.24
  1164.3  265.21 1168.49  265.02 1168.63  265.02 1169.16     265 1173.62  264.87
    1174  264.85 1175.14  264.77 1176.33  264.67 1177.38  264.57  1178.6  264.41
 1179.37  264.39 1180.28   264.3 1182.89     264 1183.71  263.95 1185.96  263.85
  1188.3  263.79 1188.54  263.78 1188.77  263.78 1192.87  263.71 1195.89  263.68
 1198.34  263.69 1199.07  263.69 1199.86  263.66  1203.5  263.58 1204.22  263.58
 1211.65  263.37 1214.99  263.39 1216.03  263.39 1216.98  263.37 1217.91  263.31
 1220.47  263.11 1222.25     263 1222.38  262.99 1227.29  262.55 1231.47     262
 1232.95  261.89 1234.41  261.82 1242.03  261.34 1243.29  261.27 1249.32  261.19
 1250.56  261.14  1251.1  261.12 1251.56  261.11 1259.14  261.16 1259.67  261.15
 1260.54  261.13 1268.61  261.26 1269.46  261.24 1269.92  261.23 1270.09  261.23
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1270.29 | 261.21 | 1270.49 | 261.18 | 1270.66 | 261.17 | 1271.13 | 261.17 | 1271.58 | 261.16 |
| 1272.11 | 261.17 | 1273.04 | 261.17 | 1273.43 | 261.18 | 1273.94 | 261.18 | 1275.79 | 261.22 |
| 1280.13 | 261.3 | 1281.52 | 261.33 | 1282.54 | 261.35 | 1283.23 | 261.37 | 1285.25 | 261.44 |
| 1286.53 | 261.47 | 1295.43 | 261.61 | 1301.38 | 261.76 | 1306.97 | 261.92 | 1309.59 | 262 |
| 1311.95 | 262.2 | 1318.87 | 263 | 1330.3 | 263.59 | 1334.09 | 263.76 | 1334.95 | 263.8 |
| 1335.53 | 263.82 | 1335.84 | 263.83 | 1336.85 | 263.85 | 1337.21 | 263.85 | 1338.55 | 263.86 |
| 1338.82 | 263.83 | 1339.27 | 263.77 | 1340.5 | 263.91 | 1340.6 | 263.89 | 1340.76 | 263.88 |
| 1340.82 | 263.87 | 1341.75 | 264 | 1342.9 | 264 | 1344.15 | 263.88 | 1346.15 | 263.66 |
| 1347.22 | 263.52 | 1348 | 263.4 | 1349.68 | 263.2 | 1351.08 | 263 | 1351.46 | 262.98 |
| 1356.6 | 262.73 | 1357.43 | 262.7 | 1358.24 | 262.69 | 1359.4 | 262.7 | 1361.22 | 262.73 |
| 1365.82 | 262.84 | 1368.1 | 262.89 | 1368.91 | 262.89 | 1370.25 | 262.91 | 1376.73 | 262.9 |
| 1378.39 | 262.91 | 1381.36 | 262.94 | 1383.79 | 262.96 | 1383.86 | 262.96 | 1386.48 | 262.95 |
| 1387.06 | 262.96 | 1387.42 | 262.97 | 1388.15 | 262.97 | 1388.66 | 262.96 | 1388.85 | 262.95 |
| 1389.83 | 262.91 | 1393.99 | 262.86 | 1394.7 | 262.83 | 1396.65 | 262.79 | 1398.03 | 262.73 |
| 1403.01 | 262.6 | 1405.7 | 262.48 | 1407.91 | 262.41 | 1416.93 | 262 | 1420.83 | 261.89 |
| 1422.67 | 261.83 | 1423.77 | 261.78 | 1425.18 | 261.69 | 1426.09 | 261.65 | 1427.43 | 261.61 |
| 1428.4 | 261.59 | 1429.62 | 261.58 | 1431.15 | 261.59 | 1432.9 | 261.62 | 1436.09 | 261.68 |
| 1437.27 | 261.71 | 1438.36 | 261.75 | 1443.06 | 261.97 | 1443.91 | 262 | 1448.4 | 262.18 |
| 1456.69 | 262.49 | 1457.29 | 262.48 | 1458.94 | 262.54 | 1459.75 | 262.56 | 1460.53 | 262.6 |
| 1461.54 | 262.65 | 1462.2 | 262.61 | 1462.92 | 262.59 | 1464.17 | 262.56 | 1466.09 | 262.53 |
| 1471.77 | 262.46 | 1473.12 | 262.44 | 1486.55 | 262.2 | 1490.44 | 262.17 | 1492.79 | 262.2 |
| 1505.89 | 262.1 | 1513.02 | 262.38 | 1521.75 | 262.57 | 1522.44 | 262.59 | 1523.38 | 262.6 |
| 1532.09 | 262.42 | 1532.74 | 262.41 | 1533.5 | 262.39 | 1534.24 | 262.36 | 1539.85 | 262.27 |
| 1540.46 | 262.24 | 1540.91 | 262.22 | 1541.41 | 262.19 | 1541.64 | 262.18 | 1541.79 | 262.18 |
| 1542.27 | 262.2 | 1542.71 | 262.21 | 1542.92 | 262.22 | 1545.46 | 262.2 | 1547.91 | 262.17 |
| 1549.17 | 262.15 | 1550.19 | 262.12 | 1551.66 | 262.06 | 1552.88 | 262 | 1556.34 | 261.67 |
| 1558.3 | 261.47 | 1568.18 | 261.08 | 1568.62 | 261.06 | 1568.82 | 261.04 | 1568.89 | 261.04 |
| 1568.98 | 261.03 | 1569.17 | 261.03 | 1570.23 | 261 | 1570.28 | 260.99 | 1592.81 | 260.73 |
| 1600.97 | 260.89 | 1607.65 | 261 | 1618.97 | 261.12 | 1620.29 | 261.13 | 1620.77 | 261.12 |
| 1622.08 | 261.09 | 1624.33 | 261 | 1626.54 | 260.94 | 1628.94 | 260.91 | 1631.55 | 260.9 |
| 1634.16 | 260.91 | 1636.41 | 260.93 | 1637.94 | 260.97 | 1638.82 | 261 | 1639.08 | 261.03 |
| 1639.59 | 261.05 | 1640.62 | 261.07 | 1647.19 | 261.13 | 1649.82 | 261.14 | 1652.37 | 261.13 |
| 1654.91 | 261.11 | 1657.57 | 261.06 | 1660.17 | 261 | 1663.85 | 260.91 | 1666.96 | 260.84 |
| 1674.12 | 261 | 1679.03 | 261.14 | 1680.55 | 261.16 | 1681.95 | 261.15 | 1687.12 | 261 |
| 1700.84 | 260.55 | 1704.02 | 260.45 | 1734.82 | 259.45 | 1737.73 | 259.36 | 1739.57 | 259.31 |
| 1740.79 | 259.29 | 1741.55 | 259.27 | 1741.94 | 259.27 | 1742.46 | 259.28 | 1742.95 | 259.27 |
| 1744.02 | 259.25 | 1744.74 | 259.23 | 1749.34 | 259 | 1754.91 | 258.91 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 936.64 | .04 | 1335.84 | .05 |

Bank Sta: Left Right Coeff Contr. Expan.
936.64 1335.84 .1 .3
Left Levee Station= 849.48 Elevation= 264.78
Right Levee Station= 1342.77 Elevation= 264.38

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 3066.24

INPUT
Description:
Station Elevation Data num= 326

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 359.852.809998 | | 359.778.929993 | | 359.629.70001 | | 35932.41003 | | 358.95 |
| 34.67999 | 358.9135.23999 | | 358.9135.89001 | | 358.8939.72998 | | 358.8285.03003 | | 358 |
| 104.65 | 357.5 | 110.33 | 357.36 | 111.37 | 357.33 | 112.63 | 357.33 | 113.94 | 357.34 |
| 114.04 | 357.35 | 114.19 | 357.35 | 114.45 | 357.35 | 115.44 | 357.32 | 116.25 | 357.3 |
| 117.26 | 357.28 | 119.13 | 357.25 | 119.97 | 357.23 | 123.07 | 357.16 | 125.63 | 357.08 |
| 125.87 | 357.07 | 128.38 | 357 | 130.57 | 356.87 | 132.92 | 356.74 | 134.71 | 356.67 |
| 137.63 | 356.58 | 139.93 | 356.49 | 142.32 | 356.56 | 144.27 | 356.59 | 144.69 | 356.6 |
| 144.96 | 356.59 | 146.71 | 356.54 | 147.44 | 356.51 | 148.06 | 356.47 | 149.16 | 356.38 |
| 149.91 | 356.33 | 151.91 | 356.26 | 152.12 | 356.26 | 154.51 | 356.17 | 155.98 | 356.3 |
| 156.65 | 356.33 | 157.89 | 356.35 | 159.44 | 356.35 | 162.98 | 356.34 | 164.32 | 356.34 |
| 166.02 | 356.36 | 166.44 | 356.37 | 166.92 | 356.36 | 169.9 | 356.3 | 172.46 | 356.23 |
| 173.75 | 356.19 | 175.97 | 356.12 | 179.28 | 356.02 | 179.79 | 356 | 182.05 | 355.58 |
| 182.1 | 355.72 | 182.12 | 355.78 | 187.82 | 355 | 189.37 | 354.99 | 189.49 | 354.99 |
| 189.66 | 354.99 | 189.88 | 354.87 | 190.87 | 354.95 | 191.67 | 355 | 191.86 | 355.06 |
| 193.18 | 355.34 | 193.85 | 355.57 | 194.71 | 356 | 200.65 | 356.01 | 204.45 | 356.01 |
| 205.78 | 356.01 | 213.59 | 356 | 213.96 | 356 | 217.4 | 355.83 | 220.06 | 355.72 |
| 221.51 | 355.74 | 224.72 | 355.82 | 225.56 | 355.83 | 230.55 | 356 | 234.67 | 356.1 |
| 238.51 | 356.23 | 240.69 | 356.29 | 240.95 | 356.3 | 240.97 | 356.33 | 245.82 | 356.36 |
| 250.29 | 356.38 | 254.03 | 356.32 | 263.28 | 356.15 | 265.68 | 356.1 | 267.17 | 356.06 |
| 269.07 | 356.01 | 269.26 | 356 | 269.83 | 355.92 | 270.12 | 355.88 | 272.55 | 355.49 |
| 275.21 | 355 | 279.39 | 354.18 | 280.36 | 354 | 283.64 | 353.98 | 284.04 | 353.98 |
| 286.54 | 353.99 | 287.94 | 354 | 288.65 | 354.06 | 289.97 | 354.15 | 291.05 | 354.2 |
| 291.75 | 354.22 | 292.43 | 354.23 | 292.84 | 354.23 | 293.29 | 354.22 | 293.8 | 354.21 |
| 298.94 | 354 | 299.04 | 353.99 | 302.72 | 353.49 | 302.92 | 353.43 | 302.92 | 353.39 |
| 303.15 | 353.35 | 303.36 | 353.33 | 303.76 | 353.32 | 306.33 | 353.26 | 306.88 | 353.25 |
| 307.34 | 353.24 | 307.8 | 353.23 | 308.13 | 353.23 | 308.42 | 353.22 | 308.45 | 353.21 |
| 308.69 | 353.21 | 308.92 | 353.2 | 310.7 | 353.22 | 311.03 | 353.22 | 312.21 | 353.24 |
| 313.65 | 353.27 | 313.68 | 353.27 | 313.88 | 353.28 | 314.67 | 353.3 | 315.7 | 353.33 |
| 316.69 | 353.35 | 317.1 | 353.36 | 317.45 | 353.37 | 317.97 | 353.37 | 322.26 | 353.5 |
| 331.58 | 353.8 | 331.95 | 353.86 | 332.67 | 353.92 | 334.42 | 354 | 335.23 | 354 |
| 336.22 | 354 | 337.36 | 354 | 337.73 | 354 | 343.24 | 354 | 346.35 | 354 |
| 349.97 | 354 | 351.53 | 354 | 353.13 | 354 | 364.27 | 354 | 365.03 | 353.87 |
| 366.47 | 353.59 | 368.6 | 353 | 373.65 | 352.99 | 374.11 | 352.99 | 376.06 | 352.99 |
| 380.07 | 353 | 380.36 | 353 | 380.85 | 353 | 380.88 | 353 | 383.42 | 353.15 |
| 383.47 | 353.15 | 385.5 | 353.29 | 385.82 | 353.28 | 387.88 | 353.44 | 388.26 | 353.42 |
| 388.47 | 353.38 | 388.49 | 353.36 | 389.13 | 353.35 | 389.74 | 353.34 | 391.61 | 353.37 |
| 392.3 | 353.38 | 392.92 | 353.37 | 393.34 | 353.36 | 393.87 | 353.33 | 393.99 | 353.31 |
| 394.13 | 353.31 | 394.26 | 353.3 | 395.18 | 353.34 | 398.92 | 353.47 | 401.86 | 353.59 |
| 406.42 | 353.77 | 406.9 | 353.83 | 407.46 | 353.9 | 408.34 | 353.96 | 409.3 | 354 |
| 409.54 | 354 | 409.55 | 354 | 410.35 | 354 | 410.45 | 354 | 411.04 | 354 |
| 411.29 | 354 | 411.46 | 354 | 411.53 | 354 | 411.86 | 354 | 412.94 | 354.09 |
| 414.35 | 354.21 | 415.11 | 354.24 | 415.9 | 354.28 | 416.54 | 354.32 | 418.91 | 354.35 |
| 421.12 | 354.37 | 421.5 | 354.36 | 422.95 | 354.38 | 423.8 | 354.38 | 424.8 | 354.37 |
| 433.42 | 354.24 | 433.53 | 354.24 | 434.22 | 354.24 | 438.45 | 354.28 | 439.24 | 354.28 |
| 439.88 | 354.27 | 440.44 | 354.26 | 441.78 | 354.2 | 444.8 | 354.11 | 445.4 | 354.1 |
| 448.43 | 354 | 453.29 | 354 | 456.92 | 354 | 457.23 | 354 | 457.77 | 354 |
| 459.36 | 354 | 465.37 | 354 | 467.53 | 354.11 | 472.73 | 354.32 | 473.69 | 354.33 |
| 474.08 | 354.34 | 475.05 | 354.34 | 476.86 | 354.33 | 483.29 | 354.28 | 487.89 | 354.22 |
| 495.27 | 354.1 | 497.25 | 354.05 | 498.54 | 354.01 | 498.65 | 354 | 499.83 | 354 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 500.02 | 354 | 504.12 | 354 | 508.96 | 354 | 509.49 | 354 | 509.53 | 354 |
| 509.58 | 354 | 510.57 | 354.2 | 511.18 | 354.25 | 512.14 | 354.28 | 513.19 | 354.31 |
| 514.56 | 354.33 | 515.91 | 354.35 | 520.43 | 354.41 | 522.12 | 354.43 | 523.04 | 354.43 |
| 523.66 | 354.43 | 531.35 | 354.36 | 541.59 | 354.26 | 541.94 | 354.26 | 544.21 | 354.24 |
| 546.46 | 354.22 | 547.26 | 354.22 | 549.86 | 354.18 | 550.36 | 354.17 | 550.54 | 354.17 |
| 551.16 | 354.15 | 551.54 | 354.14 | 551.89 | 354.13 | 552.57 | 354.14 | 553.34 | 354.15 |
| 553.4 | 354.15 | 555.1 | 354.23 | 565.44 | 354.95 | 565.48 | 355 | 567.16 | 355.05 |
| 578.64 | 355.34 | 578.89 | 355.35 | 579.35 | 355.37 | 581.57 | 355.46 | 592.87 | 356 |
| 593.67 | 356.08 | 593.86 | 356.1 | 594.1 | 356.11 | 596.85 | 356.33 | 597.27 | 356.33 |
| 598.18 | 356.31 | 598.84 | 356.28 | 598.93 | 356.27 | 599.31 | 356.28 | 600 | 356.3 |
| 600.3 | 356.31 | 601.55 | 356.41 | 602.32 | 356.48 | 606.1 | 356.97 | 606.32 | 357 |
| 606.56 | 357.01 | 606.86 | 357.05 | 609.52 | 357.31 | 612.58 | 357.61 | 614.9 | 358 |
| 615.05 | 358.02 | 616.51 | 358.12 | 618.15 | 358.21 | 619.27 | 358.33 | 620.76 | 358.47 |
| 622.07 | 358.61 | 625.98 | 359 | 628.85 | 359.23 | 630.35 | 359.37 | 631.46 | 359.48 |
| 637.09 | 360 | 646.32 | 360.63 | 647.16 | 360.7 | 650.81 | 361 | 655.7 | 361.17 |
| 666.01 | 361.36 | 668.66 | 361.4 | 671.4 | 361.43 | 674.36 | 361.44 | 684.43 | 362 |
| 695.01 | 362.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 270.12 | .04 | 565.48 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 270.12 | 565.48 | 343.23 | 407.73 | 525.24 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 2658.51

INPUT
Description:
Station Elevation Data num= 275

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 354.393.349976 | 354.42 6.73999 | | 354.4610.14001 | | 354.4911.89996 | | 354.51 | |
| 16.19 | 354.5317.15997 | 354.5417.39996 | | 354.54 | 18.87 | 354.5321.91998 | | 354.52 | |
| 23.75 | 354.5125.47998 | 354.526.95996 | | 354.49 | 28.06 | 354.48 | 28.69 | 354.47 | |
| 29.45001 | 354.4530.15997 | 354.44 | 31.25 | 354.43 | 32.75 | 354.4136.65997 | | 354.4 | |
| 38.60999 | 354.3840.33997 | 354.3643.77997 | | 354.31 | 48 | 354.2650.16998 | | 354.23 | |
| 52.22998 | 354.1954.10999 | 354.0755.07001 | | 35455.34998 | | 35455.52002 | | 354 | |
| 56.83002 | 35457.52997 | 35458.35999 | | 35459.67999 | | 35459.84998 | | 354 | |
| 59.92999 | 35464.40997 | 353.6665.39001 | | 353.6367.83002 | | 353.5969.59998 | | 353.54 | |
| 71.32001 | 353.4880.97998 | 353.12 | 83.37 | 353.0384.10999 | | 35385.33002 | | 352.72 | |
| 88.56 | 35289.52002 | 351.86 | 90.12 | 351.7794.91998 | | 35198.54999 | | 350.62 | |
| 104.48 | 350 | 107.68 | 349.7 | 108.74 | 349.62 | 111.52 | 349.45 | 114.29 | 349.45 |
| 116 | 349.36 | 117.46 | 349.35 | 119.05 | 349.33 | 120.91 | 349.28 | 126.14 | 349.14 |
| 126.69 | 349.11 | 126.93 | 349.1 | 127.13 | 349.1 | 127.42 | 349.09 | 130.5 | 349 |
| 132.06 | 349 | 132.76 | 349 | 133.07 | 349 | 133.34 | 349 | 133.66 | 349 |
| 154.81 | 349.9 | 157.6 | 350 | 157.73 | 350 | 157.79 | 350 | 159.03 | 350 |
| 159.76 | 350 | 161.46 | 350 | 163.23 | 350 | 164.9 | 350 | 170.43 | 350 |
| 172.71 | 350 | 175.86 | 349.81 | 176.3 | 349.79 | 179.12 | 349.61 | 179.45 | 349.6 |
| 180.51 | 349.52 | 181.62 | 349.51 | 182.91 | 349.45 | 189.87 | 349.09 | 190.51 | 349.05 |
| 192.06 | 349.02 | 192.74 | 349 | 194.09 | 349.01 | 194.81 | 349.01 | 195.06 | 349.01 |
| 195.24 | 349.01 | 197.86 | 349 | 200.01 | 348.93 | 201.34 | 348.9 | 202.62 | 348.88 |
| 213.12 | 348.77 | 214.72 | 348.76 | 217.47 | 348.74 | 226.25 | 348.67 | 227.56 | 348.66 |
| 230.53 | 348.62 | 231.91 | 348.61 | 233.73 | 348.6 | 235.38 | 348.63 | 237.25 | 348.68 |
| 237.51 | 348.74 | 239.6 | 348.92 | 240.25 | 349 | 243.66 | 349.23 | 244.91 | 349.24 |
| 250.99 | 349.31 | 252.56 | 349.34 | 261.47 | 349.58 | 262.54 | 349.59 | 263.6 | 349.6 |
| 265.27 | 349.65 | 268.5 | 349.75 | 269.22 | 349.77 | 269.7 | 349.78 | 270.43 | 349.8 |
| 270.78 | 349.8 | 271.16 | 349.81 | 271.57 | 349.81 | 271.98 | 349.81 | 274.01 | 349.81 |
| 275.4 | 349.82 | 277.88 | 349.82 | 278.43 | 349.83 | 280.7 | 349.82 | 281.74 | 349.82 |
| 282.47 | 349.81 | 282.67 | 349.8 | 286.19 | 349.76 | 289.39 | 349.73 | 291.84 | 349.77 |
| 304.22 | 349.96 | 305.5 | 349.98 | 306.27 | 350 | 318.66 | 350.18 | 322.11 | 350.23 |
| 325.09 | 350.26 | 327.85 | 350.29 | 330.68 | 350.31 | 339.45 | 350.36 | 340.64 | 350.37 |
| 341.9 | 350.38 | 348.47 | 350.42 | 353.89 | 350.5 | 362.05 | 350.54 | 370.53 | 350.67 |
| 371.4 | 350.68 | 384.7 | 350.89 | 387.49 | 350.93 | 387.7 | 350.94 | 388.73 | 350.95 |
| 388.92 | 350.95 | 389.44 | 350.96 | 389.74 | 350.97 | 389.8 | 350.97 | 389.88 | 350.97 |
| 390 | 350.97 | 390.28 | 350.98 | 392.46 | 350.97 | 392.51 | 350.97 | 405.39 | 350.94 |
| 405.56 | 350.94 | 416.77 | 350.92 | 417.39 | 350.93 | 417.82 | 350.94 | 417.94 | 350.94 |
| 418.04 | 350.94 | 418.26 | 350.94 | 418.97 | 350.94 | 419.3 | 350.94 | 419.65 | 350.94 |
| 420 | 350.94 | 420.68 | 350.94 | 429.35 | 350.93 | 431.83 | 350.93 | 433.45 | 350.92 |
| 437.68 | 350.88 | 438.63 | 350.88 | 439.61 | 350.91 | 441.43 | 350.93 | 445.2 | 350.95 |
| 445.78 | 350.95 | 455.85 | 350.97 | 455.97 | 350.97 | 460.49 | 350.99 | 460.67 | 350.98 |
| 463.46 | 351 | 468.88 | 351.04 | 472.25 | 351.06 | 472.35 | 351.06 | 485.12 | 351.08 |
| 485.21 | 351.08 | 495.84 | 351.06 | 495.89 | 351.06 | 496.2 | 351.06 | 498.82 | 351.06 |
| 499.61 | 351.07 | 501.86 | 351.08 | 502.03 | 351.09 | 502.47 | 351.09 | 517.53 | 351.25 |
| 521.07 | 351.28 | 521.93 | 351.29 | 522.47 | 351.3 | 522.84 | 351.31 | 523.82 | 351.34 |
| 535.3 | 351.66 | 536.24 | 351.67 | 546.3 | 351.97 | 547.17 | 352 | 552.39 | 352.39 |
| 554.11 | 352.51 | 560.11 | 353 | 565.49 | 353.79 | 566.98 | 354 | 569.06 | 354.7 |
| 570.07 | 355 | 570.55 | 355.12 | 570.6 | 355.13 | 572.89 | 355.58 | 574.75 | 356 |
| 576.45 | 356.34 | 579.36 | 357 | 580.26 | 357.23 | 583.09 | 358 | 584.04 | 358.3 |
| 586.39 | 359 | 588.78 | 359.18 | 589.25 | 359.19 | 590.09 | 359.21 | 592.67 | 359.41 |
| 597.96 | 359.45 | 601.18 | 359.6 | 604.53 | 359.73 | 605.59 | 359.78 | 608.72 | 359.88 |
| 610.1 | 359.94 | 610.14 | 359.94 | 610.29 | 359.95 | 610.47 | 359.96 | 610.57 | 359.96 |
| 610.71 | 359.97 | 610.73 | 359.97 | 610.75 | 359.97 | 610.78 | 359.97 | 610.83 | 359.97 |
| 610.95 | 359.98 | 610.96 | 359.98 | 610.97 | 359.98 | 610.99 | 359.98 | 611 | 359.98 |
| 611.02 | 359.98 | 611.06 | 359.98 | 611.08 | 359.98 | 611.35 | 359.98 | 611.39 | 359.98 |
| 611.44 | 359.98 | 611.46 | 359.98 | 611.49 | 359.98 | 611.58 | 359.98 | 611.6 | 359.98 |
| 611.63 | 359.98 | 611.65 | 359.98 | 611.7 | 359.98 | 611.81 | 359.98 | 613.49 | 359.98 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .0594.91998 | | .04 | 306.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 94.91998 | 306.27 | 273.47 | 286.9 | 311.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 2371.61

INPUT
Description:

Station Elevation Data num= 353

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 352.28 | 7.75 | 352.3 | 421.58002 | 352.52 | 25.31 | 352.5 | 641.86005 | 352.78 |
| 44.04004 | 352.81 | 58.88 | 35366.41003 | | 353 | 70.44 | 35378.61005 | | 353 |
| 81.60004 | 35383.02002 | | 352.3 | 483.73004 | 35284.48004 | | 351.6 | 485.60004 | 351.14 |
| 85.92004 | 35187.80005 | | 350.288.11005 | | 350.0788.26001 | | 35089.45001 | | 349.46 |
| 90.60004 | 34993.16003 | | 348.0693.35004 | | 34895.23999 | | 347.78 | 102.55 | 347 |
| 109.11 | 346.37 | 115.17 | 346 | 115.41 | 345.9 | 118.53 | 345.84 | 121.27 | 345.79 |
| 122.04 | 345.79 | 123.13 | 345.82 | 126.55 | 345.98 | 127.11 | 345.99 | 127.88 | 345.99 |
| 128.58 | 345.98 | 129.55 | 345.94 | 131.86 | 345.84 | 132.9 | 345.82 | 133.87 | 345.83 |
| 136.56 | 345.97 | 137.23 | 346 | 137.27 | 346 | 137.98 | 346.01 | 138.81 | 346.01 |
| 139.59 | 346 | 140.4 | 345.99 | 141.25 | 345.96 | 142.95 | 345.85 | 143.3 | 345.84 |
| 143.76 | 345.84 | 146.72 | 346 | 146.8 | 346.05 | 147.1 | 346.1 | 147.78 | 346.14 |
| 148.57 | 346.17 | 149.48 | 346.17 | 151.49 | 346.17 | 165.53 | 346.12 | 167.57 | 346.11 |
| 168.4 | 346.1 | 169.34 | 346.08 | 173.33 | 346 | 175.81 | 345.83 | 177.69 | 345.71 |
| 178.2 | 345.66 | 178.93 | 345.54 | 181.7 | 345.52 | 184.29 | 345.51 | 185.9 | 345.52 |
| 191.82 | 345.55 | 194.29 | 345.57 | 195.14 | 345.57 | 198.63 | 345.56 | 200.36 | 345.56 |
| 202.16 | 345.56 | 203.71 | 345.57 | 204.78 | 345.57 | 205.47 | 345.58 | 207.07 | 345.6 |
| 207.49 | 345.6 | 207.73 | 345.6 | 207.85 | 345.58 | 208.53 | 345.52 | 209.09 | 345.48 |
| 214.75 | 345.64 | 216.64 | 345.69 | 225.9 | 345.89 | 230.73 | 346 | 235.97 | 346.29 |
| 236.78 | 346.33 | 237.33 | 346.34 | 241.24 | 346.41 | 242.51 | 346.43 | 242.82 | 346.44 |
| 243.59 | 346.47 | 243.98 | 346.5 | 244.63 | 346.59 | 244.9 | 346.61 | 245.84 | 346.65 |
| 246.18 | 346.67 | 246.36 | 346.68 | 246.6 | 346.68 | 246.89 | 346.67 | 247.41 | 346.66 |
| 247.82 | 346.63 | 252.39 | 346.19 | 254.5 | 346.01 | 254.51 | 346.01 | 254.62 | 346 |
| 257.24 | 345.92 | 264.79 | 345.75 | 267.82 | 345.68 | 268.16 | 345.66 | 268.33 | 345.64 |
| 268.39 | 345.51 | 268.94 | 345.43 | 269.35 | 345.4 | 269.72 | 345.39 | 270.02 | 345.4 |
| 270.78 | 345.48 | 271.72 | 345.55 | 272.09 | 345.57 | 273.53 | 345.61 | 274.13 | 345.63 |
| 274.89 | 345.66 | 276.13 | 345.75 | 279.13 | 346 | 279.92 | 346 | 282.41 | 346 |
| 283.55 | 346 | 287.83 | 346 | 287.93 | 346 | 288.05 | 345.95 | 289.62 | 345.79 |
| 289.69 | 345.77 | 294.12 | 345.74 | 298.27 | 345.72 | 298.79 | 345.73 | 302.48 | 345.88 |
| 306.97 | 346 | 310.02 | 346.14 | 310.21 | 346.14 | 313.15 | 346.26 | 314.06 | 346.29 |
| 317.43 | 346.37 | 317.95 | 346.37 | 318.47 | 346.38 | 318.62 | 346.35 | 318.87 | 346.33 |
| 319.23 | 346.32 | 319.69 | 346.32 | 320.12 | 346.32 | 321.26 | 346.35 | 321.75 | 346.34 |
| 323.75 | 346.39 | 324.98 | 346.36 | 326.13 | 346.34 | 327 | 346.37 | 328.29 | 346.41 |
| 331.31 | 346.55 | 331.71 | 346.57 | 331.96 | 346.57 | 332.32 | 346.57 | 333.58 | 346.58 |
| 334.7 | 346.58 | 338.71 | 346.57 | 343.62 | 346.54 | 345.07 | 346.53 | 346.18 | 346.52 |
| 347.48 | 346.51 | 348.79 | 346.49 | 349.9 | 346.46 | 350.61 | 346.44 | 350.88 | 346.42 |
| 351 | 346.41 | 351.31 | 346.4 | 352.01 | 346.39 | 352.99 | 346.38 | 354.02 | 346.37 |
| 354.92 | 346.36 | 355.63 | 346.34 | 357.56 | 346.29 | 358.02 | 346.27 | 358.4 | 346.25 |
| 358.5 | 346.24 | 358.65 | 346.23 | 358.91 | 346.23 | 359.23 | 346.23 | 359.79 | 346.24 |
| 359.92 | 346.24 | 360.35 | 346.26 | 360.64 | 346.27 | 360.96 | 346.27 | 361.24 | 346.27 |
| 361.79 | 346.27 | 363.74 | 346.28 | 365.41 | 346.28 | 365.87 | 346.28 | 366.19 | 346.29 |
| 366.5 | 346.3 | 367.47 | 346.33 | 368.47 | 346.36 | 370.24 | 346.41 | 373.17 | 346.5 |
| 375.17 | 346.55 | 377.13 | 346.59 | 378.07 | 346.59 | 378.78 | 346.59 | 379.12 | 346.59 |
| 380.82 | 346.57 | 382.7 | 346.55 | 383 | 346.54 | 384.71 | 346.59 | 385.12 | 346.59 |
| 387.29 | 346.65 | 387.64 | 346.65 | 390.1 | 346.7 | 390.31 | 346.7 | 397.17 | 346.81 |
| 399.08 | 346.86 | 401.13 | 346.92 | 403.27 | 347 | 403.65 | 347.02 | 410.44 | 347.35 |
| 412.16 | 347.43 | 412.38 | 347.44 | 412.72 | 347.45 | 413.15 | 347.46 | 414.13 | 347.47 |
| 419.35 | 347.52 | 421.46 | 347.53 | 422.42 | 347.54 | 423.67 | 347.53 | 425.13 | 347.53 |
| 432.61 | 347.48 | 435.62 | 347.47 | 436.7 | 347.46 | 438.03 | 347.45 | 438.39 | 347.44 |
| 438.44 | 347.42 | 438.72 | 347.4 | 439.56 | 347.38 | 440.83 | 347.36 | 442.32 | 347.34 |
| 443.9 | 347.33 | 445.47 | 347.33 | 446.96 | 347.33 | 448.34 | 347.34 | 451.58 | 347.37 |
| 452.82 | 347.38 | 453.41 | 347.39 | 456.57 | 347.44 | 457.56 | 347.46 | 458.61 | 347.47 |
| 459.86 | 347.46 | 461.46 | 347.47 | 462.69 | 347.47 | 464.73 | 347.48 | 470.54 | 347.5 |
| 472.49 | 347.5 | 474.09 | 347.49 | 475.01 | 347.49 | 476.12 | 347.47 | 477.52 | 347.44 |
| 479.18 | 347.41 | 485.5 | 347.25 | 489.16 | 347.16 | 491.06 | 347.18 | 492.34 | 347.15 |
| 493.52 | 347.16 | 495.38 | 347.11 | 495.94 | 347.11 | 496 | 347.11 | 496.09 | 347.1 |
| 496.37 | 347.09 | 496.38 | 347.09 | 496.52 | 347.08 | 496.64 | 347.08 | 496.81 | 347.07 |
| 496.97 | 347.08 | 497.14 | 347.08 | 497.17 | 347.09 | 497.19 | 347.1 | 497.23 | 347.1 |
| 497.38 | 347.11 | 497.73 | 347.11 | 498.9 | 347.14 | 499.01 | 347.14 | 499.03 | 347.14 |
| 499.71 | 347.15 | 500.52 | 347.16 | 500.88 | 347.17 | 501.08 | 347.18 | 501.29 | 347.18 |
| 502.11 | 347.21 | 502.3 | 347.21 | 502.39 | 347.21 | 503.78 | 347.21 | 505.21 | 347.22 |
| 507.39 | 347.26 | 510.9 | 347.34 | 516.06 | 347.44 | 530.73 | 347.74 | 536.51 | 347.87 |
| 543.57 | 348 | 552.44 | 348.2 | 553.96 | 348.24 | 570.58 | 348.61 | 576.2 | 348.81 |
| 579.26 | 348.95 | 580.4 | 349 | 581.39 | 349.05 | 581.99 | 349.08 | 582.17 | 349.08 |
| 586.06 | 349.28 | 591.04 | 349.5 | 601.54 | 350 | 610.91 | 350.41 | 628.1801 | 351 |
| 629.9301 | 351.01 | 631.66 | 351.03 | 633.58 | 351.03 | 637.6 | 351.03 | 646.23 | 351.01 |
| 648.85 | 351 | 651.23 | 350.99 | 655.9 | 350.97 | 656 | 350.97 | 656.14 | 350.97 |
| 656.19 | 350.98 | 656.23 | 350.98 | 656.28 | 350.97 | 656.34 | 350.97 | 656.43 | 350.97 |
| 656.56 | 350.97 | 656.7 | 350.97 | 656.84 | 350.97 | 656.99 | 350.97 | 657.03 | 350.97 |
| 661.59 | 350.94 | 673.8 | 350.86 | 676.02 | 350.85 | 678.16 | 350.85 | 680.33 | 350.85 |
| 685.22 | 350.86 | 685.38 | 350.86 | 688.35 | 350.85 | 691.65 | 350.85 | 691.85 | 350.85 |
| 698.85 | 350.82 | 699.83 | 350.82 | 708.02 | 350.86 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 102.55 | .04 | 331.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 102.55 | 331.96 | 245.18 | 247.47 | 263.43 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 2124.14

INPUT
Description:
Station Elevation Data num= 353

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 351.71.300049 | | 351.685.630005 | | 351.647.790039 | | 351.6212.48004 | | 351.57 |
| 13.11005 | 351.5619.42004 | | 351.4421.40002 | | 351.423.41003 | | 351.3925.17004 | | 351.37 |
| 27.28003 | 351.3529.30005 | | 351.3440.84003 | | 351.1741.84003 | | 351.1646.70001 | | 351.08 |
| 51.22003 | 35160.83002 | | 350.6969.14001 | | 350.4283.51001 | | 35092.03003 | | 349.79 |
| 98.49005 | 349.85104.0601 | | 349.98 | 107.27 | 350 | 107.45 | 350 | 107.75 | 350 |
| 107.94 | 350 | 108.28 | 350108.8101 | | 350 | 109.26 | 350 | 109.65 | 350 |
| 110.1 | 350 | 112.01 | 350 | 112.86 | 350 | 113.21 | 350113.4901 | | 350 |
| 115.1 | 350 | 117.45 | 349.92 | 117.8 | 349.9 | 118.79 | 349.85 | 119.51 | 349.8 |
| 120.54 | 349.76 | 121.02 | 349.74 | 121.52 | 349.72 | 122.14 | 349.69 | 124.36 | 349.55 |
| 125.34 | 349.49 | 133.61 | 349 | 135.69 | 348.04 | 135.76 | 348 | 137.91 | 347.24 |
| 138.36 | 347 | 138.96 | 346.74 | 141.1 | 346 | 142.05 | 345.75 | 142.94 | 345.74 |
| 143.82 | 345.74 | 144.16 | 345.88 | 144.84 | 346 | 145.24 | 346.04 | 146.6 | 346.14 |
| 147.21 | 346.16 | 147.76 | 346.16 | 148.78 | 346.09 | 149.86 | 346 | 151.6 | 345.72 |
| 153.16 | 345.48 | 154.02 | 345.38 | 154.79 | 345.26 | 155.02 | 345.21 | 156.8 | 345 |
| 157.82 | 345 | 158.6 | 344.89 | 159.71 | 344.75 | 160.31 | 344.81 | 161.35 | 344.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 162.55 | 344.86 | 163.44 | 344.93 | 163.83 | 345 | 164.6 | 345.26 | 165.06 | 345.58 |
| 165.17 | 345.59 | 165.37 | 345.57 | 165.63 | 345.54 | 166.17 | 345.43 | 166.64 | 345.28 |
| 167.49 | 345.09 | 168.21 | 345 | 168.46 | 344.97 | 172.34 | 344.71 | 172.85 | 344.68 |
| 173.1 | 344.66 | 173.75 | 344.57 | 177.04 | 344 | 185.57 | 343.16 | 186.24 | 343.09 |
| 186.89 | 343 | 222.39 | 342.01 | 222.76 | 342 | 222.9 | 342 | 222.91 | 342 |
| 228.41 | 342.12 | 229.81 | 342.15 | 231.88 | 342.18 | 233.66 | 342.2 | 235.24 | 342.2 |
| 237 | 342.21 | 237.11 | 342.21 | 238.58 | 342.22 | 239.95 | 342.25 | 241.12 | 342.24 |
| 242.6 | 342.28 | 247.91 | 342.46 | 250.17 | 342.52 | 253.24 | 342.57 | 255.3 | 342.59 |
| 255.96 | 342.59 | 256.45 | 342.59 | 257.05 | 342.59 | 257.58 | 342.58 | 257.88 | 342.58 |
| 258.48 | 342.57 | 258.78 | 342.56 | 259.11 | 342.53 | 260.33 | 342.41 | 261.33 | 342.35 |
| 262.79 | 342.29 | 263.54 | 342.28 | 265.21 | 342.26 | 265.82 | 342.25 | 266.26 | 342.23 |
| 267.29 | 342.2 | 267.92 | 342.15 | 268.04 | 342.14 | 268.17 | 342.14 | 268.48 | 342.13 |
| 268.84 | 342.12 | 268.99 | 342.12 | 269.21 | 342.12 | 269.43 | 342.12 | 269.47 | 342.12 |
| 269.57 | 342.13 | 269.71 | 342.13 | 270.05 | 342.14 | 270.07 | 342.14 | 270.09 | 342.14 |
| 270.14 | 342.14 | 271.54 | 342.18 | 272 | 342.19 | 273.34 | 342.21 | 275.93 | 342.27 |
| 276.43 | 342.28 | 276.63 | 342.28 | 276.66 | 342.29 | 276.9 | 342.3 | 277.4 | 342.32 |
| 279.6 | 342.34 | 280.27 | 342.36 | 280.74 | 342.37 | 286.48 | 342.44 | 286.75 | 342.44 |
| 287.04 | 342.44 | 288.09 | 342.45 | 288.43 | 342.45 | 288.7 | 342.45 | 289.26 | 342.47 |
| 294.91 | 342.61 | 297.31 | 342.67 | 299.75 | 342.75 | 304.46 | 342.91 | 304.83 | 342.92 |
| 306.8 | 342.99 | 306.87 | 342.99 | 307.28 | 343 | 307.85 | 343.03 | 314.39 | 343.22 |
| 315.47 | 343.26 | 328.43 | 343.29 | 340.41 | 343.31 | 357.26 | 343.06 | 360.37 | 343.01 |
| 360.72 | 343 | 362.92 | 343 | 364.52 | 342.99 | 366.53 | 343 | 367.4 | 343 |
| 368.66 | 343 | 369.09 | 343 | 369.97 | 343 | 371.07 | 343 | 372.21 | 343 |
| 374.05 | 343 | 375.4 | 342.98 | 375.41 | 342.98 | 375.93 | 342.97 | 376.94 | 342.92 |
| 377.86 | 342.88 | 379.31 | 342.85 | 380.62 | 342.81 | 381.96 | 342.75 | 382.7 | 342.73 |
| 382.98 | 342.73 | 383.12 | 342.74 | 383.51 | 342.77 | 384.79 | 342.8 | 385.83 | 342.82 |
| 386.55 | 342.82 | 397.33 | 342.88 | 401.81 | 342.93 | 405.79 | 343 | 405.88 | 343 |
| 412.01 | 343.16 | 412.66 | 343.17 | 415.9901 | 343.23 | 419.08 | 343.28 | 420.27 | 343.29 |
| 422.86 | 343.33 | 424.26 | 343.33 | 427.56 | 343.37 | 429.06 | 343.37 | 430.52 | 343.39 |
| 431.91 | 343.38 | 433.66 | 343.41 | 435.53 | 343.4 | 441.69 | 343.52 | 442.2401 | 343.53 |
| 445.78 | 343.55 | 450.13 | 343.59 | 451.3 | 343.6 | 451.54 | 343.6 | 452.68 | 343.54 |
| 456.29 | 343.36 | 457.33 | 343.31 | 458.27 | 343.28 | 459.06 | 343.27 | 460.23 | 343.26 |
| 460.58 | 343.25 | 460.81 | 343.24 | 462.6 | 343.18 | 462.71 | 343.19 | 462.84 | 343.2 |
| 462.86 | 343.21 | 463.11 | 343.22 | 463.4901 | 343.24 | 466.09 | 343.38 | 466.96 | 343.42 |
| 467.2 | 343.43 | 477.9 | 343.56 | 479.97 | 343.63 | 482.86 | 343.73 | 483.45 | 343.74 |
| 484.11 | 343.75 | 484.91 | 343.77 | 485.86 | 343.79 | 486.67 | 343.82 | 487.03 | 343.83 |
| 487.06 | 343.83 | 487.4 | 343.83 | 487.73 | 343.83 | 488.25 | 343.82 | 488.58 | 343.81 |
| 489.03 | 343.8 | 489.33 | 343.78 | 489.59 | 343.77 | 490.94 | 343.78 | 491.86 | 343.81 |
| 492.32 | 343.81 | 493.68 | 343.78 | 494.97 | 343.75 | 496.81 | 343.73 | 498.89 | 343.71 |
| 500.86 | 343.69 | 502.52 | 343.69 | 506.42 | 343.7 | 507.26 | 343.71 | 508.04 | 343.72 |
| 509.18 | 343.77 | 510.95 | 343.85 | 511.7401 | 343.91 | 512.67 | 344 | 518.15 | 344.14 |
| 520.37 | 344.19 | 522.89 | 344.24 | 525.7 | 344.29 | 535.77 | 344.43 | 539.23 | 344.48 |
| 542.4 | 344.54 | 545.15 | 344.59 | 546.97 | 344.64 | 548.75 | 344.69 | 558.62 | 345 |
| 558.6901 | 345.01 | 558.71 | 345.01 | 558.77 | 345.01 | 558.78 | 345.01 | 558.79 | 345.01 |
| 558.84 | 345.01 | 558.9301 | 345.02 | 559.23 | 345.05 | 570.83 | 346 | 573.89 | 346.29 |
| 576.79 | 346.59 | 578.64 | 346.77 | 579.61 | 346.85 | 580.8101 | 347 | 581.05 | 347.02 |
| 581.84 | 347.07 | 582.6901 | 347.11 | 584.48 | 347.14 | 586.51 | 347.17 | 588.2401 | 347.2 |
| 588.7 | 347.21 | 589.5601 | 347.25 | 590.38 | 347.27 | 590.83 | 347.27 | 591.72 | 347.28 |
| 592.1801 | 347.29 | 592.79 | 347.3 | 593.73 | 347.3 | 599.34 | 347.24 | 603.76 | 347.21 |
| 605.58 | 347.19 | 607.09 | 347.15 | 609.85 | 347.05 | 611.34 | 347 | 613.01 | 346.94 |
| 613.29 | 346.91 | 615.3 | 346.92 | 617.34 | 346.93 | 619.04 | 346.98 | 619.95 | 347 |
| 624.16 | 347.07 | 626.32 | 347.12 | 627.08 | 347.13 | 630.3101 | 347.23 | 631.48 | 347.24 |
| 639.01 | 347.42 | 639.96 | 347.46 | 643.42 | 347.57 | 644.67 | 347.63 | 646.05 | 347.68 |
| 647.78 | 347.73 | 647.97 | 347.73 | 648.13 | 347.74 | 648.3 | 347.74 | 648.58 | 347.74 |
| 651.63 | 347.76 | 653.3101 | 347.77 | 653.86 | 347.77 | 654.2401 | 347.77 | 654.47 | 347.76 |
| 654.92 | 347.75 | 655.38 | 347.74 | 656.28 | 347.73 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 177.04 | .04 | 430.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 177.04 | 430.52 | 377.8 | 316.9 | 144.42 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1807.24

INPUT
Description:
Station Elevation Data num= 255

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.73 | 11.01996 | 344.86 | 17.51001 | 344.93 | 19.87 | 344.96 | 21.90997 | 345 |
| 22.06 | 345 | 22.07996 | 345 | 22.56 | 345.02 | 22.70996 | 345.03 | 27 | 345.01 |
| 38.45001 | 345.14 | 50.51996 | 345.19 | 52.07001 | 345.17 | 57.85999 | 345.09 | 63.27997 | 345 |
| 64.72998 | 344.94 | 64.78998 | 344.94 | 68.71997 | 344.8 | 72.38 | 344.71 | 76.27997 | 344.68 |
| 76.77997 | 344.68 | 80.82996 | 344.67 | 81.10999 | 344.67 | 84.89001 | 344.69 | 88.02997 | 344.73 |
| 90.91998 | 344.78 | 98.98999 | 345 | 99.76001 | 345.07 | 100.39 | 345.08 | 101.11 | 345.08 |
| 101.16 | 345.08 | 102.4 | 345.08 | 107.67 | 345.04 | 109.49 | 345.03 | 110.55 | 345.01 |
| 111.28 | 345 | 114.34 | 344.35 | 116.26 | 344 | 117.38 | 343.78 | 118.66 | 343.61 |
| 118.8 | 343.58 | 123.14 | 343.48 | 126.95 | 343.57 | 127.14 | 343.56 | 128.34 | 343.37 |
| 130.4 | 343 | 135.25 | 342.01 | 135.27 | 342 | 135.28 | 342 | 143.14 | 341 |
| 144.34 | 340.93 | 146.83 | 340.78 | 154.18 | 340.29 | 156.13 | 340.23 | 160.03 | 340.07 |
| 160.39 | 340.05 | 160.51 | 340.04 | 161.5 | 340 | 177.43 | 339.77 | 178.81 | 339.74 |
| 184.12 | 339.67 | 191.22 | 339.48 | 193.7 | 339.44 | 195.06 | 339.41 | 196.42 | 339.38 |
| 197.66 | 339.35 | 200.24 | 339.27 | 204.75 | 339.12 | 208.01 | 339.02 | 208.33 | 339.02 |
| 208.93 | 339 | 209.1 | 339 | 209.46 | 339 | 209.64 | 339 | 210.08 | 339 |
| 210.34 | 338.97 | 210.75 | 338.96 | 211.38 | 338.89 | 212.72 | 338.68 | 212.95 | 338.67 |
| 213.23 | 338.66 | 213.77 | 338.66 | 214.63 | 338.66 | 215.63 | 338.68 | 216.49 | 338.69 |
| 217.51 | 338.72 | 218.32 | 338.74 | 219.8 | 338.75 | 221.76 | 338.77 | 227.38 | 338.79 |
| 228.85 | 338.81 | 230.22 | 338.84 | 234.16 | 338.98 | 234.74 | 339 | 234.89 | 339 |
| 235.76 | 339.02 | 237.09 | 339.03 | 239.01 | 339.04 | 250.63 | 339.07 | 252.84 | 339.08 |
| 253.88 | 339.09 | 254.07 | 339.1 | 261.8 | 339.15 | 269.13 | 339.15 | 269.67 | 339.01 |
| 269.74 | 339 | 271.54 | 338.88 | 272.6 | 338.83 | 276.86 | 338.66 | 277.85 | 338.63 |
| 278.35 | 338.62 | 282.92 | 338.63 | 286.72 | 338.65 | 287.83 | 338.66 | 287.9 | 338.69 |
| 288.24 | 338.73 | 289.96 | 338.82 | 294.07 | 339 | 297.68 | 339.11 | 299.25 | 339.15 |
| 301.89 | 339.19 | 303.22 | 339.21 | 304.36 | 339.23 | 305.55 | 339.23 | 307.06 | 339.24 |
| 309.06 | 339.24 | 311.5 | 339.24 | 314.34 | 339.23 | 317.58 | 339.19 | 320.94 | 339.15 |
| 325.52 | 339.09 | 330.62 | 339 | 334.27 | 338.92 | 336.78 | 338.84 | 341.91 | 338.7 |
| 344.31 | 338.74 | 347 | 338.78 | 347.12 | 338.94 | 347.4 | 339 | 349.51 | 339.16 |
| 350.23 | 339.2 | 350.65 | 339.09 | 351.67 | 339 | 351.9 | 339 | 353.1 | 338.99 |
| 354.23 | 338.99 | 355.04 | 339 | 355.21 | 339.01 | 356.88 | 339.15 | 358.11 | 339.28 |
| 359.46 | 339.42 | 360.01 | 339.45 | 361.66 | 339.71 | 362.34 | 339.8 | 362.74 | 339.85 |
| 362.79 | 339.86 | 363.26 | 339.88 | 363.63 | 339.89 | 364.03 | 339.88 | 364.77 | 339.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 365.81 | 339.78 | 366.67 | 339.75 | 367.47 | 339.72 | 375.07 | 339.18 | 375.67 | 339.14 |
| 377.71 | 339 | 378.29 | 339 | 378.34 | 339 | 378.45 | 339 | 379.08 | 339 |
| 379.21 | 339 | 388.53 | 339.37 | 389.15 | 339.39 | 389.49 | 339.35 | 389.74 | 339.34 |
| 390.97 | 339.38 | 391.83 | 339.4 | 392.26 | 339.4 | 392.54 | 339.39 | 394.94 | 339.43 |
| 397.91 | 339.48 | 403.73 | 339.72 | 405.98 | 339.8 | 411.03 | 339.96 | 411.81 | 339.99 |
| 411.82 | 339.99 | 411.83 | 339.99 | 411.84 | 339.99 | 411.86 | 339.99 | 412.43 | 340 |
| 455.97 | 340.78 | 465.65 | 340.96 | 466.8 | 340.98 | 468.12 | 341 | 471.59 | 341.08 |
| 475.23 | 341.15 | 478.52 | 341.19 | 481.78 | 341.22 | 482.06 | 341.23 | 488.7 | 341.26 |
| 492.15 | 341.35 | 493.04 | 341.36 | 493.79 | 341.38 | 494.2 | 341.39 | 494.88 | 341.41 |
| 495.29 | 341.4 | 495.54 | 341.39 | 495.95 | 341.39 | 496.59 | 341.41 | 514.16 | 341.96 |
| 514.37 | 341.97 | 514.67 | 341.98 | 515.25 | 342 | 527.15 | 342.6 | 531.97 | 342.88 |
| 533.84 | 343 | 538.89 | 343.65 | 541.63 | 344 | 545.58 | 344.57 | 546.25 | 344.66 |
| 548.46 | 345 | 556.7 | 345.51 | 556.99 | 345.53 | 564.77 | 346 | 566.58 | 346 |
| 566.59 | 346 | 567.65 | 346 | 568.44 | 346 | 570.82 | 345.87 | 573.02 | 345.77 |
| 574.98 | 345.71 | 577.02 | 345.66 | 580.41 | 345.5 | 581.9 | 345.46 | 583.72 | 345.4 |
| 585.86 | 345.37 | 586.7 | 345.34 | 587.33 | 345.32 | 588.97 | 345.28 | 590.71 | 345.24 |
| 591.53 | 345.21 | 591.83 | 345.21 | 593.02 | 345.2 | 593.72 | 345.18 | 594.35 | 345.18 |
| 594.57 | 345.17 | 594.83 | 345.17 | 595.01 | 345.17 | 595.22 | 345.17 | 595.45 | 345.18 |
| 595.69 | 345.19 | 596.19 | 345.21 | 610.11 | 345.92 | 611.54 | 346 | 613.11 | 346.08 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 161.5 | .04 | 411.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 161.5 | 411.03 | 232.53 | 253.04 | 278.87 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1554.2

INPUT
Description:
Station Elevation Data num= 340

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 342.55.5799561 | | 342.553.329956 | | 342.593.570007 | | 342.597.399963 | | 342.59 |
| 9.019958 | 342.5910.46997 | | 342.614.47998 | | 342.6217.32996 | | 342.6518.14996 | | 342.65 |
| 19.48999 | 342.6521.53998 | | 342.6523.95001 | | 342.6526.26001 | | 342.6428.08997 | | 342.62 |
| 29.48999 | 342.630.57996 | | 342.5831.46997 | | 342.5732.21997 | | 342.5634.46997 | | 342.54 |
| 35.64996 | 342.5436.22998 | | 342.5337.04999 | | 342.5438.39001 | | 342.53 | 40.69 | 342.52 |
| 43.67999 | 342.49 | 47.13 | 342.4547.27997 | | 342.4449.07001 | | 342.461.09998 | | 342.17 |
| 61.51001 | 342.0762.32996 | | 342.0563.39001 | | 34263.70996 | | 34263.96997 | | 342 |
| 64.01001 | 34264.20001 | | 34269.39996 | | 341.7772.04999 | | 341.6678.85999 | | 341.43 |
| 85.67999 | 34186.09998 | | 340.9986.29999 | | 340.9988.02997 | | 340.9988.32996 | | 340.99 |
| 90.84998 | 340.84 | 100.04 | 340.29 | 102.63 | 340.17 | 103.27 | 340.15 | 103.68 | 340.14 |
| 103.91 | 340.15 | 104.02 | 340.15 | 105.31 | 340.04 | 106.19 | 340 | 106.38 | 340 |
| 107.54 | 339.97 | 111.84 | 339.87 | 115.64 | 339.76 | 116.33 | 339.74 | 119.81 | 339.59 |
| 125.47 | 339.38 | 131.62 | 339.05 | 132.72 | 339 | 134.8 | 338.95 | 134.9 | 338.95 |
| 135.03 | 338.95 | 135.16 | 338.95 | 135.26 | 338.95 | 135.54 | 338.95 | 135.64 | 338.95 |
| 135.69 | 338.94 | 135.74 | 338.94 | 135.79 | 338.94 | 135.98 | 338.92 | 135.99 | 338.92 |
| 136.13 | 338.91 | 136.37 | 338.9 | 138.23 | 338.82 | 140.78 | 338.73 | 159.06 | 338 |
| 160.94 | 337.91 | 161.55 | 337.88 | 175.6 | 337.19 | 177.7 | 337.1 | 180.42 | 337 |
| 190.12 | 336.58 | 198.57 | 336 | 200.01 | 335.9 | 200.93 | 335.84 | 202.58 | 335.78 |
| 203.93 | 335.7 | 204.34 | 335.69 | 204.55 | 335.68 | 204.75 | 335.67 | 206.15 | 335.63 |
| 206.96 | 335.61 | 207.99 | 335.59 | 209.16 | 335.58 | 211.56 | 335.56 | 212.58 | 335.55 |
| 213.35 | 335.56 | 213.83 | 335.57 | 214.07 | 335.59 | 214.36 | 335.65 | 214.45 | 335.76 |
| 214.8 | 335.86 | 215.35 | 336 | 218.21 | 336.14 | 223.8 | 336.38 | 227.68 | 336.53 |
| 228.8 | 336.57 | 230.29 | 336.61 | 231.73 | 336.65 | 232.35 | 336.66 | 232.86 | 336.67 |
| 233.58 | 336.68 | 234.12 | 336.69 | 235.14 | 336.7 | 235.67 | 336.7 | 237.67 | 336.69 |
| 239.87 | 336.67 | 239.89 | 336.66 | 240.06 | 336.65 | 240.43 | 336.64 | 240.9 | 336.63 |
| 241.33 | 336.63 | 241.82 | 336.63 | 241.95 | 336.62 | 242.38 | 336.61 | 242.55 | 336.61 |
| 242.73 | 336.61 | 245.05 | 336.57 | 247.98 | 336.51 | 250.24 | 336.37 | 250.89 | 336.35 |
| 256.31 | 336.16 | 257.32 | 336.12 | 257.49 | 336.12 | 259.79 | 336 | 267.57 | 335.63 |
| 271.33 | 335.45 | 272.24 | 335.42 | 273.22 | 335.38 | 274.2 | 335.36 | 275.13 | 335.34 |
| 276.04 | 335.34 | 277.91 | 335.35 | 279.53 | 335.35 | 280.19 | 335.35 | 280.77 | 335.36 |
| 281.29 | 335.38 | 282.24 | 335.41 | 282.98 | 335.45 | 286.28 | 335.63 | 289.36 | 335.77 |
| 290.65 | 335.84 | 291.04 | 335.88 | 291.85 | 336 | 291.87 | 336 | 292.28 | 336.01 |
| 293.23 | 336.03 | 299.65 | 336.12 | 300.02 | 336.14 | 302.57 | 336.24 | 303.19 | 336.26 |
| 304.64 | 336.28 | 306.3 | 336.3 | 307.03 | 336.3 | 307.63 | 336.3 | 308.12 | 336.28 |
| 308.49 | 336.25 | 308.91 | 336.21 | 309.15 | 336.14 | 309.87 | 336.02 | 310.07 | 336 |
| 312.89 | 335.64 | 314.31 | 335.52 | 315.63 | 335.43 | 316.01 | 335.41 | 316.47 | 335.4 |
| 320.51 | 335.41 | 325.13 | 335.42 | 326.41 | 335.42 | 326.54 | 335.42 | 336.64 | 335.54 |
| 355.04 | 335.77 | 355.68 | 335.8 | 356.63 | 335.83 | 359.33 | 335.89 | 362.09 | 335.95 |
| 364.99 | 336 | 372.83 | 336 | 374.95 | 336 | 375.09 | 335.98 | 375.54 | 335.86 |
| 381.89 | 335.8 | 384.65 | 335.78 | 392.36 | 335.72 | 393.42 | 335.87 | 394.15 | 336 |
| 394.89 | 336.1 | 395.08 | 336.16 | 395.45 | 336.18 | 396.15 | 336.2 | 397.04 | 336.21 |
| 398.49 | 336.2 | 400 | 336.18 | 400.07 | 336.16 | 400.72 | 336.15 | 403.28 | 336.14 |
| 403.6 | 336.13 | 403.92 | 336.13 | 404.66 | 336.05 | 405.13 | 336 | 408.83 | 336 |
| 408.84 | 336 | 408.87 | 336 | 409.73 | 336 | 410.45 | 336 | 411.15 | 336 |
| 412.42 | 336 | 414.68 | 336 | 416.99 | 336.01 | 417.17 | 336.01 | 421.82 | 336 |
| 426.48 | 335.99 | 429.22 | 335.98 | 430.84 | 335.98 | 431.77 | 335.96 | 438.09 | 335.86 |
| 441.31 | 335.88 | 443.78 | 335.9 | 445.3 | 335.9 | 446.08 | 335.88 | 446.59 | 335.89 |
| 447.92 | 335.91 | 452.32 | 336 | 452.82 | 336.09 | 455.11 | 336.42 | 459.09 | 337 |
| 461.4 | 337.09 | 462.85 | 337.15 | 463.9 | 337.22 | 464.3 | 337.24 | 464.66 | 337.25 |
| 465.31 | 337.25 | 469.46 | 337.22 | 470.02 | 337.23 | 474.11 | 337.28 | 475.04 | 337.31 |
| 478.52 | 337.45 | 480.44 | 337.52 | 480.72 | 337.53 | 481.07 | 337.53 | 481.76 | 337.53 |
| 482.15 | 337.53 | 482.54 | 337.51 | 484.3 | 337.48 | 484.67 | 337.48 | 491.23 | 337.53 |
| 491.42 | 337.54 | 491.64 | 337.57 | 491.97 | 337.59 | 492.08 | 337.61 | 492.79 | 337.63 |
| 493.45 | 337.64 | 493.99 | 337.64 | 497.48 | 337.64 | 497.86 | 337.63 | 498.15 | 337.62 |
| 498.38 | 337.6 | 498.48 | 337.58 | 498.6 | 337.56 | 498.72 | 337.56 | 506.95 | 337.68 |
| 507.26 | 337.69 | 513.92 | 337.78 | 514.26 | 337.79 | 517.75 | 337.85 | 522.85 | 337.95 |
| 524.83 | 338 | 524.88 | 338 | 525 | 338 | 525.05 | 338.01 | 525.11 | 338.01 |
| 525.18 | 338.01 | 525.26 | 338.01 | 529.36 | 338.16 | 552.32 | 339 | 555.74 | 339.36 |
| 558.83 | 339.51 | 568.04 | 340 | 568.11 | 340.01 | 570.17 | 340.25 | 571.36 | 340.41 |
| 571.83 | 340.53 | 574.22 | 341 | 578.1 | 341.52 | 579.73 | 341.71 | 581.88 | 342 |
| 582.34 | 342.17 | 582.43 | 342.31 | 582.87 | 342.36 | 583.07 | 342.4 | 588.27 | 342.65 |
| 590.6 | 342.73 | 591.74 | 342.67 | 592 | 342.64 | 592.98 | 342.52 | 593.9 | 342.37 |
| 594.44 | 342.31 | 596.05 | 342.18 | 596.48 | 342.19 | 598.81 | 342 | 602.36 | 341.64 |
| 604.56 | 341.39 | 605.52 | 341.31 | 606.24 | 341.27 | 608.35 | 341 | 608.87 | 340.97 |
| 609.51 | 340.95 | 610.04 | 340.97 | 610.44 | 341 | 612.06 | 341.21 | 621.15 | 342 |
| 630.4 | 342.67 | 635.52 | 343 | 636.96 | 343 | 637.32 | 343 | 637.7 | 343 |
| 638.06 | 343 | 638.65 | 343 | 640.08 | 343.01 | 641.11 | 343.01 | 641.61 | 343.01 |
| 643.76 | 343.01 | 645.4 | 343.01 | 650.82 | 343.13 | 651.85 | 343.13 | 652.61 | 343.13 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 190.12 | .04 | 455.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 190.12 | 455.11 | 249.88 | 265.06 | 283.54 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1289.14

INPUT
Description:
Station Elevation Data num= 285

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.851.949982 | 340.843.220001 | 340.843.839996 | 340.844.119995 | 340.84 |
| 6.179993 | 340.849.039978 | 340.7815.75998 | 340.6315.89999 | 340.5816.17999 | 340.55 |
| 17.12 | 340.518.32999 | 340.42 | 18.38 | 340.4118.95999 | 340.3921.60999 | 340.33 |
| 21.88 | 340.3223.07001 | 340.2 | 24.16 | 340.01 | 24.28 | 34024.57001 | 339.97 |
| 24.60999 | 339.9724.67999 | 339.96 | 29.53 | 339.54 | 30.63 | 339.4831.50998 | 339.47 |
| 33.22 | 339.37 | 34.16 | 339.336.92999 | 339 | 36.94 | 33936.94998 | 339 |
| 40.25 | 33841.17999 | 337.942.38998 | 337.7744.53998 | 337.8946.53998 | 337.87 |
| 46.60999 | 337.8447.95999 | 337.72 | 48.62 | 337.5749.63998 | 337.451.32001 | 337 |
| 55.5 | 336.3355.94998 | 336.2457.07999 | 33661.44998 | 335.6669.04999 | 335.14 |
| 69.25 | 335.1270.14999 | 33578.03998 | 334.59 | 81.53 | 334.4388.89999 | 334 |
| 91.34 | 333.87 | 93.66 | 333.7694.57999 | 333.7495.17999 | 333.7397.85001 | 333.79 |
| 99.64999 | 333.82 | 99.81 | 333.82 | 101 | 333.8 | 101.13 | 333.8 | 101.78 | 333.82 |
| 101.96 | 333.83 | 102.16 | 333.83 | 103.46 | 333.82 | 104.17 | 333.82 | 104.39 | 333.83 |
| 104.4 | 333.83 | 104.69 | 333.83 | 104.85 | 333.83 | 107.39 | 333.65 | 109.21 | 333.54 |
| 110.6 | 333.44 | 112.27 | 333.3 | 112.61 | 333.28 | 113 | 333.27 | 113.46 | 333.26 |
| 113.98 | 333.25 | 114.53 | 333.25 | 115.1 | 333.24 | 115.63 | 333.25 | 116.11 | 333.25 |
| 117.18 | 333.28 | 117.5 | 333.28 | 125.48 | 333.2 | 128.16 | 333.18 | 129.08 | 333.16 |
| 130.2 | 333.12 | 132.21 | 333 | 132.68 | 332.98 | 135.15 | 332.84 | 135.96 | 332.78 |
| 137.3 | 332.6 | 137.73 | 332.58 | 138.31 | 332.56 | 138.98 | 332.55 | 140.43 | 332.53 |
| 147.63 | 332.44 | 150.04 | 332.4 | 150.13 | 332.4 | 150.33 | 332.38 | 151.91 | 332.35 |
| 153.3 | 332.33 | 153.33 | 332.38 | 153.39 | 332.42 | 153.53 | 332.44 | 153.64 | 332.44 |
| 154.21 | 332.44 | 156.14 | 332.45 | 159.8 | 332.47 | 160.6 | 332.48 | 161.25 | 332.48 |
| 161.48 | 332.48 | 163.76 | 332.5 | 164.47 | 332.51 | 165.11 | 332.51 | 165.66 | 332.51 |
| 166.96 | 332.5 | 168.98 | 332.49 | 169.74 | 332.49 | 170.88 | 332.49 | 171.6 | 332.5 |
| 172.27 | 332.49 | 172.85 | 332.49 | 173.4 | 332.48 | 174.96 | 332.44 | 175.89 | 332.41 |
| 176.13 | 332.39 | 176.39 | 332.36 | 176.71 | 332.33 | 178.62 | 332.21 | 181.61 | 332 |
| 182.89 | 332 | 183.58 | 332 | 184.36 | 332 | 185.02 | 332 | 187.17 | 332 |
| 187.18 | 332 | 187.27 | 332 | 188.01 | 332.03 | 189.2 | 332.03 | 190.54 | 332 |
| 191.63 | 331.98 | 196.96 | 331.85 | 200.99 | 331.75 | 204.82 | 331.64 | 208.06 | 331.54 |
| 210.56 | 331.48 | 216.22 | 331.45 | 221.71 | 331.46 | 222.4 | 331.72 | 223.59 | 331.93 |
| 223.61 | 331.93 | 224 | 332 | 229.85 | 332.72 | 230.07 | 332.71 | 231.31 | 332.62 |
| 232.96 | 332.74 | 234.51 | 332.74 | 235.1 | 332.74 | 235.55 | 332.73 | 235.9 | 332.72 |
| 237.04 | 332.68 | 238.3 | 332.62 | 239.48 | 332.57 | 241.3 | 332.47 | 246.09 | 332.2 |
| 249.58 | 332 | 249.78 | 331.89 | 250.61 | 331.8 | 250.72 | 331.76 | 251.06 | 331.71 |
| 251.36 | 331.67 | 257.03 | 331.79 | 259.94 | 331.87 | 261.81 | 331.91 | 265 | 331.96 |
| 266.32 | 331.99 | 266.46 | 332 | 266.71 | 332 | 269.52 | 332.11 | 271.96 | 332.19 |
| 272.92 | 332.21 | 272.99 | 332.22 | 273.75 | 332.23 | 275.76 | 332.25 | 276.77 | 332.25 |
| 277.52 | 332.25 | 278.11 | 332.25 | 279.37 | 332.22 | 281.54 | 332.17 | 286.88 | 332 |
| 287.25 | 331.86 | 287.69 | 331.58 | 289 | 331.55 | 290.2 | 331.53 | 290.98 | 331.56 |
| 292.52 | 331.62 | 293.53 | 331.66 | 296.83 | 331.82 | 299.07 | 331.91 | 301.38 | 332 |
| 301.68 | 332.01 | 303.17 | 332.04 | 304.25 | 332.03 | 304.78 | 332 | 306.34 | 332 |
| 306.86 | 332 | 307.65 | 332 | 308.2 | 332 | 309.04 | 332 | 319.26 | 332.26 |
| 321.77 | 332.32 | 322.6 | 332.33 | 323.76 | 332.35 | 332.68 | 332.4 | 333.49 | 332.4 |
| 334.23 | 332.39 | 335.52 | 332.37 | 336.81 | 332.32 | 337.17 | 332.29 | 337.34 | 332.27 |
| 340.43 | 332.48 | 341.77 | 332.55 | 344.26 | 332.69 | 349.97 | 332.97 | 350.62 | 333 |
| 367.17 | 333.67 | 368.79 | 333.73 | 371.89 | 333.85 | 372.81 | 333.88 | 378.32 | 334 |
| 379.59 | 334.05 | 379.63 | 334.05 | 381.39 | 334.1 | 383.87 | 334.12 | 385.32 | 334.11 |
| 385.46 | 334.1 | 389.07 | 334.06 | 389.26 | 334.05 | 389.37 | 334.04 | 389.47 | 334.04 |
| 394.97 | 334.15 | 395.56 | 334.14 | 397.84 | 334.16 | 398.88 | 334.15 | 399.03 | 334.16 |
| 399.15 | 334.16 | 399.49 | 334.17 | 400.17 | 334.19 | 403.8 | 334.25 | 404.29 | 334.25 |
| 404.89 | 334.22 | 405.66 | 334.21 | 409.52 | 334.18 | 410.31 | 334.2 | 411.8 | 334.21 |
| 412.27 | 334.22 | 412.73 | 334.22 | 413.08 | 334.22 | 413.28 | 334.22 | 414.22 | 334.28 |
| 416.02 | 334.41 | 417.9 | 334.65 | 418.39 | 334.67 | 420.92 | 335 | 425.2 | 335.54 |
| 428.35 | 335.86 | 429.09 | 335.94 | 429.18 | 335.95 | 429.4 | 335.96 | 429.98 | 336 |
| 432.54 | 336.31 | 435.11 | 336.68 | 436.12 | 336.84 | 437.44 | 337 | 440.34 | 337.38 |
| 443.12 | 337.76 | 443.37 | 337.8 | 444.4 | 337.88 | 444.63 | 337.9 | 444.73 | 337.9 |
| 447.62 | 338 | 448.45 | 338.01 | 450.08 | 338.01 | 450.38 | 338 | 451.18 | 337.97 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 147.63 | .04 | 340.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 147.63 | 340.43 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1270.12*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.66 | 1.25 | 340.65 | 1.38 | 340.65 | 2.05 | 340.64 | 3.77 | 340.64 |
| 4.04 | 340.63 | 6.55 | 340.63 | 6.84 | 340.62 | 8.24 | 340.6 | 8.83 | 340.58 |
| 9.61 | 340.57 | 10.3 | 340.55 | 10.64 | 340.55 | 10.81 | 340.54 | 11.73 | 340.52 |
| 12.41 | 340.51 | 13.59 | 340.49 | 13.72 | 340.49 | 16.59 | 340.42 | 16.74 | 340.37 |
| 17.04 | 340.34 | 18.03 | 340.29 | 19.3 | 340.21 | 19.35 | 340.2 | 19.96 | 340.17 |
| 20.77 | 340.15 | 23.04 | 340.07 | 23.71 | 339.99 | 24.08 | 339.95 | 24.29 | 339.92 |
| 25.44 | 339.71 | 25.59 | 339.7 | 25.87 | 339.67 | 26.67 | 339.6 | 29.27 | 339.36 |
| 29.57 | 339.33 | 29.68 | 339.31 | 30.55 | 339.24 | 31.09 | 339.2 | 32.25 | 339.14 |
| 33.18 | 339.14 | 33.47 | 339.13 | 34.19 | 339.1 | 34.62 | 339.09 | 34.98 | 339.07 |
| 35.97 | 339.02 | 36.8 | 338.94 | 37.24 | 338.91 | 37.59 | 338.87 | 38.31 | 338.8 |
| 38.88 | 338.74 | 38.9 | 338.74 | 41.28 | 338.08 | 41.67 | 337.97 | 42.12 | 337.85 |
| 42.38 | 337.77 | 42.85 | 337.71 | 43.36 | 337.65 | 44.63 | 337.51 | 46.88 | 337.59 |
| 46.89 | 337.6 | 47.4 | 337.59 | 47.7 | 337.58 | 48.59 | 337.57 | 49 | 337.57 |
| 49.07 | 337.54 | 50.1 | 337.46 | 50.33 | 337.44 | 50.5 | 337.42 | 51.19 | 337.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 52.26 | 337.1 | 54.03 | 336.7 | 54.48 | 336.64 | 54.93 | 336.57 | 55.28 | 336.51 |
| 55.4 | 336.5 | 55.55 | 336.47 | 56.11 | 336.39 | 58.43 | 336.04 | 58.91 | 335.95 |
| 60.1 | 335.71 | 61.41 | 335.61 | 63.4 | 335.46 | 64.7 | 335.36 | 66.37 | 335.25 |
| 66.6 | 335.24 | 68.3 | 335.13 | 68.93 | 335.09 | 72.37 | 334.86 | 72.61 | 334.85 |
| 72.91 | 334.82 | 73.54 | 334.75 | 73.86 | 334.71 | 74.51 | 334.68 | 75 | 334.66 |
| 75.93 | 334.61 | 76.65 | 334.58 | 77.42 | 334.55 | 78.12 | 334.52 | 78.75 | 334.49 |
| 79.43 | 334.46 | 80.46 | 334.4 | 81.77 | 334.34 | 81.82 | 334.33 | 82.17 | 334.31 |
| 84.8 | 334.18 | 85.73 | 334.14 | 85.84 | 334.14 | 87.06 | 334.09 | 87.52 | 334.07 |
| 88.22 | 334.03 | 88.67 | 334 | 89.15 | 333.98 | 89.52 | 333.96 | 89.92 | 333.93 |
| 89.96 | 333.93 | 93.6 | 333.72 | 96.17 | 333.58 | 96.55 | 333.57 | 97.04 | 333.54 |
| 97.44 | 333.52 | 98.61 | 333.47 | 99.58 | 333.45 | 100.21 | 333.43 | 102.23 | 333.47 |
| 103.02 | 333.48 | 104.92 | 333.5 | 105.55 | 333.5 | 106.34 | 333.48 | 106.48 | 333.48 |
| 106.65 | 333.49 | 107.16 | 333.5 | 107.33 | 333.51 | 107.63 | 333.51 | 108.03 | 333.5 |
| 109.68 | 333.5 | 109.91 | 333.51 | 110.39 | 333.51 | 110.47 | 333.5 | 112.55 | 333.37 |
| 113.07 | 333.34 | 113.15 | 333.33 | 113.43 | 333.32 | 113.92 | 333.29 | 114.64 | 333.25 |
| 114.98 | 333.24 | 115.15 | 333.22 | 115.57 | 333.2 | 116.04 | 333.17 | 116.74 | 333.12 |
| 117.68 | 333.05 | 118.11 | 333.02 | 118.21 | 333.01 | 118.56 | 332.99 | 118.97 | 332.98 |
| 120.01 | 332.96 | 121.18 | 332.96 | 121.74 | 332.97 | 122.32 | 332.97 | 123.16 | 332.99 |
| 123.37 | 333 | 123.71 | 333 | 124.18 | 332.99 | 125.26 | 332.99 | 125.56 | 332.98 |
| 128.05 | 332.96 | 132.11 | 332.93 | 132.8 | 332.92 | 133.86 | 332.92 | 134.75 | 332.91 |
| 134.94 | 332.91 | 135.9 | 332.89 | 137.08 | 332.86 | 139.2 | 332.75 | 139.69 | 332.73 |
| 142.17 | 332.6 | 142.29 | 332.6 | 143.15 | 332.54 | 143.77 | 332.47 | 144.44 | 332.39 |
| 144.56 | 332.37 | 145.01 | 332.35 | 145.09 | 332.35 | 145.62 | 332.33 | 146.33 | 332.32 |
| 146.99 | 332.32 | 147.85 | 332.3 | 149.53 | 332.29 | 151.27 | 332.27 | 152.59 | 332.25 |
| 154.66 | 332.23 | 155.16 | 332.22 | 155.43 | 332.22 | 157.82 | 332.18 | 157.91 | 332.18 |
| 158.11 | 332.16 | 159.68 | 332.13 | 161.06 | 332.11 | 161.09 | 332.16 | 161.14 | 332.2 |
| 161.28 | 332.22 | 161.96 | 332.22 | 163.87 | 332.23 | 171.42 | 332.23 | 172.13 | 332.24 |
| 173.31 | 332.24 | 174.6 | 332.23 | 175.73 | 332.22 | 177.35 | 332.22 | 178.48 | 332.21 |
| 178.64 | 332.21 | 179.2 | 332.22 | 179.86 | 332.21 | 180.44 | 332.21 | 180.98 | 332.2 |
| 181.58 | 332.18 | 182.53 | 332.16 | 183.45 | 332.13 | 183.69 | 332.11 | 183.95 | 332.08 |
| 184.26 | 332.05 | 186.16 | 331.93 | 188.57 | 331.77 | 189.12 | 331.73 | 192.51 | 331.73 |
| 193.05 | 331.72 | 194.73 | 331.72 | 195.46 | 331.75 | 196.64 | 331.74 | 196.99 | 331.73 |
| 197.61 | 331.72 | 198.37 | 331.72 | 198.8 | 331.71 | 199.05 | 331.71 | 201.16 | 331.66 |
| 204.34 | 331.58 | 207.4 | 331.51 | 208.33 | 331.48 | 210.56 | 331.42 | 210.98 | 331.41 |
| 212.13 | 331.38 | 212.67 | 331.36 | 215.34 | 331.28 | 217.36 | 331.23 | 217.82 | 331.22 |
| 219.05 | 331.21 | 219.41 | 331.21 | 219.7 | 331.2 | 220.53 | 331.2 | 223.15 | 331.19 |
| 223.43 | 331.18 | 223.54 | 331.19 | 226.47 | 331.19 | 226.83 | 331.2 | 228.39 | 331.2 |
| 229 | 331.21 | 229.37 | 331.34 | 229.7 | 331.46 | 230.07 | 331.52 | 230.9 | 331.66 |
| 230.92 | 331.66 | 231.32 | 331.73 | 233.29 | 331.96 | 234.7 | 332.13 | 235.35 | 332.2 |
| 237.25 | 332.43 | 237.86 | 332.4 | 238.73 | 332.34 | 239.41 | 332.38 | 240.41 | 332.46 |
| 243.03 | 332.46 | 243.39 | 332.45 | 243.87 | 332.43 | 244.54 | 332.41 | 245.33 | 332.38 |
| 245.82 | 332.35 | 246.32 | 332.33 | 247.02 | 332.31 | 247.61 | 332.28 | 248.86 | 332.21 |
| 248.98 | 332.2 | 250.79 | 332.1 | 252.32 | 332.02 | 253.72 | 331.94 | 254.2 | 331.91 |
| 255.42 | 331.85 | 255.76 | 331.83 | 256.73 | 331.78 | 257.26 | 331.75 | 257.46 | 331.65 |
| 257.51 | 331.64 | 257.86 | 331.6 | 258.31 | 331.56 | 258.42 | 331.52 | 258.76 | 331.47 |
| 258.8 | 331.47 | 259.07 | 331.44 | 260.43 | 331.46 | 262.29 | 331.5 | 264.82 | 331.56 |
| 267.77 | 331.64 | 268.17 | 331.65 | 269.66 | 331.68 | 272.04 | 331.72 | 274.24 | 331.77 |
| 274.38 | 331.78 | 274.63 | 331.78 | 275.48 | 331.82 | 276.09 | 331.84 | 277.48 | 331.89 |
| 278.1 | 331.91 | 278.51 | 331.92 | 278.85 | 331.94 | 279 | 331.94 | 279.48 | 331.96 |
| 280.49 | 331.98 | 280.93 | 331.99 | 281.08 | 332 | 281.47 | 332.01 | 282.22 | 332.01 |
| 282.67 | 332.02 | 283.45 | 332.02 | 283.81 | 332.03 | 285.16 | 332.03 | 285.6 | 332.02 |
| 286.19 | 332.02 | 286.45 | 332.01 | 287.47 | 331.99 | 288.29 | 331.97 | 288.65 | 331.96 |
| 289.01 | 331.96 | 289.61 | 331.94 | 289.67 | 331.94 | 290.67 | 331.91 | 291.6 | 331.88 |
| 291.79 | 331.87 | 295.09 | 331.77 | 295.46 | 331.64 | 295.7 | 331.49 | 295.91 | 331.37 |
| 297.16 | 331.34 | 297.24 | 331.33 | 297.78 | 331.33 | 298.31 | 331.32 | 298.45 | 331.32 |
| 299.25 | 331.35 | 300.81 | 331.4 | 301.36 | 331.42 | 301.83 | 331.44 | 304.66 | 331.57 |
| 305.18 | 331.59 | 307.45 | 331.67 | 309.41 | 331.74 | 310.1 | 331.76 | 311.61 | 331.79 |
| 311.89 | 331.79 | 312.7 | 331.78 | 313.24 | 331.75 | 317.56 | 331.75 | 319.82 | 331.81 |
| 321.82 | 331.86 | 323.37 | 331.9 | 327.19 | 332 | 327.92 | 332.02 | 328.13 | 332.03 |
| 330.47 | 332.08 | 331.31 | 332.09 | 333.05 | 332.12 | 334.47 | 332.12 | 335.85 | 332.13 |
| 337.55 | 332.13 | 341.53 | 332.16 | 342.36 | 332.17 | 343.11 | 332.16 | 344.41 | 332.14 |
| 345.63 | 332.1 | 345.72 | 332.1 | 346.09 | 332.07 | 346.26 | 332.05 | 346.31 | 332.06 |
| 347.27 | 332.12 | 349.39 | 332.26 | 350.76 | 332.33 | 350.83 | 332.33 | 353.03 | 332.45 |
| 353.29 | 332.46 | 354.02 | 332.5 | 354.83 | 332.53 | 356.46 | 332.61 | 357.47 | 332.65 |
| 359.1 | 332.73 | 359.77 | 332.76 | 364.27 | 332.93 | 364.87 | 332.95 | 365.62 | 332.98 |
| 366.56 | 333.02 | 370.76 | 333.17 | 372.69 | 333.24 | 374.77 | 333.32 | 375.75 | 333.36 |
| 376.63 | 333.39 | 377.22 | 333.42 | 377.47 | 333.42 | 377.6 | 333.43 | 377.73 | 333.43 |
| 377.88 | 333.44 | 378.28 | 333.45 | 378.87 | 333.48 | 379.3 | 333.49 | 381.44 | 333.57 |
| 381.68 | 333.58 | 382.38 | 333.6 | 384.02 | 333.64 | 385.69 | 333.67 | 387.99 | 333.72 |
| 389.29 | 333.77 | 389.46 | 333.77 | 390.4 | 333.8 | 391.11 | 333.82 | 392.77 | 333.82 |
| 393.65 | 333.83 | 395.12 | 333.83 | 395.27 | 333.82 | 395.5 | 333.82 | 396.7 | 333.81 |
| 396.98 | 333.81 | 397.81 | 333.8 | 398.2 | 333.8 | 398.94 | 333.79 | 399.25 | 333.77 |
| 399.35 | 333.77 | 403.46 | 333.86 | 404.95 | 333.89 | 405.55 | 333.88 | 406.06 | 333.88 |
| 407.48 | 333.9 | 407.88 | 333.9 | 408.94 | 333.89 | 409.09 | 333.9 | 409.21 | 333.9 |
| 409.51 | 333.91 | 409.64 | 333.91 | 409.68 | 333.92 | 409.92 | 333.92 | 409.99 | 333.93 |
| 410.25 | 333.93 | 413.74 | 334 | 413.95 | 334 | 414.45 | 334.01 | 415.06 | 333.98 |
| 415.84 | 333.97 | 417.57 | 333.97 | 419.78 | 333.96 | 419.99 | 333.96 | 420.58 | 333.98 |
| 422.1 | 334 | 422.58 | 334.01 | 423.61 | 334.01 | 424.32 | 334.06 | 424.56 | 334.07 |
| 425.46 | 334.14 | 425.85 | 334.16 | 426.23 | 334.19 | 426.4 | 334.2 | 428.31 | 334.43 |
| 428.81 | 334.45 | 430.41 | 334.65 | 431.19 | 334.75 | 431.39 | 334.77 | 432.49 | 334.9 |
| 435.75 | 335.3 | 438.96 | 335.61 | 439.8 | 335.7 | 440.03 | 335.71 | 440.62 | 335.75 |
| 442.16 | 335.92 | 443.23 | 336.04 | 445.56 | 336.36 | 446.06 | 336.43 | 446.87 | 336.55 |
| 448.22 | 336.7 | 448.26 | 336.71 | 449.35 | 336.84 | 450.62 | 336.99 | 454 | 337.42 |
| 454.26 | 337.46 | 454.64 | 337.49 | 455.31 | 337.54 | 455.64 | 337.55 | 456.6 | 337.59 |
| 458.59 | 337.65 | 459.43 | 337.66 | 461.09 | 337.66 | 461.4 | 337.65 | 461.87 | 337.63 |
| 462.22 | 337.62 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 155.43 | .04 | 349.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 155.43 | 349.39 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1251.11*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.46 | 1.45 | 340.46 | 2.16 | 340.45 | 3.07 | 340.44 | 3.42 | 340.43 |
| 4.25 | 340.43 | 4.56 | 340.42 | 6.87 | 340.42 | 7.18 | 340.41 | 8.65 | 340.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.27 | 340.37 | 10.09 | 340.36 | 10.82 | 340.34 | 11.18 | 340.34 | 11.36 | 340.33 |
| 12.32 | 340.31 | 13.65 | 340.29 | 14.4 | 340.29 | 17.43 | 340.21 | 17.58 | 340.16 |
| 17.89 | 340.13 | 18.93 | 340.08 | 19.27 | 340.06 | 20.27 | 339.99 | 20.32 | 339.98 |
| 20.96 | 339.96 | 21.81 | 339.94 | 23.89 | 339.83 | 24.19 | 339.81 | 24.39 | 339.79 |
| 24.9 | 339.73 | 25.51 | 339.65 | 26.71 | 339.42 | 27.17 | 339.37 | 27.29 | 339.35 |
| 28.01 | 339.29 | 30.74 | 339.02 | 31.05 | 338.99 | 31.17 | 338.97 | 32.08 | 338.9 |
| 32.65 | 338.86 | 32.84 | 338.85 | 33.66 | 338.82 | 33.87 | 338.81 | 35.16 | 338.81 |
| 35.9 | 338.79 | 36.73 | 338.77 | 37.77 | 338.73 | 38.1 | 338.71 | 38.34 | 338.7 |
| 38.65 | 338.67 | 38.98 | 338.65 | 39.05 | 338.65 | 39.19 | 338.63 | 39.48 | 338.61 |
| 40.23 | 338.54 | 40.83 | 338.48 | 40.86 | 338.48 | 41.42 | 338.33 | 43.35 | 337.83 |
| 43.76 | 337.73 | 44.24 | 337.62 | 44.51 | 337.54 | 45 | 337.47 | 45.26 | 337.43 |
| 46.58 | 337.28 | 46.87 | 337.25 | 49.24 | 337.3 | 49.78 | 337.29 | 50.1 | 337.28 |
| 51.03 | 337.27 | 51.46 | 337.27 | 51.54 | 337.24 | 52.61 | 337.16 | 52.93 | 337.13 |
| 53.03 | 337.13 | 53.76 | 336.98 | 54.89 | 336.8 | 56.75 | 336.41 | 57.21 | 336.34 |
| 57.69 | 336.27 | 58.56 | 336.15 | 58.93 | 336.09 | 61.37 | 335.74 | 61.87 | 335.65 |
| 63.12 | 335.42 | 64.5 | 335.31 | 66.58 | 335.16 | 67.95 | 335.07 | 69.7 | 334.96 |
| 69.94 | 334.94 | 71.73 | 334.83 | 76 | 334.57 | 76.26 | 334.55 | 76.35 | 334.55 |
| 77.23 | 334.46 | 77.57 | 334.42 | 78.25 | 334.39 | 78.77 | 334.37 | 79.36 | 334.34 |
| 80.03 | 334.32 | 80.5 | 334.31 | 81.3 | 334.28 | 82.04 | 334.24 | 82.71 | 334.22 |
| 83.41 | 334.19 | 84.5 | 334.13 | 85.88 | 334.06 | 85.92 | 334.05 | 86.29 | 334.03 |
| 89.05 | 333.89 | 90.04 | 333.85 | 90.15 | 333.84 | 91.43 | 333.81 | 93.13 | 333.74 |
| 93.79 | 333.7 | 94.44 | 333.67 | 94.48 | 333.66 | 98.3 | 333.44 | 101.39 | 333.28 |
| 101.91 | 333.25 | 102.33 | 333.23 | 103.56 | 333.18 | 104.58 | 333.15 | 105.24 | 333.14 |
| 107.36 | 333.16 | 108.2 | 333.17 | 110.19 | 333.19 | 110.36 | 333.19 | 110.85 | 333.18 |
| 111.68 | 333.16 | 111.82 | 333.16 | 112.01 | 333.17 | 112.54 | 333.18 | 113.46 | 333.18 |
| 114.4 | 333.17 | 115.18 | 333.17 | 115.43 | 333.18 | 116.01 | 333.18 | 118.2 | 333.05 |
| 118.74 | 333.02 | 118.83 | 333.02 | 119.13 | 333 | 119.65 | 332.98 | 120.04 | 332.96 |
| 120.39 | 332.95 | 120.93 | 332.92 | 121.38 | 332.9 | 121.87 | 332.87 | 122.6 | 332.82 |
| 123.58 | 332.76 | 124.04 | 332.73 | 124.14 | 332.72 | 124.52 | 332.7 | 124.95 | 332.7 |
| 126.03 | 332.68 | 126.64 | 332.68 | 127.27 | 332.67 | 127.86 | 332.68 | 128.46 | 332.68 |
| 129.35 | 332.71 | 131.54 | 332.71 | 131.86 | 332.7 | 134.48 | 332.68 | 138.75 | 332.66 |
| 139.47 | 332.65 | 140.58 | 332.65 | 141.52 | 332.64 | 141.71 | 332.64 | 142.73 | 332.63 |
| 143.97 | 332.6 | 146.19 | 332.49 | 146.71 | 332.48 | 149.31 | 332.36 | 149.44 | 332.36 |
| 150.34 | 332.31 | 150.98 | 332.24 | 151.69 | 332.15 | 151.82 | 332.14 | 152.29 | 332.12 |
| 152.93 | 332.11 | 154.37 | 332.09 | 157.04 | 332.06 | 158.87 | 332.04 | 160.25 | 332.03 |
| 162.43 | 332.01 | 162.95 | 332 | 163.24 | 332 | 165.61 | 331.96 | 165.7 | 331.96 |
| 165.89 | 331.94 | 167.44 | 331.92 | 168.81 | 331.9 | 168.9 | 331.98 | 169.04 | 332 |
| 169.7 | 332 | 171.6 | 332.01 | 172.14 | 332.01 | 175.2 | 331.99 | 175.98 | 331.99 |
| 176.62 | 331.98 | 176.85 | 331.98 | 178.86 | 331.97 | 179.09 | 331.97 | 179.79 | 331.98 |
| 180.42 | 331.97 | 180.96 | 331.97 | 182.23 | 331.96 | 183.35 | 331.95 | 184.22 | 331.94 |
| 186.79 | 331.94 | 187.45 | 331.93 | 188.02 | 331.93 | 188.56 | 331.91 | 189.15 | 331.9 |
| 191.01 | 331.84 | 191.24 | 331.82 | 191.5 | 331.79 | 193.69 | 331.65 | 196.08 | 331.49 |
| 196.63 | 331.46 | 199.99 | 331.46 | 200.53 | 331.45 | 200.93 | 331.44 | 202.02 | 331.43 |
| 202.19 | 331.43 | 202.7 | 331.46 | 202.92 | 331.46 | 204.09 | 331.45 | 204.43 | 331.44 |
| 206.22 | 331.44 | 206.48 | 331.43 | 206.9 | 331.42 | 207.72 | 331.41 | 208.57 | 331.39 |
| 211.71 | 331.31 | 214.75 | 331.24 | 215.67 | 331.22 | 217.88 | 331.16 | 219.44 | 331.12 |
| 219.98 | 331.1 | 222.62 | 331.02 | 224.62 | 330.97 | 225.08 | 330.96 | 226.3 | 330.95 |
| 226.66 | 330.94 | 227.26 | 330.94 | 227.76 | 330.93 | 230.37 | 330.92 | 231.1 | 330.92 |
| 231.23 | 330.93 | 233.72 | 330.93 | 234.09 | 330.94 | 234.86 | 330.94 | 235.67 | 330.95 |
| 236.28 | 330.95 | 236.99 | 331.19 | 237.38 | 331.25 | 238.22 | 331.39 | 238.24 | 331.39 |
| 238.64 | 331.46 | 240.64 | 331.68 | 242.07 | 331.85 | 242.72 | 331.92 | 244.65 | 332.14 |
| 245.27 | 332.11 | 246.16 | 332.05 | 246.84 | 332.1 | 247.85 | 332.17 | 248.2 | 332.18 |
| 249.45 | 332.19 | 250.05 | 332.19 | 250.88 | 332.17 | 251.37 | 332.16 | 252.05 | 332.14 |
| 253.85 | 332.07 | 254.56 | 332.04 | 255.15 | 332.01 | 256.43 | 331.95 | 256.54 | 331.94 |
| 258.38 | 331.84 | 259.93 | 331.76 | 261.35 | 331.68 | 261.83 | 331.66 | 263.08 | 331.59 |
| 263.42 | 331.58 | 264.4 | 331.53 | 264.94 | 331.5 | 265.15 | 331.4 | 265.19 | 331.4 |
| 265.55 | 331.36 | 266 | 331.32 | 266.11 | 331.28 | 266.46 | 331.24 | 266.5 | 331.23 |
| 266.77 | 331.2 | 266.83 | 331.2 | 268.15 | 331.23 | 270.04 | 331.26 | 272.6 | 331.32 |
| 275.59 | 331.41 | 276 | 331.42 | 277.52 | 331.45 | 279.92 | 331.5 | 280.8 | 331.51 |
| 282.15 | 331.55 | 282.3 | 331.56 | 282.56 | 331.56 | 283.41 | 331.6 | 284.04 | 331.62 |
| 285.44 | 331.67 | 286.07 | 331.69 | 286.48 | 331.71 | 286.83 | 331.72 | 286.99 | 331.72 |
| 287.47 | 331.74 | 288.5 | 331.76 | 288.94 | 331.77 | 289.1 | 331.78 | 289.49 | 331.79 |
| 290.25 | 331.79 | 290.76 | 331.8 | 290.81 | 331.79 | 290.93 | 331.8 | 293.67 | 331.8 |
| 294.28 | 331.79 | 294.53 | 331.78 | 295.57 | 331.76 | 296.4 | 331.75 | 296.77 | 331.73 |
| 296.8 | 331.74 | 297.74 | 331.71 | 297.8 | 331.71 | 298.82 | 331.68 | 299.75 | 331.65 |
| 299.95 | 331.65 | 303.29 | 331.54 | 303.67 | 331.41 | 303.92 | 331.28 | 304.13 | 331.16 |
| 304.54 | 331.15 | 305.39 | 331.12 | 306.03 | 331.11 | 306.56 | 331.11 | 306.71 | 331.1 |
| 307.51 | 331.13 | 309.09 | 331.18 | 309.66 | 331.2 | 313 | 331.34 | 313.53 | 331.36 |
| 315.83 | 331.43 | 317.82 | 331.49 | 318.51 | 331.51 | 320.04 | 331.54 | 320.33 | 331.53 |
| 321.15 | 331.53 | 321.7 | 331.5 | 324.65 | 331.5 | 325.22 | 331.51 | 326.08 | 331.51 |
| 328.37 | 331.57 | 330.4 | 331.62 | 331.97 | 331.66 | 335.84 | 331.76 | 336.59 | 331.78 |
| 336.8 | 331.79 | 339.17 | 331.84 | 340.02 | 331.85 | 341.22 | 331.88 | 341.79 | 331.88 |
| 343.22 | 331.89 | 346.34 | 331.89 | 350.39 | 331.93 | 351.98 | 331.93 | 353.31 | 331.92 |
| 354.54 | 331.88 | 354.63 | 331.88 | 355 | 331.85 | 355.18 | 331.83 | 355.23 | 331.84 |
| 356.2 | 331.9 | 358.36 | 332.04 | 359.75 | 332.1 | 359.82 | 332.11 | 362.06 | 332.22 |
| 362.33 | 332.23 | 363.07 | 332.27 | 363.9 | 332.3 | 364.52 | 332.33 | 365.55 | 332.37 |
| 366.58 | 332.42 | 368.24 | 332.49 | 368.93 | 332.52 | 373.51 | 332.68 | 374.12 | 332.7 |
| 374.88 | 332.73 | 375.84 | 332.76 | 380.12 | 332.91 | 382.08 | 332.98 | 384.2 | 333.05 |
| 385.2 | 333.09 | 386.1 | 333.12 | 386.5 | 333.13 | 386.95 | 333.15 | 387.22 | 333.15 |
| 387.37 | 333.16 | 387.68 | 333.17 | 387.78 | 333.18 | 388.37 | 333.2 | 389.08 | 333.23 |
| 390.99 | 333.29 | 391.23 | 333.3 | 391.95 | 333.32 | 393.62 | 333.36 | 395.32 | 333.39 |
| 397.66 | 333.44 | 398.98 | 333.49 | 399.16 | 333.5 | 400.12 | 333.52 | 400.84 | 333.54 |
| 401.79 | 333.54 | 402.31 | 333.53 | 402.53 | 333.53 | 403.42 | 333.54 | 404.77 | 333.55 |
| 404.93 | 333.55 | 405.07 | 333.54 | 405.31 | 333.54 | 406.53 | 333.53 | 408.82 | 333.53 |
| 409.13 | 333.51 | 409.23 | 333.51 | 413.42 | 333.59 | 414.94 | 333.62 | 415.55 | 333.61 |
| 416.06 | 333.62 | 417.51 | 333.63 | 417.91 | 333.64 | 418.99 | 333.63 | 419.15 | 333.64 |
| 419.63 | 333.65 | 419.75 | 333.66 | 420.33 | 333.68 | 423.89 | 333.75 | 424.1 | 333.76 |
| 424.61 | 333.76 | 425.23 | 333.74 | 426.03 | 333.73 | 427.78 | 333.73 | 430.03 | 333.74 |
| 430.25 | 333.74 | 430.85 | 333.76 | 432.4 | 333.78 | 433.36 | 333.8 | 433.93 | 333.8 |
| 434.66 | 333.85 | 434.91 | 333.86 | 435.82 | 333.93 | 436.22 | 333.95 | 436.78 | 333.99 |
| 438.73 | 334.22 | 439.23 | 334.24 | 440.87 | 334.43 | 441.66 | 334.52 | 441.86 | 334.55 |
| 442.98 | 334.67 | 446.3 | 335.05 | 449.57 | 335.36 | 450.43 | 335.44 | 450.66 | 335.45 |
| 451.26 | 335.49 | 452.82 | 335.66 | 453.91 | 335.78 | 456.29 | 336.08 | 456.58 | 336.11 |
| 456.8 | 336.14 | 457.63 | 336.26 | 459 | 336.4 | 459.04 | 336.41 | 460.15 | 336.53 |
| 461.44 | 336.68 | 461.75 | 336.71 | 462.01 | 336.74 | 464.89 | 337.08 | 465.15 | 337.12 |
| 465.54 | 337.15 | 466.22 | 337.19 | 466.46 | 337.21 | 466.56 | 337.21 | 467.54 | 337.24 |
| 469.56 | 337.3 | 470.42 | 337.31 | 472.11 | 337.31 | 472.42 | 337.3 | 472.9 | 337.28 |
| 473.25 | 337.27 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 163.24 | .04 | 358.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 163.24 | 358.36 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1232.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.27 | 1.51 | 340.27 | 2.26 | 340.25 | 3.22 | 340.23 | 4.14 | 340.23 |
| 4.77 | 340.21 | 7.2 | 340.21 | 7.52 | 340.2 | 9.07 | 340.18 | 9.71 | 340.16 |
| 10.57 | 340.15 | 11.34 | 340.13 | 11.71 | 340.13 | 11.9 | 340.12 | 12.91 | 340.1 |
| 13.65 | 340.09 | 15.09 | 340.09 | 18.26 | 340 | 18.42 | 339.95 | 18.75 | 339.92 |
| 19.84 | 339.87 | 20.19 | 339.84 | 21.24 | 339.78 | 21.29 | 339.77 | 21.97 | 339.74 |
| 22.85 | 339.72 | 25.35 | 339.56 | 25.56 | 339.53 | 26.09 | 339.47 | 26.5 | 339.41 |
| 26.73 | 339.37 | 27.99 | 339.12 | 28.47 | 339.06 | 29.35 | 338.98 | 32.21 | 338.69 |
| 32.54 | 338.65 | 32.66 | 338.63 | 33.62 | 338.56 | 34.21 | 338.51 | 34.41 | 338.5 |
| 35.27 | 338.48 | 35.49 | 338.47 | 36.25 | 338.48 | 36.51 | 338.48 | 36.84 | 338.49 |
| 37.62 | 338.48 | 38.09 | 338.48 | 38.49 | 338.47 | 39.58 | 338.45 | 39.92 | 338.44 |
| 40.17 | 338.42 | 40.5 | 338.4 | 40.84 | 338.39 | 41.37 | 338.34 | 42.16 | 338.27 |
| 42.79 | 338.21 | 42.81 | 338.21 | 45.42 | 337.59 | 45.85 | 337.5 | 46.35 | 337.39 |
| 46.63 | 337.31 | 47.15 | 337.24 | 47.42 | 337.19 | 47.71 | 337.15 | 48.81 | 337.03 |
| 49.11 | 336.99 | 51.6 | 337.01 | 52.49 | 336.98 | 53.47 | 336.97 | 53.92 | 336.97 |
| 54 | 336.94 | 55.13 | 336.86 | 55.38 | 336.85 | 55.57 | 336.83 | 56.33 | 336.68 |
| 57.51 | 336.51 | 59.46 | 336.11 | 60.44 | 335.97 | 60.83 | 335.92 | 60.97 | 335.91 |
| 61.13 | 335.88 | 61.75 | 335.8 | 64.3 | 335.45 | 64.82 | 335.36 | 66.13 | 335.13 |
| 67.58 | 335.02 | 69.76 | 334.87 | 71.2 | 334.77 | 73.03 | 334.66 | 73.28 | 334.64 |
| 75.16 | 334.53 | 79.64 | 334.27 | 79.91 | 334.26 | 80.92 | 334.16 | 81.28 | 334.13 |
| 81.99 | 334.1 | 82.53 | 334.08 | 83.16 | 334.06 | 83.56 | 334.05 | 83.85 | 334.05 |
| 84.34 | 334.03 | 85.19 | 334 | 85.97 | 333.97 | 86.66 | 333.94 | 87.4 | 333.92 |
| 88.54 | 333.86 | 89.98 | 333.79 | 90.03 | 333.77 | 90.42 | 333.74 | 93.31 | 333.59 |
| 94.34 | 333.55 | 94.46 | 333.55 | 95.81 | 333.53 | 96.31 | 333.52 | 97.58 | 333.47 |
| 98.28 | 333.43 | 98.95 | 333.4 | 99 | 333.39 | 103 | 333.16 | 105.83 | 333.01 |
| 106.24 | 332.99 | 106.79 | 332.96 | 108.51 | 332.88 | 109.58 | 332.86 | 110.28 | 332.84 |
| 112.49 | 332.85 | 113.37 | 332.86 | 115.45 | 332.87 | 115.64 | 332.87 | 116.15 | 332.86 |
| 117.02 | 332.84 | 117.17 | 332.84 | 117.36 | 332.85 | 117.92 | 332.86 | 118.88 | 332.86 |
| 119.87 | 332.85 | 120.69 | 332.85 | 120.95 | 332.86 | 121.56 | 332.86 | 124.42 | 332.71 |
| 124.51 | 332.71 | 124.82 | 332.69 | 125.37 | 332.67 | 125.78 | 332.65 | 126.53 | 332.63 |
| 126.71 | 332.62 | 127.18 | 332.6 | 127.7 | 332.57 | 128.14 | 332.55 | 128.46 | 332.53 |
| 129.49 | 332.47 | 129.97 | 332.44 | 130.08 | 332.43 | 130.92 | 332.41 | 132.06 | 332.39 |
| 133.35 | 332.39 | 133.97 | 332.4 | 134.6 | 332.4 | 135.53 | 332.42 | 135.76 | 332.43 |
| 138.17 | 332.43 | 140.91 | 332.41 | 145.38 | 332.38 | 148.49 | 332.38 | 149.55 | 332.36 |
| 150.85 | 332.33 | 152.11 | 332.28 | 153.72 | 332.22 | 156.45 | 332.12 | 156.58 | 332.11 |
| 157.52 | 332.07 | 158.2 | 332 | 158.94 | 331.92 | 159.08 | 331.91 | 159.57 | 331.89 |
| 160.25 | 331.88 | 161.75 | 331.86 | 162.7 | 331.85 | 164.55 | 331.84 | 166.46 | 331.82 |
| 167.91 | 331.81 | 170.19 | 331.78 | 171.04 | 331.78 | 173.39 | 331.74 | 173.67 | 331.73 |
| 175.21 | 331.7 | 176.57 | 331.68 | 176.65 | 331.76 | 176.79 | 331.78 | 176.9 | 331.78 |
| 177.45 | 331.77 | 179.33 | 331.78 | 179.87 | 331.79 | 182.9 | 331.74 | 183.68 | 331.74 |
| 184.31 | 331.73 | 184.53 | 331.72 | 186.53 | 331.7 | 186.75 | 331.7 | 187.45 | 331.71 |
| 188.07 | 331.7 | 188.6 | 331.7 | 189.87 | 331.69 | 190.98 | 331.68 | 191.84 | 331.67 |
| 192.58 | 331.67 | 193.69 | 331.66 | 194.39 | 331.66 | 195.04 | 331.65 | 196.14 | 331.63 |
| 196.73 | 331.61 | 197.66 | 331.59 | 198.57 | 331.56 | 198.8 | 331.54 | 199.06 | 331.51 |
| 199.37 | 331.48 | 201.23 | 331.38 | 203.6 | 331.22 | 204.14 | 331.19 | 206.06 | 331.19 |
| 206.82 | 331.18 | 207.47 | 331.18 | 208.01 | 331.17 | 208.41 | 331.17 | 209.48 | 331.15 |
| 209.65 | 331.15 | 210.37 | 331.18 | 211.53 | 331.16 | 211.87 | 331.15 | 212.48 | 331.15 |
| 212.84 | 331.16 | 213.9 | 331.16 | 214.32 | 331.15 | 215.13 | 331.14 | 216.76 | 331.1 |
| 219.09 | 331.05 | 222.1 | 330.97 | 223.02 | 330.95 | 225.21 | 330.89 | 226.75 | 330.85 |
| 227.28 | 330.84 | 229.9 | 330.76 | 231.89 | 330.7 | 232.34 | 330.69 | 233.55 | 330.68 |
| 233.9 | 330.68 | 234.19 | 330.67 | 235 | 330.67 | 237.58 | 330.66 | 237.85 | 330.65 |
| 237.96 | 330.66 | 239.94 | 330.66 | 240.3 | 330.67 | 240.97 | 330.67 | 241.35 | 330.68 |
| 242.13 | 330.68 | 242.95 | 330.69 | 243.57 | 330.7 | 244.29 | 330.93 | 245.53 | 331.12 |
| 245.78 | 331.16 | 247.99 | 331.41 | 249.43 | 331.56 | 250.1 | 331.64 | 252.06 | 331.85 |
| 252.68 | 331.82 | 253.58 | 331.77 | 254.27 | 331.82 | 255.3 | 331.89 | 255.65 | 331.9 |
| 256.91 | 331.91 | 258 | 331.91 | 258.36 | 331.9 | 258.86 | 331.89 | 259.55 | 331.87 |
| 260.36 | 331.84 | 260.86 | 331.82 | 261.38 | 331.81 | 262.09 | 331.78 | 262.7 | 331.75 |
| 263.99 | 331.69 | 264.11 | 331.68 | 265.97 | 331.59 | 267.54 | 331.5 | 268.98 | 331.42 |
| 269.47 | 331.4 | 270.73 | 331.34 | 271.08 | 331.32 | 272.07 | 331.28 | 272.62 | 331.25 |
| 272.83 | 331.16 | 272.88 | 331.15 | 273.7 | 331.08 | 273.81 | 331.04 | 274.17 | 331 |
| 274.48 | 330.97 | 274.54 | 330.97 | 275.88 | 330.99 | 277.8 | 331.03 | 280.39 | 331.09 |
| 283.42 | 331.18 | 283.84 | 331.19 | 285.37 | 331.23 | 287.81 | 331.27 | 288.7 | 331.29 |
| 290.07 | 331.33 | 290.22 | 331.34 | 290.48 | 331.34 | 291.98 | 331.41 | 293.41 | 331.46 |
| 294.04 | 331.47 | 294.46 | 331.49 | 294.81 | 331.5 | 294.97 | 331.51 | 295.95 | 331.53 |
| 296.5 | 331.55 | 296.95 | 331.55 | 297.11 | 331.56 | 297.51 | 331.57 | 298.28 | 331.57 |
| 298.74 | 331.58 | 298.77 | 331.57 | 299.13 | 331.57 | 299.54 | 331.58 | 301.3 | 331.58 |
| 302.23 | 331.56 | 302.36 | 331.56 | 303.13 | 331.53 | 303.67 | 331.53 | 304.52 | 331.52 |
| 305.25 | 331.5 | 305.87 | 331.48 | 305.94 | 331.48 | 306.96 | 331.45 | 307.91 | 331.42 |
| 308.11 | 331.42 | 311.5 | 331.31 | 311.89 | 331.19 | 312.13 | 331.06 | 312.35 | 330.95 |
| 312.77 | 330.93 | 313.63 | 330.91 | 313.71 | 330.9 | 314.27 | 330.9 | 314.81 | 330.89 |
| 314.96 | 330.89 | 315.78 | 330.92 | 317.38 | 330.97 | 317.95 | 330.98 | 318.43 | 331 |
| 321.87 | 331.13 | 324.21 | 331.19 | 326.62 | 331.25 | 326.93 | 331.26 | 328.48 | 331.28 |
| 329.61 | 331.28 | 330.16 | 331.25 | 332.33 | 331.25 | 333.15 | 331.26 | 334.6 | 331.26 |
| 336.93 | 331.32 | 338.98 | 331.37 | 340.57 | 331.41 | 344.49 | 331.52 | 345.25 | 331.54 |
| 345.47 | 331.55 | 347.87 | 331.6 | 348.73 | 331.62 | 349.94 | 331.64 | 350.52 | 331.64 |
| 353.4 | 331.66 | 353.52 | 331.66 | 354 | 331.65 | 355.14 | 331.65 | 359.24 | 331.69 |
| 360.09 | 331.7 | 360.86 | 331.7 | 362.2 | 331.69 | 363.45 | 331.66 | 363.55 | 331.65 |
| 364.1 | 331.62 | 364.15 | 331.62 | 365.13 | 331.69 | 367.32 | 331.82 | 368.73 | 331.88 |
| 368.81 | 331.89 | 371.09 | 331.99 | 371.36 | 332.01 | 372.11 | 332.04 | 372.96 | 332.07 |
| 373.6 | 332.1 | 375.7 | 332.18 | 377.38 | 332.25 | 378.08 | 332.27 | 382.74 | 332.43 |
| 383.37 | 332.45 | 384.14 | 332.48 | 385.12 | 332.51 | 389.48 | 332.64 | 391.47 | 332.71 |
| 393.63 | 332.78 | 394.65 | 332.81 | 395.56 | 332.84 | 395.97 | 332.86 | 396.17 | 332.86 |
| 396.26 | 332.87 | 396.56 | 332.87 | 396.7 | 332.88 | 396.85 | 332.88 | 397.18 | 332.9 |
| 397.27 | 332.9 | 397.88 | 332.92 | 398.33 | 332.94 | 400.55 | 333.02 | 400.79 | 333.02 |
| 401.16 | 333.04 | 401.52 | 333.05 | 403.22 | 333.08 | 404.95 | 333.12 | 407.34 | 333.17 |
| 408.68 | 333.21 | 408.86 | 333.22 | 409.83 | 333.24 | 410.57 | 333.26 | 411.53 | 333.26 |
| 412.06 | 333.24 | 412.29 | 333.24 | 413.2 | 333.26 | 414.57 | 333.26 | 414.73 | 333.27 |
| 414.88 | 333.26 | 418.69 | 333.26 | 419.01 | 333.24 | 419.11 | 333.24 | 423.37 | 333.33 |
| 424.92 | 333.36 | 425.54 | 333.35 | 426.06 | 333.36 | 427.54 | 333.37 | 427.95 | 333.38 |
| 429.05 | 333.38 | 429.21 | 333.39 | 429.34 | 333.39 | 429.65 | 333.4 | 429.82 | 333.4 |
| 430.41 | 333.42 | 434.03 | 333.5 | 434.25 | 333.51 | 434.76 | 333.52 | 435.4 | 333.5 |
| 438 | 333.5 | 440.29 | 333.51 | 440.51 | 333.52 | 441.12 | 333.54 | 442.7 | 333.57 |
| 443.68 | 333.59 | 444.26 | 333.59 | 445 | 333.64 | 445.25 | 333.65 | 446.58 | 333.75 |
| 446.98 | 333.77 | 447.15 | 333.79 | 449.14 | 334 | 449.66 | 334.02 | 451.32 | 334.21 |
| 452.12 | 334.3 | 452.33 | 334.32 | 453.47 | 334.44 | 456.85 | 334.81 | 460.17 | 335.11 |
| 460.96 | 335.18 | 461.05 | 335.19 | 461.28 | 335.2 | 461.9 | 335.24 | 463.49 | 335.41 |
| 464.6 | 335.51 | 467.02 | 335.79 | 467.54 | 335.86 | 468.38 | 335.96 | 469.78 | 336.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 469.82 | 336.11 | 470.95 | 336.22 | 472.27 | 336.36 | 472.58 | 336.4 | 472.84 | 336.42 |
| 475.77 | 336.75 | 476.04 | 336.78 | 476.43 | 336.8 | 477.13 | 336.85 | 478.47 | 336.89 |
| 480.53 | 336.95 | 481.4 | 336.96 | 483.12 | 336.96 | 483.44 | 336.95 | 483.93 | 336.94 |
| 484.29 | 336.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 171.04 | .04 | 367.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 171.04 | 367.32 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1213.09*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.08 | 1.44 | 340.08 | 1.58 | 340.07 | 2.36 | 340.05 | 3.37 | 340.03 |
| 3.9 | 340.03 | 4.33 | 340.02 | 4.99 | 340 | 7.53 | 340 | 7.87 | 339.99 |
| 9.48 | 339.97 | 10.16 | 339.95 | 11.05 | 339.94 | 12.25 | 339.91 | 12.44 | 339.91 |
| 13.5 | 339.89 | 14.27 | 339.88 | 14.95 | 339.88 | 15.63 | 339.89 | 15.78 | 339.89 |
| 19.09 | 339.78 | 19.26 | 339.74 | 19.6 | 339.71 | 21.12 | 339.63 | 22.21 | 339.57 |
| 22.27 | 339.56 | 22.97 | 339.53 | 23.9 | 339.5 | 26.18 | 339.33 | 26.72 | 339.28 |
| 27.71 | 339.14 | 27.95 | 339.1 | 29.27 | 338.82 | 29.77 | 338.76 | 29.9 | 338.75 |
| 30.69 | 338.67 | 33.68 | 338.35 | 34.02 | 338.31 | 34.15 | 338.29 | 35.15 | 338.22 |
| 35.77 | 338.17 | 35.98 | 338.16 | 36.88 | 338.14 | 37.11 | 338.14 | 37.9 | 338.15 |
| 38.12 | 338.15 | 38.17 | 338.16 | 38.52 | 338.16 | 39.34 | 338.17 | 41.38 | 338.17 |
| 42 | 338.15 | 42.34 | 338.13 | 42.79 | 338.12 | 44.08 | 338.01 | 44.76 | 337.95 |
| 45.38 | 337.82 | 47.5 | 337.35 | 47.94 | 337.26 | 48.47 | 337.17 | 48.76 | 337.08 |
| 49.31 | 337 | 49.59 | 336.94 | 49.89 | 336.91 | 51.04 | 336.77 | 51.35 | 336.73 |
| 53.95 | 336.71 | 54.54 | 336.69 | 54.89 | 336.69 | 55.91 | 336.67 | 56.38 | 336.67 |
| 56.47 | 336.64 | 57.64 | 336.57 | 57.91 | 336.55 | 58.1 | 336.53 | 58.9 | 336.39 |
| 60.14 | 336.21 | 62.17 | 335.82 | 63.2 | 335.68 | 63.75 | 335.61 | 64.56 | 335.51 |
| 67.24 | 335.15 | 67.78 | 335.07 | 69.15 | 334.84 | 70.66 | 334.72 | 72.95 | 334.57 |
| 74.44 | 334.47 | 76.36 | 334.36 | 76.63 | 334.34 | 78.59 | 334.23 | 83.27 | 333.97 |
| 83.55 | 333.96 | 83.89 | 333.94 | 84.61 | 333.87 | 84.98 | 333.84 | 85.73 | 333.81 |
| 86.3 | 333.79 | 86.95 | 333.77 | 87.37 | 333.76 | 87.68 | 333.77 | 88.19 | 333.75 |
| 89.08 | 333.73 | 89.89 | 333.7 | 90.61 | 333.67 | 91.39 | 333.65 | 92.58 | 333.59 |
| 94.09 | 333.52 | 94.14 | 333.49 | 94.54 | 333.46 | 97.57 | 333.3 | 98.65 | 333.26 |
| 100.18 | 333.26 | 100.7 | 333.25 | 101.51 | 333.23 | 102.76 | 333.16 | 103.47 | 333.13 |
| 103.52 | 333.13 | 107.7 | 332.88 | 110.65 | 332.72 | 111.09 | 332.7 | 111.66 | 332.67 |
| 113.47 | 332.59 | 115.31 | 332.54 | 117.62 | 332.55 | 118.54 | 332.55 | 120.72 | 332.56 |
| 120.92 | 332.56 | 121.45 | 332.54 | 122.36 | 332.53 | 122.52 | 332.52 | 122.72 | 332.53 |
| 123.3 | 332.53 | 123.5 | 332.54 | 124.31 | 332.54 | 125.34 | 332.53 | 126.2 | 332.53 |
| 126.46 | 332.54 | 127.02 | 332.54 | 127.11 | 332.53 | 129.5 | 332.42 | 130.1 | 332.4 |
| 130.19 | 332.39 | 131.09 | 332.36 | 131.52 | 332.34 | 132.3 | 332.32 | 132.49 | 332.31 |
| 133.52 | 332.27 | 133.99 | 332.25 | 134.32 | 332.23 | 135.4 | 332.18 | 135.9 | 332.15 |
| 136.01 | 332.14 | 136.9 | 332.12 | 137.45 | 332.12 | 138.08 | 332.11 | 138.75 | 332.11 |
| 139.44 | 332.1 | 140.66 | 332.12 | 140.74 | 332.12 | 141.71 | 332.14 | 141.96 | 332.15 |
| 144.47 | 332.15 | 147.34 | 332.13 | 152.01 | 332.11 | 155.26 | 332.11 | 156.38 | 332.1 |
| 157.73 | 332.07 | 159.05 | 332.02 | 160.17 | 331.98 | 160.74 | 331.97 | 163.59 | 331.88 |
| 163.73 | 331.87 | 164.71 | 331.83 | 165.42 | 331.77 | 166.19 | 331.69 | 166.33 | 331.68 |
| 166.85 | 331.67 | 166.94 | 331.66 | 167.56 | 331.65 | 168.37 | 331.64 | 169.13 | 331.64 |
| 172.06 | 331.61 | 174.06 | 331.6 | 175.57 | 331.59 | 177.96 | 331.56 | 178.85 | 331.56 |
| 181.17 | 331.52 | 181.45 | 331.51 | 182.98 | 331.48 | 184.32 | 331.47 | 184.35 | 331.51 |
| 184.41 | 331.54 | 184.54 | 331.55 | 185.2 | 331.55 | 187.06 | 331.56 | 187.59 | 331.56 |
| 190.6 | 331.5 | 192 | 331.48 | 192.22 | 331.47 | 194.19 | 331.44 | 195.72 | 331.44 |
| 196.25 | 331.43 | 197.51 | 331.42 | 198.61 | 331.41 | 199.46 | 331.4 | 200.01 | 331.39 |
| 200.19 | 331.39 | 201.29 | 331.38 | 201.99 | 331.38 | 202.63 | 331.37 | 203.72 | 331.35 |
| 206.13 | 331.27 | 206.61 | 331.23 | 206.92 | 331.2 | 208.76 | 331.1 | 211.11 | 330.95 |
| 211.65 | 330.92 | 212.89 | 330.92 | 213.55 | 330.91 | 214.96 | 330.91 | 215.88 | 330.89 |
| 216.94 | 330.87 | 217.11 | 330.87 | 217.62 | 330.89 | 217.83 | 330.89 | 218.98 | 330.88 |
| 219.31 | 330.86 | 219.92 | 330.86 | 220.27 | 330.87 | 220.65 | 330.89 | 221.32 | 330.89 |
| 221.74 | 330.88 | 222.55 | 330.87 | 224.16 | 330.83 | 226.47 | 330.78 | 229.45 | 330.71 |
| 230.36 | 330.69 | 232.53 | 330.63 | 234.06 | 330.59 | 234.59 | 330.58 | 237.18 | 330.49 |
| 239.15 | 330.44 | 239.6 | 330.43 | 240.8 | 330.42 | 241.15 | 330.41 | 241.74 | 330.41 |
| 242.23 | 330.4 | 244.79 | 330.39 | 245.26 | 330.39 | 245.53 | 330.4 | 247.18 | 330.4 |
| 247.55 | 330.41 | 248.22 | 330.41 | 248.6 | 330.42 | 249.39 | 330.42 | 250.23 | 330.43 |
| 250.86 | 330.44 | 251.25 | 330.56 | 251.59 | 330.66 | 251.98 | 330.72 | 252.85 | 330.85 |
| 253.1 | 330.89 | 255.33 | 331.13 | 257.48 | 331.35 | 259.46 | 331.56 | 260.09 | 331.53 |
| 261 | 331.49 | 261.7 | 331.53 | 262.75 | 331.61 | 263.1 | 331.62 | 264.38 | 331.63 |
| 264.58 | 331.64 | 264.78 | 331.63 | 265.01 | 331.64 | 265.48 | 331.63 | 265.85 | 331.63 |
| 266.36 | 331.62 | 267.06 | 331.6 | 267.87 | 331.58 | 268.9 | 331.54 | 269.63 | 331.52 |
| 270.25 | 331.49 | 271.56 | 331.43 | 271.67 | 331.42 | 273.56 | 331.33 | 275.16 | 331.24 |
| 276.62 | 331.16 | 277.11 | 331.14 | 278.39 | 331.08 | 278.74 | 331.07 | 279.75 | 331.02 |
| 280.3 | 331 | 280.51 | 330.91 | 280.56 | 330.91 | 281.39 | 330.84 | 281.51 | 330.81 |
| 281.87 | 330.77 | 281.9 | 330.76 | 282.18 | 330.73 | 282.24 | 330.73 | 283.6 | 330.76 |
| 285.55 | 330.79 | 288.17 | 330.86 | 291.25 | 330.95 | 293.22 | 331 | 295.7 | 331.05 |
| 296.59 | 331.07 | 297.99 | 331.11 | 298.14 | 331.12 | 298.4 | 331.12 | 299.28 | 331.17 |
| 299.92 | 331.19 | 301.37 | 331.24 | 302.01 | 331.26 | 302.79 | 331.28 | 302.96 | 331.29 |
| 303.45 | 331.3 | 303.95 | 331.32 | 304.96 | 331.34 | 305.12 | 331.34 | 305.53 | 331.35 |
| 306.31 | 331.35 | 306.78 | 331.36 | 306.8 | 331.35 | 308.44 | 331.35 | 308.61 | 331.36 |
| 309.16 | 331.36 | 309.37 | 331.35 | 310.31 | 331.33 | 310.44 | 331.32 | 310.71 | 331.32 |
| 311.22 | 331.3 | 311.77 | 331.3 | 312.63 | 331.29 | 313.38 | 331.27 | 315.11 | 331.22 |
| 316.07 | 331.2 | 316.27 | 331.19 | 319.71 | 331.08 | 320.1 | 330.96 | 320.35 | 330.84 |
| 320.56 | 330.73 | 320.99 | 330.72 | 321.86 | 330.69 | 322.51 | 330.68 | 323.22 | 330.68 |
| 324.04 | 330.7 | 325.67 | 330.75 | 326.25 | 330.76 | 326.73 | 330.78 | 329.68 | 330.88 |
| 330.22 | 330.9 | 332.59 | 330.95 | 334.63 | 330.99 | 335.34 | 331.01 | 336.92 | 331.03 |
| 337.21 | 331.03 | 338.06 | 331.02 | 338.62 | 331 | 340.82 | 331 | 341.65 | 331.01 |
| 342.23 | 331.01 | 343.12 | 331.02 | 345.48 | 331.08 | 347.56 | 331.13 | 349.18 | 331.17 |
| 353.15 | 331.28 | 353.92 | 331.3 | 354.14 | 331.31 | 356.57 | 331.36 | 357.45 | 331.38 |
| 359.26 | 331.41 | 360.74 | 331.41 | 362.3 | 331.42 | 362.78 | 331.41 | 363.17 | 331.41 |
| 363.47 | 331.4 | 363.94 | 331.4 | 368.09 | 331.46 | 368.95 | 331.47 | 369.73 | 331.46 |
| 371.09 | 331.46 | 372.36 | 331.43 | 372.46 | 331.43 | 373.02 | 331.4 | 373.07 | 331.4 |
| 374.07 | 331.47 | 376.28 | 331.6 | 377.72 | 331.66 | 377.8 | 331.66 | 380.12 | 331.77 |
| 381.16 | 331.81 | 382.02 | 331.84 | 382.67 | 331.86 | 384.81 | 331.94 | 386.52 | 332.01 |
| 387.23 | 332.03 | 392.61 | 332.2 | 393.4 | 332.23 | 394.4 | 332.26 | 398.83 | 332.38 |
| 400.86 | 332.44 | 403.05 | 332.5 | 404.09 | 332.54 | 405.02 | 332.57 | 405.44 | 332.58 |
| 405.64 | 332.59 | 405.91 | 332.59 | 406.04 | 332.6 | 406.76 | 332.62 | 407.38 | 332.65 |
| 408.11 | 332.68 | 410.1 | 332.74 | 410.34 | 332.74 | 410.73 | 332.76 | 411.09 | 332.77 |
| 412.82 | 332.8 | 414.58 | 332.84 | 417.01 | 332.89 | 418.37 | 332.94 | 418.56 | 332.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 419.55 | 332.96 | 420.3 | 332.98 | 421.28 | 332.98 | 421.82 | 332.95 | 422.05 | 332.95 |
| 422.97 | 332.97 | 424.38 | 332.98 | 426.2 | 332.98 | 426.49 | 332.99 | 428.77 | 332.99 |
| 428.99 | 332.98 | 433.33 | 333.06 | 434.9 | 333.09 | 436.07 | 333.09 | 437.57 | 333.11 |
| 437.99 | 333.12 | 439.11 | 333.12 | 439.71 | 333.14 | 439.89 | 333.14 | 440.14 | 333.15 |
| 440.21 | 333.16 | 440.49 | 333.17 | 444.18 | 333.26 | 444.4 | 333.26 | 444.92 | 333.27 |
| 445.57 | 333.26 | 446.65 | 333.26 | 447.21 | 333.27 | 448.21 | 333.27 | 450.54 | 333.29 |
| 450.77 | 333.3 | 451.39 | 333.32 | 452.99 | 333.35 | 453.5 | 333.37 | 453.99 | 333.38 |
| 454.59 | 333.38 | 455.34 | 333.43 | 455.6 | 333.44 | 457.36 | 333.57 | 457.53 | 333.58 |
| 459.55 | 333.79 | 460.08 | 333.81 | 461.77 | 333.98 | 462.59 | 334.07 | 462.8 | 334.09 |
| 463.96 | 334.21 | 467.4 | 334.56 | 470.78 | 334.85 | 471.58 | 334.93 | 471.68 | 334.93 |
| 471.91 | 334.95 | 472.54 | 334.98 | 474.16 | 335.15 | 475.29 | 335.25 | 477.75 | 335.51 |
| 478.05 | 335.54 | 478.28 | 335.57 | 479.13 | 335.67 | 480.55 | 335.8 | 480.6 | 335.8 |
| 481.75 | 335.92 | 483.09 | 336.05 | 483.67 | 336.1 | 486.66 | 336.41 | 486.93 | 336.44 |
| 487.33 | 336.46 | 488.03 | 336.5 | 488.28 | 336.52 | 488.39 | 336.52 | 489.4 | 336.55 |
| 491.5 | 336.6 | 492.39 | 336.61 | 494.14 | 336.61 | 494.46 | 336.6 | 494.96 | 336.59 |
| 495.32 | 336.58 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 178.85 | .04 | 376.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 178.85 | 376.28 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1194.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.89 | 1.51 | 339.88 | 1.65 | 339.88 | 2.47 | 339.86 | 3.52 | 339.83 |
| 3.91 | 339.83 | 4.07 | 339.82 | 4.52 | 339.82 | 5.21 | 339.8 | 5.25 | 339.79 |
| 7.81 | 339.79 | 7.86 | 339.78 | 8.21 | 339.78 | 9.89 | 339.76 | 10.6 | 339.74 |
| 12.37 | 339.72 | 12.78 | 339.7 | 12.99 | 339.7 | 14.09 | 339.68 | 14.9 | 339.67 |
| 15.6 | 339.67 | 16.32 | 339.69 | 16.47 | 339.69 | 19.93 | 339.57 | 20.1 | 339.53 |
| 20.46 | 339.5 | 22.04 | 339.42 | 23.18 | 339.35 | 23.24 | 339.34 | 23.97 | 339.31 |
| 24.94 | 339.28 | 27.32 | 339.08 | 27.66 | 339.05 | 28.47 | 338.94 | 28.92 | 338.86 |
| 29.17 | 338.82 | 30.55 | 338.53 | 30.73 | 338.5 | 31.06 | 338.46 | 31.2 | 338.45 |
| 32.02 | 338.36 | 35.15 | 338.02 | 35.64 | 337.95 | 36.68 | 337.87 | 37.34 | 337.83 |
| 37.55 | 337.82 | 38.49 | 337.81 | 38.73 | 337.8 | 39.56 | 337.82 | 39.79 | 337.82 |
| 39.84 | 337.83 | 40.2 | 337.84 | 41.05 | 337.86 | 42 | 337.88 | 43.19 | 337.89 |
| 43.56 | 337.88 | 43.84 | 337.88 | 44.19 | 337.86 | 44.57 | 337.85 | 44.71 | 337.85 |
| 45.15 | 337.81 | 46.01 | 337.75 | 46.69 | 337.69 | 46.72 | 337.69 | 49.57 | 337.11 |
| 50.58 | 336.94 | 50.89 | 336.85 | 51.46 | 336.76 | 51.75 | 336.69 | 52.06 | 336.66 |
| 53.26 | 336.51 | 53.59 | 336.47 | 56.3 | 336.42 | 56.92 | 336.39 | 57.28 | 336.39 |
| 58.84 | 336.36 | 58.93 | 336.34 | 60.16 | 336.27 | 60.64 | 336.24 | 61.47 | 336.09 |
| 62.76 | 335.91 | 64.89 | 335.52 | 65.96 | 335.38 | 66.38 | 335.33 | 66.53 | 335.32 |
| 66.7 | 335.29 | 67.38 | 335.21 | 70.17 | 334.86 | 70.74 | 334.77 | 72.17 | 334.55 |
| 73.75 | 334.43 | 76.13 | 334.27 | 77.69 | 334.18 | 79.7 | 334.06 | 79.97 | 334.04 |
| 82.77 | 333.89 | 86.9 | 333.68 | 87.2 | 333.66 | 87.3 | 333.66 | 87.75 | 333.62 |
| 88.31 | 333.58 | 88.69 | 333.55 | 89.47 | 333.52 | 90.06 | 333.5 | 90.75 | 333.49 |
| 91.18 | 333.48 | 91.51 | 333.49 | 92.04 | 333.47 | 92.96 | 333.45 | 93.81 | 333.42 |
| 95.38 | 333.38 | 96.62 | 333.32 | 98.19 | 333.25 | 98.25 | 333.21 | 98.67 | 333.18 |
| 101.83 | 333 | 102.95 | 332.96 | 103.08 | 332.97 | 104.55 | 332.98 | 105.09 | 332.98 |
| 105.94 | 332.96 | 106.48 | 332.93 | 107.25 | 332.89 | 107.98 | 332.86 | 108.03 | 332.86 |
| 112.4 | 332.61 | 115.48 | 332.44 | 115.94 | 332.41 | 116.53 | 332.38 | 118.42 | 332.3 |
| 120.34 | 332.25 | 122.76 | 332.24 | 126.19 | 332.24 | 126.75 | 332.23 | 127.7 | 332.21 |
| 127.86 | 332.2 | 128.07 | 332.21 | 128.68 | 332.21 | 128.89 | 332.22 | 129.16 | 332.22 |
| 129.24 | 332.21 | 132.65 | 332.21 | 135.15 | 332.11 | 135.78 | 332.08 | 136.22 | 332.07 |
| 136.81 | 332.05 | 137.25 | 332.03 | 137.66 | 332.02 | 138.08 | 332.02 | 138.27 | 332.01 |
| 139.35 | 331.97 | 139.83 | 331.95 | 140.19 | 331.93 | 141.31 | 331.88 | 141.83 | 331.86 |
| 141.95 | 331.86 | 142.38 | 331.84 | 142.87 | 331.84 | 144.11 | 331.82 | 145.52 | 331.82 |
| 146.19 | 331.83 | 146.88 | 331.83 | 147.9 | 331.86 | 148.48 | 331.86 | 148.56 | 331.87 |
| 150.77 | 331.87 | 153.77 | 331.85 | 158.65 | 331.84 | 162.04 | 331.84 | 163.2 | 331.83 |
| 164.62 | 331.81 | 165.99 | 331.77 | 167.16 | 331.73 | 167.75 | 331.72 | 170.73 | 331.63 |
| 170.87 | 331.63 | 171.9 | 331.59 | 172.64 | 331.54 | 173.45 | 331.46 | 173.59 | 331.45 |
| 174.23 | 331.44 | 174.87 | 331.42 | 175.72 | 331.42 | 176.51 | 331.41 | 177.55 | 331.4 |
| 179.57 | 331.39 | 181.66 | 331.37 | 183.24 | 331.36 | 185.72 | 331.34 | 186.33 | 331.34 |
| 186.65 | 331.33 | 188.96 | 331.3 | 189.24 | 331.29 | 190.75 | 331.27 | 192.08 | 331.25 |
| 192.16 | 331.32 | 192.3 | 331.33 | 192.95 | 331.33 | 194.79 | 331.34 | 195.32 | 331.34 |
| 199.06 | 331.24 | 199.68 | 331.22 | 199.9 | 331.22 | 201.86 | 331.17 | 203.37 | 331.17 |
| 203.9 | 331.16 | 205.14 | 331.15 | 206.23 | 331.13 | 207.08 | 331.12 | 207.8 | 331.12 |
| 208.89 | 331.1 | 209.58 | 331.1 | 210.22 | 331.09 | 211.31 | 331.07 | 211.88 | 331.05 |
| 213.69 | 330.99 | 213.92 | 330.97 | 214.17 | 330.94 | 214.47 | 330.92 | 216.3 | 330.82 |
| 218.63 | 330.68 | 219.16 | 330.65 | 220.38 | 330.64 | 222.44 | 330.64 | 222.96 | 330.62 |
| 224.4 | 330.58 | 224.57 | 330.58 | 225.07 | 330.61 | 225.28 | 330.61 | 226.42 | 330.59 |
| 226.75 | 330.57 | 227.35 | 330.58 | 227.7 | 330.59 | 228.08 | 330.61 | 229.16 | 330.61 |
| 229.96 | 330.59 | 230.78 | 330.58 | 231.55 | 330.56 | 233.84 | 330.51 | 236.8 | 330.44 |
| 237.7 | 330.42 | 239.85 | 330.36 | 240.26 | 330.35 | 241.89 | 330.32 | 244.46 | 330.23 |
| 246.41 | 330.18 | 246.86 | 330.17 | 248.05 | 330.15 | 248.39 | 330.15 | 248.67 | 330.14 |
| 249.47 | 330.14 | 252 | 330.13 | 252.27 | 330.12 | 252.75 | 330.14 | 254.79 | 330.14 |
| 255.23 | 330.15 | 255.48 | 330.15 | 255.86 | 330.16 | 257.5 | 330.18 | 258.15 | 330.19 |
| 258.89 | 330.4 | 259.28 | 330.46 | 260.16 | 330.58 | 260.42 | 330.61 | 260.6 | 330.64 |
| 264.17 | 331 | 264.85 | 331.07 | 266.86 | 331.26 | 267.1 | 331.26 | 267.5 | 331.24 |
| 268.42 | 331.21 | 269.14 | 331.25 | 270.19 | 331.33 | 270.55 | 331.33 | 271.85 | 331.36 |
| 272.96 | 331.36 | 273.34 | 331.35 | 273.85 | 331.35 | 274.56 | 331.33 | 275.39 | 331.31 |
| 275.91 | 331.29 | 276.43 | 331.28 | 277.17 | 331.25 | 277.79 | 331.23 | 279.12 | 331.17 |
| 279.24 | 331.16 | 281.15 | 331.07 | 282.77 | 330.98 | 284.25 | 330.91 | 284.75 | 330.88 |
| 286.04 | 330.83 | 286.4 | 330.81 | 287.42 | 330.77 | 287.98 | 330.75 | 288.2 | 330.67 |
| 288.25 | 330.66 | 288.62 | 330.63 | 289.09 | 330.6 | 289.2 | 330.57 | 289.57 | 330.53 |
| 289.89 | 330.5 | 291.33 | 330.52 | 293.3 | 330.55 | 295.96 | 330.62 | 299.08 | 330.72 |
| 301.08 | 330.77 | 303.58 | 330.83 | 304.49 | 330.85 | 305.91 | 330.89 | 306.06 | 330.9 |
| 306.32 | 330.9 | 307.21 | 330.95 | 307.87 | 330.97 | 309.33 | 331.02 | 309.98 | 331.04 |
| 310.77 | 331.06 | 310.94 | 331.07 | 311.44 | 331.08 | 311.94 | 331.1 | 313.05 | 331.12 |
| 313.13 | 331.13 | 316.67 | 331.13 | 316.96 | 331.14 | 317.23 | 331.14 | 317.9 | 331.11 |
| 318.39 | 331.1 | 318.53 | 331.09 | 319.31 | 331.06 | 320.74 | 331.06 | 321.15 | 331.05 |
| 323.25 | 330.99 | 324.23 | 330.97 | 324.43 | 330.96 | 327.92 | 330.85 | 328.31 | 330.74 |
| 328.56 | 330.63 | 328.78 | 330.52 | 329.21 | 330.51 | 330.1 | 330.48 | 330.19 | 330.47 |
| 331.32 | 330.47 | 331.47 | 330.46 | 332.31 | 330.49 | 333.95 | 330.53 | 334.54 | 330.54 |
| 335.04 | 330.56 | 338.02 | 330.65 | 338.57 | 330.66 | 340.97 | 330.71 | 343.04 | 330.74 |
| 343.76 | 330.76 | 345.36 | 330.78 | 345.65 | 330.78 | 346.51 | 330.77 | 347.08 | 330.75 |
| 348.75 | 330.75 | 349.31 | 330.76 | 350.15 | 330.76 | 350.74 | 330.77 | 351.64 | 330.77 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 354.03 | 330.83 | 356.14 | 330.88 | 357.78 | 330.92 | 361.8 | 331.04 | 362.58 | 331.06 |
| 362.8 | 331.07 | 365.27 | 331.13 | 366.16 | 331.14 | 368 | 331.17 | 369.49 | 331.18 |
| 371.08 | 331.18 | 371.96 | 331.16 | 372.74 | 331.16 | 376.95 | 331.22 | 377.82 | 331.23 |
| 379.99 | 331.23 | 381.27 | 331.21 | 381.37 | 331.21 | 381.94 | 331.18 | 381.99 | 331.18 |
| 383 | 331.25 | 385.24 | 331.38 | 386.71 | 331.44 | 386.79 | 331.44 | 389.15 | 331.54 |
| 390.21 | 331.58 | 391.09 | 331.61 | 391.75 | 331.63 | 392.83 | 331.67 | 393.92 | 331.7 |
| 395.66 | 331.76 | 395.68 | 331.77 | 396.39 | 331.79 | 401.22 | 331.93 | 401.86 | 331.95 |
| 402.66 | 331.97 | 403.67 | 332 | 408.19 | 332.11 | 410.26 | 332.17 | 412.48 | 332.23 |
| 413.54 | 332.26 | 414.49 | 332.29 | 414.91 | 332.31 | 415.21 | 332.31 | 415.39 | 332.32 |
| 415.67 | 332.32 | 415.83 | 332.33 | 416.16 | 332.34 | 416.26 | 332.35 | 416.88 | 332.37 |
| 417.63 | 332.4 | 419.65 | 332.46 | 419.9 | 332.47 | 420.65 | 332.49 | 422.41 | 332.52 |
| 424.2 | 332.56 | 426.68 | 332.61 | 428.07 | 332.66 | 428.26 | 332.66 | 429.27 | 332.68 |
| 430.03 | 332.7 | 430.83 | 332.7 | 431.57 | 332.66 | 431.81 | 332.66 | 432.75 | 332.68 |
| 434.18 | 332.7 | 434.74 | 332.7 | 436.03 | 332.71 | 437.22 | 332.71 | 437.64 | 332.72 |
| 438.44 | 332.73 | 438.76 | 332.71 | 438.87 | 332.71 | 443.29 | 332.8 | 444.89 | 332.83 |
| 445.53 | 332.82 | 446.07 | 332.83 | 447.6 | 332.85 | 448.03 | 332.86 | 449.16 | 332.86 |
| 449.78 | 332.88 | 449.92 | 332.88 | 449.96 | 332.89 | 450.57 | 332.91 | 454.32 | 333.01 |
| 454.54 | 333.02 | 455.08 | 333.03 | 455.74 | 333.01 | 456.58 | 333.02 | 456.84 | 333.02 |
| 457.4 | 333.03 | 458.43 | 333.04 | 460.8 | 333.07 | 461.03 | 333.08 | 461.66 | 333.1 |
| 463.29 | 333.14 | 463.81 | 333.16 | 464.31 | 333.16 | 464.69 | 333.17 | 464.91 | 333.17 |
| 465.68 | 333.22 | 465.94 | 333.23 | 467.73 | 333.36 | 467.91 | 333.37 | 469.96 | 333.57 |
| 470.5 | 333.59 | 472.22 | 333.76 | 473.06 | 333.85 | 473.27 | 333.87 | 474.45 | 333.97 |
| 477.95 | 334.32 | 481.39 | 334.6 | 482.3 | 334.68 | 482.54 | 334.69 | 483.17 | 334.73 |
| 484.82 | 334.89 | 485.97 | 334.98 | 488.78 | 335.26 | 489.02 | 335.29 | 489.89 | 335.38 |
| 491.33 | 335.5 | 491.38 | 335.5 | 492.55 | 335.61 | 494.24 | 335.76 | 494.5 | 335.79 |
| 497.54 | 336.07 | 497.82 | 336.1 | 498.22 | 336.12 | 498.94 | 336.16 | 500.33 | 336.2 |
| 502.46 | 336.25 | 503.37 | 336.26 | 505.15 | 336.26 | 505.48 | 336.25 | 505.99 | 336.24 |
| 506.36 | 336.23 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 186.65 | .04 | 385.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 186.65 | 385.24 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1175.06*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.7 | 1.72 | 339.69 | 2.57 | 339.66 | 3.66 | 339.63 | 4.08 | 339.62 |
| 4.24 | 339.62 | 4.71 | 339.61 | 5.85 | 339.58 | 8.19 | 339.57 | 8.55 | 339.56 |
| 10.31 | 339.55 | 11.04 | 339.53 | 12.89 | 339.51 | 13.32 | 339.49 | 13.53 | 339.49 |
| 14.67 | 339.47 | 15.52 | 339.46 | 17 | 339.48 | 17.16 | 339.48 | 20.76 | 339.36 |
| 20.94 | 339.32 | 21.31 | 339.29 | 22.96 | 339.21 | 24.14 | 339.14 | 24.21 | 339.13 |
| 25.98 | 339.06 | 28.46 | 338.83 | 28.82 | 338.79 | 29.66 | 338.68 | 30.13 | 338.59 |
| 30.39 | 338.55 | 31.82 | 338.23 | 32.01 | 338.2 | 32.51 | 338.14 | 33.36 | 338.05 |
| 36.62 | 337.68 | 37.13 | 337.61 | 38.22 | 337.53 | 38.9 | 337.49 | 39.12 | 337.48 |
| 40.1 | 337.47 | 40.35 | 337.47 | 41.21 | 337.49 | 41.45 | 337.49 | 41.5 | 337.5 |
| 41.88 | 337.52 | 42.77 | 337.55 | 43.31 | 337.56 | 43.76 | 337.58 | 45 | 337.6 |
| 45.67 | 337.6 | 46.04 | 337.59 | 46.58 | 337.59 | 47.03 | 337.55 | 47.93 | 337.49 |
| 48.64 | 337.43 | 48.67 | 337.43 | 49.34 | 337.3 | 51.64 | 336.87 | 52.13 | 336.79 |
| 52.7 | 336.71 | 53.02 | 336.62 | 53.61 | 336.52 | 53.92 | 336.45 | 54.24 | 336.41 |
| 55.49 | 336.26 | 55.84 | 336.22 | 58.65 | 336.12 | 59.68 | 336.09 | 61.3 | 336.06 |
| 61.39 | 336.04 | 62.67 | 335.97 | 62.96 | 335.96 | 63.17 | 335.94 | 64.04 | 335.79 |
| 65.39 | 335.61 | 67.6 | 335.23 | 68.15 | 335.15 | 68.72 | 335.08 | 69.16 | 335.04 |
| 69.31 | 335.02 | 70.2 | 334.92 | 73.1 | 334.56 | 73.7 | 334.48 | 75.19 | 334.26 |
| 76.83 | 334.13 | 79.31 | 333.98 | 80.94 | 333.88 | 83.03 | 333.76 | 83.32 | 333.75 |
| 85.45 | 333.63 | 86.23 | 333.59 | 90.54 | 333.38 | 90.85 | 333.36 | 90.95 | 333.36 |
| 92 | 333.29 | 92.4 | 333.26 | 93.21 | 333.23 | 93.83 | 333.21 | 94.54 | 333.2 |
| 94.99 | 333.2 | 95.33 | 333.21 | 95.89 | 333.2 | 96.85 | 333.18 | 97.73 | 333.15 |
| 99.37 | 333.11 | 100.66 | 333.05 | 102.3 | 332.97 | 102.36 | 332.93 | 102.79 | 332.9 |
| 106.08 | 332.71 | 107.25 | 332.67 | 107.39 | 332.67 | 108.92 | 332.7 | 109.49 | 332.71 |
| 110.37 | 332.69 | 111.73 | 332.62 | 112.55 | 332.59 | 117.1 | 332.33 | 120.31 | 332.15 |
| 120.78 | 332.13 | 121.4 | 332.09 | 123.37 | 332.01 | 124.58 | 331.97 | 125.37 | 331.95 |
| 127.89 | 331.94 | 128.89 | 331.94 | 131.26 | 331.93 | 131.47 | 331.92 | 132.05 | 331.91 |
| 133.04 | 331.89 | 135.16 | 331.89 | 136.28 | 331.88 | 137.21 | 331.88 | 137.5 | 331.89 |
| 138.2 | 331.89 | 140.8 | 331.79 | 141.45 | 331.77 | 141.55 | 331.77 | 141.91 | 331.75 |
| 142.53 | 331.74 | 143.85 | 331.71 | 144.06 | 331.71 | 145.18 | 331.67 | 145.68 | 331.65 |
| 146.05 | 331.64 | 147.22 | 331.59 | 147.76 | 331.57 | 147.88 | 331.57 | 148.33 | 331.55 |
| 148.84 | 331.55 | 149.45 | 331.54 | 151.61 | 331.54 | 152.31 | 331.55 | 153.03 | 331.55 |
| 154.08 | 331.57 | 154.35 | 331.58 | 155.36 | 331.58 | 156.35 | 331.59 | 157.08 | 331.59 |
| 160.2 | 331.58 | 165.28 | 331.57 | 168.81 | 331.57 | 170.02 | 331.56 | 171.5 | 331.55 |
| 172.93 | 331.51 | 174.15 | 331.48 | 174.76 | 331.47 | 177.87 | 331.39 | 178.02 | 331.39 |
| 179.09 | 331.36 | 179.86 | 331.31 | 180.7 | 331.23 | 180.85 | 331.22 | 181.42 | 331.21 |
| 182.18 | 331.2 | 183.89 | 331.18 | 184.97 | 331.18 | 187.07 | 331.17 | 189.25 | 331.15 |
| 190.9 | 331.14 | 193.49 | 331.12 | 194.12 | 331.12 | 194.46 | 331.11 | 196.74 | 331.08 |
| 197.02 | 331.07 | 198.51 | 331.05 | 199.83 | 331.03 | 199.92 | 331.1 | 200.05 | 331.11 |
| 200.69 | 331.11 | 202.52 | 331.12 | 203.05 | 331.12 | 205.99 | 331.02 | 206.75 | 331 |
| 207.37 | 330.97 | 207.59 | 330.97 | 209.53 | 330.91 | 209.75 | 330.9 | 210.42 | 330.91 |
| 211.55 | 330.89 | 212.78 | 330.88 | 213.86 | 330.86 | 214.7 | 330.85 | 215.24 | 330.84 |
| 215.42 | 330.84 | 216.65 | 330.83 | 218.37 | 330.8 | 218.89 | 330.78 | 219.46 | 330.77 |
| 220.37 | 330.73 | 221.25 | 330.7 | 221.45 | 330.68 | 222.02 | 330.64 | 223.84 | 330.54 |
| 226.14 | 330.4 | 226.67 | 330.38 | 227.88 | 330.37 | 229.92 | 330.37 | 230.43 | 330.35 |
| 230.82 | 330.33 | 231.87 | 330.3 | 232.04 | 330.3 | 232.53 | 330.32 | 232.74 | 330.32 |
| 233.87 | 330.3 | 234.19 | 330.28 | 234.79 | 330.29 | 235.14 | 330.31 | 235.51 | 330.34 |
| 236.17 | 330.34 | 236.58 | 330.33 | 238.18 | 330.31 | 238.95 | 330.29 | 241.22 | 330.24 |
| 244.15 | 330.17 | 245.04 | 330.15 | 247.58 | 330.09 | 249.19 | 330.06 | 251.74 | 329.97 |
| 253.68 | 329.92 | 254.11 | 329.91 | 255.29 | 329.89 | 255.64 | 329.88 | 256.22 | 329.88 |
| 256.7 | 329.87 | 259.22 | 329.86 | 259.68 | 329.86 | 260.1 | 329.88 | 260.77 | 329.88 |
| 261.15 | 329.87 | 261.65 | 329.87 | 262.03 | 329.88 | 262.47 | 329.88 | 263.12 | 329.9 |
| 264.78 | 329.92 | 265.43 | 329.93 | 265.83 | 330.04 | 266.18 | 330.13 | 266.59 | 330.19 |
| 267.47 | 330.31 | 267.74 | 330.34 | 267.92 | 330.37 | 270.03 | 330.57 | 271.53 | 330.72 |
| 272.23 | 330.78 | 274.26 | 330.97 | 274.5 | 330.97 | 274.91 | 330.96 | 275.85 | 330.92 |
| 276.57 | 330.97 | 277.64 | 331.04 | 278.01 | 331.05 | 279.32 | 331.08 | 281.35 | 331.08 |
| 282.06 | 331.06 | 282.9 | 331.04 | 283.43 | 331.03 | 283.96 | 331.01 | 284.71 | 330.99 |
| 285.34 | 330.96 | 286.68 | 330.91 | 286.8 | 330.9 | 288.74 | 330.81 | 290.38 | 330.72 |
| 291.88 | 330.65 | 292.39 | 330.62 | 293.7 | 330.57 | 294.06 | 330.56 | 295.09 | 330.52 |
| 295.66 | 330.5 | 295.88 | 330.42 | 296.78 | 330.36 | 296.9 | 330.33 | 297.27 | 330.29 |
| 297.66 | 330.27 | 299.05 | 330.29 | 301.05 | 330.32 | 303.75 | 330.39 | 306.9 | 330.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 307.33 | 330.5 | 308.93 | 330.54 | 311.47 | 330.6 | 312.39 | 330.62 | 313.82 | 330.67 |
| 313.97 | 330.68 | 314.25 | 330.68 | 315.15 | 330.73 | 315.81 | 330.76 | 317.29 | 330.8 |
| 317.95 | 330.82 | 318.75 | 330.84 | 318.92 | 330.85 | 319.43 | 330.87 | 320.98 | 330.9 |
| 321.06 | 330.91 | 322.9 | 330.91 | 322.96 | 330.9 | 323.08 | 330.91 | 323.24 | 330.9 |
| 323.68 | 330.91 | 325.02 | 330.91 | 325.19 | 330.92 | 325.29 | 330.91 | 325.5 | 330.91 |
| 325.97 | 330.89 | 326.48 | 330.86 | 326.61 | 330.86 | 327.41 | 330.83 | 327.98 | 330.83 |
| 328.85 | 330.84 | 329.24 | 330.82 | 330.27 | 330.79 | 331.4 | 330.77 | 332.39 | 330.74 |
| 332.59 | 330.73 | 336.12 | 330.62 | 336.52 | 330.52 | 336.78 | 330.41 | 337 | 330.31 |
| 337.44 | 330.3 | 338.34 | 330.26 | 339 | 330.25 | 339.72 | 330.25 | 342.24 | 330.31 |
| 342.84 | 330.32 | 343.34 | 330.34 | 346.36 | 330.42 | 346.92 | 330.43 | 349.35 | 330.46 |
| 351.45 | 330.49 | 352.18 | 330.51 | 353.79 | 330.53 | 354.09 | 330.53 | 354.96 | 330.52 |
| 355.54 | 330.5 | 357.23 | 330.5 | 357.8 | 330.51 | 358.65 | 330.51 | 359.25 | 330.52 |
| 360.16 | 330.53 | 362.58 | 330.58 | 364.72 | 330.64 | 366.38 | 330.68 | 370.45 | 330.8 |
| 371.25 | 330.82 | 371.47 | 330.83 | 373.97 | 330.89 | 374.87 | 330.9 | 376.13 | 330.93 |
| 376.73 | 330.93 | 379.73 | 330.95 | 379.85 | 330.94 | 380.75 | 330.92 | 381.05 | 330.92 |
| 381.54 | 330.91 | 385.8 | 330.99 | 386.68 | 331 | 387.48 | 331 | 388.88 | 331.01 |
| 390.18 | 330.99 | 390.67 | 330.98 | 390.86 | 330.96 | 390.91 | 330.97 | 391.93 | 331.04 |
| 394.21 | 331.16 | 395.7 | 331.21 | 395.78 | 331.22 | 399.26 | 331.35 | 400.15 | 331.38 |
| 400.82 | 331.4 | 401.92 | 331.43 | 403.03 | 331.47 | 404.8 | 331.52 | 405.54 | 331.55 |
| 410.45 | 331.69 | 411.11 | 331.7 | 411.92 | 331.72 | 412.95 | 331.75 | 417.54 | 331.85 |
| 419.65 | 331.9 | 421.91 | 331.96 | 422.99 | 331.99 | 423.95 | 332.02 | 424.38 | 332.03 |
| 424.59 | 332.03 | 424.69 | 332.04 | 425.15 | 332.04 | 425.65 | 332.07 | 425.75 | 332.07 |
| 426.39 | 332.1 | 427.15 | 332.13 | 429.2 | 332.18 | 429.46 | 332.19 | 430.22 | 332.21 |
| 432.01 | 332.25 | 433.83 | 332.28 | 436.35 | 332.33 | 437.76 | 332.38 | 437.95 | 332.38 |
| 438.98 | 332.41 | 439.76 | 332.42 | 440.58 | 332.42 | 440.77 | 332.41 | 441.33 | 332.37 |
| 441.57 | 332.37 | 443.98 | 332.42 | 444.55 | 332.42 | 445.86 | 332.43 | 446.17 | 332.44 |
| 447.08 | 332.44 | 447.5 | 332.45 | 448.31 | 332.46 | 448.52 | 332.45 | 448.75 | 332.45 |
| 453.24 | 332.53 | 454.87 | 332.56 | 455.53 | 332.56 | 456.08 | 332.57 | 457.63 | 332.59 |
| 458.06 | 332.6 | 459.22 | 332.6 | 459.9 | 332.62 | 460.03 | 332.63 | 460.66 | 332.65 |
| 464.47 | 332.76 | 464.69 | 332.77 | 465.24 | 332.78 | 465.91 | 332.77 | 466.76 | 332.78 |
| 467.03 | 332.79 | 467.6 | 332.8 | 468.65 | 332.81 | 471.06 | 332.85 | 471.29 | 332.85 |
| 471.93 | 332.88 | 473.59 | 332.92 | 474.11 | 332.94 | 475.02 | 332.96 | 475.24 | 332.96 |
| 476.02 | 333.01 | 476.28 | 333.03 | 477.26 | 333.09 | 478.11 | 333.15 | 478.29 | 333.16 |
| 480.38 | 333.35 | 480.92 | 333.37 | 482.67 | 333.54 | 483.74 | 333.64 | 484.94 | 333.74 |
| 488.5 | 334.07 | 492 | 334.35 | 492.92 | 334.43 | 493.17 | 334.44 | 493.81 | 334.48 |
| 495.49 | 334.63 | 496.66 | 334.72 | 499.76 | 335 | 500.64 | 335.09 | 502.11 | 335.2 |
| 502.16 | 335.2 | 503.35 | 335.3 | 504.73 | 335.42 | 505.07 | 335.44 | 505.34 | 335.47 |
| 508.43 | 335.73 | 508.71 | 335.76 | 509.12 | 335.78 | 509.85 | 335.82 | 510.22 | 335.83 |
| 511.27 | 335.85 | 513.43 | 335.9 | 514.36 | 335.91 | 516.17 | 335.91 | 516.5 | 335.9 |
| 517.39 | 335.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 194.46 | .04 | 394.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 194.46 | 394.21 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1156.05*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.5 | 1.79 | 339.5 | 3.81 | 339.43 | 4.24 | 339.42 | 4.41 | 339.42 |
| 4.9 | 339.4 | 6.09 | 339.37 | 8.47 | 339.36 | 8.9 | 339.35 | 10.72 | 339.34 |
| 11.49 | 339.32 | 13.41 | 339.3 | 13.85 | 339.28 | 14.07 | 339.28 | 15.26 | 339.26 |
| 16.14 | 339.25 | 16.91 | 339.26 | 17.68 | 339.28 | 17.85 | 339.28 | 21.59 | 339.15 |
| 21.78 | 339.11 | 22.17 | 339.08 | 23.88 | 339 | 25.11 | 338.92 | 25.18 | 338.92 |
| 25.98 | 338.88 | 27.02 | 338.84 | 29.61 | 338.58 | 30.22 | 338.51 | 30.85 | 338.42 |
| 31.34 | 338.32 | 31.61 | 338.27 | 33.1 | 337.93 | 33.3 | 337.9 | 33.72 | 337.85 |
| 34.7 | 337.74 | 38.09 | 337.35 | 38.48 | 337.29 | 38.62 | 337.26 | 39.75 | 337.19 |
| 40.46 | 337.14 | 40.69 | 337.13 | 41.96 | 337.13 | 42.87 | 337.15 | 43.11 | 337.16 |
| 43.17 | 337.17 | 44.49 | 337.24 | 45.51 | 337.28 | 46.8 | 337.32 | 47.2 | 337.33 |
| 47.5 | 337.33 | 47.89 | 337.32 | 48.45 | 337.32 | 48.55 | 337.31 | 48.92 | 337.29 |
| 49.85 | 337.23 | 50.6 | 337.17 | 50.62 | 337.16 | 53.72 | 336.63 | 54.22 | 336.55 |
| 54.81 | 336.49 | 55.14 | 336.39 | 55.76 | 336.28 | 56.08 | 336.2 | 56.42 | 336.16 |
| 57.72 | 336 | 58.08 | 335.96 | 61.68 | 335.8 | 62.07 | 335.79 | 63.76 | 335.76 |
| 63.86 | 335.74 | 65.19 | 335.68 | 65.71 | 335.64 | 66.61 | 335.5 | 68.01 | 335.31 |
| 70.31 | 334.93 | 71.48 | 334.79 | 71.94 | 334.74 | 72.1 | 334.73 | 72.28 | 334.7 |
| 73.01 | 334.62 | 76.04 | 334.27 | 76.65 | 334.19 | 78.2 | 333.97 | 79.91 | 333.84 |
| 82.5 | 333.68 | 84.19 | 333.58 | 86.36 | 333.47 | 86.66 | 333.45 | 88.88 | 333.33 |
| 89.69 | 333.29 | 94.17 | 333.08 | 94.49 | 333.07 | 94.6 | 333.06 | 94.88 | 333.05 |
| 95.09 | 333.03 | 95.69 | 332.99 | 96.11 | 332.97 | 96.96 | 332.94 | 98.33 | 332.92 |
| 98.81 | 332.91 | 99.16 | 332.93 | 99.74 | 332.92 | 101.66 | 332.88 | 103.36 | 332.84 |
| 104.7 | 332.78 | 106.41 | 332.7 | 106.46 | 332.64 | 106.92 | 332.62 | 110.34 | 332.41 |
| 110.97 | 332.39 | 111.7 | 332.38 | 113.29 | 332.43 | 113.88 | 332.44 | 114.8 | 332.42 |
| 115.39 | 332.4 | 116.01 | 332.36 | 116.21 | 332.35 | 117.01 | 332.32 | 117.07 | 332.32 |
| 121.8 | 332.05 | 125.14 | 331.86 | 125.63 | 331.84 | 126.28 | 331.8 | 126.8 | 331.78 |
| 128.32 | 331.71 | 129.58 | 331.68 | 130.4 | 331.65 | 133.02 | 331.63 | 134.06 | 331.63 |
| 136.53 | 331.61 | 136.75 | 331.61 | 137.35 | 331.59 | 138.38 | 331.57 | 140.58 | 331.57 |
| 141.75 | 331.56 | 142.72 | 331.56 | 143.02 | 331.57 | 143.65 | 331.57 | 143.74 | 331.56 |
| 147.13 | 331.46 | 147.23 | 331.45 | 147.61 | 331.44 | 148.25 | 331.43 | 149.17 | 331.41 |
| 149.62 | 331.41 | 149.84 | 331.4 | 150.39 | 331.39 | 151.53 | 331.35 | 151.91 | 331.34 |
| 153.13 | 331.3 | 153.69 | 331.28 | 153.82 | 331.28 | 154.82 | 331.26 | 155.45 | 331.26 |
| 156.16 | 331.25 | 157.69 | 331.25 | 159.08 | 331.27 | 159.17 | 331.27 | 160.27 | 331.29 |
| 160.54 | 331.3 | 161.59 | 331.3 | 162.62 | 331.31 | 163.38 | 331.31 | 166.63 | 331.3 |
| 176.85 | 331.3 | 178.38 | 331.28 | 179.87 | 331.25 | 181.14 | 331.22 | 181.78 | 331.21 |
| 185.01 | 331.15 | 185.16 | 331.15 | 186.27 | 331.12 | 187.08 | 331.07 | 187.95 | 331 |
| 188.11 | 330.99 | 189.49 | 330.97 | 190.41 | 330.96 | 191.27 | 330.96 | 192.4 | 330.95 |
| 196.85 | 330.93 | 198.56 | 330.92 | 201.26 | 330.9 | 201.91 | 330.9 | 202.26 | 330.89 |
| 204.53 | 330.87 | 204.8 | 330.85 | 206.28 | 330.83 | 207.59 | 330.82 | 207.67 | 330.88 |
| 207.8 | 330.89 | 210.77 | 330.89 | 213.69 | 330.78 | 214.44 | 330.75 | 215.27 | 330.71 |
| 217.19 | 330.64 | 218.08 | 330.64 | 218.68 | 330.63 | 219.2 | 330.63 | 220.42 | 330.6 |
| 221.49 | 330.59 | 222.32 | 330.58 | 222.85 | 330.57 | 223.03 | 330.57 | 224.1 | 330.55 |
| 224.25 | 330.55 | 225.95 | 330.52 | 227.03 | 330.48 | 228.81 | 330.42 | 229.28 | 330.38 |
| 229.58 | 330.35 | 231.37 | 330.26 | 233.66 | 330.13 | 234.18 | 330.11 | 235.38 | 330.1 |
| 237.4 | 330.1 | 238.29 | 330.05 | 239.33 | 330.02 | 239.5 | 330.02 | 239.99 | 330.04 |
| 240.19 | 330.04 | 241.31 | 330.01 | 241.63 | 329.99 | 242.23 | 330 | 242.94 | 330.06 |
| 243.35 | 330.07 | 243.59 | 330.06 | 244 | 330.06 | 245.59 | 330.04 | 246.35 | 330.02 |
| 248.6 | 329.97 | 251.5 | 329.91 | 252.38 | 329.89 | 254.9 | 329.83 | 256.5 | 329.8 |
| 259.03 | 329.71 | 260.94 | 329.66 | 261.37 | 329.64 | 262.54 | 329.62 | 262.88 | 329.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 263.16 | 329.61 | 263.94 | 329.61 | 266.43 | 329.6 | 266.69 | 329.59 | 266.81 | 329.6 |
| 267.18 | 329.61 | 268.89 | 329.61 | 269.28 | 329.62 | 269.72 | 329.62 | 270.37 | 329.64 |
| 272.06 | 329.66 | 272.72 | 329.68 | 273.13 | 329.78 | 273.48 | 329.87 | 273.89 | 329.93 |
| 275.05 | 330.07 | 275.24 | 330.1 | 277.38 | 330.3 | 278.9 | 330.44 | 279.6 | 330.5 |
| 281.67 | 330.68 | 281.91 | 330.68 | 282.32 | 330.67 | 283.27 | 330.64 | 284 | 330.68 |
| 285.08 | 330.76 | 285.46 | 330.77 | 286.79 | 330.8 | 286.99 | 330.81 | 287.2 | 330.8 |
| 287.44 | 330.81 | 288.84 | 330.81 | 289.57 | 330.79 | 290.42 | 330.78 | 290.95 | 330.76 |
| 291.49 | 330.75 | 292.25 | 330.73 | 292.89 | 330.7 | 294.25 | 330.65 | 294.37 | 330.64 |
| 296.33 | 330.55 | 297.99 | 330.46 | 299.51 | 330.39 | 300.02 | 330.36 | 301.72 | 330.31 |
| 302.77 | 330.27 | 303.35 | 330.25 | 303.61 | 330.17 | 304 | 330.15 | 304.48 | 330.12 |
| 304.6 | 330.09 | 304.97 | 330.06 | 305.01 | 330.05 | 305.36 | 330.03 | 306.78 | 330.05 |
| 308.8 | 330.08 | 311.53 | 330.15 | 314.73 | 330.25 | 315.17 | 330.27 | 316.78 | 330.31 |
| 319.36 | 330.38 | 320.29 | 330.4 | 322.01 | 330.46 | 322.17 | 330.46 | 323.08 | 330.52 |
| 323.75 | 330.54 | 325.26 | 330.58 | 325.92 | 330.6 | 326.37 | 330.62 | 326.73 | 330.63 |
| 326.91 | 330.63 | 327.42 | 330.65 | 328.99 | 330.68 | 329.07 | 330.69 | 329.58 | 330.69 |
| 329.7 | 330.7 | 329.76 | 330.69 | 330.93 | 330.69 | 330.99 | 330.68 | 332.61 | 330.68 |
| 332.78 | 330.69 | 333.36 | 330.69 | 334.05 | 330.66 | 334.56 | 330.63 | 334.69 | 330.63 |
| 335.5 | 330.6 | 336.08 | 330.6 | 336.97 | 330.61 | 337.36 | 330.59 | 337.75 | 330.58 |
| 338.08 | 330.58 | 338.46 | 330.56 | 339.54 | 330.54 | 340.55 | 330.51 | 340.75 | 330.5 |
| 344.33 | 330.39 | 344.74 | 330.29 | 345.22 | 330.1 | 345.66 | 330.08 | 346.57 | 330.05 |
| 346.66 | 330.04 | 347.98 | 330.04 | 348.84 | 330.06 | 351.13 | 330.1 | 351.64 | 330.12 |
| 354.7 | 330.19 | 355.26 | 330.2 | 357.72 | 330.22 | 359.85 | 330.24 | 360.59 | 330.26 |
| 362.23 | 330.28 | 362.54 | 330.27 | 363.42 | 330.27 | 364 | 330.25 | 365.71 | 330.25 |
| 366.28 | 330.26 | 367.15 | 330.27 | 367.76 | 330.27 | 368.68 | 330.28 | 371.13 | 330.34 |
| 373.3 | 330.39 | 374.98 | 330.44 | 379.11 | 330.56 | 379.91 | 330.58 | 380.14 | 330.59 |
| 382.67 | 330.65 | 383.58 | 330.66 | 384.85 | 330.69 | 385.47 | 330.7 | 387 | 330.7 |
| 388.5 | 330.71 | 388.63 | 330.7 | 389.54 | 330.68 | 389.85 | 330.67 | 390.33 | 330.67 |
| 394.66 | 330.75 | 396.36 | 330.77 | 397.78 | 330.78 | 399.09 | 330.77 | 399.59 | 330.76 |
| 399.83 | 330.75 | 400.87 | 330.82 | 403.17 | 330.94 | 404.69 | 330.99 | 404.77 | 331 |
| 407.21 | 331.08 | 408.31 | 331.12 | 409.21 | 331.15 | 409.89 | 331.16 | 411.01 | 331.2 |
| 412.14 | 331.23 | 413.94 | 331.28 | 414.7 | 331.3 | 419.69 | 331.44 | 420.35 | 331.46 |
| 421.19 | 331.47 | 422.23 | 331.5 | 426.9 | 331.58 | 429.04 | 331.63 | 431.34 | 331.68 |
| 432.44 | 331.72 | 433.85 | 331.75 | 434.07 | 331.76 | 434.49 | 331.76 | 434.63 | 331.77 |
| 434.8 | 331.77 | 435.14 | 331.79 | 435.25 | 331.79 | 435.89 | 331.82 | 436.67 | 331.85 |
| 438.75 | 331.9 | 439.01 | 331.91 | 439.79 | 331.93 | 441.61 | 331.97 | 443.46 | 332 |
| 446.02 | 332.05 | 447.46 | 332.1 | 447.65 | 332.1 | 448.7 | 332.13 | 449.49 | 332.14 |
| 450.32 | 332.14 | 450.52 | 332.13 | 451.08 | 332.08 | 451.33 | 332.08 | 452.3 | 332.1 |
| 453.78 | 332.14 | 454.36 | 332.14 | 455.69 | 332.16 | 456.01 | 332.16 | 456.93 | 332.17 |
| 457.36 | 332.18 | 458.06 | 332.19 | 458.4 | 332.19 | 458.63 | 332.18 | 463.2 | 332.27 |
| 464.86 | 332.3 | 465.52 | 332.3 | 466.08 | 332.31 | 467.66 | 332.33 | 468.1 | 332.34 |
| 469.28 | 332.34 | 469.58 | 332.35 | 469.91 | 332.37 | 470.1 | 332.37 | 470.37 | 332.38 |
| 470.44 | 332.39 | 470.74 | 332.4 | 474.61 | 332.52 | 474.84 | 332.52 | 475.4 | 332.54 |
| 476.07 | 332.53 | 476.95 | 332.54 | 477.21 | 332.55 | 478.86 | 332.58 | 481.31 | 332.62 |
| 482.2 | 332.66 | 483.89 | 332.71 | 484.42 | 332.73 | 485.34 | 332.75 | 486.36 | 332.8 |
| 486.63 | 332.82 | 487.63 | 332.88 | 488.48 | 332.94 | 488.66 | 332.95 | 490.79 | 333.14 |
| 491.34 | 333.16 | 493.12 | 333.32 | 493.99 | 333.39 | 494.2 | 333.41 | 495.43 | 333.51 |
| 499.05 | 333.83 | 502.61 | 334.1 | 503.44 | 334.16 | 504.45 | 334.22 | 506.16 | 334.37 |
| 507.35 | 334.45 | 509.94 | 334.67 | 510.5 | 334.71 | 511.4 | 334.8 | 512.89 | 334.9 |
| 512.94 | 334.9 | 514.15 | 334.99 | 515.56 | 335.1 | 515.89 | 335.13 | 516.17 | 335.15 |
| 519.31 | 335.39 | 519.6 | 335.42 | 520.02 | 335.44 | 521.02 | 335.48 | 521.13 | 335.48 |
| 522.2 | 335.51 | 524.4 | 335.55 | 525.34 | 335.56 | 527.18 | 335.56 | 527.52 | 335.55 |
| 528.43 | 335.53 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 202.26 | .04 | 403.17 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 202.26 | 403.17 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1137.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.31 | 1.86 | 339.31 | 2.77 | 339.27 | 3.96 | 339.22 | 4.41 | 339.22 |
| 4.58 | 339.21 | 5.09 | 339.2 | 5.46 | 339.19 | 5.86 | 339.17 | 6.32 | 339.16 |
| 8.79 | 339.15 | 9.24 | 339.14 | 11.14 | 339.13 | 11.93 | 339.11 | 13.92 | 339.09 |
| 14.39 | 339.07 | 14.61 | 339.07 | 15.85 | 339.05 | 16.77 | 339.04 | 18.36 | 339.08 |
| 18.54 | 339.08 | 22.43 | 338.94 | 22.62 | 338.9 | 23.02 | 338.87 | 24.36 | 338.81 |
| 24.8 | 338.78 | 26.08 | 338.71 | 26.15 | 338.7 | 26.98 | 338.67 | 28.07 | 338.62 |
| 30.75 | 338.33 | 31.13 | 338.29 | 32.04 | 338.15 | 32.55 | 338.05 | 32.83 | 338 |
| 34.38 | 337.64 | 34.58 | 337.6 | 34.96 | 337.55 | 35.12 | 337.54 | 39.56 | 337.01 |
| 39.96 | 336.96 | 40.11 | 336.92 | 41.28 | 336.85 | 42.02 | 336.8 | 42.26 | 336.79 |
| 43.32 | 336.79 | 43.58 | 336.8 | 44.52 | 336.82 | 44.78 | 336.83 | 44.84 | 336.84 |
| 45.24 | 336.87 | 46.2 | 336.93 | 46.78 | 336.95 | 47.27 | 336.98 | 48.61 | 337.04 |
| 49.02 | 337.05 | 49.74 | 337.05 | 50.16 | 337.06 | 50.32 | 337.06 | 50.81 | 337.02 |
| 51.78 | 336.97 | 52.55 | 336.9 | 52.58 | 336.9 | 53.3 | 336.78 | 55.79 | 336.39 |
| 56.31 | 336.32 | 56.93 | 336.26 | 57.27 | 336.17 | 57.91 | 336.04 | 58.24 | 335.96 |
| 58.6 | 335.91 | 59.94 | 335.74 | 60.32 | 335.7 | 63.36 | 335.53 | 64.06 | 335.5 |
| 64.47 | 335.49 | 66.22 | 335.46 | 66.32 | 335.44 | 67.71 | 335.38 | 68.24 | 335.35 |
| 69.18 | 335.2 | 70.63 | 335.02 | 73.02 | 334.64 | 73.63 | 334.56 | 74.23 | 334.49 |
| 74.71 | 334.45 | 74.88 | 334.43 | 75.83 | 334.33 | 78.97 | 333.98 | 79.61 | 333.89 |
| 81.22 | 333.68 | 83 | 333.54 | 85.68 | 333.39 | 87.44 | 333.29 | 89.69 | 333.17 |
| 90 | 333.15 | 92.31 | 333.03 | 93.15 | 332.99 | 97.81 | 332.78 | 98.25 | 332.77 |
| 98.54 | 332.75 | 98.76 | 332.74 | 99.82 | 332.67 | 100.7 | 332.65 | 102.13 | 332.63 |
| 102.62 | 332.63 | 102.99 | 332.65 | 103.59 | 332.64 | 104.62 | 332.63 | 105.58 | 332.61 |
| 107.34 | 332.57 | 108.74 | 332.51 | 110.51 | 332.43 | 110.57 | 332.36 | 111.04 | 332.33 |
| 114.6 | 332.12 | 115.86 | 332.08 | 116.01 | 332.09 | 117.66 | 332.15 | 118.28 | 332.17 |
| 119.23 | 332.15 | 119.84 | 332.13 | 120.48 | 332.09 | 120.7 | 332.08 | 121.53 | 332.05 |
| 121.58 | 332.05 | 126.5 | 331.77 | 129.97 | 331.58 | 131.15 | 331.51 | 131.69 | 331.49 |
| 133.27 | 331.42 | 134.58 | 331.38 | 135.43 | 331.36 | 138.16 | 331.32 | 139.23 | 331.32 |
| 141.79 | 331.29 | 142.02 | 331.29 | 142.65 | 331.28 | 143.72 | 331.25 | 145.45 | 331.25 |
| 146.01 | 331.24 | 149.29 | 331.24 | 152.81 | 331.14 | 153.3 | 331.13 | 153.97 | 331.12 |
| 154.93 | 331.1 | 155.62 | 331.1 | 156.19 | 331.09 | 156.83 | 331.07 | 157.38 | 331.05 |
| 159.04 | 331.01 | 159.62 | 330.99 | 159.75 | 330.99 | 160.79 | 330.97 | 163.78 | 330.97 |
| 164.53 | 330.98 | 165.31 | 330.98 | 166.45 | 331 | 167.11 | 331.02 | 167.83 | 331.02 |
| 168.9 | 331.03 | 169.69 | 331.03 | 173.06 | 331.02 | 178.55 | 331.02 | 179.47 | 331.03 |
| 183.67 | 331.03 | 185.26 | 331.02 | 186.81 | 330.99 | 188.12 | 330.97 | 192.15 | 330.91 |
| 192.31 | 330.91 | 193.46 | 330.88 | 194.3 | 330.84 | 195.2 | 330.77 | 195.37 | 330.76 |
| 196.8 | 330.74 | 197.76 | 330.74 | 198.65 | 330.73 | 199.82 | 330.73 | 204.44 | 330.71 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 206.22 | 330.7 | 209.02 | 330.68 | 209.7 | 330.67 | 210.07 | 330.67 | 212.31 | 330.65 |
| 212.39 | 330.65 | 212.58 | 330.63 | 214.05 | 330.61 | 215.34 | 330.6 | 215.43 | 330.65 |
| 215.56 | 330.67 | 218.5 | 330.67 | 221.39 | 330.53 | 222.14 | 330.5 | 222.96 | 330.46 |
| 224.86 | 330.37 | 225.74 | 330.37 | 226.33 | 330.36 | 226.85 | 330.36 | 228.06 | 330.33 |
| 229.11 | 330.32 | 229.94 | 330.3 | 230.47 | 330.29 | 230.64 | 330.29 | 231.7 | 330.27 |
| 232.37 | 330.27 | 233 | 330.25 | 233.54 | 330.24 | 234.05 | 330.22 | 235.5 | 330.17 |
| 236.57 | 330.12 | 236.59 | 330.11 | 237.13 | 330.07 | 238.91 | 329.98 | 241.17 | 329.86 |
| 241.69 | 329.83 | 244.25 | 329.83 | 244.88 | 329.82 | 245.38 | 329.8 | 246.79 | 329.73 |
| 247.44 | 329.76 | 247.65 | 329.76 | 248.75 | 329.72 | 249.08 | 329.71 | 249.66 | 329.72 |
| 250.37 | 329.78 | 250.78 | 329.79 | 251.42 | 329.79 | 252.99 | 329.77 | 253.75 | 329.75 |
| 255.98 | 329.7 | 258.85 | 329.64 | 259.73 | 329.62 | 261.82 | 329.57 | 262.21 | 329.56 |
| 263.8 | 329.53 | 268.2 | 329.39 | 268.63 | 329.38 | 269.79 | 329.36 | 270.13 | 329.35 |
| 270.7 | 329.35 | 271.18 | 329.34 | 273.64 | 329.33 | 274.11 | 329.33 | 274.39 | 329.35 |
| 276.13 | 329.35 | 276.52 | 329.36 | 276.97 | 329.36 | 277.23 | 329.37 | 277.63 | 329.38 |
| 278.47 | 329.39 | 279.34 | 329.41 | 280.01 | 329.43 | 280.42 | 329.52 | 280.78 | 329.61 |
| 282.1 | 329.77 | 282.56 | 329.82 | 284.72 | 330.02 | 286.98 | 330.21 | 289.07 | 330.39 |
| 289.31 | 330.39 | 290.69 | 330.36 | 291.43 | 330.4 | 292.53 | 330.48 | 292.91 | 330.49 |
| 294.26 | 330.53 | 297.07 | 330.53 | 297.93 | 330.51 | 298.47 | 330.5 | 299.02 | 330.48 |
| 299.79 | 330.46 | 300.43 | 330.44 | 301.81 | 330.39 | 301.93 | 330.38 | 303.92 | 330.29 |
| 305.61 | 330.2 | 307.14 | 330.13 | 307.66 | 330.1 | 309.01 | 330.06 | 310.44 | 330.02 |
| 311.03 | 330 | 311.25 | 329.93 | 311.3 | 329.93 | 311.69 | 329.9 | 312.17 | 329.88 |
| 312.3 | 329.85 | 312.67 | 329.82 | 313.07 | 329.8 | 314.5 | 329.82 | 316.55 | 329.84 |
| 319.32 | 329.92 | 322.56 | 330.02 | 323 | 330.04 | 324.64 | 330.08 | 327.24 | 330.15 |
| 328.19 | 330.18 | 329.66 | 330.22 | 329.93 | 330.24 | 330.09 | 330.24 | 331.02 | 330.3 |
| 331.69 | 330.32 | 333.22 | 330.37 | 333.89 | 330.38 | 334.34 | 330.4 | 334.72 | 330.41 |
| 334.89 | 330.42 | 337 | 330.46 | 337.08 | 330.47 | 337.6 | 330.47 | 337.72 | 330.48 |
| 337.78 | 330.47 | 338.94 | 330.47 | 338.97 | 330.46 | 340.84 | 330.46 | 341.15 | 330.47 |
| 341.42 | 330.47 | 341.64 | 330.46 | 342.64 | 330.4 | 342.78 | 330.4 | 343.06 | 330.39 |
| 343.59 | 330.36 | 344.18 | 330.37 | 345.08 | 330.38 | 345.48 | 330.36 | 345.87 | 330.35 |
| 346.21 | 330.35 | 346.53 | 330.33 | 346.6 | 330.33 | 347.69 | 330.31 | 348.71 | 330.28 |
| 348.91 | 330.27 | 352.54 | 330.16 | 352.95 | 330.07 | 353.21 | 329.97 | 353.44 | 329.89 |
| 354.81 | 329.83 | 355.49 | 329.82 | 356.07 | 329.83 | 356.23 | 329.83 | 357.1 | 329.84 |
| 358.81 | 329.87 | 359.43 | 329.89 | 359.94 | 329.89 | 363.04 | 329.97 | 363.61 | 329.97 |
| 366.1 | 329.98 | 368.26 | 329.99 | 369.01 | 330.01 | 370.67 | 330.02 | 371.87 | 330.02 |
| 372.46 | 330 | 374.2 | 330 | 374.77 | 330.01 | 375.65 | 330.02 | 376.27 | 330.02 |
| 377.2 | 330.03 | 379.68 | 330.09 | 381.88 | 330.15 | 383.58 | 330.19 | 387.76 | 330.32 |
| 388.57 | 330.34 | 388.8 | 330.35 | 391.37 | 330.41 | 392.29 | 330.42 | 393.58 | 330.45 |
| 394.2 | 330.46 | 395.76 | 330.46 | 397.41 | 330.47 | 397.91 | 330.45 | 398.64 | 330.43 |
| 399.13 | 330.43 | 403.51 | 330.51 | 404.41 | 330.53 | 405.23 | 330.54 | 406.67 | 330.55 |
| 408.11 | 330.55 | 408.51 | 330.54 | 408.75 | 330.53 | 409.8 | 330.6 | 412.13 | 330.72 |
| 413.67 | 330.77 | 413.76 | 330.77 | 416.24 | 330.86 | 416.54 | 330.87 | 417.35 | 330.89 |
| 418.27 | 330.91 | 418.97 | 330.93 | 421.25 | 330.99 | 423.85 | 331.06 | 428.92 | 331.19 |
| 429.6 | 331.21 | 430.45 | 331.22 | 431.51 | 331.24 | 436.25 | 331.32 | 438.43 | 331.36 |
| 440.77 | 331.41 | 441.88 | 331.44 | 442.88 | 331.47 | 443.32 | 331.48 | 443.64 | 331.48 |
| 443.82 | 331.49 | 444.12 | 331.49 | 444.28 | 331.5 | 444.64 | 331.51 | 444.74 | 331.52 |
| 445.4 | 331.54 | 445.89 | 331.57 | 446.18 | 331.58 | 448.3 | 331.63 | 448.57 | 331.63 |
| 448.98 | 331.65 | 449.36 | 331.65 | 451.21 | 331.69 | 453.09 | 331.72 | 455.7 | 331.78 |
| 457.16 | 331.82 | 457.35 | 331.82 | 458.41 | 331.85 | 459.22 | 331.86 | 460.06 | 331.86 |
| 460.26 | 331.84 | 460.84 | 331.79 | 461.09 | 331.78 | 462.08 | 331.82 | 463.58 | 331.85 |
| 463.74 | 331.86 | 464.17 | 331.86 | 465.53 | 331.88 | 465.84 | 331.89 | 466.78 | 331.9 |
| 467.22 | 331.91 | 467.93 | 331.92 | 468.52 | 331.92 | 473.16 | 332 | 474.84 | 332.03 |
| 475.52 | 332.03 | 477.69 | 332.07 | 478.14 | 332.07 | 479.33 | 332.09 | 479.51 | 332.09 |
| 479.61 | 332.1 | 479.98 | 332.11 | 480.17 | 332.11 | 480.44 | 332.12 | 480.52 | 332.13 |
| 484.76 | 332.27 | 484.99 | 332.28 | 485.55 | 332.29 | 486.24 | 332.29 | 487.13 | 332.31 |
| 487.4 | 332.31 | 488 | 332.33 | 489.08 | 332.35 | 491.57 | 332.4 | 492.48 | 332.44 |
| 494.19 | 332.49 | 494.73 | 332.52 | 495.66 | 332.54 | 496.7 | 332.59 | 496.97 | 332.61 |
| 497.99 | 332.67 | 498.42 | 332.71 | 498.86 | 332.74 | 499.04 | 332.74 | 501.2 | 332.92 |
| 501.77 | 332.94 | 503.57 | 333.09 | 504.67 | 333.19 | 505.92 | 333.27 | 509.59 | 333.59 |
| 513.22 | 333.85 | 514.07 | 333.91 | 514.17 | 333.92 | 514.42 | 333.93 | 515.09 | 333.97 |
| 516.83 | 334.11 | 518.03 | 334.19 | 520.67 | 334.38 | 521.23 | 334.43 | 522.15 | 334.5 |
| 523.67 | 334.6 | 523.72 | 334.6 | 524.95 | 334.69 | 526.38 | 334.79 | 526.72 | 334.81 |
| 530.48 | 335.08 | 530.91 | 335.1 | 531.93 | 335.14 | 532.05 | 335.14 | 533.13 | 335.16 |
| 535.37 | 335.2 | 536.33 | 335.21 | 538.2 | 335.21 | 538.54 | 335.2 | 539.08 | 335.19 |
| 539.46 | 335.19 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 210.07 | .04 | 412.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 210.07 | 412.13 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1118.02*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.12 | 1.93 | 339.11 | 4.1 | 339.02 | 4.75 | 339.01 | 5.28 | 338.99 |
| 5.67 | 338.98 | 6.08 | 338.96 | 6.56 | 338.95 | 9.17 | 338.94 | 9.58 | 338.93 |
| 11.55 | 338.92 | 12.37 | 338.9 | 14.44 | 338.88 | 14.92 | 338.86 | 15.16 | 338.86 |
| 16.44 | 338.84 | 17.39 | 338.83 | 18.21 | 338.85 | 19.05 | 338.88 | 19.22 | 338.88 |
| 23.26 | 338.73 | 23.47 | 338.69 | 25.27 | 338.6 | 25.72 | 338.57 | 27.05 | 338.5 |
| 27.12 | 338.49 | 27.98 | 338.45 | 29.11 | 338.4 | 31.89 | 338.08 | 32.29 | 338.03 |
| 33.23 | 337.89 | 34.05 | 337.72 | 35.66 | 337.34 | 35.87 | 337.3 | 36.42 | 337.23 |
| 37.38 | 337.13 | 41.02 | 336.68 | 41.45 | 336.62 | 41.6 | 336.58 | 42.82 | 336.5 |
| 43.58 | 336.46 | 43.83 | 336.45 | 44.93 | 336.46 | 45.2 | 336.46 | 46.18 | 336.49 |
| 46.44 | 336.5 | 46.5 | 336.51 | 46.92 | 336.55 | 47.92 | 336.62 | 48.52 | 336.65 |
| 49.03 | 336.68 | 50.41 | 336.75 | 50.85 | 336.77 | 51.17 | 336.78 | 51.58 | 336.78 |
| 52.19 | 336.79 | 52.3 | 336.78 | 53.7 | 336.71 | 54.5 | 336.64 | 54.53 | 336.64 |
| 57.86 | 336.15 | 58.41 | 336.08 | 59.04 | 336.03 | 59.4 | 335.94 | 60.06 | 335.8 |
| 60.41 | 335.71 | 60.77 | 335.66 | 62.17 | 335.49 | 62.56 | 335.44 | 65.72 | 335.24 |
| 66.44 | 335.2 | 66.86 | 335.19 | 68.68 | 335.16 | 68.79 | 335.14 | 70.22 | 335.08 |
| 70.54 | 335.07 | 70.78 | 335.05 | 71.75 | 334.91 | 73.26 | 334.72 | 75.74 | 334.34 |
| 76.36 | 334.26 | 76.99 | 334.19 | 77.49 | 334.15 | 77.66 | 334.14 | 77.86 | 334.11 |
| 78.65 | 334.03 | 81.91 | 333.68 | 82.57 | 333.6 | 84.24 | 333.39 | 86.08 | 333.25 |
| 88.86 | 333.09 | 90.69 | 332.99 | 93.02 | 332.87 | 93.35 | 332.85 | 95.74 | 332.73 |
| 96.61 | 332.69 | 101.44 | 332.49 | 101.78 | 332.47 | 102.2 | 332.46 | 102.43 | 332.44 |
| 103.07 | 332.41 | 103.53 | 332.38 | 104.44 | 332.36 | 105.92 | 332.34 | 106.43 | 332.35 |
| 106.81 | 332.37 | 107.44 | 332.36 | 108.51 | 332.35 | 109.5 | 332.33 | 110.38 | 332.32 |
| 111.33 | 332.3 | 112.78 | 332.24 | 114.62 | 332.16 | 114.68 | 332.08 | 115.17 | 332.05 |
| 118.86 | 331.82 | 119.53 | 331.81 | 120.17 | 331.79 | 120.32 | 331.79 | 122.03 | 331.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 122.67 | 331.89 | 123.66 | 331.89 | 124.29 | 331.86 | 124.96 | 331.82 | 125.18 | 331.81 |
| 126.04 | 331.78 | 126.1 | 331.78 | 131.2 | 331.49 | 134.8 | 331.29 | 136.02 | 331.22 |
| 136.58 | 331.2 | 138.22 | 331.13 | 139.58 | 331.09 | 140.47 | 331.06 | 143.29 | 331.02 |
| 144.41 | 331.01 | 147.06 | 330.98 | 147.3 | 330.97 | 147.95 | 330.96 | 149.05 | 330.93 |
| 150.47 | 330.93 | 150.77 | 330.92 | 151.43 | 330.92 | 152.68 | 330.91 | 153.73 | 330.91 |
| 154.06 | 330.92 | 154.84 | 330.92 | 157.76 | 330.85 | 158.48 | 330.83 | 160.21 | 330.8 |
| 161.17 | 330.8 | 161.4 | 330.79 | 162 | 330.79 | 162.66 | 330.77 | 163.22 | 330.76 |
| 164.95 | 330.72 | 165.55 | 330.7 | 166.19 | 330.69 | 166.76 | 330.69 | 167.44 | 330.68 |
| 169.86 | 330.68 | 171.35 | 330.7 | 171.45 | 330.7 | 172.64 | 330.72 | 172.93 | 330.73 |
| 173.41 | 330.73 | 174.06 | 330.74 | 175.17 | 330.75 | 186.14 | 330.75 | 187.63 | 330.76 |
| 188.88 | 330.76 | 189.14 | 330.77 | 190.49 | 330.77 | 192.15 | 330.76 | 193.75 | 330.74 |
| 195.81 | 330.71 | 199.28 | 330.67 | 199.45 | 330.66 | 200.65 | 330.64 | 201.52 | 330.61 |
| 202.45 | 330.54 | 202.63 | 330.53 | 203.26 | 330.52 | 204.12 | 330.51 | 206.03 | 330.51 |
| 207.24 | 330.5 | 212.04 | 330.48 | 213.88 | 330.47 | 216.79 | 330.46 | 217.49 | 330.45 |
| 217.87 | 330.45 | 220.09 | 330.43 | 220.36 | 330.42 | 221.82 | 330.4 | 223.1 | 330.38 |
| 223.18 | 330.43 | 223.31 | 330.45 | 223.94 | 330.44 | 225.72 | 330.45 | 226.22 | 330.45 |
| 229.09 | 330.29 | 229.83 | 330.26 | 230.43 | 330.22 | 230.64 | 330.21 | 232.53 | 330.11 |
| 232.74 | 330.11 | 233.99 | 330.09 | 234.49 | 330.09 | 235.69 | 330.06 | 236.74 | 330.04 |
| 237.56 | 330.03 | 238.08 | 330.02 | 238.26 | 330.02 | 239.31 | 330 | 239.45 | 329.99 |
| 239.97 | 329.99 | 241.12 | 329.95 | 241.63 | 329.94 | 242.18 | 329.92 | 243.07 | 329.88 |
| 243.93 | 329.85 | 244.13 | 329.83 | 244.68 | 329.79 | 246.44 | 329.71 | 248.69 | 329.59 |
| 249.2 | 329.56 | 251.02 | 329.56 | 251.74 | 329.55 | 252.36 | 329.55 | 252.86 | 329.52 |
| 254.25 | 329.45 | 254.42 | 329.45 | 254.9 | 329.47 | 255.1 | 329.47 | 256.2 | 329.43 |
| 256.52 | 329.42 | 257.1 | 329.43 | 257.8 | 329.51 | 258.2 | 329.52 | 258.84 | 329.52 |
| 260.4 | 329.5 | 261.15 | 329.48 | 263.35 | 329.44 | 266.2 | 329.37 | 267.07 | 329.36 |
| 269.53 | 329.3 | 271.11 | 329.27 | 275.47 | 329.13 | 275.89 | 329.12 | 277.04 | 329.1 |
| 277.64 | 329.08 | 278.41 | 329.08 | 280.85 | 329.07 | 281.11 | 329.06 | 281.23 | 329.07 |
| 281.61 | 329.08 | 281.75 | 329.09 | 282.45 | 329.09 | 282.84 | 329.08 | 283.37 | 329.08 |
| 284.22 | 329.1 | 284.89 | 329.12 | 285.73 | 329.13 | 286.62 | 329.15 | 287.3 | 329.17 |
| 288.07 | 329.34 | 289.42 | 329.5 | 289.88 | 329.55 | 292.07 | 329.74 | 294.36 | 329.93 |
| 296.47 | 330.1 | 296.72 | 330.1 | 297.14 | 330.09 | 298.12 | 330.08 | 298.86 | 330.12 |
| 299.98 | 330.2 | 301.72 | 330.25 | 301.93 | 330.26 | 302.15 | 330.25 | 302.39 | 330.26 |
| 304.57 | 330.26 | 305.45 | 330.24 | 306.55 | 330.22 | 307.32 | 330.2 | 307.98 | 330.18 |
| 309.38 | 330.13 | 309.5 | 330.12 | 311.51 | 330.03 | 313.22 | 329.94 | 314.77 | 329.87 |
| 315.3 | 329.85 | 316.66 | 329.81 | 318.11 | 329.77 | 318.71 | 329.75 | 318.98 | 329.68 |
| 319.38 | 329.66 | 319.87 | 329.64 | 319.99 | 329.61 | 320.38 | 329.59 | 320.42 | 329.58 |
| 320.78 | 329.56 | 322.23 | 329.58 | 324.3 | 329.61 | 327.1 | 329.69 | 330.38 | 329.79 |
| 330.83 | 329.8 | 332.49 | 329.86 | 335.13 | 329.93 | 336.09 | 329.96 | 337.57 | 330 |
| 337.85 | 330.02 | 338.01 | 330.02 | 338.95 | 330.08 | 339.64 | 330.11 | 341.18 | 330.15 |
| 341.86 | 330.16 | 342.32 | 330.18 | 342.7 | 330.19 | 342.87 | 330.2 | 345.01 | 330.24 |
| 345.09 | 330.25 | 345.61 | 330.25 | 345.74 | 330.26 | 345.8 | 330.25 | 346.98 | 330.25 |
| 347 | 330.24 | 347.19 | 330.24 | 347.36 | 330.23 | 347.81 | 330.24 | 348.21 | 330.24 |
| 348.42 | 330.23 | 348.73 | 330.23 | 348.9 | 330.24 | 349.21 | 330.24 | 349.39 | 330.25 |
| 350.72 | 330.17 | 350.86 | 330.17 | 351.14 | 330.15 | 351.69 | 330.13 | 352.28 | 330.14 |
| 353.19 | 330.15 | 353.6 | 330.13 | 353.99 | 330.12 | 354.33 | 330.12 | 354.66 | 330.11 |
| 354.73 | 330.1 | 355.84 | 330.08 | 356.86 | 330.05 | 357.08 | 330.04 | 360.75 | 329.93 |
| 361.16 | 329.84 | 361.43 | 329.76 | 361.66 | 329.68 | 363.04 | 329.62 | 363.13 | 329.61 |
| 364.49 | 329.61 | 365.37 | 329.63 | 367.72 | 329.67 | 368.24 | 329.67 | 371.38 | 329.74 |
| 376.67 | 329.74 | 377.43 | 329.76 | 379.1 | 329.77 | 380.32 | 329.77 | 380.92 | 329.75 |
| 382.68 | 329.75 | 383.26 | 329.76 | 384.15 | 329.77 | 384.77 | 329.78 | 385.72 | 329.79 |
| 388.23 | 329.85 | 390.46 | 329.9 | 392.18 | 329.95 | 396.42 | 330.08 | 397.24 | 330.1 |
| 397.47 | 330.11 | 400.07 | 330.17 | 401 | 330.19 | 402.94 | 330.22 | 406.05 | 330.24 |
| 406.18 | 330.23 | 407.11 | 330.19 | 407.43 | 330.19 | 407.93 | 330.18 | 412.36 | 330.28 |
| 413.28 | 330.3 | 414.11 | 330.31 | 415.56 | 330.32 | 417.42 | 330.32 | 417.67 | 330.31 |
| 418.73 | 330.39 | 421.1 | 330.5 | 422.66 | 330.55 | 422.75 | 330.55 | 425.57 | 330.64 |
| 426.4 | 330.66 | 427.34 | 330.68 | 428.04 | 330.7 | 429.2 | 330.73 | 430.36 | 330.75 |
| 433 | 330.82 | 438.16 | 330.94 | 438.85 | 330.96 | 439.71 | 330.97 | 440.79 | 330.99 |
| 445.61 | 331.05 | 447.82 | 331.09 | 450.2 | 331.14 | 451.33 | 331.17 | 452.79 | 331.2 |
| 453.01 | 331.21 | 453.6 | 331.21 | 454.13 | 331.24 | 454.23 | 331.24 | 454.9 | 331.27 |
| 455.7 | 331.3 | 457.86 | 331.35 | 458.12 | 331.35 | 458.54 | 331.37 | 458.93 | 331.38 |
| 462.72 | 331.44 | 465.37 | 331.5 | 466.85 | 331.54 | 467.05 | 331.55 | 468.13 | 331.57 |
| 468.95 | 331.58 | 469.47 | 331.58 | 470.01 | 331.56 | 470.6 | 331.5 | 470.85 | 331.49 |
| 471.85 | 331.53 | 473.38 | 331.57 | 473.55 | 331.58 | 473.98 | 331.58 | 475.36 | 331.61 |
| 475.68 | 331.61 | 477.08 | 331.64 | 477.81 | 331.66 | 478.15 | 331.65 | 478.4 | 331.65 |
| 483.11 | 331.74 | 484.82 | 331.77 | 485.51 | 331.77 | 486.09 | 331.78 | 487.72 | 331.8 |
| 488.18 | 331.81 | 489.39 | 331.83 | 490.05 | 331.85 | 490.24 | 331.85 | 490.52 | 331.87 |
| 490.9 | 331.88 | 494.9 | 332.02 | 495.71 | 332.05 | 496.41 | 332.05 | 497.31 | 332.07 |
| 497.59 | 332.08 | 499.29 | 332.11 | 501.82 | 332.18 | 502.75 | 332.22 | 504.49 | 332.28 |
| 505.57 | 332.32 | 505.98 | 332.33 | 507.04 | 332.38 | 507.31 | 332.4 | 509.23 | 332.53 |
| 509.42 | 332.54 | 511.61 | 332.71 | 512.19 | 332.73 | 514.03 | 332.87 | 514.92 | 332.94 |
| 515.14 | 332.96 | 516.41 | 333.04 | 520.14 | 333.34 | 523.82 | 333.6 | 524.69 | 333.66 |
| 524.79 | 333.67 | 525.73 | 333.71 | 527.49 | 333.85 | 528.72 | 333.92 | 531.4 | 334.1 |
| 531.72 | 334.12 | 532.9 | 334.21 | 534.45 | 334.3 | 534.5 | 334.3 | 535.75 | 334.38 |
| 537.83 | 334.51 | 541.08 | 334.72 | 541.37 | 334.74 | 541.81 | 334.76 | 542.96 | 334.79 |
| 546.34 | 334.85 | 547.31 | 334.86 | 549.21 | 334.86 | 549.56 | 334.85 | 550.11 | 334.84 |
| 550.5 | 334.84 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 217.87 | .04 | 421.1 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 217.87 | 421.1 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1099.01*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.93 | 2 | 338.92 | 2.98 | 338.88 | 4.25 | 338.82 | 4.73 | 338.81 |
| 4.92 | 338.8 | 5.47 | 338.79 | 6.3 | 338.75 | 6.79 | 338.74 | 9.5 | 338.73 |
| 9.93 | 338.72 | 11.96 | 338.71 | 12.39 | 338.69 | 12.82 | 338.69 | 14.96 | 338.67 |
| 15.46 | 338.65 | 15.7 | 338.65 | 17.03 | 338.63 | 18.01 | 338.62 | 18.87 | 338.64 |
| 19.73 | 338.68 | 19.91 | 338.68 | 24.09 | 338.52 | 24.31 | 338.48 | 26.17 | 338.39 |
| 26.65 | 338.36 | 28.02 | 338.28 | 28.1 | 338.28 | 28.98 | 338.24 | 30.15 | 338.19 |
| 33.03 | 337.83 | 33.45 | 337.78 | 34.42 | 337.63 | 34.97 | 337.51 | 35.27 | 337.45 |
| 36.93 | 337.05 | 37.15 | 337 | 37.73 | 336.93 | 38.72 | 336.82 | 42.49 | 336.34 |
| 42.93 | 336.28 | 43.09 | 336.24 | 44.35 | 336.16 | 45.14 | 336.12 | 45.4 | 336.11 |
| 46.54 | 336.12 | 47.83 | 336.16 | 48.17 | 336.18 | 48.6 | 336.23 | 49.63 | 336.31 |
| 50.26 | 336.35 | 50.78 | 336.38 | 52.22 | 336.47 | 52.67 | 336.49 | 53 | 336.51 |
| 53.43 | 336.51 | 53.89 | 336.53 | 54.58 | 336.5 | 55.62 | 336.44 | 56.48 | 336.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 57.26 | 336.27 | 59.93 | 335.91 | 60.5 | 335.85 | 61.16 | 335.81 | 61.53 | 335.71 |
| 62.21 | 335.57 | 62.57 | 335.46 | 62.95 | 335.41 | 64.8 | 335.18 | 68.07 | 334.94 |
| 68.82 | 334.9 | 69.26 | 334.89 | 71.14 | 334.86 | 71.25 | 334.84 | 72.74 | 334.79 |
| 73.31 | 334.75 | 74.32 | 334.61 | 75.88 | 334.42 | 78.45 | 334.04 | 79.75 | 333.9 |
| 80.26 | 333.85 | 80.44 | 333.84 | 81.47 | 333.74 | 84.84 | 333.39 | 85.53 | 333.31 |
| 87.26 | 333.1 | 89.16 | 332.95 | 92.05 | 332.79 | 93.94 | 332.69 | 96.36 | 332.57 |
| 96.69 | 332.55 | 99.17 | 332.43 | 100.07 | 332.39 | 105.07 | 332.19 | 105.43 | 332.18 |
| 105.86 | 332.16 | 106.1 | 332.14 | 106.77 | 332.12 | 107.23 | 332.09 | 108.18 | 332.07 |
| 108.89 | 332.06 | 110.24 | 332.06 | 110.64 | 332.09 | 111.28 | 332.09 | 112.4 | 332.08 |
| 113.42 | 332.06 | 114.34 | 332.04 | 115.32 | 332.03 | 116.82 | 331.97 | 118.72 | 331.88 |
| 118.79 | 331.8 | 119.3 | 331.77 | 123.11 | 331.53 | 124.47 | 331.49 | 126.41 | 331.6 |
| 127.07 | 331.62 | 128.08 | 331.62 | 128.75 | 331.59 | 129.44 | 331.55 | 129.67 | 331.54 |
| 130.62 | 331.51 | 135.9 | 331.21 | 139.63 | 331.01 | 140.89 | 330.94 | 141.47 | 330.91 |
| 143.17 | 330.84 | 144.58 | 330.79 | 145.5 | 330.76 | 148.42 | 330.71 | 149.58 | 330.7 |
| 152.33 | 330.66 | 152.57 | 330.66 | 153.25 | 330.64 | 154.39 | 330.61 | 154.85 | 330.61 |
| 155.59 | 330.6 | 156.85 | 330.6 | 158.15 | 330.59 | 159.24 | 330.59 | 159.58 | 330.6 |
| 160.28 | 330.6 | 160.38 | 330.59 | 163.41 | 330.53 | 164.16 | 330.52 | 164.28 | 330.51 |
| 164.69 | 330.5 | 165.41 | 330.5 | 165.95 | 330.49 | 167.18 | 330.49 | 169.07 | 330.46 |
| 169.49 | 330.45 | 170.85 | 330.43 | 171.48 | 330.41 | 172.14 | 330.4 | 175.95 | 330.4 |
| 176.76 | 330.41 | 177.49 | 330.41 | 177.59 | 330.42 | 178.82 | 330.44 | 179.13 | 330.44 |
| 179.53 | 330.45 | 180.3 | 330.46 | 181.45 | 330.47 | 185.92 | 330.47 | 191.82 | 330.48 |
| 192.81 | 330.48 | 194.36 | 330.49 | 195.65 | 330.5 | 199.03 | 330.5 | 200.69 | 330.48 |
| 202.1 | 330.46 | 202.82 | 330.46 | 206.42 | 330.42 | 207.84 | 330.41 | 208.73 | 330.38 |
| 209.71 | 330.31 | 210.54 | 330.3 | 210.65 | 330.29 | 211.43 | 330.29 | 212.45 | 330.28 |
| 214.67 | 330.28 | 219.63 | 330.26 | 221.54 | 330.25 | 224.55 | 330.23 | 225.68 | 330.23 |
| 227.88 | 330.21 | 228.14 | 330.2 | 229.58 | 330.18 | 230.85 | 330.17 | 230.94 | 330.21 |
| 231.06 | 330.22 | 231.68 | 330.22 | 233.45 | 330.23 | 233.95 | 330.23 | 236.79 | 330.05 |
| 237.52 | 330.01 | 238.11 | 329.97 | 238.32 | 329.96 | 240.19 | 329.84 | 241.06 | 329.84 |
| 242.14 | 329.82 | 243.33 | 329.79 | 244.37 | 329.77 | 245.17 | 329.75 | 245.87 | 329.74 |
| 246.91 | 329.72 | 247.57 | 329.71 | 248.18 | 329.69 | 249.21 | 329.65 | 250.64 | 329.6 |
| 251.68 | 329.55 | 251.7 | 329.54 | 252.23 | 329.51 | 253.98 | 329.43 | 256.2 | 329.31 |
| 256.71 | 329.29 | 258.51 | 329.29 | 259.22 | 329.28 | 259.84 | 329.28 | 260.33 | 329.24 |
| 261.72 | 329.17 | 261.88 | 329.17 | 262.36 | 329.19 | 262.56 | 329.19 | 263.64 | 329.14 |
| 263.96 | 329.13 | 264.53 | 329.14 | 264.87 | 329.19 | 265.23 | 329.23 | 265.63 | 329.24 |
| 267.02 | 329.24 | 267.8 | 329.23 | 268.54 | 329.21 | 270.73 | 329.17 | 273.55 | 329.11 |
| 274.41 | 329.09 | 276.46 | 329.04 | 276.85 | 329.04 | 278.41 | 329.01 | 282.73 | 328.87 |
| 284.29 | 328.83 | 284.62 | 328.82 | 285.18 | 328.82 | 285.65 | 328.81 | 288.07 | 328.8 |
| 288.53 | 328.8 | 288.97 | 328.83 | 289.67 | 328.83 | 290.07 | 328.82 | 290.61 | 328.82 |
| 291.47 | 328.84 | 292.15 | 328.86 | 293 | 328.87 | 293.9 | 328.89 | 294.58 | 328.92 |
| 295 | 329 | 295.37 | 329.08 | 295.8 | 329.13 | 297.2 | 329.28 | 299.42 | 329.46 |
| 301 | 329.59 | 301.73 | 329.64 | 303.87 | 329.81 | 304.55 | 329.81 | 305.54 | 329.79 |
| 306.3 | 329.83 | 307.42 | 329.91 | 307.81 | 329.93 | 309.19 | 329.97 | 309.4 | 329.98 |
| 309.86 | 329.98 | 310.38 | 329.99 | 312.08 | 329.99 | 312.96 | 329.98 | 313.52 | 329.96 |
| 314.07 | 329.95 | 314.86 | 329.93 | 316.94 | 329.87 | 317.06 | 329.86 | 319.1 | 329.77 |
| 320.83 | 329.68 | 322.41 | 329.61 | 322.94 | 329.59 | 324.7 | 329.54 | 325.79 | 329.52 |
| 326.39 | 329.5 | 326.62 | 329.44 | 327.07 | 329.42 | 327.56 | 329.39 | 328.08 | 329.35 |
| 328.48 | 329.33 | 329.95 | 329.35 | 332.05 | 329.37 | 334.89 | 329.45 | 338.21 | 329.56 |
| 338.66 | 329.57 | 340.34 | 329.63 | 343.02 | 329.7 | 343.98 | 329.73 | 345.49 | 329.78 |
| 345.77 | 329.8 | 345.94 | 329.8 | 346.89 | 329.87 | 347.58 | 329.89 | 349.14 | 329.93 |
| 349.83 | 329.94 | 350.3 | 329.96 | 350.68 | 329.97 | 350.86 | 329.98 | 351.93 | 330 |
| 352.53 | 330.02 | 353.02 | 330.02 | 353.1 | 330.03 | 353.63 | 330.03 | 353.76 | 330.04 |
| 353.82 | 330.03 | 354.99 | 330.03 | 355.1 | 330.01 | 355.23 | 330.02 | 355.4 | 330.01 |
| 356.78 | 330.01 | 356.96 | 330.02 | 357.56 | 330.02 | 358.27 | 329.98 | 358.8 | 329.94 |
| 358.94 | 329.94 | 359.23 | 329.92 | 359.78 | 329.9 | 360.38 | 329.91 | 361.3 | 329.93 |
| 361.71 | 329.9 | 361.74 | 329.91 | 362.11 | 329.89 | 362.46 | 329.89 | 362.79 | 329.88 |
| 362.86 | 329.87 | 363.98 | 329.85 | 365.02 | 329.82 | 365.24 | 329.81 | 368.95 | 329.7 |
| 369.37 | 329.62 | 369.88 | 329.47 | 370.34 | 329.45 | 371.28 | 329.4 | 372.74 | 329.4 |
| 373.63 | 329.41 | 376.01 | 329.45 | 376.54 | 329.45 | 379.73 | 329.51 | 380.31 | 329.51 |
| 382.86 | 329.5 | 385.07 | 329.49 | 385.84 | 329.51 | 387.54 | 329.52 | 388.77 | 329.52 |
| 389.38 | 329.5 | 391.16 | 329.5 | 391.75 | 329.51 | 392.65 | 329.52 | 393.28 | 329.53 |
| 394.24 | 329.54 | 396.79 | 329.6 | 399.04 | 329.66 | 400.78 | 329.7 | 405.07 | 329.84 |
| 405.9 | 329.86 | 406.14 | 329.87 | 408.77 | 329.93 | 411.04 | 329.98 | 411.67 | 329.99 |
| 413.27 | 329.99 | 414.82 | 330 | 414.96 | 329.99 | 415.9 | 329.95 | 416.22 | 329.94 |
| 416.73 | 329.94 | 421.22 | 330.04 | 422.98 | 330.08 | 424.46 | 330.1 | 426.34 | 330.1 |
| 426.53 | 330.09 | 426.59 | 330.1 | 427.67 | 330.17 | 430.06 | 330.28 | 431.65 | 330.32 |
| 431.74 | 330.33 | 434.3 | 330.4 | 434.61 | 330.41 | 435.45 | 330.43 | 436.4 | 330.45 |
| 437.12 | 330.47 | 438.29 | 330.49 | 439.48 | 330.52 | 441.37 | 330.56 | 442.16 | 330.58 |
| 447.4 | 330.69 | 448.1 | 330.71 | 448.97 | 330.72 | 450.07 | 330.73 | 454.96 | 330.79 |
| 457.21 | 330.82 | 459.63 | 330.86 | 460.78 | 330.89 | 461.8 | 330.92 | 462.26 | 330.93 |
| 462.59 | 330.93 | 462.78 | 330.94 | 463.08 | 330.93 | 463.62 | 330.96 | 463.73 | 330.96 |
| 464.41 | 330.99 | 465.22 | 331.02 | 467.41 | 331.07 | 467.68 | 331.07 | 468.1 | 331.09 |
| 468.5 | 331.1 | 470.41 | 331.13 | 472.35 | 331.17 | 475.04 | 331.22 | 476.55 | 331.26 |
| 476.75 | 331.27 | 477.85 | 331.29 | 478.68 | 331.3 | 479.21 | 331.3 | 479.76 | 331.28 |
| 480.35 | 331.21 | 480.61 | 331.2 | 481.63 | 331.24 | 483.18 | 331.29 | 483.35 | 331.3 |
| 483.79 | 331.3 | 485.19 | 331.33 | 485.52 | 331.34 | 486.93 | 331.37 | 487.68 | 331.39 |
| 488.03 | 331.39 | 488.16 | 331.38 | 488.28 | 331.39 | 493.07 | 331.47 | 494.81 | 331.51 |
| 495.51 | 331.51 | 496.09 | 331.52 | 497.75 | 331.54 | 498.21 | 331.55 | 499.45 | 331.57 |
| 500.13 | 331.59 | 500.17 | 331.6 | 500.59 | 331.61 | 500.67 | 331.62 | 500.98 | 331.63 |
| 505.05 | 331.77 | 505.87 | 331.8 | 506.58 | 331.81 | 507.5 | 331.83 | 508.39 | 331.86 |
| 509.51 | 331.88 | 512.08 | 331.96 | 513.02 | 332 | 514.79 | 332.07 | 515.89 | 332.11 |
| 516.31 | 332.12 | 517.38 | 332.17 | 517.66 | 332.19 | 519.6 | 332.32 | 519.8 | 332.33 |
| 522.03 | 332.49 | 522.61 | 332.51 | 524.48 | 332.65 | 525.38 | 332.72 | 525.61 | 332.73 |
| 526.9 | 332.81 | 530.69 | 333.1 | 534.43 | 333.34 | 535.31 | 333.4 | 536.37 | 333.46 |
| 538.16 | 333.59 | 539.41 | 333.65 | 542.12 | 333.82 | 542.71 | 333.86 | 543.66 | 333.92 |
| 545.22 | 334 | 545.28 | 334 | 548.38 | 334.17 | 548.67 | 334.19 | 551.97 | 334.38 |
| 552.26 | 334.4 | 552.71 | 334.41 | 553.76 | 334.45 | 553.88 | 334.45 | 555 | 334.47 |
| 557.31 | 334.5 | 558.29 | 334.51 | 560.23 | 334.51 | 560.59 | 334.5 | 561.14 | 334.49 |
| 561.53 | 334.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 225.68 | .04 | 430.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 225.68 | 430.06 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1080.00*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.73 | 2.07 | 338.73 | 3.08 | 338.68 | 4.4 | 338.62 | 4.9 | 338.61 |
| 5.09 | 338.6 | 5.66 | 338.58 | 6.52 | 338.54 | 7.03 | 338.53 | 9.77 | 338.52 |
| 10.27 | 338.51 | 12.38 | 338.5 | 12.81 | 338.48 | 13.26 | 338.48 | 15.47 | 338.46 |
| 15.99 | 338.44 | 16.24 | 338.44 | 17.62 | 338.42 | 18.63 | 338.41 | 19.52 | 338.44 |
| 20.41 | 338.48 | 20.6 | 338.48 | 24.92 | 338.31 | 25.15 | 338.28 | 25.59 | 338.25 |
| 27.08 | 338.17 | 27.57 | 338.15 | 28.99 | 338.07 | 29.07 | 338.06 | 29.99 | 338.02 |
| 31.2 | 337.97 | 34.18 | 337.58 | 34.89 | 337.48 | 35.62 | 337.36 | 36.18 | 337.24 |
| 36.49 | 337.17 | 38.21 | 336.75 | 38.44 | 336.7 | 40.06 | 336.51 | 43.96 | 336.01 |
| 44.42 | 335.94 | 44.58 | 335.9 | 45.89 | 335.82 | 46.7 | 335.78 | 46.97 | 335.76 |
| 48.15 | 335.78 | 49.48 | 335.83 | 49.83 | 335.85 | 50.28 | 335.9 | 51.35 | 336 |
| 52 | 336.04 | 54.02 | 336.19 | 54.49 | 336.22 | 55.28 | 336.24 | 55.93 | 336.27 |
| 56.47 | 336.23 | 57.55 | 336.18 | 58.41 | 336.12 | 58.44 | 336.12 | 59.24 | 336.01 |
| 62.01 | 335.67 | 62.59 | 335.61 | 63.27 | 335.58 | 63.66 | 335.48 | 64.37 | 335.33 |
| 64.74 | 335.22 | 65.13 | 335.17 | 66.63 | 334.97 | 67.04 | 334.92 | 70.42 | 334.65 |
| 71.2 | 334.6 | 71.65 | 334.59 | 73.6 | 334.56 | 73.71 | 334.54 | 75.25 | 334.49 |
| 75.6 | 334.48 | 75.85 | 334.46 | 76.89 | 334.31 | 78.51 | 334.12 | 81.16 | 333.75 |
| 81.83 | 333.67 | 82.51 | 333.6 | 83.04 | 333.56 | 83.22 | 333.55 | 83.44 | 333.52 |
| 84.28 | 333.44 | 87.77 | 333.09 | 88.49 | 333.01 | 90.27 | 332.81 | 92.25 | 332.66 |
| 95.23 | 332.5 | 97.18 | 332.4 | 99.69 | 332.27 | 100.04 | 332.26 | 102.6 | 332.13 |
| 103.53 | 332.09 | 108.71 | 331.89 | 109.2 | 331.88 | 109.52 | 331.86 | 110.94 | 331.8 |
| 111.92 | 331.78 | 112.66 | 331.77 | 113.51 | 331.77 | 114.06 | 331.78 | 114.46 | 331.81 |
| 115.13 | 331.81 | 117.35 | 331.79 | 118.29 | 331.77 | 119.31 | 331.76 | 120.86 | 331.7 |
| 122.83 | 331.61 | 122.9 | 331.52 | 123.42 | 331.49 | 127.37 | 331.23 | 128.09 | 331.22 |
| 128.78 | 331.2 | 130.78 | 331.32 | 131.46 | 331.35 | 132.51 | 331.35 | 133.2 | 331.32 |
| 133.91 | 331.28 | 134.15 | 331.27 | 135.07 | 331.24 | 135.14 | 331.24 | 140.6 | 330.93 |
| 144.46 | 330.72 | 145.77 | 330.65 | 146.37 | 330.62 | 148.12 | 330.54 | 149.58 | 330.5 |
| 150.53 | 330.47 | 153.55 | 330.41 | 154.66 | 330.39 | 154.75 | 330.39 | 157.6 | 330.35 |
| 157.85 | 330.34 | 158.55 | 330.32 | 159.73 | 330.29 | 160.2 | 330.29 | 160.97 | 330.28 |
| 162.28 | 330.28 | 163.62 | 330.27 | 165.93 | 330.27 | 169.06 | 330.22 | 169.84 | 330.2 |
| 170.39 | 330.19 | 171.13 | 330.18 | 172.2 | 330.18 | 172.72 | 330.19 | 172.96 | 330.19 |
| 174.92 | 330.16 | 175.36 | 330.15 | 177.41 | 330.12 | 178.09 | 330.12 | 178.71 | 330.11 |
| 181.13 | 330.11 | 182.87 | 330.13 | 183.73 | 330.13 | 185 | 330.15 | 185.73 | 330.17 |
| 186.53 | 330.18 | 187.72 | 330.19 | 192.35 | 330.19 | 198.45 | 330.21 | 199.48 | 330.21 |
| 201.08 | 330.22 | 202.42 | 330.23 | 205.91 | 330.23 | 207.63 | 330.22 | 209.09 | 330.21 |
| 209.84 | 330.21 | 213.56 | 330.18 | 213.74 | 330.18 | 215.02 | 330.17 | 215.95 | 330.14 |
| 216.96 | 330.08 | 217.14 | 330.08 | 218.74 | 330.06 | 219.8 | 330.06 | 220.79 | 330.05 |
| 224.62 | 330.05 | 227.23 | 330.04 | 229.21 | 330.03 | 232.32 | 330.01 | 233.48 | 330.01 |
| 235.66 | 329.99 | 235.92 | 329.98 | 237.35 | 329.96 | 238.61 | 329.95 | 238.64 | 329.98 |
| 238.82 | 330 | 241.68 | 330 | 244.49 | 329.81 | 245.8 | 329.72 | 246.01 | 329.7 |
| 247.86 | 329.58 | 248.07 | 329.58 | 249.29 | 329.56 | 249.79 | 329.55 | 250.97 | 329.52 |
| 252 | 329.5 | 252.79 | 329.48 | 253.31 | 329.47 | 253.48 | 329.47 | 254.51 | 329.44 |
| 255.16 | 329.43 | 255.77 | 329.41 | 256.79 | 329.37 | 257.34 | 329.35 | 258.2 | 329.31 |
| 259.05 | 329.28 | 259.5 | 329.24 | 259.79 | 329.23 | 261.51 | 329.15 | 263.72 | 329.04 |
| 264.22 | 329.02 | 265.38 | 329.02 | 266 | 329.01 | 267.32 | 329.01 | 268.18 | 328.94 |
| 269.18 | 328.88 | 269.81 | 328.91 | 271.09 | 328.85 | 271.4 | 328.84 | 271.97 | 328.86 |
| 272.3 | 328.9 | 272.66 | 328.96 | 273.05 | 328.97 | 274.43 | 328.97 | 275.21 | 328.96 |
| 275.94 | 328.94 | 278.11 | 328.9 | 280.9 | 328.84 | 281.75 | 328.82 | 283.79 | 328.78 |
| 284.17 | 328.77 | 285.22 | 328.76 | 285.71 | 328.75 | 289.99 | 328.61 | 290.41 | 328.59 |
| 291.54 | 328.57 | 292.13 | 328.55 | 292.88 | 328.55 | 295.28 | 328.54 | 295.53 | 328.53 |
| 296.04 | 328.56 | 297.85 | 328.56 | 298.72 | 328.58 | 298.99 | 328.59 | 300.27 | 328.62 |
| 301.18 | 328.64 | 301.87 | 328.66 | 302.67 | 328.81 | 303.1 | 328.86 | 304.32 | 328.99 |
| 304.52 | 329.01 | 306.76 | 329.19 | 308.37 | 329.31 | 309.11 | 329.36 | 311.28 | 329.52 |
| 311.96 | 329.52 | 312.96 | 329.51 | 313.73 | 329.55 | 314.87 | 329.63 | 315.26 | 329.65 |
| 316.66 | 329.7 | 317.34 | 329.7 | 318.27 | 329.72 | 319.58 | 329.72 | 320.48 | 329.71 |
| 321.6 | 329.69 | 322.4 | 329.67 | 323.07 | 329.65 | 324.5 | 329.61 | 324.63 | 329.6 |
| 326.69 | 329.51 | 328.44 | 329.42 | 330.04 | 329.35 | 330.58 | 329.33 | 331.97 | 329.3 |
| 333.46 | 329.26 | 334.07 | 329.25 | 334.35 | 329.19 | 334.76 | 329.18 | 335.26 | 329.15 |
| 335.78 | 329.11 | 336.19 | 329.1 | 337.68 | 329.11 | 339.8 | 329.13 | 342.68 | 329.22 |
| 346.04 | 329.33 | 346.5 | 329.34 | 348.2 | 329.4 | 350.9 | 329.48 | 351.88 | 329.51 |
| 353.41 | 329.56 | 353.86 | 329.58 | 354.82 | 329.65 | 355.52 | 329.67 | 357.1 | 329.71 |
| 357.8 | 329.73 | 358.66 | 329.75 | 358.84 | 329.76 | 359.38 | 329.77 | 359.92 | 329.79 |
| 361.03 | 329.81 | 361.65 | 329.81 | 361.78 | 329.82 | 361.84 | 329.81 | 363.02 | 329.81 |
| 363.14 | 329.79 | 365.02 | 329.79 | 365.33 | 329.8 | 365.62 | 329.8 | 365.85 | 329.79 |
| 366.35 | 329.75 | 367.03 | 329.7 | 367.32 | 329.69 | 367.88 | 329.66 | 368.48 | 329.68 |
| 369.42 | 329.7 | 369.83 | 329.67 | 369.86 | 329.68 | 370.24 | 329.66 | 370.59 | 329.66 |
| 370.92 | 329.65 | 370.99 | 329.64 | 372.13 | 329.62 | 373.18 | 329.6 | 373.4 | 329.58 |
| 377.16 | 329.47 | 377.59 | 329.4 | 377.86 | 329.32 | 378.1 | 329.26 | 378.56 | 329.23 |
| 379.52 | 329.19 | 379.61 | 329.18 | 380.23 | 329.18 | 380.83 | 329.19 | 381 | 329.19 |
| 383.68 | 329.22 | 384.31 | 329.23 | 384.84 | 329.23 | 388.07 | 329.28 | 388.65 | 329.28 |
| 391.24 | 329.26 | 393.48 | 329.24 | 393.87 | 329.25 | 394.26 | 329.25 | 395.98 | 329.27 |
| 396.3 | 329.27 | 397.23 | 329.26 | 397.84 | 329.25 | 399.64 | 329.25 | 400.24 | 329.26 |
| 401.15 | 329.28 | 401.79 | 329.28 | 402.76 | 329.3 | 405.34 | 329.36 | 407.62 | 329.41 |
| 409.38 | 329.46 | 413.72 | 329.6 | 414.57 | 329.62 | 414.81 | 329.63 | 417.47 | 329.69 |
| 419.77 | 329.74 | 420.41 | 329.75 | 422.02 | 329.75 | 423.6 | 329.76 | 423.73 | 329.75 |
| 424.26 | 329.73 | 424.69 | 329.71 | 425.01 | 329.7 | 425.53 | 329.7 | 430.07 | 329.81 |
| 431.01 | 329.83 | 431.86 | 329.84 | 433.35 | 329.87 | 434.73 | 329.88 | 435.51 | 329.88 |
| 436.6 | 329.95 | 439.02 | 330.06 | 440.64 | 330.1 | 440.73 | 330.1 | 443.33 | 330.18 |
| 443.64 | 330.18 | 444.5 | 330.2 | 445.46 | 330.22 | 446.19 | 330.23 | 447.39 | 330.26 |
| 448.59 | 330.28 | 450.51 | 330.32 | 451.31 | 330.34 | 456.63 | 330.44 | 457.34 | 330.46 |
| 458.23 | 330.46 | 459.34 | 330.48 | 464.32 | 330.52 | 466.6 | 330.55 | 469.06 | 330.59 |
| 470.23 | 330.62 | 471.73 | 330.65 | 471.96 | 330.65 | 472.07 | 330.66 | 472.57 | 330.66 |
| 472.74 | 330.67 | 473.11 | 330.68 | 473.22 | 330.69 | 473.91 | 330.71 | 474.43 | 330.74 |
| 474.74 | 330.75 | 476.96 | 330.79 | 477.24 | 330.8 | 478.07 | 330.82 | 480.01 | 330.85 |
| 481.98 | 330.89 | 484.71 | 330.94 | 486.24 | 330.98 | 486.45 | 330.99 | 487.56 | 331.01 |
| 488.41 | 331.03 | 488.95 | 331.02 | 489.5 | 331 | 490.11 | 330.92 | 490.37 | 330.91 |
| 492.98 | 331.01 | 493.15 | 331.01 | 493.32 | 331.02 | 493.6 | 331.02 | 495.36 | 331.07 |
| 496.34 | 331.08 | 496.79 | 331.1 | 497.55 | 331.12 | 498.16 | 331.12 | 503.02 | 331.21 |
| 504.79 | 331.24 | 505.5 | 331.25 | 506.1 | 331.25 | 507.78 | 331.28 | 508.25 | 331.29 |
| 509.5 | 331.31 | 509.83 | 331.32 | 510.18 | 331.34 | 510.39 | 331.34 | 510.67 | 331.35 |
| 510.75 | 331.36 | 511.06 | 331.37 | 515.19 | 331.53 | 516.03 | 331.56 | 516.75 | 331.57 |
| 517.68 | 331.59 | 518.59 | 331.62 | 519.72 | 331.65 | 522.33 | 331.73 | 522.59 | 331.75 |
| 523.29 | 331.78 | 525.08 | 331.85 | 525.65 | 331.88 | 526.21 | 331.9 | 526.63 | 331.91 |
| 527.72 | 331.96 | 528 | 331.98 | 529.98 | 332.11 | 530.17 | 332.12 | 532.44 | 332.27 |
| 533.03 | 332.29 | 534.93 | 332.42 | 535.85 | 332.49 | 536.08 | 332.5 | 537.38 | 332.58 |
| 541.24 | 332.85 | 545.04 | 333.09 | 545.93 | 333.15 | 546.04 | 333.16 | 547.01 | 333.2 |
| 548.83 | 333.33 | 550.09 | 333.39 | 552.85 | 333.54 | 553.19 | 333.56 | 553.45 | 333.57 |
| 554.41 | 333.63 | 556 | 333.7 | 556.06 | 333.7 | 557.35 | 333.77 | 558.85 | 333.84 |
| 559.21 | 333.86 | 559.5 | 333.87 | 562.85 | 334.04 | 563.15 | 334.06 | 563.6 | 334.07 |
| 564.67 | 334.11 | 565.93 | 334.12 | 568.28 | 334.15 | 571.61 | 334.15 | 572.17 | 334.14 |
| 572.57 | 334.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 233.48 | .04 | 439.02 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

233.48 439.02 18.12 19.01 21.15 .1 .3

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1060.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.54 | 2.14 | 338.54 | 3.19 | 338.48 | 4.54 | 338.42 | 5.06 | 338.4 |
| 5.26 | 338.4 | 5.85 | 338.38 | 6.28 | 338.36 | 6.73 | 338.33 | 7.26 | 338.32 |
| 10.16 | 338.31 | 10.61 | 338.29 | 12.79 | 338.29 | 13.24 | 338.27 | 13.7 | 338.27 |
| 15.99 | 338.25 | 16.52 | 338.23 | 16.79 | 338.23 | 18.21 | 338.21 | 19.26 | 338.21 |
| 20.17 | 338.23 | 21.29 | 338.28 | 25.76 | 338.09 | 25.99 | 338.07 | 26.44 | 338.04 |
| 27.98 | 337.96 | 28.49 | 337.94 | 29.96 | 337.86 | 30.04 | 337.85 | 30.99 | 337.8 |
| 32.24 | 337.75 | 35.76 | 337.27 | 36.05 | 337.22 | 36.81 | 337.1 | 37.39 | 336.97 |
| 39.49 | 336.45 | 39.72 | 336.4 | 40.16 | 336.35 | 40.34 | 336.32 | 41.4 | 336.2 |
| 45.43 | 335.68 | 45.9 | 335.6 | 46.07 | 335.55 | 47.42 | 335.48 | 48.26 | 335.43 |
| 48.54 | 335.42 | 49.76 | 335.45 | 51.14 | 335.5 | 51.43 | 335.52 | 51.96 | 335.58 |
| 53.07 | 335.69 | 54.29 | 335.78 | 55.83 | 335.91 | 56.67 | 335.96 | 57.13 | 335.97 |
| 57.8 | 336 | 57.92 | 335.99 | 59.47 | 335.92 | 60.36 | 335.86 | 60.39 | 335.85 |
| 61.22 | 335.75 | 64.08 | 335.43 | 64.68 | 335.38 | 65.39 | 335.35 | 65.78 | 335.25 |
| 66.52 | 335.09 | 66.9 | 334.97 | 67.3 | 334.92 | 68.85 | 334.72 | 69.28 | 334.66 |
| 72.78 | 334.36 | 72.8 | 334.35 | 73.58 | 334.31 | 74.05 | 334.29 | 76.06 | 334.26 |
| 76.18 | 334.24 | 78.12 | 334.18 | 78.39 | 334.16 | 79.46 | 334.02 | 81.13 | 333.82 |
| 83.88 | 333.45 | 84.57 | 333.37 | 85.27 | 333.3 | 85.81 | 333.26 | 86 | 333.25 |
| 87.1 | 333.15 | 90.71 | 332.8 | 91.44 | 332.72 | 93.29 | 332.52 | 95.33 | 332.36 |
| 98.41 | 332.2 | 100.43 | 332.1 | 103.02 | 331.97 | 103.38 | 331.96 | 106.02 | 331.83 |
| 106.99 | 331.79 | 112.34 | 331.6 | 112.72 | 331.58 | 113.18 | 331.57 | 113.44 | 331.55 |
| 114.15 | 331.53 | 114.65 | 331.51 | 115.66 | 331.5 | 116.42 | 331.49 | 117.31 | 331.49 |
| 117.87 | 331.5 | 118.29 | 331.53 | 120.17 | 331.53 | 121.27 | 331.51 | 123.3 | 331.49 |
| 124.9 | 331.43 | 126.93 | 331.34 | 127.01 | 331.24 | 127.55 | 331.21 | 131.63 | 330.94 |
| 133.08 | 330.9 | 133.25 | 330.92 | 135.15 | 331.04 | 135.86 | 331.08 | 136.94 | 331.08 |
| 137.65 | 331.06 | 138.39 | 331.01 | 138.64 | 331.01 | 138.97 | 330.99 | 139.65 | 330.97 |
| 145.3 | 330.65 | 149.28 | 330.43 | 150.64 | 330.36 | 151.26 | 330.33 | 153.08 | 330.25 |
| 154.58 | 330.2 | 155.56 | 330.17 | 158.69 | 330.1 | 159.92 | 330.08 | 162.87 | 330.03 |
| 163.13 | 330.03 | 163.85 | 330.01 | 165.07 | 329.98 | 165.29 | 329.97 | 165.56 | 329.97 |
| 166.35 | 329.96 | 166.97 | 329.96 | 167.07 | 329.95 | 167.7 | 329.95 | 169.09 | 329.94 |
| 170.25 | 329.94 | 170.61 | 329.95 | 171.48 | 329.95 | 174.71 | 329.9 | 175.64 | 329.89 |
| 176.09 | 329.88 | 176.85 | 329.87 | 177.43 | 329.87 | 177.95 | 329.88 | 179.41 | 329.88 |
| 180.76 | 329.86 | 181.22 | 329.85 | 182.67 | 329.84 | 183.34 | 329.84 | 183.49 | 329.83 |
| 188.12 | 329.83 | 189.77 | 329.85 | 189.88 | 329.85 | 191.19 | 329.87 | 191.52 | 329.88 |
| 191.94 | 329.88 | 192.04 | 329.89 | 192.77 | 329.89 | 194 | 329.91 | 194.91 | 329.91 |
| 198.78 | 329.92 | 205.08 | 329.94 | 206.15 | 329.94 | 207.8 | 329.95 | 209.18 | 329.96 |
| 209.46 | 329.96 | 210.97 | 329.97 | 212.8 | 329.97 | 214.58 | 329.96 | 216.08 | 329.95 |
| 216.85 | 329.95 | 220.7 | 329.94 | 220.89 | 329.94 | 222.21 | 329.93 | 223.17 | 329.91 |
| 224.21 | 329.85 | 224.4 | 329.85 | 226.05 | 329.83 | 229.52 | 329.83 | 234.83 | 329.81 |
| 236.87 | 329.81 | 240.08 | 329.79 | 241.28 | 329.79 | 243.44 | 329.77 | 243.7 | 329.76 |
| 246.36 | 329.74 | 246.44 | 329.77 | 246.57 | 329.78 | 249.4 | 329.78 | 252.19 | 329.57 |
| 252.9 | 329.51 | 253.49 | 329.47 | 253.69 | 329.45 | 255.53 | 329.31 | 255.74 | 329.31 |
| 256.95 | 329.29 | 257.44 | 329.28 | 258.6 | 329.25 | 259.62 | 329.23 | 260.41 | 329.21 |
| 260.92 | 329.2 | 261.09 | 329.19 | 262.12 | 329.16 | 262.76 | 329.15 | 263.36 | 329.13 |
| 264.91 | 329.07 | 266.82 | 328.98 | 267.34 | 328.94 | 269.05 | 328.87 | 271.23 | 328.77 |
| 271.73 | 328.75 | 272.88 | 328.75 | 273.49 | 328.74 | 274.8 | 328.74 | 275.29 | 328.69 |
| 275.65 | 328.66 | 276.64 | 328.6 | 276.8 | 328.6 | 277.27 | 328.62 | 277.46 | 328.62 |
| 278.53 | 328.57 | 278.84 | 328.55 | 279.4 | 328.57 | 280.09 | 328.68 | 280.71 | 328.7 |
| 281.84 | 328.7 | 283.34 | 328.68 | 285.48 | 328.63 | 288.25 | 328.57 | 289.09 | 328.56 |
| 291.11 | 328.51 | 291.49 | 328.51 | 292.53 | 328.5 | 293.02 | 328.49 | 295.43 | 328.4 |
| 297.26 | 328.35 | 297.67 | 328.33 | 299.11 | 328.29 | 299.66 | 328.29 | 300.12 | 328.28 |
| 302.49 | 328.27 | 302.74 | 328.26 | 302.96 | 328.27 | 303.41 | 328.3 | 305.08 | 328.3 |
| 305.49 | 328.31 | 305.97 | 328.31 | 306.24 | 328.33 | 308.46 | 328.38 | 309.16 | 328.41 |
| 309.59 | 328.48 | 309.97 | 328.55 | 310.4 | 328.6 | 311.36 | 328.69 | 311.84 | 328.74 |
| 314.11 | 328.91 | 315.74 | 329.03 | 318.68 | 329.23 | 320.39 | 329.23 | 321.16 | 329.27 |
| 322.32 | 329.35 | 322.71 | 329.37 | 324.13 | 329.42 | 324.34 | 329.43 | 324.57 | 329.42 |
| 324.82 | 329.43 | 325.34 | 329.44 | 325.75 | 329.44 | 326.31 | 329.45 | 327.09 | 329.45 |
| 327.99 | 329.44 | 328.56 | 329.43 | 329.13 | 329.43 | 329.94 | 329.41 | 332.07 | 329.35 |
| 332.2 | 329.34 | 334.28 | 329.25 | 336.05 | 329.17 | 337.67 | 329.09 | 338.21 | 329.07 |
| 339.63 | 329.04 | 340.02 | 329.03 | 341.75 | 329 | 341.98 | 328.95 | 342.95 | 328.91 |
| 343.08 | 328.9 | 343.9 | 328.86 | 345.4 | 328.88 | 347.55 | 328.89 | 350.46 | 328.99 |
| 353.86 | 329.1 | 354.33 | 329.11 | 356.05 | 329.17 | 358.79 | 329.25 | 359.78 | 329.29 |
| 361.32 | 329.34 | 361.78 | 329.36 | 362.76 | 329.43 | 363.47 | 329.45 | 365.07 | 329.49 |
| 365.77 | 329.51 | 366.25 | 329.53 | 366.82 | 329.54 | 367.37 | 329.56 | 369.04 | 329.59 |
| 369.67 | 329.59 | 369.86 | 329.6 | 370.01 | 329.59 | 371.05 | 329.59 | 371.17 | 329.57 |
| 371.95 | 329.57 | 372.36 | 329.56 | 372.9 | 329.56 | 373.08 | 329.57 | 373.4 | 329.57 |
| 373.58 | 329.58 | 373.92 | 329.56 | 374.42 | 329.52 | 375.11 | 329.47 | 375.4 | 329.46 |
| 375.97 | 329.43 | 376.58 | 329.45 | 377.53 | 329.47 | 377.95 | 329.44 | 377.98 | 329.45 |
| 378.36 | 329.43 | 378.71 | 329.43 | 380.27 | 329.39 | 381.34 | 329.37 | 381.56 | 329.35 |
| 385.37 | 329.24 | 385.8 | 329.17 | 386.07 | 329.11 | 386.31 | 329.04 | 386.79 | 329.02 |
| 387.75 | 328.97 | 389.25 | 328.97 | 391.96 | 329 | 392.6 | 329.01 | 393.14 | 329.01 |
| 396.41 | 329.05 | 397 | 329.05 | 399.62 | 329.02 | 401.89 | 328.99 | 402.28 | 329 |
| 402.67 | 329 | 404.42 | 329.02 | 404.74 | 329.01 | 405.68 | 329.01 | 406.3 | 329 |
| 408.12 | 329 | 408.73 | 329.01 | 409.65 | 329.03 | 410.3 | 329.04 | 411.28 | 329.05 |
| 413.89 | 329.11 | 416.2 | 329.17 | 417.98 | 329.21 | 422.38 | 329.35 | 423.47 | 329.39 |
| 426.17 | 329.45 | 427.14 | 329.47 | 428.49 | 329.5 | 429.15 | 329.51 | 432.37 | 329.53 |
| 432.51 | 329.51 | 433.48 | 329.47 | 433.81 | 329.46 | 434.32 | 329.45 | 438.92 | 329.57 |
| 439.87 | 329.6 | 440.74 | 329.61 | 442.24 | 329.64 | 443.65 | 329.66 | 444.43 | 329.66 |
| 445.53 | 329.73 | 447.99 | 329.84 | 449.63 | 329.88 | 449.71 | 329.88 | 452.36 | 329.95 |
| 452.68 | 329.96 | 453.55 | 329.97 | 454.53 | 329.99 | 455.27 | 330 | 457.7 | 330.04 |
| 459.65 | 330.08 | 460.46 | 330.09 | 465.87 | 330.19 | 466.59 | 330.21 | 467.49 | 330.21 |
| 468.62 | 330.23 | 473.68 | 330.26 | 475.99 | 330.28 | 478.49 | 330.32 | 479.67 | 330.34 |
| 480.73 | 330.37 | 481.2 | 330.38 | 482.05 | 330.38 | 482.23 | 330.39 | 482.6 | 330.4 |
| 482.71 | 330.41 | 483.41 | 330.44 | 484.25 | 330.47 | 486.51 | 330.51 | 486.79 | 330.52 |
| 487.64 | 330.54 | 489.61 | 330.58 | 491.61 | 330.61 | 494.38 | 330.66 | 495.94 | 330.71 |
| 496.15 | 330.71 | 497.28 | 330.73 | 498.14 | 330.75 | 498.69 | 330.74 | 499.04 | 330.73 |
| 499.25 | 330.71 | 499.86 | 330.62 | 500.13 | 330.62 | 501.18 | 330.66 | 502.78 | 330.73 |
| 503.13 | 330.74 | 503.41 | 330.74 | 505.19 | 330.79 | 506.19 | 330.81 | 507.42 | 330.86 |
| 507.78 | 330.86 | 508.04 | 330.85 | 512.98 | 330.94 | 514.77 | 330.98 | 515.5 | 330.98 |
| 517.81 | 331.02 | 518.29 | 331.03 | 519.56 | 331.05 | 519.85 | 331.06 | 519.89 | 331.07 |
| 520.25 | 331.08 | 520.46 | 331.08 | 520.74 | 331.1 | 521.14 | 331.12 | 525.34 | 331.28 |
| 526.19 | 331.31 | 526.92 | 331.33 | 528.79 | 331.39 | 529.94 | 331.42 | 532.59 | 331.51 |
| 532.85 | 331.52 | 533.56 | 331.56 | 535.38 | 331.64 | 535.96 | 331.66 | 536.52 | 331.69 |
| 536.95 | 331.7 | 538.05 | 331.75 | 540.35 | 331.9 | 540.55 | 331.91 | 542.85 | 332.06 |
| 543.45 | 332.08 | 545.38 | 332.2 | 546.31 | 332.27 | 547.87 | 332.34 | 551.79 | 332.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 555.65 | 332.84 | 556.56 | 332.9 | 556.67 | 332.9 | 556.94 | 332.92 | 557.65 | 332.95 |
| 559.49 | 333.07 | 560.78 | 333.12 | 563.58 | 333.26 | 563.93 | 333.27 | 564.19 | 333.29 |
| 565.16 | 333.34 | 566.78 | 333.4 | 566.84 | 333.4 | 568.15 | 333.46 | 569.67 | 333.52 |
| 570.04 | 333.54 | 570.33 | 333.55 | 573.74 | 333.7 | 574.04 | 333.72 | 575.3 | 333.75 |
| 575.59 | 333.76 | 576.86 | 333.77 | 579.25 | 333.8 | 582.63 | 333.8 | 583.2 | 333.79 |
| 583.61 | 333.79 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 241.28 | .04 | 447.99 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 241.28 | 447.99 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1041.97*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.35 | 2.21 | 338.35 | 3.29 | 338.29 | 4.69 | 338.21 | 5.22 | 338.2 |
| 5.43 | 338.19 | 6.04 | 338.17 | 6.95 | 338.13 | 7 | 338.12 | 7.5 | 338.11 |
| 10.49 | 338.1 | 10.96 | 338.08 | 13.2 | 338.08 | 13.67 | 338.06 | 14.15 | 338.06 |
| 16.51 | 338.04 | 17.33 | 338.01 | 18.8 | 338 | 19.88 | 338 | 20.82 | 338.02 |
| 21.98 | 338.08 | 26.59 | 337.88 | 26.83 | 337.86 | 27.3 | 337.83 | 28.89 | 337.75 |
| 29.41 | 337.72 | 30.93 | 337.64 | 31.01 | 337.63 | 31.99 | 337.59 | 33.28 | 337.53 |
| 36.46 | 337.08 | 36.92 | 337.01 | 37.22 | 336.97 | 38 | 336.84 | 38.6 | 336.7 |
| 40.76 | 336.16 | 41.01 | 336.1 | 41.46 | 336.04 | 42.74 | 335.89 | 46.9 | 335.34 |
| 47.39 | 335.26 | 47.56 | 335.21 | 48.95 | 335.14 | 49.82 | 335.09 | 50.11 | 335.08 |
| 51.36 | 335.11 | 51.68 | 335.12 | 52.79 | 335.17 | 53.09 | 335.19 | 53.64 | 335.26 |
| 54.78 | 335.37 | 56.05 | 335.48 | 57.64 | 335.62 | 58.5 | 335.69 | 58.98 | 335.7 |
| 59.67 | 335.74 | 59.8 | 335.73 | 61.39 | 335.66 | 62.31 | 335.59 | 62.34 | 335.59 |
| 63.2 | 335.49 | 66.15 | 335.19 | 66.77 | 335.14 | 67.5 | 335.13 | 67.91 | 335.02 |
| 68.67 | 334.85 | 69.06 | 334.72 | 69.48 | 334.67 | 71.08 | 334.46 | 71.52 | 334.4 |
| 75.13 | 334.06 | 75.96 | 334.01 | 76.44 | 333.99 | 77.87 | 333.96 | 78.52 | 333.96 |
| 78.64 | 333.94 | 80.28 | 333.9 | 80.9 | 333.87 | 80.92 | 333.86 | 82.03 | 333.72 |
| 83.75 | 333.52 | 86.59 | 333.16 | 87.3 | 333.08 | 88.02 | 333.01 | 88.59 | 332.97 |
| 88.79 | 332.96 | 89.02 | 332.93 | 89.92 | 332.85 | 93.64 | 332.5 | 94.4 | 332.43 |
| 96.31 | 332.23 | 98.42 | 332.07 | 101.6 | 331.9 | 103.68 | 331.8 | 106.35 | 331.68 |
| 106.72 | 331.66 | 109.45 | 331.54 | 110.45 | 331.49 | 115.97 | 331.3 | 116.37 | 331.29 |
| 116.5 | 331.28 | 117.11 | 331.26 | 117.84 | 331.24 | 118.36 | 331.22 | 119.4 | 331.21 |
| 120.19 | 331.2 | 121.1 | 331.2 | 121.68 | 331.21 | 122.12 | 331.25 | 124.06 | 331.25 |
| 127.28 | 331.22 | 128.94 | 331.15 | 131.04 | 331.07 | 131.11 | 330.96 | 131.67 | 330.92 |
| 135.89 | 330.64 | 136.66 | 330.63 | 137.39 | 330.61 | 137.56 | 330.62 | 139.52 | 330.77 |
| 140.25 | 330.81 | 141.37 | 330.82 | 142.1 | 330.79 | 142.87 | 330.75 | 143.46 | 330.73 |
| 144.1 | 330.7 | 144.17 | 330.7 | 150 | 330.37 | 154.11 | 330.15 | 154.72 | 330.11 |
| 155.51 | 330.07 | 156.15 | 330.03 | 158.03 | 329.96 | 159.58 | 329.91 | 160.59 | 329.87 |
| 163.82 | 329.79 | 165 | 329.77 | 165.1 | 329.77 | 168.13 | 329.71 | 168.4 | 329.71 |
| 169.15 | 329.69 | 170.41 | 329.66 | 170.63 | 329.65 | 170.91 | 329.65 | 171.73 | 329.64 |
| 172.03 | 329.64 | 172.37 | 329.63 | 173.13 | 329.63 | 174.56 | 329.62 | 177.02 | 329.62 |
| 180.36 | 329.59 | 181.19 | 329.57 | 181.78 | 329.57 | 182.57 | 329.56 | 183.17 | 329.56 |
| 184.26 | 329.58 | 185.21 | 329.58 | 186.61 | 329.56 | 187.08 | 329.56 | 188.58 | 329.55 |
| 189.27 | 329.55 | 189.43 | 329.54 | 193.24 | 329.54 | 195.1 | 329.56 | 195.91 | 329.56 |
| 196.02 | 329.57 | 197.37 | 329.59 | 197.71 | 329.59 | 198.15 | 329.6 | 199 | 329.61 |
| 200.27 | 329.63 | 201.21 | 329.63 | 205.21 | 329.64 | 211.72 | 329.66 | 212.81 | 329.67 |
| 214.52 | 329.68 | 215.95 | 329.69 | 216.24 | 329.69 | 217.79 | 329.7 | 219.68 | 329.71 |
| 221.52 | 329.7 | 228.03 | 329.7 | 229.4 | 329.69 | 230.39 | 329.68 | 231.46 | 329.62 |
| 231.66 | 329.62 | 232.38 | 329.61 | 233.36 | 329.6 | 239.63 | 329.6 | 242.42 | 329.59 |
| 244.53 | 329.59 | 247.85 | 329.57 | 249.09 | 329.57 | 251.23 | 329.55 | 251.48 | 329.54 |
| 252.89 | 329.53 | 254.12 | 329.52 | 254.15 | 329.54 | 254.32 | 329.56 | 257.13 | 329.56 |
| 259.89 | 329.32 | 260.6 | 329.27 | 261.38 | 329.2 | 263.19 | 329.05 | 263.4 | 329.04 |
| 264.6 | 329.02 | 265.09 | 329.01 | 266.24 | 328.98 | 267.25 | 328.96 | 268.03 | 328.93 |
| 268.71 | 328.92 | 269.72 | 328.89 | 269.86 | 328.88 | 270.36 | 328.87 | 270.95 | 328.84 |
| 271.47 | 328.83 | 271.95 | 328.81 | 272.49 | 328.78 | 273.34 | 328.74 | 274.16 | 328.71 |
| 274.36 | 328.69 | 274.61 | 328.68 | 274.89 | 328.66 | 279.24 | 328.48 | 280.38 | 328.47 |
| 281.68 | 328.47 | 282.28 | 328.46 | 284.1 | 328.31 | 284.73 | 328.34 | 285.97 | 328.28 |
| 286.28 | 328.26 | 286.84 | 328.28 | 287.16 | 328.34 | 287.52 | 328.4 | 287.9 | 328.42 |
| 288.13 | 328.42 | 288.51 | 328.43 | 289.25 | 328.43 | 290.74 | 328.41 | 292.86 | 328.36 |
| 295.6 | 328.31 | 296.44 | 328.29 | 298.43 | 328.25 | 298.81 | 328.25 | 299.83 | 328.23 |
| 300.32 | 328.23 | 302.71 | 328.14 | 304.52 | 328.08 | 306.03 | 328.04 | 306.61 | 328.02 |
| 307.35 | 328.02 | 309.7 | 328.01 | 309.95 | 328 | 310.17 | 328.01 | 310.62 | 328.04 |
| 311.35 | 328.04 | 311.77 | 328.03 | 312.32 | 328.03 | 312.74 | 328.05 | 313.22 | 328.05 |
| 313.49 | 328.07 | 314.8 | 328.1 | 315.74 | 328.13 | 316.45 | 328.15 | 317.26 | 328.28 |
| 317.7 | 328.33 | 318.67 | 328.42 | 318.96 | 328.45 | 319.16 | 328.46 | 321.46 | 328.63 |
| 323.86 | 328.79 | 326.08 | 328.94 | 326.78 | 328.94 | 327.81 | 328.95 | 328.59 | 328.98 |
| 329.76 | 329.07 | 330.16 | 329.09 | 331.6 | 329.14 | 331.81 | 329.15 | 332.29 | 329.15 |
| 333.24 | 329.17 | 333.81 | 329.18 | 335.51 | 329.18 | 336.66 | 329.16 | 337.48 | 329.14 |
| 338.16 | 329.13 | 339.63 | 329.09 | 339.76 | 329.08 | 341.88 | 328.99 | 343.67 | 328.91 |
| 345.3 | 328.83 | 345.85 | 328.81 | 347.28 | 328.79 | 347.68 | 328.78 | 349.43 | 328.75 |
| 349.72 | 328.7 | 350.14 | 328.69 | 350.65 | 328.67 | 351.18 | 328.64 | 351.6 | 328.63 |
| 353.13 | 328.64 | 355.3 | 328.66 | 358.25 | 328.75 | 361.69 | 328.87 | 362.16 | 328.88 |
| 363.9 | 328.94 | 366.67 | 329.03 | 367.68 | 329.06 | 369.24 | 329.12 | 369.7 | 329.14 |
| 370.69 | 329.22 | 371.41 | 329.24 | 373.03 | 329.27 | 373.74 | 329.29 | 374.22 | 329.31 |
| 374.62 | 329.32 | 374.81 | 329.33 | 377.05 | 329.37 | 377.23 | 329.37 | 377.69 | 329.38 |
| 378.04 | 329.38 | 378.56 | 329.37 | 379.09 | 329.37 | 379.14 | 329.35 | 379.34 | 329.35 |
| 379.52 | 329.34 | 381.14 | 329.34 | 381.65 | 329.36 | 381.99 | 329.34 | 382.5 | 329.29 |
| 383.2 | 329.24 | 383.49 | 329.23 | 384.06 | 329.2 | 384.69 | 329.21 | 385.64 | 329.24 |
| 386.07 | 329.21 | 386.09 | 329.22 | 386.48 | 329.2 | 386.84 | 329.2 | 388.42 | 329.16 |
| 389.5 | 329.14 | 389.72 | 329.12 | 393.57 | 329.01 | 394.01 | 328.95 | 394.29 | 328.89 |
| 394.53 | 328.83 | 395.01 | 328.81 | 395.99 | 328.76 | 396.72 | 328.75 | 397.34 | 328.76 |
| 398.43 | 328.77 | 400.25 | 328.78 | 400.9 | 328.79 | 401.44 | 328.79 | 404.75 | 328.82 |
| 405.35 | 328.81 | 408 | 328.78 | 410.29 | 328.74 | 410.69 | 328.75 | 411.09 | 328.75 |
| 412.85 | 328.76 | 414.13 | 328.76 | 414.76 | 328.75 | 416.27 | 328.75 | 416.6 | 328.76 |
| 417.22 | 328.77 | 418.15 | 328.78 | 418.81 | 328.79 | 419.8 | 328.81 | 422.44 | 328.87 |
| 424.77 | 328.92 | 426.58 | 328.97 | 431.03 | 329.11 | 432.14 | 329.15 | 434.87 | 329.21 |
| 435.85 | 329.23 | 437.22 | 329.26 | 437.88 | 329.28 | 439.53 | 329.28 | 441.15 | 329.29 |
| 441.82 | 329.25 | 442.26 | 329.23 | 442.6 | 329.21 | 443.12 | 329.21 | 447.78 | 329.34 |
| 448.74 | 329.36 | 449.61 | 329.38 | 451.14 | 329.41 | 452.56 | 329.44 | 453.35 | 329.44 |
| 454.47 | 329.52 | 456.95 | 329.62 | 458.61 | 329.66 | 458.7 | 329.66 | 461.39 | 329.72 |
| 461.71 | 329.73 | 462.59 | 329.74 | 463.59 | 329.76 | 464.34 | 329.77 | 465.57 | 329.79 |
| 466.81 | 329.8 | 468.79 | 329.84 | 469.62 | 329.85 | 475.11 | 329.94 | 475.84 | 329.96 |
| 476.75 | 329.96 | 477.9 | 329.97 | 483.03 | 329.99 | 485.38 | 330.01 | 487.92 | 330.04 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 489.12 | 330.07 | 490.68 | 330.1 | 491.02 | 330.1 | 491.22 | 330.11 | 491.53 | 330.1 |
| 492.1 | 330.13 | 492.21 | 330.13 | 492.92 | 330.16 | 493.45 | 330.19 | 493.77 | 330.2 |
| 496.06 | 330.23 | 496.79 | 330.26 | 497.21 | 330.26 | 499.21 | 330.3 | 501.24 | 330.33 |
| 504.06 | 330.39 | 505.64 | 330.43 | 505.85 | 330.43 | 507 | 330.45 | 507.86 | 330.47 |
| 508.43 | 330.46 | 508.78 | 330.45 | 509 | 330.43 | 509.62 | 330.33 | 509.89 | 330.33 |
| 510.96 | 330.38 | 512.58 | 330.44 | 512.76 | 330.45 | 512.93 | 330.45 | 513.22 | 330.47 |
| 515.03 | 330.52 | 516.04 | 330.54 | 517.29 | 330.59 | 517.92 | 330.59 | 522.94 | 330.68 |
| 524.76 | 330.71 | 525.49 | 330.72 | 527.84 | 330.76 | 528.33 | 330.77 | 529.62 | 330.8 |
| 529.8 | 330.8 | 529.95 | 330.81 | 530.32 | 330.82 | 530.53 | 330.82 | 530.9 | 330.85 |
| 531.22 | 330.86 | 535.74 | 331.04 | 536.34 | 331.07 | 537.09 | 331.08 | 538.05 | 331.12 |
| 538.99 | 331.15 | 540.15 | 331.19 | 543.11 | 331.3 | 543.83 | 331.34 | 545.68 | 331.42 |
| 546.84 | 331.48 | 547.27 | 331.49 | 548.39 | 331.54 | 549.79 | 331.63 | 550.26 | 331.67 |
| 550.73 | 331.7 | 550.93 | 331.7 | 553.27 | 331.84 | 553.87 | 331.86 | 555.83 | 331.98 |
| 556.78 | 332.04 | 558.36 | 332.11 | 562.34 | 332.36 | 566.26 | 332.59 | 568.28 | 332.7 |
| 570.16 | 332.81 | 571.47 | 332.86 | 574.31 | 332.97 | 574.66 | 332.99 | 575.92 | 333.04 |
| 577.56 | 333.1 | 577.62 | 333.1 | 578.95 | 333.15 | 580.49 | 333.21 | 581.16 | 333.23 |
| 584.62 | 333.37 | 586.62 | 333.42 | 590.22 | 333.45 | 593.65 | 333.45 | 594.23 | 333.44 |
| 594.64 | 333.45 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 249.09 | .04 | 456.95 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 249.09 | 456.95 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1022.96*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.15 | 2.28 | 338.15 | 4.84 | 338.01 | 5.39 | 338 | 5.6 | 337.99 |
| 6.23 | 337.97 | 6.68 | 337.94 | 7.17 | 337.92 | 7.22 | 337.91 | 7.73 | 337.9 |
| 10.82 | 337.89 | 11.3 | 337.87 | 13.62 | 337.87 | 14.1 | 337.85 | 14.59 | 337.85 |
| 17.03 | 337.83 | 17.87 | 337.8 | 19.39 | 337.79 | 20.5 | 337.79 | 21.48 | 337.82 |
| 22.67 | 337.88 | 27.42 | 337.67 | 27.67 | 337.65 | 28.16 | 337.62 | 29.79 | 337.54 |
| 30.33 | 337.51 | 31.9 | 337.43 | 31.98 | 337.42 | 32.99 | 337.37 | 34.32 | 337.31 |
| 37.6 | 336.83 | 38.07 | 336.76 | 39.19 | 336.58 | 39.8 | 336.43 | 40.14 | 336.34 |
| 42.04 | 335.86 | 42.29 | 335.8 | 42.82 | 335.73 | 42.95 | 335.72 | 44.08 | 335.58 |
| 48.37 | 335.01 | 48.87 | 334.92 | 49.05 | 334.87 | 50.49 | 334.79 | 51.39 | 334.75 |
| 51.68 | 334.74 | 52.97 | 334.77 | 53.3 | 334.78 | 54.45 | 334.84 | 54.76 | 334.86 |
| 55.33 | 334.94 | 56.5 | 335.06 | 57.21 | 335.13 | 57.81 | 335.18 | 59.44 | 335.34 |
| 60.33 | 335.41 | 60.82 | 335.43 | 61.54 | 335.47 | 62.13 | 335.44 | 63.32 | 335.4 |
| 64.26 | 335.33 | 64.3 | 335.33 | 65.18 | 335.24 | 68.22 | 334.94 | 68.87 | 334.9 |
| 69.62 | 334.9 | 70.04 | 334.79 | 70.82 | 334.61 | 71.23 | 334.48 | 71.66 | 334.42 |
| 73.76 | 334.14 | 77.49 | 333.77 | 78.34 | 333.71 | 78.84 | 333.69 | 80.31 | 333.66 |
| 80.98 | 333.66 | 81.11 | 333.65 | 83.18 | 333.59 | 83.46 | 333.57 | 84.6 | 333.43 |
| 86.38 | 333.23 | 89.3 | 332.86 | 90.04 | 332.78 | 90.78 | 332.71 | 91.37 | 332.67 |
| 91.57 | 332.66 | 92.74 | 332.56 | 96.58 | 332.21 | 97.36 | 332.13 | 99.33 | 331.94 |
| 101.5 | 331.77 | 104.78 | 331.61 | 106.93 | 331.51 | 109.69 | 331.38 | 110.07 | 331.36 |
| 112.88 | 331.24 | 113.92 | 331.19 | 119.61 | 331 | 120.5 | 330.98 | 120.77 | 330.96 |
| 121.54 | 330.95 | 122.07 | 330.93 | 123.14 | 330.92 | 123.96 | 330.91 | 124.89 | 330.91 |
| 125.49 | 330.93 | 125.94 | 330.97 | 126.68 | 330.98 | 127.95 | 330.98 | 130.16 | 330.96 |
| 131.27 | 330.96 | 132.98 | 330.88 | 135.15 | 330.79 | 135.22 | 330.68 | 135.8 | 330.64 |
| 140.14 | 330.35 | 140.94 | 330.34 | 141.69 | 330.32 | 141.87 | 330.33 | 143.89 | 330.49 |
| 144.64 | 330.54 | 145.8 | 330.55 | 146.56 | 330.52 | 147.34 | 330.48 | 147.6 | 330.47 |
| 148.62 | 330.44 | 148.69 | 330.43 | 154.7 | 330.1 | 158.94 | 329.86 | 159.56 | 329.83 |
| 161.04 | 329.74 | 162.98 | 329.67 | 164.58 | 329.61 | 165.62 | 329.58 | 168.95 | 329.49 |
| 170.17 | 329.46 | 170.27 | 329.46 | 173.4 | 329.4 | 174.45 | 329.37 | 175.75 | 329.34 |
| 175.98 | 329.33 | 176.27 | 329.33 | 177.11 | 329.32 | 177.39 | 329.31 | 178.55 | 329.31 |
| 180.03 | 329.3 | 182.57 | 329.3 | 186.01 | 329.27 | 187 | 329.26 | 187.48 | 329.25 |
| 188.91 | 329.25 | 190.04 | 329.27 | 190.31 | 329.27 | 191.01 | 329.28 | 191.79 | 329.27 |
| 192.46 | 329.27 | 192.94 | 329.26 | 195.2 | 329.26 | 195.36 | 329.25 | 197.43 | 329.25 |
| 198.34 | 329.26 | 200.29 | 329.26 | 202.04 | 329.28 | 202.16 | 329.28 | 203.56 | 329.3 |
| 204.36 | 329.32 | 205.24 | 329.33 | 206.55 | 329.35 | 207.01 | 329.36 | 207.51 | 329.35 |
| 211.64 | 329.36 | 218.35 | 329.39 | 219.48 | 329.4 | 221.24 | 329.41 | 222.71 | 329.42 |
| 223.01 | 329.42 | 224.61 | 329.44 | 226.56 | 329.45 | 235.18 | 329.45 | 236.59 | 329.46 |
| 237.61 | 329.45 | 238.72 | 329.39 | 239.67 | 329.38 | 244.36 | 329.38 | 247.14 | 329.37 |
| 250.02 | 329.37 | 252.19 | 329.36 | 255.62 | 329.35 | 256.89 | 329.35 | 259.01 | 329.33 |
| 259.27 | 329.32 | 261.87 | 329.3 | 261.95 | 329.33 | 262.08 | 329.34 | 264.85 | 329.34 |
| 267.59 | 329.08 | 268.86 | 328.97 | 270.86 | 328.78 | 271.07 | 328.78 | 271.69 | 328.77 |
| 272.25 | 328.75 | 272.74 | 328.74 | 273.88 | 328.71 | 274.88 | 328.68 | 275.65 | 328.66 |
| 276.15 | 328.65 | 276.32 | 328.64 | 277.32 | 328.61 | 277.46 | 328.61 | 277.95 | 328.59 |
| 278.54 | 328.56 | 279.05 | 328.55 | 279.54 | 328.52 | 280.06 | 328.5 | 281.93 | 328.41 |
| 282.16 | 328.39 | 282.44 | 328.38 | 286.26 | 328.22 | 286.75 | 328.21 | 287.87 | 328.2 |
| 289.17 | 328.2 | 289.76 | 328.19 | 290.24 | 328.14 | 291.57 | 328.03 | 292.18 | 328.06 |
| 293.42 | 327.99 | 293.72 | 327.97 | 294.28 | 328 | 294.95 | 328.13 | 295.33 | 328.15 |
| 295.93 | 328.15 | 296.67 | 328.16 | 298.13 | 328.14 | 300.24 | 328.09 | 302.95 | 328.04 |
| 303.78 | 328.02 | 305.75 | 327.99 | 306.13 | 327.98 | 307.14 | 327.97 | 307.63 | 327.97 |
| 309.99 | 327.88 | 311.78 | 327.82 | 313.28 | 327.78 | 313.6 | 327.76 | 314.14 | 327.76 |
| 314.59 | 327.75 | 316.92 | 327.74 | 317.16 | 327.73 | 317.38 | 327.74 | 317.84 | 327.78 |
| 318.58 | 327.78 | 319 | 327.77 | 319.56 | 327.77 | 320.47 | 327.79 | 321.18 | 327.82 |
| 322.07 | 327.84 | 323.02 | 327.87 | 323.73 | 327.9 | 324.17 | 327.96 | 324.56 | 328.02 |
| 325.99 | 328.15 | 326.28 | 328.18 | 326.48 | 328.19 | 328.81 | 328.35 | 331.23 | 328.51 |
| 333.48 | 328.65 | 333.75 | 328.65 | 334.2 | 328.66 | 335.23 | 328.66 | 336.03 | 328.7 |
| 337.21 | 328.78 | 337.61 | 328.81 | 339.29 | 328.88 | 339.52 | 328.87 | 339.77 | 328.88 |
| 341.3 | 328.91 | 343.02 | 328.91 | 343.6 | 328.9 | 344.19 | 328.9 | 345.02 | 328.88 |
| 345.71 | 328.86 | 347.2 | 328.82 | 347.33 | 328.82 | 349.47 | 328.73 | 351.28 | 328.65 |
| 352.93 | 328.58 | 353.49 | 328.55 | 354.94 | 328.53 | 355.34 | 328.53 | 357.11 | 328.5 |
| 357.35 | 328.46 | 357.82 | 328.45 | 358.34 | 328.43 | 358.48 | 328.42 | 358.88 | 328.41 |
| 358.93 | 328.4 | 359.31 | 328.39 | 360.85 | 328.41 | 363.05 | 328.42 | 366.03 | 328.52 |
| 369.52 | 328.64 | 369.99 | 328.65 | 371.76 | 328.71 | 374.56 | 328.81 | 375.58 | 328.84 |
| 377.16 | 328.9 | 377.63 | 328.92 | 378.62 | 329 | 379.35 | 329.02 | 380.99 | 329.06 |
| 381.72 | 329.07 | 382.2 | 329.09 | 382.6 | 329.1 | 382.79 | 329.11 | 385.06 | 329.15 |
| 385.7 | 329.16 | 386.06 | 329.16 | 386.59 | 329.15 | 387.12 | 329.15 | 387.24 | 329.12 |
| 387.38 | 329.13 | 387.56 | 329.12 | 388.46 | 329.12 | 388.68 | 329.11 | 389.01 | 329.11 |
| 389.52 | 329.13 | 389.82 | 329.13 | 390.57 | 329.07 | 391.13 | 329.02 | 391.58 | 328.99 |
| 392.16 | 328.96 | 392.79 | 328.98 | 393.75 | 329.02 | 394.18 | 328.98 | 394.21 | 328.99 |
| 394.6 | 328.97 | 394.97 | 328.97 | 396.57 | 328.93 | 397.66 | 328.91 | 397.88 | 328.9 |
| 401.78 | 328.78 | 402.22 | 328.72 | 402.51 | 328.67 | 402.75 | 328.62 | 403.23 | 328.6 |
| 404.22 | 328.54 | 404.96 | 328.54 | 405.59 | 328.55 | 406.69 | 328.55 | 408.54 | 328.56 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 409.19 | 328.57 | 409.75 | 328.57 | 413.09 | 328.59 | 413.7 | 328.58 | 416.38 | 328.54 |
| 418.7 | 328.5 | 419.51 | 328.5 | 421.29 | 328.51 | 422.58 | 328.51 | 423.22 | 328.5 |
| 424.74 | 328.5 | 425.09 | 328.51 | 425.71 | 328.52 | 426.66 | 328.53 | 427.31 | 328.54 |
| 428.32 | 328.56 | 430.99 | 328.62 | 433.35 | 328.68 | 435.18 | 328.73 | 439.69 | 328.87 |
| 440.81 | 328.91 | 443.57 | 328.97 | 444.56 | 329 | 445.95 | 329.03 | 446.62 | 329.04 |
| 448.29 | 329.04 | 449.92 | 329.05 | 450.6 | 329.01 | 451.05 | 328.98 | 451.92 | 328.96 |
| 456.63 | 329.1 | 457.6 | 329.13 | 458.49 | 329.15 | 460.03 | 329.19 | 461.47 | 329.21 |
| 461.58 | 329.22 | 462.21 | 329.22 | 462.27 | 329.23 | 463.4 | 329.3 | 465.91 | 329.4 |
| 467.6 | 329.43 | 467.69 | 329.44 | 470.42 | 329.49 | 470.75 | 329.5 | 471.64 | 329.52 |
| 472.65 | 329.53 | 473.41 | 329.54 | 474.66 | 329.55 | 475.92 | 329.57 | 477.93 | 329.6 |
| 478.77 | 329.61 | 484.34 | 329.69 | 485.09 | 329.71 | 486.01 | 329.71 | 487.18 | 329.72 |
| 492.39 | 329.73 | 494.77 | 329.75 | 497.35 | 329.77 | 498.57 | 329.8 | 499.66 | 329.82 |
| 500.15 | 329.82 | 500.38 | 329.83 | 500.7 | 329.83 | 501.02 | 329.82 | 501.59 | 329.85 |
| 501.7 | 329.86 | 502.42 | 329.89 | 503.29 | 329.92 | 505.61 | 329.96 | 505.9 | 329.96 |
| 506.35 | 329.98 | 506.78 | 329.99 | 510.87 | 330.05 | 513.73 | 330.11 | 515.33 | 330.15 |
| 515.55 | 330.15 | 516.71 | 330.17 | 517.59 | 330.19 | 518.52 | 330.17 | 518.74 | 330.15 |
| 519.38 | 330.04 | 519.65 | 330.04 | 520.73 | 330.09 | 522.38 | 330.16 | 522.74 | 330.17 |
| 523.03 | 330.19 | 524.52 | 330.23 | 525.9 | 330.27 | 527.16 | 330.32 | 527.8 | 330.32 |
| 532.89 | 330.41 | 534.74 | 330.45 | 535.49 | 330.46 | 537.87 | 330.5 | 539.68 | 330.54 |
| 540.4 | 330.56 | 540.44 | 330.57 | 540.89 | 330.58 | 540.97 | 330.59 | 541.3 | 330.6 |
| 545.63 | 330.78 | 545.88 | 330.8 | 546.5 | 330.82 | 547.26 | 330.84 | 548.23 | 330.88 |
| 548.53 | 330.89 | 549.18 | 330.92 | 550.37 | 330.96 | 553.1 | 331.07 | 553.37 | 331.08 |
| 554.1 | 331.12 | 555.98 | 331.21 | 557.15 | 331.27 | 557.85 | 331.29 | 558.73 | 331.34 |
| 559.03 | 331.35 | 560.15 | 331.42 | 560.63 | 331.46 | 561.31 | 331.5 | 563.68 | 331.63 |
| 564.3 | 331.65 | 566.28 | 331.76 | 567.25 | 331.81 | 568.85 | 331.88 | 572.89 | 332.12 |
| 576.87 | 332.34 | 577.8 | 332.39 | 577.91 | 332.4 | 578.92 | 332.44 | 580.83 | 332.55 |
| 582.15 | 332.59 | 585.04 | 332.69 | 585.4 | 332.7 | 586.67 | 332.75 | 588.34 | 332.8 |
| 589.74 | 332.84 | 591.31 | 332.89 | 592 | 332.91 | 595.51 | 333.03 | 596.29 | 333.05 |
| 597.12 | 333.06 | 597.54 | 333.07 | 601.18 | 333.1 | 604.67 | 333.1 | 605.25 | 333.09 |
| 605.68 | 333.1 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 256.89 | .04 | 465.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 256.89 | 465.91 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 1003.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.96 | 2.34 | 337.96 | 3.5 | 337.89 | 4.99 | 337.81 | 5.55 | 337.79 |
| 5.77 | 337.79 | 6.89 | 337.74 | 7.39 | 337.71 | 7.97 | 337.69 | 11.08 | 337.68 |
| 11.15 | 337.67 | 11.64 | 337.66 | 14.03 | 337.66 | 14.53 | 337.64 | 15.03 | 337.64 |
| 17.54 | 337.62 | 18.42 | 337.59 | 19.98 | 337.58 | 21.13 | 337.58 | 22.13 | 337.61 |
| 23.14 | 337.67 | 23.36 | 337.68 | 28.26 | 337.46 | 28.51 | 337.44 | 29.01 | 337.41 |
| 30.7 | 337.33 | 32.87 | 337.21 | 32.95 | 337.21 | 33.99 | 337.16 | 35.37 | 337.09 |
| 38.75 | 336.58 | 39.23 | 336.51 | 39.55 | 336.45 | 40.38 | 336.31 | 41.01 | 336.15 |
| 41.36 | 336.07 | 43.32 | 335.56 | 43.58 | 335.5 | 44.13 | 335.43 | 44.25 | 335.42 |
| 45.41 | 335.27 | 49.84 | 334.67 | 50.36 | 334.58 | 50.54 | 334.53 | 52.02 | 334.45 |
| 52.95 | 334.41 | 53.25 | 334.39 | 54.58 | 334.44 | 54.92 | 334.45 | 56.1 | 334.51 |
| 56.42 | 334.53 | 57.01 | 334.61 | 58.22 | 334.75 | 58.95 | 334.82 | 59.56 | 334.89 |
| 61.25 | 335.06 | 61.77 | 335.11 | 62.17 | 335.14 | 62.67 | 335.16 | 63.2 | 335.2 |
| 63.41 | 335.21 | 63.54 | 335.2 | 64.02 | 335.18 | 65.24 | 335.14 | 66.21 | 335.07 |
| 66.25 | 335.07 | 67.16 | 334.98 | 70.3 | 334.7 | 70.96 | 334.67 | 71.73 | 334.67 |
| 72.17 | 334.56 | 72.97 | 334.37 | 73.39 | 334.23 | 75.53 | 333.94 | 76 | 333.88 |
| 79.84 | 333.47 | 80.72 | 333.41 | 81.23 | 333.4 | 82.75 | 333.36 | 83.57 | 333.35 |
| 85.31 | 333.3 | 85.71 | 333.29 | 85.99 | 333.27 | 87.17 | 333.13 | 89 | 332.93 |
| 92.77 | 332.48 | 93.54 | 332.41 | 94.35 | 332.37 | 94.59 | 332.34 | 95.55 | 332.26 |
| 99.51 | 331.92 | 100.32 | 331.84 | 102.34 | 331.65 | 104.58 | 331.48 | 107.96 | 331.31 |
| 110.18 | 331.21 | 113.02 | 331.08 | 113.41 | 331.06 | 116.31 | 330.94 | 117.38 | 330.89 |
| 123.24 | 330.71 | 123.66 | 330.69 | 123.81 | 330.69 | 124.44 | 330.67 | 125.23 | 330.65 |
| 125.78 | 330.64 | 126.88 | 330.63 | 127.72 | 330.62 | 128.69 | 330.63 | 129.31 | 330.65 |
| 129.77 | 330.69 | 130.53 | 330.7 | 131.83 | 330.7 | 133.04 | 330.69 | 135.26 | 330.69 |
| 137.02 | 330.61 | 139.25 | 330.52 | 139.33 | 330.4 | 139.92 | 330.36 | 144.4 | 330.05 |
| 145.22 | 330.04 | 146 | 330.02 | 146.18 | 330.04 | 148.26 | 330.21 | 149.04 | 330.27 |
| 150.23 | 330.28 | 151.01 | 330.25 | 151.82 | 330.21 | 152.09 | 330.2 | 153.13 | 330.17 |
| 153.2 | 330.17 | 159.4 | 329.82 | 163.77 | 329.57 | 164.41 | 329.54 | 165.94 | 329.45 |
| 167.93 | 329.38 | 170.66 | 329.28 | 174.09 | 329.18 | 175.34 | 329.15 | 175.44 | 329.15 |
| 178.67 | 329.08 | 178.96 | 329.08 | 179.75 | 329.06 | 181.09 | 329.02 | 181.32 | 329.01 |
| 181.62 | 329.01 | 182.49 | 329 | 182.78 | 328.99 | 183.17 | 328.99 | 183.28 | 328.98 |
| 185.5 | 328.98 | 185.66 | 328.97 | 186.77 | 328.97 | 187.17 | 328.98 | 188.12 | 328.98 |
| 191.66 | 328.96 | 192.68 | 328.95 | 193.17 | 328.94 | 194.64 | 328.94 | 195.22 | 328.95 |
| 195.81 | 328.97 | 196.09 | 328.97 | 196.81 | 328.98 | 197.62 | 328.97 | 198.3 | 328.97 |
| 198.8 | 328.96 | 200.4 | 328.97 | 201.3 | 328.97 | 201.91 | 328.96 | 202.61 | 328.97 |
| 205.35 | 328.97 | 208.3 | 329 | 209.74 | 329.02 | 210.57 | 329.04 | 211.47 | 329.05 |
| 212.82 | 329.07 | 213.3 | 329.08 | 218.07 | 329.08 | 224.98 | 329.12 | 226.15 | 329.13 |
| 227.96 | 329.14 | 229.48 | 329.15 | 229.79 | 329.16 | 231.44 | 329.17 | 235.4 | 329.19 |
| 237.05 | 329.19 | 237.89 | 329.2 | 242.12 | 329.21 | 242.32 | 329.21 | 243.77 | 329.22 |
| 244.83 | 329.21 | 245.97 | 329.16 | 246.18 | 329.16 | 246.95 | 329.15 | 254.65 | 329.15 |
| 257.61 | 329.14 | 259.85 | 329.14 | 263.38 | 329.13 | 264.24 | 329.13 | 264.7 | 329.12 |
| 266.79 | 329.11 | 267.05 | 329.11 | 269.63 | 329.09 | 269.71 | 329.11 | 269.93 | 329.12 |
| 270.42 | 329.11 | 272.58 | 329.11 | 275.29 | 328.84 | 276.75 | 328.69 | 278.53 | 328.52 |
| 278.73 | 328.51 | 279.35 | 328.5 | 279.9 | 328.48 | 280.38 | 328.47 | 281.51 | 328.44 |
| 282.5 | 328.41 | 283.27 | 328.39 | 283.77 | 328.37 | 283.93 | 328.37 | 284.92 | 328.33 |
| 285.06 | 328.33 | 285.55 | 328.31 | 286.13 | 328.28 | 287.64 | 328.22 | 289.28 | 328.14 |
| 289.47 | 328.12 | 291.66 | 328.04 | 293.78 | 327.95 | 294.26 | 327.94 | 295.37 | 327.93 |
| 295.97 | 327.93 | 296.65 | 327.92 | 297.24 | 327.92 | 298.07 | 327.83 | 299.03 | 327.75 |
| 299.18 | 327.75 | 299.64 | 327.78 | 299.83 | 327.77 | 301.16 | 327.68 | 301.71 | 327.71 |
| 302.37 | 327.85 | 302.98 | 327.88 | 304.83 | 327.88 | 305.53 | 327.87 | 307.61 | 327.83 |
| 310.3 | 327.77 | 311.12 | 327.76 | 313.08 | 327.72 | 313.45 | 327.72 | 314.45 | 327.71 |
| 314.93 | 327.71 | 317.27 | 327.62 | 319.04 | 327.56 | 319.45 | 327.55 | 321.1 | 327.49 |
| 321.82 | 327.49 | 324.13 | 327.48 | 324.37 | 327.47 | 324.6 | 327.48 | 324.91 | 327.51 |
| 326.8 | 327.51 | 327.72 | 327.53 | 328.43 | 327.56 | 329.34 | 327.58 | 330.29 | 327.61 |
| 331.02 | 327.65 | 331.47 | 327.7 | 331.86 | 327.75 | 332.31 | 327.8 | 333.8 | 327.92 |
| 336.15 | 328.08 | 337.84 | 328.18 | 338.61 | 328.22 | 340.89 | 328.35 | 341.15 | 328.36 |
| 341.61 | 328.37 | 342.65 | 328.38 | 343.46 | 328.42 | 344.65 | 328.5 | 346.76 | 328.6 |
| 346.99 | 328.59 | 347.25 | 328.6 | 348.22 | 328.62 | 348.8 | 328.64 | 351.12 | 328.64 |
| 351.72 | 328.63 | 352.55 | 328.62 | 354.76 | 328.56 | 354.89 | 328.56 | 357.06 | 328.48 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 358.89 | 328.39 | 360.56 | 328.32 | 361.13 | 328.29 | 362.59 | 328.28 | 363 | 328.27 |
| 364.15 | 328.26 | 364.79 | 328.24 | 365.09 | 328.21 | 366.04 | 328.19 | 366.17 | 328.18 |
| 367.02 | 328.16 | 368.58 | 328.17 | 370.81 | 328.18 | 373.82 | 328.28 | 377.35 | 328.41 |
| 377.83 | 328.42 | 379.61 | 328.49 | 382.45 | 328.58 | 383.48 | 328.62 | 385.08 | 328.68 |
| 385.55 | 328.7 | 386.56 | 328.78 | 387.3 | 328.8 | 388.95 | 328.84 | 389.69 | 328.85 |
| 390.18 | 328.87 | 390.58 | 328.88 | 390.77 | 328.89 | 391.91 | 328.91 | 393.16 | 328.93 |
| 393.26 | 328.94 | 394.08 | 328.94 | 395.16 | 328.92 | 395.28 | 328.9 | 396.08 | 328.9 |
| 396.51 | 328.89 | 397.07 | 328.89 | 397.26 | 328.9 | 397.59 | 328.9 | 397.78 | 328.91 |
| 398.12 | 328.89 | 399.21 | 328.79 | 399.67 | 328.76 | 400.25 | 328.73 | 400.89 | 328.75 |
| 401.87 | 328.79 | 402.3 | 328.76 | 402.73 | 328.74 | 403.1 | 328.74 | 404.71 | 328.7 |
| 405.82 | 328.68 | 406.04 | 328.67 | 409.99 | 328.55 | 410.44 | 328.5 | 410.72 | 328.46 |
| 410.97 | 328.41 | 411.46 | 328.38 | 412.46 | 328.33 | 413.21 | 328.32 | 413.84 | 328.34 |
| 414.01 | 328.33 | 414.96 | 328.34 | 416.82 | 328.35 | 418.05 | 328.35 | 421.43 | 328.36 |
| 422.04 | 328.35 | 424.76 | 328.3 | 427.11 | 328.25 | 427.92 | 328.25 | 429.73 | 328.26 |
| 431.04 | 328.26 | 431.68 | 328.25 | 433.22 | 328.25 | 433.57 | 328.26 | 434.2 | 328.27 |
| 435.16 | 328.28 | 435.82 | 328.3 | 436.84 | 328.31 | 439.54 | 328.38 | 441.93 | 328.43 |
| 443.79 | 328.48 | 448.34 | 328.63 | 449.47 | 328.67 | 452.26 | 328.74 | 453.27 | 328.76 |
| 454.68 | 328.79 | 455.35 | 328.8 | 457.04 | 328.81 | 458.7 | 328.81 | 459.39 | 328.77 |
| 459.84 | 328.74 | 460.18 | 328.73 | 460.72 | 328.72 | 465.48 | 328.87 | 466.47 | 328.89 |
| 467.36 | 328.92 | 468.93 | 328.96 | 470.92 | 329 | 471.19 | 329.01 | 472.33 | 329.08 |
| 474.88 | 329.18 | 476.59 | 329.21 | 476.68 | 329.21 | 479.45 | 329.27 | 479.78 | 329.27 |
| 480.69 | 329.29 | 481.72 | 329.3 | 482.49 | 329.3 | 483.76 | 329.32 | 485.03 | 329.33 |
| 487.07 | 329.35 | 487.09 | 329.36 | 487.93 | 329.37 | 493.58 | 329.44 | 494.33 | 329.46 |
| 495.27 | 329.46 | 496.46 | 329.47 | 501.74 | 329.46 | 504.17 | 329.48 | 506.77 | 329.5 |
| 508.01 | 329.52 | 509.62 | 329.55 | 510.5 | 329.55 | 510.69 | 329.56 | 511.08 | 329.57 |
| 511.2 | 329.58 | 511.93 | 329.61 | 512.48 | 329.64 | 512.8 | 329.65 | 515.17 | 329.68 |
| 515.46 | 329.68 | 515.92 | 329.7 | 516.34 | 329.71 | 520.5 | 329.77 | 523.4 | 329.83 |
| 525.03 | 329.87 | 525.24 | 329.87 | 526.43 | 329.89 | 527.32 | 329.91 | 527.9 | 329.9 |
| 528.26 | 329.89 | 528.49 | 329.86 | 529.13 | 329.75 | 529.41 | 329.75 | 530.51 | 329.8 |
| 532.37 | 329.89 | 532.54 | 329.89 | 532.84 | 329.91 | 534.35 | 329.96 | 535.75 | 330 |
| 536.23 | 330.02 | 537.03 | 330.06 | 537.68 | 330.06 | 542.85 | 330.15 | 544.72 | 330.18 |
| 546.11 | 330.2 | 549.73 | 330.28 | 550.08 | 330.29 | 550.45 | 330.31 | 550.67 | 330.31 |
| 551.38 | 330.35 | 555.77 | 330.54 | 556.66 | 330.58 | 557.43 | 330.6 | 558.42 | 330.64 |
| 558.72 | 330.65 | 559.38 | 330.68 | 560.58 | 330.73 | 563.36 | 330.85 | 563.63 | 330.86 |
| 564.37 | 330.9 | 566.28 | 330.99 | 566.88 | 331.03 | 567.47 | 331.05 | 568.17 | 331.08 |
| 569.07 | 331.13 | 569.38 | 331.14 | 570.51 | 331.21 | 570.99 | 331.25 | 571.48 | 331.28 |
| 574.09 | 331.41 | 574.72 | 331.43 | 576.73 | 331.53 | 577.71 | 331.59 | 577.96 | 331.6 |
| 579.34 | 331.64 | 583.44 | 331.88 | 587.47 | 332.09 | 588.42 | 332.14 | 588.82 | 332.15 |
| 589.56 | 332.19 | 591.49 | 332.3 | 592.84 | 332.33 | 596.13 | 332.42 | 597.43 | 332.46 |
| 599.12 | 332.5 | 599.17 | 332.5 | 600.54 | 332.54 | 602.14 | 332.58 | 602.83 | 332.6 |
| 607.19 | 332.71 | 608.03 | 332.72 | 608.32 | 332.73 | 609.66 | 332.73 | 612.15 | 332.75 |
| 616.71 | 332.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 264.7 | .04 | 474.88 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 264.7 | 474.88 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 984.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.77 | 2.41 | 337.77 | 5.13 | 337.61 | 5.94 | 337.58 | 6.6 | 337.56 |
| 7.6 | 337.5 | 8.2 | 337.48 | 11.41 | 337.46 | 11.99 | 337.45 | 14.45 | 337.45 |
| 14.96 | 337.43 | 15.48 | 337.43 | 18.06 | 337.41 | 18.96 | 337.38 | 20.56 | 337.37 |
| 21.75 | 337.37 | 22.78 | 337.41 | 23.82 | 337.47 | 24.05 | 337.47 | 29.09 | 337.25 |
| 29.35 | 337.23 | 29.87 | 337.2 | 31.6 | 337.12 | 33.83 | 337 | 33.93 | 336.99 |
| 35 | 336.94 | 36.41 | 336.87 | 39.89 | 336.33 | 40.72 | 336.2 | 41.57 | 336.05 |
| 42.22 | 335.88 | 42.58 | 335.79 | 44.6 | 335.27 | 44.86 | 335.2 | 45.43 | 335.13 |
| 45.56 | 335.11 | 46.75 | 334.96 | 51.31 | 334.34 | 51.84 | 334.25 | 52.03 | 334.19 |
| 54.51 | 334.06 | 54.82 | 334.05 | 56.19 | 334.1 | 56.54 | 334.11 | 57.75 | 334.17 |
| 58.09 | 334.2 | 58.69 | 334.29 | 59.93 | 334.44 | 60.69 | 334.52 | 61.32 | 334.59 |
| 63.05 | 334.77 | 63.59 | 334.83 | 64 | 334.86 | 64.52 | 334.89 | 65.07 | 334.93 |
| 65.28 | 334.95 | 65.91 | 334.91 | 67.17 | 334.88 | 68.17 | 334.81 | 68.2 | 334.81 |
| 69.14 | 334.72 | 72.37 | 334.46 | 73.05 | 334.43 | 73.85 | 334.45 | 74.3 | 334.33 |
| 75.12 | 334.13 | 75.55 | 333.99 | 76.01 | 333.92 | 77.76 | 333.69 | 78.25 | 333.62 |
| 82.19 | 333.18 | 83.1 | 333.11 | 83.63 | 333.1 | 85.19 | 333.06 | 86.03 | 333.05 |
| 87.83 | 333.01 | 88.23 | 332.99 | 88.37 | 332.99 | 89.74 | 332.83 | 91.63 | 332.63 |
| 94.73 | 332.27 | 95.51 | 332.19 | 96.3 | 332.12 | 96.92 | 332.08 | 97.13 | 332.07 |
| 98.37 | 331.97 | 102.44 | 331.62 | 103.27 | 331.55 | 105.36 | 331.36 | 107.67 | 331.18 |
| 111.15 | 331.02 | 113.43 | 330.91 | 116.35 | 330.78 | 116.75 | 330.76 | 119.74 | 330.64 |
| 120.84 | 330.59 | 126.88 | 330.41 | 127.31 | 330.4 | 127.46 | 330.39 | 128.11 | 330.37 |
| 128.92 | 330.36 | 129.49 | 330.35 | 130.63 | 330.34 | 131.49 | 330.33 | 132.48 | 330.34 |
| 133.12 | 330.36 | 133.6 | 330.41 | 134.38 | 330.42 | 135.72 | 330.43 | 136.96 | 330.42 |
| 139.25 | 330.42 | 141.06 | 330.34 | 143.36 | 330.25 | 143.44 | 330.12 | 144.05 | 330.08 |
| 148.66 | 329.76 | 149.5 | 329.75 | 150.3 | 329.73 | 150.49 | 329.74 | 152.63 | 329.94 |
| 153.43 | 330 | 154.66 | 330.01 | 155.46 | 329.98 | 156.29 | 329.94 | 156.57 | 329.93 |
| 157.65 | 329.9 | 157.72 | 329.9 | 164.1 | 329.54 | 168.6 | 329.29 | 169.26 | 329.25 |
| 170.83 | 329.16 | 172.88 | 329.08 | 175.69 | 328.98 | 179.22 | 328.87 | 180.51 | 328.85 |
| 180.62 | 328.84 | 183.94 | 328.77 | 184.23 | 328.76 | 185.05 | 328.74 | 186.43 | 328.7 |
| 186.67 | 328.7 | 186.98 | 328.69 | 187.87 | 328.67 | 188.2 | 328.67 | 188.57 | 328.66 |
| 189.4 | 328.66 | 190.97 | 328.65 | 193.66 | 328.65 | 197.32 | 328.64 | 198.23 | 328.63 |
| 199.73 | 328.63 | 201.58 | 328.66 | 201.87 | 328.67 | 202.62 | 328.68 | 203.44 | 328.67 |
| 204.66 | 328.67 | 206.31 | 328.68 | 210.39 | 328.68 | 213.43 | 328.71 | 214.44 | 328.71 |
| 215.92 | 328.73 | 216.78 | 328.75 | 216.89 | 328.75 | 217.71 | 328.77 | 219.1 | 328.79 |
| 219.59 | 328.8 | 220.12 | 328.8 | 224.5 | 328.81 | 231.62 | 328.85 | 232.82 | 328.86 |
| 234.68 | 328.87 | 236.25 | 328.88 | 236.56 | 328.89 | 238.26 | 328.9 | 240.33 | 328.92 |
| 242.34 | 328.93 | 244.04 | 328.94 | 244.91 | 328.95 | 249.26 | 328.97 | 249.47 | 328.97 |
| 250.96 | 328.98 | 252.05 | 328.98 | 253.22 | 328.93 | 253.43 | 328.93 | 254.23 | 328.92 |
| 259.21 | 328.92 | 262.16 | 328.93 | 265.21 | 328.92 | 267.51 | 328.92 | 271.15 | 328.91 |
| 272.03 | 328.9 | 272.5 | 328.9 | 274.58 | 328.89 | 274.83 | 328.89 | 277.39 | 328.87 |
| 277.46 | 328.89 | 280.31 | 328.89 | 282.98 | 328.6 | 283.67 | 328.53 | 284.23 | 328.46 |
| 284.43 | 328.44 | 286.19 | 328.25 | 286.4 | 328.25 | 287.01 | 328.23 | 287.56 | 328.22 |
| 288.03 | 328.2 | 289.15 | 328.17 | 290.13 | 328.14 | 290.89 | 328.11 | 291.38 | 328.1 |
| 291.55 | 328.09 | 292.53 | 328.06 | 292.66 | 328.05 | 293.15 | 328.03 | 293.72 | 328 |
| 294.7 | 327.96 | 295.22 | 327.93 | 296.84 | 327.85 | 297.27 | 327.83 | 299.19 | 327.76 |
| 301.29 | 327.68 | 301.77 | 327.67 | 302.87 | 327.66 | 303.47 | 327.66 | 304.14 | 327.65 |
| 304.72 | 327.65 | 305.19 | 327.59 | 305.54 | 327.55 | 306.49 | 327.46 | 307.09 | 327.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 307.28 | 327.48 | 308.61 | 327.39 | 309.15 | 327.43 | 309.46 | 327.5 | 309.8 | 327.57 |
| 310.18 | 327.6 | 310.4 | 327.6 | 310.77 | 327.61 | 312.23 | 327.61 | 312.93 | 327.6 |
| 314.99 | 327.56 | 317.65 | 327.51 | 318.46 | 327.49 | 320.4 | 327.46 | 320.76 | 327.45 |
| 321.76 | 327.45 | 322.23 | 327.44 | 326.31 | 327.3 | 326.7 | 327.28 | 327.78 | 327.25 |
| 328.09 | 327.23 | 328.62 | 327.23 | 329.06 | 327.22 | 331.34 | 327.21 | 331.58 | 327.2 |
| 331.81 | 327.21 | 332.28 | 327.25 | 333.03 | 327.25 | 333.46 | 327.24 | 334.04 | 327.24 |
| 334.47 | 327.26 | 334.96 | 327.27 | 335.69 | 327.3 | 336.61 | 327.32 | 338.31 | 327.39 |
| 338.76 | 327.44 | 339.16 | 327.49 | 339.61 | 327.53 | 340.61 | 327.61 | 341.12 | 327.65 |
| 343.5 | 327.8 | 345.2 | 327.9 | 345.99 | 327.94 | 348.29 | 328.06 | 348.56 | 328.07 |
| 350.08 | 328.1 | 350.89 | 328.13 | 352.1 | 328.22 | 354.23 | 328.32 | 354.72 | 328.32 |
| 355.27 | 328.34 | 356.29 | 328.36 | 358.05 | 328.38 | 358.65 | 328.37 | 359.25 | 328.37 |
| 360.09 | 328.35 | 360.8 | 328.34 | 362.32 | 328.3 | 362.46 | 328.3 | 364.65 | 328.22 |
| 366.5 | 328.13 | 368.19 | 328.06 | 368.77 | 328.03 | 370.25 | 328.02 | 370.66 | 328.02 |
| 371.83 | 328.01 | 372.47 | 327.99 | 372.72 | 327.97 | 373.74 | 327.95 | 373.87 | 327.94 |
| 374.29 | 327.93 | 374.72 | 327.93 | 376.3 | 327.94 | 378.56 | 327.95 | 381.61 | 328.05 |
| 385.17 | 328.18 | 385.66 | 328.19 | 387.46 | 328.26 | 390.33 | 328.36 | 392.99 | 328.46 |
| 393.47 | 328.48 | 394.49 | 328.57 | 395.24 | 328.59 | 396.92 | 328.62 | 397.66 | 328.63 |
| 398.15 | 328.65 | 398.57 | 328.66 | 398.76 | 328.67 | 399.91 | 328.69 | 401.17 | 328.71 |
| 401.27 | 328.72 | 401.74 | 328.72 | 401.87 | 328.73 | 402.1 | 328.72 | 403.19 | 328.7 |
| 403.32 | 328.68 | 403.64 | 328.67 | 405.31 | 328.67 | 405.84 | 328.69 | 406.19 | 328.67 |
| 406.72 | 328.61 | 407.29 | 328.55 | 407.45 | 328.55 | 408.34 | 328.49 | 408.99 | 328.52 |
| 409.98 | 328.56 | 410.42 | 328.53 | 410.85 | 328.51 | 411.22 | 328.52 | 411.65 | 328.5 |
| 412.86 | 328.48 | 413.98 | 328.45 | 414.2 | 328.44 | 418.2 | 328.31 | 418.65 | 328.28 |
| 419.19 | 328.2 | 420.7 | 328.11 | 421.45 | 328.11 | 422.09 | 328.12 | 423.22 | 328.12 |
| 425.11 | 328.13 | 426.35 | 328.13 | 429.77 | 328.14 | 430.39 | 328.12 | 433.14 | 328.05 |
| 435.51 | 328 | 436.34 | 328 | 438.16 | 328.01 | 439.49 | 328.01 | 440.14 | 328 |
| 441.7 | 328 | 442.05 | 328.01 | 442.69 | 328.02 | 443.66 | 328.04 | 444.33 | 328.05 |
| 445.36 | 328.07 | 448.09 | 328.13 | 450.51 | 328.19 | 452.39 | 328.24 | 456.99 | 328.39 |
| 458.14 | 328.43 | 460.96 | 328.5 | 461.98 | 328.52 | 463.4 | 328.55 | 464.09 | 328.57 |
| 465.8 | 328.57 | 467.47 | 328.58 | 467.62 | 328.56 | 468.17 | 328.53 | 468.97 | 328.48 |
| 469.52 | 328.48 | 474.34 | 328.63 | 475.33 | 328.66 | 476.24 | 328.69 | 477.82 | 328.73 |
| 479.29 | 328.77 | 479.84 | 328.78 | 480.11 | 328.79 | 481.27 | 328.87 | 483.84 | 328.96 |
| 485.58 | 328.99 | 485.67 | 328.99 | 488.48 | 329.04 | 488.81 | 329.04 | 489.74 | 329.06 |
| 490.78 | 329.06 | 491.56 | 329.07 | 494.14 | 329.09 | 496.23 | 329.11 | 497.08 | 329.13 |
| 502.81 | 329.2 | 503.58 | 329.21 | 505.74 | 329.21 | 511.1 | 329.2 | 516.2 | 329.22 |
| 517.46 | 329.25 | 518.58 | 329.27 | 519.45 | 329.27 | 519.65 | 329.28 | 519.99 | 329.27 |
| 520.57 | 329.3 | 520.69 | 329.3 | 521.43 | 329.33 | 521.99 | 329.36 | 522.32 | 329.37 |
| 524.72 | 329.4 | 525.02 | 329.4 | 525.48 | 329.42 | 525.91 | 329.43 | 530.13 | 329.49 |
| 533.07 | 329.55 | 534.72 | 329.59 | 534.94 | 329.59 | 536.14 | 329.62 | 537.05 | 329.63 |
| 537.64 | 329.62 | 538.01 | 329.61 | 538.23 | 329.58 | 538.89 | 329.46 | 539.17 | 329.45 |
| 540.28 | 329.51 | 542.17 | 329.61 | 542.35 | 329.61 | 542.65 | 329.63 | 544.18 | 329.68 |
| 544.54 | 329.7 | 545.6 | 329.73 | 546.09 | 329.75 | 546.91 | 329.79 | 547.56 | 329.79 |
| 552.81 | 329.88 | 554.71 | 329.92 | 556.11 | 329.94 | 557.93 | 329.98 | 558.44 | 329.99 |
| 559.79 | 330.02 | 560.14 | 330.03 | 560.52 | 330.05 | 560.74 | 330.05 | 561.13 | 330.08 |
| 561.46 | 330.09 | 566.82 | 330.33 | 568.6 | 330.4 | 568.91 | 330.42 | 569.58 | 330.45 |
| 570.8 | 330.5 | 573.61 | 330.62 | 573.89 | 330.64 | 574.64 | 330.68 | 576.58 | 330.78 |
| 577.79 | 330.84 | 578.5 | 330.87 | 579.41 | 330.92 | 579.72 | 330.94 | 580.87 | 331 |
| 581.36 | 331.04 | 581.85 | 331.07 | 584.5 | 331.19 | 585.14 | 331.21 | 587.18 | 331.31 |
| 588.18 | 331.36 | 588.43 | 331.37 | 589.83 | 331.41 | 593.99 | 331.63 | 598.08 | 331.83 |
| 599.04 | 331.88 | 599.16 | 331.89 | 600.2 | 331.93 | 602.16 | 332.04 | 603.53 | 332.06 |
| 606.5 | 332.13 | 606.87 | 332.14 | 607.14 | 332.14 | 608.18 | 332.17 | 609.89 | 332.2 |
| 609.95 | 332.2 | 611.34 | 332.23 | 612.96 | 332.26 | 613.66 | 332.28 | 617.27 | 332.35 |
| 618.08 | 332.37 | 618.94 | 332.38 | 619.37 | 332.38 | 620.59 | 332.39 | 623.12 | 332.4 |
| 627.75 | 332.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 272.5 | .04 | 483.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 272.5 | 483.84 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 965.927*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.58 | 2.48 | 337.58 | 3.7 | 337.5 | 5.28 | 337.41 | 5.88 | 337.39 |
| 6.79 | 337.35 | 7.82 | 337.29 | 8.44 | 337.27 | 11.73 | 337.25 | 12.33 | 337.24 |
| 14.86 | 337.24 | 15.38 | 337.22 | 15.92 | 337.22 | 18.58 | 337.2 | 19.5 | 337.17 |
| 21.15 | 337.16 | 22.37 | 337.16 | 23.43 | 337.2 | 24.5 | 337.27 | 24.73 | 337.27 |
| 29.92 | 337.04 | 30.19 | 337.02 | 30.72 | 336.99 | 32.51 | 336.9 | 33.1 | 336.88 |
| 34.8 | 336.79 | 34.9 | 336.78 | 36 | 336.73 | 37.45 | 336.66 | 41.03 | 336.08 |
| 41.54 | 336 | 42.76 | 335.79 | 43.43 | 335.61 | 43.8 | 335.52 | 45.87 | 334.97 |
| 46.15 | 334.9 | 46.73 | 334.83 | 46.86 | 334.81 | 48.09 | 334.66 | 52.78 | 334 |
| 53.33 | 333.91 | 53.52 | 333.85 | 56.07 | 333.72 | 56.39 | 333.71 | 57.8 | 333.76 |
| 58.16 | 333.78 | 59.41 | 333.84 | 59.83 | 333.88 | 60.37 | 333.97 | 61.65 | 334.13 |
| 62.43 | 334.21 | 63.08 | 334.29 | 64.86 | 334.49 | 65.42 | 334.55 | 65.83 | 334.59 |
| 66.37 | 334.62 | 66.93 | 334.67 | 67.15 | 334.68 | 67.29 | 334.67 | 67.8 | 334.65 |
| 69.09 | 334.61 | 70.12 | 334.55 | 70.16 | 334.54 | 71.12 | 334.46 | 74.44 | 334.22 |
| 75.14 | 334.2 | 75.96 | 334.22 | 76.42 | 334.1 | 77.28 | 333.9 | 77.72 | 333.74 |
| 78.19 | 333.68 | 79.99 | 333.43 | 84.55 | 332.88 | 85.48 | 332.81 | 86.02 | 332.8 |
| 87.63 | 332.76 | 88.5 | 332.75 | 90.76 | 332.7 | 91.06 | 332.68 | 92.32 | 332.54 |
| 94.25 | 332.33 | 97.44 | 331.97 | 98.24 | 331.89 | 99.06 | 331.82 | 99.91 | 331.78 |
| 100.17 | 331.75 | 101.19 | 331.67 | 105.38 | 331.33 | 106.23 | 331.25 | 108.38 | 331.07 |
| 110.75 | 330.89 | 114.33 | 330.72 | 116.68 | 330.62 | 120.1 | 330.46 | 123.17 | 330.34 |
| 124.3 | 330.29 | 130.51 | 330.11 | 131.11 | 330.1 | 131.78 | 330.08 | 132.61 | 330.07 |
| 133.19 | 330.06 | 134.37 | 330.05 | 135.25 | 330.04 | 136.28 | 330.06 | 136.93 | 330.08 |
| 137.42 | 330.13 | 138.22 | 330.14 | 139.61 | 330.15 | 140.88 | 330.15 | 142.02 | 330.14 |
| 143.24 | 330.15 | 145.1 | 330.07 | 147.46 | 329.98 | 147.55 | 329.84 | 148.18 | 329.8 |
| 152.92 | 329.46 | 153.78 | 329.45 | 154.61 | 329.43 | 154.8 | 329.45 | 157.01 | 329.66 |
| 157.83 | 329.72 | 159.09 | 329.74 | 159.91 | 329.71 | 160.77 | 329.67 | 161.06 | 329.66 |
| 162.16 | 329.63 | 162.24 | 329.63 | 168.8 | 329.26 | 173.43 | 329 | 174.11 | 328.96 |
| 175.72 | 328.87 | 177.83 | 328.79 | 180.72 | 328.69 | 184.35 | 328.57 | 185.68 | 328.54 |
| 185.79 | 328.53 | 189.21 | 328.45 | 189.51 | 328.44 | 190.35 | 328.42 | 191.77 | 328.38 |
| 192.02 | 328.38 | 192.33 | 328.37 | 193.25 | 328.35 | 193.59 | 328.35 | 193.97 | 328.34 |
| 194.83 | 328.34 | 196.44 | 328.33 | 202.97 | 328.33 | 203.9 | 328.32 | 205.45 | 328.32 |
| 206.73 | 328.34 | 207.36 | 328.36 | 207.65 | 328.36 | 208.42 | 328.37 | 210.53 | 328.37 |
| 212.21 | 328.38 | 212.99 | 328.39 | 215.43 | 328.39 | 216.41 | 328.4 | 217.46 | 328.4 |
| 220.58 | 328.43 | 222.11 | 328.45 | 222.98 | 328.47 | 223.1 | 328.47 | 223.94 | 328.49 |
| 225.37 | 328.51 | 225.88 | 328.52 | 226.43 | 328.52 | 230.93 | 328.53 | 238.25 | 328.58 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 239.49 | 328.58 | 241.41 | 328.6 | 243.01 | 328.62 | 243.34 | 328.62 | 245.09 | 328.64 |
| 247.21 | 328.66 | 249.28 | 328.67 | 251.03 | 328.69 | 251.92 | 328.69 | 256.39 | 328.73 |
| 256.61 | 328.73 | 258.15 | 328.74 | 259.26 | 328.75 | 260.47 | 328.7 | 261.65 | 328.7 |
| 262.61 | 328.69 | 263.88 | 328.7 | 275.18 | 328.7 | 278.91 | 328.68 | 280.31 | 328.68 |
| 282.36 | 328.67 | 282.61 | 328.67 | 283.96 | 328.66 | 285.17 | 328.66 | 285.22 | 328.67 |
| 288.03 | 328.67 | 291.37 | 328.28 | 291.92 | 328.21 | 292.12 | 328.19 | 293.86 | 327.99 |
| 294.06 | 327.98 | 294.67 | 327.96 | 295.21 | 327.95 | 295.68 | 327.93 | 296.79 | 327.9 |
| 297.76 | 327.87 | 299 | 327.82 | 299.16 | 327.82 | 300.13 | 327.78 | 301.32 | 327.72 |
| 302.28 | 327.68 | 302.79 | 327.65 | 304.4 | 327.57 | 304.59 | 327.55 | 305.1 | 327.53 |
| 306.73 | 327.48 | 308.81 | 327.41 | 309.28 | 327.4 | 310.37 | 327.39 | 310.96 | 327.39 |
| 311.62 | 327.38 | 312.2 | 327.38 | 312.66 | 327.32 | 313.01 | 327.27 | 313.95 | 327.18 |
| 314.55 | 327.21 | 314.74 | 327.2 | 315.75 | 327.12 | 316.05 | 327.1 | 316.58 | 327.14 |
| 316.89 | 327.22 | 317.23 | 327.3 | 317.82 | 327.33 | 318.19 | 327.34 | 319.64 | 327.34 |
| 320.33 | 327.33 | 322.37 | 327.29 | 325 | 327.24 | 325.8 | 327.23 | 327.72 | 327.19 |
| 329.07 | 327.19 | 329.54 | 327.18 | 333.57 | 327.04 | 333.96 | 327.02 | 335.58 | 326.96 |
| 336.29 | 326.96 | 338.55 | 326.95 | 338.79 | 326.94 | 339.02 | 326.95 | 339.5 | 326.99 |
| 340.26 | 326.99 | 340.69 | 326.98 | 341.28 | 326.98 | 341.71 | 327 | 342.21 | 327.01 |
| 342.95 | 327.04 | 344.85 | 327.1 | 345.6 | 327.14 | 346.05 | 327.18 | 346.45 | 327.23 |
| 346.91 | 327.27 | 348.23 | 327.36 | 348.44 | 327.38 | 352.57 | 327.62 | 353.36 | 327.65 |
| 355.69 | 327.77 | 356.43 | 327.79 | 357.5 | 327.82 | 358.32 | 327.85 | 359.55 | 327.94 |
| 359.97 | 327.96 | 361.47 | 328.04 | 361.7 | 328.05 | 361.94 | 328.04 | 362.2 | 328.05 |
| 362.76 | 328.06 | 363.19 | 328.08 | 363.79 | 328.09 | 365.57 | 328.11 | 366.17 | 328.11 |
| 366.77 | 328.1 | 368.35 | 328.08 | 369.89 | 328.04 | 370.02 | 328.04 | 372.24 | 327.96 |
| 374.11 | 327.87 | 375.83 | 327.8 | 376.41 | 327.78 | 377.9 | 327.77 | 378.32 | 327.76 |
| 379.5 | 327.75 | 380.15 | 327.74 | 380.46 | 327.72 | 380.89 | 327.72 | 381.57 | 327.71 |
| 382.43 | 327.69 | 384.03 | 327.7 | 386.31 | 327.71 | 389.39 | 327.82 | 393 | 327.94 |
| 393.49 | 327.96 | 395.32 | 328.03 | 398.22 | 328.13 | 399.27 | 328.17 | 400.91 | 328.24 |
| 401.22 | 328.25 | 401.39 | 328.27 | 402.43 | 328.35 | 403.18 | 328.37 | 404.88 | 328.4 |
| 405.63 | 328.42 | 406.55 | 328.44 | 406.74 | 328.45 | 407.32 | 328.46 | 407.9 | 328.48 |
| 408.56 | 328.49 | 409.09 | 328.49 | 409.18 | 328.5 | 409.76 | 328.5 | 409.89 | 328.51 |
| 410.12 | 328.5 | 411.23 | 328.48 | 411.35 | 328.46 | 411.68 | 328.45 | 412.17 | 328.45 |
| 412.62 | 328.44 | 413.18 | 328.44 | 413.91 | 328.47 | 414.26 | 328.44 | 415.37 | 328.32 |
| 415.84 | 328.3 | 416.44 | 328.26 | 417.09 | 328.29 | 418.09 | 328.33 | 418.54 | 328.3 |
| 418.57 | 328.31 | 418.97 | 328.28 | 419.35 | 328.29 | 419.71 | 328.27 | 421 | 328.25 |
| 422.13 | 328.23 | 422.37 | 328.21 | 426.4 | 328.08 | 426.86 | 328.05 | 427.41 | 327.99 |
| 428.93 | 327.9 | 429.03 | 327.89 | 429.7 | 327.89 | 430.34 | 327.91 | 438.11 | 327.91 |
| 438.74 | 327.89 | 441.52 | 327.81 | 443.92 | 327.75 | 444.75 | 327.75 | 446.6 | 327.76 |
| 446.95 | 327.76 | 447.94 | 327.75 | 450.18 | 327.75 | 450.53 | 327.76 | 451.18 | 327.77 |
| 452.16 | 327.79 | 452.84 | 327.8 | 453.88 | 327.82 | 456.65 | 327.89 | 459.09 | 327.94 |
| 460.99 | 327.99 | 466.81 | 328.19 | 469.66 | 328.26 | 470.69 | 328.28 | 472.13 | 328.31 |
| 472.82 | 328.33 | 474.55 | 328.33 | 476.25 | 328.34 | 476.39 | 328.32 | 476.95 | 328.29 |
| 477.76 | 328.24 | 478.32 | 328.23 | 483.19 | 328.39 | 484.2 | 328.43 | 485.11 | 328.46 |
| 486.71 | 328.5 | 488.2 | 328.55 | 488.76 | 328.56 | 489.03 | 328.57 | 490.2 | 328.65 |
| 492.8 | 328.74 | 494.57 | 328.77 | 494.66 | 328.77 | 497.51 | 328.81 | 497.85 | 328.82 |
| 498.79 | 328.83 | 499.84 | 328.83 | 500.64 | 328.84 | 501.94 | 328.85 | 503.26 | 328.85 |
| 505.36 | 328.87 | 506.23 | 328.88 | 512.05 | 328.95 | 512.83 | 328.96 | 513.8 | 328.95 |
| 515.01 | 328.96 | 520.45 | 328.93 | 525.63 | 328.95 | 526.91 | 328.97 | 528.56 | 329 |
| 529.13 | 329 | 529.47 | 328.99 | 530.06 | 329.02 | 530.18 | 329.03 | 530.94 | 329.06 |
| 531.5 | 329.09 | 531.84 | 329.1 | 534.27 | 329.12 | 534.57 | 329.13 | 535.48 | 329.15 |
| 537.6 | 329.18 | 539.76 | 329.22 | 542.74 | 329.27 | 544.42 | 329.31 | 544.64 | 329.32 |
| 545.86 | 329.34 | 546.78 | 329.35 | 547.38 | 329.34 | 547.75 | 329.32 | 547.98 | 329.3 |
| 548.64 | 329.17 | 548.93 | 329.16 | 550.06 | 329.23 | 551.97 | 329.33 | 552.16 | 329.33 |
| 552.46 | 329.35 | 554.01 | 329.41 | 555.45 | 329.45 | 555.95 | 329.48 | 556.78 | 329.52 |
| 557.17 | 329.53 | 557.44 | 329.53 | 562.76 | 329.62 | 564.69 | 329.65 | 565.47 | 329.67 |
| 567.96 | 329.71 | 568.47 | 329.73 | 569.85 | 329.76 | 570.16 | 329.77 | 570.2 | 329.78 |
| 570.59 | 329.79 | 570.81 | 329.79 | 571.2 | 329.82 | 571.55 | 329.84 | 576.06 | 330.04 |
| 576.33 | 330.06 | 576.98 | 330.09 | 577.77 | 330.12 | 578.78 | 330.17 | 579.1 | 330.18 |
| 579.78 | 330.21 | 581.01 | 330.26 | 583.87 | 330.4 | 584.15 | 330.42 | 584.91 | 330.46 |
| 586.88 | 330.57 | 588.1 | 330.63 | 588.83 | 330.66 | 589.75 | 330.71 | 592.23 | 330.86 |
| 594.92 | 330.98 | 595.56 | 331 | 597.64 | 331.09 | 598.64 | 331.14 | 598.9 | 331.14 |
| 600.32 | 331.18 | 604.54 | 331.39 | 608.69 | 331.58 | 609.67 | 331.63 | 609.78 | 331.63 |
| 610.07 | 331.65 | 610.84 | 331.68 | 612.83 | 331.78 | 614.21 | 331.8 | 617.23 | 331.85 |
| 617.6 | 331.85 | 617.88 | 331.86 | 618.93 | 331.88 | 620.73 | 331.9 | 622.14 | 331.92 |
| 623.78 | 331.95 | 624.18 | 331.95 | 624.5 | 331.96 | 628.16 | 332.01 | 628.49 | 332.02 |
| 628.98 | 332.02 | 629.85 | 332.03 | 630.15 | 332.04 | 631.52 | 332.04 | 634.09 | 332.05 |
| 638.78 | 332.05 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 280.31 | .04 | 492.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 280.31 | 492.8 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 946.915*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.39 | 2.32 | 337.38 | 2.55 | 337.38 | 3.81 | 337.31 | 5.43 | 337.2 |
| 6.04 | 337.19 | 6.98 | 337.15 | 7.49 | 337.12 | 8.04 | 337.08 | 8.67 | 337.06 |
| 12.13 | 337.04 | 12.67 | 337.02 | 15.27 | 337.03 | 15.81 | 337.01 | 16.36 | 337.01 |
| 19.1 | 336.99 | 20.04 | 336.96 | 21.74 | 336.95 | 22.99 | 336.95 | 24.09 | 336.99 |
| 25.19 | 337.06 | 25.42 | 337.07 | 30.76 | 336.83 | 31.03 | 336.81 | 31.58 | 336.78 |
| 34.02 | 336.66 | 35.77 | 336.57 | 35.87 | 336.57 | 37 | 336.51 | 38.49 | 336.44 |
| 42.17 | 335.83 | 43.05 | 335.68 | 43.95 | 335.53 | 44.64 | 335.34 | 45.02 | 335.24 |
| 47.15 | 334.67 | 47.43 | 334.6 | 48.03 | 334.52 | 48.16 | 334.51 | 49.43 | 334.35 |
| 54.25 | 333.67 | 54.81 | 333.57 | 55.01 | 333.5 | 56.62 | 333.42 | 57.63 | 333.38 |
| 57.96 | 333.37 | 59.41 | 333.42 | 61.06 | 333.51 | 61.49 | 333.55 | 62.05 | 333.65 |
| 63.37 | 333.82 | 64.16 | 333.91 | 66.67 | 334.21 | 67.24 | 334.27 | 67.66 | 334.32 |
| 68.21 | 334.35 | 69.02 | 334.42 | 69.16 | 334.41 | 69.68 | 334.39 | 71.01 | 334.35 |
| 72.07 | 334.28 | 72.11 | 334.28 | 73.1 | 334.21 | 76.51 | 333.98 | 77.24 | 333.96 |
| 78.08 | 333.99 | 78.55 | 333.87 | 79.43 | 333.66 | 79.88 | 333.49 | 80.37 | 333.43 |
| 82.22 | 333.17 | 82.73 | 333.11 | 86.9 | 332.59 | 87.86 | 332.52 | 88.42 | 332.5 |
| 90.07 | 332.46 | 90.96 | 332.45 | 93.29 | 332.4 | 93.6 | 332.38 | 94.89 | 332.24 |
| 96.88 | 332.03 | 100.15 | 331.68 | 100.98 | 331.59 | 101.81 | 331.52 | 102.7 | 331.48 |
| 104.01 | 331.38 | 108.31 | 331.03 | 109.19 | 330.96 | 111.4 | 330.78 | 113.83 | 330.59 |
| 117.51 | 330.42 | 119.92 | 330.32 | 123.02 | 330.19 | 123.44 | 330.17 | 126.6 | 330.04 |
| 127.76 | 329.99 | 134.14 | 329.81 | 134.76 | 329.8 | 135.45 | 329.78 | 136.31 | 329.78 |
| 136.9 | 329.77 | 138.11 | 329.76 | 139.02 | 329.76 | 140.07 | 329.77 | 140.74 | 329.8 |
| 141.25 | 329.85 | 142.07 | 329.87 | 143.5 | 329.88 | 144.8 | 329.88 | 145.97 | 329.87 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 147.22 | 329.88 | 149.14 | 329.8 | 151.57 | 329.7 | 151.65 | 329.56 | 152.3 | 329.51 |
| 157.17 | 329.17 | 158.07 | 329.16 | 158.91 | 329.14 | 161.38 | 329.38 | 162.22 | 329.45 |
| 163.52 | 329.48 | 164.37 | 329.45 | 165.25 | 329.4 | 165.54 | 329.39 | 166.68 | 329.36 |
| 166.76 | 329.36 | 173.49 | 328.98 | 178.26 | 328.71 | 178.95 | 328.68 | 179.87 | 328.62 |
| 180.61 | 328.58 | 182.78 | 328.5 | 184.58 | 328.43 | 185.75 | 328.39 | 189.48 | 328.26 |
| 190.85 | 328.23 | 190.96 | 328.23 | 194.47 | 328.14 | 195.65 | 328.1 | 197.11 | 328.06 |
| 197.36 | 328.06 | 197.69 | 328.05 | 198.63 | 328.03 | 198.95 | 328.02 | 200.25 | 328.02 |
| 201.91 | 328.01 | 209.73 | 328.01 | 210.26 | 328 | 211.17 | 328.01 | 212.49 | 328.03 |
| 213.44 | 328.06 | 214.22 | 328.07 | 216.39 | 328.07 | 218.92 | 328.1 | 220.53 | 328.1 |
| 221.43 | 328.11 | 222.44 | 328.11 | 224.63 | 328.13 | 226.6 | 328.15 | 226.73 | 328.15 |
| 228.29 | 328.17 | 229.19 | 328.19 | 230.18 | 328.2 | 232.17 | 328.24 | 232.73 | 328.24 |
| 237.36 | 328.25 | 244.88 | 328.3 | 246.15 | 328.31 | 248.13 | 328.33 | 249.78 | 328.35 |
| 250.11 | 328.35 | 251.91 | 328.37 | 254.1 | 328.4 | 256.22 | 328.42 | 258.02 | 328.43 |
| 258.93 | 328.44 | 263.53 | 328.48 | 263.76 | 328.49 | 265.34 | 328.51 | 266.48 | 328.52 |
| 267.73 | 328.47 | 274.06 | 328.47 | 277.17 | 328.48 | 280.4 | 328.48 | 282.84 | 328.47 |
| 286.68 | 328.46 | 288.11 | 328.46 | 290.15 | 328.45 | 290.39 | 328.45 | 291.72 | 328.44 |
| 292.92 | 328.44 | 292.97 | 328.45 | 295.76 | 328.45 | 298.38 | 328.12 | 299.61 | 327.96 |
| 299.8 | 327.94 | 301.53 | 327.72 | 301.72 | 327.71 | 302.32 | 327.7 | 303.33 | 327.66 |
| 304.43 | 327.63 | 305.39 | 327.59 | 306.13 | 327.57 | 306.77 | 327.54 | 307.73 | 327.5 |
| 307.87 | 327.5 | 308.34 | 327.47 | 308.91 | 327.44 | 309.4 | 327.42 | 309.86 | 327.39 |
| 310.37 | 327.37 | 311.18 | 327.32 | 312.14 | 327.27 | 312.65 | 327.25 | 314.27 | 327.2 |
| 316.32 | 327.13 | 316.79 | 327.13 | 317.87 | 327.12 | 318.45 | 327.11 | 319.11 | 327.11 |
| 319.68 | 327.1 | 320.14 | 327.04 | 321.42 | 326.9 | 321.57 | 326.9 | 322.01 | 326.93 |
| 322.19 | 326.91 | 323.2 | 326.83 | 323.49 | 326.81 | 324.02 | 326.85 | 324.66 | 327.02 |
| 325.03 | 327.05 | 326.32 | 327.07 | 327.04 | 327.07 | 327.72 | 327.06 | 329.74 | 327.02 |
| 332.35 | 326.97 | 333.15 | 326.96 | 335.05 | 326.93 | 335.4 | 326.93 | 336.38 | 326.92 |
| 336.84 | 326.92 | 339.11 | 326.84 | 340.83 | 326.77 | 341.22 | 326.76 | 342.27 | 326.72 |
| 342.58 | 326.7 | 343.1 | 326.7 | 343.53 | 326.69 | 345.77 | 326.68 | 346 | 326.67 |
| 346.23 | 326.68 | 346.56 | 326.72 | 346.71 | 326.73 | 347.49 | 326.73 | 347.93 | 326.72 |
| 348.51 | 326.72 | 349.46 | 326.74 | 349.76 | 326.76 | 350.21 | 326.78 | 352.13 | 326.84 |
| 352.88 | 326.88 | 353.75 | 326.96 | 354.22 | 327 | 355.55 | 327.09 | 355.76 | 327.11 |
| 358.2 | 327.24 | 359.94 | 327.33 | 360.74 | 327.37 | 363.09 | 327.48 | 363.84 | 327.51 |
| 364.92 | 327.53 | 365.76 | 327.57 | 366.99 | 327.65 | 367.42 | 327.68 | 368.94 | 327.76 |
| 369.17 | 327.77 | 369.41 | 327.76 | 370.24 | 327.79 | 370.68 | 327.8 | 371.28 | 327.82 |
| 373.08 | 327.84 | 374.3 | 327.84 | 375.17 | 327.83 | 375.9 | 327.81 | 377.45 | 327.78 |
| 377.59 | 327.78 | 379.83 | 327.7 | 381.73 | 327.61 | 383.46 | 327.54 | 384.04 | 327.52 |
| 385.56 | 327.51 | 385.98 | 327.51 | 387.17 | 327.5 | 387.83 | 327.49 | 388.09 | 327.48 |
| 388.58 | 327.48 | 389.26 | 327.47 | 389.69 | 327.46 | 390.14 | 327.46 | 391.75 | 327.47 |
| 394.06 | 327.47 | 397.18 | 327.58 | 400.83 | 327.71 | 401.32 | 327.73 | 403.17 | 327.8 |
| 407.17 | 327.95 | 408.83 | 328.02 | 409.14 | 328.03 | 409.32 | 328.05 | 410.36 | 328.13 |
| 411.12 | 328.15 | 412.84 | 328.18 | 413.6 | 328.2 | 414.11 | 328.22 | 414.53 | 328.23 |
| 414.72 | 328.24 | 416.56 | 328.27 | 417.1 | 328.27 | 417.19 | 328.28 | 417.77 | 328.28 |
| 417.91 | 328.29 | 418.14 | 328.28 | 419.26 | 328.26 | 419.39 | 328.23 | 419.53 | 328.24 |
| 419.72 | 328.23 | 420.22 | 328.23 | 420.67 | 328.22 | 421.24 | 328.22 | 421.77 | 328.24 |
| 422.09 | 328.24 | 422.33 | 328.22 | 422.87 | 328.16 | 423.46 | 328.09 | 423.93 | 328.06 |
| 424.53 | 328.03 | 425.19 | 328.06 | 426.2 | 328.11 | 426.65 | 328.07 | 426.68 | 328.08 |
| 427.09 | 328.05 | 427.48 | 328.06 | 427.91 | 328.04 | 430.29 | 328 | 430.53 | 327.98 |
| 434.61 | 327.85 | 435.07 | 327.83 | 435.63 | 327.78 | 436.13 | 327.75 | 437.17 | 327.68 |
| 437.94 | 327.68 | 438.6 | 327.7 | 439.75 | 327.69 | 442.95 | 327.69 | 446.45 | 327.68 |
| 449.9 | 327.57 | 452.33 | 327.5 | 458.65 | 327.5 | 459.01 | 327.51 | 459.67 | 327.52 |
| 460.66 | 327.54 | 461.35 | 327.56 | 462.4 | 327.58 | 465.2 | 327.64 | 467.67 | 327.7 |
| 469.59 | 327.75 | 475.48 | 327.95 | 478.36 | 328.02 | 479.4 | 328.04 | 480.86 | 328.08 |
| 481.56 | 328.09 | 483.31 | 328.09 | 485.02 | 328.1 | 485.73 | 328.05 | 486.2 | 328.01 |
| 487.11 | 327.99 | 492.05 | 328.16 | 493.06 | 328.19 | 493.99 | 328.22 | 495.61 | 328.28 |
| 497.11 | 328.32 | 497.22 | 328.33 | 497.95 | 328.36 | 499.13 | 328.43 | 501.76 | 328.52 |
| 503.56 | 328.54 | 503.65 | 328.55 | 506.54 | 328.58 | 506.88 | 328.59 | 507.83 | 328.6 |
| 508.9 | 328.6 | 509.71 | 328.61 | 511.03 | 328.61 | 512.37 | 328.62 | 514.52 | 328.63 |
| 515.39 | 328.64 | 521.29 | 328.7 | 522.08 | 328.71 | 523.06 | 328.7 | 524.29 | 328.71 |
| 529.81 | 328.67 | 532.34 | 328.67 | 535.06 | 328.68 | 536.36 | 328.7 | 537.51 | 328.71 |
| 538.03 | 328.72 | 538.61 | 328.72 | 538.95 | 328.71 | 539.56 | 328.74 | 539.68 | 328.75 |
| 540.44 | 328.78 | 541.02 | 328.81 | 541.36 | 328.82 | 543.82 | 328.84 | 544.6 | 328.87 |
| 545.05 | 328.87 | 547.2 | 328.91 | 549.39 | 328.94 | 552.42 | 329 | 554.11 | 329.03 |
| 554.34 | 329.04 | 555.58 | 329.06 | 556.51 | 329.07 | 557.11 | 329.06 | 557.49 | 329.04 |
| 557.73 | 329.02 | 558.4 | 328.88 | 558.69 | 328.87 | 559.84 | 328.94 | 561.96 | 329.05 |
| 562.27 | 329.07 | 563.85 | 329.13 | 564.22 | 329.15 | 565.31 | 329.18 | 565.81 | 329.21 |
| 566.65 | 329.25 | 566.79 | 329.26 | 567.32 | 329.26 | 572.72 | 329.35 | 574.68 | 329.39 |
| 575.46 | 329.4 | 576.12 | 329.42 | 577.99 | 329.45 | 578.51 | 329.47 | 579.9 | 329.51 |
| 580.67 | 329.53 | 580.72 | 329.54 | 581.19 | 329.55 | 581.63 | 329.58 | 586.21 | 329.79 |
| 586.48 | 329.81 | 587.13 | 329.84 | 588.97 | 329.93 | 589.28 | 329.94 | 589.97 | 329.98 |
| 591.23 | 330.03 | 594.13 | 330.18 | 594.41 | 330.19 | 595.18 | 330.24 | 597.17 | 330.35 |
| 597.8 | 330.39 | 598.42 | 330.42 | 599.15 | 330.45 | 600.09 | 330.5 | 601.59 | 330.59 |
| 602.1 | 330.63 | 602.6 | 330.66 | 602.82 | 330.66 | 605.33 | 330.76 | 605.98 | 330.78 |
| 608.09 | 330.87 | 609.37 | 330.92 | 610.81 | 330.95 | 615.09 | 331.14 | 619.3 | 331.33 |
| 620.29 | 331.38 | 620.7 | 331.39 | 621.48 | 331.43 | 623.5 | 331.52 | 624.9 | 331.53 |
| 627.96 | 331.56 | 628.34 | 331.57 | 628.62 | 331.57 | 629.69 | 331.58 | 631.45 | 331.6 |
| 632.94 | 331.61 | 634.6 | 331.63 | 635 | 331.63 | 635.33 | 331.64 | 639.04 | 331.68 |
| 639.88 | 331.68 | 640.76 | 331.69 | 642.46 | 331.69 | 645.06 | 331.7 | 649.37 | 331.7 |
| 649.82 | 331.71 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 288.11 | .04 | 501.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 288.11 | 501.76 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 927.902*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.19 | 2.62 | 337.19 | 3.91 | 337.11 | 5.57 | 337 | 6.21 | 336.98 |
| 7.17 | 336.94 | 7.7 | 336.91 | 8.26 | 336.87 | 8.91 | 336.85 | 12.39 | 336.83 |
| 13.02 | 336.81 | 15.69 | 336.82 | 16.24 | 336.8 | 16.81 | 336.8 | 19.61 | 336.78 |
| 20.59 | 336.75 | 22.33 | 336.74 | 23.62 | 336.74 | 24.74 | 336.79 | 25.87 | 336.86 |
| 26.11 | 336.87 | 31.59 | 336.61 | 31.87 | 336.6 | 32.43 | 336.57 | 34.94 | 336.45 |
| 36.74 | 336.36 | 36.84 | 336.35 | 38 | 336.3 | 39.54 | 336.22 | 43.32 | 335.58 |
| 44.21 | 335.43 | 45.14 | 335.26 | 45.85 | 335.07 | 46.24 | 334.97 | 48.43 | 334.38 |
| 48.72 | 334.3 | 49.47 | 334.2 | 50.77 | 334.04 | 55.72 | 333.33 | 56.3 | 333.23 |
| 56.5 | 333.16 | 58.16 | 333.08 | 59.19 | 333.04 | 59.53 | 333.02 | 61.02 | 333.09 |
| 62.72 | 333.18 | 63.16 | 333.22 | 63.73 | 333.32 | 65.08 | 333.51 | 65.9 | 333.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 66.59 | 333.69 | 68.47 | 333.92 | 69.06 | 334 | 69.5 | 334.04 | 70.06 | 334.08 |
| 70.66 | 334.14 | 70.89 | 334.15 | 71.04 | 334.14 | 71.57 | 334.12 | 72.94 | 334.09 |
| 74.02 | 334.02 | 74.06 | 334.02 | 75.08 | 333.95 | 78.59 | 333.74 | 79.33 | 333.73 |
| 80.19 | 333.77 | 80.68 | 333.64 | 81.58 | 333.42 | 82.05 | 333.25 | 82.54 | 333.18 |
| 84.44 | 332.92 | 84.97 | 332.85 | 89.26 | 332.29 | 90.24 | 332.22 | 90.81 | 332.2 |
| 92.51 | 332.16 | 93.43 | 332.15 | 95.37 | 332.12 | 95.81 | 332.11 | 96.11 | 332.09 |
| 96.13 | 332.08 | 97.46 | 331.95 | 99.5 | 331.74 | 102.87 | 331.38 | 103.71 | 331.3 |
| 104.57 | 331.23 | 105.48 | 331.19 | 105.75 | 331.16 | 106.82 | 331.08 | 111.25 | 330.74 |
| 112.15 | 330.67 | 114.41 | 330.49 | 116.92 | 330.3 | 120.7 | 330.13 | 123.17 | 330.02 |
| 126.35 | 329.89 | 126.79 | 329.87 | 130.03 | 329.74 | 131.22 | 329.69 | 137.78 | 329.52 |
| 138.24 | 329.51 | 138.41 | 329.5 | 138.81 | 329.5 | 139.12 | 329.49 | 140 | 329.48 |
| 140.61 | 329.48 | 141.85 | 329.47 | 142.78 | 329.47 | 143.87 | 329.49 | 144.56 | 329.51 |
| 145.07 | 329.57 | 145.92 | 329.59 | 147.38 | 329.6 | 149.93 | 329.6 | 151.21 | 329.61 |
| 153.18 | 329.53 | 155.67 | 329.43 | 155.76 | 329.28 | 156.43 | 329.23 | 161.43 | 328.87 |
| 162.35 | 328.86 | 163.22 | 328.84 | 163.42 | 328.87 | 165.75 | 329.11 | 166.62 | 329.18 |
| 167.95 | 329.21 | 168.82 | 329.18 | 169.72 | 329.13 | 170.03 | 329.12 | 171.19 | 329.09 |
| 171.27 | 329.09 | 178.19 | 328.7 | 183.09 | 328.43 | 183.8 | 328.39 | 184.75 | 328.33 |
| 185.51 | 328.29 | 187.74 | 328.21 | 189.58 | 328.14 | 190.78 | 328.09 | 194.62 | 327.96 |
| 196.02 | 327.92 | 196.13 | 327.92 | 199.74 | 327.82 | 200.06 | 327.81 | 200.95 | 327.79 |
| 202.45 | 327.75 | 203.04 | 327.73 | 204.01 | 327.71 | 204.34 | 327.7 | 204.77 | 327.7 |
| 204.9 | 327.69 | 205.68 | 327.69 | 207.38 | 327.68 | 210.3 | 327.68 | 214.27 | 327.7 |
| 215.26 | 327.69 | 215.95 | 327.69 | 216.89 | 327.7 | 217.6 | 327.71 | 218.9 | 327.75 |
| 219.22 | 327.75 | 220.03 | 327.77 | 221.69 | 327.77 | 222.25 | 327.78 | 224.85 | 327.81 |
| 225.72 | 327.81 | 226.5 | 327.82 | 227.42 | 327.82 | 228.47 | 327.83 | 229.57 | 327.83 |
| 232.87 | 327.86 | 234.48 | 327.88 | 235.4 | 327.9 | 235.52 | 327.91 | 236.41 | 327.92 |
| 238.46 | 327.96 | 239.04 | 327.96 | 243.79 | 327.98 | 251.52 | 328.03 | 252.82 | 328.04 |
| 254.85 | 328.06 | 256.54 | 328.08 | 256.89 | 328.08 | 258.73 | 328.11 | 260.98 | 328.13 |
| 263.16 | 328.16 | 265.01 | 328.18 | 270.67 | 328.24 | 270.9 | 328.25 | 272.52 | 328.27 |
| 273.7 | 328.28 | 274.98 | 328.24 | 278.58 | 328.24 | 279.83 | 328.25 | 290.5 | 328.25 |
| 294.44 | 328.24 | 295.92 | 328.24 | 297.93 | 328.23 | 299.49 | 328.23 | 300.65 | 328.22 |
| 300.68 | 328.23 | 301.41 | 328.23 | 303.02 | 328.22 | 303.48 | 328.22 | 306.75 | 327.78 |
| 307.29 | 327.71 | 307.48 | 327.68 | 309.19 | 327.46 | 309.39 | 327.45 | 310.52 | 327.41 |
| 310.98 | 327.39 | 312.06 | 327.36 | 314.23 | 327.27 | 314.38 | 327.27 | 315.34 | 327.22 |
| 315.47 | 327.22 | 315.94 | 327.19 | 316.5 | 327.16 | 316.98 | 327.14 | 317.94 | 327.08 |
| 319.52 | 327 | 319.7 | 326.98 | 319.94 | 326.98 | 320.21 | 326.97 | 321.8 | 326.92 |
| 323.84 | 326.86 | 324.3 | 326.86 | 325.37 | 326.85 | 325.95 | 326.84 | 326.6 | 326.84 |
| 327.16 | 326.83 | 327.96 | 326.72 | 328.88 | 326.61 | 329.46 | 326.64 | 329.65 | 326.63 |
| 330.64 | 326.54 | 330.93 | 326.52 | 331.45 | 326.57 | 331.76 | 326.65 | 332.09 | 326.75 |
| 332.67 | 326.78 | 333.03 | 326.79 | 333.73 | 326.8 | 334.45 | 326.8 | 335.12 | 326.79 |
| 337.12 | 326.75 | 339.7 | 326.71 | 340.49 | 326.69 | 342.37 | 326.66 | 344.15 | 326.66 |
| 346.39 | 326.58 | 348.1 | 326.51 | 348.48 | 326.5 | 349.52 | 326.45 | 350.07 | 326.43 |
| 350.76 | 326.43 | 352.98 | 326.42 | 353.21 | 326.41 | 353.45 | 326.42 | 353.93 | 326.46 |
| 354.71 | 326.46 | 355.16 | 326.45 | 355.75 | 326.45 | 356.2 | 326.47 | 356.71 | 326.48 |
| 357.01 | 326.5 | 357.46 | 326.52 | 358.41 | 326.55 | 359.41 | 326.59 | 360.17 | 326.63 |
| 360.64 | 326.66 | 361.05 | 326.7 | 361.52 | 326.74 | 363.08 | 326.83 | 365.54 | 326.97 |
| 367.3 | 327.05 | 368.11 | 327.08 | 370.49 | 327.19 | 371.25 | 327.22 | 372.35 | 327.25 |
| 373.19 | 327.28 | 374.87 | 327.4 | 376.4 | 327.48 | 376.64 | 327.5 | 376.89 | 327.49 |
| 377.72 | 327.52 | 378.17 | 327.53 | 378.78 | 327.55 | 379.61 | 327.56 | 380.6 | 327.58 |
| 381.21 | 327.58 | 381.83 | 327.57 | 383.44 | 327.55 | 385.02 | 327.52 | 385.15 | 327.52 |
| 387.42 | 327.44 | 389.34 | 327.35 | 391.09 | 327.28 | 391.68 | 327.26 | 393.21 | 327.26 |
| 393.64 | 327.25 | 394.85 | 327.25 | 395.52 | 327.24 | 395.77 | 327.24 | 395.83 | 327.23 |
| 397.44 | 327.23 | 397.84 | 327.22 | 399.48 | 327.23 | 401.81 | 327.24 | 404.96 | 327.35 |
| 408.65 | 327.48 | 409.16 | 327.5 | 413.99 | 327.68 | 415.07 | 327.73 | 416.74 | 327.8 |
| 416.92 | 327.8 | 417.24 | 327.83 | 418.3 | 327.92 | 419.07 | 327.94 | 420.8 | 327.97 |
| 421.57 | 327.98 | 422.08 | 328 | 422.51 | 328.01 | 422.71 | 328.02 | 425.11 | 328.06 |
| 425.79 | 328.06 | 425.93 | 328.07 | 426.17 | 328.06 | 427.3 | 328.04 | 427.42 | 328.01 |
| 427.76 | 328 | 428.72 | 328 | 428.95 | 327.99 | 429.29 | 327.99 | 430.04 | 328.02 |
| 430.4 | 327.99 | 430.95 | 327.93 | 431.54 | 327.86 | 432.63 | 327.79 | 433.29 | 327.83 |
| 434.32 | 327.88 | 434.77 | 327.84 | 434.8 | 327.85 | 435.22 | 327.82 | 435.6 | 327.83 |
| 436.05 | 327.81 | 438.45 | 327.77 | 438.69 | 327.75 | 442.82 | 327.62 | 443.58 | 327.59 |
| 443.84 | 327.56 | 445.4 | 327.47 | 445.51 | 327.46 | 446.19 | 327.46 | 446.85 | 327.48 |
| 448.02 | 327.48 | 449.97 | 327.47 | 451.25 | 327.47 | 454.79 | 327.45 | 455.44 | 327.43 |
| 458.28 | 327.33 | 460.73 | 327.25 | 467.13 | 327.25 | 467.5 | 327.26 | 468.16 | 327.27 |
| 469.16 | 327.29 | 469.85 | 327.31 | 470.92 | 327.33 | 473.75 | 327.4 | 476.25 | 327.45 |
| 478.19 | 327.5 | 482.96 | 327.67 | 484.14 | 327.71 | 487.06 | 327.78 | 488.12 | 327.81 |
| 489.59 | 327.84 | 490.29 | 327.86 | 492.06 | 327.86 | 493.8 | 327.87 | 493.94 | 327.85 |
| 494.52 | 327.81 | 494.99 | 327.77 | 495.35 | 327.75 | 495.91 | 327.74 | 500.9 | 327.92 |
| 501.93 | 327.96 | 502.86 | 327.99 | 504.5 | 328.05 | 506.02 | 328.1 | 506.59 | 328.13 |
| 506.81 | 328.13 | 506.87 | 328.14 | 508.07 | 328.22 | 510.73 | 328.3 | 512.64 | 328.32 |
| 515.57 | 328.36 | 515.92 | 328.36 | 516.88 | 328.37 | 518.79 | 328.37 | 520.13 | 328.38 |
| 521.48 | 328.38 | 523.64 | 328.39 | 524.54 | 328.4 | 530.52 | 328.45 | 531.32 | 328.46 |
| 532.32 | 328.45 | 533.57 | 328.45 | 539.16 | 328.4 | 544.49 | 328.4 | 545.8 | 328.42 |
| 547.5 | 328.45 | 548.09 | 328.45 | 548.44 | 328.44 | 549.05 | 328.47 | 549.17 | 328.47 |
| 550.53 | 328.54 | 550.87 | 328.55 | 553.37 | 328.57 | 553.68 | 328.57 | 554.17 | 328.59 |
| 554.62 | 328.6 | 559.02 | 328.66 | 562.09 | 328.72 | 563.81 | 328.75 | 564.04 | 328.76 |
| 565.29 | 328.78 | 566.24 | 328.79 | 566.85 | 328.78 | 567.24 | 328.76 | 567.47 | 328.73 |
| 568.15 | 328.59 | 568.45 | 328.58 | 569.61 | 328.65 | 572.08 | 328.79 | 573.68 | 328.86 |
| 574.05 | 328.87 | 575.16 | 328.91 | 576.52 | 328.99 | 577.07 | 328.99 | 577.2 | 329 |
| 582.67 | 329.09 | 584.66 | 329.12 | 585.46 | 329.14 | 586.13 | 329.15 | 588.02 | 329.19 |
| 588.55 | 329.21 | 589.96 | 329.25 | 590.16 | 329.25 | 590.72 | 329.28 | 590.95 | 329.28 |
| 591.35 | 329.31 | 591.71 | 329.32 | 596.35 | 329.55 | 596.63 | 329.56 | 597.29 | 329.6 |
| 599.15 | 329.69 | 599.47 | 329.71 | 600.17 | 329.74 | 601.44 | 329.8 | 604.38 | 329.96 |
| 604.67 | 329.97 | 605.45 | 330.02 | 607.47 | 330.14 | 608.11 | 330.17 | 608.73 | 330.21 |
| 609.48 | 330.24 | 610.43 | 330.29 | 611.95 | 330.38 | 612.46 | 330.42 | 613.19 | 330.46 |
| 615.74 | 330.55 | 616.41 | 330.57 | 618.54 | 330.64 | 619.57 | 330.69 | 619.84 | 330.69 |
| 621.3 | 330.71 | 625.64 | 330.9 | 629.91 | 331.08 | 630.91 | 331.12 | 631.03 | 331.13 |
| 632.12 | 331.17 | 634.16 | 331.26 | 635.59 | 331.27 | 638.69 | 331.28 | 639.07 | 331.28 |
| 639.36 | 331.29 | 640.44 | 331.29 | 642.29 | 331.3 | 643.74 | 331.31 | 645.43 | 331.32 |
| 646.16 | 331.32 | 649.93 | 331.34 | 651.66 | 331.34 | 651.98 | 331.35 | 660.4 | 331.35 |
| 660.85 | 331.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 295.92 | .04 | 510.73 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 295.92 | 510.73 | 18.12 | 19.01 | 21.15 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 908.89

INPUT
Description:

Station Elevation Data num= 393

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3372.450012 | | 3372.690002 | | 3375.720032 | | 336.86.369995 | | 336.78 |
| 7.359985 | 336.748.540039 | | 336.669.140015 | | 336.6412.79004 | | 336.6213.35999 | | 336.6 |
| 16.10004 | 336.6116.67004 | | 336.59 | 17.25 | 336.5918.77002 | | 336.58 | 20.13 | 336.57 |
| 20.79999 | 336.55 | 21.13 | 336.5422.92004 | | 336.5324.23999 | | 336.5325.39001 | | 336.58 |
| 26.54999 | 336.6626.65002 | | 336.6726.79999 | | 336.6735.85999 | | 336.2440.58002 | | 336 |
| 45.38 | 335.1746.33002 | | 335 | 47.06 | 334.8 | 50 | 33452.10999 | | 333.73 |
| 57.19 | 33357.78003 | | 332.8957.98999 | | 332.82 | 59.69 | 332.7461.10004 | | 332.68 |
| 62.63 | 332.75 | 64.37 | 332.8564.73999 | | 332.8865.41003 | | 33366.79999 | | 333.2 |
| 67.64001 | 333.3 | 70.88 | 333.7271.33002 | | 333.7771.91003 | | 333.8172.52002 | | 333.87 |
| 72.66003 | 333.8872.76001 | | 333.8972.91003 | | 333.8873.46002 | | 333.8674.85999 | | 333.83 |
| 77.06 | 333.6980.66003 | | 333.581.42004 | | 333.49 | 82.31 | 333.5483.73004 | | 333.18 |
| 84.21002 | 33386.67004 | | 332.6691.60999 | | 332 | 92.62 | 331.9293.21002 | | 331.9 |
| 94.95001 | 331.8697.89001 | | 331.8298.34003 | | 331.8198.48999 | | 331.898.64001 | | 331.79 |
| 106.45 | 331 | 107.33 | 330.93 | 108.02 | 330.9 | 108.26 | 330.89 | 108.54 | 330.87 |
| 108.95 | 330.84 | 109.64 | 330.79 | 120 | 330 | 123.88 | 329.83 | 129.68 | 329.59 |
| 130.13 | 329.57 | 133.46 | 329.44 | 134.68 | 329.39 | 141.41 | 329.22 | 141.89 | 329.21 |
| 142.47 | 329.2 | 142.79 | 329.19 | 143.69 | 329.19 | 145.59 | 329.18 | 146.55 | 329.18 |
| 147.66 | 329.2 | 148.37 | 329.23 | 148.9 | 329.29 | 149.77 | 329.31 | 151.27 | 329.33 |
| 152.65 | 329.33 | 153.88 | 329.33 | 155.2 | 329.34 | 157.22 | 329.26 | 159.78 | 329.16 |
| 159.87 | 329 | 165.69 | 328.58 | 166.63 | 328.57 | 167.52 | 328.55 | 170.12 | 328.83 |
| 171.01 | 328.91 | 172.38 | 328.94 | 173.27 | 328.91 | 174.2 | 328.86 | 174.51 | 328.85 |
| 174.93 | 328.84 | 175.71 | 328.82 | 175.79 | 328.82 | 188.65 | 328.1 | 189.62 | 328.04 |
| 190.4 | 328 | 199.75 | 327.65 | 201.19 | 327.61 | 206.25 | 327.47 | 208.4 | 327.41 |
| 209.73 | 327.38 | 210.3 | 327.37 | 211.1 | 327.37 | 213.03 | 327.36 | 214.88 | 327.36 |
| 215.85 | 327.36 | 219.92 | 327.38 | 221.09 | 327.38 | 221.65 | 327.38 | 222.61 | 327.39 |
| 223.34 | 327.4 | 224 | 327.42 | 225 | 327.45 | 225.83 | 327.47 | 226.75 | 327.47 |
| 228.11 | 327.48 | 229.94 | 327.51 | 230.78 | 327.52 | 235.63 | 327.55 | 239.01 | 327.58 |
| 240.66 | 327.6 | 241.61 | 327.62 | 242.65 | 327.64 | 244.2 | 327.67 | 244.75 | 327.68 |
| 245.34 | 327.68 | 250.22 | 327.7 | 259.49 | 327.77 | 261.57 | 327.79 | 263.31 | 327.81 |
| 270.1 | 327.9 | 277.81 | 328 | 280.92 | 328.05 | 282.23 | 328.01 | 283.5 | 328.01 |
| 287.21 | 328.02 | 292.19 | 328.03 | 295.59 | 328.03 | 298.16 | 328.03 | 302.21 | 328.02 |
| 303.19 | 328.02 | 303.72 | 328.02 | 311.21 | 328 | 316.86 | 327.19 | 320.64 | 327.05 |
| 321.84 | 327 | 323.07 | 326.94 | 325.52 | 326.8 | 327.26 | 326.7 | 331.35 | 326.59 |
| 334.64 | 326.56 | 335.09 | 326.49 | 335.43 | 326.44 | 336.34 | 326.33 | 336.92 | 326.36 |
| 338.37 | 326.23 | 338.89 | 326.28 | 339.52 | 326.47 | 339.88 | 326.5 | 340.45 | 326.52 |
| 341.14 | 326.53 | 341.85 | 326.53 | 342.52 | 326.52 | 347.05 | 326.44 | 349.69 | 326.4 |
| 350.04 | 326.4 | 351.45 | 326.4 | 355.36 | 326.25 | 356.77 | 326.19 | 357.07 | 326.17 |
| 357.31 | 326.17 | 357.58 | 326.17 | 358 | 326.16 | 360.19 | 326.15 | 360.42 | 326.14 |
| 360.56 | 326.15 | 360.66 | 326.15 | 360.99 | 326.19 | 361.15 | 326.2 | 361.23 | 326.2 |
| 361.29 | 326.2 | 361.43 | 326.2 | 361.94 | 326.2 | 362.39 | 326.19 | 362.7 | 326.19 |
| 362.99 | 326.19 | 363.44 | 326.21 | 363.96 | 326.22 | 364.26 | 326.24 | 364.72 | 326.26 |
| 365.68 | 326.29 | 366.69 | 326.33 | 367.93 | 326.4 | 368.82 | 326.47 | 370.18 | 326.55 |
| 372.89 | 326.69 | 374.67 | 326.77 | 375.49 | 326.8 | 378.66 | 326.93 | 380.62 | 327 |
| 382.32 | 327.12 | 384.11 | 327.22 | 384.36 | 327.21 | 386.27 | 327.28 | 388.11 | 327.31 |
| 389.36 | 327.31 | 390.99 | 327.29 | 392.72 | 327.26 | 395.01 | 327.18 | 396.95 | 327.09 |
| 399.32 | 327 | 400.87 | 327 | 401.3 | 327 | 402.52 | 327 | 403.51 | 326.99 |
| 403.96 | 326.99 | 405.14 | 326.99 | 405.55 | 326.99 | 407.2 | 327 | 409.56 | 327 |
| 416.99 | 327.27 | 421.88 | 327.46 | 424.98 | 327.59 | 426.23 | 327.7 | 427.01 | 327.72 |
| 429.54 | 327.76 | 430.06 | 327.78 | 430.49 | 327.79 | 430.69 | 327.8 | 431.29 | 327.81 |
| 432.57 | 327.83 | 433.32 | 327.84 | 433.81 | 327.84 | 433.95 | 327.85 | 434.02 | 327.84 |
| 434.76 | 327.83 | 435.33 | 327.82 | 435.36 | 327.81 | 435.39 | 327.8 | 435.4 | 327.8 |
| 435.46 | 327.79 | 435.6 | 327.79 | 435.8 | 327.78 | 436.31 | 327.78 | 437 | 327.77 |
| 437.17 | 327.77 | 437.35 | 327.77 | 437.55 | 327.78 | 437.9 | 327.79 | 438.06 | 327.8 |
| 438.1 | 327.8 | 438.22 | 327.79 | 438.47 | 327.77 | 439.62 | 327.63 | 440.1 | 327.6 |
| 440.72 | 327.56 | 442.43 | 327.65 | 442.89 | 327.61 | 442.92 | 327.62 | 443.34 | 327.59 |
| 443.73 | 327.6 | 444.1 | 327.58 | 445.44 | 327.56 | 446.61 | 327.54 | 446.85 | 327.52 |
| 451.8 | 327.37 | 452.58 | 327.32 | 453.64 | 327.25 | 454.43 | 327.25 | 455.1 | 327.27 |
| 458.96 | 327.25 | 463.13 | 327.22 | 469.14 | 327 | 469.57 | 327 | 472.27 | 327 |
| 474.89 | 327 | 475.23 | 327 | 475.61 | 327 | 482.3 | 327.15 | 484.83 | 327.21 |
| 486.79 | 327.26 | 491.61 | 327.43 | 492.81 | 327.47 | 499.03 | 327.62 | 500.82 | 327.62 |
| 502.57 | 327.63 | 502.72 | 327.61 | 503.3 | 327.57 | 503.78 | 327.53 | 504.14 | 327.51 |
| 504.71 | 327.5 | 514.93 | 327.88 | 515.79 | 327.92 | 517 | 328 | 519.69 | 328.08 |
| 521.63 | 328.1 | 524.6 | 328.13 | 525.93 | 328.14 | 527.03 | 328.14 | 527.86 | 328.14 |
| 529.22 | 328.14 | 530.59 | 328.14 | 532.78 | 328.15 | 539.76 | 328.2 | 540.57 | 328.21 |
| 541.58 | 328.2 | 542.85 | 328.2 | 548.52 | 328.14 | 551.12 | 328.13 | 553.92 | 328.13 |
| 555.25 | 328.15 | 556.97 | 328.17 | 557.23 | 328.17 | 557.35 | 328.17 | 557.57 | 328.17 |
| 557.74 | 328.16 | 557.92 | 328.16 | 558.12 | 328.17 | 558.54 | 328.19 | 559.45 | 328.23 |
| 560.04 | 328.26 | 560.39 | 328.27 | 563.24 | 328.29 | 563.73 | 328.31 | 566.4 | 328.35 |
| 568.65 | 328.38 | 573.74 | 328.48 | 575.01 | 328.5 | 575.97 | 328.51 | 576.59 | 328.5 |
| 576.98 | 328.48 | 577.22 | 328.45 | 577.91 | 328.3 | 578.21 | 328.29 | 581.18 | 328.47 |
| 581.89 | 328.51 | 583.51 | 328.58 | 583.89 | 328.6 | 585.01 | 328.64 | 585.53 | 328.67 |
| 586.39 | 328.72 | 592.63 | 328.82 | 596.13 | 328.89 | 598.05 | 328.93 | 600.34 | 329 |
| 600.79 | 329.02 | 600.81 | 329.02 | 600.86 | 329.02 | 600.89 | 329.02 | 600.92 | 329.02 |
| 600.96 | 329.02 | 601.02 | 329.02 | 601.34 | 329.04 | 601.43 | 329.05 | 606.5 | 329.3 |
| 609.66 | 329.47 | 610.37 | 329.51 | 611.66 | 329.57 | 614.93 | 329.75 | 619.06 | 330 |
| 620.77 | 330.08 | 622.31 | 330.17 | 622.83 | 330.21 | 623.35 | 330.24 | 628.99 | 330.42 |
| 630.04 | 330.46 | 631.79 | 330.48 | 644.83 | 331 | 649.42 | 331 | 650.1 | 331 |
| 653.07 | 331 | 654.54 | 331 | 656.25 | 331 | 656.66 | 331 | 661.67 | 331 |
| 664.32 | 331 | 671.43 | 331 | 671.89 | 331.01 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 303.72 | .04 | 519.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 303.72 | 519.69 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 889.839*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.65 | 2.57 | 336.65 | 5.47 | 336.46 | 6.09 | 336.44 | 7.04 | 336.4 |
| 8.17 | 336.32 | 8.74 | 336.3 | 12.23 | 336.28 | 12.78 | 336.26 | 15.4 | 336.26 |
| 15.87 | 336.25 | 15.95 | 336.24 | 16.75 | 336.24 | 19.26 | 336.22 | 19.5 | 336.21 |
| 20.21 | 336.19 | 21.92 | 336.17 | 23.19 | 336.17 | 24.29 | 336.22 | 25.4 | 336.29 |
| 25.64 | 336.3 | 27.51 | 336.21 | 34.3 | 335.87 | 38.82 | 335.63 | 39.38 | 335.54 |
| 43.41 | 334.85 | 44.32 | 334.68 | 45.01 | 334.49 | 47.29 | 333.88 | 47.83 | 333.74 |
| 47.89 | 333.73 | 49.85 | 333.48 | 51.57 | 333.24 | 54.7 | 332.79 | 55.27 | 332.69 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 55.47 | 332.62 | 57.1 | 332.54 | 58.44 | 332.49 | 59.91 | 332.56 | 61.57 | 332.65 |
| 61.93 | 332.68 | 62.57 | 332.8 | 63.9 | 332.99 | 64.7 | 333.08 | 67.8 | 333.48 |
| 68.23 | 333.53 | 68.78 | 333.57 | 69.6 | 333.65 | 69.74 | 333.64 | 70.27 | 333.62 |
| 71.61 | 333.59 | 73.71 | 333.46 | 77.15 | 333.28 | 77.88 | 333.27 | 78.73 | 333.32 |
| 80.09 | 332.98 | 80.55 | 332.81 | 82.9 | 332.49 | 87.63 | 331.87 | 88.59 | 331.8 |
| 89.16 | 331.78 | 90.82 | 331.74 | 93.64 | 331.71 | 94.07 | 331.7 | 94.35 | 331.68 |
| 101.82 | 330.94 | 102.66 | 330.87 | 103.3 | 330.84 | 103.82 | 330.82 | 106.6 | 330.61 |
| 107.48 | 330.55 | 108.63 | 330.46 | 111.26 | 330.26 | 114.78 | 330 | 118.5 | 329.84 |
| 120.99 | 329.74 | 121.59 | 329.71 | 124.04 | 329.61 | 124.47 | 329.6 | 127.66 | 329.47 |
| 128.83 | 329.43 | 135.26 | 329.27 | 136.28 | 329.25 | 136.58 | 329.24 | 137.44 | 329.24 |
| 139.26 | 329.23 | 140.18 | 329.23 | 141.24 | 329.25 | 141.92 | 329.28 | 142.43 | 329.34 |
| 143.26 | 329.36 | 144.7 | 329.38 | 147.19 | 329.38 | 147.62 | 329.39 | 148.45 | 329.39 |
| 150.39 | 329.32 | 152.84 | 329.23 | 152.92 | 329.07 | 154.1 | 328.99 | 154.49 | 328.96 |
| 156.41 | 328.82 | 158.49 | 328.68 | 159.39 | 328.67 | 160.24 | 328.65 | 162.73 | 328.91 |
| 163.58 | 328.99 | 164.89 | 329.01 | 165.74 | 328.99 | 166.63 | 328.94 | 166.93 | 328.93 |
| 168.07 | 328.9 | 168.15 | 328.9 | 174.37 | 328.55 | 177.28 | 328.39 | 179.86 | 328.24 |
| 180.45 | 328.21 | 181.38 | 328.15 | 182.12 | 328.11 | 186.12 | 327.96 | 191.07 | 327.77 |
| 197.29 | 327.59 | 198.26 | 327.56 | 199.34 | 327.53 | 200.61 | 327.5 | 201.16 | 327.49 |
| 201.92 | 327.49 | 203.77 | 327.48 | 206.47 | 327.48 | 210.36 | 327.49 | 212.93 | 327.49 |
| 213.63 | 327.5 | 215.22 | 327.55 | 216.01 | 327.57 | 218.2 | 327.57 | 219.95 | 327.6 |
| 220.75 | 327.61 | 225.39 | 327.63 | 227.53 | 327.65 | 228.62 | 327.65 | 230.2 | 327.67 |
| 231.11 | 327.69 | 232.1 | 327.7 | 234.11 | 327.74 | 234.68 | 327.74 | 239.34 | 327.75 |
| 247.46 | 327.8 | 248.21 | 327.8 | 250.2 | 327.82 | 251.87 | 327.83 | 256.25 | 327.88 |
| 258.36 | 327.9 | 264.98 | 327.98 | 268.71 | 328.03 | 268.77 | 328.03 | 269.96 | 327.99 |
| 271.18 | 327.99 | 274.73 | 328 | 279.49 | 328.02 | 290.52 | 328.02 | 292.21 | 328.03 |
| 292.44 | 328.02 | 293.53 | 328.01 | 294.15 | 328 | 294.59 | 328 | 294.89 | 327.99 |
| 295.27 | 327.99 | 295.55 | 327.98 | 296.81 | 327.95 | 298.35 | 327.92 | 298.71 | 327.91 |
| 299.43 | 327.81 | 300.82 | 327.62 | 301.37 | 327.55 | 302.57 | 327.39 | 304.07 | 327.2 |
| 304.9 | 327.09 | 305.24 | 327.07 | 306.15 | 327.03 | 309.03 | 326.92 | 310.35 | 326.86 |
| 311.69 | 326.79 | 313.18 | 326.7 | 314.24 | 326.64 | 314.37 | 326.63 | 315.49 | 326.57 |
| 316.28 | 326.52 | 318.43 | 326.46 | 320.58 | 326.39 | 320.75 | 326.39 | 323.18 | 326.35 |
| 324.35 | 326.34 | 324.85 | 326.27 | 326.21 | 326.12 | 326.85 | 326.14 | 328.43 | 326.01 |
| 329 | 326.06 | 329.69 | 326.24 | 330.09 | 326.26 | 330.71 | 326.28 | 332.58 | 326.28 |
| 333.29 | 326.26 | 335.68 | 326.22 | 337.93 | 326.17 | 340.82 | 326.12 | 342.66 | 326.12 |
| 342.75 | 326.11 | 344.51 | 326.05 | 346.09 | 325.99 | 347.03 | 325.96 | 348.57 | 325.9 |
| 349.16 | 325.88 | 349.45 | 325.88 | 349.91 | 325.87 | 350.39 | 325.87 | 350.47 | 325.86 |
| 351.13 | 325.86 | 351.64 | 325.85 | 352.07 | 325.85 | 352.51 | 325.84 | 352.56 | 325.83 |
| 352.68 | 325.85 | 352.82 | 325.85 | 353.18 | 325.89 | 353.44 | 325.91 | 353.89 | 325.91 |
| 354.02 | 325.9 | 354.52 | 325.9 | 354.69 | 325.89 | 355.02 | 325.89 | 355.52 | 325.9 |
| 355.82 | 325.92 | 356.4 | 325.93 | 357.2 | 325.97 | 358.34 | 325.99 | 359.32 | 326.03 |
| 360.66 | 326.11 | 361.62 | 326.18 | 362.99 | 326.25 | 363.2 | 326.27 | 364.4 | 326.32 |
| 366.01 | 326.39 | 366.53 | 326.42 | 368.2 | 326.48 | 369.43 | 326.52 | 369.97 | 326.54 |
| 372.23 | 326.61 | 372.39 | 326.61 | 373.26 | 326.64 | 374.34 | 326.67 | 375.03 | 326.72 |
| 376.09 | 326.78 | 376.17 | 326.79 | 378.1 | 326.89 | 378.37 | 326.88 | 378.8 | 326.9 |
| 379.94 | 326.94 | 380.43 | 326.96 | 382.41 | 326.99 | 384.77 | 326.99 | 385.52 | 326.97 |
| 386.06 | 326.97 | 386.91 | 326.95 | 387.38 | 326.95 | 389.33 | 326.89 | 389.54 | 326.89 |
| 389.85 | 326.88 | 390.25 | 326.86 | 391.94 | 326.8 | 394.5 | 326.72 | 396.63 | 326.72 |
| 397.95 | 326.73 | 399.02 | 326.72 | 401.22 | 326.72 | 402.73 | 326.73 | 402.86 | 326.74 |
| 405.54 | 326.74 | 406.43 | 326.76 | 408.03 | 326.81 | 409.23 | 326.85 | 411.28 | 326.93 |
| 412.22 | 326.96 | 412.95 | 326.99 | 413.55 | 327.01 | 413.94 | 327.03 | 415.59 | 327.09 |
| 416.18 | 327.11 | 416.77 | 327.14 | 417.39 | 327.16 | 418.72 | 327.21 | 418.82 | 327.21 |
| 420 | 327.26 | 420.46 | 327.27 | 421.64 | 327.32 | 421.98 | 327.33 | 422.37 | 327.36 |
| 422.47 | 327.36 | 422.98 | 327.4 | 423.29 | 327.43 | 424.12 | 327.46 | 424.35 | 327.46 |
| 424.63 | 327.47 | 425.43 | 327.48 | 425.93 | 327.48 | 426.59 | 327.49 | 427.08 | 327.49 |
| 427.64 | 327.51 | 428.1 | 327.51 | 428.32 | 327.52 | 428.97 | 327.53 | 430.35 | 327.54 |
| 431.68 | 327.54 | 431.83 | 327.55 | 432.18 | 327.53 | 432.39 | 327.53 | 432.71 | 327.52 |
| 433.32 | 327.49 | 433.46 | 327.46 | 433.61 | 327.46 | 433.83 | 327.44 | 434.38 | 327.44 |
| 434.45 | 327.43 | 435.12 | 327.42 | 435.4 | 327.42 | 435.71 | 327.44 | 435.96 | 327.44 |
| 436.3 | 327.46 | 436.94 | 327.41 | 437.95 | 327.31 | 438.37 | 327.29 | 438.46 | 327.28 |
| 439.13 | 327.25 | 440.39 | 327.31 | 440.98 | 327.34 | 441.47 | 327.31 | 441.5 | 327.32 |
| 441.96 | 327.29 | 442.33 | 327.3 | 442.38 | 327.31 | 442.78 | 327.29 | 443.46 | 327.29 |
| 444.22 | 327.27 | 445.48 | 327.26 | 445.74 | 327.24 | 448.32 | 327.17 | 451.08 | 327.09 |
| 453.06 | 326.97 | 453.91 | 326.97 | 454.03 | 326.98 | 454.53 | 326.99 | 456.15 | 326.99 |
| 456.92 | 326.98 | 458.87 | 326.98 | 459.11 | 326.97 | 460.03 | 326.97 | 460.21 | 326.96 |
| 461.52 | 326.96 | 461.81 | 326.95 | 463.29 | 326.95 | 463.46 | 326.94 | 465.09 | 326.89 |
| 466.1 | 326.85 | 466.34 | 326.85 | 466.88 | 326.83 | 468.19 | 326.79 | 469.77 | 326.74 |
| 473.48 | 326.74 | 474.59 | 326.72 | 475.34 | 326.7 | 475.58 | 326.7 | 475.6 | 326.69 |
| 476.18 | 326.69 | 476.29 | 326.7 | 476.75 | 326.7 | 478.1 | 326.76 | 479.01 | 326.79 |
| 479.63 | 326.8 | 479.99 | 326.81 | 480.61 | 326.82 | 484.86 | 326.91 | 487.31 | 326.95 |
| 488.8 | 326.98 | 489.02 | 326.99 | 489.83 | 327.01 | 490.29 | 327.03 | 491.19 | 327.05 |
| 491.94 | 327.08 | 493.41 | 327.13 | 493.99 | 327.14 | 494.52 | 327.16 | 495.72 | 327.19 |
| 498.45 | 327.25 | 498.51 | 327.25 | 501.23 | 327.31 | 501.99 | 327.33 | 505.81 | 327.33 |
| 506.6 | 327.28 | 507.12 | 327.24 | 507.5 | 327.22 | 508.12 | 327.21 | 508.9 | 327.24 |
| 509.49 | 327.25 | 510.06 | 327.27 | 512.07 | 327.35 | 514.35 | 327.43 | 514.83 | 327.45 |
| 515.25 | 327.46 | 517.31 | 327.53 | 519.45 | 327.6 | 519.56 | 327.6 | 520.06 | 327.62 |
| 520.84 | 327.67 | 521.37 | 327.7 | 521.65 | 327.71 | 522.71 | 327.74 | 523.25 | 327.76 |
| 523.77 | 327.77 | 524.27 | 327.79 | 525.5 | 327.8 | 526.14 | 327.81 | 529 | 327.84 |
| 529.45 | 327.84 | 530.28 | 327.85 | 536.88 | 327.85 | 538.88 | 327.87 | 540.65 | 327.88 |
| 543.4 | 327.9 | 544.38 | 327.91 | 545.36 | 327.9 | 546.58 | 327.9 | 552.04 | 327.84 |
| 554.55 | 327.83 | 557.24 | 327.83 | 558.53 | 327.85 | 560.18 | 327.87 | 560.76 | 327.87 |
| 561.1 | 327.86 | 561.7 | 327.89 | 562.57 | 327.92 | 563.14 | 327.95 | 563.48 | 327.96 |
| 566.22 | 327.98 | 566.7 | 328 | 568.22 | 328.02 | 569.27 | 328.04 | 571.44 | 328.07 |
| 572.27 | 328.08 | 576.34 | 328.16 | 577.56 | 328.18 | 578.49 | 328.19 | 579.09 | 328.18 |
| 579.46 | 328.16 | 579.69 | 328.13 | 580.36 | 327.99 | 580.68 | 327.98 | 583.34 | 328.14 |
| 584.19 | 328.19 | 585.75 | 328.26 | 586.12 | 328.28 | 586.34 | 328.28 | 587.2 | 328.31 |
| 588.53 | 328.39 | 588.71 | 328.39 | 591.31 | 328.43 | 593.55 | 328.47 | 594.54 | 328.49 |
| 597.91 | 328.55 | 599.76 | 328.59 | 601.97 | 328.65 | 602.4 | 328.67 | 602.62 | 328.67 |
| 603.02 | 328.7 | 604.55 | 328.78 | 606.99 | 328.9 | 607.9 | 328.94 | 610.47 | 329.08 |
| 610.94 | 329.11 | 611.63 | 329.14 | 612.4 | 329.18 | 612.87 | 329.2 | 615.15 | 329.32 |
| 616.02 | 329.37 | 620 | 329.61 | 621.65 | 329.68 | 623.13 | 329.77 | 623.63 | 329.81 |
| 624.13 | 329.83 | 628.71 | 329.98 | 629.57 | 330.01 | 630.58 | 330.04 | 632.26 | 330.06 |
| 634.37 | 330.15 | 644.83 | 330.55 | 647.12 | 330.55 | 649.25 | 330.56 | 670.45 | 330.56 |
| 670.9 | 330.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 290.52 | .04 | 524.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 290.52 | 524.27 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 870.788*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.31 | 2.24 | 336.3 | 2.46 | 336.3 | 5.22 | 336.11 | 5.82 | 336.1 |
| 6.72 | 336.06 | 7.8 | 335.98 | 8.35 | 335.96 | 11.68 | 335.93 | 12.2 | 335.92 |
| 14.7 | 335.92 | 15.15 | 335.9 | 15.75 | 335.9 | 15.99 | 335.89 | 17.14 | 335.88 |
| 18.38 | 335.86 | 18.61 | 335.85 | 19.29 | 335.83 | 20.93 | 335.82 | 22.13 | 335.81 |
| 23.18 | 335.86 | 24.24 | 335.92 | 24.47 | 335.93 | 26.26 | 335.84 | 32.74 | 335.5 |
| 37.05 | 335.27 | 37.59 | 335.17 | 41.44 | 334.52 | 42.3 | 334.37 | 45.14 | 333.61 |
| 45.65 | 333.47 | 45.71 | 333.47 | 47.58 | 333.23 | 49.23 | 333 | 52.22 | 332.58 |
| 52.76 | 332.48 | 52.95 | 332.42 | 54.5 | 332.35 | 55.79 | 332.3 | 57.19 | 332.36 |
| 58.77 | 332.46 | 59.11 | 332.48 | 59.72 | 332.59 | 60.99 | 332.77 | 61.76 | 332.86 |
| 64.72 | 333.25 | 65.13 | 333.29 | 65.66 | 333.33 | 66.44 | 333.4 | 66.57 | 333.39 |
| 67.07 | 333.38 | 68.35 | 333.35 | 70.36 | 333.23 | 73.65 | 333.07 | 74.34 | 333.06 |
| 75.15 | 333.1 | 76.45 | 332.78 | 76.89 | 332.62 | 79.14 | 332.32 | 83.65 | 331.74 |
| 84.57 | 331.67 | 85.11 | 331.66 | 86.7 | 331.62 | 89.38 | 331.59 | 90.07 | 331.57 |
| 97.2 | 330.87 | 98 | 330.81 | 98.85 | 330.78 | 99.48 | 330.73 | 100.11 | 330.69 |
| 101.75 | 330.57 | 103.69 | 330.43 | 106.21 | 330.24 | 109.57 | 329.99 | 113.11 | 329.85 |
| 115.49 | 329.75 | 116.06 | 329.73 | 118.41 | 329.64 | 118.82 | 329.62 | 121.86 | 329.51 |
| 122.97 | 329.46 | 129.56 | 329.31 | 130.09 | 329.31 | 130.38 | 329.3 | 131.2 | 329.3 |
| 132.93 | 329.29 | 133.81 | 329.29 | 134.82 | 329.31 | 135.47 | 329.34 | 135.96 | 329.39 |
| 136.75 | 329.41 | 138.12 | 329.43 | 139.38 | 329.43 | 140.5 | 329.44 | 140.91 | 329.44 |
| 141.71 | 329.45 | 145.89 | 329.29 | 145.97 | 329.15 | 147.1 | 329.07 | 147.47 | 329.04 |
| 149.3 | 328.91 | 151.29 | 328.77 | 152.15 | 328.76 | 152.96 | 328.74 | 155.33 | 328.99 |
| 156.14 | 329.06 | 157.4 | 329.09 | 158.21 | 329.06 | 159.06 | 329.02 | 159.34 | 329.01 |
| 160.51 | 328.98 | 166.44 | 328.65 | 169.22 | 328.49 | 171.69 | 328.35 | 172.25 | 328.32 |
| 173.85 | 328.23 | 177.66 | 328.08 | 181.38 | 327.93 | 182.39 | 327.89 | 188.32 | 327.71 |
| 189.25 | 327.69 | 190.28 | 327.66 | 191.5 | 327.63 | 192.02 | 327.61 | 192.75 | 327.61 |
| 196.2 | 327.59 | 197.09 | 327.59 | 200.8 | 327.6 | 201.87 | 327.59 | 202.38 | 327.59 |
| 203.26 | 327.6 | 204.53 | 327.62 | 205.44 | 327.65 | 206.2 | 327.66 | 207.04 | 327.66 |
| 208.28 | 327.67 | 209.95 | 327.69 | 210.72 | 327.69 | 215.15 | 327.71 | 217.19 | 327.72 |
| 218.23 | 327.73 | 219.74 | 327.74 | 220.61 | 327.75 | 221.56 | 327.77 | 222.97 | 327.79 |
| 223.47 | 327.8 | 228.47 | 327.8 | 236.22 | 327.83 | 236.93 | 327.84 | 238.83 | 327.84 |
| 240.42 | 327.85 | 244.61 | 327.88 | 246.62 | 327.9 | 252.94 | 327.96 | 256.5 | 328.01 |
| 256.56 | 328.01 | 257.7 | 327.97 | 258.86 | 327.98 | 262.24 | 327.99 | 266.79 | 328 |
| 269.77 | 328.01 | 272.24 | 328.02 | 277.32 | 328.02 | 279.15 | 328.03 | 279.4 | 328.03 |
| 280.58 | 328.01 | 281.26 | 327.99 | 281.74 | 327.99 | 282.07 | 327.98 | 282.48 | 327.96 |
| 284.15 | 327.9 | 285.82 | 327.83 | 286.22 | 327.82 | 287 | 327.71 | 288.51 | 327.52 |
| 289.11 | 327.45 | 290.41 | 327.29 | 291.1 | 327.21 | 292.35 | 327.05 | 292.93 | 326.98 |
| 293.3 | 326.97 | 294.29 | 326.92 | 297.43 | 326.79 | 298.85 | 326.72 | 300.85 | 326.61 |
| 301.93 | 326.54 | 302.15 | 326.53 | 303.23 | 326.46 | 304.44 | 326.4 | 305.29 | 326.35 |
| 307.63 | 326.26 | 309.6 | 326.19 | 309.97 | 326.19 | 310.16 | 326.18 | 312.79 | 326.13 |
| 314.07 | 326.12 | 314.78 | 326.04 | 315 | 326.01 | 316.09 | 325.91 | 316.78 | 325.93 |
| 318.5 | 325.8 | 319.12 | 325.84 | 319.87 | 326 | 320.15 | 326.02 | 320.97 | 326.03 |
| 323 | 326.03 | 323.78 | 326.01 | 326.36 | 325.96 | 328.81 | 325.91 | 331.95 | 325.85 |
| 332.37 | 325.84 | 333.82 | 325.83 | 334.04 | 325.83 | 335.96 | 325.76 | 338.69 | 325.68 |
| 340.37 | 325.62 | 340.72 | 325.6 | 341.33 | 325.6 | 341.83 | 325.59 | 342.14 | 325.59 |
| 342.34 | 325.58 | 342.51 | 325.56 | 343.15 | 325.56 | 343.7 | 325.55 | 344.01 | 325.55 |
| 344.17 | 325.54 | 344.43 | 325.54 | 344.74 | 325.53 | 344.87 | 325.55 | 345.36 | 325.6 |
| 345.52 | 325.61 | 346.31 | 325.61 | 346.46 | 325.6 | 347.68 | 325.6 | 347.87 | 325.61 |
| 348.8 | 325.64 | 349.41 | 325.67 | 349.68 | 325.67 | 350.9 | 325.69 | 353.39 | 325.81 |
| 354.42 | 325.88 | 355.89 | 325.96 | 356.11 | 325.98 | 357.4 | 326.03 | 359.12 | 326.1 |
| 361.48 | 326.18 | 362.13 | 326.19 | 363.73 | 326.24 | 365.79 | 326.28 | 365.97 | 326.29 |
| 366.31 | 326.29 | 368.06 | 326.35 | 369.93 | 326.45 | 370.02 | 326.46 | 372.09 | 326.56 |
| 372.38 | 326.55 | 372.84 | 326.57 | 374.06 | 326.61 | 374.59 | 326.63 | 376.04 | 326.66 |
| 376.72 | 326.67 | 378.16 | 326.68 | 378.92 | 326.68 | 379.08 | 326.67 | 379.55 | 326.67 |
| 380.63 | 326.65 | 381.54 | 326.64 | 384.14 | 326.59 | 384.36 | 326.58 | 385.12 | 326.56 |
| 386.94 | 326.5 | 389.68 | 326.43 | 391.47 | 326.44 | 391.97 | 326.44 | 393.38 | 326.45 |
| 396.41 | 326.45 | 396.88 | 326.46 | 398.5 | 326.47 | 398.85 | 326.47 | 400.16 | 326.48 |
| 400.29 | 326.47 | 401.52 | 326.47 | 402.47 | 326.5 | 404.19 | 326.54 | 405.48 | 326.59 |
| 407.67 | 326.66 | 409.47 | 326.73 | 410.11 | 326.75 | 410.53 | 326.77 | 411.09 | 326.79 |
| 412.3 | 326.84 | 412.92 | 326.86 | 413.56 | 326.89 | 414.23 | 326.91 | 415.65 | 326.96 |
| 415.76 | 326.96 | 417.03 | 327.01 | 417.52 | 327.02 | 418.79 | 327.07 | 419.35 | 327.09 |
| 419.56 | 327.11 | 419.67 | 327.11 | 420.79 | 327.19 | 421.09 | 327.19 | 421.45 | 327.2 |
| 421.69 | 327.2 | 421.99 | 327.21 | 422.85 | 327.22 | 424.62 | 327.22 | 425.72 | 327.24 |
| 428.99 | 327.24 | 429.55 | 327.23 | 429.72 | 327.24 | 429.8 | 327.23 | 430.09 | 327.23 |
| 430.65 | 327.2 | 431.31 | 327.17 | 431.38 | 327.15 | 431.71 | 327.12 | 431.79 | 327.12 |
| 431.87 | 327.09 | 432.52 | 327.09 | 433.24 | 327.08 | 433.67 | 327.08 | 434.51 | 327.12 |
| 434.94 | 327.1 | 435.2 | 327.07 | 436.27 | 326.98 | 436.73 | 326.97 | 436.83 | 326.96 |
| 437.54 | 326.94 | 438.89 | 327.01 | 439.52 | 327.04 | 440.05 | 327.01 | 440.09 | 327.02 |
| 440.57 | 327 | 441.02 | 327.01 | 441.45 | 327 | 442.19 | 327 | 443 | 326.99 |
| 444.35 | 326.97 | 444.63 | 326.95 | 447.39 | 326.88 | 450.35 | 326.81 | 451.26 | 326.76 |
| 452.48 | 326.7 | 453.52 | 326.7 | 454.06 | 326.71 | 454.17 | 326.72 | 455.66 | 326.71 |
| 456.63 | 326.71 | 457.66 | 326.7 | 459.57 | 326.7 | 460.15 | 326.69 | 461.56 | 326.68 |
| 461.86 | 326.68 | 462.99 | 326.67 | 463.63 | 326.67 | 465.38 | 326.62 | 465.64 | 326.61 |
| 466.47 | 326.59 | 467.3 | 326.56 | 468.71 | 326.52 | 470.4 | 326.47 | 474.38 | 326.47 |
| 475.57 | 326.43 | 476.63 | 326.39 | 477.49 | 326.39 | 477.88 | 326.4 | 479.33 | 326.5 |
| 480.31 | 326.52 | 481.36 | 326.55 | 482.03 | 326.56 | 485.04 | 326.62 | 485.62 | 326.63 |
| 486.07 | 326.63 | 486.58 | 326.64 | 488.54 | 326.67 | 489.21 | 326.67 | 490.81 | 326.7 |
| 491.05 | 326.71 | 492.4 | 326.74 | 493.37 | 326.77 | 494.18 | 326.79 | 496.38 | 326.86 |
| 496.94 | 326.87 | 498.23 | 326.9 | 501.16 | 326.96 | 501.22 | 326.96 | 504.13 | 327.02 |
| 504.96 | 327.03 | 507.03 | 327.03 | 509.05 | 327.04 | 509.22 | 327.02 | 509.9 | 326.99 |
| 510.45 | 326.95 | 510.87 | 326.93 | 511.36 | 326.93 | 511.53 | 326.92 | 512.37 | 326.95 |
| 512.99 | 326.95 | 513.61 | 326.97 | 514.08 | 326.99 | 514.14 | 327 | 515.47 | 327.05 |
| 518.21 | 327.14 | 518.72 | 327.16 | 519.18 | 327.17 | 521.38 | 327.24 | 523.34 | 327.29 |
| 523.68 | 327.3 | 523.8 | 327.31 | 524.34 | 327.33 | 525.38 | 327.38 | 525.73 | 327.4 |
| 526.03 | 327.41 | 527.18 | 327.44 | 528.84 | 327.5 | 530.03 | 327.51 | 530.64 | 327.52 |
| 531.52 | 327.53 | 533.4 | 327.54 | 533.83 | 327.55 | 539.58 | 327.55 | 540.13 | 327.56 |
| 540.98 | 327.56 | 542.9 | 327.57 | 544.6 | 327.58 | 547.45 | 327.59 | 548.2 | 327.6 |
| 549.13 | 327.59 | 550.31 | 327.59 | 555.56 | 327.54 | 557.97 | 327.53 | 560.57 | 327.53 |
| 561.8 | 327.55 | 563.4 | 327.56 | 564.46 | 327.56 | 565.69 | 327.62 | 566.24 | 327.65 |
| 566.57 | 327.65 | 569.21 | 327.67 | 569.66 | 327.69 | 571.13 | 327.71 | 572.14 | 327.73 |
| 574.22 | 327.75 | 575.02 | 327.77 | 578.94 | 327.84 | 580.12 | 327.86 | 581.01 | 327.87 |
| 581.58 | 327.86 | 581.94 | 327.84 | 582.16 | 327.82 | 582.8 | 327.68 | 583.08 | 327.67 |
| 583.11 | 327.68 | 585.83 | 327.84 | 587.99 | 327.94 | 589.38 | 327.99 | 589.87 | 328.02 |
| 590.66 | 328.06 | 590.84 | 328.06 | 593.34 | 328.1 | 595.5 | 328.14 | 596.45 | 328.15 |
| 599.69 | 328.21 | 601.47 | 328.25 | 603.59 | 328.31 | 604.01 | 328.33 | 604.22 | 328.33 |
| 604.52 | 328.34 | 604.6 | 328.35 | 606.08 | 328.42 | 608.42 | 328.54 | 609.3 | 328.58 |
| 611.77 | 328.72 | 612.23 | 328.74 | 612.89 | 328.78 | 614.08 | 328.83 | 616.27 | 328.95 |
| 617.11 | 328.99 | 619.98 | 329.16 | 620.94 | 329.21 | 622.53 | 329.29 | 623.95 | 329.37 |
| 624.92 | 329.43 | 629.32 | 329.57 | 630.14 | 329.59 | 631.12 | 329.63 | 632.74 | 329.65 |
| 634.77 | 329.72 | 644.83 | 330.11 | 655.41 | 330.11 | 655.79 | 330.12 | 669.48 | 330.12 |
| 669.9 | 330.13 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 277.32 | .04 | 528.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 277.32 | 528.84 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 851.738*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.96 | 2.34 | 335.95 | 4.97 | 335.77 | 6.4 | 335.72 | 7.43 | 335.64 |
| 7.95 | 335.62 | 11.12 | 335.59 | 11.62 | 335.57 | 14 | 335.57 | 14.43 | 335.55 |
| 15 | 335.55 | 15.23 | 335.54 | 16.32 | 335.53 | 17.51 | 335.51 | 18.37 | 335.48 |
| 19.93 | 335.46 | 21.08 | 335.46 | 22.08 | 335.49 | 23.09 | 335.56 | 23.31 | 335.56 |
| 25.01 | 335.48 | 31.18 | 335.14 | 35.29 | 334.9 | 35.8 | 334.81 | 39.46 | 334.2 |
| 40.29 | 334.05 | 40.92 | 333.88 | 42.99 | 333.34 | 43.48 | 333.21 | 43.54 | 333.2 |
| 45.32 | 332.98 | 46.88 | 332.76 | 49.73 | 332.37 | 50.25 | 332.28 | 50.43 | 332.22 |
| 51.91 | 332.15 | 53.13 | 332.11 | 54.46 | 332.17 | 55.98 | 332.26 | 56.3 | 332.29 |
| 56.88 | 332.39 | 58.09 | 332.56 | 58.82 | 332.65 | 61.64 | 333.01 | 62.03 | 333.05 |
| 62.53 | 333.09 | 63.27 | 333.16 | 63.88 | 333.13 | 65.1 | 333.11 | 67.01 | 333 |
| 70.14 | 332.85 | 70.8 | 332.84 | 71.58 | 332.89 | 72.81 | 332.59 | 73.23 | 332.44 |
| 75.37 | 332.16 | 79.66 | 331.61 | 80.54 | 331.55 | 81.06 | 331.53 | 82.57 | 331.5 |
| 85.13 | 331.48 | 85.52 | 331.47 | 85.78 | 331.45 | 92.57 | 330.81 | 93.33 | 330.75 |
| 94.39 | 330.71 | 94.74 | 330.68 | 95.34 | 330.64 | 96.91 | 330.53 | 97.71 | 330.47 |
| 98.76 | 330.4 | 101.15 | 330.22 | 104.35 | 329.99 | 107.73 | 329.85 | 110.54 | 329.75 |
| 112.77 | 329.66 | 113.16 | 329.65 | 117.12 | 329.5 | 122.97 | 329.37 | 123.39 | 329.36 |
| 123.89 | 329.36 | 124.17 | 329.35 | 124.95 | 329.35 | 126.61 | 329.34 | 127.44 | 329.34 |
| 128.41 | 329.36 | 129.02 | 329.39 | 129.48 | 329.44 | 130.24 | 329.46 | 131.55 | 329.48 |
| 132.75 | 329.49 | 134.21 | 329.49 | 134.96 | 329.5 | 136.72 | 329.44 | 138.95 | 329.36 |
| 139.02 | 329.22 | 140.1 | 329.15 | 140.45 | 329.13 | 142.19 | 329 | 144.09 | 328.87 |
| 144.9 | 328.86 | 145.68 | 328.84 | 147.94 | 329.07 | 148.71 | 329.14 | 149.9 | 329.16 |
| 150.68 | 329.14 | 151.49 | 329.1 | 151.76 | 329.09 | 152.87 | 329.06 | 158.52 | 328.75 |
| 161.17 | 328.6 | 163.51 | 328.46 | 164.05 | 328.43 | 165.57 | 328.34 | 169.2 | 328.2 |
| 172.75 | 328.06 | 173.7 | 328.02 | 179.36 | 327.84 | 180.24 | 327.81 | 181.23 | 327.78 |
| 182.38 | 327.75 | 183.57 | 327.73 | 186.86 | 327.71 | 191.24 | 327.71 | 192.26 | 327.7 |
| 193.58 | 327.7 | 194.79 | 327.72 | 195.66 | 327.75 | 196.38 | 327.76 | 198.37 | 327.76 |
| 199.96 | 327.78 | 200.69 | 327.78 | 204.91 | 327.79 | 206.85 | 327.8 | 207.84 | 327.8 |
| 209.28 | 327.81 | 211.01 | 327.83 | 212.36 | 327.85 | 212.84 | 327.86 | 213.35 | 327.86 |
| 217.59 | 327.85 | 224.97 | 327.87 | 228.98 | 327.87 | 232.96 | 327.89 | 234.88 | 327.91 |
| 240.9 | 327.95 | 241.59 | 327.96 | 244.35 | 327.99 | 245.43 | 327.96 | 246.53 | 327.96 |
| 249.76 | 327.97 | 254.09 | 327.99 | 257.05 | 328 | 259.28 | 328.01 | 262.67 | 328.02 |
| 264.12 | 328.02 | 266.09 | 328.04 | 266.37 | 328.04 | 267.64 | 328.01 | 268.37 | 327.98 |
| 268.89 | 327.98 | 269.24 | 327.96 | 270.01 | 327.93 | 271.49 | 327.85 | 273.29 | 327.75 |
| 273.72 | 327.73 | 274.57 | 327.61 | 276.19 | 327.42 | 276.84 | 327.34 | 278.24 | 327.19 |
| 279 | 327.1 | 280 | 326.99 | 280.97 | 326.88 | 282.44 | 326.81 | 285.82 | 326.66 |
| 287.36 | 326.58 | 288.94 | 326.49 | 290.68 | 326.37 | 290.92 | 326.36 | 292.08 | 326.29 |
| 292.95 | 326.25 | 293.38 | 326.22 | 294.31 | 326.17 | 296.84 | 326.07 | 298.65 | 326 |
| 299.36 | 325.98 | 299.56 | 325.98 | 302.4 | 325.91 | 303.78 | 325.9 | 304.36 | 325.84 |
| 304.55 | 325.83 | 304.79 | 325.8 | 305.96 | 325.69 | 306.7 | 325.71 | 308.56 | 325.58 |
| 309.23 | 325.62 | 310.04 | 325.77 | 310.5 | 325.79 | 311.23 | 325.79 | 312.12 | 325.78 |
| 313.43 | 325.78 | 314.26 | 325.76 | 317.05 | 325.7 | 319.7 | 325.64 | 323.53 | 325.56 |
| 325.1 | 325.55 | 325.34 | 325.54 | 327.4 | 325.47 | 330.36 | 325.39 | 332.16 | 325.33 |
| 332.86 | 325.31 | 333.2 | 325.31 | 333.74 | 325.3 | 334.08 | 325.3 | 334.3 | 325.29 |
| 334.48 | 325.27 | 334.71 | 325.26 | 335.17 | 325.26 | 335.76 | 325.25 | 336.1 | 325.25 |
| 336.71 | 325.22 | 336.88 | 325.22 | 336.89 | 325.24 | 337.55 | 325.3 | 337.85 | 325.32 |
| 338.37 | 325.32 | 339.09 | 325.3 | 339.66 | 325.3 | 340.23 | 325.32 | 341.22 | 325.35 |
| 341.87 | 325.38 | 342.15 | 325.38 | 342.82 | 325.39 | 343.46 | 325.39 | 344.58 | 325.44 |
| 346.12 | 325.52 | 347.21 | 325.59 | 348.78 | 325.67 | 349.03 | 325.69 | 349.53 | 325.71 |
| 350.4 | 325.74 | 352.84 | 325.82 | 354.75 | 325.88 | 355.45 | 325.89 | 356.16 | 325.91 |
| 356.78 | 325.92 | 357.15 | 325.93 | 359.36 | 325.96 | 360.54 | 325.98 | 361.78 | 326.02 |
| 363.78 | 326.12 | 363.88 | 326.13 | 364.96 | 326.18 | 366.09 | 326.23 | 366.39 | 326.23 |
| 366.88 | 326.24 | 368.75 | 326.31 | 370.3 | 326.34 | 371.02 | 326.35 | 372.56 | 326.36 |
| 373.97 | 326.36 | 374.05 | 326.35 | 375.2 | 326.33 | 376.17 | 326.32 | 376.71 | 326.32 |
| 378.95 | 326.28 | 379.18 | 326.28 | 381.93 | 326.21 | 384.86 | 326.15 | 386.77 | 326.16 |
| 387.3 | 326.17 | 388.81 | 326.18 | 390.03 | 326.17 | 390.58 | 326.18 | 392.04 | 326.19 |
| 392.55 | 326.19 | 394.28 | 326.21 | 394.65 | 326.21 | 396.05 | 326.22 | 396.19 | 326.21 |
| 397.5 | 326.21 | 398.52 | 326.23 | 400.35 | 326.27 | 401.73 | 326.32 | 404.07 | 326.4 |
| 405.99 | 326.47 | 406.67 | 326.5 | 407.12 | 326.51 | 407.72 | 326.54 | 409.01 | 326.59 |
| 409.67 | 326.61 | 410.35 | 326.64 | 411.07 | 326.66 | 412.58 | 326.71 | 412.7 | 326.71 |
| 414.06 | 326.76 | 414.58 | 326.77 | 415.93 | 326.82 | 416.53 | 326.84 | 416.76 | 326.86 |
| 416.88 | 326.86 | 417.82 | 326.91 | 418.07 | 326.93 | 418.39 | 326.94 | 419.03 | 326.94 |
| 419.35 | 326.95 | 420.27 | 326.95 | 420.38 | 326.96 | 420.84 | 326.95 | 421.6 | 326.96 |
| 422.16 | 326.95 | 422.8 | 326.96 | 424.32 | 326.96 | 425.9 | 326.95 | 426.82 | 326.94 |
| 427.43 | 326.93 | 427.6 | 326.94 | 427.69 | 326.93 | 428.14 | 326.92 | 429.3 | 326.84 |
| 429.46 | 326.81 | 429.81 | 326.78 | 429.9 | 326.75 | 430.59 | 326.75 | 431.36 | 326.73 |
| 431.68 | 326.73 | 432.72 | 326.78 | 433.18 | 326.76 | 434.6 | 326.66 | 435.19 | 326.65 |
| 435.95 | 326.62 | 437.4 | 326.7 | 438.07 | 326.73 | 438.63 | 326.71 | 438.67 | 326.72 |
| 439.19 | 326.7 | 439.62 | 326.71 | 439.67 | 326.72 | 440.13 | 326.71 | 440.91 | 326.71 |
| 441.78 | 326.7 | 443.22 | 326.68 | 443.52 | 326.67 | 446.47 | 326.6 | 449.63 | 326.53 |
| 450.59 | 326.48 | 451.9 | 326.42 | 453.02 | 326.42 | 453.58 | 326.44 | 455.3 | 326.43 |
| 456.33 | 326.43 | 457.43 | 326.42 | 457.97 | 326.42 | 458.2 | 326.43 | 458.83 | 326.43 |
| 459.47 | 326.42 | 459.88 | 326.42 | 460.09 | 326.41 | 461.59 | 326.41 | 461.92 | 326.4 |
| 463.61 | 326.4 | 463.81 | 326.39 | 465.67 | 326.34 | 465.95 | 326.34 | 466.83 | 326.32 |
| 467.72 | 326.29 | 469.23 | 326.26 | 471.03 | 326.21 | 475.28 | 326.21 | 477.41 | 326.11 |
| 477.71 | 326.08 | 478.37 | 326.08 | 479.03 | 326.11 | 480.56 | 326.23 | 482.32 | 326.28 |
| 482.73 | 326.29 | 483.45 | 326.3 | 484.5 | 326.32 | 487.3 | 326.36 | 488.3 | 326.38 |
| 490.4 | 326.39 | 491.11 | 326.4 | 492.82 | 326.42 | 493.07 | 326.43 | 493.5 | 326.43 |
| 494 | 326.45 | 494.93 | 326.47 | 495.55 | 326.49 | 498.09 | 326.55 | 499.36 | 326.59 |
| 500.74 | 326.62 | 503.87 | 326.67 | 503.93 | 326.67 | 507.04 | 326.72 | 507.92 | 326.74 |
| 512.29 | 326.74 | 513.19 | 326.69 | 514.23 | 326.64 | 515.27 | 326.64 | 515.83 | 326.65 |
| 515.88 | 326.66 | 516.26 | 326.66 | 516.5 | 326.64 | 517.16 | 326.67 | 517.73 | 326.7 |
| 518.88 | 326.75 | 522.07 | 326.86 | 522.62 | 326.87 | 523.1 | 326.89 | 525.46 | 326.95 |
| 527.55 | 327 | 528.03 | 327.01 | 528.61 | 327.03 | 529.72 | 327.08 | 529.92 | 327.1 |
| 530.1 | 327.1 | 532.85 | 327.19 | 533.42 | 327.21 | 534.56 | 327.22 | 535.15 | 327.23 |
| 535.99 | 327.23 | 537.79 | 327.25 | 538.21 | 327.25 | 538.98 | 327.26 | 545.08 | 327.26 |
| 546.92 | 327.27 | 548.56 | 327.27 | 551.1 | 327.29 | 552.01 | 327.3 | 552.91 | 327.29 |
| 554.04 | 327.29 | 559.09 | 327.24 | 561.4 | 327.23 | 563.89 | 327.23 | 565.08 | 327.24 |
| 566.61 | 327.26 | 567.14 | 327.26 | 567.45 | 327.25 | 568.01 | 327.28 | 568.82 | 327.31 |
| 569.34 | 327.34 | 569.65 | 327.35 | 572.19 | 327.36 | 572.63 | 327.38 | 574.04 | 327.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 575 | 327.41 | 577.01 | 327.44 | 577.78 | 327.45 | 581.54 | 327.52 | 582.67 | 327.54 |
| 583.52 | 327.55 | 584.42 | 327.53 | 584.64 | 327.5 | 585.25 | 327.37 | 585.55 | 327.37 |
| 588 | 327.51 | 588.79 | 327.55 | 590.24 | 327.61 | 590.78 | 327.64 | 591.57 | 327.66 |
| 592.03 | 327.69 | 592.8 | 327.73 | 592.97 | 327.73 | 595.37 | 327.77 | 597.44 | 327.8 |
| 598.35 | 327.82 | 601.47 | 327.87 | 603.18 | 327.91 | 605.22 | 327.96 | 605.62 | 327.98 |
| 605.82 | 327.98 | 606.19 | 328.01 | 607.61 | 328.07 | 609.86 | 328.18 | 610.7 | 328.22 |
| 613.07 | 328.35 | 613.51 | 328.38 | 615.29 | 328.46 | 617.4 | 328.57 | 618.21 | 328.61 |
| 620.96 | 328.77 | 621.88 | 328.82 | 623.4 | 328.89 | 624.78 | 328.97 | 625.4 | 329.01 |
| 629.93 | 329.16 | 630.72 | 329.18 | 631.66 | 329.21 | 633.21 | 329.23 | 635.16 | 329.3 |
| 644.82 | 329.66 | 646.94 | 329.66 | 648.91 | 329.67 | 655.35 | 329.67 | 659.81 | 329.68 |
| 668.91 | 329.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 264.12 | .04 | 533.42 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 264.12 | 533.42 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 832.687*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.62 | 2.02 | 335.61 | 2.22 | 335.6 | 4.73 | 335.43 | 5.26 | 335.41 |
| 6.08 | 335.37 | 7.06 | 335.3 | 7.55 | 335.28 | 10.57 | 335.25 | 11.04 | 335.23 |
| 13.3 | 335.22 | 13.71 | 335.21 | 13.77 | 335.2 | 14.25 | 335.2 | 14.47 | 335.19 |
| 15.51 | 335.18 | 16.63 | 335.16 | 17.46 | 335.12 | 18.94 | 335.11 | 20.03 | 335.1 |
| 20.98 | 335.13 | 21.93 | 335.19 | 22.14 | 335.19 | 23.76 | 335.11 | 29.63 | 334.77 |
| 33.52 | 334.53 | 34.01 | 334.45 | 37.49 | 333.87 | 38.28 | 333.74 | 38.88 | 333.58 |
| 40.84 | 333.07 | 41.36 | 332.94 | 43.05 | 332.73 | 44.54 | 332.53 | 47.25 | 332.16 |
| 47.73 | 332.07 | 47.91 | 332.02 | 49.31 | 331.96 | 50.48 | 331.92 | 51.74 | 331.98 |
| 53.18 | 332.06 | 53.48 | 332.09 | 54.04 | 332.18 | 55.19 | 332.35 | 55.88 | 332.43 |
| 58.56 | 332.77 | 58.93 | 332.81 | 59.41 | 332.85 | 59.91 | 332.9 | 60.11 | 332.91 |
| 60.23 | 332.9 | 61.84 | 332.87 | 63.66 | 332.77 | 66.64 | 332.63 | 67.26 | 332.63 |
| 68 | 332.67 | 69.17 | 332.39 | 69.57 | 332.25 | 71.6 | 331.99 | 75.68 | 331.48 |
| 76.52 | 331.42 | 77 | 331.41 | 78.44 | 331.39 | 80.87 | 331.36 | 81.24 | 331.36 |
| 81.49 | 331.34 | 87.94 | 330.75 | 88.67 | 330.69 | 89.22 | 330.67 | 89.44 | 330.67 |
| 90.58 | 330.59 | 92.07 | 330.49 | 92.82 | 330.43 | 96.1 | 330.2 | 99.14 | 329.99 |
| 102.34 | 329.86 | 105.01 | 329.76 | 107.13 | 329.69 | 107.51 | 329.67 | 110.26 | 329.58 |
| 111.26 | 329.54 | 116.82 | 329.42 | 117.22 | 329.42 | 117.96 | 329.4 | 121.07 | 329.4 |
| 121.99 | 329.42 | 122.57 | 329.45 | 123.01 | 329.49 | 123.73 | 329.51 | 124.97 | 329.53 |
| 126.11 | 329.54 | 127.13 | 329.54 | 127.5 | 329.55 | 128.22 | 329.56 | 129.89 | 329.5 |
| 132 | 329.43 | 132.08 | 329.3 | 133.09 | 329.23 | 133.43 | 329.21 | 136.88 | 328.96 |
| 138.4 | 328.94 | 140.54 | 329.15 | 141.28 | 329.22 | 142.41 | 329.24 | 143.15 | 329.21 |
| 143.91 | 329.17 | 144.17 | 329.17 | 145.23 | 329.14 | 150.6 | 328.85 | 153.11 | 328.7 |
| 155.85 | 328.54 | 156.65 | 328.49 | 157.3 | 328.46 | 160.75 | 328.31 | 164.12 | 328.18 |
| 165.02 | 328.14 | 170.39 | 327.96 | 171.23 | 327.93 | 172.17 | 327.9 | 173.27 | 327.87 |
| 174.4 | 327.85 | 177.52 | 327.83 | 178.32 | 327.82 | 181.69 | 327.82 | 182.65 | 327.81 |
| 184.51 | 327.81 | 185.06 | 327.83 | 185.88 | 327.84 | 186.57 | 327.86 | 187.33 | 327.85 |
| 188.45 | 327.85 | 189.96 | 327.87 | 197.46 | 327.87 | 198.82 | 327.88 | 200.46 | 327.9 |
| 201.74 | 327.91 | 202.2 | 327.92 | 202.69 | 327.91 | 206.72 | 327.9 | 221.32 | 327.9 |
| 228.86 | 327.94 | 229.51 | 327.94 | 232.13 | 327.97 | 233.16 | 327.94 | 234.21 | 327.94 |
| 237.28 | 327.96 | 241.39 | 327.98 | 244.2 | 327.99 | 246.32 | 328 | 249.54 | 328.02 |
| 250.92 | 328.02 | 253.04 | 328.05 | 253.33 | 328.05 | 254.7 | 328.01 | 255.48 | 327.98 |
| 255.6 | 327.97 | 255.92 | 327.97 | 256.42 | 327.94 | 257.24 | 327.9 | 258.83 | 327.79 |
| 260.76 | 327.66 | 261.23 | 327.63 | 262.13 | 327.5 | 263.88 | 327.31 | 266.08 | 327.09 |
| 266.89 | 327 | 267.97 | 326.89 | 269.01 | 326.77 | 269.43 | 326.76 | 270.58 | 326.7 |
| 274.21 | 326.52 | 275.87 | 326.44 | 277.56 | 326.34 | 278.18 | 326.3 | 279.43 | 326.21 |
| 279.68 | 326.2 | 280.93 | 326.12 | 281.87 | 326.08 | 283.29 | 325.99 | 283.33 | 325.99 |
| 286.04 | 325.88 | 287.98 | 325.79 | 288.32 | 325.79 | 288.96 | 325.77 | 292.01 | 325.69 |
| 293.49 | 325.68 | 294.58 | 325.59 | 295.83 | 325.48 | 296.63 | 325.5 | 298.63 | 325.37 |
| 299.34 | 325.4 | 300.21 | 325.53 | 300.71 | 325.55 | 301.49 | 325.55 | 302.44 | 325.54 |
| 302.53 | 325.53 | 302.9 | 325.54 | 303.42 | 325.54 | 307.74 | 325.44 | 310.58 | 325.37 |
| 314.21 | 325.29 | 314.7 | 325.29 | 316.38 | 325.26 | 316.64 | 325.26 | 318.85 | 325.19 |
| 320.85 | 325.13 | 323.96 | 325.05 | 324.38 | 325.03 | 325.08 | 325.03 | 325.66 | 325.02 |
| 326.25 | 325 | 326.45 | 324.97 | 326.84 | 324.97 | 327.19 | 324.96 | 328.37 | 324.94 |
| 329.03 | 324.91 | 329.14 | 324.95 | 329.41 | 324.97 | 329.74 | 325.01 | 330.31 | 325.03 |
| 330.81 | 325.01 | 331.37 | 325 | 331.98 | 325 | 332.36 | 325.01 | 332.95 | 325.04 |
| 333.63 | 325.06 | 334.33 | 325.09 | 334.63 | 325.08 | 335.34 | 325.09 | 335.89 | 325.09 |
| 336.02 | 325.1 | 337.22 | 325.14 | 338.84 | 325.22 | 340.01 | 325.29 | 341.68 | 325.38 |
| 341.94 | 325.41 | 342.48 | 325.43 | 343.4 | 325.45 | 345.99 | 325.53 | 347.69 | 325.57 |
| 348.03 | 325.58 | 350.18 | 325.61 | 350.58 | 325.62 | 352.92 | 325.63 | 353.13 | 325.64 |
| 353.51 | 325.64 | 354.18 | 325.66 | 355.5 | 325.69 | 357.62 | 325.79 | 357.73 | 325.8 |
| 360.08 | 325.9 | 360.4 | 325.9 | 360.93 | 325.91 | 362.91 | 325.98 | 364.56 | 326.02 |
| 366.97 | 326.05 | 368.2 | 326.05 | 368.54 | 326.04 | 369.77 | 326.02 | 370.8 | 326.01 |
| 371.38 | 326 | 373.75 | 325.98 | 374 | 325.97 | 374.38 | 325.97 | 376.93 | 325.92 |
| 380.04 | 325.87 | 382.07 | 325.88 | 382.64 | 325.89 | 384.24 | 325.9 | 385.54 | 325.9 |
| 386.13 | 325.91 | 387.67 | 325.92 | 388.21 | 325.92 | 390.05 | 325.94 | 390.3 | 325.95 |
| 391.94 | 325.96 | 392.08 | 325.95 | 393.48 | 325.95 | 394.56 | 325.97 | 396.51 | 326 |
| 397.97 | 326.05 | 400.46 | 326.14 | 401.6 | 326.17 | 402.5 | 326.21 | 403.71 | 326.26 |
| 404.34 | 326.29 | 405.71 | 326.34 | 406.42 | 326.36 | 407.15 | 326.39 | 409.51 | 326.45 |
| 409.64 | 326.46 | 410.26 | 326.48 | 411.08 | 326.5 | 413.08 | 326.57 | 413.49 | 326.58 |
| 413.96 | 326.61 | 414.08 | 326.61 | 415.08 | 326.66 | 415.69 | 326.68 | 416.1 | 326.68 |
| 416.37 | 326.69 | 417.69 | 326.69 | 417.81 | 326.7 | 418.3 | 326.69 | 420.38 | 326.69 |
| 420.94 | 326.68 | 421.2 | 326.69 | 423.67 | 326.66 | 424.66 | 326.64 | 425.48 | 326.63 |
| 425.57 | 326.62 | 426.15 | 326.61 | 426.55 | 326.58 | 427.1 | 326.53 | 427.29 | 326.52 |
| 427.46 | 326.48 | 427.83 | 326.45 | 427.93 | 326.41 | 429.48 | 326.39 | 429.97 | 326.39 |
| 430.21 | 326.41 | 430.93 | 326.44 | 431.09 | 326.43 | 431.7 | 326.41 | 432.92 | 326.34 |
| 433.55 | 326.33 | 434.37 | 326.31 | 435.9 | 326.39 | 436.61 | 326.43 | 437.21 | 326.41 |
| 437.25 | 326.42 | 437.8 | 326.4 | 438.27 | 326.42 | 438.8 | 326.42 | 439.64 | 326.43 |
| 440.56 | 326.42 | 442.1 | 326.4 | 442.41 | 326.38 | 445.55 | 326.32 | 448.91 | 326.25 |
| 449.93 | 326.21 | 451.32 | 326.15 | 452.06 | 326.14 | 452.36 | 326.14 | 452.51 | 326.15 |
| 453.11 | 326.16 | 454.93 | 326.16 | 455.09 | 326.15 | 458.02 | 326.15 | 458.4 | 326.16 |
| 458.69 | 326.15 | 459.37 | 326.15 | 460.03 | 326.14 | 461.62 | 326.13 | 461.97 | 326.13 |
| 463.25 | 326.12 | 463.98 | 326.12 | 465.96 | 326.07 | 466.26 | 326.07 | 467.2 | 326.05 |
| 468.14 | 326.02 | 469.74 | 325.99 | 470.91 | 325.96 | 471.66 | 325.95 | 476.18 | 325.95 |
| 477.53 | 325.87 | 478.45 | 325.81 | 478.73 | 325.78 | 479.12 | 325.77 | 479.42 | 325.77 |
| 479.71 | 325.79 | 480.16 | 325.81 | 481.8 | 325.97 | 483.66 | 326.02 | 484.1 | 326.03 |
| 484.86 | 326.04 | 485.98 | 326.06 | 488.28 | 326.09 | 489.45 | 326.11 | 490.02 | 326.11 |
| 492.25 | 326.12 | 493.02 | 326.12 | 493.03 | 326.13 | 494.82 | 326.14 | 495.1 | 326.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 495.55 | 326.15 | 497.07 | 326.18 | 498.65 | 326.23 | 500.43 | 326.27 | 501.15 | 326.29 |
| 501.79 | 326.3 | 503.25 | 326.33 | 506.57 | 326.38 | 506.64 | 326.38 | 509.95 | 326.43 |
| 510.89 | 326.44 | 513.24 | 326.44 | 515.53 | 326.45 | 515.73 | 326.43 | 516.49 | 326.4 |
| 517.12 | 326.37 | 517.77 | 326.35 | 518.7 | 326.35 | 519.3 | 326.36 | 519.75 | 326.36 |
| 520.01 | 326.34 | 520.7 | 326.37 | 521.24 | 326.4 | 521.31 | 326.41 | 522.54 | 326.46 |
| 525.93 | 326.57 | 526.51 | 326.59 | 527.02 | 326.6 | 529.53 | 326.66 | 531.75 | 326.71 |
| 532.27 | 326.72 | 532.88 | 326.74 | 534.47 | 326.81 | 534.81 | 326.81 | 537.39 | 326.89 |
| 538 | 326.92 | 539.09 | 326.93 | 539.66 | 326.94 | 540.47 | 326.94 | 542.19 | 326.96 |
| 547.89 | 326.96 | 548.39 | 326.97 | 552.51 | 326.97 | 554.95 | 326.99 | 557.77 | 326.99 |
| 562.61 | 326.93 | 564.83 | 326.92 | 567.22 | 326.92 | 568.35 | 326.94 | 569.82 | 326.96 |
| 570.33 | 326.96 | 570.63 | 326.95 | 571.16 | 326.97 | 571.94 | 327.01 | 572.74 | 327.04 |
| 575.17 | 327.06 | 575.59 | 327.07 | 576.95 | 327.09 | 577.87 | 327.1 | 579.79 | 327.13 |
| 580.53 | 327.14 | 584.14 | 327.21 | 586.04 | 327.23 | 586.9 | 327.21 | 587.11 | 327.18 |
| 587.7 | 327.07 | 587.98 | 327.06 | 590.34 | 327.19 | 591.09 | 327.23 | 592.48 | 327.29 |
| 592.8 | 327.31 | 593 | 327.31 | 594.2 | 327.36 | 594.94 | 327.4 | 595.1 | 327.4 |
| 597.4 | 327.44 | 599.39 | 327.47 | 600.26 | 327.48 | 603.25 | 327.54 | 604.89 | 327.57 |
| 607.23 | 327.63 | 607.42 | 327.63 | 607.77 | 327.66 | 609.14 | 327.72 | 611.29 | 327.82 |
| 612.1 | 327.86 | 614.38 | 327.99 | 614.8 | 328.01 | 615.41 | 328.05 | 616.09 | 328.08 |
| 616.51 | 328.09 | 619.3 | 328.23 | 622.82 | 328.43 | 624.28 | 328.49 | 625.6 | 328.56 |
| 626.04 | 328.6 | 626.2 | 328.6 | 626.49 | 328.62 | 630.54 | 328.74 | 631.3 | 328.76 |
| 632.2 | 328.8 | 633.69 | 328.81 | 635.56 | 328.88 | 644.82 | 329.22 | 649.32 | 329.22 |
| 651.61 | 329.23 | 654.92 | 329.23 | 659.2 | 329.24 | 662.88 | 329.24 | 667.53 | 329.23 |
| 667.92 | 329.24 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 250.92 | .04 | 538 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 250.92 | 538 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 813.637*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.27 | 2.11 | 335.26 | 4.48 | 335.09 | 4.99 | 335.07 | 5.76 | 335.03 |
| 6.68 | 334.96 | 7.15 | 334.95 | 10.01 | 334.91 | 10.46 | 334.89 | 12.6 | 334.88 |
| 12.99 | 334.86 | 13.39 | 334.86 | 13.71 | 334.85 | 14.69 | 334.83 | 15.76 | 334.8 |
| 16.54 | 334.77 | 17.94 | 334.75 | 18.97 | 334.74 | 19.87 | 334.77 | 20.78 | 334.82 |
| 20.98 | 334.82 | 22.51 | 334.74 | 28.07 | 334.4 | 31.76 | 334.17 | 32.22 | 334.08 |
| 35.52 | 333.54 | 36.26 | 333.42 | 36.83 | 333.27 | 38.69 | 332.8 | 39.13 | 332.68 |
| 39.18 | 332.68 | 40.79 | 332.48 | 42.2 | 332.29 | 44.76 | 331.95 | 45.22 | 331.87 |
| 45.39 | 331.82 | 46.72 | 331.76 | 47.82 | 331.73 | 49.02 | 331.78 | 50.38 | 331.86 |
| 50.67 | 331.89 | 51.19 | 331.98 | 52.28 | 332.13 | 52.94 | 332.21 | 55.48 | 332.53 |
| 55.83 | 332.57 | 56.28 | 332.6 | 56.95 | 332.67 | 57.07 | 332.66 | 58.59 | 332.63 |
| 60.31 | 332.54 | 63.13 | 332.41 | 63.73 | 332.41 | 64.42 | 332.45 | 65.53 | 332.19 |
| 65.91 | 332.06 | 67.83 | 331.82 | 71.7 | 331.36 | 72.49 | 331.3 | 72.95 | 331.29 |
| 74.32 | 331.27 | 76.62 | 331.25 | 77.09 | 331.24 | 83.32 | 330.68 | 84 | 330.64 |
| 84.95 | 330.6 | 85.81 | 330.54 | 87.22 | 330.45 | 87.94 | 330.4 | 88.88 | 330.33 |
| 93.92 | 329.98 | 96.96 | 329.87 | 99 | 329.8 | 99.49 | 329.78 | 101.5 | 329.71 |
| 101.85 | 329.7 | 104.46 | 329.61 | 105.41 | 329.58 | 110.68 | 329.47 | 111.05 | 329.47 |
| 111.51 | 329.46 | 112.46 | 329.46 | 113.95 | 329.45 | 114.7 | 329.45 | 115.57 | 329.47 |
| 116.13 | 329.5 | 116.54 | 329.55 | 117.22 | 329.56 | 118.4 | 329.59 | 119.48 | 329.59 |
| 120.44 | 329.6 | 120.79 | 329.6 | 121.47 | 329.61 | 123.05 | 329.56 | 125.06 | 329.49 |
| 125.13 | 329.37 | 126.41 | 329.29 | 127.98 | 329.17 | 129.68 | 329.06 | 130.42 | 329.05 |
| 131.11 | 329.03 | 133.15 | 329.24 | 133.85 | 329.29 | 134.92 | 329.31 | 135.61 | 329.29 |
| 136.34 | 329.25 | 136.59 | 329.25 | 137.59 | 329.22 | 142.67 | 328.94 | 145.06 | 328.81 |
| 147.65 | 328.65 | 148.41 | 328.6 | 149.02 | 328.57 | 152.29 | 328.43 | 155.48 | 328.3 |
| 156.34 | 328.26 | 161.43 | 328.08 | 162.22 | 328.05 | 163.11 | 328.02 | 164.15 | 327.99 |
| 164.6 | 327.98 | 165.22 | 327.98 | 168.18 | 327.94 | 168.94 | 327.94 | 172.13 | 327.93 |
| 173.04 | 327.92 | 173.48 | 327.91 | 174.23 | 327.91 | 175.32 | 327.93 | 176.75 | 327.95 |
| 177.47 | 327.95 | 178.54 | 327.94 | 179.97 | 327.95 | 180.63 | 327.96 | 184.42 | 327.95 |
| 188.36 | 327.95 | 189.1 | 327.96 | 189.92 | 327.96 | 191.13 | 327.97 | 191.56 | 327.98 |
| 192.02 | 327.97 | 195.84 | 327.95 | 202.48 | 327.94 | 203.1 | 327.93 | 204.72 | 327.92 |
| 206.09 | 327.92 | 209.67 | 327.9 | 211.4 | 327.91 | 216.82 | 327.93 | 217.44 | 327.93 |
| 219.92 | 327.95 | 220.9 | 327.92 | 221.89 | 327.93 | 224.79 | 327.94 | 228.69 | 327.97 |
| 231.35 | 327.98 | 233.36 | 328 | 236.41 | 328.02 | 236.53 | 328.01 | 237.3 | 328.02 |
| 237.71 | 328.02 | 239.98 | 328.06 | 240.3 | 328.06 | 241.76 | 328.01 | 242.59 | 327.97 |
| 242.95 | 327.96 | 243.59 | 327.93 | 244.1 | 327.9 | 244.47 | 327.87 | 248.24 | 327.58 |
| 248.73 | 327.54 | 249.7 | 327.4 | 251.56 | 327.21 | 253.92 | 326.99 | 256.33 | 326.74 |
| 257.05 | 326.67 | 257.5 | 326.65 | 258.73 | 326.58 | 262.61 | 326.39 | 264.37 | 326.3 |
| 266.84 | 326.15 | 268.18 | 326.05 | 268.45 | 326.04 | 269.61 | 325.96 | 270.79 | 325.91 |
| 272.31 | 325.82 | 272.35 | 325.81 | 275.24 | 325.69 | 277.32 | 325.59 | 278.14 | 325.57 |
| 278.36 | 325.57 | 281.63 | 325.47 | 283.2 | 325.47 | 283.87 | 325.41 | 284.09 | 325.4 |
| 284.37 | 325.37 | 285.7 | 325.27 | 286.56 | 325.28 | 288.69 | 325.15 | 289.46 | 325.17 |
| 290.38 | 325.3 | 290.6 | 325.31 | 291.75 | 325.31 | 292.77 | 325.29 | 293.81 | 325.29 |
| 295.22 | 325.26 | 298.43 | 325.18 | 305.34 | 325.02 | 307.66 | 324.98 | 307.93 | 324.97 |
| 310.3 | 324.9 | 312.43 | 324.84 | 316.56 | 324.74 | 316.95 | 324.74 | 317.57 | 324.73 |
| 318.2 | 324.71 | 318.42 | 324.67 | 318.84 | 324.67 | 319.21 | 324.66 | 319.89 | 324.65 |
| 320.79 | 324.62 | 321.13 | 324.6 | 321.18 | 324.63 | 321.57 | 324.68 | 321.92 | 324.71 |
| 322.26 | 324.73 | 322.85 | 324.73 | 323.06 | 324.71 | 323.66 | 324.71 | 323.87 | 324.7 |
| 324.23 | 324.7 | 324.3 | 324.71 | 324.7 | 324.72 | 325.33 | 324.75 | 326.08 | 324.77 |
| 326.33 | 324.79 | 326.79 | 324.8 | 327.06 | 324.79 | 328.44 | 324.79 | 328.58 | 324.8 |
| 329.85 | 324.84 | 331.57 | 324.93 | 332.81 | 325 | 334.58 | 325.09 | 334.85 | 325.12 |
| 335.42 | 325.14 | 336.4 | 325.16 | 338.47 | 325.21 | 339.15 | 325.23 | 340.94 | 325.27 |
| 341.3 | 325.27 | 342.08 | 325.29 | 343.59 | 325.31 | 346.7 | 325.31 | 347.11 | 325.32 |
| 347.82 | 325.33 | 349.22 | 325.37 | 350.1 | 325.4 | 351.47 | 325.46 | 351.58 | 325.47 |
| 354.07 | 325.57 | 354.42 | 325.57 | 356.44 | 325.64 | 357.07 | 325.66 | 358.81 | 325.7 |
| 362.28 | 325.74 | 362.48 | 325.73 | 363.04 | 325.73 | 363.63 | 325.71 | 364.33 | 325.7 |
| 365.43 | 325.69 | 366.04 | 325.69 | 368.56 | 325.67 | 369.22 | 325.67 | 371.92 | 325.62 |
| 375.22 | 325.59 | 377.37 | 325.61 | 377.97 | 325.61 | 379.67 | 325.63 | 381.04 | 325.63 |
| 381.67 | 325.64 | 383.31 | 325.65 | 383.88 | 325.66 | 385.83 | 325.68 | 386.25 | 325.68 |
| 387.83 | 325.69 | 387.98 | 325.68 | 389.45 | 325.68 | 390.6 | 325.7 | 392.67 | 325.73 |
| 394.22 | 325.78 | 396.86 | 325.87 | 398.07 | 325.91 | 399.02 | 325.95 | 400.29 | 326 |
| 400.97 | 326.03 | 402.42 | 326.08 | 403.94 | 326.14 | 406.45 | 326.2 | 406.58 | 326.21 |
| 407.24 | 326.23 | 408.11 | 326.25 | 410.22 | 326.32 | 410.9 | 326.34 | 411.28 | 326.36 |
| 411.95 | 326.38 | 412.35 | 326.4 | 412.99 | 326.42 | 413.42 | 326.42 | 413.72 | 326.43 |
| 415.11 | 326.43 | 415.23 | 326.44 | 415.75 | 326.43 | 416.6 | 326.43 | 417.96 | 326.41 |
| 418.83 | 326.41 | 419.67 | 326.39 | 421.45 | 326.36 | 422.49 | 326.34 | 423.17 | 326.33 |
| 423.89 | 326.31 | 424.08 | 326.3 | 425.28 | 326.19 | 425.37 | 326.17 | 425.86 | 326.12 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 425.96 | 326.06 | 426.74 | 326.06 | 427.61 | 326.04 | 427.96 | 326.04 | 429.08 | 326.09 |
| 429.3 | 326.09 | 429.96 | 326.07 | 431.25 | 326.02 | 432.78 | 326 | 434.4 | 326.08 |
| 435.16 | 326.12 | 435.8 | 326.11 | 435.84 | 326.12 | 436.42 | 326.11 | 436.91 | 326.13 |
| 437.48 | 326.13 | 438.36 | 326.14 | 439.34 | 326.13 | 440.97 | 326.12 | 441.3 | 326.1 |
| 444.62 | 326.04 | 448.18 | 325.97 | 449.27 | 325.93 | 450.74 | 325.87 | 452 | 325.87 |
| 452.64 | 325.88 | 455.73 | 325.88 | 456.97 | 325.87 | 457.57 | 325.87 | 457.84 | 325.88 |
| 458.14 | 325.88 | 458.24 | 325.89 | 458.55 | 325.88 | 459.73 | 325.86 | 461.65 | 325.86 |
| 462.02 | 325.85 | 463.98 | 325.85 | 464.15 | 325.84 | 465.36 | 325.82 | 466.25 | 325.8 |
| 466.57 | 325.8 | 467.56 | 325.78 | 467.86 | 325.77 | 468.56 | 325.76 | 470.26 | 325.72 |
| 471.5 | 325.7 | 472.29 | 325.68 | 477.08 | 325.68 | 478.51 | 325.58 | 479.48 | 325.51 |
| 479.81 | 325.47 | 480.29 | 325.47 | 480.52 | 325.46 | 481.3 | 325.51 | 483.03 | 325.7 |
| 484.21 | 325.74 | 485.47 | 325.77 | 486.28 | 325.78 | 487.46 | 325.8 | 489.89 | 325.83 |
| 490.59 | 325.84 | 491.14 | 325.84 | 491.75 | 325.85 | 494.93 | 325.85 | 496.83 | 325.86 |
| 497.12 | 325.87 | 497.6 | 325.87 | 498.75 | 325.89 | 499.92 | 325.92 | 502.78 | 325.98 |
| 503.53 | 326 | 504.21 | 326.01 | 505.76 | 326.04 | 509.28 | 326.09 | 509.35 | 326.09 |
| 512.86 | 326.14 | 513.85 | 326.15 | 518.77 | 326.15 | 519.79 | 326.11 | 520.46 | 326.08 |
| 521.75 | 326.06 | 522.13 | 326.07 | 523.24 | 326.07 | 523.51 | 326.04 | 524.82 | 326.11 |
| 524.9 | 326.11 | 526.85 | 326.2 | 529.79 | 326.28 | 530.95 | 326.32 | 533.6 | 326.37 |
| 536.51 | 326.42 | 537.15 | 326.44 | 538.41 | 326.49 | 538.84 | 326.51 | 541.93 | 326.6 |
| 542.58 | 326.63 | 543.62 | 326.64 | 544.16 | 326.65 | 544.94 | 326.65 | 546.59 | 326.66 |
| 546.97 | 326.66 | 547.68 | 326.67 | 556.47 | 326.67 | 558.97 | 326.68 | 559.64 | 326.69 |
| 560.46 | 326.68 | 561.5 | 326.68 | 566.13 | 326.63 | 568.26 | 326.62 | 570.54 | 326.62 |
| 571.63 | 326.64 | 573.04 | 326.65 | 573.81 | 326.65 | 575.83 | 326.73 | 578.16 | 326.75 |
| 578.56 | 326.76 | 579.85 | 326.78 | 582.58 | 326.81 | 583.29 | 326.82 | 586.74 | 326.89 |
| 588.56 | 326.91 | 589.38 | 326.89 | 589.58 | 326.87 | 590.14 | 326.76 | 590.42 | 326.75 |
| 592.67 | 326.88 | 593.4 | 326.92 | 595.22 | 326.99 | 595.94 | 327.01 | 596.37 | 327.04 |
| 597.07 | 327.07 | 597.23 | 327.07 | 599.43 | 327.1 | 601.33 | 327.14 | 602.17 | 327.15 |
| 605.03 | 327.2 | 606.6 | 327.22 | 608.47 | 327.27 | 608.84 | 327.29 | 609.29 | 327.3 |
| 609.36 | 327.31 | 610.66 | 327.37 | 612.73 | 327.47 | 613.5 | 327.51 | 615.68 | 327.63 |
| 616.66 | 327.68 | 617.32 | 327.71 | 617.72 | 327.72 | 619.65 | 327.82 | 620.39 | 327.85 |
| 622.92 | 327.99 | 623.76 | 328.04 | 625.16 | 328.1 | 626.42 | 328.16 | 627 | 328.2 |
| 627.27 | 328.21 | 631.15 | 328.33 | 631.88 | 328.35 | 632.73 | 328.38 | 634.16 | 328.39 |
| 635.95 | 328.46 | 644.82 | 328.77 | 646.76 | 328.77 | 648.57 | 328.78 | 652.75 | 328.78 |
| 654.15 | 328.79 | 654.48 | 328.79 | 658.58 | 328.8 | 662.1 | 328.8 | 666.55 | 328.79 |
| 666.93 | 328.8 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 237.71 | .04 | 542.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 237.71 | 542.58 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 794.586*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.93 | 1.81 | 334.91 | 1.99 | 334.91 | 4.23 | 334.74 | 4.71 | 334.73 |
| 5.44 | 334.69 | 6.31 | 334.63 | 6.76 | 334.61 | 9.45 | 334.56 | 9.88 | 334.55 |
| 11.9 | 334.53 | 12.27 | 334.51 | 12.75 | 334.51 | 12.94 | 334.5 | 13.88 | 334.47 |
| 14.88 | 334.45 | 15.62 | 334.42 | 16.94 | 334.39 | 17.92 | 334.38 | 18.77 | 334.41 |
| 19.81 | 334.46 | 21.26 | 334.37 | 26.51 | 334.03 | 30 | 333.8 | 30.43 | 333.72 |
| 33.55 | 333.22 | 34.25 | 333.1 | 34.79 | 332.97 | 36.54 | 332.52 | 37.01 | 332.41 |
| 38.52 | 332.23 | 39.85 | 332.06 | 42.28 | 331.74 | 42.71 | 331.66 | 42.87 | 331.61 |
| 44.12 | 331.57 | 45.17 | 331.53 | 46.3 | 331.59 | 47.58 | 331.67 | 47.86 | 331.69 |
| 48.35 | 331.78 | 49.38 | 331.92 | 50 | 331.99 | 52.4 | 332.3 | 52.73 | 332.33 |
| 53.16 | 332.36 | 53.71 | 332.42 | 55.34 | 332.39 | 56.96 | 332.31 | 59.62 | 332.2 |
| 60.19 | 332.19 | 60.84 | 332.23 | 61.89 | 331.99 | 62.25 | 331.87 | 64.07 | 331.65 |
| 67.72 | 331.23 | 68.47 | 331.18 | 68.9 | 331.17 | 70.19 | 331.15 | 72.36 | 331.14 |
| 72.81 | 331.13 | 72.92 | 331.12 | 78.69 | 330.62 | 79.34 | 330.58 | 80.23 | 330.54 |
| 80.54 | 330.52 | 82.38 | 330.41 | 83.06 | 330.36 | 85.99 | 330.16 | 88.71 | 329.98 |
| 91.57 | 329.88 | 93.5 | 329.81 | 93.96 | 329.8 | 95.86 | 329.73 | 98.66 | 329.64 |
| 99.56 | 329.61 | 104.53 | 329.52 | 105.32 | 329.52 | 105.55 | 329.51 | 108.33 | 329.51 |
| 109.15 | 329.53 | 109.68 | 329.55 | 110.07 | 329.6 | 110.71 | 329.61 | 111.82 | 329.64 |
| 112.84 | 329.64 | 113.75 | 329.65 | 114.08 | 329.65 | 114.73 | 329.66 | 116.22 | 329.62 |
| 118.11 | 329.56 | 118.18 | 329.45 | 119.39 | 329.37 | 120.87 | 329.26 | 122.48 | 329.15 |
| 123.83 | 329.13 | 125.75 | 329.32 | 126.41 | 329.37 | 127.43 | 329.39 | 128.08 | 329.37 |
| 129 | 329.32 | 129.31 | 329.32 | 129.95 | 329.3 | 134.75 | 329.04 | 137 | 328.91 |
| 138.99 | 328.79 | 139.45 | 328.77 | 140.17 | 328.72 | 140.75 | 328.69 | 143.83 | 328.55 |
| 146.85 | 328.42 | 147.66 | 328.38 | 152.46 | 328.2 | 153.21 | 328.18 | 154.05 | 328.15 |
| 155.04 | 328.12 | 155.46 | 328.1 | 156.05 | 328.1 | 159.56 | 328.05 | 162.57 | 328.03 |
| 163.43 | 328.02 | 165.1 | 328.02 | 165.58 | 328.03 | 166.94 | 328.05 | 167.62 | 328.04 |
| 170.6 | 328.04 | 174.18 | 328.03 | 175.83 | 328.02 | 178.6 | 328.02 | 179.37 | 328.03 |
| 180.52 | 328.04 | 180.92 | 328.04 | 181.36 | 328.03 | 184.97 | 328 | 191.24 | 327.97 |
| 191.82 | 327.97 | 193.36 | 327.95 | 194.64 | 327.94 | 198.03 | 327.91 | 204.78 | 327.91 |
| 205.36 | 327.92 | 207.71 | 327.93 | 208.63 | 327.9 | 209.57 | 327.91 | 212.31 | 327.93 |
| 215.99 | 327.95 | 218.5 | 327.97 | 220.4 | 327.99 | 223.28 | 328.01 | 224.12 | 328.02 |
| 224.51 | 328.02 | 226.93 | 328.07 | 228.82 | 328.01 | 229.7 | 327.96 | 229.97 | 327.96 |
| 230.21 | 327.95 | 230.77 | 327.91 | 231.31 | 327.88 | 231.71 | 327.84 | 233.51 | 327.69 |
| 235.71 | 327.5 | 236.24 | 327.45 | 237.26 | 327.3 | 239.25 | 327.11 | 240.04 | 327.04 |
| 241.75 | 326.88 | 242.67 | 326.79 | 243.9 | 326.68 | 245.08 | 326.57 | 245.57 | 326.54 |
| 246.87 | 326.47 | 251 | 326.26 | 252.88 | 326.16 | 254.8 | 326.04 | 257.22 | 325.87 |
| 258.45 | 325.79 | 258.64 | 325.79 | 259.7 | 325.74 | 260.23 | 325.71 | 261.32 | 325.64 |
| 261.36 | 325.64 | 264.44 | 325.5 | 266.65 | 325.39 | 267.52 | 325.37 | 267.77 | 325.36 |
| 271.24 | 325.25 | 272.92 | 325.25 | 273.86 | 325.18 | 275.58 | 325.06 | 276.49 | 325.06 |
| 278.76 | 324.93 | 279.57 | 324.95 | 280.56 | 325.07 | 281.12 | 325.07 | 282.01 | 325.06 |
| 283.09 | 325.04 | 284.2 | 325.04 | 284.42 | 325.03 | 284.69 | 325.03 | 285.25 | 325.02 |
| 285.71 | 325 | 289.12 | 324.92 | 292.34 | 324.84 | 296.48 | 324.74 | 298.94 | 324.69 |
| 299.23 | 324.69 | 301.75 | 324.61 | 304.02 | 324.55 | 305.35 | 324.53 | 307.56 | 324.48 |
| 308.03 | 324.46 | 308.83 | 324.46 | 309.48 | 324.44 | 309.9 | 324.44 | 310.16 | 324.42 |
| 310.38 | 324.37 | 310.92 | 324.37 | 311.23 | 324.36 | 311.95 | 324.35 | 312.36 | 324.34 |
| 313.1 | 324.3 | 313.31 | 324.3 | 313.32 | 324.33 | 313.63 | 324.37 | 314.31 | 324.43 |
| 314.76 | 324.44 | 315.26 | 324.43 | 315.5 | 324.41 | 316.62 | 324.41 | 317.05 | 324.42 |
| 317.3 | 324.44 | 317.71 | 324.45 | 318.47 | 324.48 | 318.77 | 324.5 | 319.25 | 324.51 |
| 319.53 | 324.49 | 321 | 324.49 | 321.14 | 324.5 | 322.48 | 324.55 | 324.3 | 324.63 |
| 325.61 | 324.71 | 327.48 | 324.79 | 327.6 | 324.82 | 328.37 | 324.85 | 329.4 | 324.87 |
| 331.58 | 324.92 | 332.3 | 324.93 | 334.2 | 324.97 | 334.58 | 324.97 | 336.99 | 325 |
| 337.43 | 325 | 340.06 | 324.99 | 340.71 | 324.99 | 341.46 | 325 | 342.94 | 325.04 |
| 343.87 | 325.08 | 345.32 | 325.13 | 345.43 | 325.14 | 348.06 | 325.24 | 348.43 | 325.24 |
| 350.56 | 325.31 | 351.23 | 325.34 | 353.07 | 325.38 | 353.93 | 325.39 | 355.77 | 325.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 357.44 | 325.42 | 357.53 | 325.41 | 358.9 | 325.39 | 360.06 | 325.37 | 360.7 | 325.38 |
| 363.36 | 325.37 | 363.65 | 325.36 | 364.61 | 325.36 | 366.92 | 325.33 | 370.4 | 325.3 |
| 372.67 | 325.33 | 373.3 | 325.33 | 375.09 | 325.35 | 376.55 | 325.36 | 377.21 | 325.37 |
| 378.94 | 325.38 | 381.6 | 325.42 | 382.05 | 325.42 | 383.71 | 325.43 | 383.87 | 325.42 |
| 385.43 | 325.42 | 386.55 | 325.44 | 388.83 | 325.45 | 390.47 | 325.51 | 393.25 | 325.61 |
| 394.53 | 325.65 | 395.53 | 325.69 | 396.88 | 325.74 | 397.59 | 325.78 | 399.13 | 325.83 |
| 400.73 | 325.89 | 403.38 | 325.95 | 403.52 | 325.96 | 404.21 | 325.98 | 405.14 | 326 |
| 407.37 | 326.07 | 408.09 | 326.09 | 408.35 | 326.11 | 408.49 | 326.11 | 409.61 | 326.14 |
| 409.91 | 326.16 | 410.29 | 326.16 | 410.75 | 326.17 | 412.66 | 326.17 | 413.21 | 326.16 |
| 414.11 | 326.16 | 416.17 | 326.13 | 416.46 | 326.13 | 419.22 | 326.07 | 420.32 | 326.05 |
| 421.04 | 326.02 | 421.25 | 326.03 | 421.72 | 326 | 421.89 | 326 | 423.27 | 325.87 |
| 423.38 | 325.84 | 423.79 | 325.8 | 423.88 | 325.78 | 423.99 | 325.72 | 424.71 | 325.72 |
| 424.81 | 325.71 | 425.73 | 325.7 | 426.24 | 325.7 | 426.28 | 325.71 | 426.87 | 325.73 |
| 427.28 | 325.75 | 427.89 | 325.75 | 429.57 | 325.69 | 431.19 | 325.69 | 432.9 | 325.78 |
| 433.7 | 325.82 | 434.38 | 325.81 | 434.42 | 325.82 | 435.04 | 325.81 | 435.55 | 325.83 |
| 437.09 | 325.86 | 438.12 | 325.85 | 439.84 | 325.83 | 440.19 | 325.82 | 443.7 | 325.76 |
| 447.46 | 325.69 | 448.61 | 325.65 | 450.16 | 325.6 | 450.99 | 325.59 | 451.49 | 325.59 |
| 452.16 | 325.6 | 452.31 | 325.61 | 454.2 | 325.6 | 456.74 | 325.6 | 456.9 | 325.59 |
| 457.38 | 325.59 | 457.97 | 325.61 | 458.41 | 325.61 | 459.9 | 325.59 | 461.69 | 325.58 |
| 462.08 | 325.58 | 463.51 | 325.57 | 464.33 | 325.57 | 465.6 | 325.55 | 466.88 | 325.52 |
| 467.93 | 325.51 | 468.25 | 325.5 | 468.98 | 325.49 | 470.78 | 325.46 | 472.08 | 325.44 |
| 472.92 | 325.42 | 477.98 | 325.42 | 479.49 | 325.3 | 480.52 | 325.21 | 480.83 | 325.17 |
| 481.27 | 325.16 | 481.61 | 325.16 | 482.42 | 325.21 | 482.44 | 325.22 | 484.26 | 325.44 |
| 485.51 | 325.48 | 486.84 | 325.51 | 487.69 | 325.52 | 488.95 | 325.54 | 491.51 | 325.57 |
| 492.25 | 325.58 | 495.96 | 325.58 | 496.82 | 325.57 | 496.83 | 325.58 | 498.84 | 325.58 |
| 499.15 | 325.59 | 499.66 | 325.59 | 500.87 | 325.61 | 501.35 | 325.61 | 503.12 | 325.66 |
| 505.12 | 325.7 | 505.92 | 325.71 | 506.63 | 325.73 | 507.68 | 325.74 | 508.27 | 325.75 |
| 511.99 | 325.8 | 512.07 | 325.8 | 515.77 | 325.85 | 516.82 | 325.86 | 522.01 | 325.86 |
| 523.09 | 325.82 | 523.79 | 325.79 | 525.16 | 325.77 | 525.55 | 325.78 | 526.29 | 325.78 |
| 526.74 | 325.77 | 527.02 | 325.74 | 528.4 | 325.81 | 528.48 | 325.82 | 530.54 | 325.91 |
| 533.65 | 326 | 534.3 | 326.01 | 534.87 | 326.03 | 537.68 | 326.08 | 541.43 | 326.14 |
| 542.49 | 326.18 | 543.2 | 326.21 | 545.76 | 326.28 | 546.47 | 326.31 | 546.88 | 326.32 |
| 547.15 | 326.34 | 548.15 | 326.35 | 548.67 | 326.36 | 549.41 | 326.36 | 550.99 | 326.37 |
| 556.2 | 326.37 | 556.66 | 326.38 | 557.37 | 326.37 | 560.42 | 326.37 | 562.82 | 326.38 |
| 563.45 | 326.39 | 564.24 | 326.38 | 565.23 | 326.38 | 569.65 | 326.33 | 571.68 | 326.32 |
| 573.87 | 326.32 | 574.91 | 326.34 | 576.25 | 326.35 | 577.15 | 326.35 | 577.47 | 326.37 |
| 578.18 | 326.39 | 578.64 | 326.42 | 578.92 | 326.42 | 581.14 | 326.44 | 581.52 | 326.45 |
| 582.76 | 326.47 | 585.36 | 326.5 | 586.04 | 326.51 | 589.34 | 326.57 | 591.08 | 326.59 |
| 591.56 | 326.59 | 592.05 | 326.55 | 592.59 | 326.45 | 592.85 | 326.44 | 595.7 | 326.6 |
| 597.44 | 326.67 | 598.13 | 326.69 | 599.21 | 326.74 | 599.36 | 326.75 | 601.46 | 326.77 |
| 603.28 | 326.8 | 604.08 | 326.81 | 606.81 | 326.86 | 608.31 | 326.88 | 610.45 | 326.94 |
| 610.63 | 326.94 | 610.95 | 326.96 | 612.19 | 327.01 | 614.16 | 327.11 | 617.92 | 327.31 |
| 618.93 | 327.36 | 620.77 | 327.44 | 621.48 | 327.48 | 624.7 | 327.64 | 626.04 | 327.7 |
| 627.24 | 327.76 | 627.79 | 327.8 | 628.05 | 327.81 | 632.45 | 327.94 | 633.27 | 327.96 |
| 634.64 | 327.98 | 636.35 | 328.04 | 644.82 | 328.33 | 648.93 | 328.33 | 651.03 | 328.34 |
| 653.73 | 328.34 | 654.05 | 328.35 | 657.96 | 328.36 | 661.32 | 328.36 | 665.58 | 328.35 |
| 665.93 | 328.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 224.51 | .04 | 547.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 224.51 | 547.15 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 775.536*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.58 | 1.7 | 334.56 | 1.87 | 334.56 | 3.98 | 334.4 | 5.12 | 334.35 |
| 5.94 | 334.29 | 6.36 | 334.27 | 8.9 | 334.22 | 9.3 | 334.2 | 11.2 | 334.18 |
| 12 | 334.16 | 12.18 | 334.15 | 14.01 | 334.09 | 14.18 | 334.09 | 14.7 | 334.06 |
| 15.95 | 334.04 | 16.86 | 334.02 | 17.67 | 334.04 | 18.65 | 334.09 | 20.01 | 334.01 |
| 24.95 | 333.67 | 28.23 | 333.43 | 28.64 | 333.36 | 31.57 | 332.89 | 32.23 | 332.79 |
| 32.74 | 332.66 | 34.79 | 332.15 | 34.83 | 332.15 | 36.26 | 331.98 | 39.79 | 331.53 |
| 40.2 | 331.46 | 40.35 | 331.41 | 41.53 | 331.37 | 42.51 | 331.34 | 44.79 | 331.47 |
| 45.04 | 331.49 | 45.51 | 331.57 | 46.48 | 331.71 | 47.06 | 331.77 | 49.31 | 332.06 |
| 50.03 | 332.12 | 50.62 | 332.18 | 51.11 | 332.16 | 52.08 | 332.15 | 53.61 | 332.08 |
| 56.12 | 331.98 | 56.65 | 331.98 | 57.27 | 332.01 | 58.26 | 331.8 | 58.59 | 331.69 |
| 60.3 | 331.49 | 63.74 | 331.1 | 64.44 | 331.05 | 64.85 | 331.04 | 66.06 | 331.03 |
| 68.11 | 331.02 | 68.42 | 331.02 | 68.63 | 331.01 | 74.06 | 330.56 | 74.67 | 330.52 |
| 75.14 | 330.5 | 75.32 | 330.5 | 78.17 | 330.32 | 79.01 | 330.27 | 80.93 | 330.14 |
| 83.49 | 329.98 | 86.19 | 329.88 | 88 | 329.82 | 88.44 | 329.81 | 90.22 | 329.76 |
| 92.85 | 329.68 | 93.7 | 329.65 | 98.39 | 329.58 | 98.72 | 329.57 | 99.12 | 329.57 |
| 99.35 | 329.56 | 99.97 | 329.57 | 101.29 | 329.56 | 101.96 | 329.56 | 102.73 | 329.58 |
| 103.23 | 329.61 | 103.6 | 329.65 | 104.2 | 329.67 | 105.25 | 329.69 | 106.21 | 329.7 |
| 107.06 | 329.7 | 107.37 | 329.71 | 107.98 | 329.72 | 111.17 | 329.63 | 111.23 | 329.52 |
| 112.09 | 329.47 | 113.77 | 329.35 | 115.28 | 329.25 | 116.55 | 329.23 | 118.36 | 329.4 |
| 118.98 | 329.45 | 119.93 | 329.46 | 120.55 | 329.44 | 121.42 | 329.4 | 121.71 | 329.4 |
| 122.31 | 329.38 | 126.83 | 329.14 | 128.94 | 329.02 | 130.82 | 328.9 | 131.25 | 328.88 |
| 131.93 | 328.83 | 132.47 | 328.8 | 135.38 | 328.67 | 138.21 | 328.54 | 143.5 | 328.33 |
| 144.99 | 328.27 | 145.92 | 328.24 | 148.22 | 328.19 | 149.5 | 328.18 | 150.18 | 328.17 |
| 153.01 | 328.14 | 153.82 | 328.13 | 154.21 | 328.13 | 154.88 | 328.12 | 155.39 | 328.12 |
| 155.85 | 328.13 | 157.12 | 328.15 | 157.76 | 328.14 | 158.71 | 328.13 | 160.56 | 328.13 |
| 163.94 | 328.1 | 165.5 | 328.1 | 166.29 | 328.09 | 168.82 | 328.09 | 169.9 | 328.1 |
| 170.28 | 328.1 | 170.69 | 328.09 | 174.09 | 328.05 | 180 | 328.01 | 180.54 | 328 |
| 181.99 | 327.98 | 183.2 | 327.96 | 186.39 | 327.92 | 187.92 | 327.91 | 192.74 | 327.9 |
| 193.29 | 327.9 | 195.49 | 327.91 | 196.36 | 327.89 | 197.24 | 327.89 | 199.83 | 327.91 |
| 205.56 | 327.96 | 205.66 | 327.96 | 210.15 | 328.01 | 210.94 | 328.02 | 211.31 | 328.02 |
| 213.87 | 328.08 | 214.23 | 328.07 | 215.87 | 328.01 | 216.81 | 327.95 | 217.09 | 327.95 |
| 217.35 | 327.94 | 217.94 | 327.9 | 218.52 | 327.85 | 218.94 | 327.82 | 220.85 | 327.63 |
| 223.18 | 327.41 | 223.74 | 327.36 | 224.83 | 327.2 | 226.94 | 327 | 229.59 | 326.78 |
| 230.56 | 326.69 | 231.87 | 326.58 | 232.31 | 326.53 | 233.12 | 326.46 | 233.63 | 326.44 |
| 235.02 | 326.36 | 239.39 | 326.13 | 241.39 | 326.02 | 243.43 | 325.89 | 244.17 | 325.84 |
| 245.68 | 325.72 | 245.99 | 325.71 | 247.29 | 325.63 | 248.62 | 325.57 | 249.18 | 325.54 |
| 250.33 | 325.46 | 250.38 | 325.46 | 253.65 | 325.3 | 255.99 | 325.18 | 256.4 | 325.18 |
| 257.17 | 325.16 | 260.85 | 325.03 | 262.63 | 325.03 | 263.38 | 324.98 | 263.63 | 324.97 |
| 265.45 | 324.85 | 266.41 | 324.85 | 268.82 | 324.72 | 269.68 | 324.73 | 270.73 | 324.83 |
| 271.33 | 324.84 | 272.27 | 324.82 | 273.42 | 324.79 | 274.82 | 324.79 | 275.11 | 324.78 |
| 275.71 | 324.77 | 276.19 | 324.75 | 279.8 | 324.67 | 283.23 | 324.57 | 287.61 | 324.46 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 288.19 | 324.45 | 290.22 | 324.41 | 293.2 | 324.32 | 295.6 | 324.27 | 299.36 | 324.19 |
| 300.25 | 324.17 | 300.7 | 324.17 | 301.83 | 324.15 | 302.11 | 324.13 | 302.35 | 324.08 |
| 302.66 | 324.08 | 303.24 | 324.06 | 304.01 | 324.04 | 304.45 | 324.04 | 305.46 | 323.99 |
| 305.46 | 324.03 | 305.91 | 324.09 | 306.3 | 324.12 | 306.67 | 324.14 | 307.33 | 324.14 |
| 307.56 | 324.12 | 308.22 | 324.11 | 308.94 | 324.11 | 310.09 | 324.16 | 310.89 | 324.19 |
| 311.2 | 324.21 | 311.71 | 324.22 | 312.01 | 324.2 | 313.7 | 324.2 | 315.11 | 324.25 |
| 317.03 | 324.34 | 318.41 | 324.41 | 320.37 | 324.5 | 320.68 | 324.55 | 324.7 | 324.62 |
| 325.45 | 324.64 | 327.45 | 324.67 | 327.85 | 324.67 | 329.61 | 324.69 | 330.86 | 324.69 |
| 333.62 | 324.66 | 334.31 | 324.66 | 335.1 | 324.68 | 336.65 | 324.71 | 337.64 | 324.75 |
| 339.16 | 324.8 | 339.28 | 324.81 | 342.05 | 324.91 | 342.44 | 324.91 | 343.05 | 324.93 |
| 344.68 | 324.99 | 345.39 | 325.01 | 347.33 | 325.06 | 348.24 | 325.07 | 350.17 | 325.1 |
| 351.19 | 325.11 | 351.62 | 325.11 | 352.69 | 325.08 | 353.47 | 325.07 | 354.69 | 325.06 |
| 358.91 | 325.06 | 359.48 | 325.05 | 361.91 | 325.04 | 365.58 | 325.02 | 367.97 | 325.05 |
| 368.64 | 325.06 | 370.52 | 325.08 | 372.05 | 325.09 | 372.75 | 325.1 | 374.58 | 325.12 |
| 375.21 | 325.12 | 377.38 | 325.15 | 377.85 | 325.16 | 379.6 | 325.17 | 379.77 | 325.16 |
| 381.41 | 325.16 | 382.59 | 325.17 | 384.99 | 325.18 | 386.71 | 325.24 | 389.65 | 325.34 |
| 390.99 | 325.38 | 392.05 | 325.43 | 392.9 | 325.46 | 393.47 | 325.49 | 394.22 | 325.52 |
| 395.84 | 325.58 | 397.52 | 325.64 | 400.31 | 325.7 | 400.46 | 325.71 | 401.19 | 325.73 |
| 402.16 | 325.75 | 404.51 | 325.82 | 405.27 | 325.84 | 405.55 | 325.86 | 406.43 | 325.87 |
| 406.88 | 325.89 | 407.59 | 325.91 | 410.08 | 325.91 | 410.66 | 325.9 | 411.61 | 325.9 |
| 412.31 | 325.88 | 413.12 | 325.87 | 413.78 | 325.85 | 414.09 | 325.85 | 415.02 | 325.83 |
| 418.16 | 325.75 | 418.92 | 325.72 | 419.63 | 325.7 | 419.92 | 325.68 | 421.04 | 325.56 |
| 421.27 | 325.54 | 421.47 | 325.5 | 421.8 | 325.47 | 421.9 | 325.45 | 422.05 | 325.38 |
| 422.88 | 325.37 | 423.85 | 325.35 | 424.25 | 325.35 | 425.49 | 325.41 | 426.12 | 325.41 |
| 426.46 | 325.4 | 427.9 | 325.37 | 428.64 | 325.37 | 429.6 | 325.38 | 431.41 | 325.47 |
| 432.25 | 325.51 | 433.65 | 325.51 | 434.2 | 325.54 | 434.83 | 325.55 | 435.82 | 325.57 |
| 436.9 | 325.56 | 438.71 | 325.55 | 439.08 | 325.53 | 442.78 | 325.47 | 446.74 | 325.41 |
| 447.94 | 325.37 | 449.58 | 325.32 | 450.98 | 325.32 | 451.84 | 325.33 | 453.84 | 325.32 |
| 457.18 | 325.32 | 457.81 | 325.34 | 458.27 | 325.33 | 459.84 | 325.31 | 461.72 | 325.3 |
| 464.31 | 325.3 | 464.5 | 325.29 | 465.84 | 325.27 | 466.83 | 325.26 | 467.19 | 325.25 |
| 468.29 | 325.24 | 468.63 | 325.23 | 469.41 | 325.22 | 471.29 | 325.19 | 472.67 | 325.17 |
| 473.55 | 325.16 | 478.88 | 325.16 | 480.47 | 325.02 | 481.55 | 324.91 | 481.92 | 324.86 |
| 482.34 | 324.85 | 482.7 | 324.85 | 483.04 | 324.87 | 483.57 | 324.92 | 485.5 | 325.18 |
| 486.81 | 325.21 | 487.7 | 325.24 | 488.21 | 325.25 | 489.11 | 325.26 | 490.43 | 325.28 |
| 493.13 | 325.31 | 493.91 | 325.32 | 495.19 | 325.32 | 497.82 | 325.3 | 501.17 | 325.3 |
| 501.71 | 325.31 | 502.33 | 325.31 | 503.49 | 325.33 | 504.28 | 325.35 | 507.46 | 325.41 |
| 508.3 | 325.43 | 509.06 | 325.44 | 510.16 | 325.46 | 510.78 | 325.46 | 514.7 | 325.51 |
| 514.78 | 325.51 | 518.68 | 325.55 | 519.78 | 325.56 | 525.25 | 325.56 | 525.49 | 325.55 |
| 526.38 | 325.53 | 527.13 | 325.5 | 527.68 | 325.49 | 528.35 | 325.49 | 528.56 | 325.48 |
| 528.98 | 325.49 | 529.76 | 325.49 | 530.23 | 325.48 | 530.28 | 325.46 | 530.53 | 325.44 |
| 531.35 | 325.48 | 532.07 | 325.53 | 533.51 | 325.59 | 533.84 | 325.61 | 534.24 | 325.62 |
| 537.51 | 325.71 | 538.8 | 325.75 | 541.75 | 325.79 | 544.37 | 325.83 | 544.98 | 325.83 |
| 546.82 | 325.88 | 547.57 | 325.91 | 549.5 | 325.96 | 550.27 | 325.99 | 551.02 | 326.01 |
| 551.73 | 326.05 | 552.68 | 326.06 | 553.17 | 326.06 | 553.88 | 326.07 | 555.38 | 326.08 |
| 561.47 | 326.08 | 563.01 | 326.07 | 564.38 | 326.07 | 566.5 | 326.08 | 568.01 | 326.08 |
| 568.96 | 326.07 | 573.18 | 326.03 | 575.11 | 326.02 | 577.19 | 326.02 | 578.18 | 326.03 |
| 579.46 | 326.05 | 579.91 | 326.05 | 580.17 | 326.04 | 581.74 | 326.11 | 582.01 | 326.11 |
| 584.13 | 326.13 | 584.49 | 326.14 | 585.67 | 326.16 | 586.48 | 326.17 | 588.15 | 326.18 |
| 588.79 | 326.19 | 591.94 | 326.25 | 593.59 | 326.27 | 594.06 | 326.27 | 594.52 | 326.23 |
| 595.04 | 326.14 | 595.29 | 326.14 | 597.34 | 326.25 | 597.47 | 326.25 | 598 | 326.28 |
| 599.2 | 326.32 | 599.49 | 326.34 | 599.66 | 326.34 | 600.32 | 326.36 | 601.34 | 326.41 |
| 601.49 | 326.42 | 603.49 | 326.44 | 605.22 | 326.47 | 605.99 | 326.48 | 608.59 | 326.52 |
| 610.02 | 326.54 | 611.72 | 326.58 | 612.23 | 326.59 | 612.53 | 326.61 | 613.72 | 326.66 |
| 615.6 | 326.75 | 616.3 | 326.79 | 619.18 | 326.95 | 619.77 | 326.97 | 620.14 | 326.99 |
| 622.57 | 327.1 | 624.88 | 327.21 | 625.65 | 327.25 | 626.92 | 327.3 | 628.84 | 327.4 |
| 632.37 | 327.51 | 633.03 | 327.52 | 633.81 | 327.55 | 635.11 | 327.56 | 636.74 | 327.61 |
| 644.81 | 327.88 | 646.58 | 327.88 | 648.23 | 327.89 | 650.94 | 327.89 | 652.04 | 327.9 |
| 653.61 | 327.9 | 657.34 | 327.91 | 657.79 | 327.92 | 660.55 | 327.92 | 664.6 | 327.91 |
| 664.94 | 327.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 211.31 | .04 | 551.73 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 211.31 | 551.73 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 756.485*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.24 | 1.6 | 334.21 | 1.75 | 334.21 | 3.73 | 334.06 | 4.8 | 334.01 |
| 5.57 | 333.95 | 5.96 | 333.93 | 8.34 | 333.88 | 8.71 | 333.86 | 10.5 | 333.84 |
| 10.82 | 333.82 | 11.16 | 333.82 | 11.42 | 333.8 | 13.13 | 333.74 | 13.78 | 333.71 |
| 14.95 | 333.68 | 15.81 | 333.67 | 16.56 | 333.68 | 17.32 | 333.71 | 17.48 | 333.72 |
| 18.76 | 333.64 | 23.39 | 333.3 | 26.47 | 333.06 | 26.85 | 332.99 | 29.6 | 332.57 |
| 30.22 | 332.47 | 30.7 | 332.35 | 32.61 | 331.89 | 32.66 | 331.89 | 33.99 | 331.73 |
| 35.17 | 331.58 | 37.3 | 331.32 | 37.69 | 331.25 | 37.83 | 331.21 | 38.93 | 331.18 |
| 39.85 | 331.15 | 40.85 | 331.2 | 41.99 | 331.27 | 42.23 | 331.29 | 42.67 | 331.37 |
| 43.57 | 331.49 | 44.12 | 331.56 | 46.23 | 331.82 | 46.91 | 331.88 | 47.39 | 331.93 |
| 47.92 | 331.92 | 48.83 | 331.91 | 50.26 | 331.85 | 52.61 | 331.76 | 53.11 | 331.76 |
| 53.69 | 331.8 | 54.62 | 331.6 | 54.93 | 331.5 | 56.53 | 331.32 | 59.76 | 330.97 |
| 60.41 | 330.93 | 60.8 | 330.92 | 61.93 | 330.91 | 64.15 | 330.91 | 64.34 | 330.9 |
| 69.44 | 330.49 | 70.01 | 330.46 | 70.46 | 330.45 | 71.07 | 330.42 | 71.52 | 330.39 |
| 72.69 | 330.32 | 73.29 | 330.29 | 74.08 | 330.24 | 75.87 | 330.12 | 78.27 | 329.98 |
| 80.8 | 329.89 | 82.5 | 329.84 | 82.91 | 329.83 | 84.88 | 329.77 | 87.05 | 329.71 |
| 87.85 | 329.69 | 92.24 | 329.63 | 92.55 | 329.62 | 93.73 | 329.62 | 95.12 | 329.61 |
| 96.32 | 329.64 | 96.78 | 329.66 | 97.13 | 329.7 | 97.69 | 329.72 | 98.67 | 329.74 |
| 100.37 | 329.76 | 100.67 | 329.76 | 101.23 | 329.77 | 102.55 | 329.74 | 104.22 | 329.69 |
| 104.28 | 329.6 | 105.09 | 329.55 | 105.35 | 329.53 | 106.66 | 329.44 | 108.08 | 329.34 |
| 109.27 | 329.32 | 110.97 | 329.48 | 111.55 | 329.52 | 112.44 | 329.54 | 113.02 | 329.52 |
| 113.83 | 329.48 | 114.1 | 329.48 | 114.66 | 329.46 | 118.9 | 329.24 | 120.89 | 329.12 |
| 122.65 | 329.01 | 123.05 | 328.99 | 123.69 | 328.94 | 124.19 | 328.91 | 126.92 | 328.79 |
| 129.58 | 328.66 | 135.94 | 328.39 | 136.8 | 328.36 | 138.96 | 328.31 | 140.8 | 328.28 |
| 143.45 | 328.25 | 144.21 | 328.24 | 144.58 | 328.23 | 146.11 | 328.23 | 146.76 | 328.24 |
| 147.31 | 328.24 | 147.91 | 328.23 | 148.79 | 328.22 | 150.53 | 328.22 | 153.7 | 328.18 |
| 155.16 | 328.17 | 155.9 | 328.16 | 159.65 | 328.16 | 160.03 | 328.15 | 168.75 | 328.04 |
| 170.62 | 328 | 171.75 | 327.98 | 174.74 | 327.93 | 180.7 | 327.89 | 183.24 | 327.89 |
| 183.28 | 327.88 | 184.09 | 327.87 | 184.92 | 327.88 | 187.34 | 327.9 | 192.72 | 327.95 |
| 192.81 | 327.95 | 194.48 | 327.98 | 197.03 | 328.01 | 197.77 | 328.01 | 198.11 | 328.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 200.81 | 328.09 | 201.19 | 328.08 | 202.93 | 328.01 | 203.93 | 327.94 | 204.22 | 327.94 |
| 204.64 | 327.92 | 205.73 | 327.83 | 206.17 | 327.79 | 208.19 | 327.58 | 211.25 | 327.27 |
| 212.4 | 327.1 | 214.62 | 326.9 | 217.43 | 326.68 | 219.83 | 326.47 | 221.16 | 326.36 |
| 221.7 | 326.33 | 223.16 | 326.24 | 227.79 | 326 | 229.89 | 325.88 | 232.05 | 325.74 |
| 232.84 | 325.69 | 234.43 | 325.56 | 234.75 | 325.55 | 236.13 | 325.46 | 237.54 | 325.4 |
| 238.13 | 325.36 | 239.35 | 325.29 | 239.4 | 325.28 | 242.85 | 325.11 | 245.33 | 324.98 |
| 246.3 | 324.96 | 250.46 | 324.81 | 252.34 | 324.81 | 253.13 | 324.77 | 253.73 | 324.73 |
| 255.32 | 324.63 | 256.34 | 324.63 | 258.88 | 324.5 | 259.8 | 324.51 | 260.9 | 324.6 |
| 261.53 | 324.6 | 262.53 | 324.58 | 263.74 | 324.54 | 265.23 | 324.54 | 266.16 | 324.51 |
| 266.67 | 324.5 | 270.49 | 324.41 | 274.11 | 324.31 | 278.74 | 324.19 | 279.35 | 324.17 |
| 281.5 | 324.13 | 281.82 | 324.12 | 284.65 | 324.04 | 287.19 | 323.98 | 291.68 | 323.89 |
| 292.16 | 323.89 | 292.58 | 323.88 | 293.31 | 323.87 | 293.77 | 323.86 | 294.07 | 323.83 |
| 294.32 | 323.78 | 294.64 | 323.78 | 294.82 | 323.77 | 296.53 | 323.73 | 296.76 | 323.73 |
| 297.15 | 323.7 | 297.56 | 323.68 | 297.61 | 323.72 | 297.74 | 323.75 | 298.07 | 323.79 |
| 298.71 | 323.84 | 299.2 | 323.85 | 299.57 | 323.85 | 299.75 | 323.84 | 299.81 | 323.82 |
| 300.51 | 323.81 | 301.26 | 323.81 | 301.73 | 323.83 | 302.01 | 323.85 | 302.46 | 323.87 |
| 303.31 | 323.9 | 303.63 | 323.92 | 304.17 | 323.93 | 304.48 | 323.91 | 305.42 | 323.9 |
| 306.26 | 323.9 | 307.74 | 323.95 | 309.76 | 324.04 | 311.2 | 324.12 | 313.27 | 324.21 |
| 313.28 | 324.22 | 313.59 | 324.26 | 317.82 | 324.33 | 318.61 | 324.34 | 320.71 | 324.37 |
| 321.13 | 324.37 | 322.04 | 324.38 | 324.29 | 324.38 | 327.19 | 324.34 | 327.91 | 324.34 |
| 328.74 | 324.35 | 330.37 | 324.39 | 331.41 | 324.42 | 333.01 | 324.47 | 333.14 | 324.48 |
| 334.56 | 324.53 | 336.04 | 324.58 | 336.45 | 324.58 | 336.87 | 324.6 | 337.1 | 324.6 |
| 338.81 | 324.66 | 339.55 | 324.69 | 341.59 | 324.74 | 342.54 | 324.75 | 344.57 | 324.78 |
| 345.64 | 324.8 | 345.87 | 324.79 | 346.42 | 324.79 | 346.52 | 324.78 | 347.22 | 324.77 |
| 348.04 | 324.75 | 349.32 | 324.74 | 350.03 | 324.75 | 352.97 | 324.76 | 353.75 | 324.76 |
| 354.35 | 324.75 | 356.9 | 324.74 | 360.75 | 324.74 | 363.27 | 324.77 | 363.97 | 324.78 |
| 365.95 | 324.8 | 367.56 | 324.82 | 368.29 | 324.82 | 370.88 | 324.86 | 373.15 | 324.89 |
| 373.64 | 324.89 | 375.49 | 324.91 | 375.67 | 324.89 | 377.39 | 324.89 | 378.63 | 324.91 |
| 381.15 | 324.91 | 382.96 | 324.97 | 386.04 | 325.08 | 387.45 | 325.12 | 389.46 | 325.21 |
| 390.06 | 325.23 | 390.84 | 325.27 | 392.54 | 325.33 | 394.32 | 325.39 | 395.25 | 325.41 |
| 397.25 | 325.45 | 397.41 | 325.46 | 398.17 | 325.48 | 399.19 | 325.5 | 401.66 | 325.57 |
| 402.45 | 325.59 | 402.75 | 325.61 | 403.67 | 325.62 | 404.89 | 325.65 | 407.51 | 325.65 |
| 408.12 | 325.64 | 409.11 | 325.63 | 410.69 | 325.59 | 411.39 | 325.58 | 412.69 | 325.54 |
| 414.77 | 325.48 | 415.99 | 325.45 | 417.13 | 325.41 | 417.72 | 325.38 | 417.85 | 325.38 |
| 418.33 | 325.32 | 419.26 | 325.21 | 419.47 | 325.17 | 419.82 | 325.14 | 419.93 | 325.12 |
| 420.04 | 325.03 | 420.95 | 325.03 | 421.97 | 325.01 | 422.54 | 325.01 | 422.58 | 325.02 |
| 423.69 | 325.07 | 424.72 | 325.07 | 426.23 | 325.05 | 428.01 | 325.07 | 429.91 | 325.16 |
| 430.79 | 325.21 | 431.59 | 325.21 | 432.27 | 325.22 | 433.5 | 325.26 | 434.54 | 325.29 |
| 435.68 | 325.28 | 437.58 | 325.26 | 437.97 | 325.25 | 441.85 | 325.19 | 446.01 | 325.13 |
| 447.28 | 325.09 | 449 | 325.04 | 450.47 | 325.04 | 451.22 | 325.05 | 453.66 | 325.05 |
| 454.83 | 325.04 | 456.99 | 325.04 | 457.65 | 325.06 | 457.76 | 325.07 | 458.12 | 325.06 |
| 458.96 | 325.05 | 459.78 | 325.03 | 462.19 | 325.03 | 463.77 | 325.02 | 464.67 | 325.02 |
| 466.09 | 325 | 467.13 | 324.99 | 467.5 | 324.98 | 468.66 | 324.97 | 469.01 | 324.96 |
| 469.83 | 324.95 | 471.81 | 324.93 | 473.26 | 324.91 | 474.18 | 324.89 | 479.78 | 324.89 |
| 481.45 | 324.73 | 482.58 | 324.62 | 482.94 | 324.57 | 482.97 | 324.55 | 483.41 | 324.55 |
| 483.79 | 324.54 | 484.71 | 324.62 | 486.73 | 324.91 | 488.1 | 324.95 | 489.04 | 324.98 |
| 489.58 | 324.99 | 490.53 | 325 | 491.91 | 325.02 | 494.75 | 325.05 | 496.92 | 325.05 |
| 499.67 | 325.03 | 500.62 | 325.02 | 500.63 | 325.03 | 502.86 | 325.02 | 503.2 | 325.02 |
| 503.76 | 325.03 | 504.41 | 325.03 | 505.64 | 325.05 | 506.46 | 325.07 | 509.8 | 325.13 |
| 511.48 | 325.15 | 513.29 | 325.18 | 517.41 | 325.22 | 517.49 | 325.22 | 521.59 | 325.26 |
| 522.74 | 325.27 | 528.5 | 325.27 | 529.68 | 325.23 | 530.46 | 325.21 | 531.05 | 325.2 |
| 533.22 | 325.2 | 533.72 | 325.18 | 534.03 | 325.14 | 534.9 | 325.18 | 535.56 | 325.22 |
| 535.65 | 325.23 | 537.17 | 325.3 | 537.51 | 325.32 | 537.93 | 325.33 | 541.37 | 325.42 |
| 542.72 | 325.46 | 545.82 | 325.5 | 548.58 | 325.53 | 549.05 | 325.54 | 549.97 | 325.55 |
| 551.15 | 325.59 | 551.44 | 325.59 | 551.94 | 325.61 | 552.36 | 325.62 | 553.97 | 325.67 |
| 554.77 | 325.69 | 556.06 | 325.74 | 556.31 | 325.76 | 557.21 | 325.77 | 557.68 | 325.77 |
| 558.35 | 325.78 | 564.5 | 325.78 | 564.92 | 325.79 | 565.57 | 325.78 | 567.03 | 325.78 |
| 568.33 | 325.77 | 570.5 | 325.77 | 571.08 | 325.78 | 571.79 | 325.77 | 572.69 | 325.77 |
| 576.7 | 325.73 | 578.54 | 325.72 | 580.52 | 325.72 | 581.46 | 325.73 | 582.67 | 325.75 |
| 583.1 | 325.75 | 583.35 | 325.74 | 583.49 | 325.75 | 584.43 | 325.78 | 585.09 | 325.81 |
| 587.11 | 325.82 | 587.46 | 325.83 | 588.58 | 325.85 | 589.34 | 325.86 | 590.93 | 325.87 |
| 594.53 | 325.93 | 595.43 | 325.95 | 596.55 | 325.95 | 596.83 | 325.94 | 597 | 325.92 |
| 597.48 | 325.83 | 597.72 | 325.83 | 599.67 | 325.93 | 600.3 | 325.96 | 601.71 | 326.01 |
| 601.88 | 326.02 | 602.51 | 326.04 | 602.87 | 326.06 | 603.48 | 326.08 | 603.62 | 326.09 |
| 605.52 | 326.11 | 607.17 | 326.14 | 607.89 | 326.14 | 610.37 | 326.18 | 611.73 | 326.2 |
| 614.12 | 326.26 | 617.03 | 326.39 | 619.59 | 326.54 | 619.94 | 326.55 | 621 | 326.61 |
| 621.35 | 326.62 | 623.02 | 326.69 | 625.86 | 326.82 | 626.59 | 326.86 | 627.8 | 326.91 |
| 628.88 | 326.96 | 629.62 | 327 | 632.98 | 327.09 | 634.35 | 327.13 | 635.59 | 327.14 |
| 637.14 | 327.19 | 644.81 | 327.44 | 648.54 | 327.44 | 650.44 | 327.45 | 651.68 | 327.46 |
| 653.18 | 327.46 | 656.72 | 327.47 | 657.15 | 327.48 | 659.77 | 327.48 | 663.62 | 327.47 |
| 663.95 | 327.47 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 198.11 | .04 | 556.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 198.11 | 556.31 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 737.435*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.89 | 1.49 | 333.86 | 1.64 | 333.86 | 3.48 | 333.72 | 4.48 | 333.67 |
| 5.2 | 333.61 | 5.56 | 333.59 | 7.79 | 333.54 | 8.13 | 333.52 | 9.8 | 333.49 |
| 10.1 | 333.47 | 10.42 | 333.47 | 10.66 | 333.45 | 12.26 | 333.39 | 12.86 | 333.36 |
| 14.76 | 333.31 | 15.46 | 333.32 | 16.16 | 333.35 | 16.32 | 333.35 | 17.51 | 333.27 |
| 21.83 | 332.93 | 24.71 | 332.7 | 25.06 | 332.63 | 27.63 | 332.24 | 28.21 | 332.15 |
| 28.65 | 332.05 | 30.48 | 331.62 | 31.73 | 331.48 | 32.82 | 331.35 | 34.82 | 331.1 |
| 35.18 | 331.05 | 35.31 | 331.01 | 36.34 | 330.98 | 37.2 | 330.96 | 38.13 | 331.01 |
| 39.19 | 331.08 | 39.41 | 331.1 | 40.67 | 331.28 | 41.18 | 331.34 | 43.15 | 331.59 |
| 43.78 | 331.64 | 44.3 | 331.69 | 44.39 | 331.68 | 44.72 | 331.68 | 45.58 | 331.67 |
| 46.92 | 331.62 | 49.11 | 331.55 | 49.57 | 331.55 | 50.11 | 331.58 | 50.98 | 331.4 |
| 51.27 | 331.31 | 52.77 | 331.15 | 55.77 | 330.84 | 56.39 | 330.81 | 56.75 | 330.8 |
| 57.81 | 330.79 | 59.96 | 330.79 | 60.05 | 330.78 | 64.81 | 330.43 | 65.34 | 330.4 |
| 66.08 | 330.38 | 66.33 | 330.36 | 66.75 | 330.34 | 69.14 | 330.21 | 70.82 | 330.11 |
| 73.06 | 329.97 | 75.42 | 329.9 | 77.01 | 329.85 | 78.95 | 329.8 | 79.23 | 329.8 |
| 81.25 | 329.75 | 82 | 329.73 | 86.09 | 329.68 | 86.39 | 329.67 | 89.22 | 329.67 |
| 89.9 | 329.69 | 90.33 | 329.71 | 90.65 | 329.75 | 91.18 | 329.77 | 92.1 | 329.79 |
| 94.49 | 329.82 | 95.72 | 329.79 | 97.28 | 329.76 | 97.33 | 329.67 | 98.08 | 329.64 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 99.55 | 329.52 | 100.88 | 329.44 | 101.99 | 329.42 | 103.57 | 329.56 | 104.11 | 329.6 |
| 104.95 | 329.61 | 105.49 | 329.6 | 106.25 | 329.56 | 106.5 | 329.56 | 107.02 | 329.54 |
| 110.98 | 329.33 | 112.83 | 329.23 | 114.48 | 329.12 | 114.85 | 329.1 | 115.92 | 329.03 |
| 118.46 | 328.9 | 120.94 | 328.78 | 126.88 | 328.51 | 127.69 | 328.48 | 129.7 | 328.43 |
| 131.41 | 328.4 | 133.89 | 328.36 | 134.6 | 328.35 | 135.53 | 328.33 | 136.38 | 328.33 |
| 136.98 | 328.34 | 137.49 | 328.34 | 138.88 | 328.32 | 139.99 | 328.31 | 140.5 | 328.31 |
| 143.46 | 328.26 | 144.82 | 328.25 | 145.51 | 328.24 | 146.52 | 328.23 | 147.1 | 328.23 |
| 147.73 | 328.22 | 149.01 | 328.22 | 149.37 | 328.21 | 152.34 | 328.16 | 157.51 | 328.08 |
| 157.98 | 328.07 | 159.25 | 328.03 | 160.31 | 328 | 163.1 | 327.93 | 164.44 | 327.92 |
| 168.66 | 327.88 | 169.14 | 327.87 | 171.03 | 327.87 | 171.07 | 327.86 | 171.83 | 327.85 |
| 172.6 | 327.86 | 174.86 | 327.88 | 177.89 | 327.92 | 179.96 | 327.94 | 181.53 | 327.97 |
| 183.9 | 328.01 | 184.59 | 328.01 | 184.91 | 328.02 | 187.76 | 328.1 | 188.16 | 328.09 |
| 189.99 | 328.01 | 191.04 | 327.93 | 191.35 | 327.93 | 191.79 | 327.91 | 192.3 | 327.86 |
| 192.94 | 327.81 | 195.53 | 327.53 | 198.13 | 327.24 | 198.75 | 327.18 | 199.96 | 327 |
| 202.31 | 326.8 | 205.26 | 326.58 | 208.29 | 326.33 | 209.19 | 326.26 | 209.77 | 326.23 |
| 211.31 | 326.13 | 216.18 | 325.87 | 218.4 | 325.74 | 220.67 | 325.59 | 221.5 | 325.53 |
| 223.18 | 325.4 | 224.97 | 325.29 | 226.46 | 325.23 | 228.36 | 325.11 | 228.42 | 325.11 |
| 232.05 | 324.92 | 234.66 | 324.78 | 235.69 | 324.76 | 235.97 | 324.75 | 240.07 | 324.59 |
| 242.05 | 324.59 | 242.89 | 324.55 | 243.17 | 324.54 | 245.2 | 324.42 | 246.27 | 324.41 |
| 248.95 | 324.29 | 249.91 | 324.29 | 251.07 | 324.36 | 251.74 | 324.36 | 252.79 | 324.33 |
| 254.07 | 324.29 | 255.63 | 324.29 | 256.62 | 324.26 | 257.15 | 324.25 | 261.18 | 324.15 |
| 264.99 | 324.04 | 269.87 | 323.91 | 270.52 | 323.89 | 272.78 | 323.84 | 276.1 | 323.75 |
| 278.77 | 323.69 | 280.35 | 323.66 | 282.95 | 323.62 | 283.95 | 323.6 | 284.45 | 323.6 |
| 285.23 | 323.58 | 285.71 | 323.58 | 286.02 | 323.54 | 286.29 | 323.48 | 286.82 | 323.48 |
| 287.28 | 323.46 | 288.62 | 323.43 | 289.27 | 323.4 | 289.7 | 323.37 | 289.75 | 323.42 |
| 289.94 | 323.46 | 290.67 | 323.53 | 291.42 | 323.56 | 292 | 323.54 | 292.06 | 323.52 |
| 292.79 | 323.52 | 293.05 | 323.51 | 293.5 | 323.51 | 293.58 | 323.52 | 294.07 | 323.54 |
| 294.37 | 323.56 | 294.84 | 323.58 | 295.73 | 323.61 | 296.07 | 323.63 | 296.63 | 323.64 |
| 296.96 | 323.61 | 297.94 | 323.6 | 298.82 | 323.6 | 300.37 | 323.66 | 302.49 | 323.75 |
| 306.17 | 323.92 | 306.17 | 323.93 | 306.5 | 323.97 | 307.2 | 323.99 | 308.4 | 324 |
| 311.76 | 324.04 | 313.96 | 324.07 | 315.36 | 324.07 | 316.34 | 324.08 | 317.2 | 324.08 |
| 317.71 | 324.07 | 320.76 | 324.02 | 321.02 | 324.01 | 321.51 | 324.01 | 322.38 | 324.03 |
| 324.09 | 324.06 | 325.18 | 324.09 | 326.85 | 324.14 | 326.99 | 324.15 | 328.48 | 324.19 |
| 330.04 | 324.25 | 330.9 | 324.27 | 331.14 | 324.28 | 332.93 | 324.34 | 333.71 | 324.36 |
| 335.85 | 324.42 | 336.85 | 324.43 | 338.97 | 324.47 | 340.09 | 324.48 | 340.57 | 324.48 |
| 341.75 | 324.45 | 342.61 | 324.44 | 343.94 | 324.43 | 344.7 | 324.43 | 347.78 | 324.45 |
| 351.9 | 324.45 | 355.93 | 324.46 | 358.57 | 324.49 | 361.38 | 324.53 | 363.07 | 324.54 |
| 363.83 | 324.55 | 366.54 | 324.59 | 368.93 | 324.63 | 369.44 | 324.63 | 371.38 | 324.65 |
| 371.56 | 324.63 | 373.37 | 324.63 | 374.67 | 324.64 | 377.31 | 324.64 | 379.21 | 324.7 |
| 382.43 | 324.81 | 383.92 | 324.86 | 386.02 | 324.95 | 386.64 | 324.98 | 387.47 | 325.01 |
| 389.25 | 325.08 | 391.11 | 325.14 | 394.18 | 325.2 | 394.35 | 325.21 | 395.15 | 325.23 |
| 396.22 | 325.25 | 398.8 | 325.32 | 399.64 | 325.34 | 399.95 | 325.36 | 400.91 | 325.37 |
| 401.41 | 325.37 | 401.75 | 325.39 | 403.08 | 325.39 | 403.52 | 325.4 | 404.94 | 325.39 |
| 405.57 | 325.37 | 406.62 | 325.37 | 407.39 | 325.34 | 408.27 | 325.32 | 410.37 | 325.26 |
| 413.83 | 325.15 | 414.9 | 325.11 | 415.02 | 325.1 | 415.45 | 325.09 | 415.77 | 325.07 |
| 416.28 | 325.01 | 417.25 | 324.89 | 417.37 | 324.86 | 417.71 | 324.82 | 417.95 | 324.78 |
| 418.07 | 324.69 | 419.03 | 324.68 | 420.09 | 324.66 | 420.53 | 324.66 | 421.03 | 324.69 |
| 421.42 | 324.7 | 421.9 | 324.73 | 422.59 | 324.74 | 422.97 | 324.73 | 424.55 | 324.73 |
| 426.42 | 324.75 | 428.41 | 324.85 | 429.34 | 324.9 | 430.89 | 324.92 | 431.48 | 324.95 |
| 432.18 | 324.96 | 433.27 | 325 | 434.46 | 324.99 | 436.45 | 324.98 | 436.86 | 324.96 |
| 440.93 | 324.91 | 445.29 | 324.85 | 446.62 | 324.81 | 448.42 | 324.77 | 449.38 | 324.76 |
| 449.96 | 324.76 | 450.74 | 324.77 | 456.23 | 324.77 | 456.79 | 324.76 | 457.12 | 324.78 |
| 457.61 | 324.8 | 458.86 | 324.77 | 459.43 | 324.76 | 459.72 | 324.76 | 461.79 | 324.75 |
| 464.64 | 324.75 | 464.85 | 324.74 | 466.33 | 324.73 | 467.42 | 324.72 | 467.81 | 324.71 |
| 469.02 | 324.7 | 469.39 | 324.69 | 470.25 | 324.68 | 472.33 | 324.66 | 473.84 | 324.64 |
| 474.82 | 324.63 | 480.68 | 324.63 | 482.42 | 324.45 | 483.62 | 324.32 | 484.02 | 324.25 |
| 484.89 | 324.23 | 484.94 | 324.25 | 485.26 | 324.27 | 485.85 | 324.32 | 487.96 | 324.65 |
| 489.4 | 324.69 | 490.38 | 324.72 | 490.95 | 324.73 | 491.94 | 324.74 | 493.39 | 324.76 |
| 496.37 | 324.79 | 498.64 | 324.79 | 502.53 | 324.75 | 504.87 | 324.74 | 505.22 | 324.74 |
| 505.81 | 324.75 | 506.5 | 324.75 | 507.22 | 324.76 | 507.78 | 324.76 | 508.64 | 324.78 |
| 512.15 | 324.84 | 513.07 | 324.86 | 513.9 | 324.87 | 515.12 | 324.88 | 515.8 | 324.89 |
| 520.11 | 324.93 | 520.2 | 324.93 | 524.49 | 324.97 | 525.71 | 324.98 | 528.76 | 324.97 |
| 531.74 | 324.97 | 531.99 | 324.96 | 532.98 | 324.94 | 533.8 | 324.92 | 534.41 | 324.91 |
| 536.69 | 324.91 | 537.21 | 324.89 | 537.27 | 324.87 | 537.54 | 324.84 | 538.45 | 324.88 |
| 539.23 | 324.94 | 540.83 | 325.01 | 541.19 | 325.03 | 541.63 | 325.04 | 545.23 | 325.14 |
| 545.98 | 325.15 | 546.65 | 325.18 | 549.9 | 325.21 | 552.78 | 325.24 | 553.45 | 325.24 |
| 555.48 | 325.29 | 555.78 | 325.29 | 556.31 | 325.31 | 556.75 | 325.32 | 558.43 | 325.37 |
| 559.28 | 325.4 | 560.1 | 325.42 | 560.89 | 325.47 | 561.74 | 325.48 | 562.19 | 325.48 |
| 562.82 | 325.49 | 569.66 | 325.49 | 571.06 | 325.48 | 572.29 | 325.46 | 574.35 | 325.47 |
| 574.89 | 325.48 | 575.57 | 325.47 | 576.42 | 325.47 | 580.22 | 325.43 | 581.96 | 325.42 |
| 583.84 | 325.42 | 585.89 | 325.44 | 586.66 | 325.44 | 587.55 | 325.48 | 588.18 | 325.5 |
| 590.09 | 325.51 | 590.42 | 325.52 | 591.48 | 325.54 | 592.21 | 325.54 | 593.72 | 325.56 |
| 594.3 | 325.57 | 597.13 | 325.61 | 597.99 | 325.63 | 599.05 | 325.63 | 599.31 | 325.62 |
| 599.47 | 325.6 | 599.93 | 325.52 | 600.16 | 325.52 | 602.6 | 325.64 | 603.69 | 325.68 |
| 604.1 | 325.7 | 604.69 | 325.71 | 605.04 | 325.73 | 605.62 | 325.75 | 605.75 | 325.76 |
| 607.55 | 325.77 | 609.11 | 325.8 | 609.8 | 325.81 | 612.15 | 325.84 | 613.44 | 325.86 |
| 615.43 | 325.9 | 615.7 | 325.92 | 616.77 | 325.96 | 619.1 | 326.07 | 621.22 | 326.19 |
| 621.7 | 326.21 | 622.23 | 326.24 | 622.56 | 326.25 | 624.15 | 326.31 | 624.76 | 326.34 |
| 626.83 | 326.43 | 627.53 | 326.47 | 628.67 | 326.51 | 629.71 | 326.56 | 630.06 | 326.58 |
| 633.59 | 326.68 | 634.89 | 326.72 | 636.06 | 326.73 | 637.53 | 326.77 | 644.81 | 326.99 |
| 646.4 | 326.99 | 647.89 | 327 | 648.34 | 327 | 650.15 | 327.01 | 651.32 | 327.01 |
| 652.74 | 327.02 | 656.1 | 327.03 | 656.51 | 327.04 | 658.99 | 327.04 | 662.65 | 327.03 |
| 662.96 | 327.03 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 184.91 | .04 | 560.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 184.91 | 560.89 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 718.384*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.55 | 1.39 | 333.51 | 1.52 | 333.51 | 3.23 | 333.37 | 3.6 | 333.36 |
| 4.83 | 333.27 | 5.17 | 333.25 | 7.55 | 333.18 | 9.1 | 333.14 | 9.67 | 333.12 |
| 9.9 | 333.1 | 10.61 | 333.07 | 11.95 | 333 | 13.7 | 332.95 | 14.35 | 332.96 |
| 15.15 | 332.98 | 16.26 | 332.9 | 20.27 | 332.56 | 22.94 | 332.33 | 23.27 | 332.27 |
| 25.66 | 331.92 | 26.19 | 331.84 | 26.61 | 331.74 | 28.3 | 331.36 | 29.46 | 331.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 30.48 | 331.11 | 32.33 | 330.89 | 32.67 | 330.84 | 32.78 | 330.81 | 33.75 | 330.79 |
| 34.54 | 330.77 | 36.39 | 330.88 | 36.6 | 330.9 | 36.98 | 330.96 | 37.77 | 331.07 |
| 38.24 | 331.12 | 40.07 | 331.35 | 40.33 | 331.38 | 40.65 | 331.4 | 41.08 | 331.44 |
| 41.53 | 331.44 | 42.32 | 331.43 | 43.57 | 331.39 | 45.6 | 331.33 | 46.03 | 331.33 |
| 46.53 | 331.36 | 47.34 | 331.2 | 47.61 | 331.12 | 49 | 330.98 | 51.79 | 330.71 |
| 52.36 | 330.68 | 52.7 | 330.68 | 53.68 | 330.67 | 55.34 | 330.68 | 55.68 | 330.68 |
| 55.77 | 330.67 | 60.18 | 330.37 | 60.68 | 330.34 | 61.21 | 330.33 | 63 | 330.24 |
| 64.2 | 330.17 | 65.76 | 330.09 | 67.84 | 329.97 | 71.86 | 329.86 | 73.32 | 329.83 |
| 73.57 | 329.82 | 75.45 | 329.78 | 76.14 | 329.76 | 79.95 | 329.73 | 80.55 | 329.73 |
| 80.73 | 329.72 | 81.24 | 329.73 | 82.45 | 329.72 | 83.48 | 329.75 | 83.88 | 329.77 |
| 84.18 | 329.8 | 84.67 | 329.82 | 85.52 | 329.84 | 87 | 329.86 | 87.74 | 329.88 |
| 88.89 | 329.85 | 90.33 | 329.82 | 90.38 | 329.75 | 91.08 | 329.72 | 92.44 | 329.61 |
| 93.67 | 329.53 | 94.21 | 329.53 | 94.71 | 329.51 | 96.18 | 329.64 | 96.68 | 329.68 |
| 97.46 | 329.69 | 98.48 | 329.65 | 98.87 | 329.64 | 98.9 | 329.63 | 99.38 | 329.62 |
| 103.06 | 329.43 | 104.78 | 329.33 | 106.3 | 329.23 | 106.65 | 329.21 | 107.64 | 329.14 |
| 110 | 329.02 | 112.31 | 328.91 | 112.93 | 328.87 | 116.6 | 328.69 | 117.18 | 328.67 |
| 118.57 | 328.61 | 118.89 | 328.59 | 120.44 | 328.55 | 121.48 | 328.53 | 122.03 | 328.51 |
| 124.33 | 328.47 | 124.99 | 328.45 | 125.31 | 328.45 | 126.27 | 328.43 | 126.64 | 328.44 |
| 127.2 | 328.44 | 128.19 | 328.42 | 130 | 328.4 | 130.47 | 328.39 | 133.21 | 328.34 |
| 135.13 | 328.31 | 136.06 | 328.3 | 136.6 | 328.29 | 137.18 | 328.29 | 138.37 | 328.28 |
| 138.7 | 328.27 | 141.46 | 328.21 | 146.26 | 328.11 | 146.7 | 328.1 | 147.88 | 328.06 |
| 148.86 | 328.02 | 151.45 | 327.94 | 152.7 | 327.92 | 156.62 | 327.86 | 157.06 | 327.86 |
| 158.82 | 327.85 | 158.86 | 327.84 | 159.56 | 327.83 | 162.38 | 327.87 | 167.04 | 327.92 |
| 167.11 | 327.93 | 168.57 | 327.96 | 170.77 | 328.01 | 171.71 | 328.01 | 174.7 | 328.11 |
| 175.12 | 328.1 | 177.05 | 328.01 | 178.15 | 327.92 | 178.62 | 327.92 | 179.47 | 327.85 |
| 180.15 | 327.79 | 180.63 | 327.74 | 182.87 | 327.48 | 185.6 | 327.16 | 186.26 | 327.09 |
| 187.53 | 326.9 | 190.98 | 326.62 | 193.1 | 326.48 | 194.24 | 326.38 | 195.77 | 326.27 |
| 196.28 | 326.22 | 197.23 | 326.15 | 197.83 | 326.12 | 199.45 | 326.02 | 204.57 | 325.74 |
| 206.88 | 325.61 | 206.9 | 325.6 | 210.17 | 325.38 | 211.93 | 325.23 | 212.29 | 325.22 |
| 213.81 | 325.12 | 215.37 | 325.06 | 216.03 | 325.02 | 217.38 | 324.93 | 217.43 | 324.93 |
| 221.26 | 324.73 | 224 | 324.57 | 224.47 | 324.56 | 225.08 | 324.56 | 225.38 | 324.54 |
| 229.68 | 324.38 | 231.77 | 324.37 | 232.94 | 324.33 | 235.07 | 324.21 | 236.2 | 324.2 |
| 239.01 | 324.07 | 240.02 | 324.07 | 241.25 | 324.13 | 241.71 | 324.13 | 241.95 | 324.12 |
| 243.05 | 324.09 | 244.39 | 324.05 | 244.52 | 324.04 | 245.03 | 324.05 | 245.71 | 324.05 |
| 247.07 | 324.01 | 247.64 | 324 | 251.87 | 323.89 | 255.87 | 323.77 | 261 | 323.63 |
| 261.68 | 323.62 | 264.06 | 323.56 | 267.54 | 323.46 | 270.36 | 323.4 | 272.01 | 323.38 |
| 275.33 | 323.32 | 275.86 | 323.32 | 276.32 | 323.31 | 277.65 | 323.29 | 277.98 | 323.25 |
| 278.26 | 323.19 | 279.3 | 323.16 | 280.71 | 323.13 | 280.96 | 323.12 | 281.63 | 323.07 |
| 281.89 | 323.07 | 281.9 | 323.12 | 282.09 | 323.16 | 282.41 | 323.2 | 283.1 | 323.25 |
| 283.39 | 323.26 | 284.04 | 323.26 | 284.25 | 323.25 | 284.31 | 323.23 | 284.55 | 323.22 |
| 285.9 | 323.22 | 286.42 | 323.24 | 286.72 | 323.26 | 288.14 | 323.32 | 288.5 | 323.34 |
| 289.09 | 323.34 | 289.5 | 323.32 | 290.46 | 323.3 | 291.38 | 323.3 | 293.01 | 323.36 |
| 295.21 | 323.45 | 296.8 | 323.53 | 299.06 | 323.63 | 299.42 | 323.68 | 300.15 | 323.7 |
| 301.4 | 323.71 | 304.92 | 323.75 | 307.22 | 323.77 | 310.6 | 323.77 | 311.14 | 323.76 |
| 314.32 | 323.69 | 315.11 | 323.68 | 316.02 | 323.7 | 317.81 | 323.73 | 318.95 | 323.76 |
| 320.7 | 323.81 | 320.84 | 323.82 | 322.4 | 323.86 | 324.03 | 323.92 | 324.93 | 323.94 |
| 325.18 | 323.95 | 327.06 | 324.01 | 327.87 | 324.04 | 330.11 | 324.09 | 330.23 | 324.1 |
| 331.15 | 324.12 | 333.38 | 324.15 | 334.54 | 324.17 | 335.05 | 324.17 | 337.18 | 324.12 |
| 338.57 | 324.11 | 339.36 | 324.12 | 342.58 | 324.15 | 344.1 | 324.15 | 346.89 | 324.16 |
| 351.11 | 324.17 | 353.87 | 324.21 | 356.81 | 324.25 | 359.38 | 324.28 | 362.21 | 324.32 |
| 364.7 | 324.36 | 365.24 | 324.37 | 367.26 | 324.39 | 367.46 | 324.37 | 369.35 | 324.37 |
| 370.82 | 324.38 | 373.47 | 324.37 | 375.45 | 324.43 | 378.83 | 324.55 | 381.6 | 324.64 |
| 382.58 | 324.69 | 384.09 | 324.76 | 385.96 | 324.83 | 387.9 | 324.89 | 391.11 | 324.95 |
| 391.29 | 324.96 | 392.12 | 324.97 | 395.16 | 325.05 | 395.95 | 325.06 | 396.27 | 325.08 |
| 396.82 | 325.09 | 397.14 | 325.11 | 398.15 | 325.11 | 399.03 | 325.13 | 400.05 | 325.13 |
| 400.42 | 325.14 | 400.88 | 325.14 | 402.36 | 325.13 | 403.03 | 325.11 | 404.12 | 325.1 |
| 404.93 | 325.08 | 405.85 | 325.05 | 406.62 | 325.02 | 408.04 | 324.98 | 410.32 | 324.9 |
| 411.66 | 324.85 | 412.53 | 324.81 | 412.78 | 324.81 | 413.69 | 324.76 | 414.98 | 324.59 |
| 415.24 | 324.56 | 415.47 | 324.52 | 415.97 | 324.45 | 416.1 | 324.35 | 417.1 | 324.34 |
| 418.21 | 324.32 | 418.67 | 324.32 | 419.81 | 324.37 | 420.1 | 324.39 | 420.83 | 324.4 |
| 422.88 | 324.4 | 423.58 | 324.42 | 424.84 | 324.44 | 427.88 | 324.6 | 428.75 | 324.61 |
| 430.13 | 324.65 | 430.2 | 324.66 | 430.86 | 324.67 | 431.99 | 324.72 | 433.24 | 324.71 |
| 435.33 | 324.69 | 435.75 | 324.68 | 440.01 | 324.63 | 444.57 | 324.57 | 445.96 | 324.54 |
| 447.84 | 324.49 | 450.27 | 324.49 | 450.44 | 324.5 | 452.74 | 324.49 | 456.59 | 324.49 |
| 457.32 | 324.52 | 457.84 | 324.51 | 458.76 | 324.5 | 459.66 | 324.48 | 462.29 | 324.48 |
| 464.03 | 324.47 | 465.02 | 324.47 | 466.57 | 324.45 | 467.71 | 324.44 | 468.12 | 324.44 |
| 469.39 | 324.43 | 469.77 | 324.42 | 470.67 | 324.41 | 472.84 | 324.39 | 474.43 | 324.38 |
| 475.45 | 324.37 | 481.58 | 324.37 | 483.4 | 324.17 | 484.65 | 324.02 | 485.04 | 323.96 |
| 485.08 | 323.94 | 485.56 | 323.93 | 485.98 | 323.93 | 486.37 | 323.96 | 486.97 | 324.02 |
| 486.98 | 324.03 | 489.2 | 324.38 | 490.7 | 324.43 | 491.73 | 324.45 | 492.32 | 324.47 |
| 493.36 | 324.48 | 494.88 | 324.49 | 497.99 | 324.52 | 498.88 | 324.53 | 499.58 | 324.53 |
| 500.36 | 324.52 | 503.39 | 324.49 | 504.42 | 324.47 | 504.44 | 324.48 | 506.88 | 324.46 |
| 507.86 | 324.46 | 508.58 | 324.47 | 509.33 | 324.47 | 510.82 | 324.5 | 514.49 | 324.56 |
| 516.32 | 324.58 | 517.6 | 324.59 | 518.31 | 324.6 | 522.82 | 324.64 | 522.91 | 324.64 |
| 527.4 | 324.68 | 534.98 | 324.68 | 535.24 | 324.67 | 536.28 | 324.65 | 537.13 | 324.63 |
| 537.77 | 324.62 | 540.16 | 324.62 | 540.7 | 324.59 | 540.77 | 324.57 | 541.05 | 324.54 |
| 541.99 | 324.58 | 542.72 | 324.63 | 542.82 | 324.65 | 544.48 | 324.72 | 544.86 | 324.74 |
| 545.32 | 324.75 | 550.57 | 324.89 | 553.97 | 324.92 | 556.99 | 324.94 | 557.5 | 324.95 |
| 558.52 | 324.96 | 559.81 | 324.99 | 560.42 | 325.01 | 561.13 | 325.02 | 562.9 | 325.08 |
| 563.78 | 325.1 | 564.64 | 325.13 | 565.13 | 325.16 | 565.46 | 325.17 | 565.51 | 325.18 |
| 566.28 | 325.19 | 567.3 | 325.19 | 568.58 | 325.2 | 568.88 | 325.19 | 572.81 | 325.19 |
| 573.18 | 325.2 | 573.76 | 325.19 | 575.08 | 325.18 | 576.24 | 325.16 | 578.05 | 325.17 |
| 579.34 | 325.17 | 580.15 | 325.16 | 583.74 | 325.12 | 585.39 | 325.12 | 586.02 | 325.11 |
| 587.17 | 325.12 | 589.1 | 325.14 | 589.83 | 325.14 | 590.67 | 325.17 | 591.05 | 325.19 |
| 593.08 | 325.2 | 593.39 | 325.21 | 594.39 | 325.23 | 595.08 | 325.23 | 596.51 | 325.24 |
| 599.73 | 325.3 | 600.54 | 325.31 | 601.54 | 325.31 | 601.94 | 325.29 | 602.38 | 325.22 |
| 602.59 | 325.21 | 604.34 | 325.3 | 606.17 | 325.37 | 606.32 | 325.37 | 607.21 | 325.4 |
| 607.75 | 325.43 | 609.58 | 325.44 | 611.06 | 325.47 | 611.71 | 325.48 | 613.93 | 325.5 |
| 615.15 | 325.52 | 616.6 | 325.55 | 616.88 | 325.56 | 617.23 | 325.56 | 617.29 | 325.57 |
| 618.3 | 325.6 | 620.5 | 325.71 | 622.51 | 325.83 | 625.27 | 325.94 | 625.85 | 325.96 |
| 627.81 | 326.04 | 628.47 | 326.07 | 629.55 | 326.11 | 630.53 | 326.15 | 631.19 | 326.19 |
| 634.2 | 326.27 | 634.76 | 326.28 | 635.43 | 326.3 | 636.54 | 326.31 | 644.81 | 326.55 |
| 647.72 | 326.55 | 648.15 | 326.56 | 650.03 | 326.56 | 650.96 | 326.57 | 652.05 | 326.57 |
| 652.31 | 326.58 | 655.48 | 326.59 | 655.87 | 326.59 | 656.16 | 326.6 | 658.22 | 326.6 |
| 661.96 | 326.59 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 171.71 | .04 | 565.46 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 171.71 | 565.46 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION



BSE Document Control Number: 7323HYD101

RIVER: WASH75
REACH: WASH75 RS: 699.334*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.2 | 1.28 | 333.17 | 2.99 | 333.03 | 3.84 | 332.98 | 4.46 | 332.93 |
| 4.77 | 332.91 | 6.67 | 332.85 | 6.97 | 332.83 | 8.4 | 332.8 | 8.66 | 332.78 |
| 9.14 | 332.76 | 9.8 | 332.72 | 11.03 | 332.65 | 11.96 | 332.61 | 12.65 | 332.59 |
| 13.25 | 332.59 | 13.99 | 332.61 | 15.01 | 332.54 | 18.71 | 332.2 | 21.18 | 331.96 |
| 21.48 | 331.9 | 24.18 | 331.52 | 24.56 | 331.44 | 25.8 | 331.16 | 26.13 | 331.1 |
| 27.2 | 330.99 | 29.85 | 330.68 | 30.15 | 330.64 | 30.26 | 330.61 | 31.15 | 330.59 |
| 31.89 | 330.58 | 32.69 | 330.62 | 33.59 | 330.68 | 33.79 | 330.7 | 34.14 | 330.76 |
| 34.86 | 330.85 | 35.3 | 330.9 | 37.23 | 331.14 | 37.53 | 331.16 | 37.97 | 331.2 |
| 38.34 | 331.19 | 39.07 | 331.19 | 42.1 | 331.11 | 42.49 | 331.11 | 42.96 | 331.14 |
| 43.7 | 331 | 43.95 | 330.93 | 45.23 | 330.81 | 47.81 | 330.58 | 48.34 | 330.56 |
| 49.55 | 330.56 | 51.32 | 330.57 | 55.56 | 330.3 | 56.01 | 330.28 | 56.36 | 330.28 |
| 56.65 | 330.27 | 57.22 | 330.24 | 58.64 | 330.18 | 59.27 | 330.14 | 60.71 | 330.07 |
| 62.63 | 329.97 | 64.65 | 329.92 | 66.01 | 329.88 | 66.34 | 329.88 | 67.68 | 329.85 |
| 67.91 | 329.85 | 69.65 | 329.81 | 70.29 | 329.8 | 73.8 | 329.78 | 76.48 | 329.78 |
| 77.06 | 329.8 | 77.43 | 329.82 | 77.71 | 329.85 | 78.16 | 329.87 | 78.95 | 329.89 |
| 79.67 | 329.9 | 80.31 | 329.92 | 81 | 329.93 | 82.05 | 329.91 | 83.39 | 329.89 |
| 83.43 | 329.82 | 84.08 | 329.8 | 84.29 | 329.78 | 85.34 | 329.7 | 86.47 | 329.63 |
| 87.43 | 329.61 | 88.78 | 329.72 | 89.25 | 329.75 | 89.96 | 329.76 | 90.43 | 329.75 |
| 90.91 | 329.72 | 91.74 | 329.7 | 95.13 | 329.53 | 98.45 | 329.32 | 98.96 | 329.28 |
| 99.37 | 329.26 | 101.55 | 329.14 | 103.67 | 329.03 | 104.25 | 328.99 | 105 | 328.95 |
| 107.64 | 328.82 | 108.76 | 328.76 | 110.17 | 328.7 | 112.14 | 328.64 | 112.65 | 328.63 |
| 114.77 | 328.58 | 115.68 | 328.55 | 116.18 | 328.54 | 116.9 | 328.54 | 117.43 | 328.53 |
| 117.86 | 328.53 | 119.05 | 328.5 | 120 | 328.49 | 122.97 | 328.42 | 124.14 | 328.4 |
| 124.74 | 328.38 | 125.6 | 328.37 | 126.64 | 328.35 | 127.73 | 328.34 | 128.04 | 328.33 |
| 130.59 | 328.26 | 135.02 | 328.15 | 136.51 | 328.08 | 137.42 | 328.04 | 139.81 | 327.95 |
| 140.96 | 327.92 | 144.58 | 327.85 | 144.99 | 327.84 | 146.61 | 327.83 | 146.64 | 327.82 |
| 147.96 | 327.82 | 152.49 | 327.89 | 154.19 | 327.91 | 154.27 | 327.92 | 155.61 | 327.95 |
| 157.64 | 328.01 | 158.51 | 328.01 | 161.65 | 328.12 | 164.11 | 328.01 | 165.26 | 327.91 |
| 165.76 | 327.91 | 167.35 | 327.77 | 167.86 | 327.71 | 170.22 | 327.42 | 173.08 | 327.07 |
| 173.76 | 327 | 175.1 | 326.8 | 177.68 | 326.59 | 180.94 | 326.37 | 184.27 | 326.12 |
| 185.27 | 326.05 | 185.9 | 326.02 | 187.6 | 325.9 | 192.97 | 325.6 | 195.39 | 325.47 |
| 195.41 | 325.46 | 197.92 | 325.29 | 198.83 | 325.23 | 200.68 | 325.07 | 201.06 | 325.06 |
| 202.66 | 324.95 | 204.98 | 324.85 | 206.39 | 324.76 | 206.45 | 324.75 | 210.46 | 324.54 |
| 213.33 | 324.37 | 214.47 | 324.35 | 214.78 | 324.34 | 219.3 | 324.16 | 221.48 | 324.15 |
| 222.71 | 324.11 | 224.94 | 324 | 226.12 | 323.98 | 229.08 | 323.85 | 230.14 | 323.85 |
| 231.42 | 323.9 | 231.73 | 323.89 | 232.15 | 323.89 | 234.72 | 323.8 | 234.85 | 323.79 |
| 235.39 | 323.8 | 236.16 | 323.8 | 237.53 | 323.76 | 238.12 | 323.74 | 242.56 | 323.63 |
| 246.75 | 323.51 | 255.34 | 323.27 | 258.99 | 323.17 | 261.94 | 323.11 | 263.68 | 323.09 |
| 266.55 | 323.05 | 267.65 | 323.03 | 268.2 | 323.03 | 269.59 | 323 | 269.93 | 322.96 |
| 270.22 | 322.89 | 270.6 | 322.89 | 271.32 | 322.86 | 272.79 | 322.83 | 273.06 | 322.82 |
| 273.76 | 322.77 | 274.04 | 322.77 | 274.04 | 322.82 | 274.24 | 322.86 | 274.57 | 322.9 |
| 275.04 | 322.94 | 275.49 | 322.96 | 275.86 | 322.97 | 276.5 | 322.95 | 276.57 | 322.93 |
| 277.36 | 322.92 | 278.22 | 322.92 | 279.08 | 322.97 | 280.56 | 323.03 | 280.94 | 323.05 |
| 281.55 | 323.05 | 281.91 | 323.02 | 283.94 | 323 | 285.64 | 323.06 | 287.94 | 323.16 |
| 291.96 | 323.33 | 291.97 | 323.35 | 292.33 | 323.4 | 293.09 | 323.41 | 297.16 | 323.44 |
| 298.07 | 323.45 | 300.47 | 323.47 | 303.07 | 323.47 | 304.01 | 323.46 | 304.57 | 323.45 |
| 307.89 | 323.37 | 308.17 | 323.36 | 308.71 | 323.36 | 309.66 | 323.37 | 311.53 | 323.41 |
| 312.72 | 323.44 | 314.54 | 323.48 | 314.69 | 323.49 | 316.32 | 323.53 | 318.02 | 323.59 |
| 318.96 | 323.61 | 321.18 | 323.69 | 322.03 | 323.71 | 324.36 | 323.77 | 324.49 | 323.77 |
| 325.45 | 323.8 | 329 | 323.86 | 329.52 | 323.85 | 329.89 | 323.85 | 330.01 | 323.84 |
| 330.81 | 323.82 | 331.74 | 323.81 | 333.2 | 323.8 | 334.02 | 323.81 | 337.39 | 323.84 |
| 337.75 | 323.84 | 338.28 | 323.85 | 338.97 | 323.85 | 341.89 | 323.86 | 346.29 | 323.89 |
| 349.17 | 323.93 | 349.97 | 323.94 | 352.24 | 323.98 | 354.92 | 324.01 | 357.11 | 324.05 |
| 357.87 | 324.06 | 360.48 | 324.1 | 360.81 | 324.1 | 361.04 | 324.11 | 363 | 324.13 |
| 363.15 | 324.13 | 363.35 | 324.11 | 365.33 | 324.1 | 366.86 | 324.11 | 369.63 | 324.09 |
| 371.7 | 324.16 | 375.22 | 324.29 | 376.84 | 324.33 | 378.11 | 324.38 | 379.14 | 324.43 |
| 380.72 | 324.5 | 382.66 | 324.57 | 383.67 | 324.61 | 384.69 | 324.64 | 385.76 | 324.66 |
| 388.05 | 324.7 | 388.23 | 324.71 | 389.1 | 324.72 | 391.05 | 324.77 | 392.27 | 324.79 |
| 393.09 | 324.81 | 393.43 | 324.83 | 394 | 324.84 | 394.34 | 324.86 | 395.93 | 324.86 |
| 396.8 | 324.88 | 398.24 | 324.88 | 399.79 | 324.87 | 400.49 | 324.85 | 401.62 | 324.84 |
| 402.47 | 324.81 | 403.43 | 324.78 | 404.23 | 324.75 | 404.6 | 324.74 | 405.72 | 324.69 |
| 408.1 | 324.6 | 409.49 | 324.55 | 410.4 | 324.51 | 410.66 | 324.51 | 411.26 | 324.47 |
| 411.62 | 324.46 | 412.96 | 324.27 | 413.23 | 324.24 | 413.34 | 324.21 | 414 | 324.12 |
| 414.13 | 324.01 | 415.05 | 324 | 415.17 | 323.99 | 416.33 | 323.97 | 416.81 | 323.97 |
| 417.93 | 324.03 | 418.08 | 324.03 | 418.3 | 324.05 | 418.6 | 324.05 | 419.47 | 324.07 |
| 421.2 | 324.08 | 421.94 | 324.1 | 422.1 | 324.1 | 423.25 | 324.13 | 426.43 | 324.29 |
| 428.12 | 324.33 | 428.77 | 324.36 | 429.53 | 324.38 | 430.72 | 324.43 | 432.02 | 324.42 |
| 434.2 | 324.41 | 434.64 | 324.39 | 439.09 | 324.35 | 443.84 | 324.29 | 447.26 | 324.22 |
| 448.31 | 324.21 | 448.94 | 324.21 | 449.8 | 324.22 | 452.6 | 324.22 | 453.93 | 324.21 |
| 456.4 | 324.21 | 457.15 | 324.25 | 457.7 | 324.24 | 458.66 | 324.23 | 459.28 | 324.21 |
| 459.59 | 324.21 | 461.85 | 324.2 | 465.19 | 324.2 | 466.81 | 324.18 | 468 | 324.17 |
| 468.43 | 324.17 | 469.75 | 324.16 | 470.15 | 324.15 | 471.09 | 324.15 | 473.36 | 324.13 |
| 475.01 | 324.11 | 482.48 | 324.11 | 484.38 | 323.89 | 485.69 | 323.72 | 486.13 | 323.64 |
| 486.64 | 323.62 | 487.07 | 323.62 | 487.13 | 323.64 | 487.4 | 323.65 | 487.89 | 323.7 |
| 488.12 | 323.73 | 490.43 | 324.12 | 492 | 324.17 | 493.07 | 324.19 | 493.7 | 324.21 |
| 494.77 | 324.22 | 496.36 | 324.23 | 499.61 | 324.26 | 500.57 | 324.27 | 501.27 | 324.26 |
| 502.09 | 324.26 | 505.24 | 324.21 | 506.34 | 324.2 | 508.89 | 324.18 | 510.66 | 324.18 |
| 511.45 | 324.19 | 512.06 | 324.19 | 513.01 | 324.21 | 516.83 | 324.27 | 518.75 | 324.29 |
| 520.08 | 324.31 | 520.82 | 324.31 | 525.53 | 324.35 | 525.63 | 324.35 | 530.31 | 324.38 |
| 531.64 | 324.39 | 534.96 | 324.38 | 538.5 | 324.38 | 539.57 | 324.36 | 540.47 | 324.34 |
| 541.38 | 324.34 | 541.94 | 324.33 | 543.63 | 324.33 | 544.2 | 324.3 | 544.26 | 324.28 |
| 544.55 | 324.24 | 545.54 | 324.29 | 546.4 | 324.35 | 549.02 | 324.47 | 552.95 | 324.56 |
| 554.49 | 324.6 | 558.04 | 324.63 | 561.19 | 324.65 | 561.73 | 324.66 | 561.93 | 324.65 |
| 562.79 | 324.67 | 564.14 | 324.69 | 565.04 | 324.72 | 565.52 | 324.73 | 567.36 | 324.78 |
| 569.18 | 324.84 | 569.69 | 324.86 | 570.04 | 324.88 | 570.81 | 324.9 | 577.32 | 324.9 |
| 577.86 | 324.89 | 579.1 | 324.88 | 580.2 | 324.86 | 582.03 | 324.86 | 582.52 | 324.87 |
| 583.12 | 324.86 | 583.88 | 324.86 | 587.27 | 324.82 | 588.82 | 324.81 | 589.42 | 324.81 |
| 590.49 | 324.82 | 592.31 | 324.84 | 592.67 | 324.84 | 592.88 | 324.83 | 593.25 | 324.85 |
| 593.8 | 324.86 | 594.15 | 324.88 | 596.06 | 324.89 | 596.35 | 324.9 | 597.3 | 324.92 |
| 597.95 | 324.92 | 599.29 | 324.93 | 599.81 | 324.94 | 602.33 | 324.98 | 603.09 | 324.99 |
| 604.04 | 324.99 | 604.41 | 324.97 | 604.82 | 324.91 | 605.02 | 324.9 | 606.67 | 324.98 |
| 606.78 | 324.99 | 607.2 | 325 | 608.17 | 325.04 | 609.07 | 325.06 | 609.38 | 325.07 |
| 609.89 | 325.1 | 611.61 | 325.11 | 613.01 | 325.14 | 613.62 | 325.14 | 615.71 | 325.16 |
| 616.86 | 325.18 | 618.22 | 325.2 | 619.83 | 325.25 | 621.34 | 325.32 | 621.9 | 325.35 |
| 623.5 | 325.45 | 624.69 | 325.5 | 626.4 | 325.56 | 628.79 | 325.65 | 629.41 | 325.68 |
| 630.43 | 325.71 | 631.35 | 325.75 | 631.66 | 325.77 | 631.97 | 325.78 | 634.81 | 325.86 |
| 635.97 | 325.88 | 637.01 | 325.89 | 638.32 | 325.93 | 644.8 | 326.1 | 646.22 | 326.1 |
| 647.55 | 326.11 | 647.95 | 326.11 | 649.73 | 326.12 | 650.61 | 326.13 | 651.87 | 326.13 |
| 654.87 | 326.15 | 655.23 | 326.15 | 655.5 | 326.16 | 657.44 | 326.16 | 660.7 | 326.14 |

660.97 326.15

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 158.51 | .04 | 570.04 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 158.51 | 570.04 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 680.283*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.86 | 1.17 | 332.82 | 2.74 | 332.69 | 3.52 | 332.64 | 4.09 | 332.59 |
| 4.37 | 332.57 | 6.12 | 332.51 | 6.39 | 332.49 | 7.7 | 332.45 | 7.98 | 332.43 |
| 8.19 | 332.43 | 8.38 | 332.41 | 9.63 | 332.33 | 10.11 | 332.29 | 10.97 | 332.26 |
| 11.6 | 332.23 | 12.15 | 332.23 | 12.82 | 332.24 | 13.76 | 332.17 | 17.16 | 331.83 |
| 19.41 | 331.6 | 19.69 | 331.54 | 21.71 | 331.27 | 22.17 | 331.21 | 22.51 | 331.13 |
| 23.65 | 330.89 | 23.95 | 330.83 | 24.93 | 330.74 | 25.79 | 330.64 | 27.36 | 330.47 |
| 27.74 | 330.41 | 29.23 | 330.39 | 29.96 | 330.43 | 30.97 | 330.5 | 31.29 | 330.55 |
| 32.36 | 330.69 | 33.91 | 330.87 | 34.13 | 330.9 | 34.4 | 330.92 | 34.81 | 330.96 |
| 34.88 | 330.95 | 35.81 | 330.95 | 36.87 | 330.93 | 38.59 | 330.89 | 38.95 | 330.9 |
| 39.38 | 330.93 | 40.06 | 330.81 | 40.29 | 330.75 | 43.83 | 330.45 | 44.31 | 330.43 |
| 44.59 | 330.43 | 45.43 | 330.44 | 46.83 | 330.45 | 47.19 | 330.45 | 50.93 | 330.24 |
| 51.35 | 330.22 | 51.79 | 330.22 | 52.12 | 330.2 | 53.32 | 330.16 | 54.33 | 330.11 |
| 55.65 | 330.05 | 57.41 | 329.96 | 59.27 | 329.92 | 60.51 | 329.9 | 60.81 | 329.89 |
| 62.04 | 329.88 | 62.26 | 329.87 | 63.85 | 329.85 | 64.43 | 329.84 | 67.65 | 329.83 |
| 69.77 | 329.83 | 70.64 | 329.86 | 71.24 | 329.9 | 71.65 | 329.92 | 73.03 | 329.96 |
| 73.62 | 329.97 | 74.25 | 329.99 | 75.22 | 329.97 | 76.44 | 329.96 | 76.49 | 329.9 |
| 77.08 | 329.88 | 77.27 | 329.86 | 78.23 | 329.79 | 79.27 | 329.72 | 79.72 | 329.72 |
| 80.15 | 329.71 | 81.82 | 329.83 | 82.47 | 329.84 | 83.34 | 329.8 | 84.1 | 329.78 |
| 87.21 | 329.63 | 88.67 | 329.54 | 90.25 | 329.43 | 90.72 | 329.4 | 91.09 | 329.37 |
| 93.09 | 329.26 | 95.57 | 329.12 | 98.68 | 328.94 | 99.7 | 328.88 | 101 | 328.82 |
| 102.8 | 328.76 | 103.27 | 328.75 | 105.22 | 328.69 | 106.04 | 328.66 | 106.85 | 328.64 |
| 107.17 | 328.64 | 107.65 | 328.63 | 108.04 | 328.63 | 108.48 | 328.61 | 109.13 | 328.6 |
| 110.41 | 328.57 | 112.73 | 328.5 | 113.8 | 328.47 | 114.35 | 328.46 | 115.14 | 328.44 |
| 116.09 | 328.42 | 116.83 | 328.4 | 117.38 | 328.38 | 119.71 | 328.31 | 123.77 | 328.18 |
| 125.14 | 328.11 | 125.97 | 328.07 | 128.17 | 327.95 | 129.22 | 327.92 | 132.53 | 327.84 |
| 132.91 | 327.83 | 134.4 | 327.8 | 135.03 | 327.8 | 139.79 | 327.88 | 141.35 | 327.9 |
| 141.42 | 327.91 | 144.51 | 328.01 | 145.31 | 328.01 | 148.59 | 328.13 | 149.05 | 328.11 |
| 151.16 | 328 | 152.37 | 327.9 | 152.89 | 327.9 | 153.06 | 327.89 | 153.82 | 327.81 |
| 154.56 | 327.74 | 155.1 | 327.68 | 157.56 | 327.37 | 160.55 | 326.99 | 161.27 | 326.9 |
| 162.66 | 326.7 | 165.37 | 326.49 | 168.77 | 326.27 | 172.26 | 326.02 | 173.31 | 325.94 |
| 173.97 | 325.91 | 175.74 | 325.79 | 181.36 | 325.47 | 183.89 | 325.33 | 183.92 | 325.32 |
| 186.54 | 325.14 | 187.5 | 325.07 | 189.43 | 324.91 | 189.83 | 324.89 | 191.5 | 324.78 |
| 193.93 | 324.68 | 195.41 | 324.58 | 195.47 | 324.57 | 199.66 | 324.34 | 202.67 | 324.17 |
| 203.85 | 324.15 | 204.18 | 324.13 | 208.91 | 323.94 | 211.19 | 323.93 | 212.15 | 323.91 |
| 212.48 | 323.9 | 214.81 | 323.79 | 216.05 | 323.77 | 219.14 | 323.64 | 220.25 | 323.63 |
| 221.59 | 323.66 | 221.91 | 323.66 | 222.1 | 323.65 | 222.36 | 323.65 | 223.57 | 323.6 |
| 225.04 | 323.55 | 225.18 | 323.54 | 225.75 | 323.55 | 226.56 | 323.55 | 227.98 | 323.51 |
| 228.6 | 323.49 | 233.24 | 323.37 | 237.64 | 323.24 | 243.26 | 323.08 | 247.01 | 322.98 |
| 250.44 | 322.88 | 255.34 | 322.8 | 258.35 | 322.76 | 258.99 | 322.75 | 259.57 | 322.75 |
| 260.07 | 322.74 | 260.97 | 322.73 | 261.53 | 322.72 | 261.89 | 322.67 | 262.19 | 322.59 |
| 262.58 | 322.59 | 262.93 | 322.58 | 263.34 | 322.56 | 264.88 | 322.53 | 266.13 | 322.45 |
| 266.18 | 322.46 | 266.19 | 322.52 | 266.4 | 322.56 | 266.74 | 322.6 | 267.5 | 322.66 |
| 267.69 | 322.66 | 268.08 | 322.68 | 268.75 | 322.66 | 268.82 | 322.63 | 269.64 | 322.62 |
| 270.45 | 322.62 | 270.54 | 322.63 | 271.1 | 322.66 | 271.44 | 322.67 | 271.97 | 322.7 |
| 272.98 | 322.74 | 273.37 | 322.76 | 274.01 | 322.76 | 274.38 | 322.73 | 275.5 | 322.71 |
| 276.5 | 322.7 | 278.27 | 322.76 | 280.67 | 322.86 | 282.4 | 322.94 | 284.86 | 323.04 |
| 284.87 | 323.06 | 285.24 | 323.11 | 286.04 | 323.12 | 290.28 | 323.15 | 291.22 | 323.15 |
| 293.73 | 323.17 | 295.31 | 323.17 | 297.41 | 323.15 | 297.99 | 323.14 | 301.45 | 323.04 |
| 301.75 | 323.04 | 302.31 | 323.03 | 303.3 | 323.05 | 305.25 | 323.08 | 306.49 | 323.11 |
| 308.39 | 323.15 | 308.54 | 323.16 | 310.24 | 323.2 | 312.01 | 323.26 | 312.5 | 323.27 |
| 312.99 | 323.29 | 313.26 | 323.29 | 316.19 | 323.39 | 318.62 | 323.45 | 318.75 | 323.45 |
| 319.76 | 323.48 | 323.45 | 323.54 | 324 | 323.54 | 326.31 | 323.49 | 327.83 | 323.48 |
| 328.69 | 323.49 | 332.19 | 323.54 | 333.12 | 323.54 | 333.84 | 323.55 | 336.88 | 323.57 |
| 341.47 | 323.61 | 344.47 | 323.65 | 345.31 | 323.67 | 347.67 | 323.7 | 349.59 | 323.73 |
| 350.46 | 323.74 | 352.74 | 323.78 | 353.54 | 323.79 | 356.25 | 323.84 | 356.84 | 323.84 |
| 358.88 | 323.87 | 359.04 | 323.87 | 359.25 | 323.84 | 361.31 | 323.84 | 362.91 | 323.85 |
| 365.78 | 323.82 | 367.95 | 323.89 | 371.62 | 324.02 | 373.3 | 324.07 | 374.63 | 324.12 |
| 375.7 | 324.17 | 376.41 | 324.21 | 377.34 | 324.25 | 379.37 | 324.32 | 380.42 | 324.36 |
| 381.48 | 324.39 | 382.6 | 324.41 | 384.98 | 324.45 | 385.17 | 324.46 | 386.08 | 324.47 |
| 388.11 | 324.52 | 389.38 | 324.54 | 390.24 | 324.56 | 390.59 | 324.58 | 391.19 | 324.59 |
| 391.54 | 324.61 | 392.64 | 324.6 | 393.2 | 324.6 | 394.1 | 324.62 | 395.6 | 324.62 |
| 397.22 | 324.61 | 397.94 | 324.58 | 399.13 | 324.57 | 400.01 | 324.54 | 401.01 | 324.5 |
| 401.85 | 324.47 | 402.23 | 324.46 | 403.39 | 324.41 | 405.87 | 324.31 | 408.55 | 324.2 |
| 408.68 | 324.19 | 409.39 | 324.16 | 409.54 | 324.15 | 410.12 | 324.07 | 410.93 | 323.95 |
| 411.36 | 323.89 | 411.89 | 323.81 | 412.02 | 323.78 | 412.16 | 323.66 | 413.24 | 323.65 |
| 414.45 | 323.63 | 414.95 | 323.63 | 415.97 | 323.68 | 416.11 | 323.68 | 416.82 | 323.71 |
| 417.73 | 323.73 | 419.53 | 323.76 | 420.29 | 323.78 | 420.46 | 323.79 | 421.66 | 323.82 |
| 424.97 | 323.98 | 425.86 | 324.01 | 426.73 | 324.03 | 427.41 | 324.06 | 427.49 | 324.07 |
| 428.21 | 324.09 | 429.44 | 324.15 | 430.8 | 324.14 | 433.07 | 324.12 | 433.53 | 324.11 |
| 438.16 | 324.06 | 443.12 | 324.01 | 446.68 | 323.94 | 447.77 | 323.93 | 448.22 | 323.93 |
| 448.43 | 323.94 | 455.92 | 323.94 | 456.2 | 323.93 | 457.13 | 323.98 | 457.56 | 323.96 |
| 458.56 | 323.95 | 459.2 | 323.94 | 459.53 | 323.93 | 462.4 | 323.93 | 464.29 | 323.92 |
| 465.37 | 323.92 | 467.05 | 323.91 | 468.29 | 323.9 | 468.74 | 323.9 | 470.12 | 323.89 |
| 470.54 | 323.89 | 471.51 | 323.88 | 473.88 | 323.86 | 475.6 | 323.85 | 476.71 | 323.84 |
| 483.37 | 323.84 | 485.36 | 323.6 | 486.72 | 323.43 | 487.14 | 323.35 | 487.18 | 323.33 |
| 487.84 | 323.32 | 488.16 | 323.31 | 488.23 | 323.33 | 489.02 | 323.4 | 489.26 | 323.43 |
| 491.67 | 323.85 | 493.3 | 323.9 | 494.42 | 323.93 | 495.07 | 323.95 | 496.19 | 323.96 |
| 497.84 | 323.97 | 501.23 | 324 | 502.96 | 324 | 503.81 | 323.99 | 507.1 | 323.94 |
| 508.22 | 323.92 | 508.24 | 323.93 | 510.89 | 323.9 | 512.75 | 323.9 | 513.57 | 323.91 |
| 514.21 | 323.91 | 515.19 | 323.93 | 519.17 | 323.99 | 521.17 | 324.01 | 522.55 | 324.02 |
| 523.33 | 324.03 | 528.24 | 324.06 | 528.34 | 324.06 | 533.22 | 324.09 | 541.46 | 324.09 |
| 541.75 | 324.08 | 542.87 | 324.07 | 543.8 | 324.05 | 545.33 | 324.05 | 545.6 | 324.04 |
| 547.09 | 324.04 | 547.69 | 324 | 547.76 | 323.98 | 548.06 | 323.94 | 549.09 | 323.99 |
| 549.88 | 324.04 | 549.99 | 324.06 | 552.71 | 324.18 | 556.8 | 324.28 | 557.66 | 324.29 |
| 558.42 | 324.32 | 562.12 | 324.35 | 565.4 | 324.36 | 566.16 | 324.36 | 567.06 | 324.37 |
| 568.46 | 324.39 | 569.41 | 324.42 | 569.91 | 324.43 | 571.83 | 324.48 | 573.72 | 324.54 |
| 574.62 | 324.59 | 575.34 | 324.61 | 577.64 | 324.61 | 578.12 | 324.6 | 581.12 | 324.6 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 581.45 | 324.61 | 584.15 | 324.56 | 587.61 | 324.56 | 590.79 | 324.52 | 592.25 | 324.51 |
| 593.82 | 324.51 | 595.53 | 324.53 | 596.17 | 324.53 | 596.92 | 324.56 | 597.44 | 324.57 |
| 599.04 | 324.59 | 599.32 | 324.59 | 600.21 | 324.61 | 600.82 | 324.61 | 602.08 | 324.62 |
| 602.56 | 324.62 | 604.93 | 324.66 | 605.64 | 324.67 | 606.53 | 324.67 | 606.88 | 324.65 |
| 607.27 | 324.6 | 607.46 | 324.6 | 609.01 | 324.66 | 609.1 | 324.67 | 609.5 | 324.68 |
| 610.41 | 324.71 | 610.75 | 324.73 | 611.25 | 324.74 | 612.03 | 324.77 | 613.64 | 324.78 |
| 615.53 | 324.81 | 618.57 | 324.84 | 619.85 | 324.86 | 620.23 | 324.86 | 621.36 | 324.9 |
| 622.77 | 324.96 | 623.31 | 324.99 | 625.48 | 325.12 | 627.52 | 325.18 | 629.77 | 325.27 |
| 631.31 | 325.32 | 632.17 | 325.35 | 632.46 | 325.37 | 632.76 | 325.38 | 635.42 | 325.45 |
| 635.92 | 325.45 | 636.51 | 325.47 | 637.49 | 325.47 | 638.72 | 325.5 | 644.8 | 325.66 |
| 647.38 | 325.66 | 647.76 | 325.67 | 649.26 | 325.68 | 650.25 | 325.68 | 651.44 | 325.69 |
| 654.25 | 325.71 | 654.58 | 325.71 | 654.84 | 325.72 | 656.66 | 325.72 | 659.72 | 325.7 |
| 659.98 | 325.7 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 145.31 | .04 | 574.62 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 145.31 | 574.62 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 661.233*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.51 | 1.07 | 332.47 | 2.49 | 332.35 | 3.2 | 332.3 | 3.71 | 332.25 |
| 3.98 | 332.24 | 5.56 | 332.16 | 7.25 | 332.09 | 8.16 | 332.02 | 8.87 | 331.96 |
| 9.19 | 331.94 | 9.97 | 331.9 | 10.54 | 331.88 | 11.04 | 331.87 | 11.66 | 331.87 |
| 12.51 | 331.8 | 15.6 | 331.46 | 17.65 | 331.23 | 17.91 | 331.18 | 19.74 | 330.94 |
| 20.15 | 330.89 | 20.47 | 330.83 | 21.75 | 330.57 | 22.67 | 330.49 | 23.45 | 330.41 |
| 24.88 | 330.26 | 25.22 | 330.21 | 25.96 | 330.2 | 26.58 | 330.2 | 27.24 | 330.24 |
| 28.16 | 330.3 | 28.45 | 330.35 | 29.06 | 330.43 | 29.42 | 330.47 | 30.83 | 330.64 |
| 31.54 | 330.7 | 31.6 | 330.71 | 31.95 | 330.71 | 32.56 | 330.72 | 33.52 | 330.7 |
| 35.08 | 330.68 | 35.41 | 330.68 | 35.8 | 330.71 | 36.42 | 330.61 | 36.63 | 330.56 |
| 37.7 | 330.48 | 39.85 | 330.33 | 40.29 | 330.31 | 40.54 | 330.31 | 42.58 | 330.34 |
| 42.9 | 330.34 | 46.3 | 330.18 | 46.68 | 330.16 | 47.21 | 330.16 | 47.69 | 330.14 |
| 48.47 | 330.12 | 49.4 | 330.08 | 50.59 | 330.03 | 52.2 | 329.96 | 55.02 | 329.91 |
| 55.29 | 329.91 | 56.6 | 329.9 | 58.05 | 329.88 | 62.11 | 329.88 | 62.5 | 329.89 |
| 63.43 | 329.88 | 64.23 | 329.91 | 64.77 | 329.95 | 65.14 | 329.97 | 66.4 | 330.01 |
| 66.93 | 330.02 | 67.51 | 330.04 | 69.5 | 330.02 | 69.54 | 329.97 | 70.07 | 329.96 |
| 70.25 | 329.94 | 71.12 | 329.87 | 72.07 | 329.82 | 72.86 | 329.8 | 74 | 329.88 |
| 74.38 | 329.91 | 74.98 | 329.91 | 75.37 | 329.9 | 75.77 | 329.88 | 76.46 | 329.86 |
| 79.29 | 329.72 | 80.61 | 329.64 | 81.79 | 329.56 | 82.48 | 329.51 | 82.82 | 329.48 |
| 84.63 | 329.37 | 86.41 | 329.27 | 89.71 | 329.06 | 90.15 | 329.03 | 90.65 | 329.01 |
| 91.22 | 328.97 | 91.82 | 328.95 | 92.66 | 328.91 | 93.46 | 328.88 | 93.89 | 328.86 |
| 95.66 | 328.8 | 97.14 | 328.74 | 97.43 | 328.74 | 98.63 | 328.71 | 99.22 | 328.69 |
| 100.01 | 328.67 | 100.38 | 328.65 | 102.49 | 328.58 | 103.46 | 328.55 | 103.96 | 328.53 |
| 104.68 | 328.51 | 105.09 | 328.49 | 106.22 | 328.46 | 106.71 | 328.44 | 108.84 | 328.36 |
| 112.53 | 328.22 | 112.87 | 328.2 | 114.53 | 328.09 | 116.52 | 327.96 | 117.48 | 327.93 |
| 120.49 | 327.83 | 122.19 | 327.78 | 122.76 | 327.78 | 124.93 | 327.82 | 127.09 | 327.87 |
| 128.51 | 327.89 | 128.57 | 327.9 | 129.69 | 327.94 | 131.38 | 328.01 | 132.11 | 328.01 |
| 135.54 | 328.14 | 136.01 | 328.12 | 138.22 | 328 | 139.48 | 327.89 | 140.02 | 327.89 |
| 140.2 | 327.88 | 141.77 | 327.72 | 142.33 | 327.65 | 144.9 | 327.32 | 148.02 | 326.91 |
| 148.77 | 326.81 | 150.23 | 326.6 | 153.05 | 326.39 | 156.61 | 326.17 | 159.66 | 325.96 |
| 160.25 | 325.91 | 161.34 | 325.84 | 162.03 | 325.8 | 163.89 | 325.68 | 169.75 | 325.34 |
| 172.4 | 325.19 | 172.42 | 325.19 | 175.16 | 324.99 | 176.16 | 324.92 | 178.18 | 324.75 |
| 178.59 | 324.73 | 180.34 | 324.61 | 182.13 | 324.54 | 182.88 | 324.5 | 184.42 | 324.4 |
| 184.48 | 324.4 | 188.86 | 324.15 | 192.01 | 323.96 | 193.24 | 323.94 | 193.58 | 323.93 |
| 198.52 | 323.72 | 200.91 | 323.71 | 201.91 | 323.69 | 202.25 | 323.68 | 202.66 | 323.66 |
| 204.69 | 323.58 | 205.98 | 323.55 | 209.2 | 323.42 | 210.36 | 323.41 | 211.76 | 323.43 |
| 212.3 | 323.42 | 215.37 | 323.3 | 215.51 | 323.29 | 216.1 | 323.3 | 216.95 | 323.3 |
| 217.25 | 323.29 | 217.64 | 323.29 | 218.44 | 323.26 | 219.08 | 323.24 | 223.93 | 323.11 |
| 228.52 | 322.98 | 234.39 | 322.8 | 237.89 | 322.71 | 238.31 | 322.69 | 241.89 | 322.6 |
| 245.11 | 322.54 | 247.01 | 322.52 | 250.15 | 322.48 | 251.95 | 322.45 | 252.88 | 322.44 |
| 253.47 | 322.43 | 253.84 | 322.38 | 254.16 | 322.29 | 254.8 | 322.29 | 254.93 | 322.28 |
| 255.36 | 322.27 | 256.39 | 322.24 | 257.26 | 322.21 | 258.03 | 322.15 | 258.27 | 322.14 |
| 258.32 | 322.15 | 258.33 | 322.21 | 258.55 | 322.26 | 258.75 | 322.28 | 258.91 | 322.31 |
| 259.9 | 322.37 | 260.3 | 322.38 | 260.76 | 322.38 | 260.99 | 322.36 | 261.07 | 322.33 |
| 261.93 | 322.33 | 262.24 | 322.32 | 262.76 | 322.32 | 262.86 | 322.33 | 264.35 | 322.41 |
| 265.4 | 322.45 | 265.8 | 322.47 | 266.47 | 322.47 | 266.86 | 322.43 | 268.02 | 322.41 |
| 269.06 | 322.4 | 270.9 | 322.47 | 273.4 | 322.57 | 275.19 | 322.65 | 277.76 | 322.75 |
| 277.76 | 322.77 | 278.15 | 322.82 | 278.98 | 322.84 | 280.39 | 322.84 | 283.39 | 322.85 |
| 284.38 | 322.86 | 286.98 | 322.87 | 287.5 | 322.87 | 288.63 | 322.86 | 289.8 | 322.86 |
| 290.81 | 322.85 | 291.42 | 322.83 | 295.33 | 322.71 | 295.91 | 322.71 | 296.95 | 322.72 |
| 298.97 | 322.75 | 300.26 | 322.78 | 302.24 | 322.82 | 302.4 | 322.83 | 304.16 | 322.87 |
| 306 | 322.93 | 306.51 | 322.94 | 307.31 | 322.97 | 310.35 | 323.07 | 312.88 | 323.13 |
| 313.02 | 323.13 | 314.06 | 323.16 | 316.58 | 323.21 | 317.9 | 323.23 | 318.47 | 323.23 |
| 318.87 | 323.22 | 319 | 323.21 | 319.87 | 323.19 | 320.88 | 323.18 | 322.46 | 323.16 |
| 323.35 | 323.18 | 327 | 323.23 | 327.39 | 323.24 | 327.97 | 323.24 | 328.71 | 323.25 |
| 331.88 | 323.28 | 336.65 | 323.32 | 339.77 | 323.37 | 340.64 | 323.39 | 343.1 | 323.43 |
| 345.09 | 323.46 | 346 | 323.47 | 348.38 | 323.51 | 349.2 | 323.52 | 352.03 | 323.57 |
| 352.39 | 323.57 | 352.64 | 323.58 | 354.76 | 323.61 | 354.93 | 323.61 | 355.14 | 323.58 |
| 357.28 | 323.57 | 358.95 | 323.58 | 361.94 | 323.55 | 364.19 | 323.62 | 368.01 | 323.76 |
| 369.77 | 323.81 | 371.14 | 323.86 | 372.26 | 323.91 | 372.99 | 323.95 | 373.97 | 324 |
| 376.08 | 324.07 | 377.17 | 324.1 | 378.28 | 324.14 | 379.44 | 324.16 | 381.91 | 324.2 |
| 382.11 | 324.21 | 383.06 | 324.22 | 385.17 | 324.27 | 386.49 | 324.29 | 387.38 | 324.31 |
| 387.75 | 324.33 | 388.01 | 324.33 | 388.37 | 324.34 | 388.74 | 324.36 | 388.92 | 324.35 |
| 390.46 | 324.35 | 390.87 | 324.36 | 392.96 | 324.36 | 394.64 | 324.35 | 395.4 | 324.32 |
| 396.63 | 324.31 | 397.54 | 324.27 | 398.59 | 324.23 | 399.46 | 324.19 | 399.86 | 324.18 |
| 401.07 | 324.13 | 403.65 | 324.02 | 405.16 | 323.95 | 406.43 | 323.9 | 407.46 | 323.84 |
| 408.06 | 323.75 | 409.21 | 323.59 | 409.27 | 323.57 | 409.91 | 323.48 | 410.04 | 323.45 |
| 410.19 | 323.32 | 411.19 | 323.31 | 411.32 | 323.3 | 412.58 | 323.28 | 413.09 | 323.28 |
| 413.33 | 323.3 | 414.15 | 323.33 | 414.39 | 323.35 | 415.03 | 323.37 | 415.54 | 323.39 |
| 417.86 | 323.44 | 418.65 | 323.46 | 418.82 | 323.47 | 420.07 | 323.51 | 422.42 | 323.62 |
| 423.52 | 323.68 | 424.44 | 323.7 | 424.5 | 323.71 | 425.35 | 323.74 | 426.88 | 323.8 |
| 428.17 | 323.86 | 429.58 | 323.85 | 431.94 | 323.84 | 432.42 | 323.83 | 437.24 | 323.78 |
| 442.4 | 323.73 | 446.11 | 323.66 | 456.01 | 323.66 | 456.97 | 323.71 | 457.42 | 323.69 |
| 458.46 | 323.68 | 459.47 | 323.65 | 465.54 | 323.65 | 467.29 | 323.64 | 468.58 | 323.63 |
| 469.04 | 323.63 | 470.48 | 323.62 | 470.92 | 323.62 | 471.93 | 323.61 | 474.39 | 323.6 |
| 476.18 | 323.59 | 477.34 | 323.58 | 484.27 | 323.58 | 486.34 | 323.32 | 487.75 | 323.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 488.19 | 323.05 | 488.23 | 323.02 | 488.92 | 323.01 | 489.26 | 323 | 489.32 | 323.02 |
| 489.69 | 323.05 | 490.39 | 323.13 | 492.9 | 323.59 | 494.6 | 323.64 | 495.76 | 323.67 |
| 496.44 | 323.69 | 497.6 | 323.7 | 499.32 | 323.71 | 502.85 | 323.74 | 504.65 | 323.74 |
| 505.53 | 323.73 | 510.12 | 323.65 | 512.9 | 323.63 | 513.32 | 323.62 | 515.68 | 323.62 |
| 516.35 | 323.63 | 517.37 | 323.64 | 518.77 | 323.67 | 521.52 | 323.7 | 523.59 | 323.72 |
| 525.03 | 323.73 | 525.84 | 323.74 | 530.94 | 323.77 | 531.05 | 323.77 | 536.13 | 323.8 |
| 541.17 | 323.8 | 544.7 | 323.79 | 545 | 323.79 | 546.17 | 323.77 | 547.14 | 323.76 |
| 549.01 | 323.76 | 549.56 | 323.75 | 550.56 | 323.75 | 551.18 | 323.71 | 551.25 | 323.68 |
| 551.57 | 323.64 | 552.64 | 323.69 | 553.57 | 323.76 | 555.89 | 323.87 | 556.4 | 323.89 |
| 562.34 | 324.03 | 566.19 | 324.06 | 569.6 | 324.06 | 570.19 | 324.07 | 570.4 | 324.06 |
| 571.34 | 324.07 | 572.79 | 324.1 | 573.15 | 324.1 | 573.78 | 324.12 | 574.3 | 324.13 |
| 578.26 | 324.25 | 579.2 | 324.3 | 579.87 | 324.32 | 580.71 | 324.32 | 581.77 | 324.31 |
| 585.58 | 324.31 | 588.11 | 324.26 | 590.14 | 324.26 | 590.67 | 324.25 | 591.34 | 324.25 |
| 594.31 | 324.22 | 595.67 | 324.21 | 597.14 | 324.21 | 598.74 | 324.23 | 599.34 | 324.23 |
| 599.56 | 324.24 | 600.04 | 324.25 | 600.53 | 324.27 | 602.28 | 324.28 | 603.68 | 324.3 |
| 604.86 | 324.3 | 605.32 | 324.31 | 608.2 | 324.35 | 609.23 | 324.35 | 609.36 | 324.34 |
| 609.72 | 324.29 | 609.89 | 324.29 | 611.8 | 324.37 | 613.44 | 324.41 | 614.16 | 324.44 |
| 615.68 | 324.44 | 616.9 | 324.47 | 617.43 | 324.47 | 619.27 | 324.49 | 620.28 | 324.49 |
| 621.48 | 324.51 | 621.71 | 324.52 | 622.05 | 324.52 | 622.88 | 324.55 | 624.21 | 324.61 |
| 624.71 | 324.63 | 626.1 | 324.72 | 627.15 | 324.77 | 627.41 | 324.77 | 628.65 | 324.81 |
| 629.12 | 324.82 | 631.29 | 324.9 | 632.19 | 324.92 | 633.54 | 324.97 | 636.03 | 325.03 |
| 637.05 | 325.05 | 637.96 | 325.06 | 639.11 | 325.08 | 644.8 | 325.21 | 646.05 | 325.21 |
| 647.21 | 325.22 | 647.56 | 325.22 | 649.12 | 325.23 | 650.79 | 325.25 | 651 | 325.25 |
| 653.63 | 325.27 | 653.94 | 325.27 | 654.19 | 325.28 | 655.89 | 325.28 | 658.74 | 325.26 |
| 658.99 | 325.26 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 132.11 | .04 | 579.2 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 132.11 | 579.2 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 642.182*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.17 | .96 | 332.12 | 2.24 | 332 | 2.49 | 331.99 | 2.88 | 331.96 |
| 3.34 | 331.91 | 3.58 | 331.9 | 5.01 | 331.82 | 6.3 | 331.76 | 6.75 | 331.73 |
| 6.86 | 331.71 | 7.35 | 331.67 | 7.98 | 331.61 | 8.27 | 331.59 | 9.49 | 331.52 |
| 10.49 | 331.5 | 11.26 | 331.44 | 14.04 | 331.09 | 15.89 | 330.86 | 16.12 | 330.82 |
| 17.77 | 330.62 | 18.14 | 330.57 | 19.57 | 330.31 | 20.4 | 330.24 | 21.11 | 330.17 |
| 22.39 | 330.05 | 22.7 | 330.01 | 23.92 | 330.01 | 24.52 | 330.04 | 25.35 | 330.1 |
| 25.61 | 330.14 | 26.15 | 330.21 | 27.93 | 330.42 | 28.15 | 330.43 | 28.49 | 330.47 |
| 29.31 | 330.48 | 30.17 | 330.47 | 31.58 | 330.46 | 32.22 | 330.49 | 32.78 | 330.41 |
| 32.97 | 330.37 | 33.93 | 330.31 | 35.86 | 330.2 | 36.49 | 330.19 | 38.32 | 330.22 |
| 38.62 | 330.23 | 41.67 | 330.11 | 42.02 | 330.1 | 42.65 | 330.1 | 42.92 | 330.09 |
| 43.63 | 330.08 | 43.99 | 330.06 | 44.46 | 330.05 | 45.54 | 330.01 | 46.98 | 329.96 |
| 48.5 | 329.94 | 50.77 | 329.92 | 52.25 | 329.92 | 52.73 | 329.91 | 55.36 | 329.93 |
| 55.78 | 329.94 | 57.09 | 329.94 | 58.09 | 329.98 | 58.29 | 330.01 | 59.22 | 330.04 |
| 60.24 | 330.08 | 60.76 | 330.09 | 62.55 | 330.09 | 62.59 | 330.05 | 63.07 | 330.04 |
| 63.23 | 330.02 | 64.02 | 329.96 | 64.87 | 329.91 | 65.24 | 329.91 | 65.58 | 329.9 |
| 66.6 | 329.97 | 67.49 | 329.99 | 68.2 | 329.96 | 68.82 | 329.94 | 71.37 | 329.82 |
| 72.56 | 329.75 | 74.24 | 329.62 | 76.18 | 329.49 | 77.77 | 329.39 | 80.75 | 329.18 |
| 81.14 | 329.16 | 82.11 | 329.1 | 82.33 | 329.08 | 82.64 | 329.07 | 84.12 | 328.99 |
| 84.5 | 328.98 | 86.1 | 328.91 | 86.56 | 328.88 | 87.7 | 328.84 | 88.41 | 328.82 |
| 88.77 | 328.8 | 90.02 | 328.75 | 90.35 | 328.74 | 92.25 | 328.66 | 93.57 | 328.6 |
| 94.22 | 328.58 | 94.59 | 328.56 | 95 | 328.55 | 97.96 | 328.41 | 101.28 | 328.25 |
| 101.59 | 328.23 | 102.4 | 328.16 | 103.08 | 328.11 | 104.88 | 327.97 | 105.74 | 327.93 |
| 108.45 | 327.81 | 109.98 | 327.76 | 110.49 | 327.76 | 110.99 | 327.77 | 112.44 | 327.81 |
| 114.39 | 327.85 | 115.67 | 327.88 | 115.72 | 327.89 | 116.73 | 327.93 | 118.25 | 328.01 |
| 118.91 | 328.01 | 122.48 | 328.14 | 122.98 | 328.13 | 125.28 | 328 | 126.59 | 327.89 |
| 126.8 | 327.88 | 127.16 | 327.88 | 127.34 | 327.87 | 128.17 | 327.78 | 128.98 | 327.7 |
| 129.56 | 327.63 | 132.24 | 327.26 | 135.5 | 326.82 | 136.28 | 326.72 | 137.8 | 326.5 |
| 140.74 | 326.28 | 141.91 | 326.21 | 144.45 | 326.07 | 145.81 | 325.97 | 147.63 | 325.86 |
| 148.24 | 325.81 | 149.38 | 325.74 | 150.1 | 325.7 | 152.03 | 325.57 | 158.15 | 325.21 |
| 160.9 | 325.05 | 160.93 | 325.05 | 163.78 | 324.84 | 164.83 | 324.77 | 166.93 | 324.58 |
| 167.36 | 324.57 | 169.18 | 324.44 | 171.04 | 324.37 | 171.82 | 324.33 | 173.44 | 324.22 |
| 173.5 | 324.22 | 178.07 | 323.96 | 181.34 | 323.76 | 182.63 | 323.74 | 182.99 | 323.72 |
| 188.13 | 323.5 | 190.62 | 323.49 | 191.66 | 323.48 | 192.45 | 323.45 | 194.56 | 323.36 |
| 195.91 | 323.33 | 199.27 | 323.2 | 200.48 | 323.18 | 201.94 | 323.19 | 202.29 | 323.19 |
| 204.09 | 323.12 | 205.69 | 323.05 | 205.84 | 323.04 | 206.46 | 323.05 | 207.34 | 323.05 |
| 207.66 | 323.04 | 208.06 | 323.04 | 208.89 | 323.01 | 209.57 | 322.99 | 214.62 | 322.85 |
| 219.4 | 322.71 | 225.52 | 322.52 | 226.34 | 322.5 | 229.17 | 322.42 | 229.61 | 322.41 |
| 233.34 | 322.31 | 236.7 | 322.25 | 238.67 | 322.23 | 241.94 | 322.19 | 242.64 | 322.18 |
| 243.27 | 322.18 | 245.41 | 322.14 | 245.8 | 322.09 | 246.13 | 322 | 246.55 | 322 |
| 246.93 | 321.98 | 248.45 | 321.94 | 249.36 | 321.91 | 250.3 | 321.84 | 250.47 | 321.84 |
| 250.48 | 321.91 | 250.7 | 321.96 | 251.08 | 322.01 | 251.89 | 322.07 | 252.1 | 322.07 |
| 252.52 | 322.09 | 253.24 | 322.07 | 253.32 | 322.04 | 253.59 | 322.03 | 255.18 | 322.03 |
| 256.15 | 322.09 | 256.73 | 322.11 | 258.24 | 322.18 | 258.93 | 322.18 | 259.33 | 322.14 |
| 260.54 | 322.12 | 261.42 | 322.1 | 261.62 | 322.1 | 263.53 | 322.17 | 266.13 | 322.27 |
| 267.99 | 322.35 | 270.65 | 322.46 | 270.66 | 322.48 | 271.07 | 322.54 | 271.93 | 322.55 |
| 273.39 | 322.55 | 276.51 | 322.56 | 277.53 | 322.56 | 280.24 | 322.57 | 280.78 | 322.57 |
| 284.21 | 322.54 | 288.91 | 322.39 | 289.52 | 322.38 | 290.59 | 322.39 | 292.69 | 322.42 |
| 294.02 | 322.45 | 296.08 | 322.49 | 296.25 | 322.5 | 298.08 | 322.54 | 299.99 | 322.6 |
| 300.52 | 322.61 | 301.35 | 322.64 | 304.52 | 322.74 | 307.14 | 322.81 | 307.28 | 322.81 |
| 308.37 | 322.84 | 310.98 | 322.89 | 312.36 | 322.92 | 312.95 | 322.92 | 313.49 | 322.9 |
| 315.45 | 322.86 | 317.09 | 322.85 | 318.02 | 322.87 | 321.8 | 322.93 | 322.21 | 322.93 |
| 323.58 | 322.95 | 326.87 | 322.98 | 331.83 | 323.04 | 335.07 | 323.1 | 335.97 | 323.11 |
| 338.53 | 323.15 | 340.6 | 323.19 | 341.54 | 323.2 | 344.01 | 323.24 | 344.87 | 323.26 |
| 347.8 | 323.31 | 348.18 | 323.31 | 348.44 | 323.32 | 350.64 | 323.35 | 350.81 | 323.35 |
| 351.04 | 323.32 | 353.26 | 323.31 | 354.99 | 323.32 | 358.1 | 323.28 | 360.44 | 323.35 |
| 364.41 | 323.49 | 366.23 | 323.54 | 367.66 | 323.6 | 368.81 | 323.66 | 369.58 | 323.69 |
| 370.59 | 323.74 | 372.79 | 323.82 | 373.91 | 323.85 | 375.07 | 323.89 | 376.27 | 323.91 |
| 378.84 | 323.95 | 379.05 | 323.96 | 380.03 | 323.97 | 382.23 | 324.02 | 383.6 | 324.04 |
| 384.53 | 324.06 | 384.9 | 324.08 | 385.55 | 324.09 | 385.93 | 324.11 | 386.13 | 324.1 |
| 387.12 | 324.09 | 387.73 | 324.09 | 388.7 | 324.11 | 389.35 | 324.1 | 390.32 | 324.1 |
| 392.07 | 324.09 | 392.85 | 324.06 | 394.13 | 324.04 | 395.08 | 324 | 396.17 | 323.96 |
| 397.07 | 323.92 | 398.75 | 323.84 | 402.99 | 323.65 | 404.46 | 323.58 | 404.99 | 323.56 |
| 405.38 | 323.54 | 406.89 | 323.3 | 407.33 | 323.24 | 407.47 | 323.21 | 407.93 | 323.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 408.06 | 323.12 | 408.19 | 323 | 408.27 | 322.98 | 409.25 | 322.96 | 410.7 | 322.94 |
| 411.23 | 322.94 | 411.85 | 322.97 | 412.58 | 323 | 413 | 323.03 | 413.25 | 323.03 |
| 413.77 | 323.05 | 414.23 | 323.06 | 416.18 | 323.11 | 418.48 | 323.2 | 420.93 | 323.32 |
| 422.06 | 323.37 | 423.03 | 323.4 | 423.09 | 323.41 | 423.97 | 323.44 | 424.7 | 323.47 |
| 424.78 | 323.48 | 425.56 | 323.51 | 426.89 | 323.58 | 428.36 | 323.57 | 430.81 | 323.55 |
| 431.31 | 323.54 | 436.32 | 323.5 | 441.67 | 323.45 | 443.31 | 323.42 | 445.53 | 323.39 |
| 446.7 | 323.38 | 447.42 | 323.38 | 448.38 | 323.39 | 451.28 | 323.39 | 451.53 | 323.38 |
| 455.81 | 323.38 | 456.66 | 323.43 | 456.81 | 323.43 | 458.36 | 323.4 | 459.05 | 323.39 |
| 459.41 | 323.38 | 462.51 | 323.38 | 464.55 | 323.37 | 465.71 | 323.37 | 467.53 | 323.36 |
| 469.35 | 323.36 | 470.85 | 323.35 | 471.3 | 323.35 | 472.35 | 323.34 | 474.91 | 323.33 |
| 476.77 | 323.32 | 485.17 | 323.32 | 487.32 | 323.04 | 488.79 | 322.83 | 489.24 | 322.74 |
| 489.29 | 322.72 | 489.86 | 322.7 | 490.35 | 322.7 | 490.42 | 322.72 | 490.63 | 322.73 |
| 491.28 | 322.8 | 491.53 | 322.84 | 494.13 | 323.32 | 495.9 | 323.38 | 497.81 | 323.43 |
| 499.02 | 323.44 | 500.81 | 323.45 | 504.47 | 323.48 | 506.34 | 323.48 | 507.25 | 323.46 |
| 510.81 | 323.4 | 512.03 | 323.37 | 512.04 | 323.38 | 514.91 | 323.35 | 515.35 | 323.34 |
| 516.07 | 323.34 | 516.91 | 323.33 | 517.8 | 323.34 | 518.49 | 323.34 | 519.55 | 323.36 |
| 523.86 | 323.42 | 525 | 323.43 | 526.02 | 323.43 | 527.51 | 323.44 | 528.35 | 323.45 |
| 533.65 | 323.48 | 539.04 | 323.5 | 540.53 | 323.51 | 544.28 | 323.5 | 547.94 | 323.5 |
| 548.25 | 323.49 | 550.47 | 323.47 | 552.42 | 323.47 | 552.99 | 323.46 | 554.03 | 323.45 |
| 554.67 | 323.41 | 554.75 | 323.38 | 555.08 | 323.33 | 556.19 | 323.39 | 557.04 | 323.45 |
| 557.16 | 323.47 | 559.56 | 323.58 | 560.1 | 323.6 | 564.52 | 323.7 | 565.45 | 323.72 |
| 566.27 | 323.75 | 570.26 | 323.77 | 574.64 | 323.77 | 575.61 | 323.78 | 577.12 | 323.8 |
| 577.49 | 323.8 | 578.14 | 323.82 | 578.68 | 323.83 | 581.79 | 323.92 | 582.8 | 323.96 |
| 583.77 | 324.01 | 584.4 | 324.03 | 585.18 | 324.03 | 586.17 | 324.02 | 586.82 | 324.02 |
| 586.93 | 324.01 | 589.42 | 324.01 | 589.71 | 324.02 | 590.16 | 324.01 | 591.17 | 323.98 |
| 592.06 | 323.96 | 593.96 | 323.96 | 594.45 | 323.95 | 595.07 | 323.95 | 597.83 | 323.92 |
| 599.1 | 323.91 | 600.47 | 323.91 | 601.95 | 323.93 | 602.72 | 323.93 | 603.45 | 323.96 |
| 605.25 | 323.97 | 606.55 | 323.99 | 608.07 | 323.99 | 610.75 | 324.03 | 611.71 | 324.03 |
| 612.16 | 323.98 | 612.33 | 323.98 | 613.67 | 324.03 | 614.1 | 324.05 | 615.63 | 324.09 |
| 615.88 | 324.09 | 616.3 | 324.11 | 617.71 | 324.11 | 618.84 | 324.14 | 619.34 | 324.14 |
| 621.05 | 324.15 | 621.99 | 324.15 | 623.1 | 324.17 | 623.59 | 324.17 | 623.63 | 324.18 |
| 624.41 | 324.19 | 625.64 | 324.25 | 627.41 | 324.36 | 627.99 | 324.38 | 628.38 | 324.4 |
| 628.62 | 324.4 | 630.22 | 324.44 | 631.73 | 324.49 | 633.06 | 324.52 | 634.32 | 324.57 |
| 637.59 | 324.64 | 638.44 | 324.64 | 639.51 | 324.66 | 644.8 | 324.77 | 645.96 | 324.77 |
| 647.04 | 324.78 | 647.37 | 324.78 | 648.68 | 324.79 | 649.53 | 324.8 | 650.37 | 324.8 |
| 650.57 | 324.81 | 653.01 | 324.83 | 653.53 | 324.84 | 655.11 | 324.84 | 657.77 | 324.82 |
| 657.99 | 324.82 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 118.91 | .04 | 583.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 118.91 | 583.77 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 623.132*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.82 | .85 | 331.77 | .94 | 331.77 | 1.99 | 331.66 | 2.56 | 331.62 |
| 2.97 | 331.57 | 3.18 | 331.56 | 4.45 | 331.48 | 4.65 | 331.46 | 5.95 | 331.39 |
| 6.09 | 331.36 | 6.53 | 331.32 | 7.35 | 331.23 | 8.44 | 331.16 | 9.24 | 331.14 |
| 10.01 | 331.07 | 12.48 | 330.73 | 14.12 | 330.5 | 14.33 | 330.45 | 15.79 | 330.29 |
| 16.12 | 330.26 | 16.38 | 330.22 | 17.42 | 330.04 | 18.14 | 329.99 | 18.76 | 329.93 |
| 19.9 | 329.84 | 20.14 | 329.81 | 20.77 | 329.81 | 21.26 | 329.82 | 21.8 | 329.85 |
| 22.4 | 329.89 | 22.76 | 329.94 | 23.54 | 330.03 | 24.83 | 330.18 | 25.03 | 330.19 |
| 25.29 | 330.22 | 25.57 | 330.22 | 26.05 | 330.24 | 28.07 | 330.24 | 28.65 | 330.27 |
| 29.14 | 330.21 | 29.31 | 330.18 | 30.16 | 330.14 | 31.88 | 330.07 | 32.23 | 330.06 |
| 32.44 | 330.07 | 33.05 | 330.08 | 34.07 | 330.11 | 34.33 | 330.11 | 37.05 | 330.05 |
| 37.92 | 330.05 | 38.16 | 330.04 | 38.78 | 330.03 | 39.1 | 330.03 | 39.52 | 330.02 |
| 41.76 | 329.95 | 43.11 | 329.95 | 44.24 | 329.94 | 45.13 | 329.95 | 46.87 | 329.95 |
| 49.22 | 329.98 | 49.38 | 329.98 | 50.01 | 330 | 50.75 | 329.99 | 51.39 | 330.02 |
| 51.82 | 330.06 | 52.12 | 330.07 | 52.65 | 330.1 | 53.13 | 330.11 | 53.71 | 330.14 |
| 54.01 | 330.15 | 54.72 | 330.15 | 55.61 | 330.16 | 55.64 | 330.12 | 56.07 | 330.12 |
| 56.21 | 330.1 | 56.91 | 330.05 | 57.67 | 330.01 | 57.99 | 330 | 58.3 | 330 |
| 59.21 | 330.05 | 59.52 | 330.06 | 59.99 | 330.06 | 61.18 | 330.02 | 63.44 | 329.92 |
| 64.5 | 329.85 | 65.44 | 329.78 | 65.99 | 329.73 | 69.14 | 329.51 | 70.02 | 329.44 |
| 71.78 | 329.31 | 72.53 | 329.25 | 72.99 | 329.22 | 73.19 | 329.2 | 73.47 | 329.19 |
| 75.12 | 329.09 | 76.54 | 329.02 | 76.95 | 328.99 | 77.48 | 328.96 | 77.96 | 328.94 |
| 78.6 | 328.92 | 79.39 | 328.87 | 80.32 | 328.83 | 82.01 | 328.74 | 83.18 | 328.68 |
| 83.76 | 328.64 | 84.09 | 328.63 | 85.39 | 328.56 | 87.08 | 328.46 | 90.04 | 328.29 |
| 90.31 | 328.26 | 91.64 | 328.13 | 93.24 | 327.97 | 96.41 | 327.8 | 96.69 | 327.79 |
| 97.77 | 327.74 | 99.96 | 327.79 | 101.69 | 327.84 | 102.87 | 327.87 | 103.77 | 327.93 |
| 105.12 | 328 | 105.7 | 328.01 | 109.42 | 328.15 | 109.94 | 328.14 | 112.34 | 328 |
| 113.7 | 327.88 | 114.11 | 327.88 | 114.48 | 327.86 | 114.69 | 327.84 | 116.19 | 327.68 |
| 116.79 | 327.6 | 119.58 | 327.21 | 122.97 | 326.74 | 123.78 | 326.63 | 125.36 | 326.4 |
| 128.43 | 326.18 | 129.65 | 326.11 | 132.28 | 325.97 | 133.7 | 325.87 | 135.6 | 325.75 |
| 136.24 | 325.7 | 137.42 | 325.63 | 138.16 | 325.59 | 140.18 | 325.45 | 146.54 | 325.08 |
| 149.41 | 324.91 | 149.44 | 324.91 | 153.49 | 324.61 | 155.68 | 324.42 | 156.13 | 324.4 |
| 158.32 | 324.26 | 159.96 | 324.2 | 160.77 | 324.16 | 162.45 | 324.05 | 162.52 | 324.04 |
| 167.27 | 323.77 | 170.68 | 323.55 | 171.27 | 323.55 | 172.02 | 323.54 | 172.39 | 323.52 |
| 177.74 | 323.28 | 180.33 | 323.28 | 181.42 | 323.26 | 181.79 | 323.26 | 182.24 | 323.24 |
| 184.43 | 323.15 | 185.83 | 323.12 | 189.33 | 322.99 | 190.59 | 322.96 | 192.11 | 322.96 |
| 192.69 | 322.95 | 192.98 | 322.93 | 194.35 | 322.88 | 196.02 | 322.8 | 198.06 | 322.8 |
| 198.48 | 322.79 | 199.35 | 322.76 | 200.05 | 322.74 | 205.31 | 322.6 | 210.28 | 322.44 |
| 216.65 | 322.25 | 217.5 | 322.22 | 220.45 | 322.14 | 220.9 | 322.12 | 224.79 | 322.02 |
| 228.28 | 321.96 | 230.34 | 321.94 | 233.74 | 321.9 | 234.47 | 321.9 | 235.7 | 321.88 |
| 236.71 | 321.87 | 237.34 | 321.86 | 237.75 | 321.8 | 238.1 | 321.7 | 238.54 | 321.7 |
| 238.93 | 321.68 | 239.39 | 321.67 | 240.51 | 321.63 | 241.14 | 321.62 | 242.29 | 321.54 |
| 242.55 | 321.53 | 242.61 | 321.54 | 242.62 | 321.61 | 242.8 | 321.65 | 243.24 | 321.72 |
| 244.09 | 321.77 | 244.74 | 321.79 | 245.24 | 321.79 | 245.49 | 321.77 | 245.57 | 321.74 |
| 245.85 | 321.74 | 246.49 | 321.73 | 247.39 | 321.73 | 247.5 | 321.74 | 249.11 | 321.82 |
| 250.67 | 321.89 | 251.39 | 321.89 | 251.89 | 321.84 | 253.06 | 321.82 | 253.97 | 321.8 |
| 254.18 | 321.8 | 256.16 | 321.87 | 258.86 | 321.98 | 260.79 | 322.06 | 263.55 | 322.17 |
| 263.56 | 322.19 | 263.98 | 322.25 | 264.87 | 322.26 | 269.63 | 322.26 | 270.68 | 322.27 |
| 273.49 | 322.26 | 275.27 | 322.26 | 276.52 | 322.25 | 277.62 | 322.23 | 278.27 | 322.21 |
| 282.15 | 322.07 | 282.49 | 322.06 | 283.12 | 322.05 | 284.23 | 322.07 | 287.79 | 322.12 |
| 289.93 | 322.16 | 290.1 | 322.17 | 292 | 322.21 | 293.99 | 322.27 | 294.53 | 322.29 |
| 295.08 | 322.3 | 297.68 | 322.39 | 298.68 | 322.42 | 301.4 | 322.49 | 301.55 | 322.49 |
| 302.67 | 322.52 | 305.38 | 322.57 | 306.81 | 322.6 | 307.42 | 322.6 | 307.99 | 322.59 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 308.92 | 322.56 | 310.02 | 322.54 | 311.72 | 322.53 | 312.68 | 322.55 | 316.61 | 322.62 |
| 317.65 | 322.64 | 318.45 | 322.64 | 321.86 | 322.69 | 327.01 | 322.76 | 330.37 | 322.82 |
| 331.31 | 322.83 | 333.96 | 322.88 | 336.11 | 322.91 | 337.08 | 322.93 | 339.65 | 322.97 |
| 340.54 | 322.99 | 343.58 | 323.04 | 343.96 | 323.04 | 344.24 | 323.05 | 346.53 | 323.08 |
| 346.7 | 323.08 | 346.94 | 323.05 | 351.04 | 323.05 | 354.26 | 323.01 | 356.68 | 323.08 |
| 360.8 | 323.23 | 362.69 | 323.28 | 364.18 | 323.34 | 366.17 | 323.44 | 367.22 | 323.49 |
| 369.49 | 323.57 | 370.66 | 323.6 | 371.86 | 323.64 | 373.11 | 323.66 | 375.78 | 323.7 |
| 375.99 | 323.7 | 377.01 | 323.72 | 379.29 | 323.77 | 380.71 | 323.79 | 381.67 | 323.81 |
| 382.06 | 323.83 | 382.35 | 323.83 | 382.74 | 323.84 | 383.13 | 323.86 | 383.33 | 323.85 |
| 384.36 | 323.84 | 385.43 | 323.84 | 386 | 323.85 | 386.67 | 323.84 | 387.69 | 323.84 |
| 389.49 | 323.83 | 390.31 | 323.79 | 391.64 | 323.78 | 392.62 | 323.73 | 394.68 | 323.64 |
| 396.42 | 323.56 | 399.2 | 323.43 | 400.83 | 323.35 | 401.89 | 323.3 | 402.2 | 323.29 |
| 402.9 | 323.25 | 402.95 | 323.24 | 403.31 | 323.23 | 403.95 | 323.13 | 404.87 | 322.98 |
| 405.78 | 322.84 | 405.95 | 322.82 | 406.09 | 322.78 | 406.25 | 322.63 | 407.46 | 322.62 |
| 408.82 | 322.59 | 409.38 | 322.59 | 410.01 | 322.63 | 410.77 | 322.66 | 410.85 | 322.67 |
| 411.2 | 322.68 | 412.49 | 322.73 | 414.51 | 322.79 | 415.36 | 322.82 | 415.55 | 322.83 |
| 416.89 | 322.88 | 420.61 | 323.07 | 421.61 | 323.1 | 421.67 | 323.11 | 422.58 | 323.14 |
| 423.35 | 323.18 | 423.43 | 323.18 | 425.62 | 323.29 | 427.14 | 323.28 | 429.68 | 323.27 |
| 430.2 | 323.26 | 435.39 | 323.22 | 440.95 | 323.16 | 442.64 | 323.14 | 444.95 | 323.11 |
| 455.61 | 323.11 | 456.5 | 323.15 | 456.65 | 323.16 | 457.14 | 323.14 | 458.25 | 323.13 |
| 459.35 | 323.1 | 465.89 | 323.1 | 467.77 | 323.09 | 469.16 | 323.09 | 469.66 | 323.08 |
| 471.68 | 323.08 | 472.78 | 323.07 | 475.42 | 323.06 | 477.36 | 323.06 | 478.6 | 323.05 |
| 486.07 | 323.05 | 488.3 | 322.75 | 489.82 | 322.53 | 490.3 | 322.44 | 490.34 | 322.41 |
| 491.44 | 322.39 | 491.51 | 322.41 | 491.91 | 322.44 | 492.4 | 322.5 | 492.66 | 322.54 |
| 495.37 | 323.06 | 497.2 | 323.12 | 498.45 | 323.15 | 499.18 | 323.17 | 500.44 | 323.18 |
| 502.29 | 323.19 | 506.08 | 323.22 | 507.21 | 323.22 | 508.98 | 323.2 | 512.66 | 323.13 |
| 513.94 | 323.1 | 516.92 | 323.07 | 517.37 | 323.06 | 518.12 | 323.06 | 519 | 323.05 |
| 519.91 | 323.05 | 520.63 | 323.06 | 521.73 | 323.08 | 523.25 | 323.1 | 526.2 | 323.13 |
| 528.44 | 323.15 | 529.99 | 323.16 | 530.86 | 323.16 | 536.36 | 323.19 | 541.95 | 323.21 |
| 547.38 | 323.21 | 551.18 | 323.2 | 551.51 | 323.2 | 553.81 | 323.18 | 556.41 | 323.18 |
| 557.5 | 323.16 | 558.16 | 323.12 | 558.24 | 323.09 | 558.58 | 323.03 | 559.74 | 323.09 |
| 560.62 | 323.16 | 560.74 | 323.18 | 562.77 | 323.27 | 563.23 | 323.3 | 563.79 | 323.31 |
| 568.38 | 323.42 | 570.19 | 323.46 | 574.34 | 323.48 | 578.65 | 323.48 | 578.87 | 323.47 |
| 579.88 | 323.48 | 581.45 | 323.5 | 581.84 | 323.5 | 582.51 | 323.52 | 583.07 | 323.53 |
| 585.22 | 323.59 | 586.3 | 323.63 | 587.35 | 323.66 | 587.94 | 323.7 | 588.35 | 323.72 |
| 588.93 | 323.74 | 589.65 | 323.74 | 590.78 | 323.73 | 591.17 | 323.72 | 593.84 | 323.72 |
| 594.25 | 323.71 | 595.19 | 323.68 | 596.02 | 323.66 | 597.31 | 323.65 | 598.22 | 323.65 |
| 598.8 | 323.64 | 602.53 | 323.61 | 603.79 | 323.61 | 604.39 | 323.62 | 605.59 | 323.62 |
| 606.55 | 323.65 | 607.99 | 323.66 | 608.21 | 323.67 | 609.42 | 323.67 | 610.43 | 323.68 |
| 610.82 | 323.68 | 612.73 | 323.7 | 613.3 | 323.71 | 614.19 | 323.71 | 614.61 | 323.67 |
| 614.76 | 323.67 | 616.01 | 323.72 | 617.14 | 323.75 | 617.41 | 323.75 | 618.44 | 323.78 |
| 619.74 | 323.78 | 620.79 | 323.8 | 621.25 | 323.8 | 622.83 | 323.81 | 623.69 | 323.81 |
| 624.73 | 323.82 | 625.03 | 323.82 | 625.22 | 323.83 | 625.94 | 323.84 | 627.08 | 323.89 |
| 627.51 | 323.92 | 629.25 | 324.02 | 629.83 | 324.03 | 630.9 | 324.06 | 631.31 | 324.06 |
| 632.71 | 324.1 | 633.17 | 324.11 | 634.64 | 324.15 | 637.25 | 324.21 | 637.65 | 324.21 |
| 638.12 | 324.22 | 638.91 | 324.22 | 639.9 | 324.24 | 644.8 | 324.32 | 645.87 | 324.32 |
| 646.87 | 324.33 | 647.17 | 324.33 | 648.38 | 324.34 | 648.51 | 324.35 | 649.17 | 324.35 |
| 650.13 | 324.36 | 652.39 | 324.39 | 652.87 | 324.4 | 654.34 | 324.4 | 656.79 | 324.38 |
| 657 | 324.38 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 105.7 | .04 | 588.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 105.7 | 588.35 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 604.081*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.48 | .75 | 331.42 | .82 | 331.42 | 1.74 | 331.32 | 2.78 | 331.22 |
| 3.9 | 331.14 | 4.07 | 331.12 | 5.21 | 331.04 | 5.33 | 331.01 | 5.72 | 330.97 |
| 6.21 | 330.9 | 6.98 | 330.84 | 7.38 | 330.8 | 7.73 | 330.78 | 8.09 | 330.77 |
| 8.76 | 330.7 | 10.92 | 330.36 | 12.36 | 330.13 | 12.54 | 330.09 | 13.82 | 329.97 |
| 14.11 | 329.94 | 15.06 | 329.81 | 15.25 | 329.78 | 15.87 | 329.74 | 17.42 | 329.63 |
| 17.66 | 329.6 | 18.18 | 329.62 | 18.61 | 329.63 | 19.08 | 329.66 | 19.72 | 329.71 |
| 19.92 | 329.74 | 20.35 | 329.79 | 20.6 | 329.81 | 21.59 | 329.92 | 22.16 | 329.98 |
| 22.37 | 329.98 | 22.8 | 330 | 23.47 | 330 | 24.57 | 330.02 | 25.07 | 330.05 |
| 25.5 | 330.02 | 25.65 | 329.99 | 26.4 | 329.97 | 27.9 | 329.94 | 28.39 | 329.94 |
| 28.92 | 329.96 | 29.81 | 330 | 32.42 | 329.99 | 34.22 | 329.99 | 34.59 | 329.98 |
| 35.43 | 329.97 | 36.55 | 329.95 | 37.73 | 329.95 | 39.63 | 329.97 | 40.65 | 329.99 |
| 41.02 | 329.99 | 43.07 | 330.03 | 43.22 | 330.04 | 43.7 | 330.05 | 44.42 | 330.05 |
| 45.19 | 330.09 | 45.35 | 330.11 | 45.62 | 330.12 | 46.07 | 330.15 | 46.49 | 330.17 |
| 46.87 | 330.18 | 47.27 | 330.2 | 48.66 | 330.22 | 48.69 | 330.2 | 49.07 | 330.2 |
| 49.8 | 330.14 | 50.46 | 330.1 | 50.75 | 330.1 | 51.02 | 330.09 | 51.81 | 330.13 |
| 52.08 | 330.14 | 52.5 | 330.14 | 53.28 | 330.11 | 55.52 | 330.02 | 56.45 | 329.96 |
| 57.27 | 329.89 | 57.46 | 329.87 | 59.26 | 329.73 | 60.5 | 329.64 | 60.84 | 329.6 |
| 61.28 | 329.57 | 63.47 | 329.37 | 64.29 | 329.31 | 65.74 | 329.21 | 66.98 | 329.12 |
| 68.02 | 329.06 | 68.22 | 329.04 | 68.53 | 329.03 | 69.06 | 328.99 | 69.47 | 328.97 |
| 70.03 | 328.93 | 70.29 | 328.92 | 71.77 | 328.82 | 72.45 | 328.77 | 72.79 | 328.75 |
| 73.3 | 328.71 | 73.59 | 328.7 | 73.9 | 328.68 | 74.38 | 328.64 | 74.72 | 328.62 |
| 78.79 | 328.32 | 79.67 | 328.22 | 80.2 | 328.15 | 81.59 | 327.98 | 82.26 | 327.93 |
| 84.37 | 327.79 | 84.61 | 327.77 | 85.56 | 327.72 | 86.34 | 327.74 | 87.47 | 327.78 |
| 88.99 | 327.83 | 90.03 | 327.86 | 90.81 | 327.92 | 92 | 328 | 92.5 | 328.01 |
| 96.37 | 328.16 | 96.91 | 328.15 | 99.4 | 328 | 100.82 | 327.87 | 101.24 | 327.87 |
| 101.62 | 327.85 | 101.84 | 327.82 | 103.4 | 327.66 | 104.02 | 327.57 | 106.92 | 327.16 |
| 110.44 | 326.65 | 111.29 | 326.54 | 112.93 | 326.3 | 116.11 | 326.08 | 117.38 | 326.01 |
| 120.12 | 325.87 | 121.59 | 325.77 | 123.56 | 325.65 | 124.23 | 325.6 | 125.46 | 325.53 |
| 126.23 | 325.49 | 128.32 | 325.34 | 134.93 | 324.95 | 137.91 | 324.77 | 137.94 | 324.77 |
| 141.03 | 324.54 | 142.16 | 324.46 | 144.43 | 324.26 | 144.9 | 324.24 | 147.17 | 324.09 |
| 148.88 | 324.03 | 149.72 | 323.99 | 151.47 | 323.87 | 151.54 | 323.87 | 156.47 | 323.58 |
| 160.01 | 323.35 | 161.41 | 323.33 | 161.79 | 323.31 | 167.35 | 323.06 | 170.04 | 323.06 |
| 171.17 | 323.05 | 171.56 | 323.04 | 172.02 | 323.02 | 174.31 | 322.94 | 175.76 | 322.9 |
| 179.4 | 322.77 | 180.7 | 322.74 | 182.28 | 322.73 | 183.18 | 322.7 | 184.61 | 322.63 |
| 186.34 | 322.55 | 187.17 | 322.56 | 188.04 | 322.56 | 188.12 | 322.55 | 188.47 | 322.55 |
| 188.91 | 322.54 | 189.8 | 322.51 | 196 | 322.34 | 201.16 | 322.18 | 207.79 | 321.97 |
| 208.66 | 321.94 | 211.73 | 321.85 | 212.2 | 321.84 | 216.23 | 321.73 | 219.87 | 321.67 |
| 222 | 321.65 | 225.54 | 321.62 | 226.29 | 321.61 | 226.97 | 321.61 | 228.62 | 321.58 |
| 229.28 | 321.57 | 229.71 | 321.51 | 230.07 | 321.4 | 230.52 | 321.4 | 230.93 | 321.38 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 231.41 | 321.37 | 232.57 | 321.33 | 233.23 | 321.32 | 234.12 | 321.26 | 234.42 | 321.23 |
| 234.69 | 321.22 | 234.76 | 321.23 | 234.77 | 321.31 | 234.95 | 321.35 | 235.41 | 321.42 |
| 236.29 | 321.48 | 236.52 | 321.48 | 236.97 | 321.5 | 237.74 | 321.48 | 237.82 | 321.44 |
| 238.11 | 321.44 | 238.78 | 321.43 | 239.71 | 321.43 | 240.47 | 321.48 | 241.49 | 321.53 |
| 243.11 | 321.6 | 243.85 | 321.6 | 244.28 | 321.55 | 246.52 | 321.5 | 246.74 | 321.5 |
| 248.8 | 321.58 | 251.59 | 321.68 | 253.59 | 321.76 | 256.45 | 321.88 | 256.46 | 321.9 |
| 256.89 | 321.96 | 257.82 | 321.97 | 263.84 | 321.97 | 266.75 | 321.96 | 267.33 | 321.96 |
| 269.89 | 321.94 | 271.02 | 321.92 | 271.7 | 321.9 | 275.72 | 321.75 | 276.07 | 321.74 |
| 276.72 | 321.73 | 277.87 | 321.74 | 281.56 | 321.79 | 283.77 | 321.83 | 283.95 | 321.84 |
| 285.92 | 321.88 | 287.98 | 321.94 | 288.54 | 321.96 | 289.12 | 321.97 | 291.81 | 322.06 |
| 295.66 | 322.17 | 295.81 | 322.17 | 296.97 | 322.2 | 299.79 | 322.26 | 301.26 | 322.29 |
| 301.9 | 322.29 | 302.34 | 322.28 | 302.48 | 322.27 | 303.45 | 322.25 | 304.59 | 322.23 |
| 306.35 | 322.22 | 311.41 | 322.32 | 311.85 | 322.32 | 313.33 | 322.34 | 316.86 | 322.39 |
| 322.19 | 322.48 | 325.67 | 322.54 | 326.64 | 322.55 | 331.61 | 322.64 | 335.28 | 322.71 |
| 336.2 | 322.72 | 339.35 | 322.78 | 339.75 | 322.78 | 340.03 | 322.79 | 342.41 | 322.82 |
| 342.59 | 322.82 | 342.83 | 322.79 | 345.22 | 322.78 | 347.08 | 322.79 | 350.42 | 322.74 |
| 352.93 | 322.81 | 357.2 | 322.96 | 359.15 | 323.02 | 360.69 | 323.08 | 362.76 | 323.18 |
| 363.84 | 323.23 | 366.2 | 323.32 | 367.41 | 323.35 | 368.65 | 323.39 | 369.95 | 323.41 |
| 372.71 | 323.45 | 372.93 | 323.45 | 373.99 | 323.47 | 376.35 | 323.52 | 377.82 | 323.54 |
| 378.82 | 323.56 | 379.22 | 323.58 | 379.52 | 323.58 | 380.46 | 323.61 | 380.54 | 323.6 |
| 381.6 | 323.58 | 382.26 | 323.58 | 382.72 | 323.59 | 383.3 | 323.59 | 384 | 323.58 |
| 384.47 | 323.59 | 385.05 | 323.59 | 386.72 | 323.57 | 386.92 | 323.57 | 387.76 | 323.53 |
| 389.14 | 323.51 | 390.16 | 323.46 | 391.33 | 323.41 | 392.3 | 323.36 | 394.1 | 323.28 |
| 396.98 | 323.14 | 398.66 | 323.05 | 399.76 | 323 | 400.08 | 322.99 | 400.81 | 322.95 |
| 401.23 | 322.92 | 401.9 | 322.81 | 402.85 | 322.66 | 403.25 | 322.6 | 403.97 | 322.48 |
| 404.11 | 322.45 | 404.27 | 322.29 | 405.39 | 322.27 | 405.53 | 322.27 | 406.94 | 322.25 |
| 407.52 | 322.25 | 408.18 | 322.28 | 409.05 | 322.33 | 409.68 | 322.35 | 410.25 | 322.38 |
| 410.74 | 322.39 | 412.83 | 322.47 | 413.72 | 322.51 | 413.91 | 322.51 | 415.31 | 322.57 |
| 419.15 | 322.76 | 420.19 | 322.8 | 420.25 | 322.81 | 421.2 | 322.85 | 421.99 | 322.88 |
| 422.08 | 322.89 | 422.91 | 322.93 | 424.34 | 323.01 | 425.92 | 323 | 428.55 | 322.98 |
| 429.09 | 322.97 | 434.47 | 322.94 | 440.23 | 322.88 | 441.98 | 322.86 | 445.63 | 322.83 |
| 455.42 | 322.83 | 455.85 | 322.85 | 456.5 | 322.89 | 456.99 | 322.87 | 458.15 | 322.85 |
| 458.9 | 322.84 | 459.29 | 322.83 | 462.62 | 322.83 | 464.81 | 322.82 | 468.02 | 322.82 |
| 469.46 | 322.81 | 472.06 | 322.81 | 473.2 | 322.8 | 475.94 | 322.8 | 477.94 | 322.79 |
| 486.97 | 322.79 | 489.28 | 322.47 | 490.86 | 322.23 | 491.35 | 322.13 | 491.39 | 322.11 |
| 492.01 | 322.09 | 492.53 | 322.08 | 492.61 | 322.11 | 492.83 | 322.12 | 493.53 | 322.2 |
| 493.8 | 322.24 | 496.6 | 322.79 | 498.5 | 322.86 | 499.8 | 322.89 | 500.55 | 322.91 |
| 501.85 | 322.92 | 507.7 | 322.95 | 508.87 | 322.96 | 509.71 | 322.95 | 510.7 | 322.93 |
| 514.52 | 322.85 | 515.83 | 322.82 | 515.85 | 322.83 | 518.93 | 322.79 | 519.4 | 322.78 |
| 520.17 | 322.77 | 522.77 | 322.77 | 523.91 | 322.79 | 528.54 | 322.85 | 529.77 | 322.85 |
| 530.86 | 322.86 | 532.47 | 322.87 | 533.37 | 322.87 | 539.07 | 322.9 | 544.85 | 322.92 |
| 546.46 | 322.92 | 550.48 | 322.91 | 554.76 | 322.91 | 557.14 | 322.89 | 559.84 | 322.89 |
| 560.97 | 322.87 | 561.65 | 322.82 | 561.74 | 322.79 | 561.93 | 322.77 | 562.09 | 322.73 |
| 563.28 | 322.79 | 564.2 | 322.86 | 564.33 | 322.88 | 566.43 | 322.98 | 566.91 | 323.01 |
| 567.49 | 323.02 | 572.24 | 323.13 | 573.24 | 323.15 | 574.12 | 323.18 | 578.41 | 323.19 |
| 582.22 | 323.18 | 583.11 | 323.18 | 584.16 | 323.19 | 585.78 | 323.2 | 586.55 | 323.22 |
| 586.88 | 323.22 | 587.46 | 323.23 | 589.69 | 323.3 | 590.8 | 323.33 | 591.89 | 323.37 |
| 592.5 | 323.41 | 592.93 | 323.43 | 593.46 | 323.45 | 594.12 | 323.44 | 594.96 | 323.43 |
| 595.51 | 323.43 | 595.61 | 323.42 | 597.73 | 323.42 | 597.98 | 323.43 | 598.35 | 323.41 |
| 599.21 | 323.39 | 599.97 | 323.35 | 601.58 | 323.35 | 602 | 323.34 | 602.53 | 323.34 |
| 605.95 | 323.31 | 606.37 | 323.3 | 607.11 | 323.31 | 607.67 | 323.31 | 608.38 | 323.32 |
| 608.86 | 323.32 | 609.03 | 323.33 | 609.41 | 323.33 | 609.8 | 323.34 | 610.98 | 323.35 |
| 611.18 | 323.36 | 613.58 | 323.36 | 615.33 | 323.39 | 616.77 | 323.39 | 617.06 | 323.36 |
| 617.2 | 323.36 | 618.34 | 323.4 | 618.71 | 323.41 | 619.38 | 323.42 | 620 | 323.44 |
| 620.57 | 323.45 | 621.77 | 323.45 | 622.73 | 323.47 | 625.4 | 323.47 | 626.35 | 323.48 |
| 626.81 | 323.48 | 627.47 | 323.49 | 628.52 | 323.53 | 628.91 | 323.56 | 630.01 | 323.63 |
| 631.05 | 323.67 | 632.02 | 323.68 | 632.4 | 323.68 | 634.11 | 323.72 | 635.46 | 323.74 |
| 635.89 | 323.76 | 637.86 | 323.8 | 638.66 | 323.8 | 640.3 | 323.82 | 644.79 | 323.88 |
| 645.78 | 323.88 | 646.7 | 323.89 | 646.98 | 323.89 | 648.21 | 323.9 | 649.53 | 323.92 |
| 649.7 | 323.92 | 651.77 | 323.95 | 652.21 | 323.96 | 653.56 | 323.96 | 655.82 | 323.94 |
| 656.01 | 323.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 92.5 | .04 | 592.93 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 92.5 | 592.93 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 585.031*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.13 | .64 | 331.07 | .7 | 331.07 | 1.92 | 330.93 | 2.39 | 330.88 |
| 3.34 | 330.79 | 4.2 | 330.72 | 4.47 | 330.69 | 4.9 | 330.61 | 5.26 | 330.56 |
| 5.98 | 330.48 | 6.63 | 330.42 | 6.93 | 330.4 | 7.51 | 330.33 | 9.36 | 329.99 |
| 10.6 | 329.76 | 10.75 | 329.73 | 11.85 | 329.64 | 12.1 | 329.63 | 12.29 | 329.6 |
| 12.91 | 329.53 | 13.61 | 329.49 | 14.08 | 329.46 | 15.11 | 329.41 | 15.14 | 329.4 |
| 15.59 | 329.42 | 15.95 | 329.43 | 16.35 | 329.46 | 16.81 | 329.5 | 17.44 | 329.57 |
| 17.66 | 329.6 | 18.51 | 329.69 | 19.04 | 329.73 | 19.55 | 329.76 | 20.12 | 329.77 |
| 21.26 | 329.82 | 21.49 | 329.84 | 21.99 | 329.81 | 23.92 | 329.81 | 24.34 | 329.82 |
| 24.79 | 329.84 | 25.76 | 329.89 | 27.79 | 329.92 | 28.2 | 329.93 | 28.27 | 329.94 |
| 28.63 | 329.94 | 29.1 | 329.95 | 31.33 | 329.95 | 32.35 | 329.96 | 33.03 | 329.97 |
| 33.19 | 329.98 | 33.86 | 329.99 | 33.98 | 330 | 34.85 | 330.02 | 36.92 | 330.08 |
| 37.28 | 330.1 | 38.08 | 330.1 | 38.74 | 330.14 | 38.88 | 330.16 | 39.11 | 330.17 |
| 39.5 | 330.2 | 40.18 | 330.24 | 40.3 | 330.24 | 41.05 | 330.27 | 41.72 | 330.29 |
| 41.74 | 330.27 | 42.06 | 330.28 | 42.69 | 330.22 | 43.26 | 330.2 | 43.51 | 330.2 |
| 43.74 | 330.19 | 44.42 | 330.21 | 45.01 | 330.21 | 45.24 | 330.2 | 45.48 | 330.2 |
| 45.67 | 330.19 | 47.6 | 330.11 | 48.39 | 330.06 | 49.1 | 330 | 49.26 | 329.98 |
| 50.8 | 329.84 | 51.87 | 329.76 | 53.85 | 329.55 | 54.12 | 329.52 | 54.41 | 329.5 |
| 54.76 | 329.46 | 55.62 | 329.39 | 56.11 | 329.34 | 57.42 | 329.23 | 57.73 | 329.21 |
| 57.87 | 329.19 | 58.12 | 329.17 | 58.49 | 329.15 | 58.75 | 329.13 | 60.26 | 329 |
| 61.52 | 328.9 | 62.11 | 328.85 | 62.84 | 328.78 | 63.76 | 328.71 | 64.06 | 328.68 |
| 65.33 | 328.56 | 67.55 | 328.36 | 68.75 | 328.17 | 69.95 | 327.99 | 72.33 | 327.78 |
| 72.54 | 327.76 | 73.35 | 327.7 | 74.02 | 327.72 | 74.99 | 327.76 | 76.29 | 327.82 |
| 77.18 | 327.85 | 78.87 | 328 | 79.3 | 328.01 | 83.31 | 328.17 | 83.87 | 328.15 |
| 86.45 | 328 | 87.93 | 327.86 | 88.37 | 327.86 | 88.77 | 327.84 | 88.99 | 327.81 |
| 90.6 | 327.63 | 91.26 | 327.54 | 94.26 | 327.11 | 97.91 | 326.57 | 98.79 | 326.45 |
| 100.5 | 326.2 | 103.8 | 325.98 | 105.11 | 325.91 | 107.96 | 325.76 | 111.53 | 325.55 |
| 112.22 | 325.5 | 113.49 | 325.42 | 114.3 | 325.38 | 116.47 | 325.23 | 123.33 | 324.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 126.42 | 324.63 | 126.45 | 324.63 | 129.65 | 324.39 | 130.82 | 324.31 | 133.18 | 324.1 |
| 133.66 | 324.08 | 135.71 | 323.94 | 136.03 | 323.93 | 137.8 | 323.86 | 138.67 | 323.81 |
| 140.48 | 323.69 | 140.55 | 323.69 | 145.67 | 323.38 | 149.35 | 323.15 | 150.79 | 323.13 |
| 151.2 | 323.11 | 156.97 | 322.84 | 159.76 | 322.84 | 160.93 | 322.83 | 161.33 | 322.83 |
| 161.81 | 322.81 | 164.18 | 322.73 | 165.69 | 322.68 | 169.46 | 322.56 | 170.81 | 322.52 |
| 172.45 | 322.49 | 172.85 | 322.48 | 173.39 | 322.46 | 174.87 | 322.39 | 176.67 | 322.31 |
| 176.84 | 322.3 | 177.53 | 322.31 | 178.52 | 322.31 | 179.33 | 322.29 | 180.26 | 322.26 |
| 181.01 | 322.23 | 186.68 | 322.08 | 192.05 | 321.91 | 198.92 | 321.69 | 199.83 | 321.67 |
| 203.01 | 321.57 | 203.5 | 321.55 | 207.68 | 321.45 | 211.45 | 321.39 | 213.67 | 321.37 |
| 217.34 | 321.33 | 218.12 | 321.33 | 219.45 | 321.31 | 220.54 | 321.29 | 221.22 | 321.28 |
| 221.66 | 321.22 | 221.87 | 321.16 | 222.03 | 321.1 | 222.78 | 321.1 | 223.43 | 321.07 |
| 224.64 | 321.03 | 225.66 | 321 | 226.56 | 320.92 | 226.84 | 320.91 | 226.9 | 320.92 |
| 226.91 | 321 | 227.1 | 321.05 | 227.58 | 321.12 | 228.16 | 321.16 | 228.72 | 321.19 |
| 228.86 | 321.19 | 229.19 | 321.21 | 229.71 | 321.2 | 229.98 | 321.18 | 230.07 | 321.14 |
| 231.06 | 321.14 | 231.42 | 321.13 | 232.03 | 321.13 | 232.14 | 321.14 | 232.82 | 321.18 |
| 233.22 | 321.21 | 233.86 | 321.24 | 235.54 | 321.31 | 236.31 | 321.31 | 236.76 | 321.26 |
| 236.84 | 321.26 | 238.1 | 321.22 | 239.08 | 321.2 | 239.3 | 321.2 | 241.43 | 321.28 |
| 246.39 | 321.47 | 249.35 | 321.58 | 249.35 | 321.61 | 249.8 | 321.67 | 250.76 | 321.69 |
| 252.39 | 321.68 | 255.86 | 321.67 | 256.99 | 321.67 | 260 | 321.66 | 260.6 | 321.66 |
| 263.25 | 321.64 | 264.42 | 321.62 | 265.13 | 321.59 | 269.29 | 321.42 | 269.64 | 321.41 |
| 270.32 | 321.4 | 271.51 | 321.41 | 273.85 | 321.44 | 275.33 | 321.47 | 277.62 | 321.5 |
| 277.8 | 321.5 | 279.84 | 321.55 | 281.97 | 321.61 | 285.93 | 321.74 | 289.91 | 321.85 |
| 290.07 | 321.85 | 291.28 | 321.88 | 294.19 | 321.94 | 295.71 | 321.98 | 296.37 | 321.98 |
| 296.83 | 321.97 | 296.98 | 321.96 | 297.98 | 321.93 | 299.15 | 321.91 | 300.98 | 321.9 |
| 302.01 | 321.92 | 306.67 | 322.02 | 308.2 | 322.04 | 311.85 | 322.1 | 317.37 | 322.19 |
| 320.98 | 322.26 | 321.98 | 322.28 | 327.12 | 322.37 | 328.17 | 322.39 | 330.91 | 322.44 |
| 331.87 | 322.46 | 335.13 | 322.52 | 335.54 | 322.52 | 335.56 | 322.53 | 335.83 | 322.53 |
| 338.29 | 322.56 | 338.48 | 322.56 | 338.73 | 322.53 | 341.2 | 322.52 | 343.12 | 322.52 |
| 346.58 | 322.46 | 349.18 | 322.54 | 353.59 | 322.7 | 355.62 | 322.76 | 357.21 | 322.82 |
| 359.34 | 322.92 | 360.47 | 322.98 | 362.91 | 323.06 | 365.45 | 323.14 | 366.79 | 323.16 |
| 369.64 | 323.2 | 369.87 | 323.2 | 370.97 | 323.22 | 373.41 | 323.27 | 374.93 | 323.29 |
| 375.96 | 323.31 | 376.38 | 323.33 | 376.69 | 323.33 | 377.1 | 323.34 | 377.53 | 323.36 |
| 377.74 | 323.35 | 378.85 | 323.33 | 379.52 | 323.32 | 380 | 323.33 | 382.41 | 323.33 |
| 384.14 | 323.31 | 384.35 | 323.31 | 385.22 | 323.27 | 386.64 | 323.25 | 387.7 | 323.2 |
| 389.91 | 323.09 | 390.38 | 323.06 | 394.75 | 322.84 | 396.5 | 322.76 | 397.64 | 322.7 |
| 398.13 | 322.67 | 398.71 | 322.64 | 399.15 | 322.61 | 399.85 | 322.5 | 400.83 | 322.34 |
| 401.34 | 322.25 | 401.98 | 322.15 | 402.13 | 322.12 | 402.3 | 321.95 | 403.45 | 321.93 |
| 403.61 | 321.93 | 405.06 | 321.9 | 405.66 | 321.9 | 405.93 | 321.92 | 406.34 | 321.94 |
| 406.88 | 321.96 | 407.53 | 322 | 407.9 | 322.01 | 408.48 | 322.04 | 408.99 | 322.06 |
| 411.16 | 322.15 | 412.28 | 322.2 | 413.72 | 322.26 | 416.43 | 322.39 | 417.7 | 322.46 |
| 418.77 | 322.5 | 418.84 | 322.51 | 419.82 | 322.55 | 420.63 | 322.59 | 420.72 | 322.59 |
| 421.58 | 322.64 | 423.07 | 322.72 | 424.7 | 322.71 | 427.43 | 322.7 | 427.98 | 322.69 |
| 433.55 | 322.65 | 439.5 | 322.6 | 441.32 | 322.59 | 443.79 | 322.56 | 445.09 | 322.55 |
| 455.22 | 322.55 | 455.67 | 322.58 | 456.34 | 322.62 | 456.85 | 322.6 | 458.05 | 322.58 |
| 459.22 | 322.55 | 468.26 | 322.55 | 469.75 | 322.54 | 473.62 | 322.54 | 476.46 | 322.53 |
| 487.87 | 322.53 | 490.26 | 322.19 | 491.89 | 321.94 | 492.4 | 321.83 | 492.44 | 321.8 |
| 493.08 | 321.78 | 493.63 | 321.77 | 493.7 | 321.8 | 494.13 | 321.84 | 494.66 | 321.9 |
| 494.94 | 321.94 | 497.83 | 322.53 | 501.14 | 322.63 | 501.92 | 322.65 | 503.27 | 322.66 |
| 509.32 | 322.69 | 511.4 | 322.69 | 512.42 | 322.67 | 516.38 | 322.58 | 517.75 | 322.55 |
| 520.94 | 322.51 | 521.42 | 322.5 | 522.23 | 322.49 | 524.92 | 322.49 | 526.1 | 322.51 |
| 527.72 | 322.53 | 530.89 | 322.56 | 532.15 | 322.57 | 533.28 | 322.57 | 534.95 | 322.58 |
| 535.88 | 322.59 | 541.77 | 322.61 | 541.9 | 322.61 | 547.76 | 322.63 | 549.42 | 322.63 |
| 557.66 | 322.61 | 559.36 | 322.61 | 560.48 | 322.6 | 561.32 | 322.6 | 561.62 | 322.61 |
| 562.32 | 322.61 | 562.64 | 322.6 | 563.27 | 322.6 | 564.43 | 322.58 | 565.15 | 322.53 |
| 565.23 | 322.49 | 565.43 | 322.47 | 565.6 | 322.43 | 566.83 | 322.5 | 567.78 | 322.57 |
| 567.91 | 322.59 | 570.09 | 322.69 | 570.58 | 322.72 | 571.18 | 322.74 | 576.1 | 322.84 |
| 577.13 | 322.86 | 578.04 | 322.89 | 582.48 | 322.9 | 586.43 | 322.89 | 587.1 | 322.89 |
| 587.35 | 322.88 | 588.43 | 322.89 | 590.11 | 322.91 | 590.52 | 322.91 | 590.91 | 322.92 |
| 591.24 | 322.92 | 591.85 | 322.94 | 594.15 | 323 | 596.43 | 323.08 | 597.06 | 323.11 |
| 597.51 | 323.14 | 597.99 | 323.16 | 598.24 | 323.16 | 598.6 | 323.15 | 599.54 | 323.14 |
| 599.86 | 323.13 | 602.11 | 323.13 | 602.45 | 323.12 | 603.24 | 323.09 | 603.93 | 323.05 |
| 605.09 | 323.05 | 605.39 | 323.04 | 606.26 | 323.04 | 608.4 | 323.01 | 609.38 | 323.01 |
| 609.76 | 323 | 610.44 | 323.01 | 610.94 | 323.01 | 611.59 | 323.02 | 612.19 | 323.02 |
| 612.53 | 323.03 | 612.88 | 323.03 | 613.96 | 323.04 | 614.15 | 323.05 | 616.33 | 323.05 |
| 617.93 | 323.07 | 619.24 | 323.07 | 619.63 | 323.06 | 620.67 | 323.08 | 621.01 | 323.09 |
| 621.62 | 323.1 | 621.76 | 323.11 | 622.38 | 323.11 | 622.78 | 323.12 | 623.8 | 323.11 |
| 624.68 | 323.14 | 625.07 | 323.14 | 626.39 | 323.13 | 628.39 | 323.13 | 628.99 | 323.14 |
| 629.95 | 323.18 | 630.31 | 323.2 | 631.31 | 323.27 | 631.77 | 323.28 | 632.07 | 323.3 |
| 633.15 | 323.3 | 633.49 | 323.31 | 634.66 | 323.32 | 635.05 | 323.33 | 635.7 | 323.33 |
| 636.67 | 323.35 | 638.47 | 323.38 | 638.81 | 323.39 | 640.69 | 323.39 | 644.79 | 323.43 |
| 645.69 | 323.43 | 646.52 | 323.44 | 646.78 | 323.44 | 649.11 | 323.48 | 649.26 | 323.48 |
| 651.15 | 323.51 | 651.38 | 323.51 | 651.56 | 323.52 | 652.78 | 323.52 | 654.84 | 323.5 |
| 655.02 | 323.49 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 79.3 | .04 | 597.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 79.3 | 597.51 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 565.980*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.79 | .53 | 330.73 | 1.24 | 330.63 | 1.39 | 330.62 | 1.99 | 330.54 |
| 2.78 | 330.45 | 2.91 | 330.44 | 3.5 | 330.37 | 3.72 | 330.35 | 3.81 | 330.32 |
| 4.09 | 330.26 | 4.38 | 330.21 | 4.44 | 330.19 | 4.99 | 330.12 | 5.28 | 330.09 |
| 5.78 | 330.03 | 5.83 | 330.03 | 6.26 | 329.97 | 7.8 | 329.62 | 8.83 | 329.4 |
| 8.96 | 329.36 | 9.88 | 329.32 | 10.24 | 329.3 | 10.9 | 329.25 | 12.45 | 329.21 |
| 12.62 | 329.2 | 12.99 | 329.23 | 13.3 | 329.24 | 14.01 | 329.3 | 14.24 | 329.33 |
| 15.52 | 329.46 | 15.99 | 329.5 | 16.29 | 329.52 | 16.77 | 329.54 | 17.72 | 329.6 |
| 17.91 | 329.62 | 18.33 | 329.62 | 19.94 | 329.68 | 20.16 | 329.69 | 20.66 | 329.73 |
| 21.47 | 329.78 | 23.17 | 329.86 | 23.71 | 329.89 | 23.86 | 329.89 | 24.45 | 329.92 |
| 24.72 | 329.92 | 25.32 | 329.93 | 26.96 | 329.97 | 27.53 | 329.99 | 27.66 | 329.99 |
| 28.22 | 330.02 | 28.32 | 330.02 | 29.31 | 330.06 | 30.78 | 330.13 | 31.23 | 330.16 |
| 31.74 | 330.16 | 32.41 | 330.21 | 32.6 | 330.22 | 32.92 | 330.25 | 33.59 | 330.3 |
| 34.22 | 330.33 | 34.77 | 330.36 | 34.79 | 330.35 | 35.06 | 330.36 | 35.59 | 330.31 |
| 36.06 | 330.3 | 36.27 | 330.29 | 37.52 | 330.29 | 37.91 | 330.27 | 38.24 | 330.27 |
| 38.26 | 330.26 | 39.67 | 330.21 | 40.34 | 330.17 | 41.27 | 330.07 | 41.44 | 330.06 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 42.35 | 329.96 | 43.23 | 329.88 | 44.89 | 329.67 | 45.11 | 329.65 | 45.65 | 329.59 |
| 45.94 | 329.55 | 46.36 | 329.51 | 48.12 | 329.31 | 48.61 | 329.26 | 48.97 | 329.23 |
| 49.35 | 329.18 | 50.04 | 329.11 | 51.28 | 328.98 | 51.77 | 328.92 | 52.02 | 328.9 |
| 52.38 | 328.85 | 52.81 | 328.8 | 53.15 | 328.77 | 54.46 | 328.61 | 56.3 | 328.39 |
| 56.93 | 328.27 | 57.31 | 328.19 | 58.3 | 327.99 | 58.78 | 327.94 | 60.29 | 327.76 |
| 60.46 | 327.75 | 61.14 | 327.68 | 61.42 | 327.69 | 61.7 | 327.71 | 62.51 | 327.75 |
| 63.59 | 327.8 | 64.33 | 327.84 | 64.89 | 327.91 | 65.74 | 328 | 66.1 | 328.01 |
| 70.26 | 328.18 | 70.84 | 328.16 | 73.51 | 328 | 75.04 | 327.85 | 75.49 | 327.85 |
| 75.91 | 327.83 | 76.14 | 327.8 | 76.87 | 327.72 | 77.81 | 327.61 | 78.49 | 327.52 |
| 81.6 | 327.05 | 85.39 | 326.48 | 86.3 | 326.36 | 88.06 | 326.1 | 91.48 | 325.87 |
| 92.85 | 325.8 | 95.79 | 325.66 | 97.38 | 325.56 | 99.49 | 325.44 | 100.21 | 325.39 |
| 101.53 | 325.32 | 102.36 | 325.28 | 104.61 | 325.11 | 111.72 | 324.68 | 114.92 | 324.49 |
| 114.96 | 324.49 | 118.27 | 324.24 | 119.49 | 324.15 | 121.93 | 323.93 | 122.43 | 323.91 |
| 124.55 | 323.77 | 124.88 | 323.76 | 126.71 | 323.69 | 127.62 | 323.64 | 129.5 | 323.52 |
| 129.57 | 323.51 | 134.88 | 323.19 | 138.68 | 322.94 | 140.18 | 322.92 | 146.58 | 322.62 |
| 150.68 | 322.62 | 151.6 | 322.6 | 154.05 | 322.52 | 155.62 | 322.47 | 159.53 | 322.34 |
| 160.93 | 322.3 | 163.03 | 322.25 | 163.6 | 322.22 | 165.13 | 322.15 | 166.99 | 322.06 |
| 167.17 | 322.05 | 167.88 | 322.06 | 168.91 | 322.06 | 169.75 | 322.04 | 170.72 | 322.01 |
| 171.5 | 321.98 | 177.37 | 321.82 | 182.93 | 321.64 | 190.05 | 321.42 | 190.99 | 321.39 |
| 194.29 | 321.28 | 194.54 | 321.27 | 194.79 | 321.27 | 199.13 | 321.16 | 203.04 | 321.1 |
| 205.33 | 321.08 | 209.14 | 321.05 | 209.95 | 321.04 | 210.68 | 321.04 | 212.45 | 321.01 |
| 213.16 | 321 | 213.62 | 320.93 | 214 | 320.81 | 214.49 | 320.81 | 215.45 | 320.77 |
| 216.7 | 320.73 | 217.4 | 320.71 | 217.76 | 320.69 | 218.36 | 320.64 | 218.69 | 320.62 |
| 218.98 | 320.61 | 219.05 | 320.62 | 219.06 | 320.7 | 219.25 | 320.75 | 219.74 | 320.83 |
| 220.35 | 320.86 | 220.68 | 320.89 | 220.93 | 320.89 | 221.41 | 320.91 | 221.95 | 320.9 |
| 222.23 | 320.89 | 222.32 | 320.85 | 222.63 | 320.84 | 224.46 | 320.84 | 225.16 | 320.89 |
| 227.49 | 321 | 227.98 | 321.02 | 228.77 | 321.02 | 229.23 | 320.96 | 229.32 | 320.96 |
| 230.62 | 320.93 | 231.63 | 320.9 | 231.86 | 320.9 | 234.06 | 320.98 | 237.04 | 321.09 |
| 239.18 | 321.18 | 242.24 | 321.29 | 242.25 | 321.32 | 242.72 | 321.39 | 243.71 | 321.4 |
| 245.39 | 321.39 | 248.97 | 321.38 | 250.15 | 321.38 | 253.25 | 321.36 | 253.88 | 321.36 |
| 255.23 | 321.35 | 256.62 | 321.33 | 257.83 | 321.31 | 262.85 | 321.1 | 263.22 | 321.09 |
| 263.92 | 321.08 | 265.15 | 321.09 | 267.57 | 321.12 | 271.46 | 321.17 | 271.66 | 321.17 |
| 273.76 | 321.22 | 275.96 | 321.28 | 280.06 | 321.41 | 281.16 | 321.45 | 284.17 | 321.53 |
| 284.34 | 321.53 | 285.58 | 321.56 | 288.59 | 321.63 | 290.17 | 321.66 | 290.85 | 321.66 |
| 291.32 | 321.65 | 291.47 | 321.64 | 292.51 | 321.62 | 293.72 | 321.6 | 295.61 | 321.59 |
| 296.67 | 321.61 | 301.02 | 321.71 | 301.49 | 321.71 | 302.18 | 321.73 | 303.07 | 321.74 |
| 306.85 | 321.81 | 312.55 | 321.91 | 316.28 | 321.98 | 317.31 | 322 | 320.24 | 322.05 |
| 322.63 | 322.1 | 323.71 | 322.12 | 326.55 | 322.17 | 327.53 | 322.19 | 330.9 | 322.25 |
| 331.33 | 322.25 | 331.35 | 322.26 | 331.63 | 322.26 | 334.17 | 322.3 | 334.36 | 322.3 |
| 334.62 | 322.26 | 339.17 | 322.26 | 342.74 | 322.19 | 345.42 | 322.27 | 349.99 | 322.43 |
| 352.08 | 322.49 | 353.72 | 322.56 | 355.05 | 322.62 | 355.93 | 322.67 | 357.09 | 322.72 |
| 359.61 | 322.81 | 362.24 | 322.89 | 363.62 | 322.91 | 366.58 | 322.95 | 366.81 | 322.95 |
| 367.94 | 322.97 | 370.47 | 323.02 | 372.04 | 323.04 | 373.11 | 323.06 | 373.54 | 323.08 |
| 373.86 | 323.08 | 374.29 | 323.09 | 374.72 | 323.11 | 374.95 | 323.1 | 376.09 | 323.07 |
| 377.28 | 323.07 | 377.9 | 323.08 | 378.65 | 323.07 | 379.77 | 323.07 | 381.56 | 323.05 |
| 381.77 | 323.05 | 382.67 | 323 | 384.15 | 322.98 | 385.24 | 322.93 | 386.49 | 322.86 |
| 387.52 | 322.81 | 388 | 322.79 | 389.45 | 322.71 | 392.53 | 322.55 | 394.33 | 322.46 |
| 395.51 | 322.39 | 395.85 | 322.38 | 396.62 | 322.34 | 397.08 | 322.31 | 397.79 | 322.19 |
| 398.81 | 322.01 | 399.16 | 321.96 | 399.48 | 321.9 | 400 | 321.82 | 400.16 | 321.78 |
| 400.33 | 321.6 | 401.52 | 321.59 | 401.68 | 321.58 | 403.18 | 321.56 | 403.8 | 321.56 |
| 404.08 | 321.57 | 404.5 | 321.6 | 405.06 | 321.62 | 405.73 | 321.66 | 406.12 | 321.67 |
| 406.72 | 321.7 | 407.25 | 321.72 | 409.48 | 321.82 | 410.43 | 321.87 | 412.13 | 321.95 |
| 414.94 | 322.09 | 417.35 | 322.2 | 417.42 | 322.21 | 418.43 | 322.25 | 419.28 | 322.29 |
| 419.37 | 322.3 | 420.26 | 322.35 | 421.79 | 322.44 | 423.48 | 322.43 | 426.3 | 322.41 |
| 426.87 | 322.41 | 432.62 | 322.37 | 438.78 | 322.32 | 440.66 | 322.31 | 444.56 | 322.28 |
| 455.03 | 322.28 | 455.49 | 322.3 | 456.18 | 322.34 | 456.71 | 322.32 | 457.95 | 322.3 |
| 458.75 | 322.29 | 459.16 | 322.28 | 462.73 | 322.28 | 465.07 | 322.27 | 476.97 | 322.27 |
| 479.11 | 322.26 | 488.77 | 322.26 | 491.24 | 321.9 | 492.93 | 321.64 | 493.45 | 321.52 |
| 493.5 | 321.5 | 494.16 | 321.48 | 494.32 | 321.47 | 494.72 | 321.47 | 494.8 | 321.5 |
| 495.04 | 321.51 | 495.24 | 321.53 | 495.78 | 321.6 | 496.07 | 321.65 | 499.07 | 322.26 |
| 501.1 | 322.33 | 502.49 | 322.37 | 503.29 | 322.39 | 504.68 | 322.4 | 510.94 | 322.43 |
| 512.19 | 322.43 | 513.09 | 322.42 | 514.15 | 322.4 | 518.23 | 322.31 | 519.63 | 322.27 |
| 522.95 | 322.23 | 523.45 | 322.22 | 525.25 | 322.2 | 527.06 | 322.2 | 528.28 | 322.22 |
| 533.23 | 322.28 | 534.54 | 322.28 | 535.71 | 322.29 | 537.43 | 322.29 | 538.39 | 322.3 |
| 544.48 | 322.32 | 550.67 | 322.33 | 556.69 | 322.33 | 560.9 | 322.32 | 561.26 | 322.32 |
| 562.66 | 322.31 | 563.99 | 322.31 | 564.68 | 322.32 | 565.71 | 322.32 | 566.05 | 322.31 |
| 566.7 | 322.31 | 567.9 | 322.29 | 568.64 | 322.23 | 568.73 | 322.2 | 568.93 | 322.17 |
| 569.1 | 322.13 | 570.38 | 322.2 | 571.36 | 322.27 | 571.5 | 322.29 | 573.74 | 322.4 |
| 574.26 | 322.43 | 574.88 | 322.45 | 579.96 | 322.56 | 581.03 | 322.58 | 581.97 | 322.61 |
| 586.56 | 322.61 | 590.63 | 322.6 | 591.33 | 322.59 | 592.7 | 322.59 | 594.44 | 322.61 |
| 594.87 | 322.61 | 595.61 | 322.63 | 596.23 | 322.64 | 598.62 | 322.71 | 599.81 | 322.74 |
| 600.97 | 322.78 | 602.08 | 322.85 | 602.52 | 322.87 | 603.76 | 322.85 | 603.92 | 322.84 |
| 604.21 | 322.84 | 604.29 | 322.83 | 606.04 | 322.83 | 606.24 | 322.84 | 606.55 | 322.82 |
| 607.26 | 322.79 | 607.88 | 322.75 | 608.86 | 322.74 | 609.55 | 322.74 | 609.99 | 322.73 |
| 612.81 | 322.7 | 613.15 | 322.7 | 613.76 | 322.71 | 614.93 | 322.71 | 615.01 | 322.72 |
| 615.65 | 322.72 | 615.85 | 322.73 | 616.94 | 322.73 | 617.11 | 322.74 | 618.79 | 322.74 |
| 619.09 | 322.73 | 620.53 | 322.75 | 621.29 | 322.75 | 621.63 | 322.76 | 621.72 | 322.75 |
| 622.07 | 322.75 | 623.01 | 322.77 | 623.31 | 322.77 | 624.07 | 322.78 | 624.37 | 322.79 |
| 624.91 | 322.79 | 625.83 | 322.78 | 626.62 | 322.8 | 626.97 | 322.8 | 628.17 | 322.79 |
| 628.82 | 322.79 | 629.61 | 322.78 | 630.52 | 322.78 | 631.39 | 322.82 | 632.79 | 322.91 |
| 633.3 | 322.93 | 635.99 | 322.93 | 636.58 | 322.94 | 637.34 | 322.94 | 637.46 | 322.95 |
| 639.08 | 322.97 | 641.09 | 322.97 | 644.79 | 322.99 | 645.6 | 322.99 | 646.35 | 323 |
| 646.59 | 323 | 647.5 | 323.01 | 647.6 | 323.02 | 648.1 | 323.02 | 648.69 | 323.03 |
| 648.83 | 323.04 | 650.53 | 323.07 | 650.9 | 323.08 | 652.01 | 323.08 | 653.87 | 323.05 |
| 654.02 | 323.05 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 66.1 | .04 | 602.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 66.1 | 602.08 | 20.31 | 19.05 | 18.89 | .1 | .3 |

CROSS SECTION

RIVER: WASH75
REACH: WASH75 RS: 546.93

INPUT
Description:
Station Elevation Data num= 380

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.44 | 2.890015 | 330.01 | 2.980042 | 330 | 3.050049 | 329.97 | 3.550049 | 329.84 |
| 5.01001 | 329.67 | 1.170044 | 329 | 8.610046 | 328.99 | 8.720032 | 328.99 | 9.390015 | 328.99 |
| 10.08002 | 329 | 18.81006 | 329.82 | 19.41003 | 329.87 | 19.57001 | 329.88 | 19.78003 | 329.89 |

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20.26001  329.9122.03003     33022.14001  330.0124.99005  330.2125.40002  330.21
   26.88  330.3528.06006  330.44   28.13  330.4328.48004   330.430.46002  330.35
   31.75  330.3132.28003  330.27   32.75  330.2233.89001  330.0834.60004     330
36.10004  329.7741.43005     32945.06006  328.4346.66003     328   48.25  327.75
   48.94  327.6651.46002  327.8352.61005     32852.90002  328.0157.20001  328.19
57.80005  328.1760.57001     32862.15002  327.8462.40002  327.8462.62006  327.84
62.83002  327.8363.05005  327.8263.29004  327.7964.05005   327.765.02002  327.59
65.72003  327.49   68.94     32772.86005   326.4   75.63     32679.17004  325.77
80.58002   325.7   83.63  325.5685.27002  325.4687.46002  325.3488.20001  325.29
90.43005  325.1792.76001     325103.4301  324.35  108.15     324110.6801  323.77
   111.2  323.75  113.39   323.6  115.63  323.52  116.57  323.47  118.51  323.34
  124.08     323  128.02  322.74   128.7  322.73  129.57  322.72  136.19   322.4
140.8701   322.4  153.22  322.01  153.47     322   157.5   321.8  158.24  321.81
  158.72  321.81  159.21  321.81  159.68   321.8  160.17  321.79  161.98  321.73
  168.06  321.56  185.57     321  185.83  320.99  185.86  320.99  190.58  320.87
  194.62  320.81  202.45  320.75  202.53  320.75   205.1  320.71  205.57  320.64
  205.79  320.57  205.97  320.51  206.48  320.51  206.77   320.5  206.93  320.49
  207.47  320.47  208.76  320.43  209.49  320.41  209.86  320.39  210.82  320.31
  210.99  320.31  211.12   320.3  211.19  320.31   211.2   320.4   211.4  320.45
  211.91  320.53  212.88  320.59  213.63  320.62  214.19  320.61  214.48  320.59
  214.57  320.55  215.63  320.54  216.66  320.54  217.93  320.62  219.96  320.71
  220.41  320.73  221.23  320.73  221.71  320.67  223.14  320.63  224.42   320.6
  235.14     321  235.15  321.03  235.63   321.1  236.65  321.11  238.39   321.1
   243.3  321.08  247.15  321.06  249.98  321.03  251.23     321  251.98  320.97
   256.8  320.76  257.52  320.75  258.79  320.76  262.87  320.81  265.31  320.84
  267.68  320.89  271.21  320.99  271.56     321  274.18  321.09  278.43  321.21
   278.6  321.21  284.62  321.35  284.97  321.35  285.32  321.35  285.81  321.34
  285.97  321.33  285.97  321.32  288.29  321.28  290.24  321.27  295.83   321.4
  296.31  321.41  297.94  321.44  326.68  321.99  326.98  321.99  327.12  321.99
  327.14     322  327.15     322  327.16     322  327.18     322  327.19     322
   327.2     322  327.21     322  327.22     322  327.23     322  327.24     322
  327.28     322   327.3     322  327.43     322  330.05  322.04  330.25  322.04
  330.52     322  335.05  321.99  335.21  321.99   338.9  321.92  341.67     322
  346.38  322.17  348.54  322.23  350.24   322.3  352.52  322.41  353.72  322.47
  356.32  322.56  357.66   322.6  359.03  322.64  360.46  322.66  363.51   322.7
  364.92  322.72  366.48  322.75  367.53  322.77  369.15  322.79  370.25  322.81
   370.7  322.83  371.03  322.83  371.33  322.84  371.47  322.84  371.67  322.85
  371.82  322.85  371.92  322.86  372.01  322.86  372.07  322.86  372.15  322.85
  373.33  322.82  374.05  322.81   375.2  322.82  375.97  322.81  377.13  322.81
  378.98  322.79   379.2  322.79  380.13  322.74  381.65  322.72  394.53  322.03
  394.59  322.02  394.66  322.02  394.81  322.01     395     322  396.79  321.69
  398.02  321.49  398.18  321.45  398.36  321.26  398.42  321.26  399.75  321.24
  401.46  321.21  401.57  321.21  401.73  321.21  401.94  321.21  402.23  321.23
403.2401  321.28  403.43  321.29  403.63   321.3  404.03  321.32   405.5  321.39
  408.79  321.55  413.44  321.78  417.92     322  420.52  322.15   431.7  322.09
  444.02     322  444.87     322  446.01     322  449.46     322  449.75     322
  451.53     322  453.75     322  454.02     322  454.47     322  454.83     322
  455.31  322.03  456.02  322.07  456.57  322.05  457.85  322.03  458.68  322.01
   459.1     322  462.12     322  462.78     322   465.2     322  466.28     322
  466.58     322468.7401     322  470.33     322   470.9     322  472.67     322
  473.21     322  474.46     322477.4901     322   479.7     322  482.55     322
  485.31     322  489.18     322  489.55     322  489.67     322  492.22  321.62
  493.96  321.34   494.5  321.22  494.55  321.19  495.23  321.17  495.81  321.16
  495.82  321.18  495.89  321.19  496.14  321.21  496.35  321.23  496.91   321.3
  497.21  321.35   500.3     322   502.4  322.07  503.83  322.11  504.66  322.13
   506.1  322.14  508.22  322.15512.5601  322.17  513.85  322.17  514.78  322.16
  515.87  322.14  521.53     322  521.55     322  525.47  321.94  526.33  321.93
  527.33  321.92  528.38  321.92   529.2  321.92  530.46  321.94532.1901  321.96
  535.57  321.99  538.13     322   540.9  322.01547.1901  322.03  547.32  322.03
  553.58  322.04  567.33  322.02  568.37  322.03  569.11  322.03  570.13  322.02
  571.27     322  571.37     322  572.13  321.94  572.22   321.9572.4301  321.87
  572.61  321.83573.9301   321.9574.9401  321.98  575.08     322   577.4  322.11
577.9301  322.14  578.57  322.16  583.82  322.27  584.92  322.29  585.89  322.32
  590.63  322.32595.5601   322.3  595.82  322.29  598.77  322.31  599.21  322.31
599.6201  322.32600.6201  322.34  603.08  322.41604.3101  322.45  605.51  322.49
  606.19  322.53  606.28  322.54  606.66  322.56606.6801  322.56  607.05  322.58
  607.54  322.57   608.3  322.55  608.63  322.54  609.02  322.54  609.46  322.54
  610.19  322.54610.3701  322.54  611.28  322.49  611.84  322.45  612.71  322.44
  616.54   322.4620.5601  322.43  621.84  322.42   624.5  322.44  625.34  322.45
  626.29  322.46  627.04  322.46  627.86  322.45  628.57  322.47  632.05  322.43
  632.82  322.46  633.92  322.54  634.53  322.56   635.4  322.55636.6201  322.54
  638.14  322.54  639.69  322.56  641.48  322.55  645.51  322.54  647.21  322.57
   650.1  322.63650.2401  322.64650.7401  322.64  651.23  322.64  653.03  322.61

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .0552.90002     .04  606.66     .05

Bank Sta: Left   Right    Coeff Contr.   Expan.
      52.90002  606.66             .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 9177.14

INPUT
Description:
Station Elevation Data    num=     457
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  412.252.719971  412.35 3.76001  412.357.659973  412.4712.90002   412.6
13.78998   412.614.96002  412.6315.73999  412.66   16.62  412.69   17.94  412.74
   18.31  412.7518.79999  412.7620.29999  412.7621.39001  412.7424.27997  412.68
25.09998  412.6529.15997  412.4935.15002  412.2840.47998  412.11   44.31     412
45.21997  411.9848.40002  411.9457.64001  411.88      60  411.87   61.44  411.87
62.21997  411.8864.35999  411.9267.95001     41279.28998  412.3296.40002  412.93
98.47998     413   100.3  413.05  100.37  413.05  110.66  413.27  114.79  413.34
  116.15  413.35  117.47  413.34   125.1  413.25  128.06   413.2  130.01  413.16
  131.04  413.12  142.73  412.23  143.45  412.19  144.45  412.13  144.85  412.11
  145.13   412.1  145.49   412.1  145.78  412.12  146.54     412  146.96  411.96
  148.52  411.89  150.13  411.83   150.6  411.78   151.8  411.65  153.46  411.51
  156.65  411.07  157.12     411  158.56  410.91  166.02  410.41  172.48     410
  173.07  409.83  176.42     409  178.95     409  180.42  409.49  182.36     410
  185.72  410.36  189.14  410.62  193.22  410.94  193.94     411  195.84  411.08
   197.1  411.13  198.84  411.18  203.46   411.3  206.01  411.35  206.91  411.38
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 208.94 | 411.47 | 210.48 | 411.51 | 220.46 | 411.43 | 220.61 | 411.42 | 222.13 | 411.36 |
| 222.38 | 411.31 | 222.67 | 411.26 | 222.88 | 411.23 | 223.14 | 411.22 | 223.87 | 411.23 |
| 224.88 | 411.25 | 225.05 | 411.25 | 225.79 | 411.2 | 226.19 | 411.18 | 226.47 | 411.18 |
| 226.75 | 411.17 | 227.07 | 411.16 | 228.08 | 411.11 | 229.41 | 411.11 | 229.66 | 411.15 |
| 229.87 | 411.17 | 230.14 | 411.18 | 231.22 | 411.23 | 231.52 | 411.24 | 232.17 | 411.27 |
| 232.88 | 411.31 | 234.09 | 411.37 | 235.27 | 411.41 | 235.76 | 411.42 | 236.53 | 411.42 |
| 236.96 | 411.41 | 237.76 | 411.39 | 238.09 | 411.38 | 238.74 | 411.38 | 239 | 411.39 |
| 240.84 | 411.36 | 245.19 | 411.32 | 248.78 | 411.44 | 249.57 | 411.46 | 251.7 | 411.51 |
| 253.11 | 411.54 | 256.67 | 411.6 | 257.25 | 411.6 | 258.56 | 411.61 | 259.35 | 411.62 |
| 260.5 | 411.62 | 260.62 | 411.6 | 260.82 | 411.59 | 261.18 | 411.6 | 262.14 | 411.61 |
| 263.25 | 411.61 | 264.07 | 411.6 | 265.22 | 411.58 | 269.54 | 411.49 | 270.31 | 411.48 |
| 271.24 | 411.48 | 271.47 | 411.49 | 272.26 | 411.49 | 277.83 | 411.51 | 279.2 | 411.51 |
| 280.02 | 411.46 | 280.55 | 411.42 | 282.55 | 411.31 | 283.04 | 411.3 | 287.45 | 411.28 |
| 287.91 | 411.27 | 288.66 | 411.26 | 289.75 | 411.26 | 290.09 | 411.28 | 290.4 | 411.29 |
| 291.2 | 411.29 | 292.78 | 411.27 | 295.06 | 411.23 | 297.82 | 411.17 | 300.76 | 411.1 |
| 304.67 | 411 | 305.5 | 410.97 | 306.63 | 410.92 | 309.07 | 410.68 | 309.91 | 410.62 |
| 310.28 | 410.61 | 311.05 | 410.61 | 311.86 | 410.64 | 312.62 | 410.7 | 313.89 | 410.83 |
| 315.32 | 411 | 315.43 | 411.01 | 320.68 | 411.38 | 321.43 | 411.42 | 322.12 | 411.44 |
| 323.25 | 411.48 | 323.58 | 411.49 | 324.03 | 411.53 | 324.61 | 411.53 | 326.04 | 411.37 |
| 326.31 | 411.28 | 326.79 | 411.19 | 326.81 | 411.12 | 327.4 | 411.07 | 328.4 | 411.05 |
| 329.04 | 411.05 | 331.02 | 411.2 | 332.47 | 411.29 | 333.47 | 411.32 | 334.92 | 411.35 |
| 339.21 | 411.35 | 341.16 | 411.34 | 342.36 | 411.33 | 342.95 | 411.31 | 343.68 | 411.24 |
| 345.55 | 411 | 352.48 | 410.58 | 358.04 | 410.26 | 362.39 | 410 | 366.15 | 409.54 |
| 370.36 | 409 | 371.25 | 409 | 373.04 | 408.99 | 374.32 | 408.99 | 377.23 | 409 |
| 380.96 | 409.62 | 383.08 | 410 | 386.49 | 410.15 | 388.05 | 410.24 | 392.92 | 410.43 |
| 394.99 | 410.46 | 396.17 | 410.47 | 398.82 | 410.47 | 404.51 | 410.46 | 406.66 | 410.46 |
| 410.69 | 410.42 | 412.29 | 410.4 | 413.35 | 410.39 | 414.24 | 410.36 | 414.58 | 410.25 |
| 415.14 | 410.18 | 416.39 | 410.11 | 417.78 | 410.07 | 419.3 | 410.03 | 419.41 | 410.03 |
| 420.21 | 410.02 | 420.92 | 410.02 | 420.97 | 410.03 | 421.94 | 410.03 | 425.29 | 410.09 |
| 426.28 | 410.1 | 427.2 | 410.1 | 428.06 | 410.08 | 428.87 | 410.05 | 429.81 | 410 |
| 431.53 | 410 | 434.24 | 409.99 | 435.26 | 409.99 | 437.92 | 410 | 444.23 | 410.12 |
| 451.58 | 410.24 | 456.36 | 410.27 | 461.12 | 410.28 | 461.84 | 410.29 | 463.14 | 410.3 |
| 464.27 | 410.32 | 465.1 | 410.36 | 465.54 | 410.38 | 467.77 | 410.42 | 469.83 | 410.43 |
| 470.28 | 410.42 | 471.22 | 410.39 | 474.02 | 410.35 | 477.29 | 410.32 | 477.95 | 410.31 |
| 478.89 | 410.27 | 480.08 | 410.21 | 480.58 | 410.17 | 481.26 | 410.13 | 482.1 | 410.1 |
| 482.29 | 410.11 | 487.5 | 410.03 | 493.35 | 409.94 | 494.09 | 409.93 | 494.41 | 409.94 |
| 500.26 | 410.11 | 501.4 | 410.14 | 503.38 | 410.18 | 504.54 | 410.19 | 505.85 | 410.19 |
| 507.35 | 410.17 | 508.86 | 410.14 | 510.09 | 410.1 | 510.74 | 410.06 | 511.36 | 410 |
| 514.72 | 409.84 | 520.35 | 409.59 | 523.57 | 409.46 | 525.45 | 409.39 | 526.56 | 409.36 |
| 528.43 | 409.33 | 529.23 | 409.31 | 529.89 | 409.28 | 531.31 | 409.22 | 531.7 | 409.2 |
| 531.86 | 409.19 | 532.05 | 409.19 | 532.55 | 409.2 | 532.71 | 409.2 | 532.82 | 409.21 |
| 533.16 | 409.27 | 533.7 | 409.33 | 534.75 | 409.4 | 534.94 | 409.39 | 535.94 | 409.44 |
| 536.26 | 409.45 | 537.47 | 409.48 | 538.22 | 409.53 | 540.37 | 409.54 | 541.56 | 409.62 |
| 542.64 | 409.65 | 544.58 | 409.76 | 545.7 | 409.81 | 546.11 | 409.82 | 546.63 | 409.82 |
| 546.85 | 409.81 | 547.08 | 409.79 | 547.57 | 409.73 | 548.52 | 409.65 | 549.5 | 409.56 |
| 549.98 | 409.5 | 550.4 | 409.43 | 552.35 | 409 | 553.43 | 408.62 | 555.46 | 408 |
| 555.6 | 407.99 | 556.43 | 407.98 | 557.33 | 408 | 560.5 | 408.34 | 561.1 | 408.38 |
| 561.41 | 408.38 | 561.82 | 408.37 | 564.26 | 408.22 | 567.16 | 408 | 569.18 | 407.59 |
| 570.22 | 407.34 | 570.73 | 407.19 | 571.08 | 407.1 | 571.59 | 407.1 | 571.73 | 407.12 |
| 572.48 | 407.24 | 573.37 | 407.4 | 576.6 | 408 | 589.95 | 408.87 | 590.83 | 408.92 |
| 591.06 | 408.94 | 591.3 | 408.95 | 591.44 | 408.96 | 591.64 | 408.96 | 591.72 | 408.97 |
| 591.78 | 408.96 | 591.89 | 408.95 | 591.95 | 408.94 | 592.08 | 408.94 | 593.14 | 409 |
| 596.29 | 409.07 | 598.71 | 409.11 | 601.08 | 409.12 | 603.34 | 409.1 | 605.54 | 409.04 |
| 607.11 | 409 | 608.64 | 408.93 | 610.01 | 408.91 | 610.79 | 408.89 | 610.99 | 408.89 |
| 611.39 | 408.9 | 611.51 | 408.9 | 611.66 | 408.91 | 611.82 | 408.91 | 612 | 408.9 |
| 612.58 | 408.9 | 612.95 | 408.89 | 613.21 | 408.88 | 614.45 | 408.85 | 615.23 | 408.82 |
| 619.42 | 408.73 | 625.95 | 408.51 | 639.7 | 408 | 640.34 | 407.97 | 642.7 | 407.81 |
| 645.31 | 407.67 | 645.98 | 407.64 | 646.55 | 407.63 | 647.34 | 407.62 | 648.4 | 407.62 |
| 649.61 | 407.61 | 652.09 | 407.61 | 653.31 | 407.62 | 657.43 | 407.68 | 658.82 | 407.68 |
| 660.97 | 407.73 | 662.61 | 407.76 | 663.13 | 407.75 | 664.35 | 407.72 | 664.67 | 407.71 |
| 664.94 | 407.7 | 666.12 | 407.69 | 666.58 | 407.68 | 666.97 | 407.67 | 671.96 | 407.53 |
| 673.57 | 407.48 | 676.64 | 407.37 | 677.64 | 407.35 | 686.06 | 407 | 689.24 | 406.17 |
| 689.58 | 406.07 | 689.64 | 406.05 | 689.75 | 406.05 | 689.88 | 406.08 | 690.31 | 406.15 |
| 690.47 | 406.17 | 690.64 | 406.18 | 690.87 | 406.22 | 691.05 | 406.23 | 691.29 | 406.24 |
| 692.08 | 406.31 | 694.36 | 406.56 | 695.11 | 406.61 | 695.27 | 406.62 | 695.72 | 406.62 |
| 696.1 | 406.6 | 696.4 | 406.56 | 697.57 | 406.33 | 699 | 406.15 | 699.14 | 406.15 |
| 700.49 | 406 | 712.97 | 406 | 723.37 | 407 | 724.44 | 407.26 | 727.51 | 408 |
| 730.61 | 408.58 | 732.51 | 408.95 | 732.74 | 409 | 744.51 | 409.54 | 749.61 | 409.76 |
| 751.42 | 409.83 | 756.32 | 410 | 756.65 | 410.06 | 758.03 | 410.1 | 761.28 | 410.14 |
| 765.35 | 410.17 | 769 | 410.18 | 771.49 | 410.18 | 778.04 | 410.15 | 785.75 | 410.14 |
| 786.08 | 410.14 | 786.23 | 410.13 | 786.47 | 410.09 | 786.73 | 410.08 | 787.4 | 410.08 |
| 788.78 | 410.09 | 790.51 | 410.11 | 791.68 | 410.12 | 795.67 | 410.16 | 796.49 | 410.17 |
| 797.46 | 410.18 | 798.46 | 410.2 | 805.17 | 410.35 | 809.77 | 410.44 | 811.12 | 410.46 |
| 811.92 | 410.47 | 813.18 | 410.49 | 817.12 | 410.51 | 819.06 | 410.53 | 823.76 | 410.54 |
| 825.47 | 410.55 | 832 | 410.6 | 834.7 | 410.61 | 836.28 | 410.62 | 836.64 | 410.62 |
| 838.91 | 410.61 | 839.33 | 410.61 | 839.64 | 410.6 | 839.87 | 410.59 | 840.3 | 410.56 |
| 840.77 | 410.54 | 840.81 | 410.54 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 549.98 | .04 | 744.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 549.98 | 744.51 | 512.4 | 465.6 | 368.5 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 8711.54

INPUT
Description:
Station Elevation Data num= 416

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 405.9.1199951 | | 405.9.3799438 | | 405.89 | 2.5 | 405.84.449951 | | 405.7 |
| 4.909973 | 405.695.469971 | | 405.676.369995 | | 405.6610.02997 | | 405.6612.53998 | | 405.64 |
| 19.97998 | 405.4121.76996 | | 405.38 | 25.87 | 405.2329.47998 | | 405.0931.21997 | | 405 |
| 34.31 | 404.7543.37994 | | 404 | 45.62 | 403.7854.14996 | | 403 | 61.31 | 402.56 |
| 75.52997 | 40276.35999 | | 401.9877.17999 | | 401.9778.00995 | | 401.98 | 78.87 | 401.99 |
| 80.57996 | 40280.60999 | | 402 | 80.62 | 40280.65997 | | 40281.39996 | | 402 |
| 81.40997 | 40281.53998 | | 40282.59998 | | 40282.78998 | | 40283.91998 | | 402 |
| 84.62 | 40284.89996 | | 40285.07996 | | 40286.48999 | | 40291.20996 | | 402.33 |
| 92.62 | 402.4397.96997 | | 402.83 | 100.16 | 403 | 108.05 | 403.8108.5699 | | 403.85 |
| 109 | 403.91 | 109.04 | 403.91 | 109.24 | 403.9109.3799 | | 403.9 | 109.64 | 403.91 |
| 109.89 | 403.92 | 110.22 | 403.93110.2599 | | 403.93 | 112.64 | 403.89 | 113.75 | 403.9 |

```
     115  403.95  115.71     404  118.45  404.18  118.58  404.19   119.4  404.26
  120.03  404.25120.8199  404.29  121.53  404.32  122.62  404.38  124.45   404.5
  131.62     405  136.49  405.55  139.28  405.76  142.78     406  143.78     406
144.7599     406  144.95  406.01146.0099  406.01  149.06  406.22152.0699  406.39
  156.99  406.55  157.66  406.58158.1299  406.59  158.54   406.6158.9399  406.59
162.9399  406.62164.3199  406.62165.5699  406.63  165.74  406.63  166.11  406.65
  166.28  406.65  166.55  406.65   167.6  406.65   168.4  406.64  169.35  406.64
  170.39  406.63  171.43  406.62  172.36  406.61   173.1   406.6  178.53  406.48
   180.2  406.44  184.54  406.32  195.73     406206.5699  405.27  210.94     405
  214.27   404.7  221.79     404  226.51  403.65  235.12     403  237.79  402.28
  239.46     402  241.01  401.62  244.81  401.11  245.57     401  246.04  400.97
  247.44  400.91  249.44  400.93  251.52  400.95  251.82  400.98  251.89     401
  253.42  401.24  258.24     402  261.75  402.24  262.23  402.25  262.54  402.25
  267.51  402.57   268.8  402.63  269.62  402.67  269.95  402.68   270.6  402.69
  271.34  402.72  273.11  402.77  273.28  402.78  273.48   402.8   273.6   402.8
  273.78  402.81  274.04   402.8  274.37  402.79   276.4  402.71  278.58  402.62
  279.26  402.59  290.81  402.86  291.86     403  294.57  403.09   296.1  403.14
     299   403.2  300.27  403.24   301.3  403.28  301.48   403.3  301.61  403.43
  301.75  403.45   302.1  403.47  302.55  403.48  303.27  403.48  306.35  403.51
   307.2  403.52  307.57  403.53  309.57  403.55  311.46  403.56  312.07  403.53
  314.46  403.43  315.66   403.4  316.19  403.38  317.04  403.36  318.41  403.35
  318.94  403.34  319.14  403.34   320.9  403.31   322.5  403.31  322.76  403.32
  323.19  403.32  326.64  403.32  328.45  403.33  330.71  403.34  335.29  403.35
  336.01  403.35  336.74  403.35  337.65  403.36  338.66  403.37  339.63  403.38
  340.46   403.4   342.9  403.44  357.39  403.73  361.49  403.77  362.14  403.78
  362.59  403.79  363.29  403.79  363.63   403.8  364.89  403.85  365.26  403.87
  365.54  403.87   365.8  403.88  365.98  403.88  366.42  403.89  366.76  403.89
  366.82  403.89  367.46  403.88  367.59  403.88   367.7  403.88  368.94  403.88
  369.37  403.88  369.74  403.88  369.99  403.88  370.13  403.88  370.48  403.87
  370.64  403.86   370.8  403.85  371.03  403.84  371.26  403.83  373.63  403.76
  375.04  403.71  375.78  403.69  375.85  403.69  381.96  403.65  384.01  403.64
  384.64  403.63  385.85  403.61  386.42  403.59  386.98   403.6   387.4  403.57
  387.55  403.54  392.08  403.41  395.04  403.35  395.35  403.35  395.63  403.35
  396.34  403.34  396.87  403.32  397.14   403.3   397.2  403.29  398.12  403.27
  398.93  403.26  399.18  403.26  399.29  403.25  400.29  403.24  401.19  403.23
     402  403.23  402.96  403.23  403.83  403.24  404.43  403.24  404.79  403.24
     405  403.23  405.26  403.23  405.38  403.23  405.53  403.23  405.91  403.24
  407.37  403.28  408.28  403.31  408.92  403.35   410.9  403.42  411.33  403.44
  411.43  403.48  411.71   403.5  413.02  403.54   413.7  403.56  416.28  403.62
  419.87  403.71  421.15  403.73  422.54  403.76  423.97  403.79  425.16  403.81
  427.31  403.87  428.68   403.9  428.75   403.9  429.03   403.9  429.32   403.9
  429.35  403.88   429.6  403.86  429.85  403.85  430.09  403.82  431.74  403.73
  432.24  403.75  434.69  403.62  435.81  403.66  436.58  403.67  437.34  403.68
  437.96  403.67  445.51     403  446.04     403  446.56     403  447.14     403
  447.67     403  448.16     403  455.75  403.28  458.41  403.42  461.94  403.57
   470.9     404  473.73   404.1  476.19  404.16  478.49   404.2  480.46  404.22
  481.88  404.23  482.57  404.21482.7599  404.19  482.77  404.11  483.14  404.08
  484.05  404.05  485.61  404.03  487.45  404.03  491.03  404.03  494.79  404.01
  495.79  404.01  496.19     404  497.82  403.97   501.1  403.92  504.46  403.88
  505.79  403.88  506.93  403.88  507.93  403.89  510.66  403.93  512.54  403.97
  513.68     404  513.95  404.03514.5099  404.06  515.46   404.1  516.64  404.14
517.9399  404.17  519.28  404.18  520.61  404.18  521.87  404.17  522.99  404.15
525.0099   404.1528.0099     404  529.11  403.95  530.08   403.9  530.96  403.85
  533.23  403.65  533.87  403.61534.3099   403.6  534.74  403.59  535.12  403.59
  538.15  403.65   538.6  403.68  538.84  403.71  539.11  403.81  539.54  403.88
   540.4  403.96  541.02     404541.5599  404.02   542.7  404.06  543.79  404.08
  548.45     404   548.8     404  549.46     404   550.3     404   551.4     404
  552.33     404  552.98     404   553.7     404  554.46     404554.5699     404
  554.92     404  556.65  403.93  560.17  403.82  565.28  403.64  585.18     403
  591.59  402.65  596.53  402.38  603.04     402  604.63     402  606.24     402
  609.35     402609.4399     402  609.47  402.01  609.48  402.01  609.49  402.01
609.5599  402.01  612.61  402.38617.8099     403  617.92  403.05  619.79     404
  621.48  404.78  621.93     405  622.64  405.34  624.03     406  640.78  406.85
  643.35  406.97  643.79     407  644.45  407.02  645.96  407.07   647.4   407.1
  651.27  407.15  653.79  407.17  655.63  407.18  657.83  407.19  665.61  407.11
  667.68     407  667.97  406.96669.3199  406.88  670.05  406.86   673.3  406.83
  673.46  406.83  676.09  406.94  676.18  406.94   679.6  406.99  679.66  406.99
  681.75  406.93  682.05  406.91  683.31  406.76  684.97  406.54  685.98  406.37
  687.83     406689.5099     406  690.95  405.99  691.28  405.99  691.56  405.99
  692.47  405.99  693.39     406  693.95     406695.7599  406.81  696.39     407
  696.47     407  701.28  407.13   704.6  407.19  705.29  407.22  705.58  407.24
  706.12  407.28  708.36  407.46   708.6  407.48  714.83     408716.0699  408.04
  720.97   408.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  221.79     .04  619.79     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        221.79  619.79           276.24  393.04  658.88             .1       .3
Left Levee      Station=  169.44      Elevation=  406.77

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 8318.51

INPUT
Description:
Station Elevation Data    num=     316
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  401.743.599976  401.5512.83997     40118.17999  400.59   20.56  400.42
26.19995     40026.94995  399.9530.82001  399.7140.51001     39942.07996  398.66
42.44995  398.6445.66998  398.62   48.81  398.6250.09998  398.8650.63995     399
53.17999  399.05   54.94  399.08   56.81   399.1   58.87  399.1163.82996  399.11
64.88995  399.1266.46997  399.12   68.06  399.1269.32996  399.0769.59998     399
70.53998     39971.71997     39971.83997     39972.39996     39974.69995  399.07
   75.38  399.0986.52997  399.4688.84998  399.5390.83997  399.58   91.37  399.59
92.01996  399.5993.03998   399.697.76001  399.6298.77997  399.63  100.51  399.63
  101.51  399.63  103.57  399.67  106.37  399.76  111.52  399.88  112.13  399.91
  112.34  399.91   112.9  399.92   113.1  399.93  114.29  399.95  114.72  399.96
  114.94  399.97  114.98  399.97     115  399.97  115.04  399.97  115.37  399.96
  115.62  399.96  116.79  399.97  117.41  399.96  117.43  399.96  117.44  399.96
  117.48  399.96  117.52  399.96  117.58  399.96  117.67  399.96  117.79  399.96
  118.03  399.96  118.12  399.96   118.2  399.96   118.3  399.96  119.05  399.94
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 119.96 | 399.91 | 121.13 | 399.87 | 123.53 | 399.8 | 129.22 | 399.63 | 134.22 | 399.47 |
| 137 | 399.38 | 137.6 | 399.4 | 138.24 | 399.41 | 138.43 | 399.43 | 138.63 | 399.43 |
| 138.9 | 399.43 | 144.01 | 399.23 | 148.26 | 399.07 | 148.33 | 399.07 | 148.5 | 399.06 |
| 148.61 | 399.06 | 148.96 | 399.05 | 150.03 | 399 | 156.1 | 398.8 | 179.86 | 398 |
| 180.26 | 398 | 181.19 | 398 | 181.29 | 398 | 181.49 | 398 | 181.59 | 398 |
| 181.88 | 398 | 185.91 | 398.01 | 187.98 | 398.01 | 189.01 | 398.01 | 194.3 | 398 |
| 197.18 | 398 | 198.64 | 398 | 201.33 | 398 | 202.78 | 398 | 203.18 | 398 |
| 203.91 | 398 | 204.89 | 397.99 | 204.91 | 397.99 | 204.95 | 397.99 | 204.97 | 397.99 |
| 204.98 | 397.99 | 205.03 | 397.99 | 205.15 | 397.99 | 205.17 | 397.99 | 205.21 | 397.99 |
| 205.25 | 397.99 | 205.31 | 397.99 | 205.37 | 397.99 | 205.45 | 397.99 | 205.65 | 397.98 |
| 205.78 | 397.98 | 205.85 | 397.98 | 206.29 | 397.98 | 206.3 | 397.98 | 206.32 | 397.98 |
| 207.23 | 397.97 | 207.66 | 397.96 | 207.96 | 397.96 | 208.07 | 397.96 | 208.19 | 397.96 |
| 208.22 | 397.96 | 208.28 | 397.96 | 208.41 | 397.95 | 209.06 | 397.95 | 209.18 | 397.95 |
| 209.29 | 397.94 | 210.12 | 397.93 | 210.81 | 397.92 | 211.23 | 397.91 | 228.7 | 397.63 |
| 267.98 | 397.01 | 268.34 | 397 | 271.4 | 397 | 278.75 | 397 | 278.76 | 397 |
| 278.82 | 397 | 279.15 | 397 | 280.52 | 397 | 284.19 | 397 | 285.76 | 397 |
| 286.96 | 397 | 287.57 | 397 | 288.15 | 397 | 288.76 | 397 | 288.9 | 397 |
| 289.12 | 397 | 289.8 | 397 | 289.88 | 397 | 290 | 397 | 291.5 | 397 |
| 291.85 | 397 | 292.47 | 397 | 292.62 | 397 | 292.98 | 396.89 | 296.44 | 396 |
| 297.01 | 395.66 | 300.65 | 395.56 | 303.32 | 395.49 | 305.44 | 395.61 | 307.26 | 395.67 |
| 309.25 | 395.77 | 312.87 | 396 | 314.71 | 396.41 | 316.55 | 396.64 | 317.27 | 396.76 |
| 319.59 | 396.99 | 319.61 | 397 | 319.74 | 397 | 324.51 | 397.04 | 325.67 | 397.04 |
| 328.33 | 397 | 328.94 | 396.97 | 329.06 | 396.95 | 331.64 | 396.72 | 332.8 | 396.38 |
| 333.76 | 396 | 335.8 | 395.5 | 337.63 | 395 | 341.62 | 395 | 342.15 | 395 |
| 347.2 | 395.36 | 352.79 | 395.74 | 355.68 | 396 | 358.46 | 396.2 | 359.03 | 396.23 |
| 365.41 | 396.66 | 373.63 | 397 | 374.87 | 397 | 375.05 | 397 | 375.41 | 397 |
| 376.05 | 397 | 378.29 | 397 | 382.04 | 396.99 | 382.11 | 396.99 | 382.38 | 396.99 |
| 385.76 | 397 | 386.9 | 397 | 387.12 | 397 | 390.97 | 397.1 | 403.6 | 397.42 |
| 419.9 | 397.83 | 422.83 | 397.9 | 423.01 | 397.9 | 423.69 | 397.91 | 424 | 397.91 |
| 424.23 | 397.92 | 424.35 | 397.92 | 424.38 | 397.91 | 424.46 | 397.89 | 424.58 | 397.88 |
| 424.83 | 397.87 | 425 | 397.86 | 427.37 | 398 | 432.58 | 398.01 | 433.02 | 398.01 |
| 433.62 | 398.01 | 435.95 | 398 | 437.96 | 398 | 439.53 | 398 | 443.89 | 397.82 |
| 447.36 | 397.66 | 447.67 | 397.71 | 448.03 | 397.78 | 448.4 | 397.88 | 450.49 | 398 |
| 450.85 | 398 | 450.99 | 398 | 451.15 | 398 | 456.59 | 398 | 457.69 | 398 |
| 466.02 | 398.01 | 468.55 | 398.01 | 473.28 | 398.01 | 479.63 | 398 | 487.45 | 398 |
| 488.09 | 397.95 | 489.82 | 397.84 | 492.6 | 397.62 | 493.22 | 397.58 | 502.18 | 397 |
| 503.17 | 397 | 503.98 | 397 | 504.39 | 397 | 505.62 | 397 | 510.64 | 397.57 |
| 511.97 | 397.69 | 514.81 | 397.95 | 515.26 | 398 | 516.43 | 398.2 | 516.95 | 398.24 |
| 517.87 | 398.3 | 518.45 | 398.36 | 519.01 | 398.37 | 520.68 | 398.35 | 523.29 | 398.36 |
| 524.14 | 398.34 | 530.84 | 398.16 | 531.22 | 398.13 | 531.76 | 398.1 | 531.84 | 398.1 |
| 532.88 | 398.07 | 536.48 | 398.02 | 537.33 | 398 | 537.41 | 397.94 | 537.83 | 397.93 |
| 538.78 | 397.93 | 541.17 | 397.96 | 542.3 | 398 | 543.13 | 398 | 544.26 | 398 |
| 544.51 | 398 | 545.98 | 398 | 546.29 | 398 | 547.21 | 398 | 547.3199 | 398 |
| 547.41 | 398 | 547.52 | 398 | 547.6 | 398 | 547.94 | 398 | 548.49 | 398.01 |
| 548.83 | 398.02 | 551.13 | 398.1 | 573.18 | 399 | 573.74 | 399.02 | 573.88 | 399.02 |
| 579.77 | 399.18 | 581.42 | 399.23 | 583.22 | 399.3 | 584.05 | 399.37 | 587.59 | 399.43 |
| 590.56 | 399.47 | 598.09 | 399.48 | 598.93 | 399.48 | 602.42 | 399.46 | 604.13 | 399.46 |
| 605.9 | 399.46 | 609.19 | 399.47 | 610.65 | 399.48 | 611.98 | 399.48 | 613.2 | 399.47 |
| 614.31 | 399.47 | 621.82 | 399.43 | 625.07 | 399.41 | 626.96 | 399.41 | 634.24 | 399.38 |
| 637.23 | 399.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 203.18 | .04 | 433.02 | .05 |

Bank Sta: Left Right Lengths: Left Channel Right Coeff Contr. Expan.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 203.18 | 433.02 | 370.91 | 391.05 | 440.46 | .1 | .3 |

Right Levee Station= 480.43 Elevation= 398.09

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 7927.46

INPUT
Description:
Station Elevation Data num= 357

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 399.95 | 12.41998 | 399.36 | 14.70996 | 399.26 | 15.51996 | 399.23 | 15.83997 | 399.21 |
| 19.26996 | 399 | 25.71997 | 398.88 | 46.44 | 398.54 | 7.45001 | 398.48 | 48.23999 | 398.48 |
| 48.37 | 398.48 | 70.62 | 398.19 | 84.17999 | 398.01 | 85.21997 | 398 | 85.62 | 398 |
| 86.21997 | 398 | 89.39996 | 398 | 90.57996 | 398 | 94.76001 | 398 | 95.26001 | 398 |
| 95.82996 | 398 | 95.88995 | 398 | 96.88995 | 397.91 | 101.24 | 397 | 103.33 | 396.42 |
| 105.18 | 396 | 105.73 | 395.84 | 108.89 | 395 | 108.96 | 394.98 | 113.93 | 394 |
| 114.56 | 394 | 114.94 | 394 | 115.48 | 393.99 | 116.53 | 393.99 | 117.66 | 393.99 |
| 118.97 | 394 | 121.41 | 394.01 | 123.19 | 394.01 | 123.66 | 394.01 | 125.72 | 394 |
| 126.37 | 394 | 127.26 | 393.83 | 133.47 | 393 | 137.74 | 392.57 | 143.2 | 392 |
| 146.48 | 391.99 | 146.98 | 391.99 | 148.14 | 391.99 | 148.7 | 392 | 149.88 | 392 |
| 150.26 | 392 | 151.18 | 392 | 152.62 | 392.12 | 153.19 | 392.14 | 155.22 | 392.16 |
| 155.49 | 392.14 | 156.3 | 392 | 157.28 | 392 | 157.64 | 391.99 | 158.76 | 392 |
| 158.86 | 392 | 160.22 | 392.17 | 166.39 | 393 | 168.21 | 393.31 | 171.03 | 393.71 |
| 172.18 | 393.88 | 172.54 | 393.92 | 172.69 | 393.94 | 172.93 | 393.96 | 173.24 | 394 |
| 178.05 | 394.81 | 178.91 | 395 | 181.63 | 395.09 | 181.87 | 395.09 | 182.65 | 395.1 |
| 183.12 | 395.11 | 183.58 | 395.13 | 184.03 | 395.14 | 184.5 | 395.16 | 184.98 | 395.18 |
| 186.32 | 395.23 | 187.84 | 395.28 | 195.38 | 395.53 | 197.71 | 395.59 | 199.75 | 395.64 |
| 201.12 | 395.7 | 202.31 | 395.74 | 203.36 | 395.77 | 206.56 | 395.9 | 208.95 | 396 |
| 210.29 | 396 | 210.63 | 396 | 211.8 | 396 | 212.03 | 396 | 212.54 | 396 |
| 213.88 | 395.97 | 230.29 | 395.69 | 231.64 | 395.65 | 232.24 | 395.64 | 233.86 | 395.61 |
| 236.94 | 395.5 | 238.43 | 395.45 | 240.1 | 395.41 | 242.24 | 395.39 | 243.27 | 395.36 |
| 243.94 | 395.34 | 244.39 | 395.33 | 245.01 | 395.32 | 245.64 | 395.3 | 246.9 | 395.29 |
| 247.7 | 395.27 | 248.02 | 395.26 | 248.17 | 395.25 | 248.21 | 395.24 | 248.29 | 395.23 |
| 248.36 | 395.22 | 248.69 | 395.21 | 248.85 | 395.21 | 249.06 | 395.2 | 249.82 | 395.2 |
| 250.1 | 395.19 | 250.42 | 395.18 | 250.79 | 395.17 | 251.51 | 395.15 | 251.96 | 395.13 |
| 252.06 | 395.13 | 252.14 | 395.13 | 252.36 | 395.13 | 252.54 | 395.14 | 253.1 | 395.14 |
| 253.19 | 395.15 | 253.25 | 395.15 | 253.44 | 395.16 | 253.53 | 395.17 | 253.76 | 395.18 |
| 254.1 | 395.2 | 254.79 | 395.23 | 255.04 | 395.24 | 255.26 | 395.24 | 255.58 | 395.24 |
| 259.19 | 395.23 | 260.35 | 395.24 | 261.22 | 395.26 | 261.63 | 395.26 | 262.54 | 395.28 |
| 264.36 | 395.31 | 264.96 | 395.32 | 265.3 | 395.33 | 266.28 | 395.31 | 267.02 | 395.29 |
| 268.77 | 395.23 | 270.03 | 395.2 | 272.72 | 395.14 | 277.48 | 395 | 285.25 | 394.67 |
| 285.82 | 394.65 | 291.95 | 394.41 | 296.28 | 394.25 | 300.99 | 394.07 | 302.65 | 394 |
| 304.96 | 393.68 | 307.88 | 393.24 | 309.94 | 393 | 314.07 | 392.87 | 315.56 | 392.91 |
| 317.19 | 392.96 | 317.41 | 392.99 | 317.49 | 393 | 317.71 | 393.01 | 336.12 | 393.95 |
| 337.28 | 394 | 339.86 | 394.04 | 342.45 | 394.08 | 346.33 | 394.15 | 347.24 | 394.16 |
| 348.25 | 394.17 | 349.79 | 394.17 | 358.33 | 394.15 | 360.12 | 394.18 | 360.87 | 394.2 |
| 362.31 | 394.21 | 362.79 | 394.22 | 365.34 | 394.27 | 365.74 | 394.27 | 375.97 | 394.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 377.89 | 394.47 | 378.12 | 394.47 | 381.19 | 394.56 | 382.28 | 394.52 | 383.59 | 394.46 |
| 384.64 | 394.45 | 391.79 | 394.41 | 392.89 | 394.41 | 393.64 | 394.39 | 394.44 | 394.36 |
| 396.09 | 394.27 | 396.9 | 394.22 | 398.31 | 394.08 | 399.41 | 394 | 399.47 | 394 |
| 405.45 | 393.23 | 406.19 | 393.13 | 407.15 | 393 | 409.36 | 392.81 | 410.37 | 392.69 |
| 410.85 | 392.66 | 411.49 | 392.64 | 412.37 | 392.65 | 414.27 | 392.7 | 416.21 | 392.77 |
| 416.65 | 392.8 | 417.22 | 392.86 | 417.59 | 392.88 | 418.15 | 392.87 | 419.46 | 392.82 |
| 420.11 | 392.81 | 421.17 | 392.82 | 423.24 | 392.86 | 423.27 | 392.87 | 428.1 | 393 |
| 431.12 | 393.17 | 431.81 | 393.18 | 434.27 | 393.19 | 435.08 | 393.2 | 435.69 | 393.22 |
| 436.24 | 393.27 | 436.45 | 393.27 | 436.67 | 393.27 | 438.21 | 393.16 | 438.86 | 393.12 |
| 439.65 | 393.1 | 442.16 | 393.03 | 443.27 | 393 | 445.5 | 392.85 | 457.52 | 392 |
| 491.7 | 391.17 | 494.16 | 391.11 | 496.29 | 391.08 | 497.77 | 391.07 | 497.78 | 391.09 |
| 497.9 | 391.15 | 498.31 | 391.09 | 498.72 | 391.16 | 498.81 | 391.17 | 499.41 | 391.26 |
| 500.02 | 391.43 | 500.22 | 391.47 | 500.74 | 391.45 | 501.01 | 391.43 | 504.08 | 391 |
| 504.81 | 391 | 506.41 | 391 | 506.7 | 391 | 506.83 | 391 | 508 | 391 |
| 509.03 | 391 | 509.48 | 391 | 510.21 | 391.25 | 510.3 | 391.31 | 511.02 | 391.63 |
| 511.92 | 392 | 512.85 | 392.21 | 514.97 | 393 | 517.06 | 393.04 | 518.13 | 393.06 |
| 519.69 | 393.08 | 526.88 | 393.15 | 529.7 | 393.23 | 531.48 | 393.27 | 537.05 | 393.25 |
| 538.72 | 393.25 | 546.43 | 393.22 | 546.53 | 393.2 | 548.76 | 393.07 | 551.49 | 393.01 |
| 552.12 | 393.01 | 552.37 | 393 | 552.43 | 393 | 553.37 | 393 | 553.42 | 393 |
| 553.59 | 393 | 554.63 | 393 | 554.74 | 393 | 554.94 | 393 | 555.21 | 393 |
| 555.62 | 393 | 556.19 | 393 | 557 | 393 | 557.63 | 393 | 558.37 | 393 |
| 558.77 | 393 | 561.77 | 393 | 564.81 | 393 | 568.21 | 393 | 568.49 | 393 |
| 569.72 | 393 | 574.9 | 393 | 575.71 | 393.18 | 577.57 | 393.64 | 578.45 | 393.86 |
| 578.75 | 393.95 | 578.98 | 394 | 579.33 | 394.03 | 579.38 | 394.03 | 579.46 | 394.03 |
| 581.93 | 394.22 | 585.18 | 394.41 | 586.31 | 394.42 | 588.1 | 394.54 | 589.62 | 394.53 |
| 591.4 | 394.64 | 592.22 | 394.68 | 593.94 | 394.66 | 594.84 | 394.71 | 595.46 | 394.74 |
| 596.49 | 394.79 | 597.12 | 394.81 | 598.11 | 394.85 | 598.22 | 394.86 | 598.33 | 394.87 |
| 598.38 | 394.88 | 598.52 | 394.9 | 599.17 | 394.92 | 599.66 | 394.93 | 600.46 | 394.92 |
| 601.37 | 394.91 | 601.43 | 394.91 | 601.68 | 394.91 | 601.8 | 394.91 | 601.9 | 394.9 |
| 601.97 | 394.9 | 602.05 | 394.89 | 602.1 | 394.88 | 602.17 | 394.88 | 602.26 | 394.88 |
| 602.35 | 394.87 | 602.46 | 394.87 | 602.85 | 394.87 | 603.18 | 394.87 | 603.61 | 394.86 |
| 605.51 | 394.86 | 611.57 | 394.82 | 614.55 | 394.8 | 617.59 | 394.79 | 625.38 | 394.8 |
| 626.35 | 394.79 | 627.31 | 394.78 | 628.19 | 394.78 | 630.4 | 394.76 | 631.56 | 394.75 |
| 636.12 | 394.72 | 646.72 | 394.62 | 648.26 | 394.6 | 649.49 | 394.59 | 655.19 | 394.54 |
| 663.07 | 394.47 | 664.67 | 394.45 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 302.65 | .04 | 578.75 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 302.65 | 578.75 | 637.17 | 639.89 | 454.73 | .1 | .3 |

Left Levee Station= 212.06 Elevation= 396.17

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 7287.57

INPUT
Description:
Station Elevation Data num= 415

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 395.84 | 1.049988 | 395.86 | .700012 | 395.658 | .080017 | 395.648 | .650024 | 395.63 |
| 9.529968 | 395.61 | 0.14001 | 395.59 | 11.25 | 395.541 | 5.28998 | 395.31 | 20.25 | 395 |
| 28.46002 | 394.33 | 1.78998 | 39444 | .39001 | 39371 | .52002 | 392 | 84.44 | 391.56 |
| 88.51001 | 391.43 | 96.03998 | 391.21 | 97.04999 | 391.199 | 8.67999 | 391.18 | 104.54 | 391.17 |
| 107.61 | 391.15 | 114.58 | 391 | 119.01 | 390.26 | 119.73 | 390.25 | 119.89 | 390.23 |
| 120.2 | 390.22 | 120.43 | 390.21 | 122 | 390.25 | 123.58 | 390.35 | 124.99 | 390.4 |
| 125.95 | 390.4 | 127.01 | 390.37 | 128.66 | 390.32 | 129.29 | 390.3 | 130.44 | 390.25 |
| 134.52 | 390 | 137.33 | 389.38 | 137.73 | 389.32 | 139.23 | 389 | 142.37 | 388.36 |
| 144.05 | 388 | 144.82 | 387.81 | 144.97 | 387.66 | 145.48 | 387.57 | 146.01 | 387.5 |
| 146.21 | 387.5 | 146.82 | 387.54 | 147.14 | 387.59 | 147.71 | 387.76 | 148.14 | 388 |
| 149.77 | 388.5 | 151.12 | 389 | 152.03 | 389.18 | 152.35 | 389.17 | 153.23 | 389.14 |
| 154.29 | 389.19 | 155.03 | 389.2 | 156.86 | 389.2 | 158.7 | 389.19 | 161.13 | 389.15 |
| 161.9 | 389.13 | 163.78 | 389.04 | 164.39 | 389 | 166.36 | 388.33 | 167.25 | 388 |
| 170.35 | 387.21 | 171.15 | 387 | 173.1 | 386.7 | 174.58 | 386.46 | 175.46 | 386.32 |
| 177.55 | 386 | 177.87 | 385.93 | 178 | 385.94 | 178.35 | 385.94 | 178.5 | 385.93 |
| 179.61 | 385.84 | 180.59 | 385.75 | 189.31 | 385 | 189.64 | 384.83 | 190.69 | 384.45 |
| 192.35 | 384 | 211.3 | 384 | 212.35 | 384.25 | 215.85 | 385 | 217.68 | 385.52 |
| 218.86 | 385.81 | 219.76 | 386 | 221.61 | 386.11 | 224.54 | 386.26 | 224.75 | 386.27 |
| 235.82 | 387 | 266.33 | 387 | 271.82 | 386.76 | 278.09 | 386.46 | 279.89 | 386.39 |
| 281.45 | 386.36 | 282.89 | 386.34 | 285.97 | 386.32 | 289.67 | 386.25 | 291.74 | 386.23 |
| 292.16 | 386.22 | 292.72 | 386.21 | 292.98 | 386.2 | 293.64 | 386.16 | 293.7 | 386.16 |
| 293.82 | 386.13 | 294.03 | 386.12 | 294.17 | 386.13 | 294.29 | 386.13 | 294.53 | 386.14 |
| 295.39 | 386.15 | 295.88 | 386.16 | 296.32 | 386.18 | 296.73 | 386.2 | 297.38 | 386.24 |
| 297.93 | 386.29 | 298.43 | 386.33 | 300.58 | 386.42 | 300.96 | 386.43 | 303.44 | 386.55 |
| 308.45 | 386.78 | 312.77 | 387 | 317.53 | 387.12 | 326.28 | 387.37 | 328.36 | 387.45 |
| 329.83 | 387.48 | 339.88 | 387.7 | 341.42 | 387.74 | 341.93 | 387.75 | 345.15 | 387.79 |
| 345.38 | 387.79 | 359.14 | 387.93 | 359.48 | 387.94 | 360.16 | 387.95 | 360.31 | 387.95 |
| 360.46 | 387.96 | 360.76 | 387.96 | 360.82 | 387.97 | 361.15 | 387.97 | 361.34 | 387.96 |
| 362.32 | 387.96 | 362.54 | 387.95 | 367.36 | 388 | 367.41 | 388 | 376.47 | 388.02 |
| 378.1 | 388.03 | 379.33 | 388.03 | 380.03 | 388.04 | 380.17 | 388.05 | 380.54 | 388.08 |
| 380.89 | 388.1 | 383.04 | 388.12 | 384.08 | 388.12 | 386.59 | 388.06 | 390.28 | 388 |
| 390.4 | 387.99 | 398.26 | 387 | 398.74 | 386.97 | 399 | 386.95 | 399.55 | 386.93 |
| 402.57 | 386.89 | 403.14 | 386.88 | 403.36 | 386.87 | 408.23 | 386.84 | 412.85 | 386.83 |
| 415.65 | 386.95 | 416.93 | 387 | 418.35 | 387.06 | 421.41 | 387.24 | 422.75 | 387.3 |
| 424.36 | 387.36 | 428.8 | 387.49 | 429.73 | 387.53 | 430.47 | 387.56 | 431.77 | 387.58 |
| 435.1 | 387.62 | 441.29 | 387.62 | 444.96 | 387.65 | 445.16 | 387.66 | 445.4 | 387.65 |
| 445.72 | 387.65 | 446.09 | 387.63 | 447.09 | 387.6 | 447.71 | 387.58 | 447.8 | 387.55 |
| 448.42 | 387.53 | 448.63 | 387.52 | 448.79 | 387.51 | 450.6 | 387.41 | 450.91 | 387.38 |
| 455.52 | 387.15 | 458.13 | 387 | 466.57 | 387 | 469.4 | 387.55 | 472.42 | 388 |
| 481.85 | 388.24 | 487.13 | 388.36 | 487.94 | 388.37 | 495.23 | 388.55 | 497.87 | 388.61 |
| 499.05 | 388.63 | 500.32 | 388.66 | 502.35 | 388.69 | 503.75 | 388.72 | 504.48 | 388.74 |
| 505.07 | 388.76 | 505.57 | 388.78 | 506.09 | 388.78 | 506.24 | 388.79 | 506.51 | 388.79 |
| 507.76 | 388.82 | 507.84 | 388.83 | 507.91 | 388.84 | 508.2 | 388.85 | 508.46 | 388.86 |
| 508.55 | 388.86 | 510.17 | 388.89 | 510.72 | 388.89 | 511.2 | 388.9 | 511.66 | 388.9 |
| 512.92 | 388.91 | 513.64 | 388.9 | 514.5 | 388.89 | 515.24 | 388.89 | 515.42 | 388.88 |
| 515.54 | 388.88 | 516.76 | 388.86 | 517.12 | 388.86 | 517.7 | 388.85 | 517.8 | 388.84 |
| 517.93 | 388.84 | 518.54 | 388.83 | 520.15 | 388.79 | 520.87 | 388.76 | 521.35 | 388.75 |
| 521.86 | 388.73 | 522.3 | 388.72 | 522.76 | 388.72 | 523.28 | 388.71 | 524.44 | 388.69 |
| 524.74 | 388.68 | 525.55 | 388.65 | 532.17 | 388.39 | 537.81 | 388.28 | 538.43 | 388.26 |
| 539.31 | 388.26 | 539.71 | 388.25 | 540.62 | 388.23 | 545.22 | 388.12 | 549.51 | 388 |
| 549.69 | 387.98 | 549.79 | 387.96 | 552.88 | 387.49 | 554.87 | 387 | 557.75 | 386.24 |
| 558.04 | 386.15 | 558.42 | 386 | 558.57 | 386 | 560.95 | 386.71 | 561.95 | 387 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 566.15 | 387 | 566.4 | 386.99 | 566.63 | 386.99 | 566.88 | 387 | 568.01 | 387.04 |
| 568.07 | 387.16 | 568.1 | 387.24 | 570.15 | 387.3 | 571.34 | 387.34 | 573.32 | 387.4 |
| 580 | 387.54 | 587.48 | 387.56 | 597.26 | 387.4 | 597.59 | 387.4 | 605.2 | 387.24 |
| 614.85 | 387 | 615.73 | 387 | 618.05 | 386.99 | 619.12 | 386.96 | 622.5 | 386.86 |
| 623.12 | 386.86 | 623.39 | 386.87 | 623.64 | 386.85 | 625.03 | 386.65 | 625.25 | 386.59 |
| 625.7 | 386.56 | 626.01 | 386.54 | 626.24 | 386.54 | 626.37 | 386.55 | 626.56 | 386.6 |
| 627.54 | 386.68 | 628.84 | 386.83 | 629.76 | 387 | 636.89 | 387.61 | 637.47 | 387.62 |
| 638.1 | 387.65 | 639.02 | 387.63 | 639.69 | 387.61 | 640.42 | 387.57 | 641.16 | 387.55 |
| 641.55 | 387.52 | 641.86 | 387.52 | 642.26 | 387.53 | 642.59 | 387.56 | 642.9 | 387.6 |
| 643.19 | 387.66 | 643.62 | 387.71 | 644.31 | 387.75 | 646.23 | 387.81 | 652.97 | 387.95 |
| 653.19 | 387.96 | 653.33 | 387.96 | 656.11 | 388 | 658.92 | 388 | 659.2 | 387.99 |
| 662.87 | 387.81 | 667.5 | 387.81 | 668.14 | 387.87 | 668.71 | 387.91 | 669.42 | 387.93 |
| 670.17 | 387.93 | 670.84 | 387.9 | 672.58 | 387.74 | 673.27 | 387.66 | 674.25 | 387.59 |
| 675.69 | 387.52 | 676.1 | 387.53 | 676.54 | 387.55 | 676.76 | 387.57 | 677.17 | 387.6 |
| 677.62 | 387.67 | 677.65 | 387.74 | 678.5 | 387.85 | 678.97 | 387.96 | 679.22 | 388 |
| 683.31 | 388 | 692.98 | 387.64 | 693.94 | 387.65 | 694.95 | 387.67 | 695.07 | 387.69 |
| 695.28 | 387.7 | 697.51 | 387.67 | 698.54 | 387.65 | 700.55 | 387.55 | 701.38 | 387.57 |
| 702.11 | 387.58 | 703.18 | 387.59 | 703.58 | 387.59 | 704.56 | 387.59 | 705.95 | 387.58 |
| 706.98 | 387.57 | 707.43 | 387.55 | 710.22 | 387.52 | 712.94 | 387.52 | 716.22 | 387.79 |
| 718.68 | 388 | 720.17 | 388.89 | 720.29 | 389 | 720.56 | 389.01 | 721.39 | 389.03 |
| 723.23 | 389.06 | 726.76 | 389.1 | 737.55 | 389.19 | 744.54 | 389.24 | 748.58 | 389.24 |
| 758.69 | 389.28 | 762.65 | 389.28 | 763.36 | 389.29 | 764.05 | 389.29 | 764.91 | 389.3 |
| 766.2 | 389.32 | 768.09 | 389.34 | 773.72 | 389.37 | 784.61 | 389.47 | 789.34 | 389.5 |
| 796.31 | 389.5 | 797.17 | 389.47 | 799.16 | 389.42 | 801.06 | 389.38 | 802.18 | 389.35 |
| 803.84 | 389.31 | 805.24 | 389.29 | 806.21 | 389.3 | 809.45 | 389.25 | 810.62 | 389.22 |
| 812.09 | 389.19 | 815.63 | 389.11 | 816.01 | 389.11 | 816.17 | 389.1 | 816.29 | 389.1 |
| 816.49 | 389.09 | 816.69 | 389.09 | 816.84 | 389.08 | 817.85 | 389.09 | 819.11 | 389.1 |
| 819.18 | 389.11 | 819.39 | 389.11 | 819.69 | 389.12 | 821.68 | 389.12 | 822.45 | 389.14 |
| 823.52 | 389.2 | 823.95 | 389.23 | 824.18 | 389.26 | 825.42 | 389.32 | 826.17 | 389.36 |
| 828.21 | 389.43 | 828.7 | 389.45 | 831.71 | 389.51 | 832.55 | 389.53 | 848.32 | 389.54 |
| 848.91 | 389.53 | 850.25 | 389.53 | 854.7 | 389.52 | 863.72 | 389.55 | 868.62 | 389.54 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 167.25 | .04 | 637.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 167.25 | 637.47 | 471.12 | 460.24 | 337.08 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 6827.33

INPUT
Description:
Station Elevation Data num= 441

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 388.18 | 1.539978 | 388.195 | .549988 | 388.24 | 14.19995 | 388.33 | 16.32996 | 388.35 |
| 17.88995 | 388.35 | 19.01996 | 388.351 | 9.87994 | 388.35 | 21.54999 | 388.32 | 22.81 | 388.31 |
| 26.38995 | 388.31 | 28.09998 | 388.329 | .48999 | 388.28 | 32.26996 | 388.22 | 34.16998 | 388.18 |
| 40.45996 | 388.08 | 45.81 | 388 | 52.37 | 387.89 | 56.75 | 387.82 | 56.82996 | 387.82 |
| 56.91998 | 387.82 | 57.20996 | 387.845 | 7.75995 | 387.845 | 7.87994 | 387.85 | 57.94 | 387.85 |
| 58.69995 | 387.85 | 59.41998 | 387.865 | 9.72998 | 387.85 | 59.94 | 387.85 | 60.06 | 387.86 |
| 60.19 | 387.86 | 60.48999 | 387.886 | 0.52997 | 387.89 | 60.56 | 387.89 | 60.63995 | 387.89 |
| 60.77997 | 387.89 | 61.31 | 387.886 | 2.57996 | 387.866 | 2.97998 | 387.85 | 63.06995 | 387.85 |
| 63.37 | 387.83 | 63.51996 | 387.826 | 4.32996 | 387.86 | 4.38995 | 387.8 | 64.69 | 387.81 |
| 64.81995 | 387.81 | 64.96997 | 387.816 | 5.52997 | 387.816 | 5.64996 | 387.81 | 65.98999 | 387.8 |
| 66.16998 | 387.86 | 6.38995 | 387.786 | 6.39996 | 387.77 | 66.56 | 387.76 | 67.62994 | 387.73 |
| 68.25995 | 387.72 | 70.82996 | 387.66 | 73.19 | 387.61 | 104.4 | 387 | 108.05 | 386 |
| 108.33 | 385.93 | 111.64 | 385 | 113.67 | 384.55 | 115.93 | 384 | 117.48 | 383.85 |
| 119.08 | 383.67 | 119.99 | 383.54 | 120.0099 | 383.51 | 120.11 | 383.49 | 120.29 | 383.49 |
| 120.78 | 383.51 | 121.37 | 383.55 | 121.85 | 383.6 | 122.08 | 383.66 | 122.75 | 383.73 |
| 122.93 | 383.83 | 123.6 | 384 | 127.8199 | 384.58 | 130.44 | 385 | 133.59 | 385.56 |
| 135.8799 | 386 | 143.02 | 386.7 | 143.7 | 386.74 | 144.14 | 386.81 | 144.35 | 386.83 |
| 144.54 | 386.85 | 144.91 | 386.87 | 145.05 | 386.88 | 145.35 | 386.89 | 145.43 | 386.89 |
| 145.58 | 386.91 | 145.7 | 386.92 | 145.78 | 386.92 | 145.91 | 386.92 | 146.1 | 386.92 |
| 146.31 | 386.92 | 146.47 | 386.92 | 146.6 | 386.92 | 146.74 | 386.91 | 146.94 | 386.89 |
| 147.11 | 386.87 | 147.4 | 386.82 | 147.56 | 386.8 | 147.64 | 386.76 | 147.91 | 386.71 |
| 148.56 | 386.63 | 149.15 | 386.59 | 154.65 | 386 | 157.48 | 385.38 | 158.52 | 385.14 |
| 159.1 | 385 | 160.06 | 384.76 | 163.28 | 384 | 169.97 | 383.75 | 172.19 | 383.67 |
| 173.49 | 383.63 | 174.78 | 383.61 | 178.96 | 383.53 | 179.66 | 383.51 | 181.4 | 383.46 |
| 181.96 | 383.44 | 182.89 | 383.4 | 184.96 | 383.3 | 185.8 | 383.27 | 186.3 | 383.25 |
| 186.53 | 383.24 | 186.7 | 383.23 | 187.34 | 383.22 | 188.17 | 383.21 | 190.19 | 383.2 |
| 199.7599 | 383 | 203.55 | 382.97 | 206.94 | 382.94 | 210.47 | 382.92 | 214.55 | 382.9 |
| 227.67 | 382.85 | 228.33 | 382.84 | 228.72 | 382.83 | 228.8799 | 382.83 | 231.15 | 382.82 |
| 236.0099 | 382.78 | 238.19 | 382.76 | 240.02 | 382.75 | 241.56 | 382.75 | 243.98 | 382.76 |
| 245.8799 | 382.77 | 246.6299 | 382.78 | 259.28 | 382.97 | 259.34 | 382.97 | 259.3799 | 382.97 |
| 259.43 | 382.97 | 259.55 | 382.97 | 259.62 | 382.96 | 261.5 | 383 | 261.56 | 383 |
| 261.65 | 383 | 264.16 | 382.9 | 265.4 | 382.85 | 283 | 382.14 | 286.56 | 382 |
| 291.65 | 382 | 292.83 | 382 | 295.04 | 382 | 295.0699 | 382 | 296.24 | 382.01 |
| 296.7599 | 382.01 | 296.8799 | 382.01 | 297.3 | 382.01 | 298.48 | 382 | 299.36 | 382 |
| 300.0699 | 382 | 300.44 | 382 | 300.71 | 382 | 301.47 | 382 | 302.6 | 382 |
| 303.31 | 382 | 307.3799 | 382.01 | 308.18 | 382.01 | 309.39 | 382.01 | 312.7 | 382.01 |
| 313.43 | 382 | 313.79 | 382 | 314.95 | 382 | 315.68 | 382 | 316.16 | 382 |
| 316.31 | 382 | 317.24 | 381.81 | 317.62 | 381.66 | 318.17 | 381.54 | 319.0699 | 381.39 |
| 319.5 | 381.31 | 320.65 | 381 | 323.95 | 380.63 | 331.25 | 380 | 332.7 | 380 |
| 335.0699 | 380 | 335.7 | 380 | 339.23 | 380.4 | 339.7 | 380.42 | 340.29 | 380.41 |
| 340.56 | 380.37 | 340.86 | 380.3 | 341.17 | 380.28 | 341.45 | 380.27 | 342.89 | 380.38 |
| 345.49 | 380.6 | 349.56 | 381 | 351.74 | 381.3 | 353.45 | 381.52 | 354.71 | 381.73 |
| 358.33 | 382 | 382.24 | 382.53 | 389.34 | 382.69 | 393.54 | 382.79 | 397.46 | 382.87 |
| 398.27 | 382.89 | 398.82 | 382.91 | 401.95 | 383 | 402.16 | 383 | 402.66 | 383 |
| 402.94 | 383 | 403.44 | 383 | 403.66 | 383 | 404.9 | 383 | 408.05 | 383 |
| 410.89 | 382.99 | 413.43 | 383 | 414.71 | 383 | 415.43 | 383 | 415.94 | 383 |
| 416.86 | 383 | 424.37 | 383.67 | 429.2 | 384 | 449.35 | 384.48 | 453.94 | 384.59 |
| 458.01 | 384.67 | 460.48 | 384.72 | 474.63 | 385 | 475.33 | 385.05 | 477.94 | 385.21 |
| 479.73 | 385.29 | 481.99 | 385.42 | 482.88 | 385.51 | 483.26 | 385.53 | 483.72 | 385.55 |
| 484.25 | 385.57 | 484.83 | 385.59 | 486.29 | 385.62 | 486.72 | 385.62 | 487.08 | 385.62 |
| 490.74 | 385.58 | 491.69 | 385.56 | 492.57 | 385.54 | 493.36 | 385.52 | 494.66 | 385.48 |
| 502.56 | 385.21 | 508.26 | 385 | 513.5599 | 384.63 | 517.3199 | 384.49 | 520.14 | 384.37 |
| 524.71 | 384.14 | 525.61 | 384.15 | 27.4399 | 384 | 527.92 | 383.98 | 528.89 | 383.94 |
| 531.49 | 383.84 | 531.85 | 383.83 | 532.04 | 383.75 | 532.5699 | 383.79 | 533.14 | 383.83 |
| 533.45 | 383.83 | 534.1899 | 383.88 | 535.01 | 383.91 | 536.4299 | 383.93 | 541.39 | 384 |
| 541.84 | 384.01 | 554.3199 | 384.15 | 556.55 | 384.17 | 558.49 | 384.18 | 560.08 | 384.18 |
| 561.35 | 384.17 | 562.8099 | 384.15 | 564.84 | 384.1 | 566.24 | 384.07 | 569.67 | 384.02 |

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569.8199     384  570.03     384  570.28     384  570.34     384570.6799  383.93
   576.5     383  581.88  382.54582.1899  382.53  582.58  382.57  583.02  382.56
  584.08  382.51  592.99     382  594.04  381.84  596.38  381.88  598.98  381.93
  599.13     382  603.74  382.36604.3099  382.36  605.27  382.38  605.75   382.4
  606.53  382.44  607.37  382.52  607.78  382.54  608.78  382.64  609.16  382.67
  609.29  382.67  609.38  382.67610.0599  382.63611.5599  382.53  612.49  382.45
  614.33  382.24  614.62  382.25  617.01     382  619.89  381.55  623.38     381
  624.86     381  626.42     381   627.7     381  630.11     381  631.75     381
  631.97   381.2  632.54  381.49  633.41     382  634.28  382.86  634.41     383
634.5599  383.13  634.76  383.39  635.27     384  637.92  384.11  644.08  384.35
650.3199  384.59  653.14   384.7   653.9  384.73  654.47  384.74  656.46  384.78
  656.77  384.79  661.01  384.95662.4399     385  664.39  385.03  668.88  385.09
  671.05  385.11  673.74  385.14   676.4  385.15  684.99  385.22  688.66  385.25
   691.7  385.28693.8199   385.3  694.93  385.32  695.58  385.35  695.85  385.35
  696.22  385.35  696.71  385.35  702.38  385.26  705.03  385.21  706.12  385.18
  707.88  385.13   709.7  385.09712.1899  385.04   714.9     385  718.73  384.92
  723.39  384.83  728.33  384.75  729.35  384.73  730.15   384.7734.8199  384.71
739.6899  384.73741.3099     385742.3099     385744.0599     385  746.75     385
  746.79     385  746.83     385  746.85     385  751.41  384.77  755.06  384.62
755.5099   384.6  759.74  384.44  761.02   384.4  761.23  384.38  761.55  384.37
  761.65  384.35   763.1  384.32764.3199   384.3  764.79  384.32   765.4  384.34
767.0099  384.41769.1899   384.6  770.64   384.7  775.08     385  783.75  385.33
  786.77  385.44804.4399     386  808.46  386.12  809.63  386.14  820.14  386.31
  822.74  386.36  824.16   386.4   824.8  386.43  825.37  386.47  825.93  386.49
  826.99  386.51  828.56  386.54  832.35  386.59   834.4  386.62  834.91  386.63
  835.21  386.64  835.41  386.64  835.63  386.64  835.87  386.63  836.64  386.62
  838.83   386.6  839.09  386.59  839.31  386.59  840.68  386.58  841.56  386.57
  843.66  386.55  845.56  386.52846.2599  386.51     847  386.49  847.24  386.48
  847.54  386.48  848.75  386.48850.2599  386.48851.5699  386.49  855.59  386.52
  860.08  386.55865.1299  386.58866.3199  386.59  867.33  386.59  868.16  386.59
  868.84  386.59  869.49  386.59  870.23  386.58  873.56  386.54  874.96  386.53
  876.16  386.52

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  261.56     .04  635.27     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        261.56  635.27            443.34  447.89  434.82              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 6379.44

INPUT
Description:
Station Elevation Data    num=     272
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  380.386.940002  380.2213.78998  380.0814.15997  380.0714.53003  380.06
16.03003  380.0316.42999  380.03   16.44  380.0216.46997  380.0216.59998  380.02
16.82001  380.0217.03003  380.0217.08002  380.02   17.12  380.0317.14001  380.03
17.15002  380.03   17.19  380.03   17.25  380.0317.27002  380.0317.28003  380.03
17.28998  380.0317.65997     38025.46997  379.7335.01999  379.41   42.16  379.17
   47.62     37947.76001     379   48.03     37949.57999     37951.04001     379
51.57001     37954.32001  379.0656.64001  379.0958.54999  379.1260.82001  379.16
62.04999  379.1662.73999  379.16   64.75  379.17   73.09  379.24   75.97  379.27
77.42001  379.2879.23999  379.28   82.69  379.29   84.09  379.2984.32999  379.29
   85.47  379.25   86.34  379.2387.60001  379.2189.07001  379.19   90.44  379.18
91.45999  379.17   92.19  379.17   94.56  379.18   95.06  379.18   95.81  379.18
  105.94  379.06     109  379.01  109.74     379  109.81  378.99  109.92  378.99
  109.98  378.99   110.2  378.99   119.8  378.72  145.09  378.03  145.46  378.02
   145.6  378.02  145.73  378.02  145.74  378.02  145.79  378.02  145.98  378.02
  146.39     378   150.4  377.08  150.93     377  151.68  376.99  152.83  376.99
  153.99     377  154.23     377  157.51   377.4  161.33     378     163  378.54
  164.22     379  170.18     379  175.76  379.01  178.22  379.01  188.96     379
  189.65  378.98  191.36  378.95  193.03  378.92   194.7  378.89  196.33  378.87
  197.93  378.86  199.63  378.85  208.11  378.81  209.64  378.79  211.59  378.77
  212.28  378.76  212.86  378.76  213.34  378.77  213.74  378.78  218.27     379
   218.6     379  220.24     379  222.17     379  222.24     379  222.34     379
  222.39     379   222.5     379  231.85  378.76  232.31  378.74  232.99  378.63
  233.34  378.55  233.68   378.4  235.98  378.33   237.6  378.28  238.04  378.29
  238.41  378.29  238.58  378.31  238.75  378.43  246.33  378.49  252.76  378.52
  254.38  378.42  256.82  378.27  257.04  378.25  257.77  378.24  258.53  378.23
  259.45  378.21  260.53  378.21  264.89   378.2  266.51  378.19  267.87  378.19
  268.72  378.19  268.81  378.21  269.11  378.21  269.86   378.2  272.73  378.15
  273.81  378.12  278.41     378  285.43  377.15  286.82     377  287.94     377
  291.45     377  296.46  377.24  308.59  377.97  308.76  377.98  309.22     378
  309.38     378  309.72     378  316.29     378   316.8     378  323.13     378
  323.56     378  324.11     378  324.52     378  324.72     378  333.33     378
  335.13     378  340.25     378  347.84     378  360.31     378   360.5  377.99
  362.52  377.99  367.28  377.97  373.31     378     374     378   375.5     378
  375.97  378.14  376.49  378.36  377.52     379  390.05  379.62  391.57   379.7
  392.68  379.76  393.86  379.82   395.1  379.87  395.36  379.88  395.93  379.89
  396.12   379.9  396.25   379.9  398.24     380  399.45  380.06   399.5  380.06
  401.71  380.17   403.3  380.27  403.51  380.29   406.3   380.5  407.13  380.55
  407.38  380.56  407.85  380.56  408.53  380.57  413.11  380.59  414.96   380.6
  415.59  380.61  416.35   380.6  417.25   380.6  418.34  380.58  425.15  380.47
  427.38  380.43  428.91  380.42  429.98  380.41  431.43   380.4  432.25   380.4
  433.01  380.41  433.65  380.41  434.57  380.43  440.38  380.27  440.54  380.27
  451.11     380  452.93  379.93  453.75  379.91  456.55  379.94  456.67  379.94
  457.29  379.91  457.98  379.89  458.11  379.89  458.27  379.88   458.7  379.85
  459.76  379.76  468.01     379  468.45     379  469.82     379  470.05     379
  471.38     379  472.01     379  475.83  379.73  476.92  379.87  478.15     380
  478.52     380  480.26     380  480.38     380  480.48     380  481.56     380
  481.95     380  482.36  380.04  484.83     380  486.54  380.01  487.52  380.03
  488.11  380.04  492.49   380.2  493.45  380.23  497.09  380.31  497.58   380.3
  498.21  380.27   498.6  380.21  499.01  380.19   500.4   380.2  503.34  380.39
  505.01  380.46  506.38  380.52  510.63  380.79  510.91  380.81  513.54     381
  514.08     381  515.33     381  515.41     381  515.47     381  517.56     381
  518.76     381  519.47     381   520.7     381  521.35     381  522.43     381
  524.03     381  532.58  381.24  532.91  381.24  533.14  381.24  533.31  381.24
  534.06  381.24  535.45  381.24  535.73  381.24  535.75  381.24  538.49  381.31
  541.74  381.38     545  381.45
```

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 109 | .04 | 377.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 109 | 377.52 | 290.3 | 243.3 | 233.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 6136.14

INPUT
Description:
Station Elevation Data num= 228

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 379.59 | 3.100006 | 379.589 | .169983 | 379.58 | 10.53998 | 379.59 | 11.35001 | 379.59 |
| 11.81998 | 379.6 | 12.16 | 379.612 | .85001 | 379.62 | 13.31998 | 379.63 | 13.63 | 379.63 |
| 14.44998 | 379.64 | 18.19 | 379.66 | 21.92999 | 379.63 | 26.28998 | 379.62 | 6.35001 | 379.59 |
| 26.60001 | 379.59 | 27.62 | 379.57 | 27.63 | 379.56 | 27.63 | 379.54 | 27.66998 | 379.53 |
| 28.19998 | 379.52 | 29.07999 | 379.529 | .70999 | 379.49 | 30.79999 | 379.47 | 31.59 | 379.46 |
| 32.67999 | 379.44 | 33.39999 | 379.433 | 4.53998 | 379.43 | 34.87 | 379.42 | 36.31 | 379.4 |
| 40.73999 | 379.36 | 42.88 | 379.33 | 44.22 | 379.31 | 46.35001 | 379.28 | 51.72 | 379.22 |
| 52.59 | 379.21 | 63.78998 | 379.07 | 66.34 | 379.04 | 68.88998 | 379 | 72.94998 | 378.41 |
| 75.60999 | 378 | 77.31 | 377.67 | 9.75998 | 377 | 81.72 | 376.35 | 82.75 | 376 |
| 87.56 | 375.63 | 96.10001 | 375 | 97.22 | 375 | 98.97 | 375 | 99.72998 | 374.99 |
| 102.28 | 375 | 103.09 | 375 | 103.27 | 375.02 | 103.33 | 375.03 | 112.17 | 376 |
| 114.01 | 376 | 115.1 | 376 | 121.45 | 376 | 122.72 | 376 | 126.3 | 376 |
| 130.09 | 376 | 130.49 | 376 | 130.72 | 376 | 130.89 | 376 | 130.93 | 376 |
| 133.94 | 375.91 | 141.8 | 375.62 | 142.15 | 375.61 | 142.55 | 375.6 | 142.85 | 375.6 |
| 143.99 | 375.76 | 144.28 | 375.77 | 145.05 | 375.77 | 146.08 | 375.74 | 147.44 | 375.71 |
| 148.2 | 375.69 | 149.72 | 375.66 | 173.85 | 375 | 174.46 | 375 | 175.95 | 375 |
| 176.36 | 375 | 176.37 | 375 | 178.28 | 375 | 181.03 | 375.16 | 182.94 | 375.23 |
| 183.88 | 375.27 | 188.02 | 375.45 | 191.23 | 375.59 | 195.66 | 375.78 | 199.24 | 375.91 |
| 199.62 | 375.92 | 202.18 | 376 | 203.2 | 376 | 204.74 | 376 | 205.15 | 376 |
| 206.19 | 376 | 206.82 | 376 | 207.09 | 376 | 207.43 | 376 | 207.99 | 376 |
| 208.68 | 376 | 208.81 | 376 | 209.68 | 376 | 212.19 | 376 | 213.56 | 376 |
| 216.05 | 376 | 217.12 | 376.03 | 219.75 | 376.1 | 224.44 | 376.12 | 228.99 | 376.13 |
| 229.27 | 376.13 | 229.73 | 376.13 | 230.8 | 376.14 | 235.48 | 376.22 | 237.78 | 376.21 |
| 240.14 | 376.2 | 240.54 | 376.19 | 247.64 | 376.12 | 247.95 | 376.12 | 248.07 | 376.1 |
| 248.44 | 376.09 | 249.11 | 376.09 | 249.92 | 376.09 | 250.62 | 376.1 | 251.06 | 376.11 |
| 251.34 | 376.13 | 268.76 | 376.19 | 284.21 | 376.23 | 285.27 | 376.14 | 287.06 | 376 |
| 288.35 | 376 | 290.06 | 376 | 290.55 | 376 | 290.85 | 376 | 293.3 | 376 |
| 300.64 | 376 | 306.84 | 376 | 308.04 | 376 | 310.4 | 376 | 310.66 | 376 |
| 311.47 | 376 | 313.33 | 376 | 321.33 | 376 | 322.67 | 376 | 323.62 | 376 |
| 323.89 | 376 | 330.81 | 376 | 332.23 | 375.88 | 340.74 | 375 | 348.2 | 375 |
| 348.6 | 375 | 350.99 | 375 | 351.7 | 375 | 355.97 | 375 | 356.67 | 375.02 |
| 359.06 | 375.1 | 361.77 | 375.17 | 370.23 | 375.37 | 372.32 | 375.45 | 373.12 | 375.49 |
| 374.3 | 375.52 | 379.62 | 375.72 | 381.43 | 375.8 | 384.55 | 375.94 | 384.66 | 375.95 |
| 384.79 | 375.95 | 384.94 | 375.96 | 385.07 | 375.97 | 385.19 | 375.97 | 385.25 | 375.97 |
| 385.3 | 375.97 | 385.31 | 375.97 | 385.38 | 375.97 | 385.4 | 375.97 | 386.01 | 376 |
| 387.19 | 376.15 | 388.31 | 376.27 | 388.98 | 376.27 | 389.79 | 376.3 | 390.37 | 376.32 |
| 391.47 | 376.38 | 393.08 | 376.47 | 393.22 | 376.48 | 397.28 | 376.83 | 399.41 | 377 |
| 400.49 | 377.03 | 404.23 | 377.11 | 405.47 | 377.13 | 406.67 | 377.15 | 407.78 | 377.16 |
| 410.38 | 377.16 | 412.42 | 377.13 | 415.61 | 377.11 | 416.42 | 377.1 | 416.96 | 377.1 |
| 417.95 | 377.11 | 420.48 | 377.17 | 423.26 | 377.24 | 424.28 | 377.26 | 427.9 | 377.36 |
| 431.56 | 377.46 | 438.14 | 377.64 | 438.56 | 377.65 | 438.67 | 377.66 | 440.95 | 377.75 |
| 442.34 | 377.79 | 442.91 | 377.8 | 445.17 | 377.82 | 445.5 | 377.82 | 445.96 | 377.81 |
| 446.42 | 377.81 | 451.74 | 378 | 452.63 | 378.04 | 452.65 | 378.04 | 452.69 | 378.03 |
| 452.74 | 378.03 | 452.81 | 378.03 | 452.9 | 378.03 | 453.02 | 378.03 | 453.16 | 378.03 |
| 453.33 | 378.04 | 453.5 | 378.04 | 453.7 | 378.05 | 454.83 | 378.09 | 456.24 | 378.14 |
| 458.17 | 378.2 | 464.67 | 378.43 | 477.21 | 378.85 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 79.75998 | .04 | 393.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 79.75998 | 393.22 | 491.07 | 441.95 | 435.83 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 5694.19

INPUT
Description:
Station Elevation Data num= 260

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 375.26 | 4.609985 | 375.248 | .089966 | 375.24 | 12.64001 | 375.14 | 18.75 | 375.32 |
| 19.35999 | 375.32 | 19.59998 | 375.322 | 7.83997 | 375.36 | 30.46997 | 375.36 | 32.51001 | 375.36 |
| 34.10999 | 375.34 | 36.72998 | 375.313 | 8.14996 | 375.31 | 44.91998 | 375.1 | 47.81 | 375.01 |
| 47.98999 | 375.01 | 48.20001 | 375.015 | 0.03998 | 375.01 | 53.57001 | 375 | 55.78998 | 375 |
| 56.20996 | 375 | 57.69 | 375 | 57.83002 | 375 | 59.90997 | 375 | 59.95001 | 375 |
| 60.01001 | 375 | 60.46997 | 375 | 60.59998 | 375 | 63.89996 | 374.53 | 66.23999 | 374 |
| 66.5 | 373.94 | 66.84998 | 373.846 | 8.40997 | 373.46 | 9.07999 | 373.26 | 9.75998 | 373 |
| 72.5 | 372.52 | 73.97998 | 372.247 | 4.95999 | 372 | 77.14999 | 371.51 | 80.39999 | 371 |
| 86.03 | 370.99 | 86.26999 | 370.998 | 9.47998 | 371 | 93.04999 | 371 | 95.82999 | 371.17 |
| 96.32999 | 371.18 | 97.66998 | 371.24 | 104.63 | 371.53 | 107.37 | 371.56 | 109.53 | 371.59 |
| 112.22 | 371.65 | 115.91 | 371.74 | 117.83 | 371.78 | 119.73 | 371.84 | 120.53 | 371.86 |
| 121.11 | 371.87 | 121.42 | 371.88 | 121.75 | 371.89 | 121.96 | 371.9 | 122.64 | 371.91 |
| 122.92 | 371.9 | 136.66 | 371.88 | 150.02 | 371.88 | 151.79 | 371.9 | 153.39 | 371.91 |
| 157.31 | 371.93 | 159.59 | 371.95 | 162.05 | 371.98 | 163.47 | 372 | 167.32 | 372 |
| 170.24 | 372 | 172.53 | 372 | 174.07 | 372 | 176.33 | 372 | 184.41 | 372 |
| 187.21 | 371.53 | 189.17 | 371.18 | 190.19 | 371 | 193.74 | 371 | 197.75 | 371 |
| 200.8 | 371 | 205.39 | 371 | 208.96 | 371.83 | 209.69 | 372 | 212.93 | 372.93 |
| 213.18 | 373 | 213.35 | 373 | 216.4 | 373 | 219.43 | 373 | 219.74 | 373 |
| 220.15 | 373 | 254.66 | 372.67 | 255.31 | 372.67 | 274.13 | 372.49 | 274.97 | 372.48 |
| 276.03 | 372.48 | 278.34 | 372.44 | 281 | 372.4 | 282.28 | 372.37 | 287.73 | 372.29 |
| 290.32 | 372.25 | 295.26 | 372.16 | 298.03 | 372.11 | 302.68 | 372 | 305.06 | 372 |
| 305.1 | 372 | 305.9 | 372 | 306.04 | 372 | 306.25 | 372 | 306.98 | 372 |
| 308.35 | 372 | 309.45 | 372 | 309.8 | 372 | 313.59 | 372 | 315.2 | 372 |
| 317.54 | 372 | 318.02 | 372 | 325.25 | 372 | 328.6 | 372 | 331.02 | 371.99 |
| 334.93 | 372 | 335.41 | 372 | 337.3 | 372 | 338.42 | 372 | 338.65 | 372 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 338.83 | 372 | 340.52 | 372 | 341.47 | 372 | 346.09 | 371.93 | 349.49 | 371.99 |
| 350.56 | 371.99 | 352.9 | 371.98 | 354.33 | 371.98 | 358.61 | 371.98 | 359.13 | 371.98 |
| 359.5 | 371.98 | 359.59 | 371.98 | 360.33 | 371.98 | 365.93 | 371.99 | 366.04 | 371.99 |
| 366.64 | 371.99 | 366.86 | 371.99 | 367.31 | 371.99 | 368.26 | 372 | 368.62 | 372 |
| 369.09 | 372 | 370.07 | 372 | 370.57 | 372 | 374.89 | 372.08 | 378.87 | 372.15 |
| 381.63 | 372 | 382.79 | 371.79 | 385.62 | 371 | 385.82 | 370.92 | 386.36 | 370.87 |
| 386.84 | 370.83 | 388.19 | 370.92 | 389.53 | 371 | 391.23 | 371.01 | 392.2 | 371.01 |
| 393.75 | 371.01 | 394.19 | 371 | 396.3 | 371 | 396.31 | 371 | 397.91 | 370.99 |
| 398.18 | 371 | 399.43 | 371 | 399.81 | 371 | 399.83 | 371 | 402.16 | 371 |
| 402.5 | 371 | 405.28 | 371 | 405.64 | 371 | 408.23 | 371 | 408.72 | 371 |
| 410.36 | 371.18 | 415.31 | 371.69 | 416.55 | 371.64 | 417.19 | 371.65 | 418.99 | 371.72 |
| 425.9 | 372 | 427.74 | 372 | 427.95 | 372 | 428.58 | 372 | 429.51 | 372 |
| 430.6 | 372 | 432.04 | 372 | 434.72 | 372 | 435.02 | 372 | 436.06 | 372 |
| 437.22 | 372 | 437.76 | 372 | 438.54 | 372 | 439.34 | 372 | 443.42 | 372 |
| 446.65 | 372 | 450.27 | 372.01 | 460.41 | 372 | 462.41 | 372 | 462.81 | 372 |
| 463.97 | 372 | 473.15 | 371.65 | 478.29 | 371 | 478.91 | 371 | 479.1 | 371 |
| 479.3 | 371 | 479.97 | 371 | 480.47 | 371 | 483.59 | 372 | 483.6 | 372 |
| 484.61 | 372.05 | 501.98 | 373 | 502.7 | 373.01 | 505.01 | 373.05 | 505.17 | 373.06 |
| 509.09 | 373.14 | 514.74 | 373.25 | 515.26 | 373.25 | 518.88 | 373.32 | 523.45 | 373.39 |
| 524.7 | 373.39 | 525.45 | 373.38 | 526.47 | 373.39 | 529.92 | 373.4 | 534.89 | 373.43 |
| 536.61 | 373.45 | 537.29 | 373.47 | 539.16 | 373.5 | 539.4 | 373.52 | 539.42 | 373.55 |
| 539.64 | 373.56 | 540.12 | 373.57 | 540.78 | 373.58 | 543.38 | 373.61 | 544.15 | 373.62 |
| 545.01 | 373.64 | 545.44 | 373.65 | 545.83 | 373.65 | 546.08 | 373.65 | 547.42 | 373.66 |
| 548.24 | 373.67 | 551.51 | 373.64 | 555.47 | 373.6 | 556.26 | 373.55 | 556.3 | 373.55 |
| 562.54 | 373.6 | 563.96 | 373.61 | 564.31 | 373.61 | 566.87 | 373.61 | 567.93 | 373.62 |
| 570.49 | 373.63 | 571.55 | 373.63 | 574.16 | 373.65 | 575.01 | 373.65 | 575.78 | 373.65 |
| 576.49 | 373.65 | 577.29 | 373.63 | 578.36 | 373.62 | 579.83 | 373.61 | 580.49 | 373.61 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 69.75998 | .04 | 505.01 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 69.75998 | 505.01 | 592.21 | 548.19 | 464.87 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 5146

INPUT
Description:
Station Elevation Data num= 454

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 372.44 | 7.73999 | 372.38 | 11.06 | 372.35 | 14.02002 | 372.32 | 16.27002 | 372.3 |
| 17.32001 | 372.29 | 18.23004 | 372.27 | 19.79004 | 372.23 | 20.90002 | 372.21 | 22.67999 | 372.18 |
| 34.28003 | 372 | 39.60999 | 371.64 | 39.83002 | 371.63 | 41.42999 | 371.53 | 42.69 | 371.46 |
| 43.92004 | 371.41 | 46.23004 | 371.44 | 46.63 | 371.44 | 47.27002 | 371.43 | 49.53003 | 371.37 |
| 51.71002 | 371.31 | 54.35004 | 371.22 | 56.92999 | 371.15 | 63.07001 | 371 | 65.56 | 370.78 |
| 66.65002 | 370.64 | 67.71002 | 370.52 | 68.72003 | 370.46 | 9.26001 | 370.33 | 69.64001 | 370.26 |
| 69.81 | 370.25 | 70.10999 | 370.25 | 70.63 | 370.22 | 70.91003 | 370.21 | 72.94 | 370.27 |
| 73.41003 | 370.23 | 74.92004 | 370.23 | 76.29999 | 370.19 | 77.10999 | 370.15 | 77.42004 | 370.12 |
| 78.79999 | 370 | 88.46002 | 369.17 | 91.20001 | 369 | 95.87 | 368.49 | 96.67999 | 368.41 |
| 97.23004 | 368.37 | 97.67999 | 368.32 | 97.88 | 368.28 | 100.2 | 368.14 | 100.96 | 368.09 |
| 101.68 | 368.11 | 101.74 | 368.11 | 102.49 | 368.14 | 103.53 | 368.16 | 104.28 | 368.16 |
| 106.8 | 368.08 | 109.28 | 368 | 109.84 | 368 | 109.88 | 368 | 109.96 | 368 |
| 110.12 | 368 | 110.34 | 368 | 110.63 | 368 | 111.7 | 368 | 112.24 | 368 |
| 112.84 | 368 | 118.5 | 368 | 120.03 | 368 | 121.31 | 368 | 121.59 | 368 |
| 122.03 | 368 | 122.16 | 368 | 122.35 | 368 | 122.81 | 368 | 123.42 | 368 |
| 124.36 | 368 | 124.62 | 368 | 124.81 | 368 | 125.18 | 368 | 125.37 | 368 |
| 125.97 | 368 | 126.53 | 368 | 126.55 | 368 | 126.57 | 368 | 126.59 | 368 |
| 126.71 | 368 | 126.81 | 368 | 126.86 | 368 | 126.97 | 368 | 128.14 | 368 |
| 128.49 | 368 | 128.64 | 368 | 128.76 | 368 | 129.17 | 368 | 130.02 | 368 |
| 130.53 | 368 | 131.56 | 368 | 132.65 | 368 | 134.82 | 368 | 135.69 | 368 |
| 139.81 | 368 | 139.89 | 368 | 140.38 | 368 | 140.69 | 368 | 141.61 | 367.95 |
| 141.76 | 367.95 | 142.57 | 367.7 | 144.4 | 367.61 | 145.82 | 367.55 | 146.16 | 367.56 |
| 148.15 | 367.58 | 151.15 | 367.6 | 152.47 | 367.6 | 152.64 | 367.6 | 152.78 | 367.54 |
| 152.89 | 367.49 | 153.6 | 367.49 | 157.14 | 367.52 | 158.21 | 367.53 | 158.49 | 367.54 |
| 158.73 | 367.55 | 159.08 | 367.58 | 159.18 | 367.59 | 159.75 | 367.63 | 160.35 | 367.65 |
| 163.3 | 367.71 | 165.07 | 367.74 | 169.19 | 367.81 | 169.74 | 367.83 | 170.01 | 367.84 |
| 170.42 | 367.85 | 170.67 | 367.86 | 171.89 | 367.89 | 172.24 | 367.9 | 172.38 | 367.9 |
| 172.49 | 367.9 | 172.65 | 367.9 | 173.37 | 367.9 | 173.55 | 367.9 | 173.76 | 367.9 |
| 173.96 | 367.9 | 174.17 | 367.89 | 174.2 | 367.89 | 174.33 | 367.88 | 174.44 | 367.88 |
| 176.16 | 367.9 | 179.54 | 367.94 | 179.6 | 367.94 | 179.66 | 367.95 | 179.77 | 367.95 |
| 180.01 | 367.96 | 180.11 | 367.96 | 180.16 | 367.96 | 180.18 | 367.96 | 180.21 | 367.96 |
| 180.48 | 367.96 | 180.7 | 367.96 | 180.87 | 367.96 | 180.89 | 367.96 | 180.93 | 367.96 |
| 180.97 | 367.96 | 181.13 | 367.94 | 181.59 | 367.92 | 182.26 | 367.88 | 182.74 | 367.85 |
| 182.86 | 367.84 | 183.48 | 367.84 | 186.36 | 367.81 | 186.51 | 367.81 | 186.58 | 367.81 |
| 186.68 | 367.8 | 186.99 | 367.78 | 188.4 | 367.68 | 189.76 | 367.64 | 197.12 | 367 |
| 197.28 | 367 | 197.47 | 367 | 197.98 | 367 | 198.14 | 367 | 198.75 | 367 |
| 204.97 | 367.79 | 206.83 | 368 | 210.23 | 368.22 | 222.43 | 369 | 224.33 | 369.26 |
| 227.41 | 369.69 | 229.62 | 370 | 230.07 | 370.01 | 232.54 | 370.09 | 235.57 | 370.17 |
| 239.72 | 370.26 | 242.58 | 370.32 | 244.08 | 370.36 | 248.67 | 370.49 | 251.22 | 370.54 |
| 251.93 | 370.56 | 252.39 | 370.58 | 252.77 | 370.6 | 252.99 | 370.62 | 253.51 | 370.65 |
| 254.83 | 370.71 | 255.43 | 370.73 | 257.26 | 370.78 | 258.78 | 370.81 | 259.03 | 370.8 |
| 259.3 | 370.78 | 259.36 | 370.76 | 259.6 | 370.74 | 259.79 | 370.72 | 259.97 | 370.71 |
| 260.24 | 370.71 | 260.65 | 370.7 | 261.13 | 370.69 | 261.61 | 370.69 | 262 | 370.69 |
| 262.84 | 370.69 | 263.46 | 370.7 | 263.78 | 370.7 | 264.62 | 370.69 | 266.33 | 370.66 |
| 267.32 | 370.63 | 269 | 370.58 | 269.66 | 370.56 | 270.34 | 370.55 | 270.84 | 370.55 |
| 271.6 | 370.52 | 271.79 | 370.53 | 275.4 | 370.54 | 279.06 | 370.53 | 288.69 | 370.36 |
| 292.94 | 370.25 | 293.52 | 370.24 | 294.25 | 370.23 | 294.78 | 370.22 | 308.56 | 370 |
| 309.95 | 369.98 | 310.15 | 369.98 | 310.49 | 369.97 | 324.15 | 369.79 | 327.25 | 369.76 |
| 327.64 | 369.76 | 328.3 | 369.74 | 328.95 | 369.73 | 332.37 | 369.68 | 333.95 | 369.66 |
| 336.8 | 369.6 | 339.1 | 369.56 | 341.13 | 369.52 | 343.07 | 369.49 | 344.95 | 369.47 |
| 350.09 | 369.42 | 350.68 | 369.42 | 352.28 | 369.41 | 352.93 | 369.41 | 353.53 | 369.41 |
| 353.93 | 369.42 | 354.07 | 369.43 | 357.34 | 369.43 | 360.64 | 369.42 | 360.87 | 369.41 |
| 361.38 | 369.4 | 362.71 | 369.37 | 364.39 | 369.34 | 378.64 | 369.11 | 379.29 | 369.11 |
| 386.65 | 369 | 388.83 | 369 | 390.46 | 369 | 391.44 | 369 | 392.26 | 369 |
| 393.44 | 369 | 394.23 | 369 | 394.96 | 369 | 395.41 | 369 | 395.85 | 369 |
| 396.04 | 369 | 396.28 | 369 | 396.69 | 368.99 | 396.93 | 368.99 | 398.4 | 369 |
| 406.45 | 369.01 | 410.02 | 369.02 | 411.93 | 369.02 | 413.45 | 369.02 | 414.17 | 369.02 |
| 416.17 | 369.02 | 418.45 | 369.01 | 418.95 | 369.01 | 422.69 | 369.11 | 427.55 | 369 |
| 438.66 | 368.35 | 446.73 | 368.04 | 447.74 | 368 | 448.21 | 367.88 | 448.45 | 367.84 |
| 450.81 | 367.28 | 452.69 | 367.15 | 454.95 | 367 | 456.26 | 367 | 456.45 | 367 |
| 456.56 | 367 | 456.66 | 367 | 457.35 | 367 | 461.27 | 367 | 461.44 | 367 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 463.68 | 367 | 466.85 | 367 | 468.37 | 367 | 469.15 | 367 | 470.18 | 367.06 |
| 472.36 | 367.19 | 472.56 | 367.23 | 472.8 | 367.23 | 473.43 | 367.23 | 474.65 | 367.23 |
| 478.76 | 367.2 | 480.5 | 367.19 | 481.24 | 367.2 | 481.29 | 367.22 | 481.61 | 367.22 |
| 483 | 367.23 | 483.3 | 367.23 | 483.83 | 367.22 | 491.77 | 367 | 496.13 | 367 |
| 496.18 | 367 | 496.31 | 367 | 498.24 | 367 | 500.73 | 367 | 501.74 | 367 |
| 503.25 | 367 | 504.12 | 366.65 | 505.62 | 366.65 | 507.22 | 366.62 | 507.54 | 366.6 |
| 508.42 | 366.56 | 510.53 | 366.44 | 513.5601 | 366.26 | 517.52 | 366 | 517.7 | 366 |
| 526.29 | 366 | 526.96 | 366 | 532.3101 | 366 | 538.69 | 366 | 542.64 | 366.99 |
| 542.67 | 367 | 542.6801 | 367 | 555.7 | 367.01 | 559.19 | 367.01 | 564.2 | 367.01 |
| 569.99 | 367 | 572.57 | 367 | 574.32 | 367 | 574.6 | 367 | 574.86 | 367 |
| 578.04 | 367 | 578.17 | 367 | 578.3101 | 367 | 579.63 | 367 | 580.45 | 367 |
| 581.59 | 367 | 590.65 | 367.64 | 593.44 | 367.77 | 597.0601 | 368 | 597.12 | 368 |
| 599.19 | 368 | 599.21 | 368 | 599.36 | 368 | 601.71 | 368 | 603.01 | 368 |
| 603.83 | 368 | 605.5 | 367.81 | 612.64 | 367.08 | 612.8101 | 367.07 | 612.92 | 367.07 |
| 612.94 | 367.06 | 613.88 | 367.04 | 614.38 | 367.03 | 614.45 | 367.04 | 620.28 | 367.02 |
| 622.45 | 367.01 | 622.46 | 367.01 | 623.73 | 367.01 | 630.0601 | 367.05 | 630.78 | 367.05 |
| 631.51 | 367.04 | 633.78 | 367 | 635.51 | 366.86 | 643.42 | 366.96 | 646.07 | 367 |
| 647.24 | 367 | 647.89 | 367 | 648.6801 | 367 | 652.58 | 367 | 677.93 | 367.66 |
| 685.71 | 367.82 | 694.21 | 368 | 695.38 | 368.01 | 699.26 | 368.05 | 702.98 | 368.07 |
| 706.69 | 368.09 | 710.44 | 368.1 | 719.15 | 368.1 | 719.68 | 368.1 | 720.3 | 368.11 |
| 721.48 | 368.11 | 721.61 | 368.11 | 723.33 | 368.14 | 724.59 | 368.15 | 726.17 | 368.17 |
| 730.86 | 368.22 | 733.51 | 368.28 | 736.46 | 368.33 | 741.55 | 368.43 | 754.52 | 368.64 |
| 762.55 | 368.77 | 763.6 | 368.78 | 764.29 | 368.79 | 764.75 | 368.79 | 765.14 | 368.79 |
| 765.63 | 368.78 | 766.27 | 368.79 | 769.97 | 368.87 | 770.41 | 368.87 | 774.96 | 368.95 |
| 775.12 | 368.95 | 775.23 | 368.95 | 778.28 | 369 | 788.31 | 369.15 | 799.55 | 369.41 |
| 806.01 | 369.53 | 826.32 | 370 | 830.53 | 370.35 | 845.42 | 371 | 847.29 | 371.28 |
| 847.65 | 371.33 | 849.05 | 371.44 | 851.43 | 371.65 | 855.64 | 372 | 856.3 | 372.06 |
| 857.05 | 372.14 | 862.95 | 372.76 | 864.07 | 372.86 | 864.54 | 372.9 | 866.13 | 373 |
| 877.69 | 373.13 | 880.43 | 373.16 | 882.6 | 373.16 | 887.54 | 373.14 | 889.5 | 373.15 |
| 893.43 | 373.29 | 896.05 | 373.33 | 914.11 | 374 | 922.89 | 374.14 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 447.74 | .04 | 685.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 447.74 | 685.71 | 292.22 | 358.02 | 417.45 | .1 | .3 |

Left Levee Station= 261.84 Elevation= 370.91

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 4787.98

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 372.08 | 2.099976 | 372.04 | 4.029968 | 372.8 | 13.0000 | 5 | 371.73 | 9.75 |
| 11.34998 | 371.54 | 12.52997 | 371.45 | 13.27997 | 371.38 | 23.29999 | | 371 | 28.75 |
| 31.90997 | 370.48 | 32.52002 | 370.43 | 38.29999 | 370 | 38.38 | | 370 | 38.83002 |
| 41.15002 | 369.93 | 44.75 | 369.81 | 45.89001 | 369.82 | 48.83002 | | 369.79 | 50.34998 |
| 51.58997 | 369.71 | 54.37 | 369.56 | 57.53998 | 369.42 | 59.38 | | 369.34 | 59.66998 |
| 62.16998 | 369.31 | 64.07001 | 369.31 | 66.77002 | 369.28 | 69.79999 | | 369.23 | 71.57001 |
| 73.33997 | 369.17 | 4.71002 | 369.75 | 7.77002 | 369.77 | 52.02002 | | 369.80 | 5.65002 |
| 83.57001 | 369 | 84.02002 | 369 | 85.28998 | 369 | 86.42999 | | 369 | 86.82001 |
| 87.35999 | 369 | 88.33997 | 369 | 88.82001 | 369 | 97.53998 | | 368.67 | 99.29999 |
| 102.75 | 368.43 | 103.88 | 368.37 | 104.79 | 368.45 | 105.03 | 368.45 | 110.05 | 368.31 |
| 110.53 | 368.3 | 110.74 | 368.3 | 111.14 | 368.32 | 111.52 | 368.34 | 111.92 | 368.35 |
| 112.29 | 368.34 | 113.21 | 368.34 | 113.82 | 368.33 | 114.67 | 368.33 | 116.83 | 368.34 |
| 118.31 | 368.34 | 118.88 | 368.35 | 120.24 | 368.35 | 120.7 | 368.37 | 121.03 | 368.4 |
| 121.56 | 368.51 | 121.91 | 368.54 | 122.29 | 368.55 | 122.56 | 368.56 | 122.79 | 368.55 |
| 128.67 | 368.3 | 131.06 | 368.21 | 131.81 | 368.2 | 133.27 | 368.17 | 134.45 | 368.15 |
| 136.02 | 368.12 | 137.94 | 368.06 | 139.27 | 368 | 139.97 | 367.97 | 141.58 | 367.86 |
| 142.25 | 367.89 | 144.23 | 367.88 | 153.99 | 367.73 | 157.62 | 367.58 | 161.68 | 367.44 |
| 172.66 | 367.03 | 172.77 | 367.03 | 172.86 | 367.02 | 173.8 | 367 | 175.34 | 366.98 |
| 177.29 | 366.97 | 177.33 | 366.97 | 177.52 | 366.97 | 177.76 | 366.95 | 178.71 | 366.88 |
| 180.28 | 366.82 | 182.49 | 366.71 | 184.52 | 366.58 | 188.47 | 366.33 | 191.17 | 366.26 |
| 191.98 | 366.22 | 192.24 | 366.2 | 200.74 | 366 | 205.77 | 365.99 | 206.06 | 365.99 |
| 207.12 | 365.99 | 207.94 | 365.99 | 208.15 | 365.99 | 208.18 | 365.99 | 208.42 | 365.99 |
| 214.78 | 365.71 | 218.88 | 365.56 | 219.88 | 365.52 | 222.15 | 365.44 | 224.32 | 365.36 |
| 224.43 | 365.36 | 225.17 | 365.33 | 225.82 | 365.31 | 226.42 | 365.31 | 226.53 | 365.3 |
| 226.62 | 365.3 | 226.71 | 365.29 | 227.32 | 365.27 | 227.92 | 365.25 | 228.11 | 365.25 |
| 228.3 | 365.26 | 228.31 | 365.26 | 228.39 | 365.27 | 228.69 | 365.26 | 229.12 | 365.26 |
| 229.48 | 365.25 | 229.59 | 365.26 | 229.7 | 365.27 | 229.73 | 365.28 | 230.16 | 365.28 |
| 231.02 | 365.27 | 233.42 | 365.26 | 233.99 | 365.26 | 234.1 | 365.26 | 234.49 | 365.25 |
| 237.02 | 365.38 | 241.26 | 365.46 | 242.61 | 365.42 | 244.16 | 365.38 | 244.17 | 365.37 |
| 245.79 | 365.25 | 248.26 | 365.04 | 250.05 | 365 | 251.41 | 365 | 253.34 | 365 |
| 253.35 | 365 | 253.36 | 365 | 254.81 | 365 | 254.85 | 365 | 256.39 | 365 |
| 256.85 | 365 | 258.5 | 365 | 258.65 | 365 | 258.71 | 365 | 259.72 | 365 |
| 261.25 | 365 | 261.64 | 365 | 261.79 | 365 | 261.96 | 365 | 262.03 | 365.1 |
| 265.09 | 365.11 | 268.09 | 365.12 | 268.91 | 365.06 | 270.43 | 365 | 271.06 | 365 |
| 271.57 | 365 | 271.83 | 365 | 272.37 | 365 | 272.76 | 365 | 273.28 | 365 |
| 273.55 | 365 | 281.62 | 365.01 | 282.62 | 365.01 | 289.21 | 365 | 291.54 | 365 |
| 292.31 | 365 | 294.06 | 365 | 294.62 | 365 | 296.67 | 365 | 297.35 | 365.06 |
| 297.67 | 365.21 | 298.18 | 365.21 | 301.5 | 365.2 | 304.08 | 365.19 | 306.59 | 365.16 |
| 308.63 | 365.12 | 310.24 | 365.06 | 311.5 | 365 | 312.75 | 364.88 | 317.01 | 364.58 |
| 319.82 | 364.54 | 322.35 | 364.52 | 322.92 | 364.59 | 324.47 | 364.71 | 327.13 | 364.93 |
| 328.3 | 365 | 330.73 | 365 | 331.65 | 365 | 332.5 | 365 | 334.4 | 365 |
| 336.15 | 365 | 337.02 | 365 | 340.11 | 365 | 341.01 | 365 | 342.76 | 365 |
| 343.25 | 365 | 344.78 | 365 | 344.88 | 364.97 | 346.11 | 364.96 | 347.33 | 364.96 |
| 348.32 | 365 | 348.82 | 364.99 | 349.34 | 364.97 | 351.53 | 364.83 | 351.83 | 364.8 |
| 356.4 | 364.61 | 359.27 | 364.5 | 360.72 | 364.49 | 361.72 | 364.48 | 362.91 | 364.47 |
| 364.31 | 364.48 | 368.88 | 364.5 | 370.2 | 364.51 | 371.43 | 364.51 | 371.98 | 364.51 |
| 372.53 | 364.52 | 373.91 | 364.54 | 375.64 | 364.59 | 376.69 | 364.61 | 376.86 | 364.61 |
| 379.4 | 364.62 | 380.23 | 364.62 | 380.7 | 364.62 | 380.86 | 364.63 | 381 | 364.64 |
| 381.09 | 364.64 | 381.26 | 364.63 | 382.93 | 364.57 | 384.06 | 364.53 | 384.68 | 364.52 |
| 386.03 | 364.51 | 391.11 | 364.47 | 393.1 | 364.45 | 395.97 | 364.42 | 397 | 364.41 |
| 397.95 | 364.4 | 398.77 | 364.4 | 399.49 | 364.4 | 400.13 | 364.41 | 401.2 | 364.42 |
| 401.58 | 364.42 | 401.84 | 364.42 | 402.08 | 364.41 | 402.17 | 364.41 | 402.94 | 364.41 |
| 403.71 | 364.41 | 403.82 | 364.43 | 404.25 | 364.44 | 405.18 | 364.46 | 405.93 | 364.47 |
| 406.87 | 364.47 | 415.35 | 364.61 | 438.61 | 365 | 439.24 | 365 | 440.94 | 365 |
| 441.64 | 365 | 443.18 | 365 | 443.84 | 365 | 444.43 | 365 | 446.18 | 365 |
| 447.37 | 365 | 448.84 | 365 | 448.99 | 365 | 449.16 | 365 | 449.78 | 365 |
| 449.97 | 365 | 451.77 | 365 | 453.18 | 365 | 455.8 | 365 | 456.83 | 365 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 458.97 | 365 | 461.34 | 365 | 461.37 | 365 | 464.59 | 364.86 | 466.8 | 364.8 |
| 469.05 | 364.75 | 469.96 | 364.76 | 470.8 | 364.76 | 471.3 | 364.75 | 471.86 | 364.74 |
| 472.38 | 364.73 | 480.05 | 364.54 | 482.69 | 364.48 | 502.04 | 364 | 503.55 | 364 |
| 504.56 | 364 | 509.05 | 363.99 | 513.25 | 364 | 514.86 | 364 | 515.4 | 364 |
| 515.92 | 364.1 | 516.22 | 364.16 | 516.57 | 364.22 | 521.71 | 365 | 521.81 | 365 |
| 523.59 | 365 | 524.33 | 365 | 526.87 | 365 | 528.32 | 365 | 531.19 | 365 |
| 532.7 | 365 | 534.95 | 365 | 535.28 | 365 | 540.52 | 364.92 | 545.95 | 364.83 |
| 549.91 | 364.76 | 552.77 | 364.7 | 554.2 | 364.67 | 555.21 | 364.64 | 562.19 | 364.56 |
| 567.78 | 364.51 | 568.11 | 364.51 | 568.76 | 364.5 | 569.56 | 364.49 | 570.82 | 364.46 |
| 571.46 | 364.45 | 572.03 | 364.44 | 573.18 | 364.43 | 573.76 | 364.43 | 575.86 | 364.45 |
| 578.22 | 364.48 | 578.23 | 364.48 | 578.98 | 364.48 | 588.03 | 364.18 | 588.19 | 364.18 |
| 593.01 | 364 | 593.17 | 364 | 595.87 | 363.9 | 600.49 | 363.72 | 608.98 | 363.7 |
| 609.72 | 363.7 | 618.58 | 363.69 | 618.77 | 363.7 | 618.98 | 363.7 | 619.53 | 363.68 |
| 620.1 | 363.67 | 620.46 | 363.67 | 620.79 | 363.67 | 621.04 | 363.68 | 621.25 | 363.69 |
| 622.6 | 363.78 | 623.32 | 363.85 | 625.25 | 364 | 635.92 | 364.83 | 638 | 365 |
| 640.58 | 365 | 643.36 | 365 | 644.67 | 365 | 648.75 | 365 | 649.04 | 364.97 |
| 650.74 | 364.74 | 651.28 | 364.62 | 651.64 | 364.41 | 654.17 | 364.37 | 656.32 | 364.35 |
| 656.65 | 364.35 | 656.9 | 364.37 | 657.5 | 364.39 | 658.07 | 364.42 | 658.62 | 364.44 |
| 659.79 | 364.47 | 660.11 | 364.45 | 662.36 | 364.47 | 664.74 | 364.48 | 664.88 | 364.49 |
| 667.24 | 364.53 | 667.5 | 364.53 | 668.03 | 364.53 | 668.55 | 364.52 | 670.22 | 364.57 |
| 674.07 | 364.61 | 675.23 | 364.63 | 680.82 | 364.72 | 680.93 | 364.72 | 682.35 | 364.76 |
| 683.85 | 364.81 | 686.01 | 364.79 | 688.73 | 364.75 | 693.17 | 364.86 | 700.32 | 365 |
| 706.9 | 365.1 | 707.2 | 365.11 | 707.63 | 365.12 | 707.79 | 365.13 | 708.03 | 365.13 |
| 708.34 | 365.12 | 708.46 | 365.13 | 708.76 | 365.12 | 709.02 | 365.12 | 709.31 | 365.13 |
| 709.66 | 365.14 | 710.13 | 365.16 | 710.79 | 365.18 | 712.01 | 365.22 | 712.82 | 365.24 |
| 715.51 | 365.3 | 716.36 | 365.32 | 730.57 | 365.74 | 739.27 | 366 | 742.22 | 366.71 |
| 743.49 | 367 | 743.9 | 367.11 | 744.79 | 367.23 | 747.1 | 367.42 | 752.16 | 368 |
| 753.67 | 368.09 | 753.92 | 368.12 | 754 | 368.14 | 754.08 | 368.18 | 754.23 | 368.2 |
| 754.61 | 368.24 | 757.27 | 368.44 | 757.86 | 368.47 | 757.99 | 368.49 | 759.53 | 368.53 |
| 762.11 | 368.68 | 766.42 | 369 | 766.68 | 369.04 | 767.38 | 369.12 | 767.98 | 369.18 |
| 769.81 | 369.23 | 774.27 | 369.38 | 776.11 | 369.4 | 782.86 | 369.49 | 786.19 | 369.53 |
| 790.37 | 369.6 | 793.27 | 369.63 | 798.16 | 369.71 | 798.63 | 369.71 | 799.09 | 369.73 |
| 799.49 | 369.73 | 799.8 | 369.74 | 800.35 | 369.74 | 801.2 | 369.75 | 802.19 | 369.75 |
| 803.17 | 369.75 | 804.05 | 369.75 | 805.62 | 369.73 | 806.29 | 369.73 | 806.89 | 369.73 |
| 807.45 | 369.73 | 808.68 | 369.73 | 809.54 | 369.73 | 811.86 | 369.73 | 815.17 | 369.73 |
| 816.1 | 369.74 | 817.86 | 369.74 | 820.41 | 369.75 | 821.8 | 369.75 | 823.02 | 369.74 |
| 823.99 | 369.73 | 825.14 | 369.71 | 826.81 | 369.7 | 828.84 | 369.7 | 830.97 | 369.7 |
| 833.02 | 369.7 | 835.1 | 369.7 | 837.42 | 369.71 | 840.11 | 369.72 | 845.21 | 369.75 |
| 847.74 | 369.77 | 861.89 | 369.91 | 868.01 | 369.96 | 872.01 | 370 | 872.61 | 370.01 |
| 875.51 | 370.03 | 890.53 | 370.1 | 891.01 | 370.1 | 891.93 | 370.1 | 892.24 | 370.1 |
| 892.48 | 370.1 | 893.99 | 370.11 | 894.94 | 370.12 | 895.34 | 370.12 | 896 | 370.12 |
| 910.54 | 370.21 | 913.81 | 370.22 | 917.09 | 370.23 | 920.71 | 370.24 | 924.84 | 370.24 |
| 927.12 | 370.23 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 241.26 | .04 | 730.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 241.26 | 730.57 | 322.42 | 479.02 | 500.37 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 4308.96

INPUT
Description:
Station Elevation Data num= 386

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 3742.540039 | | 3748.330017 | | 3749.990051 | | 37415.64001 | | 374 |
| 22.59003 | 37425.89001 | | 374 | 29.44 | 37430.53003 | | 374 | 32.37 | 374 |
| 33.14001 | 37438.83002 | | 37441.33002 | | 37442.79004 | | 37444.51001 | | 374 |
| 45.10004 | 37448.11005 | | 374 | 49.63 | 37451.22003 | | 37454.21002 | | 374 |
| 54.56 | 37455.95001 | | 374 | 58.5 | 373.958.84003 | | 373.958.98004 | | 373.9 |
| 61.95001 | 373.76 | 63.19 | 373.7663.47003 | | 373.7564.55005 | | 373.7364.96002 | | 373.72 |
| 66.91003 | 373.6575.92004 | | 373.3685.35004 | | 373.05 | 86.75 | 373 | 91.12 | 372.67 |
| 94.49005 | 372.4896.98004 | | 372.33 | 102.13 | 372102.1801 | | 372 | 102.28 | 371.99 |
| 107.54 | 371.5113.6801 | | 371 | 114.95 | 370.64 | 117.15 | 370 | 117.81 | 369.79 |
| 118.11 | 369.67 | 119.17 | 369.3 | 120.01 | 369 | 120.97 | 368.72123.6801 | | 368 |
| 124.56 | 367.81 | 127.33 | 367 | 130.25 | 366.28 | 131.57 | 366 | 138.78 | 365.45 |
| 144.12 | 365 | 151.81 | 364.53 | 160.64 | 364 | 177.44 | 363.32 | 185.14 | 363 |
| 221.79 | 362.4 | 223.41 | 362.38224.9301 | | 362.36 | 233.87 | 362.25 | 235.62 | 362.22 |
| 238.38 | 362.18 | 240.16 | 362.17 | 242.46 | 362.14 | 247.72 | 362.12251.4301 | | 362.1 |
| 266.51 | 362 | 269.81 | 361.97 | 276.33 | 362 | 281.38 | 362 | 291.52 | 362 |
| 296.51 | 362 | 304.67 | 362 | 308.53 | 362 | 310.36 | 362 | 311.44 | 361.97 |
| 316.4301 | 361.82 | 317.15 | 361.81 | 338.16 | 361.27 | 348.76 | 361 | 349.03 | 361 |
| 349.57 | 361 | 349.98 | 361 | 351.31 | 361 | 351.41 | 361 | 351.87 | 361 |
| 352 | 361 | 352.26 | 361 | 352.89 | 361 | 356.92 | 361 | 357.32 | 361 |
| 358.71 | 361361.2401 | | 361 | 361.8 | 361.02 | 363.09 | 361.05 | 363.48 | 361.05 |
| 363.73 | 361.05 | 364.37 | 361 | 364.48 | 361 | 364.61 | 361 | 365.09 | 361 |
| 365.71 | 361 | 365.83 | 361 | 365.89 | 361 | 369.21 | 361 | 370.04 | 361 |
| 371.31 | 361 | 372.75 | 361 | 374.04 | 361 | 375.16 | 361 | 377.23 | 361 |
| 378.79 | 360.71 | 380.17 | 360.49 | 380.9 | 360.39382.6801 | | 360.22 | 383.62 | 360.22 |
| 384.6 | 360.23 | 385.41 | 360.42386.6801 | | 360.67 | 388.81 | 361 | 400.6 | 361.01 |
| 403.35 | 361.01 | 417.47 | 361 | 417.8 | 361 | 417.9 | 361 | 417.92 | 361 |
| 423.37 | 360.99 | 426.4 | 360.99428.9301 | | 361 | 429.77 | 361 | 439.94 | 361 |
| 442.22 | 361 | 451.44 | 361 | 454.93 | 361 | 457.41 | 360.64 | 459.53 | 360.35 |
| 461.25 | 360.15 | 461.53 | 360.13 | 461.96 | 360.09 | 462.13 | 360.08 | 462.51 | 360.08 |
| 462.89 | 360.08 | 462.9 | 360.08 | 462.93 | 360.11 | 463.03 | 360.11 | 463.15 | 360.12 |
| 463.21 | 360.12 | 463.31 | 360.13 | 463.44 | 360.16 | 464.96 | 360.36 | 465.12 | 360.37 |
| 466.36 | 360.48 | 469.64 | 360.76 | 470.21 | 360.8 | 470.96 | 360.72 | 472.01 | 360.61 |
| 474.89 | 360.34 | 475.14 | 360.33 | 478.3 | 360 | 482.73 | 360 | 483.48 | 360 |
| 485.47 | 360 | 488.08 | 360 | 489.04 | 360 | 489.4 | 360.02 | 504.77 | 360.76 |
| 511.69 | 361532.8101 | | 361 | 535.35 | 361 | 535.72 | 360.95536.4301 | | 360.87 |
| 537.15 | 360.79 | 541.71 | 360.22 | 543.51 | 360 | 543.65 | 360 | 543.75 | 360 |
| 543.95 | 360 | 544.33 | 360 | 546.71 | 360.58 | 546.99 | 360.66 | 548.42 | 361 |
| 551.9301 | 361560.4301 | | 361563.4401 | | 360.24 | 564.41 | 360 | 565.33 | 360 |
| 567.6901 | 360 | 572.97 | 360 | 575 | 360 | 578.58 | 360 | 582.51 | 360 |
| 585.59 | 360.44 | 586.22 | 360.54 | 586.3 | 360.54586.8201 | | 360.46588.0701 | | 360.17 |
| 588.95 | 360 | 590.05 | 360 | 590.34 | 360 | 591.29 | 360 | 591.62 | 360 |
| 591.7 | 360 | 591.76 | 360592.1901 | | 360.1594.9401 | | 360.76596.1801 | | 361 |
| 599.75 | 361 | 600.25 | 361 | 601.53 | 361 | 602.66 | 361 | 603.6 | 360.97 |
| 605.3 | 360.9 | 606.15 | 360.85 | 606.77 | 360.88607.1801 | | 360.89607.5601 | | 360.91 |
| 607.64 | 360.91 | 607.72 | 360.91 | 607.75 | 360.91607.8201 | | 360.91 | 608.25 | 360.9 |

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  608.45   360.9  609.11  360.89  609.58  360.88  609.85  360.87  610.95  360.86
611.4401  360.85632.0601  360.43651.5601     360653.5701     360654.0601     360
  660.63  360.51663.8201  360.72  668.04     361  668.47  361.11   669.1   361.2
  669.66  361.21  671.65  361.18  673.05   361.1  673.46   361.1   674.2     361
  675.47     361  675.67     361  677.53  360.99678.4301  360.99  679.05  360.99
  680.02  360.99  681.27     361682.4401     361  683.24  361.25  685.14     362
  685.76  362.41  686.47     363694.0701  363.56695.0601  363.63  696.11  363.68
  696.66  363.72  696.72  363.73  699.21  363.82  700.55  363.86  700.89  363.85
  701.15  363.85701.5601  363.85  701.77  363.85  701.99  363.85  702.17  363.84
  702.38  363.84  702.76  363.82  708.76  363.83  716.23  363.84  718.66  363.86
  720.72  363.89  726.41     364  734.37  364.13  734.97  364.14  739.32  364.22
   740.3  364.23743.0601   364.3  744.09   364.3  745.94  364.36  746.69  364.36
  749.92  364.47  750.55  364.46  753.87  364.56  757.55  364.49  758.99  364.47
  760.35  364.46  761.77  364.45   763.4  364.45  765.33  364.46  769.04  364.48
  770.82  364.49  772.49   364.5  778.42  364.55  793.75  364.68  801.73  364.78
  808.85  364.83  809.49  364.84  812.05  364.88  812.75  364.88  814.19   364.9
  814.35   364.9  814.39   364.9  815.16  364.91  815.82  364.92816.0601  364.92
  816.32  364.92   817.6  364.92  817.77  364.92  817.89  364.92  818.69  364.92
  819.24  364.91   819.4  364.91  819.58  364.91  820.24   364.9  820.74   364.9
  821.33  364.89   822.1   364.9  822.66   364.9  830.83  364.93  831.38  364.92
  831.67  364.92  832.21  364.92  832.52  364.91  832.79  364.91835.8101  364.92
  836.02  364.92   839.2  364.92  842.62   364.9  842.88   364.9  843.19   364.9
  843.51  364.91  844.27  364.91  844.97   364.9  845.88  364.89  846.01  364.88
  846.15  364.88  846.37  364.88  847.26  364.86  848.09  364.85  848.67  364.84
   850.9  364.79  856.05  364.73  856.84  364.72  862.47  364.65  863.34  364.63
  871.39  364.51  877.23  364.41  882.73  364.31   885.6  364.25   889.8  364.16
   896.3     364   896.8  363.98  897.09  363.99  897.41     364  900.51  364.08
  905.46  364.24  906.31  364.28  906.64  364.31906.6801  364.33   907.4  364.37
  908.19  364.39910.9301  364.44  913.41  364.49  915.12  364.52  915.64  364.53
  919.05  364.55  921.14  364.56  923.28  364.58  925.05  364.59  930.08  364.58
  935.52  364.56  935.61  364.55  935.86  364.55  936.26  364.55  939.23  364.55
  939.72  364.55  944.44  364.56945.4301  364.56  946.51  364.56  950.07  364.54
   952.4  364.54

Manning's n Values         num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  317.15     .04  685.76     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        317.15  685.76           691.51  656.52  575.77              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80              RS: 3652.44

INPUT
Description:
Station Elevation Data     num=     327
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  361.94.1499634  361.94.3699951  361.945.179993     3626.679993     362
 6.72998     36213.27997     36213.57996     36216.01996     36219.13995     362
   21.06     36223.16998     36225.46997     36226.26996     36227.14996     362
27.60999     36234.64996     362   36.63     36239.15997     36239.40997     362
   43.56  361.7346.82996  361.54   50.13  361.3555.91998     36163.85999  360.32
66.78998     36076.60999  359.3182.46997     35985.26001  358.72   86.12  358.65
86.45996  358.6386.76996  358.6288.15997  358.6190.03998  358.58   90.38  358.56
91.34998  358.5693.21997  358.5394.22998  358.4696.07996  358.4498.08997  358.32
99.70996  358.32  102.01  358.35  102.56  358.35   104.8  358.32  106.39  358.29
  114.04  358.11  118.79  358.02  119.76     358  122.06  357.86  123.04  357.83
  125.28  357.76  126.56   357.7  127.85  357.68  128.85   357.6  128.92   357.6
  133.87     357  134.92  356.82  135.57  356.82  135.62  356.82  137.94   356.5
   141.8  356.01  141.83     356  141.84     356  141.86     356  144.24     355
  145.82  354.94  148.14  354.86  149.47  354.91  150.96  354.97  151.08     355
   151.2     355  152.37     355  152.53     355  155.67  355.01  157.52  355.02
  157.53  355.02  157.54  355.02  157.67     355  159.11     355  159.44     355
     160     355  161.06     355  161.86     355  167.73     355  170.13     355
  173.07     355  175.37     355  177.53     355   177.9     355     178     355
   178.1     355  178.44     355  180.43     355  181.65     355  182.14     355
  183.38     355  193.84  355.02  195.32  355.02  207.12     355  208.85  354.73
  209.95  354.59  210.49  354.55   212.1  354.61  213.37  354.64  224.01  354.15
  224.45  354.13  227.32     354  236.83     354  237.21     354  239.19     354
  240.31     354  242.04     354  247.81     354  248.16  354.01  249.59  354.01
  250.02     354  252.54     354  252.66     354  252.85     354  253.93     354
  262.82     354  266.54     354  267.07  353.99  267.15  353.99  267.22  353.99
   272.8  353.99  273.32  353.99  274.13  353.99  278.36  353.99  282.58     354
  283.95     354  284.94     354  285.41     354  285.96     354  288.03     354
  289.21     354  289.65     354  291.66     354  292.28     354  294.72     354
  295.43     354  296.91  353.99  296.96  353.99   300.8     354  305.33  353.99
  305.66  353.99  308.28  353.99  315.06  353.88  315.17     354  318.53  354.93
  318.92     355  319.78  355.02  320.71  355.03   321.8  355.03  322.94  355.03
  324.08  355.01  324.49     355   326.3  354.81  332.49     354  333.25   353.9
  335.29  353.66  335.85  353.56  336.27  353.43  336.58  353.43  337.31  353.41
  340.92  353.37  342.03  353.35   342.2  353.35  342.29  353.35  342.47  353.35
  343.27   353.4  344.87  353.49   345.3  353.52   348.4  353.78  350.88     354
  352.49  354.48  353.77  354.64  354.16  354.73  355.84     355  356.12     355
  356.43     355  359.47     355  360.73     355   362.5  355.04  366.69  355.12
  366.89  355.12  367.44  355.13  372.37  355.33  373.47  355.36  375.68  355.42
  376.25  355.44  377.15  355.45  382.02  355.52  384.27  355.55  387.32  355.53
  390.71   355.5  390.79  355.48   391.7  355.28  392.42  355.17  393.85     355
  395.02  354.93  399.87  354.99   400.9  354.99  402.59  354.99  407.99     355
  410.81  355.22  418.56  355.83  418.92  355.85   419.6  355.89  419.93   355.9
  420.23   355.9  420.25   355.9   420.3   355.9  420.83  355.87   421.2  355.87
  422.85  355.94  423.01  355.95  423.84  355.96   423.9  355.97  423.97  355.97
  425.05  355.95  427.35  355.93  429.05  355.95  430.53     356   430.7     356
  432.51  356.04  434.17  356.06  437.11  356.07  440.78  356.06  449.06  356.05
  450.19  356.05  451.44  356.07  452.93  356.09  455.65   356.1  463.77  356.13
  464.96  356.13  465.83  356.12  466.76  356.11  467.85  356.09  469.16  356.05
   470.6     356  470.62  355.99  470.75  355.78  470.87  355.77  471.09  355.78
  475.79     356  480.99  356.16  491.14  356.48  497.75  356.69  500.17  356.77
  500.88  356.79  502.84  356.86  503.14  356.87  503.35  356.87  503.83  356.88
  504.05  356.89  504.27  356.89  504.62  356.91  505.27  356.93  505.54  356.94
  505.79  356.95  505.81  356.95  505.86  356.95   505.9  356.96  506.02  356.96
   506.1  356.96  506.28  356.96  506.44  356.97  506.53  356.97  506.58  356.97
  506.61  356.97  506.63  356.97  506.66  356.97  506.95  356.97  507.04  356.97
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  507.15  356.97  507.26  356.97  507.39  356.97  507.52  356.97  507.63  356.97
  507.71  356.97  507.82  356.97  507.91  356.97  508.02  356.97  508.12  356.96
   508.2  356.96  521.13  356.86  527.63  356.82  531.37   356.8  532.71   356.8
  534.68   356.8  541.66  356.82  547.86  356.84  548.13  356.85   556.1  356.86
  557.64  356.87  558.17  356.87558.5699  356.87  558.85  356.87  559.05  356.87
  559.38  356.86  559.69  356.86   560.2  356.86  567.36  356.88  567.91  356.88
  579.22  356.93  587.48  356.98  587.59  356.98  590.95     357  602.49   357.1
  602.73   357.1  603.68  357.12   613.8  357.22  616.61  357.28   624.1  357.36
  631.35  357.54  636.82  357.61  639.93   357.7  646.29  357.92   646.4  357.92
  649.02     358  660.07  358.56  662.03  358.63  664.28  358.71  665.69  358.78
  667.71  358.82  667.98  358.84

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05   141.8     .04  418.92     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         141.8  418.92           459.93  426.01  380.87              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 3226.43

INPUT
Description:
Station Elevation Data    num=     262
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  356.56 2.77002  356.588.049988  356.6310.39001  356.6512.45001  356.67
14.07001  356.6815.40002  356.6917.66998   356.721.04999  356.7225.07001  356.73
28.42999  356.7431.72003  356.7532.41998  356.7633.15002  356.7635.78998  356.76
37.04999  356.76   38.31  356.7741.41998  356.7742.97998  356.7745.84003  356.78
50.08002  356.7257.22003  356.6357.33002  356.6257.65997  356.6158.22998   356.6
60.15002  356.5763.97998  356.4773.67999  356.2281.15002     35682.29999  355.93
86.07001  355.7386.76001  355.7187.40002   355.787.97003   355.788.78003  355.71
90.45001  355.7893.02002  355.94   93.75  355.9795.47003  355.9598.83002  355.85
   99.03  355.84  102.86  355.68  106.36  355.68  109.12   355.6  111.51  355.57
  113.34  355.54  113.96  355.53  114.57  355.51  116.37  355.43  119.79  355.26
  120.34  355.24  124.75     355  134.76   354.2  135.73  354.16  144.63     354
  145.81  353.89  146.17   353.8  146.78  353.64  149.05     353   149.3  352.99
  150.07  352.99  150.63  352.97  150.68  352.98  150.77  352.97  150.93  352.98
  151.27  352.79  151.94  352.68  152.66  352.48  152.83  352.41  152.95  352.38
  153.07  352.39  153.57  352.44  154.34  352.55  154.62  352.57  155.09  352.57
  155.49  352.54  156.19   352.4  156.42  352.33  156.53   352.3  156.61  352.31
   156.8  352.35   158.7     353  159.65   353.2   159.9   353.2  160.56  353.28
  162.47  353.56  163.03   353.8  163.78     354  164.06     354  164.13     354
  164.22     354  164.36     354  165.61     354  166.03     354  166.67     354
  167.63     354  168.56     354  168.79     354  169.63  353.86  170.07  353.78
  174.94     353  178.13  352.12  178.57     352  179.28  351.81  181.98     351
  183.32  350.92  185.57  350.83  198.35  350.82  212.94  350.95  213.16     351
  214.25     351  218.24     351  218.89     351     222     351  223.43     351
  226.28     351  227.26     351  237.65     351  242.85     351  246.68     351
  264.04     351   264.2     351  264.89     351  266.56   350.8  273.45     350
  274.94  349.93  275.15  349.91  286.43  349.85  289.11  349.84  301.39   349.8
  302.24  349.83  303.19  349.85  304.08  349.86  305.21  349.88  307.33  349.94
  307.88  349.95  309.75  349.96  310.86  349.98   311.8     350  312.59  350.07
  320.13  350.79  320.22  350.79  320.52   350.8  320.96  350.79  327.31  350.94
  327.52  350.94   327.6  350.94  329.55  350.96  331.09  350.94  331.74  350.87
  338.18  350.93   341.3  350.99  342.78  350.99  344.64     351  345.24  351.04
  348.35  351.28  349.57  351.34  351.25  351.41  353.05  351.46  354.71   351.5
  356.17  351.53  357.53  351.54  360.21  351.57  362.44  351.58  363.16  351.59
  363.73  351.59   364.3  351.58  365.01  351.58  365.85  351.57  366.84  351.56
  370.96  351.51  375.14  351.47  378.84  351.43  379.51  351.43   379.8  351.42
  383.06   351.4  386.28  351.37  387.23  351.36   393.7   351.3  396.57  351.27
  396.79  351.27  398.16  351.28  399.63  351.29  399.67   351.3  399.85  351.31
  400.03  351.32  400.28  351.32     407  351.21  409.31  351.17  409.88  351.16
  410.07  351.16  410.32  351.17  410.37  351.18  416.06  351.19   421.8  351.18
  423.47  351.11  424.62  351.08  428.41     351   431.7  350.99  432.72  350.99
  436.71     351  436.94     351  437.15     351   440.9  351.15   447.1  351.15
  449.06  351.13  449.22  351.13  452.49  351.13   458.2  351.09  458.33  351.09
   461.1  351.05  462.87  351.01  462.91  351.01  463.32     351   466.7     351
  467.38     351  469.27     351  469.63     351  476.15  351.83  477.09  351.97
  477.45     352  479.41  352.07  486.05  352.31  489.87  352.43  493.68  352.55
  496.49  352.62  498.08  352.66  504.73  352.88  509.33     353  529.73  353.23
  537.95  353.33  539.44  353.34  540.41  353.35  541.06  353.34  542.67  353.31
  543.16  353.29   544.6  353.22  545.46  353.21  546.59   353.2  547.96  353.19
  548.55   353.2  551.55  353.24  551.96  353.25  554.24   353.3  555.66  353.33
  557.06  353.34   560.6   353.4  562.61  353.45  564.74  353.51   567.1  353.58
   578.1     354  581.08  354.06  590.03  354.24  594.12  354.28  594.96  354.29
   599.2  354.34   600.4  354.35  604.46  354.39  605.22  354.39  605.76  354.39
   606.6  354.39  610.19  354.38

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  178.57     .04  477.45     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
         178.57  477.45           438.17  395.05  374.62              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 2831.38

INPUT
Description:
Station Elevation Data    num=     367
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  353.93.6599731  353.931.099976  353.941.289978  353.941.380005  353.94
2.130005  353.933.149963  353.913.190002  353.91    3.25  353.919.449951     354
9.529968     3549.619995     35410.33997     35410.34998     354      26  353.26
27.32996  353.2128.00995  353.1828.38995  353.1728.63995  353.1728.91998  353.17
29.29999  353.18   30.31   353.2   31.06  353.1132.66998  353.0532.81995  353.05
34.63995  353.0334.70996  353.0336.34998  353.03   38.56  353.0738.64996  353.07
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39.98999  353.0740.03998  353.07   41.62     35349.85999  352.6851.44995  352.56
53.22998  352.41   53.63  352.3756.95996  352.0357.21997     35266.06995  351.11
67.01996     35174.28998  350.6676.10999  350.5977.92999  350.5383.88995  350.34
94.75995  350.0194.84998  350.0195.08997     350  104.27  349.82  104.97  349.82
  109.23  349.72  117.15  349.53  122.29  349.43     124   349.4  124.35  349.39
     128  349.37   129.2  349.36   130.3  349.36  135.05  349.36  136.49  349.36
  138.03  349.36140.2599  349.37  145.05  349.39  145.72  349.39  147.23  349.41
  154.54  349.47  155.89  349.48  156.67  349.49  157.12   349.5158.0099  349.51
  160.56  349.53  162.28  349.55  164.66  349.57  166.62  349.58   168.3  349.59
  169.87   349.6  171.44   349.6  174.28  349.61  176.46  349.61  178.74  349.63
  181.85  349.62  187.27  349.61  188.31  349.61  189.07  349.61  190.27  349.62
  190.86  349.62  191.53  349.62  192.26  349.61     193   349.6  193.55  349.58
  193.69  349.58   194.3  349.56  194.79  349.55  195.76   349.5  199.92  349.37
  201.19  349.34  202.61  349.31  203.17   349.3  203.47  349.29  203.95  349.04
  204.19     349  205.64  348.16  205.92     348  206.53  347.73  208.15     347
  209.09  346.89  213.01  346.61  214.63  346.51  215.49  346.46  215.87  346.45
  216.55   346.4  216.83  346.38  216.88  346.35  217.32  346.33  217.88  346.31
  218.14  346.31  218.38  346.31  218.62  346.31  218.87  346.31  219.56  346.32
  219.92  346.33  220.32  346.34  220.86  346.38  221.13  346.39  221.47   346.4
  222.11   346.4  222.59  346.41  224.75  346.49  228.29   346.6  229.82  346.62
   231.7  346.65  232.64  346.66  233.72  346.67  234.36  346.67  235.45  346.65
  235.74  346.65  235.95  346.63   236.2  346.59  236.41  346.58  238.88   346.6
  239.88  346.61  241.29  346.64  248.18  346.73  248.65  346.74  249.14  346.74
  252.21   346.8  254.45  346.82  254.92  346.83  255.33  346.83  255.81  346.83
  257.78  346.79  261.27   346.7  261.29  346.68  261.34  346.68  261.42  346.67
  265.86  346.61  268.04  346.58   268.7  346.57  269.29  346.56  270.27  346.53
  276.28  346.33  276.59  346.32  285.73     346  286.76  345.94  289.52  345.76
  289.88  345.75  290.24  345.75  290.82  345.74   301.3  345.72  302.62  345.72
  303.19  345.72  303.56  345.74  307.09  345.91  309.03     346  309.19  346.01
  309.22  346.02  309.25  346.02  309.26  346.02  316.85   346.7  317.21  346.68
  319.78  346.49  320.24  346.48   321.1   346.5     325   346.6  327.48  346.66
  329.26  346.69  332.69   346.8  333.87  346.85  334.18  346.86  334.49  346.87
  334.81  346.88  334.85  346.88  335.01  346.88   335.2  346.88  335.42  346.87
  335.67  346.87  337.83  346.81  339.06  346.77  340.06  346.77  341.02  346.75
  341.85  346.74  343.03  346.73  344.14  346.69  344.74  346.67  346.15   346.6
  350.69  346.59  351.94  346.47  353.65  346.28  354.06  346.27  355.32  346.12
  355.48  346.11  355.62  346.09  355.84  346.06  355.96  346.03  356.03  346.02
  356.05  346.02  356.13  346.02  356.14  346.02  356.15  346.02  356.19  346.01
  356.25  346.01  356.27  346.01   356.3  346.01  356.31  346.01  356.32  346.01
  356.34  346.02  356.36  346.03  356.38  346.03  356.62  346.05  356.84  346.06
  357.16  346.08  357.44  346.09  362.46  346.37  363.48  346.43  363.91  346.45
  365.01  346.47     366  346.48  367.46  346.48  368.08  346.49  369.29  346.52
  369.79  346.53  371.07  346.54  371.46  346.56  372.38  346.55  372.64  346.53
  373.05  346.49  373.41  346.45  374.29  346.44  376.12  346.43  376.64  346.42
  376.85  346.37  377.12  346.36  377.46  346.35   378.2  346.35  379.48  346.36
  386.37  346.43  407.69  346.96  409.48     347  420.53  347.49  423.68  347.62
  431.97     348  432.15     348  432.64     348  432.71     348  433.99     348
  434.23     348  434.43     348  435.34  348.01  436.81  348.01  445.78  348.01
  447.26  348.01  450.67  348.02     452  348.02  459.18  348.03  464.57  348.04
  469.15  348.04   482.3   348.2  483.32  348.18  484.14  348.18  484.84  348.17
  486.19  348.17  488.66  348.18  489.49  348.18  490.85  348.16  492.11  348.15
  495.28  348.13  496.93  348.12  497.41  348.12  497.74  348.12   498.7  348.12
  498.95  348.12  499.26  348.11  499.84   348.1  500.45  348.09  500.49  348.09
  500.55  348.09  500.64  348.09  500.74  348.09  500.81  348.09  500.88  348.09
  500.97   348.1  501.69   348.1  501.89  348.11  502.02  348.11   502.1  348.11
  502.21  348.12  502.22  348.13  502.24  348.16   502.3  348.16  502.39  348.17
  502.54  348.17  502.73  348.18  504.74  348.19  505.05  348.19  505.31   348.2
  505.59   348.2  505.79   348.2  505.84  348.19  507.73  348.19  509.66   348.2
  510.07   348.2  510.27  348.21  510.72  348.22  512.35  348.31  512.38  348.31
  519.43  348.67   525.5     349  526.67  349.41  528.84     350   530.7  350.15
  531.79  350.26535.1899  350.63  537.26  350.84  538.77     351  552.26  351.37
  567.74  351.78  571.22  351.88  571.63  351.89  572.03  351.89  572.18   351.9
   572.4  351.89  572.87  351.89   574.1  351.97  574.14  351.97  574.55     352
  600.84  352.52604.6899   352.6  608.03  352.68   610.8  352.74  612.36  352.77
  613.04  352.76  613.98  352.78  616.33  352.81  617.95  352.83  618.56  352.84
  625.11     353   646.6  353.77  651.62  353.94  653.31     354  657.58  354.25
  663.27  354.61  669.75     355  673.37  355.26  676.06  355.44  677.69  355.55
  683.53     356  686.35  356.34

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  205.64     .04  450.67     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        205.64  450.67            399.68  417.05   475.7              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 2414.33

INPUT
Description:
Station Elevation Data    num=     404
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   347.24.910034     3477.410034  346.938.480042  346.9112.70001   346.8
15.40002  346.7116.01001  346.717.02002   346.721.11005  346.73   21.88  346.72
24.43005  346.6727.12006  346.6127.62006   346.628.12006  346.58   42.81  346.31
43.87006  346.2844.39001  346.2644.99005  346.2445.16003  346.2245.46002  346.21
45.70001  346.2146.43005  346.1947.78003  346.1648.96002  346.1449.41003  346.13
49.87006  346.1250.29004  346.1250.32001  346.1250.48004  346.1250.87006  346.12
51.14001  346.1251.27002  346.1251.42004  346.1255.28003  346.0658.70001     346
61.02002  345.9761.32001  345.9761.40002  345.9761.46002  345.9761.70001  345.96
   61.75  345.9661.80005  345.9661.84003  345.97   62.06  345.9662.12006  345.96
62.48004  345.9563.10004  345.9463.32001  345.9463.67004  345.9363.87006  345.93
82.65002  345.6685.20001  345.6393.09003  345.5493.80005  345.5494.47003  345.54
   95.38  345.5396.49005  345.5297.78003   345.5  103.44  345.39  106.07  345.34
  111.81  345.27112.4301  345.26   114.3  345.24  114.94  345.23  118.26  345.21
  119.39   345.2  120.17   345.2  120.76   345.2  122.82  345.19  123.82  345.19
  124.58  345.19124.8701  345.19  125.15  345.19  126.04  345.23  126.48  345.25
  127.41  345.26  128.39  345.29  129.21  345.33  129.95  345.38  130.69  345.42
  131.26  345.44  132.08  345.46   132.9   345.5  133.15   345.5  133.52  345.51
  134.06  345.51  134.76  345.51  135.53  345.51  137.22  345.52  138.22  345.52
  139.42  345.51  140.92   345.5  150.01  345.43  151.67  345.42  152.92  345.41
  154.22  345.41  159.28  345.43  160.56  345.44  167.19  345.43  167.93  345.43
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 169.53 | 345.42 | 170.28 | 345.41 | 171.08 | 345.4 | 171.86 | 345.39 | 173.17 | 345.36 |
| 174.03 | 345.33 | 174.21 | 345.32 | 174.29 | 345.3 | 174.77 | 345.28 | 175.27 | 345.25 |
| 175.52 | 345.24 | 176.33 | 345.23 | 176.9 | 345.22 | 178.49 | 345.21 | 179.28 | 345.2 |
| 179.95 | 345.2 | 182.3 | 345.2 | 184.41 | 345.2 | 185.23 | 345.2 | 186.33 | 345.2 |
| 187.15 | 345.19 | 189.1 | 345.19 | 199.26 | 345.17 | 201.51 | 345.16 | 203.14 | 345.15 |
| 204.39 | 345.14 | 206.6 | 345.11 | 209.88 | 345.05 | 212.38 | 345 | 215.38 | 344.69 |
| 221.04 | 344 | 234.84 | 343.42 | 239.71 | 343.23 | 245.14 | 343 | 245.84 | 342.95 |
| 250.7 | 342.62 | 252.32 | 342.53 | 252.4 | 342.51 | 252.78 | 342.5 | 253.1 | 342.5 |
| 254.18 | 342.45 | 254.71 | 342.42 | 254.86 | 342.4 | 255.39 | 342.4 | 255.92 | 342.39 |
| 256.53 | 342.49 | 256.86 | 342.53 | 257.67 | 342.6 | 258.43 | 342.64 | 259.44 | 342.68 |
| 260.67 | 342.71 | 262.06 | 342.73 | 263.57 | 342.75 | 265.32 | 342.77 | 265.46 | 342.77 |
| 266.15 | 342.81 | 266.49 | 342.83 | 266.57 | 342.83 | 266.6 | 342.85 | 266.64 | 342.86 |
| 266.76 | 342.86 | 267.61 | 342.88 | 267.72 | 342.88 | 267.85 | 342.89 | 268.01 | 342.89 |
| 268.25 | 342.89 | 268.53 | 342.88 | 268.83 | 342.88 | 269.13 | 342.88 | 269.42 | 342.88 |
| 269.7 | 342.87 | 269.95 | 342.87 | 270.18 | 342.86 | 270.35 | 342.86 | 270.54 | 342.85 |
| 270.62 | 342.84 | 270.71 | 342.83 | 270.76 | 342.83 | 270.92 | 342.82 | 271.42 | 342.81 |
| 271.65 | 342.8 | 272.22 | 342.78 | 274.18 | 342.72 | 276.18 | 342.72 | 276.67 | 342.71 |
| 277.09 | 342.7 | 279.82 | 342.68 | 282.7 | 342.65 | 282.97 | 342.65 | 283.07 | 342.66 |
| 283.25 | 342.68 | 283.41 | 342.7 | 285.15 | 342.67 | 285.95 | 342.65 | 286.71 | 342.63 |
| 296.95 | 342.31 | 298.68 | 342.28 | 299.19 | 342.26 | 303.56 | 342.13 | 304.19 | 342.11 |
| 304.92 | 342.09 | 305.19 | 342.08 | 305.65 | 342.08 | 306.45 | 342.06 | 306.73 | 342.05 |
| 306.86 | 342.05 | 307 | 342.05 | 307.24 | 342.05 | 307.31 | 342.05 | 307.36 | 342.05 |
| 307.76 | 342.04 | 307.82 | 342.04 | 307.9 | 342.04 | 307.92 | 342.05 | 307.98 | 342.05 |
| 308.03 | 342.06 | 308.12 | 342.06 | 308.29 | 342.07 | 308.57 | 342.08 | 309.3 | 342.11 |
| 312.7 | 342.32 | 314.71 | 342.43 | 315 | 342.43 | 315.92 | 342.43 | 319.2 | 342.27 |
| 320.6 | 342.21 | 321.28 | 342.23 | 321.57 | 342.23 | 322.28 | 342.25 | 322.8 | 342.25 |
| 323.11 | 342.25 | 323.56 | 342.24 | 323.99 | 342.25 | 324.64 | 342.25 | 325.16 | 342.26 |
| 325.53 | 342.27 | 326.6 | 342.31 | 327.09 | 342.33 | 328.6 | 342.42 | 329.37 | 342.48 |
| 332.48 | 342.78 | 334.06 | 342.89 | 336.07 | 343 | 336.14 | 343 | 336.32 | 343 |
| 337.34 | 343 | 339.15 | 343 | 339.56 | 343 | 339.58 | 343 | 343.44 | 343 |
| 344.38 | 343 | 344.44 | 343 | 344.95 | 343.01 | 345.13 | 343.01 | 348.82 | 343.01 |
| 352.57 | 343 | 354.31 | 343 | 357.61 | 343 | 357.62 | 343 | 357.66 | 343 |
| 358.14 | 343 | 358.27 | 343 | 358.32 | 343 | 359.22 | 343 | 384 | 342.1 |
| 386.46 | 342 | 386.9 | 341.99 | 392.67 | 341.87 | 398.73 | 341.71 | 399.03 | 341.71 |
| 400.82 | 341.71 | 407.14 | 341.69 | 409.78 | 341.69 | 411.33 | 341.69 | 412.03 | 341.69 |
| 412.39 | 341.7 | 421.61 | 342 | 422.74 | 342.23 | 426.11 | 343 | 430.57 | 343.11 |
| 433.11 | 343.17 | 437.59 | 343.27 | 441.69 | 343.36 | 449.17 | 343.53 | 469.29 | 344 |
| 476.52 | 344.39 | 487.36 | 345 | 489.85 | 345.21 | 492.89 | 345.45 | 494.44 | 345.51 |
| 508.06 | 345.87 | 509.41 | 345.93 | 510.11 | 345.97 | 510.52 | 346 | 510.93 | 346.1 |
| 513.05 | 346.46 | 513.37 | 346.49 | 514 | 346.53 | 515.88 | 346.63 | 516.6 | 346.67 |
| 517.07 | 346.68 | 517.76 | 346.75 | 18.9301 | 346.72 | 519.8101 | 346.73 | 520.34 | 346.74 |
| 526.49 | 347 | 526.95 | 347.02 | 527.04 | 347.02 | 527.07 | 347.02 | 527.73 | 347.07 |
| 533.85 | 347.44 | 535.07 | 347.52 | 535.7 | 347.55 | 537.1 | 347.62 | 540.83 | 348 |
| 549.3101 | 348.55 | 550.47 | 348.63 | 551.11 | 348.69 | 551.3101 | 348.71 | 551.65 | 348.72 |
| 552.39 | 348.75 | 552.78 | 348.76 | 553.08 | 348.77 | 553.94 | 348.76 | 554.69 | 348.77 |
| 555.8101 | 348.87 | 556.34 | 348.88 | 557.7401 | 349 | 574.02 | 349.69 | 578.17 | 350 |
| 582.72 | 350.42 | 583.67 | 350.48 | 585.54 | 350.63 | 586.42 | 350.69 | 586.97 | 350.71 |
| 588.17 | 350.74 | 594.54 | 351 | 595.46 | 351.03 | 595.53 | 351.03 | 597.36 | 351.1 |
| 598.87 | 351.11 | 600.7401 | 351.13 | 602.47 | 351.12 | 602.7401 | 351.14 | 605.02 | 351.09 |
| 605.21 | 351.11 | 605.88 | 351.12 | 606.1 | 351.13 | 606.46 | 351.13 | 607.15 | 351.15 |
| 607.36 | 351.16 | 607.69 | 351.18 | 608.77 | 351.25 | 609.86 | 351.36 | 611.23 | 351.52 |
| 611.71 | 351.57 | 612.23 | 351.61 | 612.71 | 351.64 | 613.09 | 351.66 | 613.34 | 351.67 |
| 613.9301 | 351.68 | 614.92 | 351.71 | 617.75 | 351.81 | 620.78 | 352 | 630.6801 | 352.23 |
| 634.72 | 352.31 | 640.34 | 352.38 | 642.01 | 352.42 | 645.25 | 352.46 | 645.88 | 352.47 |
| 646.48 | 352.51 | 646.77 | 352.53 | 647.04 | 352.55 | 649.57 | 352.59 | 652.35 | 352.63 |
| 654.57 | 352.67 | 656.03 | 352.69 | 657.01 | 352.7 | 658.94 | 352.73 | 660.65 | 352.76 |
| 663.04 | 352.79 | 663.41 | 352.8 | 663.5 | 352.8 | 663.58 | 352.81 | 667.17 | 352.86 |
| 669.27 | 352.89 | 669.61 | 352.89 | 669.78 | 352.89 | 670.56 | 352.9 | 670.85 | 352.91 |
| 671.13 | 352.91 | 671.38 | 352.91 | 671.6 | 352.91 | 672.05 | 352.91 | 672.19 | 352.91 |
| 672.32 | 352.92 | 672.44 | 352.92 | 672.53 | 352.92 | 672.6201 | 352.92 | 672.9901 | 352.93 |
| 673.06 | 352.93 | 673.16 | 352.93 | 673.33 | 352.93 | 673.84 | 352.94 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.38 | .04 | 469.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.38 | 469.29 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2394.51*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.94 | 1.74 | 346.87 | 4.91 | 346.75 | 6.81 | 346.7 | 7.41 | 346.68 |
| 8.48 | 346.66 | 12.7 | 346.56 | 14.06 | 346.51 | 14.56 | 346.5 | 14.96 | 346.48 |
| 15.22 | 346.48 | 15.33 | 346.47 | 15.9 | 346.47 | 16.01 | 346.46 | 17.02 | 346.46 |
| 17.89 | 346.47 | 18.8 | 346.47 | 19.13 | 346.48 | 20.44 | 346.48 | 21.11 | 346.49 |
| 21.88 | 346.48 | 24.43 | 346.43 | 27.12 | 346.37 | 27.62 | 346.36 | 28.12 | 346.34 |
| 31.01 | 346.29 | 32.35 | 346.27 | 33.72 | 346.24 | 34.49 | 346.23 | 35.41 | 346.21 |
| 36.5 | 346.2 | 37.75 | 346.17 | 39.13 | 346.15 | 40.62 | 346.13 | 42.8 | 346.09 |
| 43.86 | 346.06 | 44.98 | 346.02 | 45.4 | 346 | 45.69 | 346 | 46.82 | 345.97 |
| 47.43 | 345.96 | 47.77 | 345.95 | 48.95 | 345.93 | 49.4 | 345.92 | 49.59 | 345.92 |
| 49.86 | 345.91 | 51.61 | 345.91 | 52.77 | 345.89 | 53.28 | 345.89 | 53.65 | 345.88 |
| 54.09 | 345.88 | 54.34 | 345.87 | 54.82 | 345.87 | 54.89 | 345.86 | 55.27 | 345.86 |
| 55.78 | 345.85 | 56.59 | 345.84 | 56.75 | 345.83 | 57.84 | 345.82 | 58.69 | 345.8 |
| 59.25 | 345.79 | 60.1 | 345.78 | 60.68 | 345.78 | 60.84 | 345.77 | 61.45 | 345.77 |
| 61.79 | 345.76 | 61.85 | 345.77 | 62.47 | 345.75 | 62.88 | 345.75 | 63.03 | 345.74 |
| 63.31 | 345.74 | 63.66 | 345.73 | 64.19 | 345.73 | 65.88 | 345.7 | 66.64 | 345.69 |
| 67.6 | 345.67 | 68.11 | 345.67 | 69.27 | 345.65 | 71.88 | 345.61 | 73.68 | 345.59 |
| 75.1 | 345.57 | 79.99 | 345.49 | 81.77 | 345.47 | 82.64 | 345.45 | 85.16 | 345.42 |
| 86.59 | 345.41 | 87.77 | 345.39 | 90.61 | 345.36 | 91.43 | 345.35 | 92.15 | 345.35 |
| 92.8 | 345.34 | 94.46 | 345.34 | 96.01 | 345.32 | 96.71 | 345.32 | 98.21 | 345.29 |
| 98.64 | 345.29 | 102.17 | 345.22 | 104.02 | 345.19 | 105.98 | 345.15 | 106.06 | 345.15 |
| 109.84 | 345.11 | 110.85 | 345.09 | 111.8 | 345.08 | 112.29 | 345.08 | 112.42 | 345.07 |
| 114.29 | 345.05 | 114.85 | 345.05 | 114.93 | 345.04 | 116.34 | 345.04 | 118.12 | 345.02 |
| 119.38 | 345.01 | 120.75 | 345.01 | 122.81 | 345 | 124.35 | 345 | 124.56 | 344.99 |
| 125.13 | 344.99 | 126.46 | 345.05 | 127.2 | 345.06 | 127.39 | 345.06 | 128.37 | 345.08 |
| 128.54 | 345.09 | 129.6 | 345.14 | 129.93 | 345.17 | 130.67 | 345.21 | 131.24 | 345.23 |
| 131.46 | 345.23 | 132.06 | 345.25 | 132.88 | 345.29 | 133.13 | 345.29 | 133.5 | 345.3 |
| 135.51 | 345.3 | 135.9 | 345.31 | 136.64 | 345.31 | 137.2 | 345.32 | 138.37 | 345.32 |



BSE Document Control Number: 7323HYD101

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 139.4 | 345.31 | 139.76 | 345.31 | 142.08 | 345.29 | 142.77 | 345.28 | 143.65 | 345.28 |
| 143.81 | 345.27 | 145.22 | 345.26 | 146.07 | 345.26 | 147.1 | 345.25 | 148.37 | 345.24 |
| 151.65 | 345.22 | 152.9 | 345.21 | 154.2 | 345.21 | 157.55 | 345.22 | 159.26 | 345.23 |
| 160.54 | 345.24 | 166.16 | 345.23 | 167.91 | 345.23 | 169.51 | 345.22 | 171.84 | 345.19 |
| 173.15 | 345.16 | 174.01 | 345.13 | 174.19 | 345.12 | 174.27 | 345.1 | 174.75 | 345.08 |
| 175.25 | 345.05 | 175.5 | 345.04 | 176.31 | 345.03 | 176.88 | 345.02 | 178.47 | 345.01 |
| 179.26 | 345 | 186.31 | 345 | 187.13 | 344.99 | 190.92 | 344.99 | 194.04 | 344.98 |
| 196.88 | 344.98 | 198.42 | 344.97 | 199.24 | 344.97 | 200.66 | 344.96 | 201.49 | 344.95 |
| 203.12 | 344.94 | 204.37 | 344.92 | 206.57 | 344.89 | 209.85 | 344.82 | 212.35 | 344.77 |
| 215.35 | 344.47 | 220.8 | 343.81 | 229.76 | 343.43 | 234.09 | 343.25 | 238.78 | 343.07 |
| 244 | 342.85 | 244.68 | 342.8 | 249.36 | 342.48 | 250.92 | 342.4 | 250.99 | 342.38 |
| 251.36 | 342.37 | 251.67 | 342.37 | 252.71 | 342.32 | 253.22 | 342.29 | 253.36 | 342.27 |
| 253.87 | 342.27 | 254.38 | 342.26 | 254.7 | 342.31 | 254.97 | 342.36 | 255.29 | 342.4 |
| 256.07 | 342.46 | 256.8 | 342.5 | 257.77 | 342.54 | 258.96 | 342.57 | 260.29 | 342.58 |
| 261.75 | 342.6 | 263.43 | 342.62 | 263.57 | 342.62 | 264.56 | 342.68 | 264.64 | 342.68 |
| 264.7 | 342.71 | 265.07 | 342.71 | 265.74 | 342.72 | 265.87 | 342.73 | 266.25 | 342.73 |
| 266.52 | 342.72 | 267.38 | 342.72 | 267.65 | 342.71 | 267.89 | 342.71 | 268.53 | 342.69 |
| 268.82 | 342.67 | 269.3 | 342.66 | 270.08 | 342.63 | 271.96 | 342.57 | 273.89 | 342.57 |
| 274.76 | 342.55 | 276.95 | 342.53 | 277.39 | 342.53 | 280.16 | 342.5 | 280.42 | 342.5 |
| 280.85 | 342.55 | 282.52 | 342.52 | 284.03 | 342.48 | 293.88 | 342.17 | 295.55 | 342.14 |
| 296.04 | 342.12 | 300.25 | 342 | 300.85 | 341.98 | 301.82 | 341.95 | 302.26 | 341.95 |
| 303.03 | 341.93 | 303.3 | 341.92 | 303.91 | 341.92 | 304.43 | 341.91 | 304.44 | 341.92 |
| 304.8 | 341.94 | 305.77 | 341.97 | 309.05 | 342.17 | 310.36 | 342.24 | 310.98 | 342.28 |
| 312.15 | 342.28 | 315.3 | 342.12 | 316.65 | 342.06 | 317.31 | 342.08 | 317.59 | 342.08 |
| 318.27 | 342.1 | 319.07 | 342.1 | 319.5 | 342.09 | 319.92 | 342.1 | 320.54 | 342.1 |
| 321.4 | 342.12 | 322.9 | 342.18 | 324.35 | 342.26 | 325.09 | 342.32 | 328.09 | 342.6 |
| 329.61 | 342.71 | 331.55 | 342.81 | 338.64 | 342.81 | 339.6 | 342.8 | 340.09 | 342.81 |
| 343.82 | 342.81 | 347.43 | 342.8 | 352.79 | 342.8 | 352.92 | 342.79 | 353.83 | 342.79 |
| 369.17 | 342.23 | 377.69 | 341.92 | 380.06 | 341.82 | 380.48 | 341.81 | 386.04 | 341.7 |
| 391.87 | 341.54 | 393.88 | 341.54 | 399.97 | 341.51 | 404.86 | 341.51 | 405.01 | 341.52 |
| 405.2 | 341.52 | 405.28 | 341.53 | 405.55 | 341.53 | 405.68 | 341.54 | 406.16 | 341.55 |
| 407.44 | 341.59 | 408.55 | 341.62 | 412.31 | 341.74 | 416.02 | 341.85 | 417.34 | 342.07 |
| 419.31 | 342.44 | 419.72 | 342.52 | 419.85 | 342.54 | 421.26 | 342.81 | 423.05 | 342.84 |
| 424.48 | 342.87 | 424.84 | 342.87 | 424.97 | 342.88 | 425.2 | 342.88 | 426.46 | 342.9 |
| 428.09 | 342.92 | 429.13 | 342.94 | 429.42 | 342.94 | 430.28 | 342.96 | 430.74 | 342.96 |
| 431 | 342.97 | 431.59 | 342.97 | 431.66 | 342.98 | 431.88 | 342.98 | 432.21 | 342.99 |
| 433.22 | 343.01 | 433.53 | 343.01 | 433.66 | 343.02 | 434 | 343.02 | 434.46 | 343.03 |
| 434.64 | 343.04 | 435.14 | 343.05 | 435.8 | 343.07 | 438.07 | 343.13 | 438.25 | 343.13 |
| 438.97 | 343.15 | 439.57 | 343.16 | 440.7 | 343.19 | 442.05 | 343.22 | 442.25 | 343.22 |
| 443.15 | 343.24 | 443.62 | 343.24 | 444.23 | 343.26 | 444.59 | 343.26 | 448.13 | 343.33 |
| 448.4 | 343.34 | 452.08 | 343.41 | 454.37 | 343.44 | 455.5 | 343.45 | 457.31 | 343.48 |
| 458.06 | 343.5 | 458.81 | 343.51 | 459.67 | 343.53 | 461.1 | 343.55 | 462.16 | 343.56 |
| 462.78 | 343.58 | 463.38 | 343.59 | 463.85 | 343.59 | 464.42 | 343.6 | 465.07 | 343.62 |
| 466.37 | 343.64 | 467.84 | 343.67 | 468.59 | 343.68 | 468.87 | 343.69 | 469.07 | 343.69 |
| 469.23 | 343.7 | 469.53 | 343.7 | 469.94 | 343.71 | 470.5 | 343.73 | 470.6 | 343.74 |
| 471.29 | 343.76 | 471.57 | 343.83 | 472.25 | 343.89 | 478.74 | 344.25 | 482.93 | 344.49 |
| 484.26 | 344.56 | 486.44 | 344.68 | 488.15 | 344.78 | 489.49 | 344.85 | 490.99 | 344.98 |
| 491.96 | 345.06 | 494.97 | 345.29 | 495.56 | 345.32 | 497.09 | 345.37 | 510.02 | 345.73 |
| 510.99 | 345.77 | 512.05 | 345.83 | 512.46 | 345.86 | 512.86 | 345.96 | 513.89 | 346.13 |
| 514.96 | 346.3 | 515.28 | 346.33 | 515.91 | 346.37 | 517.77 | 346.47 | 518.48 | 346.51 |
| 518.95 | 346.52 | 519.63 | 346.55 | 520.79 | 346.57 | 521.67 | 346.58 | 522.19 | 346.59 |
| 528.29 | 346.85 | 528.75 | 346.87 | 528.87 | 346.87 | 529.81 | 346.94 | 533.23 | 347.15 |
| 535.04 | 347.26 | 535.59 | 347.3 | 536.29 | 347.34 | 536.8 | 347.38 | 538.81 | 347.48 |
| 539.86 | 347.59 | 540.33 | 347.63 | 541.42 | 347.74 | 542.27 | 347.83 | 542.51 | 347.85 |
| 543.59 | 347.92 | 546.1 | 348.07 | 546.99 | 348.13 | 549.1 | 348.26 | 550.19 | 348.34 |
| 552.07 | 348.47 | 552.9 | 348.55 | 553.24 | 348.56 | 553.67 | 348.58 | 553.97 | 348.6 |
| 554.66 | 348.62 | 555.51 | 348.62 | 556.25 | 348.63 | 557.36 | 348.73 | 557.89 | 348.74 |
| 559.28 | 348.87 | 564.95 | 349.13 | 565.72 | 349.17 | 575.42 | 349.6 | 576.61 | 349.69 |
| 576.9 | 349.72 | 579.54 | 349.9 | 582.42 | 350.16 | 584.05 | 350.31 | 584.99 | 350.36 |
| 586.84 | 350.51 | 587.72 | 350.56 | 588.26 | 350.58 | 589.45 | 350.61 | 595.77 | 350.86 |
| 596.68 | 350.89 | 596.75 | 350.89 | 598.56 | 350.96 | 600.06 | 350.97 | 601.92 | 350.99 |
| 603.3 | 350.98 | 603.63 | 350.98 | 603.9 | 351 | 606.16 | 350.95 | 606.35 | 350.97 |
| 607.01 | 350.98 | 607.23 | 350.99 | 607.59 | 350.99 | 608.27 | 351.01 | 608.81 | 351.04 |
| 609.88 | 351.11 | 610.96 | 351.21 | 612.32 | 351.36 | 612.79 | 351.41 | 613.31 | 351.45 |
| 613.78 | 351.48 | 614.41 | 351.51 | 614.99 | 351.52 | 615.98 | 351.55 | 618.78 | 351.64 |
| 621.79 | 351.82 | 631.6 | 352.04 | 635.61 | 352.11 | 635.72 | 352.11 | 640.37 | 352.17 |
| 641.02 | 352.17 | 641.18 | 352.18 | 642.84 | 352.21 | 646.05 | 352.25 | 646.67 | 352.26 |
| 647.56 | 352.32 | 647.82 | 352.33 | 649.2 | 352.36 | 650.33 | 352.37 | 651.41 | 352.39 |
| 653.09 | 352.41 | 656.74 | 352.46 | 657.71 | 352.47 | 659.62 | 352.5 | 661.32 | 352.53 |
| 663.69 | 352.55 | 664.15 | 352.56 | 664.23 | 352.57 | 667.79 | 352.62 | 669.27 | 352.63 |
| 669.6 | 352.64 | 670.37 | 352.64 | 670.78 | 352.65 | 671.15 | 352.65 | 671.35 | 352.66 |
| 672.76 | 352.66 | 672.89 | 352.67 | 673.19 | 352.67 | 673.56 | 352.68 | 673.89 | 352.68 |
| 674.4 | 352.69 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.35 | .04 | 471.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.35 | 471.57 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2374.70*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.68 | 1.74 | 346.62 | 4.91 | 346.5 | 6.81 | 346.45 | 7.41 | 346.43 |
| 8.48 | 346.42 | 12.7 | 346.31 | 14.06 | 346.27 | 14.55 | 346.25 | 14.95 | 346.24 |
| 15.22 | 346.24 | 15.33 | 346.23 | 18.79 | 346.23 | 19.12 | 346.24 | 20.44 | 346.24 |
| 21.1 | 346.25 | 21.87 | 346.24 | 24.42 | 346.19 | 25.8 | 346.16 | 27.11 | 346.13 |
| 28.11 | 346.11 | 31 | 346.06 | 32.34 | 346.03 | 34.49 | 346 | 35.4 | 345.98 |
| 36.49 | 345.96 | 37.75 | 345.94 | 39.12 | 345.92 | 42.8 | 345.87 | 43.86 | 345.84 |
| 44.38 | 345.83 | 44.98 | 345.81 | 45.15 | 345.79 | 45.39 | 345.78 | 45.69 | 345.78 |
| 46.42 | 345.77 | 46.82 | 345.76 | 47.42 | 345.75 | 47.77 | 345.74 | 48.95 | 345.72 |
| 49.4 | 345.71 | 51.41 | 345.71 | 51.6 | 345.7 | 52.15 | 345.7 | 53.27 | 345.68 |
| 53.64 | 345.68 | 53.86 | 345.67 | 54.61 | 345.67 | 54.73 | 345.66 | 55.27 | 345.66 |
| 55.77 | 345.65 | 56.74 | 345.64 | 57.83 | 345.62 | 58.69 | 345.6 | 59.25 | 345.6 |
| 60.09 | 345.59 | 60.32 | 345.58 | 61 | 345.58 | 61.79 | 345.56 | 61.84 | 345.57 |
| 62.46 | 345.55 | 62.88 | 345.55 | 63.03 | 345.54 | 63.3 | 345.54 | 63.65 | 345.53 |
| 63.95 | 345.53 | 64.18 | 345.52 | 65.87 | 345.5 | 66.63 | 345.49 | 68.1 | 345.46 |
| 69.26 | 345.45 | 70.52 | 345.43 | 71.88 | 345.41 | 73.67 | 345.38 | 79.98 | 345.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 81.76 | 345.26 | 85.18 | 345.22 | 86.58 | 345.2 | 87.76 | 345.19 | 90.6 | 345.16 |
| 92.14 | 345.14 | 92.78 | 345.14 | 93.07 | 345.13 | 93.78 | 345.13 | 94.45 | 345.14 |
| 95.36 | 345.13 | 96 | 345.12 | 96.69 | 345.12 | 97.76 | 345.1 | 98.2 | 345.1 |
| 98.63 | 345.09 | 102.16 | 345.03 | 104.01 | 345 | 105.96 | 344.96 | 106.04 | 344.96 |
| 109.82 | 344.92 | 111.78 | 344.9 | 112.4 | 344.89 | 114.27 | 344.87 | 114.84 | 344.86 |
| 115.31 | 344.86 | 116.33 | 344.85 | 118.23 | 344.84 | 119.36 | 344.82 | 120.73 | 344.82 |
| 122.79 | 344.8 | 125.12 | 344.8 | 126.29 | 344.84 | 126.45 | 344.85 | 127.38 | 344.85 |
| 127.91 | 344.87 | 128.36 | 344.88 | 128.53 | 344.89 | 129.18 | 344.91 | 129.58 | 344.93 |
| 129.92 | 344.96 | 130.66 | 345 | 131.23 | 345.02 | 131.44 | 345.02 | 132.05 | 345.04 |
| 132.87 | 345.08 | 133.12 | 345.08 | 133.49 | 345.09 | 134.91 | 345.09 | 135.5 | 345.1 |
| 135.88 | 345.1 | 136.21 | 345.11 | 137.19 | 345.11 | 137.52 | 345.12 | 138.19 | 345.12 |
| 138.35 | 345.11 | 139.39 | 345.11 | 139.74 | 345.1 | 140.89 | 345.1 | 142.06 | 345.09 |
| 142.75 | 345.08 | 143.79 | 345.07 | 145.21 | 345.06 | 146.05 | 345.06 | 147.08 | 345.05 |
| 148.35 | 345.04 | 151.63 | 345.02 | 152.88 | 345.01 | 154.18 | 345.01 | 157.53 | 345.02 |
| 159.24 | 345.03 | 166.3 | 345.03 | 167.15 | 345.02 | 167.89 | 345.02 | 169.49 | 345.01 |
| 171.04 | 344.99 | 171.82 | 344.99 | 173.13 | 344.96 | 173.99 | 344.93 | 174.17 | 344.92 |
| 174.25 | 344.9 | 175.48 | 344.85 | 176.29 | 344.84 | 176.86 | 344.83 | 178.45 | 344.82 |
| 179.24 | 344.81 | 186.28 | 344.81 | 187.1 | 344.8 | 189.05 | 344.8 | 190.9 | 344.79 |
| 194.02 | 344.78 | 196.85 | 344.78 | 198.4 | 344.77 | 199.21 | 344.76 | 200.63 | 344.75 |
| 203.09 | 344.72 | 204.34 | 344.71 | 206.55 | 344.67 | 209.83 | 344.6 | 212.33 | 344.54 |
| 215.33 | 344.24 | 220.57 | 343.62 | 229.17 | 343.25 | 233.34 | 343.08 | 237.84 | 342.91 |
| 242.87 | 342.69 | 243.52 | 342.65 | 248.01 | 342.35 | 249.51 | 342.26 | 249.62 | 342.24 |
| 250.24 | 342.24 | 251.24 | 342.19 | 251.73 | 342.16 | 251.86 | 342.14 | 252.35 | 342.14 |
| 252.85 | 342.13 | 253.41 | 342.22 | 253.72 | 342.26 | 254.47 | 342.32 | 255.17 | 342.36 |
| 256.1 | 342.39 | 257.24 | 342.42 | 258.53 | 342.44 | 259.93 | 342.45 | 261.54 | 342.47 |
| 261.67 | 342.47 | 262.31 | 342.51 | 262.7 | 342.52 | 262.77 | 342.55 | 263.12 | 342.56 |
| 263.66 | 342.57 | 263.89 | 342.58 | 264.26 | 342.58 | 264.52 | 342.57 | 265.34 | 342.57 |
| 265.6 | 342.56 | 265.83 | 342.56 | 266.38 | 342.54 | 266.53 | 342.52 | 266.73 | 342.51 |
| 267.19 | 342.5 | 267.93 | 342.47 | 269.74 | 342.42 | 271.6 | 342.42 | 272.44 | 342.4 |
| 274.54 | 342.38 | 274.96 | 342.38 | 277.63 | 342.35 | 277.88 | 342.35 | 278.14 | 342.37 |
| 278.29 | 342.39 | 279.9 | 342.36 | 280.64 | 342.35 | 281.34 | 342.33 | 290.82 | 342.03 |
| 292.42 | 342 | 292.89 | 341.98 | 296.93 | 341.86 | 298.19 | 341.82 | 298.44 | 341.81 |
| 298.87 | 341.81 | 299.61 | 341.79 | 300.45 | 341.79 | 300.82 | 341.78 | 301.02 | 341.78 |
| 301.07 | 341.79 | 302.25 | 341.84 | 305.39 | 342.02 | 306.66 | 342.09 | 307.25 | 342.12 |
| 308.37 | 342.12 | 311.41 | 341.97 | 312.7 | 341.92 | 313.33 | 341.94 | 313.6 | 341.94 |
| 314.26 | 341.95 | 315.03 | 341.95 | 315.44 | 341.94 | 315.84 | 341.95 | 316.44 | 341.95 |
| 316.92 | 341.96 | 318.26 | 342 | 318.71 | 342.02 | 320.11 | 342.1 | 320.82 | 342.16 |
| 323.7 | 342.42 | 325.16 | 342.52 | 327.02 | 342.62 | 330.27 | 342.62 | 333.84 | 342.61 |
| 334.77 | 342.61 | 335.41 | 342.62 | 342.29 | 342.6 | 343.9 | 342.6 | 346.95 | 342.59 |
| 348.44 | 342.59 | 363.19 | 342.04 | 371.38 | 341.74 | 373.65 | 341.65 | 374.06 | 341.64 |
| 379.4 | 341.52 | 385.01 | 341.37 | 386.94 | 341.37 | 392.79 | 341.34 | 397.86 | 341.34 |
| 397.91 | 341.35 | 398.2 | 341.35 | 398.36 | 341.36 | 398.62 | 341.36 | 399.18 | 341.38 |
| 400.63 | 341.42 | 401.9 | 341.45 | 406.2 | 341.57 | 410.43 | 341.69 | 411.93 | 341.91 |
| 414.19 | 342.27 | 414.8 | 342.36 | 415.1 | 342.41 | 416.42 | 342.61 | 418.45 | 342.64 |
| 419.54 | 342.66 | 420.09 | 342.66 | 420.26 | 342.67 | 420.79 | 342.67 | 420.91 | 342.68 |
| 422.35 | 342.69 | 424.21 | 342.71 | 425.39 | 342.72 | 426.15 | 342.72 | 426.71 | 342.73 |
| 428.04 | 342.73 | 428.16 | 342.74 | 428.53 | 342.74 | 428.91 | 342.75 | 430.06 | 342.77 |
| 430.38 | 342.77 | 430.43 | 342.78 | 430.82 | 342.78 | 430.96 | 342.79 | 431.28 | 342.8 |
| 431.48 | 342.8 | 431.69 | 342.81 | 432.26 | 342.82 | 433.02 | 342.85 | 434.73 | 342.89 |
| 435.6 | 342.92 | 435.81 | 342.92 | 436.64 | 342.95 | 437.14 | 342.96 | 437.32 | 342.96 |
| 438.61 | 342.99 | 439.71 | 343.02 | 440.15 | 343.03 | 440.91 | 343.03 | 441.94 | 343.05 |
| 442.38 | 343.05 | 442.64 | 343.06 | 442.89 | 343.06 | 443.04 | 343.07 | 447.09 | 343.14 |
| 447.4 | 343.14 | 450.97 | 343.2 | 451.61 | 343.21 | 452.45 | 343.21 | 454.21 | 343.22 |
| 455.5 | 343.23 | 457.57 | 343.26 | 459.28 | 343.28 | 461.18 | 343.3 | 461.9 | 343.31 |
| 463.11 | 343.32 | 463.49 | 343.32 | 463.82 | 343.33 | 464.5 | 343.34 | 465.04 | 343.34 |
| 465.69 | 343.35 | 467.92 | 343.38 | 468.54 | 343.39 | 469.6 | 343.41 | 470.45 | 343.42 |
| 470.76 | 343.43 | 471 | 343.43 | 471.18 | 343.44 | 471.99 | 343.46 | 472.62 | 343.48 |
| 472.75 | 343.49 | 473.49 | 343.52 | 473.85 | 343.65 | 474.52 | 343.75 | 480.96 | 344.11 |
| 485.12 | 344.35 | 485.49 | 344.37 | 486.43 | 344.41 | 488.59 | 344.54 | 491.62 | 344.7 |
| 493.11 | 344.83 | 494.07 | 344.91 | 497.06 | 345.14 | 497.64 | 345.16 | 498.58 | 345.2 |
| 499.15 | 345.21 | 511.97 | 345.59 | 512.94 | 345.64 | 513.3 | 345.65 | 513.99 | 345.69 |
| 514.39 | 345.72 | 514.79 | 345.81 | 515.82 | 345.98 | 516.88 | 346.15 | 517.19 | 346.18 |
| 517.81 | 346.22 | 519.66 | 346.32 | 520.37 | 346.36 | 520.83 | 346.37 | 521.51 | 346.39 |
| 522.66 | 346.41 | 523.52 | 346.43 | 524.04 | 346.44 | 530.54 | 346.73 | 530.66 | 346.73 |
| 531.31 | 346.78 | 531.6 | 346.79 | 534.99 | 347.01 | 536.78 | 347.12 | 537.33 | 347.16 |
| 538.02 | 347.2 | 538.53 | 347.24 | 539.15 | 347.27 | 540.52 | 347.34 | 541.56 | 347.45 |
| 542.02 | 347.49 | 543.11 | 347.6 | 543.19 | 347.6 | 543.95 | 347.68 | 544.19 | 347.7 |
| 545.26 | 347.76 | 547.75 | 347.91 | 548.63 | 347.96 | 550.72 | 348.09 | 551.81 | 348.17 |
| 552.53 | 348.22 | 553.67 | 348.31 | 554.49 | 348.39 | 554.83 | 348.41 | 555.55 | 348.44 |
| 555.94 | 348.46 | 556.23 | 348.47 | 557.08 | 348.47 | 557.82 | 348.49 | 558.92 | 348.59 |
| 559.44 | 348.61 | 560.81 | 348.73 | 566.44 | 349.02 | 567.2 | 349.06 | 576.82 | 349.52 |
| 578 | 349.61 | 580.9 | 349.81 | 583.76 | 350.05 | 585.37 | 350.19 | 586.31 | 350.25 |
| 589.01 | 350.44 | 589.55 | 350.46 | 590.73 | 350.49 | 596.99 | 350.73 | 597.97 | 350.75 |
| 599.77 | 350.82 | 601.25 | 350.83 | 603.09 | 350.85 | 604.46 | 350.84 | 604.79 | 350.84 |
| 605.06 | 350.86 | 607.3 | 350.82 | 607.48 | 350.83 | 608.14 | 350.84 | 608.36 | 350.85 |
| 608.71 | 350.85 | 609.39 | 350.87 | 610.98 | 350.96 | 612.06 | 351.06 | 613.4 | 351.21 |
| 613.88 | 351.26 | 614.86 | 351.32 | 615.48 | 351.35 | 616.06 | 351.36 | 617.03 | 351.38 |
| 619.81 | 351.48 | 621.3 | 351.56 | 622.79 | 351.65 | 632.53 | 351.85 | 636.5 | 351.91 |
| 636.6 | 351.92 | 641.21 | 351.96 | 642.02 | 351.97 | 643.66 | 352.01 | 646.85 | 352.04 |
| 647.47 | 352.05 | 648.06 | 352.08 | 648.61 | 352.12 | 649.97 | 352.14 | 651.1 | 352.15 |
| 652.17 | 352.17 | 653.83 | 352.19 | 656.01 | 352.22 | 657.45 | 352.23 | 658.41 | 352.24 |
| 660.31 | 352.27 | 661.99 | 352.29 | 664.34 | 352.31 | 664.7 | 352.32 | 664.87 | 352.33 |
| 668.4 | 352.37 | 669.87 | 352.39 | 670.97 | 352.39 | 671.37 | 352.4 | 671.73 | 352.4 |
| 671.94 | 352.41 | 673.34 | 352.41 | 673.46 | 352.42 | 673.76 | 352.42 | 674.12 | 352.43 |
| 674.96 | 352.43 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.33 | .04 | 473.85 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.33 | 473.85 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2354.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.43 | 1.74 | 346.36 | 4.91 | 346.25 | 6.8 | 346.2 | 8.48 | 346.17 |
| 12.7 | 346.07 | 14.06 | 346.03 | 14.55 | 346.01 | 14.95 | 346 | 15.21 | 346 |
| 15.32 | 345.99 | 17.89 | 345.99 | 18.4 | 346 | 20.43 | 346 | 21.1 | 346.01 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 21.87 | 346 | 24.42 | 345.95 | 25.8 | 345.92 | 27.11 | 345.9 | 27.61 | 345.89 |
| 28.11 | 345.87 | 31 | 345.82 | 33.71 | 345.78 | 34.49 | 345.76 | 35.4 | 345.75 |
| 36.49 | 345.73 | 37.74 | 345.72 | 39.12 | 345.7 | 42.79 | 345.65 | 43.85 | 345.62 |
| 44.37 | 345.61 | 44.97 | 345.59 | 45.39 | 345.57 | 45.68 | 345.57 | 46.41 | 345.55 |
| 46.81 | 345.55 | 47.41 | 345.54 | 47.76 | 345.53 | 48.94 | 345.51 | 49.39 | 345.51 |
| 49.58 | 345.5 | 51.59 | 345.5 | 52.76 | 345.48 | 53.27 | 345.48 | 53.64 | 345.47 |
| 54.33 | 345.47 | 54.6 | 345.46 | 55.26 | 345.46 | 55.76 | 345.45 | 56.73 | 345.44 |
| 57.83 | 345.42 | 58.68 | 345.41 | 59.24 | 345.4 | 60.08 | 345.39 | 60.31 | 345.39 |
| 60.66 | 345.38 | 61.44 | 345.38 | 61.68 | 345.37 | 62.1 | 345.37 | 62.46 | 345.36 |
| 62.56 | 345.35 | 63.02 | 345.35 | 63.08 | 345.34 | 63.3 | 345.34 | 63.65 | 345.33 |
| 63.94 | 345.33 | 64.17 | 345.32 | 65.86 | 345.3 | 66.63 | 345.28 | 67.59 | 345.27 |
| 69.25 | 345.24 | 70.51 | 345.22 | 71.87 | 345.21 | 73.66 | 345.18 | 75.08 | 345.16 |
| 79.98 | 345.08 | 81.75 | 345.06 | 82.62 | 345.04 | 85.14 | 345.01 | 86.57 | 345 |
| 87.75 | 344.98 | 90.59 | 344.95 | 91.41 | 344.94 | 92.13 | 344.94 | 92.77 | 344.93 |
| 95.35 | 344.93 | 95.99 | 344.92 | 96.68 | 344.92 | 97.74 | 344.91 | 98.62 | 344.89 |
| 102.14 | 344.84 | 104 | 344.81 | 105.95 | 344.77 | 106.03 | 344.77 | 109.81 | 344.73 |
| 111.77 | 344.71 | 112.39 | 344.7 | 114.26 | 344.68 | 114.82 | 344.68 | 114.9 | 344.67 |
| 115.29 | 344.67 | 116.31 | 344.66 | 118.22 | 344.65 | 119.35 | 344.63 | 120.72 | 344.63 |
| 122.78 | 344.61 | 124.32 | 344.61 | 124.53 | 344.6 | 125.1 | 344.6 | 126.28 | 344.64 |
| 126.43 | 344.65 | 127.36 | 344.65 | 127.89 | 344.67 | 128.34 | 344.67 | 128.51 | 344.68 |
| 129.16 | 344.7 | 129.56 | 344.72 | 130.64 | 344.78 | 131.43 | 344.81 | 132.03 | 344.83 |
| 133.1 | 344.87 | 133.47 | 344.88 | 134.9 | 344.88 | 135.48 | 344.89 | 136.2 | 344.91 |
| 138.33 | 344.91 | 139.37 | 344.9 | 139.73 | 344.9 | 140.87 | 344.89 | 142.04 | 344.89 |
| 142.73 | 344.88 | 143.77 | 344.87 | 145.19 | 344.86 | 146.03 | 344.86 | 147.06 | 344.85 |
| 148.33 | 344.84 | 151.61 | 344.82 | 152.86 | 344.81 | 154.16 | 344.81 | 157.34 | 344.82 |
| 159.22 | 344.82 | 160.5 | 344.83 | 166.12 | 344.82 | 167.87 | 344.82 | 169.47 | 344.81 |
| 171.8 | 344.78 | 173.11 | 344.76 | 173.97 | 344.73 | 174.15 | 344.72 | 174.23 | 344.7 |
| 174.71 | 344.69 | 175.21 | 344.66 | 175.46 | 344.65 | 176.27 | 344.64 | 176.84 | 344.63 |
| 178.42 | 344.62 | 179.21 | 344.61 | 186.26 | 344.61 | 187.08 | 344.6 | 190.88 | 344.6 |
| 193.99 | 344.59 | 196.41 | 344.58 | 196.83 | 344.58 | 198.37 | 344.56 | 199.19 | 344.56 |
| 200.61 | 344.54 | 203.07 | 344.51 | 204.32 | 344.49 | 206.52 | 344.45 | 209.8 | 344.37 |
| 212.3 | 344.31 | 215.3 | 344.02 | 220.33 | 343.42 | 228.59 | 343.08 | 232.59 | 342.91 |
| 236.91 | 342.74 | 241.73 | 342.54 | 242.36 | 342.5 | 246.67 | 342.21 | 248.11 | 342.13 |
| 248.18 | 342.11 | 248.52 | 342.1 | 248.8 | 342.1 | 249.76 | 342.06 | 250.37 | 342.02 |
| 250.84 | 342.02 | 251.31 | 342.01 | 251.61 | 342.05 | 251.85 | 342.09 | 252.14 | 342.13 |
| 252.86 | 342.18 | 253.54 | 342.22 | 254.43 | 342.25 | 255.53 | 342.28 | 256.76 | 342.29 |
| 258.1 | 342.31 | 259.78 | 342.32 | 260.39 | 342.36 | 260.77 | 342.37 | 260.83 | 342.4 |
| 261.17 | 342.4 | 261.79 | 342.41 | 261.9 | 342.42 | 262.26 | 342.42 | 262.51 | 342.41 |
| 263.3 | 342.41 | 263.55 | 342.4 | 263.77 | 342.4 | 264.36 | 342.38 | 264.63 | 342.36 |
| 265.07 | 342.35 | 265.79 | 342.32 | 267.53 | 342.27 | 269.3 | 342.27 | 270.11 | 342.25 |
| 272.13 | 342.23 | 272.54 | 342.23 | 275.09 | 342.2 | 275.33 | 342.2 | 275.58 | 342.22 |
| 275.72 | 342.24 | 277.27 | 342.21 | 277.98 | 342.19 | 278.66 | 342.18 | 287.75 | 341.89 |
| 289.29 | 341.86 | 289.74 | 341.84 | 293.62 | 341.73 | 295.07 | 341.68 | 295.48 | 341.68 |
| 296.19 | 341.66 | 296.44 | 341.65 | 297 | 341.65 | 297.48 | 341.64 | 297.59 | 341.66 |
| 298.07 | 341.68 | 298.72 | 341.7 | 301.74 | 341.88 | 302.95 | 341.94 | 303.52 | 341.97 |
| 304.6 | 341.97 | 308.76 | 341.77 | 309.36 | 341.79 | 309.62 | 341.79 | 310.25 | 341.8 |
| 310.98 | 341.8 | 311.38 | 341.79 | 311.77 | 341.8 | 312.34 | 341.8 | 312.81 | 341.81 |
| 314.08 | 341.85 | 314.52 | 341.87 | 315.86 | 341.94 | 316.54 | 341.99 | 319.31 | 342.25 |
| 320.71 | 342.34 | 322.5 | 342.43 | 323.62 | 342.43 | 325.23 | 342.42 | 329.04 | 342.42 |
| 329.93 | 342.41 | 330.54 | 342.42 | 337.15 | 342.4 | 338.7 | 342.39 | 342.1 | 342.39 |
| 342.21 | 342.38 | 343.06 | 342.38 | 357.21 | 341.85 | 365.07 | 341.56 | 367.25 | 341.47 |
| 367.64 | 341.46 | 372.77 | 341.35 | 378.15 | 341.2 | 378.42 | 341.2 | 380.01 | 341.19 |
| 385.62 | 341.16 | 390.51 | 341.16 | 390.71 | 341.17 | 390.95 | 341.17 | 391.05 | 341.18 |
| 391.27 | 341.18 | 392.19 | 341.21 | 393.83 | 341.25 | 395.25 | 341.29 | 400.08 | 341.41 |
| 404.84 | 341.54 | 406.53 | 341.75 | 409.06 | 342.1 | 409.58 | 342.16 | 409.75 | 342.19 |
| 410.09 | 342.23 | 411.57 | 342.42 | 413.86 | 342.44 | 414.4 | 342.44 | 415.7 | 342.46 |
| 415.95 | 342.46 | 416.06 | 342.47 | 416.62 | 342.47 | 418.24 | 342.48 | 420.33 | 342.49 |
| 422.04 | 342.49 | 422.51 | 342.5 | 425.19 | 342.5 | 425.61 | 342.51 | 426.91 | 342.53 |
| 427.03 | 342.54 | 427.48 | 342.54 | 427.62 | 342.55 | 427.92 | 342.55 | 428.28 | 342.57 |
| 428.5 | 342.57 | 429.38 | 342.6 | 430.23 | 342.62 | 433.14 | 342.71 | 433.37 | 342.72 |
| 433.94 | 342.73 | 434.87 | 342.76 | 435.07 | 342.76 | 436.01 | 342.79 | 436.52 | 342.8 |
| 438.35 | 342.83 | 438.5 | 342.84 | 439.66 | 342.84 | 440.26 | 342.85 | 440.54 | 342.85 |
| 440.76 | 342.86 | 441.05 | 342.86 | 441.5 | 342.87 | 446.05 | 342.94 | 446.4 | 342.95 |
| 450.41 | 343.01 | 455.5 | 343.01 | 457.83 | 343.03 | 458.8 | 343.03 | 459.76 | 343.04 |
| 461.89 | 343.06 | 462.7 | 343.07 | 464.05 | 343.07 | 464.49 | 343.08 | 464.85 | 343.08 |
| 465.62 | 343.09 | 466.23 | 343.09 | 466.96 | 343.1 | 468.66 | 343.12 | 470.17 | 343.14 |
| 471.35 | 343.15 | 472.31 | 343.17 | 472.66 | 343.17 | 472.92 | 343.18 | 473.13 | 343.18 |
| 473.51 | 343.19 | 474.05 | 343.21 | 474.75 | 343.24 | 474.9 | 343.25 | 475.75 | 343.28 |
| 476.03 | 343.43 | 476.14 | 343.48 | 476.8 | 343.6 | 483.18 | 343.96 | 487.3 | 344.21 |
| 487.67 | 344.23 | 488.61 | 344.27 | 490.75 | 344.39 | 492.43 | 344.48 | 493.75 | 344.56 |
| 495.23 | 344.68 | 496.18 | 344.76 | 499.14 | 344.98 | 499.72 | 345 | 500.65 | 345.04 |
| 501.22 | 345.06 | 513.93 | 345.45 | 514.89 | 345.5 | 515.24 | 345.51 | 515.93 | 345.55 |
| 516.33 | 345.58 | 516.72 | 345.67 | 517.15 | 345.74 | 518.79 | 345.99 | 519.1 | 346.02 |
| 519.72 | 346.06 | 521.55 | 346.16 | 522.25 | 346.2 | 522.71 | 346.21 | 523.38 | 346.24 |
| 524.52 | 346.26 | 525.9 | 346.29 | 532.34 | 346.58 | 532.46 | 346.58 | 533.38 | 346.65 |
| 536.75 | 346.87 | 538.52 | 346.98 | 539.07 | 347.02 | 539.76 | 347.06 | 540.25 | 347.1 |
| 540.87 | 347.13 | 542.23 | 347.2 | 543.26 | 347.31 | 543.51 | 347.33 | 544.8 | 347.45 |
| 544.88 | 347.46 | 545.63 | 347.53 | 545.87 | 347.55 | 546.93 | 347.61 | 549.39 | 347.74 |
| 550.27 | 347.79 | 551.23 | 347.85 | 552.34 | 347.93 | 553.42 | 348 | 554.13 | 348.06 |
| 555.27 | 348.15 | 556.08 | 348.23 | 556.84 | 348.28 | 557.14 | 348.29 | 557.52 | 348.31 |
| 557.81 | 348.32 | 558.65 | 348.33 | 559.38 | 348.35 | 560.47 | 348.45 | 560.99 | 348.47 |
| 562.35 | 348.6 | 567.93 | 348.91 | 568.69 | 348.95 | 578.22 | 349.43 | 579.39 | 349.52 |
| 579.68 | 349.54 | 582.27 | 349.71 | 585.1 | 349.94 | 586.7 | 350.08 | 587.63 | 350.13 |
| 589.45 | 350.26 | 590.31 | 350.31 | 590.84 | 350.33 | 592.01 | 350.36 | 598.22 | 350.59 |
| 599.12 | 350.62 | 599.19 | 350.62 | 600.97 | 350.68 | 602.44 | 350.69 | 604.26 | 350.71 |
| 605.62 | 350.7 | 605.95 | 350.7 | 606.21 | 350.72 | 608.44 | 350.68 | 608.62 | 350.7 |
| 609.27 | 350.71 | 609.84 | 350.71 | 610.51 | 350.73 | 612.09 | 350.82 | 613.15 | 350.92 |
| 614.49 | 351.05 | 614.96 | 351.1 | 615.93 | 351.16 | 616.55 | 351.19 | 617.12 | 351.19 |
| 618.09 | 351.22 | 620.84 | 351.31 | 623.8 | 351.47 | 633.45 | 351.65 | 637.39 | 351.72 |
| 637.49 | 351.72 | 642.06 | 351.76 | 642.86 | 351.77 | 644.49 | 351.8 | 647.65 | 351.83 |
| 648.26 | 351.84 | 648.85 | 351.87 | 649.13 | 351.89 | 649.39 | 351.9 | 650.74 | 351.92 |
| 651.86 | 351.94 | 652.92 | 351.95 | 654.57 | 351.96 | 658.16 | 352.01 | 659.11 | 352.01 |
| 660.99 | 352.03 | 662.66 | 352.06 | 664.99 | 352.08 | 665.44 | 352.08 | 665.52 | 352.09 |
| 669.02 | 352.13 | 670.47 | 352.14 | 670.8 | 352.14 | 671.06 | 352.15 | 671.96 | 352.15 |
| 672.32 | 352.16 | 672.52 | 352.16 | 672.6 | 352.17 | 672.88 | 352.17 | 673.12 | 352.16 |
| 673.91 | 352.16 | 674.04 | 352.17 | 674.33 | 352.17 | 674.85 | 352.18 | 675.02 | 352.17 |
| 675.52 | 352.18 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.3 | .04 | 476.14 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.3 | 476.14 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2335.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 346.17 | 4.91 | 346 | 6.8 | 345.95 | 8.48 | 345.92 | 12.69 | 345.82 |
| 14.06 | 345.78 | 14.95 | 345.76 | 15.47 | 345.76 | 15.74 | 345.75 | 17.01 | 345.75 |
| 17.89 | 345.76 | 20.43 | 345.76 | 21.1 | 345.77 | 21.87 | 345.76 | 24.42 | 345.71 |
| 25.79 | 345.69 | 27.11 | 345.66 | 27.61 | 345.65 | 28.11 | 345.63 | 30.99 | 345.58 |
| 33.71 | 345.54 | 35.39 | 345.52 | 36.49 | 345.5 | 37.74 | 345.49 | 39.11 | 345.47 |
| 40.6 | 345.45 | 42.79 | 345.43 | 43.85 | 345.41 | 44.37 | 345.39 | 44.97 | 345.38 |
| 45.14 | 345.36 | 45.38 | 345.36 | 45.44 | 345.35 | 45.68 | 345.36 | 46.41 | 345.34 |
| 46.81 | 345.34 | 47.41 | 345.32 | 47.76 | 345.32 | 48.94 | 345.31 | 49.39 | 345.3 |
| 49.57 | 345.3 | 49.85 | 345.29 | 51.59 | 345.29 | 52.14 | 345.28 | 52.75 | 345.28 |
| 53.26 | 345.27 | 54.07 | 345.27 | 54.32 | 345.26 | 55.25 | 345.26 | 55.76 | 345.25 |
| 56.73 | 345.24 | 57.82 | 345.22 | 58.67 | 345.21 | 59.23 | 345.2 | 60.07 | 345.19 |
| 60.3 | 345.19 | 60.66 | 345.18 | 61.43 | 345.18 | 61.77 | 345.17 | 61.83 | 345.18 |
| 62.45 | 345.16 | 62.86 | 345.15 | 63.07 | 345.15 | 63.64 | 345.13 | 63.93 | 345.13 |
| 64.16 | 345.12 | 65.86 | 345.1 | 66.62 | 345.08 | 67.58 | 345.07 | 68.08 | 345.06 |
| 69.24 | 345.04 | 70.51 | 345.02 | 71.86 | 345 | 73.65 | 344.97 | 75.08 | 344.96 |
| 79.97 | 344.88 | 81.74 | 344.85 | 82.61 | 344.84 | 83.49 | 344.82 | 85.16 | 344.81 |
| 86.56 | 344.79 | 87.74 | 344.78 | 90.58 | 344.75 | 92.12 | 344.73 | 95.98 | 344.73 |
| 96.3 | 344.72 | 96.67 | 344.72 | 97.73 | 344.71 | 98.17 | 344.7 | 98.6 | 344.7 |
| 102.13 | 344.64 | 103.39 | 344.63 | 105.94 | 344.59 | 106.02 | 344.58 | 109.8 | 344.54 |
| 111.76 | 344.52 | 112.25 | 344.51 | 113.28 | 344.51 | 114.24 | 344.5 | 114.81 | 344.49 |
| 115.28 | 344.49 | 116.3 | 344.48 | 118.07 | 344.46 | 119.33 | 344.45 | 120.11 | 344.44 |
| 120.7 | 344.44 | 123.76 | 344.41 | 125.09 | 344.41 | 125.98 | 344.43 | 126.42 | 344.45 |
| 127.35 | 344.45 | 128.33 | 344.47 | 128.5 | 344.47 | 129.15 | 344.49 | 130.63 | 344.57 |
| 131.41 | 344.6 | 132.02 | 344.61 | 132.84 | 344.65 | 133.09 | 344.65 | 133.99 | 344.67 |
| 134.69 | 344.67 | 134.88 | 344.68 | 135.46 | 344.69 | 135.85 | 344.7 | 136.18 | 344.7 |
| 136.59 | 344.71 | 138.32 | 344.71 | 139.35 | 344.7 | 139.71 | 344.7 | 142.02 | 344.68 |
| 142.72 | 344.68 | 143.6 | 344.67 | 143.76 | 344.66 | 145.17 | 344.66 | 146.01 | 344.65 |
| 147.04 | 344.65 | 148.32 | 344.64 | 151.6 | 344.62 | 152.85 | 344.61 | 154.14 | 344.61 |
| 157.33 | 344.62 | 159.2 | 344.62 | 160.48 | 344.63 | 166.1 | 344.62 | 167.85 | 344.62 |
| 169.45 | 344.61 | 171.78 | 344.58 | 173.09 | 344.56 | 173.95 | 344.53 | 174.21 | 344.51 |
| 174.68 | 344.49 | 175.18 | 344.46 | 175.43 | 344.46 | 176.24 | 344.45 | 176.81 | 344.44 |
| 178.4 | 344.43 | 179.19 | 344.42 | 184.32 | 344.42 | 185.14 | 344.41 | 187.38 | 344.41 |
| 189.01 | 344.4 | 190.85 | 344.4 | 193.97 | 344.39 | 196.39 | 344.38 | 196.81 | 344.38 |
| 199.16 | 344.35 | 200.58 | 344.33 | 201.41 | 344.32 | 203.04 | 344.29 | 204.29 | 344.27 |
| 206.5 | 344.23 | 209.78 | 344.14 | 212.28 | 344.08 | 215.28 | 343.8 | 220.09 | 343.23 |
| 228 | 342.9 | 231.83 | 342.74 | 235.98 | 342.58 | 240.6 | 342.39 | 245.33 | 342.07 |
| 246.71 | 342 | 246.78 | 341.98 | 247.1 | 341.97 | 247.37 | 341.97 | 248.29 | 341.93 |
| 248.87 | 341.89 | 249.32 | 341.89 | 249.77 | 341.88 | 250.06 | 341.92 | 250.29 | 341.96 |
| 250.57 | 341.99 | 251.26 | 342.05 | 251.91 | 342.08 | 252.77 | 342.11 | 253.81 | 342.13 |
| 255 | 342.14 | 256.28 | 342.16 | 257.89 | 342.17 | 258.83 | 342.22 | 258.86 | 342.24 |
| 259.72 | 342.26 | 259.92 | 342.27 | 260.26 | 342.27 | 260.5 | 342.26 | 261.01 | 342.26 |
| 261.26 | 342.25 | 261.71 | 342.25 | 262.21 | 342.23 | 262.36 | 342.21 | 262.53 | 342.2 |
| 262.96 | 342.19 | 263.16 | 342.19 | 263.64 | 342.17 | 265.31 | 342.12 | 267.01 | 342.11 |
| 267.43 | 342.11 | 267.78 | 342.1 | 269.72 | 342.08 | 270.11 | 342.08 | 272.56 | 342.05 |
| 272.87 | 342.05 | 273.16 | 342.09 | 274.64 | 342.06 | 275.97 | 342.02 | 284.68 | 341.75 |
| 286.16 | 341.72 | 286.59 | 341.7 | 290.31 | 341.59 | 290.84 | 341.57 | 291.47 | 341.56 |
| 291.7 | 341.55 | 292.09 | 341.55 | 292.77 | 341.53 | 293.01 | 341.52 | 293.54 | 341.52 |
| 294 | 341.51 | 294.11 | 341.53 | 294.33 | 341.53 | 295.19 | 341.57 | 298.09 | 341.73 |
| 299.25 | 341.79 | 299.8 | 341.82 | 300.04 | 341.82 | 300.83 | 341.81 | 303.62 | 341.68 |
| 304.81 | 341.63 | 305.39 | 341.64 | 305.63 | 341.64 | 306.24 | 341.66 | 306.94 | 341.66 |
| 307.33 | 341.65 | 308.25 | 341.65 | 308.69 | 341.66 | 309.91 | 341.7 | 310.33 | 341.71 |
| 311.61 | 341.78 | 312.27 | 341.83 | 314.92 | 342.07 | 316.26 | 342.15 | 317.97 | 342.24 |
| 319.05 | 342.24 | 320.59 | 342.23 | 320.96 | 342.23 | 324.24 | 342.22 | 325.68 | 342.22 |
| 332.01 | 342.2 | 333.49 | 342.19 | 336.3 | 342.18 | 337.67 | 342.18 | 351.22 | 341.66 |
| 358.75 | 341.38 | 360.85 | 341.29 | 361.22 | 341.28 | 366.13 | 341.17 | 371.29 | 341.03 |
| 371.54 | 341.03 | 373.07 | 341.02 | 378.44 | 340.99 | 383.56 | 340.99 | 383.62 | 341 |
| 383.99 | 341 | 384.51 | 341.02 | 385.2 | 341.03 | 387.02 | 341.08 | 388.6 | 341.12 |
| 393.97 | 341.25 | 399.25 | 341.38 | 401.13 | 341.59 | 403.94 | 341.93 | 404.52 | 341.99 |
| 405.07 | 342.05 | 406.72 | 342.22 | 409.26 | 342.24 | 409.86 | 342.24 | 411.31 | 342.26 |
| 411.71 | 342.26 | 411.82 | 342.27 | 412.01 | 342.27 | 412.12 | 342.26 | 412.18 | 342.27 |
| 420.22 | 342.27 | 420.6 | 342.26 | 421.54 | 342.26 | 422.32 | 342.28 | 423.76 | 342.3 |
| 424.21 | 342.3 | 424.4 | 342.31 | 424.71 | 342.31 | 424.87 | 342.32 | 425.28 | 342.33 |
| 425.78 | 342.35 | 426.5 | 342.37 | 429.58 | 342.47 | 430.67 | 342.5 | 431.56 | 342.53 |
| 431.96 | 342.54 | 432.59 | 342.56 | 432.81 | 342.56 | 433.87 | 342.59 | 434.42 | 342.6 |
| 435.79 | 342.63 | 436.35 | 342.64 | 437.3 | 342.64 | 437.91 | 342.65 | 438.59 | 342.65 |
| 438.89 | 342.66 | 439.46 | 342.66 | 439.96 | 342.68 | 445.01 | 342.75 | 445.4 | 342.75 |
| 449.86 | 342.81 | 450.65 | 342.81 | 451.7 | 342.8 | 453.9 | 342.79 | 455.51 | 342.79 |
| 458.1 | 342.8 | 459.17 | 342.8 | 460.23 | 342.81 | 461.46 | 342.82 | 462.6 | 342.82 |
| 463.5 | 342.83 | 465.89 | 342.83 | 466.74 | 342.84 | 467.41 | 342.84 | 468.23 | 342.85 |
| 470.11 | 342.87 | 471.01 | 342.87 | 471.79 | 342.88 | 473.1 | 342.9 | 474.17 | 342.91 |
| 474.56 | 342.91 | 474.85 | 342.92 | 475.08 | 342.92 | 475.51 | 342.94 | 476.1 | 342.96 |
| 476.88 | 342.99 | 477.04 | 343 | 477.96 | 343.04 | 478.01 | 343.06 | 478.42 | 343.31 |
| 479.08 | 343.46 | 485.41 | 343.82 | 489.49 | 344.06 | 489.85 | 344.09 | 490.78 | 344.12 |
| 492.91 | 344.25 | 494.57 | 344.33 | 495.88 | 344.41 | 497.34 | 344.53 | 498.29 | 344.61 |
| 501.22 | 344.82 | 501.79 | 344.84 | 502.72 | 344.88 | 503.29 | 344.9 | 515.88 | 345.31 |
| 517.19 | 345.38 | 517.86 | 345.41 | 518.26 | 345.44 | 518.66 | 345.53 | 519.08 | 345.59 |
| 520.7 | 345.84 | 521.01 | 345.87 | 521.62 | 345.9 | 523.44 | 346.01 | 524.59 | 346.06 |
| 525.26 | 346.08 | 526.39 | 346.11 | 527.24 | 346.13 | 527.75 | 346.14 | 533.69 | 346.41 |
| 534.14 | 346.43 | 534.25 | 346.44 | 535.17 | 346.5 | 538.51 | 346.73 | 540.27 | 346.84 |
| 540.8 | 346.87 | 541.49 | 346.92 | 542.59 | 346.99 | 543.94 | 347.07 | 544.96 | 347.17 |
| 546.49 | 347.3 | 546.57 | 347.31 | 547.31 | 347.38 | 547.55 | 347.4 | 548.6 | 347.46 |
| 551.04 | 347.58 | 551.91 | 347.63 | 552.86 | 347.68 | 553.97 | 347.76 | 555.04 | 347.84 |
| 555.74 | 347.89 | 556.86 | 347.99 | 557.68 | 348.07 | 558.72 | 348.14 | 559.1 | 348.15 |
| 559.39 | 348.17 | 560.22 | 348.18 | 560.94 | 348.21 | 562.02 | 348.31 | 562.54 | 348.33 |
| 563.89 | 348.46 | 569.42 | 348.8 | 570.17 | 348.84 | 579.62 | 349.34 | 580.78 | 349.44 |
| 581.06 | 349.46 | 583.63 | 349.62 | 586.44 | 349.84 | 588.03 | 349.96 | 588.94 | 350.01 |
| 590.75 | 350.14 | 591.6 | 350.19 | 592.13 | 350.2 | 593.29 | 350.23 | 599.45 | 350.45 |
| 600.34 | 350.48 | 600.41 | 350.48 | 602.17 | 350.54 | 603.63 | 350.55 | 605.44 | 350.57 |
| 606.79 | 350.56 | 607.11 | 350.56 | 607.37 | 350.58 | 609.58 | 350.54 | 609.76 | 350.56 |
| 610.41 | 350.57 | 610.62 | 350.58 | 610.97 | 350.58 | 611.63 | 350.59 | 613.2 | 350.68 |
| 614.25 | 350.77 | 615.58 | 350.9 | 616.04 | 350.94 | 617.01 | 351 | 617.62 | 351.02 |
| 618.19 | 351.03 | 619.14 | 351.06 | 621.88 | 351.14 | 624.8 | 351.3 | 634.37 | 351.46 |
| 638.27 | 351.52 | 638.38 | 351.52 | 642.91 | 351.56 | 643.71 | 351.56 | 645.32 | 351.59 |
| 648.45 | 351.62 | 649.06 | 351.63 | 649.64 | 351.66 | 649.92 | 351.67 | 650.18 | 351.69 |
| 651.52 | 351.7 | 651.57 | 351.71 | 653.68 | 351.73 | 655.31 | 351.74 | 657.46 | 351.77 |
| 658.87 | 351.78 | 659.81 | 351.78 | 661.68 | 351.8 | 663.33 | 351.82 | 665.64 | 351.84 |
| 666.08 | 351.84 | 666.16 | 351.85 | 669.63 | 351.88 | 671.07 | 351.89 | 671.4 | 351.89 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 671.66 | 351.9 | 672.55 | 351.9 | 673.11 | 351.92 | 674 | 351.92 | 674.48 | 351.91 |
| 674.61 | 351.92 | 674.9 | 351.92 | 675.25 | 351.93 | 675.32 | 351.92 | 675.58 | 351.92 |
| 676.08 | 351.93 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.28 | .04 | 478.42 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.28 | 478.42 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2315.25*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.91 | 1.74 | 345.85 | 4.91 | 345.75 | 6.8 | 345.7 | 8.47 | 345.67 |
| 12.69 | 345.58 | 14.06 | 345.54 | 14.95 | 345.52 | 20.43 | 345.52 | 21.1 | 345.53 |
| 21.87 | 345.52 | 24.42 | 345.47 | 25.79 | 345.45 | 27.1 | 345.42 | 28.1 | 345.4 |
| 30.99 | 345.35 | 33.71 | 345.31 | 35.39 | 345.29 | 36.48 | 345.27 | 37.73 | 345.26 |
| 39.11 | 345.24 | 40.6 | 345.23 | 42.78 | 345.21 | 43.84 | 345.19 | 44.36 | 345.17 |
| 44.96 | 345.16 | 45.38 | 345.14 | 45.67 | 345.14 | 46.4 | 345.13 | 46.8 | 345.12 |
| 47.4 | 345.11 | 47.75 | 345.11 | 48.93 | 345.1 | 49.38 | 345.09 | 49.57 | 345.09 |
| 49.84 | 345.08 | 50.29 | 345.08 | 50.45 | 345.09 | 51.39 | 345.09 | 51.58 | 345.08 |
| 52.13 | 345.08 | 52.74 | 345.07 | 53.25 | 345.07 | 53.62 | 345.06 | 55.25 | 345.06 |
| 55.75 | 345.05 | 56.72 | 345.04 | 57.81 | 345.02 | 58.66 | 345.01 | 59.23 | 345 |
| 60.07 | 344.99 | 60.81 | 344.99 | 60.98 | 344.98 | 61.42 | 344.98 | 61.76 | 344.97 |
| 61.82 | 344.98 | 62.08 | 344.97 | 62.85 | 344.95 | 63.06 | 344.95 | 63.63 | 344.93 |
| 63.92 | 344.93 | 64.15 | 344.92 | 65.85 | 344.89 | 66.61 | 344.88 | 67.57 | 344.86 |
| 68.07 | 344.86 | 69.23 | 344.84 | 71.85 | 344.8 | 73.64 | 344.77 | 75.07 | 344.75 |
| 79.96 | 344.67 | 81.73 | 344.64 | 85.15 | 344.6 | 86.55 | 344.58 | 87.73 | 344.57 |
| 90.57 | 344.54 | 91.39 | 344.54 | 92.11 | 344.53 | 92.75 | 344.53 | 93.03 | 344.52 |
| 93.31 | 344.53 | 96.43 | 344.53 | 96.66 | 344.52 | 97.72 | 344.51 | 98.16 | 344.51 |
| 98.59 | 344.5 | 102.12 | 344.45 | 103.38 | 344.43 | 103.97 | 344.43 | 105.93 | 344.4 |
| 106.01 | 344.39 | 109.78 | 344.35 | 110.8 | 344.35 | 111.74 | 344.34 | 112.36 | 344.33 |
| 114.23 | 344.31 | 114.79 | 344.3 | 115.26 | 344.3 | 116.29 | 344.29 | 118.06 | 344.27 |
| 119.32 | 344.26 | 120.1 | 344.25 | 120.69 | 344.25 | 123.74 | 344.22 | 124.29 | 344.22 |
| 124.5 | 344.21 | 125.07 | 344.21 | 125.96 | 344.23 | 126.4 | 344.25 | 127.14 | 344.24 |
| 127.33 | 344.25 | 127.86 | 344.26 | 128.31 | 344.26 | 128.48 | 344.27 | 129.13 | 344.28 |
| 130.61 | 344.36 | 131.4 | 344.39 | 132 | 344.4 | 132.82 | 344.44 | 133.07 | 344.44 |
| 133.98 | 344.46 | 134.68 | 344.46 | 134.86 | 344.47 | 135.45 | 344.48 | 136.17 | 344.5 |
| 136.58 | 344.5 | 137.14 | 344.51 | 138.3 | 344.51 | 139.34 | 344.5 | 139.69 | 344.5 |
| 142.01 | 344.48 | 142.7 | 344.47 | 143.58 | 344.46 | 145.15 | 344.46 | 145.99 | 344.45 |
| 147.03 | 344.45 | 148.3 | 344.44 | 151.58 | 344.42 | 152.83 | 344.41 | 157.31 | 344.41 |
| 157.48 | 344.42 | 159.18 | 344.42 | 160.46 | 344.43 | 166.24 | 344.42 | 167.09 | 344.41 |
| 167.83 | 344.41 | 169.43 | 344.4 | 170.18 | 344.4 | 171.76 | 344.38 | 173.92 | 344.33 |
| 174.18 | 344.31 | 175.41 | 344.26 | 176.22 | 344.25 | 176.79 | 344.24 | 178.38 | 344.23 |
| 179.17 | 344.22 | 186.22 | 344.22 | 187.04 | 344.21 | 188.99 | 344.21 | 190.83 | 344.2 |
| 193.95 | 344.19 | 196.36 | 344.18 | 196.78 | 344.18 | 199.14 | 344.15 | 200.56 | 344.12 |
| 201.39 | 344.11 | 203.02 | 344.08 | 204.27 | 344.06 | 206.47 | 344.01 | 209.75 | 343.92 |
| 212.25 | 343.85 | 215.25 | 343.57 | 219.85 | 343.04 | 227.42 | 342.72 | 231.08 | 342.57 |
| 235.04 | 342.42 | 239.46 | 342.23 | 240.03 | 342.19 | 243.99 | 341.93 | 245.68 | 341.84 |
| 245.94 | 341.84 | 247.25 | 341.78 | 247.37 | 341.76 | 247.8 | 341.76 | 248.23 | 341.75 |
| 248.51 | 341.79 | 248.73 | 341.83 | 249 | 341.86 | 249.66 | 341.91 | 250.28 | 341.94 |
| 251.1 | 341.96 | 252.1 | 341.99 | 254.46 | 342.01 | 256 | 342.02 | 256.56 | 342.05 |
| 256.83 | 342.07 | 256.96 | 342.09 | 257.27 | 342.09 | 257.74 | 342.1 | 257.94 | 342.11 |
| 258.27 | 342.11 | 258.49 | 342.1 | 259.22 | 342.1 | 259.45 | 342.09 | 259.65 | 342.09 |
| 260.19 | 342.07 | 260.44 | 342.05 | 260.84 | 342.04 | 261.03 | 342.03 | 261.5 | 342.02 |
| 263.09 | 341.97 | 264.72 | 341.96 | 265.12 | 341.95 | 265.46 | 341.95 | 267.31 | 341.93 |
| 267.68 | 341.92 | 270.02 | 341.9 | 270.24 | 341.89 | 270.6 | 341.93 | 272.02 | 341.91 |
| 273.29 | 341.87 | 281.62 | 341.61 | 283.02 | 341.58 | 283.44 | 341.56 | 287 | 341.46 |
| 288.32 | 341.41 | 288.7 | 341.41 | 289.35 | 341.4 | 289.57 | 341.39 | 290.09 | 341.39 |
| 290.53 | 341.38 | 291.07 | 341.41 | 291.67 | 341.43 | 295.54 | 341.64 | 296.07 | 341.66 |
| 297.05 | 341.66 | 299.72 | 341.53 | 300.86 | 341.48 | 301.41 | 341.5 | 301.65 | 341.49 |
| 302.23 | 341.51 | 302.9 | 341.51 | 303.27 | 341.5 | 304.15 | 341.5 | 304.87 | 341.52 |
| 305.74 | 341.54 | 307.37 | 341.62 | 307.99 | 341.67 | 310.53 | 341.89 | 311.81 | 341.97 |
| 313.45 | 342.05 | 314.48 | 342.05 | 315.95 | 342.04 | 316.3 | 342.04 | 319.44 | 342.03 |
| 320.26 | 342.02 | 320.82 | 342.03 | 326.87 | 341.99 | 328.29 | 341.99 | 330.97 | 341.98 |
| 331.4 | 341.98 | 331.51 | 341.97 | 332.28 | 341.97 | 345.24 | 341.48 | 352.44 | 341.2 |
| 354.45 | 341.12 | 354.8 | 341.11 | 359.5 | 341 | 364.43 | 340.85 | 366.13 | 340.85 |
| 371.27 | 340.81 | 376.17 | 340.81 | 376.41 | 340.82 | 376.71 | 340.82 | 376.83 | 340.83 |
| 377.09 | 340.83 | 377.25 | 340.84 | 377.46 | 340.84 | 378.21 | 340.86 | 380.22 | 340.91 |
| 381.95 | 340.95 | 387.85 | 341.09 | 393.66 | 341.23 | 395.72 | 341.43 | 398.81 | 341.76 |
| 399.45 | 341.81 | 400.06 | 341.87 | 401.87 | 342.03 | 404.67 | 342.04 | 405.33 | 342.04 |
| 406.92 | 342.06 | 410.02 | 342.06 | 412.57 | 342.05 | 414.19 | 342.05 | 414.65 | 342.04 |
| 416 | 342.04 | 416.72 | 342.03 | 417.33 | 342.03 | 417.55 | 342.02 | 417.99 | 342.02 |
| 418.05 | 342.03 | 418.51 | 342.03 | 419.02 | 342.04 | 420.6 | 342.06 | 421.04 | 342.07 |
| 421.46 | 342.07 | 421.83 | 342.08 | 422.28 | 342.1 | 422.83 | 342.12 | 423.62 | 342.14 |
| 424.66 | 342.18 | 427.01 | 342.25 | 428.21 | 342.29 | 428.49 | 342.31 | 429.18 | 342.32 |
| 429.63 | 342.34 | 430.32 | 342.36 | 430.56 | 342.36 | 431.72 | 342.39 | 432.33 | 342.41 |
| 433.84 | 342.43 | 434.45 | 342.45 | 436.17 | 342.45 | 436.91 | 342.46 | 437.51 | 342.46 |
| 437.87 | 342.47 | 438.21 | 342.47 | 438.42 | 342.48 | 443.97 | 342.55 | 444.39 | 342.56 |
| 449.3 | 342.61 | 450.17 | 342.6 | 451.32 | 342.6 | 453.74 | 342.58 | 455.51 | 342.56 |
| 458.36 | 342.57 | 459.53 | 342.57 | 460.7 | 342.58 | 462.05 | 342.58 | 463.31 | 342.59 |
| 464.3 | 342.59 | 465.95 | 342.58 | 466.93 | 342.58 | 467.86 | 342.59 | 468.6 | 342.59 |
| 469.5 | 342.6 | 470.52 | 342.6 | 472.55 | 342.62 | 473.41 | 342.63 | 474.86 | 342.64 |
| 476.03 | 342.65 | 476.46 | 342.66 | 476.78 | 342.66 | 477.03 | 342.67 | 477.5 | 342.68 |
| 478.15 | 342.7 | 479.01 | 342.74 | 479.19 | 342.76 | 480.2 | 342.8 | 480.25 | 342.82 |
| 480.7 | 343.13 | 481.35 | 343.31 | 487.63 | 343.68 | 491.68 | 343.92 | 492.04 | 343.94 |
| 492.96 | 343.98 | 495.06 | 344.1 | 496.72 | 344.18 | 498.01 | 344.26 | 499.46 | 344.38 |
| 500.4 | 344.45 | 503.31 | 344.66 | 503.87 | 344.69 | 504.79 | 344.73 | 505.35 | 344.74 |
| 517.84 | 345.17 | 519.13 | 345.24 | 519.8 | 345.27 | 520.2 | 345.3 | 520.59 | 345.38 |
| 521.59 | 345.53 | 522.62 | 345.68 | 522.93 | 345.71 | 523.53 | 345.75 | 525.33 | 345.85 |
| 526.02 | 345.89 | 526.47 | 345.9 | 527.13 | 345.93 | 528.25 | 345.96 | 529.09 | 345.98 |
| 529.6 | 345.99 | 529.82 | 346 | 535.49 | 346.27 | 535.93 | 346.29 | 536.05 | 346.29 |
| 536.68 | 346.34 | 536.96 | 346.35 | 540.26 | 346.58 | 542.01 | 346.7 | 542.54 | 346.73 |
| 543.22 | 346.78 | 544.31 | 346.85 | 545.66 | 346.93 | 546.66 | 347.03 | 548.18 | 347.16 |
| 548.26 | 347.16 | 548.99 | 347.23 | 549.23 | 347.25 | 550.27 | 347.3 | 552.69 | 347.41 |
| 553.55 | 347.46 | 555.59 | 347.59 | 556.65 | 347.67 | 557.35 | 347.73 | 558.46 | 347.83 |
| 559.08 | 347.89 | 559.27 | 347.92 | 560.01 | 347.97 | 560.3 | 347.98 | 560.96 | 348.02 |
| 561.79 | 348.04 | 562.5 | 348.06 | 563.58 | 348.17 | 564.08 | 348.19 | 565.43 | 348.33 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 570.91 | 348.68 | 571.65 | 348.73 | 581.02 | 349.26 | 582.17 | 349.35 | 582.45 | 349.37 |
| 585 | 349.52 | 587.78 | 349.73 | 589.35 | 349.85 | 590.26 | 349.9 | 592.05 | 350.01 |
| 592.9 | 350.06 | 593.42 | 350.08 | 594.57 | 350.1 | 601.56 | 350.34 | 601.62 | 350.34 |
| 603.38 | 350.4 | 604.82 | 350.41 | 606.61 | 350.43 | 607.95 | 350.42 | 608.27 | 350.42 |
| 608.53 | 350.44 | 610.71 | 350.4 | 610.9 | 350.42 | 611.54 | 350.43 | 611.75 | 350.44 |
| 612.09 | 350.44 | 612.75 | 350.45 | 613.27 | 350.48 | 614.31 | 350.53 | 615.35 | 350.62 |
| 616.66 | 350.74 | 617.12 | 350.78 | 618.08 | 350.84 | 618.68 | 350.86 | 619.25 | 350.87 |
| 620.2 | 350.9 | 622.91 | 350.98 | 625.81 | 351.12 | 635.29 | 351.27 | 639.16 | 351.32 |
| 639.27 | 351.32 | 643.76 | 351.35 | 644.55 | 351.36 | 646.15 | 351.39 | 649.25 | 351.41 |
| 649.85 | 351.42 | 650.43 | 351.44 | 650.71 | 351.46 | 650.96 | 351.47 | 652.35 | 351.49 |
| 654.43 | 351.51 | 656.05 | 351.52 | 658.18 | 351.54 | 659.58 | 351.55 | 660.51 | 351.55 |
| 662.36 | 351.57 | 664 | 351.59 | 666.29 | 351.6 | 666.73 | 351.6 | 666.81 | 351.61 |
| 670.25 | 351.64 | 671.68 | 351.65 | 672.75 | 351.65 | 673.14 | 351.66 | 673.49 | 351.66 |
| 673.69 | 351.67 | 674.92 | 351.67 | 675.05 | 351.66 | 675.18 | 351.67 | 676.15 | 351.67 |
| 676.64 | 351.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.25 | .04 | 480.7 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.25 | 480.7 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2295.44*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.65 | 1.74 | 345.6 | 4.91 | 345.5 | 6.8 | 345.46 | 7.4 | 345.44 |
| 8.47 | 345.43 | 12.69 | 345.34 | 14.06 | 345.3 | 14.95 | 345.28 | 20.43 | 345.28 |
| 21.09 | 345.29 | 21.86 | 345.28 | 24.41 | 345.23 | 25.79 | 345.21 | 27.1 | 345.18 |
| 27.6 | 345.18 | 28.1 | 345.16 | 30.99 | 345.11 | 33.7 | 345.07 | 35.38 | 345.05 |
| 37.73 | 345.03 | 39.1 | 345.01 | 40.59 | 345 | 43.84 | 344.97 | 44.96 | 344.95 |
| 45.13 | 344.93 | 45.67 | 344.93 | 46.4 | 344.92 | 46.8 | 344.91 | 47.4 | 344.9 |
| 47.75 | 344.9 | 48.92 | 344.89 | 49.37 | 344.88 | 51.57 | 344.88 | 52.13 | 344.87 |
| 52.74 | 344.87 | 53.25 | 344.86 | 55.24 | 344.86 | 55.74 | 344.85 | 56.55 | 344.84 |
| 56.71 | 344.84 | 57.81 | 344.82 | 58.66 | 344.81 | 59.22 | 344.81 | 60.06 | 344.8 |
| 60.29 | 344.79 | 60.97 | 344.79 | 61.75 | 344.77 | 61.81 | 344.78 | 62.01 | 344.77 |
| 62.53 | 344.76 | 62.84 | 344.75 | 63.27 | 344.75 | 63.62 | 344.73 | 63.92 | 344.73 |
| 64.15 | 344.72 | 65.84 | 344.69 | 66.6 | 344.68 | 68.06 | 344.65 | 69.23 | 344.64 |
| 70.49 | 344.62 | 71.84 | 344.6 | 73.63 | 344.57 | 75.06 | 344.55 | 79.95 | 344.46 |
| 81.72 | 344.44 | 82.59 | 344.42 | 85.11 | 344.39 | 86.54 | 344.38 | 87.72 | 344.37 |
| 90.56 | 344.34 | 92.1 | 344.32 | 93.73 | 344.32 | 94.4 | 344.33 | 95.31 | 344.32 |
| 95.96 | 344.33 | 96.65 | 344.33 | 97.71 | 344.31 | 98.15 | 344.31 | 98.58 | 344.3 |
| 102.11 | 344.26 | 103.36 | 344.24 | 103.96 | 344.24 | 105.91 | 344.21 | 105.99 | 344.21 |
| 109.77 | 344.16 | 110.78 | 344.16 | 111.73 | 344.15 | 112.35 | 344.14 | 113.26 | 344.13 |
| 114.22 | 344.13 | 114.78 | 344.12 | 115.25 | 344.12 | 116.27 | 344.11 | 118.05 | 344.09 |
| 118.17 | 344.09 | 119.3 | 344.07 | 120.08 | 344.06 | 120.67 | 344.06 | 122.73 | 344.03 |
| 123.73 | 344.03 | 124.28 | 344.02 | 124.78 | 344.02 | 125.06 | 344.01 | 125.95 | 344.04 |
| 126.23 | 344.04 | 126.39 | 344.05 | 127.12 | 344.04 | 127.32 | 344.04 | 128.3 | 344.06 |
| 128.46 | 344.06 | 129.12 | 344.07 | 129.52 | 344.08 | 129.86 | 344.11 | 130.59 | 344.15 |
| 131.38 | 344.18 | 131.98 | 344.19 | 132.8 | 344.23 | 133.05 | 344.23 | 133.42 | 344.24 |
| 133.96 | 344.25 | 134.66 | 344.25 | 134.85 | 344.26 | 135.43 | 344.28 | 136.15 | 344.3 |
| 137.12 | 344.3 | 137.45 | 344.31 | 138.12 | 344.31 | 138.28 | 344.3 | 139.67 | 344.3 |
| 141.99 | 344.28 | 142.68 | 344.27 | 143.56 | 344.26 | 145.13 | 344.26 | 145.98 | 344.25 |
| 147.01 | 344.25 | 148.28 | 344.24 | 151.56 | 344.22 | 152.81 | 344.21 | 157.46 | 344.21 |
| 159.16 | 344.22 | 160.44 | 344.22 | 166.06 | 344.21 | 167.81 | 344.21 | 169.41 | 344.2 |
| 170.96 | 344.18 | 171.73 | 344.18 | 173.9 | 344.13 | 174.16 | 344.11 | 175.39 | 344.06 |
| 176.2 | 344.06 | 176.77 | 344.05 | 178.36 | 344.04 | 179.15 | 344.03 | 182.17 | 344.03 |
| 184.28 | 344.02 | 186.19 | 344.02 | 187.01 | 344.01 | 188.96 | 344.01 | 190.81 | 344 |
| 193.92 | 343.99 | 196.34 | 343.98 | 196.76 | 343.98 | 198.3 | 343.96 | 199.11 | 343.94 |
| 200.54 | 343.91 | 201.36 | 343.9 | 202.99 | 343.87 | 204.24 | 343.84 | 206.45 | 343.78 |
| 209.73 | 343.69 | 212.23 | 343.62 | 215.22 | 343.35 | 219.62 | 342.85 | 226.84 | 342.55 |
| 230.33 | 342.4 | 234.11 | 342.26 | 238.33 | 342.08 | 238.87 | 342.04 | 242.64 | 341.8 |
| 243.9 | 341.73 | 243.99 | 341.72 | 244.26 | 341.71 | 244.51 | 341.71 | 245.76 | 341.65 |
| 245.87 | 341.63 | 246.28 | 341.63 | 246.7 | 341.62 | 247.17 | 341.69 | 247.43 | 341.72 |
| 248.06 | 341.77 | 248.65 | 341.8 | 249.43 | 341.82 | 250.38 | 341.84 | 252.64 | 341.86 |
| 254.1 | 341.87 | 254.64 | 341.9 | 254.96 | 341.91 | 255.02 | 341.94 | 255.11 | 341.93 |
| 255.32 | 341.94 | 255.77 | 341.95 | 256.27 | 341.95 | 256.49 | 341.94 | 257.18 | 341.94 |
| 257.39 | 341.93 | 257.9 | 341.93 | 258.05 | 341.92 | 258.18 | 341.9 | 258.34 | 341.9 |
| 258.73 | 341.89 | 259.35 | 341.86 | 260.87 | 341.82 | 262.43 | 341.81 | 263.13 | 341.79 |
| 264.9 | 341.78 | 265.25 | 341.77 | 267.49 | 341.74 | 267.7 | 341.74 | 267.91 | 341.76 |
| 268.04 | 341.78 | 269.39 | 341.75 | 270.01 | 341.74 | 270.6 | 341.72 | 278.55 | 341.47 |
| 280.29 | 341.43 | 283.68 | 341.32 | 284.17 | 341.31 | 284.74 | 341.29 | 284.95 | 341.28 |
| 285.3 | 341.28 | 285.93 | 341.26 | 286.63 | 341.26 | 286.94 | 341.25 | 287.11 | 341.25 |
| 287.15 | 341.26 | 287.35 | 341.27 | 287.57 | 341.27 | 288.14 | 341.29 | 290.78 | 341.43 |
| 291.84 | 341.48 | 292.34 | 341.51 | 293.28 | 341.51 | 295.82 | 341.38 | 296.91 | 341.34 |
| 297.44 | 341.35 | 297.66 | 341.35 | 298.22 | 341.36 | 298.86 | 341.36 | 299.21 | 341.35 |
| 299.54 | 341.36 | 300.05 | 341.35 | 300.74 | 341.37 | 301.95 | 341.4 | 303.12 | 341.46 |
| 306.13 | 341.71 | 307.36 | 341.79 | 308.92 | 341.86 | 309.91 | 341.86 | 311.31 | 341.85 |
| 311.65 | 341.85 | 314.64 | 341.83 | 315.96 | 341.83 | 318.82 | 341.82 | 321.73 | 341.79 |
| 323.08 | 341.79 | 325.64 | 341.77 | 326.89 | 341.77 | 339.26 | 341.29 | 346.13 | 341.02 |
| 348.04 | 340.94 | 348.38 | 340.93 | 352.86 | 340.82 | 357.57 | 340.68 | 359.19 | 340.68 |
| 364.1 | 340.64 | 369.26 | 340.64 | 369.33 | 340.65 | 369.77 | 340.65 | 370.01 | 340.66 |
| 370.17 | 340.66 | 370.4 | 340.67 | 371.23 | 340.69 | 373.41 | 340.74 | 375.3 | 340.78 |
| 381.73 | 340.93 | 388.07 | 341.08 | 390.32 | 341.27 | 393.69 | 341.58 | 394.38 | 341.63 |
| 395.05 | 341.69 | 397.03 | 341.83 | 400.08 | 341.84 | 400.79 | 341.84 | 401.71 | 341.85 |
| 402.86 | 341.85 | 403 | 341.86 | 403.75 | 341.86 | 405.91 | 341.85 | 408.69 | 341.83 |
| 410.46 | 341.82 | 411.6 | 341.82 | 413.22 | 341.8 | 413.66 | 341.79 | 415.16 | 341.79 |
| 415.72 | 341.8 | 417.45 | 341.82 | 417.61 | 341.83 | 418.22 | 341.83 | 418.39 | 341.84 |
| 418.59 | 341.84 | 419.28 | 341.87 | 419.88 | 341.89 | 420.74 | 341.91 | 424.43 | 342.04 |
| 425.74 | 342.08 | 426.05 | 342.1 | 426.81 | 342.12 | 427.29 | 342.14 | 428.04 | 342.16 |
| 428.31 | 342.17 | 429.57 | 342.2 | 430.24 | 342.21 | 431.88 | 342.24 | 432.68 | 342.25 |
| 432.88 | 342.26 | 433.69 | 342.25 | 434.42 | 342.25 | 435.23 | 342.26 | 435.88 | 342.26 |
| 436.65 | 342.28 | 436.88 | 342.28 | 442.93 | 342.35 | 443.39 | 342.36 | 448.74 | 342.42 |
| 449.69 | 342.4 | 450.95 | 342.39 | 453.59 | 342.36 | 455.52 | 342.34 | 461.18 | 342.34 |
| 462.65 | 342.35 | 464.02 | 342.35 | 465.1 | 342.34 | 466.9 | 342.33 | 467.96 | 342.33 |
| 468.98 | 342.34 | 470.77 | 342.34 | 473.03 | 342.36 | 474.1 | 342.36 | 475.03 | 342.37 |
| 476.61 | 342.38 | 477.89 | 342.39 | 478.36 | 342.4 | 478.71 | 342.4 | 479.49 | 342.43 |
| 480.2 | 342.45 | 481.33 | 342.51 | 482.44 | 342.56 | 482.49 | 342.59 | 482.98 | 342.96 |
| 483.63 | 343.17 | 489.85 | 343.54 | 493.86 | 343.78 | 494.22 | 343.8 | 495.13 | 343.83 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 497.22 | 343.96 | 498.86 | 344.03 | 500.14 | 344.11 | 501.58 | 344.23 | 502.5 | 344.3 |
| 505.39 | 344.51 | 505.95 | 344.53 | 506.86 | 344.57 | 519.79 | 345.03 | 520.73 | 345.08 |
| 521.74 | 345.14 | 522.13 | 345.16 | 522.52 | 345.24 | 522.93 | 345.3 | 523.51 | 345.38 |
| 524.53 | 345.53 | 525.43 | 345.59 | 527.22 | 345.69 | 527.9 | 345.73 | 528.35 | 345.75 |
| 529 | 345.77 | 530.12 | 345.8 | 530.95 | 345.82 | 531.68 | 345.85 | 537.29 | 346.12 |
| 537.73 | 346.14 | 537.84 | 346.14 | 538.47 | 346.19 | 542.02 | 346.44 | 543.75 | 346.56 |
| 544.28 | 346.59 | 544.95 | 346.64 | 545.44 | 346.67 | 546.04 | 346.71 | 547.37 | 346.79 |
| 548.37 | 346.89 | 548.61 | 346.92 | 548.82 | 346.93 | 549.87 | 347.01 | 549.95 | 347.02 |
| 550.91 | 347.1 | 551.94 | 347.15 | 554.34 | 347.25 | 555.2 | 347.29 | 557.21 | 347.42 |
| 558.26 | 347.5 | 558.96 | 347.56 | 560.67 | 347.73 | 560.86 | 347.76 | 561.18 | 347.78 |
| 561.88 | 347.83 | 562.25 | 347.85 | 562.54 | 347.87 | 563.36 | 347.89 | 564.07 | 347.92 |
| 565.13 | 348.03 | 565.63 | 348.06 | 566.96 | 348.19 | 572.4 | 348.57 | 573.13 | 348.63 |
| 582.42 | 349.17 | 583.56 | 349.27 | 583.84 | 349.29 | 586.36 | 349.43 | 589.12 | 349.62 |
| 590.68 | 349.73 | 591.58 | 349.78 | 593.36 | 349.89 | 594.19 | 349.94 | 594.72 | 349.95 |
| 595.85 | 349.98 | 601.9 | 350.18 | 602.84 | 350.2 | 604.58 | 350.26 | 606.01 | 350.27 |
| 607.79 | 350.29 | 609.11 | 350.28 | 609.43 | 350.28 | 609.69 | 350.3 | 611.85 | 350.27 |
| 612.03 | 350.28 | 612.67 | 350.29 | 612.88 | 350.3 | 613.22 | 350.3 | 613.88 | 350.32 |
| 614.07 | 350.32 | 614.39 | 350.34 | 615.41 | 350.39 | 616.45 | 350.47 | 617.75 | 350.59 |
| 618.2 | 350.63 | 618.7 | 350.65 | 619.15 | 350.68 | 619.75 | 350.7 | 620.31 | 350.71 |
| 621.25 | 350.73 | 623.94 | 350.81 | 625.38 | 350.88 | 626.82 | 350.94 | 636.22 | 351.08 |
| 640.05 | 351.12 | 640.15 | 351.12 | 644.61 | 351.15 | 645.39 | 351.15 | 646.97 | 351.18 |
| 650.05 | 351.2 | 650.65 | 351.2 | 651.22 | 351.23 | 651.49 | 351.25 | 651.75 | 351.26 |
| 653.12 | 351.27 | 655.18 | 351.29 | 656.79 | 351.3 | 658.9 | 351.32 | 660.28 | 351.32 |
| 661.22 | 351.33 | 663.05 | 351.34 | 664.67 | 351.35 | 666.94 | 351.36 | 667.29 | 351.37 |
| 667.45 | 351.37 | 670.86 | 351.39 | 672.28 | 351.4 | 673.34 | 351.4 | 673.73 | 351.41 |
| 674.08 | 351.41 | 674.28 | 351.42 | 675.53 | 351.42 | 675.63 | 351.41 | 675.75 | 351.42 |
| 677.19 | 351.42 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.22 | .04 | 482.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.22 | 482.98 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2275.63*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.4 | 1.74 | 345.34 | 4.91 | 345.25 | 6.8 | 345.21 | 7.4 | 345.19 |
| 8.47 | 345.18 | 12.69 | 345.09 | 14.95 | 345.04 | 21.86 | 345.04 | 24.41 | 344.99 |
| 27.1 | 344.95 | 27.6 | 344.94 | 28.1 | 344.92 | 30.98 | 344.88 | 33.7 | 344.84 |
| 34.47 | 344.83 | 35.38 | 344.82 | 36.47 | 344.81 | 37.72 | 344.8 | 40.59 | 344.78 |
| 43.83 | 344.75 | 44.95 | 344.73 | 45.37 | 344.71 | 45.66 | 344.71 | 46.39 | 344.7 |
| 46.79 | 344.7 | 47.39 | 344.69 | 47.74 | 344.69 | 48.92 | 344.68 | 49.37 | 344.68 |
| 49.55 | 344.67 | 52.12 | 344.67 | 52.73 | 344.66 | 54.3 | 344.66 | 54.57 | 344.65 |
| 54.69 | 344.66 | 54.78 | 344.65 | 54.85 | 344.66 | 55.23 | 344.66 | 55.73 | 344.65 |
| 56.55 | 344.64 | 56.71 | 344.64 | 57.8 | 344.63 | 58.65 | 344.61 | 59.21 | 344.61 |
| 60.05 | 344.6 | 60.28 | 344.6 | 60.63 | 344.59 | 60.96 | 344.59 | 61.27 | 344.58 |
| 61.41 | 344.58 | 61.75 | 344.57 | 61.81 | 344.58 | 62.43 | 344.56 | 62.84 | 344.56 |
| 62.99 | 344.55 | 63.27 | 344.55 | 63.62 | 344.53 | 63.91 | 344.53 | 64.14 | 344.52 |
| 65.83 | 344.49 | 66.59 | 344.48 | 68.06 | 344.45 | 69.22 | 344.43 | 70.48 | 344.41 |
| 71.83 | 344.39 | 73.63 | 344.36 | 75.05 | 344.35 | 79.94 | 344.26 | 81.71 | 344.23 |
| 83.46 | 344.21 | 85.13 | 344.19 | 86.53 | 344.17 | 87.71 | 344.16 | 90.54 | 344.13 |
| 91.37 | 344.13 | 92.09 | 344.12 | 93.72 | 344.12 | 94.39 | 344.13 | 95.3 | 344.12 |
| 95.94 | 344.13 | 96.63 | 344.13 | 97.7 | 344.12 | 98.14 | 344.11 | 98.57 | 344.11 |
| 102.09 | 344.07 | 103.35 | 344.05 | 103.95 | 344.05 | 105.9 | 344.02 | 105.98 | 344.02 |
| 109.76 | 343.98 | 111.71 | 343.96 | 112.21 | 343.95 | 113.24 | 343.95 | 114.2 | 343.94 |
| 114.77 | 343.93 | 115.24 | 343.93 | 116.26 | 343.92 | 118.03 | 343.9 | 118.16 | 343.9 |
| 119.29 | 343.88 | 120.07 | 343.87 | 120.66 | 343.87 | 122.72 | 343.84 | 123.71 | 343.83 |
| 124.26 | 343.83 | 124.47 | 343.82 | 125.04 | 343.82 | 125.93 | 343.84 | 127.3 | 343.84 |
| 127.83 | 343.85 | 128.45 | 343.85 | 129.1 | 343.86 | 129.5 | 343.87 | 129.84 | 343.89 |
| 131.15 | 343.96 | 131.36 | 343.96 | 131.97 | 343.98 | 132.79 | 344.02 | 133.04 | 344.02 |
| 133.41 | 344.03 | 133.95 | 344.04 | 134.57 | 344.04 | 134.65 | 344.05 | 134.83 | 344.05 |
| 135.41 | 344.07 | 136.54 | 344.1 | 139.66 | 344.1 | 141.97 | 344.08 | 142.66 | 344.07 |
| 143.54 | 344.06 | 143.7 | 344.06 | 145.12 | 344.05 | 146.99 | 344.05 | 148.26 | 344.04 |
| 151.54 | 344.02 | 152.79 | 344.01 | 157.44 | 344.01 | 159.14 | 344.02 | 160.42 | 344.02 |
| 166.04 | 344.01 | 167.79 | 344.01 | 169.39 | 344 | 171.71 | 343.97 | 173.02 | 343.95 |
| 173.88 | 343.93 | 174.14 | 343.91 | 174.62 | 343.9 | 175.12 | 343.87 | 175.37 | 343.87 |
| 176.18 | 343.86 | 176.75 | 343.85 | 178.34 | 343.84 | 179.13 | 343.83 | 185.07 | 343.83 |
| 186.17 | 343.82 | 187.31 | 343.82 | 188.94 | 343.81 | 190.79 | 343.81 | 193.9 | 343.79 |
| 196.31 | 343.78 | 196.74 | 343.78 | 198.28 | 343.75 | 199.09 | 343.74 | 200.51 | 343.71 |
| 204.22 | 343.62 | 209.7 | 343.47 | 212.2 | 343.39 | 215.2 | 343.13 | 219.38 | 342.65 |
| 226.25 | 342.37 | 229.58 | 342.23 | 233.18 | 342.09 | 237.19 | 341.93 | 237.71 | 341.89 |
| 241.3 | 341.66 | 242.5 | 341.6 | 242.56 | 341.58 | 242.84 | 341.58 | 243.87 | 341.54 |
| 244.26 | 341.52 | 244.38 | 341.5 | 244.77 | 341.5 | 245.16 | 341.49 | 245.61 | 341.56 |
| 245.85 | 341.59 | 246.45 | 341.63 | 247.01 | 341.65 | 247.76 | 341.68 | 248.67 | 341.7 |
| 250.81 | 341.72 | 252.21 | 341.72 | 252.72 | 341.75 | 253.03 | 341.76 | 253.08 | 341.78 |
| 253.37 | 341.78 | 253.8 | 341.79 | 253.98 | 341.8 | 254.27 | 341.8 | 254.48 | 341.79 |
| 255.14 | 341.79 | 255.34 | 341.78 | 255.53 | 341.78 | 255.7 | 341.77 | 256.02 | 341.76 |
| 256.25 | 341.74 | 256.61 | 341.73 | 256.78 | 341.73 | 257.21 | 341.71 | 258.65 | 341.67 |
| 260.13 | 341.66 | 260.81 | 341.64 | 262.48 | 341.63 | 262.82 | 341.62 | 264.95 | 341.59 |
| 265.15 | 341.59 | 265.48 | 341.62 | 266.76 | 341.6 | 267.35 | 341.58 | 267.92 | 341.57 |
| 275.48 | 341.33 | 277.14 | 341.29 | 280.37 | 341.19 | 280.83 | 341.17 | 281.37 | 341.16 |
| 281.57 | 341.15 | 281.91 | 341.15 | 282.51 | 341.13 | 282.71 | 341.12 | 283.18 | 341.12 |
| 283.58 | 341.11 | 283.67 | 341.13 | 283.86 | 341.13 | 284.61 | 341.16 | 287.12 | 341.29 |
| 288.14 | 341.33 | 288.61 | 341.35 | 289.5 | 341.35 | 291.93 | 341.23 | 292.96 | 341.19 |
| 293.47 | 341.2 | 293.68 | 341.2 | 294.2 | 341.21 | 294.82 | 341.21 | 295.15 | 341.2 |
| 295.47 | 341.21 | 295.95 | 341.2 | 296.61 | 341.22 | 297.76 | 341.25 | 299.44 | 341.34 |
| 301.74 | 341.53 | 302.91 | 341.6 | 304.4 | 341.67 | 305.34 | 341.67 | 306.67 | 341.66 |
| 306.98 | 341.65 | 309.84 | 341.64 | 310.58 | 341.63 | 310.96 | 341.64 | 311.09 | 341.63 |
| 313.82 | 341.62 | 316.59 | 341.59 | 317.88 | 341.58 | 320.32 | 341.57 | 320.71 | 341.57 |
| 320.8 | 341.56 | 321.51 | 341.56 | 333.28 | 341.1 | 339.82 | 340.84 | 341.64 | 340.76 |
| 341.96 | 340.75 | 346.23 | 340.65 | 350.71 | 340.51 | 350.93 | 340.51 | 352.25 | 340.5 |
| 356.92 | 340.46 | 361.83 | 340.46 | 362.23 | 340.47 | 362.46 | 340.48 | 362.92 | 340.48 |
| 363.1 | 340.49 | 363.35 | 340.49 | 364.24 | 340.51 | 366.6 | 340.57 | 368.65 | 340.61 |
| 375.62 | 340.77 | 382.48 | 340.92 | 384.92 | 341.11 | 388.57 | 341.41 | 389.32 | 341.45 |
| 390.04 | 341.51 | 392.18 | 341.64 | 396.26 | 341.64 | 397.25 | 341.65 | 398.5 | 341.65 |
| 398.65 | 341.66 | 399.04 | 341.66 | 399.26 | 341.65 | 399.46 | 341.66 | 401.79 | 341.64 |
| 404.81 | 341.62 | 406.73 | 341.6 | 407.27 | 341.59 | 407.96 | 341.59 | 409.71 | 341.57 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 410.19 | 341.56 | 410.43 | 341.56 | 410.69 | 341.55 | 411.82 | 341.55 | 412.43 | 341.57 |
| 413.28 | 341.57 | 414.3 | 341.59 | 414.88 | 341.59 | 415.13 | 341.6 | 415.31 | 341.6 |
| 415.75 | 341.62 | 416.27 | 341.64 | 416.59 | 341.64 | 416.93 | 341.66 | 419.08 | 341.73 |
| 421.86 | 341.83 | 423.28 | 341.88 | 423.61 | 341.89 | 424.43 | 341.91 | 426.06 | 341.97 |
| 427.42 | 342 | 428.15 | 342.01 | 429.93 | 342.05 | 430.65 | 342.06 | 433.94 | 342.06 |
| 434.26 | 342.07 | 434.68 | 342.07 | 435.09 | 342.08 | 435.34 | 342.09 | 441.89 | 342.16 |
| 442.39 | 342.16 | 448.18 | 342.22 | 449.21 | 342.2 | 450.57 | 342.19 | 453.43 | 342.15 |
| 455.52 | 342.12 | 458.88 | 342.11 | 464.73 | 342.11 | 465.9 | 342.1 | 467.85 | 342.09 |
| 472.03 | 342.09 | 473.24 | 342.1 | 474.48 | 342.1 | 475.64 | 342.11 | 476.66 | 342.11 |
| 478.37 | 342.13 | 479.75 | 342.14 | 480.63 | 342.14 | 481.48 | 342.17 | 482.25 | 342.2 |
| 483.27 | 342.25 | 483.48 | 342.27 | 484.67 | 342.33 | 484.74 | 342.35 | 485.12 | 342.67 |
| 485.27 | 342.79 | 485.91 | 343.02 | 492.07 | 343.4 | 496.05 | 343.64 | 496.4 | 343.66 |
| 497.31 | 343.69 | 499.38 | 343.81 | 501 | 343.88 | 502.27 | 343.96 | 503.7 | 344.09 |
| 504.61 | 344.15 | 507.47 | 344.35 | 508.03 | 344.37 | 508.93 | 344.41 | 509.48 | 344.43 |
| 521.75 | 344.9 | 522.68 | 344.94 | 523.68 | 345 | 524.07 | 345.02 | 524.45 | 345.1 |
| 524.86 | 345.15 | 525.43 | 345.23 | 526.45 | 345.37 | 526.75 | 345.4 | 527.34 | 345.44 |
| 529.11 | 345.54 | 529.79 | 345.58 | 530.23 | 345.59 | 530.88 | 345.62 | 531.98 | 345.65 |
| 532.81 | 345.67 | 533.53 | 345.7 | 539.09 | 345.97 | 539.53 | 345.99 | 539.64 | 346 |
| 540.26 | 346.04 | 543.78 | 346.3 | 545.5 | 346.41 | 546.02 | 346.45 | 546.68 | 346.49 |
| 547.17 | 346.53 | 547.76 | 346.57 | 549.08 | 346.65 | 550.07 | 346.75 | 550.31 | 346.78 |
| 550.52 | 346.79 | 551.56 | 346.87 | 551.64 | 346.87 | 552.59 | 346.95 | 553.61 | 346.99 |
| 555.99 | 347.09 | 556.84 | 347.13 | 557.76 | 347.18 | 558.84 | 347.25 | 559.88 | 347.33 |
| 560.57 | 347.4 | 561.66 | 347.5 | 562.26 | 347.57 | 562.45 | 347.6 | 562.77 | 347.62 |
| 563.18 | 347.66 | 564.12 | 347.72 | 564.92 | 347.75 | 565.63 | 347.78 | 566.68 | 347.89 |
| 567.18 | 347.92 | 568.5 | 348.06 | 573.88 | 348.46 | 574.62 | 348.52 | 583.82 | 349.08 |
| 584.95 | 349.18 | 585.15 | 349.2 | 585.23 | 349.2 | 587.73 | 349.33 | 590.46 | 349.51 |
| 592.01 | 349.62 | 592.9 | 349.66 | 594.66 | 349.77 | 595.49 | 349.81 | 596.01 | 349.82 |
| 597.14 | 349.85 | 603.13 | 350.04 | 604.06 | 350.06 | 605.78 | 350.12 | 607.2 | 350.13 |
| 608.96 | 350.15 | 610.28 | 350.14 | 610.59 | 350.14 | 610.85 | 350.16 | 612.99 | 350.13 |
| 613.17 | 350.14 | 613.8 | 350.15 | 614.01 | 350.16 | 614.35 | 350.16 | 615 | 350.18 |
| 615.19 | 350.18 | 615.5 | 350.2 | 616.52 | 350.25 | 617.55 | 350.32 | 618.84 | 350.43 |
| 619.29 | 350.47 | 619.78 | 350.5 | 620.23 | 350.52 | 620.82 | 350.54 | 621.38 | 350.55 |
| 622.31 | 350.57 | 624.97 | 350.64 | 626.4 | 350.71 | 627.82 | 350.77 | 637.14 | 350.89 |
| 640.94 | 350.92 | 641.04 | 350.92 | 645.46 | 350.95 | 646.23 | 350.95 | 647.8 | 350.97 |
| 650.85 | 350.99 | 651.44 | 350.99 | 652.01 | 351.02 | 652.53 | 351.04 | 653.84 | 351.05 |
| 653.89 | 351.06 | 654.91 | 351.06 | 655.94 | 351.07 | 657.53 | 351.08 | 659.62 | 351.09 |
| 660.99 | 351.1 | 661.92 | 351.1 | 663.73 | 351.11 | 665.34 | 351.12 | 667.59 | 351.12 |
| 667.94 | 351.13 | 668.1 | 351.13 | 671.48 | 351.15 | 673.93 | 351.15 | 674.67 | 351.17 |
| 677.75 | 351.17 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.2 | .04 | 485.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.2 | 485.27 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2255.81*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 345.14 | 1.74 | 345.09 | 4.91 | 345 | 6.8 | 344.96 | 7.4 | 344.95 |
| 12.69 | 344.85 | 14.05 | 344.81 | 14.54 | 344.8 | 15.46 | 344.8 | 15.73 | 344.81 |
| 16.03 | 344.81 | 17 | 344.8 | 17.88 | 344.81 | 18.39 | 344.81 | 18.62 | 344.8 |
| 21.09 | 344.8 | 21.86 | 344.79 | 24.41 | 344.75 | 27.09 | 344.71 | 28.09 | 344.69 |
| 30.98 | 344.64 | 32.32 | 344.62 | 33.69 | 344.61 | 35.38 | 344.59 | 36.47 | 344.58 |
| 39.09 | 344.56 | 40.58 | 344.55 | 42.77 | 344.54 | 43.83 | 344.53 | 44.35 | 344.52 |
| 44.95 | 344.52 | 45.12 | 344.5 | 45.66 | 344.5 | 46.38 | 344.49 | 46.78 | 344.49 |
| 47.38 | 344.48 | 47.73 | 344.48 | 48.91 | 344.47 | 49.55 | 344.47 | 49.82 | 344.46 |
| 50.43 | 344.46 | 50.82 | 344.47 | 51.37 | 344.47 | 51.56 | 344.46 | 53.23 | 344.46 |
| 53.6 | 344.45 | 54.78 | 344.45 | 54.85 | 344.46 | 55.23 | 344.46 | 55.73 | 344.45 |
| 57.79 | 344.43 | 58.64 | 344.42 | 59.2 | 344.41 | 60.05 | 344.4 | 60.63 | 344.4 |
| 60.79 | 344.39 | 61.36 | 344.39 | 61.4 | 344.38 | 61.8 | 344.38 | 62 | 344.37 |
| 62.42 | 344.37 | 62.52 | 344.36 | 62.83 | 344.36 | 62.98 | 344.35 | 63.26 | 344.35 |
| 63.61 | 344.33 | 63.9 | 344.33 | 64.13 | 344.32 | 65.82 | 344.29 | 66.59 | 344.27 |
| 67.55 | 344.25 | 68.05 | 344.25 | 69.21 | 344.23 | 70.47 | 344.21 | 71.82 | 344.19 |
| 73.62 | 344.16 | 75.04 | 344.14 | 79.93 | 344.05 | 81.7 | 344.03 | 82.57 | 344.01 |
| 85.08 | 343.98 | 86.52 | 343.97 | 87.7 | 343.95 | 90.53 | 343.93 | 91.35 | 343.92 |
| 95.29 | 343.92 | 95.93 | 343.93 | 96.62 | 343.93 | 97.68 | 343.92 | 98.13 | 343.91 |
| 98.56 | 343.91 | 102.08 | 343.87 | 103.34 | 343.86 | 103.93 | 343.86 | 105.89 | 343.83 |
| 105.97 | 343.83 | 109.74 | 343.79 | 111.7 | 343.77 | 112.32 | 343.77 | 114.19 | 343.75 |
| 115.22 | 343.75 | 116.24 | 343.74 | 118.02 | 343.71 | 118.14 | 343.71 | 119.27 | 343.69 |
| 120.05 | 343.68 | 120.64 | 343.68 | 122.7 | 343.65 | 123.7 | 343.64 | 124.25 | 343.63 |
| 124.75 | 343.63 | 125.03 | 343.62 | 125.92 | 343.64 | 127.29 | 343.64 | 127.81 | 343.65 |
| 128.27 | 343.64 | 128.43 | 343.65 | 129.08 | 343.65 | 129.48 | 343.66 | 130.56 | 343.72 |
| 131.35 | 343.75 | 131.95 | 343.77 | 133.02 | 343.81 | 133.93 | 343.83 | 134.55 | 343.83 |
| 135.4 | 343.86 | 135.78 | 343.88 | 136.53 | 343.9 | 138.25 | 343.9 | 139.28 | 343.89 |
| 139.64 | 343.89 | 140.78 | 343.88 | 141.95 | 343.88 | 142.65 | 343.87 | 143.53 | 343.85 |
| 146.97 | 343.85 | 148.24 | 343.84 | 151.52 | 343.82 | 152.77 | 343.81 | 159.13 | 343.81 |
| 160.4 | 343.82 | 166.02 | 343.81 | 167.03 | 343.81 | 167.77 | 343.8 | 169.37 | 343.79 |
| 170.11 | 343.79 | 171.69 | 343.77 | 173 | 343.75 | 173.86 | 343.73 | 174.12 | 343.71 |
| 174.6 | 343.7 | 175.35 | 343.67 | 176.16 | 343.66 | 176.73 | 343.66 | 178.32 | 343.65 |
| 179.11 | 343.64 | 179.77 | 343.64 | 182.12 | 343.63 | 186.15 | 343.63 | 186.97 | 343.62 |
| 188.92 | 343.62 | 190.76 | 343.61 | 193.88 | 343.6 | 196.29 | 343.58 | 196.71 | 343.58 |
| 198.25 | 343.55 | 199.07 | 343.53 | 200.49 | 343.5 | 204.19 | 343.41 | 206.4 | 343.34 |
| 209.68 | 343.24 | 212.17 | 343.16 | 215.17 | 342.9 | 219.14 | 342.46 | 225.67 | 342.19 |
| 228.83 | 342.06 | 232.25 | 341.93 | 236.06 | 341.77 | 236.55 | 341.74 | 239.96 | 341.52 |
| 241.1 | 341.46 | 241.42 | 341.44 | 241.64 | 341.44 | 242.4 | 341.41 | 242.88 | 341.38 |
| 243.25 | 341.37 | 243.62 | 341.37 | 244.05 | 341.43 | 244.28 | 341.45 | 244.85 | 341.49 |
| 246.09 | 341.54 | 246.96 | 341.55 | 248.99 | 341.57 | 250.32 | 341.57 | 250.8 | 341.6 |
| 251.1 | 341.61 | 251.15 | 341.63 | 251.42 | 341.63 | 251.83 | 341.64 | 252.28 | 341.64 |
| 252.47 | 341.63 | 253.1 | 341.63 | 253.29 | 341.62 | 253.47 | 341.62 | 253.63 | 341.61 |
| 253.88 | 341.61 | 254 | 341.59 | 254.5 | 341.58 | 254.66 | 341.57 | 255.06 | 341.56 |
| 256.44 | 341.51 | 257.84 | 341.51 | 258.48 | 341.49 | 260.07 | 341.47 | 260.4 | 341.47 |
| 262.42 | 341.44 | 262.61 | 341.44 | 262.91 | 341.47 | 264.14 | 341.45 | 264.7 | 341.43 |
| 265.23 | 341.42 | 272.42 | 341.19 | 273.99 | 341.15 | 277.06 | 341.05 | 277.5 | 341.04 |
| 278.01 | 341.02 | 278.2 | 341.02 | 278.52 | 341.01 | 279.08 | 341 | 279.28 | 340.99 |
| 279.72 | 340.99 | 280.1 | 340.98 | 280.38 | 341 | 280.57 | 341 | 281.08 | 341.02 |
| 283.47 | 341.14 | 284.88 | 341.2 | 285.73 | 341.2 | 288.03 | 341.09 | 289.01 | 341.04 |
| 289.49 | 341.05 | 289.7 | 341.05 | 290.19 | 341.06 | 290.78 | 341.06 | 291.09 | 341.05 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 291.39 | 341.06 | 292.47 | 341.06 | 293.23 | 341.09 | 293.57 | 341.1 | 294.63 | 341.15 |
| 295.17 | 341.18 | 297.35 | 341.36 | 298.46 | 341.42 | 299.87 | 341.48 | 300.55 | 341.48 |
| 300.76 | 341.47 | 302.03 | 341.46 | 302.34 | 341.46 | 305.04 | 341.44 | 306.23 | 341.44 |
| 308.82 | 341.42 | 311.45 | 341.39 | 314.99 | 341.36 | 315.49 | 341.36 | 316.12 | 341.35 |
| 327.3 | 340.91 | 333.51 | 340.66 | 335.24 | 340.59 | 335.54 | 340.58 | 339.59 | 340.47 |
| 343.85 | 340.34 | 344.06 | 340.34 | 345.31 | 340.33 | 349.75 | 340.28 | 354.65 | 340.28 |
| 354.96 | 340.29 | 355.04 | 340.3 | 355.49 | 340.3 | 355.56 | 340.31 | 356.03 | 340.31 |
| 356.29 | 340.32 | 357.25 | 340.34 | 359.8 | 340.4 | 362 | 340.44 | 369.5 | 340.61 |
| 376.89 | 340.77 | 379.51 | 340.95 | 383.44 | 341.24 | 384.25 | 341.28 | 384.51 | 341.29 |
| 387.33 | 341.45 | 390.89 | 341.44 | 391.72 | 341.44 | 392.79 | 341.45 | 395.17 | 341.45 |
| 397.68 | 341.43 | 400.93 | 341.4 | 403 | 341.38 | 404.32 | 341.36 | 406.21 | 341.34 |
| 406.73 | 341.33 | 407.26 | 341.31 | 408.05 | 341.31 | 408.27 | 341.32 | 408.48 | 341.32 |
| 409.13 | 341.33 | 411.14 | 341.35 | 411.33 | 341.35 | 411.7 | 341.36 | 412.04 | 341.36 |
| 412.24 | 341.37 | 412.47 | 341.37 | 413.27 | 341.4 | 413.98 | 341.42 | 414.98 | 341.46 |
| 416.3 | 341.51 | 419.28 | 341.61 | 420.81 | 341.67 | 421.17 | 341.69 | 422.05 | 341.71 |
| 423.8 | 341.77 | 425.27 | 341.8 | 426.05 | 341.82 | 427.97 | 341.85 | 428.74 | 341.87 |
| 429.13 | 341.87 | 430.07 | 341.86 | 431.87 | 341.86 | 432.29 | 341.87 | 432.64 | 341.87 |
| 433.09 | 341.88 | 433.53 | 341.88 | 433.79 | 341.89 | 440.85 | 341.96 | 441.39 | 341.97 |
| 447.62 | 342.02 | 448.73 | 342 | 450.2 | 341.98 | 453.28 | 341.93 | 455.53 | 341.9 |
| 459.14 | 341.88 | 463.84 | 341.88 | 465.44 | 341.87 | 466.7 | 341.86 | 468.79 | 341.84 |
| 474.6 | 341.84 | 475.94 | 341.85 | 477.19 | 341.85 | 478.28 | 341.86 | 480.12 | 341.87 |
| 481.61 | 341.88 | 482.16 | 341.88 | 482.56 | 341.89 | 482.88 | 341.89 | 483.48 | 341.91 |
| 484.3 | 341.95 | 485.4 | 342 | 485.62 | 342.02 | 486.91 | 342.09 | 486.98 | 342.12 |
| 487.39 | 342.48 | 487.55 | 342.61 | 488.18 | 342.88 | 494.29 | 343.25 | 498.23 | 343.5 |
| 498.59 | 343.52 | 499.48 | 343.54 | 501.53 | 343.67 | 503.14 | 343.73 | 504.4 | 343.82 |
| 505.81 | 343.94 | 506.72 | 344 | 509.56 | 344.19 | 510.11 | 344.21 | 511 | 344.25 |
| 511.55 | 344.27 | 523.71 | 344.76 | 524.62 | 344.8 | 525.62 | 344.86 | 526 | 344.88 |
| 526.38 | 344.95 | 526.79 | 345.01 | 527.35 | 345.08 | 528.36 | 345.22 | 529.25 | 345.28 |
| 531 | 345.38 | 531.67 | 345.42 | 532.11 | 345.44 | 532.75 | 345.46 | 533.84 | 345.5 |
| 534.66 | 345.52 | 535.38 | 345.55 | 540.89 | 345.83 | 541.32 | 345.85 | 541.43 | 345.85 |
| 542.05 | 345.89 | 545.54 | 346.15 | 547.24 | 346.27 | 547.76 | 346.31 | 548.42 | 346.35 |
| 548.9 | 346.39 | 549.48 | 346.43 | 550.79 | 346.51 | 551.77 | 346.61 | 552.01 | 346.64 |
| 552.21 | 346.65 | 553.24 | 346.72 | 553.32 | 346.72 | 554.27 | 346.8 | 555.28 | 346.84 |
| 557.64 | 346.92 | 558.48 | 346.96 | 559.4 | 347.01 | 560.46 | 347.09 | 561.49 | 347.17 |
| 562.18 | 347.24 | 563.26 | 347.34 | 563.85 | 347.41 | 564.04 | 347.44 | 564.36 | 347.47 |
| 564.77 | 347.5 | 565.05 | 347.53 | 565.69 | 347.57 | 566.49 | 347.6 | 567.19 | 347.64 |
| 568.24 | 347.75 | 568.73 | 347.78 | 570.04 | 347.93 | 575.37 | 348.35 | 576.1 | 348.41 |
| 585.22 | 349 | 586.34 | 349.09 | 586.61 | 349.12 | 589.09 | 349.24 | 591.8 | 349.4 |
| 593.33 | 349.5 | 594.22 | 349.54 | 595.96 | 349.64 | 596.78 | 349.68 | 597.3 | 349.7 |
| 598.42 | 349.72 | 604.36 | 349.9 | 605.28 | 349.93 | 606.99 | 349.98 | 608.4 | 349.99 |
| 610.14 | 350.01 | 611.44 | 350.01 | 611.75 | 350 | 612 | 350.02 | 614.13 | 349.99 |
| 614.31 | 350.01 | 614.93 | 350.01 | 615.14 | 350.02 | 615.47 | 350.02 | 616.12 | 350.04 |
| 616.31 | 350.04 | 616.62 | 350.06 | 617.63 | 350.1 | 618.64 | 350.17 | 619.92 | 350.28 |
| 620.85 | 350.34 | 621.3 | 350.36 | 621.89 | 350.38 | 622.44 | 350.38 | 623.36 | 350.41 |
| 626 | 350.48 | 627.41 | 350.54 | 628.83 | 350.59 | 638.06 | 350.69 | 641.83 | 350.73 |
| 646.3 | 350.74 | 646.92 | 350.74 | 647.07 | 350.75 | 651.65 | 350.78 | 652.24 | 350.78 |
| 652.8 | 350.81 | 653.32 | 350.83 | 654.67 | 350.84 | 655.68 | 350.85 | 656.69 | 350.85 |
| 658.27 | 350.86 | 660.34 | 350.87 | 664.42 | 350.87 | 666.01 | 350.88 | 668.24 | 350.88 |
| 668.59 | 350.89 | 672.09 | 350.9 | 673.8 | 350.9 | 674.05 | 350.91 | 674.91 | 350.91 |
| 675.25 | 350.92 | 675.45 | 350.92 | 675.52 | 350.93 | 675.75 | 350.93 | 675.79 | 350.92 |
| 678.31 | 350.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.17 | .04 | 487.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.17 | 487.55 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2236.00*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.88 | 1.74 | 344.83 | 4.9 | 344.75 | 6.8 | 344.71 | 7.4 | 344.7 |
| 12.69 | 344.6 | 14.54 | 344.56 | 15.31 | 344.56 | 15.38 | 344.57 | 18.39 | 344.57 |
| 18.62 | 344.56 | 21.09 | 344.56 | 21.86 | 344.55 | 24.4 | 344.52 | 25.78 | 344.49 |
| 27.09 | 344.47 | 28.09 | 344.45 | 30.98 | 344.41 | 33.69 | 344.37 | 34.46 | 344.37 |
| 35.37 | 344.36 | 36.46 | 344.35 | 39.09 | 344.33 | 40.58 | 344.33 | 42.76 | 344.32 |
| 43.82 | 344.31 | 44.34 | 344.31 | 44.94 | 344.3 | 45.11 | 344.29 | 45.65 | 344.29 |
| 46.38 | 344.28 | 46.78 | 344.28 | 47.38 | 344.27 | 47.73 | 344.27 | 48.91 | 344.26 |
| 51.56 | 344.26 | 52.11 | 344.25 | 54.84 | 344.25 | 54.87 | 344.26 | 55.22 | 344.26 |
| 55.72 | 344.25 | 56.53 | 344.24 | 56.69 | 344.24 | 57.78 | 344.23 | 58.64 | 344.22 |
| 59.2 | 344.21 | 60.04 | 344.2 | 60.95 | 344.2 | 61.39 | 344.19 | 61.63 | 344.18 |
| 62.05 | 344.18 | 62.51 | 344.17 | 62.82 | 344.16 | 62.97 | 344.15 | 63.25 | 344.15 |
| 63.6 | 344.14 | 64.12 | 344.12 | 65.82 | 344.09 | 66.58 | 344.07 | 67.54 | 344.05 |
| 68.04 | 344.05 | 69.2 | 344.03 | 70.46 | 344.01 | 71.81 | 343.99 | 73.61 | 343.96 |
| 75.03 | 343.94 | 79.92 | 343.85 | 81.69 | 343.82 | 82.56 | 343.81 | 83.44 | 343.79 |
| 85.07 | 343.77 | 86.51 | 343.76 | 87.69 | 343.75 | 90.52 | 343.72 | 91.34 | 343.72 |
| 92.06 | 343.71 | 93.27 | 343.71 | 93.7 | 343.72 | 95.28 | 343.72 | 95.92 | 343.73 |
| 96.61 | 343.73 | 97.67 | 343.72 | 98.11 | 343.72 | 98.54 | 343.71 | 102.07 | 343.68 |
| 103.33 | 343.67 | 103.92 | 343.66 | 105.87 | 343.64 | 105.95 | 343.64 | 109.73 | 343.6 |
| 110.74 | 343.6 | 111.69 | 343.59 | 112.18 | 343.58 | 113.22 | 343.57 | 114.17 | 343.57 |
| 114.74 | 343.56 | 115.21 | 343.56 | 116.23 | 343.55 | 118 | 343.53 | 118.13 | 343.52 |
| 119.26 | 343.5 | 120.04 | 343.49 | 120.63 | 343.49 | 122.69 | 343.46 | 123.68 | 343.44 |
| 124.23 | 343.44 | 124.44 | 343.43 | 125.01 | 343.43 | 125.9 | 343.44 | 126.34 | 343.44 |
| 127.08 | 343.43 | 127.27 | 343.43 | 127.8 | 343.44 | 129.07 | 343.44 | 129.47 | 343.45 |
| 130.55 | 343.51 | 131.12 | 343.53 | 131.33 | 343.54 | 131.94 | 343.56 | 133 | 343.6 |
| 133.37 | 343.61 | 133.91 | 343.62 | 134.54 | 343.62 | 134.61 | 343.63 | 134.8 | 343.63 |
| 135.77 | 343.68 | 136.1 | 343.69 | 136.51 | 343.69 | 137.07 | 343.7 | 138.23 | 343.7 |
| 139.27 | 343.69 | 139.62 | 343.69 | 141.94 | 343.67 | 142.63 | 343.67 | 143.51 | 343.65 |
| 146.95 | 343.65 | 148.23 | 343.64 | 151.5 | 343.62 | 152.75 | 343.61 | 159.11 | 343.61 |
| 160.38 | 343.62 | 166 | 343.61 | 166.16 | 343.61 | 167.01 | 343.6 | 167.75 | 343.6 |
| 169.34 | 343.59 | 170.09 | 343.58 | 170.89 | 343.58 | 171.67 | 343.57 | 172.98 | 343.55 |
| 173.84 | 343.53 | 174.1 | 343.51 | 174.58 | 343.5 | 175.08 | 343.48 | 175.33 | 343.48 |
| 176.14 | 343.47 | 176.71 | 343.46 | 178.29 | 343.45 | 179.08 | 343.44 | 184.21 | 343.44 |
| 185.03 | 343.43 | 186.13 | 343.43 | 186.95 | 343.42 | 188.89 | 343.42 | 190.74 | 343.41 |
| 193.85 | 343.4 | 196.27 | 343.39 | 196.69 | 343.38 | 198.23 | 343.35 | 199.04 | 343.33 |
| 200.46 | 343.29 | 201.29 | 343.27 | 202.92 | 343.22 | 204.17 | 343.19 | 206.37 | 343.12 |
| 209.65 | 343.01 | 212.15 | 342.93 | 215.14 | 342.68 | 218.91 | 342.27 | 225.09 | 342.02 |
| 228.08 | 341.89 | 231.31 | 341.77 | 234.92 | 341.62 | 235.39 | 341.59 | 238.62 | 341.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 239.69 | 341.33 | 239.77 | 341.32 | 240 | 341.31 | 240.21 | 341.31 | 240.93 | 341.28 |
| 241.28 | 341.26 | 241.38 | 341.25 | 241.73 | 341.25 | 242.08 | 341.24 | 242.71 | 341.32 |
| 243.25 | 341.35 | 243.75 | 341.37 | 244.42 | 341.39 | 245.24 | 341.41 | 246.16 | 341.41 |
| 247.17 | 341.42 | 248.33 | 341.43 | 248.42 | 341.42 | 248.88 | 341.45 | 249.16 | 341.46 |
| 249.46 | 341.48 | 249.93 | 341.48 | 250.01 | 341.49 | 250.12 | 341.48 | 250.66 | 341.48 |
| 250.86 | 341.47 | 251.41 | 341.47 | 251.85 | 341.45 | 252.05 | 341.43 | 252.38 | 341.43 |
| 252.54 | 341.42 | 252.92 | 341.41 | 254.22 | 341.36 | 255.55 | 341.36 | 256.15 | 341.34 |
| 257.66 | 341.32 | 257.97 | 341.32 | 259.88 | 341.29 | 260.06 | 341.29 | 260.35 | 341.32 |
| 261.51 | 341.29 | 262.55 | 341.27 | 269.35 | 341.04 | 270.5 | 341.02 | 270.84 | 341.01 |
| 273.74 | 340.92 | 274.16 | 340.9 | 274.65 | 340.89 | 274.83 | 340.88 | 275.13 | 340.88 |
| 275.66 | 340.87 | 275.85 | 340.86 | 276.27 | 340.86 | 276.63 | 340.85 | 276.89 | 340.87 |
| 277.07 | 340.87 | 277.56 | 340.88 | 279.82 | 340.99 | 281.15 | 341.05 | 281.35 | 341.05 |
| 281.96 | 341.04 | 284.14 | 340.94 | 285.07 | 340.9 | 285.52 | 340.91 | 286.73 | 340.91 |
| 287.03 | 340.9 | 287.32 | 340.91 | 288.34 | 340.91 | 289.38 | 340.94 | 290.38 | 340.99 |
| 290.89 | 341.02 | 292.96 | 341.18 | 294.01 | 341.23 | 295.35 | 341.29 | 295.99 | 341.29 |
| 296.19 | 341.28 | 297.39 | 341.27 | 297.68 | 341.27 | 300.24 | 341.25 | 300.87 | 341.24 |
| 301.37 | 341.24 | 303.82 | 341.22 | 306.31 | 341.19 | 309.66 | 341.16 | 310.01 | 341.16 |
| 310.1 | 341.15 | 310.73 | 341.15 | 321.32 | 340.72 | 327.2 | 340.48 | 328.83 | 340.41 |
| 329.13 | 340.4 | 332.96 | 340.3 | 336.99 | 340.17 | 337.19 | 340.17 | 338.38 | 340.16 |
| 342.58 | 340.11 | 347.48 | 340.11 | 347.95 | 340.12 | 348.21 | 340.13 | 348.74 | 340.13 |
| 349.24 | 340.15 | 350.27 | 340.17 | 352.99 | 340.23 | 355.35 | 340.27 | 363.39 | 340.45 |
| 371.3 | 340.62 | 374.11 | 340.79 | 378.32 | 341.07 | 379.46 | 341.11 | 380.02 | 341.14 |
| 382.49 | 341.25 | 386.29 | 341.24 | 387.19 | 341.24 | 388.33 | 341.25 | 389.36 | 341.25 |
| 389.66 | 341.24 | 389.77 | 341.25 | 390.88 | 341.25 | 393.57 | 341.22 | 397.05 | 341.18 |
| 399.26 | 341.15 | 399.89 | 341.14 | 400.68 | 341.13 | 402.7 | 341.11 | 403.53 | 341.08 |
| 403.83 | 341.08 | 404.02 | 341.07 | 404.21 | 341.08 | 405.13 | 341.08 | 405.84 | 341.09 |
| 406.82 | 341.1 | 407.99 | 341.12 | 408.67 | 341.12 | 408.95 | 341.13 | 409.16 | 341.13 |
| 409.66 | 341.15 | 410.27 | 341.17 | 411.03 | 341.19 | 412.1 | 341.23 | 413.51 | 341.29 |
| 416.71 | 341.4 | 418.35 | 341.46 | 418.73 | 341.48 | 421.55 | 341.57 | 423.13 | 341.6 |
| 423.96 | 341.62 | 426.01 | 341.66 | 426.84 | 341.68 | 427.26 | 341.68 | 428.27 | 341.67 |
| 431.01 | 341.67 | 431.5 | 341.68 | 431.97 | 341.68 | 432.25 | 341.69 | 439.81 | 341.77 |
| 440.39 | 341.77 | 447.07 | 341.82 | 448.25 | 341.8 | 449.82 | 341.78 | 453.12 | 341.72 |
| 455.53 | 341.67 | 459.4 | 341.65 | 461.01 | 341.65 | 462.6 | 341.64 | 464.43 | 341.64 |
| 466.15 | 341.63 | 467.49 | 341.62 | 469.74 | 341.6 | 470.47 | 341.59 | 477.39 | 341.59 |
| 478.74 | 341.6 | 479.9 | 341.6 | 481.87 | 341.61 | 483.47 | 341.62 | 484.06 | 341.62 |
| 484.49 | 341.63 | 485.47 | 341.66 | 486.35 | 341.69 | 487.53 | 341.75 | 487.77 | 341.78 |
| 489.15 | 341.85 | 489.22 | 341.88 | 489.66 | 342.28 | 489.83 | 342.44 | 490.46 | 342.74 |
| 496.51 | 343.11 | 500.42 | 343.36 | 500.77 | 343.38 | 501.65 | 343.39 | 503.69 | 343.52 |
| 505.28 | 343.59 | 506.53 | 343.67 | 507.93 | 343.79 | 508.83 | 343.85 | 511.64 | 344.03 |
| 512.19 | 344.06 | 513.07 | 344.1 | 513.61 | 344.12 | 525.66 | 344.62 | 526.57 | 344.66 |
| 527.56 | 344.72 | 527.94 | 344.74 | 528.31 | 344.81 | 529.28 | 344.93 | 530.27 | 345.06 |
| 530.57 | 345.09 | 531.15 | 345.12 | 532.89 | 345.22 | 533.55 | 345.26 | 534.63 | 345.31 |
| 535.71 | 345.35 | 536.52 | 345.37 | 537.23 | 345.4 | 542.69 | 345.68 | 543.12 | 345.7 |
| 543.23 | 345.7 | 543.84 | 345.75 | 544.11 | 345.76 | 547.3 | 346.01 | 548.98 | 346.13 |
| 549.5 | 346.17 | 550.15 | 346.21 | 550.62 | 346.25 | 552.5 | 346.38 | 553.47 | 346.47 |
| 553.71 | 346.5 | 553.91 | 346.51 | 554.93 | 346.57 | 555.01 | 346.58 | 555.72 | 346.64 |
| 556.95 | 346.69 | 559.29 | 346.76 | 560.12 | 346.8 | 561.03 | 346.85 | 562.09 | 346.92 |
| 563.11 | 347 | 563.78 | 347.07 | 564.86 | 347.18 | 565.45 | 347.25 | 565.63 | 347.28 |
| 566.35 | 347.35 | 567.27 | 347.42 | 568.06 | 347.46 | 568.76 | 347.5 | 569.79 | 347.61 |
| 570.28 | 347.65 | 571.57 | 347.79 | 576.86 | 348.24 | 577.58 | 348.3 | 586.62 | 348.91 |
| 587.73 | 349.01 | 587.92 | 349.03 | 588 | 349.03 | 590.46 | 349.14 | 593.14 | 349.3 |
| 594.66 | 349.39 | 595.54 | 349.43 | 597.27 | 349.52 | 598.08 | 349.56 | 599.7 | 349.59 |
| 605.58 | 349.77 | 606.5 | 349.79 | 608.19 | 349.83 | 609.59 | 349.85 | 611.31 | 349.86 |
| 612.6 | 349.87 | 612.91 | 349.87 | 613.16 | 349.88 | 615.27 | 349.86 | 615.45 | 349.87 |
| 616.06 | 349.88 | 616.6 | 349.88 | 617.24 | 349.9 | 617.43 | 349.9 | 617.74 | 349.92 |
| 618.74 | 349.96 | 621.01 | 350.12 | 621.93 | 350.18 | 622.38 | 350.2 | 622.96 | 350.22 |
| 623.5 | 350.22 | 624.42 | 350.24 | 627.03 | 350.31 | 628.43 | 350.37 | 629.83 | 350.42 |
| 638.98 | 350.5 | 642.72 | 350.53 | 647.15 | 350.54 | 647.91 | 350.54 | 649.45 | 350.56 |
| 652.45 | 350.57 | 653.03 | 350.57 | 654.1 | 350.61 | 655.44 | 350.62 | 656.44 | 350.63 |
| 659.01 | 350.63 | 661.06 | 350.64 | 665.1 | 350.64 | 666.68 | 350.65 | 669.39 | 350.65 |
| 672.71 | 350.66 | 674.09 | 350.66 | 674.4 | 350.65 | 674.65 | 350.66 | 675.5 | 350.66 |
| 676.03 | 350.68 | 676.37 | 350.68 | 676.6 | 350.67 | 678.24 | 350.67 | 678.4 | 350.66 |
| 678.87 | 350.66 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.14 | .04 | 489.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.14 | 489.83 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2216.18*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.62 | 1.74 | 344.58 | 4.9 | 344.5 | 6.8 | 344.46 | 7.4 | 344.45 |
| 8.47 | 344.44 | 12.68 | 344.36 | 14.54 | 344.32 | 15.31 | 344.32 | 15.38 | 344.33 |
| 18.61 | 344.33 | 18.78 | 344.32 | 21.08 | 344.32 | 21.85 | 344.31 | 24.4 | 344.28 |
| 25.77 | 344.25 | 27.09 | 344.23 | 27.59 | 344.23 | 28.09 | 344.21 | 30.97 | 344.17 |
| 32.31 | 344.15 | 33.69 | 344.14 | 34.46 | 344.13 | 35.37 | 344.12 | 36.46 | 344.12 |
| 39.08 | 344.1 | 42.76 | 344.1 | 43.82 | 344.09 | 44.34 | 344.09 | 44.94 | 344.08 |
| 45.11 | 344.07 | 46.77 | 344.07 | 47.37 | 344.06 | 47.72 | 344.06 | 48.9 | 344.05 |
| 53.22 | 344.05 | 53.59 | 344.04 | 53.81 | 344.05 | 54.83 | 344.05 | 54.86 | 344.06 |
| 55.21 | 344.06 | 55.71 | 344.05 | 56.53 | 344.04 | 56.69 | 344.04 | 57.78 | 344.03 |
| 58.63 | 344.02 | 59.19 | 344.02 | 60.03 | 344 | 60.94 | 344 | 61.25 | 343.99 |
| 61.39 | 343.99 | 61.62 | 343.98 | 62.04 | 343.98 | 62.5 | 343.97 | 62.81 | 343.96 |
| 62.96 | 343.95 | 63.24 | 343.95 | 63.59 | 343.94 | 64.12 | 343.92 | 65.81 | 343.89 |
| 66.57 | 343.87 | 67.53 | 343.85 | 68.03 | 343.85 | 69.19 | 343.83 | 70.45 | 343.8 |
| 71.81 | 343.78 | 73.6 | 343.75 | 75.02 | 343.74 | 79.91 | 343.64 | 81.68 | 343.61 |
| 83.43 | 343.59 | 85.1 | 343.57 | 86.5 | 343.55 | 87.68 | 343.54 | 90.51 | 343.52 |
| 91.33 | 343.51 | 93.69 | 343.51 | 94.36 | 343.52 | 95.26 | 343.52 | 95.91 | 343.53 |
| 96.6 | 343.53 | 97.66 | 343.52 | 98.1 | 343.52 | 98.53 | 343.51 | 102.06 | 343.49 |
| 103.31 | 343.48 | 103.91 | 343.47 | 105.86 | 343.45 | 105.94 | 343.45 | 109.72 | 343.41 |
| 110.73 | 343.41 | 111.67 | 343.4 | 112.17 | 343.39 | 113.2 | 343.39 | 114.16 | 343.38 |
| 115.19 | 343.38 | 116.22 | 343.36 | 117.99 | 343.34 | 118.12 | 343.34 | 119.24 | 343.32 |
| 120.02 | 343.31 | 120.61 | 343.3 | 122.67 | 343.26 | 123.67 | 343.25 | 124.22 | 343.24 |
| 124.72 | 343.24 | 125 | 343.23 | 125.89 | 343.24 | 126.33 | 343.24 | 127.06 | 343.23 |
| 127.26 | 343.23 | 127.78 | 343.24 | 128.23 | 343.23 | 129.45 | 343.23 | 129.79 | 343.26 |
| 130.53 | 343.3 | 131.32 | 343.33 | 131.92 | 343.35 | 132.74 | 343.38 | 132.99 | 343.38 |
| 133.36 | 343.4 | 133.9 | 343.4 | 134.52 | 343.41 | 134.6 | 343.42 | 134.78 | 343.42 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 135.75 | 343.47 | 136.49 | 343.49 | 137.05 | 343.49 | 137.38 | 343.5 | 138.22 | 343.5 |
| 139.25 | 343.49 | 139.61 | 343.49 | 141.92 | 343.47 | 142.61 | 343.46 | 143.49 | 343.45 |
| 146.94 | 343.45 | 148.21 | 343.44 | 151.49 | 343.42 | 152.73 | 343.41 | 160.36 | 343.41 |
| 165.98 | 343.4 | 167.73 | 343.4 | 169.32 | 343.39 | 170.87 | 343.37 | 171.65 | 343.37 |
| 172.96 | 343.35 | 173.82 | 343.33 | 174.08 | 343.31 | 174.56 | 343.3 | 175.06 | 343.28 |
| 175.31 | 343.28 | 176.12 | 343.27 | 176.68 | 343.27 | 178.27 | 343.26 | 179.06 | 343.25 |
| 179.73 | 343.25 | 182.08 | 343.24 | 186.1 | 343.24 | 186.92 | 343.23 | 187.24 | 343.23 |
| 188.87 | 343.22 | 190.72 | 343.22 | 193.83 | 343.2 | 196.24 | 343.19 | 196.66 | 343.18 |
| 198.21 | 343.15 | 199.02 | 343.12 | 200.44 | 343.08 | 201.26 | 343.06 | 202.89 | 343.01 |
| 206.35 | 342.9 | 209.62 | 342.79 | 212.12 | 342.7 | 215.12 | 342.46 | 218.67 | 342.08 |
| 224.5 | 341.84 | 227.32 | 341.72 | 230.38 | 341.61 | 233.79 | 341.47 | 234.22 | 341.44 |
| 237.27 | 341.25 | 238.29 | 341.2 | 238.36 | 341.19 | 238.58 | 341.18 | 238.78 | 341.18 |
| 239.46 | 341.15 | 239.79 | 341.13 | 239.88 | 341.12 | 240.21 | 341.12 | 240.55 | 341.11 |
| 240.76 | 341.14 | 241.14 | 341.18 | 241.65 | 341.21 | 242.12 | 341.23 | 242.76 | 341.25 |
| 244.4 | 341.27 | 245.35 | 341.27 | 246.53 | 341.28 | 246.96 | 341.29 | 247.23 | 341.3 |
| 247.27 | 341.32 | 247.51 | 341.32 | 247.88 | 341.33 | 247.95 | 341.32 | 248.03 | 341.33 |
| 248.28 | 341.33 | 248.46 | 341.32 | 249.02 | 341.32 | 249.19 | 341.31 | 249.35 | 341.31 |
| 249.49 | 341.3 | 249.72 | 341.3 | 249.96 | 341.28 | 250.27 | 341.27 | 250.41 | 341.27 |
| 250.77 | 341.25 | 252 | 341.21 | 253.26 | 341.2 | 253.56 | 341.2 | 253.83 | 341.19 |
| 255.25 | 341.17 | 255.54 | 341.17 | 257.35 | 341.14 | 257.58 | 341.14 | 257.79 | 341.16 |
| 259.38 | 341.13 | 259.86 | 341.11 | 266.28 | 340.9 | 267.37 | 340.88 | 270.43 | 340.78 |
| 271.28 | 340.76 | 271.45 | 340.75 | 271.74 | 340.75 | 272.24 | 340.73 | 272.81 | 340.73 |
| 273.06 | 340.72 | 273.2 | 340.72 | 273.23 | 340.73 | 273.4 | 340.73 | 273.57 | 340.74 |
| 274.03 | 340.75 | 276.16 | 340.84 | 277.02 | 340.88 | 277.42 | 340.89 | 278.18 | 340.89 |
| 280.24 | 340.79 | 281.12 | 340.75 | 281.55 | 340.76 | 281.73 | 340.76 | 282.17 | 340.77 |
| 282.5 | 340.76 | 284.21 | 340.76 | 285.19 | 340.79 | 286.14 | 340.83 | 286.62 | 340.86 |
| 288.57 | 341 | 289.56 | 341.05 | 290.82 | 341.1 | 291.43 | 341.1 | 291.62 | 341.09 |
| 292.75 | 341.08 | 293.02 | 341.08 | 295.45 | 341.05 | 296.07 | 341.04 | 296.39 | 341.05 |
| 296.51 | 341.04 | 298.82 | 341.02 | 301.17 | 340.99 | 302.26 | 340.98 | 304.33 | 340.95 |
| 304.78 | 340.95 | 305.34 | 340.94 | 315.34 | 340.53 | 320.89 | 340.3 | 322.43 | 340.23 |
| 322.71 | 340.23 | 326.33 | 340.12 | 330.13 | 340 | 330.31 | 340 | 331.44 | 339.99 |
| 335.4 | 339.93 | 340.31 | 339.93 | 340.66 | 339.94 | 340.75 | 339.95 | 341.09 | 339.95 |
| 341.27 | 339.96 | 341.65 | 339.96 | 341.88 | 339.97 | 342.18 | 339.97 | 343.28 | 339.99 |
| 346.19 | 340.06 | 348.7 | 340.1 | 357.27 | 340.28 | 365.71 | 340.46 | 368.7 | 340.63 |
| 373.19 | 340.89 | 374.12 | 340.92 | 374.42 | 340.94 | 375.01 | 340.96 | 377.64 | 341.06 |
| 381.7 | 341.04 | 383.87 | 341.04 | 384.97 | 341.05 | 385.41 | 341.04 | 385.6 | 341.05 |
| 386.08 | 341.05 | 386.2 | 341.04 | 386.59 | 341.04 | 389.46 | 341.01 | 393.17 | 340.96 |
| 395.53 | 340.93 | 396.2 | 340.92 | 397.04 | 340.91 | 399.2 | 340.87 | 399.79 | 340.86 |
| 400.4 | 340.84 | 401.79 | 340.84 | 402.54 | 340.86 | 403.58 | 340.86 | 404.84 | 340.88 |
| 405.56 | 340.88 | 405.86 | 340.89 | 406.09 | 340.89 | 406.62 | 340.91 | 407.27 | 340.94 |
| 408.07 | 340.96 | 409.22 | 341 | 410.72 | 341.06 | 414.14 | 341.19 | 415.88 | 341.25 |
| 416.29 | 341.27 | 417.3 | 341.3 | 417.94 | 341.33 | 419.3 | 341.37 | 420.98 | 341.41 |
| 421.87 | 341.43 | 424.06 | 341.46 | 424.94 | 341.48 | 425.39 | 341.48 | 426.46 | 341.47 |
| 429.39 | 341.47 | 430.41 | 341.49 | 430.71 | 341.5 | 438.77 | 341.57 | 439.39 | 341.58 |
| 446.51 | 341.63 | 447.77 | 341.6 | 449.45 | 341.57 | 452.96 | 341.5 | 455.53 | 341.45 |
| 459.66 | 341.42 | 461.37 | 341.42 | 463.07 | 341.41 | 466.86 | 341.39 | 468.29 | 341.38 |
| 471.46 | 341.34 | 474.54 | 341.34 | 475.84 | 341.33 | 477.33 | 341.34 | 480.28 | 341.34 |
| 481.53 | 341.35 | 483.63 | 341.36 | 485.33 | 341.36 | 485.95 | 341.37 | 486.42 | 341.37 |
| 487.46 | 341.4 | 488.4 | 341.44 | 489.66 | 341.51 | 489.91 | 341.53 | 491.38 | 341.61 |
| 491.43 | 341.62 | 491.93 | 342.09 | 492.11 | 342.27 | 492.74 | 342.59 | 498.73 | 342.97 |
| 502.61 | 343.22 | 502.95 | 343.24 | 503.83 | 343.25 | 505.84 | 343.38 | 507.42 | 343.44 |
| 508.66 | 343.52 | 510.05 | 343.64 | 510.94 | 343.7 | 513.73 | 343.88 | 514.27 | 343.9 |
| 515.14 | 343.94 | 515.68 | 343.96 | 527.62 | 344.48 | 528.52 | 344.53 | 528.85 | 344.54 |
| 529.49 | 344.58 | 529.87 | 344.6 | 530.25 | 344.67 | 530.64 | 344.71 | 531.2 | 344.78 |
| 532.19 | 344.91 | 533.06 | 344.97 | 534.78 | 345.07 | 535.44 | 345.11 | 535.87 | 345.12 |
| 536.5 | 345.15 | 538.38 | 345.22 | 539.08 | 345.25 | 544.49 | 345.53 | 544.92 | 345.55 |
| 545.03 | 345.56 | 545.9 | 345.62 | 549.06 | 345.87 | 550.73 | 345.99 | 551.23 | 346.02 |
| 551.88 | 346.07 | 552.35 | 346.11 | 554.21 | 346.24 | 555.18 | 346.33 | 555.41 | 346.36 |
| 555.61 | 346.37 | 556.62 | 346.43 | 556.7 | 346.43 | 557.4 | 346.49 | 557.63 | 346.5 |
| 558.62 | 346.53 | 560.94 | 346.59 | 561.76 | 346.63 | 562.66 | 346.68 | 563.71 | 346.75 |
| 564.72 | 346.83 | 565.39 | 346.91 | 566.45 | 347.02 | 567.04 | 347.1 | 567.54 | 347.15 |
| 567.94 | 347.2 | 568.84 | 347.27 | 569.63 | 347.31 | 570.32 | 347.36 | 571.34 | 347.47 |
| 571.83 | 347.51 | 573.11 | 347.66 | 578.35 | 348.13 | 579.06 | 348.19 | 588.02 | 348.82 |
| 589.12 | 348.92 | 589.31 | 348.94 | 589.39 | 348.94 | 591.82 | 349.05 | 595.99 | 349.27 |
| 596.86 | 349.31 | 598.57 | 349.4 | 599.38 | 349.43 | 599.88 | 349.44 | 606.81 | 349.63 |
| 607.65 | 349.65 | 607.72 | 349.65 | 609.39 | 349.69 | 610.78 | 349.71 | 612.49 | 349.72 |
| 613.77 | 349.73 | 614.07 | 349.73 | 614.32 | 349.74 | 616.41 | 349.72 | 616.58 | 349.73 |
| 617.2 | 349.74 | 617.4 | 349.74 | 617.73 | 349.75 | 618.36 | 349.76 | 618.55 | 349.76 |
| 618.85 | 349.78 | 619.84 | 349.82 | 620.84 | 349.88 | 622.53 | 350 | 623.45 | 350.04 |
| 623.8 | 350.05 | 624.03 | 350.05 | 624.57 | 350.06 | 625.47 | 350.08 | 628.07 | 350.14 |
| 629.45 | 350.2 | 630.84 | 350.24 | 639.91 | 350.31 | 643.61 | 350.33 | 648 | 350.34 |
| 648.75 | 350.34 | 650.28 | 350.35 | 653.25 | 350.36 | 653.83 | 350.36 | 654.89 | 350.4 |
| 656.21 | 350.4 | 657.21 | 350.41 | 675.71 | 350.41 | 676.09 | 350.42 | 676.43 | 350.42 |
| 676.62 | 350.43 | 676.95 | 350.43 | 677.18 | 350.42 | 678.81 | 350.42 | 678.96 | 350.41 |
| 679.43 | 350.41 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.12 | .04 | 492.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.12 | 492.11 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2196.37*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.37 | 1.74 | 344.32 | 4.9 | 344.25 | 6.8 | 344.21 | 7.4 | 344.2 |
| 8.47 | 344.19 | 12.68 | 344.11 | 14.05 | 344.09 | 14.54 | 344.08 | 15.31 | 344.08 |
| 15.32 | 344.09 | 15.73 | 344.09 | 16.02 | 344.1 | 17 | 344.09 | 18.61 | 344.09 |
| 18.77 | 344.08 | 21.08 | 344.08 | 21.85 | 344.07 | 24.4 | 344.04 | 25.77 | 344.02 |
| 27.08 | 343.99 | 27.58 | 343.99 | 28.08 | 343.98 | 30.97 | 343.94 | 32.31 | 343.92 |
| 33.68 | 343.91 | 35.36 | 343.89 | 36.45 | 343.89 | 37.71 | 343.88 | 43.81 | 343.88 |
| 44.33 | 343.87 | 44.93 | 343.87 | 45.1 | 343.86 | 46.37 | 343.86 | 46.77 | 343.85 |
| 48.89 | 343.85 | 49.34 | 343.84 | 50.41 | 343.84 | 50.8 | 343.85 | 51.54 | 343.85 |
| 52.09 | 343.84 | 54.03 | 343.84 | 54.28 | 343.85 | 54.55 | 343.84 | 54.67 | 343.85 |
| 54.83 | 343.85 | 54.86 | 343.86 | 55.21 | 343.85 | 55.71 | 343.85 | 56.52 | 343.84 |
| 56.68 | 343.84 | 57.77 | 343.83 | 58.62 | 343.82 | 59.18 | 343.82 | 60.02 | 343.81 |
| 60.25 | 343.81 | 60.6 | 343.8 | 60.93 | 343.8 | 61.72 | 343.78 | 61.78 | 343.79 |
| 62.04 | 343.78 | 62.81 | 343.76 | 63.02 | 343.75 | 63.24 | 343.75 | 63.88 | 343.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 64.11 | 343.72 | 65.8 | 343.68 | 66.56 | 343.67 | 68.02 | 343.64 | 69.18 | 343.62 |
| 71.8 | 343.58 | 73.59 | 343.55 | 75.01 | 343.53 | 79.9 | 343.44 | 81.67 | 343.41 |
| 82.54 | 343.39 | 85.05 | 343.36 | 86.49 | 343.35 | 87.67 | 343.34 | 90.5 | 343.31 |
| 91.32 | 343.31 | 92.04 | 343.3 | 92.68 | 343.3 | 92.97 | 343.31 | 93.67 | 343.31 |
| 94.34 | 343.32 | 95.25 | 343.32 | 95.9 | 343.33 | 97.65 | 343.33 | 98.09 | 343.32 |
| 98.52 | 343.32 | 102.04 | 343.3 | 103.3 | 343.29 | 103.9 | 343.28 | 105.85 | 343.26 |
| 105.93 | 343.26 | 109.7 | 343.22 | 110.71 | 343.22 | 111.66 | 343.21 | 112.28 | 343.21 |
| 113.19 | 343.2 | 114.15 | 343.2 | 114.71 | 343.19 | 115.18 | 343.19 | 116.2 | 343.18 |
| 117.97 | 343.15 | 118.1 | 343.15 | 119.23 | 343.13 | 120.01 | 343.12 | 120.6 | 343.11 |
| 122.66 | 343.07 | 123.65 | 343.06 | 124.2 | 343.05 | 124.41 | 343.04 | 126.31 | 343.04 |
| 127.04 | 343.03 | 127.24 | 343.03 | 127.77 | 343.04 | 128.22 | 343.03 | 128.39 | 343.03 |
| 129.04 | 343.02 | 129.44 | 343.02 | 129.78 | 343.04 | 131.08 | 343.11 | 131.3 | 343.12 |
| 131.9 | 343.13 | 132.72 | 343.17 | 132.97 | 343.17 | 133.34 | 343.18 | 133.88 | 343.19 |
| 134.76 | 343.22 | 135.74 | 343.27 | 136.48 | 343.29 | 139.59 | 343.29 | 141.9 | 343.27 |
| 142.59 | 343.26 | 143.47 | 343.24 | 143.63 | 343.24 | 145.05 | 343.25 | 145.89 | 343.24 |
| 146.92 | 343.25 | 148.19 | 343.24 | 149.82 | 343.24 | 151.47 | 343.22 | 152.72 | 343.22 |
| 154.01 | 343.21 | 160.35 | 343.21 | 165.96 | 343.2 | 166.97 | 343.2 | 167.71 | 343.19 |
| 169.3 | 343.19 | 171.63 | 343.16 | 172.94 | 343.15 | 173.8 | 343.13 | 174.06 | 343.11 |
| 175.04 | 343.09 | 175.29 | 343.08 | 176.09 | 343.08 | 176.66 | 343.07 | 178.25 | 343.06 |
| 179.04 | 343.05 | 182.06 | 343.05 | 184.16 | 343.04 | 186.08 | 343.04 | 186.9 | 343.03 |
| 188.85 | 343.03 | 190.69 | 343.02 | 193.81 | 343 | 196.22 | 342.99 | 198.99 | 342.92 |
| 200.41 | 342.87 | 201.24 | 342.85 | 202.87 | 342.8 | 204.12 | 342.76 | 209.6 | 342.56 |
| 212.1 | 342.47 | 215.09 | 342.23 | 218.43 | 341.88 | 223.92 | 341.66 | 226.57 | 341.55 |
| 229.45 | 341.44 | 232.65 | 341.31 | 233.06 | 341.29 | 235.93 | 341.11 | 236.89 | 341.06 |
| 236.93 | 341.05 | 237.35 | 341.05 | 237.98 | 341.02 | 238.3 | 341 | 238.38 | 340.99 |
| 238.7 | 340.99 | 239.01 | 340.98 | 239.21 | 341.01 | 239.56 | 341.05 | 240.04 | 341.08 |
| 240.49 | 341.09 | 241.09 | 341.11 | 241.81 | 341.12 | 243.52 | 341.12 | 244.64 | 341.13 |
| 245.05 | 341.14 | 245.29 | 341.15 | 245.56 | 341.17 | 246.45 | 341.17 | 246.63 | 341.16 |
| 247.14 | 341.16 | 247.29 | 341.15 | 247.52 | 341.15 | 247.74 | 341.13 | 248.15 | 341.12 |
| 248.29 | 341.11 | 248.63 | 341.1 | 249.78 | 341.06 | 250.96 | 341.05 | 251.25 | 341.05 |
| 251.5 | 341.04 | 252.84 | 341.02 | 253.11 | 341.02 | 254.81 | 340.99 | 255.03 | 340.99 |
| 255.23 | 341.01 | 256.73 | 340.98 | 257.18 | 340.96 | 263.22 | 340.76 | 264.24 | 340.74 |
| 264.54 | 340.73 | 267.12 | 340.65 | 267.49 | 340.64 | 267.92 | 340.62 | 268.08 | 340.62 |
| 268.35 | 340.61 | 268.82 | 340.6 | 269.06 | 340.6 | 269.15 | 340.59 | 269.81 | 340.59 |
| 269.91 | 340.6 | 270.07 | 340.6 | 270.5 | 340.61 | 272.51 | 340.7 | 273.32 | 340.73 |
| 273.7 | 340.74 | 273.87 | 340.74 | 274.41 | 340.73 | 276.34 | 340.64 | 277.17 | 340.61 |
| 277.74 | 340.61 | 278.16 | 340.62 | 278.47 | 340.62 | 278.65 | 340.61 | 280.08 | 340.61 |
| 280.71 | 340.63 | 281 | 340.63 | 282.34 | 340.69 | 284.18 | 340.82 | 285.11 | 340.87 |
| 286.3 | 340.91 | 286.87 | 340.9 | 287.05 | 340.9 | 288.11 | 340.89 | 288.37 | 340.89 |
| 290.65 | 340.86 | 291.2 | 340.85 | 291.64 | 340.85 | 296.03 | 340.79 | 297.06 | 340.77 |
| 299.01 | 340.75 | 299.32 | 340.75 | 299.4 | 340.74 | 299.96 | 340.74 | 309.35 | 340.34 |
| 314.58 | 340.12 | 316.29 | 340.05 | 319.69 | 339.95 | 323.27 | 339.83 | 323.44 | 339.83 |
| 324.5 | 339.81 | 328.23 | 339.76 | 333.14 | 339.76 | 333.5 | 339.77 | 333.61 | 339.78 |
| 334.24 | 339.78 | 334.56 | 339.79 | 334.8 | 339.79 | 335.12 | 339.8 | 336.29 | 339.82 |
| 339.38 | 339.88 | 342.05 | 339.94 | 351.16 | 340.12 | 360.12 | 340.31 | 363.3 | 340.47 |
| 368.07 | 340.72 | 369.05 | 340.74 | 369.37 | 340.76 | 370 | 340.78 | 372.79 | 340.86 |
| 377.1 | 340.84 | 381.04 | 340.84 | 381.25 | 340.85 | 381.43 | 340.85 | 381.76 | 340.84 |
| 382.3 | 340.84 | 385.35 | 340.8 | 389.29 | 340.74 | 391.8 | 340.71 | 392.51 | 340.69 |
| 393.41 | 340.68 | 395.69 | 340.64 | 396.97 | 340.6 | 398.45 | 340.6 | 399.24 | 340.62 |
| 400.35 | 340.63 | 401.68 | 340.64 | 401.91 | 340.64 | 402.36 | 340.65 | 402.77 | 340.65 |
| 403.58 | 340.68 | 404.27 | 340.71 | 405.12 | 340.73 | 406.34 | 340.78 | 407.94 | 340.84 |
| 411.56 | 340.97 | 413.41 | 341.04 | 413.85 | 341.07 | 415.6 | 341.12 | 416.67 | 341.16 |
| 417.05 | 341.17 | 418.83 | 341.21 | 419.78 | 341.23 | 422.1 | 341.27 | 423.04 | 341.29 |
| 423.51 | 341.29 | 425.69 | 341.27 | 427.35 | 341.27 | 427.76 | 341.28 | 428.32 | 341.28 |
| 428.85 | 341.29 | 429.17 | 341.3 | 437.73 | 341.37 | 438.38 | 341.38 | 445.95 | 341.43 |
| 449.07 | 341.36 | 452.81 | 341.28 | 455.54 | 341.23 | 459.93 | 341.19 | 461.74 | 341.18 |
| 463.54 | 341.18 | 465.62 | 341.17 | 467.57 | 341.15 | 469.09 | 341.14 | 471.64 | 341.1 |
| 472.46 | 341.1 | 473.15 | 341.09 | 475.73 | 341.09 | 477.11 | 341.08 | 480.31 | 341.08 |
| 481.83 | 341.09 | 483.15 | 341.09 | 485.38 | 341.1 | 487.19 | 341.11 | 488.34 | 341.11 |
| 488.73 | 341.12 | 490.46 | 341.19 | 491.79 | 341.26 | 492.06 | 341.29 | 493.62 | 341.37 |
| 493.67 | 341.38 | 494.2 | 341.9 | 494.4 | 342.09 | 495.01 | 342.45 | 500.96 | 342.83 |
| 504.79 | 343.08 | 505.13 | 343.1 | 506 | 343.1 | 508 | 343.23 | 509.56 | 343.29 |
| 510.79 | 343.37 | 512.17 | 343.49 | 513.05 | 343.55 | 515.81 | 343.72 | 516.34 | 343.74 |
| 517.22 | 343.78 | 517.74 | 343.8 | 529.57 | 344.34 | 530.47 | 344.39 | 530.8 | 344.4 |
| 531.43 | 344.44 | 531.81 | 344.47 | 532.57 | 344.57 | 533.12 | 344.63 | 534.1 | 344.75 |
| 534.96 | 344.81 | 536.67 | 344.91 | 537.32 | 344.95 | 538.37 | 345 | 540.23 | 345.07 |
| 540.93 | 345.1 | 546.3 | 345.39 | 546.71 | 345.41 | 546.82 | 345.41 | 547.68 | 345.47 |
| 550.82 | 345.73 | 552.47 | 345.85 | 552.97 | 345.88 | 553.61 | 345.93 | 554.08 | 345.96 |
| 554.65 | 346.01 | 555.92 | 346.1 | 556.88 | 346.19 | 557.11 | 346.22 | 558.31 | 346.28 |
| 558.39 | 346.29 | 559.08 | 346.34 | 559.31 | 346.35 | 560.3 | 346.38 | 562.59 | 346.43 |
| 563.4 | 346.46 | 564.3 | 346.51 | 565.33 | 346.58 | 566.34 | 346.67 | 567 | 346.74 |
| 568.05 | 346.86 | 568.63 | 346.94 | 568.7 | 346.94 | 569.12 | 347 | 569.79 | 347.07 |
| 570.42 | 347.12 | 571.2 | 347.17 | 571.88 | 347.22 | 572.9 | 347.34 | 573.38 | 347.37 |
| 574.65 | 347.52 | 579.84 | 348.02 | 580.55 | 348.08 | 589.42 | 348.74 | 590.51 | 348.84 |
| 590.78 | 348.86 | 593.19 | 348.95 | 595.82 | 349.08 | 597.31 | 349.16 | 598.18 | 349.19 |
| 599.87 | 349.27 | 600.67 | 349.31 | 602.26 | 349.34 | 608.04 | 349.49 | 608.94 | 349.51 |
| 610.6 | 349.55 | 611.97 | 349.57 | 613.66 | 349.58 | 614.93 | 349.59 | 615.23 | 349.59 |
| 615.48 | 349.6 | 617.55 | 349.58 | 617.72 | 349.59 | 618.33 | 349.6 | 618.53 | 349.61 |
| 618.85 | 349.61 | 619.48 | 349.62 | 619.67 | 349.63 | 620.95 | 349.67 | 621.94 | 349.73 |
| 623.18 | 349.81 | 623.62 | 349.84 | 624.09 | 349.86 | 624.52 | 349.87 | 624.87 | 349.89 |
| 625.1 | 349.89 | 625.63 | 349.9 | 626.53 | 349.92 | 629.1 | 349.98 | 630.47 | 350.03 |
| 631.85 | 350.06 | 640.83 | 350.12 | 644.49 | 350.13 | 649.59 | 350.13 | 651.11 | 350.14 |
| 654.05 | 350.15 | 654.62 | 350.15 | 655.17 | 350.17 | 655.43 | 350.17 | 655.67 | 350.18 |
| 656.93 | 350.19 | 662.51 | 350.19 | 663.83 | 350.18 | 668.02 | 350.18 | 670.19 | 350.17 |
| 673.94 | 350.17 | 675.29 | 350.16 | 676.31 | 350.16 | 676.68 | 350.17 | 677.01 | 350.17 |
| 677.2 | 350.18 | 678.04 | 350.18 | 678.37 | 350.17 | 679.28 | 350.17 | 679.37 | 350.16 |
| 679.99 | 350.16 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.09 | .04 | 494.4 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.09 | 494.4 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2176.55*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 344.11 | 1.74 | 344.07 | 4.9 | 344 | 7.4 | 343.96 | 8.47 | 343.94 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 12.68 | 343.87 | 14.05 | 343.84 | 15.31 | 343.84 | 15.32 | 343.85 | 15.73 | 343.86 |
| 17.87 | 343.86 | 18.38 | 343.85 | 18.61 | 343.85 | 18.77 | 343.84 | 21.08 | 343.84 |
| 21.85 | 343.83 | 24.39 | 343.8 | 27.08 | 343.76 | 28.08 | 343.74 | 30.96 | 343.7 |
| 32.31 | 343.68 | 33.68 | 343.67 | 34.45 | 343.67 | 35.36 | 343.66 | 36.45 | 343.66 |
| 37.7 | 343.65 | 40.56 | 343.65 | 42.75 | 343.66 | 43.81 | 343.66 | 44.33 | 343.65 |
| 45.34 | 343.65 | 45.39 | 343.64 | 45.63 | 343.65 | 46.36 | 343.64 | 49.52 | 343.64 |
| 49.8 | 343.63 | 50.25 | 343.63 | 50.41 | 343.64 | 54.54 | 343.64 | 54.66 | 343.65 |
| 54.82 | 343.65 | 54.85 | 343.66 | 55.2 | 343.65 | 55.7 | 343.65 | 56.51 | 343.64 |
| 56.67 | 343.64 | 57.76 | 343.63 | 58.61 | 343.63 | 59.17 | 343.62 | 60.02 | 343.61 |
| 60.76 | 343.61 | 60.93 | 343.6 | 61.23 | 343.6 | 61.37 | 343.59 | 61.71 | 343.58 |
| 61.77 | 343.59 | 61.97 | 343.58 | 62.49 | 343.57 | 62.8 | 343.56 | 63.01 | 343.56 |
| 64.1 | 343.52 | 65.79 | 343.48 | 66.55 | 343.47 | 67.51 | 343.44 | 68.01 | 343.44 |
| 69.18 | 343.42 | 70.44 | 343.4 | 71.79 | 343.38 | 73.58 | 343.34 | 75 | 343.33 |
| 79.89 | 343.23 | 81.66 | 343.2 | 85.08 | 343.16 | 86.47 | 343.14 | 87.66 | 343.13 |
| 90.49 | 343.11 | 91.31 | 343.1 | 92.95 | 343.1 | 93.23 | 343.11 | 93.66 | 343.11 |
| 94.33 | 343.12 | 95.24 | 343.12 | 95.89 | 343.13 | 96.35 | 343.13 | 96.58 | 343.14 |
| 97.64 | 343.13 | 98.08 | 343.12 | 98.51 | 343.12 | 102.03 | 343.1 | 103.29 | 343.1 |
| 103.88 | 343.09 | 105.84 | 343.07 | 105.92 | 343.07 | 109.69 | 343.03 | 111.65 | 343.03 |
| 112.14 | 343.02 | 113.17 | 343.02 | 114.13 | 343.01 | 115.17 | 343.01 | 116.19 | 342.99 |
| 117.96 | 342.96 | 118.09 | 342.96 | 119.22 | 342.94 | 119.99 | 342.93 | 120.58 | 342.92 |
| 124.19 | 342.85 | 124.4 | 342.85 | 124.69 | 342.84 | 126.3 | 342.84 | 127.03 | 342.82 |
| 127.22 | 342.83 | 127.75 | 342.83 | 128.2 | 342.82 | 128.37 | 342.82 | 129.02 | 342.81 |
| 129.42 | 342.81 | 130.5 | 342.87 | 131.28 | 342.91 | 131.89 | 342.92 | 132.71 | 342.96 |
| 132.96 | 342.96 | 133.33 | 342.97 | 133.86 | 342.98 | 134.56 | 343 | 135.33 | 343.04 |
| 135.72 | 343.07 | 136.05 | 343.08 | 136.46 | 343.08 | 137.02 | 343.09 | 139.57 | 343.09 |
| 141.89 | 343.07 | 142.58 | 343.06 | 143.46 | 343.04 | 143.62 | 343.04 | 145.03 | 343.05 |
| 145.87 | 343.04 | 146.9 | 343.05 | 148.17 | 343.04 | 149.8 | 343.04 | 151.45 | 343.03 |
| 153.99 | 343.01 | 157.17 | 343 | 159.05 | 343 | 160.33 | 343.01 | 165.94 | 343 |
| 166.1 | 343 | 166.95 | 342.99 | 167.68 | 342.99 | 169.28 | 342.98 | 170.03 | 342.98 |
| 171.61 | 342.96 | 172.92 | 342.95 | 173.78 | 342.93 | 173.96 | 342.93 | 174.04 | 342.92 |
| 174.51 | 342.91 | 175.01 | 342.89 | 175.26 | 342.89 | 176.07 | 342.88 | 176.64 | 342.87 |
| 178.23 | 342.87 | 179.02 | 342.86 | 179.69 | 342.86 | 182.03 | 342.85 | 184.14 | 342.85 |
| 184.96 | 342.84 | 187.2 | 342.84 | 188.82 | 342.83 | 190.67 | 342.82 | 193.78 | 342.8 |
| 196.2 | 342.79 | 198.16 | 342.74 | 198.97 | 342.71 | 200.39 | 342.66 | 201.22 | 342.64 |
| 202.84 | 342.58 | 204.09 | 342.54 | 206.3 | 342.46 | 209.57 | 342.33 | 212.07 | 342.24 |
| 215.07 | 342.01 | 218.19 | 341.69 | 223.33 | 341.48 | 225.82 | 341.38 | 228.51 | 341.28 |
| 231.51 | 341.16 | 231.9 | 341.14 | 234.59 | 340.98 | 235.48 | 340.93 | 235.53 | 340.92 |
| 235.74 | 340.92 | 235.91 | 340.91 | 236.51 | 340.89 | 236.89 | 340.86 | 237.18 | 340.86 |
| 237.47 | 340.85 | 237.66 | 340.88 | 237.99 | 340.91 | 238.44 | 340.94 | 238.86 | 340.95 |
| 240.1 | 340.97 | 240.87 | 340.97 | 241.7 | 340.98 | 242.75 | 340.98 | 243.36 | 341 |
| 243.38 | 341.01 | 243.99 | 341.01 | 244.07 | 341.02 | 244.29 | 341.02 | 244.44 | 341.01 |
| 244.77 | 341.01 | 244.93 | 341 | 245.23 | 341 | 245.35 | 340.99 | 245.55 | 340.99 |
| 245.76 | 340.97 | 246.04 | 340.96 | 246.48 | 340.95 | 247.57 | 340.91 | 248.67 | 340.9 |
| 248.94 | 340.9 | 249.17 | 340.89 | 250.43 | 340.87 | 250.68 | 340.87 | 252.27 | 340.84 |
| 252.48 | 340.84 | 252.67 | 340.86 | 253.63 | 340.84 | 254.07 | 340.82 | 254.49 | 340.81 |
| 260.15 | 340.62 | 261.11 | 340.6 | 261.39 | 340.59 | 263.8 | 340.51 | 264.56 | 340.49 |
| 264.71 | 340.48 | 264.96 | 340.48 | 265.4 | 340.47 | 265.56 | 340.46 | 265.9 | 340.46 |
| 266.2 | 340.45 | 266.21 | 340.46 | 266.42 | 340.46 | 266.57 | 340.47 | 266.98 | 340.48 |
| 268.86 | 340.55 | 269.61 | 340.57 | 269.97 | 340.59 | 270.13 | 340.59 | 270.64 | 340.58 |
| 272.45 | 340.49 | 273.22 | 340.46 | 273.6 | 340.47 | 274.61 | 340.47 | 274.86 | 340.46 |
| 275.95 | 340.46 | 276.54 | 340.47 | 277.64 | 340.51 | 278.07 | 340.53 | 279.79 | 340.64 |
| 280.66 | 340.68 | 281.77 | 340.72 | 282.31 | 340.71 | 282.47 | 340.71 | 283.48 | 340.7 |
| 283.71 | 340.69 | 285.85 | 340.66 | 286.37 | 340.65 | 286.78 | 340.65 | 290.89 | 340.59 |
| 291.85 | 340.57 | 293.68 | 340.54 | 294.07 | 340.54 | 294.57 | 340.53 | 303.37 | 340.15 |
| 308.26 | 339.94 | 309.87 | 339.87 | 313.06 | 339.77 | 316.41 | 339.66 | 316.57 | 339.66 |
| 317.56 | 339.64 | 321.05 | 339.58 | 325.97 | 339.58 | 326.35 | 339.59 | 326.46 | 339.6 |
| 326.84 | 339.6 | 327.04 | 339.61 | 327.48 | 339.61 | 327.73 | 339.62 | 328.07 | 339.62 |
| 329.3 | 339.65 | 332.57 | 339.71 | 335.4 | 339.77 | 345.04 | 339.96 | 354.53 | 340.15 |
| 362.95 | 340.55 | 363.99 | 340.57 | 364.99 | 340.6 | 367.94 | 340.67 | 372.51 | 340.64 |
| 377.43 | 340.64 | 377.57 | 340.63 | 377.74 | 340.63 | 378.01 | 340.64 | 381.24 | 340.59 |
| 385.41 | 340.52 | 388.07 | 340.48 | 388.81 | 340.47 | 389.77 | 340.45 | 392.19 | 340.41 |
| 393.54 | 340.37 | 393.63 | 340.36 | 394.37 | 340.36 | 394.56 | 340.37 | 395.11 | 340.37 |
| 395.95 | 340.38 | 397.12 | 340.39 | 398.53 | 340.41 | 399.34 | 340.41 | 399.68 | 340.42 |
| 399.94 | 340.42 | 400.54 | 340.44 | 401.71 | 340.49 | 402.17 | 340.5 | 403.45 | 340.55 |
| 405.15 | 340.62 | 408.99 | 340.76 | 410.95 | 340.83 | 411.41 | 340.86 | 412.54 | 340.89 |
| 413.26 | 340.92 | 414.39 | 340.96 | 414.79 | 340.97 | 416.68 | 341.01 | 421.14 | 341.1 |
| 421.64 | 341.1 | 422.85 | 341.08 | 426.14 | 341.08 | 426.73 | 341.09 | 427.29 | 341.09 |
| 427.63 | 341.11 | 436.69 | 341.18 | 437.38 | 341.18 | 445.39 | 341.23 | 448.7 | 341.16 |
| 452.65 | 341.07 | 455.54 | 341 | 460.19 | 340.96 | 464.02 | 340.94 | 468.28 | 340.92 |
| 469.89 | 340.9 | 472.59 | 340.86 | 474.18 | 340.84 | 476.92 | 340.84 | 478.38 | 340.83 |
| 484.77 | 340.83 | 487.14 | 340.84 | 489.05 | 340.85 | 490.27 | 340.85 | 490.68 | 340.87 |
| 491.45 | 340.89 | 492.51 | 340.93 | 493.92 | 341.01 | 494.2 | 341.04 | 495.86 | 341.13 |
| 495.91 | 341.14 | 495.94 | 341.18 | 496.68 | 341.92 | 497.29 | 342.3 | 503.18 | 342.69 |
| 506.98 | 342.94 | 507.32 | 342.96 | 508.18 | 342.96 | 510.16 | 343.09 | 511.71 | 343.14 |
| 512.92 | 343.23 | 514.28 | 343.34 | 515.16 | 343.4 | 517.89 | 343.56 | 518.42 | 343.59 |
| 519.29 | 343.63 | 519.81 | 343.65 | 531.53 | 344.2 | 532.74 | 344.27 | 533.37 | 344.3 |
| 533.74 | 344.33 | 534.11 | 344.38 | 534.5 | 344.42 | 535.04 | 344.48 | 536.01 | 344.6 |
| 536.3 | 344.62 | 536.87 | 344.65 | 538.56 | 344.76 | 539.21 | 344.79 | 541.3 | 344.89 |
| 542.09 | 344.92 | 542.78 | 344.95 | 548.1 | 345.24 | 548.51 | 345.26 | 549.21 | 345.31 |
| 549.47 | 345.32 | 552.57 | 345.58 | 554.21 | 345.71 | 554.71 | 345.74 | 555.35 | 345.79 |
| 555.81 | 345.82 | 556.37 | 345.87 | 557.63 | 345.96 | 558.58 | 346.05 | 558.81 | 346.08 |
| 559.01 | 346.09 | 560 | 346.13 | 560.08 | 346.14 | 560.76 | 346.19 | 560.99 | 346.2 |
| 561.97 | 346.22 | 564.24 | 346.27 | 565.05 | 346.3 | 565.93 | 346.34 | 566.96 | 346.41 |
| 567.95 | 346.5 | 568.61 | 346.58 | 569.65 | 346.7 | 570.23 | 346.78 | 570.41 | 346.8 |
| 571.11 | 346.89 | 571.73 | 346.94 | 572 | 346.97 | 572.77 | 347.02 | 573.44 | 347.08 |
| 574.45 | 347.2 | 574.91 | 347.23 | 574.93 | 347.24 | 576.19 | 347.39 | 581.33 | 347.9 |
| 582.03 | 347.98 | 590.82 | 348.65 | 591.9 | 348.75 | 592.16 | 348.77 | 594.55 | 348.86 |
| 597.16 | 348.97 | 598.64 | 349.05 | 599.49 | 349.08 | 601.18 | 349.15 | 601.97 | 349.18 |
| 603.54 | 349.21 | 609.27 | 349.36 | 610.16 | 349.37 | 611.8 | 349.41 | 613.16 | 349.42 |
| 614.84 | 349.44 | 616.09 | 349.45 | 616.39 | 349.45 | 616.64 | 349.46 | 618.69 | 349.45 |
| 618.86 | 349.45 | 619.46 | 349.46 | 619.66 | 349.47 | 619.98 | 349.47 | 620.6 | 349.48 |
| 620.79 | 349.49 | 622.06 | 349.53 | 623.04 | 349.58 | 624.27 | 349.66 | 625.17 | 349.7 |
| 625.94 | 349.72 | 626.17 | 349.73 | 626.7 | 349.74 | 627.59 | 349.75 | 630.13 | 349.81 |
| 631.49 | 349.86 | 632.85 | 349.89 | 641.75 | 349.92 | 645.38 | 349.93 | 650.44 | 349.93 |
| 651.94 | 349.94 | 655.42 | 349.94 | 655.95 | 349.95 | 656.46 | 349.97 | 661.23 | 349.97 |
| 663.23 | 349.96 | 664.54 | 349.96 | 665.42 | 349.95 | 667.15 | 349.95 | 668.69 | 349.94 |
| 670.84 | 349.93 | 671.33 | 349.93 | 674.55 | 349.92 | 675.9 | 349.91 | 676.9 | 349.91 |
| 677.6 | 349.93 | 678.62 | 349.93 | 678.94 | 349.92 | 679.78 | 349.92 | 679.85 | 349.91 |
| 680.55 | 349.91 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.07 | .04 | 496.68 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.07 | 496.68 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2156.74*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 343.85 | 1.74 | 343.81 | 4.9 | 343.75 | 7.4 | 343.71 | 8.47 | 343.69 |
| 12.68 | 343.63 | 14.53 | 343.59 | 14.93 | 343.6 | 15.3 | 343.6 | 15.31 | 343.62 |
| 15.46 | 343.61 | 15.73 | 343.62 | 17.87 | 343.62 | 18.38 | 343.61 | 18.61 | 343.61 |
| 18.77 | 343.6 | 21.08 | 343.6 | 21.85 | 343.59 | 24.39 | 343.56 | 25.77 | 343.54 |
| 27.08 | 343.52 | 28.08 | 343.5 | 30.96 | 343.46 | 33.67 | 343.44 | 34.44 | 343.43 |
| 36.45 | 343.43 | 37.7 | 343.42 | 39.07 | 343.42 | 40.56 | 343.43 | 42.74 | 343.44 |
| 44.92 | 343.44 | 45.09 | 343.43 | 53.57 | 343.43 | 53.79 | 343.44 | 54.74 | 343.44 |
| 54.84 | 343.46 | 55.19 | 343.45 | 56.51 | 343.45 | 56.67 | 343.44 | 57.76 | 343.44 |
| 58.61 | 343.43 | 59.17 | 343.42 | 60.01 | 343.41 | 60.92 | 343.41 | 61.22 | 343.4 |
| 61.32 | 343.39 | 61.76 | 343.39 | 61.96 | 343.38 | 62.38 | 343.38 | 62.48 | 343.37 |
| 62.79 | 343.37 | 62.94 | 343.36 | 63.57 | 343.34 | 64.09 | 343.32 | 65.78 | 343.28 |
| 66.54 | 343.27 | 67.51 | 343.24 | 68.01 | 343.24 | 69.17 | 343.22 | 70.43 | 343.19 |
| 71.78 | 343.17 | 73.57 | 343.14 | 74.99 | 343.13 | 79.88 | 343.02 | 81.65 | 343 |
| 82.52 | 342.98 | 85.03 | 342.95 | 86.46 | 342.94 | 87.65 | 342.93 | 90.48 | 342.9 |
| 91.3 | 342.9 | 92.02 | 342.89 | 92.66 | 342.9 | 93.22 | 342.9 | 93.65 | 342.91 |
| 94.32 | 342.91 | 95.18 | 342.92 | 95.87 | 342.93 | 96.34 | 342.93 | 96.56 | 342.94 |
| 97.63 | 342.93 | 98.07 | 342.93 | 98.5 | 342.92 | 102.02 | 342.91 | 103.28 | 342.91 |
| 103.87 | 342.9 | 105.82 | 342.88 | 105.9 | 342.88 | 109.68 | 342.85 | 110.69 | 342.85 |
| 111.63 | 342.84 | 112.13 | 342.83 | 114.12 | 342.83 | 114.68 | 342.82 | 115.15 | 342.82 |
| 116.17 | 342.81 | 117.94 | 342.78 | 118.07 | 342.77 | 119.2 | 342.75 | 119.98 | 342.74 |
| 120.57 | 342.73 | 124.17 | 342.66 | 124.38 | 342.65 | 124.67 | 342.65 | 124.95 | 342.64 |
| 126.28 | 342.64 | 127.01 | 342.62 | 127.21 | 342.62 | 127.73 | 342.63 | 128.19 | 342.62 |
| 128.36 | 342.61 | 129.01 | 342.6 | 129.41 | 342.6 | 129.74 | 342.62 | 130.48 | 342.66 |
| 131.05 | 342.68 | 131.27 | 342.69 | 131.87 | 342.71 | 132.94 | 342.75 | 133.31 | 342.76 |
| 133.85 | 342.77 | 134.73 | 342.8 | 135.32 | 342.84 | 135.7 | 342.86 | 136.44 | 342.88 |
| 137 | 342.89 | 139.2 | 342.89 | 139.56 | 342.88 | 140.7 | 342.88 | 141.87 | 342.87 |
| 142.56 | 342.86 | 143.44 | 342.84 | 149.79 | 342.84 | 151.43 | 342.83 | 153.98 | 342.81 |
| 157.15 | 342.8 | 160.31 | 342.8 | 165.92 | 342.79 | 167.66 | 342.79 | 169.26 | 342.78 |
| 170.01 | 342.77 | 170.81 | 342.77 | 171.59 | 342.76 | 172.9 | 342.74 | 173.75 | 342.73 |
| 173.93 | 342.73 | 174.01 | 342.72 | 174.99 | 342.7 | 175.24 | 342.69 | 176.05 | 342.68 |
| 176.62 | 342.68 | 178.21 | 342.67 | 179 | 342.66 | 182.01 | 342.66 | 184.12 | 342.65 |
| 186.04 | 342.65 | 186.85 | 342.64 | 187.17 | 342.64 | 188.8 | 342.63 | 190.65 | 342.63 |
| 193.76 | 342.6 | 196.17 | 342.59 | 196.59 | 342.58 | 198.13 | 342.54 | 198.95 | 342.51 |
| 200.37 | 342.46 | 202.82 | 342.37 | 204.07 | 342.32 | 206.27 | 342.24 | 209.55 | 342.11 |
| 212.04 | 342 | 215.04 | 341.79 | 217.96 | 341.5 | 222.75 | 341.31 | 225.07 | 341.21 |
| 227.58 | 341.12 | 230.38 | 341.01 | 230.74 | 340.99 | 233.24 | 340.84 | 234.08 | 340.8 |
| 234.32 | 340.78 | 234.48 | 340.78 | 235.04 | 340.76 | 235.31 | 340.74 | 235.66 | 340.73 |
| 235.94 | 340.73 | 236.42 | 340.78 | 236.84 | 340.8 | 237.23 | 340.81 | 238.38 | 340.83 |
| 240.85 | 340.83 | 241.21 | 340.84 | 241.46 | 340.86 | 242.29 | 340.86 | 242.44 | 340.85 |
| 242.89 | 340.85 | 243.04 | 340.84 | 243.37 | 340.84 | 243.56 | 340.82 | 244.04 | 340.81 |
| 244.34 | 340.8 | 245.35 | 340.76 | 246.38 | 340.75 | 246.63 | 340.74 | 246.85 | 340.74 |
| 248.02 | 340.72 | 248.25 | 340.72 | 249.74 | 340.69 | 249.93 | 340.69 | 250.1 | 340.7 |
| 251 | 340.68 | 251.81 | 340.66 | 257.08 | 340.48 | 257.98 | 340.46 | 258.24 | 340.45 |
| 260.49 | 340.38 | 261.19 | 340.36 | 261.33 | 340.35 | 261.57 | 340.35 | 261.98 | 340.34 |
| 262.13 | 340.33 | 262.45 | 340.33 | 262.77 | 340.32 | 262.8 | 340.33 | 263.07 | 340.33 |
| 263.45 | 340.34 | 265.2 | 340.4 | 266.24 | 340.43 | 266.86 | 340.43 | 268.55 | 340.35 |
| 269.27 | 340.32 | 270.57 | 340.32 | 270.8 | 340.31 | 271.82 | 340.31 | 272.37 | 340.32 |
| 272.62 | 340.32 | 273.4 | 340.35 | 273.79 | 340.37 | 275.4 | 340.47 | 276.21 | 340.5 |
| 277.25 | 340.53 | 277.38 | 340.53 | 277.75 | 340.52 | 277.9 | 340.52 | 278.84 | 340.5 |
| 279.06 | 340.5 | 281.05 | 340.47 | 281.53 | 340.46 | 281.92 | 340.46 | 283.82 | 340.42 |
| 285.75 | 340.39 | 286.65 | 340.37 | 288.35 | 340.34 | 288.62 | 340.34 | 288.69 | 340.33 |
| 289.18 | 340.33 | 297.39 | 339.96 | 301.95 | 339.76 | 303.22 | 339.7 | 303.45 | 339.7 |
| 306.42 | 339.6 | 309.55 | 339.49 | 309.7 | 339.48 | 310.62 | 339.47 | 313.88 | 339.41 |
| 318.8 | 339.41 | 319.2 | 339.42 | 319.32 | 339.43 | 320.02 | 339.43 | 320.39 | 339.44 |
| 320.65 | 339.44 | 321.01 | 339.45 | 322.32 | 339.47 | 325.77 | 339.54 | 328.75 | 339.6 |
| 338.92 | 339.8 | 348.94 | 340 | 352.49 | 340.14 | 357.82 | 340.38 | 358.92 | 340.39 |
| 359.98 | 340.42 | 363.1 | 340.47 | 367.91 | 340.44 | 371.8 | 340.44 | 372.18 | 340.43 |
| 372.32 | 340.43 | 372.54 | 340.44 | 373.11 | 340.44 | 373.26 | 340.43 | 373.73 | 340.43 |
| 377.13 | 340.38 | 381.53 | 340.31 | 384.33 | 340.26 | 385.12 | 340.24 | 386.13 | 340.23 |
| 387.44 | 340.2 | 388.69 | 340.18 | 389.39 | 340.15 | 390.11 | 340.13 | 391.76 | 340.13 |
| 392.65 | 340.14 | 393.89 | 340.15 | 395.38 | 340.17 | 396.24 | 340.17 | 396.86 | 340.19 |
| 397.18 | 340.19 | 397.5 | 340.21 | 398.26 | 340.24 | 398.73 | 340.25 | 399.22 | 340.27 |
| 400.57 | 340.32 | 402.36 | 340.39 | 406.41 | 340.55 | 408.48 | 340.63 | 408.97 | 340.65 |
| 410.17 | 340.69 | 410.93 | 340.72 | 412.12 | 340.75 | 412.54 | 340.77 | 414.53 | 340.82 |
| 415.59 | 340.84 | 418.19 | 340.88 | 419.24 | 340.9 | 419.77 | 340.9 | 422.2 | 340.88 |
| 424.51 | 340.88 | 425.73 | 340.9 | 426.08 | 340.91 | 435.65 | 340.98 | 436.38 | 340.99 |
| 444.83 | 341.04 | 446.33 | 341 | 448.32 | 340.95 | 452.5 | 340.85 | 455.55 | 340.78 |
| 460.45 | 340.73 | 464.49 | 340.71 | 466.82 | 340.7 | 468.98 | 340.68 | 470.69 | 340.66 |
| 473.53 | 340.61 | 474.45 | 340.6 | 475.22 | 340.6 | 476.83 | 340.59 | 478.11 | 340.59 |
| 479.65 | 340.58 | 483.22 | 340.58 | 484.92 | 340.57 | 486.4 | 340.58 | 488.89 | 340.59 |
| 492.2 | 340.59 | 492.63 | 340.61 | 494.56 | 340.68 | 496.05 | 340.77 | 496.35 | 340.8 |
| 498.09 | 340.9 | 498.15 | 340.9 | 498.19 | 340.95 | 498.96 | 341.75 | 499.57 | 342.16 |
| 505.4 | 342.54 | 509.16 | 342.8 | 509.5 | 342.82 | 510.35 | 342.81 | 512.31 | 342.94 |
| 513.85 | 342.99 | 515.05 | 343.08 | 516.4 | 343.19 | 517.27 | 343.25 | 519.98 | 343.41 |
| 520.5 | 343.43 | 521.36 | 343.47 | 521.88 | 343.49 | 533.48 | 344.06 | 534.69 | 344.13 |
| 535.31 | 344.16 | 535.68 | 344.19 | 536.04 | 344.24 | 536.43 | 344.28 | 536.97 | 344.33 |
| 537.93 | 344.44 | 538.77 | 344.5 | 540.45 | 344.6 | 541.09 | 344.64 | 542.12 | 344.69 |
| 543.16 | 344.73 | 543.95 | 344.77 | 544.63 | 344.8 | 549.9 | 345.09 | 550.31 | 345.11 |
| 550.41 | 345.12 | 551 | 345.16 | 551.26 | 345.18 | 554.33 | 345.44 | 555.95 | 345.56 |
| 556.45 | 345.6 | 557.08 | 345.64 | 558.1 | 345.73 | 559.34 | 345.82 | 560.28 | 345.92 |
| 560.51 | 345.94 | 560.7 | 345.95 | 561.69 | 345.99 | 561.76 | 345.99 | 562.45 | 346.04 |
| 562.67 | 346.05 | 563.64 | 346.07 | 565.89 | 346.1 | 566.69 | 346.13 | 567.56 | 346.17 |
| 568.58 | 346.25 | 569.56 | 346.33 | 570.22 | 346.41 | 571.25 | 346.54 | 571.82 | 346.62 |
| 572 | 346.64 | 572.69 | 346.73 | 572.96 | 346.76 | 573.31 | 346.79 | 573.57 | 346.82 |
| 574.34 | 346.88 | 575.01 | 346.94 | 576 | 347.06 | 576.48 | 347.1 | 577.72 | 347.25 |
| 582.82 | 347.79 | 583.51 | 347.87 | 592.22 | 348.57 | 593.29 | 348.67 | 593.49 | 348.68 |
| 593.55 | 348.69 | 595.92 | 348.76 | 598.51 | 348.86 | 599.97 | 348.93 | 600.81 | 348.96 |
| 602.48 | 349.03 | 603.26 | 349.05 | 603.75 | 349.07 | 604.82 | 349.08 | 610.49 | 349.22 |
| 611.31 | 349.23 | 611.37 | 349.24 | 613 | 349.27 | 614.35 | 349.28 | 616.01 | 349.3 |
| 617.25 | 349.31 | 617.55 | 349.31 | 617.79 | 349.32 | 619.83 | 349.31 | 619.99 | 349.32 |
| 620.59 | 349.32 | 620.79 | 349.33 | 621.11 | 349.33 | 621.72 | 349.34 | 621.91 | 349.35 |
| 623.16 | 349.39 | 624.14 | 349.43 | 625.35 | 349.5 | 626.25 | 349.54 | 627.01 | 349.56 |
| 627.23 | 349.57 | 627.76 | 349.57 | 628.64 | 349.59 | 631.16 | 349.64 | 632.51 | 349.69 |
| 633.86 | 349.71 | 642.67 | 349.73 | 646.37 | 349.74 | 650.54 | 349.73 | 651.13 | 349.72 |
| 651.28 | 349.72 | 652.76 | 349.73 | 656.21 | 349.73 | 656.74 | 349.74 | 657 | 349.75 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 661.97 | 349.75 | 663.95 | 349.74 | 665.25 | 349.73 | 666.12 | 349.72 | 667.84 | 349.71 |
| 669.36 | 349.71 | 671.49 | 349.69 | 671.97 | 349.69 | 675.17 | 349.68 | 676.5 | 349.67 |
| 676.8 | 349.66 | 677.36 | 349.66 | 677.49 | 349.67 | 677.86 | 349.67 | 678.19 | 349.68 |
| 679.19 | 349.68 | 679.51 | 349.67 | 680.02 | 349.67 | 680.35 | 349.66 | 680.65 | 349.66 |
| 681.11 | 349.65 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.04 | .04 | 498.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.04 | 498.96 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2136.93*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 343.59 | 1.74 | 343.56 | 4.9 | 343.5 | 7.4 | 343.46 | 8.47 | 343.45 |
| 12.68 | 343.38 | 14.04 | 343.36 | 14.53 | 343.35 | 14.93 | 343.35 | 15.3 | 343.36 |
| 15.31 | 343.38 | 15.72 | 343.38 | 15.87 | 343.39 | 16.01 | 343.39 | 16.99 | 343.38 |
| 18.38 | 343.38 | 18.77 | 343.36 | 19.1 | 343.37 | 19.67 | 343.36 | 21.07 | 343.36 |
| 21.84 | 343.35 | 24.39 | 343.32 | 27.07 | 343.28 | 27.57 | 343.28 | 28.07 | 343.27 |
| 30.96 | 343.23 | 32.3 | 343.21 | 33.67 | 343.21 | 34.44 | 343.2 | 36.44 | 343.2 |
| 37.69 | 343.19 | 39.06 | 343.19 | 40.55 | 343.2 | 42.74 | 343.22 | 50.39 | 343.22 |
| 50.78 | 343.23 | 51.52 | 343.23 | 52.07 | 343.22 | 52.68 | 343.23 | 54.01 | 343.23 |
| 54.26 | 343.24 | 54.74 | 343.24 | 54.84 | 343.26 | 55.19 | 343.25 | 56.5 | 343.25 |
| 56.66 | 343.24 | 57.75 | 343.24 | 58.6 | 343.23 | 59.16 | 343.22 | 60 | 343.21 |
| 60.91 | 343.21 | 61.22 | 343.2 | 61.36 | 343.2 | 61.59 | 343.19 | 61.75 | 343.19 |
| 61.95 | 343.18 | 62.47 | 343.18 | 62.78 | 343.17 | 63.21 | 343.15 | 63.56 | 343.14 |
| 64.08 | 343.12 | 65.78 | 343.08 | 66.54 | 343.06 | 67.5 | 343.04 | 68 | 343.04 |
| 69.16 | 343.02 | 70.42 | 342.99 | 71.77 | 342.97 | 73.56 | 342.94 | 74.98 | 342.92 |
| 79.87 | 342.82 | 81.64 | 342.79 | 82.51 | 342.78 | 83.39 | 342.76 | 85.02 | 342.74 |
| 86.45 | 342.73 | 87.63 | 342.72 | 90.47 | 342.7 | 91.29 | 342.69 | 92.65 | 342.69 |
| 92.93 | 342.7 | 93.64 | 342.7 | 94.31 | 342.71 | 95.22 | 342.72 | 95.86 | 342.73 |
| 96.18 | 342.73 | 96.33 | 342.74 | 96.55 | 342.74 | 97.61 | 342.73 | 98.48 | 342.73 |
| 102.01 | 342.72 | 103.26 | 342.71 | 103.86 | 342.71 | 105.81 | 342.69 | 105.89 | 342.69 |
| 109.66 | 342.66 | 110.67 | 342.66 | 111.62 | 342.65 | 112.24 | 342.65 | 113.15 | 342.64 |
| 115.14 | 342.64 | 116.16 | 342.62 | 117.93 | 342.59 | 118.06 | 342.59 | 119.19 | 342.56 |
| 119.97 | 342.55 | 120.55 | 342.54 | 122.61 | 342.49 | 124.16 | 342.46 | 124.37 | 342.46 |
| 124.66 | 342.45 | 124.94 | 342.45 | 125.83 | 342.44 | 126.26 | 342.44 | 127 | 342.42 |
| 127.19 | 342.42 | 127.72 | 342.43 | 128.17 | 342.41 | 128.34 | 342.41 | 128.99 | 342.39 |
| 129.39 | 342.39 | 130.47 | 342.45 | 131.04 | 342.47 | 131.25 | 342.48 | 131.86 | 342.5 |
| 132.92 | 342.54 | 133.29 | 342.55 | 133.83 | 342.56 | 134.71 | 342.59 | 135.3 | 342.63 |
| 135.69 | 342.66 | 136.43 | 342.68 | 136.99 | 342.68 | 137.32 | 342.69 | 138.15 | 342.69 |
| 139.18 | 342.68 | 139.54 | 342.68 | 141.85 | 342.66 | 142.54 | 342.66 | 143.42 | 342.63 |
| 143.58 | 342.63 | 144.99 | 342.64 | 149.77 | 342.64 | 151.41 | 342.63 | 153.96 | 342.61 |
| 157.13 | 342.6 | 160.29 | 342.6 | 165.9 | 342.59 | 166.91 | 342.59 | 167.64 | 342.58 |
| 169.24 | 342.58 | 170.79 | 342.56 | 171.57 | 342.56 | 172.88 | 342.54 | 173.73 | 342.53 |
| 173.91 | 342.53 | 173.99 | 342.52 | 174.97 | 342.5 | 175.22 | 342.49 | 176.03 | 342.49 |
| 176.6 | 342.48 | 178.19 | 342.47 | 179.64 | 342.47 | 181.99 | 342.46 | 184.1 | 342.45 |
| 186.01 | 342.45 | 186.83 | 342.44 | 188.78 | 342.44 | 190.62 | 342.43 | 193.74 | 342.41 |
| 196.15 | 342.39 | 198.11 | 342.34 | 198.92 | 342.31 | 200.34 | 342.25 | 202.79 | 342.16 |
| 204.04 | 342.11 | 206.25 | 342.02 | 209.52 | 341.88 | 212.02 | 341.77 | 215.01 | 341.56 |
| 217.72 | 341.31 | 222.17 | 341.13 | 224.32 | 341.04 | 226.65 | 340.96 | 229.24 | 340.86 |
| 231.9 | 340.7 | 232.9 | 340.65 | 233.05 | 340.65 | 233.57 | 340.63 | 233.82 | 340.61 |
| 234.14 | 340.6 | 234.4 | 340.6 | 234.56 | 340.61 | 234.69 | 340.63 | 235.24 | 340.66 |
| 236.08 | 340.68 | 238.96 | 340.68 | 239.29 | 340.69 | 239.49 | 340.69 | 239.51 | 340.7 |
| 240.04 | 340.7 | 240.1 | 340.71 | 240.18 | 340.7 | 240.57 | 340.7 | 240.71 | 340.69 |
| 241.11 | 340.69 | 241.22 | 340.68 | 241.39 | 340.68 | 241.57 | 340.66 | 241.81 | 340.66 |
| 241.92 | 340.65 | 243.13 | 340.61 | 244.09 | 340.6 | 244.32 | 340.59 | 244.52 | 340.59 |
| 245.61 | 340.57 | 245.83 | 340.56 | 247.2 | 340.54 | 247.47 | 340.54 | 247.54 | 340.55 |
| 248.38 | 340.53 | 249.12 | 340.51 | 254.02 | 340.34 | 254.84 | 340.32 | 255.09 | 340.31 |
| 257.48 | 340.23 | 257.83 | 340.22 | 258.18 | 340.22 | 258.56 | 340.2 | 259 | 340.2 |
| 259.19 | 340.19 | 259.36 | 340.19 | 259.44 | 340.2 | 259.92 | 340.2 | 262.51 | 340.28 |
| 262.65 | 340.28 | 263.09 | 340.27 | 265.33 | 340.17 | 266.53 | 340.17 | 266.74 | 340.16 |
| 267.68 | 340.16 | 268.2 | 340.17 | 268.43 | 340.17 | 269.15 | 340.19 | 271.01 | 340.29 |
| 271.76 | 340.31 | 272.72 | 340.34 | 273.19 | 340.33 | 273.33 | 340.33 | 274.2 | 340.31 |
| 274.39 | 340.31 | 276.7 | 340.26 | 277.06 | 340.26 | 280.61 | 340.18 | 281.45 | 340.17 |
| 283.02 | 340.14 | 283.05 | 340.13 | 283.36 | 340.13 | 283.79 | 340.12 | 291.41 | 339.77 |
| 295.64 | 339.58 | 297.03 | 339.52 | 299.79 | 339.43 | 302.69 | 339.32 | 302.83 | 339.31 |
| 303.68 | 339.3 | 306.71 | 339.23 | 311.62 | 339.23 | 312.05 | 339.24 | 312.17 | 339.25 |
| 312.59 | 339.25 | 312.82 | 339.26 | 313.3 | 339.26 | 313.96 | 339.28 | 315.33 | 339.3 |
| 318.96 | 339.37 | 322.11 | 339.43 | 332.81 | 339.64 | 343.35 | 339.85 | 347.09 | 339.98 |
| 352.7 | 340.21 | 353.85 | 340.21 | 354.97 | 340.24 | 358.25 | 340.28 | 363.32 | 340.24 |
| 367.4 | 340.24 | 367.81 | 340.23 | 367.95 | 340.23 | 368.19 | 340.24 | 368.41 | 340.24 |
| 368.79 | 340.23 | 369.44 | 340.23 | 373.02 | 340.17 | 377.65 | 340.09 | 380.6 | 340.03 |
| 381.43 | 340.02 | 382.49 | 340 | 383.87 | 339.98 | 385.18 | 339.95 | 385.92 | 339.92 |
| 386.68 | 339.9 | 386.78 | 339.89 | 388.42 | 339.89 | 389.35 | 339.91 | 390.66 | 339.92 |
| 392.22 | 339.93 | 392.49 | 339.93 | 393.02 | 339.94 | 393.5 | 339.94 | 394.45 | 339.97 |
| 395.26 | 340.01 | 395.75 | 340.02 | 396.27 | 340.04 | 397.69 | 340.09 | 399.58 | 340.17 |
| 403.84 | 340.33 | 406.02 | 340.42 | 406.53 | 340.45 | 407.79 | 340.48 | 408.59 | 340.52 |
| 409.84 | 340.55 | 410.29 | 340.57 | 412.39 | 340.62 | 417.34 | 340.71 | 417.89 | 340.71 |
| 419.24 | 340.69 | 420.46 | 340.68 | 422.89 | 340.68 | 424.16 | 340.7 | 424.54 | 340.71 |
| 434.61 | 340.79 | 435.38 | 340.79 | 444.28 | 340.84 | 445.85 | 340.8 | 447.95 | 340.75 |
| 452.34 | 340.64 | 455.55 | 340.56 | 460.71 | 340.5 | 462.84 | 340.49 | 464.96 | 340.47 |
| 467.41 | 340.46 | 469.69 | 340.44 | 471.49 | 340.42 | 474.48 | 340.36 | 475.45 | 340.35 |
| 476.25 | 340.35 | 477.95 | 340.34 | 479.29 | 340.34 | 480.92 | 340.33 | 482.77 | 340.32 |
| 488.02 | 340.32 | 490.64 | 340.33 | 492.77 | 340.33 | 493.55 | 340.34 | 494.13 | 340.34 |
| 494.58 | 340.35 | 495.43 | 340.38 | 496.61 | 340.43 | 498.18 | 340.52 | 498.49 | 340.55 |
| 500.33 | 340.66 | 500.39 | 340.66 | 500.43 | 340.71 | 501.01 | 341.33 | 501.24 | 341.57 |
| 501.84 | 342.01 | 507.62 | 342.4 | 511.35 | 342.66 | 511.68 | 342.68 | 512.53 | 342.67 |
| 514.47 | 342.8 | 515.99 | 342.84 | 517.18 | 342.93 | 518.52 | 343.04 | 519.38 | 343.09 |
| 522.06 | 343.25 | 522.58 | 343.27 | 523.43 | 343.31 | 523.94 | 343.34 | 535.44 | 343.92 |
| 536.63 | 343.99 | 537.25 | 344.02 | 537.61 | 344.05 | 538.89 | 344.19 | 539.84 | 344.29 |
| 540.12 | 344.31 | 540.68 | 344.34 | 542.34 | 344.44 | 542.97 | 344.48 | 545.03 | 344.58 |
| 545.8 | 344.62 | 546.48 | 344.65 | 551.7 | 344.95 | 552.1 | 344.97 | 552.21 | 344.97 |
| 553.05 | 345.03 | 556.09 | 345.3 | 557.7 | 345.42 | 558.19 | 345.46 | 558.81 | 345.5 |
| 559.26 | 345.54 | 559.82 | 345.58 | 561.06 | 345.68 | 561.98 | 345.78 | 562.21 | 345.8 |
| 562.4 | 345.81 | 563.38 | 345.84 | 563.45 | 345.85 | 564.13 | 345.89 | 564.35 | 345.9 |
| 565.31 | 345.92 | 567.54 | 345.94 | 568.33 | 345.96 | 569.2 | 346.01 | 570.2 | 346.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 571.18 | 346.17 | 571.83 | 346.25 | 572.85 | 346.38 | 573.41 | 346.46 | 573.59 | 346.48 |
| 573.89 | 346.53 | 574.54 | 346.61 | 574.89 | 346.64 | 575.15 | 346.67 | 575.91 | 346.73 |
| 576.57 | 346.8 | 577.56 | 346.92 | 578.03 | 346.96 | 579.26 | 347.12 | 584.31 | 347.68 |
| 584.99 | 347.76 | 593.62 | 348.48 | 594.68 | 348.58 | 594.86 | 348.6 | 594.94 | 348.6 |
| 597.28 | 348.67 | 599.85 | 348.76 | 601.29 | 348.82 | 602.13 | 348.84 | 603.78 | 348.9 |
| 604.56 | 348.93 | 606.1 | 348.96 | 611.72 | 349.08 | 612.59 | 349.1 | 614.21 | 349.13 |
| 615.54 | 349.14 | 617.19 | 349.16 | 618.42 | 349.17 | 618.71 | 349.17 | 618.95 | 349.18 |
| 620.96 | 349.17 | 621.13 | 349.18 | 621.72 | 349.19 | 622.23 | 349.19 | 622.84 | 349.2 |
| 623.03 | 349.21 | 623.32 | 349.21 | 624.27 | 349.24 | 625.23 | 349.29 | 626.86 | 349.37 |
| 627.75 | 349.39 | 628.3 | 349.41 | 628.82 | 349.41 | 629.7 | 349.43 | 632.19 | 349.48 |
| 634.87 | 349.54 | 647.26 | 349.54 | 651.39 | 349.52 | 657 | 349.52 | 657.53 | 349.53 |
| 657.79 | 349.53 | 658.03 | 349.54 | 661.22 | 349.54 | 662.71 | 349.52 | 664.67 | 349.51 |
| 665.96 | 349.5 | 666.82 | 349.49 | 668.52 | 349.48 | 670.03 | 349.47 | 672.14 | 349.45 |
| 672.55 | 349.45 | 672.62 | 349.46 | 675.78 | 349.43 | 677.1 | 349.42 | 678.09 | 349.42 |
| 678.45 | 349.43 | 678.77 | 349.43 | 678.96 | 349.44 | 679.28 | 349.44 | 679.5 | 349.43 |
| 679.77 | 349.43 | 680.09 | 349.42 | 680.59 | 349.42 | 680.92 | 349.41 | 681.22 | 349.41 |
| 681.67 | 349.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 215.01 | .04 | 501.24 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 215.01 | 501.24 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2117.11*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 343.34 | 1.74 | 343.3 | 6.8 | 343.22 | 7.4 | 343.21 | 8.46 | 343.2 |
| 12.68 | 343.14 | 14.04 | 343.12 | 14.53 | 343.11 | 14.93 | 343.11 | 15.3 | 343.12 |
| 15.31 | 343.14 | 15.72 | 343.14 | 15.87 | 343.15 | 16.99 | 343.15 | 17.86 | 343.14 |
| 18.37 | 343.14 | 18.6 | 343.13 | 19.09 | 343.13 | 19.66 | 343.12 | 21.07 | 343.12 |
| 21.84 | 343.11 | 24.39 | 343.08 | 27.07 | 343.04 | 27.57 | 343.04 | 28.07 | 343.03 |
| 30.95 | 342.99 | 33.66 | 342.97 | 34.44 | 342.97 | 35.35 | 342.96 | 36.44 | 342.96 |
| 37.69 | 342.97 | 39.06 | 342.97 | 40.55 | 342.98 | 42.73 | 343 | 44.31 | 343 |
| 44.91 | 343.01 | 45.08 | 343 | 45.38 | 343 | 45.62 | 343.01 | 50.23 | 343.01 |
| 50.39 | 343.02 | 52.68 | 343.02 | 53.19 | 343.03 | 53.56 | 343.02 | 53.78 | 343.03 |
| 54 | 343.03 | 54.25 | 343.04 | 54.52 | 343.03 | 54.8 | 343.05 | 56.65 | 343.05 |
| 57.74 | 343.04 | 58.59 | 343.03 | 59.15 | 343.03 | 59.99 | 343.02 | 60.22 | 343.02 |
| 60.57 | 343.01 | 60.9 | 343.01 | 61.35 | 343 | 61.59 | 342.99 | 62.01 | 342.99 |
| 62.78 | 342.97 | 62.93 | 342.96 | 63.55 | 342.94 | 64.08 | 342.92 | 65.77 | 342.88 |
| 66.53 | 342.86 | 67.99 | 342.83 | 69.15 | 342.81 | 70.41 | 342.79 | 71.76 | 342.77 |
| 73.55 | 342.73 | 74.97 | 342.72 | 79.86 | 342.61 | 81.63 | 342.59 | 82.5 | 342.57 |
| 85.01 | 342.54 | 86.44 | 342.53 | 87.62 | 342.51 | 90.46 | 342.49 | 92.92 | 342.49 |
| 93.2 | 342.5 | 93.63 | 342.5 | 94.3 | 342.51 | 95.21 | 342.52 | 95.85 | 342.53 |
| 96.17 | 342.53 | 96.31 | 342.54 | 97.6 | 342.54 | 98.04 | 342.53 | 101.99 | 342.53 |
| 103.25 | 342.52 | 103.85 | 342.52 | 105.88 | 342.5 | 109.65 | 342.47 | 111.61 | 342.47 |
| 112.1 | 342.46 | 113.13 | 342.46 | 114.09 | 342.45 | 115.12 | 342.45 | 116.14 | 342.43 |
| 117.92 | 342.4 | 118.04 | 342.4 | 119.17 | 342.37 | 119.95 | 342.36 | 120.54 | 342.35 |
| 122.6 | 342.3 | 124.14 | 342.27 | 124.35 | 342.26 | 124.64 | 342.26 | 124.92 | 342.25 |
| 125.81 | 342.24 | 126.25 | 342.24 | 126.98 | 342.22 | 127.7 | 342.22 | 128.16 | 342.2 |
| 128.32 | 342.2 | 129.37 | 342.17 | 129.71 | 342.19 | 131.02 | 342.26 | 132.91 | 342.33 |
| 133.28 | 342.34 | 133.82 | 342.35 | 134.7 | 342.38 | 135.28 | 342.42 | 135.67 | 342.45 |
| 136 | 342.47 | 136.41 | 342.48 | 139.52 | 342.48 | 141.83 | 342.46 | 142.52 | 342.45 |
| 143.4 | 342.43 | 144.98 | 342.44 | 149.75 | 342.44 | 151.39 | 342.43 | 153.94 | 342.41 |
| 157.11 | 342.4 | 160.27 | 342.4 | 166.04 | 342.39 | 166.89 | 342.38 | 167.62 | 342.38 |
| 169.22 | 342.37 | 169.97 | 342.37 | 170.77 | 342.36 | 171.55 | 342.36 | 172.85 | 342.34 |
| 173.71 | 342.33 | 173.89 | 342.33 | 173.97 | 342.32 | 174.95 | 342.3 | 175.2 | 342.3 |
| 176.01 | 342.29 | 176.58 | 342.29 | 178.16 | 342.28 | 178.95 | 342.27 | 179.62 | 342.27 |
| 181.97 | 342.26 | 184.89 | 342.26 | 185.99 | 342.25 | 187.13 | 342.25 | 188.76 | 342.24 |
| 190.6 | 342.23 | 193.71 | 342.21 | 196.12 | 342.19 | 196.54 | 342.19 | 198.08 | 342.13 |
| 198.9 | 342.1 | 200.32 | 342.04 | 201.14 | 342.01 | 202.77 | 341.94 | 204.02 | 341.89 |
| 206.22 | 341.8 | 209.5 | 341.65 | 211.99 | 341.54 | 214.99 | 341.34 | 217.48 | 341.11 |
| 221.58 | 340.95 | 223.57 | 340.88 | 225.71 | 340.8 | 228.11 | 340.7 | 228.42 | 340.68 |
| 230.56 | 340.56 | 231.27 | 340.53 | 231.31 | 340.52 | 231.62 | 340.52 | 232.33 | 340.49 |
| 232.39 | 340.48 | 232.63 | 340.48 | 232.86 | 340.47 | 233.01 | 340.48 | 233.13 | 340.5 |
| 233.28 | 340.51 | 233.97 | 340.53 | 234.41 | 340.53 | 234.96 | 340.54 | 235.57 | 340.53 |
| 237.07 | 340.53 | 237.37 | 340.54 | 237.56 | 340.54 | 237.57 | 340.55 | 238.3 | 340.55 |
| 238.42 | 340.54 | 238.81 | 340.54 | 238.94 | 340.53 | 239.15 | 340.53 | 239.69 | 340.5 |
| 240.05 | 340.49 | 240.91 | 340.46 | 241.79 | 340.45 | 242.01 | 340.44 | 242.19 | 340.44 |
| 243.2 | 340.42 | 243.4 | 340.41 | 244.67 | 340.39 | 244.79 | 340.38 | 244.98 | 340.4 |
| 246.44 | 340.36 | 250.95 | 340.2 | 251.71 | 340.18 | 251.94 | 340.17 | 253.87 | 340.11 |
| 254.46 | 340.09 | 254.58 | 340.08 | 254.79 | 340.08 | 255.14 | 340.07 | 255.38 | 340.07 |
| 255.49 | 340.06 | 256.07 | 340.06 | 256.4 | 340.07 | 257.89 | 340.11 | 258.5 | 340.12 |
| 258.78 | 340.13 | 258.91 | 340.12 | 259.31 | 340.12 | 261.38 | 340.02 | 261.68 | 340.03 |
| 261.81 | 340.02 | 262.48 | 340.02 | 262.68 | 340.01 | 264.02 | 340.01 | 264.24 | 340.02 |
| 264.91 | 340.03 | 265.24 | 340.04 | 266.62 | 340.11 | 267.31 | 340.13 | 268.2 | 340.15 |
| 268.76 | 340.14 | 269.56 | 340.12 | 269.74 | 340.12 | 271.89 | 340.07 | 272.19 | 340.06 |
| 275.47 | 339.98 | 276.24 | 339.96 | 277.7 | 339.93 | 277.93 | 339.93 | 278.01 | 339.92 |
| 278.41 | 339.91 | 285.43 | 339.58 | 290.42 | 339.35 | 290.61 | 339.34 | 293.15 | 339.25 |
| 295.82 | 339.14 | 295.96 | 339.14 | 299.53 | 339.05 | 304.45 | 339.05 | 304.9 | 339.07 |
| 305.03 | 339.08 | 305.7 | 339.08 | 305.81 | 339.09 | 306.21 | 339.09 | 306.51 | 339.1 |
| 306.9 | 339.1 | 308.34 | 339.13 | 312.16 | 339.2 | 315.46 | 339.26 | 326.69 | 339.48 |
| 337.76 | 339.69 | 341.69 | 339.82 | 347.57 | 340.03 | 348.79 | 340.03 | 349.96 | 340.06 |
| 353.4 | 340.08 | 358.73 | 340.04 | 359.98 | 340.03 | 361.57 | 340.04 | 363.01 | 340.03 |
| 363.59 | 340.03 | 363.84 | 340.04 | 364.07 | 340.04 | 364.47 | 340.03 | 364.63 | 340.02 |
| 365.15 | 340.02 | 368.91 | 339.96 | 373.77 | 339.87 | 376.87 | 339.81 | 377.74 | 339.79 |
| 378.85 | 339.77 | 380.3 | 339.75 | 381.68 | 339.71 | 382.45 | 339.69 | 382.84 | 339.67 |
| 383.25 | 339.66 | 383.36 | 339.65 | 385.08 | 339.65 | 386.06 | 339.67 | 387.43 | 339.68 |
| 389.07 | 339.7 | 390.02 | 339.7 | 390.71 | 339.72 | 391.06 | 339.72 | 391.41 | 339.74 |
| 392.26 | 339.78 | 392.77 | 339.79 | 393.32 | 339.81 | 396.79 | 339.95 | 401.26 | 340.12 |
| 403.55 | 340.21 | 404.09 | 340.24 | 405.41 | 340.28 | 406.25 | 340.31 | 407.57 | 340.35 |
| 408.04 | 340.37 | 410.24 | 340.42 | 411.41 | 340.45 | 414.28 | 340.49 | 415.44 | 340.52 |
| 416.02 | 340.52 | 417.43 | 340.5 | 420.12 | 340.48 | 420.75 | 340.48 | 421.27 | 340.49 |
| 421.95 | 340.49 | 422.6 | 340.5 | 423 | 340.52 | 433.58 | 340.59 | 434.38 | 340.6 |
| 443.72 | 340.64 | 445.38 | 340.6 | 447.57 | 340.54 | 452.19 | 340.42 | 455.55 | 340.34 |
| 460.97 | 340.28 | 465.44 | 340.24 | 468.01 | 340.22 | 470.4 | 340.2 | 472.29 | 340.18 |
| 475.43 | 340.12 | 477.29 | 340.1 | 479.07 | 340.09 | 480.48 | 340.08 | 482.19 | 340.07 |
| 486.13 | 340.07 | 488.01 | 340.06 | 489.64 | 340.07 | 492.4 | 340.07 | 494.63 | 340.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 496.05 | 340.08 | 496.53 | 340.09 | 497.42 | 340.12 | 498.66 | 340.18 | 500.31 | 340.27 |
| 500.64 | 340.31 | 502.57 | 340.42 | 502.63 | 340.43 | 502.67 | 340.48 | 503.28 | 341.14 |
| 503.53 | 341.4 | 504.12 | 341.87 | 509.84 | 342.26 | 513.53 | 342.52 | 513.86 | 342.54 |
| 514.7 | 342.52 | 516.62 | 342.65 | 518.13 | 342.69 | 519.31 | 342.78 | 520.64 | 342.89 |
| 521.49 | 342.94 | 524.14 | 343.09 | 524.66 | 343.11 | 525.5 | 343.16 | 526.01 | 343.18 |
| 537.4 | 343.78 | 538.58 | 343.85 | 539.19 | 343.88 | 539.55 | 343.91 | 540.28 | 343.99 |
| 541.76 | 344.13 | 542.59 | 344.19 | 544.23 | 344.29 | 544.86 | 344.33 | 546.89 | 344.43 |
| 547.66 | 344.47 | 548.33 | 344.5 | 553.5 | 344.8 | 553.9 | 344.82 | 554 | 344.83 |
| 554.58 | 344.87 | 554.83 | 344.88 | 557.85 | 345.16 | 559.44 | 345.28 | 559.93 | 345.32 |
| 560.54 | 345.36 | 560.99 | 345.4 | 561.54 | 345.44 | 562.77 | 345.55 | 563.91 | 345.66 |
| 564.1 | 345.66 | 565.07 | 345.7 | 565.14 | 345.7 | 565.81 | 345.74 | 566.02 | 345.75 |
| 566.98 | 345.76 | 569.18 | 345.77 | 569.97 | 345.8 | 570.83 | 345.84 | 571.83 | 345.91 |
| 572.79 | 346 | 573.43 | 346.08 | 574.45 | 346.22 | 575.01 | 346.3 | 575.18 | 346.33 |
| 575.48 | 346.37 | 575.86 | 346.43 | 576.12 | 346.45 | 576.73 | 346.52 | 578.13 | 346.65 |
| 579.11 | 346.78 | 579.57 | 346.82 | 580.8 | 346.99 | 585.8 | 347.57 | 586.48 | 347.65 |
| 595.02 | 348.39 | 596.07 | 348.49 | 596.33 | 348.51 | 598.65 | 348.57 | 601.19 | 348.65 |
| 603.45 | 348.73 | 605.08 | 348.78 | 605.85 | 348.8 | 612.95 | 348.94 | 613.81 | 348.96 |
| 615.41 | 348.99 | 616.73 | 349 | 618.36 | 349.02 | 619.58 | 349.03 | 619.88 | 349.03 |
| 620.11 | 349.04 | 622.1 | 349.03 | 622.27 | 349.04 | 622.85 | 349.05 | 623.36 | 349.05 |
| 623.96 | 349.06 | 624.15 | 349.07 | 624.44 | 349.07 | 625.38 | 349.1 | 627.53 | 349.19 |
| 627.95 | 349.21 | 628.82 | 349.23 | 629.37 | 349.25 | 629.89 | 349.25 | 630.75 | 349.27 |
| 633.22 | 349.31 | 634.55 | 349.34 | 635.87 | 349.36 | 644.52 | 349.35 | 648.14 | 349.34 |
| 652.24 | 349.32 | 652.81 | 349.32 | 652.96 | 349.31 | 654.42 | 349.32 | 657.25 | 349.31 |
| 658.32 | 349.31 | 658.58 | 349.32 | 661.97 | 349.32 | 663.45 | 349.3 | 665.39 | 349.29 |
| 666.67 | 349.27 | 667.52 | 349.26 | 669.21 | 349.25 | 670.7 | 349.24 | 672.79 | 349.22 |
| 673.19 | 349.21 | 673.26 | 349.22 | 676.4 | 349.19 | 677.7 | 349.17 | 678.68 | 349.17 |
| 679.04 | 349.18 | 679.36 | 349.18 | 679.54 | 349.19 | 679.86 | 349.19 | 680.08 | 349.18 |
| 680.35 | 349.18 | 680.66 | 349.17 | 681.16 | 349.17 | 681.63 | 349.16 | 681.78 | 349.15 |
| 682.23 | 349.15 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.99 | .04 | 503.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.99 | 503.53 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2097.30*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 343.08 | 1.74 | 343.05 | 6.79 | 342.97 | 7.4 | 342.96 | 8.46 | 342.95 |
| 12.68 | 342.89 | 14.04 | 342.87 | 14.93 | 342.87 | 15.19 | 342.88 | 15.31 | 342.9 |
| 15.45 | 342.9 | 15.72 | 342.91 | 17.86 | 342.91 | 18.37 | 342.9 | 18.6 | 342.89 |
| 19.09 | 342.89 | 19.66 | 342.88 | 21.07 | 342.88 | 21.84 | 342.87 | 24.38 | 342.84 |
| 25.76 | 342.82 | 27.07 | 342.81 | 28.07 | 342.79 | 30.95 | 342.76 | 32.29 | 342.74 |
| 33.66 | 342.74 | 34.43 | 342.73 | 36.43 | 342.73 | 37.68 | 342.74 | 39.05 | 342.74 |
| 40.54 | 342.75 | 42.73 | 342.78 | 43.78 | 342.78 | 44.3 | 342.79 | 45.61 | 342.79 |
| 46.34 | 342.8 | 46.74 | 342.8 | 47.34 | 342.79 | 47.69 | 342.8 | 48.86 | 342.8 |
| 49.31 | 342.81 | 52.06 | 342.81 | 52.67 | 342.82 | 53.55 | 342.82 | 53.77 | 342.83 |
| 54.51 | 342.83 | 54.72 | 342.84 | 54.79 | 342.85 | 56.64 | 342.85 | 57.74 | 342.84 |
| 58.59 | 342.83 | 59.15 | 342.83 | 59.99 | 342.82 | 60.9 | 342.82 | 61.2 | 342.8 |
| 61.34 | 342.8 | 61.58 | 342.79 | 62 | 342.79 | 62.46 | 342.78 | 62.77 | 342.77 |
| 63.2 | 342.75 | 63.84 | 342.73 | 64.07 | 342.72 | 65.76 | 342.68 | 66.52 | 342.66 |
| 67.48 | 342.63 | 67.98 | 342.63 | 69.14 | 342.61 | 70.4 | 342.59 | 71.75 | 342.57 |
| 73.54 | 342.53 | 74.97 | 342.52 | 79.85 | 342.41 | 81.62 | 342.38 | 82.49 | 342.36 |
| 85 | 342.33 | 86.43 | 342.32 | 87.61 | 342.31 | 90.45 | 342.29 | 91.27 | 342.28 |
| 91.99 | 342.28 | 92.63 | 342.29 | 93.19 | 342.29 | 93.62 | 342.3 | 94.29 | 342.31 |
| 95.15 | 342.31 | 95.19 | 342.32 | 95.84 | 342.33 | 96.16 | 342.34 | 98.03 | 342.34 |
| 98.46 | 342.33 | 103.83 | 342.33 | 105.78 | 342.32 | 105.86 | 342.31 | 109.64 | 342.28 |
| 110.65 | 342.29 | 111.59 | 342.28 | 112.09 | 342.27 | 115.11 | 342.27 | 116.13 | 342.25 |
| 117.9 | 342.22 | 118.03 | 342.21 | 119.16 | 342.19 | 119.94 | 342.17 | 120.53 | 342.16 |
| 122.58 | 342.11 | 123.58 | 342.09 | 124.13 | 342.07 | 124.34 | 342.07 | 124.63 | 342.06 |
| 124.91 | 342.06 | 125.79 | 342.04 | 126.23 | 342.04 | 126.97 | 342.01 | 127.16 | 342.01 |
| 127.69 | 342.02 | 128.31 | 341.99 | 128.96 | 341.97 | 129.36 | 341.96 | 129.7 | 341.98 |
| 131 | 342.05 | 131.22 | 342.06 | 131.82 | 342.08 | 132.89 | 342.12 | 133.26 | 342.13 |
| 133.8 | 342.14 | 134.68 | 342.17 | 135.65 | 342.25 | 135.98 | 342.27 | 136.39 | 342.27 |
| 136.95 | 342.28 | 139.5 | 342.28 | 141.82 | 342.26 | 142.51 | 342.25 | 143.39 | 342.23 |
| 143.55 | 342.23 | 144.96 | 342.24 | 149.73 | 342.24 | 151.37 | 342.23 | 153.92 | 342.21 |
| 157.1 | 342.2 | 160.25 | 342.2 | 165.86 | 342.18 | 167.6 | 342.18 | 169.2 | 342.17 |
| 169.95 | 342.16 | 170.75 | 342.16 | 171.53 | 342.15 | 172.83 | 342.14 | 173.69 | 342.13 |
| 173.87 | 342.13 | 173.95 | 342.12 | 174.43 | 342.11 | 174.93 | 342.11 | 175.18 | 342.1 |
| 175.99 | 342.1 | 176.56 | 342.09 | 178.14 | 342.08 | 179.6 | 342.08 | 181.95 | 342.07 |
| 184.05 | 342.06 | 185.97 | 342.06 | 186.79 | 342.05 | 187.1 | 342.05 | 188.73 | 342.04 |
| 190.58 | 342.03 | 193.69 | 342.01 | 196.1 | 341.99 | 196.52 | 341.99 | 198.06 | 341.93 |
| 198.87 | 341.9 | 200.29 | 341.83 | 201.12 | 341.8 | 202.74 | 341.73 | 203.99 | 341.67 |
| 206.2 | 341.58 | 209.47 | 341.43 | 211.97 | 341.31 | 214.96 | 341.12 | 217.25 | 340.92 |
| 221 | 340.78 | 222.82 | 340.71 | 224.78 | 340.63 | 226.97 | 340.55 | 227.26 | 340.53 |
| 229.22 | 340.43 | 229.87 | 340.4 | 229.9 | 340.39 | 230.19 | 340.39 | 230.84 | 340.36 |
| 230.9 | 340.35 | 231.11 | 340.35 | 231.32 | 340.34 | 231.7 | 340.37 | 232.34 | 340.39 |
| 233.8 | 340.39 | 234.41 | 340.38 | 235.45 | 340.38 | 235.59 | 340.39 | 236.41 | 340.39 |
| 236.53 | 340.38 | 236.89 | 340.38 | 236.99 | 340.37 | 237.22 | 340.37 | 237.38 | 340.36 |
| 238.69 | 340.31 | 239.5 | 340.3 | 239.87 | 340.28 | 240.79 | 340.27 | 240.97 | 340.26 |
| 242.13 | 340.24 | 242.24 | 340.23 | 242.28 | 340.24 | 242.42 | 340.24 | 243.12 | 340.22 |
| 243.75 | 340.2 | 247.88 | 340.06 | 248.58 | 340.04 | 248.79 | 340.03 | 250.55 | 339.97 |
| 250.81 | 339.97 | 251.1 | 339.96 | 251.21 | 339.95 | 251.4 | 339.95 | 251.72 | 339.94 |
| 251.83 | 339.93 | 252.87 | 339.93 | 254.24 | 339.96 | 254.79 | 339.97 | 255.17 | 339.97 |
| 255.54 | 339.96 | 256.86 | 339.9 | 257.43 | 339.88 | 258.11 | 339.88 | 258.32 | 339.87 |
| 258.62 | 339.87 | 258.8 | 339.86 | 260.05 | 339.86 | 260.66 | 339.87 | 260.97 | 339.88 |
| 262.22 | 339.93 | 262.86 | 339.95 | 263.77 | 339.96 | 264.92 | 339.93 | 265.08 | 339.92 |
| 267.03 | 339.87 | 267.33 | 339.87 | 268.82 | 339.83 | 270.33 | 339.78 | 271.04 | 339.76 |
| 272.37 | 339.73 | 273.02 | 339.71 | 279.45 | 339.4 | 284.01 | 339.17 | 284.19 | 339.17 |
| 286.52 | 339.08 | 288.96 | 338.97 | 289.09 | 338.97 | 292.36 | 338.88 | 297.28 | 338.88 |
| 297.75 | 338.89 | 297.88 | 338.9 | 298.35 | 338.9 | 298.59 | 338.91 | 299.12 | 338.91 |
| 299.85 | 338.93 | 301.36 | 338.96 | 305.35 | 339.03 | 308.81 | 339.09 | 320.58 | 339.32 |
| 332.17 | 339.54 | 336.28 | 339.66 | 342.45 | 339.86 | 344.13 | 339.86 | 344.94 | 339.88 |
| 348.56 | 339.89 | 354.13 | 339.84 | 355.44 | 339.83 | 357.12 | 339.84 | 358.62 | 339.83 |
| 359.07 | 339.82 | 359.23 | 339.82 | 359.49 | 339.83 | 360.15 | 339.83 | 360.32 | 339.82 |
| 360.86 | 339.82 | 364.8 | 339.75 | 369.89 | 339.65 | 373.13 | 339.59 | 374.05 | 339.57 |
| 375.21 | 339.55 | 376.73 | 339.52 | 378.17 | 339.48 | 378.99 | 339.45 | 379.39 | 339.44 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 379.82 | 339.42 | 379.93 | 339.41 | 380.1 | 339.42 | 381.73 | 339.42 | 382.76 | 339.43 |
| 384.2 | 339.44 | 385.92 | 339.46 | 386.91 | 339.46 | 388.37 | 339.5 | 389.26 | 339.54 |
| 390.36 | 339.58 | 394 | 339.72 | 398.69 | 339.91 | 401.09 | 340 | 401.65 | 340.03 |
| 403.04 | 340.07 | 403.92 | 340.11 | 405.29 | 340.15 | 405.78 | 340.17 | 408.09 | 340.23 |
| 413.54 | 340.32 | 413.77 | 340.32 | 414.15 | 340.33 | 415.62 | 340.3 | 416.97 | 340.29 |
| 419.64 | 340.29 | 421.04 | 340.31 | 421.46 | 340.32 | 432.54 | 340.39 | 433.38 | 340.4 |
| 443.16 | 340.45 | 444.9 | 340.39 | 447.2 | 340.34 | 452.03 | 340.21 | 455.56 | 340.11 |
| 461.23 | 340.05 | 465.91 | 340.01 | 468.6 | 339.99 | 471.11 | 339.96 | 473.09 | 339.93 |
| 476.38 | 339.87 | 477.44 | 339.86 | 478.33 | 339.85 | 480.19 | 339.84 | 481.67 | 339.83 |
| 483.46 | 339.82 | 485.49 | 339.82 | 487.59 | 339.81 | 494.15 | 339.81 | 496.49 | 339.82 |
| 497.98 | 339.82 | 498.48 | 339.84 | 499.42 | 339.87 | 500.71 | 339.92 | 502.44 | 340.03 |
| 502.78 | 340.06 | 504.81 | 340.18 | 504.87 | 340.19 | 504.91 | 340.24 | 505.56 | 340.95 |
| 505.81 | 341.23 | 506.4 | 341.72 | 512.06 | 342.12 | 515.72 | 342.37 | 516.05 | 342.39 |
| 516.88 | 342.38 | 518.78 | 342.51 | 520.27 | 342.54 | 521.44 | 342.63 | 522.75 | 342.74 |
| 523.6 | 342.79 | 526.23 | 342.93 | 526.74 | 342.96 | 527.57 | 343 | 528.07 | 343.02 |
| 539.35 | 343.64 | 540.2 | 343.69 | 541.13 | 343.75 | 541.48 | 343.77 | 541.83 | 343.81 |
| 542.21 | 343.84 | 542.74 | 343.89 | 543.67 | 343.97 | 544.49 | 344.03 | 546.12 | 344.13 |
| 546.74 | 344.17 | 547.74 | 344.22 | 548.76 | 344.28 | 549.52 | 344.31 | 549.98 | 344.34 |
| 550.18 | 344.35 | 555.3 | 344.65 | 555.7 | 344.68 | 555.8 | 344.68 | 556.37 | 344.72 |
| 556.62 | 344.74 | 559.61 | 345.01 | 561.18 | 345.14 | 561.67 | 345.17 | 562.28 | 345.22 |
| 562.72 | 345.26 | 563.27 | 345.3 | 564.48 | 345.41 | 565.39 | 345.5 | 565.61 | 345.52 |
| 565.8 | 345.52 | 566.76 | 345.55 | 566.83 | 345.55 | 567.49 | 345.59 | 567.7 | 345.6 |
| 568.65 | 345.61 | 570.83 | 345.61 | 571.61 | 345.63 | 572.46 | 345.67 | 573.45 | 345.74 |
| 574.41 | 345.83 | 575.04 | 345.92 | 576.04 | 346.06 | 576.6 | 346.14 | 576.77 | 346.17 |
| 577.07 | 346.21 | 577.45 | 346.27 | 578.3 | 346.37 | 579.05 | 346.44 | 579.7 | 346.51 |
| 580.67 | 346.64 | 581.12 | 346.69 | 582.34 | 346.85 | 587.29 | 347.46 | 587.96 | 347.54 |
| 596.42 | 348.31 | 597.46 | 348.41 | 597.64 | 348.43 | 597.71 | 348.43 | 600.01 | 348.48 |
| 602.53 | 348.54 | 603.95 | 348.59 | 604.77 | 348.61 | 606.39 | 348.66 | 607.15 | 348.68 |
| 607.62 | 348.69 | 608.66 | 348.7 | 614.17 | 348.81 | 615.03 | 348.82 | 616.61 | 348.85 |
| 617.92 | 348.86 | 619.54 | 348.88 | 620.74 | 348.89 | 621.04 | 348.89 | 621.27 | 348.9 |
| 623.41 | 348.9 | 623.99 | 348.91 | 624.18 | 348.91 | 624.49 | 348.92 | 625.08 | 348.92 |
| 625.27 | 348.93 | 625.55 | 348.93 | 627.43 | 348.99 | 628.61 | 349.04 | 629.9 | 349.07 |
| 630.22 | 349.08 | 630.44 | 349.08 | 630.95 | 349.09 | 631.81 | 349.1 | 634.26 | 349.14 |
| 635.57 | 349.17 | 636.88 | 349.18 | 645.44 | 349.16 | 648.94 | 349.14 | 649.03 | 349.14 |
| 653.09 | 349.12 | 653.66 | 349.11 | 655.25 | 349.11 | 658.05 | 349.1 | 659.36 | 349.1 |
| 659.6 | 349.11 | 660.79 | 349.1 | 662.73 | 349.1 | 664.19 | 349.08 | 666.11 | 349.06 |
| 667.38 | 349.05 | 669.89 | 349.02 | 671.37 | 349 | 673.44 | 348.98 | 673.76 | 348.98 |
| 673.84 | 348.97 | 673.91 | 348.98 | 677.01 | 348.94 | 678.31 | 348.93 | 678.6 | 348.92 |
| 679.27 | 348.92 | 679.95 | 348.94 | 680.44 | 348.94 | 680.66 | 348.93 | 681.27 | 348.93 |
| 681.36 | 348.92 | 681.73 | 348.92 | 682.05 | 348.91 | 682.2 | 348.91 | 682.34 | 348.9 |
| 682.78 | 348.89 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.96 | .04 | 505.81 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.96 | 505.81 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2077.48*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 342.82 | 1.74 | 342.79 | 4.9 | 342.75 | 6.79 | 342.72 | 7.39 | 342.72 |
| 8.46 | 342.7 | 12.67 | 342.65 | 14.04 | 342.63 | 14.93 | 342.63 | 15.19 | 342.64 |
| 15.31 | 342.66 | 15.45 | 342.66 | 15.87 | 342.68 | 16.98 | 342.67 | 17.86 | 342.67 |
| 18.37 | 342.66 | 18.6 | 342.65 | 19.09 | 342.65 | 19.66 | 342.64 | 21.07 | 342.64 |
| 21.83 | 342.63 | 24.38 | 342.6 | 25.75 | 342.58 | 27.06 | 342.57 | 28.06 | 342.55 |
| 30.95 | 342.52 | 33.66 | 342.5 | 36.43 | 342.5 | 37.68 | 342.51 | 39.05 | 342.51 |
| 40.54 | 342.53 | 42.72 | 342.55 | 43.78 | 342.57 | 45.07 | 342.57 | 45.31 | 342.58 |
| 46.33 | 342.58 | 46.73 | 342.59 | 47.33 | 342.58 | 47.68 | 342.59 | 48.86 | 342.6 |
| 50.38 | 342.6 | 50.76 | 342.61 | 51.51 | 342.61 | 52.06 | 342.6 | 53.18 | 342.62 |
| 53.99 | 342.62 | 54.24 | 342.63 | 54.51 | 342.63 | 54.82 | 342.65 | 56.64 | 342.65 |
| 57.73 | 342.64 | 58.58 | 342.64 | 59.14 | 342.63 | 59.98 | 342.62 | 60.89 | 342.62 |
| 61.19 | 342.61 | 61.27 | 342.6 | 61.57 | 342.6 | 61.62 | 342.59 | 61.99 | 342.59 |
| 62.76 | 342.57 | 63.19 | 342.55 | 63.54 | 342.54 | 64.06 | 342.52 | 65.75 | 342.48 |
| 66.51 | 342.46 | 67.47 | 342.43 | 67.97 | 342.43 | 69.13 | 342.41 | 70.39 | 342.38 |
| 71.74 | 342.36 | 73.54 | 342.33 | 74.96 | 342.31 | 79.84 | 342.2 | 81.61 | 342.17 |
| 82.48 | 342.16 | 83.36 | 342.14 | 84.99 | 342.12 | 86.42 | 342.11 | 87.6 | 342.1 |
| 90.43 | 342.08 | 92.62 | 342.08 | 92.9 | 342.09 | 93.18 | 342.09 | 93.61 | 342.1 |
| 94.27 | 342.11 | 95.18 | 342.11 | 96.15 | 342.14 | 103.82 | 342.14 | 105.85 | 342.13 |
| 109.62 | 342.09 | 110.63 | 342.1 | 111.58 | 342.09 | 112.2 | 342.09 | 113.11 | 342.08 |
| 115.1 | 342.08 | 116.12 | 342.06 | 117.89 | 342.03 | 118.02 | 342.03 | 119.92 | 341.98 |
| 120.51 | 341.97 | 122.57 | 341.92 | 123.56 | 341.89 | 124.11 | 341.88 | 124.32 | 341.87 |
| 124.61 | 341.87 | 124.89 | 341.86 | 125.78 | 341.85 | 126.06 | 341.84 | 126.22 | 341.84 |
| 126.95 | 341.81 | 127.67 | 341.81 | 128.12 | 341.79 | 128.29 | 341.79 | 128.94 | 341.76 |
| 129.34 | 341.75 | 130.42 | 341.81 | 131.2 | 341.85 | 131.81 | 341.87 | 132.63 | 341.9 |
| 132.87 | 341.9 | 133.24 | 341.92 | 133.78 | 341.93 | 134.67 | 341.96 | 135.25 | 342.01 |
| 135.64 | 342.05 | 136.38 | 342.07 | 136.94 | 342.08 | 139.49 | 342.08 | 141.8 | 342.06 |
| 142.49 | 342.05 | 143.37 | 342.02 | 143.53 | 342.02 | 144.94 | 342.04 | 149.71 | 342.04 |
| 151.36 | 342.03 | 153.9 | 342.01 | 157.08 | 342 | 157.25 | 342 | 158.95 | 341.99 |
| 160.23 | 341.99 | 165.84 | 341.98 | 166.84 | 341.98 | 167.58 | 341.97 | 169.18 | 341.97 |
| 169.93 | 341.96 | 170.73 | 341.96 | 171.5 | 341.95 | 172.81 | 341.94 | 173.67 | 341.93 |
| 173.85 | 341.93 | 173.93 | 341.92 | 174.41 | 341.92 | 174.91 | 341.91 | 175.16 | 341.91 |
| 175.97 | 341.9 | 176.53 | 341.9 | 178.12 | 341.89 | 178.91 | 341.88 | 179.58 | 341.88 |
| 181.92 | 341.87 | 184.03 | 341.87 | 184.85 | 341.86 | 186.76 | 341.86 | 187.08 | 341.85 |
| 188.71 | 341.85 | 190.55 | 341.84 | 193.66 | 341.81 | 196.08 | 341.8 | 196.5 | 341.79 |
| 198.04 | 341.73 | 200.27 | 341.62 | 201.09 | 341.59 | 202.72 | 341.51 | 203.97 | 341.46 |
| 206.17 | 341.36 | 209.45 | 341.2 | 211.94 | 341.08 | 214.93 | 340.89 | 217.01 | 340.73 |
| 220.42 | 340.6 | 222.06 | 340.54 | 223.85 | 340.47 | 225.84 | 340.4 | 226.09 | 340.38 |
| 228.47 | 340.26 | 228.64 | 340.26 | 228.75 | 340.25 | 229.15 | 340.24 | 229.4 | 340.22 |
| 229.59 | 340.22 | 229.79 | 340.21 | 230.13 | 340.24 | 230.43 | 340.24 | 230.71 | 340.25 |
| 231.53 | 340.25 | 232.04 | 340.24 | 232.59 | 340.24 | 233.23 | 340.23 | 233.69 | 340.23 |
| 233.7 | 340.24 | 234.22 | 340.24 | 234.3 | 340.23 | 234.63 | 340.23 | 234.73 | 340.22 |
| 234.93 | 340.22 | 235.2 | 340.2 | 235.46 | 340.2 | 235.76 | 340.18 | 237.21 | 340.14 |
| 237.39 | 340.14 | 237.54 | 340.13 | 238.37 | 340.11 | 238.54 | 340.11 | 239.6 | 340.08 |
| 239.86 | 340.09 | 240.49 | 340.07 | 244.82 | 339.92 | 245.45 | 339.9 | 245.64 | 339.9 |
| 247.24 | 339.84 | 247.74 | 339.82 | 248 | 339.82 | 248.3 | 339.81 | 248.4 | 339.8 |
| 248.63 | 339.8 | 248.91 | 339.79 | 248.97 | 339.8 | 249.34 | 339.8 | 250.59 | 339.81 |
| 251.09 | 339.82 | 251.43 | 339.82 | 251.77 | 339.81 | 252.97 | 339.75 | 253.48 | 339.73 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 254.1 | 339.73 | 254.29 | 339.72 | 254.72 | 339.72 | 254.96 | 339.71 | 256.41 | 339.71 |
| 256.69 | 339.72 | 257.83 | 339.75 | 258.41 | 339.76 | 259.24 | 339.77 | 260.28 | 339.74 |
| 260.43 | 339.73 | 262.19 | 339.68 | 262.47 | 339.67 | 263.82 | 339.63 | 265.19 | 339.58 |
| 267.04 | 339.52 | 267.23 | 339.52 | 267.3 | 339.51 | 267.63 | 339.5 | 273.47 | 339.21 |
| 276.71 | 339.04 | 277.61 | 339 | 277.77 | 338.99 | 279.88 | 338.9 | 282.1 | 338.8 |
| 282.21 | 338.8 | 282.87 | 338.78 | 285.19 | 338.7 | 290.11 | 338.7 | 290.6 | 338.72 |
| 290.74 | 338.73 | 291.48 | 338.73 | 291.59 | 338.74 | 292.03 | 338.74 | 292.79 | 338.76 |
| 294.37 | 338.78 | 298.54 | 338.86 | 302.16 | 338.92 | 314.46 | 339.16 | 326.58 | 339.38 |
| 330.88 | 339.5 | 337.33 | 339.69 | 338.66 | 339.68 | 339.08 | 339.68 | 339.93 | 339.69 |
| 343.71 | 339.7 | 349.54 | 339.64 | 350.91 | 339.63 | 352.66 | 339.64 | 354.23 | 339.63 |
| 354.7 | 339.62 | 354.86 | 339.62 | 355.14 | 339.63 | 355.39 | 339.63 | 355.83 | 339.62 |
| 356.57 | 339.62 | 360.69 | 339.54 | 370.36 | 339.34 | 371.57 | 339.32 | 373.16 | 339.29 |
| 374.67 | 339.25 | 375.52 | 339.22 | 375.94 | 339.2 | 376.39 | 339.19 | 376.51 | 339.18 |
| 378.39 | 339.18 | 379.47 | 339.2 | 380.97 | 339.21 | 382.76 | 339.23 | 383.8 | 339.23 |
| 384.23 | 339.24 | 384.56 | 339.24 | 384.94 | 339.25 | 385.33 | 339.27 | 386.26 | 339.31 |
| 387.41 | 339.35 | 389.05 | 339.41 | 391.22 | 339.5 | 396.12 | 339.69 | 398.62 | 339.79 |
| 399.21 | 339.83 | 400.66 | 339.87 | 401.58 | 339.91 | 403.02 | 339.95 | 403.53 | 339.97 |
| 405.94 | 340.03 | 407.22 | 340.05 | 410.36 | 340.11 | 411.63 | 340.13 | 412.27 | 340.13 |
| 413.82 | 340.11 | 416.76 | 340.09 | 418.02 | 340.09 | 419.48 | 340.11 | 419.92 | 340.12 |
| 431.5 | 340.2 | 432.38 | 340.2 | 442.6 | 340.25 | 444.42 | 340.19 | 446.82 | 340.13 |
| 451.87 | 339.99 | 455.56 | 339.89 | 461.49 | 339.82 | 463.95 | 339.8 | 466.39 | 339.77 |
| 469.2 | 339.75 | 471.82 | 339.72 | 473.88 | 339.69 | 477.33 | 339.62 | 478.44 | 339.61 |
| 479.36 | 339.6 | 481.32 | 339.59 | 482.86 | 339.58 | 484.72 | 339.57 | 486.85 | 339.56 |
| 489.04 | 339.56 | 491.1 | 339.55 | 492.89 | 339.55 | 495.9 | 339.56 | 499.91 | 339.56 |
| 500.43 | 339.58 | 501.41 | 339.61 | 502.76 | 339.67 | 504.57 | 339.78 | 504.93 | 339.82 |
| 507.04 | 339.94 | 507.11 | 339.95 | 507.15 | 340.01 | 507.83 | 340.76 | 508.09 | 341.05 |
| 508.67 | 341.58 | 514.28 | 341.98 | 517.91 | 342.23 | 518.23 | 342.25 | 519.05 | 342.23 |
| 520.94 | 342.36 | 522.41 | 342.4 | 523.57 | 342.49 | 524.87 | 342.6 | 525.71 | 342.64 |
| 528.31 | 342.78 | 528.82 | 342.8 | 529.64 | 342.84 | 530.14 | 342.87 | 541.31 | 343.5 |
| 542.15 | 343.55 | 543.06 | 343.61 | 543.42 | 343.63 | 544.14 | 343.69 | 544.66 | 343.74 |
| 545.58 | 343.82 | 545.86 | 343.84 | 546.4 | 343.87 | 548.01 | 343.97 | 548.62 | 344.01 |
| 549.03 | 344.04 | 550.62 | 344.12 | 551.37 | 344.16 | 552.03 | 344.2 | 557.1 | 344.5 |
| 557.49 | 344.53 | 557.59 | 344.53 | 558.41 | 344.59 | 561.37 | 344.87 | 562.93 | 345 |
| 563.4 | 345.03 | 564.01 | 345.08 | 564.45 | 345.12 | 564.99 | 345.16 | 566.19 | 345.27 |
| 567.09 | 345.36 | 567.31 | 345.38 | 567.5 | 345.38 | 568.44 | 345.4 | 568.52 | 345.41 |
| 569.17 | 345.45 | 569.38 | 345.45 | 570.32 | 345.46 | 572.48 | 345.45 | 573.25 | 345.47 |
| 574.1 | 345.5 | 575.08 | 345.57 | 576.02 | 345.67 | 577.64 | 345.9 | 578.19 | 345.98 |
| 578.36 | 346.01 | 578.65 | 346.05 | 579.03 | 346.12 | 579.88 | 346.22 | 581.26 | 346.37 |
| 582.22 | 346.5 | 582.67 | 346.55 | 583.87 | 346.72 | 588.77 | 347.35 | 589.44 | 347.43 |
| 597.82 | 348.22 | 598.85 | 348.32 | 599.1 | 348.34 | 601.38 | 348.38 | 603.87 | 348.43 |
| 605.27 | 348.47 | 607.69 | 348.53 | 608.44 | 348.55 | 608.92 | 348.56 | 609.94 | 348.57 |
| 615.4 | 348.67 | 616.25 | 348.68 | 617.82 | 348.71 | 619.11 | 348.72 | 620.71 | 348.74 |
| 621.91 | 348.75 | 622.2 | 348.75 | 622.43 | 348.76 | 624.38 | 348.76 | 624.54 | 348.77 |
| 625.31 | 348.77 | 625.61 | 348.78 | 626.21 | 348.78 | 626.39 | 348.79 | 626.67 | 348.79 |
| 627.59 | 348.81 | 628.53 | 348.84 | 629.7 | 348.88 | 630.97 | 348.91 | 631.29 | 348.92 |
| 631.51 | 348.92 | 632.01 | 348.93 | 632.86 | 348.94 | 635.29 | 348.98 | 636.58 | 349 |
| 637.88 | 349.01 | 646.37 | 348.96 | 649.83 | 348.94 | 649.92 | 348.94 | 653.94 | 348.91 |
| 654.64 | 348.91 | 656.07 | 348.9 | 658.85 | 348.89 | 661.62 | 348.89 | 662.55 | 348.88 |
| 663.48 | 348.88 | 664.93 | 348.86 | 666.83 | 348.83 | 668.08 | 348.82 | 670.58 | 348.79 |
| 672.04 | 348.77 | 674.09 | 348.74 | 674.55 | 348.74 | 677.63 | 348.7 | 678.91 | 348.68 |
| 679.2 | 348.67 | 679.87 | 348.67 | 680.53 | 348.69 | 681.24 | 348.69 | 681.26 | 348.68 |
| 681.84 | 348.68 | 681.93 | 348.67 | 682.3 | 348.67 | 682.76 | 348.66 | 682.91 | 348.65 |
| 683.34 | 348.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.93 | .04 | 508.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.93 | 508.09 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2057.67*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 342.56 | 1.74 | 342.54 | 4.9 | 342.5 | 6.79 | 342.48 | 7.39 | 342.47 |
| 8.46 | 342.46 | 12.67 | 342.41 | 14.04 | 342.39 | 14.93 | 342.39 | 15.19 | 342.4 |
| 15.31 | 342.42 | 15.45 | 342.42 | 15.87 | 342.44 | 16.98 | 342.44 | 17.86 | 342.43 |
| 18.37 | 342.42 | 18.6 | 342.42 | 18.76 | 342.41 | 19.09 | 342.41 | 19.66 | 342.4 |
| 21.06 | 342.4 | 21.83 | 342.39 | 24.38 | 342.36 | 25.75 | 342.35 | 27.06 | 342.33 |
| 27.56 | 342.33 | 28.06 | 342.32 | 30.94 | 342.29 | 32.28 | 342.27 | 36.42 | 342.27 |
| 37.67 | 342.28 | 39.04 | 342.28 | 42.72 | 342.33 | 43.77 | 342.35 | 44.29 | 342.35 |
| 44.89 | 342.36 | 45.6 | 342.36 | 46.33 | 342.37 | 47.33 | 342.37 | 47.68 | 342.38 |
| 48.85 | 342.39 | 50.37 | 342.39 | 50.76 | 342.4 | 52.05 | 342.4 | 52.66 | 342.41 |
| 53.54 | 342.41 | 53.76 | 342.42 | 53.98 | 342.42 | 54.23 | 342.43 | 54.5 | 342.43 |
| 54.62 | 342.44 | 54.78 | 342.44 | 54.81 | 342.45 | 57.72 | 342.45 | 58.57 | 342.44 |
| 59.13 | 342.43 | 59.97 | 342.42 | 60.88 | 342.42 | 61.19 | 342.41 | 61.27 | 342.4 |
| 61.72 | 342.4 | 61.92 | 342.39 | 62.34 | 342.39 | 62.44 | 342.38 | 62.75 | 342.37 |
| 62.9 | 342.37 | 62.96 | 342.36 | 63.18 | 342.36 | 63.73 | 342.33 | 65.74 | 342.27 |
| 66.5 | 342.26 | 67.46 | 342.23 | 67.96 | 342.23 | 69.13 | 342.21 | 70.39 | 342.18 |
| 71.74 | 342.16 | 73.53 | 342.12 | 74.95 | 342.11 | 79.83 | 342 | 81.6 | 341.97 |
| 82.47 | 341.95 | 84.98 | 341.92 | 86.41 | 341.91 | 87.59 | 341.9 | 90.42 | 341.88 |
| 91.24 | 341.87 | 91.96 | 341.87 | 92.6 | 341.88 | 92.89 | 341.88 | 93.16 | 341.89 |
| 93.59 | 341.89 | 94.26 | 341.9 | 95.17 | 341.91 | 96.14 | 341.94 | 96.28 | 341.94 |
| 96.51 | 341.95 | 97.57 | 341.94 | 98.44 | 341.94 | 101.96 | 341.95 | 103.81 | 341.95 |
| 105.84 | 341.94 | 109.61 | 341.9 | 110.62 | 341.91 | 111.57 | 341.9 | 115.08 | 341.9 |
| 116.1 | 341.88 | 117.87 | 341.84 | 118 | 341.84 | 119.91 | 341.79 | 120.5 | 341.77 |
| 122.55 | 341.72 | 123.55 | 341.7 | 124.1 | 341.68 | 124.31 | 341.68 | 124.88 | 341.66 |
| 125.76 | 341.65 | 126.05 | 341.64 | 126.2 | 341.64 | 126.94 | 341.61 | 127.66 | 341.61 |
| 128.93 | 341.55 | 129.33 | 341.54 | 130.4 | 341.6 | 130.97 | 341.62 | 131.19 | 341.64 |
| 131.79 | 341.65 | 132.86 | 341.69 | 133.23 | 341.7 | 133.77 | 341.72 | 134.39 | 341.74 |
| 134.47 | 341.74 | 134.65 | 341.76 | 135.23 | 341.81 | 135.62 | 341.84 | 135.95 | 341.86 |
| 136.36 | 341.87 | 136.92 | 341.87 | 137.25 | 341.88 | 139.47 | 341.88 | 141.78 | 341.86 |
| 142.47 | 341.85 | 143.35 | 341.82 | 143.51 | 341.82 | 144.92 | 341.84 | 145.76 | 341.83 |
| 146.79 | 341.84 | 149.69 | 341.84 | 151.34 | 341.83 | 153.88 | 341.81 | 157.06 | 341.79 |
| 160.21 | 341.79 | 165.82 | 341.78 | 165.98 | 341.78 | 166.82 | 341.77 | 167.56 | 341.77 |
| 169.16 | 341.76 | 169.91 | 341.76 | 170.71 | 341.75 | 171.48 | 341.75 | 172.79 | 341.74 |
| 173.65 | 341.73 | 173.83 | 341.73 | 173.91 | 341.72 | 174.39 | 341.72 | 174.89 | 341.71 |
| 175.94 | 341.71 | 176.51 | 341.7 | 178.1 | 341.69 | 179.31 | 341.69 | 179.56 | 341.68 |
| 181.9 | 341.68 | 184.01 | 341.67 | 184.82 | 341.67 | 185.92 | 341.66 | 187.06 | 341.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 188.69 | 341.65 | 190.53 | 341.64 | 193.64 | 341.61 | 196.05 | 341.6 | 196.47 | 341.59 |
| 198.01 | 341.53 | 198.82 | 341.49 | 200.24 | 341.41 | 201.07 | 341.38 | 202.7 | 341.3 |
| 203.94 | 341.24 | 206.15 | 341.13 | 209.42 | 340.97 | 211.92 | 340.85 | 214.91 | 340.67 |
| 216.77 | 340.54 | 219.83 | 340.42 | 221.31 | 340.37 | 222.91 | 340.31 | 224.7 | 340.24 |
| 224.93 | 340.23 | 226.53 | 340.15 | 227.32 | 340.12 | 227.68 | 340.11 | 228.07 | 340.09 |
| 228.36 | 340.09 | 228.45 | 340.1 | 228.83 | 340.11 | 229.41 | 340.11 | 229.81 | 340.1 |
| 230.27 | 340.1 | 231.34 | 340.08 | 232.31 | 340.08 | 232.4 | 340.07 | 232.69 | 340.07 |
| 232.78 | 340.06 | 233 | 340.06 | 233.06 | 340.05 | 233.19 | 340.05 | 233.61 | 340.03 |
| 234.92 | 339.99 | 235.08 | 339.99 | 235.22 | 339.98 | 235.96 | 339.96 | 236.11 | 339.96 |
| 237.06 | 339.93 | 237.24 | 339.93 | 237.3 | 339.94 | 238.38 | 339.9 | 242.32 | 339.76 |
| 242.49 | 339.76 | 243.93 | 339.7 | 244.13 | 339.7 | 244.46 | 339.69 | 244.88 | 339.67 |
| 245.18 | 339.67 | 245.31 | 339.66 | 247.99 | 339.66 | 249.07 | 339.61 | 249.76 | 339.58 |
| 250.26 | 339.58 | 250.36 | 339.57 | 250.65 | 339.57 | 250.86 | 339.56 | 251.16 | 339.56 |
| 251.51 | 339.55 | 252.17 | 339.55 | 252.42 | 339.56 | 253.44 | 339.58 | 254.71 | 339.58 |
| 255.64 | 339.55 | 255.77 | 339.54 | 257.05 | 339.49 | 257.61 | 339.47 | 258.82 | 339.43 |
| 260.05 | 339.38 | 260.63 | 339.36 | 262.24 | 339.3 | 267.48 | 339.02 | 270.4 | 338.86 |
| 271.21 | 338.82 | 271.35 | 338.81 | 273.25 | 338.73 | 275.24 | 338.63 | 275.34 | 338.63 |
| 275.93 | 338.61 | 278.01 | 338.53 | 282.94 | 338.53 | 283.45 | 338.54 | 283.59 | 338.55 |
| 284.1 | 338.55 | 284.37 | 338.56 | 284.95 | 338.56 | 285.28 | 338.57 | 285.74 | 338.58 |
| 291.74 | 338.69 | 295.51 | 338.76 | 308.35 | 338.99 | 320.99 | 339.23 | 325.48 | 339.34 |
| 332.2 | 339.52 | 333.59 | 339.5 | 334.03 | 339.51 | 334.92 | 339.51 | 338.86 | 339.5 |
| 344.94 | 339.44 | 346.37 | 339.43 | 349.84 | 339.43 | 350.33 | 339.42 | 350.5 | 339.42 |
| 350.78 | 339.43 | 351.05 | 339.43 | 351.5 | 339.42 | 351.69 | 339.41 | 352.28 | 339.41 |
| 356.58 | 339.33 | 362.13 | 339.21 | 366.67 | 339.12 | 367.94 | 339.09 | 369.59 | 339.06 |
| 371.16 | 339.02 | 372.05 | 338.98 | 372.49 | 338.97 | 372.96 | 338.95 | 373.08 | 338.94 |
| 375.05 | 338.94 | 376.17 | 338.96 | 377.73 | 338.97 | 379.61 | 338.99 | 380.69 | 338.99 |
| 382.29 | 339.03 | 383.26 | 339.08 | 384.46 | 339.12 | 386.17 | 339.18 | 388.43 | 339.28 |
| 393.54 | 339.48 | 396.16 | 339.58 | 396.77 | 339.62 | 398.28 | 339.66 | 399.24 | 339.71 |
| 400.75 | 339.75 | 401.28 | 339.77 | 403.79 | 339.83 | 405.13 | 339.86 | 408.41 | 339.91 |
| 409.73 | 339.94 | 410.4 | 339.94 | 412.01 | 339.91 | 413.48 | 339.9 | 415.09 | 339.89 |
| 416.39 | 339.89 | 417.92 | 339.91 | 418.38 | 339.93 | 430.46 | 340 | 431.37 | 340.01 |
| 442.04 | 340.05 | 443.94 | 339.99 | 446.45 | 339.93 | 451.72 | 339.78 | 455.57 | 339.67 |
| 461.76 | 339.59 | 464.32 | 339.56 | 466.86 | 339.54 | 469.79 | 339.52 | 472.53 | 339.49 |
| 474.68 | 339.45 | 478.28 | 339.38 | 479.43 | 339.36 | 480.4 | 339.35 | 482.44 | 339.34 |
| 484.05 | 339.33 | 485.99 | 339.32 | 490.5 | 339.3 | 501.84 | 339.3 | 503.4 | 339.36 |
| 504.82 | 339.42 | 506.7 | 339.53 | 507.07 | 339.57 | 509.28 | 339.7 | 509.35 | 339.71 |
| 509.39 | 339.77 | 510.1 | 340.57 | 510.37 | 340.88 | 510.95 | 341.43 | 516.51 | 341.83 |
| 520.09 | 342.09 | 520.41 | 342.11 | 521.23 | 342.09 | 523.09 | 342.22 | 524.56 | 342.25 |
| 525.7 | 342.34 | 526.99 | 342.45 | 527.81 | 342.49 | 530.39 | 342.62 | 530.89 | 342.64 |
| 531.71 | 342.68 | 532.2 | 342.71 | 543.26 | 343.36 | 544.1 | 343.42 | 544.41 | 343.43 |
| 545 | 343.47 | 545.35 | 343.49 | 545.7 | 343.52 | 546.58 | 343.59 | 548.3 | 343.72 |
| 549.9 | 343.82 | 550.51 | 343.86 | 551.49 | 343.91 | 552.49 | 343.97 | 553.23 | 344.01 |
| 553.68 | 344.04 | 553.88 | 344.05 | 558.9 | 344.36 | 559.29 | 344.38 | 559.39 | 344.39 |
| 559.95 | 344.43 | 560.2 | 344.44 | 563.12 | 344.73 | 564.67 | 344.86 | 565.14 | 344.89 |
| 565.74 | 344.94 | 566.18 | 344.98 | 566.71 | 345.02 | 567.9 | 345.13 | 568.79 | 345.22 |
| 569.01 | 345.24 | 569.2 | 345.24 | 570.13 | 345.26 | 570.21 | 345.26 | 570.85 | 345.3 |
| 571.99 | 345.3 | 574.13 | 345.28 | 574.9 | 345.3 | 575.73 | 345.33 | 576.7 | 345.4 |
| 577.64 | 345.5 | 578.26 | 345.59 | 579.24 | 345.74 | 579.78 | 345.82 | 580.24 | 345.9 |
| 580.62 | 345.96 | 580.87 | 345.99 | 581.2 | 346.04 | 582.19 | 346.15 | 582.82 | 346.23 |
| 583.77 | 346.36 | 584.22 | 346.41 | 585.41 | 346.58 | 590.26 | 347.23 | 590.92 | 347.33 |
| 599.22 | 348.13 | 600.42 | 348.26 | 600.49 | 348.26 | 602.74 | 348.29 | 605.21 | 348.32 |
| 606.6 | 348.36 | 607.41 | 348.37 | 608.99 | 348.41 | 609.74 | 348.43 | 610.21 | 348.43 |
| 611.22 | 348.45 | 616.63 | 348.53 | 617.47 | 348.54 | 619.02 | 348.57 | 620.3 | 348.58 |
| 621.89 | 348.6 | 623.07 | 348.61 | 623.36 | 348.61 | 623.59 | 348.62 | 625.52 | 348.62 |
| 625.68 | 348.63 | 626.25 | 348.63 | 626.44 | 348.64 | 626.74 | 348.64 | 627.33 | 348.65 |
| 627.78 | 348.65 | 629.63 | 348.69 | 630.79 | 348.72 | 631.19 | 348.74 | 631.64 | 348.74 |
| 632.37 | 348.76 | 632.58 | 348.76 | 633.08 | 348.77 | 636.32 | 348.81 | 637.6 | 348.83 |
| 638.89 | 348.83 | 647.29 | 348.77 | 650.72 | 348.75 | 650.81 | 348.74 | 654.79 | 348.71 |
| 655.34 | 348.7 | 656.9 | 348.7 | 659.65 | 348.68 | 660.18 | 348.67 | 660.69 | 348.68 |
| 661.17 | 348.68 | 662.39 | 348.67 | 663.31 | 348.66 | 664.24 | 348.66 | 665.67 | 348.64 |
| 668.79 | 348.59 | 669.63 | 348.58 | 671.26 | 348.55 | 672.71 | 348.53 | 674.74 | 348.5 |
| 675.2 | 348.5 | 678.24 | 348.45 | 679.51 | 348.43 | 679.8 | 348.42 | 680.34 | 348.42 |
| 680.46 | 348.43 | 680.81 | 348.43 | 681.12 | 348.44 | 682.08 | 348.44 | 682.38 | 348.43 |
| 682.5 | 348.42 | 682.87 | 348.42 | 683.24 | 348.41 | 683.33 | 348.4 | 683.47 | 348.4 |
| 683.9 | 348.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.91 | .04 | 510.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.91 | 510.37 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2037.85*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 342.31 | 1.74 | 342.28 | 4.9 | 342.25 | 6.79 | 342.23 | 7.39 | 342.22 |
| 8.46 | 342.21 | 12.67 | 342.16 | 14.03 | 342.15 | 14.52 | 342.14 | 15.18 | 342.16 |
| 15.29 | 342.17 | 15.3 | 342.19 | 15.71 | 342.19 | 15.86 | 342.2 | 16.98 | 342.2 |
| 17.85 | 342.19 | 18.36 | 342.19 | 18.75 | 342.17 | 19.08 | 342.17 | 19.65 | 342.16 |
| 21.06 | 342.16 | 21.83 | 342.15 | 24.37 | 342.12 | 25.75 | 342.11 | 27.06 | 342.09 |
| 27.56 | 342.09 | 28.06 | 342.08 | 30.94 | 342.05 | 32.28 | 342.04 | 34.42 | 342.04 |
| 35.33 | 342.03 | 36.42 | 342.04 | 39.04 | 342.06 | 42.71 | 342.11 | 44.29 | 342.14 |
| 45.06 | 342.14 | 45.3 | 342.15 | 45.59 | 342.15 | 46.32 | 342.16 | 47.32 | 342.16 |
| 47.67 | 342.17 | 48.85 | 342.18 | 50.11 | 342.18 | 50.17 | 342.19 | 52.04 | 342.19 |
| 53.16 | 342.21 | 53.53 | 342.21 | 53.75 | 342.22 | 53.97 | 342.22 | 54.22 | 342.23 |
| 54.49 | 342.22 | 54.7 | 342.23 | 54.8 | 342.25 | 57.71 | 342.25 | 58.56 | 342.24 |
| 59.12 | 342.24 | 59.96 | 342.23 | 60.19 | 342.23 | 60.54 | 342.22 | 60.87 | 342.22 |
| 61.56 | 342.2 | 61.72 | 342.2 | 61.92 | 342.19 | 62.44 | 342.19 | 62.75 | 342.18 |
| 62.95 | 342.16 | 63.17 | 342.16 | 63.72 | 342.13 | 65.74 | 342.07 | 66.5 | 342.05 |
| 67.96 | 342.02 | 69.12 | 342 | 70.38 | 341.98 | 71.73 | 341.96 | 73.52 | 341.92 |
| 74.94 | 341.91 | 79.82 | 341.79 | 81.59 | 341.76 | 82.46 | 341.75 | 83.34 | 341.73 |
| 84.97 | 341.71 | 86.4 | 341.7 | 87.58 | 341.69 | 90.41 | 341.67 | 91.95 | 341.67 |
| 92.59 | 341.68 | 92.87 | 341.68 | 93.15 | 341.69 | 93.58 | 341.69 | 94.25 | 341.7 |
| 95.16 | 341.71 | 96.49 | 341.75 | 97.55 | 341.75 | 97.99 | 341.74 | 98.42 | 341.74 |
| 101.94 | 341.76 | 103.8 | 341.76 | 105.82 | 341.75 | 109.6 | 341.72 | 111.55 | 341.72 |
| 112.05 | 341.71 | 115.07 | 341.71 | 116.09 | 341.69 | 117.86 | 341.65 | 117.99 | 341.65 |
| 119.89 | 341.6 | 120.48 | 341.58 | 122.54 | 341.53 | 123.53 | 341.5 | 124.08 | 341.49 |
| 124.29 | 341.48 | 124.58 | 341.48 | 124.86 | 341.47 | 125.75 | 341.45 | 126.19 | 341.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 126.92 | 341.41 | 127.64 | 341.41 | 128.26 | 341.37 | 129.31 | 341.32 | 130.39 | 341.38 |
| 131.17 | 341.42 | 131.77 | 341.44 | 132.84 | 341.48 | 133.21 | 341.49 | 133.75 | 341.51 |
| 134.37 | 341.53 | 134.45 | 341.53 | 134.63 | 341.55 | 135.22 | 341.6 | 135.6 | 341.64 |
| 135.93 | 341.66 | 136.34 | 341.67 | 139.45 | 341.67 | 141.76 | 341.65 | 142.45 | 341.64 |
| 143.33 | 341.62 | 143.49 | 341.62 | 144.91 | 341.63 | 145.75 | 341.63 | 146.78 | 341.64 |
| 149.68 | 341.64 | 151.32 | 341.63 | 153.86 | 341.61 | 157.04 | 341.59 | 160.19 | 341.59 |
| 165.8 | 341.58 | 166.8 | 341.57 | 167.54 | 341.57 | 169.14 | 341.56 | 169.89 | 341.56 |
| 170.68 | 341.55 | 171.46 | 341.55 | 172.77 | 341.54 | 173.63 | 341.53 | 173.89 | 341.53 |
| 174.37 | 341.52 | 174.87 | 341.52 | 175.11 | 341.51 | 176.49 | 341.51 | 178.08 | 341.5 |
| 178.87 | 341.49 | 179.53 | 341.49 | 181.88 | 341.48 | 183.98 | 341.47 | 185.9 | 341.47 |
| 186.72 | 341.46 | 187.04 | 341.46 | 188.66 | 341.45 | 190.51 | 341.44 | 193.62 | 341.42 |
| 196.03 | 341.4 | 196.45 | 341.39 | 197.99 | 341.32 | 200.22 | 341.21 | 202.67 | 341.09 |
| 203.92 | 341.02 | 206.12 | 340.91 | 209.4 | 340.75 | 211.89 | 340.62 | 214.88 | 340.45 |
| 216.53 | 340.34 | 219.25 | 340.24 | 220.56 | 340.2 | 221.98 | 340.15 | 223.57 | 340.09 |
| 223.77 | 340.08 | 225.66 | 340 | 225.68 | 339.99 | 225.89 | 339.99 | 226.2 | 339.98 |
| 226.56 | 339.96 | 226.89 | 339.96 | 226.99 | 339.97 | 227.44 | 339.97 | 227.74 | 339.96 |
| 228.1 | 339.96 | 228.94 | 339.94 | 229.45 | 339.93 | 230.12 | 339.93 | 230.16 | 339.92 |
| 230.48 | 339.92 | 230.57 | 339.91 | 230.81 | 339.91 | 230.87 | 339.9 | 231.04 | 339.9 |
| 231.09 | 339.89 | 231.3 | 339.89 | 231.47 | 339.88 | 232.89 | 339.83 | 233.55 | 339.81 |
| 233.69 | 339.81 | 234.53 | 339.78 | 234.73 | 339.78 | 235.24 | 339.77 | 235.7 | 339.75 |
| 238.68 | 339.64 | 239.19 | 339.62 | 239.34 | 339.62 | 240.61 | 339.57 | 240.8 | 339.56 |
| 241.01 | 339.56 | 241.09 | 339.55 | 241.62 | 339.54 | 241.69 | 339.53 | 242.08 | 339.53 |
| 242.29 | 339.52 | 243.28 | 339.52 | 243.68 | 339.51 | 243.95 | 339.51 | 245.18 | 339.46 |
| 245.59 | 339.44 | 245.87 | 339.44 | 246.32 | 339.42 | 246.57 | 339.42 | 246.76 | 339.41 |
| 247.02 | 339.41 | 247.34 | 339.4 | 247.92 | 339.4 | 248.14 | 339.39 | 249.05 | 339.4 |
| 249.51 | 339.4 | 250.17 | 339.39 | 250.47 | 339.38 | 251 | 339.35 | 251.12 | 339.35 |
| 252.25 | 339.3 | 252.52 | 339.29 | 252.54 | 339.28 | 252.74 | 339.28 | 254.91 | 339.18 |
| 255.42 | 339.16 | 256.38 | 339.11 | 256.85 | 339.09 | 261.5 | 338.83 | 264.09 | 338.68 |
| 264.8 | 338.64 | 264.93 | 338.64 | 266.62 | 338.55 | 268.38 | 338.46 | 268.47 | 338.46 |
| 268.99 | 338.43 | 270.84 | 338.35 | 275.76 | 338.35 | 276.3 | 338.37 | 276.45 | 338.38 |
| 276.98 | 338.38 | 277.25 | 338.39 | 277.86 | 338.39 | 278.68 | 338.41 | 284.93 | 338.52 |
| 288.86 | 338.59 | 302.23 | 338.83 | 315.4 | 339.08 | 320.07 | 339.18 | 327.08 | 339.34 |
| 328.52 | 339.32 | 328.99 | 339.33 | 329.91 | 339.33 | 334.01 | 339.31 | 340.35 | 339.24 |
| 341.84 | 339.23 | 343.74 | 339.23 | 345.45 | 339.22 | 346.14 | 339.22 | 346.43 | 339.23 |
| 346.71 | 339.23 | 347.18 | 339.22 | 347.38 | 339.21 | 347.99 | 339.21 | 352.47 | 339.12 |
| 358.25 | 339 | 361.94 | 338.92 | 362.97 | 338.89 | 364.3 | 338.86 | 366.02 | 338.83 |
| 367.66 | 338.78 | 368.58 | 338.75 | 369.53 | 338.71 | 369.66 | 338.7 | 371.71 | 338.7 |
| 372.87 | 338.72 | 374.5 | 338.73 | 376.46 | 338.75 | 377.59 | 338.75 | 378.83 | 338.78 |
| 380.25 | 338.85 | 380.86 | 338.86 | 381.51 | 338.89 | 383.29 | 338.96 | 385.64 | 339.06 |
| 390.97 | 339.27 | 393.69 | 339.38 | 394.33 | 339.41 | 395.9 | 339.46 | 396.9 | 339.5 |
| 398.47 | 339.55 | 399.03 | 339.57 | 401.65 | 339.63 | 403.04 | 339.66 | 406.45 | 339.72 |
| 407.83 | 339.75 | 408.53 | 339.75 | 410.2 | 339.72 | 411.73 | 339.7 | 413.41 | 339.69 |
| 414.16 | 339.69 | 414.77 | 339.7 | 415.58 | 339.7 | 416.36 | 339.71 | 416.83 | 339.73 |
| 429.42 | 339.81 | 430.37 | 339.81 | 441.49 | 339.85 | 443.46 | 339.79 | 446.07 | 339.72 |
| 451.56 | 339.56 | 455.57 | 339.45 | 462.02 | 339.36 | 464.68 | 339.33 | 467.33 | 339.31 |
| 470.39 | 339.28 | 473.24 | 339.25 | 475.48 | 339.21 | 479.22 | 339.13 | 480.43 | 339.12 |
| 483.56 | 339.09 | 485.23 | 339.08 | 487.26 | 339.06 | 489.58 | 339.06 | 494.19 | 339.04 |
| 499.41 | 339.04 | 502.07 | 339.05 | 503.76 | 339.05 | 504.33 | 339.06 | 505.39 | 339.1 |
| 506.87 | 339.17 | 508.83 | 339.28 | 509.22 | 339.33 | 511.52 | 339.47 | 511.59 | 339.48 |
| 511.64 | 339.54 | 512.37 | 340.38 | 512.66 | 340.71 | 513.23 | 341.29 | 518.73 | 341.69 |
| 522.28 | 341.95 | 522.59 | 341.97 | 523.4 | 341.94 | 525.25 | 342.07 | 526.7 | 342.1 |
| 527.83 | 342.19 | 529.11 | 342.3 | 529.92 | 342.34 | 532.48 | 342.46 | 532.97 | 342.48 |
| 533.78 | 342.53 | 534.27 | 342.55 | 545.22 | 343.23 | 546.05 | 343.28 | 546.35 | 343.29 |
| 546.94 | 343.33 | 547.29 | 343.35 | 547.63 | 343.38 | 547.99 | 343.4 | 549.68 | 343.53 |
| 550.21 | 343.56 | 551.79 | 343.66 | 552.39 | 343.7 | 552.79 | 343.72 | 553.37 | 343.76 |
| 554.35 | 343.82 | 555.09 | 343.86 | 555.53 | 343.89 | 555.73 | 343.9 | 560.7 | 344.21 |
| 561.09 | 344.24 | 561.19 | 344.24 | 561.74 | 344.28 | 561.98 | 344.29 | 564.88 | 344.59 |
| 566.41 | 344.71 | 566.88 | 344.75 | 567.47 | 344.79 | 569.61 | 344.99 | 570.71 | 345.1 |
| 570.89 | 345.1 | 571.89 | 345.11 | 572.54 | 345.15 | 573.66 | 345.15 | 575.78 | 345.12 |
| 576.54 | 345.13 | 577.36 | 345.17 | 578.32 | 345.24 | 579.25 | 345.33 | 579.87 | 345.43 |
| 580.84 | 345.58 | 581.38 | 345.66 | 581.83 | 345.74 | 582.2 | 345.81 | 582.78 | 345.88 |
| 583.03 | 345.92 | 584.38 | 346.09 | 585.33 | 346.22 | 585.75 | 346.27 | 585.77 | 346.28 |
| 586.95 | 346.45 | 591.75 | 347.12 | 592.41 | 347.22 | 600.62 | 348.05 | 601.63 | 348.15 |
| 601.8 | 348.17 | 601.88 | 348.17 | 604.11 | 348.19 | 606.55 | 348.22 | 607.93 | 348.24 |
| 608.73 | 348.26 | 610.3 | 348.29 | 611.04 | 348.3 | 611.5 | 348.31 | 612.51 | 348.32 |
| 617.86 | 348.4 | 620.22 | 348.43 | 621.49 | 348.44 | 623.06 | 348.46 | 624.23 | 348.47 |
| 624.52 | 348.47 | 624.74 | 348.48 | 626.66 | 348.49 | 627.38 | 348.49 | 627.57 | 348.5 |
| 627.87 | 348.5 | 628.45 | 348.51 | 628.9 | 348.51 | 629.81 | 348.53 | 630.72 | 348.54 |
| 631.87 | 348.57 | 632.71 | 348.59 | 633.12 | 348.59 | 633.44 | 348.6 | 634.14 | 348.6 |
| 637.35 | 348.64 | 638.62 | 348.66 | 639.9 | 348.66 | 648.21 | 348.58 | 651.6 | 348.55 |
| 651.69 | 348.55 | 655.63 | 348.51 | 656.32 | 348.5 | 660.45 | 348.47 | 660.98 | 348.46 |
| 661.95 | 348.46 | 663.11 | 348.45 | 664.08 | 348.45 | 664.99 | 348.44 | 666.41 | 348.41 |
| 669.5 | 348.36 | 670.33 | 348.35 | 671.95 | 348.32 | 673.38 | 348.3 | 675.39 | 348.26 |
| 675.84 | 348.26 | 678.86 | 348.21 | 680.11 | 348.18 | 681.05 | 348.18 | 681.4 | 348.19 |
| 681.71 | 348.19 | 681.88 | 348.2 | 682.19 | 348.2 | 682.4 | 348.19 | 682.66 | 348.19 |
| 683.19 | 348.17 | 683.44 | 348.17 | 683.75 | 348.16 | 683.81 | 348.15 | 684.03 | 348.15 |
| 684.46 | 348.14 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.88 | .04 | 512.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.88 | 512.66 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 2018.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 342.05 | 1.74 | 342.03 | 4.9 | 342 | 6.79 | 341.98 | 7.39 | 341.97 |
| 12.67 | 341.92 | 14.03 | 341.9 | 14.52 | 341.9 | 14.92 | 341.91 | 15.18 | 341.92 |
| 15.29 | 341.93 | 15.3 | 341.95 | 15.44 | 341.95 | 15.86 | 341.97 | 16 | 341.97 |
| 16.98 | 341.96 | 17.85 | 341.96 | 18.36 | 341.95 | 18.75 | 341.93 | 19.08 | 341.93 |
| 19.65 | 341.92 | 20.39 | 341.92 | 21.06 | 341.91 | 21.83 | 341.91 | 24.37 | 341.88 |
| 27.05 | 341.86 | 28.05 | 341.84 | 30.93 | 341.82 | 32.27 | 341.8 | 35.32 | 341.8 |
| 36.41 | 341.81 | 39.03 | 341.83 | 40.52 | 341.85 | 42.71 | 341.89 | 44.28 | 341.92 |
| 44.88 | 341.93 | 45.35 | 341.93 | 45.59 | 341.94 | 46.32 | 341.95 | 47.32 | 341.95 |
| 47.66 | 341.96 | 48.84 | 341.97 | 49.29 | 341.98 | 50.36 | 341.98 | 50.75 | 341.99 |
| 52.04 | 341.99 | 52.65 | 342 | 53.53 | 342 | 53.75 | 342.01 | 53.97 | 342.01 |
| 54.22 | 342.02 | 54.49 | 342.02 | 54.7 | 342.03 | 54.8 | 342.05 | 57.71 | 342.05 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 58.56 | 342.04 | 59.12 | 342.04 | 59.96 | 342.03 | 60.87 | 342.03 | 61.17 | 342.01 |
| 61.31 | 342.01 | 61.55 | 342 | 61.91 | 342 | 61.97 | 341.99 | 62.43 | 341.99 |
| 62.74 | 341.98 | 63.17 | 341.96 | 63.71 | 341.93 | 65.73 | 341.87 | 66.49 | 341.85 |
| 67.45 | 341.82 | 67.95 | 341.82 | 69.11 | 341.8 | 70.37 | 341.77 | 71.72 | 341.75 |
| 73.51 | 341.71 | 74.93 | 341.7 | 79.81 | 341.59 | 81.58 | 341.56 | 82.45 | 341.54 |
| 84.96 | 341.51 | 86.39 | 341.5 | 87.57 | 341.49 | 90.4 | 341.47 | 91.22 | 341.46 |
| 91.94 | 341.46 | 92.58 | 341.47 | 92.86 | 341.48 | 93.14 | 341.48 | 93.57 | 341.49 |
| 94.24 | 341.5 | 95.15 | 341.51 | 96.11 | 341.54 | 96.26 | 341.54 | 96.48 | 341.55 |
| 98.41 | 341.55 | 101.93 | 341.56 | 103.19 | 341.57 | 103.78 | 341.57 | 105.81 | 341.56 |
| 109.58 | 341.53 | 110.59 | 341.54 | 111.54 | 341.53 | 115.05 | 341.53 | 116.07 | 341.51 |
| 117.84 | 341.47 | 117.97 | 341.46 | 119.88 | 341.41 | 120.47 | 341.39 | 122.52 | 341.34 |
| 123.52 | 341.31 | 124.07 | 341.29 | 124.28 | 341.29 | 124.85 | 341.27 | 125.73 | 341.25 |
| 126.02 | 341.24 | 126.17 | 341.23 | 126.91 | 341.2 | 127.63 | 341.2 | 128.08 | 341.18 |
| 128.9 | 341.13 | 129.3 | 341.11 | 129.63 | 341.13 | 130.94 | 341.2 | 131.16 | 341.21 |
| 131.76 | 341.23 | 132.83 | 341.27 | 133.2 | 341.28 | 133.73 | 341.3 | 134.36 | 341.32 |
| 134.62 | 341.34 | 135.2 | 341.4 | 135.59 | 341.43 | 135.92 | 341.45 | 136.33 | 341.46 |
| 136.89 | 341.47 | 139.44 | 341.47 | 141.75 | 341.45 | 142.44 | 341.44 | 143.32 | 341.41 |
| 143.48 | 341.41 | 144.89 | 341.43 | 145.73 | 341.43 | 146.76 | 341.44 | 149.66 | 341.44 |
| 151.3 | 341.43 | 153.84 | 341.41 | 157.02 | 341.39 | 160.17 | 341.39 | 165.78 | 341.37 |
| 166.78 | 341.37 | 167.52 | 341.36 | 169.12 | 341.36 | 169.87 | 341.35 | 170.66 | 341.35 |
| 171.44 | 341.34 | 172.75 | 341.34 | 173.61 | 341.33 | 173.87 | 341.33 | 174.34 | 341.32 |
| 175.09 | 341.32 | 175.9 | 341.31 | 176.47 | 341.31 | 178.06 | 341.3 | 179.26 | 341.3 |
| 179.51 | 341.29 | 181.86 | 341.29 | 183.96 | 341.28 | 184.78 | 341.27 | 187.01 | 341.27 |
| 188.64 | 341.26 | 190.48 | 341.25 | 193.59 | 341.22 | 196 | 341.2 | 196.42 | 341.19 |
| 197.96 | 341.12 | 198.78 | 341.08 | 200.19 | 341 | 201.02 | 340.96 | 202.65 | 340.87 |
| 203.89 | 340.81 | 206.1 | 340.69 | 209.37 | 340.52 | 211.86 | 340.39 | 214.86 | 340.22 |
| 216.3 | 340.15 | 218.66 | 340.07 | 219.81 | 340.03 | 221.05 | 339.98 | 222.43 | 339.94 |
| 222.61 | 339.93 | 223.85 | 339.88 | 224.26 | 339.86 | 224.46 | 339.86 | 224.73 | 339.85 |
| 224.87 | 339.84 | 225.04 | 339.84 | 225.17 | 339.83 | 225.62 | 339.83 | 225.81 | 339.82 |
| 226.07 | 339.82 | 227.12 | 339.79 | 227.57 | 339.78 | 227.93 | 339.78 | 228 | 339.77 |
| 228.31 | 339.77 | 228.38 | 339.76 | 228.54 | 339.76 | 228.61 | 339.75 | 228.85 | 339.75 |
| 228.9 | 339.74 | 229.12 | 339.73 | 229.32 | 339.73 | 230.33 | 339.69 | 230.56 | 339.68 |
| 231.14 | 339.66 | 231.26 | 339.66 | 231.99 | 339.63 | 232.17 | 339.63 | 232.61 | 339.61 |
| 232.82 | 339.61 | 233.01 | 339.6 | 235.62 | 339.5 | 236.06 | 339.48 | 236.19 | 339.48 |
| 237.3 | 339.44 | 237.65 | 339.42 | 237.83 | 339.42 | 238.11 | 339.41 | 238.14 | 339.4 |
| 238.44 | 339.4 | 238.46 | 339.39 | 238.76 | 339.39 | 239.63 | 339.37 | 239.97 | 339.36 |
| 240.21 | 339.36 | 240.45 | 339.35 | 241.28 | 339.31 | 241.64 | 339.3 | 242.06 | 339.28 |
| 242.28 | 339.28 | 242.39 | 339.27 | 242.67 | 339.26 | 242.89 | 339.26 | 243.67 | 339.24 |
| 243.87 | 339.23 | 244.66 | 339.22 | 245.06 | 339.21 | 245.64 | 339.2 | 245.9 | 339.19 |
| 246.36 | 339.16 | 246.46 | 339.16 | 247.45 | 339.1 | 247.88 | 339.08 | 249.77 | 338.98 |
| 250.22 | 338.95 | 251.06 | 338.91 | 251.19 | 338.9 | 251.47 | 338.89 | 255.52 | 338.64 |
| 257.77 | 338.51 | 258.4 | 338.47 | 258.51 | 338.46 | 259.98 | 338.38 | 261.52 | 338.29 |
| 261.6 | 338.29 | 262.06 | 338.26 | 263.66 | 338.18 | 268.59 | 338.18 | 269.15 | 338.19 |
| 269.3 | 338.2 | 269.85 | 338.2 | 270.14 | 338.21 | 270.77 | 338.21 | 271.13 | 338.22 |
| 271.63 | 338.23 | 273.41 | 338.26 | 278.13 | 338.35 | 282.21 | 338.42 | 296.12 | 338.67 |
| 309.81 | 338.92 | 321.95 | 339.17 | 323.46 | 339.15 | 324.9 | 339.15 | 329.17 | 339.11 |
| 335.75 | 339.04 | 337.3 | 339.03 | 339.28 | 339.03 | 341.06 | 339.02 | 341.59 | 339.01 |
| 341.77 | 339.01 | 342.08 | 339.02 | 342.37 | 339.02 | 342.86 | 339.01 | 343.06 | 339 |
| 343.7 | 339 | 348.36 | 338.91 | 354.37 | 338.78 | 358.2 | 338.69 | 359.28 | 338.67 |
| 360.66 | 338.64 | 362.45 | 338.6 | 364.15 | 338.55 | 365.12 | 338.51 | 365.59 | 338.5 |
| 366.1 | 338.48 | 366.23 | 338.47 | 368.36 | 338.47 | 369.58 | 338.49 | 371.27 | 338.5 |
| 373.3 | 338.52 | 374.48 | 338.52 | 376.2 | 338.56 | 377.25 | 338.61 | 377.89 | 338.63 |
| 378.56 | 338.66 | 380.41 | 338.73 | 382.86 | 338.83 | 388.39 | 339.05 | 391.23 | 339.17 |
| 391.89 | 339.21 | 393.53 | 339.25 | 394.57 | 339.3 | 396.2 | 339.35 | 396.77 | 339.37 |
| 399.5 | 339.44 | 400.94 | 339.47 | 404.5 | 339.52 | 405.93 | 339.55 | 406.65 | 339.55 |
| 408.4 | 339.52 | 409.99 | 339.51 | 411.73 | 339.5 | 413.14 | 339.5 | 414.8 | 339.52 |
| 415.29 | 339.54 | 428.38 | 339.61 | 429.37 | 339.62 | 440.93 | 339.66 | 442.98 | 339.59 |
| 445.7 | 339.52 | 451.41 | 339.35 | 455.58 | 339.22 | 462.28 | 339.13 | 467.81 | 339.07 |
| 470.98 | 339.05 | 473.95 | 339.01 | 476.28 | 338.97 | 480.17 | 338.89 | 481.42 | 338.87 |
| 484.68 | 338.84 | 486.42 | 338.83 | 488.53 | 338.81 | 493.41 | 338.79 | 505.69 | 338.79 |
| 506.28 | 338.81 | 507.39 | 338.85 | 508.92 | 338.91 | 510.96 | 339.04 | 511.36 | 339.08 |
| 513.75 | 339.23 | 513.83 | 339.24 | 514.64 | 340.19 | 514.94 | 340.53 | 515.5 | 341.14 |
| 520.95 | 341.55 | 524.46 | 341.81 | 524.78 | 341.83 | 525.58 | 341.8 | 527.4 | 341.93 |
| 528.84 | 341.95 | 529.96 | 342.04 | 531.22 | 342.15 | 532.03 | 342.19 | 534.56 | 342.31 |
| 535.05 | 342.33 | 535.85 | 342.37 | 536.33 | 342.4 | 547.17 | 343.09 | 548.3 | 343.16 |
| 548.88 | 343.19 | 549.56 | 343.23 | 549.92 | 343.26 | 550.43 | 343.29 | 551.32 | 343.35 |
| 551.59 | 343.37 | 552.11 | 343.4 | 553.68 | 343.51 | 554.28 | 343.54 | 554.67 | 343.57 |
| 555.24 | 343.6 | 556.21 | 343.66 | 557.39 | 343.74 | 557.58 | 343.75 | 562.5 | 344.06 |
| 562.98 | 344.1 | 563.53 | 344.13 | 563.77 | 344.15 | 566.64 | 344.44 | 568.62 | 344.61 |
| 569.21 | 344.65 | 571.32 | 344.85 | 572.2 | 344.94 | 572.41 | 344.96 | 572.59 | 344.96 |
| 573.58 | 344.97 | 574.22 | 345 | 574.42 | 345 | 575.33 | 344.99 | 577.43 | 344.95 |
| 578.18 | 344.97 | 579 | 345 | 579.95 | 345.07 | 580.87 | 345.17 | 581.47 | 345.26 |
| 582.44 | 345.42 | 582.97 | 345.5 | 583.42 | 345.58 | 583.79 | 345.65 | 584.04 | 345.69 |
| 584.36 | 345.73 | 584.61 | 345.77 | 585.32 | 345.86 | 585.95 | 345.95 | 586.88 | 346.08 |
| 587.32 | 346.14 | 588.48 | 346.31 | 593.24 | 347.01 | 593.89 | 347.11 | 602.02 | 347.96 |
| 603.19 | 348.09 | 605.47 | 348.1 | 607.89 | 348.11 | 609.25 | 348.13 | 611.6 | 348.16 |
| 612.33 | 348.17 | 612.79 | 348.18 | 613.79 | 348.19 | 619.08 | 348.26 | 619.91 | 348.27 |
| 621.43 | 348.29 | 622.68 | 348.3 | 624.24 | 348.32 | 625.4 | 348.33 | 625.9 | 348.33 |
| 627.8 | 348.35 | 627.96 | 348.35 | 628.51 | 348.36 | 628.99 | 348.36 | 629.57 | 348.37 |
| 630.02 | 348.37 | 630.92 | 348.38 | 631.82 | 348.4 | 632.96 | 348.41 | 633.79 | 348.43 |
| 634.51 | 348.43 | 634.72 | 348.44 | 635.21 | 348.44 | 638.38 | 348.48 | 639.64 | 348.49 |
| 640.9 | 348.48 | 649.13 | 348.39 | 652.49 | 348.35 | 652.58 | 348.35 | 656.48 | 348.3 |
| 657.03 | 348.29 | 657.17 | 348.29 | 661.25 | 348.26 | 661.77 | 348.25 | 662.74 | 348.25 |
| 663.94 | 348.24 | 665.75 | 348.22 | 667.15 | 348.19 | 670.21 | 348.14 | 671.03 | 348.12 |
| 672.63 | 348.09 | 674.05 | 348.06 | 676.04 | 348.03 | 676.35 | 348.02 | 676.49 | 348.02 |
| 679.47 | 347.96 | 680.72 | 347.94 | 681 | 347.93 | 681.65 | 347.93 | 681.99 | 347.94 |
| 682.29 | 347.94 | 682.47 | 347.95 | 682.77 | 347.95 | 682.98 | 347.94 | 683.23 | 347.94 |
| 683.76 | 347.92 | 684.01 | 347.92 | 684.31 | 347.91 | 684.37 | 347.9 | 684.6 | 347.9 |
| 685.02 | 347.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.86 | .04 | 514.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.86 | 514.94 | 17.84 | 19.81 | 21.78 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1998.23

INPUT
Description:
Station Elevation Data num= 331

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 341.79 | 1.73999 | 341.776 | .790039 | 341.7314 | .03003 | 341.6614 | .52002 | 341.66 |
| 14.92004 | 341.6715 | .17999 | 341.6815 | .29004 | 341.6915 | .29999 | 341.71 | 15.44 | 341.71 |
| 15.71002 | 341.7215 | .86005 | 341.73 | 16 | 341.7317 | .85004 | 341.7218 | .36005 | 341.71 |
| 18.59003 | 341.7 | 18.75 | 341.6919 | .08002 | 341.6919 | .65002 | 341.6820 | .39001 | 341.68 |
| 25.73999 | 341.6330 | .92999 | 341.5832 | .27002 | 341.5733 | .64001 | 341.5734 | .41003 | 341.57 |
| 35.32001 | 341.5736 | .41003 | 341.5837 | .66003 | 341.5939 | .03003 | 341.640 | .52002 | 341.63 |
| 45.29004 | 341.7246 | .71002 | 341.74 | 47.31 | 341.7449 | .47003 | 341.7750 | .10004 | 341.77 |
| 50.84003 | 341.7851 | .48004 | 341.7852 | .03003 | 341.7852 | .64001 | 341.7953 | .15002 | 341.8 |
| 53.52002 | 341.853 | .73999 | 341.8153 | .96002 | 341.8154 | .21002 | 341.8254 | .48004 | 341.82 |
| 54.60004 | 341.83 | 54.69 | 341.8354 | .76001 | 341.8454 | .79004 | 341.8555 | .64001 | 341.85 |
| 56.45001 | 341.8556 | .61005 | 341.8557 | .70001 | 341.8559 | .11005 | 341.8459 | .95001 | 341.83 |
| 60.17999 | 341.8360 | .53003 | 341.83 | 60.69 | 341.8360 | .86005 | 341.8361 | .26001 | 341.81 |
| 61.70001 | 341.862 | .42004 | 341.7962 | .73004 | 341.78 | 62.88 | 341.7763 | .79999 | 341.73 |
| 64.03003 | 341.7265 | .72003 | 341.6766 | .48004 | 341.65 | 67.44 | 341.62 | 67.94 | 341.62 |
| 69.10004 | 341.670 | .36005 | 341.5771 | .71002 | 341.55 | 73.5 | 341.5174 | .92004 | 341.5 |
| 79.79999 | 341.3881 | .57001 | 341.3583 | .32001 | 341.3284 | .95001 | 341.3 | 86.38 | 341.29 |
| 87.56 | 341.2890 | .39001 | 341.2691 | .21002 | 341.2691 | .92999 | 341.2692 | .57001 | 341.27 |
| 93.13 | 341.2895 | .09003 | 341.3195 | .78003 | 341.3396 | .10004 | 341.3496 | .47003 | 341.35 |
| 97.97003 | 341.3598 | .40002 | 341.35 | 101.92 | 341.37 | 103.77 | 341.38 | 105.72 | 341.37 |
| 109.57 | 341.34 | 110.58 | 341.35 | 112.02 | 341.34 | 113.05 | 341.34 | 114.57 | 341.34 |
| 115.04 | 341.34 | 116.06 | 341.32 | 117.83 | 341.28 | 124.05 | 341.1 | 126 | 341.04 |
| 126.89 | 341 | 127.61 | 341 | 128.23 | 340.96 | 129.28 | 340.9 | 130.37 | 340.96 |
| 131.14 | 341 | 134.34 | 341.11 | 134.6 | 341.13 | 135.57 | 341.23 | 135.9 | 341.25 |
| 136.31 | 341.26 | 137.2 | 341.27 | 138.03 | 341.27 | 139.42 | 341.27 | 141.73 | 341.25 |
| 142.42 | 341.24 | 143.3 | 341.21 | 143.46 | 341.21 | 144.87 | 341.23 | 145.71 | 341.23 |
| 146.74 | 341.24 | 148.01 | 341.24 | 149.64 | 341.24 | 157 | 341.19 | 157.17 | 341.19 |
| 165.76 | 341.17 | 165.92 | 341.17 | 179.24 | 341.1 | 186.99 | 341.07 | 190.46 | 341.05 |
| 193.57 | 341.02 | 195.98 | 341 | 196.36 | 340.99 | 196.4 | 340.99 | 197.94 | 340.92 |
| 200.17 | 340.79 | 214.83 | 340 | 218.08 | 339.89 | 222.88 | 339.73 | 223.71 | 339.7 |
| 226.05 | 339.62 | 228.73 | 339.51 | 236.27 | 339.21 | 241.26 | 339 | 249.54 | 338.45 |
| 256.49 | 338 | 257.55 | 338 | 258.9 | 338 | 260.11 | 338 | 260.38 | 338 |
| 261.11 | 338 | 261.42 | 338 | 262 | 338.02 | 262.16 | 338.03 | 262.26 | 338.03 |
| 262.73 | 338.03 | 263.16 | 338.04 | 263.68 | 338.04 | 264.06 | 338.05 | 264.57 | 338.06 |
| 266.42 | 338.09 | 271.32 | 338.18 | 275.56 | 338.25 | 290 | 338.51 | 316.83 | 339 |
| 318.39 | 338.97 | 318.89 | 338.97 | 319.89 | 338.97 | 331.16 | 338.84 | 332.77 | 338.83 |
| 334.82 | 338.83 | 336.67 | 338.82 | 337.22 | 338.81 | 337.41 | 338.81 | 337.73 | 338.82 |
| 338.03 | 338.82 | 338.54 | 338.81 | 338.75 | 338.8 | 338.84 | 338.8 | 339 | 338.8 |
| 339.41 | 338.8 | 350.49 | 338.56 | 354.47 | 338.47 | 357.02 | 338.41 | 358.88 | 338.37 |
| 360.65 | 338.32 | 361.65 | 338.28 | 362.14 | 338.26 | 362.67 | 338.24 | 362.81 | 338.23 |
| 363.02 | 338.23 | 363.35 | 338.23 | 363.76 | 338.23 | 363.91 | 338.23 | 364.2 | 338.23 |
| 364.62 | 338.23 | 365.02 | 338.23 | 366.28 | 338.25 | 368.04 | 338.26 | 370.15 | 338.28 |
| 370.51 | 338.28 | 371.22 | 338.28 | 371.37 | 338.28 | 371.87 | 338.29 | 372.26 | 338.3 |
| 372.71 | 338.31 | 373.16 | 338.33 | 374.25 | 338.38 | 374.91 | 338.4 | 377.53 | 338.5 |
| 380.07 | 338.61 | 385.82 | 338.84 | 388.76 | 338.96 | 389.45 | 339 | 391.15 | 339.05 |
| 392.23 | 339.1 | 394.52 | 339.17 | 397.35 | 339.24 | 398.85 | 339.27 | 402.54 | 339.33 |
| 404.03 | 339.36 | 404.32 | 339.36 | 404.78 | 339.36 | 406.59 | 339.33 | 408.24 | 339.31 |
| 410.05 | 339.3 | 410.86 | 339.3 | 411.52 | 339.3 | 412.4 | 339.31 | 413.24 | 339.32 |
| 413.75 | 339.34 | 428.37 | 339.42 | 440.37 | 339.46 | 442.5 | 339.39 | 445.32 | 339.31 |
| 451.25 | 339.13 | 455.58 | 339 | 462.54 | 338.9 | 465.42 | 338.87 | 468.28 | 338.84 |
| 471.58 | 338.81 | 474.66 | 338.77 | 477.08 | 338.73 | 481.12 | 338.64 | 482.42 | 338.62 |
| 483.51 | 338.61 | 485.8 | 338.59 | 487.61 | 338.58 | 489.8 | 338.56 | 492.3 | 338.55 |
| 494.87 | 338.54 | 497.28 | 338.53 | 499.38 | 338.53 | 502.92 | 338.53 | 505.79 | 338.53 |
| 506.84 | 338.53 | 507.62 | 338.53 | 508.23 | 338.55 | 509.38 | 338.59 | 510.97 | 338.66 |
| 513.09 | 338.79 | 513.51 | 338.84 | 515.99 | 338.99 | 516.07 | 339 | 516.12 | 339.07 |
| 516.91 | 340 | 517.22 | 340.36 | 517.78 | 341 | 526.65 | 341.67 | 526.96 | 341.69 |
| 527.75 | 341.65 | 529.56 | 341.78 | 530.98 | 341.8 | 533.34 | 342 | 537.13 | 342.17 |
| 538.4 | 342.24 | 549.94 | 343 | 551.85 | 343.11 | 552.35 | 343.14 | 559.43 | 343.6 |
| 565.56 | 344 | 568.4 | 344.3 | 569.9 | 344.43 | 570.94 | 344.51 | 573.9 | 344.8 |
| 574.11 | 344.82 | 574.29 | 344.82 | 575.2 | 344.82 | 575.27 | 344.82 | 575.9 | 344.85 |
| 577 | 344.84 | 579.08 | 344.79 | 579.82 | 344.8 | 580.63 | 344.83 | 581.57 | 344.9 |
| 582.48 | 345 | 584.62 | 345.35 | 585.37 | 345.5 | 588.85 | 346 | 594.73 | 346.9 |
| 595.37 | 347 | 604.41 | 347.98 | 604.58 | 348 | 604.59 | 348 | 604.64 | 348 |
| 604.65 | 348 | 609.23 | 348 | 626.56 | 348.19 | 640.66 | 348.32 | 653.47 | 348.15 |
| 657.33 | 348.1 | 657.87 | 348.09 | 664.66 | 348.02 | 664.71 | 348.02 | 666.5 | 348 |
| 681.32 | 347.69 | 681.6 | 347.68 | 681.88 | 347.68 | 682.12 | 347.68 | 682.58 | 347.69 |
| 683.05 | 347.7 | 683.32 | 347.7 | 683.58 | 347.69 | 683.81 | 347.69 | 684.14 | 347.68 |
| 685.58 | 347.63 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 214.83 | .04 | 517.22 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 214.83 | 517.22 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1978.49*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 341.54 | .58 | 341.53 | 1.43 | 341.53 | 1.73 | 341.52 | 2.47 | 341.52 |
| 3.43 | 341.51 | 6.74 | 341.49 | 9.1 | 341.46 | 13.92 | 341.42 | 14.41 | 341.42 |
| 14.8 | 341.43 | 15.06 | 341.44 | 15.18 | 341.46 | 15.32 | 341.46 | 15.74 | 341.48 |
| 17.08 | 341.48 | 18.22 | 341.46 | 18.61 | 341.44 | 18.93 | 341.44 | 19.5 | 341.43 |
| 20.23 | 341.43 | 22.88 | 341.4 | 25.54 | 341.38 | 26.59 | 341.37 | 28.71 | 341.34 |
| 29.55 | 341.34 | 30.26 | 341.33 | 30.69 | 341.32 | 31.45 | 341.32 | 32.02 | 341.31 |
| 35.38 | 341.31 | 36.11 | 341.32 | 36.67 | 341.32 | 36.97 | 341.33 | 37.7 | 341.33 |
| 38.73 | 341.34 | 43.64 | 341.44 | 44.52 | 341.45 | 45.38 | 341.47 | 46.3 | 341.48 |
| 46.94 | 341.48 | 47.56 | 341.49 | 49.09 | 341.51 | 49.71 | 341.51 | 50.45 | 341.52 |
| 52.21 | 341.52 | 52.23 | 341.53 | 53.11 | 341.53 | 53.32 | 341.54 | 53.54 | 341.54 |
| 53.79 | 341.55 | 54.06 | 341.55 | 54.27 | 341.56 | 54.37 | 341.58 | 57.25 | 341.58 |
| 58.14 | 341.57 | 58.65 | 341.57 | 59.49 | 341.56 | 60.39 | 341.56 | 60.71 | 341.54 |
| 61.03 | 341.53 | 61.22 | 341.53 | 61.47 | 341.52 | 61.94 | 341.52 | 62.25 | 341.51 |
| 62.39 | 341.5 | 63.54 | 341.45 | 64.31 | 341.42 | 64.66 | 341.41 | 65.21 | 341.39 |
| 65.97 | 341.37 | 66.92 | 341.34 | 67.41 | 341.34 | 68.57 | 341.32 | 68.82 | 341.31 |
| 69.82 | 341.29 | 71.16 | 341.27 | 71.42 | 341.26 | 72.93 | 341.23 | 74.34 | 341.21 |
| 78.41 | 341.11 | 78.76 | 341.1 | 78.95 | 341.1 | 79.14 | 341.09 | 80.6 | 341.09 |
| 80.94 | 341.08 | 81.26 | 341.08 | 82.16 | 341.06 | 82.68 | 341.05 | 84.29 | 341.03 |
| 85.71 | 341.02 | 86.88 | 341.01 | 89.69 | 340.99 | 91.22 | 340.99 | 92.41 | 341.01 |
| 95.04 | 341.05 | 95.72 | 341.07 | 97.64 | 341.07 | 100.13 | 341.08 | 101.02 | 341.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 101.84 | 341.09 | 102.87 | 341.1 | 104.78 | 341.1 | 104.9 | 341.09 | 105.37 | 341.09 |
| 106.53 | 341.08 | 107.29 | 341.08 | 108.16 | 341.07 | 109.14 | 341.07 | 109.73 | 341.08 |
| 110.23 | 341.07 | 112.18 | 341.07 | 113.68 | 341.06 | 114.15 | 341.06 | 115.16 | 341.05 |
| 115.44 | 341.04 | 116.92 | 341.01 | 117.61 | 340.99 | 118.23 | 340.97 | 118.76 | 340.96 |
| 119.24 | 340.94 | 121.48 | 340.88 | 122.96 | 340.83 | 123.09 | 340.83 | 123.86 | 340.8 |
| 125.03 | 340.77 | 125.91 | 340.73 | 126.62 | 340.73 | 127.24 | 340.69 | 127.66 | 340.67 |
| 128.28 | 340.63 | 129.15 | 340.68 | 130.13 | 340.73 | 132.15 | 340.79 | 132.77 | 340.81 |
| 133.3 | 340.82 | 133.67 | 340.85 | 134.04 | 340.89 | 134.18 | 340.91 | 134.55 | 340.94 |
| 134.85 | 340.96 | 135.26 | 340.97 | 136.02 | 340.97 | 136.14 | 340.98 | 136.96 | 340.97 |
| 138.34 | 340.97 | 140.31 | 340.96 | 140.63 | 340.95 | 141.32 | 340.94 | 142.19 | 340.92 |
| 142.98 | 340.92 | 143.68 | 340.93 | 143.75 | 340.94 | 145.12 | 340.94 | 145.61 | 340.95 |
| 148.48 | 340.95 | 151.58 | 340.93 | 155.17 | 340.9 | 155.96 | 340.9 | 157.39 | 340.89 |
| 159.95 | 340.89 | 164.48 | 340.87 | 164.64 | 340.87 | 177.85 | 340.8 | 180.42 | 340.79 |
| 181.65 | 340.79 | 181.83 | 340.78 | 182.26 | 340.78 | 185.54 | 340.77 | 188.99 | 340.74 |
| 192.07 | 340.71 | 194.47 | 340.69 | 194.88 | 340.68 | 196.41 | 340.62 | 196.71 | 340.6 |
| 198.62 | 340.49 | 203.53 | 340.24 | 205.18 | 340.16 | 207.15 | 340.06 | 207.29 | 340.06 |
| 207.59 | 340.04 | 208.9 | 339.98 | 210.1 | 339.92 | 211.58 | 339.84 | 213.17 | 339.76 |
| 213.31 | 339.76 | 214.2 | 339.72 | 214.93 | 339.7 | 215.31 | 339.68 | 216.08 | 339.65 |
| 216.76 | 339.62 | 217.21 | 339.61 | 217.49 | 339.6 | 219.59 | 339.55 | 219.85 | 339.55 |
| 220.62 | 339.53 | 221.08 | 339.52 | 221.67 | 339.5 | 222.02 | 339.5 | 222.11 | 339.49 |
| 222.44 | 339.49 | 222.97 | 339.47 | 223.57 | 339.46 | 223.74 | 339.46 | 223.88 | 339.45 |
| 224.06 | 339.45 | 224.17 | 339.44 | 224.98 | 339.42 | 225.57 | 339.41 | 226.21 | 339.41 |
| 226.35 | 339.4 | 226.52 | 339.4 | 226.63 | 339.39 | 226.83 | 339.39 | 228.4 | 339.34 |
| 229.23 | 339.32 | 229.67 | 339.3 | 231.66 | 339.26 | 231.97 | 339.25 | 232.44 | 339.24 |
| 233.06 | 339.22 | 233.29 | 339.22 | 233.77 | 339.21 | 234.1 | 339.21 | 234.28 | 339.2 |
| 235.9 | 339.15 | 237.1 | 339.12 | 237.66 | 339.1 | 237.8 | 339.1 | 237.91 | 339.09 |
| 238.28 | 339.07 | 238.61 | 339.07 | 238.78 | 339.06 | 239.51 | 339.05 | 239.72 | 339.05 |
| 240.14 | 339.03 | 240.49 | 339.02 | 241.21 | 338.98 | 241.54 | 338.97 | 241.7 | 338.95 |
| 242.24 | 338.93 | 242.73 | 338.92 | 243.02 | 338.91 | 244.05 | 338.89 | 245.02 | 338.86 |
| 246.78 | 338.81 | 247.57 | 338.79 | 248.34 | 338.76 | 249.94 | 338.69 | 251.65 | 338.61 |
| 252.1 | 338.59 | 252.84 | 338.55 | 253.39 | 338.53 | 254.33 | 338.48 | 256.42 | 338.39 |
| 256.99 | 338.36 | 258.21 | 338.3 | 258.56 | 338.28 | 259.35 | 338.25 | 259.55 | 338.24 |
| 260.48 | 338.2 | 260.54 | 338.19 | 260.69 | 338.19 | 262.44 | 338.11 | 263.2 | 338.07 |
| 264.34 | 338.02 | 264.73 | 337.99 | 265.3 | 337.96 | 265.41 | 337.95 | 265.86 | 337.93 |
| 266.21 | 337.91 | 266.83 | 337.88 | 267.09 | 337.87 | 267.49 | 337.84 | 267.64 | 337.84 |
| 267.96 | 337.82 | 268.11 | 337.82 | 268.35 | 337.8 | 268.5 | 337.8 | 268.6 | 337.79 |
| 273.3 | 337.79 | 273.85 | 337.81 | 274 | 337.82 | 274.54 | 337.82 | 274.95 | 337.83 |
| 275.44 | 337.83 | 276.29 | 337.85 | 278.05 | 337.87 | 282.7 | 337.96 | 284.31 | 337.99 |
| 286.73 | 338.03 | 300.45 | 338.27 | 325.93 | 338.73 | 327.41 | 338.71 | 329.02 | 338.71 |
| 335.61 | 338.63 | 339.54 | 338.59 | 341.07 | 338.58 | 343.02 | 338.58 | 344.83 | 338.57 |
| 345.3 | 338.56 | 345.48 | 338.56 | 345.67 | 338.57 | 346.5 | 338.57 | 346.55 | 338.56 |
| 347.38 | 338.56 | 348.17 | 338.54 | 349.89 | 338.51 | 357.9 | 338.34 | 360.08 | 338.29 |
| 361.69 | 338.26 | 364.11 | 338.2 | 364.24 | 338.2 | 365.87 | 338.16 | 367.56 | 338.12 |
| 368.97 | 338.06 | 369.47 | 338.04 | 369.61 | 338.03 | 369.81 | 338.04 | 371.71 | 338.04 |
| 372.9 | 338.06 | 374.58 | 338.07 | 375.45 | 338.08 | 376.58 | 338.09 | 377.74 | 338.09 |
| 378.21 | 338.1 | 379.01 | 338.12 | 379.44 | 338.14 | 380.47 | 338.18 | 381.1 | 338.2 |
| 383.59 | 338.3 | 386 | 338.4 | 391.46 | 338.63 | 394.26 | 338.74 | 394.91 | 338.78 |
| 396.53 | 338.83 | 397.55 | 338.88 | 399.73 | 338.94 | 402.42 | 339.01 | 403.84 | 339.04 |
| 407.35 | 339.1 | 408.76 | 339.13 | 409.47 | 339.13 | 411.19 | 339.1 | 412.76 | 339.09 |
| 414.48 | 339.08 | 415.88 | 339.08 | 417.51 | 339.1 | 418 | 339.12 | 421.24 | 339.14 |
| 423.87 | 339.15 | 426.24 | 339.17 | 429.69 | 339.19 | 431.88 | 339.2 | 432.26 | 339.2 |
| 436.23 | 339.22 | 437.38 | 339.22 | 439.94 | 339.23 | 443.28 | 339.24 | 445.31 | 339.17 |
| 447.98 | 339.1 | 448.07 | 339.09 | 450.57 | 339.02 | 453.62 | 338.93 | 457.73 | 338.81 |
| 464.34 | 338.71 | 467.08 | 338.69 | 469.79 | 338.66 | 471.19 | 338.65 | 472.93 | 338.63 |
| 475.85 | 338.6 | 478.15 | 338.56 | 481.99 | 338.48 | 483.23 | 338.46 | 486.44 | 338.43 |
| 488.16 | 338.42 | 490.24 | 338.4 | 492.61 | 338.39 | 495.05 | 338.39 | 497.34 | 338.38 |
| 507.16 | 338.38 | 507.74 | 338.4 | 508.83 | 338.44 | 510.34 | 338.5 | 511.99 | 338.6 |
| 512.36 | 338.63 | 512.76 | 338.67 | 513.85 | 338.74 | 515.11 | 338.81 | 515.19 | 338.82 |
| 515.24 | 338.89 | 515.99 | 339.76 | 516.28 | 340.1 | 516.85 | 340.71 | 517.42 | 340.75 |
| 517.9 | 340.78 | 522.79 | 341.12 | 523.57 | 341.18 | 525.07 | 341.29 | 525.86 | 341.35 |
| 526.18 | 341.36 | 526.98 | 341.33 | 528.82 | 341.46 | 530.26 | 341.48 | 532.66 | 341.67 |
| 536.51 | 341.84 | 537.8 | 341.91 | 544.89 | 342.36 | 545.46 | 342.4 | 545.51 | 342.4 |
| 549.39 | 342.65 | 549.52 | 342.65 | 550.09 | 342.68 | 551.97 | 342.79 | 559.16 | 343.23 |
| 559.56 | 343.26 | 560.62 | 343.32 | 563.25 | 343.48 | 563.92 | 343.52 | 565.39 | 343.61 |
| 568.26 | 343.9 | 568.28 | 343.9 | 569.8 | 344.03 | 570.34 | 344.07 | 570.86 | 344.1 |
| 573 | 344.3 | 574.08 | 344.4 | 575.26 | 344.4 | 575.9 | 344.43 | 576.26 | 344.43 |
| 576.73 | 344.42 | 577.04 | 344.42 | 577.57 | 344.41 | 578.84 | 344.38 | 579.09 | 344.38 |
| 579.13 | 344.37 | 579.88 | 344.39 | 580.7 | 344.42 | 581.66 | 344.48 | 582.58 | 344.58 |
| 584.76 | 344.91 | 585.52 | 345.06 | 586.68 | 345.21 | 587.09 | 345.27 | 587.8 | 345.36 |
| 588.98 | 345.52 | 595.03 | 346.38 | 595.66 | 346.47 | 595.68 | 346.47 | 597.07 | 346.61 |
| 597.29 | 346.63 | 597.4 | 346.65 | 597.67 | 346.67 | 599.04 | 346.81 | 601.55 | 347.07 |
| 604.86 | 347.41 | 605.04 | 347.43 | 605.11 | 347.43 | 609.76 | 347.45 | 610.15 | 347.45 |
| 617.5 | 347.55 | 618.37 | 347.57 | 622.79 | 347.65 | 623.95 | 347.67 | 625.06 | 347.7 |
| 627.37 | 347.74 | 628.11 | 347.75 | 629.33 | 347.76 | 631.62 | 347.8 | 632.41 | 347.82 |
| 635.25 | 347.89 | 638.13 | 347.95 | 639.51 | 347.99 | 641.69 | 348.01 | 649.82 | 347.92 |
| 650.52 | 347.91 | 654.7 | 347.86 | 657.44 | 347.83 | 658.63 | 347.82 | 659.18 | 347.81 |
| 660.18 | 347.8 | 663.78 | 347.77 | 666.07 | 347.75 | 666.4 | 347.74 | 667.94 | 347.73 |
| 668.1 | 347.73 | 669.88 | 347.69 | 670.69 | 347.68 | 683 | 347.46 | 683.28 | 347.45 |
| 683.81 | 347.45 | 684.76 | 347.47 | 685.03 | 347.47 | 685.3 | 347.46 | 685.86 | 347.46 |
| 687.33 | 347.41 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 213.17 | .04 | 516.28 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 213.17 | 516.28 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1958.76*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 341.29 | .58 | 341.28 | .71 | 341.28 | .92 | 341.27 | 1.2 | 341.28 |
| 2.45 | 341.28 | 3.4 | 341.27 | 6.69 | 341.24 | 9.03 | 341.22 | 13.81 | 341.18 |
| 14.69 | 341.18 | 14.95 | 341.19 | 15.05 | 341.2 | 15.06 | 341.22 | 15.2 | 341.22 |
| 15.61 | 341.24 | 15.75 | 341.24 | 16.59 | 341.23 | 16.95 | 341.23 | 18.08 | 341.21 |
| 18.3 | 341.2 | 18.46 | 341.2 | 18.79 | 341.19 | 19.35 | 341.18 | 20.07 | 341.18 |
| 25.34 | 341.12 | 26.39 | 341.11 | 27.8 | 341.09 | 28.48 | 341.09 | 30.03 | 341.07 |
| 30.45 | 341.07 | 31.2 | 341.06 | 31.77 | 341.06 | 33.12 | 341.05 | 35.1 | 341.05 |
| 35.83 | 341.06 | 36.84 | 341.06 | 36.9 | 341.07 | 37.41 | 341.07 | 38.43 | 341.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 43.3 | 341.18 | 44.17 | 341.19 | 45.02 | 341.21 | 45.94 | 341.22 | 46.58 | 341.22 |
| 47.19 | 341.23 | 48.71 | 341.24 | 49.33 | 341.24 | 50.05 | 341.25 | 51.23 | 341.25 |
| 52.33 | 341.27 | 52.69 | 341.27 | 52.91 | 341.28 | 53.13 | 341.28 | 53.37 | 341.29 |
| 53.84 | 341.29 | 53.94 | 341.31 | 56.81 | 341.31 | 57.68 | 341.3 | 58.2 | 341.3 |
| 59.02 | 341.29 | 59.92 | 341.29 | 60.23 | 341.27 | 60.55 | 341.27 | 60.99 | 341.25 |
| 61.46 | 341.24 | 61.76 | 341.23 | 61.91 | 341.22 | 63.04 | 341.17 | 64.16 | 341.14 |
| 64.7 | 341.12 | 65.45 | 341.1 | 66.4 | 341.06 | 66.89 | 341.06 | 68.03 | 341.04 |
| 68.28 | 341.03 | 69.27 | 341.01 | 70.6 | 340.98 | 70.87 | 340.98 | 72.36 | 340.94 |
| 73.76 | 340.93 | 77.8 | 340.82 | 78.14 | 340.81 | 78.34 | 340.81 | 78.62 | 340.8 |
| 79.4 | 340.81 | 79.59 | 340.82 | 79.97 | 340.82 | 80.31 | 340.81 | 80.62 | 340.81 |
| 81.52 | 340.8 | 82.03 | 340.79 | 83.64 | 340.77 | 85.04 | 340.75 | 86.21 | 340.74 |
| 88.99 | 340.72 | 90.51 | 340.72 | 91.69 | 340.74 | 93.62 | 340.76 | 94.61 | 340.79 |
| 96.88 | 340.79 | 99.35 | 340.8 | 100.34 | 340.81 | 101.05 | 340.82 | 104.55 | 340.82 |
| 105.7 | 340.81 | 106.46 | 340.8 | 107.32 | 340.8 | 107.88 | 340.79 | 108.29 | 340.8 |
| 109.37 | 340.8 | 110.29 | 340.79 | 113.26 | 340.79 | 114.27 | 340.77 | 114.54 | 340.77 |
| 116.01 | 340.73 | 116.69 | 340.72 | 117.3 | 340.7 | 117.84 | 340.68 | 118.31 | 340.67 |
| 120.54 | 340.6 | 122 | 340.56 | 122.13 | 340.56 | 122.89 | 340.53 | 124.05 | 340.5 |
| 124.93 | 340.46 | 125.64 | 340.46 | 126.25 | 340.42 | 127.28 | 340.37 | 127.45 | 340.38 |
| 128.35 | 340.42 | 129.11 | 340.45 | 131.12 | 340.51 | 131.48 | 340.52 | 131.73 | 340.52 |
| 132.19 | 340.54 | 132.26 | 340.54 | 132.52 | 340.56 | 132.81 | 340.59 | 132.99 | 340.6 |
| 133.14 | 340.62 | 133.47 | 340.65 | 134.2 | 340.67 | 134.96 | 340.68 | 137.26 | 340.68 |
| 139.21 | 340.66 | 139.54 | 340.65 | 140.22 | 340.65 | 141.08 | 340.62 | 141.24 | 340.62 |
| 142.56 | 340.64 | 143.46 | 340.64 | 143.99 | 340.65 | 147.33 | 340.65 | 150.4 | 340.63 |
| 153.96 | 340.61 | 154.74 | 340.61 | 156.16 | 340.6 | 158.7 | 340.59 | 163.2 | 340.58 |
| 163.35 | 340.58 | 176.47 | 340.5 | 179.01 | 340.49 | 180.42 | 340.49 | 180.84 | 340.48 |
| 184.1 | 340.46 | 187.52 | 340.44 | 190.58 | 340.41 | 192.95 | 340.39 | 193.36 | 340.38 |
| 194.88 | 340.31 | 195.18 | 340.3 | 197.08 | 340.19 | 201.94 | 339.95 | 203.59 | 339.88 |
| 205.54 | 339.79 | 205.67 | 339.79 | 205.98 | 339.78 | 207.27 | 339.73 | 208.46 | 339.67 |
| 209.93 | 339.6 | 211.51 | 339.52 | 211.69 | 339.52 | 212.79 | 339.47 | 213.7 | 339.44 |
| 215.15 | 339.38 | 215.99 | 339.33 | 216.56 | 339.32 | 216.91 | 339.31 | 219.52 | 339.27 |
| 219.85 | 339.26 | 220.81 | 339.25 | 221.38 | 339.24 | 222.12 | 339.22 | 222.46 | 339.22 |
| 222.56 | 339.21 | 223.08 | 339.21 | 223.75 | 339.19 | 224.5 | 339.18 | 224.7 | 339.18 |
| 224.88 | 339.17 | 225.25 | 339.17 | 225.8 | 339.16 | 225.94 | 339.15 | 226.26 | 339.15 |
| 226.99 | 339.13 | 227.71 | 339.14 | 228.18 | 339.14 | 228.32 | 339.13 | 228.56 | 339.13 |
| 229.73 | 339.08 | 230.15 | 339.08 | 230.52 | 339.07 | 231.56 | 339.05 | 232.1 | 339.03 |
| 234.6 | 339 | 234.98 | 339 | 235.57 | 338.99 | 236.34 | 338.98 | 237.46 | 338.98 |
| 237.63 | 338.97 | 237.87 | 338.97 | 239.89 | 338.92 | 241.38 | 338.89 | 241.8 | 338.88 |
| 242.09 | 338.87 | 242.26 | 338.87 | 242.86 | 338.83 | 244.39 | 338.83 | 244.66 | 338.82 |
| 244.9 | 338.82 | 245.61 | 338.79 | 246.51 | 338.74 | 246.62 | 338.74 | 246.93 | 338.72 |
| 247.12 | 338.7 | 247.8 | 338.67 | 248.42 | 338.66 | 248.78 | 338.65 | 250.07 | 338.65 |
| 251.27 | 338.62 | 253.47 | 338.57 | 255.41 | 338.53 | 257.41 | 338.46 | 259.55 | 338.38 |
| 260.11 | 338.36 | 261.04 | 338.33 | 261.72 | 338.31 | 264.93 | 338.2 | 265.5 | 338.18 |
| 266.22 | 338.15 | 267.74 | 338.1 | 268.17 | 338.08 | 269.16 | 338.04 | 269.35 | 338.04 |
| 269.41 | 338.03 | 270.29 | 338.01 | 270.57 | 338 | 270.65 | 337.99 | 270.83 | 337.99 |
| 273.02 | 337.91 | 273.97 | 337.88 | 275.39 | 337.83 | 275.88 | 337.8 | 276.59 | 337.75 |
| 276.73 | 337.75 | 277.49 | 337.71 | 278.5 | 337.67 | 278.69 | 337.67 | 279.32 | 337.63 |
| 279.51 | 337.63 | 279.9 | 337.61 | 280.1 | 337.61 | 280.4 | 337.59 | 280.58 | 337.59 |
| 280.71 | 337.58 | 285.17 | 337.58 | 285.7 | 337.6 | 285.84 | 337.61 | 286.35 | 337.61 |
| 286.74 | 337.62 | 287.55 | 337.62 | 288.01 | 337.63 | 294.08 | 337.74 | 295.61 | 337.76 |
| 297.9 | 337.8 | 310.89 | 338.03 | 335.03 | 338.47 | 336.44 | 338.44 | 337.95 | 338.44 |
| 344.2 | 338.38 | 347.93 | 338.34 | 349.38 | 338.33 | 351.22 | 338.33 | 352.88 | 338.32 |
| 353.73 | 338.32 | 353.84 | 338.33 | 354.11 | 338.33 | 354.64 | 338.32 | 354.76 | 338.31 |
| 355.35 | 338.31 | 356.09 | 338.3 | 357.73 | 338.27 | 365.32 | 338.12 | 368.9 | 338.05 |
| 371.2 | 337.99 | 371.32 | 337.99 | 372.87 | 337.96 | 374.46 | 337.92 | 375.36 | 337.88 |
| 375.8 | 337.87 | 376.28 | 337.85 | 376.41 | 337.84 | 378.39 | 337.84 | 379.53 | 337.86 |
| 381.11 | 337.87 | 381.94 | 337.88 | 383.01 | 337.89 | 383.33 | 337.89 | 383.97 | 337.9 |
| 384.11 | 337.9 | 384.56 | 337.91 | 384.91 | 337.91 | 385.31 | 337.92 | 386.7 | 337.99 |
| 387.29 | 338.01 | 389.65 | 338.1 | 391.94 | 338.2 | 397.11 | 338.41 | 399.75 | 338.52 |
| 400.38 | 338.56 | 401.91 | 338.61 | 402.88 | 338.65 | 404.94 | 338.72 | 407.48 | 338.78 |
| 408.83 | 338.81 | 412.15 | 338.87 | 413.49 | 338.9 | 414.17 | 338.9 | 415.8 | 338.88 |
| 417.28 | 338.86 | 418.91 | 338.85 | 419.64 | 338.86 | 420.23 | 338.86 | 421.78 | 338.88 |
| 422.24 | 338.9 | 425.31 | 338.92 | 427.8 | 338.94 | 430.05 | 338.95 | 433.32 | 338.97 |
| 435.4 | 338.98 | 435.75 | 338.98 | 439.51 | 339 | 440.6 | 339 | 443.03 | 339.01 |
| 446.19 | 339.02 | 448.11 | 338.95 | 450.65 | 338.88 | 450.73 | 338.88 | 453.1 | 338.81 |
| 455.98 | 338.72 | 459.88 | 338.61 | 466.14 | 338.53 | 468.73 | 338.5 | 472.63 | 338.47 |
| 474.28 | 338.46 | 477.05 | 338.42 | 479.23 | 338.39 | 482.86 | 338.31 | 484.03 | 338.29 |
| 485.01 | 338.29 | 487.07 | 338.27 | 488.7 | 338.26 | 490.67 | 338.25 | 495.23 | 338.23 |
| 497.4 | 338.22 | 499.29 | 338.23 | 506.71 | 338.23 | 507.25 | 338.25 | 508.29 | 338.28 |
| 509.72 | 338.35 | 511.63 | 338.46 | 512.01 | 338.51 | 514.24 | 338.64 | 514.31 | 338.65 |
| 514.35 | 338.71 | 515.06 | 339.53 | 515.34 | 339.85 | 515.92 | 340.41 | 516.5 | 340.45 |
| 516.54 | 340.45 | 521.95 | 340.81 | 522.49 | 340.84 | 522.75 | 340.86 | 524.27 | 340.96 |
| 525.07 | 341.02 | 525.39 | 341.04 | 526.21 | 341.01 | 528.08 | 341.13 | 529.54 | 341.16 |
| 531.98 | 341.35 | 535.89 | 341.52 | 537.2 | 341.59 | 544.4 | 342.03 | 544.98 | 342.06 |
| 545.03 | 342.07 | 548.98 | 342.3 | 549.11 | 342.31 | 549.68 | 342.34 | 551.08 | 342.41 |
| 551.59 | 342.44 | 558.9 | 342.86 | 559.3 | 342.89 | 560.38 | 342.95 | 563.05 | 343.1 |
| 565.23 | 343.23 | 565.63 | 343.27 | 568.13 | 343.5 | 568.16 | 343.5 | 568.87 | 343.56 |
| 570.25 | 343.66 | 570.78 | 343.7 | 572.95 | 343.89 | 573.83 | 343.96 | 574.05 | 343.98 |
| 575.25 | 343.98 | 575.9 | 344.01 | 576.74 | 344.01 | 577.06 | 344 | 577.59 | 343.99 |
| 578.44 | 343.97 | 578.88 | 343.97 | 579.18 | 343.96 | 579.94 | 343.97 | 580.78 | 344 |
| 581.75 | 344.07 | 582.69 | 344.16 | 584.89 | 344.48 | 585.67 | 344.61 | 586.85 | 344.76 |
| 587.27 | 344.81 | 587.98 | 344.9 | 589.26 | 345.06 | 595.33 | 345.85 | 595.97 | 345.94 |
| 595.99 | 345.94 | 597.4 | 346.07 | 597.63 | 346.1 | 597.7 | 346.1 | 597.86 | 346.12 |
| 598.01 | 346.13 | 599.4 | 346.27 | 601.95 | 346.52 | 605.31 | 346.85 | 605.49 | 346.87 |
| 605.56 | 346.87 | 610.29 | 346.9 | 610.69 | 346.9 | 618.15 | 347.01 | 619.03 | 347.04 |
| 623.52 | 347.16 | 624.7 | 347.19 | 625.83 | 347.23 | 627.57 | 347.27 | 628.17 | 347.28 |
| 628.93 | 347.3 | 630.16 | 347.32 | 632.49 | 347.38 | 633.3 | 347.4 | 636.18 | 347.52 |
| 639.11 | 347.62 | 640.5 | 347.68 | 642.72 | 347.7 | 650.98 | 347.63 | 651.69 | 347.62 |
| 655.94 | 347.58 | 658.72 | 347.55 | 659.92 | 347.54 | 660.48 | 347.53 | 661.5 | 347.53 |
| 665.16 | 347.5 | 667.49 | 347.48 | 667.81 | 347.47 | 669.39 | 347.46 | 669.54 | 347.46 |
| 670.45 | 347.44 | 672.18 | 347.42 | 684.68 | 347.23 | 684.97 | 347.22 | 685.26 | 347.22 |
| 685.5 | 347.23 | 686.46 | 347.25 | 686.74 | 347.25 | 687.01 | 347.24 | 687.25 | 347.24 |
| 689.07 | 347.19 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 211.51 | .04 | 515.34 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 211.51 | 515.34 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1939.02*



BSE Document Control Number: 7323HYD101

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 341.03 | .57 | 341.03 | .71 | 341.02 | .91 | 341.02 | 1.19 | 341.03 |
| 2.43 | 341.03 | 3.37 | 341.02 | 6.63 | 341 | 8.96 | 340.98 | 13.7 | 340.93 |
| 14.18 | 340.93 | 14.83 | 340.95 | 14.95 | 340.97 | 15.08 | 340.97 | 15.49 | 340.99 |
| 16.46 | 340.99 | 16.81 | 340.98 | 17.44 | 340.98 | 17.93 | 340.97 | 18.32 | 340.95 |
| 18.64 | 340.95 | 19.19 | 340.94 | 19.92 | 340.93 | 25.14 | 340.87 | 26.18 | 340.86 |
| 28.26 | 340.83 | 29.09 | 340.82 | 29.79 | 340.82 | 30.21 | 340.81 | 30.96 | 340.8 |
| 31.52 | 340.8 | 32.86 | 340.79 | 34.83 | 340.79 | 35.55 | 340.8 | 36.83 | 340.8 |
| 37.11 | 340.81 | 38.12 | 340.82 | 42.96 | 340.92 | 43.83 | 340.93 | 44.67 | 340.95 |
| 45.58 | 340.96 | 46.21 | 340.96 | 46.82 | 340.97 | 48.32 | 340.98 | 48.94 | 340.98 |
| 49.66 | 340.99 | 50.82 | 340.99 | 51.39 | 341 | 52.28 | 341 | 52.49 | 341.01 |
| 52.71 | 341.01 | 52.95 | 341.02 | 53.22 | 341.02 | 53.33 | 341.03 | 53.49 | 341.03 |
| 53.52 | 341.04 | 56.36 | 341.04 | 57.23 | 341.03 | 57.74 | 341.03 | 58.56 | 341.02 |
| 59.45 | 341.02 | 59.76 | 341.01 | 59.84 | 341 | 60.08 | 341 | 60.51 | 340.98 |
| 60.97 | 340.97 | 61.28 | 340.96 | 61.42 | 340.95 | 62.55 | 340.9 | 63.3 | 340.87 |
| 64.2 | 340.84 | 64.94 | 340.82 | 65.88 | 340.79 | 66.36 | 340.78 | 67.5 | 340.76 |
| 67.75 | 340.75 | 68.73 | 340.73 | 70.05 | 340.7 | 70.31 | 340.69 | 71.8 | 340.66 |
| 73.18 | 340.64 | 77.19 | 340.53 | 77.53 | 340.52 | 77.72 | 340.52 | 78 | 340.51 |
| 78.78 | 340.53 | 78.97 | 340.55 | 79.68 | 340.55 | 79.99 | 340.54 | 80.88 | 340.53 |
| 81.39 | 340.52 | 82.98 | 340.5 | 84.38 | 340.49 | 85.53 | 340.48 | 88.29 | 340.45 |
| 89.8 | 340.45 | 90.42 | 340.46 | 90.97 | 340.46 | 93.56 | 340.5 | 94.23 | 340.52 |
| 95.29 | 340.51 | 95.7 | 340.51 | 95.84 | 340.52 | 96.12 | 340.51 | 98.57 | 340.52 |
| 99.56 | 340.53 | 100.26 | 340.54 | 101.27 | 340.54 | 101.36 | 340.55 | 102.41 | 340.55 |
| 103.15 | 340.54 | 104.87 | 340.54 | 106.48 | 340.52 | 107.44 | 340.52 | 108.02 | 340.53 |
| 108.51 | 340.52 | 110.43 | 340.52 | 111.91 | 340.51 | 112.37 | 340.51 | 113.37 | 340.5 |
| 113.64 | 340.49 | 115.1 | 340.46 | 115.78 | 340.44 | 116.38 | 340.43 | 116.91 | 340.41 |
| 117.38 | 340.4 | 119.59 | 340.33 | 121.04 | 340.29 | 121.17 | 340.29 | 121.93 | 340.26 |
| 123.08 | 340.23 | 123.95 | 340.19 | 124.65 | 340.19 | 125.26 | 340.15 | 126.28 | 340.1 |
| 126.45 | 340.11 | 127.35 | 340.15 | 128.1 | 340.18 | 130.09 | 340.23 | 130.45 | 340.24 |
| 130.7 | 340.24 | 131.22 | 340.25 | 131.59 | 340.28 | 131.95 | 340.32 | 132.24 | 340.34 |
| 132.43 | 340.36 | 133.15 | 340.38 | 133.9 | 340.38 | 134.02 | 340.39 | 134.83 | 340.38 |
| 136.19 | 340.38 | 138.12 | 340.36 | 138.44 | 340.36 | 139.12 | 340.35 | 139.98 | 340.33 |
| 140.13 | 340.33 | 141.44 | 340.35 | 142.33 | 340.35 | 142.86 | 340.36 | 146.17 | 340.36 |
| 149.22 | 340.34 | 152.75 | 340.32 | 153.36 | 340.31 | 154.93 | 340.31 | 157.45 | 340.3 |
| 161.92 | 340.28 | 162.07 | 340.28 | 175.08 | 340.2 | 177.61 | 340.19 | 179 | 340.19 |
| 179.42 | 340.18 | 182.65 | 340.16 | 186.04 | 340.13 | 189.08 | 340.1 | 191.44 | 340.08 |
| 191.85 | 340.07 | 193.35 | 340.01 | 193.64 | 339.99 | 195.53 | 339.89 | 200.36 | 339.66 |
| 201.99 | 339.6 | 203.92 | 339.52 | 204.06 | 339.53 | 204.36 | 339.52 | 205.64 | 339.47 |
| 206.82 | 339.42 | 208.29 | 339.36 | 209.85 | 339.28 | 210.06 | 339.28 | 211.39 | 339.22 |
| 213.06 | 339.16 | 214.21 | 339.11 | 215.22 | 339.04 | 215.9 | 339.03 | 216.32 | 339.03 |
| 219.46 | 338.98 | 219.85 | 338.98 | 221 | 338.96 | 221.69 | 338.95 | 222.57 | 338.94 |
| 222.98 | 338.94 | 223.1 | 338.93 | 223.73 | 338.93 | 224.52 | 338.91 | 225.42 | 338.9 |
| 225.88 | 338.9 | 225.91 | 338.89 | 226.32 | 338.89 | 226.98 | 338.88 | 227.16 | 338.88 |
| 227.53 | 338.87 | 228.49 | 338.86 | 229.28 | 338.88 | 229.58 | 338.88 | 229.83 | 338.87 |
| 230 | 338.87 | 231.69 | 338.81 | 232.05 | 338.81 | 232.19 | 338.8 | 232.65 | 338.8 |
| 233.89 | 338.78 | 234.54 | 338.76 | 237.53 | 338.75 | 237.99 | 338.75 | 238.69 | 338.74 |
| 241.45 | 338.74 | 243.88 | 338.69 | 245.67 | 338.66 | 246.17 | 338.65 | 246.51 | 338.64 |
| 246.72 | 338.64 | 247.56 | 338.58 | 247.73 | 338.59 | 248.18 | 338.59 | 249.27 | 338.6 |
| 249.88 | 338.6 | 250.21 | 338.58 | 250.74 | 338.56 | 251.82 | 338.5 | 252.31 | 338.47 |
| 252.51 | 338.44 | 253.36 | 338.42 | 254.1 | 338.4 | 254.54 | 338.4 | 256.08 | 338.41 |
| 257.52 | 338.38 | 260.16 | 338.33 | 262.49 | 338.29 | 264.88 | 338.23 | 267.45 | 338.16 |
| 268.13 | 338.14 | 269.23 | 338.11 | 270.05 | 338.09 | 271.45 | 338.05 | 273.9 | 337.99 |
| 274.59 | 337.97 | 275.45 | 337.94 | 277.27 | 337.89 | 277.78 | 337.87 | 278.98 | 337.84 |
| 279.27 | 337.83 | 280.33 | 337.8 | 280.66 | 337.8 | 280.75 | 337.79 | 280.98 | 337.79 |
| 283.59 | 337.72 | 284.74 | 337.69 | 286.44 | 337.64 | 287.02 | 337.6 | 288.05 | 337.54 |
| 288.72 | 337.51 | 288.95 | 337.51 | 290.17 | 337.47 | 290.95 | 337.43 | 291.15 | 337.43 |
| 291.85 | 337.4 | 292.09 | 337.4 | 292.28 | 337.39 | 292.44 | 337.39 | 292.82 | 337.37 |
| 297.05 | 337.37 | 297.54 | 337.39 | 298.16 | 337.39 | 298.53 | 337.4 | 298.97 | 337.4 |
| 299.73 | 337.42 | 301.3 | 337.44 | 305.46 | 337.52 | 306.9 | 337.54 | 309.07 | 337.58 |
| 321.34 | 337.8 | 344.13 | 338.2 | 345.46 | 338.18 | 346.89 | 338.18 | 352.79 | 338.12 |
| 356.31 | 338.09 | 357.68 | 338.08 | 360.99 | 338.08 | 361.04 | 338.07 | 361.62 | 338.07 |
| 361.79 | 338.08 | 362.53 | 338.08 | 362.58 | 338.07 | 363.32 | 338.07 | 364.02 | 338.06 |
| 365.57 | 338.03 | 372.73 | 337.9 | 376.12 | 337.83 | 378.28 | 337.79 | 378.4 | 337.78 |
| 379.86 | 337.75 | 381.37 | 337.72 | 382.22 | 337.68 | 382.63 | 337.67 | 383.08 | 337.65 |
| 383.2 | 337.64 | 383.38 | 337.65 | 385.08 | 337.65 | 386.15 | 337.67 | 387.65 | 337.68 |
| 388.43 | 337.69 | 389.44 | 337.7 | 390.48 | 337.7 | 391.61 | 337.73 | 392 | 337.75 |
| 392.92 | 337.79 | 393.48 | 337.81 | 395.71 | 337.9 | 397.87 | 337.99 | 402.75 | 338.2 |
| 405.25 | 338.3 | 405.84 | 338.34 | 407.28 | 338.38 | 408.2 | 338.43 | 410.15 | 338.49 |
| 412.55 | 338.55 | 413.83 | 338.58 | 416.96 | 338.64 | 418.23 | 338.67 | 418.86 | 338.67 |
| 420.4 | 338.65 | 423.34 | 338.63 | 424.03 | 338.63 | 424.59 | 338.64 | 426.05 | 338.66 |
| 426.49 | 338.67 | 429.39 | 338.7 | 431.74 | 338.72 | 433.86 | 338.73 | 436.95 | 338.75 |
| 438.91 | 338.76 | 439.24 | 338.76 | 442.79 | 338.78 | 443.83 | 338.78 | 446.12 | 338.79 |
| 449.11 | 338.8 | 450.92 | 338.74 | 453.31 | 338.67 | 453.39 | 338.67 | 455.63 | 338.6 |
| 458.35 | 338.52 | 462.03 | 338.42 | 467.94 | 338.34 | 474.07 | 338.29 | 475.62 | 338.28 |
| 478.24 | 338.25 | 480.3 | 338.22 | 483.73 | 338.15 | 484.84 | 338.13 | 485.76 | 338.12 |
| 487.71 | 338.11 | 489.25 | 338.1 | 491.11 | 338.09 | 493.23 | 338.08 | 495.41 | 338.08 |
| 497.46 | 338.07 | 499.25 | 338.07 | 502.25 | 338.08 | 506.25 | 338.08 | 506.77 | 338.1 |
| 507.74 | 338.13 | 509.09 | 338.19 | 510.9 | 338.3 | 511.25 | 338.34 | 512.23 | 338.4 |
| 513.36 | 338.46 | 513.43 | 338.47 | 513.47 | 338.53 | 514.14 | 339.29 | 514.41 | 339.59 |
| 514.99 | 340.12 | 515.58 | 340.15 | 515.63 | 340.16 | 516.08 | 340.19 | 521.12 | 340.49 |
| 521.89 | 340.53 | 521.92 | 340.54 | 523.46 | 340.64 | 524.29 | 340.7 | 524.61 | 340.71 |
| 525.44 | 340.69 | 527.34 | 340.81 | 528.82 | 340.84 | 531.3 | 341.02 | 535.27 | 341.19 |
| 536.6 | 341.26 | 543.91 | 341.69 | 544.5 | 341.73 | 544.55 | 341.73 | 548.56 | 341.96 |
| 548.69 | 341.96 | 549.27 | 341.99 | 550.69 | 342.06 | 551.22 | 342.09 | 558.64 | 342.5 |
| 559.04 | 342.52 | 560.14 | 342.58 | 562.85 | 342.72 | 563.54 | 342.76 | 565.06 | 342.84 |
| 565.47 | 342.88 | 568.01 | 343.1 | 568.03 | 343.11 | 568.76 | 343.16 | 570.16 | 343.26 |
| 570.7 | 343.29 | 572.9 | 343.47 | 573.8 | 343.54 | 574.02 | 343.56 | 575.23 | 343.56 |
| 575.89 | 343.59 | 577.05 | 343.59 | 577.07 | 343.58 | 577.62 | 343.57 | 578.48 | 343.56 |
| 579.23 | 343.54 | 580 | 343.56 | 580.85 | 343.59 | 581.83 | 343.65 | 582.79 | 343.74 |
| 585.03 | 344.04 | 585.71 | 344.15 | 585.82 | 344.17 | 587.44 | 344.36 | 588.17 | 344.44 |
| 589.39 | 344.58 | 589.46 | 344.59 | 595.62 | 345.33 | 596.29 | 345.41 | 597.73 | 345.54 |
| 598.03 | 345.56 | 598.08 | 345.57 | 598.35 | 345.59 | 599.25 | 345.68 | 599.76 | 345.72 |
| 602.35 | 345.97 | 605.77 | 346.28 | 606.02 | 346.3 | 610.82 | 346.34 | 611.22 | 346.35 |
| 618.8 | 346.48 | 619.7 | 346.51 | 624.26 | 346.68 | 625.45 | 346.71 | 626.6 | 346.76 |
| 628.37 | 346.81 | 628.98 | 346.83 | 629.75 | 346.85 | 631 | 346.88 | 633.37 | 346.95 |
| 634.18 | 346.99 | 637.11 | 347.16 | 640.08 | 347.29 | 641.5 | 347.36 | 643.75 | 347.39 |
| 652.14 | 347.33 | 652.86 | 347.33 | 657.17 | 347.29 | 660 | 347.27 | 661.22 | 347.26 |
| 661.79 | 347.26 | 662.82 | 347.25 | 666.54 | 347.22 | 668.9 | 347.2 | 669.23 | 347.2 |
| 670.83 | 347.19 | 670.99 | 347.19 | 671.91 | 347.17 | 673.67 | 347.15 | 686.36 | 347 |
| 687.2 | 347 | 688.17 | 347.02 | 688.45 | 347.02 | 688.73 | 347.01 | 689.31 | 347.01 |
| 690.82 | 346.97 | | | | | | | | |

Manning's n Values num= 3



BSE Document Control Number: 7323HYD101

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 209.85 | .04 | 514.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 209.85 | 514.41 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1919.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.78 | .57 | 340.77 | .9 | 340.77 | 1.18 | 340.78 | 1.39 | 340.78 |
| 1.69 | 340.79 | 2.41 | 340.79 | 3.35 | 340.78 | 6.58 | 340.76 | 8.89 | 340.73 |
| 13.6 | 340.69 | 14.07 | 340.69 | 14.46 | 340.7 | 14.71 | 340.7 | 14.82 | 340.71 |
| 14.83 | 340.73 | 14.96 | 340.73 | 15.22 | 340.74 | 16.33 | 340.74 | 16.68 | 340.73 |
| 17.3 | 340.73 | 17.79 | 340.72 | 18.17 | 340.7 | 18.49 | 340.7 | 19.04 | 340.69 |
| 19.76 | 340.68 | 24.94 | 340.62 | 25.97 | 340.6 | 27.37 | 340.58 | 28.04 | 340.58 |
| 28.86 | 340.57 | 29.55 | 340.56 | 29.97 | 340.55 | 30.71 | 340.55 | 31.27 | 340.54 |
| 32.6 | 340.54 | 32.85 | 340.53 | 34.55 | 340.53 | 35.27 | 340.54 | 36.54 | 340.54 |
| 36.82 | 340.55 | 37.82 | 340.56 | 42.62 | 340.66 | 43.48 | 340.67 | 44.32 | 340.69 |
| 45.22 | 340.7 | 46.45 | 340.7 | 47.94 | 340.72 | 48.55 | 340.72 | 49.27 | 340.73 |
| 49.89 | 340.72 | 50.42 | 340.72 | 51.51 | 340.74 | 52.29 | 340.74 | 52.53 | 340.75 |
| 52.8 | 340.75 | 53.07 | 340.77 | 55.92 | 340.77 | 56.78 | 340.76 | 57.28 | 340.76 |
| 58.1 | 340.75 | 58.98 | 340.75 | 59.29 | 340.74 | 59.37 | 340.73 | 59.6 | 340.73 |
| 60.04 | 340.71 | 60.49 | 340.7 | 60.79 | 340.69 | 60.94 | 340.68 | 61.83 | 340.63 |
| 62.05 | 340.62 | 62.8 | 340.6 | 63.15 | 340.58 | 63.69 | 340.57 | 64.42 | 340.54 |
| 65.35 | 340.51 | 65.84 | 340.5 | 66.96 | 340.48 | 67.21 | 340.47 | 68.18 | 340.44 |
| 69.49 | 340.42 | 69.75 | 340.41 | 71.23 | 340.37 | 72.6 | 340.35 | 76.58 | 340.24 |
| 76.92 | 340.24 | 77.11 | 340.23 | 77.38 | 340.23 | 78.15 | 340.25 | 78.34 | 340.28 |
| 79.36 | 340.28 | 80.24 | 340.26 | 80.74 | 340.25 | 82.32 | 340.23 | 83.71 | 340.22 |
| 84.85 | 340.21 | 87.6 | 340.18 | 89.09 | 340.18 | 89.71 | 340.19 | 90.25 | 340.19 |
| 92.15 | 340.21 | 92.82 | 340.22 | 93.49 | 340.24 | 94.53 | 340.23 | 94.94 | 340.24 |
| 97.79 | 340.24 | 98.77 | 340.25 | 99.46 | 340.26 | 100.47 | 340.27 | 102.91 | 340.27 |
| 104.04 | 340.26 | 104.79 | 340.26 | 105.63 | 340.25 | 107.65 | 340.25 | 108.56 | 340.24 |
| 111.48 | 340.24 | 112.47 | 340.22 | 112.74 | 340.22 | 114.19 | 340.19 | 114.86 | 340.17 |
| 115.46 | 340.16 | 115.99 | 340.14 | 116.46 | 340.13 | 118.64 | 340.06 | 120.08 | 340.02 |
| 120.21 | 340.01 | 120.96 | 339.99 | 122.97 | 339.92 | 123.66 | 339.92 | 125.28 | 339.84 |
| 125.45 | 339.84 | 126.34 | 339.88 | 127.09 | 339.9 | 129.06 | 339.95 | 129.42 | 339.95 |
| 129.67 | 339.96 | 130.19 | 339.97 | 130.44 | 339.98 | 130.9 | 340.03 | 131.19 | 340.05 |
| 131.38 | 340.07 | 132.1 | 340.09 | 133.76 | 340.09 | 135.11 | 340.08 | 137.03 | 340.06 |
| 137.35 | 340.06 | 138.02 | 340.05 | 138.87 | 340.03 | 139.02 | 340.03 | 140.32 | 340.05 |
| 141.2 | 340.06 | 141.73 | 340.06 | 142.2 | 340.07 | 145.01 | 340.07 | 148.04 | 340.05 |
| 151.54 | 340.03 | 152.15 | 340.02 | 153.71 | 340.02 | 156.21 | 340.01 | 160.63 | 339.99 |
| 160.79 | 339.99 | 173.7 | 339.91 | 176.2 | 339.89 | 177.58 | 339.89 | 178 | 339.88 |
| 181.21 | 339.86 | 184.57 | 339.83 | 187.58 | 339.79 | 189.92 | 339.77 | 190.33 | 339.76 |
| 191.82 | 339.7 | 192.11 | 339.69 | 198.77 | 339.37 | 200.39 | 339.32 | 202.31 | 339.25 |
| 202.44 | 339.27 | 204.01 | 339.22 | 205.19 | 339.17 | 206.64 | 339.11 | 208.19 | 339.04 |
| 208.37 | 339.05 | 208.44 | 339.04 | 209.98 | 338.97 | 211.26 | 338.92 | 211.93 | 338.9 |
| 213.27 | 338.84 | 214.45 | 338.75 | 215.25 | 338.74 | 215.73 | 338.74 | 219.39 | 338.7 |
| 219.85 | 338.69 | 221.19 | 338.68 | 221.99 | 338.67 | 223.02 | 338.66 | 223.38 | 338.66 |
| 223.5 | 338.65 | 223.79 | 338.65 | 224.37 | 338.64 | 225.3 | 338.63 | 226.35 | 338.62 |
| 227.05 | 338.62 | 227.19 | 338.61 | 227.39 | 338.61 | 228.17 | 338.6 | 228.37 | 338.6 |
| 228.81 | 338.59 | 229.93 | 338.58 | 230.84 | 338.61 | 230.95 | 338.62 | 231.2 | 338.61 |
| 231.69 | 338.61 | 232.03 | 338.6 | 233.65 | 338.54 | 234.08 | 338.53 | 234.77 | 338.53 |
| 235.46 | 338.52 | 236.98 | 338.5 | 241 | 338.5 | 241.82 | 338.49 | 243.09 | 338.49 |
| 243.31 | 338.5 | 244.15 | 338.51 | 245.04 | 338.51 | 246.73 | 338.47 | 247.29 | 338.46 |
| 247.86 | 338.46 | 249.95 | 338.43 | 250.54 | 338.42 | 250.93 | 338.42 | 251.18 | 338.4 |
| 251.36 | 338.4 | 252.16 | 338.34 | 252.35 | 338.35 | 252.68 | 338.35 | 252.88 | 338.36 |
| 254.15 | 338.38 | 254.53 | 338.38 | 255.25 | 338.36 | 255.87 | 338.33 | 257.12 | 338.26 |
| 257.7 | 338.22 | 257.93 | 338.18 | 258.92 | 338.16 | 259.78 | 338.14 | 260.29 | 338.14 |
| 262.09 | 338.16 | 263.77 | 338.14 | 266.85 | 338.1 | 269.56 | 338.06 | 272.36 | 338 |
| 275.35 | 337.93 | 276.14 | 337.91 | 277.43 | 337.88 | 278.38 | 337.87 | 280.02 | 337.83 |
| 282.87 | 337.77 | 283.67 | 337.76 | 284.67 | 337.73 | 286.8 | 337.68 | 287.4 | 337.67 |
| 288.79 | 337.64 | 289.13 | 337.63 | 290.36 | 337.6 | 290.75 | 337.6 | 290.86 | 337.59 |
| 291.12 | 337.59 | 294.17 | 337.53 | 295.51 | 337.5 | 297.49 | 337.45 | 298.17 | 337.41 |
| 299.17 | 337.34 | 299.36 | 337.34 | 300.42 | 337.3 | 301.85 | 337.26 | 302.75 | 337.22 |
| 302.99 | 337.22 | 303.53 | 337.2 | 303.8 | 337.2 | 304.3 | 337.18 | 304.49 | 337.18 |
| 304.93 | 337.16 | 308.93 | 337.16 | 309.39 | 337.18 | 309.98 | 337.18 | 310.32 | 337.19 |
| 310.74 | 337.19 | 311.04 | 337.2 | 311.45 | 337.21 | 312.93 | 337.23 | 316.84 | 337.3 |
| 320.23 | 337.35 | 331.78 | 337.56 | 353.23 | 337.94 | 354.48 | 337.92 | 355.83 | 337.92 |
| 361.38 | 337.86 | 364.69 | 337.83 | 369.15 | 337.83 | 369.54 | 337.82 | 369.69 | 337.82 |
| 369.85 | 337.83 | 370.66 | 337.83 | 370.76 | 337.82 | 370.96 | 337.82 | 371.29 | 337.83 |
| 371.95 | 337.82 | 373.41 | 337.8 | 380.15 | 337.68 | 381.98 | 337.65 | 383.33 | 337.62 |
| 385.37 | 337.58 | 385.48 | 337.57 | 386.86 | 337.55 | 388.27 | 337.51 | 389.07 | 337.48 |
| 389.89 | 337.46 | 390 | 337.45 | 391.11 | 337.45 | 391.45 | 337.46 | 391.77 | 337.46 |
| 392.77 | 337.48 | 394.18 | 337.49 | 394.92 | 337.5 | 395.87 | 337.51 | 396.84 | 337.51 |
| 398.28 | 337.55 | 399.15 | 337.6 | 399.68 | 337.61 | 401.77 | 337.7 | 403.8 | 337.79 |
| 408.4 | 337.98 | 410.75 | 338.08 | 411.3 | 338.12 | 412.66 | 338.16 | 413.52 | 338.2 |
| 415.36 | 338.26 | 417.62 | 338.32 | 418.82 | 338.35 | 421.77 | 338.41 | 422.96 | 338.44 |
| 423.56 | 338.44 | 425.01 | 338.42 | 426.33 | 338.41 | 428.95 | 338.41 | 430.32 | 338.43 |
| 430.73 | 338.45 | 433.46 | 338.48 | 435.67 | 338.5 | 437.67 | 338.51 | 440.58 | 338.53 |
| 442.42 | 338.54 | 442.74 | 338.55 | 446.08 | 338.56 | 447.05 | 338.56 | 449.21 | 338.57 |
| 452.02 | 338.57 | 453.72 | 338.52 | 455.98 | 338.45 | 456.05 | 338.45 | 458.15 | 338.39 |
| 460.72 | 338.32 | 464.18 | 338.22 | 469.74 | 338.16 | 474.33 | 338.12 | 475.51 | 338.11 |
| 476.97 | 338.1 | 479.44 | 338.07 | 481.37 | 338.05 | 484.6 | 337.98 | 485.64 | 337.97 |
| 486.51 | 337.96 | 488.34 | 337.95 | 489.79 | 337.95 | 491.54 | 337.93 | 493.54 | 337.93 |
| 495.6 | 337.92 | 499.2 | 337.92 | 502.03 | 337.93 | 505.79 | 337.93 | 506.28 | 337.95 |
| 507.2 | 337.98 | 508.47 | 338.03 | 509.86 | 338.12 | 510.16 | 338.13 | 510.5 | 338.17 |
| 511.42 | 338.22 | 512.48 | 338.29 | 512.55 | 338.29 | 512.59 | 338.35 | 513.22 | 339.06 |
| 513.47 | 339.33 | 514.06 | 339.82 | 514.66 | 339.86 | 514.71 | 339.86 | 515.17 | 339.89 |
| 520.83 | 340.2 | 521.08 | 340.21 | 521.1 | 340.22 | 522.66 | 340.32 | 523.83 | 340.39 |
| 524.67 | 340.37 | 526.59 | 340.49 | 528.1 | 340.52 | 530.62 | 340.69 | 534.65 | 340.87 |
| 536 | 340.93 | 543.42 | 341.36 | 544.02 | 341.39 | 544.07 | 341.39 | 548.14 | 341.61 |
| 548.27 | 341.62 | 548.87 | 341.64 | 550.31 | 341.71 | 550.84 | 341.74 | 558.37 | 342.13 |
| 558.78 | 342.15 | 559.9 | 342.21 | 562.65 | 342.34 | 563.35 | 342.38 | 564.89 | 342.46 |
| 565.31 | 342.49 | 567.89 | 342.71 | 568.65 | 342.76 | 569.51 | 342.82 | 570.61 | 342.88 |
| 572.85 | 343.06 | 573.76 | 343.12 | 573.99 | 343.14 | 575.15 | 343.14 | 575.22 | 343.15 |
| 575.89 | 343.17 | 577.09 | 343.17 | 577.64 | 343.16 | 578.97 | 343.13 | 579.27 | 343.13 |
| 580.06 | 343.14 | 580.92 | 343.17 | 581.92 | 343.23 | 582.89 | 343.32 | 585.17 | 343.6 |
| 585.86 | 343.71 | 585.96 | 343.72 | 587.61 | 343.91 | 588.35 | 343.98 | 589.59 | 344.11 |
| 589.67 | 344.12 | 595.92 | 344.81 | 596.6 | 344.88 | 598.06 | 345 | 598.29 | 345.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 598.37 | 345.02 | 598.54 | 345.04 | 598.69 | 345.05 | 599.61 | 345.13 | 600.12 | 345.18 |
| 602.75 | 345.41 | 606.22 | 345.72 | 606.4 | 345.74 | 606.48 | 345.74 | 611.35 | 345.79 |
| 611.76 | 345.8 | 619.45 | 345.95 | 620.36 | 345.99 | 624.99 | 346.19 | 626.2 | 346.23 |
| 627.37 | 346.29 | 629.17 | 346.35 | 629.78 | 346.38 | 630.56 | 346.4 | 631.84 | 346.44 |
| 634.24 | 346.53 | 635.07 | 346.57 | 638.04 | 346.79 | 641.06 | 346.96 | 642.5 | 347.05 |
| 644.78 | 347.08 | 653.29 | 347.04 | 654.03 | 347.04 | 658.41 | 347.01 | 661.28 | 346.99 |
| 662.52 | 346.98 | 663.09 | 346.98 | 664.14 | 346.97 | 667.91 | 346.95 | 670.31 | 346.93 |
| 670.65 | 346.93 | 672.27 | 346.92 | 672.43 | 346.92 | 674.3 | 346.9 | 675.15 | 346.89 |
| 688.04 | 346.77 | 688.89 | 346.77 | 689.88 | 346.79 | 690.69 | 346.79 | 691.04 | 346.78 |
| 692.57 | 346.75 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 208.19 | .04 | 513.47 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 208.19 | 513.47 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1899.55*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.53 | .56 | 340.52 | .9 | 340.52 | 1.38 | 340.54 | 3.32 | 340.54 |
| 6.53 | 340.51 | 8.82 | 340.49 | 13.49 | 340.45 | 14.34 | 340.45 | 14.59 | 340.46 |
| 14.71 | 340.48 | 14.84 | 340.48 | 15.1 | 340.49 | 15.25 | 340.5 | 15.38 | 340.5 |
| 16.2 | 340.49 | 16.55 | 340.49 | 17.16 | 340.48 | 17.65 | 340.47 | 18.03 | 340.45 |
| 18.34 | 340.45 | 18.89 | 340.44 | 19.6 | 340.44 | 24.75 | 340.36 | 25.77 | 340.35 |
| 27.81 | 340.32 | 28.63 | 340.31 | 29.32 | 340.3 | 29.73 | 340.3 | 30.47 | 340.29 |
| 31.02 | 340.28 | 32.58 | 340.28 | 33.03 | 340.27 | 34.28 | 340.27 | 34.99 | 340.28 |
| 36.25 | 340.28 | 36.52 | 340.29 | 37.52 | 340.3 | 42.28 | 340.4 | 43.13 | 340.41 |
| 43.96 | 340.43 | 44.86 | 340.44 | 46.08 | 340.44 | 47.56 | 340.46 | 50.02 | 340.46 |
| 50.58 | 340.47 | 51.45 | 340.47 | 51.66 | 340.48 | 52.37 | 340.48 | 52.58 | 340.49 |
| 52.64 | 340.5 | 55.47 | 340.5 | 56.32 | 340.49 | 56.83 | 340.49 | 57.63 | 340.48 |
| 58.51 | 340.48 | 58.81 | 340.47 | 58.89 | 340.46 | 59.12 | 340.46 | 60.01 | 340.42 |
| 60.31 | 340.41 | 60.45 | 340.4 | 61.56 | 340.35 | 62.3 | 340.32 | 62.64 | 340.31 |
| 63.18 | 340.29 | 63.91 | 340.27 | 64.83 | 340.23 | 65.31 | 340.23 | 66.43 | 340.2 |
| 66.67 | 340.19 | 67.64 | 340.16 | 68.94 | 340.14 | 69.2 | 340.13 | 70.66 | 340.09 |
| 72.02 | 340.07 | 75.97 | 339.96 | 76.3 | 339.95 | 76.49 | 339.94 | 76.77 | 339.94 |
| 77.53 | 339.97 | 77.72 | 340.01 | 78.73 | 340.01 | 79.6 | 340 | 80.1 | 339.99 |
| 81.67 | 339.97 | 83.04 | 339.95 | 84.18 | 339.94 | 86.9 | 339.92 | 87.68 | 339.91 |
| 88.38 | 339.91 | 88.99 | 339.92 | 89.53 | 339.92 | 91.41 | 339.94 | 92.08 | 339.95 |
| 92.39 | 339.95 | 92.74 | 339.96 | 97.01 | 339.96 | 97.87 | 339.97 | 97.98 | 339.97 |
| 98.67 | 339.98 | 99.67 | 339.99 | 103.21 | 339.99 | 103.95 | 339.98 | 106.79 | 339.98 |
| 107.69 | 339.97 | 108.68 | 339.97 | 110.14 | 339.96 | 110.59 | 339.96 | 111.57 | 339.95 |
| 111.84 | 339.94 | 113.28 | 339.91 | 114.54 | 339.89 | 115.06 | 339.87 | 115.53 | 339.86 |
| 117.7 | 339.79 | 119.12 | 339.75 | 119.26 | 339.74 | 120 | 339.71 | 121.13 | 339.68 |
| 121.99 | 339.65 | 122.68 | 339.65 | 124.28 | 339.57 | 124.45 | 339.57 | 125.33 | 339.61 |
| 126.07 | 339.63 | 128.03 | 339.66 | 128.39 | 339.67 | 128.63 | 339.67 | 129.15 | 339.68 |
| 129.51 | 339.71 | 129.68 | 339.73 | 130.33 | 339.77 | 130.36 | 339.78 | 130.65 | 339.79 |
| 131.04 | 339.79 | 131.79 | 339.8 | 131.9 | 339.8 | 132.7 | 339.79 | 134.03 | 339.79 |
| 135.94 | 339.76 | 136.92 | 339.76 | 137.76 | 339.74 | 137.92 | 339.74 | 139.2 | 339.76 |
| 140.08 | 339.76 | 141.07 | 339.78 | 143.38 | 339.78 | 143.86 | 339.77 | 146.86 | 339.76 |
| 150.34 | 339.73 | 152.48 | 339.73 | 154.96 | 339.71 | 159.35 | 339.69 | 159.51 | 339.69 |
| 172.31 | 339.61 | 174.8 | 339.59 | 176.17 | 339.59 | 176.58 | 339.58 | 179.76 | 339.55 |
| 183.1 | 339.52 | 186.09 | 339.49 | 188.41 | 339.46 | 188.81 | 339.45 | 190.29 | 339.4 |
| 190.58 | 339.38 | 192.43 | 339.3 | 197.19 | 339.09 | 198.79 | 339.04 | 200.69 | 338.99 |
| 200.83 | 339 | 201.13 | 339 | 202.39 | 338.97 | 203.55 | 338.93 | 204.99 | 338.87 |
| 206.53 | 338.81 | 206.78 | 338.81 | 206.82 | 338.8 | 208.58 | 338.72 | 210.03 | 338.67 |
| 210.8 | 338.64 | 212.34 | 338.56 | 213.68 | 338.46 | 214.59 | 338.46 | 215.15 | 338.45 |
| 219.32 | 338.41 | 219.84 | 338.41 | 221.38 | 338.4 | 222.29 | 338.39 | 223.47 | 338.38 |
| 223.76 | 338.38 | 223.88 | 338.37 | 224.35 | 338.37 | 225.01 | 338.36 | 226.07 | 338.35 |
| 227.27 | 338.34 | 228.23 | 338.34 | 228.46 | 338.33 | 229.35 | 338.32 | 230.08 | 338.32 |
| 231.25 | 338.31 | 231.36 | 338.31 | 232.4 | 338.35 | 233.15 | 338.35 | 233.37 | 338.34 |
| 233.76 | 338.33 | 235.62 | 338.27 | 236.1 | 338.26 | 236.29 | 338.26 | 236.89 | 338.25 |
| 237.69 | 338.25 | 239.41 | 338.23 | 243.4 | 338.24 | 244.01 | 338.24 | 244.95 | 338.25 |
| 246.4 | 338.25 | 246.64 | 338.26 | 247.61 | 338.27 | 247.97 | 338.28 | 248.62 | 338.28 |
| 250.56 | 338.24 | 251.85 | 338.22 | 254.23 | 338.2 | 254.91 | 338.19 | 255.36 | 338.19 |
| 255.64 | 338.17 | 255.85 | 338.16 | 256.75 | 338.1 | 257.25 | 338.12 | 257.58 | 338.12 |
| 259.04 | 338.15 | 259.84 | 338.15 | 260.29 | 338.14 | 260.99 | 338.1 | 262.43 | 338.02 |
| 263.09 | 337.98 | 263.35 | 337.93 | 263.4 | 337.93 | 264.48 | 337.9 | 265.47 | 337.88 |
| 266.05 | 337.88 | 268.1 | 337.92 | 270.02 | 337.9 | 273.54 | 337.86 | 276.64 | 337.82 |
| 279.83 | 337.77 | 283.25 | 337.7 | 284.15 | 337.69 | 285.62 | 337.66 | 286.71 | 337.65 |
| 288.58 | 337.61 | 291.84 | 337.56 | 292.76 | 337.55 | 293.9 | 337.52 | 296.33 | 337.48 |
| 297.01 | 337.46 | 298.6 | 337.43 | 298.99 | 337.43 | 300.4 | 337.4 | 300.84 | 337.4 |
| 300.97 | 337.39 | 301.27 | 337.39 | 304.75 | 337.33 | 306.27 | 337.31 | 308.54 | 337.26 |
| 309.32 | 337.21 | 310.46 | 337.14 | 310.68 | 337.13 | 311.89 | 337.09 | 313.52 | 337.05 |
| 313.82 | 337.05 | 314.33 | 337.02 | 314.55 | 337.01 | 314.82 | 337.01 | 315.44 | 336.99 |
| 315.75 | 336.99 | 316.32 | 336.97 | 316.54 | 336.97 | 317.03 | 336.95 | 320.81 | 336.95 |
| 321.24 | 336.96 | 321.36 | 336.97 | 321.79 | 336.97 | 322.11 | 336.98 | 322.5 | 336.98 |
| 322.78 | 336.99 | 323.17 | 336.99 | 324.55 | 337.01 | 328.23 | 337.08 | 331.4 | 337.13 |
| 342.23 | 337.32 | 362.34 | 337.67 | 363.5 | 337.65 | 364.77 | 337.65 | 369.97 | 337.61 |
| 373.08 | 337.58 | 377.91 | 337.58 | 378 | 337.59 | 378.22 | 337.59 | 378.57 | 337.58 |
| 379.88 | 337.58 | 381.24 | 337.56 | 387.56 | 337.46 | 389.28 | 337.43 | 390.55 | 337.41 |
| 392.46 | 337.37 | 392.56 | 337.37 | 393.85 | 337.34 | 395.18 | 337.31 | 395.95 | 337.29 |
| 396.3 | 337.27 | 396.69 | 337.26 | 396.8 | 337.25 | 396.96 | 337.26 | 398.45 | 337.26 |
| 399.4 | 337.28 | 400.72 | 337.29 | 401.41 | 337.3 | 402.3 | 337.31 | 402.57 | 337.32 |
| 403.21 | 337.32 | 403.88 | 337.34 | 404.22 | 337.34 | 404.56 | 337.36 | 405.37 | 337.4 |
| 407.83 | 337.5 | 409.73 | 337.58 | 414.04 | 337.77 | 416.25 | 337.87 | 416.76 | 337.9 |
| 418.04 | 337.94 | 418.85 | 337.98 | 420.56 | 338.04 | 422.69 | 338.1 | 423.81 | 338.12 |
| 426.58 | 338.18 | 427.69 | 338.21 | 428.25 | 338.21 | 429.61 | 338.2 | 430.85 | 338.19 |
| 433.31 | 338.19 | 434.6 | 338.21 | 434.98 | 338.23 | 437.54 | 338.26 | 439.61 | 338.28 |
| 441.48 | 338.29 | 444.21 | 338.31 | 445.94 | 338.33 | 446.23 | 338.33 | 449.36 | 338.34 |
| 450.27 | 338.35 | 454.93 | 338.35 | 456.53 | 338.3 | 458.64 | 338.24 | 458.71 | 338.24 |
| 460.68 | 338.18 | 463.08 | 338.12 | 466.33 | 338.03 | 471.55 | 337.97 | 473.7 | 337.96 |
| 476.95 | 337.93 | 478.32 | 337.92 | 480.63 | 337.9 | 482.44 | 337.88 | 485.47 | 337.82 |
| 486.45 | 337.81 | 487.26 | 337.8 | 488.98 | 337.79 | 490.34 | 337.79 | 491.98 | 337.78 |
| 493.85 | 337.77 | 501.81 | 337.77 | 503.28 | 337.78 | 505.33 | 337.78 | 505.79 | 337.79 |
| 506.65 | 337.82 | 507.84 | 337.88 | 509.14 | 337.95 | 509.43 | 337.97 | 509.75 | 338 |
| 510.61 | 338.05 | 511.61 | 338.11 | 511.67 | 338.12 | 511.7 | 338.17 | 512.3 | 338.82 |
| 512.53 | 339.08 | 513.13 | 339.53 | 513.74 | 339.56 | 513.79 | 339.56 | 514.25 | 339.59 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 519.44 | 339.86 | 520 | 339.88 | 520.15 | 339.88 | 520.28 | 339.89 | 521.86 | 339.99 |
| 522.71 | 340.05 | 523.05 | 340.06 | 523.9 | 340.05 | 525.85 | 340.16 | 527.39 | 340.2 |
| 529.93 | 340.37 | 534.03 | 340.54 | 535.4 | 340.61 | 542.93 | 341.02 | 543.54 | 341.05 |
| 543.59 | 341.06 | 547.72 | 341.26 | 547.86 | 341.27 | 548.46 | 341.3 | 549.92 | 341.36 |
| 550.46 | 341.39 | 558.1 | 341.76 | 558.53 | 341.78 | 559.66 | 341.83 | 562.45 | 341.96 |
| 563.15 | 341.99 | 564.72 | 342.07 | 565.15 | 342.11 | 567.77 | 342.31 | 568.54 | 342.36 |
| 569.41 | 342.41 | 569.98 | 342.45 | 570.53 | 342.48 | 572.8 | 342.64 | 573.73 | 342.7 |
| 573.96 | 342.72 | 574.57 | 342.72 | 575.21 | 342.73 | 575.89 | 342.75 | 577.1 | 342.75 |
| 577.66 | 342.74 | 578.55 | 342.73 | 579.01 | 342.72 | 579.32 | 342.71 | 580.12 | 342.73 |
| 581 | 342.76 | 582.01 | 342.82 | 582.99 | 342.9 | 585.3 | 343.17 | 586 | 343.27 |
| 586.11 | 343.28 | 587.35 | 343.41 | 588.54 | 343.52 | 589.79 | 343.65 | 589.87 | 343.65 |
| 596.22 | 344.29 | 596.89 | 344.35 | 596.91 | 344.36 | 598.39 | 344.46 | 598.52 | 344.47 |
| 598.55 | 344.48 | 598.68 | 344.48 | 599.96 | 344.59 | 600.48 | 344.63 | 603.15 | 344.86 |
| 606.67 | 345.15 | 606.86 | 345.17 | 606.93 | 345.17 | 611.88 | 345.24 | 612.29 | 345.25 |
| 620.1 | 345.41 | 621.03 | 345.46 | 625.72 | 345.7 | 626.96 | 345.76 | 628.14 | 345.82 |
| 629.96 | 345.9 | 630.59 | 345.92 | 631.38 | 345.95 | 632.67 | 345.99 | 635.11 | 346.1 |
| 635.95 | 346.15 | 638.97 | 346.42 | 642.03 | 346.62 | 643.49 | 346.74 | 645.81 | 346.77 |
| 654.45 | 346.75 | 655.2 | 346.74 | 659.64 | 346.72 | 662.56 | 346.71 | 663.81 | 346.7 |
| 664.4 | 346.7 | 665.46 | 346.69 | 669.29 | 346.67 | 671.73 | 346.66 | 672.07 | 346.66 |
| 673.71 | 346.65 | 673.88 | 346.64 | 674.83 | 346.64 | 676.64 | 346.62 | 689.72 | 346.54 |
| 690.58 | 346.54 | 691.58 | 346.56 | 691.88 | 346.57 | 692.16 | 346.56 | 692.76 | 346.56 |
| 694.32 | 346.54 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 206.53 | .04 | 512.53 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 206.53 | 512.53 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1879.82*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.28 | .56 | 340.27 | .89 | 340.27 | 1.37 | 340.29 | 1.75 | 340.29 |
| 2.37 | 340.3 | 3.29 | 340.29 | 6.48 | 340.27 | 8.75 | 340.25 | 13.38 | 340.21 |
| 14.23 | 340.21 | 14.58 | 340.22 | 14.59 | 340.24 | 14.98 | 340.24 | 15.12 | 340.25 |
| 15.26 | 340.25 | 16.07 | 340.24 | 16.41 | 340.24 | 17.51 | 340.22 | 17.73 | 340.21 |
| 17.88 | 340.21 | 18.2 | 340.2 | 18.74 | 340.19 | 19.44 | 340.19 | 24.55 | 340.11 |
| 25.56 | 340.09 | 27.59 | 340.06 | 28.4 | 340.06 | 29.08 | 340.05 | 29.5 | 340.04 |
| 30.22 | 340.03 | 30.77 | 340.03 | 32.08 | 340.02 | 32.32 | 340.02 | 32.76 | 340.01 |
| 34 | 340.01 | 34.7 | 340.02 | 36.23 | 340.02 | 37.22 | 340.04 | 41.94 | 340.14 |
| 42.78 | 340.15 | 43.61 | 340.17 | 44.5 | 340.18 | 45.71 | 340.18 | 47.18 | 340.19 |
| 47.78 | 340.19 | 48.48 | 340.2 | 50.2 | 340.2 | 50.68 | 340.21 | 51.46 | 340.21 |
| 51.7 | 340.22 | 52.15 | 340.22 | 52.25 | 340.24 | 53.06 | 340.23 | 55.02 | 340.23 |
| 55.87 | 340.22 | 56.37 | 340.22 | 57.17 | 340.21 | 58.04 | 340.21 | 58.34 | 340.2 |
| 58.42 | 340.19 | 58.65 | 340.19 | 59.08 | 340.16 | 59.53 | 340.15 | 59.82 | 340.14 |
| 59.96 | 340.13 | 61.06 | 340.08 | 61.8 | 340.05 | 62.14 | 340.03 | 62.67 | 340.01 |
| 63.4 | 339.99 | 64.31 | 339.95 | 64.79 | 339.95 | 65.9 | 339.92 | 66.14 | 339.91 |
| 67.1 | 339.88 | 68.38 | 339.85 | 68.64 | 339.84 | 70.09 | 339.8 | 71.45 | 339.78 |
| 75.36 | 339.67 | 75.69 | 339.66 | 75.88 | 339.65 | 76.15 | 339.65 | 76.91 | 339.69 |
| 77.09 | 339.74 | 78.09 | 339.74 | 78.96 | 339.73 | 79.46 | 339.72 | 81.01 | 339.7 |
| 82.37 | 339.68 | 83.5 | 339.67 | 86.2 | 339.65 | 86.98 | 339.64 | 88.28 | 339.64 |
| 88.81 | 339.65 | 90.68 | 339.66 | 91.34 | 339.67 | 91.64 | 339.68 | 96.23 | 339.68 |
| 97.19 | 339.69 | 97.88 | 339.7 | 99.97 | 339.72 | 101.27 | 339.72 | 102.38 | 339.71 |
| 103.95 | 339.71 | 104.49 | 339.7 | 104.89 | 339.71 | 105.45 | 339.71 | 105.94 | 339.7 |
| 106.82 | 339.7 | 107.81 | 339.69 | 109.7 | 339.69 | 110.68 | 339.67 | 110.94 | 339.67 |
| 112.37 | 339.64 | 113.03 | 339.63 | 113.62 | 339.61 | 114.6 | 339.59 | 116.75 | 339.52 |
| 118.17 | 339.48 | 118.3 | 339.47 | 119.03 | 339.44 | 120.16 | 339.41 | 121.01 | 339.38 |
| 121.69 | 339.38 | 123.28 | 339.3 | 123.45 | 339.31 | 124.12 | 339.33 | 124.32 | 339.33 |
| 125.06 | 339.35 | 127 | 339.38 | 127.36 | 339.39 | 127.6 | 339.39 | 128.11 | 339.4 |
| 128.36 | 339.41 | 128.64 | 339.44 | 129.28 | 339.48 | 129.99 | 339.5 | 131.63 | 339.5 |
| 132.95 | 339.49 | 134.84 | 339.47 | 135.16 | 339.46 | 135.81 | 339.46 | 136.65 | 339.44 |
| 136.81 | 339.44 | 137.41 | 339.45 | 138.95 | 339.47 | 139.47 | 339.48 | 142.7 | 339.48 |
| 145.68 | 339.47 | 149.13 | 339.44 | 149.88 | 339.44 | 151.26 | 339.43 | 153.72 | 339.42 |
| 158.07 | 339.4 | 158.22 | 339.4 | 170.93 | 339.31 | 173.39 | 339.29 | 174.75 | 339.29 |
| 175.16 | 339.28 | 178.32 | 339.25 | 181.63 | 339.22 | 184.59 | 339.18 | 186.89 | 339.16 |
| 187.29 | 339.15 | 188.76 | 339.09 | 189.05 | 339.08 | 190.89 | 339 | 195.6 | 338.8 |
| 197.19 | 338.76 | 199.08 | 338.72 | 199.21 | 338.74 | 199.51 | 338.75 | 200.76 | 338.71 |
| 201.91 | 338.68 | 203.34 | 338.63 | 204.87 | 338.57 | 205.15 | 338.57 | 205.19 | 338.56 |
| 207.17 | 338.47 | 208.81 | 338.41 | 211.4 | 338.29 | 212.91 | 338.18 | 213.93 | 338.17 |
| 214.56 | 338.16 | 219.26 | 338.13 | 219.84 | 338.13 | 221.57 | 338.11 | 222.6 | 338.11 |
| 223.92 | 338.1 | 224.12 | 338.1 | 224.25 | 338.09 | 224.91 | 338.09 | 225.65 | 338.08 |
| 226.85 | 338.08 | 228.19 | 338.07 | 228.56 | 338.06 | 229.54 | 338.06 | 230.53 | 338.05 |
| 230.79 | 338.05 | 231.36 | 338.04 | 232.79 | 338.03 | 233.97 | 338.09 | 234.8 | 338.09 |
| 235.05 | 338.08 | 235.5 | 338.07 | 237.58 | 337.99 | 238.34 | 337.99 | 239.02 | 337.98 |
| 239.91 | 337.98 | 241.85 | 337.96 | 246.33 | 337.99 | 247.02 | 337.99 | 248.08 | 338 |
| 249.46 | 338 | 249.71 | 338.01 | 249.98 | 338.01 | 251.06 | 338.04 | 251.47 | 338.05 |
| 252.2 | 338.05 | 254.39 | 338.01 | 255.84 | 337.99 | 258.52 | 337.97 | 259.28 | 337.97 |
| 259.78 | 337.96 | 260.33 | 337.93 | 261.16 | 337.87 | 261.35 | 337.86 | 261.91 | 337.88 |
| 262.28 | 337.89 | 263.92 | 337.93 | 264.83 | 337.93 | 265.33 | 337.91 | 266.12 | 337.87 |
| 267.92 | 337.77 | 268.47 | 337.73 | 268.77 | 337.67 | 268.82 | 337.67 | 270.04 | 337.64 |
| 271.15 | 337.61 | 271.8 | 337.63 | 274.11 | 337.68 | 276.28 | 337.66 | 280.23 | 337.62 |
| 281.99 | 337.6 | 283.71 | 337.59 | 287.3 | 337.54 | 291.15 | 337.48 | 292.16 | 337.46 |
| 293.82 | 337.44 | 295.04 | 337.43 | 297.14 | 337.39 | 300.81 | 337.35 | 301.84 | 337.34 |
| 303.12 | 337.32 | 305.86 | 337.27 | 306.63 | 337.26 | 308.41 | 337.23 | 308.85 | 337.22 |
| 310.43 | 337.2 | 310.93 | 337.2 | 311.07 | 337.19 | 311.41 | 337.19 | 315.33 | 337.14 |
| 317.04 | 337.11 | 319.59 | 337.08 | 320.47 | 337.01 | 321.75 | 336.94 | 323.01 | 336.89 |
| 323.36 | 336.88 | 323.8 | 336.88 | 324.28 | 336.86 | 325.19 | 336.85 | 325.53 | 336.84 |
| 326.1 | 336.81 | 326.35 | 336.8 | 326.65 | 336.8 | 327.34 | 336.78 | 327.7 | 336.78 |
| 328.05 | 336.77 | 328.35 | 336.77 | 329.14 | 336.74 | 332.68 | 336.74 | 333.09 | 336.75 |
| 333.2 | 336.76 | 333.6 | 336.76 | 333.9 | 336.77 | 334.53 | 336.77 | 334.89 | 336.78 |
| 336.18 | 336.8 | 339.61 | 336.86 | 342.57 | 336.91 | 352.67 | 337.08 | 371.44 | 337.41 |
| 372.53 | 337.39 | 373.71 | 337.39 | 378.56 | 337.35 | 381.46 | 337.33 | 385.83 | 337.33 |
| 385.97 | 337.34 | 386.68 | 337.34 | 386.83 | 337.33 | 386.94 | 337.34 | 387.23 | 337.34 |
| 387.81 | 337.33 | 389.08 | 337.33 | 394.98 | 337.24 | 396.58 | 337.22 | 397.76 | 337.2 |
| 399.55 | 337.16 | 399.64 | 337.16 | 400.85 | 337.14 | 402.08 | 337.11 | 403.5 | 337.07 |
| 403.6 | 337.06 | 404.36 | 337.06 | 404.57 | 337.07 | 405.14 | 337.07 | 406.02 | 337.09 |
| 407.25 | 337.1 | 407.9 | 337.11 | 408.73 | 337.12 | 408.98 | 337.12 | 409.58 | 337.13 |
| 409.93 | 337.14 | 410.2 | 337.14 | 410.52 | 337.15 | 410.83 | 337.17 | 411.6 | 337.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 413.89 | 337.3 | 419.69 | 337.56 | 421.74 | 337.65 | 422.23 | 337.68 | 423.42 | 337.72 |
| 424.17 | 337.75 | 425.77 | 337.81 | 427.75 | 337.87 | 428.8 | 337.89 | 431.38 | 337.95 |
| 432.42 | 337.98 | 432.95 | 337.98 | 435.37 | 337.96 | 436.64 | 337.96 | 437.2 | 337.97 |
| 437.66 | 337.97 | 438.87 | 337.99 | 439.22 | 338.01 | 441.61 | 338.04 | 443.55 | 338.06 |
| 445.29 | 338.08 | 447.84 | 338.1 | 449.45 | 338.11 | 449.72 | 338.11 | 452.65 | 338.12 |
| 453.5 | 338.13 | 457.84 | 338.13 | 459.33 | 338.08 | 461.3 | 338.03 | 461.37 | 338.02 |
| 463.21 | 337.97 | 465.45 | 337.91 | 468.48 | 337.84 | 473.35 | 337.79 | 475.36 | 337.77 |
| 477.36 | 337.76 | 478.39 | 337.75 | 479.67 | 337.75 | 481.82 | 337.73 | 483.52 | 337.71 |
| 486.34 | 337.65 | 487.25 | 337.64 | 488.01 | 337.64 | 489.62 | 337.63 | 490.88 | 337.63 |
| 492.41 | 337.62 | 494.16 | 337.62 | 495.96 | 337.61 | 497.64 | 337.61 | 499.11 | 337.62 |
| 501.59 | 337.62 | 502.96 | 337.63 | 504.88 | 337.63 | 505.3 | 337.64 | 506.11 | 337.67 |
| 507.22 | 337.72 | 508.43 | 337.79 | 508.7 | 337.81 | 509 | 337.84 | 509.8 | 337.88 |
| 510.73 | 337.93 | 510.79 | 337.94 | 510.82 | 337.99 | 511.37 | 338.59 | 511.59 | 338.82 |
| 512.2 | 339.24 | 512.87 | 339.26 | 513.34 | 339.3 | 518.61 | 339.54 | 519.18 | 339.56 |
| 519.32 | 339.56 | 519.45 | 339.57 | 521.06 | 339.67 | 522.26 | 339.74 | 523.13 | 339.73 |
| 525.11 | 339.84 | 526.67 | 339.87 | 529.25 | 340.04 | 533.41 | 340.21 | 534.8 | 340.28 |
| 542.44 | 340.69 | 543.06 | 340.72 | 543.11 | 340.72 | 547.3 | 340.92 | 547.44 | 340.93 |
| 548.05 | 340.95 | 549.53 | 341.01 | 550.08 | 341.03 | 558.27 | 341.41 | 559.41 | 341.46 |
| 562.96 | 341.61 | 564.56 | 341.69 | 564.99 | 341.72 | 567.64 | 341.91 | 567.67 | 341.91 |
| 568.43 | 341.96 | 569.31 | 342.01 | 570.45 | 342.07 | 572.76 | 342.23 | 573.69 | 342.29 |
| 573.92 | 342.3 | 574.55 | 342.3 | 575.2 | 342.31 | 575.89 | 342.33 | 577.12 | 342.33 |
| 577.69 | 342.32 | 578.59 | 342.31 | 579.06 | 342.3 | 579.37 | 342.3 | 580.18 | 342.31 |
| 581.07 | 342.34 | 582.1 | 342.4 | 583.1 | 342.48 | 585.44 | 342.73 | 586.15 | 342.82 |
| 586.26 | 342.84 | 587.51 | 342.96 | 588.72 | 343.07 | 590 | 343.18 | 590.08 | 343.18 |
| 596.52 | 343.76 | 597.22 | 343.83 | 598.72 | 343.93 | 598.85 | 343.93 | 599.12 | 343.96 |
| 599.21 | 343.96 | 599.37 | 343.98 | 600.84 | 344.09 | 603.55 | 344.3 | 607.12 | 344.59 |
| 607.39 | 344.61 | 612.41 | 344.69 | 612.83 | 344.7 | 620.75 | 344.88 | 621.69 | 344.93 |
| 626.46 | 345.21 | 627.71 | 345.28 | 628.91 | 345.35 | 631.39 | 345.47 | 633.51 | 345.55 |
| 635.98 | 345.68 | 636.84 | 345.74 | 639.9 | 346.05 | 643.01 | 346.29 | 644.49 | 346.43 |
| 646.84 | 346.46 | 655.61 | 346.45 | 656.37 | 346.45 | 660.88 | 346.44 | 663.83 | 346.43 |
| 665.11 | 346.42 | 666.78 | 346.42 | 670.67 | 346.4 | 673.2 | 346.39 | 673.49 | 346.38 |
| 675.16 | 346.38 | 675.32 | 346.37 | 676.29 | 346.37 | 677.25 | 346.36 | 678.12 | 346.36 |
| 691.39 | 346.31 | 692.01 | 346.31 | 692.27 | 346.32 | 693.29 | 346.34 | 694.48 | 346.34 |
| 696.06 | 346.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 204.87 | .04 | 511.59 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 204.87 | 511.59 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1860.08*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 340.02 | .56 | 340.02 | .69 | 340.01 | .88 | 340.01 | 1.15 | 340.04 |
| 1.36 | 340.04 | 1.65 | 340.05 | 3.27 | 340.05 | 6.42 | 340.02 | 8.68 | 340 |
| 13.27 | 339.96 | 13.73 | 339.96 | 14.11 | 339.97 | 14.36 | 339.97 | 14.47 | 339.99 |
| 14.6 | 339.99 | 14.86 | 340 | 15.94 | 340 | 16.28 | 339.99 | 17.37 | 339.97 |
| 17.58 | 339.97 | 17.74 | 339.96 | 18.05 | 339.96 | 18.59 | 339.94 | 19.29 | 339.94 |
| 21.81 | 339.9 | 24.35 | 339.85 | 25.35 | 339.84 | 27.37 | 339.81 | 28.85 | 339.79 |
| 29.26 | 339.79 | 29.98 | 339.78 | 30.52 | 339.77 | 31.82 | 339.76 | 32.06 | 339.76 |
| 32.5 | 339.75 | 33.73 | 339.75 | 34.44 | 339.76 | 34.96 | 339.75 | 35.24 | 339.76 |
| 35.94 | 339.76 | 36.92 | 339.78 | 41.6 | 339.88 | 42.44 | 339.9 | 42.84 | 339.9 |
| 43.25 | 339.91 | 44.14 | 339.92 | 45.33 | 339.92 | 46.79 | 339.93 | 49.21 | 339.93 |
| 49.77 | 339.94 | 50.62 | 339.94 | 50.83 | 339.95 | 51.53 | 339.95 | 51.65 | 339.96 |
| 51.73 | 339.95 | 51.83 | 339.97 | 52.63 | 339.96 | 54.58 | 339.96 | 55.42 | 339.95 |
| 55.91 | 339.95 | 56.71 | 339.94 | 57.57 | 339.94 | 57.87 | 339.93 | 57.95 | 339.92 |
| 58.17 | 339.92 | 58.36 | 339.91 | 58.6 | 339.89 | 59.04 | 339.88 | 59.34 | 339.86 |
| 59.48 | 339.86 | 60.35 | 339.81 | 61.3 | 339.77 | 61.64 | 339.76 | 62.88 | 339.71 |
| 63.79 | 339.68 | 64.26 | 339.67 | 65.36 | 339.64 | 65.6 | 339.63 | 66.55 | 339.6 |
| 67.83 | 339.57 | 68.08 | 339.56 | 69.52 | 339.52 | 70.87 | 339.49 | 74.75 | 339.38 |
| 75.08 | 339.37 | 75.26 | 339.36 | 75.53 | 339.36 | 76.28 | 339.41 | 76.47 | 339.47 |
| 77.46 | 339.47 | 78.32 | 339.46 | 78.81 | 339.46 | 80.35 | 339.43 | 81.71 | 339.42 |
| 82.74 | 339.4 | 82.82 | 339.4 | 85.5 | 339.38 | 86.27 | 339.37 | 87.56 | 339.37 |
| 88.09 | 339.38 | 89.94 | 339.39 | 90.6 | 339.39 | 90.9 | 339.4 | 93.08 | 339.4 |
| 95.45 | 339.39 | 96.3 | 339.41 | 97.08 | 339.42 | 99.16 | 339.44 | 102.28 | 339.44 |
| 103.11 | 339.43 | 105.08 | 339.43 | 105.96 | 339.42 | 106.93 | 339.42 | 108.37 | 339.41 |
| 108.82 | 339.41 | 109.78 | 339.4 | 110.04 | 339.39 | 111.45 | 339.37 | 112.11 | 339.35 |
| 112.7 | 339.34 | 113.67 | 339.32 | 115.8 | 339.25 | 117.21 | 339.2 | 117.34 | 339.2 |
| 118.07 | 339.17 | 119.18 | 339.14 | 120.02 | 339.11 | 120.71 | 339.11 | 121.69 | 339.06 |
| 122.28 | 339.04 | 122.45 | 339.04 | 123.11 | 339.06 | 123.32 | 339.06 | 124.04 | 339.08 |
| 125.97 | 339.1 | 126.32 | 339.11 | 127.07 | 339.11 | 127.32 | 339.12 | 127.77 | 339.17 |
| 127.91 | 339.18 | 128.05 | 339.18 | 128.55 | 339.2 | 128.93 | 339.21 | 129.78 | 339.21 |
| 130.56 | 339.2 | 131.88 | 339.19 | 133.75 | 339.17 | 134.06 | 339.17 | 134.71 | 339.16 |
| 135.55 | 339.15 | 135.7 | 339.15 | 136.96 | 339.17 | 137.83 | 339.17 | 138.8 | 339.19 |
| 141.54 | 339.19 | 144.5 | 339.17 | 147.92 | 339.15 | 148.67 | 339.15 | 150.03 | 339.14 |
| 152.47 | 339.13 | 156.79 | 339.1 | 156.94 | 339.1 | 169.54 | 339.01 | 171.98 | 338.99 |
| 173.33 | 338.99 | 173.74 | 338.98 | 176.87 | 338.95 | 180.15 | 338.91 | 183.1 | 338.88 |
| 185.38 | 338.85 | 185.77 | 338.84 | 187.51 | 338.78 | 189.34 | 338.7 | 194.01 | 338.51 |
| 195.59 | 338.48 | 197.47 | 338.45 | 197.6 | 338.48 | 197.89 | 338.49 | 199.13 | 338.46 |
| 200.28 | 338.43 | 201.69 | 338.38 | 203.21 | 338.33 | 203.57 | 338.33 | 205.77 | 338.21 |
| 207.59 | 338.15 | 208.54 | 338.11 | 210.47 | 338.02 | 212.14 | 337.89 | 213.28 | 337.88 |
| 213.98 | 337.88 | 219.19 | 337.85 | 219.84 | 337.84 | 221.76 | 337.83 | 222.9 | 337.82 |
| 224.37 | 337.81 | 225.47 | 337.81 | 226.3 | 337.8 | 227.62 | 337.8 | 229.12 | 337.79 |
| 229.53 | 337.78 | 230.61 | 337.78 | 231.72 | 337.77 | 232 | 337.77 | 232.63 | 337.76 |
| 234.23 | 337.76 | 235.53 | 337.82 | 235.68 | 337.83 | 236.04 | 337.83 | 236.46 | 337.82 |
| 236.74 | 337.82 | 237.23 | 337.81 | 239.55 | 337.72 | 240.38 | 337.72 | 241.14 | 337.71 |
| 242.13 | 337.7 | 243.2 | 337.7 | 244.29 | 337.69 | 249.27 | 337.74 | 250.03 | 337.74 |
| 251.2 | 337.75 | 252.74 | 337.76 | 253.01 | 337.76 | 254.52 | 337.81 | 254.98 | 337.81 |
| 255.32 | 337.82 | 255.79 | 337.82 | 258.21 | 337.78 | 259.82 | 337.76 | 262.8 | 337.74 |
| 263.64 | 337.74 | 264.2 | 337.73 | 264.56 | 337.71 | 264.82 | 337.7 | 265.74 | 337.63 |
| 265.95 | 337.62 | 266.57 | 337.64 | 266.7 | 337.65 | 266.98 | 337.65 | 268.8 | 337.7 |
| 269.33 | 337.71 | 269.81 | 337.71 | 270.37 | 337.69 | 271.24 | 337.64 | 273.03 | 337.53 |
| 273.25 | 337.52 | 273.86 | 337.48 | 274.25 | 337.41 | 275.6 | 337.38 | 276.83 | 337.35 |
| 277.56 | 337.37 | 280.12 | 337.43 | 282.53 | 337.41 | 286.92 | 337.38 | 288.87 | 337.37 |
| 290.79 | 337.35 | 294.78 | 337.31 | 299.05 | 337.25 | 300.17 | 337.24 | 302.01 | 337.22 |
| 303.37 | 337.2 | 305.71 | 337.18 | 309.78 | 337.14 | 310.92 | 337.13 | 312.35 | 337.11 |
| 315.39 | 337.07 | 316.24 | 337.05 | 318.22 | 337.03 | 318.71 | 337.02 | 320.47 | 337 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 321.18 | 337 | 321.56 | 336.99 | 325.91 | 336.95 | 327.81 | 336.92 | 330.64 | 336.89 |
| 331.61 | 336.82 | 333.04 | 336.73 | 333.32 | 336.72 | 334.82 | 336.68 | 336.86 | 336.64 |
| 337.24 | 336.63 | 337.87 | 336.6 | 338.15 | 336.59 | 338.48 | 336.59 | 339.25 | 336.57 |
| 339.65 | 336.57 | 340.04 | 336.56 | 340.37 | 336.56 | 341 | 336.54 | 341.25 | 336.53 |
| 344.56 | 336.53 | 344.94 | 336.54 | 345.04 | 336.55 | 346.03 | 336.55 | 346.6 | 336.57 |
| 347.81 | 336.58 | 350.99 | 336.64 | 352.09 | 336.66 | 353.74 | 336.68 | 363.12 | 336.84 |
| 380.54 | 337.14 | 381.55 | 337.13 | 382.65 | 337.13 | 387.16 | 337.1 | 389.84 | 337.08 |
| 393.9 | 337.08 | 394.03 | 337.09 | 394.93 | 337.09 | 395.2 | 337.1 | 395.74 | 337.09 |
| 396.92 | 337.09 | 402.39 | 337.02 | 403.88 | 337 | 406.63 | 336.95 | 406.72 | 336.95 |
| 408.99 | 336.91 | 410.3 | 336.87 | 410.39 | 336.86 | 410.53 | 336.87 | 411.57 | 336.87 |
| 411.83 | 336.88 | 412.65 | 336.89 | 414.39 | 336.92 | 415.16 | 336.93 | 415.95 | 336.93 |
| 417.11 | 336.97 | 417.82 | 337.01 | 418.25 | 337.02 | 419.95 | 337.1 | 421.6 | 337.17 |
| 425.33 | 337.34 | 427.24 | 337.43 | 427.69 | 337.45 | 428.79 | 337.49 | 429.5 | 337.53 |
| 430.98 | 337.58 | 432.82 | 337.64 | 433.79 | 337.66 | 436.19 | 337.72 | 437.16 | 337.75 |
| 437.64 | 337.75 | 438.82 | 337.74 | 441.07 | 337.74 | 441.59 | 337.75 | 442.02 | 337.75 |
| 443.14 | 337.77 | 443.47 | 337.79 | 445.69 | 337.82 | 447.48 | 337.84 | 449.1 | 337.86 |
| 451.46 | 337.88 | 452.96 | 337.89 | 453.22 | 337.89 | 455.93 | 337.91 | 460.75 | 337.91 |
| 462.14 | 337.86 | 463.97 | 337.81 | 464.03 | 337.81 | 465.74 | 337.76 | 467.82 | 337.71 |
| 470.63 | 337.64 | 475.15 | 337.6 | 478.88 | 337.58 | 479.83 | 337.58 | 481.02 | 337.57 |
| 483.02 | 337.55 | 484.59 | 337.53 | 487.21 | 337.49 | 488.06 | 337.48 | 488.76 | 337.48 |
| 490.25 | 337.47 | 491.43 | 337.47 | 492.85 | 337.46 | 499.07 | 337.46 | 501.37 | 337.47 |
| 502.64 | 337.48 | 504.42 | 337.48 | 504.82 | 337.49 | 505.56 | 337.52 | 506.59 | 337.56 |
| 507.72 | 337.63 | 507.97 | 337.64 | 508.24 | 337.67 | 508.99 | 337.71 | 509.85 | 337.76 |
| 509.91 | 337.76 | 509.94 | 337.81 | 510.65 | 338.56 | 511.27 | 338.94 | 511.9 | 338.97 |
| 511.95 | 338.97 | 512.43 | 339 | 517.77 | 339.22 | 518.35 | 339.24 | 518.5 | 339.24 |
| 518.63 | 339.25 | 520.26 | 339.35 | 521.14 | 339.4 | 521.48 | 339.41 | 522.36 | 339.4 |
| 524.37 | 339.51 | 525.95 | 339.55 | 528.57 | 339.72 | 532.79 | 339.89 | 534.2 | 339.95 |
| 541.95 | 340.35 | 542.58 | 340.38 | 542.63 | 340.38 | 546.88 | 340.57 | 547.03 | 340.58 |
| 547.64 | 340.6 | 549.15 | 340.66 | 549.7 | 340.68 | 557.58 | 341.02 | 558.01 | 341.04 |
| 559.17 | 341.09 | 562.05 | 341.2 | 562.77 | 341.23 | 564.39 | 341.3 | 564.83 | 341.33 |
| 567.52 | 341.51 | 567.55 | 341.51 | 568.32 | 341.56 | 569.21 | 341.61 | 570.37 | 341.67 |
| 572.71 | 341.81 | 573.66 | 341.87 | 573.89 | 341.88 | 574.53 | 341.88 | 575.18 | 341.89 |
| 575.88 | 341.91 | 577.13 | 341.91 | 577.71 | 341.9 | 578.63 | 341.89 | 579.1 | 341.89 |
| 579.42 | 341.88 | 580.24 | 341.9 | 581.14 | 341.93 | 582.19 | 341.98 | 583.2 | 342.06 |
| 585.58 | 342.29 | 586.3 | 342.38 | 588.14 | 342.54 | 588.9 | 342.61 | 590.2 | 342.71 |
| 590.28 | 342.71 | 596.82 | 343.24 | 597.51 | 343.3 | 597.53 | 343.3 | 599.05 | 343.39 |
| 599.15 | 343.4 | 599.29 | 343.4 | 599.42 | 343.41 | 599.43 | 343.42 | 599.55 | 343.42 |
| 599.71 | 343.44 | 600.67 | 343.5 | 603.96 | 343.75 | 607.58 | 344.02 | 607.77 | 344.04 |
| 607.84 | 344.04 | 612.94 | 344.13 | 613.37 | 344.14 | 621.4 | 344.34 | 622.36 | 344.41 |
| 627.19 | 344.72 | 628.46 | 344.8 | 629.68 | 344.88 | 631.56 | 344.98 | 632.2 | 345.02 |
| 633.02 | 345.06 | 634.35 | 345.11 | 636.86 | 345.25 | 637.72 | 345.32 | 640.83 | 345.68 |
| 643.98 | 345.96 | 645.49 | 346.12 | 647.87 | 346.15 | 656.77 | 346.16 | 657.54 | 346.16 |
| 662.11 | 346.15 | 666.41 | 346.15 | 667.01 | 346.14 | 668.1 | 346.14 | 672.05 | 346.13 |
| 674.55 | 346.11 | 676.6 | 346.11 | 676.77 | 346.1 | 679.61 | 346.1 | 693.07 | 346.09 |
| 693.39 | 346.08 | 693.7 | 346.09 | 693.96 | 346.09 | 695 | 346.11 | 696.21 | 346.11 |
| 697.81 | 346.1 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 203.21 | .04 | 510.65 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 203.21 | 510.65 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1840.35*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.77 | .55 | 339.76 | .87 | 339.76 | 1.14 | 339.79 | 1.35 | 339.8 |
| 1.72 | 339.8 | 2.33 | 339.81 | 3.24 | 339.81 | 6.37 | 339.78 | 8.61 | 339.76 |
| 13.16 | 339.72 | 13.62 | 339.72 | 14 | 339.73 | 14.24 | 339.73 | 14.35 | 339.75 |
| 14.74 | 339.75 | 14.88 | 339.76 | 15.01 | 339.76 | 15.81 | 339.75 | 16.15 | 339.75 |
| 16.75 | 339.74 | 17.22 | 339.73 | 17.59 | 339.71 | 17.9 | 339.71 | 18.43 | 339.7 |
| 19.13 | 339.69 | 21.63 | 339.65 | 25.14 | 339.58 | 27.14 | 339.55 | 27.94 | 339.54 |
| 28.61 | 339.54 | 29.02 | 339.53 | 29.73 | 339.52 | 30.27 | 339.51 | 31.56 | 339.5 |
| 31.8 | 339.5 | 32.23 | 339.49 | 33.45 | 339.49 | 34.16 | 339.5 | 34.67 | 339.49 |
| 35.1 | 339.49 | 35.16 | 339.5 | 35.64 | 339.5 | 36.62 | 339.52 | 41.26 | 339.62 |
| 42.09 | 339.64 | 42.49 | 339.64 | 42.9 | 339.65 | 43.78 | 339.65 | 43.82 | 339.66 |
| 44.96 | 339.66 | 46.41 | 339.67 | 49.38 | 339.67 | 49.86 | 339.68 | 50.21 | 339.67 |
| 50.42 | 339.68 | 51.11 | 339.68 | 51.22 | 339.69 | 51.37 | 339.69 | 51.4 | 339.7 |
| 52.2 | 339.69 | 54.13 | 339.69 | 54.97 | 339.68 | 55.45 | 339.68 | 56.24 | 339.67 |
| 57.1 | 339.67 | 57.4 | 339.66 | 57.47 | 339.65 | 57.7 | 339.65 | 57.88 | 339.63 |
| 58.56 | 339.6 | 58.85 | 339.59 | 58.99 | 339.58 | 60.07 | 339.53 | 60.8 | 339.5 |
| 61.13 | 339.48 | 61.66 | 339.46 | 62.37 | 339.44 | 63.27 | 339.4 | 63.74 | 339.39 |
| 64.83 | 339.36 | 65.06 | 339.35 | 66.01 | 339.32 | 67.28 | 339.29 | 67.53 | 339.28 |
| 68.95 | 339.24 | 70.29 | 339.21 | 74.46 | 339.08 | 74.65 | 339.07 | 74.92 | 339.07 |
| 75.66 | 339.13 | 75.84 | 339.2 | 76.53 | 339.2 | 76.83 | 339.21 | 77.68 | 339.2 |
| 78.17 | 339.19 | 79.7 | 339.17 | 81.04 | 339.15 | 82.07 | 339.13 | 82.15 | 339.13 |
| 84.8 | 339.11 | 85.57 | 339.1 | 86.85 | 339.1 | 87.37 | 339.11 | 89.21 | 339.11 |
| 89.86 | 339.12 | 92.32 | 339.12 | 94.67 | 339.11 | 95.51 | 339.12 | 95.62 | 339.13 |
| 96.29 | 339.14 | 97.26 | 339.15 | 97.35 | 339.16 | 98.35 | 339.17 | 100.72 | 339.17 |
| 101.44 | 339.16 | 104.22 | 339.16 | 106.06 | 339.14 | 107.93 | 339.14 | 108.88 | 339.12 |
| 109.14 | 339.12 | 110.54 | 339.09 | 111.78 | 339.07 | 112.74 | 339.05 | 114.86 | 338.98 |
| 116.25 | 338.93 | 116.38 | 338.93 | 117.1 | 338.89 | 118.21 | 338.87 | 119.04 | 338.84 |
| 119.72 | 338.84 | 120.3 | 338.81 | 120.7 | 338.8 | 121.29 | 338.77 | 121.45 | 338.77 |
| 122.1 | 338.79 | 122.31 | 338.79 | 123.03 | 338.81 | 124.95 | 338.82 | 125.53 | 338.82 |
| 126.03 | 338.83 | 126.38 | 338.84 | 126.73 | 338.88 | 126.87 | 338.89 | 127.01 | 338.89 |
| 127.5 | 338.91 | 129.49 | 338.91 | 130.8 | 338.89 | 132.66 | 338.87 | 133.61 | 338.87 |
| 134.44 | 338.85 | 134.59 | 338.85 | 135.84 | 338.87 | 136.7 | 338.88 | 137.67 | 338.9 |
| 140.39 | 338.9 | 143.32 | 338.88 | 146.71 | 338.86 | 147.29 | 338.85 | 148.8 | 338.85 |
| 151.22 | 338.83 | 155.51 | 338.81 | 155.66 | 338.81 | 168.16 | 338.71 | 170.58 | 338.69 |
| 171.92 | 338.69 | 172.32 | 338.68 | 175.43 | 338.65 | 178.68 | 338.61 | 181.6 | 338.57 |
| 183.86 | 338.54 | 184.25 | 338.53 | 185.98 | 338.47 | 187.79 | 338.4 | 192.43 | 338.23 |
| 194 | 338.21 | 195.85 | 338.18 | 195.98 | 338.22 | 196.27 | 338.23 | 197.51 | 338.21 |
| 198.64 | 338.18 | 200.04 | 338.14 | 201.55 | 338.09 | 201.94 | 338.09 | 204.36 | 337.96 |
| 206.36 | 337.89 | 207.41 | 337.85 | 209.53 | 337.74 | 211.37 | 337.6 | 212.62 | 337.59 |
| 213.39 | 337.59 | 219.13 | 337.56 | 219.84 | 337.56 | 221.95 | 337.55 | 223.2 | 337.54 |
| 224.82 | 337.53 | 226.03 | 337.53 | 226.94 | 337.52 | 228.4 | 337.52 | 230.04 | 337.51 |
| 230.49 | 337.51 | 230.88 | 337.5 | 231.68 | 337.5 | 232.9 | 337.49 | 233.91 | 337.49 |
| 235.51 | 337.48 | 235.66 | 337.48 | 237.1 | 337.56 | 237.26 | 337.57 | 237.65 | 337.56 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 238.42 | 337.56 | 238.96 | 337.54 | 241.51 | 337.45 | 242.43 | 337.45 | 243.26 | 337.44 |
| 244.35 | 337.43 | 245.53 | 337.43 | 246.73 | 337.42 | 252.2 | 337.48 | 253.03 | 337.49 |
| 254.33 | 337.5 | 256.02 | 337.52 | 256.32 | 337.52 | 257.98 | 337.57 | 258.48 | 337.58 |
| 258.86 | 337.58 | 259.16 | 337.59 | 259.37 | 337.59 | 262.04 | 337.54 | 262.91 | 337.53 |
| 263.81 | 337.53 | 267.09 | 337.51 | 268.01 | 337.51 | 268.63 | 337.5 | 269.02 | 337.48 |
| 269.3 | 337.47 | 270.32 | 337.39 | 270.55 | 337.38 | 271.23 | 337.4 | 271.37 | 337.41 |
| 271.68 | 337.42 | 273.68 | 337.48 | 274.27 | 337.49 | 275.4 | 337.47 | 276.37 | 337.41 |
| 278.34 | 337.29 | 278.44 | 337.29 | 279.25 | 337.23 | 279.61 | 337.16 | 279.68 | 337.16 |
| 281.16 | 337.12 | 282.52 | 337.09 | 283.32 | 337.11 | 286.14 | 337.19 | 288.78 | 337.17 |
| 293.61 | 337.14 | 297.86 | 337.12 | 302.25 | 337.08 | 306.95 | 337.03 | 308.18 | 337.01 |
| 310.21 | 336.99 | 311.7 | 336.98 | 314.27 | 336.96 | 318.75 | 336.93 | 320.01 | 336.92 |
| 321.58 | 336.9 | 324.92 | 336.86 | 325.85 | 336.85 | 328.03 | 336.82 | 328.57 | 336.82 |
| 330.51 | 336.8 | 331.29 | 336.8 | 331.7 | 336.79 | 336.49 | 336.75 | 341.69 | 336.7 |
| 342.76 | 336.62 | 344.33 | 336.53 | 345.87 | 336.48 | 346.29 | 336.47 | 347.42 | 336.45 |
| 348.53 | 336.44 | 348.94 | 336.43 | 349.22 | 336.42 | 349.64 | 336.39 | 349.95 | 336.38 |
| 350.32 | 336.38 | 351.16 | 336.36 | 352.02 | 336.36 | 353.36 | 336.32 | 356.44 | 336.32 |
| 356.78 | 336.33 | 356.88 | 336.34 | 357.79 | 336.34 | 358.02 | 336.35 | 358.32 | 336.35 |
| 359.43 | 336.37 | 362.37 | 336.42 | 363.39 | 336.43 | 364.91 | 336.46 | 373.56 | 336.6 |
| 389.64 | 336.88 | 390.57 | 336.86 | 390.87 | 336.86 | 391.58 | 336.87 | 395.75 | 336.84 |
| 398.23 | 336.83 | 401.86 | 336.83 | 401.97 | 336.84 | 402.16 | 336.84 | 402.34 | 336.85 |
| 402.69 | 336.85 | 402.83 | 336.84 | 402.92 | 336.85 | 404.75 | 336.85 | 409.81 | 336.8 |
| 411.18 | 336.79 | 413.72 | 336.74 | 414.84 | 336.73 | 415.9 | 336.71 | 417.11 | 336.67 |
| 417.51 | 336.67 | 417.76 | 336.68 | 418.51 | 336.68 | 419.27 | 336.7 | 420.87 | 336.73 |
| 421.59 | 336.74 | 422.32 | 336.74 | 423.39 | 336.78 | 424.05 | 336.81 | 424.44 | 336.83 |
| 426.01 | 336.9 | 427.53 | 336.97 | 430.98 | 337.13 | 432.74 | 337.21 | 433.15 | 337.23 |
| 434.17 | 337.27 | 434.82 | 337.3 | 436.19 | 337.36 | 437.89 | 337.41 | 438.79 | 337.43 |
| 441 | 337.49 | 441.89 | 337.51 | 442.06 | 337.52 | 442.34 | 337.52 | 443.42 | 337.51 |
| 444.41 | 337.51 | 445.5 | 337.52 | 445.98 | 337.52 | 446.38 | 337.53 | 447.41 | 337.55 |
| 447.71 | 337.56 | 449.76 | 337.59 | 451.42 | 337.62 | 452.91 | 337.64 | 455.09 | 337.66 |
| 456.47 | 337.67 | 456.71 | 337.67 | 459.21 | 337.69 | 463.66 | 337.69 | 464.94 | 337.65 |
| 466.63 | 337.6 | 466.69 | 337.6 | 468.26 | 337.55 | 470.18 | 337.51 | 472.78 | 337.45 |
| 476.95 | 337.42 | 480.39 | 337.4 | 481.27 | 337.4 | 482.37 | 337.39 | 484.21 | 337.38 |
| 485.66 | 337.36 | 488.86 | 337.32 | 489.51 | 337.32 | 490.89 | 337.31 | 491.97 | 337.31 |
| 493.28 | 337.3 | 494.78 | 337.31 | 499.02 | 337.31 | 501.15 | 337.32 | 502.32 | 337.33 |
| 503.96 | 337.33 | 504.33 | 337.34 | 505.97 | 337.41 | 507.01 | 337.46 | 507.49 | 337.5 |
| 508.18 | 337.54 | 508.98 | 337.58 | 509.03 | 337.59 | 509.05 | 337.63 | 509.53 | 338.12 |
| 509.71 | 338.31 | 510.35 | 338.65 | 511.03 | 338.67 | 511.51 | 338.7 | 516.93 | 338.9 |
| 517.52 | 338.92 | 517.77 | 338.92 | 517.8 | 338.93 | 519.46 | 339.02 | 520.7 | 339.09 |
| 521.59 | 339.08 | 523.63 | 339.19 | 525.23 | 339.23 | 527.89 | 339.39 | 532.16 | 339.56 |
| 533.6 | 339.62 | 541.46 | 340.02 | 542.1 | 340.04 | 542.15 | 340.05 | 546.47 | 340.23 |
| 546.61 | 340.23 | 547.24 | 340.25 | 548.76 | 340.31 | 549.33 | 340.33 | 557.31 | 340.65 |
| 557.75 | 340.67 | 558.93 | 340.72 | 561.85 | 340.82 | 562.58 | 340.85 | 564.22 | 340.92 |
| 564.67 | 340.94 | 568.21 | 341.16 | 569.12 | 341.21 | 569.72 | 341.23 | 570.29 | 341.26 |
| 572.66 | 341.4 | 573.63 | 341.45 | 573.86 | 341.46 | 574.51 | 341.46 | 575.17 | 341.47 |
| 575.88 | 341.49 | 576.28 | 341.49 | 576.8 | 341.5 | 577.12 | 341.49 | 577.73 | 341.49 |
| 578.67 | 341.48 | 579.15 | 341.47 | 579.47 | 341.47 | 580.3 | 341.49 | 581.22 | 341.52 |
| 582.28 | 341.57 | 583.3 | 341.64 | 585.71 | 341.86 | 586.45 | 341.94 | 586.56 | 341.95 |
| 587.85 | 342.05 | 588.31 | 342.09 | 589.09 | 342.15 | 590.4 | 342.24 | 590.48 | 342.24 |
| 597.11 | 342.72 | 597.84 | 342.77 | 599.38 | 342.85 | 599.71 | 342.87 | 599.75 | 342.88 |
| 599.89 | 342.88 | 600.04 | 342.9 | 601.02 | 342.96 | 601.56 | 343 | 604.36 | 343.2 |
| 608.03 | 343.46 | 608.3 | 343.47 | 613.46 | 343.58 | 613.9 | 343.59 | 622.05 | 343.81 |
| 623.02 | 343.88 | 627.93 | 344.23 | 629.21 | 344.32 | 630.44 | 344.41 | 632.35 | 344.53 |
| 633.01 | 344.56 | 633.83 | 344.61 | 635.18 | 344.67 | 637.73 | 344.83 | 638.61 | 344.91 |
| 641.75 | 345.31 | 644.96 | 345.63 | 646.48 | 345.81 | 648.9 | 345.84 | 657.93 | 345.87 |
| 667.7 | 345.87 | 668.31 | 345.86 | 669.42 | 345.86 | 673.42 | 345.85 | 675.97 | 345.84 |
| 676.32 | 345.84 | 678.04 | 345.83 | 681.1 | 345.83 | 694.75 | 345.86 | 695.07 | 345.85 |
| 695.38 | 345.86 | 695.65 | 345.86 | 696.7 | 345.88 | 697.01 | 345.89 | 697.93 | 345.89 |
| 699.56 | 345.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 201.55 | .04 | 509.71 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 201.55 | 509.71 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1820.61*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.52 | .55 | 339.51 | .87 | 339.51 | 1.14 | 339.54 | 1.34 | 339.55 |
| 1.62 | 339.55 | 1.7 | 339.56 | 3.21 | 339.56 | 6.32 | 339.54 | 8.54 | 339.52 |
| 13.05 | 339.48 | 13.88 | 339.48 | 14.23 | 339.49 | 14.37 | 339.5 | 14.62 | 339.5 |
| 14.89 | 339.51 | 15.68 | 339.5 | 16.01 | 339.5 | 17.08 | 339.48 | 17.45 | 339.46 |
| 17.75 | 339.46 | 18.28 | 339.45 | 18.97 | 339.44 | 21.46 | 339.4 | 24.94 | 339.33 |
| 26.92 | 339.3 | 28.38 | 339.28 | 28.78 | 339.27 | 29.49 | 339.26 | 30.03 | 339.26 |
| 31.3 | 339.24 | 32.5 | 339.24 | 32.86 | 339.23 | 35.08 | 339.23 | 35.35 | 339.24 |
| 36.31 | 339.26 | 40.92 | 339.36 | 41.74 | 339.38 | 42.14 | 339.38 | 42.55 | 339.39 |
| 44.02 | 339.39 | 44.59 | 339.4 | 46.61 | 339.4 | 47.3 | 339.41 | 47.9 | 339.41 |
| 48.41 | 339.4 | 48.95 | 339.41 | 50.21 | 339.41 | 50.44 | 339.42 | 50.95 | 339.42 |
| 50.98 | 339.43 | 51.77 | 339.43 | 52.52 | 339.42 | 53.69 | 339.42 | 54.51 | 339.41 |
| 55 | 339.41 | 55.78 | 339.4 | 56.63 | 339.4 | 56.92 | 339.39 | 57 | 339.38 |
| 57.22 | 339.38 | 57.41 | 339.36 | 58.51 | 339.31 | 59.36 | 339.26 | 60.3 | 339.22 |
| 60.63 | 339.21 | 61.15 | 339.18 | 61.86 | 339.16 | 62.75 | 339.12 | 63.21 | 339.11 |
| 64.29 | 339.08 | 64.53 | 339.07 | 66.72 | 339 | 66.97 | 339 | 68.39 | 338.95 |
| 69.71 | 338.92 | 73.85 | 338.79 | 74.03 | 338.78 | 74.25 | 338.78 | 74.3 | 338.79 |
| 75.04 | 338.85 | 75.22 | 338.93 | 75.57 | 338.93 | 75.9 | 338.94 | 76.19 | 338.94 |
| 77.04 | 338.93 | 77.52 | 338.92 | 79.04 | 338.9 | 80.37 | 338.88 | 81.47 | 338.87 |
| 84.1 | 338.84 | 84.86 | 338.84 | 85.53 | 338.83 | 86.65 | 338.83 | 88.47 | 338.84 |
| 89.41 | 338.84 | 89.76 | 338.85 | 90.76 | 338.84 | 91.15 | 338.84 | 91.29 | 338.85 |
| 91.55 | 338.84 | 93.89 | 338.83 | 94.73 | 338.84 | 94.83 | 338.85 | 95.5 | 338.86 |
| 96.46 | 338.88 | 97.54 | 338.89 | 101.42 | 338.89 | 101.95 | 338.88 | 102.34 | 338.89 |
| 102.89 | 338.89 | 103.36 | 338.88 | 104.23 | 338.87 | 105.19 | 338.87 | 106.6 | 338.86 |
| 107.04 | 338.86 | 107.99 | 338.85 | 108.24 | 338.84 | 109.63 | 338.82 | 110.86 | 338.8 |
| 111.81 | 338.78 | 113.91 | 338.71 | 115.29 | 338.66 | 115.42 | 338.66 | 116.14 | 338.62 |
| 117.23 | 338.6 | 118.06 | 338.57 | 118.73 | 338.57 | 119.31 | 338.54 | 119.71 | 338.53 |
| 120.29 | 338.5 | 120.44 | 338.51 | 121.1 | 338.52 | 121.3 | 338.52 | 122.02 | 338.53 |
| 123.92 | 338.54 | 124.99 | 338.54 | 125.24 | 338.55 | 125.51 | 338.58 | 125.96 | 338.61 |
| 126.17 | 338.61 | 126.45 | 338.62 | 127.66 | 338.62 | 128.43 | 338.61 | 129.72 | 338.6 |
| 131.56 | 338.57 | 132.51 | 338.57 | 133.48 | 338.56 | 134.72 | 338.58 | 135.57 | 338.59 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 136.07 | 338.6 | 139.23 | 338.6 | 142.14 | 338.59 | 145.5 | 338.57 | 146.08 | 338.56 |
| 147.58 | 338.56 | 149.98 | 338.54 | 154.23 | 338.51 | 154.38 | 338.51 | 166.77 | 338.41 |
| 169.17 | 338.4 | 169.52 | 338.39 | 170.5 | 338.39 | 170.9 | 338.38 | 173.98 | 338.34 |
| 177.21 | 338.3 | 180.1 | 338.26 | 182.35 | 338.23 | 182.74 | 338.23 | 184.45 | 338.17 |
| 186.24 | 338.1 | 190.84 | 337.94 | 192.4 | 337.93 | 194.24 | 337.91 | 194.37 | 337.95 |
| 194.66 | 337.97 | 195.88 | 337.95 | 197 | 337.93 | 198.4 | 337.9 | 199.88 | 337.85 |
| 199.9 | 337.86 | 200.32 | 337.85 | 202.96 | 337.71 | 205.14 | 337.63 | 206.29 | 337.59 |
| 208.59 | 337.47 | 210.6 | 337.31 | 211.97 | 337.3 | 212.8 | 337.3 | 219.06 | 337.28 |
| 219.84 | 337.27 | 222.14 | 337.26 | 223.51 | 337.26 | 225.27 | 337.25 | 226.59 | 337.25 |
| 227.58 | 337.24 | 229.17 | 337.24 | 230.97 | 337.23 | 231.95 | 337.23 | 232.17 | 337.22 |
| 234.08 | 337.22 | 234.43 | 337.21 | 235.18 | 337.21 | 236.93 | 337.2 | 237.09 | 337.21 |
| 238.84 | 337.3 | 239.77 | 337.3 | 240.11 | 337.29 | 240.7 | 337.28 | 243.48 | 337.18 |
| 244.2 | 337.18 | 244.48 | 337.17 | 245.39 | 337.17 | 246.57 | 337.16 | 247.86 | 337.16 |
| 249.16 | 337.15 | 255.13 | 337.23 | 256.04 | 337.24 | 257.46 | 337.25 | 259.3 | 337.27 |
| 260 | 337.29 | 261.44 | 337.34 | 261.98 | 337.35 | 262.4 | 337.35 | 262.72 | 337.36 |
| 262.96 | 337.36 | 265.86 | 337.31 | 266.81 | 337.3 | 267.8 | 337.3 | 271.37 | 337.28 |
| 272.38 | 337.28 | 273.05 | 337.27 | 273.48 | 337.25 | 273.79 | 337.24 | 275.15 | 337.13 |
| 275.48 | 337.15 | 275.89 | 337.17 | 276.38 | 337.18 | 278.56 | 337.25 | 279.2 | 337.26 |
| 279.78 | 337.26 | 280.44 | 337.24 | 281.49 | 337.18 | 283.64 | 337.05 | 283.9 | 337.04 |
| 284.63 | 336.98 | 285.03 | 336.9 | 285.1 | 336.9 | 286.72 | 336.86 | 288.2 | 336.83 |
| 289.07 | 336.86 | 292.15 | 336.95 | 295.03 | 336.93 | 300.3 | 336.91 | 302.64 | 336.89 |
| 304.94 | 336.88 | 309.72 | 336.84 | 314.85 | 336.8 | 316.19 | 336.79 | 318.4 | 336.77 |
| 320.03 | 336.76 | 322.83 | 336.74 | 327.72 | 336.72 | 329.09 | 336.71 | 330.8 | 336.69 |
| 334.45 | 336.66 | 335.47 | 336.64 | 337.85 | 336.62 | 338.3 | 336.61 | 340.54 | 336.6 |
| 341.39 | 336.6 | 341.85 | 336.59 | 347.06 | 336.56 | 352.74 | 336.51 | 353.91 | 336.43 |
| 355.62 | 336.32 | 357.3 | 336.27 | 357.76 | 336.26 | 358.99 | 336.24 | 360.2 | 336.23 |
| 360.95 | 336.21 | 361.42 | 336.18 | 361.75 | 336.17 | 362.15 | 336.17 | 363.07 | 336.15 |
| 364.01 | 336.15 | 365.47 | 336.11 | 368.31 | 336.11 | 368.63 | 336.12 | 369.03 | 336.12 |
| 369.27 | 336.13 | 369.76 | 336.13 | 370.04 | 336.14 | 371.06 | 336.15 | 373.75 | 336.2 |
| 374.68 | 336.21 | 376.08 | 336.23 | 384.01 | 336.37 | 398.74 | 336.61 | 399.6 | 336.6 |
| 400.52 | 336.6 | 404.34 | 336.59 | 406.61 | 336.58 | 408.62 | 336.58 | 409.63 | 336.59 |
| 410.15 | 336.59 | 410.22 | 336.6 | 410.91 | 336.6 | 411.14 | 336.61 | 411.59 | 336.61 |
| 412.59 | 336.62 | 417.22 | 336.58 | 418.48 | 336.57 | 419.41 | 336.56 | 420.81 | 336.54 |
| 420.89 | 336.53 | 422.8 | 336.51 | 423.62 | 336.48 | 423.91 | 336.48 | 423.99 | 336.47 |
| 424.1 | 336.48 | 424.75 | 336.48 | 424.98 | 336.49 | 425.2 | 336.49 | 425.89 | 336.51 |
| 426.86 | 336.52 | 427.36 | 336.53 | 428.02 | 336.54 | 428.22 | 336.54 | 428.69 | 336.55 |
| 429.18 | 336.57 | 429.42 | 336.57 | 429.67 | 336.59 | 430.27 | 336.62 | 430.63 | 336.63 |
| 432.07 | 336.7 | 433.47 | 336.76 | 436.62 | 336.91 | 438.24 | 336.99 | 438.62 | 337.01 |
| 439.55 | 337.05 | 440.14 | 337.08 | 441.4 | 337.13 | 442.95 | 337.18 | 443.78 | 337.21 |
| 446.62 | 337.28 | 446.78 | 337.29 | 448.93 | 337.29 | 449.93 | 337.3 | 450.37 | 337.3 |
| 450.73 | 337.31 | 451.68 | 337.33 | 451.96 | 337.34 | 453.83 | 337.37 | 455.35 | 337.4 |
| 456.72 | 337.42 | 458.72 | 337.44 | 459.99 | 337.45 | 460.2 | 337.45 | 462.5 | 337.47 |
| 466.58 | 337.47 | 467.75 | 337.43 | 469.29 | 337.38 | 469.35 | 337.38 | 470.79 | 337.34 |
| 472.55 | 337.3 | 474.93 | 337.26 | 478.75 | 337.23 | 480.33 | 337.23 | 481.9 | 337.22 |
| 483.71 | 337.22 | 485.41 | 337.21 | 486.73 | 337.19 | 488.95 | 337.16 | 489.67 | 337.16 |
| 490.27 | 337.15 | 497.83 | 337.15 | 498.98 | 337.16 | 500.92 | 337.17 | 502 | 337.17 |
| 502.5 | 337.18 | 503.5 | 337.18 | 504.47 | 337.21 | 505.34 | 337.25 | 506.51 | 337.31 |
| 506.74 | 337.34 | 507.37 | 337.37 | 508.1 | 337.41 | 508.14 | 337.41 | 508.78 | 338.05 |
| 509.42 | 338.35 | 510.11 | 338.37 | 510.6 | 338.41 | 516.1 | 338.59 | 516.69 | 338.6 |
| 516.94 | 338.6 | 516.98 | 338.61 | 518.66 | 338.7 | 519.56 | 338.75 | 519.91 | 338.76 |
| 520.82 | 338.76 | 522.89 | 338.87 | 524.51 | 338.91 | 527.21 | 339.06 | 531.54 | 339.23 |
| 533 | 339.3 | 540.97 | 339.68 | 541.62 | 339.7 | 541.67 | 339.71 | 546.05 | 339.88 |
| 546.19 | 339.89 | 548.38 | 339.96 | 548.95 | 339.98 | 557.05 | 340.29 | 557.49 | 340.3 |
| 558.69 | 340.35 | 561.65 | 340.44 | 562.39 | 340.47 | 564.05 | 340.53 | 564.51 | 340.56 |
| 567.28 | 340.71 | 567.3 | 340.72 | 568.1 | 340.76 | 569.02 | 340.8 | 569.63 | 340.83 |
| 570.21 | 340.85 | 572.61 | 340.98 | 573.59 | 341.03 | 573.83 | 341.04 | 574.04 | 341.04 |
| 574.48 | 341.05 | 575.16 | 341.05 | 575.88 | 341.07 | 576.28 | 341.07 | 576.81 | 341.08 |
| 577.16 | 341.08 | 577.76 | 341.07 | 578.7 | 341.06 | 579.19 | 341.06 | 579.52 | 341.05 |
| 580.36 | 341.07 | 581.29 | 341.1 | 582.36 | 341.15 | 583.4 | 341.22 | 585.85 | 341.42 |
| 586.71 | 341.5 | 588.01 | 341.6 | 588.48 | 341.63 | 589.27 | 341.69 | 590.61 | 341.77 |
| 590.69 | 341.78 | 597.41 | 342.19 | 598.14 | 342.24 | 599.71 | 342.32 | 599.88 | 342.32 |
| 600.09 | 342.34 | 600.22 | 342.34 | 600.38 | 342.36 | 601.37 | 342.42 | 601.92 | 342.45 |
| 604.76 | 342.64 | 608.48 | 342.89 | 608.68 | 342.91 | 608.76 | 342.91 | 613.99 | 343.03 |
| 614.44 | 343.04 | 622.7 | 343.27 | 623.68 | 343.35 | 628.66 | 343.75 | 629.96 | 343.84 |
| 631.21 | 343.94 | 633.15 | 344.07 | 634.65 | 344.16 | 636.02 | 344.22 | 638.6 | 344.4 |
| 639.49 | 344.49 | 642.68 | 344.95 | 645.93 | 345.29 | 647.48 | 345.49 | 649.94 | 345.53 |
| 659.08 | 345.58 | 664.58 | 345.58 | 667.67 | 345.59 | 670.74 | 345.59 | 674.8 | 345.58 |
| 677.38 | 345.57 | 677.74 | 345.57 | 679.48 | 345.56 | 679.66 | 345.56 | 680.67 | 345.57 |
| 682.58 | 345.57 | 696.43 | 345.63 | 697.35 | 345.63 | 697.87 | 345.65 | 698.41 | 345.66 |
| 701.3 | 345.66 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 199.88 | .04 | 508.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 199.88 | 508.78 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1800.88*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.27 | .54 | 339.26 | .86 | 339.26 | 1.13 | 339.29 | 1.61 | 339.31 |
| 2.29 | 339.32 | 3.19 | 339.32 | 6.27 | 339.29 | 8.47 | 339.27 | 12.95 | 339.24 |
| 14.01 | 339.24 | 14.11 | 339.25 | 14.25 | 339.25 | 14.5 | 339.26 | 15.55 | 339.26 |
| 15.88 | 339.25 | 16.47 | 339.24 | 16.94 | 339.23 | 17.15 | 339.22 | 17.3 | 339.22 |
| 17.61 | 339.21 | 18.13 | 339.2 | 18.81 | 339.19 | 21.28 | 339.15 | 23.75 | 339.09 |
| 24.73 | 339.07 | 26.7 | 339.04 | 27.48 | 339.03 | 28.14 | 339.02 | 28.54 | 339.02 |
| 29.24 | 339.01 | 29.78 | 339 | 31.04 | 338.98 | 32.23 | 338.98 | 32.59 | 338.97 |
| 34.79 | 338.97 | 35.06 | 338.98 | 37.39 | 339.03 | 38.75 | 339.07 | 40.58 | 339.1 |
| 41.4 | 339.12 | 41.79 | 339.12 | 42.19 | 339.13 | 43.65 | 339.13 | 44.22 | 339.14 |
| 49.38 | 339.14 | 49.59 | 339.15 | 50.46 | 339.15 | 50.53 | 339.16 | 51.34 | 339.16 |
| 52.09 | 339.15 | 53.24 | 339.15 | 54.06 | 339.14 | 54.54 | 339.14 | 55.32 | 339.13 |
| 56.16 | 339.13 | 56.45 | 339.12 | 56.52 | 339.11 | 56.75 | 339.11 | 56.93 | 339.09 |
| 57.6 | 339.06 | 57.88 | 339.04 | 58.02 | 339.04 | 58.87 | 338.99 | 59.8 | 338.95 |
| 60.13 | 338.93 | 60.64 | 338.91 | 61.34 | 338.88 | 62.23 | 338.84 | 62.69 | 338.83 |
| 63.76 | 338.79 | 63.99 | 338.79 | 66.17 | 338.72 | 66.41 | 338.71 | 67.82 | 338.67 |
| 69.13 | 338.64 | 72.92 | 338.51 | 73.23 | 338.5 | 73.42 | 338.49 | 73.63 | 338.49 |
| 73.68 | 338.5 | 74.41 | 338.57 | 74.59 | 338.66 | 74.94 | 338.66 | 75.26 | 338.67 |
| 75.56 | 338.67 | 76.4 | 338.66 | 76.88 | 338.66 | 78.38 | 338.63 | 79.7 | 338.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 80.79 | 338.6 | 83.4 | 338.57 | 84.16 | 338.57 | 84.82 | 338.56 | 88.38 | 338.56 |
| 88.67 | 338.57 | 89.01 | 338.57 | 90.01 | 338.56 | 90.4 | 338.57 | 90.79 | 338.57 |
| 93.11 | 338.55 | 93.94 | 338.56 | 94.04 | 338.57 | 94.7 | 338.58 | 95.66 | 338.6 |
| 96.73 | 338.61 | 97.43 | 338.62 | 99.77 | 338.62 | 100.58 | 338.61 | 102.5 | 338.61 |
| 103.36 | 338.6 | 104.31 | 338.6 | 105.71 | 338.59 | 106.15 | 338.59 | 107.09 | 338.57 |
| 107.34 | 338.57 | 108.72 | 338.55 | 109.94 | 338.53 | 110.88 | 338.51 | 112.96 | 338.44 |
| 114.33 | 338.39 | 114.46 | 338.38 | 115.17 | 338.35 | 116.26 | 338.33 | 117.08 | 338.3 |
| 117.75 | 338.3 | 118.32 | 338.28 | 118.71 | 338.26 | 119.29 | 338.24 | 119.44 | 338.24 |
| 120.09 | 338.25 | 120.29 | 338.25 | 121 | 338.26 | 123.96 | 338.26 | 124.3 | 338.27 |
| 124.47 | 338.29 | 124.92 | 338.32 | 126.59 | 338.32 | 127.36 | 338.31 | 128.64 | 338.3 |
| 130.47 | 338.27 | 132.96 | 338.27 | 134.45 | 338.29 | 135.4 | 338.31 | 138.07 | 338.31 |
| 140.96 | 338.3 | 144.29 | 338.27 | 146.35 | 338.27 | 148.73 | 338.24 | 152.95 | 338.22 |
| 153.09 | 338.21 | 165.39 | 338.11 | 167.77 | 338.1 | 168.11 | 338.1 | 168.68 | 338.09 |
| 169.09 | 338.09 | 169.48 | 338.08 | 172.54 | 338.04 | 175.74 | 338 | 178.61 | 337.96 |
| 180.83 | 337.93 | 181.22 | 337.92 | 182.64 | 337.88 | 182.92 | 337.87 | 184.7 | 337.8 |
| 189.26 | 337.65 | 192.63 | 337.65 | 192.75 | 337.69 | 193.04 | 337.71 | 195.37 | 337.69 |
| 196.75 | 337.65 | 198.22 | 337.61 | 198.24 | 337.62 | 198.63 | 337.62 | 198.69 | 337.61 |
| 201.55 | 337.46 | 203.92 | 337.38 | 205.16 | 337.32 | 207.66 | 337.2 | 209.83 | 337.02 |
| 211.31 | 337.02 | 212.22 | 337.01 | 218.99 | 336.99 | 219.84 | 336.99 | 222.33 | 336.98 |
| 223.81 | 336.98 | 225.72 | 336.97 | 227.15 | 336.97 | 228.22 | 336.96 | 229.95 | 336.96 |
| 231.89 | 336.95 | 233.45 | 336.95 | 233.83 | 336.94 | 236.45 | 336.94 | 238.35 | 336.93 |
| 238.53 | 336.93 | 240.22 | 337.03 | 240.42 | 337.04 | 241.43 | 337.04 | 241.79 | 337.03 |
| 242.43 | 337.02 | 245.44 | 336.91 | 246.22 | 336.9 | 247.51 | 336.9 | 248.8 | 336.89 |
| 250.19 | 336.89 | 251.6 | 336.88 | 258.07 | 336.97 | 259.05 | 336.99 | 260.58 | 337.01 |
| 262.58 | 337.03 | 262.94 | 337.03 | 263.33 | 337.05 | 264.89 | 337.1 | 265.49 | 337.12 |
| 265.94 | 337.12 | 266.29 | 337.13 | 266.54 | 337.12 | 269.69 | 337.08 | 271.78 | 337.06 |
| 275.65 | 337.05 | 276.75 | 337.05 | 277.47 | 337.04 | 277.94 | 337.02 | 278.27 | 337 |
| 279.47 | 336.9 | 279.74 | 336.89 | 280.71 | 336.94 | 281.08 | 336.95 | 283.45 | 337.03 |
| 284.14 | 337.04 | 284.76 | 337.04 | 285.48 | 337.02 | 286.62 | 336.95 | 288.95 | 336.81 |
| 289.07 | 336.8 | 289.22 | 336.8 | 290.02 | 336.74 | 290.44 | 336.65 | 290.53 | 336.64 |
| 292.28 | 336.6 | 293.89 | 336.57 | 294.83 | 336.6 | 298.16 | 336.7 | 301.28 | 336.69 |
| 306.99 | 336.67 | 312.01 | 336.65 | 317.2 | 336.61 | 322.75 | 336.57 | 324.2 | 336.56 |
| 326.6 | 336.55 | 328.36 | 336.54 | 331.4 | 336.52 | 336.69 | 336.51 | 338.17 | 336.5 |
| 340.03 | 336.48 | 343.98 | 336.45 | 345.08 | 336.44 | 347.66 | 336.42 | 348.15 | 336.41 |
| 348.29 | 336.41 | 350.58 | 336.4 | 351.5 | 336.4 | 351.99 | 336.39 | 357.64 | 336.36 |
| 360.11 | 336.35 | 363.79 | 336.32 | 365.06 | 336.23 | 366.9 | 336.12 | 368.73 | 336.07 |
| 369.23 | 336.06 | 371.87 | 336.02 | 372.36 | 336.01 | 372.69 | 336 | 373.19 | 335.97 |
| 373.55 | 335.96 | 373.98 | 335.96 | 374.47 | 335.95 | 374.98 | 335.95 | 375.5 | 335.94 |
| 376 | 335.94 | 376.77 | 335.92 | 377.25 | 335.91 | 377.58 | 335.9 | 380.19 | 335.9 |
| 380.48 | 335.91 | 380.84 | 335.91 | 381.06 | 335.92 | 381.51 | 335.92 | 381.76 | 335.93 |
| 382.69 | 335.94 | 385.13 | 335.98 | 385.98 | 335.99 | 387.25 | 336.01 | 394.45 | 336.13 |
| 407.84 | 336.35 | 408.62 | 336.33 | 408.87 | 336.34 | 409.46 | 336.34 | 412.93 | 336.33 |
| 416.82 | 336.33 | 417.74 | 336.34 | 418.11 | 336.34 | 418.21 | 336.35 | 418.42 | 336.36 |
| 418.71 | 336.36 | 418.78 | 336.35 | 418.82 | 336.36 | 419.11 | 336.36 | 419.52 | 336.37 |
| 420.43 | 336.38 | 424.64 | 336.36 | 425.78 | 336.36 | 426.62 | 336.35 | 427.9 | 336.33 |
| 428.82 | 336.32 | 429.71 | 336.3 | 430.21 | 336.29 | 430.45 | 336.29 | 430.72 | 336.28 |
| 431.05 | 336.28 | 431.26 | 336.29 | 431.69 | 336.29 | 431.89 | 336.3 | 432.52 | 336.31 |
| 433.85 | 336.34 | 434.45 | 336.35 | 434.63 | 336.35 | 435.06 | 336.36 | 435.31 | 336.37 |
| 435.5 | 336.37 | 435.95 | 336.39 | 436.49 | 336.42 | 436.82 | 336.43 | 438.13 | 336.5 |
| 439.4 | 336.56 | 442.27 | 336.7 | 443.73 | 336.77 | 444.08 | 336.79 | 444.93 | 336.83 |
| 445.47 | 336.86 | 448.02 | 336.95 | 448.77 | 336.98 | 451.35 | 337.05 | 451.5 | 337.06 |
| 453.46 | 337.06 | 454.36 | 337.07 | 455.09 | 337.09 | 455.95 | 337.11 | 456.2 | 337.12 |
| 457.91 | 337.15 | 459.29 | 337.18 | 460.53 | 337.2 | 462.35 | 337.22 | 463.5 | 337.23 |
| 463.7 | 337.23 | 465.78 | 337.25 | 467.73 | 337.25 | 469.49 | 337.24 | 471.96 | 337.17 |
| 472.01 | 337.17 | 473.32 | 337.13 | 477.08 | 337.06 | 480.55 | 337.05 | 481.99 | 337.04 |
| 485.06 | 337.04 | 486.6 | 337.03 | 487.81 | 337.02 | 489.82 | 337 | 490.47 | 336.99 |
| 495.4 | 336.99 | 496.68 | 337 | 497.89 | 337 | 498.94 | 337.01 | 500.7 | 337.02 |
| 501.68 | 337.02 | 502.13 | 337.03 | 503.05 | 337.03 | 503.93 | 337.06 | 504.72 | 337.09 |
| 505.58 | 337.14 | 505.78 | 337.15 | 505.99 | 337.17 | 506.56 | 337.2 | 507.22 | 337.23 |
| 507.29 | 337.26 | 507.68 | 337.65 | 507.84 | 337.8 | 508.49 | 338.06 | 509.19 | 338.08 |
| 509.69 | 338.11 | 515.26 | 338.27 | 515.86 | 338.27 | 515.94 | 338.28 | 516.12 | 338.28 |
| 516.16 | 338.29 | 517.86 | 338.38 | 518.77 | 338.42 | 519.13 | 338.44 | 520.05 | 338.44 |
| 522.15 | 338.54 | 523.79 | 338.59 | 526.53 | 338.74 | 530.92 | 338.91 | 532.4 | 338.97 |
| 540.48 | 339.35 | 541.14 | 339.37 | 541.2 | 339.38 | 545.63 | 339.54 | 545.78 | 339.54 |
| 547.99 | 339.61 | 548.57 | 339.63 | 556.78 | 339.92 | 557.23 | 339.93 | 558.44 | 339.97 |
| 561.45 | 340.06 | 562.2 | 340.08 | 563.89 | 340.15 | 564.35 | 340.17 | 567.16 | 340.32 |
| 567.99 | 340.36 | 568.92 | 340.4 | 569.54 | 340.42 | 570.13 | 340.45 | 572.57 | 340.57 |
| 573.8 | 340.62 | 574.01 | 340.62 | 574.46 | 340.63 | 575.15 | 340.63 | 575.88 | 340.65 |
| 576.29 | 340.65 | 576.82 | 340.66 | 577.18 | 340.66 | 577.78 | 340.65 | 578.74 | 340.64 |
| 579.56 | 340.64 | 580.42 | 340.66 | 581.36 | 340.69 | 582.45 | 340.73 | 583.51 | 340.8 |
| 585.99 | 340.98 | 586.86 | 341.06 | 588.18 | 341.15 | 589.46 | 341.23 | 590.81 | 341.3 |
| 590.89 | 341.31 | 597.71 | 341.67 | 598.45 | 341.71 | 600.04 | 341.78 | 600.18 | 341.78 |
| 600.21 | 341.79 | 600.38 | 341.79 | 600.42 | 341.8 | 600.56 | 341.8 | 600.72 | 341.82 |
| 601.73 | 341.87 | 602.28 | 341.91 | 605.16 | 342.09 | 608.93 | 342.33 | 609.21 | 342.34 |
| 614.52 | 342.48 | 614.97 | 342.49 | 623.35 | 342.74 | 624.35 | 342.83 | 629.39 | 343.26 |
| 630.72 | 343.36 | 631.98 | 343.47 | 633.94 | 343.61 | 634.62 | 343.66 | 635.47 | 343.71 |
| 636.85 | 343.78 | 639.47 | 343.98 | 640.38 | 344.07 | 643.61 | 344.58 | 646.91 | 344.96 |
| 648.48 | 345.18 | 650.97 | 345.22 | 660.24 | 345.28 | 661.05 | 345.28 | 665.82 | 345.3 |
| 668.94 | 345.31 | 676.18 | 345.31 | 678.79 | 345.3 | 679.16 | 345.3 | 680.93 | 345.29 |
| 681.1 | 345.29 | 682.13 | 345.3 | 683.14 | 345.3 | 684.07 | 345.31 | 698.11 | 345.4 |
| 698.76 | 345.4 | 699.04 | 345.41 | 700.12 | 345.43 | 700.73 | 345.43 | 701 | 345.44 |
| 703.05 | 345.44 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 198.22 | .04 | 507.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 198.22 | 507.84 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1781.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 339.01 | .54 | 339.01 | .66 | 339 | .85 | 339 | 1.12 | 339.04 |
| 1.59 | 339.06 | 1.67 | 339.07 | 2.28 | 339.08 | 3.16 | 339.07 | 6.21 | 339.05 |
| 8.4 | 339.03 | 12.84 | 338.99 | 13.29 | 338.99 | 13.65 | 339 | 13.99 | 339 |
| 14.13 | 339.01 | 15.42 | 339.01 | 15.75 | 339 | 16.33 | 338.99 | 16.8 | 338.98 |
| 17.01 | 338.98 | 17.16 | 338.97 | 17.46 | 338.96 | 17.98 | 338.95 | 18.66 | 338.94 |
| 21.1 | 338.9 | 23.55 | 338.84 | 24.52 | 338.82 | 25.84 | 338.79 | 26.47 | 338.79 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 27.25 | 338.78 | 27.9 | 338.77 | 28.3 | 338.76 | 29 | 338.75 | 29.53 | 338.74 |
| 30.78 | 338.73 | 31.01 | 338.72 | 31.96 | 338.72 | 32.32 | 338.71 | 34.5 | 338.71 |
| 34.76 | 338.72 | 35.71 | 338.74 | 37.07 | 338.77 | 38.43 | 338.81 | 40.24 | 338.84 |
| 41.05 | 338.86 | 41.44 | 338.86 | 41.84 | 338.87 | 43.29 | 338.87 | 43.85 | 338.88 |
| 50.04 | 338.88 | 50.1 | 338.89 | 50.91 | 338.89 | 51.65 | 338.88 | 52.79 | 338.88 |
| 53.61 | 338.87 | 54.08 | 338.87 | 54.85 | 338.86 | 55.69 | 338.86 | 55.98 | 338.85 |
| 56.05 | 338.84 | 56.27 | 338.84 | 56.45 | 338.82 | 56.68 | 338.8 | 57.11 | 338.78 |
| 57.4 | 338.77 | 57.53 | 338.76 | 58.59 | 338.71 | 59.3 | 338.67 | 59.62 | 338.65 |
| 60.13 | 338.63 | 60.83 | 338.6 | 61.71 | 338.57 | 62.16 | 338.55 | 63.22 | 338.51 |
| 63.46 | 338.5 | 64.38 | 338.47 | 65.61 | 338.44 | 65.86 | 338.43 | 67.25 | 338.38 |
| 68.55 | 338.35 | 72.31 | 338.22 | 72.62 | 338.21 | 72.8 | 338.2 | 72.98 | 338.2 |
| 73.79 | 338.29 | 73.97 | 338.38 | 74.32 | 338.4 | 75.76 | 338.4 | 77.73 | 338.36 |
| 79.04 | 338.35 | 80.04 | 338.33 | 80.11 | 338.33 | 82.7 | 338.3 | 83.45 | 338.3 |
| 84.11 | 338.29 | 88.27 | 338.29 | 89.25 | 338.28 | 89.64 | 338.29 | 90.03 | 338.29 |
| 92.33 | 338.27 | 93.15 | 338.28 | 93.25 | 338.29 | 93.91 | 338.3 | 94.86 | 338.32 |
| 94.95 | 338.32 | 95.92 | 338.34 | 101.18 | 338.34 | 101.64 | 338.33 | 102.5 | 338.33 |
| 103.44 | 338.32 | 104.83 | 338.31 | 105.26 | 338.31 | 106.19 | 338.3 | 106.45 | 338.3 |
| 107.81 | 338.28 | 108.45 | 338.26 | 109.02 | 338.26 | 109.51 | 338.25 | 109.95 | 338.23 |
| 112.02 | 338.17 | 113.38 | 338.12 | 113.5 | 338.11 | 114.21 | 338.08 | 115.29 | 338.06 |
| 116.1 | 338.04 | 116.76 | 338.03 | 117.33 | 338.01 | 117.72 | 337.99 | 118.29 | 337.97 |
| 118.44 | 337.97 | 119.09 | 337.98 | 122.19 | 337.98 | 122.43 | 337.97 | 122.92 | 337.97 |
| 123.16 | 337.98 | 123.26 | 337.98 | 123.59 | 338.02 | 123.73 | 338.02 | 123.87 | 338.03 |
| 125.53 | 338.03 | 126.29 | 338.02 | 127.57 | 338 | 129.38 | 337.98 | 130.31 | 337.98 |
| 131.12 | 337.97 | 131.26 | 337.97 | 131.84 | 337.98 | 133.32 | 338 | 134.26 | 338.02 |
| 136.92 | 338.02 | 139.77 | 338 | 143.08 | 337.98 | 143.81 | 337.98 | 145.13 | 337.97 |
| 147.49 | 337.95 | 151.67 | 337.92 | 151.81 | 337.92 | 164 | 337.82 | 166.36 | 337.8 |
| 167.3 | 337.8 | 167.36 | 337.79 | 167.67 | 337.79 | 168.06 | 337.77 | 171.09 | 337.74 |
| 174.27 | 337.69 | 177.11 | 337.65 | 179.32 | 337.62 | 179.7 | 337.61 | 181.11 | 337.57 |
| 181.38 | 337.56 | 183.15 | 337.5 | 187.67 | 337.36 | 189.2 | 337.37 | 191.01 | 337.38 |
| 191.14 | 337.43 | 191.42 | 337.45 | 192.62 | 337.45 | 193.73 | 337.44 | 195.1 | 337.41 |
| 196.56 | 337.37 | 196.58 | 337.38 | 197 | 337.38 | 197.07 | 337.37 | 200.15 | 337.21 |
| 202.69 | 337.12 | 204.03 | 337.06 | 206.72 | 336.93 | 209.07 | 336.73 | 211.63 | 336.73 |
| 218.93 | 336.71 | 219.84 | 336.71 | 222.52 | 336.7 | 224.12 | 336.69 | 227.71 | 336.69 |
| 228.87 | 336.68 | 230.72 | 336.68 | 232.82 | 336.67 | 234.9 | 336.67 | 236.45 | 336.66 |
| 237.73 | 336.66 | 239.77 | 336.65 | 241.79 | 336.76 | 242 | 336.78 | 242.49 | 336.78 |
| 243.08 | 336.77 | 243.48 | 336.77 | 244.16 | 336.75 | 247.4 | 336.63 | 249.63 | 336.63 |
| 251.02 | 336.62 | 252.52 | 336.62 | 254.04 | 336.61 | 261 | 336.72 | 262.06 | 336.74 |
| 263.71 | 336.76 | 265.86 | 336.78 | 266.24 | 336.79 | 266.67 | 336.81 | 268.35 | 336.87 |
| 268.99 | 336.88 | 269.47 | 336.89 | 270.12 | 336.89 | 273.51 | 336.85 | 275.77 | 336.83 |
| 279.94 | 336.83 | 281.11 | 336.82 | 281.9 | 336.81 | 282.4 | 336.79 | 282.76 | 336.77 |
| 284.05 | 336.66 | 284.34 | 336.65 | 284.73 | 336.68 | 285.2 | 336.69 | 285.39 | 336.7 |
| 285.78 | 336.71 | 288.33 | 336.8 | 289.07 | 336.82 | 289.74 | 336.82 | 290.52 | 336.79 |
| 291.75 | 336.73 | 294.25 | 336.57 | 295.41 | 336.49 | 295.86 | 336.39 | 295.95 | 336.39 |
| 297.84 | 336.34 | 299.57 | 336.31 | 300.58 | 336.34 | 304.17 | 336.46 | 307.53 | 336.45 |
| 313.67 | 336.43 | 319.09 | 336.41 | 324.67 | 336.38 | 330.64 | 336.35 | 332.21 | 336.34 |
| 334.79 | 336.33 | 336.69 | 336.32 | 339.96 | 336.31 | 345.66 | 336.3 | 347.26 | 336.29 |
| 349.25 | 336.27 | 353.51 | 336.24 | 354.7 | 336.23 | 357.47 | 336.21 | 358.15 | 336.21 |
| 360.61 | 336.2 | 361.61 | 336.2 | 362.13 | 336.19 | 368.22 | 336.17 | 370.88 | 336.16 |
| 374.84 | 336.13 | 376.2 | 336.03 | 378.19 | 335.91 | 380.15 | 335.86 | 380.69 | 335.85 |
| 382.13 | 335.83 | 383.54 | 335.82 | 384.07 | 335.81 | 384.42 | 335.79 | 384.96 | 335.77 |
| 385.34 | 335.75 | 385.81 | 335.75 | 386.34 | 335.74 | 386.89 | 335.74 | 387.45 | 335.73 |
| 387.99 | 335.73 | 388.45 | 335.72 | 388.82 | 335.71 | 389.33 | 335.7 | 389.69 | 335.69 |
| 392.07 | 335.69 | 392.33 | 335.7 | 392.66 | 335.7 | 392.85 | 335.71 | 393.48 | 335.71 |
| 394.31 | 335.72 | 396.51 | 335.76 | 397.27 | 335.77 | 398.42 | 335.79 | 404.9 | 335.89 |
| 416.94 | 336.08 | 417.64 | 336.07 | 417.87 | 336.07 | 418.4 | 336.08 | 421.52 | 336.07 |
| 423.37 | 336.07 | 424.1 | 336.08 | 425.02 | 336.09 | 426.1 | 336.09 | 426.18 | 336.1 |
| 426.32 | 336.1 | 426.46 | 336.11 | 426.89 | 336.11 | 427.08 | 336.12 | 428.27 | 336.15 |
| 432.05 | 336.14 | 433.08 | 336.14 | 433.84 | 336.13 | 435.05 | 336.12 | 436.61 | 336.1 |
| 437.06 | 336.09 | 437.52 | 336.09 | 437.58 | 336.08 | 437.68 | 336.09 | 438.08 | 336.09 |
| 438.21 | 336.1 | 438.57 | 336.1 | 439.14 | 336.12 | 440.34 | 336.15 | 440.88 | 336.16 |
| 441.43 | 336.16 | 442.23 | 336.2 | 442.72 | 336.22 | 443.01 | 336.24 | 444.19 | 336.29 |
| 445.33 | 336.35 | 447.91 | 336.48 | 449.23 | 336.55 | 449.54 | 336.57 | 450.31 | 336.6 |
| 450.79 | 336.63 | 453.09 | 336.72 | 453.76 | 336.75 | 456.09 | 336.82 | 456.22 | 336.82 |
| 456.42 | 336.83 | 457.24 | 336.83 | 458.79 | 336.85 | 459.15 | 336.86 | 459.45 | 336.86 |
| 459.84 | 336.88 | 460.22 | 336.89 | 460.45 | 336.9 | 461.98 | 336.93 | 463.22 | 336.96 |
| 464.34 | 336.98 | 465.98 | 337 | 467.01 | 337.01 | 467.19 | 337.01 | 469.07 | 337.03 |
| 470.82 | 337.03 | 472.4 | 337.02 | 473.36 | 336.99 | 474.62 | 336.96 | 474.67 | 336.95 |
| 475.85 | 336.92 | 477.28 | 336.9 | 479.23 | 336.87 | 482.35 | 336.86 | 487.79 | 336.86 |
| 488.88 | 336.85 | 490.69 | 336.83 | 494.59 | 336.83 | 495.71 | 336.84 | 496.87 | 336.84 |
| 497.95 | 336.85 | 498.89 | 336.86 | 500.48 | 336.87 | 501.36 | 336.87 | 501.77 | 336.88 |
| 502.59 | 336.88 | 503.38 | 336.91 | 504.09 | 336.93 | 504.87 | 336.98 | 505.05 | 336.98 |
| 505.23 | 337 | 505.75 | 337.03 | 506.35 | 337.06 | 506.41 | 337.08 | 506.9 | 337.54 |
| 507.56 | 337.76 | 508.22 | 337.78 | 508.27 | 337.78 | 508.78 | 337.81 | 514.43 | 337.95 |
| 515.04 | 337.95 | 515.11 | 337.96 | 515.3 | 337.96 | 515.33 | 337.97 | 517.06 | 338.05 |
| 517.98 | 338.1 | 518.35 | 338.11 | 519.28 | 338.12 | 521.4 | 338.22 | 523.07 | 338.27 |
| 525.85 | 338.41 | 530.3 | 338.58 | 531.8 | 338.64 | 540 | 339.01 | 540.66 | 339.03 |
| 540.72 | 339.04 | 545.21 | 339.19 | 545.36 | 339.2 | 546.01 | 339.21 | 547.61 | 339.26 |
| 548.19 | 339.28 | 556.52 | 339.55 | 556.97 | 339.56 | 558.2 | 339.6 | 562.01 | 339.7 |
| 563.72 | 339.76 | 564.19 | 339.78 | 567.03 | 339.92 | 567.06 | 339.92 | 567.88 | 339.96 |
| 568.82 | 340 | 570.04 | 340.04 | 572.52 | 340.15 | 573.77 | 340.2 | 573.98 | 340.2 |
| 574.44 | 340.21 | 575.13 | 340.21 | 575.87 | 340.23 | 576.29 | 340.24 | 577.2 | 340.24 |
| 577.81 | 340.23 | 578.78 | 340.23 | 579.28 | 340.22 | 579.61 | 340.22 | 580.48 | 340.24 |
| 581.43 | 340.27 | 582.54 | 340.32 | 583.61 | 340.37 | 586.12 | 340.55 | 587.01 | 340.62 |
| 588.35 | 340.7 | 588.83 | 340.73 | 589.64 | 340.77 | 591.01 | 340.83 | 591.1 | 340.84 |
| 598.01 | 341.15 | 598.76 | 341.18 | 600.37 | 341.24 | 600.47 | 341.25 | 600.71 | 341.25 |
| 600.76 | 341.26 | 601.06 | 341.28 | 602.08 | 341.33 | 602.64 | 341.36 | 605.56 | 341.53 |
| 609.39 | 341.76 | 609.59 | 341.78 | 609.67 | 341.78 | 615.05 | 341.92 | 615.51 | 341.94 |
| 624.01 | 342.21 | 625.01 | 342.3 | 630.13 | 342.77 | 631.47 | 342.88 | 632.75 | 343 |
| 634.74 | 343.15 | 635.42 | 343.2 | 636.29 | 343.26 | 637.69 | 343.34 | 640.35 | 343.55 |
| 641.26 | 343.66 | 644.54 | 344.21 | 647.88 | 344.63 | 649.47 | 344.87 | 652 | 344.91 |
| 661.4 | 344.99 | 662.21 | 344.99 | 667.05 | 345.01 | 670.22 | 345.03 | 677.56 | 345.03 |
| 680.21 | 345.02 | 682.55 | 345.02 | 684.61 | 345.04 | 685.55 | 345.04 | 699.79 | 345.17 |
| 700.45 | 345.17 | 700.73 | 345.18 | 701.82 | 345.2 | 702.14 | 345.21 | 703.11 | 345.21 |
| 704.8 | 345.22 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 196.56 | .04 | 506.9 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 196.56 | 506.9 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80

REACH: WASH80 RS: 1761.41*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.76 | .53 | 338.75 | .85 | 338.75 | 1.11 | 338.79 | 1.31 | 338.81 |
| 1.58 | 338.82 | 2.26 | 338.83 | 3.13 | 338.83 | 6.16 | 338.81 | 8.32 | 338.79 |
| 12.73 | 338.75 | 13.77 | 338.75 | 13.87 | 338.76 | 14.01 | 338.76 | 14.25 | 338.77 |
| 14.52 | 338.77 | 15.29 | 338.76 | 15.62 | 338.76 | 16.19 | 338.75 | 16.66 | 338.73 |
| 16.87 | 338.73 | 17.01 | 338.72 | 17.31 | 338.72 | 17.83 | 338.71 | 18.5 | 338.69 |
| 23.35 | 338.59 | 24.32 | 338.56 | 26.25 | 338.53 | 27.67 | 338.51 | 28.06 | 338.5 |
| 28.76 | 338.49 | 29.28 | 338.48 | 30.52 | 338.47 | 30.75 | 338.46 | 31.69 | 338.46 |
| 32.04 | 338.45 | 34.21 | 338.45 | 34.47 | 338.46 | 36.76 | 338.51 | 38.1 | 338.55 |
| 39.9 | 338.59 | 40.7 | 338.6 | 41.09 | 338.6 | 41.49 | 338.61 | 42.92 | 338.61 |
| 43.48 | 338.62 | 44.88 | 338.62 | 45.22 | 338.61 | 45.45 | 338.61 | 46.12 | 338.62 |
| 46.7 | 338.61 | 49.43 | 338.61 | 49.54 | 338.62 | 50.48 | 338.62 | 51.21 | 338.61 |
| 52.35 | 338.61 | 53.15 | 338.6 | 53.63 | 338.6 | 54.39 | 338.59 | 55.21 | 338.59 |
| 55.8 | 338.57 | 56.2 | 338.53 | 56.63 | 338.51 | 56.91 | 338.5 | 57.05 | 338.49 |
| 57.88 | 338.44 | 58.79 | 338.4 | 59.12 | 338.38 | 60.31 | 338.33 | 61.64 | 338.27 |
| 62.69 | 338.23 | 62.92 | 338.22 | 65.06 | 338.15 | 65.3 | 338.15 | 66.68 | 338.1 |
| 67.97 | 338.06 | 71.69 | 337.93 | 72.01 | 337.92 | 72.19 | 337.92 | 72.36 | 337.91 |
| 72.45 | 337.92 | 73.17 | 338.02 | 73.34 | 338.11 | 73.69 | 338.13 | 74 | 338.13 |
| 74.29 | 338.14 | 75.12 | 338.13 | 75.59 | 338.12 | 77.07 | 338.1 | 78.37 | 338.08 |
| 79.36 | 338.06 | 79.44 | 338.06 | 82.01 | 338.03 | 82.75 | 338.03 | 83.4 | 338.02 |
| 84.49 | 338.02 | 86.27 | 338.01 | 87.52 | 338.01 | 88.5 | 338 | 88.88 | 338.01 |
| 89.27 | 338.01 | 91.55 | 337.99 | 92.36 | 338 | 92.47 | 338.01 | 93.12 | 338.03 |
| 94.14 | 338.04 | 95.11 | 338.06 | 95.8 | 338.07 | 98.89 | 338.07 | 99.41 | 338.06 |
| 99.79 | 338.07 | 100.32 | 338.06 | 100.78 | 338.06 | 101.63 | 338.05 | 102.56 | 338.05 |
| 103.94 | 338.04 | 104.37 | 338.04 | 105.29 | 338.03 | 105.55 | 338.02 | 107.53 | 337.99 |
| 108.09 | 337.99 | 108.59 | 337.97 | 109.02 | 337.96 | 111.07 | 337.89 | 112.42 | 337.85 |
| 112.54 | 337.84 | 113.24 | 337.8 | 114.31 | 337.78 | 115.12 | 337.77 | 115.77 | 337.76 |
| 116.34 | 337.74 | 116.72 | 337.73 | 117.29 | 337.71 | 118.98 | 337.71 | 120.83 | 337.7 |
| 121.16 | 337.69 | 122.11 | 337.69 | 122.38 | 337.72 | 122.55 | 337.73 | 122.69 | 337.73 |
| 122.82 | 337.74 | 123.67 | 337.74 | 125.23 | 337.72 | 126.49 | 337.71 | 128.28 | 337.68 |
| 130.73 | 337.68 | 131.43 | 337.69 | 132.19 | 337.71 | 132.68 | 337.72 | 135.76 | 337.72 |
| 138.59 | 337.71 | 141.87 | 337.69 | 142.59 | 337.69 | 143.9 | 337.68 | 146.24 | 337.66 |
| 150.38 | 337.62 | 150.53 | 337.62 | 162.61 | 337.52 | 164.96 | 337.5 | 166.09 | 337.5 |
| 166.64 | 337.47 | 169.65 | 337.43 | 172.79 | 337.39 | 175.61 | 337.35 | 177.8 | 337.31 |
| 178.15 | 337.31 | 178.18 | 337.3 | 179.58 | 337.27 | 179.85 | 337.26 | 181.6 | 337.21 |
| 186.09 | 337.08 | 187.6 | 337.09 | 189.4 | 337.11 | 189.52 | 337.16 | 189.81 | 337.19 |
| 191 | 337.2 | 192.09 | 337.19 | 193.45 | 337.17 | 194.9 | 337.13 | 194.93 | 337.14 |
| 195.37 | 337.14 | 195.44 | 337.13 | 198.74 | 336.96 | 201.47 | 336.86 | 202.9 | 336.8 |
| 205.78 | 336.65 | 208.3 | 336.44 | 211.04 | 336.44 | 218.86 | 336.42 | 222.71 | 336.42 |
| 224.42 | 336.41 | 227.65 | 336.41 | 227.94 | 336.4 | 231.5 | 336.4 | 233.74 | 336.39 |
| 237.63 | 336.39 | 238.06 | 336.38 | 241.39 | 336.38 | 243.35 | 336.5 | 243.58 | 336.51 |
| 244.74 | 336.51 | 245.16 | 336.5 | 245.89 | 336.49 | 249.37 | 336.36 | 251.75 | 336.36 |
| 253.24 | 336.35 | 254.85 | 336.35 | 256.47 | 336.34 | 265.07 | 336.49 | 266.84 | 336.51 |
| 269.14 | 336.54 | 269.55 | 336.55 | 270.01 | 336.57 | 271.81 | 336.63 | 272.49 | 336.65 |
| 273.01 | 336.66 | 273.71 | 336.66 | 277.34 | 336.61 | 278.53 | 336.6 | 284.22 | 336.6 |
| 285.48 | 336.59 | 286.32 | 336.58 | 286.85 | 336.56 | 287.24 | 336.54 | 288.63 | 336.42 |
| 288.94 | 336.41 | 289.36 | 336.44 | 289.86 | 336.46 | 290.06 | 336.46 | 290.48 | 336.48 |
| 293.21 | 336.58 | 294.01 | 336.59 | 294.73 | 336.59 | 295.56 | 336.57 | 296.87 | 336.5 |
| 299.87 | 336.31 | 300.8 | 336.24 | 301.28 | 336.13 | 301.38 | 336.13 | 303.4 | 336.08 |
| 305.25 | 336.05 | 306.34 | 336.08 | 310.18 | 336.22 | 313.78 | 336.21 | 320.36 | 336.19 |
| 323.29 | 336.18 | 326.16 | 336.18 | 332.14 | 336.15 | 338.54 | 336.12 | 340.22 | 336.11 |
| 342.99 | 336.1 | 345.02 | 336.1 | 348.52 | 336.09 | 354.63 | 336.09 | 356.34 | 336.08 |
| 358.48 | 336.06 | 363.03 | 336.04 | 364.31 | 336.03 | 367.28 | 336.01 | 367.84 | 336.01 |
| 368.01 | 336 | 372.28 | 336 | 378.8 | 335.98 | 381.65 | 335.97 | 385.89 | 335.94 |
| 387.35 | 335.84 | 389.48 | 335.71 | 389.9 | 335.7 | 391.58 | 335.65 | 392.16 | 335.64 |
| 393.7 | 335.62 | 395.21 | 335.61 | 395.78 | 335.6 | 396.15 | 335.59 | 397.14 | 335.54 |
| 397.65 | 335.54 | 398.21 | 335.53 | 398.8 | 335.53 | 399.39 | 335.52 | 399.97 | 335.52 |
| 400.87 | 335.5 | 401.41 | 335.49 | 401.8 | 335.48 | 403.94 | 335.48 | 404.18 | 335.49 |
| 404.85 | 335.49 | 405 | 335.5 | 405.2 | 335.5 | 405.94 | 335.51 | 408.57 | 335.55 |
| 409.58 | 335.56 | 415.34 | 335.65 | 426.04 | 335.82 | 426.67 | 335.81 | 427.34 | 335.81 |
| 430.11 | 335.82 | 431.76 | 335.82 | 432.4 | 335.83 | 433.22 | 335.84 | 433.98 | 335.84 |
| 434.17 | 335.85 | 434.33 | 335.85 | 434.68 | 335.87 | 434.88 | 335.87 | 435.05 | 335.88 |
| 436.1 | 335.91 | 439.47 | 335.92 | 440.38 | 335.93 | 441.05 | 335.92 | 442.07 | 335.91 |
| 442.81 | 335.91 | 443.52 | 335.9 | 443.92 | 335.89 | 444.6 | 335.89 | 444.76 | 335.9 |
| 444.93 | 335.9 | 445.1 | 335.91 | 445.26 | 335.91 | 445.76 | 335.93 | 446.47 | 335.94 |
| 446.83 | 335.95 | 447.31 | 335.96 | 447.45 | 335.96 | 447.79 | 335.97 | 448.15 | 335.99 |
| 448.33 | 335.99 | 448.94 | 336.03 | 449.21 | 336.04 | 450.25 | 336.09 | 451.26 | 336.15 |
| 453.56 | 336.27 | 454.73 | 336.33 | 455 | 336.35 | 455.68 | 336.38 | 456.11 | 336.41 |
| 457.03 | 336.45 | 458.16 | 336.49 | 458.75 | 336.52 | 460.82 | 336.59 | 460.94 | 336.59 |
| 461.12 | 336.6 | 463.22 | 336.63 | 463.54 | 336.64 | 463.81 | 336.64 | 464.49 | 336.66 |
| 464.7 | 336.68 | 466.06 | 336.71 | 467.16 | 336.75 | 468.16 | 336.76 | 469.61 | 336.78 |
| 470.53 | 336.79 | 470.68 | 336.79 | 472.35 | 336.81 | 473.91 | 336.81 | 475.31 | 336.8 |
| 476.16 | 336.77 | 477.32 | 336.74 | 478.37 | 336.71 | 479.65 | 336.69 | 481.38 | 336.67 |
| 484.15 | 336.67 | 485.3 | 336.68 | 489.95 | 336.68 | 491.56 | 336.67 | 493.43 | 336.67 |
| 494.15 | 336.68 | 496.02 | 336.68 | 498.01 | 336.7 | 498.85 | 336.7 | 500.26 | 336.72 |
| 501.04 | 336.72 | 501.4 | 336.73 | 502.13 | 336.73 | 502.38 | 336.74 | 502.83 | 336.75 |
| 503.47 | 336.78 | 504.16 | 336.81 | 504.31 | 336.82 | 504.48 | 336.84 | 504.94 | 336.86 |
| 505.47 | 336.88 | 505.52 | 336.9 | 505.84 | 337.18 | 505.96 | 337.28 | 506.63 | 337.47 |
| 507.35 | 337.48 | 507.86 | 337.51 | 513.59 | 337.64 | 514.28 | 337.63 | 514.31 | 337.64 |
| 514.47 | 337.64 | 514.51 | 337.65 | 516.26 | 337.73 | 517.2 | 337.77 | 517.57 | 337.79 |
| 518.51 | 337.8 | 520.66 | 337.9 | 522.35 | 337.95 | 525.17 | 338.08 | 529.68 | 338.26 |
| 531.2 | 338.32 | 539.51 | 338.68 | 540.18 | 338.69 | 540.24 | 338.7 | 544.79 | 338.85 |
| 544.94 | 338.85 | 545.61 | 338.87 | 547.22 | 338.91 | 547.81 | 338.93 | 556.25 | 339.18 |
| 556.71 | 339.2 | 557.96 | 339.23 | 561.04 | 339.3 | 561.82 | 339.32 | 563.55 | 339.38 |
| 564.02 | 339.4 | 566.91 | 339.52 | 566.94 | 339.52 | 567.76 | 339.56 | 569.36 | 339.61 |
| 569.96 | 339.63 | 572.47 | 339.74 | 573.49 | 339.77 | 573.74 | 339.78 | 573.95 | 339.78 |
| 574.42 | 339.79 | 575.04 | 339.79 | 575.12 | 339.8 | 575.87 | 339.81 | 576.29 | 339.82 |
| 577.83 | 339.82 | 578.81 | 339.81 | 579.66 | 339.81 | 580.54 | 339.83 | 581.51 | 339.86 |
| 582.63 | 339.9 | 583.71 | 339.95 | 586.26 | 340.11 | 587.03 | 340.16 | 587.15 | 340.17 |
| 588.52 | 340.25 | 589 | 340.27 | 589.83 | 340.31 | 591.21 | 340.36 | 591.3 | 340.37 |
| 598.31 | 340.63 | 599.07 | 340.65 | 600.7 | 340.7 | 600.76 | 340.71 | 601.05 | 340.71 |
| 601.23 | 340.73 | 601.4 | 340.74 | 602.43 | 340.79 | 603.01 | 340.82 | 605.96 | 340.98 |
| 609.84 | 341.2 | 610.12 | 341.21 | 615.58 | 341.37 | 616.04 | 341.39 | 624.66 | 341.67 |
| 625.68 | 341.77 | 630.86 | 342.28 | 632.22 | 342.4 | 633.52 | 342.53 | 635.54 | 342.7 |
| 636.23 | 342.75 | 637.1 | 342.81 | 638.53 | 342.89 | 641.22 | 343.13 | 642.15 | 343.24 |
| 645.47 | 343.84 | 648.86 | 344.29 | 650.47 | 344.56 | 653.03 | 344.6 | 662.56 | 344.7 |
| 663.38 | 344.7 | 668.29 | 344.73 | 671.5 | 344.74 | 672.89 | 344.75 | 673.53 | 344.75 |
| 674.71 | 344.76 | 678.93 | 344.76 | 681.62 | 344.75 | 683.99 | 344.75 | 686.08 | 344.77 |
| 687.04 | 344.78 | 701.47 | 344.94 | 701.8 | 344.94 | 702.14 | 344.95 | 702.42 | 344.95 |
| 702.97 | 344.96 | 703.53 | 344.98 | 704.16 | 344.98 | 704.44 | 344.99 | 704.83 | 344.99 |
| 706.54 | 345 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 194.9 | .04 | 505.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 194.9 | 505.96 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1741.67*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.51 | .53 | 338.5 | .84 | 338.5 | 1.1 | 338.54 | 1.29 | 338.56 |
| 1.65 | 338.57 | 2.24 | 338.59 | 3.11 | 338.59 | 6.11 | 338.56 | 8.25 | 338.54 |
| 12.62 | 338.51 | 13.75 | 338.51 | 13.89 | 338.52 | 15.16 | 338.52 | 15.48 | 338.51 |
| 16.06 | 338.5 | 16.52 | 338.49 | 16.72 | 338.48 | 16.87 | 338.48 | 17.16 | 338.47 |
| 17.68 | 338.46 | 18.34 | 338.44 | 20.74 | 338.39 | 23.15 | 338.33 | 24.11 | 338.31 |
| 25.4 | 338.28 | 26.02 | 338.27 | 26.79 | 338.26 | 27.43 | 338.25 | 27.82 | 338.25 |
| 28.51 | 338.24 | 29.03 | 338.23 | 30.26 | 338.21 | 30.49 | 338.21 | 30.9 | 338.2 |
| 31.42 | 338.2 | 31.77 | 338.19 | 33.92 | 338.19 | 34.17 | 338.2 | 35.11 | 338.22 |
| 36.45 | 338.25 | 37.78 | 338.29 | 39.56 | 338.33 | 40.36 | 338.34 | 40.74 | 338.34 |
| 41.13 | 338.35 | 50.05 | 338.35 | 50.78 | 338.34 | 51.9 | 338.34 | 52.7 | 338.33 |
| 53.17 | 338.33 | 53.93 | 338.32 | 54.74 | 338.32 | 55.1 | 338.31 | 55.32 | 338.3 |
| 55.5 | 338.28 | 55.73 | 338.26 | 56.15 | 338.24 | 56.43 | 338.22 | 56.56 | 338.22 |
| 57.39 | 338.17 | 57.6 | 338.16 | 58.29 | 338.12 | 58.61 | 338.1 | 59.12 | 338.08 |
| 59.8 | 338.05 | 60.66 | 338.01 | 61.11 | 338 | 62.38 | 337.94 | 64.5 | 337.87 |
| 64.75 | 337.86 | 66.11 | 337.82 | 67.39 | 337.78 | 71.08 | 337.65 | 71.39 | 337.64 |
| 71.57 | 337.63 | 71.83 | 337.63 | 72.54 | 337.74 | 72.72 | 337.84 | 73.06 | 337.86 |
| 73.37 | 337.86 | 73.66 | 337.87 | 74.48 | 337.87 | 76.41 | 337.83 | 77.7 | 337.81 |
| 78.68 | 337.79 | 78.76 | 337.79 | 81.31 | 337.76 | 82.04 | 337.76 | 82.69 | 337.75 |
| 83.77 | 337.75 | 85.53 | 337.74 | 86.44 | 337.74 | 86.78 | 337.73 | 88.51 | 337.73 |
| 90.77 | 337.71 | 91.58 | 337.72 | 91.68 | 337.73 | 92.32 | 337.75 | 93.34 | 337.76 |
| 94.3 | 337.78 | 94.98 | 337.79 | 95.52 | 337.79 | 96.57 | 337.8 | 97.26 | 337.79 |
| 99.92 | 337.79 | 100.76 | 337.78 | 101.69 | 337.77 | 103.06 | 337.76 | 103.48 | 337.76 |
| 104.4 | 337.75 | 104.65 | 337.75 | 105.99 | 337.73 | 106.61 | 337.72 | 107.17 | 337.72 |
| 107.66 | 337.7 | 108.1 | 337.69 | 110.13 | 337.62 | 111.46 | 337.58 | 111.58 | 337.57 |
| 112.28 | 337.53 | 113.34 | 337.51 | 114.14 | 337.5 | 114.79 | 337.49 | 115.34 | 337.47 |
| 115.73 | 337.46 | 116.29 | 337.44 | 117.27 | 337.44 | 117.96 | 337.43 | 119.8 | 337.41 |
| 120.13 | 337.41 | 120.36 | 337.4 | 120.84 | 337.4 | 121.07 | 337.41 | 121.18 | 337.41 |
| 121.34 | 337.43 | 121.51 | 337.44 | 121.64 | 337.44 | 121.78 | 337.45 | 122.24 | 337.45 |
| 122.61 | 337.44 | 123.41 | 337.44 | 124.16 | 337.43 | 125.41 | 337.41 | 127.19 | 337.38 |
| 129.04 | 337.38 | 130.25 | 337.4 | 131.07 | 337.41 | 131.99 | 337.43 | 134.6 | 337.43 |
| 137.41 | 337.42 | 140.67 | 337.4 | 141.22 | 337.39 | 142.67 | 337.39 | 144.99 | 337.36 |
| 149.1 | 337.33 | 149.25 | 337.33 | 161.23 | 337.22 | 163.55 | 337.2 | 164.67 | 337.2 |
| 165.22 | 337.17 | 168.2 | 337.13 | 171.32 | 337.08 | 174.12 | 337.04 | 176.29 | 337 |
| 176.66 | 337 | 178.05 | 336.96 | 178.32 | 336.95 | 180.06 | 336.91 | 184.5 | 336.79 |
| 186 | 336.81 | 187.78 | 336.84 | 187.91 | 336.9 | 188.19 | 336.93 | 189.37 | 336.94 |
| 190.46 | 336.94 | 191.8 | 336.92 | 193.24 | 336.9 | 193.74 | 336.9 | 193.82 | 336.89 |
| 197.34 | 336.71 | 200.24 | 336.6 | 201.77 | 336.54 | 204.85 | 336.38 | 207.53 | 336.15 |
| 210.46 | 336.15 | 218.79 | 336.14 | 219.83 | 336.14 | 222.9 | 336.13 | 227.65 | 336.13 |
| 227.89 | 336.12 | 232.27 | 336.12 | 234.66 | 336.11 | 240.28 | 336.11 | 242.61 | 336.1 |
| 242.83 | 336.11 | 244.91 | 336.24 | 245.15 | 336.25 | 246.4 | 336.25 | 246.84 | 336.24 |
| 247.63 | 336.22 | 251.33 | 336.09 | 252.67 | 336.09 | 253.88 | 336.08 | 258.91 | 336.08 |
| 266.87 | 336.21 | 268.08 | 336.23 | 269.96 | 336.26 | 272.42 | 336.3 | 272.86 | 336.3 |
| 273.35 | 336.33 | 275.27 | 336.4 | 276 | 336.42 | 276.55 | 336.43 | 277.29 | 336.43 |
| 281.17 | 336.38 | 282.43 | 336.37 | 288.5 | 336.37 | 289.85 | 336.36 | 290.75 | 336.36 |
| 291.31 | 336.33 | 291.73 | 336.31 | 293.2 | 336.18 | 293.54 | 336.17 | 293.99 | 336.2 |
| 294.52 | 336.22 | 294.73 | 336.23 | 295.18 | 336.24 | 298.09 | 336.35 | 298.94 | 336.37 |
| 299.71 | 336.37 | 300.6 | 336.35 | 302 | 336.27 | 304.86 | 336.09 | 305.2 | 336.07 |
| 306.18 | 335.99 | 306.7 | 335.88 | 306.8 | 335.87 | 308.96 | 335.83 | 310.94 | 335.79 |
| 312.1 | 335.83 | 316.19 | 335.97 | 320.03 | 335.97 | 327.05 | 335.95 | 330.17 | 335.95 |
| 333.24 | 335.94 | 339.62 | 335.92 | 346.44 | 335.89 | 348.24 | 335.89 | 351.18 | 335.88 |
| 353.35 | 335.88 | 357.09 | 335.87 | 365.43 | 335.87 | 367.71 | 335.85 | 372.56 | 335.83 |
| 373.92 | 335.82 | 377.09 | 335.81 | 377.69 | 335.8 | 382.42 | 335.8 | 389.38 | 335.78 |
| 392.42 | 335.78 | 396.94 | 335.75 | 398.5 | 335.64 | 400.77 | 335.51 | 401.22 | 335.49 |
| 403.01 | 335.45 | 403.63 | 335.44 | 404.41 | 335.43 | 405.27 | 335.42 | 406.88 | 335.4 |
| 407.49 | 335.4 | 408.5 | 335.35 | 408.94 | 335.33 | 409.48 | 335.33 | 410.08 | 335.32 |
| 411.34 | 335.32 | 411.96 | 335.31 | 412.49 | 335.3 | 412.91 | 335.3 | 413.5 | 335.28 |
| 413.9 | 335.27 | 415.82 | 335.27 | 416.02 | 335.28 | 416.74 | 335.28 | 416.92 | 335.29 |
| 417.57 | 335.29 | 419.27 | 335.32 | 419.87 | 335.33 | 420.75 | 335.34 | 425.79 | 335.41 |
| 435.14 | 335.55 | 435.69 | 335.54 | 435.86 | 335.55 | 436.28 | 335.55 | 438.7 | 335.56 |
| 440.14 | 335.57 | 440.7 | 335.58 | 441.42 | 335.59 | 442.08 | 335.59 | 442.32 | 335.6 |
| 442.54 | 335.62 | 442.82 | 335.62 | 442.88 | 335.63 | 443.02 | 335.63 | 443.31 | 335.65 |
| 443.94 | 335.67 | 446.88 | 335.7 | 447.68 | 335.71 | 448.27 | 335.71 | 449.16 | 335.7 |
| 450.77 | 335.7 | 450.94 | 335.69 | 451.13 | 335.7 | 451.18 | 335.69 | 451.25 | 335.7 |
| 451.56 | 335.7 | 451.66 | 335.71 | 451.81 | 335.71 | 451.95 | 335.72 | 452.39 | 335.73 |
| 453.32 | 335.76 | 453.74 | 335.77 | 453.86 | 335.77 | 454.16 | 335.78 | 454.34 | 335.79 |
| 454.47 | 335.79 | 454.79 | 335.81 | 455.4 | 335.84 | 456.31 | 335.89 | 457.2 | 335.95 |
| 459.2 | 336.06 | 460.23 | 336.11 | 460.47 | 336.13 | 461.44 | 336.18 | 463.22 | 336.27 |
| 463.75 | 336.29 | 465.55 | 336.36 | 465.65 | 336.36 | 465.81 | 336.37 | 467.02 | 336.39 |
| 467.93 | 336.42 | 468.16 | 336.42 | 468.76 | 336.44 | 468.94 | 336.45 | 470.13 | 336.49 |
| 471.1 | 336.53 | 471.97 | 336.54 | 473.24 | 336.56 | 474.04 | 336.57 | 474.18 | 336.58 |
| 475.63 | 336.59 | 476.06 | 336.6 | 477 | 336.59 | 478.22 | 336.58 | 478.97 | 336.56 |
| 479.95 | 336.53 | 479.98 | 336.53 | 480.9 | 336.5 | 482.02 | 336.49 | 483.53 | 336.48 |
| 485.96 | 336.49 | 486.96 | 336.49 | 487.96 | 336.5 | 488.47 | 336.5 | 489.11 | 336.51 |
| 494.07 | 336.51 | 494.7 | 336.52 | 495.46 | 336.52 | 497.23 | 336.54 | 498.07 | 336.54 |
| 498.8 | 336.55 | 500.04 | 336.56 | 500.72 | 336.57 | 501.04 | 336.58 | 501.68 | 336.58 |
| 501.89 | 336.59 | 502.29 | 336.6 | 502.84 | 336.62 | 503.45 | 336.65 | 503.73 | 336.67 |
| 504.13 | 336.68 | 504.59 | 336.7 | 504.64 | 336.72 | 505.02 | 337.03 | 505.7 | 337.18 |
| 506.43 | 337.19 | 506.95 | 337.22 | 512.75 | 337.32 | 513.38 | 337.31 | 513.54 | 337.31 |
| 513.69 | 337.32 | 515.46 | 337.4 | 516.41 | 337.45 | 516.78 | 337.46 | 517.74 | 337.48 |
| 519.92 | 337.57 | 521.64 | 337.63 | 524.49 | 337.76 | 529.06 | 337.93 | 530.59 | 337.99 |
| 539.02 | 338.34 | 539.7 | 338.36 | 539.76 | 338.37 | 544.37 | 338.5 | 544.53 | 338.5 |
| 545.2 | 338.52 | 546.83 | 338.56 | 547.44 | 338.58 | 555.99 | 338.81 | 556.46 | 338.83 |
| 557.72 | 338.86 | 560.84 | 338.92 | 561.63 | 338.94 | 563.39 | 338.99 | 563.86 | 339.01 |
| 566.79 | 339.12 | 566.82 | 339.12 | 567.65 | 339.16 | 569.27 | 339.21 | 569.88 | 339.23 |
| 572.42 | 339.32 | 573.46 | 339.35 | 573.71 | 339.36 | 573.93 | 339.36 | 574.4 | 339.37 |
| 575.02 | 339.38 | 575.11 | 339.38 | 575.87 | 339.39 | 576.3 | 339.4 | 578.85 | 339.4 |
| 579.36 | 339.39 | 579.71 | 339.39 | 580.6 | 339.41 | 581.58 | 339.44 | 582.72 | 339.49 |
| 583.81 | 339.53 | 586.4 | 339.67 | 587.18 | 339.72 | 587.3 | 339.73 | 588.68 | 339.8 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 589.18 | 339.82 | 590.01 | 339.85 | 591.42 | 339.9 | 591.51 | 339.9 | 598.6 | 340.1 |
| 599.36 | 340.12 | 599.38 | 340.13 | 601.03 | 340.17 | 601.35 | 340.17 | 601.38 | 340.18 |
| 601.48 | 340.18 | 601.74 | 340.2 | 602.79 | 340.24 | 603.37 | 340.27 | 606.36 | 340.43 |
| 610.29 | 340.63 | 610.5 | 340.64 | 610.58 | 340.65 | 616.11 | 340.82 | 616.58 | 340.84 |
| 625.31 | 341.14 | 626.34 | 341.25 | 631.59 | 341.79 | 632.97 | 341.92 | 634.29 | 342.06 |
| 636.33 | 342.24 | 637.03 | 342.29 | 637.92 | 342.36 | 639.36 | 342.45 | 642.09 | 342.7 |
| 643.03 | 342.82 | 646.4 | 343.47 | 649.83 | 343.96 | 651.46 | 344.25 | 654.06 | 344.29 |
| 663.72 | 344.4 | 664.55 | 344.41 | 669.52 | 344.44 | 672.78 | 344.46 | 674.18 | 344.47 |
| 674.84 | 344.47 | 676.03 | 344.48 | 685.44 | 344.48 | 687.56 | 344.5 | 688.53 | 344.51 |
| 703.15 | 344.71 | 703.49 | 344.71 | 703.82 | 344.72 | 704.11 | 344.72 | 704.67 | 344.74 |
| 705.24 | 344.75 | 705.56 | 344.75 | 705.88 | 344.76 | 706.15 | 344.76 | 706.55 | 344.77 |
| 708.29 | 344.79 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 193.24 | .04 | 505.02 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 193.24 | 505.02 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1721.94*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338.26 | .52 | 338.25 | .83 | 338.25 | 1.09 | 338.3 | 1.28 | 338.31 |
| 1.55 | 338.32 | 1.63 | 338.33 | 2.22 | 338.34 | 3.08 | 338.34 | 6.06 | 338.32 |
| 8.18 | 338.3 | 12.51 | 338.27 | 15.03 | 338.27 | 15.35 | 338.26 | 15.92 | 338.25 |
| 16.37 | 338.24 | 16.58 | 338.23 | 16.72 | 338.23 | 17.02 | 338.22 | 17.52 | 338.21 |
| 18.18 | 338.2 | 22.95 | 338.08 | 23.9 | 338.05 | 25.8 | 338.02 | 26.56 | 338.01 |
| 27.2 | 338 | 27.58 | 337.99 | 28.27 | 337.98 | 28.78 | 337.97 | 30 | 337.95 |
| 30.23 | 337.95 | 30.64 | 337.94 | 31.15 | 337.94 | 31.5 | 337.93 | 32.47 | 337.93 |
| 32.96 | 337.92 | 33.37 | 337.92 | 33.42 | 337.93 | 33.88 | 337.93 | 34.81 | 337.96 |
| 36.14 | 337.99 | 37.45 | 338.03 | 39.22 | 338.07 | 40.01 | 338.08 | 40.39 | 338.08 |
| 40.78 | 338.09 | 45.91 | 338.09 | 46.4 | 338.08 | 49.62 | 338.08 | 50.34 | 338.07 |
| 51.46 | 338.07 | 52.25 | 338.06 | 52.71 | 338.06 | 53.46 | 338.05 | 54.12 | 338.05 |
| 54.27 | 338.04 | 54.63 | 338.04 | 54.85 | 338.03 | 55.02 | 338.01 | 55.25 | 337.99 |
| 55.67 | 337.96 | 55.94 | 337.95 | 56.08 | 337.94 | 56.9 | 337.89 | 57.1 | 337.88 |
| 57.79 | 337.85 | 58.61 | 337.8 | 59.29 | 337.77 | 60.14 | 337.73 | 60.59 | 337.72 |
| 61.62 | 337.67 | 61.85 | 337.66 | 63.95 | 337.59 | 64.19 | 337.58 | 65.55 | 337.53 |
| 66.81 | 337.49 | 70.47 | 337.36 | 70.78 | 337.35 | 70.96 | 337.34 | 71.21 | 337.34 |
| 71.92 | 337.46 | 72.09 | 337.57 | 72.43 | 337.59 | 72.74 | 337.6 | 73.84 | 337.6 |
| 74.3 | 337.59 | 75.76 | 337.56 | 77.03 | 337.54 | 78.01 | 337.52 | 78.08 | 337.52 |
| 80.61 | 337.5 | 81.34 | 337.49 | 81.98 | 337.48 | 82.55 | 337.48 | 83.05 | 337.47 |
| 84.8 | 337.46 | 86.03 | 337.46 | 86.99 | 337.45 | 87.75 | 337.45 | 89.99 | 337.42 |
| 90.79 | 337.44 | 90.89 | 337.45 | 91.53 | 337.47 | 92.45 | 337.48 | 92.54 | 337.49 |
| 93.49 | 337.51 | 94.17 | 337.52 | 98.61 | 337.52 | 99.07 | 337.51 | 99.9 | 337.5 |
| 100.82 | 337.5 | 102.17 | 337.49 | 102.59 | 337.49 | 103.5 | 337.48 | 103.75 | 337.47 |
| 105.08 | 337.46 | 105.7 | 337.45 | 106.25 | 337.44 | 107.17 | 337.42 | 109.18 | 337.35 |
| 110.5 | 337.3 | 110.63 | 337.3 | 111.31 | 337.26 | 112.36 | 337.24 | 113.16 | 337.23 |
| 113.8 | 337.22 | 114.35 | 337.2 | 114.73 | 337.19 | 115.29 | 337.17 | 116.26 | 337.17 |
| 116.95 | 337.16 | 118.77 | 337.13 | 119.1 | 337.13 | 119.32 | 337.12 | 120.13 | 337.12 |
| 120.3 | 337.14 | 120.6 | 337.16 | 120.73 | 337.16 | 120.9 | 337.15 | 121.56 | 337.15 |
| 122.25 | 337.14 | 122.35 | 337.14 | 123.09 | 337.13 | 124.33 | 337.11 | 126.1 | 337.08 |
| 126.39 | 337.08 | 127.01 | 337.09 | 128.5 | 337.09 | 129.13 | 337.1 | 129.19 | 337.11 |
| 129.94 | 337.12 | 130.86 | 337.14 | 133.45 | 337.14 | 136.23 | 337.13 | 139.46 | 337.11 |
| 140.01 | 337.1 | 141.45 | 337.1 | 143.75 | 337.07 | 147.82 | 337.03 | 147.96 | 337.03 |
| 159.84 | 336.92 | 162.15 | 336.9 | 163.26 | 336.9 | 163.8 | 336.87 | 166.75 | 336.83 |
| 169.85 | 336.78 | 172.62 | 336.73 | 174.77 | 336.7 | 175.15 | 336.69 | 176.52 | 336.66 |
| 176.79 | 336.65 | 178.51 | 336.61 | 182.92 | 336.5 | 184.41 | 336.54 | 186.17 | 336.57 |
| 186.29 | 336.64 | 186.57 | 336.67 | 187.74 | 336.69 | 188.82 | 336.69 | 190.15 | 336.68 |
| 191.58 | 336.66 | 192.19 | 336.66 | 195.93 | 336.45 | 199.02 | 336.34 | 200.64 | 336.28 |
| 203.91 | 336.11 | 206.76 | 335.87 | 208.69 | 335.86 | 209.87 | 335.86 | 218.73 | 335.85 |
| 225.03 | 335.85 | 227.52 | 335.84 | 236.28 | 335.84 | 236.88 | 335.83 | 244.26 | 335.83 |
| 246.48 | 335.97 | 246.73 | 335.99 | 248.05 | 335.99 | 248.53 | 335.98 | 249.36 | 335.96 |
| 253.3 | 335.82 | 254.72 | 335.82 | 256 | 335.81 | 261.35 | 335.81 | 269.8 | 335.96 |
| 271.09 | 335.98 | 273.09 | 336.01 | 275.7 | 336.05 | 276.17 | 336.06 | 276.69 | 336.08 |
| 279.5 | 336.19 | 280.09 | 336.19 | 280.55 | 336.2 | 280.88 | 336.2 | 284.99 | 336.15 |
| 286.34 | 336.14 | 294.22 | 336.14 | 295.17 | 336.13 | 295.77 | 336.1 | 296.21 | 336.08 |
| 297.78 | 335.94 | 298.14 | 335.93 | 298.61 | 335.96 | 299.18 | 335.98 | 299.88 | 336.01 |
| 302.97 | 336.13 | 303.88 | 336.15 | 304.69 | 336.15 | 305.63 | 336.12 | 307.12 | 336.04 |
| 310.17 | 335.84 | 310.32 | 335.84 | 310.52 | 335.83 | 311.57 | 335.74 | 312.12 | 335.62 |
| 312.23 | 335.62 | 314.52 | 335.57 | 316.62 | 335.53 | 317.85 | 335.57 | 322.21 | 335.73 |
| 326.29 | 335.72 | 333.74 | 335.71 | 340.31 | 335.71 | 347.09 | 335.69 | 354.34 | 335.67 |
| 356.25 | 335.66 | 361.68 | 335.66 | 365.65 | 335.65 | 372.57 | 335.66 | 374.51 | 335.66 |
| 376.93 | 335.65 | 382.09 | 335.63 | 383.54 | 335.62 | 386.9 | 335.6 | 392.57 | 335.6 |
| 399.96 | 335.59 | 403.19 | 335.58 | 407.99 | 335.57 | 409.65 | 335.45 | 412.06 | 335.3 |
| 412.54 | 335.29 | 414.44 | 335.24 | 415.1 | 335.23 | 415.93 | 335.22 | 416.84 | 335.21 |
| 418.55 | 335.2 | 419.2 | 335.19 | 420.27 | 335.14 | 420.74 | 335.12 | 421.31 | 335.12 |
| 421.95 | 335.11 | 423.95 | 335.11 | 424.51 | 335.1 | 424.96 | 335.09 | 425.58 | 335.07 |
| 426.01 | 335.06 | 427.87 | 335.06 | 427.92 | 335.07 | 428.64 | 335.07 | 429.19 | 335.08 |
| 430.66 | 335.1 | 431.16 | 335.1 | 431.92 | 335.11 | 436.23 | 335.17 | 444.25 | 335.28 |
| 444.86 | 335.28 | 445.21 | 335.29 | 447.29 | 335.31 | 448.52 | 335.32 | 449.01 | 335.33 |
| 449.62 | 335.34 | 450.19 | 335.34 | 450.33 | 335.35 | 450.39 | 335.36 | 450.49 | 335.36 |
| 450.71 | 335.38 | 450.87 | 335.38 | 450.99 | 335.39 | 451.23 | 335.4 | 451.78 | 335.44 |
| 454.3 | 335.48 | 454.98 | 335.5 | 455.49 | 335.5 | 456.29 | 335.49 | 456.8 | 335.5 |
| 458.14 | 335.5 | 458.26 | 335.51 | 458.39 | 335.51 | 458.52 | 335.52 | 458.64 | 335.52 |
| 459.01 | 335.54 | 459.81 | 335.57 | 460.17 | 335.58 | 460.27 | 335.58 | 460.53 | 335.59 |
| 460.68 | 335.6 | 460.8 | 335.6 | 461.07 | 335.62 | 461.39 | 335.64 | 462.37 | 335.69 |
| 463.13 | 335.74 | 464.85 | 335.84 | 465.72 | 335.9 | 465.93 | 335.91 | 466.44 | 335.94 |
| 466.76 | 335.96 | 467.44 | 335.99 | 468.29 | 336.04 | 468.74 | 336.06 | 470.28 | 336.13 |
| 470.37 | 336.13 | 470.51 | 336.14 | 471.05 | 336.15 | 471.54 | 336.17 | 472.08 | 336.18 |
| 472.52 | 336.2 | 473.03 | 336.22 | 473.19 | 336.23 | 474.21 | 336.27 | 475.03 | 336.31 |
| 475.78 | 336.33 | 476.86 | 336.35 | 477.55 | 336.36 | 477.67 | 336.36 | 478.92 | 336.38 |
| 479.28 | 336.38 | 480.09 | 336.37 | 481.14 | 336.36 | 481.77 | 336.34 | 482.61 | 336.31 |
| 482.64 | 336.31 | 483.43 | 336.29 | 485.68 | 336.29 | 487.76 | 336.3 | 489.47 | 336.32 |
| 489.91 | 336.33 | 490.46 | 336.33 | 491.38 | 336.34 | 493.69 | 336.34 | 494.02 | 336.35 |
| 494.7 | 336.35 | 495.24 | 336.36 | 495.9 | 336.36 | 497.41 | 336.38 | 498.13 | 336.39 |
| 498.76 | 336.4 | 499.81 | 336.41 | 500.4 | 336.42 | 500.67 | 336.42 | 500.99 | 336.43 |
| 501.22 | 336.43 | 501.4 | 336.44 | 501.74 | 336.45 | 502.22 | 336.46 | 502.74 | 336.49 |
| 502.85 | 336.49 | 502.98 | 336.5 | 503.32 | 336.51 | 503.72 | 336.53 | 503.76 | 336.54 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 503.99 | 336.71 | 504.08 | 336.77 | 504.77 | 336.88 | 505.51 | 336.89 | 506.04 | 336.92 |
| 511.92 | 337 | 512.55 | 336.99 | 512.82 | 336.99 | 512.86 | 337 | 514.66 | 337.08 |
| 515.62 | 337.12 | 516 | 337.14 | 516.97 | 337.16 | 519.18 | 337.25 | 520.92 | 337.31 |
| 523.8 | 337.43 | 528.44 | 337.6 | 529.99 | 337.66 | 538.53 | 338.01 | 539.22 | 338.02 |
| 539.28 | 338.03 | 543.96 | 338.16 | 544.11 | 338.16 | 544.79 | 338.17 | 546.45 | 338.21 |
| 547.06 | 338.23 | 555.72 | 338.45 | 556.2 | 338.46 | 557.48 | 338.49 | 560.64 | 338.54 |
| 561.44 | 338.56 | 563.22 | 338.61 | 563.7 | 338.62 | 566.67 | 338.72 | 566.69 | 338.73 |
| 567.54 | 338.76 | 568.53 | 338.79 | 569.18 | 338.8 | 569.8 | 338.82 | 572.37 | 338.91 |
| 573.42 | 338.93 | 573.68 | 338.94 | 573.9 | 338.94 | 574.38 | 338.95 | 575.01 | 338.96 |
| 575.1 | 338.96 | 575.87 | 338.97 | 576.3 | 338.98 | 576.87 | 338.99 | 577.21 | 338.98 |
| 579.76 | 338.98 | 580.66 | 339 | 581.65 | 339.03 | 582.8 | 339.07 | 583.92 | 339.11 |
| 587.33 | 339.28 | 587.45 | 339.29 | 588.85 | 339.34 | 589.35 | 339.36 | 590.2 | 339.39 |
| 591.62 | 339.43 | 591.71 | 339.43 | 598.9 | 339.58 | 599.69 | 339.6 | 601.36 | 339.63 |
| 601.54 | 339.63 | 601.63 | 339.64 | 601.72 | 339.64 | 601.76 | 339.65 | 601.91 | 339.65 |
| 602.08 | 339.66 | 603.14 | 339.7 | 603.73 | 339.73 | 606.76 | 339.87 | 610.74 | 340.07 |
| 610.95 | 340.08 | 611.04 | 340.08 | 616.64 | 340.27 | 617.11 | 340.28 | 625.96 | 340.6 |
| 627.01 | 340.72 | 632.33 | 341.3 | 633.72 | 341.44 | 635.06 | 341.59 | 637.13 | 341.78 |
| 637.84 | 341.84 | 638.74 | 341.92 | 640.2 | 342.01 | 642.96 | 342.28 | 643.92 | 342.41 |
| 647.33 | 343.1 | 650.81 | 343.63 | 652.46 | 343.94 | 655.09 | 343.98 | 664.88 | 344.11 |
| 665.72 | 344.12 | 670.76 | 344.16 | 674.06 | 344.18 | 675.48 | 344.19 | 676.14 | 344.19 |
| 677.35 | 344.2 | 681.69 | 344.21 | 686.88 | 344.21 | 687.96 | 344.22 | 689.03 | 344.24 |
| 690.01 | 344.25 | 704.83 | 344.48 | 705.17 | 344.49 | 705.51 | 344.49 | 705.81 | 344.5 |
| 706.94 | 344.52 | 707.27 | 344.53 | 707.59 | 344.53 | 707.87 | 344.54 | 708.28 | 344.54 |
| 710.04 | 344.57 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 191.58 | .04 | 504.08 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 191.58 | 504.08 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1702.20*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 338 | .52 | 338 | .64 | 337.99 | .82 | 337.99 | 1.08 | 338.05 |
| 1.27 | 338.06 | 1.54 | 338.08 | 1.62 | 338.08 | 2.2 | 338.1 | 3.05 | 338.1 |
| 6 | 338.07 | 8.11 | 338.06 | 12.4 | 338.03 | 12.47 | 338.02 | 13.52 | 338.02 |
| 13.65 | 338.03 | 14.14 | 338.03 | 14.9 | 338.02 | 15.22 | 338.01 | 15.78 | 338 |
| 16.23 | 337.99 | 16.43 | 337.98 | 16.58 | 337.98 | 16.87 | 337.97 | 17.37 | 337.96 |
| 18.03 | 337.95 | 22.76 | 337.83 | 23.69 | 337.8 | 24.97 | 337.77 | 25.58 | 337.76 |
| 26.33 | 337.75 | 26.96 | 337.74 | 27.34 | 337.74 | 28.02 | 337.72 | 28.53 | 337.71 |
| 29.74 | 337.69 | 29.96 | 337.69 | 30.37 | 337.68 | 30.88 | 337.68 | 31.22 | 337.67 |
| 32.19 | 337.67 | 32.67 | 337.66 | 33.33 | 337.66 | 33.59 | 337.67 | 34.5 | 337.7 |
| 35.82 | 337.73 | 37.13 | 337.77 | 38.88 | 337.81 | 39.66 | 337.82 | 40.04 | 337.82 |
| 40.43 | 337.83 | 44.29 | 337.83 | 44.95 | 337.82 | 47.51 | 337.82 | 47.7 | 337.81 |
| 49.19 | 337.81 | 49.9 | 337.8 | 51.01 | 337.8 | 51.8 | 337.79 | 52.26 | 337.79 |
| 53 | 337.78 | 53.65 | 337.78 | 53.8 | 337.77 | 54.16 | 337.77 | 54.37 | 337.76 |
| 54.55 | 337.74 | 54.77 | 337.71 | 55.18 | 337.69 | 55.46 | 337.68 | 55.59 | 337.67 |
| 56.4 | 337.62 | 56.61 | 337.61 | 57.61 | 337.55 | 58.1 | 337.53 | 58.77 | 337.5 |
| 60.06 | 337.44 | 61.31 | 337.38 | 63.4 | 337.31 | 63.63 | 337.3 | 64.98 | 337.25 |
| 66.23 | 337.2 | 69.86 | 337.07 | 70.17 | 337.06 | 70.34 | 337.05 | 70.55 | 337.05 |
| 70.59 | 337.06 | 71.3 | 337.18 | 71.47 | 337.3 | 71.81 | 337.32 | 72.11 | 337.33 |
| 73.2 | 337.33 | 73.66 | 337.32 | 75.1 | 337.3 | 76.36 | 337.27 | 77.41 | 337.26 |
| 79.91 | 337.23 | 81.27 | 337.21 | 81.84 | 337.21 | 82.33 | 337.2 | 84.06 | 337.19 |
| 84.67 | 337.18 | 85.28 | 337.18 | 86.24 | 337.17 | 86.61 | 337.17 | 86.74 | 337.18 |
| 86.99 | 337.17 | 89.21 | 337.14 | 90 | 337.16 | 90.1 | 337.16 | 90.74 | 337.19 |
| 91.65 | 337.21 | 91.74 | 337.21 | 92.68 | 337.23 | 93.35 | 337.24 | 93.88 | 337.24 |
| 94.91 | 337.25 | 97.24 | 337.25 | 97.76 | 337.24 | 98.21 | 337.24 | 99.03 | 337.23 |
| 99.94 | 337.22 | 101.29 | 337.21 | 101.7 | 337.21 | 102.6 | 337.2 | 102.85 | 337.2 |
| 104.17 | 337.18 | 104.78 | 337.17 | 105.33 | 337.17 | 106.24 | 337.15 | 108.23 | 337.08 |
| 109.55 | 337.03 | 109.67 | 337.03 | 110.35 | 336.99 | 111.39 | 336.97 | 112.18 | 336.96 |
| 112.81 | 336.95 | 113.36 | 336.93 | 113.74 | 336.92 | 114.29 | 336.91 | 114.44 | 336.9 |
| 115.25 | 336.9 | 115.93 | 336.89 | 117.74 | 336.85 | 118.06 | 336.85 | 118.29 | 336.84 |
| 118.7 | 336.83 | 119.09 | 336.83 | 119.42 | 336.87 | 119.68 | 336.87 | 119.85 | 336.86 |
| 120.51 | 336.86 | 121.19 | 336.85 | 121.29 | 336.85 | 122.03 | 336.84 | 123.25 | 336.82 |
| 125.01 | 336.79 | 126.83 | 336.79 | 128.01 | 336.81 | 128.07 | 336.81 | 128.82 | 336.83 |
| 129.73 | 336.85 | 131.86 | 336.85 | 132.29 | 336.84 | 135.05 | 336.83 | 138.25 | 336.81 |
| 138.95 | 336.81 | 140.22 | 336.8 | 142.5 | 336.78 | 146.54 | 336.74 | 146.68 | 336.74 |
| 158.46 | 336.62 | 160.74 | 336.6 | 161.84 | 336.6 | 162.38 | 336.57 | 165.31 | 336.52 |
| 168.38 | 336.47 | 171.13 | 336.43 | 173.26 | 336.39 | 173.63 | 336.38 | 174.99 | 336.35 |
| 175.25 | 336.35 | 176.96 | 336.31 | 181.33 | 336.21 | 182.81 | 336.26 | 184.56 | 336.31 |
| 184.68 | 336.38 | 184.95 | 336.41 | 186.11 | 336.44 | 187.18 | 336.45 | 188.51 | 336.44 |
| 189.92 | 336.42 | 189.95 | 336.43 | 190.48 | 336.43 | 190.57 | 336.42 | 194.53 | 336.2 |
| 197.8 | 336.09 | 199.52 | 336.01 | 202.97 | 335.84 | 205.99 | 335.58 | 209.28 | 335.58 |
| 218.66 | 335.57 | 223.28 | 335.57 | 225.33 | 335.56 | 239.19 | 335.56 | 241.18 | 335.55 |
| 245.45 | 335.55 | 245.69 | 335.56 | 248.04 | 335.71 | 248.31 | 335.73 | 248.95 | 335.73 |
| 249.71 | 335.72 | 250.21 | 335.72 | 251.09 | 335.7 | 255.26 | 335.54 | 263.79 | 335.54 |
| 272.73 | 335.71 | 274.1 | 335.73 | 276.22 | 335.77 | 278.98 | 335.81 | 279.47 | 335.82 |
| 280.02 | 335.84 | 282.18 | 335.93 | 283 | 335.95 | 283.62 | 335.96 | 284.11 | 335.97 |
| 284.46 | 335.97 | 288.82 | 335.92 | 291.72 | 335.9 | 297.07 | 335.91 | 298.58 | 335.91 |
| 299.59 | 335.9 | 300.23 | 335.87 | 300.7 | 335.84 | 302.36 | 335.7 | 302.73 | 335.68 |
| 303.24 | 335.72 | 303.84 | 335.74 | 304.58 | 335.77 | 307.86 | 335.9 | 308.81 | 335.93 |
| 309.67 | 335.93 | 310.67 | 335.9 | 312.25 | 335.81 | 315.47 | 335.6 | 315.85 | 335.58 |
| 316.96 | 335.5 | 317.54 | 335.36 | 317.66 | 335.36 | 320.08 | 335.31 | 322.3 | 335.27 |
| 323.61 | 335.31 | 328.22 | 335.49 | 332.54 | 335.48 | 340.43 | 335.48 | 343.94 | 335.47 |
| 347.39 | 335.47 | 354.56 | 335.46 | 362.24 | 335.44 | 374.21 | 335.44 | 381.54 | 335.45 |
| 383.59 | 335.45 | 386.16 | 335.44 | 391.62 | 335.42 | 393.15 | 335.41 | 396.72 | 335.4 |
| 410.53 | 335.4 | 413.95 | 335.39 | 419.04 | 335.38 | 420.79 | 335.25 | 423.35 | 335.1 |
| 423.86 | 335.08 | 425.87 | 335.03 | 426.56 | 335.02 | 428.41 | 335 | 430.22 | 334.99 |
| 430.9 | 334.98 | 432.05 | 334.93 | 432.54 | 334.91 | 433.14 | 334.91 | 433.82 | 334.9 |
| 435.94 | 334.9 | 436.53 | 334.89 | 437.01 | 334.88 | 437.66 | 334.86 | 438.12 | 334.85 |
| 439.9 | 334.85 | 440.01 | 334.86 | 440.82 | 334.86 | 442.04 | 334.88 | 442.46 | 334.88 |
| 443.09 | 334.89 | 446.68 | 334.94 | 453.35 | 335.02 | 454.11 | 335.02 | 454.15 | 335.03 |
| 455.88 | 335.05 | 456.91 | 335.07 | 457.31 | 335.08 | 458.28 | 335.1 | 458.41 | 335.11 |
| 458.51 | 335.11 | 458.73 | 335.13 | 458.82 | 335.13 | 458.96 | 335.15 | 459.16 | 335.16 |
| 459.62 | 335.2 | 461.71 | 335.26 | 462.28 | 335.28 | 462.7 | 335.28 | 463.33 | 335.29 |
| 463.8 | 335.29 | 464.24 | 335.3 | 464.77 | 335.3 | 464.83 | 335.31 | 465.01 | 335.31 |
| 465.05 | 335.32 | 465.22 | 335.32 | 465.32 | 335.33 | 465.64 | 335.34 | 466.07 | 335.36 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 466.3 | 335.38 | 466.6 | 335.38 | 466.69 | 335.39 | 466.86 | 335.39 | 466.9 | 335.4 |
| 467.02 | 335.4 | 467.12 | 335.41 | 467.23 | 335.41 | 467.62 | 335.44 | 468.43 | 335.49 |
| 469.06 | 335.54 | 470.49 | 335.63 | 471.22 | 335.68 | 471.39 | 335.69 | 471.82 | 335.71 |
| 472.08 | 335.73 | 472.65 | 335.77 | 473.36 | 335.81 | 475.2 | 335.91 | 475.65 | 335.93 |
| 476.06 | 335.94 | 476.51 | 335.96 | 476.88 | 335.98 | 477.31 | 336 | 477.43 | 336.01 |
| 478.28 | 336.05 | 478.97 | 336.09 | 479.59 | 336.11 | 480.49 | 336.13 | 481.07 | 336.14 |
| 481.16 | 336.14 | 482.2 | 336.16 | 482.5 | 336.16 | 483.17 | 336.15 | 484.05 | 336.14 |
| 484.58 | 336.12 | 485.3 | 336.1 | 485.96 | 336.08 | 486.75 | 336.09 | 487.83 | 336.09 |
| 489.56 | 336.12 | 490.98 | 336.14 | 491.35 | 336.15 | 491.8 | 336.15 | 492.57 | 336.16 |
| 493.17 | 336.17 | 494.18 | 336.18 | 494.77 | 336.18 | 495.34 | 336.19 | 495.79 | 336.2 |
| 496.33 | 336.21 | 498.19 | 336.24 | 498.71 | 336.25 | 499.59 | 336.26 | 500.08 | 336.27 |
| 500.31 | 336.27 | 500.57 | 336.28 | 500.91 | 336.28 | 501.2 | 336.29 | 502.02 | 336.33 |
| 502.22 | 336.33 | 502.84 | 336.35 | 502.87 | 336.36 | 503.15 | 336.51 | 503.84 | 336.59 |
| 504.59 | 336.59 | 505.13 | 336.62 | 511.08 | 336.68 | 511.73 | 336.67 | 512 | 336.67 |
| 512.04 | 336.68 | 513.86 | 336.76 | 514.83 | 336.8 | 515.22 | 336.81 | 516.2 | 336.84 |
| 518.44 | 336.93 | 520.2 | 336.99 | 523.12 | 337.1 | 529.39 | 337.34 | 538.04 | 337.67 |
| 538.74 | 337.68 | 538.8 | 337.69 | 543.54 | 337.81 | 543.69 | 337.81 | 544.38 | 337.82 |
| 546.06 | 337.86 | 546.68 | 337.88 | 555.46 | 338.08 | 555.94 | 338.09 | 560.44 | 338.16 |
| 561.25 | 338.17 | 563.05 | 338.22 | 563.54 | 338.23 | 566.54 | 338.33 | 566.57 | 338.33 |
| 567.43 | 338.36 | 568.43 | 338.38 | 569.72 | 338.42 | 572.33 | 338.49 | 573.39 | 338.51 |
| 573.65 | 338.52 | 573.87 | 338.52 | 574.35 | 338.53 | 575 | 338.54 | 575.87 | 338.55 |
| 576.3 | 338.56 | 576.88 | 338.57 | 577.26 | 338.57 | 577.9 | 338.56 | 579.81 | 338.56 |
| 580.72 | 338.59 | 581.73 | 338.61 | 582.89 | 338.65 | 584.02 | 338.69 | 586.67 | 338.8 |
| 587.48 | 338.84 | 587.6 | 338.84 | 589.02 | 338.89 | 589.52 | 338.91 | 590.38 | 338.93 |
| 591.82 | 338.96 | 591.91 | 338.96 | 599.2 | 339.06 | 599.99 | 339.07 | 601.69 | 339.09 |
| 601.8 | 339.1 | 602.05 | 339.1 | 602.1 | 339.11 | 602.25 | 339.11 | 602.42 | 339.12 |
| 603.49 | 339.16 | 604.09 | 339.18 | 607.16 | 339.32 | 611.2 | 339.5 | 611.49 | 339.51 |
| 617.17 | 339.72 | 617.65 | 339.73 | 626.61 | 340.07 | 627.67 | 340.19 | 633.06 | 340.82 |
| 634.48 | 340.96 | 635.83 | 341.12 | 637.93 | 341.32 | 638.65 | 341.39 | 639.56 | 341.47 |
| 641.04 | 341.57 | 643.84 | 341.85 | 644.8 | 341.99 | 648.26 | 342.74 | 651.78 | 343.3 |
| 653.46 | 343.62 | 656.12 | 343.67 | 666.03 | 343.82 | 666.89 | 343.82 | 671.99 | 343.87 |
| 675.33 | 343.9 | 676.78 | 343.91 | 677.45 | 343.92 | 678.67 | 343.92 | 683.07 | 343.94 |
| 685.86 | 343.93 | 686.25 | 343.93 | 688.14 | 343.94 | 688.33 | 343.94 | 689.42 | 343.96 |
| 690.5 | 343.97 | 691.5 | 343.99 | 706.51 | 344.25 | 706.85 | 344.26 | 707.2 | 344.26 |
| 707.5 | 344.27 | 708.65 | 344.29 | 709.31 | 344.31 | 709.59 | 344.31 | 710 | 344.32 |
| 711.79 | 344.35 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 189.92 | .04 | 503.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 189.92 | 503.15 | 19.3 | 19.73 | 20.92 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1682.47*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.75 | .51 | 337.74 | .82 | 337.74 | 1.07 | 337.8 | 1.26 | 337.82 |
| 1.52 | 337.83 | 1.6 | 337.84 | 2.18 | 337.85 | 3.03 | 337.85 | 5.95 | 337.83 |
| 8.04 | 337.81 | 12.29 | 337.78 | 14.77 | 337.78 | 15.08 | 337.77 | 15.64 | 337.75 |
| 16.09 | 337.74 | 16.29 | 337.74 | 16.43 | 337.73 | 16.72 | 337.73 | 17.22 | 337.71 |
| 17.87 | 337.7 | 20.21 | 337.64 | 22.56 | 337.57 | 23.49 | 337.54 | 25.35 | 337.51 |
| 26.1 | 337.5 | 26.73 | 337.49 | 27.1 | 337.48 | 27.78 | 337.47 | 28.28 | 337.46 |
| 29.48 | 337.43 | 29.7 | 337.43 | 30.11 | 337.42 | 30.61 | 337.42 | 30.95 | 337.41 |
| 31.91 | 337.41 | 32.39 | 337.4 | 33.04 | 337.4 | 33.29 | 337.41 | 34.2 | 337.44 |
| 35.51 | 337.47 | 36.8 | 337.51 | 38.54 | 337.55 | 39.32 | 337.56 | 39.69 | 337.56 |
| 40.07 | 337.57 | 42 | 337.57 | 43.35 | 337.56 | 45.6 | 337.56 | 46.11 | 337.55 |
| 47.51 | 337.55 | 47.74 | 337.54 | 48.76 | 337.54 | 49.47 | 337.53 | 50.56 | 337.53 |
| 51.34 | 337.52 | 51.8 | 337.52 | 52.54 | 337.51 | 53.18 | 337.51 | 53.33 | 337.5 |
| 53.68 | 337.5 | 53.9 | 337.49 | 54.07 | 337.47 | 54.29 | 337.44 | 54.7 | 337.42 |
| 55.1 | 337.39 | 55.91 | 337.35 | 56.11 | 337.33 | 56.79 | 337.3 | 57.59 | 337.25 |
| 58.26 | 337.22 | 59.1 | 337.18 | 59.54 | 337.16 | 60.55 | 337.11 | 60.78 | 337.1 |
| 61.66 | 337.07 | 63.08 | 337.01 | 64.41 | 336.96 | 65.65 | 336.92 | 69.25 | 336.78 |
| 69.55 | 336.77 | 69.73 | 336.76 | 69.93 | 336.76 | 70.67 | 336.9 | 70.84 | 337.03 |
| 71.18 | 337.05 | 71.76 | 337.07 | 72.56 | 337.07 | 74.44 | 337.03 | 75.7 | 337.01 |
| 76.66 | 336.99 | 76.73 | 336.99 | 79.21 | 336.96 | 79.93 | 336.95 | 80.56 | 336.94 |
| 81.12 | 336.94 | 81.61 | 336.93 | 83.33 | 336.91 | 83.93 | 336.91 | 84.21 | 336.9 |
| 84.54 | 336.9 | 85.48 | 336.89 | 85.85 | 336.9 | 85.98 | 336.9 | 86.23 | 336.89 |
| 88.43 | 336.86 | 89.22 | 336.88 | 89.31 | 336.88 | 89.94 | 336.91 | 90.85 | 336.93 |
| 90.94 | 336.93 | 91.87 | 336.96 | 92.54 | 336.97 | 96.9 | 336.97 | 97.35 | 336.96 |
| 98.17 | 336.96 | 99.07 | 336.95 | 100.4 | 336.94 | 100.81 | 336.94 | 101.71 | 336.93 |
| 101.95 | 336.92 | 103.26 | 336.91 | 103.87 | 336.9 | 104.41 | 336.9 | 104.89 | 336.89 |
| 105.31 | 336.88 | 107.29 | 336.81 | 108.59 | 336.76 | 108.71 | 336.75 | 109.38 | 336.71 |
| 110.42 | 336.7 | 111.2 | 336.69 | 111.83 | 336.68 | 112.37 | 336.67 | 112.74 | 336.66 |
| 113.29 | 336.64 | 113.44 | 336.64 | 114.06 | 336.63 | 114.25 | 336.63 | 114.92 | 336.61 |
| 116.71 | 336.57 | 117.03 | 336.56 | 117.25 | 336.55 | 118.05 | 336.55 | 118.21 | 336.57 |
| 118.37 | 336.58 | 118.64 | 336.58 | 118.8 | 336.57 | 119.09 | 336.57 | 119.45 | 336.56 |
| 120.13 | 336.55 | 120.23 | 336.55 | 120.96 | 336.54 | 122.18 | 336.52 | 123.91 | 336.49 |
| 124.81 | 336.49 | 125.58 | 336.5 | 126.27 | 336.5 | 126.89 | 336.51 | 126.95 | 336.52 |
| 127.69 | 336.53 | 128.59 | 336.55 | 131.13 | 336.55 | 133.87 | 336.54 | 137.04 | 336.52 |
| 137.73 | 336.52 | 139 | 336.51 | 141.26 | 336.48 | 145.26 | 336.44 | 145.4 | 336.44 |
| 157.07 | 336.32 | 159.34 | 336.3 | 160.43 | 336.3 | 160.96 | 336.27 | 163.86 | 336.22 |
| 166.9 | 336.17 | 169.63 | 336.12 | 171.74 | 336.08 | 172.11 | 336.08 | 173.46 | 336.05 |
| 173.72 | 336.04 | 175.41 | 336.01 | 179.75 | 335.93 | 181.21 | 335.98 | 182.94 | 336.04 |
| 183.06 | 336.11 | 183.34 | 336.15 | 184.49 | 336.18 | 185.55 | 336.2 | 186.86 | 336.19 |
| 188.26 | 336.18 | 188.29 | 336.19 | 188.85 | 336.19 | 188.94 | 336.18 | 193.12 | 335.95 |
| 196.57 | 335.83 | 198.39 | 335.75 | 202.04 | 335.56 | 205.22 | 335.29 | 208.7 | 335.29 |
| 218.6 | 335.28 | 247.13 | 335.28 | 249.61 | 335.44 | 249.89 | 335.46 | 251.36 | 335.46 |
| 251.9 | 335.45 | 252.83 | 335.43 | 257.23 | 335.27 | 266.22 | 335.27 | 275.67 | 335.45 |
| 277.11 | 335.48 | 279.34 | 335.52 | 282.26 | 335.56 | 282.78 | 335.57 | 283.36 | 335.6 |
| 285.64 | 335.69 | 286.51 | 335.72 | 287.16 | 335.73 | 287.68 | 335.74 | 288.05 | 335.74 |
| 292.64 | 335.68 | 294.15 | 335.67 | 295.7 | 335.67 | 301.36 | 335.68 | 302.95 | 335.68 |
| 304.02 | 335.67 | 304.69 | 335.64 | 305.18 | 335.61 | 306.93 | 335.46 | 307.33 | 335.44 |
| 307.86 | 335.48 | 308.5 | 335.51 | 309.28 | 335.54 | 312.74 | 335.68 | 313.75 | 335.7 |
| 314.66 | 335.7 | 315.71 | 335.67 | 317.37 | 335.58 | 320.78 | 335.36 | 321.17 | 335.34 |
| 322.34 | 335.25 | 322.96 | 335.11 | 323.08 | 335.1 | 325.64 | 335.05 | 327.99 | 335.01 |
| 329.36 | 335.06 | 334.23 | 335.24 | 354.46 | 335.24 | 362.04 | 335.23 | 370.14 | 335.22 |
| 372.27 | 335.21 | 375.77 | 335.21 | 378.34 | 335.22 | 382.78 | 335.22 | 390.51 | 335.24 |
| 392.68 | 335.24 | 395.38 | 335.23 | 401.15 | 335.22 | 402.77 | 335.21 | 406.53 | 335.2 |

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  407.24  335.19  407.45  335.19  410.79   335.2  424.72   335.2  430.09  335.19
  431.94  335.06  434.64  334.89  435.17  334.88   437.3  334.83  438.03  334.82
  438.96  334.81  439.98   334.8  441.89  334.79  442.61  334.78  443.09  334.76
  443.82  334.72  444.34   334.7  444.98   334.7  445.69  334.69  447.92  334.69
  448.55  334.68  449.05  334.67  449.75  334.65  450.23  334.64   451.9  334.64
  451.98  334.65  452.45  334.65  453.42  334.66  453.75  334.66  454.26  334.67
  457.12   334.7  462.45  334.75  462.76  334.75  462.86  334.76  463.09  334.76
  464.47   334.8  465.29  334.82  465.61  334.83  466.38  334.85  466.53  334.86
  466.65  334.88  466.74  334.89  466.85  334.89  467.09  334.92  467.45  334.97
  469.13  335.04  469.58  335.07  469.92  335.07  470.45  335.08  470.79  335.09
  471.14  335.09  471.34   335.1  471.44   335.1  471.54  335.11  471.61  335.11
  471.68  335.12  471.79  335.12  471.85  335.13  472.01  335.13  472.26  335.15
  472.79  335.18  473.03  335.19   473.1  335.19  473.27   335.2  473.45  335.22
  473.53  335.22  473.62  335.23  473.84  335.24     475  335.33  476.14  335.41
  476.72  335.46  477.19  335.49  477.41  335.51  477.86  335.54  478.42  335.58
  479.75  335.67  479.81  335.67   479.9  335.68  480.26   335.7  480.58  335.72
  480.94  335.74  481.24  335.76  481.58  335.78  481.68  335.79  482.36  335.83
   482.9  335.87   483.4  335.89  484.12  335.91  484.58  335.92  484.66  335.92
  485.49  335.94  485.73  335.94  486.26  335.93  486.96  335.92  487.38   335.9
  487.94  335.88  488.48  335.87  489.12  335.88  489.98   335.9  491.36  335.93
  491.93  335.95   492.5  335.96  492.79  335.97  493.15  335.98  493.76  335.99
  494.24     336  495.05  336.01   495.3  336.02  495.52  336.02  495.97  336.03
  496.33  336.04  496.77  336.05  498.25  336.08  498.67  336.09  499.37  336.11
  499.76  336.12  499.94  336.12  500.15  336.13  500.42  336.13  500.65  336.14
  501.31  336.16  501.39  336.16  501.47  336.17   501.7  336.17  501.98  336.18
  502.21  336.26  502.91  336.29  503.67   336.3  504.21  336.33  510.25  336.37
   510.9  336.35  511.17  336.35  511.21  336.36  513.06  336.43  514.04  336.47
  514.43  336.49  515.43  336.52   517.7   336.6  519.48  336.66  522.44  336.78
   527.2  336.95  528.79  337.01  537.55  337.34  538.26  337.35  538.32  337.36
  543.12  337.47  543.28  337.47  543.98  337.48  545.68  337.51   546.3  337.52
  555.19  337.71  555.68  337.72  556.99  337.74  561.06  337.79  562.88  337.83
  563.38  337.85  566.42  337.93  566.45  337.93  567.32  337.96  568.33  337.98
     569  337.99  569.64  338.01  572.28  338.08  573.35  338.09  573.62   338.1
  573.84   338.1  574.33  338.11  574.98  338.12  575.07  338.12  575.86  338.13
  576.31  338.14  576.89  338.15  579.85  338.15  580.78  338.17   581.8   338.2
  582.98  338.24  584.12  338.27  586.81  338.36  587.62  338.39  587.75   338.4
  589.18  338.44   589.7  338.45  590.57  338.47  592.03  338.49  592.12  338.49
   599.5  338.53   600.3  338.54  602.02  338.56  602.39  338.56  602.43  338.57
  602.58  338.57  602.76  338.58  603.85  338.61  604.45  338.64  607.56  338.76
  611.65  338.94  611.86  338.95  611.95  338.95   617.7  339.16  618.18  339.18
  627.26  339.53  628.34  339.67   633.8  340.33  635.23  340.48   636.6  340.65
  638.72  340.87  639.45  340.93  640.37  341.02  641.87  341.12  644.71  341.43
  645.69  341.58  649.19  342.37  652.76  342.96  654.45  343.31  657.15  343.36
  667.19  343.52  673.23  343.59  676.61  343.62  678.07  343.63  678.75  343.64
  679.99  343.65  684.44  343.66  687.67  343.66  689.58  343.67  689.77  343.67
  691.98  343.71  692.98  343.72  708.19  344.02  708.89  344.04  709.19  344.04
  709.77  344.05  710.36  344.07   710.7  344.07  711.31  344.09  711.73  344.09
  713.53  344.13

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  188.26     .04  502.21     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        188.26  502.21             19.3   19.73   20.92             .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 1662.74

INPUT
Description:
Station Elevation Data    num=     370
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0   337.5.5100098  337.49.6300049  337.49.8100586  337.491.060059  337.55
    1.25  337.571.590027  337.592.160034  337.61       3  337.617.970032  337.57
   12.25  337.5414.64001  337.5314.95001  337.5220.03003  337.3923.28003  337.29
24.53003  337.26   25.13  337.2525.87006  337.2426.49005  337.2327.53003  337.21
   29.44  337.1729.84003  337.1630.34003  337.1630.97003  337.1531.61005  337.15
32.10004  337.1432.36005  337.1432.47003  337.14    32.5  337.1432.55005  337.14
   32.75  337.14      33  337.1536.48004  337.2538.20001  337.2938.97003   337.3
39.72003  337.3140.53003  337.31   41.63  337.3143.29004   337.345.70001  337.29
50.89001  337.2552.42004  337.2453.14001  337.2353.42004  337.2253.81006  337.17
56.29004  337.0256.60004     33760.24005  336.8262.52002  336.7368.64001  336.49
   68.94  336.4869.11005  336.4769.28003  336.4769.36005  336.4870.05005  336.62
70.22003  336.7670.55005  336.78   71.13   336.871.92004   336.875.98004  336.72
76.04004  336.7284.73004  336.6185.22003  336.6287.65002  336.5888.43005   336.6
89.15002  336.6390.05005  336.6591.06006  336.6891.72003  336.6992.24005  336.69
   93.25   336.793.92004   336.794.68005   336.795.54004   336.796.49005  336.69
  101.05  336.65  102.95  336.63103.4901  336.63  103.96  336.62  104.38  336.61
  106.34  336.54  107.63  336.49  108.42  336.44  110.85  336.41  111.75  336.39
  112.44  336.37  113.05  336.36115.6801  336.29     116  336.28  116.22  336.27
116.6201  336.26  117.01  336.26  117.17  336.28  117.33  336.29  117.46  336.29
  117.59  336.29  117.78  336.28  119.07  336.26  122.82  336.19  125.16  336.21
  125.77  336.22  127.03  336.25  127.46  336.26  128.25  336.26  129.55  336.26
  132.69  336.25  135.83  336.23  137.77  336.22  140.01  336.19157.9301     336
  158.25     336  158.79     336  158.82     336  158.88     336  159.01     336
  159.17  335.99  159.54  335.97  172.19  335.74  178.16  335.64  179.61   335.7
  181.33  335.77  181.45  335.85  181.72  335.89  182.86  335.93  183.91  335.95
  185.21  335.95   186.6  335.94  186.61  335.94  186.63  335.95187.1201  335.95
  187.19  335.95  187.22  335.95  187.32  335.94  191.72   335.7  195.35  335.57
  197.26  335.49   201.1  335.29  204.45     335  206.72     335  218.53     335
  219.83     335  223.66     335  225.94     335  228.87     335  229.32     335
   229.6     335   229.9     335  230.24     335  230.63     335  231.07     335
  232.72     335  235.37     335  238.36     335  239.18     335  239.99     335
  240.37     335  240.76     335  241.34     335  243.55     335  244.12     335
  248.29     335  248.56  335.01  251.17  335.18  251.47   335.2  252.18   335.2
  253.02   335.2  253.58  335.19  254.56  335.17  259.19     335  260.39     335
  262.37     335  264.35     335  266.49     335  268.66     335  280.12  335.23
  282.47  335.27  285.54  335.32  286.09  335.33   286.7  335.36   289.1  335.46
  290.01  335.49   290.7   335.5  291.24  335.51  291.63  335.51  296.47  335.45
  298.05  335.44  299.69  335.44  305.64  335.45  307.32  335.45  308.44  335.44
  309.15  335.41  309.67  335.38  311.51  335.22  311.93   335.2  312.49  335.24
  313.16  335.27  313.42  335.28  313.98   335.3  317.62  335.45  318.68  335.48
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 319.64 | 335.48 | 320.75 | 335.45 | 322.5 | 335.35 | 326.08 | 335.12 | 326.26 | 335.11 |
| 326.5 | 335.1 | 327.73 | 335 | 328.38 | 334.85 | 331.2 | 334.79 | 333.67 | 334.75 |
| 335.12 | 334.8 | 340.24 | 335 | 345.04 | 335 | 353.81 | 335 | 357.71 | 335 |
| 369.51 | 335 | 378.04 | 334.99 | 380.28 | 334.99 | 383.96 | 334.99 | 386.67 | 335 |
| 391.34 | 335 | 399.48 | 335.03 | 401.76 | 335.03 | 404.61 | 335.02 | 410.68 | 335.01 |
| 412.38 | 335 | 417.09 | 334.99 | 417.31 | 334.99 | 420.83 | 335 | 421.94 | 335 |
| 422.25 | 335 | 423 | 335 | 431.69 | 335.01 | 435.49 | 335.01 | 441.14 | 335 |
| 443.09 | 334.86 | 445.93 | 334.69 | 446.49 | 334.67 | 448.73 | 334.62 | 449.5 | 334.61 |
| 450.48 | 334.6 | 451.55 | 334.59 | 453.56 | 334.58 | 454.32 | 334.57 | 454.82 | 334.55 |
| 455.59 | 334.51 | 456.14 | 334.49 | 456.81 | 334.49 | 457.56 | 334.48 | 458.35 | 334.48 |
| 459.14 | 334.48 | 459.91 | 334.48 | 460.57 | 334.47 | 461.1 | 334.46 | 461.83 | 334.44 |
| 462.34 | 334.43 | 463.33 | 334.43 | 465.05 | 334.44 | 471.78 | 334.49 | 472.03 | 334.5 |
| 473.06 | 334.54 | 474.5 | 334.6 | 474.63 | 334.62 | 474.76 | 334.64 | 474.78 | 334.64 |
| 475.02 | 334.68 | 475.29 | 334.73 | 476.88 | 334.85 | 477.53 | 334.87 | 478.2 | 334.9 |
| 479.28 | 334.99 | 479.51 | 335 | 486.43 | 335.61 | 486.84 | 335.65 | 487.21 | 335.67 |
| 487.75 | 335.69 | 488.15 | 335.7 | 488.77 | 335.72 | 488.95 | 335.72 | 489.35 | 335.71 |
| 490.62 | 335.67 | 491.01 | 335.66 | 494.23 | 335.79 | 499.44 | 335.97 | 500.6 | 336 |
| 500.89 | 336 | 501.27 | 336 | 502.7 | 336 | 502.75 | 336 | 503.3 | 336.03 |
| 509.41 | 336.05 | 510.07 | 336.03 | 510.15 | 336.03 | 510.18 | 336.035 | 10.2401 | 336.03 |
| 510.35 | 336.03 | 510.37 | 336.04 | 510.39 | 336.04 | 512.26 | 336.115 | 37.0601 | 337 |
| 537.78 | 337.01 | 537.84 | 337.02 | 542.7 | 337.12 | 543.57 | 337.13 | 555.42 | 337.35 |
| 556.75 | 337.37 | 560.04 | 337.4 | 560.87 | 337.41 | 563.22 | 337.46 | 566.3 | 337.53 |
| 567.21 | 337.56 | 568.91 | 337.59 | 572.23 | 337.66 | 574.3101 | 337.69 | 576.3101 | 337.72 |
| 576.9 | 337.73 | 577.29 | 337.73 | 577.95 | 337.73 | 579 | 337.73 | 579.54 | 337.73 |
| 579.85 | 337.73 | 587.77 | 337.95 | 589.35 | 337.99 | 589.36 | 337.99 | 589.87 | 338 |
| 590.75 | 338.01 | 592.23 | 338.02 | 600.59 | 338.01 | 602.35 | 338.02 | 602.41 | 338.02 |
| 602.46 | 338.02 | 602.5 | 338.02 | 602.54 | 338.02 | 602.63 | 338.02 | 602.6901 | 338.02 |
| 602.7 | 338.02 | 602.72 | 338.02 | 602.77 | 338.03 | 602.79 | 338.03 | 602.82 | 338.03 |
| 602.92 | 338.03 | 603.1 | 338.04 | 604.2 | 338.07 | 604.8101 | 338.09 | 607.96 | 338.21 |
| 618.72 | 338.63 | 627.91 | 339 | 629 | 339.14 | 634.53 | 339.84 | 635.98 | 340 |
| 637.37 | 340.18 | 639.52 | 340.41 | 641.1901 | 340.57 | 642.71 | 340.68 | 645.58 | 341 |
| 646.57 | 341.16 | 650.12 | 342 | 653.73 | 342.63 | 655.45 | 343 | 668.35 | 343.23 |
| 669.23 | 343.24 | 677.89 | 343.34 | 681.3101 | 343.37 | 685.82 | 343.39 | 689.09 | 343.39 |
| 691.22 | 343.4 | 692.34 | 343.42 | 693.45 | 343.44 | 694.47 | 343.46 | 715.28 | 343.91 |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 186.6 | .04 | 501.27 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 186.6 | 501.27 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1642.77*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 337.22 | .5 | 337.21 | .79 | 337.21 | 1.03 | 337.27 | 1.22 | 337.29 |
| 1.55 | 337.31 | 2.1 | 337.33 | 2.92 | 337.33 | 6.56 | 337.3 | 11.35 | 337.26 |
| 12.19 | 337.26 | 14.25 | 337.25 | 14.55 | 337.24 | 19.49 | 337.11 | 22.66 | 337.02 |
| 23.87 | 336.99 | 24.46 | 336.98 | 25.18 | 336.97 | 25.78 | 336.96 | 26.79 | 336.94 |
| 28.65 | 336.9 | 29.04 | 336.89 | 29.53 | 336.89 | 30.14 | 336.88 | 30.77 | 336.88 |
| 31.24 | 336.87 | 31.88 | 336.87 | 32.12 | 336.88 | 33.42 | 336.91 | 35.51 | 336.97 |
| 37.18 | 337.01 | 38.66 | 337.03 | 40.52 | 337.03 | 41.59 | 337.02 | 42.13 | 337.02 |
| 44.48 | 337.01 | 46.3 | 336.99 | 49.53 | 336.97 | 51.02 | 336.96 | 51.72 | 336.95 |
| 51.99 | 336.94 | 52.37 | 336.89 | 54.79 | 336.74 | 55.09 | 336.72 | 56.99 | 336.63 |
| 58.63 | 336.55 | 60.85 | 336.46 | 66.81 | 336.23 | 67.1 | 336.22 | 67.26 | 336.21 |
| 67.43 | 336.21 | 67.51 | 336.22 | 68.18 | 336.35 | 68.34 | 336.49 | 68.67 | 336.51 |
| 69.23 | 336.52 | 70 | 336.52 | 73.3 | 336.46 | 74.01 | 336.45 | 81.29 | 336.35 |
| 82.47 | 336.34 | 82.94 | 336.35 | 85.31 | 336.31 | 86.07 | 336.32 | 86.77 | 336.35 |
| 87.64 | 336.37 | 88.63 | 336.4 | 89.27 | 336.41 | 89.78 | 336.41 | 90.76 | 336.42 |
| 92.99 | 336.42 | 93.91 | 336.41 | 98.35 | 336.37 | 99.87 | 336.35 | 100.73 | 336.35 |
| 101.59 | 336.33 | 103.01 | 336.28 | 104.75 | 336.21 | 105.52 | 336.16 | 107.89 | 336.13 |
| 108.76 | 336.11 | 109.44 | 336.09 | 110.03 | 336.08 | 112.59 | 336.01 | 113.12 | 335.99 |
| 113.5 | 335.98 | 113.88 | 335.98 | 114.04 | 336 | 114.2 | 336.01 | 114.45 | 336.01 |
| 114.63 | 336 | 115.76 | 335.98 | 115.89 | 335.98 | 118.94 | 335.92 | 119.54 | 335.91 |
| 121.27 | 335.93 | 121.82 | 335.93 | 122.41 | 335.94 | 124.06 | 335.98 | 126.09 | 335.98 |
| 129.15 | 335.97 | 132.2 | 335.95 | 134.09 | 335.94 | 136.27 | 335.91 | 146.28 | 335.81 |
| 153.71 | 335.73 | 154.76 | 335.73 | 155.28 | 335.7 | 157.28 | 335.67 | 158.99 | 335.64 |
| 167.59 | 335.48 | 168.35 | 335.47 | 170.09 | 335.44 | 173.4 | 335.39 | 173.76 | 335.4 |
| 174.81 | 335.45 | 175.57 | 335.48 | 176.13 | 335.5 | 176.49 | 335.51 | 176.6 | 335.59 |
| 176.87 | 335.63 | 176.94 | 335.63 | 177.53 | 335.65 | 177.98 | 335.67 | 179 | 335.69 |
| 180.26 | 335.69 | 181.62 | 335.68 | 181.64 | 335.69 | 182.22 | 335.69 | 182.31 | 335.68 |
| 184.96 | 335.53 | 186.58 | 335.45 | 190.1 | 335.32 | 191.95 | 335.24 | 195.68 | 335.05 |
| 198.16 | 334.83 | 198.92 | 334.77 | 241.44 | 334.77 | 241.7 | 334.78 | 244.23 | 334.94 |
| 244.52 | 334.96 | 246.03 | 334.96 | 246.57 | 334.95 | 246.79 | 334.95 | 247.52 | 334.93 |
| 248.01 | 334.91 | 252.01 | 334.77 | 261.19 | 334.77 | 272.3 | 334.99 | 274.58 | 335.03 |
| 277.56 | 335.07 | 278.09 | 335.08 | 278.69 | 335.11 | 281.01 | 335.21 | 281.9 | 335.24 |
| 282.56 | 335.25 | 283.09 | 335.26 | 283.47 | 335.26 | 284.13 | 335.25 | 288.16 | 335.2 |
| 289.69 | 335.19 | 291.28 | 335.19 | 297.05 | 335.2 | 298.68 | 335.19 | 299.77 | 335.18 |
| 300.46 | 335.16 | 300.96 | 335.13 | 302.74 | 334.97 | 303.15 | 334.95 | 303.7 | 334.99 |
| 304.34 | 335.02 | 305.14 | 335.05 | 308.67 | 335.19 | 309.7 | 335.22 | 310.63 | 335.22 |
| 311.71 | 335.19 | 313.4 | 335.09 | 316.87 | 334.87 | 317.28 | 334.85 | 318.47 | 334.76 |
| 319.1 | 334.61 | 321.84 | 334.55 | 324.23 | 334.51 | 325.64 | 334.56 | 330.61 | 334.75 |
| 358.99 | 334.75 | 367.26 | 334.74 | 380.16 | 334.74 | 383.2 | 334.75 | 383.73 | 334.75 |
| 387.92 | 334.77 | 390.26 | 334.77 | 393.03 | 334.76 | 397.41 | 334.75 | 398.91 | 334.75 |
| 400.33 | 334.74 | 400.56 | 334.73 | 405.13 | 334.72 | 405.34 | 334.72 | 408.76 | 334.73 |
| 414.59 | 334.73 | 419.29 | 334.74 | 422.97 | 334.74 | 428.45 | 334.72 | 430.34 | 334.59 |
| 433.1 | 334.42 | 433.64 | 334.4 | 434.43 | 334.39 | 435.81 | 334.36 | 436.56 | 334.35 |
| 437.51 | 334.34 | 437.61 | 334.33 | 438.55 | 334.33 | 440.5 | 334.31 | 441.23 | 334.3 |
| 441.74 | 334.28 | 442.46 | 334.24 | 443 | 334.22 | 443.65 | 334.22 | 444.37 | 334.21 |
| 446.65 | 334.21 | 447.29 | 334.2 | 447.81 | 334.19 | 448.52 | 334.17 | 449.01 | 334.16 |
| 450.41 | 334.16 | 451.03 | 334.18 | 451.61 | 334.19 | 451.95 | 334.2 | 452.57 | 334.2 |
| 453.25 | 334.18 | 453.37 | 334.18 | 453.57 | 334.19 | 453.67 | 334.18 | 453.85 | 334.19 |
| 456.27 | 334.19 | 456.44 | 334.2 | 457.02 | 334.2 | 457.06 | 334.21 | 457.28 | 334.21 |
| 458.06 | 334.23 | 459 | 334.24 | 461.98 | 334.24 | 462.2 | 334.25 | 463.27 | 334.29 |
| 463.65 | 334.3 | 465.68 | 334.38 | 465.86 | 334.4 | 466.07 | 334.43 | 466.51 | 334.48 |
| 466.79 | 334.52 | 467.62 | 334.56 | 468.56 | 334.61 | 469.02 | 334.63 | 469.84 | 334.65 |
| 470.03 | 334.66 | 470.29 | 334.66 | 470.76 | 334.68 | 470.88 | 334.69 | 471.58 | 334.73 |
| 472.4 | 334.77 | 472.57 | 334.78 | 472.72 | 334.78 | 473.32 | 334.82 | 473.78 | 334.84 |
| 474.21 | 334.87 | 474.71 | 334.9 | 475.14 | 334.93 | 475.21 | 334.93 | 476.39 | 334.99 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 477.14 | 335.02 | 477.69 | 335.05 | 477.95 | 335.07 | 478.2 | 335.08 | 478.46 | 335.1 |
| 478.57 | 335.1 | 478.78 | 335.12 | 479.65 | 335.18 | 479.73 | 335.18 | 480.53 | 335.23 |
| 480.57 | 335.24 | 481.37 | 335.29 | 481.5 | 335.29 | 481.72 | 335.3 | 481.8 | 335.31 |
| 481.92 | 335.31 | 481.98 | 335.32 | 482.24 | 335.32 | 482.27 | 335.33 | 482.41 | 335.33 |
| 482.86 | 335.37 | 482.97 | 335.37 | 483.15 | 335.39 | 483.32 | 335.39 | 483.41 | 335.4 |
| 483.55 | 335.4 | 484.02 | 335.42 | 484.31 | 335.44 | 484.56 | 335.44 | 484.88 | 335.45 |
| 485.02 | 335.46 | 485.33 | 335.46 | 485.75 | 335.47 | 486.31 | 335.47 | 486.47 | 335.46 |
| 486.88 | 335.46 | 487.39 | 335.44 | 487.78 | 335.44 | 487.83 | 335.43 | 488.15 | 335.43 |
| 488.35 | 335.42 | 488.9 | 335.42 | 489.46 | 335.43 | 489.97 | 335.45 | 490.41 | 335.46 |
| 490.48 | 335.47 | 491.08 | 335.47 | 491.97 | 335.49 | 492.09 | 335.49 | 492.3 | 335.5 |
| 493.32 | 335.51 | 493.43 | 335.52 | 493.99 | 335.52 | 494.21 | 335.53 | 494.48 | 335.53 |
| 494.64 | 335.54 | 494.82 | 335.54 | 495.09 | 335.56 | 495.47 | 335.56 | 496.36 | 335.61 |
| 496.62 | 335.61 | 497.26 | 335.63 | 497.45 | 335.63 | 498.06 | 335.65 | 498.19 | 335.65 |
| 498.37 | 335.66 | 498.75 | 335.66 | 498.78 | 335.67 | 498.93 | 335.68 | 499.14 | 335.68 |
| 499.29 | 335.69 | 499.45 | 335.69 | 499.63 | 335.7 | 500.05 | 335.7 | 500.22 | 335.71 |
| 500.59 | 335.71 | 500.81 | 335.72 | 501.46 | 335.73 | 502.06 | 335.73 | 502.15 | 335.74 |
| 502.39 | 335.74 | 503.21 | 335.76 | 503.33 | 335.76 | 503.66 | 335.76 | 504.83 | 335.77 |
| 505.38 | 335.8 | 506.25 | 335.8 | 510.03 | 335.82 | 510.78 | 335.84 | 511.56 | 335.85 |
| 512.23 | 335.84 | 512.43 | 335.84 | 512.55 | 335.86 | 513.57 | 335.91 | 514.44 | 335.96 |
| 515.62 | 336.03 | 516.68 | 336.09 | 517.74 | 336.14 | 519.27 | 336.23 | 519.52 | 336.24 |
| 519.6 | 336.25 | 521.31 | 336.34 | 522.16 | 336.38 | 522.69 | 336.41 | 523.45 | 336.45 |
| 525.66 | 336.56 | 526.03 | 336.58 | 528.41 | 336.69 | 531.76 | 336.81 | 531.82 | 336.81 |
| 533.76 | 336.88 | 536.93 | 336.99 | 539.52 | 337.07 | 539.75 | 337.07 | 540.25 | 337.08 |
| 540.31 | 337.09 | 545.23 | 337.18 | 546.11 | 337.19 | 551.51 | 337.28 | 556.14 | 337.35 |
| 556.95 | 337.37 | 558.09 | 337.38 | 559.44 | 337.4 | 560.41 | 337.41 | 560.74 | 337.41 |
| 561.68 | 337.42 | 562.31 | 337.42 | 562.85 | 337.43 | 563.6 | 337.44 | 565.98 | 337.49 |
| 569.09 | 337.56 | 569.83 | 337.58 | 570.01 | 337.59 | 571 | 337.6 | 571.73 | 337.62 |
| 572.77 | 337.64 | 575.09 | 337.68 | 575.25 | 337.69 | 577.19 | 337.71 | 579.22 | 337.74 |
| 579.81 | 337.75 | 582.8 | 337.75 | 583.9 | 337.78 | 584.53 | 337.79 | 588.39 | 337.89 |
| 590.81 | 337.95 | 591.31 | 337.96 | 592.4 | 337.99 | 592.93 | 338 | 593.82 | 338.01 |
| 595.32 | 338.01 | 603.77 | 337.99 | 605.55 | 338 | 605.92 | 338 | 605.98 | 338.01 |
| 606.13 | 338.01 | 606.31 | 338.02 | 607.42 | 338.05 | 608.04 | 338.07 | 608.12 | 338.07 |
| 611.22 | 338.18 | 615.32 | 338.33 | 617.96 | 338.42 | 622.1 | 338.57 | 624.11 | 338.65 |
| 631.05 | 338.9 | 631.4 | 338.91 | 632.5 | 339.04 | 633.36 | 339.15 | 635.94 | 339.45 |
| 637.56 | 339.64 | 638.09 | 339.7 | 638.13 | 339.71 | 638.44 | 339.74 | 638.81 | 339.78 |
| 639.56 | 339.85 | 640.05 | 339.91 | 640.24 | 339.94 | 640.52 | 339.97 | 640.57 | 339.98 |
| 640.88 | 340.01 | 640.96 | 340.03 | 642.14 | 340.15 | 642.86 | 340.23 | 643.14 | 340.25 |
| 644.83 | 340.41 | 645.98 | 340.49 | 646.37 | 340.52 | 649.27 | 340.84 | 650.27 | 340.99 |
| 653.86 | 341.81 | 654.82 | 341.97 | 655.01 | 342.01 | 656.07 | 342.18 | 657.51 | 342.42 |
| 658.83 | 342.7 | 659.25 | 342.78 | 660.4 | 342.8 | 661.98 | 342.83 | 663.78 | 342.87 |
| 664.73 | 342.88 | 666.04 | 342.91 | 668.14 | 342.95 | 672.29 | 343.03 | 677.54 | 343.09 |
| 678.81 | 343.11 | 680.48 | 343.13 | 681.94 | 343.15 | 685.4 | 343.18 | 689.96 | 343.21 |
| 693.27 | 343.22 | 695.42 | 343.23 | 697.68 | 343.27 | 698.71 | 343.29 | 700.17 | 343.32 |
| 701.36 | 343.35 | 703.97 | 343.41 | 707.37 | 343.48 | 707.74 | 343.49 | 709.33 | 343.52 |
| 712.05 | 343.58 | 713.1 | 343.6 | 713.73 | 343.61 | 716.68 | 343.67 | 717.15 | 343.68 |
| 719.75 | 343.74 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 181.62 | .04 | 503.33 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 181.62 | 503.33 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1622.80*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.95 | .48 | 336.94 | .77 | 336.94 | 1 | 336.99 | 1.18 | 337.01 |
| 1.51 | 337.03 | 2.04 | 337.05 | 2.84 | 337.05 | 6.38 | 337.02 | 11.04 | 336.98 |
| 11.85 | 336.98 | 13.86 | 336.97 | 14.15 | 336.96 | 18.96 | 336.84 | 22.04 | 336.74 |
| 23.22 | 336.71 | 25.07 | 336.68 | 26.06 | 336.66 | 27.87 | 336.63 | 28.25 | 336.62 |
| 28.72 | 336.62 | 29.32 | 336.61 | 29.92 | 336.61 | 30.39 | 336.6 | 31 | 336.6 |
| 31.24 | 336.61 | 32.5 | 336.64 | 34.53 | 336.7 | 36.16 | 336.73 | 37.6 | 336.75 |
| 39.41 | 336.75 | 40.45 | 336.74 | 40.98 | 336.74 | 43.26 | 336.73 | 45.03 | 336.71 |
| 48.17 | 336.68 | 49.62 | 336.67 | 50.3 | 336.66 | 50.57 | 336.65 | 50.94 | 336.61 |
| 53.28 | 336.47 | 53.58 | 336.45 | 55.42 | 336.36 | 57.02 | 336.28 | 59.18 | 336.19 |
| 64.97 | 335.96 | 65.26 | 335.96 | 65.42 | 335.95 | 65.58 | 335.95 | 65.65 | 335.96 |
| 66.31 | 336.08 | 66.47 | 336.21 | 66.78 | 336.23 | 67.33 | 336.25 | 68.08 | 336.25 |
| 71.28 | 336.18 | 71.98 | 336.17 | 79.06 | 336.08 | 80.2 | 336.06 | 80.67 | 336.07 |
| 82.97 | 336.03 | 83.71 | 336.05 | 84.39 | 336.08 | 85.24 | 336.09 | 86.19 | 336.12 |
| 86.82 | 336.13 | 87.31 | 336.13 | 88.27 | 336.14 | 90.44 | 336.14 | 95.65 | 336.08 |
| 97.13 | 336.07 | 97.45 | 336.06 | 97.96 | 336.06 | 98.8 | 336.04 | 100.18 | 336 |
| 101.88 | 335.93 | 102.63 | 335.88 | 104.93 | 335.85 | 105.78 | 335.83 | 106.43 | 335.81 |
| 107.01 | 335.8 | 109.5 | 335.73 | 109.8 | 335.73 | 110.01 | 335.72 | 110.39 | 335.71 |
| 110.76 | 335.71 | 111.06 | 335.73 | 111.31 | 335.73 | 111.49 | 335.72 | 112.58 | 335.71 |
| 112.71 | 335.7 | 116.26 | 335.64 | 117.95 | 335.65 | 118.47 | 335.65 | 119.05 | 335.66 |
| 120.65 | 335.7 | 122.63 | 335.7 | 125.6 | 335.69 | 128.57 | 335.67 | 130.41 | 335.66 |
| 132.53 | 335.64 | 142.26 | 335.54 | 149.49 | 335.46 | 150.51 | 335.46 | 150.67 | 335.45 |
| 151.02 | 335.44 | 152.96 | 335.4 | 154.62 | 335.37 | 159.85 | 335.28 | 162.99 | 335.23 |
| 163.73 | 335.21 | 165.42 | 335.19 | 168.64 | 335.14 | 168.99 | 335.15 | 170.76 | 335.22 |
| 171.3 | 335.24 | 171.64 | 335.26 | 171.76 | 335.33 | 172.01 | 335.37 | 172.66 | 335.39 |
| 173.09 | 335.41 | 173.61 | 335.42 | 175.31 | 335.42 | 176.63 | 335.41 | 176.66 | 335.42 |
| 177.21 | 335.42 | 177.31 | 335.41 | 179.87 | 335.28 | 181.44 | 335.19 | 184.85 | 335.07 |
| 186.65 | 334.99 | 190.25 | 334.81 | 192.66 | 334.6 | 193.4 | 334.54 | 234.84 | 334.54 |
| 237.29 | 334.7 | 237.57 | 334.72 | 239.03 | 334.72 | 239.56 | 334.71 | 239.77 | 334.71 |
| 240.48 | 334.69 | 240.96 | 334.67 | 244.83 | 334.53 | 253.72 | 334.53 | 264.49 | 334.74 |
| 266.7 | 334.78 | 269.58 | 334.83 | 270.1 | 334.84 | 270.67 | 334.86 | 272.93 | 334.96 |
| 273.78 | 334.98 | 274.43 | 334.99 | 274.94 | 335 | 275.3 | 335 | 275.94 | 334.99 |
| 279.85 | 334.94 | 281.33 | 334.93 | 282.88 | 334.93 | 288.46 | 334.94 | 290.04 | 334.94 |
| 291.1 | 334.93 | 291.76 | 334.9 | 292.25 | 334.87 | 293.98 | 334.72 | 294.37 | 334.71 |
| 294.9 | 334.74 | 295.53 | 334.77 | 296.3 | 334.8 | 299.72 | 334.93 | 300.72 | 334.96 |
| 301.62 | 334.96 | 302.66 | 334.93 | 304.3 | 334.84 | 307.67 | 334.62 | 307.84 | 334.62 |
| 308.06 | 334.61 | 309.22 | 334.51 | 309.83 | 334.37 | 310.27 | 334.36 | 312.48 | 334.32 |
| 314.8 | 334.28 | 316.16 | 334.33 | 320.97 | 334.51 | 325.48 | 334.51 | 333.72 | 334.5 |
| 348.47 | 334.5 | 356.48 | 334.48 | 362.04 | 334.48 | 364.59 | 334.49 | 371.92 | 334.49 |
| 372.43 | 334.5 | 376.49 | 334.51 | 378.77 | 334.51 | 381.44 | 334.5 | 385.69 | 334.48 |
| 387.15 | 334.48 | 388.51 | 334.47 | 388.74 | 334.47 | 393.17 | 334.46 | 410.46 | 334.46 |
| 415.76 | 334.45 | 417.6 | 334.32 | 420.26 | 334.16 | 420.79 | 334.14 | 421.55 | 334.12 |
| 422.89 | 334.09 | 423.62 | 334.08 | 424.63 | 334.07 | 426.48 | 334.05 | 427.43 | 334.05 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 428.15 | 334.04 | 428.62 | 334.02 | 428.64 | 334.01 | 429.34 | 333.98 | 429.86 | 333.96 |
| 431.19 | 333.94 | 431.93 | 333.94 | 432.67 | 333.93 | 433.4 | 333.93 | 434.52 | 333.91 |
| 435.2 | 333.89 | 435.68 | 333.88 | 436.6 | 333.88 | 436.63 | 333.89 | 436.95 | 333.89 |
| 437.18 | 333.9 | 437.54 | 333.9 | 437.97 | 333.92 | 438.72 | 333.95 | 439.16 | 333.96 |
| 439.95 | 333.96 | 440.83 | 333.92 | 440.98 | 333.92 | 441.16 | 333.93 | 441.38 | 333.92 |
| 441.61 | 333.93 | 442.13 | 333.92 | 442.83 | 333.93 | 443.56 | 333.93 | 443.89 | 333.92 |
| 444.62 | 333.92 | 444.72 | 333.93 | 444.95 | 333.93 | 445.7 | 333.94 | 445.75 | 333.95 |
| 446.03 | 333.96 | 447.04 | 333.99 | 448.25 | 334 | 450.75 | 334 | 450.97 | 333.99 |
| 452.09 | 333.99 | 453.74 | 334.05 | 454.24 | 334.06 | 456.85 | 334.17 | 457.32 | 334.21 |
| 457.36 | 334.21 | 457.79 | 334.26 | 457.92 | 334.27 | 458.28 | 334.31 | 459.07 | 334.34 |
| 460.57 | 334.39 | 461.17 | 334.42 | 462.22 | 334.43 | 462.46 | 334.44 | 463.11 | 334.46 |
| 463.31 | 334.47 | 463.56 | 334.47 | 464.47 | 334.51 | 465.52 | 334.56 | 465.94 | 334.56 |
| 466.7 | 334.59 | 467 | 334.61 | 467.3 | 334.62 | 467.85 | 334.65 | 468.5 | 334.68 |
| 469.14 | 334.7 | 470.66 | 334.74 | 471.64 | 334.77 | 471.86 | 334.78 | 472.34 | 334.79 |
| 472.67 | 334.8 | 473 | 334.82 | 473.35 | 334.83 | 473.62 | 334.85 | 473.74 | 334.85 |
| 474.33 | 334.89 | 474.87 | 334.92 | 474.97 | 334.92 | 475.58 | 334.95 | 476 | 334.98 |
| 476.05 | 334.98 | 476.83 | 335.03 | 477.39 | 335.03 | 477.64 | 335.05 | 478.26 | 335.05 |
| 478.48 | 335.06 | 478.74 | 335.08 | 478.88 | 335.08 | 479.38 | 335.12 | 479.59 | 335.12 |
| 479.71 | 335.13 | 480.73 | 335.18 | 480.88 | 335.18 | 481.6 | 335.2 | 481.66 | 335.21 |
| 482.05 | 335.21 | 482.19 | 335.22 | 483.84 | 335.22 | 484.18 | 335.21 | 484.84 | 335.2 |
| 485.05 | 335.19 | 485.42 | 335.19 | 485.61 | 335.18 | 486.08 | 335.18 | 486.17 | 335.17 |
| 486.79 | 335.17 | 488.16 | 335.21 | 488.6 | 335.22 | 488.73 | 335.23 | 489.02 | 335.23 |
| 489.45 | 335.22 | 489.6 | 335.22 | 490.74 | 335.23 | 491.17 | 335.23 | 492.49 | 335.24 |
| 493.64 | 335.24 | 493.68 | 335.25 | 494.19 | 335.25 | 494.28 | 335.26 | 494.43 | 335.26 |
| 494.62 | 335.28 | 495.26 | 335.28 | 495.53 | 335.3 | 496.4 | 335.35 | 496.53 | 335.36 |
| 496.75 | 335.36 | 497.57 | 335.37 | 497.81 | 335.38 | 498.6 | 335.39 | 498.76 | 335.4 |
| 499 | 335.4 | 499.48 | 335.41 | 499.52 | 335.42 | 499.72 | 335.43 | 500 | 335.43 |
| 500.19 | 335.44 | 500.39 | 335.44 | 500.62 | 335.45 | 500.83 | 335.45 | 501.16 | 335.46 |
| 501.86 | 335.46 | 502.07 | 335.47 | 503.66 | 335.47 | 503.76 | 335.48 | 504.7 | 335.5 |
| 505.24 | 335.52 | 505.39 | 335.52 | 505.73 | 335.52 | 506.91 | 335.53 | 507.47 | 335.56 |
| 508.35 | 335.57 | 512.17 | 335.6 | 512.93 | 335.63 | 513.72 | 335.65 | 514.5 | 335.65 |
| 514.72 | 335.67 | 515.74 | 335.75 | 516.44 | 335.8 | 516.63 | 335.81 | 517.82 | 335.9 |
| 518.17 | 335.93 | 518.89 | 335.98 | 519.96 | 336.06 | 521.51 | 336.18 | 521.76 | 336.19 |
| 521.84 | 336.2 | 523.57 | 336.33 | 524.44 | 336.38 | 524.97 | 336.42 | 525.74 | 336.47 |
| 527.97 | 336.61 | 528.24 | 336.63 | 528.35 | 336.63 | 530.75 | 336.78 | 534.14 | 336.89 |
| 534.2 | 336.89 | 536.16 | 336.96 | 539.37 | 337.06 | 541.99 | 337.14 | 542.22 | 337.14 |
| 542.73 | 337.15 | 542.79 | 337.16 | 547.76 | 337.24 | 548.65 | 337.24 | 554.11 | 337.32 |
| 558.79 | 337.39 | 559.61 | 337.4 | 560.76 | 337.42 | 562.12 | 337.43 | 563.11 | 337.44 |
| 563.44 | 337.44 | 564.39 | 337.45 | 565.03 | 337.45 | 565.57 | 337.46 | 566.34 | 337.47 |
| 568.74 | 337.52 | 571.89 | 337.58 | 572.63 | 337.61 | 572.82 | 337.61 | 573.81 | 337.63 |
| 574.56 | 337.64 | 575.61 | 337.66 | 577.95 | 337.71 | 578.11 | 337.71 | 580.08 | 337.73 |
| 582.12 | 337.76 | 582.73 | 337.77 | 585.74 | 337.77 | 586.86 | 337.8 | 587.49 | 337.81 |
| 588.28 | 337.83 | 591.4 | 337.9 | 593.84 | 337.96 | 595.99 | 338 | 596.89 | 338 |
| 598.4 | 338.01 | 606.95 | 337.98 | 609.13 | 337.98 | 609.18 | 337.99 | 609.33 | 337.99 |
| 609.52 | 338 | 610.64 | 338.02 | 611.27 | 338.04 | 611.35 | 338.04 | 614.49 | 338.15 |
| 621.3 | 338.38 | 625.49 | 338.51 | 627.52 | 338.58 | 634.53 | 338.81 | 634.89 | 338.82 |
| 636 | 338.95 | 636.24 | 338.97 | 639.48 | 339.33 | 641.66 | 339.57 | 641.7 | 339.57 |
| 642.01 | 339.61 | 642.38 | 339.64 | 643.14 | 339.71 | 643.83 | 339.78 | 644.11 | 339.82 |
| 644.16 | 339.82 | 644.47 | 339.86 | 645.75 | 340 | 646.01 | 340.02 | 646.76 | 340.1 |
| 647.51 | 340.17 | 648.47 | 340.25 | 649.63 | 340.34 | 650.02 | 340.36 | 652.95 | 340.67 |
| 653.97 | 340.83 | 657.6 | 341.62 | 658.76 | 341.81 | 659.84 | 341.99 | 661.29 | 342.22 |
| 662.63 | 342.48 | 663.05 | 342.57 | 664.21 | 342.59 | 665.81 | 342.61 | 667.63 | 342.65 |
| 668.59 | 342.67 | 669.92 | 342.7 | 672.04 | 342.74 | 676.24 | 342.82 | 677.14 | 342.83 |
| 682.83 | 342.92 | 684.52 | 342.94 | 685.99 | 342.96 | 689.49 | 343 | 694.1 | 343.03 |
| 697.45 | 343.04 | 699.62 | 343.06 | 701.9 | 343.1 | 702.95 | 343.12 | 704.42 | 343.16 |
| 705.63 | 343.19 | 708.27 | 343.24 | 711.71 | 343.32 | 712.08 | 343.33 | 713.69 | 343.36 |
| 716.43 | 343.42 | 717.5 | 343.44 | 718.13 | 343.45 | 721.12 | 343.5 | 722.47 | 343.53 |
| 724.23 | 343.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 176.63 | .04 | 505.39 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 176.63 | 505.39 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1602.83*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.67 | .47 | 336.66 | .75 | 336.66 | .98 | 336.71 | 1.15 | 336.73 |
| 1.46 | 336.75 | 1.99 | 336.77 | 2.76 | 336.77 | 6.2 | 336.74 | 10.73 | 336.7 |
| 11.52 | 336.7 | 13.47 | 336.69 | 13.75 | 336.68 | 18.42 | 336.56 | 21.41 | 336.47 |
| 22.56 | 336.44 | 24.37 | 336.41 | 25.32 | 336.39 | 27.08 | 336.35 | 27.45 | 336.35 |
| 27.91 | 336.34 | 28.49 | 336.34 | 29.08 | 336.33 | 29.77 | 336.33 | 29.87 | 336.32 |
| 30.13 | 336.32 | 30.36 | 336.33 | 31.58 | 336.37 | 33.56 | 336.42 | 35.14 | 336.45 |
| 36.54 | 336.47 | 38.29 | 336.47 | 39.31 | 336.46 | 39.82 | 336.45 | 42.04 | 336.44 |
| 43.76 | 336.43 | 46.81 | 336.4 | 48.22 | 336.39 | 48.88 | 336.38 | 49.14 | 336.37 |
| 49.5 | 336.33 | 51.78 | 336.19 | 52.06 | 336.17 | 53.86 | 336.08 | 55.41 | 336.01 |
| 57.51 | 335.92 | 63.14 | 335.7 | 63.57 | 335.68 | 63.73 | 335.68 | 63.8 | 335.69 |
| 64.44 | 335.82 | 64.59 | 335.94 | 64.9 | 335.96 | 65.43 | 335.97 | 66.16 | 335.97 |
| 69.27 | 335.91 | 76.83 | 335.8 | 77.94 | 335.79 | 78.39 | 335.8 | 80.63 | 335.76 |
| 81.34 | 335.77 | 82.01 | 335.8 | 82.83 | 335.82 | 83.76 | 335.84 | 84.37 | 335.85 |
| 84.85 | 335.85 | 85.78 | 335.86 | 87.09 | 335.86 | 88.76 | 335.84 | 92.95 | 335.8 |
| 94.39 | 335.79 | 94.7 | 335.78 | 95.2 | 335.78 | 96.01 | 335.76 | 97.36 | 335.71 |
| 97.82 | 335.7 | 99 | 335.65 | 99.73 | 335.6 | 101.97 | 335.57 | 102.79 | 335.55 |
| 103.43 | 335.53 | 103.99 | 335.52 | 106.41 | 335.46 | 106.91 | 335.44 | 107.27 | 335.43 |
| 107.63 | 335.43 | 107.78 | 335.45 | 108.34 | 335.45 | 109.4 | 335.43 | 109.53 | 335.43 |
| 112.41 | 335.37 | 112.98 | 335.36 | 114.62 | 335.37 | 115.13 | 335.38 | 115.69 | 335.38 |
| 117.25 | 335.42 | 119.17 | 335.42 | 124.94 | 335.4 | 126.73 | 335.39 | 128.79 | 335.36 |
| 138.25 | 335.27 | 145.27 | 335.19 | 145.57 | 335.19 | 146.06 | 335.2 | 146.27 | 335.2 |
| 146.75 | 335.17 | 148.64 | 335.14 | 150.26 | 335.11 | 155.34 | 335.02 | 158.39 | 334.97 |
| 159.1 | 334.96 | 160.75 | 334.93 | 163.88 | 334.88 | 164.22 | 334.9 | 165.94 | 334.97 |
| 166.46 | 334.99 | 166.8 | 335 | 166.91 | 335.07 | 167.16 | 335.11 | 167.78 | 335.13 |
| 169.17 | 335.16 | 170.37 | 335.16 | 171.65 | 335.15 | 171.67 | 335.16 | 172.21 | 335.16 |
| 172.3 | 335.15 | 176.3 | 334.94 | 179.6 | 334.82 | 181.34 | 334.75 | 184.83 | 334.57 |
| 187.16 | 334.37 | 187.87 | 334.31 | 201.86 | 334.31 | 205.34 | 334.3 | 227.73 | 334.3 |
| 227.98 | 334.31 | 230.35 | 334.46 | 230.63 | 334.48 | 232.04 | 334.48 | 232.54 | 334.47 |
| 232.76 | 334.47 | 233.44 | 334.45 | 233.9 | 334.44 | 237.64 | 334.3 | 246.26 | 334.3 |
| 256.67 | 334.5 | 258.81 | 334.54 | 261.6 | 334.58 | 262.1 | 334.59 | 262.66 | 334.62 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 265.67 | 334.73 | 266.78 | 334.75 | 267.14 | 334.75 | 267.76 | 334.74 | 271.54 | 334.69 |
| 272.98 | 334.68 | 274.47 | 334.68 | 279.88 | 334.69 | 281.4 | 334.68 | 282.42 | 334.67 |
| 283.07 | 334.65 | 283.54 | 334.62 | 285.21 | 334.48 | 285.6 | 334.46 | 286.11 | 334.49 |
| 286.95 | 334.53 | 290.77 | 334.68 | 291.73 | 334.7 | 292.61 | 334.7 | 293.62 | 334.67 |
| 295.21 | 334.58 | 298.46 | 334.38 | 298.84 | 334.36 | 299.96 | 334.27 | 300.55 | 334.14 |
| 303.12 | 334.08 | 305.36 | 334.04 | 306.68 | 334.09 | 311.34 | 334.26 | 323.67 | 334.26 |
| 327.22 | 334.25 | 337.95 | 334.25 | 345.7 | 334.23 | 357.8 | 334.23 | 360.64 | 334.24 |
| 361.14 | 334.24 | 365.07 | 334.25 | 367.27 | 334.25 | 369.86 | 334.23 | 373.97 | 334.22 |
| 375.38 | 334.22 | 376.7 | 334.21 | 376.93 | 334.2 | 381.21 | 334.19 | 397.94 | 334.19 |
| 403.07 | 334.17 | 404.85 | 334.05 | 407.43 | 333.89 | 407.94 | 333.87 | 408.68 | 333.86 |
| 409.98 | 333.83 | 410.68 | 333.82 | 411.66 | 333.81 | 414.37 | 333.78 | 415.06 | 333.77 |
| 415.54 | 333.75 | 416.21 | 333.71 | 416.71 | 333.69 | 418 | 333.67 | 418.72 | 333.67 |
| 419.44 | 333.66 | 420.14 | 333.66 | 421.22 | 333.64 | 421.89 | 333.62 | 422.35 | 333.61 |
| 423.33 | 333.61 | 423.52 | 333.63 | 423.94 | 333.63 | 424.39 | 333.64 | 424.91 | 333.66 |
| 425.83 | 333.7 | 426.37 | 333.72 | 427.12 | 333.72 | 427.34 | 333.73 | 428.42 | 333.66 |
| 428.6 | 333.66 | 428.82 | 333.67 | 428.92 | 333.66 | 429.08 | 333.66 | 429.36 | 333.67 |
| 430.01 | 333.66 | 430.87 | 333.67 | 431.15 | 333.67 | 431.21 | 333.66 | 432.15 | 333.66 |
| 432.46 | 333.65 | 432.92 | 333.65 | 432.98 | 333.66 | 433.45 | 333.66 | 434.32 | 333.68 |
| 434.78 | 333.71 | 436.01 | 333.75 | 437.49 | 333.76 | 440.55 | 333.76 | 440.83 | 333.74 |
| 442.2 | 333.74 | 444.22 | 333.8 | 444.32 | 333.81 | 444.83 | 333.83 | 448.03 | 333.95 |
| 448.32 | 333.97 | 449.18 | 334.05 | 449.78 | 334.09 | 451.09 | 334.13 | 452.58 | 334.18 |
| 453.31 | 334.2 | 454.6 | 334.22 | 454.89 | 334.22 | 455.68 | 334.24 | 456.05 | 334.26 |
| 456.24 | 334.26 | 457.35 | 334.3 | 458.64 | 334.34 | 459.15 | 334.34 | 460.09 | 334.37 |
| 460.45 | 334.39 | 461.49 | 334.42 | 461.78 | 334.44 | 462.29 | 334.45 | 462.73 | 334.47 |
| 463.07 | 334.47 | 464.93 | 334.5 | 465.7 | 334.51 | 466.13 | 334.51 | 466.24 | 334.52 |
| 466.4 | 334.52 | 466.99 | 334.53 | 467.79 | 334.55 | 468.38 | 334.58 | 468.56 | 334.58 |
| 468.7 | 334.59 | 469.42 | 334.63 | 470.08 | 334.66 | 470.21 | 334.66 | 470.96 | 334.7 |
| 471.53 | 334.72 | 472.3 | 334.77 | 472.48 | 334.77 | 472.59 | 334.78 | 472.79 | 334.78 |
| 473 | 334.77 | 473.17 | 334.77 | 473.47 | 334.79 | 473.75 | 334.79 | 473.96 | 334.78 |
| 474.24 | 334.78 | 474.41 | 334.79 | 474.63 | 334.79 | 475 | 334.81 | 475.07 | 334.82 |
| 475.32 | 334.83 | 475.6 | 334.85 | 475.79 | 334.85 | 476.24 | 334.87 | 476.97 | 334.91 |
| 477.44 | 334.93 | 477.82 | 334.94 | 478.33 | 334.96 | 478.71 | 334.96 | 478.88 | 334.97 |
| 479.05 | 334.97 | 479.7 | 334.98 | 479.9 | 334.97 | 481.07 | 334.97 | 481.49 | 334.96 |
| 482.29 | 334.95 | 482.55 | 334.94 | 483.26 | 334.94 | 483.47 | 334.93 | 484.68 | 334.93 |
| 486.36 | 334.97 | 486.89 | 334.98 | 487.05 | 334.99 | 487.4 | 334.99 | 487.93 | 334.98 |
| 488.12 | 334.98 | 489.52 | 334.97 | 491.97 | 334.97 | 492.16 | 334.96 | 493.32 | 334.96 |
| 493.39 | 334.97 | 493.85 | 334.97 | 494.03 | 334.98 | 494.31 | 335.01 | 494.68 | 335.01 |
| 494.81 | 334.99 | 494.86 | 335 | 495.05 | 335 | 495.38 | 335.02 | 495.58 | 335.04 |
| 496.61 | 335.1 | 496.87 | 335.11 | 497.87 | 335.12 | 498.17 | 335.12 | 499.13 | 335.14 |
| 499.63 | 335.14 | 500.22 | 335.15 | 500.34 | 335.17 | 500.85 | 335.19 | 501.08 | 335.19 |
| 501.33 | 335.2 | 501.87 | 335.2 | 502.27 | 335.21 | 505.13 | 335.21 | 505.34 | 335.22 |
| 505.58 | 335.22 | 505.97 | 335.23 | 506.61 | 335.26 | 507.26 | 335.28 | 507.45 | 335.29 |
| 507.79 | 335.29 | 508.98 | 335.3 | 509.55 | 335.33 | 510.44 | 335.34 | 514.3 | 335.37 |
| 515.87 | 335.45 | 516.55 | 335.46 | 516.75 | 335.47 | 516.88 | 335.49 | 517.92 | 335.58 |
| 518.81 | 335.67 | 520.02 | 335.78 | 520.37 | 335.81 | 521.1 | 335.88 | 522.18 | 335.98 |
| 523.75 | 336.12 | 524 | 336.15 | 524.08 | 336.15 | 525.83 | 336.31 | 526.71 | 336.38 |
| 527.25 | 336.43 | 528.02 | 336.49 | 530.28 | 336.66 | 530.46 | 336.67 | 530.66 | 336.69 |
| 533.09 | 336.87 | 536.52 | 336.98 | 536.57 | 336.98 | 538.56 | 337.04 | 541.81 | 337.14 |
| 544.45 | 337.21 | 544.68 | 337.21 | 545.2 | 337.22 | 545.26 | 337.23 | 550.28 | 337.3 |
| 551.18 | 337.3 | 561.44 | 337.43 | 562.27 | 337.44 | 563.43 | 337.45 | 564.81 | 337.47 |
| 566.14 | 337.47 | 567.11 | 337.48 | 568.3 | 337.48 | 569.07 | 337.49 | 571.5 | 337.54 |
| 574.68 | 337.61 | 575.44 | 337.63 | 575.62 | 337.64 | 576.63 | 337.66 | 577.38 | 337.67 |
| 578.44 | 337.69 | 580.81 | 337.73 | 580.98 | 337.73 | 582.96 | 337.76 | 585.03 | 337.78 |
| 585.64 | 337.79 | 588.69 | 337.79 | 589.82 | 337.82 | 590.46 | 337.83 | 591.26 | 337.85 |
| 594.4 | 337.91 | 597.39 | 337.97 | 598.51 | 337.99 | 599.05 | 337.99 | 599.96 | 338 |
| 601.49 | 338 | 610.13 | 337.96 | 612.33 | 337.96 | 612.39 | 337.97 | 612.54 | 337.97 |
| 612.73 | 337.98 | 613.86 | 338 | 614.49 | 338.02 | 614.58 | 338.02 | 617.75 | 338.12 |
| 621.94 | 338.25 | 624.64 | 338.33 | 628.87 | 338.46 | 630.93 | 338.52 | 638.37 | 338.73 |
| 639.5 | 338.85 | 639.74 | 338.88 | 640.38 | 338.94 | 643.02 | 339.21 | 644.67 | 339.38 |
| 645.22 | 339.43 | 645.26 | 339.44 | 645.58 | 339.47 | 645.95 | 339.51 | 646.72 | 339.56 |
| 647.42 | 339.63 | 648.15 | 339.72 | 649.36 | 339.84 | 649.9 | 339.9 | 650.09 | 339.91 |
| 650.38 | 339.94 | 652.1 | 340.1 | 653.28 | 340.18 | 653.68 | 340.2 | 656.64 | 340.51 |
| 657.67 | 340.66 | 661.34 | 341.44 | 662.32 | 341.59 | 663.6 | 341.79 | 665.07 | 342.01 |
| 666.42 | 342.27 | 666.85 | 342.35 | 668.02 | 342.37 | 669.64 | 342.4 | 671.48 | 342.44 |
| 672.45 | 342.46 | 673.79 | 342.48 | 675.93 | 342.53 | 680.18 | 342.62 | 681.09 | 342.63 |
| 685.55 | 342.7 | 686.85 | 342.72 | 688.55 | 342.75 | 690.04 | 342.77 | 693.58 | 342.81 |
| 698.24 | 342.85 | 701.62 | 342.87 | 703.83 | 342.89 | 706.13 | 342.93 | 707.19 | 342.96 |
| 708.68 | 342.99 | 709.9 | 343.02 | 712.57 | 343.08 | 716.04 | 343.16 | 716.42 | 343.17 |
| 721.9 | 343.27 | 722.54 | 343.28 | 725.56 | 343.33 | 726.04 | 343.34 | 726.92 | 343.35 |
| 728.7 | 343.39 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 171.65 | .04 | 507.45 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 171.65 | 507.45 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1582.86*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.39 | .46 | 336.38 | .72 | 336.38 | .95 | 336.43 | 1.12 | 336.45 |
| 1.42 | 336.47 | 1.93 | 336.48 | 2.68 | 336.48 | 6.02 | 336.46 | 10.41 | 336.42 |
| 11.18 | 336.42 | 13.08 | 336.41 | 13.35 | 336.4 | 17.89 | 336.28 | 20.79 | 336.19 |
| 21.91 | 336.16 | 22.44 | 336.16 | 23.66 | 336.14 | 24.59 | 336.12 | 26.29 | 336.08 |
| 26.65 | 336.07 | 27.1 | 336.07 | 27.66 | 336.06 | 28.23 | 336.06 | 28.67 | 336.05 |
| 29.25 | 336.05 | 29.47 | 336.06 | 30.67 | 336.09 | 32.58 | 336.14 | 34.12 | 336.17 |
| 35.48 | 336.19 | 36.2 | 336.19 | 37.18 | 336.18 | 38.16 | 336.18 | 38.66 | 336.17 |
| 40.82 | 336.16 | 42.49 | 336.15 | 45.45 | 336.12 | 46.82 | 336.11 | 47.46 | 336.1 |
| 47.71 | 336.09 | 48.06 | 336.04 | 50.28 | 335.91 | 50.55 | 335.89 | 52.3 | 335.81 |
| 53.8 | 335.73 | 55.84 | 335.65 | 61.57 | 335.43 | 61.88 | 335.42 | 61.95 | 335.43 |
| 62.56 | 335.55 | 62.72 | 335.67 | 63.53 | 335.7 | 64.23 | 335.7 | 67.26 | 335.64 |
| 67.91 | 335.62 | 74.6 | 335.53 | 75.68 | 335.51 | 76.11 | 335.52 | 78.28 | 335.48 |
| 79.62 | 335.52 | 81.33 | 335.56 | 81.92 | 335.57 | 82.38 | 335.57 | 83.29 | 335.58 |
| 83.88 | 335.58 | 84.56 | 335.57 | 85.33 | 335.57 | 86.18 | 335.56 | 90.25 | 335.52 |
| 91.65 | 335.5 | 92.43 | 335.5 | 93.23 | 335.48 | 94.53 | 335.43 | 94.98 | 335.42 |
| 96.13 | 335.37 | 96.83 | 335.32 | 99.01 | 335.29 | 99.81 | 335.27 | 100.43 | 335.25 |
| 100.97 | 335.24 | 103.32 | 335.18 | 103.8 | 335.16 | 104.16 | 335.15 | 104.51 | 335.15 |
| 104.79 | 335.18 | 105.02 | 335.18 | 105.19 | 335.17 | 106.23 | 335.15 | 106.35 | 335.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 109.14 | 335.09 | 109.7 | 335.08 | 111.29 | 335.09 | 113.46 | 335.13 | 113.84 | 335.14 |
| 115.71 | 335.14 | 121.32 | 335.12 | 123.05 | 335.11 | 125.05 | 335.08 | 134.23 | 334.99 |
| 141.05 | 334.93 | 142.02 | 334.93 | 142.49 | 334.9 | 144.33 | 334.87 | 145.9 | 334.84 |
| 150.83 | 334.76 | 153.79 | 334.71 | 154.48 | 334.7 | 156.09 | 334.68 | 159.12 | 334.63 |
| 159.45 | 334.65 | 160.41 | 334.68 | 161.63 | 334.73 | 161.95 | 334.75 | 162.06 | 334.81 |
| 162.3 | 334.85 | 162.91 | 334.87 | 164.26 | 334.9 | 165.42 | 334.9 | 166.66 | 334.89 |
| 166.69 | 334.9 | 167.21 | 334.9 | 167.29 | 334.89 | 171.16 | 334.68 | 174.35 | 334.57 |
| 176.03 | 334.5 | 179.41 | 334.32 | 181.66 | 334.13 | 182.35 | 334.08 | 184.35 | 334.07 |
| 220.88 | 334.07 | 221.12 | 334.08 | 223.41 | 334.22 | 223.68 | 334.24 | 225.04 | 334.24 |
| 225.53 | 334.23 | 225.74 | 334.23 | 226.39 | 334.21 | 226.84 | 334.2 | 230.46 | 334.07 |
| 237.18 | 334.07 | 238.79 | 334.06 | 248.86 | 334.26 | 253.62 | 334.33 | 254.11 | 334.34 |
| 254.64 | 334.37 | 257.55 | 334.48 | 258.16 | 334.49 | 259.58 | 334.49 | 263.23 | 334.44 |
| 264.62 | 334.43 | 272.77 | 334.43 | 273.75 | 334.42 | 274.83 | 334.37 | 276.45 | 334.23 |
| 276.82 | 334.21 | 277.31 | 334.24 | 278.13 | 334.28 | 278.62 | 334.29 | 281.82 | 334.42 |
| 282.75 | 334.44 | 283.6 | 334.44 | 284.57 | 334.42 | 286.11 | 334.33 | 289.26 | 334.13 |
| 289.62 | 334.11 | 290.71 | 334.03 | 291.28 | 333.9 | 293.76 | 333.84 | 295.93 | 333.81 |
| 297.2 | 333.85 | 301.7 | 334.02 | 305.92 | 334.01 | 317.06 | 334.01 | 318.94 | 334 |
| 327.43 | 333.99 | 334.93 | 333.98 | 336.89 | 333.97 | 340.13 | 333.97 | 342.51 | 333.98 |
| 346.62 | 333.97 | 349.37 | 333.98 | 349.85 | 333.98 | 353.77 | 333.99 | 355.77 | 333.98 |
| 358.28 | 333.97 | 362.25 | 333.96 | 364.89 | 333.94 | 365.11 | 333.94 | 369.25 | 333.92 |
| 372.54 | 333.93 | 373.51 | 333.92 | 382.08 | 333.92 | 385.42 | 333.91 | 390.39 | 333.9 |
| 392.1 | 333.77 | 394.6 | 333.63 | 395.09 | 333.61 | 395.8 | 333.59 | 397.06 | 333.56 |
| 397.73 | 333.55 | 398.69 | 333.54 | 401.3 | 333.51 | 401.97 | 333.5 | 402.43 | 333.48 |
| 403.09 | 333.44 | 403.57 | 333.42 | 404.16 | 333.42 | 404.82 | 333.4 | 405.51 | 333.4 |
| 406.21 | 333.39 | 406.88 | 333.39 | 407.93 | 333.37 | 408.57 | 333.35 | 409.02 | 333.34 |
| 409.98 | 333.34 | 410.13 | 333.36 | 410.71 | 333.36 | 411.23 | 333.37 | 411.85 | 333.41 |
| 412.94 | 333.46 | 413.57 | 333.48 | 413.83 | 333.48 | 414.09 | 333.49 | 414.73 | 333.49 |
| 416 | 333.4 | 416.22 | 333.4 | 416.47 | 333.41 | 416.79 | 333.4 | 417.12 | 333.41 |
| 417.88 | 333.39 | 418.9 | 333.41 | 419.23 | 333.4 | 419.95 | 333.4 | 420.42 | 333.39 |
| 420.8 | 333.39 | 420.96 | 333.38 | 421.22 | 333.39 | 421.63 | 333.39 | 421.96 | 333.4 |
| 422.98 | 333.41 | 423.12 | 333.43 | 423.53 | 333.45 | 424.99 | 333.51 | 426.74 | 333.52 |
| 430.36 | 333.52 | 430.76 | 333.49 | 432.71 | 333.49 | 434.7 | 333.56 | 434.81 | 333.57 |
| 435.42 | 333.59 | 439.2 | 333.73 | 439.54 | 333.76 | 439.88 | 333.78 | 439.94 | 333.79 |
| 440.57 | 333.84 | 441.28 | 333.88 | 442.41 | 333.91 | 445.45 | 333.98 | 446.98 | 334 |
| 447.32 | 334 | 447.81 | 334.01 | 448.26 | 334.03 | 448.92 | 334.05 | 450.24 | 334.08 |
| 451.76 | 334.12 | 452.36 | 334.12 | 452.68 | 334.13 | 453.9 | 334.16 | 454.33 | 334.18 |
| 455.13 | 334.2 | 456.08 | 334.23 | 456.93 | 334.25 | 457 | 334.24 | 459.21 | 334.25 |
| 460.12 | 334.26 | 460.94 | 334.26 | 461.64 | 334.27 | 463.07 | 334.3 | 463.37 | 334.32 |
| 463.66 | 334.33 | 464.52 | 334.37 | 465.3 | 334.4 | 465.45 | 334.4 | 466.34 | 334.44 |
| 466.93 | 334.46 | 467.01 | 334.47 | 467.92 | 334.51 | 467.99 | 334.52 | 468.51 | 334.52 |
| 468.95 | 334.51 | 469.31 | 334.53 | 469.64 | 334.53 | 469.88 | 334.51 | 470.47 | 334.51 |
| 470.91 | 334.53 | 471.06 | 334.53 | 471.29 | 334.55 | 471.83 | 334.58 | 472.05 | 334.58 |
| 472.32 | 334.6 | 472.59 | 334.61 | 473.45 | 334.65 | 473.79 | 334.67 | 474 | 334.67 |
| 474.46 | 334.69 | 475.05 | 334.71 | 475.32 | 334.71 | 475.51 | 334.72 | 475.91 | 334.72 |
| 476.68 | 334.73 | 477.74 | 334.73 | 478.03 | 334.72 | 478.79 | 334.72 | 479.74 | 334.7 |
| 480.09 | 334.7 | 480.47 | 334.69 | 481.16 | 334.69 | 481.54 | 334.68 | 482.57 | 334.68 |
| 483.6 | 334.71 | 484.56 | 334.73 | 485.19 | 334.74 | 485.38 | 334.75 | 485.79 | 334.75 |
| 486.42 | 334.73 | 486.63 | 334.73 | 488.29 | 334.71 | 488.92 | 334.71 | 490.83 | 334.69 |
| 491.71 | 334.69 | 492.07 | 334.68 | 493 | 334.68 | 493.42 | 334.69 | 493.63 | 334.7 |
| 493.91 | 334.73 | 494.45 | 334.73 | 494.54 | 334.71 | 494.84 | 334.72 | 495.47 | 334.77 |
| 496.49 | 334.83 | 496.68 | 334.85 | 496.99 | 334.85 | 498.18 | 334.87 | 498.53 | 334.87 |
| 499.67 | 334.88 | 499.91 | 334.88 | 500.26 | 334.89 | 500.95 | 334.9 | 501.09 | 334.92 |
| 501.47 | 334.93 | 501.97 | 334.95 | 502.6 | 334.95 | 502.91 | 334.96 | 504.8 | 334.96 |
| 506.02 | 334.95 | 506.77 | 334.95 | 507.01 | 334.96 | 507.3 | 334.96 | 507.63 | 334.97 |
| 507.75 | 334.98 | 509.29 | 335.04 | 509.51 | 335.05 | 509.86 | 335.05 | 511.06 | 335.06 |
| 511.64 | 335.09 | 512.54 | 335.11 | 516.44 | 335.15 | 518.02 | 335.25 | 518.71 | 335.27 |
| 518.91 | 335.28 | 519.05 | 335.3 | 520.09 | 335.42 | 521 | 335.52 | 522.21 | 335.65 |
| 522.58 | 335.7 | 524.4 | 335.9 | 525.99 | 336.07 | 526.33 | 336.11 | 528.1 | 336.3 |
| 529.52 | 336.43 | 530.31 | 336.51 | 532.59 | 336.71 | 532.86 | 336.74 | 535.43 | 336.96 |
| 538.9 | 337.06 | 538.95 | 337.06 | 540.96 | 337.12 | 544.24 | 337.22 | 546.92 | 337.28 |
| 547.15 | 337.28 | 547.73 | 337.29 | 552.81 | 337.35 | 559.31 | 337.42 | 564.09 | 337.47 |
| 564.93 | 337.48 | 566.11 | 337.49 | 567.5 | 337.5 | 568.84 | 337.5 | 569.82 | 337.51 |
| 571.02 | 337.51 | 571.8 | 337.52 | 574.26 | 337.57 | 577.48 | 337.64 | 578.24 | 337.66 |
| 578.43 | 337.67 | 579.44 | 337.68 | 580.2 | 337.69 | 581.28 | 337.71 | 583.67 | 337.75 |
| 583.84 | 337.76 | 587.94 | 337.8 | 588.55 | 337.81 | 591.64 | 337.81 | 592.39 | 337.83 |
| 592.78 | 337.83 | 593.42 | 337.85 | 594.23 | 337.86 | 597.41 | 337.92 | 599.91 | 337.96 |
| 601.57 | 337.99 | 602.11 | 337.99 | 603.03 | 338 | 604.57 | 338 | 613.31 | 337.95 |
| 615.15 | 337.95 | 615.21 | 337.94 | 615.54 | 337.94 | 615.59 | 337.95 | 615.93 | 337.96 |
| 617.72 | 337.99 | 617.81 | 338 | 621.01 | 338.09 | 625.25 | 338.21 | 627.97 | 338.28 |
| 632.26 | 338.4 | 634.34 | 338.46 | 641.5 | 338.63 | 641.86 | 338.64 | 643 | 338.76 |
| 643.25 | 338.78 | 646.55 | 339.09 | 648.23 | 339.25 | 649.14 | 339.33 | 649.52 | 339.37 |
| 650.3 | 339.42 | 650.8 | 339.46 | 651.29 | 339.51 | 651.34 | 339.52 | 651.75 | 339.56 |
| 652.97 | 339.69 | 653.23 | 339.71 | 654 | 339.79 | 654.76 | 339.85 | 655.74 | 339.94 |
| 656.93 | 340.02 | 657.33 | 340.05 | 660.33 | 340.35 | 661.36 | 340.5 | 665.07 | 341.25 |
| 666.27 | 341.43 | 668.85 | 341.81 | 670.22 | 342.06 | 670.64 | 342.13 | 671.83 | 342.15 |
| 673.47 | 342.18 | 675.33 | 342.22 | 676.31 | 342.24 | 677.67 | 342.27 | 679.83 | 342.32 |
| 684.13 | 342.41 | 685.05 | 342.43 | 689.55 | 342.51 | 690.87 | 342.53 | 692.59 | 342.55 |
| 694.1 | 342.58 | 697.67 | 342.62 | 702.38 | 342.67 | 705.8 | 342.69 | 708.03 | 342.72 |
| 709.2 | 342.74 | 710.36 | 342.77 | 711.42 | 342.79 | 712.93 | 342.83 | 714.17 | 342.85 |
| 716.87 | 342.91 | 720.38 | 342.99 | 720.76 | 343 | 722.4 | 343.03 | 725.21 | 343.09 |
| 726.3 | 343.1 | 726.95 | 343.11 | 730 | 343.16 | 730.48 | 343.16 | 731.38 | 343.18 |
| 733.17 | 343.21 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 166.66 | .04 | 509.51 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 166.66 | 509.51 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1562.89*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 336.11 | .44 | 336.1 | .7 | 336.1 | .92 | 336.15 | 1.08 | 336.17 |
| 1.38 | 336.19 | 1.87 | 336.2 | 2.6 | 336.2 | 5.84 | 336.18 | 10.1 | 336.14 |
| 10.85 | 336.14 | 12.68 | 336.13 | 12.95 | 336.12 | 17.35 | 336 | 21.25 | 335.89 |
| 22.95 | 335.86 | 23.85 | 335.85 | 25.51 | 335.81 | 25.85 | 335.8 | 26.29 | 335.8 |
| 26.83 | 335.79 | 27.39 | 335.79 | 27.81 | 335.78 | 28.38 | 335.78 | 28.59 | 335.79 |
| 29.75 | 335.82 | 31.61 | 335.86 | 33.1 | 335.89 | 34.41 | 335.91 | 35.12 | 335.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 36.07 | 335.9 | 37.02 | 335.9 | 37.51 | 335.89 | 39.6 | 335.88 | 41.22 | 335.86 |
| 44.09 | 335.83 | 45.42 | 335.82 | 46.04 | 335.81 | 46.28 | 335.8 | 46.62 | 335.76 |
| 48.77 | 335.63 | 49.04 | 335.62 | 50.73 | 335.53 | 52.19 | 335.46 | 54.17 | 335.39 |
| 59.47 | 335.18 | 59.88 | 335.16 | 60.1 | 335.17 | 60.69 | 335.28 | 60.84 | 335.39 |
| 61.13 | 335.41 | 61.63 | 335.42 | 62.31 | 335.42 | 65.25 | 335.36 | 72.37 | 335.25 |
| 73.41 | 335.24 | 73.84 | 335.25 | 75.94 | 335.21 | 76.62 | 335.22 | 77.24 | 335.25 |
| 78.02 | 335.26 | 78.9 | 335.28 | 79.47 | 335.29 | 79.92 | 335.29 | 80.79 | 335.3 |
| 81.38 | 335.29 | 82.78 | 335.29 | 83.6 | 335.28 | 87.55 | 335.24 | 88.9 | 335.22 |
| 89.67 | 335.22 | 90.44 | 335.2 | 91.7 | 335.15 | 92.14 | 335.13 | 93.25 | 335.09 |
| 93.94 | 335.05 | 96.04 | 335.01 | 96.82 | 334.99 | 97.42 | 334.97 | 97.95 | 334.96 |
| 100.23 | 334.9 | 100.7 | 334.88 | 101.04 | 334.87 | 101.38 | 334.87 | 101.66 | 334.9 |
| 101.88 | 334.9 | 102.05 | 334.89 | 103.05 | 334.87 | 103.17 | 334.87 | 105.88 | 334.81 |
| 106.41 | 334.8 | 107.96 | 334.82 | 108.44 | 334.82 | 110.06 | 334.85 | 110.44 | 334.86 |
| 112.25 | 334.86 | 117.69 | 334.84 | 119.37 | 334.83 | 121.31 | 334.81 | 130.22 | 334.72 |
| 136.84 | 334.66 | 137.77 | 334.66 | 138.23 | 334.63 | 140.01 | 334.6 | 141.53 | 334.58 |
| 146.32 | 334.51 | 149.19 | 334.46 | 149.86 | 334.45 | 151.42 | 334.42 | 154.36 | 334.38 |
| 154.68 | 334.39 | 156.3 | 334.46 | 157.11 | 334.49 | 157.21 | 334.55 | 157.45 | 334.59 |
| 158.04 | 334.61 | 159.35 | 334.64 | 160.47 | 334.64 | 161.68 | 334.63 | 161.7 | 334.64 |
| 162.29 | 334.63 | 164.6 | 334.5 | 166.02 | 334.43 | 169.1 | 334.32 | 170.72 | 334.25 |
| 173.98 | 334.08 | 176.16 | 333.9 | 176.82 | 333.84 | 214.03 | 333.84 | 214.26 | 333.85 |
| 216.47 | 333.98 | 216.73 | 334 | 218.05 | 334 | 218.52 | 333.99 | 218.72 | 333.99 |
| 219.35 | 333.97 | 219.78 | 333.96 | 223.28 | 333.83 | 231.32 | 333.83 | 241.04 | 334.01 |
| 243.04 | 334.05 | 245.64 | 334.09 | 246.11 | 334.09 | 246.63 | 334.12 | 248.67 | 334.2 |
| 249.44 | 334.22 | 250.48 | 334.24 | 250.81 | 334.24 | 251.39 | 334.23 | 254.92 | 334.19 |
| 257.65 | 334.17 | 262.7 | 334.18 | 264.13 | 334.17 | 265.08 | 334.16 | 265.68 | 334.14 |
| 266.12 | 334.11 | 267.68 | 333.98 | 268.04 | 333.96 | 268.52 | 334 | 269.31 | 334.03 |
| 269.78 | 334.04 | 272.87 | 334.16 | 273.77 | 334.18 | 274.58 | 334.18 | 275.53 | 334.16 |
| 277.01 | 334.07 | 280.05 | 333.88 | 280.2 | 333.87 | 280.41 | 333.87 | 281.45 | 333.78 |
| 282 | 333.66 | 282.4 | 333.65 | 284.39 | 333.61 | 286.49 | 333.57 | 287.72 | 333.61 |
| 292.07 | 333.77 | 296.14 | 333.77 | 303.58 | 333.76 | 308.71 | 333.76 | 316.91 | 333.74 |
| 324.15 | 333.72 | 331.47 | 333.72 | 335.43 | 333.71 | 338.09 | 333.72 | 338.56 | 333.72 |
| 342.34 | 333.73 | 344.28 | 333.72 | 346.7 | 333.71 | 350.53 | 333.69 | 351.85 | 333.69 |
| 353.08 | 333.68 | 353.29 | 333.67 | 357.29 | 333.66 | 361.67 | 333.66 | 362.3 | 333.65 |
| 365.57 | 333.64 | 372.9 | 333.64 | 377.7 | 333.62 | 379.35 | 333.5 | 381.76 | 333.36 |
| 382.24 | 333.34 | 382.93 | 333.33 | 384.14 | 333.3 | 384.79 | 333.29 | 385.71 | 333.28 |
| 388.24 | 333.25 | 388.88 | 333.23 | 389.33 | 333.21 | 389.96 | 333.17 | 390.43 | 333.15 |
| 391 | 333.15 | 391.63 | 333.13 | 392.3 | 333.13 | 393.09 | 333.12 | 394.64 | 333.09 |
| 395.69 | 333.07 | 396.63 | 333.07 | 396.74 | 333.09 | 397.47 | 333.09 | 398.08 | 333.11 |
| 398.8 | 333.15 | 400.05 | 333.21 | 400.78 | 333.25 | 402.11 | 333.25 | 403.58 | 333.13 |
| 404.13 | 333.15 | 404.27 | 333.14 | 404.49 | 333.14 | 404.88 | 333.15 | 405.76 | 333.13 |
| 406.93 | 333.15 | 407.31 | 333.14 | 407.63 | 333.14 | 408.69 | 333.12 | 410.09 | 333.12 |
| 410.47 | 333.13 | 411.64 | 333.15 | 411.81 | 333.17 | 412.27 | 333.2 | 413.97 | 333.27 |
| 415.99 | 333.28 | 420.17 | 333.28 | 420.54 | 333.25 | 420.9 | 333.24 | 422.89 | 333.24 |
| 425.18 | 333.32 | 425.31 | 333.33 | 426.01 | 333.35 | 430.38 | 333.52 | 430.77 | 333.54 |
| 431.95 | 333.62 | 432.19 | 333.64 | 432.77 | 333.67 | 434.57 | 333.71 | 437.6 | 333.77 |
| 439.36 | 333.78 | 439.57 | 333.78 | 439.76 | 333.79 | 440.84 | 333.81 | 441.34 | 333.83 |
| 441.6 | 333.83 | 443.12 | 333.87 | 444.88 | 333.9 | 445.57 | 333.9 | 446.85 | 333.93 |
| 447.85 | 333.95 | 448.77 | 333.98 | 449.17 | 333.99 | 450.46 | 334.01 | 450.93 | 334.02 |
| 453.48 | 334.01 | 454.53 | 334 | 455.11 | 334 | 455.26 | 334.01 | 456.29 | 334.01 |
| 457.94 | 334.04 | 458.29 | 334.05 | 458.43 | 334.06 | 458.63 | 334.06 | 459.61 | 334.1 |
| 460.52 | 334.14 | 460.68 | 334.14 | 461.71 | 334.18 | 462.4 | 334.21 | 462.49 | 334.21 |
| 463.55 | 334.26 | 463.67 | 334.27 | 464.22 | 334.27 | 464.73 | 334.25 | 465.15 | 334.27 |
| 465.41 | 334.27 | 465.81 | 334.24 | 466.56 | 334.24 | 466.73 | 334.25 | 466.99 | 334.25 |
| 467.43 | 334.28 | 468.06 | 334.31 | 468.31 | 334.31 | 468.62 | 334.33 | 468.93 | 334.34 |
| 470.32 | 334.41 | 471.09 | 334.44 | 472.08 | 334.47 | 472.53 | 334.47 | 472.77 | 334.48 |
| 475.52 | 334.48 | 476.1 | 334.47 | 477.19 | 334.46 | 477.55 | 334.45 | 478.04 | 334.45 |
| 478.16 | 334.44 | 478.84 | 334.44 | 479.41 | 334.43 | 480.46 | 334.44 | 481.65 | 334.47 |
| 482.76 | 334.49 | 483.49 | 334.5 | 483.7 | 334.51 | 483.97 | 334.51 | 484.18 | 334.5 |
| 484.9 | 334.48 | 485.15 | 334.48 | 487.07 | 334.45 | 487.79 | 334.45 | 490 | 334.42 |
| 490.22 | 334.42 | 490.42 | 334.41 | 491.01 | 334.41 | 491.43 | 334.4 | 492.5 | 334.4 |
| 492.84 | 334.41 | 493.1 | 334.41 | 493.45 | 334.45 | 493.61 | 334.46 | 493.98 | 334.46 |
| 494.18 | 334.45 | 494.29 | 334.43 | 494.45 | 334.43 | 495.08 | 334.47 | 495.36 | 334.5 |
| 496.54 | 334.58 | 497.11 | 334.6 | 498.48 | 334.61 | 498.89 | 334.61 | 500.21 | 334.63 |
| 500.89 | 334.63 | 501.69 | 334.64 | 501.85 | 334.67 | 502.28 | 334.69 | 502.55 | 334.69 |
| 502.87 | 334.7 | 503.21 | 334.7 | 503.59 | 334.71 | 506.13 | 334.71 | 507.54 | 334.7 |
| 507.82 | 334.69 | 508.37 | 334.7 | 509.02 | 334.7 | 509.4 | 334.72 | 509.54 | 334.72 |
| 511.31 | 334.8 | 511.58 | 334.81 | 511.92 | 334.81 | 513.14 | 334.83 | 513.72 | 334.86 |
| 514.63 | 334.87 | 518.57 | 334.93 | 520.17 | 335.05 | 520.87 | 335.08 | 521.21 | 335.12 |
| 522.99 | 335.34 | 523.18 | 335.37 | 524.41 | 335.53 | 524.78 | 335.58 | 525.52 | 335.67 |
| 526.62 | 335.81 | 528.23 | 336.02 | 528.57 | 336.06 | 530.36 | 336.29 | 531.25 | 336.38 |
| 531.8 | 336.44 | 532.59 | 336.54 | 534.9 | 336.76 | 537.77 | 337.05 | 541.27 | 337.15 |
| 541.33 | 337.15 | 543.36 | 337.2 | 546.68 | 337.3 | 549.38 | 337.35 | 549.62 | 337.35 |
| 550.21 | 337.36 | 555.34 | 337.41 | 556.26 | 337.42 | 561.9 | 337.46 | 566.74 | 337.51 |
| 567.59 | 337.51 | 568.78 | 337.52 | 570.18 | 337.53 | 572.53 | 337.53 | 572.88 | 337.54 |
| 573.74 | 337.54 | 574.53 | 337.55 | 577.02 | 337.6 | 580.27 | 337.66 | 581.04 | 337.69 |
| 581.23 | 337.69 | 582.26 | 337.71 | 583.03 | 337.72 | 584.11 | 337.74 | 586.53 | 337.78 |
| 586.7 | 337.78 | 590.84 | 337.82 | 591.47 | 337.83 | 594.58 | 337.83 | 595.34 | 337.85 |
| 595.74 | 337.85 | 596.39 | 337.86 | 597.21 | 337.88 | 600.42 | 337.93 | 602.95 | 337.96 |
| 603.48 | 337.97 | 604.62 | 337.98 | 605.17 | 337.99 | 607.66 | 337.99 | 616.49 | 337.93 |
| 618.55 | 337.93 | 618.74 | 337.92 | 619.14 | 337.94 | 620.31 | 337.96 | 621.03 | 337.97 |
| 624.28 | 338.05 | 628.56 | 338.16 | 631.31 | 338.24 | 635.64 | 338.34 | 637.74 | 338.39 |
| 644.98 | 338.55 | 645.35 | 338.55 | 646.5 | 338.66 | 647.41 | 338.74 | 650.09 | 338.97 |
| 651.79 | 339.12 | 652.34 | 339.16 | 652.71 | 339.2 | 653.09 | 339.23 | 653.88 | 339.27 |
| 654.39 | 339.31 | 654.88 | 339.36 | 654.93 | 339.36 | 655.34 | 339.41 | 656.57 | 339.53 |
| 657.13 | 339.59 | 657.33 | 339.6 | 657.62 | 339.63 | 658.39 | 339.69 | 659.38 | 339.78 |
| 660.58 | 339.86 | 660.99 | 339.89 | 664.02 | 340.19 | 665.06 | 340.33 | 668.81 | 341.06 |
| 670.02 | 341.24 | 671.13 | 341.39 | 672.63 | 341.6 | 674.01 | 341.84 | 674.44 | 341.91 |
| 675.65 | 341.93 | 677.3 | 341.97 | 679.18 | 342.01 | 680.17 | 342.03 | 681.54 | 342.06 |
| 683.73 | 342.11 | 688.07 | 342.21 | 689 | 342.23 | 693.55 | 342.31 | 694.88 | 342.33 |
| 696.62 | 342.36 | 698.15 | 342.39 | 701.76 | 342.44 | 706.52 | 342.49 | 709.98 | 342.52 |
| 712.23 | 342.55 | 713.41 | 342.57 | 714.58 | 342.6 | 715.66 | 342.62 | 717.19 | 342.66 |
| 718.43 | 342.69 | 721.16 | 342.75 | 724.71 | 342.83 | 725.1 | 342.84 | 726.76 | 342.87 |
| 729.59 | 342.93 | 730.7 | 342.94 | 731.35 | 342.94 | 734.44 | 342.98 | 735.83 | 343.01 |
| 737.64 | 343.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 161.68 | .04 | 511.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 161.68 | 511.58 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80

REACH: WASH80 RS: 1542.92*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.84 | .43 | 335.83 | .68 | 335.83 | .89 | 335.87 | 1.05 | 335.89 |
| 1.34 | 335.91 | 1.81 | 335.92 | 2.52 | 335.92 | 5.66 | 335.9 | 9.79 | 335.86 |
| 10.29 | 335.86 | 10.51 | 335.85 | 12.29 | 335.84 | 12.55 | 335.84 | 16.82 | 335.73 |
| 19.55 | 335.64 | 21.1 | 335.61 | 22.24 | 335.59 | 23.12 | 335.57 | 24.72 | 335.54 |
| 25.06 | 335.53 | 25.48 | 335.53 | 26.01 | 335.52 | 26.54 | 335.52 | 26.95 | 335.51 |
| 27.5 | 335.51 | 27.71 | 335.52 | 28.83 | 335.54 | 30.63 | 335.59 | 32.08 | 335.61 |
| 33.35 | 335.63 | 34.03 | 335.62 | 34.96 | 335.62 | 35.88 | 335.61 | 36.35 | 335.61 |
| 38.38 | 335.6 | 39.95 | 335.58 | 42.73 | 335.55 | 44.02 | 335.54 | 44.62 | 335.53 |
| 44.86 | 335.52 | 45.19 | 335.48 | 47.27 | 335.36 | 47.53 | 335.34 | 49.17 | 335.26 |
| 50.58 | 335.19 | 52.5 | 335.12 | 57.64 | 334.91 | 57.89 | 334.91 | 58.18 | 334.9 |
| 58.82 | 335.01 | 58.96 | 335.12 | 59.24 | 335.14 | 59.73 | 335.15 | 60.39 | 335.15 |
| 63.24 | 335.09 | 63.85 | 335.08 | 70.14 | 334.98 | 71.15 | 334.96 | 71.56 | 334.97 |
| 73.6 | 334.93 | 74.86 | 334.97 | 75.62 | 334.98 | 76.46 | 335 | 77.02 | 335.01 |
| 80.23 | 335.01 | 84.85 | 334.95 | 86.16 | 334.94 | 86.45 | 334.93 | 86.9 | 334.93 |
| 87.65 | 334.91 | 88.87 | 334.87 | 89.3 | 334.85 | 90.38 | 334.81 | 91.04 | 334.77 |
| 93.08 | 334.73 | 93.84 | 334.71 | 94.93 | 334.69 | 97.14 | 334.62 | 97.41 | 334.62 |
| 97.93 | 334.6 | 98.26 | 334.6 | 98.52 | 334.62 | 98.74 | 334.62 | 98.9 | 334.61 |
| 99.87 | 334.59 | 99.99 | 334.59 | 103.13 | 334.53 | 104.63 | 334.54 | 105.1 | 334.54 |
| 106.67 | 334.57 | 107.03 | 334.58 | 108.79 | 334.58 | 114.06 | 334.56 | 115.69 | 334.55 |
| 117.57 | 334.53 | 126.2 | 334.45 | 132.62 | 334.39 | 133.52 | 334.39 | 133.97 | 334.37 |
| 135.69 | 334.34 | 137.17 | 334.32 | 141.81 | 334.25 | 144.59 | 334.2 | 145.24 | 334.19 |
| 146.75 | 334.17 | 149.6 | 334.13 | 149.91 | 334.14 | 150.82 | 334.18 | 151.48 | 334.2 |
| 152.27 | 334.23 | 152.37 | 334.3 | 152.59 | 334.33 | 153.17 | 334.35 | 154.01 | 334.37 |
| 155.52 | 334.37 | 156.69 | 334.36 | 156.72 | 334.37 | 157.2 | 334.37 | 157.28 | 334.36 |
| 159.51 | 334.24 | 160.88 | 334.17 | 163.85 | 334.07 | 165.42 | 334 | 168.56 | 333.84 |
| 170.66 | 333.67 | 171.3 | 333.61 | 207.4 | 333.61 | 209.54 | 333.75 | 209.78 | 333.76 |
| 211.05 | 333.76 | 211.51 | 333.75 | 211.7 | 333.75 | 212.31 | 333.74 | 212.73 | 333.72 |
| 216.1 | 333.6 | 223.85 | 333.6 | 233.23 | 333.77 | 237.66 | 333.84 | 238.11 | 333.85 |
| 240.58 | 333.95 | 241.32 | 333.97 | 242.33 | 333.99 | 242.65 | 333.99 | 243.21 | 333.98 |
| 246.61 | 333.93 | 247.9 | 333.92 | 255.49 | 333.92 | 256.41 | 333.91 | 257.41 | 333.86 |
| 258.92 | 333.73 | 259.26 | 333.72 | 259.72 | 333.75 | 260.48 | 333.78 | 260.94 | 333.79 |
| 263.92 | 333.9 | 264.79 | 333.93 | 265.57 | 333.92 | 266.48 | 333.9 | 267.91 | 333.82 |
| 270.84 | 333.63 | 271.19 | 333.62 | 272.19 | 333.54 | 272.73 | 333.42 | 273.11 | 333.41 |
| 275.03 | 333.37 | 277.05 | 333.34 | 278.24 | 333.38 | 282.43 | 333.53 | 286.36 | 333.52 |
| 293.54 | 333.51 | 298.48 | 333.51 | 306.39 | 333.49 | 313.37 | 333.47 | 315.2 | 333.47 |
| 318.21 | 333.46 | 327.26 | 333.46 | 330.91 | 333.47 | 332.78 | 333.46 | 335.11 | 333.45 |
| 338.81 | 333.43 | 341.27 | 333.41 | 341.47 | 333.41 | 345.33 | 333.39 | 349.55 | 333.39 |
| 350.22 | 333.38 | 353.31 | 333.37 | 357.28 | 333.37 | 360.39 | 333.36 | 365.01 | 333.34 |
| 366.61 | 333.23 | 368.93 | 333.09 | 369.39 | 333.08 | 370.05 | 333.06 | 371.22 | 333.03 |
| 371.85 | 333.02 | 372.74 | 333.01 | 375.17 | 332.98 | 375.8 | 332.97 | 376.21 | 332.95 |
| 376.23 | 332.94 | 377.29 | 332.89 | 377.83 | 332.88 | 378.45 | 332.86 | 379.74 | 332.84 |
| 380.37 | 332.84 | 381.35 | 332.82 | 381.94 | 332.8 | 382.36 | 332.79 | 383.13 | 332.79 |
| 383.28 | 332.8 | 383.41 | 332.82 | 383.79 | 332.82 | 384.23 | 332.83 | 384.92 | 332.84 |
| 385.74 | 332.89 | 387.16 | 332.97 | 387.99 | 333.01 | 389.5 | 333.01 | 391.17 | 332.87 |
| 391.78 | 332.89 | 392.2 | 332.87 | 392.63 | 332.89 | 393.63 | 332.86 | 394.96 | 332.89 |
| 395.49 | 332.88 | 395.76 | 332.87 | 396.34 | 332.87 | 397.43 | 332.85 | 398.36 | 332.85 |
| 398.54 | 332.86 | 398.97 | 332.87 | 400.31 | 332.89 | 400.49 | 332.91 | 401.02 | 332.95 |
| 402.94 | 333.03 | 405.23 | 333.04 | 409.98 | 333.04 | 410.39 | 333 | 410.81 | 333 |
| 411.96 | 332.99 | 413.06 | 332.99 | 415.66 | 333.08 | 415.8 | 333.08 | 416.6 | 333.11 |
| 421.55 | 333.3 | 422.45 | 333.36 | 422.52 | 333.36 | 423.34 | 333.41 | 423.61 | 333.43 |
| 424.27 | 333.46 | 425.76 | 333.48 | 429.74 | 333.55 | 431.74 | 333.56 | 431.98 | 333.57 |
| 432.19 | 333.57 | 433.42 | 333.59 | 433.98 | 333.62 | 434.28 | 333.62 | 436 | 333.65 |
| 438 | 333.69 | 438.17 | 333.68 | 438.79 | 333.68 | 439.21 | 333.69 | 440.24 | 333.71 |
| 441.37 | 333.73 | 442.41 | 333.75 | 442.86 | 333.77 | 444.33 | 333.79 | 444.86 | 333.79 |
| 447.75 | 333.77 | 448.94 | 333.75 | 451.57 | 333.75 | 452.18 | 333.76 | 453.37 | 333.8 |
| 453.59 | 333.8 | 454.7 | 333.84 | 455.73 | 333.88 | 455.92 | 333.88 | 457.09 | 333.92 |
| 457.87 | 333.95 | 457.98 | 333.96 | 459.39 | 334.02 | 459.65 | 334.02 | 460.51 | 333.99 |
| 460.98 | 334.01 | 461.28 | 334.01 | 461.86 | 333.97 | 462.12 | 333.97 | 462.17 | 333.96 |
| 462.44 | 333.97 | 462.78 | 333.97 | 463.35 | 333.99 | 463.57 | 334.01 | 464.28 | 334.04 |
| 464.69 | 334.05 | 466.41 | 334.14 | 466.85 | 334.15 | 467.13 | 334.17 | 467.72 | 334.19 |
| 468.85 | 334.22 | 469.1 | 334.22 | 469.36 | 334.23 | 472.75 | 334.23 | 473.4 | 334.22 |
| 474.64 | 334.21 | 475.05 | 334.2 | 475.74 | 334.2 | 476.1 | 334.19 | 477.16 | 334.19 |
| 478.34 | 334.2 | 479.7 | 334.23 | 480.95 | 334.25 | 481.78 | 334.26 | 482.03 | 334.27 |
| 482.33 | 334.27 | 483.39 | 334.23 | 483.67 | 334.23 | 485.85 | 334.19 | 486.66 | 334.19 |
| 489.17 | 334.15 | 489.42 | 334.14 | 489.65 | 334.14 | 489.95 | 334.13 | 490.32 | 334.13 |
| 490.79 | 334.12 | 491.6 | 334.12 | 491.74 | 334.11 | 491.85 | 334.12 | 492.39 | 334.12 |
| 492.84 | 334.14 | 493.21 | 334.18 | 493.85 | 334.18 | 494.03 | 334.15 | 494.21 | 334.15 |
| 494.42 | 334.16 | 494.93 | 334.2 | 495.24 | 334.23 | 496.58 | 334.32 | 496.83 | 334.34 |
| 497.23 | 334.34 | 498.79 | 334.36 | 499.25 | 334.36 | 500.75 | 334.37 | 501.05 | 334.37 |
| 501.51 | 334.38 | 502.42 | 334.38 | 502.5 | 334.41 | 502.61 | 334.42 | 503.1 | 334.44 |
| 503.4 | 334.44 | 504.15 | 334.46 | 507.46 | 334.46 | 509.07 | 334.44 | 509.38 | 334.43 |
| 510 | 334.44 | 510.74 | 334.44 | 511.33 | 334.47 | 512.33 | 334.51 | 513.34 | 334.56 |
| 513.64 | 334.57 | 513.99 | 334.57 | 515.22 | 334.59 | 515.8 | 334.63 | 516.72 | 334.64 |
| 520.71 | 334.7 | 521.5 | 334.78 | 522.33 | 334.85 | 523.03 | 334.9 | 523.15 | 334.9 |
| 523.33 | 334.92 | 523.37 | 334.94 | 524.44 | 335.08 | 525.37 | 335.22 | 526.61 | 335.4 |
| 526.98 | 335.46 | 527.73 | 335.57 | 528.85 | 335.73 | 530.47 | 335.97 | 530.81 | 336.01 |
| 532.62 | 336.28 | 533.52 | 336.38 | 534.08 | 336.45 | 534.88 | 336.56 | 537.21 | 336.81 |
| 537.4 | 336.84 | 537.6 | 336.86 | 540.11 | 337.14 | 543.65 | 337.23 | 543.71 | 337.23 |
| 545.76 | 337.29 | 549.11 | 337.37 | 551.85 | 337.42 | 552.62 | 337.42 | 552.68 | 337.43 |
| 557.87 | 337.47 | 558.8 | 337.47 | 564.5 | 337.51 | 569.39 | 337.54 | 570.25 | 337.55 |
| 571.45 | 337.56 | 575.59 | 337.56 | 575.9 | 337.57 | 576.47 | 337.57 | 577.27 | 337.58 |
| 579.78 | 337.63 | 583.06 | 337.69 | 583.84 | 337.71 | 584.04 | 337.72 | 585.07 | 337.73 |
| 585.85 | 337.74 | 586.95 | 337.76 | 589.39 | 337.8 | 589.57 | 337.8 | 593.75 | 337.84 |
| 594.38 | 337.85 | 597.53 | 337.85 | 598.3 | 337.87 | 598.7 | 337.87 | 599.35 | 337.88 |
| 603.43 | 337.93 | 605.99 | 337.97 | 606.52 | 337.97 | 607.67 | 337.98 | 608.23 | 337.99 |
| 610.75 | 337.99 | 619.67 | 337.91 | 622.16 | 337.91 | 622.3 | 337.92 | 623.53 | 337.93 |
| 624.26 | 337.95 | 627.54 | 338.02 | 631.87 | 338.12 | 634.65 | 338.19 | 639.03 | 338.28 |
| 641.15 | 338.33 | 648.47 | 338.46 | 648.84 | 338.47 | 650.25 | 338.58 | 650.92 | 338.64 |
| 653.63 | 338.85 | 655.34 | 338.98 | 655.91 | 339.03 | 656.66 | 339.09 | 657.46 | 339.13 |
| 657.97 | 339.16 | 658.47 | 339.2 | 658.52 | 339.21 | 658.94 | 339.25 | 660.18 | 339.38 |
| 660.45 | 339.4 | 660.94 | 339.45 | 661.23 | 339.47 | 662.01 | 339.54 | 663.02 | 339.62 |
| 664.23 | 339.7 | 664.64 | 339.73 | 667.7 | 340.02 | 668.76 | 340.16 | 672.55 | 340.87 |
| 673.77 | 341.05 | 674.89 | 341.2 | 676.41 | 341.4 | 677.8 | 341.63 | 678.24 | 341.7 |
| 679.46 | 341.72 | 681.13 | 341.75 | 683.03 | 341.79 | 684.03 | 341.82 | 685.42 | 341.85 |
| 687.63 | 341.9 | 692.01 | 342.01 | 692.95 | 342.02 | 697.56 | 342.11 | 698.9 | 342.14 |
| 700.66 | 342.17 | 702.2 | 342.19 | 705.85 | 342.25 | 710.67 | 342.31 | 714.16 | 342.35 |
| 716.43 | 342.38 | 717.63 | 342.4 | 718.81 | 342.43 | 719.9 | 342.45 | 721.44 | 342.49 |
| 722.7 | 342.52 | 725.46 | 342.58 | 729.44 | 342.68 | 731.12 | 342.71 | 733.98 | 342.76 |
| 735.09 | 342.77 | 735.76 | 342.78 | 738.88 | 342.81 | 739.37 | 342.82 | 740.28 | 342.83 |
| 742.12 | 342.86 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 156.69 | .04 | 513.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 156.69 | 513.64 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1522.95*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.56 | .41 | 335.55 | .66 | 335.55 | .86 | 335.59 | 1.02 | 335.61 |
| 1.76 | 335.64 | 2.44 | 335.64 | 5.48 | 335.61 | 6.48 | 335.61 | 9.48 | 335.58 |
| 9.96 | 335.58 | 10.18 | 335.57 | 11.9 | 335.56 | 12.15 | 335.56 | 16.28 | 335.45 |
| 19.94 | 335.34 | 20.43 | 335.33 | 21.03 | 335.33 | 22.38 | 335.3 | 23.93 | 335.27 |
| 24.26 | 335.26 | 24.67 | 335.26 | 25.18 | 335.25 | 25.7 | 335.25 | 26.1 | 335.24 |
| 26.83 | 335.24 | 27.91 | 335.27 | 29.66 | 335.31 | 31.06 | 335.33 | 32.29 | 335.35 |
| 32.95 | 335.34 | 33.85 | 335.34 | 34.74 | 335.33 | 35.19 | 335.33 | 37.15 | 335.31 |
| 38.68 | 335.3 | 41.37 | 335.27 | 42.62 | 335.26 | 43.2 | 335.25 | 43.43 | 335.24 |
| 43.75 | 335.2 | 45.76 | 335.08 | 46.02 | 335.06 | 47.6 | 334.99 | 48.98 | 334.92 |
| 50.83 | 334.85 | 56.05 | 334.64 | 56.39 | 334.64 | 56.95 | 334.74 | 57.09 | 334.85 |
| 57.83 | 334.87 | 58.47 | 334.87 | 61.23 | 334.81 | 61.82 | 334.8 | 67.9 | 334.71 |
| 68.89 | 334.69 | 69.28 | 334.7 | 71.26 | 334.66 | 71.89 | 334.67 | 72.48 | 334.69 |
| 74.03 | 334.73 | 77.67 | 334.73 | 82.15 | 334.67 | 83.42 | 334.65 | 84.14 | 334.65 |
| 84.86 | 334.63 | 86.05 | 334.59 | 86.45 | 334.57 | 87.5 | 334.53 | 88.15 | 334.49 |
| 90.12 | 334.45 | 90.85 | 334.43 | 91.91 | 334.41 | 94.05 | 334.35 | 94.49 | 334.33 |
| 94.81 | 334.32 | 95.13 | 334.32 | 95.39 | 334.34 | 95.6 | 334.34 | 95.76 | 334.33 |
| 96.69 | 334.31 | 96.8 | 334.31 | 99.85 | 334.25 | 101.3 | 334.26 | 101.76 | 334.26 |
| 103.28 | 334.29 | 103.63 | 334.3 | 107.88 | 334.3 | 110.43 | 334.28 | 112.01 | 334.28 |
| 113.83 | 334.25 | 122.19 | 334.18 | 128.4 | 334.12 | 129.28 | 334.12 | 129.71 | 334.1 |
| 131.38 | 334.07 | 132.8 | 334.05 | 137.3 | 333.99 | 139.99 | 333.94 | 140.62 | 333.93 |
| 142.08 | 333.91 | 144.84 | 333.88 | 146.02 | 333.92 | 146.66 | 333.95 | 147.13 | 333.96 |
| 147.42 | 333.98 | 147.52 | 334.04 | 147.74 | 334.07 | 148.29 | 334.09 | 148.67 | 334.1 |
| 149.11 | 334.1 | 149.52 | 334.11 | 150.58 | 334.11 | 151.71 | 334.1 | 151.73 | 334.11 |
| 152.19 | 334.11 | 152.27 | 334.1 | 154.42 | 333.99 | 155.74 | 333.92 | 158.6 | 333.82 |
| 160.11 | 333.75 | 163.13 | 333.6 | 165.15 | 333.43 | 165.77 | 333.38 | 186.76 | 333.38 |
| 187.05 | 333.37 | 200.33 | 333.37 | 200.54 | 333.38 | 202.6 | 333.51 | 202.83 | 333.52 |
| 204.06 | 333.52 | 205.27 | 333.5 | 205.67 | 333.48 | 208.92 | 333.37 | 212.98 | 333.37 |
| 214.67 | 333.36 | 216.38 | 333.36 | 225.41 | 333.53 | 227.27 | 333.56 | 229.69 | 333.59 |
| 230.12 | 333.6 | 232.49 | 333.7 | 233.21 | 333.72 | 233.75 | 333.72 | 234.18 | 333.73 |
| 235.02 | 333.73 | 238.3 | 333.68 | 239.55 | 333.67 | 245.53 | 333.67 | 246.85 | 333.66 |
| 247.73 | 333.65 | 248.29 | 333.63 | 248.7 | 333.61 | 250.15 | 333.49 | 250.48 | 333.47 |
| 250.93 | 333.5 | 251.66 | 333.53 | 252.1 | 333.54 | 254.97 | 333.65 | 255.8 | 333.67 |
| 256.56 | 333.66 | 257.44 | 333.64 | 258.82 | 333.56 | 261.97 | 333.37 | 262.94 | 333.3 |
| 263.45 | 333.18 | 263.82 | 333.18 | 265.67 | 333.14 | 267.62 | 333.1 | 268.76 | 333.14 |
| 272.8 | 333.28 | 276.58 | 333.28 | 283.49 | 333.26 | 288.26 | 333.26 | 295.87 | 333.24 |
| 302.59 | 333.22 | 304.35 | 333.21 | 309.39 | 333.21 | 313.07 | 333.2 | 315.97 | 333.2 |
| 319.49 | 333.21 | 321.28 | 333.2 | 323.53 | 333.18 | 327.09 | 333.17 | 328.31 | 333.16 |
| 329.46 | 333.14 | 329.65 | 333.14 | 333.37 | 333.12 | 338.08 | 333.12 | 341.06 | 333.1 |
| 344.87 | 333.09 | 347.87 | 333.09 | 352.32 | 333.07 | 353.86 | 332.96 | 356.1 | 332.83 |
| 356.54 | 332.81 | 357.18 | 332.8 | 358.3 | 332.77 | 358.91 | 332.76 | 360.53 | 332.74 |
| 361.31 | 332.72 | 362.71 | 332.7 | 363.12 | 332.68 | 363.71 | 332.64 | 364.14 | 332.62 |
| 365.28 | 332.6 | 365.89 | 332.58 | 366.51 | 332.57 | 367.11 | 332.57 | 368.05 | 332.55 |
| 368.63 | 332.53 | 369.03 | 332.52 | 369.84 | 332.52 | 370.02 | 332.55 | 370.51 | 332.55 |
| 371 | 332.56 | 371.77 | 332.58 | 372.68 | 332.64 | 374.27 | 332.72 | 375.2 | 332.77 |
| 376.89 | 332.77 | 378.75 | 332.61 | 379.44 | 332.63 | 379.9 | 332.61 | 380.39 | 332.63 |
| 381.51 | 332.6 | 383 | 332.63 | 383.48 | 332.61 | 383.88 | 332.61 | 385.22 | 332.59 |
| 385.75 | 332.58 | 386.66 | 332.58 | 386.79 | 332.59 | 387 | 332.59 | 388.97 | 332.63 |
| 389.18 | 332.65 | 389.77 | 332.69 | 391.92 | 332.79 | 394.48 | 332.8 | 399.78 | 332.8 |
| 400.36 | 332.75 | 400.71 | 332.75 | 402 | 332.74 | 403.23 | 332.74 | 406.14 | 332.84 |
| 406.3 | 332.84 | 407.19 | 332.88 | 412.73 | 333.08 | 413.73 | 333.14 | 413.81 | 333.14 |
| 415.02 | 333.22 | 415.77 | 333.24 | 417.43 | 333.27 | 420.62 | 333.32 | 421.88 | 333.33 |
| 424.12 | 333.35 | 424.62 | 333.35 | 425.34 | 333.36 | 426 | 333.38 | 426.43 | 333.39 |
| 426.63 | 333.41 | 426.96 | 333.41 | 428.89 | 333.44 | 431.11 | 333.47 | 431.31 | 333.46 |
| 431.57 | 333.46 | 432 | 333.47 | 432.47 | 333.47 | 433.62 | 333.49 | 434.89 | 333.51 |
| 436.05 | 333.53 | 437.44 | 333.56 | 438.2 | 333.56 | 438.69 | 333.57 | 438.79 | 333.56 |
| 442.03 | 333.52 | 444.09 | 333.49 | 446.29 | 333.49 | 447.68 | 333.51 | 447.69 | 333.52 |
| 447.99 | 333.52 | 448.55 | 333.54 | 449.8 | 333.58 | 450.95 | 333.62 | 451.16 | 333.62 |
| 452.46 | 333.66 | 453.34 | 333.7 | 453.46 | 333.7 | 454.79 | 333.76 | 455.64 | 333.76 |
| 456 | 333.74 | 456.29 | 333.73 | 456.82 | 333.75 | 457.01 | 333.75 | 457.8 | 333.7 |
| 458.04 | 333.69 | 458.62 | 333.69 | 459.16 | 333.71 | 459.38 | 333.71 | 459.71 | 333.74 |
| 460.19 | 333.76 | 460.97 | 333.78 | 461.62 | 333.81 | 462.88 | 333.88 | 463.69 | 333.91 |
| 464.36 | 333.94 | 465.23 | 333.96 | 465.36 | 333.97 | 465.89 | 333.97 | 466.18 | 333.98 |
| 470.71 | 333.98 | 472.09 | 333.96 | 472.55 | 333.95 | 473.77 | 333.95 | 474.14 | 333.94 |
| 474.91 | 333.94 | 476.23 | 333.95 | 477.75 | 333.98 | 480.08 | 334.03 | 480.69 | 334.03 |
| 482.19 | 333.98 | 484.62 | 333.93 | 485.53 | 333.93 | 488.33 | 333.87 | 488.62 | 333.87 |
| 489.21 | 333.85 | 489.62 | 333.85 | 490.76 | 333.83 | 491.34 | 333.83 | 491.51 | 333.84 |
| 491.94 | 333.84 | 492.44 | 333.86 | 492.92 | 333.91 | 493.39 | 333.91 | 493.64 | 333.9 |
| 493.77 | 333.87 | 493.98 | 333.87 | 494.06 | 333.88 | 494.78 | 333.93 | 495.13 | 333.96 |
| 496.63 | 334.06 | 496.65 | 334.07 | 497.02 | 334.09 | 497.36 | 334.09 | 499.1 | 334.1 |
| 499.61 | 334.11 | 501.28 | 334.11 | 501.63 | 334.12 | 502.14 | 334.12 | 503.16 | 334.13 |
| 503.24 | 334.16 | 503.36 | 334.16 | 503.66 | 334.18 | 504.25 | 334.2 | 504.65 | 334.2 |
| 505.1 | 334.21 | 508.2 | 334.21 | 508.79 | 334.2 | 510.59 | 334.18 | 510.93 | 334.17 |
| 511.64 | 334.18 | 512.46 | 334.18 | 512.94 | 334.21 | 513.12 | 334.21 | 514.24 | 334.27 |
| 515.37 | 334.32 | 515.7 | 334.33 | 516.05 | 334.34 | 517.29 | 334.36 | 517.89 | 334.39 |
| 518.82 | 334.41 | 522.84 | 334.48 | 523.65 | 334.57 | 524.48 | 334.65 | 525.19 | 334.71 |
| 525.28 | 334.71 | 526.62 | 334.92 | 527.35 | 335.04 | 527.55 | 335.07 | 528.81 | 335.28 |
| 529.18 | 335.34 | 529.94 | 335.47 | 532.7 | 335.91 | 533.05 | 335.97 | 534.88 | 336.26 |
| 535.79 | 336.38 | 536.35 | 336.46 | 537.16 | 336.58 | 539.52 | 336.86 | 539.92 | 336.92 |
| 542.45 | 337.23 | 546.03 | 337.31 | 546.09 | 337.32 | 548.16 | 337.37 | 551.55 | 337.45 |
| 554.31 | 337.49 | 555.09 | 337.49 | 555.15 | 337.5 | 560.4 | 337.53 | 561.33 | 337.53 |
| 567.1 | 337.56 | 572.04 | 337.58 | 572.91 | 337.59 | 579.1 | 337.59 | 579.19 | 337.6 |
| 580 | 337.61 | 582.53 | 337.65 | 585.86 | 337.72 | 586.65 | 337.74 | 586.84 | 337.74 |
| 587.89 | 337.76 | 588.67 | 337.77 | 589.78 | 337.79 | 592.26 | 337.82 | 592.43 | 337.83 |
| 594.5 | 337.84 | 596.66 | 337.87 | 600.48 | 337.87 | 601.25 | 337.88 | 601.66 | 337.89 |
| 603.16 | 337.91 | 606.44 | 337.94 | 609.02 | 337.97 | 609.56 | 337.97 | 610.73 | 337.98 |
| 611.29 | 337.99 | 612.24 | 337.99 | 613.83 | 337.98 | 622.85 | 337.9 | 624.75 | 337.89 |
| 625.37 | 337.89 | 625.56 | 337.9 | 626.75 | 337.91 | 627.49 | 337.92 | 630.8 | 337.99 |
| 635.18 | 338.08 | 637.99 | 338.14 | 642.41 | 338.23 | 644.56 | 338.27 | 651.95 | 338.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 652.33 | 338.38 | 653.76 | 338.49 | 654.43 | 338.53 | 657.17 | 338.73 | 659.47 | 338.89 |
| 659.51 | 338.9 | 659.84 | 338.92 | 660.23 | 338.96 | 661.03 | 338.98 | 661.56 | 339.01 |
| 662.06 | 339.05 | 662.11 | 339.06 | 663.79 | 339.22 | 664.36 | 339.28 | 664.56 | 339.29 |
| 664.85 | 339.32 | 666.66 | 339.46 | 667.88 | 339.54 | 668.3 | 339.57 | 671.39 | 339.86 |
| 672.46 | 340 | 676.29 | 340.69 | 677.31 | 340.83 | 677.52 | 340.85 | 678.65 | 341 |
| 680.19 | 341.19 | 682.04 | 341.48 | 683.27 | 341.5 | 684.96 | 341.53 | 686.88 | 341.58 |
| 687.89 | 341.6 | 689.29 | 341.64 | 691.52 | 341.69 | 695.96 | 341.8 | 701.56 | 341.92 |
| 702.92 | 341.94 | 704.69 | 341.97 | 709.94 | 342.07 | 714.81 | 342.13 | 718.33 | 342.17 |
| 720.63 | 342.2 | 723.04 | 342.26 | 724.14 | 342.29 | 725.7 | 342.33 | 726.97 | 342.36 |
| 729.76 | 342.42 | 733.38 | 342.51 | 733.78 | 342.51 | 735.47 | 342.54 | 738.37 | 342.6 |
| 739.49 | 342.6 | 740.16 | 342.61 | 743.32 | 342.64 | 743.81 | 342.65 | 744.74 | 342.66 |
| 746.59 | 342.69 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 151.71 | .04 | 515.7 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 151.71 | 515.7 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1502.98*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335.28 | .4 | 335.27 | .64 | 335.27 | .83 | 335.32 | .98 | 335.33 |
| 1.7 | 335.36 | 2.36 | 335.36 | 6.27 | 335.32 | 9.17 | 335.3 | 9.63 | 335.3 |
| 9.85 | 335.29 | 11.51 | 335.28 | 11.76 | 335.27 | 15.75 | 335.17 | 18.3 | 335.09 |
| 19.76 | 335.06 | 20.83 | 335.04 | 21.65 | 335.03 | 23.15 | 334.99 | 23.86 | 334.99 |
| 24.35 | 334.98 | 24.85 | 334.98 | 25.24 | 334.97 | 25.95 | 334.97 | 27 | 335 |
| 28.68 | 335.03 | 30.04 | 335.06 | 32.73 | 335.06 | 33.6 | 335.05 | 34.04 | 335.05 |
| 35.93 | 335.03 | 37.41 | 335.02 | 40.01 | 334.99 | 41.78 | 334.96 | 42 | 334.95 |
| 42.31 | 334.92 | 44.26 | 334.8 | 44.5 | 334.79 | 46.04 | 334.71 | 47.37 | 334.65 |
| 49.16 | 334.58 | 53.97 | 334.39 | 54.34 | 334.37 | 54.54 | 334.38 | 55.08 | 334.48 |
| 55.21 | 334.57 | 55.47 | 334.59 | 55.93 | 334.6 | 56.55 | 334.6 | 59.21 | 334.54 |
| 65.67 | 334.43 | 66.62 | 334.42 | 67.01 | 334.42 | 68.92 | 334.39 | 69.53 | 334.4 |
| 70.1 | 334.42 | 70.81 | 334.43 | 71.6 | 334.45 | 74.45 | 334.45 | 75.87 | 334.43 |
| 79.45 | 334.39 | 80.68 | 334.37 | 81.37 | 334.37 | 82.07 | 334.35 | 83.22 | 334.31 |
| 83.61 | 334.29 | 84.63 | 334.25 | 85.25 | 334.21 | 87.16 | 334.17 | 87.87 | 334.15 |
| 88.89 | 334.13 | 90.96 | 334.07 | 91.38 | 334.05 | 91.7 | 334.04 | 92 | 334.04 |
| 92.13 | 334.06 | 92.46 | 334.06 | 92.61 | 334.05 | 93.52 | 334.04 | 93.62 | 334.03 |
| 96.57 | 333.97 | 97.97 | 333.98 | 98.41 | 333.98 | 99.88 | 334.01 | 100.22 | 334.02 |
| 104.33 | 334.02 | 106.8 | 334 | 108.33 | 334 | 110.09 | 333.98 | 118.17 | 333.91 |
| 124.18 | 333.85 | 125.15 | 333.85 | 125.44 | 333.83 | 127.06 | 333.81 | 128.44 | 333.79 |
| 132.79 | 333.73 | 136 | 333.68 | 137.41 | 333.66 | 140.09 | 333.62 | 140.37 | 333.64 |
| 141.84 | 333.69 | 142.58 | 333.72 | 142.67 | 333.78 | 142.88 | 333.81 | 143.42 | 333.82 |
| 143.78 | 333.84 | 144.21 | 333.84 | 144.61 | 333.85 | 145.63 | 333.85 | 146.72 | 333.84 |
| 146.74 | 333.85 | 147.19 | 333.85 | 147.27 | 333.84 | 149.33 | 333.73 | 150.6 | 333.66 |
| 153.35 | 333.56 | 154.8 | 333.51 | 157.71 | 333.36 | 160.25 | 333.15 | 179.54 | 333.15 |
| 179.8 | 333.14 | 193.48 | 333.14 | 193.68 | 333.15 | 195.66 | 333.27 | 195.89 | 333.28 |
| 197.06 | 333.28 | 197.48 | 333.27 | 198.23 | 333.26 | 198.61 | 333.24 | 201.74 | 333.13 |
| 208.91 | 333.13 | 217.6 | 333.29 | 219.38 | 333.31 | 221.71 | 333.35 | 222.12 | 333.35 |
| 222.59 | 333.37 | 224.4 | 333.44 | 225.09 | 333.46 | 226.03 | 333.48 | 226.32 | 333.48 |
| 226.84 | 333.47 | 229.99 | 333.43 | 232.43 | 333.41 | 238.21 | 333.41 | 239.06 | 333.4 |
| 239.6 | 333.38 | 241.39 | 333.24 | 241.71 | 333.22 | 242.13 | 333.25 | 242.84 | 333.28 |
| 243.26 | 333.29 | 246.02 | 333.39 | 246.82 | 333.41 | 247.55 | 333.41 | 248.39 | 333.38 |
| 249.72 | 333.31 | 252.43 | 333.14 | 252.75 | 333.13 | 253.68 | 333.05 | 254.17 | 332.95 |
| 254.53 | 332.94 | 256.31 | 332.9 | 258.18 | 332.87 | 259.28 | 332.9 | 263.16 | 333.04 |
| 266.8 | 333.03 | 273.45 | 333.02 | 276.4 | 333.01 | 278.03 | 333.01 | 285.35 | 332.99 |
| 291.81 | 332.96 | 293.51 | 332.96 | 296.3 | 332.95 | 298.35 | 332.95 | 301.89 | 332.94 |
| 304.68 | 332.94 | 308.06 | 332.95 | 309.79 | 332.94 | 311.95 | 332.92 | 315.37 | 332.9 |
| 317.65 | 332.88 | 317.84 | 332.88 | 321.41 | 332.86 | 324.24 | 332.85 | 325.94 | 332.85 |
| 328.8 | 332.83 | 332.47 | 332.82 | 335.35 | 332.81 | 339.63 | 332.79 | 341.11 | 332.69 |
| 343.26 | 332.56 | 343.69 | 332.55 | 344.3 | 332.53 | 345.97 | 332.5 | 346.79 | 332.48 |
| 349.05 | 332.45 | 349.62 | 332.43 | 350.02 | 332.41 | 350.58 | 332.37 | 351 | 332.35 |
| 352.09 | 332.33 | 352.68 | 332.31 | 353.38 | 332.3 | 355.7 | 332.25 | 356.48 | 332.25 |
| 356.68 | 332.28 | 357.23 | 332.28 | 357.76 | 332.29 | 358.61 | 332.31 | 359.62 | 332.38 |
| 361.37 | 332.48 | 362.4 | 332.53 | 364.27 | 332.53 | 366.33 | 332.35 | 366.69 | 332.35 |
| 367.1 | 332.37 | 367.61 | 332.35 | 368.15 | 332.37 | 369.38 | 332.33 | 371.03 | 332.37 |
| 371.56 | 332.35 | 372.01 | 332.35 | 372.74 | 332.34 | 373.49 | 332.32 | 374.07 | 332.31 |
| 375.08 | 332.31 | 375.22 | 332.32 | 375.46 | 332.32 | 375.98 | 332.33 | 377.64 | 332.37 |
| 377.87 | 332.4 | 378.52 | 332.44 | 380.89 | 332.55 | 383.72 | 332.56 | 389.59 | 332.56 |
| 390.23 | 332.5 | 392.04 | 332.5 | 392.06 | 332.49 | 393.4 | 332.49 | 396.62 | 332.59 |
| 396.8 | 332.6 | 397.78 | 332.64 | 403.9 | 332.87 | 405.01 | 332.93 | 405.09 | 332.93 |
| 406.44 | 333.01 | 407.26 | 333.03 | 409.11 | 333.06 | 409.78 | 333.06 | 414.03 | 333.12 |
| 416.49 | 333.13 | 417.06 | 333.13 | 417.85 | 333.14 | 418.57 | 333.16 | 419.27 | 333.19 |
| 419.64 | 333.2 | 421.77 | 333.22 | 424.23 | 333.25 | 424.45 | 333.24 | 424.74 | 333.24 |
| 425.21 | 333.25 | 425.73 | 333.25 | 427.01 | 333.27 | 428.41 | 333.29 | 430.25 | 333.32 |
| 432.07 | 333.34 | 432.61 | 333.34 | 432.72 | 333.33 | 436.3 | 333.28 | 437.77 | 333.25 |
| 438.58 | 333.24 | 439.1 | 333.24 | 440.23 | 333.23 | 441.01 | 333.23 | 442.55 | 333.25 |
| 443.04 | 333.26 | 443.51 | 333.28 | 444.89 | 333.32 | 446.17 | 333.36 | 446.4 | 333.37 |
| 447.84 | 333.41 | 448.81 | 333.44 | 448.94 | 333.44 | 450.41 | 333.5 | 450.52 | 333.51 |
| 451.01 | 333.51 | 451.36 | 333.5 | 451.75 | 333.48 | 452.07 | 333.47 | 452.66 | 333.49 |
| 452.87 | 333.49 | 453.58 | 333.44 | 454 | 333.42 | 454.88 | 333.42 | 455.58 | 333.44 |
| 455.72 | 333.46 | 455.86 | 333.46 | 456.39 | 333.49 | 457.24 | 333.51 | 457.53 | 333.53 |
| 457.96 | 333.55 | 459.36 | 333.62 | 459.91 | 333.64 | 460.26 | 333.66 | 460.99 | 333.68 |
| 461.96 | 333.71 | 462 | 333.72 | 462.38 | 333.72 | 462.69 | 333.73 | 465.36 | 333.73 |
| 466.3 | 333.74 | 467.2 | 333.74 | 469.54 | 333.71 | 470.12 | 333.71 | 470.73 | 333.7 |
| 471.85 | 333.7 | 472.66 | 333.69 | 474.12 | 333.71 | 475.8 | 333.74 | 478.37 | 333.79 |
| 479.05 | 333.79 | 480.36 | 333.74 | 480.71 | 333.73 | 483.4 | 333.67 | 483.78 | 333.67 |
| 484.4 | 333.66 | 487.5 | 333.6 | 487.82 | 333.59 | 488.1 | 333.59 | 488.93 | 333.57 |
| 490.19 | 333.55 | 491.01 | 333.55 | 491.49 | 333.56 | 491.7 | 333.56 | 492.04 | 333.58 |
| 492.34 | 333.62 | 492.5 | 333.63 | 493.09 | 333.63 | 493.47 | 333.61 | 493.52 | 333.59 |
| 493.74 | 333.59 | 493.83 | 333.6 | 494.64 | 333.65 | 495.02 | 333.69 | 496.67 | 333.81 |
| 496.98 | 333.83 | 497.48 | 333.83 | 499.4 | 333.85 | 499.97 | 333.85 | 501.82 | 333.86 |
| 502.77 | 333.86 | 503.89 | 333.87 | 503.98 | 333.9 | 504.44 | 333.93 | 505.1 | 333.95 |
| 505.55 | 333.96 | 506.04 | 333.96 | 506.56 | 333.97 | 507.07 | 333.97 | 507.83 | 333.96 |
| 509.47 | 333.96 | 512.11 | 333.92 | 514.18 | 333.92 | 514.71 | 333.95 | 517.39 | 334.08 |
| 517.76 | 334.09 | 518.12 | 334.1 | 519.37 | 334.12 | 519.97 | 334.16 | 520.91 | 334.18 |
| 524.98 | 334.25 | 525.79 | 334.36 | 526.63 | 334.45 | 527.66 | 334.55 | 527.7 | 334.57 |
| 528.79 | 334.75 | 529.54 | 334.89 | 529.74 | 334.92 | 531.38 | 335.23 | 532.15 | 335.37 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 534.94 | 335.86 | 535.29 | 335.92 | 537.14 | 336.25 | 538.06 | 336.38 | 539.45 | 336.6 |
| 541.83 | 336.91 | 542.11 | 336.96 | 542.23 | 336.97 | 544.79 | 337.31 | 548.41 | 337.4 |
| 548.47 | 337.4 | 550.57 | 337.45 | 553.98 | 337.53 | 556.78 | 337.57 | 557.02 | 337.57 |
| 557.56 | 337.56 | 557.63 | 337.57 | 562.92 | 337.59 | 563.87 | 337.59 | 569.7 | 337.6 |
| 574.69 | 337.62 | 575.56 | 337.62 | 576.79 | 337.63 | 578.24 | 337.63 | 579.29 | 337.62 |
| 581.92 | 337.62 | 582.73 | 337.63 | 585.29 | 337.68 | 588.65 | 337.75 | 589.45 | 337.77 |
| 589.64 | 337.77 | 590.7 | 337.79 | 591.5 | 337.8 | 592.62 | 337.81 | 595.12 | 337.85 |
| 595.29 | 337.85 | 599.56 | 337.89 | 603.42 | 337.89 | 604.21 | 337.9 | 604.62 | 337.91 |
| 606.13 | 337.93 | 609.45 | 337.95 | 612.06 | 337.97 | 612.6 | 337.97 | 613.78 | 337.98 |
| 615.31 | 337.98 | 616.92 | 337.97 | 626.03 | 337.88 | 627.95 | 337.87 | 628.57 | 337.87 |
| 628.77 | 337.88 | 629.97 | 337.89 | 630.72 | 337.9 | 634.07 | 337.96 | 638.49 | 338.04 |
| 641.33 | 338.1 | 645.8 | 338.17 | 647.96 | 338.2 | 655.44 | 338.28 | 655.82 | 338.29 |
| 657 | 338.37 | 657.26 | 338.39 | 657.94 | 338.43 | 660.71 | 338.6 | 663.03 | 338.76 |
| 663.8 | 338.82 | 664.61 | 338.84 | 665.14 | 338.86 | 665.35 | 338.88 | 665.7 | 338.9 |
| 666.03 | 338.93 | 667.4 | 339.07 | 667.67 | 339.1 | 667.97 | 339.12 | 668.17 | 339.14 |
| 668.47 | 339.16 | 669.27 | 339.22 | 670.29 | 339.3 | 671.53 | 339.38 | 671.95 | 339.41 |
| 675.08 | 339.7 | 676.16 | 339.83 | 680.03 | 340.5 | 681.06 | 340.64 | 681.27 | 340.66 |
| 682.42 | 340.8 | 683.96 | 340.99 | 685.39 | 341.2 | 685.84 | 341.26 | 687.08 | 341.28 |
| 688.79 | 341.32 | 690.73 | 341.36 | 693.17 | 341.43 | 695.42 | 341.48 | 699.9 | 341.6 |
| 700.86 | 341.62 | 705.56 | 341.72 | 706.93 | 341.75 | 708.73 | 341.78 | 714.03 | 341.88 |
| 718.95 | 341.95 | 722.51 | 342 | 724.83 | 342.03 | 727.27 | 342.09 | 728.38 | 342.12 |
| 729.95 | 342.16 | 731.24 | 342.19 | 734.05 | 342.25 | 738.12 | 342.35 | 739.83 | 342.38 |
| 742.76 | 342.43 | 743.89 | 342.44 | 744.57 | 342.44 | 747.75 | 342.47 | 748.26 | 342.48 |
| 751.06 | 342.51 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 146.72 | .04 | 517.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 146.72 | 517.76 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1483.01*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 335 | .62 | 335 | .81 | 335.04 | .95 | 335.05 | 1.64 | 335.08 |
| 2.28 | 335.08 | 6.05 | 335.04 | 8.86 | 335.02 | 9.3 | 335.01 | 9.51 | 335.01 |
| 11.12 | 335 | 11.36 | 334.99 | 15.21 | 334.89 | 17.68 | 334.82 | 19.09 | 334.79 |
| 20.12 | 334.77 | 20.91 | 334.75 | 22.36 | 334.72 | 22.67 | 334.72 | 23.05 | 334.71 |
| 23.52 | 334.71 | 24.01 | 334.7 | 24.58 | 334.7 | 24.66 | 334.69 | 24.88 | 334.69 |
| 25.07 | 334.7 | 26.08 | 334.72 | 27.71 | 334.76 | 29.02 | 334.78 | 31.62 | 334.78 |
| 32.46 | 334.77 | 32.88 | 334.76 | 34.71 | 334.75 | 36.14 | 334.73 | 38.65 | 334.7 |
| 39.82 | 334.69 | 40.36 | 334.68 | 40.58 | 334.67 | 40.87 | 334.64 | 42.76 | 334.53 |
| 42.99 | 334.51 | 45.76 | 334.38 | 47.49 | 334.31 | 52.14 | 334.13 | 52.49 | 334.11 |
| 52.62 | 334.11 | 53.21 | 334.21 | 53.34 | 334.3 | 54.03 | 334.32 | 54.63 | 334.32 |
| 57.2 | 334.27 | 57.76 | 334.25 | 63.44 | 334.16 | 64.36 | 334.14 | 64.73 | 334.15 |
| 66.58 | 334.11 | 67.17 | 334.12 | 67.72 | 334.14 | 68.4 | 334.15 | 69.17 | 334.17 |
| 71.92 | 334.17 | 73.29 | 334.15 | 76.76 | 334.11 | 77.94 | 334.09 | 78.2 | 334.09 |
| 78.97 | 334.07 | 79.28 | 334.07 | 80.39 | 334.03 | 80.77 | 334.01 | 81.75 | 333.97 |
| 82.35 | 333.93 | 84.2 | 333.89 | 84.88 | 333.87 | 85.87 | 333.85 | 87.87 | 333.79 |
| 88.58 | 333.77 | 88.88 | 333.77 | 89 | 333.78 | 89.46 | 333.78 | 90.44 | 333.76 |
| 92.82 | 333.7 | 94.65 | 333.7 | 95.07 | 333.71 | 95.53 | 333.71 | 96.49 | 333.73 |
| 96.82 | 333.74 | 100.79 | 333.74 | 103.17 | 333.73 | 104.65 | 333.72 | 106.35 | 333.7 |
| 114.16 | 333.63 | 119.96 | 333.58 | 120.2 | 333.58 | 120.78 | 333.59 | 121.18 | 333.57 |
| 122.74 | 333.54 | 124.08 | 333.52 | 128.27 | 333.47 | 131.38 | 333.42 | 132.74 | 333.4 |
| 135.33 | 333.37 | 136.42 | 333.41 | 137.02 | 333.44 | 137.73 | 333.46 | 137.82 | 333.52 |
| 138.03 | 333.55 | 138.55 | 333.56 | 139.69 | 333.59 | 140.68 | 333.59 | 141.74 | 333.58 |
| 142.26 | 333.58 | 144.24 | 333.47 | 145.46 | 333.41 | 148.1 | 333.31 | 149.49 | 333.26 |
| 152.29 | 333.12 | 154.15 | 332.97 | 154.72 | 332.92 | 165.92 | 332.92 | 168.7 | 332.91 |
| 186.62 | 332.91 | 186.82 | 332.92 | 188.72 | 333.03 | 188.94 | 333.04 | 190.07 | 333.04 |
| 191.19 | 333.02 | 191.56 | 333 | 194.55 | 332.9 | 201.44 | 332.9 | 209.78 | 333.04 |
| 211.49 | 333.07 | 213.73 | 333.1 | 214.13 | 333.11 | 214.57 | 333.13 | 216.32 | 333.19 |
| 216.98 | 333.21 | 217.48 | 333.22 | 218.66 | 333.22 | 221.68 | 333.17 | 222.83 | 333.16 |
| 228.35 | 333.16 | 229.57 | 333.15 | 230.39 | 333.14 | 230.91 | 333.12 | 231.28 | 333.1 |
| 232.62 | 332.99 | 232.93 | 332.98 | 234.01 | 333.03 | 234.42 | 333.04 | 237.07 | 333.13 |
| 237.84 | 333.15 | 238.54 | 333.15 | 239.35 | 333.12 | 240.62 | 333.05 | 243.22 | 332.89 |
| 243.53 | 332.88 | 244.43 | 332.81 | 244.9 | 332.71 | 245.24 | 332.7 | 246.95 | 332.66 |
| 248.75 | 332.63 | 249.8 | 332.66 | 253.53 | 332.79 | 257.02 | 332.78 | 263.4 | 332.77 |
| 266.24 | 332.76 | 267.8 | 332.76 | 274.83 | 332.74 | 281.03 | 332.71 | 282.66 | 332.7 |
| 287.31 | 332.7 | 290.71 | 332.68 | 292.99 | 332.68 | 293.39 | 332.69 | 296.63 | 332.69 |
| 298.29 | 332.68 | 300.36 | 332.66 | 303.65 | 332.64 | 304.78 | 332.63 | 305.84 | 332.61 |
| 306.02 | 332.61 | 309.45 | 332.59 | 312.17 | 332.58 | 313.8 | 332.58 | 316.54 | 332.56 |
| 320.07 | 332.55 | 322.83 | 332.54 | 326.94 | 332.52 | 328.36 | 332.42 | 330.43 | 332.3 |
| 330.84 | 332.28 | 331.43 | 332.27 | 332.47 | 332.24 | 333.03 | 332.23 | 334.52 | 332.21 |
| 335.25 | 332.19 | 335.98 | 332.18 | 336.53 | 332.16 | 337.46 | 332.11 | 337.86 | 332.08 |
| 338.91 | 332.06 | 339.47 | 332.04 | 340.04 | 332.03 | 340.14 | 332.02 | 340.6 | 332.02 |
| 342.37 | 331.98 | 343.24 | 331.98 | 343.35 | 332.01 | 343.94 | 332.01 | 344.52 | 332.02 |
| 345.46 | 332.05 | 346.56 | 332.12 | 348.48 | 332.23 | 349.61 | 332.29 | 351.66 | 332.29 |
| 353.92 | 332.09 | 354.3 | 332.09 | 354.75 | 332.11 | 355.31 | 332.09 | 355.91 | 332.11 |
| 357.26 | 332.07 | 359.06 | 332.11 | 359.65 | 332.09 | 360.13 | 332.08 | 360.93 | 332.07 |
| 361.76 | 332.05 | 362.43 | 332.05 | 362.49 | 332.04 | 363.36 | 332.04 | 363.5 | 332.05 |
| 363.91 | 332.05 | 364.49 | 332.07 | 366.3 | 332.1 | 366.55 | 332.14 | 367.27 | 332.19 |
| 369.87 | 332.31 | 372.97 | 332.32 | 379.4 | 332.32 | 379.96 | 332.26 | 380.1 | 332.25 |
| 382.08 | 332.25 | 382.1 | 332.24 | 383.57 | 332.24 | 387.09 | 332.35 | 387.29 | 332.36 |
| 395.08 | 332.65 | 396.29 | 332.71 | 396.38 | 332.72 | 397.86 | 332.8 | 398.76 | 332.82 |
| 400.78 | 332.84 | 401.52 | 332.85 | 404.65 | 332.88 | 406.17 | 332.9 | 408.87 | 332.91 |
| 409.2 | 332.91 | 409.49 | 332.92 | 410.36 | 332.93 | 411.15 | 332.95 | 411.92 | 332.98 |
| 412.32 | 332.98 | 414.65 | 333.01 | 417.35 | 333.03 | 417.59 | 333.02 | 417.91 | 333.02 |
| 418.42 | 333.03 | 418.99 | 333.03 | 420.39 | 333.04 | 421.92 | 333.06 | 423.34 | 333.09 |
| 423.95 | 333.1 | 425.02 | 333.11 | 426.53 | 333.11 | 426.65 | 333.1 | 430.57 | 333.03 |
| 432.19 | 333 | 433.07 | 332.98 | 433.64 | 332.98 | 434.88 | 332.97 | 435.74 | 332.96 |
| 436.57 | 332.98 | 437.48 | 332.99 | 437.96 | 333 | 438.18 | 333.01 | 438.48 | 333.01 |
| 439.99 | 333.06 | 441.38 | 333.1 | 441.64 | 333.11 | 443.22 | 333.15 | 444.28 | 333.18 |
| 444.42 | 333.19 | 446.03 | 333.25 | 446.15 | 333.26 | 446.69 | 333.26 | 447.5 | 333.22 |
| 447.85 | 333.2 | 448.11 | 333.22 | 448.5 | 333.23 | 448.73 | 333.23 | 449.08 | 333.21 |
| 449.51 | 333.17 | 449.97 | 333.15 | 450.93 | 333.15 | 451.7 | 333.17 | 452 | 333.19 |
| 452.58 | 333.22 | 453.52 | 333.24 | 453.83 | 333.26 | 454.3 | 333.28 | 456.44 | 333.39 |
| 456.82 | 333.4 | 458.68 | 333.47 | 459.15 | 333.48 | 459.48 | 333.48 | 459.84 | 333.49 |
| 461.57 | 333.49 | 461.98 | 333.48 | 462.41 | 333.48 | 463.44 | 333.49 | 465.32 | 333.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 467 | 333.47 | 467.55 | 333.46 | 468.29 | 333.46 | 468.49 | 333.45 | 470.41 | 333.45 |
| 472.01 | 333.46 | 473.85 | 333.5 | 476.67 | 333.55 | 477.41 | 333.55 | 477.74 | 333.54 |
| 478.84 | 333.49 | 479.23 | 333.48 | 482.59 | 333.4 | 483.27 | 333.4 | 486.67 | 333.33 |
| 487.32 | 333.31 | 488.23 | 333.29 | 489.62 | 333.27 | 490.51 | 333.27 | 491.04 | 333.28 |
| 491.27 | 333.28 | 491.64 | 333.3 | 491.86 | 333.32 | 492.14 | 333.36 | 492.79 | 333.36 |
| 493.02 | 333.35 | 493.21 | 333.33 | 493.26 | 333.31 | 493.51 | 333.31 | 494.49 | 333.38 |
| 494.91 | 333.42 | 496.72 | 333.55 | 497.06 | 333.58 | 497.6 | 333.58 | 499.71 | 333.59 |
| 500.33 | 333.6 | 502.77 | 333.6 | 503.4 | 333.61 | 504.63 | 333.61 | 504.73 | 333.65 |
| 505.23 | 333.68 | 505.95 | 333.7 | 506.98 | 333.72 | 508.94 | 333.72 | 509.51 | 333.71 |
| 510.74 | 333.7 | 511.46 | 333.7 | 513.63 | 333.67 | 514.05 | 333.66 | 515.9 | 333.66 |
| 519.82 | 333.86 | 520.18 | 333.86 | 521.4 | 333.89 | 522.06 | 333.92 | 523 | 333.95 |
| 527.12 | 334.03 | 527.94 | 334.15 | 528.79 | 334.25 | 529.6 | 334.34 | 529.73 | 334.35 |
| 529.87 | 334.38 | 530.97 | 334.59 | 531.92 | 334.78 | 533.2 | 335.03 | 533.58 | 335.11 |
| 535.51 | 335.48 | 537.18 | 335.81 | 539.4 | 336.24 | 540.33 | 336.38 | 541.73 | 336.62 |
| 544.55 | 337.03 | 547.13 | 337.4 | 550.79 | 337.48 | 550.85 | 337.48 | 552.97 | 337.53 |
| 556.42 | 337.61 | 559.24 | 337.64 | 559.48 | 337.64 | 560.03 | 337.63 | 560.1 | 337.64 |
| 565.45 | 337.65 | 572.3 | 337.65 | 577.34 | 337.66 | 580.93 | 337.66 | 581.99 | 337.65 |
| 584.64 | 337.65 | 585.47 | 337.66 | 588.05 | 337.71 | 591.45 | 337.77 | 592.25 | 337.79 |
| 592.45 | 337.8 | 593.52 | 337.81 | 594.32 | 337.82 | 595.45 | 337.84 | 597.98 | 337.87 |
| 598.15 | 337.87 | 602.47 | 337.91 | 606.37 | 337.91 | 607.16 | 337.92 | 607.58 | 337.93 |
| 608.25 | 337.93 | 609.11 | 337.94 | 612.46 | 337.96 | 615.09 | 337.97 | 615.64 | 337.98 |
| 618.38 | 337.98 | 620.01 | 337.97 | 629.21 | 337.86 | 631.15 | 337.85 | 631.92 | 337.85 |
| 631.98 | 337.86 | 633.19 | 337.87 | 633.86 | 337.87 | 633.95 | 337.88 | 637.33 | 337.93 |
| 641.8 | 338 | 644.67 | 338.05 | 649.18 | 338.11 | 651.37 | 338.14 | 658.92 | 338.19 |
| 659.3 | 338.2 | 660.51 | 338.27 | 660.76 | 338.29 | 661.45 | 338.33 | 664.25 | 338.48 |
| 666.01 | 338.59 | 666.6 | 338.62 | 666.64 | 338.63 | 666.98 | 338.65 | 667.37 | 338.68 |
| 668.19 | 338.69 | 668.94 | 338.72 | 669.29 | 338.75 | 671.01 | 338.91 | 671.59 | 338.97 |
| 671.79 | 338.98 | 672.09 | 339.01 | 672.9 | 339.07 | 673.93 | 339.15 | 675.19 | 339.22 |
| 675.61 | 339.25 | 678.77 | 339.53 | 679.86 | 339.67 | 683.77 | 340.31 | 684.81 | 340.44 |
| 685.02 | 340.47 | 686.18 | 340.6 | 687.74 | 340.78 | 689.19 | 340.98 | 689.64 | 341.05 |
| 690.89 | 341.06 | 692.62 | 341.1 | 694.57 | 341.15 | 695.61 | 341.17 | 697.04 | 341.21 |
| 703.85 | 341.39 | 704.82 | 341.42 | 709.56 | 341.53 | 710.95 | 341.55 | 712.76 | 341.59 |
| 718.12 | 341.69 | 723.09 | 341.77 | 726.69 | 341.82 | 729.04 | 341.86 | 731.49 | 341.92 |
| 732.62 | 341.95 | 734.21 | 341.99 | 735.51 | 342.02 | 738.35 | 342.09 | 742.46 | 342.19 |
| 747.14 | 342.27 | 748.98 | 342.27 | 752.19 | 342.3 | 752.7 | 342.3 | 753.65 | 342.32 |
| 755.54 | 342.34 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 141.74 | .04 | 519.82 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 141.74 | 519.82 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1463.04*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.73 | .59 | 334.72 | .78 | 334.76 | 1.17 | 334.78 | 1.58 | 334.79 |
| 2.2 | 334.79 | 4.94 | 334.77 | 5.84 | 334.76 | 8.55 | 334.74 | 9.18 | 334.73 |
| 10.73 | 334.72 | 10.96 | 334.71 | 14.68 | 334.62 | 17.06 | 334.54 | 18.42 | 334.51 |
| 18.96 | 334.51 | 20.18 | 334.48 | 21.58 | 334.45 | 21.87 | 334.44 | 22.24 | 334.44 |
| 22.7 | 334.43 | 23.17 | 334.43 | 23.52 | 334.42 | 24 | 334.42 | 24.18 | 334.43 |
| 26.73 | 334.48 | 28 | 334.5 | 30.51 | 334.5 | 31.32 | 334.49 | 31.73 | 334.48 |
| 33.49 | 334.47 | 34.87 | 334.45 | 37.3 | 334.42 | 38.42 | 334.41 | 39.15 | 334.39 |
| 39.44 | 334.36 | 41.25 | 334.25 | 44.15 | 334.11 | 45.82 | 334.04 | 50.3 | 333.86 |
| 50.77 | 333.85 | 51.34 | 333.94 | 51.46 | 334.03 | 52.13 | 334.05 | 52.71 | 334.05 |
| 55.19 | 333.99 | 61.21 | 333.88 | 62.1 | 333.87 | 62.45 | 333.87 | 64.24 | 333.84 |
| 65.99 | 333.87 | 66.73 | 333.89 | 68.83 | 333.89 | 69.39 | 333.88 | 70.02 | 333.88 |
| 74.06 | 333.82 | 75.2 | 333.81 | 75.45 | 333.8 | 75.84 | 333.8 | 76.5 | 333.78 |
| 77.57 | 333.74 | 77.93 | 333.73 | 78.88 | 333.69 | 79.46 | 333.65 | 81.24 | 333.61 |
| 81.56 | 333.6 | 81.9 | 333.6 | 82.4 | 333.58 | 82.85 | 333.57 | 84.78 | 333.51 |
| 85.01 | 333.51 | 85.47 | 333.49 | 85.75 | 333.49 | 85.99 | 333.51 | 86.32 | 333.5 |
| 90.01 | 333.42 | 91.32 | 333.43 | 92.17 | 333.43 | 93.41 | 333.46 | 97.24 | 333.46 |
| 99.54 | 333.45 | 100.97 | 333.44 | 102.61 | 333.42 | 110.14 | 333.36 | 115.74 | 333.32 |
| 116.53 | 333.32 | 116.92 | 333.3 | 118.43 | 333.28 | 119.71 | 333.26 | 123.76 | 333.21 |
| 126.19 | 333.17 | 126.76 | 333.17 | 128.07 | 333.15 | 130.57 | 333.12 | 132.2 | 333.18 |
| 132.89 | 333.21 | 132.98 | 333.26 | 133.18 | 333.29 | 134.41 | 333.32 | 135.73 | 333.32 |
| 136.75 | 333.31 | 136.77 | 333.32 | 137.18 | 333.32 | 137.25 | 333.31 | 140.32 | 333.15 |
| 142.85 | 333.06 | 144.19 | 333.01 | 146.86 | 332.88 | 148.65 | 332.73 | 149.2 | 332.69 |
| 153.8 | 332.69 | 159.02 | 332.68 | 179.96 | 332.68 | 181.78 | 332.79 | 181.99 | 332.8 |
| 183.07 | 332.8 | 184.14 | 332.78 | 184.5 | 332.77 | 187.37 | 332.67 | 189.59 | 332.67 |
| 190.97 | 332.66 | 193.98 | 332.66 | 201.97 | 332.8 | 203.61 | 332.82 | 205.75 | 332.85 |
| 206.13 | 332.86 | 206.56 | 332.88 | 208.23 | 332.94 | 208.87 | 332.96 | 209.35 | 332.96 |
| 209.99 | 332.97 | 210.47 | 332.96 | 213.37 | 332.92 | 214.47 | 332.91 | 215.62 | 332.91 |
| 219.76 | 332.9 | 220.94 | 332.9 | 221.72 | 332.89 | 222.58 | 332.85 | 223.86 | 332.74 |
| 224.15 | 332.73 | 225.19 | 332.78 | 225.58 | 332.79 | 228.12 | 332.87 | 228.86 | 332.89 |
| 229.53 | 332.89 | 230.3 | 332.87 | 231.52 | 332.8 | 234.02 | 332.64 | 234.31 | 332.63 |
| 235.17 | 332.57 | 235.62 | 332.47 | 235.95 | 332.46 | 239.31 | 332.4 | 240.32 | 332.43 |
| 243.89 | 332.54 | 247.24 | 332.54 | 253.36 | 332.52 | 256.08 | 332.51 | 257.57 | 332.51 |
| 264.3 | 332.49 | 270.25 | 332.46 | 271.82 | 332.45 | 274.38 | 332.44 | 276.27 | 332.44 |
| 279.53 | 332.43 | 285.2 | 332.43 | 286.79 | 332.42 | 288.78 | 332.4 | 294.03 | 332.35 |
| 294.2 | 332.35 | 297.48 | 332.32 | 300.09 | 332.32 | 300.87 | 332.31 | 301.66 | 332.31 |
| 304.29 | 332.28 | 307.67 | 332.27 | 310.32 | 332.26 | 314.26 | 332.24 | 315.62 | 332.15 |
| 317.6 | 332.03 | 318.55 | 332 | 320.09 | 331.97 | 320.77 | 331.96 | 320.84 | 331.95 |
| 322.21 | 331.93 | 322.92 | 331.91 | 323.45 | 331.9 | 323.82 | 331.88 | 324.33 | 331.84 |
| 324.72 | 331.82 | 325.18 | 331.81 | 326.81 | 331.75 | 327.35 | 331.75 | 328.18 | 331.73 |
| 329.04 | 331.7 | 329.66 | 331.7 | 329.89 | 331.71 | 329.91 | 331.73 | 330.18 | 331.75 |
| 330.65 | 331.75 | 332.3 | 331.78 | 333.5 | 331.87 | 335.59 | 331.99 | 336.82 | 332.05 |
| 338.53 | 332.05 | 339.04 | 332.06 | 341.5 | 331.82 | 341.92 | 331.83 | 342.41 | 331.85 |
| 343.02 | 331.83 | 343.66 | 331.85 | 345.13 | 331.8 | 347.09 | 331.84 | 347.73 | 331.83 |
| 347.87 | 331.82 | 348.26 | 331.82 | 349.13 | 331.81 | 350.03 | 331.79 | 350.75 | 331.78 |
| 350.82 | 331.77 | 351.77 | 331.77 | 352.37 | 331.79 | 353 | 331.8 | 354.96 | 331.84 |
| 355.24 | 331.88 | 356.02 | 331.93 | 358.84 | 332.07 | 362.22 | 332.08 | 369.2 | 332.08 |
| 369.82 | 332.01 | 370.43 | 332 | 372.13 | 332 | 372.14 | 331.99 | 372.95 | 331.99 |
| 373.7 | 331.98 | 373.74 | 331.99 | 377.57 | 332.11 | 378.96 | 332.16 | 386.25 | 332.43 |
| 386.91 | 332.47 | 387.67 | 332.5 | 388.89 | 332.57 | 389.25 | 332.58 | 389.28 | 332.59 |
| 390.26 | 332.61 | 392.45 | 332.63 | 393.26 | 332.64 | 396.66 | 332.67 | 398.31 | 332.68 |
| 401.25 | 332.69 | 401.61 | 332.7 | 402.86 | 332.71 | 403.73 | 332.73 | 404.3 | 332.75 |
| 404.56 | 332.77 | 405 | 332.77 | 407.54 | 332.79 | 410.47 | 332.82 | 411.07 | 332.8 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 411.64 | 332.81 | 412.26 | 332.81 | 413.78 | 332.82 | 415.44 | 332.84 | 417.64 | 332.87 |
| 419.8 | 332.89 | 420.45 | 332.89 | 420.58 | 332.88 | 424.84 | 332.79 | 426.6 | 332.75 |
| 427.56 | 332.73 | 428.19 | 332.73 | 429.53 | 332.71 | 430.46 | 332.7 | 432.29 | 332.72 |
| 432.3 | 332.73 | 432.7 | 332.73 | 433.12 | 332.74 | 435.08 | 332.8 | 436.6 | 332.84 |
| 436.88 | 332.85 | 438.59 | 332.89 | 439.75 | 332.93 | 439.9 | 332.93 | 441.66 | 333 |
| 441.86 | 333.01 | 442.31 | 333.01 | 442.37 | 333 | 442.78 | 332.99 | 443.63 | 332.94 |
| 443.92 | 332.96 | 444.04 | 332.95 | 444.33 | 332.97 | 444.77 | 332.96 | 445.43 | 332.9 |
| 446.01 | 332.88 | 446.08 | 332.87 | 446.7 | 332.87 | 447.42 | 332.89 | 447.71 | 332.89 |
| 448.14 | 332.92 | 448.77 | 332.95 | 449.61 | 332.97 | 450.13 | 332.99 | 450.65 | 333.02 |
| 453.38 | 333.15 | 455.41 | 333.22 | 455.92 | 333.23 | 456.28 | 333.23 | 456.67 | 333.24 |
| 458.55 | 333.24 | 459.29 | 333.23 | 459.46 | 333.24 | 462.62 | 333.24 | 464.45 | 333.22 |
| 465.05 | 333.21 | 466.07 | 333.21 | 466.6 | 333.2 | 468.16 | 333.2 | 469.9 | 333.22 |
| 471.9 | 333.26 | 474.96 | 333.31 | 475.77 | 333.31 | 476.12 | 333.3 | 477.75 | 333.23 |
| 480.95 | 333.15 | 481.41 | 333.14 | 482.15 | 333.14 | 485.84 | 333.05 | 486.21 | 333.04 |
| 486.55 | 333.04 | 486.99 | 333.02 | 487.53 | 333.01 | 489.04 | 332.99 | 489.22 | 332.98 |
| 489.43 | 332.99 | 489.79 | 332.98 | 490.02 | 332.99 | 490.58 | 332.99 | 491.24 | 333.02 |
| 491.6 | 333.07 | 491.79 | 333.08 | 492.5 | 333.08 | 492.82 | 333.07 | 493 | 333.03 |
| 493.27 | 333.03 | 494.34 | 333.1 | 494.79 | 333.15 | 496.76 | 333.29 | 497.13 | 333.32 |
| 497.72 | 333.32 | 500.02 | 333.34 | 500.69 | 333.34 | 502.9 | 333.35 | 504.02 | 333.35 |
| 505.37 | 333.36 | 505.47 | 333.4 | 506.02 | 333.43 | 506.8 | 333.45 | 507.92 | 333.47 |
| 510.06 | 333.47 | 510.67 | 333.46 | 512.01 | 333.45 | 512.61 | 333.45 | 512.79 | 333.44 |
| 515.15 | 333.41 | 515.6 | 333.4 | 517.61 | 333.4 | 518.25 | 333.44 | 519.96 | 333.52 |
| 521.45 | 333.6 | 521.88 | 333.62 | 522.25 | 333.62 | 523.47 | 333.65 | 523.53 | 333.66 |
| 524.14 | 333.69 | 525.1 | 333.72 | 529.25 | 333.81 | 530.08 | 333.94 | 531.67 | 334.14 |
| 531.8 | 334.15 | 532.03 | 334.2 | 533.14 | 334.42 | 533.9 | 334.58 | 534.11 | 334.63 |
| 535.4 | 334.91 | 535.79 | 334.99 | 536.57 | 335.16 | 539.42 | 335.75 | 539.78 | 335.83 |
| 541.66 | 336.22 | 543.18 | 336.48 | 544.02 | 336.64 | 546.45 | 337.02 | 546.86 | 337.09 |
| 549.47 | 337.49 | 553.16 | 337.57 | 555.37 | 337.61 | 558.85 | 337.68 | 561.7 | 337.71 |
| 562.51 | 337.7 | 562.57 | 337.71 | 567.98 | 337.71 | 568.95 | 337.7 | 580.88 | 337.7 |
| 582.13 | 337.69 | 583.61 | 337.69 | 584.69 | 337.68 | 587.37 | 337.68 | 588.2 | 337.69 |
| 590.81 | 337.74 | 594.24 | 337.8 | 595.05 | 337.82 | 595.25 | 337.82 | 596.33 | 337.84 |
| 597.14 | 337.85 | 598.29 | 337.86 | 600.84 | 337.89 | 601.02 | 337.89 | 605.38 | 337.93 |
| 609.32 | 337.93 | 610.12 | 337.94 | 610.54 | 337.95 | 611.22 | 337.95 | 612.08 | 337.96 |
| 615.47 | 337.97 | 618.13 | 337.98 | 620.47 | 337.98 | 621.45 | 337.97 | 623.09 | 337.96 |
| 632.39 | 337.85 | 634.35 | 337.83 | 635.13 | 337.83 | 635.19 | 337.84 | 636.41 | 337.84 |
| 637.18 | 337.85 | 640.59 | 337.9 | 645.1 | 337.96 | 648 | 338 | 652.57 | 338.05 |
| 654.78 | 338.08 | 662.41 | 338.11 | 662.79 | 338.11 | 664.01 | 338.18 | 664.27 | 338.19 |
| 664.96 | 338.23 | 667.79 | 338.36 | 669.57 | 338.46 | 670.2 | 338.49 | 670.54 | 338.52 |
| 670.95 | 338.54 | 672.31 | 338.56 | 672.83 | 338.59 | 673.22 | 338.62 | 673.32 | 338.64 |
| 674.61 | 338.76 | 674.89 | 338.79 | 675.41 | 338.82 | 675.71 | 338.85 | 677.57 | 338.99 |
| 678.84 | 339.07 | 679.26 | 339.09 | 682.45 | 339.37 | 683.56 | 339.5 | 687.51 | 340.12 |
| 688.56 | 340.25 | 688.77 | 340.28 | 689.94 | 340.41 | 691.52 | 340.58 | 693.44 | 340.83 |
| 696.44 | 340.88 | 698.42 | 340.93 | 700.91 | 341 | 703.22 | 341.06 | 707.79 | 341.19 |
| 708.77 | 341.21 | 713.57 | 341.33 | 716.8 | 341.4 | 718.41 | 341.43 | 722.21 | 341.51 |
| 727.23 | 341.6 | 730.87 | 341.65 | 733.24 | 341.69 | 735.72 | 341.75 | 736.85 | 341.78 |
| 738.46 | 341.83 | 739.77 | 341.86 | 742.65 | 341.92 | 746.79 | 342.03 | 748.54 | 342.05 |
| 751.53 | 342.11 | 753.38 | 342.11 | 756.63 | 342.12 | 757.14 | 342.13 | 758.1 | 342.14 |
| 760.01 | 342.17 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 136.75 | .04 | 521.88 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136.75 | 521.88 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1443.07*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.45 | .57 | 334.44 | .75 | 334.48 | 1.12 | 334.5 | 1.53 | 334.51 |
| 2.12 | 334.51 | 4.76 | 334.49 | 5.63 | 334.48 | 8.23 | 334.46 | 8.84 | 334.45 |
| 10.34 | 334.44 | 10.56 | 334.43 | 14.14 | 334.34 | 16.44 | 334.27 | 17.75 | 334.24 |
| 18.71 | 334.22 | 19.44 | 334.21 | 20.79 | 334.18 | 21.07 | 334.17 | 21.42 | 334.17 |
| 21.87 | 334.16 | 22.32 | 334.16 | 22.67 | 334.15 | 23.13 | 334.15 | 23.3 | 334.16 |
| 24.25 | 334.17 | 25.76 | 334.2 | 26.97 | 334.22 | 28.62 | 334.22 | 29.4 | 334.21 |
| 30.17 | 334.21 | 30.57 | 334.2 | 32.27 | 334.19 | 33.59 | 334.17 | 35.94 | 334.14 |
| 37.52 | 334.11 | 37.72 | 334.11 | 38 | 334.07 | 39.75 | 333.97 | 39.97 | 333.96 |
| 42.54 | 333.83 | 44.15 | 333.77 | 48.47 | 333.6 | 48.68 | 333.59 | 48.98 | 333.59 |
| 49.47 | 333.67 | 49.59 | 333.76 | 49.82 | 333.77 | 50.79 | 333.77 | 53.65 | 333.71 |
| 53.7 | 333.71 | 58.98 | 333.61 | 59.83 | 333.59 | 60.18 | 333.6 | 61.89 | 333.56 |
| 62.44 | 333.57 | 62.95 | 333.59 | 64.3 | 333.61 | 66.32 | 333.61 | 66.86 | 333.6 |
| 67.47 | 333.6 | 71.36 | 333.54 | 72.46 | 333.52 | 73.08 | 333.52 | 73.71 | 333.5 |
| 74.74 | 333.46 | 75.09 | 333.45 | 76 | 333.41 | 76.56 | 333.37 | 78.28 | 333.33 |
| 78.59 | 333.32 | 78.91 | 333.32 | 79.4 | 333.3 | 79.83 | 333.29 | 81.69 | 333.24 |
| 82.35 | 333.21 | 82.63 | 333.21 | 82.85 | 333.23 | 83.17 | 333.22 | 86.73 | 333.14 |
| 87.99 | 333.15 | 88.38 | 333.15 | 88.81 | 333.16 | 89.7 | 333.17 | 89.76 | 333.18 |
| 93.7 | 333.18 | 95.92 | 333.17 | 98.87 | 333.15 | 106.13 | 333.09 | 111.52 | 333.05 |
| 112.28 | 333.05 | 112.66 | 333.03 | 114.11 | 333.01 | 115.35 | 333 | 121.59 | 332.92 |
| 122.14 | 332.91 | 123.41 | 332.9 | 125.81 | 332.87 | 127.38 | 332.93 | 128.05 | 332.95 |
| 128.13 | 333 | 128.32 | 333.03 | 128.8 | 333.04 | 129.51 | 333.06 | 130.79 | 333.06 |
| 131.77 | 333.05 | 131.79 | 333.06 | 132.18 | 333.06 | 132.25 | 333.05 | 134.07 | 332.96 |
| 135.18 | 332.9 | 137.6 | 332.81 | 138.88 | 332.76 | 141.44 | 332.64 | 143.15 | 332.5 |
| 143.67 | 332.46 | 145.19 | 332.46 | 148.07 | 332.45 | 171.71 | 332.45 | 172.92 | 332.44 |
| 174.84 | 332.55 | 175.04 | 332.56 | 176.08 | 332.56 | 176.45 | 332.55 | 177.1 | 332.54 |
| 177.44 | 332.53 | 180.19 | 332.43 | 186.51 | 332.43 | 194.15 | 332.56 | 195.72 | 332.58 |
| 197.77 | 332.61 | 198.14 | 332.61 | 198.54 | 332.63 | 200.14 | 332.69 | 200.75 | 332.7 |
| 201.57 | 332.72 | 201.83 | 332.72 | 202.29 | 332.71 | 205.06 | 332.67 | 207.21 | 332.65 |
| 211.18 | 332.65 | 212.3 | 332.64 | 213.05 | 332.63 | 213.87 | 332.59 | 215.09 | 332.49 |
| 215.37 | 332.48 | 216.19 | 332.52 | 216.37 | 332.52 | 216.74 | 332.54 | 219.88 | 332.63 |
| 220.52 | 332.63 | 221.26 | 332.61 | 222.42 | 332.54 | 224.81 | 332.4 | 225.91 | 332.32 |
| 226.35 | 332.23 | 226.66 | 332.22 | 228.23 | 332.19 | 229.88 | 332.16 | 230.84 | 332.19 |
| 234.26 | 332.3 | 237.46 | 332.29 | 243.31 | 332.27 | 245.91 | 332.27 | 247.34 | 332.26 |
| 253.78 | 332.23 | 259.47 | 332.2 | 260.97 | 332.2 | 263.42 | 332.19 | 265.23 | 332.18 |
| 268.35 | 332.17 | 273.78 | 332.17 | 275.3 | 332.15 | 277.2 | 332.14 | 281.25 | 332.1 |
| 282.22 | 332.08 | 282.38 | 332.08 | 285.52 | 332.06 | 288.02 | 332.05 | 288.76 | 332.04 |
| 289.52 | 332.04 | 292.03 | 332.01 | 295.26 | 332 | 297.8 | 331.99 | 301.57 | 331.96 |
| 302.87 | 331.87 | 305.14 | 331.75 | 305.68 | 331.74 | 306.63 | 331.71 | 307.14 | 331.7 |
| 308.51 | 331.68 | 309.85 | 331.64 | 310.36 | 331.63 | 310.71 | 331.61 | 311.21 | 331.57 |
| 311.57 | 331.55 | 312.02 | 331.54 | 313.58 | 331.48 | 313.67 | 331.48 | 315.71 | 331.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 316.3 | 331.43 | 316.54 | 331.44 | 316.56 | 331.46 | 316.85 | 331.48 | 317.37 | 331.48 |
| 318.05 | 331.49 | 319.15 | 331.52 | 320.45 | 331.61 | 322.7 | 331.74 | 324.03 | 331.82 |
| 326.43 | 331.82 | 329.08 | 331.56 | 329.54 | 331.57 | 330.07 | 331.6 | 330.32 | 331.58 |
| 330.72 | 331.56 | 331.42 | 331.59 | 333.01 | 331.54 | 335.12 | 331.58 | 335.81 | 331.56 |
| 336.39 | 331.56 | 338.3 | 331.52 | 339.04 | 331.51 | 340.52 | 331.51 | 341.5 | 331.54 |
| 343.63 | 331.58 | 343.92 | 331.62 | 344.76 | 331.68 | 347.82 | 331.83 | 351.46 | 331.84 |
| 359.01 | 331.84 | 359.68 | 331.77 | 359.84 | 331.76 | 360.33 | 331.75 | 362.17 | 331.75 |
| 362.19 | 331.74 | 363.05 | 331.74 | 363.91 | 331.73 | 368.05 | 331.87 | 368.28 | 331.88 |
| 369.55 | 331.92 | 377.43 | 332.22 | 378.14 | 332.25 | 378.85 | 332.29 | 378.96 | 332.29 |
| 380.28 | 332.36 | 381.75 | 332.4 | 384.12 | 332.41 | 384.23 | 332.42 | 384.99 | 332.42 |
| 388.67 | 332.45 | 390.46 | 332.47 | 393.63 | 332.48 | 394.35 | 332.48 | 395.37 | 332.49 |
| 396.31 | 332.51 | 396.93 | 332.54 | 397.21 | 332.56 | 397.68 | 332.56 | 400.42 | 332.58 |
| 403.59 | 332.6 | 403.87 | 332.59 | 405.52 | 332.59 | 407.16 | 332.6 | 408.96 | 332.62 |
| 411.34 | 332.65 | 412.6 | 332.66 | 414.37 | 332.66 | 414.52 | 332.65 | 419.12 | 332.55 |
| 421.01 | 332.5 | 422.05 | 332.48 | 422.33 | 332.47 | 422.73 | 332.47 | 424.18 | 332.45 |
| 425.18 | 332.44 | 427.16 | 332.46 | 427.8 | 332.47 | 428.05 | 332.48 | 430.18 | 332.54 |
| 431.81 | 332.58 | 432.11 | 332.59 | 433.97 | 332.63 | 435.22 | 332.67 | 435.38 | 332.68 |
| 437.28 | 332.75 | 437.64 | 332.75 | 437.73 | 332.76 | 438.49 | 332.73 | 439 | 332.7 |
| 439.42 | 332.68 | 439.72 | 332.7 | 439.85 | 332.69 | 440.17 | 332.71 | 440.64 | 332.7 |
| 441.36 | 332.63 | 441.9 | 332.61 | 441.98 | 332.6 | 443.03 | 332.6 | 443.93 | 332.62 |
| 444.11 | 332.64 | 444.72 | 332.67 | 444.97 | 332.67 | 445.63 | 332.7 | 445.87 | 332.7 |
| 446.43 | 332.73 | 446.99 | 332.75 | 448.8 | 332.85 | 449.5 | 332.88 | 449.95 | 332.89 |
| 450.89 | 332.93 | 452.14 | 332.97 | 452.32 | 332.98 | 452.68 | 332.98 | 453.08 | 332.99 |
| 456.52 | 332.99 | 457.72 | 333 | 458.89 | 333 | 461.9 | 332.97 | 462.55 | 332.96 |
| 464.87 | 332.96 | 465.65 | 332.95 | 465.91 | 332.95 | 467.79 | 332.98 | 469.95 | 333.02 |
| 473.26 | 333.07 | 473.65 | 333.07 | 473.93 | 333.08 | 474.51 | 333.06 | 476.27 | 332.98 |
| 479.73 | 332.89 | 480.22 | 332.88 | 481.02 | 332.88 | 485.41 | 332.77 | 485.77 | 332.76 |
| 486.84 | 332.74 | 487.58 | 332.72 | 488.47 | 332.71 | 488.66 | 332.7 | 489.28 | 332.7 |
| 489.52 | 332.71 | 490.13 | 332.71 | 490.61 | 332.73 | 490.85 | 332.73 | 491.23 | 332.79 |
| 491.44 | 332.81 | 491.99 | 332.81 | 492.55 | 332.79 | 492.75 | 332.75 | 493.04 | 332.75 |
| 493.36 | 332.77 | 494.19 | 332.83 | 494.68 | 332.88 | 497.21 | 333.07 | 497.85 | 333.07 |
| 500.32 | 333.08 | 501.05 | 333.09 | 503.92 | 333.09 | 504.65 | 333.1 | 506.1 | 333.1 |
| 506.22 | 333.15 | 506.81 | 333.18 | 507.65 | 333.2 | 508.86 | 333.22 | 511.17 | 333.22 |
| 511.83 | 333.21 | 513.27 | 333.2 | 514.12 | 333.19 | 516.67 | 333.15 | 517.16 | 333.14 |
| 519 | 333.14 | 519.33 | 333.15 | 520.28 | 333.19 | 521.86 | 333.28 | 523.47 | 333.36 |
| 523.94 | 333.38 | 524.31 | 333.38 | 525.55 | 333.42 | 525.61 | 333.42 | 526.22 | 333.46 |
| 527.19 | 333.49 | 531.39 | 333.58 | 532.22 | 333.73 | 534.05 | 333.98 | 535.32 | 334.26 |
| 536.29 | 334.48 | 537.6 | 334.78 | 537.99 | 334.88 | 538.78 | 335.06 | 542.02 | 335.78 |
| 543.93 | 336.21 | 544.87 | 336.37 | 546.3 | 336.66 | 548.76 | 337.07 | 549.05 | 337.12 |
| 551.81 | 337.58 | 555.54 | 337.65 | 555.6 | 337.65 | 557.77 | 337.69 | 561.29 | 337.76 |
| 564.17 | 337.78 | 564.42 | 337.78 | 564.98 | 337.77 | 565.05 | 337.78 | 570.51 | 337.77 |
| 571.49 | 337.76 | 577.49 | 337.74 | 582.64 | 337.74 | 583.54 | 337.73 | 584.81 | 337.73 |
| 586.3 | 337.72 | 587.38 | 337.71 | 587.75 | 337.72 | 588.8 | 337.71 | 590.09 | 337.71 |
| 590.93 | 337.72 | 593.57 | 337.76 | 597.03 | 337.83 | 597.85 | 337.85 | 599.15 | 337.86 |
| 599.97 | 337.87 | 601.12 | 337.89 | 603.7 | 337.92 | 606.04 | 337.93 | 608.28 | 337.95 |
| 612.26 | 337.95 | 613.07 | 337.96 | 613.5 | 337.96 | 614.18 | 337.97 | 615.06 | 337.97 |
| 618.48 | 337.98 | 623.53 | 337.98 | 624.51 | 337.97 | 626.18 | 337.96 | 635.57 | 337.83 |
| 637.55 | 337.81 | 638.34 | 337.81 | 638.4 | 337.82 | 639.63 | 337.82 | 640.41 | 337.83 |
| 643.86 | 337.87 | 648.41 | 337.92 | 651.34 | 337.96 | 655.95 | 337.99 | 658.19 | 338.01 |
| 665.89 | 338.02 | 666.28 | 338.02 | 667.51 | 338.08 | 671.33 | 338.24 | 673.13 | 338.33 |
| 673.72 | 338.35 | 673.77 | 338.36 | 674.52 | 338.41 | 675.35 | 338.4 | 675.89 | 338.41 |
| 676.47 | 338.44 | 678.22 | 338.6 | 678.82 | 338.66 | 679.33 | 338.69 | 681.21 | 338.83 |
| 682.49 | 338.91 | 682.92 | 338.94 | 686.14 | 339.21 | 687.25 | 339.33 | 691.24 | 339.94 |
| 692.31 | 340.06 | 692.53 | 340.08 | 693.71 | 340.21 | 695.3 | 340.37 | 696.77 | 340.56 |
| 697.24 | 340.61 | 698.52 | 340.63 | 700.27 | 340.67 | 702.27 | 340.72 | 704.79 | 340.79 |
| 707.12 | 340.85 | 711.73 | 340.99 | 712.72 | 341.01 | 717.57 | 341.13 | 720.83 | 341.2 |
| 722.46 | 341.24 | 726.3 | 341.32 | 731.37 | 341.42 | 735.05 | 341.48 | 737.44 | 341.52 |
| 738.7 | 341.55 | 739.95 | 341.59 | 741.09 | 341.62 | 742.71 | 341.66 | 744.04 | 341.69 |
| 751.13 | 341.86 | 755.92 | 341.94 | 757.79 | 341.94 | 761.07 | 341.95 | 761.59 | 341.96 |
| 764.48 | 341.99 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 131.77 | .04 | 523.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 131.77 | 523.94 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1423.10*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 334.17 | .55 | 334.17 | .72 | 334.2 | 1.08 | 334.22 | 1.47 | 334.23 |
| 2.04 | 334.23 | 4.58 | 334.21 | 5.42 | 334.2 | 7.92 | 334.18 | 8.51 | 334.17 |
| 9.95 | 334.16 | 10.16 | 334.15 | 13.61 | 334.06 | 15.82 | 333.99 | 16.67 | 333.97 |
| 17.07 | 333.97 | 18 | 333.95 | 18.7 | 333.94 | 20 | 333.91 | 20.27 | 333.9 |
| 20.61 | 333.9 | 21.04 | 333.89 | 21.48 | 333.89 | 21.81 | 333.88 | 22.42 | 333.88 |
| 23.33 | 333.9 | 24.79 | 333.92 | 25.95 | 333.94 | 27.54 | 333.94 | 29.03 | 333.92 |
| 29.41 | 333.92 | 31.05 | 333.9 | 32.32 | 333.89 | 34.58 | 333.85 | 35.62 | 333.84 |
| 36.11 | 333.83 | 36.3 | 333.82 | 36.56 | 333.79 | 38.25 | 333.7 | 38.46 | 333.68 |
| 39.78 | 333.62 | 40.93 | 333.56 | 46.64 | 333.34 | 47.13 | 333.33 | 47.59 | 333.41 |
| 47.71 | 333.48 | 48.33 | 333.5 | 48.86 | 333.5 | 51.17 | 333.44 | 56.75 | 333.33 |
| 57.57 | 333.32 | 57.9 | 333.32 | 59.55 | 333.29 | 60.57 | 333.31 | 61.87 | 333.33 |
| 63.81 | 333.33 | 64.33 | 333.32 | 64.91 | 333.32 | 68.66 | 333.26 | 70.31 | 333.23 |
| 70.63 | 333.23 | 71.91 | 333.18 | 72.25 | 333.17 | 73.13 | 333.13 | 73.66 | 333.09 |
| 75.32 | 333.05 | 75.62 | 333.04 | 75.93 | 333.04 | 76.4 | 333.02 | 78.6 | 332.96 |
| 78.96 | 332.94 | 79.5 | 332.93 | 79.72 | 332.95 | 80.02 | 332.94 | 83.45 | 332.86 |
| 84.66 | 332.87 | 85.04 | 332.87 | 85.45 | 332.88 | 86.31 | 332.89 | 86.37 | 332.9 |
| 90.15 | 332.9 | 92.29 | 332.89 | 93.61 | 332.89 | 95.13 | 332.87 | 102.11 | 332.82 |
| 107.3 | 332.78 | 108.04 | 332.78 | 108.4 | 332.76 | 109.79 | 332.74 | 110.99 | 332.73 |
| 114.74 | 332.69 | 116.99 | 332.66 | 117.52 | 332.65 | 121.05 | 332.62 | 122.03 | 332.65 |
| 122.57 | 332.67 | 123.2 | 332.7 | 123.28 | 332.74 | 123.47 | 332.77 | 124.24 | 332.79 |
| 124.61 | 332.79 | 124.95 | 332.8 | 125.84 | 332.8 | 126.78 | 332.79 | 127.24 | 332.79 |
| 128.98 | 332.7 | 130.04 | 332.64 | 132.35 | 332.56 | 133.57 | 332.51 | 136.02 | 332.39 |
| 137.65 | 332.26 | 138.15 | 332.23 | 139.6 | 332.22 | 154.82 | 332.22 | 155.1 | 332.21 |
| 166.07 | 332.21 | 168.09 | 332.32 | 169.08 | 332.32 | 170.06 | 332.3 | 170.39 | 332.29 |
| 173.01 | 332.2 | 177.87 | 332.2 | 179.04 | 332.19 | 186.34 | 332.31 | 187.83 | 332.33 |
| 189.79 | 332.36 | 190.14 | 332.36 | 190.53 | 332.38 | 192.64 | 332.45 | 193.08 | 332.46 |
| 194.1 | 332.46 | 196.75 | 332.42 | 198.8 | 332.4 | 202.59 | 332.39 | 203.66 | 332.39 |
| 204.37 | 332.38 | 205.16 | 332.34 | 206.6 | 332.23 | 207.38 | 332.27 | 207.9 | 332.28 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 210.22 | 332.36 | 210.89 | 332.37 | 211.51 | 332.37 | 212.21 | 332.35 | 213.33 | 332.29 |
| 215.61 | 332.15 | 215.87 | 332.14 | 216.66 | 332.08 | 217.07 | 331.99 | 217.37 | 331.99 |
| 218.87 | 331.95 | 220.44 | 331.93 | 221.36 | 331.95 | 224.62 | 332.05 | 227.68 | 332.04 |
| 233.27 | 332.03 | 235.75 | 332.02 | 237.11 | 332.01 | 243.26 | 331.98 | 248.7 | 331.95 |
| 250.12 | 331.94 | 252.47 | 331.93 | 254.19 | 331.93 | 257.17 | 331.91 | 262.26 | 331.91 |
| 262.35 | 331.9 | 263.8 | 331.89 | 265.62 | 331.87 | 268.49 | 331.85 | 269.48 | 331.83 |
| 273.56 | 331.79 | 275.95 | 331.78 | 276.65 | 331.77 | 277.37 | 331.77 | 279.78 | 331.74 |
| 282.86 | 331.73 | 285.28 | 331.71 | 288.88 | 331.69 | 290.12 | 331.6 | 291.93 | 331.5 |
| 292.8 | 331.47 | 294.2 | 331.44 | 294.89 | 331.43 | 295.51 | 331.41 | 296.15 | 331.4 |
| 296.79 | 331.38 | 297.61 | 331.34 | 298.08 | 331.3 | 298.43 | 331.28 | 298.86 | 331.27 |
| 300.34 | 331.21 | 300.43 | 331.2 | 300.83 | 331.2 | 302.38 | 331.16 | 303.05 | 331.16 |
| 303.21 | 331.19 | 303.53 | 331.21 | 304.08 | 331.21 | 304.81 | 331.22 | 305.99 | 331.25 |
| 307.39 | 331.35 | 309.81 | 331.5 | 311.23 | 331.58 | 313.82 | 331.58 | 316.67 | 331.3 |
| 317.15 | 331.31 | 317.72 | 331.34 | 318 | 331.31 | 318.43 | 331.3 | 319.18 | 331.33 |
| 320.88 | 331.27 | 323.16 | 331.32 | 323.9 | 331.3 | 324.51 | 331.29 | 325.52 | 331.28 |
| 326.56 | 331.25 | 327.37 | 331.24 | 328.76 | 331.24 | 328.96 | 331.25 | 329.28 | 331.25 |
| 330.01 | 331.27 | 332.29 | 331.32 | 332.61 | 331.36 | 333.51 | 331.43 | 336.79 | 331.59 |
| 340.71 | 331.6 | 348.82 | 331.6 | 349.53 | 331.52 | 349.71 | 331.51 | 350.24 | 331.51 |
| 352.21 | 331.5 | 352.23 | 331.49 | 353.16 | 331.49 | 354.08 | 331.48 | 358.53 | 331.63 |
| 360.14 | 331.69 | 368.61 | 332 | 369.37 | 332.04 | 370.13 | 332.07 | 370.25 | 332.08 |
| 371.66 | 332.15 | 373.25 | 332.18 | 375.8 | 332.2 | 376.73 | 332.21 | 380.68 | 332.24 |
| 382.6 | 332.25 | 386.01 | 332.26 | 386.79 | 332.26 | 388.89 | 332.3 | 389.55 | 332.32 |
| 389.85 | 332.34 | 390.36 | 332.34 | 393.3 | 332.36 | 396.71 | 332.38 | 397.01 | 332.37 |
| 398.78 | 332.37 | 400.54 | 332.38 | 402.48 | 332.4 | 405.03 | 332.43 | 407.54 | 332.43 |
| 408.17 | 332.44 | 408.45 | 332.42 | 415.43 | 332.25 | 416.55 | 332.22 | 418.83 | 332.19 |
| 419.91 | 332.18 | 422.03 | 332.2 | 422.71 | 332.21 | 422.99 | 332.22 | 423.36 | 332.22 |
| 425.27 | 332.28 | 427.03 | 332.33 | 427.35 | 332.33 | 429.35 | 332.38 | 430.69 | 332.41 |
| 430.86 | 332.42 | 432.9 | 332.49 | 433.05 | 332.5 | 433.73 | 332.5 | 434.21 | 332.48 |
| 434.75 | 332.44 | 435.2 | 332.42 | 435.53 | 332.44 | 435.67 | 332.43 | 436.01 | 332.44 |
| 436.52 | 332.44 | 436.75 | 332.42 | 437.28 | 332.36 | 437.86 | 332.34 | 437.95 | 332.33 |
| 439.08 | 332.33 | 440.05 | 332.35 | 440.43 | 332.38 | 440.89 | 332.39 | 441.87 | 332.43 |
| 442.13 | 332.43 | 443.34 | 332.49 | 445.27 | 332.59 | 447.53 | 332.68 | 448.86 | 332.72 |
| 449.06 | 332.73 | 449.45 | 332.73 | 449.87 | 332.74 | 450.32 | 332.74 | 450.78 | 332.75 |
| 452.51 | 332.74 | 453.57 | 332.74 | 454.86 | 332.75 | 457.23 | 332.75 | 459.35 | 332.73 |
| 460.99 | 332.71 | 463.39 | 332.71 | 463.66 | 332.7 | 465.68 | 332.73 | 468 | 332.78 |
| 471.55 | 332.83 | 471.97 | 332.84 | 472.27 | 332.84 | 472.9 | 332.82 | 474.3 | 332.75 |
| 474.79 | 332.73 | 478.5 | 332.63 | 479.03 | 332.62 | 479.89 | 332.62 | 484.18 | 332.51 |
| 484.61 | 332.5 | 485 | 332.48 | 486.14 | 332.46 | 486.94 | 332.44 | 487.89 | 332.42 |
| 489.02 | 332.42 | 489.68 | 332.43 | 489.98 | 332.43 | 490.45 | 332.45 | 490.87 | 332.51 |
| 491.18 | 332.54 | 491.56 | 332.53 | 491.9 | 332.53 | 492.18 | 332.52 | 492.43 | 332.49 |
| 492.49 | 332.47 | 492.92 | 332.47 | 493.15 | 332.49 | 494.04 | 332.55 | 494.57 | 332.61 |
| 496.85 | 332.78 | 496.89 | 332.79 | 497.28 | 332.81 | 497.97 | 332.82 | 500.63 | 332.83 |
| 501.41 | 332.83 | 503.97 | 332.84 | 506.84 | 332.84 | 506.96 | 332.89 | 507.15 | 332.91 |
| 507.99 | 332.95 | 509.12 | 332.97 | 509.8 | 332.97 | 510.52 | 332.98 | 511.22 | 332.97 |
| 512.28 | 332.97 | 513 | 332.96 | 514.54 | 332.95 | 515.45 | 332.94 | 518.72 | 332.88 |
| 520.4 | 332.88 | 520.7 | 332.89 | 521.05 | 332.89 | 521.79 | 332.92 | 522.06 | 332.94 |
| 525.5 | 333.12 | 526 | 333.14 | 527.63 | 333.18 | 527.68 | 333.19 | 528.31 | 333.22 |
| 529.28 | 333.25 | 533.52 | 333.36 | 534.37 | 333.52 | 535.24 | 333.65 | 536.21 | 333.79 |
| 536.36 | 333.83 | 537.49 | 334.09 | 538.48 | 334.33 | 539.8 | 334.66 | 540.19 | 334.76 |
| 540.99 | 334.95 | 542.18 | 335.24 | 543.9 | 335.65 | 544.26 | 335.74 | 546.19 | 336.2 |
| 547.15 | 336.37 | 547.74 | 336.5 | 548.59 | 336.68 | 551.07 | 337.12 | 551.49 | 337.2 |
| 554.15 | 337.67 | 557.92 | 337.74 | 560.17 | 337.78 | 563.73 | 337.84 | 566.89 | 337.85 |
| 567.52 | 337.84 | 573.04 | 337.82 | 574.02 | 337.82 | 580.09 | 337.79 | 585.29 | 337.77 |
| 586.2 | 337.77 | 588.99 | 337.75 | 590.08 | 337.74 | 590.45 | 337.75 | 591.51 | 337.74 |
| 591.88 | 337.73 | 592.21 | 337.74 | 592.81 | 337.73 | 593.66 | 337.74 | 596.33 | 337.79 |
| 599.83 | 337.85 | 600.66 | 337.87 | 600.86 | 337.88 | 602.79 | 337.9 | 603.96 | 337.91 |
| 606.56 | 337.94 | 608.92 | 337.95 | 611.19 | 337.97 | 615.21 | 337.97 | 616.03 | 337.98 |
| 616.45 | 337.98 | 617.15 | 337.99 | 618.03 | 337.99 | 621.49 | 337.98 | 626.59 | 337.98 |
| 629.26 | 337.95 | 638.76 | 337.82 | 640.75 | 337.8 | 640.82 | 337.79 | 641.6 | 337.79 |
| 642.85 | 337.8 | 643.64 | 337.8 | 647.12 | 337.84 | 651.72 | 337.88 | 654.68 | 337.91 |
| 659.34 | 337.94 | 661.59 | 337.95 | 669.37 | 337.93 | 669.77 | 337.93 | 671.01 | 337.98 |
| 671.27 | 338 | 671.98 | 338.02 | 674.87 | 338.12 | 676.69 | 338.19 | 677.68 | 338.24 |
| 678.09 | 338.27 | 678.93 | 338.26 | 679.48 | 338.26 | 680.06 | 338.29 | 681.83 | 338.45 |
| 682.12 | 338.48 | 682.64 | 338.51 | 682.95 | 338.54 | 683.78 | 338.6 | 684.85 | 338.67 |
| 686.14 | 338.75 | 686.57 | 338.78 | 689.83 | 339.05 | 690.95 | 339.17 | 694.98 | 339.75 |
| 696.06 | 339.87 | 699.08 | 340.17 | 700.57 | 340.34 | 701.03 | 340.39 | 702.33 | 340.41 |
| 704.1 | 340.45 | 706.12 | 340.5 | 707.19 | 340.53 | 708.66 | 340.58 | 711.01 | 340.64 |
| 716.68 | 340.81 | 721.57 | 340.94 | 724.87 | 341.01 | 726.51 | 341.05 | 730.39 | 341.13 |
| 735.51 | 341.24 | 739.22 | 341.3 | 741.64 | 341.35 | 742.91 | 341.38 | 744.17 | 341.42 |
| 745.33 | 341.45 | 746.97 | 341.5 | 748.31 | 341.53 | 751.24 | 341.59 | 755.47 | 341.7 |
| 760.3 | 341.78 | 761.49 | 341.77 | 762.19 | 341.77 | 765.51 | 341.78 | 766.03 | 341.79 |
| 768.96 | 341.82 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 126.78 | .04 | 526 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 126.78 | 526 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1403.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.89 | .53 | 333.89 | .69 | 333.92 | 1.04 | 333.94 | 1.41 | 333.95 |
| 1.96 | 333.95 | 4.4 | 333.93 | 5.2 | 333.92 | 7.61 | 333.9 | 8.17 | 333.89 |
| 9.56 | 333.88 | 9.76 | 333.87 | 13.07 | 333.78 | 15.2 | 333.72 | 16.89 | 333.68 |
| 17.29 | 333.68 | 17.97 | 333.66 | 19.8 | 333.63 | 20.21 | 333.62 | 20.63 | 333.62 |
| 20.95 | 333.61 | 21.54 | 333.61 | 22.41 | 333.63 | 23.81 | 333.65 | 24.93 | 333.66 |
| 26.45 | 333.66 | 27.89 | 333.64 | 28.26 | 333.64 | 29.83 | 333.62 | 31.05 | 333.6 |
| 33.22 | 333.57 | 34.22 | 333.56 | 34.87 | 333.54 | 35.12 | 333.51 | 36.74 | 333.42 |
| 38.22 | 333.34 | 39.32 | 333.29 | 40.81 | 333.23 | 44.8 | 333.08 | 45.22 | 333.06 |
| 45.72 | 333.14 | 45.83 | 333.21 | 46.05 | 333.22 | 46.94 | 333.22 | 49.63 | 333.16 |
| 54.52 | 333.06 | 55.62 | 333.05 | 57.21 | 333.02 | 57.72 | 333.02 | 59.44 | 333.05 |
| 61.3 | 333.05 | 61.8 | 333.04 | 62.36 | 333.04 | 62.98 | 333.02 | 65.96 | 332.98 |
| 66.98 | 332.96 | 67.2 | 332.95 | 67.55 | 332.95 | 68.13 | 332.94 | 69.08 | 332.9 |
| 69.41 | 332.89 | 70.25 | 332.85 | 70.77 | 332.81 | 72.35 | 332.77 | 72.94 | 332.76 |
| 73.39 | 332.74 | 75.86 | 332.67 | 76.37 | 332.66 | 76.75 | 332.67 | 76.88 | 332.66 |
| 77.63 | 332.65 | 77.72 | 332.64 | 79.76 | 332.59 | 81.69 | 332.59 | 82.09 | 332.6 |
| 82.91 | 332.61 | 82.97 | 332.62 | 86.61 | 332.62 | 88.66 | 332.61 | 89.93 | 332.61 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 91.39 | 332.59 | 98.1 | 332.55 | 103.08 | 332.51 | 103.89 | 332.51 | 104.13 | 332.5 |
| 105.47 | 332.48 | 106.62 | 332.47 | 110.23 | 332.43 | 112.39 | 332.4 | 112.9 | 332.4 |
| 114.07 | 332.39 | 116.29 | 332.36 | 117.23 | 332.4 | 118.36 | 332.44 | 118.44 | 332.48 |
| 118.66 | 332.51 | 119.36 | 332.53 | 119.71 | 332.53 | 120.04 | 332.54 | 120.89 | 332.54 |
| 121.8 | 332.53 | 122.17 | 332.53 | 122.23 | 332.52 | 124.9 | 332.39 | 127.1 | 332.31 |
| 128.26 | 332.27 | 130.59 | 332.15 | 132.15 | 332.03 | 132.62 | 332 | 134 | 331.99 |
| 148.06 | 331.99 | 148.27 | 331.98 | 159.38 | 331.98 | 161.14 | 332.08 | 162.09 | 332.08 |
| 163.02 | 332.06 | 165.83 | 331.97 | 167.76 | 331.97 | 168.96 | 331.96 | 171.57 | 331.96 |
| 178.52 | 332.07 | 179.95 | 332.09 | 181.81 | 332.11 | 182.51 | 332.13 | 184.52 | 332.2 |
| 184.94 | 332.2 | 185.5 | 332.21 | 185.92 | 332.2 | 188.44 | 332.16 | 189.4 | 332.15 |
| 190.39 | 332.15 | 194 | 332.14 | 195.02 | 332.13 | 195.7 | 332.12 | 196.45 | 332.09 |
| 197.56 | 332 | 197.82 | 331.99 | 198.16 | 332.01 | 198.72 | 332.02 | 201.27 | 332.1 |
| 201.91 | 332.11 | 202.49 | 332.11 | 203.17 | 332.09 | 204.23 | 332.03 | 206.4 | 331.9 |
| 206.51 | 331.9 | 207.4 | 331.84 | 207.8 | 331.76 | 208.08 | 331.75 | 211 | 331.69 |
| 211.88 | 331.71 | 214.99 | 331.81 | 217.9 | 331.8 | 223.22 | 331.78 | 225.59 | 331.77 |
| 226.89 | 331.76 | 232.74 | 331.73 | 237.92 | 331.7 | 239.28 | 331.69 | 241.51 | 331.68 |
| 243.15 | 331.67 | 245.98 | 331.65 | 248.22 | 331.65 | 250.92 | 331.64 | 252.3 | 331.63 |
| 254.03 | 331.61 | 257.72 | 331.57 | 258.75 | 331.55 | 261.6 | 331.52 | 263.87 | 331.51 |
| 264.55 | 331.51 | 264.73 | 331.5 | 265.23 | 331.5 | 267.52 | 331.47 | 270.46 | 331.45 |
| 272.76 | 331.44 | 276.19 | 331.41 | 277.37 | 331.33 | 279.1 | 331.23 | 279.93 | 331.21 |
| 280.79 | 331.18 | 282.51 | 331.15 | 283.72 | 331.11 | 284.19 | 331.09 | 285.29 | 331.02 |
| 285.7 | 331 | 287.11 | 330.94 | 287.19 | 330.93 | 287.58 | 330.93 | 288.3 | 330.91 |
| 288.74 | 330.89 | 289.69 | 330.89 | 289.87 | 330.92 | 290.2 | 330.94 | 290.79 | 330.94 |
| 291.58 | 330.95 | 292.84 | 330.99 | 294.33 | 331.1 | 296.92 | 331.25 | 298.44 | 331.34 |
| 301.2 | 331.34 | 304.25 | 331.04 | 304.77 | 331.05 | 305.38 | 331.08 | 305.67 | 331.05 |
| 306.14 | 331.04 | 306.93 | 331.07 | 308.76 | 331.01 | 311.19 | 331.06 | 311.98 | 331.04 |
| 312.16 | 331.03 | 312.64 | 331.03 | 314.83 | 330.99 | 315.69 | 330.97 | 317.18 | 330.97 |
| 317.73 | 330.98 | 318.51 | 331 | 320.95 | 331.05 | 321.3 | 331.1 | 322.26 | 331.17 |
| 325.77 | 331.35 | 329.95 | 331.36 | 338.62 | 331.36 | 339.39 | 331.27 | 339.57 | 331.26 |
| 340.14 | 331.26 | 342.25 | 331.25 | 342.27 | 331.24 | 343.27 | 331.24 | 344.25 | 331.23 |
| 349.01 | 331.39 | 350.73 | 331.45 | 359.78 | 331.78 | 361.42 | 331.86 | 361.54 | 331.86 |
| 363.05 | 331.93 | 363.39 | 331.95 | 364.75 | 331.97 | 367.47 | 331.99 | 368.47 | 331.99 |
| 372.69 | 332.02 | 374.74 | 332.03 | 378.39 | 332.04 | 378.83 | 332.04 | 379.22 | 332.05 |
| 380.39 | 332.06 | 381.47 | 332.08 | 382.17 | 332.11 | 382.5 | 332.13 | 383.04 | 332.13 |
| 386.19 | 332.15 | 390.01 | 332.16 | 390.15 | 332.15 | 391.28 | 332.15 | 392.04 | 332.16 |
| 393.93 | 332.16 | 394.96 | 332.17 | 396 | 332.17 | 398.73 | 332.2 | 400.17 | 332.21 |
| 402.21 | 332.21 | 402.38 | 332.19 | 407.66 | 332.06 | 411.35 | 331.96 | 411.81 | 331.96 |
| 413.48 | 331.93 | 414.63 | 331.92 | 415.76 | 331.92 | 416.9 | 331.93 | 416.92 | 331.94 |
| 417.41 | 331.94 | 417.63 | 331.95 | 418.33 | 331.96 | 420.37 | 332.02 | 422.25 | 332.07 |
| 422.59 | 332.07 | 424.72 | 332.12 | 426.15 | 332.16 | 426.34 | 332.16 | 428.52 | 332.24 |
| 428.68 | 332.25 | 429.33 | 332.25 | 429.41 | 332.24 | 429.92 | 332.22 | 430.5 | 332.18 |
| 430.98 | 332.16 | 431.33 | 332.18 | 431.48 | 332.17 | 432.16 | 332.18 | 432.64 | 332.15 |
| 433.21 | 332.09 | 433.83 | 332.06 | 434.5 | 332.05 | 435.13 | 332.05 | 436.03 | 332.07 |
| 436.57 | 332.1 | 438.11 | 332.16 | 438.39 | 332.16 | 439.68 | 332.22 | 441.75 | 332.33 |
| 442.56 | 332.37 | 444.16 | 332.43 | 446.22 | 332.49 | 446.67 | 332.49 | 447.15 | 332.5 |
| 447.64 | 332.5 | 449.49 | 332.49 | 450.62 | 332.49 | 452 | 332.5 | 454.54 | 332.5 |
| 456.8 | 332.48 | 457.55 | 332.47 | 458.55 | 332.47 | 458.81 | 332.46 | 461.41 | 332.46 |
| 463.57 | 332.49 | 466.05 | 332.53 | 468.34 | 332.57 | 470.62 | 332.6 | 471.29 | 332.58 |
| 472.79 | 332.5 | 473.31 | 332.49 | 477.28 | 332.37 | 477.84 | 332.36 | 478.76 | 332.35 |
| 483.34 | 332.24 | 483.81 | 332.22 | 484.77 | 332.19 | 485.45 | 332.18 | 487.32 | 332.14 |
| 487.79 | 332.14 | 487.9 | 332.13 | 488.25 | 332.13 | 488.53 | 332.14 | 489.55 | 332.15 |
| 490.05 | 332.17 | 490.5 | 332.24 | 490.73 | 332.26 | 491.36 | 332.26 | 492.01 | 332.24 |
| 492.23 | 332.19 | 492.7 | 332.19 | 493.89 | 332.28 | 494.45 | 332.34 | 496.9 | 332.52 |
| 497.36 | 332.56 | 498.09 | 332.56 | 500.93 | 332.57 | 501.77 | 332.58 | 505.92 | 332.58 |
| 507.58 | 332.59 | 507.7 | 332.64 | 507.91 | 332.66 | 508.8 | 332.7 | 510.74 | 332.73 |
| 512.26 | 332.73 | 513.39 | 332.72 | 514.16 | 332.71 | 515.81 | 332.7 | 516.78 | 332.69 |
| 519.71 | 332.64 | 520.28 | 332.62 | 521.49 | 332.62 | 522.07 | 332.63 | 522.77 | 332.63 |
| 523.56 | 332.67 | 523.85 | 332.68 | 527.52 | 332.88 | 528.06 | 332.9 | 529.7 | 332.95 |
| 530.39 | 332.99 | 531.38 | 333.02 | 535.66 | 333.13 | 536.51 | 333.3 | 537.4 | 333.45 |
| 538.35 | 333.6 | 538.52 | 333.65 | 539.67 | 333.93 | 540.66 | 334.18 | 542 | 334.53 |
| 542.39 | 334.64 | 543.2 | 334.85 | 544.4 | 335.15 | 546.14 | 335.6 | 546.51 | 335.69 |
| 548.45 | 336.18 | 549.42 | 336.37 | 550.01 | 336.51 | 550.88 | 336.7 | 553.38 | 337.17 |
| 553.8 | 337.26 | 556.49 | 337.76 | 560.3 | 337.82 | 562.57 | 337.86 | 566.16 | 337.92 |
| 569.35 | 337.92 | 569.99 | 337.91 | 575.56 | 337.88 | 576.56 | 337.87 | 582.69 | 337.84 |
| 587.94 | 337.81 | 588.86 | 337.81 | 591.67 | 337.79 | 592.78 | 337.77 | 593.15 | 337.78 |
| 594.22 | 337.77 | 594.6 | 337.76 | 595.54 | 337.76 | 596.4 | 337.77 | 599.09 | 337.82 |
| 602.62 | 337.88 | 603.46 | 337.9 | 603.67 | 337.9 | 604.78 | 337.92 | 605.61 | 337.92 |
| 606.79 | 337.94 | 609.42 | 337.96 | 609.6 | 337.96 | 611.81 | 337.98 | 614.1 | 337.99 |
| 618.16 | 337.99 | 618.98 | 338 | 619.41 | 338 | 620.12 | 338.01 | 621 | 338.01 |
| 624.49 | 337.99 | 627.24 | 337.98 | 629.06 | 337.98 | 629.65 | 337.97 | 632.35 | 337.94 |
| 641.94 | 337.8 | 643.95 | 337.78 | 644.08 | 337.77 | 644.81 | 337.77 | 646.07 | 337.78 |
| 646.87 | 337.78 | 650.39 | 337.8 | 655.03 | 337.84 | 658.02 | 337.86 | 665 | 337.89 |
| 672.86 | 337.84 | 673.26 | 337.84 | 674.77 | 337.9 | 678.41 | 338 | 680.85 | 338.08 |
| 681.24 | 338.11 | 681.66 | 338.13 | 682.51 | 338.11 | 683.06 | 338.11 | 683.6 | 338.13 |
| 684 | 338.16 | 685.44 | 338.29 | 686.04 | 338.35 | 686.57 | 338.38 | 687.41 | 338.44 |
| 688.48 | 338.51 | 689.79 | 338.59 | 690.23 | 338.62 | 693.52 | 338.88 | 694.65 | 339 |
| 698.72 | 339.56 | 699.81 | 339.68 | 702.86 | 339.96 | 704.36 | 340.13 | 704.83 | 340.18 |
| 706.14 | 340.19 | 707.93 | 340.23 | 709.97 | 340.29 | 711.05 | 340.32 | 712.54 | 340.37 |
| 714.91 | 340.43 | 719.62 | 340.58 | 720.63 | 340.61 | 725.57 | 340.74 | 727.02 | 340.77 |
| 728.91 | 340.82 | 730.56 | 340.86 | 734.48 | 340.95 | 739.65 | 341.06 | 743.4 | 341.13 |
| 745.84 | 341.18 | 747.13 | 341.21 | 748.4 | 341.25 | 749.57 | 341.28 | 751.22 | 341.33 |
| 752.58 | 341.36 | 755.54 | 341.43 | 759.39 | 341.53 | 759.81 | 341.54 | 761.61 | 341.57 |
| 764.69 | 341.61 | 765.89 | 341.61 | 766.6 | 341.6 | 769.95 | 341.61 | 770.47 | 341.61 |
| 773.43 | 341.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 121.8 | .04 | 528.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 121.8 | 528.06 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1383.17*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.62 | .51 | 333.61 | .66 | 333.64 | 1 | 333.66 | 1.35 | 333.67 |
| 1.88 | 333.67 | 4.22 | 333.65 | 4.99 | 333.64 | 7.3 | 333.62 | 7.67 | 333.61 |
| 9.16 | 333.6 | 9.36 | 333.59 | 12.54 | 333.51 | 14.57 | 333.45 | 16.58 | 333.4 |
| 17.23 | 333.39 | 18.43 | 333.36 | 18.99 | 333.35 | 19.39 | 333.35 | 19.79 | 333.34 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 20.66 | 333.34 | 21.49 | 333.35 | 22.84 | 333.37 | 23.91 | 333.38 | 25.37 | 333.38 |
| 26.75 | 333.36 | 27.1 | 333.36 | 28.61 | 333.34 | 29.78 | 333.32 | 31.86 | 333.29 |
| 33.27 | 333.26 | 33.44 | 333.26 | 33.69 | 333.23 | 35.24 | 333.14 | 36.65 | 333.07 |
| 37.71 | 333.02 | 39.14 | 332.96 | 42.97 | 332.81 | 43.37 | 332.8 | 43.85 | 332.87 |
| 43.96 | 332.94 | 44.53 | 332.95 | 45.02 | 332.95 | 47.14 | 332.89 | 47.6 | 332.88 |
| 52.29 | 332.79 | 53.04 | 332.77 | 53.35 | 332.77 | 54.87 | 332.74 | 55.81 | 332.76 |
| 56.37 | 332.76 | 57 | 332.77 | 58.38 | 332.77 | 58.79 | 332.76 | 59.27 | 332.76 |
| 63.26 | 332.69 | 64.23 | 332.68 | 64.45 | 332.67 | 64.79 | 332.67 | 66.26 | 332.62 |
| 66.57 | 332.6 | 67.38 | 332.57 | 67.87 | 332.53 | 69.39 | 332.49 | 69.67 | 332.49 |
| 70.39 | 332.46 | 72.42 | 332.4 | 72.62 | 332.4 | 73 | 332.38 | 73.61 | 332.39 |
| 73.73 | 332.38 | 74.54 | 332.37 | 76.89 | 332.31 | 78 | 332.31 | 78.35 | 332.32 |
| 78.73 | 332.32 | 79.52 | 332.34 | 83.06 | 332.34 | 85.03 | 332.33 | 86.24 | 332.33 |
| 87.65 | 332.32 | 94.08 | 332.27 | 98.87 | 332.24 | 99.64 | 332.24 | 99.87 | 332.23 |
| 101.16 | 332.21 | 102.26 | 332.2 | 105.72 | 332.18 | 107.79 | 332.15 | 108.28 | 332.14 |
| 111.53 | 332.11 | 112.43 | 332.14 | 113.51 | 332.18 | 113.59 | 332.22 | 113.8 | 332.25 |
| 114.18 | 332.26 | 114.47 | 332.26 | 114.81 | 332.27 | 115.94 | 332.27 | 116.81 | 332.26 |
| 116.83 | 332.27 | 117.17 | 332.27 | 117.23 | 332.26 | 119.76 | 332.13 | 121.86 | 332.06 |
| 122.96 | 332.02 | 125.17 | 331.91 | 126.65 | 331.8 | 127.1 | 331.76 | 139.48 | 331.76 |
| 141.17 | 331.75 | 152.52 | 331.75 | 154.2 | 331.84 | 155.41 | 331.84 | 155.55 | 331.83 |
| 155.98 | 331.82 | 158.65 | 331.73 | 164.1 | 331.73 | 170.71 | 331.83 | 172.06 | 331.84 |
| 173.83 | 331.87 | 174.15 | 331.87 | 174.5 | 331.88 | 175.88 | 331.93 | 176.8 | 331.95 |
| 177.73 | 331.95 | 180.13 | 331.91 | 181.04 | 331.9 | 181.99 | 331.9 | 185.41 | 331.88 |
| 186.38 | 331.88 | 187.03 | 331.87 | 187.74 | 331.83 | 188.8 | 331.75 | 189.04 | 331.74 |
| 189.36 | 331.76 | 189.9 | 331.77 | 192.32 | 331.84 | 192.93 | 331.85 | 193.48 | 331.85 |
| 194.12 | 331.83 | 195.13 | 331.78 | 197.19 | 331.65 | 197.3 | 331.65 | 198.15 | 331.59 |
| 198.52 | 331.52 | 198.79 | 331.51 | 200.14 | 331.48 | 201.57 | 331.46 | 202.4 | 331.48 |
| 205.35 | 331.56 | 208.12 | 331.55 | 213.17 | 331.53 | 215.42 | 331.52 | 216.66 | 331.52 |
| 222.22 | 331.48 | 228.43 | 331.43 | 230.55 | 331.42 | 232.11 | 331.42 | 234.8 | 331.4 |
| 236.61 | 331.39 | 236.92 | 331.39 | 239.49 | 331.38 | 240.81 | 331.37 | 245.05 | 331.32 |
| 245.95 | 331.3 | 249.64 | 331.26 | 251.8 | 331.24 | 252.44 | 331.24 | 252.62 | 331.23 |
| 253.09 | 331.23 | 255.27 | 331.2 | 258.06 | 331.18 | 260.25 | 331.16 | 263.5 | 331.14 |
| 264.63 | 331.06 | 266.26 | 330.97 | 267.05 | 330.94 | 268.32 | 330.91 | 268.94 | 330.9 |
| 270.66 | 330.84 | 271.1 | 330.83 | 271.4 | 330.81 | 271.83 | 330.77 | 272.53 | 330.73 |
| 273.42 | 330.69 | 273.88 | 330.66 | 274.65 | 330.64 | 275.01 | 330.64 | 275.72 | 330.61 |
| 276.2 | 330.61 | 276.49 | 330.62 | 276.55 | 330.65 | 276.74 | 330.67 | 277.5 | 330.67 |
| 279.68 | 330.72 | 281.27 | 330.84 | 284.03 | 331.01 | 285.65 | 331.1 | 288.59 | 331.1 |
| 291.83 | 330.78 | 292.39 | 330.79 | 293.04 | 330.82 | 293.35 | 330.79 | 293.84 | 330.78 |
| 294.69 | 330.81 | 296.63 | 330.74 | 299.22 | 330.8 | 300.06 | 330.78 | 300.25 | 330.77 |
| 300.76 | 330.77 | 301.91 | 330.75 | 303.1 | 330.72 | 304.01 | 330.71 | 304.14 | 330.7 |
| 305.4 | 330.7 | 307.02 | 330.74 | 309.62 | 330.79 | 309.98 | 330.84 | 311.01 | 330.92 |
| 314.74 | 331.12 | 328.43 | 331.12 | 329.25 | 331.02 | 329.44 | 331.01 | 330.05 | 331.01 |
| 332.29 | 331 | 332.31 | 330.99 | 333.38 | 330.99 | 334.43 | 330.98 | 339.49 | 331.14 |
| 341.32 | 331.21 | 350.96 | 331.57 | 351.83 | 331.61 | 352.7 | 331.64 | 352.83 | 331.65 |
| 354.44 | 331.72 | 354.8 | 331.74 | 354.95 | 331.74 | 356.24 | 331.76 | 359.14 | 331.77 |
| 359.27 | 331.78 | 360.2 | 331.78 | 364.7 | 331.8 | 366.89 | 331.82 | 370.77 | 331.83 |
| 371.65 | 331.83 | 372.9 | 331.84 | 374.8 | 331.89 | 375.14 | 331.92 | 375.72 | 331.92 |
| 379.07 | 331.93 | 382.95 | 331.95 | 383.14 | 331.95 | 383.29 | 331.93 | 384.49 | 331.93 |
| 385.31 | 331.94 | 388.41 | 331.94 | 391.54 | 331.97 | 392.42 | 331.98 | 393.96 | 331.99 |
| 395.27 | 331.98 | 396.14 | 331.98 | 396.31 | 331.96 | 401.93 | 331.81 | 404.25 | 331.74 |
| 405.53 | 331.71 | 405.86 | 331.71 | 406.35 | 331.7 | 409.35 | 331.65 | 411.77 | 331.67 |
| 412.55 | 331.68 | 415.46 | 331.76 | 417.46 | 331.81 | 417.83 | 331.81 | 420.1 | 331.86 |
| 421.62 | 331.9 | 421.82 | 331.91 | 424.14 | 331.99 | 424.32 | 332 | 425 | 332 |
| 425.09 | 331.99 | 425.63 | 331.97 | 426.76 | 331.9 | 427.13 | 331.92 | 427.29 | 331.91 |
| 427.68 | 331.92 | 428.02 | 331.92 | 428.52 | 331.89 | 429.13 | 331.82 | 429.98 | 331.78 |
| 431.18 | 331.78 | 432.28 | 331.8 | 432.59 | 331.83 | 432.71 | 331.83 | 434.65 | 331.9 |
| 434.89 | 331.9 | 435.34 | 331.92 | 436.02 | 331.96 | 438.23 | 332.07 | 439.09 | 332.11 |
| 439.64 | 332.13 | 440.79 | 332.18 | 442.31 | 332.22 | 442.39 | 332.23 | 442.98 | 332.24 |
| 443.46 | 332.24 | 443.97 | 332.25 | 444.5 | 332.25 | 446.46 | 332.24 | 447.67 | 332.24 |
| 449.15 | 332.25 | 449.89 | 332.26 | 450.57 | 332.26 | 454.25 | 332.23 | 455.05 | 332.22 |
| 457.17 | 332.22 | 457.82 | 332.21 | 459.16 | 332.21 | 461.46 | 332.24 | 464.1 | 332.29 |
| 466.53 | 332.33 | 468.14 | 332.35 | 468.62 | 332.36 | 468.96 | 332.36 | 471.27 | 332.26 |
| 471.82 | 332.24 | 476.05 | 332.11 | 476.66 | 332.1 | 477.63 | 332.09 | 482.51 | 331.96 |
| 483.01 | 331.95 | 484.03 | 331.91 | 484.75 | 331.9 | 485.66 | 331.88 | 486.74 | 331.86 |
| 486.98 | 331.85 | 487.74 | 331.85 | 488.03 | 331.86 | 488.78 | 331.86 | 489.65 | 331.89 |
| 490.13 | 331.96 | 490.49 | 331.99 | 490.92 | 331.98 | 491.31 | 331.98 | 491.74 | 331.96 |
| 491.98 | 331.91 | 492.47 | 331.91 | 493.74 | 332.01 | 494.34 | 332.07 | 496.94 | 332.27 |
| 497.43 | 332.31 | 498.21 | 332.31 | 501.24 | 332.32 | 505.04 | 332.32 | 505.64 | 332.33 |
| 508.32 | 332.33 | 508.45 | 332.39 | 508.67 | 332.41 | 509.62 | 332.45 | 510.21 | 332.46 |
| 511.68 | 332.48 | 513.3 | 332.48 | 514.5 | 332.47 | 515.32 | 332.46 | 517.08 | 332.45 |
| 517.88 | 332.44 | 518.11 | 332.43 | 521.23 | 332.38 | 521.83 | 332.36 | 523.06 | 332.37 |
| 524.49 | 332.37 | 525.33 | 332.41 | 525.64 | 332.43 | 527.58 | 332.53 | 529.55 | 332.64 |
| 530.13 | 332.67 | 530.51 | 332.67 | 531.78 | 332.72 | 533.47 | 332.79 | 537.8 | 332.91 |
| 538.66 | 333.09 | 539.55 | 333.25 | 540.54 | 333.42 | 540.68 | 333.46 | 541.84 | 333.76 |
| 542.63 | 333.98 | 544.2 | 334.41 | 545.41 | 334.75 | 546.62 | 335.07 | 548.38 | 335.54 |
| 550.71 | 336.17 | 551.69 | 336.37 | 552.29 | 336.52 | 553.16 | 336.73 | 555.69 | 337.22 |
| 556.12 | 337.31 | 558.83 | 337.85 | 562.68 | 337.9 | 562.74 | 337.91 | 568.6 | 337.99 |
| 571.82 | 337.99 | 572.47 | 337.98 | 578.09 | 337.94 | 579.1 | 337.93 | 585.29 | 337.88 |
| 590.58 | 337.85 | 591.52 | 337.84 | 594.36 | 337.82 | 595.48 | 337.8 | 595.85 | 337.81 |
| 596.93 | 337.79 | 598.26 | 337.79 | 599.13 | 337.8 | 601.85 | 337.85 | 605.42 | 337.91 |
| 606.26 | 337.93 | 607.59 | 337.94 | 608.44 | 337.95 | 609.63 | 337.96 | 612.28 | 337.99 |
| 612.47 | 337.99 | 617.01 | 338.01 | 621.1 | 338.01 | 621.94 | 338.02 | 623.98 | 338.02 |
| 627.5 | 338 | 630.27 | 337.99 | 630.85 | 337.98 | 632.11 | 337.98 | 632.7 | 337.97 |
| 633.72 | 337.96 | 635.44 | 337.94 | 645.12 | 337.78 | 647.15 | 337.76 | 647.37 | 337.75 |
| 650.09 | 337.75 | 653.65 | 337.77 | 658.34 | 337.8 | 661.36 | 337.82 | 668.41 | 337.82 |
| 676.34 | 337.75 | 676.75 | 337.75 | 678.28 | 337.8 | 679 | 337.82 | 681.94 | 337.88 |
| 683.8 | 337.93 | 684.41 | 337.95 | 684.81 | 337.97 | 685.23 | 338 | 686.09 | 337.97 |
| 686.65 | 337.96 | 687.24 | 337.98 | 689.05 | 338.14 | 689.34 | 338.17 | 689.87 | 338.2 |
| 690.19 | 338.23 | 691.03 | 338.28 | 692.12 | 338.36 | 693.44 | 338.43 | 693.88 | 338.46 |
| 697.2 | 338.72 | 698.35 | 338.83 | 702.46 | 339.37 | 703.56 | 339.49 | 705 | 339.62 |
| 706.64 | 339.76 | 708.16 | 339.91 | 708.63 | 339.96 | 709.95 | 339.98 | 711.76 | 340.02 |
| 713.82 | 340.07 | 714.91 | 340.11 | 716.41 | 340.15 | 718.81 | 340.22 | 723.57 | 340.37 |
| 724.59 | 340.4 | 729.58 | 340.55 | 731.03 | 340.58 | 732.94 | 340.63 | 734.61 | 340.67 |
| 738.57 | 340.76 | 743.79 | 340.88 | 747.58 | 340.95 | 750.05 | 341.01 | 751.34 | 341.04 |
| 752.63 | 341.08 | 753.81 | 341.11 | 756.85 | 341.2 | 759.84 | 341.26 | 763.73 | 341.37 |
| 764.15 | 341.38 | 765.97 | 341.4 | 769.08 | 341.45 | 770.29 | 341.44 | 774.92 | 341.44 |
| 777.9 | 341.47 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 116.81 | .04 | 530.13 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 116.81 | 530.13 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION



BSE Document Control Number: 7323HYD101

RIVER: WASH80
REACH: WASH80 RS: 1363.20*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.34 | .49 | 333.33 | .64 | 333.36 | .95 | 333.38 | 1.29 | 333.39 |
| 1.8 | 333.39 | 4.04 | 333.37 | 4.78 | 333.36 | 6.99 | 333.34 | 7.34 | 333.33 |
| 8.77 | 333.32 | 8.96 | 333.31 | 12 | 333.23 | 13.95 | 333.17 | 14.7 | 333.15 |
| 15.06 | 333.15 | 15.88 | 333.13 | 16.5 | 333.12 | 17.64 | 333.09 | 18.18 | 333.08 |
| 18.56 | 333.08 | 18.94 | 333.07 | 19.39 | 333.07 | 19.63 | 333.06 | 19.78 | 333.07 |
| 20.58 | 333.08 | 22.89 | 333.1 | 24.29 | 333.1 | 25.61 | 333.08 | 25.94 | 333.07 |
| 27.39 | 333.06 | 28.51 | 333.04 | 30.5 | 333 | 31.41 | 332.99 | 31.85 | 332.98 |
| 32.25 | 332.95 | 33.73 | 332.86 | 35.09 | 332.8 | 36.1 | 332.75 | 37.47 | 332.7 |
| 41.14 | 332.55 | 41.57 | 332.54 | 41.98 | 332.6 | 42.08 | 332.66 | 42.28 | 332.67 |
| 43.1 | 332.67 | 45.57 | 332.61 | 50.05 | 332.51 | 50.78 | 332.5 | 51.07 | 332.5 |
| 52.53 | 332.47 | 53 | 332.47 | 53.43 | 332.48 | 53.97 | 332.48 | 54.57 | 332.49 |
| 55.88 | 332.49 | 56.29 | 332.48 | 56.74 | 332.48 | 60.56 | 332.41 | 61.49 | 332.39 |
| 62.02 | 332.39 | 63.43 | 332.34 | 63.73 | 332.32 | 64.5 | 332.29 | 64.98 | 332.26 |
| 66.43 | 332.21 | 66.7 | 332.21 | 67.38 | 332.18 | 67.75 | 332.17 | 69.33 | 332.12 |
| 69.52 | 332.12 | 69.89 | 332.1 | 70.22 | 332.11 | 70.58 | 332.11 | 73.6 | 332.03 |
| 74.67 | 332.04 | 75.37 | 332.04 | 76.13 | 332.06 | 81.4 | 332.06 | 83.91 | 332.04 |
| 94.65 | 331.97 | 95.29 | 331.98 | 95.61 | 331.96 | 97.89 | 331.94 | 101.21 | 331.92 |
| 103.19 | 331.89 | 103.66 | 331.88 | 104.73 | 331.88 | 106.77 | 331.86 | 107.64 | 331.89 |
| 108.67 | 331.93 | 108.74 | 331.96 | 108.95 | 331.99 | 109.31 | 332 | 109.59 | 332 |
| 109.91 | 332.01 | 110.99 | 332.01 | 111.83 | 332 | 111.84 | 332.01 | 112.22 | 332 |
| 113.71 | 331.92 | 114.62 | 331.88 | 116.61 | 331.81 | 117.65 | 331.77 | 119.75 | 331.67 |
| 121.14 | 331.56 | 121.57 | 331.53 | 129.97 | 331.53 | 132.06 | 331.52 | 145.66 | 331.52 |
| 147.25 | 331.6 | 148.4 | 331.6 | 148.53 | 331.59 | 151.46 | 331.5 | 154.28 | 331.5 |
| 155.45 | 331.49 | 156.63 | 331.49 | 162.89 | 331.58 | 164.18 | 331.6 | 165.85 | 331.62 |
| 166.15 | 331.62 | 166.49 | 331.64 | 167.8 | 331.68 | 168.67 | 331.7 | 169.55 | 331.7 |
| 171.82 | 331.66 | 173.58 | 331.64 | 176.83 | 331.63 | 177.74 | 331.62 | 178.74 | 331.6 |
| 179.03 | 331.58 | 180.03 | 331.5 | 180.26 | 331.49 | 180.57 | 331.51 | 183.37 | 331.58 |
| 183.95 | 331.59 | 184.47 | 331.59 | 185.08 | 331.57 | 186.03 | 331.52 | 187.99 | 331.41 |
| 188.22 | 331.4 | 188.89 | 331.35 | 189.24 | 331.28 | 189.5 | 331.27 | 190.78 | 331.25 |
| 192.13 | 331.22 | 192.92 | 331.24 | 195.72 | 331.32 | 198.34 | 331.3 | 203.13 | 331.28 |
| 205.26 | 331.27 | 206.43 | 331.27 | 211.7 | 331.23 | 217.58 | 331.18 | 219.59 | 331.17 |
| 221.07 | 331.16 | 223.62 | 331.14 | 225.33 | 331.13 | 225.63 | 331.13 | 228.07 | 331.12 |
| 229.31 | 331.11 | 233.33 | 331.06 | 234.98 | 331.02 | 235.11 | 331.02 | 237.68 | 330.99 |
| 239.72 | 330.97 | 240.5 | 330.97 | 243.01 | 330.92 | 245.65 | 330.91 | 250.81 | 330.86 |
| 251.88 | 330.79 | 253.43 | 330.7 | 254.18 | 330.68 | 254.96 | 330.65 | 255.38 | 330.65 |
| 255.91 | 330.63 | 256.5 | 330.62 | 257.6 | 330.58 | 258.3 | 330.54 | 258.7 | 330.5 |
| 259.37 | 330.46 | 260.21 | 330.42 | 260.72 | 330.39 | 262.39 | 330.34 | 262.83 | 330.34 |
| 263.14 | 330.35 | 263.21 | 330.38 | 263.4 | 330.4 | 264.22 | 330.4 | 265.11 | 330.42 |
| 266.53 | 330.46 | 268.21 | 330.58 | 271.14 | 330.76 | 272.86 | 330.86 | 275.98 | 330.86 |
| 279.42 | 330.51 | 280.01 | 330.53 | 280.69 | 330.56 | 281.02 | 330.53 | 281.55 | 330.52 |
| 282.45 | 330.55 | 284.51 | 330.48 | 287.25 | 330.54 | 288.15 | 330.51 | 288.35 | 330.51 |
| 290.1 | 330.48 | 291.37 | 330.45 | 292.39 | 330.44 | 292.47 | 330.43 | 293.81 | 330.43 |
| 295.53 | 330.47 | 298.28 | 330.53 | 298.67 | 330.58 | 299.76 | 330.67 | 303.72 | 330.88 |
| 318.24 | 330.88 | 319.1 | 330.78 | 319.31 | 330.77 | 319.95 | 330.76 | 322.36 | 330.75 |
| 322.82 | 330.74 | 323.48 | 330.74 | 324.6 | 330.73 | 329.97 | 330.9 | 331.91 | 330.97 |
| 342.13 | 331.35 | 343.98 | 331.43 | 344.12 | 331.44 | 345.82 | 331.51 | 346.2 | 331.53 |
| 346.37 | 331.53 | 347.74 | 331.55 | 350.95 | 331.56 | 351.94 | 331.57 | 359.03 | 331.6 |
| 363.15 | 331.61 | 364.09 | 331.61 | 365.41 | 331.62 | 366.62 | 331.65 | 367.42 | 331.68 |
| 367.79 | 331.7 | 368.4 | 331.7 | 371.96 | 331.72 | 376.27 | 331.73 | 376.43 | 331.71 |
| 377.7 | 331.71 | 378.57 | 331.72 | 381.86 | 331.72 | 385.18 | 331.75 | 386.11 | 331.76 |
| 389.9 | 331.76 | 390.24 | 331.74 | 396.21 | 331.57 | 398.67 | 331.49 | 400.89 | 331.44 |
| 404.08 | 331.39 | 405.35 | 331.4 | 406.64 | 331.4 | 406.73 | 331.41 | 407.47 | 331.42 |
| 410.56 | 331.5 | 412.68 | 331.55 | 413.07 | 331.55 | 415.47 | 331.6 | 417.09 | 331.65 |
| 417.31 | 331.65 | 419.77 | 331.74 | 420.05 | 331.74 | 420.35 | 331.75 | 420.77 | 331.74 |
| 421.34 | 331.71 | 422.54 | 331.64 | 422.94 | 331.66 | 423.11 | 331.65 | 423.52 | 331.66 |
| 423.87 | 331.66 | 424.13 | 331.65 | 424.41 | 331.62 | 425.06 | 331.56 | 425.33 | 331.54 |
| 425.96 | 331.51 | 426.52 | 331.51 | 426.83 | 331.5 | 427.84 | 331.52 | 428.25 | 331.52 |
| 428.63 | 331.55 | 428.86 | 331.56 | 430.91 | 331.63 | 431.17 | 331.63 | 431.64 | 331.66 |
| 432.37 | 331.69 | 434.71 | 331.81 | 435.62 | 331.86 | 436.2 | 331.88 | 437.43 | 331.93 |
| 439.04 | 331.98 | 439.28 | 331.98 | 440.26 | 332 | 443.44 | 332 | 444.06 | 331.99 |
| 444.72 | 331.99 | 446.29 | 332.01 | 449.15 | 332.01 | 451.7 | 331.99 | 452.55 | 331.97 |
| 455.56 | 331.97 | 456.58 | 331.96 | 456.91 | 331.96 | 459.35 | 332 | 462.15 | 332.05 |
| 464.73 | 332.09 | 466.44 | 332.11 | 466.95 | 332.12 | 467.31 | 332.12 | 468.07 | 332.09 |
| 469.76 | 332.01 | 470.34 | 331.99 | 474.83 | 331.85 | 475.47 | 331.84 | 476.51 | 331.83 |
| 481.68 | 331.69 | 482.21 | 331.67 | 482.68 | 331.66 | 483.29 | 331.64 | 484.06 | 331.62 |
| 485.02 | 331.6 | 486.17 | 331.58 | 486.42 | 331.57 | 487.54 | 331.57 | 488.33 | 331.58 |
| 489.25 | 331.61 | 489.58 | 331.66 | 490.02 | 331.71 | 490.74 | 331.71 | 491.35 | 331.69 |
| 491.47 | 331.68 | 491.72 | 331.63 | 492.24 | 331.63 | 493.59 | 331.73 | 494.23 | 331.8 |
| 496.99 | 332.01 | 497.03 | 332.02 | 497.5 | 332.05 | 498.33 | 332.05 | 501.55 | 332.07 |
| 507.18 | 332.07 | 509.06 | 332.08 | 509.19 | 332.14 | 509.96 | 332.18 | 510.43 | 332.2 |
| 511.06 | 332.21 | 511.8 | 332.23 | 512.62 | 332.23 | 513.49 | 332.24 | 514.34 | 332.23 |
| 515.62 | 332.22 | 516.48 | 332.21 | 518.35 | 332.2 | 519.19 | 332.18 | 519.44 | 332.18 |
| 522.75 | 332.12 | 523.39 | 332.1 | 524.69 | 332.11 | 526.21 | 332.11 | 527.1 | 332.15 |
| 529.49 | 332.29 | 531.58 | 332.4 | 532.19 | 332.43 | 532.57 | 332.43 | 533.86 | 332.48 |
| 534.56 | 332.52 | 535.57 | 332.56 | 539.93 | 332.69 | 540.8 | 332.88 | 541.7 | 333.05 |
| 542.47 | 333.19 | 542.8 | 333.26 | 542.85 | 333.28 | 544.82 | 333.82 | 545.03 | 333.89 |
| 546.39 | 334.28 | 546.8 | 334.41 | 547.62 | 334.65 | 548.84 | 334.99 | 550.61 | 335.49 |
| 550.99 | 335.6 | 552.97 | 336.16 | 553.96 | 336.37 | 554.57 | 336.52 | 555.45 | 336.75 |
| 558 | 337.27 | 558.43 | 337.37 | 561.17 | 337.94 | 567.37 | 338.02 | 571.03 | 338.07 |
| 574.29 | 338.06 | 574.94 | 338.05 | 580.62 | 338 | 587.88 | 337.93 | 593.23 | 337.89 |
| 594.18 | 337.88 | 595.49 | 337.87 | 597.05 | 337.85 | 598.17 | 337.84 | 598.55 | 337.84 |
| 599.64 | 337.82 | 600.99 | 337.82 | 601.86 | 337.83 | 604.61 | 337.87 | 608.21 | 337.93 |
| 609.06 | 337.95 | 609.27 | 337.96 | 610.41 | 337.97 | 611.26 | 337.98 | 612.46 | 337.99 |
| 615.14 | 338.01 | 615.33 | 338.01 | 619.91 | 338.03 | 624.05 | 338.03 | 624.89 | 338.04 |
| 626.95 | 338.04 | 630.51 | 338.01 | 633.31 | 337.99 | 633.89 | 337.98 | 635.16 | 337.97 |
| 635.76 | 337.97 | 636.79 | 337.96 | 638.52 | 337.93 | 648.3 | 337.77 | 650.35 | 337.74 |
| 650.68 | 337.73 | 653.32 | 337.73 | 656.91 | 337.74 | 661.65 | 337.76 | 664.7 | 337.77 |
| 669.49 | 337.76 | 671.81 | 337.76 | 679.83 | 337.67 | 680.23 | 337.66 | 681.51 | 337.7 |
| 681.78 | 337.7 | 682.51 | 337.72 | 685.48 | 337.76 | 687.36 | 337.8 | 688.02 | 337.81 |
| 688.8 | 337.86 | 689.67 | 337.82 | 690.23 | 337.81 | 690.83 | 337.83 | 691.19 | 337.85 |
| 692.65 | 337.99 | 693.27 | 338.04 | 693.49 | 338.05 | 694.66 | 338.12 | 695.76 | 338.2 |
| 697.09 | 338.27 | 697.54 | 338.3 | 700.89 | 338.56 | 702.05 | 338.67 | 706.2 | 339.18 |
| 707.31 | 339.3 | 708.76 | 339.42 | 710.42 | 339.55 | 711.95 | 339.7 | 712.43 | 339.74 |
| 713.76 | 339.76 | 715.59 | 339.8 | 717.67 | 339.86 | 718.77 | 339.89 | 720.29 | 339.94 |
| 722.71 | 340.01 | 727.51 | 340.17 | 728.54 | 340.2 | 733.58 | 340.35 | 735.05 | 340.39 |
| 736.98 | 340.43 | 738.66 | 340.48 | 742.66 | 340.58 | 747.93 | 340.7 | 751.76 | 340.78 |
| 754.25 | 340.84 | 755.56 | 340.87 | 756.85 | 340.91 | 758.05 | 340.95 | 759.73 | 341 |
| 761.11 | 341.03 | 764.13 | 341.1 | 768.06 | 341.2 | 768.49 | 341.21 | 773.47 | 341.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 774.68 | 341.27 | 775.41 | 341.27 | 778.83 | 341.26 | 779.36 | 341.27 | 780.37 | 341.28 |
| 782.37 | 341.29 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 111.83 | .04 | 532.19 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 111.83 | 532.19 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1343.23*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 333.06 | .46 | 333.06 | .72 | 333.09 | .91 | 333.1 | 1.72 | 333.1 |
| 3.86 | 333.09 | 4.56 | 333.08 | 6.68 | 333.06 | 8.38 | 333.03 | 8.56 | 333.03 |
| 11.47 | 332.95 | 14.81 | 332.86 | 15.17 | 332.86 | 15.76 | 332.84 | 17.37 | 332.81 |
| 17.73 | 332.8 | 18.1 | 332.8 | 18.38 | 332.79 | 18.9 | 332.79 | 20.89 | 332.82 |
| 22.74 | 332.82 | 23.21 | 332.81 | 23.84 | 332.81 | 24.79 | 332.79 | 26.17 | 332.77 |
| 27.24 | 332.76 | 29.14 | 332.72 | 30.01 | 332.71 | 30.43 | 332.7 | 30.81 | 332.67 |
| 32.41 | 332.58 | 33.53 | 332.52 | 34.49 | 332.48 | 35.8 | 332.43 | 39.3 | 332.29 |
| 39.71 | 332.28 | 40.11 | 332.33 | 40.21 | 332.39 | 40.4 | 332.4 | 40.73 | 332.4 |
| 43.12 | 332.35 | 43.5 | 332.34 | 43.54 | 332.33 | 47.82 | 332.24 | 48.51 | 332.22 |
| 48.8 | 332.22 | 50.19 | 332.19 | 50.63 | 332.2 | 51.05 | 332.2 | 51.56 | 332.21 |
| 53.39 | 332.21 | 53.78 | 332.2 | 54.21 | 332.2 | 57.86 | 332.13 | 58.75 | 332.11 |
| 58.95 | 332.11 | 59.53 | 332.09 | 59.77 | 332.09 | 60.6 | 332.06 | 60.89 | 332.04 |
| 61.63 | 332.01 | 62.08 | 331.98 | 63.47 | 331.94 | 64.38 | 331.9 | 64.73 | 331.9 |
| 66.24 | 331.85 | 66.54 | 331.83 | 67 | 331.82 | 67.09 | 331.83 | 67.44 | 331.83 |
| 69.97 | 331.76 | 72.01 | 331.76 | 72.73 | 331.78 | 77.77 | 331.78 | 80.17 | 331.76 |
| 86.05 | 331.73 | 90.43 | 331.71 | 91.05 | 331.71 | 91.35 | 331.7 | 92.52 | 331.68 |
| 93.53 | 331.68 | 96.69 | 331.66 | 98.59 | 331.63 | 99.04 | 331.63 | 100.06 | 331.62 |
| 102.01 | 331.61 | 102.22 | 331.62 | 102.84 | 331.63 | 103.83 | 331.67 | 103.89 | 331.71 |
| 104.09 | 331.73 | 104.44 | 331.73 | 104.7 | 331.74 | 105.01 | 331.74 | 105.3 | 331.75 |
| 106.05 | 331.75 | 106.84 | 331.74 | 107.21 | 331.74 | 108.62 | 331.67 | 109.48 | 331.62 |
| 111.36 | 331.56 | 112.34 | 331.52 | 114.32 | 331.43 | 116.05 | 331.3 | 119.45 | 331.3 |
| 123.31 | 331.29 | 129.78 | 331.29 | 129.97 | 331.28 | 138.66 | 331.28 | 138.8 | 331.29 |
| 140.15 | 331.35 | 140.3 | 331.36 | 141.39 | 331.36 | 141.51 | 331.35 | 142.16 | 331.33 |
| 144.28 | 331.27 | 145.92 | 331.27 | 146.94 | 331.26 | 149.17 | 331.26 | 155.08 | 331.34 |
| 156.29 | 331.36 | 157.87 | 331.37 | 159.71 | 331.43 | 160.18 | 331.44 | 161.37 | 331.44 |
| 163.51 | 331.4 | 164.32 | 331.39 | 165.17 | 331.39 | 168.24 | 331.37 | 169.11 | 331.36 |
| 169.68 | 331.36 | 170.32 | 331.33 | 171.27 | 331.26 | 171.48 | 331.25 | 172.54 | 331.28 |
| 174.42 | 331.33 | 175.46 | 331.33 | 176.03 | 331.31 | 176.94 | 331.27 | 178.78 | 331.16 |
| 178.87 | 331.16 | 179.63 | 331.1 | 179.97 | 331.04 | 180.21 | 331.04 | 181.42 | 331.01 |
| 182.7 | 330.99 | 183.44 | 331 | 186.09 | 331.07 | 188.56 | 331.06 | 193.08 | 331.03 |
| 195.1 | 331.02 | 196.2 | 331.02 | 201.18 | 330.98 | 206.74 | 330.93 | 208.63 | 330.91 |
| 210.03 | 330.9 | 212.44 | 330.88 | 214.06 | 330.87 | 214.34 | 330.88 | 217.81 | 330.85 |
| 219.28 | 330.82 | 222.42 | 330.78 | 223.29 | 330.76 | 225.72 | 330.72 | 227.65 | 330.71 |
| 228.38 | 330.7 | 230.75 | 330.65 | 233.25 | 330.63 | 238.13 | 330.58 | 239.13 | 330.52 |
| 240.6 | 330.44 | 240.89 | 330.42 | 242.44 | 330.38 | 243 | 330.37 | 244.53 | 330.31 |
| 244.92 | 330.29 | 245.58 | 330.24 | 245.86 | 330.21 | 246.21 | 330.2 | 246.59 | 330.17 |
| 247 | 330.15 | 247.48 | 330.11 | 247.81 | 330.11 | 249.06 | 330.07 | 249.61 | 330.07 |
| 249.8 | 330.08 | 249.86 | 330.11 | 250.07 | 330.13 | 250.93 | 330.13 | 251.87 | 330.15 |
| 253.37 | 330.19 | 255.15 | 330.33 | 258.25 | 330.52 | 260.07 | 330.62 | 263.36 | 330.62 |
| 267 | 330.25 | 267.62 | 330.26 | 268.35 | 330.3 | 268.7 | 330.27 | 269.25 | 330.25 |
| 270.2 | 330.3 | 272.38 | 330.21 | 275.29 | 330.28 | 276.23 | 330.25 | 276.44 | 330.24 |
| 277.02 | 330.24 | 278.3 | 330.22 | 279.63 | 330.19 | 280.66 | 330.17 | 280.81 | 330.16 |
| 282.22 | 330.16 | 282.69 | 330.18 | 283.1 | 330.18 | 284.03 | 330.21 | 286.95 | 330.27 |
| 287.35 | 330.33 | 288.51 | 330.41 | 292.69 | 330.64 | 308.04 | 330.64 | 308.96 | 330.53 |
| 309.18 | 330.52 | 309.86 | 330.51 | 312.4 | 330.5 | 312.89 | 330.49 | 313.59 | 330.49 |
| 314.77 | 330.48 | 320.76 | 330.67 | 322.5 | 330.74 | 333.31 | 331.13 | 334.28 | 331.17 |
| 335.26 | 331.22 | 335.41 | 331.22 | 337.21 | 331.3 | 337.61 | 331.32 | 342.49 | 331.35 |
| 343.68 | 331.35 | 351.17 | 331.38 | 355.53 | 331.39 | 356.52 | 331.39 | 359.2 | 331.43 |
| 360.43 | 331.49 | 361.08 | 331.49 | 364.84 | 331.5 | 369.4 | 331.51 | 369.57 | 331.49 |
| 370.91 | 331.49 | 371.83 | 331.5 | 375.31 | 331.5 | 376.55 | 331.51 | 378.83 | 331.52 |
| 379.81 | 331.53 | 381.54 | 331.54 | 383.01 | 331.53 | 383.81 | 331.53 | 384.17 | 331.51 |
| 390.48 | 331.32 | 393.08 | 331.24 | 394.51 | 331.2 | 394.89 | 331.2 | 397.42 | 331.15 |
| 398.8 | 331.13 | 400.15 | 331.13 | 401.51 | 331.14 | 401.61 | 331.15 | 402.12 | 331.16 |
| 402.74 | 331.16 | 403.21 | 331.17 | 405.65 | 331.24 | 407.89 | 331.29 | 408.31 | 331.29 |
| 412.56 | 331.39 | 412.79 | 331.4 | 415.39 | 331.49 | 416.35 | 331.49 | 416.45 | 331.48 |
| 417.05 | 331.46 | 418.32 | 331.37 | 418.74 | 331.39 | 419.35 | 331.4 | 419.73 | 331.4 |
| 420.01 | 331.39 | 421.27 | 331.26 | 421.72 | 331.25 | 421.84 | 331.24 | 422.53 | 331.24 |
| 422.63 | 331.23 | 423.28 | 331.23 | 424.35 | 331.25 | 424.76 | 331.28 | 425 | 331.29 |
| 427.17 | 331.36 | 427.44 | 331.36 | 427.94 | 331.39 | 431.18 | 331.56 | 432.15 | 331.6 |
| 432.76 | 331.62 | 434.06 | 331.67 | 436.02 | 331.74 | 436.52 | 331.74 | 437.63 | 331.76 |
| 438.21 | 331.76 | 440.42 | 331.75 | 441.08 | 331.74 | 441.52 | 331.74 | 441.77 | 331.75 |
| 443.43 | 331.76 | 446.45 | 331.76 | 449.16 | 331.74 | 450.05 | 331.72 | 454.66 | 331.72 |
| 457.23 | 331.75 | 460.2 | 331.81 | 462.93 | 331.85 | 464.73 | 331.87 | 465.27 | 331.88 |
| 465.65 | 331.88 | 466.46 | 331.85 | 468.24 | 331.76 | 473.61 | 331.59 | 474.28 | 331.58 |
| 475.38 | 331.57 | 480.85 | 331.42 | 481.9 | 331.38 | 482.55 | 331.36 | 483.36 | 331.34 |
| 484.38 | 331.32 | 485.59 | 331.29 | 486.16 | 331.29 | 486.29 | 331.28 | 486.71 | 331.28 |
| 487.04 | 331.29 | 487.88 | 331.3 | 488.86 | 331.33 | 489.39 | 331.41 | 489.8 | 331.44 |
| 490.28 | 331.43 | 490.71 | 331.43 | 491.19 | 331.41 | 491.39 | 331.38 | 491.46 | 331.35 |
| 492.01 | 331.35 | 492.31 | 331.37 | 493.44 | 331.46 | 494.11 | 331.54 | 497.03 | 331.75 |
| 497.58 | 331.8 | 498.46 | 331.8 | 501.85 | 331.81 | 506.79 | 331.81 | 507.79 | 331.82 |
| 509.79 | 331.82 | 509.94 | 331.88 | 510.18 | 331.9 | 510.75 | 331.93 | 511.25 | 331.95 |
| 511.91 | 331.97 | 513.56 | 331.99 | 514.48 | 331.99 | 515.37 | 331.98 | 516.73 | 331.97 |
| 520.51 | 331.93 | 520.78 | 331.93 | 524.27 | 331.86 | 524.95 | 331.85 | 527.93 | 331.85 |
| 533.6 | 332.16 | 534.25 | 332.19 | 534.64 | 332.2 | 535.94 | 332.25 | 536.64 | 332.29 |
| 537.66 | 332.33 | 542.07 | 332.46 | 542.94 | 332.67 | 543.86 | 332.86 | 544.63 | 333 |
| 545.01 | 333.09 | 546.19 | 333.43 | 547 | 333.67 | 547.22 | 333.74 | 548.59 | 334.16 |
| 549 | 334.29 | 551.06 | 334.91 | 552.85 | 335.44 | 553.23 | 335.55 | 555.23 | 336.14 |
| 556.23 | 336.37 | 556.84 | 336.53 | 557.73 | 336.77 | 560.31 | 337.32 | 560.74 | 337.43 |
| 563.51 | 338.02 | 569.77 | 338.1 | 573.47 | 338.15 | 576.49 | 338.13 | 583.15 | 338.06 |
| 584.18 | 338.05 | 590.48 | 337.98 | 595.88 | 337.93 | 596.83 | 337.92 | 598.16 | 337.9 |
| 599.73 | 337.88 | 600.87 | 337.87 | 601.25 | 337.87 | 602.35 | 337.85 | 603.61 | 337.85 |
| 603.71 | 337.84 | 604.59 | 337.86 | 607.37 | 337.9 | 611 | 337.96 | 611.87 | 337.98 |
| 613.22 | 337.99 | 614.08 | 338 | 618 | 338.03 | 618.19 | 338.03 | 622.82 | 338.05 |
| 623.52 | 338.06 | 623.98 | 338.05 | 627 | 338.05 | 627.85 | 338.06 | 629.01 | 338.06 |
| 629.93 | 338.05 | 633.52 | 338.02 | 636.35 | 337.99 | 636.93 | 337.98 | 638.21 | 337.97 |
| 638.82 | 337.97 | 639.86 | 337.95 | 641.61 | 337.93 | 651.48 | 337.75 | 653.55 | 337.72 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 653.99 | 337.71 | 660.18 | 337.71 | 664.96 | 337.72 | 668.04 | 337.72 | 672.88 | 337.7 |
| 675.22 | 337.7 | 683.31 | 337.58 | 683.72 | 337.57 | 685.01 | 337.6 | 685.28 | 337.61 |
| 686.02 | 337.61 | 689.02 | 337.64 | 691.54 | 337.68 | 692.37 | 337.72 | 693.25 | 337.68 |
| 693.82 | 337.66 | 694.04 | 337.67 | 694.37 | 337.67 | 694.79 | 337.7 | 696.26 | 337.83 |
| 696.56 | 337.86 | 697.43 | 337.91 | 698.29 | 337.97 | 699.4 | 338.04 | 700.74 | 338.11 |
| 701.19 | 338.14 | 704.58 | 338.4 | 705.75 | 338.5 | 709.94 | 339 | 711.28 | 339.12 |
| 712.52 | 339.22 | 714.2 | 339.35 | 715.75 | 339.49 | 716.23 | 339.52 | 717.57 | 339.54 |
| 719.42 | 339.58 | 721.52 | 339.64 | 722.63 | 339.68 | 724.16 | 339.73 | 726.6 | 339.8 |
| 731.46 | 339.97 | 732.49 | 340 | 737.58 | 340.16 | 739.07 | 340.19 | 741.01 | 340.24 |
| 742.72 | 340.29 | 746.75 | 340.39 | 752.08 | 340.52 | 755.93 | 340.61 | 758.45 | 340.67 |
| 759.77 | 340.71 | 761.08 | 340.74 | 762.28 | 340.78 | 763.99 | 340.83 | 765.38 | 340.86 |
| 768.43 | 340.93 | 772.4 | 341.04 | 772.83 | 341.05 | 774.68 | 341.08 | 777.85 | 341.12 |
| 779.08 | 341.11 | 779.82 | 341.1 | 783.26 | 341.09 | 783.81 | 341.1 | 784.82 | 341.1 |
| 786.85 | 341.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 106.84 | .04 | 534.25 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 106.84 | 534.25 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1323.26*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.78 | .44 | 332.78 | .68 | 332.81 | .87 | 332.82 | 1.64 | 332.82 |
| 3.68 | 332.81 | 4.35 | 332.8 | 6.36 | 332.78 | 7.99 | 332.75 | 8.16 | 332.75 |
| 10.93 | 332.68 | 12.71 | 332.62 | 13.39 | 332.6 | 13.72 | 332.6 | 14.46 | 332.58 |
| 16.07 | 332.55 | 16.56 | 332.54 | 16.91 | 332.53 | 17.25 | 332.53 | 17.52 | 332.52 |
| 18.01 | 332.52 | 18.74 | 332.53 | 19.91 | 332.54 | 21.68 | 332.54 | 22.12 | 332.53 |
| 22.72 | 332.53 | 23.32 | 332.52 | 23.63 | 332.51 | 24.95 | 332.49 | 25.97 | 332.47 |
| 27.78 | 332.44 | 29.01 | 332.41 | 29.16 | 332.41 | 29.37 | 332.39 | 30.9 | 332.3 |
| 31.96 | 332.25 | 32.88 | 332.21 | 34.13 | 332.16 | 37.47 | 332.03 | 37.86 | 332.02 |
| 38.24 | 332.07 | 38.33 | 332.12 | 39.26 | 332.12 | 41.11 | 332.07 | 45.59 | 331.96 |
| 46.25 | 331.95 | 46.52 | 331.95 | 47.84 | 331.92 | 48.27 | 331.92 | 48.66 | 331.93 |
| 50.9 | 331.93 | 51.68 | 331.91 | 52.15 | 331.91 | 55.16 | 331.85 | 56.01 | 331.83 |
| 56.2 | 331.82 | 56.49 | 331.82 | 58.05 | 331.76 | 58.75 | 331.73 | 59.18 | 331.7 |
| 60.51 | 331.66 | 61 | 331.64 | 61.71 | 331.62 | 63.44 | 331.56 | 63.66 | 331.55 |
| 64.29 | 331.55 | 66.7 | 331.48 | 68.32 | 331.48 | 68.65 | 331.49 | 69.34 | 331.5 |
| 75.2 | 331.5 | 76.43 | 331.49 | 82.04 | 331.46 | 86.21 | 331.44 | 86.89 | 331.44 |
| 87.09 | 331.43 | 89.17 | 331.41 | 92.18 | 331.4 | 93.99 | 331.38 | 94.42 | 331.37 |
| 95.4 | 331.37 | 97.45 | 331.36 | 98.04 | 331.38 | 98.98 | 331.42 | 99.05 | 331.45 |
| 99.82 | 331.48 | 100.12 | 331.48 | 100.39 | 331.49 | 100.88 | 331.49 | 101.1 | 331.48 |
| 101.86 | 331.48 | 102.16 | 331.48 | 102.21 | 331.47 | 103.53 | 331.41 | 104.34 | 331.37 |
| 106.11 | 331.31 | 108.9 | 331.19 | 110.14 | 331.1 | 110.52 | 331.07 | 111.63 | 331.07 |
| 113.73 | 331.06 | 123.23 | 331.06 | 123.45 | 331.05 | 131.94 | 331.05 | 133.21 | 331.11 |
| 133.35 | 331.12 | 134.38 | 331.12 | 134.49 | 331.11 | 134.85 | 331.11 | 135.1 | 331.1 |
| 137.1 | 331.04 | 137.68 | 331.03 | 141.7 | 331.03 | 147.26 | 331.1 | 148.4 | 331.11 |
| 149.89 | 331.13 | 150.16 | 331.13 | 150.46 | 331.14 | 152.4 | 331.19 | 153.18 | 331.19 |
| 155.2 | 331.15 | 155.97 | 331.14 | 156.76 | 331.14 | 159.65 | 331.12 | 160.47 | 331.11 |
| 161.36 | 331.09 | 161.61 | 331.07 | 162.5 | 331.01 | 162.71 | 331 | 163.3 | 331.02 |
| 165.47 | 331.07 | 165.98 | 331.08 | 166.99 | 331.06 | 169.58 | 330.91 | 170.38 | 330.86 |
| 170.69 | 330.8 | 170.92 | 330.8 | 172.06 | 330.77 | 173.26 | 330.75 | 173.96 | 330.77 |
| 176.45 | 330.82 | 178.78 | 330.81 | 183.04 | 330.79 | 184.93 | 330.77 | 185.97 | 330.77 |
| 190.66 | 330.72 | 195.89 | 330.67 | 197.68 | 330.66 | 198.99 | 330.65 | 201.26 | 330.63 |
| 202.78 | 330.62 | 203.05 | 330.62 | 206.32 | 330.59 | 207.7 | 330.56 | 209.9 | 330.53 |
| 211.36 | 330.49 | 211.47 | 330.49 | 213.76 | 330.46 | 215.58 | 330.44 | 216.67 | 330.42 |
| 218.5 | 330.38 | 220.85 | 330.36 | 225.44 | 330.31 | 226.38 | 330.25 | 227.76 | 330.17 |
| 228.03 | 330.16 | 229.5 | 330.12 | 229.97 | 330.11 | 230.02 | 330.1 | 230.49 | 330.09 |
| 230.98 | 330.07 | 231.84 | 330.02 | 232.45 | 329.97 | 233.05 | 329.93 | 234.18 | 329.84 |
| 234.83 | 329.82 | 235.13 | 329.82 | 235.48 | 329.8 | 236.26 | 329.8 | 236.45 | 329.81 |
| 236.52 | 329.84 | 236.9 | 329.87 | 237.64 | 329.87 | 238.63 | 329.88 | 240.22 | 329.93 |
| 242.09 | 330.07 | 245.36 | 330.27 | 247.27 | 330.38 | 248.88 | 330.38 | 249.06 | 330.39 |
| 250.75 | 330.39 | 254.59 | 329.99 | 255.24 | 330 | 256.01 | 330.04 | 256.38 | 330.01 |
| 256.96 | 329.99 | 257.96 | 330.04 | 260.26 | 329.95 | 263.32 | 330.02 | 264.32 | 329.99 |
| 264.54 | 329.98 | 265.14 | 329.98 | 267.9 | 329.92 | 268.99 | 329.9 | 269.14 | 329.89 |
| 270.44 | 329.89 | 271.13 | 329.91 | 271.55 | 329.91 | 272.54 | 329.94 | 275.61 | 330 |
| 276.04 | 330.07 | 277.26 | 330.16 | 281.67 | 330.4 | 297.85 | 330.4 | 298.82 | 330.28 |
| 299.05 | 330.27 | 299.76 | 330.26 | 302.44 | 330.25 | 302.96 | 330.24 | 303.7 | 330.24 |
| 304.88 | 330.22 | 304.94 | 330.23 | 310.92 | 330.42 | 311.26 | 330.43 | 313.09 | 330.5 |
| 324.48 | 330.92 | 326.54 | 331 | 326.7 | 331.01 | 328.6 | 331.09 | 329.02 | 331.11 |
| 330.73 | 331.12 | 334.31 | 331.13 | 335.42 | 331.14 | 343.32 | 331.17 | 348.46 | 331.17 |
| 348.95 | 331.18 | 350.42 | 331.19 | 351.78 | 331.22 | 352.67 | 331.25 | 353.08 | 331.28 |
| 353.76 | 331.28 | 357.72 | 331.29 | 362.53 | 331.29 | 362.71 | 331.28 | 363.25 | 331.27 |
| 364.13 | 331.27 | 365.09 | 331.28 | 367.47 | 331.27 | 368.76 | 331.28 | 370.07 | 331.28 |
| 372.47 | 331.3 | 373.5 | 331.31 | 376.88 | 331.31 | 377.9 | 331.3 | 378.1 | 331.28 |
| 384.75 | 331.08 | 387.49 | 330.99 | 389.4 | 330.94 | 392.07 | 330.89 | 393.52 | 330.86 |
| 396.38 | 330.88 | 397.02 | 330.89 | 397.3 | 330.89 | 398.18 | 330.91 | 400.74 | 330.98 |
| 403.11 | 331.03 | 403.55 | 331.03 | 408.03 | 331.13 | 408.27 | 331.14 | 411.01 | 331.23 |
| 411.21 | 331.24 | 412.03 | 331.24 | 412.13 | 331.23 | 412.77 | 331.2 | 414.1 | 331.11 |
| 414.54 | 331.13 | 415.19 | 331.14 | 415.59 | 331.14 | 415.88 | 331.13 | 416.19 | 331.1 |
| 417.21 | 330.99 | 417.91 | 330.97 | 418.54 | 330.96 | 419.33 | 330.96 | 420.63 | 330.98 |
| 421.14 | 331.02 | 423.43 | 331.09 | 424.25 | 331.12 | 425.05 | 331.16 | 427.66 | 331.3 |
| 428.68 | 331.34 | 429.33 | 331.37 | 430.69 | 331.42 | 432.76 | 331.49 | 433.28 | 331.5 |
| 433.85 | 331.5 | 434.45 | 331.51 | 435.07 | 331.51 | 437.4 | 331.5 | 438.82 | 331.5 |
| 440.57 | 331.51 | 441.45 | 331.52 | 442.25 | 331.52 | 446.61 | 331.49 | 447.55 | 331.48 |
| 448.81 | 331.48 | 449.14 | 331.47 | 452.41 | 331.47 | 455.12 | 331.51 | 458.25 | 331.57 |
| 461.13 | 331.61 | 463.03 | 331.63 | 463.6 | 331.64 | 464.3 | 331.64 | 464.84 | 331.61 |
| 466.73 | 331.51 | 467.38 | 331.49 | 472.38 | 331.33 | 473.09 | 331.32 | 474.25 | 331.31 |
| 480.02 | 331.14 | 480.6 | 331.12 | 481.13 | 331.11 | 481.81 | 331.08 | 482.67 | 331.06 |
| 483.74 | 331.04 | 485.02 | 331.01 | 485.62 | 331.01 | 485.76 | 331 | 486.19 | 331 |
| 486.54 | 331.01 | 487.43 | 331.02 | 487.82 | 331.02 | 488.12 | 331.04 | 488.46 | 331.05 |
| 489.02 | 331.13 | 489.31 | 331.16 | 490.11 | 331.16 | 490.79 | 331.13 | 490.92 | 331.13 |
| 491.13 | 331.1 | 491.21 | 331.07 | 491.79 | 331.07 | 492.1 | 331.09 | 493.29 | 331.18 |
| 494 | 331.27 | 497.08 | 331.5 | 497.65 | 331.54 | 498.58 | 331.54 | 502.16 | 331.56 |
| 510.53 | 331.56 | 510.68 | 331.63 | 510.94 | 331.65 | 511.54 | 331.68 | 512.06 | 331.7 |
| 512.76 | 331.72 | 514.5 | 331.74 | 516.41 | 331.74 | 517.84 | 331.73 | 518.8 | 331.71 |
| 521.83 | 331.68 | 522.11 | 331.68 | 525.79 | 331.61 | 526.51 | 331.59 | 529.64 | 331.59 |
| 531.01 | 331.66 | 533.3 | 331.79 | 535.63 | 331.92 | 536.31 | 331.95 | 536.7 | 331.96 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 538.01 | 332.01 | 538.73 | 332.05 | 539.75 | 332.1 | 544.2 | 332.24 | 545.09 | 332.46 |
| 546.01 | 332.66 | 546.89 | 332.83 | 547.18 | 332.91 | 548.37 | 333.26 | 549.4 | 333.59 |
| 550.79 | 334.04 | 552.04 | 334.44 | 553.28 | 334.82 | 555.38 | 335.48 | 555.48 | 335.5 |
| 557.5 | 336.13 | 558.5 | 336.37 | 560.02 | 336.79 | 562.62 | 337.37 | 563.06 | 337.48 |
| 565.85 | 338.11 | 569.81 | 338.16 | 572.17 | 338.18 | 575.9 | 338.23 | 578.96 | 338.2 |
| 579.89 | 338.19 | 585.68 | 338.12 | 586.71 | 338.1 | 593.08 | 338.02 | 598.53 | 337.97 |
| 599.49 | 337.95 | 600.83 | 337.94 | 602.42 | 337.91 | 603.57 | 337.9 | 603.95 | 337.9 |
| 605.07 | 337.88 | 605.81 | 337.88 | 606.44 | 337.87 | 607.33 | 337.88 | 610.13 | 337.93 |
| 613.8 | 337.99 | 614.67 | 338 | 614.88 | 338.01 | 616.04 | 338.02 | 616.91 | 338.03 |
| 618.13 | 338.04 | 620.86 | 338.06 | 623.34 | 338.06 | 625.73 | 338.07 | 626.43 | 338.08 |
| 626.89 | 338.08 | 627.68 | 338.07 | 629.94 | 338.07 | 630.8 | 338.08 | 631.25 | 338.07 |
| 631.98 | 338.08 | 636.53 | 338.03 | 639.38 | 337.99 | 639.97 | 337.99 | 641.26 | 337.97 |
| 641.88 | 337.97 | 642.93 | 337.95 | 644.7 | 337.92 | 654.66 | 337.74 | 656.75 | 337.7 |
| 657.09 | 337.7 | 657.2 | 337.69 | 658.96 | 337.69 | 659.69 | 337.68 | 671.37 | 337.68 |
| 676.26 | 337.65 | 678.63 | 337.63 | 686.8 | 337.49 | 687.21 | 337.48 | 688.51 | 337.5 |
| 688.79 | 337.51 | 689.53 | 337.51 | 692.56 | 337.52 | 694.47 | 337.54 | 695.15 | 337.54 |
| 695.94 | 337.58 | 697.4 | 337.5 | 698.02 | 337.52 | 698.38 | 337.54 | 699.87 | 337.68 |
| 700.5 | 337.73 | 700.72 | 337.74 | 701.92 | 337.81 | 703.04 | 337.88 | 704.39 | 337.96 |
| 704.85 | 337.98 | 708.27 | 338.23 | 709.45 | 338.34 | 713.68 | 338.81 | 715.04 | 338.93 |
| 717.98 | 339.14 | 720.03 | 339.31 | 721.38 | 339.32 | 723.25 | 339.37 | 725.37 | 339.43 |
| 726.49 | 339.47 | 730.5 | 339.6 | 735.4 | 339.76 | 736.45 | 339.79 | 741.58 | 339.96 |
| 743.08 | 340 | 745.05 | 340.05 | 746.77 | 340.09 | 750.84 | 340.2 | 756.22 | 340.34 |
| 760.11 | 340.43 | 762.65 | 340.5 | 763.99 | 340.54 | 765.31 | 340.57 | 766.52 | 340.61 |
| 769.65 | 340.7 | 772.73 | 340.77 | 776.73 | 340.88 | 777.17 | 340.89 | 779.04 | 340.91 |
| 782.24 | 340.96 | 784.22 | 340.93 | 787.7 | 340.92 | 788.25 | 340.92 | 789.27 | 340.93 |
| 791.32 | 340.94 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 101.86 | .04 | 536.31 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 101.86 | 536.31 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1303.29*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.51 | .42 | 332.5 | .65 | 332.53 | .83 | 332.54 | 1.56 | 332.54 |
| 3.5 | 332.53 | 6.05 | 332.49 | 6.5 | 332.49 | 7.6 | 332.47 | 7.76 | 332.47 |
| 10.4 | 332.4 | 12.09 | 332.35 | 13.05 | 332.32 | 13.43 | 332.32 | 13.75 | 332.31 |
| 15.28 | 332.28 | 15.49 | 332.27 | 16.08 | 332.26 | 16.41 | 332.26 | 16.66 | 332.25 |
| 17.13 | 332.25 | 17.83 | 332.26 | 20.62 | 332.26 | 21.04 | 332.25 | 22.18 | 332.23 |
| 22.47 | 332.23 | 23.73 | 332.21 | 24.7 | 332.19 | 26.42 | 332.16 | 27.59 | 332.13 |
| 27.94 | 332.1 | 29.38 | 332.02 | 31.27 | 331.93 | 32.46 | 331.89 | 35.63 | 331.76 |
| 35.97 | 331.75 | 36.37 | 331.8 | 36.45 | 331.84 | 36.63 | 331.85 | 36.93 | 331.85 |
| 39.1 | 331.8 | 43.36 | 331.69 | 43.99 | 331.68 | 44.24 | 331.67 | 45.5 | 331.64 |
| 45.91 | 331.65 | 47.89 | 331.65 | 48.41 | 331.64 | 48.76 | 331.64 | 49.15 | 331.63 |
| 49.6 | 331.63 | 50.09 | 331.61 | 52.46 | 331.56 | 53.27 | 331.54 | 53.73 | 331.54 |
| 55.21 | 331.48 | 55.88 | 331.45 | 56.29 | 331.42 | 57.55 | 331.38 | 58.01 | 331.36 |
| 58.69 | 331.34 | 60.06 | 331.29 | 60.22 | 331.29 | 60.54 | 331.27 | 61.05 | 331.28 |
| 61.15 | 331.27 | 61.82 | 331.25 | 63.44 | 331.21 | 63.76 | 331.2 | 64.98 | 331.2 |
| 65.29 | 331.21 | 65.95 | 331.22 | 71.52 | 331.22 | 72.69 | 331.21 | 78.02 | 331.19 |
| 81.99 | 331.17 | 82.63 | 331.17 | 82.83 | 331.16 | 83.89 | 331.15 | 84.8 | 331.15 |
| 87.67 | 331.14 | 89.39 | 331.12 | 89.8 | 331.12 | 90.73 | 331.11 | 92.68 | 331.11 |
| 93.24 | 331.13 | 93.95 | 331.15 | 94.14 | 331.16 | 94.2 | 331.19 | 94.34 | 331.2 |
| 94.93 | 331.22 | 96.15 | 331.22 | 96.87 | 331.21 | 97.2 | 331.21 | 98.44 | 331.15 |
| 99.2 | 331.11 | 100.86 | 331.06 | 101.73 | 331.03 | 103.47 | 330.95 | 104.64 | 330.86 |
| 105 | 330.84 | 106.03 | 330.84 | 108 | 330.83 | 116.74 | 330.83 | 116.92 | 330.82 |
| 125.08 | 330.82 | 126.27 | 330.88 | 127.47 | 330.88 | 128.04 | 330.86 | 129.92 | 330.8 |
| 132.27 | 330.8 | 133.24 | 330.79 | 134.23 | 330.79 | 139.45 | 330.86 | 140.52 | 330.87 |
| 142.16 | 330.88 | 142.44 | 330.89 | 143.95 | 330.93 | 144.26 | 330.93 | 144.69 | 330.94 |
| 145 | 330.93 | 146.89 | 330.9 | 148.36 | 330.88 | 151.06 | 330.86 | 151.83 | 330.85 |
| 152.34 | 330.85 | 152.9 | 330.82 | 153.74 | 330.76 | 153.93 | 330.75 | 154.86 | 330.78 |
| 157 | 330.82 | 157.94 | 330.8 | 158.74 | 330.76 | 160.37 | 330.66 | 160.56 | 330.66 |
| 161.12 | 330.62 | 161.42 | 330.57 | 161.63 | 330.56 | 163.82 | 330.52 | 164.48 | 330.53 |
| 166.82 | 330.58 | 169 | 330.56 | 172.99 | 330.54 | 174.77 | 330.53 | 175.74 | 330.52 |
| 180.14 | 330.47 | 185.04 | 330.42 | 186.72 | 330.4 | 187.95 | 330.39 | 190.08 | 330.37 |
| 191.75 | 330.36 | 194.82 | 330.33 | 196.12 | 330.3 | 198.18 | 330.26 | 198.88 | 330.25 |
| 199.66 | 330.23 | 201.8 | 330.19 | 203.5 | 330.17 | 204.15 | 330.16 | 206.24 | 330.11 |
| 208.45 | 330.08 | 212.75 | 330.03 | 213.64 | 329.98 | 214.93 | 329.9 | 215.18 | 329.89 |
| 216.55 | 329.85 | 217.05 | 329.84 | 218.4 | 329.78 | 218.99 | 329.74 | 219.33 | 329.7 |
| 219.88 | 329.66 | 220.94 | 329.57 | 222.17 | 329.53 | 222.4 | 329.52 | 222.73 | 329.52 |
| 223.1 | 329.54 | 223.17 | 329.57 | 223.58 | 329.6 | 224.36 | 329.6 | 225.4 | 329.62 |
| 227.06 | 329.66 | 229.04 | 329.81 | 232.47 | 330.03 | 234.48 | 330.15 | 238.13 | 330.15 |
| 242.17 | 329.73 | 242.86 | 329.74 | 243.66 | 329.78 | 244.05 | 329.75 | 244.66 | 329.73 |
| 245.72 | 329.78 | 248.13 | 329.68 | 251.35 | 329.76 | 252.4 | 329.72 | 252.63 | 329.72 |
| 254.69 | 329.69 | 256.17 | 329.65 | 257.31 | 329.63 | 259.28 | 329.63 | 259.56 | 329.64 |
| 261.05 | 329.67 | 264.27 | 329.74 | 264.73 | 329.81 | 266 | 329.91 | 270.64 | 330.16 |
| 287.66 | 330.16 | 288.67 | 330.04 | 288.92 | 330.02 | 289.67 | 330.02 | 292.46 | 330 |
| 293.8 | 329.98 | 295.05 | 329.97 | 295.11 | 329.98 | 301.4 | 330.18 | 301.76 | 330.19 |
| 303.68 | 330.26 | 315.66 | 330.7 | 316.74 | 330.74 | 317.82 | 330.79 | 317.99 | 330.79 |
| 320.43 | 330.9 | 322.23 | 330.91 | 325.83 | 330.92 | 327.15 | 330.92 | 335.46 | 330.95 |
| 340.29 | 330.96 | 341.38 | 330.96 | 342.93 | 330.97 | 344.36 | 331 | 345.29 | 331.04 |
| 345.72 | 331.07 | 350.61 | 331.07 | 355.66 | 331.08 | 355.85 | 331.06 | 356.41 | 331.05 |
| 357.34 | 331.05 | 358.36 | 331.06 | 360.85 | 331.05 | 362.21 | 331.06 | 363.59 | 331.06 |
| 366.11 | 331.08 | 367.2 | 331.09 | 369.12 | 331.09 | 370.75 | 331.08 | 371.64 | 331.08 |
| 372.03 | 331.05 | 379.03 | 330.84 | 381.91 | 330.74 | 383.49 | 330.69 | 383.91 | 330.69 |
| 384.51 | 330.68 | 386.72 | 330.63 | 388.25 | 330.6 | 389.74 | 330.61 | 391.25 | 330.61 |
| 391.36 | 330.62 | 391.92 | 330.63 | 392.22 | 330.63 | 393.14 | 330.65 | 395.84 | 330.72 |
| 398.33 | 330.77 | 398.78 | 330.77 | 401.6 | 330.83 | 403.5 | 330.88 | 403.75 | 330.88 |
| 406.63 | 330.98 | 406.85 | 330.99 | 407.32 | 330.99 | 407.81 | 330.98 | 408.48 | 330.95 |
| 409.25 | 330.89 | 409.88 | 330.85 | 410.35 | 330.87 | 411.03 | 330.88 | 411.44 | 330.88 |
| 411.75 | 330.87 | 412.08 | 330.83 | 412.83 | 330.75 | 413.15 | 330.72 | 413.65 | 330.71 |
| 413.89 | 330.69 | 414.55 | 330.69 | 414.91 | 330.68 | 415.38 | 330.69 | 416.09 | 330.69 |
| 416.57 | 330.7 | 417.29 | 330.75 | 419.69 | 330.82 | 420.55 | 330.85 | 421.4 | 330.9 |
| 424.14 | 331.04 | 425.89 | 331.12 | 427.33 | 331.17 | 429.5 | 331.24 | 430.65 | 331.26 |
| 431.93 | 331.26 | 434.38 | 331.25 | 435.87 | 331.25 | 437.71 | 331.26 | 438.63 | 331.27 |
| 441.06 | 331.27 | 445.05 | 331.23 | 447.69 | 331.23 | 448.5 | 331.22 | 450.16 | 331.22 |
| 453.01 | 331.27 | 456.3 | 331.33 | 459.32 | 331.37 | 461.32 | 331.39 | 461.92 | 331.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 462.66 | 331.4 | 465.21 | 331.27 | 465.9 | 331.24 | 471.16 | 331.07 | 471.91 | 331.06 |
| 473.12 | 331.05 | 479.19 | 330.87 | 480.35 | 330.83 | 481.07 | 330.81 | 481.97 | 330.79 |
| 483.1 | 330.75 | 484.44 | 330.73 | 484.74 | 330.72 | 485.68 | 330.72 | 486.05 | 330.73 |
| 486.98 | 330.73 | 487.7 | 330.75 | 488.06 | 330.77 | 488.44 | 330.82 | 488.65 | 330.86 |
| 489.1 | 330.89 | 489.64 | 330.88 | 490.12 | 330.88 | 490.65 | 330.85 | 490.87 | 330.82 |
| 490.95 | 330.79 | 491.56 | 330.79 | 491.89 | 330.81 | 493.14 | 330.91 | 493.89 | 331 |
| 497.12 | 331.24 | 497.17 | 331.25 | 497.73 | 331.29 | 498.7 | 331.29 | 502.46 | 331.3 |
| 509.06 | 331.3 | 511.26 | 331.31 | 511.42 | 331.38 | 512.33 | 331.44 | 512.88 | 331.46 |
| 513.61 | 331.47 | 515.44 | 331.49 | 517.45 | 331.49 | 518.95 | 331.48 | 519.97 | 331.46 |
| 523.15 | 331.43 | 523.44 | 331.42 | 527.31 | 331.35 | 528.06 | 331.33 | 531.36 | 331.33 |
| 532.4 | 331.39 | 532.8 | 331.41 | 535.21 | 331.54 | 537.65 | 331.68 | 538.37 | 331.71 |
| 538.77 | 331.72 | 540.09 | 331.78 | 540.81 | 331.82 | 541.85 | 331.86 | 546.34 | 332.02 |
| 547.23 | 332.25 | 548.16 | 332.46 | 549.05 | 332.65 | 549.09 | 332.65 | 549.34 | 332.73 |
| 550.54 | 333.1 | 551.36 | 333.37 | 551.59 | 333.44 | 552.99 | 333.91 | 554.25 | 334.34 |
| 555.51 | 334.74 | 557.33 | 335.33 | 557.72 | 335.46 | 559.76 | 336.12 | 560.77 | 336.37 |
| 562.3 | 336.81 | 564.93 | 337.42 | 565.24 | 337.51 | 568.2 | 338.2 | 572.19 | 338.24 |
| 574.57 | 338.27 | 578.34 | 338.3 | 581.42 | 338.27 | 581.69 | 338.27 | 582.36 | 338.26 |
| 588.2 | 338.18 | 589.25 | 338.16 | 595.68 | 338.07 | 601.18 | 338 | 602.15 | 337.99 |
| 603.5 | 337.97 | 605.1 | 337.95 | 606.26 | 337.93 | 606.65 | 337.93 | 607.78 | 337.91 |
| 608.17 | 337.9 | 608.52 | 337.91 | 609.16 | 337.9 | 610.06 | 337.91 | 612.89 | 337.96 |
| 616.59 | 338.01 | 617.47 | 338.03 | 617.69 | 338.03 | 618.85 | 338.05 | 619.73 | 338.05 |
| 620.97 | 338.06 | 623.72 | 338.08 | 626.23 | 338.09 | 628.63 | 338.09 | 629.34 | 338.1 |
| 629.81 | 338.1 | 630.61 | 338.09 | 632.89 | 338.09 | 633.76 | 338.1 | 634.21 | 338.09 |
| 635.88 | 338.09 | 639.54 | 338.03 | 642.42 | 338 | 644.94 | 337.96 | 646 | 337.95 |
| 647.78 | 337.92 | 657.84 | 337.72 | 659.95 | 337.68 | 660.52 | 337.68 | 660.86 | 337.67 |
| 662.18 | 337.66 | 663.01 | 337.66 | 666.7 | 337.65 | 671.58 | 337.64 | 674.71 | 337.63 |
| 679.65 | 337.59 | 682.04 | 337.57 | 690.28 | 337.4 | 690.7 | 337.4 | 692.01 | 337.41 |
| 693.04 | 337.41 | 696.1 | 337.4 | 698.03 | 337.4 | 698.71 | 337.41 | 699.51 | 337.45 |
| 700.99 | 337.35 | 701.61 | 337.37 | 701.97 | 337.39 | 703.48 | 337.52 | 703.78 | 337.55 |
| 705.54 | 337.65 | 706.67 | 337.72 | 708.04 | 337.8 | 708.5 | 337.83 | 711.95 | 338.07 |
| 713.15 | 338.17 | 717.42 | 338.62 | 718.79 | 338.74 | 720.05 | 338.83 | 721.76 | 338.94 |
| 723.33 | 339.06 | 723.83 | 339.09 | 725.2 | 339.11 | 727.08 | 339.15 | 729.22 | 339.21 |
| 730.35 | 339.25 | 731.91 | 339.31 | 734.4 | 339.39 | 739.34 | 339.56 | 740.4 | 339.59 |
| 745.59 | 339.76 | 747.1 | 339.8 | 749.08 | 339.85 | 750.82 | 339.9 | 754.93 | 340.02 |
| 760.36 | 340.16 | 764.29 | 340.26 | 766.85 | 340.33 | 769.53 | 340.41 | 770.76 | 340.44 |
| 772.5 | 340.5 | 773.92 | 340.53 | 777.03 | 340.6 | 781.07 | 340.72 | 781.51 | 340.72 |
| 786.63 | 340.8 | 788.63 | 340.77 | 792.14 | 340.75 | 792.69 | 340.75 | 793.73 | 340.76 |
| 795.79 | 340.77 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 96.87 | .04 | 538.37 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 96.87 | 538.37 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1283.32*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 332.23 | .4 | 332.23 | .62 | 332.25 | 1.06 | 332.26 | 1.48 | 332.26 |
| 3.32 | 332.25 | 5.74 | 332.21 | 6.17 | 332.21 | 7.21 | 332.19 | 7.36 | 332.19 |
| 9.86 | 332.12 | 11.46 | 332.07 | 12.08 | 332.06 | 12.74 | 332.04 | 13.04 | 332.04 |
| 13.56 | 332.03 | 14.5 | 332 | 14.94 | 332 | 15.25 | 331.99 | 15.57 | 331.99 |
| 15.81 | 331.98 | 19.56 | 331.98 | 19.96 | 331.97 | 21.04 | 331.95 | 21.32 | 331.95 |
| 22.5 | 331.93 | 23.43 | 331.91 | 25.06 | 331.87 | 25.81 | 331.86 | 26.17 | 331.85 |
| 26.5 | 331.82 | 27.72 | 331.76 | 28.83 | 331.7 | 29.66 | 331.66 | 30.79 | 331.62 |
| 33.8 | 331.5 | 34.16 | 331.49 | 34.5 | 331.53 | 34.58 | 331.57 | 35.42 | 331.57 |
| 37.08 | 331.52 | 41.13 | 331.41 | 41.97 | 331.4 | 43.16 | 331.37 | 44.34 | 331.37 |
| 44.84 | 331.38 | 45.92 | 331.36 | 46.25 | 331.36 | 46.62 | 331.35 | 49.76 | 331.28 |
| 50.96 | 331.25 | 51.19 | 331.25 | 52.37 | 331.2 | 53 | 331.17 | 53.39 | 331.14 |
| 54.59 | 331.1 | 55.03 | 331.08 | 55.67 | 331.06 | 57.23 | 331 | 57.62 | 330.99 |
| 57.91 | 331 | 58 | 330.99 | 58.57 | 330.98 | 58.63 | 330.97 | 60.18 | 330.93 |
| 60.48 | 330.92 | 61.36 | 330.92 | 61.63 | 330.93 | 61.93 | 330.93 | 62.55 | 330.94 |
| 67.84 | 330.94 | 68.95 | 330.93 | 74.01 | 330.92 | 77.77 | 330.9 | 78.38 | 330.9 |
| 78.56 | 330.89 | 79.57 | 330.89 | 80.44 | 330.88 | 83.16 | 330.88 | 84.79 | 330.86 |
| 86.06 | 330.86 | 87.73 | 330.85 | 87.91 | 330.86 | 88.44 | 330.87 | 89.11 | 330.9 |
| 89.29 | 330.9 | 89.35 | 330.93 | 89.82 | 330.95 | 90.32 | 330.96 | 91.2 | 330.96 |
| 91.89 | 330.95 | 92.19 | 330.95 | 93.35 | 330.89 | 94.06 | 330.86 | 95.61 | 330.81 |
| 96.42 | 330.78 | 98.05 | 330.7 | 99.47 | 330.61 | 100.44 | 330.61 | 102.28 | 330.6 |
| 110.04 | 330.6 | 110.16 | 330.59 | 118.22 | 330.59 | 119.33 | 330.64 | 120.45 | 330.64 |
| 120.99 | 330.62 | 122.74 | 330.57 | 123.25 | 330.57 | 124.09 | 330.56 | 126.76 | 330.56 |
| 132.63 | 330.62 | 133.94 | 330.63 | 134.43 | 330.64 | 135.83 | 330.68 | 136.81 | 330.68 |
| 138.58 | 330.65 | 139.95 | 330.63 | 142.48 | 330.61 | 143.67 | 330.59 | 144.19 | 330.57 |
| 144.97 | 330.51 | 145.15 | 330.5 | 145.67 | 330.52 | 146.02 | 330.52 | 148.02 | 330.56 |
| 148.9 | 330.54 | 151.34 | 330.41 | 151.86 | 330.37 | 152.14 | 330.33 | 152.34 | 330.32 |
| 154.39 | 330.28 | 155.01 | 330.29 | 157.18 | 330.33 | 159.22 | 330.32 | 162.95 | 330.29 |
| 164.61 | 330.28 | 165.52 | 330.27 | 169.62 | 330.22 | 173.24 | 330.18 | 174.2 | 330.16 |
| 175.76 | 330.15 | 176.91 | 330.13 | 178.9 | 330.11 | 180.46 | 330.1 | 182.3 | 330.08 |
| 183.33 | 330.06 | 184.54 | 330.04 | 186.46 | 330 | 187.73 | 329.96 | 187.84 | 329.96 |
| 189.84 | 329.92 | 191.43 | 329.9 | 192.03 | 329.89 | 193.99 | 329.84 | 196.04 | 329.81 |
| 200.06 | 329.76 | 200.89 | 329.7 | 202.33 | 329.63 | 203.61 | 329.59 | 204.07 | 329.58 |
| 204.91 | 329.54 | 205.66 | 329.49 | 205.89 | 329.47 | 206.2 | 329.43 | 206.72 | 329.39 |
| 207.71 | 329.3 | 207.77 | 329.29 | 208.04 | 329.29 | 209.07 | 329.25 | 209.36 | 329.25 |
| 209.75 | 329.26 | 209.83 | 329.3 | 210.25 | 329.33 | 211.07 | 329.33 | 212.16 | 329.35 |
| 213.91 | 329.4 | 215.98 | 329.55 | 219.58 | 329.78 | 221.69 | 329.91 | 225.52 | 329.91 |
| 229.75 | 329.47 | 230.47 | 329.48 | 231.32 | 329.52 | 231.73 | 329.49 | 232.37 | 329.47 |
| 233.47 | 329.52 | 236.01 | 329.42 | 239.38 | 329.5 | 240.73 | 329.45 | 241.39 | 329.45 |
| 244.44 | 329.39 | 245.63 | 329.36 | 247.44 | 329.36 | 247.7 | 329.37 | 247.99 | 329.37 |
| 248.47 | 329.38 | 249.55 | 329.41 | 252.94 | 329.48 | 253.41 | 329.55 | 254.75 | 329.66 |
| 259.62 | 329.92 | 277.46 | 329.92 | 278.53 | 329.79 | 278.78 | 329.77 | 279.57 | 329.77 |
| 282.5 | 329.75 | 283.91 | 329.73 | 285.28 | 329.72 | 291.88 | 329.93 | 292.25 | 329.95 |
| 294.27 | 330.02 | 306.83 | 330.48 | 307.97 | 330.53 | 309.1 | 330.57 | 309.28 | 330.58 |
| 311.84 | 330.69 | 313.73 | 330.7 | 317.51 | 330.71 | 318.89 | 330.71 | 324.75 | 330.73 |
| 327.6 | 330.73 | 332.67 | 330.74 | 333.82 | 330.74 | 335.44 | 330.76 | 336.93 | 330.79 |
| 337.92 | 330.82 | 338.37 | 330.85 | 339.12 | 330.85 | 343.49 | 330.86 | 348.79 | 330.86 |
| 348.99 | 330.84 | 349.58 | 330.83 | 350.55 | 330.83 | 351.62 | 330.84 | 354.24 | 330.83 |
| 355.66 | 330.84 | 357.11 | 330.84 | 359.75 | 330.85 | 360.89 | 330.87 | 362.9 | 330.86 |
| 364.62 | 330.86 | 365.55 | 330.85 | 365.96 | 330.82 | 373.3 | 330.59 | 376.32 | 330.49 |
| 377.98 | 330.44 | 379.05 | 330.42 | 381.37 | 330.37 | 382.97 | 330.34 | 384.54 | 330.34 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 386.12 | 330.35 | 386.24 | 330.36 | 386.83 | 330.37 | 387.55 | 330.37 | 388.1 | 330.38 |
| 390.93 | 330.46 | 393.54 | 330.51 | 394.02 | 330.51 | 396.98 | 330.57 | 398.97 | 330.62 |
| 399.23 | 330.63 | 402.25 | 330.73 | 402.48 | 330.74 | 402.97 | 330.74 | 403.48 | 330.73 |
| 404.19 | 330.69 | 405 | 330.63 | 405.66 | 330.59 | 406.15 | 330.61 | 406.86 | 330.62 |
| 407.3 | 330.62 | 407.62 | 330.6 | 407.96 | 330.57 | 408.76 | 330.48 | 409.09 | 330.45 |
| 409.87 | 330.42 | 410.56 | 330.42 | 410.67 | 330.41 | 411.42 | 330.41 | 412.68 | 330.43 |
| 413.27 | 330.47 | 413.43 | 330.47 | 414.12 | 330.5 | 414.51 | 330.51 | 415.23 | 330.54 |
| 415.57 | 330.54 | 416.27 | 330.56 | 416.85 | 330.59 | 417.74 | 330.63 | 420.62 | 330.78 |
| 422.45 | 330.86 | 423.96 | 330.92 | 426.24 | 330.99 | 428.11 | 331.02 | 428.79 | 331.02 |
| 431.35 | 331 | 432.93 | 331 | 434.85 | 331.02 | 438.37 | 331.02 | 441.51 | 331 |
| 442.55 | 330.98 | 447.9 | 330.98 | 450.9 | 331.02 | 454.35 | 331.08 | 457.52 | 331.13 |
| 459.62 | 331.15 | 460.24 | 331.16 | 461.02 | 331.16 | 461.62 | 331.13 | 463.7 | 331.02 |
| 464.42 | 330.99 | 469.93 | 330.81 | 470.72 | 330.8 | 471.99 | 330.78 | 478.35 | 330.6 |
| 479 | 330.57 | 479.58 | 330.56 | 480.33 | 330.53 | 481.27 | 330.51 | 482.46 | 330.47 |
| 483.87 | 330.45 | 484.18 | 330.44 | 484.53 | 330.44 | 484.89 | 330.43 | 485.16 | 330.44 |
| 485.55 | 330.44 | 486.53 | 330.45 | 487.28 | 330.47 | 487.66 | 330.49 | 488.06 | 330.54 |
| 488.28 | 330.58 | 488.76 | 330.62 | 489.82 | 330.6 | 490.38 | 330.57 | 490.61 | 330.54 |
| 490.69 | 330.5 | 490.93 | 330.51 | 491.33 | 330.51 | 491.68 | 330.53 | 492.99 | 330.63 |
| 493.77 | 330.73 | 497.17 | 330.98 | 497.22 | 330.99 | 497.8 | 331.03 | 498.82 | 331.04 |
| 502.77 | 331.05 | 512 | 331.05 | 512.17 | 331.13 | 513.11 | 331.19 | 513.69 | 331.21 |
| 514.46 | 331.22 | 515.37 | 331.24 | 516.38 | 331.25 | 517.45 | 331.25 | 518.49 | 331.24 |
| 520.06 | 331.23 | 521.13 | 331.21 | 524.46 | 331.18 | 524.77 | 331.17 | 528.83 | 331.09 |
| 529.62 | 331.07 | 533.08 | 331.07 | 534.17 | 331.13 | 534.58 | 331.15 | 537.12 | 331.3 |
| 540.43 | 331.48 | 540.83 | 331.48 | 542.17 | 331.54 | 542.23 | 331.55 | 543.94 | 331.63 |
| 548.47 | 331.79 | 549.38 | 332.04 | 550.31 | 332.26 | 551.21 | 332.46 | 551.32 | 332.48 |
| 551.5 | 332.54 | 552.72 | 332.93 | 553.55 | 333.22 | 553.77 | 333.29 | 555.19 | 333.79 |
| 555.6 | 333.94 | 557.73 | 334.66 | 559.57 | 335.28 | 562.02 | 336.1 | 563.04 | 336.37 |
| 564.59 | 336.83 | 567.24 | 337.47 | 567.69 | 337.6 | 570.54 | 338.29 | 574.57 | 338.33 |
| 576.97 | 338.35 | 580.78 | 338.38 | 583.88 | 338.34 | 584.15 | 338.34 | 590.73 | 338.24 |
| 591.79 | 338.22 | 598.28 | 338.12 | 603.83 | 338.04 | 604.81 | 338.03 | 606.18 | 338 |
| 607.79 | 337.98 | 608.96 | 337.96 | 609.35 | 337.96 | 610.49 | 337.94 | 610.89 | 337.93 |
| 611.89 | 337.93 | 612.79 | 337.94 | 615.65 | 337.98 | 619.39 | 338.04 | 620.27 | 338.06 |
| 621.67 | 338.07 | 622.55 | 338.08 | 623.8 | 338.09 | 626.59 | 338.1 | 629.11 | 338.11 |
| 631.54 | 338.11 | 632.26 | 338.12 | 632.73 | 338.12 | 633.53 | 338.11 | 635.84 | 338.11 |
| 636.71 | 338.12 | 637.17 | 338.11 | 637.91 | 338.11 | 638.85 | 338.1 | 642.55 | 338.04 |
| 645.45 | 338 | 648 | 337.96 | 649.07 | 337.94 | 650.87 | 337.91 | 661.02 | 337.7 |
| 663.15 | 337.66 | 663.73 | 337.66 | 663.85 | 337.65 | 665.4 | 337.64 | 666.24 | 337.63 |
| 669.97 | 337.62 | 674.89 | 337.6 | 678.05 | 337.58 | 683.03 | 337.53 | 685.44 | 337.51 |
| 693.76 | 337.31 | 696.55 | 337.31 | 699.64 | 337.28 | 701.58 | 337.27 | 702.27 | 337.27 |
| 703.08 | 337.31 | 703.99 | 337.24 | 704.57 | 337.2 | 704.81 | 337.21 | 705.14 | 337.21 |
| 705.2 | 337.22 | 705.67 | 337.24 | 707.09 | 337.37 | 707.39 | 337.4 | 707.73 | 337.42 |
| 707.95 | 337.42 | 709.17 | 337.5 | 710.31 | 337.56 | 711.69 | 337.64 | 712.16 | 337.67 |
| 715.64 | 337.91 | 716.84 | 338 | 721.15 | 338.43 | 722.54 | 338.55 | 723.81 | 338.63 |
| 725.54 | 338.73 | 727.13 | 338.84 | 727.63 | 338.87 | 729.01 | 338.89 | 730.91 | 338.93 |
| 733.07 | 339 | 734.21 | 339.04 | 735.78 | 339.09 | 738.3 | 339.18 | 743.29 | 339.35 |
| 744.36 | 339.39 | 749.59 | 339.57 | 751.12 | 339.61 | 753.12 | 339.66 | 759.02 | 339.83 |
| 764.5 | 339.98 | 768.47 | 340.08 | 771.05 | 340.15 | 772.41 | 340.2 | 773.76 | 340.24 |
| 775 | 340.28 | 778.19 | 340.37 | 781.32 | 340.44 | 785.4 | 340.55 | 785.85 | 340.56 |
| 787.76 | 340.59 | 791.01 | 340.63 | 793.03 | 340.6 | 796.58 | 340.58 | 798.18 | 340.58 |
| 800.27 | 340.6 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 91.89 | .04 | 540.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 91.89 | 540.43 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1263.35*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.95 | .38 | 331.95 | .58 | 331.97 | 1.01 | 331.98 | 1.4 | 331.98 |
| 3.14 | 331.97 | 5.43 | 331.93 | 5.71 | 331.93 | 5.83 | 331.92 | 6.96 | 331.91 |
| 9.33 | 331.84 | 10.84 | 331.8 | 11.42 | 331.78 | 11.7 | 331.78 | 12.34 | 331.76 |
| 14.13 | 331.72 | 14.42 | 331.72 | 14.72 | 331.71 | 16.99 | 331.71 | 17.79 | 331.7 |
| 18.5 | 331.7 | 18.88 | 331.69 | 19.9 | 331.67 | 20.16 | 331.67 | 21.28 | 331.65 |
| 22.16 | 331.63 | 23.7 | 331.59 | 24.75 | 331.56 | 25.06 | 331.54 | 26.22 | 331.48 |
| 26.36 | 331.47 | 27.27 | 331.43 | 28.06 | 331.39 | 31.97 | 331.24 | 32.3 | 331.23 |
| 32.62 | 331.26 | 32.7 | 331.3 | 33.13 | 331.3 | 35.07 | 331.25 | 38.9 | 331.14 |
| 39.69 | 331.13 | 40.82 | 331.1 | 42.41 | 331.1 | 43.43 | 331.08 | 43.74 | 331.08 |
| 44.09 | 331.07 | 47.06 | 331 | 47.79 | 330.98 | 47.95 | 330.98 | 48.42 | 330.96 |
| 48.61 | 330.96 | 49.52 | 330.92 | 50.13 | 330.89 | 50.49 | 330.86 | 51.63 | 330.82 |
| 52.04 | 330.8 | 53.87 | 330.74 | 54.31 | 330.72 | 54.76 | 330.72 | 54.85 | 330.71 |
| 55.45 | 330.7 | 56.91 | 330.65 | 58.57 | 330.65 | 59.16 | 330.66 | 65.21 | 330.66 |
| 69.99 | 330.64 | 73.55 | 330.63 | 74.3 | 330.63 | 75.26 | 330.62 | 78.65 | 330.62 |
| 80.19 | 330.61 | 80.55 | 330.6 | 82.97 | 330.6 | 83.14 | 330.61 | 83.65 | 330.62 |
| 84.28 | 330.64 | 84.45 | 330.65 | 84.51 | 330.67 | 84.95 | 330.69 | 85.42 | 330.7 |
| 86.26 | 330.7 | 86.9 | 330.69 | 87.19 | 330.69 | 88.26 | 330.63 | 88.92 | 330.6 |
| 90.36 | 330.56 | 91.11 | 330.53 | 92.63 | 330.46 | 93.95 | 330.38 | 94.85 | 330.37 |
| 101.53 | 330.37 | 102.43 | 330.36 | 110.54 | 330.36 | 111.25 | 330.35 | 111.36 | 330.36 |
| 112.39 | 330.4 | 113.43 | 330.4 | 113.93 | 330.38 | 116.03 | 330.33 | 118.57 | 330.33 |
| 119.29 | 330.32 | 124.74 | 330.38 | 125.96 | 330.39 | 127.36 | 330.42 | 127.72 | 330.42 |
| 127.99 | 330.43 | 128.63 | 330.43 | 130.27 | 330.39 | 130.89 | 330.38 | 131.54 | 330.38 |
| 133.89 | 330.35 | 134.55 | 330.34 | 134.99 | 330.34 | 136.21 | 330.26 | 136.59 | 330.26 |
| 136.86 | 330.27 | 137.18 | 330.27 | 138.62 | 330.29 | 139.04 | 330.3 | 139.85 | 330.28 |
| 140.54 | 330.25 | 141.96 | 330.17 | 142.61 | 330.13 | 142.87 | 330.09 | 143.05 | 330.08 |
| 144.95 | 330.04 | 145.53 | 330.05 | 147.55 | 330.09 | 149.44 | 330.07 | 152.9 | 330.04 |
| 154.44 | 330.03 | 155.29 | 330.02 | 159.1 | 329.97 | 162.47 | 329.92 | 163.35 | 329.91 |
| 164.8 | 329.89 | 165.87 | 329.88 | 167.72 | 329.85 | 169.17 | 329.84 | 170.93 | 329.82 |
| 171.83 | 329.8 | 172.95 | 329.78 | 174.74 | 329.74 | 175.92 | 329.7 | 176.02 | 329.69 |
| 177.88 | 329.66 | 177.97 | 329.66 | 179.79 | 329.62 | 180.21 | 329.62 | 180.24 | 329.61 |
| 181.73 | 329.56 | 183.64 | 329.54 | 185.14 | 329.52 | 187.37 | 329.48 | 188.14 | 329.43 |
| 189.48 | 329.36 | 190.67 | 329.32 | 191.1 | 329.31 | 191.88 | 329.27 | 192.57 | 329.22 |
| 193.08 | 329.17 | 193.29 | 329.14 | 193.85 | 329.1 | 194.53 | 329.02 | 195.01 | 329 |
| 195.25 | 329 | 195.54 | 328.98 | 196 | 328.98 | 196.4 | 328.99 | 196.48 | 329.03 |
| 196.93 | 329.06 | 197.78 | 329.06 | 198.92 | 329.08 | 200.75 | 329.13 | 202.92 | 329.3 |
| 206.69 | 329.54 | 208.9 | 329.67 | 212.91 | 329.67 | 217.34 | 329.2 | 218.09 | 329.22 |
| 218.97 | 329.26 | 219.4 | 329.23 | 220.07 | 329.2 | 221.23 | 329.26 | 223.88 | 329.15 |
| 227.41 | 329.24 | 228.82 | 329.19 | 231.08 | 329.16 | 232.71 | 329.12 | 233.96 | 329.1 |

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|---|---|---|---|---|---|---|---|---|---|
| 234.13 | 329.09 | 235.85 | 329.09 | 236.12 | 329.1 | 236.43 | 329.1 | 236.92 | 329.11 |
| 238.06 | 329.14 | 241.6 | 329.22 | 242.1 | 329.29 | 243.5 | 329.4 | 248.59 | 329.68 |
| 267.27 | 329.68 | 268.38 | 329.54 | 268.65 | 329.53 | 269.48 | 329.52 | 272.54 | 329.5 |
| 274.02 | 329.48 | 275.45 | 329.47 | 282.36 | 329.69 | 282.75 | 329.71 | 284.86 | 329.79 |
| 298.01 | 330.27 | 299.2 | 330.31 | 300.57 | 330.37 | 303.25 | 330.48 | 305.22 | 330.49 |
| 309.36 | 330.49 | 310.63 | 330.5 | 316.76 | 330.51 | 319.75 | 330.52 | 326.25 | 330.52 |
| 327.95 | 330.54 | 329.51 | 330.57 | 330.54 | 330.61 | 331.01 | 330.64 | 341.92 | 330.64 |
| 342.13 | 330.62 | 342.75 | 330.61 | 343.76 | 330.61 | 344.88 | 330.62 | 347.62 | 330.61 |
| 349.11 | 330.61 | 350.62 | 330.62 | 353.39 | 330.63 | 354.59 | 330.64 | 356.69 | 330.64 |
| 358.48 | 330.63 | 359.66 | 330.62 | 359.89 | 330.6 | 367.57 | 330.35 | 372.47 | 330.18 |
| 372.93 | 330.18 | 373.59 | 330.16 | 376.02 | 330.11 | 377.7 | 330.08 | 379.33 | 330.08 |
| 381.11 | 330.09 | 381.73 | 330.1 | 382.06 | 330.1 | 383.06 | 330.12 | 386.03 | 330.19 |
| 388.76 | 330.25 | 389.26 | 330.25 | 392.36 | 330.31 | 394.44 | 330.36 | 397.88 | 330.48 |
| 398.24 | 330.48 | 398.63 | 330.49 | 399.05 | 330.48 | 399.16 | 330.47 | 399.9 | 330.44 |
| 400.75 | 330.37 | 401.44 | 330.33 | 401.95 | 330.35 | 402.7 | 330.36 | 403.16 | 330.36 |
| 403.49 | 330.34 | 403.85 | 330.31 | 404.68 | 330.21 | 405.03 | 330.18 | 405.84 | 330.15 |
| 406.57 | 330.14 | 407.47 | 330.14 | 408.98 | 330.16 | 409.28 | 330.19 | 410.29 | 330.23 |
| 410.71 | 330.24 | 411.46 | 330.27 | 411.81 | 330.27 | 412.54 | 330.29 | 413.15 | 330.32 |
| 417.1 | 330.53 | 418.27 | 330.58 | 420.59 | 330.67 | 422.98 | 330.74 | 424.93 | 330.77 |
| 425.65 | 330.77 | 428.33 | 330.75 | 429.98 | 330.75 | 433.01 | 330.78 | 433.94 | 330.78 |
| 438.96 | 330.75 | 440.05 | 330.73 | 445.65 | 330.73 | 448.79 | 330.78 | 452.4 | 330.84 |
| 455.72 | 330.89 | 457.91 | 330.91 | 458.57 | 330.92 | 459.38 | 330.92 | 460.01 | 330.89 |
| 462.18 | 330.77 | 462.94 | 330.74 | 468.71 | 330.55 | 469.53 | 330.54 | 470.87 | 330.52 |
| 477.52 | 330.32 | 478.8 | 330.28 | 479.6 | 330.25 | 480.58 | 330.23 | 481.82 | 330.19 |
| 483.29 | 330.17 | 483.62 | 330.16 | 483.99 | 330.16 | 484.15 | 330.15 | 484.65 | 330.15 |
| 485.05 | 330.16 | 486.08 | 330.17 | 486.87 | 330.19 | 487.27 | 330.21 | 487.91 | 330.3 |
| 488.41 | 330.34 | 489 | 330.33 | 489.52 | 330.33 | 490.11 | 330.3 | 490.35 | 330.26 |
| 490.44 | 330.22 | 490.92 | 330.22 | 491.47 | 330.25 | 492.84 | 330.36 | 493.66 | 330.46 |
| 497.21 | 330.73 | 497.27 | 330.73 | 497.88 | 330.78 | 498.94 | 330.78 | 503.08 | 330.79 |
| 512.74 | 330.79 | 512.91 | 330.88 | 513.9 | 330.94 | 514.51 | 330.96 | 515.31 | 330.97 |
| 516.27 | 330.99 | 517.32 | 331 | 518.44 | 331 | 519.53 | 330.99 | 521.18 | 330.98 |
| 522.29 | 330.96 | 524.69 | 330.94 | 525.78 | 330.92 | 526.1 | 330.92 | 530.36 | 330.83 |
| 531.18 | 330.81 | 534.8 | 330.81 | 535.94 | 330.87 | 536.37 | 330.9 | 539.02 | 331.05 |
| 541.71 | 331.2 | 542.49 | 331.24 | 542.9 | 331.24 | 544.24 | 331.31 | 544.31 | 331.31 |
| 544.98 | 331.35 | 546.03 | 331.4 | 550.61 | 331.57 | 551.52 | 331.83 | 552.47 | 332.06 |
| 553.28 | 332.25 | 553.51 | 332.3 | 553.67 | 332.36 | 554.89 | 332.77 | 555.73 | 333.06 |
| 555.96 | 333.15 | 557.38 | 333.66 | 557.81 | 333.82 | 558.67 | 334.13 | 559.95 | 334.58 |
| 561.81 | 335.23 | 562.2 | 335.36 | 564.28 | 336.09 | 565.31 | 336.37 | 565.95 | 336.56 |
| 566.87 | 336.85 | 569.55 | 337.52 | 569.87 | 337.62 | 570 | 337.65 | 572.88 | 338.38 |
| 576.94 | 338.41 | 579.37 | 338.43 | 583.21 | 338.46 | 586.35 | 338.41 | 586.62 | 338.41 |
| 587.14 | 338.39 | 587.3 | 338.39 | 593.26 | 338.29 | 594.33 | 338.28 | 600.87 | 338.16 |
| 606.48 | 338.08 | 607.47 | 338.06 | 608.85 | 338.04 | 610.48 | 338.01 | 611.66 | 337.99 |
| 612.05 | 337.99 | 613.2 | 337.97 | 613.6 | 337.96 | 614.61 | 337.96 | 615.53 | 337.97 |
| 618.41 | 338.01 | 622.18 | 338.07 | 623.07 | 338.08 | 623.29 | 338.09 | 624.48 | 338.1 |
| 625.38 | 338.1 | 626.64 | 338.11 | 629.45 | 338.13 | 632 | 338.13 | 634.45 | 338.14 |
| 635.65 | 338.14 | 636.46 | 338.13 | 638.78 | 338.13 | 639.67 | 338.14 | 640.13 | 338.13 |
| 640.88 | 338.13 | 641.83 | 338.12 | 645.56 | 338.05 | 649.1 | 337.99 | 651.06 | 337.96 |
| 652.14 | 337.94 | 653.95 | 337.9 | 664.2 | 337.69 | 666.36 | 337.65 | 666.43 | 337.64 |
| 666.93 | 337.64 | 667.27 | 337.63 | 668.62 | 337.62 | 669.47 | 337.61 | 673.23 | 337.59 |
| 678.2 | 337.55 | 681.39 | 337.54 | 686.41 | 337.47 | 688.85 | 337.44 | 697.25 | 337.23 |
| 697.68 | 337.22 | 699.01 | 337.21 | 700.06 | 337.21 | 703.18 | 337.16 | 705.14 | 337.14 |
| 705.84 | 337.14 | 706.21 | 337.15 | 706.65 | 337.17 | 707.57 | 337.1 | 708.16 | 337.05 |
| 708.39 | 337.06 | 708.79 | 337.06 | 709.16 | 337.08 | 710.69 | 337.21 | 711 | 337.24 |
| 712.8 | 337.34 | 713.95 | 337.41 | 715.34 | 337.48 | 719.33 | 337.74 | 720.54 | 337.84 |
| 724.89 | 338.25 | 726.29 | 338.36 | 727.58 | 338.43 | 729.32 | 338.53 | 731.42 | 338.66 |
| 732.82 | 338.67 | 734.74 | 338.72 | 736.92 | 338.78 | 738.07 | 338.83 | 739.66 | 338.88 |
| 742.2 | 338.97 | 747.23 | 339.15 | 748.31 | 339.19 | 753.59 | 339.37 | 755.13 | 339.41 |
| 757.15 | 339.47 | 758.92 | 339.52 | 763.11 | 339.64 | 768.64 | 339.8 | 772.65 | 339.91 |
| 775.26 | 339.98 | 776.63 | 340.03 | 777.99 | 340.07 | 779.24 | 340.11 | 782.45 | 340.2 |
| 785.62 | 340.27 | 789.74 | 340.39 | 790.19 | 340.4 | 792.11 | 340.42 | 795.4 | 340.47 |
| 796.68 | 340.44 | 797.44 | 340.43 | 801.02 | 340.4 | 801.58 | 340.41 | 802.63 | 340.41 |
| 804.74 | 340.42 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 86.9 | .04 | 542.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 86.9 | 542.49 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1243.38*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.67 | .36 | 331.67 | .55 | 331.69 | .95 | 331.7 | 1.32 | 331.7 |
| 2.96 | 331.68 | 3.5 | 331.68 | 5.12 | 331.65 | 5.5 | 331.64 | 6.56 | 331.63 |
| 8.79 | 331.57 | 10.22 | 331.52 | 11.03 | 331.5 | 11.36 | 331.5 | 11.63 | 331.49 |
| 13.32 | 331.45 | 13.88 | 331.44 | 14.21 | 331.44 | 14.25 | 331.43 | 16.02 | 331.43 |
| 16.77 | 331.42 | 17.44 | 331.42 | 18.76 | 331.39 | 19 | 331.38 | 20.06 | 331.36 |
| 20.89 | 331.34 | 22.34 | 331.31 | 23.33 | 331.28 | 23.62 | 331.26 | 24.85 | 331.19 |
| 25.7 | 331.15 | 27.45 | 331.08 | 30.13 | 330.98 | 30.45 | 330.97 | 30.75 | 330.99 |
| 30.83 | 331.02 | 30.97 | 331.03 | 31.23 | 331.02 | 31.57 | 331.02 | 33.06 | 330.98 |
| 33.38 | 330.96 | 36.67 | 330.87 | 37.2 | 330.85 | 37.41 | 330.85 | 38.48 | 330.82 |
| 39.98 | 330.82 | 40.94 | 330.8 | 41.23 | 330.8 | 41.94 | 330.78 | 44.36 | 330.72 |
| 45.43 | 330.69 | 45.82 | 330.67 | 46.46 | 330.65 | 47.25 | 330.61 | 47.6 | 330.58 |
| 48.66 | 330.54 | 49.06 | 330.52 | 50.78 | 330.46 | 51.2 | 330.44 | 51.71 | 330.44 |
| 53.65 | 330.37 | 55.21 | 330.37 | 55.77 | 330.38 | 56.87 | 330.38 | 58.25 | 330.39 |
| 60.48 | 330.39 | 61.47 | 330.38 | 65.98 | 330.37 | 69.47 | 330.36 | 69.81 | 330.37 |
| 69.88 | 330.36 | 70.94 | 330.35 | 71.71 | 330.35 | 74.14 | 330.36 | 75.59 | 330.35 |
| 78.38 | 330.35 | 78.85 | 330.36 | 79.19 | 330.38 | 79.61 | 330.39 | 79.66 | 330.41 |
| 80.08 | 330.43 | 80.52 | 330.43 | 80.74 | 330.44 | 81.13 | 330.44 | 81.31 | 330.43 |
| 81.92 | 330.43 | 83.17 | 330.38 | 83.78 | 330.35 | 85.11 | 330.31 | 87.2 | 330.22 |
| 88.14 | 330.16 | 88.42 | 330.15 | 89.25 | 330.14 | 94.03 | 330.14 | 95.43 | 330.13 |
| 98.13 | 330.13 | 98.26 | 330.12 | 104.5 | 330.12 | 105.45 | 330.16 | 106.41 | 330.16 |
| 106.87 | 330.14 | 108.37 | 330.1 | 110.25 | 330.1 | 111.03 | 330.09 | 111.82 | 330.09 |
| 116 | 330.13 | 116.86 | 330.13 | 117.98 | 330.14 | 119.27 | 330.17 | 120.45 | 330.17 |
| 121.96 | 330.14 | 123.13 | 330.12 | 125.3 | 330.1 | 126.32 | 330.08 | 126.77 | 330.06 |
| 127.59 | 330.01 | 127.8 | 330.02 | 128.34 | 330.02 | 129.67 | 330.04 | 130.05 | 330.04 |
| 130.81 | 330.02 | 131.45 | 329.99 | 132.75 | 329.92 | 132.9 | 329.92 | 133.35 | 329.89 |
| 133.59 | 329.85 | 133.76 | 329.85 | 135.52 | 329.81 | 136.05 | 329.82 | 137.91 | 329.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 139.66 | 329.83 | 142.86 | 329.79 | 144.28 | 329.78 | 145.06 | 329.77 | 148.58 | 329.72 |
| 151.69 | 329.67 | 153.85 | 329.64 | 154.83 | 329.62 | 156.53 | 329.6 | 157.68 | 329.58 |
| 157.88 | 329.58 | 159.5 | 329.56 | 160.33 | 329.54 | 161.37 | 329.51 | 163.02 | 329.47 |
| 164.11 | 329.43 | 164.2 | 329.43 | 166 | 329.39 | 167.69 | 329.35 | 168.1 | 329.35 |
| 169.47 | 329.29 | 171.24 | 329.26 | 172.62 | 329.24 | 174.68 | 329.2 | 175.39 | 329.16 |
| 176.63 | 329.1 | 177.73 | 329.06 | 178.12 | 329.05 | 178.48 | 329.03 | 178.84 | 329 |
| 179.21 | 328.98 | 180.15 | 328.88 | 180.39 | 328.85 | 180.67 | 328.83 | 181.24 | 328.75 |
| 182.22 | 328.71 | 182.82 | 328.71 | 183.05 | 328.72 | 183.09 | 328.75 | 183.27 | 328.78 |
| 183.6 | 328.79 | 184.49 | 328.79 | 185.69 | 328.81 | 187.6 | 328.87 | 189.86 | 329.04 |
| 193.79 | 329.29 | 196.1 | 329.43 | 200.29 | 329.43 | 204.92 | 328.94 | 205.71 | 328.96 |
| 206.63 | 329 | 207.08 | 328.97 | 207.78 | 328.94 | 208.99 | 329 | 211.76 | 328.89 |
| 215.45 | 328.98 | 216.92 | 328.93 | 217.64 | 328.92 | 219.28 | 328.89 | 220.97 | 328.85 |
| 222.28 | 328.83 | 222.46 | 328.82 | 224.25 | 328.82 | 224.86 | 328.84 | 225.38 | 328.84 |
| 226.56 | 328.88 | 230.27 | 328.95 | 230.78 | 329.03 | 232.25 | 329.15 | 237.57 | 329.44 |
| 257.08 | 329.44 | 258.24 | 329.29 | 258.52 | 329.28 | 259.38 | 329.27 | 262.58 | 329.26 |
| 262.61 | 329.25 | 264.13 | 329.23 | 265.62 | 329.22 | 272.84 | 329.45 | 273.24 | 329.47 |
| 275.45 | 329.55 | 289.18 | 330.05 | 291.67 | 330.15 | 291.86 | 330.15 | 294.66 | 330.26 |
| 294.83 | 330.27 | 296.72 | 330.27 | 300.85 | 330.28 | 302.37 | 330.28 | 308.77 | 330.29 |
| 311.89 | 330.3 | 318.09 | 330.3 | 318.68 | 330.31 | 320.46 | 330.32 | 322.09 | 330.36 |
| 323.17 | 330.4 | 323.66 | 330.43 | 334.78 | 330.43 | 335.06 | 330.42 | 335.27 | 330.4 |
| 335.92 | 330.39 | 336.98 | 330.4 | 338.14 | 330.4 | 341 | 330.39 | 344.14 | 330.39 |
| 347.03 | 330.41 | 348.28 | 330.42 | 350.48 | 330.42 | 352.35 | 330.4 | 353.37 | 330.4 |
| 353.82 | 330.37 | 361.84 | 330.1 | 366.96 | 329.93 | 368.13 | 329.91 | 370.67 | 329.85 |
| 372.42 | 329.82 | 375.86 | 329.82 | 375.99 | 329.83 | 376.63 | 329.84 | 376.97 | 329.84 |
| 378.03 | 329.86 | 381.12 | 329.93 | 383.97 | 329.99 | 387.73 | 330.06 | 389.91 | 330.11 |
| 390.19 | 330.12 | 393.5 | 330.22 | 393.74 | 330.23 | 394.72 | 330.23 | 395.62 | 330.18 |
| 396.5 | 330.11 | 397.22 | 330.07 | 397.76 | 330.09 | 398.54 | 330.1 | 399.02 | 330.1 |
| 399.37 | 330.08 | 400.61 | 329.94 | 400.98 | 329.91 | 401.82 | 329.88 | 402.58 | 329.87 |
| 402.7 | 329.86 | 403.52 | 329.86 | 404.89 | 329.88 | 405.71 | 329.93 | 406.47 | 329.96 |
| 406.9 | 329.97 | 407.69 | 330 | 408.05 | 330 | 408.82 | 330.02 | 410.43 | 330.1 |
| 413.57 | 330.27 | 415.58 | 330.35 | 417.23 | 330.42 | 419.72 | 330.5 | 420.35 | 330.51 |
| 421.03 | 330.51 | 421.76 | 330.52 | 422.51 | 330.52 | 425.31 | 330.51 | 426.15 | 330.5 |
| 427.03 | 330.5 | 430.19 | 330.53 | 432.98 | 330.53 | 437.55 | 330.49 | 439.07 | 330.49 |
| 439.46 | 330.48 | 443.4 | 330.48 | 446.68 | 330.53 | 450.45 | 330.6 | 453.92 | 330.65 |
| 456.21 | 330.68 | 457.74 | 330.68 | 458.4 | 330.65 | 460.67 | 330.52 | 461.46 | 330.49 |
| 467.48 | 330.29 | 468.34 | 330.27 | 469.74 | 330.26 | 476.69 | 330.05 | 477.4 | 330.03 |
| 478.03 | 330 | 478.86 | 329.97 | 479.88 | 329.95 | 481.18 | 329.91 | 482.72 | 329.88 |
| 483.44 | 329.88 | 483.61 | 329.87 | 484.14 | 329.87 | 484.56 | 329.88 | 485.63 | 329.89 |
| 486.1 | 329.89 | 486.87 | 329.93 | 487.31 | 329.99 | 487.54 | 330.03 | 488.06 | 330.07 |
| 488.86 | 330.06 | 489.22 | 330.05 | 489.84 | 330.02 | 490.08 | 329.98 | 490.18 | 329.94 |
| 490.69 | 329.94 | 490.88 | 329.95 | 492.69 | 330.09 | 493.55 | 330.19 | 497.26 | 330.47 |
| 497.32 | 330.48 | 497.95 | 330.53 | 499.07 | 330.53 | 503.38 | 330.54 | 504.66 | 330.54 |
| 508.81 | 330.53 | 509.66 | 330.53 | 510.93 | 330.54 | 513.47 | 330.54 | 513.66 | 330.62 |
| 513.97 | 330.65 | 514.69 | 330.69 | 515.32 | 330.71 | 516.16 | 330.73 | 518.26 | 330.75 |
| 520.57 | 330.75 | 522.29 | 330.73 | 523.45 | 330.71 | 525.96 | 330.69 | 527.1 | 330.67 |
| 527.43 | 330.67 | 531.88 | 330.58 | 532.74 | 330.55 | 536.52 | 330.55 | 537.71 | 330.62 |
| 538.16 | 330.64 | 540.93 | 330.8 | 543.73 | 330.96 | 544.55 | 331 | 544.96 | 331.01 |
| 546.32 | 331.07 | 546.38 | 331.08 | 547.06 | 331.12 | 548.13 | 331.17 | 552.75 | 331.34 |
| 553.67 | 331.62 | 554.62 | 331.86 | 555.65 | 332.11 | 557.07 | 332.6 | 557.91 | 332.91 |
| 558.14 | 333 | 560.01 | 333.7 | 560.88 | 334.03 | 562.17 | 334.49 | 564.35 | 335.29 |
| 564.45 | 335.32 | 566.54 | 336.08 | 567.58 | 336.37 | 568.23 | 336.57 | 569.16 | 336.87 |
| 571.86 | 337.58 | 572.32 | 337.71 | 575.22 | 338.47 | 579.39 | 338.49 | 581.77 | 338.51 |
| 585.65 | 338.54 | 588.81 | 338.48 | 589.09 | 338.48 | 589.61 | 338.46 | 589.78 | 338.46 |
| 596.86 | 338.33 | 603.47 | 338.21 | 609.13 | 338.12 | 611.52 | 338.07 | 614.36 | 338.02 |
| 614.75 | 338.02 | 615.91 | 338 | 616.32 | 337.99 | 616.68 | 337.99 | 617.33 | 337.98 |
| 618.26 | 338 | 621.16 | 338.04 | 624.97 | 338.1 | 627.3 | 338.12 | 628.2 | 338.13 |
| 629.47 | 338.14 | 632.31 | 338.15 | 634.88 | 338.15 | 637.35 | 338.16 | 638.56 | 338.16 |
| 639.38 | 338.15 | 643.09 | 338.15 | 644.8 | 338.13 | 648.57 | 338.06 | 651.52 | 338 |
| 654.12 | 337.96 | 655.21 | 337.94 | 657.04 | 337.9 | 667.38 | 337.67 | 669.56 | 337.63 |
| 669.63 | 337.62 | 670.14 | 337.62 | 670.48 | 337.61 | 671.84 | 337.59 | 672.7 | 337.59 |
| 676.49 | 337.55 | 681.51 | 337.51 | 684.73 | 337.49 | 689.8 | 337.42 | 692.26 | 337.38 |
| 700.73 | 337.14 | 701.16 | 337.13 | 702.8 | 337.12 | 703.57 | 337.1 | 706.72 | 337.03 |
| 708.7 | 337.01 | 709.4 | 337 | 709.78 | 337.02 | 710.22 | 337.03 | 711.74 | 336.9 |
| 711.98 | 336.91 | 712.38 | 336.91 | 712.86 | 336.94 | 714.3 | 337.06 | 714.61 | 337.09 |
| 714.96 | 337.11 | 715.18 | 337.11 | 716.43 | 337.18 | 717.59 | 337.25 | 719 | 337.32 |
| 723.02 | 337.58 | 724.24 | 337.67 | 728.63 | 338.06 | 729.8 | 338.15 | 730.04 | 338.16 |
| 731.34 | 338.23 | 733.1 | 338.32 | 734.72 | 338.41 | 735.22 | 338.44 | 736.63 | 338.45 |
| 738.57 | 338.5 | 740.76 | 338.57 | 741.93 | 338.61 | 743.53 | 338.67 | 746.09 | 338.76 |
| 751.18 | 338.95 | 752.26 | 338.98 | 757.59 | 339.18 | 759.15 | 339.22 | 761.19 | 339.28 |
| 762.97 | 339.33 | 767.2 | 339.46 | 772.78 | 339.62 | 776.82 | 339.74 | 779.46 | 339.81 |
| 780.84 | 339.86 | 782.22 | 339.9 | 783.48 | 339.94 | 785.26 | 340 | 786.72 | 340.03 |
| 789.92 | 340.11 | 794.07 | 340.23 | 794.53 | 340.24 | 796.47 | 340.26 | 799.79 | 340.3 |
| 801.08 | 340.28 | 801.85 | 340.26 | 805.46 | 340.23 | 806.03 | 340.23 | 807.09 | 340.24 |
| 809.21 | 340.25 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 81.92 | .04 | 544.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 81.92 | 544.55 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1223.41*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.4 | .33 | 331.39 | .52 | 331.41 | 1.24 | 331.41 | 2.78 | 331.4 |
| 3.29 | 331.4 | 4.81 | 331.37 | 5.16 | 331.36 | 6.04 | 331.35 | 6.16 | 331.34 |
| 8.26 | 331.29 | 9.6 | 331.25 | 10.11 | 331.24 | 10.67 | 331.22 | 10.92 | 331.22 |
| 12.14 | 331.19 | 12.3 | 331.18 | 12.77 | 331.17 | 13.23 | 331.17 | 13.34 | 331.16 |
| 14.16 | 331.16 | 15.04 | 331.15 | 15.75 | 331.15 | 16.07 | 331.14 | 16.38 | 331.14 |
| 17.62 | 331.11 | 17.85 | 331.1 | 18.84 | 331.08 | 19.61 | 331.06 | 20.98 | 331.02 |
| 21.61 | 331.01 | 22.02 | 330.99 | 23.21 | 330.92 | 23.34 | 330.92 | 24.14 | 330.88 |
| 25.78 | 330.81 | 28.3 | 330.71 | 28.6 | 330.71 | 28.88 | 330.73 | 28.95 | 330.75 |
| 29.33 | 330.75 | 31.05 | 330.7 | 34.44 | 330.59 | 35.14 | 330.58 | 36.14 | 330.55 |
| 36.46 | 330.55 | 36.76 | 330.54 | 37.54 | 330.54 | 38.03 | 330.53 | 38.72 | 330.51 |
| 39.04 | 330.51 | 39.78 | 330.49 | 41.66 | 330.43 | 43.04 | 330.39 | 43.64 | 330.37 |
| 44.38 | 330.33 | 44.7 | 330.3 | 45.7 | 330.26 | 46.07 | 330.24 | 48.24 | 330.16 |
| 48.56 | 330.16 | 49.09 | 330.14 | 50.64 | 330.09 | 51.85 | 330.09 | 52.37 | 330.1 |
| 53.41 | 330.1 | 54.71 | 330.11 | 57.73 | 330.11 | 61.96 | 330.1 | 65.62 | 330.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 65.78 | 330.09 | 67.35 | 330.09 | 69.63 | 330.1 | 70.99 | 330.09 | 72.05 | 330.09 |
| 73.45 | 330.1 | 74.05 | 330.11 | 74.61 | 330.13 | 74.95 | 330.16 | 75.2 | 330.17 |
| 76.36 | 330.17 | 76.93 | 330.16 | 77.17 | 330.16 | 78.09 | 330.12 | 79.86 | 330.06 |
| 80.5 | 330.03 | 81.78 | 329.98 | 82.64 | 329.93 | 82.9 | 329.91 | 85.1 | 329.91 |
| 87.6 | 329.9 | 91.65 | 329.9 | 91.79 | 329.89 | 97.64 | 329.89 | 98.51 | 329.92 |
| 99.39 | 329.92 | 99.82 | 329.9 | 101.19 | 329.87 | 101.59 | 329.87 | 102.25 | 329.86 |
| 104.36 | 329.86 | 108.19 | 329.88 | 108.97 | 329.89 | 110.18 | 329.89 | 110.39 | 329.9 |
| 111.19 | 329.91 | 111.49 | 329.92 | 112.26 | 329.92 | 113.65 | 329.89 | 114.73 | 329.87 |
| 116.71 | 329.84 | 117.65 | 329.82 | 117.89 | 329.82 | 118.82 | 329.76 | 119 | 329.77 |
| 119.5 | 329.77 | 120.72 | 329.78 | 121.07 | 329.78 | 122.35 | 329.74 | 123.55 | 329.67 |
| 123.69 | 329.67 | 124.1 | 329.64 | 124.31 | 329.61 | 124.47 | 329.61 | 126.08 | 329.57 |
| 126.57 | 329.58 | 128.28 | 329.6 | 129.88 | 329.58 | 132.81 | 329.55 | 134.83 | 329.52 |
| 138.06 | 329.47 | 140.91 | 329.42 | 141.66 | 329.4 | 142.89 | 329.38 | 143.79 | 329.37 |
| 146.4 | 329.32 | 146.58 | 329.32 | 148.03 | 329.3 | 148.84 | 329.28 | 149.79 | 329.25 |
| 151.3 | 329.21 | 152.3 | 329.17 | 152.38 | 329.16 | 155.21 | 329.09 | 155.58 | 329.09 |
| 155.68 | 329.08 | 155.96 | 329.08 | 157.22 | 329.02 | 158.84 | 328.99 | 160.11 | 328.97 |
| 162 | 328.93 | 162.65 | 328.89 | 163.78 | 328.83 | 164.79 | 328.79 | 165.15 | 328.78 |
| 165.81 | 328.74 | 166.4 | 328.69 | 166.82 | 328.63 | 167.48 | 328.56 | 168.06 | 328.47 |
| 168.27 | 328.47 | 169.08 | 328.43 | 169.26 | 328.43 | 169.7 | 328.45 | 169.74 | 328.48 |
| 169.94 | 328.51 | 170.28 | 328.52 | 171.21 | 328.52 | 174.44 | 328.6 | 176.8 | 328.78 |
| 180.9 | 329.05 | 183.31 | 329.19 | 187.68 | 329.19 | 192.5 | 328.68 | 193.32 | 328.7 |
| 194.29 | 328.75 | 194.75 | 328.7 | 195.48 | 328.68 | 196.75 | 328.74 | 199.63 | 328.62 |
| 203.48 | 328.71 | 204.73 | 328.67 | 205.01 | 328.67 | 205.77 | 328.66 | 207.47 | 328.63 |
| 209.24 | 328.58 | 210.6 | 328.56 | 210.79 | 328.55 | 212.66 | 328.55 | 213.29 | 328.57 |
| 213.83 | 328.58 | 215.07 | 328.61 | 218.93 | 328.69 | 219.17 | 328.72 | 219.47 | 328.77 |
| 221 | 328.9 | 226.54 | 329.2 | 246.89 | 329.2 | 248.1 | 329.05 | 248.39 | 329.03 |
| 249.29 | 329.02 | 252.62 | 329.01 | 252.66 | 329 | 254.23 | 328.98 | 255.79 | 328.97 |
| 263.32 | 329.21 | 263.74 | 329.23 | 266.04 | 329.31 | 280.36 | 329.83 | 282.95 | 329.93 |
| 283.15 | 329.94 | 286.07 | 330.05 | 288.22 | 330.06 | 292.53 | 330.07 | 294.1 | 330.07 |
| 300.78 | 330.08 | 304.03 | 330.08 | 309.8 | 330.09 | 311.12 | 330.09 | 312.97 | 330.11 |
| 314.67 | 330.14 | 315.79 | 330.18 | 316.3 | 330.21 | 328.19 | 330.21 | 328.41 | 330.18 |
| 331.41 | 330.18 | 334.39 | 330.17 | 337.66 | 330.17 | 340.67 | 330.19 | 341.98 | 330.2 |
| 344.27 | 330.19 | 346.22 | 330.18 | 347.28 | 330.17 | 347.76 | 330.14 | 356.12 | 329.86 |
| 359.56 | 329.74 | 361.46 | 329.67 | 361.95 | 329.67 | 362.68 | 329.65 | 365.32 | 329.59 |
| 367.14 | 329.55 | 368.93 | 329.56 | 370.73 | 329.56 | 370.76 | 329.57 | 371.53 | 329.58 |
| 371.89 | 329.58 | 372.36 | 329.59 | 372.99 | 329.59 | 376.22 | 329.67 | 379.19 | 329.74 |
| 379.74 | 329.74 | 383.11 | 329.8 | 385.38 | 329.85 | 389.12 | 329.97 | 389.38 | 329.98 |
| 389.94 | 329.98 | 390.52 | 329.97 | 391.33 | 329.93 | 392.25 | 329.85 | 393.01 | 329.81 |
| 393.56 | 329.83 | 393.8 | 329.82 | 394.38 | 329.84 | 395.24 | 329.82 | 395.63 | 329.78 |
| 396.53 | 329.67 | 396.92 | 329.64 | 397.51 | 329.62 | 397.8 | 329.6 | 398.58 | 329.6 |
| 398.72 | 329.59 | 399.57 | 329.59 | 400.43 | 329.6 | 401 | 329.61 | 401.86 | 329.66 |
| 402.64 | 329.68 | 403.09 | 329.7 | 403.92 | 329.73 | 404.3 | 329.74 | 404.73 | 329.74 |
| 405.09 | 329.75 | 405.76 | 329.79 | 406.77 | 329.84 | 410.05 | 330.01 | 411.33 | 330.07 |
| 412.14 | 330.1 | 413.86 | 330.17 | 416.46 | 330.25 | 417.83 | 330.27 | 418.59 | 330.27 |
| 419.37 | 330.28 | 422.29 | 330.26 | 423.16 | 330.25 | 423.74 | 330.25 | 424.08 | 330.26 |
| 426.27 | 330.28 | 430.28 | 330.28 | 433.86 | 330.26 | 435.05 | 330.24 | 440.69 | 330.24 |
| 441.15 | 330.23 | 444.57 | 330.29 | 448.5 | 330.36 | 452.11 | 330.41 | 455.22 | 330.45 |
| 455.72 | 330.45 | 456.1 | 330.44 | 456.79 | 330.41 | 459.15 | 330.28 | 459.98 | 330.24 |
| 466.26 | 330.03 | 467.16 | 330.01 | 468.61 | 330 | 475.86 | 329.78 | 476.59 | 329.75 |
| 478.12 | 329.7 | 480.54 | 329.63 | 482.14 | 329.6 | 482.5 | 329.59 | 484.06 | 329.59 |
| 485.17 | 329.6 | 485.67 | 329.61 | 486.04 | 329.63 | 486.47 | 329.64 | 487.18 | 329.75 |
| 487.71 | 329.79 | 488.35 | 329.78 | 488.93 | 329.78 | 489.57 | 329.74 | 489.82 | 329.7 |
| 489.92 | 329.66 | 490.45 | 329.66 | 491.04 | 329.7 | 492.54 | 329.81 | 493.44 | 329.92 |
| 497.3 | 330.21 | 497.36 | 330.22 | 498.03 | 330.27 | 499.19 | 330.27 | 503.69 | 330.28 |
| 514.21 | 330.28 | 514.4 | 330.37 | 514.72 | 330.4 | 515.48 | 330.44 | 516.14 | 330.46 |
| 517.02 | 330.48 | 518.05 | 330.5 | 519.2 | 330.5 | 520.42 | 330.51 | 521.61 | 330.5 |
| 523.4 | 330.48 | 524.61 | 330.46 | 527.23 | 330.44 | 528.41 | 330.42 | 528.76 | 330.41 |
| 533.4 | 330.32 | 534.29 | 330.29 | 537.13 | 330.29 | 537.64 | 330.3 | 538.24 | 330.3 |
| 539.48 | 330.36 | 539.95 | 330.39 | 542.84 | 330.55 | 545.76 | 330.72 | 546.61 | 330.76 |
| 547.03 | 330.77 | 548.4 | 330.84 | 548.46 | 330.84 | 550.22 | 330.94 | 554.88 | 331.12 |
| 555.81 | 331.41 | 556.77 | 331.66 | 557.81 | 331.92 | 559.24 | 332.44 | 560.1 | 332.76 |
| 561.78 | 333.41 | 562.21 | 333.59 | 564.39 | 334.41 | 566.29 | 335.12 | 566.59 | 335.24 |
| 566.69 | 335.27 | 568.8 | 336.07 | 569.86 | 336.36 | 570.51 | 336.58 | 571.44 | 336.89 |
| 574.39 | 337.69 | 574.63 | 337.77 | 577.56 | 338.56 | 581.7 | 338.58 | 584.17 | 338.59 |
| 588.08 | 338.61 | 591.28 | 338.55 | 591.56 | 338.55 | 592.08 | 338.53 | 592.25 | 338.53 |
| 598.32 | 338.41 | 599.4 | 338.39 | 606.07 | 338.26 | 611.78 | 338.16 | 614.19 | 338.11 |
| 615.85 | 338.07 | 617.05 | 338.05 | 617.46 | 338.05 | 618.62 | 338.03 | 619.03 | 338.02 |
| 619.4 | 338.02 | 620.06 | 338.01 | 620.99 | 338.02 | 623.92 | 338.07 | 627.77 | 338.12 |
| 628.68 | 338.14 | 630.11 | 338.15 | 631.02 | 338.16 | 632.31 | 338.16 | 637.76 | 338.18 |
| 642.31 | 338.18 | 643.62 | 338.17 | 646.04 | 338.17 | 647.78 | 338.15 | 651.58 | 338.07 |
| 654.56 | 338.01 | 655.18 | 337.99 | 656.55 | 337.97 | 657.18 | 337.95 | 658.28 | 337.93 |
| 660.13 | 337.89 | 670.56 | 337.66 | 672.76 | 337.61 | 672.89 | 337.6 | 673.34 | 337.6 |
| 673.69 | 337.59 | 675.06 | 337.57 | 675.93 | 337.56 | 679.76 | 337.52 | 684.81 | 337.47 |
| 688.07 | 337.44 | 693.18 | 337.36 | 695.66 | 337.32 | 704.22 | 337.05 | 704.65 | 337.04 |
| 706.01 | 337.02 | 706.3 | 337.02 | 707.08 | 337 | 710.26 | 336.91 | 712.96 | 336.87 |
| 713.35 | 336.88 | 713.8 | 336.9 | 715.33 | 336.75 | 715.57 | 336.76 | 715.97 | 336.76 |
| 716.35 | 336.77 | 717.91 | 336.9 | 718.23 | 336.93 | 720.05 | 337.03 | 722.65 | 337.16 |
| 726.7 | 337.42 | 727.94 | 337.51 | 732.37 | 337.87 | 733.55 | 337.96 | 733.79 | 337.97 |
| 735.1 | 338.04 | 736.87 | 338.12 | 738.51 | 338.2 | 739.02 | 338.22 | 740.44 | 338.24 |
| 742.39 | 338.28 | 744.61 | 338.35 | 745.79 | 338.4 | 747.41 | 338.46 | 749.99 | 338.55 |
| 755.12 | 338.74 | 756.22 | 338.78 | 761.6 | 338.98 | 763.17 | 339.02 | 765.22 | 339.08 |
| 767.02 | 339.14 | 771.29 | 339.27 | 776.92 | 339.44 | 781 | 339.56 | 783.66 | 339.64 |
| 785.06 | 339.69 | 786.44 | 339.73 | 787.72 | 339.77 | 789.52 | 339.83 | 790.99 | 339.87 |
| 794.21 | 339.94 | 798.41 | 340.06 | 798.86 | 340.07 | 800.83 | 340.1 | 804.17 | 340.14 |
| 805.48 | 340.11 | 806.25 | 340.1 | 809.9 | 340.06 | 810.47 | 340.06 | 811.54 | 340.07 |
| 813.69 | 340.07 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 76.93 | .04 | 546.61 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 76.93 | 546.61 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1203.44*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 331.12 | .31 | 331.12 | .41 | 331.13 | 1.16 | 331.13 | 2.6 | 331.12 |
| 3.07 | 331.12 | 4.5 | 331.09 | 4.83 | 331.08 | 5.64 | 331.07 | 5.76 | 331.06 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 7.72 | 331.01 | 8.98 | 330.97 | 9.69 | 330.96 | 10.21 | 330.94 | 10.62 | 330.93 |
| 11.35 | 330.92 | 11.94 | 330.9 | 12.38 | 330.89 | 13.24 | 330.89 | 14.73 | 330.87 |
| 15.32 | 330.85 | 15.63 | 330.85 | 16.48 | 330.83 | 16.69 | 330.82 | 17.62 | 330.8 |
| 18.34 | 330.78 | 19.62 | 330.74 | 20.75 | 330.7 | 21.7 | 330.65 | 21.82 | 330.64 |
| 22.58 | 330.61 | 24.11 | 330.54 | 26.74 | 330.44 | 27.01 | 330.46 | 27.08 | 330.48 |
| 27.43 | 330.47 | 27.73 | 330.47 | 29.04 | 330.43 | 32.2 | 330.32 | 32.67 | 330.3 |
| 32.86 | 330.3 | 33.8 | 330.27 | 34.37 | 330.27 | 34.72 | 330.26 | 35.11 | 330.26 |
| 36.21 | 330.23 | 36.51 | 330.23 | 36.84 | 330.22 | 37.2 | 330.2 | 39.7 | 330.13 |
| 40.08 | 330.11 | 40.25 | 330.11 | 40.81 | 330.09 | 41 | 330.07 | 41.8 | 330.02 |
| 42.74 | 329.98 | 43.09 | 329.96 | 45.12 | 329.88 | 45.41 | 329.88 | 45.91 | 329.86 |
| 47.12 | 329.82 | 48.04 | 329.81 | 48.49 | 329.81 | 48.98 | 329.82 | 49.95 | 329.82 |
| 51.16 | 329.83 | 61.52 | 329.83 | 62.31 | 329.82 | 62.98 | 329.83 | 65.12 | 329.85 |
| 66.39 | 329.84 | 66.69 | 329.83 | 67.38 | 329.84 | 68.84 | 329.85 | 69.56 | 329.87 |
| 69.78 | 329.87 | 69.96 | 329.89 | 70.33 | 329.91 | 71.41 | 329.91 | 71.95 | 329.9 |
| 72.17 | 329.9 | 73 | 329.86 | 73.51 | 329.84 | 74.61 | 329.81 | 75.19 | 329.79 |
| 76.36 | 329.74 | 77.13 | 329.69 | 77.37 | 329.68 | 79.38 | 329.68 | 81.65 | 329.67 |
| 85.21 | 329.67 | 85.33 | 329.66 | 90.78 | 329.66 | 91.57 | 329.68 | 92.38 | 329.68 |
| 92.76 | 329.66 | 94.01 | 329.64 | 94.37 | 329.63 | 96.23 | 329.63 | 96.33 | 329.62 |
| 96.89 | 329.62 | 100.37 | 329.64 | 101.09 | 329.64 | 102.02 | 329.65 | 102.37 | 329.65 |
| 103.1 | 329.66 | 103.38 | 329.67 | 104.08 | 329.67 | 105.34 | 329.64 | 106.32 | 329.62 |
| 108.13 | 329.59 | 108.98 | 329.57 | 109.91 | 329.52 | 112.38 | 329.52 | 112.72 | 329.5 |
| 113.25 | 329.48 | 114.34 | 329.43 | 114.84 | 329.4 | 115.18 | 329.37 | 115.89 | 329.35 |
| 116.65 | 329.34 | 117.09 | 329.34 | 118.64 | 329.35 | 120.1 | 329.33 | 122.77 | 329.3 |
| 123.95 | 329.28 | 124.6 | 329.28 | 127.54 | 329.22 | 130.13 | 329.16 | 131.93 | 329.13 |
| 132.75 | 329.11 | 135.12 | 329.06 | 135.29 | 329.06 | 136.65 | 329.04 | 137.34 | 329.02 |
| 138.21 | 328.99 | 139.58 | 328.95 | 140.05 | 328.92 | 140.57 | 328.9 | 142 | 328.86 |
| 142.06 | 328.85 | 143.13 | 328.83 | 143.57 | 328.81 | 143.82 | 328.81 | 144.96 | 328.75 |
| 146.44 | 328.72 | 147.59 | 328.69 | 149.31 | 328.65 | 149.9 | 328.62 | 150.76 | 328.57 |
| 150.93 | 328.57 | 151.85 | 328.53 | 152.18 | 328.52 | 152.47 | 328.5 | 153.31 | 328.42 |
| 153.7 | 328.37 | 153.87 | 328.34 | 154.3 | 328.29 | 154.82 | 328.2 | 155.18 | 328.18 |
| 155.37 | 328.18 | 155.75 | 328.16 | 155.9 | 328.16 | 156.35 | 328.18 | 156.4 | 328.21 |
| 156.73 | 328.25 | 157.92 | 328.25 | 159.22 | 328.28 | 161.29 | 328.34 | 163.74 | 328.53 |
| 168.01 | 328.8 | 170.52 | 328.95 | 175.06 | 328.95 | 180.09 | 328.42 | 180.94 | 328.44 |
| 181.94 | 328.49 | 182.43 | 328.44 | 183.19 | 328.42 | 184.5 | 328.48 | 187.51 | 328.36 |
| 191.51 | 328.45 | 193.11 | 328.4 | 193.9 | 328.39 | 195.67 | 328.36 | 198.93 | 328.29 |
| 199.12 | 328.28 | 201.07 | 328.28 | 201.73 | 328.3 | 202.29 | 328.31 | 203.58 | 328.34 |
| 207.59 | 328.43 | 208.16 | 328.51 | 209.75 | 328.64 | 215.52 | 328.96 | 236.69 | 328.96 |
| 237.95 | 328.8 | 238.26 | 328.78 | 239.19 | 328.77 | 242.66 | 328.76 | 242.7 | 328.75 |
| 244.34 | 328.73 | 245.96 | 328.72 | 253.8 | 328.97 | 254.24 | 328.98 | 256.63 | 329.07 |
| 271.54 | 329.62 | 274.23 | 329.72 | 274.43 | 329.73 | 277.47 | 329.84 | 279.71 | 329.85 |
| 284.4 | 329.85 | 285.84 | 329.86 | 292.79 | 329.86 | 296.17 | 329.87 | 303.55 | 329.87 |
| 305.48 | 329.89 | 307.25 | 329.92 | 308.41 | 329.97 | 308.95 | 330 | 315.03 | 330 |
| 321.02 | 329.99 | 321.32 | 329.99 | 321.55 | 329.96 | 324.67 | 329.96 | 327.77 | 329.95 |
| 331.18 | 329.95 | 334.31 | 329.96 | 335.67 | 329.97 | 338.06 | 329.97 | 340.09 | 329.95 |
| 341.19 | 329.95 | 341.42 | 329.94 | 341.69 | 329.91 | 350.39 | 329.62 | 353.98 | 329.48 |
| 355.95 | 329.42 | 357.22 | 329.39 | 359.96 | 329.33 | 361.87 | 329.29 | 365.6 | 329.29 |
| 365.74 | 329.3 | 366.44 | 329.31 | 366.81 | 329.31 | 367.95 | 329.33 | 371.31 | 329.41 |
| 374.41 | 329.48 | 374.98 | 329.48 | 378.48 | 329.54 | 380.84 | 329.6 | 381.16 | 329.6 |
| 384.74 | 329.72 | 385.01 | 329.73 | 385.6 | 329.73 | 386.07 | 329.72 | 386.2 | 329.71 |
| 387.04 | 329.67 | 388 | 329.6 | 388.79 | 329.55 | 389.37 | 329.57 | 389.62 | 329.56 |
| 390.21 | 329.58 | 391.11 | 329.56 | 391.52 | 329.51 | 392.86 | 329.37 | 393.48 | 329.35 |
| 393.77 | 329.33 | 394.59 | 329.32 | 394.73 | 329.31 | 395.04 | 329.31 | 395.62 | 329.32 |
| 396.51 | 329.33 | 397.11 | 329.33 | 397.33 | 329.34 | 397.67 | 329.37 | 398 | 329.39 |
| 398.82 | 329.41 | 400.14 | 329.46 | 400.99 | 329.48 | 401.37 | 329.48 | 402.06 | 329.52 |
| 403.12 | 329.57 | 406.53 | 329.75 | 408.71 | 329.85 | 410.5 | 329.92 | 413.2 | 330 |
| 415.41 | 330.03 | 416.23 | 330.03 | 419.27 | 330.01 | 420.17 | 330 | 420.78 | 330 |
| 421.13 | 330.01 | 424.57 | 330.04 | 427.59 | 330.04 | 431.31 | 330.01 | 432.55 | 329.99 |
| 438.9 | 329.99 | 442.46 | 330.05 | 446.55 | 330.12 | 450.31 | 330.17 | 453.54 | 330.21 |
| 454.07 | 330.21 | 454.46 | 330.2 | 455.18 | 330.16 | 457.64 | 330.03 | 465.04 | 329.77 |
| 465.97 | 329.75 | 467.48 | 329.74 | 475.03 | 329.5 | 475.79 | 329.48 | 476.48 | 329.45 |
| 477.38 | 329.42 | 479.9 | 329.35 | 481.57 | 329.32 | 481.94 | 329.31 | 482.36 | 329.31 |
| 482.54 | 329.3 | 483.11 | 329.3 | 483.57 | 329.31 | 484.72 | 329.32 | 485.24 | 329.33 |
| 485.62 | 329.35 | 486.07 | 329.36 | 486.81 | 329.47 | 487.19 | 329.51 | 487.37 | 329.52 |
| 488.23 | 329.51 | 488.63 | 329.5 | 489.3 | 329.47 | 489.56 | 329.42 | 489.67 | 329.38 |
| 490.22 | 329.38 | 490.43 | 329.39 | 492.39 | 329.54 | 493.32 | 329.65 | 497.35 | 329.96 |
| 497.41 | 329.97 | 498.1 | 330.02 | 499.31 | 330.02 | 504 | 330.03 | 505.38 | 330.03 |
| 509.88 | 330.02 | 512.21 | 330.02 | 514.95 | 330.03 | 515.14 | 330.12 | 516.27 | 330.19 |
| 516.95 | 330.21 | 517.87 | 330.23 | 518.95 | 330.25 | 520.14 | 330.26 | 521.41 | 330.26 |
| 522.65 | 330.25 | 524.51 | 330.23 | 525.77 | 330.21 | 528.5 | 330.19 | 529.73 | 330.17 |
| 530.09 | 330.16 | 534.92 | 330.06 | 535.85 | 330.03 | 537.74 | 330.04 | 539.96 | 330.04 |
| 541.25 | 330.1 | 544.74 | 330.31 | 547.79 | 330.48 | 548.68 | 330.52 | 549.09 | 330.53 |
| 550.48 | 330.6 | 550.54 | 330.61 | 552.32 | 330.71 | 557.02 | 330.9 | 557.95 | 331.19 |
| 558.93 | 331.46 | 559.76 | 331.68 | 560 | 331.75 | 561.42 | 332.27 | 562.51 | 332.7 |
| 563.98 | 333.29 | 564.41 | 333.47 | 565.3 | 333.82 | 566.61 | 334.33 | 568.93 | 335.23 |
| 571.06 | 336.05 | 572.13 | 336.36 | 572.78 | 336.59 | 573.73 | 336.92 | 576.48 | 337.68 |
| 576.94 | 337.82 | 579.9 | 338.65 | 584.15 | 338.66 | 586.57 | 338.67 | 590.52 | 338.69 |
| 593.74 | 338.63 | 594.55 | 338.6 | 594.72 | 338.6 | 600.84 | 338.47 | 601.94 | 338.45 |
| 608.67 | 338.3 | 614.43 | 338.2 | 615.45 | 338.17 | 616.86 | 338.14 | 618.54 | 338.11 |
| 619.75 | 338.08 | 620.16 | 338.08 | 621.33 | 338.05 | 622.12 | 338.05 | 622.78 | 338.04 |
| 623.72 | 338.05 | 626.68 | 338.09 | 630.56 | 338.15 | 631.48 | 338.16 | 631.71 | 338.17 |
| 632.93 | 338.18 | 633.85 | 338.18 | 635.14 | 338.19 | 638.03 | 338.2 | 645.23 | 338.2 |
| 646.55 | 338.19 | 649 | 338.19 | 650.75 | 338.17 | 654.58 | 338.08 | 657.6 | 338.01 |
| 658.22 | 337.99 | 659.6 | 337.97 | 660.24 | 337.95 | 661.35 | 337.93 | 663.21 | 337.89 |
| 673.74 | 337.64 | 675.96 | 337.59 | 676.14 | 337.58 | 676.55 | 337.58 | 676.9 | 337.57 |
| 678.29 | 337.55 | 679.15 | 337.54 | 683.02 | 337.49 | 688.12 | 337.43 | 691.41 | 337.4 |
| 696.57 | 337.3 | 699.07 | 337.25 | 707.7 | 336.96 | 708.14 | 336.95 | 709.51 | 336.93 |
| 710.59 | 336.9 | 713.79 | 336.79 | 715.81 | 336.75 | 716.48 | 336.73 | 716.91 | 336.74 |
| 717.37 | 336.76 | 718.3 | 336.66 | 718.91 | 336.6 | 719.15 | 336.61 | 719.56 | 336.6 |
| 719.94 | 336.62 | 721.52 | 336.75 | 721.84 | 336.78 | 722.18 | 336.8 | 722.42 | 336.8 |
| 723.68 | 336.87 | 724.86 | 336.93 | 726.3 | 337 | 726.78 | 337.03 | 731.64 | 337.34 |
| 737.3 | 337.77 | 738.87 | 337.84 | 740.65 | 337.91 | 742.3 | 337.99 | 742.82 | 338 |
| 744.25 | 338.02 | 746.22 | 338.07 | 748.46 | 338.14 | 749.65 | 338.18 | 751.28 | 338.25 |
| 753.89 | 338.34 | 759.06 | 338.54 | 760.17 | 338.58 | 765.6 | 338.78 | 767.18 | 338.83 |
| 769.26 | 338.89 | 771.08 | 338.95 | 775.38 | 339.09 | 781.06 | 339.26 | 785.18 | 339.39 |
| 787.86 | 339.47 | 789.27 | 339.52 | 790.67 | 339.56 | 791.95 | 339.61 | 793.77 | 339.67 |
| 795.26 | 339.7 | 798.51 | 339.78 | 802.74 | 339.9 | 803.2 | 339.91 | 805.18 | 339.93 |
| 808.56 | 339.98 | 809.87 | 339.94 | 810.66 | 339.93 | 814.34 | 339.89 | 816 | 339.89 |
| 818.16 | 339.9 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 71.95 | .04 | 548.68 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 71.95 | 548.68 | 19.86 | 19.97 | 18.34 | .1 | .3 |



BSE Document Control Number: 7323HYD101

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1183.47*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.84 | .29 | 330.84 | .38 | 330.85 | 1.08 | 330.85 | 2.42 | 330.84 |
| 2.86 | 330.83 | 4.18 | 330.81 | 4.4 | 330.81 | 4.49 | 330.8 | 5.25 | 330.79 |
| 5.37 | 330.78 | 7.19 | 330.73 | 8.8 | 330.69 | 9.02 | 330.68 | 9.28 | 330.68 |
| 9.51 | 330.67 | 10.57 | 330.64 | 10.89 | 330.64 | 11.11 | 330.63 | 11.34 | 330.63 |
| 11.52 | 330.62 | 11.84 | 330.62 | 12.32 | 330.61 | 13.71 | 330.59 | 14.25 | 330.57 |
| 14.54 | 330.57 | 14.94 | 330.56 | 15.33 | 330.54 | 15.54 | 330.54 | 16.4 | 330.52 |
| 17.07 | 330.5 | 18.26 | 330.46 | 19.07 | 330.43 | 19.31 | 330.41 | 20.2 | 330.37 |
| 20.31 | 330.36 | 21.01 | 330.33 | 21.62 | 330.31 | 22.44 | 330.27 | 24.89 | 330.18 |
| 25.2 | 330.2 | 25.53 | 330.2 | 27.03 | 330.15 | 29.97 | 330.04 | 30.58 | 330.03 |
| 31.73 | 329.99 | 32.32 | 329.99 | 32.92 | 329.97 | 33.46 | 329.96 | 34.29 | 329.93 |
| 36.26 | 329.87 | 37.46 | 329.83 | 38.16 | 329.79 | 38.91 | 329.74 | 39.78 | 329.7 |
| 40.1 | 329.68 | 40.57 | 329.66 | 41.51 | 329.63 | 41.85 | 329.61 | 42.11 | 329.61 |
| 42.73 | 329.58 | 43.85 | 329.54 | 44.08 | 329.54 | 44.92 | 329.53 | 45.13 | 329.54 |
| 46.49 | 329.54 | 47.62 | 329.55 | 50.24 | 329.55 | 53.93 | 329.56 | 58.62 | 329.56 |
| 60.6 | 329.59 | 61.79 | 329.58 | 62.72 | 329.58 | 63.94 | 329.59 | 64.07 | 329.6 |
| 64.45 | 329.6 | 64.94 | 329.62 | 65.07 | 329.62 | 65.21 | 329.64 | 65.46 | 329.64 |
| 65.62 | 329.65 | 66.47 | 329.65 | 66.96 | 329.64 | 67.91 | 329.6 | 68.37 | 329.59 |
| 69.36 | 329.55 | 69.88 | 329.54 | 70.93 | 329.5 | 71.85 | 329.45 | 72.47 | 329.45 |
| 73.65 | 329.44 | 78.81 | 329.44 | 78.91 | 329.43 | 83.35 | 329.43 | 83.85 | 329.42 |
| 83.92 | 329.43 | 84.63 | 329.44 | 85.36 | 329.44 | 86.83 | 329.4 | 87.7 | 329.4 |
| 88.24 | 329.39 | 89.42 | 329.39 | 92.56 | 329.4 | 94.36 | 329.4 | 95.01 | 329.41 |
| 95.89 | 329.41 | 97.03 | 329.38 | 97.91 | 329.36 | 99.54 | 329.33 | 100.31 | 329.31 |
| 100.5 | 329.31 | 101.15 | 329.27 | 101.82 | 329.27 | 102.82 | 329.26 | 103.37 | 329.26 |
| 104.15 | 329.23 | 105.13 | 329.18 | 105.25 | 329.18 | 105.58 | 329.16 | 105.89 | 329.13 |
| 106.53 | 329.12 | 107.21 | 329.1 | 107.61 | 329.1 | 109.01 | 329.11 | 110.32 | 329.09 |
| 112.72 | 329.05 | 113.79 | 329.04 | 114.37 | 329.03 | 117.02 | 328.96 | 119.35 | 328.91 |
| 119.96 | 328.89 | 120.97 | 328.87 | 121.71 | 328.85 | 122.99 | 328.82 | 124 | 328.81 |
| 125.18 | 328.78 | 125.84 | 328.76 | 127.86 | 328.68 | 128.68 | 328.64 | 128.75 | 328.63 |
| 130.04 | 328.59 | 130.1 | 328.59 | 131.67 | 328.54 | 132.71 | 328.48 | 134.03 | 328.44 |
| 135.07 | 328.42 | 136.62 | 328.38 | 137.15 | 328.35 | 138.3 | 328.29 | 138.91 | 328.27 |
| 139.74 | 328.21 | 140.02 | 328.18 | 140.72 | 328.08 | 141.11 | 328.02 | 141.58 | 327.93 |
| 142.28 | 327.89 | 142.53 | 327.89 | 143.01 | 327.91 | 143.05 | 327.94 | 143.26 | 327.97 |
| 143.63 | 327.99 | 144.63 | 327.99 | 145.98 | 328.01 | 148.13 | 328.07 | 150.69 | 328.27 |
| 155.12 | 328.56 | 157.73 | 328.72 | 162.45 | 328.72 | 167.67 | 328.16 | 168.56 | 328.17 |
| 169.6 | 328.23 | 170.1 | 328.18 | 170.89 | 328.16 | 172.26 | 328.22 | 175.38 | 328.09 |
| 179.54 | 328.19 | 181.2 | 328.14 | 182.02 | 328.13 | 183.86 | 328.1 | 185.78 | 328.05 |
| 187.25 | 328.02 | 189.8 | 328.02 | 190.16 | 328.03 | 190.74 | 328.04 | 192.08 | 328.08 |
| 196.26 | 328.17 | 196.52 | 328.2 | 196.84 | 328.26 | 198.49 | 328.39 | 204.49 | 328.72 |
| 226.5 | 328.72 | 227.81 | 328.55 | 228.12 | 328.53 | 229.1 | 328.53 | 232.71 | 328.51 |
| 232.74 | 328.5 | 233.45 | 328.49 | 234.45 | 328.48 | 236.06 | 328.46 | 236.14 | 328.47 |
| 244.27 | 328.73 | 244.47 | 328.73 | 247.22 | 328.83 | 262.71 | 329.4 | 265.51 | 329.5 |
| 265.72 | 329.51 | 268.31 | 329.61 | 268.88 | 329.63 | 269.14 | 329.63 | 271.21 | 329.64 |
| 277.58 | 329.64 | 284.8 | 329.65 | 295.98 | 329.65 | 297.98 | 329.67 | 299.83 | 329.71 |
| 301.04 | 329.75 | 301.59 | 329.79 | 302.52 | 329.79 | 307.91 | 329.78 | 314.14 | 329.77 |
| 314.45 | 329.77 | 314.69 | 329.75 | 315.42 | 329.74 | 317.93 | 329.74 | 321.16 | 329.72 |
| 322.92 | 329.73 | 324.7 | 329.73 | 327.96 | 329.74 | 329.37 | 329.75 | 331.85 | 329.74 |
| 333.96 | 329.73 | 335.11 | 329.72 | 335.34 | 329.71 | 335.62 | 329.68 | 344.66 | 329.37 |
| 348.39 | 329.23 | 350.44 | 329.16 | 350.98 | 329.16 | 351.76 | 329.14 | 354.61 | 329.07 |
| 356.59 | 329.03 | 360.47 | 329.03 | 360.51 | 329.04 | 361.34 | 329.05 | 361.73 | 329.05 |
| 362.91 | 329.07 | 366.41 | 329.15 | 369.62 | 329.22 | 370.21 | 329.22 | 373.86 | 329.28 |
| 376.31 | 329.34 | 376.64 | 329.35 | 380.36 | 329.47 | 380.64 | 329.48 | 381.25 | 329.48 |
| 381.75 | 329.47 | 381.88 | 329.46 | 382.75 | 329.42 | 383.75 | 329.34 | 384.57 | 329.28 |
| 385.17 | 329.31 | 385.43 | 329.3 | 386.05 | 329.32 | 386.98 | 329.3 | 388.38 | 329.14 |
| 388.8 | 329.1 | 389.44 | 329.08 | 389.75 | 329.06 | 390.6 | 329.05 | 390.75 | 329.04 |
| 391.67 | 329.04 | 392.6 | 329.05 | 393.22 | 329.06 | 393.45 | 329.07 | 393.8 | 329.1 |
| 394.14 | 329.12 | 394.99 | 329.14 | 395.48 | 329.16 | 396.37 | 329.19 | 397.64 | 329.22 |
| 398.36 | 329.25 | 399.46 | 329.31 | 404.39 | 329.56 | 405.27 | 329.59 | 407.13 | 329.66 |
| 409.58 | 329.74 | 409.94 | 329.75 | 412.24 | 329.78 | 413.08 | 329.78 | 416.25 | 329.76 |
| 418.18 | 329.76 | 421.75 | 329.79 | 424.89 | 329.79 | 428.77 | 329.76 | 430.05 | 329.74 |
| 436.65 | 329.74 | 440.35 | 329.8 | 444.6 | 329.88 | 448.51 | 329.93 | 451.09 | 329.96 |
| 451.87 | 329.97 | 452.41 | 329.97 | 452.82 | 329.96 | 456.12 | 329.78 | 457.01 | 329.75 |
| 463.81 | 329.51 | 464.78 | 329.49 | 466.35 | 329.48 | 474.2 | 329.23 | 474.99 | 329.2 |
| 475.7 | 329.18 | 476.64 | 329.14 | 477.8 | 329.12 | 479.26 | 329.07 | 480.99 | 329.04 |
| 481.26 | 329.04 | 481.38 | 329.03 | 481.81 | 329.03 | 482 | 329.02 | 482.59 | 329.02 |
| 483.07 | 329.03 | 484.27 | 329.04 | 485.21 | 329.06 | 485.67 | 329.08 | 486.17 | 329.15 |
| 486.44 | 329.2 | 487.02 | 329.24 | 487.71 | 329.23 | 488.33 | 329.23 | 489.02 | 329.19 |
| 489.3 | 329.15 | 489.41 | 329.1 | 489.98 | 329.1 | 490.2 | 329.11 | 492.24 | 329.26 |
| 493.21 | 329.38 | 497.39 | 329.7 | 497.46 | 329.71 | 498.18 | 329.76 | 499.43 | 329.76 |
| 504.3 | 329.77 | 515.68 | 329.77 | 515.89 | 329.87 | 517.06 | 329.94 | 517.77 | 329.97 |
| 518.72 | 329.98 | 519.84 | 330 | 521.08 | 330.01 | 522.4 | 330.01 | 523.68 | 330 |
| 525.62 | 329.99 | 526.94 | 329.96 | 529.76 | 329.93 | 531.05 | 329.91 | 531.43 | 329.91 |
| 536.44 | 329.8 | 537.41 | 329.78 | 541.67 | 329.78 | 543.02 | 329.85 | 546.65 | 330.06 |
| 549.81 | 330.24 | 550.74 | 330.28 | 551.16 | 330.29 | 552.55 | 330.37 | 552.62 | 330.37 |
| 554.41 | 330.47 | 559.15 | 330.67 | 560.1 | 330.98 | 561.08 | 331.26 | 561.92 | 331.49 |
| 562.13 | 331.55 | 562.32 | 331.62 | 563.59 | 332.11 | 564.46 | 332.46 | 564.7 | 332.55 |
| 566.18 | 333.16 | 566.61 | 333.35 | 567.51 | 333.72 | 568.84 | 334.25 | 570.76 | 335.02 |
| 571.17 | 335.18 | 573.33 | 336.04 | 574.4 | 336.36 | 575.06 | 336.6 | 576.01 | 336.94 |
| 578.79 | 337.73 | 579.12 | 337.84 | 582.24 | 338.73 | 586.46 | 338.75 | 588.97 | 338.76 |
| 592.95 | 338.77 | 596.21 | 338.7 | 597.02 | 338.67 | 597.2 | 338.67 | 603.37 | 338.53 |
| 604.48 | 338.5 | 611.27 | 338.35 | 617.08 | 338.23 | 619.53 | 338.18 | 622.45 | 338.11 |
| 622.86 | 338.11 | 624.46 | 338.07 | 624.83 | 338.08 | 625.51 | 338.07 | 626.46 | 338.08 |
| 629.44 | 338.12 | 633.36 | 338.18 | 634.28 | 338.19 | 634.51 | 338.19 | 635.74 | 338.2 |
| 636.67 | 338.21 | 637.98 | 338.21 | 640.89 | 338.22 | 648.16 | 338.22 | 649.49 | 338.21 |
| 651.49 | 338.21 | 651.96 | 338.2 | 652.74 | 338.2 | 653.73 | 338.18 | 657.59 | 338.08 |
| 660.63 | 338.01 | 661.27 | 338 | 662.64 | 337.97 | 663.3 | 337.95 | 664.42 | 337.92 |
| 666.3 | 337.88 | 676.92 | 337.62 | 679.16 | 337.57 | 679.4 | 337.56 | 679.75 | 337.56 |
| 679.88 | 337.55 | 680.11 | 337.55 | 681.51 | 337.53 | 682.38 | 337.51 | 686.28 | 337.46 |
| 691.43 | 337.39 | 694.74 | 337.35 | 699.95 | 337.24 | 702.48 | 337.19 | 711.19 | 336.87 |
| 713.01 | 336.83 | 714.1 | 336.8 | 717.33 | 336.67 | 719.37 | 336.61 | 720.09 | 336.6 |
| 720.94 | 336.62 | 721.88 | 336.52 | 722.5 | 336.45 | 723.15 | 336.45 | 723.54 | 336.46 |
| 725.13 | 336.59 | 725.45 | 336.62 | 726.03 | 336.65 | 726.38 | 336.66 | 727.31 | 336.71 |
| 728.5 | 336.77 | 729.95 | 336.85 | 730.43 | 336.87 | 734.08 | 337.09 | 735.34 | 337.17 |
| 739.85 | 337.49 | 741.05 | 337.57 | 741.3 | 337.59 | 742.63 | 337.64 | 744.43 | 337.71 |
| 746.1 | 337.77 | 746.62 | 337.79 | 748.07 | 337.8 | 750.05 | 337.85 | 752.31 | 337.92 |
| 755.16 | 338.04 | 757.79 | 338.13 | 763.01 | 338.33 | 764.13 | 338.38 | 769.6 | 338.59 |
| 771.2 | 338.63 | 773.29 | 338.7 | 775.13 | 338.76 | 779.47 | 338.9 | 785.2 | 339.08 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 789.36 | 339.21 | 792.06 | 339.3 | 793.49 | 339.35 | 794.9 | 339.39 | 796.19 | 339.44 |
| 798.03 | 339.5 | 799.53 | 339.54 | 802.81 | 339.61 | 807.08 | 339.74 | 807.54 | 339.75 |
| 809.54 | 339.77 | 812.95 | 339.81 | 814.27 | 339.78 | 815.06 | 339.76 | 818.77 | 339.72 |
| 822.63 | 339.72 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 66.96 | .04 | 550.74 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 66.96 | 550.74 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1163.50*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.56 | .27 | 330.56 | .35 | 330.57 | 1 | 330.57 | 2.24 | 330.56 |
| 2.65 | 330.55 | 3.87 | 330.53 | 4.07 | 330.52 | 4.86 | 330.51 | 4.97 | 330.5 |
| 6.65 | 330.46 | 7.73 | 330.43 | 8.15 | 330.41 | 8.8 | 330.4 | 10.08 | 330.36 |
| 10.5 | 330.35 | 10.88 | 330.35 | 10.96 | 330.34 | 11.4 | 330.34 | 12.12 | 330.32 |
| 12.69 | 330.31 | 13.19 | 330.29 | 13.46 | 330.29 | 13.83 | 330.27 | 14.38 | 330.26 |
| 15.18 | 330.23 | 15.8 | 330.21 | 17.41 | 330.15 | 17.65 | 330.15 | 17.87 | 330.13 |
| 18.7 | 330.09 | 18.8 | 330.09 | 19.45 | 330.06 | 20.01 | 330.03 | 20.77 | 330.01 |
| 22.8 | 329.93 | 22.9 | 329.92 | 23.27 | 329.92 | 23.43 | 329.93 | 23.63 | 329.92 |
| 23.89 | 329.92 | 25.01 | 329.88 | 27.74 | 329.77 | 28.31 | 329.75 | 29.11 | 329.73 |
| 29.61 | 329.72 | 30.97 | 329.68 | 32.05 | 329.64 | 33.56 | 329.58 | 34.37 | 329.56 |
| 34.67 | 329.54 | 35.15 | 329.52 | 35.75 | 329.48 | 36.01 | 329.47 | 37.12 | 329.4 |
| 37.55 | 329.38 | 38.42 | 329.35 | 38.74 | 329.33 | 39.01 | 329.33 | 39.12 | 329.32 |
| 39.5 | 329.31 | 39.55 | 329.3 | 40.59 | 329.26 | 43.03 | 329.26 | 44.07 | 329.27 |
| 45.76 | 329.27 | 46.5 | 329.28 | 49.92 | 329.28 | 52.46 | 329.29 | 53.67 | 329.29 |
| 56.09 | 329.33 | 57.19 | 329.32 | 57.45 | 329.32 | 58.05 | 329.33 | 59.3 | 329.34 |
| 59.92 | 329.36 | 60.11 | 329.36 | 60.36 | 329.38 | 60.92 | 329.38 | 61.09 | 329.39 |
| 61.38 | 329.39 | 61.52 | 329.38 | 61.98 | 329.38 | 62.15 | 329.37 | 62.82 | 329.35 |
| 63.23 | 329.33 | 64.11 | 329.3 | 64.57 | 329.29 | 65.51 | 329.26 | 66.32 | 329.22 |
| 66.88 | 329.22 | 67.93 | 329.21 | 71.55 | 329.21 | 72.27 | 329.2 | 72.8 | 329.2 |
| 72.89 | 329.19 | 77.06 | 329.19 | 77.69 | 329.2 | 78.34 | 329.2 | 78.64 | 329.19 |
| 79.65 | 329.17 | 79.94 | 329.17 | 80.42 | 329.16 | 81.51 | 329.16 | 81.95 | 329.15 |
| 86.34 | 329.15 | 86.93 | 329.16 | 87.71 | 329.16 | 88.72 | 329.13 | 89.5 | 329.11 |
| 91.36 | 329.07 | 91.81 | 329.05 | 91.93 | 329.05 | 92.38 | 329.02 | 92.98 | 329.02 |
| 93.87 | 329.01 | 94.63 | 328.99 | 95.93 | 328.93 | 96.03 | 328.93 | 96.49 | 328.9 |
| 97.17 | 328.88 | 97.77 | 328.87 | 98.13 | 328.87 | 99.37 | 328.86 | 100.54 | 328.84 |
| 102.68 | 328.8 | 103.62 | 328.79 | 104.15 | 328.78 | 106.5 | 328.71 | 108.57 | 328.66 |
| 109.12 | 328.64 | 110.01 | 328.62 | 110.67 | 328.6 | 112.57 | 328.55 | 112.71 | 328.55 |
| 113.76 | 328.52 | 114.35 | 328.5 | 116.14 | 328.42 | 116.52 | 328.39 | 116.93 | 328.37 |
| 118.08 | 328.32 | 118.13 | 328.32 | 119.53 | 328.27 | 120.45 | 328.2 | 121.63 | 328.17 |
| 122.56 | 328.14 | 123.93 | 328.1 | 124.4 | 328.08 | 125.1 | 328.04 | 125.23 | 328.04 |
| 125.96 | 328 | 126.23 | 327.99 | 126.46 | 327.97 | 127.26 | 327.87 | 127.45 | 327.83 |
| 127.93 | 327.75 | 128.31 | 327.66 | 128.97 | 327.62 | 129.39 | 327.62 | 129.66 | 327.63 |
| 129.7 | 327.67 | 129.92 | 327.7 | 130.3 | 327.72 | 131.34 | 327.72 | 132.74 | 327.74 |
| 134.98 | 327.81 | 137.63 | 328.01 | 142.23 | 328.31 | 144.93 | 328.48 | 149.84 | 328.48 |
| 155.25 | 327.89 | 156.18 | 327.91 | 157.26 | 327.97 | 157.78 | 327.92 | 158.6 | 327.89 |
| 160.02 | 327.96 | 163.26 | 327.83 | 167.58 | 327.93 | 169.3 | 327.88 | 170.15 | 327.87 |
| 172.06 | 327.83 | 174.04 | 327.78 | 175.57 | 327.76 | 175.79 | 327.75 | 177.88 | 327.75 |
| 178.59 | 327.77 | 179.2 | 327.77 | 180.59 | 327.81 | 184.92 | 327.9 | 185.19 | 327.94 |
| 185.53 | 328 | 187.24 | 328.14 | 193.47 | 328.48 | 216.31 | 328.48 | 217.67 | 328.3 |
| 217.99 | 328.29 | 219 | 328.28 | 222.75 | 328.26 | 222.78 | 328.25 | 223.52 | 328.24 |
| 224.56 | 328.23 | 226.22 | 328.21 | 226.31 | 328.22 | 234.75 | 328.48 | 235.23 | 328.5 |
| 237.81 | 328.6 | 253.89 | 329.18 | 255.34 | 329.24 | 256.79 | 329.29 | 257.01 | 329.3 |
| 259.69 | 329.4 | 260.29 | 329.42 | 262.71 | 329.42 | 267.54 | 329.43 | 287.72 | 329.43 |
| 288.41 | 329.44 | 290.49 | 329.45 | 292.4 | 329.49 | 293.66 | 329.54 | 294.24 | 329.58 |
| 295.2 | 329.57 | 300.79 | 329.57 | 307.26 | 329.56 | 307.58 | 329.55 | 307.83 | 329.53 |
| 308.59 | 329.52 | 311.19 | 329.52 | 314.54 | 329.5 | 318.21 | 329.5 | 321.6 | 329.52 |
| 323.06 | 329.53 | 325.63 | 329.52 | 329.02 | 329.49 | 329.55 | 329.46 | 338.93 | 329.13 |
| 342.8 | 328.98 | 344.93 | 328.91 | 345.49 | 328.9 | 346.3 | 328.88 | 349.26 | 328.81 |
| 351.31 | 328.76 | 353.32 | 328.77 | 355.34 | 328.77 | 355.49 | 328.78 | 356.24 | 328.79 |
| 356.64 | 328.79 | 357.88 | 328.81 | 361.5 | 328.89 | 364.84 | 328.96 | 365.45 | 328.96 |
| 369.24 | 329.03 | 371.78 | 329.08 | 375.99 | 329.21 | 376.27 | 329.22 | 377.42 | 329.22 |
| 378.47 | 329.16 | 379.5 | 329.08 | 380.35 | 329.02 | 380.97 | 329.05 | 381.24 | 329.04 |
| 381.89 | 329.06 | 382.45 | 329.05 | 382.86 | 329.03 | 383.29 | 328.99 | 384.31 | 328.87 |
| 384.74 | 328.83 | 385.41 | 328.8 | 385.73 | 328.79 | 386.61 | 328.78 | 386.76 | 328.77 |
| 387.72 | 328.77 | 388.68 | 328.78 | 389.32 | 328.79 | 389.57 | 328.8 | 390.28 | 328.84 |
| 391.17 | 328.87 | 391.67 | 328.89 | 392.6 | 328.92 | 393.92 | 328.95 | 394.67 | 328.98 |
| 395.81 | 329.04 | 399.48 | 329.24 | 400.92 | 329.3 | 401.83 | 329.34 | 403.76 | 329.41 |
| 406.3 | 329.49 | 406.68 | 329.51 | 407.42 | 329.52 | 408.22 | 329.52 | 409.07 | 329.53 |
| 409.94 | 329.53 | 413.22 | 329.51 | 415.23 | 329.51 | 418.94 | 329.54 | 422.2 | 329.54 |
| 427.55 | 329.5 | 429.33 | 329.5 | 429.79 | 329.49 | 434.4 | 329.49 | 438.24 | 329.56 |
| 442.65 | 329.63 | 446.71 | 329.69 | 449.39 | 329.72 | 450.19 | 329.73 | 450.76 | 329.73 |
| 451.18 | 329.72 | 451.95 | 329.68 | 454.61 | 329.53 | 455.53 | 329.5 | 462.59 | 329.25 |
| 463.59 | 329.23 | 465.23 | 329.21 | 473.36 | 328.96 | 474.19 | 328.93 | 475.9 | 328.86 |
| 477.1 | 328.84 | 478.62 | 328.79 | 480.42 | 328.75 | 481.27 | 328.75 | 481.46 | 328.74 |
| 482.08 | 328.74 | 482.57 | 328.75 | 483.82 | 328.76 | 484.38 | 328.76 | 485.28 | 328.8 |
| 486.07 | 328.92 | 486.48 | 328.96 | 486.67 | 328.97 | 488.03 | 328.95 | 488.75 | 328.91 |
| 489.04 | 328.87 | 489.15 | 328.82 | 489.75 | 328.82 | 490.41 | 328.86 | 492.09 | 328.99 |
| 493.1 | 329.11 | 497.44 | 329.44 | 497.51 | 329.45 | 498.25 | 329.51 | 499.56 | 329.51 |
| 504.61 | 329.52 | 506.1 | 329.52 | 510.96 | 329.51 | 516.42 | 329.51 | 516.63 | 329.61 |
| 517 | 329.64 | 517.84 | 329.69 | 518.58 | 329.72 | 519.57 | 329.74 | 522.02 | 329.76 |
| 524.72 | 329.76 | 526.74 | 329.74 | 528.1 | 329.71 | 531.03 | 329.68 | 532.36 | 329.66 |
| 532.76 | 329.66 | 537.96 | 329.55 | 538.97 | 329.52 | 543.39 | 329.52 | 544.79 | 329.59 |
| 545.32 | 329.62 | 548.56 | 329.81 | 551.84 | 330 | 552.8 | 330.05 | 553.22 | 330.06 |
| 554.63 | 330.14 | 554.69 | 330.14 | 556.5 | 330.24 | 561.29 | 330.45 | 562.24 | 330.77 |
| 563.23 | 331.06 | 564.33 | 331.37 | 564.49 | 331.44 | 565.77 | 331.94 | 566.64 | 332.3 |
| 566.88 | 332.41 | 568.82 | 333.23 | 569.72 | 333.62 | 571.06 | 334.16 | 573 | 334.97 |
| 573.32 | 335.1 | 573.42 | 335.13 | 575.59 | 336.03 | 576.67 | 336.36 | 577.34 | 336.6 |
| 578.3 | 336.96 | 581.1 | 337.78 | 581.33 | 337.85 | 581.57 | 337.94 | 584.58 | 338.82 |
| 588.9 | 338.83 | 591.37 | 338.84 | 595.39 | 338.85 | 598.67 | 338.77 | 599.5 | 338.74 |
| 599.67 | 338.74 | 605.9 | 338.59 | 607.02 | 338.56 | 613.86 | 338.4 | 619.73 | 338.27 |
| 620.76 | 338.25 | 622.2 | 338.21 | 625.15 | 338.14 | 625.56 | 338.14 | 627.18 | 338.1 |
| 628.13 | 338.1 | 628.23 | 338.09 | 629.19 | 338.11 | 632.2 | 338.15 | 636.15 | 338.2 |
| 637.09 | 338.22 | 638.56 | 338.23 | 639.49 | 338.23 | 640.81 | 338.24 | 651.08 | 338.24 |
| 652.43 | 338.23 | 654.44 | 338.23 | 654.92 | 338.22 | 656.7 | 338.2 | 660.6 | 338.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 663.67 | 338.01 | 664.31 | 338 | 665.69 | 337.96 | 666.36 | 337.95 | 669.39 | 337.87 |
| 680.1 | 337.61 | 682.72 | 337.54 | 682.96 | 337.54 | 683.32 | 337.53 | 684.73 | 337.5 |
| 685.61 | 337.49 | 689.55 | 337.43 | 694.74 | 337.35 | 698.08 | 337.3 | 703.34 | 337.18 |
| 705.89 | 337.13 | 714.67 | 336.79 | 715.12 | 336.77 | 716.52 | 336.73 | 716.81 | 336.73 |
| 717.61 | 336.69 | 720.87 | 336.55 | 722.93 | 336.48 | 723.6 | 336.46 | 724.51 | 336.48 |
| 726.08 | 336.3 | 726.74 | 336.3 | 727.13 | 336.31 | 728.73 | 336.44 | 729.06 | 336.47 |
| 729.41 | 336.49 | 729.65 | 336.49 | 730 | 336.51 | 730.94 | 336.55 | 732.14 | 336.62 |
| 733.6 | 336.69 | 734.09 | 336.71 | 737.77 | 336.93 | 739.04 | 337.01 | 743.59 | 337.31 |
| 744.8 | 337.38 | 746.39 | 337.44 | 748.21 | 337.5 | 749.89 | 337.56 | 750.42 | 337.57 |
| 751.88 | 337.58 | 753.88 | 337.63 | 756.16 | 337.71 | 757.37 | 337.76 | 759.03 | 337.82 |
| 761.68 | 337.92 | 766.95 | 338.13 | 768.08 | 338.17 | 773.6 | 338.39 | 775.22 | 338.44 |
| 777.33 | 338.51 | 779.18 | 338.57 | 783.56 | 338.71 | 789.34 | 338.9 | 793.54 | 339.04 |
| 796.27 | 339.13 | 799.12 | 339.23 | 800.43 | 339.27 | 802.28 | 339.33 | 803.79 | 339.37 |
| 807.11 | 339.45 | 811.41 | 339.58 | 811.88 | 339.59 | 813.9 | 339.61 | 817.34 | 339.65 |
| 818.67 | 339.61 | 819.47 | 339.59 | 823.21 | 339.54 | 823.8 | 339.54 | 824.9 | 339.55 |
| 827.1 | 339.55 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 61.98 | .04 | 552.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 61.98 | 552.8 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1143.53*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.29 | .92 | 330.29 | 2.06 | 330.28 | 2.43 | 330.27 | 3.56 | 330.25 |
| 4.47 | 330.22 | 4.57 | 330.22 | 6.12 | 330.18 | 7.49 | 330.14 | 7.68 | 330.14 |
| 8.09 | 330.12 | 8.41 | 330.12 | 9.27 | 330.09 | 9.65 | 330.08 | 9.94 | 330.08 |
| 10.08 | 330.07 | 11.14 | 330.04 | 11.67 | 330.03 | 12.38 | 330 | 13.05 | 329.98 |
| 13.22 | 329.98 | 13.96 | 329.95 | 14.53 | 329.93 | 15.54 | 329.89 | 16.44 | 329.85 |
| 17.19 | 329.82 | 17.29 | 329.81 | 17.88 | 329.78 | 18.4 | 329.76 | 19.1 | 329.74 |
| 20.97 | 329.66 | 21.19 | 329.66 | 21.4 | 329.65 | 21.55 | 329.66 | 21.97 | 329.64 |
| 23 | 329.6 | 23.21 | 329.6 | 23.23 | 329.59 | 25.51 | 329.49 | 26.03 | 329.48 |
| 27.01 | 329.44 | 27.23 | 329.44 | 27.81 | 329.42 | 28.01 | 329.42 | 28.92 | 329.38 |
| 29.47 | 329.36 | 30.86 | 329.3 | 31.88 | 329.26 | 32.33 | 329.24 | 32.87 | 329.2 |
| 33.12 | 329.19 | 34.13 | 329.12 | 34.53 | 329.11 | 35.74 | 329.05 | 36.37 | 329.03 |
| 37.51 | 328.98 | 39.57 | 328.98 | 40.53 | 328.99 | 41.49 | 328.99 | 42.08 | 329 |
| 42.76 | 329 | 45.9 | 329.01 | 48.24 | 329.02 | 48.73 | 329.02 | 49.36 | 329.03 |
| 49.89 | 329.03 | 51.58 | 329.07 | 53.38 | 329.07 | 54.42 | 329.09 | 54.86 | 329.09 |
| 55.5 | 329.12 | 56.57 | 329.12 | 56.99 | 329.11 | 57.15 | 329.11 | 58.09 | 329.08 |
| 58.86 | 329.05 | 59.27 | 329.04 | 60.63 | 328.99 | 61.28 | 328.99 | 62.2 | 328.98 |
| 64.89 | 328.98 | 65.38 | 328.97 | 66.38 | 328.97 | 66.47 | 328.96 | 71.32 | 328.96 |
| 71.59 | 328.95 | 72.47 | 328.94 | 72.72 | 328.93 | 73.56 | 328.93 | 74.02 | 328.92 |
| 74.48 | 328.92 | 76.93 | 328.91 | 79.03 | 328.91 | 79.18 | 328.9 | 79.52 | 328.9 |
| 80.41 | 328.88 | 81.1 | 328.86 | 82.96 | 328.8 | 83.62 | 328.78 | 83.7 | 328.77 |
| 84.02 | 328.77 | 84.14 | 328.76 | 84.92 | 328.75 | 85.14 | 328.74 | 85.35 | 328.74 |
| 85.96 | 328.72 | 86.72 | 328.68 | 87.31 | 328.66 | 87.81 | 328.65 | 88.34 | 328.63 |
| 88.65 | 328.63 | 90.76 | 328.59 | 92.63 | 328.56 | 93.92 | 328.53 | 95.98 | 328.46 |
| 97.79 | 328.4 | 98.27 | 328.39 | 99.63 | 328.34 | 101.3 | 328.29 | 101.41 | 328.29 |
| 102.36 | 328.26 | 102.85 | 328.23 | 104.42 | 328.15 | 105.06 | 328.11 | 105.11 | 328.1 |
| 106.12 | 328.06 | 106.16 | 328.05 | 107.39 | 328 | 108.2 | 327.93 | 109.23 | 327.9 |
| 110.04 | 327.87 | 111.24 | 327.82 | 111.66 | 327.8 | 112.26 | 327.78 | 112.55 | 327.76 |
| 112.86 | 327.75 | 113.23 | 327.73 | 113.25 | 327.72 | 113.67 | 327.68 | 113.89 | 327.64 |
| 114.16 | 327.6 | 114.32 | 327.56 | 114.74 | 327.48 | 114.91 | 327.44 | 115.11 | 327.38 |
| 115.36 | 327.36 | 115.5 | 327.36 | 115.8 | 327.34 | 116.31 | 327.36 | 116.36 | 327.4 |
| 116.58 | 327.43 | 116.98 | 327.45 | 118.06 | 327.45 | 119.51 | 327.48 | 121.82 | 327.54 |
| 124.57 | 327.76 | 129.34 | 328.07 | 132.14 | 328.24 | 137.22 | 328.24 | 142.84 | 327.63 |
| 143.79 | 327.65 | 144.91 | 327.71 | 145.45 | 327.66 | 146.3 | 327.63 | 147.77 | 327.7 |
| 151.13 | 327.56 | 155.61 | 327.67 | 157.39 | 327.61 | 158.27 | 327.6 | 160.25 | 327.57 |
| 162.31 | 327.52 | 163.9 | 327.49 | 164.12 | 327.48 | 166.29 | 327.48 | 167.03 | 327.5 |
| 167.65 | 327.51 | 169.09 | 327.55 | 173.59 | 327.64 | 173.87 | 327.68 | 174.21 | 327.74 |
| 175.99 | 327.88 | 182.44 | 328.24 | 206.11 | 328.24 | 207.52 | 328.06 | 207.86 | 328.04 |
| 208.9 | 328.03 | 212.79 | 328.01 | 212.83 | 328 | 213.58 | 327.99 | 214.66 | 327.98 |
| 216.48 | 327.96 | 225.23 | 328.24 | 225.72 | 328.26 | 228.4 | 328.36 | 245.06 | 328.97 |
| 246.57 | 329.02 | 248.3 | 329.09 | 251.08 | 329.19 | 251.7 | 329.21 | 261.05 | 329.21 |
| 268.82 | 329.22 | 280.85 | 329.22 | 283 | 329.24 | 284.98 | 329.28 | 286.29 | 329.32 |
| 286.88 | 329.36 | 287.88 | 329.36 | 293.68 | 329.35 | 300.38 | 329.34 | 300.71 | 329.34 |
| 300.97 | 329.31 | 301.75 | 329.3 | 304.46 | 329.3 | 307.93 | 329.28 | 311.73 | 329.28 |
| 315.24 | 329.29 | 316.76 | 329.3 | 319.42 | 329.29 | 321.69 | 329.28 | 322.93 | 329.27 |
| 323.18 | 329.26 | 323.48 | 329.23 | 333.21 | 328.88 | 337.22 | 328.73 | 339.42 | 328.65 |
| 340 | 328.65 | 340.84 | 328.63 | 343.91 | 328.55 | 346.04 | 328.5 | 350.21 | 328.5 |
| 350.25 | 328.51 | 351.15 | 328.52 | 351.56 | 328.52 | 352.1 | 328.53 | 352.84 | 328.54 |
| 356.6 | 328.63 | 360.05 | 328.7 | 360.69 | 328.7 | 364.61 | 328.77 | 367.25 | 328.83 |
| 371.61 | 328.96 | 371.91 | 328.97 | 372.56 | 328.97 | 373.1 | 328.96 | 373.24 | 328.95 |
| 374.18 | 328.91 | 375.25 | 328.82 | 376.13 | 328.76 | 376.78 | 328.79 | 377.06 | 328.78 |
| 377.72 | 328.8 | 378.3 | 328.79 | 378.73 | 328.77 | 380.23 | 328.6 | 380.68 | 328.56 |
| 381.37 | 328.53 | 381.7 | 328.51 | 382.62 | 328.5 | 382.78 | 328.49 | 383.77 | 328.49 |
| 384.77 | 328.5 | 385.43 | 328.51 | 385.68 | 328.52 | 386.21 | 328.56 | 386.43 | 328.57 |
| 387.34 | 328.6 | 387.87 | 328.62 | 388.82 | 328.65 | 390.19 | 328.68 | 392.15 | 328.78 |
| 395.96 | 328.98 | 397.45 | 329.05 | 398.4 | 329.08 | 400.4 | 329.16 | 403.03 | 329.24 |
| 403.42 | 329.26 | 405.89 | 329.29 | 406.8 | 329.29 | 410.2 | 329.27 | 411.22 | 329.26 |
| 412.29 | 329.26 | 414.84 | 329.29 | 416.12 | 329.3 | 419.5 | 329.3 | 423.67 | 329.27 |
| 425.05 | 329.25 | 432.15 | 329.25 | 436.12 | 329.31 | 440.7 | 329.39 | 444.9 | 329.45 |
| 447.68 | 329.48 | 448.52 | 329.49 | 449.1 | 329.49 | 449.54 | 329.48 | 450.34 | 329.44 |
| 453.09 | 329.29 | 454.05 | 329.25 | 461.36 | 328.99 | 462.41 | 328.97 | 464.1 | 328.95 |
| 472.53 | 328.68 | 473.39 | 328.65 | 474.15 | 328.63 | 475.16 | 328.59 | 476.41 | 328.56 |
| 477.98 | 328.51 | 479.84 | 328.47 | 480.13 | 328.47 | 480.26 | 328.46 | 480.72 | 328.46 |
| 480.93 | 328.45 | 481.56 | 328.45 | 482.08 | 328.46 | 483.37 | 328.47 | 483.95 | 328.48 |
| 484.88 | 328.52 | 485.41 | 328.6 | 485.7 | 328.65 | 486.12 | 328.68 | 486.33 | 328.69 |
| 487.07 | 328.68 | 487.74 | 328.68 | 488.48 | 328.64 | 488.78 | 328.59 | 488.9 | 328.54 |
| 489.51 | 328.54 | 489.75 | 328.55 | 490.2 | 328.58 | 491.94 | 328.71 | 492.98 | 328.84 |
| 497.48 | 329.19 | 497.55 | 329.2 | 498.33 | 329.25 | 499.68 | 329.25 | 504.91 | 329.26 |
| 517.15 | 329.26 | 517.38 | 329.36 | 517.75 | 329.39 | 518.63 | 329.44 | 519.4 | 329.47 |
| 520.42 | 329.49 | 521.63 | 329.51 | 522.96 | 329.52 | 524.38 | 329.52 | 525.76 | 329.51 |
| 527.85 | 329.49 | 529.26 | 329.46 | 532.3 | 329.43 | 533.68 | 329.41 | 534.09 | 329.4 |
| 539.48 | 329.29 | 540.52 | 329.26 | 545.11 | 329.26 | 547.11 | 329.37 | 550.46 | 329.56 |
| 553.86 | 329.76 | 554.86 | 329.81 | 555.29 | 329.82 | 556.71 | 329.9 | 556.77 | 329.9 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 557.48 | 329.95 | 558.6 | 330.01 | 563.42 | 330.22 | 564.39 | 330.56 | 565.38 | 330.86 |
| 566.38 | 331.15 | 566.65 | 331.25 | 567.94 | 331.78 | 568.83 | 332.15 | 569.07 | 332.26 |
| 570.57 | 332.91 | 571.02 | 333.12 | 571.93 | 333.51 | 573.28 | 334.08 | 575.24 | 334.91 |
| 575.66 | 335.09 | 577.85 | 336.01 | 578.94 | 336.36 | 579.61 | 336.61 | 580.58 | 336.98 |
| 583.41 | 337.83 | 583.75 | 337.95 | 583.89 | 337.99 | 586.92 | 338.91 | 591.21 | 338.92 |
| 597.82 | 338.92 | 601.14 | 338.84 | 601.97 | 338.81 | 602.14 | 338.81 | 608.43 | 338.65 |
| 609.55 | 338.62 | 616.46 | 338.44 | 622.38 | 338.31 | 623.42 | 338.28 | 624.88 | 338.25 |
| 626.6 | 338.2 | 627.84 | 338.17 | 628.26 | 338.17 | 629.89 | 338.13 | 630.27 | 338.13 |
| 630.96 | 338.12 | 631.92 | 338.14 | 634.96 | 338.18 | 638.94 | 338.23 | 639.89 | 338.24 |
| 640.12 | 338.25 | 641.37 | 338.25 | 642.32 | 338.26 | 643.65 | 338.26 | 646.61 | 338.27 |
| 646.82 | 338.27 | 649.3 | 338.26 | 654.01 | 338.26 | 655.36 | 338.25 | 657.4 | 338.25 |
| 657.88 | 338.24 | 658.67 | 338.23 | 659.68 | 338.21 | 663.61 | 338.1 | 666.7 | 338.02 |
| 667.35 | 338 | 668.75 | 337.96 | 669.42 | 337.95 | 672.47 | 337.87 | 683.28 | 337.59 |
| 685.56 | 337.53 | 685.8 | 337.53 | 685.92 | 337.52 | 686.16 | 337.52 | 686.29 | 337.51 |
| 686.53 | 337.51 | 687.95 | 337.48 | 688.74 | 337.47 | 688.84 | 337.46 | 692.81 | 337.4 |
| 698.05 | 337.31 | 701.42 | 337.26 | 706.72 | 337.13 | 709.29 | 337.06 | 718.16 | 336.7 |
| 718.61 | 336.68 | 720.02 | 336.64 | 720.32 | 336.63 | 721.12 | 336.59 | 724.41 | 336.43 |
| 726.48 | 336.35 | 727.17 | 336.33 | 728.08 | 336.35 | 729.67 | 336.15 | 729.91 | 336.15 |
| 730.33 | 336.14 | 730.73 | 336.15 | 732.34 | 336.28 | 732.67 | 336.31 | 733.26 | 336.34 |
| 733.62 | 336.35 | 734.56 | 336.4 | 735.78 | 336.46 | 737.25 | 336.53 | 737.74 | 336.56 |
| 741.45 | 336.77 | 742.73 | 336.84 | 747.32 | 337.12 | 748.55 | 337.19 | 750.16 | 337.25 |
| 751.99 | 337.3 | 753.69 | 337.34 | 754.22 | 337.35 | 755.69 | 337.37 | 757.71 | 337.42 |
| 760.01 | 337.49 | 762.91 | 337.61 | 765.58 | 337.71 | 770.9 | 337.92 | 772.03 | 337.97 |
| 777.61 | 338.2 | 779.23 | 338.24 | 781.36 | 338.31 | 783.23 | 338.38 | 787.65 | 338.53 |
| 793.48 | 338.72 | 797.71 | 338.87 | 800.47 | 338.96 | 803.35 | 339.06 | 804.67 | 339.1 |
| 806.54 | 339.17 | 808.06 | 339.21 | 811.4 | 339.28 | 815.75 | 339.41 | 816.22 | 339.42 |
| 818.25 | 339.44 | 821.72 | 339.48 | 823.07 | 339.45 | 823.87 | 339.43 | 827.65 | 339.37 |
| 831.58 | 339.37 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 56.99 | .04 | 554.86 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 56.99 | 554.86 | 19.86 | 19.97 | 18.34 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1123.57

INPUT
Description:
Station Elevation Data num= 432

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 330.01 | 1.880005 | 330 | 3.25 | 329.97 | 3.48999 | 329.96 | 9.570007 | 329.79 |
| 11.90997 | 329.71 | 3.26001 | 329.65 | 16.32001 | 329.51 | 20.98999 | 329.33 | 23.27997 | 329.22 |
| 25.70996 | 329.13 | 28.59998 | 329 | 29.5 | 328.96 | 31.01996 | 328.85 | 33.14996 | 328.75 |
| 34.06 | 328.71 | 34.72998 | 328.73 | 5.42999 | 328.74 | 1.89001 | 328.74 | 45.03998 | 328.76 |
| 45.52997 | 328.77 | 47.07001 | 328.81 | 48.20996 | 328.81 | 48.70996 | 328.82 | 49.76001 | 328.84 |
| 50.06 | 328.84 | 50.27997 | 328.85 | 50.44 | 328.85 | 50.66998 | 328.86 | 50.83997 | 328.86 |
| 51.12 | 328.86 | 51.51001 | 328.86 | 52.01001 | 328.85 | 52.64001 | 328.83 | 55.13 | 328.76 |
| 56.47998 | 328.75 | 59.91998 | 328.74 | 60.20996 | 328.73 | 62.95996 | 328.73 | 64.29999 | 328.72 |
| 64.52997 | 328.71 | 66.67999 | 328.69 | 71.15997 | 328.65 | 71.33997 | 328.65 | 78.01996 | 328.42 |
| 83.69 | 328.28 | 90.01996 | 328.03 | 90.12 | 328.03 | 90.90997 | 328 | 92.70001 | 327.89 |
| 93.25 | 327.84 | 95.25 | 327.73 | 95.94 | 327.66 | 99.67999 | 327.5 | 100.28 | 327.46 |
| 100.64 | 327.41 | 101.06 | 327.33 | 101.56 | 327.21 | 101.87 | 327.11 | 102.09 | 327.09 |
| 102.43 | 327.07 | 102.67 | 327.08 | 102.96 | 327.09 | 103.01 | 327.13 | 103.07 | 327.14 |
| 103.24 | 327.16 | 103.4 | 327.17 | 103.65 | 327.18 | 103.99 | 327.18 | 104.33 | 327.18 |
| 104.6 | 327.18 | 104.74 | 327.18 | 104.77 | 327.18 | 106.27 | 327.21 | 108.67 | 327.28 |
| 111.51 | 327.5 | 116.45 | 327.82 | 119.35 | 328 | 119.99 | 328 | 120.51 | 328 |
| 121.69 | 328 | 121.78 | 328 | 122.06 | 328 | 123.4 | 328 | 124.11 | 328 |
| 124.34 | 328 | 124.61 | 328 | 130.42 | 327.37 | 131.41 | 327.39 | 132.57 | 327.45 |
| 133.13 | 327.4 | 134.01 | 327.37 | 135.53 | 327.44 | 139.01 | 327.3 | 143.64 | 327.41 |
| 145.15 | 327.36 | 145.49 | 327.35 | 146.4 | 327.34 | 148.45 | 327.3 | 150.58 | 327.25 |
| 152.22 | 327.22 | 152.3 | 327.22 | 152.45 | 327.21 | 153.04 | 327.21 | 154.21 | 327.21 |
| 154.42 | 327.21 | 154.7 | 327.21 | 155.06 | 327.22 | 155.46 | 327.23 | 156.11 | 327.24 |
| 157.6 | 327.28 | 162.25 | 327.38 | 162.54 | 327.42 | 162.9 | 327.48 | 164.74 | 327.63 |
| 171.42 | 328 | 171.46 | 328 | 171.49 | 328 | 171.55 | 328 | 179.4 | 328 |
| 182.91 | 328 | 185.11 | 328 | 189.51 | 328 | 192.19 | 328 | 193.6 | 328 |
| 195.92 | 328 | 197.38 | 327.81 | 197.73 | 327.79 | 198.81 | 327.78 | 202.83 | 327.76 |
| 202.87 | 327.75 | 204.77 | 327.73 | 206.56 | 327.71 | 215.71 | 328 | 215.93 | 328.01 |
| 216.22 | 328.02 | 243.11 | 329 | 243.33 | 329 | 243.39 | 329 | 250.89 | 329 |
| 251.12 | 329 | 252.79 | 329 | 260.83 | 329 | 271.7 | 329 | 273.28 | 329 |
| 275.51 | 329.02 | 277.56 | 329.06 | 278.91 | 329.11 | 279.53 | 329.15 | 286.56 | 329.14 |
| 293.84 | 329.12 | 294.11 | 329.09 | 294.92 | 329.08 | 297.72 | 329.08 | 301.31 | 329.06 |
| 303.27 | 329.06 | 305.25 | 329.06 | 308.88 | 329.07 | 310.45 | 329.08 | 313.21 | 329.07 |
| 315.56 | 329.05 | 316.84 | 329.04 | 317.1 | 329.03 | 317.41 | 329 | 327.48 | 328.64 |
| 331.63 | 328.48 | 333.91 | 328.4 | 334.51 | 328.39 | 335.38 | 328.37 | 338.56 | 328.29 |
| 340.76 | 328.24 | 342.91 | 328.24 | 345.08 | 328.24 | 345.12 | 328.25 | 345.24 | 328.25 |
| 346.05 | 328.26 | 346.48 | 328.26 | 347.04 | 328.27 | 347.8 | 328.28 | 351.69 | 328.37 |
| 355.27 | 328.44 | 355.93 | 328.44 | 359.99 | 328.51 | 362.72 | 328.57 | 363.08 | 328.58 |
| 367.23 | 328.71 | 367.54 | 328.72 | 367.71 | 328.72 | 368.02 | 328.72 | 368.22 | 328.72 |
| 368.77 | 328.71 | 368.92 | 328.7 | 369.89 | 328.65 | 371 | 328.56 | 371.91 | 328.5 |
| 372.58 | 328.53 | 372.87 | 328.52 | 373.56 | 328.54 | 374.16 | 328.53 | 374.6 | 328.51 |
| 375.07 | 328.46 | 376.16 | 328.33 | 376.62 | 328.29 | 377.34 | 328.26 | 377.35 | 328.26 |
| 377.52 | 328.25 | 377.68 | 328.24 | 378.63 | 328.23 | 378.79 | 328.22 | 378.84 | 328.22 |
| 379.82 | 328.22 | 380.85 | 328.23 | 381.54 | 328.24 | 381.8 | 328.25 | 382.19 | 328.28 |
| 382.35 | 328.29 | 382.57 | 328.3 | 383.52 | 328.33 | 385.05 | 328.38 | 385.51 | 328.39 |
| 386.03 | 328.4 | 386.47 | 328.41 | 387.27 | 328.45 | 392.44 | 328.72 | 393.98 | 328.79 |
| 397.03 | 328.91 | 399.88 | 329 | 400.16 | 329.01 | 400.95 | 329.02 | 401.81 | 329.03 |
| 402.72 | 329.04 | 403.66 | 329.04 | 408.23 | 329.01 | 408.93 | 329.01 | 411.98 | 329.04 |
| 413.31 | 329.05 | 414.53 | 329.05 | 416.81 | 329.05 | 421.12 | 329.02 | 422.55 | 329 |
| 422.74 | 329 | 422.75 | 329 | 424.46 | 329 | 424.95 | 329 | 426.2 | 329 |
| 426.35 | 329 | 427.51 | 329 | 427.62 | 329 | 429.9 | 329 | 438.75 | 329.15 |
| 443.1 | 329.21 | 445.98 | 329.24 | 446.84 | 329.25 | 447.45 | 329.25 | 447.9 | 329.24 |
| 448.73 | 329.2 | 451.58 | 329.04 | 452.57 | 329 | 460.14 | 328.73 | 461.22 | 328.71 |
| 462.97 | 328.69 | 471.7 | 328.41 | 473.38 | 328.35 | 474.42 | 328.31 | 475.71 | 328.28 |
| 477.34 | 328.23 | 479.27 | 328.19 | 479.57 | 328.19 | 479.7 | 328.18 | 480.18 | 328.18 |
| 480.39 | 328.17 | 480.67 | 328.17 | 481.05 | 328.17 | 481.58 | 328.18 | 482.92 | 328.19 |
| 483.52 | 328.2 | 483.96 | 328.22 | 484.48 | 328.24 | 485.03 | 328.32 | 485.33 | 328.37 |
| 485.77 | 328.41 | 485.98 | 328.42 | 486.75 | 328.41 | 486.98 | 328.41 | 487.44 | 328.4 |
| 488.01 | 328.37 | 488.21 | 328.36 | 488.52 | 328.31 | 488.64 | 328.26 | 488.72 | 328.26 |
| 488.97 | 328.26 | 489.13 | 328.26 | 489.28 | 328.26 | 489.52 | 328.27 | 489.99 | 328.3 |
| 491.79 | 328.44 | 492.87 | 328.57 | 497.53 | 328.93 | 497.6 | 328.94 | 498.4 | 329 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 498.74 | 329 | 499.8 | 329 | 505.22 | 329.01 | 506.82 | 329.01 | 512.03 | 329 |
| 513.1 | 329 | 514.7 | 329 | 514.72 | 329 | 517.87 | 329 | 517.89 | 329 |
| 517.9 | 329 | 518.12 | 329.11 | 518.51 | 329.14 | 519.42 | 329.19 | 520.21 | 329.22 |
| 521.27 | 329.24 | 522.52 | 329.26 | 523.9 | 329.27 | 525.37 | 329.27 | 526.8 | 329.26 |
| 528.96 | 329.24 | 530.42 | 329.21 | 533.5699 | 329.18 | 535.42 | 329.15 | 541 | 329.03 |
| 542.08 | 329 | 544.27 | 329 | 544.39 | 329 | 545.5 | 329 | 546.11 | 329 |
| 546.83 | 329 | 548.33 | 329.08 | 555.89 | 329.52 | 556.92 | 329.57 | 557.35 | 329.58 |
| 560.69 | 329.78 | 565.56 | 330 | 566.53 | 330.35 | 568.65 | 331 | 570.12 | 331.61 |
| 571.01 | 332 | 572.77 | 332.79 | 573.22 | 333 | 574.14 | 333.41 | 575.5 | 334 |
| 577.48 | 334.86 | 577.8 | 335 | 577.9 | 335.04 | 580.11 | 336 | 581.21 | 336.36 |
| 581.89 | 336.62 | 582.87 | 337 | 585.72 | 337.88 | 585.95 | 337.96 | 586.06 | 338 |
| 586.2 | 338.05 | 589.26 | 339 | 593.59 | 339 | 593.66 | 339 | 596.17 | 339 |
| 600.26 | 339 | 603.89 | 338.9 | 604.44 | 338.88 | 619.06 | 338.49 | 625.03 | 338.35 |
| 626.08 | 338.32 | 630.54 | 338.2 | 630.96 | 338.2 | 632.18 | 338.17 | 632.61 | 338.16 |
| 632.99 | 338.16 | 633.68 | 338.15 | 642.69 | 338.27 | 644.19 | 338.28 | 646.48 | 338.29 |
| 649.68 | 338.29 | 660.35 | 338.27 | 660.84 | 338.26 | 661.64 | 338.25 | 662.65 | 338.23 |
| 666.62 | 338.11 | 670.39 | 338 | 689.67 | 337.49 | 692.07 | 337.44 | 701.36 | 337.27 |
| 704.76 | 337.21 | 712.7 | 337 | 721.64 | 336.61 | 723.82 | 336.53 | 724.63 | 336.49 |
| 727.95 | 336.31 | 730.04 | 336.22 | 730.78 | 336.19 | 731.18 | 336.2 | 731.65 | 336.21 |
| 733.25 | 336 | 733.5 | 336 | 733.86 | 335.99 | 733.92 | 335.99 | 734.32 | 336 |
| 735.95 | 336.13 | 736.28 | 336.16 | 736.64 | 336.18 | 736.88 | 336.18 | 738.19 | 336.24 |
| 740.9 | 336.37 | 752.3 | 337 | 752.55 | 337.01 | 753.92 | 337.05 | 757.48 | 337.13 |
| 759.5 | 337.15 | 761.54 | 337.2 | 763.86 | 337.28 | 765.09 | 337.33 | 766.78 | 337.4 |
| 769.48 | 337.5 | 781.61 | 338 | 783.25 | 338.05 | 785.4 | 338.12 | 810.79 | 339 |
| 812.33 | 339.04 | 815.7 | 339.12 | 820.08 | 339.25 | 820.56 | 339.26 | 822.61 | 339.28 |
| 826.11 | 339.32 | 827.47 | 339.28 | 828.28 | 339.26 | 832.09 | 339.2 | 832.69 | 339.2 |
| 833.81 | 339.2 | 836.05 | 339.2 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 52.01001 | .04 | 556.92 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 52.01001 | 556.92 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1103.85*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.72 | 2.01 | 329.71 | 3.4 | 329.68 | 4.78 | 329.64 | 5.19 | 329.63 |
| 7.3 | 329.57 | 9.23 | 329.53 | 9.48 | 329.52 | 10.24 | 329.5 | 11.86 | 329.44 |
| 14.19 | 329.36 | 15.4 | 329.31 | 15.46 | 329.3 | 15.88 | 329.29 | 17.98 | 329.21 |
| 19.7 | 329.16 | 19.85 | 329.15 | 21.19 | 329.11 | 22.74 | 329.05 | 24.79 | 328.95 |
| 24.91 | 328.95 | 26.57 | 328.89 | 26.72 | 328.88 | 27.51 | 328.86 | 27.64 | 328.85 |
| 28.65 | 328.81 | 28.72 | 328.81 | 29.74 | 328.77 | 30.12 | 328.75 | 30.34 | 328.75 |
| 30.84 | 328.73 | 31.26 | 328.72 | 33.16 | 328.6 | 34.58 | 328.54 | 34.89 | 328.53 |
| 35.47 | 328.5 | 35.87 | 328.49 | 36.45 | 328.46 | 36.89 | 328.45 | 38.67 | 328.45 |
| 40.25 | 328.46 | 41.84 | 328.46 | 42.02 | 328.47 | 43.13 | 328.47 | 44.83 | 328.48 |
| 45.71 | 328.49 | 46.69 | 328.49 | 47.57 | 328.5 | 48.2 | 328.5 | 48.49 | 328.51 |
| 48.91 | 328.51 | 50.37 | 328.55 | 51.59 | 328.55 | 53.25 | 328.58 | 53.57 | 328.58 |
| 54.22 | 328.6 | 55.12 | 328.6 | 55.66 | 328.59 | 56.12 | 328.56 | 56.65 | 328.54 |
| 56.89 | 328.55 | 57.98 | 328.55 | 58.07 | 328.54 | 58.54 | 328.54 | 59.06 | 328.53 |
| 59.24 | 328.52 | 59.69 | 328.51 | 60.78 | 328.51 | 62.06 | 328.49 | 63.17 | 328.49 |
| 64.13 | 328.5 | 66.15 | 328.5 | 66.24 | 328.49 | 67.08 | 328.49 | 67.3 | 328.48 |
| 67.54 | 328.48 | 67.73 | 328.47 | 70.79 | 328.47 | 71.53 | 328.46 | 71.77 | 328.46 |
| 71.83 | 328.45 | 72.27 | 328.46 | 73.38 | 328.46 | 74.14 | 328.45 | 75.27 | 328.45 |
| 75.63 | 328.44 | 76.35 | 328.43 | 76.86 | 328.43 | 77.05 | 328.42 | 77.56 | 328.41 |
| 78.11 | 328.39 | 78.38 | 328.39 | 78.79 | 328.37 | 78.92 | 328.38 | 79.49 | 328.4 |
| 80.24 | 328.4 | 80.39 | 328.39 | 80.63 | 328.39 | 81.03 | 328.38 | 81.74 | 328.35 |
| 82.03 | 328.33 | 82.46 | 328.32 | 83.32 | 328.32 | 83.49 | 328.31 | 85.26 | 328.28 |
| 87.34 | 328.22 | 88.57 | 328.19 | 88.79 | 328.19 | 89.26 | 328.17 | 90.26 | 328.15 |
| 91.02 | 328.15 | 91.18 | 328.14 | 91.48 | 328.14 | 91.71 | 328.13 | 92.18 | 328.12 |
| 92.2 | 328.11 | 92.58 | 328.09 | 94.17 | 328.09 | 94.44 | 328.08 | 94.75 | 328.08 |
| 95.12 | 328.07 | 95.6 | 328.07 | 95.96 | 328.06 | 96.35 | 328.06 | 96.41 | 328.05 |
| 96.67 | 328.05 | 97.84 | 328.01 | 98.25 | 327.99 | 99.19 | 327.96 | 99.4 | 327.96 |
| 100.25 | 327.93 | 100.92 | 327.91 | 101.77 | 327.89 | 101.85 | 327.88 | 102.09 | 327.88 |
| 102.83 | 327.85 | 104.76 | 327.8 | 105.77 | 327.77 | 105.91 | 327.77 | 107.76 | 327.68 |
| 108.22 | 327.66 | 108.93 | 327.61 | 109.38 | 327.6 | 110.08 | 327.57 | 110.47 | 327.56 |
| 111.03 | 327.53 | 111.69 | 327.5 | 112.36 | 327.42 | 112.87 | 327.39 | 114.34 | 327.33 |
| 114.51 | 327.33 | 114.91 | 327.31 | 115.14 | 327.31 | 115.56 | 327.29 | 115.94 | 327.28 |
| 117.19 | 327.24 | 117.31 | 327.23 | 118.01 | 327.2 | 118.41 | 327.16 | 119.02 | 327.07 |
| 119.66 | 326.96 | 120.07 | 326.86 | 120.35 | 326.84 | 120.79 | 326.82 | 121.3 | 326.84 |
| 121.35 | 326.88 | 121.57 | 326.91 | 121.97 | 326.93 | 123.05 | 326.93 | 124.5 | 326.96 |
| 126.83 | 327.02 | 129.58 | 327.23 | 134.36 | 327.54 | 134.84 | 327.57 | 137.16 | 327.72 |
| 142.26 | 327.72 | 144.12 | 327.52 | 147.88 | 327.11 | 148.84 | 327.13 | 149.96 | 327.19 |
| 150.5 | 327.14 | 151.35 | 327.11 | 152.5 | 327.17 | 152.82 | 327.18 | 155.87 | 327.06 |
| 156.19 | 327.05 | 160.67 | 327.15 | 160.89 | 327.14 | 162.46 | 327.09 | 163.34 | 327.08 |
| 163.9 | 327.07 | 165.33 | 327.05 | 167.39 | 327 | 167.74 | 326.99 | 168.98 | 326.97 |
| 169.2 | 326.96 | 171.38 | 326.96 | 172.11 | 326.98 | 172.74 | 326.99 | 174.18 | 327.02 |
| 178.68 | 327.12 | 178.97 | 327.16 | 179.31 | 327.22 | 179.38 | 327.22 | 181.09 | 327.36 |
| 187.56 | 327.72 | 211.27 | 327.72 | 212.68 | 327.54 | 213.02 | 327.52 | 214.07 | 327.51 |
| 217.96 | 327.49 | 218 | 327.48 | 219.18 | 327.47 | 219.84 | 327.46 | 221.57 | 327.44 |
| 230.43 | 327.72 | 230.92 | 327.74 | 256.94 | 328.68 | 274.09 | 328.68 | 284.61 | 328.69 |
| 286.14 | 328.69 | 288.3 | 328.71 | 290.29 | 328.74 | 291.59 | 328.79 | 292.19 | 328.83 |
| 297.43 | 328.82 | 299 | 328.82 | 306.04 | 328.8 | 306.3 | 328.77 | 307.09 | 328.76 |
| 309.8 | 328.76 | 313.27 | 328.75 | 317.81 | 328.75 | 320.6 | 328.76 | 322.12 | 328.77 |
| 324.79 | 328.76 | 328.3 | 328.73 | 328.55 | 328.72 | 328.86 | 328.69 | 338.6 | 328.35 |
| 342.62 | 328.19 | 342.73 | 328.19 | 344.82 | 328.12 | 345.41 | 328.11 | 346.25 | 328.09 |
| 349.32 | 328.01 | 351.45 | 327.96 | 355.64 | 327.96 | 355.79 | 327.97 | 356.57 | 327.98 |
| 356.99 | 327.98 | 358.27 | 328 | 362.03 | 328.09 | 365.5 | 328.16 | 366.14 | 328.16 |
| 370.07 | 328.23 | 372.71 | 328.28 | 373.06 | 328.29 | 377.37 | 328.43 | 378.03 | 328.43 |
| 378.56 | 328.42 | 379.65 | 328.36 | 380.72 | 328.28 | 381.6 | 328.22 | 382.25 | 328.25 |
| 382.53 | 328.24 | 383.2 | 328.26 | 383.78 | 328.25 | 384.21 | 328.23 | 385.72 | 328.06 |
| 386.16 | 328.02 | 386.86 | 327.99 | 387.19 | 327.97 | 388.11 | 327.96 | 388.26 | 327.95 |
| 389.26 | 327.95 | 390.25 | 327.96 | 390.92 | 327.97 | 391.17 | 327.98 | 391.55 | 328.01 |
| 391.92 | 328.03 | 394.32 | 328.11 | 394.77 | 328.12 | 395.27 | 328.12 | 395.69 | 328.13 |
| 396.47 | 328.17 | 401.47 | 328.43 | 402.96 | 328.5 | 405.91 | 328.62 | 408.67 | 328.7 |
| 408.94 | 328.71 | 411.42 | 328.74 | 412.33 | 328.74 | 416.75 | 328.72 | 417.43 | 328.72 |
| 420.38 | 328.74 | 421.67 | 328.75 | 422.85 | 328.75 | 425.06 | 328.76 | 429.23 | 328.73 |
| 430.61 | 328.71 | 437.73 | 328.71 | 440.36 | 328.75 | 446.29 | 328.86 | 450.5 | 328.91 |

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|---|---|---|---|---|---|---|---|---|---|
| 453.29 | 328.94 | 454.12 | 328.95 | 454.71 | 328.95 | 455.15 | 328.94 | 455.95 | 328.91 |
| 458.71 | 328.75 | 459.67 | 328.71 | 467 | 328.46 | 468.04 | 328.44 | 469.73 | 328.42 |
| 478.18 | 328.15 | 479.81 | 328.09 | 480.82 | 328.05 | 482.06 | 328.03 | 483.64 | 327.98 |
| 485.51 | 327.94 | 485.8 | 327.94 | 485.93 | 327.93 | 486.39 | 327.93 | 486.59 | 327.92 |
| 487.23 | 327.92 | 487.75 | 327.93 | 489.04 | 327.94 | 489.62 | 327.95 | 490.55 | 327.99 |
| 491.37 | 328.11 | 491.8 | 328.15 | 492 | 328.16 | 493.42 | 328.14 | 494.16 | 328.1 |
| 494.46 | 328.06 | 494.58 | 328.01 | 495.2 | 328.01 | 495.43 | 328.02 | 495.89 | 328.05 |
| 497.63 | 328.18 | 498.67 | 328.31 | 503.18 | 328.65 | 503.25 | 328.66 | 504.02 | 328.72 |
| 505.38 | 328.72 | 510.63 | 328.73 | 512.17 | 328.73 | 517.22 | 328.72 | 522.89 | 328.72 |
| 523.11 | 328.83 | 523.49 | 328.86 | 524.37 | 328.91 | 525.13 | 328.94 | 526.16 | 328.96 |
| 527.37 | 328.98 | 528.7 | 328.99 | 530.13 | 328.99 | 531.51 | 328.98 | 533.6 | 328.96 |
| 535.01 | 328.93 | 538.06 | 328.9 | 539.85 | 328.87 | 545.25 | 328.76 | 546.3 | 328.73 |
| 550.9 | 328.73 | 552.35 | 328.81 | 556.94 | 329.07 | 559.67 | 329.24 | 560.66 | 329.29 |
| 560.73 | 329.3 | 561.08 | 329.31 | 563.32 | 329.46 | 564.35 | 329.53 | 567.29 | 329.68 |
| 568.04 | 329.72 | 568.28 | 329.74 | 569.1 | 329.78 | 570.05 | 330.13 | 570.73 | 330.35 |
| 570.99 | 330.45 | 572.12 | 330.82 | 572.4 | 330.94 | 573.56 | 331.42 | 574.43 | 331.8 |
| 575.49 | 332.27 | 576.15 | 332.56 | 576.59 | 332.77 | 577.49 | 333.16 | 578.82 | 333.73 |
| 580.75 | 334.56 | 581.16 | 334.73 | 583.32 | 335.66 | 583.4 | 335.68 | 584.4 | 336 |
| 585.06 | 336.25 | 586.02 | 336.62 | 589.03 | 337.54 | 589.27 | 337.63 | 590.66 | 338.06 |
| 592.26 | 338.55 | 603.01 | 338.55 | 606.56 | 338.46 | 607.09 | 338.44 | 621.38 | 338.07 |
| 627.21 | 337.94 | 628.24 | 337.91 | 631.28 | 337.83 | 632.59 | 337.8 | 633.01 | 337.8 |
| 634.62 | 337.76 | 634.99 | 337.76 | 635.66 | 337.75 | 644.47 | 337.87 | 645.93 | 337.88 |
| 647.29 | 337.88 | 648.17 | 337.89 | 652.98 | 337.89 | 655.01 | 337.88 | 656.41 | 337.88 |
| 661.72 | 337.87 | 662.2 | 337.86 | 662.98 | 337.85 | 663.97 | 337.83 | 667.85 | 337.72 |
| 671.53 | 337.61 | 671.8 | 337.61 | 672.11 | 337.6 | 677.75 | 337.45 | 690.37 | 337.13 |
| 692.71 | 337.09 | 695.5 | 337.04 | 701.79 | 336.94 | 702.81 | 336.92 | 705.64 | 336.87 |
| 709.95 | 336.76 | 712.87 | 336.69 | 715.44 | 336.58 | 716.55 | 336.53 | 721.03 | 336.34 |
| 721.61 | 336.32 | 723.74 | 336.24 | 727.65 | 336.04 | 727.77 | 336.03 | 729.81 | 335.94 |
| 730.34 | 335.92 | 730.93 | 335.92 | 731.39 | 335.93 | 732.27 | 335.82 | 732.47 | 335.79 |
| 732.95 | 335.73 | 733.19 | 335.73 | 733.6 | 335.72 | 734 | 335.73 | 734.77 | 335.79 |
| 735.91 | 335.89 | 736.26 | 335.91 | 736.5 | 335.91 | 737.78 | 335.97 | 740.42 | 336.1 |
| 742.77 | 336.23 | 751.53 | 336.71 | 753.15 | 336.76 | 756.62 | 336.85 | 758.6 | 336.87 |
| 760.59 | 336.92 | 762.86 | 337 | 762.97 | 337 | 764.06 | 337.05 | 765.71 | 337.12 |
| 768.15 | 337.21 | 768.35 | 337.21 | 771.97 | 337.36 | 780.2 | 337.7 | 781.8 | 337.75 |
| 783.9 | 337.82 | 792.22 | 338.1 | 795.58 | 338.22 | 797.78 | 338.29 | 800.86 | 338.4 |
| 804.68 | 338.53 | 808.71 | 338.66 | 810.22 | 338.7 | 810.75 | 338.71 | 813.51 | 338.77 |
| 815.83 | 338.84 | 816.48 | 338.85 | 817.79 | 338.89 | 818.26 | 338.9 | 819.68 | 338.91 |
| 820.26 | 338.92 | 823.68 | 338.96 | 825.01 | 338.92 | 825.8 | 338.9 | 829.52 | 338.84 |
| 833.39 | 338.84 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 55.66 | .04 | 560.66 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 55.66 | 560.66 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1084.14*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.43 | 2.14 | 329.42 | 3.62 | 329.39 | 3.98 | 329.37 | 5.09 | 329.35 |
| 5.53 | 329.33 | 7.78 | 329.28 | 9.83 | 329.24 | 10.91 | 329.21 | 12.63 | 329.15 |
| 15.12 | 329.07 | 16.4 | 329.01 | 16.8 | 329 | 16.92 | 328.99 | 18.61 | 328.95 |
| 19.16 | 328.93 | 20.99 | 328.89 | 21.16 | 328.88 | 22.58 | 328.83 | 24.23 | 328.78 |
| 26.41 | 328.68 | 26.54 | 328.68 | 28.31 | 328.61 | 28.47 | 328.61 | 29.31 | 328.58 |
| 29.45 | 328.58 | 30.53 | 328.54 | 30.6 | 328.53 | 32.09 | 328.49 | 32.33 | 328.49 |
| 32.86 | 328.47 | 33.64 | 328.45 | 34.65 | 328.39 | 35.33 | 328.36 | 35.37 | 328.35 |
| 35.81 | 328.34 | 36.85 | 328.3 | 37.18 | 328.29 | 38.84 | 328.21 | 39.3 | 328.2 |
| 39.8 | 328.2 | 40.4 | 328.19 | 41.2 | 328.19 | 42.89 | 328.2 | 44.45 | 328.2 |
| 44.59 | 328.21 | 45.95 | 328.21 | 47.9 | 328.22 | 48.7 | 328.23 | 49.75 | 328.23 |
| 50.68 | 328.24 | 51.35 | 328.24 | 51.67 | 328.25 | 52.12 | 328.25 | 53.67 | 328.29 |
| 54.97 | 328.29 | 55.64 | 328.3 | 56.74 | 328.31 | 57.08 | 328.31 | 57.77 | 328.33 |
| 58.73 | 328.33 | 59.3 | 328.32 | 59.59 | 328.32 | 59.87 | 328.28 | 60.21 | 328.26 |
| 60.53 | 328.26 | 60.82 | 328.28 | 61.16 | 328.29 | 62.83 | 328.29 | 63.29 | 328.28 |
| 63.7 | 328.28 | 64.24 | 328.27 | 65.15 | 328.27 | 66.38 | 328.24 | 67.15 | 328.23 |
| 68.51 | 328.23 | 69.69 | 328.26 | 70.46 | 328.26 | 70.56 | 328.27 | 71.83 | 328.27 |
| 72.02 | 328.26 | 72.44 | 328.26 | 73.1 | 328.24 | 73.31 | 328.24 | 73.88 | 328.22 |
| 74.37 | 328.21 | 77.86 | 328.21 | 78.76 | 328.2 | 79.13 | 328.2 | 79.66 | 328.21 |
| 79.94 | 328.21 | 80.05 | 328.22 | 80.32 | 328.21 | 80.78 | 328.22 | 81.96 | 328.22 |
| 82.4 | 328.21 | 83.34 | 328.21 | 83.78 | 328.2 | 84.93 | 328.19 | 85.14 | 328.18 |
| 85.52 | 328.18 | 86.15 | 328.16 | 86.82 | 328.12 | 87.66 | 328.08 | 88.52 | 328.14 |
| 89.81 | 328.14 | 89.91 | 328.13 | 90.97 | 328.09 | 91.38 | 328.07 | 91.64 | 328.05 |
| 92.15 | 328.04 | 92.73 | 328.04 | 93.04 | 328.05 | 93.43 | 328.05 | 95.6 | 328.02 |
| 99.19 | 327.95 | 99.65 | 327.94 | 99.92 | 327.94 | 101.73 | 327.91 | 102.65 | 327.91 |
| 102.85 | 327.9 | 103.14 | 327.9 | 103.21 | 327.89 | 103.5 | 327.89 | 104.05 | 327.88 |
| 104.1 | 327.85 | 104.92 | 327.82 | 105.35 | 327.83 | 105.48 | 327.84 | 106.51 | 327.86 |
| 107.22 | 327.84 | 107.68 | 327.84 | 108.27 | 327.83 | 109.19 | 327.83 | 109.26 | 327.82 |
| 109.58 | 327.82 | 111.01 | 327.78 | 111.52 | 327.76 | 111.86 | 327.74 | 112.53 | 327.73 |
| 113.97 | 327.69 | 114.79 | 327.67 | 115.84 | 327.65 | 116.13 | 327.65 | 116.22 | 327.64 |
| 116.49 | 327.64 | 117.13 | 327.62 | 119.49 | 327.56 | 119.86 | 327.56 | 120.74 | 327.54 |
| 120.9 | 327.54 | 123.18 | 327.45 | 123.74 | 327.43 | 124.28 | 327.4 | 125.16 | 327.37 |
| 125.71 | 327.36 | 126.02 | 327.36 | 127.03 | 327.32 | 127.18 | 327.32 | 127.44 | 327.3 |
| 128 | 327.28 | 128.52 | 327.21 | 129.44 | 327.13 | 131.24 | 327.07 | 131.45 | 327.07 |
| 132.22 | 327.04 | 132.48 | 327.04 | 134.74 | 326.98 | 134.88 | 326.97 | 135.74 | 326.94 |
| 136.31 | 326.89 | 136.98 | 326.82 | 137.77 | 326.7 | 138.26 | 326.61 | 138.61 | 326.59 |
| 139.15 | 326.57 | 139.64 | 326.59 | 139.69 | 326.63 | 139.9 | 326.66 | 140.29 | 326.67 |
| 141.34 | 326.67 | 142.74 | 326.7 | 144.99 | 326.77 | 147.64 | 326.97 | 152.27 | 327.27 |
| 152.74 | 327.29 | 154.98 | 327.43 | 159.9 | 327.43 | 161.7 | 327.24 | 165.34 | 326.85 |
| 166.26 | 326.87 | 167.35 | 326.93 | 167.87 | 326.88 | 168.7 | 326.85 | 169.81 | 326.91 |
| 170.12 | 326.92 | 173.06 | 326.8 | 173.37 | 326.79 | 177.71 | 326.89 | 177.92 | 326.89 |
| 179.44 | 326.84 | 180.29 | 326.83 | 182.21 | 326.79 | 184.2 | 326.74 | 184.54 | 326.74 |
| 185.73 | 326.72 | 185.95 | 326.71 | 188.06 | 326.71 | 188.39 | 326.72 | 188.77 | 326.72 |
| 189.79 | 326.74 | 190.77 | 326.77 | 195.12 | 326.86 | 195.79 | 326.96 | 197.45 | 327.09 |
| 203.7 | 327.43 | 205.61 | 327.43 | 211.17 | 327.44 | 226.62 | 327.44 | 227.99 | 327.26 |
| 228.32 | 327.24 | 229.33 | 327.23 | 233.09 | 327.22 | 233.13 | 327.21 | 234.27 | 327.2 |
| 234.9 | 327.19 | 236.58 | 327.17 | 245.14 | 327.44 | 245.62 | 327.46 | 270.78 | 328.37 |
| 299.01 | 328.37 | 301.09 | 328.39 | 303.01 | 328.43 | 304.28 | 328.47 | 304.86 | 328.51 |
| 309.92 | 328.5 | 311.43 | 328.5 | 318.25 | 328.49 | 318.5 | 328.46 | 319.26 | 328.45 |
| 321.88 | 328.45 | 325.24 | 328.43 | 329.62 | 328.43 | 332.32 | 328.44 | 333.79 | 328.45 |

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|---|---|---|---|---|---|---|---|---|---|
| 336.37 | 328.44 | 338.57 | 328.43 | 339.77 | 328.42 | 340.01 | 328.41 | 340.3 | 328.38 |
| 349.72 | 328.05 | 353.61 | 327.9 | 353.72 | 327.9 | 355.74 | 327.83 | 356.3 | 327.82 |
| 357.11 | 327.8 | 360.09 | 327.73 | 362.15 | 327.69 | 366.19 | 327.69 | 366.23 | 327.7 |
| 367.1 | 327.71 | 367.5 | 327.71 | 368.74 | 327.73 | 372.38 | 327.81 | 375.72 | 327.88 |
| 376.34 | 327.88 | 380.14 | 327.94 | 382.7 | 328 | 386.92 | 328.13 | 387.21 | 328.14 |
| 387.84 | 328.14 | 388.36 | 328.13 | 389.4 | 328.07 | 390.44 | 327.99 | 391.29 | 327.94 |
| 391.92 | 327.97 | 392.19 | 327.96 | 392.84 | 327.97 | 393.4 | 327.97 | 393.81 | 327.95 |
| 395.27 | 327.78 | 395.7 | 327.74 | 396.38 | 327.72 | 396.69 | 327.7 | 397.58 | 327.69 |
| 397.73 | 327.68 | 398.7 | 327.68 | 399.66 | 327.69 | 400.31 | 327.7 | 400.55 | 327.71 |
| 400.91 | 327.74 | 401.27 | 327.76 | 402.16 | 327.78 | 403.59 | 327.83 | 404.92 | 327.86 |
| 405.67 | 327.9 | 410.5 | 328.15 | 411.95 | 328.21 | 414.8 | 328.32 | 417.47 | 328.41 |
| 417.73 | 328.42 | 420.12 | 328.45 | 421 | 328.45 | 425.28 | 328.42 | 425.93 | 328.42 |
| 428.79 | 328.45 | 430.03 | 328.46 | 433.31 | 328.46 | 438.68 | 328.42 | 445.55 | 328.42 |
| 448.1 | 328.46 | 453.84 | 328.56 | 457.91 | 328.62 | 461.41 | 328.66 | 461.98 | 328.66 |
| 462.4 | 328.65 | 463.17 | 328.61 | 465.84 | 328.46 | 466.77 | 328.43 | 473.85 | 328.18 |
| 474.86 | 328.16 | 476.5 | 328.14 | 484.67 | 327.89 | 486.24 | 327.83 | 487.21 | 327.8 |
| 488.42 | 327.77 | 489.94 | 327.72 | 491.75 | 327.69 | 492.03 | 327.69 | 492.15 | 327.68 |
| 492.6 | 327.68 | 492.8 | 327.67 | 493.42 | 327.67 | 493.91 | 327.68 | 495.16 | 327.69 |
| 495.73 | 327.7 | 496.62 | 327.74 | 497.14 | 327.81 | 497.42 | 327.86 | 498.03 | 327.9 |
| 498.75 | 327.89 | 499.39 | 327.89 | 500.11 | 327.85 | 500.4 | 327.8 | 500.52 | 327.76 |
| 501.12 | 327.76 | 501.78 | 327.79 | 503.46 | 327.92 | 504.47 | 328.04 | 508.84 | 328.38 |
| 508.9 | 328.39 | 509.65 | 328.44 | 510.96 | 328.44 | 516.03 | 328.45 | 527.89 | 328.45 |
| 528.1 | 328.55 | 528.47 | 328.58 | 529.32 | 328.63 | 530.06 | 328.65 | 531.05 | 328.67 |
| 532.22 | 328.69 | 533.51 | 328.7 | 534.88 | 328.7 | 536.22 | 328.69 | 538.24 | 328.67 |
| 539.61 | 328.65 | 542.56 | 328.62 | 544.29 | 328.59 | 549.51 | 328.49 | 550.52 | 328.46 |
| 554.96 | 328.46 | 556.37 | 328.53 | 560.81 | 328.79 | 563.44 | 328.96 | 564.41 | 329.02 |
| 564.82 | 329.03 | 567 | 329.2 | 568 | 329.28 | 570.88 | 329.45 | 571.61 | 329.49 |
| 572.65 | 329.57 | 573.57 | 329.92 | 574.23 | 330.13 | 574.49 | 330.26 | 574.97 | 330.43 |
| 575.6 | 330.64 | 575.86 | 330.76 | 576.43 | 331 | 577 | 331.23 | 578.89 | 332.05 |
| 579.53 | 332.34 | 580.09 | 332.6 | 580.84 | 332.92 | 582.13 | 333.46 | 584.42 | 334.43 |
| 586.53 | 335.31 | 586.61 | 335.34 | 587.58 | 335.65 | 589.17 | 336.24 | 591.88 | 337.06 |
| 592.34 | 337.21 | 595.26 | 338.09 | 599.39 | 338.1 | 605.76 | 338.1 | 609.22 | 338.01 |
| 609.75 | 338 | 623.7 | 337.65 | 629.39 | 337.52 | 629.72 | 337.52 | 630.39 | 337.5 |
| 633.36 | 337.42 | 634.65 | 337.39 | 635.05 | 337.39 | 636.21 | 337.36 | 636.99 | 337.36 |
| 637.65 | 337.35 | 646.24 | 337.46 | 647.67 | 337.48 | 649 | 337.48 | 649.86 | 337.49 |
| 654.55 | 337.49 | 656.54 | 337.48 | 657.91 | 337.48 | 663.09 | 337.47 | 663.56 | 337.46 |
| 665.29 | 337.44 | 669.08 | 337.33 | 672.67 | 337.23 | 673.24 | 337.21 | 678.74 | 337.08 |
| 691.07 | 336.78 | 693.36 | 336.74 | 696.08 | 336.69 | 702.22 | 336.6 | 703.22 | 336.59 |
| 705.98 | 336.54 | 710.19 | 336.44 | 713.04 | 336.38 | 715.55 | 336.28 | 716.63 | 336.23 |
| 721.01 | 336.05 | 723.65 | 335.96 | 724.43 | 335.92 | 727.48 | 335.76 | 727.59 | 335.75 |
| 730.1 | 335.65 | 730.29 | 335.64 | 731.12 | 335.66 | 731.99 | 335.55 | 732.18 | 335.52 |
| 732.65 | 335.47 | 733.29 | 335.46 | 733.67 | 335.47 | 734.42 | 335.53 | 735.23 | 335.59 |
| 735.54 | 335.62 | 735.88 | 335.64 | 736.11 | 335.64 | 737.36 | 335.69 | 739.95 | 335.82 |
| 742.24 | 335.95 | 750.79 | 336.43 | 752.37 | 336.48 | 755.77 | 336.56 | 757.7 | 336.59 |
| 759.64 | 336.64 | 761.86 | 336.72 | 761.97 | 336.72 | 763.03 | 336.76 | 764.64 | 336.83 |
| 767.02 | 336.92 | 767.22 | 336.93 | 770.76 | 337.07 | 777.13 | 337.34 | 778.79 | 337.4 |
| 780.36 | 337.45 | 782.41 | 337.52 | 790.53 | 337.79 | 793.81 | 337.9 | 795.96 | 337.98 |
| 797.33 | 338.02 | 798.96 | 338.07 | 802.7 | 338.2 | 806.63 | 338.32 | 808.1 | 338.36 |
| 811.32 | 338.42 | 813.59 | 338.48 | 814.22 | 338.5 | 815.96 | 338.54 | 817.34 | 338.55 |
| 817.91 | 338.56 | 821.25 | 338.59 | 822.21 | 338.57 | 823.32 | 338.54 | 826.96 | 338.48 |
| 830.74 | 338.48 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 59.3 | .04 | 564.41 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 59.3 | 564.41 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1064.42*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 329.14 | 2.28 | 329.13 | 2.86 | 329.11 | 3.85 | 329.09 | 5.41 | 329.05 |
| 8.25 | 328.99 | 10.44 | 328.94 | 10.72 | 328.94 | 11.58 | 328.92 | 13.41 | 328.86 |
| 16.05 | 328.78 | 17.41 | 328.72 | 17.96 | 328.7 | 20.33 | 328.66 | 21.85 | 328.63 |
| 22.28 | 328.61 | 22.46 | 328.61 | 23.97 | 328.56 | 25.72 | 328.51 | 28.03 | 328.41 |
| 28.18 | 328.4 | 30.05 | 328.34 | 30.22 | 328.33 | 31.12 | 328.31 | 31.26 | 328.3 |
| 32.48 | 328.26 | 34.07 | 328.22 | 34.76 | 328.22 | 34.88 | 328.21 | 35.7 | 328.19 |
| 37.18 | 328.12 | 39.11 | 328.05 | 39.46 | 328.04 | 41.22 | 327.96 | 41.72 | 327.95 |
| 42.25 | 327.95 | 43.74 | 327.93 | 45.53 | 327.94 | 46.85 | 327.94 | 47.02 | 327.95 |
| 48.78 | 327.95 | 50.85 | 327.96 | 51.7 | 327.97 | 52.81 | 327.97 | 53.8 | 327.98 |
| 54.51 | 327.98 | 54.85 | 327.99 | 55.32 | 327.99 | 56.97 | 328.02 | 58.35 | 328.02 |
| 60.22 | 328.05 | 60.59 | 328.05 | 61.33 | 328.07 | 62.34 | 328.07 | 62.95 | 328.06 |
| 63.29 | 328.06 | 63.48 | 328.01 | 64.02 | 327.98 | 64.32 | 327.97 | 65.15 | 328.03 |
| 65.61 | 328.03 | 66.86 | 328.05 | 67.13 | 328.04 | 67.67 | 328.04 | 68.8 | 328.02 |
| 69.28 | 328.02 | 69.88 | 328.03 | 70.21 | 328.01 | 70.38 | 328.01 | 72.24 | 327.97 |
| 73.51 | 327.97 | 73.85 | 327.98 | 75.25 | 328.01 | 75.49 | 328.02 | 76.17 | 328.03 |
| 78.19 | 328.03 | 79.28 | 328 | 79.54 | 328 | 79.85 | 327.98 | 80.8 | 327.95 |
| 84.93 | 327.95 | 86 | 327.94 | 86.43 | 327.94 | 87.28 | 327.97 | 88.38 | 327.97 |
| 88.68 | 327.98 | 90.3 | 327.98 | 90.46 | 327.97 | 91.42 | 327.97 | 91.94 | 327.96 |
| 92.99 | 327.95 | 94 | 327.93 | 94.75 | 327.9 | 95.85 | 327.83 | 96.23 | 327.8 |
| 96.73 | 327.81 | 97.7 | 327.89 | 98.64 | 327.89 | 98.86 | 327.88 | 99.2 | 327.88 |
| 100.45 | 327.82 | 101.09 | 327.78 | 101.85 | 327.76 | 101.92 | 327.75 | 102.14 | 327.77 |
| 102.54 | 327.77 | 103.04 | 327.79 | 103.36 | 327.79 | 105.93 | 327.77 | 110.19 | 327.7 |
| 110.73 | 327.7 | 111.05 | 327.69 | 113.19 | 327.66 | 113.97 | 327.66 | 114.29 | 327.67 |
| 114.53 | 327.66 | 114.87 | 327.66 | 115.29 | 327.64 | 115.98 | 327.63 | 116 | 327.59 |
| 116.97 | 327.56 | 117.48 | 327.58 | 117.64 | 327.58 | 118.45 | 327.61 | 118.86 | 327.62 |
| 119.26 | 327.61 | 119.7 | 327.61 | 120.24 | 327.6 | 122.11 | 327.6 | 122.61 | 327.58 |
| 122.91 | 327.58 | 124.19 | 327.55 | 125.19 | 327.5 | 125.66 | 327.49 | 125.98 | 327.49 |
| 126.83 | 327.47 | 127.69 | 327.46 | 128.66 | 327.44 | 129.9 | 327.41 | 130.49 | 327.41 |
| 130.67 | 327.4 | 131.43 | 327.38 | 134.23 | 327.33 | 134.66 | 327.33 | 135.7 | 327.31 |
| 135.9 | 327.3 | 139.26 | 327.2 | 139.9 | 327.18 | 140.29 | 327.16 | 141.59 | 327.14 |
| 141.96 | 327.14 | 143.15 | 327.1 | 143.34 | 327.1 | 143.65 | 327.08 | 143.93 | 327.08 |
| 144.3 | 327.06 | 144.65 | 327.01 | 145.33 | 326.94 | 146 | 326.88 | 146.71 | 326.86 |
| 148.38 | 326.8 | 148.64 | 326.8 | 149.3 | 326.78 | 149.61 | 326.78 | 152.28 | 326.72 |
| 152.45 | 326.71 | 153.47 | 326.68 | 154.15 | 326.63 | 154.94 | 326.56 | 155.87 | 326.45 |
| 156.46 | 326.36 | 156.87 | 326.34 | 157.51 | 326.32 | 157.98 | 326.34 | 158.08 | 326.39 |
| 158.61 | 326.42 | 159.62 | 326.42 | 160.97 | 326.45 | 163.14 | 326.51 | 165.71 | 326.7 |
| 170.63 | 327.02 | 172.79 | 327.15 | 177.55 | 327.15 | 179.28 | 326.97 | 182.8 | 326.59 |

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|---|---|---|---|---|---|---|---|---|---|
| 183.69 | 326.61 | 184.74 | 326.67 | 185.24 | 326.62 | 186.04 | 326.6 | 187.11 | 326.65 |
| 187.41 | 326.66 | 190.25 | 326.55 | 190.56 | 326.54 | 194.74 | 326.63 | 194.94 | 326.63 |
| 196.41 | 326.58 | 199.09 | 326.54 | 201.01 | 326.49 | 201.34 | 326.49 | 202.49 | 326.46 |
| 203.23 | 326.46 | 204.29 | 326.45 | 204.73 | 326.45 | 205.42 | 326.47 | 206.41 | 326.49 |
| 211.55 | 326.6 | 212.2 | 326.7 | 213.8 | 326.82 | 219.84 | 327.15 | 239.88 | 327.15 |
| 241.98 | 327.16 | 243.29 | 326.99 | 243.61 | 326.97 | 244.59 | 326.96 | 248.26 | 326.94 |
| 249.36 | 326.92 | 249.97 | 326.92 | 251.59 | 326.9 | 259.86 | 327.16 | 260.32 | 327.18 |
| 284.61 | 328.05 | 300.62 | 328.05 | 310.44 | 328.06 | 311.87 | 328.06 | 313.89 | 328.08 |
| 315.74 | 328.11 | 316.96 | 328.16 | 317.52 | 328.19 | 322.41 | 328.19 | 323.87 | 328.18 |
| 330.45 | 328.17 | 330.69 | 328.14 | 331.42 | 328.13 | 333.95 | 328.13 | 337.2 | 328.12 |
| 341.43 | 328.12 | 344.04 | 328.13 | 345.46 | 328.14 | 347.95 | 328.13 | 351.19 | 328.1 |
| 351.46 | 328.1 | 351.74 | 328.07 | 360.84 | 327.76 | 364.59 | 327.62 | 364.7 | 327.61 |
| 366.65 | 327.55 | 367.2 | 327.54 | 370.85 | 327.45 | 372.84 | 327.41 | 376.75 | 327.41 |
| 376.78 | 327.42 | 377.62 | 327.43 | 378.01 | 327.43 | 379.2 | 327.45 | 382.72 | 327.53 |
| 385.95 | 327.59 | 386.55 | 327.59 | 390.22 | 327.66 | 392.68 | 327.71 | 396.76 | 327.84 |
| 397.04 | 327.85 | 397.65 | 327.85 | 398.15 | 327.84 | 399.16 | 327.79 | 400.16 | 327.71 |
| 400.99 | 327.66 | 401.59 | 327.68 | 401.85 | 327.67 | 402.48 | 327.69 | 403.42 | 327.67 |
| 403.84 | 327.62 | 404.83 | 327.51 | 405.24 | 327.47 | 405.89 | 327.45 | 406.2 | 327.43 |
| 407.06 | 327.42 | 407.2 | 327.41 | 408.13 | 327.41 | 409.69 | 327.43 | 409.92 | 327.44 |
| 410.42 | 327.48 | 410.62 | 327.48 | 412.86 | 327.56 | 413.28 | 327.57 | 413.74 | 327.57 |
| 414.14 | 327.58 | 414.87 | 327.62 | 419.54 | 327.86 | 420.93 | 327.92 | 423.68 | 328.03 |
| 426.26 | 328.11 | 426.51 | 328.12 | 428.82 | 328.15 | 429.67 | 328.15 | 433.8 | 328.13 |
| 434.44 | 328.13 | 437.19 | 328.15 | 438.39 | 328.16 | 439.5 | 328.16 | 441.56 | 328.17 |
| 445.45 | 328.14 | 446.74 | 328.12 | 448.47 | 328.13 | 453.38 | 328.13 | 455.84 | 328.17 |
| 461.38 | 328.27 | 465.31 | 328.32 | 468.69 | 328.36 | 469.24 | 328.36 | 469.65 | 328.35 |
| 470.4 | 328.32 | 472.97 | 328.18 | 473.87 | 328.14 | 480.71 | 327.91 | 481.68 | 327.89 |
| 483.26 | 327.87 | 491.15 | 327.63 | 492.67 | 327.58 | 493.61 | 327.54 | 494.77 | 327.52 |
| 496.25 | 327.47 | 497.99 | 327.44 | 498.38 | 327.43 | 498.81 | 327.43 | 499 | 327.42 |
| 499.6 | 327.42 | 500.08 | 327.43 | 501.29 | 327.44 | 501.83 | 327.45 | 502.23 | 327.47 |
| 502.7 | 327.48 | 503.46 | 327.6 | 503.86 | 327.64 | 504.96 | 327.64 | 505.37 | 327.63 |
| 506.07 | 327.59 | 506.35 | 327.55 | 506.46 | 327.5 | 507.03 | 327.5 | 507.68 | 327.54 |
| 509.3 | 327.67 | 510.28 | 327.78 | 514.49 | 328.1 | 514.55 | 328.11 | 515.27 | 328.16 |
| 516.54 | 328.16 | 521.44 | 328.18 | 522.88 | 328.18 | 527.59 | 328.17 | 532.88 | 328.17 |
| 533.09 | 328.27 | 533.44 | 328.3 | 534.27 | 328.34 | 534.98 | 328.37 | 535.94 | 328.39 |
| 537.07 | 328.41 | 538.31 | 328.42 | 539.64 | 328.42 | 540.93 | 328.41 | 542.89 | 328.39 |
| 544.2 | 328.37 | 547.05 | 328.34 | 548.72 | 328.32 | 553.76 | 328.21 | 554.74 | 328.19 |
| 559.03 | 328.19 | 560.39 | 328.26 | 564.67 | 328.51 | 567.22 | 328.69 | 568.15 | 328.74 |
| 568.55 | 328.76 | 570.68 | 328.94 | 571.66 | 329.02 | 574.47 | 329.22 | 575.18 | 329.26 |
| 575.41 | 329.29 | 576.19 | 329.35 | 577.1 | 329.7 | 577.74 | 329.92 | 577.99 | 330.06 |
| 578.45 | 330.24 | 579.07 | 330.47 | 579.33 | 330.59 | 579.88 | 330.82 | 580.44 | 331.04 |
| 581.27 | 331.39 | 582.28 | 331.84 | 582.91 | 332.11 | 583.33 | 332.31 | 583.46 | 332.36 |
| 584.18 | 332.67 | 585.45 | 333.2 | 587.29 | 333.96 | 587.69 | 334.12 | 589.74 | 334.97 |
| 589.82 | 334.99 | 590.77 | 335.29 | 591.4 | 335.52 | 592.31 | 335.86 | 594.97 | 336.64 |
| 595.41 | 336.79 | 596.74 | 337.19 | 598.26 | 337.64 | 602.3 | 337.65 | 608.51 | 337.65 |
| 611.89 | 337.57 | 612.4 | 337.55 | 626.01 | 337.23 | 631.57 | 337.11 | 632.55 | 337.09 |
| 636.7 | 336.99 | 637.1 | 336.99 | 638.63 | 336.95 | 638.99 | 336.95 | 639.63 | 336.94 |
| 648.02 | 337.06 | 650.71 | 337.08 | 651.84 | 337.08 | 652.35 | 337.09 | 655.71 | 337.09 |
| 656.13 | 337.08 | 659.4 | 337.08 | 664.46 | 337.07 | 664.92 | 337.06 | 666.61 | 337.04 |
| 670.3 | 336.94 | 673.81 | 336.84 | 674.37 | 336.83 | 679.74 | 336.7 | 691.77 | 336.42 |
| 694 | 336.38 | 696.66 | 336.34 | 702.65 | 336.27 | 703.62 | 336.25 | 705.82 | 336.23 |
| 706.32 | 336.21 | 710.43 | 336.13 | 713.21 | 336.07 | 715.66 | 335.97 | 716.72 | 335.93 |
| 720.99 | 335.76 | 723.57 | 335.67 | 724.32 | 335.63 | 727.3 | 335.48 | 727.41 | 335.47 |
| 729.86 | 335.37 | 730.05 | 335.36 | 730.86 | 335.38 | 731.71 | 335.28 | 731.89 | 335.25 |
| 732.35 | 335.2 | 732.97 | 335.19 | 733.35 | 335.2 | 734.86 | 335.32 | 735.51 | 335.36 |
| 735.73 | 335.36 | 736.95 | 335.42 | 739.47 | 335.55 | 741.71 | 335.67 | 750.06 | 336.14 |
| 751.6 | 336.19 | 754.91 | 336.28 | 756.79 | 336.3 | 758.69 | 336.35 | 760.85 | 336.43 |
| 760.96 | 336.44 | 762 | 336.48 | 763.57 | 336.55 | 765.9 | 336.64 | 766.09 | 336.64 |
| 769.54 | 336.79 | 773.23 | 336.94 | 775.77 | 337.04 | 777.38 | 337.1 | 778.91 | 337.15 |
| 780.91 | 337.21 | 788.84 | 337.48 | 792.04 | 337.59 | 794.14 | 337.66 | 795.48 | 337.7 |
| 797.07 | 337.74 | 800.71 | 337.87 | 804.56 | 337.99 | 805.99 | 338.02 | 809.13 | 338.08 |
| 811.34 | 338.13 | 811.96 | 338.14 | 813.21 | 338.18 | 813.65 | 338.18 | 815.01 | 338.19 |
| 815.56 | 338.2 | 818.82 | 338.23 | 820.09 | 338.19 | 820.84 | 338.18 | 824.39 | 338.12 |
| 828.08 | 338.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 62.95 | .04 | 568.15 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 62.95 | 568.15 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1044.71*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.85 | 2.41 | 328.83 | 4.07 | 328.8 | 5.72 | 328.76 | 8.73 | 328.7 |
| 11.04 | 328.65 | 11.35 | 328.65 | 12.25 | 328.63 | 14.19 | 328.57 | 15.25 | 328.54 |
| 19 | 328.41 | 20.9 | 328.38 | 21.51 | 328.38 | 23.11 | 328.36 | 25.36 | 328.29 |
| 26.88 | 328.25 | 27.21 | 328.23 | 29.66 | 328.14 | 29.81 | 328.13 | 31.8 | 328.06 |
| 31.97 | 328.06 | 32.92 | 328.03 | 33.07 | 328.03 | 34.29 | 327.99 | 35.59 | 327.97 |
| 36.04 | 327.96 | 36.78 | 327.96 | 36.9 | 327.95 | 37.4 | 327.94 | 37.77 | 327.94 |
| 39.15 | 327.88 | 40.21 | 327.84 | 40.83 | 327.83 | 41.75 | 327.8 | 42.44 | 327.77 |
| 42.91 | 327.74 | 43.31 | 327.73 | 43.61 | 327.71 | 44.47 | 327.7 | 44.69 | 327.69 |
| 46.27 | 327.67 | 48.16 | 327.68 | 49.02 | 327.68 | 49.34 | 327.69 | 51.6 | 327.69 |
| 53.64 | 327.7 | 54.69 | 327.71 | 55.87 | 327.71 | 56.91 | 327.72 | 58.02 | 327.72 |
| 60.27 | 327.76 | 61.73 | 327.76 | 63.71 | 327.79 | 64.1 | 327.79 | 64.88 | 327.81 |
| 65.43 | 327.8 | 66.59 | 327.8 | 66.99 | 327.79 | 67.11 | 327.75 | 67.83 | 327.69 |
| 68.05 | 327.68 | 69.14 | 327.77 | 70.49 | 327.79 | 70.78 | 327.8 | 71.42 | 327.8 |
| 72.05 | 327.79 | 72.61 | 327.79 | 73.35 | 327.78 | 74.6 | 327.78 | 75.18 | 327.76 |
| 76.28 | 327.74 | 77.33 | 327.71 | 78.8 | 327.71 | 80.81 | 327.77 | 81.08 | 327.77 |
| 81.87 | 327.79 | 83.74 | 327.8 | 84 | 327.79 | 84.58 | 327.79 | 86.13 | 327.74 |
| 87.22 | 327.69 | 93.23 | 327.69 | 93.47 | 327.68 | 94.46 | 327.72 | 95.12 | 327.72 |
| 95.35 | 327.73 | 96.33 | 327.73 | 97.6 | 327.74 | 99.11 | 327.74 | 99.5 | 327.73 |
| 101.31 | 327.7 | 101.67 | 327.7 | 102.48 | 327.68 | 103.34 | 327.64 | 104.61 | 327.56 |
| 105.06 | 327.52 | 105.42 | 327.51 | 105.63 | 327.52 | 106.05 | 327.57 | 106.58 | 327.62 |
| 107.17 | 327.64 | 107.84 | 327.63 | 108.23 | 327.63 | 109.17 | 327.59 | 109.94 | 327.55 |
| 110.66 | 327.5 | 111.17 | 327.49 | 111.55 | 327.47 | 111.89 | 327.49 | 112.09 | 327.49 |
| 112.92 | 327.53 | 113.29 | 327.53 | 116.26 | 327.52 | 119.75 | 327.48 | 121.81 | 327.45 |
| 122.18 | 327.44 | 122.96 | 327.43 | 124.65 | 327.42 | 125.56 | 327.42 | 125.92 | 327.43 |
| 126.2 | 327.42 | 126.59 | 327.42 | 127.09 | 327.4 | 127.84 | 327.39 | 127.91 | 327.33 |

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|---|---|---|---|---|---|---|---|---|---|
| 129.02 | 327.3 | 129.61 | 327.32 | 130.37 | 327.36 | 130.73 | 327.37 | 130.87 | 327.39 |
| 131.2 | 327.39 | 131.67 | 327.37 | 134.96 | 327.37 | 135.53 | 327.35 | 135.89 | 327.35 |
| 137.36 | 327.32 | 138.52 | 327.27 | 139.07 | 327.25 | 139.63 | 327.25 | 140.41 | 327.23 |
| 141.41 | 327.22 | 142.53 | 327.2 | 143.96 | 327.18 | 144.49 | 327.18 | 145.73 | 327.15 |
| 148.97 | 327.1 | 149.47 | 327.1 | 150.67 | 327.08 | 150.9 | 327.07 | 154.78 | 326.97 |
| 155.02 | 326.97 | 155.52 | 326.95 | 156.72 | 326.93 | 157.48 | 326.93 | 158.55 | 326.9 |
| 158.95 | 326.9 | 160.18 | 326.86 | 160.61 | 326.84 | 161.01 | 326.78 | 161.73 | 326.71 |
| 162.57 | 326.62 | 163.38 | 326.6 | 165.04 | 326.55 | 165.62 | 326.53 | 166 | 326.53 |
| 166.74 | 326.51 | 167.72 | 326.5 | 169.83 | 326.46 | 170.02 | 326.45 | 171.2 | 326.42 |
| 171.98 | 326.37 | 172.89 | 326.3 | 173.98 | 326.2 | 174.65 | 326.11 | 175.13 | 326.09 |
| 175.86 | 326.07 | 176.33 | 326.09 | 176.37 | 326.13 | 176.93 | 326.17 | 177.9 | 326.17 |
| 179.21 | 326.19 | 181.3 | 326.25 | 183.78 | 326.44 | 188.08 | 326.71 | 188.52 | 326.74 |
| 190.61 | 326.86 | 192.97 | 326.86 | 194.14 | 326.87 | 195.19 | 326.87 | 196.87 | 326.69 |
| 200.25 | 326.34 | 201.12 | 326.35 | 202.13 | 326.41 | 202.61 | 326.36 | 203.38 | 326.34 |
| 204.42 | 326.39 | 204.71 | 326.4 | 207.45 | 326.29 | 207.74 | 326.28 | 211.77 | 326.38 |
| 213.09 | 326.33 | 214.18 | 326.32 | 217.82 | 326.24 | 218.14 | 326.23 | 219.25 | 326.21 |
| 219.45 | 326.2 | 221.41 | 326.2 | 222.07 | 326.22 | 222.64 | 326.23 | 223.94 | 326.26 |
| 227.99 | 326.34 | 228.56 | 326.43 | 228.61 | 326.43 | 230.16 | 326.55 | 235.98 | 326.87 |
| 257.33 | 326.87 | 258.6 | 326.71 | 258.9 | 326.7 | 259.85 | 326.69 | 263.35 | 326.67 |
| 263.38 | 326.66 | 264.45 | 326.65 | 265.04 | 326.65 | 266.6 | 326.63 | 274.57 | 326.88 |
| 275.02 | 326.9 | 298.45 | 327.73 | 305.23 | 327.74 | 324.74 | 327.74 | 326.68 | 327.76 |
| 328.47 | 327.79 | 329.64 | 327.84 | 330.18 | 327.87 | 336.31 | 327.87 | 342.65 | 327.85 |
| 342.89 | 327.83 | 343.59 | 327.82 | 346.03 | 327.82 | 349.16 | 327.8 | 352.59 | 327.8 |
| 353.25 | 327.81 | 355.76 | 327.81 | 357.13 | 327.82 | 359.53 | 327.82 | 362.69 | 327.79 |
| 363.19 | 327.76 | 371.96 | 327.46 | 375.58 | 327.33 | 375.69 | 327.33 | 377.57 | 327.26 |
| 378.09 | 327.26 | 381.62 | 327.17 | 383.54 | 327.13 | 385.41 | 327.13 | 387.3 | 327.14 |
| 388.52 | 327.15 | 389.67 | 327.17 | 393.06 | 327.25 | 396.18 | 327.31 | 396.76 | 327.31 |
| 400.29 | 327.37 | 402.67 | 327.43 | 406.6 | 327.55 | 406.87 | 327.56 | 407.46 | 327.56 |
| 407.94 | 327.55 | 408.92 | 327.5 | 409.89 | 327.42 | 410.68 | 327.37 | 411.26 | 327.4 |
| 411.52 | 327.39 | 412.12 | 327.41 | 412.64 | 327.4 | 413.02 | 327.38 | 413.43 | 327.34 |
| 414.38 | 327.23 | 414.78 | 327.2 | 415.41 | 327.18 | 415.71 | 327.16 | 416.54 | 327.15 |
| 416.67 | 327.14 | 417.57 | 327.14 | 419.07 | 327.16 | 419.64 | 327.2 | 420.8 | 327.24 |
| 422.13 | 327.28 | 423.37 | 327.31 | 424.06 | 327.34 | 428.57 | 327.57 | 429.91 | 327.64 |
| 432.57 | 327.74 | 435.05 | 327.82 | 435.3 | 327.83 | 435.98 | 327.83 | 437.53 | 327.85 |
| 438.35 | 327.85 | 442.33 | 327.83 | 442.94 | 327.83 | 445.6 | 327.86 | 446.75 | 327.87 |
| 449.8 | 327.87 | 453.56 | 327.85 | 454.81 | 327.83 | 456.9 | 327.83 | 457.99 | 327.84 |
| 461.21 | 327.84 | 468.92 | 327.97 | 472.71 | 328.02 | 475.97 | 328.06 | 476.5 | 328.06 |
| 476.89 | 328.05 | 477.62 | 328.02 | 480.1 | 327.89 | 480.96 | 327.85 | 487.56 | 327.63 |
| 488.5 | 327.61 | 490.03 | 327.6 | 497.63 | 327.37 | 499.1 | 327.32 | 500 | 327.28 |
| 501.13 | 327.26 | 502.55 | 327.22 | 504.23 | 327.19 | 504.6 | 327.18 | 505.02 | 327.18 |
| 505.21 | 327.17 | 505.78 | 327.17 | 506.24 | 327.18 | 507.41 | 327.19 | 507.93 | 327.2 |
| 508.32 | 327.22 | 508.77 | 327.23 | 509.51 | 327.34 | 509.89 | 327.38 | 510.08 | 327.39 |
| 510.95 | 327.38 | 511.35 | 327.37 | 512.02 | 327.34 | 512.29 | 327.29 | 512.39 | 327.25 |
| 512.95 | 327.25 | 513.16 | 327.26 | 515.14 | 327.41 | 516.08 | 327.52 | 520.14 | 327.83 |
| 520.9 | 327.89 | 522.12 | 327.89 | 526.84 | 327.9 | 528.24 | 327.9 | 532.78 | 327.89 |
| 533.71 | 327.9 | 537.88 | 327.9 | 538.08 | 327.99 | 538.42 | 328.02 | 539.21 | 328.06 |
| 539.9 | 328.09 | 540.83 | 328.1 | 541.92 | 328.12 | 543.12 | 328.13 | 544.4 | 328.13 |
| 545.65 | 328.12 | 547.53 | 328.11 | 548.8 | 328.09 | 551.54 | 328.06 | 553.16 | 328.04 |
| 558.96 | 327.92 | 563.1 | 327.92 | 564.41 | 327.99 | 568.54 | 328.22 | 570.99 | 328.41 |
| 571.89 | 328.47 | 572.28 | 328.49 | 574.36 | 328.68 | 575.32 | 328.77 | 578.05 | 328.99 |
| 578.75 | 329.04 | 579.74 | 329.14 | 580.62 | 329.49 | 581.25 | 329.71 | 581.49 | 329.87 |
| 581.94 | 330.06 | 582.55 | 330.29 | 582.8 | 330.41 | 583.34 | 330.64 | 583.88 | 330.85 |
| 584.69 | 331.19 | 585.68 | 331.62 | 586.7 | 332.07 | 586.82 | 332.13 | 587.53 | 332.43 |
| 588.77 | 332.93 | 590.57 | 333.66 | 590.95 | 333.81 | 592.95 | 334.63 | 593.03 | 334.65 |
| 593.95 | 334.93 | 594.57 | 335.16 | 595.46 | 335.48 | 598.05 | 336.23 | 598.49 | 336.38 |
| 599.78 | 336.75 | 601.26 | 337.19 | 605.26 | 337.19 | 606.55 | 337.2 | 607.54 | 337.2 |
| 611.26 | 337.21 | 614.55 | 337.13 | 615.05 | 337.11 | 628.33 | 336.81 | 633.75 | 336.7 |
| 634.71 | 336.67 | 637.53 | 336.61 | 638.76 | 336.58 | 639.14 | 336.58 | 640.64 | 336.55 |
| 641.61 | 336.54 | 649.79 | 336.66 | 652.42 | 336.68 | 654.35 | 336.68 | 655.97 | 336.69 |
| 657.3 | 336.69 | 657.71 | 336.68 | 660.2 | 336.68 | 660.9 | 336.67 | 665.84 | 336.67 |
| 666.28 | 336.66 | 667.01 | 336.66 | 667.92 | 336.64 | 671.53 | 336.54 | 674.95 | 336.46 |
| 675.49 | 336.44 | 680.73 | 336.32 | 692.47 | 336.07 | 694.65 | 336.03 | 697.24 | 336 |
| 703.08 | 335.93 | 706.17 | 335.9 | 710.66 | 335.81 | 713.38 | 335.76 | 715.77 | 335.67 |
| 720.96 | 335.47 | 723.48 | 335.38 | 724.22 | 335.35 | 727.13 | 335.2 | 727.24 | 335.2 |
| 729.81 | 335.09 | 730.6 | 335.11 | 731.42 | 335.01 | 731.6 | 334.98 | 732.05 | 334.93 |
| 732.66 | 334.92 | 733.02 | 334.93 | 734.5 | 335.05 | 735.13 | 335.09 | 735.35 | 335.09 |
| 736.54 | 335.15 | 739 | 335.27 | 741.18 | 335.4 | 749.32 | 335.86 | 750.82 | 335.91 |
| 754.06 | 335.99 | 755.89 | 336.02 | 757.75 | 336.07 | 759.85 | 336.15 | 759.96 | 336.15 |
| 761.83 | 336.24 | 762.5 | 336.26 | 764.77 | 336.35 | 764.96 | 336.36 | 768.32 | 336.5 |
| 771.92 | 336.64 | 774.4 | 336.74 | 775.97 | 336.8 | 777.46 | 336.85 | 779.42 | 336.91 |
| 787.15 | 337.17 | 790.27 | 337.27 | 792.32 | 337.34 | 793.62 | 337.38 | 795.18 | 337.42 |
| 798.73 | 337.54 | 802.48 | 337.65 | 803.88 | 337.68 | 804.37 | 337.68 | 806.94 | 337.73 |
| 809.1 | 337.78 | 809.7 | 337.79 | 811.35 | 337.83 | 812.67 | 337.83 | 813.21 | 337.84 |
| 816.39 | 337.87 | 817.63 | 337.83 | 821.83 | 337.77 | 822.37 | 337.77 | 823.39 | 337.76 |
| 825.42 | 337.76 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 66.59 | .04 | 571.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 66.59 | 571.89 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1024.99*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.56 | 2.54 | 328.54 | 4.39 | 328.51 | 6.03 | 328.46 | 9.21 | 328.4 |
| 11.65 | 328.36 | 11.97 | 328.36 | 12.92 | 328.34 | 14.96 | 328.28 | 16.08 | 328.25 |
| 20.04 | 328.12 | 22.04 | 328.1 | 22.69 | 328.1 | 25.06 | 328.07 | 26.75 | 328.02 |
| 28.35 | 327.98 | 28.7 | 327.96 | 31.28 | 327.86 | 31.44 | 327.86 | 33.54 | 327.79 |
| 33.72 | 327.78 | 34.72 | 327.76 | 34.88 | 327.75 | 36.16 | 327.72 | 37.54 | 327.7 |
| 38.01 | 327.69 | 38.19 | 327.7 | 38.92 | 327.7 | 39.84 | 327.68 | 41.3 | 327.63 |
| 41.49 | 327.63 | 41.85 | 327.61 | 42.41 | 327.6 | 44.03 | 327.55 | 45.26 | 327.5 |
| 46.16 | 327.46 | 46.55 | 327.46 | 47.14 | 327.44 | 48.8 | 327.42 | 50.91 | 327.42 |
| 51.48 | 327.43 | 53.54 | 327.43 | 54.43 | 327.44 | 56.74 | 327.44 | 57.68 | 327.45 |
| 58.93 | 327.45 | 60.03 | 327.46 | 61.2 | 327.46 | 63.57 | 327.5 | 65.11 | 327.5 |
| 67.2 | 327.53 | 68.12 | 327.53 | 68.43 | 327.54 | 69.56 | 327.54 | 70.24 | 327.53 |
| 70.69 | 327.53 | 70.82 | 327.48 | 71.12 | 327.45 | 71.77 | 327.4 | 72.03 | 327.4 |
| 72.59 | 327.46 | 73.13 | 327.5 | 73.73 | 327.52 | 74.99 | 327.55 | 75.72 | 327.55 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 76.43 | 327.54 | 77.06 | 327.54 | 77.91 | 327.53 | 78.54 | 327.53 | 79.33 | 327.54 |
| 79.65 | 327.52 | 81.23 | 327.48 | 82.42 | 327.46 | 82.75 | 327.45 | 84.09 | 327.45 |
| 84.54 | 327.47 | 86.37 | 327.52 | 87.57 | 327.55 | 89.67 | 327.56 | 90.22 | 327.56 |
| 91.99 | 327.51 | 92.87 | 327.46 | 93.64 | 327.44 | 97.44 | 327.44 | 97.54 | 327.43 |
| 100.46 | 327.43 | 100.73 | 327.42 | 101.03 | 327.43 | 101.86 | 327.47 | 102.29 | 327.48 |
| 102.87 | 327.48 | 103.59 | 327.49 | 103.98 | 327.49 | 105.42 | 327.5 | 107.21 | 327.5 |
| 107.57 | 327.49 | 110.36 | 327.45 | 110.96 | 327.43 | 111.93 | 327.39 | 113.38 | 327.28 |
| 113.88 | 327.23 | 114.29 | 327.22 | 114.53 | 327.24 | 115.01 | 327.3 | 115.81 | 327.38 |
| 117.04 | 327.38 | 117.62 | 327.37 | 118.54 | 327.32 | 119.42 | 327.28 | 120.45 | 327.22 |
| 121.25 | 327.19 | 121.6 | 327.2 | 121.86 | 327.22 | 122.63 | 327.25 | 122.8 | 327.27 |
| 126.6 | 327.27 | 130.56 | 327.23 | 132.89 | 327.2 | 133.31 | 327.2 | 136.12 | 327.17 |
| 137.14 | 327.18 | 137.56 | 327.19 | 137.87 | 327.18 | 138.31 | 327.18 | 138.88 | 327.16 |
| 139.64 | 327.15 | 139.77 | 327.14 | 139.81 | 327.07 | 141.08 | 327.03 | 142.6 | 327.12 |
| 143.02 | 327.13 | 143.17 | 327.15 | 143.55 | 327.15 | 144.65 | 327.13 | 147.14 | 327.13 |
| 147.36 | 327.14 | 147.94 | 327.14 | 148.87 | 327.11 | 150.53 | 327.09 | 151.32 | 327.05 |
| 151.85 | 327.03 | 153.35 | 327 | 154 | 327 | 155.12 | 326.98 | 156.4 | 326.97 |
| 158.03 | 326.94 | 158.8 | 326.94 | 159.04 | 326.93 | 160.7 | 326.9 | 163.71 | 326.87 |
| 165.64 | 326.84 | 165.89 | 326.84 | 169.87 | 326.75 | 170.3 | 326.75 | 171.14 | 326.72 |
| 172.5 | 326.7 | 173.59 | 326.71 | 173.83 | 326.7 | 174.57 | 326.69 | 175.4 | 326.67 |
| 176.43 | 326.64 | 176.91 | 326.62 | 177.73 | 326.51 | 178.26 | 326.46 | 179.14 | 326.37 |
| 180.06 | 326.34 | 183.03 | 326.26 | 183.46 | 326.26 | 183.87 | 326.25 | 184.27 | 326.25 |
| 184.98 | 326.24 | 187.37 | 326.2 | 187.59 | 326.19 | 188.94 | 326.16 | 190.85 | 326.05 |
| 191.87 | 325.96 | 192.08 | 325.95 | 192.85 | 325.86 | 193.39 | 325.84 | 194.42 | 325.83 |
| 194.67 | 325.84 | 194.71 | 325.87 | 195.04 | 325.91 | 196.19 | 325.91 | 197.44 | 325.94 |
| 199.46 | 326 | 201.84 | 326.17 | 205.99 | 326.43 | 206.41 | 326.46 | 208.42 | 326.58 |
| 212.84 | 326.58 | 214.45 | 326.41 | 217.71 | 326.08 | 218.54 | 326.1 | 219.52 | 326.15 |
| 219.99 | 326.11 | 220.72 | 326.08 | 221.72 | 326.13 | 222 | 326.14 | 224.92 | 326.03 |
| 228.81 | 326.12 | 228.99 | 326.11 | 230.36 | 326.07 | 231.12 | 326.06 | 232.84 | 326.03 |
| 234.63 | 325.99 | 234.93 | 325.98 | 236.01 | 325.96 | 236.2 | 325.95 | 238.09 | 325.95 |
| 238.73 | 325.97 | 239.27 | 325.97 | 240.52 | 326 | 244.42 | 326.08 | 245.02 | 326.17 |
| 246.51 | 326.29 | 252.12 | 326.59 | 272.68 | 326.59 | 273.9 | 326.44 | 274.2 | 326.42 |
| 275.11 | 326.42 | 278.48 | 326.4 | 278.51 | 326.39 | 279.54 | 326.38 | 280.11 | 326.38 |
| 281.61 | 326.36 | 289.29 | 326.6 | 289.72 | 326.61 | 312.28 | 327.42 | 327.15 | 327.42 |
| 336.27 | 327.43 | 337.6 | 327.43 | 339.47 | 327.45 | 341.19 | 327.48 | 342.33 | 327.52 |
| 342.85 | 327.55 | 348.75 | 327.55 | 354.85 | 327.53 | 355.08 | 327.51 | 355.76 | 327.5 |
| 358.11 | 327.5 | 361.12 | 327.49 | 365.06 | 327.49 | 367.48 | 327.5 | 368.79 | 327.51 |
| 373.08 | 327.49 | 374.16 | 327.48 | 374.64 | 327.45 | 383.09 | 327.17 | 386.57 | 327.04 |
| 386.67 | 327.04 | 388.48 | 326.98 | 389.72 | 326.96 | 392.38 | 326.89 | 394.23 | 326.86 |
| 397.86 | 326.86 | 397.99 | 326.87 | 399.03 | 326.88 | 399.5 | 326.89 | 400.14 | 326.89 |
| 403.4 | 326.97 | 406.41 | 327.03 | 406.96 | 327.03 | 410.37 | 327.09 | 412.66 | 327.14 |
| 416.44 | 327.26 | 416.7 | 327.27 | 417.28 | 327.27 | 417.86 | 327.25 | 418.68 | 327.21 |
| 419.61 | 327.14 | 420.37 | 327.09 | 420.93 | 327.12 | 421.18 | 327.11 | 421.76 | 327.13 |
| 422.26 | 327.12 | 422.63 | 327.1 | 423.94 | 326.96 | 424.32 | 326.93 | 425.21 | 326.89 |
| 426.01 | 326.88 | 426.15 | 326.87 | 427.01 | 326.87 | 428.45 | 326.89 | 429.32 | 326.94 |
| 430.11 | 326.97 | 431.79 | 327.02 | 432.22 | 327.02 | 432.59 | 327.03 | 433.26 | 327.07 |
| 437.6 | 327.29 | 438.89 | 327.35 | 441.45 | 327.45 | 443.84 | 327.52 | 444.08 | 327.53 |
| 446.23 | 327.56 | 447.02 | 327.56 | 450.85 | 327.54 | 451.44 | 327.54 | 455.11 | 327.57 |
| 456.14 | 327.57 | 458.05 | 327.58 | 461.67 | 327.56 | 462.87 | 327.54 | 466.06 | 327.54 |
| 467.03 | 327.55 | 469.04 | 327.55 | 476.46 | 327.68 | 480.11 | 327.73 | 482.53 | 327.76 |
| 484.14 | 327.76 | 484.84 | 327.73 | 487.23 | 327.6 | 488.06 | 327.57 | 494.42 | 327.36 |
| 495.32 | 327.34 | 496.79 | 327.33 | 504.12 | 327.11 | 506.4 | 327.03 | 507.48 | 327.01 |
| 508.85 | 326.97 | 510.47 | 326.94 | 510.83 | 326.93 | 511.23 | 326.93 | 511.41 | 326.92 |
| 511.96 | 326.92 | 512.41 | 326.93 | 513.53 | 326.94 | 514.4 | 326.96 | 514.84 | 326.98 |
| 515.55 | 327.09 | 516.1 | 327.13 | 516.94 | 327.12 | 517.33 | 327.11 | 517.97 | 327.08 |
| 518.23 | 327.04 | 518.33 | 327 | 518.87 | 327 | 519.47 | 327.03 | 520.98 | 327.15 |
| 521.88 | 327.25 | 525.79 | 327.55 | 525.85 | 327.56 | 526.52 | 327.61 | 527.7 | 327.61 |
| 532.25 | 327.62 | 542.88 | 327.62 | 543.07 | 327.71 | 543.4 | 327.74 | 544.16 | 327.78 |
| 544.83 | 327.8 | 546.76 | 327.84 | 547.92 | 327.85 | 549.16 | 327.85 | 550.36 | 327.84 |
| 552.17 | 327.83 | 553.39 | 327.8 | 556.04 | 327.78 | 557.59 | 327.76 | 562.27 | 327.67 |
| 563.18 | 327.64 | 565.02 | 327.65 | 567.17 | 327.65 | 568.42 | 327.71 | 572.41 | 327.94 |
| 574.77 | 328.13 | 575.63 | 328.19 | 576.01 | 328.22 | 578.04 | 328.43 | 578.97 | 328.52 |
| 581.64 | 328.75 | 582.32 | 328.81 | 582.54 | 328.84 | 583.28 | 328.92 | 584.14 | 329.27 |
| 584.75 | 329.49 | 584.99 | 329.68 | 585.43 | 329.87 | 586.02 | 330.11 | 586.26 | 330.24 |
| 586.79 | 330.46 | 587.32 | 330.66 | 588.11 | 330.99 | 589.67 | 331.66 | 590.19 | 331.9 |
| 590.88 | 332.18 | 592.08 | 332.66 | 593.84 | 333.36 | 594.21 | 333.5 | 596.17 | 334.28 |
| 596.24 | 334.31 | 597.14 | 334.58 | 598.61 | 335.1 | 601.34 | 335.88 | 601.56 | 335.96 |
| 602.81 | 336.32 | 604.27 | 336.73 | 608.16 | 336.74 | 609.41 | 336.75 | 610.38 | 336.75 |
| 614.01 | 336.76 | 617.22 | 336.68 | 617.71 | 336.67 | 630.65 | 336.39 | 635.94 | 336.29 |
| 636.87 | 336.26 | 639.62 | 336.2 | 640.81 | 336.18 | 641.19 | 336.18 | 642.27 | 336.15 |
| 642.98 | 336.15 | 643.59 | 336.14 | 651.57 | 336.26 | 654.13 | 336.28 | 656.02 | 336.28 |
| 657.59 | 336.29 | 658.89 | 336.29 | 659.28 | 336.28 | 661.12 | 336.28 | 661.72 | 336.27 |
| 667.21 | 336.27 | 667.64 | 336.26 | 668.35 | 336.26 | 669.24 | 336.24 | 672.76 | 336.15 |
| 676.1 | 336.07 | 676.62 | 336.06 | 681.73 | 335.94 | 693.17 | 335.71 | 695.29 | 335.68 |
| 697.82 | 335.65 | 703.52 | 335.6 | 706.53 | 335.57 | 707 | 335.56 | 710.9 | 335.49 |
| 713.56 | 335.44 | 715.88 | 335.37 | 716.89 | 335.33 | 721.47 | 335.16 | 723.4 | 335.09 |
| 724.12 | 335.06 | 726.95 | 334.92 | 727.06 | 334.92 | 729.38 | 334.82 | 729.92 | 334.82 |
| 730.33 | 334.83 | 731.14 | 334.73 | 731.75 | 334.66 | 732.34 | 334.66 | 732.7 | 334.67 |
| 733.4 | 334.72 | 734.14 | 334.78 | 734.75 | 334.82 | 734.96 | 334.82 | 736.12 | 334.88 |
| 738.52 | 335 | 740.65 | 335.12 | 748.59 | 335.57 | 750.05 | 335.62 | 753.2 | 335.71 |
| 754.99 | 335.74 | 756.8 | 335.79 | 758.85 | 335.87 | 758.95 | 335.87 | 759.94 | 335.92 |
| 760.77 | 335.95 | 761.44 | 335.98 | 763.65 | 336.07 | 763.83 | 336.07 | 767.11 | 336.21 |
| 770.62 | 336.35 | 773.03 | 336.45 | 774.57 | 336.51 | 776.02 | 336.55 | 777.92 | 336.61 |
| 785.46 | 336.86 | 788.5 | 336.96 | 790.5 | 337.02 | 791.77 | 337.05 | 793.28 | 337.09 |
| 796.75 | 337.21 | 800.4 | 337.31 | 801.76 | 337.33 | 802.25 | 337.34 | 804.75 | 337.38 |
| 807.44 | 337.43 | 809.05 | 337.47 | 810.34 | 337.47 | 810.87 | 337.48 | 813.96 | 337.5 |
| 814.85 | 337.48 | 815.89 | 337.45 | 819.26 | 337.41 | 819.79 | 337.41 | 820.78 | 337.4 |
| 822.77 | 337.4 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 70.24 | .04 | 575.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 70.24 | 575.63 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 1005.28*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.27 | 2.67 | 328.25 | 4.51 | 328.22 | 4.96 | 328.2 | 6.35 | 328.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 9.69 | 328.11 | 12.25 | 328.07 | 12.59 | 328.07 | 13.6 | 328.05 | 15.74 | 327.99 |
| 16.92 | 327.95 | 18.84 | 327.9 | 20.44 | 327.85 | 20.87 | 327.83 | 23.18 | 327.82 |
| 23.87 | 327.82 | 25.64 | 327.81 | 26.36 | 327.8 | 28.13 | 327.75 | 29.82 | 327.71 |
| 30.19 | 327.69 | 32.91 | 327.59 | 33.07 | 327.59 | 35.28 | 327.51 | 35.47 | 327.51 |
| 36.52 | 327.48 | 36.69 | 327.48 | 38.04 | 327.45 | 39.48 | 327.43 | 40.17 | 327.43 |
| 40.28 | 327.44 | 40.94 | 327.44 | 41.5 | 327.43 | 44.02 | 327.37 | 44.07 | 327.36 |
| 44.61 | 327.35 | 45.3 | 327.33 | 46.32 | 327.31 | 47.09 | 327.28 | 47.61 | 327.25 |
| 48.56 | 327.21 | 48.97 | 327.21 | 49.59 | 327.19 | 50.33 | 327.18 | 51.34 | 327.16 |
| 53.56 | 327.16 | 54.16 | 327.17 | 56.31 | 327.17 | 57.25 | 327.18 | 59.51 | 327.18 |
| 59.68 | 327.19 | 61.99 | 327.19 | 63.14 | 327.2 | 64.38 | 327.2 | 66.87 | 327.24 |
| 68.49 | 327.24 | 69.32 | 327.25 | 70.69 | 327.26 | 71.11 | 327.26 | 71.98 | 327.28 |
| 73.17 | 327.28 | 73.88 | 327.27 | 74.38 | 327.27 | 74.53 | 327.21 | 74.86 | 327.17 |
| 75.74 | 327.11 | 76.01 | 327.13 | 76.52 | 327.19 | 77.11 | 327.24 | 79.2 | 327.3 |
| 81.12 | 327.3 | 81.52 | 327.29 | 83.17 | 327.29 | 84.05 | 327.3 | 84.79 | 327.26 |
| 87.51 | 327.2 | 87.88 | 327.19 | 89.38 | 327.19 | 89.88 | 327.21 | 91.93 | 327.28 |
| 93.28 | 327.31 | 95.62 | 327.32 | 96.59 | 327.32 | 96.71 | 327.31 | 98.68 | 327.24 |
| 99.59 | 327.19 | 100.07 | 327.18 | 104.91 | 327.18 | 105.02 | 327.17 | 108.2 | 327.17 |
| 108.32 | 327.18 | 109.25 | 327.22 | 109.92 | 327.24 | 110.39 | 327.24 | 111.19 | 327.25 |
| 111.63 | 327.25 | 113.24 | 327.26 | 115.24 | 327.26 | 115.65 | 327.25 | 117.95 | 327.22 |
| 119.44 | 327.18 | 120.53 | 327.13 | 121.69 | 327.04 | 122.71 | 326.95 | 123.16 | 326.93 |
| 123.97 | 327.02 | 124.64 | 327.1 | 124.87 | 327.12 | 125.39 | 327.13 | 125.77 | 327.13 |
| 126.24 | 327.12 | 126.74 | 327.12 | 127.06 | 327.1 | 128.9 | 327.01 | 129.43 | 326.97 |
| 130.05 | 326.94 | 130.95 | 326.91 | 131.17 | 326.91 | 131.38 | 326.94 | 131.63 | 326.94 |
| 132.69 | 327 | 132.99 | 327.01 | 133.16 | 327 | 136.93 | 327.02 | 141.36 | 326.98 |
| 143.97 | 326.95 | 144.44 | 326.95 | 147.58 | 326.92 | 148.73 | 326.94 | 149.83 | 326.94 |
| 150.36 | 326.92 | 150.67 | 326.92 | 151.67 | 326.9 | 151.71 | 326.81 | 153.13 | 326.77 |
| 153.88 | 326.81 | 154.1 | 326.83 | 154.83 | 326.87 | 155.3 | 326.89 | 155.47 | 326.92 |
| 156.48 | 326.9 | 159.91 | 326.9 | 160.15 | 326.91 | 160.81 | 326.91 | 161.84 | 326.88 |
| 163.71 | 326.86 | 165.18 | 326.79 | 166.34 | 326.77 | 166.86 | 326.77 | 167.03 | 326.76 |
| 167.58 | 326.76 | 168.84 | 326.74 | 170.27 | 326.73 | 172.09 | 326.71 | 172.75 | 326.71 |
| 174.33 | 326.68 | 178.44 | 326.63 | 179.08 | 326.63 | 180.6 | 326.61 | 180.89 | 326.61 |
| 185.34 | 326.52 | 185.82 | 326.52 | 186.13 | 326.51 | 187.33 | 326.49 | 188.28 | 326.48 |
| 189.5 | 326.49 | 189.77 | 326.48 | 190.6 | 326.47 | 191.53 | 326.45 | 192.67 | 326.42 |
| 193.22 | 326.4 | 194.13 | 326.28 | 194.64 | 326.23 | 195.71 | 326.11 | 196.74 | 326.08 |
| 198.85 | 326.03 | 199.58 | 326.01 | 200.55 | 325.99 | 201.45 | 325.99 | 202.25 | 325.98 |
| 204.92 | 325.93 | 205.16 | 325.93 | 206.67 | 325.9 | 208.81 | 325.79 | 209.95 | 325.71 |
| 211.04 | 325.61 | 211.65 | 325.59 | 212.77 | 325.58 | 213.01 | 325.59 | 213.05 | 325.62 |
| 213.23 | 325.65 | 213.57 | 325.66 | 214.47 | 325.66 | 217.62 | 325.74 | 219.91 | 325.91 |
| 223.9 | 326.16 | 224.3 | 326.18 | 226.24 | 326.3 | 230.48 | 326.3 | 232.03 | 326.14 |
| 235.17 | 325.82 | 235.97 | 325.84 | 236.91 | 325.88 | 237.36 | 325.85 | 238.07 | 325.82 |
| 239.29 | 325.88 | 242.1 | 325.77 | 245.84 | 325.86 | 246.02 | 325.85 | 247.33 | 325.81 |
| 248.07 | 325.81 | 251.44 | 325.73 | 251.73 | 325.73 | 252.76 | 325.71 | 252.95 | 325.7 |
| 254.77 | 325.7 | 255.9 | 325.72 | 257.11 | 325.75 | 260.86 | 325.82 | 261.43 | 325.91 |
| 262.87 | 326.02 | 268.26 | 326.3 | 269.9 | 326.3 | 274.7 | 326.31 | 288.03 | 326.31 |
| 289.21 | 326.16 | 289.49 | 326.15 | 290.36 | 326.14 | 293.61 | 326.13 | 293.64 | 326.12 |
| 294.63 | 326.11 | 295.17 | 326.11 | 296.62 | 326.09 | 304 | 326.32 | 304.41 | 326.33 |
| 326.12 | 327.1 | 333.93 | 327.1 | 340.42 | 327.11 | 350.46 | 327.11 | 352.26 | 327.13 |
| 353.92 | 327.16 | 355.01 | 327.2 | 355.51 | 327.23 | 361.18 | 327.23 | 367.06 | 327.22 |
| 367.28 | 327.19 | 370.19 | 327.19 | 373.09 | 327.17 | 374.67 | 327.18 | 376.87 | 327.18 |
| 379.2 | 327.19 | 380.46 | 327.2 | 384.59 | 327.18 | 385.62 | 327.17 | 386.08 | 327.14 |
| 394.21 | 326.87 | 397.56 | 326.75 | 397.65 | 326.75 | 399.4 | 326.69 | 399.88 | 326.69 |
| 400.58 | 326.67 | 403.15 | 326.61 | 404.92 | 326.58 | 408.41 | 326.58 | 408.54 | 326.59 |
| 409.54 | 326.6 | 410.61 | 326.62 | 413.75 | 326.69 | 416.63 | 326.75 | 417.17 | 326.75 |
| 420.44 | 326.81 | 422.65 | 326.86 | 422.94 | 326.86 | 426.29 | 326.97 | 426.54 | 326.98 |
| 427.09 | 326.98 | 427.53 | 326.97 | 428.43 | 326.92 | 430.06 | 326.81 | 430.6 | 326.84 |
| 430.84 | 326.83 | 431.4 | 326.84 | 431.88 | 326.84 | 432.24 | 326.82 | 433.87 | 326.65 |
| 434.72 | 326.62 | 435.49 | 326.61 | 435.62 | 326.6 | 436.45 | 326.6 | 437.84 | 326.62 |
| 438.67 | 326.67 | 439.43 | 326.69 | 440.67 | 326.73 | 441.81 | 326.76 | 442.46 | 326.79 |
| 446.63 | 327 | 447.88 | 327.06 | 450.34 | 327.15 | 452.64 | 327.23 | 452.86 | 327.23 |
| 454.93 | 327.26 | 455.69 | 327.26 | 459.38 | 327.24 | 459.94 | 327.24 | 462.4 | 327.27 |
| 463.48 | 327.28 | 466.3 | 327.28 | 469.78 | 327.26 | 470.93 | 327.25 | 475.02 | 327.25 |
| 476.86 | 327.26 | 479.06 | 327.3 | 484.01 | 327.38 | 487.52 | 327.43 | 490.54 | 327.47 |
| 491.03 | 327.47 | 491.39 | 327.46 | 492.06 | 327.43 | 494.36 | 327.31 | 495.16 | 327.28 |
| 501.27 | 327.08 | 503.55 | 327.05 | 510.6 | 326.85 | 512.79 | 326.77 | 513.84 | 326.75 |
| 515.15 | 326.71 | 516.71 | 326.69 | 517.06 | 326.68 | 517.44 | 326.68 | 517.61 | 326.67 |
| 518.15 | 326.67 | 518.57 | 326.68 | 519.65 | 326.69 | 520.49 | 326.71 | 520.91 | 326.73 |
| 521.6 | 326.83 | 522.12 | 326.87 | 522.75 | 326.86 | 523.3 | 326.86 | 523.76 | 326.83 |
| 523.92 | 326.83 | 524.17 | 326.79 | 524.27 | 326.75 | 524.79 | 326.75 | 525.36 | 326.78 |
| 526.81 | 326.89 | 527.68 | 326.99 | 531.45 | 327.27 | 531.5 | 327.28 | 532.15 | 327.33 |
| 533.28 | 327.33 | 537.65 | 327.34 | 545.32 | 327.34 | 547.88 | 327.35 | 548.06 | 327.43 |
| 548.38 | 327.46 | 549.11 | 327.5 | 549.75 | 327.52 | 550.6 | 327.54 | 552.73 | 327.56 |
| 555.07 | 327.56 | 556.81 | 327.54 | 557.99 | 327.52 | 560.53 | 327.5 | 562.02 | 327.48 |
| 566.53 | 327.4 | 567.4 | 327.37 | 569.17 | 327.38 | 571.23 | 327.38 | 572.44 | 327.44 |
| 576.27 | 327.66 | 578.54 | 327.85 | 579.38 | 327.91 | 579.75 | 327.94 | 581.73 | 328.17 |
| 582.63 | 328.27 | 585.23 | 328.52 | 585.89 | 328.58 | 586.83 | 328.71 | 587.66 | 329.06 |
| 588.26 | 329.28 | 588.49 | 329.48 | 588.92 | 329.69 | 589.49 | 329.93 | 589.73 | 330.06 |
| 590.24 | 330.27 | 591.53 | 330.79 | 592.47 | 331.18 | 593.43 | 331.61 | 594.23 | 331.93 |
| 597.11 | 333.06 | 599.38 | 333.94 | 600.32 | 334.22 | 600.91 | 334.42 | 601.76 | 334.72 |
| 604.21 | 335.41 | 604.63 | 335.54 | 605.85 | 335.88 | 607.27 | 336.28 | 611 | 336.29 |
| 612.28 | 336.3 | 613.23 | 336.3 | 616.75 | 336.31 | 619.88 | 336.24 | 632.97 | 335.97 |
| 638.12 | 335.87 | 638.42 | 335.87 | 639.02 | 335.85 | 641.71 | 335.8 | 642.87 | 335.77 |
| 643.23 | 335.77 | 644.28 | 335.75 | 644.98 | 335.75 | 645.58 | 335.74 | 653.35 | 335.85 |
| 654.64 | 335.87 | 655.84 | 335.87 | 656.62 | 335.88 | 657.68 | 335.88 | 659.21 | 335.89 |
| 660.47 | 335.89 | 660.86 | 335.88 | 662.65 | 335.88 | 663.23 | 335.87 | 669 | 335.87 |
| 670.56 | 335.85 | 673.99 | 335.76 | 677.24 | 335.68 | 677.75 | 335.67 | 682.72 | 335.56 |
| 693.86 | 335.36 | 695.93 | 335.33 | 698.4 | 335.3 | 703.95 | 335.26 | 704.85 | 335.26 |
| 706.88 | 335.24 | 707.34 | 335.23 | 711.14 | 335.18 | 713.73 | 335.13 | 716.97 | 335.03 |
| 720.92 | 334.89 | 721.44 | 334.87 | 723.32 | 334.81 | 724.02 | 334.78 | 726.77 | 334.64 |
| 726.88 | 334.64 | 728.68 | 334.56 | 729.32 | 334.54 | 730.07 | 334.56 | 731.02 | 334.44 |
| 731.45 | 334.4 | 732.03 | 334.39 | 732.37 | 334.4 | 733.78 | 334.5 | 734.37 | 334.55 |
| 734.58 | 334.55 | 735.71 | 334.6 | 738.05 | 334.72 | 740.12 | 334.84 | 747.85 | 335.29 |
| 749.28 | 335.34 | 752.35 | 335.43 | 754.09 | 335.46 | 755.85 | 335.51 | 757.85 | 335.59 |
| 757.95 | 335.59 | 758.91 | 335.63 | 760.37 | 335.7 | 762.52 | 335.78 | 762.7 | 335.79 |
| 765.89 | 335.92 | 769.31 | 336.05 | 771.66 | 336.15 | 773.16 | 336.21 | 774.57 | 336.25 |
| 776.43 | 336.31 | 783.77 | 336.55 | 788.68 | 336.7 | 789.92 | 336.73 | 791.39 | 336.76 |
| 794.76 | 336.88 | 798.32 | 336.97 | 799.65 | 336.99 | 800.12 | 337 | 802.56 | 337.03 |
| 804.61 | 337.07 | 806.34 | 337.1 | 806.75 | 337.11 | 808 | 337.11 | 808.52 | 337.12 |
| 811.54 | 337.14 | 812.4 | 337.12 | 813.41 | 337.09 | 816.69 | 337.05 | 818.18 | 337.05 |
| 820.11 | 337.04 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 73.88 | .04 | 579.38 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 73.88 | 579.38 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 985.570*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.99 | 2.8 | 327.96 | 3.52 | 327.95 | 4.74 | 327.92 | 6.66 | 327.88 |
| 7.24 | 327.86 | 10.17 | 327.82 | 12.85 | 327.78 | 13.74 | 327.78 | 14.27 | 327.76 |
| 16.51 | 327.7 | 17.75 | 327.66 | 19.77 | 327.61 | 21.45 | 327.56 | 21.9 | 327.54 |
| 26.91 | 327.54 | 27.66 | 327.53 | 31.68 | 327.42 | 34.53 | 327.32 | 34.7 | 327.31 |
| 37.02 | 327.23 | 38.33 | 327.21 | 38.5 | 327.2 | 39.92 | 327.18 | 40 | 327.17 |
| 41.43 | 327.16 | 41.96 | 327.16 | 42.63 | 327.18 | 43.54 | 327.17 | 43.98 | 327.17 |
| 46.24 | 327.12 | 46.81 | 327.1 | 47.53 | 327.09 | 48.6 | 327.06 | 48.89 | 327.06 |
| 49.12 | 327.04 | 49.96 | 327 | 50.95 | 326.96 | 51.38 | 326.96 | 51.77 | 326.94 |
| 52.03 | 326.94 | 52.81 | 326.92 | 53.87 | 326.9 | 56.07 | 326.91 | 58.84 | 326.91 |
| 59.09 | 326.92 | 60.08 | 326.92 | 62.44 | 326.93 | 65.05 | 326.93 | 66.26 | 326.94 |
| 67.55 | 326.94 | 70.17 | 326.98 | 72.61 | 326.98 | 72.75 | 326.99 | 74.18 | 327 |
| 74.62 | 327 | 74.95 | 327.01 | 77.53 | 327.01 | 78.09 | 327 | 78.39 | 326.91 |
| 79.52 | 326.82 | 79.88 | 326.85 | 81.1 | 326.98 | 83.01 | 327.03 | 83.41 | 327.05 |
| 83.88 | 327.06 | 84.31 | 327.05 | 85.97 | 327.05 | 87.02 | 327.04 | 87.8 | 327.04 |
| 88.74 | 327.06 | 88.77 | 327.05 | 89.31 | 327.02 | 89.59 | 327.02 | 93.01 | 326.93 |
| 94.67 | 326.93 | 97.49 | 327.04 | 98.98 | 327.07 | 99.4 | 327.07 | 101.57 | 327.09 |
| 102.25 | 327.08 | 102.78 | 327.08 | 104.03 | 327.03 | 104.45 | 327.02 | 104.96 | 326.99 |
| 105.96 | 326.94 | 106.49 | 326.92 | 112.48 | 326.92 | 112.84 | 326.91 | 115.26 | 326.91 |
| 115.62 | 326.92 | 116.65 | 326.97 | 117.19 | 326.99 | 117.91 | 326.99 | 119.27 | 327.01 |
| 121.06 | 327.02 | 123.27 | 327.02 | 124.56 | 327 | 126.78 | 326.96 | 127.91 | 326.93 |
| 129.12 | 326.87 | 130.41 | 326.76 | 131.2 | 326.7 | 131.53 | 326.66 | 132.02 | 326.64 |
| 132.34 | 326.67 | 132.93 | 326.75 | 133.67 | 326.84 | 133.92 | 326.86 | 134.27 | 326.87 |
| 135.44 | 326.87 | 136.34 | 326.85 | 138.38 | 326.74 | 139.17 | 326.68 | 139.66 | 326.66 |
| 140.12 | 326.65 | 140.75 | 326.62 | 141.19 | 326.67 | 141.4 | 326.67 | 142.36 | 326.72 |
| 142.57 | 326.74 | 143.09 | 326.74 | 147.26 | 326.77 | 152.16 | 326.73 | 155.05 | 326.7 |
| 155.57 | 326.7 | 156.67 | 326.69 | 159.04 | 326.68 | 160.31 | 326.7 | 161.53 | 326.7 |
| 162.46 | 326.67 | 163.4 | 326.66 | 163.56 | 326.65 | 163.61 | 326.56 | 164.5 | 326.52 |
| 165.18 | 326.51 | 166.26 | 326.57 | 167.06 | 326.63 | 167.58 | 326.65 | 167.77 | 326.68 |
| 168.24 | 326.68 | 168.89 | 326.66 | 171.62 | 326.66 | 172.95 | 326.68 | 173.67 | 326.68 |
| 174.82 | 326.65 | 176.88 | 326.63 | 178.5 | 326.55 | 179.79 | 326.53 | 180.55 | 326.53 |
| 181.17 | 326.52 | 182.56 | 326.51 | 184.14 | 326.49 | 186.48 | 326.47 | 186.72 | 326.48 |
| 187.42 | 326.46 | 189.46 | 326.43 | 193.18 | 326.4 | 193.88 | 326.4 | 195.57 | 326.38 |
| 195.89 | 326.38 | 200.81 | 326.29 | 201.33 | 326.29 | 201.68 | 326.28 | 203.01 | 326.26 |
| 204.06 | 326.25 | 205.13 | 326.27 | 205.71 | 326.27 | 207.19 | 326.24 | 207.66 | 326.24 |
| 208.45 | 326.21 | 209.52 | 326.18 | 210.53 | 326.04 | 211.1 | 325.99 | 212.28 | 325.86 |
| 215.75 | 325.77 | 216.14 | 325.75 | 216.56 | 325.74 | 217.09 | 325.74 | 217.63 | 325.73 |
| 218.62 | 325.73 | 219.51 | 325.72 | 222.46 | 325.67 | 222.74 | 325.67 | 223.87 | 325.65 |
| 225.49 | 325.59 | 226.77 | 325.53 | 228.03 | 325.46 | 229.24 | 325.36 | 230.94 | 325.33 |
| 231.35 | 325.34 | 231.44 | 325.38 | 231.88 | 325.41 | 232.75 | 325.41 | 233.91 | 325.43 |
| 235.77 | 325.48 | 237.98 | 325.64 | 241.8 | 325.88 | 242.19 | 325.9 | 244.05 | 326.01 |
| 248.13 | 326.01 | 249.62 | 325.86 | 252.63 | 325.56 | 253.4 | 325.58 | 254.29 | 325.62 |
| 254.73 | 325.59 | 255.41 | 325.57 | 256.59 | 325.62 | 259.28 | 325.52 | 262.87 | 325.6 |
| 263.05 | 325.6 | 264.04 | 325.56 | 265.01 | 325.55 | 266.6 | 325.52 | 268.25 | 325.48 |
| 268.53 | 325.48 | 269.52 | 325.46 | 269.7 | 325.45 | 271.72 | 325.45 | 272.54 | 325.47 |
| 272.88 | 325.47 | 273.69 | 325.49 | 277.29 | 325.57 | 277.52 | 325.59 | 277.85 | 325.64 |
| 279.22 | 325.75 | 284.4 | 326.02 | 293.3 | 326.02 | 295.01 | 326.03 | 303.38 | 326.03 |
| 304.52 | 325.89 | 304.79 | 325.88 | 305.62 | 325.87 | 308.74 | 325.86 | 308.77 | 325.85 |
| 309.72 | 325.84 | 310.24 | 325.83 | 311.63 | 325.82 | 318.72 | 326.04 | 319.11 | 326.05 |
| 339.95 | 326.78 | 345.98 | 326.79 | 353.68 | 326.79 | 362.1 | 326.8 | 363.33 | 326.8 |
| 365.06 | 326.82 | 366.65 | 326.85 | 367.69 | 326.88 | 368.17 | 326.91 | 373.62 | 326.91 |
| 379.26 | 326.9 | 379.47 | 326.88 | 380.1 | 326.87 | 382.27 | 326.87 | 385.05 | 326.86 |
| 388.68 | 326.86 | 390.92 | 326.87 | 392.13 | 326.88 | 394.27 | 326.88 | 396.09 | 326.86 |
| 397.08 | 326.86 | 397.53 | 326.83 | 405.33 | 326.58 | 408.54 | 326.47 | 408.64 | 326.46 |
| 410.31 | 326.41 | 411.45 | 326.39 | 413.91 | 326.34 | 415.62 | 326.3 | 417.28 | 326.3 |
| 419.09 | 326.31 | 420.05 | 326.32 | 421.07 | 326.34 | 424.09 | 326.41 | 426.86 | 326.47 |
| 427.37 | 326.47 | 430.52 | 326.52 | 432.64 | 326.57 | 432.91 | 326.58 | 436.13 | 326.68 |
| 436.37 | 326.69 | 436.9 | 326.69 | 438.19 | 326.64 | 439.05 | 326.57 | 439.76 | 326.53 |
| 440.28 | 326.55 | 441.04 | 326.56 | 441.84 | 326.54 | 443.05 | 326.41 | 443.41 | 326.38 |
| 444.23 | 326.35 | 444.96 | 326.34 | 445.13 | 326.33 | 445.89 | 326.34 | 446.68 | 326.34 |
| 447.22 | 326.35 | 448.02 | 326.4 | 448.75 | 326.42 | 450.3 | 326.47 | 450.7 | 326.47 |
| 451.66 | 326.51 | 455.67 | 326.72 | 456.86 | 326.77 | 459.22 | 326.86 | 461.43 | 326.93 |
| 462.26 | 326.95 | 462.93 | 326.95 | 463.63 | 326.96 | 464.36 | 326.96 | 467.9 | 326.95 |
| 468.44 | 326.95 | 471.84 | 326.98 | 472.78 | 326.98 | 474.55 | 326.99 | 477.89 | 326.97 |
| 479 | 326.96 | 482.93 | 326.96 | 484.69 | 326.97 | 486.8 | 327 | 491.55 | 327.09 |
| 494.92 | 327.14 | 497.15 | 327.16 | 497.82 | 327.17 | 498.29 | 327.17 | 499.28 | 327.14 |
| 501.49 | 327.02 | 502.26 | 326.99 | 508.13 | 326.81 | 508.96 | 326.79 | 510.32 | 326.78 |
| 517.08 | 326.59 | 518.38 | 326.54 | 520.19 | 326.5 | 521.45 | 326.46 | 522.95 | 326.43 |
| 523.65 | 326.43 | 523.82 | 326.42 | 524.33 | 326.42 | 524.74 | 326.43 | 525.78 | 326.44 |
| 526.58 | 326.46 | 526.99 | 326.48 | 527.64 | 326.57 | 528.15 | 326.61 | 528.74 | 326.6 |
| 529.28 | 326.6 | 529.88 | 326.57 | 530.21 | 326.5 | 530.71 | 326.5 | 531.26 | 326.53 |
| 532.65 | 326.63 | 533.49 | 326.73 | 537.77 | 327.05 | 538.86 | 327.05 | 543.06 | 327.06 |
| 544.3 | 327.07 | 552.87 | 327.07 | 553.05 | 327.15 | 553.36 | 327.18 | 554.67 | 327.24 |
| 555.49 | 327.25 | 556.46 | 327.27 | 557.53 | 327.28 | 558.67 | 327.28 | 559.78 | 327.27 |
| 561.45 | 327.26 | 562.58 | 327.24 | 565.03 | 327.22 | 566.46 | 327.2 | 570.78 | 327.12 |
| 571.62 | 327.1 | 573.41 | 327.1 | 574.27 | 327.11 | 575.3 | 327.11 | 576.46 | 327.17 |
| 580.14 | 327.38 | 583.12 | 327.64 | 583.48 | 327.67 | 585.41 | 327.91 | 586.28 | 328.01 |
| 588.81 | 328.29 | 589.46 | 328.35 | 589.67 | 328.39 | 590.37 | 328.49 | 591.19 | 328.84 |
| 591.77 | 329.06 | 591.99 | 329.29 | 592.41 | 329.51 | 592.97 | 329.76 | 593.2 | 329.88 |
| 593.7 | 330.09 | 594.95 | 330.59 | 595.86 | 330.96 | 596.43 | 331.21 | 596.8 | 331.38 |
| 597.58 | 331.69 | 598.72 | 332.12 | 600.38 | 332.76 | 600.73 | 332.89 | 602.59 | 333.6 |
| 603.51 | 333.87 | 604.9 | 334.34 | 607.3 | 334.99 | 607.7 | 335.12 | 610.27 | 335.83 |
| 613.9 | 335.84 | 615.15 | 335.84 | 616.07 | 335.85 | 619.5 | 335.86 | 623.01 | 335.79 |
| 635.29 | 335.54 | 640.3 | 335.46 | 641.18 | 335.44 | 643.79 | 335.39 | 644.92 | 335.37 |
| 645.28 | 335.37 | 646.66 | 335.34 | 647.56 | 335.34 | 655.12 | 335.45 | 657.55 | 335.47 |
| 658.31 | 335.48 | 660.83 | 335.48 | 660.99 | 335.49 | 662.06 | 335.49 | 662.44 | 335.48 |
| 664.18 | 335.47 | 670.36 | 335.47 | 671.88 | 335.45 | 675.21 | 335.37 | 678.88 | 335.29 |
| 683.72 | 335.18 | 694.56 | 335 | 696.58 | 334.98 | 698.98 | 334.95 | 704.38 | 334.93 |
| 705.25 | 334.92 | 707.23 | 334.91 | 707.68 | 334.91 | 711.38 | 334.86 | 713.9 | 334.82 |
| 716.1 | 334.76 | 717.06 | 334.73 | 720.9 | 334.59 | 721.4 | 334.58 | 723.23 | 334.52 |
| 726.6 | 334.37 | 726.7 | 334.36 | 728.91 | 334.27 | 729.41 | 334.27 | 729.81 | 334.28 |
| 730.74 | 334.17 | 731.15 | 334.13 | 731.71 | 334.12 | 732.05 | 334.13 | 733.42 | 334.23 |
| 733.69 | 334.26 | 735.3 | 334.33 | 737.57 | 334.45 | 739.59 | 334.57 | 747.11 | 335 |
| 748.5 | 335.05 | 751.49 | 335.14 | 753.19 | 335.17 | 754.9 | 335.23 | 755.39 | 335.25 |
| 756.85 | 335.3 | 756.95 | 335.31 | 757.88 | 335.35 | 758.67 | 335.39 | 759.3 | 335.41 |
| 761.39 | 335.5 | 761.57 | 335.5 | 764.68 | 335.63 | 770.29 | 335.85 | 771.75 | 335.91 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 774.93 | 336 | 782.08 | 336.24 | 784.96 | 336.33 | 788.06 | 336.41 | 789.5 | 336.44 |
| 792.78 | 336.56 | 796.25 | 336.63 | 798 | 336.66 | 800.37 | 336.68 | 802.36 | 336.72 |
| 802.92 | 336.72 | 804.45 | 336.75 | 805.67 | 336.75 | 806.17 | 336.76 | 809.11 | 336.78 |
| 809.95 | 336.75 | 810.25 | 336.75 | 810.93 | 336.73 | 814.13 | 336.69 | 815.57 | 336.69 |
| 817.45 | 336.68 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 77.53 | .04 | 583.12 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 77.53 | 583.12 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 965.856*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.7 | 2.93 | 327.67 | 3.68 | 327.65 | 5.07 | 327.63 | 6.97 | 327.58 |
| 7.58 | 327.57 | 10.64 | 327.53 | 13.46 | 327.49 | 14.38 | 327.49 | 14.94 | 327.47 |
| 17.29 | 327.41 | 18.59 | 327.37 | 20.7 | 327.32 | 22.46 | 327.26 | 23.16 | 327.25 |
| 25.47 | 327.26 | 26.22 | 327.26 | 28.17 | 327.27 | 28.96 | 327.26 | 33.17 | 327.15 |
| 36.15 | 327.05 | 36.33 | 327.04 | 38.76 | 326.96 | 38.97 | 326.96 | 40.13 | 326.93 |
| 40.31 | 326.93 | 41.79 | 326.9 | 43.93 | 326.9 | 44.13 | 326.91 | 44.64 | 326.91 |
| 44.98 | 326.92 | 46.04 | 326.91 | 47.43 | 326.89 | 49.02 | 326.86 | 49.77 | 326.84 |
| 50.89 | 326.82 | 51.43 | 326.8 | 52.31 | 326.75 | 53.35 | 326.71 | 53.8 | 326.71 |
| 54.21 | 326.69 | 54.48 | 326.69 | 56.4 | 326.64 | 58.71 | 326.65 | 61.29 | 326.65 |
| 61.42 | 326.66 | 62.9 | 326.66 | 65.38 | 326.67 | 68.1 | 326.67 | 69.38 | 326.68 |
| 70.73 | 326.68 | 71.34 | 326.69 | 73.47 | 326.71 | 75.25 | 326.71 | 77.66 | 326.74 |
| 78.13 | 326.74 | 78.52 | 326.75 | 78.73 | 326.74 | 79.08 | 326.75 | 80.4 | 326.75 |
| 81.18 | 326.74 | 81.79 | 326.74 | 81.96 | 326.66 | 82.12 | 326.63 | 83.08 | 326.56 |
| 83.26 | 326.54 | 83.61 | 326.55 | 83.75 | 326.57 | 85.09 | 326.72 | 85.91 | 326.74 |
| 87.18 | 326.78 | 87.43 | 326.78 | 87.61 | 326.8 | 88.13 | 326.81 | 89.58 | 326.81 |
| 89.95 | 326.8 | 92.43 | 326.8 | 93.5 | 326.81 | 94.08 | 326.78 | 96.08 | 326.72 |
| 98.14 | 326.67 | 99.96 | 326.67 | 100.56 | 326.7 | 103.05 | 326.79 | 105.14 | 326.84 |
| 107.52 | 326.85 | 108.7 | 326.85 | 108.84 | 326.84 | 110.22 | 326.79 | 111.23 | 326.74 |
| 111.86 | 326.7 | 112.91 | 326.66 | 120.25 | 326.66 | 122.52 | 326.65 | 124.05 | 326.72 |
| 124.85 | 326.75 | 125.42 | 326.75 | 126.92 | 326.77 | 128.88 | 326.78 | 131.31 | 326.78 |
| 132.72 | 326.76 | 135.15 | 326.72 | 135.92 | 326.7 | 137.72 | 326.62 | 139.13 | 326.49 |
| 139.84 | 326.44 | 140.36 | 326.37 | 140.91 | 326.36 | 141.24 | 326.39 | 141.89 | 326.48 |
| 142.97 | 326.61 | 144.07 | 326.62 | 145.03 | 326.61 | 145.63 | 326.59 | 146.68 | 326.53 |
| 147.86 | 326.47 | 148.98 | 326.39 | 149.76 | 326.37 | 150.46 | 326.34 | 150.94 | 326.39 |
| 151.56 | 326.41 | 152.45 | 326.48 | 153.03 | 326.48 | 157.6 | 326.52 | 162.97 | 326.48 |
| 165.17 | 326.46 | 166.13 | 326.46 | 166.7 | 326.45 | 167.9 | 326.44 | 170.5 | 326.43 |
| 171.89 | 326.45 | 172.88 | 326.47 | 174.25 | 326.43 | 175.46 | 326.41 | 175.51 | 326.3 |
| 176.48 | 326.26 | 177.23 | 326.24 | 178.14 | 326.3 | 179.3 | 326.39 | 179.86 | 326.41 |
| 180.13 | 326.45 | 181.3 | 326.43 | 181.46 | 326.42 | 182.08 | 326.42 | 183.04 | 326.43 |
| 184.29 | 326.43 | 185.46 | 326.44 | 185.75 | 326.45 | 186.54 | 326.45 | 187.8 | 326.42 |
| 190.06 | 326.39 | 191.12 | 326.35 | 191.83 | 326.31 | 193.25 | 326.29 | 194.08 | 326.29 |
| 194.75 | 326.28 | 198.01 | 326.26 | 200.22 | 326.24 | 201.02 | 326.24 | 202.94 | 326.21 |
| 203.85 | 326.2 | 207.92 | 326.17 | 208.68 | 326.17 | 210.54 | 326.15 | 210.89 | 326.14 |
| 215.67 | 326.07 | 216.28 | 326.06 | 216.85 | 326.06 | 217.23 | 326.05 | 218.69 | 326.03 |
| 219.84 | 326.03 | 221.01 | 326.05 | 221.65 | 326.05 | 222.66 | 326.03 | 223.27 | 326.03 |
| 223.78 | 326.02 | 224.66 | 325.99 | 225.82 | 325.96 | 226.44 | 325.87 | 226.93 | 325.81 |
| 227.66 | 325.74 | 228.85 | 325.6 | 230.1 | 325.57 | 232.65 | 325.5 | 234.12 | 325.47 |
| 235.26 | 325.47 | 235.8 | 325.46 | 236.77 | 325.46 | 240.01 | 325.41 | 240.31 | 325.41 |
| 241.55 | 325.38 | 242.13 | 325.37 | 243.17 | 325.34 | 243.33 | 325.34 | 244.73 | 325.28 |
| 246.11 | 325.2 | 246.4 | 325.19 | 247.43 | 325.11 | 249.3 | 325.08 | 249.69 | 325.09 |
| 249.77 | 325.13 | 250.2 | 325.16 | 251.04 | 325.16 | 252.15 | 325.18 | 253.93 | 325.23 |
| 256.04 | 325.38 | 259.71 | 325.6 | 260.08 | 325.62 | 261.86 | 325.73 | 265.77 | 325.73 |
| 267.2 | 325.59 | 270.09 | 325.3 | 270.82 | 325.32 | 271.68 | 325.36 | 272.1 | 325.33 |
| 272.75 | 325.31 | 273.88 | 325.36 | 276.47 | 325.27 | 279.91 | 325.34 | 280.07 | 325.34 |
| 281.28 | 325.3 | 282.38 | 325.29 | 283.48 | 325.27 | 285.06 | 325.23 | 285.33 | 325.22 |
| 286.28 | 325.21 | 286.45 | 325.2 | 287.91 | 325.2 | 288.12 | 325.19 | 288.68 | 325.21 |
| 289.17 | 325.21 | 290.27 | 325.24 | 293.73 | 325.31 | 294.26 | 325.38 | 295.58 | 325.48 |
| 300.54 | 325.74 | 313.97 | 325.74 | 315.97 | 325.75 | 318.74 | 325.75 | 319.82 | 325.62 |
| 320.08 | 325.6 | 320.88 | 325.6 | 323.87 | 325.58 | 325.31 | 325.56 | 326.64 | 325.55 |
| 333.43 | 325.76 | 333.81 | 325.77 | 353.79 | 326.47 | 360.97 | 326.47 | 366.95 | 326.48 |
| 375.02 | 326.48 | 376.19 | 326.49 | 377.85 | 326.5 | 379.37 | 326.53 | 380.37 | 326.56 |
| 380.84 | 326.59 | 386.06 | 326.59 | 391.46 | 326.58 | 391.66 | 326.56 | 392.27 | 326.55 |
| 394.35 | 326.56 | 397.01 | 326.55 | 400.49 | 326.55 | 402.63 | 326.56 | 403.8 | 326.57 |
| 407.6 | 326.55 | 408.74 | 326.54 | 408.97 | 326.52 | 416.45 | 326.28 | 419.53 | 326.18 |
| 421.23 | 326.13 | 422.32 | 326.11 | 424.68 | 326.06 | 426.31 | 326.02 | 427.91 | 326.03 |
| 429.52 | 326.03 | 429.55 | 326.04 | 430.24 | 326.05 | 430.98 | 326.05 | 431.54 | 326.06 |
| 434.43 | 326.13 | 437.09 | 326.18 | 437.58 | 326.18 | 442.62 | 326.28 | 445.97 | 326.39 |
| 446.71 | 326.4 | 447.95 | 326.35 | 448.77 | 326.29 | 449.45 | 326.25 | 449.95 | 326.27 |
| 450.16 | 326.26 | 450.67 | 326.28 | 451.45 | 326.26 | 451.8 | 326.23 | 452.61 | 326.14 |
| 452.95 | 326.11 | 453.62 | 326.08 | 454.44 | 326.07 | 454.6 | 326.06 | 455.32 | 326.07 |
| 456.09 | 326.07 | 456.6 | 326.08 | 457.37 | 326.13 | 460.26 | 326.21 | 464.7 | 326.43 |
| 465.84 | 326.48 | 468.11 | 326.57 | 470.22 | 326.63 | 470.43 | 326.64 | 472.33 | 326.67 |
| 473.03 | 326.67 | 476.42 | 326.65 | 476.94 | 326.65 | 479.21 | 326.68 | 480.2 | 326.69 |
| 482.8 | 326.69 | 486 | 326.68 | 487.06 | 326.67 | 490.83 | 326.67 | 492.52 | 326.68 |
| 494.54 | 326.71 | 499.09 | 326.79 | 502.32 | 326.84 | 504.46 | 326.86 | 505.1 | 326.87 |
| 505.89 | 326.87 | 506.51 | 326.84 | 508.62 | 326.73 | 509.36 | 326.71 | 514.98 | 326.53 |
| 515.78 | 326.52 | 517.08 | 326.51 | 523.57 | 326.33 | 524.81 | 326.29 | 525.59 | 326.26 |
| 527.76 | 326.21 | 529.19 | 326.18 | 529.86 | 326.18 | 530.02 | 326.17 | 530.51 | 326.17 |
| 530.9 | 326.18 | 531.9 | 326.19 | 532.67 | 326.21 | 533.06 | 326.23 | 533.47 | 326.28 |
| 533.69 | 326.32 | 534.17 | 326.35 | 534.91 | 326.35 | 535.26 | 326.34 | 535.83 | 326.31 |
| 536.21 | 326.25 | 536.8 | 326.25 | 537.15 | 326.27 | 538.49 | 326.37 | 539.29 | 326.47 |
| 542.75 | 326.72 | 543.4 | 326.77 | 544.44 | 326.77 | 548.46 | 326.79 | 555.52 | 326.79 |
| 557.87 | 326.8 | 558.04 | 326.87 | 558.33 | 326.9 | 559.01 | 326.93 | 560.38 | 326.97 |
| 562.34 | 326.99 | 564.49 | 326.99 | 566.09 | 326.98 | 567.18 | 326.96 | 570.89 | 326.93 |
| 575.04 | 326.85 | 575.84 | 326.83 | 577.56 | 326.83 | 578.38 | 326.84 | 579.37 | 326.84 |
| 580.48 | 326.89 | 584.01 | 327.09 | 586.1 | 327.29 | 586.86 | 327.36 | 587.21 | 327.4 |
| 589.09 | 327.65 | 589.94 | 327.76 | 592.4 | 328.06 | 593.03 | 328.12 | 593.92 | 328.28 |
| 594.71 | 328.63 | 595.27 | 328.85 | 595.49 | 329.1 | 595.9 | 329.32 | 596.44 | 329.58 |
| 596.67 | 329.71 | 597.15 | 329.91 | 598.37 | 330.39 | 599.8 | 330.98 | 600.29 | 331.2 |
| 600.92 | 331.44 | 602.03 | 331.85 | 603.65 | 332.46 | 603.91 | 332.55 | 605.8 | 333.26 |
| 605.87 | 333.27 | 606.7 | 333.51 | 608.05 | 333.96 | 610.38 | 334.58 | 610.66 | 334.67 |
| 613.27 | 335.37 | 616.81 | 335.39 | 618.02 | 335.39 | 618.91 | 335.4 | 622.25 | 335.41 |
| 625.22 | 335.36 | 625.67 | 335.34 | 637.6 | 335.12 | 642.48 | 335.05 | 643.34 | 335.03 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 646.98 | 334.96 | 648.32 | 334.95 | 648.67 | 334.94 | 649.54 | 334.94 | 656.9 | 335.05 |
| 659.26 | 335.07 | 660.25 | 335.07 | 660.7 | 335.08 | 662.61 | 335.08 | 663.16 | 335.09 |
| 663.65 | 335.09 | 664.01 | 335.08 | 665.71 | 335.07 | 671.72 | 335.07 | 673.2 | 335.05 |
| 676.44 | 334.98 | 680 | 334.9 | 684.71 | 334.81 | 695.26 | 334.64 | 697.22 | 334.62 |
| 699.55 | 334.6 | 704.81 | 334.59 | 705.66 | 334.59 | 708.03 | 334.58 | 711.62 | 334.54 |
| 714.07 | 334.51 | 716.21 | 334.45 | 720.88 | 334.3 | 721.37 | 334.28 | 723.15 | 334.23 |
| 723.81 | 334.2 | 726.42 | 334.09 | 726.52 | 334.08 | 728.23 | 334.01 | 728.83 | 333.99 |
| 729.54 | 334 | 730.85 | 333.86 | 731.4 | 333.86 | 731.72 | 333.87 | 732.37 | 333.91 |
| 733.05 | 333.96 | 733.22 | 333.98 | 733.81 | 334 | 734.88 | 334.06 | 737.1 | 334.17 |
| 739.06 | 334.29 | 746.38 | 334.72 | 747.73 | 334.77 | 750.64 | 334.86 | 752.29 | 334.89 |
| 753.95 | 334.95 | 754.42 | 334.96 | 755.85 | 335.02 | 756.85 | 335.07 | 757.62 | 335.1 |
| 758.23 | 335.13 | 760.27 | 335.21 | 760.43 | 335.22 | 763.46 | 335.34 | 768.92 | 335.56 |
| 770.34 | 335.61 | 773.43 | 335.7 | 780.38 | 335.92 | 783.19 | 336.01 | 786.21 | 336.09 |
| 787.6 | 336.11 | 790.8 | 336.23 | 794.17 | 336.3 | 795.43 | 336.31 | 795.87 | 336.32 |
| 798.18 | 336.34 | 800.12 | 336.36 | 801.75 | 336.39 | 803.33 | 336.39 | 803.82 | 336.4 |
| 806.68 | 336.41 | 807.79 | 336.38 | 808.45 | 336.37 | 811.56 | 336.33 | 812.97 | 336.33 |
| 814.79 | 336.32 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 81.18 | .04 | 586.86 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 81.18 | 586.86 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 946.141*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.41 | 3.07 | 327.38 | 3.85 | 327.36 | 5.18 | 327.34 | 5.69 | 327.32 |
| 7.29 | 327.29 | 11.12 | 327.23 | 14.06 | 327.2 | 15.03 | 327.2 | 15.61 | 327.18 |
| 17.66 | 327.12 | 18.07 | 327.12 | 19.42 | 327.08 | 21.63 | 327.03 | 23.46 | 326.97 |
| 24.2 | 326.95 | 26.62 | 326.98 | 27.4 | 326.98 | 29.44 | 326.99 | 30.26 | 326.99 |
| 34.66 | 326.88 | 37.78 | 326.78 | 37.97 | 326.77 | 40.5 | 326.68 | 41.93 | 326.66 |
| 42.12 | 326.65 | 43.67 | 326.63 | 45.91 | 326.63 | 46.24 | 326.65 | 46.84 | 326.66 |
| 48.11 | 326.66 | 49.56 | 326.64 | 51.22 | 326.61 | 52 | 326.6 | 52.7 | 326.58 |
| 53.18 | 326.58 | 54.06 | 326.54 | 55.16 | 326.48 | 56.21 | 326.46 | 56.64 | 326.44 |
| 56.93 | 326.44 | 57.78 | 326.41 | 58.94 | 326.38 | 61.35 | 326.39 | 63.48 | 326.39 |
| 63.58 | 326.4 | 65.73 | 326.4 | 68.32 | 326.41 | 71.16 | 326.41 | 72.49 | 326.42 |
| 73.91 | 326.42 | 74.54 | 326.43 | 76.77 | 326.45 | 78.62 | 326.45 | 79.59 | 326.46 |
| 81.15 | 326.47 | 81.64 | 326.48 | 82.26 | 326.48 | 82.64 | 326.49 | 84.01 | 326.49 |
| 84.82 | 326.48 | 85.49 | 326.48 | 85.68 | 326.39 | 86.11 | 326.33 | 87.09 | 326.25 |
| 87.27 | 326.25 | 87.63 | 326.28 | 88.29 | 326.37 | 89.08 | 326.46 | 89.97 | 326.49 |
| 91.35 | 326.53 | 91.63 | 326.53 | 91.82 | 326.55 | 92.39 | 326.56 | 94.37 | 326.56 |
| 94.89 | 326.55 | 97.06 | 326.55 | 98.22 | 326.57 | 98.86 | 326.53 | 102.79 | 326.42 |
| 103.27 | 326.41 | 105.25 | 326.41 | 105.91 | 326.44 | 108.61 | 326.55 | 110.38 | 326.59 |
| 110.6 | 326.6 | 113.51 | 326.61 | 113.94 | 326.62 | 114.91 | 326.6 | 116.41 | 326.55 |
| 116.9 | 326.53 | 117.51 | 326.49 | 118.7 | 326.42 | 119.34 | 326.4 | 127.32 | 326.4 |
| 129.79 | 326.39 | 130.22 | 326.41 | 131.45 | 326.48 | 132.32 | 326.5 | 132.94 | 326.5 |
| 134.57 | 326.53 | 136.7 | 326.54 | 138.02 | 326.54 | 138.67 | 326.55 | 139.34 | 326.55 |
| 139.88 | 326.53 | 140.88 | 326.52 | 144.35 | 326.45 | 144.87 | 326.43 | 146.31 | 326.36 |
| 147.85 | 326.22 | 148.62 | 326.16 | 149.18 | 326.09 | 149.78 | 326.07 | 150.14 | 326.11 |
| 151.73 | 326.32 | 152.03 | 326.35 | 152.44 | 326.36 | 153.84 | 326.36 | 154.5 | 326.35 |
| 156.06 | 326.27 | 157.34 | 326.2 | 158.56 | 326.11 | 160.05 | 326.06 | 160.57 | 326.09 |
| 160.61 | 326.11 | 161.37 | 326.14 | 162.09 | 326.19 | 162.33 | 326.22 | 162.96 | 326.22 |
| 167.93 | 326.27 | 173.77 | 326.23 | 176.17 | 326.22 | 177.21 | 326.21 | 177.83 | 326.21 |
| 179.14 | 326.2 | 181.97 | 326.19 | 183.48 | 326.21 | 184.55 | 326.23 | 185.37 | 326.2 |
| 187.16 | 326.17 | 187.36 | 326.16 | 187.41 | 326.04 | 188.47 | 326 | 189.28 | 325.98 |
| 190.27 | 326.04 | 190.57 | 326.07 | 191.53 | 326.14 | 192.14 | 326.17 | 192.37 | 326.21 |
| 192.93 | 326.21 | 193.7 | 326.19 | 195.6 | 326.19 | 198.23 | 326.21 | 198.54 | 326.22 |
| 199.4 | 326.22 | 200.77 | 326.19 | 203.23 | 326.16 | 204.39 | 326.11 | 205.16 | 326.07 |
| 206.09 | 326.06 | 206.7 | 326.06 | 207.04 | 326.05 | 207.61 | 326.05 | 208.34 | 326.04 |
| 211.87 | 326.02 | 214.67 | 326 | 215.16 | 326.01 | 215.79 | 325.99 | 217.24 | 325.97 |
| 218.23 | 325.96 | 222.65 | 325.94 | 223.15 | 325.93 | 225.5 | 325.92 | 225.88 | 325.91 |
| 231.09 | 325.84 | 231.75 | 325.83 | 232.37 | 325.83 | 233.62 | 325.81 | 235.62 | 325.81 |
| 236.89 | 325.83 | 237.23 | 325.84 | 237.59 | 325.83 | 238.68 | 325.82 | 239.91 | 325.8 |
| 240.86 | 325.77 | 242.13 | 325.74 | 242.8 | 325.64 | 243.33 | 325.58 | 244.12 | 325.5 |
| 245.42 | 325.34 | 246.77 | 325.31 | 249.55 | 325.24 | 251.15 | 325.21 | 251.79 | 325.21 |
| 252.39 | 325.2 | 254.03 | 325.2 | 257.55 | 325.15 | 257.88 | 325.14 | 259.86 | 325.11 |
| 260.99 | 325.08 | 261.17 | 325.08 | 262.69 | 325.02 | 264.19 | 324.95 | 265.63 | 324.86 |
| 267.66 | 324.83 | 268.03 | 324.84 | 268.11 | 324.88 | 268.35 | 324.9 | 269.32 | 324.9 |
| 270.38 | 324.92 | 272.09 | 324.97 | 274.11 | 325.11 | 277.62 | 325.32 | 279.68 | 325.44 |
| 280.5 | 325.44 | 281.34 | 325.45 | 283.42 | 325.45 | 284.78 | 325.31 | 287.55 | 325.04 |
| 288.25 | 325.06 | 289.07 | 325.1 | 289.47 | 325.07 | 290.1 | 325.05 | 291.18 | 325.1 |
| 293.65 | 325.01 | 296.94 | 325.08 | 297.1 | 325.08 | 298.25 | 325.04 | 298.9 | 325.04 |
| 299.31 | 325.03 | 301.87 | 324.98 | 303.04 | 324.95 | 303.62 | 324.95 | 304.8 | 324.94 |
| 306.12 | 324.97 | 306.86 | 324.98 | 310.16 | 325.05 | 310.67 | 325.12 | 311.93 | 325.21 |
| 316.68 | 325.46 | 332.44 | 325.46 | 334.09 | 325.47 | 335.12 | 325.34 | 335.37 | 325.33 |
| 336.14 | 325.32 | 339.03 | 325.31 | 340.38 | 325.29 | 341.65 | 325.28 | 348.15 | 325.48 |
| 348.51 | 325.49 | 367.62 | 326.15 | 373.15 | 326.16 | 380.21 | 326.16 | 387.93 | 326.17 |
| 389.06 | 326.17 | 392.1 | 326.21 | 393.5 | 326.27 | 398.49 | 326.27 | 403.67 | 326.26 |
| 404.43 | 326.24 | 406.42 | 326.24 | 408.97 | 326.23 | 411.77 | 326.23 | 412.31 | 326.24 |
| 414.35 | 326.24 | 415.47 | 326.25 | 417.43 | 326.25 | 419.1 | 326.24 | 420.19 | 326.23 |
| 420.42 | 326.21 | 427.57 | 325.99 | 430.52 | 325.89 | 432.14 | 325.84 | 432.57 | 325.84 |
| 433.18 | 325.82 | 435.44 | 325.78 | 437.01 | 325.75 | 440.08 | 325.75 | 440.1 | 325.76 |
| 441.07 | 325.77 | 444.77 | 325.85 | 447.32 | 325.9 | 447.79 | 325.9 | 450.67 | 325.95 |
| 452.61 | 326 | 452.87 | 326.01 | 455.82 | 326.1 | 456.38 | 326.1 | 456.52 | 326.11 |
| 457.71 | 326.06 | 459.14 | 325.97 | 459.62 | 325.99 | 459.82 | 325.98 | 460.31 | 326 |
| 461.05 | 325.98 | 461.39 | 325.95 | 462.16 | 325.86 | 462.49 | 325.84 | 463.24 | 325.81 |
| 463.92 | 325.8 | 465.49 | 325.8 | 465.98 | 325.81 | 466.56 | 325.85 | 467.39 | 325.87 |
| 468.81 | 325.92 | 469.49 | 325.93 | 470.06 | 325.96 | 473.73 | 326.14 | 474.82 | 326.19 |
| 476.99 | 326.27 | 479.02 | 326.34 | 479.21 | 326.35 | 479.78 | 326.35 | 481.03 | 326.37 |
| 481.7 | 326.37 | 484.95 | 326.36 | 485.45 | 326.36 | 488.56 | 326.39 | 489.43 | 326.39 |
| 491.05 | 326.4 | 494.11 | 326.38 | 495.26 | 326.37 | 496.48 | 326.38 | 498.73 | 326.38 |
| 500.35 | 326.39 | 502.28 | 326.42 | 506.64 | 326.5 | 509.73 | 326.54 | 512.38 | 326.58 |
| 512.82 | 326.58 | 513.73 | 326.55 | 515.75 | 326.45 | 516.46 | 326.42 | 521.84 | 326.26 |
| 522.6 | 326.24 | 523.85 | 326.23 | 530.05 | 326.06 | 531.24 | 326.03 | 531.98 | 326 |
| 532.9 | 325.99 | 534.06 | 325.96 | 535.43 | 325.93 | 536.07 | 325.93 | 536.69 | 325.92 |
| 537.07 | 325.93 | 538.02 | 325.94 | 539.13 | 325.97 | 539.73 | 326.06 | 540.05 | 326.09 |
| 540.91 | 326.09 | 541.78 | 326.06 | 542 | 326.03 | 542.09 | 325.99 | 542.54 | 325.99 |

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|---|---|---|---|---|---|---|---|---|---|
| 543.05 | 326.02 | 544.32 | 326.12 | 545.09 | 326.2 | 548.4 | 326.44 | 549.02 | 326.49 |
| 550.02 | 326.49 | 553.87 | 326.51 | 559.47 | 326.51 | 560.6 | 326.52 | 562.87 | 326.52 |
| 563.03 | 326.59 | 563.96 | 326.65 | 564.52 | 326.67 | 565.27 | 326.68 | 566.16 | 326.7 |
| 567.14 | 326.71 | 569.2 | 326.71 | 570.74 | 326.7 | 571.77 | 326.68 | 575.33 | 326.65 |
| 579.29 | 326.58 | 580.06 | 326.56 | 581.7 | 326.56 | 582.49 | 326.57 | 583.43 | 326.57 |
| 584.5 | 326.62 | 587.87 | 326.81 | 589.87 | 327.02 | 590.6 | 327.08 | 593.6 | 327.51 |
| 595.99 | 327.82 | 596.6 | 327.89 | 596.79 | 327.94 | 597.46 | 328.06 | 598.23 | 328.41 |
| 598.78 | 328.64 | 598.99 | 328.9 | 599.39 | 329.14 | 599.91 | 329.4 | 600.13 | 329.53 |
| 600.61 | 329.73 | 601.79 | 330.18 | 602.65 | 330.53 | 603.54 | 330.92 | 605.35 | 331.59 |
| 606.92 | 332.16 | 609.01 | 332.91 | 609.88 | 333.15 | 610.42 | 333.33 | 611.2 | 333.58 |
| 613.46 | 334.17 | 613.84 | 334.28 | 614.97 | 334.58 | 616.27 | 334.92 | 619.71 | 334.94 |
| 620.88 | 334.94 | 621.76 | 334.95 | 625 | 334.96 | 627.88 | 334.91 | 628.32 | 334.9 |
| 639.92 | 334.7 | 644.66 | 334.63 | 644.94 | 334.63 | 647.96 | 334.58 | 649.03 | 334.56 |
| 649.37 | 334.56 | 650.33 | 334.54 | 650.98 | 334.54 | 651.53 | 334.53 | 658.68 | 334.65 |
| 660.97 | 334.67 | 661.93 | 334.67 | 662.37 | 334.68 | 664.22 | 334.68 | 664.86 | 334.69 |
| 665.23 | 334.68 | 667.24 | 334.67 | 673.08 | 334.67 | 674.52 | 334.65 | 677.67 | 334.59 |
| 681.13 | 334.51 | 685.71 | 334.43 | 695.96 | 334.29 | 697.87 | 334.27 | 700.13 | 334.26 |
| 707.94 | 334.26 | 708.37 | 334.25 | 714.24 | 334.2 | 716.32 | 334.15 | 717.23 | 334.12 |
| 720.86 | 334.01 | 721.34 | 333.99 | 723.71 | 333.92 | 726.25 | 333.81 | 726.34 | 333.8 |
| 728 | 333.74 | 728.59 | 333.71 | 729.28 | 333.73 | 730.55 | 333.59 | 730.75 | 333.6 |
| 731.08 | 333.59 | 731.4 | 333.6 | 732.02 | 333.65 | 732.85 | 333.7 | 733.24 | 333.73 |
| 733.43 | 333.73 | 734.47 | 333.78 | 736.62 | 333.9 | 738.53 | 334.01 | 745.64 | 334.43 |
| 746.95 | 334.48 | 749.78 | 334.57 | 751.38 | 334.61 | 753 | 334.66 | 755.82 | 334.78 |
| 756.57 | 334.82 | 757.16 | 334.84 | 759.14 | 334.93 | 759.3 | 334.93 | 762.25 | 335.05 |
| 765.39 | 335.17 | 767.55 | 335.26 | 768.93 | 335.31 | 771.94 | 335.4 | 778.69 | 335.61 |
| 781.42 | 335.69 | 783.21 | 335.75 | 785.71 | 335.79 | 788.81 | 335.9 | 792.09 | 335.96 |
| 793.75 | 335.97 | 795.99 | 335.99 | 797.87 | 336.01 | 798.4 | 336.01 | 799.46 | 336.03 |
| 801.47 | 336.03 | 804.25 | 336.05 | 805.33 | 336.02 | 808.99 | 335.97 | 810.36 | 335.97 |
| 812.14 | 335.96 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 84.82 | .04 | 590.6 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 84.82 | 590.6 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 926.427*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.12 | 4.01 | 327.07 | 5.41 | 327.04 | 7.6 | 327 | 8.26 | 326.98 |
| 11.6 | 326.94 | 14.67 | 326.91 | 15.67 | 326.91 | 16.28 | 326.89 | 18.42 | 326.83 |
| 18.84 | 326.83 | 20.26 | 326.79 | 25.24 | 326.66 | 27.76 | 326.69 | 28.58 | 326.71 |
| 30.7 | 326.72 | 31.56 | 326.71 | 33.69 | 326.67 | 36.15 | 326.61 | 39.4 | 326.5 |
| 39.6 | 326.5 | 42.24 | 326.41 | 42.47 | 326.4 | 45.55 | 326.36 | 47.28 | 326.36 |
| 47.88 | 326.37 | 48.23 | 326.39 | 48.86 | 326.4 | 50.18 | 326.4 | 52.01 | 326.39 |
| 52.25 | 326.38 | 53.42 | 326.36 | 54.97 | 326.34 | 56.05 | 326.31 | 57.01 | 326.26 |
| 57.94 | 326.22 | 58.63 | 326.21 | 59.37 | 326.18 | 61.47 | 326.13 | 65.54 | 326.13 |
| 65.84 | 326.14 | 68.55 | 326.14 | 71.25 | 326.15 | 74.22 | 326.15 | 75.61 | 326.16 |
| 77.08 | 326.16 | 77.75 | 326.17 | 80.06 | 326.19 | 82 | 326.19 | 82.85 | 326.2 |
| 84.64 | 326.21 | 85.15 | 326.21 | 85.52 | 326.22 | 88.47 | 326.22 | 89.17 | 326.22 |
| 89.39 | 326.12 | 89.57 | 326.08 | 89.86 | 326.05 | 90.7 | 325.99 | 91.03 | 325.96 |
| 91.5 | 326 | 92.22 | 326.1 | 93.07 | 326.19 | 94.03 | 326.23 | 95.52 | 326.28 |
| 95.82 | 326.28 | 96.03 | 326.3 | 96.64 | 326.31 | 99.34 | 326.31 | 100.69 | 326.3 |
| 101.69 | 326.31 | 102.9 | 326.33 | 103.47 | 326.3 | 103.63 | 326.28 | 105.98 | 326.22 |
| 107.88 | 326.16 | 108.4 | 326.15 | 110.54 | 326.15 | 111.25 | 326.19 | 114.66 | 326.32 |
| 116.62 | 326.36 | 119.42 | 326.38 | 120.81 | 326.38 | 120.98 | 326.37 | 123.78 | 326.25 |
| 124.53 | 326.2 | 125.76 | 326.14 | 136.62 | 326.14 | 137.05 | 326.13 | 137.52 | 326.16 |
| 138.85 | 326.23 | 139.79 | 326.26 | 140.46 | 326.26 | 142.22 | 326.29 | 144.52 | 326.3 |
| 145.61 | 326.31 | 147.37 | 326.31 | 147.95 | 326.29 | 149.03 | 326.27 | 151.23 | 326.24 |
| 152.4 | 326.22 | 153.35 | 326.18 | 154.9 | 326.1 | 157.2 | 325.89 | 157.59 | 325.86 |
| 158.01 | 325.8 | 158.65 | 325.78 | 159.04 | 325.82 | 159.8 | 325.93 | 161.08 | 326.1 |
| 161.83 | 326.11 | 162.37 | 326.11 | 163.5 | 326.1 | 164.2 | 326.07 | 165.43 | 326.01 |
| 166.82 | 325.93 | 167.84 | 325.85 | 168.47 | 325.82 | 169.75 | 325.78 | 170.31 | 325.81 |
| 170.44 | 325.84 | 171.17 | 325.87 | 171.95 | 325.92 | 172.22 | 325.95 | 172.89 | 325.96 |
| 178.26 | 326.02 | 184.57 | 325.98 | 187.16 | 325.97 | 188.29 | 325.96 | 188.96 | 325.96 |
| 190.38 | 325.95 | 193.43 | 325.94 | 196.22 | 325.99 | 196.64 | 325.98 | 197.39 | 325.95 |
| 199.04 | 325.92 | 199.25 | 325.92 | 199.31 | 325.78 | 200.46 | 325.74 | 201.33 | 325.72 |
| 202.72 | 325.81 | 203.76 | 325.9 | 204.43 | 325.93 | 204.74 | 325.98 | 206.11 | 325.95 |
| 207.03 | 325.95 | 208.16 | 325.96 | 209.63 | 325.96 | 210.71 | 325.98 | 211.34 | 325.98 |
| 211.43 | 325.99 | 212.27 | 325.99 | 213.75 | 325.96 | 216.4 | 325.93 | 217.65 | 325.88 |
| 218.49 | 325.83 | 219.49 | 325.82 | 220.52 | 325.82 | 220.89 | 325.81 | 221.93 | 325.81 |
| 223.72 | 325.8 | 225.74 | 325.78 | 227.29 | 325.77 | 229.29 | 325.77 | 231.54 | 325.74 |
| 232.61 | 325.73 | 237.39 | 325.7 | 238.29 | 325.7 | 240.47 | 325.68 | 240.88 | 325.68 |
| 246.51 | 325.61 | 247.22 | 325.6 | 248.34 | 325.6 | 250.05 | 325.58 | 251.41 | 325.58 |
| 253.14 | 325.62 | 253.53 | 325.61 | 254.71 | 325.6 | 256.03 | 325.58 | 257.06 | 325.55 |
| 258.43 | 325.52 | 259.16 | 325.41 | 259.73 | 325.34 | 260.59 | 325.26 | 261.99 | 325.09 |
| 263.45 | 325.05 | 266.45 | 324.98 | 267.5 | 324.96 | 268.87 | 324.94 | 270.15 | 324.94 |
| 271.29 | 324.93 | 275.1 | 324.89 | 275.45 | 324.88 | 277.59 | 324.85 | 278.81 | 324.82 |
| 279 | 324.82 | 282.27 | 324.7 | 283.82 | 324.61 | 286.01 | 324.58 | 286.37 | 324.59 |
| 286.56 | 324.64 | 286.84 | 324.65 | 287.6 | 324.65 | 288.62 | 324.67 | 290.25 | 324.71 |
| 292.17 | 324.85 | 295.87 | 325.07 | 297.49 | 325.16 | 301.06 | 325.16 | 302.37 | 325.04 |
| 305 | 324.79 | 305.68 | 324.8 | 306.46 | 324.84 | 306.84 | 324.81 | 307.44 | 324.79 |
| 308.47 | 324.84 | 310.6 | 324.77 | 310.83 | 324.76 | 313.97 | 324.83 | 315 | 324.79 |
| 316.24 | 324.78 | 317.24 | 324.76 | 318.68 | 324.72 | 318.93 | 324.72 | 320.35 | 324.69 |
| 321.48 | 324.69 | 321.72 | 324.7 | 322.73 | 324.71 | 323.44 | 324.73 | 326.6 | 324.79 |
| 327.08 | 324.85 | 328.29 | 324.94 | 332.82 | 325.17 | 334.2 | 325.17 | 338.23 | 325.18 |
| 349.44 | 325.18 | 350.43 | 325.07 | 350.67 | 325.06 | 351.4 | 325.05 | 354.13 | 325.04 |
| 354.15 | 325.03 | 354.98 | 325.03 | 355.44 | 325.02 | 356.66 | 325.01 | 363.21 | 325.21 |
| 381.45 | 325.83 | 386.73 | 325.84 | 388.02 | 325.84 | 393.48 | 325.85 | 400.85 | 325.86 |
| 401.92 | 325.86 | 403.43 | 325.87 | 404.83 | 325.9 | 405.74 | 325.93 | 406.16 | 325.95 |
| 415.87 | 325.95 | 416.05 | 325.93 | 416.6 | 325.92 | 418.5 | 325.93 | 420.94 | 325.92 |
| 424.12 | 325.92 | 426.07 | 325.93 | 427.14 | 325.94 | 429.01 | 325.94 | 430.6 | 325.93 |
| 431.65 | 325.92 | 431.86 | 325.9 | 438.69 | 325.69 | 441.51 | 325.6 | 443.46 | 325.55 |
| 446.21 | 325.5 | 447.7 | 325.47 | 449.16 | 325.47 | 450.63 | 325.48 | 450.74 | 325.49 |
| 451.58 | 325.49 | 455.12 | 325.57 | 457.54 | 325.62 | 457.99 | 325.62 | 460.75 | 325.67 |
| 462.6 | 325.71 | 462.84 | 325.72 | 465.66 | 325.81 | 466.7 | 325.81 | 467.46 | 325.77 |
| 468.22 | 325.72 | 468.83 | 325.69 | 469.29 | 325.71 | 469.48 | 325.7 | 470.36 | 325.71 |
| 470.66 | 325.7 | 472.03 | 325.56 | 472.75 | 325.54 | 473.39 | 325.53 | 474.2 | 325.53 |

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|---|---|---|---|---|---|---|---|---|---|
| 474.9 | 325.54 | 475.37 | 325.54 | 475.81 | 325.57 | 476.71 | 325.6 | 477.75 | 325.64 |
| 478.06 | 325.64 | 479.25 | 325.68 | 482.76 | 325.86 | 485.88 | 325.98 | 487.81 | 326.04 |
| 488.53 | 326.06 | 489.12 | 326.06 | 489.74 | 326.07 | 490.37 | 326.07 | 493.47 | 326.06 |
| 493.95 | 326.06 | 496.02 | 326.09 | 496.92 | 326.1 | 499.29 | 326.1 | 502.22 | 326.09 |
| 503.32 | 326.08 | 504.48 | 326.09 | 506.63 | 326.09 | 508.17 | 326.1 | 510.02 | 326.13 |
| 517.13 | 326.25 | 520.08 | 326.28 | 520.95 | 326.25 | 523.55 | 326.13 | 528.69 | 325.98 |
| 530.61 | 325.96 | 538.38 | 325.75 | 540.36 | 325.7 | 541.67 | 325.68 | 542.29 | 325.68 |
| 542.88 | 325.67 | 543.24 | 325.68 | 544.14 | 325.69 | 545.2 | 325.72 | 545.78 | 325.8 |
| 546.22 | 325.84 | 546.74 | 325.83 | 547.21 | 325.83 | 547.73 | 325.8 | 548.02 | 325.74 |
| 548.46 | 325.74 | 548.94 | 325.77 | 550.16 | 325.86 | 550.89 | 325.94 | 554.06 | 326.17 |
| 554.65 | 326.21 | 555.6 | 326.22 | 559.27 | 326.23 | 560.36 | 326.23 | 563.89 | 326.24 |
| 565.72 | 326.24 | 567.87 | 326.25 | 568.02 | 326.32 | 568.29 | 326.33 | 568.91 | 326.37 |
| 569.44 | 326.39 | 570.16 | 326.4 | 571.01 | 326.42 | 571.95 | 326.42 | 572.94 | 326.43 |
| 573.91 | 326.42 | 575.38 | 326.41 | 578.51 | 326.38 | 579.76 | 326.37 | 583.55 | 326.31 |
| 584.28 | 326.29 | 586.6 | 326.29 | 587.01 | 326.3 | 587.5 | 326.3 | 588.52 | 326.35 |
| 591.74 | 326.53 | 593.65 | 326.74 | 594.35 | 326.81 | 594.68 | 326.85 | 596.45 | 327.13 |
| 597.25 | 327.26 | 599.58 | 327.59 | 600.17 | 327.66 | 600.36 | 327.71 | 601.01 | 327.85 |
| 601.75 | 328.2 | 602.29 | 328.42 | 602.5 | 328.71 | 602.88 | 328.95 | 603.39 | 329.22 |
| 603.6 | 329.36 | 604.06 | 329.55 | 605.21 | 329.98 | 606.04 | 330.31 | 606.56 | 330.53 |
| 606.91 | 330.69 | 607.62 | 330.95 | 610.19 | 331.86 | 610.52 | 331.97 | 612.28 | 332.59 |
| 613.07 | 332.8 | 614.35 | 333.2 | 616.54 | 333.76 | 616.91 | 333.86 | 618.01 | 334.14 |
| 619.27 | 334.47 | 622.61 | 334.49 | 623.75 | 334.49 | 624.6 | 334.5 | 627.75 | 334.51 |
| 630.55 | 334.47 | 630.97 | 334.46 | 642.24 | 334.28 | 646.84 | 334.22 | 647.11 | 334.22 |
| 650.05 | 334.17 | 651.09 | 334.15 | 652.35 | 334.14 | 652.98 | 334.14 | 653.51 | 334.13 |
| 660.45 | 334.24 | 661.61 | 334.26 | 662.68 | 334.26 | 663.37 | 334.27 | 664.32 | 334.27 |
| 665.84 | 334.28 | 666.46 | 334.29 | 667.17 | 334.28 | 668.77 | 334.27 | 669.28 | 334.27 |
| 669.87 | 334.26 | 674.06 | 334.27 | 675.06 | 334.27 | 675.84 | 334.26 | 678.9 | 334.19 |
| 681.8 | 334.14 | 682.26 | 334.13 | 686.71 | 334.05 | 696.66 | 333.93 | 700.71 | 333.91 |
| 705.67 | 333.92 | 706.47 | 333.93 | 708.29 | 333.93 | 708.71 | 333.92 | 712.1 | 333.91 |
| 714.41 | 333.89 | 717.31 | 333.82 | 720.84 | 333.72 | 721.3 | 333.7 | 722.98 | 333.66 |
| 723.61 | 333.63 | 726.07 | 333.53 | 726.16 | 333.52 | 728.35 | 333.44 | 729.02 | 333.45 |
| 730.25 | 333.33 | 730.77 | 333.32 | 731.07 | 333.33 | 731.68 | 333.38 | 732.33 | 333.42 |
| 732.86 | 333.46 | 733.05 | 333.46 | 734.06 | 333.51 | 736.15 | 333.63 | 738 | 333.74 |
| 744.91 | 334.14 | 745.12 | 334.16 | 746.18 | 334.2 | 748.92 | 334.29 | 750.48 | 334.33 |
| 752.05 | 334.38 | 753.84 | 334.46 | 753.93 | 334.46 | 755.52 | 334.53 | 756.09 | 334.56 |
| 758.02 | 334.64 | 758.17 | 334.65 | 761.03 | 334.76 | 764.08 | 334.88 | 767.52 | 335.01 |
| 768.79 | 335.05 | 777 | 335.3 | 779.66 | 335.38 | 781.39 | 335.43 | 782.5 | 335.45 |
| 783.82 | 335.46 | 786.83 | 335.57 | 790.01 | 335.62 | 791.62 | 335.63 | 793.8 | 335.64 |
| 795.63 | 335.66 | 796.14 | 335.66 | 797.17 | 335.67 | 799.12 | 335.67 | 801.82 | 335.69 |
| 802.87 | 335.66 | 803.49 | 335.65 | 806.43 | 335.62 | 806.89 | 335.61 | 807.75 | 335.61 |
| 809.48 | 335.6 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 88.47 | .04 | 594.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 88.47 | 594.35 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 906.713*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.83 | 4.18 | 326.78 | 5.76 | 326.75 | 7.91 | 326.7 | 8.6 | 326.69 |
| 12.08 | 326.65 | 15.27 | 326.62 | 16.32 | 326.62 | 16.95 | 326.6 | 19.18 | 326.54 |
| 19.62 | 326.54 | 21.09 | 326.5 | 26.28 | 326.37 | 28.9 | 326.41 | 29.75 | 326.43 |
| 31.97 | 326.45 | 32.86 | 326.44 | 35.08 | 326.4 | 37.64 | 326.34 | 41.02 | 326.23 |
| 41.23 | 326.22 | 43.98 | 326.13 | 44.22 | 326.13 | 45.53 | 326.11 | 47.42 | 326.09 |
| 47.53 | 326.08 | 49.23 | 326.09 | 49.85 | 326.1 | 50.22 | 326.13 | 50.87 | 326.14 |
| 52.25 | 326.14 | 53.82 | 326.13 | 54.16 | 326.14 | 54.41 | 326.13 | 54.94 | 326.13 |
| 55.62 | 326.11 | 56.47 | 326.11 | 57.23 | 326.09 | 57.75 | 326.09 | 58.71 | 326.05 |
| 59.36 | 326.01 | 60.32 | 325.97 | 61.05 | 325.96 | 61.51 | 325.94 | 62.75 | 325.9 |
| 64 | 325.87 | 66.77 | 325.87 | 67.52 | 325.88 | 71.38 | 325.88 | 74.19 | 325.89 |
| 77.28 | 325.89 | 78.72 | 325.9 | 80.26 | 325.9 | 80.95 | 325.91 | 83.36 | 325.93 |
| 86.27 | 325.93 | 86.43 | 325.94 | 88.13 | 325.95 | 88.66 | 325.95 | 89.05 | 325.96 |
| 91.23 | 325.96 | 92.11 | 325.95 | 92.89 | 325.95 | 93.11 | 325.85 | 93.3 | 325.81 |
| 94.74 | 325.68 | 94.95 | 325.68 | 95.37 | 325.72 | 96.14 | 325.83 | 97.06 | 325.93 |
| 99.69 | 326.03 | 100.01 | 326.03 | 100.24 | 326.05 | 100.89 | 326.06 | 101.5 | 326.06 |
| 102.72 | 326.07 | 103.19 | 326.06 | 106.32 | 326.06 | 107.67 | 326.08 | 108.8 | 326.02 |
| 110.93 | 325.96 | 112.97 | 325.91 | 113.53 | 325.89 | 115.83 | 325.89 | 116.59 | 325.93 |
| 119.73 | 326.06 | 120.26 | 326.08 | 122.37 | 326.12 | 125.37 | 326.14 | 126.86 | 326.14 |
| 127.04 | 326.13 | 128.79 | 326.06 | 129.36 | 326.04 | 130.06 | 326 | 130.86 | 325.94 |
| 132.18 | 325.88 | 143.85 | 325.88 | 144.32 | 325.87 | 146.24 | 325.98 | 146.72 | 326 |
| 147.98 | 326.02 | 149.2 | 326.03 | 149.87 | 326.05 | 152.34 | 326.06 | 153.51 | 326.07 |
| 155.41 | 326.07 | 156.03 | 326.06 | 157.19 | 326.03 | 159.55 | 326 | 160.26 | 325.98 |
| 161.23 | 325.96 | 163.5 | 325.85 | 165.28 | 325.68 | 166.38 | 325.58 | 166.83 | 325.51 |
| 167.51 | 325.49 | 167.94 | 325.54 | 168.76 | 325.66 | 169.79 | 325.8 | 170.13 | 325.84 |
| 170.94 | 325.86 | 171.52 | 325.85 | 172.24 | 325.85 | 173 | 325.84 | 173.49 | 325.82 |
| 174.81 | 325.75 | 176.31 | 325.66 | 177.39 | 325.58 | 178.07 | 325.54 | 179.45 | 325.5 |
| 179.59 | 325.49 | 180.05 | 325.53 | 180.1 | 325.56 | 180.49 | 325.57 | 181.81 | 325.66 |
| 182.1 | 325.69 | 182.83 | 325.7 | 188.6 | 325.77 | 195.38 | 325.73 | 198.16 | 325.72 |
| 199.37 | 325.71 | 200.09 | 325.71 | 201.61 | 325.7 | 204.89 | 325.69 | 206.65 | 325.73 |
| 207.89 | 325.75 | 208.13 | 325.75 | 209.15 | 325.71 | 210.92 | 325.68 | 211.15 | 325.67 |
| 211.21 | 325.52 | 213.39 | 325.45 | 214.53 | 325.53 | 215.99 | 325.66 | 216.71 | 325.69 |
| 216.97 | 325.74 | 217.62 | 325.74 | 218.52 | 325.71 | 219.51 | 325.72 | 220.72 | 325.72 |
| 223.46 | 325.74 | 224.14 | 325.75 | 224.72 | 325.77 | 225.77 | 325.74 | 229.58 | 325.7 |
| 230.92 | 325.64 | 231.82 | 325.59 | 232.9 | 325.58 | 234 | 325.58 | 234.4 | 325.57 |
| 235.51 | 325.57 | 239.61 | 325.55 | 242.85 | 325.53 | 243.42 | 325.54 | 244.16 | 325.52 |
| 245.84 | 325.5 | 246.99 | 325.49 | 252.13 | 325.47 | 253.1 | 325.47 | 255.43 | 325.45 |
| 255.88 | 325.45 | 261.92 | 325.39 | 262.69 | 325.37 | 263.89 | 325.37 | 264.86 | 325.36 |
| 267.19 | 325.36 | 269.05 | 325.4 | 269.47 | 325.4 | 270.74 | 325.38 | 271.51 | 325.38 |
| 272.57 | 325.36 | 273.26 | 325.33 | 273.91 | 325.32 | 274.74 | 325.3 | 276.13 | 325.11 |
| 277.05 | 325.02 | 278.56 | 324.83 | 280.13 | 324.79 | 283.36 | 324.72 | 283.9 | 324.7 |
| 285.21 | 324.68 | 287.33 | 324.68 | 288.56 | 324.67 | 292.65 | 324.63 | 293.02 | 324.62 |
| 295.32 | 324.59 | 296.64 | 324.56 | 296.84 | 324.56 | 298.61 | 324.51 | 300.35 | 324.44 |
| 300.71 | 324.43 | 302.02 | 324.36 | 304.37 | 324.33 | 304.72 | 324.34 | 304.75 | 324.37 |
| 305.16 | 324.4 | 305.89 | 324.4 | 306.85 | 324.41 | 308.41 | 324.46 | 310.24 | 324.58 |
| 313.76 | 324.79 | 315.31 | 324.88 | 318.71 | 324.88 | 319.95 | 324.76 | 322.46 | 324.53 |
| 323.1 | 324.54 | 323.85 | 324.58 | 324.21 | 324.55 | 324.78 | 324.54 | 325.76 | 324.58 |
| 327.8 | 324.51 | 328.01 | 324.5 | 331.01 | 324.57 | 331.15 | 324.56 | 332.2 | 324.53 |

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|---|---|---|---|---|---|---|---|---|---|
| 332.79 | 324.53 | 333.16 | 324.52 | 335.49 | 324.47 | 336.55 | 324.45 | 336.7 | 324.44 |
| 338.39 | 324.44 | 339.06 | 324.45 | 343.03 | 324.53 | 343.49 | 324.59 | 344.64 | 324.67 |
| 348.96 | 324.89 | 354.12 | 324.89 | 356.38 | 324.9 | 364.79 | 324.9 | 365.74 | 324.79 |
| 365.96 | 324.78 | 366.66 | 324.78 | 369.26 | 324.77 | 369.28 | 324.76 | 370.07 | 324.76 |
| 370.51 | 324.75 | 371.67 | 324.74 | 377.91 | 324.93 | 395.29 | 325.52 | 401.54 | 325.52 |
| 406.74 | 325.53 | 413.76 | 325.54 | 414.79 | 325.54 | 417.55 | 325.58 | 418.42 | 325.61 |
| 418.82 | 325.63 | 428.07 | 325.63 | 428.25 | 325.61 | 430.58 | 325.61 | 432.9 | 325.6 |
| 434.17 | 325.6 | 435.45 | 325.61 | 435.93 | 325.61 | 437.79 | 325.62 | 440.59 | 325.62 |
| 442.11 | 325.61 | 442.94 | 325.61 | 443.31 | 325.59 | 449.81 | 325.4 | 452.49 | 325.32 |
| 452.57 | 325.31 | 453.97 | 325.27 | 454.36 | 325.27 | 456.97 | 325.22 | 458.4 | 325.19 |
| 459.78 | 325.2 | 461.19 | 325.2 | 461.81 | 325.22 | 462.45 | 325.22 | 465.46 | 325.29 |
| 467.77 | 325.34 | 468.2 | 325.34 | 470.82 | 325.39 | 472.59 | 325.43 | 472.82 | 325.43 |
| 475.5 | 325.52 | 476.5 | 325.52 | 477.22 | 325.49 | 478.53 | 325.4 | 478.96 | 325.42 |
| 479.98 | 325.43 | 480.26 | 325.42 | 481.27 | 325.31 | 481.57 | 325.29 | 482.15 | 325.27 |
| 482.87 | 325.26 | 483.64 | 325.26 | 484.75 | 325.27 | 485.17 | 325.3 | 487.32 | 325.37 |
| 487.94 | 325.38 | 488.45 | 325.41 | 491.79 | 325.57 | 494.76 | 325.69 | 496.6 | 325.75 |
| 496.78 | 325.75 | 498.44 | 325.78 | 499.04 | 325.78 | 502.45 | 325.77 | 505.28 | 325.8 |
| 506.07 | 325.8 | 507.54 | 325.81 | 510.33 | 325.8 | 511.25 | 325.79 | 512.49 | 325.79 |
| 512.8 | 325.8 | 516 | 325.8 | 517.76 | 325.84 | 521.72 | 325.91 | 524.53 | 325.95 |
| 526.39 | 325.97 | 526.95 | 325.98 | 527.63 | 325.98 | 528.17 | 325.96 | 530.01 | 325.87 |
| 530.65 | 325.85 | 535.55 | 325.71 | 537.37 | 325.69 | 543.02 | 325.54 | 544.77 | 325.49 |
| 545.61 | 325.48 | 546.66 | 325.45 | 547.91 | 325.43 | 548.5 | 325.43 | 549.06 | 325.42 |
| 549.4 | 325.43 | 550.27 | 325.44 | 551.27 | 325.47 | 551.82 | 325.55 | 552.24 | 325.58 |
| 553.19 | 325.57 | 553.69 | 325.55 | 553.96 | 325.49 | 554.38 | 325.49 | 554.84 | 325.51 |
| 556 | 325.6 | 556.7 | 325.68 | 559.71 | 325.89 | 559.75 | 325.9 | 560.49 | 325.94 |
| 561.18 | 325.94 | 564.68 | 325.95 | 565.71 | 325.96 | 569.77 | 325.96 | 570.8 | 325.97 |
| 572.87 | 325.97 | 573.01 | 326.04 | 574.37 | 326.1 | 575.05 | 326.12 | 576.75 | 326.14 |
| 578.62 | 326.14 | 580.96 | 326.12 | 583 | 326.11 | 587.8 | 326.03 | 588.5 | 326.02 |
| 590.71 | 326.02 | 591.1 | 326.03 | 591.57 | 326.03 | 595.61 | 326.24 | 597.42 | 326.46 |
| 598.09 | 326.53 | 598.41 | 326.58 | 600.13 | 326.88 | 600.91 | 327.01 | 603.16 | 327.36 |
| 603.74 | 327.43 | 603.92 | 327.49 | 604.55 | 327.63 | 605.28 | 327.98 | 605.79 | 328.21 |
| 606 | 328.51 | 606.37 | 328.77 | 606.86 | 329.05 | 607.07 | 329.18 | 607.51 | 329.37 |
| 607.96 | 329.53 | 608.63 | 329.78 | 609.44 | 330.09 | 610.38 | 330.5 | 611.98 | 331.05 |
| 613.46 | 331.55 | 615.43 | 332.23 | 616.25 | 332.44 | 616.76 | 332.59 | 617.5 | 332.82 |
| 619.63 | 333.35 | 619.99 | 333.45 | 622.27 | 334.01 | 625.51 | 334.03 | 627.44 | 334.05 |
| 630.5 | 334.07 | 633.21 | 334.03 | 633.63 | 334.02 | 644.56 | 333.86 | 649.02 | 333.81 |
| 649.28 | 333.8 | 649.81 | 333.8 | 652.13 | 333.76 | 654.37 | 333.74 | 654.69 | 333.73 |
| 655.49 | 333.73 | 662.23 | 333.84 | 664.39 | 333.86 | 665.06 | 333.87 | 665.98 | 333.87 |
| 667.46 | 333.88 | 667.96 | 333.89 | 668.06 | 333.88 | 668.74 | 333.88 | 670.3 | 333.87 |
| 670.8 | 333.86 | 671.37 | 333.86 | 675.43 | 333.87 | 676.4 | 333.87 | 677.15 | 333.86 |
| 680.12 | 333.8 | 682.94 | 333.75 | 683.39 | 333.74 | 687.7 | 333.67 | 697.36 | 333.58 |
| 701.29 | 333.56 | 706.1 | 333.59 | 706.88 | 333.6 | 709.05 | 333.6 | 712.34 | 333.59 |
| 714.58 | 333.58 | 716.55 | 333.54 | 717.4 | 333.52 | 720.82 | 333.43 | 721.27 | 333.41 |
| 722.9 | 333.37 | 723.5 | 333.35 | 725.9 | 333.25 | 725.99 | 333.25 | 727.55 | 333.18 |
| 728.4 | 333.17 | 728.75 | 333.18 | 729.95 | 333.06 | 730.45 | 333.06 | 730.75 | 333.07 |
| 732.12 | 333.16 | 733.64 | 333.24 | 735.67 | 333.35 | 737.47 | 333.46 | 744.17 | 333.86 |
| 745.41 | 333.91 | 748.07 | 334.01 | 749.58 | 334.04 | 752.84 | 334.17 | 752.93 | 334.18 |
| 754.46 | 334.25 | 755.02 | 334.28 | 756.89 | 334.36 | 757.04 | 334.36 | 759.82 | 334.47 |
| 762.78 | 334.59 | 764.81 | 334.67 | 767.34 | 334.75 | 768.95 | 334.79 | 775.31 | 334.99 |
| 777.89 | 335.06 | 779.57 | 335.11 | 781.92 | 335.13 | 784.85 | 335.24 | 787.93 | 335.28 |
| 789.09 | 335.29 | 791.61 | 335.29 | 793.38 | 335.3 | 793.88 | 335.3 | 794.88 | 335.31 |
| 795.24 | 335.32 | 796.77 | 335.31 | 799.39 | 335.33 | 800.14 | 335.3 | 803.86 | 335.26 |
| 806.82 | 335.24 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 92.11 | .04 | 598.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 92.11 | 598.09 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 886.999*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.54 | 4.34 | 326.49 | 5.98 | 326.46 | 8.23 | 326.41 | 8.94 | 326.39 |
| 12.56 | 326.36 | 15.88 | 326.33 | 16.97 | 326.33 | 17.62 | 326.31 | 19.93 | 326.25 |
| 20.4 | 326.25 | 21.93 | 326.21 | 26.49 | 326.1 | 26.6 | 326.09 | 27.33 | 326.08 |
| 30.05 | 326.13 | 30.93 | 326.15 | 33.24 | 326.18 | 34.16 | 326.17 | 36.46 | 326.13 |
| 39.13 | 326.07 | 42.65 | 325.96 | 42.86 | 325.95 | 45.72 | 325.86 | 45.97 | 325.85 |
| 47.34 | 325.84 | 47.55 | 325.83 | 49.41 | 325.81 | 51.83 | 325.84 | 52.2 | 325.86 |
| 52.88 | 325.88 | 53.78 | 325.88 | 54.31 | 325.89 | 55.96 | 325.88 | 56.3 | 325.89 |
| 56.56 | 325.88 | 57.11 | 325.88 | 59.5 | 325.85 | 60.67 | 325.82 | 61.71 | 325.76 |
| 62.71 | 325.72 | 63.46 | 325.71 | 63.94 | 325.69 | 66.54 | 325.61 | 69.26 | 325.61 |
| 69.31 | 325.62 | 74.2 | 325.62 | 77.13 | 325.63 | 79.22 | 325.63 | 80.34 | 325.64 |
| 83.44 | 325.64 | 84.15 | 325.65 | 86.66 | 325.67 | 89.85 | 325.67 | 91.62 | 325.69 |
| 92.87 | 325.69 | 93.6 | 325.7 | 94.08 | 325.69 | 95.76 | 325.69 | 96.59 | 325.69 |
| 96.82 | 325.57 | 97.03 | 325.53 | 98.7 | 325.39 | 99.05 | 325.41 | 100.07 | 325.55 |
| 101.04 | 325.67 | 102.15 | 325.71 | 103.86 | 325.78 | 104.2 | 325.78 | 104.64 | 325.81 |
| 105.15 | 325.82 | 108.25 | 325.82 | 109.8 | 325.81 | 110.74 | 325.81 | 110.95 | 325.82 |
| 112.39 | 325.84 | 113.19 | 325.79 | 113.6 | 325.78 | 115.88 | 325.71 | 118.06 | 325.65 |
| 118.66 | 325.63 | 121.12 | 325.63 | 121.93 | 325.67 | 125.28 | 325.82 | 125.86 | 325.83 |
| 127.49 | 325.88 | 128.11 | 325.88 | 131.32 | 325.91 | 132.92 | 325.91 | 134.97 | 325.82 |
| 136.34 | 325.75 | 137.19 | 325.69 | 138.61 | 325.62 | 151.58 | 325.62 | 153.64 | 325.73 |
| 154.73 | 325.77 | 155.5 | 325.77 | 156.81 | 325.79 | 157.52 | 325.81 | 160.16 | 325.83 |
| 163.44 | 325.83 | 164.11 | 325.82 | 165.35 | 325.79 | 167.87 | 325.75 | 168.62 | 325.74 |
| 170.3 | 325.69 | 172.09 | 325.59 | 174 | 325.4 | 175.17 | 325.3 | 175.66 | 325.23 |
| 176.38 | 325.2 | 176.84 | 325.25 | 177.72 | 325.39 | 178.82 | 325.54 | 179.19 | 325.58 |
| 180.05 | 325.6 | 180.67 | 325.6 | 181.97 | 325.58 | 182.25 | 325.58 | 182.78 | 325.56 |
| 185.79 | 325.39 | 186.66 | 325.32 | 187.3 | 325.28 | 187.68 | 325.27 | 188.36 | 325.24 |
| 189.15 | 325.22 | 189.3 | 325.21 | 189.79 | 325.26 | 189.94 | 325.29 | 190.11 | 325.29 |
| 191.68 | 325.39 | 191.98 | 325.43 | 192.76 | 325.43 | 198.93 | 325.51 | 206.18 | 325.48 |
| 209.15 | 325.47 | 210.45 | 325.47 | 211.22 | 325.46 | 212.85 | 325.46 | 216.36 | 325.45 |
| 218.23 | 325.49 | 219.57 | 325.51 | 219.82 | 325.51 | 220.91 | 325.47 | 222.81 | 325.44 |
| 223.05 | 325.43 | 223.11 | 325.27 | 224.43 | 325.22 | 225.44 | 325.19 | 226.66 | 325.28 |
| 228.23 | 325.41 | 228.99 | 325.45 | 229.27 | 325.5 | 229.46 | 325.51 | 230.93 | 325.48 |
| 231.98 | 325.48 | 234.97 | 325.5 | 236.21 | 325.51 | 236.93 | 325.52 | 237.56 | 325.54 |
| 238.2 | 325.53 | 238.68 | 325.51 | 242.75 | 325.47 | 244.19 | 325.4 | 245.15 | 325.35 |
| 246.3 | 325.34 | 248.18 | 325.34 | 249.1 | 325.33 | 253.48 | 325.31 | 255.26 | 325.3 |
| 256.47 | 325.3 | 256.74 | 325.29 | 257.31 | 325.31 | 257.88 | 325.29 | 258.34 | 325.29 |

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|---|---|---|---|---|---|---|---|---|---|
| 260.14 | 325.27 | 261.37 | 325.26 | 266.87 | 325.24 | 267.9 | 325.24 | 270.4 | 325.22 |
| 270.87 | 325.22 | 277.34 | 325.16 | 278.15 | 325.14 | 279.44 | 325.14 | 280.48 | 325.13 |
| 282.97 | 325.13 | 284.96 | 325.18 | 285.41 | 325.18 | 286.76 | 325.16 | 287.59 | 325.16 |
| 288.72 | 325.14 | 289.46 | 325.11 | 290.41 | 325.1 | 291.04 | 325.08 | 291.87 | 324.96 |
| 292.54 | 324.87 | 293.37 | 324.8 | 295.12 | 324.58 | 300.26 | 324.46 | 300.84 | 324.44 |
| 302.24 | 324.42 | 304.51 | 324.42 | 305.82 | 324.41 | 310.19 | 324.37 | 310.6 | 324.36 |
| 313.05 | 324.33 | 314.46 | 324.3 | 314.67 | 324.3 | 316.56 | 324.25 | 318.43 | 324.19 |
| 318.82 | 324.18 | 320.21 | 324.11 | 321.2 | 324.1 | 322.73 | 324.08 | 323.06 | 324.09 |
| 323.09 | 324.12 | 323.33 | 324.14 | 324.17 | 324.14 | 325.09 | 324.16 | 326.56 | 324.2 |
| 328.31 | 324.32 | 331.34 | 324.49 | 331.65 | 324.51 | 333.12 | 324.59 | 334.79 | 324.59 |
| 335.61 | 324.6 | 336.35 | 324.6 | 339.92 | 324.27 | 340.53 | 324.28 | 341.24 | 324.32 |
| 341.58 | 324.29 | 342.12 | 324.28 | 343.06 | 324.32 | 344.99 | 324.26 | 345.2 | 324.25 |
| 348.04 | 324.31 | 348.18 | 324.3 | 350.09 | 324.26 | 350.99 | 324.25 | 352.3 | 324.22 |
| 352.52 | 324.21 | 353.36 | 324.2 | 353.45 | 324.19 | 355.05 | 324.19 | 355.3 | 324.2 |
| 355.97 | 324.2 | 356.61 | 324.22 | 359.47 | 324.27 | 359.9 | 324.33 | 361 | 324.4 |
| 365.1 | 324.61 | 373.51 | 324.61 | 376.06 | 324.62 | 380.14 | 324.62 | 381.04 | 324.52 |
| 381.25 | 324.51 | 381.92 | 324.5 | 384.39 | 324.5 | 384.41 | 324.49 | 386.68 | 324.47 |
| 392.61 | 324.65 | 409.12 | 325.2 | 413.9 | 325.21 | 415.07 | 325.21 | 420 | 325.22 |
| 426.68 | 325.23 | 427.65 | 325.23 | 429.02 | 325.24 | 430.28 | 325.26 | 431.11 | 325.29 |
| 431.49 | 325.31 | 434.81 | 325.32 | 435.81 | 325.32 | 440.28 | 325.31 | 440.94 | 325.29 |
| 442.66 | 325.3 | 444.86 | 325.29 | 447.74 | 325.29 | 449.51 | 325.3 | 450.48 | 325.31 |
| 452.17 | 325.31 | 453.61 | 325.3 | 454.4 | 325.3 | 454.75 | 325.28 | 460.93 | 325.1 |
| 464.88 | 324.99 | 465.25 | 324.99 | 467.74 | 324.94 | 469.09 | 324.92 | 470.41 | 324.92 |
| 471.84 | 324.93 | 472.95 | 324.95 | 473.41 | 324.95 | 475.8 | 325.01 | 478 | 325.06 |
| 478.41 | 325.06 | 480.9 | 325.1 | 482.57 | 325.14 | 482.8 | 325.15 | 485.34 | 325.23 |
| 486.29 | 325.23 | 486.98 | 325.2 | 487.66 | 325.15 | 488.22 | 325.12 | 488.63 | 325.14 |
| 489.23 | 325.15 | 489.87 | 325.13 | 490.16 | 325.11 | 490.83 | 325.04 | 491.11 | 325.02 |
| 491.76 | 325 | 492.35 | 324.99 | 493.08 | 324.99 | 494.13 | 325 | 494.76 | 325.04 |
| 496.29 | 325.09 | 496.57 | 325.09 | 497.65 | 325.13 | 500.83 | 325.28 | 501.77 | 325.33 |
| 503.64 | 325.4 | 505.39 | 325.45 | 505.57 | 325.46 | 506.05 | 325.46 | 507.14 | 325.48 |
| 507.72 | 325.48 | 510.52 | 325.47 | 510.95 | 325.48 | 513.64 | 325.51 | 518.44 | 325.51 |
| 519.32 | 325.5 | 520.79 | 325.5 | 521.56 | 325.51 | 523.83 | 325.51 | 529.26 | 325.61 |
| 531.94 | 325.65 | 533.7 | 325.68 | 534.23 | 325.68 | 534.61 | 325.69 | 535.39 | 325.66 |
| 537.14 | 325.58 | 537.75 | 325.56 | 542.4 | 325.43 | 543.06 | 325.42 | 544.14 | 325.42 |
| 549.5 | 325.28 | 551.17 | 325.23 | 551.96 | 325.22 | 554.15 | 325.18 | 554.71 | 325.18 |
| 555.24 | 325.17 | 555.57 | 325.18 | 556.76 | 325.19 | 557.35 | 325.22 | 557.87 | 325.29 |
| 558.27 | 325.32 | 559.16 | 325.31 | 559.64 | 325.29 | 559.9 | 325.24 | 560.44 | 325.24 |
| 561.84 | 325.34 | 562.5 | 325.41 | 565.9 | 325.66 | 566.76 | 325.66 | 570.08 | 325.68 |
| 574.27 | 325.68 | 574.92 | 325.69 | 575.92 | 325.69 | 577.86 | 325.7 | 578.01 | 325.76 |
| 579.29 | 325.82 | 579.94 | 325.83 | 580.71 | 325.85 | 581.55 | 325.85 | 582.46 | 325.86 |
| 583.34 | 325.85 | 584.66 | 325.85 | 585.56 | 325.84 | 587.49 | 325.83 | 588.63 | 325.81 |
| 592.72 | 325.75 | 595.19 | 325.75 | 595.64 | 325.76 | 596.56 | 325.8 | 599.47 | 325.96 |
| 601.83 | 326.26 | 602.14 | 326.31 | 603.81 | 326.62 | 604.57 | 326.75 | 606.75 | 327.13 |
| 607.31 | 327.2 | 607.49 | 327.26 | 608.1 | 327.42 | 608.8 | 327.77 | 609.3 | 327.99 |
| 609.5 | 328.32 | 609.85 | 328.58 | 610.34 | 328.87 | 610.54 | 329 | 610.97 | 329.19 |
| 611.4 | 329.34 | 612.05 | 329.58 | 612.83 | 329.88 | 613.75 | 330.26 | 614.31 | 330.46 |
| 616.74 | 331.25 | 618.7 | 331.9 | 619.44 | 332.08 | 620.64 | 332.44 | 622.71 | 332.93 |
| 623.06 | 333.03 | 624.09 | 333.28 | 625.27 | 333.56 | 628.41 | 333.58 | 630.28 | 333.6 |
| 633.25 | 333.62 | 635.88 | 333.58 | 636.28 | 333.57 | 646.88 | 333.44 | 651.2 | 333.4 |
| 651.96 | 333.38 | 654.22 | 333.35 | 656.39 | 333.33 | 657.47 | 333.33 | 664 | 333.44 |
| 666.1 | 333.46 | 666.75 | 333.47 | 667.64 | 333.47 | 668.94 | 333.48 | 670.32 | 333.48 |
| 671.83 | 333.47 | 672.31 | 333.46 | 672.87 | 333.46 | 676.81 | 333.48 | 677.16 | 333.47 |
| 677.74 | 333.47 | 678.47 | 333.46 | 681.35 | 333.41 | 684.08 | 333.37 | 684.51 | 333.36 |
| 688.7 | 333.29 | 698.06 | 333.22 | 699.8 | 333.22 | 701.87 | 333.21 | 706.53 | 333.26 |
| 707.29 | 333.26 | 709 | 333.27 | 714.75 | 333.27 | 716.66 | 333.24 | 717.48 | 333.22 |
| 720.8 | 333.13 | 722.81 | 333.08 | 723.4 | 333.06 | 725.72 | 332.97 | 725.81 | 332.97 |
| 727.32 | 332.91 | 727.71 | 332.89 | 728.49 | 332.9 | 729.65 | 332.79 | 730.14 | 332.79 |
| 730.43 | 332.8 | 731.85 | 332.9 | 732.28 | 332.91 | 733.23 | 332.97 | 735.2 | 333.08 |
| 736.94 | 333.18 | 743.43 | 333.57 | 744.63 | 333.63 | 747.21 | 333.72 | 748.68 | 333.76 |
| 751.84 | 333.89 | 752.73 | 333.93 | 753.41 | 333.97 | 753.95 | 333.99 | 755.76 | 334.07 |
| 755.91 | 334.08 | 758.6 | 334.19 | 761.47 | 334.29 | 763.45 | 334.37 | 765.89 | 334.45 |
| 767.45 | 334.49 | 773.62 | 334.68 | 776.12 | 334.75 | 777.75 | 334.79 | 780.03 | 334.81 |
| 782.86 | 334.91 | 786.97 | 334.95 | 789.42 | 334.94 | 791.14 | 334.95 | 791.62 | 334.95 |
| 792.94 | 334.96 | 794.42 | 334.95 | 796.96 | 334.96 | 797.69 | 334.94 | 801.3 | 334.9 |
| 804.17 | 334.88 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 95.76 | .04 | 601.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 95.76 | 601.83 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 867.285*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.25 | 3.59 | 326.21 | 4.51 | 326.19 | 6.07 | 326.17 | 6.67 | 326.15 |
| 8.54 | 326.12 | 9.28 | 326.1 | 13.04 | 326.06 | 16.48 | 326.04 | 17.61 | 326.04 |
| 18.29 | 326.02 | 20.69 | 325.96 | 21.17 | 325.96 | 22.76 | 325.92 | 25.34 | 325.86 |
| 27.5 | 325.8 | 28.37 | 325.79 | 32.11 | 325.87 | 34.5 | 325.91 | 35.46 | 325.9 |
| 37.85 | 325.86 | 40.62 | 325.8 | 44.27 | 325.69 | 44.49 | 325.68 | 47.46 | 325.58 |
| 47.72 | 325.58 | 49.14 | 325.56 | 49.36 | 325.56 | 51.29 | 325.54 | 53.12 | 325.56 |
| 53.8 | 325.57 | 54.19 | 325.6 | 54.66 | 325.61 | 55.09 | 325.63 | 58.09 | 325.63 |
| 58.72 | 325.64 | 60.02 | 325.62 | 61.76 | 325.6 | 62.32 | 325.6 | 62.68 | 325.59 |
| 63.36 | 325.55 | 64.65 | 325.49 | 65.33 | 325.47 | 65.88 | 325.46 | 66.38 | 325.44 |
| 67.72 | 325.4 | 69.07 | 325.35 | 71.89 | 325.36 | 75.77 | 325.36 | 77.03 | 325.37 |
| 82.24 | 325.37 | 83.4 | 325.38 | 86.61 | 325.38 | 87.02 | 325.39 | 89.96 | 325.4 |
| 92.14 | 325.4 | 93.27 | 325.41 | 95.1 | 325.42 | 95.68 | 325.42 | 96.1 | 325.43 |
| 98.45 | 325.43 | 99.41 | 325.42 | 100.27 | 325.43 | 100.54 | 325.3 | 100.76 | 325.26 |
| 101.11 | 325.22 | 102.14 | 325.14 | 102.49 | 325.1 | 103.11 | 325.15 | 103.99 | 325.28 |
| 105.03 | 325.41 | 106.21 | 325.45 | 108.04 | 325.52 | 108.4 | 325.53 | 108.86 | 325.56 |
| 109.4 | 325.57 | 115.58 | 325.57 | 117.07 | 325.6 | 117.12 | 325.59 | 117.75 | 325.56 |
| 117.96 | 325.54 | 118.41 | 325.53 | 120.83 | 325.46 | 123.79 | 325.37 | 126.41 | 325.37 |
| 127.28 | 325.42 | 130.84 | 325.57 | 131.45 | 325.59 | 133.19 | 325.64 | 133.85 | 325.65 |
| 137.28 | 325.67 | 138.97 | 325.67 | 141.16 | 325.58 | 141.81 | 325.55 | 142.61 | 325.5 |
| 143.52 | 325.43 | 145.03 | 325.36 | 158.85 | 325.36 | 161.04 | 325.48 | 162.19 | 325.52 |
| 165.17 | 325.56 | 167.98 | 325.59 | 171.47 | 325.59 | 172.18 | 325.58 | 173.5 | 325.55 |
| 176.19 | 325.51 | 176.99 | 325.49 | 177.62 | 325.48 | 178.78 | 325.44 | 180.68 | 325.33 |
| 182.72 | 325.13 | 183.97 | 325.02 | 184.48 | 324.94 | 185.27 | 324.92 | 185.75 | 324.97 |

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|---|---|---|---|---|---|---|---|---|---|
| 186.68 | 325.11 | 187.85 | 325.28 | 188.24 | 325.33 | 189.16 | 325.35 | 189.82 | 325.35 |
| 191.2 | 325.33 | 191.51 | 325.33 | 193.57 | 325.22 | 195.27 | 325.12 | 196.2 | 325.05 |
| 196.51 | 325.02 | 196.88 | 325 | 197.28 | 324.99 | 198 | 324.96 | 198.85 | 324.94 |
| 199.01 | 324.93 | 199.53 | 324.98 | 199.59 | 325 | 200.59 | 325.05 | 201.87 | 325.16 |
| 202.23 | 325.17 | 202.69 | 325.17 | 209.26 | 325.26 | 216.98 | 325.24 | 220.15 | 325.22 |
| 222.35 | 325.22 | 224.08 | 325.21 | 227.82 | 325.2 | 229.82 | 325.25 | 231.24 | 325.27 |
| 231.74 | 325.27 | 232.32 | 325.24 | 232.67 | 325.23 | 234.69 | 325.19 | 234.94 | 325.18 |
| 235.02 | 325.01 | 236.42 | 324.95 | 237.49 | 324.93 | 238.79 | 325.02 | 239.19 | 325.06 |
| 240.46 | 325.17 | 241.27 | 325.21 | 241.65 | 325.27 | 242.31 | 325.27 | 243.33 | 325.24 |
| 244.46 | 325.24 | 245.84 | 325.25 | 247.64 | 325.26 | 248.96 | 325.28 | 249.32 | 325.29 |
| 249.73 | 325.29 | 250.4 | 325.31 | 250.61 | 325.3 | 251.08 | 325.3 | 251.59 | 325.28 |
| 255.93 | 325.24 | 257.46 | 325.17 | 258.48 | 325.12 | 259.71 | 325.11 | 260.52 | 325.1 |
| 261.71 | 325.1 | 262.68 | 325.09 | 267.35 | 325.07 | 269.25 | 325.07 | 270.54 | 325.06 |
| 271.04 | 325.06 | 271.69 | 325.07 | 272.53 | 325.05 | 274.44 | 325.03 | 275.75 | 325.02 |
| 281.6 | 325 | 282.7 | 325 | 285.37 | 324.99 | 285.87 | 324.98 | 292.75 | 324.93 |
| 294.45 | 324.91 | 295 | 324.91 | 296.1 | 324.9 | 297.09 | 324.9 | 298.75 | 324.91 |
| 300.42 | 324.96 | 301.34 | 324.96 | 302.79 | 324.95 | 304.41 | 324.93 | 306.4 | 324.88 |
| 306.67 | 324.88 | 307.35 | 324.86 | 308.23 | 324.73 | 308.94 | 324.64 | 309.83 | 324.56 |
| 311.69 | 324.32 | 317.16 | 324.2 | 317.78 | 324.18 | 320.12 | 324.15 | 320.91 | 324.16 |
| 321.69 | 324.16 | 323.08 | 324.15 | 327.74 | 324.11 | 328.17 | 324.1 | 330.78 | 324.07 |
| 332.28 | 324.04 | 332.51 | 324.04 | 336.51 | 323.94 | 336.92 | 323.92 | 338.41 | 323.86 |
| 339.46 | 323.85 | 341.23 | 323.84 | 341.4 | 323.85 | 341.65 | 323.89 | 342.45 | 323.89 |
| 344.72 | 323.94 | 346.37 | 324.05 | 349.25 | 324.21 | 349.54 | 324.23 | 350.94 | 324.31 |
| 354 | 324.31 | 357.38 | 324.01 | 357.95 | 324.02 | 358.63 | 324.06 | 358.96 | 324.03 |
| 359.47 | 324.02 | 360.35 | 324.06 | 362.18 | 324 | 362.38 | 323.99 | 365.07 | 324.05 |
| 365.95 | 324.02 | 366.68 | 324.02 | 367.87 | 323.99 | 369.11 | 323.97 | 369.32 | 323.96 |
| 370.11 | 323.95 | 370.2 | 323.94 | 371.34 | 323.94 | 371.51 | 323.93 | 372.33 | 323.95 |
| 373.2 | 323.96 | 375.9 | 324.01 | 376.32 | 324.06 | 377.35 | 324.14 | 381.24 | 324.32 |
| 382.42 | 324.33 | 389.2 | 324.33 | 391.62 | 324.34 | 395.5 | 324.34 | 396.35 | 324.25 |
| 396.55 | 324.24 | 397.18 | 324.23 | 399.54 | 324.22 | 400.25 | 324.21 | 401.69 | 324.2 |
| 407.01 | 324.36 | 422.96 | 324.88 | 427.48 | 324.89 | 428.59 | 324.89 | 433.27 | 324.9 |
| 439.59 | 324.91 | 440.51 | 324.91 | 443 | 324.95 | 443.79 | 324.97 | 444.15 | 324.99 |
| 447.3 | 325 | 452.48 | 325 | 452.64 | 324.98 | 454.74 | 324.98 | 456.83 | 324.97 |
| 457.97 | 324.98 | 459.55 | 324.98 | 461.23 | 324.99 | 462.14 | 325 | 463.75 | 324.99 |
| 465.86 | 324.99 | 466.2 | 324.97 | 472.06 | 324.81 | 475.8 | 324.7 | 476.65 | 324.69 |
| 479.78 | 324.64 | 481.03 | 324.65 | 482.3 | 324.65 | 482.32 | 324.66 | 483.11 | 324.66 |
| 483.44 | 324.67 | 486.14 | 324.73 | 488.23 | 324.77 | 488.61 | 324.78 | 490.97 | 324.82 |
| 492.56 | 324.86 | 492.77 | 324.86 | 495.19 | 324.94 | 496.08 | 324.94 | 496.74 | 324.91 |
| 497.91 | 324.84 | 498.3 | 324.86 | 498.47 | 324.85 | 498.87 | 324.87 | 499.48 | 324.85 |
| 500.65 | 324.75 | 501.27 | 324.72 | 502.51 | 324.72 | 503.51 | 324.73 | 504.11 | 324.77 |
| 504.67 | 324.78 | 505.83 | 324.82 | 506.13 | 324.82 | 506.85 | 324.85 | 509.86 | 325 |
| 510.75 | 325.04 | 512.53 | 325.1 | 514.19 | 325.16 | 514.81 | 325.17 | 515.31 | 325.17 |
| 515.84 | 325.18 | 519.45 | 325.18 | 522 | 325.21 | 522.71 | 325.21 | 524.04 | 325.22 |
| 526.55 | 325.21 | 528.78 | 325.21 | 529.5 | 325.22 | 531.66 | 325.22 | 536.81 | 325.32 |
| 539.34 | 325.36 | 541.87 | 325.39 | 542.62 | 325.37 | 544.27 | 325.29 | 544.85 | 325.27 |
| 549.26 | 325.16 | 550.9 | 325.14 | 555.98 | 325.02 | 556.96 | 325 | 557.57 | 324.98 |
| 558.32 | 324.97 | 560.39 | 324.93 | 560.92 | 324.93 | 561.42 | 324.92 | 561.73 | 324.93 |
| 562.86 | 324.94 | 563.42 | 324.97 | 563.91 | 325.03 | 564.29 | 325.06 | 564.87 | 325.06 |
| 565.47 | 325.04 | 565.84 | 324.99 | 566.35 | 324.99 | 567.67 | 325.08 | 568.3 | 325.15 |
| 571.01 | 325.34 | 571.52 | 325.38 | 572.33 | 325.38 | 575.49 | 325.4 | 576.42 | 325.4 |
| 579.45 | 325.41 | 581.02 | 325.41 | 582.86 | 325.42 | 583 | 325.48 | 584.21 | 325.54 |
| 586.36 | 325.57 | 589.3 | 325.57 | 590.15 | 325.55 | 591.99 | 325.55 | 593.06 | 325.54 |
| 596.94 | 325.48 | 599.28 | 325.48 | 599.7 | 325.49 | 600.58 | 325.53 | 603.34 | 325.68 |
| 605.57 | 325.98 | 605.88 | 326.03 | 607.49 | 326.36 | 608.22 | 326.5 | 610.34 | 326.89 |
| 610.88 | 326.98 | 611.05 | 327.04 | 611.64 | 327.2 | 612.32 | 327.55 | 612.8 | 327.78 |
| 613 | 328.13 | 613.34 | 328.4 | 613.81 | 328.69 | 614 | 328.83 | 614.42 | 329.01 |
| 614.84 | 329.15 | 616.23 | 329.66 | 617.11 | 330.03 | 617.66 | 330.21 | 618.62 | 330.51 |
| 620.01 | 330.95 | 620.3 | 331.05 | 621.85 | 331.54 | 622.63 | 331.73 | 623.1 | 331.86 |
| 623.79 | 332.06 | 625.79 | 332.52 | 626.13 | 332.61 | 627.13 | 332.84 | 628.28 | 333.1 |
| 632.36 | 333.14 | 633.13 | 333.15 | 636 | 333.17 | 638.55 | 333.14 | 638.93 | 333.13 |
| 649.19 | 333.02 | 653.38 | 332.98 | 654.12 | 332.97 | 657.55 | 332.94 | 658.4 | 332.93 |
| 659.46 | 332.93 | 665.78 | 333.04 | 667.81 | 333.06 | 668.44 | 333.06 | 668.66 | 333.07 |
| 669.31 | 333.07 | 670.56 | 333.08 | 671.89 | 333.08 | 673.35 | 333.07 | 673.82 | 333.06 |
| 674.36 | 333.06 | 678.18 | 333.08 | 678.52 | 333.07 | 679.08 | 333.07 | 682.58 | 333.02 |
| 685.23 | 332.98 | 685.64 | 332.97 | 689.69 | 332.92 | 698.76 | 332.87 | 700.44 | 332.86 |
| 702.45 | 332.86 | 707.7 | 332.93 | 709.73 | 332.94 | 712.82 | 332.95 | 714.92 | 332.95 |
| 717.57 | 332.92 | 721.2 | 332.83 | 722.73 | 332.79 | 723.3 | 332.78 | 725.54 | 332.69 |
| 725.63 | 332.69 | 727.62 | 332.61 | 728.23 | 332.62 | 728.86 | 332.57 | 729.35 | 332.52 |
| 729.53 | 332.53 | 729.82 | 332.52 | 730.1 | 332.53 | 731.38 | 332.62 | 731.9 | 332.64 |
| 732.82 | 332.69 | 734.72 | 332.8 | 736.41 | 332.91 | 742.7 | 333.29 | 743.86 | 333.34 |
| 746.36 | 333.44 | 747.78 | 333.48 | 750.84 | 333.61 | 750.92 | 333.61 | 752.36 | 333.68 |
| 752.89 | 333.71 | 754.64 | 333.79 | 754.78 | 333.79 | 757.38 | 333.9 | 762.08 | 334.07 |
| 763.3 | 334.12 | 765.96 | 334.19 | 771.93 | 334.37 | 775.93 | 334.47 | 776.94 | 334.48 |
| 778.13 | 334.48 | 780.88 | 334.58 | 783.78 | 334.61 | 785.24 | 334.61 | 787.23 | 334.6 |
| 788.89 | 334.6 | 789.36 | 334.59 | 790.64 | 334.6 | 791.66 | 334.59 | 792.08 | 334.59 |
| 794.53 | 334.6 | 795.24 | 334.58 | 798.73 | 334.54 | 799.15 | 334.54 | 799.94 | 334.53 |
| 801.51 | 334.52 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 99.41 | .04 | 605.57 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 99.41 | 605.57 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 847.570*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.96 | 3.72 | 325.92 | 6.3 | 325.87 | 6.44 | 325.87 | 8.85 | 325.82 |
| 9.62 | 325.81 | 13.51 | 325.77 | 17.09 | 325.75 | 18.26 | 325.75 | 18.96 | 325.73 |
| 21.45 | 325.67 | 21.95 | 325.67 | 23.6 | 325.63 | 26.27 | 325.57 | 28.51 | 325.51 |
| 29.41 | 325.5 | 32.34 | 325.57 | 33.29 | 325.59 | 35.77 | 325.63 | 36.76 | 325.63 |
| 39.24 | 325.59 | 42.1 | 325.53 | 45.9 | 325.42 | 46.13 | 325.41 | 49.47 | 325.3 |
| 50.94 | 325.29 | 51.17 | 325.28 | 53.17 | 325.27 | 55.77 | 325.3 | 56.18 | 325.34 |
| 56.67 | 325.35 | 57.11 | 325.37 | 58.45 | 325.37 | 60.22 | 325.38 | 60.87 | 325.39 |
| 62.22 | 325.37 | 63.18 | 325.37 | 64.6 | 325.35 | 65.29 | 325.33 | 67.02 | 325.24 |
| 68.3 | 325.21 | 71.6 | 325.09 | 74.53 | 325.1 | 78.54 | 325.1 | 79.85 | 325.11 |
| 85.26 | 325.11 | 86.46 | 325.12 | 90.21 | 325.12 | 90.56 | 325.13 | 93.26 | 325.14 |
| 95.52 | 325.14 | 96.69 | 325.15 | 98.59 | 325.16 | 99.19 | 325.16 | 99.62 | 325.17 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 102.06 | 325.17 | 103.05 | 325.16 | 103.99 | 325.16 | 104.25 | 325.03 | 104.48 | 324.98 |
| 104.86 | 324.94 | 105.95 | 324.85 | 106.23 | 324.82 | 106.48 | 324.82 | 106.76 | 324.84 |
| 107.92 | 325.01 | 109.02 | 325.15 | 110.27 | 325.2 | 112.21 | 325.27 | 112.59 | 325.28 |
| 113.08 | 325.31 | 113.66 | 325.32 | 114.39 | 325.32 | 115.86 | 325.33 | 116.43 | 325.33 |
| 117.16 | 325.32 | 119.97 | 325.32 | 120.21 | 325.33 | 121.79 | 325.36 | 122.52 | 325.31 |
| 123.21 | 325.28 | 125.78 | 325.2 | 128.92 | 325.11 | 131.7 | 325.11 | 132.62 | 325.16 |
| 136.4 | 325.33 | 138.9 | 325.4 | 139.6 | 325.41 | 143.23 | 325.43 | 144.37 | 325.44 |
| 145.03 | 325.43 | 147.35 | 325.33 | 148.04 | 325.31 | 149.85 | 325.18 | 150.56 | 325.14 |
| 151.45 | 325.11 | 160.41 | 325.11 | 160.6 | 325.1 | 166.11 | 325.1 | 166.72 | 325.14 |
| 168.44 | 325.24 | 169.66 | 325.28 | 170.53 | 325.28 | 172.01 | 325.31 | 172.82 | 325.32 |
| 175.8 | 325.35 | 177.65 | 325.35 | 178.56 | 325.36 | 179.51 | 325.36 | 180.26 | 325.34 |
| 181.66 | 325.31 | 184.52 | 325.27 | 186.53 | 325.22 | 187.26 | 325.19 | 189.28 | 325.08 |
| 191.43 | 324.86 | 192.26 | 324.79 | 192.76 | 324.74 | 193.31 | 324.65 | 194.14 | 324.63 |
| 194.65 | 324.69 | 195.64 | 324.84 | 196.88 | 325.02 | 197.3 | 325.07 | 198.27 | 325.09 |
| 198.97 | 325.09 | 200.43 | 325.07 | 200.76 | 325.07 | 202.94 | 324.96 | 204.75 | 324.85 |
| 205.74 | 324.77 | 206.46 | 324.72 | 206.88 | 324.71 | 208.55 | 324.65 | 208.72 | 324.65 |
| 209.28 | 324.7 | 209.33 | 324.73 | 210.39 | 324.78 | 211.4 | 324.86 | 211.75 | 324.9 |
| 212.63 | 324.91 | 219.6 | 325.01 | 227.79 | 324.99 | 231.15 | 324.98 | 232.61 | 324.97 |
| 233.49 | 324.97 | 235.32 | 324.96 | 239.28 | 324.95 | 242.26 | 325.02 | 242.91 | 325.03 |
| 243.45 | 325.03 | 244.06 | 325 | 244.99 | 324.97 | 246.57 | 324.95 | 246.84 | 324.94 |
| 246.92 | 324.75 | 248.4 | 324.69 | 249.54 | 324.66 | 251.34 | 324.8 | 252.69 | 324.92 |
| 253.56 | 324.97 | 253.87 | 325.03 | 254.09 | 325.04 | 254.65 | 325.03 | 255.74 | 325 |
| 258.4 | 325.02 | 260.31 | 325.03 | 261.71 | 325.05 | 262.09 | 325.05 | 262.64 | 325.07 |
| 263.24 | 325.08 | 263.95 | 325.07 | 264.51 | 325.05 | 269.1 | 325.01 | 270.72 | 324.93 |
| 271.81 | 324.88 | 273.97 | 324.86 | 276.27 | 324.86 | 281.22 | 324.84 | 283.23 | 324.83 |
| 284.6 | 324.83 | 284.9 | 324.82 | 285.55 | 324.84 | 285.82 | 324.84 | 286.19 | 324.82 |
| 286.71 | 324.82 | 288.74 | 324.8 | 290.13 | 324.79 | 296.34 | 324.77 | 297.51 | 324.77 |
| 300.33 | 324.75 | 300.87 | 324.75 | 308.17 | 324.7 | 309.97 | 324.68 | 312.77 | 324.68 |
| 314.53 | 324.69 | 316.31 | 324.74 | 316.78 | 324.75 | 317.28 | 324.74 | 318.82 | 324.73 |
| 319.75 | 324.73 | 320.53 | 324.72 | 321.03 | 324.7 | 322.65 | 324.66 | 322.94 | 324.66 |
| 323.65 | 324.64 | 324.59 | 324.5 | 325.34 | 324.41 | 326.28 | 324.32 | 328.26 | 324.07 |
| 330.16 | 324.02 | 334.06 | 323.94 | 335.42 | 323.9 | 336.3 | 323.9 | 337.2 | 323.89 |
| 338.04 | 323.89 | 338.86 | 323.9 | 340.34 | 323.89 | 345.28 | 323.84 | 345.74 | 323.84 |
| 348.52 | 323.81 | 350.1 | 323.78 | 350.35 | 323.78 | 352.48 | 323.74 | 355.02 | 323.67 |
| 356.6 | 323.61 | 357.72 | 323.6 | 359.58 | 323.59 | 359.8 | 323.62 | 360.12 | 323.64 |
| 360.73 | 323.64 | 361.56 | 323.65 | 362.88 | 323.69 | 364.44 | 323.79 | 367.16 | 323.94 |
| 367.43 | 323.95 | 368.75 | 324.02 | 369.39 | 324.02 | 370.04 | 324.03 | 371.64 | 324.03 |
| 372.7 | 323.94 | 374.84 | 323.75 | 376.02 | 323.8 | 376.81 | 323.76 | 377.65 | 323.8 |
| 379.38 | 323.75 | 379.56 | 323.74 | 382.1 | 323.79 | 383.12 | 323.76 | 383.62 | 323.76 |
| 384.75 | 323.74 | 386.82 | 323.69 | 388.19 | 323.68 | 388.38 | 323.69 | 388.96 | 323.69 |
| 389.21 | 323.7 | 392.34 | 323.75 | 392.73 | 323.8 | 393.71 | 323.87 | 397.38 | 324.04 |
| 398.5 | 324.04 | 401.76 | 324.05 | 407.32 | 324.05 | 408.8 | 324.06 | 410.85 | 324.06 |
| 411.65 | 323.97 | 411.84 | 323.96 | 412.44 | 323.96 | 414.67 | 323.95 | 416.7 | 323.93 |
| 421.73 | 324.08 | 422.01 | 324.09 | 436.79 | 324.57 | 441.07 | 324.58 | 442.11 | 324.58 |
| 446.53 | 324.59 | 452.51 | 324.6 | 453.38 | 324.6 | 454.6 | 324.61 | 455.73 | 324.63 |
| 456.81 | 324.67 | 459.79 | 324.68 | 464.68 | 324.68 | 464.83 | 324.66 | 469.87 | 324.66 |
| 470.95 | 324.67 | 472.95 | 324.68 | 476.62 | 324.68 | 477.47 | 324.67 | 477.64 | 324.66 |
| 483.18 | 324.52 | 485.46 | 324.45 | 486.71 | 324.42 | 487.52 | 324.41 | 490.48 | 324.36 |
| 491.66 | 324.37 | 492.85 | 324.37 | 493.39 | 324.39 | 493.93 | 324.39 | 496.49 | 324.45 |
| 498.45 | 324.49 | 498.82 | 324.49 | 501.05 | 324.54 | 502.55 | 324.57 | 502.75 | 324.58 |
| 505.03 | 324.65 | 505.96 | 324.65 | 507.6 | 324.56 | 507.97 | 324.58 | 508.13 | 324.57 |
| 508.84 | 324.58 | 509.34 | 324.55 | 510.19 | 324.47 | 510.78 | 324.45 | 511.95 | 324.45 |
| 512.9 | 324.46 | 513.46 | 324.49 | 514.83 | 324.54 | 515.61 | 324.55 | 519.74 | 324.75 |
| 521.41 | 324.81 | 522.98 | 324.86 | 524.54 | 324.89 | 525.06 | 324.89 | 527.57 | 324.88 |
| 527.96 | 324.89 | 530.36 | 324.92 | 537.53 | 324.92 | 538.17 | 324.93 | 539.48 | 324.93 |
| 540.98 | 324.96 | 544.35 | 325.02 | 546.74 | 325.06 | 548.33 | 325.08 | 548.8 | 325.09 |
| 549.38 | 325.09 | 551.4 | 325 | 551.95 | 324.99 | 556.11 | 324.88 | 556.7 | 324.88 |
| 557.67 | 324.87 | 562.47 | 324.76 | 563.39 | 324.74 | 563.96 | 324.72 | 564.67 | 324.71 |
| 565.57 | 324.69 | 566.63 | 324.68 | 567.61 | 324.67 | 567.9 | 324.68 | 568.96 | 324.69 |
| 569.49 | 324.71 | 569.96 | 324.78 | 570.2 | 324.8 | 571.12 | 324.8 | 571.54 | 324.78 |
| 571.78 | 324.73 | 572.05 | 324.73 | 573.51 | 324.82 | 574.1 | 324.89 | 576.67 | 325.06 |
| 577.14 | 325.1 | 577.91 | 325.1 | 580.89 | 325.12 | 581.77 | 325.12 | 584.64 | 325.13 |
| 585.23 | 325.13 | 586.11 | 325.14 | 587.86 | 325.15 | 587.99 | 325.2 | 588.7 | 325.24 |
| 589.72 | 325.26 | 590.41 | 325.28 | 591.16 | 325.28 | 591.97 | 325.29 | 592.76 | 325.29 |
| 594.75 | 325.27 | 596.48 | 325.27 | 597.5 | 325.26 | 600.57 | 325.22 | 601.16 | 325.2 |
| 602.36 | 325.21 | 603.37 | 325.21 | 603.77 | 325.22 | 604.6 | 325.26 | 607.2 | 325.4 |
| 609.32 | 325.7 | 609.61 | 325.76 | 611.17 | 326.1 | 611.88 | 326.25 | 613.92 | 326.66 |
| 614.45 | 326.75 | 614.61 | 326.81 | 615.18 | 326.99 | 615.84 | 327.34 | 616.31 | 327.57 |
| 616.5 | 327.93 | 616.83 | 328.21 | 617.28 | 328.51 | 617.47 | 328.65 | 617.87 | 328.82 |
| 618.28 | 328.96 | 619.62 | 329.44 | 620.48 | 329.8 | 623.28 | 330.65 | 623.56 | 330.74 |
| 625.06 | 331.2 | 625.81 | 331.37 | 626.94 | 331.68 | 628.87 | 332.11 | 630.16 | 332.41 |
| 631.28 | 332.65 | 635.22 | 332.69 | 635.97 | 332.7 | 638.75 | 332.72 | 641.21 | 332.7 |
| 641.58 | 332.69 | 651.51 | 332.6 | 655.57 | 332.57 | 656.28 | 332.56 | 659.31 | 332.53 |
| 661.44 | 332.53 | 667.56 | 332.63 | 668.58 | 332.65 | 669.52 | 332.66 | 670.34 | 332.66 |
| 670.71 | 332.67 | 672.18 | 332.68 | 673.47 | 332.68 | 674.88 | 332.67 | 675.34 | 332.66 |
| 675.86 | 332.66 | 679.55 | 332.68 | 679.88 | 332.67 | 681.11 | 332.67 | 683.81 | 332.63 |
| 686.37 | 332.59 | 686.77 | 332.59 | 690.69 | 332.54 | 699.46 | 332.51 | 701.09 | 332.51 |
| 703.03 | 332.52 | 707.4 | 332.59 | 708.1 | 332.6 | 709.7 | 332.61 | 710.07 | 332.62 |
| 713.06 | 332.64 | 715.1 | 332.64 | 716.88 | 332.63 | 717.65 | 332.62 | 721.17 | 332.54 |
| 722.65 | 332.51 | 725.37 | 332.41 | 726.87 | 332.36 | 727.24 | 332.34 | 727.96 | 332.35 |
| 728.58 | 332.29 | 729.05 | 332.26 | 729.5 | 332.26 | 730.31 | 332.3 | 731.35 | 332.37 |
| 731.51 | 332.37 | 732.4 | 332.42 | 734.24 | 332.53 | 741.96 | 333 | 743.08 | 333.06 |
| 745.5 | 333.15 | 748.26 | 333.25 | 749.83 | 333.33 | 749.91 | 333.33 | 751.31 | 333.4 |
| 751.82 | 333.43 | 753.51 | 333.5 | 753.65 | 333.51 | 756.17 | 333.61 | 758.86 | 333.7 |
| 760.71 | 333.78 | 761.89 | 333.82 | 764.46 | 333.89 | 770.24 | 334.06 | 772.58 | 334.12 |
| 774.11 | 334.15 | 775.08 | 334.16 | 776.24 | 334.15 | 778.9 | 334.25 | 781.7 | 334.27 |
| 782.75 | 334.27 | 783.12 | 334.26 | 786.65 | 334.24 | 787.1 | 334.23 | 788.34 | 334.24 |
| 789.73 | 334.23 | 792.1 | 334.24 | 793.03 | 334.21 | 793.58 | 334.21 | 796.16 | 334.18 |
| 798.85 | 334.16 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 103.05 | .04 | 609.32 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 103.05 | 609.32 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 827.856*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.67 | 3.86 | 325.63 | 4.84 | 325.61 | 6.52 | 325.58 | 6.67 | 325.58 |
| 9.17 | 325.53 | 9.96 | 325.51 | 13.99 | 325.48 | 17.69 | 325.46 | 18.9 | 325.46 |
| 19.63 | 325.44 | 22.21 | 325.38 | 22.73 | 325.38 | 24.43 | 325.34 | 27.2 | 325.28 |
| 29.52 | 325.22 | 30.45 | 325.21 | 33.48 | 325.29 | 37.03 | 325.36 | 38.06 | 325.36 |
| 40.63 | 325.32 | 43.59 | 325.26 | 47.52 | 325.14 | 47.76 | 325.14 | 50.94 | 325.03 |
| 51.22 | 325.03 | 52.74 | 325.01 | 55.05 | 325 | 57.02 | 325.02 | 57.75 | 325.04 |
| 58.17 | 325.08 | 58.67 | 325.09 | 59.13 | 325.11 | 59.93 | 325.11 | 60.52 | 325.12 |
| 62.35 | 325.13 | 62.73 | 325.14 | 63.57 | 325.14 | 63.64 | 325.13 | 64.42 | 325.13 |
| 66.29 | 325.11 | 66.89 | 325.11 | 67.28 | 325.1 | 67.6 | 325.08 | 69.39 | 324.99 |
| 70.12 | 324.97 | 70.71 | 324.96 | 74.14 | 324.84 | 80.73 | 324.84 | 80.98 | 324.85 |
| 88.27 | 324.85 | 89.51 | 324.86 | 93.4 | 324.86 | 93.77 | 324.87 | 96.56 | 324.88 |
| 98.9 | 324.88 | 99.93 | 324.89 | 102.08 | 324.9 | 103.48 | 324.9 | 103.95 | 324.91 |
| 104.3 | 324.9 | 106.7 | 324.9 | 107.69 | 324.9 | 107.97 | 324.76 | 108.21 | 324.7 |
| 108.61 | 324.66 | 109.76 | 324.57 | 110.15 | 324.53 | 110.62 | 324.56 | 110.85 | 324.59 |
| 111.84 | 324.74 | 113.01 | 324.88 | 114.33 | 324.94 | 116.38 | 325.02 | 116.78 | 325.02 |
| 116.93 | 325.04 | 117.3 | 325.06 | 117.91 | 325.07 | 118.68 | 325.07 | 120.24 | 325.08 |
| 124.84 | 325.08 | 126.57 | 325.11 | 127.28 | 325.07 | 127.51 | 325.05 | 128.01 | 325.03 |
| 130.73 | 324.95 | 133.33 | 324.87 | 134.45 | 324.85 | 136.99 | 324.85 | 137.96 | 324.91 |
| 142.65 | 325.11 | 144.6 | 325.16 | 145.34 | 325.17 | 149.18 | 325.2 | 151.08 | 325.2 |
| 153.54 | 325.09 | 154.27 | 325.06 | 156.18 | 324.93 | 156.94 | 324.89 | 157.88 | 324.85 |
| 169.33 | 324.85 | 169.71 | 324.84 | 173.37 | 324.84 | 175.83 | 324.99 | 177.13 | 325.03 |
| 177.46 | 325.03 | 179.62 | 325.07 | 180.47 | 325.08 | 183.62 | 325.11 | 185.58 | 325.11 |
| 186.54 | 325.12 | 187.54 | 325.12 | 188.33 | 325.1 | 189.82 | 325.07 | 192.84 | 325.02 |
| 193.73 | 325 | 194.43 | 324.99 | 195.73 | 324.94 | 197.87 | 324.82 | 200.15 | 324.59 |
| 201.55 | 324.46 | 202.13 | 324.37 | 202.99 | 324.34 | 203.55 | 324.4 | 204.6 | 324.57 |
| 205.91 | 324.76 | 206.35 | 324.82 | 207.38 | 324.84 | 208.11 | 324.84 | 209.67 | 324.82 |
| 210.29 | 324.8 | 212.32 | 324.69 | 214.23 | 324.58 | 215.28 | 324.5 | 215.62 | 324.47 |
| 216.49 | 324.43 | 218.25 | 324.37 | 218.43 | 324.37 | 219.02 | 324.42 | 219.08 | 324.45 |
| 219.57 | 324.47 | 220.2 | 324.51 | 221.26 | 324.59 | 221.63 | 324.64 | 222.56 | 324.65 |
| 229.93 | 324.76 | 238.59 | 324.74 | 242.14 | 324.73 | 243.7 | 324.72 | 246.55 | 324.72 |
| 250.75 | 324.71 | 253.9 | 324.78 | 254.58 | 324.79 | 255.15 | 324.79 | 256.18 | 324.74 |
| 258.45 | 324.7 | 258.74 | 324.69 | 258.82 | 324.49 | 260.39 | 324.43 | 261.59 | 324.4 |
| 263.06 | 324.51 | 264.92 | 324.68 | 265.84 | 324.73 | 266.26 | 324.8 | 267 | 324.8 |
| 268.15 | 324.77 | 269.41 | 324.77 | 270.96 | 324.78 | 272.98 | 324.8 | 274.46 | 324.82 |
| 274.86 | 324.82 | 276.08 | 324.85 | 276.31 | 324.84 | 276.83 | 324.84 | 277.42 | 324.82 |
| 282.27 | 324.78 | 283.99 | 324.7 | 285.14 | 324.64 | 286.51 | 324.63 | 287.42 | 324.62 |
| 289.85 | 324.62 | 295.09 | 324.6 | 297.22 | 324.59 | 299.23 | 324.59 | 299.96 | 324.6 |
| 300.9 | 324.58 | 303.05 | 324.56 | 304.51 | 324.55 | 311.08 | 324.54 | 312.31 | 324.54 |
| 315.3 | 324.52 | 315.86 | 324.52 | 323.58 | 324.47 | 324.56 | 324.46 | 325.49 | 324.46 |
| 326.1 | 324.45 | 328.45 | 324.45 | 330.31 | 324.46 | 332.19 | 324.52 | 332.69 | 324.53 |
| 333.22 | 324.53 | 334.84 | 324.51 | 335.83 | 324.51 | 336.66 | 324.5 | 337.19 | 324.48 |
| 338.9 | 324.44 | 339.2 | 324.44 | 339.95 | 324.42 | 340.95 | 324.27 | 341.74 | 324.17 |
| 342.74 | 324.08 | 344.83 | 323.81 | 346.84 | 323.76 | 350.96 | 323.68 | 352.4 | 323.64 |
| 353.33 | 323.63 | 355.17 | 323.63 | 356.04 | 323.64 | 357.61 | 323.63 | 362.83 | 323.58 |
| 363.31 | 323.58 | 366.25 | 323.55 | 367.93 | 323.52 | 368.18 | 323.52 | 370.44 | 323.48 |
| 373.13 | 323.42 | 374.8 | 323.37 | 375.68 | 323.35 | 377.93 | 323.34 | 378.23 | 323.38 |
| 379.02 | 323.38 | 381.04 | 323.43 | 382.51 | 323.52 | 385.06 | 323.66 | 385.32 | 323.67 |
| 386.57 | 323.74 | 388.66 | 323.74 | 389.29 | 323.75 | 390.28 | 323.66 | 392.3 | 323.49 |
| 393.41 | 323.54 | 393.7 | 323.52 | 394.15 | 323.51 | 394.94 | 323.54 | 396.57 | 323.49 |
| 396.74 | 323.49 | 399.14 | 323.53 | 399.92 | 323.51 | 400.86 | 323.5 | 401.63 | 323.48 |
| 402.73 | 323.46 | 403.58 | 323.44 | 404.61 | 323.43 | 405.05 | 323.43 | 405.26 | 323.44 |
| 405.82 | 323.44 | 408.77 | 323.49 | 409.14 | 323.54 | 410.06 | 323.6 | 413.52 | 323.76 |
| 417.65 | 323.76 | 419.47 | 323.77 | 425 | 323.77 | 426.2 | 323.78 | 426.96 | 323.7 |
| 427.14 | 323.69 | 427.7 | 323.69 | 429.78 | 323.68 | 431.71 | 323.66 | 436.44 | 323.8 |
| 436.71 | 323.8 | 450.63 | 324.25 | 454.65 | 324.26 | 455.64 | 324.26 | 459.8 | 324.27 |
| 465.42 | 324.28 | 466.24 | 324.28 | 468.46 | 324.32 | 469.16 | 324.34 | 469.48 | 324.36 |
| 476.88 | 324.36 | 477.02 | 324.35 | 483.18 | 324.35 | 484.67 | 324.36 | 485.48 | 324.37 |
| 486.91 | 324.37 | 488.13 | 324.36 | 488.92 | 324.36 | 489.09 | 324.35 | 494.3 | 324.22 |
| 496.45 | 324.16 | 497.63 | 324.14 | 497.94 | 324.13 | 498.39 | 324.13 | 500.03 | 324.1 |
| 501.17 | 324.09 | 502.28 | 324.09 | 503.41 | 324.1 | 504.82 | 324.12 | 506.83 | 324.17 |
| 508.68 | 324.21 | 509.02 | 324.21 | 511.13 | 324.25 | 512.54 | 324.28 | 512.72 | 324.29 |
| 514.87 | 324.36 | 515.75 | 324.36 | 516.25 | 324.34 | 516.82 | 324.3 | 517.3 | 324.28 |
| 518.15 | 324.3 | 518.69 | 324.29 | 519.73 | 324.2 | 520.28 | 324.18 | 521.39 | 324.18 |
| 522.28 | 324.19 | 523.3 | 324.24 | 524.6 | 324.27 | 525.25 | 324.3 | 527.92 | 324.43 |
| 530.3 | 324.52 | 531.77 | 324.56 | 532.33 | 324.58 | 532.77 | 324.58 | 533.24 | 324.59 |
| 536.46 | 324.59 | 538.72 | 324.62 | 539.36 | 324.62 | 540.54 | 324.63 | 542.77 | 324.63 |
| 543.61 | 324.62 | 544.5 | 324.63 | 545.47 | 324.63 | 546.08 | 324.64 | 547.31 | 324.64 |
| 548.72 | 324.67 | 551.89 | 324.73 | 554.14 | 324.77 | 555.64 | 324.79 | 556.63 | 324.79 |
| 557.06 | 324.78 | 559.05 | 324.7 | 562.97 | 324.61 | 563.52 | 324.6 | 564.43 | 324.6 |
| 569.82 | 324.48 | 571.02 | 324.46 | 571.87 | 324.44 | 572.87 | 324.43 | 573.09 | 324.42 |
| 573.34 | 324.43 | 573.79 | 324.42 | 574.06 | 324.43 | 575.07 | 324.44 | 575.56 | 324.46 |
| 576 | 324.52 | 576.23 | 324.54 | 577.1 | 324.54 | 577.39 | 324.53 | 577.72 | 324.48 |
| 578.05 | 324.48 | 578.42 | 324.5 | 579.35 | 324.57 | 579.91 | 324.62 | 582.77 | 324.82 |
| 583.49 | 324.82 | 586.3 | 324.84 | 587.13 | 324.85 | 589.82 | 324.86 | 591.22 | 324.86 |
| 592.86 | 324.87 | 592.98 | 324.92 | 594.06 | 324.97 | 595.97 | 325 | 598.59 | 325 |
| 599.34 | 324.99 | 600.97 | 324.99 | 601.93 | 324.98 | 604.82 | 324.94 | 605.38 | 324.93 |
| 606.51 | 324.94 | 607.46 | 324.94 | 608.61 | 324.98 | 611.07 | 325.11 | 612.53 | 325.35 |
| 613.06 | 325.43 | 613.34 | 325.49 | 615.53 | 326 | 617.51 | 326.43 | 618.01 | 326.52 |
| 618.18 | 326.59 | 618.73 | 326.77 | 619.37 | 327.12 | 619.82 | 327.35 | 620 | 327.74 |
| 620.32 | 328.03 | 620.76 | 328.33 | 620.94 | 328.48 | 621.33 | 328.64 | 621.72 | 328.77 |
| 623.02 | 329.22 | 623.46 | 329.4 | 623.75 | 329.53 | 624.36 | 329.72 | 625.25 | 329.98 |
| 626.83 | 330.43 | 628.28 | 330.85 | 628.33 | 330.87 | 629 | 331.01 | 630.09 | 331.3 |
| 631.96 | 331.7 | 632.27 | 331.77 | 634.28 | 332.2 | 638.09 | 332.24 | 638.81 | 332.25 |
| 641.5 | 332.27 | 643.88 | 332.25 | 644.24 | 332.25 | 653.83 | 332.18 | 657.75 | 332.16 |
| 658.44 | 332.15 | 660.48 | 332.13 | 661.64 | 332.13 | 662.72 | 332.12 | 662.97 | 332.13 |
| 663.42 | 332.12 | 669.33 | 332.23 | 671.23 | 332.25 | 672.38 | 332.27 | 673.8 | 332.28 |
| 675.05 | 332.28 | 676.41 | 332.26 | 677.35 | 332.26 | 680.92 | 332.28 | 681.24 | 332.27 |
| 682.43 | 332.27 | 687.51 | 332.21 | 687.9 | 332.2 | 691.68 | 332.16 | 700.16 | 332.15 |
| 703.6 | 332.17 | 707.83 | 332.25 | 708.51 | 332.27 | 710.06 | 332.29 | 710.41 | 332.29 |
| 713.3 | 332.32 | 715.27 | 332.33 | 716.99 | 332.32 | 717.74 | 332.32 | 720.74 | 332.26 |
| 722.56 | 332.22 | 723.09 | 332.2 | 725.19 | 332.14 | 725.27 | 332.13 | 726.64 | 332.08 |
| 727 | 332.07 | 727.7 | 332.07 | 728.43 | 332.01 | 728.75 | 331.99 | 729.19 | 331.99 |
| 729.97 | 332.03 | 730.65 | 332.08 | 730.97 | 332.09 | 731.99 | 332.15 | 733.77 | 332.25 |
| 741.23 | 332.72 | 742.31 | 332.77 | 744.65 | 332.87 | 745.97 | 332.91 | 748.83 | 333.04 |
| 749.64 | 333.09 | 750.75 | 333.14 | 752.39 | 333.22 | 752.52 | 333.22 | 754.95 | 333.32 |
| 757.55 | 333.41 | 759.34 | 333.48 | 760.48 | 333.52 | 762.96 | 333.59 | 770.81 | 333.8 |
| 772.28 | 333.83 | 773.23 | 333.84 | 774.35 | 333.83 | 776.91 | 333.93 | 779.62 | 333.93 |
| 780.99 | 333.92 | 782.84 | 333.9 | 784.4 | 333.89 | 784.84 | 333.88 | 786.03 | 333.88 |
| 786.99 | 333.87 | 789.67 | 333.87 | 790.33 | 333.86 | 791.1 | 333.84 | 794.73 | 333.81 |
| 796.2 | 333.8 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 106.7 | .04 | 613.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 106.7 | 613.06 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 808.142*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.38 | 3.99 | 325.33 | 5.01 | 325.32 | 6.74 | 325.29 | 7.4 | 325.27 |
| 9.48 | 325.24 | 10.3 | 325.22 | 14.47 | 325.19 | 18.3 | 325.17 | 19.55 | 325.17 |
| 20.3 | 325.15 | 22.97 | 325.09 | 25.27 | 325.05 | 28.13 | 324.98 | 30.52 | 324.93 |
| 31.25 | 324.92 | 31.49 | 324.91 | 34.62 | 325 | 35.64 | 325.04 | 38.3 | 325.09 |
| 39.36 | 325.09 | 42.02 | 325.05 | 45.08 | 324.99 | 49.14 | 324.87 | 49.39 | 324.86 |
| 52.68 | 324.75 | 54.55 | 324.74 | 54.8 | 324.73 | 56.93 | 324.72 | 58.97 | 324.76 |
| 59.72 | 324.77 | 60.15 | 324.81 | 61.15 | 324.85 | 61.97 | 324.85 | 62.59 | 324.86 |
| 64.48 | 324.88 | 64.87 | 324.89 | 65.81 | 324.89 | 66.63 | 324.88 | 67.65 | 324.88 |
| 69.17 | 324.86 | 69.91 | 324.84 | 70.33 | 324.82 | 71.11 | 324.77 | 71.76 | 324.74 |
| 72.52 | 324.72 | 73.13 | 324.71 | 74.05 | 324.68 | 75.17 | 324.63 | 76.67 | 324.58 |
| 82.12 | 324.58 | 82.42 | 324.59 | 90.62 | 324.59 | 91.29 | 324.6 | 96.59 | 324.6 |
| 96.97 | 324.61 | 99.86 | 324.62 | 103.53 | 324.62 | 105.57 | 324.63 | 106.21 | 324.64 |
| 109.28 | 324.64 | 110.34 | 324.63 | 111.37 | 324.64 | 111.68 | 324.48 | 111.94 | 324.43 |
| 112.36 | 324.38 | 113.58 | 324.28 | 113.88 | 324.25 | 114.16 | 324.25 | 114.73 | 324.31 |
| 115.77 | 324.46 | 117 | 324.62 | 118.39 | 324.68 | 120.55 | 324.77 | 120.98 | 324.77 |
| 121.14 | 324.79 | 121.53 | 324.81 | 122.17 | 324.83 | 129.2 | 324.83 | 129.47 | 324.84 |
| 131.23 | 324.87 | 131.29 | 324.86 | 132.04 | 324.82 | 132.29 | 324.8 | 132.81 | 324.78 |
| 135.68 | 324.7 | 138.43 | 324.61 | 139.19 | 324.6 | 141.09 | 324.6 | 142.28 | 324.59 |
| 143.3 | 324.65 | 147.52 | 324.84 | 150.65 | 324.93 | 151.08 | 324.93 | 155.13 | 324.96 |
| 155.87 | 324.97 | 156.4 | 324.96 | 157.14 | 324.96 | 159.72 | 324.85 | 160.5 | 324.82 |
| 162.52 | 324.67 | 163.31 | 324.63 | 164.3 | 324.59 | 176.78 | 324.59 | 180.01 | 324.58 |
| 180.64 | 324.58 | 181.32 | 324.63 | 183.23 | 324.74 | 183.88 | 324.76 | 184.6 | 324.79 |
| 185.57 | 324.79 | 187.22 | 324.82 | 188.12 | 324.84 | 191.44 | 324.87 | 193.02 | 324.87 |
| 193.5 | 324.88 | 195.57 | 324.88 | 196.41 | 324.86 | 197.97 | 324.83 | 201.16 | 324.78 |
| 202.84 | 324.74 | 204.21 | 324.69 | 206.46 | 324.57 | 208.87 | 324.32 | 209.79 | 324.23 |
| 210.35 | 324.18 | 210.96 | 324.08 | 211.86 | 324.05 | 212.45 | 324.12 | 213.55 | 324.3 |
| 214.94 | 324.5 | 215.4 | 324.56 | 216.49 | 324.58 | 217.26 | 324.58 | 219.56 | 324.55 |
| 221.7 | 324.43 | 223.71 | 324.31 | 225.18 | 324.19 | 226.09 | 324.15 | 227.95 | 324.09 |
| 228.14 | 324.08 | 228.76 | 324.14 | 228.94 | 324.19 | 229.15 | 324.19 | 230.01 | 324.24 |
| 231.13 | 324.33 | 231.52 | 324.38 | 231.95 | 324.38 | 232.49 | 324.39 | 240.26 | 324.51 |
| 249.4 | 324.49 | 253.14 | 324.48 | 254.78 | 324.48 | 255.75 | 324.47 | 257.79 | 324.47 |
| 262.21 | 324.46 | 264.57 | 324.52 | 265.53 | 324.54 | 266.25 | 324.55 | 266.85 | 324.55 |
| 267.53 | 324.51 | 267.94 | 324.5 | 270.33 | 324.46 | 270.63 | 324.45 | 270.72 | 324.23 |
| 272.38 | 324.17 | 273.64 | 324.13 | 275.65 | 324.3 | 277.16 | 324.44 | 278.12 | 324.49 |
| 278.47 | 324.56 | 278.71 | 324.57 | 279.34 | 324.56 | 280.56 | 324.53 | 281.89 | 324.53 |
| 283.52 | 324.55 | 285.65 | 324.56 | 287.21 | 324.59 | 287.63 | 324.59 | 288.91 | 324.62 |
| 289.16 | 324.61 | 289.71 | 324.61 | 290.33 | 324.59 | 295.45 | 324.55 | 298.47 | 324.4 |
| 299.92 | 324.39 | 300.88 | 324.39 | 301.4 | 324.38 | 303.44 | 324.38 | 308.96 | 324.36 |
| 311.2 | 324.36 | 313.06 | 324.35 | 313.78 | 324.37 | 314.09 | 324.37 | 315.08 | 324.35 |
| 317.35 | 324.33 | 318.89 | 324.32 | 325.81 | 324.31 | 327.12 | 324.31 | 330.27 | 324.29 |
| 330.86 | 324.29 | 339 | 324.24 | 340.03 | 324.23 | 341.01 | 324.23 | 341.65 | 324.22 |
| 342.96 | 324.22 | 344.13 | 324.23 | 346.09 | 324.24 | 348.07 | 324.3 | 348.6 | 324.31 |
| 349.16 | 324.31 | 350.87 | 324.29 | 351.91 | 324.29 | 353.34 | 324.27 | 354.27 | 324.24 |
| 355.14 | 324.22 | 355.46 | 324.22 | 356.26 | 324.2 | 357.31 | 324.04 | 358.14 | 323.94 |
| 359.2 | 323.84 | 361.4 | 323.56 | 363.52 | 323.51 | 367.86 | 323.41 | 368.6 | 323.39 |
| 370.36 | 323.37 | 374.87 | 323.37 | 380.37 | 323.32 | 380.88 | 323.31 | 382.99 | 323.3 |
| 383.98 | 323.29 | 385.75 | 323.26 | 386.02 | 323.26 | 388.4 | 323.22 | 391.23 | 323.16 |
| 393.92 | 323.1 | 396.28 | 323.09 | 396.64 | 323.13 | 397.3 | 323.13 | 398.03 | 323.14 |
| 399.19 | 323.17 | 400.57 | 323.26 | 402.97 | 323.38 | 403.22 | 323.4 | 404.38 | 323.46 |
| 406.93 | 323.46 | 407.87 | 323.38 | 409.75 | 323.24 | 410.8 | 323.27 | 411.5 | 323.25 |
| 412.23 | 323.28 | 413.76 | 323.24 | 413.92 | 323.23 | 416.17 | 323.27 | 416.9 | 323.26 |
| 417.07 | 323.25 | 417.51 | 323.25 | 417.79 | 323.24 | 419.54 | 323.21 | 419.72 | 323.2 |
| 420.45 | 323.19 | 420.73 | 323.18 | 421.91 | 323.18 | 422.95 | 323.2 | 425.21 | 323.23 |
| 425.55 | 323.27 | 426.41 | 323.33 | 429.66 | 323.48 | 435.24 | 323.48 | 436.3 | 323.49 |
| 441.55 | 323.49 | 442.26 | 323.42 | 442.95 | 323.41 | 444.91 | 323.41 | 444.93 | 323.4 |
| 445.85 | 323.4 | 446.72 | 323.39 | 451.16 | 323.52 | 451.41 | 323.52 | 464.46 | 323.93 |
| 468.35 | 323.94 | 469.16 | 323.95 | 473.06 | 323.96 | 478.34 | 323.97 | 479.11 | 323.97 |
| 480.19 | 323.98 | 481.18 | 324 | 481.84 | 324.02 | 482.14 | 324.04 | 489.09 | 324.04 |
| 489.22 | 324.03 | 493.67 | 324.03 | 494.63 | 324.04 | 496.39 | 324.05 | 500.38 | 324.05 |
| 500.53 | 324.04 | 505.42 | 323.93 | 507.43 | 323.88 | 508.54 | 323.85 | 510.8 | 323.82 |
| 511.87 | 323.81 | 512.91 | 323.82 | 513.96 | 323.82 | 513.98 | 323.83 | 514.64 | 323.83 |
| 515.28 | 323.85 | 517.17 | 323.89 | 518.91 | 323.93 | 519.23 | 323.93 | 521.2 | 323.97 |
| 522.53 | 324 | 522.7 | 324 | 524.72 | 324.06 | 524.87 | 324.07 | 525.54 | 324.07 |
| 526.99 | 324 | 527.79 | 324.02 | 528.29 | 324.01 | 529.05 | 323.94 | 529.71 | 323.92 |
| 529.79 | 323.91 | 530.83 | 323.91 | 531.66 | 323.92 | 532.06 | 323.95 | 532.62 | 323.96 |
| 533.37 | 323.99 | 534.06 | 324 | 534.44 | 324.02 | 536.95 | 324.14 | 539.18 | 324.23 |
| 540.57 | 324.27 | 541.5 | 324.29 | 542.4 | 324.29 | 544.96 | 324.3 | 547.09 | 324.33 |
| 548.78 | 324.33 | 550.88 | 324.34 | 551.66 | 324.33 | 552.5 | 324.34 | 553.42 | 324.34 |
| 553.98 | 324.35 | 555.14 | 324.35 | 556.46 | 324.38 | 559.44 | 324.43 | 561.55 | 324.47 |
| 563.66 | 324.5 | 565.66 | 324.43 | 566.15 | 324.42 | 569.82 | 324.33 | 570.34 | 324.33 |
| 571.19 | 324.32 | 575.43 | 324.24 | 576.25 | 324.22 | 577.38 | 324.2 | 579.11 | 324.18 |
| 579.32 | 324.17 | 579.55 | 324.18 | 579.97 | 324.17 | 580.23 | 324.18 | 581.17 | 324.19 |
| 581.64 | 324.21 | 582.26 | 324.28 | 583.07 | 324.28 | 583.45 | 324.27 | 583.66 | 324.23 |
| 583.97 | 324.23 | 585.18 | 324.31 | 585.71 | 324.36 | 587.97 | 324.51 | 588.39 | 324.54 |
| 589.07 | 324.55 | 591.7 | 324.56 | 592.48 | 324.57 | 595.01 | 324.58 | 595.53 | 324.58 |
| 596.31 | 324.59 | 597.85 | 324.6 | 597.97 | 324.64 | 598.98 | 324.69 | 600.77 | 324.72 |
| 603.23 | 324.72 | 603.94 | 324.71 | 605.47 | 324.71 | 609.07 | 324.67 | 609.6 | 324.66 |
| 610.66 | 324.67 | 611.56 | 324.67 | 612.63 | 324.71 | 614.94 | 324.83 | 616.3 | 325.07 |
| 616.8 | 325.15 | 618.53 | 325.58 | 619.19 | 325.75 | 621.1 | 326.2 | 621.58 | 326.29 |
| 621.74 | 326.36 | 622.27 | 326.56 | 622.89 | 326.91 | 623.32 | 327.14 | 623.5 | 327.55 |
| 623.81 | 327.84 | 624.41 | 328.3 | 624.78 | 328.46 | 625.16 | 328.58 | 626.41 | 329.01 |
| 627.21 | 329.33 | 628.57 | 329.71 | 630.09 | 330.12 | 631.49 | 330.51 | 632.18 | 330.66 |
| 632.61 | 330.76 | 633.23 | 330.92 | 635.04 | 331.28 | 635.34 | 331.35 | 636.24 | 331.54 |
| 637.28 | 331.74 | 640.02 | 331.78 | 641.65 | 331.8 | 644.24 | 331.82 | 646.89 | 331.81 |
| 659.93 | 331.74 | 660.59 | 331.74 | 662.56 | 331.73 | 663.42 | 331.72 | 663.68 | 331.73 |
| 664.46 | 331.72 | 665.41 | 331.72 | 671.11 | 331.83 | 672.94 | 331.85 | 674.29 | 331.87 |
| 675.42 | 331.88 | 676.62 | 331.88 | 677.94 | 331.86 | 678.85 | 331.86 | 682.29 | 331.88 |
| 683.11 | 331.88 | 683.75 | 331.87 | 686.26 | 331.84 | 688.65 | 331.82 | 689.02 | 331.82 |
| 692.68 | 331.78 | 700.86 | 331.8 | 704.18 | 331.82 | 708.26 | 331.92 | 708.92 | 331.93 |
| 710.41 | 331.96 | 710.75 | 331.96 | 713.54 | 332 | 715.44 | 332.02 | 717.1 | 332.02 |
| 720.72 | 331.97 | 722.99 | 331.92 | 725.02 | 331.86 | 725.09 | 331.85 | 726.42 | 331.81 |
| 726.76 | 331.79 | 727.44 | 331.8 | 728.01 | 331.75 | 728.45 | 331.72 | 729.13 | 331.73 |
| 729.63 | 331.77 | 730.75 | 331.83 | 731.58 | 331.87 | 734.82 | 332.08 | 740.49 | 332.43 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 741.54 | 332.49 | 745.07 | 332.63 | 747.83 | 332.76 | 747.91 | 332.76 | 749.21 | 332.83 |
| 749.68 | 332.86 | 751.26 | 332.93 | 751.39 | 332.94 | 753.74 | 333.03 | 756.24 | 333.12 |
| 759.07 | 333.22 | 760.11 | 333.25 | 761.47 | 333.28 | 769.04 | 333.49 | 770.46 | 333.52 |
| 771.37 | 333.52 | 772.45 | 333.5 | 774.93 | 333.6 | 777.55 | 333.59 | 778.87 | 333.58 |
| 780.65 | 333.55 | 782.16 | 333.53 | 782.58 | 333.52 | 783.73 | 333.52 | 784.65 | 333.51 |
| 787.25 | 333.51 | 787.88 | 333.49 | 788.62 | 333.48 | 791.03 | 333.46 | 792.12 | 333.46 |
| 793.54 | 333.44 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 110.34 | .04 | 616.8 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 110.34 | 616.8 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 788.428*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.09 | 4.12 | 325.04 | 5.17 | 325.03 | 6.97 | 324.99 | 7.12 | 324.99 |
| 9.79 | 324.94 | 10.64 | 324.93 | 14.95 | 324.89 | 18.9 | 324.88 | 20.2 | 324.88 |
| 20.97 | 324.87 | 23.73 | 324.8 | 26.1 | 324.76 | 29.06 | 324.69 | 32.53 | 324.62 |
| 35.77 | 324.72 | 36.82 | 324.76 | 39.56 | 324.82 | 40.35 | 324.81 | 40.66 | 324.82 |
| 43.41 | 324.78 | 46.57 | 324.72 | 50.77 | 324.6 | 51.02 | 324.59 | 54.42 | 324.48 |
| 54.72 | 324.48 | 56.35 | 324.46 | 58.81 | 324.45 | 60.92 | 324.49 | 61.69 | 324.51 |
| 62.14 | 324.55 | 63.17 | 324.59 | 64.65 | 324.61 | 66.61 | 324.63 | 67.02 | 324.64 |
| 67.99 | 324.64 | 68.83 | 324.63 | 69.88 | 324.63 | 70.82 | 324.62 | 71.46 | 324.62 |
| 71.88 | 324.61 | 72.22 | 324.59 | 74.13 | 324.5 | 74.92 | 324.47 | 75.54 | 324.46 |
| 76.5 | 324.42 | 77.65 | 324.38 | 79.2 | 324.32 | 82.63 | 324.32 | 83.55 | 324.33 |
| 93.61 | 324.33 | 94.3 | 324.34 | 99.79 | 324.34 | 100.17 | 324.35 | 103.16 | 324.36 |
| 106.95 | 324.36 | 109.06 | 324.37 | 109.71 | 324.37 | 110.2 | 324.38 | 111.42 | 324.38 |
| 111.99 | 324.37 | 113.99 | 324.37 | 115.06 | 324.38 | 115.4 | 324.21 | 115.67 | 324.15 |
| 117.39 | 324 | 117.74 | 323.96 | 118.01 | 323.96 | 118.6 | 324.02 | 119.69 | 324.19 |
| 120.99 | 324.36 | 122.45 | 324.42 | 124.72 | 324.52 | 125.17 | 324.52 | 125.34 | 324.54 |
| 125.75 | 324.56 | 126.42 | 324.58 | 127.27 | 324.58 | 129 | 324.59 | 134.1 | 324.59 |
| 135.95 | 324.63 | 136.01 | 324.62 | 137.06 | 324.55 | 137.62 | 324.53 | 140.63 | 324.44 |
| 143.52 | 324.36 | 144.32 | 324.34 | 147.56 | 324.34 | 148.65 | 324.39 | 153.08 | 324.6 |
| 156.37 | 324.69 | 156.82 | 324.69 | 161.08 | 324.73 | 163.19 | 324.73 | 163.45 | 324.72 |
| 165.91 | 324.6 | 166.72 | 324.57 | 167.72 | 324.51 | 168.85 | 324.42 | 170.72 | 324.33 |
| 187.24 | 324.33 | 187.9 | 324.32 | 188.35 | 324.36 | 188.62 | 324.37 | 190.63 | 324.49 |
| 191.31 | 324.52 | 192.07 | 324.54 | 192.43 | 324.54 | 194.82 | 324.58 | 195.77 | 324.6 |
| 199.26 | 324.63 | 200.92 | 324.64 | 203.6 | 324.64 | 204.49 | 324.62 | 209.48 | 324.53 |
| 210.47 | 324.51 | 211.25 | 324.49 | 212.69 | 324.44 | 215.06 | 324.31 | 218.56 | 323.95 |
| 218.85 | 323.93 | 219.78 | 323.8 | 220.74 | 323.76 | 220.76 | 323.77 | 221.35 | 323.83 |
| 222.51 | 324.02 | 223.97 | 324.24 | 224.46 | 324.3 | 225.59 | 324.33 | 226.41 | 324.33 |
| 228.13 | 324.31 | 228.83 | 324.29 | 231.08 | 324.17 | 233.2 | 324.04 | 234.74 | 323.92 |
| 235.2 | 323.89 | 236.6 | 323.84 | 237.65 | 323.81 | 237.85 | 323.8 | 238.5 | 323.86 |
| 238.57 | 323.9 | 239.12 | 323.92 | 240.99 | 324.06 | 241.4 | 324.11 | 241.64 | 324.11 |
| 242.06 | 324.13 | 242.43 | 324.13 | 250.6 | 324.26 | 260.2 | 324.24 | 264.13 | 324.23 |
| 266.88 | 324.23 | 269.02 | 324.22 | 273.67 | 324.22 | 276.16 | 324.28 | 277.16 | 324.3 |
| 277.92 | 324.31 | 278.55 | 324.31 | 279.27 | 324.27 | 279.7 | 324.26 | 282.21 | 324.22 |
| 282.53 | 324.2 | 282.62 | 323.97 | 284.36 | 323.91 | 285.7 | 323.87 | 287.81 | 324.04 |
| 289.39 | 324.19 | 290.4 | 324.25 | 290.87 | 324.33 | 291.69 | 324.33 | 292.96 | 324.29 |
| 296.08 | 324.31 | 298.32 | 324.33 | 299.96 | 324.35 | 300.92 | 324.37 | 301.21 | 324.39 |
| 301.75 | 324.39 | 302.01 | 324.38 | 302.59 | 324.38 | 303.24 | 324.36 | 308.62 | 324.32 |
| 310.53 | 324.23 | 311.8 | 324.16 | 313.32 | 324.15 | 314.88 | 324.15 | 315.45 | 324.14 |
| 319.75 | 324.14 | 322.83 | 324.13 | 325.19 | 324.12 | 327.42 | 324.12 | 327.9 | 324.14 |
| 328.23 | 324.14 | 328.65 | 324.12 | 329.27 | 324.11 | 331.65 | 324.09 | 333.27 | 324.08 |
| 340.55 | 324.07 | 341.92 | 324.07 | 345.23 | 324.06 | 345.86 | 324.06 | 354.42 | 324.01 |
| 355.5 | 324 | 359.81 | 324 | 361.87 | 324.01 | 363.95 | 324.08 | 364.51 | 324.09 |
| 365.1 | 324.09 | 366.9 | 324.08 | 368.91 | 324.06 | 369.49 | 324.05 | 370.47 | 324.02 |
| 371.39 | 324 | 371.73 | 324 | 372.56 | 323.98 | 373.67 | 323.82 | 374.54 | 323.71 |
| 375.84 | 323.58 | 377.97 | 323.3 | 380.2 | 323.25 | 384.77 | 323.15 | 385.54 | 323.13 |
| 386.36 | 323.12 | 388.44 | 323.1 | 389.43 | 323.11 | 392.13 | 323.11 | 397.92 | 323.06 |
| 398.45 | 323.05 | 400.68 | 323.04 | 401.71 | 323.03 | 402.87 | 323.01 | 403.57 | 323.01 |
| 403.85 | 323 | 408.83 | 322.92 | 412.16 | 322.85 | 414.63 | 322.84 | 415.08 | 322.88 |
| 415.58 | 322.88 | 416.26 | 322.89 | 417.35 | 322.92 | 420.88 | 323.11 | 422.19 | 323.17 |
| 423.3 | 323.17 | 423.42 | 323.18 | 424.58 | 323.18 | 425.45 | 323.11 | 427.21 | 322.98 |
| 428.19 | 323.01 | 428.84 | 322.99 | 429.53 | 323.02 | 430.95 | 322.98 | 431.11 | 322.98 |
| 433.2 | 323.02 | 433.31 | 323.01 | 434.46 | 322.99 | 435.38 | 322.98 | 436.35 | 322.95 |
| 437.2 | 322.94 | 437.47 | 322.93 | 438.86 | 322.93 | 439.06 | 322.94 | 439.53 | 322.94 |
| 441.64 | 322.97 | 441.96 | 323.01 | 442.77 | 323.06 | 445.8 | 323.19 | 446.72 | 323.19 |
| 449.41 | 323.2 | 452 | 323.2 | 453.89 | 323.21 | 456.9 | 323.21 | 457.72 | 323.14 |
| 460.04 | 323.14 | 460.05 | 323.13 | 460.91 | 323.13 | 461.73 | 323.12 | 465.87 | 323.24 |
| 466.11 | 323.24 | 478.29 | 323.62 | 481.82 | 323.63 | 482.68 | 323.63 | 486.33 | 323.64 |
| 491.25 | 323.65 | 491.97 | 323.66 | 493.91 | 323.68 | 494.52 | 323.7 | 494.8 | 323.72 |
| 497.99 | 323.72 | 501.29 | 323.73 | 501.78 | 323.71 | 503.05 | 323.72 | 506.46 | 323.72 |
| 506.8 | 323.73 | 508.11 | 323.73 | 508.82 | 323.74 | 511.72 | 323.74 | 511.98 | 323.73 |
| 516.54 | 323.63 | 519.45 | 323.57 | 521.56 | 323.54 | 522.56 | 323.53 | 524.52 | 323.55 |
| 524.96 | 323.56 | 525.41 | 323.56 | 527.51 | 323.61 | 529.14 | 323.65 | 529.44 | 323.65 |
| 531.28 | 323.68 | 532.51 | 323.71 | 532.68 | 323.72 | 534.56 | 323.77 | 534.7 | 323.78 |
| 535.32 | 323.78 | 536.27 | 323.73 | 536.68 | 323.72 | 536.98 | 323.73 | 537.9 | 323.73 |
| 538.61 | 323.67 | 539.3 | 323.64 | 540.27 | 323.64 | 541.05 | 323.65 | 541.51 | 323.68 |
| 543.08 | 323.72 | 543.64 | 323.74 | 545.99 | 323.85 | 546.68 | 323.88 | 548.07 | 323.93 |
| 549.36 | 323.97 | 549.49 | 323.98 | 550.23 | 323.99 | 550.65 | 323.99 | 551.07 | 324 |
| 553.46 | 324 | 555.45 | 324.03 | 556 | 324.03 | 557.03 | 324.04 | 559.72 | 324.04 |
| 560.5 | 324.05 | 561.88 | 324.05 | 561.93 | 324.06 | 562.97 | 324.06 | 564.2 | 324.09 |
| 566.98 | 324.14 | 570.26 | 324.19 | 570.65 | 324.2 | 571.13 | 324.2 | 571.5 | 324.19 |
| 572.79 | 324.14 | 577.16 | 324.05 | 577.96 | 324.05 | 581.92 | 323.98 | 583.15 | 323.95 |
| 583.73 | 323.95 | 584.47 | 323.93 | 585.76 | 323.93 | 586.15 | 323.92 | 586.39 | 323.93 |
| 587.27 | 323.94 | 587.71 | 323.96 | 588.09 | 324.01 | 588.39 | 324.03 | 588.74 | 324.02 |
| 588.84 | 324.03 | 589.4 | 324.01 | 589.59 | 323.98 | 589.99 | 323.98 | 590.21 | 324 |
| 591.02 | 324.05 | 591.51 | 324.1 | 593.62 | 324.24 | 594.02 | 324.26 | 594.65 | 324.27 |
| 597.11 | 324.29 | 597.84 | 324.29 | 600.2 | 324.3 | 600.68 | 324.31 | 601.41 | 324.31 |
| 602.84 | 324.32 | 602.96 | 324.36 | 603.55 | 324.39 | 604.95 | 324.42 | 606.24 | 324.44 |
| 607.87 | 324.44 | 608.53 | 324.43 | 609.96 | 324.43 | 610.8 | 324.42 | 613.33 | 324.4 |
| 613.82 | 324.39 | 614.81 | 324.4 | 615.97 | 324.4 | 616.65 | 324.44 | 618.8 | 324.55 |
| 620.55 | 324.88 | 620.81 | 324.94 | 622.21 | 325.33 | 622.85 | 325.49 | 624.69 | 325.96 |
| 625.15 | 326.06 | 625.31 | 326.14 | 625.82 | 326.34 | 626.41 | 326.69 | 626.83 | 326.93 |
| 627 | 327.35 | 627.3 | 327.66 | 627.87 | 328.12 | 628.24 | 328.28 | 628.6 | 328.39 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 629.81 | 328.79 | 630.58 | 329.1 | 631.88 | 329.44 | 633.09 | 329.75 | 634.7 | 330.17 |
| 635.37 | 330.3 | 636.38 | 330.54 | 638.12 | 330.87 | 638.41 | 330.94 | 639.28 | 331.1 |
| 640.28 | 331.29 | 642.92 | 331.33 | 643.83 | 331.34 | 644.5 | 331.34 | 646.99 | 331.37 |
| 649.21 | 331.37 | 649.54 | 331.36 | 658.47 | 331.34 | 662.11 | 331.33 | 662.75 | 331.33 |
| 664.65 | 331.32 | 667.39 | 331.32 | 672.89 | 331.42 | 673.8 | 331.44 | 675.2 | 331.46 |
| 675.95 | 331.46 | 677.04 | 331.48 | 678.2 | 331.48 | 679.47 | 331.46 | 679.88 | 331.45 |
| 680.35 | 331.45 | 683.66 | 331.48 | 685.07 | 331.48 | 687.49 | 331.45 | 689.79 | 331.43 |
| 690.15 | 331.43 | 693.67 | 331.4 | 701.56 | 331.44 | 703.02 | 331.46 | 704.76 | 331.47 |
| 708.69 | 331.58 | 709.33 | 331.6 | 710.76 | 331.63 | 711.09 | 331.63 | 713.78 | 331.69 |
| 715.61 | 331.71 | 717.21 | 331.72 | 717.91 | 331.71 | 720.7 | 331.68 | 722.89 | 331.63 |
| 724.92 | 331.58 | 726.52 | 331.52 | 727.17 | 331.52 | 728.15 | 331.45 | 728.8 | 331.47 |
| 729.8 | 331.53 | 730.36 | 331.55 | 732.82 | 331.7 | 734.28 | 331.8 | 739.75 | 332.15 |
| 740.76 | 332.2 | 742.94 | 332.3 | 744.17 | 332.35 | 746.83 | 332.48 | 748.61 | 332.57 |
| 750.13 | 332.65 | 750.26 | 332.65 | 752.52 | 332.74 | 754.94 | 332.82 | 756.6 | 332.89 |
| 758.66 | 332.95 | 759.97 | 332.98 | 765.17 | 333.12 | 767.27 | 333.17 | 768.64 | 333.2 |
| 770.56 | 333.18 | 772.95 | 333.27 | 776.74 | 333.24 | 778.46 | 333.2 | 779.91 | 333.18 |
| 780.32 | 333.17 | 781.14 | 333.17 | 781.43 | 333.16 | 782.32 | 333.15 | 784.82 | 333.15 |
| 785.43 | 333.13 | 786.14 | 333.12 | 788.47 | 333.11 | 788.83 | 333.1 | 789.52 | 333.1 |
| 790.88 | 333.08 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 113.99 | .04 | 620.55 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 113.99 | 620.55 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 768.713*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.8 | 4.25 | 324.75 | 5.34 | 324.74 | 7.19 | 324.7 | 7.35 | 324.7 |
| 10.1 | 324.65 | 10.98 | 324.63 | 15.43 | 324.6 | 19.5 | 324.59 | 20.84 | 324.59 |
| 21.65 | 324.58 | 24.49 | 324.51 | 25.06 | 324.5 | 26.94 | 324.46 | 29.99 | 324.4 |
| 32.54 | 324.34 | 33.57 | 324.33 | 36.91 | 324.44 | 38 | 324.48 | 40.83 | 324.55 |
| 41.64 | 324.54 | 41.97 | 324.55 | 44.79 | 324.5 | 48.06 | 324.45 | 52.39 | 324.33 |
| 52.65 | 324.32 | 56.16 | 324.2 | 60.69 | 324.18 | 62.86 | 324.22 | 63.66 | 324.24 |
| 64.13 | 324.29 | 65.19 | 324.33 | 66.07 | 324.34 | 68.74 | 324.38 | 69.16 | 324.39 |
| 72.12 | 324.39 | 73.09 | 324.38 | 73.75 | 324.38 | 74.18 | 324.37 | 74.98 | 324.33 |
| 75.8 | 324.28 | 77.31 | 324.22 | 77.96 | 324.21 | 78.55 | 324.19 | 78.95 | 324.17 |
| 80.13 | 324.13 | 81.73 | 324.06 | 85.08 | 324.07 | 95.02 | 324.07 | 96.61 | 324.08 |
| 103.38 | 324.08 | 106.46 | 324.1 | 110.37 | 324.1 | 112.54 | 324.11 | 117.63 | 324.11 |
| 118.79 | 324.11 | 119.11 | 323.94 | 119.4 | 323.88 | 119.86 | 323.83 | 121.65 | 323.67 |
| 122.2 | 323.71 | 122.47 | 323.74 | 123.62 | 323.92 | 124.97 | 324.1 | 126.51 | 324.16 |
| 128.89 | 324.26 | 129.36 | 324.27 | 129.54 | 324.29 | 129.97 | 324.31 | 130.67 | 324.33 |
| 131.57 | 324.33 | 133.38 | 324.34 | 138.44 | 324.34 | 138.74 | 324.35 | 140.74 | 324.38 |
| 141.84 | 324.31 | 142.42 | 324.29 | 145.58 | 324.19 | 148.61 | 324.1 | 149.45 | 324.08 |
| 152.85 | 324.08 | 153.99 | 324.14 | 158.64 | 324.35 | 159.44 | 324.38 | 162.09 | 324.45 |
| 162.57 | 324.46 | 167.03 | 324.49 | 169.24 | 324.49 | 169.51 | 324.48 | 172.1 | 324.36 |
| 172.95 | 324.33 | 173.99 | 324.26 | 175.18 | 324.17 | 176.05 | 324.12 | 177.14 | 324.07 |
| 195.17 | 324.07 | 195.91 | 324.12 | 198.03 | 324.24 | 198.74 | 324.27 | 199.13 | 324.28 |
| 199.54 | 324.3 | 200.61 | 324.3 | 203.42 | 324.36 | 207.08 | 324.39 | 208.83 | 324.4 |
| 211.64 | 324.4 | 212.56 | 324.38 | 217.8 | 324.29 | 218.84 | 324.27 | 219.65 | 324.25 |
| 220.28 | 324.23 | 221.17 | 324.19 | 223.65 | 324.05 | 226.3 | 323.77 | 227.63 | 323.65 |
| 228.61 | 323.51 | 229.61 | 323.47 | 229.64 | 323.48 | 230.26 | 323.55 | 231.47 | 323.75 |
| 233 | 323.98 | 233.51 | 324.05 | 234.23 | 324.06 | 234.7 | 324.08 | 235.13 | 324.07 |
| 235.56 | 324.07 | 237.37 | 324.05 | 237.77 | 324.05 | 240.46 | 323.9 | 242.68 | 323.77 |
| 243.89 | 323.67 | 244.78 | 323.61 | 246.25 | 323.56 | 247.34 | 323.53 | 247.56 | 323.52 |
| 248.24 | 323.59 | 248.31 | 323.62 | 249.62 | 323.69 | 250.85 | 323.8 | 251.28 | 323.85 |
| 251.76 | 323.86 | 252.36 | 323.86 | 260.93 | 324.01 | 271 | 323.99 | 275.13 | 323.98 |
| 280.26 | 323.98 | 285.14 | 323.97 | 287.74 | 324.04 | 288.8 | 324.06 | 289.59 | 324.07 |
| 290.25 | 324.07 | 290.73 | 324.05 | 291 | 324.03 | 292.15 | 324 | 294.09 | 323.97 |
| 294.43 | 323.96 | 294.52 | 323.72 | 296.35 | 323.64 | 297.75 | 323.61 | 299.45 | 323.74 |
| 301.62 | 323.95 | 302.68 | 324.01 | 303.07 | 324.09 | 303.34 | 324.1 | 304.03 | 324.09 |
| 305.37 | 324.06 | 306.84 | 324.06 | 308.64 | 324.08 | 310.99 | 324.1 | 312.71 | 324.12 |
| 313.71 | 324.14 | 314.02 | 324.16 | 314.59 | 324.16 | 314.87 | 324.15 | 315.47 | 324.15 |
| 316.53 | 324.12 | 317.56 | 324.12 | 321.8 | 324.09 | 323.79 | 323.99 | 325.13 | 323.92 |
| 326.73 | 323.91 | 329.34 | 323.91 | 330.61 | 323.9 | 333.47 | 323.9 | 336.7 | 323.89 |
| 339.17 | 323.89 | 340.85 | 323.88 | 341.22 | 323.88 | 342.02 | 323.9 | 342.36 | 323.9 |
| 343.45 | 323.88 | 345.95 | 323.86 | 347.65 | 323.85 | 355.29 | 323.84 | 356.73 | 323.84 |
| 360.2 | 323.83 | 360.85 | 323.82 | 369.83 | 323.78 | 370.97 | 323.77 | 374.2 | 323.77 |
| 375.48 | 323.78 | 377.65 | 323.79 | 379.84 | 323.86 | 380.42 | 323.87 | 381.04 | 323.87 |
| 382.92 | 323.86 | 384.08 | 323.86 | 385.04 | 323.85 | 386.67 | 323.8 | 387.64 | 323.78 |
| 387.99 | 323.78 | 388.87 | 323.76 | 390.02 | 323.59 | 390.94 | 323.47 | 392.3 | 323.34 |
| 394.54 | 323.04 | 396.88 | 322.99 | 401.67 | 322.89 | 403.34 | 322.85 | 404.42 | 322.84 |
| 405.53 | 322.84 | 406.56 | 322.85 | 409.39 | 322.85 | 415.47 | 322.8 | 416.03 | 322.79 |
| 418.36 | 322.78 | 419.44 | 322.77 | 420.66 | 322.75 | 421.39 | 322.75 | 421.69 | 322.74 |
| 424.32 | 322.71 | 426.91 | 322.67 | 429.38 | 322.62 | 430.41 | 322.61 | 430.76 | 322.6 |
| 432.98 | 322.59 | 433.4 | 322.63 | 433.87 | 322.63 | 435.51 | 322.66 | 436.71 | 322.73 |
| 440.01 | 322.89 | 442.22 | 322.89 | 443.03 | 322.83 | 444.67 | 322.72 | 445.58 | 322.75 |
| 446.18 | 322.73 | 446.68 | 322.76 | 446.82 | 322.76 | 448.15 | 322.73 | 448.29 | 322.72 |
| 450.24 | 322.76 | 450.87 | 322.74 | 451.4 | 322.74 | 451.64 | 322.73 | 453.16 | 322.7 |
| 453.88 | 322.69 | 453.95 | 322.68 | 455.68 | 322.68 | 456.12 | 322.69 | 458.08 | 322.71 |
| 458.38 | 322.75 | 459.12 | 322.79 | 461.94 | 322.91 | 462.8 | 322.91 | 465.3 | 322.92 |
| 467.7 | 322.92 | 469.45 | 322.93 | 472.26 | 322.93 | 472.87 | 322.87 | 473.47 | 322.87 |
| 475.17 | 322.86 | 475.98 | 322.86 | 476.74 | 322.85 | 480.59 | 322.96 | 480.8 | 322.96 |
| 492.13 | 323.3 | 495.41 | 323.31 | 496.21 | 323.31 | 499.59 | 323.32 | 504.17 | 323.34 |
| 504.83 | 323.34 | 505.77 | 323.35 | 507.21 | 323.38 | 507.47 | 323.4 | 510.43 | 323.4 |
| 513.49 | 323.41 | 513.61 | 323.4 | 516.64 | 323.4 | 517.47 | 323.41 | 518.61 | 323.41 |
| 519.83 | 323.42 | 520.49 | 323.43 | 523.18 | 323.43 | 523.42 | 323.42 | 527.66 | 323.34 |
| 530.37 | 323.28 | 530.99 | 323.28 | 532.33 | 323.26 | 534.16 | 323.26 | 535.14 | 323.27 |
| 535.9 | 323.29 | 536.22 | 323.29 | 537.86 | 323.33 | 539.36 | 323.36 | 539.64 | 323.37 |
| 541.35 | 323.4 | 542.5 | 323.43 | 542.65 | 323.43 | 544.4 | 323.48 | 544.53 | 323.49 |
| 545.11 | 323.49 | 546.37 | 323.43 | 546.65 | 323.45 | 546.78 | 323.44 | 547.07 | 323.45 |
| 547.51 | 323.45 | 547.7 | 323.43 | 548.36 | 323.38 | 548.74 | 323.38 | 548.8 | 323.37 |
| 549.7 | 323.37 | 550.43 | 323.38 | 550.86 | 323.41 | 551.91 | 323.44 | 552.5 | 323.45 |
| 552.84 | 323.47 | 555.02 | 323.57 | 555.67 | 323.59 | 556.95 | 323.64 | 558.15 | 323.68 |
| 558.6 | 323.69 | 558.96 | 323.69 | 559.35 | 323.7 | 559.74 | 323.7 | 561.96 | 323.71 |
| 563.25 | 323.73 | 563.81 | 323.73 | 564.32 | 323.74 | 565.28 | 323.75 | 568.5 | 323.75 |
| 568.71 | 323.76 | 569.83 | 323.76 | 570.79 | 323.77 | 571.94 | 323.79 | 574.52 | 323.85 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 577.57 | 323.9 | 578.38 | 323.9 | 579.93 | 323.85 | 580.34 | 323.84 | 583.53 | 323.78 |
| 584.72 | 323.78 | 588.4 | 323.72 | 589.11 | 323.71 | 590.09 | 323.69 | 590.77 | 323.68 |
| 591.97 | 323.68 | 592.34 | 323.67 | 592.56 | 323.68 | 593.38 | 323.69 | 593.78 | 323.71 |
| 594.14 | 323.75 | 594.41 | 323.77 | 595.03 | 323.77 | 595.35 | 323.76 | 595.53 | 323.73 |
| 595.9 | 323.73 | 596.86 | 323.79 | 597.31 | 323.83 | 599.28 | 323.96 | 599.79 | 323.99 |
| 600.23 | 323.99 | 602.52 | 324.01 | 603.19 | 324.01 | 605.38 | 324.03 | 606.51 | 324.03 |
| 607.84 | 324.04 | 607.95 | 324.08 | 608.5 | 324.11 | 609.27 | 324.13 | 610.38 | 324.15 |
| 615.23 | 324.15 | 617.58 | 324.13 | 618.04 | 324.12 | 618.96 | 324.13 | 620.04 | 324.13 |
| 622.67 | 324.26 | 623.85 | 324.51 | 624.29 | 324.6 | 624.54 | 324.67 | 625.89 | 325.07 |
| 628.27 | 325.73 | 628.72 | 325.83 | 628.87 | 325.91 | 629.36 | 326.13 | 629.93 | 326.48 |
| 630.34 | 326.71 | 630.5 | 327.16 | 630.79 | 327.48 | 631.18 | 327.8 | 631.34 | 327.95 |
| 631.69 | 328.1 | 633.2 | 328.57 | 633.86 | 328.83 | 633.94 | 328.87 | 635.2 | 329.17 |
| 636.61 | 329.51 | 637.91 | 329.82 | 638.95 | 330.03 | 639.53 | 330.16 | 641.2 | 330.46 |
| 641.48 | 330.52 | 643.28 | 330.84 | 645.83 | 330.87 | 646.7 | 330.89 | 647.34 | 330.89 |
| 649.74 | 330.93 | 651.87 | 330.92 | 664.91 | 330.92 | 666.73 | 330.91 | 667.53 | 330.91 |
| 667.77 | 330.92 | 669.37 | 330.92 | 674.66 | 331.02 | 675.54 | 331.04 | 676.36 | 331.05 |
| 676.89 | 331.05 | 677.07 | 331.06 | 677.61 | 331.06 | 678.66 | 331.08 | 679.78 | 331.08 |
| 681 | 331.06 | 681.39 | 331.05 | 681.84 | 331.05 | 685.03 | 331.08 | 686.39 | 331.08 |
| 688.72 | 331.06 | 690.93 | 331.05 | 691.28 | 331.04 | 694.67 | 331.03 | 702.25 | 331.09 |
| 703.66 | 331.1 | 705.34 | 331.12 | 709.12 | 331.25 | 709.73 | 331.27 | 711.12 | 331.3 |
| 711.43 | 331.31 | 714.02 | 331.37 | 715.78 | 331.4 | 717.32 | 331.41 | 717.99 | 331.41 |
| 720.68 | 331.38 | 721.03 | 331.38 | 722.79 | 331.35 | 724.67 | 331.3 | 726.28 | 331.24 |
| 726.91 | 331.25 | 727.56 | 331.2 | 727.85 | 331.19 | 728.24 | 331.19 | 728.94 | 331.23 |
| 729.44 | 331.25 | 729.63 | 331.27 | 729.98 | 331.28 | 730.75 | 331.33 | 733.75 | 331.52 |
| 739.18 | 331.87 | 739.99 | 331.91 | 742.08 | 332.02 | 743.27 | 332.07 | 744.81 | 332.15 |
| 745.9 | 332.2 | 747.1 | 332.27 | 749.01 | 332.36 | 749.13 | 332.37 | 751.31 | 332.45 |
| 753.63 | 332.53 | 755.23 | 332.59 | 757.22 | 332.65 | 758.48 | 332.68 | 763.48 | 332.81 |
| 765.5 | 332.85 | 766.82 | 332.88 | 767.66 | 332.87 | 768.67 | 332.85 | 770.97 | 332.94 |
| 774.29 | 332.9 | 774.61 | 332.9 | 776.27 | 332.86 | 777.67 | 332.83 | 778.06 | 332.81 |
| 779.13 | 332.81 | 779.98 | 332.79 | 782.39 | 332.78 | 783.66 | 332.76 | 786.25 | 332.75 |
| 788.23 | 332.72 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 117.63 | .04 | 624.29 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 117.63 | 624.29 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 748.999*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.51 | 4.38 | 324.46 | 5.5 | 324.44 | 8.14 | 324.4 | 10.42 | 324.35 |
| 11.32 | 324.34 | 15.9 | 324.31 | 20.11 | 324.29 | 20.66 | 324.3 | 21.49 | 324.3 |
| 22.32 | 324.29 | 25.25 | 324.22 | 25.83 | 324.21 | 27.77 | 324.17 | 30.92 | 324.11 |
| 33.55 | 324.05 | 34.61 | 324.04 | 39.18 | 324.2 | 42.09 | 324.27 | 42.94 | 324.27 |
| 43.27 | 324.28 | 46.18 | 324.23 | 48.95 | 324.19 | 49.55 | 324.17 | 54.01 | 324.05 |
| 54.29 | 324.05 | 57.91 | 323.93 | 58.22 | 323.93 | 59.95 | 323.91 | 62.57 | 323.91 |
| 64.81 | 323.95 | 65.64 | 323.98 | 66.12 | 324.03 | 67.21 | 324.07 | 68.79 | 324.09 |
| 71.31 | 324.14 | 74.35 | 324.14 | 75.35 | 324.13 | 76.03 | 324.13 | 76.48 | 324.12 |
| 77.3 | 324.08 | 78.15 | 324.03 | 79.71 | 323.97 | 80.38 | 323.96 | 80.99 | 323.94 |
| 81.39 | 323.92 | 82.62 | 323.87 | 84.27 | 323.81 | 97.97 | 323.81 | 99.6 | 323.82 |
| 106.58 | 323.82 | 109.76 | 323.83 | 112.42 | 323.83 | 113.79 | 323.84 | 116.03 | 323.85 |
| 120.11 | 323.85 | 121.28 | 323.84 | 122.46 | 323.85 | 122.83 | 323.67 | 123.12 | 323.6 |
| 123.61 | 323.55 | 125.01 | 323.43 | 125.36 | 323.39 | 125.69 | 323.39 | 126.06 | 323.42 |
| 126.34 | 323.46 | 127.54 | 323.65 | 128.96 | 323.83 | 130.57 | 323.91 | 133.06 | 324.01 |
| 133.56 | 324.02 | 133.92 | 324.06 | 134.19 | 324.06 | 134.93 | 324.08 | 135.87 | 324.08 |
| 137.76 | 324.09 | 141.7 | 324.09 | 143.37 | 324.1 | 145.39 | 324.14 | 145.46 | 324.13 |
| 146.61 | 324.06 | 147.22 | 324.04 | 150.53 | 323.94 | 153.7 | 323.84 | 154.58 | 323.82 |
| 158.14 | 323.82 | 159.33 | 323.88 | 164.2 | 324.11 | 165.03 | 324.14 | 167.81 | 324.21 |
| 168.31 | 324.22 | 172.98 | 324.25 | 173.84 | 324.26 | 175.3 | 324.26 | 175.58 | 324.24 |
| 179.18 | 324.08 | 180.27 | 324.01 | 181.51 | 323.91 | 182.42 | 323.86 | 183.57 | 323.81 |
| 202.43 | 323.81 | 205.43 | 324 | 206.17 | 324.02 | 206.58 | 324.04 | 207 | 324.05 |
| 207.41 | 324.05 | 208.12 | 324.06 | 211.07 | 324.12 | 214.9 | 324.15 | 216.73 | 324.16 |
| 217.28 | 324.16 | 218.45 | 324.17 | 219.67 | 324.17 | 220.64 | 324.14 | 226.12 | 324.05 |
| 228.06 | 324 | 228.72 | 323.98 | 229.65 | 323.94 | 232.24 | 323.8 | 235.02 | 323.5 |
| 236.41 | 323.37 | 236.73 | 323.33 | 237.43 | 323.22 | 238.02 | 323.2 | 238.51 | 323.19 |
| 239.16 | 323.27 | 240.43 | 323.48 | 242.03 | 323.72 | 242.56 | 323.79 | 243.81 | 323.82 |
| 244.71 | 323.82 | 246.6 | 323.8 | 247.37 | 323.78 | 247.78 | 323.75 | 249.83 | 323.64 |
| 252.16 | 323.5 | 253.43 | 323.4 | 253.85 | 323.37 | 254.9 | 323.31 | 255.89 | 323.28 |
| 257.04 | 323.24 | 257.27 | 323.24 | 257.57 | 323.26 | 257.98 | 323.31 | 258.2 | 323.36 |
| 258.66 | 323.37 | 259.42 | 323.42 | 260.72 | 323.53 | 261.17 | 323.59 | 261.89 | 323.6 |
| 262.14 | 323.59 | 262.3 | 323.6 | 271.27 | 323.76 | 281.81 | 323.74 | 286.13 | 323.74 |
| 288.02 | 323.73 | 291.5 | 323.73 | 296.6 | 323.72 | 299.33 | 323.79 | 300.43 | 323.82 |
| 301.26 | 323.83 | 301.96 | 323.83 | 302.45 | 323.81 | 302.74 | 323.79 | 303.95 | 323.76 |
| 305.97 | 323.73 | 306.32 | 323.71 | 306.42 | 323.46 | 308.34 | 323.38 | 309.8 | 323.34 |
| 311.58 | 323.49 | 312.12 | 323.54 | 313.85 | 323.71 | 314.97 | 323.77 | 315.37 | 323.85 |
| 315.48 | 323.86 | 316.38 | 323.86 | 317.78 | 323.82 | 319.32 | 323.82 | 321.2 | 323.84 |
| 323.66 | 323.86 | 325.46 | 323.89 | 326.51 | 323.91 | 326.83 | 323.93 | 328.07 | 323.93 |
| 328.6 | 323.91 | 328.8 | 323.91 | 329.46 | 323.89 | 330.54 | 323.88 | 334.97 | 323.86 |
| 337.06 | 323.76 | 338.46 | 323.68 | 340.13 | 323.67 | 344.19 | 323.67 | 347.19 | 323.66 |
| 350.57 | 323.66 | 353.16 | 323.65 | 355.61 | 323.65 | 356.14 | 323.67 | 356.49 | 323.67 |
| 356.96 | 323.65 | 357.64 | 323.64 | 360.25 | 323.62 | 362.03 | 323.61 | 371.53 | 323.61 |
| 375.17 | 323.59 | 375.85 | 323.59 | 385.25 | 323.55 | 386.44 | 323.54 | 389.82 | 323.54 |
| 391.16 | 323.55 | 393.43 | 323.57 | 396.33 | 323.66 | 396.98 | 323.65 | 398.95 | 323.64 |
| 400.16 | 323.64 | 401.16 | 323.63 | 402.88 | 323.58 | 403.88 | 323.57 | 405.17 | 323.54 |
| 406.38 | 323.36 | 407.34 | 323.24 | 408.77 | 323.1 | 411.11 | 322.79 | 413.55 | 322.73 |
| 418.57 | 322.63 | 420.32 | 322.59 | 421.45 | 322.58 | 423.69 | 322.58 | 424.75 | 322.59 |
| 426.65 | 322.59 | 433.01 | 322.54 | 433.6 | 322.53 | 436.04 | 322.52 | 437.17 | 322.51 |
| 438.44 | 322.49 | 439.21 | 322.49 | 439.53 | 322.48 | 442.28 | 322.45 | 444.99 | 322.41 |
| 445.55 | 322.41 | 447.58 | 322.37 | 448.65 | 322.36 | 449.02 | 322.35 | 451.33 | 322.34 |
| 451.56 | 322.37 | 452.15 | 322.37 | 453.67 | 322.4 | 454.77 | 322.46 | 456.89 | 322.56 |
| 457.82 | 322.6 | 458.27 | 322.61 | 459.87 | 322.61 | 462.13 | 322.46 | 462.96 | 322.49 |
| 463.52 | 322.48 | 464.12 | 322.5 | 465.34 | 322.47 | 465.47 | 322.47 | 467.27 | 322.5 |
| 467.86 | 322.49 | 467.99 | 322.48 | 468.57 | 322.48 | 469.97 | 322.45 | 470.64 | 322.44 |
| 470.7 | 322.43 | 471.38 | 322.43 | 471.71 | 322.42 | 471.87 | 322.43 | 472.7 | 322.43 |
| 474.51 | 322.46 | 475.48 | 322.52 | 478.08 | 322.63 | 481.18 | 322.63 | 482.55 | 322.64 |
| 485.11 | 322.64 | 486.16 | 322.65 | 487.61 | 322.65 | 488.18 | 322.6 | 488.73 | 322.59 |
| 491.05 | 322.59 | 491.75 | 322.58 | 495.31 | 322.67 | 495.5 | 322.68 | 505.96 | 322.98 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 508.99 | 322.99 | 509.08 | 323 | 509.73 | 323 | 512.86 | 323.01 | 517.08 | 323.03 |
| 517.7 | 323.03 | 519.36 | 323.05 | 520.13 | 323.08 | 522.86 | 323.08 | 525.7 | 323.09 |
| 526.12 | 323.08 | 527.21 | 323.09 | 529.36 | 323.09 | 530.13 | 323.1 | 531.55 | 323.11 |
| 534.74 | 323.11 | 534.87 | 323.1 | 538.78 | 323.04 | 540.4 | 323.01 | 541.28 | 323 |
| 541.86 | 323 | 543.95 | 322.98 | 544.78 | 322.99 | 545.63 | 322.99 | 545.64 | 323 |
| 546.17 | 323 | 546.69 | 323.01 | 548.2 | 323.05 | 549.59 | 323.08 | 549.85 | 323.08 |
| 551.43 | 323.12 | 552.49 | 323.14 | 552.63 | 323.15 | 554.24 | 323.19 | 554.36 | 323.2 |
| 554.9 | 323.2 | 555.28 | 323.19 | 556.06 | 323.15 | 556.71 | 323.17 | 556.94 | 323.17 |
| 557.9 | 323.11 | 558.25 | 323.1 | 559.14 | 323.1 | 560.21 | 323.13 | 560.58 | 323.15 |
| 561.56 | 323.17 | 564.05 | 323.28 | 564.65 | 323.3 | 565.84 | 323.35 | 567.7 | 323.4 |
| 568.42 | 323.4 | 570.47 | 323.41 | 572.17 | 323.44 | 572.64 | 323.44 | 573.53 | 323.45 |
| 575.21 | 323.46 | 576.7 | 323.46 | 577.18 | 323.47 | 577.74 | 323.47 | 578.62 | 323.48 |
| 579.68 | 323.5 | 582.06 | 323.55 | 585.45 | 323.61 | 585.95 | 323.6 | 587.06 | 323.56 |
| 587.44 | 323.56 | 590.39 | 323.51 | 591.49 | 323.51 | 595.54 | 323.45 | 595.94 | 323.44 |
| 596.44 | 323.44 | 597.83 | 323.42 | 598.18 | 323.43 | 598.37 | 323.42 | 599.25 | 323.44 |
| 599.48 | 323.44 | 599.85 | 323.46 | 600.35 | 323.51 | 601 | 323.51 | 601.42 | 323.49 |
| 601.47 | 323.47 | 601.81 | 323.48 | 602.7 | 323.53 | 603.12 | 323.57 | 604.93 | 323.68 |
| 605.27 | 323.71 | 605.81 | 323.71 | 607.92 | 323.73 | 608.54 | 323.74 | 610.57 | 323.75 |
| 610.99 | 323.75 | 611.61 | 323.76 | 612.84 | 323.77 | 612.94 | 323.8 | 613.44 | 323.83 |
| 614.16 | 323.85 | 614.65 | 323.85 | 615.76 | 323.87 | 619.67 | 323.87 | 621.84 | 323.85 |
| 622.26 | 323.85 | 623.11 | 323.86 | 624.11 | 323.86 | 626.54 | 323.98 | 628.03 | 324.32 |
| 628.27 | 324.4 | 629.57 | 324.81 | 630.16 | 324.99 | 631.86 | 325.5 | 632.29 | 325.6 |
| 632.43 | 325.69 | 632.91 | 325.91 | 633.45 | 326.26 | 633.84 | 326.5 | 634 | 326.97 |
| 634.28 | 327.29 | 634.81 | 327.77 | 635.14 | 327.92 | 635.98 | 328.17 | 636.6 | 328.35 |
| 637.31 | 328.63 | 639.63 | 329.15 | 639.87 | 329.2 | 641.12 | 329.48 | 641.74 | 329.59 |
| 642.68 | 329.78 | 644.29 | 330.05 | 644.56 | 330.1 | 646.28 | 330.38 | 648.73 | 330.42 |
| 649.56 | 330.44 | 650.18 | 330.44 | 652.49 | 330.48 | 654.85 | 330.48 | 663.1 | 330.49 |
| 666.47 | 330.51 | 670.75 | 330.51 | 670.96 | 330.52 | 671.35 | 330.52 | 676.44 | 330.62 |
| 677.29 | 330.63 | 678.07 | 330.65 | 678.76 | 330.65 | 680.28 | 330.68 | 681.1 | 330.68 |
| 681.35 | 330.67 | 682.53 | 330.66 | 682.91 | 330.65 | 683.34 | 330.65 | 686.41 | 330.68 |
| 687.7 | 330.68 | 692.07 | 330.66 | 695.66 | 330.65 | 702.95 | 330.73 | 704.31 | 330.75 |
| 705.92 | 330.78 | 709.55 | 330.91 | 710.14 | 330.94 | 711.47 | 330.97 | 711.77 | 330.98 |
| 714.26 | 331.05 | 715.95 | 331.09 | 717.43 | 331.11 | 718.08 | 331.11 | 720.66 | 331.09 |
| 721 | 331.09 | 722.23 | 331.07 | 724.49 | 331.02 | 726.04 | 330.97 | 726.16 | 330.96 |
| 726.65 | 330.97 | 727.55 | 330.92 | 727.89 | 330.92 | 728.6 | 330.96 | 729.46 | 331 |
| 730.34 | 331.06 | 731.87 | 331.15 | 733.22 | 331.25 | 738.28 | 331.58 | 739.22 | 331.63 |
| 741.22 | 331.73 | 742.36 | 331.78 | 743.52 | 331.84 | 743.84 | 331.86 | 744.83 | 331.91 |
| 744.89 | 331.92 | 746.05 | 331.98 | 746.47 | 332.01 | 747.88 | 332.08 | 748 | 332.08 |
| 750.09 | 332.16 | 752.33 | 332.24 | 753.86 | 332.3 | 754.84 | 332.32 | 755.77 | 332.35 |
| 761.79 | 332.5 | 763.73 | 332.54 | 765 | 332.56 | 765.81 | 332.55 | 766.77 | 332.52 |
| 768.98 | 332.61 | 771.31 | 332.58 | 774.08 | 332.51 | 775.8 | 332.46 | 776.83 | 332.45 |
| 777.65 | 332.43 | 779.96 | 332.42 | 780.73 | 332.4 | 781.18 | 332.4 | 783.67 | 332.39 |
| 785.57 | 332.36 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 121.28 | .04 | 628.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 121.28 | 628.03 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 729.285*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 324.23 | 4.52 | 324.17 | 5.67 | 324.15 | 7.63 | 324.12 | 7.81 | 324.11 |
| 10.73 | 324.06 | 11.66 | 324.04 | 16.38 | 324.02 | 20.71 | 324 | 22.13 | 324.02 |
| 22.99 | 324 | 26.01 | 323.92 | 26.61 | 323.92 | 28.61 | 323.88 | 31.85 | 323.82 |
| 34.56 | 323.76 | 35.29 | 323.75 | 35.65 | 323.75 | 39.2 | 323.88 | 40.35 | 323.92 |
| 43.36 | 324 | 44.23 | 324 | 44.57 | 324.01 | 47.57 | 323.96 | 50.42 | 323.92 |
| 51.04 | 323.9 | 55.64 | 323.78 | 55.92 | 323.77 | 59.65 | 323.65 | 64.45 | 323.63 |
| 66.76 | 323.69 | 67.61 | 323.71 | 68.1 | 323.76 | 68.7 | 323.79 | 69.23 | 323.81 |
| 70.16 | 323.82 | 70.86 | 323.84 | 73.45 | 323.89 | 74.51 | 323.9 | 75.43 | 323.89 |
| 78.32 | 323.89 | 78.78 | 323.88 | 80.5 | 323.78 | 81.24 | 323.75 | 82.1 | 323.72 |
| 82.79 | 323.71 | 83.42 | 323.68 | 83.84 | 323.67 | 86.8 | 323.55 | 96.8 | 323.55 |
| 100.62 | 323.56 | 109.79 | 323.56 | 113.06 | 323.57 | 117.22 | 323.57 | 119.52 | 323.58 |
| 120.24 | 323.58 | 120.77 | 323.59 | 122.12 | 323.59 | 122.74 | 323.58 | 124.93 | 323.58 |
| 126.16 | 323.59 | 126.54 | 323.39 | 126.85 | 323.32 | 127.36 | 323.27 | 128.83 | 323.15 |
| 129.19 | 323.11 | 129.39 | 323.1 | 129.92 | 323.14 | 130.21 | 323.18 | 131.47 | 323.37 |
| 132.95 | 323.57 | 134.63 | 323.65 | 137.23 | 323.76 | 137.75 | 323.77 | 138.12 | 323.81 |
| 138.41 | 323.81 | 139.18 | 323.84 | 140.16 | 323.84 | 142.15 | 323.85 | 147.67 | 323.85 |
| 148 | 323.86 | 150.11 | 323.9 | 150.19 | 323.89 | 151.09 | 323.84 | 151.39 | 323.81 |
| 155.48 | 323.68 | 158.79 | 323.58 | 159.71 | 323.56 | 163.43 | 323.56 | 164.67 | 323.63 |
| 169.76 | 323.86 | 170.63 | 323.89 | 173.11 | 323.96 | 174.05 | 323.98 | 178.93 | 324.02 |
| 181.35 | 324.02 | 181.65 | 324.01 | 184.47 | 323.88 | 185.41 | 323.84 | 186.54 | 323.76 |
| 187.84 | 323.66 | 189.99 | 323.55 | 209.69 | 323.55 | 210.51 | 323.61 | 212.82 | 323.75 |
| 213.6 | 323.78 | 214.03 | 323.79 | 214.47 | 323.81 | 214.89 | 323.81 | 217.63 | 323.85 |
| 218.71 | 323.88 | 222.72 | 323.91 | 224.63 | 323.92 | 225.21 | 323.92 | 226.43 | 323.93 |
| 227.7 | 323.93 | 228.71 | 323.9 | 230.6 | 323.87 | 235.58 | 323.78 | 236.47 | 323.76 |
| 238.12 | 323.69 | 240.84 | 323.54 | 243.74 | 323.23 | 244.85 | 323.12 | 245.19 | 323.09 |
| 245.52 | 323.05 | 246.26 | 322.94 | 246.87 | 322.91 | 247.35 | 322.9 | 247.38 | 322.91 |
| 248.06 | 322.98 | 249.39 | 323.21 | 251.06 | 323.46 | 251.62 | 323.54 | 252.41 | 323.55 |
| 252.92 | 323.57 | 253.86 | 323.57 | 255.04 | 323.55 | 255.84 | 323.54 | 256.63 | 323.52 |
| 257.07 | 323.5 | 259.21 | 323.38 | 261.64 | 323.23 | 262.97 | 323.12 | 263.41 | 323.09 |
| 264.51 | 323.03 | 265.54 | 323 | 266.97 | 322.95 | 267.72 | 323.03 | 267.8 | 323.07 |
| 268.43 | 323.1 | 269.23 | 323.15 | 270.58 | 323.27 | 271.05 | 323.33 | 271.57 | 323.33 |
| 271.81 | 323.34 | 272.06 | 323.33 | 272.23 | 323.34 | 281.6 | 323.51 | 292.61 | 323.49 |
| 299.1 | 323.49 | 300.27 | 323.48 | 308.06 | 323.48 | 310.91 | 323.55 | 312.07 | 323.58 |
| 312.93 | 323.59 | 313.66 | 323.59 | 314.18 | 323.56 | 314.97 | 323.53 | 315.74 | 323.52 |
| 317.85 | 323.48 | 318.22 | 323.47 | 318.32 | 323.2 | 320.32 | 323.12 | 321.85 | 323.08 |
| 323.71 | 323.23 | 324.27 | 323.29 | 326.09 | 323.46 | 327.25 | 323.53 | 327.79 | 323.63 |
| 328.72 | 323.62 | 330.19 | 323.58 | 331.79 | 323.59 | 333.76 | 323.61 | 336.33 | 323.63 |
| 338.21 | 323.66 | 339.31 | 323.68 | 339.64 | 323.7 | 340.93 | 323.7 | 341.49 | 323.68 |
| 341.7 | 323.68 | 342.39 | 323.66 | 343.51 | 323.65 | 348.15 | 323.62 | 350.33 | 323.52 |
| 351.79 | 323.44 | 353.54 | 323.43 | 357.78 | 323.43 | 360.91 | 323.42 | 367.14 | 323.42 |
| 368.98 | 323.41 | 369.39 | 323.41 | 370.25 | 323.43 | 370.63 | 323.43 | 371.82 | 323.41 |
| 374.55 | 323.39 | 376.42 | 323.38 | 386.33 | 323.38 | 390.13 | 323.36 | 390.85 | 323.36 |
| 400.66 | 323.32 | 401.91 | 323.31 | 405.44 | 323.31 | 406.84 | 323.32 | 409.21 | 323.34 |
| 412.24 | 323.44 | 412.92 | 323.44 | 414.98 | 323.42 | 416.24 | 323.42 | 417.29 | 323.41 |
| 417.96 | 323.4 | 419.08 | 323.36 | 420.13 | 323.35 | 421.47 | 323.32 | 422.74 | 323.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 423.74 | 323 | 425.02 | 322.88 | 425.23 | 322.85 | 427.68 | 322.53 | 430.23 | 322.48 |
| 435.47 | 322.37 | 436.35 | 322.34 | 438.48 | 322.32 | 440.82 | 322.32 | 441.93 | 322.33 |
| 443.92 | 322.33 | 450.56 | 322.28 | 450.8 | 322.27 | 451.17 | 322.27 | 453.72 | 322.25 |
| 454.9 | 322.25 | 456.23 | 322.23 | 457.04 | 322.23 | 457.36 | 322.22 | 463.07 | 322.16 |
| 463.65 | 322.15 | 465.77 | 322.12 | 466.89 | 322.11 | 467.27 | 322.1 | 469.6 | 322.09 |
| 469.95 | 322.12 | 470.43 | 322.12 | 471.83 | 322.14 | 472.84 | 322.2 | 474.6 | 322.27 |
| 475.64 | 322.32 | 476.6 | 322.32 | 477.08 | 322.33 | 477.51 | 322.33 | 478.2 | 322.28 |
| 479.59 | 322.2 | 480.35 | 322.23 | 480.87 | 322.22 | 481.41 | 322.24 | 482.65 | 322.22 |
| 484.3 | 322.24 | 486.02 | 322.21 | 486.78 | 322.2 | 486.91 | 322.19 | 488.08 | 322.17 |
| 488.91 | 322.17 | 489.29 | 322.18 | 490.94 | 322.2 | 491.2 | 322.22 | 491.83 | 322.25 |
| 494.22 | 322.34 | 494.94 | 322.35 | 497.06 | 322.35 | 498.32 | 322.36 | 501.63 | 322.36 |
| 502.13 | 322.37 | 502.96 | 322.37 | 503.6 | 322.32 | 506.12 | 322.32 | 506.76 | 322.31 |
| 510.02 | 322.39 | 510.2 | 322.4 | 519.8 | 322.67 | 522.57 | 322.68 | 523.25 | 322.68 |
| 526.12 | 322.69 | 530 | 322.71 | 530.56 | 322.71 | 532.09 | 322.73 | 532.79 | 322.76 |
| 534.73 | 322.76 | 535.3 | 322.77 | 540.57 | 322.77 | 541.26 | 322.78 | 542.24 | 322.78 |
| 543.27 | 322.79 | 543.83 | 322.8 | 546.2 | 322.8 | 546.31 | 322.79 | 549.9 | 322.75 |
| 552.2 | 322.72 | 552.72 | 322.71 | 553.86 | 322.71 | 554.64 | 322.7 | 556.18 | 322.72 |
| 556.53 | 322.73 | 556.88 | 322.73 | 557.15 | 322.74 | 559.82 | 322.8 | 560.06 | 322.8 |
| 561.5 | 322.83 | 562.48 | 322.86 | 562.61 | 322.86 | 564.09 | 322.9 | 564.2 | 322.91 |
| 564.69 | 322.91 | 565.76 | 322.87 | 566.35 | 322.89 | 566.56 | 322.89 | 567.44 | 322.84 |
| 567.76 | 322.83 | 568.58 | 322.83 | 569.43 | 322.86 | 569.9 | 322.87 | 570.45 | 322.89 |
| 571.24 | 322.91 | 573.08 | 322.99 | 573.63 | 323.02 | 574.72 | 323.05 | 575.74 | 323.09 |
| 576.12 | 323.09 | 576.43 | 323.1 | 577.09 | 323.11 | 578.97 | 323.12 | 580.06 | 323.14 |
| 580.53 | 323.14 | 580.97 | 323.15 | 581.78 | 323.16 | 583.83 | 323.16 | 583.89 | 323.17 |
| 584.68 | 323.17 | 585.13 | 323.18 | 585.64 | 323.18 | 586.45 | 323.19 | 587.42 | 323.21 |
| 589.61 | 323.26 | 591.16 | 323.28 | 592.19 | 323.3 | 592.49 | 323.31 | 592.87 | 323.31 |
| 594.19 | 323.27 | 594.54 | 323.27 | 597.24 | 323.23 | 598.25 | 323.23 | 601.36 | 323.2 |
| 602.34 | 323.18 | 603.38 | 323.18 | 604.07 | 323.17 | 604.57 | 323.17 | 605.93 | 323.2 |
| 606.39 | 323.25 | 607.18 | 323.25 | 607.41 | 323.22 | 607.64 | 323.22 | 607.89 | 323.24 |
| 608.53 | 323.27 | 608.92 | 323.31 | 610.89 | 323.43 | 611.39 | 323.43 | 613.33 | 323.45 |
| 613.9 | 323.46 | 615.76 | 323.47 | 616.14 | 323.48 | 616.71 | 323.48 | 617.84 | 323.49 |
| 618.07 | 323.53 | 619.05 | 323.56 | 619.99 | 323.58 | 621.03 | 323.58 | 621.8 | 323.59 |
| 624.1 | 323.59 | 626.09 | 323.58 | 626.48 | 323.58 | 627.26 | 323.59 | 628.17 | 323.59 |
| 628.71 | 323.62 | 630.4 | 323.7 | 631.77 | 324.05 | 633.25 | 324.55 | 633.82 | 324.74 |
| 635.45 | 325.27 | 635.86 | 325.37 | 636 | 325.46 | 636.45 | 325.7 | 636.98 | 326.05 |
| 637.35 | 326.28 | 637.5 | 326.77 | 637.77 | 327.11 | 638.28 | 327.6 | 638.6 | 327.74 |
| 639.4 | 327.96 | 639.99 | 328.14 | 640.68 | 328.4 | 641.1 | 328.49 | 641.83 | 328.63 |
| 642.91 | 328.85 | 643.08 | 328.89 | 644.33 | 329.14 | 644.38 | 329.14 | 644.93 | 329.23 |
| 645.82 | 329.4 | 648.4 | 329.8 | 649.28 | 329.93 | 651.63 | 329.97 | 652.43 | 329.98 |
| 655.24 | 330.03 | 657.5 | 330.04 | 665.42 | 330.07 | 668.65 | 330.09 | 669.22 | 330.09 |
| 670.91 | 330.1 | 671.64 | 330.1 | 671.86 | 330.11 | 672.96 | 330.11 | 673.34 | 330.12 |
| 678.21 | 330.22 | 680.44 | 330.25 | 680.73 | 330.26 | 681.9 | 330.27 | 682 | 330.28 |
| 682.69 | 330.28 | 682.93 | 330.27 | 684.06 | 330.26 | 684.42 | 330.25 | 684.83 | 330.25 |
| 687.78 | 330.28 | 693.36 | 330.28 | 693.53 | 330.27 | 696.66 | 330.27 | 704.95 | 330.4 |
| 706.5 | 330.43 | 709.98 | 330.58 | 711.82 | 330.64 | 714.5 | 330.73 | 716.12 | 330.78 |
| 718.16 | 330.81 | 720.96 | 330.8 | 722.14 | 330.78 | 722.58 | 330.78 | 724.38 | 330.74 |
| 725.8 | 330.69 | 726.38 | 330.69 | 727.25 | 330.65 | 727.61 | 330.66 | 728.71 | 330.71 |
| 729.01 | 330.72 | 729.21 | 330.74 | 729.92 | 330.78 | 732.69 | 330.97 | 737.7 | 331.3 |
| 738.44 | 331.34 | 740.37 | 331.45 | 741.46 | 331.5 | 743.82 | 331.63 | 743.89 | 331.63 |
| 745 | 331.7 | 746.76 | 331.79 | 746.87 | 331.79 | 748.87 | 331.87 | 751.02 | 331.94 |
| 752.49 | 332 | 753.43 | 332.02 | 754.32 | 332.05 | 755.49 | 332.07 | 760.09 | 332.19 |
| 763.18 | 332.24 | 763.96 | 332.23 | 764.88 | 332.2 | 767 | 332.28 | 769.23 | 332.24 |
| 770.07 | 332.22 | 771.89 | 332.16 | 773.18 | 332.12 | 773.54 | 332.1 | 774.52 | 332.09 |
| 775.31 | 332.07 | 777.53 | 332.06 | 778.07 | 332.04 | 778.7 | 332.04 | 781.09 | 332.03 |
| 782.91 | 332 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 124.93 | .04 | 631.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 124.93 | 631.77 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 709.571*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.94 | 4.65 | 323.88 | 5.83 | 323.86 | 7.86 | 323.82 | 8.03 | 323.82 |
| 11.04 | 323.77 | 12 | 323.75 | 16.86 | 323.72 | 21.32 | 323.71 | 22.78 | 323.73 |
| 23.66 | 323.71 | 26.77 | 323.63 | 27.39 | 323.63 | 29.44 | 323.59 | 32.78 | 323.53 |
| 35.57 | 323.47 | 36.32 | 323.46 | 36.69 | 323.46 | 40.34 | 323.6 | 41.53 | 323.64 |
| 44.62 | 323.73 | 45.87 | 323.73 | 48.96 | 323.69 | 52.53 | 323.63 | 57.26 | 323.51 |
| 57.55 | 323.5 | 61.39 | 323.38 | 61.72 | 323.38 | 63.56 | 323.36 | 66.33 | 323.36 |
| 68.71 | 323.42 | 69.58 | 323.45 | 70.09 | 323.5 | 70.7 | 323.53 | 71.25 | 323.55 |
| 72.21 | 323.57 | 72.93 | 323.58 | 75.13 | 323.62 | 75.59 | 323.64 | 75.94 | 323.64 |
| 76.68 | 323.65 | 77.63 | 323.64 | 78.82 | 323.65 | 79.88 | 323.64 | 80.6 | 323.64 |
| 81.08 | 323.63 | 81.95 | 323.59 | 83.62 | 323.5 | 84.2 | 323.48 | 84.5 | 323.48 |
| 85.21 | 323.46 | 85.85 | 323.43 | 86.29 | 323.42 | 87.58 | 323.36 | 89.33 | 323.29 |
| 99.63 | 323.29 | 103.55 | 323.3 | 112.99 | 323.3 | 116.36 | 323.31 | 120.64 | 323.31 |
| 123.01 | 323.32 | 123.75 | 323.32 | 124.37 | 323.33 | 124.69 | 323.32 | 128.57 | 323.32 |
| 129.89 | 323.32 | 130.26 | 323.12 | 130.58 | 323.05 | 131.11 | 322.99 | 132.64 | 322.86 |
| 133.02 | 322.82 | 133.23 | 322.81 | 133.78 | 322.85 | 134.08 | 322.89 | 135.39 | 323.1 |
| 136.94 | 323.31 | 138.69 | 323.39 | 141.4 | 323.51 | 141.94 | 323.52 | 142.33 | 323.56 |
| 142.63 | 323.56 | 143.44 | 323.59 | 144.46 | 323.59 | 146.53 | 323.6 | 150.81 | 323.6 |
| 152.29 | 323.61 | 152.63 | 323.61 | 154.91 | 323.65 | 156.16 | 323.57 | 156.83 | 323.54 |
| 160.43 | 323.43 | 163.88 | 323.32 | 164.84 | 323.3 | 168.72 | 323.3 | 170.02 | 323.37 |
| 175.32 | 323.62 | 176.23 | 323.65 | 178.82 | 323.72 | 179.8 | 323.74 | 184.88 | 323.78 |
| 185.81 | 323.79 | 187.41 | 323.79 | 187.71 | 323.77 | 190.66 | 323.63 | 191.63 | 323.59 |
| 192.82 | 323.51 | 194.17 | 323.41 | 195.17 | 323.35 | 196.41 | 323.29 | 216.96 | 323.29 |
| 217.49 | 323.33 | 220.22 | 323.5 | 221.48 | 323.55 | 221.94 | 323.56 | 222.38 | 323.56 |
| 223.16 | 323.57 | 225.23 | 323.61 | 226.36 | 323.64 | 230.54 | 323.67 | 232.53 | 323.68 |
| 233.14 | 323.68 | 234.41 | 323.69 | 235.74 | 323.69 | 236.79 | 323.67 | 238.76 | 323.62 |
| 242.76 | 323.56 | 243.95 | 323.53 | 244.87 | 323.51 | 245.59 | 323.49 | 246.6 | 323.44 |
| 249.43 | 323.28 | 252.45 | 322.96 | 253.62 | 322.85 | 254.31 | 322.77 | 255.08 | 322.65 |
| 256.22 | 322.61 | 256.26 | 322.62 | 256.96 | 322.7 | 258.35 | 322.93 | 260.09 | 323.2 |
| 260.67 | 323.28 | 262.03 | 323.31 | 263.01 | 323.31 | 264.24 | 323.3 | 265.07 | 323.28 |
| 265.53 | 323.28 | 266.35 | 323.24 | 268.59 | 323.12 | 271.12 | 322.96 | 272.51 | 322.85 |
| 272.96 | 322.81 | 274.11 | 322.75 | 275.19 | 322.72 | 276.68 | 322.67 | 277.02 | 322.7 |
| 277.46 | 322.75 | 277.55 | 322.79 | 277.7 | 322.81 | 278.2 | 322.82 | 279.03 | 322.88 |
| 280.44 | 323 | 280.93 | 323.06 | 281.22 | 323.06 | 281.72 | 323.08 | 281.99 | 323.07 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 282.16 | 323.08 | 291.93 | 323.26 | 303.41 | 323.24 | 311.4 | 323.24 | 313.97 | 323.23 |
| 319.52 | 323.23 | 322.5 | 323.31 | 323.7 | 323.34 | 324.6 | 323.35 | 325.36 | 323.35 |
| 325.9 | 323.32 | 326.73 | 323.29 | 327.53 | 323.27 | 329.73 | 323.24 | 330.12 | 323.22 |
| 330.22 | 322.94 | 332.31 | 322.86 | 333.9 | 322.82 | 336.43 | 323.03 | 338.32 | 323.22 |
| 339.53 | 323.29 | 339.97 | 323.38 | 340.09 | 323.39 | 341.07 | 323.39 | 342.59 | 323.34 |
| 342.95 | 323.34 | 344.27 | 323.35 | 346.32 | 323.37 | 349 | 323.4 | 350.96 | 323.43 |
| 352.11 | 323.45 | 352.45 | 323.47 | 353.1 | 323.48 | 353.42 | 323.47 | 353.8 | 323.47 |
| 354.38 | 323.45 | 354.6 | 323.45 | 355.32 | 323.43 | 356.49 | 323.42 | 361.32 | 323.39 |
| 363.59 | 323.29 | 365.12 | 323.2 | 366.94 | 323.19 | 374.63 | 323.19 | 378.31 | 323.18 |
| 383.8 | 323.18 | 384.37 | 323.2 | 384.76 | 323.2 | 385.27 | 323.18 | 386.01 | 323.17 |
| 388.85 | 323.15 | 390.8 | 323.14 | 401.14 | 323.14 | 405.1 | 323.13 | 405.84 | 323.13 |
| 416.08 | 323.09 | 417.38 | 323.08 | 419.42 | 323.08 | 422.52 | 323.1 | 425 | 323.12 |
| 428.15 | 323.22 | 428.86 | 323.22 | 431.01 | 323.21 | 432.32 | 323.21 | 433.41 | 323.2 |
| 434.11 | 323.18 | 435.28 | 323.14 | 436.38 | 323.13 | 437.78 | 323.1 | 439.1 | 322.9 |
| 440.14 | 322.77 | 441.47 | 322.64 | 444.25 | 322.28 | 446.91 | 322.22 | 452.37 | 322.11 |
| 453.29 | 322.08 | 454.28 | 322.06 | 455.51 | 322.05 | 456.77 | 322.05 | 459.1 | 322.07 |
| 461.18 | 322.06 | 468.1 | 322.02 | 468.36 | 322.01 | 468.74 | 322.01 | 474.02 | 321.97 |
| 474.86 | 321.97 | 475.2 | 321.96 | 478.19 | 321.94 | 481.15 | 321.91 | 481.76 | 321.9 |
| 483.97 | 321.87 | 485.14 | 321.86 | 485.53 | 321.86 | 487.96 | 321.84 | 488.35 | 321.87 |
| 489.2 | 321.87 | 489.98 | 321.89 | 492.51 | 322 | 492.67 | 322 | 493.45 | 322.04 |
| 495.16 | 322.04 | 495.78 | 322.01 | 497.05 | 321.94 | 497.74 | 321.97 | 498.21 | 321.96 |
| 498.7 | 321.98 | 499.83 | 321.96 | 501.34 | 321.98 | 501.83 | 321.97 | 502.42 | 321.97 |
| 503.59 | 321.94 | 504.77 | 321.92 | 505.87 | 321.92 | 507.47 | 321.94 | 507.61 | 321.96 |
| 508.19 | 321.99 | 510.36 | 322.06 | 511.02 | 322.06 | 512.95 | 322.07 | 514.09 | 322.07 |
| 514.8 | 322.08 | 517.56 | 322.08 | 518.31 | 322.09 | 518.79 | 322.05 | 520.96 | 322.05 |
| 521.18 | 322.04 | 521.77 | 322.04 | 524.74 | 322.11 | 524.9 | 322.12 | 533.63 | 322.35 |
| 536.23 | 322.36 | 536.77 | 322.37 | 539.39 | 322.38 | 542.91 | 322.4 | 543.43 | 322.4 |
| 544.82 | 322.42 | 545.46 | 322.44 | 547.21 | 322.44 | 547.74 | 322.45 | 550.1 | 322.46 |
| 550.45 | 322.45 | 551.36 | 322.46 | 553.16 | 322.46 | 554.99 | 322.48 | 555.5 | 322.48 |
| 556.39 | 322.49 | 557.65 | 322.49 | 557.76 | 322.48 | 561.02 | 322.45 | 562.41 | 322.44 |
| 563.11 | 322.43 | 566.03 | 322.43 | 566.79 | 322.44 | 570.05 | 322.52 | 570.26 | 322.52 |
| 572.47 | 322.57 | 572.58 | 322.57 | 573.93 | 322.61 | 574.03 | 322.62 | 574.48 | 322.62 |
| 575.45 | 322.59 | 575.67 | 322.6 | 576.32 | 322.6 | 576.83 | 322.57 | 577.21 | 322.56 |
| 577.7 | 322.56 | 578.35 | 322.57 | 579.72 | 322.62 | 580.03 | 322.62 | 580.44 | 322.64 |
| 582.61 | 322.73 | 584.88 | 322.8 | 585.76 | 322.81 | 587.47 | 322.82 | 588.89 | 322.85 |
| 589.29 | 322.85 | 590.03 | 322.86 | 591.43 | 322.87 | 591.95 | 322.87 | 593.08 | 322.89 |
| 593.54 | 322.89 | 594.28 | 322.9 | 595.16 | 322.92 | 597.15 | 322.96 | 598.56 | 322.99 |
| 599.5 | 323 | 599.78 | 323.01 | 600.39 | 323.01 | 601.64 | 322.98 | 604.1 | 322.96 |
| 605.01 | 322.96 | 607.85 | 322.94 | 608.39 | 322.93 | 609.15 | 322.93 | 609.68 | 322.92 |
| 610.76 | 322.92 | 612 | 322.95 | 612.42 | 322.99 | 613.21 | 322.99 | 613.35 | 322.97 |
| 613.79 | 322.98 | 614.37 | 323.02 | 614.72 | 323.05 | 616.23 | 323.13 | 616.52 | 323.15 |
| 616.97 | 323.15 | 618.73 | 323.17 | 619.25 | 323.18 | 620.94 | 323.2 | 621.29 | 323.2 |
| 621.81 | 323.21 | 622.84 | 323.22 | 623.05 | 323.25 | 623.6 | 323.27 | 624.35 | 323.29 |
| 624.8 | 323.29 | 625.27 | 323.3 | 626.91 | 323.3 | 627.94 | 323.31 | 631.45 | 323.31 |
| 631.81 | 323.32 | 632.24 | 323.32 | 632.73 | 323.34 | 634.27 | 323.41 | 635.18 | 323.68 |
| 635.52 | 323.77 | 636.93 | 324.29 | 639.03 | 325.03 | 639.43 | 325.14 | 639.56 | 325.24 |
| 640 | 325.48 | 640.5 | 325.83 | 640.86 | 326.07 | 641 | 326.58 | 641.26 | 326.92 |
| 641.74 | 327.42 | 642.05 | 327.56 | 642.82 | 327.76 | 643.39 | 327.92 | 644.04 | 328.17 |
| 644.45 | 328.24 | 645.15 | 328.37 | 647.54 | 328.79 | 647.58 | 328.8 | 648.46 | 328.93 |
| 648.97 | 329.02 | 650.45 | 329.22 | 650.7 | 329.26 | 651.44 | 329.36 | 652.29 | 329.48 |
| 654.53 | 329.52 | 655.3 | 329.53 | 657.99 | 329.58 | 659.87 | 329.59 | 660.16 | 329.6 |
| 667.74 | 329.65 | 670.83 | 329.68 | 671.38 | 329.68 | 672.99 | 329.69 | 674.54 | 329.71 |
| 675.32 | 329.71 | 679.99 | 329.81 | 680.77 | 329.83 | 681.49 | 329.84 | 682.4 | 329.86 |
| 683.52 | 329.87 | 683.62 | 329.88 | 684.28 | 329.88 | 684.51 | 329.87 | 685.59 | 329.86 |
| 685.93 | 329.85 | 686.33 | 329.85 | 689.15 | 329.88 | 689.82 | 329.88 | 690.34 | 329.89 |
| 697.65 | 329.89 | 704.35 | 330.02 | 705.6 | 330.05 | 707.08 | 330.08 | 710.41 | 330.24 |
| 710.95 | 330.27 | 714.74 | 330.42 | 716.29 | 330.47 | 717.66 | 330.5 | 718.25 | 330.51 |
| 720.93 | 330.51 | 722.06 | 330.5 | 722.48 | 330.49 | 724.2 | 330.46 | 725.56 | 330.42 |
| 726.12 | 330.42 | 726.69 | 330.39 | 727.3 | 330.39 | 728.35 | 330.44 | 728.63 | 330.45 |
| 728.83 | 330.47 | 729.51 | 330.51 | 730.92 | 330.61 | 732.16 | 330.69 | 736.81 | 331.01 |
| 737.67 | 331.06 | 739.51 | 331.16 | 741.62 | 331.28 | 742.82 | 331.35 | 742.88 | 331.35 |
| 743.95 | 331.42 | 745.63 | 331.51 | 745.74 | 331.51 | 747.66 | 331.58 | 752.03 | 331.73 |
| 752.88 | 331.75 | 753.99 | 331.77 | 758.4 | 331.88 | 760.19 | 331.91 | 761.36 | 331.92 |
| 762.1 | 331.91 | 762.99 | 331.87 | 765.02 | 331.95 | 767.96 | 331.88 | 769.7 | 331.81 |
| 770.93 | 331.77 | 771.28 | 331.75 | 771.97 | 331.73 | 772.22 | 331.73 | 772.98 | 331.71 |
| 773.29 | 331.71 | 775.1 | 331.69 | 775.62 | 331.68 | 776.23 | 331.68 | 778.51 | 331.67 |
| 780.25 | 331.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 128.57 | .04 | 635.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 128.57 | 635.52 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 689.856*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.65 | 4.78 | 323.58 | 6 | 323.57 | 8.08 | 323.53 | 8.87 | 323.52 |
| 11.36 | 323.47 | 12.34 | 323.46 | 17.34 | 323.43 | 21.92 | 323.42 | 23.43 | 323.44 |
| 24.33 | 323.42 | 27.52 | 323.34 | 28.16 | 323.34 | 30.28 | 323.3 | 33.71 | 323.23 |
| 36.58 | 323.18 | 37.35 | 323.17 | 37.73 | 323.17 | 41.49 | 323.32 | 42.71 | 323.36 |
| 45.89 | 323.46 | 47.17 | 323.46 | 50.35 | 323.42 | 54.02 | 323.36 | 58.89 | 323.24 |
| 63.13 | 323.1 | 65.36 | 323.09 | 68.22 | 323.09 | 70.66 | 323.15 | 71.56 | 323.18 |
| 71.88 | 323.21 | 72.08 | 323.24 | 73.02 | 323.28 | 73.27 | 323.3 | 74.26 | 323.31 |
| 74.99 | 323.33 | 77.26 | 323.37 | 78.1 | 323.4 | 82.89 | 323.4 | 83.37 | 323.39 |
| 85.2 | 323.29 | 85.99 | 323.25 | 86.59 | 323.24 | 87.63 | 323.21 | 88.29 | 323.18 |
| 88.73 | 323.17 | 91.87 | 323.03 | 100.77 | 323.03 | 102.45 | 323.04 | 116.19 | 323.04 |
| 119.66 | 323.05 | 124.06 | 323.05 | 126.5 | 323.06 | 130.95 | 323.06 | 132.22 | 323.05 |
| 133.56 | 323.06 | 133.97 | 322.85 | 134.31 | 322.77 | 134.86 | 322.71 | 136.45 | 322.58 |
| 136.85 | 322.53 | 137.22 | 322.53 | 137.63 | 322.57 | 137.95 | 322.61 | 139.32 | 322.83 |
| 140.93 | 323.05 | 142.75 | 323.13 | 145.58 | 323.26 | 146.14 | 323.27 | 146.54 | 323.31 |
| 147.69 | 323.34 | 148.76 | 323.34 | 150.91 | 323.36 | 151.74 | 323.36 | 152.81 | 323.35 |
| 155.37 | 323.36 | 156.9 | 323.36 | 157.26 | 323.37 | 159.56 | 323.41 | 159.63 | 323.4 |
| 160.94 | 323.32 | 161.63 | 323.29 | 165.38 | 323.18 | 168.97 | 323.06 | 169.97 | 323.04 |
| 174.01 | 323.04 | 175.36 | 323.11 | 180.88 | 323.38 | 181.82 | 323.41 | 184.52 | 323.49 |
| 184.97 | 323.49 | 185.54 | 323.5 | 190.84 | 323.54 | 190.91 | 323.55 | 193.46 | 323.55 |
| 193.78 | 323.53 | 196.85 | 323.39 | 197.86 | 323.35 | 199.1 | 323.26 | 200.5 | 323.15 |
| 201.54 | 323.09 | 202.84 | 323.04 | 215.9 | 323.04 | 216.19 | 323.03 | 224.22 | 323.03 |



BSE Document Control Number: 7323HYD101

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| 224.78 | 323.07 | 225.11 | 323.1 | 227.62 | 323.25 | 228.47 | 323.29 | 228.93 | 323.3 |
| 229.41 | 323.32 | 229.87 | 323.32 | 230.68 | 323.33 | 232.84 | 323.37 | 234.01 | 323.39 |
| 238.36 | 323.44 | 240.43 | 323.44 | 241.06 | 323.45 | 243.77 | 323.45 | 244.87 | 323.43 |
| 246.91 | 323.38 | 251.08 | 323.32 | 252.31 | 323.29 | 254.02 | 323.24 | 255.08 | 323.2 |
| 258.03 | 323.03 | 261.17 | 322.69 | 262.38 | 322.57 | 263.11 | 322.49 | 263.91 | 322.36 |
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| 274.3 | 323.03 | 275.17 | 323.01 | 275.64 | 322.98 | 277.97 | 322.85 | 280.6 | 322.69 |
| 282.05 | 322.57 | 283.1 | 322.5 | 284.84 | 322.44 | 286.39 | 322.39 | 287.21 | 322.47 |
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| 314.22 | 323 | 319.12 | 322.99 | 325.2 | 322.99 | 330.99 | 322.98 | 334.08 | 323.07 |
| 335.33 | 323.1 | 336.28 | 323.11 | 337.06 | 323.11 | 337.62 | 323.08 | 338.49 | 323.05 |
| 339.32 | 323.03 | 341.62 | 323 | 342.01 | 322.98 | 342.13 | 322.68 | 344.29 | 322.6 |
| 345.95 | 322.55 | 347.98 | 322.72 | 348.58 | 322.78 | 350.55 | 322.97 | 351.81 | 323.05 |
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| 367.49 | 323.22 | 368.25 | 323.2 | 369.46 | 323.19 | 374.49 | 323.16 | 376.86 | 323.05 |
| 378.45 | 322.97 | 380.34 | 322.96 | 381.6 | 322.95 | 392.18 | 322.95 | 395.11 | 322.94 |
| 397.55 | 322.94 | 398.49 | 322.97 | 398.89 | 322.97 | 399.42 | 322.95 | 400.19 | 322.94 |
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| 431.5 | 322.86 | 432.84 | 322.85 | 434.97 | 322.85 | 438.2 | 322.87 | 440.78 | 322.9 |
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| 476.28 | 321.81 | 478.44 | 321.8 | 485.65 | 321.75 | 486.31 | 321.75 | 491.81 | 321.71 |
| 493.04 | 321.71 | 499.23 | 321.65 | 499.86 | 321.65 | 502.16 | 321.62 | 503.38 | 321.61 |
| 503.79 | 321.61 | 506.49 | 321.6 | 506.5 | 321.61 | 506.99 | 321.61 | 508.14 | 321.63 |
| 508.97 | 321.67 | 510.42 | 321.72 | 510.56 | 321.72 | 511.27 | 321.75 | 511.95 | 321.76 |
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| 515.55 | 321.7 | 515.9 | 321.72 | 517.02 | 321.71 | 518.37 | 321.72 | 518.81 | 321.72 |
| 518.91 | 321.71 | 519.35 | 321.71 | 520.51 | 321.69 | 521.46 | 321.67 | 522.45 | 321.67 |
| 523.9 | 321.68 | 524.54 | 321.72 | 526.5 | 321.78 | 527.09 | 321.78 | 528.83 | 321.79 |
| 530.5 | 321.79 | 531.72 | 321.8 | 532.98 | 321.8 | 533.66 | 321.81 | 534.09 | 321.78 |
| 534.51 | 321.77 | 535.68 | 321.78 | 535.7 | 321.77 | 536.78 | 321.77 | 539.45 | 321.83 |
| 539.6 | 321.84 | 547.47 | 322.03 | 549.74 | 322.05 | 550.3 | 322.05 | 552.65 | 322.06 |
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| 569.11 | 322.18 | 569.2 | 322.17 | 572.15 | 322.16 | 573.36 | 322.15 | 576.03 | 322.15 |
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| 584.27 | 322.33 | 584.88 | 322.31 | 585.34 | 322.32 | 585.93 | 322.32 | 586.52 | 322.29 |
| 587.17 | 322.29 | 588.15 | 322.31 | 588.2 | 322.32 | 589.63 | 322.36 | 591.6 | 322.44 |
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| 600.01 | 322.58 | 601.02 | 322.6 | 601.44 | 322.6 | 602.1 | 322.61 | 602.9 | 322.63 |
| 604.69 | 322.67 | 605.97 | 322.69 | 606.81 | 322.71 | 607.61 | 322.71 | 610.95 | 322.68 |
| 611.78 | 322.69 | 614.33 | 322.68 | 614.82 | 322.67 | 616.96 | 322.67 | 617.61 | 322.69 |
| 617.92 | 322.69 | 618.45 | 322.73 | 618.94 | 322.74 | 619.54 | 322.72 | 620.52 | 322.78 |
| 621.89 | 322.86 | 622.14 | 322.87 | 622.55 | 322.87 | 624.14 | 322.9 | 624.6 | 322.9 |
| 626.13 | 322.92 | 626.44 | 322.93 | 626.91 | 322.93 | 627.84 | 322.94 | 628.02 | 322.97 |
| 628.52 | 322.99 | 628.83 | 322.99 | 629.6 | 323.01 | 630.03 | 323.01 | 630.45 | 323.02 |
| 631.51 | 323.02 | 632.43 | 323.03 | 632.97 | 323.03 | 634.6 | 323.04 | 635.59 | 323.04 |
| 635.92 | 323.05 | 636.31 | 323.05 | 638.13 | 323.13 | 638.96 | 323.4 | 639.26 | 323.49 |
| 639.47 | 323.58 | 640.61 | 324.03 | 642.62 | 324.8 | 643 | 324.92 | 643.12 | 325.01 |
| 643.54 | 325.27 | 644.02 | 325.62 | 644.36 | 325.86 | 644.5 | 326.38 | 644.74 | 326.74 |
| 645.21 | 327.24 | 645.5 | 327.37 | 646.78 | 327.7 | 647.41 | 327.93 | 648.47 | 328.1 |
| 649.66 | 328.28 | 650.75 | 328.45 | 651.3 | 328.52 | 652.12 | 328.64 | 653.53 | 328.81 |
| 654.47 | 328.93 | 655.29 | 329.02 | 657.43 | 329.07 | 658.17 | 329.08 | 660.74 | 329.13 |
| 662.54 | 329.15 | 662.81 | 329.15 | 670.06 | 329.23 | 673.01 | 329.27 | 673.54 | 329.27 |
| 675.08 | 329.29 | 675.75 | 329.29 | 675.95 | 329.3 | 676.56 | 329.3 | 676.77 | 329.31 |
| 677.3 | 329.31 | 681.77 | 329.41 | 682.51 | 329.43 | 683.2 | 329.44 | 684.07 | 329.46 |
| 685.23 | 329.47 | 685.86 | 329.48 | 686.08 | 329.47 | 687.11 | 329.46 | 687.45 | 329.45 |
| 687.83 | 329.45 | 690.52 | 329.48 | 691.16 | 329.48 | 691.66 | 329.49 | 693.63 | 329.5 |
| 695.79 | 329.5 | 698.65 | 329.51 | 705.05 | 329.66 | 706.24 | 329.69 | 707.66 | 329.73 |
| 711.36 | 329.94 | 712.8 | 330 | 714.98 | 330.1 | 716.46 | 330.15 | 717.77 | 330.2 |
| 718.33 | 330.21 | 720.6 | 330.22 | 720.9 | 330.21 | 721.98 | 330.21 | 722.38 | 330.2 |
| 724.02 | 330.18 | 725.33 | 330.14 | 725.86 | 330.14 | 726.31 | 330.12 | 726.77 | 330.12 |
| 727.18 | 330.13 | 728.45 | 330.19 | 729.1 | 330.24 | 730.44 | 330.33 | 731.63 | 330.42 |
| 736.07 | 330.72 | 738.66 | 330.88 | 741.82 | 331.07 | 742.43 | 331.1 | 742.9 | 331.13 |
| 744.5 | 331.22 | 744.61 | 331.22 | 746.44 | 331.3 | 748.41 | 331.35 | 749.76 | 331.41 |
| 750.62 | 331.43 | 751.43 | 331.44 | 752.5 | 331.47 | 756.71 | 331.57 | 758.42 | 331.59 |
| 759.54 | 331.6 | 760.25 | 331.59 | 761.09 | 331.54 | 763.03 | 331.62 | 766.11 | 331.53 |
| 767.51 | 331.46 | 768.69 | 331.41 | 769.02 | 331.39 | 769.68 | 331.38 | 770.64 | 331.35 |
| 770.94 | 331.35 | 772.67 | 331.33 | 773.17 | 331.32 | 773.75 | 331.32 | 775.93 | 331.31 |
| 777.6 | 331.28 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 132.22 | .04 | 639.26 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 132.22 | 639.26 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 670.142*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.36 | 4.91 | 323.29 | 6.16 | 323.28 | 8.3 | 323.24 | 8.49 | 323.24 |
| 9.12 | 323.22 | 11.67 | 323.18 | 12.68 | 323.16 | 17.82 | 323.14 | 22.53 | 323.13 |
| 24.07 | 323.15 | 25 | 323.13 | 28.28 | 323.05 | 28.94 | 323.05 | 31.11 | 323.01 |
| 34.64 | 322.94 | 37.58 | 322.89 | 38.38 | 322.88 | 38.77 | 322.87 | 42.63 | 323.03 |
| 43.89 | 323.09 | 47.15 | 323.19 | 48.1 | 323.18 | 48.47 | 323.19 | 51.74 | 323.15 |
| 55.51 | 323.09 | 60.51 | 322.97 | 64.87 | 322.83 | 65.22 | 322.83 | 67.16 | 322.81 |
| 70.1 | 322.82 | 72.61 | 322.88 | 73.53 | 322.92 | 73.86 | 322.95 | 74.07 | 322.98 |
| 75.03 | 323.02 | 75.29 | 323.04 | 76.31 | 323.05 | 77.06 | 323.07 | 79.39 | 323.12 |
| 80.25 | 323.15 | 82.04 | 323.15 | 83.29 | 323.16 | 84.41 | 323.15 | 85.17 | 323.15 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 85.67 | 323.14 | 86.6 | 323.1 | 87.55 | 323.04 | 88.36 | 323.01 | 89.29 | 322.98 |
| 90.04 | 322.96 | 94.4 | 322.77 | 99.58 | 322.77 | 100.01 | 322.78 | 119.4 | 322.78 |
| 122.96 | 322.79 | 129.99 | 322.79 | 130.77 | 322.8 | 132.36 | 322.8 | 132.81 | 322.79 |
| 135.86 | 322.79 | 137.25 | 322.8 | 137.29 | 322.79 | 137.69 | 322.58 | 138.04 | 322.5 |
| 138.61 | 322.44 | 140.68 | 322.25 | 140.9 | 322.24 | 141.49 | 322.28 | 141.83 | 322.33 |
| 143.24 | 322.56 | 144.91 | 322.79 | 146.81 | 322.87 | 149.75 | 323.01 | 150.33 | 323.01 |
| 150.75 | 323.06 | 151.95 | 323.09 | 153.05 | 323.09 | 155.29 | 323.11 | 159.92 | 323.11 |
| 161.52 | 323.12 | 161.89 | 323.12 | 164.28 | 323.17 | 164.36 | 323.16 | 165.38 | 323.1 |
| 165.71 | 323.07 | 166.43 | 323.04 | 170.33 | 322.92 | 175.1 | 322.78 | 179.3 | 322.78 |
| 180.7 | 322.86 | 186.44 | 323.13 | 187.42 | 323.17 | 190.22 | 323.25 | 190.69 | 323.26 |
| 191.28 | 323.26 | 196.79 | 323.31 | 197.79 | 323.32 | 199.52 | 323.32 | 199.85 | 323.3 |
| 204.09 | 323.1 | 205.37 | 323.02 | 206.84 | 322.9 | 207.91 | 322.84 | 209.26 | 322.78 |
| 230.64 | 322.78 | 231.49 | 322.77 | 232.06 | 322.82 | 232.41 | 322.84 | 235.02 | 323 |
| 236.38 | 323.06 | 236.88 | 323.07 | 237.35 | 323.07 | 238.2 | 323.08 | 240.44 | 323.13 |
| 241.66 | 323.15 | 246.18 | 323.2 | 248.33 | 323.21 | 251.8 | 323.21 | 252.94 | 323.19 |
| 255.07 | 323.14 | 259.4 | 323.07 | 260.68 | 323.04 | 261.69 | 323.02 | 263.56 | 322.95 |
| 266.62 | 322.77 | 269.89 | 322.42 | 271.15 | 322.29 | 271.53 | 322.26 | 271.9 | 322.21 |
| 272.73 | 322.08 | 273.97 | 322.03 | 274 | 322.04 | 274.76 | 322.13 | 276.26 | 322.39 |
| 278.15 | 322.68 | 278.78 | 322.77 | 280.25 | 322.8 | 281.31 | 322.8 | 282.64 | 322.79 |
| 283.54 | 322.77 | 284.03 | 322.77 | 284.93 | 322.72 | 287.35 | 322.59 | 290.09 | 322.42 |
| 292.08 | 322.26 | 292.68 | 322.22 | 294.49 | 322.16 | 296.1 | 322.11 | 296.95 | 322.19 |
| 297.04 | 322.24 | 297.2 | 322.26 | 297.75 | 322.27 | 298.64 | 322.34 | 300.17 | 322.47 |
| 300.7 | 322.54 | 301.01 | 322.54 | 301.55 | 322.56 | 301.84 | 322.55 | 302.03 | 322.56 |
| 312.6 | 322.75 | 325.02 | 322.75 | 330.11 | 322.74 | 342.45 | 322.74 | 345.67 | 322.83 |
| 346.97 | 322.86 | 347.95 | 322.87 | 348.76 | 322.87 | 349.69 | 322.82 | 351.11 | 322.79 |
| 353.5 | 322.75 | 353.91 | 322.73 | 354.03 | 322.42 | 356.28 | 322.34 | 358.01 | 322.29 |
| 360.11 | 322.47 | 360.74 | 322.53 | 362.78 | 322.73 | 364.09 | 322.81 | 364.57 | 322.91 |
| 364.7 | 322.92 | 365.76 | 322.92 | 367.41 | 322.87 | 367.79 | 322.87 | 369.22 | 322.88 |
| 371.44 | 322.9 | 374.34 | 322.93 | 376.46 | 322.96 | 377.03 | 322.97 | 377.7 | 322.99 |
| 378.08 | 323.01 | 378.78 | 323.02 | 379.12 | 323.01 | 379.53 | 323.01 | 380.16 | 322.99 |
| 380.39 | 322.99 | 381.17 | 322.97 | 382.44 | 322.96 | 387.67 | 322.93 | 390.13 | 322.82 |
| 391.78 | 322.73 | 393.75 | 322.72 | 395.76 | 322.72 | 396.5 | 322.71 | 411.99 | 322.71 |
| 412.61 | 322.73 | 413.03 | 322.73 | 413.58 | 322.71 | 414.38 | 322.7 | 417.46 | 322.68 |
| 419.56 | 322.67 | 428.98 | 322.68 | 430.75 | 322.68 | 435.03 | 322.67 | 435.84 | 322.66 |
| 446.91 | 322.63 | 448.31 | 322.62 | 449.64 | 322.62 | 450.52 | 322.63 | 452.3 | 322.63 |
| 453.88 | 322.65 | 456.56 | 322.67 | 459.25 | 322.77 | 459.97 | 322.78 | 460.73 | 322.78 |
| 463.06 | 322.77 | 464.48 | 322.77 | 465.66 | 322.76 | 467.68 | 322.71 | 468.87 | 322.69 |
| 470.39 | 322.66 | 471.82 | 322.45 | 472.95 | 322.3 | 474.38 | 322.17 | 474.63 | 322.13 |
| 477.38 | 321.77 | 480.27 | 321.7 | 487.17 | 321.56 | 488.24 | 321.54 | 489.57 | 321.53 |
| 490.93 | 321.53 | 492.21 | 321.54 | 495.7 | 321.54 | 503.19 | 321.49 | 503.88 | 321.48 |
| 506.76 | 321.47 | 509.6 | 321.45 | 510.87 | 321.45 | 514.11 | 321.42 | 517.31 | 321.4 |
| 517.97 | 321.39 | 521.62 | 321.36 | 522.05 | 321.36 | 524.83 | 321.35 | 524.84 | 321.36 |
| 525.28 | 321.36 | 525.67 | 321.37 | 526.3 | 321.37 | 527.04 | 321.4 | 528.32 | 321.44 |
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| 537.85 | 321.42 | 538.38 | 321.42 | 538.48 | 321.41 | 539.04 | 321.41 | 540.25 | 321.42 |
| 540.9 | 321.45 | 542.64 | 321.5 | 544.71 | 321.5 | 545.63 | 321.51 | 546.2 | 321.51 |
| 547.28 | 321.52 | 549.01 | 321.52 | 549.4 | 321.5 | 551.79 | 321.5 | 554.17 | 321.55 |
| 554.3 | 321.56 | 561.3 | 321.72 | 563.33 | 321.73 | 563.82 | 321.73 | 565.91 | 321.75 |
| 568.74 | 321.77 | 569.16 | 321.77 | 569.74 | 321.78 | 570.27 | 321.78 | 570.78 | 321.8 |
| 572.19 | 321.81 | 572.61 | 321.81 | 574.51 | 321.82 | 575.52 | 321.83 | 576.45 | 321.83 |
| 576.96 | 321.84 | 577.67 | 321.84 | 578.42 | 321.85 | 578.83 | 321.85 | 579.55 | 321.86 |
| 580.16 | 321.86 | 580.56 | 321.87 | 580.65 | 321.86 | 585.1 | 321.86 | 585.32 | 321.87 |
| 586.72 | 321.87 | 587.85 | 321.89 | 588.1 | 321.9 | 588.56 | 321.9 | 589.57 | 321.93 |
| 590.5 | 321.95 | 590.67 | 321.96 | 591.73 | 321.98 | 593.62 | 322.03 | 593.7 | 322.04 |
| 594.31 | 322.04 | 594.6 | 322.03 | 595.08 | 322.03 | 595.26 | 322.04 | 595.66 | 322.04 |
| 595.94 | 322.02 | 596.64 | 322.02 | 597.16 | 322.03 | 597.55 | 322.05 | 597.86 | 322.05 |
| 598.26 | 322.07 | 598.83 | 322.08 | 600.18 | 322.14 | 600.58 | 322.15 | 601.37 | 322.18 |
| 602.12 | 322.2 | 602.39 | 322.2 | 603.1 | 322.22 | 604.29 | 322.23 | 604.47 | 322.24 |
| 605.93 | 322.26 | 607.65 | 322.29 | 608.07 | 322.29 | 608.52 | 322.3 | 609.01 | 322.3 |
| 609.93 | 322.32 | 610.64 | 322.34 | 612.24 | 322.37 | 613.37 | 322.4 | 614.12 | 322.41 |
| 614.34 | 322.42 | 614.83 | 322.42 | 615.58 | 322.41 | 618.54 | 322.41 | 620.81 | 322.42 |
| 623.15 | 322.42 | 623.74 | 322.44 | 624.01 | 322.44 | 624.36 | 322.47 | 624.73 | 322.48 |
| 625.11 | 322.48 | 625.45 | 322.47 | 626.05 | 322.5 | 626.33 | 322.52 | 627.54 | 322.58 |
| 628.13 | 322.6 | 629.54 | 322.62 | 629.96 | 322.63 | 631.31 | 322.64 | 632.01 | 322.66 |
| 632.84 | 322.67 | 633 | 322.69 | 634.05 | 322.72 | 634.41 | 322.72 | 634.79 | 322.73 |
| 635.16 | 322.73 | 635.72 | 322.74 | 636.1 | 322.74 | 636.92 | 322.75 | 637.4 | 322.75 |
| 638.86 | 322.76 | 639.74 | 322.77 | 640.03 | 322.78 | 640.37 | 322.78 | 640.77 | 322.8 |
| 642 | 322.85 | 643 | 323.22 | 644.29 | 323.78 | 646.21 | 324.57 | 646.57 | 324.69 |
| 646.69 | 324.79 | 647.09 | 325.05 | 647.54 | 325.4 | 647.87 | 325.64 | 648 | 326.19 |
| 648.23 | 326.55 | 648.55 | 326.91 | 648.68 | 327.07 | 648.96 | 327.19 | 649.66 | 327.36 |
| 650.18 | 327.48 | 650.77 | 327.7 | 652.87 | 327.97 | 652.92 | 327.97 | 653.96 | 328.11 |
| 654.48 | 328.16 | 655.27 | 328.26 | 656.62 | 328.4 | 656.84 | 328.42 | 658.29 | 328.57 |
| 660.34 | 328.62 | 661.04 | 328.63 | 663.49 | 328.68 | 665.2 | 328.71 | 665.46 | 328.71 |
| 672.37 | 328.81 | 675.2 | 328.85 | 675.69 | 328.86 | 677.8 | 328.89 | 678.78 | 328.9 |
| 679.28 | 328.91 | 683.54 | 329.01 | 684.25 | 329.02 | 684.91 | 329.04 | 685.34 | 329.04 |
| 685.48 | 329.05 | 685.92 | 329.05 | 687.17 | 329.08 | 688.64 | 329.05 | 688.96 | 329.04 |
| 689.32 | 329.04 | 692.5 | 329.09 | 692.98 | 329.09 | 694.85 | 329.1 | 696.64 | 329.12 |
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| 711.77 | 329.61 | 713.14 | 329.67 | 715.22 | 329.78 | 716.64 | 329.84 | 717.88 | 329.89 |
| 718.42 | 329.9 | 720.58 | 329.93 | 720.86 | 329.92 | 722.27 | 329.92 | 723.79 | 329.91 |
| 723.84 | 329.9 | 724.83 | 329.87 | 725.59 | 329.87 | 726.02 | 329.85 | 726.47 | 329.85 |
| 727.23 | 329.89 | 727.95 | 329.91 | 728.68 | 329.96 | 729.97 | 330.06 | 735.34 | 330.44 |
| 737.8 | 330.6 | 738.76 | 330.65 | 740 | 330.74 | 740.82 | 330.78 | 740.87 | 330.79 |
| 741.84 | 330.85 | 743.38 | 330.94 | 743.47 | 330.94 | 745.23 | 331.01 | 747.1 | 331.06 |
| 748.39 | 331.11 | 749.21 | 331.13 | 749.98 | 331.14 | 751 | 331.17 | 755.02 | 331.25 |
| 756.65 | 331.28 | 757.71 | 331.29 | 759.2 | 331.22 | 761.05 | 331.3 | 763 | 331.22 |
| 763.99 | 331.19 | 766.44 | 331.06 | 766.76 | 331.04 | 767.62 | 331.01 | 768.31 | 330.99 |
| 768.59 | 330.99 | 770.24 | 330.97 | 770.72 | 330.96 | 771.27 | 330.96 | 773.35 | 330.95 |
| 774.94 | 330.92 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 135.86 | .04 | 643 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 135.86 | 643 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 650.428*

INPUT

Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.07 | 5.04 | 323 | 6.33 | 322.98 | 8.52 | 322.95 | 8.72 | 322.94 |
| 11.98 | 322.89 | 13.02 | 322.87 | 18.29 | 322.85 | 23.13 | 322.84 | 23.77 | 322.85 |
| 24.72 | 322.86 | 25.67 | 322.84 | 29.04 | 322.76 | 29.72 | 322.76 | 31.95 | 322.72 |
| 35.57 | 322.65 | 38.59 | 322.59 | 39.41 | 322.58 | 39.81 | 322.58 | 43.78 | 322.75 |
| 45.06 | 322.81 | 48.42 | 322.91 | 49.39 | 322.91 | 49.77 | 322.92 | 53.12 | 322.88 |
| 56.3 | 322.83 | 57 | 322.82 | 62.13 | 322.69 | 66.61 | 322.55 | 66.97 | 322.55 |
| 68.96 | 322.54 | 71.98 | 322.54 | 75.5 | 322.65 | 76.05 | 322.71 | 76.71 | 322.74 |
| 77.31 | 322.78 | 78.35 | 322.79 | 81.52 | 322.87 | 82.4 | 322.9 | 83.21 | 322.91 |
| 84.24 | 322.9 | 85.53 | 322.91 | 87.46 | 322.91 | 87.97 | 322.9 | 88.92 | 322.85 |
| 89.9 | 322.79 | 90.73 | 322.76 | 91.69 | 322.73 | 92.46 | 322.71 | 96.93 | 322.52 |
| 130.9 | 322.52 | 133.47 | 322.53 | 134.28 | 322.53 | 134.95 | 322.54 | 135.3 | 322.53 |
| 139.51 | 322.53 | 140.95 | 322.54 | 140.99 | 322.53 | 141.4 | 322.3 | 141.76 | 322.22 |
| 142.36 | 322.16 | 144.08 | 322.01 | 144.5 | 321.96 | 144.74 | 321.95 | 145.35 | 322 |
| 145.7 | 322.05 | 147.17 | 322.28 | 148.9 | 322.52 | 150.87 | 322.62 | 153.92 | 322.75 |
| 154.52 | 322.76 | 154.96 | 322.81 | 156.2 | 322.85 | 157.35 | 322.85 | 159.67 | 322.86 |
| 161.72 | 322.86 | 164.48 | 322.87 | 166.14 | 322.87 | 166.52 | 322.88 | 169 | 322.93 |
| 169.08 | 322.92 | 170.14 | 322.85 | 170.49 | 322.82 | 171.23 | 322.8 | 175.28 | 322.67 |
| 179.16 | 322.55 | 180.23 | 322.52 | 184.59 | 322.52 | 186.04 | 322.6 | 192 | 322.89 |
| 193.02 | 322.92 | 195.92 | 323.01 | 197.02 | 323.03 | 202.74 | 323.07 | 203.78 | 323.08 |
| 205.57 | 323.08 | 205.92 | 323.06 | 210.32 | 322.86 | 211.65 | 322.77 | 213.17 | 322.65 |
| 214.29 | 322.58 | 215.68 | 322.52 | 238.75 | 322.52 | 239.35 | 322.56 | 239.71 | 322.59 |
| 242.41 | 322.76 | 243.33 | 322.79 | 244.34 | 322.83 | 244.84 | 322.83 | 245.71 | 322.84 |
| 248.04 | 322.88 | 249.31 | 322.91 | 254 | 322.96 | 256.24 | 322.97 | 256.92 | 322.97 |
| 258.34 | 322.98 | 259.83 | 322.98 | 261.02 | 322.95 | 263.23 | 322.9 | 267.72 | 322.83 |
| 269.05 | 322.8 | 270.1 | 322.77 | 272.03 | 322.7 | 275.21 | 322.51 | 278.61 | 322.14 |
| 279.91 | 322.01 | 280.31 | 321.98 | 280.69 | 321.93 | 281.56 | 321.79 | 282.28 | 321.76 |
| 282.84 | 321.75 | 282.87 | 321.76 | 283.67 | 321.85 | 285.22 | 322.12 | 287.18 | 322.42 |
| 287.83 | 322.51 | 288.76 | 322.53 | 289.36 | 322.55 | 290.46 | 322.55 | 291.84 | 322.53 |
| 292.77 | 322.52 | 293.28 | 322.51 | 294.21 | 322.47 | 296.72 | 322.33 | 299.57 | 322.15 |
| 301.12 | 322.02 | 301.64 | 321.98 | 302.92 | 321.92 | 304.13 | 321.88 | 305.81 | 321.82 |
| 306.69 | 321.92 | 306.78 | 321.96 | 306.95 | 321.98 | 307.52 | 322 | 308.45 | 322.06 |
| 310.03 | 322.2 | 310.58 | 322.28 | 311.19 | 322.28 | 311.47 | 322.29 | 311.77 | 322.28 |
| 311.96 | 322.29 | 322.93 | 322.5 | 343.42 | 322.5 | 344.79 | 322.49 | 353.91 | 322.49 |
| 357.25 | 322.58 | 358.6 | 322.62 | 359.62 | 322.63 | 360.47 | 322.63 | 361.43 | 322.58 |
| 362 | 322.56 | 362.9 | 322.55 | 365.38 | 322.51 | 365.81 | 322.49 | 365.93 | 322.17 |
| 368.27 | 322.07 | 370.06 | 322.03 | 372.24 | 322.21 | 372.89 | 322.28 | 375.02 | 322.49 |
| 376.38 | 322.57 | 376.87 | 322.67 | 377.01 | 322.69 | 378.1 | 322.68 | 379.82 | 322.63 |
| 380.22 | 322.63 | 381.7 | 322.64 | 384 | 322.67 | 387.01 | 322.7 | 389.21 | 322.73 |
| 389.81 | 322.74 | 390.5 | 322.76 | 390.89 | 322.78 | 391.61 | 322.79 | 391.97 | 322.78 |
| 392.4 | 322.78 | 393.05 | 322.76 | 393.29 | 322.76 | 394.1 | 322.74 | 395.42 | 322.73 |
| 400.84 | 322.7 | 403.4 | 322.58 | 405.11 | 322.49 | 407.15 | 322.48 | 412.12 | 322.48 |
| 415.78 | 322.47 | 425.71 | 322.47 | 426.72 | 322.5 | 427.16 | 322.5 | 427.73 | 322.48 |
| 428.56 | 322.47 | 431.76 | 322.45 | 433.94 | 322.44 | 443.71 | 322.44 | 444.51 | 322.45 |
| 445.55 | 322.45 | 450 | 322.43 | 450.84 | 322.43 | 462.33 | 322.4 | 463.78 | 322.39 |
| 465.16 | 322.39 | 466.07 | 322.4 | 467.92 | 322.4 | 469.56 | 322.42 | 472.34 | 322.45 |
| 475.13 | 322.55 | 475.88 | 322.57 | 476.67 | 322.57 | 479.09 | 322.55 | 480.56 | 322.55 |
| 481.79 | 322.54 | 482.57 | 322.53 | 483.89 | 322.49 | 485.12 | 322.47 | 486.69 | 322.44 |
| 488.17 | 322.22 | 489.35 | 322.07 | 490.84 | 321.93 | 491.09 | 321.89 | 493.95 | 321.51 |
| 496.94 | 321.45 | 503.08 | 321.32 | 504.11 | 321.29 | 505.22 | 321.28 | 506.6 | 321.27 |
| 509.34 | 321.27 | 510.64 | 321.28 | 512.97 | 321.28 | 520.74 | 321.23 | 521.02 | 321.23 |
| 521.46 | 321.22 | 524.44 | 321.21 | 527.38 | 321.19 | 528.71 | 321.19 | 535.39 | 321.15 |
| 536.07 | 321.14 | 539.86 | 321.11 | 540.31 | 321.11 | 543.18 | 321.1 | 543.22 | 321.11 |
| 543.91 | 321.11 | 544.46 | 321.12 | 545.11 | 321.14 | 546.23 | 321.16 | 546.35 | 321.17 |
| 547.04 | 321.18 | 547.16 | 321.19 | 548.09 | 321.19 | 548.53 | 321.18 | 549.42 | 321.17 |
| 549.91 | 321.19 | 550.24 | 321.19 | 550.51 | 321.2 | 551.38 | 321.2 | 552.49 | 321.21 |
| 552.78 | 321.2 | 553.53 | 321.2 | 554.02 | 321.19 | 554.1 | 321.18 | 554.41 | 321.18 |
| 554.45 | 321.17 | 554.9 | 321.17 | 554.96 | 321.16 | 556.75 | 321.16 | 556.83 | 321.17 |
| 557.25 | 321.18 | 559.24 | 321.22 | 560.6 | 321.22 | 561.4 | 321.23 | 562.9 | 321.23 |
| 563.52 | 321.24 | 564.37 | 321.24 | 564.7 | 321.23 | 566.79 | 321.23 | 568.88 | 321.27 |
| 569 | 321.28 | 575.14 | 321.4 | 576.91 | 321.41 | 576.96 | 321.42 | 577.34 | 321.42 |
| 579.18 | 321.43 | 581.66 | 321.45 | 582.02 | 321.46 | 582.53 | 321.46 | 583 | 321.47 |
| 583.3 | 321.47 | 583.45 | 321.48 | 584.68 | 321.49 | 585.05 | 321.49 | 586.71 | 321.51 |
| 586.96 | 321.5 | 588.42 | 321.52 | 588.86 | 321.52 | 590.14 | 321.54 | 590.5 | 321.54 |
| 591.13 | 321.55 | 592.09 | 321.55 | 594.39 | 321.57 | 595.33 | 321.57 | 595.36 | 321.58 |
| 596.19 | 321.58 | 596.92 | 321.59 | 597.42 | 321.59 | 598.85 | 321.62 | 599.02 | 321.63 |
| 600.73 | 321.67 | 600.88 | 321.67 | 601.81 | 321.7 | 602.51 | 321.71 | 603.46 | 321.74 |
| 603.57 | 321.75 | 604.75 | 321.75 | 604.9 | 321.76 | 605.25 | 321.76 | 605.5 | 321.75 |
| 606.11 | 321.75 | 606.57 | 321.76 | 607.85 | 321.8 | 608.03 | 321.81 | 609.21 | 321.85 |
| 610.91 | 321.9 | 611.77 | 321.92 | 612.81 | 321.94 | 612.97 | 321.94 | 613.67 | 321.96 |
| 613.97 | 321.96 | 614.77 | 321.98 | 615.76 | 321.99 | 616.52 | 322.01 | 616.95 | 322.01 |
| 617.24 | 322.02 | 618.38 | 322.04 | 619.78 | 322.08 | 620.77 | 322.1 | 621.43 | 322.11 |
| 621.63 | 322.12 | 622.93 | 322.12 | 624.66 | 322.13 | 624.91 | 322.14 | 625.31 | 322.14 |
| 627.3 | 322.16 | 628.21 | 322.16 | 628.58 | 322.17 | 629.34 | 322.17 | 629.86 | 322.19 |
| 630.34 | 322.2 | 630.56 | 322.22 | 631.47 | 322.22 | 631.88 | 322.24 | 632.13 | 322.26 |
| 633.71 | 322.32 | 634.95 | 322.34 | 635.31 | 322.35 | 637.11 | 322.38 | 637.83 | 322.39 |
| 637.98 | 322.41 | 638.19 | 322.41 | 638.61 | 322.43 | 638.89 | 322.43 | 639.21 | 322.44 |
| 639.55 | 322.44 | 640.36 | 322.46 | 640.7 | 322.46 | 641.42 | 322.47 | 641.84 | 322.48 |
| 643.36 | 322.49 | 643.89 | 322.5 | 644.14 | 322.51 | 644.44 | 322.51 | 644.78 | 322.52 |
| 645.87 | 322.57 | 646.74 | 322.94 | 646.94 | 323.03 | 647.97 | 323.52 | 649.8 | 324.34 |
| 650.14 | 324.46 | 650.25 | 324.56 | 650.63 | 324.84 | 651.07 | 325.18 | 651.38 | 325.43 |
| 651.5 | 326 | 651.72 | 326.37 | 652.02 | 326.74 | 652.15 | 326.89 | 652.41 | 327.01 |
| 653.57 | 327.27 | 654.08 | 327.44 | 654.14 | 327.47 | 654.49 | 327.5 | 655.1 | 327.56 |
| 657.17 | 327.77 | 657.67 | 327.81 | 658.42 | 327.88 | 659.91 | 328.01 | 661.29 | 328.12 |
| 663.24 | 328.17 | 664.4 | 328.19 | 666.24 | 328.24 | 667.87 | 328.27 | 668.12 | 328.27 |
| 674.69 | 328.39 | 677.38 | 328.44 | 677.85 | 328.45 | 679.86 | 328.48 | 680.04 | 328.49 |
| 680.59 | 328.5 | 680.96 | 328.5 | 681.27 | 328.51 | 685.32 | 328.61 | 686.62 | 328.63 |
| 687.41 | 328.65 | 687.58 | 328.65 | 688.77 | 328.68 | 689.24 | 328.67 | 690.17 | 328.65 |
| 690.47 | 328.64 | 690.82 | 328.64 | 693.84 | 328.69 | 694.3 | 328.69 | 697.78 | 328.73 |
| 698.04 | 328.73 | 700.64 | 328.76 | 706.45 | 328.95 | 707.53 | 328.99 | 708.81 | 329.04 |
| 711.71 | 329.24 | 712.18 | 329.27 | 713.24 | 329.33 | 713.48 | 329.34 | 715.46 | 329.46 |
| 717.99 | 329.59 | 718.5 | 329.6 | 720.56 | 329.63 | 723.67 | 329.63 | 724.85 | 329.59 |
| 725.33 | 329.59 | 725.74 | 329.58 | 726.05 | 329.58 | 726.35 | 329.59 | 726.89 | 329.62 |
| 727.51 | 329.63 | 727.68 | 329.65 | 728.27 | 329.69 | 730.57 | 329.86 | 734.6 | 330.15 |
| 736.95 | 330.31 | 737.86 | 330.37 | 738.77 | 330.44 | 739.03 | 330.45 | 739.87 | 330.5 |
| 740.79 | 330.57 | 742.25 | 330.65 | 742.34 | 330.65 | 744.01 | 330.72 | 745.79 | 330.77 |
| 747.02 | 330.81 | 747.8 | 330.83 | 748.54 | 330.84 | 753.33 | 330.94 | 754.88 | 330.96 |
| 755.89 | 330.97 | 756.54 | 330.94 | 757.31 | 330.89 | 759.07 | 330.97 | 761.62 | 330.86 |
| 761.86 | 330.84 | 764.2 | 330.71 | 764.5 | 330.68 | 765.32 | 330.65 | 765.97 | 330.63 |
| 766.24 | 330.63 | 768.26 | 330.59 | 768.79 | 330.59 | 770.67 | 330.6 | 770.77 | 330.59 |
| 772.28 | 330.56 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 0 | .05 | 139.51 | .04 | 646.74 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 139.51 | 646.74 | 14.6 | 19.71 | 24.05 | .1 | .3 |

CROSS SECTION

RIVER: WASH80
REACH: WASH80 RS: 630.714*

INPUT
Description:
Station Elevation Data num= 496

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.78 | 5.17 | 322.71 | 6.49 | 322.69 | 8.75 | 322.65 | 9.61 | 322.64 |
| 13.36 | 322.57 | 18.77 | 322.55 | 23.74 | 322.55 | 24.39 | 322.56 | 25.36 | 322.57 |
| 26.34 | 322.55 | 29.8 | 322.47 | 30.49 | 322.47 | 32.78 | 322.43 | 36.5 | 322.36 |
| 39.6 | 322.3 | 40.44 | 322.29 | 40.85 | 322.29 | 44.92 | 322.47 | 46.24 | 322.53 |
| 49.68 | 322.64 | 50.68 | 322.64 | 51.07 | 322.65 | 54.51 | 322.61 | 57.77 | 322.56 |
| 58.49 | 322.55 | 63.76 | 322.42 | 68.35 | 322.28 | 68.72 | 322.28 | 70.77 | 322.27 |
| 71.09 | 322.26 | 73.86 | 322.27 | 76.5 | 322.35 | 77.48 | 322.39 | 77.83 | 322.42 |
| 78.04 | 322.45 | 78.72 | 322.48 | 79.33 | 322.52 | 80.4 | 322.54 | 83.65 | 322.62 |
| 84.17 | 322.64 | 84.56 | 322.65 | 85.29 | 322.66 | 86.44 | 322.66 | 87.76 | 322.67 |
| 88.94 | 322.66 | 89.74 | 322.66 | 90.27 | 322.65 | 92.25 | 322.55 | 93.1 | 322.51 |
| 94.08 | 322.48 | 94.87 | 322.46 | 97.52 | 322.35 | 99.47 | 322.26 | 134.32 | 322.26 |
| 136.96 | 322.27 | 139.93 | 322.27 | 140.65 | 322.26 | 143.15 | 322.26 | 144.65 | 322.27 |
| 144.69 | 322.26 | 145.12 | 322.03 | 145.49 | 321.95 | 146.11 | 321.88 | 148.33 | 321.68 |
| 148.57 | 321.67 | 149.21 | 321.71 | 149.57 | 321.76 | 151.09 | 322.01 | 152.89 | 322.26 |
| 154.93 | 322.36 | 158.09 | 322.5 | 158.72 | 322.51 | 159.17 | 322.56 | 160.46 | 322.6 |
| 161.64 | 322.6 | 164.05 | 322.62 | 169.03 | 322.62 | 170.75 | 322.63 | 171.15 | 322.63 |
| 173.72 | 322.68 | 173.81 | 322.67 | 174.91 | 322.61 | 175.26 | 322.58 | 176.04 | 322.55 |
| 180.23 | 322.42 | 184.25 | 322.29 | 185.36 | 322.26 | 189.88 | 322.26 | 191.39 | 322.35 |
| 197.56 | 322.64 | 198.61 | 322.68 | 201.63 | 322.77 | 202.77 | 322.79 | 208.69 | 322.84 |
| 209.77 | 322.85 | 211.63 | 322.85 | 211.98 | 322.83 | 215.41 | 322.66 | 216.54 | 322.61 |
| 217.92 | 322.52 | 219.5 | 322.39 | 220.66 | 322.33 | 222.11 | 322.26 | 246.02 | 322.26 |
| 246.63 | 322.31 | 247.01 | 322.33 | 249.81 | 322.51 | 251.28 | 322.57 | 251.81 | 322.58 |
| 252.32 | 322.58 | 253.23 | 322.59 | 255.65 | 322.64 | 256.96 | 322.67 | 261.82 | 322.72 |
| 264.14 | 322.73 | 264.84 | 322.73 | 266.32 | 322.74 | 267.87 | 322.74 | 269.09 | 322.71 |
| 271.38 | 322.66 | 276.04 | 322.58 | 277.42 | 322.55 | 278.5 | 322.53 | 279.33 | 322.5 |
| 280.51 | 322.45 | 283.81 | 322.26 | 287.32 | 321.87 | 289.09 | 321.7 | 289.49 | 321.65 |
| 290.38 | 321.51 | 291.71 | 321.46 | 291.75 | 321.47 | 292.57 | 321.56 | 294.18 | 321.84 |
| 296.21 | 322.16 | 296.89 | 322.26 | 297.84 | 322.28 | 298.47 | 322.29 | 299.61 | 322.29 |
| 301.04 | 322.28 | 302 | 322.26 | 302.54 | 322.26 | 302.97 | 322.24 | 306.1 | 322.06 |
| 309.05 | 321.88 | 310.66 | 321.75 | 311.19 | 321.71 | 311.84 | 321.67 | 312.53 | 321.64 |
| 313.78 | 321.6 | 315.52 | 321.54 | 315.91 | 321.58 | 316.43 | 321.64 | 316.53 | 321.69 |
| 316.7 | 321.71 | 317.01 | 321.72 | 317.29 | 321.72 | 318.25 | 321.79 | 319.9 | 321.94 |
| 320.47 | 322.01 | 320.8 | 322.01 | 321.38 | 322.03 | 321.69 | 322.02 | 321.9 | 322.03 |
| 333.27 | 322.25 | 365.38 | 322.25 | 368.84 | 322.34 | 370.24 | 322.38 | 371.29 | 322.39 |
| 372.17 | 322.39 | 373.16 | 322.34 | 373.76 | 322.32 | 374.69 | 322.3 | 377.26 | 322.26 |
| 377.7 | 322.24 | 377.83 | 321.91 | 380.25 | 321.81 | 382.11 | 321.76 | 385.05 | 322.02 |
| 387.25 | 322.24 | 388.66 | 322.33 | 389.17 | 322.44 | 389.31 | 322.45 | 390.45 | 322.45 |
| 392.22 | 322.4 | 392.64 | 322.4 | 394.17 | 322.41 | 396.56 | 322.43 | 399.68 | 322.46 |
| 402.58 | 322.51 | 403.29 | 322.53 | 403.7 | 322.55 | 404.45 | 322.56 | 404.82 | 322.55 |
| 405.26 | 322.55 | 405.94 | 322.53 | 406.19 | 322.53 | 407.03 | 322.51 | 408.39 | 322.5 |
| 414.02 | 322.47 | 416.66 | 322.35 | 418.44 | 322.25 | 420.56 | 322.24 | 440.18 | 322.24 |
| 440.84 | 322.26 | 441.3 | 322.26 | 441.89 | 322.24 | 442.75 | 322.23 | 446.06 | 322.21 |
| 448.32 | 322.2 | 458.45 | 322.21 | 460.36 | 322.21 | 464.96 | 322.2 | 465.83 | 322.2 |
| 477.74 | 322.17 | 479.25 | 322.16 | 480.68 | 322.17 | 481.63 | 322.17 | 485.24 | 322.19 |
| 488.12 | 322.22 | 491.02 | 322.33 | 491.79 | 322.35 | 492.61 | 322.35 | 495.11 | 322.34 |
| 496.64 | 322.34 | 497.91 | 322.33 | 498.73 | 322.31 | 500.09 | 322.27 | 501.36 | 322.25 |
| 503 | 322.22 | 504.53 | 321.99 | 505.75 | 321.83 | 507.29 | 321.69 | 507.56 | 321.65 |
| 510.52 | 321.26 | 513.62 | 321.19 | 519.98 | 321.06 | 521.05 | 321.03 | 522.2 | 321.01 |
| 523.63 | 321 | 525.1 | 321 | 527.81 | 321.02 | 530.23 | 321.02 | 538.28 | 320.97 |
| 538.58 | 320.97 | 539.03 | 320.96 | 542.12 | 320.95 | 545.17 | 320.93 | 546.54 | 320.93 |
| 553.47 | 320.89 | 554.17 | 320.89 | 558.11 | 320.86 | 558.57 | 320.86 | 561.39 | 320.85 |
| 561.84 | 320.85 | 562.14 | 320.86 | 562.61 | 320.86 | 564.71 | 320.9 | 565.24 | 320.9 |
| 565.5 | 320.91 | 566.88 | 320.91 | 567.3 | 320.93 | 567.58 | 320.93 | 567.82 | 320.94 |
| 568.56 | 320.94 | 569.47 | 320.95 | 570.12 | 320.95 | 570.41 | 320.94 | 571.54 | 320.91 |
| 571.91 | 320.91 | 572 | 320.9 | 573.26 | 320.9 | 573.61 | 320.91 | 574.92 | 320.93 |
| 575.32 | 320.93 | 576.48 | 320.94 | 577.17 | 320.94 | 577.6 | 320.95 | 578.46 | 320.95 |
| 578.99 | 320.96 | 580.01 | 320.96 | 580.07 | 320.95 | 580.29 | 320.96 | 581.8 | 320.96 |
| 583.6 | 320.99 | 583.7 | 320.99 | 588.97 | 321.08 | 590.49 | 321.1 | 590.87 | 321.1 |
| 592.44 | 321.12 | 594.57 | 321.14 | 594.88 | 321.14 | 595.32 | 321.15 | 595.72 | 321.15 |
| 596.11 | 321.16 | 597.17 | 321.17 | 597.49 | 321.17 | 599.68 | 321.2 | 600.38 | 321.2 |
| 600.76 | 321.21 | 601.3 | 321.21 | 601.86 | 321.22 | 602.17 | 321.23 | 602.71 | 321.23 |
| 603.17 | 321.24 | 603.54 | 321.24 | 605.51 | 321.27 | 606.32 | 321.29 | 606.77 | 321.29 |
| 607.06 | 321.3 | 607.68 | 321.31 | 608.96 | 321.34 | 609.23 | 321.34 | 609.49 | 321.35 |
| 610.96 | 321.39 | 611.09 | 321.39 | 611.88 | 321.41 | 612.49 | 321.43 | 613.3 | 321.45 |
| 613.46 | 321.46 | 614.22 | 321.46 | 614.66 | 321.48 | 615.57 | 321.48 | 616.31 | 321.5 |
| 616.79 | 321.52 | 617.07 | 321.52 | 617.23 | 321.53 | 618.24 | 321.56 | 619.7 | 321.61 |
| 620.08 | 321.62 | 620.44 | 321.62 | 621.34 | 321.64 | 621.48 | 321.65 | 622.07 | 321.66 |
| 622.33 | 321.67 | 622.57 | 321.67 | 623.87 | 321.7 | 624.15 | 321.71 | 624.52 | 321.71 |
| 624.62 | 321.72 | 624.89 | 321.72 | 625.12 | 321.73 | 626.12 | 321.75 | 628.17 | 321.8 |
| 628.74 | 321.82 | 629.03 | 321.82 | 629.12 | 321.83 | 629.84 | 321.83 | 630.03 | 321.84 |
| 631.52 | 321.86 | 633.78 | 321.9 | 634.31 | 321.9 | 634.57 | 321.91 | 634.89 | 321.91 |
| 635.48 | 321.92 | 635.98 | 321.94 | 636.29 | 321.94 | 636.54 | 321.96 | 637.17 | 321.96 |
| 637.72 | 321.98 | 639.08 | 322.04 | 639.29 | 322.04 | 640.35 | 322.06 | 640.67 | 322.07 |
| 641.69 | 322.09 | 641.9 | 322.1 | 642.21 | 322.1 | 643.14 | 322.13 | 643.29 | 322.14 |
| 643.74 | 322.15 | 644.01 | 322.15 | 644.58 | 322.17 | 645.01 | 322.17 | 645.29 | 322.18 |
| 645.91 | 322.19 | 646.27 | 322.2 | 647.37 | 322.22 | 647.58 | 322.22 | 648.25 | 322.24 |
| 648.51 | 322.24 | 649.73 | 322.28 | 650.29 | 322.56 | 650.49 | 322.67 | 651.65 | 323.26 |
| 652.1 | 323.48 | 653.38 | 324.1 | 653.71 | 324.23 | 653.82 | 324.34 | 654.18 | 324.62 |
| 654.59 | 324.97 | 654.88 | 325.21 | 655 | 325.8 | 655.21 | 326.18 | 655.61 | 326.72 |
| 655.87 | 326.83 | 656.5 | 326.96 | 656.97 | 327.05 | 657.25 | 327.15 | 657.5 | 327.23 |
| 657.84 | 327.26 | 658.42 | 327.29 | 659.4 | 327.36 | 659.44 | 327.36 | 660.42 | 327.42 |
| 661.56 | 327.5 | 662.78 | 327.57 | 662.98 | 327.59 | 663.59 | 327.62 | 664.29 | 327.66 |
| 666.14 | 327.71 | 666.77 | 327.73 | 667.24 | 327.74 | 668.99 | 327.79 | 670.54 | 327.82 |
| 670.77 | 327.83 | 677.01 | 327.97 | 679.56 | 328.03 | 681.33 | 328.07 | 682.09 | 328.08 |
| 682.61 | 328.09 | 682.79 | 328.1 | 683.25 | 328.11 | 687.1 | 328.2 | 687.74 | 328.22 |
| 688.85 | 328.24 | 690.37 | 328.28 | 690.62 | 328.28 | 690.81 | 328.27 | 691.7 | 328.25 |
| 691.99 | 328.24 | 692.31 | 328.24 | 694.63 | 328.28 | 694.84 | 328.28 | 695.62 | 328.3 |
| 698.92 | 328.34 | 699.17 | 328.35 | 701.63 | 328.38 | 707.15 | 328.6 | 709.39 | 328.69 |
| 712.14 | 328.91 | 712.58 | 328.94 | 713.59 | 329 | 713.82 | 329.02 | 715.7 | 329.15 |
| 718.1 | 329.28 | 718.59 | 329.3 | 720.54 | 329.34 | 720.79 | 329.34 | 721.72 | 329.35 |
| 723.49 | 329.35 | 724.38 | 329.32 | 725.07 | 329.32 | 725.54 | 329.31 | 726.01 | 329.33 |

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  726.21  329.33  726.54  329.35  727.13  329.36   727.3  329.38  727.86  329.42
  730.04  329.59  733.87  329.87  733.99  329.87  734.57  329.92  736.09  330.03
  738.81  330.22  739.34  330.26  739.74  330.28  741.13  330.37  741.21  330.37
   742.8  330.43  744.49  330.47  745.65  330.52  747.09  330.54  748.01  330.56
  751.64  330.63  753.11  330.65  754.07  330.65  754.68  330.62  755.41  330.57
  757.08  330.64  758.85  330.55   759.5  330.51  759.74   330.5  760.94  330.42
  762.24  330.33  762.81   330.3  763.02   330.3  763.64  330.27  763.89  330.27
  765.81  330.23  766.31  330.23  767.94  330.24  768.19  330.24  768.67  330.22
  769.63   330.2

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  143.15     .04  650.49     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        143.15  650.49             14.6   19.71   24.05              .1       .3

CROSS SECTION


RIVER: WASH80
REACH: WASH80             RS: 611

INPUT
Description:
Station Elevation Data    num=     449
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  322.496.659973   322.48.969971  322.3612.60999   322.313.69995  322.28
   19.25  322.2624.33997  322.2625.00995  322.2726.00995  322.28   30.56  322.18
31.26996  322.1840.60999  322.0140.77997  322.0141.46997     32241.54999     322
41.57996     32241.88995     32247.41998  322.2550.94995  322.3751.96997  322.37
   52.37  322.3855.89996  322.3459.97998  322.2865.37994  322.1570.08997     322
70.09998     32270.10999     32270.46997     322   72.87  321.9972.89996  321.99
75.57996     32275.66998     32275.73999     32278.44995  322.0879.44995  322.12
   79.81  322.1680.02997  322.1981.06995  322.2481.34998  322.2682.44995  322.28
85.77997  322.37   86.31  322.3986.70996   322.487.45996  322.4188.63995  322.41
      90  322.4291.20996  322.4292.02997  322.4292.56995  322.4193.00995  322.39
94.59998   322.395.46997  322.2696.47998  322.2397.28998  322.2198.51996  322.16
     102     322  106.17     322106.2599     322  106.41     322   107.6     322
  108.06     322108.7599     322  109.25     322  109.65     322  109.86     322
  110.04     322  110.37     322  110.83     322  111.08     322  111.42     322
  111.89     322  113.75     322  118.58     322  120.56     322  121.45     322
  123.16     322  125.46     322126.2599     322  127.91     322129.0099     322
  133.06     322  134.61     322  134.86     322135.0099     322  135.46     322
  135.56     322  137.74     322     142  322.01  144.23     322   146.8     322
  148.35  322.01  148.39     322  148.83  321.76  149.22  321.67  149.86   321.6
   151.7  321.44  152.16  321.39152.3199  321.38  152.41  321.38  152.59  321.39
153.0699  321.43153.4399  321.48  155.02  321.74156.8799     322  158.99   322.1
162.2599  322.25162.8199  322.26  162.91  322.26  163.15  322.29163.3799  322.31
  163.74  322.32  164.71  322.35165.9399  322.35  168.43  322.37   169.4  322.37
170.6299  322.37  175.37  322.38  175.78  322.39178.4399  322.44  178.53  322.43
  179.67  322.36  180.04  322.33  180.84   322.3  189.34  322.03  190.49     322
  191.12     322  192.73     322  193.37     322  195.17     322  196.73  322.09
  203.12   322.4  204.21  322.44  207.33  322.53  207.85  322.54208.5099  322.55
  214.64   322.6215.7599  322.61216.5699  322.61217.1299  322.61  217.48  322.61
  217.68  322.61  218.05  322.59   221.6  322.42  222.77  322.37   224.2  322.27
  225.83  322.14  227.03  322.07  228.53     322  229.49     322  229.64     322
234.8199     322235.0099     322235.7599     322  236.18     322236.6899     322
  237.21     322  237.68     322  238.08     322  238.91     322   239.1     322
  239.28     322  239.48     322     240     322  241.78     322  242.14     322
  243.17     322  243.65     322  243.98     322244.5699     322  245.22     322
  245.43     322  246.45     322246.8199     322  247.43     322  253.28     322
  253.92  322.05  257.21  322.26  258.19   322.3  258.73  322.32  259.28  322.34
  259.81  322.34  260.75  322.35  263.25   322.4  264.61  322.43  269.64  322.48
  272.04  322.49   274.3   322.5  274.91   322.5   275.4   322.5  275.62   322.5
   275.9   322.5  277.17  322.47  279.54  322.42  284.36  322.34  285.79  322.31
  286.91  322.28  287.77  322.25  288.99   322.2   292.4     322  296.04   321.6
  297.44  321.46  297.87  321.42  298.28  321.37  299.21  321.22  299.98  321.19
  300.58  321.17  300.62  321.18  301.47  321.28  303.14  321.57  305.24   321.9
  305.94     322  306.93  322.02  307.58  322.04  308.17  322.04  308.76  322.04
  310.24  322.02  311.79     322  312.24  321.98  315.48   321.8  318.53  321.61
   320.2  321.47  320.75  321.43  321.42  321.39  322.13  321.36  323.43  321.32
  324.94  321.27  325.23  321.26  325.63   321.3  326.17  321.36  326.27  321.41
  326.45  321.43  326.77  321.44  327.06  321.45  328.06  321.52  329.76  321.67
  330.35  321.75   330.7  321.75     331  321.76   331.3  321.77  331.62  321.76
  331.83  321.77   343.6     322  357.43     322   363.1     322  365.58     322
  367.05     322  376.84     322  380.42   322.1  381.87  322.14  382.96  322.15
  383.45  322.15  383.87  322.15  384.52  322.12   384.9   322.1  385.52  322.08
  386.48  322.06  389.14  322.02  389.46  322.01   389.6     322  389.73  321.65
  392.24  321.55  394.16   321.5   396.5   321.7   397.2  321.77  399.48     322
  400.94  322.09  401.47   322.2  401.62  322.22  401.84  322.22  402.79  322.21
  404.63  322.16  405.06  322.16  406.65  322.17  409.12   322.2  412.35  322.23
  414.71  322.27  415.35  322.28  416.09   322.3  416.28  322.31  416.51  322.32
  417.29  322.33  417.67  322.32  418.13  322.32   418.5  322.31  419.09   322.3
  419.43  322.29  419.96  322.28  421.37  322.27  427.19  322.24  429.93  322.11
  431.77  322.01  433.96     322  435.41     322   436.2     322  437.02     322
  437.55     322  439.29     322  443.22     322  447.66     322  451.05     322
  453.36     322  453.87     322  454.27  322.01  454.96  322.03  455.43  322.03
  456.04  322.01   456.9     322  456.93     322  460.36  321.98   462.7  321.97
  474.37  321.98  474.42  321.98  474.47  321.98  474.57  321.98   474.6  321.98
  474.62  321.98  474.67  321.98  474.76  321.99  474.78  321.99  474.79  321.99
  474.84  321.98  474.86  321.98  474.92  321.98  475.16  321.98  479.93  321.97
  493.16  321.94  494.72  321.93  497.18  321.94  499.16  321.95   503.9     322
   506.9  322.11   507.7  322.13  508.55  322.13  511.14  322.12  512.72  322.12
  514.04  322.11  514.88  322.09  516.29  322.05  517.61  322.03   519.3     322
  520.89  321.76  522.15   321.6  523.75  321.45  527.09     321   530.3  320.93
  536.88   320.8  537.99  320.77  539.18  320.75  540.66  320.74  542.18  320.74
   543.6  320.75  544.99  320.76  547.49  320.76  555.83  320.71   556.6   320.7
   559.8  320.69  562.96  320.67  563.97  320.67  571.55  320.64  576.35  320.61
  579.75   320.6  582.13  320.61   583.7  320.63  585.12  320.68585.6899  320.69
  586.54  320.69  587.05  320.69   587.7  320.68  588.62  320.65  589.67  320.64
  591.39  320.65  593.98  320.67  596.41  320.69  609.66  320.85  613.11   320.9
  614.88  320.93  617.33     321  633.86  321.46   653.6     322  654.23  322.39
654.2599  322.41  655.33     323  656.97  323.87  657.28     324  657.38  324.11
  658.39     325   658.5  325.61   658.7     326  659.08  326.54659.3199  326.65
  660.36  326.83  660.87     327  663.63  327.08  666.63  327.19  669.64  327.28
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 681.88 | 327.62 | 683.42 | 327.66 | 690.04 | 327.83 | 690.53 | 327.84 | 690.75 | 327.85 |
| 690.9 | 327.85 | 691.62 | 327.87 | 691.97 | 327.88 | 692.02 | 327.88 | 692.21 | 327.88 |
| 692.39 | 327.87 | 693.23 | 327.85 | 693.5 | 327.84 | 693.8099 | 327.84 | 700.17 | 327.96 |
| 700.3 | 327.96 | 702.63 | 328 | 709.97 | 328.34 | 712.99 | 328.61 | 714.16 | 328.69 |
| 715.9399 | 328.83 | 718.21 | 328.98 | 718.67 | 329 | 720.52 | 329.05 | 723.2599 | 329.07 |
| 724.37 | 329.04 | 725.17 | 329.04 | 725.25 | 329.04 | 726.2 | 329.08 | 726.62 | 329.09 |
| 726.7599 | 329.09 | 726.86 | 329.17 | 29.5099 | 329.31 | 733.1299 | 329.58 | 737.11 | 329.89 |
| 737.86 | 329.94 | 738.6899 | 330 | 740 | 330.08 | 741.58 | 330.14 | 743.18 | 330.18 |
| 744.28 | 330.22 | 749.95 | 330.32 | 751.34 | 330.33 | 752.25 | 330.33 | 752.83 | 330.3 |
| 753.52 | 330.24 | 755.1 | 330.31 | 757.61 | 330.16 | 759.71 | 330 | 759.98 | 329.97 |
| 761.3 | 329.91 | 763.36 | 329.87 | 765.52 | 329.88 | 766.97 | 329.84 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 146.8 | .04 | 654.23 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 146.8 | 654.23 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 6831.23

INPUT
Description:
Station Elevation Data num= 257

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 361.55 | 6.700012 | 361.45 | 16.02997 | 361.32 | 3.35999 | 361.18 | 34.01001 | 361 |
| 39.65002 | 360.38 | 41.52002 | 360.19 | 43.15997 | 360 | 46.34998 | 359.62 | 51.52002 | 359 |
| 56.10999 | 358.67 | 65.81 | 358 | 66.77002 | 357.96 | 67.33002 | 357.94 | 77.46997 | 357.54 |
| 91.09998 | 357 | 93.04999 | 356.97 | 124.99 | 356.46 | 129.57 | 356.39 | 131.77 | 356.36 |
| 138.55 | 356.25 | 140.41 | 356.22 | 142.92 | 356.19 | 144.04 | 356.17 | 151.95 | 356 |
| 163.6 | 355.86 | 184.72 | 355.6 | 198.07 | 355.43 | 204.96 | 355.35 | 207.74 | 355.31 |
| 208.63 | 355.3 | 209.91 | 355.29 | 213.1 | 355.26 | 214.15 | 355.25 | 216.68 | 355.26 |
| 219.52 | 355.28 | 219.66 | 355.3 | 220.02 | 355.31 | 220.84 | 355.32 | 221.03 | 355.33 |
| 223.38 | 355.32 | 223.64 | 355.32 | 226.67 | 355.36 | 228.66 | 355.36 | 230.42 | 355.37 |
| 231.26 | 355.37 | 232.07 | 355.36 | 232.91 | 355.35 | 233.81 | 355.33 | 235.56 | 355.29 |
| 238.03 | 355.22 | 247 | 355 | 247.18 | 355 | 248.73 | 354.95 | 254.51 | 354.73 |
| 256.12 | 354.68 | 257.12 | 354.66 | 258.36 | 354.64 | 259.94 | 354.62 | 261.87 | 354.6 |
| 263.91 | 354.59 | 265.74 | 354.58 | 270.95 | 354.62 | 277.12 | 354.68 | 277.61 | 354.68 |
| 278.61 | 354.68 | 282.15 | 354.65 | 283.78 | 354.65 | 285.11 | 354.66 | 286.79 | 354.67 |
| 290.47 | 354.65 | 293.35 | 354.64 | 294.11 | 354.63 | 294.8 | 354.62 | 295.07 | 354.62 |
| 295.98 | 354.58 | 297.17 | 354.54 | 299.95 | 354.41 | 301.04 | 354.37 | 302.14 | 354.35 |
| 304.11 | 354.29 | 306.71 | 354.21 | 310.65 | 354.05 | 312.16 | 354 | 312.25 | 354 |
| 314.26 | 354 | 314.68 | 354 | 316.63 | 354 | 317.28 | 354.06 | 324.06 | 354.01 |
| 325.26 | 354.01 | 326.49 | 354.01 | 328.21 | 354.01 | 329.08 | 354.01 | 329.28 | 354.01 |
| 329.62 | 354.01 | 339.86 | 354 | 340.57 | 354 | 350.34 | 354 | 351.59 | 354 |
| 352.31 | 354 | 353.75 | 354 | 354.5 | 354 | 357.49 | 354 | 358.03 | 354.01 |
| 358.06 | 354.01 | 372.99 | 354.21 | 375.22 | 354.25 | 377.88 | 354.3 | 379.98 | 354.35 |
| 382.83 | 354.32 | 385.99 | 354.28 | 386.05 | 354.26 | 386.43 | 354.23 | 387.2 | 354.2 |
| 390.14 | 354.13 | 392.21 | 354.09 | 392.3 | 354.09 | 394.42 | 354.06 | 396.3 | 354.04 |
| 397.8 | 354.03 | 399.6 | 354.03 | 400.16 | 354.03 | 400.99 | 354 | 401.3 | 353.99 |
| 401.88 | 353.95 | 402.02 | 353.92 | 403.06 | 353.9 | 404.07 | 353.88 | 406.13 | 354 |
| 406.17 | 354 | 406.31 | 354 | 407.87 | 354 | 414.25 | 354.01 | 419.29 | 354 |
| 422.25 | 354 | 427.35 | 353.49 | 431.7 | 353 | 432.1 | 353 | 432.21 | 353 |
| 435.45 | 353.03 | 436.2 | 353.28 | 436.94 | 353.42 | 448.09 | 353 | 452.67 | 352.08 |
| 453.04 | 352 | 453.71 | 352 | 454.02 | 352 | 456.41 | 352 | 457.38 | 352 |
| 458.95 | 352 | 461.58 | 352 | 461.9 | 352 | 462.2 | 352.02 | 465.8 | 352.26 |
| 467.96 | 352.35 | 468.52 | 352.36 | 468.88 | 352.36 | 469.39 | 352.31 | 469.65 | 352.3 |
| 473.82 | 352 | 475.48 | 352 | 476.69 | 352 | 479.17 | 352 | 479.47 | 352 |
| 480.85 | 352.07 | 500.16 | 353 | 508.68 | 353.38 | 511.42 | 353.39 | 514.21 | 353.37 |
| 514.41 | 353.34 | 516.65 | 353.16 | 518.61 | 353.05 | 518.64 | 353.05 | 519.48 | 353.03 |
| 519.8 | 353 | 520.45 | 352.98 | 522.18 | 352.96 | 523.64 | 352.94 | 526.99 | 352.84 |
| 528.43 | 352.82 | 530.01 | 352.81 | 531.74 | 352.82 | 533.5 | 352.85 | 535.03 | 352.89 |
| 535.99 | 352.92 | 536.5 | 352.95 | 536.88 | 353 | 543.48 | 353.4 | 544.75 | 353.46 |
| 550.51 | 353.67 | 551.99 | 353.72 | 552.33 | 353.73 | 552.72 | 353.73 | 553.12 | 353.74 |
| 553.49 | 353.74 | 553.82 | 353.74 | 554.1 | 353.74 | 554.59 | 353.73 | 555.54 | 353.71 |
| 556.77 | 353.68 | 559.72 | 353.62 | 562.05 | 353.54 | 567 | 353.38 | 567.11 | 353.38 |
| 579.97 | 353 | 580.76 | 352.98 | 583.65 | 352.9 | 586.82 | 352.99 | 588.85 | 352.99 |
| 589.51 | 352.99 | 590.36 | 352.99 | 593.27 | 353 | 595.94 | 353 | 602.61 | 353.64 |
| 604.5 | 354 | 607.45 | 354 | 609.47 | 354 | 610.35 | 354 | 611.82 | 354 |
| 612.35 | 354 | 617.77 | 354 | 617.87 | 353.84 | 618.99 | 353.66 | 620.65 | 353.67 |
| 622.39 | 353.69 | 623.04 | 353.74 | 625.31 | 354 | 625.53 | 354.08 | 629.18 | 355 |
| 630.17 | 355.33 | 632.44 | 356 | 633.93 | 356.42 | 635.62 | 357 | 638.23 | 357.7 |
| 639.75 | 358 | 642.95 | 358.59 | 645.23 | 359 | 653.06 | 359.77 | 655.48 | 360 |
| 657 | 360.16 | 665.27 | 361 | 669.22 | 361.43 | 675.49 | 362 | 680.02 | 362.61 |
| 681.69 | 362.84 | 682.22 | 362.9 | 682.61 | 362.95 | 682.98 | 363 | 684.41 | 363 |
| 694.19 | 363 | 701.75 | 363 | 702.05 | 363 | 702.11 | 363 | 702.36 | 363 |
| 723 | 363.58 | 725.56 | 363.65 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 295.98 | .04 | 629.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 295.98 | 629.18 | 324.48 | 327.34 | 331.11 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 6503.89

INPUT
Description:
Station Elevation Data num= 286

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 359.68 | .04 | 359.68 | 1.780029 | 359.68 | 4.430054 | 359.67 | 8.550049 | 359.64 |
| 14.32001 | 359.6 | 21.55005 | 359.54 | 29.63 | 359.46 | 38.41003 | 359.38 | 47.85004 | 359.28 |
| 57.79004 | 359.17 | 67.59003 | 359.05 | 71.37006 | 359 | 72.71002 | 358.96 | 72.94 | 358.96 |
| 75.95001 | 358.88 | 76.94 | 358.87 | 79.97003 | 358.77 | 81.51001 | 358.76 | 82.02002 | 358.76 |
| 83.05005 | 358.74 | 86.35004 | 358.65 | 86.93005 | 358.65 | 89.37006 | 358.56 | 90.03003 | 358.56 |
| 90.69 | 358.57 | 92.80005 | 358.61 | 93.10004 | 358.61 | 93.46002 | 358.69 | 4.76001 | 358.59 |
| 97.55005 | 358.55 | 103.72 | 358.47 | 107.14 | 358.42 | 116.52 | 358.27 | 128.1201 | 358.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 132.34 | 358.04 | 135.52 | 358 | 136.8701 | 357.91 | 137.07 | 357.9 | 138.25 | 357.8 |
| 138.42 | 357.8 | 140.1201 | 357.75 | 141.7401 | 357.64 | 144.79 | 357.51 | 148.64 | 357.33 |
| 155.28 | 357 | 156.51 | 356.92 | 156.66 | 356.92 | 157.39 | 356.88 | 161.71 | 356.61 |
| 166.05 | 356.4 | 173.31 | 356 | 174.98 | 355.85 | 176.76 | 355.7 | 185.17 | 355 |
| 187.66 | 354.93 | 190.25 | 354.86 | 193.68 | 354.78 | 196.91 | 354.7 | 197.54 | 354.67 |
| 199.6 | 354.61 | 201.16 | 354.55 | 202.97 | 354.47 | 208.24 | 354.23 | 209.45 | 354.18 |
| 212.83 | 354.02 | 213.39 | 354 | 215.17 | 353.95 | 216.9 | 353.91 | 218.3 | 353.89 |
| 221.51 | 353.87 | 222.23 | 353.86 | 224.24 | 353.79 | 227.16 | 353.69 | 228.31 | 353.64 |
| 231.85 | 353.53 | 240.72 | 353.23 | 241.32 | 353.22 | 246.87 | 353.16 | 248.97 | 353.13 |
| 250.78 | 353.1 | 253.16 | 353.04 | 255.86 | 353.01 | 256.12 | 353 | 259.2 | 352.9 |
| 259.48 | 352.89 | 259.6 | 352.89 | 277.44 | 352 | 320.98 | 351.18 | 329.93 | 351 |
| 336.81 | 350.77 | 343.84 | 350.54 | 347.52 | 350.43 | 349.84 | 350.38 | 351.64 | 350.34 |
| 352.76 | 350.31 | 353.2 | 350.3 | 357.73 | 350.17 | 362.96 | 350.02 | 363.5 | 350 |
| 364.77 | 349.97 | 366.11 | 349.94 | 369.98 | 349.81 | 371.66 | 349.77 | 372.57 | 349.73 |
| 372.98 | 349.72 | 373.52 | 349.72 | 374.85 | 349.71 | 375.46 | 349.71 | 376.78 | 349.69 |
| 380.15 | 349.66 | 381.33 | 349.64 | 394.57 | 349.63 | 405.08 | 349.64 | 407.78 | 349.64 |
| 408.28 | 349.72 | 408.88 | 350 | 438.58 | 350.51 | 451.56 | 350.73 | 456.32 | 350.75 |
| 460.78 | 350.75 | 460.85 | 350.75 | 460.98 | 350.75 | 461.16 | 350.75 | 461.4 | 350.75 |
| 461.96 | 350.76 | 463.63 | 350.75 | 465.46 | 350.74 | 465.51 | 350.73 | 465.69 | 350.72 |
| 465.99 | 350.7 | 466.39 | 350.68 | 466.97 | 350.7 | 467.33 | 350.69 | 469.05 | 350.73 |
| 469.77 | 350.74 | 470.14 | 350.73 | 470.94 | 350.74 | 472.05 | 350.75 | 472.2 | 350.78 |
| 472.35 | 350.81 | 472.59 | 350.85 | 473.36 | 350.91 | 473.94 | 350.93 | 475.35 | 350.97 |
| 475.39 | 350.97 | 476.69 | 351 | 478.36 | 351.1 | 478.42 | 351.11 | 484.46 | 351.5 |
| 484.62 | 351.51 | 484.95 | 351.53 | 487.25 | 351.69 | 487.6 | 351.73 | 487.78 | 351.74 |
| 487.95 | 351.74 | 488.17 | 351.74 | 489.06 | 351.7 | 489.36 | 351.69 | 489.5 | 351.69 |
| 490.55 | 351.61 | 491.25 | 351.57 | 492.04 | 351.57 | 493.06 | 351.62 | 494.5 | 351.7 |
| 496.29 | 351.77 | 497.81 | 351.77 | 498.7 | 351.71 | 499.33 | 351.62 | 499.53 | 351.56 |
| 500.13 | 351.56 | 500.73 | 351.56 | 502.54 | 352 | 519.89 | 352.75 | 520.75 | 352.79 |
| 524.01 | 353 | 528.3101 | 353.12 | 528.6901 | 353.13 | 533.35 | 353.25 | 535.66 | 353.3 |
| 539.41 | 353.37 | 541.17 | 353.41 | 542.27 | 353.45 | 542.58 | 353.47 | 542.64 | 353.5 |
| 543.03 | 353.53 | 544 | 353.57 | 545.12 | 353.6 | 546.71 | 353.65 | 546.87 | 353.65 |
| 547.07 | 353.65 | 547.55 | 353.66 | 548.36 | 353.66 | 550.5601 | 353.66 | 553.26 | 353.65 |
| 553.96 | 353.65 | 554.25 | 353.64 | 554.79 | 353.63 | 554.97 | 353.62 | 555.26 | 353.58 |
| 555.65 | 353.57 | 556.08 | 353.58 | 556.78 | 353.58 | 557.6 | 353.58 | 558.36 | 353.59 |
| 558.98 | 353.58 | 559.85 | 353.56 | 560.59 | 353.57 | 560.84 | 353.57 | 562.72 | 353.58 |
| 572.17 | 353.68 | 572.46 | 353.69 | 573.92 | 353.74 | 574.4901 | 353.76 | 574.61 | 353.76 |
| 574.75 | 353.76 | 575.53 | 353.75 | 576.21 | 353.73 | 577.05 | 353.73 | 577.71 | 353.72 |
| 578.35 | 353.7 | 578.54 | 353.69 | 580.8101 | 353.74 | 581.59 | 353.73 | 582.6 | 353.71 |
| 585.13 | 353.63 | 592.37 | 353.9 | 595.73 | 354 | 600.82 | 354.31 | 601.77 | 354.39 |
| 603.13 | 354.49 | 610.92 | 355 | 611.15 | 355.03 | 611.9301 | 355.14 | 615.96 | 355.71 |
| 619.55 | 356 | 620.36 | 356.09 | 620.53 | 356.1 | 620.79 | 356.12 | 621.08 | 356.14 |
| 621.23 | 356.16 | 622.07 | 356.34 | 623.7 | 356.62 | 624.79 | 356.84 | 625.1 | 356.89 |
| 625.27 | 356.92 | 625.83 | 357 | 626.3 | 357.05 | 626.36 | 357.06 | 630.51 | 357.31 |
| 631.79 | 357.43 | 632.33 | 357.52 | 634.2401 | 358 | 635.28 | 358.27 | 637.9301 | 359 |
| 639.09 | 359.39 | 641.41 | 360 | 644.53 | 360.85 | 645.25 | 361 | 647.95 | 361.46 |
| 651.3 | 362 | 654.7 | 362.17 | 658.85 | 362.36 | 660.28 | 362.41 | 664.47 | 362.58 |
| 666.55 | 362.68 | 667.6 | 362.73 | 667.96 | 362.74 | 668.31 | 362.74 | 668.67 | 362.74 |
| 669.03 | 362.74 | 670.15 | 362.72 | 671.39 | 362.76 | 672.6201 | 362.73 | 674.95 | 362.68 |
| 676.54 | 362.69 | 678.92 | 362.61 | 680.67 | 362.59 | 681.3 | 362.56 | 681.7 | 362.51 |
| 683.31 | 362.37 | 684.42 | 362.33 | 686.72 | 362.11 | 687 | 362.09 | 688.06 | 362 |
| 690.34 | 361.64 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 277.44 | .04 | 487.6 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 277.44 | 487.6 | 567.65 | 568.56 | 578.47 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 5935.33

INPUT
Description:
Station Elevation Data num= 424

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 355.1 | 210.07001 | 355 | 21.71997 | 354.75 | 22.28998 | 354.74 | 22.58997 | 354.74 |
| 23.09998 | 354.73 | 25.01996 | 354.69 | 25.88 | 354.68 | 26.28998 | 354.67 | 34.87 | 354.63 |
| 36.04999 | 354.64 | 37.76996 | 354.66 | 38.48999 | 354.66 | 38.85999 | 354.66 | 39.83997 | 354.63 |
| 40.42999 | 354.61 | 42.27997 | 354.6 | 43.01001 | 354.59 | 44.64996 | 354.57 | 46.10999 | 354.54 |
| 46.87 | 354.53 | 48.32001 | 354.5 | 49.76001 | 354.46 | 53.12 | 354.41 | 54.67999 | 354.37 |
| 56.04999 | 354.33 | 66.83997 | 354.18 | 71.14001 | 354.11 | 74.72998 | 354.05 | 77 | 354 |
| 78.64001 | 353.92 | 79.92999 | 353.89 | 81.71997 | 353.87 | 82.31 | 353.84 | 85.02997 | 353.83 |
| 85.79999 | 353.8 | 98.59998 | 353.79 | 101.6 | 353.67 | 102.52 | 353.66 | 103.3 | 353.61 |
| 107.43 | 353.45 | 109.87 | 353.31 | 110.78 | 353.26 | 113.85 | 353.2 | 114.94 | 353.16 |
| 117.65 | 353.15 | 117.94 | 353.13 | 121.98 | 353.16 | 125.12 | 353.21 | 128.66 | 353.3 |
| 129.88 | 353.31 | 130.84 | 353.31 | 131.98 | 353.28 | 133.33 | 353.23 | 135 | 353.14 |
| 137.06 | 353 | 137.13 | 353 | 137.19 | 353 | 137.28 | 352.99 | 140.95 | 352.78 |
| 142.41 | 352.71 | 144.78 | 352.57 | 145.91 | 352.53 | 147.03 | 352.51 | 149.4 | 352.5 |
| 157.64 | 352.29 | 165.14 | 352.01 | 165.74 | 352 | 167.18 | 352 | 167.33 | 352 |
| 167.57 | 352 | 169.1 | 352 | 169.28 | 352 | 169.6 | 352 | 170.16 | 352 |
| 171.77 | 352 | 172.06 | 352 | 172.92 | 352 | 175.28 | 352.01 | 177.19 | 352.01 |
| 178.74 | 352 | 181 | 352.01 | 184.65 | 352 | 185.5 | 352 | 186.65 | 352 |
| 186.79 | 351.98 | 189.92 | 351.53 | 193.52 | 351 | 198.53 | 350.26 | 199.86 | 350 |
| 201.9 | 349.72 | 206.85 | 349 | 209.59 | 348.43 | 209.81 | 348.41 | 210.55 | 348.3 |
| 210.9 | 348.25 | 211.19 | 348.23 | 211.63 | 348.23 | 211.83 | 348.22 | 212.88 | 348.29 |
| 213.74 | 348.32 | 214.57 | 348.26 | 217.28 | 348.24 | 218.74 | 348.21 | 220.31 | 348.13 |
| 222.46 | 348 | 222.5 | 347.99 | 222.52 | 347.99 | 222.53 | 347.99 | 222.94 | 347.88 |
| 224.55 | 347.46 | 225.88 | 347 | 226.63 | 346.73 | 228.61 | 346 | 232.27 | 345.22 |
| 233.28 | 345 | 236.77 | 344.88 | 240.67 | 344.73 | 241.65 | 344.71 | 244.2 | 344.66 |
| 244.34 | 344.65 | 245.77 | 344.69 | 247.37 | 344.74 | 247.78 | 344.88 | 248.17 | 344.91 |
| 250.61 | 344.99 | 250.74 | 345 | 251.61 | 345 | 254.15 | 345 | 255 | 345 |
| 260.45 | 345.01 | 261.85 | 345.01 | 264.21 | 345.01 | 269.17 | 345 | 270.77 | 345 |
| 273.88 | 344.86 | 279.24 | 344.62 | 279.53 | 344.6 | 280 | 344.57 | 280.99 | 344.54 |
| 285.07 | 344.43 | 286.07 | 344.41 | 286.32 | 344.4 | 286.94 | 344.38 | 287.34 | 344.37 |
| 287.75 | 344.37 | 288.16 | 344.37 | 289.19 | 344.37 | 289.92 | 344.38 | 290.78 | 344.38 |
| 291.77 | 344.39 | 292.93 | 344.41 | 294.31 | 344.44 | 300.78 | 344.62 | 302.37 | 344.66 |
| 302.97 | 344.68 | 305.21 | 344.74 | 317.82 | 345 | 317.89 | 345.01 | 317.91 | 345.01 |
| 324 | 346 | 326.29 | 346.13 | 329.67 | 346.26 | 330.41 | 346.28 | 330.89 | 346.29 |
| 331.67 | 346.29 | 333.02 | 346.29 | 335.1 | 346.27 | 339.81 | 346.23 | 342.33 | 346.2 |
| 344.47 | 346.16 | 351.81 | 346 | 354.23 | 345.89 | 355.25 | 345.8 | 362.54 | 345.81 |
| 370.31 | 345.86 | 370.9 | 345.9 | 371.74 | 346 | 372.8 | 346 | 373.37 | 346 |
| 375.46 | 346 | 377.01 | 346 | 377.62 | 346 | 377.97 | 346 | 378.53 | 346 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 378.62 | 346 | 379.77 | 346 | 385.8 | 346.01 | 389.77 | 346.01 | 396.71 | 346 |
| 397.05 | 346 | 398.29 | 346 | 398.65 | 346 | 402.02 | 346 | 404.48 | 346 |
| 404.9 | 346 | 405.16 | 346 | 405.56 | 346 | 406.3 | 346 | 406.78 | 346 |
| 406.86 | 346 | 408.21 | 346 | 408.94 | 346 | 412.1 | 346 | 412.11 | 346 |
| 413.32 | 346 | 425.1 | 346 | 425.61 | 346 | 426.15 | 346 | 426.43 | 346 |
| 427.07 | 346 | 427.73 | 346 | 428.47 | 346 | 429.82 | 346 | 430.98 | 346 |
| 431.35 | 346 | 434.79 | 345.58 | 434.97 | 345.58 | 435.48 | 345.56 | 436.33 | 345.5 |
| 436.76 | 345.46 | 436.92 | 345.44 | 440.19 | 345.33 | 442.24 | 345.27 | 444.41 | 345.24 |
| 445.16 | 345.23 | 445.74 | 345.23 | 446.2 | 345.23 | 446.84 | 345.24 | 447.08 | 345.23 |
| 447.29 | 345.23 | 447.68 | 345.22 | 448.12 | 345.2 | 448.26 | 345.2 | 448.35 | 345.2 |
| 448.46 | 345.2 | 448.57 | 345.2 | 448.7 | 345.2 | 449.01 | 345.21 | 449.57 | 345.22 |
| 449.97 | 345.22 | 450.39 | 345.23 | 450.78 | 345.23 | 451.5 | 345.23 | 451.87 | 345.23 |
| 452.29 | 345.24 | 452.78 | 345.25 | 453.39 | 345.26 | 454.05 | 345.28 | 455.02 | 345.31 |
| 455.32 | 345.32 | 456 | 345.37 | 456.87 | 345.42 | 456.89 | 345.44 | 457.35 | 345.48 |
| 458.17 | 345.51 | 458.87 | 345.53 | 459.41 | 345.54 | 460.45 | 345.56 | 461.33 | 345.58 |
| 463.33 | 345.62 | 468.08 | 345.69 | 469.1 | 345.71 | 470.59 | 345.73 | 471.61 | 345.76 |
| 485.3 | 346 | 486.33 | 346 | 486.71 | 346 | 487.38 | 346 | 487.79 | 346 |
| 488.96 | 346 | 489.24 | 346 | 489.6 | 346 | 490.4 | 346 | 490.58 | 346 |
| 490.69 | 346 | 495.97 | 346 | 497.95 | 346 | 498.57 | 346 | 499 | 346 |
| 507.4 | 345.35 | 511.58 | 345 | 511.74 | 345 | 512.44 | 345 | 512.63 | 345 |
| 512.77 | 345 | 513.44 | 345 | 514.64 | 345.04 | 530.62 | 345.07 | 546.54 | 345.04 |
| 546.63 | 345.01 | 546.66 | 345.01 | 546.68 | 345.01 | 546.72 | 345.02 | 547.17 | 345.02 |
| 547.28 | 345.02 | 547.37 | 345.02 | 547.49 | 345.03 | 547.66 | 345.03 | 548.09 | 345.04 |
| 548.1 | 345.05 | 548.64 | 345.09 | 548.89 | 345.11 | 555.13 | 345.41 | 556.15 | 345.45 |
| 558.3 | 345.57 | 560.26 | 345.63 | 561.77 | 345.67 | 561.8 | 345.65 | 562.05 | 345.64 |
| 562.24 | 345.67 | 562.93 | 345.73 | 565.29 | 346 | 566.75 | 346.2 | 568.94 | 346.53 |
| 571.31 | 346.88 | 572.12 | 347 | 572.3 | 347 | 572.63 | 347 | 572.87 | 347 |
| 574.73 | 347 | 575.02 | 347 | 575.28 | 347 | 575.58 | 347 | 577.94 | 347 |
| 578.21 | 347 | 578.64 | 347 | 579.29 | 347 | 579.78 | 347 | 579.96 | 347 |
| 582.36 | 347 | 584.02 | 347 | 585.55 | 347.07 | 590.1 | 347.17 | 592.67 | 347.25 |
| 593 | 347.26 | 595.24 | 347.34 | 599.58 | 347.56 | 601.53 | 347.64 | 606.52 | 347.87 |
| 607.52 | 347.92 | 607.63 | 347.92 | 607.74 | 347.92 | 607.85 | 347.92 | 608 | 347.92 |
| 608.11 | 347.92 | 608.29 | 347.92 | 610.09 | 348 | 618.67 | 348.33 | 623.81 | 348.61 |
| 625.73 | 348.69 | 628.43 | 348.8 | 630.01 | 348.88 | 631.28 | 348.93 | 631.53 | 348.94 |
| 632.85 | 348.96 | 632.97 | 348.96 | 633.06 | 348.97 | 633.12 | 348.98 | 633.14 | 348.98 |
| 633.15 | 348.98 | 633.21 | 348.97 | 633.26 | 348.97 | 633.33 | 348.97 | 634.99 | 348.95 |
| 635.26 | 348.94 | 638.55 | 348.85 | 640.84 | 348.77 | 641.39 | 348.75 | 642.04 | 348.76 |
| 642.82 | 348.77 | 644.51 | 348.85 | 645.77 | 348.95 | 646.34 | 349 | 646.57 | 349.04 |
| 647.05 | 349.04 | 649 | 349 | 651.37 | 348.92 | 652.05 | 348.86 | 652.42 | 348.81 |
| 652.5 | 348.73 | 653.52 | 348.7 | 654.48 | 348.68 | 656.12 | 348.85 | 658.16 | 349 |
| 662.45 | 349.53 | 666.87 | 350 | 670.62 | 350.43 | 674.05 | 351 | 675.65 | 351.33 |
| 678.95 | 352 | 686.03 | 352.99 | 686.06 | 352.99 | 686.14 | 353 | 697.08 | 353.24 |
| 700.16 | 353.33 | 701.53 | 353.36 | 702.3 | 353.37 | 704.8 | 353.41 | 706.62 | 353.44 |
| 707.14 | 353.45 | 708.2 | 353.43 | 709.45 | 353.42 | 709.94 | 353.42 | 712.54 | 353.45 |
| 713.26 | 353.45 | 715.36 | 353.48 | 717.15 | 353.5 | 719.07 | 353.52 | 721.55 | 353.53 |
| 722.74 | 353.53 | 723.44 | 353.53 | 724.93 | 353.52 | 726.59 | 353.54 | 728.81 | 353.56 |
| 730.17 | 353.58 | 731.93 | 353.6 | 732.17 | 353.61 | 732.51 | 353.61 | 733.66 | 353.6 |
| 734.51 | 353.59 | 735.51 | 353.6 | 738.02 | 353.57 | 743.11 | 353.51 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 225.88 | .04 | 572.63 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 225.88 | 572.63 | 469.45 | 448.82 | 287.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 5486.51

INPUT
Description:
Station Elevation Data num= 362

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 351.25 | 5899658 | 351.25 | 6539978 | 351.26 | 12.42999 | 351.27 | 14.53998 | 351.27 |
| 15.72998 | 351.27 | 17.32996 | 351.26 | 19.12 | 351.25 | 20.79999 | 351.24 | 22.06995 | 351.23 |
| 22.94 | 351.21 | 23.44 | 351.19 | 23.96997 | 351.17 | 24.59998 | 351.16 | 30.15997 | 351.08 |
| 38.19995 | 351.01 | 39.54999 | 35 | 141.10999 | 350.96 | 59.97998 | 350 | 60.51996 | 350 |
| 63.00995 | 349.77 | 63.34998 | 349.74 | 68.10999 | 349.32 | 70.13 | 349.13 | 70.29999 | 349.12 |
| 70.41998 | 349.11 | 70.5 | 349.11 | 70.71997 | 349.14 | 71.07996 | 349.16 | 71.38995 | 349.17 |
| 71.84998 | 349.17 | 72.06 | 349.18 | 73.00995 | 349.24 | 73.53998 | 349.26 | 73.96997 | 349.29 |
| 75.70996 | 349.44 | 80.01996 | 350 | 80.31 | 350 | 80.54999 | 350 | 81.75995 | 350 |
| 82.09998 | 350 | 84.53998 | 350 | 88.21997 | 350 | 89.20996 | 350 | 89.41998 | 349.93 |
| 92.35999 | 349 | 95.59998 | 348.33 | 95.70996 | 348.31 | 98.07996 | 348.35 | 98.22998 | 348.35 |
| 98.81995 | 348.3 | 99.92999 | 348.2 | 100.0699 | 348.2 | 102.65 | 348.24 | 109 | 348.34 |
| 110.49 | 348.35 | 111.58 | 348.35 | 112.46 | 348.32 | 116.09 | 348.16 | 118.3 | 348.27 |
| 119 | 348.21 | 19.8199 | 348.17 | 120.73 | 348.21 | 128.34 | 348.5 | 134.77 | 349 |
| 136.08 | 349.15 | 136.41 | 349.18 | 136.56 | 349.17 | 136.66 | 349.15 | 138.23 | 349.19 |
| 140.02 | 349.14 | 141.7 | 349 | 142.52 | 348.94 | 142.56 | 348.94 | 142.61 | 348.94 |
| 143.59 | 348.81 | 146.6 | 348.47 | 150.3 | 348 | 154.28 | 347.48 | 158.21 | 347 |
| 160 | 346.85 | 169.43 | 346 | 170.38 | 345.93 | 171 | 345.89 | 172.42 | 345.79 |
| 180.88 | 345.2 | 183.55 | 345.08 | 184.21 | 345.04 | 185.92 | 345 | 185.93 | 345 |
| 186.27 | 345 | 188.88 | 344.98 | 190.53 | 344.93 | 191.2599 | 344.93 | 193.84 | 344.84 |
| 194.78 | 344.85 | 194.93 | 344.85 | 195.05 | 344.85 | 195.36 | 344.84 | 198.54 | 344.71 |
| 205.15 | 344.49 | 215.36 | 344 | 222.12 | 343.68 | 223.1 | 343.64 | 224.6 | 343.59 |
| 231.04 | 343.39 | 234.08 | 343.29 | 235.47 | 343.24 | 240.06 | 343.02 | 240.35 | 343 |
| 244.52 | 342.12 | 244.66 | 342.1 | 244.71 | 342.09 | 244.74 | 342.09 | 244.81 | 342.09 |
| 244.87 | 342.1 | 244.92 | 342.11 | 245.05 | 342.13 | 245.29 | 342.14 | 245.39 | 342.14 |
| 245.47 | 342.14 | 245.5699 | 342.13 | 245.72 | 342.11 | 245.7599 | 342.1 | 245.81 | 342.09 |
| 245.86 | 342.08 | 245.99 | 342.09 | 246.08 | 342.09 | 246.14 | 342.11 | 246.23 | 342.16 |
| 246.36 | 342.21 | 246.49 | 342.24 | 246.67 | 342.23 | 247.13 | 342.28 | 247.54 | 342.32 |
| 251.18 | 342.69 | 251.35 | 342.68 | 252.21 | 342.73 | 252.29 | 342.73 | 252.63 | 342.71 |
| 253.31 | 342.64 | 254.6 | 342.49 | 256.37 | 342.31 | 259.63 | 342 | 265.52 | 341.63 |
| 266.54 | 341.56 | 274.8 | 341 | 276.64 | 340.9 | 276.79 | 340.9 | 278.33 | 340.79 |
| 279.01 | 340.76 | 281.91 | 340.66 | 282.52 | 340.64 | 282.81 | 340.65 | 304.22 | 340.65 |
| 318.47 | 340.47 | 345.55 | 340.73 | 353.62 | 340.81 | 353.71 | 340.81 | 355.52 | 340.93 |
| 356.61 | 341 | 357.43 | 341 | 363.99 | 341 | 368.45 | 340.35 | 370.8 | 340 |
| 371.78 | 340 | 378.56 | 339.99 | 385.52 | 340 | 386.16 | 339.99 | 386.35 | 340 |
| 388.05 | 340.11 | 389.24 | 340.16 | 391.05 | 340.25 | 405.78 | 341 | 406.63 | 341.03 |
| 406.92 | 341.06 | 412.03 | 341.14 | 416.37 | 341.2 | 418.44 | 341.2 | 420.93 | 341.19 |
| 423.8 | 341.18 | 431.9 | 341.12 | 432.66 | 341.11 | 436.24 | 341.08 | 444.72 | 341 |
| 445.36 | 340.99 | 447.33 | 340.94 | 447.8 | 340.91 | 449.91 | 340.73 | 451.68 | 340.65 |
| 452.91 | 340.51 | 453.42 | 340.48 | 454.92 | 340.5 | 456.51 | 340.51 | 456.97 | 340.61 |
| 458.62 | 340.8 | 460.23 | 341 | 461.7 | 341 | 467.2 | 341.01 | 472.88 | 341 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 473.31 | 341 | 474.57 | 341 | 476.18 | 340.96 | 478.33 | 340.92 | 480.36 | 340.89 |
| 485.66 | 340.81 | 487 | 340.79 | 487.93 | 340.76 | 488.39 | 340.74 | 488.95 | 340.66 |
| 489.28 | 340.64 | 489.63 | 340.63 | 490 | 340.63 | 492.49 | 340.74 | 494.14 | 340.84 |
| 497.55 | 341 | 497.68 | 341 | 498.16 | 341.04 | 498.83 | 341.06 | 499.67 | 341.07 |
| 500.62 | 341.06 | 501.61 | 341.03 | 502.56 | 341 | 503.13 | 340.98 | 503.9 | 340.93 |
| 504.93 | 340.81 | 505.4 | 340.78 | 505.59 | 340.78 | 506.1 | 340.79 | 510.58 | 340.95 |
| 511.46 | 341 | 514.3099 | 341.1 | 518.96 | 341.25 | 521.05 | 341.27 | 523.04 | 341.29 |
| 523.45 | 341.28 | 524.65 | 341.28 | 526.5699 | 341.28 | 531.89 | 341.3 | 534.74 | 341.31 |
| 537.26 | 341.31 | 539.27 | 341.3 | 540.8199 | 341.28 | 543.75 | 341.25 | 544.5699 | 341.24 |
| 546.59 | 341.2 | 548.22 | 341.15 | 550.36 | 341.07 | 551.45 | 341 | 554.97 | 340.92 |
| 556.54 | 340.89 | 558.04 | 340.87 | 560.43 | 340.85 | 562.72 | 340.83 | 562.78 | 340.85 |
| 563.24 | 340.87 | 564.28 | 340.89 | 568.47 | 340.94 | 568.89 | 340.95 | 569.14 | 340.96 |
| 569.97 | 340.97 | 570.35 | 340.98 | 570.5 | 341 | 571.29 | 341.05 | 571.78 | 341.07 |
| 572.46 | 341.09 | 576.71 | 341.15 | 577.58 | 341.17 | 577.77 | 341.18 | 577.92 | 341.26 |
| 578.4 | 341.28 | 579.1899 | 341.3 | 579.6 | 341.31 | 580.23 | 341.31 | 580.97 | 341.31 |
| 581.7 | 341.3 | 582.33 | 341.29 | 583.62 | 341.27 | 587.13 | 341.24 | 596.34 | 341.12 |
| 597.53 | 341.1 | 598.33 | 341.08 | 598.93 | 341.07 | 600.04 | 341.06 | 607.24 | 341.01 |
| 609.28 | 341 | 610 | 341 | 613.24 | 341 | 614.93 | 341 | 616.09 | 341 |
| 617.4 | 341 | 617.54 | 341 | 622.38 | 341.14 | 629.46 | 341.33 | 637.41 | 341.56 |
| 649.87 | 341.93 | 650.59 | 341.95 | 652.3199 | 342 | 654.81 | 342 | 656.79 | 342 |
| 657.37 | 342 | 659.04 | 342 | 662.11 | 342 | 663.04 | 342 | 664.13 | 342 |
| 666.03 | 341.99 | 666.64 | 342 | 669.5699 | 342 | 672.58 | 342.24 | 676.56 | 342.55 |
| 683.72 | 343 | 687.1 | 343.5 | 690.1899 | 344 | 691.93 | 344.46 | 693.98 | 345 |
| 695.21 | 345.36 | 697.63 | 346 | 700.9399 | 346.98 | 701 | 347 | 701.05 | 347.04 |
| 701.62 | 348 | 702.0699 | 348.29 | 703.22 | 349 | 705.49 | 349.7 | 706.22 | 349.91 |
| 706.31 | 349.93 | 706.41 | 349.93 | 706.54 | 349.94 | 708.14 | 349.83 | 708.28 | 349.83 |
| 708.46 | 349.8 | 709.75 | 349.57 | 711.5 | 349.36 | 713.33 | 349 | 714.14 | 348.79 |
| 714.53 | 348.77 | 715.12 | 348.88 | 715.53 | 349 | 717.96 | 349.66 | 719.24 | 350 |
| 721.03 | 350 | 721.24 | 350 | 721.71 | 350 | 721.97 | 350 | 725.42 | 350 |
| 734.3 | 350 | 742.98 | 350 | 743.04 | 350 | 743.15 | 350 | 752.13 | 350.4 |
| 758.52 | 350.67 | 758.9 | 350.68 | 759.61 | 350.67 | 766.18 | 350.65 | 767.34 | 350.64 |
| 770.22 | 350.61 | 772.93 | 350.54 | 773.5699 | 350.53 | 774.67 | 350.52 | 776.44 | 350.52 |
| 778.5699 | 350.52 | 779.35 | 350.52 | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 259.63 | .04 | 672.58 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 259.63 | 672.58 | 527.47 | 488.29 | 521.73 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 4998.22

INPUT
Description:
Station Elevation Data num= 421

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 347.31 | 2399902 | 347.31 | 4130005 | 347.31 | 7650024 | 347.31 | 10290004 | 347.3 |
| 13.66003 | 347.28 | 14890001 | 347.28 | 16168998 | 347.28 | 17799999 | 347.28 | 19898999 | 347.28 |
| 30.20001 | 347.24 | 32702002 | 347.23 | 35234004 | 347.22 | 48202001 | 347.06 | 53.38 | 347 |
| 53.71002 | 347 | 54.15002 | 347 | 57.60004 | 347 | 57.70001 | 347 | 58.91003 | 347 |
| 59.15002 | 347 | 60.25 | 347 | 61.20001 | 347 | 61.71002 | 347 | 64.81 | 347 |
| 65.72003 | 347 | 66.23004 | 347 | 78.14001 | 347 | 78.60999 | 347 | 78.64001 | 347 |
| 80.01001 | 346.82 | 81.29999 | 346.69 | 82.32001 | 346.62 | 83.04004 | 346.61 | 83.48004 | 346.67 |
| 84.13 | 347 | 84.35999 | 347 | 84.66003 | 347 | 84.79004 | 347 | 85.03003 | 347 |
| 85.12 | 347 | 88.02002 | 346.67 | 89.26001 | 346.53 | 90.28003 | 346.44 | 91.25 | 346.4 |
| 92.15002 | 346.37 | 93.94 | 346.35 | 94.20001 | 346.34 | 94.53003 | 346.32 | 94.87 | 346.34 |
| 95.26001 | 346.38 | 95.58002 | 346.34 | 97.25 | 346.53 | 97.71002 | 346.55 | 98.35999 | 346.58 |
| 100.63 | 346.58 | 101.27 | 346.57 | 101.51 | 346.56 | 101.91 | 346.52 | 102.36 | 346.49 |
| 104.84 | 346.36 | 107.03 | 346.26 | 108.28 | 346.2 | 108.48 | 346.19 | 110.86 | 346.09 |
| 113.56 | 346 | 114.53 | 345.85 | 114.74 | 345.82 | 116.96 | 345.43 | 122.88 | 345 |
| 123.47 | 344.95 | 124.15 | 344.83 | 126.04 | 344.51 | 126.75 | 344.36 | 128.04 | 344.22 |
| 129.67 | 344.12 | 129.91 | 344.08 | 130.65 | 344 | 131.67 | 343.88 | 131.85 | 343.87 |
| 132.72 | 343.74 | 135.68 | 343.31 | 136.11 | 343.24 | 137.33 | 343 | 141.15 | 342.29 |
| 143.7 | 342 | 144.48 | 341.92 | 144.68 | 341.91 | 144.85 | 341.9 | 145 | 341.89 |
| 145.3 | 341.87 | 145.47 | 341.84 | 145.61 | 341.82 | 146.01 | 341.71 | 147.02 | 341.52 |
| 149.88 | 341 | 151.32 | 340.86 | 152.81 | 340.73 | 154.93 | 340.6 | 161.64 | 340 |
| 165.06 | 339.39 | 166.96 | 339 | 167.15 | 338.97 | 169.96 | 338.9 | 171.12 | 338.88 |
| 173.42 | 338.8 | 177.69 | 338.68 | 178.74 | 338.66 | 179.81 | 338.64 | 182.41 | 338.58 |
| 187.09 | 338.48 | 187.28 | 338.46 | 187.35 | 338.43 | 187.74 | 338.37 | 187.85 | 338.36 |
| 188.34 | 338.38 | 188.95 | 338.38 | 189.84 | 338.38 | 191.63 | 338.33 | 192.89 | 338.28 |
| 194.41 | 338.2 | 197.73 | 338 | 212.75 | 337.45 | 215.44 | 337.35 | 216.59 | 337.3 |
| 217.23 | 337.26 | 218.1 | 337.19 | 218.13 | 337.16 | 218.78 | 337.15 | 219.32 | 337.14 |
| 219.53 | 337.14 | 220.25 | 337.16 | 220.38 | 337.16 | 220.64 | 337.15 | 220.78 | 337.15 |
| 221.04 | 337.14 | 221.3 | 337.14 | 221.35 | 337.14 | 221.66 | 337.14 | 221.81 | 337.14 |
| 221.91 | 337.14 | 222.14 | 337.13 | 223.65 | 337.08 | 223.94 | 337.07 | 224.11 | 337.07 |
| 224.31 | 337.06 | 224.39 | 337.06 | 229.89 | 337.14 | 230.59 | 337.14 | 242.24 | 337 |
| 242.88 | 336.99 | 248.33 | 336.87 | 248.49 | 336.87 | 252.88 | 336.76 | 253.33 | 336.75 |
| 256.34 | 336.66 | 258.64 | 336.65 | 259.69 | 336.64 | 261.36 | 336.65 | 261.59 | 336.64 |
| 262.97 | 336.59 | 264.58 | 336.53 | 267.05 | 336.46 | 270.54 | 336.38 | 272.87 | 336.31 |
| 288.42 | 336 | 290.8 | 335.96 | 290.84 | 335.95 | 290.99 | 335.95 | 291.2 | 335.95 |
| 291.52 | 335.95 | 291.55 | 335.95 | 291.61 | 335.95 | 291.74 | 335.94 | 293.52 | 335.88 |
| 297.09 | 335.75 | 310.07 | 335.37 | 312.31 | 335.28 | 314.16 | 335.22 | 316.56 | 335.14 |
| 317.3 | 335.12 | 317.77 | 335.1 | 318.07 | 335.09 | 320.24 | 335.05 | 320.36 | 335.04 |
| 322.62 | 335.02 | 322.65 | 335.02 | 322.75 | 335.02 | 322.81 | 335.01 | 322.87 | 335.01 |
| 322.88 | 335.01 | 322.92 | 335.01 | 322.96 | 335.01 | 322.97 | 335.01 | 322.98 | 335.01 |
| 322.99 | 335.01 | 323.03 | 335.01 | 323.07 | 335.01 | 323.08 | 335.01 | 323.09 | 335.01 |
| 323.1 | 335.01 | 325.06 | 335.01 | 325.07 | 335.01 | 325.12 | 335.01 | 325.18 | 335.01 |
| 325.19 | 335.01 | 325.2 | 335.01 | 325.21 | 335.01 | 325.22 | 335 | 325.25 | 335.01 |
| 325.27 | 335.01 | 327.09 | 335.01 | 328.7 | 335.02 | 328.71 | 335.02 | 328.74 | 335.02 |
| 328.78 | 335.02 | 328.84 | 335.02 | 328.89 | 335.02 | 328.94 | 335.02 | 329 | 335.02 |
| 329.27 | 335.03 | 329.33 | 335.03 | 329.4 | 335.03 | 329.47 | 335.03 | 329.53 | 335.03 |
| 329.69 | 335.04 | 329.8 | 335.04 | 331.86 | 335.06 | 333.89 | 335.09 | 334.43 | 335.1 |
| 334.75 | 335.11 | 349.61 | 335.37 | 350.36 | 335.38 | 351.08 | 335.39 | 351.1 | 335.39 |
| 351.89 | 335.39 | 352.74 | 335.39 | 357.8 | 335.26 | 364.45 | 335.01 | 366.75 | 335 |
| 367.01 | 335 | 367.09 | 335 | 367.18 | 335 | 367.6 | 335 | 367.88 | 335 |
| 369.72 | 335.15 | 370.01 | 335.15 | 380.2 | 335.83 | 395.21 | 335.44 | 395.87 | 335.43 |
| 396.98 | 335.41 | 402.5 | 335.02 | 403.04 | 335.02 | 405.4 | 335 | 405.74 | 335 |
| 405.92 | 335 | 406.22 | 335 | 406.47 | 335 | 406.87 | 335 | 407.93 | 335.15 |
| 409.53 | 335.36 | 410.7 | 335.47 | 411.09 | 335.46 | 411.49 | 335.46 | 411.58 | 335.45 |
| 413.34 | 335.36 | 416.58 | 335.17 | 419.85 | 335 | 420.07 | 335 | 420.7 | 335 |
| 421.36 | 335 | 421.52 | 335 | 421.62 | 335 | 428.88 | 335.22 | 431.34 | 335.28 |

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  435.37  335.37  438.25  335.43  439.68  335.45  440.92  335.47   444.5   335.5
  444.91   335.5  451.43  335.46  456.86  335.43  459.45  335.43   460.5  335.43
   462.2  335.44  463.43  335.45  463.73  335.44   465.6  335.37  466.04  335.36
  466.75  335.35  467.63  335.32  470.96   335.2  477.11     335  482.49  334.87
  490.99  334.66  495.08  334.56  497.51  334.49  498.53  334.47  499.52  334.46
  500.44  334.45  501.39  334.46  502.44  334.46   503.6  334.46  504.76  334.46
  505.76  334.46  506.51  334.45  507.02  334.44  507.49  334.42  507.89   334.4
  508.22  334.39  508.66  334.38  509.13  334.38   509.5  334.38  509.72  334.39
   509.8   334.4  509.89  334.43  509.92  334.53  510.17  334.59  511.43  334.75
  511.86  334.77  512.48  334.77  512.98  334.77  513.44  334.77  514.45  334.77
   514.9  334.76515.1801  334.75  515.82  334.67  516.76   334.6  517.46  334.57
  518.38  334.54  519.61  334.51  521.17   334.5   522.8  334.49  524.14  334.48
  525.35  334.48  525.61  334.48  529.74  334.57  530.88   334.6  533.52  334.69
  541.98  334.98  542.54     335  570.24  335.83  573.83  335.93  574.22  335.94
  574.56  335.94  574.58  335.94  574.67  335.94  574.82  335.94  575.61  335.94
  576.28     336   580.6  336.52  584.33     337587.9301  337.12  595.41  337.37
  597.41  337.43  598.87  337.46  600.02  337.49  603.31  337.54  605.83  337.59
   609.2  337.66  627.95     338  629.47  338.02  629.89  338.03  636.25  338.13
  637.67  338.15  652.63   338.4   660.1  338.52  665.58  338.61  667.43  338.63
  676.54  338.72  678.05  338.75  680.56   338.8  685.52  338.91  689.17     339
  695.74  339.16  697.65  339.21  700.89  339.28  706.35  339.42  717.77  339.72
  728.44     340  732.56  340.17  738.25  340.41  750.74     341  754.53  341.43
  756.26  341.55   759.2  341.74  763.44     342  767.96  342.53  768.35   342.6
  772.29     343  772.59  343.03  772.64  343.04  776.62   343.4  783.99  343.99
  784.01     344  784.04     344  787.47  344.27  791.59  344.61  795.35     345
  800.12  345.36  805.48  345.75  807.31  345.88   808.9     346  822.77  346.45
   832.7   346.9  833.58  346.93  833.91  346.94  835.43     347  835.67     347
     837     347  838.42     347  844.32     347  844.61     347  846.19     347
  851.97     347  858.87     347  866.82     347  870.15  347.01  872.83  347.01
   876.2  347.01

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  270.54     .04   580.6     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        270.54   580.6               678  623.98  612.86              .1       .3

CROSS SECTION


RIVER: WASH90
REACH: WASH90             RS: 4374.24

INPUT
Description:
Station Elevation Data    num=     493
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  340.73.2599487  340.74    3.75  340.793.849976   340.8 4.22998  340.81
4.359985  340.824.659973  340.824.859985  340.835.349976  340.855.859985  340.86
6.279968  340.876.459961  340.876.679993  340.887.779968  340.888.259949  340.89
10.02997  340.8910.42999  340.88   10.69  340.8711.06995  340.8711.58997  340.86
12.16998  340.86   13.19  340.8513.27997  340.85   13.56  340.8413.69995  340.84
14.09998  340.8314.25995  340.8314.63995  340.8415.42999  340.8316.98999  340.83
17.09998  340.8217.25995  340.8217.41998  340.8118.03998   340.8   18.19   340.8
18.41998  340.7918.96997  340.7619.13995  340.7519.29999  340.74   19.44  340.72
   19.63  340.7120.53998  340.7121.31995  340.6922.32996  340.6723.20996  340.66
23.73999  340.6524.16998  340.64   25.13  340.6425.71997  340.6227.72998  340.57
36.83997  340.2138.21997  340.1839.29999  340.1642.47998     34045.13995     340
51.13995  340.16   61.69  340.4168.77997  340.5972.38995  340.6985.34998     341
  106.17     341   109.5  340.06  109.78     340  109.87  339.76  110.35     339
110.7599  338.27   110.9     338  110.99  337.85  111.54     337   111.7   336.6
  112.02     336  112.46  335.56  113.11     335  113.97  334.48  114.77     334
  115.81  333.36  116.42     333  117.95  332.06  118.06     332  118.12  331.96
  119.71     331  121.69  330.15  122.18     330  122.75  329.85  125.27     329
  129.33  328.27   130.5  328.06  130.83     328  131.14  327.98  138.81  327.45
  146.53     327   150.8  326.91  152.69  326.88  157.29  326.86  157.53  326.86
  158.19  326.82   158.8   326.8  163.09  326.76  169.13  326.82  169.84  326.86
  170.12  326.87   170.3  326.87  173.66  326.83  187.55  326.83  191.04  326.84
193.7599  326.86   195.2  326.89  195.72  326.94  195.91  326.99  196.05     327
  213.83   327.5  218.78  327.65  219.97  327.68  226.94  327.72  227.04  327.71
  227.67  327.71  229.83  327.76  232.46  327.81  232.65  327.81  232.79  327.82
  233.11  327.83  233.55  327.84   234.4  327.87  234.77  327.88  234.94  327.88
  235.56  327.86   235.9  327.85  236.11  327.85  236.24  327.84   238.3  327.87
  238.64  327.87  238.84  327.88  239.03   327.9   239.3  327.91  239.86  327.91
     240   327.9  240.13   327.9240.5699  327.87  242.13  327.78  242.84  327.75
  244.99  327.72  245.25  327.71  245.54   327.7  245.96  327.69  248.23  327.63
   249.3   327.6  253.83  327.45  260.09  327.32  261.96  327.26  263.74  327.21
  268.02  327.05  268.62  327.03  269.92     327  271.68     327  271.96  327.01
   272.8  327.08     273  327.07  277.05  327.41  278.35  327.53  279.37  327.63
  279.99  327.67  280.47  327.72  280.69  327.73  281.43  327.74  282.55  327.76
  282.71  327.76  283.58  327.79284.0099  327.79  285.24   327.8  285.65   327.8
  286.61  327.81  287.88  327.81  288.17   327.8289.0099  327.79  289.37  327.79
  290.33  327.77   290.8  327.77  290.98  327.76291.3199  327.75  291.61  327.75
  292.05  327.74   293.1  327.72   295.1  327.72  298.34   327.7299.5099   327.7
300.5699  327.69  300.74  327.69  305.52  327.61  320.04  327.52  323.46  327.49
  324.93  327.48  326.71  327.46  327.96  327.44  328.84  327.43  329.91  327.42
  331.35   327.4   332.1   327.4  332.92  327.38  333.13  327.38  335.33  327.33
  336.41  327.31   338.6  327.31  339.66  327.32  344.58  327.32  344.73  327.34
  346.75  327.45  348.11  327.51352.3199  327.67353.0699  327.69  353.62  327.69
  357.85  327.74  360.61  327.78  363.19  327.84365.3199   327.9   367.1  327.96
  367.71     328  370.15  328.27  370.58  328.35375.0099  328.98  375.09  328.99
  375.15     329  376.12  329.04  376.89  329.06  377.88  329.07  378.91  329.07
  379.77  329.06   380.3  329.05   380.5     329  384.85  328.81  385.73  328.79
     386  328.78  386.64  328.77392.2599  328.73  392.55  328.73  394.16  328.71
  395.29   328.7  396.58  328.71  403.33  328.75  405.41  328.75  405.75  328.76
     406  328.77   406.9   328.8  407.91  328.84  408.68  328.84  409.11  328.85
  409.79  328.85  410.03  328.84   410.3  328.84  410.68  328.83  411.13  328.82
  411.55  328.82  411.87  328.81  412.35  328.82  412.66  328.81413.3199  328.81
  413.73   328.8  415.94  328.76  417.46  328.75  425.29  328.63  428.91  328.56
  429.61  328.56  430.48  328.55  432.49  328.52   436.6  328.43  439.67  328.37
  440.09  328.37  440.49  328.36  440.97  328.37442.5099  328.38  447.74  328.46
  448.24  328.46  450.33  328.36  451.08  328.33451.5099  328.31452.0099  328.31
  452.28   328.3  452.94  328.31   453.3  328.31  454.17  328.32  455.79  328.35
   456.5  328.36  456.98  328.36  458.47  328.39  459.65  328.41  463.25  328.49
464.5099  328.51  465.03  328.51  471.86  328.58  476.94  328.73  481.31  328.85
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  484.53  328.93  488.17  329.01  493.03  329.07  497.82  329.11  500.06  329.14
  502.19  329.16   508.1  329.25  509.54  329.27  510.56  329.27  511.25  329.28
  515.92  329.25  517.33  329.22  519.89  329.06  521.63     329  525.29     329
  536.63  329.37  538.71  329.47  541.74  329.58   549.8     330  573.13   330.7
585.0699     331  592.74  331.18  606.08  331.62611.0599  331.77  613.25  331.83
617.9299     332633.9299  332.38  637.36  332.45639.0599  332.49  640.25  332.51
   642.7  332.53  643.73  332.54  647.26  332.49647.5599  332.49  651.03  332.63
  654.78  332.79  659.21     333  665.42  333.24  666.59  333.27     671  333.45
684.8099  333.85  686.46  333.91  718.87  334.76  720.72   334.8  721.24  334.81
  722.72  334.83  726.73  334.89  726.95  334.89  727.35   334.9  728.12   334.9
  728.23  334.89  730.45     335  730.62  335.01  731.29  335.03  732.13  335.05
  733.15  335.05735.5699  335.04  737.96  335.02  738.59    335742.0699     335
  748.84  335.32  755.12  335.63  755.67  335.64  757.91  335.71  760.16  335.77
   762.1  335.84762.6899  335.86   763.5  335.88  763.68  335.89  764.02  335.87
  764.12  335.86  764.23  335.82  764.29  335.81  765.09  335.85   766.3  335.87
  767.99  335.87  768.06  335.88  768.38   335.9768.4399  335.91  768.68  335.92
  768.93  335.92  769.09  335.91  769.22   335.9  771.96   335.9  773.31  335.89
  774.55  335.87  775.16  335.85   775.6  335.83  775.78   335.8  777.84  335.74
  779.73  335.74  781.98  335.81  786.23     336  790.84  336.37  794.14  336.52
  795.67  336.61  796.77  336.66   797.7  336.69  798.55  336.72  801.47  336.83
  802.84  336.86  806.05  336.96  806.13  336.96  807.74     337  815.01   337.2
  816.78  337.19  819.87  337.28  820.55  337.29     822  337.28  822.83  337.24
  826.35     337  827.54  336.88  827.78  336.88  828.36  336.93  828.84     337
832.0699  337.24  840.06     338  844.53  338.48  845.72  338.61  846.55  338.74
  847.72     339  850.23  339.21  851.15  339.27  854.37  339.43856.8199  339.53
   858.9  339.61  860.22  339.64  860.97  339.66     862  339.68     865  339.73
  867.13  339.73  867.37  339.74  867.78  339.76  868.41  339.76  868.84  339.74
   876.2  339.12  876.29  339.11  877.48     339  878.39  338.78  881.38     338
881.8199  337.82     882   337.6  883.95  337.58   884.8  337.66  887.42     338
  891.52  338.13  892.78  338.16  893.79  338.17  898.87  338.06  900.84  338.03
903.4399  338.01  903.49  338.02  903.56  338.02   903.8  338.03  903.91  338.02
  904.13  338.03  904.22  338.04  906.45  338.13  916.81  338.58  922.91  338.86
  924.86  338.92  925.68  338.94  925.84  338.94  925.97  338.95  927.26     339
  931.04  339.34  934.83  339.66  939.96     340   945.2  340.41   948.2  340.67
  952.36     341  953.15  341.07  953.71  341.11  958.69   341.5  960.85  341.74
  963.05     342  966.29  342.23  969.27  342.45  970.37  342.49  971.09  342.55
972.0699  342.67  972.45   342.7972.7599  342.72  973.15  342.73  973.63  342.75
  976.72  342.83  977.99  342.85  979.02  342.85  979.38  342.84  979.72  342.82
  980.23   342.8   982.3  342.69  983.16  342.69   984.2  342.67988.2599   342.4
  989.11  342.35  992.52  342.13993.2599  342.08  994.64    342996.7599  341.99
  999.35  341.99 1002.41     342  1002.6     342

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  129.33     .04  375.09     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        129.33  375.09           694.65  691.23   688.3             .1       .3

CROSS SECTION


RIVER: WASH90
REACH: WASH90             RS: 3683.01

INPUT
Description:
Station Elevation Data    num=     484
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0     3354.220093     3354.710083  334.954.810059  334.95     7.5  334.74
8.840088  334.6611.24011  334.5411.71008  334.5413.69006  334.4716.77002  334.51
17.43005  334.47   18.13  334.5418.74011  334.61 18.8501  334.6418.93005  334.71
19.05005  334.7319.28003  334.7519.49011  334.7520.26001  334.7721.27002  334.77
   21.87  334.7822.15002  334.7722.52002  334.7723.52002  334.7524.34009  334.71
   26.25  334.55   34.75     33437.96008  333.25   39.63  332.6241.59009     332
44.29004  331.3645.33008     33147.27002  330.58 52.3501  329.5354.81006     329
56.61011  328.3357.55005     32858.31006     32859.33008   328.361.33008  328.55
   62.87  328.83 64.8501     32970.76001  329.4277.09009  329.8377.43005  329.84
78.04004  329.8583.79004  330.4186.80005  330.6590.15002  330.9690.51001     331
92.92004  331.16 96.3501  331.4496.57007  331.4596.86011  331.46 97.7301  331.44
98.76001  331.38102.9601   331.1104.3601     331106.1001  330.75114.2401     330
  116.67  329.73  118.38  329.56126.2201     329127.8501  328.84130.7101  328.52
  135.15     328137.3601   327.7138.5601  327.51  141.63     327  144.92  326.23
  146.25     326147.7001  325.76151.4701     325  155.29  324.46158.1801     324
161.4401  323.46162.0601  323.37162.4701  323.32  162.76  323.29162.9901  323.28
  163.89  323.27164.7001  323.25165.3301  323.22165.6901   323.2169.6801  323.18
170.5901  323.15  172.41  323.04172.6101  323.03172.9301     323181.7201  322.32
185.1001     322190.6101  321.43191.4801  321.36191.9301  321.33  192.28   321.3
192.5801  321.29193.1801  321.28  194.14  321.29194.5701  321.27  196.88  321.36
197.3101  321.34198.9901  321.38  200.78   321.4   202.5  321.38  204.05  321.34
  207.14  321.21  207.54  321.19  207.87  321.18208.3401  321.18  209.26   321.2
210.9601  321.11  211.12  321.11213.2301  321.04  213.29  321.04  215.27  321.03
215.3201  321.03218.4301  321.05220.4301  321.03  221.87  320.97222.0601  320.97
  222.13  320.96   222.8  320.91  227.12  320.64232.8201   320.2234.9901  320.05
235.4401     320  239.48  319.31240.1201  319.19  240.41  319.11  240.59   319.1
240.7601   319.1  240.92  319.12241.0601  319.12  241.28  319.14  244.42  319.27
   244.8  319.29252.3901  319.57  259.23   319.9259.6301  319.91260.6301  319.92
  260.97  319.92  261.23  319.91262.1801  319.93262.9401  319.93263.3301  319.92
264.0801  319.89264.6801  319.89265.5601  319.88271.7001  319.66273.9301  319.61
276.8101  319.56287.4301  319.44  290.78  319.38304.3901  319.09305.1401  319.07
313.3801   318.9  325.84  318.67   329.1  318.62332.5601  318.54344.9601  318.32
347.5601  318.26  361.29     318372.4601  317.82  380.09  317.73382.4401  317.73
384.0601  317.76386.3901  317.83  386.61  317.83386.7101  317.78394.0001  317.69
  396.55  317.79397.6301  317.82  398.79  317.84  399.92  317.84400.8701  317.82
  404.92  317.61405.4301  317.59  405.98  317.58406.5701  317.59407.1901  317.62
412.1901  317.83413.5801  317.91  415.55     318  426.78  318.38427.5801   318.4
  427.98   318.4  430.29  318.42439.0001  318.47  446.05  318.45446.4501  318.44
  446.53  318.43  447.54  318.39  449.61  318.32451.0701  318.29  456.17  318.21
  457.09  318.22461.3201  318.19465.5601  318.13465.9601  318.13466.2001  318.12
466.8201  318.09466.9501  318.08467.2401  318.08467.3701  318.07467.4401  318.08
467.5101  318.08  467.97  318.12468.1301  318.13   468.3  318.13468.6201  318.12
469.0701  318.09  469.16  318.08469.2101  318.07  469.28  318.08469.5801  318.08
  469.67  318.09  469.78  318.09469.9301  318.08  470.05  318.08470.1801  318.09
470.2701  318.09470.3301  318.11471.3801  318.18  477.78  318.03  479.17  318.03
481.6401  318.04497.0001     318500.3901     318505.7401     318  528.03  318.87
  533.53     319  536.65     319  538.97  318.94541.4601  318.85549.3101  318.94
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  551.67  318.98557.5201  318.99  559.17     319567.2101     319  575.55  318.19
  576.28  318.19  576.92  318.13  577.79  318.37578.3101  318.48  583.84  318.48
  590.11  318.43  599.97  318.07601.7401     318605.2101  317.69   606.9  317.56
606.9901  317.55   607.1  317.53607.2101  317.45607.3801  317.43608.5601  317.39
  608.73  317.39  609.79  317.38610.6301  317.39611.4901  317.39   614.4  317.47
  617.11  317.56  618.72  317.62   619.4  317.63  625.91  317.71626.4501  317.73
  629.72     318  630.04  318.08630.9501  318.31634.0001     319637.8701   319.1
  640.09  319.13642.6301  319.12  646.05  319.09   656.9   319.1657.3901  319.09
  657.91  319.07  666.22  318.66  666.54  318.66666.7401  318.67667.3901  318.69
668.0001  318.69668.6801  318.67  670.29  318.65671.4901  318.62675.5701  318.53
679.9401  318.39   681.1  318.36681.8701  318.35  682.91  318.32  684.34  318.27
686.9601  318.16  687.41  318.14687.6901  318.12  688.09  318.12  688.29  318.14
  688.65  318.14688.7601  318.13688.8301  318.13  689.09  318.12  689.34  318.12
689.7501  318.15690.0201  318.19690.6901  318.27  691.15  318.32  691.61   318.4
  691.72  318.44  692.42  318.55693.4501  318.69695.5001  318.91  696.65     319
701.8901     319  714.48  318.68  716.86  318.63718.3901  318.61719.8901  318.61
  722.16  318.62729.4601  318.62733.0101   318.6  735.11  318.58736.0001  318.56
736.1801  318.55  747.05  318.51750.8401  318.59  752.91  318.62  755.64  318.71
  765.53     319  766.78  319.16767.3201  319.29  776.16  319.37777.6801  319.33
779.5601  319.32  791.98  319.22804.4701     319804.8801  318.92  808.03  318.86
810.8201  318.82812.3101  318.96  812.78     319817.6301  319.27  828.16     320
830.6201  320.66830.8301  320.71   831.9     321  832.91  321.51833.6001  321.84
834.0901     322  834.48  322.12835.0801  322.22835.2201  322.22835.6201  322.09
  835.98     322  836.39  321.66  836.65  321.63837.9501   321.6840.8301     322
842.5801  322.55  844.51     323855.2001  323.43856.8201   323.5857.2201  323.52
858.0901  323.61  858.29  323.65  859.28  323.71  863.52  323.75863.6301  323.74
864.1201  323.74  865.11  323.73  865.41  323.72  865.76  323.69  865.89  323.67
  866.05   323.6866.3101  323.57866.9401  323.51868.3801  323.45  868.73  323.42
868.8701  323.42869.2501  323.37  869.55   323.3  870.26  323.19870.5601  323.19
870.9401  323.26  871.23  323.33871.3301  323.35871.4601  323.35873.7101  323.33
875.1801  323.34  877.41  323.37880.6201  323.43  881.67  323.47  893.29  323.73
  903.52     324914.9401  324.23916.4301  324.25973.4501  325.48 1003.73  326.28
 1004.69   326.3 1019.83  326.51 1040.39     327  1053.7  327.43 1054.73  327.45
 1055.45  327.45 1057.24  327.42 1058.09  327.38 1058.48  327.34 1058.78  327.35
  1059.6  327.36 1060.16  327.36 1062.99  327.38 1063.41  327.38 1063.64  327.37
  1063.8  327.35 1064.31  327.32  1064.5  327.32 1064.71  327.34 1065.76  327.56
 1066.39  327.64 1066.93  327.69 1067.69  327.73 1068.71  327.77 1074.95  327.97
 1075.63     328 1080.44  328.11 1099.14   328.6  1101.1  328.67 1102.68  328.72
 1107.59  328.94 1109.36     329 1111.28  329.08 1118.49  329.34 1119.94  329.41
 1132.86     330 1146.65  330.69 1147.93  330.75  1148.7  330.78 1150.43  330.84
  1152.1  330.92 1155.46  331.06 1155.57  331.07 1155.71  331.07 1156.44  331.12
 1160.49  331.33 1161.82  331.41 1172.22  331.98 1172.48     332 1174.94  332.15
 1184.53  332.77 1186.36  332.77 1191.26     333 1191.44  333.01 1191.52  333.02
  1194.3   333.2 1198.28  333.49 1200.65  333.63 1201.07  333.67 1201.47  333.69
  1207.4     334 1214.01  334.58  1214.3  334.61  1219.2  334.72 1219.84  334.76
 1220.61  334.78  1220.8  334.78 1221.53  334.71 1222.54  334.64 1223.16  334.62
 1228.72  334.67 1229.21  334.72 1231.74     335 1232.08  335.04 1234.86  335.35
 1235.42  335.36 1236.78  335.45 1237.69  335.49 1238.48  335.49  1239.1  335.46
 1239.98  335.39 1240.34  335.38 1241.35  335.27 1243.42     335 1244.74     335
 1249.34  335.79 1250.61     336 1258.16  336.68 1260.43  336.86

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05262.9401     .04   831.9     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
      262.9401   831.9           478.07  569.84  670.79             .1       .3

CROSS SECTION


RIVER: WASH90
REACH: WASH90             RS: 3113.17

INPUT
Description:
Station Elevation Data    num=     384
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  333.51 1.02002   333.51.839966  333.482.169983  333.472.609985  333.45
3.650024  333.414.349976   333.46.599976  333.366.960022  333.327.359985  333.29
7.650024  333.278.900024  333.219.890015  333.1913.82001  333.0916.79999     333
16.83997     33316.90002  332.9916.92999  332.99   20.56  332.5324.03998     332
26.09998  331.53   28.31     33131.16998  330.0731.22998  330.06   31.38     330
31.42999  329.9631.83002  329.8532.08997  329.86   33.06     33034.70001  330.25
36.59998  330.3437.89001  330.4843.71997     33144.90002  331.1450.72998  331.79
51.79999  331.9352.65997     33253.65997  332.0754.33002  332.08   56.44  332.08
58.98999  332.07   59.94  332.0760.92999  332.0563.27002     33265.97998  331.51
67.84998  331.1768.58002  331.0368.92999     33171.66998  330.7773.16998  330.67
73.66998  330.64      75  330.6176.14001  330.65   76.62  330.6578.48999  330.81
78.73999  330.8380.15002     33181.58997  331.1384.20001  331.2384.92999   331.3
85.32001  331.4185.52002  331.4186.46997  331.3787.58002   331.391.47998     331
93.90997  330.4797.20001  330.0397.41998     33097.57001  329.96  101.18     329
   102.4  328.67  104.84     328  108.56  327.04  108.72     327  111.27  326.53
  114.12     326  114.25  325.98  119.41     325  120.06  324.89  124.12  324.31
  126.15     324  129.68   323.4   132.2     323  134.01  322.62  136.84     322
  137.18  321.91  137.81  321.77  139.34  321.35  140.55     321  140.85  320.89
  143.21     320   145.9  319.45  147.97     319  149.39   318.7  152.87     318
  158.43  317.03  158.62     317  158.98  316.95  166.26     316  169.53  315.57
  173.77     315  177.58   314.4  180.06     314  183.54  313.67  191.02     313
  193.87  312.91  207.87  312.49  209.67  312.46  213.25  312.37  214.72  312.34
  216.02  312.31  216.88   312.3  217.64  312.29  218.61  312.29  221.97  312.27
     223  312.26  227.68  312.22  228.54  312.21  241.65  312.01  241.68  312.01
   242.6  312.01  250.18  312.09  254.21  312.11  258.33  312.08   263.2     312
  266.14  311.93  299.24     311  300.98  310.97  301.31  310.97  301.86  310.97
  302.13  310.98  302.42  310.98   302.6  310.98  302.85  310.98  303.33  310.98
  303.96  310.98  305.06  310.99  306.17  310.98  307.28  310.98  307.38  310.98
  307.75  310.98  307.99  310.98  308.34  310.98   310.4     311  312.69  311.01
  313.85  311.02  315.31  311.02  315.86  311.02  319.35     311  320.25  310.82
  321.33   310.8  322.38  310.79  322.73  310.89  322.98     311   324.9     311
  324.95     311  328.17  311.21  331.66  311.35  333.18  311.42  335.12  311.53
  335.57  311.53  335.89  311.51  348.79  311.91  357.79  311.52  364.07   311.4
  368.24   311.4  372.05  311.41  376.41  311.42  384.41  311.42  388.16  311.43
  392.74  311.46  395.93  311.47   398.3  311.48  404.92  311.55  409.57  311.56
  412.19  311.59  416.51   311.6  418.98  311.61  422.01  311.62  428.76  311.65
  431.44  311.67   432.5  311.67  433.72  311.67  435.01  311.67  436.32  311.66
  439.48  311.67  442.87  311.63  443.99  311.62  446.22  311.61   446.5  311.61
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 453.55 | 311.49 | 455.33 | 311.47 | 458.6 | 311.4 | 459.87 | 311.38 | 470.11 | 311.13 |
| 470.58 | 311.12 | 475.51 | 311.02 | 475.61 | 311.02 | 475.73 | 311.02 | 475.82 | 311.01 |
| 475.95 | 311.01 | 476.64 | 311 | 486.24 | 310.85 | 486.84 | 310.85 | 494.89 | 310.69 |
| 496.02 | 310.69 | 496.88 | 310.7 | 497.7 | 310.71 | 498 | 310.71 | 498.43 | 310.71 |
| 499.03 | 310.7 | 499.82 | 310.69 | 503.59 | 310.65 | 510.9 | 310.53 | 518.15 | 310.43 |
| 519.74 | 310.41 | 520.5 | 310.4 | 521.1 | 310.39 | 529.44 | 310.24 | 529.88 | 310.24 |
| 532.63 | 310.18 | 536.4 | 310.09 | 539.62 | 310 | 544.15 | 310 | 544.48 | 309.99 |
| 546.38 | 310 | 549.7 | 310 | 550.59 | 310 | 551.14 | 310 | 559.72 | 310.14 |
| 560.28 | 310.15 | 564.31 | 310.22 | 568.55 | 310.29 | 579.21 | 310.5 | 580.97 | 310.53 |
| 582.37 | 310.54 | 589.82 | 310.62 | 591.56 | 310.64 | 593.13 | 310.62 | 594.85 | 310.6 |
| 594.95 | 310.59 | 598.15 | 310.52 | 598.64 | 310.51 | 599.73 | 310.53 | 606.38 | 310.63 |
| 608.01 | 310.66 | 609 | 310.69 | 614.24 | 311 | 614.38 | 311.02 | 614.86 | 311.05 |
| 617.79 | 311.13 | 618.39 | 311.15 | 626.05 | 311.09 | 627.56 | 311.08 | 629.82 | 311.05 |
| 633.89 | 311.01 | 634.55 | 311 | 638.91 | 310.92 | 645.64 | 310.78 | 647.71 | 310.74 |
| 655.95 | 310.6 | 657.4 | 310.58 | 658.41 | 310.58 | 659.56 | 310.57 | 659.93 | 310.56 |
| 660.85 | 310.54 | 661.61 | 310.52 | 662.5 | 310.51 | 665.55 | 310.47 | 665.98 | 310.46 |
| 667.36 | 310.42 | 669.51 | 310.37 | 669.67 | 310.37 | 669.82 | 310.37 | 670.04 | 310.38 |
| 670.28 | 310.39 | 671.66 | 310.46 | 674.26 | 310.64 | 676.76 | 310.85 | 677.72 | 311 |
| 685.84 | 311.59 | 692.49 | 312 | 699.82 | 312.93 | 700.43 | 313 | 701.94 | 313.27 |
| 702.44 | 313.36 | 705.89 | 314 | 710.04 | 314.64 | 710.58 | 314.71 | 712.22 | 314.86 |
| 713.8 | 315 | 720.59 | 315.32 | 721.63 | 315.36 | 725.28 | 315.56 | 729.35 | 315.63 |
| 731.51 | 315.82 | 733.39 | 315.96 | 733.41 | 315.96 | 735.04 | 316 | 740.22 | 316.1 |
| 740.72 | 316.1 | 740.82 | 316.11 | 741.24 | 316.12 | 741.57 | 316.14 | 742.01 | 316.16 |
| 742.28 | 316.17 | 742.59 | 316.19 | 743.64 | 316.28 | 751.82 | 317 | 762.25 | 317.82 |
| 763 | 317.88 | 764.57 | 318 | 775.68 | 318.86 | 777.88 | 319 | 787.9 | 319.89 |
| 788.64 | 319.96 | 789.13 | 320 | 792.13 | 320.32 | 798.62 | 321 | 804.75 | 321.57 |
| 808.75 | 322 | 810.51 | 322.22 | 817.34 | 323 | 821.44 | 323.54 | 825.12 | 324 |
| 832.15 | 324.9 | 833.39 | 325 | 839.08 | 325.55 | 840.85 | 325.67 | 841.06 | 325.67 |
| 843.18 | 325.67 | 844.28 | 325.7 | 846.47 | 325.71 | 846.76 | 325.73 | 849.4 | 325.83 |
| 850.49 | 325.85 | 852.86 | 325.83 | 853.36 | 325.86 | 854.14 | 325.94 | 854.62 | 326 |
| 860.09 | 326.98 | 860.19 | 327 | 860.22 | 327.01 | 860.7 | 327.08 | 863.14 | 327.13 |
| 863.71 | 327.25 | 864.38 | 327.3 | 868.85 | 328 | 869.44 | 328.14 | 870.05 | 328.32 |
| 873.35 | 328.96 | 873.39 | 328.97 | 873.41 | 328.98 | 873.52 | 329 | 876.18 | 329.55 |
| 880.28 | 330 | 883.17 | 330.24 | 883.31 | 330.27 | 885.86 | 330.31 | 887.03 | 330.42 |
| 887.83 | 330.52 | 888.91 | 330.71 | 890.03 | 331 | 893.54 | 331.27 | 904.1 | 332 |
| 939.64 | 332.64 | 942.56 | 332.7 | 944.3 | 332.73 | 950.67 | 332.86 | 953.12 | 332.89 |
| 954.63 | 332.91 | 954.76 | 332.91 | 954.86 | 332.91 | 955.14 | 332.92 | 955.44 | 332.92 |
| 955.58 | 332.92 | 955.77 | 332.92 | 955.9 | 332.92 | 956.11 | 332.92 | 956.26 | 332.92 |
| 956.36 | 332.92 | 956.53 | 332.92 | 958.8 | 333 | 959.62 | 333.02 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 221.97 | .04 | 692.49 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 221.97 | 692.49 | 490.21 | 556.42 | 553.33 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2556.75

INPUT
Description:
Station Elevation Data num= 438

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 33026.85999 | | 33032.66998 | | 329.19 | 33.06 | 329.1436.22998 | | 329 |
| 39.60004 | 328.7141.20001 | | 328.6341.91003 | | 328.5445.97003 | | 32847.45001 | | 327.79 |
| 51.29999 | 327 | 54.13 | 326.5356.97003 | | 326.0757.29999 | | 32657.90002 | | 325.87 |
| 61.89001 | 32562.77002 | | 324.83 | 66.37 | 32467.23999 | | 323.8368.45001 | | 323.63 |
| 70.51001 | 323.2371.35004 | | 323.0571.53998 | | 323 | 71.75 | 322.9576.48999 | | 322 |
| 77.52002 | 321.8181.71002 | | 321.0581.97003 | | 32187.57001 | | 320.0787.90002 | | 320 |
| 88.22998 | 319.9494.03003 | | 31997.02002 | | 318.4498.45001 | | 318.24 | 100.42 | 318 |
| 102.52 | 317.59 | 105.72 | 317 | 107.42 | 316.55 | 109.96 | 316 | 110.49 | 315.84 |
| 112.72 | 315 | 115.11 | 314.21 | 115.65 | 314 | 115.78 | 313.95 | 118.48 | 313 |
| 119.69 | 312.56 | 121.16 | 312 | 122.77 | 311.54 | 124.7 | 311 | 125.62 | 310.8 |
| 129.38 | 310 | 133.83 | 309.16 | 135.21 | 309 | 141.12 | 308.47 | 145.81 | 308 |
| 151.93 | 307.44 | 156.54 | 307 | 159.96 | 306.71 | 168.67 | 306 | 169.12 | 305.98 |
| 169.7 | 305.96 | 178.58 | 305.58 | 181.24 | 305.45 | 189.75 | 305 | 211.01 | 304 |
| 218.09 | 303.18 | 219.7 | 303 | 220.96 | 302.95 | 221.84 | 302.93 | 227.04 | 302.88 |
| 227.29 | 302.87 | 229.39 | 302.85 | 231.36 | 302.82 | 232.88 | 302.79 | 233.77 | 302.77 |
| 234.19 | 302.74 | 234.44 | 302.71 | 235.29 | 302.65 | 236.08 | 302.64 | 237.09 | 302.69 |
| 238.53 | 302.73 | 243.97 | 302.96 | 245.22 | 302.99 | 246.25 | 303 | 246.97 | 302.97 |
| 248.76 | 302.75 | 249.8 | 302.63 | 250.29 | 302.67 | 250.82 | 302.71 | 252.18 | 302.99 |
| 252.24 | 303 | 254.75 | 303.11 | 255.46 | 303.13 | 256.15 | 303.13 | 256.8 | 303.12 |
| 257.35 | 303.1 | 258.7 | 303.01 | 258.91 | 303 | 259.4 | 302.97 | 260.39 | 302.94 |
| 261.77 | 302.92 | 263.57 | 302.91 | 269.3 | 302.91 | 270.06 | 302.94 | 271.16 | 303 |
| 273.65 | 303 | 273.98 | 303.01 | 276.17 | 303.05 | 277.77 | 303.04 | 281.83 | 303.04 |
| 285.4 | 303.01 | 299.22 | 302.92 | 300.48 | 302.92 | 300.53 | 302.93 | 300.59 | 302.93 |
| 300.67 | 302.94 | 301.19 | 302.94 | 302.65 | 302.93 | 303.41 | 302.93 | 303.69 | 302.92 |
| 304.08 | 302.92 | 304.99 | 302.9 | 306 | 302.88 | 306.59 | 302.86 | 309.2 | 302.79 |
| 310.15 | 302.77 | 319.84 | 302.67 | 321.23 | 302.64 | 326.58 | 302.55 | 328.8 | 302.52 |
| 330.73 | 302.5 | 332.23 | 302.5 | 333.4 | 302.51 | 334.99 | 302.52 | 335.88 | 302.52 |
| 336.15 | 302.53 | 336.57 | 302.55 | 336.89 | 302.56 | 337.28 | 302.56 | 339.01 | 302.51 |
| 340.24 | 302.47 | 340.98 | 302.44 | 341.39 | 302.43 | 342.54 | 302.4 | 343.09 | 302.39 |
| 343.49 | 302.37 | 344.03 | 302.34 | 344.54 | 302.32 | 344.79 | 302.32 | 345.02 | 302.33 |
| 345.66 | 302.37 | 345.95 | 302.39 | 347.34 | 302.43 | 348.39 | 302.47 | 351 | 302.54 |
| 351.41 | 302.54 | 351.7 | 302.55 | 353.16 | 302.55 | 353.67 | 302.54 | 353.96 | 302.53 |
| 354.1 | 302.53 | 354.22 | 302.52 | 366.35 | 302.84 | 366.47 | 302.85 | 367.47 | 302.82 |
| 369.19 | 302.71 | 370.12 | 302.83 | 371.13 | 303 | 377.07 | 303.16 | 377.93 | 303.18 |
| 392.04 | 303.57 | 393 | 303.6 | 395.74 | 303.6 | 396.75 | 303.61 | 398.61 | 303.65 |
| 399.69 | 303.67 | 400.58 | 303.7 | 401.83 | 303.75 | 402.25 | 303.76 | 402.48 | 303.76 |
| 402.7 | 303.77 | 402.91 | 303.77 | 403.22 | 303.76 | 403.36 | 303.76 | 404.95 | 303.7 |
| 407.12 | 303.63 | 407.33 | 303.62 | 416.62 | 303 | 419.65 | 302.86 | 420.74 | 302.8 |
| 422.77 | 302.66 | 424.93 | 302.46 | 425.09 | 302.46 | 425.33 | 302.45 | 425.78 | 302.45 |
| 430.57 | 302.48 | 431.9 | 302.5 | 433.76 | 302.52 | 439.41 | 302.61 | 441.13 | 302.63 |
| 444.07 | 302.63 | 449.78 | 302.71 | 462.12 | 302.92 | 462.51 | 302.92 | 462.62 | 302.93 |
| 463.17 | 302.93 | 463.33 | 302.94 | 464.26 | 302.96 | 464.37 | 302.96 | 464.43 | 302.94 |
| 464.59 | 302.93 | 464.73 | 302.93 | 467.64 | 303 | 467.71 | 303 | 470.05 | 303.04 |
| 476.02 | 303.1 | 479.46 | 303.12 | 483.04 | 303.13 | 486.7 | 303.13 | 499.05 | 303.1 |
| 499.81 | 303.09 | 500.28 | 303.09 | 503.01 | 303.04 | 504.52 | 303 | 504.64 | 302.99 |
| 506.74 | 302.86 | 508.39 | 302.77 | 512.5 | 303 | 514.89 | 303.24 | 515.36 | 303.26 |
| 515.62 | 303.25 | 524.34 | 303.99 | 524.45 | 303.99 | 525.2 | 304 | 528.7 | 304 |
| 530.06 | 303.99 | 531.4 | 304 | 537.47 | 304 | 549.69 | 304.7 | 554.96 | 305 |
| 555.68 | 305.05 | 555.96 | 305.07 | 556.2 | 305.08 | 556.35 | 305.08 | 556.73 | 305.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 558 | 305.19 | 565.78 | 305.69 | 570.29 | 306 | 576.94 | 306.51 | 579.26 | 306.65 |
| 581.29 | 306.79 | 582.06 | 306.82 | 582.61 | 306.85 | 583.04 | 306.87 | 583.41 | 306.88 |
| 583.98 | 306.9 | 584.61 | 306.89 | 587.67 | 306.76 | 588.12 | 306.74 | 588.31 | 306.75 |
| 588.97 | 306.95 | 589.26 | 307 | 600.99 | 307.7 | 602.53 | 307.78 | 604.85 | 307.91 |
| 606.17 | 308 | 607.51 | 308.08 | 610.14 | 308.23 | 610.71 | 308.25 | 611.21 | 308.26 |
| 612.42 | 308.25 | 616.59 | 308.14 | 616.72 | 308.14 | 616.92 | 308.15 | 617.29 | 308.15 |
| 617.53 | 308.16 | 617.82 | 308.17 | 618.59 | 308.22 | 619.24 | 308.26 | 620.8 | 308.32 |
| 625.82 | 308.74 | 626.83 | 308.76 | 629.63 | 308.81 | 629.88 | 308.81 | 630.7 | 308.82 |
| 636.49 | 309 | 643.45 | 309.24 | 644.08 | 309.25 | 646.94 | 309.32 | 649.88 | 309.37 |
| 650.61 | 309.37 | 652.45 | 309.41 | 654.42 | 309.48 | 658.77 | 309.61 | 660.29 | 309.63 |
| 663.77 | 309.63 | 667.01 | 309.66 | 668.96 | 309.69 | 669.19 | 309.7 | 672.9 | 309.83 |
| 673.03 | 309.84 | 673.48 | 309.86 | 673.6 | 309.87 | 673.87 | 309.86 | 674.68 | 309.84 |
| 677.94 | 309.99 | 678.09 | 310 | 687.96 | 310.22 | 690.91 | 310.34 | 697.28 | 310.46 |
| 698.19 | 310.47 | 702.75 | 310.69 | 704.11 | 310.74 | 704.81 | 310.73 | 705.84 | 310.73 |
| 706.6 | 310.76 | 707.51 | 310.81 | 708.48 | 310.88 | 709.45 | 311 | 712.27 | 311.13 |
| 724.27 | 312 | 728.72 | 312.4 | 729.02 | 312.4 | 730.35 | 312.41 | 736.62 | 312.36 |
| 739.81 | 312.3 | 740.44 | 312.29 | 740.6 | 312.29 | 740.72 | 312.31 | 740.87 | 312.34 |
| 741.75 | 312.46 | 742.67 | 312.55 | 742.96 | 312.55 | 744.16 | 312.62 | 745.25 | 312.65 |
| 745.91 | 312.65 | 746.25 | 312.64 | 747.21 | 312.55 | 747.51 | 312.54 | 748.11 | 312.58 |
| 752.23 | 313 | 753.03 | 313.11 | 754.11 | 313.19 | 756.95 | 313.34 | 759.53 | 313.46 |
| 760.61 | 313.5 | 761.23 | 313.51 | 761.75 | 313.5 | 762.51 | 313.46 | 763.95 | 313.46 |
| 767.5 | 313.56 | 767.84 | 313.57 | 770.16 | 313.65 | 778.43 | 314 | 782.27 | 314.2 |
| 782.61 | 314.21 | 783.1 | 314.23 | 783.6 | 314.24 | 784.9 | 314.33 | 785.99 | 314.34 |
| 786.7 | 314.35 | 788.02 | 314.39 | 790.41 | 314.49 | 795.56 | 314.76 | 799.92 | 315 |
| 803.34 | 315.15 | 823.53 | 316 | 835.45 | 316.82 | 838.02 | 317 | 845.1 | 317.91 |
| 845.86 | 318 | 846.99 | 318.17 | 852.56 | 319 | 854.83 | 319.13 | 857.62 | 319.3 |
| 858.49 | 319.34 | 861.35 | 319.43 | 863.09 | 319.48 | 865.45 | 319.5 | 866 | 319.5 |
| 866.34 | 319.49 | 866.65 | 319.48 | 871.19 | 319.41 | 872.01 | 319.38 | 873.89 | 319.29 |
| 874.44 | 319.3 | 878.94 | 319 | 879.34 | 318.87 | 880.07 | 318.89 | 880.85 | 318.92 |
| 881.14 | 319 | 883.89 | 319.29 | 887.03 | 319.72 | 889.27 | 320 | 891.11 | 320.08 |
| 892.65 | 320.13 | 893.9 | 320.16 | 894.64 | 320.15 | 895.14 | 320.11 | 895.78 | 320.09 |
| 896.91 | 320.09 | 898.69 | 320.1 | 900.54 | 320.09 | 902.03 | 320.04 | 902.48 | 320 |
| 904.63 | 319.65 | 905.17 | 319.6 | 905.26 | 319.66 | 907.42 | 320 | 917.5 | 320.87 |
| 918.5 | 321 | 920.24 | 321.13 | 932.88 | 322 | 942.94 | 322.92 | 944.5 | 323 |
| 946.84 | 323.21 | 950.35 | 323.54 | 955.5 | 324 | 956.37 | 324.1 | 956.51 | 324.12 |
| 959.97 | 324.56 | 964.12 | 325 | 968.58 | 325.19 | 968.77 | 325.2 | 975.53 | 325.47 |
| 977.43 | 325.55 | 978.93 | 325.57 | 979.62 | 325.59 | 980.41 | 325.62 | 981.28 | 325.67 |
| 982.8 | 325.75 | 984.55 | 325.8 | 986.92 | 325.89 | 989.27 | 326 | 992.53 | 326 |
| 994.46 | 325.89 | 995.69 | 325.84 | 995.82 | 325.84 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 181.24 | .04 | 549.69 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 181.24 | 549.69 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2510.31*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 328.76 | 2.67 | 328.72 | 7.41 | 328.67 | 10.99 | 328.62 | 17.44 | 328.56 |
| 18.22 | 328.56 | 24.87 | 328.46 | 25.9 | 328.45 | 26.07 | 328.42 | 27.85 | 328.18 |
| 29.71 | 327.88 | 31.34 | 327.6 | 31.88 | 327.52 | 33.66 | 327.39 | 34.94 | 327.28 |
| 35.66 | 327.19 | 36.53 | 327.1 | 38.19 | 326.91 | 39.73 | 326.79 | 39.96 | 326.76 |
| 42.68 | 326.35 | 44.61 | 326.08 | 45.76 | 325.93 | 49.47 | 325.23 | 50.7 | 325.05 |
| 53.41 | 324.62 | 54.94 | 324.39 | 55.84 | 324.21 | 59.68 | 323.4 | 60.53 | 323.24 |
| 64 | 322.48 | 64.84 | 322.31 | 66.05 | 322.11 | 68 | 321.73 | 68.81 | 321.56 |
| 69.19 | 321.46 | 72.29 | 320.83 | 73.76 | 320.54 | 74.76 | 320.35 | 76.8 | 319.99 |
| 79.05 | 319.57 | 84.45 | 318.68 | 84.6 | 318.64 | 88.53 | 317.99 | 90.68 | 317.65 |
| 93.56 | 317.12 | 94.94 | 316.93 | 96.84 | 316.7 | 98.86 | 316.32 | 101.16 | 315.9 |
| 101.94 | 315.77 | 103.59 | 315.35 | 106.04 | 314.84 | 106.55 | 314.69 | 108.7 | 313.93 |
| 111 | 313.21 | 111.65 | 312.97 | 113.82 | 312.25 | 115.42 | 311.69 | 116.84 | 311.18 |
| 118.39 | 310.75 | 120.25 | 310.24 | 121.14 | 310.05 | 123.45 | 309.57 | 124.77 | 309.3 |
| 129.06 | 308.51 | 130.39 | 308.35 | 131.72 | 308.22 | 132.87 | 308.1 | 136.09 | 307.79 |
| 139.27 | 307.46 | 140.61 | 307.3 | 143.7 | 306.96 | 145.22 | 306.8 | 146.51 | 306.65 |
| 148.12 | 306.47 | 150.96 | 306.16 | 153.15 | 305.94 | 154.26 | 305.84 | 155.68 | 305.72 |
| 162.65 | 305.11 | 163.65 | 305.07 | 168.46 | 304.82 | 169.44 | 304.78 | 173.36 | 304.58 |
| 174.78 | 304.5 | 175.69 | 304.46 | 176.62 | 304.41 | 179.05 | 304.29 | 183.28 | 304.07 |
| 183.4 | 304.07 | 200.65 | 303.27 | 200.78 | 303.27 | 202.08 | 303.21 | 202.49 | 303.18 |
| 204.53 | 303.09 | 205.58 | 302.98 | 211.61 | 302.36 | 213.22 | 302.19 | 214.48 | 302.15 |
| 216.97 | 302.11 | 220.56 | 302.08 | 221.25 | 302.07 | 222.91 | 302.06 | 225.45 | 302.02 |
| 226.39 | 302.01 | 227.28 | 301.99 | 227.95 | 301.94 | 228.8 | 301.89 | 229.59 | 301.88 |
| 230.6 | 301.93 | 232.04 | 301.97 | 234.71 | 302.08 | 235.24 | 302.11 | 237.48 | 302.22 |
| 238.73 | 302.26 | 239.67 | 302.28 | 240.15 | 302.27 | 240.64 | 302.24 | 241.27 | 302.16 |
| 243.31 | 301.94 | 244.33 | 302.01 | 245.75 | 302.26 | 248.26 | 302.36 | 249.66 | 302.37 |
| 250.85 | 302.34 | 252.9 | 302.22 | 253.89 | 302.19 | 255.27 | 302.17 | 257.07 | 302.15 |
| 259.86 | 302.15 | 262.8 | 302.14 | 264.66 | 302.22 | 267.15 | 302.21 | 267.48 | 302.22 |
| 269.43 | 302.25 | 269.67 | 302.26 | 271.27 | 302.24 | 274.15 | 302.24 | 276.34 | 302.22 |
| 276.4 | 302.21 | 278.18 | 302.19 | 278.89 | 302.19 | 281.16 | 302.17 | 282.83 | 302.17 |
| 287.12 | 302.14 | 288.97 | 302.13 | 291.39 | 302.11 | 293.97 | 302.11 | 294.16 | 302.13 |
| 296.9 | 302.12 | 300.07 | 302.06 | 300.2 | 302.05 | 303.63 | 301.98 | 305.53 | 301.96 |
| 306.67 | 301.96 | 308.3 | 301.94 | 310.37 | 301.93 | 311.31 | 301.92 | 313.32 | 301.89 |
| 314.71 | 301.86 | 317.3 | 301.82 | 322.27 | 301.75 | 322.68 | 301.75 | 324.1 | 301.73 |
| 325.7 | 301.73 | 328.46 | 301.75 | 329.52 | 301.75 | 330.04 | 301.78 | 330.99 | 301.78 |
| 332.44 | 301.74 | 333.83 | 301.68 | 336.01 | 301.62 | 336.96 | 301.6 | 338.01 | 301.55 |
| 338.56 | 301.55 | 339.71 | 301.61 | 341.09 | 301.65 | 342.14 | 301.69 | 342.45 | 301.69 |
| 343.86 | 301.73 | 345.43 | 301.76 | 346.88 | 301.76 | 347.67 | 301.74 | 348.6 | 301.75 |
| 353.54 | 301.87 | 355.5 | 301.92 | 359.98 | 302.04 | 361.09 | 302.02 | 362.8 | 301.93 |
| 363.72 | 302.03 | 364.73 | 302.19 | 366.76 | 302.24 | 371.48 | 302.36 | 374.89 | 302.45 |
| 379.07 | 302.57 | 383.72 | 302.69 | 385.5 | 302.73 | 386.45 | 302.76 | 389.17 | 302.76 |
| 390.18 | 302.77 | 391.02 | 302.79 | 393.1 | 302.83 | 395.22 | 302.91 | 396.3 | 302.93 |
| 398.32 | 302.87 | 400.48 | 302.81 | 402.17 | 302.72 | 409.92 | 302.26 | 410.3 | 302.25 |
| 411.39 | 302.2 | 412.6 | 302.16 | 413.25 | 302.13 | 414.72 | 302.05 | 416.03 | 301.97 |
| 418.17 | 301.79 | 418.57 | 301.78 | 419.02 | 301.79 | 421.47 | 301.8 | 422.21 | 301.81 |
| 423.77 | 301.82 | 425.09 | 301.84 | 425.31 | 301.85 | 426.74 | 301.86 | 427.5 | 301.88 |
| 429.19 | 301.9 | 430.36 | 301.92 | 432.56 | 301.95 | 433.72 | 301.96 | 437.18 | 301.96 |
| 438.26 | 301.98 | 440.49 | 302.01 | 442.51 | 302.03 | 442.86 | 302.04 | 452.43 | 302.19 |
| 455.61 | 302.25 | 457.35 | 302.27 | 457.71 | 302.25 | 460.6 | 302.32 | 462.99 | 302.36 |
| 465.73 | 302.39 | 468.84 | 302.42 | 471.31 | 302.43 | 472.34 | 302.44 | 475.75 | 302.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 479.53 | 302.45 | 482.13 | 302.43 | 484.75 | 302.43 | 491.8 | 302.41 | 493.02 | 302.4 |
| 495.73 | 302.35 | 497.23 | 302.31 | 497.35 | 302.3 | 499.44 | 302.19 | 501.08 | 302.11 |
| 504.81 | 302.29 | 505.16 | 302.31 | 507.54 | 302.52 | 508 | 302.54 | 508.26 | 302.53 |
| 509.4 | 302.62 | 510.8 | 302.72 | 513.4 | 302.9 | 516.92 | 303.16 | 518.02 | 303.17 |
| 518.37 | 303.16 | 519.99 | 303.16 | 520.95 | 303.15 | 521.25 | 303.16 | 522.61 | 303.15 |
| 526.11 | 303.17 | 528.94 | 303.17 | 529.97 | 303.18 | 530.8 | 303.22 | 533.07 | 303.34 |
| 535.09 | 303.46 | 542.11 | 303.84 | 542.51 | 303.87 | 546.16 | 304.08 | 547.26 | 304.14 |
| 547.28 | 304.15 | 548.7 | 304.23 | 552.15 | 304.45 | 557.69 | 304.81 | 562.32 | 305.14 |
| 564.04 | 305.28 | 568.85 | 305.66 | 571.13 | 305.8 | 573.12 | 305.93 | 573.88 | 305.96 |
| 574.84 | 306.01 | 575.76 | 306.04 | 576.38 | 306.04 | 579.38 | 305.94 | 579.83 | 305.92 |
| 580.01 | 305.93 | 580.66 | 306.11 | 580.94 | 306.16 | 585.02 | 306.4 | 592.46 | 306.84 |
| 593.97 | 306.91 | 594.22 | 306.93 | 596.25 | 307.04 | 596.49 | 307.06 | 598.86 | 307.2 |
| 601.44 | 307.34 | 602.49 | 307.37 | 603.68 | 307.37 | 605.83 | 307.32 | 607.9 | 307.28 |
| 608.97 | 307.31 | 610.37 | 307.39 | 610.83 | 307.4 | 611.9 | 307.44 | 616.83 | 307.82 |
| 620.57 | 307.89 | 621.62 | 307.9 | 624.09 | 307.97 | 627.45 | 308.07 | 628.56 | 308.1 |
| 629.4 | 308.13 | 630.34 | 308.15 | 632.27 | 308.18 | 632.85 | 308.2 | 634.75 | 308.24 |
| 635.94 | 308.27 | 636.91 | 308.28 | 636.98 | 308.29 | 638.18 | 308.33 | 638.65 | 308.33 |
| 640.35 | 308.37 | 641.16 | 308.37 | 642.97 | 308.42 | 644.9 | 308.49 | 645.34 | 308.51 |
| 646.54 | 308.54 | 647.94 | 308.59 | 649.17 | 308.62 | 650.41 | 308.63 | 650.66 | 308.64 |
| 651.52 | 308.63 | 654.08 | 308.63 | 657.26 | 308.65 | 659.17 | 308.68 | 661.42 | 308.76 |
| 663.04 | 308.81 | 663.73 | 308.85 | 664.79 | 308.83 | 668.25 | 309 | 669.72 | 309.04 |
| 671.98 | 309.09 | 674.64 | 309.14 | 676.07 | 309.15 | 677.55 | 309.19 | 679.93 | 309.29 |
| 680.72 | 309.33 | 682.69 | 309.37 | 683.64 | 309.4 | 684.12 | 309.4 | 685.57 | 309.43 |
| 687.6 | 309.46 | 687.86 | 309.46 | 692.34 | 309.66 | 693.67 | 309.71 | 694.36 | 309.7 |
| 695.57 | 309.71 | 697.01 | 309.77 | 697.96 | 309.83 | 698.91 | 309.94 | 701.68 | 310.06 |
| 703.74 | 310.21 | 704.94 | 310.29 | 709.7 | 310.64 | 713.46 | 310.9 | 717.83 | 311.28 |
| 719.43 | 311.29 | 725.58 | 311.28 | 729.49 | 311.23 | 729.75 | 311.28 | 730.62 | 311.39 |
| 731.52 | 311.47 | 731.8 | 311.47 | 732.98 | 311.54 | 734.05 | 311.57 | 735.03 | 311.56 |
| 735.97 | 311.49 | 736.34 | 311.48 | 736.86 | 311.52 | 737.78 | 311.61 | 740.9 | 311.9 |
| 741.69 | 312 | 742.75 | 312.08 | 745.53 | 312.22 | 746.52 | 312.26 | 748.07 | 312.34 |
| 749.13 | 312.38 | 749.74 | 312.39 | 750.25 | 312.38 | 750.99 | 312.35 | 752.4 | 312.35 |
| 753.18 | 312.38 | 755.89 | 312.45 | 758.57 | 312.54 | 763.86 | 312.76 | 765.63 | 312.84 |
| 766.62 | 312.88 | 767.68 | 312.94 | 770.14 | 313.07 | 771.2 | 313.11 | 771.69 | 313.12 |
| 772.97 | 313.21 | 774.04 | 313.22 | 775.06 | 313.24 | 778.38 | 313.38 | 787.71 | 313.88 |
| 788.93 | 313.94 | 791.07 | 314.03 | 807.34 | 314.75 | 810.88 | 314.91 | 822.24 | 315.69 |
| 823.2 | 315.76 | 824.39 | 315.83 | 825.11 | 315.89 | 832.05 | 316.74 | 832.8 | 316.83 |
| 833.91 | 316.99 | 839.38 | 317.77 | 841.39 | 317.88 | 842.28 | 317.94 | 844.34 | 318.06 |
| 845.45 | 318.11 | 848 | 318.19 | 849.71 | 318.24 | 850.99 | 318.25 | 852.03 | 318.27 |
| 855.04 | 318.24 | 857.66 | 318.22 | 858.47 | 318.2 | 860.31 | 318.13 | 860.85 | 318.15 |
| 865.27 | 317.91 | 865.66 | 317.8 | 867.14 | 317.85 | 867.43 | 317.92 | 870.13 | 318.2 |
| 873.21 | 318.6 | 875.41 | 318.86 | 877.13 | 318.94 | 877.21 | 318.95 | 879.95 | 319.04 |
| 880.68 | 319.03 | 881.17 | 319 | 881.8 | 318.98 | 884.65 | 319.01 | 886.47 | 319.01 |
| 887.93 | 318.98 | 888.37 | 318.94 | 890.48 | 318.65 | 891.01 | 318.61 | 891.1 | 318.66 |
| 893.22 | 318.97 | 897.24 | 319.31 | 903.12 | 319.83 | 904.1 | 319.96 | 905.81 | 320.09 |
| 908.52 | 320.28 | 913.44 | 320.63 | 917.32 | 320.91 | 918.21 | 320.97 | 920.98 | 321.23 |
| 925.65 | 321.68 | 928.09 | 321.92 | 929.62 | 322.02 | 931.91 | 322.25 | 934.51 | 322.52 |
| 937.45 | 322.83 | 939.46 | 323.03 | 940.38 | 323.13 | 941.27 | 323.25 | 943.84 | 323.61 |
| 944.8 | 323.73 | 948.87 | 324.17 | 951.7 | 324.31 | 953.25 | 324.38 | 954.88 | 324.46 |
| 957.3 | 324.56 | 958.85 | 324.63 | 961.61 | 324.74 | 961.94 | 324.76 | 963.41 | 324.78 |
| 964.86 | 324.83 | 967.21 | 324.96 | 968.93 | 325.01 | 971.15 | 325.1 | 973.56 | 325.21 |
| 974.46 | 325.21 | 976.76 | 325.22 | 978.65 | 325.13 | 979.99 | 325.09 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 174.78 | .04 | 542.11 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 174.78 | 542.11 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2463.87*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 327.52 | 1.33 | 327.47 | 7.14 | 327.33 | 10.59 | 327.24 | 16.79 | 327.13 |
| 17.55 | 327.11 | 24.94 | 326.89 | 26.82 | 326.64 | 27.37 | 326.55 | 28.61 | 326.31 |
| 30.18 | 325.99 | 30.7 | 325.9 | 32.41 | 325.71 | 33.65 | 325.56 | 34.34 | 325.45 |
| 36.78 | 325.11 | 38.26 | 324.95 | 41.1 | 324.47 | 42.69 | 324.24 | 44.07 | 324.08 |
| 47.64 | 323.46 | 48.82 | 323.3 | 51.44 | 322.92 | 52.91 | 322.71 | 53.77 | 322.55 |
| 54.09 | 322.48 | 57.48 | 321.79 | 58.29 | 321.65 | 59.12 | 321.49 | 61.06 | 321.07 |
| 62.16 | 320.85 | 63.61 | 320.59 | 65.39 | 320.25 | 66.44 | 320.02 | 66.63 | 319.97 |
| 67.82 | 319.73 | 69.61 | 319.35 | 71.03 | 319.07 | 73.96 | 318.55 | 75.88 | 318.19 |
| 76.94 | 318 | 81.32 | 317.28 | 81.63 | 317.22 | 83.1 | 316.98 | 85.26 | 316.61 |
| 87.32 | 316.29 | 88.32 | 316.11 | 90.1 | 315.81 | 91.43 | 315.63 | 93.26 | 315.4 |
| 96.79 | 314.77 | 97.42 | 314.65 | 98.18 | 314.53 | 99.76 | 314.15 | 102.12 | 313.68 |
| 102.61 | 313.55 | 104.68 | 312.86 | 106.9 | 312.2 | 107.52 | 311.99 | 109.16 | 311.48 |
| 110.03 | 311.2 | 111.15 | 310.83 | 112.52 | 310.35 | 114.01 | 309.95 | 115.81 | 309.48 |
| 116.66 | 309.3 | 118.89 | 308.85 | 120.15 | 308.6 | 124.28 | 307.85 | 125.57 | 307.7 |
| 126.85 | 307.57 | 127.95 | 307.44 | 131.05 | 307.12 | 134.56 | 306.72 | 135.41 | 306.6 |
| 138.39 | 306.22 | 141.09 | 305.87 | 142.45 | 305.68 | 142.64 | 305.66 | 145.38 | 305.32 |
| 147.48 | 305.07 | 148.55 | 304.98 | 149.92 | 304.85 | 156.64 | 304.23 | 157.6 | 304.17 |
| 162.23 | 303.9 | 163.17 | 303.85 | 165.84 | 303.7 | 166.95 | 303.63 | 168.31 | 303.56 |
| 169.23 | 303.52 | 170.16 | 303.47 | 176.82 | 303.14 | 176.93 | 303.14 | 194.18 | 302.36 |
| 194.31 | 302.36 | 195.6 | 302.3 | 196.02 | 302.27 | 198.06 | 302.18 | 199.1 | 302.09 |
| 205.13 | 301.53 | 206.74 | 301.39 | 208 | 301.35 | 208.88 | 301.33 | 210.49 | 301.31 |
| 212.87 | 301.29 | 214.07 | 301.29 | 214.77 | 301.28 | 216.42 | 301.27 | 218.39 | 301.24 |
| 218.96 | 301.24 | 219.91 | 301.22 | 220.33 | 301.22 | 221.14 | 301.2 | 221.47 | 301.17 |
| 222.32 | 301.13 | 223.11 | 301.13 | 224.12 | 301.17 | 225.55 | 301.21 | 228.22 | 301.32 |
| 230.99 | 301.48 | 232.24 | 301.53 | 233.36 | 301.56 | 233.99 | 301.54 | 235.78 | 301.35 |
| 236.82 | 301.25 | 237.83 | 301.31 | 239.25 | 301.53 | 241.76 | 301.6 | 243.16 | 301.61 |
| 243.81 | 301.6 | 244.36 | 301.58 | 245.71 | 301.5 | 246.41 | 301.47 | 247.4 | 301.44 |
| 248.78 | 301.42 | 250.57 | 301.4 | 253.36 | 301.39 | 256.3 | 301.37 | 256.43 | 301.38 |
| 258.16 | 301.44 | 260.65 | 301.43 | 260.98 | 301.44 | 262.92 | 301.46 | 264.76 | 301.45 |
| 265.63 | 301.44 | 267.65 | 301.43 | 269.54 | 301.41 | 269.89 | 301.39 | 273.27 | 301.35 |
| 276.96 | 301.35 | 277.57 | 301.34 | 280.61 | 301.32 | 284.88 | 301.3 | 286.19 | 301.29 |
| 287.56 | 301.3 | 288.16 | 301.31 | 289.62 | 301.3 | 290.38 | 301.31 | 291.96 | 301.28 |
| 292.97 | 301.27 | 293.68 | 301.25 | 296.17 | 301.2 | 297.82 | 301.18 | 299.01 | 301.18 |
| 300.15 | 301.17 | 301.78 | 301.17 | 304.79 | 301.14 | 306.8 | 301.11 | 308.19 | 301.08 |
| 310.77 | 301.04 | 314.41 | 301 | 315.75 | 300.98 | 316.15 | 300.98 | 317.57 | 300.96 |
| 319.18 | 300.96 | 321.93 | 300.98 | 323.09 | 300.98 | 323.8 | 301.01 | 324.46 | 301.01 |
| 326.88 | 300.93 | 327.3 | 300.9 | 329.48 | 300.84 | 330.03 | 300.84 | 331.48 | 300.78 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 332.33 | 300.78 | 333.48 | 300.84 | 334.85 | 300.87 | 336.19 | 300.91 | 338.46 | 300.96 |
| 339.15 | 300.97 | 341.09 | 300.97 | 341.64 | 300.95 | 342.3 | 300.97 | 347.21 | 301.08 |
| 349.16 | 301.13 | 353.61 | 301.23 | 353.86 | 301.24 | 354.71 | 301.22 | 356.41 | 301.14 |
| 357.01 | 301.2 | 358.32 | 301.37 | 360.35 | 301.42 | 365.03 | 301.54 | 368.42 | 301.63 |
| 372.57 | 301.75 | 372.81 | 301.76 | 377.19 | 301.86 | 379.9 | 301.92 | 381.67 | 301.92 |
| 383.6 | 301.94 | 384.44 | 301.96 | 387.38 | 302.02 | 388.62 | 302.07 | 389.68 | 302.09 |
| 391.7 | 302.04 | 394.04 | 301.99 | 395.52 | 301.91 | 403.6 | 301.51 | 405.87 | 301.44 |
| 406.2 | 301.42 | 407.28 | 301.38 | 408.97 | 301.29 | 411.41 | 301.13 | 412.31 | 301.12 |
| 414.69 | 301.14 | 415.42 | 301.15 | 416.98 | 301.16 | 418.29 | 301.19 | 419.69 | 301.21 |
| 420.13 | 301.21 | 421.38 | 301.24 | 422.98 | 301.25 | 425.7 | 301.29 | 427.83 | 301.29 |
| 428.32 | 301.3 | 430.3 | 301.3 | 431.37 | 301.31 | 433.58 | 301.34 | 435.93 | 301.36 |
| 445.44 | 301.52 | 449.15 | 301.56 | 450.33 | 301.59 | 450.69 | 301.57 | 453.56 | 301.64 |
| 455.93 | 301.68 | 458.65 | 301.71 | 459.79 | 301.73 | 461.83 | 301.74 | 464.2 | 301.76 |
| 465.22 | 301.76 | 468.61 | 301.77 | 472.36 | 301.77 | 474.95 | 301.75 | 477.55 | 301.74 |
| 484.55 | 301.71 | 485.76 | 301.7 | 488.46 | 301.66 | 489.95 | 301.63 | 490.07 | 301.62 |
| 492.14 | 301.51 | 493.77 | 301.44 | 494.41 | 301.47 | 497.47 | 301.6 | 497.82 | 301.62 |
| 500.18 | 301.8 | 500.65 | 301.82 | 500.9 | 301.81 | 502.37 | 301.9 | 503.42 | 301.97 |
| 506 | 302.12 | 509.51 | 302.33 | 510.94 | 302.33 | 512.55 | 302.31 | 515.15 | 302.31 |
| 516.47 | 302.32 | 516.82 | 302.33 | 518.64 | 302.33 | 521.45 | 302.34 | 522.46 | 302.35 |
| 523.29 | 302.4 | 525.55 | 302.51 | 527.55 | 302.62 | 534.52 | 302.99 | 534.91 | 303.01 |
| 538.5 | 303.22 | 540.56 | 303.36 | 540.99 | 303.37 | 541.3 | 303.4 | 542.52 | 303.47 |
| 544.38 | 303.59 | 549.82 | 303.95 | 552.96 | 304.18 | 556.04 | 304.42 | 560.76 | 304.8 |
| 562.81 | 304.94 | 564.95 | 305.08 | 565.69 | 305.11 | 566.64 | 305.16 | 567.54 | 305.19 |
| 568.15 | 305.19 | 571.53 | 305.1 | 571.71 | 305.11 | 572.35 | 305.27 | 572.63 | 305.31 |
| 576.63 | 305.54 | 583.92 | 305.97 | 585.65 | 306.06 | 587.64 | 306.17 | 588.91 | 306.25 |
| 590.2 | 306.32 | 592.74 | 306.45 | 593.77 | 306.48 | 594.93 | 306.48 | 597.04 | 306.45 |
| 598.61 | 306.42 | 599.62 | 306.43 | 600.13 | 306.45 | 601.5 | 306.52 | 603 | 306.57 |
| 607.84 | 306.91 | 608.81 | 306.93 | 611.51 | 306.97 | 612.54 | 306.98 | 613.16 | 307 |
| 614.96 | 307.04 | 617.62 | 307.11 | 620.17 | 307.18 | 621.09 | 307.19 | 622.27 | 307.18 |
| 624.05 | 307.21 | 625.42 | 307.24 | 627.46 | 307.26 | 628.31 | 307.31 | 630.91 | 307.37 |
| 632.56 | 307.39 | 633.48 | 307.42 | 635.81 | 307.52 | 637.9 | 307.59 | 639.57 | 307.63 |
| 640.79 | 307.64 | 641.88 | 307.64 | 643.57 | 307.63 | 644.38 | 307.63 | 648.89 | 307.66 |
| 651.59 | 307.74 | 653.18 | 307.79 | 654.11 | 307.83 | 654.89 | 307.82 | 657.3 | 307.95 |
| 658.29 | 308 | 659.74 | 308.04 | 661.95 | 308.09 | 663.48 | 308.12 | 665.23 | 308.13 |
| 665.96 | 308.12 | 667.68 | 308.18 | 669.75 | 308.28 | 670.52 | 308.31 | 672.45 | 308.37 |
| 675.28 | 308.43 | 677.53 | 308.45 | 680.16 | 308.55 | 681.92 | 308.63 | 683.23 | 308.68 |
| 684.9 | 308.68 | 686.51 | 308.73 | 687.23 | 308.77 | 688.37 | 308.88 | 691.09 | 309 |
| 693.11 | 309.13 | 694.29 | 309.21 | 698.95 | 309.56 | 702.65 | 309.81 | 706.93 | 310.16 |
| 708.5 | 310.18 | 714.54 | 310.19 | 717.61 | 310.17 | 718.37 | 310.17 | 718.63 | 310.21 |
| 719.48 | 310.31 | 720.37 | 310.39 | 720.65 | 310.39 | 721.8 | 310.46 | 722.85 | 310.49 |
| 723.81 | 310.49 | 724.74 | 310.42 | 725.1 | 310.42 | 725.61 | 310.46 | 729.57 | 310.81 |
| 730.34 | 310.9 | 731.38 | 310.97 | 734.12 | 311.1 | 736.6 | 311.21 | 737.64 | 311.25 |
| 738.74 | 311.26 | 739.47 | 311.24 | 740.86 | 311.25 | 741.62 | 311.27 | 743.8 | 311.34 |
| 746.91 | 311.43 | 748.78 | 311.51 | 752.09 | 311.64 | 754.8 | 311.76 | 755.85 | 311.82 |
| 758.26 | 311.95 | 759.3 | 311.99 | 759.78 | 312 | 761.04 | 312.08 | 762.09 | 312.1 |
| 764.04 | 312.16 | 766.34 | 312.27 | 771.3 | 312.53 | 775.5 | 312.76 | 778.79 | 312.92 |
| 794.76 | 313.66 | 798.24 | 313.82 | 809.38 | 314.58 | 810.46 | 314.66 | 811.48 | 314.72 |
| 812.19 | 314.77 | 812.59 | 314.82 | 819.01 | 315.58 | 819.74 | 315.66 | 820.83 | 315.81 |
| 826.19 | 316.53 | 826.26 | 316.53 | 828.17 | 316.65 | 831.07 | 316.82 | 831.9 | 316.86 |
| 832.15 | 316.86 | 834.66 | 316.95 | 836.33 | 317 | 838.61 | 317.04 | 839.46 | 317.04 |
| 839.76 | 317.03 | 841.57 | 317.04 | 844.14 | 317.03 | 844.93 | 317.02 | 846.74 | 316.98 |
| 847.27 | 316.99 | 848.37 | 316.95 | 851.6 | 316.82 | 851.98 | 316.72 | 853.44 | 316.78 |
| 853.72 | 316.85 | 856.37 | 317.1 | 859.39 | 317.48 | 861.55 | 317.72 | 863.24 | 317.81 |
| 865.21 | 317.89 | 866.01 | 317.91 | 866.72 | 317.91 | 867.2 | 317.89 | 867.82 | 317.88 |
| 868.9 | 317.89 | 870.62 | 317.92 | 872.4 | 317.94 | 873.84 | 317.92 | 874.27 | 317.89 |
| 876.34 | 317.64 | 876.86 | 317.61 | 876.95 | 317.66 | 879.03 | 317.95 | 882.97 | 318.27 |
| 888.73 | 318.79 | 889.7 | 318.91 | 891.37 | 319.05 | 894.04 | 319.25 | 898.86 | 319.6 |
| 902.67 | 319.88 | 903.54 | 319.95 | 906.26 | 320.2 | 910.84 | 320.67 | 913.23 | 320.92 |
| 914.74 | 321.04 | 916.99 | 321.29 | 919.53 | 321.58 | 922.42 | 321.92 | 924.4 | 322.15 |
| 925.33 | 322.27 | 926.17 | 322.39 | 928.69 | 322.78 | 929.63 | 322.9 | 933.63 | 323.33 |
| 938.65 | 323.62 | 943.42 | 323.84 | 946.12 | 323.95 | 946.45 | 323.97 | 947.89 | 323.99 |
| 949.32 | 324.04 | 951.27 | 324.15 | 953.3 | 324.22 | 955.48 | 324.31 | 957.85 | 324.42 |
| 958.73 | 324.43 | 961.18 | 324.44 | 962.85 | 324.37 | 964.16 | 324.34 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 168.31 | .04 | 534.52 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 168.31 | 534.52 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2417.44*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 326.27 | 2.47 | 326.15 | 6.86 | 326 | 10.18 | 325.86 | 16.87 | 325.67 |
| 23.03 | 325.38 | 23.47 | 325.35 | 23.99 | 325.34 | 25.79 | 325.1 | 26.32 | 325 |
| 27.51 | 324.74 | 28.3 | 324.55 | 29.52 | 324.28 | 31.17 | 324.04 | 32.35 | 323.84 |
| 33.02 | 323.71 | 33.82 | 323.57 | 35.1 | 323.36 | 35.36 | 323.31 | 36.79 | 323.11 |
| 39.52 | 322.59 | 40.68 | 322.41 | 42.37 | 322.22 | 45.81 | 321.7 | 46.95 | 321.56 |
| 48.34 | 321.37 | 50.88 | 321.03 | 51.64 | 320.9 | 52.01 | 320.82 | 55.27 | 320.19 |
| 56.05 | 320.07 | 56.85 | 319.92 | 59.77 | 319.33 | 61.13 | 319.09 | 63.72 | 318.57 |
| 64.07 | 318.48 | 65.22 | 318.25 | 66.94 | 317.87 | 69.23 | 317.44 | 71.12 | 317.11 |
| 72.97 | 316.76 | 73.99 | 316.57 | 78.2 | 315.89 | 78.5 | 315.83 | 78.93 | 315.77 |
| 79.91 | 315.61 | 81.98 | 315.24 | 83.97 | 314.94 | 84.93 | 314.77 | 85.39 | 314.7 |
| 86.77 | 314.47 | 87.92 | 314.32 | 89.68 | 314.1 | 91.55 | 313.77 | 93.07 | 313.52 |
| 93.68 | 313.4 | 94.19 | 313.33 | 94.65 | 313.24 | 95.93 | 312.96 | 98.2 | 312.52 |
| 98.67 | 312.4 | 100.66 | 311.79 | 102.79 | 311.2 | 103.39 | 311.01 | 104.97 | 310.55 |
| 105.8 | 310.3 | 106.88 | 309.96 | 108.2 | 309.53 | 111.36 | 308.72 | 112.63 | 308.46 |
| 113.34 | 308.33 | 115.54 | 307.9 | 119.51 | 307.2 | 120.74 | 307.04 | 121.98 | 306.92 |
| 123.04 | 306.77 | 126.02 | 306.44 | 128.97 | 306.09 | 130.21 | 305.9 | 133.08 | 305.47 |
| 134.48 | 305.27 | 137.17 | 304.84 | 139.79 | 304.47 | 141.82 | 304.2 | 143.2 | 304.08 |
| 144.16 | 303.98 | 150.62 | 303.34 | 151.54 | 303.28 | 156.91 | 302.92 | 159.47 | 302.76 |
| 160.53 | 302.68 | 161.85 | 302.61 | 163.69 | 302.53 | 166.12 | 302.41 | 170.35 | 302.21 |
| 170.46 | 302.21 | 187.71 | 301.46 | 189.13 | 301.39 | 189.54 | 301.35 | 191.58 | 301.28 |
| 192.63 | 301.19 | 198.65 | 300.71 | 200.26 | 300.58 | 201.52 | 300.54 | 202.64 | 300.53 |
| 204.01 | 300.51 | 206.38 | 300.49 | 207.59 | 300.49 | 208.29 | 300.48 | 210.49 | 300.47 |
| 211.91 | 300.46 | 213.42 | 300.44 | 213.84 | 300.44 | 214.73 | 300.42 | 214.98 | 300.4 |
| 215.83 | 300.37 | 216.62 | 300.37 | 217.63 | 300.41 | 219.07 | 300.45 | 221.73 | 300.56 |
| 224.5 | 300.73 | 225.75 | 300.8 | 226.86 | 300.84 | 227.66 | 300.81 | 229.28 | 300.66 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 230.32 | 300.57 | 231.34 | 300.61 | 232.76 | 300.79 | 235.27 | 300.85 | 236.67 | 300.85 |
| 237.86 | 300.82 | 239.21 | 300.75 | 239.91 | 300.72 | 240.9 | 300.69 | 242.28 | 300.66 |
| 244.18 | 300.64 | 246.87 | 300.62 | 249.93 | 300.61 | 250.56 | 300.62 | 251.66 | 300.66 |
| 254.47 | 300.65 | 256.42 | 300.66 | 256.66 | 300.67 | 259.13 | 300.64 | 261.14 | 300.63 |
| 263.04 | 300.6 | 263.39 | 300.56 | 265.16 | 300.54 | 266.77 | 300.53 | 271.06 | 300.53 |
| 272.74 | 300.51 | 275.95 | 300.49 | 278.37 | 300.49 | 278.84 | 300.48 | 280.94 | 300.48 |
| 281.13 | 300.5 | 283.11 | 300.49 | 284.53 | 300.49 | 285.44 | 300.47 | 287.17 | 300.45 |
| 289.65 | 300.41 | 290.6 | 300.4 | 292.49 | 300.39 | 295.26 | 300.39 | 297.33 | 300.38 |
| 298.27 | 300.37 | 301.59 | 300.3 | 303.64 | 300.28 | 304.25 | 300.27 | 307.88 | 300.23 |
| 309.22 | 300.21 | 309.62 | 300.21 | 311.05 | 300.19 | 312.65 | 300.19 | 313.82 | 300.2 |
| 316.29 | 300.2 | 316.94 | 300.23 | 317.94 | 300.23 | 319.38 | 300.19 | 320.19 | 300.16 |
| 320.77 | 300.11 | 323.5 | 300.06 | 324.43 | 300.02 | 324.94 | 300.01 | 326.1 | 300.01 |
| 326.96 | 300.04 | 327.24 | 300.06 | 328.6 | 300.09 | 329.63 | 300.12 | 329.94 | 300.12 |
| 332.19 | 300.17 | 334.31 | 300.19 | 335.09 | 300.17 | 336 | 300.18 | 340.88 | 300.29 |
| 342.82 | 300.33 | 347.24 | 300.43 | 348.33 | 300.42 | 350.02 | 300.36 | 350.93 | 300.44 |
| 351.92 | 300.56 | 353.93 | 300.61 | 357.03 | 300.68 | 361.94 | 300.81 | 366.07 | 300.93 |
| 367.65 | 300.97 | 370.66 | 301.03 | 373.36 | 301.08 | 374.28 | 301.09 | 376.04 | 301.09 |
| 377.03 | 301.1 | 377.86 | 301.12 | 379.91 | 301.16 | 382.01 | 301.23 | 383.07 | 301.25 |
| 385.07 | 301.21 | 387.2 | 301.18 | 396.51 | 300.79 | 399.48 | 300.71 | 399.8 | 300.69 |
| 400.55 | 300.67 | 403.33 | 300.54 | 404.65 | 300.46 | 405.04 | 300.45 | 405.54 | 300.46 |
| 407.91 | 300.48 | 411.7 | 300.53 | 412.88 | 300.55 | 413.5 | 300.57 | 415.15 | 300.59 |
| 416.68 | 300.6 | 418.06 | 300.62 | 418.85 | 300.62 | 419.25 | 300.63 | 423.41 | 300.63 |
| 426.68 | 300.66 | 428.67 | 300.69 | 429.01 | 300.69 | 438.45 | 300.84 | 442.13 | 300.88 |
| 442.29 | 300.89 | 443.31 | 300.9 | 443.66 | 300.89 | 448.88 | 301 | 451.57 | 301.04 |
| 454.65 | 301.07 | 457.09 | 301.08 | 458.1 | 301.08 | 461.47 | 301.09 | 464.88 | 301.09 |
| 465.2 | 301.08 | 467.76 | 301.06 | 470.34 | 301.05 | 477.3 | 301.02 | 478.51 | 301.01 |
| 481.18 | 300.97 | 482.66 | 300.94 | 482.78 | 300.93 | 484.84 | 300.84 | 486.46 | 300.78 |
| 487.09 | 300.8 | 490.48 | 300.92 | 492.83 | 301.08 | 493.54 | 301.09 | 495 | 301.17 |
| 496.05 | 301.22 | 498.61 | 301.33 | 502.09 | 301.5 | 503.17 | 301.5 | 503.78 | 301.48 |
| 504.5 | 301.48 | 506.06 | 301.46 | 506.33 | 301.47 | 507.7 | 301.47 | 509.35 | 301.49 |
| 513.28 | 301.51 | 514.96 | 301.53 | 518.03 | 301.68 | 526.94 | 302.13 | 527.32 | 302.15 |
| 530.83 | 302.37 | 532.86 | 302.5 | 533.28 | 302.52 | 536.6 | 302.74 | 541.94 | 303.09 |
| 542.13 | 303.1 | 545.02 | 303.33 | 546.39 | 303.43 | 548.05 | 303.57 | 552.68 | 303.95 |
| 554.68 | 304.09 | 556.78 | 304.22 | 557.51 | 304.25 | 558.44 | 304.3 | 559.33 | 304.33 |
| 559.92 | 304.33 | 562.81 | 304.29 | 563.41 | 304.29 | 564.04 | 304.43 | 564.31 | 304.47 |
| 568.24 | 304.69 | 575.39 | 305.11 | 576.85 | 305.18 | 577.09 | 305.2 | 579.27 | 305.31 |
| 581.55 | 305.44 | 584.03 | 305.56 | 585.05 | 305.59 | 586.19 | 305.6 | 588.26 | 305.58 |
| 589.8 | 305.56 | 590.44 | 305.56 | 591.28 | 305.58 | 592.63 | 305.65 | 594.1 | 305.69 |
| 598.84 | 305.99 | 599.8 | 306.01 | 602.44 | 306.05 | 604.06 | 306.07 | 605.83 | 306.12 |
| 608.44 | 306.17 | 610.94 | 306.24 | 611.85 | 306.23 | 613 | 306.2 | 614.75 | 306.21 |
| 616.09 | 306.23 | 617.24 | 306.24 | 618.09 | 306.24 | 618.76 | 306.29 | 619.39 | 306.32 |
| 620.3 | 306.34 | 621.48 | 306.38 | 622.26 | 306.38 | 624 | 306.43 | 626.28 | 306.53 |
| 628.33 | 306.6 | 628.79 | 306.62 | 629.97 | 306.64 | 631.17 | 306.64 | 631.4 | 306.65 |
| 632.23 | 306.64 | 633.9 | 306.63 | 634.69 | 306.63 | 637.75 | 306.64 | 639.11 | 306.65 |
| 640.43 | 306.69 | 641.76 | 306.72 | 643.31 | 306.77 | 643.93 | 306.81 | 645 | 306.81 |
| 648.22 | 307 | 649.75 | 307.04 | 651.92 | 307.09 | 654.48 | 307.12 | 655.85 | 307.09 |
| 657.54 | 307.15 | 660.33 | 307.3 | 662.22 | 307.37 | 663.6 | 307.4 | 666.34 | 307.44 |
| 667.2 | 307.44 | 668.51 | 307.48 | 669.78 | 307.53 | 671.51 | 307.61 | 672.79 | 307.65 |
| 673.45 | 307.65 | 675.37 | 307.67 | 676.92 | 307.74 | 677.63 | 307.81 | 680.5 | 307.93 |
| 682.48 | 308.06 | 685.59 | 308.28 | 688.21 | 308.48 | 691.84 | 308.71 | 696.04 | 309.04 |
| 697.58 | 309.06 | 703.5 | 309.11 | 707.26 | 309.11 | 707.51 | 309.15 | 708.35 | 309.24 |
| 709.22 | 309.31 | 709.49 | 309.31 | 710.62 | 309.37 | 711.65 | 309.41 | 712.6 | 309.41 |
| 713.5 | 309.36 | 713.85 | 309.36 | 714.35 | 309.39 | 715.24 | 309.47 | 718.24 | 309.71 |
| 719 | 309.79 | 720.02 | 309.85 | 722.7 | 309.98 | 723.66 | 310.02 | 725.14 | 310.09 |
| 726.16 | 310.13 | 727.24 | 310.14 | 727.95 | 310.12 | 729.31 | 310.14 | 730.06 | 310.16 |
| 732.2 | 310.23 | 735.18 | 310.32 | 735.25 | 310.33 | 737.08 | 310.39 | 740.33 | 310.52 |
| 742.04 | 310.6 | 744.02 | 310.7 | 746.38 | 310.83 | 747.4 | 310.87 | 747.88 | 310.88 |
| 749.1 | 310.96 | 750.13 | 310.98 | 751.12 | 311.01 | 754.31 | 311.15 | 763.29 | 311.65 |
| 764.74 | 311.71 | 766.52 | 311.8 | 782.18 | 312.57 | 785.59 | 312.73 | 796.52 | 313.47 |
| 797.58 | 313.55 | 798.58 | 313.6 | 799.67 | 313.7 | 805.96 | 314.41 | 806.68 | 314.49 |
| 807.75 | 314.63 | 813.01 | 315.3 | 813.08 | 315.3 | 815.81 | 315.46 | 817.79 | 315.57 |
| 818.85 | 315.62 | 821.31 | 315.7 | 822.96 | 315.76 | 825.71 | 315.81 | 826.32 | 315.81 |
| 828.09 | 315.83 | 830.61 | 315.84 | 831.38 | 315.84 | 833.16 | 315.82 | 833.68 | 315.84 |
| 834.76 | 315.82 | 837.93 | 315.73 | 838.31 | 315.65 | 839.73 | 315.71 | 840.01 | 315.77 |
| 842.6 | 316.01 | 845.57 | 316.36 | 847.69 | 316.59 | 849.34 | 316.67 | 849.42 | 316.68 |
| 852.06 | 316.79 | 852.76 | 316.79 | 853.83 | 316.77 | 854.9 | 316.79 | 856.58 | 316.83 |
| 858.33 | 316.86 | 859.74 | 316.85 | 860.16 | 316.83 | 862.19 | 316.64 | 862.7 | 316.61 |
| 862.79 | 316.66 | 864.83 | 316.92 | 868.7 | 317.24 | 869.63 | 317.31 | 869.9 | 317.34 |
| 874.35 | 317.75 | 875.29 | 317.87 | 879.55 | 318.21 | 884.29 | 318.57 | 888.01 | 318.85 |
| 888.88 | 318.92 | 891.54 | 319.17 | 896.04 | 319.67 | 897.79 | 319.86 | 898.88 | 319.96 |
| 899.85 | 320.06 | 902.06 | 320.33 | 904.56 | 320.64 | 909.33 | 321.28 | 910.21 | 321.4 |
| 911.2 | 321.56 | 913.54 | 321.96 | 914.46 | 322.07 | 918.38 | 322.5 | 921.1 | 322.68 |
| 922.78 | 322.78 | 923.31 | 322.82 | 926.49 | 322.97 | 927.99 | 323.05 | 930.64 | 323.16 |
| 933.03 | 323.23 | 933.77 | 323.26 | 936.03 | 323.37 | 937.68 | 323.43 | 939.82 | 323.52 |
| 942.14 | 323.63 | 945.4 | 323.66 | 947.04 | 323.61 | 948.33 | 323.59 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 161.85 | .04 | 526.94 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 161.85 | 526.94 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2371.00*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 325.03 | 1.22 | 324.94 | 2.37 | 324.87 | 6.59 | 324.67 | 9.77 | 324.48 |
| 15.5 | 324.26 | 16.2 | 324.22 | 22.11 | 323.84 | 22.54 | 323.8 | 23.03 | 323.78 |
| 24.76 | 323.56 | 25.26 | 323.46 | 26.41 | 323.17 | 27.17 | 322.96 | 28.34 | 322.66 |
| 29.92 | 322.37 | 31.06 | 322.12 | 31.7 | 321.96 | 32.47 | 321.81 | 33.95 | 321.51 |
| 35.32 | 321.27 | 37.94 | 320.71 | 38.76 | 320.58 | 39.05 | 320.52 | 40.68 | 320.37 |
| 43.98 | 319.93 | 45.07 | 319.82 | 47.49 | 319.51 | 48.84 | 319.35 | 49.77 | 319.2 |
| 49.94 | 319.16 | 53.06 | 318.59 | 53.82 | 318.48 | 54.58 | 318.35 | 56.37 | 318.01 |
| 56.9 | 317.9 | 58.69 | 317.57 | 58.72 | 317.57 | 60.81 | 317.15 | 61.52 | 316.99 |
| 62.61 | 316.76 | 64.27 | 316.39 | 66.46 | 315.99 | 68.28 | 315.67 | 70.05 | 315.32 |
| 71.03 | 315.14 | 76.71 | 314.23 | 78.71 | 313.87 | 80.62 | 313.58 | 81.54 | 313.43 |
| 83.18 | 313.17 | 83.31 | 313.16 | 84.41 | 313.01 | 86.1 | 312.81 | 87.9 | 312.5 |
| 89.35 | 312.26 | 89.93 | 312.15 | 90.64 | 312.06 | 91.25 | 311.94 | 92.1 | 311.76 |
| 94.27 | 311.37 | 94.73 | 311.26 | 96.02 | 310.89 | 96.64 | 310.72 | 98.69 | 310.2 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 99.15 | 310.06 | 100.78 | 309.63 | 101.58 | 309.4 | 102.62 | 309.09 | 103.88 | 308.7 |
| 105.26 | 308.36 | 106.91 | 307.96 | 107.7 | 307.8 | 108.81 | 307.59 | 109.76 | 307.42 |
| 110.92 | 307.2 | 114.74 | 306.54 | 115.92 | 306.39 | 117.11 | 306.26 | 118.13 | 306.1 |
| 120.99 | 305.76 | 123.82 | 305.41 | 125.01 | 305.2 | 129.11 | 304.5 | 131.51 | 304.06 |
| 134.21 | 303.63 | 136.16 | 303.34 | 137.48 | 303.21 | 138.4 | 303.11 | 144.61 | 302.45 |
| 145.49 | 302.39 | 149.77 | 302.06 | 150.64 | 302 | 154.12 | 301.73 | 155.39 | 301.67 |
| 157.23 | 301.59 | 159.66 | 301.47 | 163.88 | 301.28 | 163.99 | 301.28 | 181.23 | 300.55 |
| 182.65 | 300.48 | 183.07 | 300.44 | 185.11 | 300.37 | 186.15 | 300.29 | 193.78 | 299.77 |
| 195.04 | 299.74 | 196.16 | 299.72 | 198.59 | 299.7 | 199.9 | 299.7 | 201.11 | 299.69 |
| 201.8 | 299.69 | 205.42 | 299.67 | 205.99 | 299.66 | 207.83 | 299.66 | 208.5 | 299.63 |
| 209.35 | 299.61 | 210.13 | 299.61 | 211.14 | 299.65 | 212.58 | 299.7 | 215.24 | 299.8 |
| 215.77 | 299.83 | 218.01 | 299.99 | 219.26 | 300.07 | 220.37 | 300.12 | 221.17 | 300.09 |
| 223.83 | 299.88 | 224.85 | 299.91 | 225.31 | 299.95 | 226.21 | 300.05 | 229.48 | 300.1 |
| 230.82 | 300.08 | 231.37 | 300.06 | 233.41 | 299.97 | 234.4 | 299.94 | 235.78 | 299.91 |
| 237.58 | 299.88 | 243.3 | 299.84 | 244.06 | 299.85 | 245.15 | 299.88 | 247.64 | 299.86 |
| 250.16 | 299.87 | 252.62 | 299.84 | 255.81 | 299.81 | 255.88 | 299.8 | 256.82 | 299.77 |
| 256.88 | 299.74 | 260.26 | 299.7 | 260.85 | 299.71 | 262.5 | 299.71 | 263.3 | 299.72 |
| 267.58 | 299.69 | 271.85 | 299.67 | 274.43 | 299.67 | 274.48 | 299.68 | 278.02 | 299.68 |
| 279.94 | 299.66 | 280.65 | 299.64 | 283.13 | 299.61 | 288.74 | 299.61 | 291.21 | 299.6 |
| 293.75 | 299.55 | 295.07 | 299.52 | 297.12 | 299.5 | 297.73 | 299.49 | 300.48 | 299.47 |
| 302.7 | 299.44 | 304.52 | 299.43 | 304.62 | 299.42 | 306.12 | 299.42 | 307.29 | 299.43 |
| 309.93 | 299.43 | 310.41 | 299.45 | 311.41 | 299.46 | 312.85 | 299.41 | 313.32 | 299.4 |
| 313.82 | 299.37 | 314.24 | 299.33 | 314.86 | 299.31 | 315.27 | 299.31 | 316.96 | 299.28 |
| 318.41 | 299.24 | 319.87 | 299.24 | 321 | 299.28 | 323.38 | 299.33 | 323.68 | 299.34 |
| 325.07 | 299.36 | 326.6 | 299.39 | 327.3 | 299.39 | 328.02 | 299.4 | 328.94 | 299.39 |
| 329.05 | 299.38 | 329.71 | 299.4 | 334.55 | 299.49 | 336.48 | 299.53 | 340.86 | 299.63 |
| 341.95 | 299.62 | 343.63 | 299.57 | 344.22 | 299.62 | 345.52 | 299.75 | 347.51 | 299.79 |
| 350.59 | 299.86 | 355.47 | 299.99 | 359.57 | 300.11 | 359.81 | 300.11 | 361.14 | 300.14 |
| 364.13 | 300.2 | 366.81 | 300.25 | 368.55 | 300.25 | 370.46 | 300.27 | 371.28 | 300.29 |
| 374.19 | 300.35 | 375.81 | 300.4 | 376.46 | 300.41 | 376.89 | 300.4 | 378.44 | 300.38 |
| 379.91 | 300.37 | 382.21 | 300.31 | 389.8 | 300.05 | 390.18 | 300.05 | 391.25 | 300.02 |
| 392.43 | 300 | 393.81 | 299.96 | 394.51 | 299.93 | 395.79 | 299.89 | 397.89 | 299.79 |
| 398.78 | 299.79 | 403.38 | 299.85 | 404.68 | 299.88 | 406.68 | 299.91 | 408.32 | 299.94 |
| 409.3 | 299.94 | 409.84 | 299.95 | 411.21 | 299.96 | 416.53 | 299.96 | 421.75 | 300.01 |
| 422.09 | 300.02 | 431.47 | 300.16 | 434.1 | 300.19 | 434.59 | 300.2 | 435.28 | 300.2 |
| 436.29 | 300.22 | 436.64 | 300.2 | 439.47 | 300.27 | 441.82 | 300.32 | 444.5 | 300.36 |
| 445.63 | 300.38 | 449.97 | 300.4 | 450.98 | 300.4 | 454.32 | 300.41 | 457.72 | 300.41 |
| 458.03 | 300.4 | 460.58 | 300.37 | 463.14 | 300.36 | 470.05 | 300.33 | 471.25 | 300.32 |
| 475.38 | 300.26 | 475.49 | 300.25 | 479.15 | 300.11 | 483.15 | 300.23 | 485.47 | 300.36 |
| 486.18 | 300.37 | 488.05 | 300.45 | 491.22 | 300.55 | 494.67 | 300.67 | 495.51 | 300.67 |
| 496.35 | 300.64 | 497.06 | 300.64 | 498.5 | 300.61 | 499.52 | 300.63 | 500.24 | 300.63 |
| 503.68 | 300.67 | 505.79 | 300.68 | 507.46 | 300.7 | 510.5 | 300.84 | 512.48 | 300.94 |
| 519.35 | 301.27 | 519.73 | 301.29 | 523.17 | 301.51 | 524.9 | 301.63 | 525.57 | 301.66 |
| 528.83 | 301.88 | 535.25 | 302.31 | 537.08 | 302.47 | 538.43 | 302.57 | 544.59 | 303.1 |
| 546.56 | 303.24 | 548.62 | 303.37 | 549.84 | 303.42 | 551.11 | 303.48 | 555.12 | 303.47 |
| 555.73 | 303.59 | 556 | 303.63 | 559.84 | 303.84 | 566.86 | 304.24 | 568.29 | 304.32 |
| 570.43 | 304.43 | 575.33 | 304.67 | 576.32 | 304.7 | 577.44 | 304.71 | 579.47 | 304.71 |
| 581.43 | 304.7 | 582.18 | 304.71 | 584.19 | 304.79 | 585.2 | 304.82 | 589.85 | 305.08 |
| 590.79 | 305.09 | 593.38 | 305.13 | 594.97 | 305.15 | 596.7 | 305.19 | 601.9 | 305.29 |
| 602.6 | 305.27 | 603.73 | 305.22 | 604.42 | 305.21 | 605.44 | 305.21 | 607.89 | 305.23 |
| 608.62 | 305.22 | 608.87 | 305.23 | 609.38 | 305.28 | 610 | 305.31 | 612.04 | 305.38 |
| 613.63 | 305.4 | 614.51 | 305.43 | 616.75 | 305.54 | 617.89 | 305.59 | 618.76 | 305.62 |
| 620.37 | 305.65 | 622.59 | 305.65 | 624.22 | 305.63 | 625 | 305.63 | 628 | 305.64 |
| 629.8 | 305.65 | 630.63 | 305.67 | 631.93 | 305.71 | 633.11 | 305.74 | 634.06 | 305.79 |
| 634.94 | 305.8 | 638.26 | 306 | 639.76 | 306.04 | 641.89 | 306.09 | 643.36 | 306.11 |
| 645.05 | 306.09 | 645.75 | 306.06 | 646.1 | 306.06 | 647.4 | 306.13 | 649.39 | 306.25 |
| 650.13 | 306.29 | 651.99 | 306.36 | 652.89 | 306.39 | 654.71 | 306.42 | 656.03 | 306.43 |
| 656.87 | 306.43 | 658.57 | 306.48 | 659.4 | 306.51 | 661.1 | 306.58 | 662.35 | 306.62 |
| 663.96 | 306.63 | 664.14 | 306.64 | 664.88 | 306.64 | 666.4 | 306.69 | 667.3 | 306.77 |
| 668.22 | 306.8 | 669.91 | 306.87 | 671.85 | 306.98 | 672.99 | 307.06 | 674.9 | 307.2 |
| 677.47 | 307.4 | 681.02 | 307.62 | 685.14 | 307.92 | 685.42 | 307.92 | 686.65 | 307.95 |
| 692.46 | 308.02 | 695.41 | 308.04 | 696.15 | 308.05 | 697.21 | 308.16 | 698.06 | 308.23 |
| 698.33 | 308.23 | 699.44 | 308.29 | 700.45 | 308.33 | 701.06 | 308.34 | 701.6 | 308.33 |
| 701.93 | 308.31 | 702.61 | 308.3 | 703.1 | 308.33 | 703.97 | 308.4 | 706.92 | 308.61 |
| 707.66 | 308.68 | 708.66 | 308.74 | 711.29 | 308.86 | 712.22 | 308.89 | 713.68 | 308.96 |
| 715.25 | 309.02 | 716.44 | 309.01 | 717.77 | 309.03 | 718.5 | 309.06 | 720.6 | 309.13 |
| 723.52 | 309.21 | 723.59 | 309.22 | 725.39 | 309.28 | 728.57 | 309.4 | 730.25 | 309.48 |
| 732.18 | 309.59 | 734.51 | 309.71 | 735.5 | 309.75 | 735.97 | 309.76 | 737.17 | 309.84 |
| 738.18 | 309.86 | 739.15 | 309.9 | 742.27 | 310.04 | 747.04 | 310.3 | 751.08 | 310.53 |
| 754.25 | 310.69 | 772.94 | 311.64 | 783.66 | 312.37 | 784.87 | 312.45 | 785.21 | 312.46 |
| 786.36 | 312.54 | 786.75 | 312.59 | 792.92 | 313.25 | 793.62 | 313.32 | 794.67 | 313.44 |
| 799.83 | 314.06 | 799.89 | 314.06 | 801.72 | 314.18 | 802.57 | 314.22 | 804.51 | 314.33 |
| 805.56 | 314.38 | 807.97 | 314.46 | 809.58 | 314.51 | 812.59 | 314.59 | 812.88 | 314.59 |
| 814.61 | 314.62 | 817.08 | 314.65 | 817.84 | 314.65 | 819.58 | 314.66 | 820.09 | 314.69 |
| 821.15 | 314.68 | 824.26 | 314.64 | 824.63 | 314.57 | 826.03 | 314.64 | 826.29 | 314.69 |
| 828.84 | 314.92 | 833.82 | 315.45 | 835.45 | 315.54 | 835.53 | 315.54 | 837.35 | 315.63 |
| 838.8 | 315.68 | 839.85 | 315.67 | 840.9 | 315.7 | 844.26 | 315.78 | 845.64 | 315.79 |
| 846.06 | 315.78 | 848.05 | 315.63 | 848.55 | 315.62 | 848.63 | 315.66 | 850.63 | 315.9 |
| 854.42 | 316.2 | 855.33 | 316.27 | 855.6 | 316.3 | 859.97 | 316.71 | 860.89 | 316.82 |
| 865.07 | 317.18 | 869.71 | 317.54 | 873.36 | 317.83 | 874.21 | 317.9 | 876.82 | 318.14 |
| 881.23 | 318.66 | 882.95 | 318.86 | 884.02 | 318.97 | 884.36 | 319.02 | 884.97 | 319.08 |
| 887.14 | 319.37 | 889.58 | 319.7 | 892.36 | 320.12 | 894.26 | 320.4 | 895.96 | 320.68 |
| 896.09 | 320.71 | 898.39 | 321.13 | 899.3 | 321.24 | 903.14 | 321.67 | 905.8 | 321.86 |
| 907.27 | 321.96 | 907.45 | 321.98 | 908.8 | 322.06 | 911.09 | 322.18 | 912.56 | 322.26 |
| 913.71 | 322.3 | 915.15 | 322.37 | 917.49 | 322.44 | 918.22 | 322.47 | 920.1 | 322.56 |
| 920.44 | 322.58 | 922.06 | 322.64 | 924.74 | 322.77 | 926.43 | 322.84 | 927.27 | 322.85 |
| 929.45 | 322.89 | 929.63 | 322.88 | 932.38 | 322.83 | 932.5 | 322.84 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 155.39 | .04 | 519.35 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 155.39 | 519.35 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2324.57*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 323.79 | 1.17 | 323.68 | 2.27 | 323.59 | 6.32 | 323.33 | 9.37 | 323.11 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 14.86 | 322.82 | 15.53 | 322.78 | 21.19 | 322.29 | 21.6 | 322.25 | 22.07 | 322.23 |
| 23.73 | 322.02 | 24.21 | 321.91 | 25.31 | 321.59 | 26.84 | 321.13 | 27.17 | 321.04 |
| 28.68 | 320.69 | 29.77 | 320.4 | 30.38 | 320.22 | 31.12 | 320.05 | 32.54 | 319.71 |
| 33.85 | 319.43 | 36.36 | 318.83 | 37.43 | 318.64 | 38.99 | 318.51 | 42.15 | 318.16 |
| 42.79 | 318.1 | 43.2 | 318.08 | 45.51 | 317.81 | 46.81 | 317.67 | 47.52 | 317.57 |
| 47.86 | 317.5 | 50.85 | 316.99 | 51.58 | 316.89 | 52.31 | 316.78 | 54.03 | 316.47 |
| 55 | 316.3 | 55.25 | 316.24 | 56.28 | 316.05 | 57.85 | 315.74 | 58.28 | 315.66 |
| 58.96 | 315.5 | 60.01 | 315.28 | 61.59 | 314.91 | 62.85 | 314.68 | 65.44 | 314.23 |
| 67.14 | 313.89 | 68.08 | 313.71 | 71.96 | 313.1 | 72.08 | 313.07 | 72.5 | 313.02 |
| 73.52 | 312.86 | 75.44 | 312.49 | 77.26 | 312.23 | 78.15 | 312.09 | 79.84 | 311.84 |
| 80.9 | 311.7 | 82.51 | 311.51 | 84.24 | 311.23 | 85.64 | 311.01 | 86.19 | 310.9 |
| 86.67 | 310.85 | 87.09 | 310.79 | 88.27 | 310.56 | 90.35 | 310.21 | 90.79 | 310.11 |
| 92.62 | 309.65 | 94.58 | 309.2 | 95.14 | 309.05 | 96.99 | 308.6 | 99.56 | 307.88 |
| 102.46 | 307.2 | 103.22 | 307.05 | 106.31 | 306.5 | 109.97 | 305.89 | 111.1 | 305.74 |
| 112.23 | 305.61 | 113.21 | 305.44 | 115.96 | 305.09 | 118.67 | 304.73 | 119.81 | 304.5 |
| 122.45 | 303.98 | 123.74 | 303.74 | 126.04 | 303.24 | 126.21 | 303.22 | 128.63 | 302.79 |
| 130.49 | 302.47 | 131.44 | 302.37 | 132.65 | 302.25 | 138.59 | 301.57 | 138.96 | 301.53 |
| 143.54 | 301.14 | 147.71 | 300.79 | 148.92 | 300.72 | 149.4 | 300.71 | 150.77 | 300.65 |
| 153.19 | 300.53 | 157.42 | 300.35 | 157.53 | 300.35 | 174.76 | 299.64 | 176.18 | 299.57 |
| 176.59 | 299.52 | 178.63 | 299.46 | 187.3 | 298.97 | 188.56 | 298.94 | 189.68 | 298.92 |
| 192.11 | 298.9 | 193.42 | 298.9 | 194.63 | 298.89 | 197.53 | 298.89 | 198.94 | 298.88 |
| 200.45 | 298.88 | 200.87 | 298.87 | 201.34 | 298.88 | 202.01 | 298.86 | 202.86 | 298.85 |
| 203.65 | 298.86 | 204.66 | 298.89 | 206.09 | 298.94 | 208.75 | 299.04 | 209.29 | 299.07 |
| 212.04 | 299.29 | 212.77 | 299.33 | 213.88 | 299.4 | 214.51 | 299.39 | 216.3 | 299.26 |
| 217.34 | 299.19 | 218.36 | 299.21 | 218.82 | 299.24 | 219.77 | 299.32 | 222.28 | 299.34 |
| 222.99 | 299.34 | 224.32 | 299.32 | 224.87 | 299.3 | 226.92 | 299.21 | 229.28 | 299.16 |
| 231.18 | 299.13 | 233.87 | 299.1 | 236.8 | 299.07 | 238.65 | 299.1 | 241.14 | 299.08 |
| 243.65 | 299.08 | 245.25 | 299.05 | 246.12 | 299.05 | 249.37 | 299 | 250.31 | 298.95 |
| 250.37 | 298.92 | 252.86 | 298.89 | 253.75 | 298.87 | 255.99 | 298.9 | 258.04 | 298.9 |
| 259.72 | 298.88 | 262.93 | 298.86 | 268.02 | 298.86 | 268.1 | 298.87 | 270.84 | 298.87 |
| 271.12 | 298.86 | 272.41 | 298.86 | 274.14 | 298.84 | 277.56 | 298.81 | 278.26 | 298.82 |
| 279.45 | 298.82 | 280.6 | 298.83 | 284.69 | 298.83 | 285.22 | 298.82 | 288.55 | 298.74 |
| 288.62 | 298.73 | 290.59 | 298.73 | 291.2 | 298.72 | 293.96 | 298.69 | 294.83 | 298.69 |
| 296.17 | 298.67 | 296.57 | 298.67 | 299.59 | 298.65 | 300.76 | 298.66 | 303.51 | 298.66 |
| 303.89 | 298.68 | 304.88 | 298.68 | 306.79 | 298.63 | 307.29 | 298.6 | 307.71 | 298.55 |
| 308.33 | 298.53 | 308.74 | 298.53 | 310.43 | 298.5 | 310.83 | 298.5 | 311.88 | 298.47 |
| 313.65 | 298.47 | 313.87 | 298.48 | 316.11 | 298.53 | 318.81 | 298.57 | 319.65 | 298.59 |
| 321.02 | 298.61 | 322.23 | 298.61 | 322.76 | 298.6 | 323.41 | 298.61 | 328.22 | 298.7 |
| 330.14 | 298.74 | 334.49 | 298.82 | 334.74 | 298.83 | 335.58 | 298.82 | 337.24 | 298.79 |
| 338.14 | 298.85 | 339.11 | 298.93 | 341.1 | 298.97 | 344.15 | 299.04 | 349 | 299.17 |
| 352.04 | 299.26 | 354.63 | 299.32 | 357.6 | 299.36 | 359.33 | 299.39 | 360.26 | 299.41 |
| 361.99 | 299.41 | 363.89 | 299.43 | 364.7 | 299.45 | 367.59 | 299.51 | 368.8 | 299.55 |
| 369.43 | 299.56 | 370.28 | 299.56 | 371.82 | 299.55 | 373.28 | 299.55 | 374.12 | 299.54 |
| 375.56 | 299.5 | 383.1 | 299.32 | 383.48 | 299.31 | 384.54 | 299.3 | 385.71 | 299.28 |
| 386.35 | 299.26 | 387.08 | 299.25 | 388.74 | 299.2 | 389.05 | 299.2 | 389.83 | 299.17 |
| 391.52 | 299.12 | 392.01 | 299.13 | 394.34 | 299.16 | 395.06 | 299.16 | 396.59 | 299.19 |
| 397.87 | 299.22 | 398.09 | 299.22 | 399.67 | 299.26 | 400.9 | 299.28 | 401.86 | 299.29 |
| 402.47 | 299.28 | 403 | 299.29 | 404.36 | 299.3 | 406.27 | 299.3 | 407.23 | 299.29 |
| 407.7 | 299.3 | 410.69 | 299.3 | 414.82 | 299.34 | 415.16 | 299.35 | 424.48 | 299.48 |
| 427.09 | 299.51 | 428.11 | 299.51 | 428.26 | 299.52 | 429.27 | 299.53 | 429.62 | 299.52 |
| 432.43 | 299.59 | 434.76 | 299.64 | 437.42 | 299.69 | 438.54 | 299.7 | 442.86 | 299.72 |
| 450.86 | 299.72 | 453.39 | 299.68 | 455.94 | 299.67 | 462.8 | 299.64 | 463.99 | 299.63 |
| 468.09 | 299.57 | 468.21 | 299.56 | 471.83 | 299.45 | 472.46 | 299.46 | 475.81 | 299.54 |
| 478.12 | 299.64 | 478.82 | 299.65 | 479.94 | 299.69 | 480.68 | 299.71 | 483.82 | 299.76 |
| 487.26 | 299.84 | 488.33 | 299.83 | 489.63 | 299.79 | 491.17 | 299.77 | 492.07 | 299.79 |
| 492.79 | 299.79 | 494.42 | 299.82 | 496.2 | 299.83 | 498.3 | 299.85 | 499.95 | 299.88 |
| 500.77 | 299.92 | 502.98 | 300.01 | 504.94 | 300.1 | 511.77 | 300.42 | 512.14 | 300.43 |
| 516.54 | 300.73 | 517.46 | 300.79 | 517.86 | 300.8 | 518.16 | 300.83 | 519.31 | 300.9 |
| 521.05 | 301.02 | 527.35 | 301.45 | 529.14 | 301.61 | 532.05 | 301.85 | 536.5 | 302.24 |
| 538.43 | 302.39 | 540.45 | 302.51 | 541.15 | 302.54 | 542.04 | 302.59 | 542.89 | 302.62 |
| 543.46 | 302.63 | 546.24 | 302.64 | 546.82 | 302.65 | 547.42 | 302.76 | 547.68 | 302.78 |
| 551.45 | 302.99 | 558.33 | 303.38 | 559.95 | 303.46 | 561.83 | 303.56 | 563.03 | 303.62 |
| 564.24 | 303.67 | 566.63 | 303.78 | 567.15 | 303.8 | 568.7 | 303.83 | 570.69 | 303.84 |
| 572.6 | 303.83 | 576.31 | 303.94 | 580.86 | 304.16 | 581.78 | 304.18 | 585.29 | 304.22 |
| 587.57 | 304.26 | 590.69 | 304.31 | 592.19 | 304.34 | 592.67 | 304.34 | 593.35 | 304.31 |
| 594.47 | 304.24 | 595.67 | 304.21 | 599.49 | 304.21 | 600 | 304.28 | 600.61 | 304.31 |
| 601.48 | 304.33 | 602.61 | 304.38 | 604.17 | 304.4 | 605.03 | 304.44 | 607.22 | 304.55 |
| 608.78 | 304.62 | 610.77 | 304.66 | 612.15 | 304.66 | 614.54 | 304.63 | 618.24 | 304.63 |
| 620.01 | 304.64 | 623.25 | 304.72 | 623.71 | 304.75 | 624.47 | 304.78 | 625.05 | 304.79 |
| 627.47 | 304.95 | 628.3 | 305 | 629.77 | 305.04 | 631.86 | 305.09 | 633.3 | 305.1 |
| 634.32 | 305.09 | 634.95 | 305.07 | 635.64 | 305.03 | 635.99 | 305.03 | 637.01 | 305.1 |
| 637.26 | 305.11 | 639.21 | 305.24 | 639.94 | 305.28 | 641.76 | 305.36 | 643.09 | 305.4 |
| 645.72 | 305.42 | 646.54 | 305.42 | 649.02 | 305.48 | 650.68 | 305.55 | 651.92 | 305.59 |
| 653.09 | 305.61 | 654.18 | 305.61 | 654.39 | 305.6 | 655.68 | 305.64 | 656.56 | 305.69 |
| 656.76 | 305.71 | 658.86 | 305.78 | 660.05 | 305.84 | 662.33 | 305.98 | 664.21 | 306.12 |
| 666.73 | 306.32 | 670.21 | 306.52 | 674.25 | 306.79 | 675.73 | 306.83 | 681.42 | 306.94 |
| 685.03 | 306.99 | 686.08 | 307.09 | 686.91 | 307.15 | 689.25 | 307.25 | 690.16 | 307.26 |
| 690.71 | 307.24 | 691.37 | 307.24 | 692.7 | 307.33 | 695.59 | 307.52 | 696.31 | 307.58 |
| 696.65 | 307.59 | 697.29 | 307.63 | 699.87 | 307.74 | 700.79 | 307.77 | 702.21 | 307.84 |
| 703.19 | 307.88 | 704.23 | 307.9 | 704.92 | 307.9 | 706.94 | 307.95 | 709 | 308.02 |
| 711.86 | 308.1 | 711.92 | 308.11 | 713.69 | 308.17 | 716.81 | 308.29 | 718.46 | 308.36 |
| 720.35 | 308.47 | 722.63 | 308.59 | 723.6 | 308.63 | 724.06 | 308.64 | 725.24 | 308.71 |
| 726.23 | 308.75 | 727.18 | 308.78 | 728.07 | 308.82 | 730.24 | 308.93 | 738.87 | 309.41 |
| 741.97 | 309.57 | 757.02 | 310.38 | 760.3 | 310.55 | 770.8 | 311.26 | 771.81 | 311.33 |
| 772.78 | 311.37 | 773.83 | 311.47 | 780.56 | 312.15 | 781.59 | 312.26 | 786.65 | 312.83 |
| 786.71 | 312.83 | 789.33 | 312.99 | 792.26 | 313.14 | 794.62 | 313.22 | 796.2 | 313.27 |
| 797.39 | 313.3 | 798.84 | 313.36 | 799.43 | 313.37 | 801.13 | 313.41 | 803.55 | 313.46 |
| 804.3 | 313.47 | 806 | 313.51 | 806.5 | 313.53 | 807.54 | 313.54 | 810.59 | 313.55 |
| 810.95 | 313.5 | 812.32 | 313.57 | 812.58 | 313.61 | 815.08 | 313.83 | 819.96 | 314.31 |
| 821.56 | 314.4 | 821.63 | 314.41 | 823.03 | 314.49 | 824.16 | 314.54 | 824.84 | 314.56 |
| 825.29 | 314.55 | 825.87 | 314.56 | 828.51 | 314.66 | 830.19 | 314.71 | 831.54 | 314.73 |
| 831.95 | 314.72 | 833.9 | 314.63 | 834.39 | 314.62 | 834.47 | 314.65 | 836.43 | 314.87 |
| 841.04 | 315.23 | 841.3 | 315.26 | 845.58 | 315.67 | 846.49 | 315.78 | 850.58 | 316.14 |
| 858.71 | 316.8 | 859.54 | 316.87 | 862.1 | 317.11 | 868.67 | 317.93 | 869.15 | 317.98 |
| 870.09 | 318.1 | 874.61 | 318.76 | 879.19 | 319.52 | 880.04 | 319.67 | 880.99 | 319.86 |
| 883.24 | 320.3 | 884.13 | 320.41 | 887.89 | 320.84 | 890.5 | 321.05 | 892.63 | 321.21 |
| 893.44 | 321.26 | 895.69 | 321.39 | 897.12 | 321.46 | 898.25 | 321.51 | 899.67 | 321.58 |
| 901.96 | 321.65 | 902.68 | 321.68 | 904.85 | 321.79 | 906.44 | 321.85 | 909.07 | 321.98 |
| 910.95 | 322.06 | 913.68 | 322.11 | 915.43 | 322.09 | 916.66 | 322.08 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 148.92 | .04 | 511.77 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 148.92 | 511.77 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2278.13*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 322.55 | 1.12 | 322.41 | 2.18 | 322.31 | 6.04 | 322 | 8.96 | 321.73 |
| 14.21 | 321.39 | 14.85 | 321.33 | 20.27 | 320.75 | 20.66 | 320.7 | 21.25 | 320.66 |
| 22.7 | 320.48 | 23.16 | 320.37 | 24.22 | 320.02 | 25.55 | 319.56 | 25.99 | 319.42 |
| 27.43 | 319.02 | 28.48 | 318.68 | 29.07 | 318.48 | 30.9 | 317.98 | 31.13 | 317.91 |
| 32.38 | 317.59 | 32.94 | 317.44 | 34.78 | 316.96 | 35.8 | 316.76 | 36.36 | 316.71 |
| 37.3 | 316.66 | 40.32 | 316.39 | 40.93 | 316.35 | 41.32 | 316.34 | 42.55 | 316.21 |
| 44.78 | 315.99 | 45.46 | 315.91 | 45.78 | 315.85 | 48.71 | 315.37 | 49.34 | 315.3 |
| 50.04 | 315.21 | 51.68 | 314.94 | 52.61 | 314.78 | 53.84 | 314.54 | 56.08 | 314.09 |
| 56.4 | 314.01 | 57.4 | 313.8 | 58.92 | 313.44 | 60.12 | 313.22 | 62.6 | 312.79 |
| 65.12 | 312.28 | 69.09 | 311.66 | 69.48 | 311.62 | 70.33 | 311.48 | 72.16 | 311.12 |
| 75.16 | 310.69 | 76.26 | 310.54 | 78.93 | 310.21 | 81.92 | 309.76 | 82.45 | 309.65 |
| 83.31 | 309.56 | 84.44 | 309.36 | 86.43 | 309.05 | 86.85 | 308.97 | 88.03 | 308.7 |
| 90.48 | 308.19 | 91.01 | 308.07 | 92.4 | 307.78 | 92.78 | 307.69 | 94.08 | 307.36 |
| 95.24 | 307.06 | 98.02 | 306.44 | 98.74 | 306.31 | 99.13 | 306.23 | 99.76 | 306.13 |
| 101.7 | 305.8 | 105.19 | 305.23 | 106.28 | 305.09 | 107.36 | 304.96 | 108.3 | 304.77 |
| 110.92 | 304.41 | 113.52 | 304.05 | 113.89 | 303.96 | 117.13 | 303.24 | 118.37 | 302.97 |
| 119.42 | 302.72 | 120.57 | 302.43 | 120.73 | 302.41 | 123.05 | 301.95 | 124.83 | 301.6 |
| 125.73 | 301.51 | 126.89 | 301.38 | 132.58 | 300.68 | 137.31 | 300.22 | 138.11 | 300.14 |
| 140.37 | 299.93 | 141.3 | 299.84 | 142.46 | 299.78 | 143.37 | 299.75 | 144.3 | 299.71 |
| 146.73 | 299.59 | 150.95 | 299.42 | 151.06 | 299.42 | 168.28 | 298.73 | 168.41 | 298.73 |
| 169.7 | 298.67 | 170.12 | 298.61 | 171.24 | 298.57 | 172.15 | 298.55 | 173.2 | 298.5 |
| 179.22 | 298.23 | 180.82 | 298.16 | 182.08 | 298.14 | 182.96 | 298.12 | 184.56 | 298.1 |
| 190.49 | 298.1 | 191.04 | 298.09 | 194.39 | 298.09 | 195.2 | 298.1 | 195.28 | 298.09 |
| 196.37 | 298.09 | 197.16 | 298.1 | 198.17 | 298.13 | 199.6 | 298.18 | 202.27 | 298.28 |
| 202.8 | 298.32 | 205.03 | 298.51 | 207.39 | 298.68 | 208.02 | 298.67 | 208.81 | 298.62 |
| 210.85 | 298.5 | 211.16 | 298.51 | 211.86 | 298.51 | 213.22 | 298.58 | 216.49 | 298.58 |
| 217.83 | 298.56 | 219.72 | 298.49 | 220.42 | 298.46 | 224.58 | 298.37 | 227.37 | 298.34 |
| 230.3 | 298.3 | 232.15 | 298.32 | 234.64 | 298.29 | 237.15 | 298.28 | 239.61 | 298.25 |
| 241.63 | 298.21 | 242.87 | 298.19 | 243.81 | 298.14 | 243.87 | 298.1 | 245.64 | 298.07 |
| 247.24 | 298.05 | 249.49 | 298.08 | 251.53 | 298.08 | 253.21 | 298.06 | 256.41 | 298.04 |
| 260.14 | 298.04 | 261.4 | 298.05 | 263.56 | 298.05 | 264.32 | 298.06 | 264.6 | 298.05 |
| 265.9 | 298.05 | 266.9 | 298.04 | 267.62 | 298.04 | 270.1 | 298.03 | 271.04 | 298.02 |
| 271.74 | 298.03 | 274.08 | 298.05 | 278.17 | 298.05 | 280.71 | 297.99 | 282.03 | 297.95 |
| 284.07 | 297.95 | 284.68 | 297.94 | 287.43 | 297.92 | 288.31 | 297.92 | 289.65 | 297.9 |
| 290.05 | 297.9 | 293.07 | 297.88 | 294.23 | 297.89 | 296.98 | 297.89 | 298.35 | 297.91 |
| 299.79 | 297.86 | 300.26 | 297.85 | 300.76 | 297.82 | 301.18 | 297.76 | 302.2 | 297.75 |
| 303.35 | 297.73 | 303.9 | 297.73 | 305.35 | 297.7 | 307.64 | 297.7 | 308.53 | 297.73 |
| 310.87 | 297.76 | 311.17 | 297.77 | 314.74 | 297.82 | 316.47 | 297.82 | 321.9 | 297.9 |
| 323.8 | 297.94 | 328.12 | 298.02 | 329.2 | 298.02 | 330.85 | 298 | 331.43 | 298.04 |
| 331.74 | 298.05 | 332.71 | 298.12 | 337.71 | 298.22 | 339.24 | 298.26 | 340.36 | 298.28 |
| 342.53 | 298.34 | 346.58 | 298.46 | 348.12 | 298.5 | 351.07 | 298.53 | 352.79 | 298.56 |
| 353.71 | 298.57 | 355.43 | 298.57 | 356.34 | 298.58 | 358.12 | 298.62 | 359.1 | 298.63 |
| 360.14 | 298.65 | 362.6 | 298.71 | 362.82 | 298.72 | 363.53 | 298.72 | 363.66 | 298.73 |
| 365.19 | 298.72 | 367.47 | 298.72 | 368.91 | 298.7 | 376.4 | 298.58 | 376.77 | 298.58 |
| 378.99 | 298.56 | 379.31 | 298.55 | 380.35 | 298.54 | 381.04 | 298.52 | 382 | 298.51 |
| 384.38 | 298.46 | 385.25 | 298.46 | 387.56 | 298.5 | 388.28 | 298.5 | 389.79 | 298.53 |
| 391.28 | 298.57 | 392.86 | 298.6 | 393.39 | 298.62 | 394.08 | 298.63 | 396.16 | 298.63 |
| 397.51 | 298.64 | 398.67 | 298.64 | 399.93 | 298.62 | 400.83 | 298.63 | 402.76 | 298.63 |
| 403.8 | 298.64 | 405.95 | 298.65 | 407.9 | 298.67 | 408.24 | 298.67 | 417.49 | 298.8 |
| 421.1 | 298.83 | 421.25 | 298.84 | 422.25 | 298.85 | 422.6 | 298.84 | 425.39 | 298.91 |
| 427.7 | 298.96 | 431.46 | 299.03 | 433.44 | 299.03 | 435.75 | 299.04 | 443.69 | 299.04 |
| 446.21 | 298.99 | 448.74 | 298.99 | 455.55 | 298.94 | 456.28 | 298.94 | 456.73 | 298.93 |
| 460.92 | 298.88 | 462.94 | 298.82 | 464.52 | 298.79 | 468.13 | 298.84 | 470.76 | 298.92 |
| 471.22 | 298.93 | 471.47 | 298.92 | 472.57 | 298.96 | 472.9 | 298.96 | 473.92 | 298.98 |
| 476.43 | 298.98 | 479.84 | 299.01 | 480.67 | 299 | 482.2 | 298.95 | 483.73 | 298.92 |
| 484.62 | 298.95 | 485.33 | 298.95 | 486.96 | 298.98 | 490.81 | 299.02 | 491.46 | 299.03 |
| 492.45 | 299.06 | 495.45 | 299.17 | 497.4 | 299.26 | 504.18 | 299.56 | 504.55 | 299.57 |
| 508.85 | 299.87 | 509.76 | 299.93 | 510.1 | 299.94 | 510.44 | 299.97 | 511.57 | 300.04 |
| 519.45 | 300.59 | 521.21 | 300.75 | 522.5 | 300.86 | 528.41 | 301.39 | 530.3 | 301.55 |
| 532.28 | 301.66 | 534.16 | 301.74 | 534.67 | 301.77 | 538.52 | 301.83 | 539.11 | 301.92 |
| 539.36 | 301.94 | 543.06 | 302.14 | 549.79 | 302.51 | 551.16 | 302.59 | 553.45 | 302.7 |
| 557.93 | 302.89 | 558.44 | 302.91 | 559.96 | 302.94 | 561.9 | 302.96 | 563.78 | 302.97 |
| 564.29 | 302.98 | 565.44 | 303.02 | 567.41 | 303.06 | 571.87 | 303.24 | 572.77 | 303.26 |
| 580.9 | 303.36 | 581.5 | 303.38 | 583.26 | 303.4 | 584.11 | 303.35 | 585.2 | 303.26 |
| 585.86 | 303.23 | 586.84 | 303.21 | 588.1 | 303.21 | 590.06 | 303.19 | 590.61 | 303.27 |
| 590.93 | 303.29 | 591.64 | 303.31 | 593.17 | 303.38 | 593.89 | 303.4 | 594.7 | 303.4 |
| 595.55 | 303.45 | 597.7 | 303.56 | 598.78 | 303.62 | 599.63 | 303.65 | 600.82 | 303.67 |
| 602.29 | 303.66 | 603.3 | 303.66 | 604.86 | 303.63 | 610.23 | 303.63 | 612.26 | 303.68 |
| 613.73 | 303.72 | 615.31 | 303.79 | 617.53 | 303.95 | 618.45 | 304 | 619.78 | 304.05 |
| 621.83 | 304.09 | 623.24 | 304.1 | 624.24 | 304.08 | 624.86 | 304.05 | 625.53 | 304 |
| 625.87 | 304 | 627.12 | 304.09 | 629.03 | 304.22 | 629.74 | 304.26 | 632.39 | 304.39 |
| 632.83 | 304.4 | 634.14 | 304.41 | 636.21 | 304.41 | 637.45 | 304.43 | 638.64 | 304.46 |
| 641.73 | 304.57 | 643.01 | 304.58 | 643.19 | 304.59 | 643.9 | 304.57 | 645.17 | 304.59 |
| 646.22 | 304.65 | 648.28 | 304.72 | 648.73 | 304.73 | 650.6 | 304.83 | 651.68 | 304.9 |
| 653.52 | 305.04 | 655.99 | 305.24 | 659.4 | 305.43 | 663.36 | 305.67 | 664.81 | 305.72 |
| 670.38 | 305.86 | 673.22 | 305.91 | 673.92 | 305.93 | 674.94 | 306.02 | 675.76 | 306.07 |
| 678.05 | 306.17 | 679.16 | 306.18 | 679.8 | 306.17 | 680.13 | 306.18 | 681.43 | 306.26 |
| 684.26 | 306.42 | 685.3 | 306.49 | 685.93 | 306.52 | 688.46 | 306.62 | 689.35 | 306.65 |
| 691.71 | 306.75 | 692.26 | 306.77 | 693.4 | 306.79 | 694.68 | 306.82 | 695.38 | 306.85 |
| 697.39 | 306.92 | 698.38 | 306.95 | 700.26 | 307 | 701.99 | 307.05 | 705.05 | 307.17 |
| 706.66 | 307.24 | 708.52 | 307.35 | 710.75 | 307.47 | 711.71 | 307.51 | 712.15 | 307.52 |
| 713.31 | 307.59 | 714.91 | 307.65 | 718.21 | 307.82 | 722.78 | 308.07 | 726.66 | 308.29 |
| 728.02 | 308.36 | 729.7 | 308.46 | 744.44 | 309.28 | 747.65 | 309.46 | 757.94 | 310.15 |
| 758.93 | 310.22 | 759.88 | 310.26 | 760.53 | 310.31 | 760.91 | 310.35 | 766.83 | 310.92 |
| 767.51 | 310.98 | 768.51 | 311.08 | 773.46 | 311.59 | 773.52 | 311.59 | 775.28 | 311.71 |
| 778.96 | 311.9 | 781.28 | 311.98 | 782.82 | 312.03 | 783.99 | 312.06 | 784.92 | 312.11 |
| 785.71 | 312.14 | 785.99 | 312.14 | 787.65 | 312.2 | 790.76 | 312.29 | 792.43 | 312.35 |
| 792.92 | 312.38 | 793.94 | 312.41 | 796.92 | 312.46 | 797.27 | 312.43 | 798.61 | 312.5 |
| 798.87 | 312.54 | 801.32 | 312.73 | 804.63 | 313.04 | 806.1 | 313.17 | 807.66 | 313.27 |
| 807.74 | 313.27 | 809.11 | 313.36 | 810.22 | 313.42 | 810.88 | 313.44 | 811.32 | 313.44 |
| 812.89 | 313.5 | 814.48 | 313.57 | 816.12 | 313.63 | 817.85 | 313.67 | 819.76 | 313.63 |
| 820.24 | 313.63 | 820.32 | 313.65 | 822.24 | 313.85 | 825.88 | 314.12 | 827.01 | 314.21 |
| 831.2 | 314.63 | 832.09 | 314.73 | 833.64 | 314.88 | 836.1 | 315.11 | 840.55 | 315.48 |
| 844.06 | 315.77 | 844.87 | 315.84 | 847.38 | 316.09 | 851.61 | 316.64 | 853.27 | 316.85 |
| 853.82 | 316.93 | 854.29 | 316.98 | 854.62 | 317.04 | 855.21 | 317.12 | 859.63 | 317.82 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 860.41 | 317.96 | 862.3 | 318.31 | 864.12 | 318.64 | 864.99 | 318.81 | 865.88 | 319 |
| 868.09 | 319.48 | 872.65 | 320 | 875.2 | 320.23 | 877.28 | 320.41 | 880.28 | 320.59 |
| 881.69 | 320.67 | 882.79 | 320.72 | 884.18 | 320.79 | 886.43 | 320.86 | 887.13 | 320.89 |
| 888.93 | 320.98 | 889.26 | 320.99 | 890.81 | 321.06 | 892.82 | 321.16 | 892.92 | 321.17 |
| 895.23 | 321.27 | 895.82 | 321.28 | 897.91 | 321.33 | 900.83 | 321.33 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 142.46 | .04 | 504.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 142.46 | 504.18 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2231.70*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 321.3 | 1.07 | 321.15 | 2.08 | 321.02 | 5.77 | 320.67 | 8.55 | 320.35 |
| 13.57 | 319.95 | 14.18 | 319.89 | 19.35 | 319.21 | 19.72 | 319.15 | 20.29 | 319.11 |
| 21.67 | 318.94 | 22.11 | 318.82 | 23.12 | 318.45 | 23.78 | 318.18 | 24.51 | 317.9 |
| 26.19 | 317.35 | 27.75 | 316.74 | 28.42 | 316.52 | 29.71 | 316.12 | 31.1 | 315.69 |
| 33.21 | 315.08 | 33.92 | 314.93 | 34.32 | 314.86 | 35.6 | 314.8 | 38.49 | 314.63 |
| 39.45 | 314.59 | 42.75 | 314.31 | 43.39 | 314.25 | 43.7 | 314.19 | 46.5 | 313.77 |
| 47.77 | 313.64 | 49.34 | 313.41 | 50.22 | 313.26 | 51.36 | 313.03 | 51.4 | 313.03 |
| 52.83 | 312.73 | 53.22 | 312.66 | 53.84 | 312.52 | 54.8 | 312.32 | 56.25 | 311.96 |
| 57.4 | 311.75 | 59.76 | 311.35 | 61.31 | 311.03 | 62.17 | 310.86 | 65.96 | 310.27 |
| 66.32 | 310.24 | 67.14 | 310.1 | 68.89 | 309.75 | 70.56 | 309.52 | 71.36 | 309.4 |
| 71.75 | 309.36 | 72.8 | 309.22 | 75.35 | 308.91 | 76.93 | 308.68 | 78.2 | 308.51 |
| 78.71 | 308.4 | 79.53 | 308.33 | 80.6 | 308.16 | 82.51 | 307.89 | 82.91 | 307.82 |
| 84.58 | 307.51 | 86.37 | 307.19 | 86.88 | 307.09 | 88.2 | 306.85 | 88.9 | 306.7 |
| 90.91 | 306.23 | 92.12 | 305.98 | 93.57 | 305.69 | 94.64 | 305.49 | 96.06 | 305.27 |
| 97.08 | 305.1 | 100.42 | 304.58 | 101.46 | 304.44 | 102.49 | 304.31 | 103.39 | 304.1 |
| 105.89 | 303.74 | 108.37 | 303.36 | 108.72 | 303.28 | 109.41 | 303.1 | 111.82 | 302.49 |
| 113 | 302.21 | 115.1 | 301.62 | 115.26 | 301.59 | 117.46 | 301.11 | 119.17 | 300.73 |
| 120.33 | 300.61 | 121.13 | 300.51 | 126.56 | 299.79 | 127.34 | 299.71 | 131.08 | 299.29 |
| 134 | 298.99 | 134.89 | 298.89 | 136 | 298.83 | 137.84 | 298.77 | 140.26 | 298.66 |
| 144.48 | 298.49 | 144.59 | 298.49 | 161.81 | 297.82 | 161.94 | 297.82 | 163.23 | 297.76 |
| 163.64 | 297.69 | 165.68 | 297.64 | 166.72 | 297.6 | 172.74 | 297.41 | 174.34 | 297.35 |
| 175.6 | 297.33 | 176.72 | 297.32 | 178.08 | 297.3 | 186.54 | 297.3 | 187.9 | 297.31 |
| 188.37 | 297.32 | 189.04 | 297.32 | 190.67 | 297.34 | 191.68 | 297.38 | 193.12 | 297.42 |
| 195.78 | 297.52 | 196.31 | 297.56 | 198.54 | 297.77 | 200.72 | 297.94 | 200.9 | 297.96 |
| 201.69 | 297.95 | 204.35 | 297.82 | 204.66 | 297.81 | 205.37 | 297.81 | 206.73 | 297.84 |
| 209.29 | 297.83 | 211.33 | 297.8 | 213.23 | 297.73 | 214.91 | 297.69 | 216.29 | 297.65 |
| 218.08 | 297.62 | 218.19 | 297.61 | 220.87 | 297.57 | 223.8 | 297.54 | 224.55 | 297.53 |
| 225.65 | 297.53 | 228.13 | 297.51 | 228.46 | 297.5 | 230.65 | 297.49 | 232.24 | 297.46 |
| 233.11 | 297.45 | 235.12 | 297.41 | 236.36 | 297.38 | 237.01 | 297.35 | 237.3 | 297.32 |
| 237.36 | 297.27 | 239.85 | 297.24 | 240.74 | 297.22 | 241.33 | 297.24 | 242.98 | 297.26 |
| 245.02 | 297.26 | 246.7 | 297.24 | 249.9 | 297.22 | 252.32 | 297.23 | 254.93 | 297.23 |
| 254.99 | 297.24 | 261.1 | 297.24 | 263.58 | 297.23 | 264.53 | 297.23 | 265.23 | 297.24 |
| 268.64 | 297.27 | 269.18 | 297.28 | 271.65 | 297.28 | 272.18 | 297.27 | 275.5 | 297.17 |
| 277.55 | 297.17 | 278.16 | 297.16 | 280.91 | 297.15 | 281.78 | 297.15 | 283.12 | 297.13 |
| 284.94 | 297.12 | 289.29 | 297.12 | 290.18 | 297.11 | 290.87 | 297.13 | 291.19 | 297.12 |
| 291.82 | 297.14 | 294.07 | 297.06 | 294.65 | 296.98 | 297.77 | 296.95 | 298.81 | 296.93 |
| 301.41 | 296.93 | 302.29 | 296.95 | 303.62 | 296.96 | 304.62 | 296.98 | 304.92 | 296.98 |
| 308.46 | 297.03 | 310.18 | 297.03 | 315.57 | 297.11 | 321.75 | 297.21 | 321.86 | 297.22 |
| 324.46 | 297.22 | 325.04 | 297.24 | 326.31 | 297.31 | 328.26 | 297.34 | 331.28 | 297.4 |
| 332.79 | 297.44 | 333.9 | 297.46 | 336.06 | 297.52 | 340.08 | 297.64 | 340.31 | 297.65 |
| 341.61 | 297.68 | 344.54 | 297.7 | 348.07 | 297.74 | 348.87 | 297.74 | 350.74 | 297.76 |
| 351.55 | 297.78 | 353.55 | 297.82 | 354.39 | 297.84 | 356.91 | 297.88 | 357.05 | 297.89 |
| 358.56 | 297.89 | 360 | 297.9 | 362.26 | 297.9 | 369.69 | 297.84 | 370.06 | 297.85 |
| 371.11 | 297.84 | 372.58 | 297.84 | 372.89 | 297.83 | 373.62 | 297.83 | 375.26 | 297.81 |
| 376.33 | 297.81 | 377.62 | 297.79 | 381.49 | 297.84 | 384.26 | 297.91 | 384.47 | 297.91 |
| 386.23 | 297.96 | 386.57 | 297.96 | 387.83 | 297.98 | 389.32 | 297.97 | 390.66 | 297.98 |
| 391.82 | 297.98 | 393.07 | 297.96 | 395.87 | 297.96 | 396.91 | 297.97 | 399.05 | 297.98 |
| 400.98 | 298 | 401.32 | 298 | 410.5 | 298.12 | 413.08 | 298.14 | 413.56 | 298.15 |
| 414.24 | 298.15 | 415.57 | 298.16 | 418.35 | 298.23 | 420.65 | 298.28 | 424.38 | 298.35 |
| 426.26 | 298.36 | 436.53 | 298.36 | 439.02 | 298.3 | 441.53 | 298.3 | 448.3 | 298.25 |
| 449.48 | 298.24 | 452.08 | 298.21 | 453.52 | 298.2 | 453.64 | 298.19 | 457.21 | 298.12 |
| 457.83 | 298.13 | 460.79 | 298.15 | 461.13 | 298.15 | 463.86 | 298.21 | 464.11 | 298.2 |
| 465.93 | 298.23 | 466.54 | 298.23 | 469.04 | 298.19 | 472.53 | 298.18 | 473.48 | 298.16 |
| 473.81 | 298.14 | 474.77 | 298.11 | 475.36 | 298.1 | 476.18 | 298.07 | 476.58 | 298.09 |
| 477.88 | 298.11 | 479.16 | 298.14 | 479.49 | 298.14 | 481.25 | 298.17 | 483.31 | 298.19 |
| 483.96 | 298.21 | 484.94 | 298.23 | 487.93 | 298.34 | 496.6 | 298.7 | 496.95 | 298.72 |
| 501.17 | 299.02 | 501.81 | 299.06 | 502.45 | 299.09 | 503.83 | 299.19 | 505.51 | 299.3 |
| 510.43 | 299.64 | 511.54 | 299.73 | 513.27 | 299.9 | 516.06 | 300.14 | 522.17 | 300.7 |
| 525.26 | 300.86 | 527 | 300.93 | 529.66 | 300.99 | 530.22 | 301.01 | 531.05 | 301.1 |
| 534.67 | 301.28 | 541.26 | 301.65 | 542.6 | 301.72 | 544.62 | 301.82 | 544.84 | 301.82 |
| 546.94 | 301.91 | 549.72 | 302.02 | 551.21 | 302.06 | 554.54 | 302.11 | 554.96 | 302.11 |
| 556.58 | 302.15 | 558.51 | 302.19 | 562.88 | 302.33 | 567.13 | 302.38 | 567.69 | 302.38 |
| 569.32 | 302.41 | 571.72 | 302.42 | 572.3 | 302.44 | 573.29 | 302.45 | 574.2 | 302.45 |
| 574.86 | 302.39 | 575.93 | 302.27 | 577.09 | 302.22 | 578.23 | 302.2 | 579.83 | 302.19 |
| 580.69 | 302.17 | 581.23 | 302.26 | 581.82 | 302.3 | 582.24 | 302.31 | 583.74 | 302.39 |
| 585.23 | 302.41 | 586.06 | 302.45 | 587.78 | 302.55 | 588.17 | 302.58 | 589.66 | 302.65 |
| 590.48 | 302.67 | 591.23 | 302.68 | 591.85 | 302.68 | 593.65 | 302.66 | 595.19 | 302.63 |
| 595.92 | 302.63 | 598.74 | 302.62 | 600.44 | 302.62 | 600.64 | 302.63 | 602.43 | 302.66 |
| 603.87 | 302.7 | 605.42 | 302.78 | 607.59 | 302.94 | 607.69 | 302.94 | 608.49 | 303 |
| 609.8 | 303.05 | 611.8 | 303.09 | 613.18 | 303.1 | 614.16 | 303.07 | 614.77 | 303.04 |
| 615.42 | 302.97 | 615.76 | 302.97 | 616.74 | 303.05 | 616.98 | 303.06 | 618.85 | 303.21 |
| 621.29 | 303.35 | 622.14 | 303.39 | 622.57 | 303.4 | 623.85 | 303.41 | 625.09 | 303.4 |
| 625.88 | 303.4 | 627.09 | 303.41 | 628.26 | 303.44 | 631.65 | 303.55 | 632.72 | 303.56 |
| 633.21 | 303.54 | 634.07 | 303.54 | 634.65 | 303.55 | 635.69 | 303.59 | 636.55 | 303.61 |
| 637.7 | 303.65 | 638.84 | 303.7 | 639.97 | 303.76 | 641.03 | 303.83 | 642.83 | 303.96 |
| 645.25 | 304.16 | 648.59 | 304.33 | 652.46 | 304.55 | 653.88 | 304.6 | 659.34 | 304.77 |
| 662.81 | 304.87 | 663.04 | 304.89 | 664.61 | 304.99 | 666.85 | 305.09 | 667.73 | 305.11 |
| 668.56 | 305.11 | 669.34 | 305.14 | 670.16 | 305.19 | 672.93 | 305.32 | 673.95 | 305.38 |
| 674.57 | 305.4 | 677.04 | 305.49 | 680.23 | 305.63 | 680.77 | 305.65 | 681.88 | 305.67 |
| 683.13 | 305.71 | 683.82 | 305.74 | 685.79 | 305.81 | 686.75 | 305.84 | 690.29 | 305.94 |
| 693.29 | 306.05 | 694.87 | 306.12 | 696.69 | 306.23 | 698.87 | 306.35 | 699.81 | 306.39 |
| 700.24 | 306.4 | 700.81 | 306.43 | 701.37 | 306.47 | 704.09 | 306.59 | 706.17 | 306.71 |
| 710.65 | 306.96 | 714.45 | 307.18 | 715.79 | 307.24 | 717.43 | 307.34 | 731.86 | 308.19 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 735.01 | 308.38 | 745.08 | 309.04 | 745.93 | 309.11 | 746.53 | 309.12 | 746.98 | 309.14 |
| 754.45 | 309.81 | 755.43 | 309.9 | 760.28 | 310.36 | 760.34 | 310.36 | 762.06 | 310.47 |
| 762.86 | 310.51 | 764.68 | 310.61 | 767.93 | 310.74 | 770.58 | 310.83 | 771.5 | 310.87 |
| 771.98 | 310.9 | 772.55 | 310.92 | 774.18 | 311 | 776.5 | 311.08 | 777.21 | 311.11 |
| 778.85 | 311.19 | 779.33 | 311.23 | 780.33 | 311.27 | 783.25 | 311.37 | 783.59 | 311.35 |
| 784.91 | 311.43 | 785.16 | 311.46 | 787.56 | 311.64 | 790.29 | 311.87 | 792.24 | 312.03 |
| 793.77 | 312.13 | 793.84 | 312.14 | 795.18 | 312.23 | 796.91 | 312.32 | 797.91 | 312.35 |
| 800.44 | 312.48 | 802.05 | 312.55 | 803.35 | 312.6 | 803.74 | 312.61 | 805.61 | 312.62 |
| 806.08 | 312.63 | 806.16 | 312.65 | 808.04 | 312.82 | 811.61 | 313.08 | 812.46 | 313.14 |
| 812.71 | 313.17 | 816.82 | 313.59 | 817.69 | 313.69 | 819.2 | 313.84 | 821.61 | 314.07 |
| 825.98 | 314.44 | 829.41 | 314.74 | 832.66 | 315.06 | 838.42 | 315.85 | 839.43 | 315.99 |
| 840.32 | 316.15 | 842.36 | 316.49 | 844.66 | 316.88 | 845.42 | 317.03 | 847.27 | 317.41 |
| 849.06 | 317.76 | 850.78 | 318.15 | 852.94 | 318.65 | 853.79 | 318.76 | 857.4 | 319.17 |
| 859.91 | 319.42 | 861.94 | 319.61 | 864.88 | 319.8 | 866.26 | 319.88 | 868.7 | 319.99 |
| 868.99 | 320.01 | 870.3 | 320.05 | 870.9 | 320.08 | 871.59 | 320.1 | 872.34 | 320.14 |
| 873.35 | 320.18 | 875.19 | 320.28 | 877.16 | 320.37 | 877.25 | 320.38 | 879.52 | 320.48 |
| 880.09 | 320.49 | 882.14 | 320.55 | 883.82 | 320.57 | 885 | 320.58 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 136 | .04 | 496.6 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 136 | 496.6 | 52.69 | 46.44 | 39.18 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2185.26*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 320.06 | 1.02 | 319.88 | 1.98 | 319.74 | 5.49 | 319.33 | 8.15 | 318.97 |
| 12.92 | 318.52 | 13.5 | 318.44 | 18.43 | 317.67 | 18.79 | 317.6 | 19.32 | 317.55 |
| 20.64 | 317.4 | 21.06 | 317.28 | 22.02 | 316.88 | 22.65 | 316.59 | 23.23 | 316.34 |
| 23.63 | 316.18 | 24.94 | 315.67 | 26.43 | 314.99 | 28.09 | 314.39 | 28.3 | 314.32 |
| 29.45 | 313.91 | 29.62 | 313.84 | 29.95 | 313.74 | 31.63 | 313.2 | 32.55 | 312.99 |
| 33.06 | 312.96 | 33.91 | 312.95 | 37.22 | 312.84 | 37.57 | 312.85 | 38.69 | 312.77 |
| 39.59 | 312.7 | 40.72 | 312.63 | 41.33 | 312.58 | 41.63 | 312.53 | 44.23 | 312.18 |
| 44.86 | 312.13 | 45.5 | 312.07 | 46.99 | 311.87 | 47.84 | 311.74 | 48.06 | 311.69 |
| 50.32 | 311.23 | 50.69 | 311.17 | 51.28 | 311.03 | 52.19 | 310.83 | 53.57 | 310.48 |
| 54.67 | 310.29 | 55.4 | 310.17 | 56.92 | 309.91 | 59.21 | 309.43 | 62.59 | 308.91 |
| 63.17 | 308.85 | 63.95 | 308.73 | 65.61 | 308.37 | 67.2 | 308.17 | 67.97 | 308.06 |
| 69.45 | 307.9 | 70.36 | 307.78 | 71.77 | 307.61 | 74.49 | 307.25 | 74.97 | 307.15 |
| 75.55 | 307.12 | 76.07 | 307.06 | 76.77 | 306.96 | 78.97 | 306.68 | 80.04 | 306.51 |
| 80.56 | 306.44 | 82.27 | 306.19 | 82.75 | 306.11 | 84.01 | 305.93 | 84.68 | 305.8 |
| 85.54 | 305.62 | 86.59 | 305.41 | 87.74 | 305.19 | 90.14 | 304.74 | 91.5 | 304.55 |
| 92.47 | 304.4 | 95.65 | 303.92 | 96.64 | 303.79 | 97.62 | 303.65 | 98.47 | 303.44 |
| 100.86 | 303.06 | 103.22 | 302.68 | 103.56 | 302.59 | 104.21 | 302.4 | 106.5 | 301.75 |
| 107.63 | 301.44 | 109.63 | 300.81 | 109.78 | 300.78 | 111.88 | 300.26 | 113.5 | 299.87 |
| 114.61 | 299.74 | 115.38 | 299.64 | 120.55 | 298.91 | 121.29 | 298.81 | 124.85 | 298.37 |
| 125.58 | 298.29 | 128.48 | 297.95 | 129.53 | 297.89 | 130.01 | 297.87 | 131.37 | 297.83 |
| 133.8 | 297.72 | 138.01 | 297.56 | 138.13 | 297.56 | 155.33 | 296.91 | 155.46 | 296.91 |
| 156.75 | 296.85 | 157.17 | 296.78 | 158.29 | 296.75 | 160.25 | 296.71 | 166.26 | 296.58 |
| 167.86 | 296.55 | 169.12 | 296.53 | 170.24 | 296.52 | 171.6 | 296.5 | 175.43 | 296.5 |
| 175.87 | 296.51 | 178.07 | 296.51 | 179.48 | 296.52 | 180.05 | 296.52 | 181.42 | 296.53 |
| 182.23 | 296.55 | 182.55 | 296.55 | 183.4 | 296.57 | 184.19 | 296.58 | 185.19 | 296.62 |
| 186.63 | 296.66 | 189.29 | 296.76 | 189.82 | 296.8 | 192.05 | 297.03 | 192.57 | 297.08 |
| 194.23 | 297.22 | 194.41 | 297.24 | 195.04 | 297.24 | 197.86 | 297.13 | 199.34 | 297.1 |
| 200.29 | 297.11 | 204.19 | 297.05 | 205.05 | 297.03 | 208.42 | 296.93 | 211.59 | 296.86 |
| 214.37 | 296.81 | 218.05 | 296.76 | 219.15 | 296.75 | 221.63 | 296.72 | 221.96 | 296.72 |
| 223.9 | 296.69 | 224.14 | 296.69 | 225.74 | 296.66 | 226.6 | 296.65 | 229.86 | 296.57 |
| 230.8 | 296.51 | 230.86 | 296.45 | 232.63 | 296.42 | 234.23 | 296.4 | 235.6 | 296.43 |
| 237.27 | 296.45 | 238.51 | 296.45 | 240.19 | 296.43 | 243.39 | 296.41 | 246.27 | 296.41 |
| 247.12 | 296.42 | 249.08 | 296.42 | 250.53 | 296.43 | 254.59 | 296.43 | 257.06 | 296.44 |
| 258.01 | 296.44 | 259.9 | 296.47 | 262.12 | 296.49 | 262.66 | 296.5 | 265.13 | 296.5 |
| 265.66 | 296.49 | 267.67 | 296.43 | 268.52 | 296.4 | 269.05 | 296.39 | 271.02 | 296.4 |
| 271.63 | 296.39 | 274.38 | 296.38 | 275.26 | 296.38 | 276.6 | 296.36 | 278.42 | 296.35 |
| 281.18 | 296.35 | 282.76 | 296.34 | 283.82 | 296.34 | 283.92 | 296.35 | 284.66 | 296.35 |
| 285.29 | 296.36 | 286.73 | 296.31 | 287.54 | 296.29 | 288.12 | 296.19 | 289.14 | 296.19 |
| 291.24 | 296.17 | 291.77 | 296.16 | 295.18 | 296.16 | 295.78 | 296.17 | 297.37 | 296.18 |
| 298.37 | 296.19 | 298.66 | 296.2 | 300.01 | 296.21 | 301.23 | 296.23 | 302.18 | 296.24 |
| 302.89 | 296.24 | 304.53 | 296.26 | 309.24 | 296.31 | 311.11 | 296.35 | 315.38 | 296.41 |
| 316.44 | 296.42 | 318.07 | 296.43 | 319.9 | 296.49 | 321.85 | 296.53 | 324.84 | 296.58 |
| 326.34 | 296.62 | 327.45 | 296.64 | 329.59 | 296.7 | 333.58 | 296.82 | 333.81 | 296.83 |
| 335.1 | 296.85 | 338.01 | 296.87 | 339.71 | 296.89 | 340.62 | 296.89 | 341.51 | 296.9 |
| 342.31 | 296.9 | 343.21 | 296.91 | 344.97 | 296.95 | 345.93 | 296.96 | 347.8 | 297 |
| 349.6 | 297.03 | 350.43 | 297.05 | 351.93 | 297.06 | 353.99 | 297.09 | 355.6 | 297.09 |
| 362.99 | 297.11 | 364.39 | 297.12 | 366.89 | 297.12 | 367.57 | 297.11 | 368.51 | 297.12 |
| 370.86 | 297.12 | 371.01 | 297.13 | 371.72 | 297.13 | 374 | 297.17 | 374.71 | 297.18 |
| 376.2 | 297.22 | 377.46 | 297.25 | 377.67 | 297.26 | 378.8 | 297.28 | 379.22 | 297.3 |
| 380.43 | 297.32 | 384.57 | 297.32 | 386.2 | 297.29 | 387.08 | 297.3 | 390.01 | 297.3 |
| 394.06 | 297.32 | 394.39 | 297.33 | 403.52 | 297.44 | 406.08 | 297.46 | 407.07 | 297.47 |
| 408.27 | 297.47 | 408.55 | 297.48 | 411.31 | 297.54 | 411.37 | 297.55 | 416.2 | 297.66 |
| 417.29 | 297.68 | 429.06 | 297.68 | 429.36 | 297.67 | 431.84 | 297.61 | 434.33 | 297.61 |
| 441.05 | 297.56 | 444.81 | 297.53 | 446.35 | 297.51 | 448.34 | 297.48 | 449.9 | 297.46 |
| 453.79 | 297.46 | 456.06 | 297.48 | 456.75 | 297.48 | 457.84 | 297.49 | 458.56 | 297.49 |
| 459.17 | 297.48 | 461.64 | 297.41 | 465.01 | 297.35 | 466.39 | 297.31 | 466.64 | 297.29 |
| 467.93 | 297.25 | 468.73 | 297.23 | 469.14 | 297.25 | 470.42 | 297.27 | 472.03 | 297.31 |
| 473.77 | 297.33 | 475.82 | 297.36 | 477.44 | 297.41 | 478.24 | 297.44 | 480.4 | 297.5 |
| 482.33 | 297.58 | 489.01 | 297.85 | 489.36 | 297.86 | 493.49 | 298.16 | 493.51 | 298.17 |
| 494.36 | 298.22 | 496.1 | 298.33 | 497.73 | 298.44 | 502.55 | 298.78 | 503.64 | 298.86 |
| 505.33 | 299.04 | 506.57 | 299.15 | 514.05 | 299.85 | 515.94 | 299.95 | 517.43 | 300.02 |
| 518.23 | 300.05 | 518.77 | 300.08 | 521.92 | 300.19 | 522.73 | 300.26 | 526.27 | 300.43 |
| 532.73 | 300.78 | 534.04 | 300.85 | 534.26 | 300.87 | 536.02 | 300.95 | 536.23 | 300.95 |
| 537.14 | 300.99 | 540.53 | 301.11 | 541.01 | 301.13 | 544.33 | 301.22 | 546.3 | 301.25 |
| 547.06 | 301.27 | 548.28 | 301.29 | 548.68 | 301.29 | 549.61 | 301.31 | 554.75 | 301.43 |
| 558.59 | 301.46 | 560.19 | 301.48 | 562.54 | 301.49 | 562.98 | 301.5 | 564.97 | 301.5 |
| 565.62 | 301.43 | 566.66 | 301.29 | 567.29 | 301.25 | 568.23 | 301.21 | 570.48 | 301.17 |
| 571.32 | 301.15 | 571.85 | 301.25 | 572.16 | 301.28 | 573.24 | 301.32 | 574.3 | 301.39 |
| 574.99 | 301.41 | 575.77 | 301.41 | 578.26 | 301.56 | 578.64 | 301.59 | 579.68 | 301.65 |
| 580.9 | 301.69 | 582.25 | 301.69 | 583.04 | 301.67 | 584.01 | 301.67 | 585.51 | 301.63 |
| 586.22 | 301.63 | 588.99 | 301.61 | 590.65 | 301.61 | 590.84 | 301.62 | 591.41 | 301.62 |

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   592.6  301.65     594  301.68  595.52  301.77  597.65  301.94  598.53     302
  599.81  302.05  601.77  302.09  603.12  302.09  604.08  302.06  604.67  302.02
  605.32  301.94  605.64  301.94  608.67  302.19  609.35  302.24  611.89  302.39
  612.31   302.4  613.57   302.4  614.78  302.39  615.55  302.39  617.11   302.4
  617.88  302.41  619.44  302.47   621.2  302.52  622.07  302.53  622.24  302.54
  622.92   302.5  624.14   302.5  624.96  302.53     626  302.55  627.12  302.59
  627.55   302.6  629.34  302.68  630.38  302.75  632.14  302.88  634.51  303.08
  637.78  303.24  641.57  303.43  642.96  303.49   648.3  303.69  651.56  303.81
  653.46  303.91  655.66  304.01  656.71  304.03  657.64  304.06  658.89  304.12
   661.6  304.23  662.28  304.26  665.63  304.37  666.48   304.4  668.74   304.5
  669.72  304.54  670.36  304.56  672.26  304.64  674.19  304.71  675.13  304.74
  676.94  304.78   678.6  304.82  681.53  304.93  683.07     305  684.85  305.12
  686.99  305.23  688.89  305.31  691.26  305.44   692.1  305.48  694.14  305.59
  698.53  305.84  702.24  306.06  703.55  306.13  705.15  306.23  719.28  307.09
  722.36  307.29  732.22  307.94  733.05     308  733.64  308.01  734.08  308.03
  734.71  308.08  735.06  308.12  740.74  308.58  741.39  308.64   747.1  309.12
  747.15  309.12  748.84  309.24  751.41  309.37  752.37  309.41  754.59  309.49
  756.07  309.55  757.18  309.59  758.55  309.67   760.7  309.79  762.97  309.89
  763.67  309.93  766.72  310.14  769.58  310.27  769.92  310.28   771.2  310.36
  773.79  310.55  776.47  310.75  778.38   310.9  779.87     311  779.95     311
  781.62  311.13  782.32  311.17  783.38  311.22  784.89   311.3   786.4  311.39
  787.98  311.47  789.63  311.56  791.47  311.62     792  311.65  793.84   311.8
  797.33  312.04  798.17   312.1  798.42  312.13  803.29  312.64  804.77   312.8
  807.13  313.04   811.4  313.41  814.76  313.72  815.54  313.79  817.94  314.03
  823.58  314.85  824.56  314.99  824.88  315.07  827.43  315.53  829.68  315.94
  830.43   316.1  832.24   316.5  833.99  316.88  837.79  317.83  838.62  317.93
  842.16  318.34  846.12  318.76  847.37  318.86  850.82  319.09  853.21   319.2
  854.78  319.26  856.04  319.32  857.76  319.39  858.08  319.41  862.04  319.62
  864.37  319.71  866.37  319.77  866.53  319.78  869.17  319.83

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  129.53     .04  489.01     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        129.53  489.01             52.69   46.44   39.18             .1       .3

CROSS SECTION


RIVER: WASH90
REACH: WASH90             RS: 2138.83

INPUT
Description:
Station Elevation Data    num=     434
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  318.82.9700317  318.621.880005  318.465.220032     3187.740051  317.59
12.28003  317.0812.51001  317.0412.83002     31717.51001  316.1317.85004  316.05
18.36005     31619.61005  315.8619.74005  315.8320.01001  315.7320.92004  315.31
21.52002     31522.07001  314.7323.70001     31425.11005  313.2525.72003     313
   26.69   312.628.14001     31230.05005  311.3230.70001  311.1730.93005  311.11
   31.06   311.131.41003  311.0935.36005  311.0935.70001  311.1137.61005     311
39.27002  310.9239.42004   310.939.55005  310.8742.08002  310.5743.23004   310.5
44.65002  310.3445.45001  310.2246.51001     310   47.81  309.7348.16003  309.67
49.59003  309.3550.90002     30954.08002  308.4756.26001     30859.57001   307.5
60.02002  307.4760.76001  307.3562.34003     30764.58002  306.7264.93005  306.69
65.98004  306.5870.77002     30671.23004   305.971.62006  305.8971.78003  305.88
71.97003  305.8772.27002  305.8476.05005  305.4279.82001     30580.15002  304.95
85.64001     30486.18005  303.9386.93005  303.83   92.75     303   93.56  302.77
98.07001     30298.39001   301.9  101.19     301  102.26  300.68  104.16     300
   104.3  299.97  107.84     299  108.32  298.94  108.89  298.87109.6201  298.77
  114.66     298118.6201  297.45  119.31  297.36  122.07     297  123.07  296.94
  123.31  296.93  123.55  296.93  123.98  296.92  124.91  296.89  127.33  296.78
  131.66  296.63  148.86     296148.9901     296  150.28  295.94  150.69  295.86
  151.81  295.84  153.77  295.81  163.76  295.72165.1201   295.7166.1801   295.7
167.4901   295.7  169.39  295.71  171.59  295.72  173.57  295.73174.9301  295.75
175.7401  295.77  179.83  295.89   182.8     296  183.33  296.04  186.08  296.34
187.7401   296.5  187.92  296.52  188.22  296.52  188.71  296.52  189.34   296.5
191.6801  296.43  192.85  296.39  198.55  296.27  205.19   296.1207.8701  296.05
210.9301     296   217.4   295.9   220.1  295.85  222.11   295.8  223.35  295.76
     224  295.72  224.29  295.69  224.35  295.63226.1201   295.6  227.72  295.57
  228.31  295.59  229.09  295.61  229.96  295.62  230.76  295.63   231.4  295.63
     232  295.63233.6801  295.61  235.03   295.6  236.88  295.59  239.29   295.6
  239.76   295.6  248.07  295.63251.4901  295.65  252.19  295.66  253.38  295.68
  254.52   295.7  255.05  295.71   255.6  295.71  256.14  295.72  258.21  295.73
  258.61  295.73   258.9  295.72  259.14  295.72     262  295.62  262.46  295.61
   264.5  295.62  265.11  295.61  268.73  295.61  270.47  295.59  271.89  295.58
  277.29  295.57  277.77  295.58   278.1  295.57  278.76  295.59   280.2  295.54
  280.67  295.53  281.01  295.51  281.17  295.49   281.4  295.45  281.59  295.41
  285.75  295.39   287.3  295.39  287.72  295.39  288.73  295.39  292.41  295.41
  293.75  295.42   295.9  295.45  298.23  295.47  302.91  295.52  304.77  295.55
  309.25  295.61  312.25  295.66315.4301  295.71   318.4  295.76320.9901  295.82
323.1201  295.88  326.07  295.97  327.08     296  327.31  296.01  328.59  296.03
  331.48  296.04  334.96  296.06  335.75  296.06  338.39  296.11  346.73  296.26
  348.95  296.29  356.31  296.37  356.65  296.38  357.68  296.39  358.82   296.4
  359.44   296.4  360.83  296.41  361.77  296.42  362.83  296.44  364.95  296.47
  367.22  296.51  367.92  296.52  370.86   296.6  371.99  296.63  372.16  296.64
  372.21  296.64  372.59  296.65  372.93  296.66   373.6  296.67  374.17  296.67
  374.53  296.67  375.12  296.66  375.64  296.66  376.96  296.66   378.1  296.65
  378.82  296.64  379.37  296.62  379.75  296.62  380.21  296.63  380.44  296.63
  380.68  296.63  381.17  296.63  383.12  296.63  385.23  296.64  387.14  296.65
  396.53  296.76  401.25  296.79  409.12  296.98  410.21     297  412.07     297
  414.41     297  418.61     297  418.83     297  419.31     297  419.78     297
  421.59     297  421.73     297  421.89     297  424.65  296.92  427.13  296.92
   443.2  296.79  446.12  296.77  450.47  296.76  450.79  296.75  451.19  296.75
  451.79  296.73  454.25  296.62  458.63  296.49  458.96  296.47  459.21  296.45
   459.9  296.43  460.49  296.41  461.29  296.38   461.4  296.38  461.66   296.4
  462.27  296.42  462.87  296.43  464.56  296.47  466.29   296.5  468.33  296.53
  468.97  296.55  470.73  296.61  472.88  296.67  474.79  296.74  481.43  296.99
  481.77     297  484.87  297.24  485.81  297.31  487.03  297.38  489.96  297.58
  494.67  297.92  495.74     298  497.39  298.18  500.06  298.43  505.92     299
  517.88  299.58525.6901     300  527.42  300.08  527.62  300.08  535.55  300.35
  536.91  300.38  538.22  300.41   539.8  300.42  545.72  300.51   549.5  300.54
551.0601  300.55  553.36  300.55  553.92  300.56  554.86  300.56   555.3  300.56
555.5701  300.56  555.74  300.55  556.37  300.47  557.39  300.31  558.01  300.26
```

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 558.5 | 300.23 | 558.9301 | 300.21 | 561.13 | 300.16 | 561.79 | 300.13 | 561.88 | 300.13 |
| 561.95 | 300.13 | 562.01 | 300.14 | 562.47 | 300.24 | 562.62 | 300.25 | 562.77 | 300.27 |
| 563.03 | 300.29 | 563.4301 | 300.3 | 563.83 | 300.32 | 564.87 | 300.39 | 565.54 | 300.41 |
| 566.3 | 300.41 | 569.11 | 300.6 | 570.13 | 300.66 | 570.54 | 300.68 | 570.92 | 300.69 |
| 571.3201 | 300.7 | 572.04 | 300.7 | 572.64 | 300.7 | 573.42 | 300.68 | 574.36 | 300.67 |
| 575.83 | 300.63 | 580.4301 | 300.6 | 581.6 | 300.61 | 582.77 | 300.63 | 583.83 | 300.65 |
| 584.6901 | 300.69 | 585.48 | 300.75 | 587.71 | 300.94 | 587.8 | 300.94 | 588.5701 | 301 |
| 589.8201 | 301.05 | 591.74 | 301.09 | 593.0601 | 301.09 | 594 | 301.05 | 594.58 | 301 |
| 595.21 | 300.91 | 595.53 | 300.91 | 596.47 | 301 | 598.49 | 301.18 | 600.83 | 301.34 |
| 601.64 | 301.39 | 602.05 | 301.4 | 603.28 | 301.4 | 605 | 301.38 | 606.38 | 301.38 |
| 606.75 | 301.38 | 607.5 | 301.39 | 610.4 | 301.48 | 611.24 | 301.51 | 611.77 | 301.51 |
| 612.4301 | 301.47 | 613.0601 | 301.46 | 613.62 | 301.46 | 614.4301 | 301.47 | 615.4401 | 301.49 |
| 616.54 | 301.52 | 617.63 | 301.56 | 618.71 | 301.61 | 619.73 | 301.67 | 621.45 | 301.8 |
| 623.77 | 302 | 644.57 | 302.93 | 645.49 | 302.96 | 645.79 | 302.97 | 645.83 | 302.97 |
| 646.4 | 303 | 647.62 | 303.05 | 651.25 | 303.16 | 655.05 | 303.28 | 660.7 | 303.53 |
| 662.59 | 303.6 | 663.51 | 303.63 | 665.28 | 303.67 | 666.9 | 303.71 | 669.77 | 303.81 |
| 671.28 | 303.88 | 673.02 | 304 | 675.11 | 304.11 | 675.1901 | 304.11 | 675.59 | 304.13 |
| 676.07 | 304.15 | 676.97 | 304.19 | 679.29 | 304.32 | 691.07 | 305 | 691.3101 | 305.01 |
| 706.7 | 306 | 719.36 | 306.83 | 720.17 | 306.89 | 720.29 | 306.89 | 720.45 | 306.9 |
| 720.75 | 306.97 | 721.1801 | 306.91 | 722.14 | 307 | 733.97 | 307.89 | 735.62 | 308 |
| 736.38 | 308.04 | 739.07 | 308.17 | 743.78 | 308.35 | 747.22 | 308.58 | 750.0601 | 308.74 |
| 753.11 | 309 | 763.14 | 309.66 | 765.98 | 309.86 | 767.69 | 310 | 777.85 | 310.65 |
| 783.0601 | 311 | 783.88 | 311.06 | 784.12 | 311.09 | 792.64 | 312 | 796.82 | 312.38 |
| 800.11 | 312.69 | 803.22 | 313 | 807.19 | 313.61 | 808.7401 | 313.85 | 809.7 | 314 |
| 810.01 | 314.08 | 814.71 | 315 | 817.21 | 315.6 | 818.92 | 316 | 819.7 | 316.21 |
| 822.64 | 317 | 829.31 | 317.79 | 831.26 | 318 | 832.01 | 318.06 | 834.07 | 318.21 |
| 835.39 | 318.3 | 837.73 | 318.41 | 842.1801 | 318.6 | 845.83 | 318.8 | 846.36 | 318.83 |
| 848.09 | 318.9 | 848.64 | 318.92 | 850.76 | 319 | 853.34 | 319.08 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 123.07 | .04 | 481.43 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 123.07 | 481.43 | 46.66 | 49.2 | 49.28 | .1 | .3 |

Ineffective Flow num= 1

| Sta L | Sta R | Elev | Permanent |
|---|---|---|---|
| 422.48 | 853.34 | 297.14 | F |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2089.63*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 317.74 | 1.12 | 317.48 | 2.17 | 317.26 | 2.88 | 317.12 | 4.06 | 316.91 |
| 6.1 | 316.59 | 7.31 | 316.34 | 8.33 | 316.11 | 9 | 315.95 | 9.31 | 315.9 |
| 11.03 | 315.73 | 14.17 | 315.43 | 14.81 | 315.36 | 18.21 | 314.85 | 20.21 | 314.56 |
| 20.6 | 314.48 | 21.27 | 314.43 | 21.92 | 314.36 | 22.63 | 314.3 | 23.09 | 314.17 |
| 24.14 | 313.79 | 24.83 | 313.5 | 25.47 | 313.25 | 27.35 | 312.6 | 28.98 | 311.92 |
| 30.8 | 311.33 | 31.82 | 311.01 | 32.47 | 310.79 | 34.68 | 310.18 | 35.38 | 310.05 |
| 35.69 | 309.98 | 36.1 | 309.96 | 36.81 | 309.96 | 40.81 | 309.93 | 41.2 | 309.94 |
| 41.85 | 309.91 | 45.32 | 309.8 | 46.19 | 309.71 | 48.56 | 309.51 | 49.89 | 309.46 |
| 51.53 | 309.33 | 52.45 | 309.24 | 54.52 | 308.92 | 54.91 | 308.85 | 55.4 | 308.78 |
| 56.15 | 308.65 | 56.59 | 308.56 | 57.49 | 308.44 | 58.74 | 308.2 | 60.53 | 307.98 |
| 62.41 | 307.76 | 64.16 | 307.48 | 64.92 | 307.35 | 67.06 | 307.12 | 68.05 | 307 |
| 68.74 | 306.93 | 69.26 | 306.9 | 70.12 | 306.8 | 71.94 | 306.49 | 72.73 | 306.41 |
| 73.47 | 306.32 | 75.7 | 306.09 | 76.87 | 306.01 | 78.34 | 305.9 | 79.74 | 305.78 |
| 81.67 | 305.62 | 82.2 | 305.54 | 82.83 | 305.53 | 83.4 | 305.5 | 84.37 | 305.43 |
| 84.93 | 305.38 | 86.93 | 305.22 | 87.76 | 305.16 | 90.84 | 304.91 | 92.11 | 304.83 |
| 92.89 | 304.75 | 95.22 | 304.5 | 95.89 | 304.44 | 96.93 | 304.29 | 97.49 | 304.22 |
| 98.83 | 303.97 | 99.97 | 303.81 | 100.8 | 303.67 | 102.34 | 303.42 | 103.52 | 303.19 |
| 107.03 | 302.54 | 107.97 | 302.26 | 109.79 | 301.89 | 112.09 | 301.44 | 113.16 | 301.24 |
| 113.54 | 301.12 | 115.6 | 300.49 | 115.79 | 300.44 | 116.77 | 300.14 | 117.48 | 299.93 |
| 118.01 | 299.8 | 120.2 | 299.11 | 123.56 | 298.34 | 124.45 | 298.13 | 125.4 | 298.01 |
| 126.5 | 297.88 | 132.32 | 297.12 | 134.06 | 296.91 | 134.74 | 296.82 | 135.67 | 296.71 |
| 137.68 | 296.5 | 138.53 | 296.42 | 139.27 | 296.36 | 140.87 | 296.2 | 142.02 | 296.15 |
| 143 | 296.13 | 143.99 | 296.1 | 146.58 | 296 | 147.11 | 295.99 | 148.49 | 295.94 |
| 150.57 | 295.88 | 151.21 | 295.85 | 152.41 | 295.81 | 157.59 | 295.63 | 158.9 | 295.58 |
| 160.89 | 295.52 | 162.38 | 295.48 | 162.91 | 295.46 | 164.4 | 295.42 | 165.64 | 295.38 |
| 167.83 | 295.3 | 169.6 | 295.24 | 169.74 | 295.24 | 171.01 | 295.18 | 171.12 | 295.18 |
| 171.56 | 295.11 | 172.66 | 295.09 | 172.76 | 295.08 | 173.61 | 295.07 | 175.47 | 295.04 |
| 176.44 | 295.04 | 178.17 | 295.02 | 179.03 | 295.02 | 179.63 | 295 | 180.45 | 295 |
| 181.23 | 294.99 | 185.53 | 294.95 | 186.29 | 294.95 | 186.99 | 294.94 | 193.91 | 294.94 |
| 195.32 | 294.93 | 196.49 | 294.93 | 197.05 | 294.94 | 197.48 | 294.93 | 198.15 | 294.93 |
| 200.44 | 294.98 | 203.6 | 295.06 | 205.51 | 295.12 | 206.46 | 295.17 | 208.64 | 295.38 |
| 209.4 | 295.45 | 211.18 | 295.6 | 211.37 | 295.61 | 212.21 | 295.61 | 212.89 | 295.6 |
| 214.29 | 295.56 | 215.39 | 295.54 | 217.15 | 295.5 | 222.43 | 295.41 | 222.74 | 295.4 |
| 226.04 | 295.34 | 229.42 | 295.25 | 229.84 | 295.25 | 233.3 | 295.19 | 233.98 | 295.19 |
| 235.18 | 295.17 | 235.98 | 295.17 | 236.07 | 295.16 | 237.66 | 295.15 | 238.84 | 295.13 |
| 240.27 | 295.12 | 240.39 | 295.11 | 241.39 | 295.1 | 245.78 | 295.01 | 246.4 | 295 |
| 248.96 | 294.93 | 249.95 | 294.89 | 250.26 | 294.86 | 250.33 | 294.81 | 252.22 | 294.79 |
| 253.93 | 294.76 | 253.98 | 294.77 | 255.39 | 294.8 | 256.9 | 294.82 | 258.51 | 294.82 |
| 261.75 | 294.8 | 263.73 | 294.8 | 266.87 | 294.81 | 267.42 | 294.82 | 268.83 | 294.83 |
| 269.82 | 294.83 | 270.94 | 294.84 | 275.7 | 294.84 | 276.33 | 294.82 | 279.35 | 294.85 |
| 281.37 | 294.88 | 281.41 | 294.89 | 283.09 | 294.92 | 283.9 | 294.93 | 284.69 | 294.93 |
| 285.14 | 294.94 | 285.97 | 294.93 | 286.96 | 294.94 | 287.53 | 294.93 | 290.59 | 294.85 |
| 291.08 | 294.84 | 292.58 | 294.86 | 293.26 | 294.86 | 293.91 | 294.85 | 297.78 | 294.85 |
| 299.64 | 294.83 | 301.16 | 294.82 | 304.26 | 294.82 | 307.8 | 294.78 | 308.51 | 294.79 |
| 310.05 | 294.73 | 310.55 | 294.72 | 311.09 | 294.68 | 311.54 | 294.6 | 313.17 | 294.58 |
| 314.56 | 294.57 | 314.92 | 294.56 | 319.05 | 294.56 | 322.15 | 294.58 | 322.82 | 294.58 |
| 325.58 | 294.62 | 327.8 | 294.63 | 328.19 | 294.64 | 332.26 | 294.68 | 334.03 | 294.71 |
| 337.04 | 294.75 | 338.3 | 294.77 | 341.16 | 294.81 | 341.98 | 294.83 | 344.19 | 294.86 |
| 347.02 | 294.91 | 347.74 | 294.92 | 349.48 | 294.96 | 351.51 | 295.02 | 354.33 | 295.11 |
| 355.51 | 295.14 | 356.73 | 295.16 | 359.48 | 295.17 | 362.8 | 295.2 | 363.89 | 295.2 |
| 367.23 | 295.26 | 374.01 | 295.37 | 376.13 | 295.4 | 378.73 | 295.42 | 383.03 | 295.47 |
| 383.46 | 295.48 | 385.53 | 295.5 | 386.12 | 295.5 | 388.34 | 295.52 | 389.35 | 295.54 |
| 391.37 | 295.56 | 394.2 | 295.61 | 396.28 | 295.66 | 398.08 | 295.71 | 398.98 | 295.74 |
| 402.82 | 295.74 | 404.59 | 295.72 | 405.11 | 295.7 | 405.91 | 295.71 | 408.69 | 295.71 |
| 412.52 | 295.73 | 415.87 | 295.77 | 417.19 | 295.78 | 421.46 | 295.83 | 425.96 | 295.85 |
| 427.66 | 295.89 | 430.14 | 295.94 | 432.06 | 295.99 | 433.46 | 296.03 | 434.13 | 296.04 |
| 438.5 | 296.04 | 442.31 | 296.03 | 443.17 | 296.03 | 443.57 | 296.02 | 445.63 | 296.02 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 448.26 | 295.95 | 450.62 | 295.95 | 455.16 | 295.92 | 455.83 | 295.91 | 457.38 | 295.9 |
| 458.24 | 295.9 | 461.22 | 295.89 | 465.93 | 295.86 | 468.72 | 295.85 | 472.86 | 295.86 |
| 473.55 | 295.85 | 476.46 | 295.74 | 480.64 | 295.63 | 481.19 | 295.6 | 482.41 | 295.57 |
| 483.28 | 295.54 | 483.52 | 295.56 | 484.68 | 295.59 | 486.29 | 295.64 | 487.94 | 295.67 |
| 489.17 | 295.7 | 489.88 | 295.71 | 490.67 | 295.74 | 494.22 | 295.86 | 496.04 | 295.93 |
| 502.36 | 296.19 | 502.7 | 296.2 | 505.81 | 296.46 | 506.75 | 296.53 | 507.97 | 296.6 |
| 508.89 | 296.66 | 510.16 | 296.75 | 511.99 | 296.89 | 513.18 | 297 | 515.01 | 297.16 |
| 516.92 | 297.32 | 518.35 | 297.48 | 518.75 | 297.51 | 520.57 | 297.69 | 521.02 | 297.73 |
| 523.99 | 298.05 | 526.89 | 298.32 | 533.12 | 298.65 | 535.8 | 298.79 | 536.61 | 298.82 |
| 538.86 | 298.93 | 540.15 | 299 | 545.98 | 299.29 | 546.68 | 299.33 | 548.42 | 299.4 |
| 548.8 | 299.4 | 550.09 | 299.44 | 556.56 | 299.63 | 557.71 | 299.65 | 557.92 | 299.66 |
| 559.23 | 299.68 | 560.81 | 299.68 | 561.89 | 299.69 | 562.29 | 299.7 | 563.71 | 299.71 |
| 564.31 | 299.72 | 566.74 | 299.74 | 570.61 | 299.75 | 572.34 | 299.76 | 574.62 | 299.75 |
| 574.95 | 299.76 | 575.9 | 299.75 | 576.61 | 299.75 | 577.41 | 299.67 | 578.43 | 299.52 |
| 579.54 | 299.45 | 579.97 | 299.43 | 582.17 | 299.38 | 583 | 299.35 | 583.52 | 299.44 |
| 584.08 | 299.49 | 584.48 | 299.49 | 585.92 | 299.57 | 586.59 | 299.58 | 587.35 | 299.58 |
| 589.77 | 299.72 | 590.17 | 299.73 | 591.43 | 299.78 | 592.38 | 299.79 | 593.38 | 299.78 |
| 594.28 | 299.75 | 595.22 | 299.74 | 595.42 | 299.75 | 596.9 | 299.75 | 597.78 | 299.76 |
| 601.5 | 299.76 | 601.68 | 299.77 | 602.67 | 299.78 | 603.84 | 299.8 | 604.91 | 299.83 |
| 605.77 | 299.87 | 606.56 | 299.92 | 608.07 | 300.05 | 608.88 | 300.1 | 609.65 | 300.16 |
| 610.42 | 300.18 | 610.9 | 300.21 | 612.83 | 300.26 | 614.15 | 300.26 | 615.09 | 300.23 |
| 615.67 | 300.19 | 616.3 | 300.11 | 616.62 | 300.12 | 619.59 | 300.37 | 622.74 | 300.57 |
| 623.15 | 300.58 | 624.38 | 300.59 | 626.11 | 300.57 | 627.86 | 300.58 | 628.61 | 300.59 |
| 631.51 | 300.68 | 632.35 | 300.71 | 632.89 | 300.71 | 633.55 | 300.68 | 634.18 | 300.67 |
| 635.6 | 300.69 | 636.56 | 300.71 | 637.66 | 300.74 | 638.75 | 300.78 | 639.83 | 300.83 |
| 640.86 | 300.89 | 643.23 | 301.07 | 644.9 | 301.21 | 653.98 | 301.62 | 663.15 | 302.03 |
| 665.73 | 302.16 | 666.95 | 302.2 | 668.79 | 302.29 | 672.42 | 302.41 | 675.2 | 302.51 |
| 676.23 | 302.55 | 681.88 | 302.81 | 683.78 | 302.89 | 684.7 | 302.92 | 686.47 | 302.97 |
| 688.09 | 303.02 | 689.4 | 303.07 | 690.97 | 303.12 | 692.48 | 303.2 | 694.22 | 303.31 |
| 697.28 | 303.47 | 698.18 | 303.51 | 700.5 | 303.64 | 709.71 | 304.17 | 711.89 | 304.29 |
| 712.54 | 304.33 | 727.95 | 305.32 | 728.52 | 305.36 | 730.17 | 305.46 | 731.07 | 305.52 |
| 734.84 | 305.73 | 737.29 | 305.89 | 738.76 | 305.98 | 739.23 | 306 | 741.72 | 306.18 |
| 742.45 | 306.19 | 743.41 | 306.29 | 744.31 | 306.36 | 755.26 | 307.17 | 756.91 | 307.28 |
| 757.67 | 307.32 | 760.36 | 307.45 | 761.06 | 307.48 | 765.08 | 307.64 | 768.52 | 307.87 |
| 771.37 | 308.03 | 774.42 | 308.28 | 777.92 | 308.51 | 781.51 | 308.74 | 782.85 | 308.83 |
| 784.47 | 308.93 | 785.01 | 308.97 | 787.08 | 309.1 | 789.02 | 309.26 | 795.51 | 309.67 |
| 799.2 | 309.9 | 804.41 | 310.24 | 805.24 | 310.3 | 805.48 | 310.33 | 814.01 | 311.2 |
| 814.78 | 311.26 | 818.19 | 311.56 | 819.63 | 311.69 | 821.49 | 311.85 | 824.6 | 312.15 |
| 831.09 | 313.08 | 831.4 | 313.15 | 834.33 | 313.69 | 836.11 | 314.01 | 838.61 | 314.57 |
| 840.32 | 314.95 | 841.11 | 315.14 | 844.05 | 315.88 | 845.14 | 316 | 850.73 | 316.64 |
| 852.68 | 316.84 | 853.43 | 316.9 | 855.5 | 317.05 | 856.82 | 317.14 | 859.16 | 317.26 |
| 861 | 317.34 | 863.62 | 317.46 | 866.49 | 317.62 | 867.8 | 317.69 | 869.39 | 317.73 |
| 870.56 | 317.75 | 871.86 | 317.8 | 872.44 | 317.83 | 874.79 | 317.97 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 142.02 | .04 | 502.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 142.02 | 502.36 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 2040.43*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 316.65 | 1.31 | 316.32 | 1.48 | 316.29 | 2.46 | 316.05 | 3.26 | 315.87 |
| 4.6 | 315.59 | 6.25 | 315.3 | 6.92 | 315.19 | 8.29 | 314.85 | 10.55 | 314.24 |
| 12.5 | 314.07 | 13.92 | 313.95 | 16.78 | 313.72 | 19.35 | 313.41 | 21.91 | 313.11 |
| 22.9 | 312.98 | 23.35 | 312.91 | 24.02 | 312.87 | 25.65 | 312.73 | 25.82 | 312.71 |
| 26.17 | 312.62 | 27.36 | 312.27 | 28.9 | 311.77 | 29.39 | 311.63 | 31 | 311.19 |
| 32.84 | 310.59 | 34.91 | 310.07 | 36.81 | 309.58 | 39.31 | 309.03 | 40.1 | 308.92 |
| 40.46 | 308.85 | 41.3 | 308.82 | 41.73 | 308.82 | 44.82 | 308.79 | 46.22 | 308.77 |
| 46.7 | 308.77 | 47.18 | 308.74 | 51.37 | 308.68 | 52.36 | 308.61 | 55.04 | 308.45 |
| 56.55 | 308.42 | 57.78 | 308.35 | 58.4 | 308.33 | 59.45 | 308.25 | 60.84 | 308.11 |
| 61.27 | 308.06 | 61.8 | 307.98 | 63.48 | 307.76 | 63.97 | 307.67 | 64.86 | 307.61 |
| 65.82 | 307.51 | 66.58 | 307.41 | 70.74 | 307.04 | 73.59 | 306.71 | 74.63 | 306.62 |
| 76.57 | 306.47 | 77.92 | 306.35 | 78.51 | 306.33 | 79.47 | 306.24 | 81.54 | 305.98 |
| 82.43 | 305.91 | 83.27 | 305.81 | 84.47 | 305.69 | 84.93 | 305.65 | 85.8 | 305.55 |
| 87.13 | 305.51 | 88.5 | 305.46 | 88.79 | 305.44 | 92.57 | 305.25 | 93.17 | 305.18 |
| 93.89 | 305.18 | 94.53 | 305.16 | 96.27 | 305.08 | 98.53 | 304.95 | 99.47 | 304.89 |
| 101.69 | 304.77 | 102.72 | 304.71 | 104.01 | 304.66 | 104.26 | 304.66 | 106.46 | 304.53 |
| 107.93 | 304.46 | 108.58 | 304.44 | 110.36 | 304.25 | 111.3 | 304.08 | 112.02 | 303.94 |
| 113.89 | 303.65 | 114.25 | 303.58 | 116 | 303.26 | 117.33 | 302.95 | 121.32 | 302.08 |
| 122.38 | 301.76 | 124.44 | 301.28 | 126.07 | 300.93 | 127.05 | 300.73 | 128.26 | 300.47 |
| 130.73 | 299.75 | 130.96 | 299.68 | 133.16 | 299.05 | 133.76 | 298.91 | 134.98 | 298.58 |
| 136.24 | 298.22 | 137.24 | 298.02 | 138.91 | 297.7 | 140.05 | 297.47 | 141.06 | 297.26 |
| 142.43 | 297.09 | 143.38 | 296.99 | 149.98 | 296.24 | 151.95 | 296.03 | 152.72 | 295.93 |
| 153.51 | 295.85 | 154.55 | 295.76 | 155.16 | 295.72 | 155.73 | 295.67 | 157.52 | 295.55 |
| 157.94 | 295.54 | 159.67 | 295.4 | 160.98 | 295.35 | 161.25 | 295.34 | 162.01 | 295.34 |
| 163.07 | 295.31 | 165.83 | 295.22 | 166.39 | 295.21 | 167.86 | 295.17 | 170.76 | 295.08 |
| 171.82 | 295.04 | 172.04 | 295.04 | 177.55 | 294.85 | 178.95 | 294.8 | 181.07 | 294.74 |
| 183.05 | 294.69 | 184.8 | 294.65 | 185.08 | 294.65 | 186.12 | 294.62 | 188.46 | 294.54 |
| 190.34 | 294.48 | 190.49 | 294.48 | 191.84 | 294.42 | 191.96 | 294.42 | 192.43 | 294.35 |
| 194.62 | 294.31 | 196.59 | 294.28 | 197.63 | 294.28 | 198.58 | 294.27 | 199.46 | 294.27 |
| 200.39 | 294.26 | 201.02 | 294.24 | 202.73 | 294.22 | 206.11 | 294.19 | 208.12 | 294.19 |
| 208.86 | 294.18 | 211.84 | 294.18 | 213.72 | 294.17 | 214.54 | 294.17 | 216.23 | 294.15 |
| 217.73 | 294.14 | 218.48 | 294.13 | 219.58 | 294.13 | 220.13 | 294.12 | 220.48 | 294.1 |
| 220.95 | 294.11 | 221.78 | 294.11 | 223.18 | 294.14 | 225.61 | 294.18 | 225.74 | 294.19 |
| 228.58 | 294.26 | 229.59 | 294.31 | 231.92 | 294.49 | 232.72 | 294.56 | 234.62 | 294.69 |
| 234.82 | 294.71 | 235.72 | 294.71 | 236.44 | 294.7 | 239.1 | 294.65 | 240.43 | 294.62 |
| 240.98 | 294.62 | 246.92 | 294.54 | 250.44 | 294.48 | 252.48 | 294.43 | 254.49 | 294.39 |
| 257.54 | 294.36 | 259.56 | 294.33 | 261.12 | 294.33 | 262.82 | 294.31 | 264.57 | 294.31 |
| 266.79 | 294.28 | 267.88 | 294.25 | 269.44 | 294.22 | 271.46 | 294.17 | 272.12 | 294.16 |
| 274.85 | 294.09 | 275.16 | 294.09 | 275.9 | 294.06 | 276.23 | 294.03 | 276.3 | 293.99 |
| 278.32 | 293.97 | 280.19 | 293.96 | 281.7 | 294 | 283.6 | 294.02 | 285.01 | 294.02 |
| 288.46 | 294 | 290.57 | 294 | 294.5 | 294.03 | 296.01 | 294.05 | 297.06 | 294.05 |
| 298.25 | 294.06 | 299.07 | 294.06 | 299.81 | 294.05 | 300.62 | 294.06 | 303.33 | 294.06 |
| 303.64 | 294.02 | 303.99 | 294.01 | 307.21 | 294.06 | 309.4 | 294.09 | 311.19 | 294.13 |
| 311.89 | 294.13 | 312.5 | 294.15 | 313.37 | 294.15 | 314.26 | 294.14 | 315.92 | 294.15 |
| 319.17 | 294.08 | 321.3 | 294.09 | 322.02 | 294.1 | 322.72 | 294.09 | 326.84 | 294.09 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 328.82 | 294.07 | 330.44 | 294.06 | 333.73 | 294.06 | 337.13 | 294 | 337.51 | 293.99 |
| 338.26 | 293.99 | 339.9 | 293.92 | 340.43 | 293.91 | 341.26 | 293.83 | 341.48 | 293.79 |
| 343.22 | 293.76 | 343.5 | 293.75 | 344.36 | 293.75 | 345.09 | 293.73 | 349.05 | 293.73 |
| 352 | 293.75 | 352.63 | 293.75 | 355.25 | 293.78 | 357.36 | 293.8 | 357.74 | 293.8 |
| 361.6 | 293.85 | 363.29 | 293.87 | 366.15 | 293.91 | 367.35 | 293.92 | 370.06 | 293.97 |
| 372.94 | 294.01 | 375.63 | 294.06 | 376.32 | 294.07 | 379.91 | 294.16 | 382.58 | 294.24 |
| 383.7 | 294.28 | 387.48 | 294.31 | 390.63 | 294.33 | 391.35 | 294.33 | 391.67 | 294.34 |
| 394.59 | 294.38 | 394.84 | 294.39 | 401.29 | 294.49 | 403.3 | 294.51 | 405.77 | 294.53 |
| 409.87 | 294.58 | 410.28 | 294.58 | 412.24 | 294.6 | 413.72 | 294.6 | 414.06 | 294.61 |
| 416.02 | 294.63 | 417.8 | 294.66 | 420.49 | 294.7 | 422.46 | 294.75 | 423.15 | 294.76 |
| 424.17 | 294.79 | 425.63 | 294.82 | 426.47 | 294.82 | 427.01 | 294.81 | 428.67 | 294.81 |
| 430.36 | 294.8 | 430.86 | 294.78 | 431.62 | 294.79 | 434.25 | 294.79 | 437.89 | 294.81 |
| 441.08 | 294.84 | 443.07 | 294.87 | 446.4 | 294.91 | 450.67 | 294.91 | 451.5 | 294.93 |
| 452.29 | 294.94 | 454.65 | 294.99 | 456.47 | 295.04 | 458.79 | 295.09 | 459.86 | 295.08 |
| 462.59 | 295.07 | 466.21 | 295.05 | 469.37 | 295.05 | 471.87 | 294.98 | 474.11 | 294.98 |
| 478.43 | 294.95 | 480.54 | 294.95 | 481.36 | 294.94 | 491.31 | 294.94 | 495.11 | 294.95 |
| 495.91 | 294.95 | 496.45 | 294.94 | 498.68 | 294.86 | 502.65 | 294.78 | 503.17 | 294.75 |
| 503.8 | 294.74 | 504.33 | 294.72 | 505.15 | 294.71 | 505.94 | 294.75 | 506.49 | 294.76 |
| 508.02 | 294.81 | 509.58 | 294.85 | 510.76 | 294.87 | 512.01 | 294.91 | 513.6 | 294.98 |
| 515.55 | 295.05 | 517.28 | 295.12 | 523.3 | 295.39 | 523.64 | 295.41 | 526.51 | 295.66 |
| 526.75 | 295.67 | 527.69 | 295.74 | 529.83 | 295.88 | 532.65 | 296.1 | 535.96 | 296.44 |
| 536.34 | 296.49 | 537.65 | 296.59 | 538.05 | 296.64 | 539.7 | 296.81 | 541.53 | 296.98 |
| 544.95 | 297.37 | 547.85 | 297.65 | 554.09 | 297.99 | 556.78 | 298.15 | 557.59 | 298.18 |
| 559.85 | 298.28 | 561.13 | 298.35 | 566.98 | 298.62 | 569.41 | 298.72 | 569.8 | 298.72 |
| 571.09 | 298.75 | 577.57 | 298.91 | 580.24 | 298.95 | 583.31 | 298.95 | 585.33 | 298.96 |
| 588.25 | 298.97 | 591.56 | 298.96 | 593.37 | 298.96 | 595.43 | 298.95 | 596.93 | 298.95 |
| 597.64 | 298.94 | 598.45 | 298.87 | 599.47 | 298.73 | 600.58 | 298.66 | 603.22 | 298.59 |
| 604.04 | 298.56 | 604.56 | 298.65 | 604.86 | 298.67 | 605.93 | 298.7 | 606.97 | 298.75 |
| 607.64 | 298.76 | 608.4 | 298.75 | 610.83 | 298.86 | 612.24 | 298.88 | 613.44 | 298.88 |
| 614.44 | 298.85 | 615.09 | 298.84 | 615.54 | 298.81 | 616.28 | 298.81 | 616.59 | 298.84 |
| 617.96 | 298.87 | 618.85 | 298.9 | 622.57 | 298.93 | 623.75 | 298.95 | 624.92 | 298.98 |
| 625.98 | 299 | 626.84 | 299.04 | 629.16 | 299.22 | 629.87 | 299.27 | 631.99 | 299.36 |
| 633.91 | 299.42 | 635.24 | 299.44 | 636.18 | 299.42 | 636.76 | 299.38 | 637.39 | 299.32 |
| 637.72 | 299.32 | 638.15 | 299.36 | 640.68 | 299.56 | 643.03 | 299.71 | 643.84 | 299.75 |
| 644.25 | 299.76 | 645.49 | 299.77 | 647.21 | 299.77 | 648.97 | 299.78 | 649.72 | 299.79 |
| 652.63 | 299.88 | 653.47 | 299.91 | 654 | 299.92 | 654.66 | 299.89 | 655.86 | 299.89 |
| 657.68 | 299.93 | 658.78 | 299.96 | 661.98 | 300.11 | 663.71 | 300.23 | 664.36 | 300.29 |
| 666.03 | 300.42 | 675.12 | 300.84 | 684.31 | 301.25 | 686.89 | 301.38 | 688.16 | 301.43 |
| 688.73 | 301.47 | 689.95 | 301.53 | 693.59 | 301.67 | 697.4 | 301.82 | 703.07 | 302.1 |
| 704.96 | 302.18 | 707.66 | 302.27 | 709.28 | 302.32 | 710.6 | 302.38 | 711.65 | 302.41 |
| 712.16 | 302.44 | 713.68 | 302.51 | 715.42 | 302.63 | 717.52 | 302.74 | 719.38 | 302.82 |
| 721.71 | 302.95 | 730.93 | 303.48 | 733.12 | 303.61 | 733.76 | 303.64 | 749.2 | 304.64 |
| 749.77 | 304.68 | 751.89 | 304.81 | 756.1 | 305.01 | 757.77 | 305.11 | 758.55 | 305.17 |
| 760.03 | 305.25 | 760.74 | 305.28 | 761.89 | 305.37 | 762.7 | 305.44 | 763.72 | 305.48 |
| 764.68 | 305.58 | 765.58 | 305.65 | 776.54 | 306.44 | 778.2 | 306.55 | 781.66 | 306.73 |
| 786.38 | 306.93 | 789.83 | 307.16 | 791.41 | 307.26 | 792.68 | 307.33 | 795.74 | 307.57 |
| 799.24 | 307.78 | 802.83 | 308.01 | 804.17 | 308.1 | 805.79 | 308.2 | 806.34 | 308.24 |
| 808.41 | 308.36 | 810.36 | 308.51 | 816.85 | 308.92 | 820.54 | 309.15 | 825.77 | 309.49 |
| 826.59 | 309.54 | 826.83 | 309.57 | 835.38 | 310.39 | 836.15 | 310.46 | 839.57 | 310.74 |
| 842.87 | 311.02 | 845.99 | 311.3 | 847.81 | 311.54 | 849.97 | 311.82 | 852.48 | 312.16 |
| 852.79 | 312.23 | 855.73 | 312.72 | 857.51 | 313.03 | 860.02 | 313.55 | 861.73 | 313.89 |
| 865.46 | 314.75 | 866.55 | 314.87 | 872.15 | 315.48 | 874.1 | 315.68 | 874.86 | 315.74 |
| 876.92 | 315.89 | 878.25 | 315.98 | 880.59 | 316.1 | 882.43 | 316.19 | 885.05 | 316.31 |
| 887.93 | 316.48 | 889.07 | 316.55 | 889.62 | 316.56 | 890.98 | 316.56 | 892 | 316.57 |
| 892.78 | 316.6 | 893.49 | 316.61 | 893.66 | 316.63 | 896.25 | 316.86 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 160.98 | .04 | 523.3 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 160.98 | 523.3 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1991.23*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 315.57 | 1.42 | 315.19 | 1.65 | 315.14 | 2.75 | 314.85 | 3.65 | 314.62 |
| 5.14 | 314.26 | 6.99 | 313.93 | 7.73 | 313.79 | 9.27 | 313.37 | 10.05 | 313.13 |
| 11.32 | 312.73 | 11.79 | 312.59 | 15.56 | 312.3 | 17.95 | 312.14 | 18.76 | 312.08 |
| 23.08 | 311.66 | 25.6 | 311.41 | 26.1 | 311.35 | 27.77 | 311.23 | 28.67 | 311.17 |
| 29.25 | 311.06 | 30.59 | 310.74 | 32.31 | 310.29 | 32.85 | 310.17 | 34.65 | 309.79 |
| 36.71 | 309.26 | 37.6 | 309.08 | 39.99 | 308.61 | 41.14 | 308.38 | 43.93 | 307.89 |
| 45.22 | 307.73 | 45.74 | 307.7 | 46.64 | 307.69 | 50.1 | 307.64 | 52.19 | 307.6 |
| 52.85 | 307.56 | 53.02 | 307.57 | 57.41 | 307.57 | 57.82 | 307.54 | 61.52 | 307.39 |
| 63.2 | 307.38 | 63.67 | 307.36 | 65.28 | 307.32 | 65.57 | 307.3 | 66.45 | 307.27 |
| 67.77 | 307.18 | 68 | 307.17 | 69.9 | 306.96 | 70.41 | 306.91 | 71.13 | 306.82 |
| 71.5 | 306.75 | 72.5 | 306.74 | 73.57 | 306.69 | 74.42 | 306.61 | 76.69 | 306.47 |
| 77.44 | 306.43 | 79.07 | 306.33 | 81.28 | 306.14 | 82.25 | 306.06 | 83.42 | 306 |
| 84.96 | 305.91 | 86.21 | 305.83 | 87.09 | 305.78 | 87.75 | 305.76 | 88.83 | 305.69 |
| 90.86 | 305.5 | 91.14 | 305.47 | 92.14 | 305.41 | 93.08 | 305.3 | 94.21 | 305.2 |
| 94.93 | 305.13 | 95.9 | 305.02 | 96.23 | 305 | 96.46 | 305.01 | 97.9 | 305.01 |
| 98.92 | 305 | 101.02 | 304.94 | 103 | 304.88 | 103.47 | 304.87 | 104.14 | 304.82 |
| 105.66 | 304.82 | 107.6 | 304.77 | 111.19 | 304.63 | 113.67 | 304.53 | 115.04 | 304.49 |
| 116.7 | 304.48 | 118.99 | 304.43 | 120.64 | 304.42 | 121.48 | 304.43 | 123.35 | 304.26 |
| 123.51 | 304.25 | 123.75 | 304.18 | 124.4 | 304.07 | 126 | 303.78 | 127.3 | 303.57 |
| 127.71 | 303.48 | 129.66 | 303.11 | 131.15 | 302.7 | 135.6 | 301.62 | 136.79 | 301.25 |
| 138.04 | 300.94 | 139.1 | 300.66 | 139.94 | 300.48 | 140.91 | 300.25 | 143.36 | 299.71 |
| 146.12 | 298.92 | 147.94 | 298.41 | 148.84 | 298.17 | 149.5 | 298.03 | 150.87 | 297.69 |
| 151.97 | 297.41 | 152.28 | 297.34 | 153.4 | 297.13 | 155.75 | 296.74 | 156.54 | 296.6 |
| 157.66 | 296.38 | 159.2 | 296.2 | 160.27 | 296.11 | 167.63 | 295.36 | 169.84 | 295.15 |
| 170.7 | 295.04 | 171.58 | 294.97 | 172.75 | 294.89 | 174.07 | 294.81 | 175.51 | 294.74 |
| 176.06 | 294.72 | 176.53 | 294.72 | 178.47 | 294.6 | 179.05 | 294.59 | 179.93 | 294.56 |
| 182.15 | 294.52 | 185.08 | 294.45 | 185.67 | 294.43 | 189.58 | 294.33 | 190.31 | 294.3 |
| 191.66 | 294.26 | 197.51 | 294.07 | 199 | 294.02 | 201.24 | 293.96 | 203.52 | 293.92 |
| 205.5 | 293.89 | 209.08 | 293.79 | 211.08 | 293.72 | 211.24 | 293.72 | 212.67 | 293.66 |
| 212.8 | 293.66 | 213.29 | 293.6 | 214.54 | 293.57 | 215.62 | 293.56 | 217.02 | 293.53 |
| 218.81 | 293.51 | 219.83 | 293.52 | 221.74 | 293.5 | 221.82 | 293.48 | 224.22 | 293.45 |
| 227.82 | 293.42 | 233.89 | 293.42 | 235.89 | 293.41 | 236.76 | 293.4 | 238.54 | 293.37 |
| 240.14 | 293.35 | 240.93 | 293.33 | 242.1 | 293.32 | 243.34 | 293.27 | 245.96 | 293.29 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 247.73 | 293.32 | 248.64 | 293.33 | 252.08 | 293.41 | 252.73 | 293.44 | 256.05 | 293.67 |
| 258.27 | 293.8 | 259.22 | 293.8 | 261.12 | 293.78 | 261.57 | 293.77 | 263.33 | 293.76 |
| 264.8 | 293.73 | 269.47 | 293.69 | 271.11 | 293.67 | 274.84 | 293.63 | 276.13 | 293.59 |
| 277 | 293.57 | 278.66 | 293.54 | 279.13 | 293.54 | 282.37 | 293.51 | 283.04 | 293.5 |
| 283.81 | 293.5 | 285.17 | 293.49 | 286.17 | 293.5 | 287.97 | 293.48 | 290.91 | 293.48 |
| 292.18 | 293.46 | 293.35 | 293.43 | 294.66 | 293.39 | 294.99 | 293.39 | 297.14 | 293.33 |
| 297.84 | 293.32 | 299.57 | 293.28 | 300.74 | 293.26 | 301.83 | 293.23 | 302.21 | 293.21 |
| 302.28 | 293.16 | 305.07 | 293.16 | 306.35 | 293.15 | 306.41 | 293.16 | 308 | 293.19 |
| 309.7 | 293.21 | 317.42 | 293.21 | 321.59 | 293.24 | 324.06 | 293.27 | 324.3 | 293.28 |
| 326.43 | 293.28 | 327.22 | 293.27 | 328.08 | 293.28 | 330.18 | 293.28 | 330.95 | 293.27 |
| 331.28 | 293.22 | 331.65 | 293.2 | 335.06 | 293.26 | 337.35 | 293.29 | 337.39 | 293.3 |
| 340.03 | 293.34 | 340.43 | 293.36 | 341.6 | 293.36 | 342.55 | 293.35 | 343.18 | 293.36 |
| 344.31 | 293.36 | 347.76 | 293.32 | 348.32 | 293.31 | 350.01 | 293.33 | 355.89 | 293.33 |
| 357.99 | 293.31 | 359.71 | 293.31 | 363.2 | 293.3 | 366.23 | 293.22 | 366.81 | 293.22 |
| 367.21 | 293.2 | 368.01 | 293.19 | 370.32 | 293.1 | 371.2 | 293.02 | 371.43 | 292.98 |
| 373.27 | 292.93 | 374.84 | 292.92 | 375.25 | 292.9 | 379.05 | 292.9 | 381.93 | 292.91 |
| 383.09 | 292.93 | 384.93 | 292.95 | 386.93 | 292.96 | 387.28 | 292.97 | 390.95 | 293.01 |
| 392.06 | 293.03 | 392.55 | 293.03 | 395.26 | 293.07 | 396.39 | 293.08 | 401.07 | 293.15 |
| 404.25 | 293.2 | 404.91 | 293.22 | 406.47 | 293.25 | 408.3 | 293.3 | 410.84 | 293.38 |
| 411.9 | 293.41 | 413 | 293.43 | 415.48 | 293.44 | 419.46 | 293.48 | 422.22 | 293.51 |
| 422.46 | 293.52 | 428.57 | 293.6 | 430.48 | 293.62 | 432.82 | 293.63 | 436.7 | 293.68 |
| 437.09 | 293.69 | 437.98 | 293.69 | 438.95 | 293.7 | 440.68 | 293.7 | 441.49 | 293.71 |
| 442.4 | 293.73 | 444.22 | 293.75 | 446.17 | 293.78 | 446.77 | 293.78 | 448.64 | 293.83 |
| 450.26 | 293.86 | 451.07 | 293.89 | 454.53 | 293.89 | 455.51 | 293.88 | 456.6 | 293.86 |
| 457.32 | 293.87 | 459.82 | 293.87 | 463.27 | 293.89 | 467.48 | 293.93 | 468.18 | 293.95 |
| 469.83 | 293.96 | 471.33 | 293.98 | 475.39 | 293.98 | 476.91 | 294 | 479.15 | 294.04 |
| 480.88 | 294.09 | 482.74 | 294.13 | 484.09 | 294.13 | 484.68 | 294.12 | 486.69 | 294.11 |
| 490.12 | 294.08 | 492.18 | 294.08 | 493.11 | 294.07 | 495.95 | 294 | 497.61 | 294.01 |
| 501.7 | 293.98 | 503.69 | 293.99 | 504.47 | 293.99 | 507.15 | 294 | 509.93 | 294 |
| 510.14 | 294.01 | 511.4 | 294.01 | 513.91 | 294.02 | 517.51 | 294.05 | 517.92 | 294.04 |
| 518.26 | 294.05 | 518.78 | 294.04 | 520.89 | 293.98 | 524.65 | 293.92 | 525.15 | 293.9 |
| 526.8 | 293.87 | 527.78 | 293.91 | 528.29 | 293.92 | 529.74 | 293.98 | 532.34 | 294.05 |
| 533.53 | 294.09 | 535.04 | 294.16 | 538.53 | 294.31 | 544.23 | 294.59 | 544.57 | 294.61 |
| 547.68 | 294.89 | 548.63 | 294.96 | 550.78 | 295.1 | 552.79 | 295.26 | 553.6 | 295.33 |
| 555.07 | 295.5 | 556.92 | 295.73 | 557.29 | 295.78 | 558.6 | 295.89 | 560.26 | 296.07 |
| 560.66 | 296.1 | 562.49 | 296.28 | 562.94 | 296.34 | 565.92 | 296.7 | 568.82 | 296.97 |
| 577.76 | 297.5 | 578.57 | 297.53 | 580.83 | 297.63 | 582.12 | 297.7 | 588.67 | 297.98 |
| 590.41 | 298.03 | 592.09 | 298.07 | 598.58 | 298.19 | 599.73 | 298.2 | 599.94 | 298.21 |
| 601.79 | 298.22 | 602.84 | 298.21 | 608.79 | 298.21 | 609.28 | 298.2 | 614.15 | 298.17 |
| 616.46 | 298.15 | 618.41 | 298.14 | 618.85 | 298.13 | 619.48 | 298.07 | 620.51 | 297.95 |
| 621.62 | 297.88 | 622.05 | 297.86 | 624.26 | 297.81 | 625.09 | 297.78 | 625.61 | 297.85 |
| 626.17 | 297.88 | 626.57 | 297.88 | 628.02 | 297.92 | 628.69 | 297.93 | 629.45 | 297.92 |
| 631.88 | 298 | 634.09 | 297.98 | 636.15 | 297.91 | 636.54 | 297.88 | 637.34 | 297.88 |
| 637.65 | 297.92 | 639.02 | 297.98 | 639.92 | 298.04 | 643.64 | 298.09 | 647.06 | 298.18 |
| 647.92 | 298.22 | 648.72 | 298.27 | 650.65 | 298.41 | 651.82 | 298.47 | 652.58 | 298.49 |
| 653.07 | 298.52 | 655 | 298.59 | 656.33 | 298.61 | 657.27 | 298.6 | 657.85 | 298.58 |
| 658.49 | 298.52 | 658.81 | 298.53 | 659.75 | 298.61 | 661.78 | 298.75 | 664.13 | 298.89 |
| 664.94 | 298.93 | 666.59 | 298.96 | 668.32 | 298.96 | 669.7 | 298.97 | 670.83 | 298.99 |
| 673.74 | 299.09 | 675.12 | 299.12 | 675.78 | 299.1 | 676.41 | 299.1 | 677.84 | 299.12 |
| 678.8 | 299.15 | 681 | 299.23 | 682.08 | 299.28 | 683.11 | 299.34 | 684.84 | 299.45 |
| 687.17 | 299.63 | 696.27 | 300.06 | 705.47 | 300.47 | 708.05 | 300.61 | 708.98 | 300.65 |
| 711.12 | 300.76 | 714.76 | 300.92 | 717.55 | 301.05 | 724.25 | 301.38 | 727.07 | 301.51 |
| 728.85 | 301.57 | 730.48 | 301.63 | 731.79 | 301.69 | 732.84 | 301.72 | 734.88 | 301.83 |
| 736.62 | 301.94 | 739.69 | 302.1 | 740.59 | 302.14 | 742.92 | 302.27 | 752.15 | 302.8 |
| 754.34 | 302.93 | 754.99 | 302.96 | 770.44 | 303.96 | 771.02 | 304 | 773.14 | 304.13 |
| 774.63 | 304.19 | 777.36 | 304.28 | 778.3 | 304.35 | 779.61 | 304.43 | 781.29 | 304.52 |
| 781.75 | 304.53 | 783.16 | 304.64 | 783.24 | 304.64 | 784.25 | 304.73 | 784.98 | 304.76 |
| 786.85 | 304.95 | 797.83 | 305.72 | 799.49 | 305.83 | 802.95 | 306.01 | 803.65 | 306.04 |
| 807.68 | 306.23 | 811.13 | 306.46 | 813.99 | 306.62 | 817.05 | 306.85 | 820.56 | 307.06 |
| 824.15 | 307.29 | 827.12 | 307.47 | 827.67 | 307.51 | 829.97 | 307.64 | 831.69 | 307.77 |
| 838.19 | 308.18 | 841.89 | 308.4 | 847.12 | 308.73 | 848.19 | 308.81 | 856.74 | 309.59 |
| 860.94 | 309.91 | 862.38 | 310.03 | 864.25 | 310.18 | 867.37 | 310.45 | 871.36 | 310.93 |
| 873.88 | 311.24 | 874.19 | 311.3 | 878.91 | 312.04 | 881.42 | 312.52 | 883.13 | 312.84 |
| 883.92 | 313.01 | 886.87 | 313.63 | 887.96 | 313.74 | 893.57 | 314.33 | 895.53 | 314.52 |
| 896.28 | 314.58 | 898.35 | 314.73 | 899.67 | 314.82 | 902.02 | 314.95 | 906.49 | 315.17 |
| 909.37 | 315.34 | 910.51 | 315.41 | 911.06 | 315.41 | 912.28 | 315.39 | 913.45 | 315.39 |
| 913.63 | 315.4 | 914.76 | 315.42 | 914.83 | 315.41 | 917.7 | 315.75 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 179.93 | .04 | 544.23 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 179.93 | 544.23 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1942.03*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 314.49 | 1.57 | 314.05 | 2.03 | 313.93 | 3.04 | 313.64 | 4.03 | 313.37 |
| 5.68 | 312.94 | 8.54 | 312.39 | 10.24 | 311.89 | 11.67 | 311.4 | 12.51 | 311.1 |
| 13.04 | 310.93 | 14.44 | 310.83 | 17.2 | 310.64 | 19.84 | 310.49 | 20.73 | 310.43 |
| 23.91 | 310.19 | 25.51 | 310.06 | 27.07 | 309.94 | 28.3 | 309.84 | 28.85 | 309.78 |
| 29.78 | 309.73 | 31.69 | 309.6 | 32.34 | 309.51 | 33.81 | 309.22 | 35.34 | 308.89 |
| 36.31 | 308.71 | 38.3 | 308.38 | 40.58 | 307.93 | 41.56 | 307.78 | 43.13 | 307.53 |
| 44.2 | 307.37 | 45.47 | 307.17 | 48.56 | 306.75 | 49.38 | 306.67 | 49.98 | 306.6 |
| 50.76 | 306.56 | 51.55 | 306.55 | 55.38 | 306.49 | 57.51 | 306.44 | 58.29 | 306.39 |
| 59.94 | 306.42 | 60.78 | 306.42 | 63.46 | 306.45 | 63.91 | 306.43 | 68 | 306.33 |
| 69.86 | 306.34 | 70.38 | 306.33 | 72.3 | 306.31 | 72.47 | 306.3 | 73.45 | 306.29 |
| 74.91 | 306.24 | 75.7 | 306.19 | 76.35 | 306.12 | 77.83 | 305.99 | 78.43 | 305.93 |
| 78.98 | 305.84 | 79.25 | 305.84 | 80.51 | 305.88 | 81.32 | 305.87 | 82.25 | 305.82 |
| 84.77 | 305.72 | 87.39 | 305.62 | 89.84 | 305.47 | 90.92 | 305.41 | 91.35 | 305.4 |
| 93.91 | 305.31 | 95.29 | 305.24 | 96.27 | 305.2 | 96.99 | 305.19 | 98.19 | 305.14 |
| 100.43 | 304.98 | 101.85 | 304.9 | 102.88 | 304.79 | 104.13 | 304.69 | 104.93 | 304.61 |
| 106.19 | 304.47 | 108.21 | 304.53 | 109.34 | 304.54 | 109.7 | 304.53 | 111.66 | 304.52 |
| 113.84 | 304.5 | 114.36 | 304.49 | 115.11 | 304.45 | 116.3 | 304.48 | 118.15 | 304.47 |
| 118.93 | 304.46 | 121.73 | 304.4 | 122.9 | 304.36 | 125.64 | 304.3 | 126.91 | 304.29 |
| 127.21 | 304.28 | 128.5 | 304.29 | 129.52 | 304.31 | 130.07 | 304.31 | 131.53 | 304.33 |
| 132.8 | 304.36 | 134.15 | 304.42 | 134.77 | 304.39 | 136.35 | 304.28 | 136.52 | 304.26 |
| 136.78 | 304.18 | 137.51 | 304.06 | 138.39 | 303.89 | 139.99 | 303.61 | 140.71 | 303.49 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 141.16 | 303.39 | 143.31 | 302.95 | 144.96 | 302.46 | 149.88 | 301.16 | 151.19 | 300.75 |
| 153.75 | 300.05 | 154.68 | 299.84 | 155.75 | 299.57 | 156.97 | 299.3 | 158.46 | 298.95 |
| 159.32 | 298.7 | 161.52 | 298.1 | 163.52 | 297.55 | 164.52 | 297.29 | 165.25 | 297.14 |
| 166.76 | 296.8 | 167.98 | 296.52 | 168.32 | 296.45 | 169.56 | 296.24 | 171.62 | 295.95 |
| 172.15 | 295.86 | 173.03 | 295.73 | 174.27 | 295.51 | 175.6 | 295.35 | 177.15 | 295.22 |
| 185.29 | 294.48 | 187.73 | 294.27 | 188.68 | 294.15 | 189.98 | 294.06 | 190.94 | 294.01 |
| 192.41 | 293.96 | 193.33 | 293.91 | 194.4 | 293.89 | 195.13 | 293.9 | 195.71 | 293.88 |
| 197.27 | 293.8 | 197.67 | 293.8 | 198.88 | 293.76 | 199.5 | 293.76 | 201.23 | 293.73 |
| 204.95 | 293.66 | 206.61 | 293.62 | 209.85 | 293.53 | 211.05 | 293.49 | 211.29 | 293.49 |
| 217.48 | 293.28 | 220.33 | 293.21 | 223.83 | 293.15 | 225.92 | 293.13 | 229.71 | 293.03 |
| 231.83 | 292.96 | 231.99 | 292.96 | 233.5 | 292.9 | 233.64 | 292.9 | 234.16 | 292.84 |
| 235.59 | 292.82 | 238.1 | 292.77 | 240 | 292.75 | 241.07 | 292.76 | 243.09 | 292.74 |
| 243.17 | 292.72 | 244.78 | 292.69 | 245.72 | 292.68 | 249.52 | 292.65 | 250.86 | 292.66 |
| 255.94 | 292.66 | 258.97 | 292.63 | 260.86 | 292.59 | 262.55 | 292.56 | 263.95 | 292.53 |
| 265.13 | 292.49 | 265.93 | 292.44 | 268.66 | 292.44 | 268.71 | 292.45 | 270.58 | 292.46 |
| 271.39 | 292.47 | 272.44 | 292.5 | 275.18 | 292.55 | 275.86 | 292.58 | 278.46 | 292.73 |
| 278.62 | 292.73 | 279.37 | 292.78 | 281.49 | 292.88 | 282.1 | 292.9 | 282.73 | 292.9 |
| 284.73 | 292.88 | 286.52 | 292.88 | 288.63 | 292.85 | 293.56 | 292.82 | 294.35 | 292.82 |
| 295.3 | 292.8 | 299.24 | 292.77 | 300.61 | 292.73 | 301.53 | 292.71 | 303.29 | 292.69 |
| 303.78 | 292.68 | 308.72 | 292.65 | 310.16 | 292.66 | 311.22 | 292.66 | 313.82 | 292.65 |
| 314.53 | 292.66 | 316.18 | 292.66 | 318.81 | 292.6 | 319.87 | 292.56 | 320.2 | 292.56 |
| 322.83 | 292.49 | 323.56 | 292.48 | 325.39 | 292.44 | 326.62 | 292.42 | 328.18 | 292.38 |
| 328.25 | 292.34 | 330.52 | 292.35 | 332.62 | 292.35 | 334.31 | 292.38 | 337.26 | 292.41 |
| 344.26 | 292.41 | 347.34 | 292.45 | 348.02 | 292.45 | 351.28 | 292.49 | 351.54 | 292.5 |
| 353.79 | 292.5 | 354.62 | 292.48 | 355.54 | 292.49 | 357.75 | 292.5 | 358.57 | 292.48 |
| 358.92 | 292.41 | 359.32 | 292.39 | 362.92 | 292.46 | 363.82 | 292.48 | 365.38 | 292.5 |
| 367.54 | 292.55 | 368.01 | 292.55 | 368.59 | 292.57 | 369.84 | 292.57 | 370.25 | 292.56 |
| 371.51 | 292.56 | 372.69 | 292.57 | 376.35 | 292.55 | 376.94 | 292.55 | 378.73 | 292.57 |
| 384.95 | 292.57 | 387.17 | 292.55 | 388.98 | 292.55 | 392.68 | 292.54 | 395.88 | 292.44 |
| 396.49 | 292.43 | 396.91 | 292.41 | 397.76 | 292.4 | 400.63 | 292.26 | 401.13 | 292.21 |
| 401.37 | 292.17 | 403.64 | 292.1 | 404.98 | 292.09 | 405.42 | 292.07 | 409.05 | 292.07 |
| 411.78 | 292.08 | 412.86 | 292.09 | 413.99 | 292.11 | 414.61 | 292.11 | 416.83 | 292.13 |
| 420.3 | 292.17 | 421.35 | 292.19 | 421.81 | 292.19 | 424.37 | 292.22 | 425.44 | 292.24 |
| 428.57 | 292.29 | 429.86 | 292.3 | 432.87 | 292.35 | 433.49 | 292.37 | 436.7 | 292.44 |
| 440.1 | 292.54 | 441.14 | 292.56 | 443.48 | 292.58 | 446.3 | 292.6 | 450.08 | 292.64 |
| 455.86 | 292.71 | 457.66 | 292.73 | 459.87 | 292.74 | 463.54 | 292.78 | 463.91 | 292.79 |
| 464.74 | 292.79 | 465.67 | 292.8 | 467.3 | 292.8 | 468.92 | 292.82 | 469.05 | 292.83 |
| 470.64 | 292.84 | 472.48 | 292.87 | 473.05 | 292.87 | 477.66 | 292.97 | 478.89 | 292.96 |
| 481.31 | 292.96 | 482.34 | 292.94 | 483.02 | 292.95 | 485.39 | 292.95 | 487.1 | 292.96 |
| 488.65 | 292.96 | 491.5 | 292.99 | 493.28 | 293.02 | 494.85 | 293.04 | 496.27 | 293.05 |
| 498.38 | 293.05 | 500.84 | 293.04 | 503.66 | 293.09 | 505.29 | 293.14 | 507.05 | 293.17 |
| 507.37 | 293.18 | 508.88 | 293.16 | 510.78 | 293.14 | 514.02 | 293.11 | 514.75 | 293.1 |
| 516.85 | 293.1 | 519.09 | 293.03 | 520.01 | 293.03 | 521.1 | 293.04 | 524.96 | 293.02 |
| 527.59 | 293.03 | 536.51 | 293.1 | 540.62 | 293.15 | 543.11 | 293.1 | 546.66 | 293.07 |
| 547.13 | 293.05 | 547.69 | 293.05 | 548.91 | 293.03 | 549.12 | 293.05 | 550.1 | 293.09 |
| 555.05 | 293.27 | 555.2 | 293.28 | 558.22 | 293.42 | 559.77 | 293.51 | 565.16 | 293.79 |
| 568.39 | 294.09 | 569.57 | 294.18 | 570.79 | 294.26 | 573.74 | 294.49 | 574.83 | 294.6 |
| 576.02 | 294.75 | 577.87 | 295.01 | 578.24 | 295.07 | 579.96 | 295.23 | 581.21 | 295.36 |
| 583.45 | 295.58 | 586.88 | 296.03 | 589.79 | 296.3 | 596.04 | 296.68 | 598.74 | 296.86 |
| 599.56 | 296.88 | 603.11 | 297.05 | 608.97 | 297.28 | 611.79 | 297.36 | 613.09 | 297.38 |
| 619.58 | 297.47 | 622.27 | 297.49 | 623.86 | 297.47 | 625.34 | 297.47 | 626.77 | 297.45 |
| 629.81 | 297.44 | 630.3 | 297.43 | 635.18 | 297.37 | 635.44 | 297.37 | 637.49 | 297.34 |
| 639.89 | 297.32 | 641.55 | 297.16 | 642.17 | 297.12 | 643.1 | 297.08 | 645.31 | 297.03 |
| 645.93 | 297 | 646.19 | 297 | 646.66 | 297.06 | 647.22 | 297.08 | 647.62 | 297.07 |
| 649.07 | 297.1 | 650.51 | 297.09 | 652.94 | 297.14 | 654.36 | 297.1 | 655.55 | 297.06 |
| 656.28 | 297.02 | 656.88 | 297 | 657.6 | 296.95 | 658.27 | 296.94 | 658.71 | 297 |
| 660.09 | 297.1 | 660.98 | 297.17 | 664.72 | 297.26 | 668.13 | 297.35 | 669 | 297.39 |
| 669.79 | 297.44 | 671.73 | 297.58 | 672.13 | 297.59 | 672.9 | 297.63 | 673.67 | 297.65 |
| 676.28 | 297.76 | 677.42 | 297.79 | 678.94 | 297.77 | 679.58 | 297.73 | 679.9 | 297.74 |
| 680.85 | 297.81 | 682.88 | 297.94 | 685.23 | 298.07 | 686.04 | 298.11 | 687.69 | 298.14 |
| 689.42 | 298.15 | 691.94 | 298.19 | 695.7 | 298.32 | 697.53 | 298.31 | 698.96 | 298.34 |
| 699.92 | 298.37 | 702.12 | 298.45 | 703.21 | 298.5 | 704.24 | 298.56 | 706.62 | 298.71 |
| 708.3 | 298.84 | 717.41 | 299.28 | 726.62 | 299.69 | 729.21 | 299.84 | 730.14 | 299.88 |
| 732.28 | 300 | 735.93 | 300.18 | 738.72 | 300.31 | 739.75 | 300.37 | 745.43 | 300.67 |
| 748.26 | 300.8 | 750.04 | 300.87 | 753.46 | 301.02 | 754.56 | 301.06 | 756.07 | 301.14 |
| 757.82 | 301.25 | 759.93 | 301.37 | 761.8 | 301.45 | 764.13 | 301.59 | 773.38 | 302.11 |
| 776.22 | 302.28 | 791.69 | 303.28 | 792.27 | 303.32 | 793.92 | 303.42 | 794.83 | 303.46 |
| 798.61 | 303.56 | 799.56 | 303.64 | 800.29 | 303.66 | 801.07 | 303.72 | 801.8 | 303.76 |
| 802.55 | 303.78 | 803.27 | 303.81 | 805.36 | 303.99 | 806.25 | 304.05 | 808.13 | 304.24 |
| 819.11 | 305 | 821.54 | 305.15 | 824.24 | 305.29 | 824.94 | 305.32 | 828.98 | 305.52 |
| 832.44 | 305.75 | 834.02 | 305.85 | 835.29 | 305.91 | 838.36 | 306.13 | 841.87 | 306.34 |
| 845.47 | 306.56 | 848.45 | 306.74 | 851.07 | 306.89 | 851.3 | 306.9 | 853.02 | 307.03 |
| 860.36 | 307.48 | 863.24 | 307.65 | 868.48 | 307.98 | 869.3 | 308.03 | 878.11 | 308.78 |
| 878.88 | 308.84 | 882.32 | 309.09 | 885.62 | 309.34 | 888.75 | 309.59 | 890.58 | 309.8 |
| 895.27 | 310.32 | 895.58 | 310.38 | 898.52 | 310.79 | 900.31 | 311.06 | 902.82 | 311.49 |
| 904.54 | 311.79 | 908.28 | 312.51 | 909.37 | 312.62 | 914.99 | 313.18 | 916.95 | 313.36 |
| 917.7 | 313.42 | 919.77 | 313.57 | 921.1 | 313.66 | 923.45 | 313.79 | 927.93 | 314.03 |
| 930.81 | 314.2 | 931.95 | 314.28 | 932.51 | 314.27 | 933.73 | 314.22 | 934.9 | 314.21 |
| 936.21 | 314.23 | 936.56 | 314.25 | 936.79 | 314.3 | 939.15 | 314.64 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 198.88 | .04 | 565.16 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 198.88 | 565.16 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1892.83*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 313.4 | 1.72 | 312.9 | 2.22 | 312.77 | 4.14 | 312.2 | 6.22 | 311.62 |
| 8.46 | 311.17 | 9.36 | 310.98 | 11.22 | 310.41 | 12.78 | 309.84 | 13.7 | 309.48 |
| 14.28 | 309.28 | 15.82 | 309.17 | 16.92 | 309.1 | 18.84 | 308.99 | 22.71 | 308.79 |
| 26.19 | 308.58 | 29.65 | 308.36 | 31.59 | 308.21 | 32.5 | 308.17 | 33.62 | 308.1 |
| 34.71 | 308.04 | 35.42 | 307.95 | 37.03 | 307.7 | 38.09 | 307.51 | 39.11 | 307.34 |
| 39.77 | 307.26 | 41.95 | 306.98 | 44.45 | 306.6 | 45.52 | 306.47 | 47.24 | 306.27 |
| 49.81 | 305.96 | 52.28 | 305.7 | 53.19 | 305.6 | 54.09 | 305.54 | 54.75 | 305.47 |
| 55.89 | 305.42 | 56.47 | 305.42 | 62.55 | 305.29 | 63.85 | 305.22 | 64.19 | 305.23 |
| 68.56 | 305.32 | 69.77 | 305.33 | 70.74 | 305.32 | 70.85 | 305.31 | 74.48 | 305.27 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 74.97 | 305.28 | 78.19 | 305.3 | 79.38 | 305.3 | 80.45 | 305.31 | 82.05 | 305.29 |
| 82.91 | 305.25 | 83.62 | 305.19 | 84.23 | 305.15 | 85.24 | 305.07 | 86.12 | 304.99 |
| 86.56 | 304.92 | 87.77 | 305 | 89.06 | 305.05 | 89.49 | 305.05 | 90.09 | 305.02 |
| 92.85 | 304.96 | 93.75 | 304.95 | 95.72 | 304.9 | 98.4 | 304.8 | 99.58 | 304.77 |
| 102.86 | 304.7 | 105.44 | 304.63 | 106.24 | 304.62 | 107.55 | 304.58 | 111.55 | 304.4 |
| 112.69 | 304.28 | 114.31 | 304.15 | 114.93 | 304.09 | 116.31 | 303.94 | 118.53 | 304.05 |
| 120.15 | 304.08 | 122.3 | 304.1 | 125.26 | 304.11 | 126.08 | 304.09 | 127.39 | 304.13 |
| 127.92 | 304.14 | 129.41 | 304.15 | 130.27 | 304.15 | 133.34 | 304.12 | 136.11 | 304.08 |
| 137.61 | 304.07 | 139.33 | 304.07 | 141.09 | 304.12 | 144.06 | 304.23 | 145.45 | 304.3 |
| 147.08 | 304.42 | 149.53 | 304.28 | 149.82 | 304.19 | 150.61 | 304.05 | 151.58 | 303.86 |
| 153.33 | 303.55 | 154.12 | 303.4 | 154.61 | 303.29 | 156.97 | 302.79 | 158.78 | 302.22 |
| 164.17 | 300.7 | 164.99 | 300.43 | 165.6 | 300.24 | 167.12 | 299.81 | 168.4 | 299.44 |
| 169.42 | 299.2 | 170.6 | 298.89 | 171.93 | 298.58 | 173.56 | 298.18 | 174.5 | 297.92 |
| 176.91 | 297.27 | 179.11 | 296.69 | 180.2 | 296.41 | 181 | 296.26 | 182.65 | 295.92 |
| 183.99 | 295.63 | 184.36 | 295.56 | 185.72 | 295.35 | 187.98 | 295.07 | 189.52 | 294.86 |
| 190.88 | 294.64 | 192.34 | 294.47 | 192.74 | 294.43 | 194.03 | 294.33 | 202.95 | 293.6 |
| 205.62 | 293.4 | 206.66 | 293.26 | 208.09 | 293.18 | 209.14 | 293.14 | 210.74 | 293.1 |
| 211.76 | 293.06 | 212.11 | 293.07 | 213.15 | 293.06 | 213.24 | 293.08 | 213.72 | 293.09 |
| 214.36 | 293.06 | 216.07 | 293 | 217.84 | 292.97 | 218.16 | 292.96 | 219.06 | 292.96 |
| 220.31 | 292.95 | 224.24 | 292.88 | 228.59 | 292.78 | 230.66 | 292.71 | 230.92 | 292.71 |
| 237.44 | 292.5 | 240.45 | 292.43 | 241.6 | 292.41 | 243.47 | 292.39 | 244.13 | 292.37 |
| 245.12 | 292.38 | 246.34 | 292.37 | 250.34 | 292.27 | 252.57 | 292.2 | 252.74 | 292.2 |
| 254.34 | 292.14 | 255.03 | 292.09 | 259.18 | 292.01 | 261.18 | 291.99 | 262.31 | 292 |
| 264.44 | 291.98 | 264.53 | 291.96 | 265.19 | 291.94 | 266.23 | 291.93 | 267.21 | 291.91 |
| 271.22 | 291.88 | 273.59 | 291.9 | 277.99 | 291.9 | 281.19 | 291.86 | 283.18 | 291.81 |
| 284.96 | 291.76 | 285.84 | 291.74 | 287.14 | 291.7 | 287.79 | 291.67 | 288.21 | 291.62 |
| 289.16 | 291.6 | 291.45 | 291.6 | 293.42 | 291.61 | 294.43 | 291.62 | 295.39 | 291.64 |
| 297.79 | 291.68 | 298.99 | 291.71 | 301.73 | 291.84 | 305.17 | 291.99 | 307.08 | 291.99 |
| 308.85 | 291.98 | 310.81 | 291.99 | 312.45 | 291.97 | 317.66 | 291.95 | 318.48 | 291.95 |
| 319.49 | 291.94 | 323.64 | 291.92 | 324.11 | 291.91 | 325.08 | 291.87 | 326.05 | 291.85 |
| 327.91 | 291.83 | 328.43 | 291.83 | 332.04 | 291.81 | 334.43 | 291.81 | 335.81 | 291.83 |
| 339.01 | 291.82 | 340.35 | 291.84 | 341.16 | 291.84 | 342.98 | 291.81 | 345.74 | 291.72 |
| 346.11 | 291.72 | 348.51 | 291.65 | 349.28 | 291.64 | 351.21 | 291.6 | 352.88 | 291.58 |
| 354.15 | 291.55 | 354.23 | 291.52 | 356.62 | 291.54 | 358.77 | 291.54 | 359.56 | 291.56 |
| 360.61 | 291.57 | 361.79 | 291.59 | 362.86 | 291.6 | 364.53 | 291.6 | 366.8 | 291.61 |
| 368.61 | 291.61 | 371.11 | 291.62 | 375.07 | 291.67 | 375.76 | 291.67 | 378.78 | 291.72 |
| 381.16 | 291.72 | 381.82 | 291.7 | 382.99 | 291.71 | 385.33 | 291.71 | 386.19 | 291.7 |
| 386.56 | 291.61 | 386.98 | 291.58 | 390.78 | 291.66 | 390.8 | 291.67 | 393.33 | 291.7 |
| 393.37 | 291.71 | 394.84 | 291.74 | 396.14 | 291.76 | 396.51 | 291.78 | 397.51 | 291.79 |
| 399.12 | 291.76 | 400.37 | 291.78 | 405.55 | 291.78 | 407.45 | 291.81 | 408.3 | 291.81 |
| 409.12 | 291.8 | 414 | 291.8 | 416.34 | 291.79 | 422.15 | 291.79 | 426.62 | 291.62 |
| 427.51 | 291.6 | 430.08 | 291.47 | 430.75 | 291.43 | 431.32 | 291.37 | 433.71 | 291.28 |
| 434.73 | 291.27 | 435.58 | 291.24 | 436.86 | 291.24 | 436.92 | 291.23 | 438.8 | 291.23 |
| 439.05 | 291.24 | 441.62 | 291.25 | 444.29 | 291.28 | 446.07 | 291.29 | 446.38 | 291.3 |
| 451.07 | 291.36 | 453.48 | 291.38 | 454.49 | 291.4 | 457.44 | 291.44 | 458.65 | 291.45 |
| 462.07 | 291.51 | 463.46 | 291.54 | 465.09 | 291.59 | 468.12 | 291.67 | 469.27 | 291.69 |
| 471.48 | 291.71 | 475.02 | 291.75 | 476.76 | 291.76 | 483.14 | 291.82 | 486.92 | 291.84 |
| 490.37 | 291.88 | 490.72 | 291.89 | 492.38 | 291.9 | 493.91 | 291.9 | 495.44 | 291.92 |
| 497.06 | 291.93 | 498.8 | 291.96 | 499.33 | 291.96 | 501 | 291.99 | 501.58 | 292.01 |
| 502.44 | 292.02 | 503.16 | 292.04 | 507.11 | 292.04 | 508.09 | 292.02 | 508.73 | 292.03 |
| 512.56 | 292.03 | 514.02 | 292.04 | 517.77 | 292.08 | 518.39 | 292.1 | 521.2 | 292.12 |
| 521.31 | 292.13 | 523.19 | 292.12 | 524.81 | 292.1 | 525.5 | 292.1 | 528.16 | 292.14 |
| 529.7 | 292.19 | 531.36 | 292.22 | 534.87 | 292.18 | 538.61 | 292.13 | 538.94 | 292.12 |
| 540.59 | 292.12 | 542.7 | 292.06 | 543.56 | 292.06 | 544.59 | 292.07 | 548.23 | 292.05 |
| 548.77 | 292.05 | 550.7 | 292.08 | 555.56 | 292.14 | 559.11 | 292.19 | 562.98 | 292.25 |
| 563.44 | 292.24 | 565.32 | 292.22 | 568.67 | 292.21 | 569.11 | 292.2 | 570.09 | 292.2 |
| 570.7 | 292.19 | 571.45 | 292.24 | 571.91 | 292.25 | 574.52 | 292.37 | 575.51 | 292.4 |
| 576.71 | 292.46 | 577.92 | 292.53 | 579.56 | 292.61 | 581.02 | 292.7 | 586.09 | 292.99 |
| 586.44 | 293.02 | 589.32 | 293.31 | 589.56 | 293.32 | 590.51 | 293.4 | 591.73 | 293.48 |
| 593.93 | 293.65 | 595.78 | 293.83 | 598.82 | 294.29 | 599.19 | 294.36 | 599.43 | 294.38 |
| 602.17 | 294.66 | 602.57 | 294.69 | 604.41 | 294.88 | 604.86 | 294.94 | 607.84 | 295.36 |
| 610.76 | 295.62 | 617.02 | 296.03 | 619.72 | 296.22 | 620.54 | 296.24 | 624.09 | 296.4 |
| 629.96 | 296.61 | 632.41 | 296.67 | 634.09 | 296.69 | 641.75 | 296.76 | 643.28 | 296.76 |
| 643.81 | 296.75 | 645.96 | 296.73 | 647.79 | 296.7 | 648.39 | 296.7 | 650.83 | 296.67 |
| 654.64 | 296.6 | 656.47 | 296.58 | 658.53 | 296.54 | 659.09 | 296.54 | 660.75 | 296.52 |
| 661.56 | 296.46 | 662.59 | 296.37 | 663.7 | 296.31 | 666.35 | 296.24 | 667.24 | 296.22 |
| 668 | 296.27 | 669.07 | 296.27 | 670.79 | 296.28 | 671.56 | 296.26 | 673.99 | 296.29 |
| 675.42 | 296.21 | 675.83 | 296.18 | 676.61 | 296.15 | 677.34 | 296.1 | 678.28 | 296.05 |
| 678.66 | 296.02 | 679.33 | 296.01 | 679.77 | 296.09 | 682.05 | 296.31 | 685.79 | 296.42 |
| 686.97 | 296.45 | 689.21 | 296.53 | 690.08 | 296.57 | 692.4 | 296.72 | 693.98 | 296.79 |
| 694.75 | 296.8 | 695.24 | 296.83 | 697.18 | 296.92 | 698.51 | 296.96 | 699.45 | 296.97 |
| 700.04 | 296.96 | 700.67 | 296.93 | 700.99 | 296.94 | 701.43 | 296.98 | 703.97 | 297.13 |
| 707.15 | 297.29 | 708.8 | 297.33 | 710.53 | 297.35 | 713.05 | 297.39 | 716.81 | 297.52 |
| 717.35 | 297.53 | 718.39 | 297.52 | 720.07 | 297.56 | 722.15 | 297.63 | 725.36 | 297.78 |
| 727.75 | 297.93 | 729.43 | 298.05 | 738.56 | 298.5 | 747.78 | 298.91 | 751.64 | 299.13 |
| 752.22 | 299.17 | 753.45 | 299.24 | 757.1 | 299.43 | 759.9 | 299.58 | 760.93 | 299.64 |
| 766.62 | 299.95 | 768.52 | 300.05 | 772.86 | 300.24 | 774.35 | 300.32 | 775.75 | 300.37 |
| 777.27 | 300.46 | 779.02 | 300.57 | 782.1 | 300.73 | 783 | 300.77 | 785.34 | 300.9 |
| 794.6 | 301.43 | 797.44 | 301.6 | 812.94 | 302.6 | 815.17 | 302.74 | 815.64 | 302.76 |
| 817.14 | 302.8 | 819.87 | 302.84 | 820.82 | 302.92 | 821.55 | 302.94 | 822.33 | 303 |
| 823.06 | 303.03 | 824.53 | 303.07 | 826.5 | 303.26 | 827.52 | 303.33 | 828.49 | 303.44 |
| 829.4 | 303.53 | 840.4 | 304.27 | 842.06 | 304.38 | 845.54 | 304.57 | 846.24 | 304.6 |
| 850.28 | 304.81 | 853.74 | 305.04 | 855.33 | 305.14 | 856.6 | 305.21 | 859.67 | 305.41 |
| 863.19 | 305.61 | 869.77 | 306.01 | 872.63 | 306.16 | 874.36 | 306.28 | 881.7 | 306.73 |
| 884.59 | 306.9 | 890.66 | 307.27 | 899.48 | 307.98 | 900.25 | 308.03 | 905.13 | 308.37 |
| 907 | 308.51 | 910.13 | 308.74 | 911.96 | 308.93 | 914.13 | 309.15 | 915.69 | 309.3 |
| 916.66 | 309.4 | 916.97 | 309.45 | 919.92 | 309.83 | 921.7 | 310.07 | 925.94 | 310.74 |
| 926.73 | 310.87 | 929.69 | 311.38 | 930.78 | 311.49 | 936.41 | 312.02 | 938.37 | 312.2 |
| 939.13 | 312.26 | 941.2 | 312.41 | 942.53 | 312.5 | 944.89 | 312.64 | 949.37 | 312.88 |
| 953.04 | 313.11 | 953.4 | 313.14 | 953.95 | 313.13 | 955.32 | 313.05 | 956.34 | 313.02 |
| 956.52 | 313.04 | 957.94 | 313.05 | 958.24 | 313.12 | 960.6 | 313.53 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 217.84 | .04 | 586.09 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 217.84 | 586.09 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1843.63*

INPUT

Description:

Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 312.32 | 1.87 | 311.76 | 2.42 | 311.61 | 3.62 | 311.23 | 4.8 | 310.87 |
| 6.76 | 310.29 | 9.2 | 309.79 | 10.17 | 309.58 | 12.2 | 308.93 | 13.89 | 308.27 |
| 15.01 | 307.81 | 15.52 | 307.62 | 17.19 | 307.52 | 20.48 | 307.33 | 24.07 | 307.17 |
| 24.69 | 307.15 | 28.47 | 306.97 | 30.37 | 306.87 | 32.23 | 306.78 | 33.69 | 306.69 |
| 34.34 | 306.64 | 35.32 | 306.6 | 37.73 | 306.48 | 38.5 | 306.4 | 40.25 | 306.18 |
| 41.95 | 305.94 | 42.52 | 305.87 | 45.6 | 305.57 | 48.31 | 305.27 | 49.49 | 305.16 |
| 52.62 | 304.89 | 54.14 | 304.75 | 57.82 | 304.46 | 58.99 | 304.39 | 59.51 | 304.34 |
| 60.76 | 304.29 | 61.38 | 304.29 | 65.93 | 304.18 | 68.69 | 304.1 | 69.55 | 304.04 |
| 69.78 | 304.06 | 72.36 | 304.14 | 75.56 | 304.21 | 80.96 | 304.21 | 85 | 304.28 |
| 87.45 | 304.32 | 89.19 | 304.34 | 89.75 | 304.33 | 91.99 | 304.19 | 92.37 | 304.17 |
| 93.61 | 304.08 | 94.03 | 304.01 | 94.35 | 304.02 | 95.85 | 304.17 | 96.81 | 304.23 |
| 97.28 | 304.24 | 97.93 | 304.22 | 100.93 | 304.2 | 101.91 | 304.21 | 104.05 | 304.19 |
| 106.96 | 304.13 | 109.78 | 304.11 | 111.81 | 304.1 | 112.63 | 304.09 | 114.61 | 304.05 |
| 115.48 | 304.05 | 116.9 | 304.03 | 119.58 | 303.95 | 119.94 | 303.93 | 121.26 | 303.9 |
| 122.49 | 303.77 | 123.98 | 303.66 | 125.03 | 303.56 | 126.2 | 303.42 | 126.53 | 303.4 |
| 127.58 | 303.49 | 128.84 | 303.56 | 129.7 | 303.59 | 130.18 | 303.62 | 132.95 | 303.68 |
| 136.16 | 303.74 | 137.05 | 303.73 | 139.05 | 303.8 | 140.67 | 303.83 | 141.6 | 303.84 |
| 146.32 | 303.84 | 147.95 | 303.83 | 149.59 | 303.84 | 151.46 | 303.86 | 153 | 303.92 |
| 153.57 | 303.96 | 154.87 | 304.02 | 156.59 | 304.13 | 158.76 | 304.29 | 159.87 | 304.41 |
| 161.6 | 304.34 | 162.54 | 304.29 | 162.85 | 304.19 | 163.71 | 304.04 | 164.77 | 303.83 |
| 167.52 | 303.32 | 168.06 | 303.19 | 170.63 | 302.63 | 172.59 | 301.97 | 178.45 | 300.24 |
| 180.01 | 299.74 | 181.66 | 299.25 | 183.05 | 298.83 | 184.17 | 298.56 | 185.44 | 298.22 |
| 188.67 | 297.42 | 189.68 | 297.13 | 192.64 | 296.35 | 195.88 | 295.53 | 196.75 | 295.37 |
| 198.54 | 295.03 | 200 | 294.74 | 201.1 | 294.56 | 201.88 | 294.47 | 204.33 | 294.2 |
| 206 | 293.99 | 207.49 | 293.77 | 209.31 | 293.55 | 210.91 | 293.44 | 220.61 | 292.72 |
| 223.51 | 292.52 | 224.65 | 292.38 | 226.19 | 292.29 | 227.33 | 292.26 | 229.08 | 292.24 |
| 230.18 | 292.21 | 231.7 | 292.23 | 231.8 | 292.25 | 232.32 | 292.27 | 234.86 | 292.2 |
| 235.63 | 292.2 | 236.79 | 292.18 | 237.13 | 292.17 | 238.08 | 292.17 | 239.39 | 292.16 |
| 242.82 | 292.11 | 243.52 | 292.11 | 245.35 | 292.07 | 248.95 | 291.98 | 250.54 | 291.93 |
| 257.4 | 291.72 | 260.57 | 291.65 | 261.77 | 291.63 | 263.75 | 291.62 | 264.44 | 291.6 |
| 265.48 | 291.61 | 266.76 | 291.61 | 270.96 | 291.51 | 273.31 | 291.44 | 273.49 | 291.44 |
| 275.17 | 291.38 | 275.9 | 291.34 | 277.36 | 291.3 | 278.62 | 291.29 | 280.26 | 291.25 |
| 282.37 | 291.23 | 283.56 | 291.24 | 285.8 | 291.22 | 285.89 | 291.19 | 286.58 | 291.17 |
| 287.92 | 291.16 | 288.71 | 291.14 | 291.73 | 291.12 | 292.92 | 291.12 | 295.41 | 291.14 |
| 296.33 | 291.14 | 296.79 | 291.15 | 298.33 | 291.15 | 299.69 | 291.14 | 300.04 | 291.13 |
| 303.4 | 291.09 | 305.5 | 291.02 | 307.37 | 290.97 | 308.92 | 290.92 | 310.23 | 290.86 |
| 310.7 | 290.82 | 310.78 | 290.79 | 312.4 | 290.76 | 314.2 | 290.75 | 316.27 | 290.76 |
| 318.33 | 290.78 | 320.86 | 290.82 | 322.12 | 290.85 | 325.01 | 290.96 | 325.18 | 290.96 |
| 328.62 | 291.08 | 329.74 | 291.09 | 330.63 | 291.09 | 332.49 | 291.08 | 333.94 | 291.1 |
| 336.28 | 291.09 | 341.75 | 291.08 | 342.62 | 291.08 | 343.67 | 291.07 | 348.05 | 291.06 |
| 348.54 | 291.05 | 349.56 | 291.01 | 350.58 | 290.99 | 353.08 | 290.98 | 356.87 | 290.97 |
| 357.66 | 290.96 | 359.38 | 290.96 | 360.15 | 290.98 | 361.2 | 290.99 | 361.32 | 291 |
| 364.2 | 290.99 | 366.46 | 291.02 | 368.37 | 290.99 | 369.74 | 290.95 | 370.55 | 290.91 |
| 371.67 | 290.89 | 374.19 | 290.81 | 375 | 290.8 | 377.04 | 290.76 | 377.35 | 290.76 |
| 379.15 | 290.73 | 380.12 | 290.72 | 380.21 | 290.7 | 385.05 | 290.74 | 386.92 | 290.77 |
| 388.91 | 290.79 | 390.19 | 290.79 | 391.04 | 290.8 | 393.42 | 290.8 | 397.95 | 290.82 |
| 402.03 | 290.88 | 402.84 | 290.88 | 405.23 | 290.93 | 405.48 | 290.94 | 408.52 | 290.94 |
| 409.22 | 290.92 | 410.45 | 290.93 | 412.91 | 290.93 | 413.81 | 290.91 | 414.21 | 290.8 |
| 414.64 | 290.77 | 418.64 | 290.87 | 419.63 | 290.88 | 421.36 | 290.91 | 422.9 | 290.95 |
| 424.17 | 290.96 | 424.93 | 291 | 425.71 | 291 | 427.41 | 290.97 | 429.47 | 291 |
| 433.52 | 291.01 | 436.16 | 291.05 | 437.06 | 291.05 | 437.93 | 291.04 | 445.52 | 291.04 |
| 447.53 | 291.03 | 451.63 | 291.03 | 456.32 | 290.83 | 457.26 | 290.8 | 460.44 | 290.63 |
| 461.26 | 290.56 | 463.42 | 290.46 | 465.26 | 290.44 | 465.75 | 290.41 | 467.09 | 290.41 |
| 467.15 | 290.4 | 468.82 | 290.4 | 469.05 | 290.41 | 471.38 | 290.42 | 473.96 | 290.45 |
| 475.93 | 290.46 | 480.32 | 290.52 | 483.54 | 290.55 | 486.31 | 290.6 | 487.97 | 290.61 |
| 490.65 | 290.66 | 495.6 | 290.78 | 496.49 | 290.81 | 499.48 | 290.84 | 502.8 | 290.88 |
| 510.42 | 290.94 | 512.01 | 290.94 | 513.97 | 290.95 | 517.21 | 290.99 | 518.27 | 290.99 |
| 519.09 | 291 | 520.53 | 291 | 521.97 | 291.02 | 525.11 | 291.04 | 527.73 | 291.09 |
| 528.97 | 291.11 | 531.15 | 291.11 | 532.1 | 291.12 | 533.83 | 291.1 | 536.52 | 291.1 |
| 539.4 | 291.12 | 542.92 | 291.16 | 544.88 | 291.19 | 546.24 | 291.2 | 548 | 291.19 |
| 549.52 | 291.16 | 550.8 | 291.16 | 552.67 | 291.19 | 554.11 | 291.24 | 555.95 | 291.26 |
| 556.79 | 291.25 | 558.96 | 291.21 | 562.47 | 291.15 | 563.55 | 291.15 | 564.65 | 291.14 |
| 566.3 | 291.09 | 567.66 | 291.09 | 568.08 | 291.1 | 571.5 | 291.08 | 573.82 | 291.12 |
| 576.06 | 291.17 | 578.38 | 291.2 | 578.55 | 291.21 | 581.7 | 291.27 | 584.71 | 291.34 |
| 585.77 | 291.35 | 587.53 | 291.34 | 590.68 | 291.36 | 590.91 | 291.35 | 592.47 | 291.35 |
| 593.29 | 291.4 | 596.17 | 291.54 | 597.1 | 291.58 | 598.22 | 291.64 | 600.9 | 291.8 |
| 607.03 | 292.2 | 607.37 | 292.22 | 610.26 | 292.52 | 613.6 | 292.77 | 614.87 | 292.87 |
| 616.72 | 293.06 | 617.92 | 293.26 | 619.77 | 293.58 | 620.38 | 293.68 | 621.87 | 293.82 |
| 625.37 | 294.18 | 625.81 | 294.24 | 628.81 | 294.69 | 631.72 | 294.94 | 638 | 295.37 |
| 640.7 | 295.57 | 641.52 | 295.59 | 645.08 | 295.75 | 650.95 | 295.94 | 651.66 | 295.96 |
| 653.4 | 295.99 | 655.09 | 296 | 661.6 | 296.03 | 664.29 | 296.03 | 665.89 | 296 |
| 666.98 | 295.99 | 668.81 | 295.95 | 672.35 | 295.89 | 675.67 | 295.81 | 677.24 | 295.79 |
| 677.5 | 295.78 | 679.56 | 295.74 | 680.13 | 295.74 | 681.79 | 295.71 | 682.6 | 295.66 |
| 683.63 | 295.58 | 684.74 | 295.53 | 687.4 | 295.46 | 688.28 | 295.43 | 688.75 | 295.46 |
| 689.31 | 295.47 | 689.72 | 295.46 | 691.17 | 295.46 | 692.61 | 295.43 | 695.05 | 295.43 |
| 696.47 | 295.32 | 697.67 | 295.24 | 698.4 | 295.18 | 699.34 | 295.12 | 699.72 | 295.08 |
| 700.53 | 295.09 | 700.84 | 295.17 | 703.12 | 295.45 | 708.04 | 295.62 | 709.22 | 295.67 |
| 710.29 | 295.7 | 711.15 | 295.74 | 713.48 | 295.89 | 713.9 | 295.91 | 715.07 | 295.94 |
| 715.83 | 295.95 | 716.33 | 295.98 | 718.46 | 296.09 | 719.59 | 296.13 | 720.54 | 296.15 |
| 721.76 | 296.14 | 722.09 | 296.15 | 723.03 | 296.21 | 725.07 | 296.32 | 727.43 | 296.44 |
| 728.66 | 296.49 | 731.63 | 296.54 | 734.16 | 296.59 | 737.93 | 296.72 | 738.46 | 296.73 |
| 739.5 | 296.73 | 740.33 | 296.75 | 743.27 | 296.85 | 746.49 | 297 | 748.88 | 297.14 |
| 750.56 | 297.25 | 759.7 | 297.72 | 768.94 | 298.13 | 771.54 | 298.29 | 772.81 | 298.36 |
| 774.61 | 298.48 | 778.27 | 298.68 | 782.1 | 298.91 | 787.8 | 299.23 | 789.71 | 299.34 |
| 790.64 | 299.38 | 794.05 | 299.55 | 795.54 | 299.63 | 796.56 | 299.66 | 796.95 | 299.69 |
| 798.47 | 299.77 | 800.23 | 299.88 | 803.3 | 300.04 | 806.55 | 300.22 | 815.82 | 300.74 |
| 818.67 | 300.91 | 834.19 | 301.92 | 834.76 | 301.96 | 836.43 | 302.06 | 837.33 | 302.09 |
| 841.13 | 302.12 | 842.07 | 302.2 | 842.81 | 302.22 | 843.4 | 302.26 | 844.32 | 302.3 |
| 845.55 | 302.33 | 846.08 | 302.36 | 846.95 | 302.44 | 848.05 | 302.56 | 848.79 | 302.62 |
| 850.67 | 302.83 | 861.69 | 303.55 | 864.12 | 303.7 | 866.83 | 303.85 | 867.53 | 303.88 |
| 871.58 | 304.1 | 875.05 | 304.33 | 876.63 | 304.43 | 877.91 | 304.5 | 880.99 | 304.7 |
| 884.51 | 304.89 | 888.12 | 305.11 | 889.47 | 305.18 | 891.65 | 305.31 | 893.97 | 305.42 |
| 895.69 | 305.54 | 903.05 | 305.99 | 905.93 | 306.15 | 911.19 | 306.46 | 912.26 | 306.53 |
| 920.85 | 307.17 | 921.62 | 307.23 | 925.06 | 307.45 | 926.51 | 307.54 | 931.52 | 307.89 |
| 933.35 | 308.06 | 935.52 | 308.25 | 937.96 | 308.47 | 938.36 | 308.53 | 941.31 | 308.86 |
| 943.1 | 309.08 | 945.62 | 309.44 | 947.35 | 309.68 | 948.14 | 309.8 | 951.1 | 310.26 |
| 957.83 | 310.87 | 959.79 | 311.04 | 960.55 | 311.09 | 962.63 | 311.24 | 963.96 | 311.34 |
| 966.32 | 311.48 | 968.17 | 311.6 | 971.32 | 311.77 | 973.69 | 311.92 | 974.48 | 311.98 |
| 975.02 | 312 | 975.4 | 311.98 | 976.76 | 311.88 | 977.79 | 311.84 | 977.97 | 311.86 |
| 979.1 | 311.85 | 979.46 | 311.88 | 979.69 | 311.94 | 982.06 | 312.43 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| 0 | .05 | 236.79 | .04 | 607.03 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 236.79 | 607.03 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1794.43*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 311.24 | 2.02 | 310.62 | 2.61 | 310.45 | 4.86 | 309.72 | 7.31 | 308.97 |
| 9.93 | 308.41 | 10.93 | 308.2 | 13.17 | 307.45 | 15 | 306.7 | 16.21 | 306.18 |
| 16.76 | 305.97 | 18.57 | 305.86 | 19.86 | 305.79 | 22.12 | 305.68 | 25.52 | 305.55 |
| 30.74 | 305.36 | 32.8 | 305.27 | 34.81 | 305.2 | 36.39 | 305.12 | 37.09 | 305.07 |
| 38.3 | 305.03 | 40.75 | 304.91 | 41.58 | 304.84 | 43.47 | 304.65 | 45.31 | 304.46 |
| 45.92 | 304.39 | 49.25 | 304.17 | 52.18 | 303.94 | 55.46 | 303.73 | 56.83 | 303.65 |
| 58.48 | 303.54 | 61.38 | 303.38 | 62.44 | 303.31 | 63.71 | 303.26 | 64.54 | 303.2 |
| 65.62 | 303.16 | 66.29 | 303.15 | 71.21 | 303.03 | 73.43 | 302.96 | 74.19 | 302.93 |
| 74.96 | 302.87 | 77.07 | 302.96 | 78.15 | 302.99 | 80.49 | 303.07 | 81.6 | 303.1 |
| 83.05 | 303.11 | 83.18 | 303.1 | 87.44 | 303.15 | 88.02 | 303.17 | 90.5 | 303.22 |
| 94.45 | 303.34 | 96.32 | 303.39 | 97.34 | 303.38 | 98.17 | 303.33 | 99.76 | 303.25 |
| 101.1 | 303.16 | 101.56 | 303.09 | 101.9 | 303.11 | 103.52 | 303.32 | 104.56 | 303.41 |
| 105.06 | 303.43 | 105.77 | 303.43 | 109 | 303.45 | 110.07 | 303.46 | 112.38 | 303.47 |
| 116.91 | 303.47 | 117.46 | 303.48 | 118.57 | 303.48 | 120.76 | 303.5 | 122.54 | 303.48 |
| 126.26 | 303.48 | 129.15 | 303.44 | 129.54 | 303.42 | 130.96 | 303.4 | 132.3 | 303.26 |
| 133.9 | 303.15 | 134.93 | 303.05 | 135.04 | 303.03 | 136.31 | 302.89 | 136.78 | 302.87 |
| 137.79 | 302.98 | 139.15 | 303.08 | 140.6 | 303.16 | 141.06 | 303.17 | 143.59 | 303.26 |
| 147.06 | 303.36 | 148.02 | 303.37 | 149.16 | 303.41 | 151.93 | 303.52 | 156.54 | 303.57 |
| 158.03 | 303.57 | 159.79 | 303.58 | 163.2 | 303.64 | 163.58 | 303.65 | 165.64 | 303.76 |
| 167.26 | 303.88 | 169.13 | 304.03 | 171.47 | 304.25 | 172.5 | 304.4 | 172.67 | 304.41 |
| 174.54 | 304.35 | 175.55 | 304.31 | 175.89 | 304.19 | 176.82 | 304.03 | 177.96 | 303.8 |
| 180.01 | 303.42 | 180.93 | 303.24 | 181.51 | 303.1 | 184.29 | 302.47 | 186.41 | 301.73 |
| 192.74 | 299.78 | 193.7 | 299.46 | 194.42 | 299.23 | 196.2 | 298.69 | 197.7 | 298.22 |
| 198.91 | 297.92 | 200.28 | 297.54 | 201.84 | 297.15 | 203.77 | 296.65 | 204.86 | 296.35 |
| 208.5 | 295.41 | 210.27 | 294.96 | 211.55 | 294.64 | 212.5 | 294.49 | 214.43 | 294.15 |
| 216.45 | 293.78 | 217.19 | 293.67 | 218.03 | 293.58 | 220.69 | 293.32 | 222.49 | 293.12 |
| 224.09 | 292.9 | 225.81 | 292.7 | 226.06 | 292.66 | 227.79 | 292.55 | 238.26 | 291.84 |
| 241.4 | 291.64 | 242.63 | 291.49 | 244.3 | 291.41 | 246.49 | 291.38 | 247.41 | 291.38 |
| 248.61 | 291.36 | 249.02 | 291.38 | 250.24 | 291.4 | 250.35 | 291.43 | 250.78 | 291.45 |
| 251.66 | 291.44 | 255.74 | 291.38 | 257.09 | 291.38 | 258.47 | 291.37 | 262.07 | 291.33 |
| 262.8 | 291.33 | 267.61 | 291.23 | 269.89 | 291.16 | 270.17 | 291.16 | 277.36 | 290.94 |
| 279.19 | 290.89 | 281.95 | 290.85 | 284.02 | 290.85 | 284.75 | 290.83 | 285.84 | 290.85 |
| 287.18 | 290.85 | 288.55 | 290.83 | 291.59 | 290.75 | 294.05 | 290.68 | 294.24 | 290.68 |
| 296 | 290.62 | 296.77 | 290.58 | 299.62 | 290.53 | 302.2 | 290.47 | 303.55 | 290.47 |
| 304.8 | 290.48 | 307.15 | 290.46 | 307.25 | 290.43 | 307.98 | 290.41 | 309.61 | 290.38 |
| 310.2 | 290.38 | 313.37 | 290.35 | 314.62 | 290.35 | 316.18 | 290.36 | 317.24 | 290.38 |
| 318.2 | 290.38 | 318.68 | 290.39 | 320.3 | 290.39 | 321.72 | 290.38 | 322.09 | 290.37 |
| 325.62 | 290.31 | 329.78 | 290.18 | 332.18 | 290.09 | 333.27 | 289.99 | 333.36 | 289.96 |
| 335.05 | 289.92 | 336.89 | 289.91 | 340.23 | 289.91 | 341.28 | 289.93 | 343.93 | 289.95 |
| 345.25 | 289.98 | 348.28 | 290.07 | 351.8 | 290.17 | 352.52 | 290.18 | 355.57 | 290.18 |
| 358.29 | 290.22 | 359.39 | 290.21 | 366.75 | 290.21 | 367.86 | 290.2 | 372.45 | 290.21 |
| 372.96 | 290.2 | 374.03 | 290.16 | 375.1 | 290.14 | 377.15 | 290.12 | 384.34 | 290.12 |
| 385.87 | 290.16 | 388.59 | 290.16 | 391.76 | 290.2 | 392.08 | 290.21 | 392.38 | 290.18 |
| 393.77 | 290.17 | 395.2 | 290.12 | 396.05 | 290.08 | 397.23 | 290.06 | 399.87 | 289.97 |
| 400.73 | 289.96 | 402.86 | 289.92 | 404.29 | 289.9 | 405.66 | 289.9 | 406.18 | 289.88 |
| 409.62 | 289.92 | 411.19 | 289.93 | 413.22 | 289.96 | 416.66 | 289.99 | 417.55 | 289.99 |
| 422.05 | 290.01 | 424.8 | 290.03 | 429.93 | 290.1 | 432.43 | 290.15 | 434.81 | 290.17 |
| 435.88 | 290.16 | 436.85 | 290.13 | 437.91 | 290.15 | 440.49 | 290.15 | 441.43 | 290.12 |
| 441.85 | 290 | 442.3 | 289.95 | 446.5 | 290.07 | 447.54 | 290.09 | 449.31 | 290.11 |
| 449.36 | 290.12 | 450.97 | 290.16 | 452.3 | 290.17 | 453.09 | 290.21 | 454.54 | 290.21 |
| 455.21 | 290.18 | 455.7 | 290.18 | 457.86 | 290.21 | 462.11 | 290.24 | 464.88 | 290.29 |
| 465.82 | 290.29 | 466.73 | 290.28 | 474.69 | 290.28 | 476.8 | 290.27 | 481.1 | 290.27 |
| 484.82 | 290.1 | 486.02 | 290.04 | 487.01 | 290 | 489.14 | 289.88 | 490.35 | 289.82 |
| 491.21 | 289.75 | 493.48 | 289.64 | 495.41 | 289.61 | 495.91 | 289.58 | 497.32 | 289.58 |
| 497.39 | 289.57 | 498.84 | 289.57 | 499.05 | 289.58 | 501.7 | 289.59 | 503.13 | 289.61 |
| 505.2 | 289.62 | 505.48 | 289.63 | 509.2 | 289.67 | 509.58 | 289.68 | 512.59 | 289.71 |
| 515.17 | 289.75 | 516.73 | 289.76 | 519.23 | 289.81 | 520.45 | 289.83 | 521.88 | 289.87 |
| 524.69 | 289.94 | 530.34 | 290.02 | 532.11 | 290.02 | 532.93 | 290.03 | 537.7 | 290.05 |
| 541.02 | 290.05 | 544.04 | 290.09 | 545.04 | 290.09 | 545.8 | 290.1 | 546.22 | 290.09 |
| 546.9 | 290.1 | 551.46 | 290.13 | 551.9 | 290.14 | 554.63 | 290.18 | 555.71 | 290.19 |
| 559.2 | 290.19 | 559.57 | 290.18 | 562.08 | 290.18 | 564.78 | 290.2 | 568.06 | 290.23 |
| 568.61 | 290.25 | 571.17 | 290.27 | 572.82 | 290.25 | 574.23 | 290.22 | 575.43 | 290.22 |
| 577.17 | 290.23 | 577.99 | 290.27 | 579.51 | 290.29 | 580.24 | 290.31 | 581.48 | 290.28 |
| 583.05 | 290.25 | 586.62 | 290.17 | 588.06 | 290.17 | 589.91 | 290.12 | 591.18 | 290.12 |
| 591.58 | 290.13 | 595.24 | 290.12 | 596.93 | 290.17 | 601.19 | 290.27 | 604.3 | 290.35 |
| 607.43 | 290.44 | 608.1 | 290.45 | 609.75 | 290.46 | 612.68 | 290.5 | 614.54 | 290.52 |
| 614.71 | 290.54 | 615.52 | 290.58 | 616.66 | 290.65 | 619.61 | 290.81 | 623.51 | 291.08 |
| 627.96 | 291.4 | 628.3 | 291.43 | 631.2 | 291.74 | 631.43 | 291.76 | 634.54 | 291.99 |
| 635.82 | 292.1 | 637.38 | 292.26 | 637.97 | 292.35 | 638.87 | 292.51 | 640.72 | 292.86 |
| 641.33 | 292.97 | 644.08 | 293.25 | 644.48 | 293.28 | 646.32 | 293.48 | 649.77 | 294.02 |
| 652.69 | 294.27 | 658.97 | 294.72 | 661.68 | 294.93 | 662.5 | 294.94 | 666.06 | 295.1 |
| 671.95 | 295.27 | 674.4 | 295.31 | 683.98 | 295.31 | 685.31 | 295.3 | 686.9 | 295.26 |
| 690.43 | 295.19 | 693.37 | 295.12 | 696.7 | 295.03 | 696.78 | 295.02 | 698.53 | 294.98 |
| 702.11 | 294.91 | 703 | 294.9 | 704.66 | 294.79 | 706.22 | 294.73 | 708.44 | 294.68 |
| 709.33 | 294.65 | 710.1 | 294.67 | 710.76 | 294.65 | 712.22 | 294.64 | 713.66 | 294.6 |
| 716.1 | 294.57 | 717.78 | 294.4 | 718.73 | 294.33 | 719.46 | 294.26 | 720.06 | 294.22 |
| 720.79 | 294.15 | 721.59 | 294.16 | 721.9 | 294.26 | 723.28 | 294.45 | 724.18 | 294.59 |
| 727.93 | 294.75 | 729.11 | 294.79 | 731.36 | 294.88 | 732.23 | 294.92 | 734.56 | 295.06 |
| 736.15 | 295.1 | 736.92 | 295.11 | 739.35 | 295.25 | 740.68 | 295.31 | 742.04 | 295.34 |
| 742.85 | 295.34 | 743.62 | 295.39 | 744.13 | 295.41 | 746.17 | 295.51 | 748.53 | 295.62 |
| 749.76 | 295.67 | 751 | 295.7 | 752.74 | 295.73 | 754.13 | 295.77 | 754.51 | 295.77 |
| 755.26 | 295.8 | 758.19 | 295.89 | 759.04 | 295.92 | 760.88 | 295.95 | 762.26 | 295.99 |
| 764.39 | 296.08 | 765.49 | 296.12 | 767.61 | 296.22 | 769.35 | 296.32 | 771.69 | 296.46 |
| 780.85 | 296.93 | 790.1 | 297.34 | 792.7 | 297.52 | 793.97 | 297.59 | 795.78 | 297.71 |
| 799.44 | 297.94 | 802.25 | 298.11 | 803.28 | 298.18 | 808.99 | 298.52 | 810.89 | 298.63 |
| 813.61 | 298.77 | 816.74 | 298.94 | 817.85 | 298.98 | 819.67 | 299.09 | 823.54 | 299.31 |
| 825.41 | 299.4 | 827.76 | 299.53 | 837.04 | 300.06 | 839.9 | 300.23 | 855.44 | 301.24 |
| 856.01 | 301.28 | 857.68 | 301.37 | 858.58 | 301.4 | 859.65 | 301.41 | 862.39 | 301.4 |
| 863.33 | 301.48 | 864.07 | 301.49 | 864.86 | 301.55 | 865.58 | 301.58 | 866.81 | 301.59 |
| 867.06 | 301.6 | 868.22 | 301.71 | 869.32 | 301.83 | 870.06 | 301.9 | 871.03 | 302.02 |
| 871.94 | 302.12 | 882.97 | 302.83 | 884.64 | 302.93 | 885.41 | 302.97 | 888.12 | 303.13 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 888.83 | 303.16 | 892.88 | 303.39 | 896.35 | 303.63 | 897.94 | 303.73 | 899.22 | 303.79 |
| 902.3 | 303.98 | 905.83 | 304.17 | 910.8 | 304.46 | 912.98 | 304.58 | 915.3 | 304.68 |
| 917.02 | 304.8 | 924.39 | 305.24 | 927.28 | 305.4 | 932.54 | 305.71 | 933.61 | 305.77 |
| 942.22 | 306.37 | 942.99 | 306.42 | 947.88 | 306.72 | 952.9 | 307.04 | 954.73 | 307.19 |
| 956.91 | 307.36 | 959.35 | 307.56 | 962.71 | 307.9 | 964.5 | 308.1 | 967.03 | 308.42 |
| 968.75 | 308.63 | 969.54 | 308.74 | 972.51 | 309.14 | 973.61 | 309.23 | 979.25 | 309.72 |
| 981.21 | 309.88 | 981.97 | 309.93 | 985.39 | 310.18 | 989.6 | 310.45 | 992.76 | 310.63 |
| 995.14 | 310.78 | 996.28 | 310.87 | 996.84 | 310.84 | 998.06 | 310.72 | 999.24 | 310.66 |
| 999.42 | 310.68 | 1000.73 | 310.65 | 1001.14 | 310.76 | 1003.51 | 311.32 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 255.74 | .04 | 627.96 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 255.74 | 627.96 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1745.23*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 310.16 | 2.17 | 309.47 | 2.8 | 309.29 | 5.22 | 308.48 | 7.85 | 307.65 |
| 10.67 | 307.04 | 11.74 | 306.8 | 14.15 | 305.96 | 16.12 | 305.13 | 17.28 | 304.62 |
| 18.01 | 304.31 | 19.95 | 304.2 | 21.34 | 304.13 | 23.76 | 304.02 | 27.41 | 303.9 |
| 27.48 | 303.89 | 28.64 | 303.87 | 33.02 | 303.75 | 35.23 | 303.67 | 37.39 | 303.61 |
| 39.84 | 303.51 | 40.98 | 303.47 | 43.77 | 303.35 | 44.66 | 303.29 | 49.32 | 302.92 |
| 50.15 | 302.88 | 52.9 | 302.76 | 56.05 | 302.61 | 57.41 | 302.55 | 59.57 | 302.47 |
| 62.81 | 302.34 | 65.93 | 302.22 | 67.07 | 302.17 | 68.21 | 302.14 | 69.33 | 302.07 |
| 70.48 | 302.03 | 71.2 | 302.02 | 76.49 | 301.88 | 78.88 | 301.8 | 79.68 | 301.76 |
| 80.51 | 301.7 | 82.79 | 301.81 | 86.46 | 301.94 | 87.99 | 301.99 | 89.2 | 302.01 |
| 89.34 | 302 | 93.92 | 302.09 | 97.21 | 302.19 | 99.66 | 302.28 | 100.1 | 302.29 |
| 101.45 | 302.36 | 103.46 | 302.44 | 104.12 | 302.45 | 104.55 | 302.44 | 105.45 | 302.39 |
| 105.78 | 302.39 | 107.15 | 302.33 | 108.59 | 302.25 | 109.09 | 302.17 | 109.46 | 302.21 |
| 111.2 | 302.47 | 112.31 | 302.59 | 112.85 | 302.62 | 113.61 | 302.63 | 117.08 | 302.69 |
| 118.23 | 302.72 | 120.71 | 302.76 | 124.09 | 302.8 | 125.57 | 302.83 | 129.71 | 302.9 |
| 131.62 | 302.89 | 135.62 | 302.92 | 138.72 | 302.92 | 140.67 | 302.89 | 142.1 | 302.75 |
| 143.82 | 302.64 | 146.41 | 302.36 | 146.92 | 302.34 | 148.01 | 302.47 | 148.68 | 302.52 |
| 149.46 | 302.6 | 151.02 | 302.7 | 154.23 | 302.84 | 157.24 | 302.96 | 159.67 | 303.03 |
| 160.21 | 303.06 | 163.19 | 303.2 | 164.27 | 303.23 | 168.14 | 303.29 | 171.64 | 303.33 |
| 173.53 | 303.37 | 175.7 | 303.44 | 177.49 | 303.55 | 179.66 | 303.73 | 181.66 | 303.93 |
| 183.42 | 304.12 | 184.18 | 304.21 | 185.28 | 304.39 | 185.47 | 304.4 | 187.47 | 304.36 |
| 188.56 | 304.32 | 188.92 | 304.19 | 189.92 | 304.02 | 192.36 | 303.54 | 194.34 | 303.16 |
| 194.97 | 303 | 197.94 | 302.32 | 200.22 | 301.49 | 207.02 | 299.32 | 208.83 | 298.72 |
| 210.74 | 298.12 | 212.36 | 297.6 | 213.65 | 297.28 | 215.12 | 296.86 | 216.8 | 296.43 |
| 218.87 | 295.89 | 220.05 | 295.57 | 223.48 | 294.69 | 223.59 | 294.67 | 227.23 | 293.76 |
| 228.25 | 293.6 | 230.33 | 293.26 | 232.01 | 292.97 | 233.29 | 292.78 | 234.19 | 292.69 |
| 237.04 | 292.45 | 238.98 | 292.25 | 240.7 | 292.03 | 242.54 | 291.81 | 243.04 | 291.76 |
| 244.67 | 291.66 | 255.92 | 290.96 | 259.29 | 290.76 | 260.61 | 290.6 | 261.95 | 290.54 |
| 263.73 | 290.51 | 264.76 | 290.51 | 266.3 | 290.52 | 267.03 | 290.51 | 268.79 | 290.57 |
| 268.9 | 290.6 | 269.36 | 290.63 | 270.31 | 290.63 | 273.35 | 290.6 | 274.69 | 290.59 |
| 276.11 | 290.58 | 277.55 | 290.58 | 281.32 | 290.56 | 284.1 | 290.52 | 287.12 | 290.45 |
| 289.5 | 290.38 | 289.8 | 290.38 | 297.33 | 290.15 | 299.23 | 290.11 | 300.8 | 290.09 |
| 304.29 | 290.07 | 305.06 | 290.06 | 306.19 | 290.08 | 307.22 | 290.08 | 307.6 | 290.09 |
| 309.03 | 290.07 | 312.22 | 290 | 314.79 | 289.92 | 314.99 | 289.92 | 317.64 | 289.83 |
| 319.24 | 289.79 | 320.63 | 289.77 | 323.32 | 289.71 | 324.74 | 289.71 | 326.04 | 289.73 |
| 327.25 | 289.72 | 328.5 | 289.7 | 328.6 | 289.67 | 329.37 | 289.64 | 330.56 | 289.62 |
| 335.01 | 289.58 | 336.33 | 289.58 | 337.96 | 289.6 | 340.07 | 289.62 | 340.57 | 289.63 |
| 342.27 | 289.63 | 343.76 | 289.62 | 344.14 | 289.61 | 347.83 | 289.54 | 352.19 | 289.39 |
| 353.21 | 289.34 | 353.89 | 289.32 | 354.71 | 289.28 | 355.32 | 289.23 | 355.85 | 289.17 |
| 355.94 | 289.14 | 357.04 | 289.1 | 359.63 | 289.06 | 361.96 | 289.05 | 364.23 | 289.07 |
| 367 | 289.09 | 371.55 | 289.19 | 375.24 | 289.26 | 376.75 | 289.28 | 377.73 | 289.28 |
| 379.77 | 289.29 | 382.03 | 289.33 | 383.19 | 289.33 | 383.93 | 289.32 | 389.93 | 289.34 |
| 390.89 | 289.35 | 392.05 | 289.34 | 396.85 | 289.35 | 397.39 | 289.34 | 398.51 | 289.3 |
| 399.63 | 289.28 | 401.77 | 289.27 | 408.39 | 289.27 | 409.3 | 289.28 | 411.3 | 289.33 |
| 413.75 | 289.33 | 415.46 | 289.35 | 416.14 | 289.37 | 417.39 | 289.39 | 417.71 | 289.36 |
| 419.17 | 289.34 | 420.66 | 289.29 | 421.95 | 289.23 | 422.78 | 289.22 | 425.55 | 289.13 |
| 426.45 | 289.12 | 428.68 | 289.08 | 430.17 | 289.07 | 430.61 | 289.06 | 432.16 | 289.06 |
| 434.91 | 289.1 | 438.32 | 289.14 | 440.88 | 289.16 | 442.13 | 289.18 | 443.12 | 289.18 |
| 444.05 | 289.19 | 448.76 | 289.21 | 451.64 | 289.23 | 455.39 | 289.29 | 457.01 | 289.31 |
| 459.07 | 289.36 | 460.5 | 289.39 | 462.12 | 289.39 | 463.24 | 289.38 | 464.25 | 289.35 |
| 465.37 | 289.36 | 468.06 | 289.37 | 469.06 | 289.33 | 469.49 | 289.19 | 469.97 | 289.14 |
| 474.36 | 289.27 | 477.35 | 289.32 | 479.04 | 289.36 | 480.43 | 289.38 | 481.26 | 289.42 |
| 482.77 | 289.42 | 483.47 | 289.39 | 484.8 | 289.4 | 493.6 | 289.52 | 506.07 | 289.52 |
| 510.57 | 289.51 | 514.47 | 289.31 | 515.22 | 289.28 | 518.99 | 289.08 | 520.25 | 289.01 |
| 521.15 | 288.94 | 523.53 | 288.82 | 525.55 | 288.78 | 526.08 | 288.75 | 527.55 | 288.75 |
| 527.62 | 288.74 | 528.85 | 288.74 | 529.05 | 288.75 | 531.08 | 288.75 | 531.14 | 288.76 |
| 532.84 | 288.78 | 535.02 | 288.79 | 537.68 | 288.82 | 538.49 | 288.84 | 540.81 | 288.85 |
| 541.63 | 288.87 | 545.03 | 288.91 | 548.95 | 288.98 | 552.11 | 289.05 | 553.68 | 289.09 |
| 555.48 | 289.11 | 558.37 | 289.16 | 560.55 | 289.15 | 564.98 | 289.16 | 568.06 | 289.16 |
| 570.88 | 289.19 | 571.16 | 289.2 | 572.51 | 289.2 | 573.53 | 289.19 | 573.77 | 289.2 |
| 575.01 | 289.21 | 576.33 | 289.21 | 577.77 | 289.22 | 578.18 | 289.23 | 580.72 | 289.25 |
| 580.82 | 289.26 | 582.99 | 289.26 | 584.52 | 289.27 | 584.97 | 289.26 | 587.65 | 289.26 |
| 590.16 | 289.28 | 593.21 | 289.31 | 593.71 | 289.33 | 594.92 | 289.34 | 596.09 | 289.34 |
| 597.63 | 289.32 | 598.95 | 289.29 | 599.51 | 289.27 | 601.68 | 289.28 | 602.43 | 289.32 |
| 604.53 | 289.35 | 605.26 | 289.34 | 605.69 | 289.32 | 607.14 | 289.28 | 610.46 | 289.2 |
| 612.08 | 289.19 | 613.26 | 289.15 | 614.23 | 289.14 | 615.07 | 289.16 | 618.03 | 289.15 |
| 619.48 | 289.2 | 620.05 | 289.21 | 621.99 | 289.28 | 625.08 | 289.37 | 626.9 | 289.44 |
| 629.81 | 289.54 | 631.96 | 289.58 | 634.69 | 289.65 | 635.05 | 289.65 | 636.25 | 289.68 |
| 639.46 | 289.89 | 640.73 | 289.96 | 642.23 | 290.08 | 644.76 | 290.27 | 648.89 | 290.6 |
| 649.24 | 290.63 | 652.14 | 290.96 | 655.49 | 291.21 | 656.76 | 291.32 | 658.62 | 291.53 |
| 659.81 | 291.76 | 661.67 | 292.14 | 662.05 | 292.24 | 663.36 | 292.38 | 665.44 | 292.58 |
| 667.28 | 292.77 | 667.73 | 292.85 | 670.73 | 293.34 | 673.66 | 293.59 | 679.95 | 294.06 |
| 682.66 | 294.29 | 683.48 | 294.29 | 687.05 | 294.45 | 692.94 | 294.6 | 693.65 | 294.61 |
| 695.6 | 294.62 | 695.78 | 294.63 | 697.09 | 294.63 | 703.62 | 294.6 | 704.99 | 294.58 |
| 707.92 | 294.53 | 709.41 | 294.49 | 710.84 | 294.44 | 711.45 | 294.43 | 713.9 | 294.36 |
| 714.39 | 294.35 | 717.73 | 294.24 | 719.56 | 294.19 | 721.63 | 294.14 | 724.04 | 294.09 |
| 725.7 | 294 | 726.83 | 293.96 | 729.49 | 293.89 | 730.11 | 293.87 | 731.14 | 293.87 |
| 733.27 | 293.81 | 733.94 | 293.8 | 734.71 | 293.77 | 737.16 | 293.71 | 737.55 | 293.67 |
| 738.59 | 293.53 | 740.52 | 293.34 | 741.46 | 293.27 | 741.85 | 293.22 | 742.52 | 293.21 |
| 742.96 | 293.34 | 745.25 | 293.72 | 749.18 | 293.92 | 751.37 | 294.01 | 753.31 | 294.1 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 756.06 | 294.24 | 757.23 | 294.26 | 758 | 294.26 | 760.44 | 294.41 | 760.64 | 294.43 |
| 762.72 | 294.52 | 764.27 | 294.56 | 767.26 | 294.71 | 770.45 | 294.83 | 770.86 | 294.85 |
| 773.85 | 294.92 | 775.62 | 294.97 | 776.37 | 295 | 779.31 | 295.09 | 780.69 | 295.14 |
| 782 | 295.16 | 784.4 | 295.25 | 787.71 | 295.4 | 791.14 | 295.57 | 792.83 | 295.67 |
| 801.99 | 296.15 | 811.26 | 296.56 | 813.86 | 296.74 | 815.09 | 296.82 | 815.71 | 296.87 |
| 820.61 | 297.19 | 823.42 | 297.38 | 824.46 | 297.46 | 830.17 | 297.8 | 832.08 | 297.91 |
| 833.01 | 297.97 | 836.44 | 298.16 | 837.93 | 298.25 | 838.82 | 298.28 | 840.87 | 298.4 |
| 844.74 | 298.62 | 845.71 | 298.67 | 848.97 | 298.85 | 858.27 | 299.37 | 861.12 | 299.55 |
| 876.68 | 300.56 | 877.26 | 300.6 | 879.4 | 300.71 | 880.9 | 300.71 | 883.64 | 300.67 |
| 884.59 | 300.76 | 885.33 | 300.77 | 886.12 | 300.83 | 886.85 | 300.85 | 888.32 | 300.86 |
| 889.49 | 300.98 | 890.3 | 301.08 | 891.33 | 301.19 | 892.3 | 301.31 | 893.21 | 301.41 |
| 904.26 | 302.1 | 905.93 | 302.21 | 906.7 | 302.25 | 909.42 | 302.41 | 910.12 | 302.44 |
| 914.18 | 302.69 | 917.66 | 302.92 | 919.25 | 303.02 | 923.61 | 303.26 | 927.14 | 303.45 |
| 930.76 | 303.65 | 932.12 | 303.73 | 934.3 | 303.85 | 936.63 | 303.94 | 938.36 | 304.05 |
| 945.73 | 304.49 | 948.63 | 304.65 | 954.97 | 305.01 | 963.59 | 305.57 | 964.36 | 305.61 |
| 967.81 | 305.81 | 971.14 | 306 | 974.28 | 306.19 | 976.12 | 306.32 | 980.75 | 306.64 |
| 981.15 | 306.68 | 984.11 | 306.93 | 985.9 | 307.11 | 990.16 | 307.58 | 993.92 | 308.01 |
| 995.02 | 308.11 | 1000.67 | 308.56 | 1002.64 | 308.72 | 1003.4 | 308.77 | 1006.81 | 309.02 |
| 1009.18 | 309.18 | 1011.03 | 309.3 | 1013.68 | 309.45 | 1014.19 | 309.49 | 1016.58 | 309.64 |
| 1017.72 | 309.73 | 1018.28 | 309.7 | 1019.51 | 309.55 | 1019.66 | 309.55 | 1020.69 | 309.48 |
| 1020.87 | 309.5 | 1022.18 | 309.46 | 1022.59 | 309.59 | 1024.96 | 310.21 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 274.69 | .04 | 648.89 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 274.69 | 648.89 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1696.03*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 309.07 | 2.31 | 308.33 | 3 | 308.13 | 4.49 | 307.62 | 5.58 | 307.24 |
| 5.96 | 307.12 | 8.39 | 306.32 | 11.4 | 305.66 | 12.62 | 305.38 | 15.12 | 304.48 |
| 16.4 | 303.92 | 17.23 | 303.57 | 18.62 | 302.93 | 19.25 | 302.66 | 21.32 | 302.55 |
| 22.81 | 302.48 | 25.4 | 302.37 | 29.3 | 302.25 | 30.61 | 302.23 | 35.3 | 302.14 |
| 37.66 | 302.08 | 39.97 | 302.03 | 43.81 | 301.9 | 43.97 | 301.9 | 45.32 | 301.84 |
| 47.1 | 301.77 | 47.74 | 301.73 | 51.35 | 301.53 | 52.73 | 301.44 | 56.55 | 301.36 |
| 59.91 | 301.27 | 61.37 | 301.25 | 63.68 | 301.2 | 65.78 | 301.16 | 70.48 | 301.06 |
| 72.66 | 301.01 | 73.25 | 300.99 | 75.35 | 300.89 | 76.12 | 300.88 | 81.76 | 300.73 |
| 84.32 | 300.64 | 84.92 | 300.61 | 86.07 | 300.52 | 86.53 | 300.55 | 88.5 | 300.65 |
| 89.74 | 300.7 | 92.42 | 300.82 | 95.36 | 300.91 | 95.51 | 300.9 | 101.07 | 301.06 |
| 103.15 | 301.13 | 103.91 | 301.15 | 107 | 301.29 | 110.6 | 301.49 | 111.31 | 301.51 |
| 111.77 | 301.51 | 112.72 | 301.46 | 113.54 | 301.45 | 114.55 | 301.41 | 116.09 | 301.33 |
| 116.61 | 301.26 | 117.01 | 301.3 | 118.87 | 301.61 | 120.06 | 301.77 | 120.63 | 301.81 |
| 121.45 | 301.83 | 125.16 | 301.94 | 126.38 | 301.98 | 129.04 | 302.05 | 132.65 | 302.13 |
| 134.87 | 302.2 | 138.66 | 302.29 | 140.7 | 302.31 | 143.21 | 302.35 | 148.29 | 302.41 |
| 148.74 | 302.4 | 150.37 | 302.39 | 151.91 | 302.24 | 153.75 | 302.12 | 155.05 | 301.99 |
| 156.51 | 301.82 | 157.05 | 301.81 | 158.22 | 301.96 | 159.78 | 302.11 | 161.44 | 302.24 |
| 161.97 | 302.26 | 164.87 | 302.42 | 168.09 | 302.57 | 168.86 | 302.61 | 170.68 | 302.68 |
| 171.72 | 302.73 | 174.45 | 302.88 | 175.61 | 302.92 | 179.74 | 303.02 | 183.48 | 303.08 |
| 185.51 | 303.14 | 187.83 | 303.23 | 189.73 | 303.37 | 190.45 | 303.43 | 192.05 | 303.59 |
| 194.2 | 303.83 | 196.07 | 304.06 | 196.88 | 304.17 | 198.07 | 304.38 | 198.26 | 304.4 |
| 200.41 | 304.37 | 201.57 | 304.34 | 201.96 | 304.2 | 203.03 | 304.01 | 205.63 | 303.49 |
| 207.42 | 303.15 | 207.75 | 303.08 | 208.42 | 302.91 | 211.6 | 302.16 | 214.04 | 301.24 |
| 221.3 | 298.86 | 222.41 | 298.49 | 225.28 | 297.56 | 227.01 | 296.99 | 228.39 | 296.64 |
| 229.97 | 296.18 | 231.76 | 295.72 | 233.97 | 295.12 | 234 | 295.12 | 235.23 | 294.78 |
| 239.4 | 293.74 | 242.91 | 292.88 | 243.99 | 292.72 | 246.22 | 292.38 | 248.02 | 292.08 |
| 249.38 | 291.89 | 250.35 | 291.8 | 253.4 | 291.57 | 254.18 | 291.49 | 255.47 | 291.38 |
| 257.31 | 291.15 | 259.81 | 290.87 | 261.56 | 290.78 | 273.58 | 290.08 | 277.18 | 289.88 |
| 278.59 | 289.71 | 280.51 | 289.64 | 281.92 | 289.64 | 284.08 | 289.66 | 285.46 | 289.66 |
| 285.93 | 289.69 | 287.02 | 289.72 | 287.33 | 289.74 | 287.46 | 289.78 | 288.1 | 289.82 |
| 288.96 | 289.81 | 292.21 | 289.81 | 293.65 | 289.79 | 296.64 | 289.79 | 301.37 | 289.78 |
| 306.62 | 289.68 | 309.12 | 289.61 | 309.42 | 289.61 | 317.29 | 289.37 | 319.28 | 289.33 |
| 320.92 | 289.31 | 322.3 | 289.3 | 324.57 | 289.3 | 325.36 | 289.29 | 326.55 | 289.32 |
| 327.63 | 289.32 | 328.02 | 289.33 | 329.52 | 289.31 | 332.84 | 289.24 | 335.53 | 289.16 |
| 335.74 | 289.16 | 338.5 | 289.07 | 340.18 | 289.04 | 340.32 | 289.03 | 341.63 | 289.02 |
| 344.44 | 288.95 | 345.92 | 288.95 | 347.29 | 288.97 | 348.54 | 288.96 | 349.86 | 288.94 |
| 349.96 | 288.9 | 350.76 | 288.88 | 353.19 | 288.84 | 356.66 | 288.81 | 358.03 | 288.81 |
| 359.73 | 288.83 | 362.46 | 288.87 | 364.23 | 288.87 | 366.19 | 288.85 | 368.88 | 288.8 |
| 370.05 | 288.77 | 372.45 | 288.68 | 374.6 | 288.59 | 377.23 | 288.47 | 378.01 | 288.4 |
| 378.51 | 288.31 | 379.66 | 288.26 | 382.37 | 288.22 | 384.8 | 288.2 | 386.02 | 288.2 |
| 387.17 | 288.22 | 390.07 | 288.23 | 394.83 | 288.3 | 395.98 | 288.32 | 399.46 | 288.37 |
| 400.25 | 288.37 | 402.8 | 288.39 | 405.08 | 288.43 | 405.77 | 288.45 | 407.75 | 288.44 |
| 414.03 | 288.47 | 415.02 | 288.48 | 416.23 | 288.47 | 421.25 | 288.5 | 421.81 | 288.49 |
| 422.98 | 288.44 | 424.15 | 288.42 | 426.39 | 288.41 | 427.02 | 288.42 | 431.37 | 288.42 |
| 432.28 | 288.43 | 434.25 | 288.43 | 435.92 | 288.49 | 438.9 | 288.5 | 439.78 | 288.51 |
| 441.4 | 288.54 | 442.71 | 288.57 | 443.04 | 288.54 | 444.56 | 288.52 | 446.13 | 288.47 |
| 447.47 | 288.4 | 448.34 | 288.39 | 451.23 | 288.29 | 452.17 | 288.28 | 454.5 | 288.24 |
| 456.06 | 288.23 | 458.14 | 288.23 | 461.01 | 288.28 | 461.89 | 288.3 | 464.57 | 288.33 |
| 465.83 | 288.34 | 468.12 | 288.37 | 469.59 | 288.38 | 470.56 | 288.38 | 473.29 | 288.4 |
| 475.48 | 288.42 | 478.49 | 288.44 | 482.4 | 288.5 | 483.16 | 288.52 | 484.1 | 288.53 |
| 487.12 | 288.6 | 487.74 | 288.61 | 489.44 | 288.61 | 490.61 | 288.6 | 491.66 | 288.56 |
| 492.82 | 288.58 | 495.64 | 288.58 | 496.68 | 288.55 | 497.13 | 288.39 | 497.63 | 288.33 |
| 502.21 | 288.48 | 503.35 | 288.49 | 505.28 | 288.52 | 505.34 | 288.53 | 507.1 | 288.57 |
| 508.56 | 288.59 | 509.42 | 288.64 | 511.01 | 288.63 | 511.74 | 288.59 | 512.27 | 288.59 |
| 514.25 | 288.63 | 514.64 | 288.63 | 519.28 | 288.71 | 522.31 | 288.76 | 540.05 | 288.76 |
| 544.12 | 288.53 | 544.9 | 288.49 | 550.42 | 288.18 | 551.1 | 288.13 | 553.58 | 287.99 |
| 555.69 | 287.96 | 556.24 | 287.92 | 557.78 | 287.92 | 557.86 | 287.91 | 558.86 | 287.91 |
| 559.05 | 287.92 | 560.98 | 287.92 | 561.76 | 287.94 | 562.99 | 287.95 | 564.34 | 287.95 |
| 564.57 | 287.96 | 567.77 | 288 | 569.92 | 288.01 | 572.9 | 288.06 | 573.82 | 288.06 |
| 575.95 | 288.09 | 577.44 | 288.12 | 580.37 | 288.19 | 583.48 | 288.25 | 585.94 | 288.29 |
| 587.46 | 288.29 | 588.16 | 288.28 | 592.26 | 288.27 | 593.54 | 288.27 | 595.11 | 288.26 |
| 597.71 | 288.3 | 599.22 | 288.29 | 600.38 | 288.29 | 602.75 | 288.31 | 604.46 | 288.31 |
| 605.72 | 288.33 | 607.35 | 288.33 | 607.74 | 288.34 | 613.22 | 288.34 | 615.53 | 288.36 |
| 617.56 | 288.37 | 618.35 | 288.38 | 618.82 | 288.4 | 621.02 | 288.42 | 622.44 | 288.39 |
| 624.18 | 288.33 | 626.18 | 288.33 | 626.88 | 288.37 | 628.19 | 288.38 | 628.82 | 288.4 |
| 629.89 | 288.36 | 631.24 | 288.32 | 633.54 | 288.24 | 635.54 | 288.22 | 636.89 | 288.18 |
| 637.78 | 288.17 | 638.41 | 288.19 | 641.71 | 288.19 | 642.64 | 288.24 | 646.82 | 288.4 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 647.81 | 288.45 | 651.91 | 288.62 | 652.76 | 288.66 | 654.18 | 288.7 | 656.7 | 288.79 |
| 658.23 | 288.84 | 660.11 | 288.99 | 662.28 | 289.14 | 664.9 | 289.37 | 666 | 289.46 |
| 669.83 | 289.8 | 673.07 | 290.17 | 676.43 | 290.43 | 677.71 | 290.55 | 678.46 | 290.63 |
| 679.56 | 290.77 | 680.76 | 291.02 | 682.62 | 291.43 | 683 | 291.53 | 684.32 | 291.68 |
| 684.73 | 291.71 | 685.99 | 291.84 | 686.39 | 291.87 | 688.24 | 292.07 | 691.7 | 292.67 |
| 694.63 | 292.91 | 700.92 | 293.41 | 703.64 | 293.64 | 704.46 | 293.65 | 706.74 | 293.74 |
| 708.03 | 293.8 | 713.94 | 293.93 | 716.4 | 293.94 | 718.09 | 293.94 | 724.63 | 293.88 |
| 726.01 | 293.86 | 727.87 | 293.82 | 730.02 | 293.76 | 731.86 | 293.69 | 732.47 | 293.68 |
| 734.93 | 293.6 | 738.75 | 293.45 | 740.59 | 293.39 | 742.66 | 293.34 | 743.23 | 293.32 |
| 745.07 | 293.28 | 747.87 | 293.18 | 750.53 | 293.11 | 751.36 | 293.08 | 752.19 | 293.07 |
| 755.77 | 292.94 | 758.21 | 292.86 | 759.64 | 292.64 | 761.86 | 292.39 | 762.77 | 292.31 |
| 762.91 | 292.28 | 763.58 | 292.28 | 763.72 | 292.3 | 764.03 | 292.43 | 766.31 | 292.86 |
| 770.07 | 293.07 | 770.25 | 293.09 | 772.44 | 293.18 | 774.39 | 293.27 | 776.72 | 293.39 |
| 777.44 | 293.41 | 779.09 | 293.42 | 781.53 | 293.58 | 784.4 | 293.73 | 785.04 | 293.75 |
| 785.81 | 293.8 | 788.36 | 293.9 | 790.73 | 293.98 | 791.96 | 294.03 | 793.21 | 294.07 |
| 796.72 | 294.17 | 797.48 | 294.2 | 800.42 | 294.3 | 801.27 | 294.32 | 802.85 | 294.37 |
| 805.52 | 294.47 | 808.83 | 294.62 | 811.61 | 294.75 | 812.27 | 294.79 | 823.14 | 295.37 |
| 832.41 | 295.78 | 835.02 | 295.97 | 841.78 | 296.45 | 844.6 | 296.64 | 845.63 | 296.73 |
| 851.35 | 297.09 | 853.27 | 297.2 | 854.2 | 297.26 | 859.13 | 297.56 | 860.24 | 297.61 |
| 861.48 | 297.69 | 863.83 | 297.82 | 865.94 | 297.93 | 866.92 | 297.99 | 870.18 | 298.17 |
| 879.49 | 298.69 | 881.69 | 298.82 | 882.35 | 298.87 | 897.93 | 299.88 | 898.51 | 299.92 |
| 900.18 | 300.01 | 901.09 | 300.03 | 902.16 | 300.02 | 904.9 | 299.95 | 905.85 | 300.04 |
| 906.59 | 300.04 | 907.38 | 300.1 | 908.11 | 300.13 | 909.59 | 300.13 | 910.75 | 300.25 |
| 911.85 | 300.39 | 912.59 | 300.47 | 914.48 | 300.71 | 925.54 | 301.38 | 927.99 | 301.53 |
| 930.71 | 301.69 | 931.42 | 301.72 | 935.48 | 301.98 | 938.96 | 302.21 | 940.55 | 302.32 |
| 941.84 | 302.38 | 948.46 | 302.72 | 952.09 | 302.93 | 953.45 | 303 | 955.63 | 303.12 |
| 957.96 | 303.2 | 959.69 | 303.31 | 967.08 | 303.75 | 969.98 | 303.9 | 975.25 | 304.19 |
| 976.33 | 304.26 | 984.95 | 304.76 | 985.73 | 304.81 | 989.19 | 304.98 | 992.52 | 305.16 |
| 995.67 | 305.34 | 999.69 | 305.58 | 1002.14 | 305.72 | 1005.5 | 305.97 | 1007.3 | 306.13 |
| 1011.56 | 306.52 | 1012.35 | 306.6 | 1015.33 | 306.89 | 1016.43 | 306.98 | 1024.06 | 307.56 |
| 1024.82 | 307.61 | 1028.24 | 307.86 | 1030.61 | 308.02 | 1032.47 | 308.15 | 1035.63 | 308.34 |
| 1038.02 | 308.5 | 1039.17 | 308.6 | 1039.73 | 308.55 | 1040.95 | 308.39 | 1042.13 | 308.29 |
| 1042.31 | 308.32 | 1043.63 | 308.27 | 1044.04 | 308.41 | 1046.42 | 309.1 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 293.65 | .04 | 669.83 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 293.65 | 669.83 | 46.66 | 49.2 | 49.28 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1646.84

INPUT
Description:
Station Elevation Data num= 498

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.992.550049 | | 307.162.869995 | | 307.073.069946 | | 3073.189941 | | 306.97 |
| 5.939941 | 3066.339966 | | 305.878.930054 | | 30512.14001 | | 304.2813.35999 | | 304 |
| 13.43005 | 303.9816.09998 | | 30317.45996 | | 302.3918.33997 | | 30219.81995 | | 301.3 |
| 20.48999 | 30122.69995 | | 300.8924.28003 | | 300.8227.04004 | | 300.7131.27002 | | 300.6 |
| 37.57996 | 300.5340.08997 | | 300.4842.55005 | | 300.45 | 46.81 | 300.33 | 48.25 | 300.28 |
| 55.38 | 30055.53998 | | 299.99 | 56.13 | 299.9757.07001 | | 299.9669.46997 | | 299.93 |
| 70.02997 | 299.9375.02997 | | 299.977.34998 | | 299.87 | 77.62 | 299.87 | 77.88 | 299.86 |
| 78.20001 | 299.8579.46002 | | 299.7980.21002 | | 299.7681.02997 | | 299.7587.03998 | | 299.58 |
| 89.76001 | 299.4890.40002 | | 299.44 | 91.62 | 299.3591.82001 | | 299.35 | 92.12 | 299.38 |
| 94.21002 | 299.598.39001 | | 299.69 | 101.51 | 299.81 | 101.67 | 299.8 | 107.59 | 300 |
| 110.62 | 300.12 | 112.21 | 300.2 | 113.64 | 300.28 | 113.91 | 300.29 | 117.74 | 300.54 |
| 118.49 | 300.57 | 118.98 | 300.57 | 120 | 300.53 | 120.38 | 300.53 | 120.87 | 300.52 |
| 121.94 | 300.49 | 123.28 | 300.44 | 123.58 | 300.42 | 124.14 | 300.34 | 124.22 | 300.34 |
| 124.56 | 300.39 | 126.54 | 300.76 | 127.81 | 300.95 | 128.42 | 301 | 129.04 | 301.03 |
| 133.24 | 301.18 | 134.54 | 301.24 | 141.21 | 301.46 | 143.58 | 301.56 | 144.93 | 301.6 |
| 147.61 | 301.69 | 148.69 | 301.71 | 149.78 | 301.72 | 157.86 | 301.89 | 160.08 | 301.89 |
| 161.71 | 301.73 | 163.67 | 301.61 | 165.06 | 301.47 | 166.61 | 301.29 | 166.91 | 301.27 |
| 167.04 | 301.27 | 167.19 | 301.28 | 167.59 | 301.34 | 168.43 | 301.45 | 169.2 | 301.53 |
| 170.09 | 301.63 | 171.22 | 301.72 | 171.86 | 301.78 | 172.42 | 301.81 | 175.51 | 302 |
| 178.94 | 302.19 | 181.7 | 302.32 | 185.71 | 302.56 | 186.94 | 302.61 | 191.34 | 302.74 |
| 195.32 | 302.83 | 197.48 | 302.91 | 199.48 | 303 | 199.86 | 303.02 | 199.95 | 303.02 |
| 201.98 | 303.18 | 202.47 | 303.23 | 204.45 | 303.44 | 206.73 | 303.73 | 208.73 | 304 |
| 209.59 | 304.13 | 210.85 | 304.37 | 211.06 | 304.39 | 211.83 | 304.39 | 213.34 | 304.38 |
| 214.31 | 304.36 | 214.58 | 304.35 | 214.99 | 304.2 | 216.13 | 304 | 220.03 | 303.22 |
| 221.16 | 303 | 221.87 | 302.81 | 225.26 | 302 | 227.85 | 301 | 236.77 | 298 |
| 239.82 | 297 | 241.66 | 296.38 | 243.13 | 296 | 244.81 | 295.5 | 246.72 | 295 |
| 249.07 | 294.36 | 250.41 | 294 | 253.87 | 293.14 | 254.32 | 293.03 | 254.44 | 293 |
| 254.85 | 292.9 | 258.59 | 292 | 262.11 | 291.49 | 264.03 | 291.19 | 265.48 | 291 |
| 266.51 | 290.91 | 269.75 | 290.7 | 270.59 | 290.62 | 271.96 | 290.51 | 276.01 | 290.04 |
| 276.08 | 290.03 | 276.32 | 290 | 295.07 | 289 | 296.57 | 288.82 | 298.1 | 288.77 |
| 298.61 | 288.76 | 300.12 | 288.76 | 302.42 | 288.8 | 303.88 | 288.81 | 304.34 | 288.83 |
| 304.39 | 288.84 | 304.92 | 288.86 | 305.55 | 288.89 | 305.88 | 288.91 | 306.01 | 288.95 |
| 306.53 | 288.99 | 306.7 | 289 | 307.61 | 289 | 310.69 | 289.01 | 311.07 | 289.01 |
| 312.6 | 289 | 320.65 | 289 | 322.84 | 288.97 | 326.13 | 288.9 | 328.73 | 288.83 |
| 329.05 | 288.83 | 337.25 | 288.59 | 339.33 | 288.55 | 341.04 | 288.53 | 342.48 | 288.52 |
| 344.84 | 288.53 | 345.43 | 288.52 | 345.67 | 288.52 | 346.91 | 288.55 | 348.03 | 288.56 |
| 348.44 | 288.57 | 348.93 | 288.56 | 350 | 288.55 | 350.87 | 288.53 | 353.47 | 288.48 |
| 358.5 | 288.34 | 361.12 | 288.28 | 362.63 | 288.26 | 365.56 | 288.19 | 367.11 | 288.19 |
| 368.53 | 288.21 | 369.84 | 288.2 | 371.21 | 288.18 | 371.32 | 288.14 | 372.15 | 288.11 |
| 373.45 | 288.09 | 373.75 | 288.09 | 374.01 | 288.08 | 374.69 | 288.07 | 378.3 | 288.04 |
| 379.73 | 288.04 | 382.71 | 288.09 | 384.35 | 288.11 | 386.2 | 288.11 | 388.24 | 288.09 |
| 392.26 | 288 | 397.01 | 287.8 | 398.86 | 287.71 | 399.75 | 287.66 | 400.57 | 287.58 |
| 400.99 | 287.52 | 401.09 | 287.48 | 401.49 | 287.46 | 402.29 | 287.43 | 403.02 | 287.41 |
| 405.11 | 287.37 | 405.17 | 287.37 | 407.65 | 287.35 | 408.92 | 287.35 | 410.12 | 287.36 |
| 413.14 | 287.37 | 418.1 | 287.42 | 418.31 | 287.42 | 426.41 | 287.49 | 427.05 | 287.5 |
| 429.06 | 287.55 | 429.51 | 287.56 | 431.58 | 287.56 | 438.12 | 287.6 | 439.16 | 287.61 |
| 439.93 | 287.6 | 445.65 | 287.64 | 446.24 | 287.63 | 447.46 | 287.58 | 448.68 | 287.56 |
| 451.01 | 287.56 | 457.15 | 287.58 | 458.22 | 287.58 | 459.21 | 287.59 | 460.13 | 287.62 |
| 460.95 | 287.65 | 461.53 | 287.66 | 464.06 | 287.67 | 464.39 | 287.68 | 464.97 | 287.68 |
| 465.92 | 287.7 | 466.66 | 287.72 | 467.67 | 287.74 | 467.9 | 287.75 | 468.03 | 287.75 |
| 468.1 | 287.74 | 468.18 | 287.73 | 468.37 | 287.72 | 468.75 | 287.72 | 469.96 | 287.7 |
| 471.59 | 287.64 | 472.56 | 287.59 | 472.99 | 287.57 | 473.43 | 287.56 | 473.9 | 287.56 |
| 477 | 287.45 | 477.89 | 287.44 | 480.7 | 287.4 | 481.95 | 287.39 | 482.85 | 287.39 |
| 483.48 | 287.4 | 488.03 | 287.49 | 489.9 | 287.52 | 490.63 | 287.52 | 494.52 | 287.56 |
| 505.24 | 287.64 | 510.31 | 287.73 | 511.18 | 287.74 | 513.42 | 287.8 | 513.74 | 287.81 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 514.04 | 287.81 | 514.33 | 287.82 | 514.64 | 287.82 | 514.98 | 287.83 | 516.75 | 287.83 |
| 517.63 | 287.82 | 517.97 | 287.82 | 518.81 | 287.79 | 519.07 | 287.78 | 520.28 | 287.8 |
| 523.22 | 287.8 | 523.95 | 287.78 | 524.3 | 287.76 | 524.77 | 287.58 | 524.96 | 287.55 |
| 525.13 | 287.53 | 525.29 | 287.52 | 530.1 | 287.68 | 533.33 | 287.73 | 535.17 | 287.78 |
| 536 | 287.79 | 536.19 | 287.8 | 536.69 | 287.8 | 536.81 | 287.81 | 537.28 | 287.84 |
| 537.42 | 287.84 | 537.59 | 287.85 | 538.53 | 287.85 | 539.24 | 287.84 | 539.79 | 287.82 |
| 540 | 287.8 | 540.56 | 287.8 | 551.03 | 288 | 569.52 | 288 | 583.63 | 287.17 |
| 584.05 | 287.16 | 585.33 | 287.14 | 585.69 | 287.13 | 585.83 | 287.13 | 586.41 | 287.09 |
| 588.01 | 287.09 | 588.09 | 287.08 | 588.88 | 287.08 | 589.05 | 287.09 | 590.77 | 287.09 |
| 591.14 | 287.1 | 592.27 | 287.11 | 594.12 | 287.12 | 597.06 | 287.16 | 599.03 | 287.17 |
| 601.77 | 287.21 | 602.61 | 287.21 | 604.97 | 287.25 | 613.93 | 287.43 | 615.63 | 287.41 |
| 615.78 | 287.41 | 622.16 | 287.37 | 624.55 | 287.4 | 626.8 | 287.39 | 628.14 | 287.4 |
| 630.4 | 287.4 | 631.9 | 287.41 | 633.99 | 287.41 | 635.53 | 287.42 | 638.57 | 287.42 |
| 642.77 | 287.45 | 643.5 | 287.46 | 643.93 | 287.48 | 644.95 | 287.49 | 645.95 | 287.49 |
| 647.25 | 287.46 | 648.85 | 287.39 | 649.31 | 287.38 | 650.69 | 287.38 | 651.33 | 287.42 |
| 651.75 | 287.43 | 652.57 | 287.43 | 652.9 | 287.44 | 653.07 | 287.44 | 653.73 | 287.42 |
| 657.44 | 287.27 | 658.14 | 287.25 | 658.71 | 287.25 | 659.17 | 287.24 | 659.52 | 287.24 |
| 660.52 | 287.21 | 661.03 | 287.2 | 661.34 | 287.2 | 661.63 | 287.21 | 661.74 | 287.21 |
| 661.91 | 287.22 | 664.57 | 287.22 | 664.94 | 287.23 | 665.8 | 287.28 | 666.28 | 287.3 |
| 667.93 | 287.39 | 669.64 | 287.47 | 669.77 | 287.48 | 674.31 | 287.72 | 680.03 | 288 |
| 683.44 | 288.29 | 684.27 | 288.36 | 690.76 | 289 | 694.01 | 289.39 | 697.37 | 289.65 |
| 698.65 | 289.77 | 700.22 | 289.96 | 700.51 | 290 | 700.81 | 290.07 | 701.71 | 290.27 |
| 703.57 | 290.71 | 703.95 | 290.82 | 705.5 | 291 | 705.68 | 291.01 | 707.35 | 291.17 |
| 709.2 | 291.37 | 712.66 | 292 | 721.9 | 292.75 | 724.62 | 293 | 725.44 | 293 |
| 729.02 | 293.15 | 734.93 | 293.26 | 737.78 | 293.26 | 739.09 | 293.25 | 746.8 | 293.14 |
| 748.88 | 293.09 | 751.04 | 293.02 | 751.44 | 293 | 752.88 | 292.94 | 753.49 | 292.92 |
| 756.44 | 292.81 | 759.86 | 292.66 | 761.62 | 292.6 | 763.92 | 292.53 | 772.2 | 292.31 |
| 779.27 | 292 | 780.95 | 291.71 | 782.92 | 291.47 | 783.58 | 291.41 | 783.83 | 291.38 |
| 783.97 | 291.35 | 784.64 | 291.35 | 784.78 | 291.37 | 785.09 | 291.51 | 787.38 | 292 |
| 791.32 | 292.25 | 797.8 | 292.56 | 798.22 | 292.57 | 800.17 | 292.57 | 802.81 | 292.76 |
| 805.31 | 292.91 | 806.9 | 293 | 823.97 | 293.58 | 825.67 | 293.65 | 833.4 | 294 |
| 844.28 | 294.59 | 853.57 | 295 | 865.77 | 295.91 | 866.79 | 296 | 880.15 | 296.86 |
| 880.32 | 296.87 | 880.63 | 296.88 | 881.03 | 296.9 | 881.21 | 296.9 | 881.34 | 296.91 |
| 881.44 | 296.92 | 882.68 | 297 | 900.71 | 298 | 902.92 | 298.14 | 919.76 | 299.24 |
| 921.43 | 299.33 | 921.9 | 299.34 | 922.34 | 299.34 | 923.41 | 299.32 | 926.16 | 299.23 |
| 927.11 | 299.32 | 927.85 | 299.32 | 928.44 | 299.36 | 928.64 | 299.38 | 929.37 | 299.4 |
| 930.13 | 299.4 | 930.6 | 299.39 | 930.85 | 299.39 | 931.14 | 299.42 | 932.1 | 299.53 |
| 935.75 | 300 | 952.26 | 300.98 | 952.47 | 300.99 | 952.59 | 300.99 | 952.71 | 301 |
| 961.86 | 301.61 | 969.78 | 302 | 973.41 | 302.2 | 974.77 | 302.27 | 976.96 | 302.39 |
| 979.05 | 302.45 | 987.59 | 302.95 | 987.69 | 302.95 | 987.76 | 302.96 | 988.42 | 303 |
| 1007.1 | 304 | 1012.01 | 304.23 | 1018.89 | 304.58 | 1023.53 | 304.8 | 1026.9 | 305 |
| 1037.84 | 305.85 | 1053.9 | 307 | 1057.07 | 307.2 | 1059.46 | 307.36 | 1060.61 | 307.46 |
| 1060.75 | 307.45 | 1061.17 | 307.41 | 1062.4 | 307.22 | 1063.58 | 307.11 | 1063.76 | 307.14 |
| 1064.32 | 307.1 | 1064.37 | 307.11 | 1064.9 | 307.09 | 1064.97 | 307.07 | 1065.08 | 307.08 |
| 1065.19 | 307.11 | 1065.49 | 307.23 | 1067.87 | 307.99 | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 312.6 | .04 | 690.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 312.6 | 690.76 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1602.10*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.91 | 1.62 | 307.39 | 3.11 | 306.93 | 5.25 | 306.19 | 6.18 | 305.88 |
| 8.32 | 305.18 | 8.7 | 305.06 | 11.83 | 304.36 | 13.02 | 304.1 | 15.69 | 303.2 |
| 17.87 | 302.31 | 19.31 | 301.69 | 19.96 | 301.42 | 22.12 | 301.32 | 26.35 | 301.13 |
| 28.56 | 301.07 | 30.47 | 301.01 | 36.62 | 300.93 | 36.81 | 300.93 | 39.06 | 300.88 |
| 41.46 | 300.85 | 43.58 | 300.8 | 44.67 | 300.76 | 45.61 | 300.74 | 54.69 | 300.41 |
| 58.48 | 300.37 | 67.69 | 300.34 | 68.23 | 300.34 | 73.11 | 300.3 | 75.37 | 300.27 |
| 76.19 | 300.25 | 77.42 | 300.19 | 78.95 | 300.16 | 80.56 | 300.11 | 80.7 | 300.1 |
| 84.81 | 299.98 | 87.46 | 299.87 | 89.27 | 299.75 | 90.83 | 299.82 | 91.79 | 299.87 |
| 93.97 | 299.94 | 95.87 | 300.01 | 98.91 | 300.1 | 99.06 | 300.09 | 103.22 | 300.2 |
| 103.71 | 300.2 | 104.83 | 300.22 | 107.59 | 300.29 | 107.78 | 300.29 | 110.72 | 300.37 |
| 110.99 | 300.37 | 114.72 | 300.51 | 115.45 | 300.52 | 115.93 | 300.51 | 116.62 | 300.47 |
| 117.29 | 300.46 | 118.81 | 300.41 | 120.41 | 300.33 | 120.96 | 300.25 | 121.36 | 300.29 |
| 123.29 | 300.6 | 124.53 | 300.75 | 125.13 | 300.79 | 125.73 | 300.81 | 128.53 | 300.87 |
| 130.17 | 300.92 | 131.51 | 300.97 | 134.84 | 301.07 | 134.94 | 301.07 | 138.16 | 301.17 |
| 140.16 | 301.22 | 142.7 | 301.27 | 143.82 | 301.3 | 144.88 | 301.31 | 145.94 | 301.31 |
| 147.21 | 301.33 | 147.98 | 301.33 | 152.92 | 301.39 | 155.46 | 301.38 | 155.97 | 301.37 |
| 157.56 | 301.21 | 157.65 | 301.21 | 159.47 | 301.08 | 160.83 | 300.94 | 162.34 | 300.76 |
| 162.9 | 300.74 | 164.11 | 300.86 | 165.73 | 300.98 | 167.45 | 301.08 | 171.01 | 301.19 |
| 173.77 | 301.26 | 174.35 | 301.27 | 177.69 | 301.31 | 181.44 | 301.39 | 182.14 | 301.4 |
| 184.15 | 301.46 | 186.43 | 301.52 | 189.65 | 301.6 | 192.41 | 301.66 | 194.36 | 301.73 |
| 194.82 | 301.74 | 196.56 | 301.85 | 199.21 | 302.08 | 201.43 | 302.32 | 203.38 | 302.55 |
| 204.24 | 302.66 | 205.44 | 302.87 | 205.65 | 302.89 | 206.4 | 302.88 | 207.87 | 302.88 |
| 209.08 | 302.85 | 209.48 | 302.72 | 210.59 | 302.55 | 213.23 | 302.08 | 214.39 | 301.87 |
| 215.49 | 301.69 | 216.18 | 301.52 | 219.48 | 300.83 | 221.59 | 300.12 | 222.01 | 299.97 |
| 224.09 | 299.34 | 224.86 | 299.1 | 228.08 | 298.12 | 228.64 | 297.96 | 229.91 | 297.54 |
| 230.7 | 297.3 | 233.67 | 296.38 | 235.46 | 295.81 | 236.89 | 295.46 | 238.2 | 295.1 |
| 238.53 | 295 | 240.39 | 294.55 | 241.75 | 294.2 | 243.99 | 293.64 | 247.8 | 292.76 |
| 247.91 | 292.73 | 250.22 | 292.21 | 251.96 | 291.81 | 252.64 | 291.72 | 255.39 | 291.33 |
| 257.1 | 291.06 | 258.67 | 290.84 | 259.67 | 290.74 | 262.68 | 290.5 | 262.83 | 290.48 |
| 264.98 | 290.27 | 267.34 | 289.97 | 268.34 | 289.85 | 269.4 | 289.71 | 271.46 | 289.52 |
| 274.74 | 289.24 | 277.38 | 289.03 | 279.47 | 288.88 | 287.5 | 288.4 | 288.96 | 288.22 |
| 290.95 | 288.14 | 292.42 | 288.12 | 294.66 | 288.13 | 296.08 | 288.13 | 298.03 | 288.19 |
| 298.16 | 288.22 | 298.83 | 288.26 | 299.72 | 288.25 | 303.09 | 288.24 | 304.58 | 288.22 |
| 312.9 | 288.15 | 315.16 | 288.1 | 315.92 | 288.09 | 321.24 | 287.95 | 322.26 | 287.93 |
| 325.37 | 287.83 | 329.74 | 287.71 | 330.04 | 287.71 | 333.96 | 287.64 | 335.44 | 287.63 |
| 337.88 | 287.63 | 338.74 | 287.62 | 340.02 | 287.64 | 341.17 | 287.64 | 341.6 | 287.65 |
| 346.79 | 287.55 | 349.05 | 287.48 | 350.19 | 287.45 | 352.56 | 287.41 | 354.69 | 287.38 |
| 357.37 | 287.36 | 359.28 | 287.32 | 360.88 | 287.33 | 361.01 | 287.34 | 362.35 | 287.36 |
| 365.12 | 287.34 | 365.23 | 287.3 | 366.09 | 287.28 | 367.43 | 287.27 | 368.71 | 287.25 |
| 369.41 | 287.25 | 372.44 | 287.23 | 373.92 | 287.23 | 375.39 | 287.25 | 378.25 | 287.3 |
| 380.6 | 287.31 | 381.07 | 287.3 | 383.69 | 287.28 | 385.88 | 287.24 | 386.86 | 287.23 |
| 387.66 | 287.2 | 390.59 | 287.11 | 393.07 | 287.02 | 394.59 | 286.97 | 395.44 | 286.91 |
| 395.87 | 286.86 | 395.98 | 286.82 | 397.81 | 286.76 | 399.21 | 286.74 | 400.13 | 286.72 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 404.06 | 286.69 | 405.3 | 286.7 | 408.71 | 286.7 | 413.55 | 286.73 | 415.62 | 286.74 |
| 422.13 | 286.78 | 422.79 | 286.78 | 425.33 | 286.83 | 427.47 | 286.83 | 431.28 | 286.84 |
| 433.38 | 286.84 | 434.22 | 286.85 | 435.3 | 286.85 | 436.09 | 286.84 | 440.54 | 286.86 |
| 442 | 286.87 | 442.6 | 286.86 | 443.87 | 286.81 | 445.26 | 286.79 | 447.26 | 286.78 |
| 449.02 | 286.78 | 450.26 | 286.79 | 454.98 | 286.79 | 456 | 286.8 | 457.8 | 286.86 |
| 458.4 | 286.87 | 459.93 | 286.87 | 461.95 | 286.89 | 463.7 | 286.93 | 465.11 | 286.95 |
| 465.47 | 286.93 | 467.11 | 286.91 | 468.76 | 286.86 | 470.24 | 286.8 | 471.18 | 286.8 |
| 472.8 | 286.75 | 474.38 | 286.71 | 478.2 | 286.67 | 480.42 | 286.67 | 483.96 | 286.73 |
| 485.77 | 286.77 | 487.7 | 286.79 | 488.45 | 286.79 | 491.8 | 286.82 | 492.47 | 286.82 |
| 497.1 | 286.84 | 498.07 | 286.85 | 500.69 | 286.86 | 503.55 | 286.88 | 508.78 | 286.95 |
| 509.68 | 286.96 | 512.33 | 287.02 | 513.25 | 287.02 | 513.61 | 287.03 | 515.47 | 287.03 |
| 516.69 | 287.02 | 517.56 | 286.99 | 519.08 | 287 | 522.12 | 287 | 523.23 | 286.97 |
| 523.72 | 286.81 | 524.25 | 286.75 | 529.22 | 286.89 | 532.8 | 286.93 | 534.46 | 286.96 |
| 536.15 | 286.97 | 536.64 | 287 | 537.93 | 287 | 538.92 | 286.98 | 539.92 | 286.92 |
| 540.56 | 286.93 | 541.9 | 286.98 | 550.24 | 287.15 | 551.36 | 287.17 | 555.77 | 287.17 |
| 557.19 | 287.16 | 558.28 | 287.16 | 559.41 | 287.15 | 561.21 | 287.15 | 564.27 | 287.14 |
| 569.94 | 287.13 | 571.69 | 287.04 | 583.64 | 286.4 | 584.48 | 286.35 | 586.78 | 286.31 |
| 587.38 | 286.27 | 589.81 | 286.25 | 589.96 | 286.26 | 591.5 | 286.26 | 592.84 | 286.28 |
| 594.52 | 286.29 | 597.79 | 286.34 | 598.88 | 286.35 | 601.32 | 286.39 | 602.07 | 286.39 |
| 604.18 | 286.43 | 607.64 | 286.51 | 612.19 | 286.6 | 619.54 | 286.56 | 621.68 | 286.59 |
| 623.69 | 286.59 | 624.89 | 286.6 | 626.9 | 286.6 | 628.24 | 286.62 | 630.11 | 286.62 |
| 631.49 | 286.64 | 634.2 | 286.64 | 637.96 | 286.68 | 638.61 | 286.69 | 638.99 | 286.71 |
| 639.9 | 286.72 | 640.8 | 286.72 | 641.96 | 286.7 | 643.39 | 286.64 | 645.03 | 286.64 |
| 645.61 | 286.68 | 647.16 | 286.7 | 651.69 | 286.55 | 652.61 | 286.54 | 652.92 | 286.55 |
| 653.82 | 286.52 | 654.55 | 286.52 | 655.06 | 286.54 | 657.43 | 286.54 | 657.77 | 286.55 |
| 658.96 | 286.62 | 661.96 | 286.78 | 666.14 | 287.02 | 671.25 | 287.3 | 674.29 | 287.57 |
| 675.04 | 287.63 | 680.84 | 288.23 | 682 | 288.39 | 684.01 | 288.68 | 684.93 | 288.78 |
| 687.29 | 288.97 | 688.54 | 289.09 | 690.36 | 289.32 | 691.53 | 289.57 | 693.35 | 289.98 |
| 693.72 | 290.08 | 695.24 | 290.25 | 695.41 | 290.26 | 697.05 | 290.41 | 698.85 | 290.6 |
| 702.23 | 291.17 | 711.26 | 291.89 | 714.04 | 292.13 | 714.29 | 292.16 | 714.93 | 292.17 |
| 718.22 | 292.3 | 723.99 | 292.4 | 725.98 | 292.4 | 727.03 | 292.41 | 728.06 | 292.4 |
| 731.1 | 292.35 | 734.65 | 292.3 | 735.59 | 292.29 | 737.62 | 292.24 | 739.74 | 292.17 |
| 740.13 | 292.15 | 742.13 | 292.08 | 745.01 | 291.97 | 747.01 | 291.88 | 748.35 | 291.83 |
| 752.32 | 291.71 | 753.69 | 291.68 | 760.41 | 291.49 | 767.32 | 291.17 | 768.96 | 290.91 |
| 770.89 | 290.69 | 771.53 | 290.63 | 771.91 | 290.57 | 772.57 | 290.57 | 772.7 | 290.59 |
| 773.01 | 290.71 | 775.24 | 291.12 | 779.09 | 291.32 | 785.42 | 291.56 | 785.84 | 291.57 |
| 787.74 | 291.56 | 790.32 | 291.71 | 792.76 | 291.83 | 794.32 | 291.9 | 798.8 | 292.01 |
| 799.97 | 292.05 | 801.52 | 292.09 | 811 | 292.45 | 812.66 | 292.52 | 817.78 | 292.76 |
| 820.21 | 292.87 | 821.79 | 292.95 | 823.75 | 293.03 | 826.9 | 293.2 | 830.84 | 293.42 |
| 834.19 | 293.57 | 834.8 | 293.6 | 839.92 | 293.79 | 841.25 | 293.89 | 844.82 | 294.13 |
| 845.97 | 294.2 | 846.62 | 294.25 | 851.84 | 294.63 | 853.24 | 294.74 | 856.14 | 294.92 |
| 861.56 | 295.25 | 865.89 | 295.52 | 867.15 | 295.58 | 868.36 | 295.66 | 872.47 | 295.88 |
| 885.98 | 296.61 | 888.14 | 296.75 | 888.58 | 296.77 | 891.91 | 296.99 | 899.79 | 297.49 |
| 905.2 | 297.84 | 906.22 | 297.89 | 907.11 | 297.9 | 908.16 | 297.89 | 910.56 | 297.83 |
| 910.88 | 297.83 | 911.77 | 297.91 | 912.5 | 297.92 | 913.27 | 297.98 | 913.98 | 298 |
| 914.98 | 298.01 | 915.18 | 298 | 915.71 | 298.03 | 916.65 | 298.14 | 920.22 | 298.57 |
| 926.65 | 298.96 | 927.03 | 298.99 | 936.35 | 299.58 | 936.79 | 299.6 | 939.16 | 299.77 |
| 940 | 299.82 | 945.73 | 300.19 | 948.52 | 300.32 | 951.56 | 300.47 | 953.47 | 300.57 |
| 958.3 | 300.83 | 960.48 | 300.95 | 962.53 | 301.01 | 963.57 | 301.07 | 966.56 | 301.27 |
| 969.65 | 301.47 | 970.87 | 301.54 | 971.04 | 301.56 | 974 | 301.74 | 979.55 | 302.05 |
| 986.71 | 302.47 | 989.93 | 302.67 | 993.91 | 302.89 | 995.57 | 302.99 | 1000.22 | 303.29 |
| 1001.45 | 303.36 | 1002.53 | 303.43 | 1005.86 | 303.66 | 1007.14 | 303.76 | 1009.28 | 303.92 |
| 1011.42 | 304.12 | 1012.78 | 304.24 | 1012.93 | 304.26 | 1018.48 | 304.76 | 1019.21 | 304.84 |
| 1023.14 | 305.2 | 1024.09 | 305.29 | 1027.96 | 305.68 | 1030.26 | 305.9 | 1033.55 | 306.24 |
| 1036.93 | 306.61 | 1038.76 | 306.8 | 1040.86 | 307.04 | 1042.22 | 307.21 | 1042.77 | 307.2 |
| 1043.97 | 307.09 | 1045.12 | 307.05 | 1045.3 | 307.08 | 1045.84 | 307.07 | 1046.41 | 307.09 |
| 1046.59 | 307.08 | 1046.99 | 307.23 | 1048.97 | 307.89 | 1049.31 | 308.01 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 304.58 | .04 | 680.84 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 304.58 | 680.84 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1557.36*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.83 | 1.58 | 307.34 | 2.42 | 307.07 | 3.03 | 306.89 | 5.11 | 306.19 |
| 8.47 | 305.11 | 10.81 | 304.58 | 11.52 | 304.44 | 12.74 | 304.18 | 13.62 | 303.9 |
| 15.27 | 303.4 | 16.23 | 303.06 | 16.56 | 302.93 | 17.4 | 302.63 | 18.8 | 302.08 |
| 19.44 | 301.85 | 19.71 | 301.83 | 21.54 | 301.74 | 21.68 | 301.74 | 23.03 | 301.67 |
| 25.65 | 301.55 | 27.42 | 301.5 | 27.81 | 301.48 | 30.56 | 301.41 | 32.6 | 301.38 |
| 35.65 | 301.33 | 35.85 | 301.33 | 40.37 | 301.25 | 44.41 | 301.15 | 45.77 | 301.1 |
| 52.16 | 300.89 | 53.25 | 300.85 | 54.1 | 300.83 | 55.83 | 300.81 | 56.94 | 300.79 |
| 65.91 | 300.74 | 66.44 | 300.74 | 71.18 | 300.7 | 73.38 | 300.67 | 74.19 | 300.65 |
| 76.09 | 300.57 | 76.87 | 300.56 | 78.58 | 300.51 | 82.57 | 300.37 | 85.15 | 300.27 |
| 86.92 | 300.15 | 87.39 | 300.17 | 89.38 | 300.23 | 91.49 | 300.28 | 93.34 | 300.33 |
| 94.38 | 300.34 | 99.72 | 300.44 | 100.51 | 300.45 | 102.07 | 300.45 | 104.75 | 300.46 |
| 108.07 | 300.46 | 111.7 | 300.49 | 112.41 | 300.48 | 113.84 | 300.39 | 114.67 | 300.37 |
| 116.96 | 300.26 | 117.24 | 300.24 | 117.77 | 300.17 | 118.17 | 300.2 | 120.05 | 300.44 |
| 121.25 | 300.56 | 122.42 | 300.59 | 125.14 | 300.61 | 127.12 | 300.66 | 127.64 | 300.68 |
| 131.29 | 300.77 | 133.97 | 300.83 | 134.52 | 300.85 | 136.21 | 300.88 | 137.49 | 300.88 |
| 141.06 | 300.91 | 142.1 | 300.9 | 149.76 | 300.9 | 151.87 | 300.85 | 153.41 | 300.69 |
| 153.5 | 300.69 | 155.27 | 300.55 | 156.59 | 300.41 | 158.06 | 300.23 | 158.61 | 300.2 |
| 159.79 | 300.28 | 160.52 | 300.3 | 161.36 | 300.34 | 163.04 | 300.37 | 164.31 | 300.37 |
| 166.51 | 300.38 | 169.2 | 300.37 | 169.76 | 300.36 | 172.34 | 300.28 | 176.18 | 300.21 |
| 176.85 | 300.19 | 179.3 | 300.24 | 181.52 | 300.31 | 184.26 | 300.38 | 187.35 | 300.42 |
| 189.69 | 300.47 | 191.62 | 300.56 | 193.96 | 300.71 | 196.12 | 300.91 | 198.02 | 301.1 |
| 198.86 | 301.19 | 200.03 | 301.37 | 200.96 | 301.38 | 201.46 | 301.37 | 202.39 | 301.37 |
| 203.57 | 301.35 | 203.96 | 301.24 | 205.04 | 301.09 | 206.56 | 300.85 | 207.61 | 300.69 |
| 208.74 | 300.53 | 209.81 | 300.37 | 210.49 | 300.23 | 212.49 | 299.87 | 213.7 | 299.66 |
| 215.75 | 299.07 | 216.16 | 298.94 | 216.61 | 298.83 | 218.19 | 298.4 | 218.94 | 298.18 |
| 222.08 | 297.34 | 222.62 | 297.2 | 222.94 | 297.09 | 224.62 | 296.59 | 227.52 | 295.76 |
| 229.26 | 295.24 | 230.66 | 294.92 | 232.25 | 294.51 | 234.06 | 294.1 | 236.29 | 293.58 |
| 237.56 | 293.29 | 240.85 | 292.59 | 241.27 | 292.49 | 243.02 | 292.11 | 243.64 | 291.99 |
| 244.47 | 291.8 | 245.32 | 291.63 | 248.1 | 291.25 | 249.47 | 291.05 | 251.86 | 290.68 |
| 252.84 | 290.57 | 255.76 | 290.28 | 256.71 | 290.17 | 258.01 | 290.03 | 261.19 | 289.6 |
| 261.85 | 289.5 | 262.14 | 289.44 | 264.31 | 289.16 | 267.51 | 288.77 | 270.08 | 288.5 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 272.12 | 288.33 | 279.45 | 287.82 | 279.93 | 287.79 | 281.35 | 287.61 | 282.1 | 287.58 |
| 283.29 | 287.52 | 284.72 | 287.49 | 286.9 | 287.47 | 288.29 | 287.44 | 289.28 | 287.45 |
| 290.19 | 287.47 | 290.31 | 287.5 | 290.97 | 287.52 | 291.83 | 287.5 | 294.75 | 287.47 |
| 296.56 | 287.43 | 305.14 | 287.3 | 308.26 | 287.22 | 310.32 | 287.16 | 310.61 | 287.16 |
| 314.8 | 287.04 | 318.01 | 286.94 | 322.52 | 286.83 | 322.83 | 286.82 | 326.87 | 286.75 |
| 328.4 | 286.74 | 330.92 | 286.73 | 331.8 | 286.71 | 333.13 | 286.73 | 334.32 | 286.72 |
| 334.76 | 286.73 | 336.42 | 286.7 | 340.12 | 286.62 | 342.45 | 286.55 | 343.31 | 286.52 |
| 345.48 | 286.5 | 346.06 | 286.5 | 348.27 | 286.48 | 349.88 | 286.49 | 353 | 286.46 |
| 354.79 | 286.48 | 355.79 | 286.5 | 359.02 | 286.5 | 359.14 | 286.47 | 360.02 | 286.45 |
| 362 | 286.44 | 362.73 | 286.43 | 366.58 | 286.42 | 368.1 | 286.42 | 369.63 | 286.45 |
| 372.57 | 286.49 | 375 | 286.5 | 377.17 | 286.5 | 378.18 | 286.48 | 381.45 | 286.45 |
| 382.29 | 286.43 | 385.31 | 286.37 | 387.86 | 286.3 | 389.47 | 286.29 | 390.59 | 286.21 |
| 390.86 | 286.16 | 392.14 | 286.12 | 394.2 | 286.09 | 395.15 | 286.07 | 397.49 | 286.05 |
| 399.21 | 286.04 | 400.49 | 286.04 | 404 | 286.03 | 408.99 | 286.04 | 411.13 | 286.05 |
| 418.53 | 286.06 | 421.28 | 286.1 | 423.36 | 286.09 | 430.32 | 286.09 | 431.43 | 286.1 |
| 432.25 | 286.09 | 436.84 | 286.1 | 438.35 | 286.1 | 438.97 | 286.09 | 440.28 | 286.05 |
| 440.35 | 286.04 | 441.58 | 286.02 | 443.78 | 286.01 | 444.06 | 286 | 448.24 | 286 |
| 450.6 | 286.01 | 452.37 | 286.01 | 454.65 | 286.06 | 456.6 | 286.08 | 457.97 | 286.08 |
| 458.8 | 286.1 | 459.95 | 286.11 | 462.2 | 286.16 | 462.36 | 286.14 | 464.26 | 286.13 |
| 465.99 | 286.09 | 467.03 | 286.05 | 467.95 | 286.03 | 468.45 | 286.03 | 471.76 | 285.97 |
| 472.71 | 285.96 | 475.7 | 285.94 | 477.03 | 285.94 | 477.99 | 285.95 | 481.64 | 286.01 |
| 482.64 | 286.03 | 483.65 | 286.04 | 485.5 | 286.07 | 486.27 | 286.07 | 495.3 | 286.09 |
| 495.55 | 286.08 | 496.66 | 286.09 | 501.85 | 286.11 | 508.18 | 286.18 | 510.57 | 286.22 |
| 511.23 | 286.22 | 512.23 | 286.24 | 515.42 | 286.22 | 516.59 | 286.19 | 517.88 | 286.21 |
| 521.01 | 286.2 | 521.79 | 286.19 | 522.16 | 286.17 | 522.66 | 286.03 | 523.22 | 285.99 |
| 526.56 | 286.06 | 528.34 | 286.1 | 530.99 | 286.12 | 532.03 | 286.12 | 533.75 | 286.14 |
| 535.37 | 286.13 | 536 | 286.16 | 537.33 | 286.15 | 538.08 | 286.13 | 538.73 | 286.1 |
| 539.39 | 286.05 | 540.04 | 286.06 | 541.43 | 286.13 | 543.4 | 286.17 | 550.03 | 286.32 |
| 550.65 | 286.33 | 557.2 | 286.33 | 559.49 | 286.31 | 561.35 | 286.3 | 564.51 | 286.29 |
| 570.35 | 286.26 | 572.17 | 286.17 | 578.72 | 285.86 | 584.49 | 285.58 | 585.39 | 285.53 |
| 587.73 | 285.49 | 588.35 | 285.45 | 589.32 | 285.44 | 590.14 | 285.42 | 590.87 | 285.43 |
| 592.22 | 285.43 | 592.86 | 285.45 | 594.86 | 285.46 | 594.89 | 285.47 | 597.17 | 285.51 |
| 598.72 | 285.52 | 600.88 | 285.57 | 601.54 | 285.57 | 603.4 | 285.61 | 606.44 | 285.69 |
| 610.45 | 285.78 | 611.79 | 285.77 | 616.92 | 285.76 | 618.81 | 285.79 | 620.58 | 285.79 |
| 624.59 | 285.82 | 626.23 | 285.83 | 627.45 | 285.85 | 629.84 | 285.87 | 633.14 | 285.91 |
| 634.06 | 285.94 | 635.65 | 285.96 | 636.67 | 285.94 | 638.29 | 285.89 | 639.38 | 285.9 |
| 640.21 | 285.94 | 641.25 | 285.96 | 641.77 | 285.95 | 644.69 | 285.86 | 645.24 | 285.85 |
| 646.33 | 285.85 | 647.76 | 285.83 | 648.21 | 285.85 | 650.3 | 285.87 | 651.65 | 285.94 |
| 652.94 | 286.02 | 656 | 286.19 | 657.96 | 286.32 | 662.47 | 286.59 | 665.8 | 286.91 |
| 670.91 | 287.46 | 672.04 | 287.64 | 674.01 | 287.98 | 674.91 | 288.1 | 677.22 | 288.3 |
| 678.44 | 288.42 | 679.94 | 288.6 | 680.21 | 288.64 | 681.36 | 288.87 | 683.13 | 289.25 |
| 683.5 | 289.34 | 684.98 | 289.51 | 686.32 | 289.62 | 688.51 | 289.83 | 691.81 | 290.35 |
| 700.62 | 291.03 | 703.34 | 291.26 | 703.58 | 291.31 | 707.42 | 291.44 | 713.06 | 291.54 |
| 714.25 | 291.54 | 715 | 291.55 | 716.71 | 291.55 | 717.03 | 291.54 | 720 | 291.5 |
| 723.46 | 291.46 | 726.37 | 291.39 | 728.43 | 291.32 | 728.81 | 291.3 | 733.58 | 291.13 |
| 735.53 | 291.04 | 738.53 | 290.95 | 742.06 | 290.87 | 748.62 | 290.68 | 755.37 | 290.35 |
| 756.97 | 290.11 | 758.85 | 289.9 | 759.48 | 289.85 | 759.85 | 289.8 | 760.63 | 289.8 |
| 760.92 | 289.9 | 763.11 | 290.24 | 766.87 | 290.39 | 773.05 | 290.56 | 775.31 | 290.54 |
| 777.83 | 290.66 | 780.22 | 290.75 | 781.73 | 290.8 | 782.57 | 290.81 | 786.11 | 290.87 |
| 788.76 | 290.94 | 798.02 | 291.31 | 804.65 | 291.64 | 807.02 | 291.74 | 808.56 | 291.81 |
| 810.48 | 291.86 | 815.32 | 292.13 | 817.4 | 292.24 | 820.38 | 292.39 | 820.68 | 292.41 |
| 821.27 | 292.42 | 825.2 | 292.55 | 826.27 | 292.59 | 827.57 | 292.67 | 829.77 | 292.82 |
| 831.05 | 292.89 | 832.17 | 292.94 | 832.81 | 292.98 | 837.64 | 293.33 | 838.88 | 293.43 |
| 839.27 | 293.45 | 842.11 | 293.62 | 847.4 | 293.93 | 851.63 | 294.19 | 852.47 | 294.22 |
| 854.04 | 294.31 | 858.06 | 294.53 | 871.25 | 295.23 | 873.36 | 295.35 | 873.79 | 295.38 |
| 877.04 | 295.58 | 879.35 | 295.73 | 884.74 | 296.07 | 889.43 | 296.37 | 891.02 | 296.45 |
| 891.89 | 296.47 | 895.25 | 296.43 | 895.57 | 296.43 | 896.44 | 296.51 | 897.15 | 296.52 |
| 897.9 | 296.58 | 898.6 | 296.61 | 900.01 | 296.62 | 901.2 | 296.74 | 904.68 | 297.15 |
| 910.96 | 297.54 | 911.34 | 297.56 | 912.89 | 297.67 | 920.44 | 298.18 | 920.87 | 298.2 |
| 923.18 | 298.37 | 929.6 | 298.77 | 935.29 | 299.04 | 937.16 | 299.14 | 940.62 | 299.33 |
| 941.92 | 299.39 | 944.01 | 299.51 | 946 | 299.58 | 947.02 | 299.63 | 952.96 | 300.06 |
| 954.31 | 300.15 | 954.94 | 300.2 | 957.21 | 300.35 | 961.22 | 300.58 | 969.61 | 301.12 |
| 972.77 | 301.34 | 976.65 | 301.59 | 978.27 | 301.71 | 982.81 | 302.06 | 984.02 | 302.15 |
| 985.07 | 302.22 | 991.66 | 302.85 | 995.08 | 303.21 | 995.22 | 303.22 | 999.34 | 303.65 |
| 1000.14 | 303.74 | 1001.35 | 303.89 | 1002.1 | 303.97 | 1003.39 | 304.12 | 1005.2 | 304.31 |
| 1008.62 | 304.75 | 1009.9 | 304.92 | 1012.15 | 305.2 | 1014.12 | 305.47 | 1015.36 | 305.63 |
| 1020.43 | 306.4 | 1022.74 | 306.77 | 1023.83 | 306.97 | 1024.74 | 306.98 | 1025.54 | 306.96 |
| 1026.66 | 306.98 | 1026.83 | 307.02 | 1027.37 | 307.04 | 1027.92 | 307.08 | 1028.2 | 307.12 |
| 1028.48 | 307.24 | 1029.06 | 307.43 | 1030.42 | 307.91 | 1030.76 | 308.02 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 296.56 | .04 | 670.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 296.56 | 670.91 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1512.62*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.75 | 2.94 | 306.85 | 4.97 | 306.19 | 5.85 | 305.91 | 8.24 | 305.17 |
| 10.52 | 304.65 | 11.21 | 304.52 | 12.33 | 304.29 | 13.25 | 304.02 | 14.86 | 303.61 |
| 16.12 | 303.21 | 16.93 | 302.94 | 18.91 | 302.27 | 20.95 | 302.17 | 24.96 | 301.98 |
| 26.68 | 301.91 | 28.86 | 301.84 | 31.72 | 301.78 | 37 | 301.69 | 39.28 | 301.66 |
| 41.29 | 301.61 | 44.54 | 301.51 | 50.75 | 301.33 | 51.81 | 301.29 | 54.32 | 301.24 |
| 55.4 | 301.21 | 64.12 | 301.15 | 64.64 | 301.15 | 66.91 | 301.12 | 69.26 | 301.1 |
| 71.4 | 301.07 | 72.18 | 301.05 | 73.35 | 301 | 74.04 | 300.98 | 74.79 | 300.97 |
| 76.31 | 300.92 | 76.45 | 300.91 | 80.34 | 300.77 | 82.85 | 300.66 | 84.57 | 300.55 |
| 86.96 | 300.6 | 89.02 | 300.62 | 93.7 | 300.67 | 93.85 | 300.66 | 97.02 | 300.7 |
| 97.79 | 300.7 | 99.31 | 300.67 | 101.92 | 300.64 | 102.11 | 300.63 | 105.14 | 300.54 |
| 108.68 | 300.46 | 109.37 | 300.43 | 109.99 | 300.39 | 110.77 | 300.32 | 111.57 | 300.29 |
| 112.56 | 300.24 | 114.07 | 300.15 | 114.59 | 300.08 | 114.97 | 300.1 | 116.8 | 300.28 |
| 117.97 | 300.36 | 119.11 | 300.37 | 121.76 | 300.36 | 123.31 | 300.37 | 124.19 | 300.4 |
| 124.58 | 300.4 | 127.74 | 300.47 | 130.34 | 300.52 | 130.7 | 300.53 | 132.78 | 300.53 |
| 135.18 | 300.51 | 137.25 | 300.51 | 138.25 | 300.49 | 144.13 | 300.43 | 145.71 | 300.4 |
| 147.76 | 300.33 | 149.35 | 300.17 | 151.07 | 300.02 | 152.36 | 299.88 | 153.79 | 299.7 |
| 154.32 | 299.66 | 155.47 | 299.69 | 157 | 299.69 | 158.04 | 299.67 | 158.75 | 299.67 |
| 159.4 | 299.64 | 162 | 299.57 | 164.62 | 299.47 | 165.17 | 299.44 | 167.68 | 299.26 |
| 171.42 | 299.03 | 171.87 | 298.99 | 172.55 | 298.99 | 174.45 | 299.03 | 179.28 | 299.16 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 180.58 | 299.18 | 181.4 | 299.17 | 182.28 | 299.17 | 184.13 | 299.19 | 184.56 | 299.19 |
| 186.21 | 299.24 | 188.72 | 299.35 | 192.67 | 299.65 | 193.49 | 299.72 | 194.82 | 299.88 |
| 195.53 | 299.87 | 196.92 | 299.87 | 198.07 | 299.85 | 198.45 | 299.76 | 199.5 | 299.64 |
| 200.98 | 299.44 | 202 | 299.31 | 204.14 | 299.06 | 204.8 | 298.95 | 206.75 | 298.66 |
| 207.93 | 298.49 | 209.92 | 298.02 | 210.32 | 297.92 | 212.29 | 297.46 | 213.02 | 297.27 |
| 216.07 | 296.56 | 216.6 | 296.44 | 216.91 | 296.34 | 217.8 | 296.09 | 221.36 | 295.14 |
| 223.06 | 294.68 | 224.42 | 294.38 | 224.48 | 294.36 | 225.97 | 294.01 | 226.83 | 293.84 |
| 229.02 | 293.37 | 231.14 | 292.93 | 233.65 | 292.45 | 236.44 | 291.87 | 237.05 | 291.77 |
| 237.86 | 291.6 | 238.69 | 291.44 | 239.34 | 291.37 | 241.39 | 291.09 | 242.73 | 290.9 |
| 243.71 | 290.73 | 245.05 | 290.52 | 246 | 290.4 | 248.85 | 290.07 | 251.03 | 289.79 |
| 254.13 | 289.33 | 254.69 | 289.24 | 255.21 | 289.14 | 257.16 | 288.8 | 260.28 | 288.31 |
| 262.77 | 287.97 | 264.76 | 287.77 | 271.89 | 287.22 | 272.36 | 287.19 | 273.75 | 287.01 |
| 275.16 | 286.93 | 277.02 | 286.85 | 279.15 | 286.8 | 280.92 | 286.75 | 282.34 | 286.75 |
| 282.46 | 286.77 | 283.1 | 286.78 | 283.94 | 286.75 | 286.78 | 286.69 | 287.13 | 286.69 |
| 288.54 | 286.65 | 297.39 | 286.45 | 299.79 | 286.37 | 300.6 | 286.35 | 303.41 | 286.27 |
| 306.26 | 286.18 | 306.61 | 286.18 | 310.65 | 286.06 | 315.3 | 285.95 | 315.62 | 285.94 |
| 319.79 | 285.87 | 321.37 | 285.84 | 323.96 | 285.82 | 324.61 | 285.81 | 327.91 | 285.81 |
| 328.45 | 285.79 | 329.63 | 285.77 | 333.44 | 285.69 | 334.47 | 285.66 | 336.47 | 285.59 |
| 337.05 | 285.58 | 339.57 | 285.58 | 343.5 | 285.6 | 344.69 | 285.6 | 345.57 | 285.59 |
| 346.72 | 285.59 | 348.56 | 285.62 | 349.98 | 285.65 | 352.93 | 285.65 | 353.05 | 285.63 |
| 353.96 | 285.62 | 355.72 | 285.62 | 356 | 285.61 | 362.29 | 285.61 | 363.86 | 285.64 |
| 366.89 | 285.68 | 367.36 | 285.68 | 369.39 | 285.7 | 371.63 | 285.7 | 372.68 | 285.69 |
| 375.01 | 285.68 | 376.05 | 285.68 | 376.91 | 285.67 | 380.02 | 285.62 | 381.27 | 285.61 |
| 382.66 | 285.59 | 384.31 | 285.6 | 384.82 | 285.58 | 385.64 | 285.53 | 385.75 | 285.5 |
| 387.07 | 285.47 | 387.87 | 285.46 | 389.19 | 285.43 | 392.59 | 285.4 | 392.96 | 285.39 |
| 394.35 | 285.38 | 395.67 | 285.38 | 398.99 | 285.36 | 404.44 | 285.36 | 404.67 | 285.35 |
| 414.27 | 285.35 | 416.47 | 285.36 | 417.1 | 285.37 | 419.24 | 285.36 | 423.3 | 285.35 |
| 425.53 | 285.34 | 427.57 | 285.34 | 428.42 | 285.33 | 433.14 | 285.33 | 434.7 | 285.32 |
| 436.69 | 285.28 | 438.03 | 285.26 | 438.16 | 285.25 | 440.3 | 285.23 | 440.59 | 285.22 |
| 448.51 | 285.22 | 449.59 | 285.23 | 452.14 | 285.28 | 453.77 | 285.28 | 455.92 | 285.3 |
| 457.78 | 285.34 | 459.28 | 285.36 | 459.66 | 285.34 | 460.07 | 285.35 | 461.4 | 285.34 |
| 463.19 | 285.31 | 464.66 | 285.27 | 465.73 | 285.27 | 467.46 | 285.25 | 469.14 | 285.22 |
| 474.93 | 285.22 | 479.32 | 285.29 | 480.35 | 285.3 | 481.25 | 285.32 | 484.1 | 285.35 |
| 488.38 | 285.34 | 493.66 | 285.33 | 494.34 | 285.34 | 494.81 | 285.33 | 500.16 | 285.35 |
| 500.97 | 285.35 | 505.73 | 285.39 | 506.68 | 285.39 | 509.14 | 285.42 | 509.5 | 285.43 |
| 510.48 | 285.43 | 510.86 | 285.44 | 512.8 | 285.43 | 514.14 | 285.43 | 515.06 | 285.4 |
| 516.68 | 285.41 | 519.91 | 285.4 | 521.1 | 285.38 | 521.61 | 285.26 | 522.18 | 285.22 |
| 527.47 | 285.31 | 528.5 | 285.32 | 530.19 | 285.32 | 531.02 | 285.31 | 531.27 | 285.32 |
| 533.04 | 285.31 | 534.16 | 285.31 | 534.84 | 285.3 | 535.69 | 285.31 | 536.73 | 285.3 |
| 537.78 | 285.27 | 538.34 | 285.21 | 538.85 | 285.17 | 539.53 | 285.18 | 540.95 | 285.27 |
| 542.99 | 285.32 | 549.82 | 285.48 | 552.41 | 285.5 | 554.02 | 285.5 | 555.7 | 285.49 |
| 557.21 | 285.49 | 558.37 | 285.48 | 559.57 | 285.46 | 564.75 | 285.43 | 570.77 | 285.39 |
| 572.64 | 285.31 | 574.62 | 285.23 | 585.34 | 284.76 | 586.73 | 284.7 | 588.14 | 284.67 |
| 588.69 | 284.67 | 589.32 | 284.64 | 590.32 | 284.61 | 591.78 | 284.6 | 593.2 | 284.61 |
| 595.25 | 284.64 | 597.74 | 284.69 | 598.57 | 284.7 | 601 | 284.75 | 602.61 | 284.79 |
| 605.24 | 284.87 | 608.71 | 284.95 | 614.31 | 284.95 | 615.93 | 284.98 | 618.87 | 285 |
| 619.91 | 285.01 | 620.93 | 285.03 | 623.4 | 285.07 | 625.47 | 285.09 | 628.83 | 285.15 |
| 629.12 | 285.17 | 630.49 | 285.19 | 631.38 | 285.18 | 632.47 | 285.15 | 633.72 | 285.16 |
| 634.44 | 285.2 | 635.34 | 285.22 | 638.79 | 285.15 | 639.73 | 285.16 | 640.97 | 285.15 |
| 641.35 | 285.17 | 643.16 | 285.19 | 648.1 | 285.49 | 649.79 | 285.62 | 653.68 | 285.89 |
| 656 | 286.13 | 656.57 | 286.18 | 660.98 | 286.69 | 664.01 | 287.27 | 664.88 | 287.41 |
| 667.14 | 287.62 | 668.33 | 287.74 | 669.8 | 287.92 | 670.78 | 288.09 | 672.92 | 288.51 |
| 673.27 | 288.6 | 674.28 | 288.72 | 676.02 | 288.86 | 678.16 | 289.06 | 681.38 | 289.52 |
| 689.99 | 290.17 | 692.63 | 290.38 | 692.87 | 290.47 | 696.62 | 290.59 | 702.75 | 290.68 |
| 703.28 | 290.68 | 704.48 | 290.7 | 706 | 290.69 | 708.89 | 290.65 | 712.28 | 290.61 |
| 715.11 | 290.54 | 717.5 | 290.46 | 719.41 | 290.39 | 722.15 | 290.28 | 724.06 | 290.2 |
| 729.12 | 290.08 | 730.43 | 290.06 | 733.5 | 289.97 | 736.15 | 289.88 | 736.83 | 289.86 |
| 743.42 | 289.52 | 744.98 | 289.31 | 746.82 | 289.12 | 747.43 | 289.07 | 747.79 | 289.02 |
| 748.42 | 289.01 | 748.84 | 289.1 | 750.97 | 289.36 | 754.64 | 289.46 | 760.67 | 289.56 |
| 761.07 | 289.56 | 762.88 | 289.53 | 765.34 | 289.61 | 767.67 | 289.67 | 769.15 | 289.7 |
| 769.97 | 289.7 | 773.42 | 289.72 | 774.54 | 289.75 | 776.01 | 289.78 | 785.05 | 290.18 |
| 791.52 | 290.51 | 793.83 | 290.61 | 795.34 | 290.68 | 797.21 | 290.69 | 801.93 | 290.96 |
| 803.96 | 291.07 | 806.87 | 291.21 | 807.16 | 291.24 | 807.74 | 291.25 | 811.57 | 291.35 |
| 812.61 | 291.38 | 814.3 | 291.48 | 816.03 | 291.59 | 817.28 | 291.65 | 818.38 | 291.68 |
| 819.01 | 291.72 | 823.71 | 292.05 | 824.93 | 292.14 | 828.08 | 292.32 | 833.25 | 292.61 |
| 837.37 | 292.85 | 838.57 | 292.9 | 839.73 | 292.97 | 843.64 | 293.17 | 856.52 | 293.84 |
| 858.58 | 293.96 | 859 | 293.98 | 862.17 | 294.18 | 864.43 | 294.32 | 869.68 | 294.64 |
| 874.26 | 294.93 | 876.25 | 295.03 | 877.66 | 295.04 | 879.94 | 295.02 | 880.25 | 295.03 |
| 881.1 | 295.1 | 881.79 | 295.12 | 882.53 | 295.18 | 883.92 | 295.23 | 884.35 | 295.23 |
| 884.86 | 295.26 | 885.75 | 295.35 | 889.15 | 295.72 | 895.28 | 296.11 | 895.64 | 296.13 |
| 897.16 | 296.24 | 904.53 | 296.78 | 904.83 | 296.79 | 907.2 | 296.98 | 908 | 297.02 |
| 913.02 | 297.32 | 913.47 | 297.35 | 916.13 | 297.47 | 920.84 | 297.7 | 924.22 | 297.89 |
| 925.49 | 297.95 | 927.53 | 298.07 | 929.48 | 298.14 | 930.47 | 298.2 | 933.32 | 298.41 |
| 938.2 | 298.79 | 940.42 | 298.95 | 943.46 | 299.14 | 945.71 | 299.29 | 952.52 | 299.76 |
| 955.6 | 300.01 | 959.39 | 300.29 | 960.17 | 300.36 | 960.97 | 300.42 | 965.41 | 300.83 |
| 967.61 | 301.02 | 970.78 | 301.39 | 972 | 301.54 | 974.04 | 301.77 | 976.08 | 302.02 |
| 981.54 | 302.66 | 982.81 | 302.83 | 983.5 | 302.94 | 984.23 | 303.04 | 987.25 | 303.43 |
| 988.15 | 303.57 | 991.85 | 304.16 | 994.04 | 304.5 | 995.96 | 304.83 | 997.17 | 305.03 |
| 999.15 | 305.41 | 999.75 | 305.52 | 1000.4 | 305.66 | 1002.14 | 306 | 1004.74 | 306.56 |
| 1005.44 | 306.72 | 1005.96 | 306.77 | 1007.1 | 306.83 | 1008.2 | 306.92 | 1008.37 | 306.96 |
| 1009.6 | 307.09 | 1009.98 | 307.24 | 1010.54 | 307.43 | 1012.2 | 308.04 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 288.54 | .04 | 660.98 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 288.54 | 660.98 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1467.89*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.67 | 2.29 | 306.98 | 2.86 | 306.82 | 5.33 | 306.03 | 5.69 | 305.93 |
| 8.01 | 305.23 | 10.23 | 304.72 | 11.99 | 304.39 | 12.88 | 304.15 | 14.45 | 303.81 |
| 15.36 | 303.57 | 16.46 | 303.26 | 18.39 | 302.7 | 18.64 | 302.68 | 20.37 | 302.59 |
| 20.5 | 302.59 | 21.79 | 302.52 | 24.27 | 302.4 | 25.94 | 302.33 | 28.06 | 302.25 |
| 28.9 | 302.23 | 33.72 | 302.13 | 35.98 | 302.09 | 38.18 | 302.06 | 40.14 | 302.01 |
| 41.14 | 301.99 | 42.01 | 301.96 | 43.3 | 301.93 | 49.34 | 301.77 | 51.21 | 301.7 |
| 53.86 | 301.63 | 62.34 | 301.56 | 62.84 | 301.55 | 65.05 | 301.53 | 69.41 | 301.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 69.89 | 301.46 | 71.98 | 301.39 | 74.33 | 301.32 | 78.11 | 301.16 | 80.55 | 301.05 |
| 82.4 | 300.94 | 82.67 | 300.95 | 84.54 | 300.97 | 86.55 | 300.97 | 89.28 | 300.95 |
| 91.09 | 300.96 | 91.24 | 300.95 | 94.33 | 300.96 | 95.07 | 300.95 | 96.55 | 300.89 |
| 99.09 | 300.81 | 102.22 | 300.63 | 106.33 | 300.39 | 106.77 | 300.35 | 107.41 | 300.27 |
| 109.43 | 300.16 | 110.9 | 300.06 | 111.4 | 300 | 111.78 | 300.01 | 113.56 | 300.12 |
| 114.7 | 300.16 | 115.8 | 300.16 | 118.37 | 300.1 | 119.89 | 300.1 | 124.19 | 300.17 |
| 126.72 | 300.2 | 127.25 | 300.21 | 128.47 | 300.19 | 129.09 | 300.19 | 130.06 | 300.16 |
| 131.43 | 300.13 | 132.46 | 300.12 | 135.58 | 300.06 | 136.29 | 300.03 | 140.12 | 299.95 |
| 140.84 | 299.94 | 143.65 | 299.81 | 145.2 | 299.65 | 146.88 | 299.49 | 149.51 | 299.17 |
| 150.04 | 299.12 | 151.15 | 299.1 | 151.84 | 299.07 | 152.64 | 299.05 | 153.65 | 298.99 |
| 154.23 | 298.97 | 154.97 | 298.91 | 155.42 | 298.89 | 157.42 | 298.76 | 157.5 | 298.76 |
| 160.05 | 298.58 | 163.02 | 298.24 | 163.65 | 298.18 | 167.1 | 297.8 | 167.76 | 297.79 |
| 169.6 | 297.82 | 171.44 | 297.87 | 171.71 | 297.87 | 174.3 | 297.95 | 174.67 | 297.94 |
| 175.56 | 297.96 | 176.35 | 297.94 | 177.22 | 297.93 | 179.35 | 297.92 | 179.43 | 297.91 |
| 181.04 | 297.94 | 181.7 | 297.94 | 183.07 | 297.97 | 185.52 | 298.1 | 187.31 | 298.2 |
| 188.11 | 298.25 | 189.22 | 298.36 | 190.09 | 298.37 | 190.57 | 298.36 | 192.32 | 298.36 |
| 192.56 | 298.35 | 192.93 | 298.28 | 193.67 | 298.21 | 196.38 | 297.93 | 198.47 | 297.74 |
| 199.1 | 297.66 | 201 | 297.44 | 202.15 | 297.33 | 204.08 | 296.97 | 204.47 | 296.89 |
| 205.56 | 296.69 | 206.39 | 296.52 | 207.1 | 296.35 | 210.07 | 295.78 | 210.58 | 295.69 |
| 210.88 | 295.59 | 211.75 | 295.37 | 215.21 | 294.52 | 215.56 | 294.44 | 216.86 | 294.11 |
| 218.18 | 293.84 | 218.24 | 293.82 | 219.69 | 293.51 | 221.4 | 293.2 | 222.66 | 292.95 |
| 224.72 | 292.58 | 227.15 | 292.16 | 228.22 | 291.95 | 229.87 | 291.64 | 230.46 | 291.55 |
| 231.25 | 291.39 | 232.06 | 291.26 | 232.69 | 291.19 | 234.68 | 290.92 | 235.98 | 290.75 |
| 236.94 | 290.58 | 238.24 | 290.36 | 239.16 | 290.23 | 241.93 | 289.86 | 242.83 | 289.72 |
| 244.05 | 289.55 | 246.22 | 289.2 | 247.07 | 289.07 | 247.61 | 288.97 | 250.02 | 288.44 |
| 250.57 | 288.34 | 253.04 | 287.85 | 255.47 | 287.44 | 257.4 | 287.22 | 264.79 | 286.58 |
| 266.14 | 286.4 | 267.97 | 286.29 | 269.33 | 286.22 | 272.7 | 286.07 | 274.2 | 286.03 |
| 275.23 | 286.04 | 276.05 | 286 | 279.15 | 285.91 | 280.52 | 285.86 | 289.63 | 285.6 |
| 292.94 | 285.48 | 295.44 | 285.4 | 298.77 | 285.3 | 299.89 | 285.27 | 303.29 | 285.17 |
| 308.09 | 285.06 | 308.41 | 285.06 | 310.77 | 285.02 | 310.79 | 285.01 | 314.42 | 284.95 |
| 317 | 284.92 | 317.94 | 284.9 | 319.34 | 284.9 | 320.15 | 284.89 | 321.07 | 284.89 |
| 321.63 | 284.87 | 322.84 | 284.85 | 323.82 | 284.82 | 326.76 | 284.76 | 327.82 | 284.73 |
| 329.24 | 284.67 | 330.49 | 284.64 | 331.25 | 284.64 | 332.45 | 284.66 | 333.07 | 284.66 |
| 337.13 | 284.71 | 338.35 | 284.73 | 339.26 | 284.72 | 340.44 | 284.73 | 342.19 | 284.76 |
| 343.41 | 284.79 | 345.28 | 284.81 | 346.83 | 284.81 | 346.96 | 284.79 | 351.53 | 284.79 |
| 354.85 | 284.8 | 356.47 | 284.8 | 358.09 | 284.83 | 361.22 | 284.87 | 361.7 | 284.87 |
| 363.79 | 284.89 | 366.1 | 284.9 | 371.53 | 284.9 | 374.74 | 284.88 | 376.02 | 284.88 |
| 377.45 | 284.87 | 379.12 | 284.91 | 380.05 | 284.89 | 380.64 | 284.84 | 382.65 | 284.81 |
| 382.82 | 284.8 | 384.18 | 284.78 | 386.7 | 284.75 | 387.68 | 284.75 | 388.06 | 284.74 |
| 390.85 | 284.72 | 394.27 | 284.69 | 399.88 | 284.67 | 409.28 | 284.63 | 412.93 | 284.64 |
| 415.13 | 284.62 | 419.3 | 284.61 | 421.61 | 284.59 | 423.71 | 284.59 | 424.58 | 284.58 |
| 429.45 | 284.56 | 431.05 | 284.55 | 433.1 | 284.51 | 434.48 | 284.49 | 434.62 | 284.48 |
| 437.67 | 284.44 | 438.74 | 284.44 | 440.1 | 284.43 | 441.55 | 284.44 | 445.93 | 284.44 |
| 447.43 | 284.46 | 448.36 | 284.48 | 449.01 | 284.48 | 452.91 | 284.51 | 455.96 | 284.56 |
| 456.75 | 284.55 | 458.55 | 284.55 | 460.4 | 284.53 | 462.48 | 284.5 | 463.01 | 284.51 |
| 464.79 | 284.5 | 466.52 | 284.48 | 467.52 | 284.49 | 470.77 | 284.49 | 472.48 | 284.5 |
| 477.01 | 284.57 | 478.99 | 284.59 | 479.14 | 284.6 | 481.11 | 284.62 | 485.6 | 284.61 |
| 486.34 | 284.6 | 491.41 | 284.58 | 491.77 | 284.57 | 492.47 | 284.58 | 498.46 | 284.58 |
| 499.3 | 284.59 | 504.2 | 284.61 | 505.18 | 284.61 | 507.72 | 284.63 | 508.08 | 284.64 |
| 511.49 | 284.64 | 511.52 | 284.63 | 512.87 | 284.63 | 514.11 | 284.6 | 515.48 | 284.61 |
| 518.81 | 284.6 | 520.03 | 284.58 | 520.56 | 284.49 | 521.15 | 284.46 | 526.59 | 284.52 |
| 527.66 | 284.52 | 529.4 | 284.51 | 530.51 | 284.51 | 534.04 | 284.47 | 535.06 | 284.47 |
| 536.13 | 284.45 | 537.21 | 284.42 | 538.31 | 284.3 | 539.01 | 284.3 | 540.48 | 284.42 |
| 549.61 | 284.64 | 550.27 | 284.66 | 552.28 | 284.67 | 553.94 | 284.67 | 558.42 | 284.64 |
| 559.65 | 284.62 | 564.98 | 284.57 | 571.19 | 284.52 | 573.11 | 284.45 | 580.07 | 284.18 |
| 586.19 | 283.94 | 586.94 | 283.92 | 587.11 | 283.9 | 589.07 | 283.85 | 589.64 | 283.85 |
| 590.29 | 283.82 | 592.2 | 283.77 | 592.69 | 283.78 | 593.89 | 283.78 | 595.62 | 283.81 |
| 597.71 | 283.86 | 601.82 | 283.97 | 604.04 | 284.05 | 606.97 | 284.13 | 608.03 | 284.13 |
| 611.69 | 284.15 | 613.06 | 284.18 | 614.35 | 284.18 | 615.54 | 284.2 | 617.28 | 284.24 |
| 621.11 | 284.31 | 623.52 | 284.37 | 624.77 | 284.42 | 626.09 | 284.43 | 627.01 | 284.41 |
| 628.06 | 284.42 | 628.43 | 284.45 | 629.33 | 284.48 | 629.81 | 284.48 | 631.94 | 284.45 |
| 632.67 | 284.46 | 634 | 284.46 | 634.5 | 284.48 | 636.03 | 284.52 | 636.74 | 284.56 |
| 637.96 | 284.65 | 639.01 | 284.71 | 640.19 | 284.79 | 641.62 | 284.92 | 644.9 | 285.18 |
| 646.86 | 285.41 | 647.34 | 285.46 | 651.06 | 285.92 | 652.14 | 286.15 | 654.01 | 286.56 |
| 654.86 | 286.73 | 657.06 | 286.94 | 658.23 | 287.07 | 659.65 | 287.24 | 661.01 | 287.47 |
| 662.7 | 287.78 | 663.04 | 287.86 | 664.03 | 287.97 | 667.22 | 288.23 | 667.81 | 288.29 |
| 670.95 | 288.69 | 679.35 | 289.3 | 681.93 | 289.51 | 682.17 | 289.62 | 682.75 | 289.64 |
| 685.82 | 289.73 | 691.19 | 289.81 | 693.49 | 289.85 | 694.96 | 289.84 | 697.79 | 289.8 |
| 701.09 | 289.76 | 703.86 | 289.69 | 706.18 | 289.61 | 712.58 | 289.37 | 713.83 | 289.33 |
| 715.43 | 289.3 | 718.8 | 289.25 | 721.79 | 289.15 | 724.38 | 289.07 | 725.04 | 289.04 |
| 731.47 | 288.7 | 732.99 | 288.51 | 734.78 | 288.33 | 735.38 | 288.29 | 735.74 | 288.25 |
| 736.34 | 288.23 | 736.75 | 288.3 | 738.18 | 288.42 | 738.83 | 288.49 | 742.41 | 288.53 |
| 748.3 | 288.56 | 748.68 | 288.56 | 750.45 | 288.52 | 752.85 | 288.56 | 755.12 | 288.58 |
| 756.57 | 288.6 | 757.36 | 288.59 | 760.73 | 288.58 | 763.26 | 288.63 | 772.07 | 289.05 |
| 773.62 | 289.13 | 778.38 | 289.39 | 782.11 | 289.54 | 783.93 | 289.52 | 788.54 | 289.79 |
| 790.52 | 289.9 | 793.36 | 290.04 | 793.64 | 290.07 | 794.21 | 290.07 | 797.95 | 290.15 |
| 798.96 | 290.18 | 800.2 | 290.25 | 802.29 | 290.36 | 803.52 | 290.41 | 804.58 | 290.42 |
| 805.2 | 290.46 | 810.97 | 290.85 | 814.05 | 291.02 | 819.09 | 291.29 | 823.11 | 291.51 |
| 825.41 | 291.63 | 829.23 | 291.82 | 841.79 | 292.45 | 844.21 | 292.58 | 847.3 | 292.78 |
| 849.5 | 292.91 | 859.09 | 293.49 | 860.61 | 293.57 | 861.44 | 293.6 | 862.41 | 293.61 |
| 864.91 | 293.62 | 865.77 | 293.7 | 866.44 | 293.72 | 867.16 | 293.78 | 868.51 | 293.84 |
| 869.17 | 293.85 | 870.3 | 293.96 | 873.62 | 294.3 | 879.59 | 294.69 | 879.95 | 294.71 |
| 881.43 | 294.82 | 889.02 | 295.4 | 891.23 | 295.58 | 892.01 | 295.62 | 896.9 | 295.9 |
| 899.94 | 296.05 | 902.76 | 296.18 | 904.53 | 296.27 | 907.83 | 296.45 | 909.02 | 296.51 |
| 909.06 | 296.52 | 911.05 | 296.62 | 912.95 | 296.7 | 913.93 | 296.76 | 916.71 | 296.99 |
| 919.57 | 297.23 | 920.71 | 297.33 | 923.62 | 297.56 | 928.78 | 297.91 | 935.43 | 298.41 |
| 938.43 | 298.68 | 942.13 | 299 | 942.89 | 299.06 | 943.67 | 299.14 | 949.14 | 299.72 |
| 950.15 | 299.82 | 954.43 | 300.43 | 956.42 | 300.69 | 958.41 | 300.97 | 959.81 | 301.16 |
| 963.74 | 301.68 | 964.49 | 301.79 | 966.36 | 302.1 | 967.58 | 302.29 | 969.31 | 302.54 |
| 972.57 | 303.17 | 975.92 | 303.8 | 977.8 | 304.19 | 978.98 | 304.42 | 981.5 | 305.02 |
| 982.13 | 305.19 | 983.83 | 305.6 | 986.01 | 306.18 | 987.04 | 306.47 | 987.55 | 306.56 |
| 988.24 | 306.65 | 988.67 | 306.69 | 989.74 | 306.85 | 989.91 | 306.9 | 990.42 | 306.98 |
| 991.21 | 307.13 | 992.03 | 307.44 | 993.32 | 307.94 | 993.64 | 308.05 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 280.52 | .04 | 651.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 280.52 | 651.06 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1423.15*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.6 | 2.22 | 306.94 | 2.78 | 306.78 | 5.18 | 306.04 | 7.45 | 305.38 |
| 7.78 | 305.29 | 9.94 | 304.79 | 10.58 | 304.68 | 11.71 | 304.47 | 12.51 | 304.28 |
| 14.04 | 304.01 | 14.92 | 303.82 | 15.99 | 303.57 | 17.86 | 303.12 | 21.17 | 302.95 |
| 23.57 | 302.82 | 25.56 | 302.73 | 28.08 | 302.64 | 29.95 | 302.59 | 32.76 | 302.53 |
| 34.95 | 302.49 | 37.09 | 302.46 | 39.97 | 302.4 | 41.17 | 302.36 | 47.93 | 302.21 |
| 48.93 | 302.16 | 49.75 | 302.14 | 51.3 | 302.09 | 52.32 | 302.05 | 60.56 | 301.96 |
| 61.05 | 301.96 | 65.41 | 301.9 | 67.89 | 301.85 | 68.17 | 301.85 | 69.92 | 301.79 |
| 70.64 | 301.78 | 72.07 | 301.73 | 74.02 | 301.63 | 75.88 | 301.56 | 78.25 | 301.45 |
| 78.81 | 301.41 | 80.04 | 301.34 | 80.3 | 301.35 | 84.07 | 301.31 | 86.73 | 301.26 |
| 88.49 | 301.25 | 88.63 | 301.24 | 91.63 | 301.22 | 92.35 | 301.2 | 92.79 | 301.17 |
| 96.26 | 300.99 | 97.78 | 300.86 | 99.06 | 300.74 | 99.3 | 300.71 | 102.64 | 300.41 |
| 103.88 | 300.27 | 104.34 | 300.2 | 104.94 | 300.17 | 106.3 | 300.08 | 107.73 | 299.97 |
| 108.22 | 299.91 | 108.58 | 299.91 | 110.31 | 299.96 | 111.42 | 299.97 | 111.95 | 299.96 |
| 114.99 | 299.84 | 116.15 | 299.83 | 117.66 | 299.83 | 120.64 | 299.87 | 123.1 | 299.89 |
| 123.61 | 299.89 | 124.8 | 299.85 | 125.16 | 299.85 | 127.67 | 299.74 | 128.68 | 299.73 |
| 130.57 | 299.67 | 131.71 | 299.64 | 132.4 | 299.6 | 136.12 | 299.48 | 137.61 | 299.41 |
| 139.09 | 299.32 | 139.93 | 299.26 | 141.05 | 299.13 | 142.68 | 298.96 | 145.24 | 298.64 |
| 145.59 | 298.6 | 148.27 | 298.4 | 149.93 | 298.25 | 150.54 | 298.18 | 150.98 | 298.15 |
| 152.92 | 297.95 | 153 | 297.95 | 155.47 | 297.68 | 158.36 | 297.23 | 158.97 | 297.13 |
| 162.34 | 296.61 | 162.96 | 296.58 | 164.75 | 296.6 | 169.32 | 296.73 | 169.68 | 296.72 |
| 170.55 | 296.73 | 171.31 | 296.7 | 172.15 | 296.68 | 174.3 | 296.64 | 176.07 | 296.63 |
| 176.5 | 296.62 | 177.84 | 296.62 | 180.22 | 296.69 | 182.73 | 296.78 | 183.99 | 296.87 |
| 184.66 | 296.86 | 185.98 | 296.86 | 187.06 | 296.85 | 187.42 | 296.8 | 188.41 | 296.73 |
| 189.81 | 296.62 | 191.81 | 296.48 | 192.79 | 296.43 | 193.41 | 296.37 | 195.26 | 296.23 |
| 196.37 | 296.16 | 198.25 | 295.92 | 199.69 | 295.71 | 201.18 | 295.44 | 204.06 | 294.99 |
| 204.56 | 294.93 | 204.85 | 294.84 | 206.4 | 294.48 | 209.39 | 293.83 | 210.66 | 293.54 |
| 212.01 | 293.29 | 213.11 | 293.07 | 215.08 | 292.75 | 216.29 | 292.54 | 218.29 | 292.22 |
| 220.66 | 291.87 | 221.7 | 291.68 | 223.3 | 291.4 | 223.87 | 291.33 | 224.64 | 291.19 |
| 225.42 | 291.07 | 226.03 | 291.01 | 229.24 | 290.6 | 231.43 | 290.2 | 235.15 | 289.62 |
| 237.08 | 289.31 | 240.01 | 288.81 | 240.53 | 288.7 | 242.87 | 288.08 | 243.41 | 287.96 |
| 245.81 | 287.39 | 248.17 | 286.91 | 250.04 | 286.66 | 256.78 | 286.02 | 257.55 | 285.94 |
| 258.53 | 285.8 | 259.87 | 285.7 | 261.63 | 285.58 | 263.63 | 285.47 | 264.9 | 285.39 |
| 265.81 | 285.34 | 266.65 | 285.31 | 267.36 | 285.3 | 268.16 | 285.25 | 271.17 | 285.14 |
| 272.51 | 285.08 | 281.88 | 284.75 | 284.43 | 284.64 | 285.29 | 284.61 | 288.26 | 284.52 |
| 291.28 | 284.42 | 292.43 | 284.39 | 295.93 | 284.28 | 300.87 | 284.18 | 301.2 | 284.17 |
| 303.65 | 284.13 | 305.62 | 284.09 | 307.39 | 284.06 | 310.04 | 284.02 | 310.73 | 284 |
| 312.45 | 283.99 | 313.75 | 283.97 | 314.23 | 283.97 | 314.8 | 283.95 | 317.06 | 283.9 |
| 320.09 | 283.82 | 321.18 | 283.8 | 323.3 | 283.71 | 324.7 | 283.71 | 325.94 | 283.74 |
| 328.99 | 283.79 | 330.75 | 283.83 | 332.01 | 283.85 | 332.94 | 283.84 | 334.16 | 283.86 |
| 335.17 | 283.89 | 337.62 | 283.94 | 339.14 | 283.96 | 340.74 | 283.97 | 340.87 | 283.96 |
| 341.83 | 283.96 | 343.35 | 283.97 | 345.57 | 283.97 | 348.99 | 283.98 | 350.66 | 283.99 |
| 352.32 | 284.02 | 355.54 | 284.06 | 356.03 | 284.06 | 358.19 | 284.09 | 360.56 | 284.1 |
| 361.67 | 284.11 | 364.14 | 284.12 | 365.24 | 284.13 | 366.15 | 284.13 | 369.45 | 284.14 |
| 370.77 | 284.15 | 372.25 | 284.15 | 373.96 | 284.23 | 375.41 | 284.2 | 375.52 | 284.18 |
| 376.21 | 284.18 | 376.92 | 284.16 | 379.17 | 284.13 | 381.76 | 284.1 | 383.16 | 284.09 |
| 384.64 | 284.07 | 386.04 | 284.06 | 389.55 | 284.02 | 389.88 | 284.01 | 395.33 | 283.98 |
| 397.67 | 283.96 | 405 | 283.92 | 405.74 | 283.91 | 408.61 | 283.91 | 408.75 | 283.9 |
| 411.02 | 283.89 | 415.31 | 283.86 | 417.68 | 283.84 | 418.63 | 283.84 | 420.74 | 283.82 |
| 427.4 | 283.78 | 429.51 | 283.74 | 431.07 | 283.72 | 433.33 | 283.67 | 434.21 | 283.66 |
| 435.31 | 283.66 | 436.71 | 283.65 | 442.03 | 283.65 | 445.21 | 283.68 | 445.88 | 283.69 |
| 447.61 | 283.69 | 448.83 | 283.71 | 451 | 283.73 | 451.86 | 283.75 | 453.03 | 283.76 |
| 456.43 | 283.76 | 458.73 | 283.74 | 459.74 | 283.74 | 460.29 | 283.75 | 462.11 | 283.75 |
| 463.89 | 283.74 | 464.93 | 283.75 | 468.2 | 283.76 | 469.66 | 283.77 | 471.44 | 283.79 |
| 474.69 | 283.85 | 478.91 | 283.89 | 479.76 | 283.89 | 483.53 | 283.87 | 484.29 | 283.86 |
| 489.51 | 283.82 | 490.6 | 283.83 | 491.1 | 283.82 | 497.63 | 283.82 | 502.67 | 283.83 |
| 503.69 | 283.83 | 506.29 | 283.84 | 510.21 | 283.84 | 511.59 | 283.83 | 512.57 | 283.81 |
| 514.28 | 283.81 | 517.7 | 283.8 | 518.96 | 283.79 | 519.73 | 283.7 | 520.11 | 283.69 |
| 523.76 | 283.72 | 525.71 | 283.73 | 526.81 | 283.73 | 529.74 | 283.7 | 531.61 | 283.67 |
| 533.38 | 283.63 | 534.23 | 283.63 | 535.53 | 283.6 | 536.64 | 283.56 | 536.99 | 283.53 |
| 537.77 | 283.42 | 538.11 | 283.41 | 538.49 | 283.43 | 540 | 283.56 | 542.16 | 283.62 |
| 549.4 | 283.81 | 550.66 | 283.83 | 552.15 | 283.84 | 553.85 | 283.84 | 555.63 | 283.83 |
| 557.24 | 283.81 | 559.73 | 283.77 | 561.76 | 283.75 | 565.22 | 283.71 | 571.6 | 283.65 |
| 573.58 | 283.59 | 580.75 | 283.35 | 587.04 | 283.13 | 587.81 | 283.1 | 587.99 | 283.08 |
| 590.01 | 283.03 | 590.59 | 283.03 | 592.33 | 282.96 | 593.52 | 282.94 | 594.4 | 282.95 |
| 595.98 | 282.98 | 597.34 | 283.03 | 598.26 | 283.05 | 599.54 | 283.1 | 601.04 | 283.15 |
| 602.84 | 283.23 | 605.23 | 283.3 | 609.07 | 283.34 | 610.19 | 283.37 | 611.24 | 283.38 |
| 612.2 | 283.4 | 614.6 | 283.47 | 615.32 | 283.5 | 618.71 | 283.6 | 619.72 | 283.65 |
| 620.8 | 283.67 | 621.76 | 283.66 | 622.41 | 283.68 | 622.71 | 283.71 | 623.44 | 283.74 |
| 625.89 | 283.75 | 626.53 | 283.77 | 627.38 | 283.78 | 627.65 | 283.8 | 629.07 | 283.85 |
| 630.46 | 283.96 | 631.32 | 284.02 | 632.28 | 284.1 | 633.45 | 284.21 | 636.12 | 284.48 |
| 638.1 | 284.73 | 641.14 | 285.16 | 642.19 | 285.4 | 644.01 | 285.86 | 644.84 | 286.05 |
| 646.99 | 286.27 | 648.12 | 286.39 | 649.51 | 286.56 | 650.83 | 286.77 | 652.48 | 287.05 |
| 652.82 | 287.12 | 653.78 | 287.23 | 655.83 | 287.38 | 657.46 | 287.52 | 660.53 | 287.86 |
| 668.71 | 288.44 | 671.12 | 288.62 | 671.23 | 288.64 | 671.46 | 288.78 | 672.03 | 288.8 |
| 675.02 | 288.88 | 680.25 | 288.95 | 680.84 | 288.95 | 681.35 | 288.97 | 683 | 289 |
| 683.93 | 288.99 | 686.69 | 288.95 | 689.91 | 288.91 | 692.6 | 288.84 | 694.52 | 288.78 |
| 694.87 | 288.76 | 695.92 | 288.73 | 701.11 | 288.53 | 702.33 | 288.5 | 703.88 | 288.48 |
| 707.17 | 288.43 | 710.08 | 288.34 | 712.61 | 288.25 | 713.25 | 288.22 | 719.51 | 287.87 |
| 721 | 287.71 | 722.75 | 287.55 | 723.33 | 287.51 | 723.68 | 287.47 | 724.39 | 287.45 |
| 724.67 | 287.49 | 726.7 | 287.61 | 730.19 | 287.6 | 735.92 | 287.56 | 738.02 | 287.5 |
| 740.36 | 287.51 | 742.57 | 287.5 | 743.98 | 287.5 | 744.76 | 287.49 | 748.05 | 287.43 |
| 748.87 | 287.45 | 750.12 | 287.46 | 750.51 | 287.47 | 759.1 | 287.92 | 760.6 | 288 |
| 765.25 | 288.26 | 767.45 | 288.34 | 768.88 | 288.4 | 770.15 | 288.37 | 770.66 | 288.35 |
| 773.51 | 288.51 | 775.15 | 288.61 | 777.08 | 288.72 | 779.85 | 288.87 | 780.12 | 288.9 |
| 780.68 | 288.9 | 785.02 | 288.96 | 785.31 | 288.97 | 788.56 | 289.13 | 789.75 | 289.17 |
| 790.9 | 289.16 | 791.39 | 289.19 | 795.86 | 289.49 | 797.02 | 289.56 | 800.02 | 289.73 |
| 804.93 | 289.97 | 809.63 | 290.21 | 811.09 | 290.28 | 814.81 | 290.47 | 827.05 | 291.07 |
| 829.42 | 291.19 | 832.43 | 291.37 | 834.58 | 291.49 | 843.92 | 292.05 | 845.82 | 292.15 |
| 847.16 | 292.18 | 849.33 | 292.21 | 850.43 | 292.29 | 851.09 | 292.32 | 851.79 | 292.38 |
| 852.43 | 292.42 | 853.75 | 292.47 | 858.08 | 292.87 | 863.91 | 293.26 | 864.26 | 293.28 |
| 865.7 | 293.4 | 872.7 | 293.97 | 873.1 | 294 | 875.25 | 294.19 | 880.78 | 294.48 |
| 886.49 | 294.75 | 891.43 | 295.01 | 892.64 | 295.08 | 894.58 | 295.18 | 896.43 | 295.26 |
| 897.38 | 295.32 | 900.09 | 295.56 | 904.14 | 295.94 | 906.83 | 296.17 | 909.72 | 296.37 |
| 911.86 | 296.53 | 918.34 | 297.06 | 921.27 | 297.35 | 924.87 | 297.7 | 926.38 | 297.85 |
| 930.59 | 298.37 | 932.68 | 298.61 | 936.86 | 299.33 | 938.8 | 299.62 | 940.74 | 299.92 |
| 941.98 | 300.1 | 942.11 | 300.13 | 945.93 | 300.69 | 946.67 | 300.81 | 948.49 | 301.16 |
| 951.36 | 301.66 | 952.22 | 301.84 | 954.54 | 302.38 | 957.81 | 303.1 | 959.65 | 303.54 |
| 960.79 | 303.82 | 962.68 | 304.36 | 963.24 | 304.51 | 963.86 | 304.71 | 965.52 | 305.21 |
| 968.78 | 306.26 | 969.81 | 306.49 | 970.24 | 306.56 | 971.28 | 306.79 | 971.44 | 306.84 |
| 972.29 | 307.04 | 972.61 | 307.1 | 973.51 | 307.44 | 975.08 | 308.07 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 272.51 | .04 | 641.14 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 272.51 | 641.14 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1378.41*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.52 | 2.16 | 306.89 | 2.43 | 306.82 | 4.56 | 306.18 | 5.36 | 305.96 |
| 7.56 | 305.34 | 9.64 | 304.86 | 10.27 | 304.76 | 11.36 | 304.57 | 12.15 | 304.41 |
| 13.62 | 304.21 | 14.48 | 304.08 | 15.52 | 303.89 | 16.77 | 303.65 | 17.34 | 303.55 |
| 17.58 | 303.53 | 19.21 | 303.44 | 19.33 | 303.44 | 22.88 | 303.24 | 24.8 | 303.15 |
| 27.25 | 303.05 | 29.07 | 303 | 31.8 | 302.93 | 33.92 | 302.9 | 36 | 302.86 |
| 37.84 | 302.83 | 39.61 | 302.78 | 39.96 | 302.76 | 40.82 | 302.75 | 46.52 | 302.64 |
| 47.49 | 302.6 | 48.29 | 302.58 | 49.79 | 302.52 | 50.78 | 302.47 | 58.78 | 302.37 |
| 59.25 | 302.36 | 63.48 | 302.3 | 65.89 | 302.25 | 66.16 | 302.25 | 67.86 | 302.2 |
| 68.56 | 302.19 | 69.95 | 302.13 | 70.08 | 302.13 | 71.85 | 302.03 | 73.64 | 301.95 |
| 75.94 | 301.84 | 77.69 | 301.74 | 77.94 | 301.74 | 79.71 | 301.7 | 81.6 | 301.65 |
| 83.25 | 301.6 | 84.17 | 301.56 | 88.93 | 301.48 | 89.64 | 301.46 | 91.03 | 301.34 |
| 93.42 | 301.16 | 95.22 | 300.95 | 99.62 | 300.38 | 101.53 | 300.11 | 102.27 | 300.06 |
| 104.56 | 299.88 | 105.1 | 299.82 | 105.39 | 299.82 | 108.14 | 299.77 | 108.65 | 299.75 |
| 111.61 | 299.58 | 112.73 | 299.56 | 112.91 | 299.55 | 114.19 | 299.55 | 117.09 | 299.57 |
| 119.97 | 299.57 | 121.71 | 299.5 | 123.91 | 299.36 | 124.89 | 299.34 | 127.83 | 299.21 |
| 128.5 | 299.17 | 132.79 | 298.97 | 135.82 | 298.74 | 136.82 | 298.62 | 136.9 | 298.62 |
| 138.48 | 298.43 | 140.97 | 298.11 | 142.51 | 297.93 | 145.41 | 297.56 | 146.54 | 297.4 |
| 148.5 | 297.14 | 150.9 | 296.79 | 151.4 | 296.69 | 153.7 | 296.21 | 154.3 | 296.09 |
| 157.13 | 295.5 | 157.54 | 295.41 | 158.15 | 295.38 | 159.91 | 295.39 | 161.64 | 295.43 |
| 164.33 | 295.52 | 164.56 | 295.51 | 165.53 | 295.51 | 166.27 | 295.47 | 168.78 | 295.38 |
| 169.18 | 295.36 | 170.69 | 295.32 | 172.61 | 295.26 | 174.91 | 295.28 | 175.41 | 295.29 |
| 177.35 | 295.31 | 178.4 | 295.36 | 179.23 | 295.36 | 179.67 | 295.35 | 181.55 | 295.35 |
| 181.9 | 295.32 | 184.22 | 295.2 | 185.16 | 295.16 | 186.17 | 295.14 | 187.12 | 295.11 |
| 187.72 | 295.08 | 189.51 | 295.01 | 190.59 | 294.99 | 192.42 | 294.87 | 193.18 | 294.8 |
| 193.81 | 294.73 | 194.59 | 294.63 | 195.26 | 294.52 | 198.06 | 294.21 | 198.54 | 294.17 |
| 198.83 | 294.08 | 199.65 | 293.91 | 202.91 | 293.28 | 204.47 | 292.97 | 205.77 | 292.75 |
| 206.84 | 292.56 | 207.92 | 292.42 | 208.75 | 292.3 | 209.93 | 292.12 | 210.74 | 292.02 |
| 211.87 | 291.87 | 214.17 | 291.58 | 215.18 | 291.42 | 216.73 | 291.16 | 217.29 | 291.11 |
| 218.03 | 290.98 | 219.38 | 290.83 | 221.77 | 290.54 | 222.49 | 290.44 | 223.39 | 290.28 |
| 225.49 | 289.89 | 228.1 | 289.43 | 230.1 | 289.07 | 232.15 | 288.69 | 232.94 | 288.55 |
| 233.46 | 288.43 | 233.93 | 288.29 | 235.72 | 287.72 | 236.24 | 287.58 | 238.58 | 286.92 |
| 240.87 | 286.39 | 242.69 | 286.11 | 249.22 | 285.41 | 249.97 | 285.34 | 250.78 | 285.21 |
| 251.59 | 285.15 | 252.65 | 285.05 | 255.87 | 284.8 | 257.11 | 284.7 | 258.8 | 284.59 |
| 258.91 | 284.59 | 260.17 | 284.5 | 260.27 | 284.5 | 262.87 | 284.38 | 264.49 | 284.3 |
| 274.12 | 283.9 | 277.63 | 283.74 | 279.94 | 283.66 | 280.68 | 283.64 | 283.8 | 283.54 |
| 284.97 | 283.5 | 288.58 | 283.39 | 293.65 | 283.3 | 293.99 | 283.29 | 296.51 | 283.25 |
| 298.53 | 283.2 | 300.35 | 283.17 | 304.07 | 283.1 | 305.56 | 283.08 | 307.97 | 283.03 |
| 314.53 | 282.86 | 316.03 | 282.8 | 317 | 282.77 | 318.15 | 282.78 | 322.57 | 282.89 |
| 324.37 | 282.94 | 325.67 | 282.97 | 326.63 | 282.97 | 328.92 | 283.03 | 329.89 | 283.05 |
| 331.44 | 283.09 | 334.64 | 283.13 | 334.78 | 283.12 | 337.32 | 283.14 | 337.62 | 283.15 |
| 338.81 | 283.15 | 339.62 | 283.16 | 343.13 | 283.17 | 344.84 | 283.18 | 346.56 | 283.21 |
| 348.41 | 283.23 | 350.37 | 283.26 | 352.59 | 283.28 | 353.13 | 283.29 | 355.03 | 283.31 |
| 356.17 | 283.31 | 358.71 | 283.34 | 359.84 | 283.36 | 360.78 | 283.36 | 364.17 | 283.4 |
| 365.53 | 283.42 | 367.04 | 283.43 | 367.74 | 283.48 | 368.81 | 283.54 | 369.39 | 283.55 |
| 370.1 | 283.54 | 370.41 | 283.52 | 371.12 | 283.52 | 374.16 | 283.48 | 376.82 | 283.45 |
| 378.26 | 283.44 | 379.78 | 283.41 | 381.22 | 283.4 | 384.83 | 283.35 | 385.17 | 283.34 |
| 390.77 | 283.29 | 391.02 | 283.29 | 400.72 | 283.2 | 401.48 | 283.19 | 403.89 | 283.18 |
| 404.57 | 283.17 | 406.91 | 283.15 | 411.32 | 283.12 | 413.76 | 283.09 | 416.9 | 283.06 |
| 422.05 | 283.03 | 424.44 | 283 | 424.45 | 282.99 | 425.91 | 282.98 | 426 | 282.97 |
| 427.52 | 282.95 | 429.85 | 282.89 | 431.88 | 282.87 | 439.98 | 282.87 | 442.76 | 282.9 |
| 444.53 | 282.9 | 445.78 | 282.91 | 446.87 | 282.93 | 448.9 | 282.95 | 450.11 | 282.97 |
| 451.4 | 282.97 | 452.85 | 282.98 | 454.8 | 282.98 | 456.47 | 282.97 | 457.56 | 282.98 |
| 461.27 | 283 | 462.34 | 283.01 | 465.78 | 283.03 | 467.2 | 283.05 | 467.59 | 283.05 |
| 472.37 | 283.12 | 473.49 | 283.14 | 476.71 | 283.17 | 477.59 | 283.17 | 481.46 | 283.13 |
| 482.24 | 283.13 | 487.61 | 283.07 | 488 | 283.06 | 488.74 | 283.07 | 489.25 | 283.06 |
| 491.77 | 283.06 | 495.08 | 283.05 | 506.74 | 283.05 | 508.89 | 283.04 | 511.32 | 283.02 |
| 513.08 | 283.02 | 516.6 | 283.01 | 517.89 | 282.99 | 518.45 | 282.94 | 519.08 | 282.93 |
| 522.83 | 282.94 | 525.96 | 282.94 | 528.98 | 282.89 | 530.9 | 282.85 | 532.72 | 282.8 |
| 533.43 | 282.79 | 534.92 | 282.75 | 536.07 | 282.71 | 536.43 | 282.67 | 537.24 | 282.55 |
| 537.97 | 282.55 | 539.53 | 282.71 | 549.19 | 282.97 | 552.01 | 283.01 | 553.77 | 283.01 |
| 555.6 | 282.99 | 557.25 | 282.98 | 558.51 | 282.95 | 561.9 | 282.9 | 565.46 | 282.86 |
| 572.02 | 282.77 | 574.06 | 282.73 | 576.22 | 282.66 | 581.42 | 282.51 | 587.9 | 282.31 |
| 588.68 | 282.28 | 588.91 | 282.26 | 590.94 | 282.21 | 591.98 | 282.2 | 592.24 | 282.18 |
| 593.81 | 282.12 | 594.45 | 282.11 | 595.13 | 282.12 | 596.35 | 282.16 | 597.67 | 282.21 |
| 599.1 | 282.28 | 600.25 | 282.33 | 601.65 | 282.41 | 603.48 | 282.48 | 604.15 | 282.49 |
| 606.45 | 282.54 | 608.13 | 282.58 | 609.43 | 282.62 | 609.97 | 282.65 | 613.89 | 282.83 |
| 614.68 | 282.88 | 615.51 | 282.91 | 616.25 | 282.92 | 616.75 | 282.94 | 617.85 | 283.01 |
| 619.19 | 283.04 | 619.94 | 283.08 | 620.48 | 283.09 | 620.8 | 283.12 | 621.76 | 283.17 |
| 622.97 | 283.27 | 624.37 | 283.4 | 625.27 | 283.51 | 627.34 | 283.78 | 628.57 | 283.96 |
| 631.21 | 284.39 | 632.23 | 284.65 | 634.01 | 285.15 | 634.82 | 285.37 | 636.91 | 285.59 |
| 636.95 | 285.59 | 639.62 | 285.91 | 640.28 | 286.02 | 640.66 | 286.07 | 642.59 | 286.37 |
| 643.52 | 286.49 | 646.55 | 286.7 | 647.12 | 286.75 | 650.1 | 287.04 | 658.07 | 287.58 |
| 660.53 | 287.76 | 660.75 | 287.94 | 661.31 | 287.96 | 664.22 | 288.02 | 669.31 | 288.09 |
| 669.89 | 288.09 | 670.39 | 288.11 | 671.07 | 288.12 | 671.5 | 288.14 | 672.62 | 288.14 |
| 672.9 | 288.13 | 675.59 | 288.09 | 678.72 | 288.06 | 681.35 | 287.99 | 683.21 | 287.93 |
| 683.56 | 287.91 | 684.58 | 287.88 | 685.32 | 287.85 | 687.87 | 287.76 | 689.63 | 287.69 |
| 692.34 | 287.65 | 695.53 | 287.62 | 698.37 | 287.53 | 700.84 | 287.44 | 701.46 | 287.41 |
| 707.56 | 287.05 | 709.01 | 286.91 | 710.71 | 286.77 | 711.62 | 286.7 | 712.2 | 286.67 |
| 712.58 | 286.69 | 713.94 | 286.71 | 714.56 | 286.73 | 717.96 | 286.67 | 723.55 | 286.56 |
| 725.59 | 286.49 | 727.87 | 286.46 | 730.03 | 286.42 | 731.4 | 286.4 | 735.36 | 286.29 |
| 737.37 | 286.31 | 737.75 | 286.31 | 746.12 | 286.78 | 747.59 | 286.87 | 752.12 | 287.14 |
| 754.26 | 287.21 | 755.65 | 287.26 | 757.39 | 287.19 | 760.16 | 287.34 | 761.76 | 287.44 |
| 763.64 | 287.55 | 766.34 | 287.7 | 766.61 | 287.74 | 767.14 | 287.73 | 770.69 | 287.75 |
| 771.38 | 287.76 | 772.84 | 287.82 | 773.22 | 287.83 | 774.82 | 287.9 | 775.98 | 287.92 |
| 776.57 | 287.92 | 777.1 | 287.9 | 781.94 | 288.21 | 783.42 | 288.3 | 785.98 | 288.43 |
| 790.77 | 288.64 | 794.59 | 288.84 | 795.61 | 288.88 | 796.77 | 288.94 | 800.4 | 289.12 |
| 812.32 | 289.68 | 814.62 | 289.79 | 817.56 | 289.97 | 819.65 | 290.08 | 824.52 | 290.37 |
| 829.29 | 290.65 | 830.6 | 290.71 | 834.31 | 290.82 | 835.1 | 290.89 | 835.74 | 290.92 |
| 836.42 | 290.98 | 837.05 | 291.02 | 838.32 | 291.08 | 839.4 | 291.17 | 842.55 | 291.45 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 848.23 | 291.83 | 848.47 | 291.84 | 849.97 | 291.98 | 856.79 | 292.57 | 857.18 | 292.6 |
| 859.27 | 292.79 | 860.01 | 292.83 | 864.66 | 293.06 | 867.54 | 293.19 | 870.22 | 293.32 |
| 875.04 | 293.58 | 878.1 | 293.74 | 880.83 | 293.88 | 883.47 | 294.13 | 887.27 | 294.52 |
| 890.04 | 294.78 | 892.86 | 294.98 | 893.66 | 295.05 | 894.94 | 295.15 | 901.25 | 295.71 |
| 908.34 | 296.48 | 909.08 | 296.57 | 913.18 | 297.14 | 914.27 | 297.28 | 915.22 | 297.41 |
| 918.16 | 298 | 919.29 | 298.22 | 921.18 | 298.54 | 923.07 | 298.87 | 924.4 | 299.09 |
| 928.13 | 299.7 | 928.85 | 299.83 | 929.94 | 300.08 | 931.78 | 300.46 | 933.42 | 300.77 |
| 934.25 | 300.98 | 936.51 | 301.58 | 939.7 | 302.4 | 942.61 | 303.21 | 944.44 | 303.83 |
| 944.99 | 304.01 | 945.59 | 304.24 | 947.19 | 304.8 | 949.06 | 305.51 | 950.26 | 305.98 |
| 951.09 | 306.24 | 951.81 | 306.43 | 952.82 | 306.72 | 952.98 | 306.78 | 954.21 | 307.14 |
| 954.47 | 307.25 | 954.99 | 307.44 | 956.22 | 307.97 | 956.52 | 308.09 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 264.49 | .04 | 631.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 264.49 | 631.21 | 43.81 | 44.74 | 42.49 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1333.67*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.44 | 1.36 | 307.06 | 2.62 | 306.7 | 4.42 | 306.18 | 7.01 | 305.48 |
| 7.33 | 305.4 | 9.35 | 304.93 | 9.96 | 304.84 | 11.02 | 304.67 | 11.78 | 304.53 |
| 13.21 | 304.41 | 14.32 | 304.3 | 15.05 | 304.2 | 16.81 | 303.97 | 19.92 | 303.8 |
| 24.05 | 303.56 | 26.43 | 303.46 | 28.19 | 303.4 | 30.83 | 303.33 | 31 | 303.33 |
| 34.91 | 303.27 | 37.62 | 303.21 | 38.75 | 303.17 | 39.59 | 303.16 | 45.11 | 303.08 |
| 46.82 | 303.01 | 49.24 | 302.89 | 57 | 302.77 | 57.46 | 302.77 | 59.47 | 302.74 |
| 61.56 | 302.7 | 63.9 | 302.65 | 64.16 | 302.65 | 65.19 | 302.62 | 66.48 | 302.59 |
| 67.83 | 302.54 | 69.67 | 302.43 | 71.41 | 302.35 | 74.17 | 302.2 | 75.58 | 302.13 |
| 77.29 | 302.07 | 79.12 | 301.99 | 80.72 | 301.91 | 81.62 | 301.87 | 83.28 | 301.82 |
| 83.41 | 301.82 | 86.24 | 301.74 | 86.92 | 301.71 | 88.27 | 301.56 | 90.59 | 301.34 |
| 92.03 | 301.12 | 96.6 | 300.35 | 97.62 | 300.18 | 98.2 | 300.07 | 99.17 | 299.99 |
| 101.14 | 299.81 | 101.85 | 299.74 | 103.82 | 299.63 | 105.36 | 299.54 | 108.22 | 299.32 |
| 109.32 | 299.29 | 109.61 | 299.27 | 109.94 | 299.28 | 110.73 | 299.26 | 113.62 | 299.27 |
| 116.17 | 299.26 | 117.45 | 299.18 | 118.02 | 299.15 | 120.16 | 298.98 | 121.67 | 298.92 |
| 123.96 | 298.79 | 124.61 | 298.73 | 128.11 | 298.53 | 129.51 | 298.42 | 130.9 | 298.29 |
| 131.7 | 298.22 | 132.67 | 298.11 | 135.42 | 297.75 | 137.05 | 297.53 | 139.55 | 297.11 |
| 141 | 296.86 | 141.46 | 296.77 | 143.92 | 296.34 | 143.99 | 296.32 | 146.32 | 295.89 |
| 146.81 | 295.77 | 149.62 | 295.04 | 152.36 | 294.32 | 152.77 | 294.21 | 153.35 | 294.17 |
| 155.06 | 294.17 | 156.74 | 294.22 | 156.98 | 294.22 | 159.35 | 294.3 | 159.57 | 294.29 |
| 160.51 | 294.29 | 161.23 | 294.23 | 164.05 | 294.09 | 165.51 | 294.02 | 165.71 | 294 |
| 167.37 | 293.91 | 167.74 | 293.9 | 169.61 | 293.88 | 171.98 | 293.84 | 172.99 | 293.86 |
| 173.79 | 293.85 | 176.05 | 293.85 | 177.07 | 293.82 | 177.32 | 293.82 | 178.64 | 293.79 |
| 179.54 | 293.78 | 181.45 | 293.8 | 182.03 | 293.79 | 183.77 | 293.8 | 184.81 | 293.82 |
| 186.58 | 293.82 | 187.94 | 293.76 | 188.69 | 293.69 | 189.34 | 293.61 | 192.05 | 293.43 |
| 192.52 | 293.42 | 192.8 | 293.33 | 193.59 | 293.19 | 196.76 | 292.66 | 198.27 | 292.41 |
| 199.53 | 292.21 | 200.85 | 292.02 | 202.42 | 291.85 | 203.56 | 291.71 | 204.35 | 291.63 |
| 205.45 | 291.51 | 207.67 | 291.29 | 208.65 | 291.15 | 209.09 | 291.08 | 210.16 | 290.93 |
| 210.7 | 290.89 | 211.42 | 290.78 | 212.16 | 290.7 | 212.73 | 290.66 | 214.56 | 290.43 |
| 215.04 | 290.38 | 215.75 | 290.29 | 217.81 | 289.89 | 221.19 | 289.21 | 225.11 | 288.44 |
| 225.88 | 288.28 | 226.38 | 288.16 | 226.84 | 288 | 228.58 | 287.36 | 229.08 | 287.21 |
| 231.34 | 286.46 | 233.56 | 285.86 | 235.33 | 285.55 | 241.67 | 284.81 | 242.39 | 284.73 |
| 243.32 | 284.59 | 243.96 | 284.54 | 244.57 | 284.47 | 248.12 | 284.13 | 250.68 | 283.89 |
| 251.49 | 283.83 | 252.37 | 283.74 | 254.9 | 283.6 | 255.21 | 283.59 | 256.47 | 283.51 |
| 266.37 | 283.05 | 269.06 | 282.91 | 269.97 | 282.87 | 272.34 | 282.79 | 273.11 | 282.76 |
| 276.31 | 282.65 | 277.52 | 282.62 | 281.22 | 282.5 | 286.43 | 282.41 | 286.78 | 282.41 |
| 291.45 | 282.32 | 293.32 | 282.27 | 296.12 | 282.21 | 298.66 | 282.16 | 299.54 | 282.15 |
| 300.04 | 282.13 | 301.15 | 282.11 | 302.46 | 282.07 | 303.53 | 282.05 | 306.73 | 281.96 |
| 307.89 | 281.93 | 310.13 | 281.84 | 310.78 | 281.84 | 311.61 | 281.85 | 312.92 | 281.89 |
| 313.59 | 281.92 | 318 | 282.06 | 319.33 | 282.1 | 320.31 | 282.09 | 321.6 | 282.13 |
| 322.67 | 282.17 | 323.66 | 282.2 | 326.86 | 282.26 | 329.7 | 282.29 | 331.99 | 282.33 |
| 332.83 | 282.33 | 333.66 | 282.34 | 339.03 | 282.37 | 340.79 | 282.4 | 342.69 | 282.42 |
| 344.71 | 282.45 | 346.98 | 282.48 | 347.55 | 282.48 | 349.49 | 282.51 | 350.66 | 282.52 |
| 353.27 | 282.56 | 355.4 | 282.6 | 358.88 | 282.66 | 361.84 | 282.72 | 363.65 | 282.85 |
| 364.25 | 282.87 | 365.17 | 282.87 | 365.79 | 282.86 | 366.02 | 282.87 | 369.15 | 282.83 |
| 370.31 | 282.82 | 372.95 | 282.79 | 373.36 | 282.78 | 376.4 | 282.74 | 380.12 | 282.68 |
| 380.46 | 282.67 | 386.22 | 282.6 | 386.47 | 282.6 | 388.69 | 282.57 | 396.44 | 282.49 |
| 400.4 | 282.44 | 402.79 | 282.42 | 407.33 | 282.37 | 409.83 | 282.34 | 418.36 | 282.26 |
| 420.82 | 282.22 | 423.23 | 282.2 | 426.36 | 282.12 | 427.3 | 282.1 | 429.94 | 282.08 |
| 435.56 | 282.08 | 436.28 | 282.09 | 437.91 | 282.09 | 438.91 | 282.1 | 441.45 | 282.1 |
| 443.14 | 282.13 | 443.86 | 282.13 | 445.03 | 282.15 | 447.18 | 282.17 | 447.62 | 282.18 |
| 448.51 | 282.18 | 449.99 | 282.19 | 450.77 | 282.19 | 451.96 | 282.2 | 453.19 | 282.2 |
| 453.64 | 282.21 | 454.26 | 282.21 | 454.84 | 282.22 | 459.75 | 282.27 | 463.2 | 282.31 |
| 464.74 | 282.33 | 465.14 | 282.33 | 470.06 | 282.4 | 474.52 | 282.44 | 475.4 | 282.45 |
| 475.41 | 282.44 | 479.4 | 282.4 | 480.2 | 282.39 | 485.71 | 282.31 | 486.87 | 282.32 |
| 487.39 | 282.31 | 489.98 | 282.3 | 493.38 | 282.29 | 494.29 | 282.29 | 499.62 | 282.27 |
| 500.69 | 282.26 | 503.84 | 282.26 | 504.21 | 282.25 | 505.36 | 282.25 | 507.54 | 282.24 |
| 510.07 | 282.22 | 511.88 | 282.22 | 515.49 | 282.21 | 516.82 | 282.2 | 517.4 | 282.17 |
| 517.84 | 282.16 | 521.89 | 282.16 | 523.96 | 282.15 | 525.12 | 282.14 | 528.21 | 282.09 |
| 530.19 | 282.03 | 531.21 | 281.99 | 531.45 | 281.99 | 532.21 | 281.96 | 532.79 | 281.95 |
| 533.17 | 281.93 | 534.32 | 281.9 | 535.2 | 281.87 | 535.87 | 281.81 | 536.7 | 281.67 |
| 537.06 | 281.66 | 537.46 | 281.68 | 539.05 | 281.85 | 541.33 | 281.92 | 548.98 | 282.14 |
| 550.31 | 282.15 | 551.88 | 282.17 | 553.68 | 282.17 | 555.56 | 282.15 | 557.26 | 282.14 |
| 559.9 | 282.08 | 565.69 | 282 | 572.44 | 281.9 | 574.53 | 281.86 | 576.75 | 281.81 |
| 582.1 | 281.67 | 588.75 | 281.49 | 589.56 | 281.47 | 589.79 | 281.45 | 591.88 | 281.38 |
| 592.49 | 281.39 | 592.95 | 281.38 | 593.21 | 281.36 | 595.18 | 281.29 | 595.85 | 281.29 |
| 597.45 | 281.37 | 597.64 | 281.39 | 600.45 | 281.59 | 602.18 | 281.67 | 603.84 | 281.73 |
| 604.44 | 281.76 | 605.54 | 281.8 | 607.24 | 281.93 | 608.01 | 281.98 | 609.08 | 282.06 |
| 609.89 | 282.13 | 611.09 | 282.2 | 611.66 | 282.26 | 612.99 | 282.35 | 614.72 | 282.5 |
| 615.91 | 282.64 | 616.47 | 282.7 | 618.56 | 283.07 | 619.63 | 283.28 | 621.28 | 283.62 |
| 622.28 | 283.9 | 624.01 | 284.44 | 624.8 | 284.68 | 626.84 | 284.91 | 629.47 | 285.23 |
| 632.04 | 285.59 | 633.27 | 285.74 | 633.81 | 285.78 | 634.84 | 285.84 | 636.22 | 285.94 |
| 636.77 | 285.97 | 639.68 | 286.21 | 649.72 | 286.87 | 649.82 | 286.89 | 650.04 | 287.09 |
| 650.58 | 287.12 | 653.41 | 287.17 | 658.38 | 287.23 | 658.94 | 287.23 | 659.42 | 287.25 |
| 660.77 | 287.29 | 661.87 | 287.28 | 664.48 | 287.24 | 667.54 | 287.21 | 668.35 | 287.19 |
| 670.09 | 287.13 | 671.91 | 287.08 | 673.24 | 287.04 | 676.44 | 286.91 | 678.16 | 286.85 |
| 680.79 | 286.83 | 682.72 | 286.82 | 683.9 | 286.81 | 686.67 | 286.71 | 689.06 | 286.62 |
| 689.68 | 286.59 | 695.61 | 286.22 | 698.68 | 285.98 | 699.23 | 285.95 | 699.56 | 285.92 |

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  700.24  285.88   700.5  285.89  702.42  285.85  711.17  285.56  711.53  285.54
  713.16  285.48  715.38  285.41  717.48  285.34  718.81   285.3  722.67  285.14
  723.45  285.15  724.63  285.15     725  285.16  733.15  285.65  734.58  285.74
  738.98  286.01  741.07  286.08  742.43  286.13   743.1  286.08  744.11  286.02
  746.82  286.17  748.37  286.27  750.21  286.38  752.31  286.49  752.83  286.53
  753.09  286.57  753.61  286.55  757.73  286.55  759.15   286.6  759.52  286.62
  761.09  286.67  762.22  286.68  762.79  286.67   763.2  286.64  763.77  286.66
  768.01  286.93  769.45  287.01  771.95  287.13  776.61  287.32  780.33   287.5
  781.07  287.53  782.45   287.6  785.98  287.76  797.59  288.29  799.83   288.4
  802.69  288.56  804.73  288.67  809.46  288.94  814.11  289.21  815.76  289.29
  816.66  289.32  818.72   289.4  821.05  289.58   822.9   289.7  823.95  289.78
  827.02  290.02  832.54  290.41  832.87  290.43  834.24  290.55  840.88  291.17
  841.16  291.19   843.3   291.4  844.02  291.43  848.54  291.64  848.94  291.66
  853.96  291.89   855.6  291.98  859.79   292.2  861.62   292.3  863.38  292.39
  864.28  292.44  866.85  292.71   869.5     293  871.25  293.18  873.24  293.39
  876.77  293.66  878.01  293.77  884.16  294.35  886.94  294.69  890.35   295.1
  891.78  295.28  895.78  295.91  896.84  296.07  897.76   296.2  900.62  296.86
  901.72  297.11  903.56  297.46   905.4  297.82  906.57  298.03  906.59  298.04
  910.32  298.72  911.02  298.86  912.09  299.13  913.88  299.54  915.47  299.89
  916.29  300.12  918.49  300.79  921.59   301.7  924.42  302.61  926.21   303.3
  926.74   303.5  927.33  303.76  928.88   304.4   930.7  305.21  930.92   305.3
  931.24  305.46  931.87  305.73  932.67  306.05  933.07  306.19  934.99  306.89
  935.62  307.11  936.48  307.45  937.67  307.98  937.97   308.1

Manning's n Values        num=       3
     Sta   n Val     Sta   n Val     Sta   n Val
       0     .05  256.47     .04  621.28     .05

Bank Sta: Left   Right    Lengths: Left Channel   Right     Coeff Contr.   Expan.
        256.47  621.28            43.82   44.74   42.49              .1       .3

CROSS SECTION


RIVER: WASH90
REACH: WASH90             RS: 1288.94

INPUT
Description:
Station Elevation Data    num=     381
     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev     Sta    Elev
       0  307.361.319946     3074.279968  306.18 4.98999     3066.789978  305.53
9.059998     30511.40997  304.6613.59998  304.5916.50995  304.3818.15997  304.29
22.96997     30423.29999  303.9825.59998  303.87   27.31  303.8130.02997  303.73
35.54999  303.64   36.44  303.6237.53998  303.5843.69995  303.5245.31995  303.45
46.76996  303.3747.69995  303.3157.60999  303.1464.37994     30365.70996  302.94
65.82996  302.9467.48999  302.8374.08997  302.4876.64996  302.3378.22998  302.23
79.06995  302.1783.53998     30284.19995  301.9684.59998   301.987.75995  301.51
89.14996  301.2589.44995  301.1990.35999     30194.70996  300.0995.12994     300
  104.84  299.06  106.06  299.01  106.18     299   106.5     299  107.27  298.98
  109.99  298.97  110.02  298.97110.0699  298.97112.3799  298.94  112.44  298.94
  112.54  298.94   112.7  298.93  113.78  298.84  114.33  298.81   116.4   298.6
  117.87  298.52  120.08  298.37  120.71   298.3   124.1  298.05  124.74     298
  126.81  297.77  127.58   297.7   128.6  297.58  132.74     297  136.69  296.13
  137.25     296  137.65  295.92  139.42  295.53  141.75     295144.3799  294.17
  144.94     294  147.99  293.02     148  293.02148.0099  293.02  148.16     293
  148.56  292.97  150.21  292.96  151.84     293  154.37  293.09  154.58  293.07
   154.7  293.07  155.34  293.07  155.49  293.07  156.19     293  160.34  292.71
  162.14  292.55  164.77  292.45   166.6  292.37  168.78  292.34  171.53  292.36
  173.05  292.38  173.93   292.4  178.02  292.58  180.75  292.77  181.47  292.78
  182.06  292.78  182.79  292.75  183.42  292.69  186.05  292.65   186.5  292.66
  186.77  292.58  187.54  292.46  190.91     292  193.29  291.67   194.3  291.55
  195.31  291.47   197.2  291.29  201.18     291  203.59  290.69  204.11  290.67
  204.81  290.57  206.08  290.48  207.85  290.27     209  290.14  209.72     290
  211.69  289.58  214.27     289218.0699  288.18218.8199  288.02  218.89     288
   219.3  287.89  219.75  287.72  221.43     287  221.92  286.83  224.11     286
226.2599  285.33  227.97     285  234.11  284.21  234.81  284.13235.5699     284
  236.33  283.93  244.39     283  248.45  282.73  262.31     282  264.75  281.91
   265.1   281.9  270.06  281.73  273.86  281.61  279.21  281.53  282.23  281.48
  286.28  281.38  292.67  281.23  301.24     281302.8199  280.93  303.54   280.9
  303.84   280.9  304.21   280.9  305.06  280.92   307.1     281  312.99  281.22
     314  281.22  316.42  281.31  317.44  281.34318.6299  281.37  320.18   281.4
  325.59   281.5   327.7  281.52333.8199  281.57  335.02  281.59338.5099  281.63
  341.96  281.68  345.16  281.73  347.84  281.78  350.02  281.83   353.6  281.92
356.6299     282  358.53  282.17  359.11  282.19  359.86   282.2  360.93  282.21
  362.43   282.2  364.14  282.18  366.95  282.15  368.04  282.14  375.65     282
  375.75     282   384.2  281.88  392.23  281.77  396.22  281.71  403.34  281.63
  405.91  281.59  414.66  281.49  417.18  281.45  418.82  281.44  419.66  281.43
  420.43  281.41  422.88  281.34  423.84  281.32  425.03  281.31  426.55   281.3
  428.17   281.3  431.84   281.3  433.06   281.3  438.07  281.31  438.37  281.31
  440.68  281.34  447.94  281.41  449.16  281.42  450.89  281.44   454.1  281.49
  460.78  281.58  462.69  281.61  467.74  281.68  468.92  281.69  470.12   281.7
  473.23  281.72  477.33  281.66  483.81  281.56  483.92  281.56  484.22  281.55
     485  281.56  485.54  281.55   488.2  281.54  492.62  281.52  506.26  281.44
  516.08   281.4  520.96  281.38  524.27  281.35  526.21  281.31  527.45  281.28
534.9299     281  535.38  280.94  536.16   280.8  536.53  280.78536.9399   280.8
  538.58     281  540.92  281.07  548.77   281.3  550.14  281.32  551.75  281.34
   553.6  281.34  555.53  281.32  557.27   281.3   558.6  281.27  559.98  281.24
562.1799   281.2565.9299  281.14     575     281  577.28  280.95  582.77  280.83
   589.6  280.67590.4299  280.65  590.63  280.63  591.83  280.59  592.91  280.56
593.4299  280.57  593.91  280.56  595.33  280.49  595.84  280.47   596.3  280.46
   596.7  280.47  597.08   280.5  597.62  280.56  599.25  280.77  602.17     281
  602.21     281  605.48  281.47608.5599     282  611.36  282.85611.8199     283
  612.33  283.15  614.78     284   616.8  284.24  619.95  284.63  623.02     285
  624.55  285.09  625.89  285.17  639.02     286  639.12  286.02  639.33  286.25
639.6899  286.27  639.86  286.28  647.99  286.37  648.46  286.39   649.1  286.41
  649.51  286.43  649.98  286.44650.5699  286.43  653.38  286.39  656.35  286.36
   661.9  286.19  666.68  286.01  672.27     286  674.96   285.9  677.29  285.81
   689.7     285  706.95  284.16  709.98     284  710.74     284  710.96     284
  711.89     284  712.25     284  725.85  284.89   729.2  284.99  729.85  284.93
  730.37  284.89  730.84  284.85  733.47     285  734.98  285.1738.8099  285.32
739.3199  285.36739.5699   285.4  740.08  285.38743.4399  285.35  744.09  285.35
  745.47  285.39  745.83   285.4  747.35  285.44  748.45  285.44  749.01  285.42
  749.41  285.38  749.51  285.38  749.96   285.4  754.09  285.65  755.49  285.72
  757.92  285.83  762.45     286771.5699  286.41  785.04     287787.8199  287.16
   789.8  287.26  794.41  287.52  798.93  287.77  803.41     288  803.68  288.02
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| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 807.11 | 288.29 | 816.86 | 288.98 | 817.09 | 288.99 | 817.18 | 289 | 818.5099 | 289.13 |
| 827.3199 | 290 | 827.89 | 290.03 | 828.02 | 290.03 | 832.42 | 290.22 | 835.15 | 290.34 |
| 837.6899 | 290.46 | 843.3199 | 290.76 | 847.73 | 291 | 850.23 | 291.28 | 852.81 | 291.59 |
| 856.45 | 292 | 859.12 | 292.21 | 859.88 | 292.28 | 861.09 | 292.39 | 867.0699 | 293 |
| 873.09 | 293.8 | 874.48 | 294 | 878.37 | 294.68 | 880.3 | 295 | 883.08 | 295.73 |
| 884.15 | 296 | 887.73 | 296.77 | 888.87 | 297 | 888.89 | 297 | 888.99 | 297.03 |
| 892.52 | 297.73 | 893.2 | 297.88 | 893.6299 | 298 | 894.24 | 298.18 | 895.98 | 298.63 |
| 897.53 | 299 | 898.3199 | 299.26 | 900.46 | 300 | 901.56 | 300.36 | 903.48 | 301 |
| 905.17 | 301.62 | 906.23 | 302 | 907.97 | 302.77 | 908.49 | 303 | 909.06 | 303.29 |
| 910.5699 | 304 | 912.34 | 304.9 | 912.55 | 305 | 912.87 | 305.18 | 914.2599 | 305.87 |
| 914.55 | 306 | 914.65 | 306.04 | 916.83 | 307 | 917.96 | 307.45 | 919.12 | 308 |
| 919.41 | 308.12 | | | | | | | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 248.45 | .04 | 611.36 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 248.45 | 611.36 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1240.05*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.47 | .19 | 307.43 | .6 | 307.3 | 1.01 | 307.14 | 1.22 | 307.08 |
| 1.61 | 306.94 | 3.44 | 306.37 | 4.04 | 306.19 | 5.23 | 305.8 | 5.54 | 305.71 |
| 7.12 | 305.18 | 7.74 | 304.99 | 8.3 | 304.8 | 9.12 | 304.55 | 9.64 | 304.38 |
| 11.07 | 303.88 | 12.19 | 303.58 | 13.95 | 303.13 | 14.44 | 303.06 | 14.93 | 302.97 |
| 15.72 | 302.85 | 16.64 | 302.73 | 17.58 | 302.58 | 18.65 | 302.42 | 20.18 | 302.38 |
| 21.38 | 302.37 | 24.01 | 302.31 | 24.76 | 302.28 | 25.78 | 302.25 | 28.48 | 302.18 |
| 29.22 | 302.17 | 29.81 | 302.14 | 31.18 | 302 | 31.94 | 302.07 | 32.35 | 302.12 |
| 32.64 | 302.14 | 33.38 | 302.17 | 34.08 | 302.21 | 35.38 | 302.25 | 36.71 | 302.28 |
| 37.7 | 302.32 | 38.57 | 302.33 | 38.79 | 302.34 | 39.61 | 302.35 | 40.51 | 302.35 |
| 42.78 | 302.33 | 43.46 | 302.33 | 44.54 | 302.31 | 45.7 | 302.28 | 47.51 | 302.28 |
| 51.27 | 302.25 | 53.42 | 302.24 | 55.4 | 302.18 | 57.11 | 302.11 | 58.24 | 302.07 |
| 58.86 | 302.07 | 59.86 | 302.08 | 62.73 | 302.12 | 66 | 302.17 | 67.37 | 302.16 |
| 68.44 | 302.17 | 69.37 | 302.14 | 70.4 | 302.12 | 70.49 | 302.11 | 71.45 | 302.07 |
| 73.5 | 301.9 | 74.26 | 301.85 | 75.41 | 301.75 | 76.39 | 301.64 | 77.26 | 301.5 |
| 79 | 301.19 | 80.32 | 300.95 | 80.47 | 300.94 | 81.14 | 300.84 | 82.5 | 300.67 |
| 83.82 | 300.53 | 84.21 | 300.48 | 86.86 | 300.18 | 87.49 | 300.1 | 88.78 | 299.95 |
| 90.5 | 299.73 | 90.57 | 299.73 | 93.69 | 299.52 | 94.39 | 299.48 | 95.03 | 299.43 |
| 97.24 | 299.31 | 100.8 | 299.17 | 102.12 | 299.12 | 102.92 | 299.07 | 103.56 | 299 |
| 107.28 | 298.64 | 108.97 | 298.39 | 110.45 | 298.16 | 111.3 | 298.02 | 112.87 | 297.78 |
| 113.72 | 297.63 | 114.3 | 297.55 | 114.8 | 297.47 | 116.18 | 297.27 | 116.28 | 297.25 |
| 117.43 | 297.17 | 118.12 | 297.13 | 119.93 | 297 | 120.79 | 296.93 | 122.54 | 296.81 |
| 123.51 | 296.73 | 125.11 | 296.62 | 127.59 | 296.43 | 128.15 | 296.39 | 128.55 | 296.38 |
| 129.79 | 296.33 | 130.41 | 296.33 | 130.82 | 296.32 | 131.48 | 296.32 | 132.7 | 296.33 |
| 133.16 | 296.32 | 134.55 | 296.32 | 136.61 | 296.29 | 137.57 | 296.28 | 139.08 | 296.19 |
| 139.8 | 296.16 | 140.64 | 296.09 | 141.95 | 295.99 | 142.28 | 295.96 | 143.69 | 295.89 |
| 144.08 | 295.88 | 145.01 | 295.82 | 146 | 295.73 | 146.91 | 295.7 | 147.55 | 295.65 |
| 152.48 | 295.39 | 155.01 | 295.19 | 156.1 | 295.12 | 157.2 | 295.02 | 159.01 | 294.84 |
| 159.25 | 294.81 | 161.69 | 294.57 | 162.36 | 294.49 | 166.98 | 293.76 | 167.77 | 293.62 |
| 168.26 | 293.55 | 168.94 | 293.44 | 170.42 | 293.21 | 171.41 | 293.04 | 173.27 | 292.74 |
| 173.38 | 292.71 | 176.49 | 291.99 | 177.17 | 291.84 | 178.98 | 291.42 | 180.9 | 290.97 |
| 181.6 | 290.92 | 184.09 | 290.92 | 185.61 | 290.95 | 186.11 | 290.97 | 187.78 | 291.01 |
| 188.7 | 291.04 | 188.95 | 291.02 | 190.07 | 291.02 | 190.92 | 290.96 | 191.87 | 290.92 |
| 192.07 | 290.9 | 193.17 | 290.85 | 194.16 | 290.79 | 196 | 290.7 | 196.72 | 290.66 |
| 197.21 | 290.62 | 197.62 | 290.6 | 198.2 | 290.55 | 198.74 | 290.54 | 201.42 | 290.44 |
| 203.65 | 290.35 | 205.54 | 290.32 | 205.73 | 290.31 | 206.4 | 290.31 | 210.55 | 290.36 |
| 213.01 | 290.41 | 214.7 | 290.47 | 217.25 | 290.54 | 220.42 | 290.7 | 220.94 | 290.73 |
| 221.62 | 290.73 | 221.82 | 290.74 | 222.55 | 290.74 | 223.44 | 290.71 | 224.21 | 290.66 |
| 225.36 | 290.64 | 227.06 | 290.63 | 227.42 | 290.62 | 227.97 | 290.63 | 228.3 | 290.56 |
| 229.24 | 290.45 | 231.71 | 290.21 | 232.96 | 290.08 | 234.84 | 289.89 | 236.06 | 289.77 |
| 236.27 | 289.74 | 237.49 | 289.64 | 237.51 | 289.63 | 238.74 | 289.56 | 241.05 | 289.39 |
| 241.15 | 289.39 | 245.61 | 289.14 | 245.92 | 289.12 | 248.86 | 288.84 | 249.5 | 288.82 |
| 249.61 | 288.8 | 250.49 | 288.72 | 251.91 | 288.64 | 253.35 | 288.52 | 253.72 | 288.48 |
| 255.48 | 288.33 | 256.36 | 288.19 | 258.76 | 287.79 | 261.92 | 287.24 | 264.31 | 286.83 |
| 265.33 | 286.66 | 266.41 | 286.47 | 266.56 | 286.46 | 267.48 | 286.33 | 268.07 | 286.21 |
| 268.62 | 286.07 | 269.54 | 285.78 | 269.89 | 285.68 | 270.67 | 285.43 | 271.27 | 285.28 |
| 273.09 | 284.78 | 273.95 | 284.54 | 274.97 | 284.3 | 275.51 | 284.18 | 276.08 | 284.04 |
| 276.57 | 283.93 | 277.27 | 283.82 | 277.84 | 283.74 | 278.66 | 283.61 | 279.31 | 283.54 |
| 280.61 | 283.42 | 282.05 | 283.28 | 285.71 | 282.99 | 286.72 | 282.92 | 287.58 | 282.83 |
| 287.95 | 282.78 | 288.88 | 282.72 | 290.19 | 282.61 | 291.17 | 282.52 | 295.56 | 282.13 |
| 298.74 | 281.84 | 299.82 | 281.78 | 303.7 | 281.58 | 305.79 | 281.48 | 316.81 | 280.92 |
| 319.02 | 280.84 | 319.44 | 280.83 | 321.2 | 280.77 | 321.92 | 280.74 | 327.73 | 280.56 |
| 332.79 | 280.49 | 335.64 | 280.44 | 339.47 | 280.35 | 345.52 | 280.21 | 351.41 | 280.06 |
| 353.62 | 280 | 355.8 | 279.91 | 356.43 | 279.91 | 357.23 | 279.93 | 359.16 | 280 |
| 364.73 | 280.19 | 365.69 | 280.19 | 367.98 | 280.27 | 368.94 | 280.29 | 370.07 | 280.32 |
| 371.53 | 280.34 | 376.65 | 280.43 | 378.64 | 280.44 | 384.43 | 280.48 | 385.57 | 280.5 |
| 386.65 | 280.51 | 388.87 | 280.52 | 391.6 | 280.55 | 392.13 | 280.56 | 394.71 | 280.58 |
| 395.29 | 280.6 | 395.99 | 280.61 | 396.09 | 280.62 | 397.69 | 280.65 | 398.37 | 280.67 |
| 401.48 | 280.74 | 405.99 | 280.85 | 407.11 | 280.95 | 407.8 | 281 | 408.35 | 281.02 |
| 410.07 | 281.04 | 411.49 | 281.03 | 413.1 | 281.01 | 414.73 | 281 | 416.79 | 280.98 |
| 423.99 | 280.86 | 425.44 | 280.84 | 428.79 | 280.8 | 429.16 | 280.79 | 431.61 | 280.76 |
| 432.07 | 280.75 | 443.44 | 280.6 | 444.57 | 280.59 | 450.17 | 280.52 | 452.6 | 280.48 |
| 454.67 | 280.46 | 460.88 | 280.39 | 463.26 | 280.36 | 464.81 | 280.35 | 465.61 | 280.34 |
| 467.97 | 280.27 | 469.56 | 280.24 | 472.12 | 280.22 | 473.65 | 280.22 | 476.95 | 280.21 |
| 483.3 | 280.21 | 484.97 | 280.23 | 485.48 | 280.24 | 492.35 | 280.29 | 493.5 | 280.3 |
| 497.68 | 280.35 | 498.18 | 280.36 | 504.49 | 280.43 | 506.3 | 280.46 | 507.64 | 280.47 |
| 511.07 | 280.51 | 513.29 | 280.53 | 515.35 | 280.54 | 516.27 | 280.55 | 520.14 | 280.49 |
| 526.27 | 280.39 | 526.66 | 280.38 | 527.4 | 280.39 | 527.91 | 280.38 | 530.42 | 280.37 |
| 534.6 | 280.35 | 535.49 | 280.34 | 547.5 | 280.26 | 561.4 | 280.2 | 564.53 | 280.17 |
| 566.37 | 280.13 | 567.54 | 280.1 | 569.56 | 280.03 | 574.61 | 279.85 | 575.04 | 279.79 |
| 575.78 | 279.67 | 576.13 | 279.65 | 576.51 | 279.67 | 578.07 | 279.84 | 580.28 | 279.91 |
| 587.7 | 280.11 | 589 | 280.13 | 590.52 | 280.14 | 592.27 | 280.14 | 595.74 | 280.1 |
| 597 | 280.08 | 597.49 | 280.06 | 598.3 | 280.05 | 600.38 | 280.01 | 603.93 | 279.95 |
| 612.51 | 279.82 | 614.66 | 279.77 | 619.86 | 279.66 | 626.31 | 279.51 | 627.1 | 279.49 |
| 627.29 | 279.47 | 628.42 | 279.43 | 628.57 | 279.43 | 629.44 | 279.39 | 630.39 | 279.38 |
| 632.22 | 279.27 | 632.69 | 279.26 | 633.21 | 279.29 | 633.68 | 279.33 | 634.87 | 279.47 |
| 635.04 | 279.48 | 636.43 | 279.64 | 637.36 | 279.71 | 637.76 | 279.73 | 638.76 | 279.8 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 639.3 | 279.82 | 640.18 | 279.89 | 640.46 | 279.93 | 643.18 | 280.26 | 644.66 | 280.43 |
| 645.63 | 280.57 | 648.24 | 280.93 | 649.9 | 281.32 | 651.78 | 281.77 | 652.69 | 282.04 |
| 654.97 | 282.81 | 656.85 | 283.03 | 659.78 | 283.39 | 662.63 | 283.73 | 663.6 | 283.78 |
| 665.3 | 283.89 | 677.52 | 284.67 | 677.61 | 284.69 | 677.8 | 284.89 | 678.3 | 284.92 |
| 685.86 | 285.03 | 687.71 | 285.1 | 688.26 | 285.09 | 690.87 | 285.06 | 693.64 | 285.05 |
| 698.8 | 284.92 | 703.25 | 284.78 | 708.45 | 284.79 | 710.86 | 284.71 | 711.29 | 284.7 |
| 713.12 | 284.64 | 724.66 | 283.96 | 727.32 | 283.84 | 736.67 | 283.43 | 736.76 | 283.43 |
| 740.71 | 283.25 | 743.52 | 283.12 | 745.64 | 283.12 | 756.3 | 283.82 | 758.29 | 283.95 |
| 761.4 | 284.05 | 762.49 | 283.96 | 762.93 | 283.93 | 765.38 | 284.07 | 766.78 | 284.16 |
| 770.34 | 284.37 | 770.82 | 284.4 | 771.05 | 284.44 | 771.52 | 284.42 | 774.65 | 284.4 |
| 776.54 | 284.44 | 778.29 | 284.49 | 779.31 | 284.5 | 779.83 | 284.48 | 780.2 | 284.44 |
| 780.72 | 284.46 | 784.56 | 284.7 | 787.77 | 284.85 | 788.12 | 284.87 | 792.33 | 285.03 |
| 798.57 | 285.32 | 802.79 | 285.51 | 809.43 | 285.8 | 813.35 | 285.97 | 815.93 | 286.12 |
| 817.78 | 286.22 | 822.06 | 286.46 | 826.27 | 286.69 | 830.44 | 286.9 | 833.88 | 287.17 |
| 840.66 | 287.65 | 843.25 | 287.83 | 845.55 | 288.05 | 852.68 | 288.74 | 854.81 | 288.84 |
| 857.42 | 288.95 | 859.96 | 289.06 | 862.33 | 289.17 | 866.75 | 289.41 | 867.56 | 289.45 |
| 871.66 | 289.67 | 873.99 | 289.92 | 876.39 | 290.21 | 879.21 | 290.52 | 879.78 | 290.58 |
| 882.26 | 290.77 | 884.09 | 290.93 | 889.66 | 291.49 | 895.26 | 292.21 | 896.55 | 292.39 |
| 900.17 | 293 | 901.96 | 293.29 | 904.55 | 293.94 | 905.54 | 294.18 | 908.87 | 294.88 |
| 909.93 | 295.08 | 910.05 | 295.11 | 913.33 | 295.74 | 913.96 | 295.87 | 914.93 | 296.14 |
| 916.55 | 296.55 | 917.99 | 296.88 | 918.73 | 297.12 | 920.72 | 297.78 | 922.53 | 298.36 |
| 923.53 | 298.69 | 925.1 | 299.24 | 926.08 | 299.59 | 928.19 | 300.49 | 928.72 | 300.75 |
| 930.12 | 301.39 | 931.77 | 302.2 | 932.26 | 302.45 | 933.55 | 303.07 | 933.92 | 303.22 |
| 935.94 | 304.09 | 937 | 304.49 | 938.07 | 304.99 | 938.34 | 305.1 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 303.7 | .04 | 651.78 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 303.7 | 651.78 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1191.17*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.57 | .48 | 307.46 | .7 | 307.38 | 1.2 | 307.16 | 2.35 | 306.73 |
| 3.42 | 306.38 | 4.54 | 306 | 5.65 | 305.63 | 6.54 | 305.29 | 7.16 | 305.07 |
| 7.39 | 304.97 | 8.07 | 304.72 | 8.41 | 304.58 | 9.23 | 304.29 | 10.77 | 303.73 |
| 11.39 | 303.48 | 12.14 | 303.16 | 12.28 | 303.11 | 13.09 | 302.76 | 13.67 | 302.55 |
| 14.29 | 302.34 | 14.4 | 302.29 | 16.48 | 301.61 | 17.07 | 301.47 | 17.65 | 301.31 |
| 18.09 | 301.2 | 19.3 | 300.93 | 19.67 | 300.87 | 20.78 | 300.63 | 22.08 | 300.37 |
| 22.39 | 300.36 | 23.12 | 300.38 | 23.85 | 300.39 | 25.27 | 300.42 | 25.93 | 300.39 |
| 27.39 | 300.42 | 30.47 | 300.39 | 31.79 | 300.39 | 33.19 | 300.38 | 34.87 | 300.38 |
| 35.23 | 300.34 | 36.73 | 300.14 | 36.86 | 300.13 | 37.75 | 300.28 | 38.24 | 300.4 |
| 38.73 | 300.46 | 40.28 | 300.63 | 42.73 | 300.79 | 44.56 | 300.92 | 45.58 | 300.96 |
| 45.85 | 300.98 | 46.82 | 301.01 | 47.59 | 301.01 | 47.88 | 301.02 | 50.56 | 301.02 |
| 52.65 | 301 | 54.02 | 300.98 | 56.15 | 300.99 | 60.6 | 300.96 | 63.14 | 300.96 |
| 67.5 | 300.85 | 68.84 | 300.82 | 70.76 | 300.87 | 74.14 | 301 | 75.61 | 301.05 |
| 78.01 | 301.14 | 79.62 | 301.15 | 80.52 | 301.17 | 80.89 | 301.17 | 82 | 301.12 |
| 83.31 | 301.09 | 84.45 | 301.01 | 86.87 | 300.72 | 87.34 | 300.66 | 87.77 | 300.62 |
| 89.37 | 300.41 | 90.08 | 300.29 | 90.8 | 300.1 | 91.31 | 299.98 | 91.81 | 299.83 |
| 94.15 | 299.17 | 94.3 | 299.14 | 94.93 | 298.97 | 95.9 | 298.78 | 96.68 | 298.65 |
| 99.07 | 298.28 | 99.53 | 298.2 | 100.48 | 298.05 | 101.74 | 297.86 | 103.41 | 297.59 |
| 104.93 | 297.34 | 106.43 | 297.08 | 107.04 | 296.98 | 112.32 | 296.61 | 114.01 | 296.52 |
| 114.25 | 296.5 | 114.93 | 296.48 | 119.14 | 296.3 | 120.69 | 296.24 | 121.65 | 296.18 |
| 122.4 | 296.11 | 126.79 | 295.76 | 129.23 | 295.48 | 130.97 | 295.27 | 131.55 | 295.19 |
| 132.61 | 295.07 | 133.18 | 294.99 | 133.4 | 294.97 | 134.13 | 294.86 | 135.1 | 294.75 |
| 136.83 | 294.57 | 137.44 | 294.5 | 138.66 | 294.45 | 140.44 | 294.36 | 141.75 | 294.28 |
| 142.77 | 294.23 | 144.83 | 294.11 | 145.98 | 294.04 | 150.81 | 293.76 | 151.93 | 293.7 |
| 153.22 | 293.67 | 153.44 | 293.66 | 154.13 | 293.67 | 154.62 | 293.66 | 155.4 | 293.66 |
| 156.26 | 293.68 | 157.39 | 293.68 | 158.08 | 293.67 | 159.02 | 293.67 | 161.46 | 293.64 |
| 162.59 | 293.63 | 164.38 | 293.54 | 165.24 | 293.51 | 166.23 | 293.45 | 167.77 | 293.35 |
| 168.17 | 293.32 | 170.29 | 293.23 | 171.33 | 293.18 | 172.67 | 293.05 | 173.49 | 293.04 |
| 174.4 | 292.99 | 176.64 | 292.91 | 179.29 | 292.82 | 180.22 | 292.78 | 181.73 | 292.69 |
| 183.21 | 292.61 | 184.32 | 292.56 | 185.79 | 292.47 | 188.23 | 292.29 | 191.9 | 292.01 |
| 197.36 | 291.37 | 198.29 | 291.25 | 198.87 | 291.19 | 199.67 | 291.09 | 202.59 | 290.74 |
| 204.79 | 290.47 | 204.92 | 290.45 | 208.59 | 289.82 | 211.54 | 289.31 | 213.81 | 288.91 |
| 214.63 | 288.87 | 217.02 | 288.87 | 219.97 | 288.92 | 221.94 | 288.96 | 223.03 | 288.99 |
| 223.33 | 288.98 | 224.64 | 288.98 | 226.26 | 288.9 | 227.01 | 288.88 | 227.6 | 288.85 |
| 229.94 | 288.75 | 230.49 | 288.74 | 231.65 | 288.7 | 233.09 | 288.63 | 234.25 | 288.56 |
| 237.07 | 288.47 | 240.7 | 288.33 | 242.23 | 288.29 | 242.93 | 288.28 | 243.73 | 288.28 |
| 243.95 | 288.29 | 247.82 | 288.34 | 251.02 | 288.4 | 251.76 | 288.42 | 253.76 | 288.46 |
| 255.08 | 288.48 | 257.19 | 288.53 | 258.61 | 288.59 | 261.14 | 288.68 | 261.94 | 288.69 |
| 263.03 | 288.69 | 264.09 | 288.67 | 265 | 288.62 | 266.36 | 288.61 | 268.36 | 288.6 |
| 268.8 | 288.59 | 269.45 | 288.6 | 269.84 | 288.54 | 270.95 | 288.44 | 273.87 | 288.23 |
| 275.34 | 288.12 | 276.19 | 288.05 | 277.56 | 287.95 | 279.26 | 287.82 | 280.7 | 287.72 |
| 282.17 | 287.65 | 284.9 | 287.5 | 285.02 | 287.49 | 286.68 | 287.42 | 290.29 | 287.26 |
| 290.65 | 287.25 | 294.14 | 286.98 | 294.85 | 286.96 | 296.06 | 286.87 | 297.73 | 286.81 |
| 298.87 | 286.74 | 300.29 | 286.64 | 301.95 | 286.51 | 302.99 | 286.39 | 305.84 | 286 |
| 309.57 | 285.47 | 312.39 | 285.08 | 313.6 | 284.92 | 314.38 | 284.8 | 314.88 | 284.74 |
| 315.2 | 284.73 | 316.24 | 284.62 | 316.83 | 284.54 | 317.48 | 284.41 | 318.99 | 284.08 |
| 319.91 | 283.86 | 320.62 | 283.73 | 322.77 | 283.29 | 323.62 | 283.11 | 325.63 | 282.76 |
| 326.31 | 282.63 | 327.02 | 282.51 | 327.72 | 282.43 | 328.38 | 282.34 | 329.36 | 282.22 |
| 330.12 | 282.15 | 331.66 | 282.03 | 332.65 | 281.97 | 333.36 | 281.91 | 337.69 | 281.73 |
| 339.24 | 281.65 | 340.18 | 281.57 | 341.44 | 281.51 | 341.57 | 281.51 | 342.98 | 281.41 |
| 346.01 | 281.2 | 353.08 | 280.69 | 354.37 | 280.63 | 358.95 | 280.44 | 360.92 | 280.34 |
| 371.3 | 279.84 | 373.39 | 279.77 | 373.79 | 279.76 | 375.44 | 279.7 | 378.21 | 279.61 |
| 381.6 | 279.51 | 389.06 | 279.4 | 392.67 | 279.32 | 398.36 | 279.19 | 403.92 | 279.05 |
| 406 | 279 | 407.1 | 278.96 | 407.41 | 278.94 | 408.05 | 278.92 | 409.41 | 278.93 |
| 411.22 | 278.99 | 416.47 | 279.16 | 417.38 | 279.15 | 419.53 | 279.22 | 420.44 | 279.24 |
| 421.5 | 279.27 | 427.71 | 279.36 | 435.04 | 279.4 | 435.65 | 279.41 | 437.13 | 279.41 |
| 441.8 | 279.43 | 442.3 | 279.43 | 444.73 | 279.45 | 445.94 | 279.48 | 446.03 | 279.49 |
| 447.54 | 279.52 | 448.18 | 279.54 | 449.48 | 279.56 | 452.67 | 279.64 | 455.36 | 279.7 |
| 457.07 | 279.84 | 458.25 | 279.86 | 459.21 | 279.87 | 460.54 | 279.86 | 462.07 | 279.84 |
| 463.6 | 279.83 | 464.57 | 279.83 | 465.54 | 279.82 | 472.33 | 279.71 | 473.69 | 279.7 |
| 476.85 | 279.67 | 477.2 | 279.66 | 479.51 | 279.63 | 479.95 | 279.63 | 487.1 | 279.54 |
| 490.66 | 279.49 | 491.72 | 279.48 | 499.3 | 279.38 | 501.25 | 279.36 | 507.1 | 279.29 |
| 509.34 | 279.26 | 510.81 | 279.25 | 512.24 | 279.23 | 515.28 | 279.15 | 516.34 | 279.15 |
| 517.7 | 279.14 | 519.14 | 279.14 | 522.25 | 279.13 | 524.49 | 279.13 | 526.68 | 279.12 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 528.23 | 279.12 | 529.8 | 279.13 | 530.29 | 279.14 | 536.76 | 279.18 | 537.85 | 279.18 |
| 539.39 | 279.2 | 541.79 | 279.22 | 542.25 | 279.23 | 548.21 | 279.28 | 549.91 | 279.3 |
| 551.17 | 279.32 | 554.41 | 279.35 | 555.46 | 279.35 | 556.53 | 279.36 | 558.43 | 279.37 |
| 559.3 | 279.37 | 562.96 | 279.31 | 568.73 | 279.22 | 569.1 | 279.21 | 569.79 | 279.22 |
| 570.28 | 279.21 | 572.65 | 279.2 | 576.59 | 279.18 | 577.42 | 279.17 | 588.74 | 279.09 |
| 597.5 | 279.04 | 601.85 | 279.02 | 604.8 | 278.99 | 606.53 | 278.95 | 607.63 | 278.93 |
| 609.53 | 278.86 | 614.3 | 278.69 | 614.7 | 278.64 | 615.39 | 278.53 | 615.72 | 278.52 |
| 616.09 | 278.53 | 617.55 | 278.69 | 619.64 | 278.74 | 626.63 | 278.92 | 629.29 | 278.94 |
| 630.94 | 278.94 | 632.66 | 278.92 | 634.21 | 278.91 | 636.63 | 278.85 | 641.93 | 278.77 |
| 650.01 | 278.64 | 652.05 | 278.59 | 656.94 | 278.48 | 663.03 | 278.34 | 663.77 | 278.32 |
| 664.32 | 278.29 | 665.16 | 278.27 | 665.98 | 278.22 | 666.44 | 278.22 | 666.87 | 278.2 |
| 668.59 | 278.08 | 669.08 | 278.07 | 669.71 | 278.1 | 670.75 | 278.23 | 671.11 | 278.26 |
| 672.58 | 278.4 | 673.61 | 278.51 | 675.22 | 278.62 | 676.44 | 278.68 | 677.35 | 278.71 |
| 678.16 | 278.78 | 678.49 | 278.83 | 682.44 | 279.25 | 683.18 | 279.31 | 684.75 | 279.48 |
| 687.91 | 279.86 | 688.59 | 279.98 | 692.21 | 280.68 | 693.04 | 280.93 | 695.15 | 281.62 |
| 696.89 | 281.82 | 702.24 | 282.45 | 703.14 | 282.5 | 704.71 | 282.6 | 710.37 | 282.97 |
| 716.01 | 283.34 | 716.1 | 283.35 | 716.28 | 283.54 | 716.73 | 283.57 | 723.73 | 283.68 |
| 725.44 | 283.75 | 728.37 | 283.74 | 730.92 | 283.74 | 735.7 | 283.65 | 739.81 | 283.54 |
| 744.62 | 283.58 | 747.25 | 283.51 | 748.94 | 283.46 | 759.62 | 282.91 | 762.08 | 282.82 |
| 770.73 | 282.5 | 770.81 | 282.49 | 774.46 | 282.35 | 777.07 | 282.23 | 777.72 | 282.24 |
| 779.02 | 282.24 | 788.89 | 282.89 | 790.73 | 283.02 | 793.61 | 283.11 | 794.17 | 283.06 |
| 795.02 | 283 | 798.58 | 283.22 | 801.88 | 283.41 | 802.53 | 283.48 | 802.97 | 283.47 |
| 806.42 | 283.46 | 809.23 | 283.55 | 810.29 | 283.55 | 810.65 | 283.54 | 811 | 283.51 |
| 811.47 | 283.53 | 815.03 | 283.75 | 816.23 | 283.81 | 818 | 283.89 | 818.32 | 283.91 |
| 822.22 | 284.06 | 827.99 | 284.34 | 830.07 | 284.43 | 831.89 | 284.52 | 841.66 | 284.95 |
| 845.75 | 285.17 | 849.72 | 285.39 | 853.61 | 285.61 | 855.82 | 285.72 | 857.7 | 285.82 |
| 860.65 | 286.05 | 866.92 | 286.49 | 869.31 | 286.66 | 871.45 | 286.86 | 878.04 | 287.49 |
| 878.64 | 287.51 | 882.43 | 287.68 | 884.77 | 287.78 | 886.96 | 287.88 | 891.8 | 288.14 |
| 895.6 | 288.34 | 897.75 | 288.57 | 899.97 | 288.82 | 902.58 | 289.1 | 903.1 | 289.16 |
| 905.4 | 289.33 | 907.1 | 289.48 | 908.1 | 289.58 | 912.24 | 289.97 | 917.42 | 290.61 |
| 918.62 | 290.77 | 921.96 | 291.32 | 923.62 | 291.57 | 926.94 | 292.37 | 930.02 | 292.98 |
| 931.1 | 293.19 | 934.14 | 293.75 | 934.73 | 293.87 | 935.09 | 293.96 | 935.62 | 294.11 |
| 937.12 | 294.47 | 938.45 | 294.77 | 939.13 | 294.97 | 940.97 | 295.57 | 942.65 | 296.08 |
| 943.57 | 296.37 | 945.02 | 296.87 | 945.94 | 297.17 | 947.43 | 297.79 | 947.88 | 297.97 |
| 948.37 | 298.21 | 949.67 | 298.77 | 951.65 | 299.72 | 952.85 | 300.27 | 953.18 | 300.41 |
| 955.06 | 301.18 | 956.03 | 301.54 | 957.03 | 301.98 | 957.28 | 302.08 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 358.95 | .04 | 692.21 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 358.95 | 692.21 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1142.29*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.68 | .25 | 307.64 | .81 | 307.46 | 1.38 | 307.17 | 1.66 | 307.06 |
| 2.25 | 306.8 | 4.7 | 305.95 | 5.24 | 305.75 | 5.66 | 305.61 | 6.55 | 305.29 |
| 7.55 | 304.88 | 8.26 | 304.6 | 8.53 | 304.48 | 9.31 | 304.16 | 9.71 | 303.98 |
| 10.55 | 303.66 | 10.65 | 303.61 | 11.6 | 303.24 | 12.58 | 302.85 | 13.37 | 302.47 |
| 14.35 | 302.01 | 14.96 | 301.71 | 15.78 | 301.36 | 16.49 | 301.07 | 16.63 | 301 |
| 17.53 | 300.65 | 18.46 | 300.3 | 19.02 | 300.08 | 19.69 | 299.88 | 20.36 | 299.64 |
| 21.44 | 299.33 | 22.27 | 299.1 | 22.6 | 299.04 | 23.49 | 298.81 | 23.97 | 298.67 |
| 25.08 | 298.42 | 25.48 | 298.32 | 25.84 | 298.32 | 26.68 | 298.35 | 28.09 | 298.41 |
| 29.16 | 298.47 | 29.92 | 298.44 | 31.5 | 298.51 | 32.74 | 298.52 | 33.77 | 298.52 |
| 35.16 | 298.53 | 39.05 | 298.58 | 39.77 | 298.6 | 40.53 | 298.57 | 42.51 | 298.26 |
| 42.68 | 298.29 | 43.56 | 298.5 | 44.12 | 298.68 | 44.52 | 298.76 | 44.8 | 298.79 |
| 45.53 | 298.9 | 46.48 | 299.06 | 48.25 | 299.22 | 51.69 | 299.54 | 52.6 | 299.59 |
| 52.9 | 299.62 | 54.03 | 299.66 | 55.25 | 299.69 | 58.34 | 299.7 | 59.27 | 299.7 |
| 62.58 | 299.68 | 64.8 | 299.7 | 69.93 | 299.68 | 72.85 | 299.67 | 75.55 | 299.63 |
| 77.89 | 299.58 | 79.65 | 299.58 | 80.28 | 299.61 | 81.65 | 299.66 | 87.25 | 299.96 |
| 89.11 | 300.05 | 90.01 | 300.1 | 91.88 | 300.13 | 93.34 | 300.17 | 94.62 | 300.11 |
| 96.01 | 300.07 | 97.45 | 299.95 | 100.24 | 299.54 | 101.28 | 299.39 | 103.12 | 299.09 |
| 103.94 | 298.91 | 105.37 | 298.45 | 106.27 | 298.13 | 106.89 | 297.9 | 107.33 | 297.75 |
| 107.74 | 297.59 | 109.61 | 296.96 | 110.66 | 296.72 | 111.13 | 296.62 | 112.51 | 296.36 |
| 113.06 | 296.27 | 115.95 | 295.72 | 118.46 | 295.25 | 120.15 | 294.91 | 121.08 | 294.73 |
| 121.81 | 294.57 | 123.52 | 294.23 | 127.79 | 293.91 | 129.61 | 293.78 | 131.55 | 293.68 |
| 132.62 | 293.64 | 137.48 | 293.43 | 140.37 | 293.3 | 141.24 | 293.22 | 146.31 | 292.89 |
| 149.12 | 292.62 | 150.64 | 292.48 | 151.8 | 292.36 | 152.19 | 292.33 | 153.68 | 292.18 |
| 154.78 | 292.05 | 155.47 | 291.99 | 157.89 | 291.81 | 158.59 | 291.75 | 161.1 | 291.68 |
| 162.06 | 291.65 | 162.83 | 291.6 | 164.74 | 291.52 | 170.64 | 291.25 | 174.02 | 291.08 |
| 176.19 | 291 | 177.05 | 290.99 | 177.5 | 291 | 179.32 | 291 | 180.58 | 291.03 |
| 181.61 | 291.03 | 182.42 | 291.02 | 183.5 | 291.02 | 186.31 | 290.98 | 187.62 | 290.97 |
| 189.69 | 290.89 | 190.67 | 290.86 | 191.82 | 290.81 | 193.59 | 290.71 | 194.61 | 290.66 |
| 196.5 | 290.59 | 197.7 | 290.53 | 198.98 | 290.39 | 199.24 | 290.37 | 200.36 | 290.37 |
| 201.24 | 290.34 | 203.83 | 290.28 | 207.96 | 290.17 | 211.41 | 290.03 | 212.69 | 289.99 |
| 214.39 | 289.91 | 216.86 | 289.78 | 220.51 | 289.58 | 221.29 | 289.54 | 221.44 | 289.52 |
| 227.73 | 288.97 | 228.81 | 288.87 | 230.41 | 288.74 | 233.78 | 288.44 | 236.31 | 288.21 |
| 246.72 | 286.86 | 247 | 286.84 | 247.67 | 286.82 | 249.38 | 286.83 | 251.07 | 286.83 |
| 253.83 | 286.87 | 254.88 | 286.9 | 256.1 | 286.91 | 257.35 | 286.94 | 257.7 | 286.93 |
| 259.22 | 286.93 | 261.68 | 286.85 | 261.96 | 286.85 | 263.45 | 286.79 | 265.33 | 286.73 |
| 267.31 | 286.69 | 268.01 | 286.67 | 268.96 | 286.63 | 269.24 | 286.61 | 270.27 | 286.57 |
| 270.31 | 286.56 | 271.8 | 286.52 | 273.56 | 286.46 | 274.71 | 286.43 | 277.74 | 286.31 |
| 279.52 | 286.26 | 280.58 | 286.25 | 281.49 | 286.26 | 287.16 | 286.35 | 289.34 | 286.4 |
| 290.51 | 286.42 | 291.71 | 286.43 | 292.81 | 286.45 | 294.34 | 286.47 | 296.78 | 286.51 |
| 298.41 | 286.56 | 301.33 | 286.64 | 302.25 | 286.64 | 302.53 | 286.65 | 303.52 | 286.65 |
| 304.73 | 286.63 | 305.78 | 286.59 | 307.36 | 286.58 | 309.67 | 286.57 | 310.92 | 286.57 |
| 311.37 | 286.52 | 312.65 | 286.44 | 316.02 | 286.25 | 317.71 | 286.16 | 320.28 | 286.01 |
| 322.24 | 285.89 | 323.9 | 285.8 | 324.67 | 285.78 | 328.76 | 285.6 | 328.88 | 285.6 |
| 335.26 | 285.37 | 335.39 | 285.37 | 339.41 | 285.13 | 340.23 | 285.11 | 341.63 | 285.03 |
| 343.56 | 284.97 | 344.87 | 284.91 | 346.03 | 284.85 | 348.43 | 284.7 | 349.63 | 284.58 |
| 352.91 | 284.21 | 357.21 | 283.71 | 360.48 | 283.34 | 361.87 | 283.18 | 363.12 | 283.02 |
| 363.71 | 283.01 | 364.8 | 282.94 | 365.6 | 282.86 | 366.35 | 282.76 | 367.61 | 282.56 |
| 368.65 | 282.38 | 369.97 | 282.18 | 373.62 | 281.62 | 374.27 | 281.54 | 375.01 | 281.43 |
| 376.53 | 281.22 | 377.2 | 281.12 | 378.16 | 281.03 | 380.05 | 280.83 | 380.93 | 280.75 |
| 382.7 | 280.65 | 383.85 | 280.6 | 384.67 | 280.55 | 389.66 | 280.47 | 391.04 | 280.43 |
| 392.72 | 280.34 | 393.99 | 280.31 | 394.81 | 280.26 | 395.3 | 280.24 | 397.11 | 280.13 |
| 399.27 | 280.01 | 403.1 | 279.78 | 405.03 | 279.68 | 407.43 | 279.53 | 408.91 | 279.47 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 414.2 | 279.29 | 416.05 | 279.2 | 425.8 | 278.76 | 427.76 | 278.69 | 432.91 | 278.53 |
| 435.47 | 278.46 | 436.08 | 278.45 | 439.94 | 278.4 | 442.47 | 278.36 | 445.86 | 278.29 |
| 451.21 | 278.17 | 456.42 | 278.05 | 458.38 | 278 | 460.31 | 277.93 | 461.58 | 277.94 |
| 463.29 | 277.99 | 468.22 | 278.12 | 469.06 | 278.12 | 471.09 | 278.18 | 471.94 | 278.2 |
| 478.76 | 278.29 | 480.53 | 278.29 | 485.65 | 278.31 | 486.22 | 278.32 | 487.62 | 278.32 |
| 489.58 | 278.31 | 494.75 | 278.31 | 495.26 | 278.32 | 495.97 | 278.36 | 497.99 | 278.4 |
| 500.74 | 278.47 | 504.74 | 278.55 | 505.73 | 278.63 | 506.33 | 278.67 | 506.82 | 278.69 |
| 508.34 | 278.7 | 510.34 | 278.68 | 511.03 | 278.68 | 513.38 | 278.66 | 514.29 | 278.66 |
| 520.66 | 278.57 | 521.95 | 278.56 | 524.91 | 278.53 | 525.24 | 278.53 | 527.41 | 278.5 |
| 527.82 | 278.5 | 534.54 | 278.42 | 537.88 | 278.37 | 543.84 | 278.31 | 545.99 | 278.27 |
| 547.82 | 278.25 | 553.32 | 278.2 | 555.43 | 278.17 | 556.8 | 278.16 | 558.15 | 278.14 |
| 559.59 | 278.1 | 561 | 278.07 | 562 | 278.06 | 563.27 | 278.06 | 564.39 | 278.05 |
| 567.54 | 278.04 | 569.65 | 278.04 | 573.16 | 278.02 | 574.64 | 278.03 | 575.09 | 278.04 |
| 581.17 | 278.06 | 582.19 | 278.06 | 585.89 | 278.09 | 586.33 | 278.1 | 594.71 | 278.16 |
| 597.74 | 278.18 | 598.73 | 278.19 | 601.52 | 278.19 | 602.34 | 278.2 | 605.77 | 278.14 |
| 611.2 | 278.05 | 611.54 | 278.04 | 612.19 | 278.05 | 612.64 | 278.04 | 614.87 | 278.03 |
| 618.57 | 278 | 619.36 | 278 | 629.99 | 277.91 | 638.21 | 277.86 | 642.29 | 277.84 |
| 645.06 | 277.81 | 646.68 | 277.78 | 647.72 | 277.75 | 653.98 | 277.54 | 654.36 | 277.5 |
| 655.01 | 277.4 | 655.32 | 277.38 | 655.67 | 277.4 | 657.04 | 277.53 | 659 | 277.58 |
| 665.57 | 277.72 | 666.71 | 277.74 | 668.06 | 277.75 | 671.23 | 277.73 | 673.79 | 277.69 |
| 674.95 | 277.66 | 679.93 | 277.58 | 684.05 | 277.51 | 687.52 | 277.46 | 689.43 | 277.41 |
| 694.03 | 277.31 | 699.74 | 277.18 | 700.44 | 277.16 | 700.95 | 277.13 | 701.74 | 277.11 |
| 702.51 | 277.06 | 703.35 | 277.02 | 704.76 | 276.89 | 705.48 | 276.87 | 706.22 | 276.92 |
| 707.44 | 277.07 | 708.58 | 277.18 | 709.58 | 277.27 | 710.13 | 277.31 | 711.42 | 277.42 |
| 712.12 | 277.47 | 713.65 | 277.55 | 714.88 | 277.57 | 716.13 | 277.67 | 716.53 | 277.72 |
| 720.4 | 278.1 | 720.87 | 278.15 | 722.03 | 278.23 | 723.87 | 278.4 | 725.35 | 278.55 |
| 727.59 | 278.79 | 728.38 | 278.91 | 729.95 | 279.16 | 732.64 | 279.6 | 733 | 279.71 |
| 733.4 | 279.81 | 735.34 | 280.42 | 736.94 | 280.61 | 741.85 | 281.18 | 743.06 | 281.25 |
| 749.32 | 281.66 | 754.51 | 282.01 | 754.58 | 282.02 | 754.75 | 282.18 | 755.17 | 282.21 |
| 761.6 | 282.34 | 763.17 | 282.41 | 765.86 | 282.41 | 768.21 | 282.43 | 772.6 | 282.37 |
| 776.38 | 282.31 | 780.8 | 282.37 | 784.77 | 282.29 | 794.58 | 281.87 | 796.84 | 281.81 |
| 804.79 | 281.56 | 804.87 | 281.56 | 808.22 | 281.44 | 810.61 | 281.35 | 811.39 | 281.36 |
| 812.41 | 281.36 | 821.47 | 281.97 | 823.16 | 282.08 | 825.81 | 282.17 | 827.11 | 282.08 |
| 829.19 | 282.2 | 830.38 | 282.28 | 833.41 | 282.46 | 834.01 | 282.52 | 834.41 | 282.51 |
| 837.07 | 282.51 | 838.68 | 282.55 | 840.16 | 282.6 | 841.03 | 282.61 | 841.48 | 282.6 |
| 841.79 | 282.57 | 842.23 | 282.59 | 845.49 | 282.79 | 846.6 | 282.85 | 848.23 | 282.93 |
| 848.52 | 282.95 | 852.1 | 283.1 | 860.99 | 283.52 | 866.64 | 283.77 | 869.96 | 283.92 |
| 872.16 | 284.05 | 873.73 | 284.13 | 877.37 | 284.33 | 880.95 | 284.53 | 882.98 | 284.63 |
| 884.49 | 284.71 | 884.7 | 284.73 | 887.42 | 284.93 | 893.18 | 285.33 | 895.13 | 285.47 |
| 895.38 | 285.48 | 897.34 | 285.67 | 903.4 | 286.23 | 903.95 | 286.26 | 905.21 | 286.31 |
| 907.43 | 286.41 | 909.59 | 286.5 | 915.36 | 286.79 | 916.05 | 286.83 | 919.53 | 287.01 |
| 921.51 | 287.21 | 923.55 | 287.44 | 926.43 | 287.73 | 928.54 | 287.89 | 930.1 | 288.02 |
| 931.02 | 288.11 | 934.83 | 288.46 | 939.59 | 289.02 | 940.69 | 289.16 | 943.76 | 289.63 |
| 945.29 | 289.86 | 948.33 | 290.55 | 951.16 | 291.09 | 952.16 | 291.27 | 954.95 | 291.76 |
| 955.49 | 291.86 | 956.31 | 292.07 | 957.69 | 292.39 | 958.91 | 292.65 | 959.54 | 292.83 |
| 961.23 | 293.35 | 963.62 | 294.06 | 965.79 | 294.76 | 967.58 | 295.46 | 968.03 | 295.66 |
| 969.22 | 296.16 | 970.62 | 296.79 | 971.04 | 296.99 | 972.37 | 297.57 | 972.45 | 297.59 |
| 974.17 | 298.27 | 975.07 | 298.58 | 975.98 | 298.97 | 976.21 | 299.05 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 414.2 | .04 | 732.64 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 414.2 | 732.64 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1093.41*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.78 | .29 | 307.75 | .92 | 307.54 | 1.56 | 307.18 | 1.88 | 307.05 |
| 2.56 | 306.74 | 5.32 | 305.74 | 5.94 | 305.5 | 6.42 | 305.34 | 7.42 | 304.96 |
| 9.37 | 304.12 | 10.56 | 303.59 | 11 | 303.38 | 11.96 | 302.99 | 13.15 | 302.49 |
| 14.09 | 302.08 | 15.16 | 301.55 | 15.88 | 301.18 | 16.95 | 300.61 | 17.88 | 300.16 |
| 19.85 | 299.27 | 21.56 | 298.56 | 22.32 | 298.29 | 23.08 | 297.98 | 23.66 | 297.78 |
| 25.24 | 297.27 | 25.72 | 297.15 | 26.63 | 296.89 | 27.17 | 296.72 | 28.83 | 296.28 |
| 29.29 | 296.27 | 30.24 | 296.33 | 31.19 | 296.4 | 31.83 | 296.43 | 33.05 | 296.52 |
| 33.91 | 296.49 | 35.82 | 296.6 | 37.11 | 296.62 | 38.28 | 296.63 | 39.84 | 296.66 |
| 41.57 | 296.72 | 44.26 | 296.78 | 45.08 | 296.81 | 45.61 | 296.81 | 46.08 | 296.76 |
| 48.03 | 296.41 | 48.18 | 296.39 | 48.37 | 296.43 | 49.37 | 296.71 | 50.01 | 296.96 |
| 50.45 | 297.07 | 50.78 | 297.11 | 52.67 | 297.48 | 54.69 | 297.7 | 55.88 | 297.85 |
| 57.04 | 297.98 | 58.59 | 298.14 | 59.96 | 298.25 | 61.23 | 298.32 | 62.25 | 298.34 |
| 62.62 | 298.36 | 66.12 | 298.38 | 67.17 | 298.38 | 68.85 | 298.39 | 70.93 | 298.38 |
| 73.44 | 298.41 | 79.25 | 298.39 | 82.57 | 298.39 | 85.63 | 298.36 | 88.28 | 298.32 |
| 90.28 | 298.34 | 92.54 | 298.46 | 96.97 | 298.75 | 101 | 299 | 102.02 | 299.07 |
| 104.14 | 299.11 | 105.31 | 299.16 | 105.79 | 299.16 | 107.24 | 299.09 | 108.82 | 299.05 |
| 110.45 | 298.9 | 111.75 | 298.67 | 113.61 | 298.35 | 114.79 | 298.16 | 115.68 | 298 |
| 116.68 | 297.81 | 117.8 | 297.53 | 118.75 | 297.17 | 119.42 | 296.93 | 122.11 | 295.79 |
| 123.14 | 295.38 | 123.33 | 295.32 | 124.23 | 294.96 | 124.39 | 294.93 | 125.42 | 294.65 |
| 126.44 | 294.42 | 128.14 | 294.09 | 130.17 | 293.65 | 133.06 | 293.04 | 135.24 | 292.57 |
| 136.18 | 292.35 | 137.23 | 292.12 | 138.05 | 291.92 | 139.19 | 291.66 | 139.89 | 291.49 |
| 139.99 | 291.48 | 144.83 | 291.11 | 145.91 | 291.02 | 147.82 | 290.91 | 149.1 | 290.85 |
| 150.31 | 290.8 | 157.85 | 290.47 | 159.1 | 290.41 | 160.08 | 290.33 | 165.82 | 290.01 |
| 169.2 | 289.75 | 170.74 | 289.64 | 172.04 | 289.53 | 173.85 | 289.4 | 175.43 | 289.24 |
| 176.21 | 289.18 | 177.45 | 289.13 | 178.95 | 289.05 | 179.75 | 289 | 181.34 | 288.98 |
| 181.52 | 288.97 | 183.68 | 288.93 | 185.39 | 288.85 | 186.72 | 288.81 | 189.41 | 288.71 |
| 190.92 | 288.65 | 193.4 | 288.56 | 197.23 | 288.41 | 199.7 | 288.33 | 200.67 | 288.32 |
| 201.17 | 288.34 | 202.22 | 288.33 | 203.24 | 288.34 | 204.67 | 288.38 | 205.84 | 288.38 |
| 206.75 | 288.37 | 207.88 | 288.37 | 207.98 | 288.36 | 212.46 | 288.32 | 212.95 | 288.31 |
| 214.99 | 288.24 | 216.1 | 288.21 | 218.43 | 288.12 | 219.41 | 288.07 | 222.1 | 287.97 |
| 224.07 | 287.88 | 225.52 | 287.71 | 225.82 | 287.69 | 226.89 | 287.71 | 235.7 | 287.56 |
| 237.68 | 287.51 | 239.61 | 287.45 | 241.06 | 287.42 | 242.99 | 287.36 | 245.79 | 287.24 |
| 246.17 | 287.23 | 250.98 | 287.04 | 258.11 | 286.58 | 260.09 | 286.45 | 261.14 | 286.39 |
| 264.96 | 286.14 | 268.01 | 285.93 | 272.81 | 285.46 | 273.86 | 285.37 | 276.66 | 285.09 |
| 279.63 | 284.8 | 280.7 | 284.77 | 282.64 | 284.78 | 283.82 | 284.78 | 286.9 | 284.82 |
| 287.68 | 284.82 | 288.88 | 284.85 | 290.26 | 284.86 | 291.68 | 284.89 | 292.31 | 284.88 |
| 293.8 | 284.89 | 295.12 | 284.85 | 296.9 | 284.82 | 298.28 | 284.77 | 298.59 | 284.77 |
| 301.44 | 284.7 | 302.96 | 284.69 | 305.48 | 284.61 | 306.32 | 284.57 | 311.35 | 284.42 |
| 314.79 | 284.29 | 316.8 | 284.23 | 318 | 284.22 | 319.04 | 284.23 | 324.11 | 284.32 |
| 327.93 | 284.4 | 329.26 | 284.42 | 331.87 | 284.44 | 333.61 | 284.45 | 335.82 | 284.48 |

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|---|---|---|---|---|---|---|---|---|---|
| 336.37 | 284.48 | 338.21 | 284.52 | 340.72 | 284.58 | 342.57 | 284.6 | 344 | 284.6 |
| 345.38 | 284.59 | 346.57 | 284.55 | 348.35 | 284.55 | 351.54 | 284.54 | 352.39 | 284.55 |
| 352.9 | 284.5 | 354.36 | 284.43 | 358.17 | 284.27 | 360.09 | 284.2 | 361.21 | 284.14 |
| 363.01 | 284.07 | 365.22 | 283.96 | 367.98 | 283.86 | 369.04 | 283.83 | 372.61 | 283.7 |
| 372.75 | 283.7 | 374.93 | 283.64 | 379.66 | 283.5 | 380.13 | 283.49 | 384.68 | 283.27 |
| 385.61 | 283.25 | 386.99 | 283.19 | 387.2 | 283.19 | 389.39 | 283.14 | 392.64 | 283.01 |
| 392.73 | 283 | 394.55 | 282.9 | 394.91 | 282.89 | 396.27 | 282.77 | 399.99 | 282.42 |
| 404.86 | 281.94 | 410.14 | 281.44 | 411.16 | 281.32 | 411.81 | 281.28 | 412.23 | 281.3 |
| 412.7 | 281.28 | 414.37 | 281.19 | 415.22 | 281.11 | 416.65 | 280.95 | 418.39 | 280.73 |
| 422.13 | 280.32 | 423.25 | 280.18 | 424.19 | 280.09 | 425.87 | 279.91 | 427.52 | 279.72 |
| 428.6 | 279.64 | 430.75 | 279.44 | 431.75 | 279.36 | 435.05 | 279.22 | 435.98 | 279.19 |
| 442.35 | 279.2 | 443.2 | 279.19 | 444.9 | 279.12 | 446.26 | 279.1 | 446.72 | 279.1 |
| 448.56 | 279.01 | 449.35 | 278.98 | 450.08 | 278.94 | 452.52 | 278.83 | 456.87 | 278.61 |
| 459.06 | 278.51 | 461.77 | 278.37 | 469.45 | 278.14 | 471.18 | 278.06 | 480.29 | 277.68 |
| 482.13 | 277.62 | 483.93 | 277.57 | 486.36 | 277.49 | 486.94 | 277.48 | 489.33 | 277.41 |
| 489.91 | 277.4 | 493.52 | 277.36 | 495.88 | 277.32 | 499.05 | 277.25 | 504.06 | 277.16 |
| 508.93 | 277.05 | 511.73 | 276.97 | 512.8 | 276.93 | 513.75 | 276.94 | 515.35 | 276.98 |
| 519.96 | 277.09 | 520.75 | 277.09 | 523.44 | 277.15 | 529.82 | 277.21 | 531.47 | 277.22 |
| 536.26 | 277.22 | 536.8 | 277.23 | 538.1 | 277.23 | 539.93 | 277.2 | 542.2 | 277.18 |
| 544.77 | 277.17 | 545.83 | 277.21 | 545.92 | 277.23 | 547.8 | 277.27 | 548.94 | 277.3 |
| 551.74 | 277.36 | 554.11 | 277.4 | 555.6 | 277.51 | 557.48 | 277.53 | 559.35 | 277.51 |
| 561.34 | 277.5 | 563.05 | 277.5 | 569 | 277.43 | 572.98 | 277.4 | 575.31 | 277.38 |
| 575.69 | 277.37 | 581.98 | 277.3 | 585.1 | 277.26 | 590.67 | 277.2 | 592.69 | 277.17 |
| 594.4 | 277.15 | 599.53 | 277.1 | 601.51 | 277.07 | 602.79 | 277.07 | 604.05 | 277.05 |
| 605.4 | 277.02 | 605.97 | 277 | 608.84 | 276.97 | 610.11 | 276.97 | 612.84 | 276.96 |
| 613.94 | 276.95 | 614.81 | 276.95 | 617.86 | 276.93 | 619.9 | 276.93 | 625.58 | 276.95 |
| 627.89 | 276.95 | 630.4 | 276.97 | 635.63 | 276.99 | 637.13 | 277 | 638.24 | 277 |
| 641.08 | 277.02 | 645.38 | 277.02 | 648.58 | 276.97 | 653.66 | 276.88 | 654.59 | 276.88 |
| 655.01 | 276.87 | 657.09 | 276.86 | 660.55 | 276.83 | 661.29 | 276.82 | 671.23 | 276.74 |
| 678.91 | 276.68 | 682.73 | 276.66 | 685.32 | 276.63 | 686.84 | 276.6 | 693.67 | 276.39 |
| 694.63 | 276.26 | 695.24 | 276.26 | 696.52 | 276.38 | 698.36 | 276.41 | 704.5 | 276.53 |
| 706.83 | 276.55 | 708.28 | 276.55 | 711.15 | 276.51 | 712.6 | 276.48 | 714.99 | 276.44 |
| 717.93 | 276.4 | 725.03 | 276.27 | 726.81 | 276.23 | 731.11 | 276.14 | 736.46 | 276.01 |
| 737.11 | 276 | 737.26 | 275.98 | 738.32 | 275.95 | 739.05 | 275.89 | 739.83 | 275.84 |
| 740.94 | 275.72 | 741.34 | 275.69 | 741.87 | 275.68 | 742.72 | 275.73 | 744.12 | 275.92 |
| 745.71 | 276.05 | 746.59 | 276.13 | 747.98 | 276.24 | 748.69 | 276.29 | 750.15 | 276.38 |
| 751.26 | 276.43 | 751.78 | 276.44 | 752.66 | 276.44 | 753.02 | 276.46 | 754.11 | 276.56 |
| 754.56 | 276.62 | 759.55 | 277.07 | 760.88 | 277.15 | 762.11 | 277.24 | 764.69 | 277.47 |
| 767.26 | 277.72 | 769.98 | 278.08 | 773.01 | 278.51 | 773.06 | 278.51 | 773.76 | 278.7 |
| 775.53 | 279.23 | 776.98 | 279.39 | 779.25 | 279.66 | 781.47 | 279.9 | 783.54 | 280.03 |
| 793 | 280.67 | 793.22 | 280.83 | 793.61 | 280.85 | 799.47 | 281 | 800.56 | 281.05 |
| 801.33 | 281.07 | 803.35 | 281.09 | 805.5 | 281.12 | 809.5 | 281.1 | 812.94 | 281.07 |
| 816.97 | 281.15 | 818.91 | 281.14 | 819.17 | 281.13 | 820.59 | 281.12 | 829.54 | 280.83 |
| 831.6 | 280.79 | 838.85 | 280.62 | 841.97 | 280.53 | 844.16 | 280.47 | 844.87 | 280.47 |
| 845.8 | 280.49 | 854.06 | 281.04 | 855.6 | 281.14 | 858.02 | 281.23 | 859.2 | 281.16 |
| 861.09 | 281.27 | 864.94 | 281.51 | 865.49 | 281.56 | 868.75 | 281.57 | 870.01 | 281.62 |
| 871.1 | 281.65 | 872.3 | 281.66 | 872.59 | 281.64 | 872.98 | 281.65 | 875.96 | 281.84 |
| 876.97 | 281.9 | 878.45 | 281.97 | 878.72 | 281.99 | 881.99 | 282.13 | 886.82 | 282.37 |
| 888.56 | 282.46 | 890.09 | 282.53 | 895.24 | 282.76 | 898.27 | 282.89 | 900.28 | 283.01 |
| 901.7 | 283.08 | 905.03 | 283.27 | 908.29 | 283.45 | 911.52 | 283.61 | 911.71 | 283.63 |
| 914.18 | 283.81 | 919.44 | 284.18 | 921.21 | 284.3 | 921.44 | 284.31 | 923.23 | 284.48 |
| 928.75 | 284.98 | 930.41 | 285.05 | 932.43 | 285.13 | 934.4 | 285.22 | 939.66 | 285.48 |
| 940.29 | 285.52 | 943.47 | 285.68 | 945.27 | 285.85 | 947.13 | 286.05 | 949.32 | 286.27 |
| 949.76 | 286.31 | 952.23 | 286.49 | 953.1 | 286.56 | 953.94 | 286.64 | 957.41 | 286.94 |
| 961.75 | 287.43 | 962.75 | 287.55 | 965.56 | 287.95 | 966.95 | 288.14 | 968.95 | 288.58 |
| 969.73 | 288.74 | 972.31 | 289.2 | 975.76 | 289.77 | 976.25 | 289.86 | 977 | 290.04 |
| 978.25 | 290.31 | 979.37 | 290.53 | 979.94 | 290.69 | 981.48 | 291.14 | 982.28 | 291.35 |
| 982.89 | 291.53 | 983.66 | 291.74 | 984.88 | 292.12 | 985.64 | 292.34 | 987.27 | 292.95 |
| 987.68 | 293.12 | 988.77 | 293.55 | 990.05 | 294.09 | 990.43 | 294.26 | 991.43 | 294.68 |
| 993.29 | 295.36 | 994.1 | 295.63 | 994.94 | 295.96 | 995.15 | 296.03 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 469.45 | .04 | 773.06 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 469.45 | 773.06 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 1044.53*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 307.89 | .32 | 307.86 | .71 | 307.74 | 1.03 | 307.61 | 1.75 | 307.19 |
| 2.1 | 307.04 | 2.79 | 306.71 | 3.44 | 306.46 | 5 | 305.89 | 5.95 | 305.53 |
| 6.64 | 305.25 | 7.17 | 305.07 | 8.29 | 304.63 | 10.54 | 303.62 | 10.8 | 303.48 |
| 11.8 | 303.03 | 12.3 | 302.78 | 13.36 | 302.33 | 13.5 | 302.26 | 14.69 | 301.75 |
| 15.75 | 301.26 | 16.65 | 300.79 | 16.94 | 300.62 | 17.75 | 300.18 | 19.13 | 299.41 |
| 19.73 | 299.1 | 21.07 | 298.43 | 22.18 | 297.9 | 22.2 | 297.88 | 24.1 | 297.03 |
| 24.95 | 296.7 | 25.8 | 296.32 | 27.16 | 295.81 | 28.22 | 295.44 | 28.63 | 295.34 |
| 28.75 | 295.29 | 29.76 | 294.98 | 30.37 | 294.77 | 32.22 | 294.24 | 32.74 | 294.23 |
| 33.8 | 294.31 | 34.86 | 294.4 | 35.58 | 294.45 | 36.93 | 294.57 | 37.42 | 294.56 |
| 37.9 | 294.53 | 38.35 | 294.57 | 40.03 | 294.69 | 41.47 | 294.73 | 42.78 | 294.75 |
| 44.53 | 294.8 | 46.47 | 294.88 | 48.51 | 294.95 | 50.38 | 295.03 | 50.97 | 295.03 |
| 51.34 | 295 | 51.5 | 294.96 | 53.69 | 294.54 | 53.88 | 294.52 | 54.06 | 294.57 |
| 55.18 | 294.93 | 55.89 | 295.24 | 56.39 | 295.38 | 56.75 | 295.43 | 57.68 | 295.63 |
| 58.87 | 295.9 | 61.13 | 296.19 | 63.42 | 296.5 | 65.48 | 296.75 | 67.02 | 296.89 |
| 68.44 | 296.98 | 69.99 | 297.02 | 73.9 | 297.06 | 76.96 | 297.08 | 79.28 | 297.08 |
| 82.08 | 297.12 | 88.58 | 297.1 | 92.29 | 297.11 | 95.71 | 297.08 | 98.77 | 297.06 |
| 100.74 | 297.09 | 103.43 | 297.25 | 108.38 | 297.62 | 110.52 | 297.79 | 112.89 | 297.95 |
| 114.03 | 298.04 | 116.39 | 298.09 | 117.7 | 298.16 | 118.25 | 298.16 | 119.86 | 298.08 |
| 121.63 | 298.03 | 123.45 | 297.84 | 124.9 | 297.55 | 128.29 | 296.93 | 130.29 | 296.53 |
| 131.67 | 296.15 | 133.48 | 295.4 | 134.21 | 295.05 | 134.62 | 294.87 | 136.48 | 293.99 |
| 137.16 | 293.7 | 137.63 | 293.48 | 137.84 | 293.4 | 138.85 | 292.97 | 140.18 | 292.59 |
| 141.32 | 292.31 | 142.53 | 292.05 | 143.22 | 291.91 | 146.88 | 291.06 | 147.76 | 290.85 |
| 148.72 | 290.64 | 151.16 | 290.06 | 152.21 | 289.79 | 153.38 | 289.51 | 154.3 | 289.27 |
| 155.57 | 288.95 | 156.35 | 288.74 | 161.88 | 288.3 | 163.08 | 288.2 | 164.18 | 288.13 |
| 165.21 | 288.09 | 167.01 | 288 | 168 | 287.96 | 174.15 | 287.7 | 177.82 | 287.52 |
| 178.92 | 287.44 | 185.34 | 287.14 | 188.27 | 286.96 | 188.91 | 286.91 | 189.61 | 286.88 |
| 190.83 | 286.8 | 191.45 | 286.75 | 192.8 | 286.67 | 193.84 | 286.62 | 194.68 | 286.56 |
| 196.07 | 286.43 | 196.95 | 286.38 | 197.48 | 286.37 | 200.9 | 286.25 | 202.68 | 286.24 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 204.08 | 286.22 | 205.29 | 286.21 | 206.26 | 286.17 | 207.21 | 286.14 | 211.7 | 286.02 |
| 213.39 | 285.96 | 216.16 | 285.88 | 221.4 | 285.71 | 223.69 | 285.65 | 224.29 | 285.65 |
| 224.85 | 285.67 | 226.59 | 285.67 | 227.16 | 285.68 | 228.75 | 285.73 | 230.06 | 285.73 |
| 231.08 | 285.72 | 232.2 | 285.72 | 232.45 | 285.71 | 236.01 | 285.67 | 237.67 | 285.66 |
| 240.29 | 285.59 | 241.45 | 285.57 | 241.54 | 285.56 | 242.99 | 285.52 | 244.14 | 285.48 |
| 245.24 | 285.43 | 246.53 | 285.39 | 248.24 | 285.32 | 248.93 | 285.3 | 250.44 | 285.24 |
| 250.54 | 285.22 | 252.06 | 285.03 | 252.4 | 285.01 | 253.59 | 285.04 | 258.21 | 285 |
| 262.08 | 284.97 | 263.44 | 284.95 | 267.81 | 284.87 | 269.43 | 284.85 | 271.59 | 284.8 |
| 279.34 | 284.58 | 280.51 | 284.55 | 288.49 | 284.19 | 289.85 | 284.12 | 290.7 | 284.09 |
| 291.87 | 284.03 | 294.44 | 283.92 | 296.14 | 283.83 | 299.55 | 283.67 | 304.91 | 283.29 |
| 306.09 | 283.21 | 309.22 | 282.98 | 312.54 | 282.75 | 313.74 | 282.72 | 315.91 | 282.74 |
| 318.04 | 282.74 | 321.54 | 282.78 | 322.88 | 282.8 | 324.42 | 282.81 | 326.01 | 282.84 |
| 328.38 | 282.84 | 330.73 | 282.81 | 331.84 | 282.79 | 332.7 | 282.76 | 336.52 | 282.69 |
| 338.62 | 282.68 | 340.06 | 282.65 | 343.36 | 282.55 | 346.54 | 282.45 | 348 | 282.41 |
| 351.84 | 282.27 | 354.09 | 282.2 | 355.43 | 282.19 | 362.25 | 282.31 | 365.46 | 282.37 |
| 365.47 | 282.38 | 367.63 | 282.42 | 369.53 | 282.42 | 372.87 | 282.44 | 375.35 | 282.45 |
| 378.02 | 282.49 | 380.82 | 282.54 | 381.72 | 282.55 | 382.89 | 282.55 | 383.24 | 282.56 |
| 384.49 | 282.56 | 386.03 | 282.55 | 387.36 | 282.52 | 389.35 | 282.52 | 392.91 | 282.51 |
| 393.86 | 282.52 | 394.43 | 282.48 | 396.06 | 282.42 | 397.45 | 282.38 | 400.32 | 282.29 |
| 403.18 | 282.21 | 405.73 | 282.13 | 407.84 | 282.05 | 410.31 | 281.97 | 412.47 | 281.92 |
| 416.46 | 281.81 | 416.62 | 281.8 | 419.06 | 281.75 | 424.34 | 281.62 | 424.87 | 281.61 |
| 429.96 | 281.42 | 431 | 281.4 | 432.76 | 281.34 | 435.21 | 281.3 | 436.87 | 281.26 |
| 438.35 | 281.21 | 438.95 | 281.18 | 441.65 | 281.06 | 447.06 | 280.63 | 456.64 | 279.84 |
| 458.41 | 279.7 | 460 | 279.55 | 460.28 | 279.54 | 460.74 | 279.58 | 462.12 | 279.55 |
| 463.13 | 279.51 | 464.08 | 279.45 | 465.68 | 279.34 | 466.29 | 279.29 | 467.63 | 279.16 |
| 468.67 | 279.08 | 471.81 | 278.83 | 473.29 | 278.7 | 474.11 | 278.64 | 475.99 | 278.49 |
| 477.83 | 278.32 | 480.02 | 278.17 | 481.44 | 278.04 | 482.56 | 277.97 | 484.8 | 277.89 |
| 487.3 | 277.82 | 493.62 | 277.94 | 494.41 | 277.95 | 495.36 | 277.94 | 496.26 | 277.92 |
| 496.85 | 277.92 | 497.26 | 277.9 | 498.26 | 277.9 | 499.29 | 277.89 | 500.76 | 277.83 |
| 502.23 | 277.78 | 505.78 | 277.65 | 510.64 | 277.44 | 513.09 | 277.35 | 516.12 | 277.22 |
| 518 | 277.16 | 524.7 | 276.99 | 526.31 | 276.93 | 534.79 | 276.6 | 538.17 | 276.5 |
| 540.43 | 276.43 | 540.98 | 276.42 | 543.2 | 276.36 | 543.74 | 276.35 | 547.1 | 276.31 |
| 549.3 | 276.28 | 552.25 | 276.22 | 556.9 | 276.14 | 561.44 | 276.04 | 563.14 | 276 |
| 564.82 | 275.94 | 565.31 | 275.94 | 571.7 | 276.06 | 572.44 | 276.06 | 574.2 | 276.09 |
| 576.94 | 276.12 | 580.88 | 276.14 | 588.12 | 276.14 | 592.4 | 276.06 | 592.8 | 276.06 |
| 594.79 | 276.03 | 596.37 | 276.11 | 597.09 | 276.13 | 598.67 | 276.16 | 601.28 | 276.22 |
| 603.48 | 276.25 | 604.87 | 276.34 | 605.29 | 276.35 | 606.62 | 276.36 | 608.36 | 276.34 |
| 611.8 | 276.34 | 618.46 | 276.28 | 621.33 | 276.27 | 623.21 | 276.25 | 623.57 | 276.24 |
| 632.32 | 276.15 | 637.51 | 276.09 | 639.38 | 276.06 | 640.97 | 276.04 | 645.75 | 276 |
| 648.78 | 275.97 | 649.4 | 275.97 | 651.21 | 275.93 | 652.44 | 275.91 | 654.41 | 275.89 |
| 655.59 | 275.89 | 658.13 | 275.88 | 658.27 | 275.87 | 659.15 | 275.87 | 662.8 | 275.83 |
| 672.14 | 275.83 | 674.1 | 275.84 | 681.77 | 275.84 | 684.41 | 275.85 | 688.41 | 275.85 |
| 691.4 | 275.8 | 696.12 | 275.71 | 696.99 | 275.71 | 697.38 | 275.7 | 699.32 | 275.69 |
| 702.54 | 275.66 | 703.22 | 275.65 | 712.47 | 275.56 | 725.59 | 275.45 | 727.9 | 275.4 |
| 733.35 | 275.23 | 734.25 | 275.13 | 734.82 | 275.13 | 736.01 | 275.22 | 737.71 | 275.25 |
| 743.43 | 275.34 | 744.43 | 275.35 | 746.95 | 275.35 | 748.36 | 275.33 | 749.62 | 275.32 |
| 750.97 | 275.29 | 753.2 | 275.25 | 755.93 | 275.21 | 756.92 | 275.19 | 759.52 | 275.15 |
| 762.54 | 275.09 | 764.2 | 275.05 | 768.2 | 274.97 | 773.17 | 274.85 | 774.22 | 274.81 |
| 774.79 | 274.8 | 775.96 | 274.69 | 777.34 | 274.53 | 777.54 | 274.5 | 778.26 | 274.48 |
| 779.22 | 274.55 | 780.8 | 274.77 | 782.29 | 274.89 | 784.3 | 275.04 | 785.97 | 275.17 |
| 787.28 | 275.25 | 788.86 | 275.31 | 789.46 | 275.32 | 790.64 | 275.32 | 791.63 | 275.41 |
| 792.59 | 275.52 | 797.61 | 275.94 | 798.6 | 276.02 | 800.35 | 276.11 | 801.12 | 276.16 |
| 804.03 | 276.39 | 806.94 | 276.64 | 810.01 | 277 | 813.43 | 277.42 | 813.48 | 277.43 |
| 814.12 | 277.59 | 815.71 | 278.04 | 817.03 | 278.18 | 819.08 | 278.41 | 821.08 | 278.63 |
| 821.76 | 278.67 | 827.23 | 279.04 | 831.5 | 279.34 | 831.7 | 279.47 | 832.04 | 279.49 |
| 837.34 | 279.66 | 838.63 | 279.72 | 839.02 | 279.72 | 840.85 | 279.76 | 842.78 | 279.81 |
| 846.4 | 279.83 | 849.51 | 279.84 | 853.15 | 279.94 | 854.9 | 279.95 | 855.14 | 279.94 |
| 856.42 | 279.94 | 864.5 | 279.78 | 866.36 | 279.77 | 872.91 | 279.69 | 872.97 | 279.68 |
| 875.73 | 279.63 | 877.7 | 279.58 | 879.18 | 279.61 | 886.65 | 280.11 | 888.04 | 280.2 |
| 890.22 | 280.29 | 891.29 | 280.24 | 893 | 280.34 | 893.98 | 280.41 | 896.81 | 280.58 |
| 896.97 | 280.6 | 899.49 | 280.62 | 900.81 | 280.66 | 902.04 | 280.71 | 903.12 | 280.72 |
| 903.45 | 280.7 | 906.43 | 280.89 | 908.68 | 281.01 | 911.87 | 281.16 | 916.24 | 281.39 |
| 919.19 | 281.54 | 923.84 | 281.74 | 926.58 | 281.87 | 929.68 | 282.04 | 932.68 | 282.2 |
| 937.3 | 282.45 | 938.72 | 282.53 | 940.95 | 282.7 | 945.7 | 283.02 | 947.51 | 283.14 |
| 949.12 | 283.29 | 954.11 | 283.72 | 955.61 | 283.78 | 959.21 | 283.94 | 960.87 | 284.02 |
| 963.96 | 284.18 | 964.53 | 284.2 | 967.4 | 284.35 | 969.03 | 284.5 | 970.71 | 284.67 |
| 972.69 | 284.85 | 973.08 | 284.89 | 974.82 | 285.01 | 976.86 | 285.17 | 980 | 285.43 |
| 983.92 | 285.83 | 984.82 | 285.93 | 987.36 | 286.27 | 988.61 | 286.43 | 990.42 | 286.79 |
| 991.12 | 286.92 | 994.19 | 287.42 | 997.01 | 287.85 | 997.69 | 288 | 998.82 | 288.23 |
| 999.61 | 288.37 | 1000.35 | 288.55 | 1001.74 | 288.92 | 1002.46 | 289.1 | 1003.71 | 289.43 |
| 1005.5 | 289.93 | 1006.97 | 290.43 | 1007.34 | 290.58 | 1008.32 | 290.94 | 1010.73 | 291.88 |
| 1010.98 | 291.96 | 1012.4 | 292.45 | 1013.14 | 292.67 | 1014.08 | 293.01 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 524.7 | .04 | 813.48 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 524.7 | 813.48 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 995.654*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308 | .35 | 307.97 | .78 | 307.83 | 1.14 | 307.69 | 1.93 | 307.2 |
| 2.32 | 307.04 | 3.16 | 306.62 | 3.8 | 306.37 | 6.57 | 305.32 | 7.33 | 305 |
| 7.93 | 304.8 | 9.17 | 304.3 | 11.57 | 303.18 | 11.94 | 302.99 | 13.04 | 302.47 |
| 13.59 | 302.18 | 14.77 | 301.66 | 16.24 | 301 | 17.62 | 300.34 | 17.74 | 300.26 |
| 18.41 | 299.89 | 18.72 | 299.7 | 19.62 | 299.19 | 21.15 | 298.29 | 21.81 | 297.93 |
| 23.29 | 297.14 | 24.52 | 296.52 | 24.54 | 296.5 | 25.84 | 295.88 | 26.63 | 295.51 |
| 27.57 | 295.11 | 28.51 | 294.65 | 30.02 | 294.05 | 31.19 | 293.61 | 31.78 | 293.44 |
| 32.89 | 293.06 | 33.57 | 292.81 | 35.61 | 292.19 | 36.18 | 292.18 | 38.54 | 292.4 |
| 39.32 | 292.46 | 40.82 | 292.62 | 41.36 | 292.61 | 41.89 | 292.58 | 43.36 | 292.71 |
| 44.25 | 292.77 | 45.84 | 292.84 | 47.29 | 292.87 | 49.22 | 292.94 | 51.36 | 293.04 |
| 53.62 | 293.14 | 55.69 | 293.24 | 56.34 | 293.25 | 56.75 | 293.21 | 59.34 | 292.68 |
| 59.53 | 292.65 | 59.76 | 292.71 | 60.99 | 293.14 | 61.78 | 293.53 | 62.33 | 293.68 |
| 62.73 | 293.75 | 65.07 | 294.32 | 67.56 | 294.67 | 69.03 | 294.9 | 70.46 | 295.1 |
| 72.38 | 295.36 | 73.65 | 295.48 | 74.07 | 295.53 | 75.64 | 295.63 | 77.36 | 295.69 |
| 81.68 | 295.75 | 82.98 | 295.76 | 87.63 | 295.78 | 90.73 | 295.83 | 97.91 | 295.82 |
| 102.01 | 295.83 | 105.79 | 295.81 | 109.06 | 295.79 | 109.17 | 295.8 | 111.53 | 295.86 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 112.41 | 295.92 | 114.32 | 296.04 | 122.16 | 296.7 | 124.77 | 296.9 | 126.03 | 297 |
| 128.65 | 297.07 | 130.1 | 297.15 | 130.7 | 297.16 | 132.48 | 297.06 | 134.43 | 297 |
| 136.45 | 296.79 | 138.05 | 296.44 | 140.36 | 295.99 | 141.12 | 295.83 | 141.8 | 295.7 |
| 144.01 | 295.22 | 144.39 | 295.12 | 145.53 | 294.77 | 145.88 | 294.62 | 147.53 | 293.88 |
| 148.34 | 293.46 | 148.79 | 293.24 | 150.85 | 292.2 | 152.12 | 291.59 | 153.38 | 291.02 |
| 153.66 | 290.92 | 154.95 | 290.53 | 155.6 | 290.35 | 156.21 | 290.2 | 158.31 | 289.73 |
| 160.81 | 289.1 | 163.32 | 288.48 | 164.38 | 288.23 | 165.86 | 287.86 | 167.07 | 287.55 |
| 168.23 | 287.23 | 169.54 | 286.9 | 170.55 | 286.61 | 171.95 | 286.24 | 172.82 | 285.99 |
| 180.25 | 285.38 | 181.47 | 285.3 | 182.61 | 285.26 | 185.69 | 285.12 | 192.49 | 284.83 |
| 195 | 284.71 | 196.54 | 284.63 | 197.76 | 284.55 | 204.85 | 284.26 | 208.1 | 284.1 |
| 208.8 | 284.06 | 209.57 | 284.03 | 210.92 | 283.95 | 212.54 | 283.87 | 214.26 | 283.8 |
| 215.18 | 283.75 | 216.72 | 283.62 | 217.69 | 283.58 | 219.22 | 283.56 | 222.06 | 283.5 |
| 224.25 | 283.5 | 224.89 | 283.49 | 225.57 | 283.5 | 226.67 | 283.5 | 228.5 | 283.44 |
| 230.67 | 283.39 | 233.99 | 283.32 | 235.86 | 283.26 | 238.92 | 283.2 | 244.71 | 283.03 |
| 245.47 | 283.02 | 246.7 | 282.98 | 247.57 | 282.98 | 249.03 | 283.01 | 249.82 | 283 |
| 250.45 | 283.01 | 252.84 | 283.08 | 254.29 | 283.08 | 256.93 | 283.06 | 260.86 | 283.02 |
| 263.07 | 282.99 | 265.59 | 282.94 | 266.87 | 282.92 | 266.97 | 282.91 | 268.58 | 282.87 |
| 269.85 | 282.83 | 271.06 | 282.8 | 271.71 | 282.77 | 272.49 | 282.75 | 275.14 | 282.65 |
| 276.82 | 282.59 | 278.6 | 282.36 | 278.97 | 282.34 | 280.3 | 282.38 | 280.95 | 282.39 |
| 281.77 | 282.38 | 285.4 | 282.37 | 289.68 | 282.35 | 293.62 | 282.32 | 296.01 | 282.29 |
| 297.8 | 282.28 | 298.1 | 282.27 | 300.18 | 282.24 | 304.11 | 282.17 | 309.85 | 282.07 |
| 310.05 | 282.06 | 318.86 | 281.8 | 319.07 | 281.79 | 322.61 | 281.68 | 327.33 | 281.53 |
| 330.88 | 281.41 | 337.02 | 281.11 | 337.57 | 281.09 | 341.78 | 280.87 | 345.45 | 280.69 |
| 346.91 | 280.68 | 349.17 | 280.69 | 350.63 | 280.69 | 353.4 | 280.72 | 354.43 | 280.72 |
| 355.4 | 280.73 | 356.88 | 280.76 | 358.58 | 280.76 | 360.34 | 280.79 | 362 | 280.79 |
| 362.95 | 280.8 | 365.56 | 280.77 | 366.78 | 280.76 | 367.73 | 280.73 | 368.87 | 280.71 |
| 370.77 | 280.69 | 371.96 | 280.67 | 374.62 | 280.67 | 375.87 | 280.65 | 378.48 | 280.58 |
| 383.03 | 280.45 | 384.64 | 280.4 | 388.89 | 280.25 | 390.98 | 280.18 | 391.9 | 280.16 |
| 392.86 | 280.16 | 394.14 | 280.18 | 400.39 | 280.3 | 402.07 | 280.34 | 403.96 | 280.37 |
| 405.98 | 280.42 | 412.13 | 280.42 | 414.87 | 280.43 | 415.54 | 280.44 | 420.91 | 280.49 |
| 421.92 | 280.51 | 426.48 | 280.51 | 426.68 | 280.5 | 428.15 | 280.49 | 430.35 | 280.49 |
| 434.29 | 280.48 | 435.34 | 280.49 | 435.97 | 280.46 | 437.76 | 280.41 | 439.3 | 280.38 |
| 442.48 | 280.31 | 444.85 | 280.27 | 446.23 | 280.23 | 448.45 | 280.19 | 450.78 | 280.12 |
| 453.52 | 280.05 | 454.59 | 280.04 | 460.31 | 279.91 | 460.49 | 279.91 | 469.6 | 279.74 |
| 475.23 | 279.56 | 476.38 | 279.55 | 478.08 | 279.5 | 481.04 | 279.47 | 483.79 | 279.41 |
| 485.17 | 279.37 | 488.15 | 279.25 | 489.54 | 279.16 | 494.14 | 278.84 | 500.16 | 278.41 |
| 504.73 | 278.1 | 506.68 | 277.96 | 508.43 | 277.81 | 508.75 | 277.81 | 509.26 | 277.86 |
| 509.85 | 277.86 | 511.9 | 277.84 | 514.72 | 277.73 | 516.17 | 277.64 | 516.87 | 277.59 |
| 518.02 | 277.53 | 521.49 | 277.34 | 523.13 | 277.24 | 525.08 | 277.13 | 527.21 | 276.99 |
| 528.15 | 276.92 | 530.56 | 276.77 | 532.14 | 276.65 | 533.37 | 276.57 | 535.64 | 276.52 |
| 535.85 | 276.51 | 538.61 | 276.46 | 545.59 | 276.68 | 547.52 | 276.7 | 548.51 | 276.68 |
| 549.16 | 276.69 | 549.62 | 276.68 | 551.86 | 276.68 | 556.02 | 276.55 | 559.04 | 276.46 |
| 564.41 | 276.27 | 567.11 | 276.18 | 570.47 | 276.06 | 572.54 | 276 | 579.94 | 275.85 |
| 581.43 | 275.79 | 589.29 | 275.51 | 590.87 | 275.47 | 591.17 | 275.47 | 592.93 | 275.41 |
| 597.07 | 275.31 | 597.57 | 275.31 | 600.68 | 275.27 | 602.71 | 275.24 | 605.44 | 275.19 |
| 609.75 | 275.12 | 613.95 | 275.04 | 616.35 | 274.98 | 617.08 | 274.95 | 618.1 | 274.95 |
| 623.44 | 275.03 | 624.13 | 275.02 | 625.76 | 275.05 | 627.25 | 275.06 | 628.29 | 275.06 |
| 631.94 | 275.07 | 633.36 | 275.07 | 637.48 | 275.05 | 638.64 | 275.05 | 640.65 | 274.99 |
| 642.97 | 274.93 | 644.81 | 274.89 | 645.72 | 274.94 | 645.8 | 274.96 | 646.93 | 275 |
| 649.63 | 275.06 | 650.82 | 275.07 | 652.85 | 275.11 | 654.14 | 275.18 | 655.76 | 275.19 |
| 657.37 | 275.17 | 659.81 | 275.18 | 660.55 | 275.17 | 665.68 | 275.14 | 669.37 | 275.14 |
| 676.85 | 275.07 | 679.54 | 275.04 | 687.55 | 274.94 | 691.97 | 274.9 | 693.67 | 274.88 |
| 694.78 | 274.88 | 695.86 | 274.87 | 697.02 | 274.84 | 698.16 | 274.82 | 699.99 | 274.81 |
| 701.08 | 274.81 | 703.55 | 274.79 | 707.75 | 274.74 | 709.51 | 274.73 | 714.4 | 274.71 |
| 718.56 | 274.71 | 723.06 | 274.69 | 727.75 | 274.69 | 728.54 | 274.68 | 731.45 | 274.67 |
| 738.58 | 274.54 | 741.54 | 274.51 | 744.52 | 274.49 | 745.15 | 274.48 | 753.71 | 274.39 |
| 760.33 | 274.33 | 763.62 | 274.29 | 765.85 | 274.27 | 767.99 | 274.22 | 773.04 | 274.08 |
| 773.86 | 274 | 774.39 | 273.99 | 775.5 | 274.07 | 777.07 | 274.09 | 782.36 | 274.15 |
| 785.62 | 274.15 | 786.92 | 274.13 | 788.09 | 274.12 | 789.34 | 274.1 | 789.92 | 274.08 |
| 791.4 | 274.06 | 793.93 | 274.02 | 794.84 | 274.01 | 797.25 | 273.96 | 801.58 | 273.88 |
| 809.88 | 273.68 | 811.39 | 273.64 | 812.12 | 273.55 | 812.47 | 273.52 | 813.93 | 273.31 |
| 814.4 | 273.28 | 815.01 | 273.3 | 815.72 | 273.37 | 817.49 | 273.61 | 819.49 | 273.77 |
| 821.38 | 273.9 | 822.34 | 273.98 | 824.7 | 274.13 | 825.69 | 274.16 | 826.47 | 274.2 |
| 828.24 | 274.19 | 828.69 | 274.21 | 829.55 | 274.29 | 830.63 | 274.41 | 836.22 | 274.86 |
| 836.91 | 274.92 | 839.27 | 275.03 | 840.13 | 275.08 | 843.38 | 275.31 | 846.61 | 275.57 |
| 850.03 | 275.92 | 853.85 | 276.34 | 853.91 | 276.35 | 854.47 | 276.48 | 855.9 | 276.85 |
| 857.07 | 276.97 | 858.9 | 277.17 | 860.69 | 277.35 | 862.36 | 277.46 | 866.18 | 277.73 |
| 869.99 | 278.01 | 870.17 | 278.12 | 870.48 | 278.14 | 875.21 | 278.31 | 876.36 | 278.37 |
| 878.34 | 278.43 | 880.07 | 278.49 | 883.29 | 278.56 | 886.07 | 278.6 | 889.32 | 278.73 |
| 890.83 | 278.76 | 891.1 | 278.75 | 892.24 | 278.77 | 899.46 | 278.74 | 901.12 | 278.75 |
| 907.02 | 278.75 | 911.25 | 278.7 | 912.57 | 278.73 | 919.23 | 279.18 | 920.48 | 279.27 |
| 922.42 | 279.35 | 923.38 | 279.31 | 925.78 | 279.47 | 928.01 | 279.6 | 928.45 | 279.64 |
| 928.75 | 279.64 | 930.7 | 279.67 | 931.88 | 279.72 | 932.98 | 279.76 | 933.94 | 279.77 |
| 934.17 | 279.76 | 936.89 | 279.94 | 937.71 | 279.99 | 941.76 | 280.19 | 945.65 | 280.4 |
| 947.06 | 280.48 | 948.29 | 280.54 | 952.44 | 280.73 | 954.89 | 280.84 | 957.66 | 280.99 |
| 960.34 | 281.14 | 965.73 | 281.43 | 967.72 | 281.58 | 971.96 | 281.86 | 973.58 | 281.97 |
| 975.02 | 282.1 | 979.47 | 282.46 | 979.88 | 282.48 | 984.02 | 282.66 | 985.5 | 282.73 |
| 988.27 | 282.87 | 988.77 | 282.89 | 991.34 | 283.01 | 994.29 | 283.28 | 996.05 | 283.43 |
| 996.41 | 283.47 | 997.96 | 283.57 | 999.11 | 283.65 | 999.79 | 283.71 | 1002.58 | 283.91 |
| 1006.08 | 284.24 | 1006.89 | 284.32 | 1009.15 | 284.59 | 1010.27 | 284.71 | 1012.51 | 285.11 |
| 1014.59 | 285.41 | 1017.38 | 285.79 | 1017.78 | 285.84 | 1018.09 | 285.91 | 1019.39 | 286.15 |
| 1020.09 | 286.26 | 1020.75 | 286.4 | 1022 | 286.71 | 1022.64 | 286.85 | 1023.75 | 287.11 |
| 1025.35 | 287.52 | 1026.67 | 287.92 | 1027 | 288.04 | 1027.87 | 288.32 | 1029.21 | 288.8 |
| 1030.02 | 289.08 | 1031.51 | 289.54 | 1032.17 | 289.72 | 1033.01 | 289.99 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 579.94 | .04 | 853.91 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 579.94 | 853.91 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 946.772*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.1 | .39 | 308.08 | .86 | 307.93 | 1.25 | 307.77 | 2.12 | 307.21 |
| 2.55 | 307.03 | 3.37 | 306.6 | 4.16 | 306.27 | 6.05 | 305.55 | 7.2 | 305.1 |
| 8.03 | 304.75 | 8.45 | 304.61 | 10 | 303.98 | 10.04 | 303.97 | 11.58 | 303.24 |
| 12.67 | 302.71 | 13.08 | 302.49 | 14.28 | 301.91 | 14.89 | 301.57 | 16.18 | 301 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 16.34 | 300.91 | 17.79 | 300.25 | 19.3 | 299.51 | 19.43 | 299.41 | 20.16 | 298.99 |
| 20.51 | 298.77 | 22.01 | 297.88 | 23.16 | 297.17 | 25.5 | 295.85 | 26.88 | 295.12 |
| 29.17 | 293.98 | 29.79 | 293.7 | 30.2 | 293.53 | 31.23 | 292.99 | 32.88 | 292.28 |
| 34.16 | 291.78 | 34.81 | 291.58 | 36.03 | 291.15 | 36.77 | 290.86 | 38.46 | 290.32 |
| 39 | 290.14 | 39.57 | 290.13 | 42.21 | 290.41 | 43.07 | 290.48 | 44.71 | 290.66 |
| 45.3 | 290.66 | 45.88 | 290.62 | 47.49 | 290.78 | 48.46 | 290.86 | 50.21 | 290.94 |
| 51.79 | 290.99 | 53.91 | 291.08 | 56.25 | 291.21 | 58.73 | 291.33 | 59.88 | 291.39 |
| 60.99 | 291.46 | 61.22 | 291.45 | 61.71 | 291.47 | 62.35 | 291.38 | 64.99 | 290.81 |
| 65.2 | 290.77 | 65.32 | 290.8 | 66.8 | 291.36 | 67.66 | 291.81 | 68.27 | 291.99 |
| 68.7 | 292.08 | 69.82 | 292.36 | 71.27 | 292.74 | 74 | 293.16 | 75.61 | 293.42 |
| 77.17 | 293.66 | 79.27 | 293.97 | 80.66 | 294.11 | 81.13 | 294.17 | 82.85 | 294.29 |
| 84.73 | 294.36 | 89.47 | 294.43 | 93.16 | 294.46 | 95.59 | 294.47 | 95.98 | 294.48 |
| 99.37 | 294.54 | 107.24 | 294.53 | 111.72 | 294.54 | 115.87 | 294.54 | 119.57 | 294.53 |
| 121.81 | 294.6 | 125.21 | 294.83 | 131.2 | 295.37 | 133.8 | 295.61 | 136.66 | 295.85 |
| 138.04 | 295.97 | 140.9 | 296.05 | 142.49 | 296.15 | 143.15 | 296.16 | 145.1 | 296.05 |
| 147.24 | 295.98 | 149.44 | 295.73 | 151.2 | 295.33 | 153.73 | 294.8 | 154.56 | 294.62 |
| 155.31 | 294.48 | 156.52 | 294.19 | 157.73 | 293.92 | 158.14 | 293.8 | 159.4 | 293.39 |
| 161.59 | 292.35 | 162.47 | 291.87 | 162.97 | 291.61 | 165.23 | 290.4 | 166.05 | 289.99 |
| 166.61 | 289.69 | 166.87 | 289.58 | 168.1 | 288.98 | 169.71 | 288.47 | 171.09 | 288.09 |
| 173.39 | 287.54 | 176.13 | 286.83 | 178.87 | 286.11 | 180.04 | 285.82 | 182.99 | 285.04 |
| 184.26 | 284.68 | 185.69 | 284.3 | 186.8 | 283.96 | 188.34 | 283.52 | 189.28 | 283.24 |
| 189.42 | 283.23 | 197.42 | 282.57 | 198.76 | 282.48 | 201.75 | 282.36 | 203.38 | 282.28 |
| 210.83 | 281.96 | 213.58 | 281.83 | 216.6 | 281.67 | 224.37 | 281.39 | 227.92 | 281.24 |
| 228.94 | 281.19 | 229.54 | 281.18 | 232.79 | 281.03 | 233.4 | 281.02 | 234.67 | 280.98 |
| 235.68 | 280.94 | 237.36 | 280.81 | 238.43 | 280.78 | 240.11 | 280.78 | 243.21 | 280.75 |
| 245.36 | 280.77 | 246.32 | 280.76 | 247.97 | 280.78 | 250.27 | 280.73 | 250.84 | 280.71 |
| 256.29 | 280.62 | 258.33 | 280.57 | 261.68 | 280.51 | 266.86 | 280.39 | 268.02 | 280.36 |
| 268.86 | 280.35 | 270.2 | 280.31 | 271.16 | 280.31 | 272.2 | 280.34 | 273.62 | 280.34 |
| 274.31 | 280.35 | 276.52 | 280.42 | 277.55 | 280.44 | 278.51 | 280.43 | 281.41 | 280.41 |
| 285.72 | 280.36 | 287.72 | 280.35 | 290.89 | 280.29 | 292.4 | 280.27 | 294.16 | 280.23 |
| 295.56 | 280.19 | 296.88 | 280.16 | 297.59 | 280.13 | 298.44 | 280.11 | 300.52 | 280.04 |
| 303.19 | 279.94 | 305.15 | 279.68 | 305.55 | 279.66 | 307.26 | 279.72 | 307.71 | 279.73 |
| 308.61 | 279.72 | 312.58 | 279.73 | 318.91 | 279.73 | 324.21 | 279.71 | 326.49 | 279.71 |
| 328.78 | 279.69 | 332.57 | 279.65 | 333.08 | 279.64 | 338.17 | 279.59 | 339.59 | 279.58 |
| 349.24 | 279.41 | 350.9 | 279.37 | 351.92 | 279.36 | 353.34 | 279.33 | 358.51 | 279.23 |
| 362.4 | 279.15 | 362.63 | 279.14 | 369.12 | 278.94 | 370.56 | 278.89 | 374.34 | 278.77 |
| 377.27 | 278.68 | 378.79 | 278.63 | 379.95 | 278.63 | 382.44 | 278.65 | 385.02 | 278.65 |
| 388.2 | 278.68 | 389.26 | 278.68 | 390.88 | 278.71 | 392.74 | 278.71 | 394.67 | 278.75 |
| 395.51 | 278.74 | 396.48 | 278.75 | 397.53 | 278.75 | 399.32 | 278.74 | 400.89 | 278.74 |
| 401.72 | 278.73 | 403.6 | 278.69 | 404.02 | 278.69 | 406.09 | 278.66 | 407.39 | 278.65 |
| 407.87 | 278.66 | 409.98 | 278.67 | 411.68 | 278.65 | 412.89 | 278.62 | 413.33 | 278.62 |
| 414.47 | 278.59 | 414.53 | 278.58 | 416.82 | 278.52 | 421.28 | 278.39 | 425.93 | 278.22 |
| 428.23 | 278.15 | 428.66 | 278.13 | 429.89 | 278.13 | 430.28 | 278.12 | 431.69 | 278.15 |
| 442.42 | 278.37 | 444.66 | 278.42 | 447.36 | 278.41 | 455.13 | 278.41 | 457.63 | 278.43 |
| 461.01 | 278.45 | 462.11 | 278.46 | 463.52 | 278.46 | 463.95 | 278.47 | 465.46 | 278.47 |
| 468.94 | 278.45 | 471.35 | 278.45 | 474.89 | 278.46 | 476.81 | 278.46 | 477.5 | 278.44 |
| 481.15 | 278.38 | 487.23 | 278.31 | 488.08 | 278.29 | 493.73 | 278.2 | 496.72 | 278.14 |
| 497.9 | 278.13 | 499.33 | 278.1 | 504.17 | 278.01 | 507.31 | 277.97 | 514.34 | 277.86 |
| 520.5 | 277.71 | 523.62 | 277.65 | 526.87 | 277.63 | 528.88 | 277.61 | 529.88 | 277.59 |
| 531.39 | 277.55 | 533.86 | 277.46 | 534.33 | 277.45 | 536.18 | 277.35 | 541.21 | 277.05 |
| 547.81 | 276.65 | 554.95 | 276.22 | 556.87 | 276.07 | 557.21 | 276.08 | 557.77 | 276.15 |
| 559.44 | 276.16 | 560.67 | 276.16 | 561.82 | 276.15 | 563.75 | 276.11 | 565.35 | 276.06 |
| 566.11 | 276.02 | 567.37 | 275.99 | 571.17 | 275.85 | 573.96 | 275.74 | 576.23 | 275.64 |
| 578.46 | 275.51 | 579.92 | 275.45 | 581.11 | 275.38 | 582.83 | 275.26 | 584.18 | 275.18 |
| 586.67 | 275.14 | 586.9 | 275.13 | 588.65 | 275.11 | 589.92 | 275.09 | 598.27 | 275.44 |
| 599.68 | 275.46 | 600.77 | 275.45 | 601.48 | 275.46 | 602.26 | 275.45 | 602.92 | 275.47 |
| 603.91 | 275.47 | 604.44 | 275.48 | 606.21 | 275.43 | 606.93 | 275.42 | 608.99 | 275.36 |
| 612.3 | 275.28 | 618.17 | 275.1 | 621.14 | 275.02 | 624.81 | 274.91 | 627.09 | 274.85 |
| 635.19 | 274.7 | 636.56 | 274.65 | 643.78 | 274.43 | 645.23 | 274.4 | 648.58 | 274.31 |
| 650.94 | 274.26 | 651.39 | 274.26 | 654.25 | 274.22 | 656.13 | 274.2 | 662.6 | 274.1 |
| 666.46 | 274.03 | 668.89 | 273.98 | 669.33 | 273.96 | 670.27 | 273.96 | 675.19 | 274 |
| 675.81 | 273.99 | 677.95 | 274 | 678.68 | 274.01 | 679.64 | 274 | 683 | 274 |
| 684.3 | 273.99 | 688.1 | 273.97 | 688.84 | 273.96 | 691 | 273.89 | 692.79 | 273.82 |
| 694.83 | 273.75 | 695.67 | 273.81 | 695.74 | 273.83 | 696.78 | 273.87 | 699.27 | 273.92 |
| 700.35 | 273.93 | 702.22 | 273.96 | 702.96 | 274 | 703.77 | 274.02 | 704.9 | 274.02 |
| 706.38 | 274 | 707.95 | 274.01 | 709.3 | 274.01 | 714.02 | 274 | 714.97 | 274 |
| 717.16 | 274.01 | 717.41 | 274 | 719.32 | 273.99 | 726.76 | 273.93 | 734.12 | 273.83 |
| 739.75 | 273.79 | 740.77 | 273.79 | 741.77 | 273.77 | 742.84 | 273.76 | 743.88 | 273.74 |
| 746.39 | 273.73 | 746.56 | 273.72 | 748.72 | 273.71 | 748.84 | 273.7 | 751.8 | 273.66 |
| 752.7 | 273.64 | 758.81 | 273.6 | 760.64 | 273.58 | 762.63 | 273.58 | 766.77 | 273.54 |
| 767.95 | 273.54 | 768.83 | 273.53 | 771.81 | 273.52 | 773.88 | 273.5 | 774.49 | 273.5 |
| 781.04 | 273.37 | 782.11 | 273.36 | 786.5 | 273.31 | 787.08 | 273.31 | 794.95 | 273.21 |
| 801.04 | 273.15 | 804.06 | 273.11 | 808.08 | 273.05 | 809.41 | 273.01 | 812.72 | 272.93 |
| 813.71 | 272.85 | 814.98 | 272.91 | 821.3 | 272.96 | 823.14 | 272.96 | 825.49 | 272.94 |
| 827.39 | 272.91 | 828.24 | 272.89 | 831.93 | 272.84 | 832.77 | 272.82 | 834.98 | 272.78 |
| 838.96 | 272.7 | 846.6 | 272.52 | 848.08 | 272.48 | 848.97 | 272.34 | 850.32 | 272.11 |
| 851.04 | 272.09 | 851.44 | 272.11 | 852.22 | 272.18 | 854.17 | 272.46 | 855.99 | 272.6 |
| 856.37 | 272.62 | 860.52 | 272.92 | 862.13 | 273.01 | 863.22 | 273.04 | 864.07 | 273.08 |
| 864.81 | 273.09 | 866.26 | 273.07 | 867.47 | 273.18 | 868.66 | 273.31 | 874.83 | 273.78 |
| 875.59 | 273.84 | 878.19 | 273.95 | 879.14 | 274 | 882.72 | 274.24 | 886.29 | 274.5 |
| 887.55 | 274.61 | 890.06 | 274.84 | 894.34 | 275.26 | 896.08 | 275.66 | 898.73 | 275.92 |
| 900.3 | 276.08 | 900.83 | 276.11 | 908.49 | 276.68 | 908.65 | 276.76 | 908.92 | 276.78 |
| 913.08 | 276.97 | 913.85 | 277.02 | 914.4 | 277.04 | 917.35 | 277.18 | 920.19 | 277.29 |
| 922.64 | 277.37 | 925.5 | 277.52 | 928.07 | 277.6 | 934.42 | 277.7 | 935.88 | 277.73 |
| 941.02 | 277.81 | 944.79 | 277.81 | 945.96 | 277.85 | 951.82 | 278.25 | 952.91 | 278.33 |
| 954.63 | 278.41 | 955.47 | 278.39 | 956.81 | 278.47 | 957.58 | 278.53 | 959.54 | 278.65 |
| 959.93 | 278.69 | 960.19 | 278.69 | 962.25 | 278.74 | 964.48 | 278.83 | 965.25 | 278.84 |
| 967.36 | 278.99 | 969.13 | 279.09 | 971.64 | 279.22 | 975.07 | 279.42 | 977.39 | 279.55 |
| 981.04 | 279.71 | 983.2 | 279.82 | 984.62 | 279.9 | 985.63 | 279.95 | 987.99 | 280.08 |
| 992.6 | 280.32 | 994.49 | 280.46 | 998.22 | 280.7 | 1000.32 | 280.85 | 1000.91 | 280.9 |
| 1004.83 | 281.21 | 1008.84 | 281.38 | 1010.14 | 281.44 | 1012.57 | 281.56 | 1015.27 | 281.68 |
| 1016.55 | 281.78 | 1017.87 | 281.9 | 1019.42 | 282.02 | 1022.11 | 282.2 | 1025.17 | 282.4 |
| 1028.25 | 282.65 | 1028.54 | 282.67 | 1030.95 | 282.9 | 1031.94 | 283 | 1033.91 | 283.29 |
| 1035.74 | 283.52 | 1038.54 | 283.84 | 1039.96 | 284.07 | 1040.75 | 284.18 | 1042.25 | 284.49 |
| 1043.8 | 284.8 | 1045.2 | 285.1 | 1046.36 | 285.41 | 1047.42 | 285.71 | 1048.33 | 285.99 |
| 1049.31 | 286.28 | 1050.63 | 286.62 | 1051.21 | 286.76 | 1051.95 | 286.97 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 635.19 | .04 | 894.34 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 635.19 | 894.34 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 897.892*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.21 | .42 | 308.18 | .93 | 308.02 | 1.35 | 307.85 | 2.3 | 307.22 |
| 2.77 | 307.02 | 3.76 | 306.49 | 4.53 | 306.18 | 6.58 | 305.39 | 7.83 | 304.89 |
| 8.73 | 304.5 | 9.44 | 304.25 | 10.87 | 303.66 | 13.78 | 302.24 | 14.22 | 301.99 |
| 15.53 | 301.34 | 16.18 | 300.97 | 17.59 | 300.33 | 17.76 | 300.24 | 19.34 | 299.5 |
| 20.72 | 298.79 | 20.97 | 298.67 | 21.12 | 298.56 | 21.91 | 298.09 | 22.29 | 297.85 |
| 23.92 | 296.85 | 24.93 | 296.2 | 25.18 | 296.06 | 26.3 | 295.39 | 27.72 | 294.57 |
| 29.19 | 293.76 | 29.21 | 293.74 | 31.71 | 292.46 | 32.38 | 292.13 | 32.83 | 291.94 |
| 33.95 | 291.33 | 34.8 | 290.94 | 35.74 | 290.52 | 37.13 | 289.94 | 37.68 | 289.78 |
| 39.16 | 289.23 | 39.96 | 288.91 | 41.8 | 288.3 | 42.4 | 288.09 | 43.08 | 288.09 |
| 45.88 | 288.41 | 46.82 | 288.5 | 48.6 | 288.71 | 49.24 | 288.71 | 49.87 | 288.67 |
| 52.51 | 288.94 | 54.58 | 289.05 | 56.3 | 289.1 | 58.6 | 289.21 | 61.14 | 289.37 |
| 63.83 | 289.52 | 64.75 | 289.58 | 65.09 | 289.59 | 66.3 | 289.67 | 67.08 | 289.68 |
| 67.77 | 289.59 | 70.64 | 288.94 | 70.87 | 288.9 | 71.14 | 288.99 | 72.61 | 289.57 |
| 73.55 | 290.09 | 74.2 | 290.3 | 74.68 | 290.4 | 77.47 | 291.16 | 80.44 | 291.64 |
| 82.19 | 291.95 | 83.45 | 292.15 | 83.89 | 292.23 | 85.7 | 292.51 | 86.17 | 292.57 |
| 88.19 | 292.8 | 90.06 | 292.95 | 91.55 | 293 | 92.1 | 293.03 | 97.25 | 293.11 |
| 98.79 | 293.13 | 103.9 | 293.17 | 108.01 | 293.25 | 116.57 | 293.24 | 121.44 | 293.26 |
| 125.94 | 293.27 | 129.97 | 293.27 | 132.41 | 293.36 | 132.78 | 293.37 | 133.82 | 293.46 |
| 136.1 | 293.63 | 142.62 | 294.25 | 145.43 | 294.52 | 148.55 | 294.79 | 150.05 | 294.94 |
| 153.16 | 295.04 | 154.88 | 295.15 | 155.6 | 295.16 | 157.72 | 295.03 | 160.05 | 294.96 |
| 160.24 | 294.93 | 162.44 | 294.67 | 164.36 | 294.22 | 168 | 293.42 | 168.82 | 293.25 |
| 171.45 | 292.61 | 171.9 | 292.47 | 173.26 | 292.02 | 175.64 | 290.83 | 178.17 | 289.4 |
| 179.6 | 288.6 | 180.49 | 288.13 | 181.11 | 287.79 | 181.38 | 287.67 | 182.61 | 287.04 |
| 182.94 | 286.91 | 184.47 | 286.4 | 185.97 | 285.98 | 188.47 | 285.36 | 190.56 | 284.79 |
| 193.28 | 284.06 | 194.43 | 283.74 | 195.7 | 283.41 | 197.47 | 282.93 | 198.91 | 282.53 |
| 200.29 | 282.12 | 201.84 | 281.69 | 203.04 | 281.31 | 204.72 | 280.81 | 205.74 | 280.5 |
| 205.9 | 280.48 | 213.01 | 279.88 | 214.6 | 279.75 | 216.04 | 279.65 | 217.4 | 279.6 |
| 219.29 | 279.52 | 219.77 | 279.51 | 221.07 | 279.45 | 229.16 | 279.09 | 232.16 | 278.95 |
| 233.99 | 278.86 | 235.44 | 278.78 | 243.88 | 278.52 | 248.85 | 278.34 | 249.5 | 278.33 |
| 253.03 | 278.2 | 255.7 | 278.15 | 256.59 | 278.1 | 258.01 | 278 | 259.16 | 277.97 |
| 260.99 | 278 | 264.37 | 278 | 266.71 | 278.03 | 267.74 | 278.03 | 269.54 | 278.06 |
| 270.15 | 278.06 | 271.42 | 278.02 | 272.66 | 278 | 274.62 | 277.98 | 278.58 | 277.92 |
| 280.8 | 277.88 | 284.44 | 277.83 | 290.08 | 277.72 | 291.33 | 277.69 | 293.71 | 277.64 |
| 294.74 | 277.64 | 296.17 | 277.68 | 297.42 | 277.68 | 298.92 | 277.71 | 300.58 | 277.77 |
| 301.69 | 277.79 | 302.74 | 277.78 | 305.88 | 277.76 | 310.57 | 277.71 | 313.19 | 277.68 |
| 317.72 | 277.62 | 319.75 | 277.59 | 321.26 | 277.55 | 322.7 | 277.52 | 323.48 | 277.49 |
| 324.4 | 277.47 | 326.66 | 277.4 | 327.56 | 277.36 | 329.56 | 277.29 | 329.68 | 277.28 |
| 331.69 | 277 | 332.13 | 276.98 | 333.01 | 277.01 | 333.99 | 277.06 | 334.48 | 277.07 |
| 335.45 | 277.07 | 339.77 | 277.09 | 344.87 | 277.12 | 346.65 | 277.12 | 349.57 | 277.13 |
| 352.4 | 277.13 | 354.89 | 277.14 | 361.5 | 277.11 | 362.06 | 277.11 | 367.58 | 277.09 |
| 369.13 | 277.09 | 379.62 | 277.01 | 381.42 | 277 | 384.07 | 276.98 | 389.69 | 276.93 |
| 393.92 | 276.89 | 394.18 | 276.88 | 401.23 | 276.76 | 402.79 | 276.73 | 406.9 | 276.66 |
| 410.08 | 276.61 | 411.26 | 276.58 | 413 | 276.58 | 415.7 | 276.6 | 417.43 | 276.6 |
| 420.74 | 276.63 | 423.11 | 276.63 | 424.87 | 276.66 | 426.9 | 276.66 | 428.99 | 276.7 |
| 429.73 | 276.69 | 429.91 | 276.7 | 430.97 | 276.7 | 431.69 | 276.71 | 435.21 | 276.71 |
| 435.76 | 276.7 | 436.67 | 276.7 | 438.7 | 276.66 | 439.16 | 276.66 | 441.42 | 276.64 |
| 443.35 | 276.64 | 445.58 | 276.66 | 448.35 | 276.64 | 450.59 | 276.59 | 451.83 | 276.55 |
| 453.07 | 276.52 | 457.92 | 276.39 | 462.98 | 276.2 | 465.48 | 276.12 | 465.94 | 276.1 |
| 466.66 | 276.09 | 467.71 | 276.09 | 468.81 | 276.12 | 469.23 | 276.12 | 476.68 | 276.29 |
| 478.68 | 276.33 | 480.92 | 276.37 | 482.31 | 276.41 | 483.76 | 276.43 | 484.26 | 276.42 |
| 488.1 | 276.4 | 490.66 | 276.39 | 494.72 | 276.39 | 497.43 | 276.4 | 501.11 | 276.41 |
| 502.3 | 276.42 | 512.34 | 276.42 | 516.2 | 276.43 | 518.28 | 276.43 | 521.17 | 276.4 |
| 523 | 276.39 | 526.78 | 276.36 | 529.61 | 276.35 | 531.25 | 276.32 | 533.9 | 276.3 |
| 536.67 | 276.27 | 539.93 | 276.22 | 541.21 | 276.21 | 548.02 | 276.12 | 548.23 | 276.11 |
| 551.44 | 276.08 | 559.08 | 275.98 | 567.46 | 275.83 | 569.17 | 275.81 | 572.7 | 275.8 |
| 574.88 | 275.78 | 577.47 | 275.74 | 577.61 | 275.73 | 580.29 | 275.65 | 581.16 | 275.62 |
| 582.81 | 275.54 | 588.29 | 275.26 | 595.46 | 274.88 | 603.22 | 274.48 | 605.31 | 274.33 |
| 605.68 | 274.35 | 606.29 | 274.43 | 606.99 | 274.45 | 609.43 | 274.49 | 610.68 | 274.5 |
| 612.79 | 274.5 | 614.52 | 274.47 | 616.72 | 274.44 | 620.85 | 274.37 | 622.8 | 274.32 |
| 623.88 | 274.3 | 626.35 | 274.22 | 629.02 | 274.1 | 630.37 | 274.05 | 631.65 | 273.99 |
| 633.53 | 273.87 | 635 | 273.79 | 637.69 | 273.75 | 641.23 | 273.73 | 649.55 | 274.15 |
| 650.59 | 274.19 | 651.84 | 274.22 | 653.02 | 274.21 | 653.8 | 274.23 | 654.65 | 274.23 |
| 655.66 | 274.26 | 657.01 | 274.27 | 658.94 | 274.23 | 659.72 | 274.22 | 660.88 | 274.19 |
| 665.55 | 274.1 | 671.94 | 273.92 | 675.17 | 273.86 | 679.16 | 273.75 | 681.63 | 273.69 |
| 690.44 | 273.55 | 691.69 | 273.51 | 698.28 | 273.35 | 699.6 | 273.33 | 700.9 | 273.3 |
| 701.34 | 273.28 | 702.66 | 273.25 | 703.08 | 273.25 | 704.81 | 273.21 | 705.22 | 273.21 |
| 709.54 | 273.16 | 715.44 | 273.08 | 720.29 | 273.01 | 721.59 | 272.97 | 722.45 | 272.96 |
| 723.6 | 272.97 | 726.93 | 272.97 | 727.5 | 272.96 | 729.45 | 272.96 | 734.05 | 272.93 |
| 735.25 | 272.91 | 738.71 | 272.88 | 739.09 | 272.88 | 740.03 | 272.85 | 742.99 | 272.69 |
| 744.85 | 272.62 | 745.62 | 272.68 | 745.68 | 272.7 | 746.63 | 272.74 | 747.86 | 272.77 |
| 751.6 | 272.81 | 752.68 | 272.85 | 754.88 | 272.84 | 755.38 | 272.83 | 756.82 | 272.85 |
| 758.05 | 272.85 | 763.22 | 272.86 | 765.23 | 272.87 | 766.91 | 272.87 | 767.19 | 272.86 |
| 771.73 | 272.83 | 773.98 | 272.82 | 778.01 | 272.77 | 780.7 | 272.73 | 784.41 | 272.71 |
| 787.24 | 272.69 | 787.67 | 272.68 | 789.06 | 272.67 | 790.27 | 272.65 | 791.13 | 272.65 |
| 794.02 | 272.62 | 795.44 | 272.6 | 797.64 | 272.55 | 799.12 | 272.53 | 804.89 | 272.46 |
| 806.41 | 272.45 | 806.71 | 272.44 | 810.48 | 272.4 | 811.56 | 272.38 | 814.42 | 272.35 |
| 815.09 | 272.35 | 816.97 | 272.33 | 819.84 | 272.28 | 824.48 | 272.19 | 828.48 | 272.14 |
| 829.02 | 272.13 | 841.75 | 271.97 | 844.51 | 271.93 | 848.18 | 271.87 | 852.4 | 271.77 |
| 853.31 | 271.72 | 853.54 | 271.72 | 854.47 | 271.76 | 855.79 | 271.76 | 860.23 | 271.77 |
| 861 | 271.76 | 861.91 | 271.76 | 865.03 | 271.73 | 867.81 | 271.68 | 870.7 | 271.64 |
| 875.06 | 271.55 | 879.45 | 271.45 | 883.31 | 271.35 | 884.66 | 271.32 | 886.7 | 270.92 |
| 887.1 | 270.89 | 887.44 | 270.89 | 888.73 | 271 | 890.85 | 271.31 | 893.26 | 271.48 |
| 895.54 | 271.63 | 896.71 | 271.72 | 897.79 | 271.79 | 899.55 | 271.89 | 900 | 271.91 |
| 901.68 | 271.96 | 902.48 | 271.97 | 903.81 | 271.94 | 904.35 | 271.96 | 905.4 | 272.06 |
| 906.69 | 272.21 | 914.26 | 272.76 | 918.15 | 272.91 | 919.49 | 273 | 922.06 | 273.16 |
| 925.96 | 273.43 | 930.09 | 273.76 | 934.68 | 274.17 | 934.76 | 274.18 | 935.19 | 274.25 |
| 936.27 | 274.47 | 938.56 | 274.68 | 939.91 | 274.81 | 940.59 | 274.85 | 941.18 | 274.9 |
| 944.08 | 275.12 | 946.98 | 275.35 | 947.12 | 275.41 | 947.35 | 275.42 | 951.62 | 275.67 |
| 953.33 | 275.78 | 954.64 | 275.87 | 957.09 | 276.02 | 959.2 | 276.13 | 961.68 | 276.31 |
| 963.89 | 276.42 | 969.38 | 276.65 | 970.64 | 276.72 | 975.08 | 276.87 | 977 | 276.91 |
| 978.34 | 276.93 | 979.34 | 276.97 | 984.41 | 277.33 | 985.35 | 277.39 | 986.83 | 277.47 |
| 987.56 | 277.47 | 988.72 | 277.54 | 989.39 | 277.59 | 991.08 | 277.7 | 991.64 | 277.73 |
| 993.41 | 277.79 | 994.85 | 277.87 | 995.34 | 277.89 | 995.81 | 277.89 | 996.01 | 277.91 |
| 999.52 | 278.14 | 1006.49 | 278.56 | 1009.65 | 278.7 | 1011.51 | 278.79 | 1012.73 | 278.86 |
| 1013.61 | 278.9 | 1017.64 | 279.12 | 1018.78 | 279.18 | 1019.74 | 279.24 | 1026.3 | 279.67 |
| 1026.8 | 279.71 | 1030.19 | 279.95 | 1031.2 | 280 | 1033.65 | 280.1 | 1034.77 | 280.15 |
| 1037.26 | 280.27 | 1039.21 | 280.35 | 1041.45 | 280.51 | 1043.06 | 280.62 | 1045.63 | 280.77 |
| 1047.75 | 280.88 | 1051.03 | 281.09 | 1053.6 | 281.28 | 1055.3 | 281.48 | 1057.44 | 281.67 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1059.3 | 281.83 | 1061.56 | 282.12 | 1062.99 | 282.35 | 1063.84 | 282.48 | 1065.06 | 282.69 |
| 1066.06 | 282.89 | 1067.85 | 283.3 | 1068.73 | 283.51 | 1070.88 | 283.94 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 690.44 | .04 | 934.76 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 690.44 | 934.76 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 849.010*

INPUT
Description:
Station Elevation Data num= 499

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.31 | .46 | 308.29 | 1.01 | 308.12 | 1.46 | 307.92 | 2.49 | 307.23 |
| 2.99 | 307.01 | 4.06 | 306.43 | 4.89 | 306.09 | 7.1 | 305.23 | 7.23 | 305.17 |
| 8.45 | 304.68 | 9.43 | 304.25 | 10.19 | 303.98 | 11.79 | 303.31 | 13.59 | 302.41 |
| 14.88 | 301.77 | 15.35 | 301.5 | 16.77 | 300.78 | 17.48 | 300.37 | 18.99 | 299.67 |
| 19.18 | 299.56 | 20.88 | 298.75 | 22.38 | 297.97 | 22.65 | 297.84 | 22.81 | 297.72 |
| 23.67 | 297.2 | 24.08 | 296.92 | 25.22 | 296.2 | 25.84 | 295.81 | 26.93 | 295.1 |
| 28.41 | 294.19 | 29.94 | 293.28 | 31.55 | 292.36 | 34.25 | 290.93 | 34.97 | 290.57 |
| 35.45 | 290.35 | 36.66 | 289.66 | 38.6 | 288.76 | 40.1 | 288.11 | 40.69 | 287.93 |
| 40.86 | 287.86 | 42.3 | 287.32 | 43.16 | 286.95 | 45.79 | 286.05 | 46.46 | 286.04 |
| 48.03 | 286.23 | 49.55 | 286.42 | 50.56 | 286.51 | 52.49 | 286.76 | 53.18 | 286.76 |
| 53.86 | 286.71 | 54.5 | 286.79 | 55.75 | 286.93 | 56.89 | 287.04 | 58.94 | 287.15 |
| 60.8 | 287.22 | 63.29 | 287.35 | 66.04 | 287.54 | 69.93 | 287.77 | 71.6 | 287.89 |
| 71.87 | 287.88 | 72.44 | 287.9 | 72.96 | 287.85 | 73.2 | 287.79 | 76.3 | 287.08 |
| 76.57 | 287.03 | 76.84 | 287.13 | 78.42 | 287.79 | 79.43 | 288.37 | 80.14 | 288.61 |
| 80.65 | 288.72 | 81.97 | 289.09 | 83.67 | 289.58 | 86.87 | 290.13 | 88.76 | 290.47 |
| 90.6 | 290.79 | 92.56 | 291.11 | 93.06 | 291.18 | 94.69 | 291.37 | 95.24 | 291.44 |
| 97.26 | 291.6 | 99.47 | 291.7 | 105.03 | 291.8 | 106.7 | 291.81 | 112.22 | 291.87 |
| 116.66 | 291.96 | 125.89 | 291.96 | 131.16 | 291.98 | 140.23 | 292 | 140.37 | 292.01 |
| 143 | 292.11 | 143.4 | 292.13 | 144.53 | 292.23 | 146.99 | 292.42 | 154.03 | 293.12 |
| 157.07 | 293.43 | 160.43 | 293.74 | 162.05 | 293.9 | 165.41 | 294.02 | 167.28 | 294.14 |
| 168.05 | 294.16 | 170.34 | 294.02 | 172.91 | 293.93 | 175.44 | 293.62 | 177.51 | 293.11 |
| 180.47 | 292.43 | 182.33 | 292.02 | 183.75 | 291.66 | 185.25 | 291.29 | 187.13 | 290.64 |
| 187.57 | 290.4 | 189.7 | 289.3 | 190.87 | 288.6 | 191.32 | 288.35 | 192.43 | 287.7 |
| 193.23 | 287.24 | 193.97 | 286.8 | 194.94 | 286.28 | 195.6 | 285.9 | 195.9 | 285.76 |
| 197.34 | 284.99 | 199.23 | 284.34 | 200.85 | 283.87 | 203.55 | 283.18 | 206.77 | 282.28 |
| 208.74 | 281.72 | 209.99 | 281.37 | 211.36 | 281.01 | 213.27 | 280.46 | 214.82 | 280.02 |
| 216.31 | 279.56 | 217.99 | 279.08 | 219.29 | 278.65 | 221.1 | 278.1 | 222.21 | 277.75 |
| 222.37 | 277.73 | 230.06 | 277.08 | 231.77 | 276.93 | 233.33 | 276.83 | 237.35 | 276.67 |
| 238.76 | 276.61 | 247.5 | 276.22 | 250.73 | 276.06 | 252.72 | 275.97 | 254.28 | 275.89 |
| 263.4 | 275.64 | 267.57 | 275.52 | 268.77 | 275.48 | 269.47 | 275.48 | 271.2 | 275.43 |
| 272.08 | 275.41 | 273.28 | 275.37 | 274 | 275.37 | 275.49 | 275.35 | 277.13 | 275.29 |
| 278.65 | 275.19 | 279.9 | 275.17 | 280.66 | 275.19 | 281.88 | 275.21 | 284.26 | 275.24 |
| 285.52 | 275.25 | 288.05 | 275.3 | 288.34 | 275.29 | 289.17 | 275.3 | 291.11 | 275.34 |
| 291.76 | 275.34 | 293.81 | 275.3 | 294.48 | 275.28 | 296.6 | 275.27 | 300.87 | 275.23 |
| 303.27 | 275.18 | 307.2 | 275.14 | 313.29 | 275.04 | 315.63 | 275 | 317.21 | 274.96 |
| 317.91 | 274.96 | 318.75 | 274.98 | 319.55 | 275.01 | 321.22 | 275.01 | 322.84 | 275.05 |
| 324.63 | 275.12 | 325.83 | 275.14 | 326.96 | 275.13 | 330.36 | 275.11 | 335.42 | 275.05 |
| 337.47 | 275.04 | 343.15 | 274.97 | 345.33 | 274.94 | 348.53 | 274.88 | 350.36 | 274.83 |
| 355.93 | 274.65 | 358.23 | 274.33 | 358.7 | 274.3 | 360.4 | 274.38 | 361.25 | 274.41 |
| 366.96 | 274.46 | 372.47 | 274.5 | 374.39 | 274.51 | 380.6 | 274.55 | 382.92 | 274.57 |
| 385.98 | 274.57 | 391.03 | 274.58 | 397 | 274.6 | 398.66 | 274.61 | 409.99 | 274.62 |
| 425.72 | 274.62 | 433.34 | 274.58 | 435.02 | 274.57 | 439.46 | 274.55 | 442.9 | 274.54 |
| 444.17 | 274.53 | 446.05 | 274.53 | 448.97 | 274.56 | 452 | 274.56 | 455.73 | 274.59 |
| 456.97 | 274.59 | 458.87 | 274.62 | 461.06 | 274.61 | 463.32 | 274.65 | 464.31 | 274.65 |
| 465.45 | 274.66 | 466.68 | 274.66 | 468.78 | 274.67 | 471.61 | 274.67 | 472.83 | 274.65 |
| 476.74 | 274.62 | 478.26 | 274.62 | 481.24 | 274.66 | 481.68 | 274.65 | 483.29 | 274.65 |
| 484.72 | 274.63 | 485.24 | 274.63 | 486.57 | 274.6 | 486.64 | 274.59 | 487.98 | 274.56 |
| 492.5 | 274.43 | 494.57 | 274.38 | 500.03 | 274.18 | 503.23 | 274.07 | 504 | 274.06 |
| 505.13 | 274.06 | 506.33 | 274.09 | 514.83 | 274.28 | 516.99 | 274.32 | 519.39 | 274.37 |
| 520.91 | 274.41 | 522.01 | 274.43 | 525.18 | 274.4 | 529.92 | 274.38 | 533.44 | 274.36 |
| 534.3 | 274.36 | 537.24 | 274.37 | 544.15 | 274.37 | 544.66 | 274.38 | 550.51 | 274.38 |
| 553.34 | 274.39 | 557.5 | 274.4 | 560.57 | 274.4 | 562.88 | 274.39 | 564.85 | 274.39 |
| 568.94 | 274.38 | 571.99 | 274.38 | 573.76 | 274.37 | 576.62 | 274.36 | 579.62 | 274.34 |
| 580.14 | 274.33 | 584.51 | 274.3 | 586.2 | 274.28 | 591.87 | 274.22 | 595.56 | 274.19 |
| 603.07 | 274.11 | 612.53 | 273.98 | 612.87 | 273.97 | 614.71 | 273.96 | 620.88 | 273.96 |
| 622.06 | 273.94 | 623.68 | 273.92 | 623.84 | 273.91 | 626.73 | 273.83 | 627.67 | 273.81 |
| 629.45 | 273.73 | 635.36 | 273.47 | 643.1 | 273.12 | 648.98 | 272.86 | 651.49 | 272.74 |
| 653.11 | 272.63 | 653.74 | 272.6 | 654.14 | 272.61 | 654.8 | 272.72 | 658.2 | 272.81 |
| 661.82 | 272.89 | 662.68 | 272.9 | 663.7 | 272.89 | 666.06 | 272.89 | 670.53 | 272.88 |
| 672.31 | 272.86 | 673.81 | 272.85 | 676.47 | 272.79 | 677.88 | 272.75 | 679.36 | 272.7 |
| 680.81 | 272.66 | 682.2 | 272.59 | 685.81 | 272.39 | 688.72 | 272.37 | 691.05 | 272.37 |
| 692.54 | 272.36 | 701.52 | 272.88 | 702.34 | 272.93 | 702.65 | 272.93 | 704 | 272.97 |
| 705.28 | 272.98 | 706.11 | 273.01 | 706.7 | 273 | 707.81 | 273.04 | 708.96 | 273.05 |
| 709.59 | 273.07 | 710.79 | 273.04 | 712.51 | 273.02 | 713.77 | 273 | 714.93 | 272.97 |
| 718.81 | 272.91 | 725.71 | 272.75 | 729.19 | 272.69 | 733.51 | 272.59 | 736.18 | 272.54 |
| 745.69 | 272.41 | 746.82 | 272.38 | 752.77 | 272.27 | 754.2 | 272.25 | 756.73 | 272.19 |
| 757.12 | 272.19 | 758.68 | 272.16 | 761.41 | 272.14 | 762.95 | 272.12 | 765.02 | 272.1 |
| 771.47 | 272.02 | 772.67 | 272.01 | 773.3 | 271.99 | 774.62 | 271.97 | 778.67 | 271.93 |
| 779.19 | 271.92 | 780.95 | 271.91 | 782.35 | 271.89 | 785.11 | 271.86 | 789.32 | 271.79 |
| 789.67 | 271.79 | 790.52 | 271.75 | 793.19 | 271.57 | 793.48 | 271.56 | 794.87 | 271.48 |
| 795.56 | 271.54 | 795.62 | 271.57 | 796.85 | 271.62 | 798.53 | 271.65 | 799.42 | 271.65 |
| 800.97 | 271.66 | 801.57 | 271.68 | 802.62 | 271.68 | 803.94 | 271.67 | 804.39 | 271.66 |
| 806.25 | 271.69 | 806.8 | 271.69 | 810.69 | 271.71 | 813.29 | 271.74 | 815.06 | 271.74 |
| 819.17 | 271.71 | 821.81 | 271.7 | 824.84 | 271.66 | 827.27 | 271.62 | 830.63 | 271.61 |
| 831.92 | 271.6 | 833.18 | 271.6 | 833.58 | 271.59 | 834.46 | 271.59 | 835.93 | 271.57 |
| 836.7 | 271.57 | 839.31 | 271.54 | 839.41 | 271.53 | 840.6 | 271.51 | 841.86 | 271.47 |
| 843.65 | 271.43 | 843.92 | 271.43 | 847.63 | 271.36 | 850.52 | 271.32 | 850.78 | 271.31 |
| 855.9 | 271.22 | 860.06 | 271.15 | 860.56 | 271.15 | 862.65 | 271.1 | 866.57 | 271.03 |
| 866.85 | 271.02 | 870.47 | 270.97 | 870.95 | 270.96 | 877.44 | 270.86 | 882.46 | 270.79 |
| 886.64 | 270.72 | 887.63 | 270.71 | 888.27 | 270.69 | 892.09 | 270.62 | 892.72 | 270.59 |
| 893.95 | 270.6 | 895.15 | 270.59 | 899.16 | 270.57 | 899.86 | 270.57 | 903.5 | 270.53 |
| 904.45 | 270.51 | 904.89 | 270.51 | 908.62 | 270.45 | 910.45 | 270.41 | 912.57 | 270.37 |
| 916.54 | 270.27 | 921.25 | 270.16 | 922.95 | 269.76 | 923.09 | 269.72 | 923.83 | 269.7 |
| 924.3 | 269.72 | 925.23 | 269.81 | 926.49 | 270 | 927.54 | 270.15 | 929.7 | 270.31 |
| 930.15 | 270.33 | 932.63 | 270.5 | 933.89 | 270.58 | 935.07 | 270.67 | 936.98 | 270.77 |
| 938.27 | 270.81 | 939.28 | 270.85 | 940.16 | 270.85 | 941.6 | 270.82 | 942.19 | 270.84 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 943.85 | 271 | 944.73 | 271.1 | 952.04 | 271.62 | 952.94 | 271.69 | 955.13 | 271.76 |
| 957.16 | 271.83 | 958.62 | 271.92 | 961.41 | 272.08 | 967.14 | 272.46 | 970.11 | 272.68 |
| 975.1 | 273.08 | 975.18 | 273.09 | 976.46 | 273.27 | 978.38 | 273.44 | 980.09 | 273.57 |
| 983.04 | 273.81 | 985.48 | 274.02 | 985.79 | 274.07 | 988.82 | 274.28 | 989.6 | 274.34 |
| 990.82 | 274.46 | 993.99 | 274.74 | 995.77 | 274.9 | 997.85 | 275.1 | 998.82 | 275.18 |
| 1004.34 | 275.61 | 1005.4 | 275.7 | 1009.14 | 275.94 | 1010.76 | 276 | 1012.59 | 276.08 |
| 1016.99 | 276.4 | 1019.04 | 276.53 | 1019.65 | 276.54 | 1021.19 | 276.65 | 1023.08 | 276.77 |
| 1025.22 | 276.89 | 1026.76 | 276.97 | 1028.82 | 277.12 | 1031.41 | 277.29 | 1035.59 | 277.56 |
| 1038.25 | 277.68 | 1039.81 | 277.76 | 1040.85 | 277.82 | 1046.65 | 278.13 | 1046.75 | 278.14 |
| 1050.74 | 278.39 | 1051.77 | 278.45 | 1052.7 | 278.52 | 1055.55 | 278.69 | 1057.45 | 278.78 |
| 1058.46 | 278.82 | 1059.41 | 278.87 | 1061.18 | 278.95 | 1063.14 | 279.02 | 1065.03 | 279.13 |
| 1067.38 | 279.25 | 1068.11 | 279.28 | 1068.55 | 279.31 | 1070.34 | 279.37 | 1073.1 | 279.48 |
| 1075.26 | 279.57 | 1076.7 | 279.66 | 1078.03 | 279.73 | 1079.81 | 279.81 | 1081.67 | 279.95 |
| 1084.52 | 280.23 | 1085.75 | 280.38 | 1088.04 | 280.7 | 1089.82 | 280.92 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 745.69 | .04 | 975.18 | .05 |

| Bank Sta: Left | Right | Lengths: Left | Channel | Right | Coeff Contr. | Expan. |
|---|---|---|---|---|---|---|
| 745.69 | 975.18 | 48.31 | 48.88 | 64.4 | .1 | .3 |

CROSS SECTION

RIVER: WASH90
REACH: WASH90 RS: 800.13

INPUT
Description:
Station Elevation Data num= 494

| Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev | Sta | Elev |
|---|---|---|---|---|---|---|---|---|---|
| 0 | 308.42.4899902 | | 308.41.079956 | | 308.211.569946 | | 3082.670044 | | 307.24 |
| 3.209961 | 3074.359985 | | 306.37 | 5.25 | 3067.630005 | | 305.06 | 7.77002 | 305 |
| 9.079956 | 304.47 | 10.13 | 30410.65002 | | 303.8210.94995 | | 303.7112.60999 | | 303 |
| 12.66003 | 302.9814.59998 | | 30215.97998 | | 301.316.48999 | | 30118.01001 | | 300.22 |
| 18.37 | 30018.77002 | | 299.7720.40002 | | 29920.59998 | | 298.8922.43005 | | 298 |
| 24.04004 | 297.1524.32996 | | 297 | 24.5 | 296.8725.42004 | | 296.325.85999 | | 296 |
| 27.08997 | 295.2127.39001 | | 295 | 27.75 | 294.7828.92004 | | 294 | 30.12 | 293.25 |
| 30.51001 | 293 | 31.88 | 292.1732.14001 | | 29232.16003 | | 291.9933.85999 | | 291 |
| 33.89001 | 290.9835.68994 | | 29037.02002 | | 289.2837.56006 | | 28938.07996 | | 288.76 |
| 39.38 | 288 | 40.37 | 287.5241.45996 | | 28743.06995 | | 286.2843.70996 | | 286.08 |
| 43.89001 | 28645.43005 | | 285.446.35999 | | 28548.48999 | | 284.2549.18005 | | 284 |
| 49.27002 | 283.9949.90002 | | 283.9949.96997 | | 28451.58997 | | 284.2153.21997 | | 284.42 |
| 54.31006 | 284.53 | 56.38 | 284.81 | 57.12 | 284.8157.84998 | | 284.76 | 59.88 | 285 |
| 60.91003 | 285.1161.10999 | | 285.1363.31006 | | 285.2665.31006 | | 285.3467.97998 | | 285.49 |
| 70.93005 | 285.775.51001 | | 28676.91003 | | 286.177.05005 | | 286.177.18994 | | 286.1 |
| 77.81006 | 286.12 | 78.37 | 286.06 | 78.62 | 28681.94995 | | 285.2182.20996 | | 285.16 |
| 82.23999 | 285.1682.35999 | | 285.284.22998 | | 28685.32001 | | 286.6586.08002 | | 286.92 |
| 86.42999 | 287 | 86.63 | 287.04 | 89.87 | 288 | 93.31 | 288.6195.34003 | | 289 |
| 97.31 | 289.3599.41998 | | 289.7199.96002 | | 289.79 | 101.71 | 290 | 102.12 | 290.05 |
| 102.3 | 290.08 | 104.47 | 290.26 | 106.2 | 290.33 | 106.84 | 290.37 | 112.81 | 290.48 |
| 120.53 | 290.57 | 125.3 | 290.67 | 135.22 | 290.67 | 150.62 | 290.74 | 153.6 | 290.87 |
| 154.03 | 290.89 | 155.24 | 291 | 157.88 | 291.21 | 165.44 | 292 | 168.71 | 292.34 |
| 172.32 | 292.69 | 174.06 | 292.87 | 177.67 | 293 | 179.67 | 293.14 | 180.5 | 293.16 |
| 182.96 | 293 | 185.66 | 292.91 | 185.89 | 292.88 | 188.44 | 292.56 | 190.66 | 292 |
| 193.84 | 291.25 | 194.89 | 291 | 195.84 | 290.79 | 197.36 | 290.39 | 198.89 | 290 |
| 198.97 | 289.98 | 199.07 | 289.95 | 199.41 | 289.83 | 200.99 | 289.26 | 201.47 | 289 |
| 202.61 | 288.39 | 203.34 | 288 | 203.75 | 287.78 | 204.87 | 287.09 | 205.01 | 287 |
| 205.49 | 286.72 | 206.69 | 286 | 207.57 | 285.47 | 208.34 | 285 | 209.38 | 284.42 |
| 210.09 | 284 | 210.41 | 283.85 | 211.96 | 283 | 213.99 | 282.28 | 214.9 | 282 |
| 215.73 | 281.76 | 218.63 | 281 | 221.06 | 280.3 | 222.09 | 280 | 224.21 | 279.39 |
| 225.55 | 279 | 227.02 | 278.6 | 229.07 | 278 | 230.74 | 277.51 | 232.34 | 277 |
| 234.14 | 276.47 | 235.54 | 276 | 237.48 | 275.39 | 238.67 | 275 | 248.94 | 274.11 |
| 250.62 | 274 | 254.39 | 273.86 | 254.94 | 273.84 | 256.45 | 273.77 | 265.84 | 273.35 |
| 273.12 | 273 | 288.68 | 272.63 | 289.43 | 272.63 | 292.24 | 272.57 | 293.53 | 272.54 |
| 294.3 | 272.54 | 295.9 | 272.53 | 296.62 | 272.52 | 297.18 | 272.5 | 297.66 | 272.48 |
| 299.3 | 272.38 | 299.92 | 272.37 | 300.64 | 272.37 | 301.45 | 272.39 | 302.76 | 272.43 |
| 306.4 | 272.5 | 309.39 | 272.56 | 309.7 | 272.56 | 310.59 | 272.57 | 311.52 | 272.59 |
| 312.68 | 272.62 | 313.05 | 272.62 | 313.19 | 272.62 | 313.38 | 272.62 | 314.86 | 272.59 |
| 315.58 | 272.58 | 316.3 | 272.57 | 318.57 | 272.56 | 323.16 | 272.53 | 325.74 | 272.49 |
| 329.96 | 272.46 | 336.5 | 272.37 | 337.96 | 272.35 | 339.01 | 272.33 | 340.71 | 272.29 |
| 341.08 | 272.29 | 341.46 | 272.29 | 341.89 | 272.3 | 342.37 | 272.31 | 343.23 | 272.34 |
| 343.57 | 272.35 | 343.92 | 272.35 | 345.02 | 272.35 | 345.89 | 272.37 | 346.76 | 272.39 |
| 348.68 | 272.47 | 349.19 | 272.48 | 349.97 | 272.49 | 351.19 | 272.48 | 352.74 | 272.47 |
| 354.45 | 272.46 | 360.27 | 272.4 | 368.7 | 272.32 | 370.92 | 272.3 | 372.68 | 272.27 |
| 374.35 | 272.24 | 376.32 | 272.19 | 378.94 | 272.11 | 382.3 | 272 | 382.44 | 271.98 |
| 384.77 | 271.65 | 385.05 | 271.63 | 385.28 | 271.62 | 386.3 | 271.67 | 387.44 | 271.73 |
| 388.01 | 271.75 | 388.91 | 271.76 | 394.15 | 271.82 | 405.51 | 271.94 | 411.69 | 272 |
| 419.35 | 272.05 | 420 | 272.05 | 426.41 | 272.1 | 428.2 | 272.12 | 440.37 | 272.23 |
| 445.54 | 272.27 | 452.06 | 272.32 | 457.26 | 272.36 | 466.2 | 272.41 | 472.02 | 272.44 |
| 475.71 | 272.47 | 479.1 | 272.48 | 482.23 | 272.51 | 485.49 | 272.52 | 488.07 | 272.54 |
| 490.83 | 272.54 | 492.87 | 272.57 | 495.22 | 272.56 | 497.83 | 272.6 | 498.5 | 272.6 |
| 499.94 | 272.61 | 504.86 | 272.64 | 505.5 | 272.64 | 506.02 | 272.64 | 506.55 | 272.64 |
| 507.86 | 272.62 | 508.91 | 272.61 | 509.44 | 272.61 | 512.06 | 272.6 | 513.08 | 272.6 |
| 513.7 | 272.6 | 514.3 | 272.61 | 516.96 | 272.65 | 517.37 | 272.65 | 518.25 | 272.65 |
| 518.8 | 272.65 | 519.1 | 272.65 | 520.1 | 272.64 | 520.63 | 272.63 | 521.19 | 272.63 |
| 522.62 | 272.6 | 524.14 | 272.56 | 525.58 | 272.52 | 528.99 | 272.43 | 531.21 | 272.37 |
| 539.97 | 272.06 | 540.51 | 272.04 | 541.24 | 272.04 | 541.29 | 272.04 | 541.34 | 272.03 |
| 541.54 | 272.03 | 541.56 | 272.03 | 541.57 | 272.03 | 541.59 | 272.03 | 541.63 | 272.03 |
| 541.69 | 272.03 | 541.75 | 272.03 | 541.83 | 272.03 | 542.07 | 272.03 | 542.56 | 272.03 |
| 543.84 | 272.06 | 544.33 | 272.07 | 555.29 | 272.32 | 557.89 | 272.37 | 559.5 | 272.41 |
| 560.12 | 272.42 | 560.69 | 272.43 | 561.18 | 272.43 | 561.76 | 272.42 | 564.09 | 272.4 |
| 566.22 | 272.38 | 569.18 | 272.36 | 572.96 | 272.34 | 577.04 | 272.34 | 581.31 | 272.33 |
| 582.94 | 272.33 | 584.47 | 272.33 | 589 | 272.34 | 594.34 | 272.36 | 598.81 | 272.37 |
| 606.7 | 272.39 | 611.09 | 272.4 | 614.37 | 272.42 | 616.27 | 272.41 | 619.34 | 272.42 |
| 622.56 | 272.41 | 626.34 | 272.39 | 627.82 | 272.39 | 635.97 | 272.32 | 639.69 | 272.3 |
| 647.75 | 272.23 | 648.3 | 272.23 | 657.91 | 272.13 | 658.28 | 272.12 | 660.61 | 272.12 |
| 666.88 | 272.13 | 668.15 | 272.12 | 669.13 | 272.11 | 669.89 | 272.1 | 673.16 | 272.02 |
| 674.17 | 272 | 697.06 | 271.11 | 699.76 | 271 | 701.5 | 270.89 | 702.18 | 270.86 |
| 702.61 | 270.88 | 703.32 | 271 | 704.13 | 271.03 | 704.14 | 271.03 | 710.86 | 271.28 |
| 711.78 | 271.3 | 712.87 | 271.31 | 720.21 | 271.39 | 722.12 | 271.4 | 723.73 | 271.4 |
| 725.17 | 271.39 | 726.59 | 271.37 | 728.11 | 271.34 | 729.69 | 271.3 | 731.25 | 271.26 |
| 732.74 | 271.2 | 736.62 | 271 | 739.75 | 270.99 | 739.88 | 270.99 | 740.04 | 270.99 |
| 742.25 | 271 | 743.85 | 271 | 753.5 | 271.62 | 754.38 | 271.67 | 754.63 | 271.68 |
| 755.38 | 271.7 | 756.16 | 271.73 | 757.53 | 271.74 | 758.43 | 271.78 | 759.06 | 271.78 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 759.97 | 271.81 | 760.25 | 271.82 | 760.59 | 271.83 | 761.38 | 271.84 | 761.49 | 271.84 |
| 762.06 | 271.86 | 762.16 | 271.86 | 763.45 | 271.84 | 764.4 | 271.83 | 765.3 | 271.82 |
| 766.65 | 271.8 | 767.9 | 271.78 | 772.07 | 271.73 | 779.48 | 271.58 | 783.22 | 271.53 |
| 790.72 | 271.38 | 800.94 | 271.26 | 801.95 | 271.24 | 808.34 | 271.18 | 809.39 | 271.16 |
| 809.74 | 271.15 | 811.15 | 271.13 | 812.88 | 271.11 | 823.98 | 271.02 | 825.61 | 271 |
| 840.24 | 270.7 | 840.71 | 270.68 | 841 | 270.66 | 843.39 | 270.45 | 844.89 | 270.34 |
| 845.17 | 270.37 | 845.51 | 270.41 | 845.56 | 270.44 | 845.88 | 270.46 | 846.66 | 270.49 |
| 848.16 | 270.51 | 850.34 | 270.51 | 850.88 | 270.52 | 853.4 | 270.49 | 854.56 | 270.52 |
| 859.73 | 270.58 | 861.35 | 270.61 | 861.53 | 270.61 | 862.71 | 270.61 | 868.97 | 270.59 |
| 873.85 | 270.52 | 880.27 | 270.5 | 882.89 | 270.48 | 884.61 | 270.45 | 885.76 | 270.42 |
| 886.88 | 270.38 | 888.48 | 270.33 | 894.62 | 270.19 | 899.43 | 270.06 | 902.16 | 270 |
| 903.15 | 269.98 | 909.22 | 269.85 | 912.88 | 269.79 | 929.33 | 269.5 | 942.82 | 269.32 |
| 946.55 | 269.27 | 948.18 | 269.23 | 957.4 | 269.01 | 957.83 | 269 | 959.48 | 268.53 |
| 959.8 | 268.5 | 960.22 | 268.5 | 960.73 | 268.53 | 961.73 | 268.63 | 964.22 | 269 |
| 966.55 | 269.16 | 967.04 | 269.19 | 968.6 | 269.29 | 969.71 | 269.36 | 972.34 | 269.54 |
| 973.77 | 269.62 | 974.4 | 269.65 | 974.92 | 269.67 | 975.8 | 269.69 | 976.89 | 269.73 |
| 977.83 | 269.73 | 979.39 | 269.69 | 979.69 | 269.69 | 980.02 | 269.71 | 981.24 | 269.83 |
| 982.76 | 270 | 990.65 | 270.54 | 991.62 | 270.61 | 992.2 | 270.63 | 994.95 | 270.71 |
| 996.17 | 270.75 | 997.74 | 270.84 | 1000.75 | 271 | 1006.93 | 271.39 | 1010.14 | 271.6 |
| 1015.52 | 272 | 1015.61 | 272.01 | 1019.45 | 272.28 | 1021.99 | 272.5 | 1027.32 | 273 |
| 1034.81 | 273.99 | 1034.95 | 274 | 1040.16 | 274.68 | 1043.2 | 275 | 1043.21 | 275 |
| 1043.23 | 275 | 1049.58 | 275.47 | 1057.1 | 276 | 1059.81 | 276.21 | 1063.32 | 276.47 |
| 1064.69 | 276.57 | 1066.85 | 276.67 | 1073.1 | 277 | 1077 | 277.23 | 1078.59 | 277.33 |
| 1081.6 | 277.47 | 1085.48 | 277.64 | 1089.53 | 277.77 | 1091.47 | 277.84 | 1094.92 | 277.87 |
| 1100.99 | 277.82 | 1102.03 | 277.83 | 1103.61 | 277.85 | 1108.75 | 277.9 | | |

Manning's n Values num= 3

| Sta | n Val | Sta | n Val | Sta | n Val |
|---|---|---|---|---|---|
| 0 | .05 | 800.94 | .04 | 1015.61 | .05 |

| Bank Sta: Left | Right | Coeff Contr. | Expan. |
|---|---|---|---|
| 800.94 | 1015.61 | .1 | .3 |

SUMMARY OF MANNING'S N VALUES

River:WASH0

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| WASH0 | 12718.16 | .05 | .04 | .05 |
| WASH0 | 12391.48 | .05 | .04 | .05 |
| WASH0 | 12095.14 | .05 | .04 | .05 |
| WASH0 | 11801.24 | .05 | .04 | .05 |
| WASH0 | 11434.21 | .05 | .04 | .05 |
| WASH0 | 11096.81 | .05 | .04 | .05 |
| WASH0 | 10668.33 | .05 | .04 | .05 |
| WASH0 | 10283.74 | .05 | .04 | .05 |
| WASH0 | 9871.26 | .05 | .04 | .05 |
| WASH0 | 9562.95 | .05 | .04 | .05 |
| WASH0 | 9197 | .05 | .04 | .05 |
| WASH0 | 8798.15 | .05 | .04 | .05 |
| WASH0 | 8444.54 | .05 | .04 | .05 |
| WASH0 | 8396.61* | .05 | .04 | .05 |
| WASH0 | 8348.68* | .05 | .04 | .05 |
| WASH0 | 8300.75* | .05 | .04 | .05 |
| WASH0 | 8252.82* | .05 | .04 | .05 |
| WASH0 | 8204.90* | .05 | .04 | .05 |
| WASH0 | 8156.97* | .05 | .04 | .05 |
| WASH0 | 8109.04* | .05 | .04 | .05 |
| WASH0 | 8061.11* | .05 | .04 | .05 |
| WASH0 | 8013.19* | .05 | .04 | .05 |
| WASH0 | 7965.26* | .05 | .04 | .05 |
| WASH0 | 7917.33* | .05 | .04 | .05 |
| WASH0 | 7869.40* | .05 | .04 | .05 |
| WASH0 | 7821.48 | .05 | .04 | .05 |
| WASH0 | 7773.52* | .05 | .04 | .05 |
| WASH0 | 7725.56* | .05 | .04 | .05 |
| WASH0 | 7677.61* | .05 | .04 | .05 |
| WASH0 | 7629.65* | .05 | .04 | .05 |
| WASH0 | 7581.69* | .05 | .04 | .05 |
| WASH0 | 7533.74* | .05 | .04 | .05 |
| WASH0 | 7485.78* | .05 | .04 | .05 |
| WASH0 | 7437.82* | .05 | .04 | .05 |
| WASH0 | 7389.87* | .05 | .04 | .05 |
| WASH0 | 7341.91* | .05 | .04 | .05 |
| WASH0 | 7293.95* | .05 | .04 | .05 |
| WASH0 | 7246.* | .05 | .04 | .05 |
| WASH0 | 7198.04* | .05 | .04 | .05 |
| WASH0 | 7150.08* | .05 | .04 | .05 |
| WASH0 | 7102.13 | .05 | .04 | .05 |
| WASH0 | 7055.36* | .05 | .04 | .05 |
| WASH0 | 7008.59* | .05 | .04 | .05 |
| WASH0 | 6961.82* | .05 | .04 | .05 |
| WASH0 | 6915.05* | .05 | .04 | .05 |
| WASH0 | 6868.28* | .05 | .04 | .05 |
| WASH0 | 6821.51* | .05 | .04 | .05 |
| WASH0 | 6774.75* | .05 | .04 | .05 |
| WASH0 | 6727.98* | .05 | .04 | .05 |
| WASH0 | 6681.21* | .05 | .04 | .05 |
| WASH0 | 6634.44* | .05 | .04 | .05 |
| WASH0 | 6587.67* | .05 | .04 | .05 |
| WASH0 | 6540.90* | .05 | .04 | .05 |
| WASH0 | 6494.14 | .05 | .04 | .05 |
| WASH0 | 6474.37* | .05 | .04 | .05 |
| WASH0 | 6454.60* | .05 | .04 | .05 |
| WASH0 | 6434.84* | .05 | .04 | .05 |
| WASH0 | 6415.07* | .05 | .04 | .05 |
| WASH0 | 6395.30* | .05 | .04 | .05 |
| WASH0 | 6375.54* | .05 | .04 | .05 |
| WASH0 | 6355.77* | .05 | .04 | .05 |
| WASH0 | 6336.00* | .05 | .04 | .05 |
| WASH0 | 6316.24* | .05 | .04 | .05 |
| WASH0 | 6296.47* | .05 | .04 | .05 |
| WASH0 | 6276.70* | .05 | .04 | .05 |

| | | | | |
|---|---|---|---|---|
| WASH0 | 6256.94* | .05 | .04 | .05 |
| WASH0 | 6237.17* | .05 | .04 | .05 |
| WASH0 | 6217.40* | .05 | .04 | .05 |
| WASH0 | 6197.64* | .05 | .04 | .05 |
| WASH0 | 6177.87* | .05 | .04 | .05 |
| WASH0 | 6158.10* | .05 | .04 | .05 |
| WASH0 | 6138.34* | .05 | .04 | .05 |
| WASH0 | 6118.57* | .05 | .04 | .05 |
| WASH0 | 6098.80* | .05 | .04 | .05 |
| WASH0 | 6079.04* | .05 | .04 | .05 |
| WASH0 | 6059.27* | .05 | .04 | .05 |
| WASH0 | 6039.50* | .05 | .04 | .05 |
| WASH0 | 6019.74 | .05 | .04 | .05 |
| WASH0 | 5999.98* | .05 | .04 | .05 |
| WASH0 | 5980.22* | .05 | .04 | .05 |
| WASH0 | 5960.46* | .05 | .04 | .05 |
| WASH0 | 5940.70* | .05 | .04 | .05 |
| WASH0 | 5920.94* | .05 | .04 | .05 |
| WASH0 | 5901.18* | .05 | .04 | .05 |
| WASH0 | 5881.43* | .05 | .04 | .05 |
| WASH0 | 5861.67* | .05 | .04 | .05 |
| WASH0 | 5841.91* | .05 | .04 | .05 |
| WASH0 | 5822.15* | .05 | .04 | .05 |
| WASH0 | 5802.39* | .05 | .04 | .05 |
| WASH0 | 5782.63* | .05 | .04 | .05 |
| WASH0 | 5762.87* | .05 | .04 | .05 |
| WASH0 | 5743.12* | .05 | .04 | .05 |
| WASH0 | 5723.36* | .05 | .04 | .05 |
| WASH0 | 5703.60* | .05 | .04 | .05 |
| WASH0 | 5683.84* | .05 | .04 | .05 |
| WASH0 | 5664.08* | .05 | .04 | .05 |
| WASH0 | 5644.32* | .05 | .04 | .05 |
| WASH0 | 5624.57 | .05 | .04 | .05 |
| WASH0 | 5605.08* | .05 | .04 | .05 |
| WASH0 | 5585.60* | .05 | .04 | .05 |
| WASH0 | 5566.12* | .05 | .04 | .05 |
| WASH0 | 5546.64* | .05 | .04 | .05 |
| WASH0 | 5527.15* | .05 | .04 | .05 |
| WASH0 | 5507.67* | .05 | .04 | .05 |
| WASH0 | 5488.19* | .05 | .04 | .05 |
| WASH0 | 5468.71* | .05 | .04 | .05 |
| WASH0 | 5449.22* | .05 | .04 | .05 |
| WASH0 | 5429.74* | .05 | .04 | .05 |
| WASH0 | 5410.26* | .05 | .04 | .05 |
| WASH0 | 5390.78* | .05 | .04 | .05 |
| WASH0 | 5371.29* | .05 | .04 | .05 |
| WASH0 | 5351.81* | .05 | .04 | .05 |
| WASH0 | 5332.33* | .05 | .04 | .05 |
| WASH0 | 5312.85* | .05 | .04 | .05 |
| WASH0 | 5293.36* | .05 | .04 | .05 |
| WASH0 | 5273.88* | .05 | .04 | .05 |
| WASH0 | 5254.40* | .05 | .04 | .05 |
| WASH0 | 5234.92 | .05 | .04 | .05 |
| WASH0 | 5214.99* | .05 | .04 | .05 |
| WASH0 | 5195.06* | .05 | .04 | .05 |
| WASH0 | 5175.14* | .05 | .04 | .05 |
| WASH0 | 5155.21* | .05 | .04 | .05 |
| WASH0 | 5135.29* | .05 | .04 | .05 |
| WASH0 | 5115.36* | .05 | .04 | .05 |
| WASH0 | 5095.43* | .05 | .04 | .05 |
| WASH0 | 5075.51* | .05 | .04 | .05 |
| WASH0 | 5055.58* | .05 | .04 | .05 |
| WASH0 | 5035.66* | .05 | .04 | .05 |
| WASH0 | 5015.73* | .05 | .04 | .05 |
| WASH0 | 4995.81* | .05 | .04 | .05 |
| WASH0 | 4975.88* | .05 | .04 | .05 |
| WASH0 | 4955.95* | .05 | .04 | .05 |
| WASH0 | 4936.03* | .05 | .04 | .05 |
| WASH0 | 4916.10* | .05 | .04 | .05 |
| WASH0 | 4896.18* | .05 | .04 | .05 |
| WASH0 | 4876.25* | .05 | .04 | .05 |
| WASH0 | 4856.33* | .05 | .04 | .05 |
| WASH0 | 4836.40* | .05 | .04 | .05 |
| WASH0 | 4816.47* | .05 | .04 | .05 |
| WASH0 | 4796.55* | .05 | .04 | .05 |
| WASH0 | 4776.62* | .05 | .04 | .05 |
| WASH0 | 4756.70* | .05 | .04 | .05 |
| WASH0 | 4736.77* | .05 | .04 | .05 |
| WASH0 | 4716.84* | .05 | .04 | .05 |
| WASH0 | 4696.92* | .05 | .04 | .05 |
| WASH0 | 4676.99* | .05 | .04 | .05 |
| WASH0 | 4657.07* | .05 | .04 | .05 |
| WASH0 | 4637.14* | .05 | .04 | .05 |
| WASH0 | 4617.22 | .05 | .04 | .05 |
| WASH0 | 4597.95* | .05 | .04 | .05 |
| WASH0 | 4578.69* | .05 | .04 | .05 |
| WASH0 | 4559.43* | .05 | .04 | .05 |
| WASH0 | 4540.17* | .05 | .04 | .05 |
| WASH0 | 4520.91* | .05 | .04 | .05 |
| WASH0 | 4501.65* | .05 | .04 | .05 |
| WASH0 | 4482.39* | .05 | .04 | .05 |
| WASH0 | 4463.13* | .05 | .04 | .05 |
| WASH0 | 4443.87* | .05 | .04 | .05 |
| WASH0 | 4424.61* | .05 | .04 | .05 |
| WASH0 | 4405.34* | .05 | .04 | .05 |
| WASH0 | 4386.08* | .05 | .04 | .05 |
| WASH0 | 4366.82* | .05 | .04 | .05 |
| WASH0 | 4347.56* | .05 | .04 | .05 |
| WASH0 | 4328.30* | .05 | .04 | .05 |
| WASH0 | 4309.04* | .05 | .04 | .05 |
| WASH0 | 4289.78* | .05 | .04 | .05 |
| WASH0 | 4270.52* | .05 | .04 | .05 |
| WASH0 | 4251.26* | .05 | .04 | .05 |
| WASH0 | 4232 | .05 | .04 | .05 |
| WASH0 | 4213.08* | .05 | .04 | .05 |
| WASH0 | 4194.17* | .05 | .04 | .05 |

| | | | | |
|---|---|---|---|---|
| WASH0 | 4175.26* | .05 | .04 | .05 |
| WASH0 | 4156.35* | .05 | .04 | .05 |
| WASH0 | 4137.43* | .05 | .04 | .05 |
| WASH0 | 4118.52* | .05 | .04 | .05 |
| WASH0 | 4099.61* | .05 | .04 | .05 |
| WASH0 | 4080.70* | .05 | .04 | .05 |
| WASH0 | 4061.79* | .05 | .04 | .05 |
| WASH0 | 4042.87* | .05 | .04 | .05 |
| WASH0 | 4023.96* | .05 | .04 | .05 |
| WASH0 | 4005.05* | .05 | .04 | .05 |
| WASH0 | 3986.14* | .05 | .04 | .05 |
| WASH0 | 3967.23 | .05 | .04 | .05 |
| WASH0 | 3947.5* | .05 | .04 | .05 |
| WASH0 | 3927.76* | .05 | .04 | .05 |
| WASH0 | 3908.03* | .05 | .04 | .05 |
| WASH0 | 3888.30* | .05 | .04 | .05 |
| WASH0 | 3868.57* | .05 | .04 | .05 |
| WASH0 | 3848.84* | .05 | .04 | .05 |
| WASH0 | 3829.11* | .05 | .04 | .05 |
| WASH0 | 3809.38* | .05 | .04 | .05 |
| WASH0 | 3789.65* | .05 | .04 | .05 |
| WASH0 | 3769.92* | .05 | .04 | .05 |
| WASH0 | 3750.19* | .05 | .04 | .05 |
| WASH0 | 3730.46* | .05 | .04 | .05 |
| WASH0 | 3710.73* | .05 | .04 | .05 |
| WASH0 | 3691.00* | .05 | .04 | .05 |
| WASH0 | 3671.27* | .05 | .04 | .05 |
| WASH0 | 3651.54* | .05 | .04 | .05 |
| WASH0 | 3631.81* | .05 | .04 | .05 |
| WASH0 | 3612.08 | .05 | .04 | .05 |
| WASH0 | 3592.34* | .05 | .04 | .05 |
| WASH0 | 3572.60* | .05 | .04 | .05 |
| WASH0 | 3552.86* | .05 | .04 | .05 |
| WASH0 | 3533.12* | .05 | .04 | .05 |
| WASH0 | 3513.38* | .05 | .04 | .05 |
| WASH0 | 3493.64* | .05 | .04 | .05 |
| WASH0 | 3473.90* | .05 | .04 | .05 |
| WASH0 | 3454.16* | .05 | .04 | .05 |
| WASH0 | 3434.42* | .05 | .04 | .05 |
| WASH0 | 3414.68* | .05 | .04 | .05 |
| WASH0 | 3394.94* | .05 | .04 | .05 |
| WASH0 | 3375.21* | .05 | .04 | .05 |
| WASH0 | 3355.47* | .05 | .04 | .05 |
| WASH0 | 3335.73* | .05 | .04 | .05 |
| WASH0 | 3315.99* | .05 | .04 | .05 |
| WASH0 | 3296.25* | .05 | .04 | .05 |
| WASH0 | 3276.51* | .05 | .04 | .05 |
| WASH0 | 3256.77* | .05 | .04 | .05 |
| WASH0 | 3237.03* | .05 | .04 | .05 |
| WASH0 | 3217.29* | .05 | .04 | .05 |
| WASH0 | 3197.55* | .05 | .04 | .05 |
| WASH0 | 3177.81* | .05 | .04 | .05 |
| WASH0 | 3158.07* | .05 | .04 | .05 |
| WASH0 | 3138.34 | .05 | .04 | .05 |
| WASH0 | 3118.5* | .05 | .04 | .05 |
| WASH0 | 3098.65* | .05 | .04 | .05 |
| WASH0 | 3078.81* | .05 | .04 | .05 |
| WASH0 | 3058.97* | .05 | .04 | .05 |
| WASH0 | 3039.13* | .05 | .04 | .05 |
| WASH0 | 3019.29* | .05 | .04 | .05 |
| WASH0 | 2999.45* | .05 | .04 | .05 |
| WASH0 | 2979.61* | .05 | .04 | .05 |
| WASH0 | 2959.77* | .05 | .04 | .05 |
| WASH0 | 2939.93* | .05 | .04 | .05 |
| WASH0 | 2920.09* | .05 | .04 | .05 |
| WASH0 | 2900.25* | .05 | .04 | .05 |
| WASH0 | 2880.41* | .05 | .04 | .05 |
| WASH0 | 2860.57* | .05 | .04 | .05 |
| WASH0 | 2840.73* | .05 | .04 | .05 |
| WASH0 | 2820.89* | .05 | .04 | .05 |
| WASH0 | 2801.05* | .05 | .04 | .05 |
| WASH0 | 2781.21* | .05 | .04 | .05 |
| WASH0 | 2761.37* | .05 | .04 | .05 |
| WASH0 | 2741.53* | .05 | .04 | .05 |
| WASH0 | 2721.69* | .05 | .04 | .05 |
| WASH0 | 2701.85* | .05 | .04 | .05 |
| WASH0 | 2682.01* | .05 | .04 | .05 |
| WASH0 | 2662.17* | .05 | .04 | .05 |
| WASH0 | 2642.33* | .05 | .04 | .05 |
| WASH0 | 2622.49 | .05 | .04 | .05 |
| WASH0 | 2603.18* | .05 | .04 | .05 |
| WASH0 | 2583.87* | .05 | .04 | .05 |
| WASH0 | 2564.56* | .05 | .04 | .05 |
| WASH0 | 2545.26* | .05 | .04 | .05 |
| WASH0 | 2525.95* | .05 | .04 | .05 |
| WASH0 | 2506.64* | .05 | .04 | .05 |
| WASH0 | 2487.33* | .05 | .04 | .05 |
| WASH0 | 2468.03* | .05 | .04 | .05 |
| WASH0 | 2448.72* | .05 | .04 | .05 |
| WASH0 | 2429.41* | .05 | .04 | .05 |
| WASH0 | 2410.11* | .05 | .04 | .05 |
| WASH0 | 2390.80* | .05 | .04 | .05 |
| WASH0 | 2371.49* | .05 | .04 | .05 |
| WASH0 | 2352.18* | .05 | .04 | .05 |
| WASH0 | 2332.88* | .05 | .04 | .05 |
| WASH0 | 2313.57* | .05 | .04 | .05 |
| WASH0 | 2294.26* | .05 | .04 | .05 |
| WASH0 | 2274.95* | .05 | .04 | .05 |
| WASH0 | 2255.65* | .05 | .04 | .05 |
| WASH0 | 2236.34* | .05 | .04 | .05 |
| WASH0 | 2217.03* | .05 | .04 | .05 |
| WASH0 | 2197.73 | .05 | .04 | .05 |
| WASH0 | 2177.87* | .05 | .04 | .05 |
| WASH0 | 2158.00* | .05 | .04 | .05 |
| WASH0 | 2138.14* | .05 | .04 | .05 |
| WASH0 | 2118.28* | .05 | .04 | .05 |

| | | | | |
|---|---|---|---|---|
| WASH0 | 2098.42* | .05 | .04 | .05 |
| WASH0 | 2078.56* | .05 | .04 | .05 |
| WASH0 | 2058.70* | .05 | .04 | .05 |
| WASH0 | 2038.84* | .05 | .04 | .05 |
| WASH0 | 2018.98* | .05 | .04 | .05 |
| WASH0 | 1999.12* | .05 | .04 | .05 |
| WASH0 | 1979.26* | .05 | .04 | .05 |
| WASH0 | 1959.40* | .05 | .04 | .05 |
| WASH0 | 1939.54* | .05 | .04 | .05 |
| WASH0 | 1919.68* | .05 | .04 | .05 |
| WASH0 | 1899.82* | .05 | .04 | .05 |
| WASH0 | 1879.96* | .05 | .04 | .05 |
| WASH0 | 1860.10* | .05 | .04 | .05 |
| WASH0 | 1840.24* | .05 | .04 | .05 |
| WASH0 | 1820.38* | .05 | .04 | .05 |
| WASH0 | 1800.52* | .05 | .04 | .05 |
| WASH0 | 1780.66* | .05 | .04 | .05 |
| WASH0 | 1760.8* | .05 | .04 | .05 |
| WASH0 | 1740.94 | .05 | .04 | .05 |
| WASH0 | 1721.32* | .05 | .04 | .05 |
| WASH0 | 1701.71* | .05 | .04 | .05 |
| WASH0 | 1682.10* | .05 | .04 | .05 |
| WASH0 | 1662.49* | .05 | .04 | .05 |
| WASH0 | 1642.88* | .05 | .04 | .05 |
| WASH0 | 1623.27* | .05 | .04 | .05 |
| WASH0 | 1603.66* | .05 | .04 | .05 |
| WASH0 | 1584.05* | .05 | .04 | .05 |
| WASH0 | 1564.43* | .05 | .04 | .05 |
| WASH0 | 1544.82* | .05 | .04 | .05 |
| WASH0 | 1525.21* | .05 | .04 | .05 |
| WASH0 | 1505.60* | .05 | .04 | .05 |
| WASH0 | 1485.99* | .05 | .04 | .05 |
| WASH0 | 1466.38* | .05 | .04 | .05 |
| WASH0 | 1446.77* | .05 | .04 | .05 |
| WASH0 | 1427.16* | .05 | .04 | .05 |
| WASH0 | 1407.54* | .05 | .04 | .05 |
| WASH0 | 1387.93* | .05 | .04 | .05 |
| WASH0 | 1368.32* | .05 | .04 | .05 |
| WASH0 | 1348.71* | .05 | .04 | .05 |
| WASH0 | 1329.10* | .05 | .04 | .05 |
| WASH0 | 1309.49* | .05 | .04 | .05 |
| WASH0 | 1289.88* | .05 | .04 | .05 |
| WASH0 | 1270.27 | .05 | .04 | .05 |
| WASH0 | 1250.94* | .05 | .04 | .05 |
| WASH0 | 1231.61* | .05 | .04 | .05 |
| WASH0 | 1212.29* | .05 | .04 | .05 |
| WASH0 | 1192.96* | .05 | .04 | .05 |
| WASH0 | 1173.64* | .05 | .04 | .05 |
| WASH0 | 1154.31* | .05 | .04 | .05 |
| WASH0 | 1134.99* | .05 | .04 | .05 |
| WASH0 | 1115.66* | .05 | .04 | .05 |
| WASH0 | 1096.34* | .05 | .04 | .05 |
| WASH0 | 1077.01* | .05 | .04 | .05 |
| WASH0 | 1057.69* | .05 | .04 | .05 |
| WASH0 | 1038.36* | .05 | .04 | .05 |
| WASH0 | 1019.04* | .05 | .04 | .05 |
| WASH0 | 999.714* | .05 | .04 | .05 |
| WASH0 | 980.389* | .05 | .04 | .05 |
| WASH0 | 961.063* | .05 | .04 | .05 |
| WASH0 | 941.738* | .05 | .04 | .05 |
| WASH0 | 922.413* | .05 | .04 | .05 |
| WASH0 | 903.087* | .05 | .04 | .05 |
| WASH0 | 883.762* | .05 | .04 | .05 |
| WASH0 | 864.437* | .05 | .04 | .05 |
| WASH0 | 845.111* | .05 | .04 | .05 |
| WASH0 | 825.786* | .05 | .04 | .05 |
| WASH0 | 806.460* | .05 | .04 | .05 |
| WASH0 | 787.135* | .05 | .04 | .05 |
| WASH0 | 767.81 | .05 | .04 | .05 |
| WASH0 | 747.982* | .05 | .04 | .05 |
| WASH0 | 728.155* | .05 | .04 | .05 |
| WASH0 | 708.327* | .05 | .04 | .05 |
| WASH0 | 688.5* | .05 | .04 | .05 |
| WASH0 | 668.672* | .05 | .04 | .05 |
| WASH0 | 648.845* | .05 | .04 | .05 |
| WASH0 | 629.017* | .05 | .04 | .05 |
| WASH0 | 609.19* | .05 | .04 | .05 |
| WASH0 | 589.362* | .05 | .04 | .05 |
| WASH0 | 569.535* | .05 | .04 | .05 |
| WASH0 | 549.707* | .05 | .04 | .05 |
| WASH0 | 529.88* | .05 | .04 | .05 |
| WASH0 | 510.052* | .05 | .04 | .05 |
| WASH0 | 490.225* | .05 | .04 | .05 |
| WASH0 | 470.397* | .05 | .04 | .05 |
| WASH0 | 450.569* | .05 | .04 | .05 |
| WASH0 | 430.742* | .05 | .04 | .05 |
| WASH0 | 410.914* | .05 | .04 | .05 |
| WASH0 | 391.087* | .05 | .04 | .05 |
| WASH0 | 371.259* | .05 | .04 | .05 |
| WASH0 | 351.432* | .05 | .04 | .05 |
| WASH0 | 331.604* | .05 | .04 | .05 |
| WASH0 | 311.777* | .05 | .04 | .05 |
| WASH0 | 291.949* | .05 | .04 | .05 |
| WASH0 | 272.122* | .05 | .04 | .05 |
| WASH0 | 252.294* | .05 | .04 | .05 |
| WASH0 | 232.467* | .05 | .04 | .05 |
| WASH0 | 212.639* | .05 | .04 | .05 |
| WASH0 | 192.812* | .05 | .04 | .05 |
| WASH0 | 172.984* | .05 | .04 | .05 |
| WASH0 | 153.157* | .05 | .04 | .05 |
| WASH0 | 133.33 | .05 | .04 | .05 |

River:WASH60

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| WASH60 | 5477.11 | .05 | .04 | .05 |
| WASH60 | 5299.28 | .05 | .04 | .05 |
| WASH60 | 5104.28 | .05 | .04 | .05 |
| WASH60 | 4869.04 | .05 | .04 | .05 |
| WASH60 | 4591.11 | .05 | .04 | .05 |
| WASH60 | 4337.83 | .05 | .04 | .05 |
| WASH60 | 4068.7 | .05 | .04 | .05 |
| WASH60 | 3746.65 | .05 | .04 | .05 |
| WASH60 | 3427.61 | .05 | .04 | .05 |
| WASH60 | 3162.25 | .05 | .04 | .05 |
| WASH60 | 2826.26 | .05 | .04 | .05 |
| WASH60 | 2497.44 | .05 | .04 | .05 |
| WASH60 | 2235.76 | .05 | .04 | .05 |
| WASH60 | 1902.48 | .05 | .04 | .05 |
| WASH60 | 1536.23 | .05 | .04 | .05 |
| WASH60 | 1155.84 | .05 | .04 | .05 |
| WASH60 | 717.74 | .05 | .04 | .05 |
| WASH60 | 251.42 | .05 | .04 | .05 |

River:WASH70

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| WASH70 | 3521.27 | .05 | .04 | .05 |
| WASH70 | 3474.19* | .05 | .04 | .05 |
| WASH70 | 3427.11* | .05 | .04 | .05 |
| WASH70 | 3380.03* | .05 | .04 | .05 |
| WASH70 | 3332.95* | .05 | .04 | .05 |
| WASH70 | 3285.87* | .05 | .04 | .05 |
| WASH70 | 3238.79* | .05 | .04 | .05 |
| WASH70 | 3191.72 | .05 | .04 | .05 |
| WASH70 | 3147.19* | .05 | .04 | .05 |
| WASH70 | 3102.66* | .05 | .04 | .05 |
| WASH70 | 3058.13* | .05 | .04 | .05 |
| WASH70 | 3013.6* | .05 | .04 | .05 |
| WASH70 | 2969.07* | .05 | .04 | .05 |
| WASH70 | 2924.54* | .05 | .04 | .05 |
| WASH70 | 2880.01 | .05 | .04 | .05 |
| WASH70 | 2831.89* | .05 | .04 | .05 |
| WASH70 | 2783.77* | .05 | .04 | .05 |
| WASH70 | 2735.65* | .05 | .04 | .05 |
| WASH70 | 2687.53* | .05 | .04 | .05 |
| WASH70 | 2639.41* | .05 | .04 | .05 |
| WASH70 | 2591.29* | .05 | .04 | .05 |
| WASH70 | 2543.17* | .05 | .04 | .05 |
| WASH70 | 2495.05* | .05 | .04 | .05 |
| WASH70 | 2446.93* | .05 | .04 | .05 |
| WASH70 | 2398.82 | .05 | .04 | .05 |
| WASH70 | 2036.83 | .05 | .04 | .05 |
| WASH70 | 1648.15 | .05 | .04 | .05 |
| WASH70 | 1321.01 | .05 | .04 | .05 |
| WASH70 | 1029.2 | .05 | .04 | .05 |
| WASH70 | 666.38 | .05 | .04 | .05 |
| WASH70 | 358.04 | .05 | .04 | .05 |

River:WASH75

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| WASH75 | 3066.24 | .05 | .04 | .05 |
| WASH75 | 2658.51 | .05 | .04 | .05 |
| WASH75 | 2371.61 | .05 | .04 | .05 |
| WASH75 | 2124.14 | .05 | .04 | .05 |
| WASH75 | 1807.24 | .05 | .04 | .05 |
| WASH75 | 1554.2 | .05 | .04 | .05 |
| WASH75 | 1289.14 | .05 | .04 | .05 |
| WASH75 | 1270.12* | .05 | .04 | .05 |
| WASH75 | 1251.11* | .05 | .04 | .05 |
| WASH75 | 1232.10* | .05 | .04 | .05 |
| WASH75 | 1213.09* | .05 | .04 | .05 |
| WASH75 | 1194.07* | .05 | .04 | .05 |
| WASH75 | 1175.06* | .05 | .04 | .05 |
| WASH75 | 1156.05* | .05 | .04 | .05 |
| WASH75 | 1137.04* | .05 | .04 | .05 |
| WASH75 | 1118.02* | .05 | .04 | .05 |
| WASH75 | 1099.01* | .05 | .04 | .05 |
| WASH75 | 1080.00* | .05 | .04 | .05 |
| WASH75 | 1060.99* | .05 | .04 | .05 |
| WASH75 | 1041.97* | .05 | .04 | .05 |
| WASH75 | 1022.96* | .05 | .04 | .05 |
| WASH75 | 1003.95* | .05 | .04 | .05 |
| WASH75 | 984.94* | .05 | .04 | .05 |
| WASH75 | 965.927* | .05 | .04 | .05 |
| WASH75 | 946.915* | .05 | .04 | .05 |
| WASH75 | 927.902* | .05 | .04 | .05 |
| WASH75 | 908.89 | .05 | .04 | .05 |
| WASH75 | 889.839* | .05 | .04 | .05 |
| WASH75 | 870.788* | .05 | .04 | .05 |
| WASH75 | 851.738* | .05 | .04 | .05 |
| WASH75 | 832.687* | .05 | .04 | .05 |
| WASH75 | 813.637* | .05 | .04 | .05 |
| WASH75 | 794.586* | .05 | .04 | .05 |
| WASH75 | 775.536* | .05 | .04 | .05 |
| WASH75 | 756.485* | .05 | .04 | .05 |
| WASH75 | 737.435* | .05 | .04 | .05 |
| WASH75 | 718.384* | .05 | .04 | .05 |
| WASH75 | 699.334* | .05 | .04 | .05 |
| WASH75 | 680.283* | .05 | .04 | .05 |
| WASH75 | 661.233* | .05 | .04 | .05 |
| WASH75 | 642.182* | .05 | .04 | .05 |
| WASH75 | 623.132* | .05 | .04 | .05 |
| WASH75 | 604.081* | .05 | .04 | .05 |
| WASH75 | 585.031* | .05 | .04 | .05 |

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|---|---|---|---|---|
| WASH75 | 565.980* | .05 | .04 | .05 |
| WASH75 | 546.93 | .05 | .04 | .05 |

River:WASH80

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| WASH80 | 9177.14 | .05 | .04 | .05 |
| WASH80 | 8711.54 | .05 | .04 | .05 |
| WASH80 | 8318.51 | .05 | .04 | .05 |
| WASH80 | 7927.46 | .05 | .04 | .05 |
| WASH80 | 7287.57 | .05 | .04 | .05 |
| WASH80 | 6827.33 | .05 | .04 | .05 |
| WASH80 | 6379.44 | .05 | .04 | .05 |
| WASH80 | 6136.14 | .05 | .04 | .05 |
| WASH80 | 5694.19 | .05 | .04 | .05 |
| WASH80 | 5146 | .05 | .04 | .05 |
| WASH80 | 4787.98 | .05 | .04 | .05 |
| WASH80 | 4308.96 | .05 | .04 | .05 |
| WASH80 | 3652.44 | .05 | .04 | .05 |
| WASH80 | 3226.43 | .05 | .04 | .05 |
| WASH80 | 2831.38 | .05 | .04 | .05 |
| WASH80 | 2414.33 | .05 | .04 | .05 |
| WASH80 | 2394.51* | .05 | .04 | .05 |
| WASH80 | 2374.70* | .05 | .04 | .05 |
| WASH80 | 2354.88* | .05 | .04 | .05 |
| WASH80 | 2335.07* | .05 | .04 | .05 |
| WASH80 | 2315.25* | .05 | .04 | .05 |
| WASH80 | 2295.44* | .05 | .04 | .05 |
| WASH80 | 2275.63* | .05 | .04 | .05 |
| WASH80 | 2255.81* | .05 | .04 | .05 |
| WASH80 | 2236.00* | .05 | .04 | .05 |
| WASH80 | 2216.18* | .05 | .04 | .05 |
| WASH80 | 2196.37* | .05 | .04 | .05 |
| WASH80 | 2176.55* | .05 | .04 | .05 |
| WASH80 | 2156.74* | .05 | .04 | .05 |
| WASH80 | 2136.93* | .05 | .04 | .05 |
| WASH80 | 2117.11* | .05 | .04 | .05 |
| WASH80 | 2097.30* | .05 | .04 | .05 |
| WASH80 | 2077.48* | .05 | .04 | .05 |
| WASH80 | 2057.67* | .05 | .04 | .05 |
| WASH80 | 2037.85* | .05 | .04 | .05 |
| WASH80 | 2018.04* | .05 | .04 | .05 |
| WASH80 | 1998.23 | .05 | .04 | .05 |
| WASH80 | 1978.49* | .05 | .04 | .05 |
| WASH80 | 1958.76* | .05 | .04 | .05 |
| WASH80 | 1939.02* | .05 | .04 | .05 |
| WASH80 | 1919.29* | .05 | .04 | .05 |
| WASH80 | 1899.55* | .05 | .04 | .05 |
| WASH80 | 1879.82* | .05 | .04 | .05 |
| WASH80 | 1860.08* | .05 | .04 | .05 |
| WASH80 | 1840.35* | .05 | .04 | .05 |
| WASH80 | 1820.61* | .05 | .04 | .05 |
| WASH80 | 1800.88* | .05 | .04 | .05 |
| WASH80 | 1781.14* | .05 | .04 | .05 |
| WASH80 | 1761.41* | .05 | .04 | .05 |
| WASH80 | 1741.67* | .05 | .04 | .05 |
| WASH80 | 1721.94* | .05 | .04 | .05 |
| WASH80 | 1702.20* | .05 | .04 | .05 |
| WASH80 | 1682.47* | .05 | .04 | .05 |
| WASH80 | 1662.74 | .05 | .04 | .05 |
| WASH80 | 1642.77* | .05 | .04 | .05 |
| WASH80 | 1622.80* | .05 | .04 | .05 |
| WASH80 | 1602.83* | .05 | .04 | .05 |
| WASH80 | 1582.86* | .05 | .04 | .05 |
| WASH80 | 1562.89* | .05 | .04 | .05 |
| WASH80 | 1542.92* | .05 | .04 | .05 |
| WASH80 | 1522.95* | .05 | .04 | .05 |
| WASH80 | 1502.98* | .05 | .04 | .05 |
| WASH80 | 1483.01* | .05 | .04 | .05 |
| WASH80 | 1463.04* | .05 | .04 | .05 |
| WASH80 | 1443.07* | .05 | .04 | .05 |
| WASH80 | 1423.10* | .05 | .04 | .05 |
| WASH80 | 1403.14* | .05 | .04 | .05 |
| WASH80 | 1383.17* | .05 | .04 | .05 |
| WASH80 | 1363.20* | .05 | .04 | .05 |
| WASH80 | 1343.23* | .05 | .04 | .05 |
| WASH80 | 1323.26* | .05 | .04 | .05 |
| WASH80 | 1303.29* | .05 | .04 | .05 |
| WASH80 | 1283.32* | .05 | .04 | .05 |
| WASH80 | 1263.35* | .05 | .04 | .05 |
| WASH80 | 1243.38* | .05 | .04 | .05 |
| WASH80 | 1223.41* | .05 | .04 | .05 |
| WASH80 | 1203.44* | .05 | .04 | .05 |
| WASH80 | 1183.47* | .05 | .04 | .05 |
| WASH80 | 1163.50* | .05 | .04 | .05 |
| WASH80 | 1143.53* | .05 | .04 | .05 |
| WASH80 | 1123.57 | .05 | .04 | .05 |
| WASH80 | 1103.85* | .05 | .04 | .05 |
| WASH80 | 1084.14* | .05 | .04 | .05 |
| WASH80 | 1064.42* | .05 | .04 | .05 |
| WASH80 | 1044.71* | .05 | .04 | .05 |
| WASH80 | 1024.99* | .05 | .04 | .05 |
| WASH80 | 1005.28* | .05 | .04 | .05 |
| WASH80 | 985.570* | .05 | .04 | .05 |
| WASH80 | 965.856* | .05 | .04 | .05 |
| WASH80 | 946.141* | .05 | .04 | .05 |
| WASH80 | 926.427* | .05 | .04 | .05 |
| WASH80 | 906.713* | .05 | .04 | .05 |
| WASH80 | 886.999* | .05 | .04 | .05 |
| WASH80 | 867.285* | .05 | .04 | .05 |
| WASH80 | 847.570* | .05 | .04 | .05 |
| WASH80 | 827.856* | .05 | .04 | .05 |
| WASH80 | 808.142* | .05 | .04 | .05 |
| WASH80 | 788.428* | .05 | .04 | .05 |

| | | | | |
|---|---|---|---|---|
| WASH80 | 768.713* | .05 | .04 | .05 |
| WASH80 | 748.999* | .05 | .04 | .05 |
| WASH80 | 729.285* | .05 | .04 | .05 |
| WASH80 | 709.571* | .05 | .04 | .05 |
| WASH80 | 689.856* | .05 | .04 | .05 |
| WASH80 | 670.142* | .05 | .04 | .05 |
| WASH80 | 650.428* | .05 | .04 | .05 |
| WASH80 | 630.714* | .05 | .04 | .05 |
| WASH80 | 611 | .05 | .04 | .05 |

River:WASH90

| Reach | River Sta. | n1 | n2 | n3 |
|---|---|---|---|---|
| WASH90 | 6831.23 | .05 | .04 | .05 |
| WASH90 | 6503.89 | .05 | .04 | .05 |
| WASH90 | 5935.33 | .05 | .04 | .05 |
| WASH90 | 5486.51 | .05 | .04 | .05 |
| WASH90 | 4998.22 | .05 | .04 | .05 |
| WASH90 | 4374.24 | .05 | .04 | .05 |
| WASH90 | 3683.01 | .05 | .04 | .05 |
| WASH90 | 3113.17 | .05 | .04 | .05 |
| WASH90 | 2556.75 | .05 | .04 | .05 |
| WASH90 | 2510.31* | .05 | .04 | .05 |
| WASH90 | 2463.87* | .05 | .04 | .05 |
| WASH90 | 2417.44* | .05 | .04 | .05 |
| WASH90 | 2371.00* | .05 | .04 | .05 |
| WASH90 | 2324.57* | .05 | .04 | .05 |
| WASH90 | 2278.13* | .05 | .04 | .05 |
| WASH90 | 2231.70* | .05 | .04 | .05 |
| WASH90 | 2185.26* | .05 | .04 | .05 |
| WASH90 | 2138.83 | .05 | .04 | .05 |
| WASH90 | 2089.63* | .05 | .04 | .05 |
| WASH90 | 2040.43* | .05 | .04 | .05 |
| WASH90 | 1991.23* | .05 | .04 | .05 |
| WASH90 | 1942.03* | .05 | .04 | .05 |
| WASH90 | 1892.83* | .05 | .04 | .05 |
| WASH90 | 1843.63* | .05 | .04 | .05 |
| WASH90 | 1794.43* | .05 | .04 | .05 |
| WASH90 | 1745.23* | .05 | .04 | .05 |
| WASH90 | 1696.03* | .05 | .04 | .05 |
| WASH90 | 1646.84 | .05 | .04 | .05 |
| WASH90 | 1602.10* | .05 | .04 | .05 |
| WASH90 | 1557.36* | .05 | .04 | .05 |
| WASH90 | 1512.62* | .05 | .04 | .05 |
| WASH90 | 1467.89* | .05 | .04 | .05 |
| WASH90 | 1423.15* | .05 | .04 | .05 |
| WASH90 | 1378.41* | .05 | .04 | .05 |
| WASH90 | 1333.67* | .05 | .04 | .05 |
| WASH90 | 1288.94 | .05 | .04 | .05 |
| WASH90 | 1240.05* | .05 | .04 | .05 |
| WASH90 | 1191.17* | .05 | .04 | .05 |
| WASH90 | 1142.29* | .05 | .04 | .05 |
| WASH90 | 1093.41* | .05 | .04 | .05 |
| WASH90 | 1044.53* | .05 | .04 | .05 |
| WASH90 | 995.654* | .05 | .04 | .05 |
| WASH90 | 946.772* | .05 | .04 | .05 |
| WASH90 | 897.892* | .05 | .04 | .05 |
| WASH90 | 849.010* | .05 | .04 | .05 |
| WASH90 | 800.13 | .05 | .04 | .05 |

SUMMARY OF REACH LENGTHS

River: WASH0

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH0 | 12718.16 | 325.54 | 326.68 | 329.73 |
| WASH0 | 12391.48 | 307.28 | 296.34 | 279.57 |
| WASH0 | 12095.14 | 306.25 | 293.9 | 254.63 |
| WASH0 | 11801.24 | 417.69 | 367.03 | 349.87 |
| WASH0 | 11434.21 | 383.57 | 337.4 | 217.83 |
| WASH0 | 11096.81 | 432.61 | 428.48 | 442.51 |
| WASH0 | 10668.33 | 406.95 | 384.59 | 335.64 |
| WASH0 | 10283.74 | 413.3 | 412.48 | 421.09 |
| WASH0 | 9871.26 | 309 | 308.31 | 309.07 |
| WASH0 | 9562.95 | 367.74 | 365.95 | 358.85 |
| WASH0 | 9197 | 399.37 | 398.85 | 403.04 |
| WASH0 | 8798.15 | 355.93 | 353.61 | 359.03 |
| WASH0 | 8444.54 | 45.93 | 47.93 | 55 |
| WASH0 | 8396.61* | 45.93 | 47.93 | 55 |
| WASH0 | 8348.68* | 45.93 | 47.93 | 55 |
| WASH0 | 8300.75* | 45.93 | 47.93 | 55 |
| WASH0 | 8252.82* | 45.93 | 47.93 | 55 |
| WASH0 | 8204.90* | 45.93 | 47.93 | 55 |
| WASH0 | 8156.97* | 45.93 | 47.93 | 55 |
| WASH0 | 8109.04* | 45.93 | 47.93 | 55 |
| WASH0 | 8061.11* | 45.93 | 47.93 | 55 |
| WASH0 | 8013.19* | 45.93 | 47.93 | 55 |
| WASH0 | 7965.26* | 45.93 | 47.93 | 55 |
| WASH0 | 7917.33* | 45.93 | 47.93 | 55 |
| WASH0 | 7869.40* | 45.93 | 47.93 | 55 |
| WASH0 | 7821.48 | 48.11 | 47.96 | 41.26 |
| WASH0 | 7773.52* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7725.56* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7677.61* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7629.65* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7581.69* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7533.74* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7485.78* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7437.82* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7389.87* | 48.11 | 47.96 | 41.26 |

| | | | | |
|---|---|---|---|---|
| WASH0 | 7341.91* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7293.95* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7246.* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7198.04* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7150.08* | 48.11 | 47.96 | 41.26 |
| WASH0 | 7102.13 | 50.68 | 46.77 | 36.78 |
| WASH0 | 7055.36* | 50.68 | 46.77 | 36.78 |
| WASH0 | 7008.59* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6961.82* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6915.05* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6868.28* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6821.51* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6774.75* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6727.98* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6681.21* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6634.44* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6587.67* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6540.90* | 50.68 | 46.77 | 36.78 |
| WASH0 | 6494.14 | 14.41 | 19.77 | 28.33 |
| WASH0 | 6474.37* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6454.60* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6434.84* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6415.07* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6395.30* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6375.54* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6355.77* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6336.00* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6316.24* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6296.47* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6276.70* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6256.94* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6237.17* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6217.40* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6197.64* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6177.87* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6158.10* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6138.34* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6118.57* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6098.80* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6079.04* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6059.27* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6039.50* | 14.41 | 19.77 | 28.33 |
| WASH0 | 6019.74 | 13.39 | 19.76 | 27.15 |
| WASH0 | 5999.98* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5980.22* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5960.46* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5940.70* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5920.94* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5901.18* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5881.43* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5861.67* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5841.91* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5822.15* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5802.39* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5782.63* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5762.87* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5743.12* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5723.36* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5703.60* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5683.84* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5664.08* | 13.39 | 19.76 | 27.15 |
| WASH0 | 5644.32* | 13.39 | 19.76 | 27.16 |
| WASH0 | 5624.57 | 13.83 | 19.48 | 21.91 |
| WASH0 | 5605.08* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5585.60* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5566.12* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5546.64* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5527.15* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5507.67* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5488.19* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5468.71* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5449.22* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5429.74* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5410.26* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5390.78* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5371.29* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5351.81* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5332.33* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5312.85* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5293.36* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5273.88* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5254.40* | 13.83 | 19.48 | 21.91 |
| WASH0 | 5234.92 | 12.25 | 19.93 | 22.58 |
| WASH0 | 5214.99* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5195.06* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5175.14* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5155.21* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5135.29* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5115.36* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5095.43* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5075.51* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5055.58* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5035.66* | 12.25 | 19.93 | 22.58 |
| WASH0 | 5015.73* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4995.81* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4975.88* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4955.95* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4936.03* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4916.10* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4896.18* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4876.25* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4856.33* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4836.40* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4816.47* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4796.55* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4776.62* | 12.25 | 19.93 | 22.58 |

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|---|---|---|---|---|
| WASH0 | 4756.70* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4736.77* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4716.84* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4696.92* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4676.99* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4657.07* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4637.14* | 12.25 | 19.93 | 22.58 |
| WASH0 | 4617.22 | 23.49 | 19.26 | 20.45 |
| WASH0 | 4597.95* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4578.69* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4559.43* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4540.17* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4520.91* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4501.65* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4482.39* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4463.13* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4443.87* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4424.61* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4405.34* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4386.08* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4366.82* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4347.56* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4328.30* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4309.04* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4289.78* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4270.52* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4251.26* | 23.49 | 19.26 | 20.45 |
| WASH0 | 4232 | 33.31 | 18.91 | 17.36 |
| WASH0 | 4213.08* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4194.17* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4175.26* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4156.35* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4137.43* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4118.52* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4099.61* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4080.70* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4061.79* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4042.87* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4023.96* | 33.31 | 18.91 | 17.36 |
| WASH0 | 4005.05* | 33.31 | 18.91 | 17.36 |
| WASH0 | 3986.14* | 33.31 | 18.91 | 17.36 |
| WASH0 | 3967.23 | 36.8 | 19.73 | 17.8 |
| WASH0 | 3947.5* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3927.76* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3908.03* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3888.30* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3868.57* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3848.84* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3829.11* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3809.38* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3789.65* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3769.92* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3750.19* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3730.46* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3710.73* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3691.00* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3671.27* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3651.54* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3631.81* | 36.8 | 19.73 | 17.8 |
| WASH0 | 3612.08 | 26.21 | 19.74 | 18.73 |
| WASH0 | 3592.34* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3572.60* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3552.86* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3533.12* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3513.38* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3493.64* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3473.90* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3454.16* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3434.42* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3414.68* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3394.94* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3375.21* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3355.47* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3335.73* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3315.99* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3296.25* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3276.51* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3256.77* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3237.03* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3217.29* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3197.55* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3177.81* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3158.07* | 26.21 | 19.74 | 18.73 |
| WASH0 | 3138.34 | 22.65 | 19.84 | 19.47 |
| WASH0 | 3118.5* | 22.65 | 19.84 | 19.47 |
| WASH0 | 3098.65* | 22.65 | 19.84 | 19.47 |
| WASH0 | 3078.81* | 22.65 | 19.84 | 19.47 |
| WASH0 | 3058.97* | 22.65 | 19.84 | 19.47 |
| WASH0 | 3039.13* | 22.65 | 19.84 | 19.47 |
| WASH0 | 3019.29* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2999.45* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2979.61* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2959.77* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2939.93* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2920.09* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2900.25* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2880.41* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2860.57* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2840.73* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2820.89* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2801.05* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2781.21* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2761.37* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2741.53* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2721.69* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2701.85* | 22.65 | 19.84 | 19.47 |

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|---|---|---|---|---|
| WASH0 | 2682.01* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2662.17* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2642.33* | 22.65 | 19.84 | 19.47 |
| WASH0 | 2622.49 | 25.95 | 19.31 | 19.21 |
| WASH0 | 2603.18* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2583.87* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2564.56* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2545.26* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2525.95* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2506.64* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2487.33* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2468.03* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2448.72* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2429.41* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2410.11* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2390.80* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2371.49* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2352.18* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2332.88* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2313.57* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2294.26* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2274.95* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2255.65* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2236.34* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2217.03* | 25.95 | 19.31 | 19.21 |
| WASH0 | 2197.73 | 20.65 | 19.86 | 20.35 |
| WASH0 | 2177.87* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2158.00* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2138.14* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2118.28* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2098.42* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2078.56* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2058.70* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2038.84* | 20.65 | 19.86 | 20.35 |
| WASH0 | 2018.98* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1999.12* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1979.26* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1959.40* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1939.54* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1919.68* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1899.82* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1879.96* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1860.10* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1840.24* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1820.38* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1800.52* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1780.66* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1760.8* | 20.65 | 19.86 | 20.35 |
| WASH0 | 1740.94 | 17.76 | 19.61 | 21.2 |
| WASH0 | 1721.32* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1701.71* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1682.10* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1662.49* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1642.88* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1623.27* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1603.66* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1584.05* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1564.43* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1544.82* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1525.21* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1505.60* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1485.99* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1466.38* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1446.77* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1427.16* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1407.54* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1387.93* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1368.32* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1348.71* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1329.10* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1309.49* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1289.88* | 17.76 | 19.61 | 21.2 |
| WASH0 | 1270.27 | 21.54 | 19.33 | 20.13 |
| WASH0 | 1250.94* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1231.61* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1212.29* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1192.96* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1173.64* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1154.31* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1134.99* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1115.66* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1096.34* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1077.01* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1057.69* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1038.36* | 21.54 | 19.33 | 20.13 |
| WASH0 | 1019.04* | 21.54 | 19.33 | 20.13 |
| WASH0 | 999.714* | 21.54 | 19.33 | 20.13 |
| WASH0 | 980.389* | 21.54 | 19.33 | 20.13 |
| WASH0 | 961.063* | 21.54 | 19.33 | 20.13 |
| WASH0 | 941.738* | 21.54 | 19.33 | 20.13 |
| WASH0 | 922.413* | 21.54 | 19.33 | 20.13 |
| WASH0 | 903.087* | 21.54 | 19.33 | 20.13 |
| WASH0 | 883.762* | 21.54 | 19.33 | 20.13 |
| WASH0 | 864.437* | 21.54 | 19.33 | 20.13 |
| WASH0 | 845.111* | 21.54 | 19.33 | 20.13 |
| WASH0 | 825.786* | 21.54 | 19.33 | 20.13 |
| WASH0 | 806.460* | 21.54 | 19.33 | 20.13 |
| WASH0 | 787.135* | 21.54 | 19.33 | 20.13 |
| WASH0 | 767.81 | 34.67 | 19.83 | 18.51 |
| WASH0 | 747.982* | 34.67 | 19.83 | 18.51 |
| WASH0 | 728.155* | 34.67 | 19.83 | 18.51 |
| WASH0 | 708.327* | 34.67 | 19.83 | 18.51 |
| WASH0 | 688.5* | 34.67 | 19.83 | 18.51 |
| WASH0 | 668.672* | 34.67 | 19.83 | 18.51 |
| WASH0 | 648.845* | 34.67 | 19.83 | 18.51 |
| WASH0 | 629.017* | 34.67 | 19.83 | 18.51 |

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|---|---|---|---|---|
| WASH0 | 609.19* | 34.67 | 19.83 | 18.51 |
| WASH0 | 589.362* | 34.67 | 19.83 | 18.51 |
| WASH0 | 569.535* | 34.67 | 19.83 | 18.51 |
| WASH0 | 549.707* | 34.67 | 19.83 | 18.51 |
| WASH0 | 529.88* | 34.67 | 19.83 | 18.51 |
| WASH0 | 510.052* | 34.67 | 19.83 | 18.51 |
| WASH0 | 490.225* | 34.67 | 19.83 | 18.51 |
| WASH0 | 470.397* | 34.67 | 19.83 | 18.51 |
| WASH0 | 450.569* | 34.67 | 19.83 | 18.51 |
| WASH0 | 430.742* | 34.67 | 19.83 | 18.51 |
| WASH0 | 410.914* | 34.67 | 19.83 | 18.51 |
| WASH0 | 391.087* | 34.67 | 19.83 | 18.51 |
| WASH0 | 371.259* | 34.67 | 19.83 | 18.51 |
| WASH0 | 351.432* | 34.67 | 19.83 | 18.51 |
| WASH0 | 331.604* | 34.67 | 19.83 | 18.51 |
| WASH0 | 311.777* | 34.67 | 19.83 | 18.51 |
| WASH0 | 291.949* | 34.67 | 19.83 | 18.51 |
| WASH0 | 272.122* | 34.67 | 19.83 | 18.51 |
| WASH0 | 252.294* | 34.67 | 19.83 | 18.51 |
| WASH0 | 232.467* | 34.67 | 19.83 | 18.51 |
| WASH0 | 212.639* | 34.67 | 19.83 | 18.51 |
| WASH0 | 192.812* | 34.67 | 19.83 | 18.51 |
| WASH0 | 172.984* | 34.67 | 19.83 | 18.51 |
| WASH0 | 153.157* | 34.67 | 19.83 | 18.51 |
| WASH0 | 133.33 | | | |

River: WASH60

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH60 | 5477.11 | 180.06 | 177.83 | 178.58 |
| WASH60 | 5299.28 | 199.46 | 195 | 192.68 |
| WASH60 | 5104.28 | 252.12 | 235.24 | 234.46 |
| WASH60 | 4869.04 | 271.83 | 277.93 | 280.54 |
| WASH60 | 4591.11 | 219.5 | 253.28 | 261.51 |
| WASH60 | 4337.83 | 251.09 | 269.13 | 271.53 |
| WASH60 | 4068.7 | 313.38 | 322.05 | 319.56 |
| WASH60 | 3746.65 | 365.52 | 319.04 | 300.31 |
| WASH60 | 3427.61 | 186.86 | 265.36 | 269.91 |
| WASH60 | 3162.25 | 403.08 | 335.99 | 286.95 |
| WASH60 | 2826.26 | 284.23 | 328.82 | 338.59 |
| WASH60 | 2497.44 | 265.43 | 261.68 | 258.79 |
| WASH60 | 2235.76 | 325.83 | 333.28 | 345.19 |
| WASH60 | 1902.48 | 352.26 | 366.25 | 360.76 |
| WASH60 | 1536.23 | 374.718 | 380.39 | 365.52 |
| WASH60 | 1155.84 | 450.159 | 438.1 | 341.728 |
| WASH60 | 717.74 | 441.46 | 466.32 | 465.52 |
| WASH60 | 251.42 | | | |

River: WASH70

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH70 | 3521.27 | 50.42 | 47.09 | 38.47 |
| WASH70 | 3474.19* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3427.11* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3380.03* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3332.95* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3285.87* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3238.79* | 50.42 | 47.09 | 38.47 |
| WASH70 | 3191.72 | 50.7 | 44.53 | 34.1 |
| WASH70 | 3147.19* | 50.7 | 44.53 | 34.1 |
| WASH70 | 3102.66* | 50.7 | 44.53 | 34.1 |
| WASH70 | 3058.13* | 50.7 | 44.53 | 34.1 |
| WASH70 | 3013.6* | 50.7 | 44.53 | 34.1 |
| WASH70 | 2969.07* | 50.7 | 44.53 | 34.1 |
| WASH70 | 2924.54* | 50.7 | 44.53 | 34.1 |
| WASH70 | 2880.01 | 54.45 | 48.12 | 32.3 |
| WASH70 | 2831.89* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2783.77* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2735.65* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2687.53* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2639.41* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2591.29* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2543.17* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2495.05* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2446.93* | 54.45 | 48.12 | 32.3 |
| WASH70 | 2398.82 | 339.35 | 361.99 | 326.49 |
| WASH70 | 2036.83 | 360.76 | 388.68 | 399.2 |
| WASH70 | 1648.15 | 280.14 | 327.11 | 415.1 |
| WASH70 | 1321.01 | 204.66 | 291.79 | 455.04 |
| WASH70 | 1029.2 | 399.36 | 362.8 | 198.8 |
| WASH70 | 666.38 | 385.26 | 308.34 | 329.64 |
| WASH70 | 358.04 | | | |

River: WASH75

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH75 | 3066.24 | 343.23 | 407.73 | 525.24 |
| WASH75 | 2658.51 | 273.47 | 286.9 | 311.47 |
| WASH75 | 2371.61 | 245.18 | 247.47 | 263.43 |
| WASH75 | 2124.14 | 377.8 | 316.9 | 144.42 |
| WASH75 | 1807.24 | 232.53 | 253.04 | 278.87 |
| WASH75 | 1554.2 | 249.88 | 265.06 | 283.54 |
| WASH75 | 1289.14 | 18.12 | 19.01 | 21.15 |
| WASH75 | 1270.12* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1251.11* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1232.10* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1213.09* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1194.07* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1175.06* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1156.05* | 18.12 | 19.01 | 21.15 |

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|---|---|---|---|---|
| WASH75 | 1137.04* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1118.02* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1099.01* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1080.00* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1060.99* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1041.97* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1022.96* | 18.12 | 19.01 | 21.15 |
| WASH75 | 1003.95* | 18.12 | 19.01 | 21.15 |
| WASH75 | 984.94* | 18.12 | 19.01 | 21.15 |
| WASH75 | 965.927* | 18.12 | 19.01 | 21.15 |
| WASH75 | 946.915* | 18.12 | 19.01 | 21.15 |
| WASH75 | 927.902* | 18.12 | 19.01 | 21.15 |
| WASH75 | 908.89 | 20.31 | 19.05 | 18.89 |
| WASH75 | 889.839* | 20.31 | 19.05 | 18.89 |
| WASH75 | 870.788* | 20.31 | 19.05 | 18.89 |
| WASH75 | 851.738* | 20.31 | 19.05 | 18.89 |
| WASH75 | 832.687* | 20.31 | 19.05 | 18.89 |
| WASH75 | 813.637* | 20.31 | 19.05 | 18.89 |
| WASH75 | 794.586* | 20.31 | 19.05 | 18.89 |
| WASH75 | 775.536* | 20.31 | 19.05 | 18.89 |
| WASH75 | 756.485* | 20.31 | 19.05 | 18.89 |
| WASH75 | 737.435* | 20.31 | 19.05 | 18.89 |
| WASH75 | 718.384* | 20.31 | 19.05 | 18.89 |
| WASH75 | 699.334* | 20.31 | 19.05 | 18.89 |
| WASH75 | 680.283* | 20.31 | 19.05 | 18.89 |
| WASH75 | 661.233* | 20.31 | 19.05 | 18.89 |
| WASH75 | 642.182* | 20.31 | 19.05 | 18.89 |
| WASH75 | 623.132* | 20.31 | 19.05 | 18.89 |
| WASH75 | 604.081* | 20.31 | 19.05 | 18.89 |
| WASH75 | 585.031* | 20.31 | 19.05 | 18.89 |
| WASH75 | 565.980* | 20.31 | 19.05 | 18.89 |
| WASH75 | 546.93 | | | |

River: WASH80

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH80 | 9177.14 | 512.4 | 465.6 | 368.5 |
| WASH80 | 8711.54 | 276.24 | 393.04 | 658.88 |
| WASH80 | 8318.51 | 370.91 | 391.05 | 440.46 |
| WASH80 | 7927.46 | 637.17 | 639.89 | 454.73 |
| WASH80 | 7287.57 | 471.12 | 460.24 | 337.08 |
| WASH80 | 6827.33 | 443.34 | 447.89 | 434.82 |
| WASH80 | 6379.44 | 290.3 | 243.3 | 233.47 |
| WASH80 | 6136.14 | 491.07 | 441.95 | 435.83 |
| WASH80 | 5694.19 | 592.21 | 548.19 | 464.87 |
| WASH80 | 5146 | 292.22 | 358.02 | 417.45 |
| WASH80 | 4787.98 | 322.42 | 479.02 | 500.37 |
| WASH80 | 4308.96 | 691.51 | 656.52 | 575.77 |
| WASH80 | 3652.44 | 459.93 | 426.01 | 380.87 |
| WASH80 | 3226.43 | 438.17 | 395.05 | 374.62 |
| WASH80 | 2831.38 | 399.68 | 417.05 | 475.7 |
| WASH80 | 2414.33 | 17.84 | 19.81 | 21.78 |
| WASH80 | 2394.51* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2374.70* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2354.88* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2335.07* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2315.25* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2295.44* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2275.63* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2255.81* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2236.00* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2216.18* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2196.37* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2176.55* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2156.74* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2136.93* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2117.11* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2097.30* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2077.48* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2057.67* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2037.85* | 17.84 | 19.81 | 21.78 |
| WASH80 | 2018.04* | 17.84 | 19.81 | 21.78 |
| WASH80 | 1998.23 | 19.3 | 19.73 | 20.92 |
| WASH80 | 1978.49* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1958.76* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1939.02* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1919.29* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1899.55* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1879.82* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1860.08* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1840.35* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1820.61* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1800.88* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1781.14* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1761.41* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1741.67* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1721.94* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1702.20* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1682.47* | 19.3 | 19.73 | 20.92 |
| WASH80 | 1662.74 | 19.86 | 19.97 | 18.34 |
| WASH80 | 1642.77* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1622.80* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1602.83* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1582.86* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1562.89* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1542.92* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1522.95* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1502.98* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1483.01* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1463.04* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1443.07* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1423.10* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1403.14* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1383.17* | 19.86 | 19.97 | 18.34 |

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|---|---|---|---|---|
| WASH80 | 1363.20* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1343.23* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1323.26* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1303.29* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1283.32* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1263.35* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1243.38* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1223.41* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1203.44* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1183.47* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1163.50* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1143.53* | 19.86 | 19.97 | 18.34 |
| WASH80 | 1123.57 | 14.6 | 19.71 | 24.05 |
| WASH80 | 1103.85* | 14.6 | 19.71 | 24.05 |
| WASH80 | 1084.14* | 14.6 | 19.71 | 24.05 |
| WASH80 | 1064.42* | 14.6 | 19.71 | 24.05 |
| WASH80 | 1044.71* | 14.6 | 19.71 | 24.05 |
| WASH80 | 1024.99* | 14.6 | 19.71 | 24.05 |
| WASH80 | 1005.28* | 14.6 | 19.71 | 24.05 |
| WASH80 | 985.570* | 14.6 | 19.71 | 24.05 |
| WASH80 | 965.856* | 14.6 | 19.71 | 24.05 |
| WASH80 | 946.141* | 14.6 | 19.71 | 24.05 |
| WASH80 | 926.427* | 14.6 | 19.71 | 24.05 |
| WASH80 | 906.713* | 14.6 | 19.71 | 24.05 |
| WASH80 | 886.999* | 14.6 | 19.71 | 24.05 |
| WASH80 | 867.285* | 14.6 | 19.71 | 24.05 |
| WASH80 | 847.570* | 14.6 | 19.71 | 24.05 |
| WASH80 | 827.856* | 14.6 | 19.71 | 24.05 |
| WASH80 | 808.142* | 14.6 | 19.71 | 24.05 |
| WASH80 | 788.428* | 14.6 | 19.71 | 24.05 |
| WASH80 | 768.713* | 14.6 | 19.71 | 24.05 |
| WASH80 | 748.999* | 14.6 | 19.71 | 24.05 |
| WASH80 | 729.285* | 14.6 | 19.71 | 24.05 |
| WASH80 | 709.571* | 14.6 | 19.71 | 24.05 |
| WASH80 | 689.856* | 14.6 | 19.71 | 24.05 |
| WASH80 | 670.142* | 14.6 | 19.71 | 24.05 |
| WASH80 | 650.428* | 14.6 | 19.71 | 24.05 |
| WASH80 | 630.714* | 14.6 | 19.71 | 24.05 |
| WASH80 | 611 | | | |

River: WASH90

| Reach | River Sta. | Left | Channel | Right |
|---|---|---|---|---|
| WASH90 | 6831.23 | 324.48 | 327.34 | 331.11 |
| WASH90 | 6503.89 | 567.65 | 568.56 | 578.47 |
| WASH90 | 5935.33 | 469.45 | 448.82 | 287.4 |
| WASH90 | 5486.51 | 527.47 | 488.29 | 521.73 |
| WASH90 | 4998.22 | 678 | 623.98 | 612.86 |
| WASH90 | 4374.24 | 694.65 | 691.23 | 688.3 |
| WASH90 | 3683.01 | 478.07 | 569.84 | 670.79 |
| WASH90 | 3113.17 | 490.21 | 556.42 | 553.33 |
| WASH90 | 2556.75 | 52.69 | 46.44 | 39.18 |
| WASH90 | 2510.31* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2463.87* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2417.44* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2371.00* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2324.57* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2278.13* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2231.70* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2185.26* | 52.69 | 46.44 | 39.18 |
| WASH90 | 2138.83 | 46.66 | 49.2 | 49.28 |
| WASH90 | 2089.63* | 46.66 | 49.2 | 49.28 |
| WASH90 | 2040.43* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1991.23* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1942.03* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1892.83* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1843.63* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1794.43* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1745.23* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1696.03* | 46.66 | 49.2 | 49.28 |
| WASH90 | 1646.84 | 43.81 | 44.74 | 42.49 |
| WASH90 | 1602.10* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1557.36* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1512.62* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1467.89* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1423.15* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1378.41* | 43.81 | 44.74 | 42.49 |
| WASH90 | 1333.67* | 43.82 | 44.74 | 42.49 |
| WASH90 | 1288.94 | 48.31 | 48.88 | 64.4 |
| WASH90 | 1240.05* | 48.31 | 48.88 | 64.4 |
| WASH90 | 1191.17* | 48.31 | 48.88 | 64.4 |
| WASH90 | 1142.29* | 48.31 | 48.88 | 64.4 |
| WASH90 | 1093.41* | 48.31 | 48.88 | 64.4 |
| WASH90 | 1044.53* | 48.31 | 48.88 | 64.4 |
| WASH90 | 995.654* | 48.31 | 48.88 | 64.4 |
| WASH90 | 946.772* | 48.31 | 48.88 | 64.4 |
| WASH90 | 897.892* | 48.31 | 48.88 | 64.4 |
| WASH90 | 849.010* | 48.31 | 48.88 | 64.4 |
| WASH90 | 800.13 | | | |

SUMMARY OF CONTRACTION AND EXPANSION COEFFICIENTS
River: WASH0

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH0 | 12718.16 | .1 | .3 |
| WASH0 | 12391.48 | .1 | .3 |
| WASH0 | 12095.14 | .1 | .3 |
| WASH0 | 11801.24 | .1 | .3 |
| WASH0 | 11434.21 | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH0 | 11096.81 | .1 | .3 |
| WASH0 | 10668.33 | .1 | .3 |
| WASH0 | 10283.74 | .1 | .3 |
| WASH0 | 9871.26 | .1 | .3 |
| WASH0 | 9562.95 | .1 | .3 |
| WASH0 | 9197 | .1 | .3 |
| WASH0 | 8798.15 | .1 | .3 |
| WASH0 | 8444.54 | .1 | .3 |
| WASH0 | 8396.61* | .1 | .3 |
| WASH0 | 8348.68* | .1 | .3 |
| WASH0 | 8300.75* | .1 | .3 |
| WASH0 | 8252.82* | .1 | .3 |
| WASH0 | 8204.90* | .1 | .3 |
| WASH0 | 8156.97* | .1 | .3 |
| WASH0 | 8109.04* | .1 | .3 |
| WASH0 | 8061.11* | .1 | .3 |
| WASH0 | 8013.19* | .1 | .3 |
| WASH0 | 7965.26* | .1 | .3 |
| WASH0 | 7917.33* | .1 | .3 |
| WASH0 | 7869.40* | .1 | .3 |
| WASH0 | 7821.48 | .1 | .3 |
| WASH0 | 7773.52* | .1 | .3 |
| WASH0 | 7725.56* | .1 | .3 |
| WASH0 | 7677.61* | .1 | .3 |
| WASH0 | 7629.65* | .1 | .3 |
| WASH0 | 7581.69* | .1 | .3 |
| WASH0 | 7533.74* | .1 | .3 |
| WASH0 | 7485.78* | .1 | .3 |
| WASH0 | 7437.82* | .1 | .3 |
| WASH0 | 7389.87* | .1 | .3 |
| WASH0 | 7341.91* | .1 | .3 |
| WASH0 | 7293.95* | .1 | .3 |
| WASH0 | 7246.* | .1 | .3 |
| WASH0 | 7198.04* | .1 | .3 |
| WASH0 | 7150.08* | .1 | .3 |
| WASH0 | 7102.13 | .1 | .3 |
| WASH0 | 7055.36* | .1 | .3 |
| WASH0 | 7008.59* | .1 | .3 |
| WASH0 | 6961.82* | .1 | .3 |
| WASH0 | 6915.05* | .1 | .3 |
| WASH0 | 6868.28* | .1 | .3 |
| WASH0 | 6821.51* | .1 | .3 |
| WASH0 | 6774.75* | .1 | .3 |
| WASH0 | 6727.98* | .1 | .3 |
| WASH0 | 6681.21* | .1 | .3 |
| WASH0 | 6634.44* | .1 | .3 |
| WASH0 | 6587.67* | .1 | .3 |
| WASH0 | 6540.90* | .1 | .3 |
| WASH0 | 6494.14 | .1 | .3 |
| WASH0 | 6474.37* | .1 | .3 |
| WASH0 | 6454.60* | .1 | .3 |
| WASH0 | 6434.84* | .1 | .3 |
| WASH0 | 6415.07* | .1 | .3 |
| WASH0 | 6395.30* | .1 | .3 |
| WASH0 | 6375.54* | .1 | .3 |
| WASH0 | 6355.77* | .1 | .3 |
| WASH0 | 6336.00* | .1 | .3 |
| WASH0 | 6316.24* | .1 | .3 |
| WASH0 | 6296.47* | .1 | .3 |
| WASH0 | 6276.70* | .1 | .3 |
| WASH0 | 6256.94* | .1 | .3 |
| WASH0 | 6237.17* | .1 | .3 |
| WASH0 | 6217.40* | .1 | .3 |
| WASH0 | 6197.64* | .1 | .3 |
| WASH0 | 6177.87* | .1 | .3 |
| WASH0 | 6158.10* | .1 | .3 |
| WASH0 | 6138.34* | .1 | .3 |
| WASH0 | 6118.57* | .1 | .3 |
| WASH0 | 6098.80* | .1 | .3 |
| WASH0 | 6079.04* | .1 | .3 |
| WASH0 | 6059.27* | .1 | .3 |
| WASH0 | 6039.50* | .1 | .3 |
| WASH0 | 6019.74 | .1 | .3 |
| WASH0 | 5999.98* | .1 | .3 |
| WASH0 | 5980.22* | .1 | .3 |
| WASH0 | 5960.46* | .1 | .3 |
| WASH0 | 5940.70* | .1 | .3 |
| WASH0 | 5920.94* | .1 | .3 |
| WASH0 | 5901.18* | .1 | .3 |
| WASH0 | 5881.43* | .1 | .3 |
| WASH0 | 5861.67* | .1 | .3 |
| WASH0 | 5841.91* | .1 | .3 |
| WASH0 | 5822.15* | .1 | .3 |
| WASH0 | 5802.39* | .1 | .3 |
| WASH0 | 5782.63* | .1 | .3 |
| WASH0 | 5762.87* | .1 | .3 |
| WASH0 | 5743.12* | .1 | .3 |
| WASH0 | 5723.36* | .1 | .3 |
| WASH0 | 5703.60* | .1 | .3 |
| WASH0 | 5683.84* | .1 | .3 |
| WASH0 | 5664.08* | .1 | .3 |
| WASH0 | 5644.32* | .1 | .3 |
| WASH0 | 5624.57 | .1 | .3 |
| WASH0 | 5605.08* | .1 | .3 |
| WASH0 | 5585.60* | .1 | .3 |
| WASH0 | 5566.12* | .1 | .3 |
| WASH0 | 5546.64* | .1 | .3 |
| WASH0 | 5527.15* | .1 | .3 |
| WASH0 | 5507.67* | .1 | .3 |
| WASH0 | 5488.19* | .1 | .3 |
| WASH0 | 5468.71* | .1 | .3 |
| WASH0 | 5449.22* | .1 | .3 |
| WASH0 | 5429.74* | .1 | .3 |
| WASH0 | 5410.26* | .1 | .3 |
| WASH0 | 5390.78* | .1 | .3 |
| WASH0 | 5371.29* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH0 | 5351.81* | .1 | .3 |
| WASH0 | 5332.33* | .1 | .3 |
| WASH0 | 5312.85* | .1 | .3 |
| WASH0 | 5293.36* | .1 | .3 |
| WASH0 | 5273.88* | .1 | .3 |
| WASH0 | 5254.40* | .1 | .3 |
| WASH0 | 5234.92 | .1 | .3 |
| WASH0 | 5214.99* | .1 | .3 |
| WASH0 | 5195.06* | .1 | .3 |
| WASH0 | 5175.14* | .1 | .3 |
| WASH0 | 5155.21* | .1 | .3 |
| WASH0 | 5135.29* | .1 | .3 |
| WASH0 | 5115.36* | .1 | .3 |
| WASH0 | 5095.43* | .1 | .3 |
| WASH0 | 5075.51* | .1 | .3 |
| WASH0 | 5055.58* | .1 | .3 |
| WASH0 | 5035.66* | .1 | .3 |
| WASH0 | 5015.73* | .1 | .3 |
| WASH0 | 4995.81* | .1 | .3 |
| WASH0 | 4975.88* | .1 | .3 |
| WASH0 | 4955.95* | .1 | .3 |
| WASH0 | 4936.03* | .1 | .3 |
| WASH0 | 4916.10* | .1 | .3 |
| WASH0 | 4896.18* | .1 | .3 |
| WASH0 | 4876.25* | .1 | .3 |
| WASH0 | 4856.33* | .1 | .3 |
| WASH0 | 4836.40* | .1 | .3 |
| WASH0 | 4816.47* | .1 | .3 |
| WASH0 | 4796.55* | .1 | .3 |
| WASH0 | 4776.62* | .1 | .3 |
| WASH0 | 4756.70* | .1 | .3 |
| WASH0 | 4736.77* | .1 | .3 |
| WASH0 | 4716.84* | .1 | .3 |
| WASH0 | 4696.92* | .1 | .3 |
| WASH0 | 4676.99* | .1 | .3 |
| WASH0 | 4657.07* | .1 | .3 |
| WASH0 | 4637.14* | .1 | .3 |
| WASH0 | 4617.22 | .1 | .3 |
| WASH0 | 4597.95* | .1 | .3 |
| WASH0 | 4578.69* | .1 | .3 |
| WASH0 | 4559.43* | .1 | .3 |
| WASH0 | 4540.17* | .1 | .3 |
| WASH0 | 4520.91* | .1 | .3 |
| WASH0 | 4501.65* | .1 | .3 |
| WASH0 | 4482.39* | .1 | .3 |
| WASH0 | 4463.13* | .1 | .3 |
| WASH0 | 4443.87* | .1 | .3 |
| WASH0 | 4424.61* | .1 | .3 |
| WASH0 | 4405.34* | .1 | .3 |
| WASH0 | 4386.08* | .1 | .3 |
| WASH0 | 4366.82* | .1 | .3 |
| WASH0 | 4347.56* | .1 | .3 |
| WASH0 | 4328.30* | .1 | .3 |
| WASH0 | 4309.04* | .1 | .3 |
| WASH0 | 4289.78* | .1 | .3 |
| WASH0 | 4270.52* | .1 | .3 |
| WASH0 | 4251.26* | .1 | .3 |
| WASH0 | 4232 | .1 | .3 |
| WASH0 | 4213.08* | .1 | .3 |
| WASH0 | 4194.17* | .1 | .3 |
| WASH0 | 4175.26* | .1 | .3 |
| WASH0 | 4156.35* | .1 | .3 |
| WASH0 | 4137.43* | .1 | .3 |
| WASH0 | 4118.52* | .1 | .3 |
| WASH0 | 4099.61* | .1 | .3 |
| WASH0 | 4080.70* | .1 | .3 |
| WASH0 | 4061.79* | .1 | .3 |
| WASH0 | 4042.87* | .1 | .3 |
| WASH0 | 4023.96* | .1 | .3 |
| WASH0 | 4005.05* | .1 | .3 |
| WASH0 | 3986.14* | .1 | .3 |
| WASH0 | 3967.23 | .1 | .3 |
| WASH0 | 3947.5* | .1 | .3 |
| WASH0 | 3927.76* | .1 | .3 |
| WASH0 | 3908.03* | .1 | .3 |
| WASH0 | 3888.30* | .1 | .3 |
| WASH0 | 3868.57* | .1 | .3 |
| WASH0 | 3848.84* | .1 | .3 |
| WASH0 | 3829.11* | .1 | .3 |
| WASH0 | 3809.38* | .1 | .3 |
| WASH0 | 3789.65* | .1 | .3 |
| WASH0 | 3769.92* | .1 | .3 |
| WASH0 | 3750.19* | .1 | .3 |
| WASH0 | 3730.46* | .1 | .3 |
| WASH0 | 3710.73* | .1 | .3 |
| WASH0 | 3691.00* | .1 | .3 |
| WASH0 | 3671.27* | .1 | .3 |
| WASH0 | 3651.54* | .1 | .3 |
| WASH0 | 3631.81* | .1 | .3 |
| WASH0 | 3612.08 | .1 | .3 |
| WASH0 | 3592.34* | .1 | .3 |
| WASH0 | 3572.60* | .1 | .3 |
| WASH0 | 3552.86* | .1 | .3 |
| WASH0 | 3533.12* | .1 | .3 |
| WASH0 | 3513.38* | .1 | .3 |
| WASH0 | 3493.64* | .1 | .3 |
| WASH0 | 3473.90* | .1 | .3 |
| WASH0 | 3454.16* | .1 | .3 |
| WASH0 | 3434.42* | .1 | .3 |
| WASH0 | 3414.68* | .1 | .3 |
| WASH0 | 3394.94* | .1 | .3 |
| WASH0 | 3375.21* | .1 | .3 |
| WASH0 | 3355.47* | .1 | .3 |
| WASH0 | 3335.73* | .1 | .3 |
| WASH0 | 3315.99* | .1 | .3 |
| WASH0 | 3296.25* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH0 | 3276.51* | .1 | .3 |
| WASH0 | 3256.77* | .1 | .3 |
| WASH0 | 3237.03* | .1 | .3 |
| WASH0 | 3217.29* | .1 | .3 |
| WASH0 | 3197.55* | .1 | .3 |
| WASH0 | 3177.81* | .1 | .3 |
| WASH0 | 3158.07* | .1 | .3 |
| WASH0 | 3138.34 | .1 | .3 |
| WASH0 | 3118.5* | .1 | .3 |
| WASH0 | 3098.65* | .1 | .3 |
| WASH0 | 3078.81* | .1 | .3 |
| WASH0 | 3058.97* | .1 | .3 |
| WASH0 | 3039.13* | .1 | .3 |
| WASH0 | 3019.29* | .1 | .3 |
| WASH0 | 2999.45* | .1 | .3 |
| WASH0 | 2979.61* | .1 | .3 |
| WASH0 | 2959.77* | .1 | .3 |
| WASH0 | 2939.93* | .1 | .3 |
| WASH0 | 2920.09* | .1 | .3 |
| WASH0 | 2900.25* | .1 | .3 |
| WASH0 | 2880.41* | .1 | .3 |
| WASH0 | 2860.57* | .1 | .3 |
| WASH0 | 2840.73* | .1 | .3 |
| WASH0 | 2820.89* | .1 | .3 |
| WASH0 | 2801.05* | .1 | .3 |
| WASH0 | 2781.21* | .1 | .3 |
| WASH0 | 2761.37* | .1 | .3 |
| WASH0 | 2741.53* | .1 | .3 |
| WASH0 | 2721.69* | .1 | .3 |
| WASH0 | 2701.85* | .1 | .3 |
| WASH0 | 2682.01* | .1 | .3 |
| WASH0 | 2662.17* | .1 | .3 |
| WASH0 | 2642.33* | .1 | .3 |
| WASH0 | 2622.49 | .1 | .3 |
| WASH0 | 2603.18* | .1 | .3 |
| WASH0 | 2583.87* | .1 | .3 |
| WASH0 | 2564.56* | .1 | .3 |
| WASH0 | 2545.26* | .1 | .3 |
| WASH0 | 2525.95* | .1 | .3 |
| WASH0 | 2506.64* | .1 | .3 |
| WASH0 | 2487.33* | .1 | .3 |
| WASH0 | 2468.03* | .1 | .3 |
| WASH0 | 2448.72* | .1 | .3 |
| WASH0 | 2429.41* | .1 | .3 |
| WASH0 | 2410.11* | .1 | .3 |
| WASH0 | 2390.80* | .1 | .3 |
| WASH0 | 2371.49* | .1 | .3 |
| WASH0 | 2352.18* | .1 | .3 |
| WASH0 | 2332.88* | .1 | .3 |
| WASH0 | 2313.57* | .1 | .3 |
| WASH0 | 2294.26* | .1 | .3 |
| WASH0 | 2274.95* | .1 | .3 |
| WASH0 | 2255.65* | .1 | .3 |
| WASH0 | 2236.34* | .1 | .3 |
| WASH0 | 2217.03* | .1 | .3 |
| WASH0 | 2197.73 | .1 | .3 |
| WASH0 | 2177.87* | .1 | .3 |
| WASH0 | 2158.00* | .1 | .3 |
| WASH0 | 2138.14* | .1 | .3 |
| WASH0 | 2118.28* | .1 | .3 |
| WASH0 | 2098.42* | .1 | .3 |
| WASH0 | 2078.56* | .1 | .3 |
| WASH0 | 2058.70* | .1 | .3 |
| WASH0 | 2038.84* | .1 | .3 |
| WASH0 | 2018.98* | .1 | .3 |
| WASH0 | 1999.12* | .1 | .3 |
| WASH0 | 1979.26* | .1 | .3 |
| WASH0 | 1959.40* | .1 | .3 |
| WASH0 | 1939.54* | .1 | .3 |
| WASH0 | 1919.68* | .1 | .3 |
| WASH0 | 1899.82* | .1 | .3 |
| WASH0 | 1879.96* | .1 | .3 |
| WASH0 | 1860.10* | .1 | .3 |
| WASH0 | 1840.24* | .1 | .3 |
| WASH0 | 1820.38* | .1 | .3 |
| WASH0 | 1800.52* | .1 | .3 |
| WASH0 | 1780.66* | .1 | .3 |
| WASH0 | 1760.8* | .1 | .3 |
| WASH0 | 1740.94 | .1 | .3 |
| WASH0 | 1721.32* | .1 | .3 |
| WASH0 | 1701.71* | .1 | .3 |
| WASH0 | 1682.10* | .1 | .3 |
| WASH0 | 1662.49* | .1 | .3 |
| WASH0 | 1642.88* | .1 | .3 |
| WASH0 | 1623.27* | .1 | .3 |
| WASH0 | 1603.66* | .1 | .3 |
| WASH0 | 1584.05* | .1 | .3 |
| WASH0 | 1564.43* | .1 | .3 |
| WASH0 | 1544.82* | .1 | .3 |
| WASH0 | 1525.21* | .1 | .3 |
| WASH0 | 1505.60* | .1 | .3 |
| WASH0 | 1485.99* | .1 | .3 |
| WASH0 | 1466.38* | .1 | .3 |
| WASH0 | 1446.77* | .1 | .3 |
| WASH0 | 1427.16* | .1 | .3 |
| WASH0 | 1407.54* | .1 | .3 |
| WASH0 | 1387.93* | .1 | .3 |
| WASH0 | 1368.32* | .1 | .3 |
| WASH0 | 1348.71* | .1 | .3 |
| WASH0 | 1329.10* | .1 | .3 |
| WASH0 | 1309.49* | .1 | .3 |
| WASH0 | 1289.88* | .1 | .3 |
| WASH0 | 1270.27 | .1 | .3 |
| WASH0 | 1250.94* | .1 | .3 |
| WASH0 | 1231.61* | .1 | .3 |
| WASH0 | 1212.29* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH0 | 1192.96* | .1 | .3 |
| WASH0 | 1173.64* | .1 | .3 |
| WASH0 | 1154.31* | .1 | .3 |
| WASH0 | 1134.99* | .1 | .3 |
| WASH0 | 1115.66* | .1 | .3 |
| WASH0 | 1096.34* | .1 | .3 |
| WASH0 | 1077.01* | .1 | .3 |
| WASH0 | 1057.69* | .1 | .3 |
| WASH0 | 1038.36* | .1 | .3 |
| WASH0 | 1019.04* | .1 | .3 |
| WASH0 | 999.714* | .1 | .3 |
| WASH0 | 980.389* | .1 | .3 |
| WASH0 | 961.063* | .1 | .3 |
| WASH0 | 941.738* | .1 | .3 |
| WASH0 | 922.413* | .1 | .3 |
| WASH0 | 903.087* | .1 | .3 |
| WASH0 | 883.762* | .1 | .3 |
| WASH0 | 864.437* | .1 | .3 |
| WASH0 | 845.111* | .1 | .3 |
| WASH0 | 825.786* | .1 | .3 |
| WASH0 | 806.460* | .1 | .3 |
| WASH0 | 787.135* | .1 | .3 |
| WASH0 | 767.81 | .1 | .3 |
| WASH0 | 747.982* | .1 | .3 |
| WASH0 | 728.155* | .1 | .3 |
| WASH0 | 708.327* | .1 | .3 |
| WASH0 | 688.5* | .1 | .3 |
| WASH0 | 668.672* | .1 | .3 |
| WASH0 | 648.845* | .1 | .3 |
| WASH0 | 629.017* | .1 | .3 |
| WASH0 | 609.19* | .1 | .3 |
| WASH0 | 589.362* | .1 | .3 |
| WASH0 | 569.535* | .1 | .3 |
| WASH0 | 549.707* | .1 | .3 |
| WASH0 | 529.88* | .1 | .3 |
| WASH0 | 510.052* | .1 | .3 |
| WASH0 | 490.225* | .1 | .3 |
| WASH0 | 470.397* | .1 | .3 |
| WASH0 | 450.569* | .1 | .3 |
| WASH0 | 430.742* | .1 | .3 |
| WASH0 | 410.914* | .1 | .3 |
| WASH0 | 391.087* | .1 | .3 |
| WASH0 | 371.259* | .1 | .3 |
| WASH0 | 351.432* | .1 | .3 |
| WASH0 | 331.604* | .1 | .3 |
| WASH0 | 311.777* | .1 | .3 |
| WASH0 | 291.949* | .1 | .3 |
| WASH0 | 272.122* | .1 | .3 |
| WASH0 | 252.294* | .1 | .3 |
| WASH0 | 232.467* | .1 | .3 |
| WASH0 | 212.639* | .1 | .3 |
| WASH0 | 192.812* | .1 | .3 |
| WASH0 | 172.984* | .1 | .3 |
| WASH0 | 153.157* | .1 | .3 |
| WASH0 | 133.33 | .1 | .3 |

River: WASH60

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH60 | 5477.11 | .1 | .3 |
| WASH60 | 5299.28 | .1 | .3 |
| WASH60 | 5104.28 | .1 | .3 |
| WASH60 | 4869.04 | .1 | .3 |
| WASH60 | 4591.11 | .1 | .3 |
| WASH60 | 4337.83 | .1 | .3 |
| WASH60 | 4068.7 | .1 | .3 |
| WASH60 | 3746.65 | .1 | .3 |
| WASH60 | 3427.61 | .1 | .3 |
| WASH60 | 3162.25 | .1 | .3 |
| WASH60 | 2826.26 | .1 | .3 |
| WASH60 | 2497.44 | .1 | .3 |
| WASH60 | 2235.76 | .1 | .3 |
| WASH60 | 1902.48 | .1 | .3 |
| WASH60 | 1536.23 | .1 | .3 |
| WASH60 | 1155.84 | .1 | .3 |
| WASH60 | 717.74 | .1 | .3 |
| WASH60 | 251.42 | .1 | .3 |

River: WASH70

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH70 | 3521.27 | .1 | .3 |
| WASH70 | 3474.19* | .1 | .3 |
| WASH70 | 3427.11* | .1 | .3 |
| WASH70 | 3380.03* | .1 | .3 |
| WASH70 | 3332.95* | .1 | .3 |
| WASH70 | 3285.87* | .1 | .3 |
| WASH70 | 3238.79* | .1 | .3 |
| WASH70 | 3191.72 | .1 | .3 |
| WASH70 | 3147.19* | .1 | .3 |
| WASH70 | 3102.66* | .1 | .3 |
| WASH70 | 3058.13* | .1 | .3 |
| WASH70 | 3013.6* | .1 | .3 |
| WASH70 | 2969.07* | .1 | .3 |
| WASH70 | 2924.54* | .1 | .3 |
| WASH70 | 2880.01 | .1 | .3 |
| WASH70 | 2831.89* | .1 | .3 |
| WASH70 | 2783.77* | .1 | .3 |
| WASH70 | 2735.65* | .1 | .3 |
| WASH70 | 2687.53* | .1 | .3 |
| WASH70 | 2639.41* | .1 | .3 |
| WASH70 | 2591.29* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH70 | 2543.17* | .1 | .3 |
| WASH70 | 2495.05* | .1 | .3 |
| WASH70 | 2446.93* | .1 | .3 |
| WASH70 | 2398.82 | .1 | .3 |
| WASH70 | 2036.83 | .1 | .3 |
| WASH70 | 1648.15 | .1 | .3 |
| WASH70 | 1321.01 | .1 | .3 |
| WASH70 | 1029.2 | .1 | .3 |
| WASH70 | 666.38 | .1 | .3 |
| WASH70 | 358.04 | .1 | .3 |

River: WASH75

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH75 | 3066.24 | .1 | .3 |
| WASH75 | 2658.51 | .1 | .3 |
| WASH75 | 2371.61 | .1 | .3 |
| WASH75 | 2124.14 | .1 | .3 |
| WASH75 | 1807.24 | .1 | .3 |
| WASH75 | 1554.2 | .1 | .3 |
| WASH75 | 1289.14 | .1 | .3 |
| WASH75 | 1270.12* | .1 | .3 |
| WASH75 | 1251.11* | .1 | .3 |
| WASH75 | 1232.10* | .1 | .3 |
| WASH75 | 1213.09* | .1 | .3 |
| WASH75 | 1194.07* | .1 | .3 |
| WASH75 | 1175.06* | .1 | .3 |
| WASH75 | 1156.05* | .1 | .3 |
| WASH75 | 1137.04* | .1 | .3 |
| WASH75 | 1118.02* | .1 | .3 |
| WASH75 | 1099.01* | .1 | .3 |
| WASH75 | 1080.00* | .1 | .3 |
| WASH75 | 1060.99* | .1 | .3 |
| WASH75 | 1041.97* | .1 | .3 |
| WASH75 | 1022.96* | .1 | .3 |
| WASH75 | 1003.95* | .1 | .3 |
| WASH75 | 984.94* | .1 | .3 |
| WASH75 | 965.927* | .1 | .3 |
| WASH75 | 946.915* | .1 | .3 |
| WASH75 | 927.902* | .1 | .3 |
| WASH75 | 908.89 | .1 | .3 |
| WASH75 | 889.839* | .1 | .3 |
| WASH75 | 870.788* | .1 | .3 |
| WASH75 | 851.738* | .1 | .3 |
| WASH75 | 832.687* | .1 | .3 |
| WASH75 | 813.637* | .1 | .3 |
| WASH75 | 794.586* | .1 | .3 |
| WASH75 | 775.536* | .1 | .3 |
| WASH75 | 756.485* | .1 | .3 |
| WASH75 | 737.435* | .1 | .3 |
| WASH75 | 718.384* | .1 | .3 |
| WASH75 | 699.334* | .1 | .3 |
| WASH75 | 680.283* | .1 | .3 |
| WASH75 | 661.233* | .1 | .3 |
| WASH75 | 642.182* | .1 | .3 |
| WASH75 | 623.132* | .1 | .3 |
| WASH75 | 604.081* | .1 | .3 |
| WASH75 | 585.031* | .1 | .3 |
| WASH75 | 565.980* | .1 | .3 |
| WASH75 | 546.93 | .1 | .3 |

River: WASH80

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH80 | 9177.14 | .1 | .3 |
| WASH80 | 8711.54 | .1 | .3 |
| WASH80 | 8318.51 | .1 | .3 |
| WASH80 | 7927.46 | .1 | .3 |
| WASH80 | 7287.57 | .1 | .3 |
| WASH80 | 6827.33 | .1 | .3 |
| WASH80 | 6379.44 | .1 | .3 |
| WASH80 | 6136.14 | .1 | .3 |
| WASH80 | 5694.19 | .1 | .3 |
| WASH80 | 5146 | .1 | .3 |
| WASH80 | 4787.98 | .1 | .3 |
| WASH80 | 4308.96 | .1 | .3 |
| WASH80 | 3652.44 | .1 | .3 |
| WASH80 | 3226.43 | .1 | .3 |
| WASH80 | 2831.38 | .1 | .3 |
| WASH80 | 2414.33 | .1 | .3 |
| WASH80 | 2394.51* | .1 | .3 |
| WASH80 | 2374.70* | .1 | .3 |
| WASH80 | 2354.88* | .1 | .3 |
| WASH80 | 2335.07* | .1 | .3 |
| WASH80 | 2315.25* | .1 | .3 |
| WASH80 | 2295.44* | .1 | .3 |
| WASH80 | 2275.63* | .1 | .3 |
| WASH80 | 2255.81* | .1 | .3 |
| WASH80 | 2236.00* | .1 | .3 |
| WASH80 | 2216.18* | .1 | .3 |
| WASH80 | 2196.37* | .1 | .3 |
| WASH80 | 2176.55* | .1 | .3 |
| WASH80 | 2156.74* | .1 | .3 |
| WASH80 | 2136.93* | .1 | .3 |
| WASH80 | 2117.11* | .1 | .3 |
| WASH80 | 2097.30* | .1 | .3 |
| WASH80 | 2077.48* | .1 | .3 |
| WASH80 | 2057.67* | .1 | .3 |
| WASH80 | 2037.85* | .1 | .3 |
| WASH80 | 2018.04* | .1 | .3 |
| WASH80 | 1998.23 | .1 | .3 |
| WASH80 | 1978.49* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH80 | 1958.76* | .1 | .3 |
| WASH80 | 1939.02* | .1 | .3 |
| WASH80 | 1919.29* | .1 | .3 |
| WASH80 | 1899.55* | .1 | .3 |
| WASH80 | 1879.82* | .1 | .3 |
| WASH80 | 1860.08* | .1 | .3 |
| WASH80 | 1840.35* | .1 | .3 |
| WASH80 | 1820.61* | .1 | .3 |
| WASH80 | 1800.88* | .1 | .3 |
| WASH80 | 1781.14* | .1 | .3 |
| WASH80 | 1761.41* | .1 | .3 |
| WASH80 | 1741.67* | .1 | .3 |
| WASH80 | 1721.94* | .1 | .3 |
| WASH80 | 1702.20* | .1 | .3 |
| WASH80 | 1682.47* | .1 | .3 |
| WASH80 | 1662.74 | .1 | .3 |
| WASH80 | 1642.77* | .1 | .3 |
| WASH80 | 1622.80* | .1 | .3 |
| WASH80 | 1602.83* | .1 | .3 |
| WASH80 | 1582.86* | .1 | .3 |
| WASH80 | 1562.89* | .1 | .3 |
| WASH80 | 1542.92* | .1 | .3 |
| WASH80 | 1522.95* | .1 | .3 |
| WASH80 | 1502.98* | .1 | .3 |
| WASH80 | 1483.01* | .1 | .3 |
| WASH80 | 1463.04* | .1 | .3 |
| WASH80 | 1443.07* | .1 | .3 |
| WASH80 | 1423.10* | .1 | .3 |
| WASH80 | 1403.14* | .1 | .3 |
| WASH80 | 1383.17* | .1 | .3 |
| WASH80 | 1363.20* | .1 | .3 |
| WASH80 | 1343.23* | .1 | .3 |
| WASH80 | 1323.26* | .1 | .3 |
| WASH80 | 1303.29* | .1 | .3 |
| WASH80 | 1283.32* | .1 | .3 |
| WASH80 | 1263.35* | .1 | .3 |
| WASH80 | 1243.38* | .1 | .3 |
| WASH80 | 1223.41* | .1 | .3 |
| WASH80 | 1203.44* | .1 | .3 |
| WASH80 | 1183.47* | .1 | .3 |
| WASH80 | 1163.50* | .1 | .3 |
| WASH80 | 1143.53* | .1 | .3 |
| WASH80 | 1123.57 | .1 | .3 |
| WASH80 | 1103.85* | .1 | .3 |
| WASH80 | 1084.14* | .1 | .3 |
| WASH80 | 1064.42* | .1 | .3 |
| WASH80 | 1044.71* | .1 | .3 |
| WASH80 | 1024.99* | .1 | .3 |
| WASH80 | 1005.28* | .1 | .3 |
| WASH80 | 985.570* | .1 | .3 |
| WASH80 | 965.856* | .1 | .3 |
| WASH80 | 946.141* | .1 | .3 |
| WASH80 | 926.427* | .1 | .3 |
| WASH80 | 906.713* | .1 | .3 |
| WASH80 | 886.999* | .1 | .3 |
| WASH80 | 867.285* | .1 | .3 |
| WASH80 | 847.570* | .1 | .3 |
| WASH80 | 827.856* | .1 | .3 |
| WASH80 | 808.142* | .1 | .3 |
| WASH80 | 788.428* | .1 | .3 |
| WASH80 | 768.713* | .1 | .3 |
| WASH80 | 748.999* | .1 | .3 |
| WASH80 | 729.285* | .1 | .3 |
| WASH80 | 709.571* | .1 | .3 |
| WASH80 | 689.856* | .1 | .3 |
| WASH80 | 670.142* | .1 | .3 |
| WASH80 | 650.428* | .1 | .3 |
| WASH80 | 630.714* | .1 | .3 |
| WASH80 | 611 | .1 | .3 |

River: WASH90

| Reach | River Sta. | Contr. | Expan. |
|---|---|---|---|
| WASH90 | 6831.23 | .1 | .3 |
| WASH90 | 6503.89 | .1 | .3 |
| WASH90 | 5935.33 | .1 | .3 |
| WASH90 | 5486.51 | .1 | .3 |
| WASH90 | 4998.22 | .1 | .3 |
| WASH90 | 4374.24 | .1 | .3 |
| WASH90 | 3683.01 | .1 | .3 |
| WASH90 | 3113.17 | .1 | .3 |
| WASH90 | 2556.75 | .1 | .3 |
| WASH90 | 2510.31* | .1 | .3 |
| WASH90 | 2463.87* | .1 | .3 |
| WASH90 | 2417.44* | .1 | .3 |
| WASH90 | 2371.00* | .1 | .3 |
| WASH90 | 2324.57* | .1 | .3 |
| WASH90 | 2278.13* | .1 | .3 |
| WASH90 | 2231.70* | .1 | .3 |
| WASH90 | 2185.26* | .1 | .3 |
| WASH90 | 2138.83 | .1 | .3 |
| WASH90 | 2089.63* | .1 | .3 |
| WASH90 | 2040.43* | .1 | .3 |
| WASH90 | 1991.23* | .1 | .3 |
| WASH90 | 1942.03* | .1 | .3 |
| WASH90 | 1892.83* | .1 | .3 |
| WASH90 | 1843.63* | .1 | .3 |
| WASH90 | 1794.43* | .1 | .3 |
| WASH90 | 1745.23* | .1 | .3 |
| WASH90 | 1696.03* | .1 | .3 |
| WASH90 | 1646.84 | .1 | .3 |
| WASH90 | 1602.10* | .1 | .3 |
| WASH90 | 1557.36* | .1 | .3 |
| WASH90 | 1512.62* | .1 | .3 |

| | | | |
|---|---|---|---|
| WASH90 | 1467.89* | .1 | .3 |
| WASH90 | 1423.15* | .1 | .3 |
| WASH90 | 1378.41* | .1 | .3 |
| WASH90 | 1333.67* | .1 | .3 |
| WASH90 | 1288.94 | .1 | .3 |
| WASH90 | 1240.05* | .1 | .3 |
| WASH90 | 1191.17* | .1 | .3 |
| WASH90 | 1142.29* | .1 | .3 |
| WASH90 | 1093.41* | .1 | .3 |
| WASH90 | 1044.53* | .1 | .3 |
| WASH90 | 995.654* | .1 | .3 |
| WASH90 | 946.772* | .1 | .3 |
| WASH90 | 897.892* | .1 | .3 |
| WASH90 | 849.010* | .1 | .3 |
| WASH90 | 800.13 | .1 | .3 |